# Draft Environmental Assessment Proposed Medium Security Housing Unit

**Hawaii Community Correctional Center**

May 10, 2019

**State of Hawaii**
**Hawaii Department of Public Safety**

# Draft Environmental Assessment Proposed Medium Security Housing Unit

**Hawaii Community Correctional Center**

May 2019

Prepared for:

**Hawaii Department of Public Safety**

**Hawaii Department of Accounting and General Services**

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# Abbreviations and Acronyms

| | |
|---|---|
| AQCR | Air Quality Control Region |
| BMP | best management practices |
| CCC | Community Correctional Center |
| CFR | Code of Federal Regulations |
| Corps | U.S. Army Corps of Engineers |
| DAGS | Hawaii Department of Accounting and General Services |
| dB | Decibels |
| dbA | A-weighted Decibel Scale |
| DHHL | Department of Hawaiian Home Lands |
| DLNR | Hawaii Department of Land and Natural Resources |
| DOA | Hawaii Department of Agriculture |
| DPW | Hawaii County Department of Public Works |
| EA | Environmental Assessment |
| EIS | Environmental Impact Statement |
| FEMA | Federal Emergency Management Agency |
| FONSI | Finding of No Significant Impact |
| HAR | Hawaii Administrative Rules |
| HCCC | Hawaii Community Correctional Center |
| HRS | Hawaii Revised Statutes |
| Ldn | day-night equivalent sound level |
| Leq | equivalent noise level |
| LSB | University of Hawaii Land Study Bureau |
| MCCC | Maui Community Correctional Center |
| mgd | million gallons per day |
| msl | mean sea level |
| NAAQS | National Ambient Air Quality Standards |
| NRCS | Natural Resource Conservation Service |
| NWI | National Wetlands Inventory |
| OCCC | Oahu Community Correctional Center |
| OEQC | Hawaii Office of Environmental Quality Control |
| OHWM | ordinary high water mark |
| PSD | Hawaii Department of Public Safety |
| SAAQS | State Ambient Air Quality Standards |

| | |
|---|---|
| SHPD | State Historic Preservation Division |
| TMK | Tax Map Key |
| USDA | U.S. Department of Agriculture |
| USEPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| WCCC | Women's Community Correctional Center |
| WWTP | Wastewater Treatment Plant |

# PREFACE

With increasingly aged and overcrowded in-state jail and prison facilities, the Hawaii Department of Public Safety (PSD) is moving forward with an overall program to improve and/or replace its corrections infrastructure. As evidence, planning for a new facility to replace the Oahu Community Correctional Center (OCCC) and expand the Women's Community Correctional Center (WCCC) has been underway since 2016 with considerable progress already accomplished. In addition to replacing OCCC and expanding WCCC, PSD is seeking to alleviate the severe overcrowding that exists at the Kauai Community Correctional Center (KCCC), the Maui Community Correctional Center (MCCC), and the Hawaii Community Correctional Center (HCCC) in order to provide safe, secure, and humane environments for the care and custody of adult male and female offenders originating from Kauai, Maui, and Hawaii counties. Assisting PSD is the Hawaii Department of Accounting and General Services (DAGS).

PSD is proposing to alleviate the persistent and significant crowded conditions by developing a Medium Security Housing Unit at each facility for inmates who are currently housed at KCCC, MCCC and HCCC. Since the proposed housing unit projects involve the use of State funds and State lands, each is subject to the State environmental review process. In the case of HCCC, this Draft Environmental Assessment (EA) has been prepared pursuant to the requirements of Chapter 343, Hawaii Revised Statutes (HRS), and Chapter 200, Title 11, State of Hawaii Department of Health Administrative Rules (HAR), State Department of Health. PSD is proposing to alleviate the crowded conditions by developing a Medium Security Housing Unit for inmates who are currently housed at HCCC. Given the severe crowding which exists at other jail facilities, similar Draft EAs have been developed for MCCC and KCCC, subject to the same requirements of Chapter 343, HRS, and Chapter 200, Title 11, HAR. The proposed project at HCCC is representative of PSD's overall program of improving its community correctional centers.

The proposed Medium Security Housing Units are intended to provide additional beds in appropriate settings to address the current crowded conditions; provision of such housing is not intended to increase the inmate population at the facilities beyond their current number. Instead, inmates housed in cramped conditions and in spaces not well suited for inmates, would be accommodated in housing units designed and constructed to State of Hawaii and national standards. To bring commonality among the community correctional centers, a prototype medium security housing building would be designed to meet the needs at KCCC, MCCC, and HCCC. Providing standardization of the various systems and facilities will also aid in maintenance. Subsequent design objectives for the housing unit would be to implement a direct supervision housing model to aid in the rehabilitation of inmates. Development of the Medium Security Housing Units will allow for inmates currently housed in inadequate conditions to be relocated to the proposed buildings.

The preferred alternative is development of the inmate housing unit at HCCC as proposed and by doing so help achieve a safe, secure, and humane environment for the care and custody of adult male and female offenders originating from the County of Hawaii. It is anticipated that a Finding of No Significant Impact (FONSI) will be issued and filed with the State Office of Environmental Quality Control (OEQC) by the proposing and determining agency following public review of the Draft EA.

# SUMMARY

| | |
|---|---|
| Name: | Medium Security Housing Unit at Hawaii Community Correctional Center |
| Type of Document: | Draft Environmental Assessment |
| Legal Authority: | Chapter 343, Hawaii Revised Statutes |
| Location: | 60 Punahele Street, Hilo, Hawaii County, Hawaii |
| Tax Map Key: | TMK 2-3-023:005 |
| Ownership: | State of Hawaii |
| Identification of Proposing Agency: | State of Hawaii, Department of Accounting and General Services |
| Identification of Determining Agency: | State of Hawaii, Department of Accounting and General Services |
| Contact: | Wayne J. Takara, Program Specialist<br>Hawaii Department of Public Safety<br>919 Ala Moana Boulevard, Suite 400, Honolulu, HI 96814<br>Tel: 808-587-3463<br>Email: Wayne.j.takara@hawaii.com |
| Contact: | Richard J. Louis, Project Coordinator<br>Project Management Branch<br>Hawaii Department of Accounting and General Services<br>1151 Punchbowl Street, Room 427, Honolulu, HI 96813<br>Tel: 808-586-0474<br>Email: richard.j.louis@hawaii.gov |
| Identification of Accepting Agency: | State of Hawaii, Department of Health, Office of Environmental Quality Control |
| Contact: | Office of Environmental Quality Control<br>235 South Beretania Street, Suite 702, Honolulu, HI 96813<br>Tel: 808-586-4185<br>Email: oeqchawaii@doh.hawaii.gov |
| Environmental Consultant for Draft EA Preparation: | Louis Berger U.S., Inc. |
| Contact: | Robert J. Nardi, Vice President<br>Louis Berger U.S., Inc.<br>412 Mt. Kemble Avenue, Morristown, New Jersey 07962 |

| | |
|---|---|
| | Tel: 973-407-1681<br>Email: rnardi@louisberger.com |
| Judicial District: | North Hilo, South Hilo |
| Proposed Action: | With increasingly aged and overcrowded in-state jail and prison facilities, the Hawaii Department of Public Safety (PSD) is moving forward with an overall program to improve and/or replace its corrections infrastructure. This includes alleviating the severe overcrowding that exists at the Kauai Community Correctional Center (KCCC), the Maui Community Correctional Center (MCCC), and the Hawaii Community Correctional Center (HCCC) in order to provide safe, secure, and humane environments for the care and custody of adult male and female offenders originating from Kauai, Maui, and Hawaii counties. PSD is proposing to alleviate the crowded conditions by developing a Medium Security Housing Unit at each facility for inmates who are currently housed at KCCC, MCCC, and HCCC. The proposed Medium Security Housing Unit at HCCC is intended to accommodate up to 144 inmates in an appropriate setting to address the current crowded conditions. Development and operation of the proposed housing unit would not change the number of inmates held at HCCC because the unit would be occupied by inmates already housed at HCCC. Instead, inmates housed in cramped conditions and in spaces not well suited for inmates would be accommodated in a housing unit designed and constructed to State of Hawaii and national standards. The housing unit would help achieve a safe, secure, and humane environment for the care and custody of adult male and female offenders originating from Hawaii County and is representative of PSD's overall program of improving its community correctional centers. |
| Land Area (approximate) | 4.25 acres |
| Existing Land Use: | Hawaii Community Correctional Center |
| State Land Use District: | Urban |
| Hawaii County General Plan Designation: | Urban |
| County Zoning: | Single Family Residential (RS-7.5) |
| Special Management Area: | HCCC is located outside the limits of Hawaii's Special Management Area |
| Major Approvals that May be Required: | Permit/Approval: Chapter 343, HRS Compliance<br>Issuing Agency: Hawaii Department of Accounting and General Services |

| | |
|---|---|
| | Permit/Approval: Use Permit, Plan Approval l<br>Issuing Agency: Hawaii County Council<br>Permit/Approval: Building Permit, Grading Permit, Fence Permit<br>Issuing Agency: Hawaii County Department of Planning<br>Permit/Approval: Approval to Construct, Approval to Use, NPDES Permit, Chapter 6E, HRS Historic Preservation<br>Issuing Agency: Hawaii Department of Health |
| Impacts: | Construction and operation of the proposed housing unit at HCCC would have negligible adverse impacts to topography, geology, soils, archaeological and cultural resources, natural hazards, fiscal considerations, demographic and economic conditions, housing, community services, land use, utilities, traffic movements, and climate. Even minimal impacts would be mitigated as appropriate. In order to address potential impacts to biological resources, water resources, and soils during construction, applicable Best Management Practices will be employed to prevent potential degradation of water quality resulting from soil erosion. Potential short-term impacts to noise and air quality during the construction period will be minimized by compliance with applicable Department of Health Rules. Beneficial impacts would be derived from the proposed action including contributions toward fulfilling the PSD mission to protect public safety by operating humane and secure facilities where the health and well-being of the inmates are sustained, and opportunities are available to assist with their reintegration back into the community. Implementation of the proposed action would result in no significant adverse impacts as defined by Hawaii Revised Statutes. |
| Anticipated Determination: | Finding of No Significant Impact (FONSI) |
| Parties Consulted During Pre-Assessment: | Federal<br><br>U.S. Army Corps of Engineers<br>U.S. Fish and Wildlife Service<br>U.S. Department of Transportation, Federal Highway Administration<br>U.S. Geological Survey<br>U.S. Department of Agriculture<br>U.S. Environmental Protection Agency<br>Federal Aviation Administration<br><br>State of Hawaii<br><br>Department of Accounting and General Services<br>Department of Agriculture<br>Department of the Attorney General<br>Department of Education |

Department of Business, Economic Development and Tourism (DBEDT)
DBEDT, Land Use Commission
DBEDT, Office of Planning
Department of Hawaiian Home Lands
Department of Health (DOH)
DOH, HEER
DOH, Environmental Health Services Division
DOH, Office of Environmental Quality and Control
Department of Land and Natural Resources (DLNR)
DLNR, State Historic Preservation Division
DLNR, Land Division
Department of Transportation
Office of Hawaiian Affairs

County of Hawaii

Planning Department
Department of Public Works
Mass Transit Agency
Civil Defense Agency
Department of Parks and Recreation
Fire Department
Police Department
Department of Environmental Management
County Clerk
Office of the Corporation Counsel
Office of the Prosecuting Attorney

Others

Papa Ola Lokahi
Hale O Na Limahanai
Council for Native Hawaiian Advancement
Native Hawaiian Chamber of Commerce
Native Hawaiian Education Council
Papakōlea Community Development Corporation
Partners in Development Foundation
Ho'Omana Pono, LLC
Native Hawaiian Legal Corporation
Historic Hawai'i Foundation

Date: May 10, 2019

# 1.0 INTRODUCTION

## 1.1 Background

The State of Hawaii Department of Public Safety (PSD) is responsible for carrying out judgments of the state courts whenever a period of confinement is ordered. Its mission is to uphold justice and public safety by providing correctional and law enforcement services to Hawaii's communities with professionalism, integrity, and fairness. Currently, PSD is responsible for the approximately 5,600 offenders that are housed within eight State of Hawaii facilities, the Federal Detention Center in Honolulu, and in private contractor-operated correctional facilities located in Arizona.

Since 1991, Hawaii's prison and jail inmate population has grown well beyond the system's capacity, during which time no new facilities were added to the system. Consequently, PSD has been forced to double-bunk cells, add beds to dorms without adding space, and convert spaces normally used for inmate programs, counseling and similar services to other functions, such as inmate housing, to cope with the population. At the present time, the design capacity for the State's four jails is 1,153 beds and the operational bed capacity is 1,609. In the case of the State's prisons, the design capacity is 1,338 beds and the operational bed capacity is 1,918 (PSD, November 2018).

The persistent and severe crowding and a lack of suitable space in the islands has required PSD to house approximately 31 percent of the state's prison inmate population at contracted facilities on the mainland. Contracting for prison beds on the mainland began in 1995 when 300 male inmates were transferred to facilities in Texas. Additional transfers followed in 1997 with 236 male inmates and 64 female inmates and have continued to grow since then. As of November 30, 2018, approximately 1,459 State of Hawaii prison inmates are housed in facilities on the mainland.

## 1.2 Responsibilities of Hawaii Department of Public Safety

PSD deals with offenders at various stages within the criminal justice process. People who are arrested are initially held in custody at county police cellblocks, where they are assessed to determine if they are eligible to be diverted from the correctional system. Those who qualify for release into the community, pending their trial, are supervised by PSD's Intake Service Center staff who provide counseling and electronic monitoring, if needed. Those who are not eligible for pre-trial diversion programs are transferred to one of the State's jails until their trial and acquittal or sentencing. On conviction, individuals who are sentenced to serve less than one year remain at the jails and serve out their sentences. Those who are sentenced to serve more than one year are transferred to a state prison to serve out their sentence.

Felons sentenced to prison undergo a comprehensive assessment and diagnostic process which includes academic, vocational, treatment, and security information. Based on the assessment results, a correctional program plan is created to prepare the inmate to return to the community as a successful citizen. The plan includes programs and treatment services. PSD offers various programs to help create an environment that would be conducive to an inmate exercising behavioral control, taking responsibility, and achieving self-improvement. Only inmates who are classified as maximum security, or those whose behavior poses a threat to themselves or other inmates, are limited in their access to programs. Among the programs offered by PSD are education, vocational training, substance abuse treatment, and sex offender treatment. In addition to programs and basic needs such as food and clothing, medical and mental health services are also provided along with access to a law library and other library services.

When inmates near the end of their sentences, and are of the appropriate custody level, they are typically transferred to a minimum-security facility where they may participate in work release or furlough programs. Planning for housing, employment, finances, continuing education, training, follow-up treatment services, or other elements of life after incarceration also occurs at this stage. Some female offenders may transfer to a transition center in the community as well.

Although some offenders will remain in prison for life, the majority will serve their sentences and be released. Over 98 percent of those currently incarcerated will eventually return to the community. Those who are released to parole are closely supervised in the community to assist and prepare them for full release. If at any time a parolee violates the terms and conditions of parole, his or her parole status can be immediately revoked, and the offender may be returned to prison or jail.

## 1.3 Jail vs. Prison—Important Differences

PSD operates the Hawaii Community Correctional Center (HCCC) in Hilo, which acts as the local detention center for the Third Circuit Court. As a jail, HCCC operates substantially different than a prison. A jail is a facility where individuals are held for trial. These may be persons who either could not meet their bail or may not have qualified for bail according to the courts. In certain cases, a jail may also house individuals who have been to court, convicted, and sentenced to short term incarceration – usually less than a year. However, inmates housed at CCCs are under the jurisdiction of the Courts and not PSD and detainees in jail can only be released, placed in outside programs, or assigned to other alternatives to incarceration by the Courts.

The services that a jail such as HCCC must provide are vastly different from that of a prison. For example, it is important that pre-trial detainees are kept separate from sentenced inmates. Thus, a jail is usually operated on a 'distributed services' model where detainees or inmates remain in their housing units and meals, drug treatment, counseling, and even minor medical treatments are delivered to them. Another important consideration in the operation of a jail is that detainees may have a chemical dependency or suffer from an undiagnosed mental health issue. In both cases, it is the responsibility of the jail to provide diagnosis and recommend the appropriate treatment program.

Understanding the unique and fundamental differences between the inmate populations and the services provided to them in prison vs. jail will be important to understanding the purpose and function of Hawaii's CCCs and PSD's plan to develop a Medium Security Housing Unit at HCCC.

In addition to HCCC, PSD also operates jails on the islands of Oahu, Maui, and Kauai. Each facility houses sentenced inmates (felony, probation, and misdemeanor), pretrial individuals (felony and misdemeanor), arrestees from other jurisdictions, and probation/parole violators. CCCs provide the customary county jail function of managing both pre-trial detainees and locally sentenced misdemeanant offenders and others with a sentence of one year or less. Jails also provide an important pre-release preparation/transition function for prison system inmates who are transferred back to their counties of origin when they reach less than a year until their scheduled release. Most of these inmates are transferred to a dedicated work furlough unit where they can begin working in the community on supervised work crews or in individual placements as determined by needs and classification assessments and individualized pre-release plans.

## 1.4 Hawaii's Community Correctional Centers

The concept and mission of Hawaii's CCCs was originally defined in the 1973 Corrections Master Plan which resulted in the construction of jails (i.e., CCCs) on the Islands of Maui, Kauai, Oahu, and Hawaii. Consequently, all four facilities share some common original facility design elements that were considered appropriate at the time. One of those common features is the subdivision of the original secure housing building into very small operationally inefficient units of three-, four- or six-cell clusters. Contemporary jail designs provide for much larger units (usually 32, 48 or 64 beds each for general population minimum- or medium-security) that allow many more inmates to be supervised by each officer. In 1991, the combined operational bed capacity of the four jail facilities was 958, whereas today the current design capacity is 1,153 beds with a total operational bed capacity of 1,609 (PSD, 2018).

- Hawaii Community Correctional Center—HCCC, opened as a 22-bed facility in Hilo in 1975, currently has a design capacity of 206 beds (TMK 2-3-023:005). Unlike other CCCs, it has a Work Furlough Center located on a site outside of Hilo. The CCC was sited next to the original county jail in a Hilo location that, at the time, was largely undeveloped. As of November 30, 2018, HCCC housed approximately 387 inmates or 71 percent above its operational capacity of 226 beds (PSD, 2018).
- Kauai Community Correctional Center—KCCC (TMK 4-3-9-05:13) is located at 3-5351 Kuhio Highway in Lihue. The facility has been expanded from its original capacity of 16 medium-security beds in 1977 to 46 beds by 1991, and currently has a design capacity of 110 beds. Additional bed space came in the form of temporary dormitory structures that were used by displaced residents of Hurricane Iniki and are still being used for correctional housing. As of November 30, 2018, KCCC housed approximately 172 inmates or 34 percent above its operational capacity of 128 beds (PSD, 2018).
- Oahu Community Correctional Center—OCCC, located in Kalihi, opened in 1975 as a part of the county-based community corrections system concept with 456 beds. OCCC was originally designed to house both pretrial detainees and sentenced felons. At that time, OCCC was considered a jail as well as the primary prison for the state. OCCC has a design capacity of 628 beds but by the late 1990s, OCCC's population increased to upward of 1,400. Today, OCCC is the largest jail in the State of Hawaii and still houses dual populations of pretrial detainees (male and female offenders) and sentenced male felons. The facility also oversees operation of the Laumaka Work Furlough Center located a block away. As of November 30, 2018, OCCC housed approximately 1,212 inmates, or 27 percent above its operational capacity of 954 beds (PSD, 2018).
- Maui Community Correctional Center—MCCC, with a design capacity of 209 beds, has been expanded from its original two-acre site to the current 7.23 acres (TMK (2) 3-8-46:05, 06). Originally sited in a relatively isolated location, the town of Wailuku has since grown around and beyond the facility. As of November 30, 2018, MCCC housed approximately 415 inmates or 38 percent above its operational capacity of 301 beds (PSD, 2018).

PSD is committed to providing safe, secure, healthy, and humane social and physical environments for the care and custody of adult male and female offenders originating from the State of Hawaii. However, crowding has exacerbated physical plant operations, contributed to tension among inmates, and diminished treatment and program opportunities. Overall, jail facilities are operating well above their operational capacities. Given long-standing conditions, alleviating crowding is an important priority for Hawaii's community corrections system.

## 1.5 Hawaii Community Correctional Center

HCCC is located at 60 Punahele Street in Hilo, Hawaii. The facility provides the customary county jail function of managing both pre-trial detainees and locally-sentenced misdemeanant

offenders and others with a sentence of one year or less as well as providing a pre-release preparation/transition function for prison system inmates when they reach less than a year until their scheduled release.

From its original capacity of 22 beds, HCCC was expanded in 1990 with construction of a stand-alone dormitory building with a rated capacity of 40 beds. In 1998, a new housing module was added consisting of 32 cells located on two open tiers with a total capacity of 64 inmates. HCCC currently has a design capacity of 206 beds and an operational capacity of 226 beds.

HCCC was sited next to the original county jail in a Hilo location that was largely undeveloped; today the facility is surrounded by residential, commercial, and institutional uses. The site comprises about 4.25 acres and has four access points. Unlike other CCCs, HCCC has a Work Furlough Center (Hale Nani) located on a site approximately five miles away in the Panaewa.

HCCC houses inmates based on classified security levels using virtually every bed available and is one of the most severely crowded facilities in Hawaii. Most of the facility's support and program components are rated functionally and operationally inadequate to support the current population. Various studies conducted for PSD over the past decade confirmed the necessity to alleviate HCCC crowding. Based on the analysis of existing conditions, all buildings comprising HCCC need replacement and/or major renovation or repair. Furthermore, most of the support and program components were rated as inadequate or marginal functionally and operationally as they are significantly undersized to serve the current population. Exhibit 1-1 shows the regional location of HCCC and Exhibit 1-2 is an aerial view of the facility.

## 1.6 Project Purpose and Need

With increasingly aged, obsolete and severely crowded correctional facilities, PSD is planning to improve the state's corrections infrastructure through modernization of existing facilities when possible and construction of new institutions to replace others when necessary. Among several priority projects is the replacement of OCCC and expansion of WCCC and planning for both facilities is already well underway. In addition to OCCC and WCCC, PSD also considers alleviating crowded conditions at HCCC a high priority.

### 1.6.1 Medium Security Housing Unit

The important issue currently facing HCCC involves the severe and persistent crowding. Therefore, PSD plans to alleviate crowded conditions at HCCC by adding a Medium Security Housing Unit capable of accommodating up to 144 inmates who are currently housed at HCCC.

Development of a Medium Security Housing Unit is intended to provide a sufficient number of beds in an appropriate setting to address the current severely crowded conditions; *provision of such housing is not intended to increase the population of HCCC beyond its current number.* Rather, medium-security inmates housed in cramped conditions and in spaces not well suited for inmates, would be accommodated in a modern housing unit designed and constructed to State of Hawaii and national standards.

To bring commonality among all of PSD's community correctional centers, a prototype medium-security housing building would be designed to meet the needs at HCCC. Providing standardization of the various systems and facilities will also aid in maintenance. Subsequent design objectives for the housing unit would be to implement a direct supervision housing model to aid in the rehabilitation of inmates. Development of the Medium Security Housing Unit will allow for inmates currently housed in inadequate conditions to be relocated to the proposed building (Exhibit 1-3).

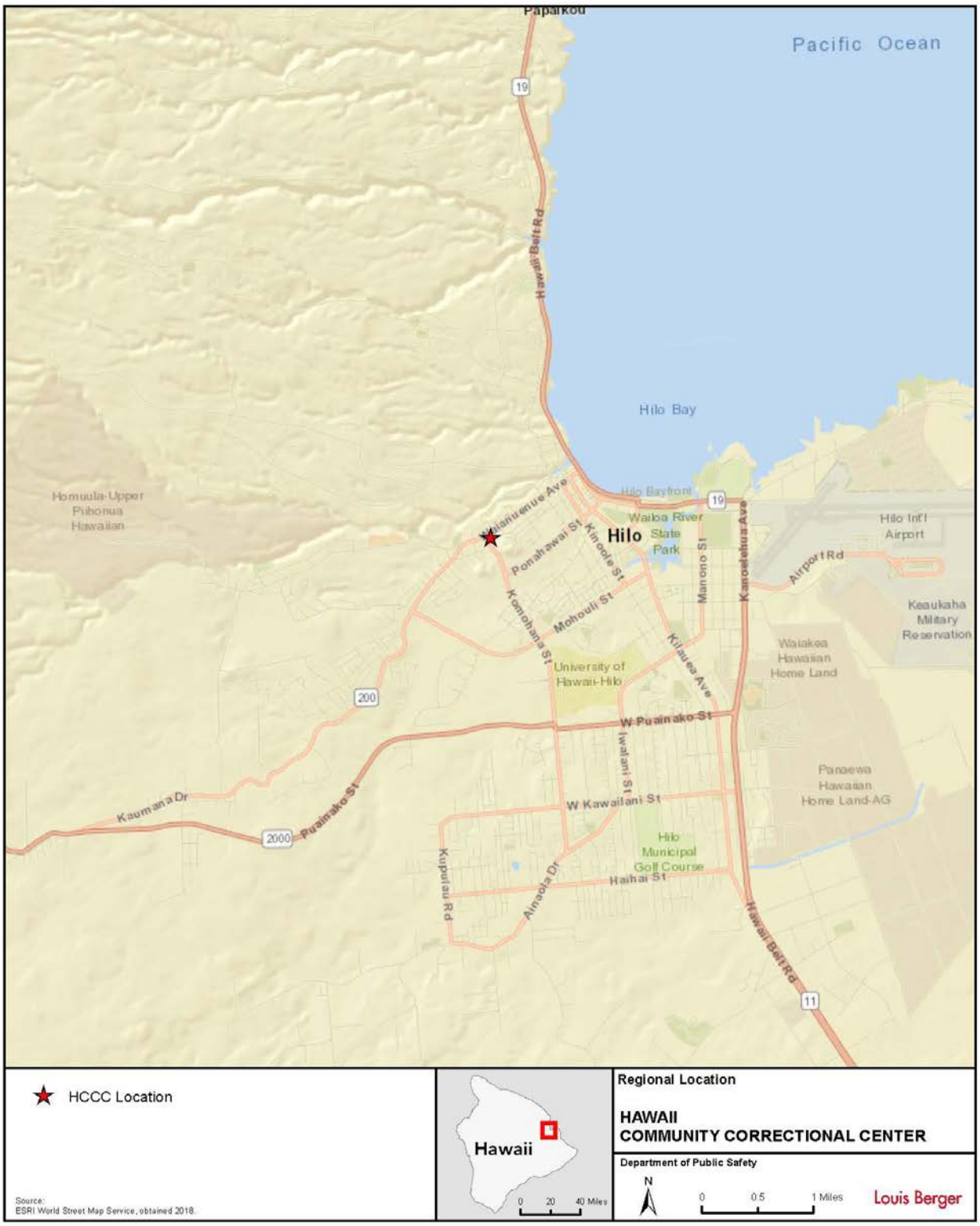



**Exhibit 1-1: Regional Location of HCCC**




**Exhibit 1-2: Aerial Photograph of HCCC**




**Exhibit 1-3: Medium Security Housing Unit Conceptual Site Plan**

### 1.6.2 Project Objectives

The primary objectives of the Medium Security Housing Unit at HCCC are to better accommodate current and future jail inmate populations and provide for public safety. Providing medium security housing at HCCC will help ensure that Hawaii's criminal justice system in general, and PSD in particular, functions in a quality manner while addressing the need for modern, efficient and cost-effective institutions. The addition of a Medium Security Housing Unit will also allow PSD to accomplish its mission to uphold justice and public safety, meet the needs of current and future jail populations, and provide for the continued safety and security of inmates, staff and island communities. Specific objectives for the proposed housing unit addition at HCCC include:

- Improve living conditions for male and female inmates.
- Provide adequate space and an environment where the focus can be on better preparing inmates for successful reintegration into the community and reduced recidivism.
- Provide a safer and more efficient work environment for corrections staff.
- Enhance opportunities for addressing inmates with special needs.
- Be a catalyst for improving corrections infrastructure in Hawaii County.

### 1.6.3 Summary of Proposed Action

The inmate population held at HCCC has experienced an overall increase of 5.0 percent over the past three years, rising from 378 inmates on December 31, 2014, to 397 inmates on December 31, 2017. This number reflects an increase in the number of male inmates from 316 on December 31, 2014, to 342 on December 31, 2017 (an increase of approximately 2.75 percent annually). However, the number of female inmates declined slightly from 62 on December 31, 2014, to 55 on December 31, 2017 (a decrease of approximately 3.0 percent annually). As of November 30, 2018, the total number of male inmates housed in HCCC was 317, while the number of female inmates was 70 (387 total inmates).

The proposed action at HCCC is intended to address the long-standing and severe crowding that exists at the facility by the addition of a Medium Security Housing Unit capable of housing up to 144 inmates. However, the proposed housing unit is not intended to increase the inmate population of HCCC beyond its current number. Rather, inmates housed in cramped conditions and in spaces not well suited for inmates would be accommodated in a modern housing unit designed and constructed to State of Hawaii and national standards. The proposed project has an estimated project cost of $15 million, including planning, design, and construction. Construction is preliminarily scheduled to begin in 2020 and be completed in 2021.

## 1.7 State of Hawaii Environmental Regulations

Adopted in 1974 and implemented by the Office of Environmental Quality Control (OEQC), Hawaii's environmental impact statement law (HRS, Chapter 343) requires the preparation of EAs and environmental impact statements (EISs) in advance of undertaking many development projects. Like its federal equivalent (NEPA), HRS, Chapter 343, requires that Hawaii government agencies such as PSD, give systematic consideration to the environmental, social, and economic consequences of proposed projects prior to development and assures the public of the right to participate in the planning process involving projects that may affect their community. Every year in Hawaii numerous proposed projects and actions undergo environmental review. Notice of these projects, studies, and determinations are published twice each month by OEQC in *The Environmental Notice*.

If a proposed action is subject to the requirements of HRS, Chapter 343, the environmental review process is initiated with preparation of a Draft EA by the proposing and determining agency or the private applicant. The Draft EA offers a detailed description of the proposed action along with an evaluation of the possible direct, indirect, and cumulative impacts. The document must also consider alternatives to the proposed project and describe any measures proposed to minimize potential impacts. Following its preparation, the public is typically provided 30 days to review and comment on the Draft EA.

After the Draft EA has been finalized and public comments responded to, the proposing and determining agency reviews the final assessment and determines if any "significant" environmental impacts are anticipated. If the agency determines that the project would not have a significant environmental impact, it issues a Finding of No Significant Impact (FONSI). This determination allows the project to proceed without further study. If the agency determines that the action may have a significant impact, a more detailed EIS is prepared.

## 1.8 Public Information and Involvement

Public outreach, information and participation are essential elements of any complex and potential controversial undertaking. PSD has long recognized the unique challenges faced in providing modern facilities for managing the state's inmate population and the importance of informing and otherwise involving diverse interest groups, elected officials, key regulatory agencies, and the public at large in the planning and decision-making process. When a project or action is of a scope and/or nature that may affect community interests, reaching out and involving community leaders, regulatory agencies, and the public in the planning process can facilitate the decision-making and approval process. The goal is to avoid or reduce conflict while maintaining the focus on critical issues affecting the proposed action.

Public outreach and involvement at the onset of the planning process also serves to assist in determining the focus and content of the environmental impact study. Public outreach assists to identify the range of actions, alternatives, environmental effects, and mitigation measures to be analyzed in depth and eliminates from detailed study issues that are not pertinent to the final decision on the proposed project. Public outreach is also an effective means to bring together and address the concerns of the public, affected agencies, and other interested parties. Significant issues may be identified through public and agency comments.

The purpose of public outreach is to help ensure that a comprehensive environmental impact document is prepared to provide a firm basis for the decision-making process. The intent of PSD's public outreach process has been to:

- Inform agency representatives, elected officials, and interested members of the public about the proposed action, the roles and responsibilities of PSD in implementing the proposed action, as well as activities to ensure compliance with HRS, Chapter 343.
- Identify the range of concerns that form the basis for identification of potential significant environmental issues to be addressed in the Draft EA.
- Identify suggested mitigation measures, strategies and approaches to mitigation that may be useful and explored further in the Draft EA.

To inform and involve the public in the planning and decision-making process, PSD conducted the following activities:

- Sought the participation of federal, state, and local agencies and the public in the environmental impact study process.

- Conducted informal discussions and consultations by telephone and via correspondence with Hawaii County officials. This included initiating contacts with the Mayor of Hawaii County to explain PSD's proposal for HCCC and to facilitate interaction between PSD leadership and the Mayor, County Council members and their staff (Appendix A). Additional discussions between PSD officials and the Mayor and County Council Members will occur to maintain communication linkages concerning PSD plans.
- Prepared and distributed individual letters to inform key elected officials, including State Senators and Representatives, of the proposed action. Letters to officials representing Hawaii County are included in Appendix A.
- Established a dedicated website to make available information concerning the proposed project to all interested groups and individuals (*https://dps.hawaii.gov/neighbor-island-jails-project/* ).
- Prepared and distributed multiple newsletters providing elected and appointed officials, regulatory agencies, stakeholders, and the public with continuous updates on the status of the planning and EA study process while soliciting advice and input on issues that should be addressing during the planning and decision-making process.
- Prepared and distributed a Pre-Assessment Consultations document to explain the need for the proposed housing unit and to seek advice and input on issues that should be addressing in the Draft EA (Appendix C).
- Determined the scope and significance of issues to be included within the Draft EA on the basis of relevant environmental considerations and information obtained throughout the public outreach process. The determination defined the scope and significance of the issues to be included in the Draft EA and identified issues that could be eliminated from detailed study as irrelevant or insignificant.
- In accordance with HRS, Chapter 353, provided the public with a 60-day comment period following Draft EA distribution to further identify any issues of concern.
- Identified additional data requirements based on information obtained from the public outreach process so that analyses and findings could be integrated into the Draft EA.

Throughout the preparation of the Draft EA, PSD reviewed incoming correspondence, newspaper articles and other indications of interest or concern on the part of regulatory agencies, organizations, elected officials, and the public regarding the proposed project. Federal, state, and county officials and regulatory agencies were consulted in preparing this Draft EA with the resulting scope of study indicated by the Table of Contents and the materials presented in the subsequent sections of the document and its incorporations by reference.

# 2.0 ALTERNATIVES ANALYSIS

## 2.1 Introduction to the Alternatives Analysis

The State of Hawaii has developed guidelines for the preparation of environmental impact studies for state projects or actions. These guidelines require an evaluation of alternatives to the proposed project or action as part of each such environmental impact study. The alternative analysis conducted under these guidelines addresses the following:

- No Action Alternative—A decision not to proceed with the proposed action to develop a Medium Security Housing Unit at HCCC. Under the No Action Alternative, the persistent and severe crowding experienced at HCCC would continue.
- Alternatives Considered but Not Carried Forward for Analysis—Potential expansion of the property boundaries to provide additional lands for HCCC improvements along with the complete relocation and replacement of HCCC at a different location on Hawaii were considered for the future of HCCC.
- Preferred Alternative—Development of a Medium Security Housing Unit as proposed. This alternative meets the purpose and need for the proposed action which is to alleviate the persistent and severe crowded conditions experienced at HCCC.

A discussion of these alternatives follows. No other reasonable alternatives within the jurisdiction of PSD have been identified.

## 2.2 No Action Alternative

HRS, Chapter 343, requires the consideration of the No Action Alternative to serve as a baseline against which other potential actions can be measured. The No Action Alternative is defined as a decision by the State of Hawaii not to proceed with development of a Medium Security Housing Unit at HCCC. Implementation of the No Action Alternative would maintain the status quo, precluding development of a Medium Security Housing Unit that, if constructed, would help alleviate the severe, long-standing, and chronic crowding that exists at HCCC.

Adoption of the No Action Alternative would avoid the potential impacts and inconveniences associated with development and operation of the Medium Security Housing Unit to accommodate current inmates. This alternative would also avoid the potential impacts and inconveniences (albeit temporary) associated with construction of the housing unit such as noise, dust, soil erosion, and air emissions. The No Action Alternative would also avoid the potential permanent impacts on land use at HCCC, utility services, and visual and aesthetic resources associated with development and occupancy of the proposed housing unit. Based on projects of a similar nature and scale developed elsewhere, PSD anticipates that potentially significant adverse impacts from the proposed housing unit can and will be avoided and that none of the potential project impacts, properly mitigated, would constitute significant adverse impacts as defined by Hawaii Revised Statutes (HRS).

Although the No Action Alternative would avoid the potential impacts associated with constructing and occupying a housing unit at HCCC, adoption of this alternative would also result in the loss of substantial positive benefits including the project's contribution to achieving the mission of PSD, the provision of a housing unit to better accommodate the current inmate population, the societal benefits derived from effective and efficient operation of the Hawaii's criminal justice system, and the potential economic benefits which would become available to the residents and businesses of Hawaii as a consequence of implementation of the proposed action.

The No Action Alternative does not address the State's need to provide adequate housing for the jail population on Hawaii. For these reasons, the No Action Alternative has been eliminated from further consideration as not meeting PSD needs and goals for the future of HCCC. However, to compare and contrast the potential impacts of the proposed action, the No Action Alternative is carried forward and discussed in this Draft EA.

## 2.3 Alternatives Considered but Not Carried Forward for Analysis

### 2.3.1 Expansion of HCCC Property Boundaries

Potential expansion of the HCCC property boundaries to provide additional lands for housing unit development was an alternative considered at the onset of the planning process. Expansion of the property, while considered, was determined unnecessary because sufficient developable land exists within the HCCC property (which totals approximately 4.25 acres) to accommodate development of the Medium Security Housing Unit without adversely affecting HCCC operations. Such available land, currently consisting of a paved parking lot and grassed area, is located northwest of the main HCCC compound, and coupled with the removal of the original county jail from the site, will accommodate development of the Medium Security Housing Unit.

Once the Medium Security Housing Unit is developed, a portion of the inmate population can be relocated from their current housing unit(s) to the new unit. The sequence of developing the housing unit followed by redistribution of the inmate population across the current housing units can be accommodated without the necessity of acquiring additional adjoining private or public lands. The alternative to expand the HCCC property boundaries was considered and eliminated as not necessary for meeting PSD needs and goals for the future of HCCC.

### 2.3.2 Development of Replacement HCCC

Development of an entire new facility in a different location on Hawaii followed by closure of HCCC was also considered. Development of a replacement HCCC, while providing a modern, state-of-the-art facility that would meet PSD's long-term needs, would require a substantial investment in land, infrastructure, and facilities. The time required to identify and/or acquire a different site (approximately two to three years), developing the infrastructure necessary to support the facility (approximately two to three years depending on location), as well as designing, permitting, and constructing the facility itself (approximately two to four years) will extend the period during which PSD will need to operate an already severely crowded facility by six to ten years.

This alternative would also require funding for an entire replacement HCCC. The potential costs associated with land acquisition, extending and/or upgrading utility and roadway infrastructure, along with construction of a complete HCCC institution would be significant, thereby limiting the State's ability to finance needed critical social and other infrastructure improvements throughout Hawaii. For these reasons, the alternative to develop a replacement HCCC in a different location has been eliminated from further consideration as not a practical or viable alternative and one which does not meet PSD needs and goals for the future of HCCC.

### 2.3.3 Alternative Locations within HCCC Property

Among the initial steps in the planning process is the identification and evaluation of prospective locations capable of accommodating the proposed Medium Security Housing Unit. PSD focused its siting efforts to the undeveloped portions of the 4.25-acre HCCC property. When evaluating such locations, the following factors were considered:

- Prospective building locations should provide for a sufficiently large land area to accommodate the housing unit. The relationship and proximity to other HCCC inmate housing, administrative, program, and support structures was also an important consideration.
- Prospective locations should exhibit a relatively level surface area with minimal site preparation and topographic alterations while allowing for proper drainage.
- Prospective locations should seek to avoid significant environmental concerns including, but not limited to, drainageways, floodplains, and wetlands.
- Prospective locations should be easily serviced by onsite utility systems.

The land area comprising HCCC, coupled with existing inmate housing, administrative and program structures, maintenance buildings and storage areas, and vehicle access and parking areas has limited potential sites for housing unit development. The most suitable undeveloped portion of property, consisting primarily of a small grassed area and paved parking lot, is located to the northwest of the main compound. This proposed development site is relatively level and sufficiently large to accommodate the housing unit and is located in proximity to onsite utilities.

## 2.4 Preferred Alternative

The preferred development location is the paved parking lot located in the northwestern portion of the property. This location is vacant, easily accessible by motor vehicles, and in proximity to onsite utility systems. Selection of this location best meets PSD's security and operational requirements, while minimizing potential adverse impacts on the natural and man-made environments. For these reasons, the Medium Security Housing Unit is proposed for development in the northwestern portion of the property.

In consideration of alternatives, development of a Medium Security Housing Unit is proposed as the best means to alleviate crowding at HCCC and is considered the Preferred Alternative. The Preferred Alternative meets the purpose and need for the proposed action which is to alleviate the persistent and severe crowded conditions experienced at HCCC and is the alternative preferred for implementation by PSD. The proposed housing unit would meet all applicable building codes and would include air conditioning and fire protection systems. Development and operation of the housing unit would not increase the inmate population at HCCC because inmates from other areas of the facility would occupy the structure.

# 3.0 EXISTING ENVIRONMENT, PROJECT IMPACTS, AND MITIGATION MEASURES

## 3.1 Overview

Implementation of the proposed action has the potential to affect various environmental resources found within the HCCC property as well as resources that exist beyond the boundaries of HCCC. This chapter examines specific environmental resources that have the potential to be affected by implementation of the proposed inmate housing project. Natural resources, including topographic features, geology and soils, water and biological resources, among others, as well as community resources such as social and economic factors, land use, utility services, and transportation networks, are addressed. Each resource description focuses on the relevant attributes and characteristics of that resource with the potential to be affected by the proposed action or that represent potential encumbrances to the proposed action.

To analyze the impacts of the proposed action, it is necessary to describe the existing conditions at HCCC and the surrounding area. The overall environmental and socioeconomic conditions that exist in and around HCCC are described in the sections that follow along with potential environmental impacts and mitigation measures.

## 3.2 Site Characteristics

### 3.2.1 Topography

#### Existing Conditions

Topography is the slope gradient of a site expressed as a relationship of vertical feet of elevation over horizontal feet of distance and the visual *"lay of the land."* Topographic conditions have specific implications for development, influencing the location of roads, buildings, and utilities and generally affecting the overall visual character of a site.

HCCC, located in Hilo, is approximately 4.25 acres in area. Much of those 4.25 acres have already been developed with inmate housing, administrative and program structures, maintenance buildings and storage areas, vehicle access and parking areas, among similar uses. The remaining undeveloped portions of property consist primarily of parking lots and grassed areas between buildings. The property, bounded to the north by Waianuenue Avenue and by Komohana Street to the west, is located at an elevation of approximately 225 feet above mean sea level (msl) with topography sloping gently from west to east (Exhibit 3-1).

#### Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, so topography would not be affected, and mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Activities associated with housing unit construction would require minimal clearing and grading for construction of a structure which would slightly reshape topographic conditions at the building site. The

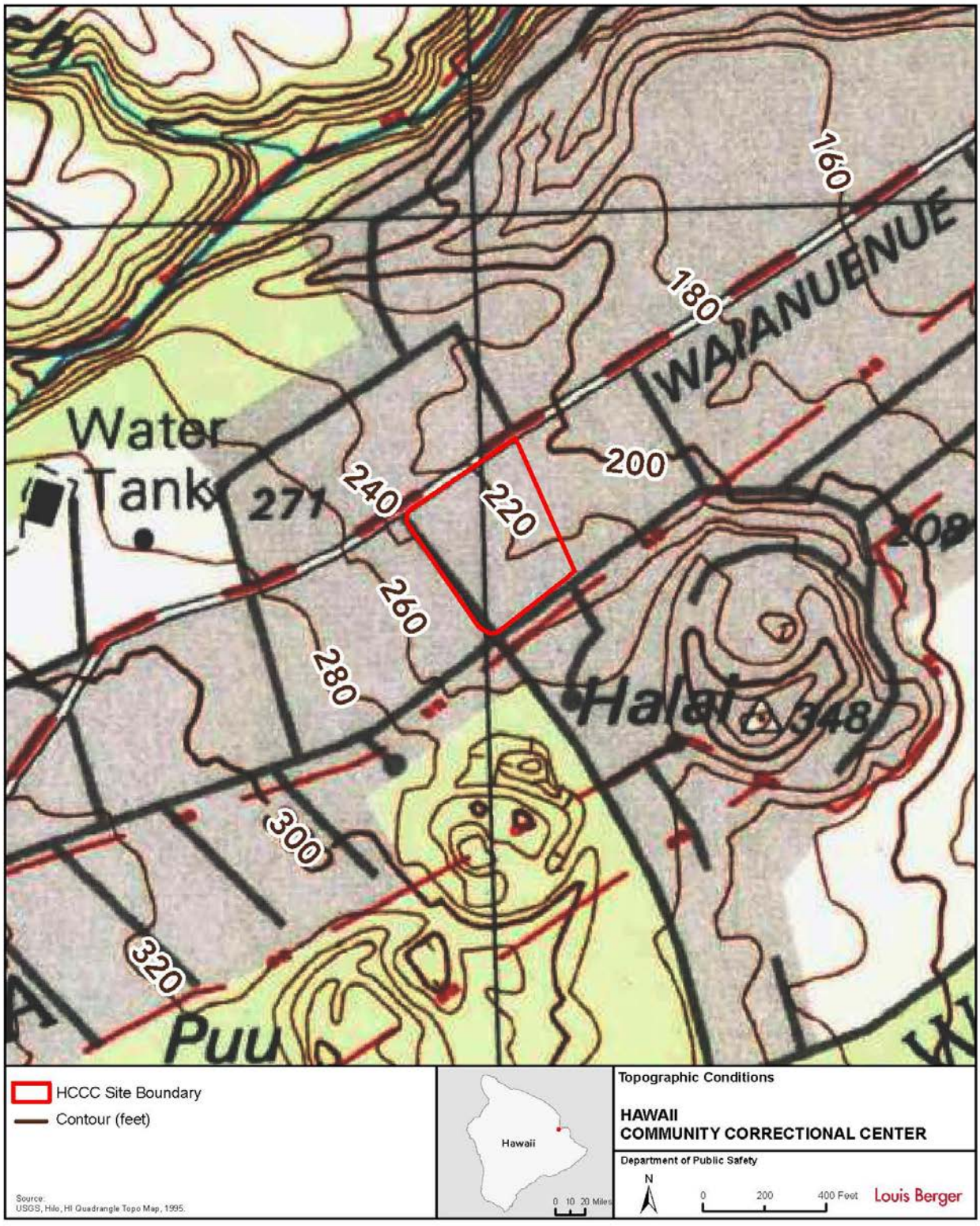



**Exhibit 3-1: Topographic Conditions**

existing topography would be utilized to tuck the housing unit against an embankment to minimize views of the unit. The extent of ground disturbance would be determined once a detailed site plan is finalized. While the topographic alterations resulting development of the inmate housing unit are unavoidable, any such changes are not expected to produce significant adverse impacts. Additional grading activities or other topographic changes are not expected to occur following completion of construction.

To minimize potential adverse topographic impacts, a site development plan would be prepared that would precisely locate the housing unit, utility corridors, and drainage facilities in a manner compatible with existing topography and drainage patterns. Doing so would serve to minimize earth disturbance and topographic alterations. Appropriate soil erosion and sediment control measures would be employed throughout the construction phase to minimize soil losses and similar short-term impacts resulting from ground disturbing activities. Implementation of best management practices (BMPs), to the extent practicable, would also occur to prevent damage by sedimentation, erosion or dust to streams, watercourses, natural areas, and the property of others. No other mitigation measures for topographic impacts are warranted.

### 3.2.2 Geology

## Origin of the Hawaiian Islands

The Hawaiian Islands comprise eight principal islands: Hawaii, Maui, Oahu, Kahoolawe, Lanai, Molokai, Kauai, and Niihau. The oldest is Kauai, which is just over 5 million years old. In addition, smaller islands are located to the northwest of Kauai, representing an older chain of volcanoes. The oldest of these islands was formed approximately 30 million years ago (USGS, 2001). The islands in the northwest are the oldest, while the islands in the southeast are the youngest. On the Island of Hawaii, the youngest island, the oldest rocks are less than 0.7 million years old and new rock is continually being formed by the five volcanoes that make up the island (USGS, 1999). The Hawaiian Islands formed primarily in thin-bedded pahoehoe and ‘a‘â lava flows, which are highly fractured and blocky flows. The rocks are mostly basaltic, with about 50 percent silica. Andesitic rocks as well as volcanic ash and cinders occur in a few places. Adjacent to the ocean is a small amount of coral limestone and coral sand. The relief of the islands varies as once smooth volcanic domes have been weathered and eroded. The older islands are deeply dissected; their surface is one of ridges, valleys, and alluvial fans (NRCS, 1972).

The Hawaiian Islands are part of a chain of approximately 125 volcanoes that extend nearly 3,600 miles across the North Pacific Ocean. The islands along this chain, many of which have submerged to become seamounts and atolls, began forming over 70 million years ago. The Hawaiian Islands are located near the center of the Pacific Plate, one of many oceanic crustal plates that form the surface of the earth beneath the oceans. At the Earth’s surface, the Pacific tectonic plate is currently moving in a northwest direction at a rate of seven to nine centimeters per year. This movement has led to the development of a chain of volcanoes, as the stationary hotspot (a fixed spot deep in the Earth’s mantle where magma forms and rises to the Earth’s surface), continues to release magma to the moving tectonic plate (USGS, 2001).

The Hawaiian Islands formed as the Pacific Plate moved slowly northwestward over a relatively permanent hotspot in the mantle beneath the Pacific Plate. The hotspot melted the oceanic crust above it, causing the melted rock (magma) to rise through the crust and ooze out slowly onto the ocean floor, eventually piling high enough to emerge above the surface of the ocean and form islands. This hotspot, still existing under the Hawaiian Islands, is relatively small, and as the Pacific Plate passes over it, the once-active volcanoes cool and stop erupting.

Due to the composition of the oceanic crust, eruptions of Hawaiian volcanoes are generally not explosive or violent. Most Hawaiian lavas tend to be hot and thin, enabling them to flow rapidly in thin layers and gradually build up huge, gentle-sloping domes called shield volcanoes. Lava texture varies, depending on differences in rate of flow and cooling, on distance from the vent, and on whether it is deposited on land or under water. As a result, the lava may be highly ‘a‘â lava or dense, smooth or ropy, and unfractured (pâhoehoe). Sometimes the lava in the center of a flow continues to flow after the outer surfaces have cooled and hardened, leaving a hollow tube. Lava tubes can eventually become conduits for surface water or groundwater.

Over time the composition of the magma changes. More explosive eruptions tend to occur near the end of the eruptive history of an island. More gaseous, explosive lavas result in cinder cones and deposits of cinders and ash. Thus, in a sequence of lava flows deposited over thousands of years, there may be many variations in the texture and permeability of the rock. Hawaiian volcanoes tend to erupt along rift zones, which are linear zones of fractures through which magma moves upward from a magma chamber deep in the crust where melting occurs. Eruptive episodes may occur decades or even thousands of years apart from different active vents, and the lava flows may follow different routes over time.

Currently, three volcanoes on the Hawaiian Islands are classified as active—Kilauea, which has been actively erupting since 1983 and more so since May 2018; Mauna Loa, which last erupted in 1984; and Loihi which erupted in 1996. Two dormant volcanoes may erupt again—Hualalai, which last erupted in 1801, and Haleakala, which last erupted in 1790.

## Existing Conditions

The Island of Hawaii is both the youngest and the largest of the major islands in the Hawaiian chain. As the youngest island, it is characterized by gentle slopes, rich soil, and tall volcanoes that offer widely varying climate terrains from dense tropical rainforest to desert and from tropical to alpine. The island is home to five volcanoes: Mauna Loa (Hawaiian for the "long mountain", extending for over 75 miles), Mauna Kea (Hawaiian for the "white mountain" so named for its snow-capped summit), Kilauea (the youngest and most active volcano on the island), Hualalai (beneath Kona) and Loihi (Gum, 2005).

Mauna Loa Volcano, nearing the end of the shield stage, is declining in its eruption rate. Only three of its 36 eruptions since 1843 have occurred since 1950. In addition to the two prominent rift zones, repeated fissure eruptions have occurred randomly on the northern and northwestward flank of the volcano (USGS, 1995

Mauna Kea, a dormant volcano in its postshield stage, last erupted about 4,500 years ago. Lava flows and cinder cones have buried the final summit caldera. Although a few flows have funneled down stream beds and reached the coast, its youngest lavas are thick and pasty and formed large cinder cones and short flows. Its oldest exposed lavas are about 250,000 years old. Mauna Kea could erupt again, although it is unlikely, because postshield-stage eruptions become less and less frequent before they cease altogether (USGS, 1995).

Kilauea is the youngest and southeastern-most volcano on the Island of Hawaii. Topographically, Kilauea appears as only a bulge on the southeastern flank of Mauna Loa, and for many years was thought to be a mere satellite of its giant neighbor, not a separate volcano. However, research over the past several decades show clearly that Kilauea has its own magma-plumbing system, extending to the surface from more than 37 miles deep in the earth (USGS, 2008).

Kilauea is currently the most active volcano on Earth, having erupted 60 times since 1840 and continuously throughout much of 2018. Eruptions can occur anywhere at the summit or along

the east or southwest rift zones. The south flank of the volcano, bounded by the two rift zones, slips towards the ocean at rates of a few inches per year on a flat-lying fault about six miles deep (USGS, 2008).

Hualalai is the third youngest and third-most historically active volcano on the Island of Hawaii. Six different vents erupted lava between the late 1700s and 1801, two of which generated lava flows that poured into the sea on the west coast of the island. Though Hualalai is not nearly as active as Mauna Loa or Kilauea, recent geologic mapping of the volcano shows that 80 percent of Hualalai's surface has been covered by lava flows in the past 5,000 years. In the past few decades, when most of the resorts, homes, and commercial buildings were built on the flanks of Hualalai, earthquake activity beneath the volcano has been low. Hualalai is considered a potentially dangerous volcano that is likely to erupt again in the next 100 years (USGS, 2008).

Loihi, known as a seamount, is an active volcano built on the seafloor south of Kilauea about 19 miles from shore. The seamount rises to 3,179 feet below sea level and generates frequent earthquake swarms, the most intense of which occurred in 1996 (USGS, 2008).

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, geologic conditions would not be affected, and mitigation measures would not be required.

Under the preferred alternative, the inmate housing unit would be developed at HCCC. Activities associated with housing unit construction would require minimal clearing and grading for construction. Deep excavations for building footings and foundations or utility connections are not planned. As a result, no adverse impacts on subsurface geological features and conditions are expected to occur at the building site. There are no plans to undertake any activities that could adversely affect underlying geologic features. Construction activities are not expected to result in significant adverse impacts on pre-existing geologic features and conditions.

Geologic hazards such as landsliding, erosion, and subsidence have a low probability of occurring within the grounds of HCCC. The proposed building site is relatively level, the area is not susceptible to undue erosion, and the potential for landsliding or subsidence under normal conditions is slight.

Only minimal land disturbance is required to implement the proposed project which would have no adverse impact on natural geologic features and conditions. Recommended mitigation would involve ensuring compliance with applicable Hawaii County code requirements for building design and construction.

### 3.2.3 Soils

## Existing Conditions

Soil types and characteristics are considered because they can limit or restrict use of a site. Examples of soil characteristics that can limit use include poor drainage, excessive wetness, excessive erodibility, the occurrence of rock at shallow depths, and the presence of shrink-swell clays, among others. Soil characteristics may preclude proposed uses or require the application of special engineering measures or designs.

According to the NRCS Web Soil Survey of Hawaii, only one soil mapping unit, Panaewa-Urban Land Complex 2-10 percent slopes, occurs within the area proposed for development of the Medium Security Housing Unit (Exhibit 3-2). The following discussion provides general characteristics of this mapping unit and its associated limitations.

- **Panaewa-Urban Land Complex 2-10 percent slopes**. The Panaewa series consists of shallow, moderately well drained silty clay loams formed in volcanic ash. These soils are nearly level to gently sloping and found on uplands at elevations from 300 to 1,000 feet above msl. The surface layer is about 12 inches thick, and the subsoil is about 4 inches thick. The surface layer is medium acid, and the subsoil is strongly acid (NRCS, 2008).

Also found on the HCCC property, although not within the area proposed for the housing unit, is Hilo Silty Clay Loam 0-10 percent slope (Exhibit 3-2). The following discussion provides general characteristics of this mapping unit and its associated limitations.

- **Hilo silty clay loam, 0 to 10 percent slopes**. The Hilo silty clay loam series consists of well drained soils formed in volcanic ash. The surface layer is approximately 12 inches thick, while the subsoil is approximately 48 inches thick. The surface layer is very strongly acid, and the subsoil is strongly acid to moderately acid. Permeability is rapid, runoff is slow, and the erosion hazard is slight (NRCS, 2008).

Most of the HCCC property has been disturbed with buildings and parking lots with few areas of undisturbed ground remaining.

The University of Hawaii Land Study Bureau's (LSB's) *Detailed Land Classification - Island of Hawaii*, establishes a soil productivity rating from "A" to "E," with "A" reflecting the highest level of productivity and "E" representing the poorest. This rating system is based on factors such as slope, drainage, rainfall, texture, stoniness, elevation, clay properties, and machine tillability. Land comprising HCCC is not located on LSB-rated land.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, soils would not be affected, and mitigation measures would not be required.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Much of the area composing HCCC has already been developed with inmate housing; administrative, program, and support structures; maintenance buildings and storage areas; vehicle access and parking areas; and similar uses. The remaining undeveloped portions of property consist primarily of parking lots and small grassed areas between buildings. As a result of past activities, natural soil conditions at HCCC have been altered and potentially adverse impacts on such soil resulting from the proposed project are not expected to occur.

Although construction activities could expose a small volume of soil to potential wind and water erosion, the relatively level topography found across the development site would limit the potential for soil loss. The small volume of soil to be disturbed during construction of the housing unit may also be redistributed onsite as fill.

Only minimal land disturbance is anticipated from the project, and this disturbance should have no significant adverse impact on soil conditions at HCCC. Nonetheless, potential soil loss from wind and precipitation would be minimized by limiting the extent of land disturbance activities at any one time and seeding exposed soils with native grasses, as necessary. To reduce potential impacts on soil resources, all earth-disturbing activities would be conducted in accordance with applicable Hawaii County ordinances governing such activities.




**Exhibit 3-2: Soils Map**

## 3.2.4 Water Resources

### Existing Conditions

Based on the USGS 7.5-minute quadrangle map for the area (Topozone, 2008), aerial photographs, hydrographic features map data (Hawaii Statewide GIS Program, 2008), together with an onsite inspection two surface water features were located on the HCCC property. These features consist of two unlined drainage ditches that bisect the property from west to east and serve to collect and divert surface waters flowing from adjacent properties around HCCC to a larger ditch that generally follows along Waianuenue Street beyond the HCCC property. Eventually all surface water flows in the area discharge to the Pacific Ocean.

The nearest large water feature is the Wailuku River, which is located approximately 1,300 feet to the north. In addition, there are no wells producing groundwater operating within the HCCC property.

### Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, water resources would not be affected, and mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC which would result in a negligible increase in storm water runoff since the proposed development area is largely covered with impervious surfaces (paved parking lot). To control any slight increase in runoff, a storm water system would be provided that would direct storm flows to the appropriate drainage facilities. In addition, a plan would be developed prior to construction that would maintain existing hydrologic drainage patterns and provide gentle slopes that are properly vegetated and stabilized. By doing so, the potential for soil erosion would be minimized. No additional impacts are expected once construction is completed as occupation and operation of the housing unit would not result in any direct discharge into surface or groundwaters or result in alteration of surface or groundwater quality.

## 3.2.5 Biological Resources

Biological resources, including vegetation, wildlife, wetlands, and special status species within the HCCC property were determined via state and federal agency contacts, available database inventories and maps, and a site visit conducted in June 2018. As part of this effort, National Wetlands Inventory (NWI) maps, available Geographic Information Systems data, and U.S. Fish and Wildlife Service (USFWS) information, along with an on-site inspection, were utilized in determining the presence or absence of such resources.

### Existing Conditions

#### *Vegetation and Wildlife*

Prior to the arrival of Europeans, most of the Hawaiian Islands were dominated largely by complex and unique native flora. Waves of human colonizers added large numbers of introduced and invasive plants to the flora. Early Polynesian settlers carried with them important food plants, including taro (*Colocasia esculenta*), sweet potatoes (*Ipomoea batatas*), breadfruit (*Artocarpus altilis*), bananas (*Musa acuminata*), and yams (*Dioscorea* spp.). Settlement by Europeans (and, later, by Americans, Japanese, and others) led to large-scale agricultural

development, primarily for sugarcane (*Saccharum officinarum*) production. Following World War II, lands in sugarcane production were converted to pastureland, secondary agro-forestry, and subsistence agriculture. Large-scale agriculture (e.g., for pineapple [*Ananas comosus*] and coffee [*Coffea* spp.]) remains prevalent in some areas, along with small commercial enterprises that grow food for local consumption. Many areas have become urbanized and industrialized with large areas utilized for tourism and military purposes (USACE 2012).

The major native habitat types on the island of Hawaii include wet montane forest, mesic montane forest, subalpine mesic forest and shrubland. Additional but smaller areas support alpine shrubland and alpine desert, dry montane and dry lowland forests, wet lowland forest, coastal forest and coastal shrub and grasslands. Because of its size and the loss of habitat on other islands, Hawaii provides relatively abundant habitat for endemic species. The island of Hawaii supports a great number of endemic species of forest birds and terrestrial invertebrates. Many other species, including migratory birds, seabirds, freshwater fishes, freshwater invertebrates, marine reptiles, marine fishes, and marine invertebrates are found on the island or in the near-shore waters. Despite this diversity of habitat types, 42 percent of the island is considered "converted" to human use. Most of the original lowland habitat on the island has been transformed by human habitation, and whole suites of bird and snail species have been extirpated and are known only from fossils. In addition, honeycreeper and honeyeater species that were adapted to low-elevation forests have disappeared, both from the loss of forests and the introduction of alien insects and diseases such as avian pox and malaria (DLNR 2015).

The HCCC property is located within a highly developed urban area, surrounded by residential development and commercial and institutional uses. The majority of the HCCC property is developed with inmate housing, administrative, program and support structures, maintenance buildings and storage areas, vehicle access and parking areas, and mowed grass. The only undeveloped portions of the property consist of maintained grass areas with occasional ornamental trees, shrubs, and other landscape plants surrounding the existing structures, as well as a small, relatively steep sloped area in the northwest portion of the property. Two narrow, man-made ditches are present in the undeveloped, portion of the property. Most of the proposed housing unit footprint is currently paved and used for parking.

Ornamental and fruit-bearing plants occur throughout the property including palm trees, breadfruit (*Artocarpus altilis*), and planted ti (*Cordyline fruticose*). Numerous non-native invasive African tulip trees (*Spathodea campanulata*) are also present. The larger irrigation ditch within the central portion of the property is predominantly vegetated with guinea grass (*Urochloa maxima*). Vegetation along the smaller ditch and in the northern portion of the property adjacent to the ditch includes taro (*Colocasia esculenta*), primrose willow (*Ludwigia octovalvis*), and California grass (*Urochloa mutica*) intermixed with guinea grass.

Due the developed nature of the property, the HCCC provides minimal natural habitat and any wildlife found in the area consist solely of common species that are adapted to urban environments. Wildlife expected to utilize the site include small terrestrial mammals, birds, insects, snails, and arachnids. Wildlife observed during field investigations included insects and zebra dove (*Geopelia striata*). Other wildlife expected to occur on the property include feral cats (*Felis catus)*, and feral chickens.

## *Wetlands*

Wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions do support a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR, Part 328.3). Three elements are used to identify wetlands: hydrology, vegetation, and hydric soils. Dredge and fill

activities in wetland areas are regulated through a permit program administrated by the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act (33 Code of Federal Regulations [CFR], Parts 320-329, November 13, 1986 and 33 CFR, Part 330, November 22, 1991).

Analysis of the NWI map (Exhibit 3-3), and field inspection of the site and its surroundings, indicate that no wetland resources are present on the HCCC property. The nearest mapped wetland is a freshwater forested/ shrub wetland classified as palustrine, forested, broad-leaved evergreen, temporary flooded (PFO3A) located approximately 800 feet north of the HCCC property, separated by residential development. The Wailuku River is approximately 0.25 miles north of the HCCC property and is classified by NWI as riverine, upper perennial, unconsolidated bottom, permanently flooded (R3UBH). ‘Alenaio Stream, classified by NWI as riverine, intermittent, streambed, seasonally flooded (R4SBC), is found approximately 0.5 miles south of the HCCC property while the Pacific Ocean is located approximately one mile east of the site.

The two narrow, man-made ditches that occur in the undeveloped portion of the property are not mapped by NWI. One ditch emerges from underground storm drainage infrastructure through a culvert in the center of the property and continues easterly off-site. A smaller ditch emerges from underground along the northern boundary also receiving storm water from under Waianuenue Avenue. These ditches converge off-site, on the adjacent property west of the HCCC boundary. The ditch then travels underground beneath a parking lot, then reemerges and continues approximately 800 feet before returning underground. A request has been submitted to the Corps to determine if the on-site ditches are subject to regulation under Section 404 of the CWA or Sections 9 and 10 of the Rivers and Harbors Act of 1899 (see Appendix B).

## *Species of Special Concern*

The Endangered Species Act (16 USC 1531 et seq.) mandates that federal actions consider the potential effects on species listed as threatened or endangered. Section 7 of the Endangered Species Act (ESA) requires federal agencies that fund, authorize, or carry out an action to ensure that the action is not likely to jeopardize the continued existence of any threatened or endangered species (including plant species) or result in the destruction or adverse modification of designated critical habitats. Critical habitat, as defined in the ESA, is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. If it is determined that development may affect a federally listed species, consultation with the USFWS would be required to ensure minimization of potential adverse impacts to the species or its designated critical habitat.

In addition to the ESA, the Migratory Bird Treaty Act (16 USC §§703-712, July 3, 1918, U.S. as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986, and 1989), makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase or barter, any migratory bird, or the parts, nests, or eggs of such a bird, except under the terms of a valid permit issued pursuant to Federal regulations. Title 50, Section 10.13, of the Code of Federal Regulations (50 CFR 10.13) lists the bird species protected under the Migratory Bird Treaty Act.

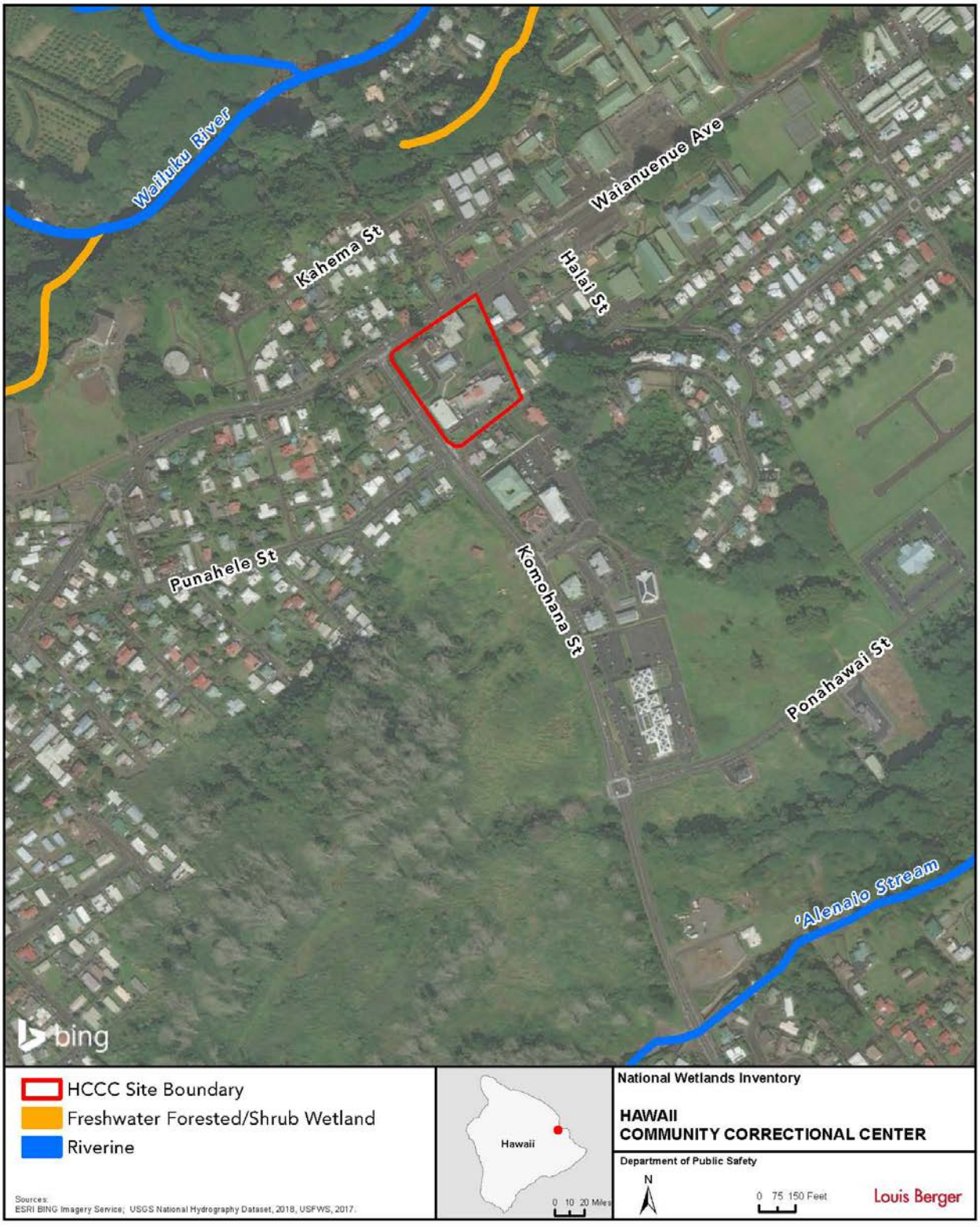



**Exhibit 3-3: National Wetlands Inventory Map**

The island of Hawaii supports a great number of endemic species, including forest birds [(honeycreepers, Hawaii thrush (*Myadestes obscurus*), and Hawaii ʻākepa (*Loxops coccineus coccineus*)] and terrestrial invertebrates, including several species of land snails, the wekiu bug (*Nysius wekiuicola*), and bees. Hawaii also provides abundant habitat for species such as the Hawaiian hawk (*Buteo solitarius*), ʻiʻiwi (*Vestiaria coccinea*), nēnē (*Branta sandvicensis*), and anchialine pond fauna. Other federally listed species include the Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian coot (*Fulica alai*), Hawaiian stilt (*Himantopus mexicanus knudseni*), and Hawaiian duck (Anas wyvilliana), Hawaiian petrel (*Pterodroma sandwichensis*), Blackburn's sphinx moth (*Manduca blackburni*) and sea turtles. Hawaii also supports rare species of stink bugs, damsel bugs, plant hoppers, and kissing bugs, lacewings, beetles, moths, flies, yellow-faced bees, and damselflies (DLNR 2015).

No federally designated or proposed critical habitat occurs within the immediate vicinity of the HCCC site. Correspondence from the USFWS Pacific Islands Fish and Wildlife Office (included in Appendix B) states that due to the urban location and already disturbed action area, it is unlikely that there are any federally threatened or endangered species habitats in the vicinity of the project site.

As noted earlier, HCCC is located in an urban area and the property has been developed with inmate housing, administrative and program structures, maintenance buildings and storage areas, and parking areas. The undeveloped portions of property consist of maintained lawn with occasional landscape plantings which do not provide suitable habitat for species of special concern. One federally endangered tree, an uhi (*Mezoneuron kavaiense*), is present within the HCCC property, growing out of a non-native African tulip tree. The uhi is found along the northern site boundary near the center of the site, separated from the proposed building footprint by existing structures. It is unlikely that any other threatened or endangered plant or animal species utilize these developed areas other than the occasional transient.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, so biological resources would not be affected, and mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC.

### *Vegetation and Wildlife*

Due to the developed nature of the HCCC property, implementation of the preferred alternative would result in minimal disturbance to vegetation resources. Short-term impacts would be limited to disturbance to vegetated areas required for access during construction. Long-term impacts are restricted to the permanent loss of vegetation within the approximately 0.23-acre development footprint, which consists predominantly of paved land. Given the minimal area and nature of the vegetation within the development footprint, impacts on vegetation would be negligible. Impacts to vegetation would be mitigated by incorporating BMPs to avoid the spread or introduction of invasive plants during construction and re-vegetating temporarily disturbed areas that would remain undeveloped following completion of construction using native species. Disturbance/removal of trees for construction is not expected but should any tree removal be required, selective removal of trees less than four inches in diameter would be targeted in lieu of removal of larger trees.

The project would result in the loss of approximately 0.23-acre of mostly developed land that does not provide quality habitat for wildlife and is currently subject to regular human activity. Impacts on the common wildlife species that may utilize portions of the site are expected to be negligible and limited to temporary avoidance of the development area due to noise and activity during construction. Operation of the Medium Security Housing Unit would slightly increase building and grounds maintenance and other human activities. However, the proposed building site is located adjacent to the existing main compound and in an area where human activities occur daily from routine HCCC operation. As a result, impacts to wildlife would be negligible once construction is complete.

### *Wetlands*

There are no wetland resources located within the existing HCCC site; therefore, no direct impacts to wetlands would occur. Wetland and water resources located in surrounding areas would similarly be unaffected as the potential for indirect impacts associated with soil erosion and sedimentation is considered negligible given the distance from the site to such resources and the soil erosion and sediment control measures that would be implemented during construction. No mitigation is warranted.

### *Species of Special Concern*

Except for occasional transients, it is unlikely threatened and endangered wildlife species would occur within the site. One federally endangered plant, an uhi tree, is present on the site but is separated from the proposed activity by existing structures and would not be impacted by the project. Development of the proposed Medium Security Housing Unit would have no significant adverse impact on threatened and endangered species due to the lack of habitat for threatened and endangered species and the minimization and avoidance measures to be implemented during construction. The following proposed measures would avoid or minimize potential impacts should any such species be present.

Although there is no project-related activity anticipated near the uhi tree, it is recommended that orange construction fencing be placed around the uhi tree during construction to avoid any inadvertent disturbance.

Efforts would be made to ensure that any security lighting associated with the proposed housing unit minimizes and avoids artificial lighting impacts to seabirds. Use of high-mast lights and similar high-intensity security lighting common to correctional facilities are not proposed. Instead, lighting would be largely confined to traditional walkway lighting common to most commercial establishments for safety purposes. In general, lights would be positioned low to the ground and be shielded and/or employ full cut-off features. Effective light shields would be opaque, sufficiently large, and positioned so that the bulb is only visible from below. No other mitigation is warranted.

## 3.2.6 Archaeological and Architectural Resources

Polynesians emigrating from the Marquesas Islands are believed to be the first Hawaiian settlers, sailing in large double-hulled canoes from the South Pacific Ocean thousands of miles to the south. Tahitians and travelers from other Pacific Islands followed. As a culture seated in oral tradition, what is known of these early settlers are based primarily on oral accounts passed down through generations. However, it is believed that the islands were settled hundreds of years before Captain James Cook visited in 1778.

By the time Captain Cook arrived (believed to be the first European contact) the population of the islands was estimated to be between 400,000 and 800,000. At that time the islands were divided into four independent chiefdoms. Kamehameha, a chief on the Island of Hawaii, was rising to power and by 1810 he had conquered and united all the islands under his rule. During the period between 1810 and 1895, the unified island was governed by a monarchy, initially headed by Kamehameha the Great.

In 1820, American missionaries arrived on the islands and developed a written form of the native language, attempted religious conversions, and taught the population to read and write. In 1840, Kamehameha III promulgated the first Hawaiian Constitution and established an elected House of Representatives as well as an appointed House of Nobles. Subsequent constitutions, adopted in 1852, 1864, and 1887, further eroded the power of the monarchy while increasing that of the elected representatives. The 1887 Constitution provided that the House of Nobles, previously appointed by the Crown, be elected. By this time, economic ties existed between Hawaii and the United States through treaties related to the sugar and pineapple industries. Ties between the United States and Hawaii became more formal when, in 1900, Hawaii became a territory of the United States. On August 21, 1959, Hawaii was admitted as the 50th state of the United States of America.

## Existing Conditions

HCCC is located in the Pi'ihonua ahupua'a of the South Hilo district on the Island of Hawaii. The available historical and archaeological literature for the HCCC property (TMK 2-3-023:005) focuses on the old Hilo County Jail complex and water claim statements from two Hilo residents regarding a network of four 'auwai (water ditches). "*The old jail house on the Hawaii CCC property is Site 7457. The site is considered significant for its architectural qualities only* (SHPD, 1974)." The jail structure, built in the late 1890s, is a good example of a brick building in Hawaii with reports stating: A jailor's cottage and 'various outbuildings' are mentioned in this documentation, but not located or described on the site form (Wolforth, 1999). While the State-wide Inventory of Historic Places site form suggests that the old jail is significant (SHPD, 1974), there is no evidence that this suggestion was ever formally evaluated as the site is not listed on either the State Register of Historic Places or the National Register of Historic Places.

The other significant feature on the HCCC property and in its vicinity is a network of 'auwai. Since "*...there is currently no clear and indisputable chronology for the ditch network*," available information was used to determine the chronology (Wolforth, 1999). Statements regarding this network of ditches were given by Solomon P. Kaleioholani and Frederick S. Lyman. Kaleioholani, born in 1845, through testimony in 1915 (Walker, Maly, and Rosendahl, 1997) and emphasized "*that his grandmother was responsible for overseeing the appropriate distribution of water in the Hilo ditches*" (Wolforth, 1999).

Lyman, born in Hilo in 1837, was the third child of the missionaries David and Sarah Lyman, the president of the board of trustees for the Hilo Boarding School for 34 years, worked as a land agent and surveyor, and served the district as the Circuit and Probate Judge (Wolforth, 1999). According to their testimony, the oldest 'auwai was dug by the 17th century Hilo chief, 'Ī, to provide fresh water to the village of Hilo and is the only one of the four that has an origin at a water source, specifically a branch of the Wailuku River. The next oldest 'auwai was dug by Kamehameha I after he conquered the islands (between 1794 and 1802) and was a branch of the 'Ī Ditch. The next 'auwai was dug sometime in the 1830s to the1840s by Kanuha under Governor John A. Kuakini. This 'auwai was used to supply water for Kuakini's sugar mill and emptied into a fish pond called Hauna. The final 'auwai, known as the 'Hilo Boarding School Ditch,' was dug in 1813 by Aki and improvements were made in 1822 by the first American Missionary, Mr. Goodrich. This 'auwai provided water for the inhabitants of the area, the

Goodrich Mill, Hilo Boarding School, irrigating kalo land, and generating electricity for the school (Wolforth 1999). The pu'u (hills) in the nearby Hāla'i Hills region are the site of many myths, though there is some discrepancy as to what legendary occurrence happened on which pu'u. These myths are connected with Hina and her daughters, Hina Keahi and Hina Kulu'ua, the "two Hina sisters" (Wolforth 1999).

At the request of the State Historic Preservation Division (SHPD), Scientific Consultant Services, Inc. (SCS) conducted an archaeological inventory survey (AIS) of the HCCC property (Appendix D). Archaeological inventory survey field work was conducted in March 2017. A series of northeast/southwest traverses spaced three meters apart were walked across the project area. Three previously identified archaeological sites (Site 50-10-35-7457, 20848, and 20849) were documented on the current project area. Site 7457 is the old Hilo Jail building while Sites 20848 and 20849 are Historic era ditches used to provide water for agricultural and residential use, and to channel drainage (Exhibit 3-4). No new historic properties were identified.

Site 7457 was assessed in the AIS as significant under criteria "c" and "d". The old Hilo Jail is recommended as significant under criterion "c" as it embodies distinctive characteristics of a type, period and method of construction; is the work of a noted architect (O.G. Traphagen); and possesses architectural, engineering, and design elements characteristic to public buildings constructed during the late 1800s and early 1900s. The old Hilo Jail is also recommended as significant under criterion "d" as it has yielded and may be likely to yield information important to history. Site 20848 and Site 20849 were assessed as significant during their identification in 1996 and subjected to a data recovery study and monitoring (Wolforth 1999). Portions of the ditches were redirected and reconstructed.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, so archaeological and architectural resources would not be affected, and mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Site 20848 and Site 20849 were mitigated for a previous project and have since been altered. Site 20849 was replaced with drainage pipe and was covered with fill between 1998 and 1999. The present project is proposed for the northwest portion of the HCCC property and will not impact Site 20849, and no further work is recommended for the resource.

Separate and apart from the proposed housing unit development, Site 7457 (old Hilo Jail) is undergoing demolition due to the age and very poor condition of the structure and will be impacted by the preferred alternative. To do so, PSD and DAGS consulted with SHPD which requested a Short Form Historic American Buildings Survey (HABS) of the old Hilo Jail in 2017 as mitigation for its demolition. The HABS documentation was completed in 2018 by Mason Architects and no additional work is recommended for Site 7457 (see Appendix D).

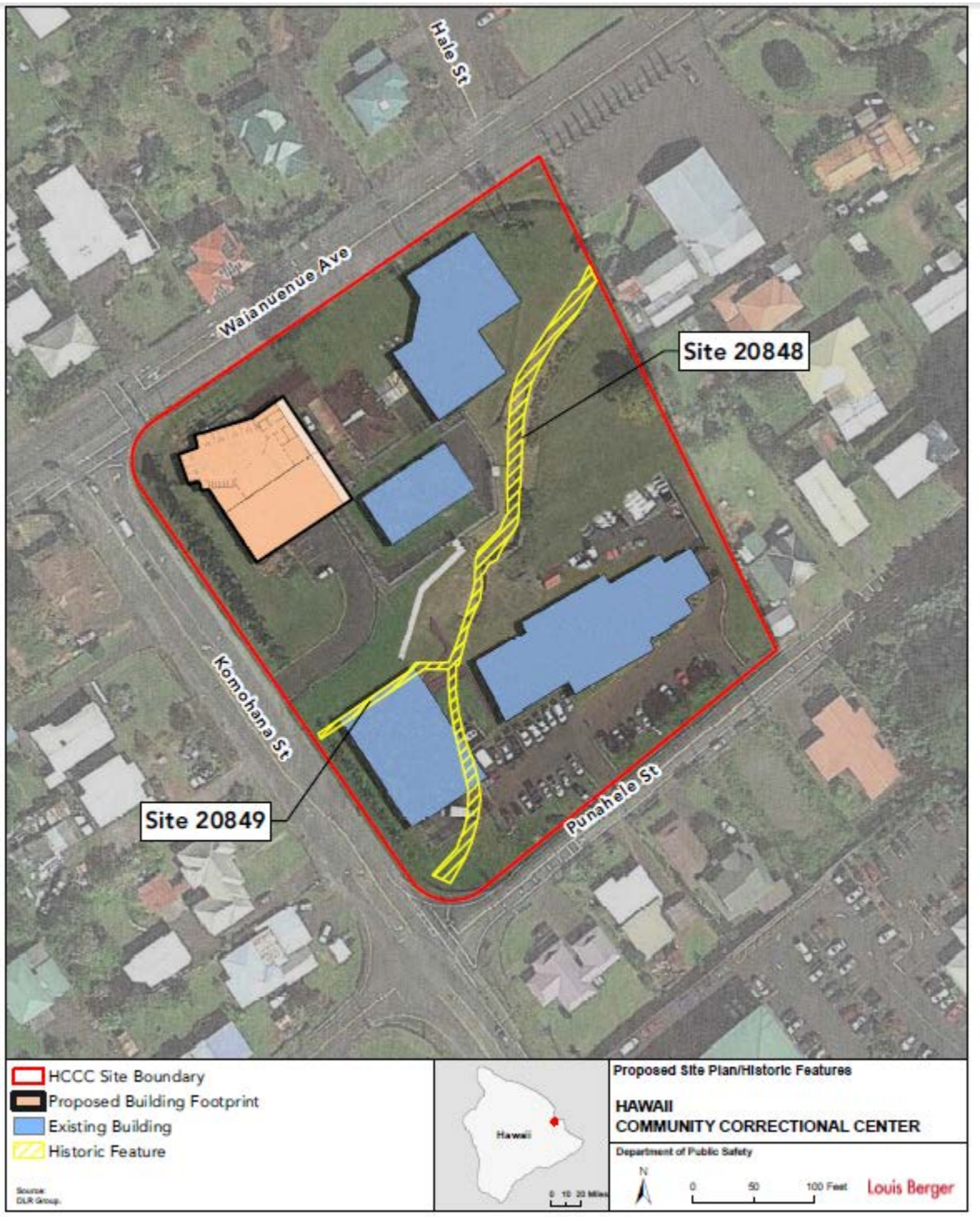



**Exhibit 3-4: Historic Features**

## 3.2.7 Cultural Resources

## Existing Conditions

OEQC guidelines identify several possible types of cultural practices and beliefs that are subject to assessment. These include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs. The guidelines also identify the types of potential cultural resources, associated with cultural practices and beliefs that are subject to assessment. Essentially these are natural features of the landscape and historic sites, including traditional cultural properties. In the HRS, Chapter 6E, a definition of traditional cultural property is provided:

> *"Traditional cultural property" means any historic property associated with the traditional practices and beliefs of an ethnic community or members of that community for more than fifty years. These traditions shall be founded in an ethnic community's history and contribute to maintaining the ethnic community's cultural identity. Traditional associations are those demonstrating a continuity of practice or belief until present or those documented in historical source materials, or both.*

The origin of the concept of traditional cultural property is found in National Register Bulletin 38 published by the U.S. Department of Interior, National Park Service. "Traditional" as it is used, implies a time depth of at least 50 years, and a generalized mode of transmission of information from one generation to the next, either orally or by act. "Cultural" refers to the beliefs, practices, lifeways, and social institutions of a given community. The use of the term "Property" defines this category of resource as an identifiable place. Traditional cultural properties are not intangible, they must have some kind of boundary; and are subject to the same kind of evaluation as any other historic resource, with one very important exception. By definition, the significance of traditional cultural properties should be determined by the community that values them.

A review of the culture-historical background material reveals that the history of Pi'ihonua Ahupua'a is commemorated in many traditional Hawaiian legendary accounts. While the majority of the accounts for this *ahupua'a* are centered on the infamous Wailuku River, the area often referred to as the Hilo Hills (located to the south and southwest of the study area) also figures prominently in the area's history. Through these accounts, one learns of the river's association with various *akua* (deities) including Hi'iaka, Kāne, Kanaloa, Kū, and Hina, and how the Hilo Hills were home to Hina's two daughters Hinakulu'ua and Hinakeahi. The legendary accounts also relate this river to several *kupua* (culture heroes) such as Māui and Kana as well as other historical figures like the Pā'ao, Uweuwelekehau, Halemano, Kamalālawalu, Kamehameha, Namakeha, and Kawau. This amassing of timeless stories represents an untold amount of generations of Native Hawaiians each adding a complex layer to the local history. These narratives are powerful in that they form an unbroken continuum that links the present generation to the distant past, all while conveying age-old knowledge and wisdom of this *ahupua'a* and the study area vicinity. Also, from these accounts, one learns of the various cultural sites located within this *ahupua'a* as well as the many *ali'i* that have carried out traditional ceremonies and practices such as that of the sacrificing of chief Namakeha at Kaipalaoa and that of Kamehameha lifting the massive Naha stone. Although the landscape within the *makai* portion of Pi'ihonua has been significantly transformed, the traditional accounts help in the reconstruction of the area's distant history.

A reflection on the early Historical accounts for Pi'ihonua sheds light on the impacts of western influence and the transformation of Pi'ihonua into a port town with a growing Christian congregation. By the mid-19th century, Pi'ihonua was claimed as the personal lands (Crown

Lands) of the reigning monarch, Kauikeaouli and deeds to specific parcels within the boundaries of this *ahupua'a* were executed at his discretion. By the turn of the 20th century, Hawaii's last reigning monarch, Queen Lili'uokalani was overthrown thereby sending the Hawaiian nation into turmoil. The overthrow also affected the status of Crown Lands by administering them as Government lands, which were later divided and sold as government grants. This move caused exponential growth in the commercial sugar industry and later paved the way for the creation of the Pi'ihonua House Lots; the community that now surrounds most of the current study area (Appendix E).

Throughout the late 19th and early 20th century, Hilo town continued to experience economic growth and had become a popular destination for visitors, many of whom took delight to the wonders of the island's active volcanoes. By the late 19th century, the original Hilo Jail, located on the corner of present-day Ponahawai and Kino'ole Street had fallen into disrepair and could no longer accommodate the influx of inmates. Discussions to relocate the facility spanned many years, until in 1919 government officials finally settled on relocating the jail to its current location. By 1920, the Hilo Jail had been built by a prolific American architect Oliver G. Traphagen (Mason Architects, Inc. 2018). By 1975, HCCC was established and since this time continues to serve as the main jail facility for the entire Hawaii County, serving both east and west Hawaii.

A review of the previous studies conducted within the subject parcel has identified the presence of three Historic properties: two historic ditches SIHP Site 50-10-35-20848 first recorded by Walker et al. (1997) and again by Wolforth (1999) and Escott (2017); and SIHP Site 50-10-35-21228 described as the Pi'ihonua Ditch recorded by Wolforth (1999), Barna and Rechtman (2015), and Escott (2017). Additionally, the old Hilo Jail building, SIHP Site 50-10-35-7457, was also identified as a historic property.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, so cultural resources would not be affected, and mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. As a result of the consultation process, there were no specific traditional cultural places and associated practices identified to exist or have taken place within the subject parcel. While no specific cultural practices were identified, the site visit and consultation efforts resulted in the identification of a *la'amia* tree, a historically introduced plant whose fruits are used in creating traditional Hawaiian musical instruments and containers (Krauss 1993). The existence and known uses of this tree were also described by Mr. Robert Yamashita and HCCC Warden, Mr. Peter Cabreros. Although Mr. Cabreros explained that he has not received any request from the public to gather the fruits of this plant, he was aware of its cultural uses, particularly *hula* and advocated for its protection.

The known uses of this plant are described in Hawaiian ethnobotanical literature. The fruits of the tree were dried, and the interior pulp and seeds removed. Once dried, the round gourds could be made into containers (Bishop Museum 2018) or musical instruments specifically the *'ulī'ulī* (feathered gourd rattle) and the lesser known *'ūlili* (spinning gourd rattle), both of which were used by *hula* dancers (Krauss 1993). Although not considered rare or endangered, this historically introduced tree is not widely distributed thereby making each living plant a valuable resource that can lend to the perpetuation of traditional Hawaiian crafts. An article published by Nina Wu in the *Star Advertiser* in 2011 described recent efforts to revive the nearly forgotten art of crafting both the *'ulī'ulī* and *'ūlili*. At the recommendation of Mr. Cabreros and in light of recent efforts to revive traditional Hawaiian arts that utilized the fruit of the *la'amia* tree, we recommend that this

tree be preserved in place. Given the distance of the tree to the proposed project location, at present there are no anticipated ground-disturbing activities near the tree that could result in an adverse effect. However, if any ground-disturbing activities do occur in the vicinity of the *la'amia* tree, it is strongly advised that temporary fencing be placed around the tree thereby creating a buffer to prevent adversely impacting the tree.

In addition to the identification of the *la'amia* tree, the interview with Kamuela Bannister resulted in the discussion of two historic ditches on the property (SIHP Site 50-10-35-20848 and 21228). Mr. Bannister would like to ensure that construction near these sites do not adversely impact the integrity of these sites, specifically Site 21228, which is located near the proposed facility location. It is the authors recommendation that a reasonable distance be maintained when working around the ditch to reduce the potential of adversely impacting this site.

## 3.2.8 Potential for Hazardous Materials Contamination

## Existing Conditions

Much of the 4.25-acre HCCC property has already been developed with inmate housing, administrative, program and support structures, maintenance buildings and storage areas, vehicle access and parking areas, among similar uses. The undeveloped portions of property consist primarily of small grass plots, walkways and parking areas. Based on past studies and recent investigations conducted as part of this EA:

- No evidence involving the manufacturing, storage, handling or disposal of hazardous substances or petroleum products was observed within the HCCC property.
- No surficial evidence or visual signs of contamination, stained soils, stressed vegetation, unusual mounds, or other indication of the use, handling, storage, or disposal of hazardous materials was identified during recent field surveys.
- No adjoining land uses were identified that are expected to pose a potential environmental risk to the continued use and development of the HCCC property.
- No evidence of leaking aboveground or underground storage tanks was observed within the HCCC property.
- Materials considered hazardous in use at HCCC include janitorial supplies, laundry detergents and sanitizers, maintenance materials, and paint. All these items are properly managed and stored in labeled and locked cabinets or in locked cages.

With many years of state government controls over use of the property, contamination from hazardous materials is not expected at the HCCC property. No indications of contamination or obvious indication of the use or disposal of hazardous substances at HCCC was noted during field investigations conducted as part of this study.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, so hazardous materials contamination would not be a consideration and mitigation measures would not be necessary.

### *Construction Phase*

Activities associated with the construction of the proposed housing unit would involve the use and storage of potentially hazardous materials (e.g., solvents, fuel oil, lubricants, etc.). To avoid

potential releases of such materials into the environment during construction, a temporary staging area would be established for the storage and handling of such materials. Stored materials would be removed from the construction site by authorized personnel only, and removals would be recorded by onsite personnel overseeing the construction of the housing unit. Any liquid waste storage areas would have secondary containment systems in place to reduce the risk of potential spillage. The storage of hazardous materials onsite during the construction phase would be minimized or avoided where practicable (e.g., fuels for construction and other equipment would be transported to the site by fuel trucks as needed).

Wastes considered hazardous that are generated during construction (i.e., waste fuel oils, spent lubricants and solvents, etc.) would be handled, stored and disposed of in accordance with applicable federal and state regulations. The amount of waste generated during construction should have no significant impact on the ability or availability of waste handlers to collect and properly dispose of such wastes. No mitigation measures, other than those described above, are warranted during the construction phase.

### *Operating Phase*

Materials that are currently in use at the existing HCCC include janitorial supplies, laundry detergents and sanitizers, maintenance materials, paints, and similar materials. Operation of the housing unit would result in the continued routine use of small quantities of chemical cleaners, paints, petroleum products, thereby resulting in the generation of small amounts of regulated wastes.

All hazardous materials, biohazardous and medical waste (from operation of the medical units) would continue to be handled in accordance with applicable regulatory requirements. PSD would continue its current practice of proper management, use, storage, and disposal of hazardous materials. In addition, the volume of hazardous wastes generated during housing unit operation should have no significant impact on the ability or availability of waste handlers to collect and properly dispose of such wastes. As a result, the proposed action is not expected to result in the release of contaminants into the environment and, therefore no significant adverse impacts are anticipated. No mitigation measures, other than those described above, are warranted during operation.

## 3.2.9 Visual and Aesthetic Resources

## Existing Conditions

Hawaii is an island with an abundance of beautiful and unique physical characteristics and resources that is populated and governed by people who both appreciate and work diligently to preserve and protect those features. The island's unique landscape stems from the variety of environments present on the island, from lush green tropical valleys to snow-capped mountains. The history of geologic forces on the island have resulted in a variety of landscape features including barren fields of lava, heavily vegetated valleys, kiawe deserts, native forests, rolling grasslands, and rocky coastlines. The County of Hawaii General Plan recognizes these aesthetic and visual values stating that, *"Hawaii's natural beauty is both an irreplaceable asset and a part of the public trust. It is fragile and although often enhanced by man can easily be adversely affected. Measures must be taken to insure its protection, both now and in the future, for the enjoyment of Hawaii's residents and visitors"* (County of Hawaii, 2005).

According to the Hawaii County General Plan, the HCCC property is located within the South Hilo district. This area is characterized by the natural beauty of the South Hilo district which is dominated by Mauna Kea and Mauna Loa. From various locations in the area, there are

magnificent views of the mountains. Hilo Bay is an equally picturesque visual resource in Hilo. From Hilo Bay the land gently slopes upward towards Mauna Kea and Mauna Loa. Throughout the district there are numerous waterfalls including the famous Akaka Falls as well as nearby Kahuna Falls, Rainbow Falls, and others (County of Hawaii, 2005).

The visual quality of the area around HCCC is characterized largely by residential development. Buildings are primarily one- or two-stories in height, have hip roofs, and have lawns and/or gardens surrounding the buildings. The homes directly across Komohana Street are located at a higher elevation than the majority of the HCCC site, thus maintaining the clear line of site from the homes past HCCC.

The visual features comprising the HCCC property are typical of a correctional facility with a large portion of the property already developed with inmate housing, support facilities, and parking lots. HCCC has existed on the site for over 40 years and although it has been expanded since its original 22-bed design in 1975, it maintains buildings that do not conflict with the surrounding residential uses. The buildings comprising HCCC are low profile with one- and two-story construction and have residential style roofs. Unlike more typical correctional facilities, HCCC does not employ high-powered security lighting, a perimeter patrol road, or guard towers.

The landscape within eastern Hawaii provides numerous vantage points and scenic views from which to enjoy the area's picturesque scenery and ocean vistas. While the views and vistas available to and from the HCCC property are attractive, they are not unique to the area. Exhibit 3-5 illustrates visual features within and around the HCCC property.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, so visual and aesthetic resources would not be affected, and mitigation measures would not be necessary.

Under the preferred alternative, immediately following the start of construction and throughout the construction phase, the aesthetic features and characteristics of only the housing unit building site would be altered. The use of construction equipment to develop the inmate housing unit would alter the aesthetic quality of the present environment. During this time, a small staging area would be established to temporarily store equipment and materials needed for construction along with a construction office trailer and a container for the storage of waste materials. Short-term impacts would occur from construction activities with the aesthetic quality of the building site restored soon after the completion of construction. Any aesthetic impacts during this phase would be short-term, lasting only for the time devoted to construction.

Following completion of construction, the principal visual impacts would be associated with the housing unit which would be a new feature to the HCCC landscape. However, potential aesthetic impacts would be minimized by placement of the structure at a slightly lower elevation than the adjoining Komohana Street. The building exterior and grounds would also be maintained to a high standard. Impacts on visual and aesthetic resources would be long-term (lasting for the duration the inmate housing unit is in use) and minor, the result of building development (see Appendix F). Operation of the housing unit would not result in any additional visual impacts.

Potential visual and aesthetic impacts would be mitigated by careful placement of the structure and committing to maintaining the structure and its surroundings to a high standard. No other mitigation measures are warranted.



**View of Proposed Building Site from Punahele Street**



**View of Existing HCCC Facilities**



**View of Proposed Building Site from Waianuenue Avenue**

**Exhibit 3-5: Visual and Aesthetic Conditions**

## 3.2.10 Fiscal Considerations

### Existing Conditions

Fiscal considerations are those having to do with the public treasury or revenue. Potential fiscal impacts could, but do not always, include removal of property from the public tax rolls; acquisition of property through use of public funds; and other public expenditures related to a proposed action (e.g., utility connections). Fiscal considerations of State-sponsored projects or actions, such as development of an inmate housing unit at HCCC, are important to local governments due to the possible loss of local tax revenues since State agencies typically do not pay property taxes or make similar payments to local governments for State institutions or facilities. In this case, the 4.25-acre HCCC property is under State of Hawaii ownership and control. These lands were removed from the tax rolls at the time they were acquired by the State of Hawaii and have not contributed tax revenues or similar payments since their acquisition.

### Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, so no fiscal impacts would occur, and mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Lands comprising HCCC are under state ownership and control and consequently have not contributed tax revenues or similar payments throughout the period of state ownership. Development of the inmate housing unit at HCCC would not affect the current ownership arrangement and, therefore, pose no adverse impacts on fiscal conditions for the State of Hawaii or Hawaii County. In the absence of impacts, no mitigation measures are warranted.

## 3.2.11 Natural Hazards

### Existing Conditions

#### *Earthquakes*

Earthquakes in the Hawaiian Islands are closely linked to volcanism. Beneath the Island of Hawaii numerous earthquakes occur every year. The Hawaiian Islands are affected by earthquakes resulting from two conditions. One condition is the movement of magma (molten rock) as it rises and intrudes fractures in the crust in volcanic eruptions or in advance of those eruptions. The other is settlement of the lithosphere (the upper part of the earth's crust) under the weight of the accumulated lava that has erupted from the Hawaiian volcanoes. While this settlement occurs over millions of years, it can also occur in sudden episodes (Wyss and Koyanagi, 1992).

The USGS National Seismic Hazard Mapping Project has prepared maps showing the magnitude of ground shaking events for specific probabilities of exceedance in a given time period throughout the Hawaiian Islands (Klein et al., 2001). The 10 percent chance for ground accelerations of 60 to 80 percent of the acceleration of gravity to occur in the next 50 years in the Hilo area. Earth materials vary in their response to seismic waves; firm rock tends to move the least, while loose unconsolidated materials shake more in a given earthquake. The ground acceleration probability estimates provided by the USGS apply to firm rock conditions. Exhibit 3-6 illustrates seismic conditions on Hawaii Island.

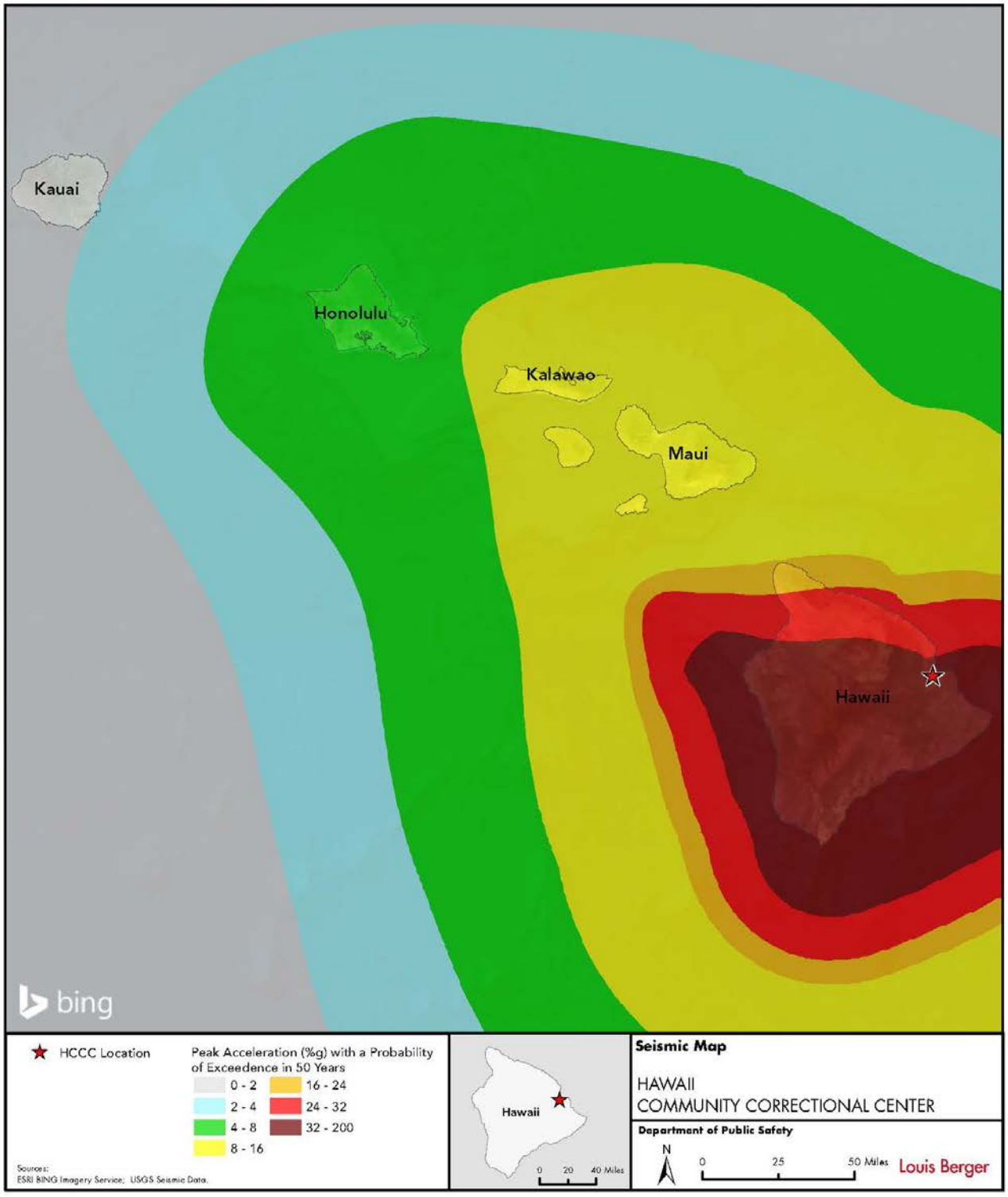



**Exhibit 3-6: Seismic Map**

### *Hurricanes*

Hurricanes are relatively infrequent and mild in Hawaii, with no authenticated reports of hurricanes in the Hawaiian region prior to 1950. The Hawaiian Islands are seasonally susceptible to Pacific hurricanes from the late summer to early winter months. While hurricanes are relatively rare in Hawaii, the state has experienced three major hurricanes since 1982: ʻIwa in 1982, ʻIniki in 1992, and most recently Lane, in August 2018. It is difficult to predict these natural occurrences, but it is reasonable to assume that future events will occur. The HCCC property, however, is no more or less vulnerable than the rest of Hawaii County to the destructive winds and torrential rains associated with hurricanes.

Several tornado funnel clouds occur over or near the islands during an average year, but most either fail to reach the ground or remain at sea as waterspouts. Hail events occur several times a year throughout Hawaii, but the hail is only a quarter inch or less in diameter and thus does little damage (NRCS, 1972).

### *Flood Hazards*

Officially designated floodplains and floodways are established by the Federal Emergency Management Agency (FEMA) where substantial flooding may result in property damage or threaten public safety. A FEMA-designated floodplain is the area that would be inundated by a 100-year storm (i.e., a flood which has the probability of occurring once every 100 years). A regulatory floodway is the portion of the 100-year floodplain within which the majority of the flood waters are carried. Encroachment into a floodway could result in increased flood elevations and possibly increase property damage during a storm event. For this reason, the locations of flood prone areas are important considerations in determining the development suitability of a site.

A review of the FEMA Flood Insurance Rate Maps shows the HCCC property located within Zone X, an area of minimal flooding (Exhibit 3-7). Zone X corresponds to areas outside the one-percent annual chance floodplain (otherwise known as the 100-year floodplain), areas of one-percent annual chance sheet flow flooding where average depths are less than one foot, areas of one-percent annual chance stream flooding where the contributing drainage area is less than one square mile, or areas protected from the one-percent annual chance flood by levees. No base flood elevations are shown within this zone and insurance purchase is not required in this zone (Hawaii NFIP, 2008).

### *Tsunamis*

A tsunami involves the generation of a series of destructive ocean waves that can affect all shorelines. The generation of these waves can occur at any time with limited or no warning, and persons in shoreline or beach areas are advised to move to higher ground immediately following notification of an impending tsunami.

Since the early 1880s, approximately 85 tsunamis have been reported in Hawaii (Hawaii Civil Beat, 2011). Seven caused major damage, and two were generated locally. According to Hawaii County Emergency Management Agency, the HCCC property is not located within the Tsunami Evacuation Zone (Exhibit 3-8) which requires evacuation following a tsunami warning (Hawaii County, 2018).

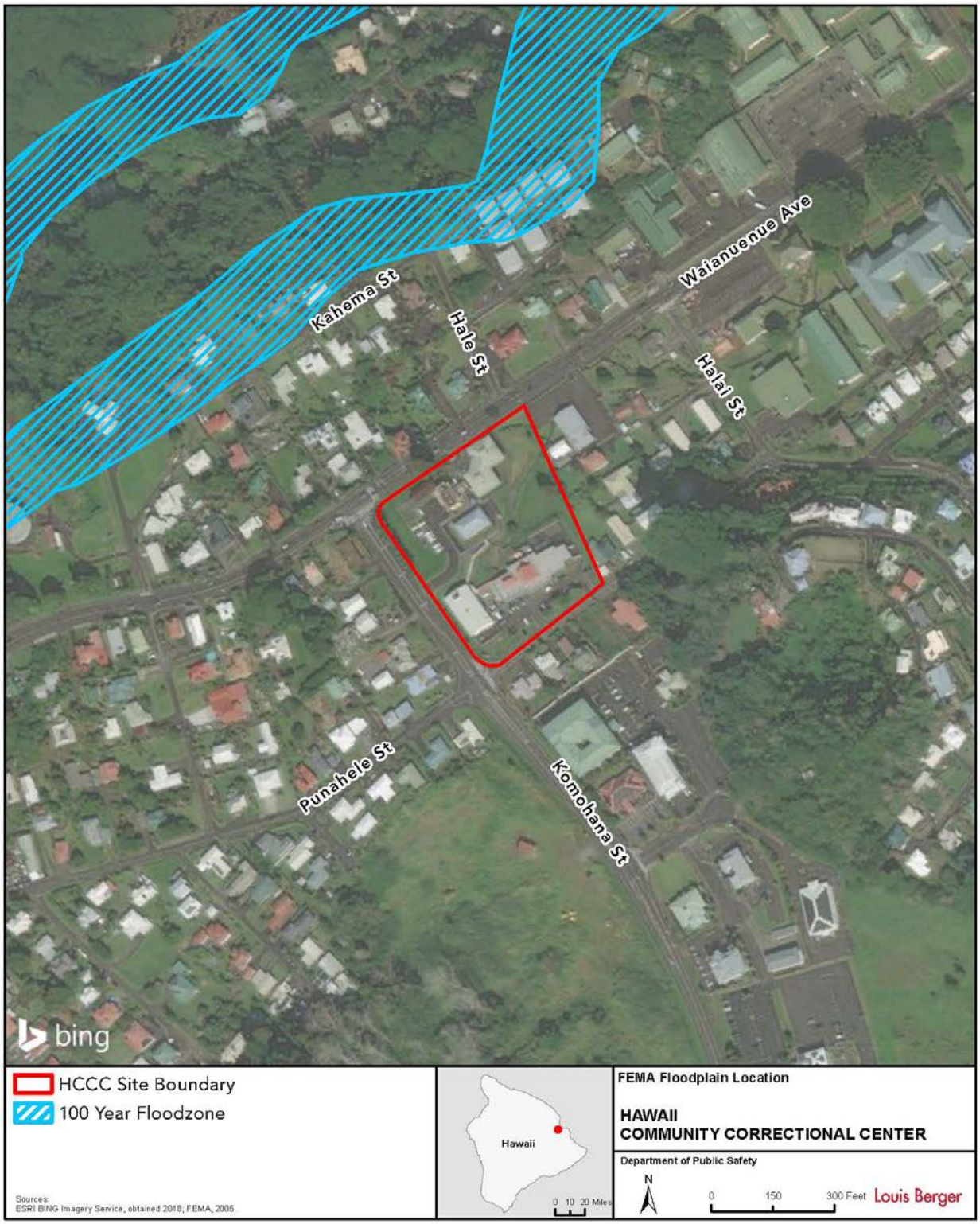



**Exhibit 3-7: FEMA Floodplain Location**

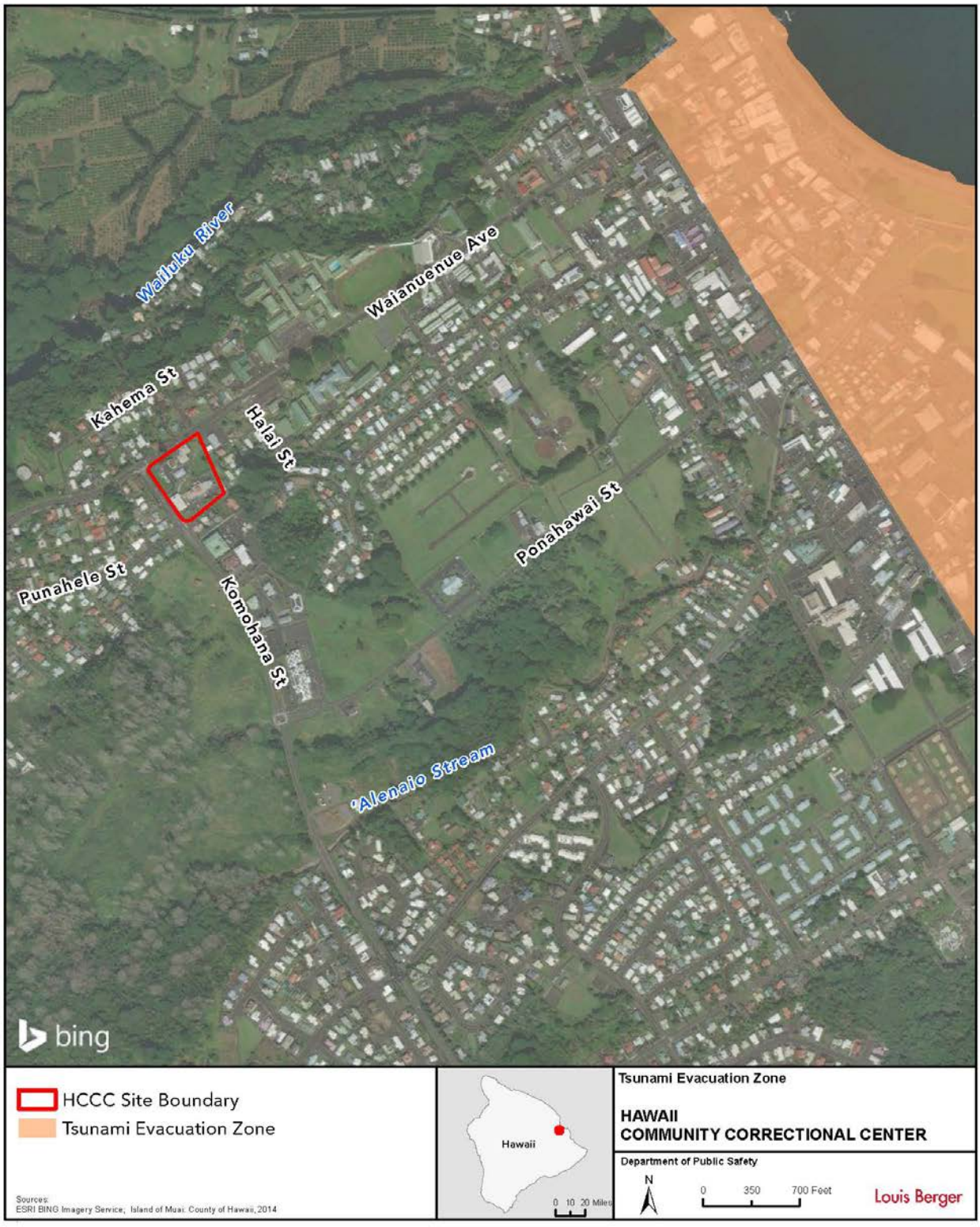



**Exhibit 3-8: Tsunami Evacuation Zones**

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. The HCCC property would remain in its current condition, so no impacts associated with natural hazards would occur, and mitigation measures would not be necessary.

The Island of Hawaii lies in a region with high seismic potential, therefore, the potential for impacts from earthquakes associated with volcanic activity is also high. Building design would take into consideration seismic potential and risk so as to develop the housing unit capable of withstanding seismic events. Other geologic hazards such as landsliding, erosion, and subsidence have a low probability of occurring within the HCCC property. The proposed building site is relatively level and the area is not susceptible to undue erosion or landsliding.

The proposed project would involve installation of a small area of additional impervious surface. As a result, a slight increase in the volume of storm water runoff is anticipated. With the project site located outside the FEMA designated100-year floodplain, no direct or indirect impacts to flood prone areas are expected. In addition, the threat of tsunami inundation is low as the project site is located outside of the mapped Tsunami Evacuation Zone. Furthermore, operation of the proposed inmate housing unit would not result in any direct discharge into surface or subsurface waters or result in any alteration of surface or subsurface water quality. Therefore, no mitigation measures would be required.

# 3.3 Community and Regional Characteristics

## 3.3.1 Demographic Characteristics

## Existing Conditions

The population of the State of Hawaii, including the County of Hawaii, has been steadily increasing over the past 25 years. Between 2000 and 2010, the population of Hawaii increased by 12.3 percent while Hawaii County experienced a population increase of 24.5 percent (Table 3-1). According to the American Community Survey, the population of Hawaii increased by 17.7 percent between 2000 and 2015 while the population of Hawaii County increased by 23.1 percent.

**Table 3-1: Population Trends and Characteristics**

| Characteristics | State of Hawaii | Hawaii County | Hawaii County % of State Total |
|---|---|---|---|
| 1990 Population | 1,108,229 | 120,317 | 10.9% |
| 2000 Population | 1,211,537 | 148,677 | 12.3% |
| 2010 Population | 1,360,301 | 185,079 | 13.6% |
| 2015 Population | 1,425,557 | 191,482 | 13.4% |
| Population % Change 1990–2000 | 9.3% | 23.6% | N/A |
| Population % Change 2000–2010 | 12.3% | 24.5% | N/A |
| Population % Change 2000–2015 | 17.7% | 23.1% | N/A |

Sources: U.S. Census, 1990, 2000, 2010 and American Community Survey, 2015.

In 2000, approximately 608,671 (50.2 percent) of the state's 1,211,537 residents were male and 602,866 (49.8 percent) were female. During this same time frame, 74,449 (approximately 50.1% percent) of Hawaii County residents were male and 74,178 (approximately 49.9% percent) were female. The U.S. Census reports that during 2010, approximately 681,243 (approximately 50.0 percent) of the state's 1,360,301 residents were male and 679,058 (approximately 50.0 percent) were female. During this same time frame, 90,447 (approximately 50.1 percent) of Hawaii County residents were male and 89,915 (approximately 49.9 percent) were female (Table 3-2).

In 2000, the age cohort with the highest population in the state of Hawaii was between the ages of 18 and 59 (708,769 residents); by 2010 the total had risen to 711,196. The second most populated age cohort in Hawaii in 2000 was the under 18 age group with 295,767 residents which had risen to 303,818 by 2010. Hawaii County followed a similar trend as that for the state as a whole. In 2000, the largest age group in Hawaii County was between the ages of 18 and 59 (79,735 residents); by 2010 the total had risen to 102,423. The second most populated age group in Hawaii County in 2000 was the under 18 age group with 42,820 residents which had declined to 42,280 by 2010 (Table 3-2).

**Table 3-2: Age and Gender Characteristics**

| Characteristics | State of Hawaii | | Hawaii County | |
|---|---|---|---|---|
| | 2000 | 2010 | 2000 | 2010 |
| Male | 608,671 | 681,243 | 74,449 | 90,447 |
| Female | 602,866 | 679,058 | 74,178 | 89,915 |
| Under 18 years of age (all) | 295,767 | 303,818 | 42,820 | 42,280 |
| 18 to 59 years of age (all) | 708,769 | 711,196 | 79,735 | 102,423 |
| 60+ years of age (all) | 207,001 | 243,893 | 26,122 | 40,376 |

Sources: U.S. Census, 2000, 2010.

According to the 2000 Census, the majority of residents of the State of Hawaii were classified as Asian, comprising 503,868 residents or 42 percent of the population. The remainder of the state's population is classified as White (294,102 residents or 25 percent), Two or More Races (259,343 residents or 21 percent), Native Hawaiian or Other Pacific Islander (113,539 residents or nine percent), African American (22,003 residents or two percent), Some Other Race (15,147 residents or one percent), and American Indian and Alaska Native (3,535 residents or less than one percent). Of the total population of Hawaii, 87,699 residents, or seven percent, identified as Hispanic (Table 3-3).

By 2010, the racial composition of Hawaii remained largely unchanged. Approximately 36.1 percent were classified as Asian with 525,078 residents. The remainder of the state's population was classified as White (309,343 residents or 21.2 percent), Two or More Races (320,629 residents or 22 percent), Native Hawaiian or Other Pacific Islander (135,422 residents or 9.3 percent), African American (21,424 residents or 1.5 percent), Some Other Race (16,985 residents or one percent), and American Indian and Alaska Native (4,164 residents or less than one percent). Of the total population of Hawaii, 120,842 residents, or 8.3 percent, identified as Hispanic in 2010 (Table 3-3).

According to the 2000 Census, the majority of the residents of Hawaii County were classified as White with 31.5 percent of the population (46,904 residents). The remainder of the population

was composed of Asian residents (26.7 percent or 39,702 residents), those who identify with Two or More Races (28.4 percent or 42,288 residents), Native Hawaiian and Other Pacific Islander (11.2 percent or 16,724 residents), African American (less than 1 percent or 698 residents), Some Other Race (1.1 percent or 1,695 residents), and American Indian or Alaska Native (less than 1 percent or 666 residents). Of the total population of Hawaii County in 2000, 9.5 percent or 14,111 residents identified as Hispanic (Table 3-3).

By 2010, the racial composition of Hawaii County remained largely unchanged. According to the 2010 Census, the majority of the residents of Hawaii County were classified as White with 33 percent of the population (61,035 residents). The remainder of the population was composed of Asian residents (24 percent or 44,461 residents), Two or More Races (26.2 percent or 48,509 residents), Native Hawaiian and Other Pacific Islander (11.3 percent or 20,832 residents), African American (0.6 percent or 1,083 residents), Some Other Race (2.1 percent or 3,801 residents), and American Indian or Alaska Native (0.3 percent or 641 residents). Of the total population of Hawaii County in 2010, 11.6 percent or 21,383 residents identified as Hispanic (Table 3-3).

**Table 3-3: Race**

| Characteristics | | State of Hawaii | | Hawaii County | |
|---|---|---|---|---|---|
| | | 2000 | 2010 | 2000 | 2010 |
| Race | White | 294,102 (25%) | 309,343 (21.2%) | 46,904 (31.5%) | 61,035 (33.0%) |
| | African American | 22,003 (2%) | 21,424 (1.5%) | 698 (0.3%) | 1,083 (0.6%) |
| | American Indian and Alaska Native | 3,535 (>1%) | 4,164 (>1%) | 666 (0.3%) | 641 (0.3%) |
| | Asian | 503,868 (42%) | 525,078 (36.1%) | 39,702 (26.7%) | 44,461 (24.0%) |
| | Native Hawaiian/Other Pacific Islander | 113,539 (9%) | 135,422 (9.3%) | 16,724 (11.2%) | 20,832 (11.3%) |
| | Some Other Race | 15,147 (1%) | 16,985 (1%) | 1,695 (1.1%) | 3,801 (2.1%) |
| | Two or More Races | 259,343 (21%) | 320,629 (22%) | 42,288 (28.4%) | 48,509 (26.2%) |
| | Hispanic | 87,699 (7%) | 120,842 (8.3%) | 14,111 (9.5%) | 21,383 (11.6%) |

Sources: U.S. Census, 2000, 2010.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. HCCC would remain in its current condition, and population groups residing on the Island of Hawaii would not be affected. In the absence of impacts, mitigation measures would not be necessary.

Under the proposed action, the inmate housing unit would be constructed within the HCCC property, and in doing so, an increased demand for construction workers involved in masonry, electrical, plumbing and similar trades along with supervisory personnel is expected to occur. Potential impacts on Hawaii County's population during the construction phase depend on the duration of construction, the number of construction jobs required, and the ability of the local labor market to fill those positions. It is anticipated that any increased demand among the island's construction workforce is expected to be slight and temporary, lasting only for the duration of construction and easily accommodated by the current island workforce. As a result, permanent population impacts directly attributable to construction are not expected.

Following construction, up to 144 inmates originating from Hawaii County and already housed at HCCC would occupy the housing unit, thereby posing no change (increase or decrease) to the population of the county. Operation of the proposed housing unit would also avoid permanent impacts on population groups or employment. No population groups or businesses would be relocated or removed as a result of the proposed project and no sensitive population groups (e.g., children, minorities, seniors, and handicapped) are expected to be adversely affected. As a result, no significant adverse demographic impacts are anticipated.

The majority of direct employment opportunities (during construction) resulting from the project are expected to be filled from the existing resident population of Hawaii County, which should easily accommodate the needs of the proposed housing unit without significant adverse impacts or the need for mitigation measures.

## 3.3.2 Economic Characteristics

## Existing Conditions

Of Hawaii's 612,831 person labor force, approximately 5.8 percent (35,886 persons) were unemployed in 2000 (U.S. Census, 2000). Of the state's 714,067-person labor force, approximately 3.6 percent (38,015 persons) were unemployed in 2010 (Table 3-4). The largest employment industry in Hawaii in 2000 was the educational, health, and services sector, with 102,254 jobs. This sector was followed by the arts and entertainment industry, with 86,189 jobs. The retail trade reported 65,693 jobs in Hawaii. By 2015, the unemployment rate in the state had risen to 3.7 percent or 42,288 persons (American Community Survey, 2015). The largest industry in Hawaii in 2015 was Educational services, and health care and social assistance, with 133,756 jobs followed by Arts, entertainment, and recreation, and accommodation and food services, with 106,307 jobs. Retail trade reported 65,693 jobs in Hawaii in 2015.

In 2010, Hawaii County had an unemployment rate higher than that of the state with 7,199 (7.7 percent) of its workers being unemployed (Table 3-4). In 2010, Educational Services, and health care and social assistance represented the largest employment sector in Hawaii County with approximately 16,162 jobs in the sector. This sector is followed by Arts, entertainment, and recreation, and accommodation and food services (14,809 jobs), Retail trade (10,922 jobs), Construction (9,450), and Professional, scientific, and management, and administrative and waste management services (7,858). By 2015, the Hawaii County unemployment rate had increased, remaining higher than that of the state with 7,279 (8.1 percent) of its 89,572 person labor force reporting unemployment. The Educational Services, and health care and social assistance industry represented the largest employment sector in Hawaii County with approximately 15,919 jobs in the sector followed by Arts, entertainment, and recreation, and accommodation and food services (13,593 jobs), and retail trade (11,022 jobs).

**Table 3-4: Labor Force and Unemployment**

| Characteristics | State of Hawaii | | Hawaii County | |
|---|---|---|---|---|
| | 2000 | 2010 | 2010 | 2015 |
| Labor Force | 612,831 | 714,067 | 93,190 | 89,572 |
| Unemployed | 35,886 | 38,015 | 7,199 | 7,279 |
| Unemployment Rate | 5.8% | 3.6% | 7.7% | 8.1% |

Sources: U.S. Census, 2000, 2010 and American Community Survey, 2015.

Hawaii's major industries include tourism, scientific technology, papayas, macadamia nuts, cattle, orchids, aquaculture, and Kona coffee, which is the only gourmet coffee grown in the United States. Tourism activities include deep sea fishing, golfing, sailing, horseback riding, hiking, tennis and scuba diving. As with all the Hawaiian Islands, tourism is a major component of the Hawaii County economy, evidenced by the number of jobs in the lodging and food industries.

According to the U.S. Census, the median household income in Hawaii County in 2000 was $10,015, less than the median household income of the state ($49,820). By 2010, the median household income in the state had increased to $69,515, while Hawaii County increased from $39,805 to $54,966 (Table 3-5). In 2000, the state as a whole reported considerably higher per capita income ($29,403) than Hawaii County ($18,791). Per capita income in the state increased from $29,403 in 2000 to $41,724 in 2010, while Hawaii County increased from $18,791 to $26,194.

According to the U.S. Census, approximately 126,154 of the state's 1,211,537 residents (10.4 percent) reported incomes below the poverty level in 2000, increasing to 11.2 percent in 2010. By comparison, Hawaii County had 15.7 percent (22,821 residents) of its population reporting incomes below the poverty level in 2000 and 14.4 percent (26,651 residents) in 2010.

**Table 3-5: Income and Poverty Status**

| Characteristics | State of Hawaii | | Hawaii County | |
|---|---|---|---|---|
| | 2000 | 2010 | 2000 | 2010 |
| Median Household Income | $49,820 | $69,515 | $39,805 | $54,966 |
| Per Capita Personal Income | $29,403 | $41,724 | $18,791 | $26,194 |
| Population Below Poverty Level (Persons) | 126,154 | 152,353 | 22,821 | 26,651 |
| Percent Below Poverty Level (Persons) | 10.4% | 11.2% | 15.7% | 14.4% |

Sources: U.S. Census, 2000, 2010.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. HCCC would remain in its current condition, and the economy or economic conditions

involving residents and businesses on the Island of Hawaii would not be affected. In the absence of impacts, mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Construction and operation of the housing unit would generate impacts on the island's economy. The project's construction budget, estimated at approximately $15 million (2018 dollars), would generate construction employment and materials purchases which, although temporary in nature, would involve both manpower and material resources from the island. Use of these resources would generate further spending while supporting indirect employment. The increased economic activity resulting from construction spending is considered beneficial to the island's economy and a positive impact.

The proposed project is not anticipated to induce growth in the Hilo area, and no businesses or other economic activities would be displaced or eliminated because of the project. Development and operation of the proposed inmate housing unit would not change the number of inmates held at HCCC because the unit would be occupied by inmates already housed at HCCC.

The potential economic impacts from construction and operation are considered to be beneficial because employment and economic opportunities would be provided to Hawaii County residents and business owners. Because economic impacts resulting from project construction and operation would be beneficial, no mitigation measures are required.

### 3.3.3 Housing Characteristics

## Existing Conditions

According to the 2000 U.S. Census, a total of 460,524 housing units existed in the State of Hawaii, of which approximately 87.6 percent (403,419 units) were occupied and 12.4 percent (57,105 units) were vacant. Of the occupied units, 260,196 (56.5 percent) were owner-occupied and 200,238 (44.5 percent) were renter-occupied. In 2000, median value of an owner-occupied unit in Hawaii was $272,700 and the median monthly contract rent was $721. Average household size in the state was 2.92 and the median number of rooms in a home was 4.3.

By 2010, there were a total of 519,508 housing units in the State of Hawaii, of which about 87.6 percent (455,338 units) were occupied and 12.4 percent (64,170 units) were vacant (Table 3-6). Of the occupied units, 262,682 (50.5 percent) were owner-occupied and 192,656 (37.1 percent) were renter-occupied. In 2010, the median value of an owner-occupied unit in the State of Hawaii was $529,700 and the median monthly contract rent was $1,116. Average household size in the state was 2.88 and the median number of rooms in a home was 4.6.

**Table 3-6: Housing Characteristics**

| Characteristics | State of Hawaii | | Hawaii County | |
|---|---|---|---|---|
| | 2000 | 2010 | 2000 | 2010 |
| Average Household Size | 2.92 | 2.88 | 2.92 | 2.73 |
| Number of Housing Units | 460,524 | 519,508 | 62,674 | 79,771 |
| % Occupied Units | 87.6% | 87.6% | 84.5% | 80.7% |
| % Owner-Occupied | 56.5% | 57.6% | 65.0% | 66.2% |

| Characteristics | State of Hawaii | | Hawaii County | |
|---|---|---|---|---|
| | 2000 | 2010 | 2000 | 2010 |
| % Renter-Occupied | 44.5% | 42.4% | 35.0% | 33.8% |
| % Vacant Units | 12.4% | 12.4% | 16.0% | 19.3% |
| Median Number of Rooms | 4.3 | 4.6 | 4.3 | 4.7 |
| Median Home Value | $272,700 | $529,700 | $153,700 | $361,400 |
| Median Year Housing Built | 1974 | 1974 | 1980 | 1982 |
| Median Monthly Contract Rent | $721 | $1,116 | $645 | $1,009 |

Sources: U.S. Census, 2000, 2010.

In 2000, there were a total of 62,674 housing units in Hawaii County, of which approximately 84.5 percent (52,959 units) were occupied and 16 percent (10,027 units) were vacant. Of the occupied units, 40,738 (65 percent) were owner-occupied and 21,935 (35 percent) were renter-occupied. Regarding the cost of housing in Hawaii County, the 2000 U.S. Census reported the median value of an owner-occupied unit to be $153,700 and the median monthly contract rent to be $645. Average household size in the county was 2.92 and the median number of rooms in a home was 4.3.

By 2010, there were a total of 79,771 housing units in Hawaii County, of which approximately 80.7 percent (64,375 units) were occupied and 19.3 percent (15,395 units) were vacant. Of the occupied units, 52,808 (66.2 percent) were owner-occupied and 26,962 (33.8 percent) were renter-occupied. Regarding the cost of housing in Hawaii County, the 2010 U.S. Census reported the median value of an owner-occupied unit to be $361,400 and the median monthly contract rent to be $1,009.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. HCCC would remain in its current condition, and the availability, supply, or cost of housing on the Island of Hawaii would not be affected. In the absence of impacts, mitigation measures are not warranted.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Development and operation of the proposed inmate housing unit would not change the number of inmates held at HCCC because the unit would be occupied by inmates already housed at HCCC. In the absence of additional inmates at HCCC, adverse impacts the island's housing market (i.e., housing availability, supply, and cost) are not anticipated. Because the proposed project would have no significant adverse impact on the island's housing market, no mitigation measures are required.

# 3.3.4 Community Services

## Existing Conditions

### *Police Protection*

Law enforcement in Hawaii County is provided by the Hawaii County Police Department (HCPD). Hawaii County is home to eight police stations with the main station located at 349

Kapiolani Street in South Hilo. HCCC is located within the Hilo Patrol District and is serviced by the Hilo Police Station. For fiscal year 2015-2016, the HCPD had a budget of $60,362,138.

## Fire Protection

The Hawaii Fire Department is responsible for fire protection and suppression, pre-hospital emergency medical services, land and sea search and rescue, hazardous materials response, ocean safety, and fire prevention and public education for the County of Hawaii. The department comprises 20 full-time fire/medic stations, and 20 volunteer fire stations. It maintains over 60 pieces of equipment for use in emergencies that may occur on the island. For firefighting purposes, Hawaii County is divided into two battalion areas, East and West, with the closest fire station to HCCC being the Hilo Station, located in the Eastern Battalion area.

The Department comprises the following functional areas: administration division, operations division, emergency medical division, volunteer division, training division, fire prevention division, and communications division. The Department also relies on a large number of volunteer firefighters to assist with operations.

## Medical Care

Southern Hawaii County is serviced by two hospitals, the Hilo Medical Center (HMC) and Hale Ho'ola Hamakua Hospital (HHH). HMC is among the largest employers in Hilo, with over 1,100 employees and a medical staff comprised 250 community physicians, physician assistants and Advanced Practice Registered Nurses, representing 33 specialties. Established in 1897, HMC has grown from a 10-bed hospital, erected by the Hawaiian Government, to the present facility of 157 licensed beds for acute care and 35 beds for long-term care. As a medical center, HHH has a network of nine outpatient clinics offering primary and specialty care. The hospital is a Level III Trauma Center which includes the second busiest emergency room in the state that provides 24-hour care to more than 49,000 patients annually. Built in 1984, the facility is located on some 20.5 acres of land adjacent to the Wailuku River.

Hale Ho'ola Hamakua, originally known as Honoka'a Hospital, is a 77-bed Critical Access Hospital located in the town of Honokaa'a and serving the healthcare needs of the communities of Hamakua, North Hawaii and South Kohala. HHH offers emergency, acute and long-term care, and laboratory and X-ray services. Additional services available include physical therapy, occupational therapy and speech therapy. HHH also maintains 11 swing beds available to patients with acute needs or skilled care needs. Services range from antibiotics and IV fluids to wound care and inpatient rehabilitation services.

## Public Education

There are 64 elementary and intermediate schools operating in Hawaii County that are organized into "complexes." A "complex" consists of a high school and all of the intermediate/middle and elementary schools that flow into it. When two to four complexes are grouped, they create a "complex area" that is under the supervision of a complex area superintendent. HCCC is located in the Hilo-Waiakea complex area. Within this complex area are elementary and intermediate schools including DeSilva Elementary School, Haaheo Elementary School, Hilo Intermediate School, Hilo Union Elementary School, Kalanianaole Elementary and Intermediate School, Kapiolani Elementary, Kaumana Elementary, Keaukaha Elementary, Connections Charter School, Ka' Imeke Ka'eo Charter School, and Ke Ana La'ahaha Charter School (HIDOE, 2019). Hilo High School and Hilo Intermediate School are located within 1,000 feet (northeast) of HCCC.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. HCCC would remain in its current condition, and community facilities and services involving law enforcement, fire protection, medical care, and public education the Island of Hawaii would not be affected. In the absence of impacts, mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. PSD staff are equipped to handle virtually all emergency situations that may arise during operation of HCCC. Nonetheless, the Hawaii County Police Department would be relied on to assist PSD staff, if necessary, in the event of an emergency or other incident at the facility (an unusual occurrence based on PSD experience operating HCCC and similar facilities). HCCC staff would contact Hawaii County law enforcement personnel in the event of an incident and would seek assistance as appropriate. Based on many years of experience operating HCCC, significant adverse impacts on law enforcement services are not anticipated as a result of the proposed project. Consequently, no mitigation measures, outside the need to coordinate and communicate facility operating activities with county law enforcement officials, are warranted.

Fire stations are located throughout the county with a station located near HCCC in Hilo. To guard against fire emergencies, PSD and its HCCC staff take stringent precautions. The proposed housing unit would be designed, constructed, and operated in compliance with applicable fire and life safety codes. Furthermore, PSD would guard against fire emergencies via facility operating policies and procedures; periodic inspections; fire prevention and evacuation planning; among other activities. PSD would also provide the appropriate fire suppression equipment onsite, while relying on the local fire company, as necessary, for assistance. No situations are expected to arise that would place an undue burden on Hawaii County Fire Department manpower or equipment resources. Significant adverse impacts on fire protection services are not anticipated as a result of the proposed project. Therefore, no mitigation measures, except for the need to coordinate and communicate with appropriate county fire protection personnel, are warranted.

Development and operation of the proposed inmate housing unit would not change the number of inmates held at HCCC because the unit would be occupied by inmates already housed at HCCC. In the absence of additional inmates at HCCC, significant adverse impacts on medical services and facilities in Hawaii County are not anticipated. PSD would maintain current arrangements with area hospitals for providing emergency medical services to HCCC. In addition, with PSD providing for many routine medical treatments and emergencies onsite, significant adverse impacts on emergency medical services are not anticipated as a result of the proposed project.

Local hospitals and emergency medical service providers are expected to accommodate any demand for service resulting during construction and operation of the inmate housing unit without adverse impact. Because operation of the proposed housing unit is not expected to pose significant adverse impacts on medical services and facilities, no mitigation measures are required.

Development and operation of the proposed inmate housing unit would not change the number of inmates held at HCCC because the unit would be occupied by inmates already housed at HCCC. In the absence of additional inmates at HCCC, no significant adverse impacts on public schools and services in Hawaii County are anticipated. Because changes (increases or decreases) in the school-age population or enrollments are not expected, no mitigation measures are warranted.

## 3.3.5 Land Use and Zoning

## Existing Conditions

### *Land Use*

HCCC is located in a highly developed urban area of Hilo. The 4.25-acre property (TMK 2-3-023:005; Exhibit 3-9) is currently developed and contains inmate housing, administrative and program structures, maintenance buildings and storage areas, and vehicle access and parking areas. Land uses surrounding the HCCC property include residential, commercial and institutional uses. The proposed location for the housing unit is the northwestern portion of the property. Currently, this area of HCCC largely comprises a parking lot and outdoor storage area.

The Hawaii State Land Use Law (Chapter 205, HRS) created the State Land Use Commission, which placed all lands in the state into one of four districts: Urban, Rural, Agricultural, and Conservation. The HCCC property is located within the Urban land use district. The Land Use Commission's website indicates that this district "*generally includes lands characterized by 'city-like' concentrations of people, structures and services*" and that "jurisdiction of this district lies primarily with the respective counties" (Hawaii Land Use Commission, 2008).

### *Zoning*

Zoning in Hawaii County is regulated by Chapter 25 of the Hawaii County Code. The purpose and intent of this ordinance is to promote the health, safety, morals, and general welfare of the people of the county by regulating and restricting the height, size of buildings, and other structures, percentage of a building site that may be occupied, off-street parking, setbacks, size of yards, courts, and other open spaces, density of population, and location and use of buildings, structures, and land for trade, industry, residence, or other purposes (County of Hawaii, 1999). The HCCC property is zoned RS-7.5, Single-Family Residential, with a minimum lot-size requirement of 7,500 square feet.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. HCCC would remain in its current condition, and land use or zoning would not be affected. In the absence of impacts, mitigation measures would not be necessary.

The proposed housing unit would be located within the northwest portion of the HCCC property. Potential land use impacts would be minimized by selection of a location within a portion of the HCCC property that would be less visible by private residences and commercial developments than other areas of the property.

The proposed project would have a direct impact on land use by transforming a parking lot and outdoor storage area at HCCC to inmate housing. However, the self-contained nature of HCCC would limit potential direct impacts on the property with no adverse impacts on adjoining private properties or values of such properties. If nearby property values have any positive or negative effects, they would likely occur from factors unrelated to the proposed project.

Because no significant adverse impacts on area land uses or property values are anticipated, no mitigation measures are required. To ensure that the project is consistent with applicable local regulations and ordinances, coordination with applicable Hawaii County planning and development officials would be necessary.




**Exhibit 3-9: Tax Map Key—HCCC**

## 3.3.6 Utility Services

## Existing Conditions

### *Water Supply*

HCCC, along with most of residences, businesses and industries on the island are served with potable water by the Hawaii County Department of Water Supply (DWS). The majority of the raw water used by DWS is obtained from groundwater wells located in various aquifers across the island with a total production capacity of over 20 million gallons per day (mgd). DWS also has one surface water treatment facility located on the Kohakohau Stream at the Marine Dam. This facility, combined with a deep-well into the Waimea aquifer, has a capacity of approximately 4.0 mgd and an average daily production rate of approximately 2.0 mgd. DWS operates approximately 1,900 miles of water distribution mains across the island ranging in diameter from 1.5 inches to 24 inches along with water storage tanks totaling approximately 9.0 million gallons.

The main meter for HCCC is located on Punahele Street and consists of a four-inch by two-inch combination fire suppression and potable water supply meter. This meter is connected to an eight-inch ductile iron water main that extends the length of the HCCC property along Punahele Street which, in turn, is supplied by a 12-inch water main along Komohana Street. The 12-inch main is connected to a one million gallon storage tank located on Punawai Street, approximately 0.2 miles from HCCC. This is also a six-inch cast iron water main along Waianuenue Avenue. There also appears to be a 1.5-inch backflow preventer adjacent to Komohana Street that could potentially be another potable water connection. With approximately 387 inmates housed at HCCC (PSD, November 30, 2018), utilizing approximately 100 gallons per inmate per day, the estimated average water demand is approximately 38,700 gallons per day. There are no known limitations to the provision of water supply in the area of HCCC.

### *Wastewater Collection and Treatment*

The Hawaii County Department of Environmental Management, Wastewater Division (DEM) is responsible for operating and maintaining the public wastewater collection and treatment systems. HCCC lies within the service area of the Hilo Wastewater Treatment Plant. The plant provides secondary treatment with chlorine disinfection and has a deep ocean outfall.

HCCC currently discharges wastewaters into a 10-inch vitrified, salt-glazed pipe located in Waianuenue Avenue through a single connection. There are also 12-inch and 15-inch reinforced concrete sewer lines located adjacent to the facility in Komohana Street and Punahele Street, respectively. Wastewater from HCCC and the surrounding area is conveyed to the wastewater treatment plant via two pump stations: Wailoa and Pua. With approximately 387 inmates housed at HCCC (PSD, November 30, 2018), the estimated average daily wastewater flow is approximately 90 percent of total water demand or 34,800 gallons per day. There are no known limitations to the provision of wastewater collection and treatment services in the vicinity of HCCC.

### *Electrical Power*

The Hawaii Electric Light Company (HELCO) provides power to residences, businesses and industries throughout Hawaii County. Adjacent to HCCC, there is a 12.47-kilovolt (KV) overhead distribution circuit on Komohana Street and a 13.8-KV overhead distribution circuit on Waianuenue Avenue. The 12.47-KV circuit is fed by the 10.0 megavolt-ampere (MVA)

Komohana substation and the 13.8-KV circuit is fed by the 7.5-MVA Puueo substation. There are no known limitations to the provision of electric power in the area of HCCC.

### *Propane Gas*

The Gas Company has a localized distribution system comprising approximately 72 miles of gas mains and service lines that range from one-half inch to four inches in diameter. HCCC is supplied by a 1.25-inch high density, polypropylene distribution line located along Waianuenue Avenue. There are no known limitations to the provision of gas service to HCCC.

### *Telecommunications*

Hawaiian Telcom is the primary telecommunications provider for Hawaii County. Hawaiian Telcom maintains overhead telecommunications lines on Komohana Avenue, Punahele Street and Waianuenue Avenue that border upon HCCC. The provision of telecommunications service in the area of HCCC has no known limitations.

### *Solid Waste*

The County's solid waste management facilities are comprised of 22 recycling and transfer stations and two landfills; the South Hilo Sanitary Landfill which services much of the eastern portion of the island, and the West Hawaii Sanitary Landfill which services the western portion. Disposal of solid wastes generated at HCCC occurs at the South Hilo Sanitary Landfill. Approximately 50 percent of the wastes originate from residential customers with the remainder from commercial customers. The landfill has separate yards for scrap metal and white goods, as well as for green wastes. Solid wastes generated at HCCC by the current population of 387 inmates total approximately two pounds per inmate per day or 12 tons per month. Solid wastes are stored in enclosed containers that are collected by a private carter as necessary for disposal.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. HCCC would remain in its current condition, and the availability or provision of water supply, wastewater treatment, power, propane gas, telecommunications, or solid waste disposal services on the Island of Hawaii would not be affected. In the absence of impacts, mitigation measures would not be necessary.

### *Water Supply*

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Provision of such housing is not intended to increase the inmate population of HCCC beyond its current number; instead, existing inmates would be accommodated in a modern housing unit designed and constructed to State of Hawaii and national standards. As a result, water demand at HCCC would not increase beyond the current volume.

Because the proposed project would not increase the inmate population at HCCC or increase in water demand or consumption, no significant adverse impacts on the provision of water supply are anticipated, and no mitigation measures beyond communication and coordination with DWS and appropriate local building code authorities are warranted. Extension of the onsite water supply system to the housing structure would be carried out in accordance with applicable building and plumbing codes of Hawaii County.

### *Wastewater*

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. The primary source of wastewater from HCCC is domestic flows generated by the inmate population with flows typically occurring from 6:00 a.m. to 8:00 p.m. during periods of high water demand (i.e., meal preparation and personal hygiene).

Because the proposed project is not intended to increase the inmate population of HCCC beyond its current number, an increase in daily wastewater flow is not anticipated. Therefore, no significant adverse impacts on wastewater collection and treatment are anticipated, and no mitigation measures beyond communication and coordination with DEM and appropriate local building code authorities are warranted.

### *Electric Power*

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Electric power demands associated with interior illumination and other requirements of the proposed housing unit are expected to be equivalent to a large residential structure. The relatively low service demands anticipated can be easily accommodated by current power generating and distribution systems operated by HELCO. No changes to the electric distribution system are required to accommodate the proposed housing unit. Construction of the proposed housing structure would be carried out in accordance with applicable building and electrical codes of Hawaii County. It should be noted that PSD has an electrical/mechanical repair and improvement Capital Improvement Program underway that is expected to better manage power demands through installation of energy efficient equipment and various upgrades at HCCC and other PSD facilities.

There are no known limitations to the provision of electric service in the Hilo area and no adverse impacts are anticipated as a result of the proposed project. No mitigation measures, beyond coordination with HELCO and compliance with appropriate local building codes, are warranted.

### *Propane Gas*

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. There are no known limitations to the provision of gas service to HCCC, therefore, the small additional volume of gas which may be necessary to accommodate the hot water requirements associated with the proposed housing unit is not expected to adversely impact current or future gas customers on the island.

### *Telecommunications*

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. There are no known limitations to the provision of telecommunications service by Hawaiian Telcom in the area of HCCC. Occupancy and use of the proposed housing unit would not increase the inmate population and would not result in an increase in telecommunications activity by inmates.

There are no known limitations to the provision of telecommunications service in the Hilo area and no adverse impacts are anticipated as a result of the proposed project. No mitigation measures beyond coordination with Hawaiian Telcom and local authorities are anticipated.

### *Solid Waste*

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Construction of the proposed housing structure would generate solid wastes requiring collection and disposal by a commercial waste disposal contractor. However, given the relatively small scale of the proposed project, only small quantities of solid wastes are expected to result during the construction phase. The disposal of construction wastes would be the responsibility of the construction contractors involved, although efforts will be made to sort, segregate, and recycle a portion of the wastes. While the precise volume of construction-related solid wastes is unknown at this time, it is not expected to adversely impact solid waste collection and disposal services currently provided on the island. Solid wastes generated during construction would be managed and disposed of in accordance with applicable state and county guidelines and regulations and would be stored onsite in a container that would be removed for disposal as necessary.

Routine occupancy of the proposed housing structure would result in the generation of solid waste of a nature and quantity similar to that being generated currently as a result of normal HCCC operations. Development and operation of the proposed inmate housing unit would not change the number of inmates held at HCCC because the unit would be occupied by inmates already housed at HCCC; therefore, an increase in daily solid waste generation is not anticipated. The proposed project would also not generate significant quantities of toxic, medical, or hazardous wastes during occupation of the housing structure.

Because the project would not increase the inmate population at HCCC, the volume of solid waste would not increase and the waste collection and disposal operations on the island would not be affected. The storage, collection and disposal of solid wastes, in addition to efforts to sort, segregate and recycle a portion of the waste stream, would be conducted in accordance with current operating policies and procedures and applicable regulations. Solid wastes generated during use of the housing structures would be stored, handled, and either recycled or disposed of at appropriate facilities. No other mitigation measures are warranted.

## 3.3.7 Transportation Systems

## Existing Conditions

HCCC is bounded on three sides by Waianuenue Avenue, Komohana Street, and Punahele Street. Waianuenue Avenue is a four-lane major thoroughfare within a 56-foot right-of-way that serves business establishments, public institutions and facilities, recreational and cultural institutions as well as residential neighborhoods. It provides access between Hilo's central business district and upland residential areas and continues upland as the saddle road between Mauna Kea and Mauna Loa to connect with West Hawaii.

Waianuenue Avenue is intersected by several cross streets including some with traffic lights. Ingress and egress from abutting properties are permitted. There are curbs, gutters, and sidewalks on both sides of the street pavement and the posted speed limit is 30 miles per hour (mph). There is no on-street parking on Waianuenue Avenue adjacent to HCCC, however, several blocks away, towards Komohana Street, parking is allowed.

Komohana Street is a main connecting roadway between Waianuenue Avenue and Kawailani, a large residential district in South Hilo. This two-lane county road (within a 75-foot wide right-of-way) serves as a major access route to residential subdivisions in the area. There are curbs, gutters, and sidewalks on both sides of the street, but no on-street parking is allowed, and the posted speed limit is 35 mph. A traffic light controls movement through the Waianuenue

Avenue/Komohana Street intersection which is configured as a "T" intersection with Waianuenue Avenue as the through right-of-way.

Punahele Street is a local 40-foot wide right-of-way that provides mountainside-oceanside access through upper Hilo town. It has an approximately 20-foot wide pavement and no shoulders, curbs, gutters, or sidewalk. The posted speed limit is 25 mph. Punahele Street approaches the Komohana Street intersection at a stop sign.

On-site parking is provided at HCCC, including designated handicapped parking. Spaces are found at the Punahele Street parking lot, the Waianuenue Avenue parking lot, and the Komohana Street lot. Visitors and employees are allowed to park at any of these locations.

### *Potential Impacts and Mitigation Measures*

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. HCCC would remain in its current condition, and the local transportation network on the Island of Hawaii would not be affected. In the absence of impacts, mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. The construction phase is expected to minimally increase traffic volumes as a result of worker trips to and from the building site at HCCC and the movement of materials, supplies, and equipment along Waianuenue Avenue, Komohana Street, and Punahele Street. The number of construction workers onsite at any one time is not expected to exceed 25 individuals and, therefore, would represent only a slight increase in traffic volumes along area roadways. Truck deliveries would be distributed throughout the work day and would generally occur between the hours of 7:00 a.m. and 5:00 p.m., depending on the stage of construction. All such traffic would end following completion of the construction phase.

Development and operation of the proposed inmate housing unit would not change the number of inmates held at HCCC because the unit would be occupied by inmates already housed at HCCC. With no change to the number of inmates housed at HCCC, the number of visits by inmate family members, friends, attorneys, and others is also not expected to change. (The number, frequency, and duration of visits to HCCC are strictly controlled by PSD and are expected to remain low.) In the absence of additional inmates or visitors to HCCC, significant adverse impacts resulting from traffic volumes, movements, and patterns affecting Waianuenue Avenue, Komohana Street, and Punahele Street and the local transportation network in Hawaii County are not anticipated.

Because no significant adverse impacts on the area's transportation network are anticipated as a result of the proposed project, no mitigation measures are necessary. Nonetheless, PSD would encourage visitors to use carpools to reduce reliance on motor vehicles and minimize the potential for transportation impacts.

## 3.3.8 Climate

## Existing Conditions

The climate of the Island of Hawaii can be characterized as tropic and is unique in the differences in rainfall over short distances, mild temperatures, and the persistence of the northeasterly trade winds. The latitude of Hawaii is the major influence on the climate, because the State lies well within the geographic tropics. The climate is also influenced by the surrounding ocean, which has a moderating influence on temperature, and the Pacific anticyclone, from

which the trade winds flow. On the Island of Hawaii, the climate is further influenced by the topography, with every valley bottom, slope, and steep-sided ridge having its own localized climate (NRCS, 1972).

According to findings by researchers at the University of Hawaii (IPRC, 2013, var.), the effects of climate change are increasingly evident in Hawaii as well. This includes increases in air temperature, increases in rainfall intensity while total rainfall has decreased, decreases in stream flows, increases in sea surface temperatures and sea levels, and increased ocean acidity.

### *Precipitation*

The amount of rainfall in the Hawaiian Islands varies greatly. Over the open sea, rainfall averages between 25 and 30 inches a year, with the islands themselves receiving more than 10 times this amount in some places, and less than half in others. Except for Lanai, where maximum rainfall is about 50 inches, each of the major islands has regions in which the mean annual rainfall approaches or exceeds 300 inches. This variation is a result of the orographic, or mountain-caused, rain that forms within the moist air from trade winds going across the varying terrain of the islands. The resulting rainfall distribution closely resembles the topographic contours with rainfall greatest over windward slopes and crests and least toward the leeward lowlands. The lowlands obtain moisture chiefly from a few winter storms, and only small amounts from trade wind showers. Thus, rainfall in the normally dry areas is strongly seasonal with arid summers and small seasonal differences in the wetter areas, where rainfall is derived from both the winter storms and the year-round, trade-wind showers (NRCS, 1972). In the Hilo region, rainfall averages 126 inches per year, with a range of 7 to 15 inches per month.

The number of rainy days a year also varies widely from place to place. Deep cumulus clouds that build up over mountains and interiors on clear calm afternoons are another source of rainfall on the islands and are usually too brief and localized to contribute significantly to the total water supply. The heaviest rains in Hawaii result from winter storms, which can have large differences in rainfall over small distances because of the topography and the path and structure of the rain clouds. Another important, but often neglected, source of water is that directly extracted from passing clouds by vegetation and by the soil in areas where an elevation of 2,500 feet or more above msl brings them into the cloud belt. Conversely, the islands also experience drought, although it rarely affects more than part of even a single island at one time. Drought occurs when either the winter storms or the trade winds fail. The probability of serious drought somewhere in the State of Hawaii during any given 10-year period exceeds 90 percent (NRCS, 1972).

### *Temperature*

The mean annual temperatures in Hawaii vary between about 72 degrees and 75 degrees Fahrenheit (F), near sea level, decreasing by about three degrees F for each 1,000 feet of elevation, and tend to be higher in sunny dry areas. Temperatures are higher, for example, in the leeward lowlands, than in those areas that are cloudier, wetter, and more directly exposed to the trade winds. On the Island of Hawaii, the average high temperature is 80 degrees F and the average low is 65 degrees F.

The average difference between daily high and low temperatures on the Hawaiian Islands is between 10 degrees and 20 degrees F. Higher readings occur in areas that are lower, drier, and less open to the wind. There is little seasonal variation in temperatures, only six degrees to eight degrees F, with August and September being the warmest months of the year, and January and February the coolest. The seasonal variation is far below the daily variation, which results in more temperature change in the course of an average day than from season to season. Almost

everywhere at low elevations, the highest temperatures of the year are in the low 90 degrees F and the lowest temperatures near 50 degrees F (NRCS, 1972). The average month minimum and maximum temperatures for Hilo, Hawaii are shown in Table 3-7.

**Table 3-7: Minimum and Maximum Monthly Average Temperatures**

| Hawaii (°F) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month | Jan | Feb | Mar | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
| Maximum | 79 | 79 | 79 | 79 | 81 | 82 | 82 | 83 | 83 | 83 | 81 | 79 |
| Minimum | 64 | 64 | 65 | 66 | 67 | 68 | 69 | 69 | 69 | 69 | 67 | 65 |

Source: The Weather Channel.

### *Wind Speed and Direction*

The climate on the Island of Hawaii, as well as the other Hawaiian Islands, is heavily influenced by winds. The prevailing wind throughout the year is the east-northeasterly trade. The trades vary greatly in frequency being virtually absent for long periods and blowing for weeks on end at others. The winds are most persistent in the winter, but slightly stronger in the summer. In well-exposed areas, the trades average somewhat under 15 miles an hour, with winds exceeding 31 miles an hour only about two percent of the time by the trades and three percent by winds from other directions. Although trade winds are the most prevalent, the strongest and most damaging winds are those that accompany winter storms and the infrequent hurricanes. High winds occur most often between November and March and blow from almost any direction. Local winds are greatly influenced by local topography, ranging from a complete sheltering from winds from certain directions to winds that pass through narrow valleys and over crests, transforming a moderate wind into a strong and gusty one (NRCS, 1972).

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. HCCC would remain in its current condition, and climatic conditions and patterns (e.g., precipitation, temperatures, and wind speed and direction) on the Island of Hawaii would not be affected. In the absence of impacts, mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. However, construction is not expected to alter the microclimatology of wind and temperature at the site. Because of its small scale relative to its surroundings, the proposed housing unit would not alter or affect the larger-scale climatology of the area or have a significant impact on neighboring properties. The proposed project is not expected to result in significant emission of chlorofluorocarbons, halons, or greenhouse gases and is located sufficiently inland from the Pacific Ocean to not be affected by changes in sea levels. Adverse meteorological impacts are not expected to result from the proposed project and measures to mitigate local weather conditions are not warranted.

## 3.3.9 Air Quality

Air quality is defined by ambient air concentrations of specific pollutants of concern with respect to the health and welfare of the general public. Air pollution is the presence in the outdoor atmosphere of one or more contaminants that are injurious to humans, plants, or animals, or that interfere with the enjoyment of life and property. Air quality can be affected by air pollutants

produced by mobile sources, such as vehicular traffic, aircraft, or non-road equipment used for construction activities; and by fixed or immobile facilities, referred to as "stationary sources." Stationary sources can include combustion and industrial stacks and exhaust vents.

Air quality as a resource incorporates several components describing the levels of overall air pollution in a region, and sources of and regulations governing air emissions. A discussion of the affected environment as it relates to air quality, including State of Hawaii and National Ambient Air Quality Standards (NAAQS) and local ambient air quality, follows.

## Air Quality Standards

The U.S. Environmental Protection Agency (USEPA) defines ambient air in 40 CFR § 50.1(e) as: "that portion of the atmosphere, external to buildings, to which the general public has access." The Clean Air Act (42 USC 7401-7671q), as amended, gives USEPA the responsibility to establish the primary and secondary NAAQS (40 CFR 50) that set acceptable concentration levels for seven criteria pollutants: particulate matter less than 10 microns in diameter (PM10); particulate matter less than 2.5 microns in diameter (PM2.5); sulfur dioxide (SO2); carbon monoxide (CO); nitrogen dioxide (NO2); ozone (O3); and lead (Pb). The State of Hawaii has established ambient air quality standards in Chapter ii-59 of the Hawaii Administrative Rules. Together, USEPA and the Hawaii Department of Health (DOH) regulate air quality in Hawaii.

Short-term standards for 1-, 8-, and 24-hour periods have been established for pollutants contributing to acute health effects, while long-term standards (based on annual averages) have been established for pollutants contributing to chronic health effects. The State of Hawaii has adopted State Ambient Air Quality Standards (SAAQS) in addition to those established under federal regulations.

Federal regulations designate Air Quality Control Regions (AQCRs) that have concentrations of one or more of the criteria pollutants that exceed the NAAQS as nonattainment areas. Federal regulations designate AQCRs with levels below the NAAQS as attainment areas. Honolulu County is located in the State of Hawaii AQCR (AQCR 246) (40 CFR 81.76). USEPA designated Honolulu County as in attainment or unclassifiable/ attainment for all criteria pollutants for which designations have been issued (USEPA 2017). USEPA monitors levels of criteria pollutants at representative sites in each region throughout Hawaii. Table 3-8 provides a description of NAAQS criteria pollutants, while Table 3-9 lists both federal and state air quality standards.

In addition to ambient air quality standards for particulate matter in general, fugitive dust is regulated by the Hawaii DOH, Clean Air Branch (Hawaii DOH, 2014). HAR §11-60.1-33, Fugitive Dust states, in part:

- §11-60.1-33(a): No person shall cause or permit visible fugitive dust to become airborne without taking reasonable precautions.
- §11-60.1-33(b): ...no person shall cause or permit the discharge of visible fugitive dust beyond the property lot line on which the fugitive dust originates.

## Existing Conditions

Air quality in the state of Hawaii is among the best in the nation, and criteria pollutant levels remain well below state and federal ambient air quality standards. Fourteen air quality monitoring stations are located in the state: one on Kauai, three on Maui, four on Oahu, and six on Hawaii Island (Hawaii DOH, 2016). The six air monitoring stations on the Island of Hawaii are: Hilo, Mountain View, Puna E, Pahala, Ocean View, and Kona stations. These stations are

dispersed throughout the southern half of the island. Pollutants monitored at these stations include Sulfur Dioxide ($SO_2$), Hydrogen Sulfide ($H_2S$) and Particulate Matter ($PM_{2.5}$). The ambient levels of pollutants measured in 2015 at these air monitoring sites are provided in Table 3-10, along with state and federal air quality standards. The data shows existing concentrations of criteria air pollutants on Hawaii are below the applicable state and federal standards. As of April 2018, Hawaii County is in attainment for all criteria pollutants (USEPA, 2018a).

Point source emissions (e.g. power generating stations and large industrial operations) and non-point emission sources (e.g. motor vehicles) on Hawaii, in general, do not generate a high concentration of pollutants. The excellent air quality can also be attributed to the Island's near constant exposure to wind, which quickly disperses emissions. Although air quality on Hawaii complies with the NAAQS, temporary air quality issues arise during volcanic eruptions in the Hilo area (where $H_2S$ is monitored at the Puna E station) and from agricultural activities that can affect pollutant levels. Such operations produce air quality conditions that are highly localized, intermittent, and temporary in nature.

**Table 3-8: Description of NAAQS Criteria Pollutants**

| NAAQS Criteria Pollutant | Description |
|---|---|
| Sulfur Dioxide ($SO_2$) | A toxic, colorless gas with a distinctly detectable odor and taste. Oxides of sulfur in the presence of water vapor, such as fog, may result in the formation of sulfuric acid mist. Human exposure to $SO_2$ can result in irritation to the respiratory system, which can cause both temporary and permanent damage. $SO_2$ exposure can cause leaf injury to plants and suppress plant growth and yield. $SO_2$ can also cause corrosive damage to many types of manmade materials. |
| Particulates ($PM_{2.5}$ and $PM_{10}$) | Particulates originate from various natural and anthropogenic sources. Some predominant anthropogenic sources of particulates include combustion products (wood, coal and fossil fuels), automotive exhaust (particularly diesels), and windborne dust (fugitive dust) from construction activities, roadways and soil erosion. Smaller particulates (smaller than or equal to 10 and 2.5 microns in size [$PM_{10}$ and $PM_{2.5}$] are of particular health concern because they can get deep into the lungs and affect respiratory and heart function. Small particulates affect visibility by scattering visible light and when combined with water vapor can create haze and smog. Micron and submicron particles are those that assume characteristics of a gas and remain suspended in the atmosphere for long periods. |
| Carbon Monoxide (CO) | A colorless, odorless, tasteless and toxic gas formed through incomplete combustion of crude oil, fuel oil, natural gas, wood waste, gasoline, and diesel fuel. Most combustion processes produce at least a small quantity of this gas, while motor vehicles constitute the largest single source. Human exposure to CO can cause serious health effects before exposure is ever detected by the human senses. The most serious health effect of CO results when inhaled CO enters the bloodstream and prevents oxygen from combining with hemoglobin, impeding the distribution of oxygen throughout the bloodstream. |

| NAAQS Criteria Pollutant | Description |
|---|---|
| Nitrogen Dioxide ($NO_2$) | A reddish-brown gas with a highly detectable odor, which is highly corrosive and a strong oxidizing agent. $NO_2$ is one of a group of reactive gases called nitrogen oxides or NOx. $NO_2$ forms small particles that penetrate deep in the lungs and can cause or worsen existing respiratory system problems such as asthma, emphysema, or bronchitis. NOx is a precursor to the formation of ozone and $PM_{2.5}$. |
| Ozone ($O_3$) | An oxidant that is a major component of urban smog. $O_3$ is a gas that is formed naturally at higher altitudes and protects the earth from harmful ultraviolet rays. At ground level, $O_3$ is a pollutant created by a combination of VOC, $NO_x$ and sunlight, through photochemistry. Ground-level $O_3$ is odorless and colorless and is the predominant constituent of photochemical smog. Human exposure to $O_3$ can cause eye irritation at low concentration and respiratory irritation and inflammation at higher concentrations. Respiratory effects are most pronounced during strenuous activities. $O_3$ exposure will deteriorate manmade materials and reduce plant growth and yield. |
| Lead (Pb) | Lead is a toxic heavy metal that can have numerous adverse health impacts, including neurological damage to children and cardiovascular effects in adults. Lead emissions can contribute to exposure through the air directly or indirectly by causing soil/water contamination. Prior to the phase out of leaded gasoline, automobiles were a source of lead emissions. According to USEPA, the major sources of lead emissions to the air today are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel.[a] |

Source: Louis Berger U.S., 2018.

[a] https://www.epa.gov/lead-air-pollution.

**Table 3-9: State and Federal Air Quality Standards**

| Pollutant | Hawaii Air Quality Standards | Federal Primary Air Quality Standards |
|---|---|---|
| Carbon Monoxide (CO) | | |
| 1-hour maximum | 9 ppm | 35 ppm |
| 8-hour maximum | 4.4 ppm | 9 ppm |
| Lead (Pb) | | |
| 3-month average | 1.5 µg/m3 | 0.15 µg/m3 |
| Nitrogen Dioxide (NO2) | | |
| 1-hour | Not Established | 0.100 ppm |
| Annual average | 0.04 ppm | 0.053 ppm |

| Pollutant | Hawaii Air Quality Standards | Federal Primary Air Quality Standards |
|---|---|---|
| Particulate Matter (PM2.5) | | |
| 24-hour average | None | 35 µg/m3 |
| Annual average | None | 12 µg/m3 |
| Particulate Matter (PM10) | | |
| 24-hour average | 150 µg/m3 | 150 µg/m3 |
| Annual average | 50 µg/m3 | None |
| Ozone (O3) | | |
| 8-hour maximum | 0.08 ppm | 0.070 ppm |
| Sulfur Dioxide (SO2) | | |
| 1-hour average | None | 0.075 ppm |
| 3-hour block average | 0.5 ppm | - |
| 24-hour block average | 0.14 ppm | None |
| Annual average | 0.03 ppm | None |
| Hydrogen Sulfide (HS) | | |
| 1-hour average | 25 ppb | None |

Sources: Hawaii DOH, 2015.

Notes: NE = not established; ppm = parts per million; ppb = parts per billion; µg/m3 = micrograms per cubic meter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; $PM_{10}$ = particulate matter less than 10 microns in diameter.

**Table 3-10: Hawaii DOH Air Quality Data**

| Pollutant | Period | Hawaii Monitoring Stations | State Air Quality Standard | Federal Primary Air Quality Standard | Federal Secondary Air Quality Standard |
|---|---|---|---|---|---|
| CO | 1-hour average (maximum) | ---a | 9 ppm | 35 ppm | No standard |
| | 8-hour average (maximum) | ---a | 4.4 ppm | 9 ppm | No standard |
| $PM_{10}$ | 24-hour average (maximum) | ---a | 150 µg/$m^3$ | 150 µg/ $m^3$ | 150 µg/ $m^3$ |

| Pollutant | Period | Hawaii Monitoring Stations | State Air Quality Standard | Federal Primary Air Quality Standard | Federal Secondary Air Quality Standard |
|---|---|---|---|---|---|
| | Annual average | ---[a] | 50 µg/m³ | No standard | No standard |
| $PM_{2.5}$ | 24-hour average (based on 98th percentile) | Hilo Station: 17.1 µg/m³ Mountain View Station: 13.1 µg/m³ Pahala Station: 17.8 µg/m³ Ocean View Station: 22.6 µg/m³ Kona Station: 23.0 µg/m³ | No standard | 35 µg/ m³ | 35 µg/ m³ |
| | Annual average | ---[a] | No standard | 12 µg/ m³ | 15.0 µg/m³ |
| $O_3$ | 8-hour average (based on 4th highest daily maximum) | ---[a] | 0.08 ppm | 0.070 ppm | 0.070 ppm |
| $NO_2$ | 1-hour average (based on 98th percentile) | ---[a] | No standard | 100 ppb | No standard |
| | Annual average | ---[a] | 0.04 ppm | 53 ppb | 53 ppb |
| $H_2S$ | 1-Hour Average | Puna E Station: 0.004 ppm | 25 ppb | No Standard | No Standard |
| $SO_2$ | 1-hour average (based on 99th percentile) | Hilo Station: 0.236 ppm Mountain View Station: 0.276 ppm Puna E Station: 0.015 ppm Pahala Station: 0.496 ppm Ocean View Station: 0.382 ppm Kona Station: 0.031 ppm | No standard | 75 ppb | No standard |

| Pollutant | Period | Hawaii Monitoring Stations | State Air Quality Standard | Federal Primary Air Quality Standard | Federal Secondary Air Quality Standard |
|---|---|---|---|---|---|
| | 3-hour average (maximum) | Hilo Station: 0.472 ppm Mountain View Station: 0.294 ppm Puna E Station: 0.025 ppm Pahala Station: 0.423 ppm Ocean View Station: 0.293 ppm Kona Station: 0.049 ppm | 0.5 ppm | No standard | 0.5 ppm |
| | 24-hour average (maximum) | Hilo Station: 0.160 ppm Mountain View Station: 0.071 ppm Puna E Station: 0.007 ppm Pahala Station: 0.140 ppm Ocean View Station: 0.079 ppm Kona Station: 0.017 ppm | 0.14 ppm | No standard | No standard |
| | Annual average | Hilo Station: 0.004 ppm Mountain View Station: 0.004 ppm Puna E Station: 0.001 ppm Pahala Station: 0.026 ppm Ocean View Station: 0.013 ppm Kona Station: 0.003 ppm | 0.03 ppm | No standard | No standard |

Sources: Hawaii DOH, 2015; EPA, 2018b

Notes: **---[a]** = Pollutant not monitored
µg/m3 = micrograms per cubic meter

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. HCCC would remain in its current condition, and air quality on the Island of Hawaii would not be affected. In the absence of impacts, mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Short-term impacts on air quality would result either directly or indirectly as a consequence of construction. For a project of this nature and scale, much of the potential air emissions that result during construction involve fugitive dust from site clearing, grading and excavation; and exhaust emissions from operation of onsite construction equipment. Indirect, short-term impacts could also result from transportation of construction equipment and materials to and from HCCC and from a temporary increase in local traffic caused by construction workers commuting to and from HCCC.

To understand potential air quality impacts associated with construction activities, the construction process itself must be understood. The following provides a general overview of the construction process as it may potentially affect air quality.

- Initial site preparation involves the use of heavy equipment to remove asphalt and vegetation and carry out preliminary site grading to establish a level building location and proper elevation. Other site preparation activities during this stage include installing underground utilities, implementing soil erosion and sediment control measures, implementing storm water control measures, and conducting similar preliminary site work.
- Following initial site clearing and preparation, construction of the foundations and any below-grade components would commence. Excavation typically includes the use of heavy equipment to excavate and remove material in preparation for foundation construction. Foundation work includes preparation of forms and the pouring of concrete footings and foundation slabs. Heavy trucks would deliver concrete and other supplies to the building site.
- Next, the building facade (exterior walls and cladding) and roof are constructed. At this stage, concrete floors are poured. Installation of the structure's core, which consists of vertical riser systems for mechanical, electrical, and plumbing, as well as the electrical and mechanical equipment rooms, and plumbing facilities, begins and continues through the interior construction and finishing stage.
- Installation of interior mechanical, electrical, and plumbing systems continues during this stage and includes installation of ventilation and air conditioning equipment and ducting, interior installation of electric lines, water supply and wastewater piping. Installation and testing of telecommunications, security, and life safety systems also occurs along with the construction of interior walls systems and interior finishes (e.g., flooring and painting).

To mitigate potential air quality impacts during construction, BMPs would be specified for site construction activities. Such practices include using properly maintained equipment, limiting unnecessary idling of diesel-powered engines, using tarp covers on trucks transporting materials, periodically wetting unpaved surfaces to suppress dust, and prohibiting open burning of construction wastes onsite. Restoration of the ground surface by the introduction of grass or native ground-cover following completion of construction would further minimize fugitive dust emissions.

Systems for hot water and HVAC would be the primary source of potential air quality impact during housing unit operation. The final choice of fuel would be determined by fuel availability,

costs, and other considerations, however, the volume of combustion emission by-products from housing unit operation would not pose a significant adverse air quality impact.

Other than selecting energy-efficient equipment that meets applicable permitting and emission control standards, no mitigation measures are warranted during housing unit operation. Potential air quality impacts during operation would be minimized by designing and constructing the housing unit to be energy-efficient, thereby minimizing the use of fossil fuels and the potential emission of air pollutants.

### 3.3.10 Noise

According to Hawaii Administrative Rules (HAR), Title 11 Chapter 46, Community Noise Control, "noise" is any sound that may produce adverse physiological effects or interfere with individual or group activities, including, but not limited to, communication, work, rest, recreation, or sleep. "Noise pollution" is noise emitted from any excessive noise source in excess of the maximum permissible sound levels. The accepted unit of measure for noise levels is the decibel (dB) because it reflects the way humans perceive changes in sound amplitude. Sound levels are easily measured, but human response and perception of the wide variability in sound amplitude is subjective.

Sound may be described in terms of intensity or amplitude (measured in dB), frequency or pitch (measured in Hertz or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the intensity of sound is the dB. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) is most commonly used for community noise measurements, as it most closely resembles human perception of noise by weighting the most audible frequencies more heavily. The dBA scale is logarithmic; in other words, a noise difference of 3 dBA is barely perceptible to the human ear, while a difference of 10 dBA is perceived as twice as loud. Time duration also affects the perception of noise; that is, whether the noise is sudden, intermittent, occasional, or continuous.

Noise is emitted from many sources including aircraft, industrial facilities, railroads, power generating stations, and motor vehicles. Among the most common, motor vehicle noise is usually a composite of noises from engine, exhaust and tire-roadway interaction. Noise is known to have adverse health effects on people, including hearing loss, speech interference, sleep interference, physiological responses, and annoyance. Most individuals in urbanized areas are exposed to fairly high noise levels from many sources as they go about their daily activities.

The degree of disturbance or annoyance of unwanted sound depends on several key factors: the amount and nature of the intruding noise; the relationship between background noise and the intruding noise; and the type of activity occurring where the noise is heard. In considering the first of these factors (the amount and nature of the intruding noise), it is important to note that individuals have different sensitivities to noise. Loud noises bother some individuals more than others and some patterns of noise also enter into an individual's judgment of whether or not a noise is offensive. For example, noises occurring during sleeping hours are usually considered to be more of a nuisance than the same noises during daytime hours.

With regard to the second factor (the relationship between background noise and the intruding noise), individuals tend to judge the annoyance of an unwanted noise in terms of its relationship to noise from other sources (background noise). For instance, the use of a car horn at night when background noise levels are typically about 45 dBA would be more objectionable than the use of a car horn in the afternoon when background noises are likely to be 60 dBA or higher.

The third factor (the type of activity occurring where the noise is heard) is related to the interference of noises with the activities of individuals. In a 60-dBA environment, normal work activities requiring high levels of concentration may be interrupted by loud noises, while activities requiring manual effort may not be interrupted to the same degree.

Several descriptors exist to help predict average community perceptions of noise. A noise descriptor, which provides a common basis to characterize the variability of noise, is the equivalent noise level (Leq). The Leq is a sound energy level averaged over a specified time period (usually 1 hour). Leq is a single numerical value that represents the amount of variable sound energy received by a receptor during the time interval. The Day-Night Equivalent Sound Level (Ldn) is the Leq measured over a 24-hour period. However, a 10-dB penalty is added to the noise levels recorded between 10:00 p.m. and 7:00 a.m. to account for people's higher sensitivity to noise at night when the background noise level is typically lower. The Ldn is a commonly used noise descriptor in assessing land use compatibility and is widely used by federal, state, and local agencies and standards organizations.

## Noise Standards

Various federal, state, and local agencies have established guidelines and standards for assessing environmental noise impacts and set noise limits as a function of land use. In this case, the most important and applicable guidelines are the State of Hawaii Community Noise Control Rule (HAR Chapter 11-46). The Community Noise Control Rule defines three classes of zoning districts and specifies corresponding maximum permissible sound levels due to stationary noise sources such as air-conditioning units, exhaust systems, generators, compressors, pumps, among others. The Community Noise Control Rule does not address most moving sources, such as vehicular traffic noise, aircraft noise, or rail transit noise which are regulated by the Hawaii Department of Transportation. However, the Community Noise Control Rule does regulate noise related to agricultural, construction, and industrial activities, which may not be stationary.

The maximum permissible noise levels for stationary mechanical equipment are enforced by the Hawaii Department of Health (DOH) for any location at or beyond the property line and shall not be exceeded for more than 10 percent of the time during any 20-minute period. The specified noise limits that apply are a function of the zoning and time of day as shown in Table 3-11. With respect to mixed zoning districts, the rule specifies that the primary land use designation shall be used to determine the applicable zoning district class and the maximum permissible sound level. In determining the maximum permissible sound level, the background noise level is taken into account by Hawaii DOH.

**Table 3-11: Maximum Permissible Sound Levels**

| Zoning District | Daytime (7:00 a.m. to 10:00 p.m.) | Nighttime (10:00 p.m. to 7:00 a.m.) |
|---|---|---|
| Class A | 55 dBA | 45 dBA |
| Class B | 60 dBA | 50 dBA |
| Class C | 70 dBA | 70 dBA |

HAR, Department of Health, Chapter 46, Community Noise Control.

Note: Class A zoning districts include all areas equivalent to lands zoned residential, conservation, preservation, public space, Open space, or similar type. Class B zoning districts include all areas equivalent to lands zoned for multi-family dwellings, apartment,

business, commercial, hotel, resort, or similar type. Class C zoning districts include all areas equivalent to lands zoned agriculture, country, industrial, or similar type.

According to the Hawaii DOH Noise Reference Manual, an approved Community Noise Permit is required for construction projects exceeding 78 dBA or that have a total cost of more than $250,000. Construction is allowed from 7:00 a.m. to 6:00 p.m., Monday through Friday and 9:00 a.m. to 6:00 p.m. on Saturdays. The use of certain demolition and construction equipment (such as pile drivers, hydraulic hammers, and jackhammers) shall be limited to 9:00 a.m. to 5:30 p.m., Monday through Friday. Construction activities exceeding the maximum permissible sound levels before 7:00 a.m. and after 6:00 p.m., Monday through Friday, or before 9:00 a.m. and after 6:00 p.m. on Saturdays, or at any time on Sundays and holidays are only allowed with an approve Community Noise Variance.

## Community Response to Changes in Noise Levels

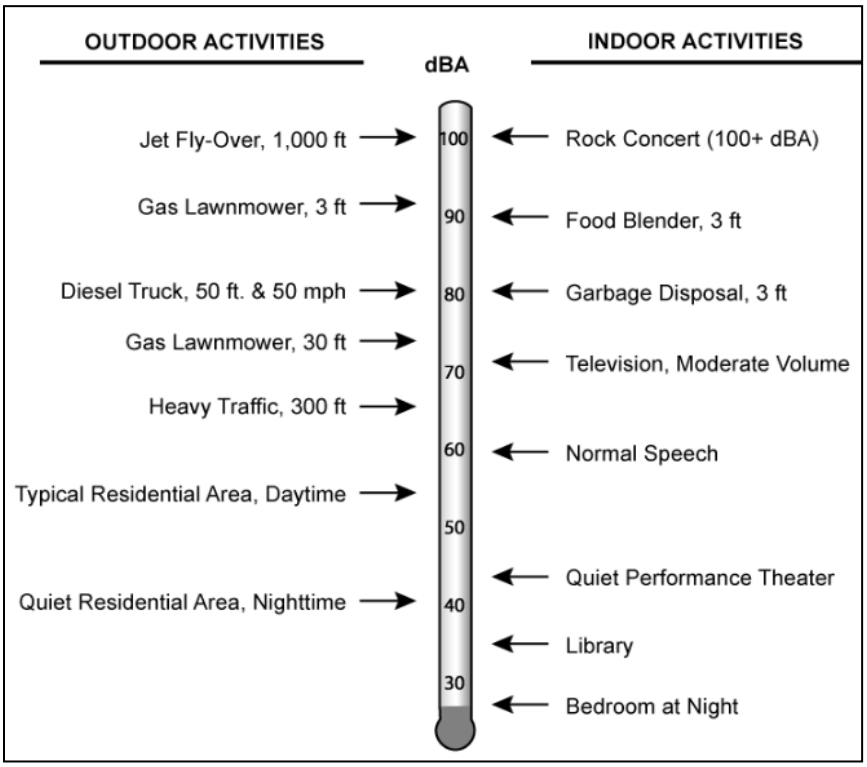
Human sensitivity to changes in sound pressure level is highly individualized. Sensitivity to sound depends on frequency content, time of occurrence, duration, and psychological factors such as emotions and expectations. However, the average ability of individuals to perceive changes in noise levels is well documented and has been summarized in Table 3-12. These guidelines permit direct estimation of an individual's probable perception of changes in noise levels.

Noise in a community can come from man-made sources, such as automobiles, trucks, buses, aircraft, and construction equipment, and from industrial, commercial, transportation, and manufacturing facilities. Exhibit 3-10 presents typical activities, noise levels, and effects that they have on humans. Noise levels, which are measured in units called decibels (dB), relate the magnitude of the sound pressure to a standard reference value. Although the noise values of certain activities can approach 135 dB, sounds typically encountered in the environment range from 50 to 100 dB.

**Table 3-12: Average Ability to Perceive Changes in Noise Level**

| Sound Level Change (dB) | Human Perception of Sound |
|---|---|
| 0 | Imperceptible |
| 3 | Barely Perceptible |
| 6 | Clearly Noticeable |
| 10 | Two Times (or one-half) as Loud |
| 20 | Four Times (or one-quarter) as Loud |

Source: D.L. Adams Associates, Ltd., 2015.




Sources: FTA, 1995, ATS Consulting, 2005.

**Exhibit 3-10: Common Indoor and Outdoor Noise Levels**

## Existing Conditions

A survey of the existing noise environment and noise-sensitive receptors was conducted via field visits to HCCC together with a review of adjacent and nearby land uses. Ambient noise levels in the area of HCCC are largely the result of motor vehicle traffic on Waianuenue Avenue, Komohana Street, and Punahele Street. Occasionally, the sound of lawn mower activity and building construction and repair projects on nearby residences is also heard. Intermittent and temporary noise is also experienced from occasional wildlife calls and overhead aircraft activity, as airplanes arrive and depart from Hilo International Airport. No noise-sensitive receptors are located in the vicinity of HCCC.

## Potential Impacts and Mitigation Measures

Under the No Action Alternative, the proposed inmate housing unit would not be developed at HCCC. HCCC would remain in its current condition, and noise levels would not be affected. In the absence of impacts, mitigation measures would not be necessary.

Under the preferred alternative, the proposed inmate housing unit would be developed at HCCC. Potential noise impacts can be divided into two categories: construction impacts and operational impacts, each of which is discussed below.

### *Construction Impacts*

Construction of the proposed housing unit would result in temporary noise impacts in the immediate vicinity of the building site. The magnitude of the potential impacts would depend

on the specific types of equipment to be used, construction methods employed, and scheduling and duration of the construction work. These details are typically not specified in contract documents but are at the discretion of the construction contractor to provide the necessary flexibility to use equipment and personnel to accomplish the work on schedule and minimize costs. However, general conclusions concerning potential noise impacts can be drawn based on the nature, scope, and scale of the work being proposed and the types of equipment needed.

Increased noise levels may result from the use of construction equipment. Construction activities would include site preparation, construction of the housing unit, installation of walkways and access drive, utility connections and similar activities. These activities are expected to largely involve use of handheld power tools typical of residential construction projects with heavy construction equipment, which can produce high levels of noise, limited to foundation and concrete pad installation, building construction, and underground utility pipe trenching.

Construction noise would last for only the duration of the construction period. It is generally intermittent and depends on the type of operation, location and function of the equipment being employed and the equipment usage cycle. Such noise also attenuates quickly with the distance from the source. Potential construction-related noise levels of 85 to 90 dBA at 50 feet from the noise source would be reduced to less than 62 dBA at 2,000 feet from the source. Because of the relatively small scale of the project, noise resulting from construction is not anticipated to have a significant adverse effect on the adjoining land uses, which are not noise sensitive. Following completion of construction, noise levels would return to current levels.

Noise impacts during the construction phase would be mitigated by confining construction activities to normal working hours, completing the work in a timely fashion, and adhering to State of Hawaii regulations governing community noise control. In the unlikely event that construction activities need to be performed outside normal business hours, application for a noise variance permit maybe necessary.

### *Operational Impacts*

Noise occurring during occupancy and use of the proposed housing unit is not expected to result in significant adverse impacts. The absence of noise-producing equipment and activities should result in post-construction noise conditions that are similar to pre-construction conditions. Any increase in noise during occupancy and use would be slight and virtually imperceptible over the background noise associated with motor vehicle traffic using Waianuenue Avenue, Komohana Street, and Punahele Street, aircraft flyovers, and similar activities.

Because of the lack of significant potential noise impacts during operations, and the background noise levels currently resulting from motor vehicle traffic, occasional aircraft flyovers, and similar urban activities, no mitigation measures to control noise resulting from operation of the proposed project are warranted.

## 3.4 Summary of Any Significant Impacts and Required Mitigation

Construction and operation of an inmate housing unit at HCCC would result in less than significant impacts on topography, geology, soils, water resources, biological resources, hazardous materials, fiscal considerations, demographic, economic and housing characteristics, traffic, meteorological conditions, air quality and noise levels. Development of the proposed housing unit would result in beneficial impacts by helping to alleviate the persistent and severe crowding that has existed at HCCC for many years.

Development and operation of the inmate housing unit would have negligible adverse impacts on physical, biological, and socioeconomic resources. Impacts on topography, geology, soils, water resources, biological resources, hazardous materials, fiscal considerations, demographic, economic and housing considerations, land use, utility services, archaeological and architectural resources, traffic and transportation movements, cultural resources, air quality and noise levels are not anticipated and if occurred, would be negligible. Even minimal impacts would be mitigated as appropriate.

Beneficial impacts would be derived from the proposed action including contributions toward fulfilling the PSD mission to provide public protection by operating humane and secure facilities in a safe working environment, where the health and well-being of the inmates are sustained, and opportunities are available to address issues related to their reintegration back into the community. Beneficial impacts would also occur by provision of more beds at HCCC to alleviate the crowded conditions. Implementation of the proposed action would result in no significant adverse impacts as defined by HRS. Any potential adverse cumulative, secondary and construction-related impacts would be controlled, mitigated, or avoided to the maximum extent possible.

## 3.5 Relationship between Short-Term Use of the Environment and the Maintenance and Enhancement of Long-Term Productivity

Regulations for the preparation of environmental impact studies require such documents to address the relationship between short-term use of the environment and the maintenance of long-term productivity. In this instance, following ground-breaking, the project site would be used as a construction site. Construction would involve ground clearing and excavating, the erection of the housing unit structure, trenching for utility installations, paving of an internal access/fire protection driveway, among other similar activities. A temporary increase in noise levels, increased dust, and similar construction impacts can be anticipated, however, these impacts would be brief and minor and should be easily controlled to minimize their effects and to avoid significant adverse impacts.

Potential short-term impacts and inconveniences must be contrasted with the benefits realized by implementing the proposed project. Beneficial impacts would be derived from the proposed action including contributions toward fulfilling the PSD mission to provide public protection by operating humane and secure facilities. Beneficial impacts would also occur by providing medium-security beds at HCCC; beneficial impacts would be long-term.

## 3.6 Irreversible and Irretrievable Commitments of Resources

Construction of the proposed inmate housing unit would result in both direct and indirect commitments of resources. In some cases, the resources committed would be recovered in a relatively short period of time. In other cases, resources would be irreversibly or irretrievably committed by virtue of being consumed or by the apparent limitlessness of the period of their commitment to a specific use. Irreversibly and irretrievable commitments of resources can sometimes be compensated for by the provision of similar resources with substantially the same use or value.

In this instance, land comprising the housing unit structure would be considered irretrievably committed. The proposed action would also require the commitment of various construction materials including cement, aggregate, and other building materials. Much of the material dedicated to construction may be recycled at some future date. The proposed project would

require the use of an amount of fossil fuel, electrical power, and other energy resources during construction and occupancy/use. These should also be considered irretrievably committed to the project.

## 3.7 Consideration of Secondary and Cumulative Impacts

HRS, Chapter 343 require an assessment of cumulative impacts in the decision-making process. Other actions that when added to the impact of the proposed action could include continuing residential and commercial development of Hawaii County, the growing demand for utility services on the island, and the development and use of the proposed housing unit at HCCC. As described in the preceding sections, development and occupancy of the inmate housing unit (the preferred alternative) would not have a significant adverse impact to the resource areas discussed. Any potential impacts from implementing the proposed action would be mitigated as appropriate. Because the proposed action would not have a significant impact to environmental, cultural, and socioeconomic resources and because any potential impacts would be mitigated, when this action is combined with other actions in the area, no significant cumulative impacts would occur.

## 3.8 Summary of Impacts

Based on the analysis presented in this Draft EA, the proposed action (preferred alternative) is not expected to result in significant impacts on environmental, cultural, or socioeconomic resources. Table 3-13 presents a summary of impacts under each alternative.

**Table 3-13: Summary of Impacts**

| Resource | No Action Alternative | Preferred Alternative |
|---|---|---|
| Topography | The proposed housing unit would not be developed; therefore, impacts on topographic conditions would not occur. | Development and operation of the housing unit would not require significant regrading or alteration of the existing topography. Impacts on topographic conditions would be negligible. |
| Geology | The proposed housing unit would not be developed; therefore, impacts on geologic resources would not occur. | Development and operation of the proposed housing unit would not result in disturbance or alteration of natural geologic features and conditions. Significant adverse impacts on geologic conditions are not anticipated. |
| Soils | The proposed housing unit would not be developed; therefore, impacts on soils would not occur. | Given that the area of HCCC has been altered by previous development, construction of the proposed housing unit would not be expected to result in significant adverse impacts on soils. |

| Resource | No Action Alternative | Preferred Alternative |
|---|---|---|
| Water Resources | The proposed housing unit would not be developed; therefore, impacts on water resources would not occur. | Two surface water drainage ditches bisect the HCCC property. A slight increase in impervious surface would result from the proposed project and therefore, a slight increase in storm water runoff is anticipated. Development of the housing unit would not be expected to result in potentially significant adverse impacts on water resources. |
| Biological Resources | The proposed housing unit would not be developed; therefore, impacts on biological resources would not occur. | Onsite land cover consists of primarily of pavement and grass with surrounding areas devoted primarily to urban development (i.e., residential, commercial, and institutional uses). Development of the housing unit would avoid disturbance to native vegetation and significant adverse impacts on wildlife and habitats would be avoided. Common (non-special status) wildlife species would displaced due to the increase in human activity during construction and later occupancy and use of the housing unit. |
| Archaeological and Historic Resources | The proposed housing unit would not be developed; therefore, impacts to archaeological and historic resources would not occur. | No known archaeological resources or historic structures exist on the proposed site of the housing unit. No significant archaeological or historic resource impacts are anticipated as a result of the proposed project. |
| Cultural Resources | The proposed housing unit would not be developed; therefore, impacts on cultural resources would not occur. | No significant cultural resource impacts are anticipated as a result of the proposed project. |
| Visual and Aesthetic Resources | The proposed housing unit would not be developed; therefore, impacts on visual and aesthetic resources would not occur. | Impacts on visual and aesthetic resources would be short term during construction as the introduction of construction equipment would alter the aesthetic features and characteristics of the building site. During operation, long-term impacts would occur from development of the housing unit at HCCC. The structure would be generally compatible with its surroundings resulting in only minor impacts during operation. |

| Resource | No Action Alternative | Preferred Alternative |
|---|---|---|
| Hazardous Materials | The proposed housing unit would not be developed; therefore, impacts associated with hazardous materials would not occur. | No known issues involving hazardous materials at the proposed development site; therefore, no adverse impacts involving hazardous materials are anticipated as a result of the proposed project. |
| Fiscal Considerations | The proposed housing unit would not be developed; therefore, impacts associated with fiscal considerations would not occur. | The 4.25-acre property HCCC is under state ownership and control and consequently has not contributed tax revenues or similar payments throughout the period of state ownership. Development of the proposed housing unit would not affect the current ownership arrangement and, therefore, pose no adverse impacts on fiscal conditions for the State of Hawaii or Hawaii County. |
| Natural Hazards | The proposed housing unit would not be developed; therefore, impacts associated with natural hazards would not occur. | The entire HCCC property is located beyond the limits of the FEMA designated 100-year floodplain. Construction of the housing unit must conform to applicable county flood control regulations and ordinances. No other natural hazards pose risk to development and occupancy of proposed inmate housing unit. |
| Demographic Characteristics | The proposed housing unit would not be developed; therefore, impacts on demographic characteristics would not occur. | The proposed unit would house up to approximately 144 inmates currently held at HCCC, thereby posing no change (increase or decrease) to the HCCC inmate population or the county's total population. No population groups or businesses would be relocated or removed and no sensitive population groups (e.g., other children, minorities, seniors, and handicapped) would be adversely affected. No significant adverse demographic impacts are anticipated. |
| Economic Characteristics | The proposed housing unit would not be developed; therefore, impacts on local and regional economic conditions would not occur. | Development of the proposed housing unit would require construction employment and materials purchases which would generate further spending while supporting indirect employment. The increased economic activity resulting from construction spending is considered beneficial to the island's economy and a positive impact. No businesses or other economic activities would be displaced or eliminated by the proposed project. |

| Resource | No Action Alternative | Preferred Alternative |
|---|---|---|
| Housing Characteristics | The proposed housing unit would not be developed; therefore, impacts on housing markets would not occur. | Following development of the proposed housing unit, no change to the HCCC inmate population or the county's total population would occur. As a result, adverse impacts the island's housing market (i.e., housing availability, supply, and cost) are not anticipated. |
| Community Services and Facilities | The proposed housing unit would not be developed; therefore, impacts on community services and facilities would not occur. | Construction-related activities are not expected to adversely affect law enforcement, fire protection, or emergency medical services and capabilities in the area. Public roadways leading to and from HCCC would remain open, accessible, and available for normal traffic movements at all times. Development of the proposed housing unit is not anticipated to place an undue burden on law enforcement, emergency medical or fire protection agencies and personnel currently serving residents, businesses, and public institutions in the Hilo area. |
| Land Use and Zoning | The proposed housing unit would not be developed; therefore, impacts on land use and zoning would not occur. | The proposed action would have a direct impact on land use by transforming a small paved and vacant portion of the HCCC property to inmate housing. The self-contained nature of HCCC would limit any potential direct impacts to the property itself with no adverse impacts on adjoining private and public properties or the values of such properties. |
| Water Supply Service | The proposed housing unit would not be developed; therefore, impacts on water supply services would not occur. | Under the proposed action, the inmate population at HCCC would not increase because the proposed inmate housing unit would accommodate inmates already housed at the facility. As a result, water supply services would not be affected. |
| Wastewater Service | The proposed housing unit would not be developed; therefore, impacts on wastewater collection and treatment services would not occur. | Under the proposed action, the inmate population at HCCC would not increase because the proposed inmate housing unit would accommodate inmates already housed at the facility. As a result, wastewater collection and treatment services would not be affected. |

| Resource | No Action Alternative | Preferred Alternative |
|---|---|---|
| Electrical Service | The proposed housing unit would not be developed; therefore, impacts on electrical services would not occur. | Under the proposed action, the inmate population at HCCC would not increase because the proposed inmate housing unit would accommodate inmates already housed at the facility. As a result, electrical services would not be affected. PSD also has an electrical/mechanical repair and improvement Capital Improvement Program underway that is expected to better manage power demands through installation of energy efficient equipment and various upgrades at HCCC. |
| Propane Gas Service | The proposed housing unit would not be developed; therefore, impacts on gas service would not occur. | There are no known limitations to provision of gas service in the area of HCCC. Therefore, no adverse impacts on gas service are anticipated. |
| Telecommunication Services | The proposed housing unit would not be developed; therefore, impacts on tele-communication services would not occur. | The provision of telecommunications service to HCCC has no known limitations. Therefore, no adverse impacts on telecommunication services are anticipated. |
| Solid Waste Service | The proposed housing unit would not be developed; therefore, impacts on solid waste management services would not occur. | Construction and operation of the proposed housing unit would generate solid waste requiring collection and disposal. Solid waste in varying quantities would be generated during construction of the housing unit. The disposal of construction-derived waste would be the responsibility of the construction contractors involved, although efforts will be made to sort, segregate, and recycle construction debris when possible. Solid waste generated during operation of the proposed housing unit would be accommodated by existing waste disposal services. |

| Resource | No Action Alternative | Preferred Alternative |
|---|---|---|
| Transportation Systems | The proposed housing unit would not be developed; therefore, impacts on transportation systems would not occur. | A minimal (temporary) increase in traffic is anticipated resulting from the construction worker trips to and from HCCC and the movement of materials, supplies, and equipment along Waianuenue Avenue, Komohana Street, and Punahele Street. All such traffic would end following completion of construction. Following development of the proposed housing unit, no change (increase or decrease) to the HCCC inmate population or the county's total population would occur, and no significant adverse traffic impacts are expected. |
| Climate | The proposed housing unit would not be developed; therefore, impacts on meteorological conditions would not occur. | Construction and operation of the proposed inmate housing unit is not expected to alter the micro-climatology of wind and temperature at HCCC. Due to its small scale relative to its environs, the proposed housing unit would not alter or affect the larger-scale climatology of the area or have a significant adverse impact on neighboring properties. |
| Air Quality | The proposed housing unit would not be developed; therefore, impacts on air quality would not occur. | Air quality would potentially be temporarily affected as a result of construction activities however, any such impacts would be considered negligible. No adverse impacts are anticipated during occupancy and operation. |
| Noise | The proposed housing unit would not be developed; therefore, impacts on noise conditions would not occur. | Construction activities would result in temporary noise impacts in the immediate vicinity of the proposed housing unit. The magnitude of the potential impact would depend on the specific types of equipment to be used, the construction methods employed and the scheduling and duration of the work. However, any such impact would be considered slight and would end following completion of construction. Occupancy and operation of the proposed inmate housing unit is not expected to increase noise levels above current conditions. |

# 4.0 RELATIONSHIP TO LAND USE PLANS, POLICIES, AND CONTROLS

## 4.1 Hawaii State Plan

The Hawaii State Plan, embodied in HRS, Chapter 226, serves as a guide for goals, objectives, policies and priorities for the State. The State Plan provides a basis for determining priorities, allocating limited resources, and improving coordination of State and County plans, policies, programs, projects and regulatory activities. The proposed project is consistent with the following State Plan objective and policies.

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

*(a) Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:*

*(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.*

*(2) Effective protection of Hawaii'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 Hawaii's natural resources.*

*(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.*

*(3) Take into account the physical attributes of areas when planning and designing activities and facilities.*

*(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.*

*(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.*

*(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.*

*(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.*

*(8) Pursue compatible relationships among activities, facilities, and natural resources.*

*(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.*

Construction activities will involve land disturbing activities such as grubbing, clearing, grading, and excavation. However, various mitigation measures will be incorporated into the project's construction plans to minimize soil disturbance and potential short-term erosion and siltation impacts during construction. Excavation and grading activities associated with construction of the proposed inmate housing unit will be regulated by the County's grading ordinances.

A Department of the Army (DOA) Nationwide Permit, pursuant to Section 404 of the Clean Water Act and a Water Quality Certification, issued by the State Department of Health (DOH) pursuant to Section 401 of the Clean Water Act may be required for construction work in waters of the U.S. For such work involving the adjoining ditch drainage system and freshwater emergent wetland, waters of the U.S. is defined as portions of the stream bed and banks below the ordinary high water mark (OHWM). In conjunction with the Section 404 permit and Water Quality Certification, a BMP plan will be prepared for construction activities within the project site. Erosion and sediment control measures will be instituted in accordance with a site-specific assessment and incorporate appropriate structural and/or non-structural BMPs such as appropriately stockpiling materials onsite to prevent runoff, covering or stabilizing topsoil stockpiles, using sediment basins and traps, and re-establishing vegetation or landscaping as early as possible on completed areas.

*Sec. 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.*
*(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.*
*(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.*
*(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.*
*(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.*
*(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization. [L 1978, c 100, pt of §2; am L 1984, c 236, §17; am L 1986, c 276, §32]*

PSD is committed to providing safe, secure, healthy, and humane social and physical environments for the care and custody of adult male and female offenders originating from the State of Hawaii. However, the severe and persistent crowding at all Hawaii jails has exacerbated physical plant operations, contributed to tension among inmates, and diminished treatment and program opportunities. Overall, jail facilities are operating well above their operational capacities and given long-standing conditions, alleviating crowding is an important priority for Hawaii's community correctional system. PSD plans to alleviate crowded conditions by adding a Medium Security Housing Unit at HCCC to accommodate inmates currently housed at the facility responds to these priority guidelines.

*Sec. 226-108 Sustainability.*

*Priority guidelines and principles to promote sustainability shall include:*

*(1) Encouraging balanced economic, social, community, and environmental priorities;*
*(2) Encourage planning that respects and promotes living within the natural resources and limits of the State;*
*(3) Promote a diversified and dynamic economy;*
*(4) Encouraging respect for the host culture;*

*(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations;*
*(6) Considering the principles of the ahupuaa system; and*
*(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaii.*

By developing the proposed housing unit at the existing HCCC, significant adverse environmental, social, and economic impacts would be avoided. Beneficial impacts would be derived from the proposed action including contributions toward fulfilling the PSD mission to provide public protection by operating humane and secure facilities in a safe working environment, where the health and well-being of the inmates are sustained and opportunities are available to address issues related to their reintegration back into the community. Beneficial impacts would also occur by promoting sound long-term planning at the facility and within Hawaii's jail system.

## 4.2 State Land Use Districts

The State Land Use Law, Chapter 205, HRS, is intended to preserve, protect and encourage the development of lands in the State for uses that are best suited to the public health and welfare of Hawaii's people. Under Chapter 205, HRS all lands in the State of Hawaii are classified by the State Land Use Commission into four major categories referred to as State Land Use Districts. These districts are identified as the Urban District, Agricultural District, Conservation District, and Rural District.

HCCC is located within the Urban District (Exhibit 4-1). The proposed action involves use of a property that is consistent with a permitted use with the State Urban District, would not require approval from the State Land Use Commission, and presents no conflicts with state land use districts.

## 4.3 General Plan of Hawaii County

The existing General Plan was adopted in 2005 and much has happened to Hawaii County since 2005, including population growth, natural disasters, technological advancements, and an emphasis on sustainability. These factors are being considered in the 2015 General Plan which is undergoing review. Since this review has not been completed, the 2005 General Plan will be used for analysis. The General Plan serves as a policy document outlining long-range comprehensive development of Hawaii County, providing broad goals, objectives, policies, and implementing actions that portray the desired direction of the County's future. Purposes of the General Plan include:

- *Guide the pattern of future development in the County based on long-term goals.*
- *Identify the visions, values, and priorities important to the people of this County.*
- *Provide the framework for regulatory decisions, capital improvement priorities, acquisition strategies, and other pertinent government programs within the County organization and coordinated with State and Federal programs.*
- *Improve the physical environment of the County as a setting for human activities; to make it more functional, beautiful, healthful, interesting, and efficient.*
- *Promote and safeguard the public interest and the interest of the County as a whole.*
- *Facilitate the democratic determination of community policies concerning the utilization of its natural, man-made, and human resources.*
- *Effect political and technical coordination in community improvement and development.*

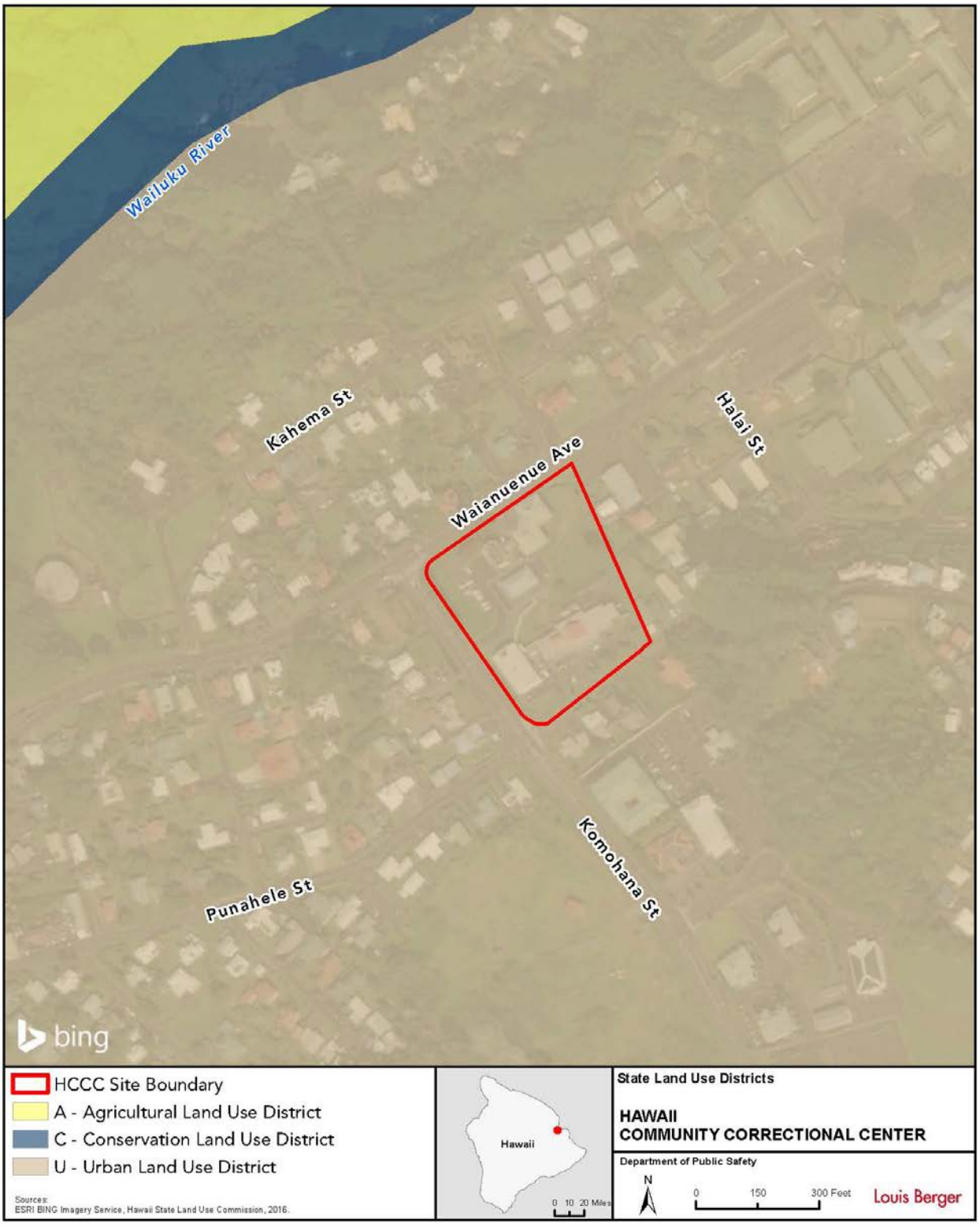



**Exhibit 4-1: State Land Use Districts**

- *Inject long-range considerations into the determination of short-range actions and implementation.*

The comprehensive review of the General Plan gathered and assessed the data related to each element to identify present conditions and problems and future possibilities. The study elements utilized in the General Plan included the following:

- **Economic**: Describes the human, capital, and natural resources used to produce goods and services for consumption in local and overseas markets.
- **Energy**: Describes the energy situation for the County and explains the incentive for promoting energy conservation and the development of indigenous energy resources including solar, wind, hydrologic, and geothermal.
- **Environmental Quality**: Identifies the factors affecting the island's environmental quality and describes the precautions and safeguards necessary to maintain and improve the quality of the environment for the physical, psychological, and social wellbeing of residents and visitors.
- **Flooding and Other Natural Hazards**: Pertains to the conservation and protection of life, improvements, and natural resources from excess runoff due to either man-made improvements, natural causes, or inundation from tsunamis and heavy seas.
- **Historic Sites**: Identifies sites and buildings of historical and cultural importance.
- **Natural Beauty**: Identifies areas of unique natural beauty that are a principle asset of the island, and encourages programs for their conservation, preservation, and integration with other elements.
- **Natural Resources and Shoreline**: Describes the valuable and often irreplaceable natural assets of the island and encourages programs for their proper management and protection.
- **Housing**: Addresses the requirements for and the quantity, quality, and distribution of housing units in the County. This element also addresses critical housing problems of the County.
- **Public Facilities**: Pertains to the location and distribution of facilities for education, public safety, social, health services and other government operations.
- **Public Utilities**: Describes the distribution of power, light, and water; the collection and disposal of solid waste and sewage; and the provision of other communication utilities that are essential to the efficient functioning of a community.
- **Recreation**: Examines the requirements of the County for active and passive outdoor activities, cultural events and pastimes, as well as attendant facilities and areas.
- **Transportation**: Describes the requirements for air and water transport terminal facilities linking the County with the rest of the State and overseas areas, and the island's network of streets, highways, and roads.
- **Land Use**: Studies the relationship of human activities to the uses of land and the location, spatial relationship, and topography.
- **Agricultural**: Encompasses all types of agricultural endeavors and specified industrial uses, residential and ancillary community and public and accessory uses.
- **Commercial**: Comprised of industries in the retail trade and service categories and certain non-noxious enterprises from other industrial classifications.
- **Industrial**: Includes uses that may not be compatible with commercial areas (such as manufacturing and processing, wholesaling, large storage and transportation facilities, power plants, and government base yards) as well as other industrial, manufacturing**,** or wholesaling uses.
- **Multiple Residential**: Includes duplexes, apartments, town houses and similar types of residential structures and ancillary community and public uses.
- **Open Space**: Includes conservation lands, forest and water reserves, natural and scientific preserves, and potential natural hazard areas.
- **Public Lands**: Includes Federal, State, County, and University owned lands.

- **Resort**: Consists primarily of areas with basic amenities and attributes that attract developments of visitor accommodations and related facilities.
- **Single-Family Residential**: Consists of single-family detached houses and ancillary community and public uses.

Constructing and operating an inmate housing unit meets the above vision by providing the inmate beds needed at HCCC within its existing property boundary. The overall inmate population at HCCC would not increase and therefore would not put additional demands on utilities, community services, public lands or open space, or the transportation network and would not impede the County of Hawaii from meeting is goals and objectives. Therefore, the proposed inmate housing project is considered to be consistent with the General Plan of Hawaii County.

## 4.4 Hawaii County Zoning

Hawaii County's zoning ordinance establishes procedures for the division of the County into land use districts, and creates regulations for the types, size, placement, and control of structures within various zoning district classifications. The zoning ordinance also delineates the respective types of permitted uses and the development that can take place in those zoning districts.

Hawaii County has zoned the HCCC property as RS-7.5, Single-Family Residential with a minimum lot size requirement of 7,500 square feet. Although the RS district doesn't specifically permit prison and jail facilities, Section 25-4-11( c) of the Hawaii County Code allows for public uses, structures, and buildings in all zoning districts as long as the Planning Director has issued a Plan Approval for the proposed use or structure. The proposed housing unit at HCCC would be consistent with the zoning of the area.

## 4.5 Hawaii Coastal Zone Management Program

The Hawaii Coastal Zone Management Program (HCZMP), as formalized in Chapter 205A, HRS, establishes objectives and policies for the preservation, protection, and restoration of natural resources of Hawaii's coastal zone. As set forth in Chapter 205A, HRS, this section addresses the project's relationship to applicable coastal zone management considerations with each section stating its objective, followed by policies to meet that objective.

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

(A) Improve coordination and funding of coastal recreational planning and management; and

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

(ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the state for recreation when replacement is not feasible or desirable;

(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

(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;

(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;

(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and

(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 such dedication against the requirements of section 46-6.

*Discussion:* The proposed inmate housing unit is not anticipated to affect existing coastal recreational resources. Access to shoreline areas would remain unaffected by the proposed project as HCCC is located in Hilo and not near the shoreline and any action that would occur at HCCC would not alter shoreline access.

2. Historic Resources: 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.

(A) Identify and analyze significant archaeological resources;

(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and

(C) Support state goals for protection, restoration, interpretation, and display of historic resources.

*Discussion:* The proposed inmate housing unit involves the construction on a previously disturbed (paved) portion of the HCCC property, with no known historic resources. Based on past disturbance at HCCC, the lack of known resources, and the minimal amount of ground disturbance that would occur, no impacts on archaeological and historic resources are expected.

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

(A) Identify valued scenic resources in the coastal zone management area;

(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments that are not coastal dependent to locate in inland areas.

*Discussion:* The proposed inmate housing unit at HCCC would be developed in a manner to ensure visual compatibility with the surrounding environs. The proposed inmate housing unit is not expected to impact coastal and scenic open space resources as construction of the housing unit would be limited to one to two stories in height and located within the existing property boundary of HCCC.

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

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

(B) Improve the technical basis for natural resource management;

(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(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

(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 non-point source water pollution control measures.

*Discussion:* Development of the proposed inmate housing unit at HCCC is not expected to adversely impact coastal ecosystems. The amount of ground disturbance would be minimal, resulting only from use of the site as a construction staging area and for construction of the proposed inmate housing unit within an open, level, vacant area. For this minimal disturbance, appropriate design measures and BMPs for controlling surface runoff and the disposal of waste construction materials would be utilized to ensure that coastal water impacts are mitigated. Mitigation measures for soil erosion would be implemented during and following construction activities, where required and impacts on coastal ecosystems would not occur.

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

(A) Concentrate coastal dependent development in appropriate areas;

(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Use of presently designated locations is not feasible;

(ii) Adverse environmental effects are minimized; and

(iii) The development is important to the State's economy.

*Discussion:* The proposed inmate housing project would support a limited under of short-term direct construction and construction-related jobs during the construction period. The proposed project would not substantially impact the local economy because these jobs are expected to be filled by existing Hawaii County construction workers/ residents. The proposed housing unit site does not border the shoreline and would not affect coastal development necessary to the State's economy. The proposed project is in keeping with the land use patterns established at HCCC because the project area is already developed for correctional uses.

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

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and non-point source pollution hazards;

(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and non-point source pollution hazards;

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

(D) Prevent coastal flooding from inland projects.

*Discussion:* The proposed inmate housing unit site at HCCC lies within Zone X, which represents an area outside the 100-year floodplain. No significant changes in drainage patterns are anticipated with the construction of the housing unit and no adverse drainage impacts on surrounding properties are anticipated.

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

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;

(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and

(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.

*Discussion:* This Draft EA has been prepared for public review in compliance with HRS, Chapter 343, Title 11 Administrative Rule. In addition, applicable state and county requirements would be adhered to in the design and construction of the proposed inmate housing unit at HCCC.

8. Public Participation: Stimulate public awareness, education, and participation in coastal management.

(A) Promote public involvement in coastal zone management processes;

(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

(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

*Discussion:* As described earlier, public information and outreach activities were carried out during preparation of the Draft EA. Opportunities to comment will also occur through the Draft EA process.

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

(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;

(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.

*Discussion:* Development of the proposed inmate housing unit would have no impact to shoreline activities. HCCC is not located adjacent to the coast; no adverse impacts on beaches are expected.

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

(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

(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;

(D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources. [L 1977, c 188, pt of §3; am L 1993, c 258, §1; am L 1994, c 3, §1; am L 1995, c 104, §5; am L 2001, c 169, §3]

*Discussion:* The proposed inmate housing unit at HCCC would not adversely impact ocean resources and would not affect marine and coastal resources because the site of the proposed housing unit is not located adjacent to or in the vicinity of these resources.

## 4.6 Hawaii County Special Management Area

The Hawaii Coastal Zone Management Act (Chapter 205A, HRS) is the basis for the Hawaii CZM Program. In addition to providing Federal Consistency Review, the Act establishes objectives, policies, and guidelines on which all counties within the State have structured specific legislation which designated Special Management Areas (SMA). Any development within the SMA requires a County-issued SMA Use permit which on Hawaii is administered by the Hawaii County Planning Department. Through the SMA permit system, the County assesses and regulates developments proposed for areas located within the SMA. The site of the proposed HCCC inmate housing unit is located outside the County's SMA (Exhibit 4-2).

## 4.7 Anticipated Permits and Approvals

The following list of permits and approvals may be required for development of the proposed project:

### FEDERAL

None

### STATE OF HAWAII

Hawaii Department of Health:

- Approval to Construct
- Approval to Use
- Community Noise Permit (if required)
- National Pollutant Discharge Elimination System Construction Stormwater Permit

Hawaii Department of Land and Natural Resources:

- Chapter 6E, HRS Historic Preservation

Office of Planning:

- Coastal Zone Management Consistency

### COUNTY OF HAWAII

- Use Permit
- Plan Approval
- Grading Permit
- Building Permit
- Fence Permit

Additional information is included in Appendix F, HCCC Secure Housing Project—Schematic Design Report.




**Exhibit 4-2: Special Management Area**

# 5.0 ANTICIPATED DETERMINATION

Significance Criteria, Section 12 of the Hawaii Department of Health Administrative Rules, Title 11, Chapter 200, was reviewed and analyzed to determine whether the proposed project would have significant impacts on the environment. Based on the significance criteria, it is anticipated that the proposed project will not have a significant effect on the environment, and that a Finding of No Significant Impact (FONSI) will be filed with the State Office of Environmental Quality Control following the public consultation period. The reasons supporting this anticipated determination are described below according to these significance criteria.

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

   Development of the proposed project will require an irrevocable commitment of energy, labor, capital, and materials for construction. Land has been utilized for roadway and drainage purposes for decades and will continue to be used for those purposes for an indefinite period of time.

   As detailed in the Draft EA, the proposed project would not result in any significant adverse environmental impacts. None of the plant species recorded in the biological survey are endemic and none are listed as endangered or threatened or proposed for inclusion as a listed species by federal or state agencies. No aquatic species protected by State of Hawaii Administrative Rules, nor federally endangered or threatened species were observed in or around the proposed project site. Furthermore, the site evaluated for the proposed housing unit is located adjacent to the main correctional center compound and does not provide significant wildlife habitat. Under the proposed action there would be minimal impacts on wildlife in the area.

   As a result of past development of HCCC, it is unlikely that the site has any archaeological sites, features, human burials, or subsurface deposits. If any previously unidentified burial, archaeological, or historic sites are found during the course of construction, the Contractor will stop work in the immediate vicinity and the SHPD will be notified immediately to determine appropriate mitigation measures.

   No ongoing traditional gathering or hunting practices have been reported within the project area itself. The HCCC property has been in use as a correctional facility since development of the original Hilo jail in the late 1890s. Access to traditional resources will not be affected by development of the proposed housing unit. It is anticipated that the proposed project will have no adverse impact on traditional cultural properties or practices, gathering rights, or access.

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

   The intention of the proposed project is to commit the project site to inmate housing unit use over the long-term. The proposed project and the commitment of land resources would not curtail the range of beneficial uses of the environment. Under the preferred alternative, the action would have beneficial impacts by converting vacant state-owned property to a productive use.

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

The proposed project would not have a significant impact to the environment and does not conflict with the State of Hawaii's long-term environmental policies, goals, and guidelines. As presented in this Draft EA, the project's potential adverse impacts are associated only with short-term construction-related activities and can be mitigated through adherence to standard construction mitigation practices.

4. Substantially affects the economic, social welfare, or cultural practices of the community or state.

   In the short-term, the proposed project will confer positive benefits in the local area. Direct economic benefits will result from construction expenditures both through the purchase of material from local suppliers and through the employment of local labor, thereby stimulating that sector of the economy. Indirect economic benefits may include benefits to local retailing businesses resulting from construction activities.

   Over the long-term, the proposed project would support the local economy through the continued purchases of goods and services from local merchants and service providers. Furthermore, beneficial impacts would be derived by fulfilling PSD's mission to provide public protection by operating humane and secure facilities in a safe working environment, where the health and well-being of the inmates are sustained, and opportunities are available to address issues related to their reintegration back into the community.

   Beneficial impacts would also occur by providing a sufficient number of beds in an appropriate setting to address the current severely crowded conditions; *provision of such housing is not intended to increase the population of HCCC beyond its current number.* Instead, medium-security inmates housed in cramped conditions and in spaces not well suited for inmates, would be accommodated in a modern housing unit designed and constructed to State of Hawaii and national standards. The proposed project is not expected to increase traffic or induce growth in the Hilo area.

   No ongoing traditional gathering or hunting practices occurring within the HCCC project area has been reported, and the proposed project is not anticipated to have an adverse impact on traditional cultural properties or practices, gathering rights, or access.

5. Substantially affects public health.

   During both construction and operation of the proposed inmate housing unit, no adverse impacts on the public's health and welfare are anticipated. Public health, welfare and safety or enhanced by operating a humane and secure jail facility in an overall safe working environment, where the health and well-being of the inmates and staff are properly considered.

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

   No substantial secondary effects are anticipated with the construction and operation of the proposed project. The proposed project is not anticipated to induce growth beyond that which is already anticipated for the region and should not influence future populations and land use patterns in the area of Hilo. Rather, the housing unit is proposed to fulfill an essential community need to provide a humane and secure jail facility where the health and well-being of inmates and staff are considered.

   Provision of such housing is not intended to increase the inmate population at HCCC beyond its current number. Instead, inmates housed in cramped conditions and in spaces not well suited for inmates, would be accommodated in the housing unit. As a result, no

additional PSD employees are anticipated to manage the inmate population. Therefore, no significant changes to Hawaii County's population are expected to result. From a land use perspective, the proposed project would maximize use of a publicly-owned property.

Solid waste generated during construction of the proposed housing unit would be managed and disposed of in accordance with *A Contractor's Waste Management Guide* developed by the Hawaii Department of Business, Economic Development, and Tourism. Wastes generated during construction would be stored onsite in an enclosed container until collected and transported by licensed haulers to the appropriate disposal and recycling facilities.

The future population of inmates at HCCC following development is not expected to be greater than the current population, hence, the demand for utility services (i.e., water supply, wastewater treatment, power, telecommunications, and solid waste) required during operation would be no greater than currently experienced at HCCC. Any proposed service improvements or extensions would be coordinated with the appropriate governmental agencies and would be designed in accordance with applicable regulatory standards. Surface runoff from the proposed project would not be expected to increase substantially over current conditions. Adverse impacts on public services such as police and fire protection, education, and medical care are not anticipated.

7. Involves a substantial degradation of environmental quality.

   The proposed project is not anticipated to involve a substantial degradation of environmental quality. During construction, there would be short-term air quality and noise impacts. In the long-term, impacts on these resources would not be significantly higher than current ambient levels. With the incorporation of mitigation measures during construction, the project will not result in long-term degradation to environmental quality.

   The project, during operation, is not anticipated to significantly affect the open space and scenic character of the area which is already developed with a correctional institution. It is not expected that the proposed action would result in significant impacts. Therefore, no substantial degradation of environmental quality resulting from the project is anticipated.

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

   Implementation of the proposed project would have no significant impact to the resource areas discussed. Potential impacts from implementing the proposed project would be mitigated as appropriate. Because the proposed project would not have a significant impact to environmental, cultural, and socioeconomic resources and because potential impacts would be mitigated, when this action is combined with other actions in the area, no significant cumulative impacts would occur.

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

   No rare, threatened, or endangered species or their habitats were located on the HCCC property and due to past disturbance, no natural habitat exists. None of the plants recorded in the biological survey are endemic and none are listed as endangered or threatened or proposed for inclusion as a listed species by federal or state agencies. No aquatic species protected by State of Hawaii Administrative Rules, nor federally endangered or threatened species were observed within the project area. BMPs implemented during construction will help to mitigate possible adverse air, noise, soil or water quality impacts. The project will not adversely affect any rare, threatened or endangered species, or its habitat.

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

    During construction, equipment operation would temporarily elevate ambient noise and concentrations of exhaust emissions in the immediate vicinity of the project site. To minimize air quality impacts during construction, dust control measures would be implemented to minimize wind-blown emissions. Noise impacts from construction would be minimized by limiting construction activities to daylight weekday hours and by following all applicable regulations. In the long-term, operation of the proposed project will have no significant long-term impact on air quality or ambient noise levels in the vicinity of HCCC.

    Potential water quality impacts during construction will be mitigated by adherence to Federal, State and County water quality regulations governing grading, excavation and stockpiling. Appropriate BMPs will be implemented to prevent significant degradation of water quality. Mitigation measures will be instituted incorporating appropriate structural and/or non-structural BMPs such as silt fences, diversion berm/ditches and minimizing time of exposure between construction and re-vegetation. Following construction, the project will produce no lasting adverse effects from storm water runoff to adjacent and downstream areas.

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

    The proposed housing unit site at HCCC is not located within and/or would not affect environmentally sensitive areas. Soils are not erosion-prone, and no geologically hazardous lands, estuaries, or coastal waters occur within or adjacent to the site. This site is not located within a floodplain.

    Applicable BMPs will mitigate against potential temporary effects to air, noise and soil erosion during construction. Compliance with Hawaii County Code provisions related to grading, Section 404 Corps Permit, Section 401 Water Quality Certification, and Stream Channel Alteration Permit may be required. The project should not adversely impact beaches, erosion-prone areas, geologically hazardous land, or fresh water.

12. Substantially affects scenic vistas and viewplanes identified in county or state plans or studies.

    The project site is not identified as a scenic vista or viewplane and the proposed housing unit would not affect scenic corridors and coastal scenic and open space resources. Any potential impacts would be mitigated by implementing design features that are sensitive to the unique visual resources of Hawaii and would include the selection of the color, texture, and materials for the structure.

13. Requires substantial energy consumption.

    The proposed action would involve the short-term commitment of fuel for equipment, vehicles, and machinery during construction activities. However, this use is not anticipated to result in a substantial consumption of energy resources. In the long-term, the proposed action may create a slight additional demand for electricity. This demand is not deemed significant or excessive within the context of the region's overall energy consumption. Nonetheless, PSD has an electrical/mechanical repair and improvement Capital Improvement Program underway that is expected to better manage power demands through installation of energy efficient equipment and various upgrades at HCCC and other PSD facilities.

Based on analysis of the proposed action against the 13 significance criteria, it is concluded that construction and operation of an inmate housing unit at HCCC would not result in any significant adverse impacts.

# 6.0 CONSULTATIONS

## 6.1 Pre-Assessment Consultations

In addition to notifying elected and appointed officials, the following agencies and organizations are among those contacted during preparation of the Draft EA. Communications involving preparation of the Draft EA are provided in Appendices A and B.

### Federal

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- U.S. Department of Transportation, Federal Highway Administration
- U.S. Geological Survey
- U.S. Department of Agriculture
- U.S. Environmental Protection Agency
- Federal Aviation Administration

### State of Hawaii

- Department of Accounting and General Services
- Department of Agriculture
- Department of the Attorney General
- Department of Education
- Department of Business, Economic Development and Tourism (DBEDT)
  - DBEDT, Land Use Commission
  - DBEDT, Office of Planning
- Department of Hawaiian Home Lands
- Department of Health (DOH)
  - DOH, HEER
  - DOH, Environmental Health Services Division
  - DOH, Office of Environmental Quality and Control
- Department of Land and Natural Resources (DLNR)
  - DLNR, State Historic Preservation Division
  - DLNR, Land Division
- Department of Transportation
- Office of Hawaiian Affairs

### County of Hawaii

- Planning Department
- Department of Public Works
- Mass Transit Agency
- Emergency Management Agency
- Department of Parks and Recreation
- Fire Department
- Police Department
- Housing Agency
- Office of the Corporation Counsel
- Office of the County Clerk
- Office of the Prosecuting Attorney
- Civil Defense Agency

### Others

- Hale O Nā Limahana
- Papa Ola Lokahi
- Council for Native Hawaiian Advancement
- Ke One O Kakuhihewa (O'ahu Council of the Association of Hawaiian Civic Clubs)
- Native Hawaiian Chamber of Commerce
- Papakōlea Community Development Corporation
- Partners in Development Foundation

  Ho'omana Pono LLC

## 6.2 Public Engagement

Since April 2018, PSD and DAGS have undertaken a public outreach and engagement effort to provide information about the proposed HCCC inmate housing project. This effort has helped to frame the planning and decision-making process, offered citizens the means to participate in the planning process, and explained how public input will be considered in the decision-making process. The public outreach and information effort has the following objectives:

- Provide an understanding of PSD's mission and responsibilities of the important role HCCC plays in the criminal justice system in Hawaii;
- Describe the current HCCC and the need to alleviate the severe and persistent crowding experienced at the facility that will improve the health and safety for inmates, staff and the public;
- Demonstrate how the Project Team is exercising careful, objective, and systematic evaluation of proposed plans for the inmate housing unit at HCCC;
- Provide HCCC project information that is accurate, readily available, and understandable to the public;

- Continuously inform the public regarding all aspects of the HCCC planning process and offer opportunities for input and participation;
- Encourage public interest and constructive input, eliciting the full spectrum of viewpoints;
- Eliminate misunderstanding by providing accurate and timely information about the proposed HCCC project through a variety of methods;
- Ensure the public feel their input matters and that they are being heard and respected.

Outreach activities to date have been varied in their approach to encourage participation across different audiences, recognizing that individuals and groups receive and process information in different ways.

### 6.2.1 Notification Letters

PSD is committed to providing a safe, secure, healthy, and humane social and physical environment for inmates and staff but the severe and persistent crowding at HCCC has limited its ability to provide such environments, exacerbated basic physical plant operations, contributed to tension among inmates, and diminished program opportunities. To increase awareness of this problem and solicit the input and assistance of federal, state, and local elected and appointed officials and government agencies, PSD issued letters to such individuals and agencies to inform them of plans to alleviate crowding at HCCC. Two such letters, sent by PSD Director Nolan P. Espinda, introduced the team responsible for developing and managing the effort to conduct the necessary planning and environmental impact studies (2018) and an update on progress and status (2019).

### 6.2.2 Neighbor Island Jail Projects Website

Information prepared in support of inmate housing project proposed for HCCC (including the aforementioned newsletters) has also been made available through the Neighbor Island Jail Projects website: ***https://dps.hawaii.gov/neighbor-island-jails-project/.*** The website hosts a calendar of events, presentation materials, the history of public outreach activities during 2018 and 2019, project newsletters, various technical reports, and other informative materials. Interested persons and organizations were also continuously added to the Neighbor Island Jail Projects emailing/distribution list to receive periodic information about the project and to learn about progress in the planning process.

### 6.2.3 Project Newsletters and Other Materials

PSD and DAGS produced and widely distributed periodic newsletters concerning various aspects of the HCCC housing unit planning and environmental impact study process. Newsletters were prepared in response to the need for accurate information about jail function, operation, inmate populations, and related characteristics. These publications were used as meeting handouts, made available via PSD's Neighbor Island Jail Projects website, and distributed via an email system to over 500 individuals, organizations, agencies, stakeholders, elected and appointed officials, and others. In addition, PSD and DAGS prepared a ***Pre-Assessment Consultations*** document to explain the need for the housing unit and to seek advice and input on issues that should be addressed in the forthcoming Draft EA. Newsletters and other documents prepared and distributed during 2018 and 2019 are shown in Table 6-1.

## 6.3 Next Steps

Throughout the planning and Draft EA effort, PSD and DAGS have demonstrated its commitment to ensuring that the process of planning, programming, assessing potential environmental

impacts, and eventually permitting, designing, and constructing a HCCC inmate housing unit has been open and transparent and benefitted from the input and involvement of all interested and concerned parties. This outreach and engagement will continue through the end of the design phase.

**Table 6-1: Neighbor Island Jail Project Documents**

| Date Issued | Type | Title |
|---|---|---|
| April 2018 | Newsletter Volume 1 | PSD to Address Overcrowding at Kauai, Maui and Hawaii Jails |
| May 2018 | Newsletter Volume 2 | Frequently Asked Questions about KCCC, MCCC, and HCCC |
| July 2018 | Booklet | Pre-Assessment Consultations Document |
| August 2018 | Newsletter Volume 3 | Who is Housed at Kauai, Maui and Hawaii CCCs? |
| December 2018 | OCCC Newsletter 22 | Planned Neighbor Island Jail Housing Units Moving Forward |
| February 2019 | Newsletter Volume 4 | Planning for KCCC, MCCC, and HCCC Housing Advancing |
| April 2019 | Newsletter Volume 5 | New Housing Units Planned at KCCC, MCCC, and HCCC |

## 6.4 Agencies and Organizations Consulted on the Draft EA

Availability of the Draft EA for review and comment will be published in the OEQC *Environmental Notice* dated May 8, 2019. PSD will directly notify agencies, organizations, and the public regarding the availability of the Draft EA for review and comment. PSD will also continue to consult with the Hawaii SHPD in accordance with the state's historic preservation regulations, with the USFWS in accordance with Section 7 of the Endangered Species Act, and the Corps in accordance with the Clean Water Act.

# 7.0 PREPARERS

The Draft EA has been prepared by Louis Berger U.S., Inc., headquartered at 412 Mt. Kemble Avenue, Morristown, New Jersey 07962. Other members of the consultant team were employed to provide specific assessments of environmental and other key factors for this project. Table 7-1 presents the consultants who contributed to Draft EA preparation and their specialties.

**Table 7-1: List of Preparers**

| Name | Area(s) of Responsibility |
|---|---|
| DLR Group, Inc. | Project Management, Architecture, Justice Planning and Programming |
| Louis Berger U.S., Inc. | Environmental Planning, Air Quality, Archaeological/Architectural Resources, Biological Resources, Water Resources, Noise, Socio-economics, Housing, Visual Resources, Utility Services, Climate, Community Services, Hazardous Waste Contamination, Natural Hazards, Fiscal Considerations, Alternatives Analysis, Public Outreach and Engagement |
| ASM Affiliates | Cultural Impact Assessment |
| Austin, Tsutsumi & Associates, Inc. | Civil Engineering and Permitting |
| Chris Hart & Partners | Permitting |

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# APPENDIX A:
# Notification Letters

DAVID Y. IGE
GOVERNOR

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

NOLAN P. ESPINDA
DIRECTOR

**Cathy Ross**
Deputy Director
Administration

**Jodie F. Maesaka-Hirata**
Deputy Director
Corrections

**Renee R. Sonobe Hong**
Deputy Director
Law Enforcement

No. _____

March 28, 2018

The Honorable Harry Kim
Mayor, County of Hawai'i
25 Aupuni Street
Hilo, Hawaii 96720

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Mayor Kim:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

PSD is responsible for approximately 1,090 offenders currently housed within Community Correctional Centers (CCCs) located on the islands of Kauai, Maui, and Hawai'i. They provide the customary jail function of managing pre-trial detainees and locally-sentenced misdemeanant offenders and others with a sentence of one year or less. CCCs also provide an important pre-release preparation/transition function for prison system inmates who are transferred back to their county or origin when they reach less than a year until their release.

We are committed to providing a safe, secure, healthy, humane, social, and physical environment for inmates and staff. However, the severe and persistent overcrowding at HCCC has limited PSD's ability to provide such environments, has exacerbated basic physical plant operations, contributed to tension among inmates, and diminished program opportunities. Assisting us is a team consisting of representatives of PSD, Hawai'i Department of Accounting and General Services (DAGS), and consultants led by DLR Group.

As we undertake this effort, I wish to inform key state and local officials such as yourself and seek your cooperation. While we have many steps ahead involving environmental assessment/studies, public outreach, project approvals/permits, design and eventual construction, it will be through your cooperation that we will be successful. In the coming weeks, members of our team will be reaching out to you to introduce themselves and further explain our plan, the process, and timeframe for completion of the necessary

planning and environmental impact studies. In charge of these efforts is Mr. Clayton Shimazu, Chief Planner (Email: clayton.h.shimazu@hawaii.gov; Tel: 808-587-1237); please contact him with questions.

We appreciate your support for the Department of Public Safety. Mahalo.

Sincerely,

Nolan P. Espinda
Director

c: C. Shimazu
R. Louis
D. Jardoc

DAVID Y. IGE
GOVERNOR

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

NOLAN P. ESPINDA
DIRECTOR

**Cathy Ross**
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Administration

**Jodie F. Maesaka-Hirata**
Deputy Director
Corrections

**Renee R. Sonobe Hong**
Deputy Director
Law Enforcement

No. _____

March 28, 2018

The Honorable Valerie T. Poindexter, Chair
Hawai'i County Council
25 Aupuni Street
Hilo, Hawaii 96720

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Chair Poindexter:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

PSD is responsible for approximately 1,090 offenders currently housed within Community Correctional Centers (CCCs) located on the islands of Kauai, Maui, and Hawai'i. They provide the customary jail function of managing pre-trial detainees and locally-sentenced misdemeanant offenders and others with a sentence of one year or less. CCCs also provide an important pre-release preparation/transition function for prison system inmates who are transferred back to their county or origin when they reach less than a year until their release.

We are committed to providing a safe, secure, healthy, humane, social, and physical environment for inmates and staff. However, the severe and persistent overcrowding at HCCC has limited PSD's ability to provide such environments, has exacerbated basic physical plant operations, contributed to tension among inmates, and diminished program opportunities. Assisting us is a team consisting of representatives of PSD, Hawai'i Department of Accounting and General Services (DAGS), and consultants led by DLR Group.

As we undertake this effort, I wish to inform key state and local officials such as yourself and seek your cooperation. While we have many steps ahead involving environmental assessment/studies, public outreach, project approvals/permits, design and eventual construction, it will be through your cooperation that we will be successful. In the coming weeks, members of our team will be reaching out to you to introduce themselves and further explain our plan, the process, and timeframe for completion of the necessary

planning and environmental impact studies. In charge of these efforts is Mr. Clayton Shimazu, Chief Planner (Email: clayton.h.shimazu@hawaii.gov; Tel: 808-587-1237); please contact him with questions.

We appreciate your support for the Department of Public Safety. Mahalo.

Sincerely,

Nolan P. Espinda
Director

c: C. Shimazu
R. Louis
D. Jandoc

DAVID Y. IGE
GOVERNOR

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
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NOLAN P. ESPINDA
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**Jodie F. Maesaka-Hirata**
Deputy Director
Corrections

**Renee R. Sonobe Hong**
Deputy Director
Law Enforcement

No. _____

March 28, 2018

The Honorable Aaron Chung, Member
Hawai'i County Council
25 Aupuni Street
Hilo, Hawaii 96720

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Council Member Chung:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

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We appreciate your support for the Department of Public Safety. Mahalo.

Sincerely,

Nolan P. Espinda
Director

c: C. Shimazu
R. Louis
D. Jandoc

DAVID Y. IGE
GOVERNOR

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

NOLAN P. ESPINDA
DIRECTOR

Cathy Ross
Deputy Director
Administration

Jodie F. Maesaka-Hirata
Deputy Director
Corrections

Renae R. Sonobe Hong
Deputy Director
Law Enforcement

No. _____

March 28, 2018

The Honorable Susan L. K. Lee Loy, Member
Hawai'i County Council
25 Aupuni Street
Hilo, Hawaii 96720

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Council Member Lee Loy:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

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March 28, 2018

The Honorable Maile Medeiros David, Member
Hawai'i County Council
25 Aupuni Street
Hilo, Hawaii 96720

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Council Member David:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

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March 28, 2018

The Honorable Dru Mamo Kanuha, Member
Hawai'i County Council
25 Aupuni Street
Hilo, Hawaii 96720

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Council Member Kanuha:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

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March 28, 2018

The Honorable Herbert M. Richards, III, Member
Hawai'i County Council
25 Aupuni Street
Hilo, Hawaii 96720

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Council Member Richards:

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March 28, 2018

The Honorable Karen Eoff, Member
Hawai'i County Council
25 Aupuni Street
Hilo, Hawaii 96720

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Council Member Eoff:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

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March 28, 2018

The Honorable Jennifer Ruggles, Member
Hawai'i County Council
25 Aupuni Street
Hilo, Hawaii 96720

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Council Member Ruggles:

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Deputy Director
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March 28, 2018

The Honorable Eileen O'Hara, Ph.D, Member
Hawai'i County Council
25 Aupuni Street
Hilo, Hawaii 96720

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Council Member O'Hara:

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March 28, 2018

The Honorable Ronald D. Kouchi
President, Hawai'i State Senate
415 S. Beretania Street, Rm. 409
Honolulu, Hawaii 96813

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Senate President Kouchi:

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March 28, 2018

The Honorable Clarence K. Nishihara, Senator
Chair – Senate Committee on Public Safety, Intergovernmental,
and Military Affairs
415 S. Beretania Street, Rm. 214
Honolulu, Hawai'i 96813

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Chair Nishihara:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

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March 28, 2018

The Honorable Donovan M. Dela Cruz, Senator
Chair – Senate Committee on Ways and Means
415 S. Beretania Street, Rm. 208
Honolulu, Hawaii 96813

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Chair Dela Cruz:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

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March 28, 2018

The Honorable Scott K. Saiki, Speaker
Hawai'i House of Representatives
415 S. Beretania Street, Rm. 431
Honolulu, Hawaii 96813

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Speaker Saiki:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

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No. _____

March 28, 2018

The Honorable Sylvia Luke, Representative
Chair - House Committee on Finance
415 S. Beretania Street, Rm. 306
Honolulu, Hawaii 96813

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Chair Luke:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

PSD is responsible for approximately 1,090 offenders currently housed within Community Correctional Centers (CCCs) located on the islands of Kauai, Maui, and Hawai'i. They provide the customary jail function of managing pre-trial detainees and locally-sentenced misdemeanant offenders and others with a sentence of one year or less. CCCs also provide an important pre-release preparation/transition function for prison system inmates who are transferred back to their county or origin when they reach less than a year until their release.

We are committed to providing a safe, secure, healthy, humane, social, and physical environment for inmates and staff. However, the severe and persistent overcrowding at HCCC has limited PSD's ability to provide such environments, has exacerbated basic physical plant operations, contributed to tension among inmates, and diminished program opportunities. Assisting us is a team consisting of representatives of PSD, Hawai'i Department of Accounting and General Services (DAGS), and consultants led by DLR Group.

As we undertake this effort, I wish to inform key state and local officials such as yourself and seek your cooperation. While we have many steps ahead involving environmental assessment/studies, public outreach, project approvals/permits, design and eventual construction, it will be through your cooperation that we will be successful. In the coming weeks, members of our team will be reaching out to you to introduce themselves and further explain our plan, the process, and timeframe for completion of the necessary

planning and environmental impact studies. In charge of these efforts is Mr. Clayton Shimazu, Chief Planner (Email: clayton.h.shimazu@hawaii.gov; Tel: 808-587-1237); please contact him with questions.

We appreciate your support for the Department of Public Safety. Mahalo.

Sincerely,

Nolan P. Espinda
Director

c: C. Shimazu
R. Louis
D. Jandoc

DAVID Y. IGE
GOVERNOR

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

NOLAN P. ESPINDA
DIRECTOR

**Cathy Ross**
Deputy Director
Administration

**Jodie F. Maeaska-Hirata**
Deputy Director
Corrections

**Renee R. Sonobe Hong**
Deputy Director
Law Enforcement

No. _____

March 28, 2018

The Honorable Gregg Takayama, Representative
Chair - House Committee on Public Safety
415 S. Beretania Street, Rm. 323
Honolulu, Hawaii 96813

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha Chair Takayama:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

PSD is responsible for approximately 1,090 offenders currently housed within Community Correctional Centers (CCCs) located on the islands of Kauai, Maui, and Hawai'i. They provide the customary jail function of managing pre-trial detainees and locally-sentenced misdemeanant offenders and others with a sentence of one year or less. CCCs also provide an important pre-release preparation/transition function for prison system inmates who are transferred back to their county or origin when they reach less than a year until their release.

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We appreciate your support for the Department of Public Safety. Mahalo.

Sincerely,

Nolan P. Espinda
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c: C. Shimazu
R. Louis
D. Jandoc

DAVID Y. IGE
GOVERNOR

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

**NOLAN P. ESPINDA**
DIRECTOR

**Cathy Ross**
Deputy Director
Administration

**Jodie F. Maesaka-Hirata**
Deputy Director
Corrections

**Renee R. Sonobe Hong**
Deputy Director
Law Enforcement

No. _____

April 3, 2018

**RE: Hawai'i Community Correctional Center; New Medium Security Housing**

Aloha:

The Department of Public Safety (PSD) has an immediate need to address overcrowding at the Hawai'i Community Correctional Center (HCCC). As Director of PSD, I am writing today to seek your cooperation and assistance in our project to construct an addition at this facility.

PSD is responsible for approximately 1,090 offenders currently housed within Community Correctional Centers (CCCs) located on the islands of Kauai, Maui, and Hawai'i. They provide the customary jail function of managing pre-trial detainees and locally-sentenced misdemeanant offenders and others with a sentence of one year or less. CCCs also provide an important pre-release preparation/transition function for prison system inmates who are transferred back to their county of origin when they reach less than a year until their release.

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We appreciate your support for the Department of Public Safety. Mahalo.

Sincerely,

Nolan P. Espinda
Director

c: C. Shimazu, R. Louis, D. Jandoc

DAVID Y. IGE
GOVERNOR

NOLAN P. ESPINDA
DIRECTOR

Maria C. Cook
Deputy Director
Administration

Jodie F. Maesaka-Hirata
Deputy Director
Corrections

Renee R. Sonobe Hong
Deputy Director
Law Enforcement

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

No. _____

February 25, 2019

The Honorable Harry Kim, Mayor
County of Hawaii
25 Aupuni Street, Suite 1402/2402
Hilo, Hawaii 96720

**RE: Hawaii Community Correctional Center; New Medium Security Housing Unit Update**

Aloha, Mayor Kim:

The Department of Public Safety (PSD) is working to provide safe, secure, healthy, and humane social and physical environments for inmates and staff at the Hawaii Community Correctional Center (HCCC). As Director of PSD, I am writing to provide you with a status report on PSD's efforts to improve HCCC.

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Over the past several months the PSD team has been focused on preparing a Draft Environmental Assessment (EA) pursuant to Hawaii Revised Statutes, Chapter 343. Preparation of the Draft EA for HCCC is on schedule with publication expected in April - May 2019. While we have many steps ahead to complete the environmental studies, gain project approvals/permits, complete the design, and eventually construct the unit, we are confident we will be successful. Additional information can be found on the PSD-Neighbor Island Jail Projects website including newsletters, a Pre-Assessment Consultations document, and other information: *https://dps.hawaii.gov/neighbor-island-jails-project/*. We appreciate your support for the Department of Public Safety. Mahalo.

Sincerely,

Nolan P. Espinda
Director

cc: W. Takara, R. Louis, D. Jandoc

DAVID Y. IGE
GOVERNOR

NOLAN P. ESPINDA
DIRECTOR

**Maria C. Cook**
Deputy Director
Administration

**Jodie F. Maesaka-Hirata**
Deputy Director
Corrections

**Renee R. Sonobe Hong**
Deputy Director
Law Enforcement

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

No. _____

February 25, 2019

The Honorable Aaron Chung, Chairman
Hawaii County Council
25 Aupuni Street, Suite 1402/2402
Hilo, HI 96720

**RE: Hawaii Community Correctional Center; New Medium Security Housing Unit Update**

Aloha, Chairman Chung:

The Department of Public Safety (PSD) is working to provide safe, secure, healthy, and humane social and physical environments for inmates and staff at the Hawaii Community Correctional Center (HCCC). As Director of PSD, I am writing to provide you with a status report on PSD's efforts to improve HCCC.

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Sincerely,

Nolan P. Espinda
Director

c: W. Takara, R. Louis, D. Jandoc

DAVID Y. IGE
GOVERNOR

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

NOLAN P. ESPINDA
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**Renee R. Sonobe Hong**
Deputy Director
Law Enforcement

No. _____

February 25, 2019

The Honorable Valerie T. Poindexter, Member
Hawaii County Council
25 Aupuni Street, Suite 1402/2402
Hilo, Hawaii 96720

**RE: Hawaii Community Correctional Center; New Medium Security Housing Unit Update**

Aloha, Councilwomen Poindexter:

The Department of Public Safety (PSD) is working to provide safe, secure, healthy, and humane social and physical environments for inmates and staff at the Hawaii Community Correctional Center (HCCC). As Director of PSD, I am writing to provide you with a status report on PSD's efforts to improve HCCC.

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Sincerely,

Nolan P. Espinda
Director

cc: W. Takara, R. Louis, D. Jandoc

DAVID Y. IGE
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STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

No. _____

February 25, 2019

The Honorable Susan L. K. Lee Loy, Member
Hawaii County Council
25 Aupuni Street, Suite 1402/2402
Hilo, HI 96720

**RE: Hawaii Community Correctional Center; New Medium Security Housing Unit Update**

Aloha, Councilwoman Lee Loy:

The Department of Public Safety (PSD) is working to provide safe, secure, healthy, and humane social and physical environments for inmates and staff at the Hawaii Community Correctional Center (HCCC). As Director of PSD, I am writing to provide you with a status report on PSD's efforts to improve HCCC.

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Sincerely,

Nolan P. Espinda
Director

c: W. Takara, R. Louis, D. Jandoc

DAVID Y. IGE
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NOLAN P. ESPINDA
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STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

No. _____

February 25, 2019

The Honorable Ashley Lehualani Kierkiewicz, Member
Hawaii County Council
25 Aupuni Street, Suite 1402/2402
Hilo, HI 96720

**RE: Hawaii Community Correctional Center; New Medium Security Housing Unit Update**

Aloha, Councilwoman Kierkiewicz:

The Department of Public Safety (PSD) is working to provide safe, secure, healthy, and humane social and physical environments for inmates and staff at the Hawaii Community Correctional Center (HCCC). As Director of PSD, I am writing to provide you with a status report on PSD's efforts to improve HCCC.

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Sincerely,

Nolan P. Espinda
Director

c: W. Takara, R. Louis, D. Jandoc

DAVID Y. IGE
GOVERNOR

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

NOLAN P. ESPINDA
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**Maria C. Cook**
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Deputy Director
Corrections

**Renee R. Sonobe Hong**
Deputy Director
Law Enforcement

No. _____

February 25, 2019

The Honorable Matt Kanealii-Kleinfielder, Member
Hawaii County Council
25 Aupuni Street, Suite 1402/2402
Hilo, HI 96720

**RE: Hawaii Community Correctional Center; New Medium Security Housing Unit Update**

Aloha, Councilman Kanealii-Kleinfelder:

The Department of Public Safety (PSD) is working to provide safe, secure, healthy, and humane social and physical environments for inmates and staff at the Hawaii Community Correctional Center (HCCC). As Director of PSD, I am writing to provide you with a status report on PSD's efforts to improve HCCC.

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Sincerely,

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Director

c: W. Takara, R. Louis, D. Jandoc

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STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

No. _____

February 25, 2019

The Honorable Maile Medeiros David, Member
Hawaii County Council
25 Aupuni Street, Suite 1402/2402
Hilo, HI 96720

**RE: Hawaii Community Correctional Center; New Medium Security Housing Unit Update**

Aloha, Councilwoman David:

The Department of Public Safety (PSD) is working to provide safe, secure, healthy, and humane social and physical environments for inmates and staff at the Hawaii Community Correctional Center (HCCC). As Director of PSD, I am writing to provide you with a status report on PSD's efforts to improve HCCC.

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Sincerely,

Nolan P. Espinda
Director

c: W. Takara, R. Louis, D. Jandoc

DAVID Y. IGE
GOVERNOR

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STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

No. _____

February 25, 2019

The Honorable Rebecca Villegas, Member
Hawaii County Council
25 Aupuni Street, Suite 1402/2402
Hilo, HI 96720

**RE: Hawaii Community Correctional Center; New Medium Security Housing Unit Update**

Aloha, Councilwoman Villegas:

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Sincerely,

Nolan P. Espinda
Director

c: W. Takara, R. Louis, D. Jandoc

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STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

No. _____

February 25, 2019

The Honorable Karen Eoff, Vice Chair
Hawaii County Council
25 Aupuni Street, Suite 1402/2402
Hilo, HI 96720

**RE: Hawaii Community Correctional Center; New Medium Security Housing Unit Update**

Aloha, Vice Chairwoman Eoff:

The Department of Public Safety (PSD) is working to provide safe, secure, healthy, and humane social and physical environments for inmates and staff at the Hawaii Community Correctional Center (HCCC). As Director of PSD, I am writing to provide you with a status report on PSD's efforts to improve HCCC.

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Sincerely,

Nolan P. Espinda
Director

c: W. Takara, R. Louis, D. Jandoc

DAVID Y. IGE
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Law Enforcement

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

No. _____

February 25, 2019

The Honorable Herbert M. Richards, III, Member
Hawaii County Council
25 Aupuni Street, Suite 1402/2402
Hilo, HI 96720

**RE: Hawaii Community Correctional Center; New Medium Security Housing Unit Update**

Aloha, Councilman Richards:

The Department of Public Safety (PSD) is working to provide safe, secure, healthy, and humane social and physical environments for inmates and staff at the Hawaii Community Correctional Center (HCCC). As Director of PSD, I am writing to provide you with a status report on PSD's efforts to improve HCCC.

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Sincerely,

Nolan P. Espinda
Director

c: W. Takara, R. Louis, D. Jandoc

# APPENDIX B:
# Correspondence

May 24, 2018

Russell Tsuji, Administrator
State of Hawaii Department of Land and Natural Resources
Land Division
1151 Punchbowl Street, Room 220
Honolulu, HI 96813

RE: **Information Request for Proposed Medium Security Housing Unit Development at Hawaii Community Correctional Center, Hilo, Hawaii**

Dear Mr. Tsuji:

Louis Berger is supporting the Hawaii Department of Public Safety (PSD) in planning for development of a New Medium Security Housing Unit for inmates housed at the Hawaii Community Correctional Center (HCCC) located at 60 Punahele Street in Hilo, Hawaii. The addition of the New Medium Security Housing Unit is intended to provide a sufficient number of beds under appropriate conditions to address the history of overcrowding at HCCC and would be designed and constructed to State of Hawaii and national standards.

In support of this undertaking, Louis Berger is contacting your office for assistance in identifying the potential presence of any rare or federal and/or state threatened, endangered, proposed, or candidate species in the vicinity of the subject HCCC property. In addition, information regarding the presence of any other species or habitats of special concern, including wetlands or significant natural communities, in the vicinity of the HCCC is hereby requested. Site location maps of the HCCC property are attached to this letter. HCCC, comprising approximately three acres of land, is located within a highly urbanized environment, surrounded on all sides by residential, commercial and institutional uses. The information requested would assist us in preparing an Environmental Assessment in accordance with HRS 343, Hawaii's Environmental Policy Act.

We appreciate your assistance and input regarding wetlands, significant natural communities, special status species present and/or potential special status species habitat present in and around the HCCC property. Thank you for your cooperation and support. Please contact me at tstewart@louisberger.com or 973-407-1473 if you require additional information.

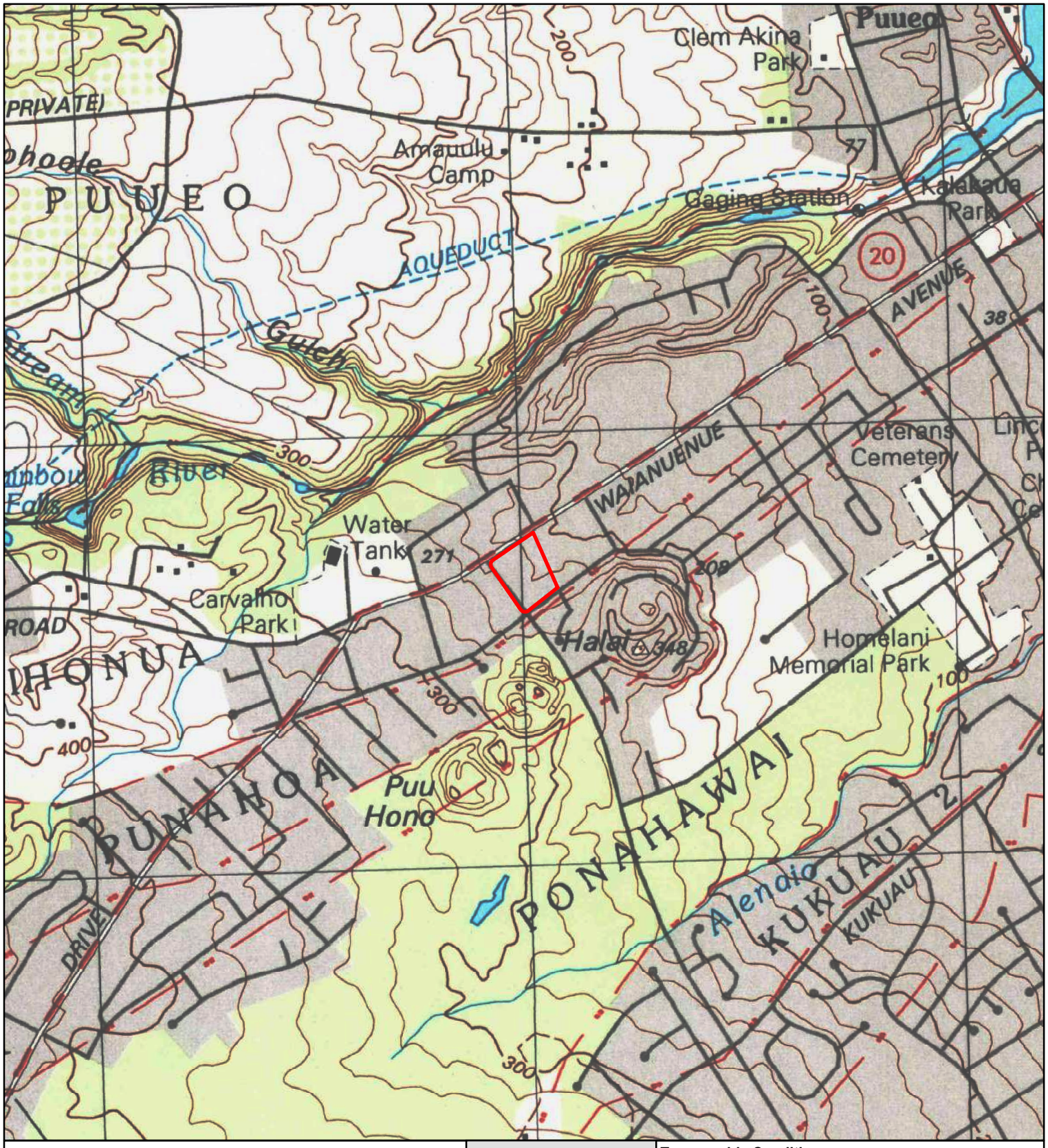
Sincerely,

Tara Stewart

Tara Stewart
Senior Environmental Scientist

Attachments

Cc: R. Nardi (Louis Berger)




HCCC Site Boundary

Source:
USGS, Hilo, HI Quadrangle Topo Map, 1995.




**Topographic Conditions**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 500 1,000 Feet

Louis Berger




HCCC Site Boundary

Source:
ESRI BING Imagery Service, obtained 2018.




**Aerial Photo**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

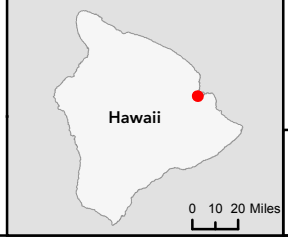
0 75 150 Feet

Louis Berger




HCCC Site Boundary
Building Footprint

Source:
ESRI BING Imagery Service, obtained 2018.




**Aerial Photo with Building Footprint**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 75 150 Feet

Louis Berger

May 24, 2018

Nanea Valeros
U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

RE: **Species List Request for Proposed Medium Security Housing Unit Development at Hawaii Community Correctional Center, Hilo, Hawaii**

Dear Ms. Valeros:

Louis Berger is supporting the Hawaii Department of Public Safety (PSD) in planning for development of a New Medium Security Housing Unit for inmates housed at the Hawaii Community Correctional Center (HCCC) located at 60 Punahele Street in Hilo, Hawaii. The addition of the New Medium Security Housing Unit is intended to provide a sufficient number of beds under appropriate conditions to address the history of overcrowding at HCCC and would be designed and constructed to State of Hawaii and national standards.

In support of this undertaking, Louis Berger is requesting information from your office regarding listed species and designated critical habitat within the vicinity of HCCC as well as any recommendations pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) and the Migratory Bird Treaty Act of 1918 (16 U.S.C. 103 et seq.), as amended (MBTA). Site location maps of the subject HCCC property are attached to this letter. HCCC, comprising approximately three acres of land, is located within a highly urbanized environment, surrounded on all sides by residential, commercial and institutional uses. The information requested would assist us in preparing an Environmental Assessment in accordance with HRS 343, Hawaii's Environmental Policy Act.

We appreciate your assistance and input regarding special status species present and/or potential special status species habitat present in and around the HCCC property. Thank you for your cooperation and support. Please contact me at tstewart@louisberger.com or 973-407-1473 if you require additional information.

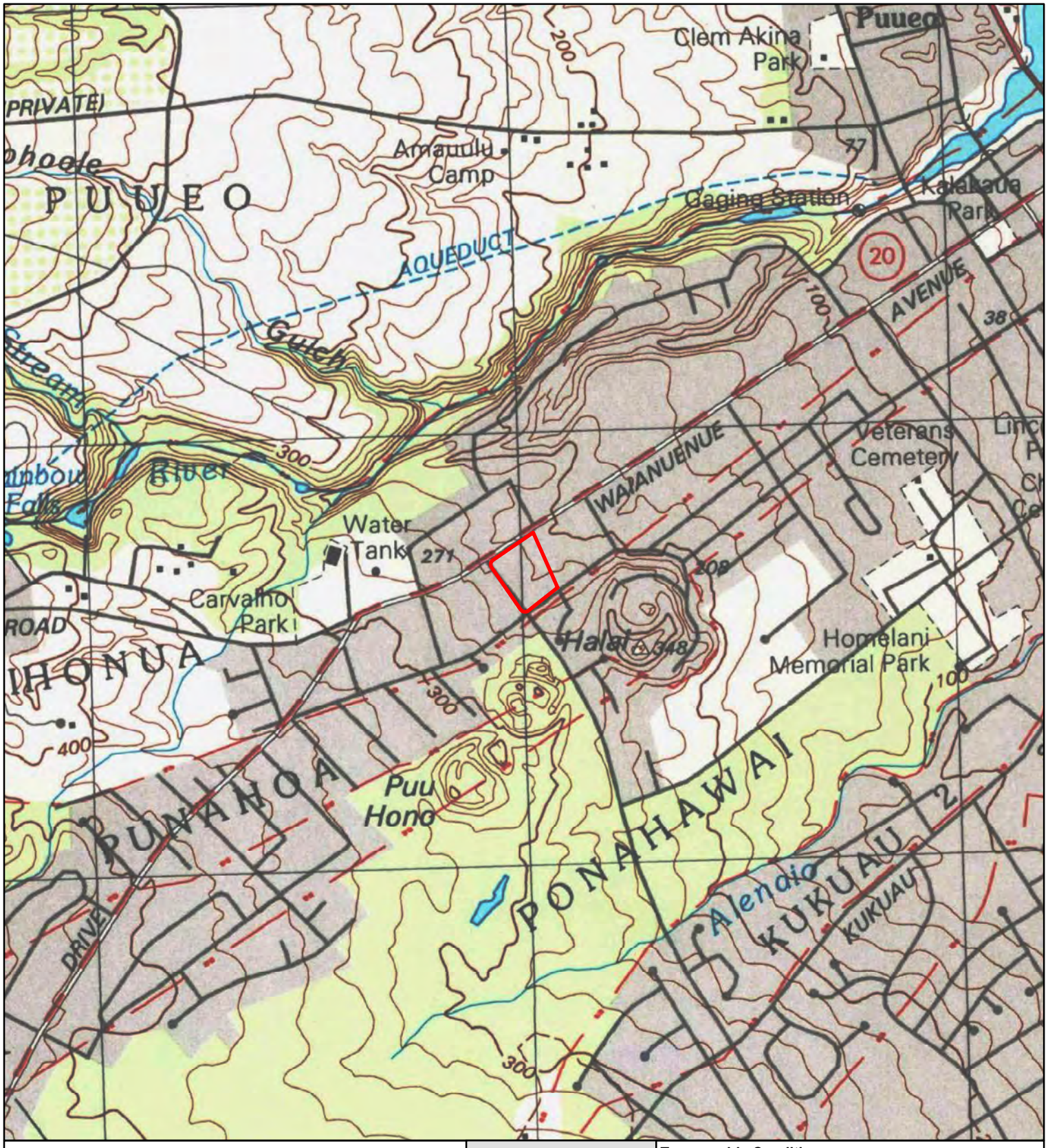
Sincerely,

Tara Stewart

Tara Stewart
Senior Environmental Scientist

Attachments

Cc: R. Nardi (Louis Berger)




HCCC Site Boundary




**Topographic Conditions**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 500 1,000 Feet

Louis Berger

Source:
USGS, Hilo, HI Quadrangle Topo Map, 1995.




HCCC Site Boundary

Source:
ESRI BING Imagery Service, obtained 2018.




**Aerial Photo**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 75 150 Feet

Louis Berger




HCCC Site Boundary

Building Footprint

Source:
ESRI BING Imagery Service, obtained 2018.




**Aerial Photo with Building Footprint**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 75 150 Feet

Louis Berger

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

June 22, 2018

Louis Berger Group
Attn: Ms. Tara Stewart
Senior Environmental Scientist
412 Mount Kemble Avenue
P.O. Box 1946
Morristown, NJ 07962-1946

via email: tstewart@louisberger.com

Attn: Ms. Stewart

SUBJECT: Information Request for Proposed Medium Security Housing Unit Development at **Hawaii Community Correctional Center** located at Hilo, Island of Hawaii; TMK: (3) 2-3-023:005

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from the (a) Engineering Division, (b) Division of Forestry & Wildlife, (c) Division of State Parks, and (d) Land Division – Hawaii District on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at (808) 587-0417. Thank you.

Sincerely,

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

RECEIVED
LAND DIVISION
'18 JUN 12 AM 11:09
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

'18 JUN 01 PM 01:42 ENGINEERING

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

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

May 31, 2018

**MEMORANDUM**

TO:

**DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
_X_ Div. of Forestry & Wildlife
_X_ Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Hawaii District
_X_ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Information Request for Proposed Medium Security Housing Unit Development at Hawaii Community Correctional Center
LOCATION: Hilo, Island of Hawaii; TMK: (3) 2-3-023:005
APPLICANT: Louis Berger on behalf of Hawaii Department of Public Safety

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **June 21, 2018.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

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

Signed: _____

Print Name: ~~Carty S. Chang, Chief Engineer~~

Date: 6/7/18

Attachments
cc: Central Files

**DEPARTMENT OF LAND AND NATURAL RESOURCES**
**ENGINEERING DIVISION**

**LD/Russell Y. Tsuji**
**Ref: Information Request for Proposed Medium Security Housing Unit Development at Hawaii Community Correctional Center, Hilo, Island of Hawaii; TMK: (3) 2-3-023:005**

**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 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), which can be viewed on our Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

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) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4846.

**The applicant should include water demands and infrastructure required to meet project needs.** Please note that the projects within State lands 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: 4/7/16

18356

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

RECEIVED
LAND DIVISION
2018 JUN 20 AM 10:39
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

May 31, 2018

**MEMORANDUM**

TO: **DLNR Agencies:**
Fr:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_Engineering Division
_X_Div. of Forestry & Wildlife
_X_Div. of State Parks
_X_Commission on Water Resource Management
_X_Office of Conservation & Coastal Lands
_X_Land Division – Hawaii District
_X_Historic Preservation

To:
FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Information Request for Proposed Medium Security Housing Unit Development at Hawaii Community Correctional Center
LOCATION: Hilo, Island of Hawaii; TMK: (3) 2-3-023:005
APPLICANT: Louis Berger on behalf of Hawaii Department of Public Safety

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **June 21, 2018.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

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

Signed: _____

Print Name: **DAVID G. SMITH, Administrator**

Date: 6/18/18

Attachments
cc: Central Files

57635

DAVID Y. IGE
GOVERNOR OF HAWAII

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

RECEIVED
STATE PARKS DIV

'18 JUN 3 P12:26

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

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

DEPT OF LAND & NATURAL RESOURCES

May 31, 2018

**MEMORANDUM**

RECEIVED
LAND DIVISION
2018 JUN -6 AM 11:12
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_Engineering Division
_X_Div. of Forestry & Wildlife
_X_Div. of State Parks
_X_Commission on Water Resource Management
_X_Office of Conservation & Coastal Lands
_X_Land Division – Hawaii District
_X_Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Information Request for Proposed Medium Security Housing Unit Development at Hawaii Community Correctional Center
LOCATION: Hilo, Island of Hawaii; TMK: (3) 2-3-023:005
APPLICANT: Louis Berger on behalf of Hawaii Department of Public Safety

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **June 21, 2018.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

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

Signed: CA Cottrell

Print Name: CURT. A. COTTRELL

Date: JUN 4 2018

Attachments
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

2018 JUN -4 P 2:23
RECEIVED
LAND DIVISION
HILO, HAWAII

RECEIVED
LAND DIVISION
2018 JUN 12 AM 11:24
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

May 31, 2018

**MEMORANDUM**

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
_X_ Div. of Forestry & Wildlife
_X_ Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Hawaii District
_X_ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Information Request for Proposed Medium Security Housing Unit Development at Hawaii Community Correctional Center
LOCATION: Hilo, Island of Hawaii; TMK: (3) 2-3-023:005
APPLICANT: Louis Berger on behalf of Hawaii Department of Public Safety

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **June 21, 2018.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

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

Signed: _____

Print Name: GORDON C. HEIT

Date: 6/6/18

Attachments
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

75 Aupuni Street, Room 204
Hilo, Hawaii 96720
PHONE: (808) 961-9590
FAX: (808) 961-9599

June 6, 2018

MEMORANDUM

TO: Russell Y. Tsuji, Administrator

FROM: Gordon C. Heit, Hawaii District Land Agent

SUBJECT: Information Request for Proposed Medium Security Housing Unit Development at Hawaii Community Correctional Center

LOCATION: South Hilo, Island of Hawaii, TMK: (3) 2-3-023:005

APPLICANT: Louis Berger on behalf of Hawaii Department of Public Safety

Pursuant to your request for comments on the above matter, we offer the following:

The parcel of land identified by the above TMK is government land currently set aside under Executive Order No. 2923 (EO2923) for use as a correctional facility under the control and management of the Department of Social Services and Housing and being designated the Hawaii Intake Service Center, Community Correctional Center. The proposed project is consistent with the allowed use under EO2923.

Please contact me should you have any questions.

**Charrier, Jodi <jodi_charrier@fws.gov>**

# Species List Request for Wailuku and Hilo Correctional Facilities

**Charrier, Jodi** <jodi_charrier@fws.gov> Wed, Jun 27, 2018 at 4:44 AM
To: tstuart@louisberger.com

Dear Ms. Stuart,

Thank you for your incoming species list requests (attached), received May 24, 2018, regarding the proposed construction of correctional facilities in Wailuku, Maui and Hilo, Hawaii. We have reviewed your request and determined that due to the urban locations and already disturbed action area, it is unlikely that there are any federally threatened or endangered species in the vicinity of your project.

Please feel free to contact me if you need further assistance.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Jodi Charrier
Endangered Species Biologist
Maui Nui and Hawaii Island Team
U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Blvd
Honolulu HI 96850
(808) 792-9423
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

**2 attachments**

**2018-TA-0379 incoming Hawaii correction center, Hilo,Hawaii.PDF**
588K

**2018-TA-0378 incoming Maui correction center, Wailuku.PDF**
443K

DAVID Y. IGE
GOVERNOR OF HAWAII

BRUCE S. ANDERSON, Ph.D.
DIRECTOR OF HEALTH

LORRIN W. PANG, M.D., M.P.H.
DISTRICT HEALTH OFFICER

**STATE OF HAWAII**
**DEPARTMENT OF HEALTH**
**MAUI DISTRICT HEALTH OFFICE**
54 HIGH STREET
WAILUKU, HAWAII 96793-3378

August 13, 2018

Mr. Reynald D. Rios
DAGS Project Management Branch
1151 Punchbowl Street, Room 430
Honolulu, Hawaii 96813
Via Email: Reynaldo.d.rios@hawaii.gov

Dear Mr. Rios:

Subject: Pre-Assessment Consultations-New Medium Security Housing Units at Kauai, Maui and Hawaii Community Correctional Centers

Thank you for the opportunity to comment on this project. We have the following comments.

If noise created during the construction phase of the project may exceed the maximum allowable levels (Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control") then a noise permit may be required and needs to be obtained before the commencement of work. Relevant information is online at: http://health.hawaii.gov/irhb/noise. We recommend you contact the Indoor and Radiological Health Branch (IRHB) at (808) 586-4700 with any specific questions.

If you have any questions, please contact me at 808 984-8230 or email me at patricia.kitkowski@doh.hawaii.gov.

Sincerely,

Patti Kitkowski

Patti Kitkowski
District Environmental Health Program Chief

**DEPARTMENT OF THE ARMY**
**HONOLULU DISTRICT, U.S. ARMY CORPS OF ENGINEERS**
**FORT SHAFTER, HAWAII 96858-5440**

October 10, 2018

SUBJECT: Additional Information Request for a Jurisdictional Determination for HCCC Proposed Medium Security Housing Units, Island of Kauai, Hawaii, Department of the Army File No. POH-2018-00205

Mr. Robert Nardi
Louis Berger
P.O. Box 1946
Morristown, New Jersey 07962

Mr. Nardi:

The Honolulu District, U.S. Army Corps of Engineers (Corps), Regulatory Branch has received your request dated August 8, 2018 for a Department of the Army (DA) approved jurisdictional determination (JD) for the HCCC Proposed Medium Security Housing Units project located at 60 Punehele Street, Hilo, Island of Hawaii, Hawaii. Your request has been assigned DA file number POH-2018-00205. Please reference this number in all future correspondence with our office relating to this action.

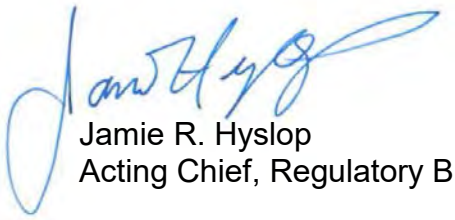
Based on review of the information you provided, our office does not have enough information to make a determination. Please refer to the enclosed checklist for the additional information needed to support our JD.

Please submit the requested information within 30 days of the date of this letter. If we do not receive a response from you within 30 days, your JD request will be administratively withdrawn until you provide the required information. Upon receipt of the requested information, we will resume evaluation of your request.

Thank you for your cooperation with the Honolulu District Regulatory Program. If you have any questions related to this determination, please contact Ms. Rebecca Black at 808-835-4107 or via e-mail at rebecca.l.black@usace.army.mil. You are encouraged to provide comments on your experience with the Honolulu District Regulatory Branch by accessing our web-based customer survey form at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

For additional information about our Regulatory Program, please visit our web site at http://www.poh.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,



Jamie R. Hyslop
Acting Chief, Regulatory Branch

Enclosure

cc:
Ms. Tara Stewart, Louis Berger

**HONOLULU DISTRICT, U.S. ARMY CORPS OF ENGINEERS**
**ADDITIONAL INFORMATION REQUIRED TO SUPPORT A JURISDICTIONAL DETERMINATION**

In order for this office to evaluate and determine the jurisdictional status and/or limits of aquatic features occurring on your property within the identified review area, you must submit the following information that is checked below:

(1) ☐ A JD Request Form requesting a jurisdictional determination. The form can be downloaded from our website at http://www.poh.usace.army.mil/Portals/10/docs/jurisdictionaldeterminations/RGL_%2016-01_%20Appendix_%201_%20FILLABLE.pdf?ver=2017-04-07-174236-997

(2) ☐ Contact information for the requestor/applicant, property owner(s), and authorized agent, if one has been designated.

(3) ☐ A signed statement from the property owner(s) allowing Corps personnel to enter the property and to collect samples during normal business hours.

(4) ☒ The total acreage of the survey area.

(5) ☐ Location Map – preferably depicted on a USGS 7.5 minute topographical map. The map should show a north arrow, the property/project boundary.

(6) ☐ Date(s) field work was performed to collect data, make field observations and/or to delineate the jurisdictional boundaries of the aquatic features.

(7) ☒ A description of existing field conditions. The field condition description may include current land use, flood/drought conditions, irrigation practices, modifications to the site, and any characteristics considered atypical or relevant to establishing jurisdictional limits (e.g., grading, illegal dumping, man-made stream diversions).

(8) ☒ A discussion of the hydrology at the site, including:
- a. ☒ All known surface or sub-surface sources
- b. ☒ Characteristics of surface flows (i.e., perennial, intermittent/seasonal or ephemeral)
- c. ☐ Estimated drainage gradients
- d. ☒ Surface water connections to the nearest traditional navigable water (TNW)
- e. ☒ Any potential influence for manmade water sources, such as irrigation
- f. ☒ The nearest “blue-line” waterway or other feature found on the most recent USGS map.

(9) ☐ If remote sensing was used in performing the delineation, provide an explanation of how it was used and include the name, date and source of the tools used and copies of applicable maps/photographs.

(10) ☐ A discussion of plant communities habitat types present at the site and other biological characteristics, such as wildlife, Federally listed species, fish/spawning areas or other important biological attributes.

(11) ☐ Tributary characteristics, including:
- a. ☐ Average width
- b. ☐ Average depth
- c. ☐ Substrate composition (e.g., silts, cobbles, bedrock, sands, gravel)
- d. ☐ Stream or channel gradient

(12) ☐ Any observed or documented interstate or foreign commerce associated with aquatic resources found on the site, specifically recreation or other use by interstate or foreign travelers, sale of fish or shellfish in interstate or foreign commerce, and use by industries operating in interstate or foreign commerce.

(13) ☒ A table listing all aquatic resources. The table should include the name of each aquatic resource, Cowardin type, acreage, and location (latitude/longitude in decimal format). For linear features (streams), the table must show both acreage and linear feet.

(14) ☒ A delineation of the jurisdictional boundaries of wetlands, other special aquatic sites (submerged aquatic vegetation and coral reefs), and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

a. ☒ Wetland delineation form(s). Wetland delineations must be conducted in accordance with the technical procedures and guidance described in the 1987 *Corps of Engineers Wetlands Delineation Manual* (Technical Report Y-87-1) and the 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Hawai'i and Pacific Islands Region*, Version 2.0.The Hawaii and Pacific Island Supplement data sheets can be found here: http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/HPI_dataform_v2.pdf.

b. ☒ A delineation of the ordinary high water mark (OHWM) for freshwater perennial, intermittent, and ephemeral streams. This should include OHWM data sheets or other documentation supporting the rationale for the delineated OHWM. The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 CFR 328.3(e)).

c. ☐ A delineation of the *high tide line* (HTL) for coastal waters and waterbodies subject to the ebb and flow of the tide. This should include documentation of the HTL and other information supporting the rationale for the delineated HTL. The term *high tide line* means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore

objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm (33 CFR 328.3(d)). Note: The mean higher high water (MHHW) mark may be used to demarcate the HTL on a case-by-case basis when approved by the Corps Regulatory project manager and when physical field indicators of the HTL are not identifiable or feasible to collect/document.

d. ☐ A delineation of the *mean high water mark* for coastal waters and waterbodies subject to the ebb and flow of the tide
e. ☐ A delineation of coral reefs. *Coral reefs* consist of the skeletal deposit, usually of calcareous or silicaceous materials, produced by the vital activities of anthozoan polyps or other invertebrate organisms present in growing portions of the reef.

(15) ☒ A map/drawing or series of maps/drawings depicting the delineated wetlands, ephemeral, intermittent, perennial streams, natural or man-made drainages, swales, and other water conveyances. If culverts, flumes, or other similar features are observed/documented to exist on the site, include the location and dimensions of such features. Because only the Corps determines the regulatory status of each aquatic resource, the map(s) should not include any labeling about jurisdiction. If the JD requestor/applicant believes one or more aquatic resource is not jurisdictional, the rationale should be included in the delineation report and the resource(s) should be identified on the map. The aquatic resources delineation map(s) must include:

a. ☐ A title block, including drawing date, scale, revision dates (if any), north arrow, existing topographic contours (if available), benchmarks, and the stamp of a licensed surveyor or a narrative describing how the GPS data were obtained
b. ☐The vertical datum (e.g., NAD 83, etc.) equivalent for the project's vertical datum, mean lower low water (MLLW) or other tidal datum for tidal projects within the vertical units.

(16) ☐ Colored flagging, 'wetland delineation' printed pin flags, or other conspicuous markings to identify the wetland boundary, including photographs of the markings/flagging placed in the field. Note: If you are requesting a wetland boundary concurrence or verification from the Corps, you will need to have the boundary flagged in the field. Delineation flags should be shown as points that are connected by straight lines (or extend off-site at property boundaries) and identified on the drawing(s) with the corresponding number or naming convention that is written on the flag in the field. The flag numbers and any text must occur in a large enough scale to be legible on an 8 ½ x 11-inch reduced drawing(s)/map(s).

(17) ☐ Colored flagging, 'OHWM' printed pin flags, or other conspicuous markings to identify the lateral limits of the ordinary high water mark, including photographs of the markings/flagging placed in the field. Note: If you are requesting a field verification or concurrence from the Corps, you will need to have the OHWM limits flagged in the field.

(18) ☒ Properly labeled photographs of each identified wetland, ephemeral, intermittent, perennial stream, gulch, ditch, conveyance, etc. (including those that may be considered isolated and/or non-jurisdictional).

a. ☒ Identification of on-site "ditches" since some ditches may be determined as jurisdictional. Please include observations with regard to perennial or seasonal flow of these features.

(19) ☒ Justification for proposed "isolated" or non-jurisdictional determinations related to any wetlands, streams, gulches, etc. within the review area. Note that these water bodies must be delineated and depicted on the wetland and other waters delineation map. For wetlands, include distance (feet) from the nearest stream or other downstream conveyance (ditch, culvert, etc.) within the same sub-watershed as the wetland.

(20) ☒ A drawing/map depicting all proposed aquatic resource <u>impacts</u> (if known) should be presented as a separate document including the following:

a. ☒ The project boundary and aquatic resource boundaries (including ditches, swales, culverts, etc.) depicted on a topographic base map with color coded boundaries, arrows, and text.
b. ☐ Flagged, and legibly labeled surveyed boundary/reach of each wetland and stream.
c. ☒ Unique hatching or shading depicting each impact to each aquatic resource with the acreage/linear feet labeled. Temporary and permanent impacts to aquatic resources should be depicted.

| | |
|---|---|
| **From:** | Black, Rebecca L CIV USARMY CELRH (US) |
| **To:** | Stewart, Tara; Nardi, Robert |
| **Subject:** | POH-2018-00189 and POH-2018-00205 (HCCC and KCCC Proposed Medium Security Housing Units, Islands of Hawaii and Kauai ) |
| **Date:** | Wednesday, October 10, 2018 11:27:36 PM |
| **Attachments:** | POH-2018-189 JD-Addtl Info Needed_Ltr.pdf<br>POH-2018-205 JD-Addtl Info Needed_Ltr.pdf |

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External

Ms. Stewart,
Please see the attached requests for additional information for both of the JD requests.

DA File Number: POH-2018-00189 KCCC Proposed Medium Security Housing Units, Island Kauai
Please see the attached checklist and my specific questions/comments below:

1) On the JD request form you indicate that you are requesting an approved JD. The JD boundary (area) needs to be clearly identified. All of the aquatic resources within that boundary need to identified, named, and depicted on the mapping.

2) You need to include a table in the report listing all the aquatic resources. The table should include the name of each aquatic resource, cowardin type, flow regime, acreage, linear footage, location (latitude/longitude in decimal format). For linear features (streams, ditches, etc.), the table must show both acreage and linear feet.

3) I have several questions pertaining the linear feature identified as "irrigation ditches":
a) Are the ditches being used for irrigation?
b) Flow regimes for the ditches need to be included.
c) Were all the site photographs (5, 6, and 7) taken June 14. Did you collect any rainfall data and were the hydrologic conditions be considered typical?
c) Several of these features appear to be modified streams or canals, draining wetlands, and at least one is depicted on the USGS mapping as a blue line stream that flows to the ocean.

4) Were there any additional upland sample plots examined within the proposed building footprint? There are several secondary hydrology indicators visible in Photograph 13.

DA File Number: POH-2018-00205 HCCC Proposed Medium Security Housing Units, Island of Hawaii
Please see the attached checklist and my specific questions/comments below:

5) The JD boundary (area) needs to be clearly identified. All of the aquatic resources within that boundary need to identified, named, and depicted on the mapping.

6) You need to include a table in the report listing all the aquatic resources. The table should include the name of each aquatic resource, cowardin type, flow regime, acreage, linear footage, location (latitude/longitude in decimal format). For linear features (streams, ditches, etc.), the table must show both acreage and linear feet.

7) Indicate whether the linear features exhibit a defined bed and bank, ordinary high water mark, and specify the flow regime.
Are either of these features relocated tributary or excavated in a tributary? Aerial photography, historical mapping, and site photographs indicate at least one of these features may be a modified or relocated tributary.

8) Did you check the soils in both of these areas? Guinea grass is FAC, taro is OBL. Are the features identified as "ditches" in fact linear wetlands?

9) Were the hydrologic conditions typical and did you collect any rainfall data?

In both requests you stated that you would also like to be notified of any permits that may be required from the

Corps. Currently, I don't have enough information to determine this.

Please feel free to give me a call to discuss. I should be in the office most of the day tomorrow.

Thank you,
Rebecca Black
Biologist
Reglatory Specialist
Honolulu District
U.S. Army Corps of Engineers
Building 252
Fort Shafter, Hawaii  96858-5440
808-835-4107

November 9, 2018

Rebecca Black
U.S. Army Corps of Engineers, Honolulu District
Regulatory Branch
Building 230
Fort Shafter, Hawaii 96858-5440

RE: **DA File Number: POH-2018-00205**
**Request for Preliminary Jurisdictional Determination - Proposed Medium Security Housing Unit Development at Hawaii Community Correctional Center, Hilo, Hawaii**

Dear Ms. Black:

Louis Berger U.S., Inc. (Louis Berger) is supporting the Hawaii Department of Public Safety (PSD) in planning for development of a New Medium Security Housing Unit for inmates housed at the Hawaii Community Correctional Center (HCCC) located at 60 Punahele Street in Hilo, Hawaii. The addition of the New Medium Security Housing Unit is intended to provide a sufficient number of beds under appropriate conditions to address the history of overcrowding at HCCC and would be designed and constructed to State of Hawaii and national standards.

In support of this undertaking, Louis Berger previously submitted a request to your office for an Approved Jurisdictional Determination (AJD) on August 8, 2018. We received your request for additional information on October 10, 2018. After corresponding with your office and further review of the proposed project, Louis Berger has determined that it would be more appropriate to request a preliminary jurisdictional determination (PJD) from the United States Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA) and Sections 9 and 10 of the Rivers and Harbors Act of 1899 (RHA). The PJD would assist us in preparing an Environmental Assessment in accordance with HRS 343, Hawaii's Environmental Policy Act, as well to inform future permitting requirements for the project.

Responses to your specific questions contained in email correspondence from your office dated October 10, 2018 are provided below. A Request for Corps JD Form for the subject property is included as Attachment 1 to this letter. Updated information, figures, and photographs to assist in determining preliminary jurisdiction of aquatic resources on the property are also presented below. As requested in the checklist of information to include with requests for jurisdictional determinations, the names, addresses, and phone number of the current property owner/applicant, and wetland delineator are as follows:

Current Property Owner/Applicant: State of Hawaii, Department of Public Safety
Attn: Clayton Shimazu, Chief Planner
919 Ala Moana Boulevard, Suite 400, Honolulu, Hawaii 96814
Tel: 808-587-1237
Email: clayton.h.shimazu@hawaii.gov

Wetland Delineator: Louis Berger
Attn: Tara Stewart
412 Mount Kemble Avenue, Morristown, New Jersey 07962
Tel: 973-407-1473
Email: tstewart@louisberger.com

**USACE SPECIFIC REQUESTS/QUESTIONS AND LOUIS BERGER RESPONSES:**

**Question/Request 1: The JD boundary (area) needs to be clearly identified. All of the aquatic resources within that boundary need to identified, named, and depicted on the mapping.**

Response: The Jurisdictional Determination Area figure included herein as Attachment 6 clearly identifies the Jurisdictional Determination Boundary, and all aquatic resources within that boundary are labeled and depicted on the figure.

**Question/Request 2: You need to include a table in the report listing all the aquatic resources. The table should include the name of each aquatic resource, Cowardin type, flow regime, acreage, linear footage, location (latitude/longitude in decimal format). For linear features (streams, ditches, etc.), the table must show both acreage and linear feet.**

Response: A table listing all aquatic resources depicted on the Jurisdictional Determination Area figure, along with each feature's Cowardin classification, flow regime, acreage, linear footage, and location is provided herein.

**Question/Request 3: Indicate whether the linear features exhibit a defined bed and bank, ordinary high water mark, and specify the flow regime. Are either of these features relocated tributary or excavated in a tributary? Aerial photography, historical mapping, and site photographs indicate at least one of these features may be a modified or relocated tributary.**

Response: The smaller feature (Resource A) does not exhibit a defined bed and bank or ordinary high water mark. Flow within this feature is intermittent, and it is surrounded by hydrophytic vegetation. Based on site history and archaeological investigations, the larger ditch (Resource B) is presumed to be a modified natural drainage feature. Additional documentation is presented herein.

**Question/Request 4: Did you check the soils in both of these areas? Guinea grass is FAC, taro is OBL. Are the features identified as "ditches" in fact linear wetlands?**

Response: A soil profile of Resource B from previous archeological investigations is provided herein. Resource A has characteristics of a linear wetland. Taro was only observed in the northeast corner of the property within Resource A.

**Question/Request 5: Were the hydrologic conditions typical and did you collect any rainfall data?**

Response: Hydrologic conditions depicted in the photos provided in Attachment 7 are considered typical. No rainfall data was collected.

## SITE INFORMATION

A desktop review of available resource data and a field survey of the property were conducted. A description of the subject property and the methodology and results of this investigation are described below.

### Site Location

HCCC comprises approximately 4.25 acres of land and is located in Hilo, on the eastern side of the island of Hawaii (Tax Map Key 2-3-023:005). Site location maps of the HCCC property are included as Attachment 2. The property is bordered to the north by Waianuenue Avenue, to the west by Komohana Street, to the south by Punahele Street, and to the east by a church and residential properties. The property is located within a highly developed urban area, surrounded by residential development and commercial and institutional uses. The Pacific Ocean is located approximately one mile east of the site.

### Desktop Investigation

A desktop review of resource maps, site photography, National Wetlands Inventory (NWI) data, and general observations of topographic and hydrologic conditions was conducted. Much of the area that comprises the HCCC parcel has been developed with inmate housing, administrative and program structures, maintenance buildings and storage areas, vehicle access, and parking areas. The only undeveloped land consists of mowed grass with landscape plantings surrounding the individual structures comprising HCCC, and the relatively steeply sloping area in the northeast portion of the property.

The HCCC property is located at an elevation of approximately 225 feet above mean sea level with topography sloping gently from west to east (see Attachment 3 – Topographic Map). Rainfall in the area is high, ranging between 150 and 200 inches per year (Kelly et al. 1981). According to the NRCS Web Soil Survey of Hawaii, two soil mapping units occur within the HCCC property: 638—Panaewa-Urban land complex, 2 to 10 percent slopes; and 901—Hilo hydrous silty clay loam, 0 to 10 percent slopes (see Attachment 4 – Soils Map). Neither soil map unit has a hydric soil rating.

As depicted on the NWI Wetland Map (Attachment 5), there are no wetlands or waterways mapped by NWI within or adjacent to the HCCC property. The nearest mapped wetland is a freshwater forested/shrub wetland classified as palustrine, forested, broad-leaved evergreen, temporary flooded (PFO3A) located approximately 800 feet north of the HCCC property, separated by residential development. The nearest "blue-line" waterway shown on the most recent USGS map is the Wailuku River, located approximately 0.25 miles north of the HCCC property and classified by NWI as riverine, upper perennial, unconsolidated bottom, permanently flooded (R3UBH). 'Alenaio Stream, classified by NWI as riverine, intermittent, streambed, seasonally flooded (R4SBC), is found approximately 0.5 miles south of the HCCC property.

As visible on the aerial view maps in Attachment 2, two drainage ditches are present within the northeast portion of the site. For the purposes of this JD request letter report, the smaller ditch in the northeast corner of the property is referred to as Resource A, and the larger ditch that bisects the northeast portion of the property is referred to as Resource B. These resources are also depicted on Attachment 6 - Jurisdictional Determination Area Figure. Resource A is considered modern era drainage, while Resource B is a Historic Era ditch known as Archaeological Site 20848 (Okahara and Associates 2017). Okahara and Associates (2017)

described Resource B as rock-lined on both sides with angular basalt small boulders, and the southwest end of the ditch is topped with concrete. Photographs of Resource B from Okahara and Associates (2017) are included as Photographs 29-22 of Attachment 7 – Site Photographs. Review of archaeological excavation profiles drawings of Resource B presented in Wolforth (1999) characterize soils within the ditch approximately 0-20 cm below ground surface (bgs) as very dark brown (10 YR 2/2) loamy sand. Soils within the layer approximately 20-80 cm bgs were characterized as dark brown (10YR 3/3) sandy clay loam.

As documented by Wolforth (1999), review of records and studies conclude that Resource B is a modified natural drainage that could have tapped into the water carried down by the Hilo Boarding School Ditch, but it is not the Boarding School Ditch itself. A portion of Resource B was previously piped underground during construction of a housing structure in 1996. Based on an archaeological investigation conducted by Paul H. Rosendahl, Ph.D., Inc. in support of that activity, the ditch is presumed to be part of a network of ditches in the region originally created to supply freshwater to residents and agricultural fields in Pi'ihonua and Punahoa. Subsequent alterations to the ditch network resulted from population growth in the 1800's, mechanical mills, the sugar industry, and electrical generation. Results of the archaeological investigation suggest that the larger ditch on the HCCC property was likely built in the 1920's. Field investigations associated with the archaeological study support the presumption that Resource B was made or modified by humans, since a cross-section of the ditch was too regular to be attributed to natural riverine forces (Paul H. Rosendahl, Ph.D., Inc.).

**Field Investigation**

A field investigation was conducted by a Louis Berger biologist on June 12, 2018. The field inspection revealed that the majority of the property is developed with inmate housing, administrative, program and support structures, maintenance buildings and storage areas, vehicle access and parking areas, and mowed grass. The only undeveloped portions of the property consist of maintained grass areas with occasional ornamental trees, shrubs, and other landscape plants surrounding the existing structures, as well as a relatively steep sloped area in the northeast portion of the property. Ornamental and fruit-bearing plants were observed throughout the property including palm trees, breadfruit (*Artocarpus altilis*), and planted ti (*Cordyline fruticose*). Numerous invasive African tulip trees (*Spathodea campanulata*) were also observed.

Two drainage features were observed within the undeveloped, northeast portion of the site. The smaller feature (Resource A) emerges from underground along the northern site boundary, and also receives stormwater from under Waianuenue Avenue. Resource A does not have a defined bed or bank, but appears to have intermittent flow for approximately 197 feet until it connects with Resource B. Vegetation within Resource A, which includes the northeast corner of the property, includes taro (*Colocasia esculenta*), primrose willow (*Ludwigia octovalvis*), and California grass (*Urochloa mutica*) intermixed with guinea grass (*Urochloa maxima*). The larger drainage feature (Resource B) emerges from underground storm drainage infrastructure through a pipe in the center of the property, and continues northeast off-site. Resource B is approximately 334 feet long, 3 feet wide, and approximately 2 feet deep. Vegetation along Resource B is predominantly guinea grass. The two ditches converge along the eastern HCCC property boundary and continue off-site. The ditch then goes underground beneath a parking lot on the adjacent property, then reemerges and continues northeast approximately 800 feet before disappearing underground. The location and extent of the two drainage features are also depicted on Attachment 6 - Jurisdictional Determination Area Figure. Site photographs taken during the field inspection are presented in Attachment 7. Note that Photographs 19-22 are from Okahara and Associates (2017) and show views of Resource B when vegetation has been mowed around the ditch.

**PRELIMINARY JURISDICTIONAL DETERMINATION REQUEST**

The scope of waters protected under the Clean Water Act is outlined in the "Clean Water Rule: Definition of `Waters of the United States"' (80 FR 37054, June 29, 2015). We respectfully request USACE review of the information provided herein and a PJD of the aquatic resources identified within the HCCC property be prepared. The location and extent of aquatic resources identified within the site are depicted on Attachment 6 - Jurisdictional Determination Area Figure. The total area within the Jurisdictional Determination Area boundary is 4.43 acres. The boundaries of the identified resources were delineated using available aerial imagery (ESRI 2018) and supplemented by field observations.

Resource A is an intermittently flooded drainage feature with wetland characteristics, and is classified herein as Palustrine Emergent Persistent Partially Drained/Ditched (PEM1d). Resource B is a drainage feature with intermittent flow and is classified herein as Riverine Intermittent Stream Bed (R4SB). Table 1 presents a list of each aquatic resource identified along with the Cowardin classification, flow regime, acreage, linear footage, and location of each resource.

**Table 1. Aquatic Resources Identified within the Jurisdictional Determination Area**

| Aquatic Resource | Cowardin Classification | Flow Regime | Area (Acres) | Length (Linear Feet) | Location (Latitude/Longitude) |
|---|---|---|---|---|---|
| A | PEM1d | Intermittent | 0.08 | 196.81 | 19.719 / -155.098 |
| B | R4SB | Intermittent | 0.12 | 333.92 | 19.718 / -155.098 |

There is no evidence of other aquatic resources within the Jurisdictional Determination Area. The nearest "blue-line" waterway or other feature found on the most recent USGS map is the Wailuku River, located approximately 0.25 miles north of the site. No surface water connections to traditional navigable water are evident.

Notice of any regulatory permits that may be required based on USACE's determination is also requested. As depicted on the Aerial Photo with Proposed Building Footprint and the Proposed Site Plan, both included in Attachment 2, the footprint of the proposed medium security housing unit is located on developed land in the northwest corner of the HCCC property and would not impact the resources described above.

Should you require additional information please contact me at tstewart@louisberger.com or 973-407-1473. Thank you for your assistance and cooperation.

Sincerely,

Tara Stewart

Tara Stewart
Senior Environmental Scientist, Louis Berger

Cc: R. Nardi (Louis Berger)

**Attachments**

Attachment 1 - Request for Corps JD Form
Attachment 2 – Site Location Maps
Attachment 3 – Topographic Map
Attachment 4 – Soils Map
Attachment 5 – NWI Wetland Map
Attachment 6 – Jurisdictional Determination Area
Attachment 7 – Site Photographs

**References**


ESRI BING Imagery Service, obtained 2018.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *State of Hawaii 2016 Wetland Plant List: 2016 wetland ratings*. Phytoneuron 2016-30: 1-17. http://wetland-plants.usace.army.mil/nwpl_static/data/DOC/lists_2016/States/pdf/HI_2016v1.pdf

Kelly, M., B. Nakamura, and Dorothy Barrère. 1981. *Hilo Bay: A Chronological History, Land and Water Use in the Hilo Bay Area, Island of Hawai'i.* Bishop Museum, Honolulu.

Munsell. 2000. *Munsell Soil Color Charts.* (Year 2000 Revised).

NRCS (Natural Resources Conservation Service). 2017. *Field Indicators of Hydric Soils in the United States. A Guide for Identifying and Delineating Hydric Soils.* Version 8.1, 2017.

NRCS *Web Soil Survey, Island of Hawaii, Hawaii*, 2017.

Okahara and Associates. 2017. *Archaeological Inventory Survey of the Hawai'I Community Correctional Center (HCCC) Property in Pi'Ihonua Ahupua'a, South Hilo District, Hawai'I Island, Hawai'I [TMK: (3) 2-2-023:005]*. Draft.

Paul H. Rosendahl, Ph.D., Inc. *Data Recovery for the Housing Facility at the Hawai'i Community Correctional Center: Investigation into the Network of Ditches in the Hala'I Region of Hilo, Land of Pi'ihonua, South Hilo District, Island of Hawai'i.*

USACE and EPA. 2015. USACE and Environmental Protection Agency, "*Clean Water Rule: Definition of 'Waters of the United States,' Final Rule*," 80 Federal Register 37054-37127, June 29, 2015.

USFWS (U.S. Fish and Wildlife Service). 2016. *National Wetland Inventory*. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Available at: http://www.fws.gov/wetlands/Data/Mapper.html.

Wolforth, T. 1999. *Data Recovery for the Housing Facility at the Hawai'i Community Correctional Center: Investigation into the Network* of Ditches in the Hāla'i Region of Hilo, Land of Pi'ihonua, South Hilo District, Island of Hawai'i (TMK:3-2-3-23: Por.5). PHRI Report #1741-092999 submitted to Architects Hawai'i, Ltd, Honolulu.

# ATTACHMENTS

# Attachment 1
# Request for Corps JD Form

## Appendix 1 - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

To: Honolulu District, U.S. Army Corps of Engineers (Corps) Regulatory Branch

- I am requesting a JD on property located at: 60 Punahele Street
  City: Hilo _____ County/Island: Hawaii
  State/Territory: ✔ HI __AS __GU __CNMI Acreage of Parcel/Review Area for JD: 11 acres
  Latitude (decimal degrees): 19°43'6.92"N Longitude (decimal degrees): 155° 5'55.65"W
  (For linear projects, please include the center point of the proposed alignment.)

- Please attach a survey/plat map and vicinity map identifying location and review area for the JD.
- ☐ I currently own this property. ☐ I plan to purchase this property.
  ☑ I am an agent/consultant acting on behalf of the requestor.
  ☐ Other (please explain):_____
- Reason for request: (check as many as applicable)
  ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
  ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
  ☑ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
  ☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
  ☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 1O list and/or is subject to the ebb and flow of the tide.
  ☐ A Corps JD is required in order to obtain my local/state authorization.
  ☐ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does -not exist over the aquatic resource on the parcel.
  ☐ I believe that the site may be comprised entirely of dry land.
  ☐ Other:_____
- Type of determination being requested:
  ☐ I am requesting an approved JD.
  ☑ I am requesting a preliminary JD.
  ☐ I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
  ☐ I am unclear as to which JD I would like to request and require additional information to inform my decision.

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

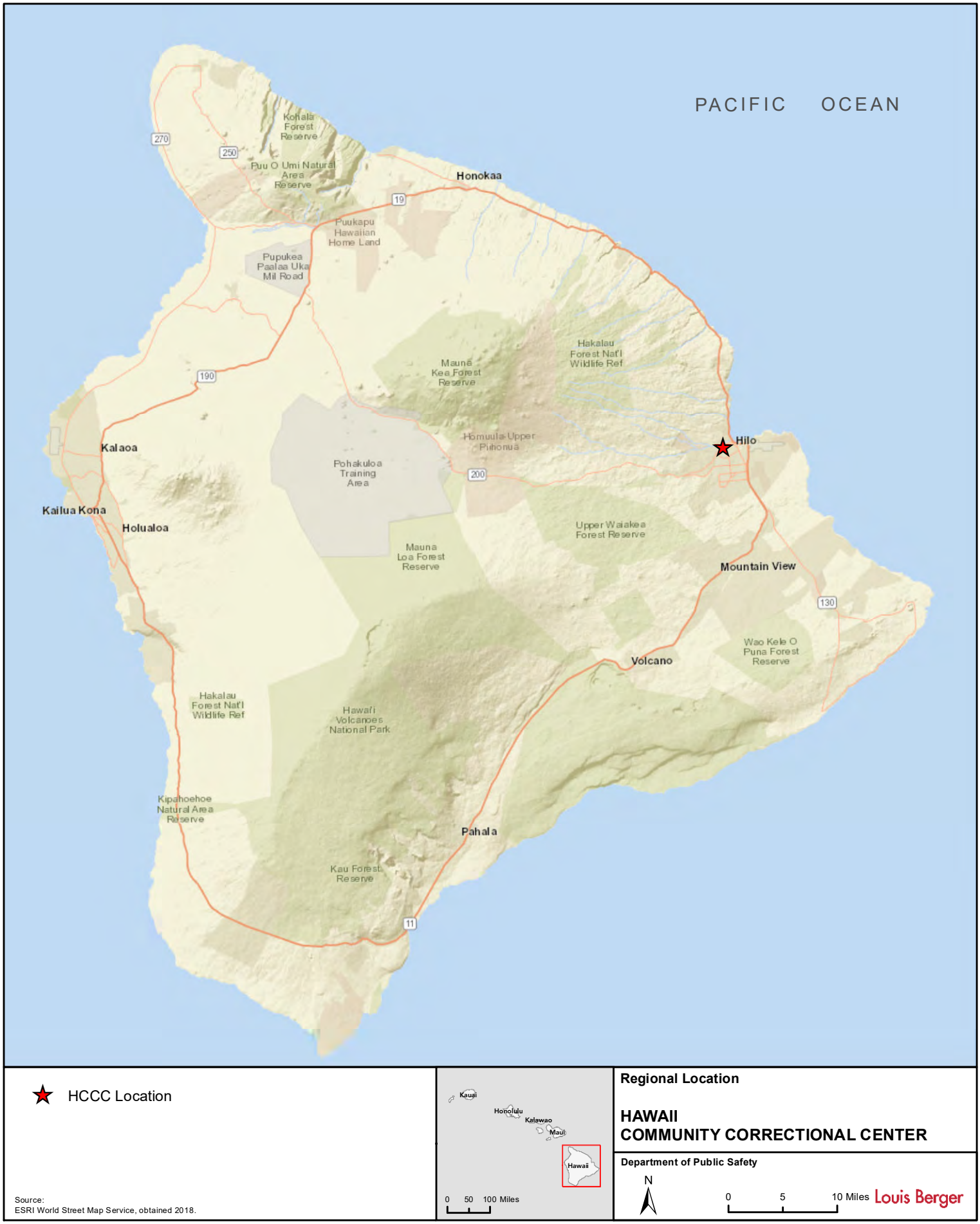
*Signature:_____ Date: November 8, 2018

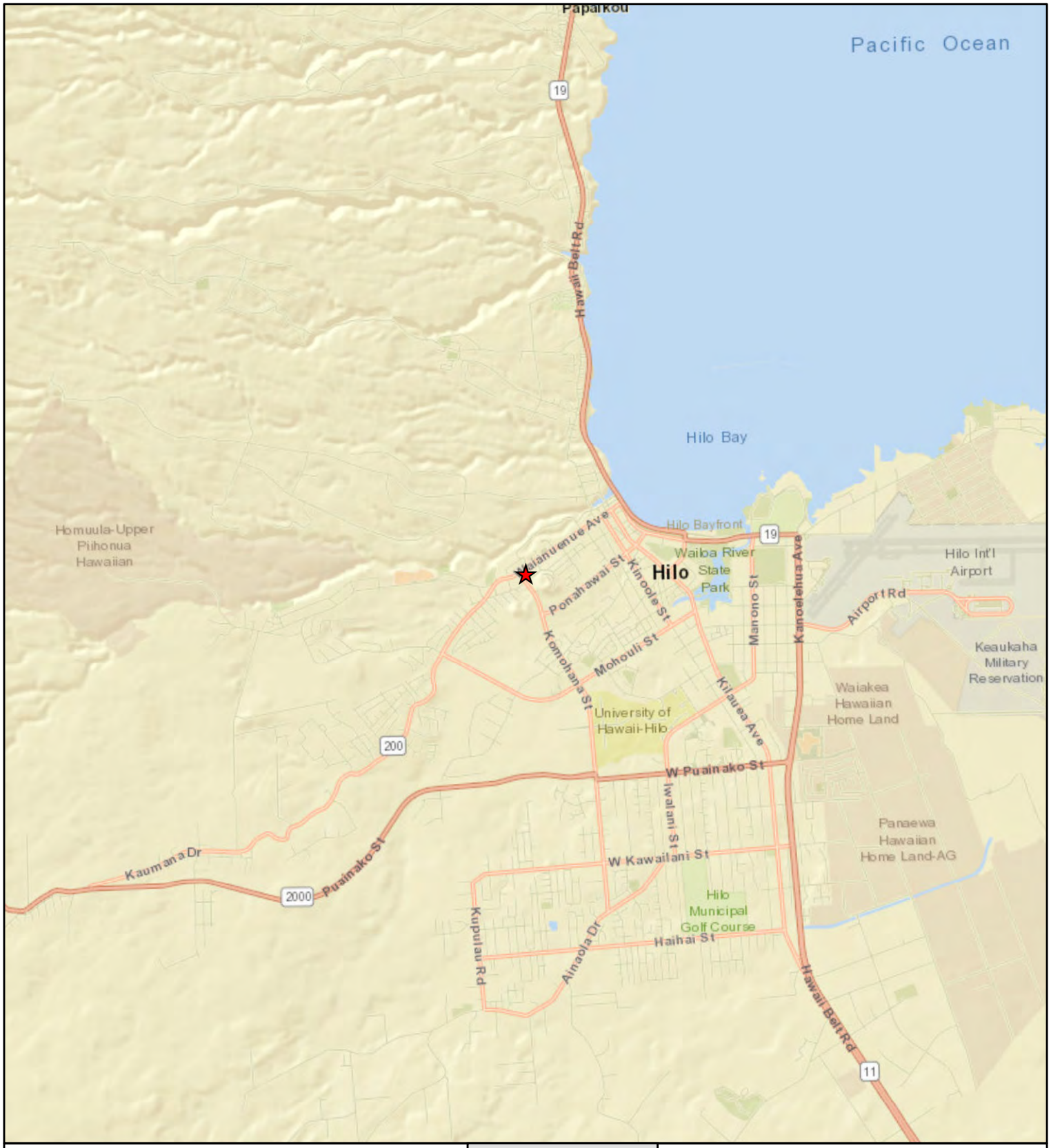
- Typed or printed name: Robert Nardi
  Company name: Louis Berger
  Address: 412 Mount Kemble Avenue, PO Box 1946
  Morristown, NJ 07962-1946
  Daytime phone no.: 973-407-1681
  Email address: rnardi@louisberger.com

***Authorities**: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
**Routine Uses**: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USAGE website.
**Disclosure**: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

Submit your JD request via email to CEPOH-RO@usace.army.mil or via postal mail to
Honolulu District, U.S. Army Corps of Engineers, Regulatory Branch, Building 230, Fort Shafter, Hawaii 96858-5440.
Please contact the Regulatory Branch at (808) 835-4303 or at the email above for any questions regarding this form.

# Attachment 2
# Site Location Maps


PACIFIC OCEAN
Kohala Forest Reserve
Puu O Umi Natural Area Reserve
Honokaa
Puukapu Hawaiian Home Land
Pupukea Paalaa Uka Mil Road
Hakalau Forest Nat'l Wildlife Ref
Mauna Kea Forest Reserve
Hilo
Kalaoa
Pohakuloa Training Area
Kailua Kona
Holualoa
Upper Waiakea Forest Reserve
Mauna Loa Forest Reserve
Mountain View
Wao Kele O Puna Forest Reserve
Volcano
Hakalau Forest Nat'l Wildlife Ref
Hawai'i Volcanoes National Park
Kipahoehoe Natural Area Reserve
Pahala
Kau Forest Reserve
270
250
19
190
200
130
11
HCCC Location
Source:
ESRI World Street Map Service, obtained 2018.
Kauai
Honolulu
Kalawao
Maui
Hawaii
0 50 100 Miles
Regional Location
HAWAII
COMMUNITY CORRECTIONAL CENTER
Department of Public Safety
N
0 5 10 Miles
Louis Berger




HCCC Location

Source:
ESRI World Street Map Service, obtained 2018.




**Regional Location**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 0.5 1 Miles

Louis Berger




HCCC Site Boundary

TMK Parcel Boundary

Sources:
ESRI BING Imagery Service; Hawaii County, 2017.




Tax Map Key

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

Department of Public Safety

N

0 75 150 Feet

Louis Berger




HCCC Site Boundary

Proposed Building Footprint

Source:
ESRI BING Imagery Service, obtained 2018.




**Aerial Photo with Proposed Building Footprint**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 75 150 Feet

Louis Berger




HCCC Site Boundary
Proposed Building Footprint
Existing Building

Source:
DLR Group.




**Proposed Site Plan**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

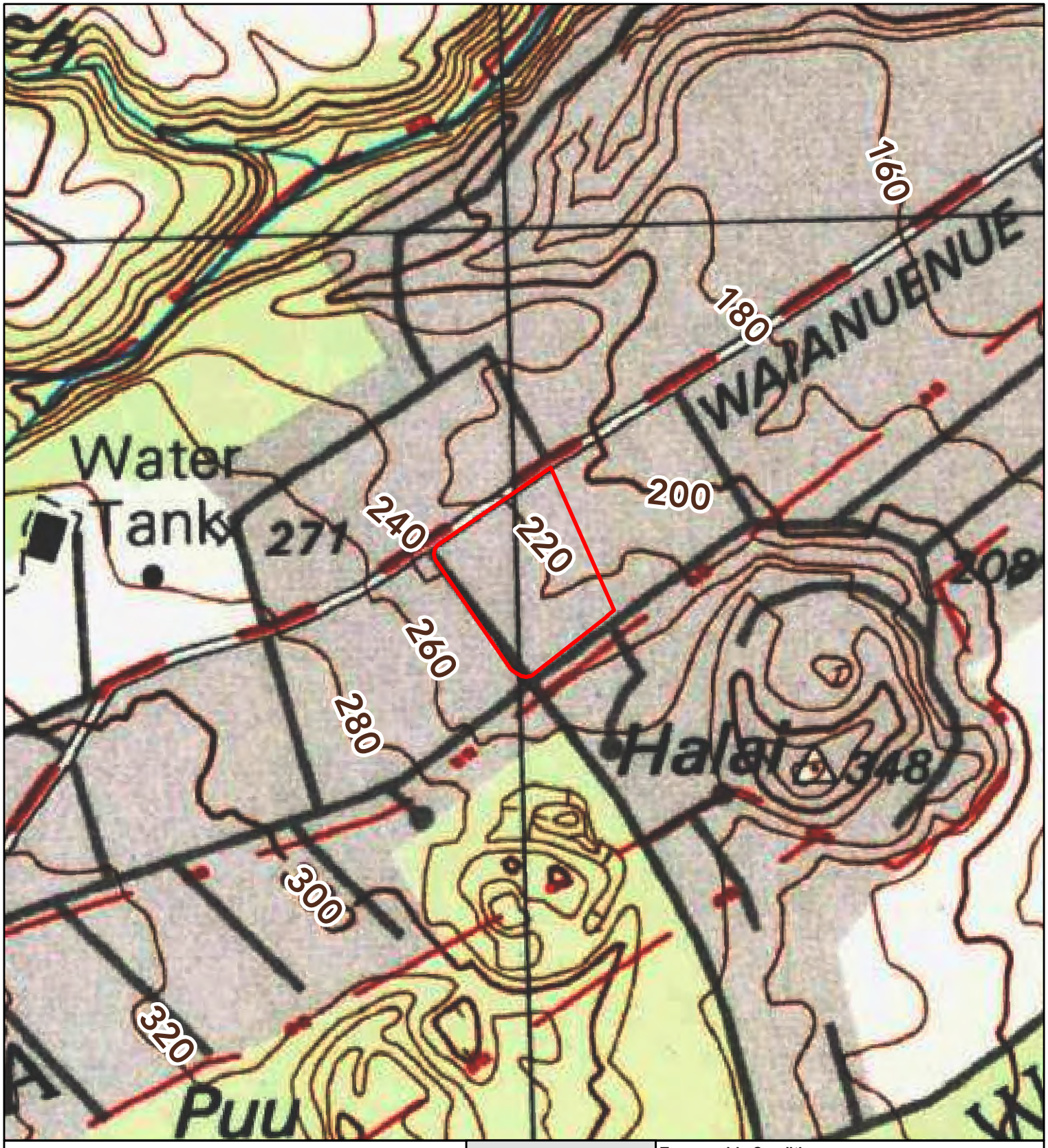
**Department of Public Safety**

N

0 50 100 Feet

Louis Berger

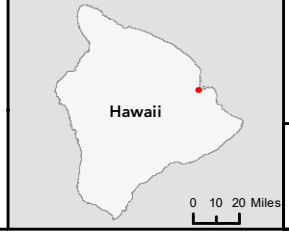
# Attachment 3
# Topographic Map




HCCC Site Boundary

Contour (feet)

Source:
USGS, Hilo, HI Quadrangle Topo Map, 1995.




**Topographic Conditions**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 200 400 Feet

Louis Berger

# Attachment 4
# Soils Map



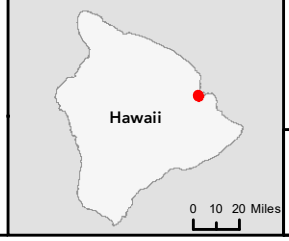

HCCC Site Boundary

Soil Boundary

638 - Panaewa-Urban land complex, 2 to 10 % slopes

901 - Hilo hydrous silty clay loam, 0 to 10 % slopes

Sources:
ESRI BING Imagery Service; NRCS Web Soil Survey, Island of Hawaii, 2017.




**Soils**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

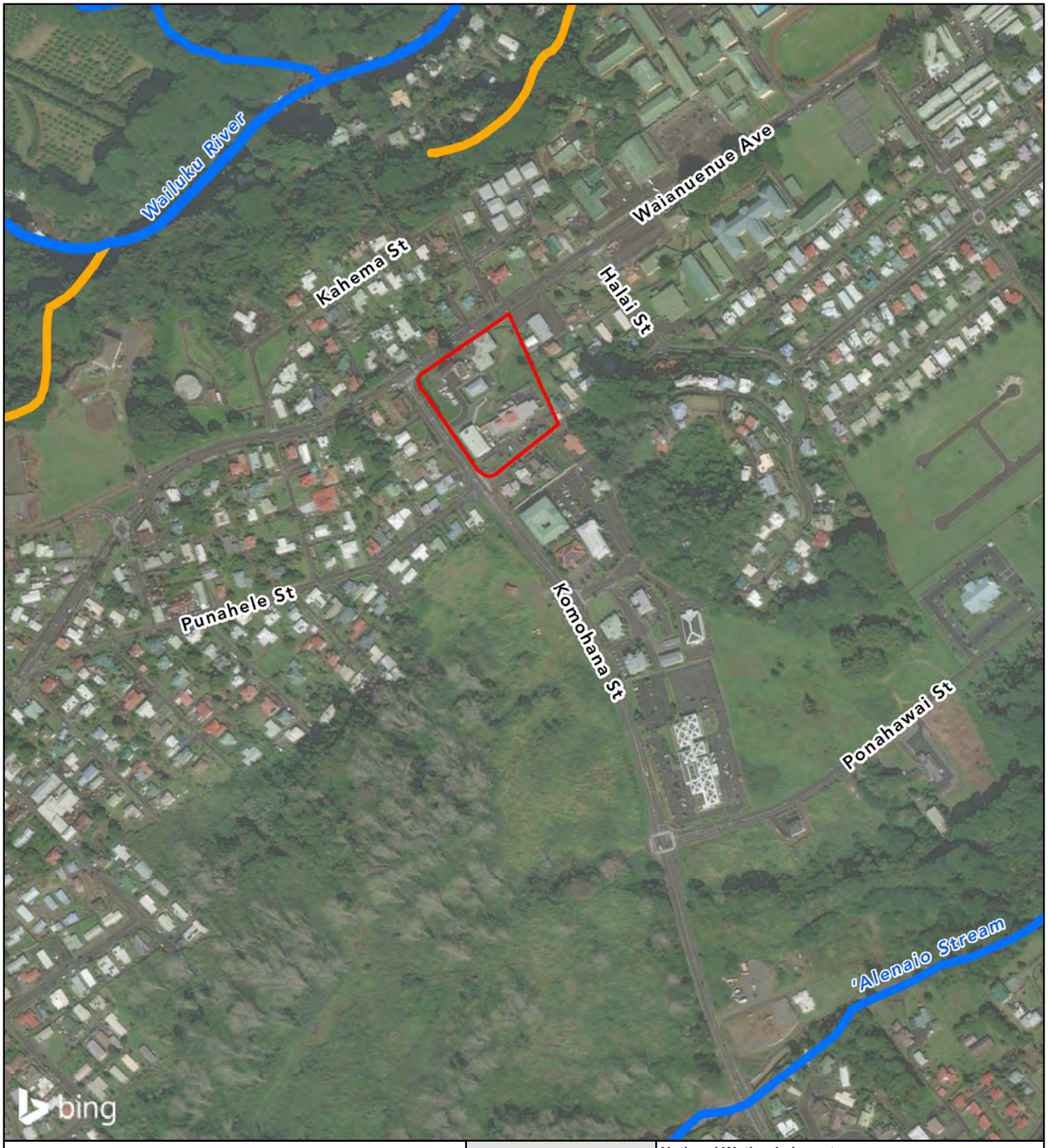
**Department of Public Safety**

N

0 75 150 Feet

Louis Berger

# Attachment 5
# NWI Wetlands Map




HCCC Site Boundary
Freshwater Forested/Shrub Wetland (PFO3A)
Riverine (R4SBC/R3UBH)

Sources:
ESRI BING Imagery Service; USGS National Hydrography Dataset, 2018, USFWS, 2017.




**National Wetlands Inventory**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 75 150 Feet

Louis Berger

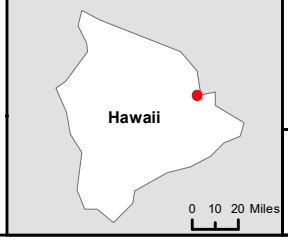
# Attachment 6
# Jurisdictional Determination Area




Jurisdictional Determination Area

Aquatic Resource

Source:
ESRI BING Imagery Service, obtained 2018.




**Jurisdictional Determination Area**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 75 150 Feet

Louis Berger

# Attachment 7
# Site Photographs

# SITE PHOTOGRAPHS



**Photograph 1. View looking south toward Punahele Street at paved parking and landscaped front of HCCC property, June 12, 2018.**



**Photograph 2. Looking northwest along western property boundary adjacent to Komohana Street, June 12, 2018.**

## SITE PHOTOGRAPHS



**Photographs 3. Typical grass area between existing facility structures, June 12, 2018.**



**Photograph 4. Paved land inside HCCC compound, June 12, 2018.**

## SITE PHOTOGRAPHS



**Photograph 5. African tulip tree and mowed grass inside compound, June 12, 2018.**



**Photograph 6. Breadfruit tree in center of property, June 12, 2018.**

## SITE PHOTOGRAPHS



**Photograph 7. Ti plants along slope on western portion of the property, June 12, 2018.**



**Photograph 8. View looking northwest at location of footprint of the proposed medium security housing structure, June 12, 2018.**

## SITE PHOTOGRAPHS



**Photograph 9. View looking southeast along Waianuenua Avenue where small ditch (Resource A) emerges from underground, June 12, 2018.**



**Photograph 10. View looking northeast at Resource A along northern site boundary. Also in view is stormwater input from under Waianuenua Avenue, June 12, 2018.**

## SITE PHOTOGRAPHS



**Photograph 11. Looking northwest across Waianuenua Avenue at storm drain opposite of stormwater input into ditch observed in Photograph 13, June 12, 2018.**



**Photograph 12. View of Resource A looking southeast along property boundary from northeast corner of property near where the two ditches converge, June 12, 2018.**

## SITE PHOTOGRAPHS



**Photograph 13. View looking north from center of the site at Resource B, June 12, 2018.**



**Photograph 14. View looking northeast from where larger ditch (Resource B) originates in center of the site, June 12, 2018.**

## SITE PHOTOGRAPHS



**Photograph 15. View looking southwest toward location where central ditch (Resource B) emerges from underground drainage, June 12, 2018.**



**Photograph 16. Ditch flowing off site on adjacent church property east of property boundary, June 12, 2018.**

## SITE PHOTOGRAPHS



**Photograph 17. End of ditch on church property adjacent to east boundary, June 12, 2018.**



**Photograph 18. Looking northeast along Waianuenua Avenue where ditch reemerges two properties east of HCCC, June 12, 2018.**

## SITE PHOTOGRAPHS



**Photograph 19. View looking southwest at southwest end of Resource B showing underground pipe. Photo from Okahara and Associates (2017).**



**Photograph 20. View looking west at northeast portion of Resource B showing rock-lined northwest side. Photo from Okahara and Associates (2017).**

## SITE PHOTOGRAPHS



**Photograph 21. View looking north along middle portion of Resource B showing rock-lined sides. Photo from Okahara and Associates (2017).**



**Photograph 22. View looking west at southwest portion of Resource B showing concrete top of west side. Photo from Okahara and Associates (2017).**

AUSTIN, TSUTSUMI & ASSOCIATES, INC. CIVIL ENGINEERS • SURVEYORS
CONTINUING THE ENGINEERING PRACTICE FOUNDED BY H. A. R. AUSTIN IN 1934

TERRANCE S. ARASHIRO, P.E.
ADRIENNE W.L.H. WONG, P.E., LEED AP
DEANNA M.R. HAYASHI, P.E.
PAUL K. ARITA P.E.
ERIK S. KANESHIRO, L.P.L.S., LEED AP
MATT K. NAKAMOTO, P.E.
GARRETT K. TOKUOKA, P.E.

#17-118

February 19, 2019

Mr. Keith Okamoto
Manager and Chief Engineer
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo, Hawaii 96720

Dear Mr. Okamoto:

Subject: **Hawaii Community Correctional Center (HCCC)**
**Secure Housing Project - Phase 1**
**60 Punahele Street**
**Hilo, Hawaii 96720**
**TMK: (3) 2-3-023:005**

Austin, Tsutsumi & Associates, Inc. (ATA) has been retained by DLR Group, Inc. to provide civil engineering services for proposed improvements at the existing HCCC site. The proposed project is in Phase 1 of an overall masterplan consisting of four (4) total phases to develop secure housing complex and support services buildings on the HCCC property. Phase 1 of the buildout includes secure housing complexes consisting of approximately 144 beds (approximately 25,000 sf) on the northwest corner of the existing HCCC property. Of note, the goal of the proposed housing complex is help elevate the existing overcrowded situation and house the existing inmates onsite and not to increase the overall population of HCCC. The landowner and developer of the site is The State of Hawaii Department of Public Safety (DPS).

Based on our field observations and research, there are three existing water meter boxes (water meter sizes unknown) at the south, south-east and north-west of the lot. These meters are serviced through the existing 16-inch waterline in Waianuenue Avenue and the existing 8-inch waterline in Punahele Street. There are two existing fire hydrants along Punahele Street, one existing fire hydrant along Waianuenue Avenue, and one assumed fire hydrant within the site near the Komohana Building.

Regarding water system improvements for this project, we respectfully ask for assistance in acquiring the following additional information needed to complete our design:

Please confirm the availability of water for our planned improvements as well as information on existing water pressure and flow data adjacent to the project site (see attached location map). As mentioned previously, we are looking to provide housing for the existing inmates onsite, and not to house a larger population. We understand that we will be including new fixtures for the property, but we do anticipate that the water demand will not rise significantly, if at all, due to the improvements. We would also request written confirmation of the required fire flow for fire water service for possible onsite fire hydrants, if required. Please let us know how we could access or request any as-builts showing connection points, age and size of public line

REPLY TO:
501 SUMNER STREET, SUITE 521 • HONOLULU, HAWAII 96817-5031
PHONE (808) 533-3646 • FAX (808) 526-1267
EMAIL : atanl@atahawaii.com

OFFICES IN:
HONOLULU, HAWAII
WAILUKU, MAUI, HAWAII
HILO, HAWAII

servicing the CCC, as well as any information regarding existing water meters including the water meter sizes that currently service the site. Also, any information regarding the regional water system that could potentially affect our site that you folks could provide would be appreciated. This information could include, but is not limited to, future improvement or maintenance plans and/or immediate or future limitations or planned changes in service.

Based on the anticipated demand, the project will utilize the existing water connections for both domestic and fire protection water demands, unless the existing meters require upgrades.

We respectfully request the information by March 1, 2019. Your expeditious response to this matter would be greatly appreciated. If you have any questions, please call me at (808) 533-3646. Thank you for your assistance.

Sincerely,

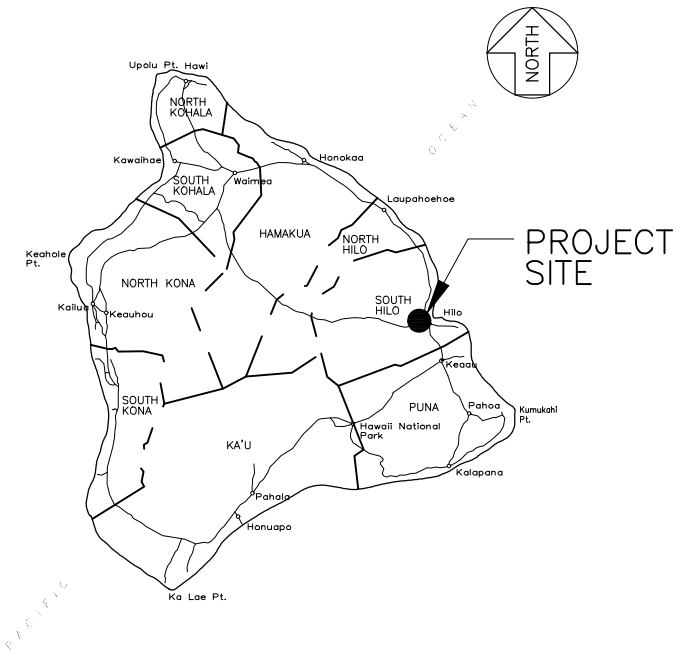
AUSTIN, TSUTSUMI & ASSOCIATES, INC.

By
M. KIMO UNTEN, P.E.
Project Manager

KS:ks

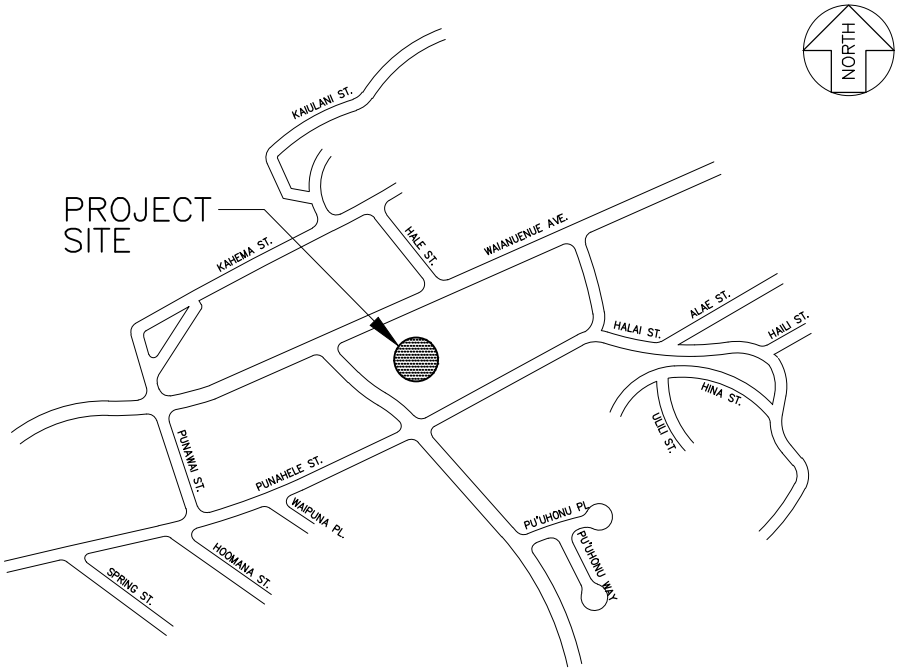
Attachments:
Figure 1 – Existing Site Topographical Map
Figure 2 – Site Vicinity Map

Y:\2017\17-118 ENGINEERING Correspondence\Water Service Request.docx




## ISLAND OF HAWAII

NOT TO SCALE




## LOCATION MAP

NOT TO SCALE

SCHEMATIC DESIGN REPORT

# HAWAII COMMUNITY CORRECTIONAL CENTER SECURE HOUSING PROJECT TMK: (3) 2-3-023: 003

HILO, HAWAII, HAWAII

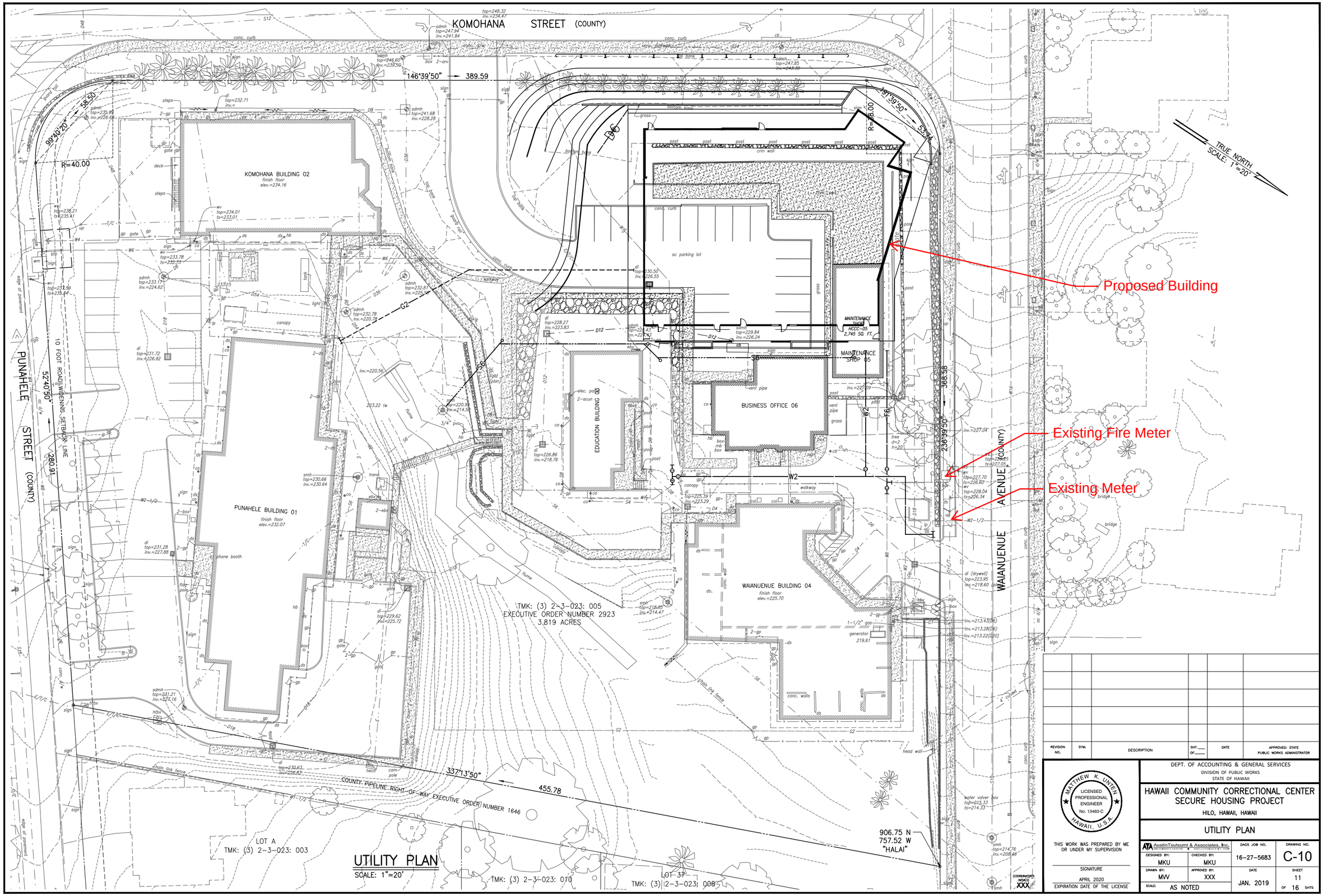
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS,SURVEYORS ● HONOLULU, WAILUKU, HILO, HAWAII

PROJECT LOCATION AND VICINITY MAP

EXHIBIT 1

JOB NO. 17-118
\\files\Projects\PROSPECTIVES\DLR Secure Housing Project for DPS\Exhibits\CCC\HCCC\EXH1-VICINITY MAP.dwg

NOV. 2017




| REVISION NO. | SYM. | DESCRIPTION | SHT. ___ OF ___ | DATE | APPROVED: STATE PUBLIC WORKS ADMINISTRATOR |
|---|---|---|---|---|---|

MATTHEW K. UNTEN
LICENSED PROFESSIONAL ENGINEER
No. 13463-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE

APRIL 2020
EXPIRATION DATE OF THE LICENSE

DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS
STATE OF HAWAII

HAWAII COMMUNITY CORRECTIONAL CENTER
SECURE HOUSING PROJECT
HILO, HAWAII, HAWAII

UTILITY PLAN

AustinTsutsumi & Associates, Inc.

| DESIGNED BY: MKU | CHECKED BY: MKU | DAGS JOB NO. 16-27-5683 | DRAWING NO. C-10 |
|---|---|---|---|
| DRAWN BY: MVV | APPROVED BY: XXX | DATE JAN. 2019 | SHEET 11 OF 16 SHTS |
| SCALE: AS NOTED | | | |

FILE ___ DRAWER ___ FOLDER ___

Y:\2017\17-118\ENGINEERING\DWG\11 C-10 UTILITY PLAN.DWG
JOB NO. 0-17-118
022019

**DEPARTMENT OF THE ARMY**
**U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT**
**FORT SHAFTER, HAWAII 96858-5440**

April 3, 2019

SUBJECT: Determination of No Permit Required, HCCC Proposed Medium Security Housing Units, Island of Hawaii, Department of the Army File No. POH-2018-00205

Ms. Tara Stewart
Louis Berger
412 Mt. Kemble Avenue
P.O. Box 1946
Morristown, New Jersey 07962

Dear Ms. Stewart:

The Honolulu District, U.S. Army Corps of Engineers (Corps), Regulatory Branch has received your request for a jurisdictional determination and clarification whether a Department of the Army (DA) permit is required for the construction of a new building with utility connections and removal of the old jail located north adjacent to the proposed new building site, all located at 19.71831, -155.099442, north of Komohana Street between Waianuenue Avenue and Punahele Street in Hilo, Island of Hawaii, Hawaii. Your request has been assigned DA file number POH-2018-00205. Please reference this number in all future correspondence with our office relating to this action.

Based on our review of the information you provided and the enclosed approved jurisdictional determination (AJD), dated April 3, 2019, the area identified as the Corps Area of Review (AOR) (Enclosure 1) does not contain waters of the U.S., including wetlands or navigable waters of the U.S., as defined by 33 CFR Parts 328 and 329, respectively. Therefore, a DA permit under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899 is not required. The basis for our jurisdictional determination is on the enclosed AJD Form (Enclosure 2).

This letter contains an AJD for the aforementioned review area. If you wish to submit new information regarding this jurisdictional determination, please do so within 60 days. We will consider any new information submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior determination. If you object to this determination, you may request an administrative appeal under 33 CFR Part 331. We have enclosed a Notification of Appeal Process and Request for Appeal (NAP/RFA) form (Enclosure 3). If you wish to appeal this determination, you must submit a completed RFA form within 60 days of the date on the NAP to the Corps' Pacific Ocean Division office at the following address:

Kate Bliss
Civil Works and Regulatory Program Manager
U.S. Army Corps of Engineers
Pacific Ocean Division, ATTN: CEPOD-PDC
Building 525
Fort Shafter, Hawaii 96858-5440

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Pacific Ocean Division office by May 31, 2019.

While a DA permit is not required for your proposed project, you are responsible for obtaining all other applicable Federal, state, or local authorizations required by law.

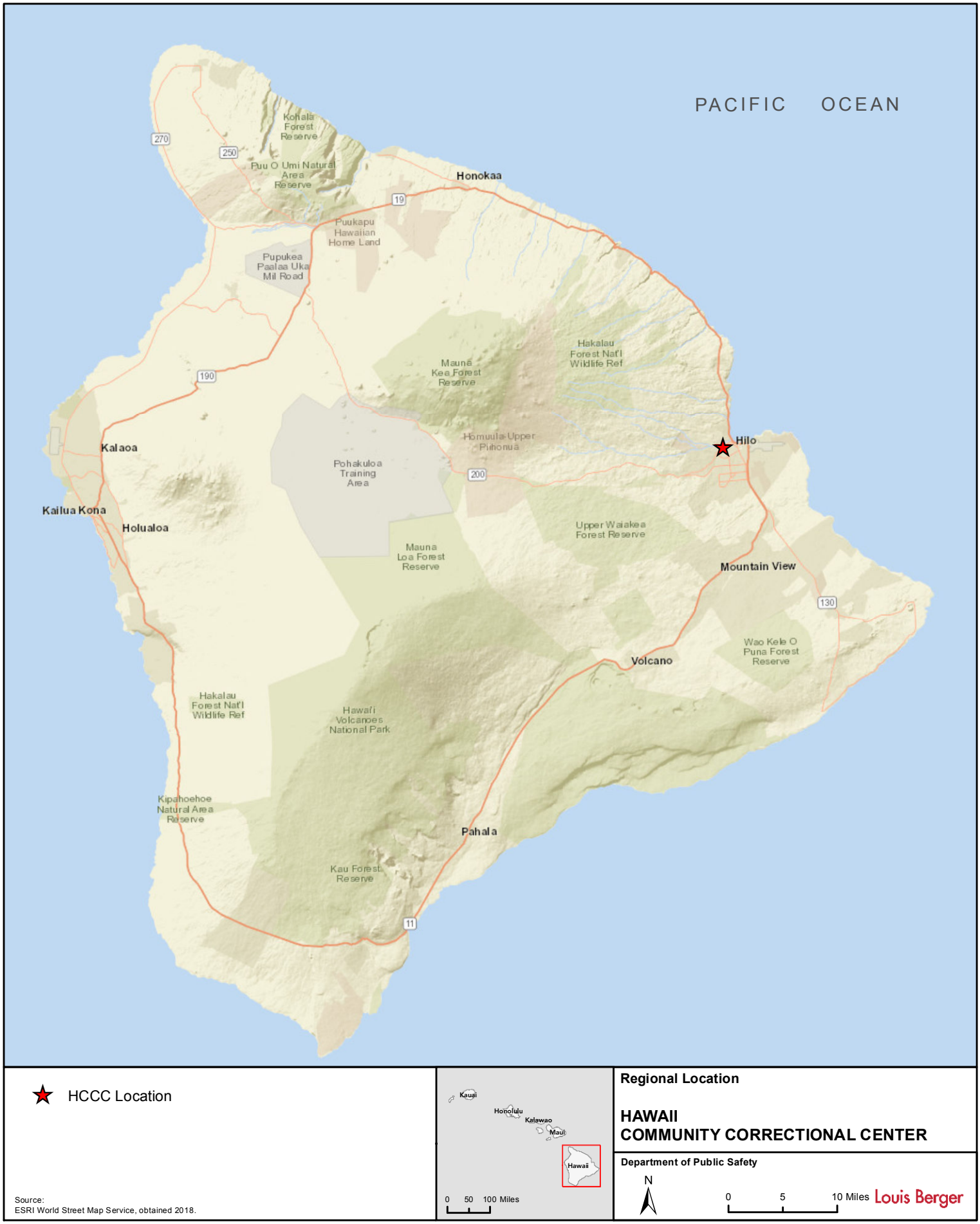
Thank you for your cooperation with the Honolulu District Regulatory Program. If you have any questions related to this determination, please contact me at 808-835-4310 or via e-mail at Vera.B.Koskelo@usace.army.mil. You are encouraged to provide comments on your experience with the Honolulu District Regulatory Branch by accessing our web-based customer survey form at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. For additional information about our Regulatory Program, please visit our web site at http://www.poh.usace.army.mil/Missions/Regulatory.aspx.

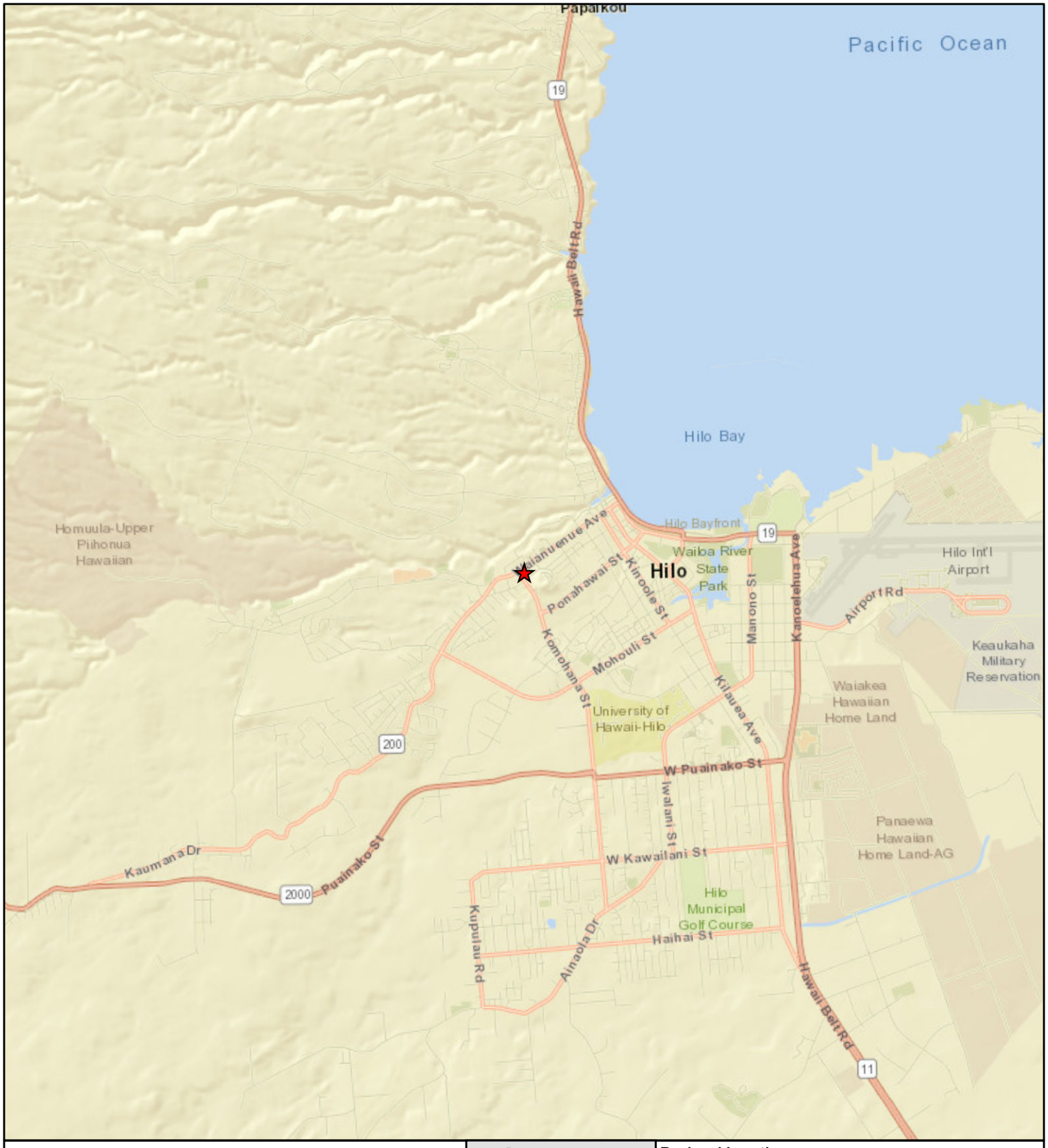
Sincerely,

KOSKELO.VERA.B.1370139110
Digitally signed by KOSKELO.VERA.B.1370139110
Date: 2019.04.03 14:35:55 -10'00'

Vera B. Koskelo
Regulatory Project Manager

Enclosures


PACIFIC OCEAN
Kohala Forest Reserve
Puu O Umi Natural Area Reserve
Honokaa
Puukapu Hawaiian Home Land
Pupukea Paalaa Uka Mil Road
Mauna Kea Forest Reserve
Hakalau Forest Nat'l Wildlife Ref
Hilo
Kalaoa
Pohakuloa Training Area
Homuula-Upper Pinonua
Kailua Kona
Holualoa
Mauna Loa Forest Reserve
Upper Waiakea Forest Reserve
Mountain View
Wao Kele O Puna Forest Reserve
Volcano
Hakalau Forest Nat'l Wildlife Ref
Hawai'i Volcanoes National Park
Kipahoehoe Natural Area Reserve
Pahala
Kau Forest Reserve
270
250
19
190
200
130
11
HCCC Location
Source:
ESRI World Street Map Service, obtained 2018.
Kauai
Honolulu
Kalawao
Maui
Hawaii
0 50 100 Miles
Regional Location
HAWAII
COMMUNITY CORRECTIONAL CENTER
Department of Public Safety
N
0 5 10 Miles
Louis Berger




★ HCCC Location

Source:
ESRI World Street Map Service, obtained 2018.




**Regional Location**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 0.5 1 Miles

Louis Berger




HCCC Site Boundary

Proposed Building Footprint

Source:
ESRI BING Imagery Service, obtained 2018.




**Aerial Photo with Proposed Building Footprint**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 75 150 Feet

Louis Berger




HCCC Site Boundary
Proposed Building Footprint
Existing Building
Corps Area of Review

Source:
DLR Group.




**Proposed Site Plan**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 50 100 Feet

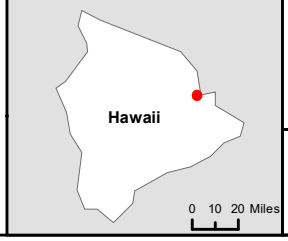
Louis Berger




Jurisdictional Determination Area

Aquatic Resource

Source:
ESRI BING Imagery Service, obtained 2018.




**Jurisdictional Determination Area**

**HAWAII**
**COMMUNITY CORRECTIONAL CENTER**

**Department of Public Safety**

N

0 75 150 Feet

Louis Berger

# Regulatory Program

**INTERIM APPROVED JURISDICTIONAL DETERMINATION FORM**
**U.S. Army Corps of Engineers**
This form should be completed by following the instructions provided
in the Interim Approved Jurisdictional Determination Form User Manual.

**SECTION I: BACKGROUND INFORMATION**

A. COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (AJD): 03 April 2019

B. ORM NUMBER IN APPROPRIATE FORMAT (e.g., HQ-2015-00001-SMJ): POH-2018-00205

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State:Hawaii County/parish/borough: Hawaii City: Hilo
Center coordinates of site (lat/long in degree decimal format): Lat. 19.71831, , Long. -155.099442.
Map(s)/diagram(s) of review area (including map identifying single point of entry (SPOE) watershed and/or potential jurisdictional areas where applicable) is/are: ☒ attached ☐ in report/map titled .
☐ Other sites (e.g., offsite mitigation sites, disposal sites, etc.) are associated with this action and are recorded on a different jurisdictional determination (JD) form. List JD form ID numbers (e.g., HQ-2015-00001-SMJ-1): .

D. REVIEW PERFORMED FOR SITE EVALUATION:
☒ Office (Desk) Determination Only. Date: 03 April 2019.
☐ Office (Desk) and Field Determination. Office/Desk Dates: Field Date(s): .

**SECTION II: DATA SOURCES**

Check all that were used to aid in the determination and attach data/maps to this AJD form and/or references/citations in the administrative record, as appropriate.
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant. Title/Date: Proposed Site Plan, 08 August 2018.
☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☐ Data sheets/delineation report are sufficient for purposes of AJD form. Title/Date: .
  ☐ Data sheets/delineation report are not sufficient for purposes of AJD form. Summarize rationale and include information on revised data sheets/delineation report that this AJD form has relied upon: .
  Revised Title/Date: .
☐ Data sheets prepared by the Corps. Title/Date: .
☐ Corps navigable waters study. Title/Date: .
☐ CorpsMap ORM map layers. Title/Date: .
☐ USGS Hydrologic Atlas. Title/Date: .
☐ USGS, NHD, or WBD data/maps. Title/Date: .
☐ USGS 8, 10 and/or 12 digit HUC maps. HUC number: .
☒ USGS maps. Scale & quad name and date: Earthpoint topo quad data layer for Google Earth Pro.
☒ USDA NRCS Soil Survey. Citation: SSURGO soils data layer for GoogleEarth Pro.
☒ USFWS National Wetlands Inventory maps. Citation: data layer for GoogleEarth Pro.
☐ State/Local wetland inventory maps. Citation: .
☐ FEMA/FIRM maps. Citation: .
☒ Photographs: ☐ Aerial. Citation: . or ☒ Other. Citation: provided by applicant, 08 August 2018.
☐ LiDAR data/maps. Citation: .
☐ Previous JDs. File no. and date of JD letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

**SECTION III: SUMMARY OF FINDINGS**

Complete ORM "Aquatic Resource Upload Sheet" or Export and Print the Aquatic Resource Water Droplet Screen from ORM for All Waters and Features, Regardless of Jurisdictional Status – Required

A. RIVERS AND HARBORS ACT (RHA) SECTION 10 DETERMINATION OF JURISDICTION:

☐ "*navigable waters of the U.S.*" within RHA jurisdiction (as defined by 33 CFR part 329) in the review area.

- **Complete Table 1 - Required**

*NOTE:* If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Section 10 navigable waters list, DO NOT USE THIS FORM TO MAKE THE DETERMINATION. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Section 10 RHA navigability determination.

B. CLEAN WATER ACT (CWA) SECTION 404 DETERMINATION OF JURISDICTION: "*waters of the U.S.*" within CWA jurisdiction (as defined by 33 CFR part 328.3) in the review area. **Check all that apply.**

☐ (a)(1): All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. (Traditional Navigable Waters (TNWs))

- **Complete Table 1 - Required**

☐ This AJD includes a case-specific (a)(1) TNW (Section 404 navigable-in-fact) determination on a water that has not previously been designated as such. Documentation required for this case-specific (a)(1) TNW determination is attached.

☐ (a)(2): All interstate waters, including interstate wetlands.

- **Complete Table 2 - Required**

☐ (a)(3): The territorial seas.

- **Complete Table 3 - Required**

☐ (a)(4): All impoundments of waters otherwise identified as waters of the U.S. under 33 CFR part 328.3.

- **Complete Table 4 - Required**

☐ (a)(5): All tributaries, as defined in 33 CFR part 328.3, of waters identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.

- **Complete Table 5 - Required**

☐ (a)(6): All waters adjacent to a water identified in paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters.

- **Complete Table 6 - Required**

☐ Bordering/Contiguous.

Neighboring:

☐ (c)(2)(i): All waters located within 100 feet of the ordinary high water mark (OHWM) of a water identified in paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3.

☐ (c)(2)(ii): All waters located within the 100-year floodplain of a water identified in paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3 and not more than 1,500 feet of the OHWM of such water.

☐ (c)(2)(iii): All waters located within 1,500 feet of the high tide line of a water identified in paragraphs (a)(1) or (a)(3) of 33 CFR part 328.3, and all waters within 1,500 feet of the OHWM of the Great Lakes.

☐ (a)(7): All waters identified in 33 CFR 328.3(a)(7)(i)-(v) where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.

- **Complete Table 7 for the significant nexus determination. Attach a map delineating the SPOE watershed boundary with (a)(7) waters identified in the similarly situated analysis. - Required**

☐ Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established, normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent and require a case-specific significant nexus determination.

☐ (a)(8): All waters located within the 100-year floodplain of a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3 not covered by (c)(2)(ii) above and all waters located within 4,000 feet of the high tide line or OHWM of a water identified in paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3 where they are determined on a case-specific basis to have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.

- **Complete Table 8 for the significant nexus determination. Attach a map delineating the SPOE watershed boundary with (a)(8) waters identified in the similarly situated analysis. - Required**

☐ Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established, normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent and require a case-specific significant nexus determination.

C. NON-WATERS OF THE U.S. FINDINGS:

**Check all that apply.**

☒ The review area is comprised entirely of dry land.

☐ Potential-(a)(7) Waters: Waters that DO NOT have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.

- **Complete Table 9 and attach a map delineating the SPOE watershed boundary with potential (a)(7) waters identified in the similarly situated analysis. - Required**

☐ Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established, normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent and require a case-specific significant nexus determination.

☐ Potential-(a)(8) Waters: Waters that DO NOT have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.

- **Complete Table 9 and attach a map delineating the SPOE watershed boundary with potential (a)(8) waters identified in the similarly situated analysis. - Required**

☐ Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established, normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent and require a case-specific significant nexus determination.

☐ Excluded Waters (Non-Waters of U.S.), even where they otherwise meet the terms of paragraphs (a)(4)-(a)(8):

- **Complete Table 10 - Required**

☐ (b)(1): Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA.

☐ (b)(2): Prior converted cropland.

☐ (b)(3)(i): Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary.

☐ (b)(3)(ii): Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands.

☐ (b)(3)(iii): Ditches that do not flow, either directly or through another water, into a water identified in paragraphs (a)(1)-(a)(3).

☐ (b)(4)(i): Artificially irrigated areas that would revert to dry land should application of water to that area cease.

☐ (b)(4)(ii): Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds.

☐ (b)(4)(iii): Artificial reflecting pools or swimming pools created in dry land.[1]

☐ (b)(4)(iv): Small ornamental waters created in dry land.[1]

☐ (b)(4)(v): Water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water.

☐ (b)(4)(vi): Erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of tributary, non-wetland swales, and lawfully constructed grassed waterways.[1]

☐ (b)(4)(vii): Puddles.[1]

☐ (b)(5): Groundwater, including groundwater drained through subsurface drainage systems.[1]

☐ (b)(6): Stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.[1]

☐ (b)(7): Wastewater recycling structures created in dry land; detention and retention basins built for wastewater recycling; groundwater recharge basins; percolation ponds built for wastewater recycling; and water distributary structures built for wastewater recycling.

☐ Other non-jurisdictional waters/features within review area that do not meet the definitions in 33 CFR 328.3 of (a)(1)-(a)(8) waters and are not excluded waters identified in (b)(1)-(b)(7).

- **Complete Table 11 - Required.**

D. ADDITIONAL COMMENTS TO SUPPORT AJD: .

[1] In many cases these excluded features will not be specifically identified on the AJD form, unless specifically requested. Corps Districts may, in case-by-case instances, choose to identify some or all of these features within the review area.

## Jurisdictional Waters of the U.S.

### Table 1. (a)(1) Traditional Navigable Waters

| (a)(1) Waters Name | (a)(1) Criteria | Rationale to Support (a)(1) Designation<br>Include High Tide Line or Ordinary High Water Mark indicators, when applicable. |
|---|---|---|
| N/A | Choose an item. | N/A |

### Table 2. (a)(2) Interstate Waters

| (a)(2) Waters Name | Rationale to Support (a)(2) Designation |
|---|---|
| N/A | N/A |

### Table 3. (a)(3) Territorial Seas

| (a)(3) Waters Name | Rationale to Support (a)(3) Designation |
|---|---|
| N/A | N/A |

### Table 4. (a)(4) Impoundments

| (a)(4) Waters Name | Rationale to Support (a)(4) Designation |
|---|---|
| N/A | N/A |
| N/A | N/A |

**Table 5. (a)(5)Tributaries**

| (a)(5) Waters Name | Flow Regime | (a)(1)-(a)(3) Water Name to which this (a)(5) Tributary Flows | Tributary Breaks | Rationale for (a)(5) Designation and Additional Discussion. Identify flowpath to (a)(1)-(a)(3) water or attach map identifying the flowpath; explain any breaks or flow through excluded/non-jurisdictional features, etc. |
|---|---|---|---|---|
| N/A | Choose an item. | N/A | Choose an item. | N/A |
| N/A | Choose an item. | N/A | Choose an item. | N/A |
| N/A | Choose an item. | N/A | Choose an item. | N/A |
| N/A | Choose an item. | N/A | Choose an item. | N/A |

**Table 6. (a)(6) Adjacent Waters**

| (a)(6) Waters Name | (a)(1)-(a)(5) Water Name to which this Water is Adjacent | Rationale for (a)(6) Designation and Additional Discussion. Identify the type of water and how the limits of jurisdiction were established (e.g., wetland, 87 Manual/Regional Supplement); explain how the 100-year floodplain and/or the distance threshold was determined; whether this water extends beyond a threshold; explain if the water is part of a mosaic, etc. |
|---|---|---|
| N/A | N/A | N/A |
| N/A | N/A | N/A |
| N/A | N/A | N/A |
| N/A | N/A | N/A |

**Table 7. (a)(7) Waters**

| SPOE Name | (a)(7) Waters Name | (a)(1)-(a)(3) Water Name to which this Water has a Significant Nexus | Significant Nexus Determination<br>Identify SPOE watershed; discuss whether any similarly situated waters were present and aggregated for SND; discuss data, provide analysis, and summarize how the waters have more than speculative or insubstantial effect on the physical, chemical, or biological integrity of the (a)(1)-(a)(3) water, etc. |
|---|---|---|---|
| N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A |

**Table 8. (a)(8) Waters**

| SPOE Name | (a)(8) Waters Name | (a)(1)-(a)(3) Water Name to which this Water has a Significant Nexus | Significant Nexus Determination<br>Identify SPOE watershed; explain how 100-yr floodplain and/or the distance threshold was determined; discuss whether waters were determined to be similarly situated to subject water and aggregated for SND; discuss data, provide analysis, and then summarize how the waters have more than speculative or insubstantial effect the on the physical, chemical, or biological integrity of the (a)(1)-(a)(3) water, etc. |
|---|---|---|---|
| N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A |

## Non-Jurisdictional Waters

### Table 9. Non-Waters/No Significant Nexus

| SPOE Name | Non-(a)(7)/(a)(8) Waters Name | (a)(1)-(a)(3) Water Name to which this Water DOES NOT have a Significant Nexus | Basis for Determination that the Functions DO NOT Contribute Significantly to the Chemical, Physical, or Biological Integrity of the (a)(1)-(a)(3) Water. Identify SPOE watershed; explain how 100-yr floodplain and/or the distance threshold was determined; discuss whether waters were determined to be similarly situated to the subject water; discuss data, provide analysis, and summarize how the waters did not have more than a speculative or insubstantial effect on the physical, chemical, or biological integrity of the (a)(1)-(a)(3) water. |
|---|---|---|---|
| N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A |

### Table 10. Non-Waters/Excluded Waters and Features

| Paragraph (b) Excluded Feature/Water Name | Rationale for Paragraph (b) Excluded Feature/Water and Additional Discussion. |
|---|---|
| N/A | N/A |
| N/A | N/A |

### Table 11. Non-Waters/Other

| Other Non-Waters of U.S. Feature/Water Name | Rationale for Non-Waters of U.S. Feature/Water and Additional Discussion. |
|---|---|
| | |

## NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

| Applicant: Ms. Tara Stewart, Louis Berger | File Number: POH-2018-00205 | Date: 03 April 2019 |
|---|---|---|

| Attached is: | | See Section below |
|---|---|---|
| | INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission) | A |
| | PROFFERED PERMIT (Standard Permit or Letter of Permission) | B |
| | PERMIT DENIAL | C |
| **x** | APPROVED JURISDICTIONAL DETERMINATION | D |
| | PRELIMINARY JURISDICTIONAL DETERMINATION | E |

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A. INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district commander. Your objections must be received by the district commander within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district commander will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district commander will send you a proffered permit for your reconsideration, as indicated in Section B below.

B. PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

C. PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

**D. APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.**

- **ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.**
- **APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.**

E. PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Honolulu District, U.S. Army Corps of Engineers
Regulatory Branch, CEPOH-RO
Building 230
Fort Shafter, Hawaii 96858-5440
808-835-4303

If you only have questions regarding the appeal process you may also contact:

Kate Bliss
Regulatory Program Manager
U.S. Army Corps of Engineers, Pacific Ocean Division
Building 525
Fort Shafter, HI 96858-5440
808-835-4626
Kate.m.bliss@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Commanders personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

| | Date: | Telephone number: |
|---|---|---|
| _____<br>Signature of appellant or agent. | | |

# APPENDIX C:
# Pre-Assessment Consultations Document

DAVID Y. IGE
GOVERNOR

NOLAN P. ESPINDA
DIRECTOR

Cathy Ross
Deputy Director
Administration

Jodie F. Maesaka-Hirata
Deputy Director
Corrections

Renee R. Sonobe Hong
Deputy Director
Law Enforcement

STATE OF HAWAII
**DEPARTMENT OF PUBLIC SAFETY**
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

No. _____

July 30, 2018

**RE: Pre-Assessment Consultations – New Medium Security Housing Units at Kauai, Maui, and Hawaii Community Correctional Centers**

Aloha:

The Hawaii Department of Public Safety (PSD) has an immediate need to address the persistent and significant overcrowding experienced at the Kauai, Maui, and Hawaii Community Correctional Centers (KCCC, MCCC, and HCCC). As the Director of PSD, I am informing you of our plans for new Medium Security Housing Units for inmates currently housed at KCCC, MCCC, and HCCC. We have prepared the attached ***Pre-Assessment Consultations*** document to explain the need for these housing units and to seek advice and input on issues that should be addressed in forthcoming Draft Environmental Assessments (EAs).

The severe and persistent overcrowding at KCCC, MCCC, and HCCC limits PSD's ability to provide safe, secure, and humane, social, and physical environment for inmates and staff, has exacerbated physical plant operations, contributed to tension among inmates, and diminished program opportunities. Since development of the additional housing units involves use of State funds and State lands, PSD is preparing a Draft EA for each project in accordance with State regulations. Assisting PSD is the Hawaii Department of Accounting and General Services (DAGS) and a team of consultants.

PSD appreciates the important input and contributions received from stakeholders and the public for other PSD undertakings and is engaging community leaders, agencies, stakeholders and the public early in the environmental study process so the development of new Medium Security Housing Units benefits from the input of all interested parties. PSD is working closely with DAGS, Project Management Branch on these projects.

The State project teams are:

- Mr. Clayton H. Shimazu, PSD Chief Planner
  Tel: 808-587-1237
  Email: clayton.h.shimazu@hawaii.gov

- KCCC - Daniel Jandoc
  DAGS Project Management Branch
  Tel: 808-586-0469
  Email: daniel.jandoc@hawaii.gov

- MCCC - Reynald D. Rios
  DAGS Project Management Branch
  Tel: 808-586-0468
  Email: reynaldo.d.rios@hawaii.gov

- HCCC - Richard J.Y. Louis
  DAGS Project Management Branch
  Tel: 808-586-0474
  Email: richard.j.louis@hawaii.gov

Please contact them with comments, questions, or advice concerning the ***Pre-Assessment Consultations*** document or any aspect of the projects. We appreciate your continued support for the Department of Public Safety. Mahalo.

Sincerely,

Nolan P. Espinda
Director

Attachment

c: C. Shimazu, PSD
D. Jandoc, DAGS
R. Louis, DAGS
R. Rios, DAGS

# Pre-Assessment Consultations: Proposed Medium Security Housing Units

**Kauai, Maui, and Hawaii Community Correctional Centers**

July 30, 2018

**State of Hawaii**
**Hawaii Department of Public Safety**

# Pre-Assessment Consultations: Proposed Medium Security Housing Units

**Kauai, Maui, and Hawaii Community Correctional Centers**

July 2018

Prepared for:

**Hawaii Department of Public Safety**
**Hawaii Department of Accounting and General Services**

Prepared by:

Louis Berger

# PRE-ASSESSMENT CONSULTATIONS

The Hawaii Department of Public Safety (PSD) has an immediate need to address the persistent and significant overcrowding experienced at the Kauai, Maui, and Hawaii Community Correctional Centers (KCCC, MCCC, and HCCC) and is planning new Medium Security Housing Units for inmates currently housed at KCCC, MCCC, and HCCC. This *Pre-Assessment Consultations* document has been prepared to explain the need and importance of these housing units and to seek advice and input on issues that should be addressed in forthcoming Draft Environmental Assessments (EAs).

PSD is committed to providing a safe, secure, healthy, humane, social, and physical environment for inmates and staff. However, the severe and persistent overcrowding at KCCC, MCCC, and HCCC limits PSD's ability to provide such environments, exacerbates basic physical plant operations, contributes to tension among inmates, and diminishes program opportunities. In response, PSD plans to add new Medium Security Housing to each facility. The new housing units are not intended to increase the inmate populations at KCCC, MCCC, and HCCC. Instead, inmates housed in cramped conditions and in spaces not well suited for inmates would be accommodated in housing units designed and constructed to State of Hawaii and national standards.

The proposed projects involve the use of State funds and State lands; therefore, development of new Medium Security Housing Units at KCCC, MCCC, and HCCC is subject to the State environmental review process. Assisting PSD with this undertaking is the Hawaii Department of Accounting and General Services (DAGS) together with a team of consultants.

As PSD begins these efforts, it is important to inform, educate, and encourage input and advice from elected and appointed officials, regulatory agencies, stakeholders, and the public. This *Pre-Assessment Consultations* document has been prepared at the onset of the planning process to inform interested parties of the projects and the purpose and objectives of the new housing units, and to seek comments and input on issues that should be addressed in the forthcoming Draft EAs for each proposed project. The Draft EAs will include a discussion of the impacts of construction and operation of the new Medium Security Housing Units on the natural and man-made environments at KCCC, MCCC, and HCCC.

# 1.0 IDENTIFICATION OF PROPOSING AGENCY

The proposing agency is the State of Hawaii Department of Accounting and General Services (DAGS) on behalf of the Hawaii Department of Public Safety (PSD).

Contact: Clayton H. Shimazu, Chief Planner
State of Hawaii
Department of Public Safety
919 Ala Moana Boulevard, Suite 400
Honolulu, Hawaii 96814
Tel: 808-587-1237
Email: clayton.h.shimazu@hawaii.gov

Contacts: State of Hawaii
Department of Accounting and General Services
1151 Punchbowl Street, Room 430
Honolulu, Hawaii 96813

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Tel: 808-586-0469
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Reynaldo D. Rios (Maui Community Correctional Center)
Tel: 808-586-0468
Email: Reynaldo.d.rios@hawaii.gov

Richard J.Y. Louis (Hawaii Community Correctional Center)
Tel: 808-586-0474
Email: richard.j.louis@hawaii.gov

Assisting PSD and DAGS with planning and Draft EA preparation is Louis Berger U.S., Inc.

Contact: Robert J. Nardi, Vice President
Louis Berger U.S., Inc.
412 Mt. Kemble Avenue
Morristown, New Jersey 07962
Tel: 973-407-1681
Email: rnardi@louisberger.com

# 2.0 DESCRIPTION OF THE PROPOSED ACTION

## 2.1 Background

PSD is responsible for carrying out judgments of the State courts whenever a period of confinement is ordered. Its mission is to uphold justice and public safety by providing correctional and law enforcement services to Hawaii's communities with professionalism, integrity, and fairness. Currently, PSD is responsible for the approximately

5,600 offenders that are housed within eight State of Hawaii facilities, the Federal Detention Center in Honolulu, and in private contractor-operated correctional facilities in Arizona.

Since 1991, Hawaii's prison and jail inmate population has grown well beyond the system's capacity, during which time no new facilities have been added to the system. Consequently, PSD has been forced to double-bunk cells; add beds to dorms without adding space; and convert spaces normally used for inmate programs, counseling, and similar services to other functions such as inmate housing in order to cope with the population. At the present time, the design capacity for the State's four jails is 1,153 beds, and the operational bed capacity is 1,609. In the case of the State's prisons, the design capacity is 1,338 beds, and the operational bed capacity is 1,918 beds.

The persistent and severe overcrowding and a lack of suitable space in the islands has required PSD to house approximately 31 percent of the state's prison inmate population at contracted facilities on the mainland. Contracting for prison beds on the mainland began in 1995 when 300 male inmates were transferred to facilities in Texas. As of May 2018, approximately 1,459 State of Hawaii prison inmates are housed in facilities on the mainland.

## 2.2 Hawaii Department of Public Safety Responsibilities

PSD deals with offenders at various stages within the criminal justice process. People who are arrested are initially held in custody at county police cellblocks, where they are assessed to determine if they are eligible to be diverted from the correctional system. Those who qualify for release into the community, pending their trial, are supervised by PSD's Intake Service Center staff who provide counseling and electronic monitoring, if needed. Those who are not eligible for pre-trial diversion programs are transferred to one of the State's jails until their trial and acquittal or sentencing. Upon conviction, individuals who are sentenced to serve less than one year remain at the jails and serve out their sentence. Those who are sentenced to serve more than one year are transferred to a State prison to serve out their sentence.

Felons sentenced to prison undergo a comprehensive assessment and diagnostic process, which includes academic, vocational, treatment, and security information. Based on the assessment results, a correctional program plan is created to prepare the inmate to return to the community as a successful citizen. The plan includes programs and treatment services. PSD offers various programs to help create an environment that would be conducive to an inmate exercising behavioral control, taking responsibility, and achieving self-improvement. Only inmates who are classified as maximum security, or those whose behavior poses a threat to themselves or other inmates, are limited in their access to programs. Among the programs offered by PSD are education, vocational training, substance abuse treatment, and sex offender treatment. In addition to programs and basic needs such as food and clothing, medical and mental health services are also provided as well as access to a law library and other library services.

When inmates near the end of their sentences, and are of the appropriate custody level, they are typically transferred to a minimum-security facility where they may participate in work release or furlough programs. Planning for housing, employment, finances, continuing education, training, follow-up treatment services, or other elements of life after incarceration also occurs at this stage. Some female offenders may transfer to a transition center in the community as well.

Although some offenders will remain in prison for life, the majority will serve their sentences and be released. Over 98 percent of those currently incarcerated will eventually return to the community. Those who are released

to parole are closely supervised in the community to assist and prepare them for full release. If at any time a parolee violates the terms and conditions of parole, his or her parole status can be immediately revoked, and the offender may be returned to prison or jail.

## 2.3 Jail vs. Prison—Important Differences

As jails, KCCC, MCCC, and HCCC operate substantially different than a prison. A jail is a facility where individuals are held for trial. These may be persons who either could not meet their bail or may not have qualified for bail according to the courts. In certain cases, a jail may also house individuals who have been to court, convicted, and sentenced to short-term incarceration—usually less than a year. However, inmates housed at CCCs (i.e., jails) are under the jurisdiction of the Courts and not PSD, and detainees in jail can only be released, placed in outside programs, or assigned to other alternatives to incarceration by the Courts.

The services that jails must provide are vastly different from that of a prison. For example, it is important that pre-trial detainees are kept separate from sentenced inmates. Thus, a jail is usually operated on a 'distributed services' model where detainees or inmates remain in their housing units and meals, drug treatment, counseling, and even minor medical treatments are delivered to them. Another important consideration in the operation of a jail is that detainees may have a chemical dependency or suffer from an as-yet-undiagnosed mental health issue. In both cases, it is the responsibility of the jail to provide diagnosis and recommend the appropriate treatment program. Understanding the unique and fundamental differences between inmate populations and the services provided to them in prison vs. jail is important to understanding the purpose and function of Hawaii's CCCs.

Each CCC facility houses sentenced inmates (felony, probation, and misdemeanor), pretrial individuals (felony and misdemeanor), arrestees from other jurisdictions, and probation/parole violators. CCCs provide the customary county jail function of managing both pre-trial detainees and locally sentenced misdemeanant offenders and others with a sentence of one year or less. Jails also provide an important pre-release preparation/transition function for prison system inmates who are transferred back to their counties of origin when they reach less than a year until their scheduled release. Most of these inmates are transferred to a dedicated work furlough unit where they are able to begin working in the community on supervised work crews or in individual placements as determined by needs and classification assessments and individualized pre-release plans.

## 2.4 Hawaii Community Correctional Centers

The concept and mission of Hawaii's CCCs was originally defined in the 1973 Corrections Master Plan which resulted in the construction of jails (i.e., CCCs) on the Islands of Maui, Kauai, Oahu, and Hawaii. Consequently, all four facilities share some common original facility design elements that were considered appropriate at the time. One of those common features is the subdivision of the original secure housing building into very small operationally inefficient units of three-, four-, or six-cell clusters. Contemporary jail designs provide for much larger units (usually 32, 48, or 64 beds each for minimum- or medium-security general population) that allow many more inmates to be supervised by each officer.

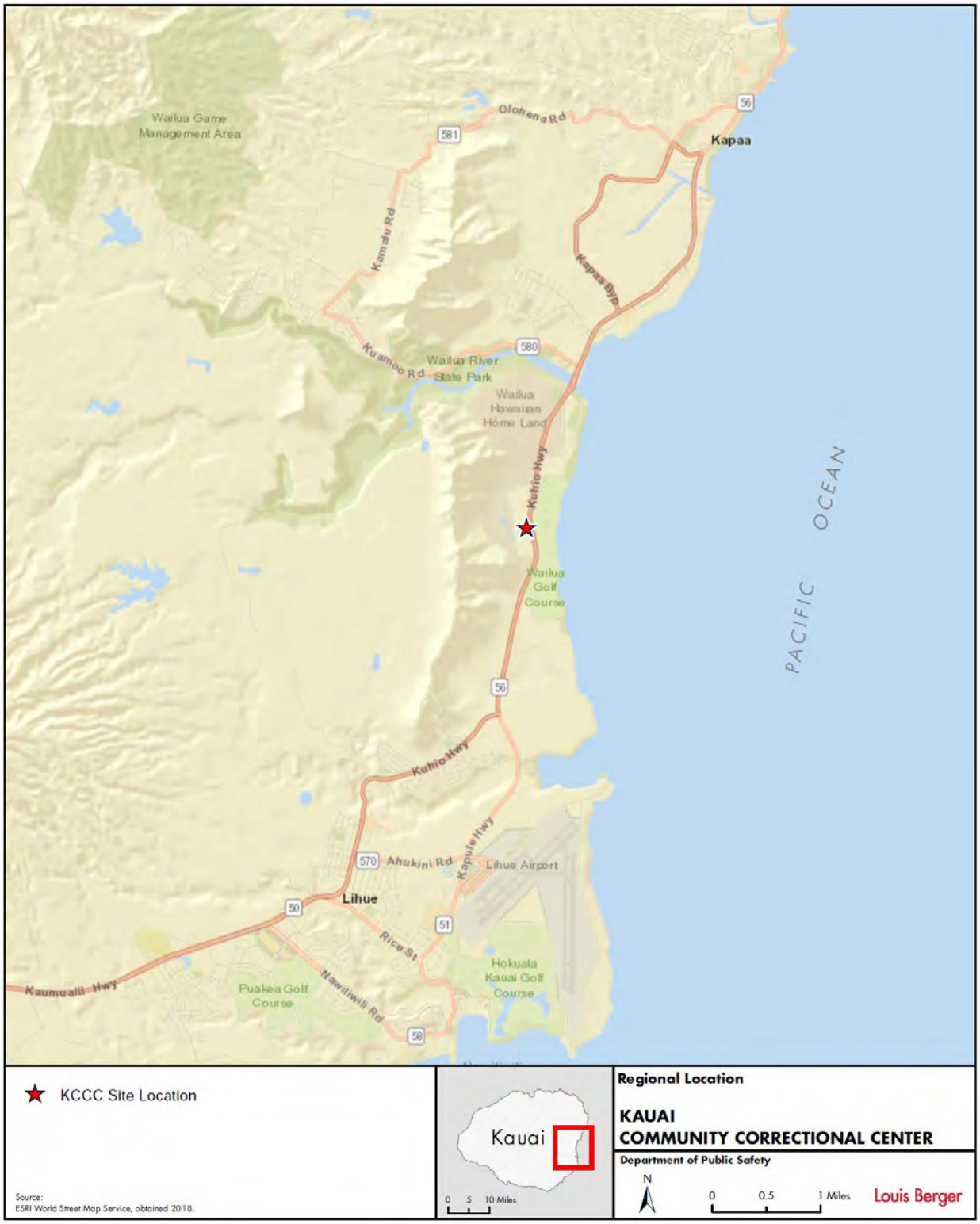
- Kauai Community Correctional Center—KCCC (tax map key [TMK] 4-3-9-05:13) has been expanded from its original capacity of 16 medium-security beds in 1977 to 46 beds by 1991, and currently has a design capacity of 110 beds. Additional bed space came in the form of temporary dormitory structures that were used by displaced residents of Hurricane Iniki and are still being used for correctional housing. As of May 31, 2018, the number of male inmates housed in KCCC was 177,

with the number of female inmates at 29 for a total of 206 inmates or 61 percent above its operational capacity of 128 beds. See Exhibits 1 and 2.

- Maui Community Correctional Center—MCCC, with a design capacity of 209 beds, has been expanded from its original two-acre site to the current 7.23 acres (TMK (2) 38046005, 06). Originally sited in a relatively isolated location, the town of Wailuku has since grown around and beyond the facility. As of May 31, 2018, the number of male inmates housed in MCCC was 399 with the number of female inmates at 70 for a total of 469 inmates or 56 percent above its operational capacity of 301 beds. See Exhibits 3 and 4.
- Hawaii Community Correctional Center—HCCC, opened as a 22-bed facility in Hilo in 1975, currently has a design capacity of 206 beds (TMK 2-3-023:005). The CCC was sited next to the original county jail in a Hilo location that, at the time, was largely undeveloped; today the facility is surrounded by urban development. As of May 31, 2018, the number of male inmates housed in HCCC was 373, while the number of female inmates was 71 for a total of 444 inmates which is 96 percent above its operational capacity of 226 beds. See Exhibits 5 and 6.
- Oahu Community Correctional Center—OCCC, located in Kalihi, opened in 1975 with 456 beds. OCCC was originally designed to house both pretrial detainees and sentenced felons. At that time, OCCC (TMK 1-2-013:002) was considered a jail as well as the primary prison for the State. OCCC has a design capacity of 628 beds but by the late 1990s, OCCC's population increased to upwards of 1,400. As of May 31, 2018, the number of male inmates housed in OCCC was 1,020 with the number of female inmates at 143 for a total of 1,163 inmates or 22 percent above its operational capacity of 954 beds. A separate planning effort is currently underway to replace OCCC.

Overall, jail facilities are operating well above their operational capacities and given long-standing conditions, alleviating overcrowding is an important PSD priority.

## Exhibit 1: KCCC Regional Location



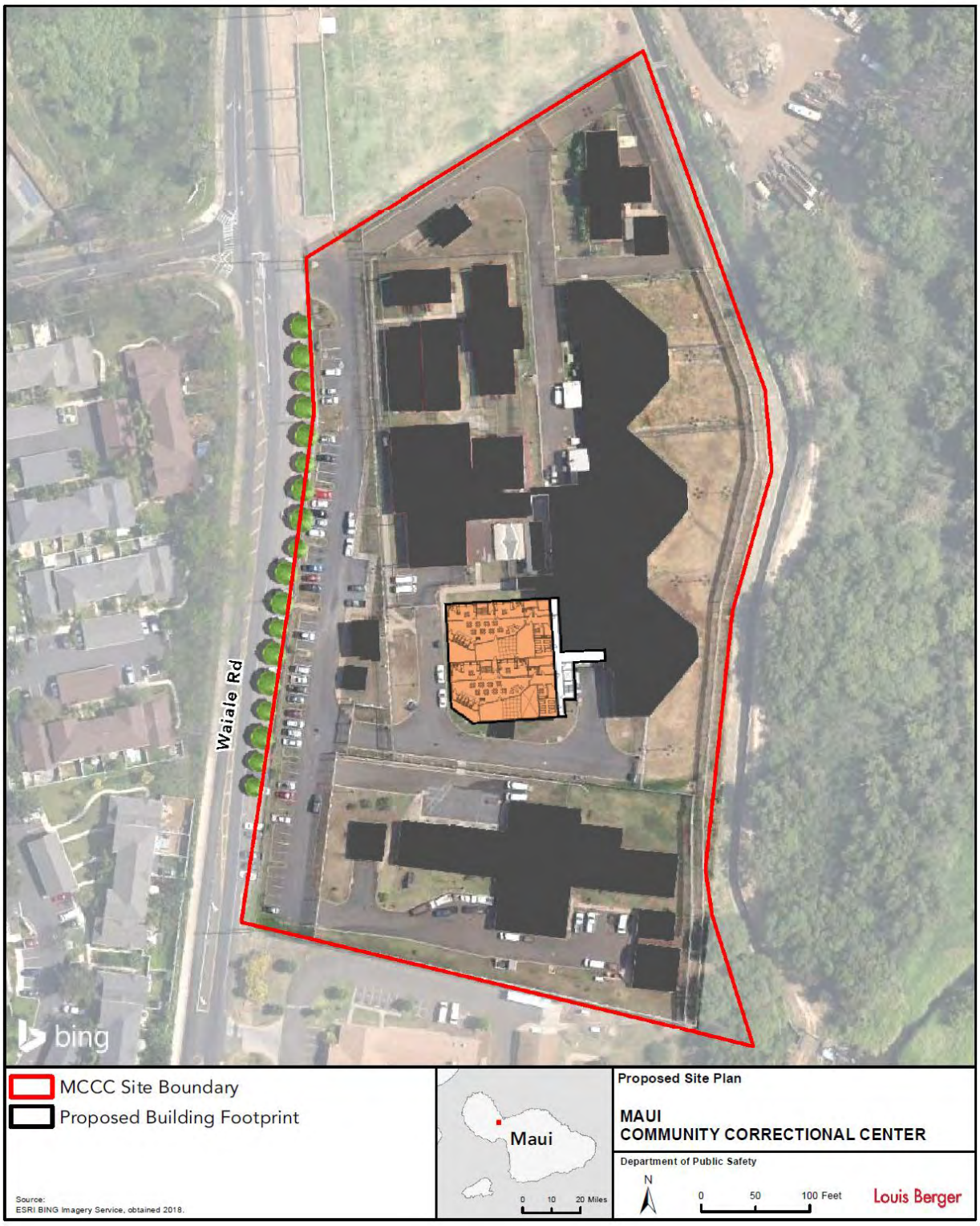
## Exhibit 2: KCCC Proposed Site Plan



## Exhibit 3: MCCC Regional Location



## Exhibit 4: MCCC Proposed Site Plan



## Exhibit 5: HCCC Regional Location



## Exhibit 6: HCCC Proposed Site Plan



## 2.5 Purpose and Need

With increasingly aged, obsolete, and severely overcrowded correctional facilities, PSD is proposing to improve the State's corrections infrastructure through modernization of existing facilities when possible and construction of new institutions to replace others when necessary. PSD is proposing to develop new Medium Security Housing Units at KCCC, MCCC, and HCCC capable of accommodating up to 140 inmates, up to 80 inmates, and up to 140 inmates, respectively, who are currently housed at each facility. Development of new Medium Security Housing Units is intended to provide additional beds in an appropriate setting to address the current severely overcrowded conditions; *provision of such housing is not intended to increase the populations of KCCC, MCCC, or HCCC beyond their current numbers*. Rather, medium security inmates housed in cramped conditions and in spaces not well suited for inmates, would be accommodated in modern housing units designed and constructed to State of Hawaii and national standards. Development of the new Medium Security Housing Units will allow for inmates currently housed in inadequate conditions to be relocated to the new buildings.

The objectives of developing the proposed new Medium Security Housing Units at KCCC, MCCC, and HCCC are to:

- Better accommodate current and future jail inmate populations.
- Improve living conditions for male and female inmates.
- Provide adequate space and an environment where the focus can be on better preparing inmates for successful reintegration into the community and reduced recidivism.
- Provide a safer and more efficient work environment for corrections staff.
- Provide for public safety.

Developing new Medium Security Housing Units at KCCC, MCCC, and HCCC will help ensure that Hawaii's criminal justice system, in general, and PSD, in particular, will function in a quality manner while addressing the need for modern, efficient, and cost-effective institutions. The addition of new Medium Security Housing Units will also allow PSD to accomplish its mission to uphold justice and public safety; meet the needs of current and future jail populations; and provide for the continued safety and security of inmates, staff, and island communities. Construction at KCCC, MCCC, and HCCC is preliminarily scheduled to begin in 2020 and be completed in 2021.

# 3.0 KCCC ENVIRONMENT

KCCC, located in Lihue along the east shore of Kauai, comprises approximately 10 acres in area much of which has already been developed with inmate housing, administrative and program structures, maintenance buildings and storage areas, vehicle access and parking areas, recreational facilities, and similar uses. The few undeveloped portions of property consist primarily of grass fields and small cultivated plots. There are no plans to expand KCCC beyond its current property boundaries and no plans to relocate the facility from Lihue.

## 3.1 Site Characteristics

### 3.1.1 Topography

The KCCC property is located at an elevation of approximately 20 feet above msl with the topography sloping gently from northwest to southeast.

### 3.1.2 Water Resources

Surface water features consist of a drainage channel that forms the property's western border which serves to divert surface waters flowing from adjacent properties around KCCC. This channel eventually discharges to a second larger channel that forms the eastern border of the KCCC property, and parallels Kuhio Highway to the east. Bisecting the northern portion of the property is an additional drainage channel that directs surface water flows from adjacent properties to the same channel paralleling the highway.

### 3.1.3 Biological Resources

Much of the area comprising KCCC has already been developed with the undeveloped portion of property consisting primarily of grass fields and small cultivated plots. The overall property is bordered on the east by the Kuhio Highway and to the north, south, and west by agricultural fields and vacant lands.

### 3.1.4 Demographics and Economic Characteristics

The population of the State of Hawaii, including the County of Kauai, has been steadily increasing; between 1990 and 2010, the population of Hawaii increased by 9.3 percent while Kauai County's population increased by 31.0 percent. The population of Hawaii increased by 17.7 percent between 2000 and 2015 to 1,425,557 while the population of Kauai County increased by 22.2 percent to 71,478.

Of the state's 714,067 person labor force, approximately 3.6 percent (38,015 persons) were unemployed in 2010. The largest industry in Hawaii in 2015 was Educational services, and health care and social assistance, with 133,756 jobs. In 2015, Kauai County had an unemployment rate of 3.5 percent with 1,929 of its 36,149 person labor force unemployed. The arts, entertainment, and recreation, and accommodation and food services industry represented the largest employment sector in Kauai County with approximately 8,222 jobs.

### 3.1.5 Community Services

Law enforcement services in Kauai County are provided by the Kauai County Police Department. Headquartered at 3990 Kaana Street in Lihue, the Department comprises three districts, with KCCC located within the Lihue District. The Kauai Fire Department provides fire protection and suppression, rescue (ocean and land), hazmat, and emergency medical services (basic life support) to the Island of Kauai. The Department maintains eight fire stations with the Lihue Station, located at 4450 Rice Street, servicing Lihue and KCCC. Kauai is serviced by several medical centers and clinics facilities, including Samuel Mahelona Memorial Hospital (SMMH), Wilcox Medical Center, and the West Kauai Medical Center. SMMH is Kauai's Eastside Critical Access Hospital located in Kapaa. Located in Lihue, Wilcox Medical Center provides Kauai residents with accessible, quality health care. West Kauai Medical Center is located in Waimea on the west side of Kauai.

### 3.1.6 Utility Services

KCCC along with most residences, businesses, and institutions on the island, are served with potable water by the Kauai Department of Water (KDOW). KDOW operates and maintains 12 separate water systems that are divided into three plant operations districts (East, Central and West) and two water distribution districts (East and West). KCCC lies within the East water service district and is served by the Lihue-Kapaa water system.

The Kauai Department of Public Works, Wastewater Management Division (KWMD) is responsible for operation and maintenance of the public wastewater collection and treatment systems across the island. KWMD operates

four treatment facilities on the island: Waimea, Eleele, Lihue, and Wailua with KCCC located within the service area of the Wailua Wastewater Treatment Plant.

The Kauai Island Utility Cooperative (KIUC) provides electric power to residences, businesses and industries across the island. A 12 kV overhead distribution line adjacent to facility supplies electricity to KCCC.

The County of Kauai Public Works Department, Solid Waste Division (SWD) owns one landfill and four transfer stations. The Kekaha Landfill is located on the southwest side of the island near the town of Kekaha. SWD is proposing to develop and operate a new solid waste landfill in the southeastern portion of the island.

### 3.1.7 Transportation

KCCC is located at 5350 Kuhio Highway between Leho Drive and Marine Camp Road in Lihue. Kuhio Highway is a two-way State Highway traversing the northern and eastern shores of Kauai extending from Haena State Park in the north to Lihue in the south.

# 4.0 MCCC ENVIRONMENT

MCCC, located on the east side of Waiale Road, is within the urbanized area of Wailuku. MCCC comprises approximately 7.23 acres of inmate housing, administrative and program structures, maintenance buildings and storage areas, and vehicle access and parking areas and similar uses. The few undeveloped portions of the property are limited to small grassed and paved areas between buildings, a grassed area devoted to outdoor recreation, and employee and visitor parking areas. There are no plans to expand MCCC beyond its current property boundaries and no plans to relocate the facility from Wailuku.

## 4.1 Site Characteristics

### 4.1.1 Topography

MCCC is located approximately 230 feet above msl, and the topography is nearly level.

### 4.1.2 Water Resources

Two surface water features are located in the vicinity of MCCC consisting of a concrete drainage channel (Spreckels Ditch) located along the property's eastern border and the Waiale Reservoir, also located east of MCCC. No other waterbodies are located on or in proximity to the MCCC property.

### 4.1.3 Biological Resources

Much of the area comprising MCCC has been developed with the few undeveloped portions of the property limited to small grassed and paved areas between buildings, a grassed area devoted to outdoor recreation adjoining the main housing units, and employee and visitor parking areas. MCCC lies between institutional/ commercial zones to the north and south and a residential zone immediately to the west, across Waiale Road.

### 4.1.4 Demographic and Economic Characteristics

The population of the State of Hawaii, including the County of Maui, has been steadily increasing. Between 2000 and 2015, the population of Hawaii increased by 17.7 percent while Maui County experienced a

population increase of over 28 percent. Between 2010 and 2015, the population of Hawaii increased by 4.8 percent to 1,425,557 while Maui County experienced a population increase of 6.0 percent to 164,357.

Of the State's 714,067 person labor force, approximately 3.6 percent (38,015 persons) were unemployed in 2010. The largest industry in Hawaii in 2015 was Educational services, and health care and social assistance, with 133,756 jobs. The tourism industry represents the largest employment sector on Maui in 2016 with approximately 21,600 jobs in Accommodations and Food Services.

### 4.1.5 Community Services

Law enforcement services in Maui County are provided by the Maui Police Department. Police services are headquartered at 55 Mahalani Street in Wailuku, in the vicinity of MCCC, which houses patrol units and investigative and administrative divisions. The Maui County Department of Fire and Public Safety provides fire and emergency services to the islands of Maui, Lanai, and Molokai from 14 fire stations and a fire prevention office. The Department operates from its headquarters located at 200 Dairy Road in Kahului, Hawaii. The Wailuku Fire Station, located at 21 Kinipopo Street in Wailuku is located a short distance from MCCC. Maui Memorial Medical Center, located at 221 Mahalani Street in Wailuku and a short distance from MCCC, is the main hospital and health care provider on the Island of Maui. Since its establishment, the hospital has undergone many changes and today, the total bed count for the hospital is 231.

### 4.1.6 Utility Services

The main MCCC campus is connected to the 12-inch main on Waiale Road with two 1.5-inch meters for the potable water distribution system. In addition, a third water meter is connected to the 12-inch main on Waiale Road.

Wastewater generated in the area of MCCC is conveyed to the Kahului wastewater treatment plant. Wastewater is pumped from MCCC by an on-site pumping station to a sewer line located along Waiale Road.

Maui Electric provides electric power to residences, businesses and industries throughout Maui County. Electric power is distributed via substations and 69 kilovolt, high voltage distribution lines. Three-phase overhead power lines are located along Waiale Road adjacent to the western border of MCCC.

The majority of solid wastes generated within the County of Maui are disposed of at the Central Maui Landfill–Refuse and Recycling Center located approximately four miles southeast of Kahului Airport. The landfill accepts solid waste for disposal delivered directly by residents, businesses, commercial collection services, transfer station, and municipalities and agencies.

### 4.1.7 Transportation

MCCC is located at 600 Waiale Road, between Olomea Street and Waimaluhia Lane. Waiale Road is a two-lane road that connects the business center of Wailuku to the Ma'alaea area. Access to the facility is via a driveway connecting the north end of the property to Waiale Road.

# 5.0 HCCC ENVIRONMENT

HCCC is located in a highly developed urban area in Hilo at 60 Punahele Street in Hilo. HCCC comprises a single parcel of approximately four acres, much of which has already been developed with inmate housing;

administrative, program, and support structures; maintenance buildings and storage areas; vehicle access and parking areas; and similar uses. There are no plans to expand HCCC beyond its current property boundaries and no plans to relocate the facility from Hilo.

# 5.1 Site Characteristics

## 5.1.1 Topography

The HCCC property is located at an elevation of approximately 225 feet above msl with the topography sloping from west to east.

## 5.1.2 Water Resources

One surface water feature was identified on the HCCC property; a narrow drainage channel bisects the property starting from the north end near Waianuenue Avenue. The nearest major water body is the Wailuku River, which is located approximately 1,300 feet to the north of HCCC.

## 5.1.3 Biological Resources

Virtually all the land area comprising HCCC has been developed with inmate housing, administrative and program structures, maintenance buildings and storage areas, vehicle access and parking areas, among similar uses. The small undeveloped portions of property consists primarily of concrete walkways and small grass areas between buildings.

## 5.1.4 Demographic and Economic Characteristics

The population of Hawaii increased by 17.7 percent between 2000 and 2015 from 1,211,537 to 1,425,557, while the population of Hawaii County increased by 31.9 percent from 148,677 to 196,156.

Of the state's 714,067-person labor force, approximately 38,015 persons were unemployed in 2010. The largest industry sector in the State of Hawaii in 2016 was Government with 126,300 jobs. In 2015, Hawaii County had approximately 3,900 workers unemployed. The Leisure and Hospitality industry represented the largest industry sector in Hawaii County with approximately 14,200 jobs.

## 5.1.5 Community Services

Law enforcement in Hawaii County is provided by the Hawaii County Police Department. HCCC is serviced by the Hilo Station located at 349 Kapiolani Street in South Hilo. The Hawaii Fire Department is primarily responsible for fire protection and suppression on the Island of Hawaii. The closest fire station to HCCC is the Hilo Station located at 466 Kinoole Street in Hilo. The Hilo area, including HCCC, is service by the Hilo Medical Center (HMC). HMC is located on 20 acres of land adjacent to the Wailuku River at 1190 Waianauenue Avenue in Hilo, less than a mile from HCCC.

## 5.1.6 Utility Services

HCCC is served by the Hilo Water System with raw water for the system obtained from deep wells. The main meter for HCCC is located on Punahele Street and consists of a combination fire suppression and potable water supply meter.

HCCC lies within the service area of the Hilo Wastewater Treatment Plant, which provides secondary treatment with chlorine disinfection and a deep ocean outfall. HCCC currently discharges wastewaters into a 10-inch main located in Waianuenue Avenue through a single connection.

The Hawaii Electric Light Company (HELCO) provides power to residences, businesses and industries throughout Hawaii County. Adjacent to HCCC, HELCO maintains a 12.47-kilovolt (KV) overhead distribution circuit on Komohana Street and a 13.8-KV overhead distribution circuit on Waianuenue Avenue.

Disposal of solid wastes generated at HCCC currently occurs at the South Hilo Sanitary Landfill, which is the only municipal solid waste landfill operating in East Hawaii.

### 5.1.7 Transportation

HCCC is located at 60 Punahele Street between Waianuenue Avenue, Komohana Street, and Punahele Street. Waianuenue Avenue is a four-lane major thoroughfare that serves a number of business establishments, public facilities, recreational and cultural institutions, as well as residential neighborhoods. It provides access between Hilo's central business district and upland residential areas and continues upland as the saddle road between Mauna Kea and Mauna Loa to connect with West Hawaii.

# 6.0 PLANNING HORIZON

The planning, Draft EA preparation, permitting, and new Medium Security Housing Unit design processes are estimated to take approximately one to two years to complete with construction of the new housing units estimated to take an additional year. The Draft EAs will include available information concerning the schedule for developing the proposed new Medium Security Housing Units at KCCC, MCCC, and HCCC.

# 7.0 ALTERNATIVES

At this time, the following alternatives have been identified:

- No Action Alternative. A decision not to proceed with the proposed action to develop new Medium Security Housing Units at KCCC, MCCC, and HCCC. Under the No Action Alternative, the persistent and severe overcrowding experienced at KCCC, MCCC, and HCCC would continue.

- Alternatives Considered. Potential expansion of the property boundaries to provide additional lands for new housing unit development; complete relocation and replacement of each facility at a new location, and development of new Medium Security Housing Units as proposed.

No other reasonable alternatives within the jurisdiction of PSD have been identified.

# 8.0 CONSULTATIONS

## 8.1 Pre-Assessment Consultations

PSD is committed to ensuring that the process of planning, permitting, designing, and eventually developing new Medium Security Housing Units at KCCC, MCCC, and HCCC benefits from the input and involvement of stakeholders, elected officials, regulatory agencies, and the public. Beginning in March 2018, PSD and DAGS

initiated a public outreach effort to provide information about the proposed inmate housing unit projects. The effort is intended to frame the planning and decision-making process and offer elected officials, stakeholders, and the public a means to participate. The public outreach effort has the following objectives:

- Provide an understanding of PSD's mission and responsibilities and the important role KCCC, MCCC, and HCCC play in the criminal justice system in Hawaii;
- Describe the current KCCC, MCCC, and HCCC and the need to alleviate the severe and persistent overcrowding experienced at the facilities and by doing so improve the health and safety for inmates, staff, and the public;
- Demonstrate how the PSD and the Project Team are exercising careful, objective, and systematic development of plans for the proposed new inmate housing units at KCCC, MCCC, and HCCC;
- Provide project information that is accurate, timely, accessible, and understandable to the public;
- Regularly inform the public regarding the planning process and offer opportunities for input; and
- Encourage public interest and constructive input, eliciting a variety of viewpoints.

### 7.1.1 Pre-Assessment Document

Outreach activities are being varied in their approach to encourage participation across different audiences, recognizing that individuals and groups receive and process information in different ways. Activities include preparation of this ***Pre-Assessment Consultations*** document to inform interested parties of the proposed inmate housing projects and to seek comments and input on issues that should be addressed in the forthcoming Draft EAs for KCCC, MCCC, and HCCC.

### 7.1.2 Initial Notification Letters

PSD is committed to providing a safe, secure, healthy, humane, social, and physical environment for inmates and staff, but the severe and persistent overcrowding at KCCC, MCCC, and HCCC has limited its ability to provide such environments, exacerbated basic physical plant operations, contributed to tension among inmates, and diminished program opportunities. To increase awareness of this problem and solicit the input and assistance of federal, State, and local elected and appointed officials and government agencies, PSD issued letters to such individuals and agencies to inform them of plans to alleviate overcrowding (March/April 2018). The introductory letters, sent by PSD Director Nolan P. Espinda, introduced the proposed projects and the team responsible for conducting the planning and environmental studies.

### 7.1.3 Neighbor Island Jail Projects Website

Information prepared in support of the proposed inmate housing projects has also been made available through PSD's Neighbor Island Jail Projects website: ***https://dps.hawaii.gov/neighbor-island-jails-project/.*** Over time, the website will host a calendar of activities, project-related newsletters, various technical reports, and other informative materials. Interested persons and organizations are also continuously added to the Neighbor Island Jail Projects emailing/distribution list to receive periodic information about the projects and to learn about progress in the planning process.

### 7.1.4 Project Newsletters

PSD is producing and widely distributing newsletters concerning various aspects of the housing unit planning and environmental study process. Newsletters are being prepared in response to the need for accurate and timely information about jail function and operation, Draft EA preparation efforts, characteristics of the inmates housed

in CCCs, and other important topics. These publications are also being used as meeting handouts, made available via the Neighbor Island Jail Projects website, and distributed via an email system to over 1,000 individuals, organizations, agencies, stakeholders, and elected and appointed officials. DAGS, in collaboration with PSD, is conducting public outreach to introduce the proposed action involving KCCC, MCCC, and HCCC to communities on Kauai, Maui, and Hawaii and statewide; facilitate the public informational process; and integrate public input into the decision-making process.

## 8.2 Public Outreach

PSD officials recognize the value and importance of effectively communicating with various stakeholders (elected officials, interest groups, regulatory agencies, the public, etc.) during the planning and Draft EA process. When a project or action has the potential to affect local and statewide interests, communicating with community leaders, community and public interest groups, regulatory agencies, and the public early and throughout the process can facilitate decision-making and help achieve approval/acceptance. Public outreach at the onset of the planning process serves to assist in determining the focus and content of the environmental impact study. Public outreach also assists to identify the range of actions, alternatives, environmental effects, and mitigation measures to be analyzed and eliminates from study issues that are not pertinent to the final decision on the proposed projects.

At the onset of the various studies, PSD notified State and local agencies and elected officials via letters informing them that PSD was initiating preparation of Draft EAs and inviting them into a conversation about the proposed projects. Significant issues may be identified through public and agency input and comments. The following agencies, organizations, and officials are among those being consulted during preparation of the Draft EAs:

### 7.2.1 Federal

- U.S. Senators
- U.S. Congressional Representatives
- Department of the Army, Army Corps of Engineers
- Department of Agriculture, Natural Resources Conservation Service
- Department of the Interior
  - Fish and Wildlife Service
  - Geological Survey
- Others

### 7.2.2 State

- Governor's Office
- Hawaii State Senators
- Hawaii House of Representatives
- Department of Agriculture
- Department of Accounting and General Services
- Department of Business, Economic Development, and Tourism

  - Land Use Commission
  - Office of Planning
- Department of Defense
  - Hawaii Army National Guard
- Department of Education
- Department of Hawaiian Home Lands
- Department of Health
  - Office of Environmental Quality Control
  - Environmental Planning Office
- Department of Land and Natural Resources
  - Land Division
  - State Historic Preservation Division
- Department of Transportation
- Office of Hawaiian Affairs
- University of Hawaii Environmental Center
- Others

### 7.2.3 County of Kauai

- Office of the Mayor
- Kauai County Council Members
- Planning Department
- Department of Public Works
- Transportation Agency
- Emergency Management Agency
- Office of Economic Development
- Water Department
- Department of Parks and Recreation
- Fire Department
- Police Department
- Housing Agency
- County Clerk
- County Attorney's Office
- Others

### 7.2.4 County of Maui

- Office of the Mayor
- Maui County Council Members
- Office of Economic Development
- Department of Prosecuting Attorney's Office
- Department of Parks and Recreation
- Planning Department
- Maui Fire Department
- Maui Police Department
- Public Works Department
- Department of Water Supply
- Others

### 7.2.5 County of Hawaii

- Office of the Mayor
- Hawaii County Council Members
- Office of the Corporation Counsel
- Department of Environmental Management
- Planning Department
- Department of Public Works
- Mass Transit Agency
- Civil Defense Agency
- Department of Water Supply
- Department of Parks and Recreation
- Fire Department
- Police Department
- County Clerk
- Office of the Prosecuting Attorney
- Others

# APPENDIX D:
# Archaeological Inventory Survey of the Hawaii Community Correctional Center

SCS Project Number 1967-1

# ARCHAEOLOGICAL INVENTORY SURVEY OF THE HAWAIʻI COMMUNITY CORRECTIONAL CENTER (HCCC) PROPERTY IN PIʻIHONUA AHUPUAʻA, SOUTH HILO DISTRICT, HAWAIʻI ISLAND, HAWAIʻI [TMK: (3) 2-3-023:005]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**APRIL 2017**

**Draft**

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## ABSTRACT

At the request of the State Historic Preservation Division (SHPD), Okahara and Associates contracted Scientific Consultant Services, Inc. (SCS) to conduct an archaeological inventory survey (AIS) of a 3.189-acre parcel [TMK: (3)-2-3-023:005], located in Piʻihonua Ahupuaʻa, South Hilo District, Island of Hawaiʻi. The property is the location of the Hawaiʻi Community Correctional Center (HCCC). The project area is situated approximately 1.0 mile southwest of Hilo Bay and is bounded by Waiānuenue Avenue to the north, Komohana Street to the west, Punahele Street to the south, and by residential neighborhoods to the east. The northeast corner of the parcel is being considered for the construction of a new inmate housing facility. The property is owned by the State of Hawaiʻi. The Hawaiʻi Department of Public Safety Programs, Planning and Budget-Capital Projects Office is the proposing agency. Their mailing address is 919 Ala Moana Boulevard, Suite 400 Honolulu, Hawaii 96814.

Archaeological inventory survey field work was conducted in March, 2017 by Senior Archaeologists Glenn Escott M.A. and Suzan Escott, B.A. The field work included a total of 16 person-hours. A series of northeast/southwest traverses spaced three meters apart were walked across the project area. Ground visibility was excellent.

Three previously identified archaeological sites (Site 50-10-35-7457, 20848, and 20849) were documented on the current project area. Site 7457 is the old Hilo Jail building designed by Oliver G. Traphagen and constructed in 1905. Sites 20848 and 20849 are Historic era ditches used to provide water for agricultural and residential use, and to channel drainage. Site 7457 is significant under criteria "c" and "d". The Old Hilo Jail is significant under criterion “c” as it embodies distinctive characteristics of a type, period and method of construction; is the work of a noted architect (O.G. Traphagen); and possesses architectural, engineering, and design elements characteristic to public buildings constructed during the late 1800s and early 1900s. The Old Hilo Jail is also significant under criterion “d” as it has yielded and may be likely to yield information important to history. Site 20848 and Site 20849 were subjected to a data recovery study and monitoring (Wolforth 1999) and portions of the ditches were redirected and reconstructed. Site 20848 and Site 20849 are recommended for no further work.

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# INTRODUCTION

## PROJECT AREA DESCRIPTION

At the request of the State Historic Preservation Division (SHPD), Okahara and Associates contracted Scientific Consultant Services, Inc. (SCS) to conduct an archaeological inventory survey (AIS) of a 3.189-acre parcel [TMK: (3)-2-3-023:005], located in Piʻihonua Ahupuaʻa, South Hilo District, Island of Hawaiʻi (Figures 1, 2, 3, and 4). The property is the location of the Hawaiʻi Community Correctional Center (HCCC). The project area is situated approximately 1.0 mile southwest of Hilo Bay and is bounded by Waiānuenue Avenue to the north, Komohana Street to the west, Punahele Street to the south, and by residential neighborhoods to the east. The northeast corner of the parcel is being considered for the construction of a new inmate housing building at the Hawaiʻi Community Correctional Center (HCCC) facility. The property is owned by the State of Hawaiʻi. The Hawaiʻi Department of Public Safety Programs, Planning and Budget-Capital Projects Office is the proposing agency. The proposing agency mailing address is 919 Ala Moana Boulevard, Suite 400 Honolulu, Hawaii 96814.

## METHODS

The archaeological inventory survey was undertaken in accordance with Hawaiʻi Administrative Rules 13§13-284 and was performed in compliance with the Rules Governing Procedures for Historic Preservation Review for Governmental Projects contained in Hawaiʻi Administrative Rules 13§13-275. Prior to fieldwork, geological maps, aerial photos, historical maps, historical documents, and previous archaeological reports were studied. Glenn Escott, M.A. was the Principal Investigator for the project.

Archaeological field work was conducted in March, 2017 by Senior Archaeologists Glenn Escott M.A. and Suzan Escott, B.A. The field work included a total of 16 person-hours. The pedestrian survey consisted of a series of northeast/southwest traverses spaced three meters across the project area. Ground visibility was excellent.

Schematics of the Old Jail building 7454 were checked in the field for accuracy. SHPD Intensive Level Historic Resource Inventory Forms were filled out (Appendix A). Complete descriptions of the building were made and photographs of the building were taken. Sites 20848 and 20849 were inspected, recorded, and photographed. A series of shovel probes were excavated in close proximity of the two ditches.




**Figure 1:** 5,500 K-Series Map of USGS Topographic Map Hawai‘i Showing Location of Project Area (Hawai‘i County Quad. National Geographic Topo!, 2003. Sources: National Geographic Society, USGS).

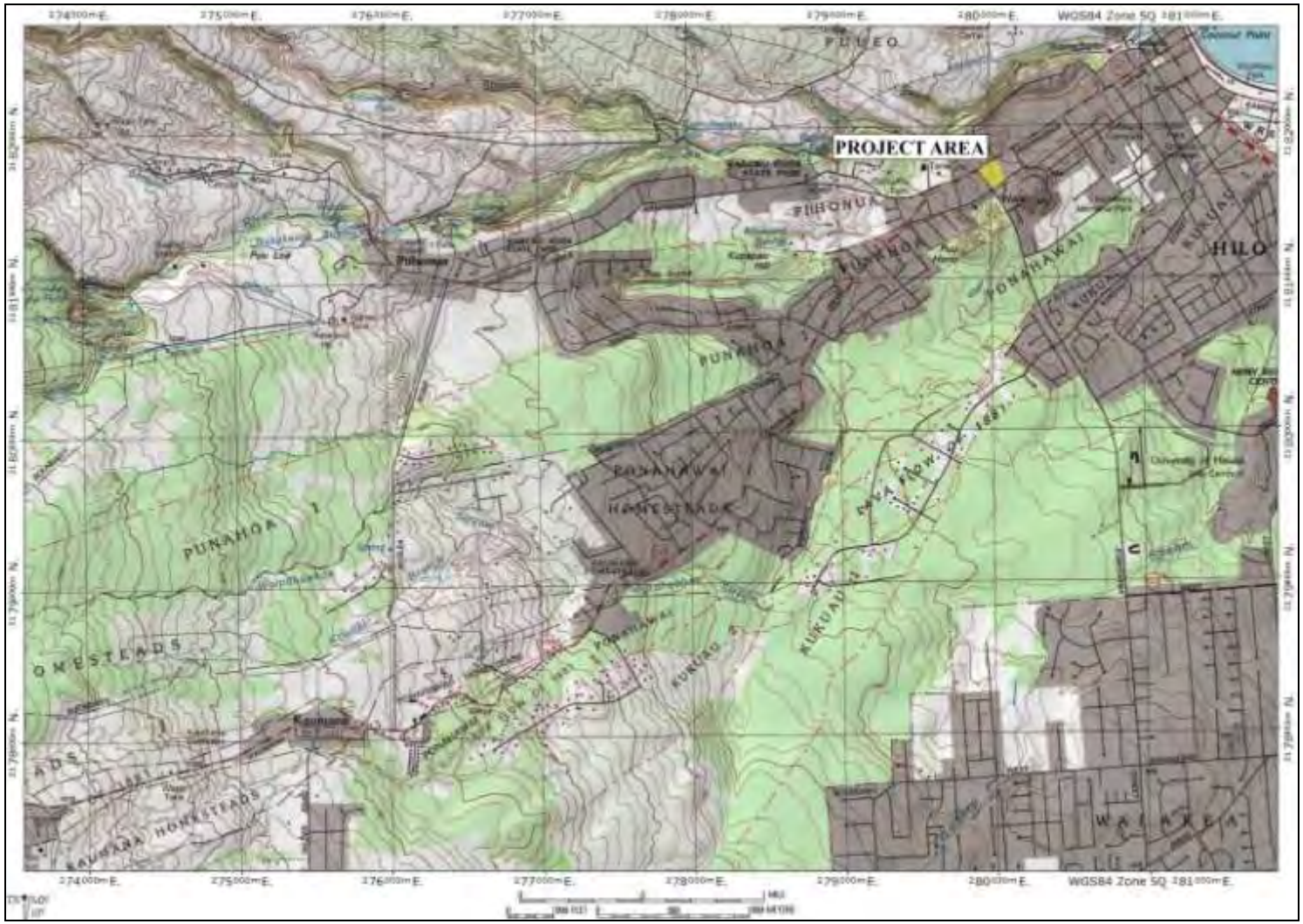


**Figure 2:** 7.5-Minute Series USGS Topographic Map Showing Project Area Location (Shaded Yellow) (Hilo Quad. National Geographic Topo! 2003. Source: National Geographic Society).

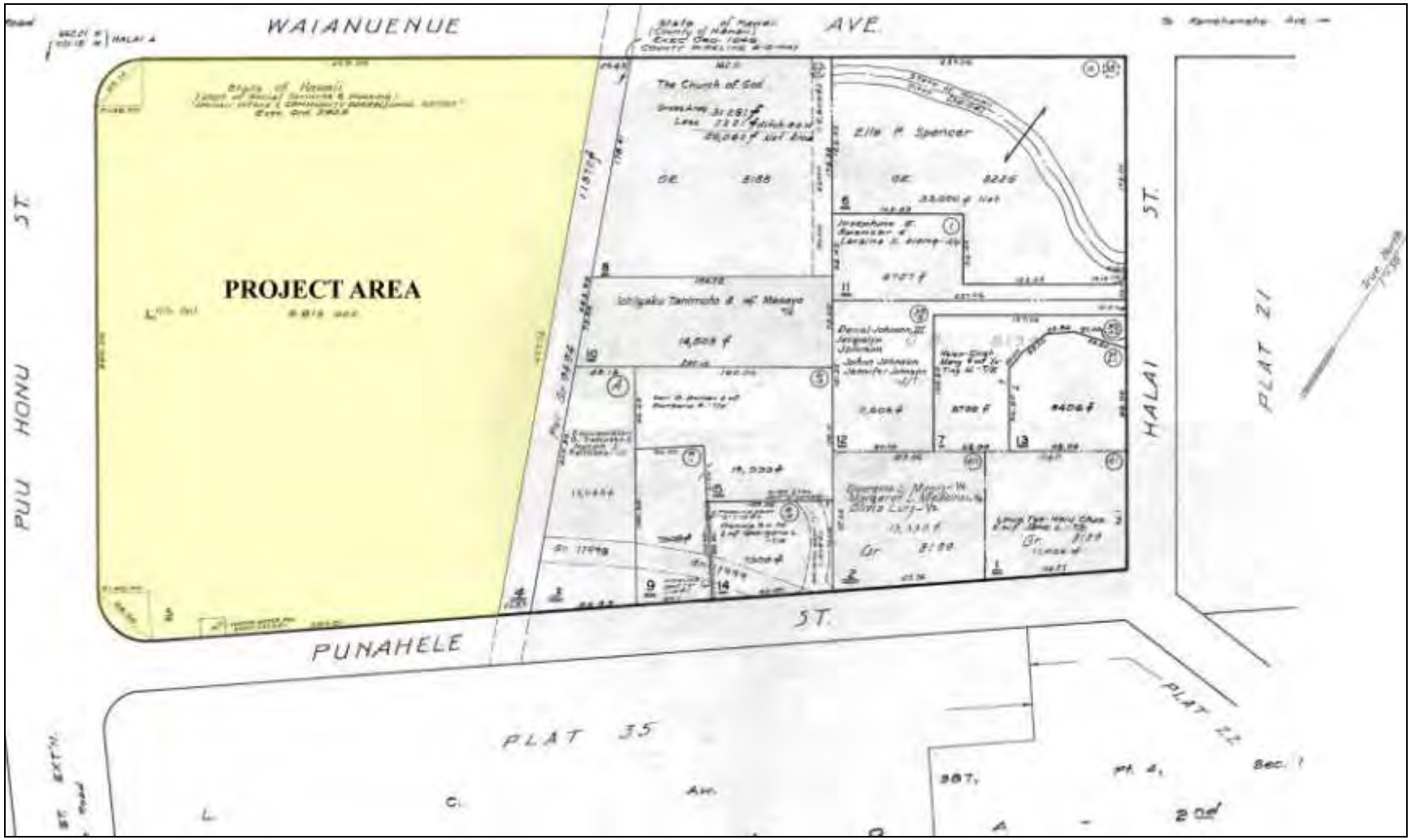


**Figure 3**: Map of TMK: (3) 2-3-023 Showing Location of Project Area (Shaded Yellow) (Hawai‘i County Planning Department, 2017).




**Figure 4:** Aerial Photograph Showing Location of Project Area (Google Earth 2017. 2013 Image. Hilo, Zone 5 North, 280003 m E, 2181697 m N. Sources: NASA, Digital Globe).

This report contains background information outlining the environmental and cultural contexts of the project area, a section on methods, a presentation of previous archaeological work within the study area and in the immediate vicinity, current survey expectations based on that previous work, and the results of the survey. Significance assessments and recommendations were made for all sites and are contained in this report.

## ENVIRONMENTAL SETTING

The current project area is 3.189 acres of developed land situated on gentle northeast sloping ground between 200 and 260 feet (61 to 79 m) above mean sea level (amsl) (see Figure 2 and Figure 4). The ground substrate is a Mauna Loa lava flow dated to between 3,000 and 5,000 years before present (Wolfe and Morris 1996). Soil on the project area is Keaukaha series (rKFD) extremely rocky muck with six to twenty percent slopes (Sato et al. 1973:27).

Rainfall in the project area is high, ranging between 150 and 200 inches per year (Kelly et al. 1981). Natural drainage in the area runs from west to east. There is a drainage ditch situated through the center of the project area and another along the north and east edges of the project area.

The project area is the location of HCCC buildings and structures and is completely developed. The ground surface slopes to the east and is mown grass and a few trees.

## HISTORICAL AND CULTURAL CONTEXTS

The predominant view among archaeologists, based on radiocarbon dating, is that Hawai‘i was first settled between A.D. 700 and 1,000 by people sailing from the Marquesas (Cordy 2000:104-109). Recently, there has been debate surrounding the archaeological dating of the initial settlement of Hawai‘i. An article published in the Journal of Archaeological Science reviewing radiocarbon dates recovered at archaeological sites on the Island of Hawai‘i suggests that, by relying on only carbon samples from short-lived plant remains, the most reliable dates point to initial Polynesian colonization of Hawai‘i Island occurring between AD 1220 and 1261 (Rieth et al. 2011:2747).

The rich marine resources of Hilo Bay and the gently sloping forests of Mauna Loa and Mauna Kea provided abundant resources. Fresh water was available from the Wailoa and Wailuku rivers and smaller streams such as Waiākea, Waiolama, Pukihae, and ʻAlenaio. Waiākea Stream flows south of the present study area. The *ahupuaʻa* of Ponahawai is literally translated as "water circle" (Pukui et al. 1974:189) and can be used to describe water welling up or water found in an opening in a forest (Maly and Maly 2003:5-6). Ponahawai extends from the coastline to 2,700 feet above sea level on the lower slopes of Mauna Kea. It is believed that Ponahawai Ahupuaʻa was given to Keawe-a-Heulu by Kamehameha I, though it became Crown Lands during the Māhele (Kelly et al. 1981:40).

**PRE-CONTACT ACCOUNTS OF HILO**

The earliest account of Hilo appears in ʻUmi-a-Liloa's (1600–1620) conquest of the Island of Hawaiʻi, which establishes Hilo as a royal center by the sixteenth century. In the account, ʻUmi-a-Liloa began his conquest of the Island of Hawaiʻi by defeating chief Kulukuluʻā, who lived in Waiākea, and the other chiefs of Hilo (Kamakau 1992:16–17). ʻUmi-a-Liloa's second son, Keawe-nui-a-ʻUmi, ruled Hāmākua, Hilo, and Puna from his residence at Hilo (Kamakau 1992: 34). It was from Hilo that he waged war on the Kona chiefs and unified the island. Keawe-nui-a-ʻUmi's descendants single handedly continued rule for many generations from Hilo.

After the death of Keawe-nui-a-ʻUmi the kingdom was divided into three parts and was established under warring chiefs; Hilo was ruled by Kumalae-nui-puʻawa-lau and his son Makua *(*Kamakau 1992: 45). It was during the period of time that Kamehameha I was born. Kalaniʻōpuʻu's grandson, Keoua Kuahuʻula and nephew Kamehameha vied for control over the six chiefdoms constituting the island kingdom and Keoua conquered Hilo chief Keawe-mau-hili and harvested the benefits for a short time only to be killed by Kamehameha late in 1791. Kamehameha's son Liholiho was born in Hilo in November 1797 (Kamakau 1992:22). Waiākea was inherited by Lihiliho after Kamehameha's death. The *ʻili kūpono* of Piʻopiʻo and its royal fishpond were given to his favorite wife, Kaʻahumanu (Figure 5).

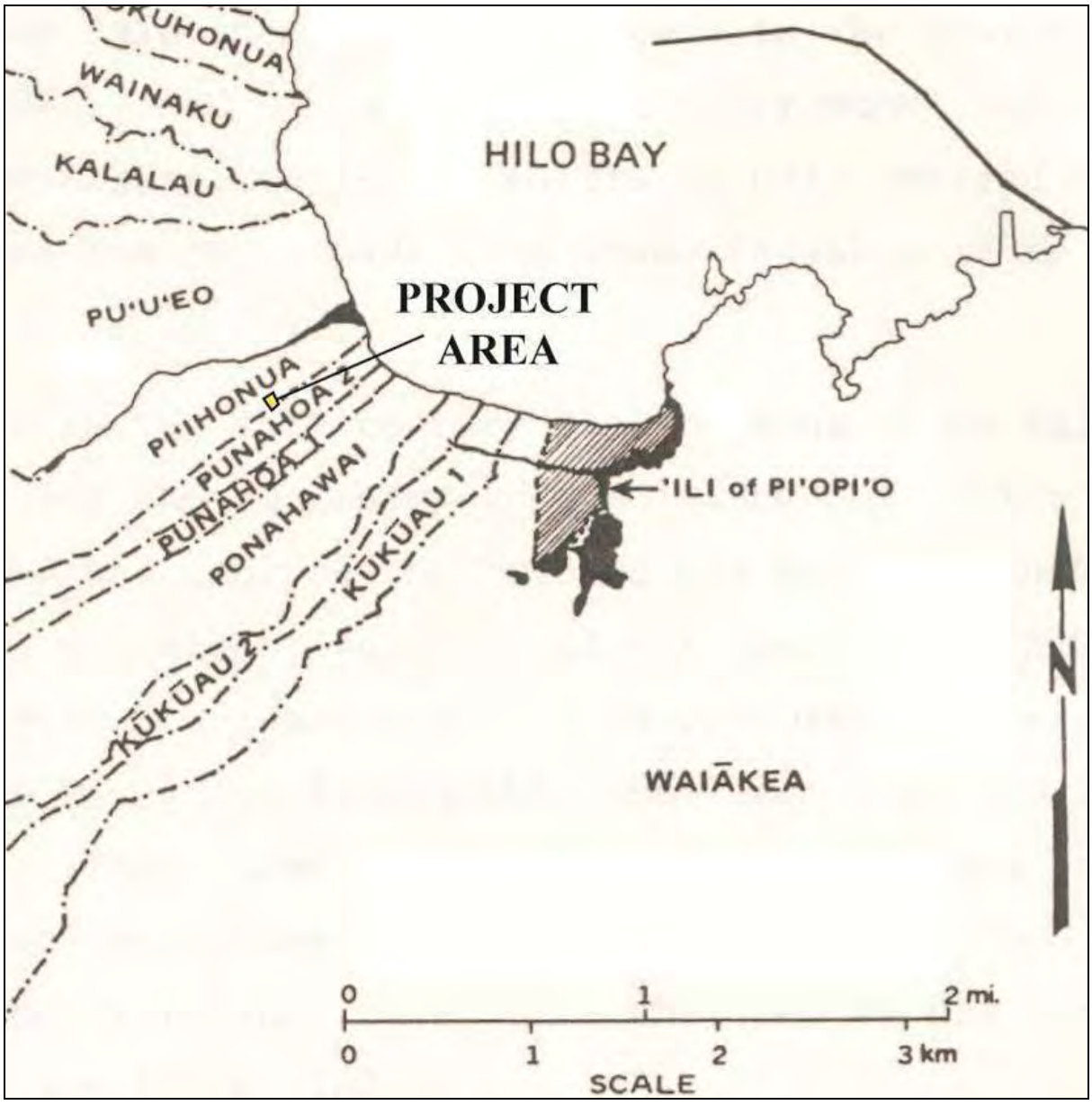


**Figure 5:** Map Showing Pi‘opi‘o and the Project Area Shaded Yellow (Kelly et al. 1981).

**MOʻOLELO OF HĀLAʻI, PUʻUHONU, ʻŌPEʻAPEʻA, AND KAMALIʻI**

There is a collection of traditional Hawaiian legends that are set on the three hills in Ponahawai and Punahoa Ahupuaʻa. Hālaʻi hill is the largest, is furthest *makai*, and is just northeast of the current project area (Figure 6). The middle hill and the *mauka* hill have been referred to in legend as Puʻuhonu, ʻŌpeʻapeʻa, and Puʻu o Kamaliʻi. The confusion in the names of the latter two hills continued into the early post-Contact era when cartographers gave these two cinder cones different names on their maps. Furthermore, the middle hill was excavated from the mid 1940s through the 1960s for cinder to supply various construction projects. Modern maps depict the large hill to the northeast as Hālaʻi, the small hill to the southwest as Puʻuhonu, and the middle hill is no longer present (see Figure 8).

The best treatment of the legends surrounding the three hills can be found in a study of the oral traditions and archival records of Ponahawai and Punahoa Ahupuaʻa written by Kepa and Onaona Maly (Maly and Maly 2003:14-19). Their work relied heavily on that of W.D. Westervelt (1910, reprinted in 1987) who published a collection of traditional stories about the goddesses called Hina and the demi-god Maui. According to Maly and Maly,

> In that collection, is found an account of the *puʻu* (hills) of Hālaʻi, ʻŌpeʻapeʻa, and Puʻuhonu. The tradition tells us of the presence of Hawaiian villages and agricultural fields in the vicinity of the hills. Hālaʻi (the first hill) is in Punahoa, bounded on the Puna side by the land of Ponahawai. Puʻu Honu, the third hill in this series of volcanic cones, is further *mauka*, and crossed by the boundary between Punahoa and Ponahawai. ʻŌpeʻapeʻa is not named on any of the historical maps viewed to date, but has been interpreted as being the middle, or second hill, and is thus situated just *mauka* of the present-day Komohana Street. This is the hill that was mined by C. Brewer prior to 1970, and is between Hālaʻi and Puʻuhonu. There is some confusion regarding the name of the "middle" hill (see discussion in Wolforth 1999), and one or two historical accounts describing important facets of the history of Hilo appear to be centered on the "middle" hill. In one account it may be referred to as Pōhakunui (Westervelt, 1910; in this study) and in another account, as Puʻu o Kamaliʻi (see T. Kelsey notes, 1921, in this study).

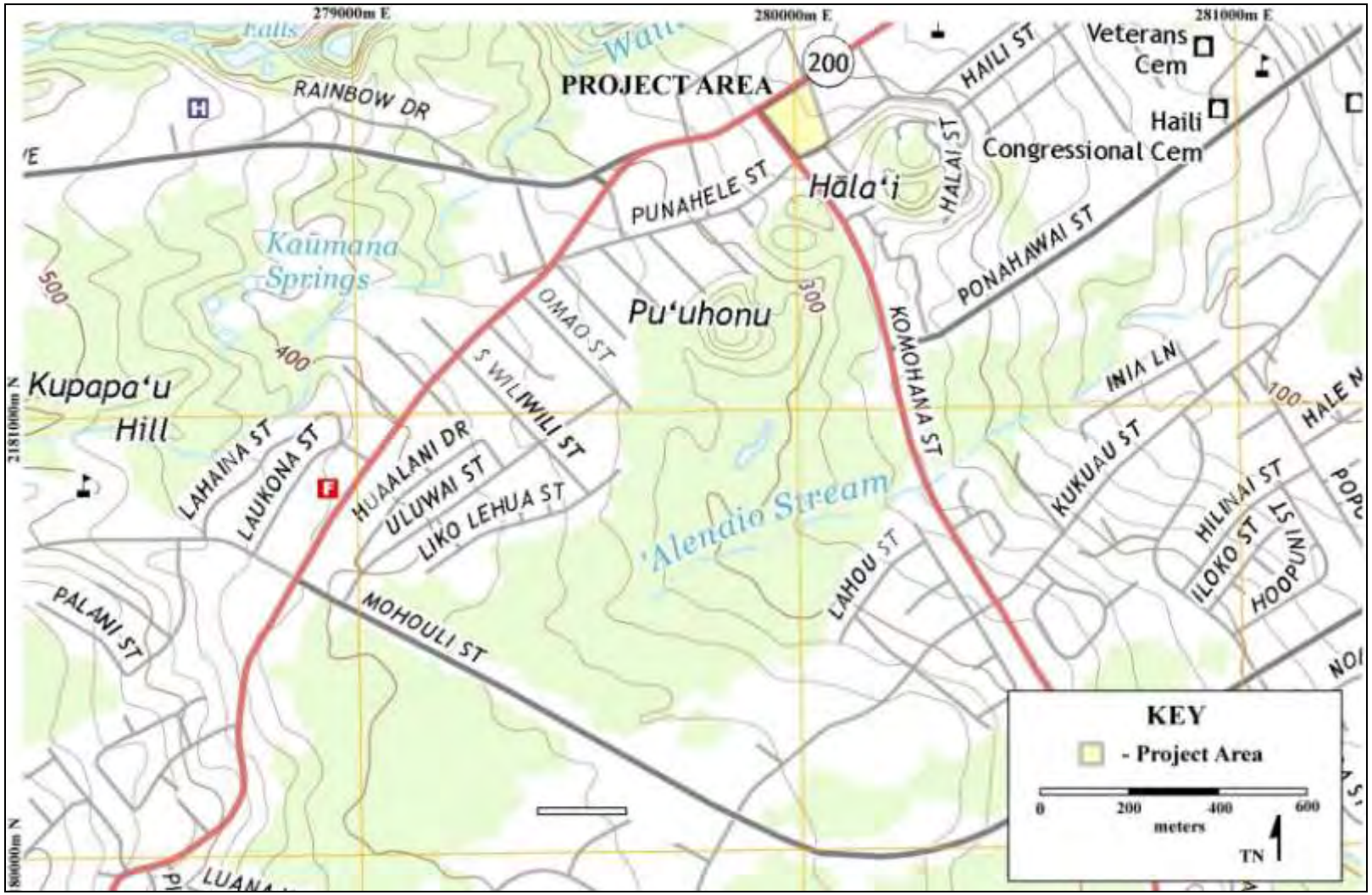


**Figure 6:** 7.5-Minute Series USGS Topographic Map Showing Location of Hāla'i and Pu'u Honu (USGS Hilo Quad, 2013. Source: National Geographic Society).

Regarding the traditions of Hina and the Hālaʻi Hills, Westervelt (reprinted in 1987) wrote:

**Ghosts of the Hilo Hills**

The Legends about Hina and her famous son Maui, and her less widely known daughters, are common property among the natives of the beautiful little city of Hilo. One of these legends of more than ordinary interest finds its location in the three small hills back of Hilo toward the mountains.

These hills are small craters connected with some ancient lava flow of unusual violence. The eruption must have started far up on the slopes of Mauna Loa. As it sped down toward the sea, it met some obstruction which, although overwhelmed, checked the flow and caused a great mass of cinders and ashes to be thrown out until a large hill with a hollow crater was built up, covering many acres of ground.

Soon the lava found another vent and then another obstruction and a second, and then a third, hill were formed nearer the sea. These hills or extinct craters bear the names Halai, Opeapea, and Puu Honu. They are not far from the Wailuku River, famous for its picturesque waterfalls and also for the legends which are told along its banks.

Hina had several daughters, four of whose names are given: Hina Keahi, Hina Kekai, Hina Mahuia, and Hina Kuluua. Each name marked the peculiar *mana* or divine gift which Hina, the mother, had bestowed upon her daughters.

Hina Keahi meant the Hina who had control of fire. This name is sometimes given to Hina the mother. Hina Kekai was the daughter who had power over the sea. She was said to have been in a canoe with her brother Maui when he fished up Coconut Island [Mokuola], his line breaking before he could pull it up to the mainland and make it fast. Hina Kuluua was the mistress over the forces of rain. The winds and the storms were supposed to obey her will. Hina Mahuia is peculiarly a name connected with the legends of the other island groups of the Pacific; Mahuia or Mafuie was a god or goddess of fire all through Polynesia.

The legend of the Hilo hills pertains especially to Hina Keahi and Hina Kuluua. Hina the mother gave the hill Halai to Hina Keahi and the hill Puuhonu to Hina Kuluua for their families and dependents.

The hills were of rich soil and there was much rain. Therefore, for a long time, the two daughters had plenty of food for themselves and their people. But at last the days were like fire and the sky had no rain to it. The taro planted on the hillsides died. The bananas and sugar cane and sweet potatoes withered and the fruit on the trees was blasted. The people were faint because of hunger, and the shadow of death was over the land.

Hina Keahi pitied her suffering friends and determined to provide food for them. Slowly her people labored at her command. Over they went to the banks of the river course, which was only the bed of an ancient lava stream, over which no water was flowing. The famished laborers toiled. gathering and carrying back whatever wood they could find, then went up the mountainside to the great *koa* and *ohia* forests, gathering their burdens of fuel according to the wishes of the chiefess.

Their sorcerers planted charms along the way and uttered incantations to ward off the danger of failure. The priests offered sacrifices and prayers for the safe and successful return of the burden bearers. After many days, the great quantity of wood desired by the goddess was piled up by the side of the Halai Hill.

Then came the days of digging out the hill and making a great *imu* or cooking oven, and preparing it with stones and wood. Large quantities of wood were thrown into the place. Stones best fitted for retaining heat were gathered and the fires kindled. When the stones were hot, Hina Keahi directed the people to arrange the *imu* in its proper order for cooking the materials for a great feast. A place was made for sweet potatoes, another for taro, another for pigs, and another for dogs. All the forms of preparing the food for cooking were passed through, but no real food was laid on the stones.

Then Hina told them to make a place in the *imu* for a human sacrifice. Probably, out of every *imu* of the long ago, a small part of the food was

offered to the gods, and there may have been a special place in the *imu* for that part of the food to be cooked. At any rate, Hina had this oven so built that the people understood that a remarkable sacrifice would be offered in it to the gods, who for some reason had sent the famine upon the people.

Therefore it was in quiet despair that the workmen obeyed Hina Keahi and prepared the place for sacrifice.

It might mean their own holocaust as an offering to the gods. At last Hina Keahi bade the laborers cease their work and stand by the side of the oven, ready to cover it with the dirt which had been thrown out and piled up by the side. The people stood by, not knowing upon whom the blow might fall.

But Hina Keahi was "Hina the Kind," and although she stood before them robed in royal majesty and power. still her face was full of pity and love. Her voice melted the hearts of her retainers as she bade them carefully follow her directions.

"O my people! Where are you? Will you obey and do as I command? This *imu* is my *imu.* I shall lie down in its bed of burning stones. I shall sleep under its cover. But deeply cover me, or I may perish. Quickly throw the dirt over my body. Fear not the fire. Watch for three days. A woman will stand by the *imu.* Obey her will."

Hina Keahi was very beautiful, and her eyes flashed light like fire as she stepped into the great pit and lay down on the burning stones. A great smoke arose and gathered over the *imu.* The men toiled rapidly, placing the *imu* mats over their chiefess and throwing the dirt back into the oven until it was all thoroughly covered and the smoke was quenched.

Then they waited for the strange, mysterious thing which must fallow the sacrifice of this divine chiefess.

Halai hill trembled and earthquakes shook the land round about. The great heat of the fire in the *imu* withered the little life that was still left from the famine. Meanwhile, Hina Keahi was carrying out her plan for securing aid for her people. She could not be injured by the heat, for she was a goddess

of fire. The waves of heat raged around her as she sank down through the stones of the *imu* into the underground paths which belonged to the spirit world.

The legend says that Hina made her appearance in the form of a gushing stream of water which would always supply the wants of her adherents. The second day passed. Hina was still journeying underground, but this time she came to the surface as a pool named Moe-waa (Canoe Sleep), much nearer the sea. The third day came and Hina caused a great spring of sweet water to burst forth from the seashore in the very path of the ocean surf. This received the name of Auauwai. Here Hina washed away all traces of her journey through the depths.

This was the last of the series of earthquakes and the appearance of new water springs. The people waited, feeling that some more wonderful event must follow the remarkable experience of the three days. Soon a woman stood by the *imu,* who commanded the laborers to dig away the dirt and remove the mats. When this was done, the hungry people found a very great abundance of food, enough to supply their wants until the food plants should have time to ripen and the days of the famine should be over.

The joy of the people was great when they knew that their chiefess had escaped death and would still dwell among them in comfort. Many were the songs sung and stories told about the great famine and the success of the goddess of fire.

The second sister, Hina Kuluua, the goddess of rain, was always very jealous of her beautiful sister Hina Keahi, and many times sent rain to put out fires which her sister tried to kindle. Hina Keahi could not stand the rain and so fled with her people to a home by the seaside.

Hina Kuluua could control rain and storms, but for some reason failed to provide a food supply for her people, and the famine wrought havoc among them. She thought of the stories told and songs sung about her Sister, and wished for the same honor for herself. She commanded her people to make a great *imu* for her in the hill Puu Honu. She knew that a

strange power belonged to her and yet, blinded by jealousy, forgot that rain and fire could not work together. She planned to furnish a great supply of food for her people in the same way in which her sister had worked.

The oven was dug. Stones and wood were collected and the same ghostly array of potatoes, taro, pig and dog prepared as had been done before by her sister.

The kahunas or priests knew that Hina Kuluua was going out of her province in trying to do as her sister had done, but there was no use in attempting to change her plans. Jealousy is self-willed and obstinate, and no amount of reasoning from her dependents could have any influence over her. The ordinary incantations were observed, and Hina Kuluua gave the same directions as those her sister had given. The *imu* was to be well heated. The make-believe food was to be put in and a place left for her body. It was the goddess of rain making ready to lie down on a bed prepared for the goddess of fire. When all was ready, she lay down on the heated stones and the oven mats were thrown over her and the ghostly provisions. Then the covering of dirt was thrown back upon the mats and heated stones, filling the pit which had been dug. The goddess of rain was left to prepare a feast for her people as the goddess of fire had done for her followers.

Some of the legends have introduced the demi-god Maui into this story. The natives say that Maui came to "burn or cook the rain" and that he made the oven very hot, but that the goddess of rain escaped and hung over the hill in the form of a cloud. At least this is what the people saw - not a cloud of smoke over the *imu,* but a rain cloud. They waited and watched for such evidences of underground labor as attended the passage of Hina Keahi through the earth from the hill to the sea, but the only strange appearance was the dark rain cloud. They waited three days and looked for their chiefess to come in the form of a woman. They waited another day and still another, and no signs or wonders were manifest.

Meanwhile, Maui, changing himself into a white bird, flew up into the sky to catch the ghost of the goddess of rain that had escaped from the burning

oven. Having caught this spirit, he rolled it in some *kapa* cloth that he kept for food to be placed in an oven, and carried it to a place in the forest on the mountainside, where again the attempt was made to "bum the rain"; but a great drop escaped and sped upward into the sky.

Again Maui caught the ghost of the goddess and carried it to a *pali* or precipice below the great volcano Kilauea, where he again tried to destroy it in the heat of a great lava oven. But this time the spirit escaped and found a safe refuge among *kukui* trees on the mountainside. from which she sometimes rises in clouds that the natives say are the sure sign of rain.

The ghosts of Hina Keahi and Hina Kuluua sometimes draw near to the old hills in the form of the fire of flowing lava or clouds of rain, while the old men and women tell the story of the Hinas, the sisters of Maui, who were laid upon the burning stones of the imus of a famine. [Westervelt 1987:25-31]

While Theodore Kelsey was working with *kūpuna* of Hilo (1921), they shared with him descriptions the Ponahawai-Punahoa landscape that were of cultural and historical importance. Among their stories was that of Hina-a-ke-ahi and Hina-kulu-ua, similar to that above. They also told him of an important event that took place on a small hill above Hāla‘i in 1881. Though late in the history of these lands, this event was one that stood out in the native mind as being of great importance to the well-being of Hilo. In a series of letters from Kelsey to Thomas Thrum (in the collection of Bernice Pauahi Bishop Museum), Kelsey wrote of the famed hills of Hala‘i, Pu‘u Honu and Pu'u a Kamali‘i, the latter being the hill to which Princess Ruth Ke‘elikolani (Governess of Hawai‘i) went in August of 1881, when she personally asked Pele to spare Hilo from the Mauna Loa lava flow of 1881.

Kelsey's letters on this matter include the following observations:

June 16, 1921
... Ben Brown gave me the meanings of the names of the hills back of Hilo. Hala‘i hill was named because of the easy life led by the subjects of Hina a ke Ahi, after she had relieved their famine by placing her body in

the *imu* to create food for them. She went under ground appearing at two or three springs called Hina Auau Wai, and finally came walking up from the sea.

Puu Honu is named after the rain sister, Hina a ka Ua, who was baked in her unsuccessful attempt to imitate Hina a ke Ahi. Hina a ka Ua only crawled about like a tortoise, never getting anywhere-nee *wale iho no i kauhale* [moving about only in her dwelling].

Puu o Kamalii was the peoples' playground. There was a *holua* slide from there down to the Nawahi place. Since Princess Ruth went up there in 1881 and prayed for the lava flow to stop, the hill has often been called Puu Alii [Royal Hill] ... [BPBM Vol. 1:930].

Based on Kelsey and his informants references to known locations—Hālaʻi and Puʻu Honu also being identified on historic maps—Puʻu Kamaliʻi (Hill of the Children - perhaps referring to the children of Hina), or Puʻu Ali'i (Royal Hill) would apparently be the middle hill, as there is no other hill in the vicinity [Maly and Maly 2003:14-19].

**TRADITIONAL SETTLEMENT PATTERNS, SUBSISTENCE, AND LAND-USE**

Historical accounts and archaeological/cultural studies pertaining to the project area region (Bingham 1969; Bird 1974; Ellis 1963; Handy and Handy 1972; Kelly et al. 1981; Maly 1996; McEldowney 1979) provide a wealth of information on traditional residence patterns, land-use, and subsistence horticulture of the area. It is widely held that these historical accounts are indicative of traditional practices developed long before contact with Europeans (McEldowney 1979). These are synthesized below in order to explain the types of cultural resources possibly located within the current project area.

Early accounts of Hilo portray it as divided into several distinct environmental regions. From the coast to a distance of five or six miles scattered subsistence agriculture was evident, followed by a region of tall fern and bracken, flanked at higher elevations by a forest region between 10 and 20 miles wide, beyond which was an expanse of grass and lava (Ellis 1969:403).

The American Missionary C.S. Stewart wrote, "the first four miles of the country is open and uneven, and beautifully sprinkled with clumps, groves, and single trees of the

bread-fruit, pandanus, and candle tree (Stewart 1970:361-363). The majority of Hilo's inhabitants (in 1825) lived within this coastal region (Ellis1969: 253). Taro, plantains, bananas, coconuts, sweet potatoes, and breadfruit were grown individually or in small garden plots. Fish, pig, dog, and birds were also raised and captured for consumption.

The present study area is situated along the upper reaches of the open coastal region and the lower reaches of the tall fern and bracken zone (see Figure 6). It is located in McEldowney's upland agricultural zone (see Previous Archaeology section below) consisting of "scattered huts" amidst "garden "plots" created through "shifting agriculture" (McEldowney 1979:18-19). Wood, such as '*ōhi'a* and *koa* for house construction, canoe building, and fires was obtained from this upland agricultural zone, and from the dense forests above (Ellis 1963:236). *Hala* for thatching was also known to be plentiful along the lava flows of eastern Waiākea (Ellis 1917, cited in Kelly et al. 1981:20).

## THE MĀHELE AND LAND COMMISSION AWARDS

The *ahupua'a* of Pi'ihonua was taken by Kamehameha as Crown Lands (Kelly et al. 1981:40). The land was inherited by Liholiho at Kamehameha's death. In the following years, 14 Land Commission Awards (LCA) were awarded within the coastal area of Pi'ihonua Ahupua'a (Table 1 and Figure 7). No LCAs were claimed or awarded in Pi'ihonua Ahupua'a near the current project area.

**Table 1:** Inventory of Land Commission Award Claims in Ponahawai Ahupua'a.

| LCA# | Claimant | Acreage |
|---|---|---|
| 67 | Benjamin Pitman | 1.92 |
| 11046B | Akina | 0.96 |
| 571 | Cornelius Hoyer | 0.75 |
| 1178 | George M. Moore | 0.96 |
| 2276 | Kuhio | 4.38 |
| 2604 | Paulo | 4.49 |
| 2630 | Kimoteo Pohano | 0.97 |
| 3758B | Ulu | 1.63 |
| 3994 | Hanau | 0.2 |
| 4539 | Ewaliko | 0.4 |
| 4597 | Hanaumaikai | 0.37 |
| 4598H | Halaki | 1.81 |
| 4894 | Kalaeloa | 2.16 |
| 4918 | Kapapa | 4.1 |

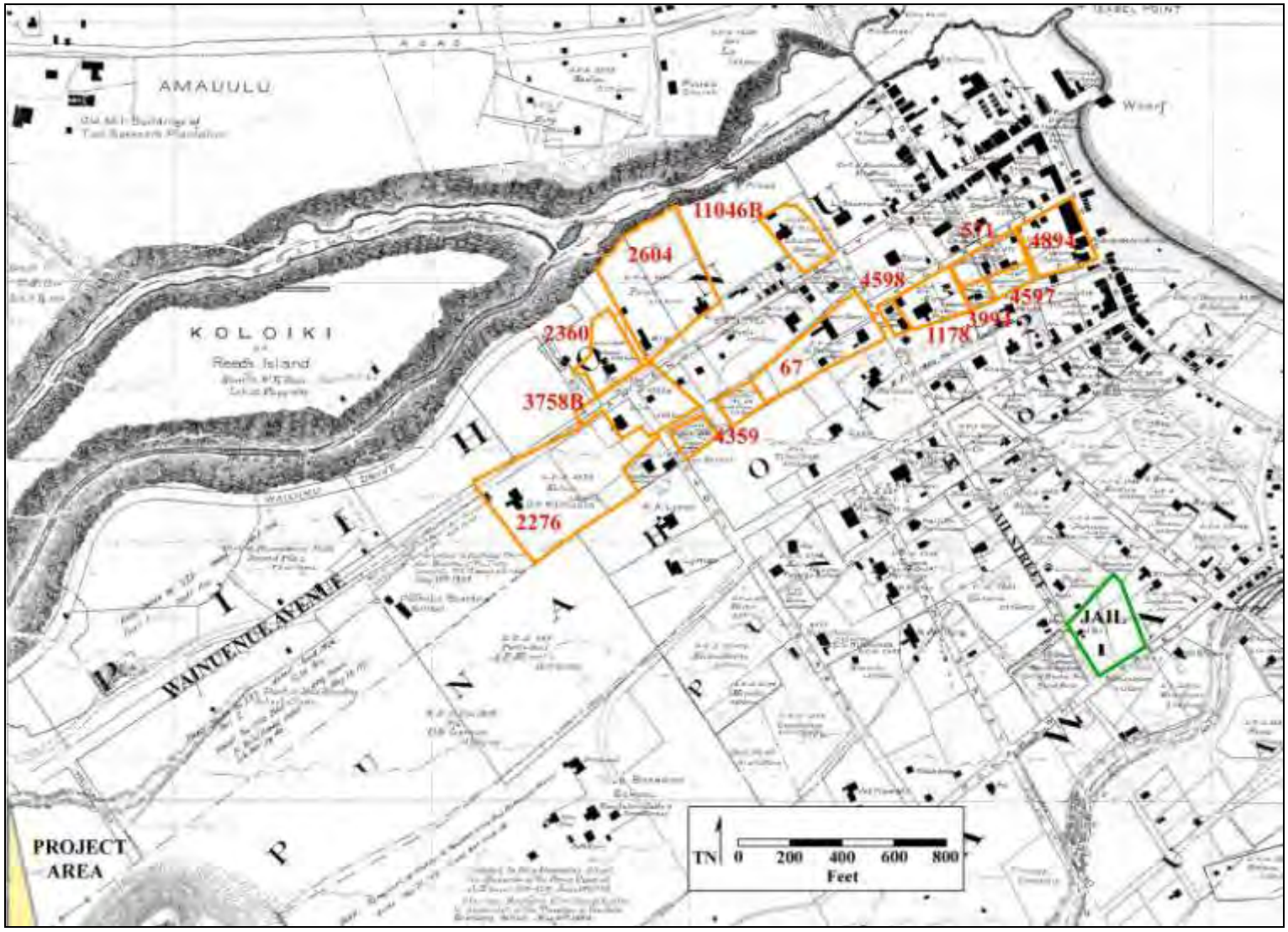


**Figure 7:** Portion of Hilo Titles Map Showing Land Commission Awards (Orange) in Pi‘ihonua Ahupua‘a (Baldwin 1891).

Fourteen Land Commission Award claims were awarded in Pi‘ihonua Ahupua‘a. Most were small, 0.2 to 1.0 acre in size, four were between one and just over two acres, and three were just over 4.0 acres. All of the Land Commission awards were just inland of Hilo Bay. The project area is located approximately 0.5 miles *mauka* (northwest) of the LCAs shown in Figure 7 and the northeast boundary of the project area is shown on the map.

It is a point of interest to this study that the first jail in Hilo is shown on the Hilo Titles Map (Baldwin 1891) depicted in Figure 7. The location of the original jail is shown at the corner of Jail Street (now Kino‘ole Street) and Ponahawai Street. The property is now the location of Lincoln Park.

**CHANGING RESIDENTIAL AND LAND-USE PATTERNS**

Between 1800 and 1865 traditional land-use and residential patterns underwent a change. Prior to and after the Māhele, the regular use of Hilo Bay by foreign commercial and whaling vessels, the establishment of businesses to supply sailing vessels, the establishment of Christian missions in the Hilo area, the sandalwood trade (until the 1830s), the legalization of private land ownership, the introduction of cattle ranching, and the introduction of sugar cane cultivation all brought about changes in traditional settlement patterns and long-established land-use patterns (Kelly et al. 1981). Hilo became the center of population and settlements in outlying regions declined or disappeared.

The introduction of private land ownership and the development of sugarcane agriculture were arguably the most powerful drivers of socioeconomic and land-use change in Hawai‘i, and had the largest combined effect on the development of Hilo town and the surrounding lands.

By 1898, the sugar industry had become the leading industry of the Hawaiian Islands (Kelly et al. 1981:117). At that time, the majority of capital and labor investments in Hawai‘i were devoted to the production and export of sugar. Sugar was the major export of Hawai‘i and provided income for more people living in Hawai‘i than any other industry.

Prior to contact with the European world, Hawaiians grew several varieties of sugarcane in their fields, often as wind breaks along the edges of their taro and sweet

potato gardens (Handy et al. 1972:186). The sugarcane stalks were eaten without much preparation. The establishment of sugarcane agriculture, the milling of cane, and the production of raw sugar and molasses for export lead to the consolidation of smaller arable plots, that once formed the basis of family subsistence gardens, into large mono-crop sugar plantations controlled (owned or leased) by foreign investment firms (agents) and large land owners.

The plantation system led to an increased development of wage labor and infrastructure improvements within Hilo town. The latter included the construction of roads, railroads, wharves, piers, flumes, and commercial buildings.

**SUGAR AND HISTORIC TO MODERN LAND-USE**

Governor Kuakini had already established a sugar plantation and mill in Ponahawai by 1839 (Kelly et al. 1981:49). The sugarcane fields were located between the Hālaʻi Hill and Kilauea Avenue. The mill was powered by water from the Wailuku River. The early sugar mills and plantations were owned, managed and operated by Chinese (Kelly et al. 1981:82).

Much of the early sugar growing wage labor was provided by Hawaiians who were paid in dyed cotton cloth. The sugarcane was planted using an *ʻōʻō* (digging stick) and cut cane was carted to the mill, sometimes pulled by oxen. Raw sugar and molasses produced at the mill were packed in kegs for shipping.

Some time just after 1846, Benjamin Pitman and Stephen Reynolds began growing coffee and sugar in Ponahawai and Puʻuʻeo Ahupuaʻa (Kelly et al. 1981:85). Pitman had moved to Hilo from Salem, Massachusetts with his father in 1836. Pitman married Chiefess Kinoʻole-o-Liliha around 1837. Kinoʻole-o-Liliha was from a chiefly family and her paternal grandfather advised Kamehameha I. She inherited large areas of land in Hilo and ʻŌlaʻa. King Kamehameha III made her the high chiefess of Hilo.

In 1850, Pitman was granted 354 acres of land (Land Grant 252) in central Ponahawai Ahupuaʻa for the price of $531.30 (Figure 8). The current project area is located near the north boundary of Land Grant 252. The survey description in L.G. 252 documents states that a small portion of the northern property boundary follows a "small water run called the Malokioi."

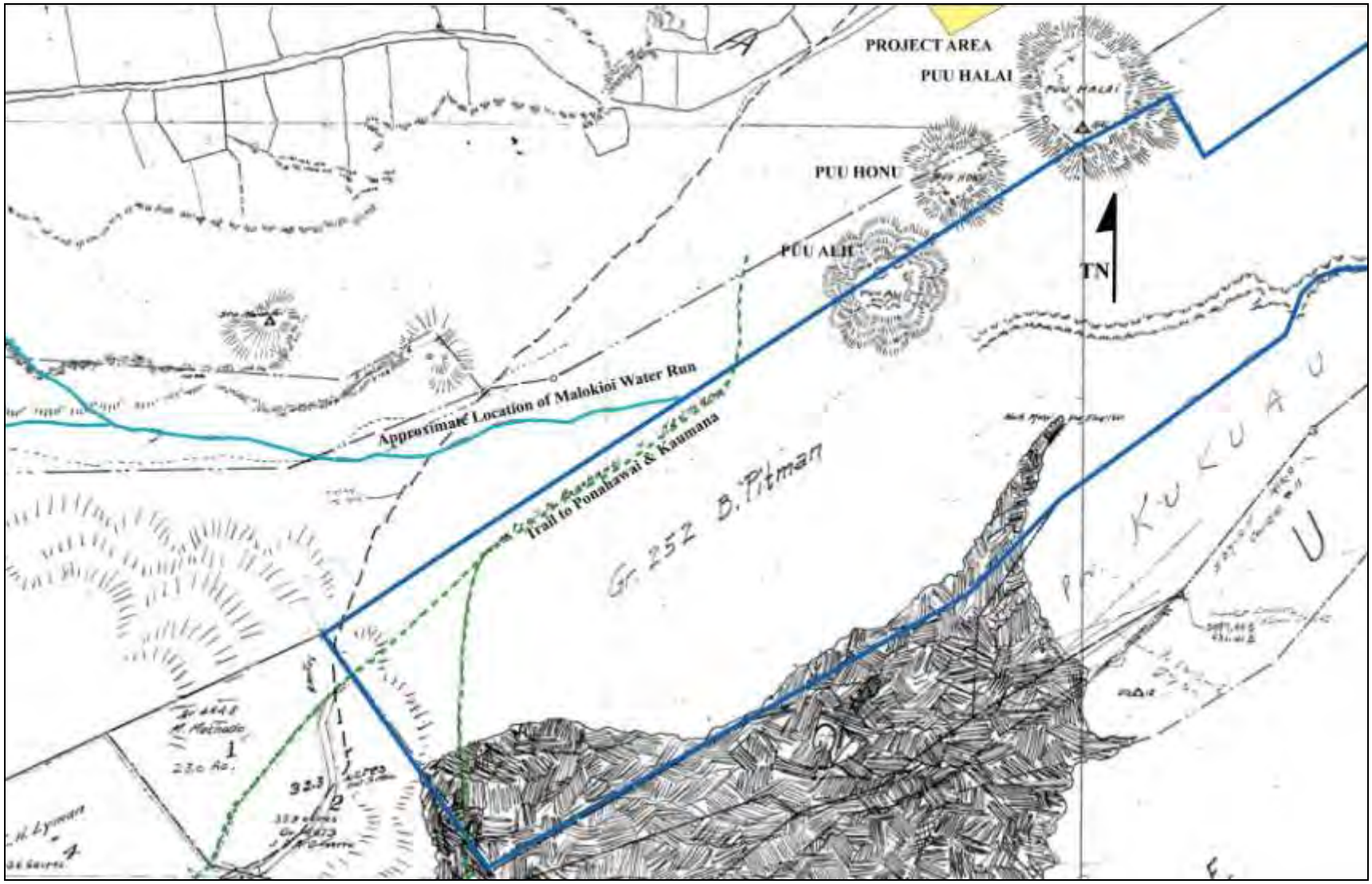


**Figure 8:** Portion of Ponahawai Map Showing Land Grant 252 (Blue) and Project Area (Yellow) (Loebenstein 1896).

The Malokioi is fed by water from the Wailuku River. It appears that the Malokioi might have been the original source of the Hilo Boarding School and Old Mission School Ditch (Figure 9, project area is just above the right hand corner of the figure). The Hilo Boarding School and Old Mission School Ditch, and the spillway into the ʻAlenaio Stream, date to at least the 1840s and possibly as far back as 1770 (Maly and Maly 2003:37). Solomon P. Kaleiohholani (born in Waiākea, 1845), testifying during the Water Rights Case No. 2248 hearing in 1915, stated that the original water ditch was constructed by ʻĪ, prior to the reign of Kamehameha I. The spillway into the ʻAlenaio Stream (also called the third branch, or third ditch)

> adjoins the I ditch mauka, and goes around the Puna side of Puuhonu. Kanuha dug that under Kuakini (Gov. Adams). This ditch was dug to supply water for Gov. Adams' sugar mill. Cane was planted on the Puna side of Halae down to Volcano Road; also coffee that was planted by Gov. Adams. There was coffee planted before Goodrich's time. Vancouver brought the coffee and gave it to the father of Queen Kaahumanu. The third ditch was dug when Adams was appointed Governor of Hawaii, and through his instructions to Kanuha, about the year 1841 [cited in Maly and Maly 2003:39].

Frank Swartz Lyman (born in Hilo, 1837), testifying during the Water Rights Case No. 2248 hearing in 1915, stated that the original ditch

> was made to bring water from the south branch of the Wailuku River for the land of Punahoa, which had no water.
>
> Almost every Ahupuaa, or strip of land by name, in the District of Hilo, each had its water ditch running through the inhabited portions of the land below the forest, for the use of its tenants. Punahoa had no stream of water, so a ditch was made by Aki, who had the charge of the land of Punahoa for the King Kamehameha I. After two or three attempts he finally succeeded in bringing down the water in a ditch onto the land of Punahoa, and the ditch was named after him "Auwai o Aki" (the water ditch of Aki), in the year 1813. This is the same ditch now owned by the Hilo Boarding School. At first the ditch was not very successful in bringing the water down; but Mr. Goodrich, the first American Missionary who came to Hilo, about 1822, lived on the land of Punahoa, and he improved the water ditch of Aki, and brought down a suitable supply of water for the use of Punahoa land, while it was still under the supervision of the *Konohiki*, or caretaker of the land under the King.

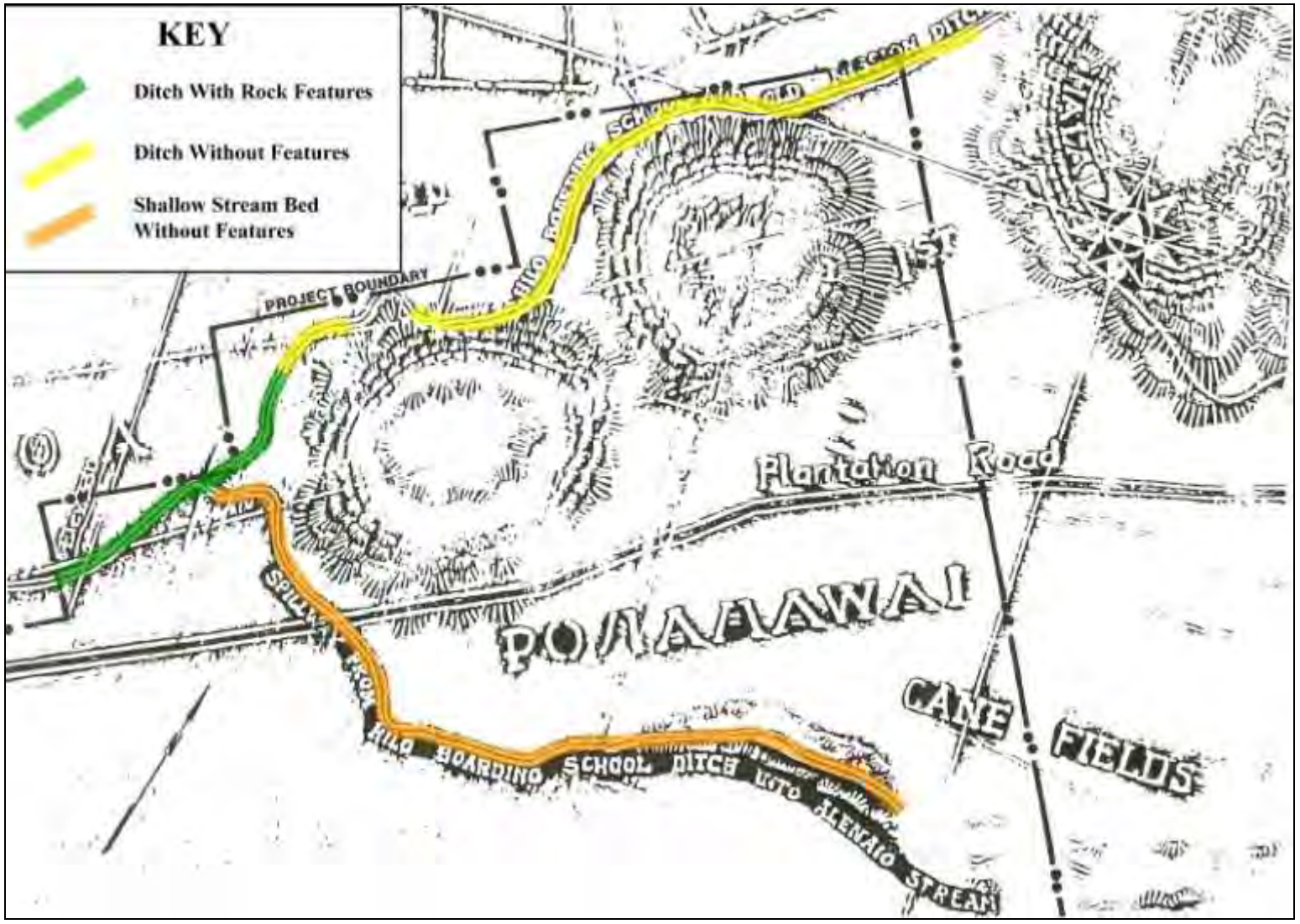


**Figure 9:** Portion of Hilo Boarding School and Old Mission Ditch Map (Hilo Boarding School, 1913. In Jensen 1991:9).

> Later on, about 1824, Mr. Goodrich planted sugar cane below Halai Hill in said Hilo, and ground the cane with a wooden mill, and water wheel, that he made, and operated by the water of this ditch. The mill was located directly above the present homestead of Rufus A. Lyman, on School Street, up nearly as far as the present Catholic School. From the Mill the water went down through the land of Punahoa to the house of Mr. Goodrich, and other houses below, and on to the sea [cited in Maly and Maly 2003:39-40].

The Hilo Boarding School, established in 1836, used water from the ditch to irrigate their fields, to process their sugar cane and in 1895, leased water to a private company located on Pitman Street (now Kapi‘olani Street) that generated electricity using the water.

Wolforth (1999) documented two ditches (Site 20848 and Site 20849 on the HCCC property (Figure 10). Kepa Maly concluded based, on records of the Lyman Library, County of Hawai‘i, and studies of Hilo by Athens (1982) and Kelly (1982), that

> the larger of the two ditches (Site 20848), which cuts diagonally across the project area (roughly south to north), is a modified natural drainage that could have tapped into the water carried down by the Hilo Boarding School Ditch, but it is not the Boarding School Ditch itself. Based on F,S. Lyman's testimony… it is possible that this drainage may have provided water to the residences of Wetmore and Coan, in the vicinity of Pitman and Church Streets.
>
> Based on the available evidence, and on field observations, it appears that the smaller ditch (Site 20849), which is crossed by Komohana Street, is associated with development of the Pi'ihonua House Lots Subdivision, although the reviewed documents for the subdivision from the 1920s make no reference to the need of drainage ways to channel run-off. Like the drainage on the *mauka* side of and parallel to Komohana, fronting the houses, the smaller ditch (Site 20849) may have been constructed as: (a) a public safety feature that was constructed in the 1920s to channel run-off from the subdivision; (b) built concurrently with Komohana Street to channel run-off; and/or (c) it is possible that the rock lining of the ditch (Site 20849) may have been built subsequent to AD 1907 as part of a

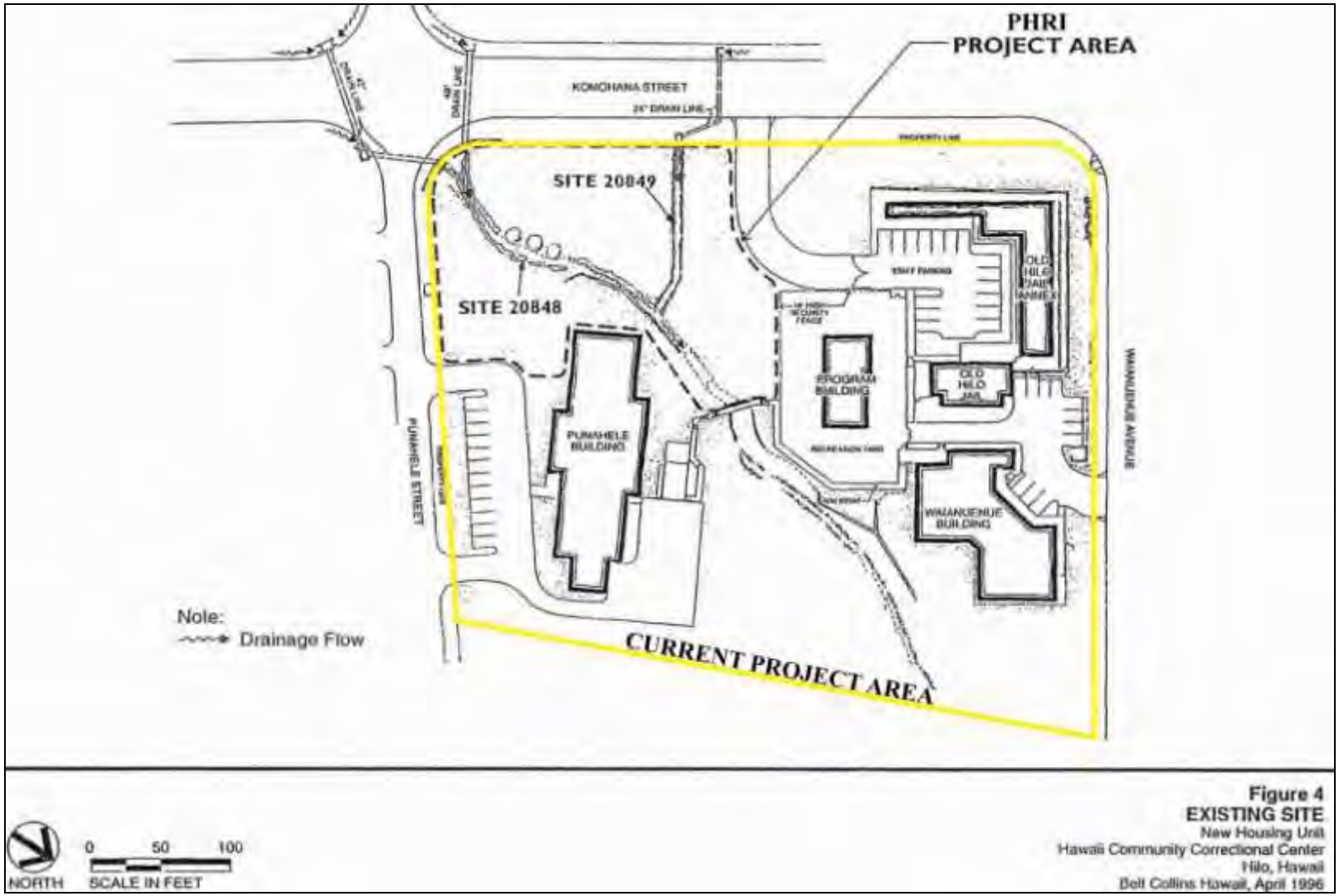


**Figure 10:** Map of HCCC Showing PHRI, Inc. Project Area and Site 20848 and Site 20849 (Adapted from Walker et al. 1996:4).

> prisoner work project. There is no evidence of the ditch (Site 20849) continuing further *mauka.*
>
> Based on the testimonies or statements of Kaleioholani, Lyman, and Walker… '*auwai,* or irrigation channels in the vicinity of the feature generally referred to as the Hilo Boarding School Ditch, may date back at least to the mid 1700s. Subsequent work on various components of the ditch system date from at least 1813, 1822, 1856, 1869, 1895, and 1897… In the matter of the apparent cartographic discrepancies, the testimonies cited… clearly place the primary HBS Ditch along the northern side of Hāla'i Hill, now basically under Punahele Street However, based on the record of modifications and extensions of the ditch system, it is likely that several of the extensions could also have been identified, at various times, as the Hilo Boarding School Ditch. [Wolforth 1999:14]

The project area parcel is north of both the Hilo Boarding School Ditch and Land Grant (L.G. 252) made to Benjamin Pitman (see Figure 8). Mr. Pitman used the area around Pu'u Hāla'i and Pu'u Honu (labeled Pu'u Ali'i on Loebenstein's 1896 map) to grow sugarcane and coffee. The northeastern portion of the project area continued to be used for sugarcane agriculture until after the 1970s. Pitman's sugar boiling house and later mill were located on the *makai* portion of L.G. 252.

**LATE HISTORIC AND MODERN LAND-USE**

The first jail in Hilo was constructed at the corner of Jail Street (now Kino'ole Street) and Ponahawai Street (see Figure 7). The property is now the location of Lincoln Park. The second jail, the Old Hilo Jail building (Site 7457), was designed by O.G. Traphagen and was constructed in 1905 at the corner of Waiānuenue Avenue and Pu'u Honu Street, now Komohana Street (Figure 11).

A 1920 map (see Figure 11) shows the original driveway coming south off of Old Waiānuenue Avenue. The driveway led to the front entrance of the Old Hilo Jail building. There appears to be a fenced yard behind the Old Jail building. Three additional buildings were constructed along the edges of the fenced yard. There were also two additional buildings south of the fenced yard. The drainage channel that crosses the property is also depicted on the map.




**Figure 11:** Portion of Pi‘ihonua House Lots Map Showing Locations of Project Area and Hilo Jail Buildings (Chaney 1920).

All of the existing HCCC buildings other than the Old Hilo Jail building were demolished and replaced by the Old Hilo Jail Annex, the Punahele Building, the Program Building, and the Waiānuenue Building. The Old Hilo Jail and the Old Hilo Jail Annex buildings are the only structures older than 50 years.

The Old Hilo Jail building (Site 7457) was designed by Oliver G. Traphagen (1854-1932), an American architect born in Tarrytown, New York. Traphagen designed buildings in Duluth, Minnesota during the 19th century and in Hawai'i during the early 20th century. Traphagen designed both public and privately owned buildings. Many of his designs were influenced by the Richardsonian Romanesque style popular at the time. Traphagen moved to Hawai'i in October 1897 because his daughter's health required a warm climate. He was considered one of the most prolific and highly regarded architects in Hawai'i. Table 2 lists 34 of Traphagen-designed buildings in Hawai'i.

**Table 2:** Inventory of Hawai'i Buildings Designed by O.G. Traphagen.

| BUILDING | LOCATION | DATE | DATE RAZED |
|---|---|---|---|
| Hale'iwa Hotel | North Shore, O'ahu | 1898 | 1952 |
| C B Reynolds House | 1040 Green Street, O'ahu | 1898 | Razed, Date Unknown |
| McChesney & Sons Building | 42 Queen Street, Honolulu | 1899 | Razed, Date Unknown |
| Judd Building | Corner Fort & Merchants Streets, Honolulu | 1899 | Extant |
| Elite Building | Fort Street, O'ahu | 1899 | Razed, Date Unknown |
| Boston Block | Fort Street, O'ahu | 1899 | Razed, Date Unknown |
| Sprekels Block (First Bank of Hilo) | 30 Kalakaua Street, Hilo | 1899 | Razed, Date Unknown |
| Palama Fire House | North King Street, Honolulu | 1900 | Extant |
| Mcintyre Building | Corner King & Fort Streets, Honolulu | 1900 | Razed, Date Unknown |
| Kaka'ako Pumping Station | 500 Ala Moana Boulevard, O'ahu | 1900 | Extant |
| Moana Hotel | 2365 Kalakaua Avenue, Waikīkī | 1901 | Extant |
| Mendonca Building Hotel | Smith & Maunakea Avenue, Honolulu | 1901 | Extant |
| Collins Harness Maker | 82-84 S. King Street, Honolulu | 1901 | Razed, Date Unknown |
| George & Helen Carter House | Corner of Liliha and Judd Streets, Honolulu | 1901 | Razed, Date Unknown |
| E. O. Hall & Sons Building | Corner King & Fort Streets, Honolulu | 1902 | 1966 |
| Waity Building | 74 S. King Street, Honolulu | 1902 | Razed, Date Unknown |

| BUILDING | LOCATION | DATE | DATE RAZED |
|---|---|---|---|
| Lewers & Cooke Building | King Street, Honolulu | 1902 | Razed, Date Unknown |
| Hackfeld and Company Building | 745 Fort Street, Oʻahu | 1902 | Razed After 1967 |
| August Drier House | Beretania Street, Honolulu | 1902 | Razed, Date Unknown |
| Queen's Hospital Wing/Dr.'s Cottage | Ala Moana Street, Honolulu | 1903 | |
| O'Neil Building | Corner of Fort & King Streets, Honolulu | 1903 | Razed, Date Unknown |
| Odd Fellows Hall | Fort Street, Oʻahu | 1903 | Razed After 1967 |
| Cooper-Cartwright Building | Corner of Fort & King Streets, Honolulu | 1903 | Razed, Date Unknown |
| McLean Building | Nuʻuanu Street, Oʻahu | 1904 | Extant |
| Oʻahu Prison | Oʻahu | 1904 | Extant |
| Immigration Station | Ala Moana Boulevard, Honolulu | 1905 | Razed 1934 |
| Electric Light Plant | Nuʻuanu Valley, Oʻahu | 1905 | Unknown |
| Crematorium | Oʻahu | 1905 | Extant |
| Hilo Jail | Waiānuenue Avenue, Hilo | 1905 | Extant |
| State Archives Building | Honolulu | 1906 | Extant |
| Punahou School President's House | 1601 Punahoa Street, Oʻahu | 1907 | Extant |
| James & Mabel Castle House | 2933 Kalakaua Street, Oʻahu | Unknown | Razed 1959 |

Traphagen's notable designs in Hawaiʻi include the Judd Building on the corner of Merchant and Fort Streets in Honolulu constructed in 1898, Kakaako Pumping Station at 653 Ala Moana Boulevard in Honolulu constructed in 1900, the Moana Hotel at 2365 Kalakaua Avenue at Waikīkī constructed in 1901, the Palama Fire Station at 879 N King Street on Oʻahu constructed in 1901, the Hackfeld and Company Building constructed in Honolulu in 1902, the first public crematorium in Hawaiʻi constructed at the Oʻahu Cemetery in 1906, the Old State Archives Building on Oʻahu constructed in 1906, the President's Home at the Punahou School, Oʻahu constructed in 1907, and the beach house of James Bicknell Castle in Waikīkī constructed in 1902. The Hackfeld and Company and the James Bicknell Castle home have been demolished. Photographs of Traphagen's buildings are available at *https://en.wikipedia.org/wiki/Oliver_G._Traphagen*.

There are four historic properties eligible for listing on the Hawaiʻi Register of Historic Places that are located near the current project area (Table 3 and Figure 12). The

sites include the Old Hilo Hospital, The Old Hilo County Jail, the Waiākea Railroad Station and Post Office, and a Portuguese oven.

**Table 3:** List of Historic Properties Near the Current Project Area.

| State Site No. | Site No. | Site Name | Description | Hawai'i Register |
|---|---|---|---|---|
| 50-10-35-07450 | 7450 | Old Hilo Hospital | Theme: Architectural, Government, Social | 1-Jan-92 |
| 50-10-35-07457 | 7457 | Old Hilo County Jail | Theme: Architecture, Government | 1-Jan-92 |
| 50-10-35-07471 | 7471 | Waiākea Railroad Station & Post Office | Architecture, Transportation | 1-Jan-92 |
| 50-10-35-07482 | 7482 | Portuguese Oven | Theme: Architecture, Social | 1-Jan-92 |




**Figure 12:** 7.5 Minute Series USGS Topographic Map Showing Project Area and Hawaii Register of Historic Paces Sites (USGS Hilo Quad, National Geographic Topo 2003).

## PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

Ten previous archaeological studies have been conducted in Pi‘ihonua Ahupua‘a near the current project area (Table 4 and Figure 13). Table 4 below summarizes major findings and Figure 13 shows the location of archaeological investigations near the current project area.

**Table 4:** Previous Archaeological Research in Pi‘ihonua Ahupua‘a.

| Reference | Location | Description & Results |
|---|---|---|
| Walters, Kimura and Associates 1976 | TMK: (3) 2-3-030:001, 004, 005 (por.) | No sites identified |
| Sinoto 1978 | TMK: (3) 2-3-030:001, 004, 005 (por.) | Six prehistoric agricultural and habitation complexes (Site 50-10-35-18696) |
| Spear 1992 | TMK: (3) 2-3-032:001 | Two Historic era stone walls |
| Walker and Rosendahl 1996 | TMK: (3) 2-3-032:001 | No sites identified |
| Walker et al. 1996 | TMK: (3) 2-3-023:005 (por.) | Sites 20848 and 20849, water ditches recorded |
| Wolforth 1999 | TMK: (3) 2-3-023:005 (por.) | Data Recovery of Sites 20848 and 20849, water ditches recorded |
| Rechtman 2004a | TMK: (3) 2-3-032:012 | No sites identified |
| Reschtman 2004b | TMK: (3) 2-3-030:005 | Two Historic era stone walls |
| Rechtman 2005 | TMK: (3) 2-3-032:006, 007, and 008 | No sites identified |
| Escott 2014 | TMK: (3) 2-3-032:003 | Site 50-10-35-30064: a Historic to Modern era Portuguese oven, a low rock alignment, a cement foundation, and a cement walkway |

Walters, Kimura and Associates conducted an archaeological investigation of a 117-acre parcel west of the current project area (Walters, Kimura and Associates, Inc. 1976). The study did not identify any archaeological sites.

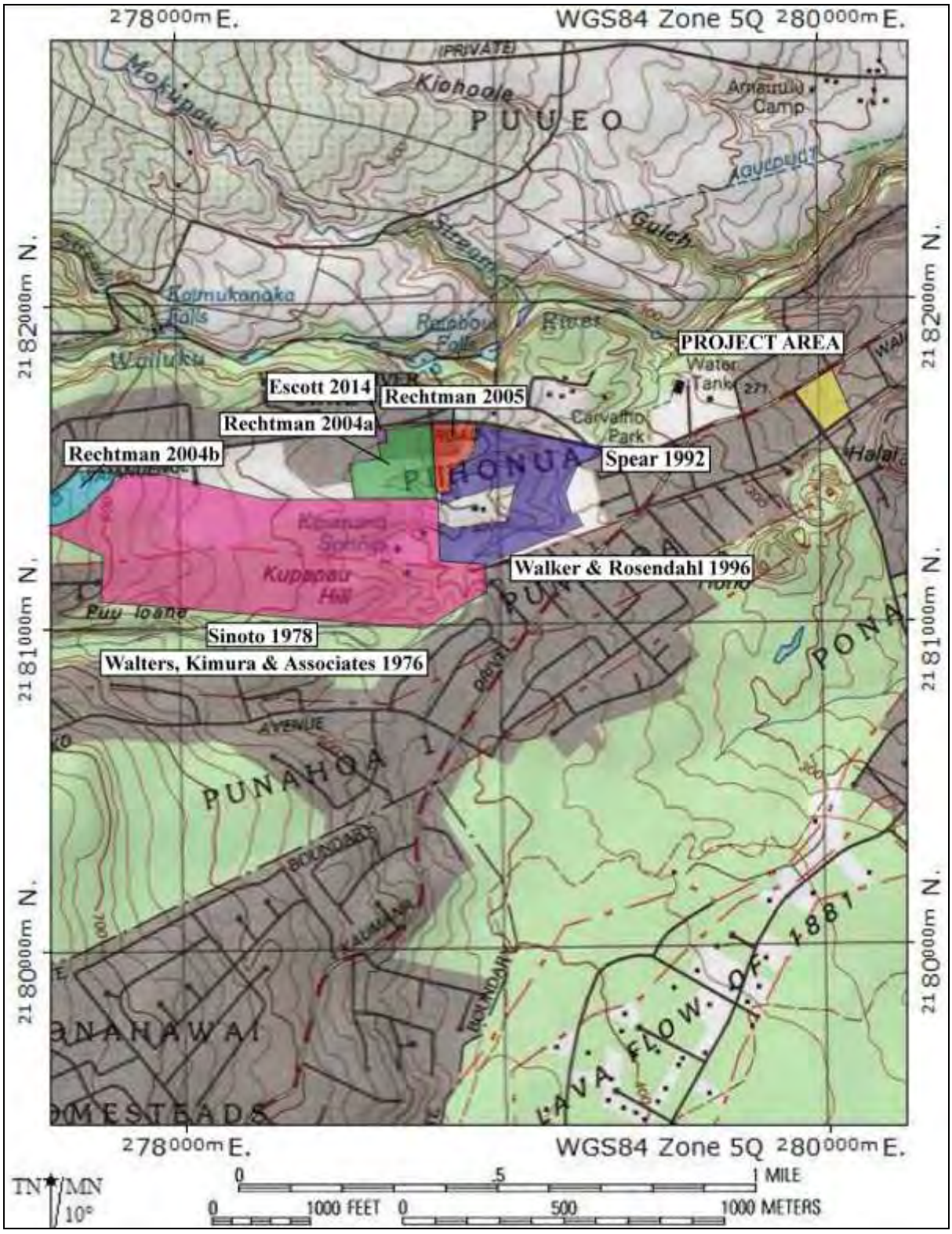


**Figure 13:** 7.5 Minute Series USGS Topographic Map Showing Location of Previous Archaeological Studies (USGS Hilo Quad, National Geographic Topo, 2003).

Aki Sinoto (1978) conducted an archaeological investigation of the same parcel previously investigated by Walkers, Kimura and Associates. Sinoto recorded six prehistoric agricultural and habitation complexes within the study parcel. Archaeological features included terraces, alignments, walls, rock mounds, cairns, platforms, enclosures, *ʻauwai*, and stone reinforced stream banks. The complexes were recorded as Site 18696.

Scientific Consultant Services, Inc. conducted an archaeological inventory survey of 12.0 acres located west of the current project area (Spear 1992). The study documented two Historic era walls associated with cattle ranching or water control and erosion prevention associated with sugarcane agriculture.

Paul H. Rosendahl Ph.D., Inc. conducted a limited archaeological inventory survey on 42.3 acres of land west of the current project area (Walker and Rosendahl 1996). No sites were identified on the project area land.

Paul H. Rosendahl Ph.D., Inc. conducted an archaeological inventory survey on the southwest quadrant (Figure 14) of the current project area (Walker et al. 1996). Two water drainage ditches (Sites 20848 and 20849) were documented during the study. The ditches were stone-lined channels approximately 60.0 cm in depth (Figure 15).

Paul H. Rosendahl Ph.D., Inc. conducted data recovery and archaeological monitoring study (Wolforth 199) for the two water drainage ditches (Sites 20848 and 20849) located in the southwest quadrant (see Figure 14) of the current project area. The ditches were stone-lined channels approximately 60.0 cm in depth with slightly different construction methods (Figure 16). The rock-lined ditches were interpreted as Historic era modifications to a natural gulch. The ditches were constructed for drainage control, especially after the construction of the Piʻihonua House Lots located adjacent and *mauka* (west) of the HCCC property. The south end of Site 20848 and the entirety of Site 20849 were laid with drainage pipe and were covered with fill during the course of archaeological monitoring.

Rechtman Consulting, LLC surveyed four acres west of the current project area (Rechtman 2004a). No sites were identified during the study. Rechtman Consulting, LLC conducted and archaeological inventory survey of 4.6 acres of land located west of the current project area (Rechtman 2004b).

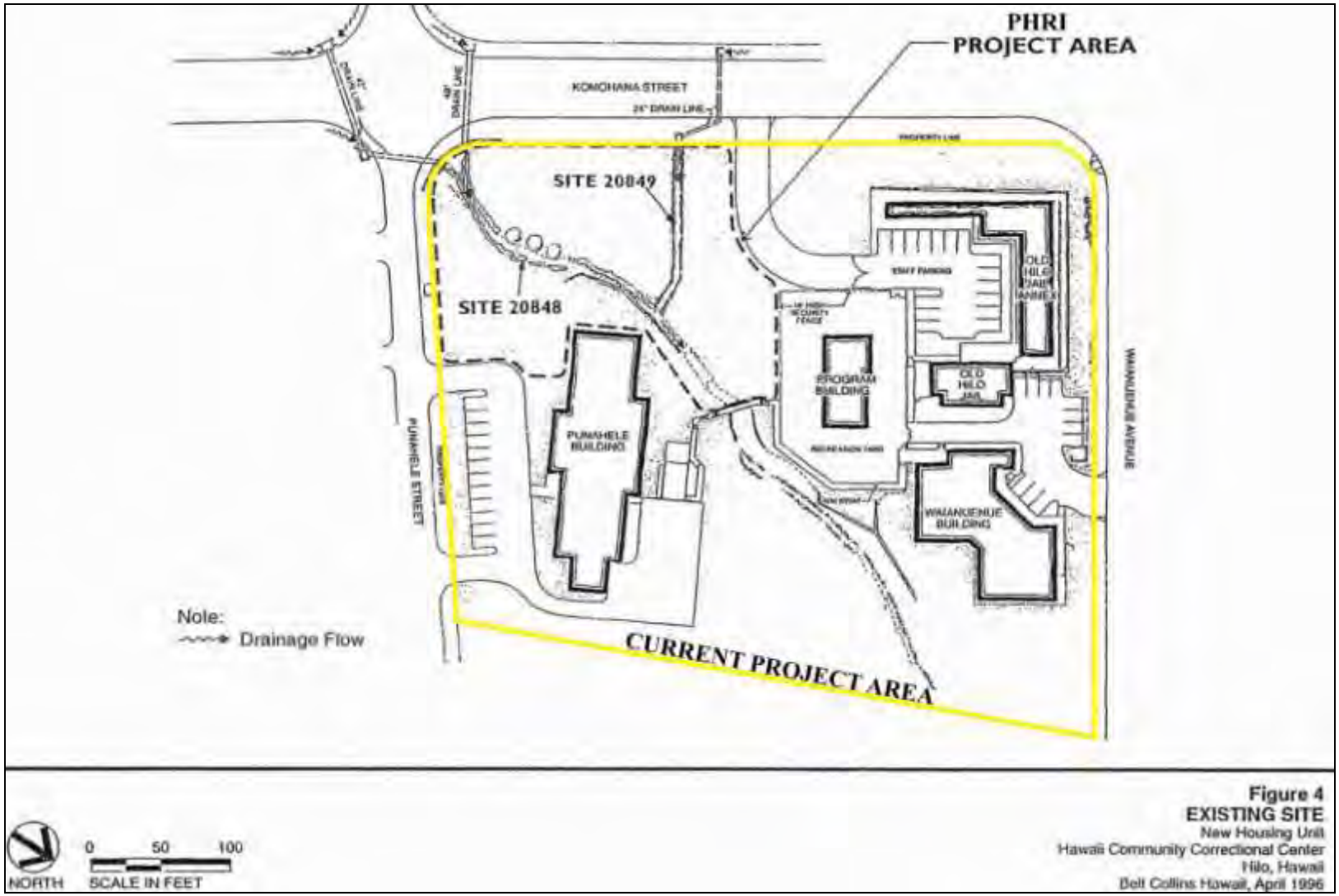


**Figure 14:** Map of HCCC Showing PHRI, Inc. AIS Project Area and Site 20848 and Site 20849 (Adapted from Walker et al. 1996:4).

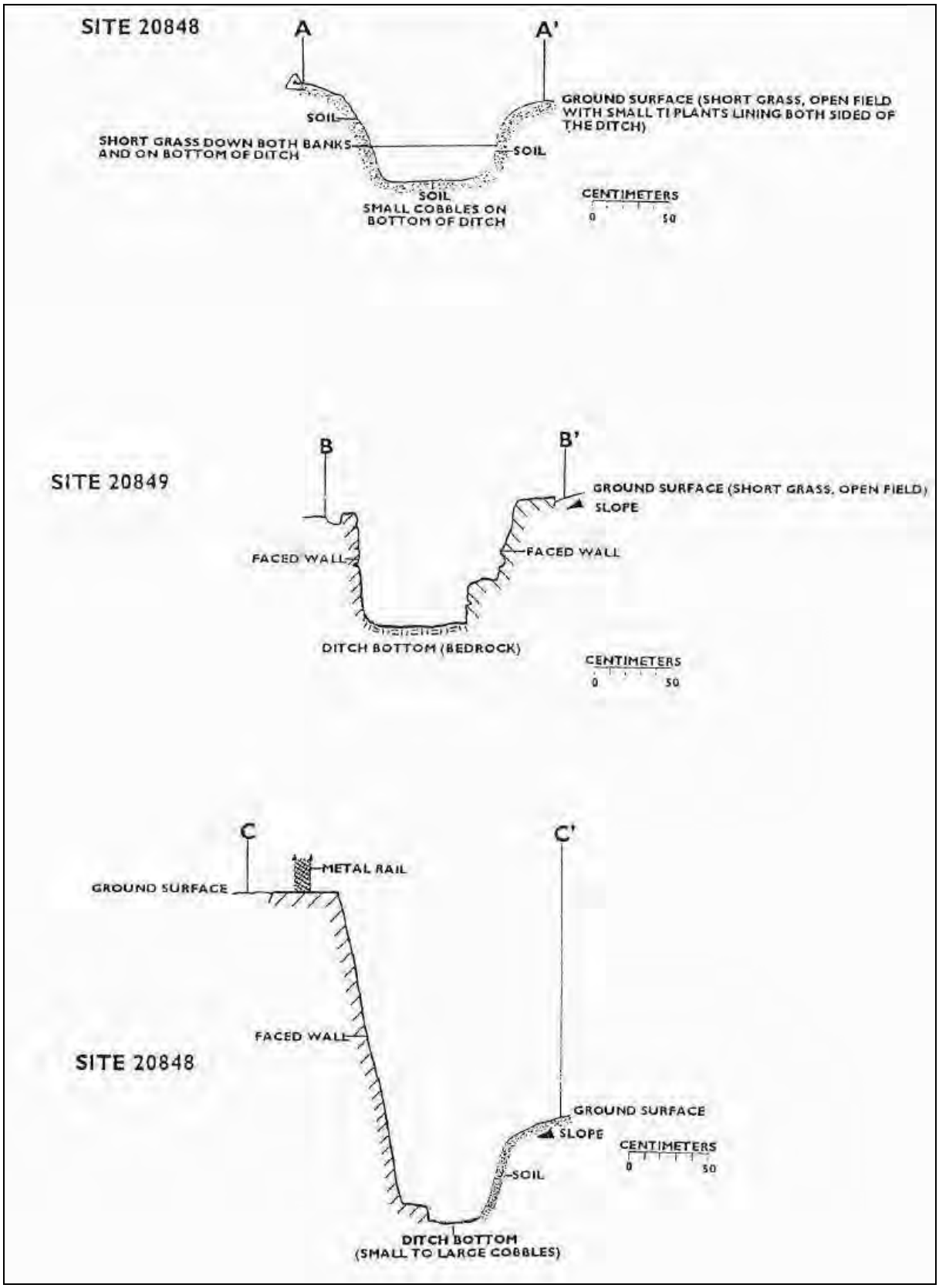


**Figure 15:** Site 20848 and Site 20849 Profile Drawings (Walker et al. 1996:18).

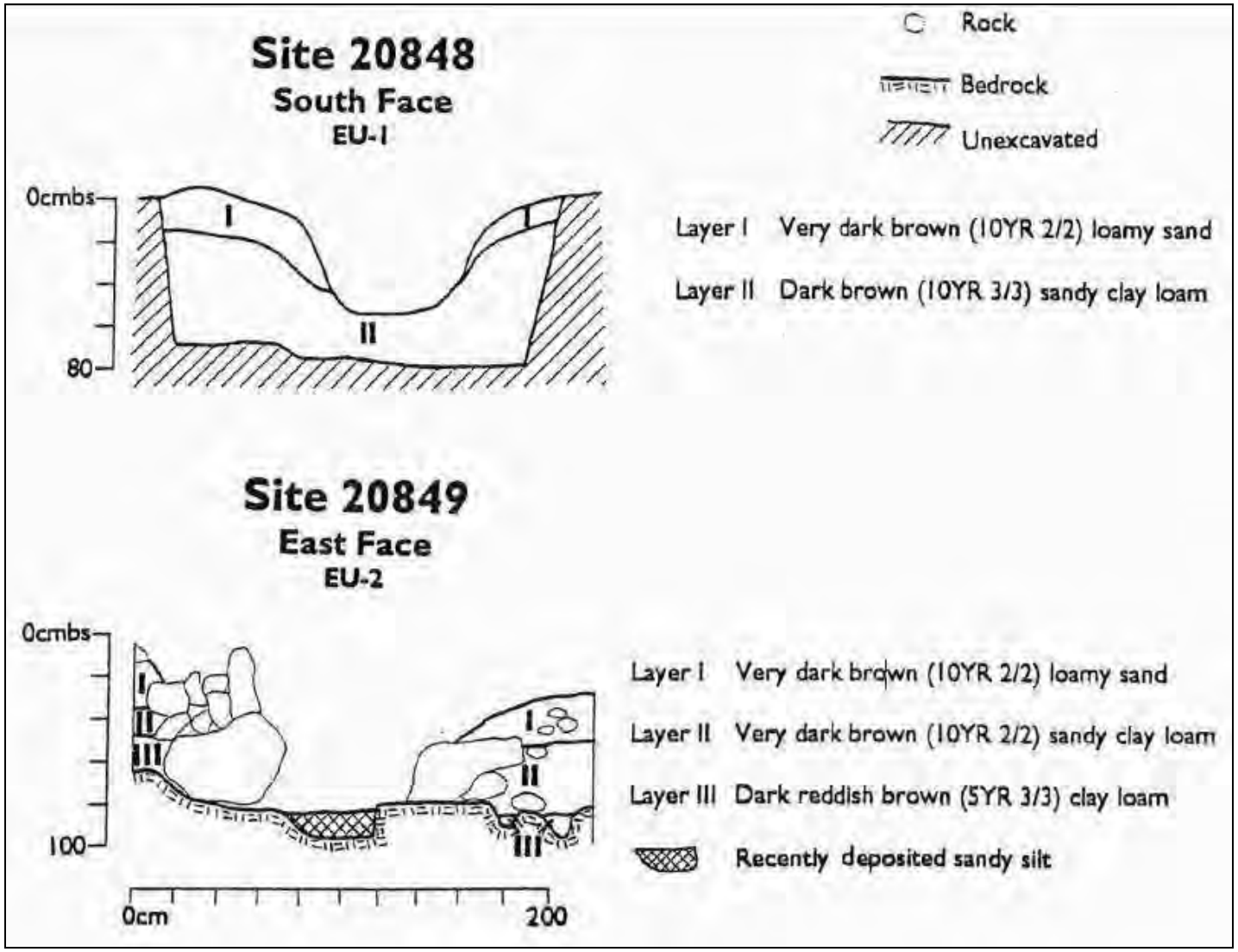


**Figure 16:** Site 20848 and Site 20849 Excavation Profile Drawings (Wolforth 1999:6).

Two Historic era wall segments were recorded during the study. Rechtman Consulting, LLC conducted a third archaeological study east of the current project area. No sites were identified during the work.

Scientific Consultant Services, Inc. conducted an archaeological inventory survey of 0.285 acres [TMK: (3) 2-3-032:003] located west of the current project area (Escott2014). One archaeological site (Site 50-10-35-30064) was documented on the project area parcel and included a Portuguese oven, a low rock alignment, a cement foundation, and a cement walkway. Site 30064 Feature 2, a Portuguese oven, was recommended for preservation.

## EXPECTED ARCHAEOLOGICAL PATTERNS

Based on previous archaeological studies, geological studies, historical research, interviews, and Hawai‘i County Planning Department records it is expected that any archaeological sites located on the current project area will be related to recent activities associated with the Old Hilo Jail, HCCC, and the construction of the two ditches located on the property. This is likely because the construction, use, and demolition of HCCC facilities will likely have destroyed and removed any earlier remains. It is possible that traditional Hawaiian pre-Contact Era sites associated with agriculture, habitation, and extraction of forest resources, such as wood and birds, might still exist, on the project area. In addition, previous archaeological studies have documented sugarcane agricultural features in the area.

## RESULTS OF FIELDWORK

Two previously recorded archaeological sites (Site 50-10-35-7457 and Site 20848) were documented during the current AIS study (Table 5 and Figures 17 and 18). Site 20849 was replaced with drainage pipe and was covered with fill between 1998 and 1999.

**Table 5:** Inventory of Archaeological Sites.

| Site #* | Type | Function | Age |
|---|---|---|---|
| 7457 | Old Hilo Jail | Jail | Constructed in 1905 |
| 20848 | Ditch | Drainage | Historic Era to Early Modern Era |

*SIHP No. Prefix 50-10-35-.

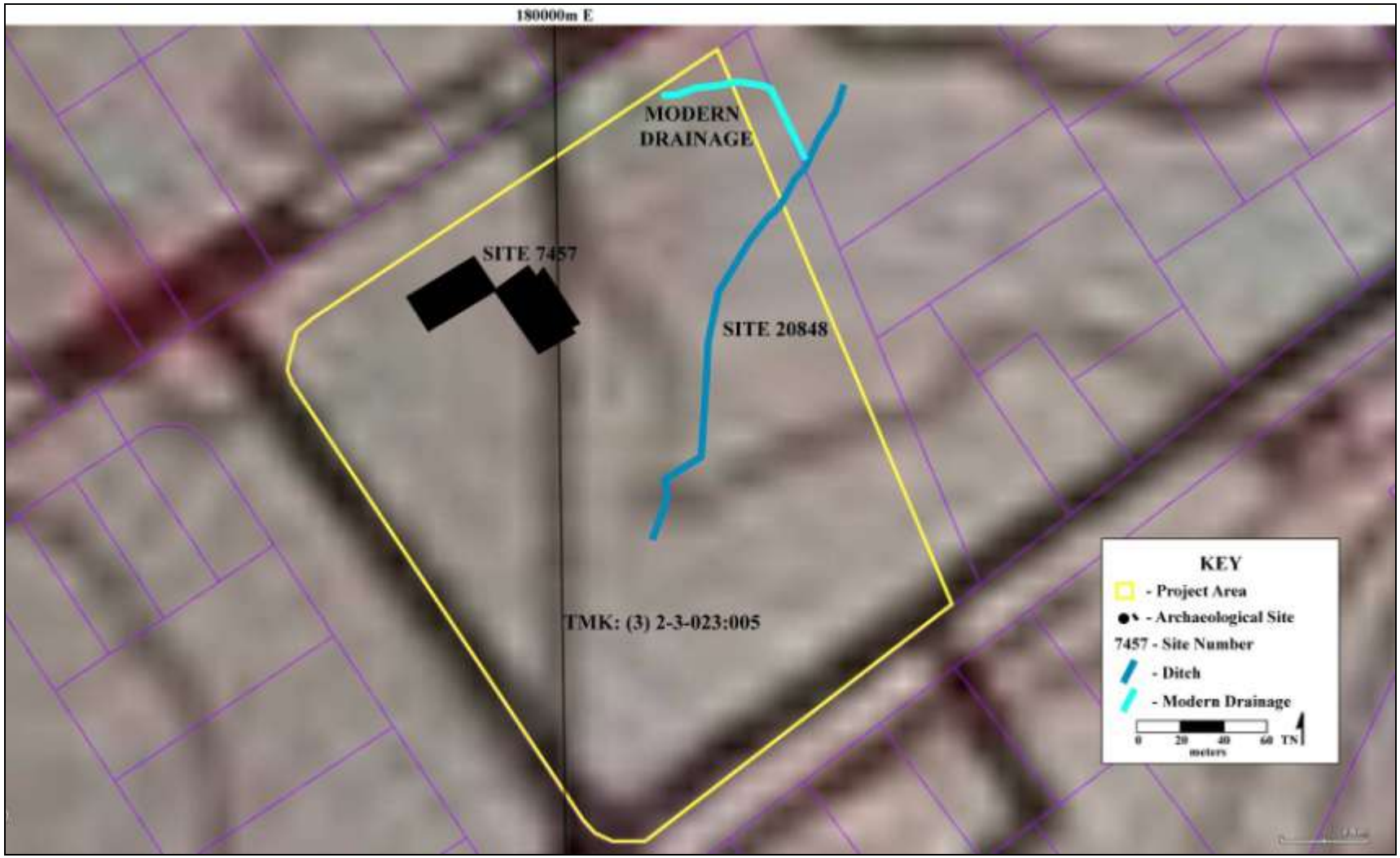


**Figure 17:** 7.5-Minute Series USGS Topographic Map Showing Location of Archaeological Sites (Hilo Quad. ESRI, 2013. Data Source: NASA, National Geographic Society, USGS).

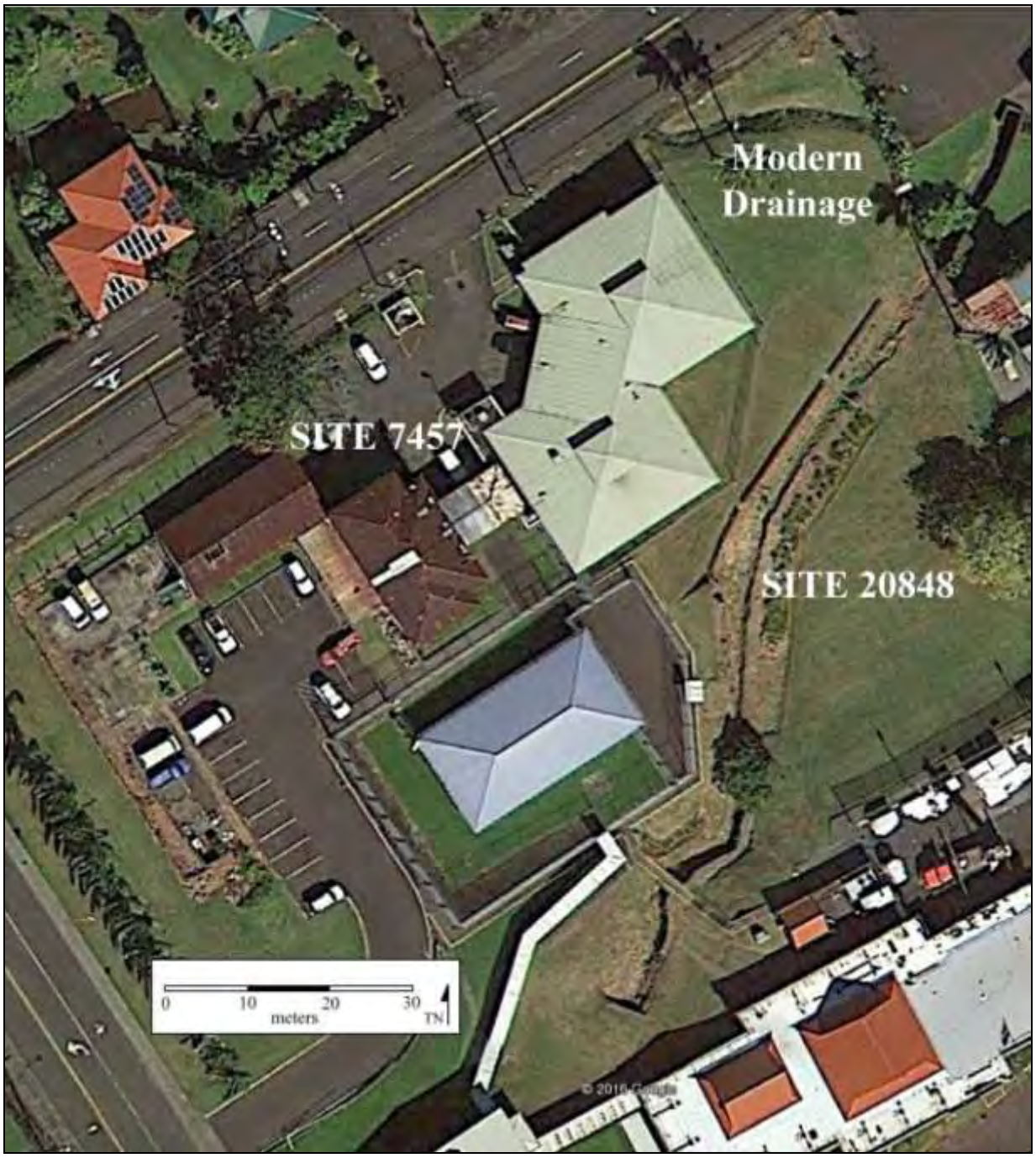


**Figure 18:** Aerial Photograph Showing Location of Archaeological Sites (Google Earth 2017. 2013 Image. Hilo, Zone 5 North, 280003 m E, 2181697 m N. Sources: NASA, Digital Globe).

Site 7457 is the Old Hilo Jail and Old Hilo Jail Annex located in the northwest quadrant of the project area. Site 20848 is the remains of a drainage ditch located across the center of the project area. Site 20849, a drainage ditch first documented in Walker et al. (1996) is no longer present on the project area. A modern drainage ditch was identified in the north corner of the project area (see Figure 17 and Figure 18). Descriptions for Site 20848 and Site 7457 are recorded below.

| **SITE 20848** | **Irrigation Ditch** |
|---|---|
| FUNCTION: | Drainage |
| AGE: | Historic Era |
| DIMENSIONS: | 120.0 m NE/SW by 1.0 m |
| CONDITION: | Good, Slightly Altered |
| SURFACE ARTIFACTS: | None |
| EXCAVATION: | None |

DESCRIPTION: Site 20848 is an irrigation ditch located at 200 and 220 feet amsl through the center of the project area (see Figure 17 and Figure 18). The ditch enters the property from a buried pipe at the southwest end of the ditch (Figure 19) and enters a second underground pipe on the church property to the northeast. Vegetation in the area is mown grass.

Site 20848 is approximately 120.00 meters long (NE/SW) by 1.0 m wide. The ditch is primarily 60 cm in depth. The ditch is rock-lined on both sides with angular basalt small boulders stacked four to seven courses high (Figures 20, 21, and 22). The sides are a single course wide. The southwest end of the ditch is topped with concrete, likely added during work conducted between 1998 and 1999 (Figure 23). Other than the buried southwest portion of Site 20848, the ditch was found to be exactly as it was recorded by PHRI, Inc. (Walker et al. 1996 and Wolforth 1999). A modern garden was identified along the east side of the ditch (see Figure 18). Site 20848 is in good condition and has been slightly altered by use. Site 20848 is recommended for no further work.



**Figure 19:** Photograph of Site 20848 Southwest End Showing Underground Pipe, Looking Southwest.



**Figure 20**: Photograph of Site 20848 Northeast Portion of Ditch Showing Rock-Lined Northwest Side, Looking West.



**Figure 21**: Photograph of Site 20848 Middle Portion of Ditch Showing Rock-Lined Sides, Looking North.



**Figure 22**: Photograph of Site 20848 Southwest Portion of Ditch Showing Rock-Lined West Side, Looking Northwest.



**Figure 23**: Photograph of Site 20848 Southwest Portion of Ditch Showing Concrete Top of West Side, Looking West.

| | |
|---|---|
| **SITE 7457** | **Old Hilo Jail Building** |
| FUNCTION: | Jail |
| AGE: | 1905 |
| DIMENSIONS: | 60.0 ft NW/SE by 35.0 ft by Two Stories |
| CONDITION: | Fair, Altered by Weathering |
| SURFACE ARTIFACTS: | Historic and Modern Trash Debris |
| EXCAVATION: | None |

DESCRIPTION: Site 7475 is the Old Hilo Jail Building located between 220 feet amsl in the northwest quadrant of the project area (see Figure 17 and Figure 18). It was designed by Oliver G. Traphagen and was constructed in 1905. The building is a two story brick building (Figures 24, 25, and 26).

The exterior walls are red brick with yellow paint (Figure 27). The foundation is finished with mortar (see Figure 27). There is a wood-frame and corrugated metal *port-cochere* at front entrance (Figures 28, 29, and 30). There are smooth finished concrete steps at front entrance (Figure 31). The front entrance is a hinged swinging metal bars with a single hinged latch (Figure 32 and Figure 33). There are two large windows with bars on the first floor on both sides of the front entrance (see Figure 25 and Figure 34). The front entrance and first floor window and door frames are arched. There are seven rectangular windows with bars along the top of the second floor front of the building (see Figure 26 and Figure 35). There are electrical meter boxes and electrical conduit on the front and two sides of the building (Figures 36, 37, and 38).

Both sides of the building have three large rectangular windows (two on first floor) and three small rectangular windows (two on the second floor) (Figures 39 through 43). All windows have one inch metal bars (Figure 44). The larger windows have corrugated metal awnings supported by metal supports. There are cast iron waterlines and waste water drain pipes on both sides of the building (see Figures 36, 37, and 38).

The rear of the building has a centrally located arched doorway entrance (See Figure 25 and Figure 45). There are two large rectangular arch windows with bars on either side of the rear entrance (Figure 46). There are six small rectangular windows with bars on the first floor (see Figure 25). There are nine small rectangular windows with bars along top of the second floor (Figure 47). All of the building's windows contain modern glass jalousie windows and likely were screened (Figure 48).

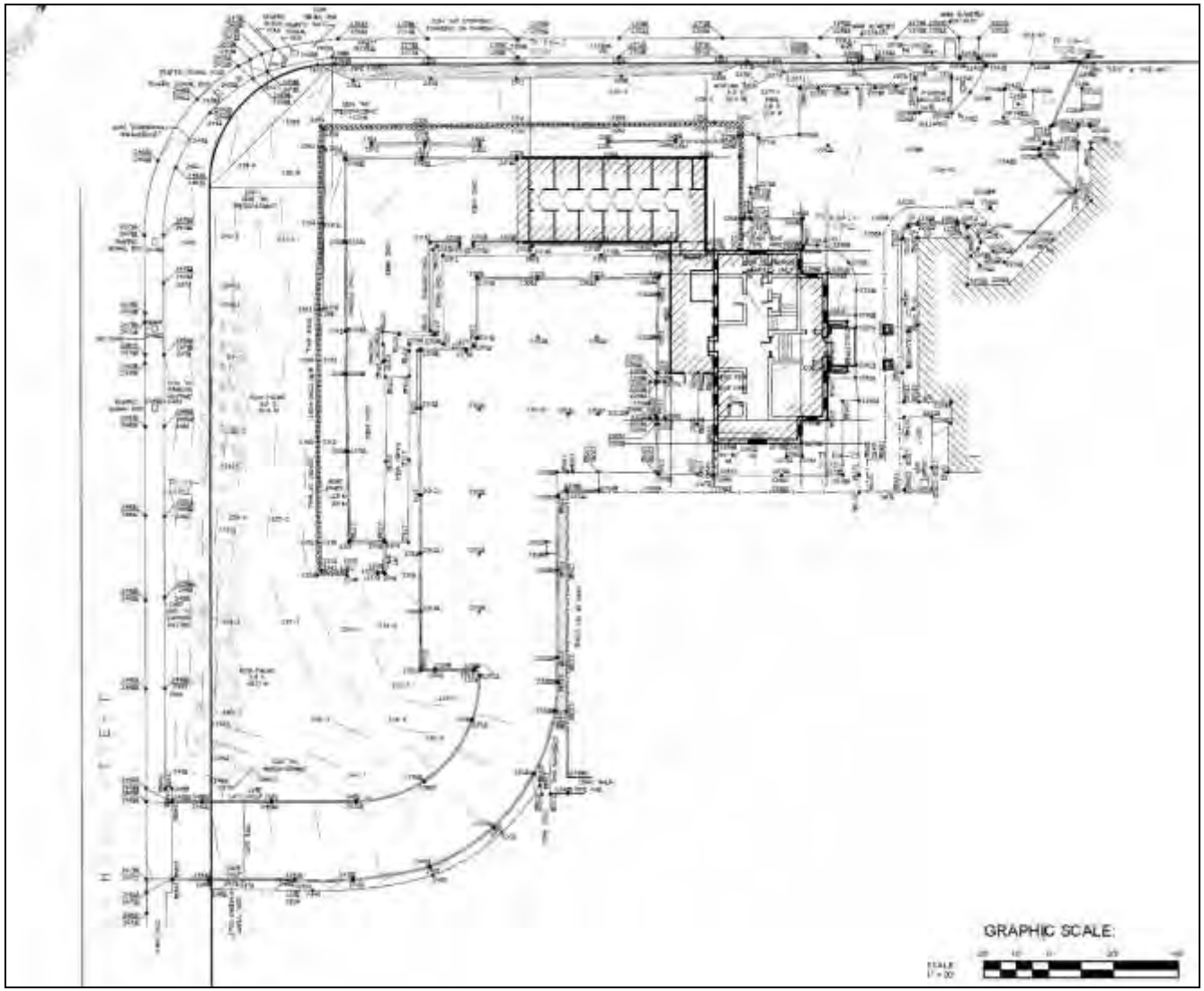


**Figure 24:** Site 7457 Old Hilo Jail and Old Hilo Jail Annex Site Plan Schematic.

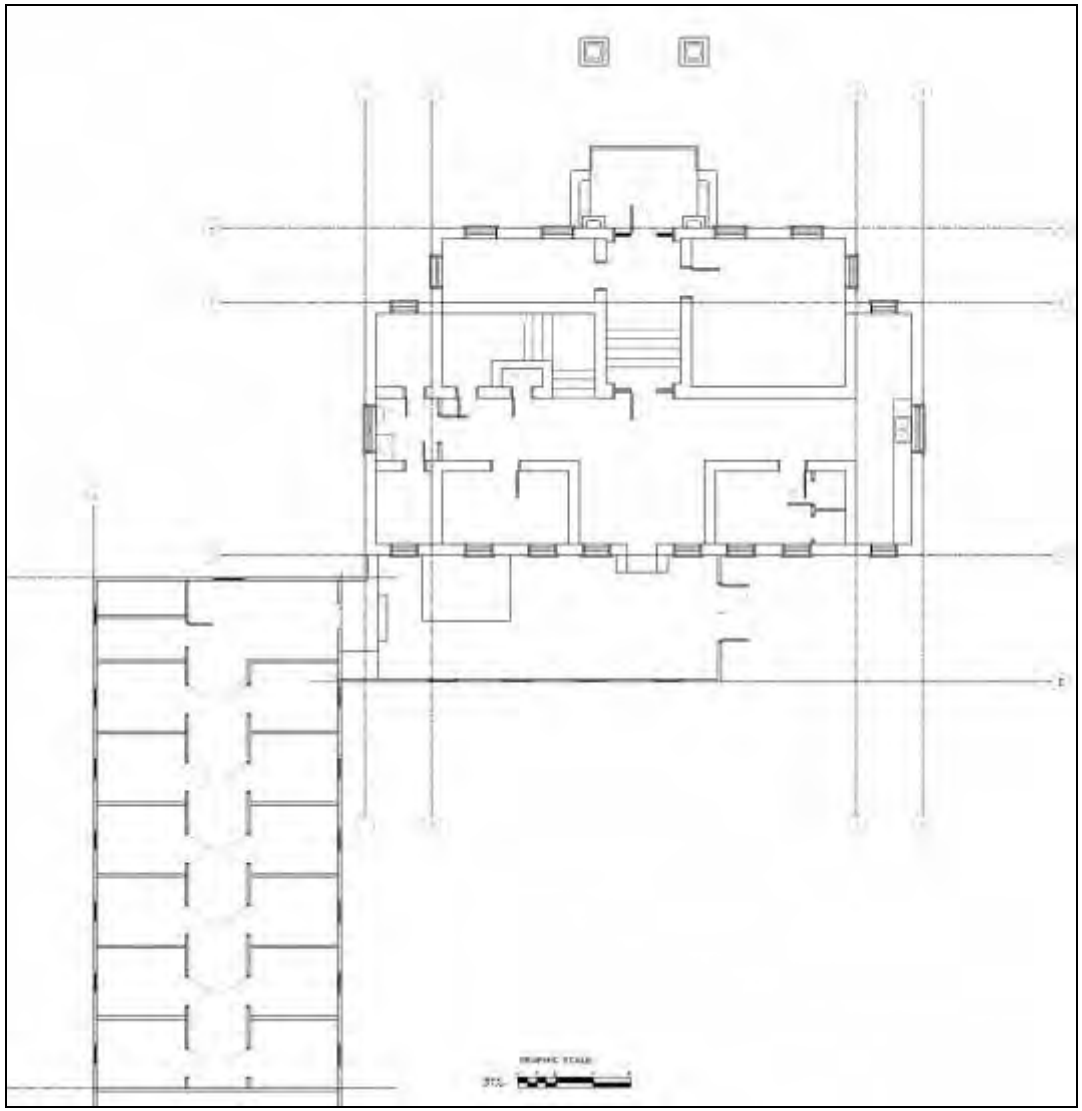

**Figure 25:** Site 7457 Old Hilo Jail and Old Hilo Jail Annex First Floor Plan.

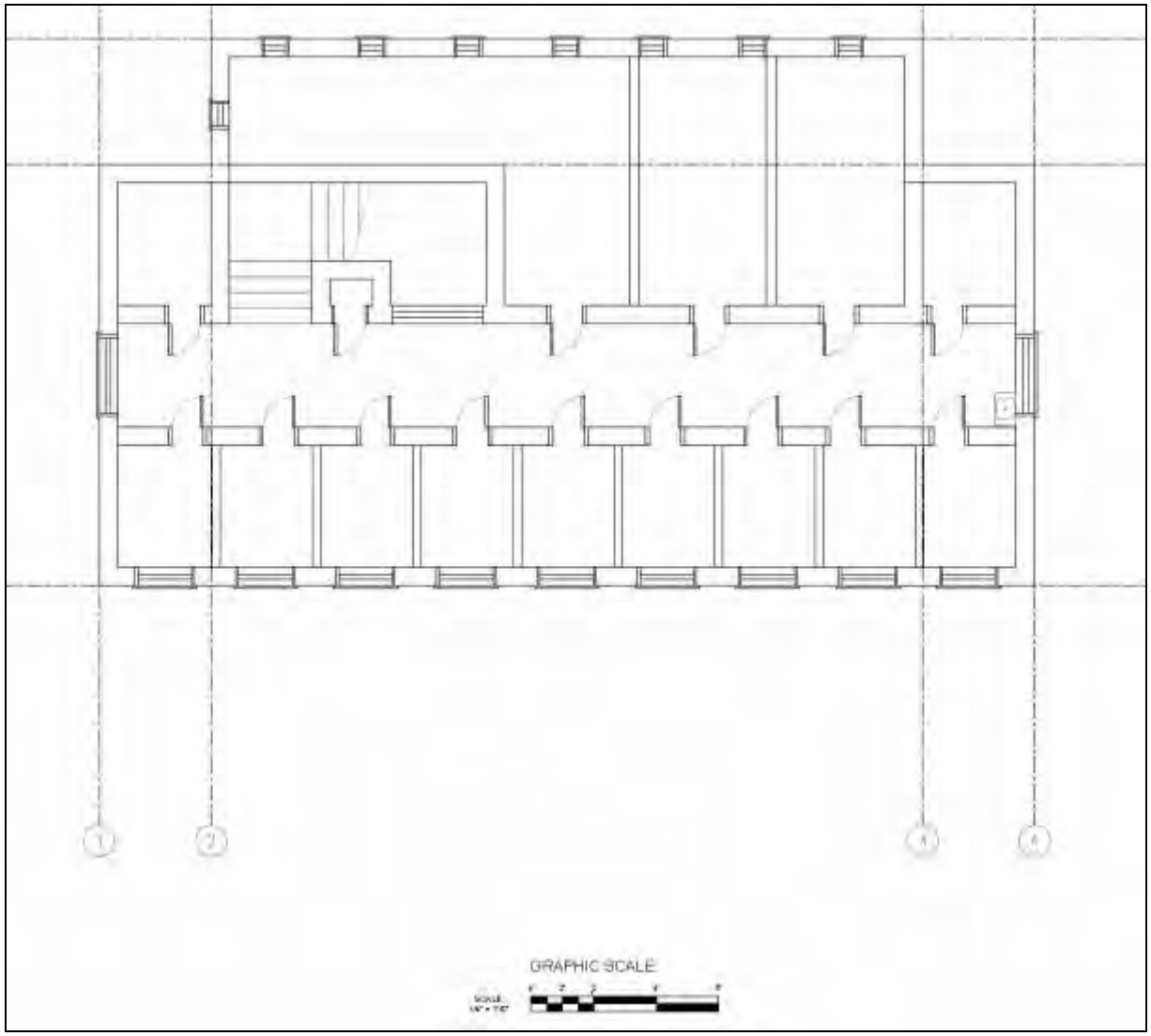


**Figure 26:** Site 7457 Old Hilo Jail Second Floor Plan.



**Figure 27:** Photograph of Site 7457 Old Hilo Jail Brick Exterior Wall and Concrete Foundation.



**Figure 28:** Photograph of Site 7457 Old Hilo Jail Front Elevation, Looking Northwest.



**Figure 29:** Photograph of Site 7457 Old Hilo Jail Front Entrance *Port-Cochere*, Looking Northeast.



**Figure 30:** Photograph of Site 7457 Old Hilo Jail Front Entrance *Port-Cochere*, Looking Northwest.



**Figure 31:** Photograph of Site 7457 Old Hilo Jail Front Entrance Stairs, Looking West.

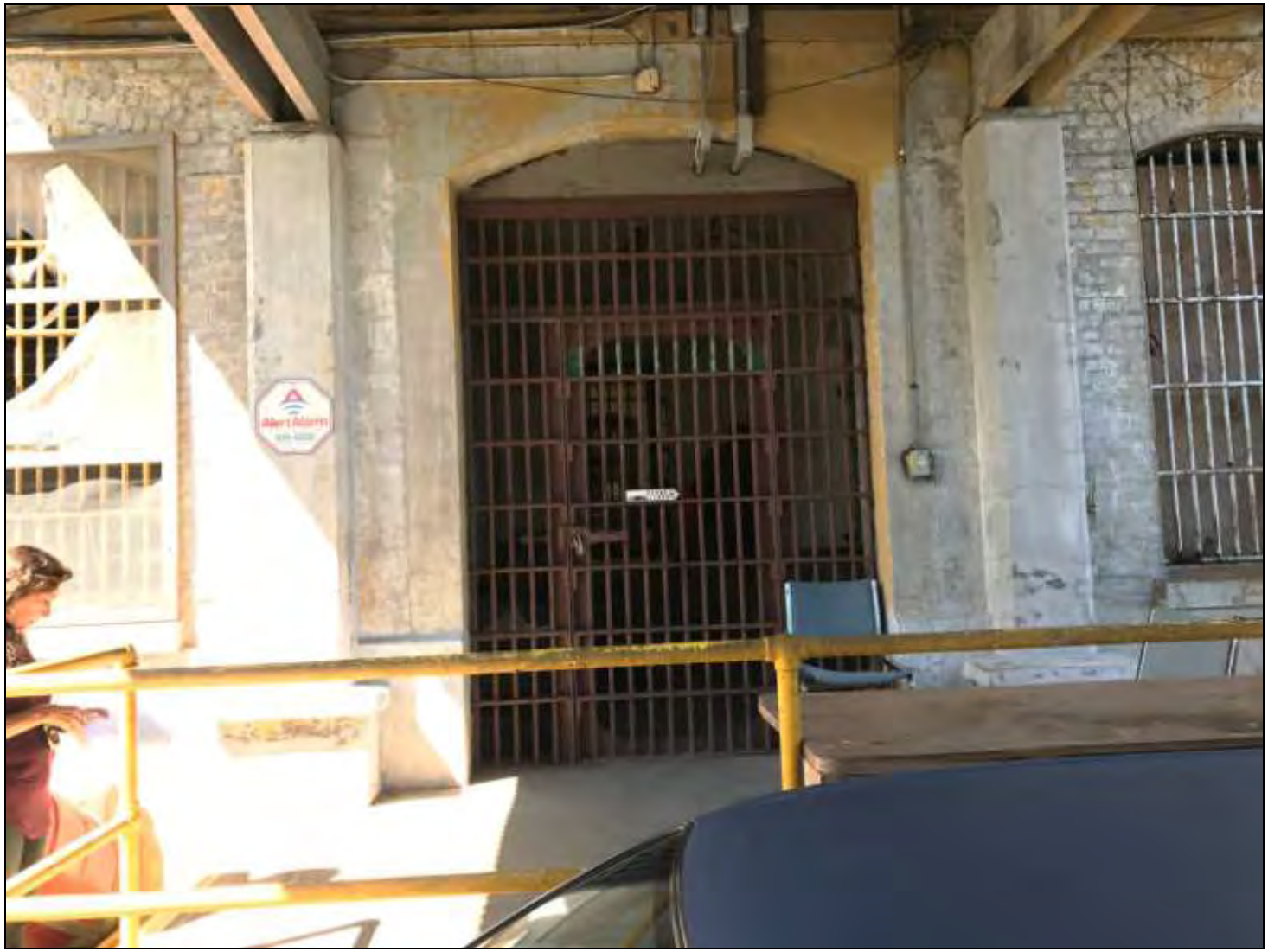

**Figure 32:** Photograph of Site 7457 Old Hilo Jail Front Entrance, Looking West.



**Figure 33:** Photograph of Site 7457 Old Hilo Jail Front Entrance Close, Looking West.



**Figure 34:** Photograph of Site 7457 Old Hilo Jail First Floor Front Windows, Looking West.



**Figure 35:** Photograph of Site 7457 Old Hilo Jail Front Elevation Windows, Looking Northwest.



**Figure 36:** Photograph of Site 7457 Old Hilo Jail Front and Southeast Side Showing Electrical Conduits and Cast Iron Water Pipes, Looking Northwest.



**Figure 37:** Photograph of Site 7457 Old Hilo Jail Southeast Side Showing Electrical Conduits and Cast Iron Water Pipes, Looking West.



**Figure 38**: Photograph of Site 7457 Old Hilo Jail Front Showing Electrical Conduits and Cast Iron Water Pipes, Looking Southwest.



**Figure 39**: Photograph of Site 7457 Old Hilo Jail Southeast Side Windows and Awnings, Looking Northeast.



**Figure 40:** Photograph of Site 7457 Old Hilo Jail Southeast Side Windows and Awnings Close Up, Looking Northeast.



**Figure 41:** Photograph of Site 7457 Old Hilo Jail Southeast Side Windows Close Up, Looking Northeast.



**Figure 42:** Photograph of Site 7457 Old Hilo Jail Front Southeast Side First Floor Window Close Up, Looking South.



**Figure 43:** Photograph of Site 7457 Old Hilo Jail Front Southeast Side Windows, Looking South.



**Figure 44:** Photograph of Site 7457 Old Hilo Jail One Inch Metal Bars




**Figure 45:** Photograph of Site 7457 Old Hilo Jail Rear Entrance, Looking Northeast.

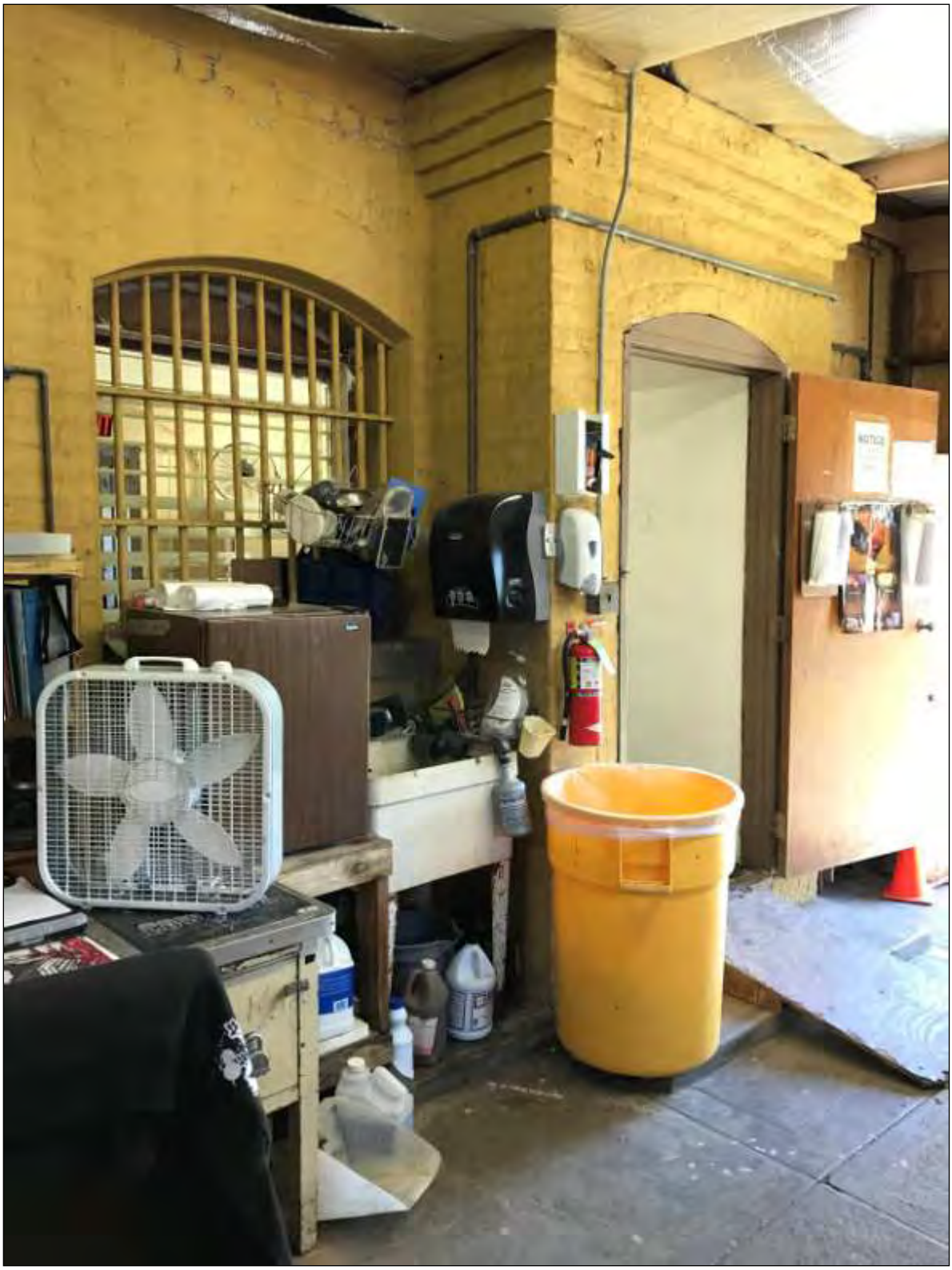

**Figure 46:** Photograph of Site 7457 Old Hilo Jail Arched Window at Rear Entrance, Looking East.



**Figure 47:** Photograph of Site 7457 Old Hilo Jail Rear Elevation Showing Windows, Looking Northeast.



**Figure 48:** Photograph of Site 7457 Old Hilo Jail Interior Jalousie Windows.

Some of the windows contain exterior screens and the remains of wood frames that attached the screens to the exterior of the building.

The old roof was a corrugated metal hip and valley design and was replaced between 2013 and 2014 (see Figure 18). The new roof is flat post and beam framed wood supported over the concrete ceiling of the building (Figure 49 and Figure 50). The roofing asphalt is applied over rolled rubber barrier. There is a low parapet along the outside of the edges and five skylights/vents along the centerline of the roof. The roof is accessed through a metal covered wooden hatch that rests freely on the roof (no hinge or latch) (Figure 52). There are five skylight/vents across the center of the roof (see Figure 51).

The first floor of the Old Hilo Jail is split-level (see Figure 25 and Figure 53). There are two rooms on the lower level at either side of the front entrance (Figure 54 and Figure 55). The southeast side room is currently used as the armory and is locked. A centrally located stair way leads to the first floor upper level (Figure 56). There is a swinging metal-bar door at the top of the stairs to the upper level (see Figure 56 and Figure 57). The upper level of the first floor contains a centrally located corridor (NW/SE) (see Figure 25, and Figures 58 and 59). The corridor opens to six rooms and two closets (see Figure 25). The floor is concrete. The interior walls are painted concrete. The doorways are arched and the walls are slightly vaulted where they meet the concrete ceiling (Figure 60).

Metal beams can be seen in the walls where the cement has fallen away (Figure 60 and Figure 61) and metal wire mesh can be seen in the ceiling where the cement has fallen away from them (Figure 63). The imprint from the form boards and some type of sheeting (paper or plastic) is evident in the cement on the ceiling (Figure 64). Most of the doors are solid wood panel doors (Figure 65 and Figure 66). Two of the doors are iron with a stationary latch and hinged iron bar or solid iron hatch at eye-level (Figures 67, 68, 69, and 70). There is a staircase in the north corner of the building leading to the second floor (Figures 71 through 76).



**Figure 49:** Photograph of Site 7457 Old Hilo Jail Concrete Ceiling and Wood Frame Roof.



**Figure 50:** Photograph of Site 7457 Old Hilo Jail Concrete Ceiling and Wood Frame Roof.



**Figure 51:** Photograph of Site 7457 Old Hilo Jail Roof Top, Looking Southeast.



**Figure 52:** Photograph of Site 7457 Old Hilo Jail Roof Top Hatch, Looking North.



**Figure 53:** Photograph of Site 7457 Old Hilo Jail First Floor Lower Level, Looking Northeast.



**Figure 54:** Photograph of Site 7457 Old Hilo Jail First Floor Lower Level Northwest Room, Looking Northwest.



**Figure 55:** Photograph of Site 7457 Old Hilo Jail First Floor Lower Level Southeast Room Locked Doorway, Looking Southeast.

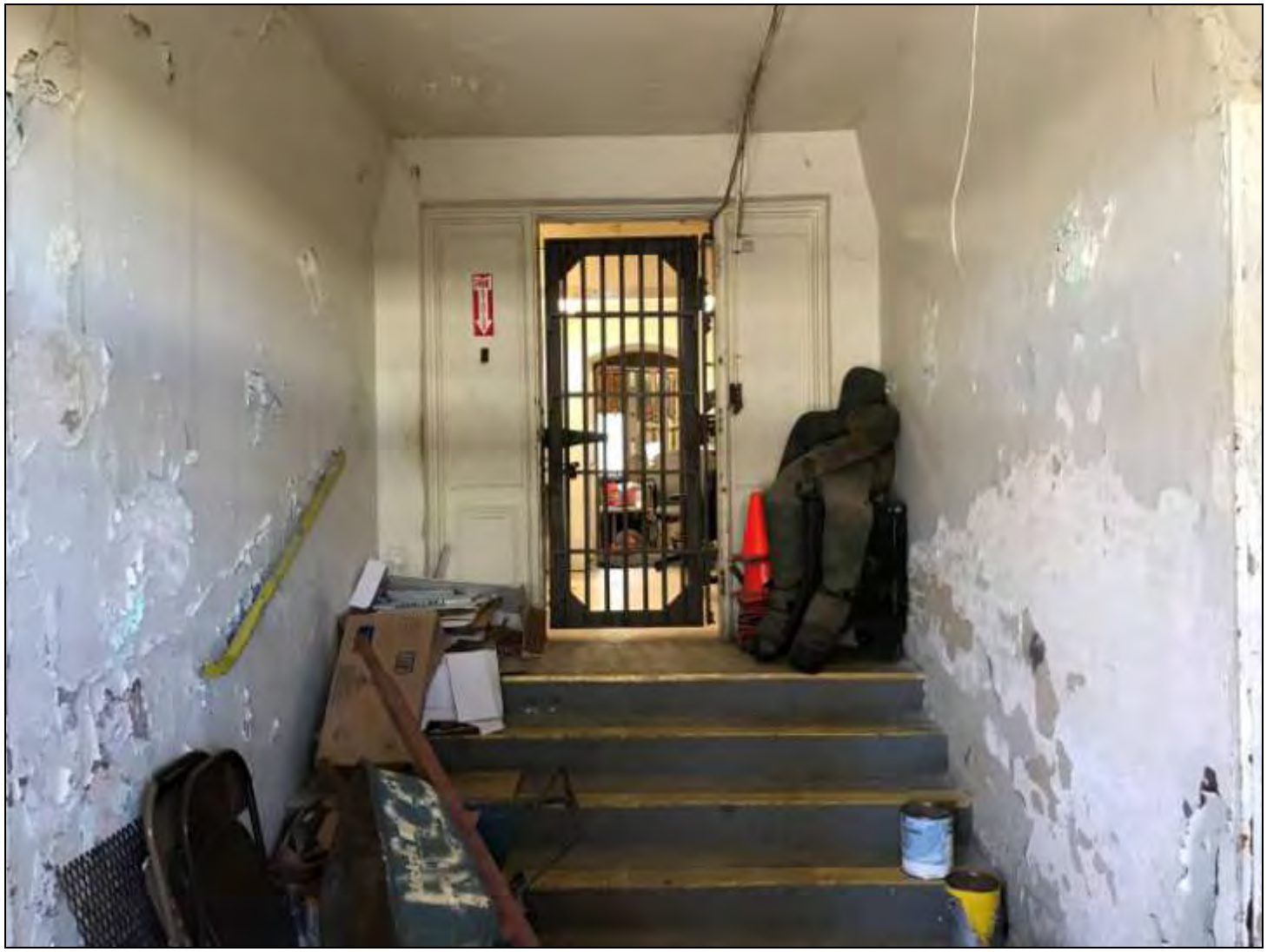

**Figure 56:** Photograph of Site 7457 Old Hilo Jail First Floor Split-Level Stairway, Looking Southwest.




**Figure 57:** Photograph of Site 7457 Old Hilo Jail First Floor Upper Level Front Entrance, Looking Northeast.



**Figure 58:** Photograph of Site 7457 Old Hilo Jail First Floor Central Corridor, Looking Northwest.



**Figure 59:** Photograph of Site 7457 Old Hilo Jail First Floor Central Corridor, Looking Southeast.



**Figure 60:** Photograph of Site 7457 Old Hilo Jail First Floor Central Corridor Showing Vaulted Ceilings, Looking Northwest.



**Figure 61:** Photograph of Site 7457 Old Hilo Jail Showing Deterioration.



**Figure 62:** Photograph of Site 7457 Old Hilo Jail Metal Beam in Wall.



**Figure 63:** Photograph of Site 7457 Old Hilo Jail Metal Wire Mesh in Ceiling.



**Figure 64:** Photograph of Site 7457 Old Hilo Jail Ceiling Showing Imprint of Form Material.



**Figure 65:** Photograph of Site 7457 Old Hilo Jail First Floor Solid Wood Panel Door Style 1.



**Figure 66:** Photograph of Site 7457 Old Hilo Jail First Floor Solid Wood Panel Door Style 2.



**Figure 67:** Photograph of Site 7457 Old Hilo Jail First Floor Metal Door With Solid Hatch.



**Figure 68:** Photograph of Site 7457 Old Hilo Jail First Floor Metal Door With Bar Hatch.



**Figure 69:** Photograph of Site 7457 Old Hilo Jail First Floor Metal Door Hinge Close Up.



**Figure 70:** Photograph of Site 7457 Old Hilo Jail First Floor Metal Door Close Up.




**Figure 71:** Photograph of Site 7457 Old Hilo Jail First Floor Stairway to Second Floor, Looking North.



**Figure 72:** Photograph of Site 7457 Old Hilo Jail Lower Landing in Stairway to Second Floor, Looking Northeast.



**Figure 73:** Photograph of Site 7457 Old Hilo Jail Upper Landing in Stairway to Second Floor, Looking North.



**Figure 74:** Photograph of Site 7457 Old Hilo Jail Ceiling Above Lower Landing in Stairway to Second Floor, Looking Southeast.



**Figure 75:** Photograph of Site 7457 Old Hilo Jail Second Floor From Upper Landing, Looking West.



**Figure 76:** Photograph of Site 7457 Old Hilo Jail Vent Screen Between Stairwell and Second Floor, Looking West.

The second floor contains 14 inmate cells: 11 of the cells are 8.0 ft long by 6.0 ft wide, two cells are 8.0 ft by 6.0 ft, and one is an L-shape cell 26.0 ft long by 6.5 ft to 8.0 ft wide (see Figure 26). The smaller cells have a single window up high on the outer wall (Figure 77 and Figure 78). The floor is concrete. The interior walls are painted concrete. Metal beams can be seen in the walls where the cement has fallen away and metal wire mesh can be seen in the ceiling where the cement has fallen away from them. The imprint from the form boards and some type of sheeting (paper or plastic) is evident in the cement on the ceiling.

The doorways are arched and the walls are slightly vaulted where they meet the concrete ceiling (Figure 79). Most of the doors are modern, hollow wood doors (Figure 80). The tops of the doors have been cut to fit the arched doorways (Figure 81). Three of the doors are iron with a stationary latch and hinged solid iron hatch at eye-level (Figures 82 through 85).

The smaller cells housed a single inmate. The larger rooms housed more inmates. The largest cell is located next to the stairwell and housed up to twelve inmates (Figure 86). The cells do not have toilets or wash basins. Inmates were provided with buckets.

There is a small wooden door the right of the stairway from the first floor that open to wooden stairs leading to the roof (Figure 87). There are skylights/vents in the second floor central corridor ceiling that provide light and ventilation (Figure 88). The Old Hilo Jail building has been altered by weathering and deterioration and is in fair condition.

There is a wooden (T-111) shed with corrugated metal shed roof constructed onto the northeast side of the Old Jail (see Figure 25 and Figure 89). The rear entrance to the Old Jail is accessed through a door in the wooden shed. The shed contains a small workshop with tools and an industrial washer and dryer (Figure 90 and 91). The shed entrance is also the access to the Old Hilo Jail Annex, a long wooden structure constructed at the northeast corner of the Old Jail building (see Figure 25, and Figure 92 and Figure 93).



**Figure 77:** Photograph of Site 7457 Old Hilo Jail Second Floor Small Inmate Cell.



**Figure 78:** Photograph of Site 7457 Old Hilo Jail Second Floor Small Inmate Cell Window.



**Figure 79:** Photograph of Site 7457 Old Hilo Jail Second Floor Small Inmate Cell Hollow Wood Door, Doorway Arch, and Vaulted Ceiling.




**Figure 80:** Photograph of Site 7457 Old Hilo Jail Second Floor Small Inmate Cell Hollow Wood Door.



**Figure 81:** Photograph of Site 7457 Old Hilo Jail Second Floor Small Inmate Cell Hollow Wood Door and Doorway Arch Close Up.



**Figure 82:** Photograph of Site 7457 Old Hilo Jail Second Floor Large Inmate Cell Metal Door.




**Figure 83:** Photograph of Site 7457 Old Hilo Jail Second Floor Large Inmate Cell Metal Door Showing Hinge and Hatch Detail.



**Figure 84:** Photograph of Site 7457 Old Hilo Jail Second Floor Large Inmate Cell Metal Door Showing Latch.



**Figure 85:** Photograph of Site 7457 Old Hilo Jail Second Floor Large Inmate Cell Metal Door and Frame Close Up.



**Figure 86:** Photograph of Site 7457 Old Hilo Jail Second Floor Largest Inmate Cell Interior, Looking Northwest.



**Figure 87:** Photograph of Site 7457 Old Hilo Jail Second Floor Door to Roof Stairwell.



**Figure 88:** Photograph of Site 7457 Old Hilo Jail Second Floor Ceiling Skylight Vent.



**Figure 89:** Photograph of Site 7457 Old Hilo Jail Rear Workshop Shed Entrance, Looking North.



**Figure 90:** Photograph of Site 7457 Old Hilo Jail Rear Workshop Shed Interior, Looking North.




**Figure 91:** Photograph of Site 7457 Old Hilo Jail Rear Workshop Shed Washer and Dryer, Looking Northeast.

The Annex foundation is wood-form poured concrete (Figure 94). The siding is five inch milled boards. The structure has a gable roof of corrugated metal (Figure 95 through Figure 97). The roof contained a large rectangular skylight at one time but is now gone. The roof is badly rusted, has numerous holes, and is sagging noticeably. There is a single rectangular window and an arch vent on the northeast end of the Annex and seven rectangular windows along the northwest side of the building (see Figure 95 and Figure 98). The windows have metal bars with exterior framed screens (Figure 99). The southwest end of the Annex appears to have been removed (Figure 100).

There is a rectangular poured concrete slab where the rest of the Annex building once stood (see Figure 24 and Figure 101). The slab was the foundation for the Old Hilo Jail Annex and connection washroom and showers. The slab has three foot square expansion joints cut into the top surface. There are cut-off one inch water pipes set in the southeast half of slab for the showers (Figure 102).

The Old Hilo Jail Annex interior contains thirteen inmate cells accessed by a centrally-located corridor along the center of the Annex (see Figure 25 and Figure 103). There were likely additional cells that were removed from the southwest end of the Annex building. The entrance to the central corridor and cells is through a one-inch iron bar door with sliding latch (Figure 104). The cells are 9.5 ft long by 7.0 ft wide (see Figure 25 and Figure 105). The interior of the Annex is constructed entirely of wood. The doors are constructed of six inch wide solid wood planks (Figure 106 and Figure 107). The doors have iron hinges and sliding iron latches (Figure 108). There is a single, hinged solid iron hatch set at eye-level in the doors (Figure 108). The hatches have metal hinge latches that can be locked (see Figure 106). There is a large skylight above the central corridor (Figure 109). The skylight window is gone. There are metal bars in the ceiling below the skylight. The wood interior has extensive water damage and rot Figure 110). There are numerous holes in the ceilings and walls of the Annex. The annex is currently being used to store tools, old parts, and trash.

The Old Hilo Jail Annex building was built after the Old Hilo Jail to accommodate additional inmates. Both buildings were last used in the early 1970s to house work-release inmates. The Old Hilo Jail Annex building has been altered by weathering and deterioration and is in poor condition. The roof and interior are badly damaged by rot and the roof is sagging.



**Figure 92:** Photograph of Site 7457 Old Hilo Jail Annex Northeast Elevation, Looking Southwest.



**Figure 93:** Photograph of Site 7457 Old Hilo Jail Annex Northwest Elevation, Looking South.



**Figure 94:** Photograph of Site 7457 Old Hilo Jail Annex Northeast Elevation Showing Foundation and Wood Siding, Looking Southwest.



**Figure 95:** Photograph of Site 7457 Old Hilo Jail Annex Showing Northeast Roof Construction, Looking Southwest.



**Figure 96:** Photograph of Site 7457 Old Hilo Jail Annex Showing Northeast Roof Construction, Looking West.



**Figure 97:** Photograph of Site 7457 Old Hilo Jail Annex Roof Overview, Looking West.



**Figure 98:** Photograph of Site 7457 Old Hilo Jail Annex Northwest Elevation, Looking South.



**Figure 99:** Photograph of Site 7457 Old Hilo Jail Annex Northwest Elevation Showing Window Detail, Looking Southeast.



**Figure 100:** Photograph of Site 7457 Old Hilo Jail Annex Southwest Elevation, Looking Northeast.



**Figure 101:** Photograph of Site 7457 Old Hilo Jail Annex Concrete Floor Foundation, Looking Southeast.



**Figure 102:** Photograph of Site 7457 Old Hilo Jail Annex Concrete Slab Showing Water Pipes, Looking Southwest.



**Figure 103:** Photograph of Site 7457 Old Hilo Jail Annex Central Corridor, Looking Southwest.

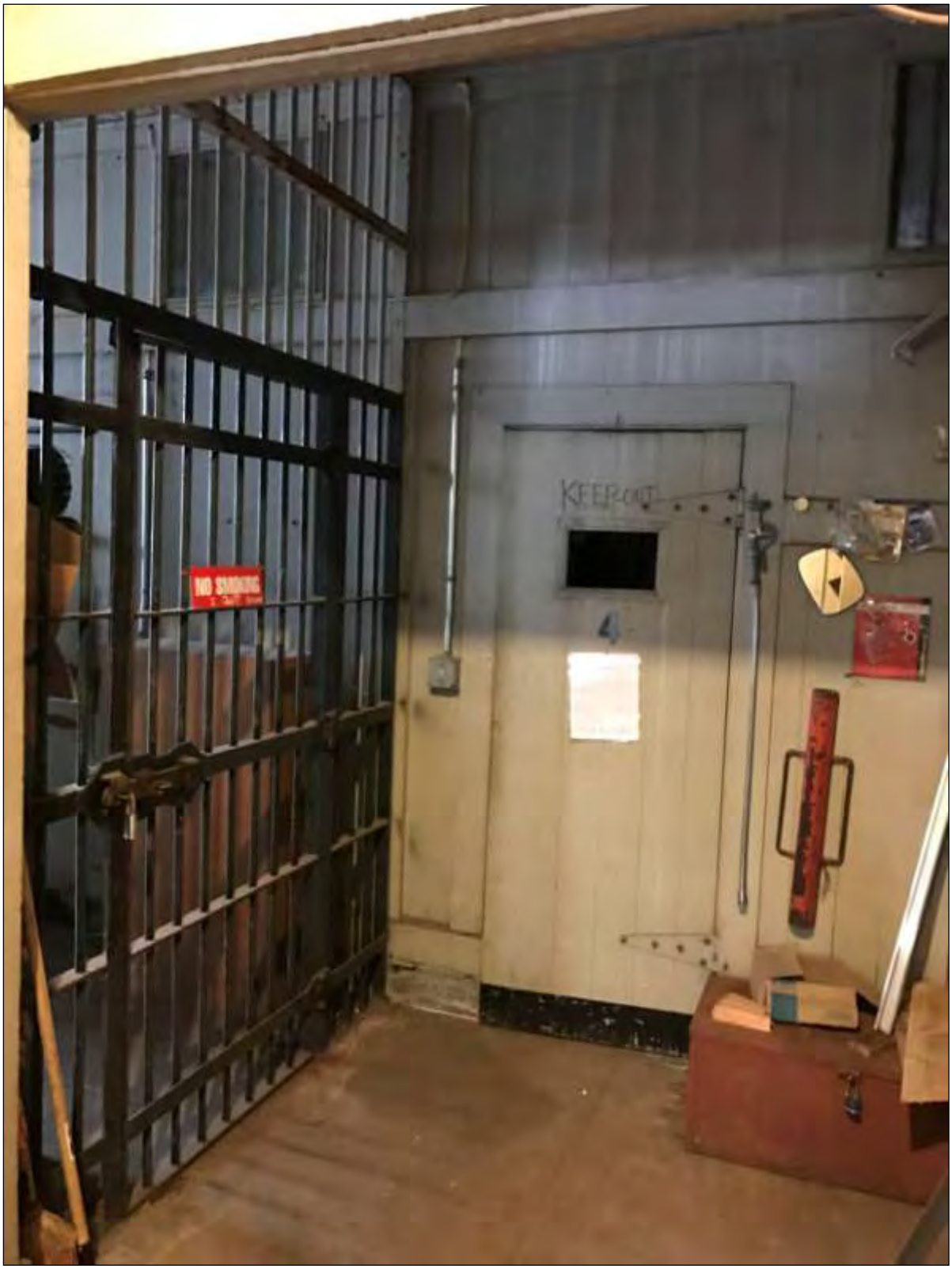


**Figure 104:** Photograph of Site 7457 Old Hilo Jail Annex Locked Door to Central Corridor, Looking Northwest.

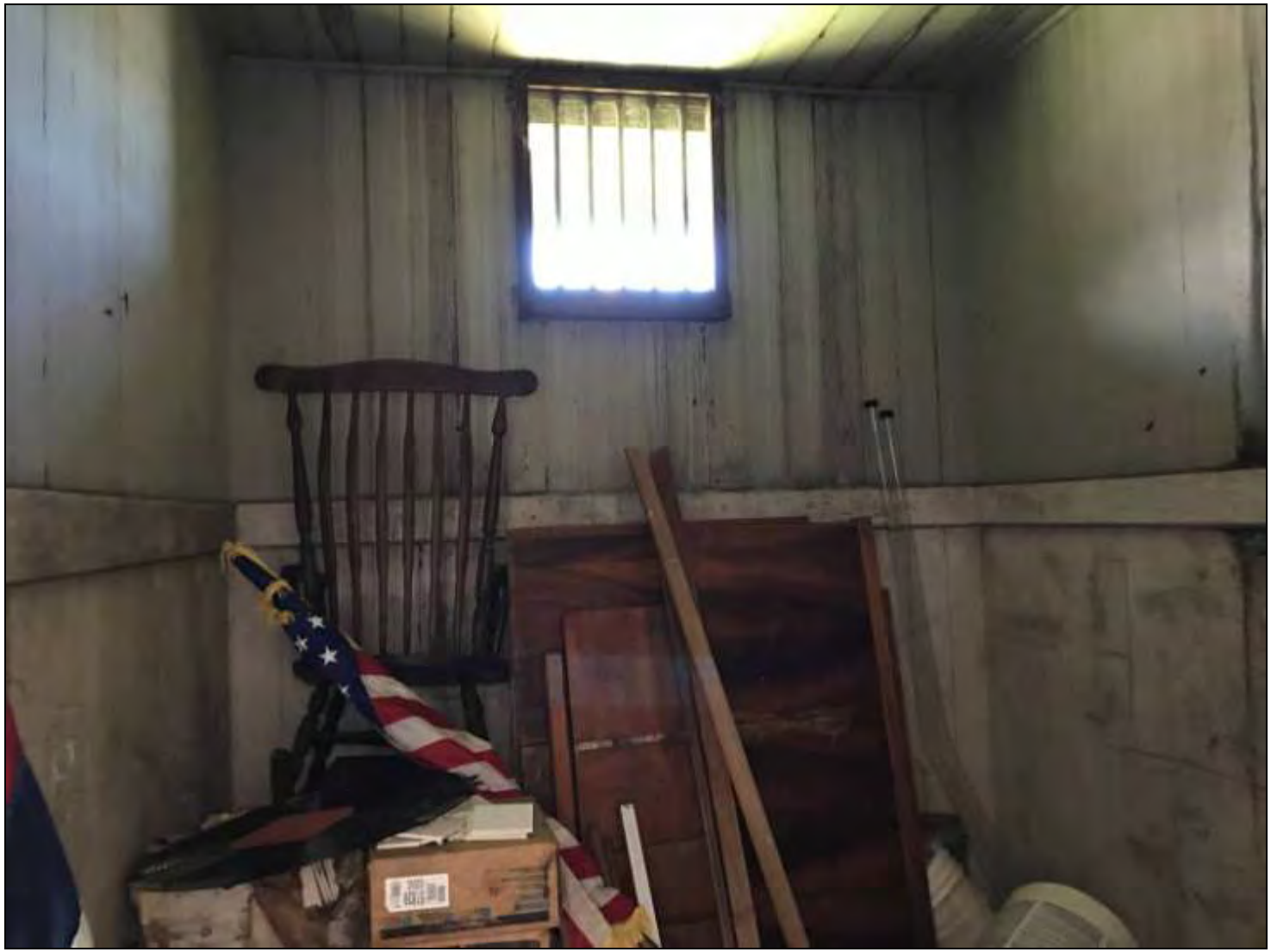

**Figure 105:** Photograph of Site 7457 Old Hilo Jail Annex Cell, Looking Northwest.




**Figure 106:** Photograph of Site 7457 Old Hilo Jail Annex Cell Door Exterior, Looking North.



**Figure 107:** Photograph of Site 7457 Old Hilo Jail Annex Cell Door Interior Showing Construction.



**Figure 108:** Photograph of Site 7457 Old Hilo Jail Annex Cell Door Sliding Latch.



**Figure 109:** Photograph of Site 7457 Old Hilo Jail Annex Skylight, Looking Northeast.



**Figure 110:** Photograph of Site 7457 Old Hilo Jail Annex Water Damage, Looking East.

## CONCLUSION

Two previously recorded archaeological sites (Site 50-10-35-7457 and Site 20848) were documented during the current AIS study. Site 20849 was replaced with drainage pipe and was covered with fill between 1998 and 1999.

Site 7457 is the Old Hilo Jail and Old Hilo Jail Annex located in the northwest quadrant of the project area. Site 20848 is the remains of a drainage ditch located across the center of the project area. Site 20849, a drainage ditch first documented in Walker et al. (1996) is no longer present on the project area. A modern drainage ditch was identified in the north corner of the project area.

The first jail in Hilo was constructed at the corner of Jail Street (now Kinoʻole Street) and Ponahawai Street. The property is now the location of Lincoln Park. The second jail, the Old Hilo Jail building (Site 7457), was designed by O.G. Traphagen and was constructed in 1905 at the corner of Waiānuenue Avenue and Puʻu Honu Street, now Komohana Street.

A 1920 map (see Figure 11) shows the original driveway to the Old Hilo Jail coming south off of Old Waiānuenue Avenue. The driveway led to the front entrance of the Old Hilo Jail building. There appears to be a fenced yard behind the Old Jail building. Three additional buildings were constructed along the edges of the fenced yard. There were also two additional buildings south of the fenced yard. The drainage channel that crosses the property is also depicted on the map.

Oliver G. Traphagen (1854-1932) was an American architect born in Tarrytown, New York. Traphagen designed buildings in Duluth, Minnesota during the 19th century and in Hawaiʻi during the early 20th century. Traphagen designed both public and privately owned buildings. Many of his designs were influenced by the Richardsonian Romanesque style popular at the time. Traphagen moved to Hawaiʻi in October 1897 because his daughter's health required a warm climate. He was considered one of the most prolific and highly regarded architects in Hawaiʻi.

Richardsonian Romanesque design and Romanesque Revival architecture, in general, incorporated 11th and 12th century French, Spanish, and Italian characteristics "emphasizing clear, strong picturesque massing, round-headed "Romanesque" arches,

often springing from Short squat columns, recessed entrances, richly varied rustication, blank stretches of walling contracting with bands of windows, and cylindrical towers with conical caps embedded in walling" (https://en.wikipedia.org/wiki/Richardsonian_ Romanesque).

There are a number of buildings Traphagen designed in Hawai‘i that serve as good examples of Romanesque design, including The Hackfeld and Company Building in Honolulu (Figures 111, 112, and 113), The Judd Building in Honolulu (Figure 114), and the Kaka‘ako Pumping Station, on O‘ahu (Figure 115). The use of rustication, the contrast between rough textured and smooth masonry, the contrast between rounded tower/column and square architectural elements, and the recessed and arched doorways and windows are all visible in the three buildings mentioned above.

The Old Hilo Jail building, constructed in 1905, does not exhibit the same level of ornamentation, or the use of columns or rustication. The Old Hilo Jail design is more simple and utilitarian. It does exhibit some texture from the bricks and it does have recessed and arched doorways and windows. The Old Hilo Jail building is a good example of a Traphagen designed utilitarian public building having a solid appearance. The original corrugated metal hip and valley roof was replaced between 2013 and 2014 with a flat asphalt post and beam roof.

The Old Hilo Jail Annex was constructed after the 1920s, likely in the 1940s or 1950s to accommodate additional inmates. The wash room and showers, and the southwest end of the Annex were demolished in the recent past.



**Figure 111:** Photograph of Hackfeld and Company Building Front Corner Elevation.



**Figure 112:** Photograph of Hackfeld and Company Building Front Elevation.



**Figure 113:** Photograph of Hackfeld and Company Building Rear Corner Elevation.



**Figure 114:** Photograph of Judd Building Corner Elevation.

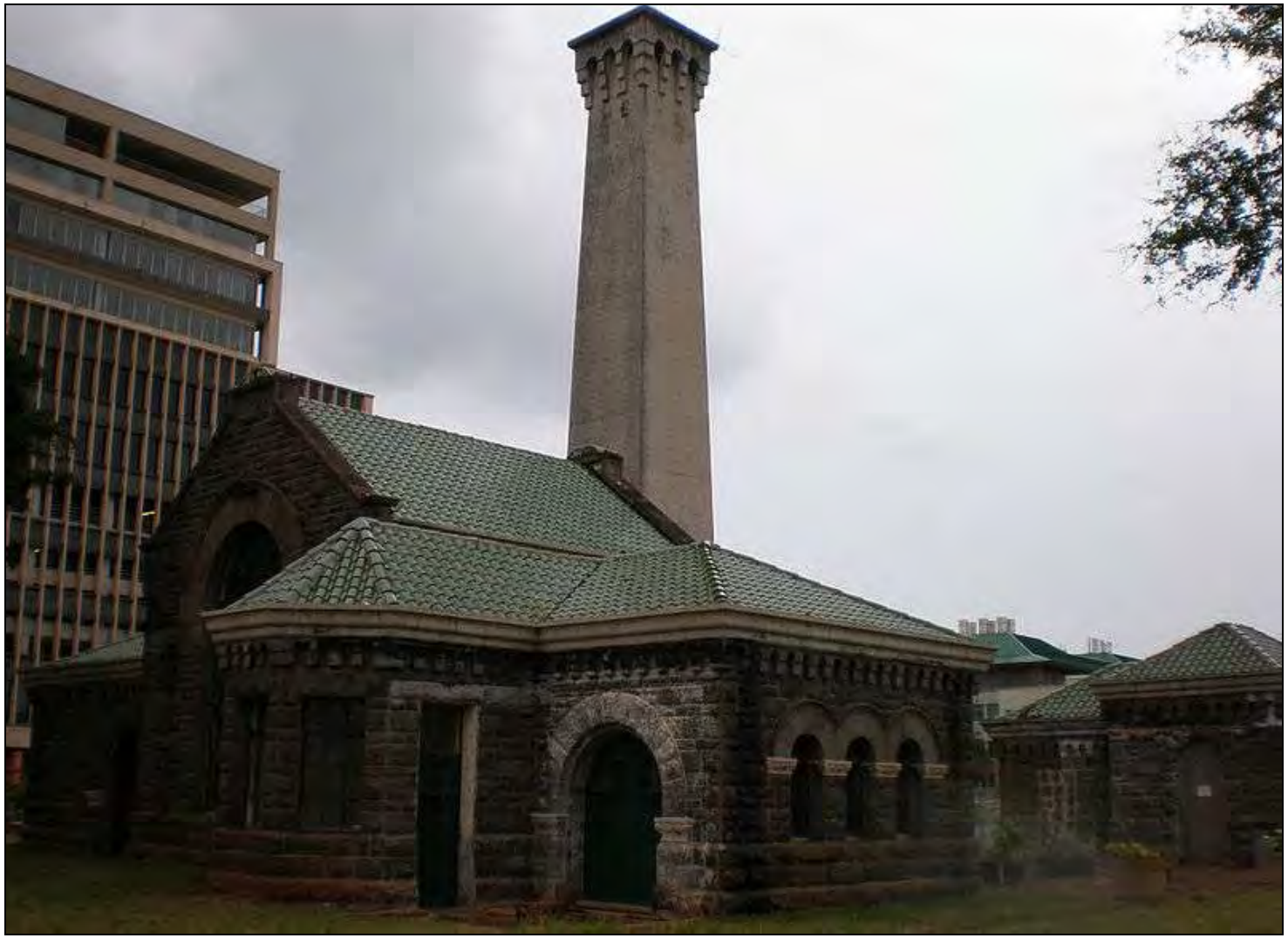

**Figure 115:** Photograph of Kaka‘ako Pimping Station Front Corner Elevation.

## SIGNIFICANCE ASSESSMENT & RECOMMENDATIONS

The sites documented in this AIS report were assessed for significance as outlined in Hawai‘i Administrative Rules §13-275-6. To be assessed as significant a site must retain integrity and must be characterized by one or more of the following five criteria:

(a) It must be associated with events that have made a significant contribution to the broad patterns of our history.

(b) It must be associated with the lives of persons significant in the past.

(c) It must embody distinctive characteristics of a type, period, or method of construction, or represent a significant and distinguishable entity whose components may lack individual distinction.

(d) It must have yielded or may be likely to yield, information important in prehistory or history.

(e) Have important value to native Hawaiian people or other ethnicities in the state, due to associations with cultural practices and traditional beliefs that were, or still are, carried out.

Both sites, Site 7457 and Site 20848, are assessed as significant under criterion "d" as they are likely to yield information important to history. Additionally, Site 7457 is assessed as significant under criterion "c" as the Old Hilo Jail building embodies distinctive characteristics of a type, period and method of construction; is the work of a noted architect (O.G. Traphagen); and possesses architectural, engineering, and design elements characteristic to public buildings constructed during the late 1800s and early 1900s.

**RECOMMENDATIONS**

The drainage ditch, Site 20848, is recommended for no further work. The ditch was documented through both inventory survey and data recovery studies. That documentation was field checked during the current study and was found to be accurate.

Site 7457, the Old Hilo Jail building, is eligible for listing on the Hawai‘i Register of Historic Places. It does represent a specific type of public building designed by a noted architect. It does exhibit architectural, engineering, and design elements of the late 19th and early 20th centuries.

The State of Hawai‘i Department of Public Safety and Department of Social Services and Housing have expressed a need for new inmate housing facilities at HCCC. The existing facilities are currently overcrowded. In addition, there is limited space at the HCCC facilities and there is no existing land within the property to construct much needed new housing facilities. The two agencies are proposing to build the new housing facility in the location of Site 7457.

There are also concerns with the state of the existing Old Hilo Jail and Annex buildings. The buildings are in need of repair and are expensive to maintain. They can no longer be used for inmate housing in their current condition. The cost to repair the Old Hilo Jail building and annual maintenance costs are prohibitive. Finally, the building is located on an active prison facility and is not accessible to the public, due to security concerns.

As a result of the existing conditions and the public need for additional inmate housing, the proposing agency is requesting that the Old Hilo Jail and Annex not be preserved in place. The agency is proposing to demolish the Old Hilo Jail Building and annex and is proposing to build additional inmate housing facilities to releive existing inmate overcrowding.

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# APPENDIX A – SHPD INTENSIVE LEVEL AIS FORM

| FOR SHPD USE ONLY: | Site # Click here to enter text. | TMK # Click here to enter text. |
|---|---|---|

## I. GENERAL INFORMATION

Common / Present Name: Old Hilo Jail
Historic Name: Hilo Jail
Property Owner: State of Hawai‘i
Address: 60 Punahele Street 96720
City/ Town/ Location: Hilo, Hawai‘I, Pi‘ihonua Ahupua‘a
County: Hawai‘i
TMK [(X)-X-X-XXX:XXX)]: (3) 2-3-023:005 (portion)
Subdivision/Neighborhood: N/A
Latitude: 279988.35 m E
Longitude: 2181701.77 m N
Parcel Number: 005
Historic District: N/A
Original Use: Jail
Current Use: Storage and Work Shop
Architect/ Builder (if known): O.G. Traphagen
Date of Construction (if known): 1905

## II. Photograph of Resource



Prepared By: Glenn G. Escott, M.A. Consulting Firm: Scientific Consultant Services, Inc.
Address: PO Box 155 Kea'au, HI 96749
Telephone Number: 808-938-0968 Email:ggescott@yahoo.com Date: 3/17/2017

**III. CONDITION ASSESSMENT**

Category (select all that apply):

☐Building(s)

☐Residential ☐Commercial ☐Educational ■Public/Civic ☐Religious

☐Structure(s)

☐Object(s)

☐Site(s)/Landscape(s)

☐Archaeology or potential for archaeology (Please provide a description of the potential for archaeology within VI. Description of Resource Features below.)

Condition:

☐Excellent

☐Good

■Fair

Eligibility (select all that apply):

■National Register of Historic Places

■State Register of Historic Places

☐Not Eligible

■Eligible

☐Listed

☐Contributing to Historic District:

Name of District: Click here to enter text.

☐Unknown

Criteria of Significance (select all that apply)

☐A: Associated with Events

☐B: Associated with Significant Person(s)

■C: Distinctive characteristics of a type, period or method of construction; work of a master; possess high artistic values (Architecture, Engineering, Design)

■D: Have yielded or may be likely to yield information important to history or prehistory.

| FOR SHPD USE ONLY: | Site #Click here to enter text. | TMK # Click here to enter text. |
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## IV. MAP



| FOR SHPD USE ONLY: | Site #Click here to enter text. | TMK # Click here to enter text. |
|---|---|---|

## V. DESCRIPTION

Materials (please check those materials that are visible):

Height

■Stories: Two Stories ☐N/A

☐Below Ground ☐Other: Click here to enter text.

**Exterior Walls (siding):**

| | | |
|---|---|---|
| ☐Aluminum Siding | ☐Metal | ☐Plywood |
| ☐Asbestos | ☐Shingles-Asphalt | ☐OSB |
| ■Brick | ☐Shingles-Wood | ☐Fiberboard |
| ☐Ceramic | ☐Stone | ☐Fiber Cement |
| ☐Concrete | ☐Stucco | ☐Vinyl Siding |
| ☐Horizontal Wood Siding | ☐Vertical Wood Siding | ☐Other: |
| ☐Log | ☐Engineered Siding | Click here to enter text. |

Roof:

| | | |
|---|---|---|
| ☐Asphalt, shingle | ☐Slate | ☐Wood Shingle |
| ■Asphalt, roll | ☐Built Up | ☐None |
| ☐Metal | ☐Ceramic Tile | |

☐Other: Click here to enter text.

Foundation:

| | | |
|---|---|---|
| ☐Brick | ☐Concrete Slab | ☐Stone |
| ☐Concrete Block | ■Poured Concrete | ☐Raised/Pile |

☐Other: Click here to enter text.

Structural Support:

| | | |
|---|---|---|
| ☐Baled Hay | ☐Concrete Framed | ☐Frame-wood |
| ☐Concrete Block | ■Concrete Poured | ☐Frame-metal/steel |

| FOR SHPD USE ONLY: | Site #Click here to enter text. | TMK # Click here to enter text. |
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☐Brick-load bearing ☐Puddled Clay ☐Sod
☐Stone-load bearing ☐Rammed Earth
☐Other: Metal Beam and Concrete

Windows:

☐Double Hung Sash ☐Jalousie ☐Stained Glass
☐Single Hung Sash ☐Glass Block ☐Replacement
☐Casement ☐None/Unknown ☐Aluminum
☐Fixed ☐Ribbon ☐Vinyl
☐Other: Iron Bars

Lanai(s)

☐Arcade ☐Recessed ☐Wrap-around
☐Balcony ☐Stoop ☐Verandah
☐Porte-Cochere ☐Portico ☐None
☐Other: Click here to enter text.

Chimney

☐Brick ☐Stuccoed Masonry ☐Stove Pipe
☐Concrete ☐Stone ☐Siding
☐None ☐Other: Click here to enter text.

**VI. Narrative Description**

(Include within the description of resource features any changes to the resource that have been made over time.)

**A. Describe exterior features:**

Exterior walls are red brick with yellow paint. Foundation is finished with mortar. Wood-frame and corrugated metal port-cochere at front entrance. Smooth concrete steps at front entrance. Front entrance is hinged swinging metal bars with single hinged latch. There are two large windows with bars on the first floor on both sides of the front entrance. The front entrance and first floor frames are arched. There are seven rectangular windows with bars along the top of the second floor front of the building. There are electrical meter boxes and electrical conduit on the front and two sides of the building. Both sides of the building have three large rectangular windows (two on first floor) and three small rectangular windows (two on the second floor). All windows are metal bars. The larger windows have corrugated metal awnings supported by metal supports. There are cast iron waterlines and waste water drain pipes on both sides of the building. The rear of the building has a centrally located arched doorway entrance. There are two large rectangular arch windows with bars on either side of the rear entrance.

There are six small rectangular windows with bars on the first floor. There are nine small rectangular windows with bars along top of the second floor. All of the building's windows contain modern, glass jalousie windows and likely were screened. Some of the windows contain exterior screens and the remains of wood frames that attached the screens to the exterior of the building. The old roof was a corrugated metal hip and valley design and was replaced between 2013 and 2014. The new roof is flat post and beam framed wood supported over the concrete ceiling of the building. The roofing asphalt is applied over rolled rubber barrier. The roof is fairly new and has been repaired several times in the past. There is a low parapet along the outside of the edges and five skylights/vents along the centerline of the roof. The roof is accessed through a wooden hatch that rests freely on the roof (no hinge or latch).

There is a wooden (T-111) shed with corrugated metal shed roof constructed onto the northeast side of the Old Jail. The rear entrance to the Old Jail is accessed through a door in the wooden shed. The shed contains a small workshop with tools and an industrial washer and dryer. The shed entrance is also the access to the Old Hilo Jail Annex, a long wooden structure constructed at the northeast corner of the Old Jail building. The Annex foundation is wood-form poured concrete. The siding is five inch milled boards. The structure has a gable roof of corrugated metal. The roof contained a large rectangular skylight at one time but is now gone. The roof is badly rusted, has numerous holes, and is sagging noticeably. There is a single rectangular window and an arch vent on the northeast end of the Annex and seven rectangular windows along the northwest side of the building. The windows have metal bars with exterior framed screens. The southwest end of the Annex appears to have been removed. There is a rectangular poured concrete slab where the rest of the Annex building once stood.

**B. Describe distinguishing interior features:**

The first floor of the Old Hilo Jail is split-level. There are two rooms on the lower level at either side of the front entrance. A centrally located stair way leads to the first floor upper level. There is a swinging metal-bar door at the top of the stairs to the upper level. The upper level of the first floor contains a centrally located corridor (NW/SE). The corridor opens to six rooms and two closets. The floor is concrete. The interior walls are painted concrete. The doorways are arched and the walls are slightly vaulted where they meet the concrete ceiling. Metal beams can be seen in the walls where the cement has fallen away and metal wire mesh can be seen in the ceiling where the cement has fallen away from them. The imprint from the form boards and some type of sheeting (paper or plastic) is evident in the cement on the ceiling. Most of the doors are solid wood panel doors. Two of the doors are iron with a stationary latch and hinged iron bar or solid iron hatch at eye-level. There is a staircase in the north corner of the building leading to the second floor.

The second floor contains 14 inmate cells: 11 of the cells are 8.0 ft long by 6.0 ft wide, two cells are 8.0 ft by 6.0 ft, and one is an L-shape cell 26.0 ft long by 6.5 ft to 8.0 ft wide. The floor is concrete. The interior walls are

painted concrete. The doorways are arched and the walls are slightly vaulted where they meet the concrete ceiling. Metal beams can be seen in the walls where the cement has fallen away and metal wire mesh can be seen in the ceiling where the cement has fallen away from them. The imprint from the form boards and some type of sheeting (paper or plastic) is evident in the cement on the ceiling. Most of the doors are modern, hollow wood doors. The tops of the doors have been cut to fit the arched doorways. Three of the doors are iron with a stationary latch and hinged solid iron hatch at eye-level. There is a small wooden door the right of the stairway from the first floor that open to wooden stairs leading to the roof.

The Old Hilo Jail Annex interior contains thirteen inmate cells accessed by a centrally-located corridor along the center of the Annex. There were likely additional cells that were removed from the southwest end of the Annex building. The cells are 9.5 ft long by 7.0 ft wide. The interior is constructed entirely of wood. The doors are constructed of six inch wide solid wood planks. The doors have iron hinges and sliding iron latches. There is a single, hinged solid iron hatch set at eye-level in the doors. The hatches have metal hinge latches that can be locked. There is a large skylight above the central corridor. The skylight window is gone. There are metal bars in the ceiling below the skylight. The wood interior has extensive water damage and rot. There are numerous holes in the ceilings and walls of the Annex. The annex is currently being used to store tools, old parts, and trash.

**C. Describe the landscape and setting (include adjacent sites/resources):**

The Old Hilo Jail is in the northwest corner of the Hawai‘i Community Correctional Center (HCCC). The HCCC facilities include at least four modern buildings/structures spread across the property. The property grounds are mown grass and a few trees. Two water ditches, Sites 50-10-35-20848 and 20849, were documented in a Paul H. Rosendahl, PhD, Inc. AIS report (Walker et al. 1996) and data recovery report (Wolforth 1999). Site 20849 has since been replaced with a drainage pipe and is covered with fill. The HCCC is bounded on three sides by paved streets and is bounded on the northeast by a church and residential properties. No other historic properties, archaeological sites, or cultural resources are located in close proximity to the HCCC property.

| FOR SHPD USE ONLY: | Site #Click here to enter text. | TMK # Click here to enter text. |
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## VII. Statement of Significance

Site 7457 is significant under criteria c and d. The Old Hilo Jail is significant under criterion c as it embodies distinctive characteristics of a type, period and method of construction; is the work of a noted architect (O.G. Traphagen); and possesses architectural, engineering, and design elements characteristic to public buildings constructed during the late 1800s and early 1900s. The Old Hilo Jail is also significant under criterion d as it has yielded and may be likely to yield information important to history.

| FOR SHPD USE ONLY: | Site #Click here to enter text. | TMK # Click here to enter text. |
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## VIII. Survey Analysis

Please provide your observations about the survey; including constraints and opportunities for future research and/or survey in connection to this site

A complete set of architectural plans and building floor plans were field-checked and were used for an Intensive Level AIS study (Escott 2017). A very detailed and complete photographic record containing 536 photographs was made during the study. An extensive written description of the Old Hilo Jail building, including descriptions of construction materials and architectural elements was collected for the AIS report.

Constraints to the study included a lack of historical documents pertaining to the Old Hilo Jail. Also, the proximity of another HCCC building made it difficult to photograph the front elevation of the Old Hilo Jail building. Numerous oblique photos of the front elevation were taken that accurately depict the front elevation of the building.

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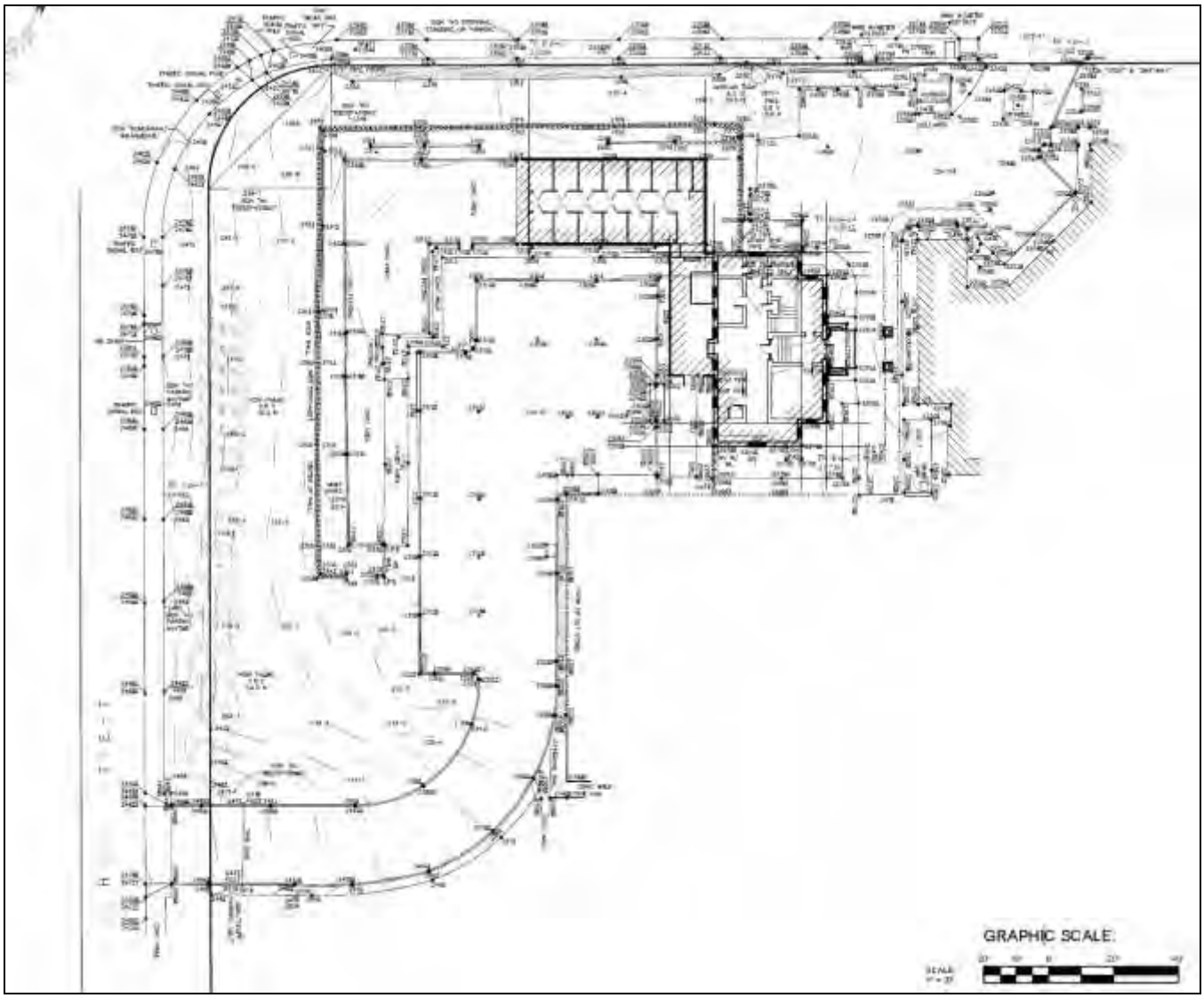
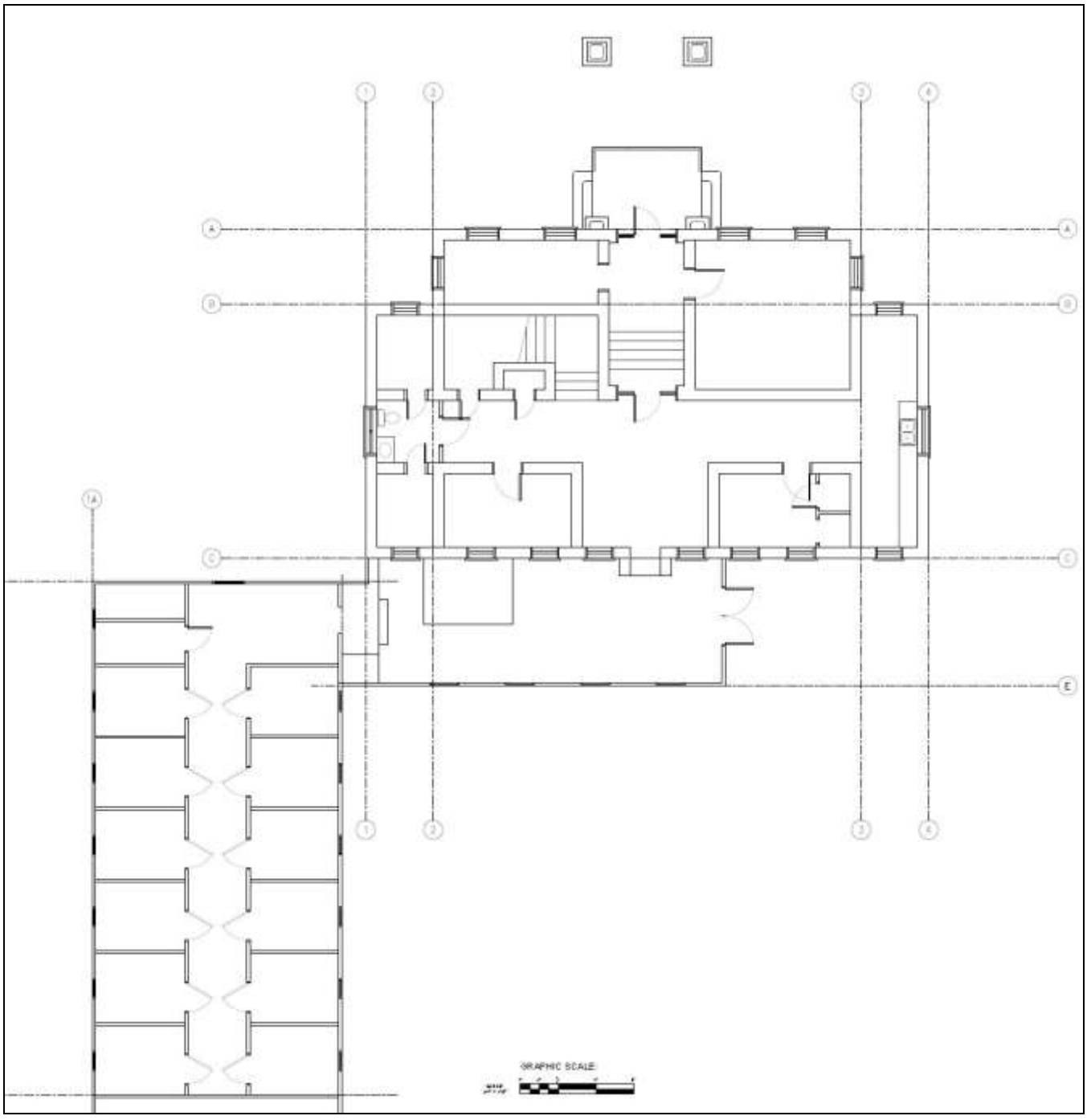
**X. Continuation Sheet**

Please use this sheet those that follow to attach additional information about the site; including, but not limited to additional floor plans, drawings, photographs, maps, etc.

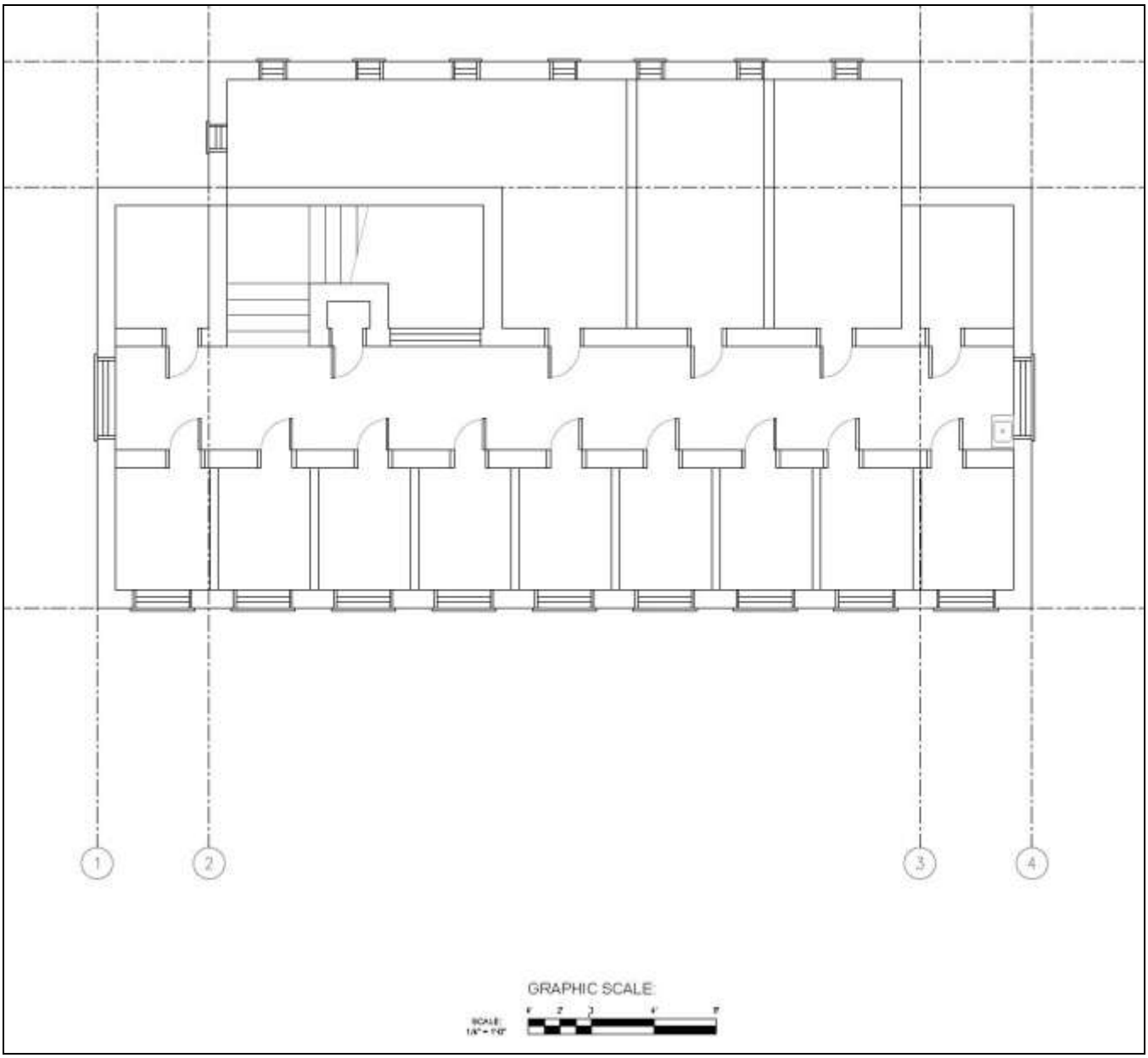



**Site 7457 Old Hilo Jail and Old Hilo Jail Annex Site Plan Schematic.**

| FOR SHPD USE ONLY: | Site #Click here to enter text. | TMK # Click here to enter text. |
|---|---|---|




**Site 7457 Old Hilo Jail and Old Hilo Jail Annex First Floor Plan.**




**Site 7457 Old Hilo Jail Second Floor Plan.**

**SIHP Number Request Form for Archaeological and Historic Architecture Sites (All fields required- highlighted fields not required for Archaeological Sites) First row (in gray/italics) is an example.**

| SIHP Number | TEMP ID | Library Number/Reference | Type of Report | Date Assigned | Resource Name | Site Description | Consultant | TMK | Island | District | Ahupua`a | Address | City, County, Zip | Formal Site Type /Category of Property | Site Function or Use | Number of Features | Year Built | Site Period/Period of Significance | Condition | Integrity | Eligibility | Criteria of Significance | District/Multiple Property | Burials Present? | USGS Quad Name/No. | UTM Datum/Zone | Easting | Northing | GPS Point Location Description | Comments | Preservation Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *SHPD TO FILL OUT* | *TS-1234* | *O-1234* | *AIS, RLS* | *SHPD TO FILL OUT* | *Terrace Complex* | *Complex consisting of 12 features constructed for habitation and agriculture in the precontact period.* | *CSH, SCS, Pacific Legacy, etc.* | *(1) 2-3-456:789* | *O'ahu* | *Wai'anae* | *Nanakuli* | *12-3456 Nanakuli Ave.* | *Waianae, Honolulu, 96792* | *Complex, Terrace* | *Habitation, Agriculture-irrigated* | *12* | *1912* | *Precontact, Historic, etc.* | *Excellent, Good, Fair, Poor* | *YES/NO* | *Eligible, Not eligible, Contributing element, etc.* | *A,B,C,D,E* | *Waianae Historic District* | *YES/NO* | *Waianae/07* | *NAD83 UTM Zone 4 North* | *567891* | *2345678* | *Center of site, At doorstep, In driveway, etc.* | *Site has been damaged due to natural collapse and/or bulldozing in the area.* | *Recommended for preservation, No further work, etc.* |
| | | | HABS | | Old Hilo Jail | 1905 brick Hilo Jail building and attached 1950s wood cell block annex building | Mason Architects, Inc. | (2) 3-23-005:000 | Hawaii | Hilo | Waiakea | 60 Punahele Street | Hilo, Hawaii, 96720 | Building | Government, correctional | 2 | 1905, 1954-1964 | Early 20th Century | Fair | Yes | Eligible | A, C | N/A | N/A | Hilo | NAD83 UTM Zone 5 | 279974 | 2181692 | Approximate center of building complex | N/A | N/A |

United States Department of the Interior

NATIONAL PARK SERVICE
1849 C Street, N.W.
Washington, D.C. 20240

IN REPLY REFER TO:

16 August 2018

Lesleigh Jones
Mason Architects, Inc.
119 Merchant Street, Suite 501
Honolulu, HI 96813

Dear Ms. Jones,

On behalf of the National Park Service's Heritage Documentation Programs (HABS/HAER/HALS), I acknowledge the receipt and acceptance of the Historic American Buildings Survey documentation of the Hilo Jail (HABS HI-598).

The completed documentation will be transmitted to the Prints and Photographs Division of the Library of Congress. The records are in the public domain and will be accessible through the library.

Sincerely,

Mary McPartland
Collections Manager

**HISTORIC AMERICAN BUILDINGS SURVEY**

INDEX TO PHOTOGRAPHS

HILO JAIL — HABS No. HI-598
(Old Hilo Jail)
(South Hilo Jail)
(Hilo Community Correctional Center Administration Building)
60 Punahele Street
Hilo
Hawaii County
Hawaii

David Franzen, Photographer — April 2018

| | |
|---|---|
| HI-598-1 | Overview of Hilo Jail from southwest side of property. View facing north. |
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| HI-598-4 | Main front door showing passage to interior and rear entry door. View facing southwest. |
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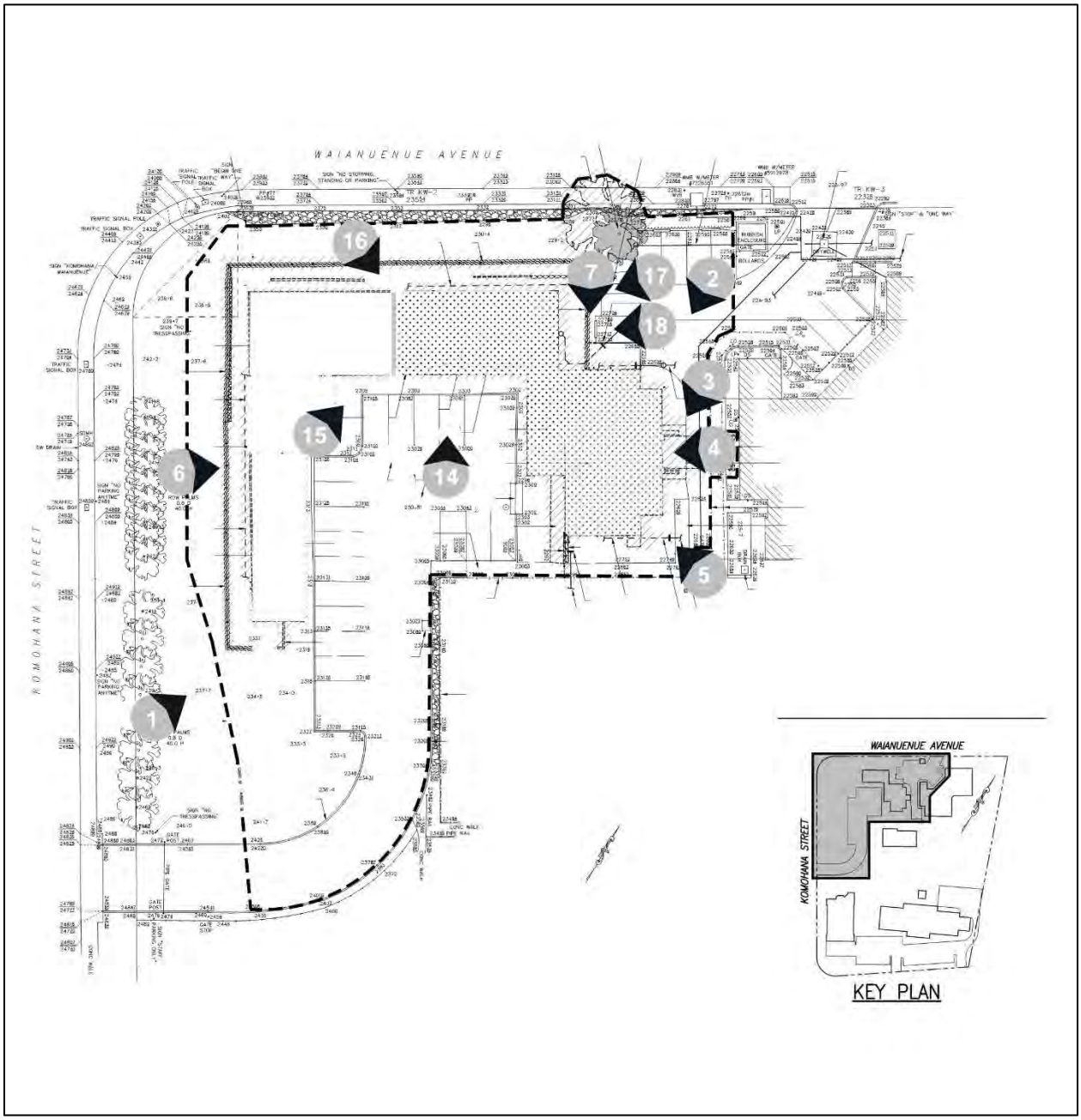
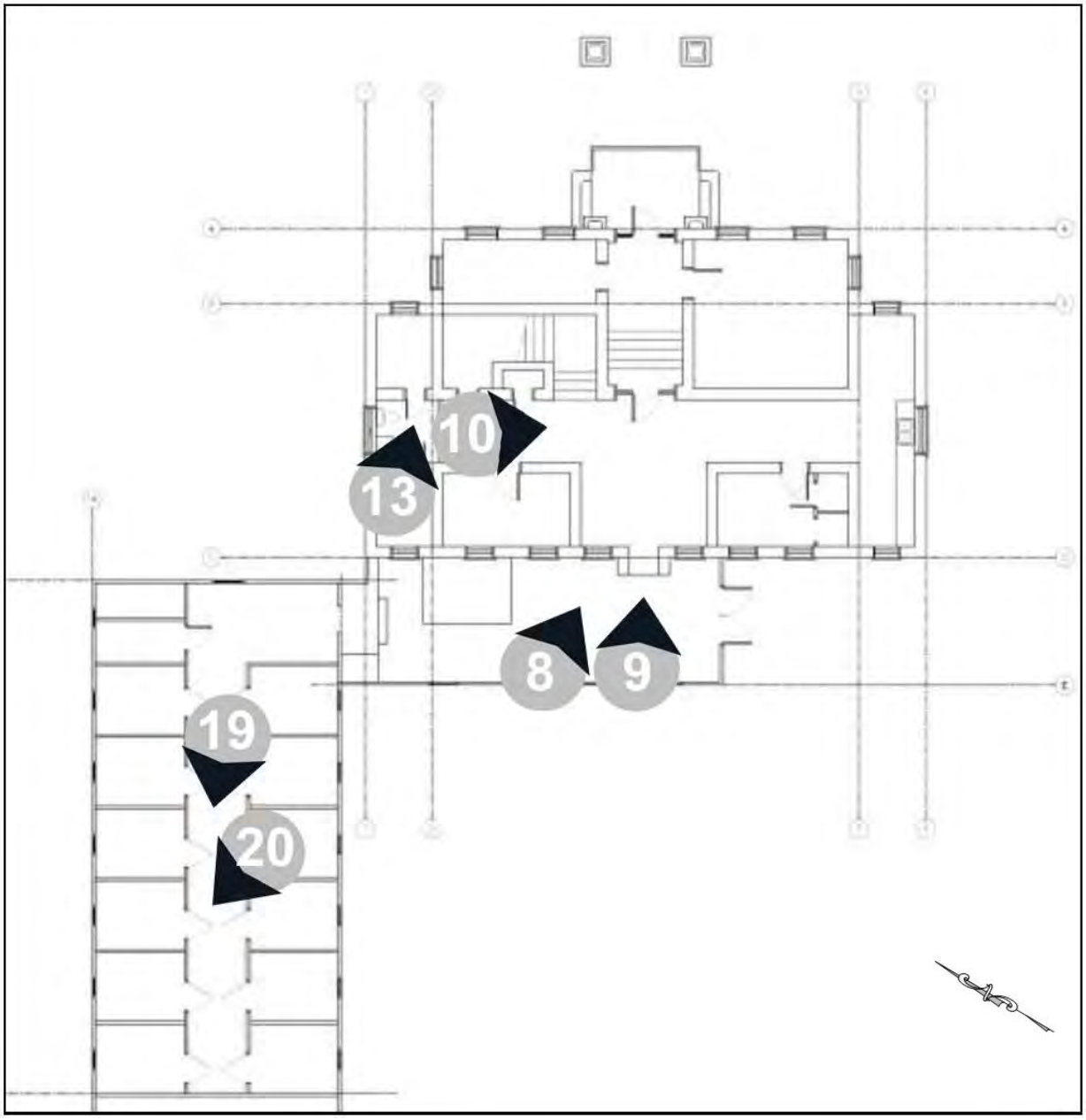
| HI-598-19 | Interior hall of wood cell block addition showing cell doors to the right. View facing south. |
| HI-598-20 | Detail of wood cell door in wood cell block addition. View facing south. |

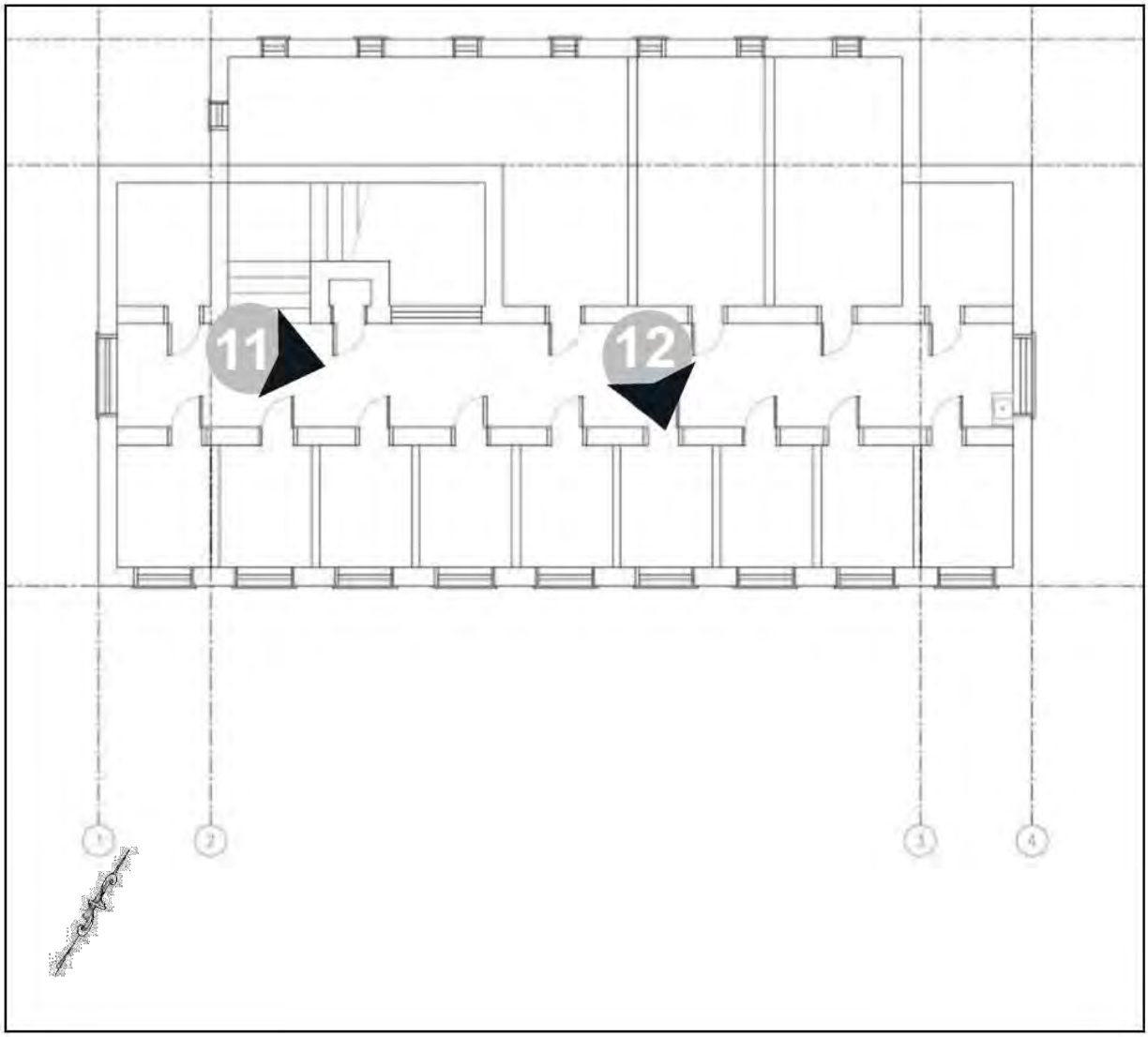
**PHOTO KEY (Prepared by Mason Architects, Inc.)**




*Base plan courtesy of Okahara and Associates*




*Plan courtesy of Okahara and Associates. First floor plan showing brick building at top and wood cell block at left.*




*Plan courtesy of Okahara and Associates. Brick building, second floor plan.*

**HISTORIC AMERICAN BUILDINGS SURVEY**

**HILO JAIL**

**(Old Hilo Jail)**

**(South Hilo Jail)**

**(Hilo Community Correctional Center Administration building)**

**HABS No. HI-598**

**Location**: The Hilo Jail is located at 60 Punahele Street, Hilo, Hawai'i County, Hawai'i. The property is within the Waiakea *ahupua'a*, in the *moku* (district) of Hilo on the island of Hawai'i. The Old Hilo Jail is located near the northwest corner of a large lot bounded by Waianuenue Avenue (northwest), Komohana (southwest), and Punahele (southeast) Streets on three sides, and by residences to the fourth (northeast).The coordinates for this property, representative of the approximate center of the building, are latitude 19.718634 and longitude -155.099271. These coordinates were obtained in May 2018 via Google Earth, which uses WGS 1984 datum. There are no restrictions on the release of the locational data to the public.

**Significance**: The Hilo Jail was designed by the prolific American architect Oliver G. Traphagen and expresses the distinct architectural and political influences of its time. This utilitarian municipal building, loosely modeled after the mid-19th century Oahu Jail, has a simple design that includes a *porte cochere*, a traditional jail with a linear cellblock plan, and small, arched door and window openings filled with metal bars, roughly 12"-thick cellblock walls, and steel doors. Planned just a few years after Hawaii's 1898 annexation to replace an earlier jail in downtown Hilo, it was constructed the same year (1905) that the territorial counties were first established. The robust, new brick building projected Hilo County's authority. Its design reflects its origins in the Hawaiian Monarchy and the subsequent American interests that overthrew it.

**Description**: The Hilo Jail building shares a lot with several other buildings that are part of the Hawaii Community Correctional Facility and parking areas, separated from one another by fenced yards, and open lawn. The lot slopes from southwest toward the northeast, with the steepest area along Komohana Street. The lot is also divided approximately in half by a nearly diagonal swale. The area immediately surrounding the old jail includes a mortared stone wall with embedded concrete fence posts that read approximately 10' above ground level. Along the Waianuenue Avenue side of the building there is a drainage channel made up of the fence's stone wall and a second, parallel stone wall that is located closer to the building.

The jail building is made up of two formerly separate buildings that have been connected via an addition to the larger of these two. Overall the complex is reverse L-shaped in plan, and bordered by asphalt parking areas and drives, as well as grassy lawn areas.

The larger of the two buildings is a two-story, painted brick building that is symmetrical in plan, with a projecting bay at the eastern side. It has a flat roof with low parapet, and a poured concrete foundation. The concrete foundation is

at-grade at the upslope, western side of the building, and approximately 4’ above grade at the downslope side. There is a porch centrally located on the downslope (eastern) side of the building. It is covered by a secondary gable roof that extends beyond the porch to shelter a driveway, and connect to one of the newer buildings nearby. The secondary roof is supported by concrete columns, wood beams and rafters with decorative, tails and is clad with corrugated metal. The walls are primarily made up of painted brick, laid in a common bond pattern. At the downslope side, portions of the walls are part of the concrete foundation, and resemble a plinth upon which the building rests.

The building has two entrances, the main, front entrance is reached via the porch on the eastern side of the building. The porch is also concrete, extends out from the building approximately 6’, has two risers on each side, and a metal pipe railing. With the metal pipe railing, curved corners on the risers, and a decorative rectangular inset area at the front, this porch does not appear to have the same construction date as the building. The doorway is a segmentally arched opening filled with a metal barred grating surrounding a metal barred door. A second doorway is centrally located at the rear (western) side of the building and is now within the shed addition on this side. This entrance is reached via two small steps from the concrete floor of the addition. A frame with a stepped upper molding that projects out from the rear wall by approximately 2’ houses the segmentally arched door opening. The opening has been filled with a metal door-frame, and a flush wood door.

The fenestration pattern is regular and symmetrical at the front. Window openings on the building differ, with large openings of varying dimensions mainly located on the first floor, and small openings in two sizes on both floors. All windows have concrete sills, and larger windows are segmentally arched; smaller windows either have a flat arch, or no arch. The six largest windows are located on the three sides of the eastern, projecting bay, with two evenly spaced on each side of the main entry door, and one each on the north and south side of the bay. Other large windows are centrally located on the northern and southern sides of the main portion of the building on both the first and second floors (denoting the ends of hallways that extend the length of the building on each floor), and at either side of the central rear entry door. Smaller windows are located on the rear wall, with six on the first floor, four north of the entry door and two to its south; and nine that are slightly larger on the second floor. Other small windows are located on the front of the building, with two on the first floor, and eleven, the building’s smallest, on the second floor, including the north and south sides of the projecting bay. All windows are filled with metal bars. Most also have insect screen at the exterior. A small number have glass jalousies at the interior. Several of the larger windows have corrugated metal awnings supported on wood brackets.

The interior of the building contains seven rooms on the first floor, and fourteen on the second. Rooms on the first floor include a former office at the southeast, a cross-shaped open entry hall and central hall, two storage rooms, two small former cells, and two storage closets. A wide staircase leads to the second floor, where there are fourteen cells arranged on either side of a central hallway. The nine cells along the western side of the hall are all small. On the eastern side of the hall, there are two small cells at either end, two larger cells of approximately

equal dimensions, a large cell formerly used as a dayroom, and a small room providing roof access. The walls and ceiling are plastered, and most of the floors are vinyl composition tile or concrete, with an elevated wood floor in one room. Doors include non-historic flush wood, historic multi-panel wood, historic metal cell doors with face-height hatch-type openings, and historic doors made of metal bars. Many historic doors retain historic hardware, including knobs, escutcheons, hinges and latches. The building does not appear to have originally had plumbing; however, three sinks and one toilet have been installed at some point.

Attached to the eastern side of the brick building is a one story, shed-roofed addition. This is a wood frame structure, with dark-stained, scored plywood walls that are open to the frame at the interior. There are four jalousie windows along the eastern wall, one flush, double entrance door on the southern end, and a single door opening northern end that opens into the wood cellblock annex to the main jail building.

The wood cellblock annex is rectangular in plan, and is oriented on an east to west axis. It is one story with a gable roof that has overhanging eaves and exposed rafter tails. The roof is clad with corrugated metal panels. There is also an area of missing cladding that appears to have contained a skylight. The foundation is poured concrete and, is located varying distances above grade, depending on the ground slope. The walls are vertical boards, with a high girt. Just above the girt are regularly spaced small windows. The windows are nearly square, barred openings covered with metal mesh screen. The eastern end of the building has three bays that are inset below the gable roof, and have projecting vertical separating walls. Aerial images show that sometime between 2010 and 2012, the building was divided at this location, and the other portion of the building demolished.[1] The concrete foundation of the demolished building portion remains, extending to the east and south of the extant portion. The inset bays express the locations of cells on either side of the central hallway. Plumbing lines are visible just above the foundation, corresponding to each cell.

The interior of this building is made up of an entryway, storage space (possibly a former cell), a central hallway, and twelve cells of the same size. Each cell has a historic wooden door made up of vertical and horizontal boards with Z-bracing that has a face-height hatch, and a metal latching mechanism. The cells contain an exterior window, and one above the hallway door. The walls are painted, and the floor is finished concrete. No plumbing or other fixtures remain.

**History**: Planned just a few years after Hawai‘i’s 1898 annexation to replace an earlier jail in downtown Hilo, it was constructed in 1905, the same year that the territorial counties were first established.

It was built on land approximately one mile southwest of Hilo town, along Kaumana Road (now called Wainuenue Avenue), near several stone quarries and Hilo Hospital. Over time the area developed, as a new high school and residences were constructed nearby.

Planning began as early as 1903, when $16,000 was set aside by the Territorial Senate for the construction of a new jail in Hilo. The old jail in downtown Hilo had

[1] “Hilo” Google Earth 5Q 279974.64m E 2181692.44m N. December 11, 2010 and May 13, 2012, accessed July 17, 2018.

become crowded, with up to 80 inmates at times in a building with only eleven cells, and after input from a committee of prominent local businessmen, and eventual agreement from the governor, it was decided to locate the new jail farther from town. The chosen location was also nearer to quarries, making it more convenient to use inmate labor that was often used in municipal projects that required stone. Initial plans called for the building itself to be modeled after the Oahu Prison, and constructed of stone quarried on site. It was to have some sixty rooms total, including: "an office, guard rooms, examining room, 48 prisoners' cells, 6 cells for witnesses and two large double cells for women inmates."[2]

The building was described as such:

> The dimensions of the building are 27 feet by 120 feet in length in the shape of a rectangle, with a seven foot corridor running the full length. Each cell is 8 feet by 10 feet. The main entrance is in the center, with a double stairway leading from the ground floor to the upper story…with only one means of entrance and exit through which an escape might occur. [3]

In 1904, noted architect Oliver G. Traphagen was enlisted to provide design drawings for the jail building.[4] Traphagen moved to Hawai'i in 1897, from Duluth Minnesota, where he was already a successful architect. He was born in Tarrytown New York in 1854, and moved to Minnesota in the 1870s with his parents. After work as a carpenter, he apprenticed with architect George Wirth, ultimately practicing in Duluth for fifteen years before the move to Hawai'i. The timing of Traphagen's move was fortuitous, sandwiched between the overthrow of the Hawaiian Monarchy, and the annexation of the former kingdom by the United States. With the nation now under control of American interests, business investment and construction was in a period of growth. Traphagen was quickly engaged in projects, beginning with the Judd Building on Fort and Merchant Streets. He went on to design a number of prominent hotel, mercantile and other buildings in Honolulu and Hawai'i during his nine years practicing in the islands. Extant examples include Moana Hotel and Kakaako Pumping Station; Traphagen designed buildings that are no longer extant in Hawai'i including the Haleiwa Hotel, Hackfeld and Company Building, and an assortment of buildings on downtown Honolulu's most prominent streets: Fort, Merchant, Nuuanu and King. Residential work for prominent residents was also a part of Traphagen's portfolio, with homes for August Drieron, George R. Carter, and James B. Castle. Traphagen left Hawai'i in 1907, moving to Alameda, California where he continued to practice (including designs for Dole Hall at Punahou School campus, and for a large Bishop Estate building that does not appear to have been constructed) until his retirement in 1925. He died in California in 1932.[5]

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[2] "Court House and Jail*," Hilo Tribune*, March 20, 1903, p. 2. "At Loggerheads over Jail Site," *Hilo Tribune*, October 4, 1904, p. 6

[3] Ibid.

[4] "Plans for Hilo Jail," *Hawaiian Star*, September 30,1904, p. 2. Jami Wallace *O.G. Traphagen FAIA: A Biography*, 1979.

[5] *"Seven-Story Block for Bishop Park," Commercial Advertiser*, February 1, 1913, p. 1

Bids for the construction contract included tiers of building options, beginning with the core building only, and up to two wings of cells. With the total planned expenditure of $16,000 for land, architectural services and construction, contractor L.M Whitehouse's bid of $13,895 for the construction with two wings of cells was the winning tender. Ultimately it appears that the amount allotted did not cover all construction expenses, and only the central portion of the jail was constructed. Not only this, but rather than using stone quarried on site, the jail was constructed of brick likely imported from the continental United States. [6]

When the first section was complete in September 1906, the jail contained 16 cells, and had no dining or cooking facilities. Plans were made to deconstruct a structure from the former Jail in downtown Hilo that contained those facilities, and reassemble it at the new location.[7] It appears that the additional sections were not added as planned. Nonetheless, the robust brick building projected the newly created Hilo County's growing authority.

As early as 1910, complaints of overcrowding were being made about the jail, with up to 107 inmates at some points during the year, in contrast to the 22-30 the jail was intended to accommodate.[8] By 1911, allegations were made of underfeeding leading to Beriberi, a disease brought on by lack of proper nutrients.[9] By 1913, the jail and its jailer were the focus of investigations for its treatment of prisoners, sending prisoners to work on public roads and projects without clothing, or to work on private projects, as well as at least one death from Beriberi.[10] An appropriation of $20,000 to enlarge the jail was made in 1913, though it is unclear if this work was ever accomplished.[11] At some point between 1954 and 1964 a new wood cell block was added to the rear of the brick building.[12]

In 1967, a new Hawaii County Jail site was planned farther outside of downtown Hilo, in Panaewa, and it was anticipated that the inmates would be moved out of the Wainuenue Street building between 1970 and 1971. The inmate population had diminished from approximately 50 some years earlier to only 14 at the time of the decision.[13] In 1978, a new building was constructed on the site, and 32 prisoners would be moved from the old jail building into the new building, where "[t]here also are individual toilets with running water instead of buckets that are emptied once a day."[14] It is unclear if inmates were housed in the old building

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[6] "…material to be used in the construction of the Hilo Jail has arrived from the mainland." *Hilo Tribune* October 3, 1905. p. 4.

[7] "Moved to New Hilo Jail," *Hawaiian Star*, September 21, 1906, p. 5.

[8] "Hilo Jail Now Has Standing Room Only," *Commercial Advertiser*, November 27, 1910, p. 1.

[9] "Prisoners Show Effect of Apparant Lack of Food While in Hilo Bastile," *Commercial Advertiser,* November 29, 1911, p. 11.

[10] "Japan's Consul-General Takes Up Hilo Jail Scandal," *Commercial Advertiser,* January 16, 1913, p. 9.

[11] "Hiloites Score School System," *Honolulu Star-Bulletin,* February 17, 1913, p. 8.

[12] Aerial images: USN V VJ 61, October 14, 1954. Hawaii State Archives, folder PPA-14-3, photo 8-07; and USDA Flightline 62, image no. 5409 (EKL-6CC-13), January 16, 1965, available at: http://magis.manoa.hawaii.edu/remotesensing/GeoserverFiles/ShpFiles/Hawaii/062/jpegs/5409. Accessed July 17, 2018.

[13] Walt Southward, "Hilo Jail to Move From Downtown to Panaewa Site," *Honolulu Advertiser,* June 29, 1967, p. C-14.

[14] Hugh Clark "Good news: a new jail; bad news: it's too small," *Honolulu Advertiser.* May 5, 1978. p. A-3.

after this time. As of 2018, the brick jail building, wood cell annex and shed addition were used for maintenance activities and storage. The second floor of the brick building had been damaged by a fire in 2017 that scorched the walls and ceiling, and destroyed ceiling-hung light fixtures.

The brick building has not been significantly altered since construction, with the most noticeable alterations the cell block and shed additions to the rear. The cell block is also historic, despite not being part of the original construction. At some point, likely the 1930s, a hipped roof was added over the original flat roof with parapet that had initially been roofed with "felt, pitch and gravel."[15] Glass jalousies have also been installed in several windows. At the interior, alterations include replacement doors at most upstairs cells, installation of two sinks and one toilet, addition of composition tile to some floors on the first floor, and installation of a raised wood floor in one first-floor room. Some of the cells retain their original metal doors with face-height hatches (some barred), exterior latch-type locking mechanisms and oversized hinges. Sometime between 2010 and 2012, much of the wooden cell annex was demolished. The portion that remains retains historic features including double-thickness wood-plank cell doors with face-height hatches.

**Sources**:

Clark, Hugh. "Good news: a new jail; bad news: it's too small." *Honolulu Advertiser*, May 5, 1978: A-3.

*Commercial Advertiser.* "Hilo Jail Now Has Standing Room Only." November 27, 1910: 1.

*Commercial Advertiser.* "Hilo Jailbirds Interest Keefe." December 19, 1910: 9.

*Commercial Advertiser.* "Advertisement." August 6, 1911: 15.

*Commercial Advertiser.* "Prisoners Show Effect of Apparant Lack of Food While in Hilo Bastile." November 29, 1911: 11.

*Commercial Advertiser.* "A Pest Hole, is the Hilo Jail." January 8, 1913: 9.

*Commercial Advertiser.* "The Hilo Jail Scandal." January 15, 1913: 4.

*Commercial Advertiser.* "Japan's Consul-General Takes Up Hilo Jail Scandal." January 16, 1913: 9.

*Commercial Advertiser.* "Concentrated Lye, Sulphuric Acid and Cyanide to Clean up Hilo Jail." January 28, 1913: 9.

*Commercial Advertiser.* "Prison Reform Legislation." February 9, 1913: 4.

*Hawaiian Gazette.* "Bad Conditions in Big Island Coop." December 2, 1910: 5.

*Hawaiian Star.* "Moved to New Hilo Jail." September 21, 1906: 5.

"Hilo" *Google Earth* 5Q 279974.64m E 2181692.44m N. December 11, 2010 and May 13, 2012, accessed July 17, 2018.

[15] "Tell Your Roof Troubles to Peter Higgins" (Advertisement), *Honolulu Advertiser*, August 6, 1911, p. 15.

*Hilo Tribune*. At Loggerheads over Jail Site. October 4, 1904. p. 6.

*Hilo Tribune.* "Whitehouse Lowest Bidder." July 25, 1905: 2.

*Hilo Tribune.* "Condensed Local Items." August 1, 1905: 5.

*Hilo Tribune.* "Pick-Ups Here and There." October 3, 1905: 4.

*Hilo Tribune.* "Supervisors Asked to Further Jail Construction." November 7, 1905: 1.

*Hilo Tribune.* "Sealed Tenders." November 28, 1905: 1.

*Honolulu Star-Bulletin.* "Hiloites Score School System." February 17, 1913: 8.

*Honolulu Star-Bulletin.* "Bucket Handle Used to Bore Hilo Jail Wall." January 29, 1932: 25.

O'Brien, Tom. "Hilo Chief Urges 'Dirty' Jail Probe." *Honolulu Advertiser*, August 20, 1947: 1.

*Pacific Commercial Advertiser.* "A Cement Scandal over Hilo Jail Specifications." October 28, 1905: 1.

*Pacific Commercial Advertiser.* "Notice to Intending Bidders." June 12, 1905: 7.

*Pacific Commercial Advertiser.* "Items." October 30, 1905: 8.

Southward, Walt. "Hilo Jail to Move From Downtown to Panaewa Site." *Honolulu Advertiser*, June 29, 1967: C-14.

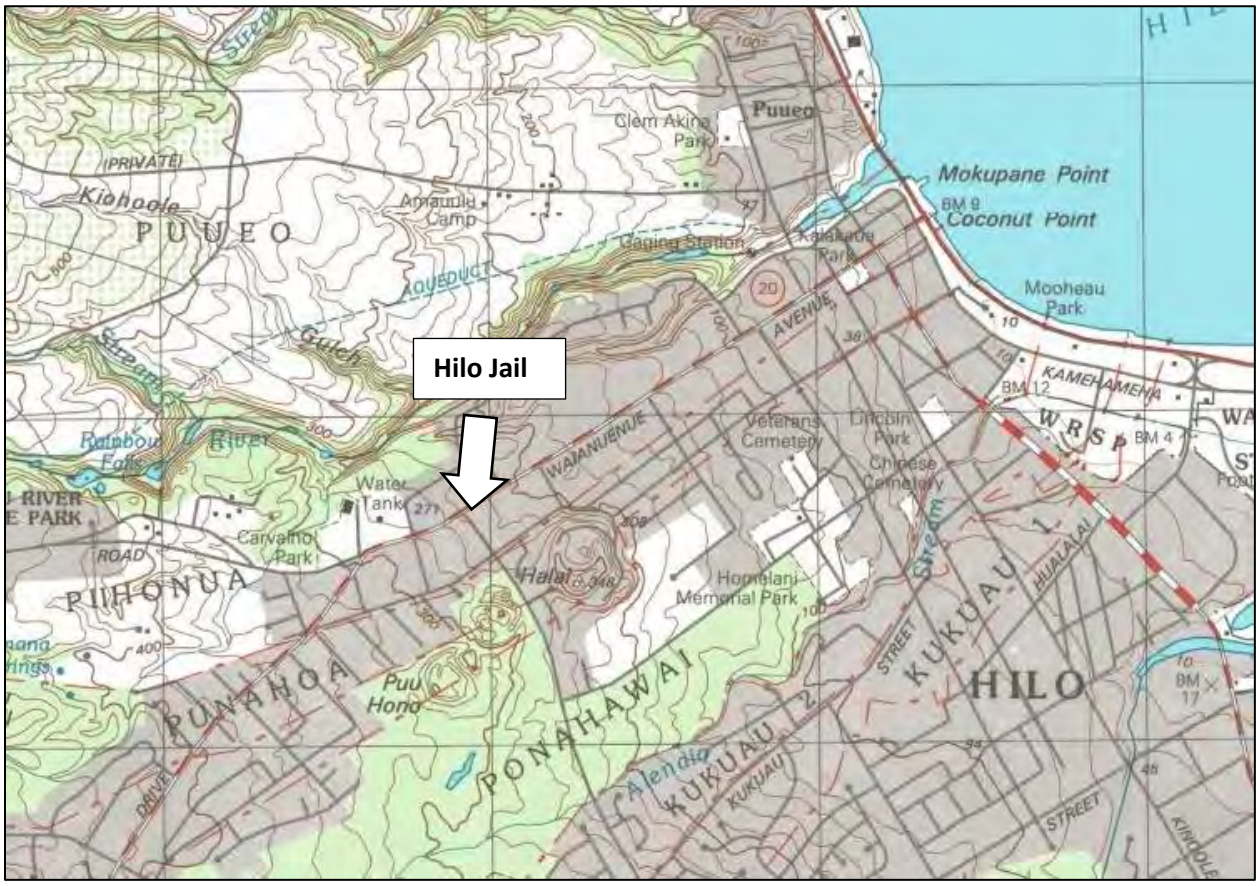
United States Department of Agriculture Photograph. Flightline 62, image no. 5409 (EKL-6CC-13), January 16, 1965. http://magis.manoa.hawaii.edu/remotesensing/GeoserverFiles/ShpFiles/Hawaii/062/jpegs/5409.

United States Navy Photograph V VJ 61, October 14, 1954. Hawaii State Archives, folder PPA-14-3, photo 8-07.

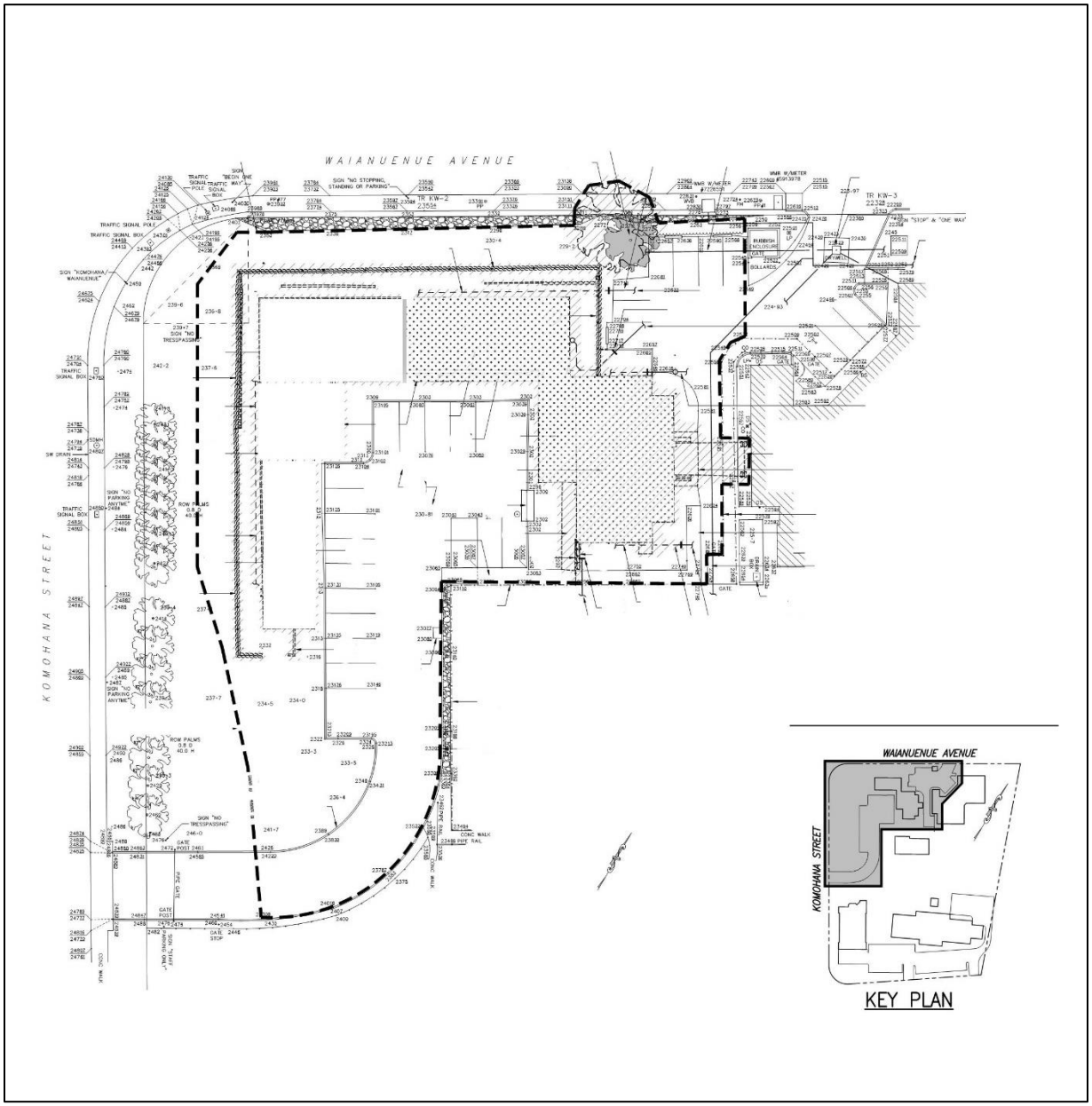
**Historian(s)**: Lesleigh Jones, Architectural Historian, Mason Architects, Inc. March 2018.

**Project Information**: This report is part of the requested documentation for a property identified as incurring an effect with proposed mitigation from the Hawai`i State Historic Preservation Division (SHPD). In late 2017, Hawaii County/the State Historic Preservation Division (SHPD) received a submittal from the Hawaii State Department of Public Safety related to a demolition permit request. The project scope of work includes the demolition of the brick jail building, and attached wood-frame cell block on the property. The report was prepared by Mason Architects, Inc under contract to Okahara and Associates, Inc. The field work for this report was conducted in April 2018, and the initial report prepared in June 2018. The report was finalized in July 2018.

**Location Map (U.S. Geological Survey 1995, Hilo)**



**Site Plan (Prepared by Okahara and Associates.)**



**HISTORIC AMERICAN BUILDINGS SURVEY**
**SEE INDEX TO PHOTOGRAPHS FOR CAPTIONS**

**HABS No. HI-598-1**



**HISTORIC AMERICAN BUILDINGS SURVEY**
**SEE INDEX TO PHOTOGRAPHS FOR CAPTIONS**

**HABS No. HI-598-2**



**HISTORIC AMERICAN BUILDINGS SURVEY**
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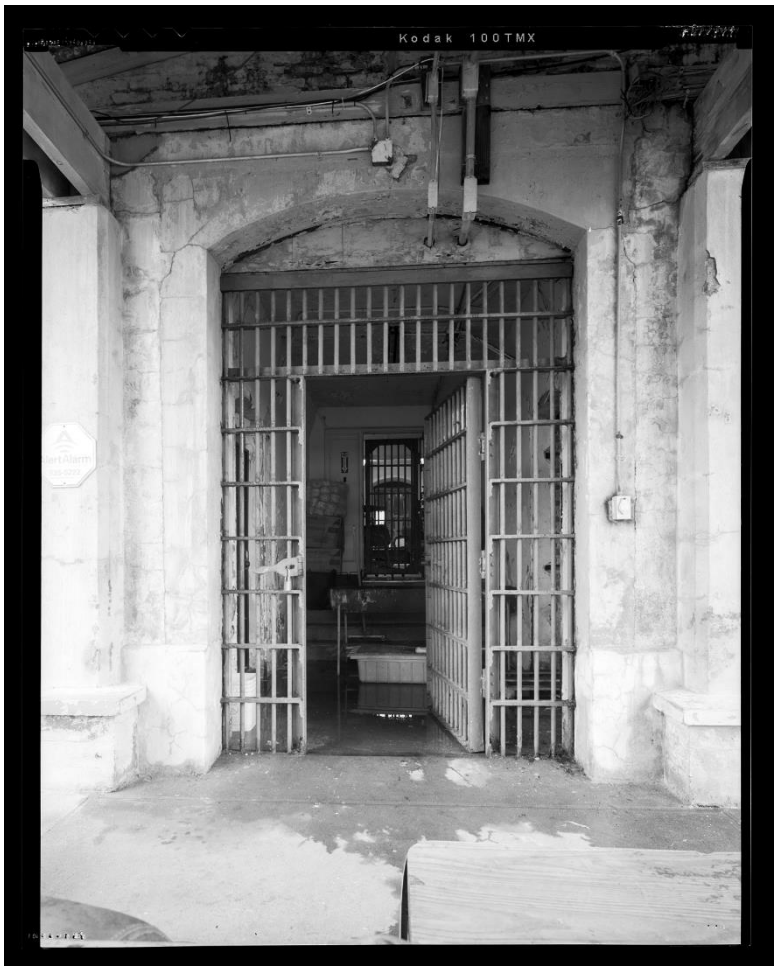

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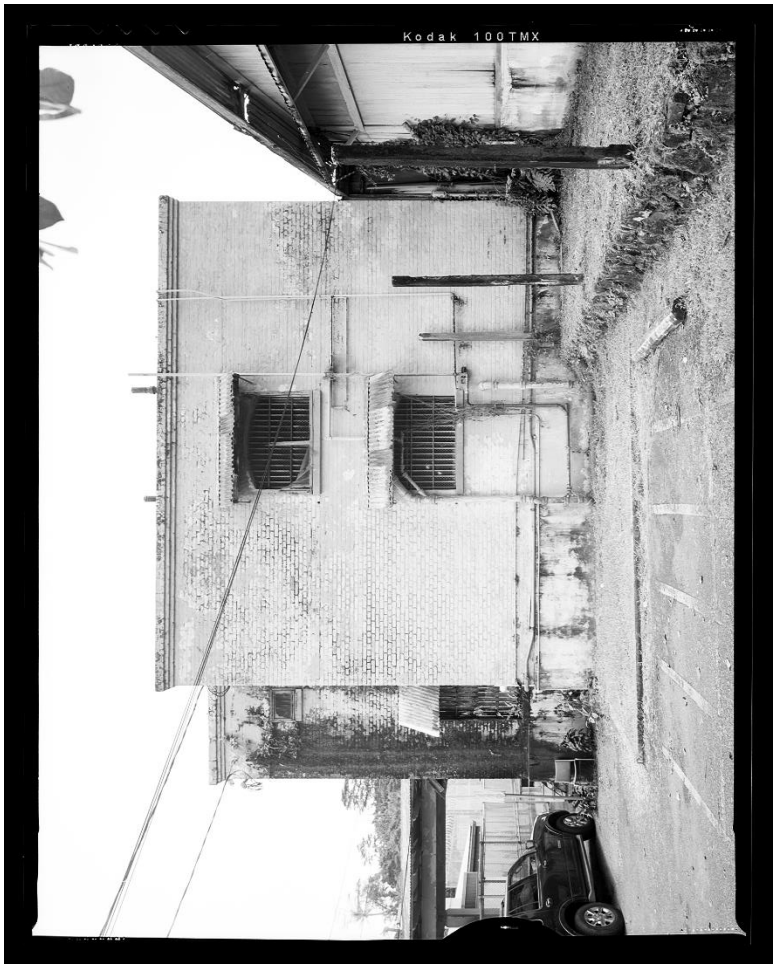

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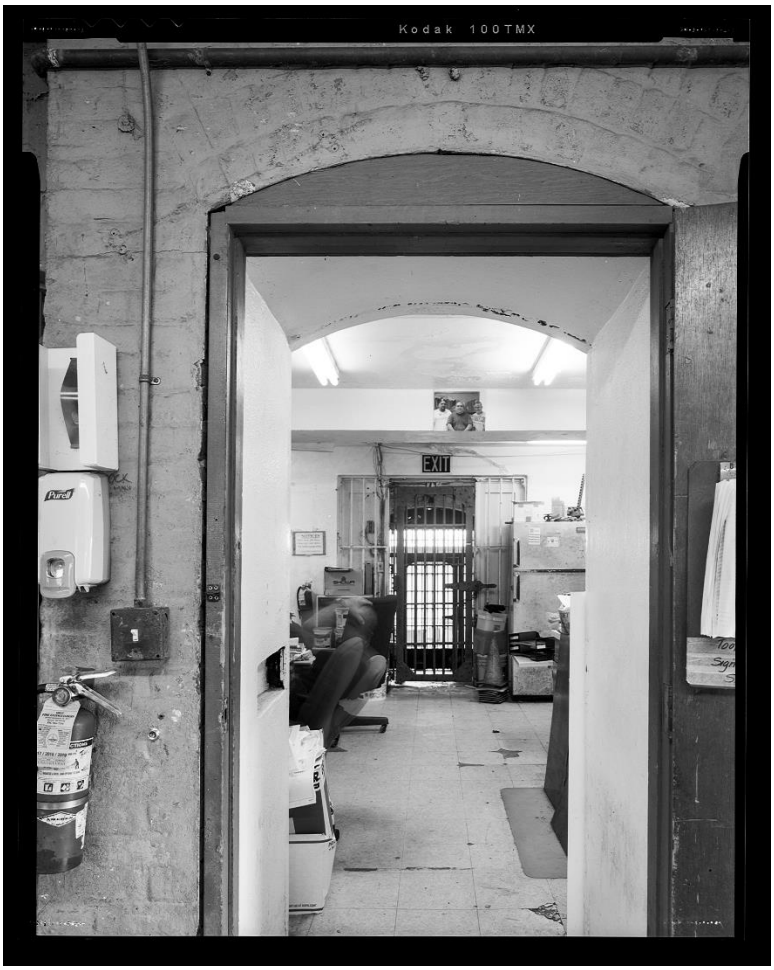

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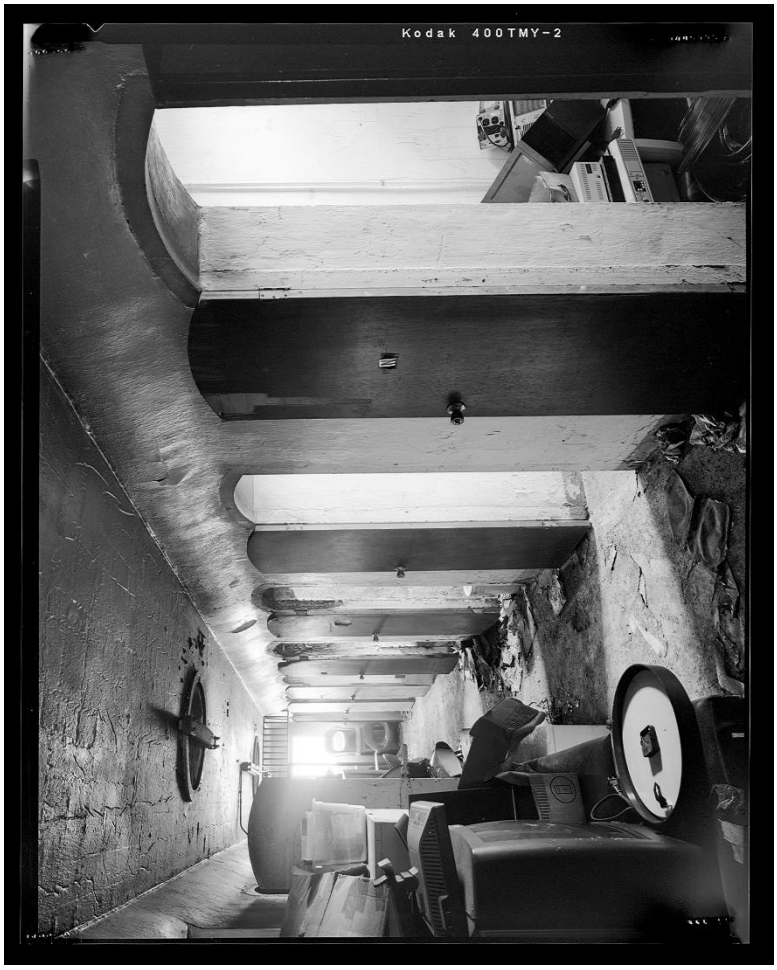

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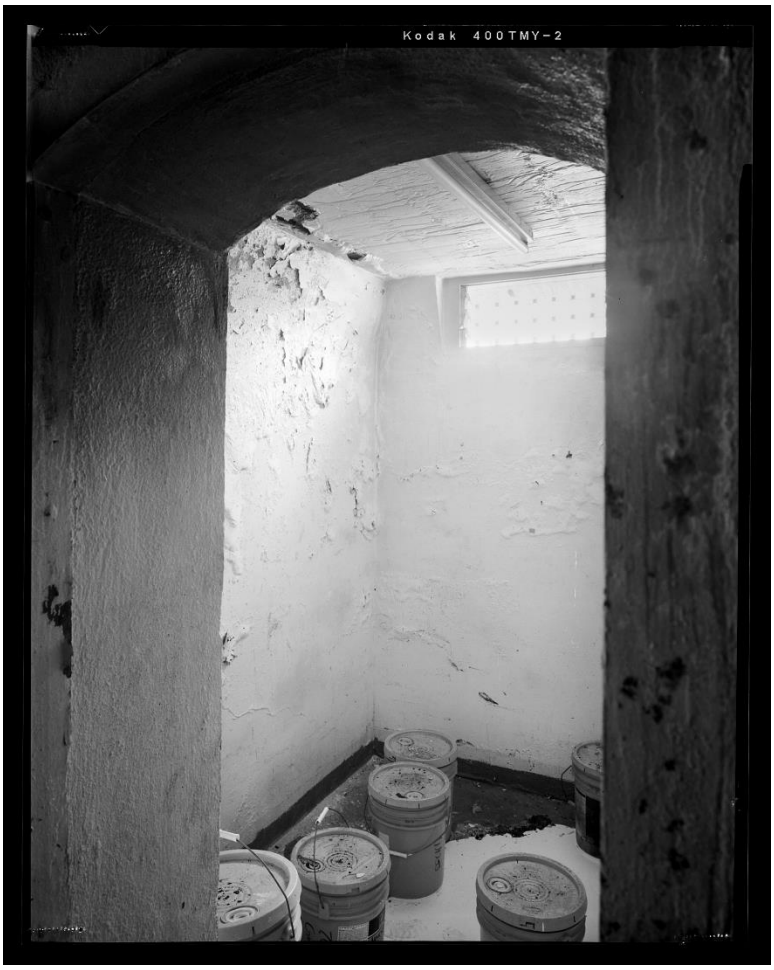

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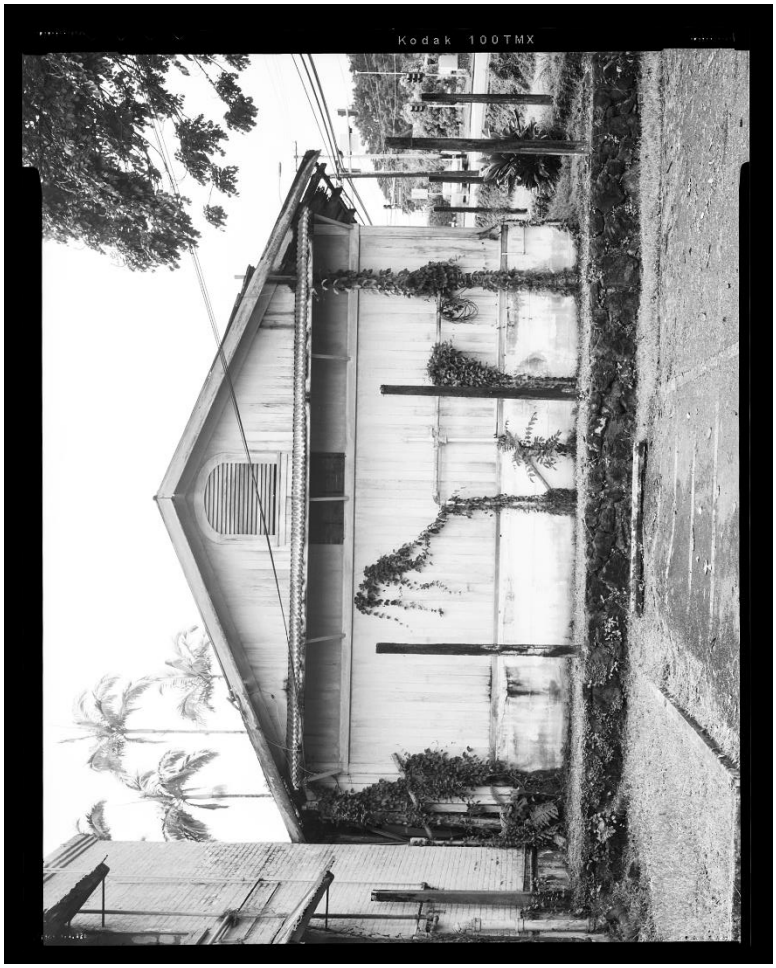

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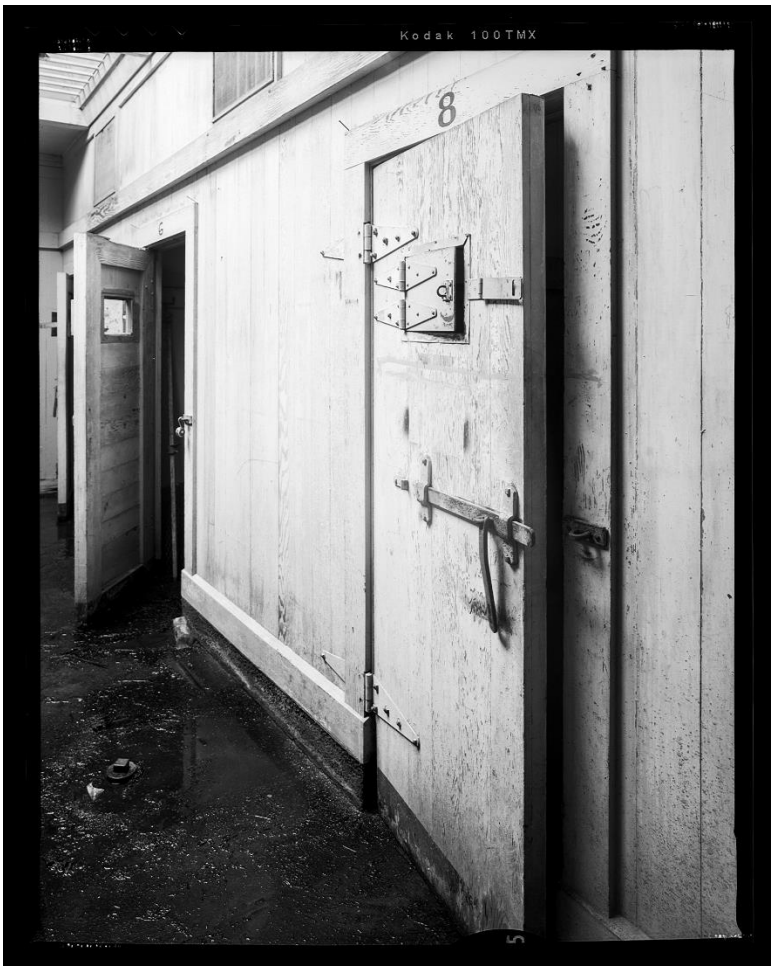

# APPENDIX E:
# Cultural Impact Assessment for the Hawaii Community Correctional Center Proposed Housing Project

# A Cultural Impact Assessment for the Hawai‘i Community Correctional Center Proposed Housing Expansion Project

TMK: (3) 2-3-023:005

Pi‘ihonua Ahupua‘a
Hilo District
Island of Hawai‘i



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ASM Project Number 28690.01

# A Cultural Impact Assessment for the Hawai‘i Community Correctional Center Proposed Housing Expansion Project

TMK: (3) 2-3-023:005

Pi‘ihonua Ahupua‘a
Hilo District
Island of Hawai‘i

ASM affiliates

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# 1. INTRODUCTION

At the request of Louis Berger, on behalf of the State of Hawai‘i Department of Public Safety (PSD), ASM Affiliates (ASM) has prepared this Cultural Impact Assessment (CIA) for the Hawai‘i Community Correctional Center (HCCC) Proposed Housing Expansion Project. HCCC is located on TMK: (3) 2-3-023:005 in Pi‘ihonua Ahupua‘a, Hilo District, Island of Hawai‘i (Figure 1 and 2). PSD currently operates the HCCC, which serves as a jail for short-term sentenced, pretrial, other jurisdiction, and probation/parole violators. The HCCC facility is currently the customary jail for Hawai‘i County that manages both pre-trial detainees and locally-sentenced misdemeanant offenders and others with a sentence of one year or less. Additionally, this facility provides important pre-release preparation/transition for prison system inmates who are transferred back to their county of origin when they reach less than one year until their schedule release date.

The current CIA report is an accompanying document to an Environmental Assessment (EA) conducted in compliance with Hawai‘i Revised Statutes (HRS) Chapter 343. This CIA was prepared in adherence with the Office of Environmental Quality Control (OEQC) *Guidelines for Assessing Cultural Impact*, adopted by the Environmental Council, State of Hawai‘i, on November 19, 1997. As stated in Act 50, which was proposed and passed as Hawai‘i State House of Representatives Bill No. 2895 and signed into law by the Governor on April 26, 2000, “environmental assessments . . . should identify and address effects on Hawaii’s culture, and traditional and customary rights . . . native Hawaiian culture plays a vital role in preserving and advancing the unique quality of life and the ‘aloha spirit’ in Hawai‘i. Articles IX and XII of the state constitution, other state laws, and the courts of the State impose on governmental agencies a duty to promote and protect cultural beliefs, practices, and resources of native Hawaiians as well as other ethnic groups.”

This report is divided into four main sections, beginning with an introduction and a general description of the study area, and the nature of the proposed housing expansion project. Also presented within this section is a brief historical context for Hawai‘i’s carceral system as a basis for understanding the system’s current disproportionate effect on Native Hawaiian populations and by extension on Native Hawaiian culture. This section is followed by a detailed culture-historical background and a presentation of prior studies; all of which combine to provide a physical and cultural context for the current project area. The results of the consultation process are then presented, along with a discussion of potential impacts as well as appropriate actions and strategies to mitigate any such impacts.



Figure 1. Study area location (portion of USGS 7.5-minute series, Hilo, HI quadrangle, 1995).




Figure 2. Tax Map Key (3) 2-3-023:005 showing the current study area parcel (shaded red).

## STUDY AREA DESCRIPTION

The current study area consists of a 3.819-acre parcel (TMK: (3) 2-3-023:005) bounded on the north by Waiānuenue Avenue, on the west by Komohana Street, and the south by Punahele Street (Figure 3). Extending along the east end of the parcel is a roughly 6.5 meter (~21 foot) County of Hawai‘i pipeline right of way. Further east of the right of way are three separate TMK parcels, the northern most being owned by the Hilo Church of God, while the other two are privately owned (see Figure 2). Two modified natural drainages have been recorded on the subject parcel. Cutting through the parcel in a north-south direction is the larger earthen drainage ditch (Figure 4), which was first recorded by Walker et al. (1997) as SIHP Site 50-10-35-20848 and again in 1999 by Wolforth (Figure 5). Maly (1997:10) provided an interpretation of this ditch's origin, suggesting that it "is a modified natural drainage that could have tapped into the water carried down by the Hilo Boarding School Ditch, but it is not the Boarding School Ditch itself." A second, smaller localized drainage (SIHP Site 50-10-35-20849) was also recorded by Walker et al (1997). Wolforth (1999:4) states that this smaller ditch was likely "associated with the development of the Pi‘ihonua House Lots Subdivision in the 1920s or landscaping in the jail property after 1907." This parcel has been used exclusively as a jail since about the late 1890s and has been subject to decades worth of ground disturbance (Wolforth 1999). The original jail facility was constructed along the northern half of the parcel and has subsequently been expanded to the southern half.

The study area parcel is located at an elevation ranging from 65 meters on the *makai* (east) end and rises to 78 meters above sea level on the *mauka* (west) end. Geology underlying the study area is comprised predominately of 3,000-5,000 year old Kau Basalt (labeled as "Qkly" in Figure 6). The southeast section of the parcel contains tephra deposits that have been dated to 11,000 to 30,000 years old (Sherrod et al. 2007). Two soil types have been mapped in the current study area (Figure 7). The west-northwest section has been mapped as 638, described as Pana‘ewa-Urban land complex with a two to ten percent slope, while the east-southwest half has been mapped as 901 defined as Hilo hydrous silty clay loam with a zero to ten percent slope (Soil Survey Staff 2017).

Hilo has a warm semitropical climate and experiences abundant rainfall and relatively light trade winds. The mean annual rainfall within the project area is approximately 3,791 millimeters (149 inches), with most rainfall occurring between the months of March through April, and again in November (Giambelluca et al. 2013). The climate is relatively warm with a mean annual temperature ranging from 69 degrees Fahrenheit (F) during the winter months to 74 degrees F during the summer months (Giambelluca et al. 2014).




Figure 3. 2013 Google Earth™ satellite image showing study area location (outlined in red).



Figure 4. Photograph of overgrown drainage extending through the study area with Hilo Church of God (blue building) in background, view to the north.

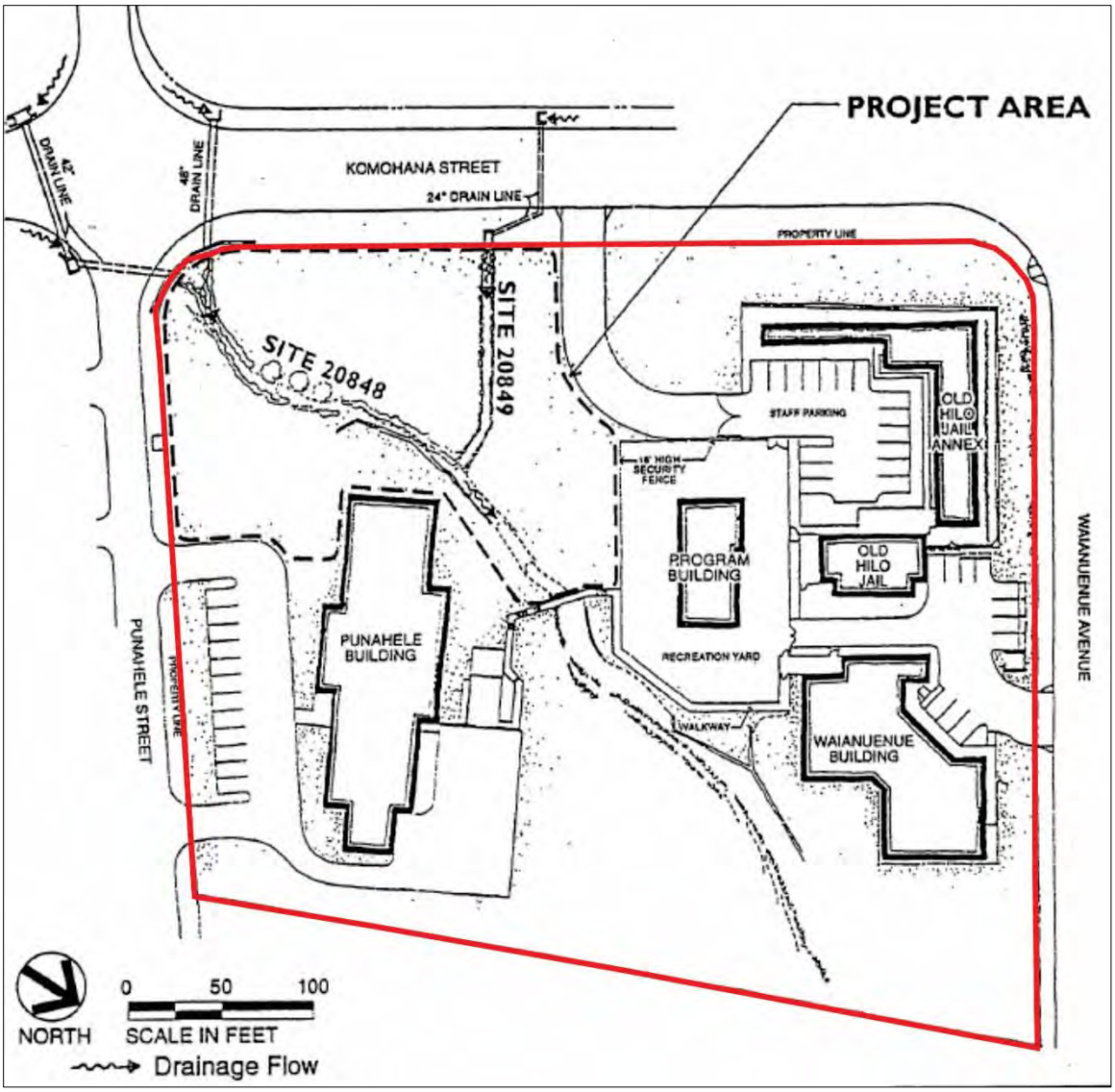



Figure 5. Study area parcel showing previously recorded ditches SIHP Site 50-10-35-20848 and 20849 (from Wolforth 1999:3).

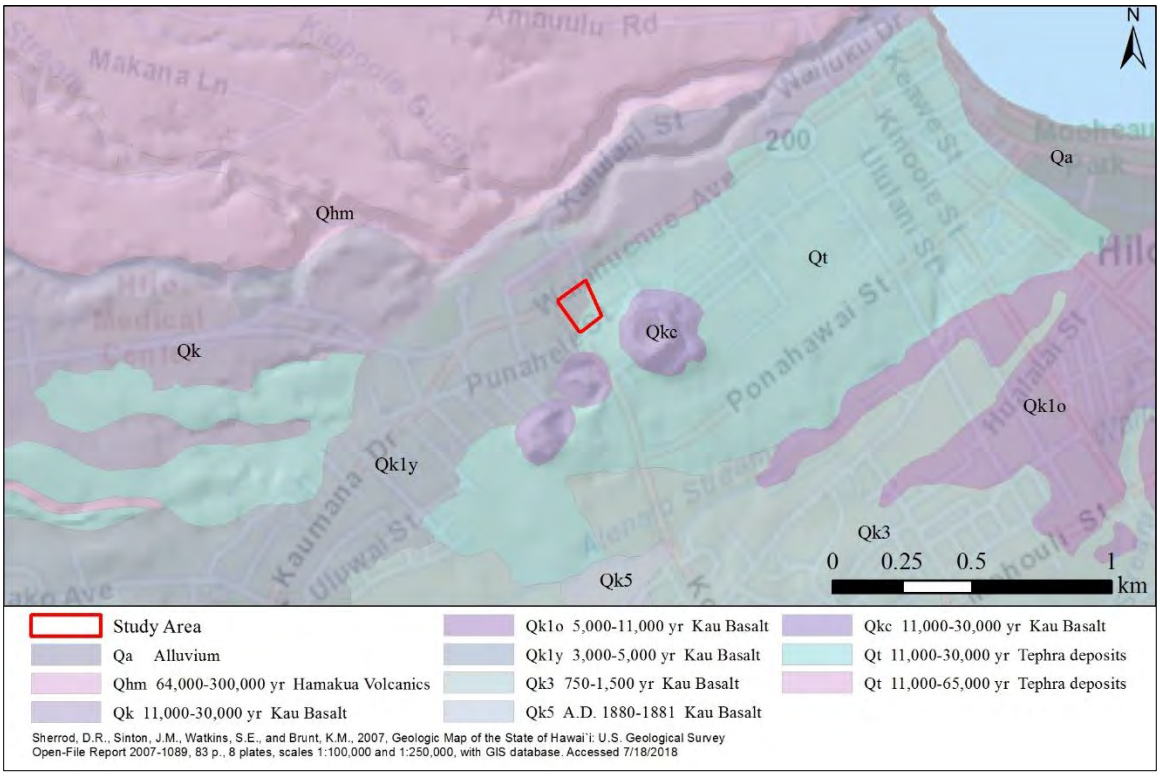



Figure 6. Geology in the current study area.

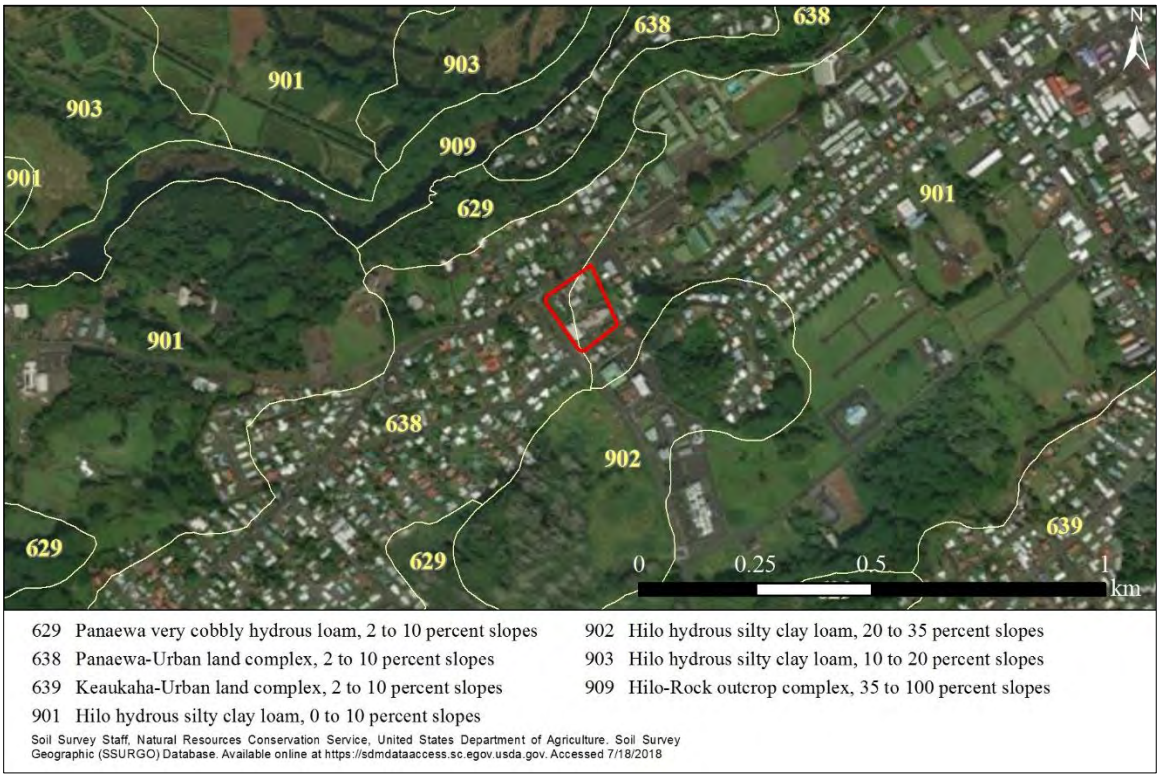



Figure 7. Soils in the current study area.

## PROPOSED HOUSING EXPANSION PROJECT

The Hawai‘i Department of Safety (PSD) currently operates five Community Correctional Centers (CCCs), commonly referred to as jails, with one on the islands of Kaua‘i, Maui, and Hawai‘i, and one on O‘ahu. As of January 31, 2018, the four facilities were housing a combined 2,269 inmates, which is forty-one percent more than their total operational capacity (Schwarts 2018). To remain committed to providing a safe, secure, healthy, humane, social, and physical environment for inmates and staff, PSD is seeking to alleviate the severe overcrowding problems within the CCCs by developing new medium security housing for medium security inmates who are currently housed at KCCC, MCCC, and HCCC. The focus of this study is the HCCC facility, located in Pi‘ihonua Ahupua‘a, Hilo District, Island of Hawai‘i (Figure 8). The proposed housing expansion project (Figure **Error! Reference source not found.**) is intended to provide a sufficient number of beds under appropriate conditions to address the history of overcrowding. The housing expansion project is not intended to increase the inmate population beyond their current numbers. Rather inmates currently housed in cramped conditions and in spaces not originally intended for inmates would be accommodated as part of the proposed housing expansion project. Additionally, the proposed housing facility would be designed and constructed to meet State of Hawai‘i and national standards. HCCC is currently a 206-bed facility for male and female sentenced and pretrial inmates located on two sites: the primary facility being the current study area; and the secondary facility located approximately five miles away in Pana‘ewa is a reintegration facility known as Hale Nani. As of May 2018, HCCC currently houses 373 male inmates and 71 female inmates for a combined total of 444 inmates, which is ninety-six percent above its operational capacity of 226 beds (Louis Berger 2018:5).




Figure 8. The current study area HCCC facility in Pi‘ihonua, Hilo, Hawai‘i (study area parcel outlined red).



Figure 9. Conceptual plan of HCCC proposed housing expansion project (highlighted orange).

## Hawai‘i’s Criminal Justice System

The history of Hawai‘i’s Euro-American criminal justice system can be traced back to the first constitution of the Kingdom of Hawai‘i promulgated on October 8, 1840, by Kauikeaouli (Kamehameha III) upon the advice of foreign political advisors. This constitution was the first of its kind and marked an important shift in Hawai‘i’s longstanding sociopolitical system by establishing a legal framework that governed the monarchy (Keahiolalo-Karasuda 2010). The influence of Christian missionaries is apparent in these early laws as it provided them with a legal basis to enforce Christian beliefs and values onto all sectors of the population. Although the 1840 Constitution did not specify forms of punishments, sections seven through thirteen of the Constitution recognized certain acts as being punishable by law, such as causing injury or committing a crime against another citizen or the Kingdom. Additionally, the Constitution declared that a person accused of a crime had the right to a trial conducted according to the law (Achiu 2002). The 1840 Constitution became the instrument that allowed an individual with the legal knowhow to bring about charges against any citizen of the Kingdom regardless of their social status. Section four of the 1840 Constitution reads:

> The above sentiments are hereby published for the purpose of protecting alike, both the people and the chiefs of all these islands, while they maintain a correct deportment; that no chief may be able to oppress any subject, but that chiefs and people may enjoy the same protection, under one and the same law (Achiu 2002:33).

This legal framework for dealing with lawbreakers was a new concept that was fundamentally different from the traditional Hawaiian system. This new framework emphasized Christian beliefs and values all while punishing individuals who held to certain traditional practices and beliefs (OHA et al. 2010). Nonetheless, crimes committed under the traditional laws of the islands did not go unpunished. The *kapu* system implemented during the reign of the chief Wākea established a set of religious laws that governed nearly all aspects of traditional life (Malo 1951). Crimes committed under the *kapu* system were also punishable as these crimes were viewed as an offense to the gods and the chiefs alike, and therefore, threatened the very foundation upon which Hawaiian society was organized (King 1993). Lawbreakers that were found guilty often faced severe corporal punishment, seizure of property, and even banishment (King 1993, Ellis 1917). While traditional forms of punishment were severe a lawbreaker also had the opportunity to be absolved of his or her crime by entering a designated *pu‘uhonua* (place of peace and safety) or seeking the mercy of a chief or chiefess, as they were also known as *pu‘uhonua*. Such chiefs and chiefesses had the authority to exonerate a person from their crime, thus allowing for their reintegration into society (Kamakau 1964). The 1840 Constitution not only undermined the foundation of the *pu‘uhonua* but it effectively disempowered the chiefs from exercising their power to free an individual from the death penalty. While the legal groundwork for the criminal justice system was laid starting in 1840, the emergence of Hawai‘i’s jail facilities occurred much earlier.

Hawai‘i’s first western-style jail facility formerly location in Honolulu has its origins with Russian colonists who sought to establish Hawai‘i as the main provisioning port for Russian ships engaged in the Pacific fur trade. The Russian-American Company set out from Sitka, Alaska to expand their resource depleted territory and seek new kinds of investments (Mills 2002). Although their initial attempts to colonize the islands were thwarted when one of their ships wrecked off of Kaua‘i, the Russians eventually found refuge on that very island under the ruling chief Kaumuali‘i. While the Russians were engaged in establishing a fort on Kaua‘i, the rest of the archipelago was recovering from the aftermath of Kamehameha’s conquest. In 1810, Kamehameha turned his attention to unifying the islands with the exception of Kaua‘i under his rule. Although Kamehameha did not seize Kaua‘i by force, Kaumuali‘i recognized Kamehameha as an independent sovereign. Through peaceful negotiations, Kamehameha offered military protection over Kaumuali‘i’s island kingdom. In 1816, Kamehameha left O‘ahu for Hawai‘i Island to settle his affairs. In his absence, the Russian brig *Ilmen* captained by Doctor George Anton Schäffer arrived in Honolulu for repairs and was soon joined by the *Kodiak*, another Russian ship under the command of Captain Young. Although they had permission from Kamehameha to build a block house in Honolulu, the crew of about eighty Russians proceeded to build a fort made from mined coral blocks, mounted their guns, and raised the Russian flag. Their actions caused great alarm for both native and foreign residents of Honolulu as this was viewed as an attempt to seize the islands. A messenger was sent to inform Kamehameha of the situation, where he then dispatched his generals and warriors to investigate and settle the matter. The arrival of Kamehameha’s militia in Honolulu made a profound impression, causing the Russians to wisely pack up and sail back to Kaua‘i (Emerson 1900). Left with a half-completed building, John Young and Kalaimoku (William Pitt) advised Kamehameha to construct a fort that would protect the port and the nearby royal compound from future invaders. Kamehameha proclaimed a draft and ordered all men and women to help with erecting the fort known as Kekuanohu and later referred to as Honolulu Fort (Figure 10). By 1817, the fort

was completed and from that time until its demolition in 1857, it housed several administrative functions such as police headquarters, courthouse, and served as the first jail for unruly foreign sailors (ibid.).

Shortly after the 1840 Constitution became law, the foreigners realized that it could be used to control anyone, including the most powerful Hawaiian chiefs (King 1993). On October 20, 1840, just twelve days after the Constitution was enacted, the Honolulu Fort was the site of Hawai‘i’s first public execution (Clark 1847, Emerson 1900). The chiefs Kamanawa (grandfather of King Kalākaua and Queen Lili‘uokalani) and Lonopuakau were both sentenced to death after being accused of murder; both received the notice of the execution, which was sent by King Kamehameha III and Prime Minister Kekāuluohi. An American sailor named Joseph Clark provides insight into that tragic day:

> The sentence of death was published on the 5th, for the murder of a female on the 28th of Sept. The following is the sentence… (Clark 1847:179)
>
> On the 20th, the day previously appointed for the execution, at 11 o’clock the chief Kamanawa and the native Lonopuakau, were both hanged by the neck upon the ramparts of the fort, before an immense crowd of spectators. The Rev. Messrs. Armstrong and Smith addressed the throne of grace on their behalf. About eight hundred natives, under arms, were assembled, and passed behind them, two and two, with arms reversed, until the whole was concluded. As they dropped, the colors were half-masted, the bell tolled, and there was a general yell and weeping throughout the village. The chief died a very hard death. (ibid.:180)

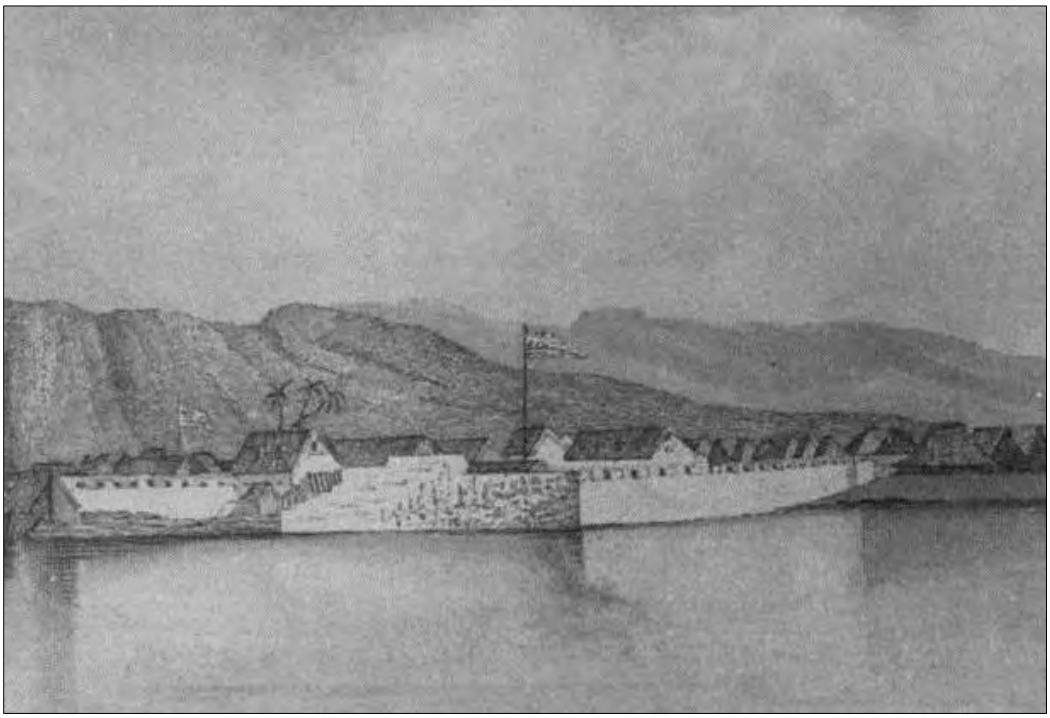


Figure 10. Honolulu Fort 1837, Hawai‘i State Archives, Henry Colburn collection, PP-36-5-001.

The Honolulu Fort continued serving as a jail and by 1822, Queen Ka‘ahumanu, a staunch Christian convert proclaimed more criminal laws that were to be observed and supported by the chiefs (King 1993; Kamakau 1992). According to Kamakau (1992), Ka‘ahumanu verbally enforced various forms of capital punishment and established the island of Kaho‘olawe as a place of exile for convicts. As early as 1826, the first male exiles were sent to the island of Kaho‘olawe, while females were sent to Lāna‘i Island. The area of Kaulana Bay located on the northwest end of Kaho‘olawe served as the penal colony headquarters until 1847 when the last convict, George Morgan, a Caucasian man served out his sentence on the island (MacDonald 1972).

In 1855, under the administration of Alexander Liholiho (Kamehameha IV), the legislature appropriated $10,000 for the construction of a new prison. The area of Iwilei was chosen as the site for the new prison, which was completed in 1857 (Figures 11and 12), at which time the old Honolulu Fort was demolished (Kuykendall 1953). The prison was constructed from coral and was built on a pile of coral rubble between the fishponds of Kawa and Kūwili (Figure 13). Although this prison was formally known as Oahu Prison, it was sometimes referred to as Kawa Prison or simply “The Reef” (Ruby and Stephenson 2012).



Figure 11. Former Oahu Jail in Iwilei with fishponds in foreground, Hawai‘i State Archives, Oahu Prison Collection, PP-61-5-020-00001.



Figure 12. Exterior of former Oahu Prison, Hawai‘i State Archives, Oahu Prison Collection, PP-61-5-005-00001.




Figure 13. Portion of Hawai‘i Registered map 1609 by W.A. Wall from 1893 showing the site of old Oahu Prison.

In 1886, while visiting Honolulu, Mark Twain stumbled upon the prison and described it as such:

> … we presently arrived at a massive coral edifice which I took for a fortress at first, but found out directly that it was the Government prison. A soldier at the great gate admitted us without further authority than my countenance, and I suppose he thought he was paying me a handsome compliment when he did so; and so did I until I reflected that the place was a penitentiary. However, as far as appearances went, it might have been the King's palace, so neat, and clean, and white, and so full of the fragrance of flowers was the establishment, and I was satisfied.
>
> We passed through a commodious office whose walls were ornamented with linked strands of polished handcuffs and fetters, through a hall, and among the cells above and below. The cells for the men were eight or ten feet high, and roomy enough to accommodate the two prisoners and their hammocks, usually put in each, and have space left for several more. The floors were scrubbed clean, and were guiltless of spot or stain of any kind… (Twain 1972:57)

At the time of his visit, Twain noted that the prison contained four wards, housed both male and female inmates, and could accommodate one hundred thirty-two prisoners (1972:57). Twain also visited the prison yard (Figure 14) and noted the differences in this facility compared to those he observed back on the continent:

> The prison-yard—that sad inclosure [*sic*] which, in the prisons of my native America, is a cheerless barren and yieldeth no vegetation save the gallows-tree, with its sorrowful human fruit—is a very garden! The beds, bordered by rows of inverted bottles (the usual style here), were filled with all manner of dainty flowers and shrubs…(ibid.:58)



Figure 14. Former Oahu Prison yard, Hawai‘i State Archives, Oahu Prison Collection, PP-61-5-011-00001.

*History of Hilo Jail*

By the late 19th century, small jail facilities most of which were attached to either the district police stations or court houses had been constructed in each of the six districts of Hawai‘i Island (Hawaiian Commission 1898). Hilo jail was, however, the largest and the only standalone incarceration facility on the island (ibid.). Hawai‘i Registered Map 1561 (Figure 15) from 1891 shows the location of the former jail to be situated near the corner of Ponahawai and present day Kino‘ole Street, which is labled on the map as “Jail Street.” Standing in this location today is Lincoln Park. It appears that this facility was in use for some time because by 1890, the Hilo jail was “reported so old and decayed that a new one was necessary” (Grieve 1894:161). Grieve further reports that:

> Until now the same jail has been made to serve by making repairs, but it has at last become quite unsafe, and a new one containing sixteen cells should be built as soon as practicable.
>
> It is estimated that $3,500.00 will cover the cost.
>
> If that amount is not available, somewhat extensive repairs made judiciously, will make the building safe for another two years. (ibid.)

In the early 1890s, former soldier turned police officer George W. Hale of Lawrence Massachusetts took on the laborious task of compiling nationwide statistics and secular knowledge of police and prisons and published his findings in his 1893 book titled *Police and Prison Encyclopedia*. Contained within Hale’s book are some description and statistics of the Hilo jail as reported in April of 1892 by Hawai‘i Island Sheriff, E.G. Hitchcock:

> In re Prisoners: I would state that during the past period but few have been sent to Oahu jail, and that most of them have been kept at work on the public roads of the various districts of this island; and since August, 1891, such prisoners have been constantly employed on the Volcano Road, between Hilo and the Volcano of Kilauea. There has been but little sickness among the prisoners, and they have, as a general thing, shown themselves docile and easily controlled, and have done good work.
>
> One of the greatest necessities of this island is a prosecuting attorney for all criminal cases arising in the district and police courts, a person well versed in the English and Hawaiian languages, and one of whose duties should be to give proper legal advice to all officers in the police department,

> besides personally attending the district, police, and other courts at such times as serious crimes were on trial. (Hitchcock in Hale 1893:569)

With respect to inmate statistics, Hitchcock reported that between 1890 and 1892 some 2,405 inmates were received at the Hilo Jail of which 97% (2,346) were discharged. Hitchcock also reported that nineteen inmates were sent to Oahu Prison in Iwilei, while the remaining inmates (if they had not escaped) were subject to labor which included constructing or improving roads around the island including Volcano Road as well as roads in North Hilo, Hāmākua, and North Kohala (Hale 1893:592). Hitchcock reported that the average cost of housing an inmate during this period was roughtly $183 dollars anually (ibid.). By the turn of the 20th century, plans for a new jail in Hilo were underway. In a July 13, 1896 public notice printed in the *Evening Bulletin*, a Honolulu based newspaper, noted "[t]he contract for building the Hilo jail has been awarded to John Cook. His bid was $2425." Given the award amount, and the fact that during this time, the Hilo jail had not yet been relocated to the present day location, it is reasoned that this new jail facility was likely for a new building at the original site at the corner of Ponahawai and Kinoʻole Street.

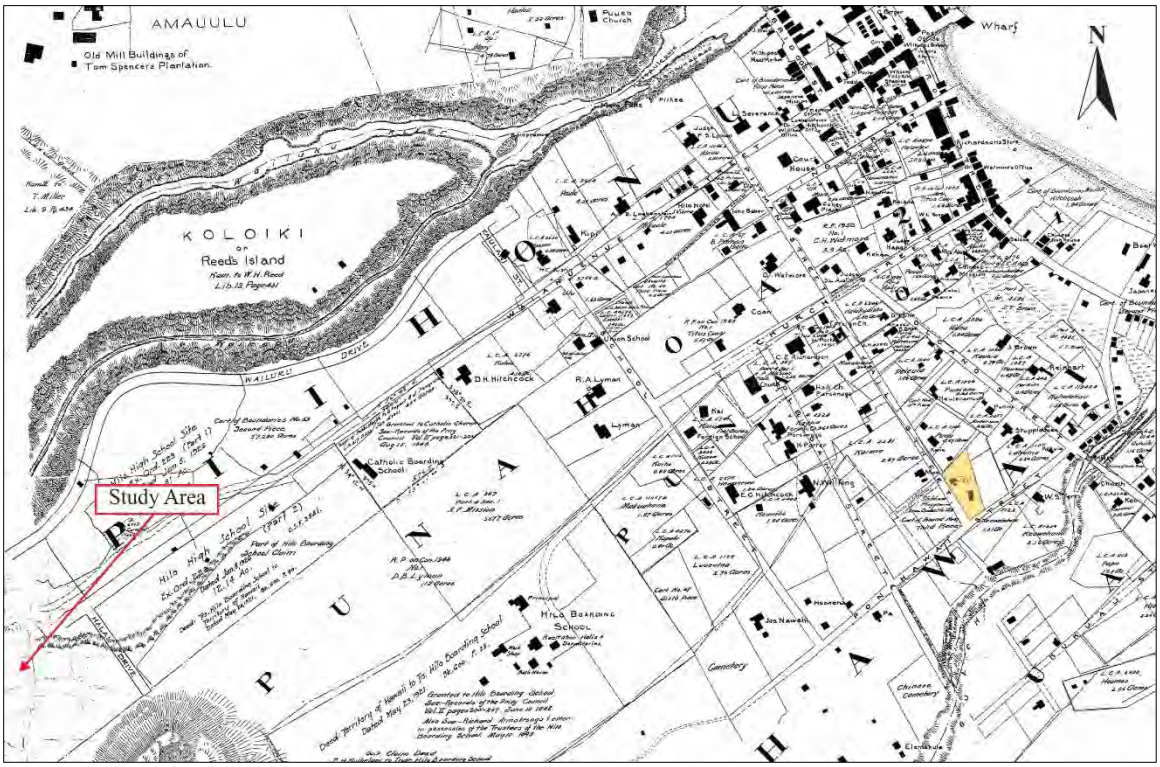



Figure 15. Portion of Hawaiʻi Registered Map 1561 showing the location of the old Hilo Jail (shaded yellow) in 1891.

Although county jails had been well established, by turn of the 20th century, a 1902 report from the Governor of the Territory of Hawaiʻi specified that by this time the Oahu Prison "was the general place of confinement of all persons convicted of criminal offenses within the Territory" (Governor 1902:114). During this same year, the legislature sought to formally segregate convicted felons from the misdemeanor population by establishing the Honolulu Jail, which was located adjacent to the Oahu Prison (ibid.). The creation of the Honolulu Jail established the foundation upon which the current Community Correctional Facilities operate.

In her book *Colonizing Hawai'i The Cultural Power of Law,* Sally Engle Merry (2000:139) correlates the growth of Hilo's jail and court facilities during the late 19th and early 20th century with a distinctive cultural order that emerged as the sugar plantations expanded—a cultural order that viewed whites as dominant to Native Hawaiians and other migrant plantation laborers. Merry (ibid.) argued that the primal structure of the sugar plantations, which was based on ethnic segregation and discipline further reinforced this power structure. By the late 19th century, plantation laborers many of whom had endured grueling working conditions for little pay began to organize themselves and at times protested against the plantations. A newspaper article printed in a September 1894 issue of *The Hawaiian Gazette* described laborers being arrested and placed in the Hilo jail for "*haalele hana,*" literraly translated as "abandon work." The article reads thusly:

> A small army, consisting of eighty-seven Japanese, was brought into Hilo, Tuesday, from Pepeekeo Sugar Co. and lodged in Hilo jail, to await their trial for *haalele hana*. Their plea for refusing to work is, they don't like the "helper" that assists the luna [supervisor], Mr. Young, who is over them. (The Hawaiian Gazette 1894:2)

These protests often resulted in a large number of arrest resulting in overcrowding of an already inadequate jail facility. In 1903, the Hilo Legislative Committee on the Court House and Jail published their report describing the state of the Hilo jail in the March 20, 1903 edition of the *Hilo Tribune*. This detailed report provides the most comprehensive description of the former Hilo jail located at Ponahawai and "Jail Street," present day Kinoʻole Street in Hilo town proper. A portion of the Committee report reads:

> With reference to the Hilo Jail, this institution is at present located in the heart of the city and very objectionable to the property owners and citizens living in that vicinity. The present quarters, while well kept and in fairly good condition, are too small to accommodate the number of prisoners of ten required to be confined here and are poorly arranged to prevent escapes. The Jail building proper consists of only eleven available rooms or cells, and as the average number of prisoners is eighty, it necessitates the crowding of a number of prisoners in each cell. The number is often much larger, especially during the terms of Court, when there are always a number of committal cases awaiting action by the Grand Jury or sentence. Separate quarters apart from prisoners convicted, and if possible better accommodations should be provided for such cases.
>
> The present location of the Jail is objectionable, the building is crowded and the enclosure is not safe. There should be established on the outskirts of the City, a Jail well removed from the residence portion, capable of accommodating 150-200 prisoners. The Government owns tracts of land from two to three miles distant from the Court House, available for this purpose and which would make excellent sites for a Jail. Kaumana or Waiakea have both been suggested as possible locations for such a penal institution. The premises now occupied could be utilized for other purposes, by the Government or divided up into building lots. The presence of the ugly high fence surrounding the Jail yard and the frequent passage of prisoners to and place, has depreciated the value of splendid building property in the center of the City. The effect also, of prisoners in the chain gang or in striped suits marched through the main streets of Hilo daily to and from the Kail is not a wholesome or elevating object lesson to the young, and is very objectionable. For these and other reasons, the Jail should be removed to a site distant from the much frequented parts of the City. (Hilo Tribune 1903:2)

Based on the summary of their findings, the Committee, consisting of J.C. Ridgway, B.H. Brown, and J. Maka provided the following recommendation to address the issues discovered during their investigation, concluding:

> First. Hilo Jail, for the removal and construction of an enlarged jail and grounds at a suitable site on the outskirts of Hilo, $25,000. (ibid)

On account of the findings described above, Governor Carter requested for a special committee to convene and to provide suggestions for identifying a new site for the Hilo jail and drafting a new building design. The Executive Council of the Board of Trade, which consisted mostly of businessmen from Hilo convened and took on the task assigned by the Governor. The matter of relocating the Hilo jail to the current study area parcel was eventually brought before Governor Carter and the Superintendent of Public Works, C.S. Holloway, both of whom decided to spend the appropotiated $16,000 loan at the exisitng jail facility on Ponahawai and Kinoʻole Street instead of the current study area location—the parcel identified by the Executive Council. Although the Executive Council's proposed site recommendation was dismissed by the Governor and the Superintendent, an article printed on October 4, 1904 in the *Hilo Tribune* provides additional details about the jail site in Hilo town, former land use activities at the current study area parcel as well as the conceptual design for the proposed jail facility. A portion of the article reads:

> The site recommended by the Executive Council, who have given the matter much attention, is on the Kaumana road one mile from town, where is located an inexhaustible quarry suitable for building stone and road material. The propety is government land, although at present held by John T. Baker in his Piihonua leasehold, a portion of which, it is stated, he is willing to release for this purpose.
>
> The present jail is located in the very business center of the city, screened from public view by an unsightly board fence, painted a roseate pink. It has always been one of the principal [*sic.*] sites of Hilo, avoided by visitors and citizens alike. The buidling is a wooden structure built in the center of a corner lot, surrounded by dwellings and the homes of respectable residents.

> It is understood however, that Superintendent Holloway is opposed to the propsed Kaumana jail site, giving as a reason that the construction of a stone jail is entirely too expensive and that a wooden building would answer all the requirements. (Hilo Tribune 1904:6)

The article further described land use on the subject parcel indicating that "[t]he pahoehoe surface on the land is not suitable for agricultural purposes, and at present contains scant grazing" (ibid.). The article also detailed the conceptual building plans for the jail at the current study area parcel, stating:

> The plans provide for a two story jail building, containing sixty rooms. There are provided an office, guard rooms, examining room, 48 prisoners' cells, 6 cells for witnesses and two large double cells for women inmates. The dimensions of the building are 27 feet by 120 feet in length in the shape of a rectangle, with a seven foot corridor running the full length. Each cell is 8 feet by 10 feet. The main entrance is in the center, with a double stairway leading from the ground floor to the upper story. It would seem to be a well ventilated and comfortable jail, with only one means of entrance and exit through which an escape might occur. (ibid.)

The plans to move the jail to a parcel in Pi'ihonua appears to have been mulled over for several years because it was not until 1919 through a concurrent resolution passed by the House and Senate of the Territory of Hawai'i that the current study area parcel was surveyed and set aside as the Hawai'i County Jail site (Journal of the House 1919). The area surveyed consisted of roughly ten-acres (ibid.). The original jail building was designed by a prolific American architect Oliver G. Traphagen and was loosely modeled after mid-19$^{th}$ century O'ahu Jail (Mason Architects, Inc. 2018). The following year, the jail facility appeared on a map produced by A.S. Chaney. Chaney's depiction shows one large square-shaped structure with what appears to be four attached structures and two detached structures (Figure 16). Also depicted on this map is a portion of the Pi'ihonua Ditch (SIHP Site -21228) passing north of the subject parcel, a portion of an old flume likely associated with the Hawaii Mill Company operations, and a natural drainage that would later be recorded by Walker et al. (1997) as SIHP Site -20848. Since the jail's relocation to this parcel, it has and continues to serve as the main jail facility for Hawai'i County.

The 10-year Master Plan Report produced by Carter Goble Associates (2003) summarized the history of the current HCCC facility stating:

> The original facility opened as a 22-bed facility in 1975 is located in a neighborhood in Hilo and has been expanded substantially since then to be a 226-bed facility. Unlike other CCCs it has a Work Furlough Center remotely located on a site outside of Hilo that was conceived as a possible future location for the entire HCCC. The CCC was sited next to the old County jail in a Hilo location that was not then surrounded by residences and schools as it is today. Consequently, local leadership and the Department have discussed the possibility of eventually relocating the facility to an outlying area that would not be at conflict with surround development. The Hali [sic] Nani Work Furlough Center site may be a feasible alternate location provided that enough buildable land is available. For fiscal year 2002/03 the facility averaged 286 inmates, which is more than 26% above its rated capacity. (Carter Goble Associates 2003: Section 3:4-5)

Using historical inmate population data, Carter Goble Associates (2003: Section 3:28) projected that the capacity needs for Hawai'i County "is almost three times the facility's current operating capcity," signifying the need to expand the facility to meet the growing inmate population as well as programmatic and administrative needs. While the overall number of inmates at all of the CCC continues to rise, concerns over the alarming number of inmates of Hawaiian ancestry in these facilities is another major issue that various State agencies (including the Office of Hawaiian Affairs), various organization, and scholars are attempting to address. The subseqent section of this report will bring attention to the impacts of Hawai'i's carceral system on Native Hawaiians populations.

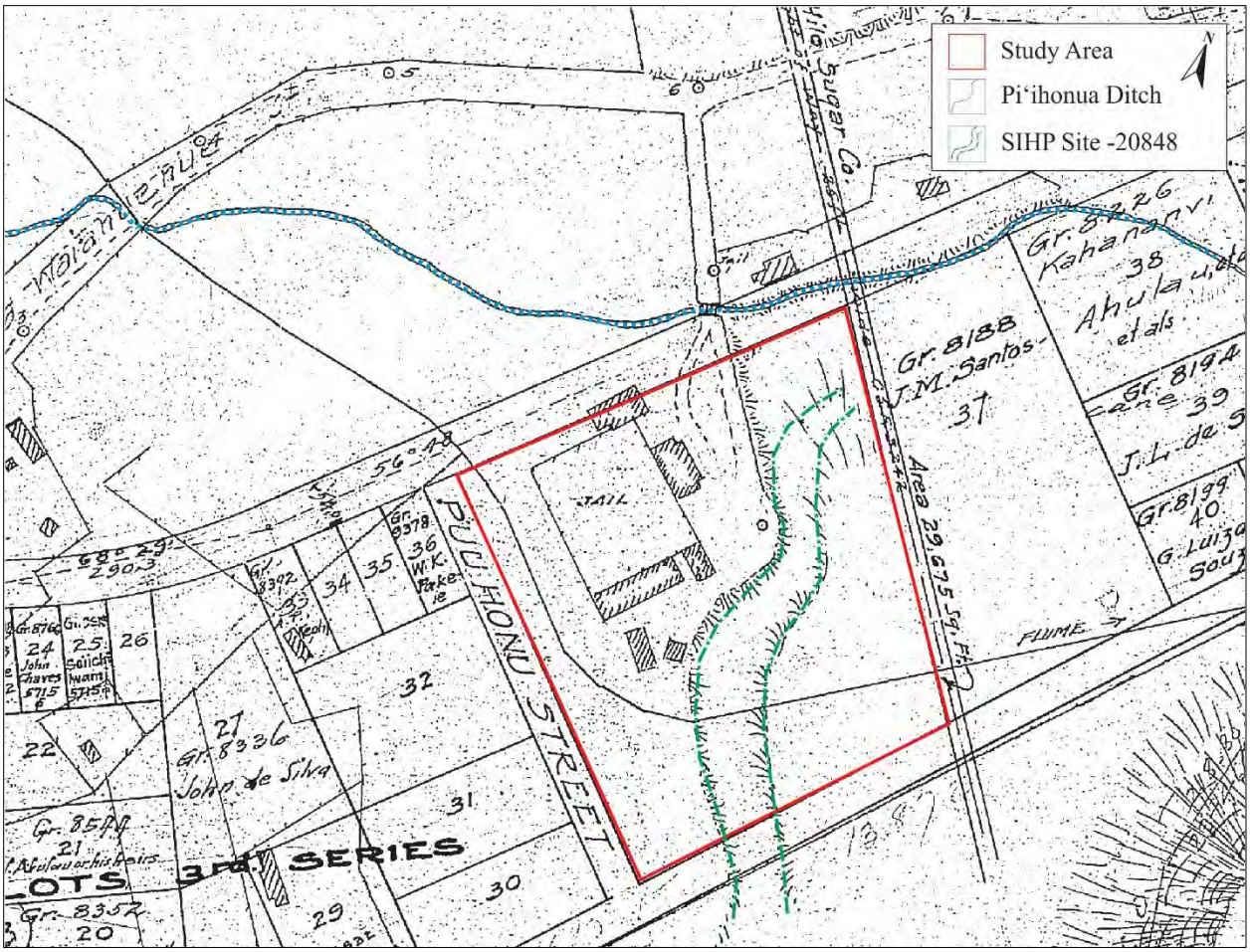



Figure 16. Portion of Hawai'i Registered Map 2658 from 1920 showing the old Hilo Jail and adjacent water ways.

## Impact of the Criminal Justice System on the Native Hawaiian Population

Although the bulk of this study has focused on identifying site-specific cultural impacts, the authors of this report also seek to identify any potential impacts that may adversely affect the Native Hawaiian population at large. The following section explores the most recent data regarding Native Hawaiian representation in Hawai'i's criminal justice system and explores the impacts this project may have on the said population.

In 2010, the Office of Hawaiian Affairs (OHA et al. 2010) in a collaborative research effort published the most comprehensive study that focused on the disparate treatment of Native Hawaiians in the criminal justice system. Since the adoption of a Western system of governance and laws with the 1840 Constitution, Native Hawaiians have and continue to be adversely affected at every stage of the criminal justice system, starting with arrest and continuing through parole (OHA et al. 2010). The reasons Native Hawaiians are adversely affected by the criminal justice system is varied, however, the OHA et al. (2010) study identified a variety of social factors that are unique to indigenous people. In the context of Hawai'i, having an understanding of the historical trauma associated with the loss of land, language, and spirituality that occurred as a result of Western contact is fundamental when analyzing the effects of the criminal justice system on the Native population.

One of the key findings from the OHA et al. (2010) study revealed that Native Hawaiians are not only disproportionately represented at every stage of Hawai'i's criminal justice system but this disproportion increases exponentially as individuals move through the system. Figure 17 shows the rate at which Native Hawaiian representation increases at every stage of the criminal justice system (OHA et al. 2010). As the United States' overall rate of incarceration has increased by some 450 percent, Hawai'i's incarceration rate has been even more rapid with a growth of 709 percent between 1980 and 2008, from 41 individuals incarcerated per 100,000 in 1980 to 332 individuals per 100,000 in 2008 (Figure 18).

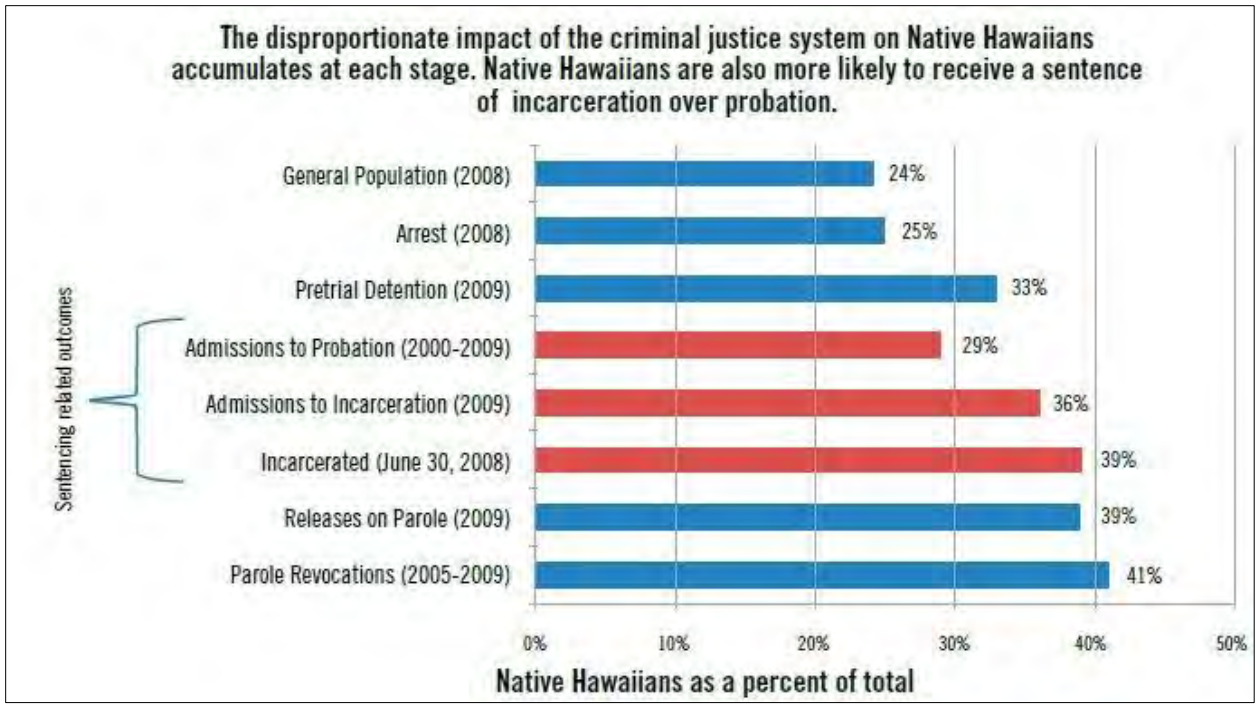



Figure 17. Native Hawaiian representation at each stage of the criminal justice system. (OHA et al. 2010:27)

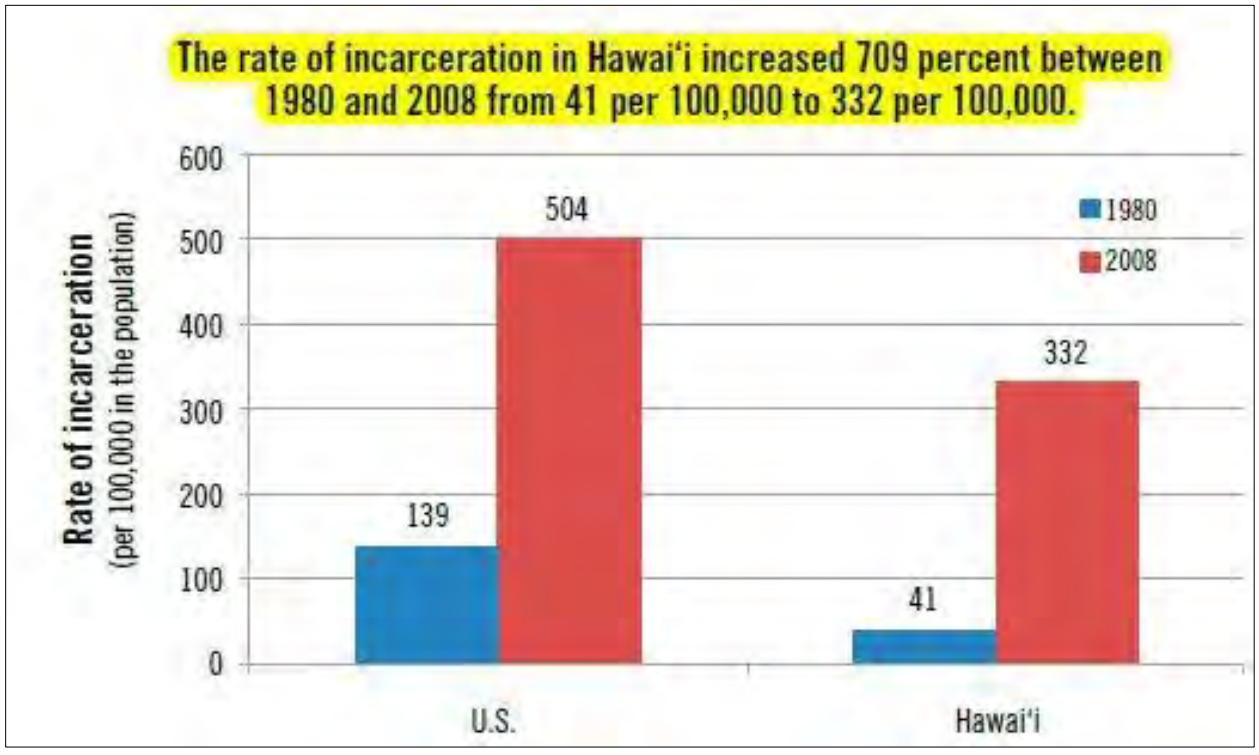



Figure 18. Rate of incarceration for the U.S. and Hawai‘i. (OHA et al. 2010:17)

Population estimates collected in 2008 by the Hawai‘i Department of Business, Economic Development, and Tourism reported that 1,257,607 people lived in Hawai‘i with Native Hawaiians making up 24 percent of the total population (OHA et al. 2010:21). Arrest rates mirror the population percentage figures with Native Hawaiians accounting for 25 percent of the total number of arrests made annually. However, as arrested populations move through the system, these figures increase disproportionately for Native Hawaiians within the incarcerated population (ibid.:27). And, when the data is separated by gender the results are even more alarming; as Native Hawaiian women make up approximately 44 percent of the incarcerated women's population and Native Hawaiian men comprise 37 percent of the incarcerated men's population (ibid.:39). Keahiolalo-Karasuda (2010) has suggested that these figures may be an underestimation of the actual percentages. Data collected in 2009 by the Hawai‘i Criminal Justice Data Center revealed that even though Native Hawaiians do not use drugs at dissimilar rates to other ethnicities, they make up the largest portion (32 percent) of the people admitted to prison for a drug offenses (OHA et al. 2010:45). Methamphetamine accounts for the greatest number (54 percent) of drug charges in Hawai‘i, with Native Hawaiians receiving the largest percentage of those charges at 38 percent. Additionally, Hawai‘i has a mandatory minimum sentence of ten years for methamphetamine-related charges, which results in more Native Hawaiians being incarcerated for longer periods of time (ibid.:47).

The rates at which Native Hawaiians are impacted by the criminal justice system is known to have devastating effects on the individual and collateral consequences that extend into their families and communities. OHA's 2010 study found that individuals coming out of incarceration are faced with many challenges that hinder them from successfully reintegrating and contributing to society such as: 1) diminished educational opportunities; 2) difficulty in obtaining a driver's license; 3) exclusion from civic and political participation; and 4) difficulty finding employment and vocational opportunities. Cumulatively, these factors often result in the breaking up of the family unit as incarcerated parents who lose custody of their children may never get them back (ibid.). Also "if a person convicted of a crime is able to reunite with his or her family after incarceration, the family may find itself homeless" (ibid.:61).because their absence contributes to economic disparity within the household As formerly incarcerated individuals struggle to regain their economic independence and social footing, their families and communities are also adversely affected by their experience. The impacts that result from the imprisonment of a parent can have long-lasting negative consequences that contribute to a cycle of continued contact with the criminal justice system.

Children are most vulnerable to the emotional, physical, and psychological impacts that result from having a parent incarcerated. These children are more likely to develop anti-social behaviors, join gangs, display delinquent behavior, develop mental health problems, and use drugs than children whose parents are not incarcerated. These impacts on children are even greater when a mother is incarcerated because she is often the primary caregiver. For Native Hawaiian families, the impacts of incarceration are often experienced across multiple generations. OHA et al. (2010:67) reported that a study conducted in 2000 found that in 33.9 percent of Native Hawaiian households grandparents played a part in the care of their grandchildren. The data collected from this study did not include statistics on the extent to which extended family members contribute to caring for the children of incarcerated parents. Since Native Hawaiians make up the largest percent of Hawai‘i's imprisoned population, this has resulted in inter-generational impacts that have long-lasting consequences.

Just as families are impacted by the imprisonment of a family member, so too are the communities and cultures in which they are associated. This is especially true for Native Hawaiian communities where strength and resiliency are drawn from individuals and families that are able to make contributions that promote healthy communities and a flourishing culture (OHA et al. 2010). When an individual is removed from their community, their ability to contribute to their communities and cultures is curtailed. As a culture that has endured the tangible impacts of colonization fueled by Euro-American interests, Native Hawaiian communities are more vulnerable than ever to the loss of land, culture, and community. A consideration of the historical and on-going disproportionate effects of Hawai‘i's criminal justice system on Native Hawaiian populations is vital in the assessment of potential cultural impacts

# 2. BACKGROUND

This section of the report includes a discussion of the cultural-historical background for the project area and a synthesis of relevant prior research. This information is presented to provide a comprehensive understanding of the cultural significance of the study area and general vicinity and to establish an analytical basis for the assessment of any potential cultural impacts. The ability to assess the cultural significance of the current study area parcel is contingent upon developing (at a minimum), a comprehensive understanding of the *ahupua'a* in which the study area is located. As will be demonstrated in the ensuing section and particularly with the traditional Hawaiian legendary accounts, a consideration of the broader region and island landscape is also required at times. The culture-historical context presented below for Pi'ihonua Ahupua'a is based on original research conducted by ASM at various online repositories as well as physical repositories including the University of Hawai'i at Hilo Mo'okini Library, State Historic Preservation Division library, and the Hawai'i State Archives.

## CULTURE-HISTORICAL CONTEXT

The chronological summary presented below begins with the peopling of the Hawaiian Islands and a generalized model of Hawaiian Prehistory followed by a summary of Historic events in the Hawaiian Islands after the arrival of foreigners. The discussion continues with a presentation of legendary and historical references to Pi'ihonua Ahupua'a, the nearby Wailuku River, Pu'u Honu, and Pu'u Hāla'i. This summary includes oral traditions and first-hand Historic accounts recorded by visitors and missionaries related to Pi'ihonua and beyond. Land use practices in the study area vicinity are also presented, including commercial sugar cultivation.

### A Generalized Model of Hawaiian Prehistory

While the question of the timing of the first settlement of Hawai'i by Polynesians remains unanswered, several theories have been offered that derive from various sources of information (i.e., genealogical, oral-historical, mythological, radiometric). However, none of these theories is today universally accepted (c.f., Kirch 2011). What is more widely accepted is the answer to the question of where Hawaiian populations came from and the transformations they went through on their way to establish a uniquely Hawaiian culture. The initial settlement in Hawai'i is believed to have originated from the southern Marquesas Islands (Emory in Tatar 1982). During these early times, Hawai'i's inhabitants were primarily engaged in subsistence level agriculture and fishing (Handy et al. 1991). This was a period of great exploitation and environmental modification when early Hawaiian farmers developed new subsistence strategies by adapting their familiar patterns and traditional tools to their new environment (Kirch 1985; Pogue 1978). Their ancient and ingrained philosophy of life tied them to their environment and kept order; which was further assured by the conical clan principle of genealogical seniority (Kirch 1984). According to Fornander (1880), the Hawaiians brought from their homeland certain universal Polynesian customs and belief: the major gods Kāne, Kū, and Lono; the *kapu* system of law and order; cities of refuge; the *'aumakua* concept; and the concept of *mana*. The initial permanent settlements were established at sheltered bays with access to fresh water and marine resources. These communities shared extended familial relations and there was an occupational focus on the collection of marine resources. Over a period of a few centuries, the areas with the richest natural resources became populated and perhaps even crowded, and there was an increasing separation of the chiefly class from the common people. As populations increased so did societal conflict, which resulted in hostility and war between neighboring groups (Kirch 1985). Soon, large areas of Hawai'i were controlled by a few powerful chiefs.

As time passed, a uniquely Hawaiian culture developed. The portable artifacts found in archaeological sites of this next period reflect an evolution of the traditional tools and distinctly Hawaiian inventions. The adze (*ko'i*) evolved from the typical Polynesian variations of plano-convex, trapezoidal, and reverse-triangular cross-section to a very standard Hawaiian rectangular quadrangular tanged adze. The two-piece fishhook and the octopus-lure breadloaf sinker are Hawaiian inventions of this period, as are '*ulu maika* stones and *lei niho palaoa*. The latter was a status item worn by those of high rank, indicating a trend toward greater status differentiation (Kirch 1985). As the population continued to expand so did social stratification, which was accompanied by major socioeconomic changes and intensive land modification. Most of the ecologically favorable zones of the windward and coastal regions of all major islands were settled and the more marginal leeward areas were being developed. During this expansion period, additional migrations to Hawai'i occurred from Tahiti in the Society Islands. Rosendahl (1972) has proposed that settlement at this time was related to seasonal, recurrent occupation in which coastal sites were occupied in the summer to exploit marine resources, and upland sites were occupied during the winter months, with a focus on agriculture. An increasing reliance on agricultural products may have caused a shift in social networks as well; as Hommon (1976) argues, kinship links between coastal settlements disintegrated as those links within the *mauka-makai* settlements expanded to accommodate

the exchange of agricultural products for marine resources. This shift is believed to have resulted in the establishment of the *ahupua‘a* system sometime during the A.D. 1400s (Kirch 1985), which added another component to an already well-stratified society. The implications of this model include a shift in residential patterns from seasonal, temporary occupation, to permanent dispersed occupation of both coastal and upland areas.

The *ahupua‘a* became the equivalent of a local community, with its own social, economic, and political significance, which added another component to a then well-stratified society. *Ahupua‘a* were ruled by *ali‘i ‘ai ahupua‘a* or chiefs who controlled the *ahupua‘a* resources; who, for the most part, had complete autonomy over this generally economically self-supporting piece of land. *Ahupua‘a* lands were in turn, managed by an appointed *konohiki* or lesser chief-landlord. The *ali‘i-‘ai-ahupua‘a*, in turn, answered to an *ali‘i ‘ai moku* (chief who claimed the abundance of the entire district). Thus, *ahupua‘a* resources supported not only the *maka‘āinana* (commoners) and *‘ohana* (families) who lived on the land but also contributed to the support of the royal community of regional and/or island kingdoms. *Ahupua‘a* are land divisions that typically incorporated all of the eco-zones from the mountains to the sea and for several hundred yards beyond the shore, assuring a diverse subsistence resource base (Hommon 1986). Although the *ahupua‘a* land division typically incorporated all of the eco-zones, their size and shape varied greatly. This form of district subdividing was integral to Hawaiian life and was the product of resource management planning that was strictly adhered to. In this system, the land provided fruits and vegetables and some meat for the diet, and the ocean provided a wealth of protein resources (Rechtman and Maly 2003). In communities with long-term royal residents, divisions of labor (with specialists in various occupations on land and in the procurement of marine resources) were also strictly enforced.

By the seventeenth century, large areas of Hawai‘i Island were controlled by a few powerful *ali‘i ‘ai moku*. There is island-wide evidence to suggest that growing conflicts between independent chiefdoms were resolved through warfare, culminating in a unified political structure at the district level. It has been suggested that the unification of the island resulted in a partial abandonment of portions of leeward Hawai‘i, with people moving to more favorable agricultural areas (Barrera 1971; Schilt and Sinoto 1980). ‘Umi a Līloa, a renowned *ali‘i* of the Pili line, is often credited with uniting the Island of Hawai‘i under one rule during the Precontact Period (Cordy 1994). ‘Umi-a-Līloa is also credited with formalizing the land division system on Hawai‘i Island and separating the various classes of chiefs, priests, and laborers (Beamer 2014; Cordy 2000; Kamakau 1992). Upon the death of ‘Umi-a-Līloa, Hawai‘i Island came under the control of his eldest son Keli‘iokāloa-A-‘Umi (Cordy 2000), whose reign is marked by his mistreatment of the lesser chiefs and commoners. His reign was short lived and by the early eighteenth century Hawai‘i Island fell under the control of Alapa‘inui, who assembled a robust army and assigned his closest potential usurpers (his nephews Keawema‘uhili, Kalani‘ōpu‘u, and Keōua) as generals in his militia. The prodigious ‘Ī clan, spread across the districts of Ka‘ū, Puna, Hilo, and portion of Hāmākua was also a powerful force and threat to Alapa‘i campaign (Cordy 2000). As Alapa‘i gathered his forces to strike back at Kekaulike, the *ali‘i nui* of Maui, the high ranking *ali‘i wahine* (chiefess) Keku‘iapoiwa made her way to Kokoiki, Kohala to give birth to Pai‘ea, the birth name of Kamehameha (ibid.). Kamehameha was reared in the traditions and customs of the ancient chiefs and trained under some of the most skilled warriors of that time including Kekūhaupi‘o. Upon Alapa‘i’s death, his eldest son Keawe‘ōpala was named heir to the kingdom. By the mid eighteenth century, the young and determined Kamehameha directed his efforts toward consolidating Hawai‘i Island under his rule. To accomplish this monumental task, Kamehameha continued his training under his more experienced kin namely Kalani‘ōpu‘u, who was the *ali‘i nui* of Hawai‘i Island (‘Ī‘ī 1959). During Kalani‘ōpu‘ū’s reign, the first foreign vessels arrived in Hawaiian waters captained by British explorer, James Cook. Cook first landed at Waimea, Kaua‘i in 1778 and in 1779, he anchored just off the shores of Kealakekua Bay, Kona. Aboard these ships were innovative technologies and diseases unknown to the inhabitants of these islands. Items such as metal, nails, guns, canons, and the large foreign vessels themselves stirred the interest of the *ali‘i* and *maka‘āinana* alike. Acquisition of these technological advancements came through barter. This resulted in the *ali‘i* gaining possession of such items that ultimately set traditional Hawaiian warfare in new trajectory; one that would be forged by none other than Kamehameha. Wars occurred regularly between intra-island and inter-island polities during this period. It was during this time of warfare that Kamehameha, eventually rose to power and united all the Hawaiian Islands under his rule (Kamakau 1992).

## A Brief History of Hawai‘i After Western Contact

The arrival of Western explorers in Hawai‘i signified the end of the Precontact Period, and the beginning of the Historic Period. With the arrival of foreigners, Hawai‘i’s culture and economy underwent drastic changes. Demographic trends during the early Historic Period indicate population reduction in some areas, due to war and disease, yet increase in others, with relatively little change in material culture. At first there was a continued trend toward craft and status specialization, intensification of agriculture, *ali‘i* controlled aquaculture, the establishment of upland residential sites,

and the enhancement of traditional oral history. The Kū cult, *luakini heiau*, and the *kapu* system were at their peaks, although western influence was already altering the cultural fabric of the Islands (Kirch 1985; Kent 1983). Foreigners very quickly introduced the concept of trade for profit, and by the time Kamehameha had conquered Oʻahu, Maui and Molokaʻi, in 1795, Hawaiʻi saw the beginnings of a market system economy (Kent 1983). Some of the work of the *makaʻāinana* shifted from subsistence agriculture to the production of foods and goods that they could trade with early visitors. Introduced foods often grown for trade with Westerners included yams, coffee, melons, Irish potatoes, Indian corn, beans, figs, oranges, guavas, and grapes (Wilkes 1845). In 1819, Kamehameha died and the *kapu* system that governed all aspects of traditional Hawaiian society was symbolically abolished when Liholiho (son of Kamehameha) ate in the presence of his mothers Keōpūolani and Kaʻahumanu. Shortly after 1820, Christianity established a firm foothold in the islands, and introduced diseases and global economic forces began to have a devastating impact on traditional life-ways.

## PIʻIHONUA AHUPUAʻA AND THE GREATER HILO DISTRICT

Piʻihonua literally translated as ascending (*piʻi*) earth (*honua*), and the *ahupuaʻa* is characterized by its sloping topography that extends along the south side of Wailuku River (Maly 1996:A-2). This *ahupuaʻa* is located within the traditional *moku* (district) of Hilo, which is one of six *moku* of Hawaiʻi Island. The Hawaiian proverb, "*Hilo, mai Mawae a ka pali o Maulua*" (Pukui 1983:108) details the extent of the district spanning from Mawae, a fissure separating Hilo from Puna and Maulua, separating Hilo from Hāmākua. Handy et al. provides a general description of the district:

> Hilo as a major division of Hawaiʻi included the southeastern part of the windward coast most of which was in Hamakua, to the north of Hilo Bay. This, the northern portion, had many scattered settlements above streams running between high, forested kula lands, now planted with sugar cane. From Hilo Bay southeastward to Puna the shore and inland are rather barren and there were few settlements. The population of Hilo was anciently as now concentrated mostly around and out from Hilo Bay, which is still the island's principal port. The Hilo Bay region is one of lush tropical verdure and beauty, owing to the prevalence of nightly showers and moist warmth which prevail under the northeasterly trade winds into which it faces. Owing to the latter it is also subject to violent oceanic storms and has many times in its history suffered semidevastation from tidal waves unleashed by earthquake action in the Aleutian area of the Pacific. (Handy et al. 1991:538)

Traditionally, the *moku* of Hilo was divided into three *ʻokana* (sub districts) with place names that have their origins in legendary times. The three *ʻokana* are (from north to south): Hilo Palikū—characterized by its upright cliffs, this area of Hilo extends north of the Wailuku River to Kaʻula Gulch. The Hawaiian proverb, *Hilo iki, pali ʻeleʻele* describes this sub district noted for its greenery, rain, and mists (Pukui 1983:107). The second sub district is Hilo One—or sandy Hilo, extends along the shoreline of Hilo Bay between Wailoa and Wailuku rivers; and finally, Hilo Hanakahi—the land region extending south of Wailoa River to include Keaukaha (Edith Kanakaʻole Foundation 2012). The *ahupuaʻa* in which the current study area is situated lies at the margin of Hilo Palikū and encompasses a portion of Hilo One.

The source of these *ʻokana* are found in the legendary account titled "*Kaʻao Hoʻoniua Puʻuwai no Ka-Miki"* ("The Heart Stirring Story of Ka-Miki") published in Hilo's Hawaiian language newspaper *Ka Hōkū O Hawaiʻi* between January 8, 1914 through December 6, 1917. In this legend, Piʻihonua-a-ka-lani is described as the ruling chief of Hilo Hanakahi. Hilo Hanakahi is also personified as a famous warrior who served in Piʻihonua-a-ka-lani's army. Piʻihonua-a-ka-lani is said to have had two beautiful daughters, the eldest being ʻŌhele who he gave to Ka-miki (hero of the story) as a wife and the second daughter was Waiānuenue who was kept hidden and raised in the cave below present-day Rainbow Falls (traditionally known as Waiānuenue) (Ka Hōkū O Hawaiʻi 1916). According to Maly (1996:A-2), Piʻihonua Ahupuaʻa is named in honor of the chief Piʻihonua-a-ka-lani, the brother of Waiākea-nui-kumu-honua and their sister Panaʻewa-nui-moku-lehua. Pukui et al (1974:184). further qualify the place name Piʻihonua as a "village, upland area, and ancient surfing place". The names of the legendary people of the area were identified with the place names for several land units (both the *ahupuaʻa* and their component *ʻili*) that comprise portions of the Hilo District. Many of these names survive today, but only as localities or street names (Rechtman and Lang 2009).

The lands of Hilo would eventually be further divided into *ahupuaʻa* that today retain their original names (Kelly et al. 1981). These include but are not limited to the subject *ahupuaʻa* of Piʻihonua in addition to Punahoa, Ponahawai, Kūkūau, and Waiākea all of which are located to the south of the current study area (Figure 19). Piʻihonua extends *mauka* from Hilo Bay and reaches the massive *ahupuaʻa* of Humuʻula. Piʻihonua is also bounded to the south by Punahoa 2nd Ahupuaʻa and to the north by the *ahupuaʻa* of Puʻuʻeo. Of the Hilo *ahupuaʻa* located south of Wailuku River, only Piʻihonua and Waiākea provided access to the full range of resources stretching from the sea up to 6,000

feet along the slopes of Mauna Kea and Mauna Loa respectively. The abundant marine resources of Hilo Bay, extensive spring-fed fishponds and waterfowl, and wetland and dryland agricultural resources sustained the population of the *moku* of Hilo. This area of Hilo also served as one of Hawai'i Island's royal seats with chiefly residences that lasted up through the time of Princess Ruth Ke'elikōlani in the 1870s (Brandt 2017, Kelly et. al. 1981; Cordy 2000). In addition to the terrestrial and marine resources found within the subject *ahupua'a*, freshwater is another resource that is found both on and near the subject parcel, specifically the Wailuku River and Pi'ihonua Ditch (SIHP Site 50-10-35-21228)

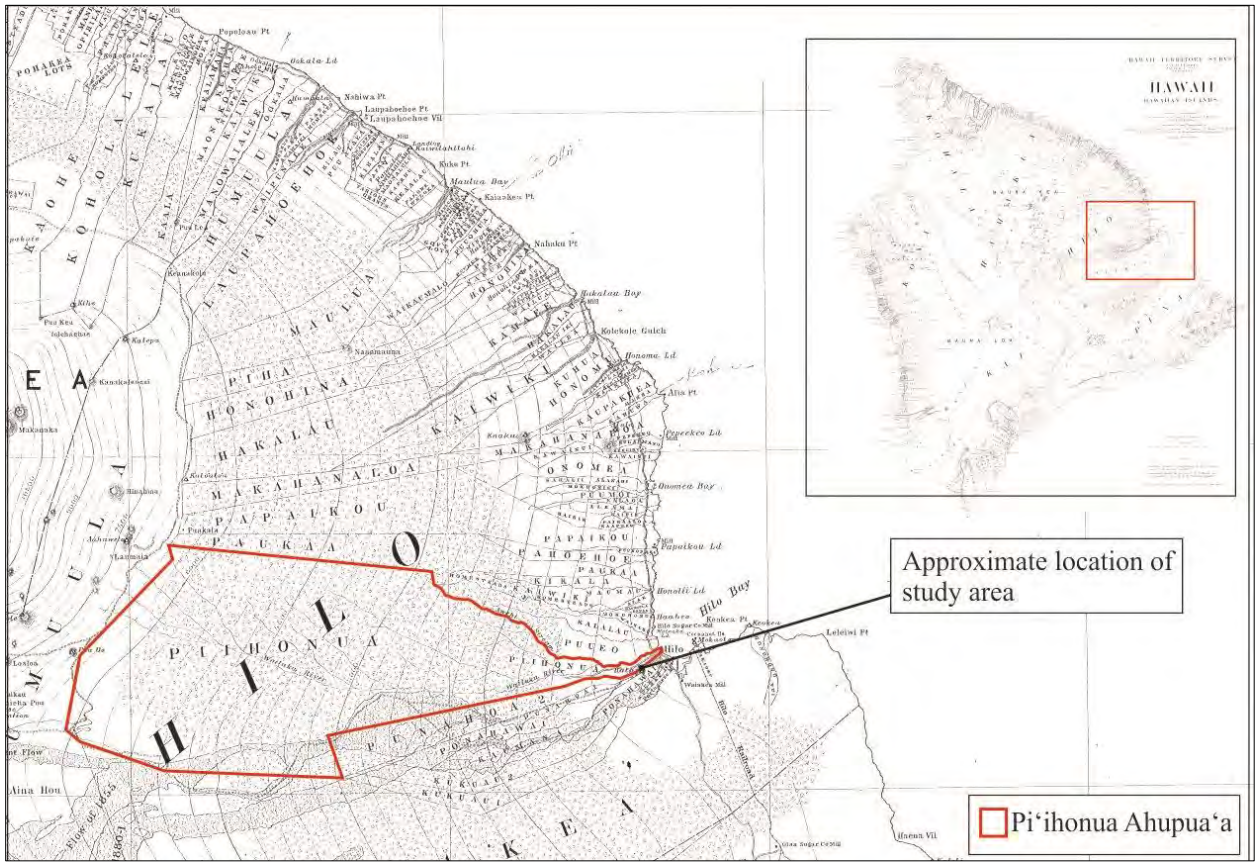



Figure 19. Portion of Hawai'i Registered Map 2060 by J.M. Donn showing study area location in relation to Pi'ihonua Ahupua'a ca. 1901.

## Rains, Rivers, and Waterways in Pi'ihonua Ahupua'a

The district of Hilo is renowned for its abundance of rain and freshwater, which has been recorded in countless oral traditions including *mele* (songs), *oli* (chants), and *'ōlelo no'eau* (proverbs and poetical expressions). In their most recent publication *Hānau Ka Ua*, Collette Akana and Kiele Gonzalez (2015) describes the Hawaiian cultural significance of rain:

> Our kūpuna [ancestors] had an intimate relationship with the elements. They were keen observers of their environment, with all of its life-giving and life-taking forces. They had a nuanced understanding of the rains of their home. They knew that one place could have several different rains, and that each rain was distinguishable from another. They knew when a particular rain would fall, its color, duration, intensity, the path it would take, the sound it made on the trees, the scent it carried, and the effect it had on people. (Akana and Gonzalez 2015:xv)

The nuanced understanding of the various rains of Hilo has been captured in the following *'ōlelo no'eau* published by Pukui (1983). These *'ōlelo no'eau* offers a more detailed understanding of the characteristics of the many rains of Hilo and Pi'ihonua:

> *Halulu me he kapua'i kanaka la ka ua o Hilo.*
> The rain of Hilo makes a rumbling sound like the treading of feet. (ibid.:53)

*Hilo ʻāina ua lokuloku.*
Hilo of the pouring rain. (ibid.:107)

*Hilo i ka ua Kani-Lehua.*
Hilo of the Kanilehua rain.
The Kanilehua rain, or the rain that patters in the lehua forest, is frequently referred to in the chants and songs of Hilo. (ibid.:168)

*Ka ua heʻe nehu o Hilo.*
The nehu-producing rain of Hilo.
The people knew the season when the schools of nehu fish followed the rain. (ibid.:167)

*Ka ua hehi ʻulu o Piʻihonua.*

The rain that treads on the breadfruit leaves of Piʻihonua.

Refers to Piʻihonua. (ibid.:167)

*Kau i ka lani ka holowaʻa ua o Hilo.*
Placed high in heaven is the rain trough of Hilo.
An expression of admiration for a person of regal bearing. (ibid.:173)

*Ku pāpū Hilo i ka ua.*
Hilo stands directly in the path of the rain. (ibid.:207)

*Luʻuluʻu Hanakahi i ka ua nui.*
Weighted down is Hanakahi by the heavy rain.
Hanakahi, Hilo, was named for a chief of ancient times. This expression was much used in dirges to express heaviness of the heart, as tears pour like rain. (ibid.:219)

*Pāuli hiwa ka lani o Hilo.*
Black with rainclouds is the sky of Hilo.
Sometimes said in humor when a dark-skinned person is seen. (ibid.:287)

*Pō Hilo i ka ua Kanilehua.*
Hilo is darkened by the Kanilehua rain.
Said of one who is weighted by sorrow and grief. (ibid.:293)

The abundance of rain that falls in the district of Hilo supplies all of its *ahupuaʻa*, including the subject *ahupuaʻa* of Piʻihonua. Rain has played its role in shaping both the physical landscape of this land and ultimately influenced the area's cultural-history. Pukui (ibid.) published several *ʻōlelo noʻeau* that speaks specifically to the districts many gulches, rivers, and streams.

*ʻAu umauma o Hilo i ka wai.*
Hilo has breasted the water.
To weather the storm. The district of Hilo had many gulches and streams and was difficult to cross. (1983:28)

*"Māmā Hilo?" "ʻAe, māmā Hilo i ka wai ʻole."*
"Is Hilo light?" "Yes, Hilo is light for lack of water."
A question asked of a runner, and his reply. It means that the way is clear, with no robbers or unpleasant experiences, and no rains to swell the streams and make traveling difficult. (ibid.:232)

*Pau ke aho i ke kahawai lau o Hilo.*
One's strength is exhausted in crossing the many streams of Hilo.
Said of or by one who is weary with effort. First uttered by Hiʻiaka in a chant when she found herself weary after a battle with the lizard god Panaʻewa. (ibid.:287)

One of the most prominent waterways found within the immediate project area vicinity is the Wailuku River, whose name can be literally translated as "waters of destruction" (Pukui 1974:225) and the Waikapu River (lit. sacred waters), which is a branch of the Wailuku River. The landmass situated between these two rivers is traditionally known as Koloiki, which Pukui (1974:116) translates as "little crawling." Koloiki is also commonly referred to as Reed's Island. Wailuku River tracks between the Piʻihonua and Puʻueo Ahupuaʻa boundary and is the largest and longest river in Hilo with a length of 315.6 kilometers (196.1 miles) (Parham *et al*. 2008:1034). The Wailuku River is classified

as a perennial stream and is the main feature of the Wailuku River watershed. The Wailuku River watershed is 653.2 square kilometers (252.2 square miles), with a maximum elevation of 4,200 meters (13,779 feet), effectively connecting it to Mauna Kea (ibid.:1033). The sheer scale of the Wailuku River and the abundance of fresh water it brings down from the upper elevations impacts the communities within North and South Hilo districts. It is also perhaps, one of the most storied rivers in east Hawai‘i and a vital source of *wai* or fresh water, which is not only necessary for survival but also carries cultural significance for the Hawaiian people (Tam Sing et al. 2017). The following Hawaiian proverbs illuminates some of the cultural connotations associated with the Wailuku River.

> *Ka wai lumaluma‘i kanaka o Wailuku.*
> The water of Wailuku where men were drowned.
> Refers to Wailuku, Hilo, where victims were drowned to be offered in sacrifice at a nearby *heiau*. (Pukui 1983:179)

> *Piha ‘ōpala ke one o Ha‘akua.*
> The sand of Ha‘akua is filled with rubbish.
> Said of one who is untidy, or who talks nonsense. Ha‘akua is under the Pu‘ueo end of the railroad bridge that spans the Wailuku River in Hilo, Hawai‘i. (ibid.:289)

While the various waterways furnished the area residents with one of life’s fundamental necessities, *wai* (freshwater) also carries spiritual and purification properties, and is considered a *kinolau* (physical manifestation) of the god Kāne. The origin of Hawai‘i’s freshwater sources is often attributed to Kāne, who along with his companion Kanaloa (whose dominion was over the ocean), came to Hawai‘i from Kahiki (land outside of Hawai‘i). Legend has it that Kāne and Kanaloa both enjoyed consuming *‘awa*, a drink prepared by mixing the root of the *‘awa* plant (*Piper methysticum*) with fresh water. In their travels, they stopped at various places around the Hawaiian Islands, including Hilo and opened new fresh water springs from which they prepared their favorite drink (Handy et al. 1991:65). The saying, “*He huewai ola ke kanaka na Kāne*” literally translates as “[m]an is Kāne’s living water gourd,” and emphasizes the relationship that Hawaiians have to fresh water, and thereby to the deity Kāne (Pukui 1983:68). Handy et al. emphasize the spiritual relationship that Native Hawaiians have to water:

> Fresh water as a life-giver was not to the Hawaiians merely a physical element; it had a spiritual connotation. In prayers of thanks and invocations used in offering fruits of the land, and in prayers chanted when planting, and in prayers for rain, the “Water of Life of Kane” is referred to over and over again. Kane—the word means “male” and “husband”—was the embodiment of male procreative energy in fresh water, flowing on or under the earth in springs, in streams and rivers, and falling as rain (and also as sunshine), which gives life to plants. (Handy et al. 1991:64)

*Wai* was not only valued for its life-giving properties, but also its purifying properties. The continuous *mauka* to *makai* flow of *wai* provided fresh drinking water, supplied water to irrigated fields, and fishponds, recharged ground water supplies, and sustained productive estuaries and fisheries by transporting nutrients from the uplands to the sea (Sproat 2009). Because flowing water was considered a vital artery for both the land and man, great care was paid to maintaining clean waterways. Traditionally, domestic duties involving the use of water were dispersed along the length of the river. For instance, “there was a place for bathing (*‘au‘au*) low down in the stream; a place up farther along the stream for washing utensils or soaking calabashes; still farther up were dams for *‘auwai*; and above the dams was the place where drinking water was taken” (Handy et al 1991:61). Because of the high degree of dependency on *wai* to furnish and satisfy life’s needs, *wai* was a public trust resource that was considered inalienable. Handy et al. continue thusly:

> Inalienable title to water rights in relation to land use is a conception that has no place in old Hawaiian thinking… [w]ater, whether for irrigation, for drinking, or other domestic purposes, was something that “belonged” to Kane-i-ka-wai-ola (Procreator-in-the-water-of-life)… The *ali‘i nui*, in old Hawaiian thinking and practice, did not exercise personal dominion, but channeled dominion. In other words, he was a trustee. (Handy et al. 1991:63)

The introduction of western law during the reign of Kauikeaouli (known as Kamehameha III 1825-1854), and the subsequent 1848 land privatization movement known as the *Māhele ‘Āina* established new laws that gave rise to the notion of private ownership of the land and its resources. Sproat (2009) notes that although the concept of water as a public trust carried over into the Kingdom of Hawai‘i laws, many newcomers were unaware or failed to respect the customary practices resulting in a number of water disputes. This conflict is evident in this area’s history as new ditches were dug to furnish water to places like the Hilo Boarding School, and the expanding Hilo town.

*Waterways within the Study Area and the Greater Pi'ihonua Ahupua'a*

Historical maps and oral testimony collected during the early 20th century illuminate a complex network of waterways that effectively moved water from the uplands of Pi'ihonua and the neighboring Punahoa Ahupua'a to the sprawling coastal town of Hilo. Within the immediate study area, Walker et al. (1997) recorded a branch of what he interpreted as the Hilo Boarding School (HBS) Ditch (see Figure 5), which was designated as SIHP Site -20848. This site is one of two historic water features that passes through the HCCC parcel; the second feature being a portion of the Pi'ihonua Ditch that cuts through the northeast corner of the subject parcel (Figure 20). Site -20848 joins with the historic Pi'ihonua Ditch outside of the study area boundaries near the northeast corner. Although no surface evidence remains, both Walker et al. (1997) and Wolforth (1999) recorded a smaller water feature extending west from Site -20848 (see Figure 5), which they determined to be a localized ditch and was designated as SIHP Site -20849. Walker et al. (1997) associated the smaller Site -20849 ditch with the development of the Pi'ihonua House Lots Subdivision constructed in the late 1920s or with the landscaping of the jail property after 1907. This smaller branch was a part of Wolforth's 1999 data recovery initiative and has since been filled in. Although neither ditch has been labeled on historical maps, two maps from 1920 shows the route of Site -20848. Hawai'i Registered Map 2856 (Figure 21) produced by A.S. Chaney in 1920 shows the study area parcel, which is labeled "jail." Additionally, Chaney's map shows Site -20848 originating from the south section of parcel in the neighboring *ahupua'a* of Punahoa and Pi'ihonua Ditch further north of the parcel. Chaney represents this unlabeled feature with sloping lines suggesting it may have been a naturally occurring drainage. A 1920 map housed at the County of Hawai'i Public Work's office titled "Hilo Sugar Company's Fields" (Figure **Error! Reference source not found.**) shows Site -20848, which appears to extend from the HBS Ditch through the study area and connects with the Pi'ihonua Ditch. These two ditches are part of a network of Pre-Historic and early Historic ditches that directed water down the steeply sloped lands of Pi'ihonua.

Based on the Walker et al. (1997) and Wolforth (1999) studies, Site -20848 has been interpreted as a branch of the HBS Ditch— an extensive ditch that was added in the early Historic Period and passed south of the current study area (see Figure **Error! Reference source not found.**). The development of the HBS and Pi'ihonua Ditch coincides with the more prominent and older 'Ī 'Auwai ('Ī Ditch), which brought water from a source near Waiale Falls in Pi'ihonua and fed several other ditches that watered the many irrigated fields located along its length. The HBS Ditch appears to have followed the older 'Ī 'Auwai system, which Wolforth (1999) determined to be the primary ditch with its headwaters near Waiale Falls in Wailuku River, well *mauka* of the current study area and carried water toward Pu'u Hāla'i where it turned north, and then flowed through the drainage in the current study area on its way to what became the foot of Waianuenue Avenue. Construction of what has been referred to as the 'Ī Ditch was ordered by a Hilo *ali'i* named 'Ī, at a time well before Kamehameha I, had conquered the islands (Kelly 1982). This ditch "went close to Puuhonu [one of the Hilo Hills], on the Pueo [Hāmākua] side, and …went right straight down to the foot of Waianuenue Street" (ibid.:10) and was probably earthen in construction. After Kamehameha united the islands, he ordered a channel dug from the 'Ī Ditch near the old Hilo Hotel located off present-day Kino'ole Street *makai* of the current study area (ibid.). This branch of the 'Ī ditch provided water to a house lot belonging to the Spencer's as well as the nearby government buildings (ibid.). Several ditches branches were dug from the 'Ī Ditch, one of which was the Kanuha Ditch that "goes around the Puna side of Puuhonu" and was said to have been constructed during Governor Kuakini reign (Kaleioholani in Kelly 1982:12). According to Kaleioholani's testimony, the HBS Ditch was dug from a branch of the Kanuha Ditch (in Kelly 1982:13).

With the arrival of Hilo's first missionaries in the early 19th century, the area's ditch system was modified to supply water to the growing mission station. Arriving in Hilo on July 6, 1833, missionaries David Belden Lyman and his wife Sarah Joiner Lyman settled in Punahoa in a wooden frame house, which still stands on what is now Haili Street as part of the Lyman Memorial Museum. Three years later, the Lyman's opened the Hilo Boarding School near the present-day location of the Hilo Boys and Girls Club on Haili Street (Canevali 1977). Their "goal was to educate Hawaiian boys in the ways of industry and morality, and to be a preparatory school for Lahainaluna High School on Maui" (Lang 2007:57). As part of the curriculum, students cultivated various food crops and sugarcane, and ran a tailor shop, dairy, and blacksmith (ibid.). Perhaps one of the first vocational training schools in the United States territory, it operated until 1925. The Hilo Boarding School obtained its water through a ditch (later dubbed the HBS Ditch) that transported water from *mauka* Punahoa around the base of Pu'u 'Ōpe'ape'a, Pu'u Honu, and Pu'u Hāla'i, colloquially referred to as the Hilo Hills (see Figure **Error! Reference source not found.**). In referencing a note written on the a 1920 "Hilo Sugar Company Fields" map, Kelly (1982:24) clarified that the HBS Ditch was constructed in 1813 and extended *mauka* of Kupapau Hill in Punahoa Ahupua'a and passed along the north face of the Hilo Hills. A spillway is also depicted on the map as being located above Pu'u 'Ōpe'ape'a (see Figure **Error! Reference source not found.**). Historic water rights testimonies and historic maps provide additional insight into the ditch development in the area.

In 1917, questions arose regarding ownership and water rights of the HBS Ditch, a case that was eventually settled in the Supreme Court with the ruling in favor of the Hilo Boarding School (Kelly 1981; Wolforth 1999). Two key water rights testimonies from this case provide clues to the evolution of the ditch system. The first testimony was provided by Solomon P. Kaleioholani, who was born in Waiākea Ahupua‘a in 1845 and oversaw the distribution of water in the Hilo ditches after 1852, a responsibility he took over from his grandmother. The full text of his statement was transcribed by Kelly (1982:27-28). Kaleioholoani's testimony details four main ditches in the area, namely ‘Ī Ditch, Kamehameha Ditch, Kanuha Ditch, and the HBS Ditch; the first and latter two are relevant to the study area and are quoted below:

> The first ditch was dug by I, a Hilo chief, to furnish running water for the village of Hilo. Prior to that time, the natives had to go to the Wailuku River to get their water. The I ditch was dug before Kamehameha conquered the Islands. The old I ditch went close to Puuhonu, on the Pueo side, and that went right straight down to the foot of Waianuenue Street. (quoted in Kelly 1982:12)
>
> The second branch adjoins the I ditch mauka, and goes around the Puna side of Puuhonu. Kanuha dug that under Kuakini (Gov. Adams). This ditch was dug to supply water for Gov. Adam's sugar mill… The third ditch was dug when Adams was appointed Governor of Hawaii, and through his instructions to Kanuha,— about the year 1841. This ditch went down to about there [where] the jail is now; and emptied into a fishpond called "Hauna" which belonged to I, then from there to Alalaua Stream. This fish pond was in Ponahawi [Ponahawai]. My people owned this strip of land adjoining the fish pond, which was afterwards sold to Kaina. (ibid.:12-13)
>
> The Boarding School ditch is the branch of the Kanuha auwai.
>
> My grandmother gave the missionaries the right to dig the ditch for household purposes and my grandmother's people dug this ditch for them, during the time of Goodrich, —this was the time the ditch got its name of Haalilili. (ibid.:13)

The second testimony was given by Frederick S. Lyman who indicated that the HBS Ditch was originally created by Joseph Goodrich, the founder of the Hilo Station for American Board of Commissioners for Foreign Missions (ABCFM). Initially used for agricultural and household use, water in the HBS Ditch later powered a generator that provided electricity for about a dozen lights at the school. A little later, the school used that electricity to start an ice plant. In 1895, the HBS Ditch was generating commercial electricity to Hilo via the specially formed Hilo Light Co., Ltd., which began in 1895 (Kelly 1982).

While the bulk of Lyman's statement focused on the HBS Ditch and the HBS's water rights, he mentions "the Piihonua water ditch" from which Coan and Wetmore took water "at the Union School, to their houses" (quoted in Wolforth 1999:11). The Pi‘ihonua Ditch, on the other hand, originated from the Wailuku River at the present-day Carvalho Park, with another ditch segment added upstream to bring water from Kaumana Springs in Pi‘ihonua. The source of water that furnishes the area's ditch system, more specifically the Wailuku River figures prominently in many of the legendary accounts for this portion of the Hilo District. The following section of this report features a summary of the many legendary accounts for this river.

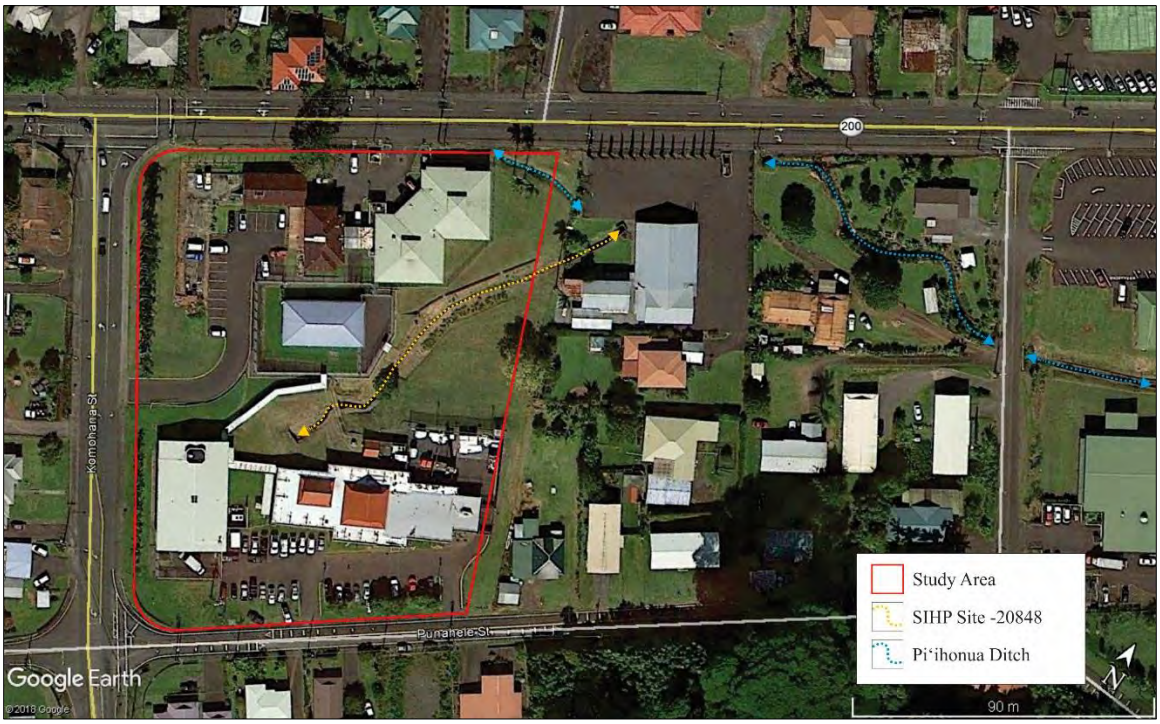



Figure 20. Google Earth™ 2013 satellite image showing study area in relation to nearby historic waterways.

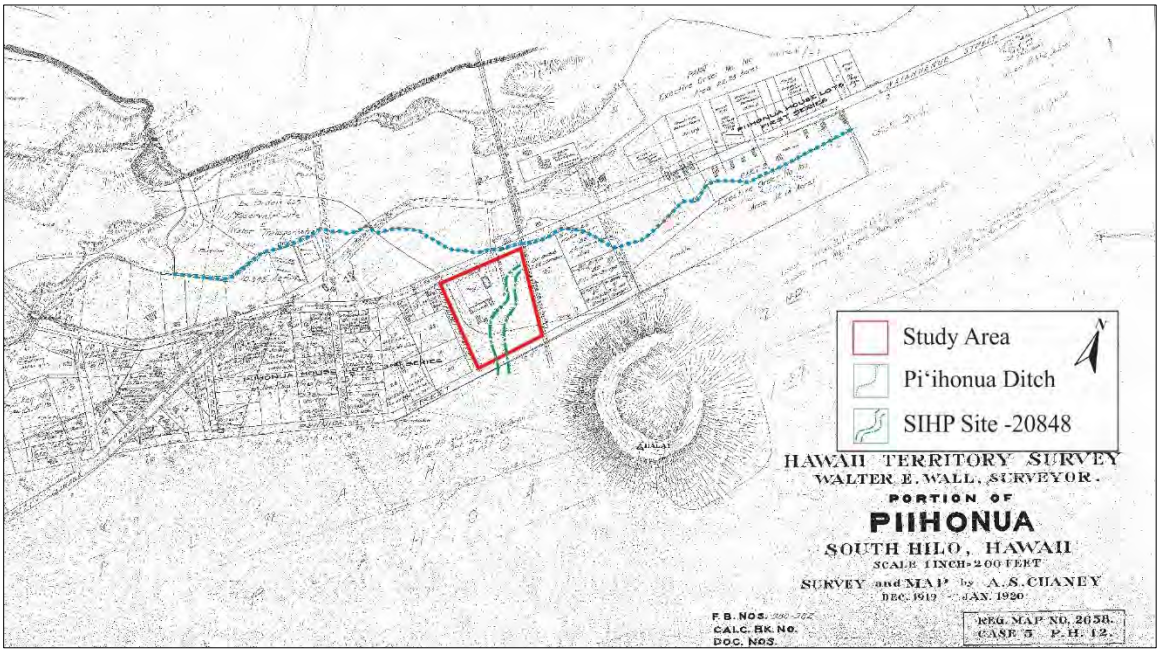



Figure 21. Portion of Hawai'i Registered Map 2658 showing SIHP Site -20848 originating from the neighboring Punahoa Ahupua'a.

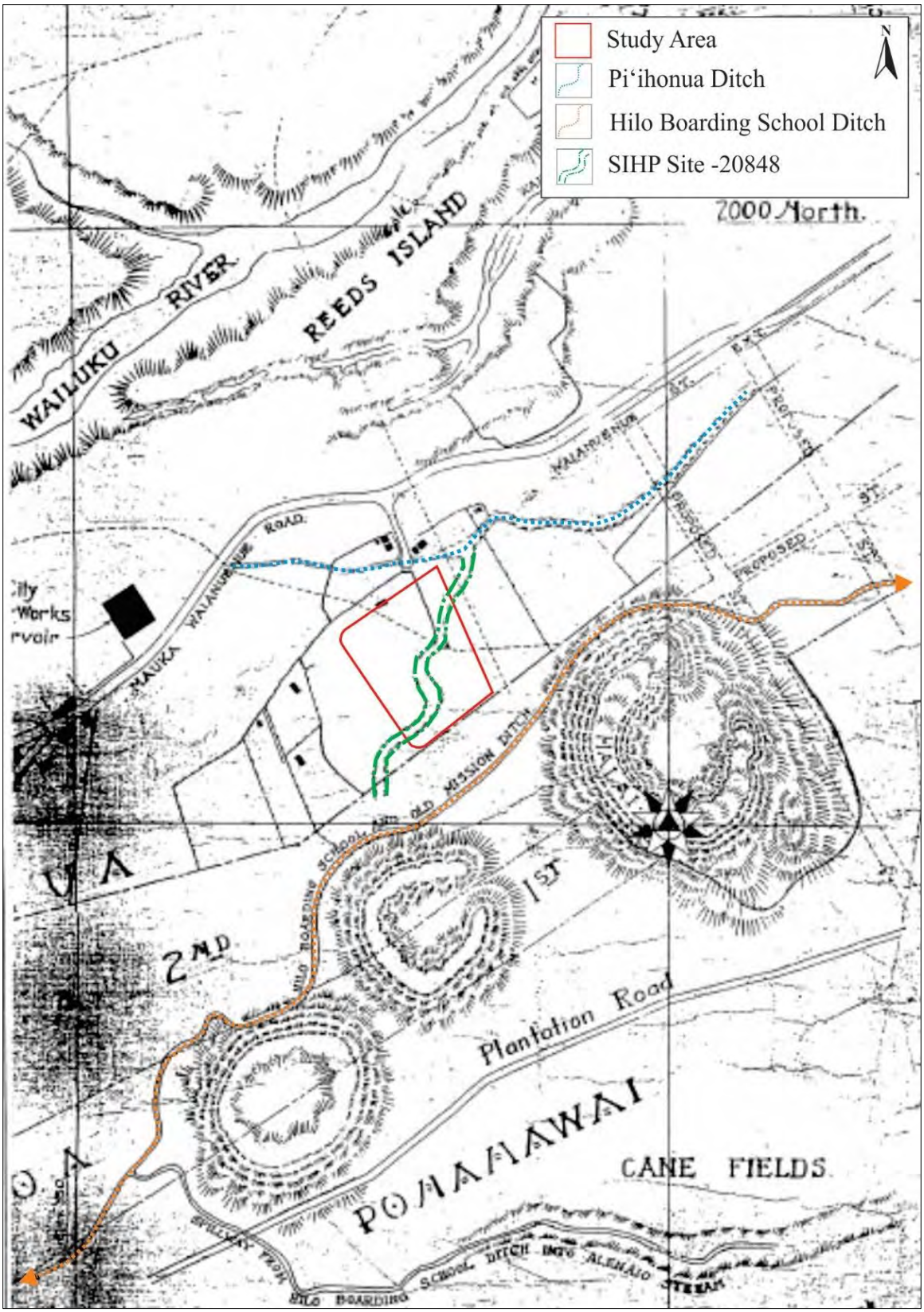



Figure 22. Portion of Hawai'i Registered Map 2658 showing SIHP Site -20848 originating from the neighboring Punahoa Ahupua'a.

## Select *Moʻolelo* for the Wailuku River and Piʻihonua Ahupuaʻa

Traditional *moʻolelo* (stories, tales, and myths) and *ʻōlelo noʻeau* (proverbs and sayings) associated with the *wahi pana* (legendary places) of Piʻihonua Ahupuaʻa and Wailuku River abound. Many legends associated with Piʻihonua are set in Wailuku River and the hills located near the study area vicinity. According to Charlotte Hapai, author of *Legends of the Wailuku*, Wailuku means "destroying water," and many of the legends associated with the river "confirm the belief that it was named for its violent habits" (1920:5); such as taking lives and damaging property when the waters overflowed its banks. Some of the legends associated with this river feature humans, goddesses, and demi-gods battling *moʻo* (guardians of fresh water often with reptile like features) who lived in the river. According to Kamakau, the *moʻo* most commonly referred to in Hawaiian folklore differ from the typical house or rock lizard. Kamakau notes that the bodies of mythical *moʻo* were "extremely long and terrifying" (1964:82) and they were often seen near or in bodies of fresh water and even in certain fishponds. In legendary accounts, *moʻo* are often depicted as fearsome and meddlesome, while in other accounts they are portrayed as friendly and even helpful (Beckwith 1970). In *The Epic Tale of Hiʻiakaikapoliopele*, Hiʻiaka, the heroine of the journey slays numerous malevolent *moʻo* throughout the island chain while en route to Kauaʻi (Hoʻoulumāhiehie 2006). Nonetheless, their association with fresh water contributes to a better understanding of the cultural significance of Hawaiʻi's waterways.

*Hiʻiaka and Wailuku River*

The Wailuku River also appears in another legend associated with Hiʻiakaikapoliopele, Pele's favorite sister who journeyed throughout the islands in search of her sister's lover Lohiʻau. According to the following version of the legend published in Hawaiʻi Island Legends under the title "How Hawaiʻi Was Made Safe" by Pukui and Curtis (2010:3-14), as Hiʻiaka's party approached Hilo, they stopped to ask if they were going the right way:

> "Yes, follow that trail," the old people answered. "Soon you will come to the Wailuku River. Two logs make a bridge over the river. But do not cross until you have made offering to the gods who guard the bridge." (ibid.:12)

The old couple informed Hiʻiaka that the two logs belonged to two gods that lived in a cave and that when they wanted to cross, they left vegetables or fish on the logs to appease the gods and ensure their safe passage. However, Hiʻiaka traveled without food; thus, the old couple warned "Then do not try to cross, for the gods will turn these logs beneath your feet and you will fall into the raging river. You will be dashed to death upon the rocks" (ibid.). Once they arrived at the crossing, Hiʻiaka refused to give the so-called gods any food and in front of a gathering crowd challenged them thusly:

> "I'll show you they are no gods!" shouted Hiʻiaka as she whirled her pāʻū. The people saw two frightened figures rushing away to hide in a cave far up the river. Hiʻiaka followed them and the two dashed out to find another hiding place. The pāʻū of the goddess flashed and the figures were turned to stone. (ibid.)

Hiʻiaka returned to the people and announced that "the crossing is safe." (ibid.)

Hoʻoulumāhiehie (2006), offers another version of the story in which Hiʻiaka encounters two gamblers in Hilo, named Piʻihonua and Puʻuʻeo. Similarly, two *moʻo* named Kuāua and Piliamoʻo guarded Wailuku Stream and demanded offerings in exchange for safe passage over a bridge made of *ʻahakea* (*Bobea sp.*) logs. Hiʻiaka refused the demands of the two *moʻo* and offered a supplication chant instead. Upon hearing Hiʻiaka's chant, Piliamoʻo dashed up the river embankments and shot her tongue up causing the bridge to overturn. Hiʻiaka and her companions then drew upon their supernatural powers to outsmart the two *moʻo*; thus allowing them to cross the Wailuku River. The legend concludes with Hiʻaka turning the two *moʻo* to stone, thereby making the Wailuku a little safer for the people to cross (ibid.:91-93).

*Legends of Māui and the Wailuku River*

Legendary tales concerning malicious *moʻo* are also found in the story of the young demi-god Māui in his quest to save his mother Hina from the ill-tempered *moʻo* named Kuna. Hina, the famed moon and *kapa* goddess dwelled within the cave hidden behind the crashing sheet of water at Waiānuenue or more commonly known as Rainbow Falls. Descriptions of this famed waterfall is described in the following *ʻōlelo noʻeau* published by Pukui (1983:170):

> *Ka ua lei māʻohu o Waiānuenue.*
> The rain of Waiānuenue that is like a wreath of mist.
> Wai-ānuenue (Rainbow-water) in Hilo, Hawaiʻi, is now known as Rainbow Falls. On sunny days a rainbow can be seen in the falls, and on rainy days the rising vapor is suggestive of a wreath of mist.

Hina's son Māui is perhaps best known as the trickster *kupua* who snared the sun at Haleakalā on Maui, convincing it to circle slower so that his mother may have sufficient time to dry her *kapa*. However, he appears frequently in *mo'olelo* of the Wailuku River. The following legend details his battle with the irascible *mo'o* Kuna and also mentions the origin of two rock formations: Ka Wa'a o Māui and Lonokaeho in the Wailuku River. The legend was published by Hapai (1920) and is reproduced here, in its entirety:

> Far above Rainbow falls there lived a powerful kupua named Kuna. Kuna had the form of a monstrous dragon, unlike anything in these islands today.
>
> Kuna often tormented the goddess Hina in her rocky cave behind Rainbow Falls by sending over great torrents of water or by rolling logs and boulders down the stream. Quite often he would block the stream below the falls with sediment sent down by freshets during the rainy seasons.
>
> But Hina was well protected. Her cave was large and the misty cloud of spray from the falling waters helped to conceal it. So in spite of the frequent floods and many threats from Kuna, Hina paid him not the slightest attention, but with her songs and gay laughter lightly mocked him as she worked.
>
> On many days Hina was quite alone, while her eldest son, the demi-god Maui, was away on one of his numerous expeditions. Even then she did not mind this for should any danger befall her she had a peculiar cloud servant which she called "ao-opua." If Hina were in trouble this ao-opua would rise high above the falls, taking an unusual shape. When Maui saw this warning cloud he would hurry home at once to his mother's side.
>
> One night while Maui was away from home on the Island of Maui, where he had gone to bargain with the Sun, a storm arose. The angry waters roared about the mouth of Hina's cave. They hissed and tossed in ugly blackness down the narrow river gorge; but Hina heard naught of the wildness without. Being used to the noisy cataract, her slumbers were not disturbed by the heightened tumult of its roar.
>
> But Kuna, quite aware of the situation, was quick to take advantage and to act. Hina's apparent indifference annoyed him. He recalled several failures to conquer her, and rage overwhelmed him. Calling upon his powers he lifted an immense boulder and hurled it over the cliffs. It fitted perfectly where it fell between the walls of the gorge and blocked the rush of the hurrying torrent.
>
> Laughing loudly at his success, Kuna called on Hina and warned her of her plight, but still unknowing, Hina slept on until the cold waters entered the cave, rapidly creeping higher and higher until they reached her where she slept. Startled into wakefulness she sprang to her feet, and her cries of panic resounded against the distant hills. As the waters rose higher her cries became more terrified until they reached the Island of Maui and the ears of her son.
>
> Through the darkness Maui could see the strange warning cloud, unusually large and mysterious. With his mother's cries ringing in his ears he bounded down the mountain to his canoe, which he sent across the sea to the mouth of the Wailuku with two strong sweeps of his paddle. The long, narrow rock in the river below the Mauka Bridge, called Ka Waa o Maui (The Canoe of Maui), is still just where he ran it aground at the foot of the rapids.
>
> Seizing his magic club with which he had conquered the Sun, Maui rushed to the scene of danger. Seeing the rock blocking the river he raised his club and struck it a mighty blow. Nothing could resist the magic club! The rock split in two, allowing the strong current to rush unhindered on its way.
>
> Hearing the crash of the club and realizing his attempt on the life of Hina had again failed, Kuna turned and fled up the river.
>
> The remains of the great boulder, now known as Lonokaeho, overgrown with tropical plants and with the river rushing through the rift, lies there to this day as proof of Maui's prowess. (Hapai 1920:14-16)

Regarding Māui's final defeat of Kuna, Westervelt recounts the following details, including references to earthquakes, Pe'epe'e (Boiling Pots) (Figure 23), and other geologic features within the Wailuku River. The following excerpts are taken from "Hina and the Wailuku River" (Westervelt 1910:146-154), and follow Māui's successful rescue of Hina by damming the river:

> . . . Maui rushed up the river to punish Kuna-mo-o for the trouble he had caused Hina. When he came to the place where the dragon was hidden under deep waters, he took his magic spear and

thrust it through the dirt and lava rocks along one side of the river, making a long hole, through which the waters rushed, revealing Kuna-mo-o's hiding place. This place of the spear thrust is known among the Hawaiians as Ka puka a Maui, "the door made by Maui." It is also known as "the natural bridge of the Wailuku River."

Kuna-mo-o fled to his different hiding places, but Maui broke up the river bed and drove the dragon out from every one, following him from place to place as he fled down the river. Apparently this is a legendary account of earthquakes. At last Kuna-mo-o found what seemed to be a safe hiding place in a series of deep pools, but Maui poured a lava flow into the river. He threw red-hot burning stones into the water until the pools were boiling and the steam was rising in clouds. . . The waters of the pools are no longer scalding, but they have never lost the tumbling, tossing, foaming, boiling swirl which Maui gave to them when he threw into them the red-hot stones with which he hoped to destroy Kuna, and they are known to-day as "The Boiling Pots." [see Figure 23]

Some versions of the legend say that Maui poured boiling water in the river and sent it in swift pursuit of Kuna, driving him from point to point and scalding his life out of him. Others say that Maui chased the dragon, striking him again and again with his consecrated weapons, following Kuna down from falls to falls until he came to the place where Hina dwelt. Then, feeling that there was little use in flight, Kuna battled with Maui. . . He was forced over the falls into the stream below. . . the swift waters swept him against the dam with which he had hoped to destroy Hina; and when the whirling waves caught him and dashed him through the new channel made by Maui's magic club, they rejoiced. . . Maui had rushed along the bank of the river with tremendous strides overtaking the dragon as he was rolled over and over among the small waterfalls near the mouth of the river. Here Maui again attacked Kuna, at last beating the life out of his body. "Moo-Kuna" was the name given by the Hawaiians to the dragon. . . Moo Kuna is the name sometimes given to a long black stone lying like an island in the waters between the small falls of the river. Ads one who calls attention to this legendary black stone says: "As if he were not dead enough already, every big freshet in the stream beats him and pounds him and drowns him over and over as he would have drowned Hina." (Westervelt 1910:151-153)



Figure 23. Historic photo of Peʻepeʻe (Boiling Pots), C.J. Hedemann Collection (Lang 2007:108).

Māui's association with Wailuku River is reinforced in yet another legend, this one titled "Maui's Fishook," which was published in the same volume by Hapai (1920:34-37). After a failed attempt at joining together the Hawaiian Islands, Māui grew frustrated with his uncharmed fishhook and discarded it by throwing it into the forest near Waiānuenue (Rainbow Falls). According to the legend, it remained where it landed, untouched until foreigners came to Hawai'i and dismantled it:

> To those early settlers the magic fishhook of Maui was of less interest as such than as material for masonry, and not a piece of it remains. At the forks of the Piihonua-Kaumana Road [likely refers to the area where Waianuenue Avenue crosses the river, *mauka* of Boiling Pots] one may, however, see the peculiar shaped depression where it lay for so long, before civilization's vanguard swept the tangled jungle of Maui's time from its hiding place. (Hapai 1920:37)

Another *mo'olelo* about Māui mentions the Wailuku River in the context of his fascination with the beloved ancient Hawaiian pastime of kite-flying. Titled "Maui's Kite-Flying" as published in *Legends of Ma-ui* by Westervelt (1910:112-118), this legend tells of the giant enchanted kite Māui made for himself fashioned from strong fibers of the native *olonā* plant and Hina's *kapa.* Although "endowed both kite and string with marvelous powers" (ibid.), the kite failed to take flight for the winds did not hold it aloft. As a result, Māui sought out Kaleiioku, the elderly priest of Waipi'o "who had charge of the winds," which he kept hidden inside a calabash "when he did not wish them to play on land and sea" (ibid.:115). According to Westervelt, Kaleiioku's calabash "was known as ipu-makani-a ka maumau, 'the calabash of the perpetual winds'" (ibid.). Māui called for the priest to release the winds, asking the priest to:

> open his calabash and let the winds come up to Hilo and blow along the Wailuku river on the side of which Maui stood. The natives say that the place where Maui stood was marked by the pressure of his feet in the lava rocks of the river bank as he braced himself to hold the kite against the increasing force of the winds which pushed it towards the sky. (Westervelt 1910:115)

Perhaps the depression in the rocks left by Māui's feet along the riverbank is the same depression that Hapai (1920) attributed to Māui's fishhook at Piihonua Road and Kaumana Road (present-day Waianuenue Avenue) in the legend "Maui's Fishhook," mentioned above. "Maui's Kite-Flying" legend, as told by Westervelt (1910), continues as follows:

> Then the enthusiasm of kite flying filled his youthful soul and he cried aloud screaming his challenge along the coast of the sea toward Waipio—
>
> "O winds, winds of Waipio.
> In the calabash of Kaleiioku.
> Come from the ipu-makani.
> O wind, the wind of Hilo.
> Come quickly, come with power."
>
> Then the priest lifted the cover of the calabash of the winds and let the strong winds of Hilo escape. Along the sea coast they rushed until as they entered Hilo bay they heard the voice of Maui calling—
>
> "O winds, winds of Hilo,
> Hasten and come to me."
>
> With a tumultuous rush the strong winds turned toward the mountains. They forced their way along the gorges and palisades of the Wailuku river. They leaped into the heavens, making a fierce attack upon the monster which Maui had sent into the sky. The kite struggled as it was pushed upward by the hands of the fierce winds, but Maui rejoiced. His heart was uplifted by the joy of the conflict in which his strength to hold was pitted against the power of the winds to tear away. And again he shouted toward the sea—
>
> "O winds, the winds of Hilo.
> Come to the mountains, come."
>
> The winds which had been stirring up storms on the face of the waters came inland. They dashed against Maui. They climbed the heights of the skies until they fell with full violence against their mighty foe hanging in the heavens. (ibid.:115-116)

The legend continues with Māui calling for still stronger winds testing the strength of his homemade kite, "until the kite was far above the mountains. At last, it broke and the kite was tossed over the craters of the volcanoes to the land of the district of Ka-u on the other side of the island" (ibid.:117). Pukui (1983) offers a slightly different version

this part of the story. She attributes Laʻamaomao as the god of the winds instead of Kaleiioku, and notes the name of the calabash as Ipu-a-Laʻamaomao instead of ipu-makani-a ka maumau. Pukui writes thusly:

> *Pā mai, pā mai ka makani o Hilo; waiho aku i ka ipu iki, hō mai i ka ipu nui.*
> Blow, blow, O winds of Hilo, put away the small containers and give us the large one.
> Laʻamaomao, the god of wind, was said to have a wind container called Ipu-a-Laʻamaomao. When one desires more wind to make the surf roll high, or a kite sail aloft, he makes this appeal. (Pukui 1983:285)

Westervelt's (1910) version of the legend continues with Māui setting off to retrieve his kite, crossing the mountains in only a few strides, and when he returned, "he was more careful in calling the winds to aid him in his sport" (ibid.:117). The legend ends with the following anecdote about how Māui's kite flying was linked to fair weather and mentions the Wailuku River again, as follows:

> The people watched their wise neighbor and soon learned that the kite could be a great blessing to them. When it was soaring in the sky there was always dry and pleasant weather. It was a day for great rejoicing. They could spread out their kapa cloth to dry as long as the kite was in the sky. They could carry out their necessary work without fear of the rain. Therefore when any one [*sic*] saw the kite beginning to float along the mountain side [*sic*] he would call out joyfully, "E! Maui's kite is in the heavens." Maui would send his kite into the blue sky and then tie the line to the great black stones in the bed of the Wailuku river. (ibid.:117-118)

In the conclusion of this legend Westervelt also reports his version of the final resting place for Māui's fishhook and his double canoe, which differ from Hapai's version presented earlier in this discussion:

> Time passed and even the demi-god died. The fish hook with which he drew the Hawaiian Islands up from the depths of the sea was allowed to lie on the lava by the Wailuku river until it became a part of the stone. The double canoe was carried far inland and then permitted to petrify by the river side. The two stones which represent the double canoe now bear the name "Waa-Kauhi," and the kite has fallen from the sky far up on the mountain side, where it still rests, a flat plot of rich land between Mauna Kea and Mauna Loa. (ibid.:118)

Waʻa-Kauhi (Figure 24) is also mentioned in the valuable reference book *Place Names of Hawaii* (Pukui et al. 1974). The following sentence is found listed under Wai-luku: "A rock here called Waʻa-Kauhi (canoe [of] Kauhi [a Maui chief]) is said to be the petrified canoe of the demigod Māui" (ibid.:225). Thus, the listing corroborates the origin of the rock formation as presented in Westervelt's version of Māui's Kite legend above, for both references bear the same name. However, another listing in *Place Names* under "Ka-waʻa-o-Māui" reads thusly: "Double rock lying in Hilo Bay said to be Māui's magic canoe" (ibid.:97), which Pukui et al. attributed to Westervelt's *Legends of Maui.* Indeed, Westervelt mentions Ka Waʻa o Māui in his version of the aforementioned legend in which Kuna tries to drown Hina, which he published under the title "Hina and the Wailuku River" as follows:

> . . . he [Māui] crossed the sea to the mouth of the Wailuku river. Here even to the present day lies a long double rock, surrounded by the waters of the bay, which the natives call Ka waa o Maui, "the canoe of Maui." It represents to Hawaiian thought the magic canoe with which Maui always sailed over the ocean more swiftly than any winds could carry him. (1910:151).

Thus, it appears that Westervelt attributes two distinct rock formations to Māui, Ka Waʻa o Māui in Hilo Bay and Waʻa Kauhi located further *mauka*, along the side of the Wailuku River. The rock formation known as Waʻa Kauhi also figure prominently in the story of the priest Paʻao.



Figure 24. Waʻa Kauhi pictured as the long crevice adjacent to river embankment and Na Mauʻu a Paʻao (large rock outcrop) in foreground, 2014.

*Pāʻao and the Wailuku River*

This next *moʻolelo* titled "The Coming of Paoa [Pāʻao]" (Hapai 1920:20-24) also mentions Waʻa Kauhi (see Figure 24). However, in this tale, Pāʻao an influential priest who came to Hawaiʻi from Tahiti sometime during the thirteenth century (Cordy 2000), chose the low rock near the mouth of the Wailuku as his new home after he fled Tahiti in search of peace following the sacrifice of his only son. Traveling across the Pacific Ocean in his canoe, Pāʻoa brought only three things with him: *aku* and *ʻōpelu* fish, and *pili* grass. Pāʻao's journey was interrupted by a bout of dreadful weather which threatened his safety. In an effort of placation, Pāʻao tossed his *aku* and *ʻōpelu* overboard. Almost immediately, the weather cleared and Pāʻoa called out to his helpful fish to come back to his canoe. He was able to safely continue his voyage across the vast sea until he encountered a beautiful place, the island of Hawaiʻi:

> At last Paoa [Pāʻao] came to an island which appeared very large and was covered with vegetation. Paddling his canoe into a great crescent-shaped bay, he observed a river emptying into it and turned the nose of his tiny craft that way. Not far up the river he came to a long, low rock which he called Waa Kauhi, and landed on the southeastern side of its point.
>
> So great was the joy of Paoa upon reaching this beautiful island that he decided to make it his home. To commemorate his safe landing he at once planted on the rock the pili grass he had brought with him. Also he liberated his aku and opelu fish in the new waters, where today their progeny teem in countless millions.
>
> Very soon he built himself a grass hut for a home, and was careful to protect the pili grass, which grew rapidly and before long spread to other parts of the big island, where it throve even better than on the scant soil of the pahoehoe rock.
>
> Hawaiians soon learned to use the pili grass in house building, as it made a tighter thatch and lasted longer than the lauhala or the grasses to which they had been accustomed. The stems of the flowers were later used in weaving hats, as they, too, were firm and strong.
>
> Farther up the river, which Paoa learned was called the Wailuku, there lived the goddess Hina. Soon after the arrival of this stranger from Tahiti, Hina heard of him and his chosen home. Evidently he had not come to wage war or do harm to the people, for he had already made friends with many of the fishermen living near him.

> So Hina decided to see him for herself and went down to his home. She was surprised that he had really established himself on that low rock.
>
> "Why," she exclaimed, "you must not stay on this rock! Can't you see the waters above here are high? When the rain comes you will be washed away and drowned. It is not safe!"
>
> Paoa stood upon the little plot of pili grass as he answered her. "No, I will not go away, for no matter how high the waters come they shall never cover this spot."
>
> From that day Paoa's word has held true. No matter how high the Wailuku rises, it never has covered the little plot of pili grass which still grows on the long, low rock at the river's mouth. (Hapai 1920:22-24)

Hawai'i Registered Map 1561 by Baldwin and Monsarrat from 1891 (Figure 25) depicts the area known as Nā-mau'u-a-Pā'ao, which translates as "the grasses of Pā'ao," and is said to be the area where the priest Pā'ao set up his residence. Stories associated with various rock formations are also synonymous with Wailuku River, as illustrated in several of the above legendary accounts. Two other stories rock formation Papa-kāhulihuli and Kāluakanaka are also associated with the Wailuku River. Papa-kāhulihuli (swaying rock) is defined by Pukui et al. as:

> A stone in the Wai-luku River, Hilo, that tipped when stepped upon, dropping the stepper into a pit (Ka-lua-kanaka, the human pit) where he died unless he found the opening that led underground to Moku-ola (Coconut Island). (Pukui et al. 1974:179)

The same volume references Kālua-kanaka as a "balancing stone in the Wai-luku River at Hilo, Hawai'i; it was believed connected by a tunnel to Coconut Island, and that persons falling over the stone into the stream would drown. . . *Lit*., oven-baking man" (ibid.:78). Ka Lua-kanaka is also mentioned in the following *mele* of the *hula pa'i umauma* as recorded by Emerson:

> A Hilo ai e, hoolulu ka lehua; — At Hilo I rendezvoused with the lehua;
>
> A Wai-luku la, i ka Lua-kanaka[b]; — By the Wailuku stream, near the robber-den. . .
>
> [b] *Lua-kanaka*. a deep and dangerous crossing at the Wailuku river, which is said to have been the cause of death by drowning of very many. Another story is that it was once the hiding place of robbers. (1909:203)

In addition to the legendary rock formations presented above, two *pōhaku hānau*, or birth stones, are located near the Wailuku River. According to June Gutmanis (1986), *pōhaku hānau* are of particular importance to Hawaiians because these stones were associated with either male or female energy, thus allowing them to procreate, and birth more stones. The stories shared by Gutmanis were originally collected by Theodore Kelsey who spoke to Hawaiian informants in 1919. Gutmanis writes:

> Along the Hilo shoreline and along the Wailuku River are at least two of these stone "families." One is that of a chief of the Puueo area who mated with Namaka, a chiefly woman of Piihonua. Tradition has it that some of their children were rocks, some were eels, and others were sea creatures of various kinds.
>
> Along the Wailuku River, in the area called Waimalino by Reeds Island, are two stone "brothers" What family they belong to is no longer known. The older brother is called Konanuhea and the younger is called Mu. They are said to have had two other brothers. One was a *kupua* (being with supernatural power) who could take the form of an 'anuhe (caterpillar) or a chief. When in the form of a chief, however, he retained a tail like a caterpillar. The other brother whose name was Mano, is at Waianuenue or "Rainbow Falls". He too was a *kupua* and could take the form of a turtle, *'aha* fish or eel. (ibid.:29)

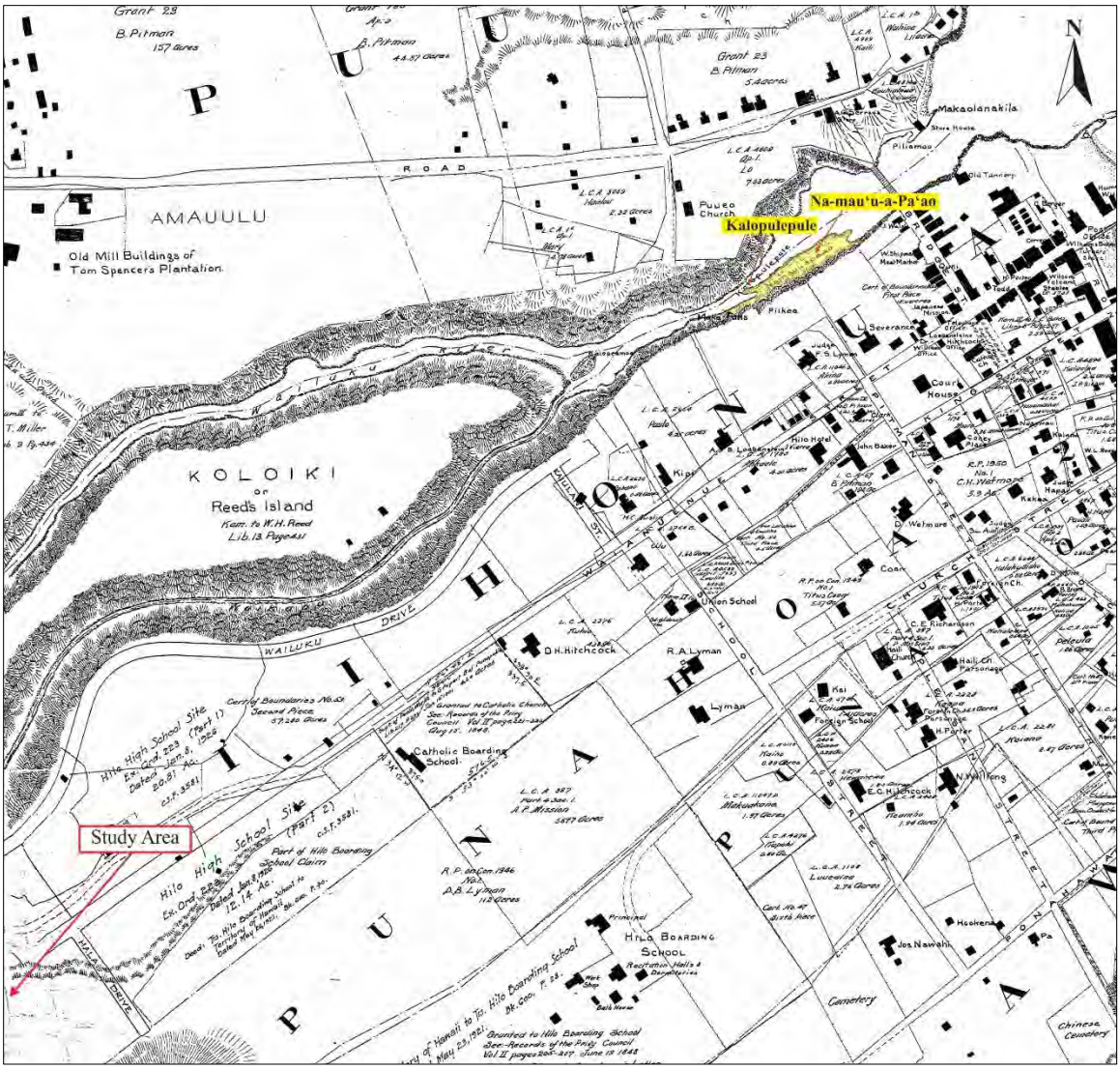



Figure 25. Portion of Hawai'i Registered Map 1561 from 1891 showing Nā Mau'u a Pa'ao, Kalopulepule, and approximate location of study area.

*Legend of Kana and Hina*

In addition to the *pōhaku hānau* of Konanuhea and Mu, Gutmanis (1986) also notes the story of Kana, a supernatural being who with the aid of his grandmother took various forms including rope, banana, *pōhuehue* (*Ipomoea pes-caprae*), spider, and finally he is eternalized as a stone located in the Wailuku River. In her book, *Hawaiian* Mythology, Martha Beckwith (1970) also gathered several accounts for the legend of Kana. However, none of the accounts mentioned by Beckwith relate the legend of Kana to the Wailuku River. Nonetheless, Gutmanis' version states:

> The most famous stone "family" in the area is that of Kana and [his wife] Pohaku Hanau. Little is known of the mother or her background—even her true name remains unknown. Today she is called Pohaku Hanau or "Reproducing Stone." She may be found at Kuipaa in the Kapehu branch of the Wailuku River. It is said that Kana, the father was not always a rock; he was born as a rope that could stretch. His unusual ability to stretch distances led to many adventures and the stories of his exploits are used to explain many strange markings or rock outcrops found on all the Hawaiian Islands.
>
> One of Kana's most famous adventures occurred when his mother, Hina, was kidnapped from Hilo by a Molokai chief [Kape'epe'ekauila], who carried her away on the back of a turtle. With a brother

> [Niheu], Kana tried to rescue Hina but lost a fight with her guards. Next, he challenged the turtle to a stretching contest. When Kana lost that contest his grandmother was brought to Molokai to help him in more stretching contest. First she turned him into a rope, then a *pōhuehue* (morning glory vine), then a banana, and finally a spider so large that it stretched from Molokai to Hilo. While he was stretched out as a spider, Kana's brother grabbed Hina and rushed her back to Hilo.
>
> Tradition does not say why or when Kana was turned into a rock or whether his children were born as rocks. His stone body can be found in the Wailuku River in the main gulch between Pukao [Puka o] Maui and Kapaukea (Gutmanis 1986:29-30).

Gutmanis also conveys another story of a family of stones located at various points along the Wailuku River. These stones are said to be the other children of Kana and his wife Pohaku Hanau. She writes:

> Along the shore on the Puueo side of the Wailuku River mouth, below the old railroad bridge, is a daughter, Puao, and a son, Haakua. A nearby sister was lost when the bridge was built. Named Ohuwai, she was believed to care for the aborted material from miscarriages until that material matured and swam away as sharks. Pieces of umbilical cord were also left in her care.
>
> On the upper side of the main bridge over the Wailuku River is a stone brother named Ahuawa. It was believed that he made the waves of the harbor swell. When standing by that rock looking upstream on the left bank of the river, the stone Kawaakauhia [Ka waa Kauhi a] Maui, "The-ahi-fishing-canoe-of Maui," can be seen.
>
> The last two stone sons born to Kana and Pohaku Hanau lie just above Death Falls [Make Fall-located upstream of the Wainaku Street bridge]. They are Huakuaikai and Huakuaiuka. They divide the river water that flows to the two falls. There are some who say that there is still another son further up the river beyond Puu ʻOʻo Ranch. His name is Papakolea. (Gutmanis 1986:31-32)

*Legend of Halemano*

The well-watered environs of Hilo are also featured in the legends concerning the romance between Halemano of Oʻahu and the beautiful and forbidden princess Kamalalawalu (Kama) of Puna. Kamalalawalu lived under a strict *kapu* (taboo) that kept her from leaving her home or having visitors, and her parents had promised her as the wife of either the Hilo or the Puna King upon reaching maturity. Visions of Kamalalawalu appeared to Halemano in his sleep and he fell in love with the image of her without knowing her name. Halemano's sister, Laenihi, a shape-shifting sorceress, located and took her brother to meet Kamalalawalu in person in Puna. The two lovers recognized one another from their dreams and were soon married and living simply and happily. Then, driven by jealousy, the kings of Puna and Hilo decided to make war on Halemano's people and the couple was forced to flee to Maui, where Kamalalawalu realized that she missed her former life as a princess and did not wish to remain a farmer's wife there. Kamalalawalu left Halemano for the king of Puna, but realizing her mistake, she soon left the king and chose to wander the islands alone. To win his wife back, Halemano trained as a master chanter, assuming that she might return to him if he became something more than a farmer. Once he had learned the art of chant, he entered a competition where Kamalalawalu was among the audience gathered to hear the performance. Halemano took the opportunity to compose a chant about the life they had shared together in Hilo. Halemano's chant is taken from the version of this romance published under the title "The Story of Ha-le-ma-no" in *Legends of Hawaii* by Padraic Colum (1937:123-132), and mentions Hilo, the Wailuku River, and Piʻihonua (emphasis added):

> "We once lived in Hilo, in our own home,
>
> For we had suffered in the home that was not ours,
>
> For I had but one friend, myself.
>
> The streams of Hilo are innumerable,
>
> The high cliff was the home where we lived.
>
> Alas, my love of the lehua blossom of Moku-pa-ne!
>
> The lehua blossoms that were braided with the hala blossoms,
>
> For our love for one another was all that we had.
>
> The rain fell only at Le-lewi,
>
> As it came creeping over the hala trees at Po-mai-kai,
>
> At the place where I was punished through love.

Alas, O my love!
My love from the leaping cliffs of Pi-i-kea;
From the waters of Wai-lu-ku where the people are carried under,
Which we had to go through to get to the many cliffs of Hilo,
Those solemn cliffs that are bare of people,
Peopled by you and me alone, my love,
You, my own love!" (ibid.:131)

To which Kama responded in her own chant thusly:

"Alas, thou art my bosom companion, my love!
My companion of the cold watery home of Hilo.
I am from Hilo,
From the rain that pelts the leaves of the breadfruit of Pi-i-honua. . .
Alas, O companion, my love!
My love of the cold, watery home of Hilo,
The friendless home where you and I lived." (ibid.:131-132)

Thus, Halemano and Kama were reunited and remained together.

*Legend of Uweuwelekehau*

Pi'ihonua and Wailuku River is also a setting for the Legend of Uweuwelekehau. Although this legends is set primarily on the island of Kaua'i, the early life of the hero, Uweuwelekehau is set in Pi'ihonua. Fornander (1918:192-198) describes the departure of Kū and his sister Hina from the island of Kaua'i after they both becomes discontent with their elder brother/chief Olopana. Kū and Hina establish themselves in Pi'ihonua and both frequented their favorite bathing pool at Waiānuenue, located within the Wailuku River. In following the ancient traditions, Kū eventually took his sister Hina to be his wife and after some time, Hina became pregnant and gave birth to a boy whom they named Uweuwelekehau. Upon the birth of their son, a great storm swept over the land. Thunder and lightning filled the sky, the rivers and stream overflowed with water, and the earth was shaken by a great earthquake. These powerful natural phenomena were accepted as proof of recognition by the gods for the birth of this high-ranking child.

Uweuwelekehau grew up to be a striking man and because of his high-rank, he was always accompanied by his two gods/guardians Kāne and Kanaloa. The striking young man was brought up with many *kapu* (taboos, restrictions); his house was sacred and commoners were not allowed to pass near it lest they be put to death. The young chief's uncle, Olopana was still ruling as a chief over the island of Kaua'i when he was blessed with a daughter who he named Lu'ukia. Olopana vowed that his daughter should marry no one else except for his nephew Uweuwelekehau. Olopana gathered his people and commended:

> … when he [Uweuwelekehau] comes shall come in a red canoe, having red sails, red paddles, accompanied by large and small men in large and small canoes. When they see such a man come with these different things, then it is the sign of the great chief. (Fornander 1918:194)

Meanwhile back in Pi'ihonua, Kū and Hina desired to go up the Wailuku to gather *'o'opu* and shrimps, leaving their son in the care of Kāne and Kanaloa. Uweuwelekehau set out to Kalopulepule (see Figure 25) to sail his canoe, when a small cloud appeared from the sea and moved up the Wailuku River where it dropped a torrent of rain causing the stream to flood. It is said that this unusual flood was caused by the two gods Kane and Kanaloa. Uweuwelekehau was swept out into the ocean where he transformed into a fish. Kū and Hina was made aware of the matter and they ordered a search party to look for the boy, but he could not be found. Kū and Hina mourned the loss of their only son.

> While in the sea Uweuwelekehau was changed into a fish through the power of Kane [*sic*] and Kanaloa, and by them taken to Kauai [*sic*] and left in a crevice in the rocks near the shore where the fish of Luukia [*sic*] was generally caught by her attendant, Papioholoholokahakai. The fish into which Uweuwelekehau was changed was of the kind called *moa*, a short stubby fish. (ibid.:194)

In his fish form, Uweuwelekehau arrived on the shores of Kaua'i where he was caught by Lu'ukia's attendant who placed him into a calabash with some water. Lu'ukia was pleased at the sight of the fish and ordered that it be given good care. On the second day, while Lu'ukia and her attendants were asleep, the little "fish transformed itself into a human being, through the power of Kane." (ibid.). The next morning Lu'ukia and her attendants were approached by a handsome young man and the young chiefess immediate fell in love with him. The young lovers were

inseparable, and both sought a long-term commitment to each other. Everyone was clearly unaware that this young man was indeed Uweuwelekehau, Luʻukiaʻs intended lover. After hearing about his daughter's new lover, chief Olopana became furious and summoned his daughter, her new lover, and the people of Kauaʻi to his court in Wailua.

> As soon as the people came together in his [Olopana] presence, he asked Luukia [*sic*] "Which would you rather have, the husband or your father?" "I will take my husband," said Luukia. Olopana then ordered his chief officer: "Take off everything from Luukia and leave her naked; also take off everything from her husband except his malo." Olopana though they were deserving of this ill treatment because his daughter had disobeyed him. (ibid.:196)

Olopana then banished the two lovers to Mānā, a place where only spirits lived and commanded the people of Kauaʻi not to take his daughter and her lover into their homes or provide them with food. While traveling to Mānā, the young man provided his wife with food and clothes to keep her warm. They arrived at Mānā and as they slept, "a house was built over them, food was provided, animals were brought to the place and all their needs were supplied them." (ibid.) The two established themselves at Mānā, and hosted local fishermen who came ashore only to find the once desolate Mānā filled with food, meat, and other necessities. The abundance brought to Mānā by the two lovers attracted many others. This news was reported to Olopana who was still at his court in Wailua.

> In order therefore to see these things for himself and also to make up with his daughter and son-in-law, for news had also come to him that this person was Uweuwelekehau himself, because the latter had informed his wife and the people in Mana as to his identity, Olopana set out for Mana, with the purpose not only to make up, but to make his son-in-law and daughter the king and queen of Kauai. (ibid.:198)

The news had reached Uweuwelekehau's parents back in Piʻihonua. Kū and Hina arrived "with their servants, in large and small canoes, having red sails, red cords, red paddles, red seats, red bailing cups and red men…" (ibid.). After being declared the king and queen of Kauaʻi, Uweuwelekehau and Luʻukia planted a grove of coconut trees at Kaunalewa and built the temple of Lolomauna.

*Legendary Account Concerning the Hilo Hills*

The Hilo Hills are three cinder cones bearing the names Puʻu ʻŌpeʻapeʻa, Puʻu Honu, and Puʻu Hālaʻi, which is situated to the south of the subject parcel. Recorded by Pukui and Curtis (2010) and Westervelt (1987) one such story involves two of Hina's daughters, Hina Keahi (or Hina-i-ke-ahi) and Hina Kuluʻua. Each sister was bestowed with divine powers from their mother, Hina Keahi having the power to control *ahi* (fire), and her sister Hina Kuluʻua having the power over *ua* (rain) (Westervelt 1987). These stories illustrate moral lessons about generosity, jealousy, sacrifice and explains the appearance of water cycles as well as the large pit found atop Puʻu Hālaʻi.

The area surrounding the Hilo Hills was a place renowned for its bounty. The naturally fertile soil and ample rainfall provided the area residents with the ideal conditions to develop unique horticultural practices and helped to established Hilo as a place reknowed for its fondness of cooked greens and proud farmers. Pukui (1983) elaborates on these two traditions in the following *ʻōlelo noʻeau*:

> *Hilo ʻai lūʻau.*
> Hilo, eater of taro greens.
> The people of Hilo were said to be fond of cooked taro greens. When storms came to Hilo, it was impossible to obtain fish from the streams or the sea. The people had to be content with taro greens. (Pukui 1983:107)

> *Hilo mahi haʻaheo.*
> Hilo of the proud farmers.
> The climate makes the soil of Hilo very easy to till, so the farmers used to make a game of planting. They used long digging sticks to make the holes and wore lei to work. Working in unison, they made a handsome picture. (ibid.)

In addition to the rich soil, the streams flowed and the people prospered. Their mother and moon goddess Hina, gave Puʻu Honu to Hina Kuluʻua, and Puʻu Hālaʻi to Hina Keahi. There came a time when drought fell upon the land, leaving the streams dry, the crops decimated, and the people famished. Determined to change the fate and condition of her people, Hina Keahi called her people together and ordered some of the men to gather firewood. To some men she commanded they fetch stones from the coast, and to the other men she requested a large *imu* (earth oven) be dug atop Puʻu Hālaʻi (Pukui and Curtis 2010).

> The men stared at their chiefess. Gather wood? Dig an *imu*? There was no food to cook! They wondered greatly but their chiefess was both kind and wise and had great power. They trusted her. (Pukui and Curtis 2010:69)

Although reluctant to follow the orders, the men labored on, traveling into the uplands to gather firewood, and down to the coast to gather stones. At last, the exhausted men brought all their stones and wood to the massive pit. The *imu* was made ready and the men wondered about their chiefess's request. Hina Keahi walked around the *imu* and offered the following incantation:

> Here are the sweet potatoes.
>
> *Kalo* is here,
>
> And here are bananas.
>
> Over there is pork
>
> And here is fish.
>
> Here are tender shoots of fern
>
> And over there is chicken." (Pukui and Curtis 2010:70)

Hina Keahi then turned to her people and announced, "I shall make an offering to the gods" (ibid.). Growing increasingly aware of the intent of their chiefess, the people began to weep.

> Do not try to hold me back but cover me until no steam appears. On the third day you will see a cloud over our *imu*. It will be like a woman with a shining face. That is your sign. Uncover the *imu* and you will find food. (ibid.)

Hina Keahi stepped into the *imu* and with tears streaming down their faces, the people began to cover their chiefess with soil. "Tears rolled down their faces for love of their good chiefess but they obeyed and covered her until they saw no steam. Then they watched beside the *imu*. With heavy hearts they watched for three long days" (ibid.). As described by their chiefess, a cloud in the shape of a woman appeared over the *imu*. Following the commands of their beloved chiefess, the people uncovered the *imu* and found it filled with all the foods named in her incantation. The people then turned towards the coast of Hilo Bay and saw a woman approaching them adorned with various *lei* made of seaweed. The people rejoiced as the woman got closer, for they knew that it was their beloved Hina Keahi. Their hearts filled with joy and they celebrated by enjoying the contents of the *imu.* The gardens at Puʻu Hālaʻi began to flourish and the health of Hina Keahi's people were restored.

News of this joyous event had reached the ears of the younger sister, Hina Kuluʻua, who grew envious of her sister's accomplishment. "All men praise my sister!" she said (ibid.:72). Filled with envy and jealousy, Hina Kuluʻua demanded that her people gather fire wood, stones, and construct a large *imu*. Her people hesitantly followed her orders. As the *imu* was ablaze, Hina Kuluʻua offered her incantation, stepped into the pit and ordered her people to cover her with soil. The people obeyed her command and waited with great hope for three days. On the third day, a dark cloud in the form of a woman appeared over the *imu*. Hina Kuluʻua's people dug with great intent only to find the ashes of their chiefess at the bottom of the pit. The people sadly covered Hina Kuluʻua's body.

Hina Keahi received word of her sister's death. "My sister envied my power. Her power was great but different. She could have caused rain to fall on Puʻu Honu to make the gardens grow and bear much food. That I could not do. Instead she tried to do what I had done, though she had no power over fire. So she perished. Auē! Auē! Go bring her people here that we may share our food with them" (ibid.).

*Kamehameha and the Lifting of the Naha Stone*

The following legend tells the story of the Naha Stone, which is currently situated in front of the Hilo Public Library on Waiānuenue Avenue (Figure 26). This legendary stone is directly linked to King Kamehameha I and the unification of the Hawaiian Islands under his rule. In the early 1900s, the ancient legend of the Naha stone was published by the Board of Trade of Hilo as a pamphlet under the title *The Story of the Naha Stone*; and in 1952, the Hawaiʻi Natural History Association (now Hawaiʻi Pacific Parks Association) reprinted it as part of their *Hawaii Nature Notes* series. The story was originally recorded in Hawaiian by Reverend Stephen Desha of Hilo, editor of the *Hoku o Hawaii* newspaper, and adapted by Lionel W. de Vis-Norton for publication. The story is reproduced here as it appears in de Vis-Norton's undated publication:




Figure 26. Recent photograph showing location of Naha and Pinao Stones since 1951.

> For many, many years, there lay, in the back garden of a house in Hilo, Hawaii, a great four-sided obelisk of lava stone. For so long, indeed, had it lain there, that this present generation has well-nigh forgotten its existence. The ever-present rank growth of the lantana had covered it, and its resting place bid fair to remain undisturbed forever. . .
>
> Just how, and why the great obelisk first became famous, is veiled in the mystery of past days, for the first authentic record of it deals with its voyage from the far away island of Kauai. Here it had rested hard by the Wailuku [Wailua] river on that island, but was placed upon a double canoe by the high chief Makaliinuikualawalea, and by him brought to the river of the same name in Hawaii the Beautiful, and there was placed in front of the temple Pinao, of which but one single stone now remains, and the site of which is the back-garden with which our story opens.
>
> It is said that the Naha Stone had the peculiar property of being able to determine the legitimacy of all who claimed to be of the royal blood of the Naha family, and many times, in front of the temple of Pinao, must the strange ceremony have been enacted. . .
>
> As soon as a boy of the royal stock was born, he was brought to the Naha Stone and was laid thereon, while the kahunas prayed to the gods and chanted their strange barbaric chants. One can imagine how anxiously the parents would watch the unconscious babe, for one faint cry from those infant lips would bring upon him shame which would endure through all his lifetime, and he would be thrust out to take his place among the common people and to make his stormy way through life as best he could.
>
> But should the infant have been endowed with the golden virtue of silence, then indeed a career was open to him, for he would be declared by the high kahuna to be of true Naha descent, a royal prince by right and destined to become a brave and fearless soldier and a leader of hs fellow men.
>
> . . . the Naha Stone was vested with yet more mystery, for concerning it there existed an ancient prophecy that only the chiefs of the Naha blood could violate its sanctity by moving it, and that he who moved it would become a king of the Island of Hawaii. And yet more: for the saga had come down through the past ages that he who could overturn the stone would be a king indeed, for to him should be given the power to conquer all the islands of the group and bring them under one sovereignty. (de Vis-Norton n.d.:3-4)

The legend continues by providing a history of Kamehameha's birth, boyhood and his rise to power thus setting the stage for the story of the Naha stone's influence on his life and the history of the Hawaiian Islands. The troubled times across the islands during Kamehameha's early years and leading up to Kalani'ōpu'u's reign were described by de Vis-Norton:

> And warfare and strifes spread throughout all the land of Hawaii, and for many seasons the warfare ceased not, and ever the tidings came of fierce and terrible conflicts, of chief against chief and brother opposed to brother, so that men died in their thousands and all the land was red with blood. (ibid.:5)

Meanwhile, Kamehameha resided in Hilo, where he became "stronger in manhood and greater of stature, so that his fame began to spread abroad, even as far as Kohala, where Kalani'ōpu'u had taken up his abode" (ibid.). As a result, the legend continues, Kalani'ōpu'u invited Kamehameha to Kohala. Shortly after Kamehameha's arrival, prince Kaiokuanuiakanaele spoke of "rumors and strange whispers" about Kamehameha that had been circulating and requested that the king "gather together the kahunas and the priestesses that they may examine into his future and tell us the things that shall come unto him" (ibid.:6). Kalani'ōpu'u granted his request and "the priests took counsel together, and communed with their gods," and made the following statement:

> . . . "Great shall he be and mighty; a warrior above all warriors. None shall stand before him, neither may any dare to meet him in combat. Behold we do pronounce him dedicated to the stormy winds, and as a stormy wind shall he live, sweeping all before him, for none may stand in his path."
>
> And having said these things, the kahunas were silent. (ibid.:6-7).

Kalani'ōpu'u then asked the priestesses for their counsel and, as a group, they agreed with the *kahuna*. However, the high princess Kalaniwahine set herself off from the rest and made the following pronouncement:

> "Hearken ye unto these words and mark them well, for they are words of wisdom. The young Kamehameha will have but one adversary who will sorely try his strength, and the strength of his men learned in the throwing of spears, for surely will Keaweokahikona try them to the uttermost. And now behold, these twain are of one blood, wherefore it is fitting for Kamehameha to go and visit his relative, that they may learn and understand and dwell together as brothers. Also there is a deed for Kamehameha to do, even the overthrowing of a mountain. And now is the time propitious for these things, therefore let him hasten and tarry not, lest he be too late for the meeting." (ibid.)

Shortly thereafter, Kamehameha, Kalaniwahine and two high chiefs Naihe and Kalaninuimakolukolu made the journey by canoe to Hilo where they were welcomed by princess Ululani. While feasting with Ululani, Kamehameha said, "I have come to try and move the Naha Stone, for by that symbol I shall attain success and live, or shall meet that which will bare my bones" (ibid.:9). The next day, Kamehameha, Ululani, the Hilo chiefs, and Kalaniwahine journeyed to the Naha Stone at the *heiau* of Pinao. Ululani spoke thusly while on their journey:

> "O, Prince, thou knowest, perchance, that this stone is sacred to those of the Naha family, and they are the only persons who may ascend it and move it. Now thou, dear Prince, belongest not to the royal family of Naha, but to the royal family of Niu-pio, and it may be that this will hinder thee in the moving of the stone."
>
> But Kamehameha answered never a word, and presently they were come to the temple of Pinao, in front of which the Naha Stone lay. And Kamehameha came and stood by the stone, and when he had seen its great size, he uttered a heavy sigh, and spoke these words:
>
> "Now do I perceive that this is indeed no stone, but a mountain, and perchance I may not be able to move it. Moreover, it is said that only they of the royal Naha line may essay the task. Howbeit, I will put forth my strength, and if I fail, then it can be truly said that this stone belongs to the Naha line by law, and if I succeed, then by my strength and favor of the gods my success will be attained."
>
> . . . Kalaniwahine, taking hold of his hands, spoke encouraging words unto him and said unto him:
>
> "If indeed the Naha Stone shall be this day moved by thee, then shall the whole group of islands, from Hawaii to Kauai be moved, but if indeed it shall be moved and turned from its resting place, then shall all dissensions be removed, and thou and thy people and thy prophetess shall live and shall dwell henceforth in peace forever. For this is the prophecy of the Naha Stone, O Prince, so get thee to thy great task."
>
> . . . he placed his hands under the stone and began to move them so that he might better take hold. Which being done, he cried these words:
>
> "Naha Stone art thou:
>
> And by Naha Prince only may thy sacredness be broken,
>
> Now behold, I am Kamehameha, a Niu-pio
>
> A spreading mist of the forest."

> Then gripped he the stone and leaned over it, and as he leaned, great strength came into him and he struggled yet more fiercely, so that the blood burst from his eyes and from the tips of his fingers, and the earth trembled with the might of his struggling, so that they who stood by believed that an earthquake came to his assistance.
>
> . . . And he put forth all his strength, and, behold, the stone did move under his arms, and he raised it on its side and with supernatural strength did over turn it, so that all who stood by were amazed and dumb with awe. (ibid.:9-10)

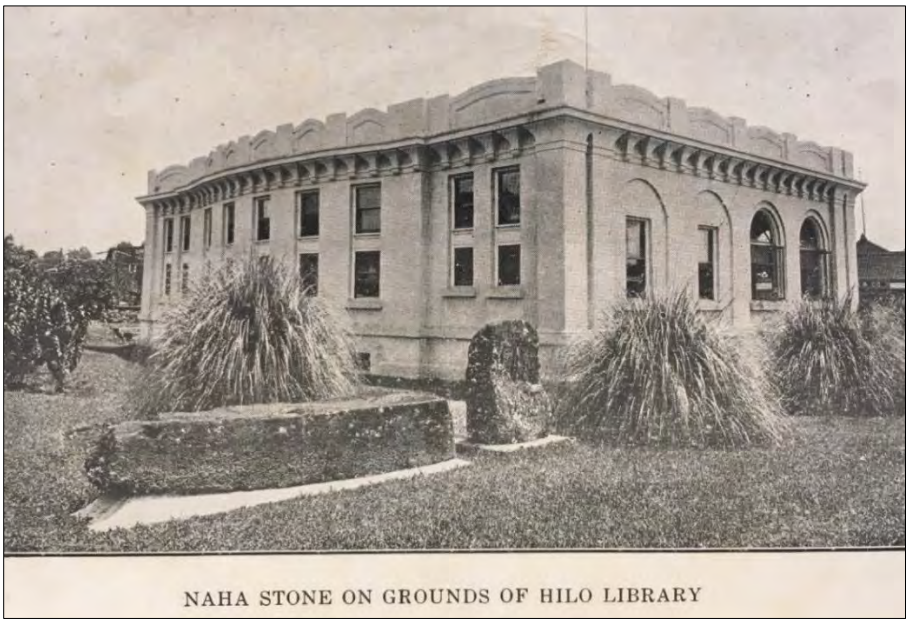
Afterwards, Keaweokahikona made the following declaration to Kamehameha:

> For that this day ye have done a great deed whereas all men may wonder, now do I declare unto thee that henceforth shalt thou be my chief man in battle, and to thee will I give all my art in war, and teach thee many things. Therefore, let us live together as relatives and let there ever be peace between us. . .
>
> This, then, is the story of the Naha Stone, which lies by the library in Hilo today for all to see. (ibid.:10-11)

Figure 27 is a photograph of the Naha Stone behind the old Hilo Library building. According to an article titled "Ka Moolelo O Na-Ha Pohaku" from the Hawaiian newspaper *Hoku o Hawaii* in early 1915, the Board of Trade of Hilo began planning to move the Naha stone from its then resting place "on the Hilo side of Waianuenue Avenue. . . in front of the first house foundation of governor Kipi of Hilo," at a place "named after an old Heiau called 'Pinao'" (*Hoku o Hawaii* December 9, 1915:2). Figure 26 above shows the stone in its present-day position in front of the current Hilo Library building, which opened in 1951, and its location on the north side of Waiānuenue Avenue in Pi'ihonua Ahupua'a. The tale of the Naha Stone was concluded in the de Vis-Norton version of the story as such:

> . . . The fulfillment of the prophecy concerning the Naha Stone attracted all the high chiefs and the greatest warriors to Kamehameha's standard, and this, in conjunction with the immunity from harm and the apparent favor with which the young Prince was regarded by the gods, caused him to embark upon the long series of conquests which made him King of all the group of the islands, and made his name revered for justice and equity and high statesmanship among all who have learned to know and love the Hawaiian race. (ibid.:10-11)

An upright stone believed to be part of the entrance pillar of Pinao Heiau is displayed beside the Naha stone in both Figures 26 and 27, and still, rests in front of the Hilo Library (ibid.:11). The so-called Pinao stone is said to be the only stone that remains from the former Pinao Heiau, which was located at or near the site of the Hilo Public Library at the corner of Waiānuenue Avenue and Ululani Street (Stokes and Dye 1991). The word *pinao* translates literally as "dragonfly" (Pukui and Elbert 1986:331).



NAHA STONE ON GROUNDS OF HILO LIBRARY

Figure 27. Historical photograph of Naha and Pinao Stones from de Vis-Norton (n.d.:2) prior to 1951.

*Kaipalaoa Heiau and the Sacrificing of Chief Namakeha of Maui*

The area of Kaipalaoa also figures prominently in the ascent of Kamehameha I as *aliʻi nui* (paramount chief) of Hawaiʻi Island. Renowned as an ancient surfing area, Kaipalaoa is also the name of the area located at the foot of Waiānuenue Avenue where "Kamehameha I often visited" (Pukui et al. 1974:70). In addition, a *heiau* of the same name was once located near here; and upon his birth, Liholiho, son of Kamehameha I "was taken to the heiau Kaipalaoa, and the sacred right of the cutting of his navel cord was performed by the kahuna" (Kamakau 1991:220). Kamakau also mentions Kaipalaoa as the site of a battle between Kamehameha and the Maui chief Namakeha who resided on Hawaiʻi and refused to join Kamehameha in his conquest of the islands: "In September of 1796, Kamehameha returned to Hawaii to make war on Na-makeha and his followers" (ibid.:174) in response to Namakeha's attempt to mount a rebellion by preparing the men of Hilo, Puna, and Kaʻū for war against him. Namakeha fled and hid until January of 1797, when "with the consent of Kamehameha, he was offered as a sacrifice to the gods in the heiau of Kaipalaoa in Piʻihonua, Hilo" (ibid.). According to Kamakau, the battle of Kaipalaoa was the last battle fought by Kamehameha in his effort to unite all the islands under his rule.

*An Account of the Chief Kawau*

Piʻihonua Ahupuaʻa is briefly mentioned by John Papa ʻĪʻī in *Fragments of Hawaiian History* as having a preferred surf spot called Huia (1959:134). Kamakau also mentions Huia in an anecdote about a hunchback named Kawau published in *Tales and Traditions of the People of Old*. Kawau was "a lesser chief of olden times" who lived in Hilo and often looked at "the waves of Huia—this is the surf off Piʻihonua and Punahoa," upon his return from fishing and would utter the following prayer:

| | |
|---|---|
| *Kū mai, kū mai, kū mai,* | Arise, arise, arise, |
| *Ka nalu nui mai Kahiki ea,* | Great waves from Kahiki, |
| *I Wawau e, i Uapou e,* | From Wawau, from Uapou, |
| *I Helani e, i Kekuʻina e,* | From Helani, from Kekuʻina, |
| *I Ulunui e, i Melemele e,* | From Ulunui, from Melemele, |
| *I Uliuli, i Hakalauʻai e,* | From Uliuli, from Hakalauʻai, |
| *I Bolabola e, i Nuʻuhiwa e,* | From Bolabola, from Nuʻuhiwa, |
| *I Hoanekapua e;* | From Hoanekapua; |
| *Hoehoe pae; pae au la.* | I will paddle until I reach shore; I have landed. |
| | (Kamakau 1991:116-117) |

## Western Accounts of Greater Hilo in the Early 19th Century

The early 19th century heralded a new era in the Hilo Bay area. During the first two decades of the nineteenth century, sandalwood was harvested and shipped from Hilo Bay and whaling ships were a common sight as they stopped at Hilo for supplies. In 1823, British missionary William Ellis and other members of the American Board of Commissioners for Foreign Missions (ABCFM) toured the island of Hawaiʻi seeking out communities in which to establish church centers for the growing Calvinist mission (Ellis 1917). Ellis estimated that at the time of his visit, about 2,000 people lived in 400 houses or huts along the coastline at Hilo Bay (ibid.). Ellis described the residential and land use practices he observed while in the Hilo ("Hiro") District, which is applicable to the study area vicinity, thusly:

> *Hiro*, which we had now left, though not so extensive and populous as Kona, is the most fertile and interesting division on the island.
>
> The coast from Waiakea to this place is bold and steep, and intersected by numerous valleys or ravines; many of these are apparently formed by the streams from the mountains, which flow through them into the sea. The rocks along the coast are volcanic, generally a brown vesicular lava. In the sides and bottoms of some of the ravines, they were occasionally of very hard compact lava, or a kind of basalt.
>
> This part of the island, from the district of Waiakea to the northern point, appears to have remained many years undisturbed by volcanic eruptions. The habitations of the natives generally appear in clusters at the opening of the valleys, or scattered over the face of the high land. The soil is fertile, and herbage abundant.

> The lofty Mouna-Kea, rising about the centre of this division, forms a conspicuous object in every view that can be taken of it. The base of the mountain on this side is covered with woods, which occasionally extend within five or six miles of the shore. . . rain is frequent in this and the adjoining division of Hamakua, which forms the centre of the windward coast, and is doubtless the source of their abundant fertility. The climate is warm. Our thermometer was usually 71° at sun-rise; 74° at noon; and 72° or 73° at sun-set. Notwithstanding these natural advantages, the inhabitants, excepting at Waiakea, did not appear better supplied with the necessaries of life than those of Kona, or the more barren parts of Hawai‘i. They had better houses, plenty of vegetables, some dogs, and a few hogs, but hardly any fish, a principle article of food with the natives in general. (ibid.:263-264)

Another missionary named Hiram Bingham spent over twenty years in the Hawaiian Islands and wrote a memoir in 1847, which recounted his experiences as well as those reported to him by his colleagues. Bingham tells of the establishment of a new mission station in Hilo during early 1824. Mr. and Mrs. Ruggles and Mr. and Mrs. Goodrich left Kaua‘i for Hawai‘i to establish "the new station at Waiakea, central for the large districts of Hilo and Puna, which extend along the seaboard about eighty miles" (Bingham 1848:206). During their initial journey to Hilo, the party lodged in a *hālau wa‘a* (canoe house) they described as follows:

> . . . they anchored in Hilo bay about sun-set, and landed before dark with a few necessary articles. They at once prepared their lodging in a large thatched building, seventy feet by thirty, designed as a shelter for canoes, timber, and other articles, and, by order of the chiefs at Oahu, appropriated to their use. It was without floor, partitions, or windows; and though the canoes were removed, a large pile of long timber still occupied the central part of the building, near the rude posts that supported the ridge-pole. . .
>
> The next day, the duties of preaching and public worship engaged their attention. To favor this Kaahumanu had offered the use of another building of similar structure. It was well filled by the people and missionary company, to whom Mr. Ellis preached. (Bingham 1848:207)

In June of 1825, an American Protestant missionary by the name of Charles Samuel Stewart visited Hilo. Stewart depicted Hilo as a well-populated residence for natives and missionaries alike:

> . . . The reef runs in a curved direction from the point at the channel, about half a mile to the east, where it joins a romantic little islet covered with cocoanut trees; from that fact, called "Cocoanut island." A small channel runs between this and the main land, which is low, and sweeps round to the western cliffs in a beautifully curved sandy beach of about two miles, making the form of the bay that of a flattened horseshoe. The beach is covered with varied vegetation, and ornamented by clumps and single trees of lofty cocoanut, among which the habitations of the natives are seen, not in a village, but scattered everywhere among the plantations, like farm houses in a thickly inhabited country. The mission houses were pointed out to us, pleasantly situated near the water, about the middle of the curvature forming the head of the bay. At a very short distance from the beach, bread-fruit trees were seen in heavy groves, in every direction, intersected with the pandanus and kukui, or candle-tree, the hibiscus and the acacia, &c. The tops of these rising gradually one above another, as the country gently ascends towards the mountains in the interior, presented for twenty or thirty miles in the southeast a delightful forest scene, totally different in extent from anything I had before witnessed on the islands. (Stewart 1828:287)

On July 21, 1835, another Protestant missionary named Titus Coan and his wife made landfall in Hilo, where they were to be stationed. Coan recorded observations he made of the Hilo landscape and the homes of other missionaries such as Goodrich and Lyman, thusly:

> . . .on the 21st we saw the emerald beauty of Hilo, and disembarked with joy and thanksgiving. Hundreds of laughing natives thronged the beach, seized our hands, gave us the hearty "*Aloha*" and followed us up to the house of our good friends, Mr. and Mrs. Lyman, who were with us to comfort and inform us all the way.
>
> The bay of Hilo is a beautiful, spacious, and safe harbor. The outline of its beach is a crescent like the moon in her first quarter. The beach is composed of fine, volcanic sand, mixed with a little coral and earth. On its eastern and western sides, and in its center, it is divided by three streams of pure water; it has a deep channel about half a mile wide, near the western shore, sufficiently deep to admit the largest ship that floats. Seaward it is protected by a lava reef one mile from the shore. This reef was formed by a lateral stream of lava, sent out at right angles from a broad river of molten rocks that formed our eastern coast. This reef is a grand barrier against the swell of the ocean. Lord

> Byron, who visited Hilo, when he brought home the corpses of King Liholiho and his queen [in 1825], gave the name of "Byron's Bay" to this harbor, but that name is nearly obsolete.
>
> The beach was once beautifully adorned with the cocoa palm, whose lofty plumes waved and rustled and glittered in the fresh sea-breeze. Beyond our quiet bay the broad, blue ocean foams or sleeps, with a surface sometimes shining like molten silver, tumbling in white foam, or gently throbbing as with the pulsations of life.
>
> Inland, from the shore to the bases of the mountains, the whole landscape is "arrayed in living green," presenting a picture of inimitable beauty, so varied in tint, so grooved with water channels, and so sparkling with limpid streams and white foaming cascades, as to charm the eye, and cause the beholder to exclaim, "This *is* a scene of surpassing loveliness."
>
> Behind all this in the background, tower the lofty, snow-mantled mountains, Kea and Loa, out of one of which rush volcanic fires. At the first sight we were charmed with the beauty and the grandeur of the scene, and we exclaimed, "Surely the lines are fallen to us in pleasant places, and we have a goodly heritage."
>
> . . . Hilo had then but one framed house. It was a low, two-story building in the style of a New England farm-house, built and occupied by the Rev. Joseph Goodrich, a good and faithful missionary of the A.B.C.F.M.
>
> Mr. Lyman's home, into which we were received, was a small, stone house, with walls laid up with mud, and a thatched roof. Each family had but one room about fifteen feet square. (Coan 1882:24-26)

Although Coan's observations lends insight into landscape and people of Hilo during the 19th century, the following *ʻōlelo noʻeau* paints a somewhat different picture, especially of his relationship with the local chiefs, namely Governor Kuakini and a chief by the name of Kanuha.

> *Noho maialile ka ua o Hilo, ʻelua wale no māua*.
> Keep your silence, O rain of Hilo, there are only two of us.
> Uttered by Kanuha in retort when rebuked by the Reverend Titus Coan for Sabbath-breaking: "Hold your silence, for there are only two of us in authority" – meaning Kanuha and Governor Kuakini. Rev. Coan was not to give orders when either was present. Now it is used to mean, "Keep quiet. You're not the boss around here." (Pukui 1983:253)

In 1840, Lieutenant Charles Wilkes, head of the U.S. Exploring Expedition, traveled to Hilo. His narrative provides a similar account to those written by others in earlier times, painting the Hilo settlement as a lush, verdant, and well-watered home shared by missionaries and natives:

> The scene which the island presents as viewed from the anchorage in Hilo Bay, is both novel and splendid: the shores are studded with extensive groves of cocoa-nut and bread-fruit trees, interspersed with plantations of sugar-cane; through these, numerous streams are seen hurrying to the ocean; to this succeeds a belt of some miles in width, free from woods, but clothed in verdure; beyond is a wider belt of forest, whose trees, as they rise higher and higher from the sea, change their characters from the vegetation of the tropics to that of polar regions; and above all tower the snow-capped summits of the mountains. . .
>
> Hilo is a straggling village, and is rendered almost invisible by the luxuriant growth of the sugar-cane, which the natives plant around their houses. A good road has been made through it for the extent of a mile, at one end of which the mission establishment is situated. This consists of several houses, most of which are of modern style, covered with zinc and shingles. One of them however, the residence of the Rev. Mr. Coan, was very differently built, and derived importance in our eyes, from its recalling the associations of home. It was an old-fashioned, prim, red Yankee house, with white sills and casements, and double rows of small windows. No one could mistake the birthplace of the architect, and although thirty degrees nearer the equator than the climate whence its model was drawn, I could not but think it as well adapted to its new as to its original station.
>
> The whole settlement forms a pretty cluster; the paths and roadsides are planted with pine-apples; the soil is deep and fertile, and through an excess of moisture, yields a rank vegetation.
>
> The church is of mammoth dimensions, and will, it is said, accommodate as many as seven thousand persons. It is now rapidly falling into decay, and another is in progress of erection. Many of the

> native houses are surrounded with bread-fruit and cocoa-nut trees, and have a fine view of the bay. (Wilkes 1845:114-115)

In 1848, the whaler *Josephine* made port in Hilo with Samuel Hill on board. After a journey to Kīlauea, Hill visited Hilo and provided the following details in the account of his journey:

> . . . and it was not until near sunset that we discovered any signs of our approach to the little port of Hilo, when we came suddenly upon a piece of meadow land, on which were feeding several head of cattle, with letters marked upon their skins, which as plainly revealed the fact of their captivity as it assured us of the near termination of our journey.
>
> In another half-hour we opened a view of Byron's bay; after which, we crossed some further meadow land, which brought us to the village of Hilo, seated upon the bay near the shore. The place appeared to consist merely of a few scattered huts, among which it was easy to distinguish the residence of an European; and we rode immediately up to that of Mr. Pitman, to whom I had brought the letter of introduction, and from whom we now met a hearty reception, without a word of reproach for our depredation at the crater of the volcano. . .
>
> Byron's bay, or Waiakue Kaikuono, as it is called by the natives, comprises a spacious harbor, formed by a reef of coral rocks, of about half-a-mile in breadth, through which there is a channel three-quarters of a mile wide, with a depth of water throughout of about eleven fathoms. Hilo is a missionary station, both Protestant and Romish, and has one of the best Protestant schools in the islands. It is well situated, as well in relation to the bay upon which it is placed as to the surrounding country; and promises to become one of the most flourishing settlements in the islands. It consists, at present, of thirty or forty scattered huts, a Protestant church, a small Romish chapel, the dwellings of the missionaries, a school-house, and several houses belonging to Mr. Pitman, by whom all the proper commerce of the place is carried on. (Hill 1856:290-292)

During the mid-1800s, epidemics spread through the islands and ravaged the native population. In 1847, a measles epidemic, the same disease which caused the demise of Kamehameha II and Kamāmalu, struck in Hilo. Introduced by the American warship the *Independence*, from Mazatlan, Mexico, measles spread swiftly throughout the islands (Schmitt and Nordyke 2001). A short article printed in *The Polynesian* in 1848, describes the effect of measles, as well as other introduced diseases such as whooping cough, mumps, and the flu on the native population in Hilo:

> SICKNESS.—Much sickness prevails here at the present time. The measles and whooping cough have at length made their appearance here. The whooping cough made its appearance a few weeks since, and during the last week several cases of the measles have occurred in town. By an arrival from Hilo, we learn that the measles prevail extensively among the native population at Hilo. Both the measles and whooping cough are comparatively light, and no fears need be entertained if proper care be taken. Among the native population some cases have proved fatal, owing to exposure and improper treatment. The mumps prevailed here some years since, and we understand several cases have lately occurred Pleurisy and bilious fever prevail to some extent among the native population. Several cases of influenza similar to that which occurred here in 1845 have lately occurred. (*The Polynesian* October 14, 1848:86 c.3)

## Early Historical Accounts of Pi'ihonua and the Wailuku River

Portions of the historical record of Hilo also mention the Wailuku River specifically, as in the following account composed by Lord George Anson Byron (1826), commander of the *H.M.S. Blonde*, which departed London on September 28, 1824, carrying the bodies of King Liholiho (Kamehameha II) and his wife Kamāmalu. The royal couple had perished just six days apart due to measles. Their caskets were removed from the ship on May 11th of 1825 on the island of O'ahu and on June 7th, departed O'ahu for Hawai'i Island. Lord Byron, accompanied by Ka'ahumanu, her sister, three other lower-status chiefs, and forty other Hawaiians, toured the coast of Hawai'i Island until they reached Hilo on June 12, 1825. Byron's journal, emphasizes the importance of the Wailuku River as a source of fresh water for the ships of visiting sailors. In addition, Byron provides a detailed portrait of the environs of the Wailuku River and the falls therein; an illustration by Rob Dampier included in Byron's journal is reproduced as Figure 28 below:

> There is a creek at the [Hilo Bay] extremity, up which boats go as far as a fall of fine fresh water of excellent quality, which keeps long at sea, and is particularly convenient for watering the ships. . .

> The neighborhood of the watering-creek is particularly picturesque. The entrance is about fifty yards wide, between high precipitous rocks, crowned with palm and artocarpus trees, and almost covered with beautiful creeping plants, whose broad green leaves and many-coloured flowers only partially show the dark lava beneath. About fifty fathoms inland there is a ledge of rock, over which a beautiful clear river of fresh water comes, pouring its streams into the creek*; and, a few yards higher up, there is another cascade of still greater beauty. Immense masses of lava lie in picturesque confusion on the banks, between which gay shrubs and flowers have rooted, and partially conceal them. At these falls we were often amused by looking on, while the natives enjoyed themselves in the water. Some of their exercises, indeed, were almost fearful: they would strip even their maro [malo], and then plunge into the river above the first fall, and allow themselves to be carried down into the deep pool below, in which they would disappear, and then rise again at some distance and draw breath to be ready for the second fall, down which they would go, and then return to the upper rocks to renew their sport; nay some of them would ascend the cliffs above, a height of thirty or forty feet, and leap from these into the water, seemingly enjoying our terror at their daring diversion; but they are like the amphibious animals, accustomed to the water from infancy, and whether rolling about in the surf on their float-boards, or dashing down the cascades along with the waters, seem equally at home. (Byron 1826:165-166)



Figure 28. Historical illustration of "Waterfall, Byron Bay" (Byron 1826:165).

Although life-sustaining, the waters also proved treacherous and sometimes deadly as can be seen in the note that accompanies the previous excerpt by Byron "This river is the Wairuku; that is, the forceful, or destructive, or rushing water" (ibid.166). The following excerpts from the journals of Wilkes and Stewart also touch upon the dangers of the Wailuku River:

> Excellent water is to be had in abundance, and with great ease, within the mouth of the Wailuku river; but it requires some care in passing in and out the river when the surf is high. (Wilkes 1845:230)

> After satisfying our curiosity here, we rowed down the creek and across the bay, to another stream on the western side of the harbor, called Wairuku—*river of destruction*—where the ships get their water. (Stewart 1828:289)

Another account describes the way travelers would cross the river in the days before bridges spanned the Wailuku. The account, composed by Ellis ca. 1827 reproduced below, bears the self-explanatory title, "Toll Charged for Crossing Wailuku River":

> Returning from Pueo, I visited Wairuku, a beautiful stream of water flowing rapidly over a rocky bed, with frequent falls, and many places eligible for the erection of water-mills of almost any

> description. Makoa and the natives pointed out a square rock in the middle of the stream, on which, during the reign of Tamehameha, and former kings, a toll used to be paid by every traveler who passed over the river.
>
> Whenever any one approached the stream, he stood on the brink, and called to the collector of the toll, who resided on the opposite side. He came down with a broad piece of board, which he placed on the rock above mentioned. Those who wished to cross met him there, and deposited on the board whatever articles had been brought; and if satisfactory, the person was allowed to pass the river. It did not appear that any uniform toll was required; the amount, or value, being generally left to the collector.
>
> The natives said it was principally regulated by the rank or number of those who passed over. In order the better to accommodate passengers, all kinds of permanently valuable articles were received. Some paid in native tapa and mats, or baskets, others paid a hog, a dog, some fowls, a roll of tobacco, or a quantity of dried salt fish. (Ellis 1917:241-242)

Other accounts describe a marketplace along the banks of the river, which acted as an epicenter of trade for the region from the middle to late nineteenth century. Figure 29 is as a daguerreotype (predecessor of the photograph of the Wailuku River captured during the mid-nineteenth century, which depicts the riverbanks during the years when the markets were still active.



Figure 29. 1853 daguerreotype by Hugo Stangenwald of the mouth of the Wailuku River, Mission Houses Museum.

Ellis described the markets that had been held along the Wailuku ("Wairuku") as follows:

> The river of Wairuku was also distinguished by the markets or fairs held at stated periods on its banks. At those times the people of Puna, and the desolate shores of Kau, even from the south point of the island, brought mats, and mamake tapa. . . These, together with vast quantities of dried salt fish, were ranged along on the south side of the ravine.
>
> The people of Hiro and Hamakua, as far north as the north point, brought hogs, tobacco, tapa of various kinds, large mats made of the pandanus leaves, and bundles of ai pa, [*pa'i'ai*] which were collected on the north bank. . . From bank to bank the traders shouted to each other, and arranged the preliminaries of their bargains. From thence the articles were taken down to the before-mentioned rock in the middle of the stream, which in this place is almost covered by large stones. Here they were examined by the parties immediately concerned, in the presence of the collectors,

> who stood on each side of the rock, and were the general arbiters in the event of any disputes arising. To them also was committed the preservation of good order during the fair, and they, of course, received a suitable remuneration from the different parties.
>
> On the above occasions, the banks of the Wairuku must often have presented an interesting scene, in the bustle of which these clerks of the market must have had no inconsiderable share.
>
> According to the account of the natives, this institution was in force till the accession of Rihoriho, the late king, since which time it has been abolished. (Ellis 1917:242)

James Jackson Jarves, the founder and editor of the first Hawaiian weekly newspaper, *The Polynesian*, provided the following description of the activities associated with the Wailuku River market:

> At stated periods, markets or fairs were held in various places. The most celebrated occurred on the banks of the Wailuku river, in the district of Hilo, Hawai‘i. Here, inhabitants from all portions of the island assembled, to make exchanges of property. Certain districts were noted for the goodness of their tapas; others, for their mats, live stock, or excellence of their *poi*, or dried fish. The peddlers cried their wares, which were exhibited in piles on either side of the stream, according to certain rules; and when a bargain was in negotiation, the articles were deposited on a particular rock, where they could be mutually examined in the presence of inspectors, who were appointed as arbiters in cases of dispute, and also acted as a police for the preservation of order. They received a remuneration for their services. A toll was required from all who crossed the river. (Jarves 1843:77-78)

Byron also described a chiefly residence located on the riverbank in his 1827 account of the Wailuku River environs:

> As Lord Byron had determined to refit here, Kahumanu [Ka‘ahumanu] appropriated to his use a large and very convenient house, which had just been constructed for the chief of the district. It was delightfully situated on the banks of the Wairuku: the floor was laid with small black pebbles, and carefully covered with mats, and the roof lined with the leaves of the pandanus; there was a door at each end, and several windows were cut in the thatch, so that when we had furnished it with a few chairs and tables, and screened off our bed-places with tappa, it really formed a very comfortable habitation. . .(Byron 1826:166-167)

Between 1846 and 1865, a port town began to replace the traditional huts and gardens located between the Wailuku and Wailoa Rivers. According to McEldowney (1979:37)., “the main pier near the mouth of the Wailuku River served as the focal point of this ‘New Bedford’ type whaling town of trading stores, stables, churches, small boarding houses, and residences” The shift from village life to port town during the mid-nineteenth century was accelerated by the overhaul of the traditional land tenure system during the reign of the *Mō‘ī* (Monarch) Kauikeaouli (also known as Kamehameha III).

## The *Māhele ‘Āina* of 1848

By the mid-nineteenth century, the ever-growing population of Westerners in the Hawaiian Islands forced socioeconomic and demographic changes that promoted the establishment of a Euro-American style of land ownership. By 1840 the first Hawaiian constitution had been drafted and the Hawaiian Kingdom shifted from an absolute monarchy into a constitutional government. Convinced that the feudal system of land tenure previously practiced was not compatible with a constitutional government, the *Mō‘ī* Kauikeaouli and his high-ranking chiefs decided to separate and define the ownership of all lands in the Kingdom (King n.d.). The change in land tenure was further endorsed by missionaries and Western businessmen in the islands who were generally hesitant to enter business deals on leasehold lands that could be revoked from them at any time. After much consideration, it was decided that three classes of people each had one-third vested rights to the lands of Hawai‘i: the *Mō‘ī* (monarch), the *ali‘i* (chiefs) and *konohiki* (land agents), and the *maka‘āinana* (common people or native tenants).

In 1845 the legislature created the Board of Commissioners to Quiet Land Titles (more commonly known as the Land Commission), first to adopt guiding principles and procedures for dividing the lands and granting land titles, and then to act as a court of record to investigate and ultimately award or reject all claims brought before them. All land claims, whether by chiefs for entire *ahupua‘a* or by tenants for their house lots and gardens, had to be filed with the Land Commission within two years of the effective date of the Act (February 14, 1848) to be considered. This deadline was extended several times for the *ali‘i* and *konohiki*, but not for commoners (Alexander 1920; Soehren 2005)

The *Mō'ī* and some 245 *ali'i* (Kuykendall 1938) spent nearly two years trying unsuccessfully to divide all the lands of Hawai'i amongst themselves before the whole matter was referred to the Privy Council on December 18, 1847 (King n.d.). Once the *Mō'ī* and his *ali'i* accepted the principles of the Privy Council, the *Māhele 'Āina* (Land Division) was completed in just forty days (on March 7, 1848), and the names of all of the *ahupua'a* and *'ili kūpono* (nearly independent *'ili* land division within an *ahupua'a*) of the Hawaiian Islands and the chiefs who claimed them, were recorded in the *Buke Mahele* (also known as the *Māhele* Book) (Soehren 2005). As this process unfolded the *Mō'ī*, who received roughly one-third of the lands of Hawai'i, realized the importance of setting aside public lands that could be sold to raise money for the government and also purchased by his subjects to live on. Accordingly, the day after the division when the last chief was recorded in the *Buke Māhele* (*Māhele* Book), the *Mō'ī* commuted about two-thirds of the lands awarded to him to the government (King n.d.). Unlike the *Mō'ī*, the *ali'i* and *konohiki* were required to present their claims to the Land Commission to receive their Land Commission Award (LCAw.). The chiefs who participated in the *Māhele* were also required to provide commutations of a portion of their lands to the government to receive a Royal Patent that gave them title to their remaining lands. The lands surrendered to the government by the *Mō'ī* and *ali'i* became known as "Government Land," while the lands that were personally retained by the *Mō'ī* became known as "Crown Land," and the lands received by the *ali'i* became known as "*Konohiki* Land" (Chinen 1958:vii, 1961:13). Most importantly, all lands (Crown, Government, and Konohiki lands) identified and claimed during the *Māhele* were "subject to the rights of the native tenants" therein (Garavoy 2005:524). Finally, all lands awarded during the *Māhele* were identified by name only, with the understanding that the ancient boundaries would prevail until the land could be formally surveyed. This process expedited the work of the Land Commission.

Prior to the *Māhele*, Pi'ihonua *ahupua'a* was held by Kamehameha I until the time of his death in 1819. Upon his death, Pi'ihonua was passed down to his son and heir of the Kingdom, Liholiho. Kelly et al. (1981) speculate that Pi'ihonua may have been given to the *ali'i* Kaleokekoi by Kauikeaouli or Boki in 1828. According to the *Buke Māhele* (1848:35), on January 28, 1848, Kaleokekoi returned the *ahupua'a* of Pi'ihonua to the *Mō'ī* as commutation for his retained lands, thereby establishing Pi'ihonua Ahupua'a as Crown Lands. To help clarify the exclusive nature of Crown Lands, in 1864 the Supreme Court established that all lands with such designation were inalienable and shall pass to the successor of the Hawaiian Kingdom for his or her lifetime (Van Dyke 2008). Van Dyke (ibid.:111) further explains that "[t]he Commissioner of the Crown Lands managed the land, leased the most productive lands (usually to sugar plantations), and conveyed the revenues to the *Mō'ī*." Within the study area vicinity, a total of six deeds (Figure 30) were issued between 1848 and 1861 by two different *Mō'ī*, Kauikeaouli, and Alexander Liholiho (Kamehameha IV) as well as the Privy Council (Table 1).

**Table 1. Deeds Granted in Pi'ihonua Ahupua'a.**

| *From* | *Claimant* | *Year* | *Acres* |
|---|---|---|---|
| Kauikeaouli | Elizabeth G.J. Bates | 1853 | 2.59 |
| Kauikeaouli | Benjamin Pitman | 1851 | 0.33 |
| Alexander Liholiho | Board of Education | 1861 | 0.50 |
| Alexander Liholiho | Benjamin Pitman | 1860 | 0.16 |
| Alexander Liholiho | W.H. Reed | 1861 | 26.0 |
| Privy Council | Catholic Church (French) | 1848 | n/a |

As the *Mō'ī* and *ali'i* made claims to large tracts of land during the *Māhele*, questions arose regarding the protection of rights for the native tenants. To address this matter, on August 6, 1850, the *Kuleana* Act or Enabling Act was passed, allowing native tenants to claim a fee simple title to any portion of lands which they physically occupied, actively cultivated, or had improved (Garavoy 2005). Additionally, the *Kuleana* Act clarified rights to gather natural resources, as well as access rights to *kuleana* parcels, which were typically land locked. Lands awarded through the *Kuleana* Act were, and still are, referred to as *kuleana* awards or *kuleana* lands. The Land Commission oversaw the program and administered the *kuleana* as Land Commission Awards (Chinen 1958). Native tenants wishing to make a claim to their lands were required to submit a Native Register to the Land Commission, followed by Native Testimony given by at least two individuals (typically neighbors) to confirm their claim to the land. Upon successful submittal of the required documents, the Land Commission rendered their decision, and if successful, the tenant was issued the Land Comission Award (LCAw.).

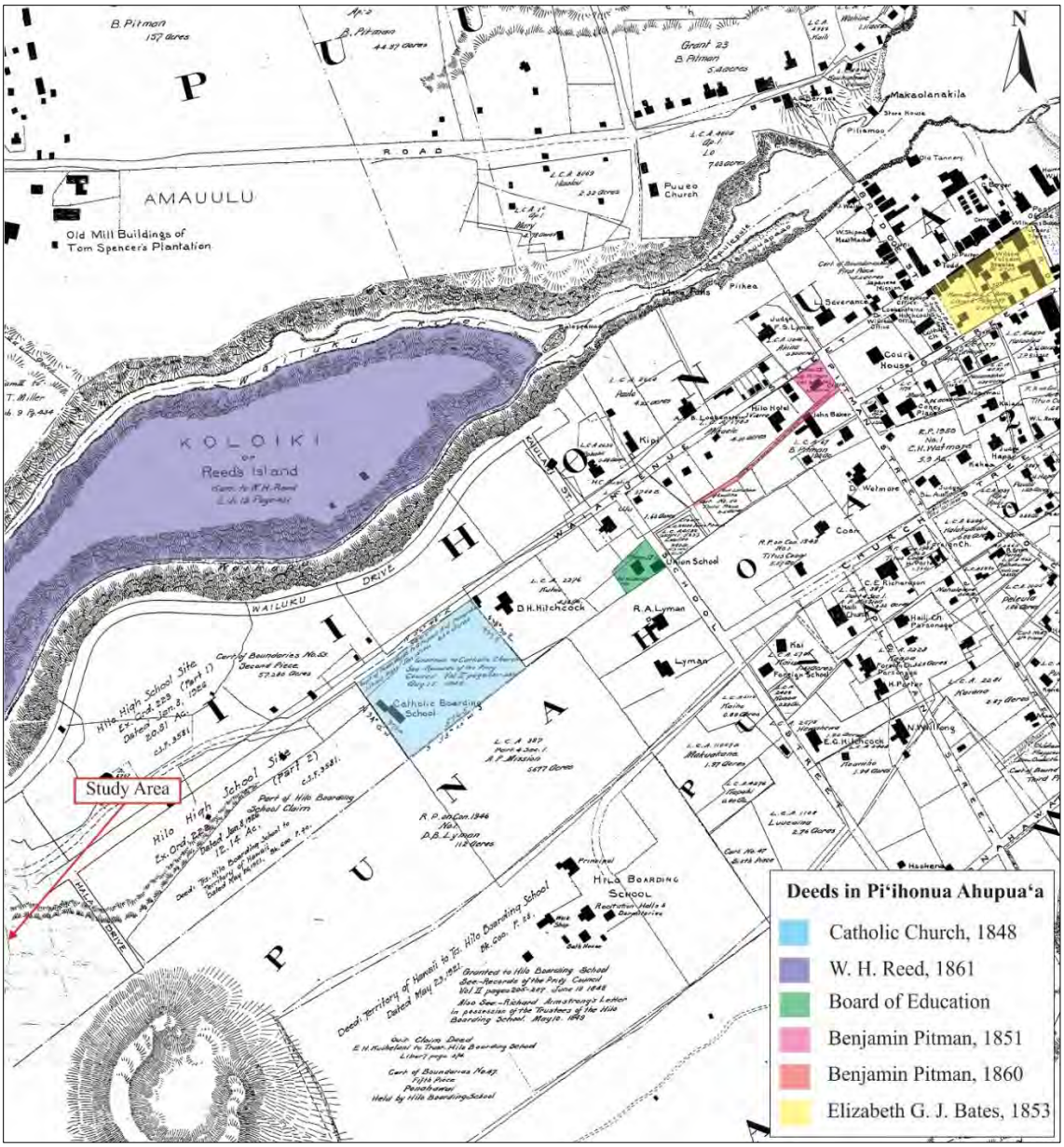



Figure 30. Portion of Hawai'i Registered Map 1561 from 1891, showing deeds granted within Pi'ihonua Ahupua'a between 1848-1861.

Unlike the *Māhele* between the chiefs, native tenants claiming land through the *Kuleana* Act were required to pay for a Government surveyor to survey and map the boundaries of the awarded parcels. Although no *kuleana* awards were recorded within the current project area, such awards were issued on lands adjacent to the study area. The information recorded in the Native Testimonies provides insight into land use and settlement patterns prior to the *Māhele*, while the Land Commission Awards reflect the results of this newly established land tenure system, both of which are discussed in the following paragraphs.

Data from the *Waihona 'Aina* (2018) database specify that twenty *kuleana* claims were made within Pi'ihonua Ahupua'a, of which fourteen were awarded. All of the awards were located *makai* of the current study area. In the neighboring Punahoa 2nd Ahupua'a, a significant portion of the *ahupua'a* was awarded to the American Board of Commissioners for Foreign Missions (ABCFM) as LCAw 387, Part 4 Section 1. In addition to the land in Punahoa 2nd the ABCFM's claim included a portion of the current Hilo Intermediate School parcel (Figure 31) as well as water rights to the Wailuku River, both of which are in Pi'ihonua (Canevali 1977). The list of LCAw. have been compiled and presented in Table 2 below (Board of Commissioners to Quiet Land Titles 1929:18).

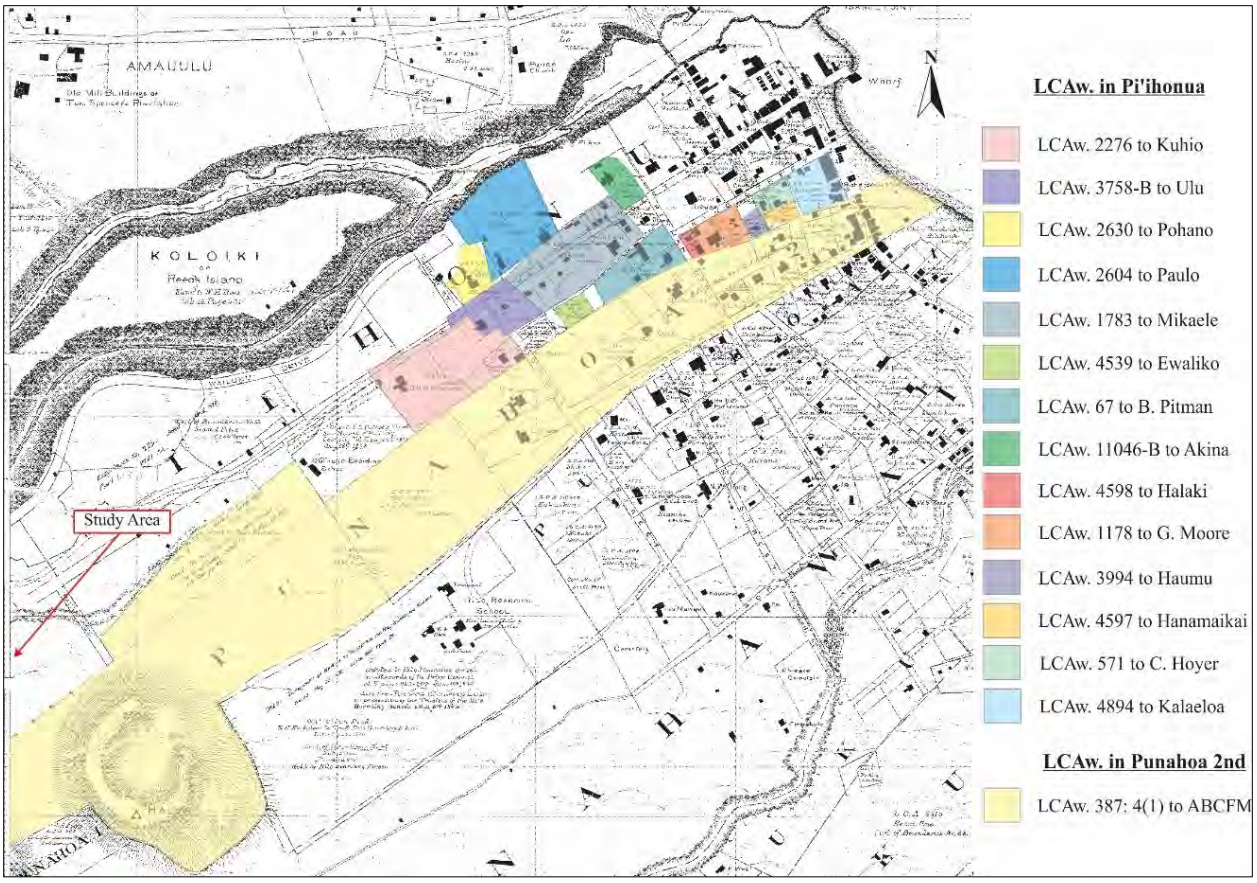



Figure 31. Portion of Hawai‘i Registered Map 1561 from 1891 showing LCAw. near the study area vicinity.

**Table 2. Land Commission Awards in Pi‘ihonua and Punahoa 2nd Ahupua‘a**

| *LCAw.* | *Claimant* | *Ahupua‘a* | *Parcels Awarded* | *Acres* |
|---|---|---|---|---|
| 12 | Asa Kaeo | Pi‘ihonua | 0 | n/a |
| 67 | Benjamin Pitman | Pi‘ihonua | 1 | 1.92 |
| 571 | Cornelius Hoyer | Pi‘ihonua | 1 | 0.75 |
| 1178 | George M. Moore | Pi‘ihonua | 1 | 0.96 |
| 1783 | Mikaele | Pi‘ihonua | 1 | 4.30 |
| 2276 | Kuhio | Pi‘ihonua | 1 | 4.38 |
| 2604 | Paulo | Pi‘ihonua | 1 | 4.49 |
| 2630 | Kimoteo Pohano | Pi‘ihonua | 1 | 0.97 |
| 3758B | Ulu (w) | Pi‘ihonua | 1 | 1.63 |
| 3788 | Opu | Pi‘ihonua | 0 | n/a |
| 3863 | Paulo | Pi‘ihonua | 0 | n/a |
| 3994 | Haunu | Pi‘ihonua | 1 | 0.20 |
| 4539 | Ewaliko | Pi‘ihonua | 1 | 0.40 |
| 4597 | Hanamaikai | Pi‘ihonua | 1 | 0.37 |
| 4598H | Halaki | Pi‘ihonua | 2 | 1.81 |
| 4894 | Kalaeloa | Pi‘ihonua | 1 | 2.16 |
| 4918 | Kapapa | Pi‘ihonua | 0 | n/a |
| 7578 | Kanaina | Pi‘ihonua | 0 | n/a |
| 7579 | Kahinawe | Pi‘ihonua | 0 | n/a |
| 11046B | Akina | Pi‘ihonua | 1 | 0.96 |
| 387 | ABCFM | Punahoa 2nd | 1 | 5,552 |

## Commission of Boundaries (1862-1876)

In 1862, the Commission of Boundaries (Boundary Commission) was established in the Kingdom of Hawai‘i to legally set the boundaries of all the *ahupua‘a* that had been awarded as a part of the *Māhele*. Subsequently, in 1874, the Boundary Commission were authorized to certify the boundaries for lands brought before them. The primary informants for the boundary descriptions were old native residents who learned of the boundaries from their parents, neighbors, or other relatives. The boundary information was collected primarily between 1873 and 1885 and was usually given in Hawaiian and simultaneously transcribed into English. Although hearings for most *ahupua‘a* boundaries were brought before the Boundary Commission and later surveyed by Government employed surveyors, in some instances, the boundaries were established through a combination of other methods. In some cases, *ahupua‘a* boundaries were established by conducting surveys on adjacent *ahupua‘a*. Or in cases where the entire *ahupua‘a* was divided and awarded as LCAw. and or Government issued Land Grants (both which required formal surveys), the Boundary Commission relied on those surveys to establish the boundaries for that *ahupua‘a*. Although these small-scale surveys aided in establishing the boundaries, they lack the detailed knowledge of the land that is found in the Boundary Commission hearings.

On October 8, 1873, hearings were held regarding the boundaries of Pi‘ihonua Ahupua‘a. Five native residents, namely Manuia, Kamalo, Kamoku, Pilimoku, and Hoikaikaeleele appeared before the Boundary Commission to provide testimony to help settle the boundaries for Pi‘ihonua. Manuia, a former resident of Pi‘ihonua, was born and lived there until shortly before his testimony. He served as the primary witness for the Boundary Commission (Maly 1996). His testimony, regarding the boundaries of the *ahupua‘a*, is as follows:

> Manuia K., sworn, I was born at Piihonua during the time of Kamehameha I and have always lived there until a short time since. [I] know a part of the boundaries, was shown them by Kaumu (my father), Puukia, Mano, and Awakua *kahu hanai* [my guardian from childhood, or foster parent]. These men are all dead. They were bird catchers and I used to go into the woods with them. I have been a bird catcher from my youth to the present time. I know the junction of Pōnahawai and Piihonua…in the woods at a place called Puuike, at the *mauka* corner of Punahoa 1st and Punahoa 2nd. Thence the boundary runs to Nahuina, junction of the old roads. Know the place called Nahaleoeleele, it is a hill *mauka* of Nahuina on the boundary between Kaaumana and Piihonua. Ponahawai leaves Piihonua at Nahuina and Kaaumana joins it. From Nahaleoelelele the boundary runs *mauka* to Kawauuai on the lava flow of 1855 (I know where it is now). Thence to Kapiliiki and thence to Kapilinui. These places are islands [*kipuka*] in the flow, covered so thickly with trees and *uluhi* [*Dicranopteris*] that it is impossible to go through them (hence their name). Thence to Kalapalapaiki and from thence to Kalapalapanui. My parents told me the land of Kaaumana runs very narrow (about two chains more) to Mawae.
>
> Kilohana is on Piihonua and the boundary is on the Puna side of it. Naunapaakea is on Piihonua, it is partly covered by the lava flow. Mawae is where Waiakea and Piihonua cut off Kaaumana, and the *mawae* [a deep crack or fissure] was covered up by the lava of 1855. I saw a pile of rocks there before the flow of 1852, said to have been put up by a foreigner who was engaged in surveying lands. This pile of stones was on the boundary between Piihonua and Waiakea (now covered by lava). The boundary used to run up old road in a straight line from Kalapalapanui to Mawae. Thence the boundary between Waiakea and Piihonua runs to Kaelekalua, small *ohia* trees where we used to catch birds. Thence to Luaoanapapa a cave where people used to sleep on the Hilo side of the lava flow; here, Humuula cuts these other lands off. This is as my *makua* told me. I have always been told that Humuula took the *mamani* [*Sophora chrysophylla* trees] and *pili* [*Heteropogan* grass] outside of the forest and *makai* to the other lands.
>
> This is as far as I learned the boundaries from my parents. I learned the mountain boundaries from Kamalo and Naa, when I was working for Mr. Castle (James Castle’s father). Thence along Humuula to Aaina. Thence to Laumaia. Thence to Waipahoehoe, below Aahuwela. Thence to Kapuakala, the *mauka* end of Honolii. The *mauka* boundary of Piihonua runs along the edge of the forest, the *pili* and *mamani* outside are on Humuula. Thence follow down Kapuakala gulch. I have never been along these woods. The boundary between Puueo and Piihonua follows up the Wailuku gulch from the seas shore to a branch gulch called Awehe. Thence it runs up this gulch to the junction of Kawala with Awehe gulch, *mauka* of Waihiloa. Thence along that gulch to Namahana. Thence across land to Nahuina, the *mauka* corner of Alae, and where the Puueo and Alae roads join (close to Honolii gulch). Thence to Honolii gulch, the boundary running towards Hamakua (from Namahana to Honolii) and the land of Paukaa is on the Hamakua side of the gulch. I have been as

far as this after birds, but no further. Have always heard that the boundary between Piihonua and Paukaa follows up Honolii gulch to Kapuakala. I think Kalapalapanui belongs to Piihonua, I have never heard of a place called Lai. I have always heard that all the water in the Wailuku belongs to Piihonua and that the water in Awehe [present-day Waiau] belongs to both lands of Piihonua and Puueo, and the water in the Kawala gulch belongs to both lands also.

Have heard that the water of Kapuakala belonged to Piihonua and Paukaa. Piihonua had fishing rights at the seashore from Puuau to Piilani [vicinity of the light house on the shore].

I know a place called Halehaleakalani, it is near Kapilinui, near the boundary, Kaaumana and Piihonua run through it. Kapiliwaleokahalu is on the boundary between Kaaumana and Piihonua, *mauka* of Kilohana. Kilohana is not on the boundary. Waiakea and Piihonua are not cut off by the land of Humuula at Mawae. I am certain that I was told by my parents that these lands extended to Kaelekalua and from thence to Luaoanapapapa, at which place they were cut off by Humuula. Know a place called Kalaeokahiliku, *makai* of Kaulukahaku on the lava flow of 1855 (a rocky point). It is on Waiakea and is *mauka* of a rocky point called Nakalaikiolaola and is *mauka* of Mawae (can see Mauna Kea from Mawae). Hailewa is the name of a pond of water in the woods on Piihonua.

Kamalo K. knows the boundaries outside of the woods where he used to kill bullocks, and I know the boundaries where we used to catch birds. Kaaumana runs from Nahuina to Mawae but the land is very narrow. Kukuau ends at Nahuina. (Maly 1996:A-23-A-24)

Kamalo, a bird catcher and native of Pi‘ihonua, provides testimony regarding the boundaries of Pi‘ihonua:

Kamalo K., sworn, Ponahawai joins Piihonua at a place called Nahuina. Punahoa ends at Puuiki, and from there to Nahuina, Ponahawai bounds Piihonua (Punahoa 2nd is owned and Patented by mess. T. Coan, D.B. Lyman and C.H. Hitchcock).

Kaaumana joins Piihonua at Kawauwai where bird catchers used to live, said place was destroyed by the lava flow of 1855. Thence the boundary between these two lands runs *mauka* to Kalapalapanui; thence to Kalapalapaiki, on the lava flow; thence to Naumuapaakea, a small island in the lava flow covered by trees thence to Kilohana an *ahua* in the center of the lava flow from which you can see to the shore; thence to Piliwaleokahalu, an *ahua* in the flow which is in sight of Kilohana; thence to Kapilinui, an island in the flow covered with trees, this is the *mauka* end of Kaaumana and where Piihonua and Waiakea join. (You come to Kapiliiki before you come to Kapilinui). Thence the boundary between Piihonua and Waiakea runs *mauka* to Halehaleakalani, an *ahua* on the lava flow where bird catchers used to meet the ones who carried up the food; thence to Mawae, a small island in the lava flow covered with trees, this is where Humuula cuts off Piihonua and Waiakea. There is an old pile of stones there and when Wiltse surveyed for a road, Keakaokawai and myself built another pile close to it. The first pile was built previous to 1859. Thence the boundary runs along the land of Humuula turning towards the right to Kaelekalua, an old *kauhale,* where trees are growing. The boundary runs *makai* of the old *kauhale*, and the tall trees belong to Piihonua. Thence to Kalaikahiliku a grove of *koa* and *ohia* trees, the boundary runs along the edge of the woods. The tall trees being on Piihonua and the short ones on Humuula. Thence to Nakalokiolaola the boundary running on the *mauka* edge of the woods on the *makai* side of this place. Thence to Kaelewa a large pond of water and *kauhale* on Humuula. Thence along the edge of the woods to Puuoo a hill larger than Halai. The boundary runs about as far from said hill as from the Court House in Hilo to the sea shore; on the edge of the bush. Thence along the edge of the bush to Waikeeiki, and thence to Waikeenui, to small *kahawai* branches of the Wailuku; thence to Aama a cave where people used to sleep. This is in the Wailuku stream and belongs to Humuula. The boundary is in the edge of the woods *makai* of this place. Thence to Laumaiaiki, the boundary running to a *kahawai makai* of it; thence to Laumaianui a *kahawai*; all these *kahawai* are branches of the Wailuku. Thence along the edge of the woods to Waipahoehoe, a cave in the *kahawai*; thence to Lai a point of the woods, covered with *koa* and *ohia*, *makai* of Ahuwela, a hill at the foot of the mountain, which you can see from Waiakea. At this point the large trees have been marked and a stone buried by Hitchcock bearing September 1873. Kalapapainiu is directly below Lai; thence to Kapuakala, *kahawai* at the junction of Piihonua and Paukaa on the boundary of Humuula; this place is at the *mauka* end of Honolii gulch, and is the true boundary between these two lands, as told me by my *kupuna* Eleele, Manoawahua, Paliupu, Pumine and Makaole. I went with them catching birds from the time I was small till I grew up. Their *kupuna* told them in olden times, these men are all dead.

> It is a short distance from Kapuakala to Lai. From Kapuakala the boundary of Piihonua runs up to Kalapapainiu, following the gulch; the water in the gulch belongs to Paukaa. Thence to Ka Puulehu, a hill on the edge of the gulch; thence to Puuhaohailele, *kauhale kaawili manu*; thence to Kamokuloulu, a *kauhale*, among the palm trees; thence to Kawala, the *mauka* corner of Alae; thence along the gulch across the head of Alae to the corner of Puueo. I know this gulch is on the boundary between Piihonua, Alae and Puueo. I do not know how wide Alae is at the *mauka* end nor do I know the points on the boundary till you come to Waihiloa, a waterfall on Awehe, but I know the gulch is the boundary between Puueo and Piihonua. Thence the boundary between these lands runs along the center of the gulch to the junction of the Waiele, with the Wailuku; thence along the Wailuku gulch to the shore. The sea water belonged to Wailuku but the tide water at the mouth of the gulch belonged to Piihonua; also the shallow water at the foot of the land, deep sea belongs to Waiakea.
>
> Kahue in a conversation with me told me that the boundary of Piihonua and Humuula was at Nahuina, on the Wailuku river. This conversation took place just before our giving testimony on the boundaries of Makahanaloa.
>
> He made offer to me (which I understood as endeavors to bribe me) to give evidence the same as his, whereby he and I could make money.
>
> I used to go bird catching on Piihonua with Malo and others. Humuula people catching birds outside of the woods, and Piihonua people catching them, to the *mauka* edge of the woods. That was the boundary and my *kupuna* told me fights used to occur when the Humuula men went below the edge of the woods, or if the Piihonua people went above them. From the time I was young to the present day, I have caught birds without hinderance from the Humuula people, within the boundaries I have defined. (Maly and Maly 2005:321-322)

Kamoku testimony:

> Kamoku, K., sworn, I was born and have always lived on Puueo. I am a bird catcher, and have been bullock catching and know some of the boundaries of Piihonua. I do not know the boundaries on the Waiakea side, only on the Hamakua side. The boundary at shore between Puueo and Piihonua is in the Wailuku river; thence the boundary runs *mauka* to the junction of Awehe gulch with Wailuku gulch; thence up said gulch to *mauka* of Waihiloa, and to the junction of Kawala and Awehe gulches; this is as far as I know the boundaries on this side. I have always heard that Piihonua extends through the woods, to the *pili* grass. And that the *mamani* and *pili* are on Humuula. This is all I know about the boundaries. (Maly and Maly 2005:323)

Pilimoku testimony:

> Pilimoku, K., sworn, I was born at Piihonua before the *moku aa* came into Hilo and have always lived on said land and Punahoa, know the boundaries of Piihonua as far *mauka* as where Puueo cuts Alae off. Punahoa ends *mauka* of Puuiki. Know Waiakea and Piihonua join at Mawae, I do not know any points on the boundary below Mawae, on that side. Have always heard that the tall woods are on Piihonua, and the *mamani* and *pili* are on Humuula.
>
> The boundary between Puueo and Piihonua is the Wailuku river; thence up the gulch to the junction of Awehe gulch with the Wailuku; thence up said gulch to *mauka* of Waihiloa, to the junction of *Kahawai o kahakai o Kawala*; thence along this gulch to the Alae road; where Puueo cuts Alae off. I have heard that Paukaa and Piihonua join in the woods (Maly and Maly 2005:324)

Hoikaikaeleele, a native of the neighboring *ahupua'a* of Punahoa, testifies as to the boundaries of Pi'ihonua:

> Hoikaikaeleele, K., sworn, I was born on Punahoa at the time of Ainoa, at the time Kaahumanu came to Hilo [ca. 1824], *olelo o ke* Akua; I know the boundaries of Piihonua on the South East side and on the mountain. When I was young I went with Kamalo, bird catching and killing bullock. Punahoa 2nd bounds Piihonua from the shore to a place in the woods called Puuiki; thence Ponohawai [Ponahawai] bounds it to Kilohana. This information I got from Kamalo. I went on the mountain with Eleele, and he said Piihonua runs to Kaelekalua, from Mawae along Waiakea; thence to Anapapapa, at the edge of the *pili* where Humuula cuts Piihonua off and Waiakea off. Thence the line runs to Kaelewa, thence to Puuoo, said place being on Piihonua and the *mamani mauka* on Humuula; thence to Aama on Wailuku gulch; thence to Laumai gulch (the place of that name is on Humuula). Thence along the *mauka* edge of the woods, to Waipahoehoe, thence to Lai, thence to Kapuakala. Paukaa is on the Hamakua of this place on the *mauka* end of Honolii gulch. Eleele said

> that Paukaa was the other side of the gulch, that Lai is on Piihonua and Aahuwela, is *mauka* of it. Kapuakala is *mauka* end of Honolii gulch. (Maly and Maly 2005:324)

Kanaloa, a native of Alae, testifies regarding the boundary of Pi‘ihonua and Alae:

> Kanaloa, K., sworn, I was born at Alae after the time of Peleleu [ca. 1795], and have always lived there. My parents lived there. Know the boundaries between Alae and Piihonua. Alae joins Piihonua at Waihiloa on the Awehe gulch. Thence up that gulch across the head of Alae to the corner of Kaiwiki and from thence straight to Honolii gulch, Piihonua cutting off Kaiwiki and Alae.
>
> A place on Honolii gulch called Waikee is the *mauka* corner of Kaiwiki. (Maly and Maly 2005:324-325)

The testimonies provided during the Boundary Commission hearings provide insights into the land use and residency of Pi‘ihonua during the late 18th and 19th century. From this, we learn that bullock hunting and bird catching were practiced at the upper elevations along the edges of the Wailuku River. Although the majority of the testimonies indicate the Wailuku River to be the main boundary separating Pi‘ihonua and Pu‘ueo *ahupua‘a*, it is unclear from the testimonies whether the water of the Wailuku River belonged exclusively to Pi‘ihonua or Pu‘ueo *ahupua‘a*, or whether the water was a shared resource. Although Manuia comments that the water in the Wailuku River was reserved for Pi‘ihonua Ahupua‘a, Kamalo comments that the water was shared between the neighboring *ahupua‘a*. Following the testimonies, on October 8, 1874, the Commissioner of Boundaries for the 3rd Judicial Court, Rufus A, Lyman rendered his decision that legally set the boundaries for Pi‘ihonua Ahupua‘a.

## Commercial Expansion in Pi‘ihonua and the Transformation of Crown Lands (Post 1848-1893)

In the decades following the *Māhele* of 1848, the area of Pi‘ihonua experienced a growing detraction from traditional subsistence activities, undoubtedly the result of the relatively swift expansion of the non-native population in Hilo that occurred throughout the 19th century. Between 1863 and 1890, landing wharves were built at the foot of what is now Waiānuenue Avenue at the mouth of the Wailuku River in Pi‘ihonua Ahupua‘a (Figure 32). This landing became a focal point for trade, commerce, and transportation. D.H. Hitchcock built the first landing and wrote that the “little wharf was a vast improvement on the old style of running the boats up onto the sand beach and transferring passengers and goods from them to dry land on the backs of the stalwart boat boys, stripped to their malo” (Lang 2007:86). By 1874, Hilo ranked as the second largest population center in the islands and within a few years the fertile uplands, plentiful water supply, and port combined to make Hilo a major center for sugarcane production and export.

Consequently the privatization of land in 1848 also drew in commercial sugar production, and beginning in the late 1880s, the Hawaii Mill Company was operating in Pi‘ihonua (Kelly 1981). The late 19th century was also a tumultuous time in the Kingdom of Hawai‘i as the eighth reigning monarch, Queen Lili‘uokalani faced serious pressure from American businessmen to abdicate her thrown. On January 17, 1893, a small group of American businessmen and sugar moguls backed by a U.S. consul and marines illegally attacked the Hawaiian Kingdom government and the sovereign, Queen Lili‘uokalani (Beamer 2014). This group, consisting of thirteen men referred to themselves as the Committee of Safety and following the overthrow, they proclaimed to be the Provisional Government that would manage the affairs of the Hawaiian Kingdom (Beamer 2014, Van Dyke 2008). The overthrow of the Hawaiian Kingdom government had a rippling effect that cause major instability for the Hawaiian nation and severely impacted the way Crown lands were allocated, such as those in Pi‘ihonua Ahupua‘a. Van Dyke (ibid.:153) states that “some also believed that abrogation of the Monarchy would open up the Government and Crown Lands for exploitation.” This belief was publicized as early as 1872 by Standford B. Dole, the acting President for the Provisional Government. In an article published in the *Pacific Commercial Advertiser* (1872:2) newspaper, Dole asserted that preserving Crown lands as inalienable under an 1865 Statute was a “mistaken policy.” Dole believed that maintaining Crown lands as inalienable hampered the economic development of the islands and argued that these lands should be made available to foreigners for homesteading (Van Dyke 2008). Following the overthrow of 1893, sizable portions of the previously inalienable Crown lands were divided and sold as Government land grants. In Pi‘ihonua, large tracts of land located above the main town and near the study area vicinity was divided up and sold. The 1894 *Biennial Report of the Commissioner of Crown Lands* compiled by Curtis P. Iaukea, described land use across the extent of the entire Pi‘ihonua Ahupua‘a. From his descriptions we learn that Waiānuenue Avenue was the main road in this *ahupua‘a.* Additionally, the current study area appears to been eyed for potential agricultural pursuits. Iaukea’s description is presented below in its entirety:

> PIIHONUA.— A large Ahupuaa extending from the beach on Front Street in Hilo town to the summit of Maunaloa. There are several acres in the town divided up into building lots and mostly situated on both sides of Waianuenue Street, the principle thoroughfare in Hilo. From thence into

> the woods for about ½ miles extends a fine tract of land suitable for raising fruits or coffee. The forest, as are all Hilo forests, is very dense and is composed principally of Koa and Ohia; large quantities of which would be suitable for cutting into lumber. The woods are full of wild cattle. The flow of 1885 and 1886 made it practicable to construct a good road into the upper portion of the land lying above the woods. There is a stretch of land there about seven miles long and from ½ to 1 ½ in width, which contains about the finest land in the country for raising wheat, oats, or any other of the cereals, as also potatoes. The climate is dry with enough moisture to furnish all the water needed for use. Above this tract stretching away to the summit of Maunaloa, the land is rocky and good only for grazing purposes. It joins the land of Humuula above the woods. The land rises gradually to the high table lands being 1000 feet altitude at the lower edge of the woods, and about 5000 feet at the upper end, 15 miles distant. The land of Piihonua contains 57, 236 acres, about 600 of which lie below the woods. There are between 200 and 300 acres of cane land. (Iaukea 1894:22-23)

With a rapidly expanding migrant population, the need for residential space was a growing concern in Pi‘ihonua as it was elsewhere across the islands. The growing sugar industry prompted the importation of contract labor from China in 1852, from Portugal in 1878, and from Japan in 1884 (among other places), which led to the formation of Hilo’s multi-ethnic character (Dorrance and Morgan 2000; Maclellan 1997). However, in an article titled “Chinese Settlers in the Village of Hilo before 1852,” Kai (1974:42) explains that a group of Chinese “sugar masters” settled permanently in Hilo well before commercial sugar cultivation became established between 1825 and 1840. These men arrived with knowledge of sugar processing, took Hawaiian wives, and eventually became landowners who spent their entire lives in Hawai‘i. As early as 1843, a Chinese sugar master by the name of Chee In, known as A‘ina in Hawaiian, claimed to own “a Sugar Establishment situated on Piihonua” (ibid.:45) that included a mill on a four-acre property (LCAw. 1783) he acquired located along the southern bank of the Wailuku River. Another Chinese settler named Tang Hun Sin known as Akina (or Ahkina) in Hawaiian, had acquired an acre of land within Pi‘ihonua by 1840 (that was awarded to him during the Māhele as LCAw. 11046B) (ibid.:50).



Figure 32. Hilo Landing in the early 1890s, Hawaiian Historical Society Historical Photograph Collection, James J. Williams collection.

## Late Nineteenth and Early Twentieth Century in Pi‘ihonua and Hilo

With the illegal annexation of Hawai‘i to the United States in 1898 and the granting of territory status in 1900, Hilo was designated the center of county government in 1905 and remained the second most populated city in the newly formed Territory of Hawai‘i. Commercial agriculture, particularly sugarcane had a dominating presence in the upper elevations of Pi‘ihonua as it did elsewhere throughout the Hawaiian Islands—forever changing the landscape, the economy, and the cultural fabric of the island.

By the late 1880s, the Hawaii Mill Company began operating in Pi‘ihonua (Kelly et al. 1981) and by 1905, Thrum (1923) reported that the Hawaii Mill Company had 10 miles of cane flumes and produced twenty-five tons of sugar per day. Although commercial sugar cultivation did not occur within the current study area, Hawai‘i Registered Map 2658 from 1920 (Figure 33) shows that a portion of a cane flume likely associated with Hawaii Mill Company meandered through what is now the subject parcel, entering at the northwest corner and exiting at the southeast corner. A second map, HST Plat Map 799 from 1922 (Figure 34) depicts a second flume route entering the property at the southwest corner and exiting at the northeast corner. This flume route appears to follow the same course as SIHP Site 20848 recorded by Walker et al. (1997) and Wolforth (1999). In 1923, Hawaii Mill Company was taken over by the Hilo Sugar Company (Dorrance and Morgan 2000). The population of Hilo surged with an expanding migrant population and veterans returning after the end of World War II; and in response, Pi‘ihonua expanded with residential subdivisions, schools, a jail, and a hospital depicted in Figure 35. Constructed within the study area vicinity was the Pi‘ihonua House Lots Subdivision, which was built in three series, the third series being located to the west of the study area parcel. Some cane fields were converted to pasturage associated with cattle ranching. In 1965, the remaining fields of Hilo Sugar Company were merged along with those of the Onomea plantation into Mauna Kea Sugar Company. In 1972, Mauna Kea Sugar Company formed a nonprofit called the Hilo Coast Processing Company to harvest and grind sugar on shares. In 1973, Mauna Kea Sugar Company absorbed Pepeekeo Sugar Company’s land holdings, which included the former Honomu and Hakalau plantations. The Hilo Sugar Company mill grounded its last crop in 1976 (ibid.). By 1994, the Hilo Coast Processing Company and Mauna Kea Sugar milled their last harvest which marked the end of commercial sugarcane production in the Hilo area. The rise and fall of the sugar industry were closely linked with that of the railroad, which is the subject of the next section.

A newspaper article published in the early 20th century provides a glimpse of land use activities in the upper elevations of Pi‘ihonua. According to a 1907 article written by Ralph Hosmer in support of protecting the *koa* forest titled “Piihonua Land Not Available,” the cane lands of the Hawaii Mill Company’s sugar plantation extended from 2,000 feet to 5,000 feet in elevation within Pi‘ihonua (Pacific Commercial Advertiser 1907). At that time, Pi‘ihonua was classified as government land “under a crown lease [no.531] to the Hon. John T. Baker of Hilo” set to expire on March 21, 1921 (ibid.). The upper portion of the tract, above 5,000 feet in elevation was sublet to W.H. Shipman as Puu Oo Ranch, while the remainder of the inland tract was part of the Hilo Forest Reserve, established in 1905. Also, at this time, the waters of the Wailuku were used “for irrigation and for turning the power wheels of the Hilo Electric Light Company. For these purposes, it is diverted at points near or below 2000 feet level” (ibid.). The author of the article suggested that the Wailuku River was “one of, if not, the most important streams protected by a forest reserve in the Territory,” particularly due to its then current use and “possible further development for water power, irrigation and even for domestic supply—especially in connection with the growth of Hilo town” (ibid.).

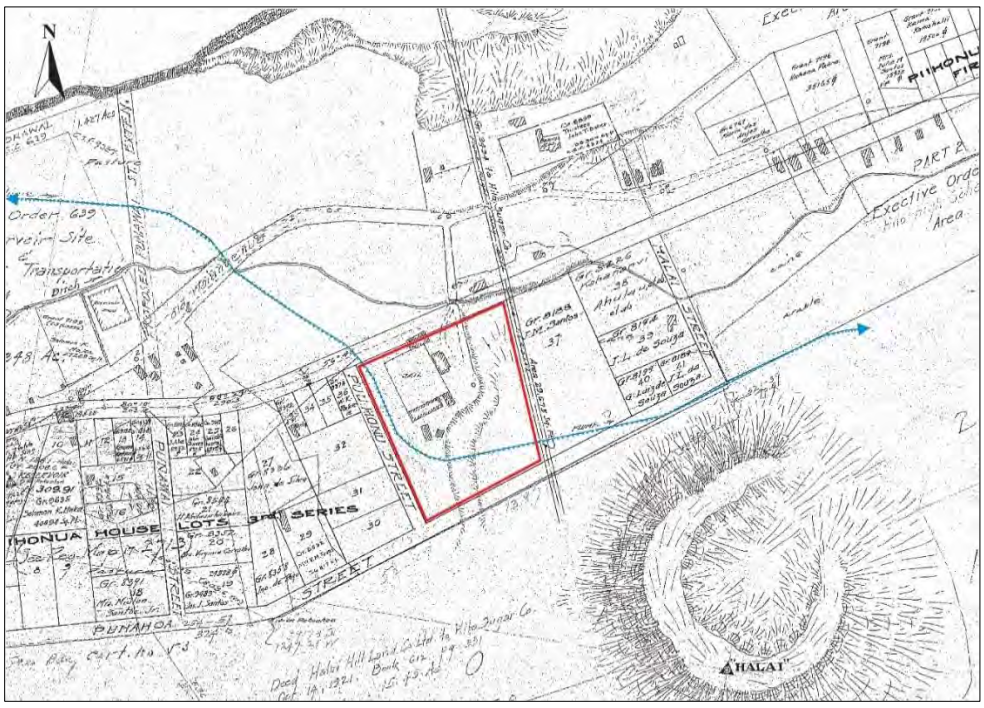



Figure 33. Portion of Hawai‘i Registered Map 2658 from 1920 showing flume within the study area.

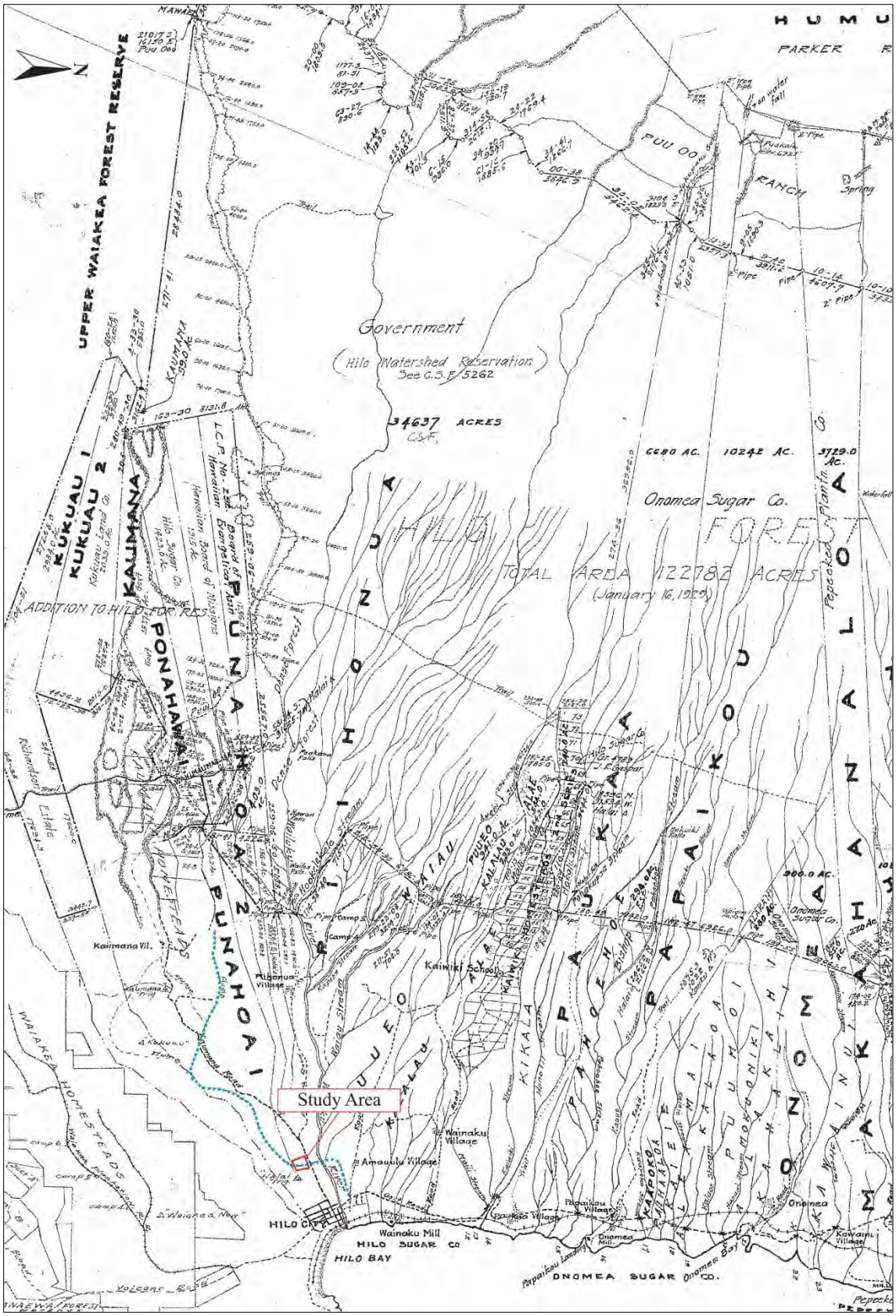

Study Area
Government
(Hilo Watershed Reservation
See C.S.F. 5262
34637 ACRES
C.S.F.
TOTAL AREA 122782 ACRES
(January 16, 1909)
Onomea Sugar Co.
UPPER WAIAKEA FOREST RESERVE
KUKUAU 1
KUKUAU 2
KAUMANA
PUNAHOA 1
PUNAHOA 2
PUU OO RANCH
Kaumana Vil.
Kaiwiki School
Waiakea Village
Waiakea Houselots
Waiakea Houselots
Waiakea Houselots




Figure 35. Portion of Hawai‘i Registered Map 2713 by W. E. Wall illustrates the expanding residential and commercial activity in Pi‘ihonua in 1924.

## PREVIOUS STUDIES

Since the early 1900s, several studies have examined where Hawaiians of the Precontact and Early Historic Period established settlements in the area near Hilo Bay. The earliest archaeological study in the Hilo area appears to be that of Thomas G. Thrum, who created a list of the *heiau* of ancient Hawai‘i. Thrum published his list of *heiau* in a series of entries titled “Tales from the Temples” in the *Hawaiian Almanac and Annual,* beginning with the 1907 edition. Of his investigations, Thrum noted the following:

> This much is being realized, and expressions of regret have been freely made, that we are at least fifty years too late in entering upon these investigations for a complete knowledge of the matter, for there are no natives now living that have more than hear-say information on the subject, not a little of which proves conflicting if not contradictory . . . While these difficulties may delay the result of our study of the subject, there is nevertheless much material of deep interest attending the search and listing of the temples of these islands that warrants a record thereof for reference and preservation. (1907b:49-50)

Thrum and his associates, W.T. Brigham and J.F. Stokes of the Bishop Museum, compiled information on over 130 *heiau* on Hawai‘i (Thrum 1907a). However, one must take into consideration that Thrum included data on *heiau* that had already been destroyed prior to his data collection efforts in the early 1900s. Regarding the *heiau* of the Hilo district, Thrum stated: “little evidence of their existence now remains, so complete has been their destruction, but though their stones are scattered, much of their history is yet preserved” (1907b:55). The results of his investigations relative to the current study area *ahupua‘a* are reproduced in Table 3 below.

**Table 3. Heiau sites recorded by Thrum (1907a/b) in the current study area vicinity.**

| *Name* | *Thrum’s Remarks* |
|---|---|
| Kaipalaoa | Near armory site and the foot of Waianuenue street, Hilo: of pookanaka class; the heiau at which Umi’s life was threatened and the place where Kamehameha I is said to have proclaimed his “Mamalahoa” law. Destroyed in the time of Kuakini’s governorship of Hawaii. |
| Kiniakua | Near Waikapu Spring; a small heiau of hooulu ai class, now entirely destroyed. |
| Papio | Back in the forest; a heiau for canoe builders and bird catchers. |

Regarding the *heiau* known as Kaipalaoa, Thrum provides the following further details: “the place where Keoua sacrificed Keawemauhili, Moi [Mō‘ī] of the Hilo district, whom he had defeated about 1790” (Thrum 1907b:56.). As previously mentioned, Kaipalaoa was also the site where Kamehameha sacrificed the rebel Maui chief Namakeha (Fornander 1918; Kamakau 1991).

Also of interest to the current discussion, is Thrum's account of the origin of the aforementioned Pinao stone, which presently rests in front of the Hilo Public Library. According to Thrum:

> In the premises formerly owned by Kipi, on Waianuenue street, is a large boulder known as Pinao, which is said by old natives to have been the stone on which Keawemauhili was sacrificed. It was formerly a part of the heiau of Kaipalaoa, and was being taken for the building of the first Haili church, but for some reason it was left in its present locality. (Thrum 1907b:56.)

In 1906, J.F.G. Stokes conducted an archaeological survey (Stokes and Dye 1991) with the sole purpose of recording *heiau* for the Bishop Museum. Stokes traversed the same route around Hawai'i Island that the missionary William Ellis took in 1823. While conducting fieldwork in the district of Hilo, Stokes "relied on Caucasian sugar growers for information on the whereabouts of heiau platforms," which resulted primarily in "recollections of where a heiau stood before it had been destroyed to plant cane" (ibid.:12). Stokes' brief discussion of the Hilo District reads thusly, "In Hilo, as in Honolulu, the heiau have entirely disappeared and their history is lost or has become confused" (ibid.:154). He continues by citing Thrum's aforementioned list of *heiau* for the region (Thrum 1907a) and by adding a dozen *heiau* sites with their approximate locations (ibid. 154-157). Each of the twelve additions Stokes made is listed as destroyed. Although part of Thrum's list, Stokes included descriptions of Kaipalaoa and Kiniakua *heiau* in his so-called addition: "Probably located just west of Isabelle Point. The native name of this point is Kaipalaoa" (ibid.:154). Stokes also described Pinao Heiau, located at "the west corner of Pleasant (now Ululani) and Waianuenue Street" (ibid.).

Between 1930 and 1932, Alfred Hudson conducted archaeological fieldwork as part of an attempt to inventory the sites of eastern Hawai'i Island for the Bishop Museum. Of *heiau* sites in the study area vicinity, Hudson noted that there were "probably 6 in the immediate vicinity of Hilo with others close by" (1932:37). In his fieldwork summary for Hilo town proper, Hudson states "no archaeological remains are to be found within the town of Hilo itself except a few stones which are said to have been taken from heiaus…" (ibid.:226). Hudson then reproduces much of the descriptions of the various *heiau* sites as presented above. In addition, he provides the following detail about Papio Heiau, "Mr. John Akau thinks that this site was near Laiaole falls in the Wailuku River, but a careful search failed to reveal any indications of it" (ibid.:241). Hudson also provides the following insight, "…the houses of the chiefs stood along the beach below the site of Kaipalaoa heiau" (ibid.:240).

During the four decades between Hudson's site inventory survey and the implementation of environmental review as an integral part of construction and development on Hawai'i Island in the 1970s, no relevant cultural resource reports were produced. But by the 1980s, stricter environmental regulations led to an increase in the number of archaeological and cultural studies undertaken throughout Hilo. Since then, numerous archaeological studies have been conducted both *mauka* and *makai* of the current study area within Pi'ihonua (Table 4). The results of the most relevant and proximate of these studies are discussed below and their locations are depicted in Figure 36.

In 1976 Walters, Kimura and Associates (W.K.A.) investigated a 117-acre area as part of an environmental assessment for the proposed Kaumana Springs Wilderness Park (TMKs:(3) 2-3-030:001, 002, 004, and 005), located to the west of the current study area (see Figure 36). In their report, W.K.A. failed to recognize the historic significance of agricultural features that they encountered reasoning that the area had been extensively altered by historic cultivation. Two years later, the Bishop Museum conducted a reconnaissance survey (Sinoto 1978) of the same parcel(s) and found that the majority of the study area had not been impacted by historic cultivation as W.K.A. had claimed. To the contrary, as a result of the 1978 fieldwork, six clusters of Precontact agricultural and habitation features were identified; which included stone terraces, alignments, walls, mounds, cairns, platforms, enclosures, *'auwai,* and stone reinforced stream banks. Sinoto noted that some of the walls appeared to be associated with more recent ranching activities. He suggested that the area represented a single continuous site, SIHP Site 18696 and that the paucity of sites in the surrounding areas was due to mechanized agricultural activities.

Throughout the early 1980s, a series of archaeological and historical studies were undertaken for the Alenaio Stream Flood Damage Reduction Study, which included the works of Kelley (1982), Athens (1982), Wickler (1990), and Wickler and Ward (1992). Of these studies, Kelly's (1982) historical study is most relevant to the current study area. The work associated with the Alenaio Stream did not yield any pre-Contact cultural sites and the artifacts encountered did not date to earlier than the last quarter of the 19th century.

In 1988, Paul H. Rosendahl Ph.D., Inc. (PHRI) conducted a reconnaissance survey (Rosendahl 1988) of five distinct parcels encompassing a total of 26.30 acres that were spread across six *ahupua'a*: Pi'ihonua, Punahoa 1, Kukuau 1 and 2, Ponohawai, and Waiākea *ahupua'a.* These five parcels were identified as potential sites for the Hilo Judiciary Complex. Of the five parcels, only one was located to the northeast of the current study area (see Figure 36), however, Rosendahl reported no archaeological sites or cultural resources on that parcel.

**Table 4. Previous archaeological studies.**

| *Name* | *Author* | *Ahupua'a* | *Type of Study* |
|---|---|---|---|
| 1976 | Walters, Kimura and Associates | Pi'ihonua | Inventory Survey |
| 1978 | Sinoto | Pi'ihonua | Inventory Survey |
| 1982 | Kelly | Pi'ihonua, Punahoa 1 & 2, Ponahawai | Historical |
| 1988 | Rosendahl | Pi'ihonua, Punahoa 1, Kukuau 1 & 2, Ponahawai, Waiākea | Reconnaissance Survey |
| 1992 | Spear | Pi'ihonua | Inventory Survey |
| 1996 | Walker and Rosendahl | Wainaku, Ponahawai, Pi'ihonua, Waiākea | Inventory Survey |
| 1997 | Walket et al. | Pi'ihonua | Inventory Survey |
| 1999 | Wolforth | Pi'ihonua | Data Recovery |
| 2004 | Clark and Rechtman | Pi'ihonua | Assessment and Limited Cultural Assessment |
| 2004a | Rechtman | Pi'ihonua | Field Inspection |
| 2004b | Rechtman | Pi'ihonua | Inventory and Limited Cultural Assessment |
| 2009 | Wilkinson and Hammatt | Pi'ihonua | Field Inspection, Literature Review |
| 2009 | Rechtman and Lang | Pi'ihonua, Punahoa, Kukuau, Ponahawai, Waiākea | Cultural Impact Assessment |
| 2015 | Barna and Rechtman | Pi'ihonua | Inventory Suyvey |
| 2017 | Tam Sing et al. | Pi'ihonua and Pu'ueo | Cultural Impact Assessment |
| 2018 | Brandt and Rechtman | Pi'ihonua | Cultural Impact Assessment |

Four years later in 1992, Scientific Consultant Services (SCS) conducted an inventory survey (Spear 1992) of a 12-acre parcel (TMK: (3) 2-3-032:001B) located on the south side of Waiānuenue Avenue, and to the west of the current study area (see Figure 36). As a result of the survey, Spear identified two Historic stacked stone walls and concluded that one of the walls was likely associated with cattle ranching, and that the other may have been used as a retaining wall for water control and erosion prevention associated with sugarcane cultivation or cattle ranching. The sites were determined no longer significant "sufficient information" had been collected from both sites; thus, no further work was the recommended treatment. Archaeological sites reported near Spear's study area include SHPD Site 18696, and Historic Period structures such as the Old Hilo Hospital (SHPD Site 7450), a Portuguese oven (SHPD Site7482), and the old Hilo County Jail (SHPD Site 7457).

In 1996, PHRI conducted an archaeological assessment (Walker and Rosendahl 1996) of seven proposed locations for the Hilo Judiciary Complex (Sites A-G) located throughout Hilo. One of these study area locations (Site F/TMK: (3) 2-3-032:001) encompassed the Spear (1992) study area (see Figure 36). Based on the assumption that the 42.3 acres had likely been impacted by Historic sugarcane cultivation, PHRI surveyed only 11% (approximately 4.6 acres) of the property. Walker and Rosendahl recorded no sites within the 4.6 acres they surveyed. Later in 2004, Rechtman Consulting, LLC (RC) conducted a field inspection as part of the preparation of a request for determination of "no historic properties affected" (Rechtman 2004a) associated with the proposed expansion of the Hilo Hospital facility on a roughly four-acre portion of the same parcel (see Figure 36). As a result of the fieldwork, no historic properties were identified and Rechtman noted that the property had previously undergone substantial alteration in the past including, but not limited to, mechanized clearing and earth moving.

Again in 1996, PHRI conducted a limited AIS (Walker et al. 1997) of a portion of the Hilo Community Correctional Center (HCCC) parcel (TMK: (3) 2-3-023:005), the subject of this report (see Figure 36). As a result of their study, two historic ditches were identified, SIHP Sites 20848 and 20849. Later that same year, PHRI conducted data recovery (Wolforth 1999) of those sites (see Figure 36). As a result of their investigation, PHRI determined that while Site 20849 is a small branch of a larger ditch system, Site 20848 is an older, more natural looking 400-meter waterway that connects with the Pi'ihonua Ditch (SIHP Site 21228) on the Hilo Church of God parcel. Also identified on the subject parcel was the old Hilo Jail (SIHP Site 50-10-35-07457). The conceptual plans for the proposed housing expansion project shows it to be situated near the site of the old Hilo Jail building, thereby requiring mitigation. In

April of 2018, the Hilo County Jail building was subject to detailed documentation using the Historic American Building Survey (HABS) standard and guidelines set by the National Park Service, Department of the Interior. The HABS was completed by Mason Architects, Inc. Their report included building plan maps, photos, a historical background outlining the history of the Hilo Jail, as well as detailed descriptions of the buildings architectural elements. In describing the main architectural elements, their report reads:

> The Hilo Jail was designed by the prolific American architect Oliver G. Traphagen and expresses the distinct architectural and political influences of its time. This utilitarian municipal building, loosely modeled after the mid-19th century Oahu Jail, has a simple design that includes a *porte cochere*, a traditional jail with a linear cellblock plan, and small, arched door and window openings filled with metal bars, roughly 12"-thick cellblock walls, and steel doors. Planned just a few years after Hawaii's 1898 annexation to replace an earlier jail in downtown Hilo…The robust, new brick building projected Hilo County's authority. Its design reflects its origins in the Hawaiian monarchy and the subsequent American interest that overthrew it. (Mason Architects, Inc. 2018:5)

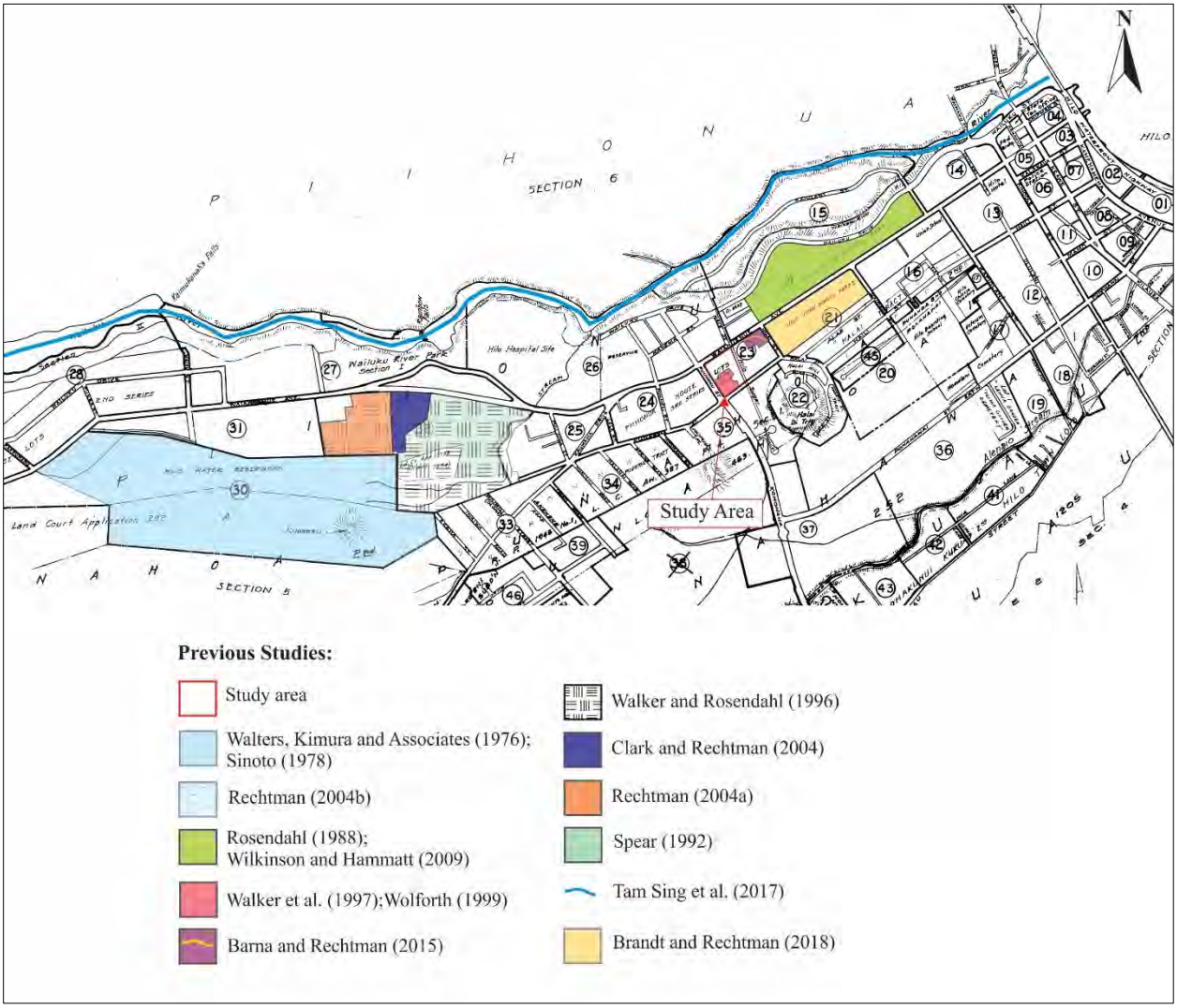



Figure 36. Previous archaeological studies in the vicinity of the current study area.

In 2004, RC conducted an archaeological inventory survey and limited cultural assessment (Rechtman 2004b) of a parcel located along the southern edge of Waiānuenue Avenue (TMK:[3] 2-3-30:5 por.; see Figure 36) that was a portion of the area that had been previously surveyed by Sinoto (1978). As a result, Rechtman recorded two Historic stone wall remnants (SIHP Sites 24267 and 24268). The sites appeared to have been previously disturbed and were interpreted as agricultural and residential features dating to a time prior to the development of commercial sugarcane cultivation. Also, in that same year, RC conducted an archaeological and limited cultural assessment (Clark and Rechtman 2004) of a 5.4-acre parcel for the expansion of the Arc of Hilo facility (TMKs: [3] 2-3-032:006-008), located to the northwest of the current study area. (see Figure 36). As a result of their fieldwork no historic properties were identified in the project area, which had been previously bulldozed.

In 2009, Cultural Surveys Hawai‘i, Inc. (CSH) conducted an archaeological field inspection and literature review (Wilkinson and Hammatt 2009) for the proposed construction of a new gymnasium within the 24-acre Hilo High School parcel (TMK: [3] 2-3-015:001), located along Waiānuenue Avenue to the northeast of the current study area (see Figure 36). The *makai* portion of their study area had previously been examined by PHRI (Rosendahl 1988), which had resulted in negative findings. As a result of the 2009 fieldwork, five previously identified historic properties comprising Hilo High School (SIHP Site 7522) were recorded in addition to a previously unidentified ditch and *pāhoehoe* alignment, which they described as potential historic properties and assigned only temporary site numbers. Historic and architectural significance assessment was the recommended treatment for the five previously identified properties; and further documentation and research in the form of an AIS was recommended for the newly identified ditch and alignment features, if the proposed development would impact them.

Again in 2009, a Cultural Impact Assessment was prepared by Rechtman Consulting (Rechtman and Lang 2009) for the Hilo Bayfront Trails project spanning the *ahupua‘a* of Pi‘ihonua, Punahoa, Ponahawai, Kūkūau, and Waiākea. Their study included a detailed culture-historical background for all five of the primary *ahupua‘a*, as well as a history of land use from Precontact through modern times for the region. Oral interviews were conducted with Leslie Lang (co-author of the study), Manu Meyer, Luahiwa Lee Loy Namahoe, and Sean Kekamakūpa‘a Lee Loy Browne. As a result of the study, Rechtman and Lang concluded that there were no specific resources or traditional practices identified that would be impacted by the development and use of the trail network; although they did caution that there was potential for previously undiscovered subsurface resources to be encountered during development activities.

In 2015, ASM Affiliates conducted an AIS (Barna and Rechtman 2015) of a 5,037 square-foot State-owned drainage easement bisecting TMK: (3) 2-3-023:006 in Pi‘ihonua Ahupua‘a, located to the northeast of the current study area (see Figure 36). A portion of this same drainage also passes through the current study area at the northeast corner. This drainage easement was previously identified by PHRI in 1996 (Wolforth 1999) as a portion of the Pi‘ihonua Ditch (SIHP Site 21228). However, no Precontact or Historic Period elements of Site 21228 were observed during fieldwork, and it was concluded that the site had been modified to the point where it failed to retain integrity of design, setting, materials, workmanship, or feeling pertaining to its former use as an earthen irrigation ditch.

Two years later, ASM Affiliates conducted a cultural impact assessment (Tam Sing et al. 2017) to accompany Hawai‘i Electric Light (HEL) renewal application for a water lease along a portion of the Wailuku River (see Figure 36), located to the north of the current study area. Their report provided a detailed culture-historical background and a presentation of previous studies conducted within their study area vicinity. As part of the cultural assessment process, consultation was completed with three individuals as well as select members representing four of the Hawaiian Homestead Community Associations (HHCA) located in Hilo, namely Pi‘ihonua, Kaūmana, Keaukaha, and Pana‘ewa (HHCA). Tam Sing et al. (2017:68) concluded that the “Wailuku River as a whole should be considered a traditional cultural property as it is associated with traditional *mo‘olelo* linked with various Hawaiian *akua* (deities), *kupua* (culture heroes), and *mo‘o* (guardians of fresh water).” Detailed recommendations were provided to HEL that would help ensure that no such resources, practices, or beliefs would be adversely impacted by the proposed water lease renewal.

In 2018, ASM Affiliates completed another cultural impact study (Brandt and Rechtman 2018) for the proposed Hilo Intermediate School Repair/Replacement of Building-A project on TMK (3) 2-3-021:058 located to the east of the current study area (see Figure 36). Again, a detailed culture-historical background section was prepared in addition to consultation with three individuals, Kaleo Aki, Rayelle Subica, and Hale Decker, all of whom have been employed at the school for over ten years and held detailed knowledge about the school and the surrounding area. The consultation process did not identify any ongoing traditional cultural places and associated practices on the school grounds, however, two valued historical sites were identified within the study area parcel; a portion of the Pi‘ihonua Ditch (SIHP Site -21228) as well as nearly 90-year old Building-A. The authors provided specific recommendations that would help the Department of Education ensure that no such resources, practices, or beliefs would be adversely impacted by the proposed repair/replacement project.

In summary, the early archaeological studies conducted within the *makai* portion of Pi‘ihonua Ahupua‘a have identified the former location of several *heiau* and royal complexes that were known to have been used until the time of Kamehameha I. In the upper elevations near the study area vicinity, archaeological investigations conducted post-1970 revealed the presence of at least one isolated Precontact site with multiple features (Sinoto 1978). To that end, the study area vicinity contains mostly Historic Period sites associated with Pi‘ihonua’s plantation and ranching era, and multiple Historic buildings, including the Hilo County Jail building (SIHP Site 50-10-35-7457) located on the current study area parcel. These buildings are associated with the development of Pi‘ihonua as a main center for Hilo town during the late 19th century and throughout the 20th century. Perhaps, one of the most unique features identified in several studies is the network of waterways and ditches that once carried water from the culturally significant Wailuku River, and other water sources found in neighboring Punahoa Ahupua‘a, towards the shore. Oral testimony collected during the early 20th century for the Hilo Boarding School water rights case specify that the ‘Ī ‘Auwai was the first ditch constructed in Pi‘ihonua prior to Kamehameha conquering the islands with the purpose of furnishing water for the area residents (see discussion on Waterways within the Study Area and Greater Pi‘ihonua Ahupua‘a). Accordingly, all subsequent ditches are direct or indirect branches of the ‘Ī ‘Auwai. As pointed out in the Walket et al. (1997) and Wolforth (1999) studies, two of these ditches cut through the current study area parcel, specifically the Pi‘ihonua Ditch (SIHP Site 21228) and an unnamed ditch (SIHP Site 20848).

# 3. CONSULTATION

Gathering input from community members with genealogical ties and long-standing residency or relationships to the study area is vital to the process of assessing potential cultural impacts to resources, practices, and beliefs. It is precisely these individuals that ascribe meaning and value to traditional resources and practices. Community members often possess traditional knowledge and in-depth understanding that are unavailable elsewhere in the historical or cultural record of a place. As stated in the OEQC Guidelines for Assessing Cultural Impacts, the goal of the oral interview process is to identify potential cultural resources, practices, and beliefs associated with the affected project area. It is the present authors' further contention that the oral interviews should also be used to augment the process of assessing the significance of any identified traditional cultural properties. Thus, it is the researcher's responsibility to use the gathered information to identify and describe potential cultural impacts and propose appropriate mitigation as necessary.

In an effort to identify individuals knowledgeable about traditional cultural practices and/or uses associated with the current subject property, a public notice was submitted to the Office of Hawaiian Affairs (OHA) for publication in their newspaper, *Ka Wai Ola*. Although the notice was submitted via email on June 11th with the intent that it would appear in the following July issue, the notice was not published until the August 2018 issue (Appendix A). As of the date of the current report, no responses have been received from this public notice.

ASM contacted the following organizations and individuals: The Office of Hawaiian Affairs-East Hawai‘i Representative Kamuela Bannister, Robert Yamashita, Peter Cabreros. Additionally, we have summarized oral-historical information gathered during prior interviews conducted by ASM staff for earlier cultural and archaeological studies that is either regionally or topically relevant for the current study.

## ROBERT YAMASHITA

On June 12, 2018, Robert B. Rechtman met at the HCCC location with Robert Yamashita, a civilian employee with HCCC, who is currently the Superintendent of facilities and maintenance. The purpose of the meeting was to tour the facility and identify whether he was aware of any past or ongoing cultural practices that may be taking place within the boundry of the HCCC facility. Robert pointed out that his office is located in the original brick Hilo Jail building, which was constructed around 1919. This building was subject to a detailed documentation study conducted by Mason Architects (Glenn Mason Pers. Comm 2018) that has effectively mitigated impacts that will result from its destruction as a result of the proposed housing expansion project.

When asked, Robert explained that he was unaware of any requests to access the facility for cultural practices, but did point out a *la‘amia* (calabash tree; *Cresentia cujete*) that is within an unsecured area of the facility, and he indicated that there may be some people who collect the gourds that this tree produces; and referred ASM to the HCCC command adminstration for further information about use of this specific tree.

## PETER CABREROS

A phone call was made by Lokelani Brandt on August 22, 2018 to the current warden, Peter Cabreros. Mr. Cabraros has worked for the Deparment of Public Safety since February 1975 and has since worked his way up to the rank of Chief of Security at HCCC in 2002. In January of 2018, Mr. Cabreros was promoted to Warden of HCCC. In discussing any on-going cultural practices on the HCCC site, Mr. Cabreros specified that he has not received any request from the public to access the property for traditional cultural practices. He was aware though of the large *la‘amia* tree located on the subject property and that its fruits are used to make *‘ulī‘ulī*. Although no request from the public has been received to gather the fruits of the *la‘amia* tree, Mr. Cabreros explained that HCCC staff frequently gather the fruits and use them ornamentally in their offices. When asked if the inmates participate in any cultural activities on the property, Mr. Cabreros clarified that these sorts of activities specifically the cultivation of traditional Hawaiian food crops currently take place at the Hale Nani facility in Pana‘ewa. He explained that they keep the vegetaion at the HCCC property to a minimum to eliminate potential hiding places for inmates. When asked about his thoughts on the proposed housing expansion project, Mr. Cabreros lamented at the idea of demolishing the Old Hilo Jail building but emphasized that upgrading that facility would be too costly for the Department. He also expressed the need for more space on the HCCC grounds and that the demolition of the old Hilo Jail building will help to create the much-needed space to construct a new inmate housing facility.

## KAMUELA BANNISTER

An interview with Kamuela Bannister was conducted by ASM staff, Lokelani Brandt and Aoloa Santos in Hilo on September 28, 2018. Mr. Bannister is the current Board Secretary of Hui Mālama Ola Nā ʻŌiwi (HMONO). He is also active in Hawaiʻi Community College's (HCC), College of Continuing Education and Community Service (CCESE) where he has been invited on a number of occasions as a guest speaker for the Kulani Correctional Facility's HCC CCESE Life Skills course and has one-on-one interactions with inmates. He has also been involved in several initiatives that advocate for developing partnerships with various agencies to develop community-specific inmate rehabilitative programs, specifically for Native Hawaiians. Kamuela shared his thoughts on some site-specific impacts as well as broader sociocultural impacts and has invited other knowledgeable professionals to comment on the proposed project.

With respect to site-specific impacts, Mr. Bannister was aware of the historic ditches on the property. He mentioned that some of these ditches are known to be unstable because of their age. Given that the proposed project would be adjacent to the Piʻihonua Ditch, which extends along Waiānuenue Avenue, Mr. Bannister cautioned that efforts should be made during the construction process to maintain the integrity of the ditch.

While Mr. Bannister acknowledges the importance of assessing the broader sociocultural impacts of Hawaiʻi's criminal justice system on Native Hawaiian, he is a staunch supporter of assessing and including community specific impacts. He pointed out that in East Hawaiʻi, one of the biggest problems is drug addiction and mental health issues, both of which often lead individuals into the criminal justice system. He indicated that if more funding and resources could be directed to these types of service providers, it would help to reduce the inmate population. He is a strong advocate for strengthening and providing more rehabilitative and transitional services for incarcerated inmates. From his work with the HCCC continuing education program, he has come to learn of the value of helping inmates obtain a higher education and employment training as he believes that these services can help with reducing recidivism. He also emphasized that Native Hawaiians are overly represented in our Hawaiʻi County jail system. He described what he views as flaws in our current criminal justice system and advocated for reform of the current pretrial process as these systematic flaws result in excessive criminalization, thereby contributing to the issue of inmate overcrowding. He believes that if we can improve the quality of life for Native Hawaiian inmates, it will encourage self-rehabilitation and that the number of incarcerated Native Hawaiians will be reduced.

Mr. Bannister supports the proposed housing expansion project as he believes that the inmates deserve humane living conditions and a better quality of life. Although he supports the proposed project, he stated that it should only be viewed as a temporary solution. He strongly believes that additional efforts are needed to prevent people from entering into the system as well as helping inmates transition out of the system—efforts that he believes will prevent the continued increase in the number of inmates. While he lends his support for this project, he emphasized that expansion of incarceration facilities at some point needs to stop.

## SUMMARY OF PRIOR RELEVANT INTERVIEWS

Between 2017 and 2018, ASM Affiliates completed two Cultural Impact Assessment studies, one for the Wailuku River (Tam Sing et al. 2017) located to the north of the study area and one for Building-A on the Hilo Intermediate School campus (Brandt and Rechtman 2018) located to the east of the study area. Twenty individuals participated in the consultation process, with three conducted for the Brandt and Rechtman (2018) study and seventeen for the Tam Sing et al. (2017) study. Although each study has topical differences, several key themes emerged from both studies, particularly the significance of the area's network of ditches and their connection to Wailuku River. Tam Sing et al.'s study of Wailuku contends that the river qualifies for inclusion on the National Register as a traditional cultural property, stating that:

> … Wailuku River as a whole should be considered a traditional cultural property as it is associated with traditional *moʻolelo* linked with various Hawaiian *akua* (deities), *kupua* (cultura heroes), and *moʻo* (guardians of fresh water sources). The Wailuku is arguably one of the most storied water courses on Hawaiʻi Island and more importantly these *moʻolelo* are the major contributing element that make the Wailuku a culturally significant place. Collectively, these *moʻolelo* enhance our understanding of traditional practices like *kapa* making, kite flying, and cordage making and of their association with Wailuku and the greater Hilo area. Some of these *moʻolelo*, especially those associated with *moʻo* culture (i.e. the *moʻolelo* of Moʻo Kuna and Hiʻiakaikapoliopele) are foundational cultural beliefs associated with the river. (Tam Sing et al. 2017:68)

Not only is this river a storied one, but Cheyenne Perry "stressed that Wailuku must be viewed not as an isolated river, but one that is intimately connected to the neighboring lands of Piʻihonua, Puʻuʻeo, Humuʻula, and Mauna Kea,

and therefore is an important component of our island's ecosystems" (Tam Sing et al. 2017:69). In Brandt and Rechtman's (2018) study, the Piʻihonua Ditch (SIHP Site 21228), which is connected to Wailuku River was identified as a valued historical resource. This ditch passes along the northeast corner of the subject parcel and runs under the Church of God parking lot where it joins with SIHP 20848 ditch. The ditch then runs parallel to Waiānuenue Avenue for a short distance before it turns southeast and bisects TMK: [3] 2-3-023:006. From here the ditch passes under Hālaʻi Street and meanders eastward along the front of the Hilo Intermediate School campus and passes under Laimana Street. From here the ditch crosses under Waiānuenue Avenue and extends along the back side of Hilo High School's New Gymnasium where it empties into Waikapu River, a branch of the Wailuku. As recommended in the Brandt and Rechtman (2017) study, complete avoidance or extreme caution should be taken when working near this ditch to prevent adversely impacting this site, both physically and ecologically. Brandt and Rechtman (ibid.:61) state that "[i]f avoidance is not possible, then efforts should be made to limit the impacts and preserve an unobstructed water flow." Additionally, students from Hilo Intermediate School sometimes utilize the stream as part of their science curriculum (ibid.), therefore maintaining clean and natural waterflow is vital to users located downstream of the subject parcel.

In considering the impacts of the current criminal justice system on Native Hawaiians, statistical information has and continues to be collected by the various State departments and agencies including the Office of Hawaiian Affairs (OHA). As such, the data has substantiated years of anecdotal evidence showing the alarming rates at which Native Hawaiians are disproportionately represented in every stage of the criminal justice system. Several key reports have explored the data in more detail and has resulted in the publication of two major reports, including *The Disparate Treatment of Native Hawaiians in the Criminal Justice System* (OHA 2010). Following the publication of OHA's (2010) report, Act 170 was passed, which led to the statutory creation of the Native Hawaiian Justice Task Force. The task force published their recommendations in a 32-page report titled *The Native Hawaiian Justice Task Force Report* (2012). Serving as Chair of this task force was Michael Broderick and task force member Dr. Keahiolalo, both of whom were interviewed by ASM Affiliates staff for the Oʻahu Community Correctional Center proposed repair/replacement project (Gotay et al. 2018). While typical Cultural Impact Assessments emphasizes site-specific impacts, the inherent nature of the proposed housing expansion project carries more than site-specific impacts. Distinguishing between social and cultural impacts is a difficult proposition at best, as many of the identified social impacts apply specifically to Native Hawaiians; thus, transforming them into sociocultural impacts.

Gotay et al's (2018) report covered subjects relevant to this study, specifically the issue of overcrowding, and more importantly the overrepresentation of Native Hawaiians in State run jail facilities including the Community Correctional Centers. Dr. RaeDeen Keahiolalo, an expert in Hawaiʻi prison politics was consulted on this matter and she "related the idea of reducing recidivism to the ongoing rhetoric about the lack of space for inmates" (ibid.:88). Dr. Keahiolalo added that:

> …space limitations can be reduced by placing community and low-custody level inmates on supervision rather than imprisonment, utilizing rehabilitative programs such as work furlough, drug treatment, probation, or electronic monitoring. Dr. Keahiolalo related that these types of supervision are proven to result in lower rates of recidivism and higher rates of rehabilitation. (ibid.)

In describing the impacts of Hawaiʻi's carceral system on Native Hawaiians, Dr. Keahiolalo stated "that the cycle of imprisonment of *Kanaka Maoli* has been proven for over two-hundred years" (ibid.:89). She further remarked:

> …ethnic disparities are socially accepted and that although there is an array of rehabilitative services for Native Hawaiians in nearly every sector, the statistics do not reflect any improvement in the socioeconomic status of Native Hawaiians…our policies perpetuate social, cultural, economic, and political disparities… the issue is not just about an individual, or an individual's family, rather it's about communities and the impacts that are felt by communities. As Hawaiians make up the largest proportion of Hawaiʻi's inmate population, they are the most adversely impacted.

Additionally, a second interview was conducted with former family court judge, Michael Broderick. He stressed that "Native Hawaiians have been and continue to be, disproportionately represented in Hawaiʻi's criminal justice system, and therefore any new jail facility *will* have an impact on Native Hawaiians" (ibid.:89). He stressed that *how* Native Hawaiians will be impacted is the fundamental question. The Native Hawaiian Justice Task Force (2012:7) reported that "Native Hawaiian are overrepresented in every stage in the criminal justice system, and the disproportionality increases as Native Hawaiians go further into the system, also making it harder to leave and stay out of prison." While expanding the current housing facilities may immediately relieve inmate overcrowding, both Mr. Broaderick and Dr. Keahiolalo emphasized the importance of finding ways to reduce the overall jail population, which include but are not limited to reforming the bail and pretrial systems—a step that Mr. Broderick believes "should

not be overlooked. (ibid.). The current bail and pretrial system has resulted in the detainment of low-security level inmates, which currently make up a sizable portion of the inmate population.

# 4. IDENTIFICATION AND MITIGATION OF POTENTIAL CULTURAL IMPACTS

The OEQC guidelines identify several possible types of cultural practices and beliefs that are subject to assessment. These include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs. The guidelines also identify the types of potential cultural resources, associated with cultural practices and beliefs that are subject to assessment. Essentially these are natural features of the landscape and historic sites, including traditional cultural properties. In the Hawai‘i Revised Statutes–Chapter 6E a definition of traditional cultural property is provided.

> "Traditional cultural property" means any historic property associated with the traditional practices and beliefs of an ethnic community or members of that community for more than fifty years. These traditions shall be founded in an ethnic community's history and contribute to maintaining the ethnic community's cultural identity. Traditional associations are those demonstrating a continuity of practice or belief until present or those documented in historical source materials, or both.

The origin of the concept of traditional cultural property is found in National Register Bulletin 38 published by the U.S. Department of Interior-National Park Service. "Traditional" as it is used, implies a time depth of at least 50 years, and a generalized mode of transmission of information from one generation to the next, either orally or by act. "Cultural" refers to the beliefs, practices, lifeways, and social institutions of a given community. The use of the term "Property" defines this category of resource as an identifiable place. Traditional cultural properties are not intangible, they must have some kind of boundary; and are subject to the same kind of evaluation as any other historic resource, with one very important exception. By definition, the significance of traditional cultural properties should be determined by the community that values them.

It is however with the definition of "Property" wherein there lies an inherent contradiction, and corresponding difficulty in the process of identification and evaluation of potential Hawaiian traditional cultural properties, because it is precisely the concept of boundaries that runs counter to the traditional Hawaiian belief system. The sacredness of a particular landscape feature is often cosmologically tied to the rest of the landscape as well as to other features on it. To limit a property to a specifically defined area may actually partition it from what makes it significant in the first place. However offensive the concept of boundaries may be, it is nonetheless the regulatory benchmark for defining and assessing traditional cultural properties. As the OEQC guidelines do not contain criteria for assessing the significance for traditional cultural properties, this study will adopt the state criteria for evaluating the significance of historic properties, of which traditional cultural properties are a subset. To be significant the potential historic property or traditional cultural property must possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

a Be associated with events that have made an important contribution to the broad patterns of our history;

b Be associated with the lives of persons important in our past;

c Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;

d Have yielded, or is likely to yield, information important for research on prehistory or history;

e Have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group's history and cultural identity.

While it is the practice of the DLNR-SHPD to consider most historic properties significant under Criterion d at a minimum, it is clear that traditional cultural properties by definition would also be significant under Criterion e. A further analytical framework for addressing the preservation and protection of customary and traditional native practices specific to Hawaiian communities resulted from the *Ka Pa‘akai O Ka ‘Āina* v Land Use Commission court case. The court decision established a three-part process relative to evaluating such potential impacts: first, to identify whether any valued cultural, historical, or natural resources are present; and identify the extent to which any traditional

and customary native Hawaiian rights are exercised; second, to identify the extent to which those resources and rights will be affected or impaired; and third, specify any mitigative actions to be taken to reasonably protect native Hawaiian rights if they are found to exist.

A review of the culture-historical background material reveals that the history of Pi‘ihonua Ahupua‘a is commemorated in many traditional Hawaiian legendary accounts. While the majority of the accounts for this *ahupua‘a* are centered on the infamous Wailuku River, the area often referred to as the Hilo Hills (located to the southand southwest of the current study area) also figures prominently in the area’s history. Through these accounts, we learn of the river’s association with various *akua* (deities) including Hi‘iaka, Kāne, Kanaloa, Kū, and Hina, and how the Hilo hills were home to Hina’s two daughters Hinakulu‘ua and Hinakeahi. The legendary accounts also relate this river to several *kupua* (culture heroes) such as Māui and Kana as well as other historical figures like the Pā‘ao, Uweuwelekehau, Halemano, Kamalālawalu, Kamehameha, Namakeha, and Kawau. This amassing of timeless stories represents an untold amount of generations of Native Hawaiians each adding a complex layer to the local history. These narratives are powerful in that they form an unbroken continuum that links the present generation to the distant past, all while conveying age-old knowledge and wisdom of this *ahupua‘a* and the study area vicinity. Also, from these accounts, we learn of the various cultural sites located within this *ahupua‘a* as well as the many *ali‘i* that have carried out traditional ceremonies and practices such as that of the sacrificing of chief Namakeha at Kaipalaoa and that of Kamehameha lifting the massive Naha stone. Although the landscape within the *makai* portion of Pi‘ihonua has been significantly transformed, the traditional accounts help in the reconstruction of the area’s distant history.

A reflection on the early Historical accounts for Pi‘ihonua sheds light on the impacts of western influence and the transformation of Pi‘ihonua into a port town with a growing Christian congregation. By the mid-19$^{th}$ century, Pi‘ihonua was claimed as the personal lands (Crown Lands) of the reigning monarch, Kauikeaouli and deeds to specific parcels within the boundaries of this *ahupua‘a* were executed at his discretion. By the turn of the 20$^{th}$ century, Hawai‘i’s last reigning monarch, Queen Lili‘uokalani was overthrown thereby sending the Hawaiian nation into turmoil. The overthrow also affected the status of Crown Lands by administering them as Government lands, which were later divided and sold as government grants. This move caused exponential growth in the commercial sugar industry and later paved the way for the creation of the Pi‘ihonua House Lots; the community that now surrounds most of the current study area.

Throughout the late 19$^{th}$ and early 20$^{th}$ century, Hilo town continued to experience economic growth and had become a popular desination for visitors, many of whom took delight to the wonders of the island’s active volcanoes. By the late 19$^{th}$ century, the original Hilo Jail, located on the corner of present-day Ponahawai and Kino‘ole Street had falled into disrepair and could no longer accommodate the influx of inmates. Discussions to relocate the facility spanned many years, until in 1919 government officials finally settled on relocating the jail to its current location. By 1920, the Hilo Jail had been built by a prolific American architect Oliver G. Traphagen (Mason Architects, Inc. 2018) and was first mapped by A.S. Chaney. By 1975, HCCC was established and since this time continues to serve as the main jail facility for the entire Hawai‘i County, serving both east and west Hawai‘i.

A review of the previous studies conducted within the subject parcel has identified the presence of three Historic properties: two historic ditches SIHP Site 50-10-35-20848 first recorded by Walker et al. (1997) and again by Wolforth (1999) and Escott (2017); and SIHP Site 50-10-35-21228 described as the Pi‘ihonua Ditch recorded by Wolforth (1999), Barna and Rechtman (2015), and Escott (2017). Additionally, the old Hilo Jail building SIHP Site 50-10-35-7457 was also identified as a historic property.

The two ditch sites (Sites 20848 and 21288) were determined significant under Criterion d and subject to data recovery (Wolforth 1999). However, a subsequent cultural study in the area (Brandt and Rechtman 2018) attached cultural significance (Criterion e) to the Pi‘ihonua Ditch (Site 21288) and it is the present authors’ contention that there will be no cultural impacts to this site from the proposed project as long as the water flow is not impeded.

The old Hilo Jail Building is significant under Criteria a, c, and d and the State Historic Preservation Division requested a Short Form Historic American Building Survey (HABS) as a mitigation commitment for the demolition of the Old Hilo Jail (Log No. 2017.02563; Doc. No. 1801KN05), which was completed by Mason Architects. Inc. (2018), thus impact to the resource from the current proposed project has been formally mitigated.

As a result of the consultation process, there were no specific traditional cultural places and associated practices identified to exist or have taken place within the subject parcel. While no specific cultural practices were identified, the site visit and consultation efforts resulted in the identification of a *la‘amia* tree, a historically introduced plant whose fruits are used in creating traditional Hawaiian musical instruments and containers (Krauss 1993). The existence and known uses of this tree were also described by Mr. Robert Yamashita and current HCCC Warden, Mr. Peter Cabreros. Although Mr. Cabreros explained that he has not received any request from the public to gather the fruits

of this plant, he was aware of its cultural uses, particularly *hula* and advocated for its protection. The known uses of this plant are described in Hawaiian ethnobotanical literature. The fruits of the tree were dried, and the interior pulp and seeds removed. Once dried, the round gourds could be made into containers (Bishop Museum 2018) or musical instruments specifically the *ʻulīʻulī* (feathered gourd rattle) and the lesser known *ʻūlili* (spinning gourd rattle), both of which were used by *hula* dancers (Krauss 1993). Although not considered rare or endangered, this historically introduced tree is not widely distributed thereby making each living plant a valuable resource that can lend to the perpetuation of traditional Hawaiian crafts. An article published by Nina Wu in the *Star Advertiser* in 2011 described recent efforts to revive the nearly forgotten art of crafting both the *ʻulīʻulī* and *ʻūlili*. At the recommendation of Mr. Cabreros and in light of recent efforts to revive traditional Hawaiian arts that utilized the fruit of the *laʻamia* tree, we recommend that this tree be preserved in place. Given the distance of the tree to the proposed project location, we, at present do not anticipate any ground-disturbing activities near the tree that could result in an adverse effect. However, if any ground-disturbing activities do occur in the vicinity of the *laʻamia* tree, we strongly advise that temporary fencing be placed around the tree thereby creating a buffer to prevent adversely impacting the tree.

In addition to the identification of the *laʻamia* tree, the interview with Kamuela Bannister resulted in the discussion of two historic ditches on the property (SIHP Site 50-10-35-20848 and 21228). Mr. Bannister would like to ensure that construction near these sites do not adversely impact the integrity of these sites, specifically Site 21228, which is located near the proposed facility location. It is the authors recommendation that a reasonable distance be maintained when working around the ditch to reduce the potential of adversely impacting this site.

In considering the possibility of expanding the housing facility at HCCC, Carter Goble Associates (2003) stated that such action would result in continued conflict with the surrounding residential neighborhood, schools, and churches that now surround the HCCC facility. In light of this conflict, Carter Goble proposed two alternatives:

> The facility should be relocated to a larger site where land use and development conflicts will not be an issue. The satellite location of the Hale Nani Work Furlough Center outside of Hilo may be feasible, but would need to be confirmed by detailed site and design studies. Also, if in the long-range a 2nd Hawaii facility in the Kona area was constructed then the future growth needs in the Hilo location would be reduced, which may make the Hale Nani site feasible in size for the main complex.

While the proposed alternative described above favor expansion and relocation to more remote areas away from populated centers, this undertaking would be a significant cost but may provide a long-term solution to address the issue of overcrowding. Another issue to be considered is if the facility is relocated to the Hale Nani site, PSD would need to account for the additional cost of transportation services for inmates to any necessary court or rehabilitative facilities, most of which are located in Hilo town proper.

The findings from Gotay et al.'s (2018:99) study suggest that expanding the current housing facility at HCCC or at any of the CCC's will impact Native Hawaiians, however "the ways in which this proposed project is implemented will ultimately determine whether the subject ethnic group will be adversely or positively impacted." While the simplest and most cost-effective solution would be to expand the inmate housing facilities, it is at best, a short-term and temporary solution to a much more complex problem. This sentiment was also echoed in the interview with Kamuela Bannister. The issue of overcrowing has been an enigma since at least the turn of the 19th century and although many years have lapsed, the issue has yet to be resolved. The trend and issues concerning the construction of larger capacity jail facilities is well documented for the Hawai'i County Jail and it has yet to alleviate the long-standing issue of inmate overcrowding. It is the authors contention that while the proposed project will temporarily alleviate inmate overcrowing, we strongly urge PSD to continue to strengthen their inmate services and where necessary garner additional support from other state and private agencies to reform the pretrial system and enhance the transitional services for current inmates—recommendations that will help reduce the overall number of inmates in Hawai'i's jails.

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# APPENDIX A
# *KA WAI OLA* PUBLIC NOTICE

**CULTURAL IMPACT ASSESSMENT - PI'IHONUA AHUPUA'A, SOUTH HILO, ISLAND OF HAWAI'I**

ASM Affiliates is preparing a Cultural Impact Assessment (CIA) in advance of the proposed Hawai'i Community Correctional Center (HCCC) Housing Expansion, State of Hawai'i Department of Public Safety (PSD), Island of Hawai'i. The current HCCC facility is located on TMK: [3] 2-3-025:005 in Pi'ihonua Ahupua'a, South Hilo, Island of Hawai'i.

We are seeking consultation with any community members that might have knowledge of traditional cultural uses of the proposed project area; or who are involved in any ongoing cultural practices that may be occurring on or in the general vicinity of the subject properties, which may be impacted by the proposed project. If you have and can share any such information please contact Bob Rechtman brechtman@asmaffiliates.com, or Lokelani Brandt lbrandt@asmaffiliates.com, phone (808) 969-6066, mailing address ASM Affiliates 507A E. Lanikāula Street, Hilo, HI 96720.

# APPENDIX F:
# HCCC Secure Housing Project
# Schematic Design Report



# Hawaii Community Correctional Center

PUBLIC SAFETY DEPARTMENT HAWAII CORRECTIONS

DLR Group

# Current Existing Conditions















PUBLIC SAFETY DEPARTMENT HAWAII CORRECTIONS

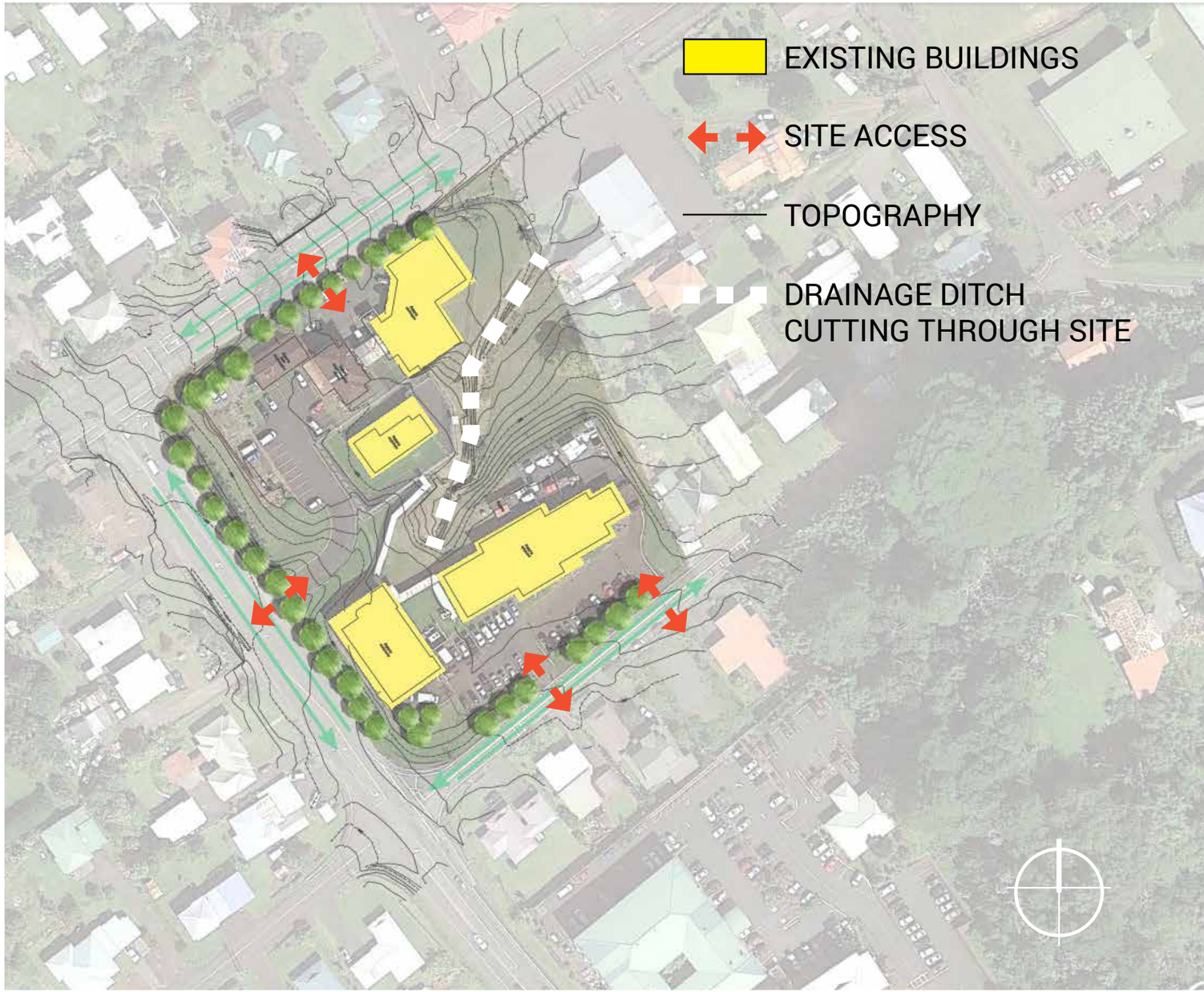
DLR Group

# Site Internal Influences

The initial construction project will include the secure housing of three 32 bed units and one 48 bed unit along with their support spaces. These are shown in phase 1. The master plan looks to add three more 32 bed units to be able to provide over 250 beds to alleviate the overcrowding that currently exists. The designs included in this report are schematic floor plans to confirm that adjacencies are adequate between departments and that the circulation of inmates and staff are controlled as required. Rooms are shown to match the areas of the programs and provide overall building areas and quantities to provide estimated costs.

Ongoing design will progress with the selected schematic design to determine systems for mechanical, plumbing, and electrical components are integrated into design. The interior building design will progress to determine appropriate functionality and security throughout the secure housing. Exterior enclosures will develop to ensure the materials and systems are fully designed to protect the building from the climate and ensures a secure perimeter is constructed.

For the Hawaii site, the annual average air temperature is 71.93 degrees with an annual average wind speed of 2.56 mph coming from a mean direction of E of N 216.4-degrees. The annual total rainfall is 129.19-inches. The warmest month is August with the driest month happing just before with 6.2-inches of rain in June. The coldest month is February with the wettest month occurring in April with 15.26-inches of rain. These climatic cues allow the design to respond by placing the highest internal gains in the North facing positions while avoiding placing occupants high in spaces avoiding stratification that occurs. To deal with the stratification utilizing tall spaces in the dayrooms and adding ceiling fans will provide comfort. The design will allow for open plan giving more space to occupants and provide semi-outdoor spaces for day time occupation. The viewing garden gives an opportunity to provide ground level vegetation to reduce ground reflectance providing cooler ground temperatures. The climate of Hawaii dictates using low mass construction with high levels of insulation due to the amount of air conditioning required to provide comfort to occupants during the hottest times in the year. Ventilation is utilized through the design with East and West facing windows that are wider than tall with shading being provided with roof overhang. Prevailing wind comes from the West, but large solar exposure will inhibit utilizing those winds.



# Codes & Standards

The following codes are applicable to this project:

2012 International Building Code (IBC) with Hawaii Amendments
2012 International Mechanical Code (IMC)
2006 Uniform Plumbing Code (UPC)
2012 National Fire Protection Association (NFPA) Fire Code
2012 International Fuel Gas Code (IFGC)
2008 National Electrical Code (NEC)
2015 International Energy Conservation Code (IECC) with Hawaii Amendments
2012 National Fire Protection Association (NFPA) Fire Code

Publications from the following standards organizations will be used as design guidelines for the project:

ASHRAE 62-1999 Ventilation for Acceptable Indoor Air Quality
ANSI/ASHRAE 55-1992 Thermal Environmental Conditions for Human Occupancy
Illuminating Engineering Society of North America (IES)
Building Industry Consulting Service International (BICSI)
National Electrical Manufacturer's Association (NEMA)
Electrical Industries Alliance (EIA)
Telecommunications Industry Association (TIA)
Americans with Disabilities Act and Architectural Guidelines (ADAAG).

The construction of the jail building is driven by the security and operations within the building. The square footage of the 32 bed unit is approximately 5,200 sf and the 48 bed unit is approximately 7,600 sf. The prototype includes inmate housing, medical facilities, and building services.

Through the Goal and Visioning meeting the Goals of Staff, Community, and Longevity emerged as principles that drive the decision making process for the project. To achieve these goals providing safety and security, efficiency, and sustainability.

Safety in a jail facility comes in many levels. Staff occupy the building daily and need to feel safe always. Dealing with volatile and complicated situation puts employees in substantial risky situations. The safety of the staff will come through measures such as increasing security in operations, clear lines of sight, providing state of the art security systems and procedures, clearly identify staff areas, creating personal space, increasing natural daylight, and creating a secure perimeter.



The community working and living around the facilities will feel safe and see it as a community resource. By creating a secure environment in and around the jail, it would be an unlikely place for unwanted people to loiter. Additionally, by creating a secure environment inside the jail, inmates will have the ability to feel controlled and secure without the threat from unwanted interactions with other inmates. Modern security measures and operations allow more control and direct supervision by the officers. Normative and calming physical environments assist in the rehabilitation of inmates. In improving and providing adequate space for housing ensures people will have their own personal space and alleviate issues of overcrowding and unsanitary conditions.

In providing a prototype will lead to efficiency in the buildings in terms of materials, systems, organization, and construction. The prototype design provides operational efficiency in corrections staffing and operational procedures for the security of inmates. Systems and material selected are chosen to positively affect the long-term durability of the building. Efficiencies in staffing are not typically associated with the cost of the project, they directly



affect the building cost and impact to the islands of Hawaii. Through organization and space adjacencies, the operations will more efficiently utilize staff on each shift. Response time to events throughout the facilities is minimized by bringing inmate areas close together with clear lines of sight for the direct supervisor. The design will also allow for future growth and changes that will occur. The prototype provides the ability to expand on the same site should size projections develop as anticipated. As inmate groups change in character, the inmate areas shall accommodate new population combinations with the use of the mini dorm and cell housing layouts. The materials being proposed will provide long-term durability in an abusive and heavy use environment from the activities it houses. Flexibility in technologies that are ever advancing or being innovated must be accommodated into the buildings through simple pathways.

The construction of the secure housing is driven by the security and operations within the building and program. The square footage of the secure housing is approximately 23,200 SF containing 144 beds at HCCC and 128 at KCCC. The secure housing encompasses inmate housing, inmate programs, health and interview services and building services. The secure perimeter construction is reinforced CMU with outboard exterior continuous extruded polystyrene insulation in conjunction with a fiber cement board panel rainscreen to protect the exterior wall. The exterior continuous extruded polystyrene insulation will meet the current energy codes. Rainscreen systems can use many combinations of exterior materials including but not limited to wood, metal panels, fiber cement boards and masonry. Selection of materials will complement the residential/commercial neighborhood around the facility while emphasizing the civic presence of the institution.

Roof planes in the facility vary over distinct functions with the main shed roof extending over the secure housing portion and giving the buildings it's character. The program areas that support the secure housing will have a flat membrane roof which will provide opportunities for HVAC equipment and roof penetrations required for these departments.

Windows throughout the jail are limited to prevent vision of inmate activities and inmates communicating to the outside. Natural daylighting throughout the

housing dayrooms are provided in clear triple pane skylights, secure glazing between the viewing garden and housing, and laminated glass between outdoor recreation and the housing. Unobstructed vision of the sky is provided without diffusion of light to allow the visual benefits of the movement of the sun throughout the day. The connection to the viewing garden will allow inmates to see a natural landscape and daylighting without being able to communicate to the outside community around the buildings. Interior construction



is predominately a wall construction of concrete masonry units (CMU) and steel stud framed construction with security mesh behind dry wall above. Fully grouted CMU is provided up to 10'-0" from finished floor to provide durability and security in inmate accessible areas. Six-inch wide steel stud framing is provided on top of the CMU and up to the exposed roof deck with sprayed on acoustical treatment. A layer of woven wire security mesh on the side of the wall accessible to inmates is covered with one layer of gypsum wall board (GWB) on both sides of the wall. The mesh provides a security deterrent in the event an inmate gains access to the wall. Stud walls will be insulated where required for sound privacy or noise control. This construction is provided as a cost-effective solution limiting the structural weight of a full height CMU wall and the complicated detailing around structure and mechanical systems required to pass through the walls. By using a GWB system, holes and gaps may be securely patched and filled around complex shapes.

The main housing units with 32 beds will consist of 4 mini dorms or 16 cell units that can be mixed or matched depending on the need of the sites and for the 48 bed housing unit will consist of 6 mini dorms or 24 cell units. The cells are stacked in two tiers with a mezzanine accessed by a single or in the case of cells a double run metal stair with a minimum of 60-inch width clearance. Railings are provided at a minimum of 60-inch high along all open sides of the mezzanine to protect people from being thrown over the railing. The cells are metal wall construction which provides the most efficient building footprint by limiting



the wall thickness to 2-inches thick. Metal wall panels are fully grouted with concrete to provide a quality sound barrier between cells. Area of each cell is based on American Correctional Association standards. Each cell will be provided with bunks, a small desk and two stools welded to the metal wall panels, and a combination toilet/sin unit. Swing doors to most cells will be provided with vision glazing and leading-edge food pass cuffport. Some single cells can be provided with slider doors for added control of inmates by officers. Security grade door silencers are provided along the door frames to mitigate the loud door closing. Each cell is negatively pressured to meet codes for occupancy with a toilet unit within the room. Security grade light fixtures are provided as noted in the electrical narrative to provide cell lighting and night lighting. Natural daylighting is borrowed light from the dayroom skylights and glazing. The mini dorms are stacked in two tiers with a short mezzanine that extends from the single metal stair that connects the two dorm housing units. Along with the cells the walls will also be a metal wall construction that are fully grouted with concrete. Each dorm unit will consist of 4 double bunk beds. The area of each mini dorm is based on American Correctional Association standards. Each dorm will be provided with bunks, a welded round table with chairs, two sinks, and two toilets. The swing doors to the dorms will be provided with vision glazing and leading-edge pass cuffport. Silencers will be added to door frames along with negative pressured to the dorm. Light fixtures will be similar to cell security lighting and will borrow natural daylight from the dayroom through security glazing along the dorm wall.



Open dayrooms provide tables and areas for inmate activities such as dining, passive recreation, video visiting, viewing garden observation, and showers. The clear height 26-feet at the highest point and 16-feet at the lowest point in the dayroom allow the area to have exposed ceiling structure, skylights, and commercial grade light fixtures in lieu of security grade as they are out of reach of inmates. Light fixtures are on daylight sensors to dim or turn off as possible during high daylit hours.

One exterior recreation yard will be provided and enclosed on all sides with solid security wall construction. The yards are open are open to the sky with security mesh covering for natural daylighting and fresh air for required

exercise periods.

Interior materials throughout the secure housing program spaces and housing areas are durable and anti-microbial wherever possible. Anti-microbial products prevent the ongoing spread of infections and illness through facilities such as secure housing by deterring growth of the bacteria where people will touch and spread them. Flooring materials are durable. Dayrooms and cells shall be exposed concrete floors with either a polished or honed finished or a durable security grade floor paint. Shower areas will have a continuous or seamless flooring system that prevents mildew from forming within cracks and joints with a textured, slip resistant surface. CMU, metal wall panels, and GWB walls shall be painted. Ceilings in cells will be security ceiling systems manufactured as part of the metal cell construction and painted to match. Ceiling panels may be perforated with insulation backing to provide additional acoustic control within cells. The multi-purpose, office and interview/medical offices will have linoleum flooring and dropped ceilings such as moisture resistant acoustic ceiling tiles (ACT) may be provided in medical areas and offices to provide cleanable surface. Corridors and mechanical rooms will typically be exposed to structure.

All areas within the secure perimeter shall be classified as 1-3 occupancy. The jail support and housing areas of the facility will be Type II-B construction which is non-combustible. The entire building will be provided with automatic sprinkler system to meet code requirements. Fire separation of programmatic areas to create smoke compartments and allowable building areas may require fire construction or expansion joints.



Permanent millwork will use durable materials such as solid surface counters and plastic laminate. Rooms with casework will use standard unit sizes with minimal customization.

# HCCC Programming

(3) 32 Beds & (1) 48 Beds - HCCC & KCCC

| Housing Pod | Spaces | SF/ Space | Total NSF | Notes |
|---|---|---|---|---|
| Beds | 96.0 | 59 | 5,664 | Includes space for 8 person mini dorms or 4 double |
| Mini Dorm | - | - | - | with 2 toilets, 2 sinks, 8 bunks, tables for 4-8. |
| Double Cell | - | - | - | with 1 toilet, 1 sink, 2 bunks, desk |
| Shower | 12.0 | 50 | 600 | Shower, drying area, privacy screen, 1 ADA |
| Dayroom | 96.0 | 46 | 4,416 | *will probably be larger due to geometry* |
| Recreation Yard | 96.0 | 25 | 2,400 | *Space TBD based on geometry (minimum 750)* |
| Staff Station | 3.0 | 80 | 240 | open in dayroom |
| Janitor Closet | 3.0 | 35 | 105 | Floor sink, janitorial supplies |
| Viewing Garden | 3.0 | 439 | 1,317 | Open air natural viewing garden |
| Stairs | 6.0 | 128 | 768 | |
| Storage | 3.0 | 27 | 81 | |
| Vestibule | 3.0 | 62 | 186 | connects housing units |
| | | Subtotal | 15,777 | |
| | | Grossing | 1.45 | |
| | | **Total DGSF** | **22,877** | |

| Housing Support | Spaces/ Pod | SF/ Space | Total NSF | Notes |
|---|---|---|---|---|
| Medical Assessment/ Interview | 3.0 | 127 | 381 | Medical and mental health assessment/ Camera'd small private meeting room |
| Multi-Purpose Room | 0.8 | 750 | 563 | 25 inmates and 2 staff |
| Office | 3.0 | 122 | 366 | |
| Storage | 3.0 | 108 | 324 | |
| Circulation | 3.0 | 204 | 612 | |
| staff toilet | 3.0 | 70 | 210 | |
| | | Subtotal | 2,456 | |
| | | Grossing | 1.25 | |
| | | **Sub Total DGSF** | **3,069** | |
| | | **Total DGSF** | **25,946** | |

48 Beds

| Housing Pod | Spaces | SF/ Space | Total NSF | Notes |
|---|---|---|---|---|
| Beds | 48.0 | 40 | 1,920 | Includes space for 8 person mini dorms or 4 |
| Mini Dorm | - | - | - | with 2 toilets, 2 sinks, 8 bunks, tables for 4- |
| Double Cell | - | - | - | with 1 toilet, 1 sink, 2 bunks, desk |
| Shower | 4.0 | 50 | 200 | Shower, drying area, privacy screen, 1 ADA |
| Dayroom | 48.0 | 49 | 2,352 | *will probably be larger due to geometry* |
| Recreation Yard | 48.0 | 25 | 1,067 | *Space TBD based on geometry (minimum 750)* |
| Staff Station | 1.0 | 80 | 80 | open in dayroom |
| Janitor Closet | 1.0 | 35 | 35 | Floor sink, janitorial supplies |
| Viewing Garden | 1.0 | 516 | 516 | |
| | | | | |
| | | | | |
| | | | | opens to dayroom |
| | | Subtotal | 6,170 | |
| | | Grossing | 1.45 | |
| | | **Total DGSF** | **8,947** | |

| Housing Support | Spaces/ Pod | SF/ Space | Total NSF | Notes |
|---|---|---|---|---|
| Medical Assessment/ interview | 1.0 | 127 | 127 | Medical and mental health assessment |
| Multi-Purpose Room | 0.5 | 810 | 405 | 25 inmates and 2 staff |
| Office | 1.0 | 122 | 122 | |
| Storage | 1.0 | 108 | 108 | |
| Circulation | 1.0 | 203 | 203 | |
| Staff toilet | 0.5 | 70 | 35 | Camera'd small private meeting room |
| | | Subtotal | 1,000 | |
| | | Grossing | 1.25 | |
| | | **Sub total DGSF** | **1,250** | |
| | | **Total DGSF** | **10,197** | |

Total Housing SF = 36,143

For efficiency the secure housing is derived from a prototype that will be applied on each site. In order to get a maximum amount of beds without increasing the capacity of the secure housing, 144 beds are proposed with three 32 bed modules and one 48 bed module. The modules incorporate a viewing garden, which creates a therapeutic visual connection to nature for the inmates, while simultaneously limiting visual access to the public. The secure housing areas incorporate support spaces like the assessment/ medication room, interview room, two offices for mental health counseling, and two program rooms. The allocation of space for the dayroom and outdoor recreational areas are based on the American Correctional Association (ACA) standards.

# Housing Unit Prototypes

# FINAL HOUSING FLOOR PLANS



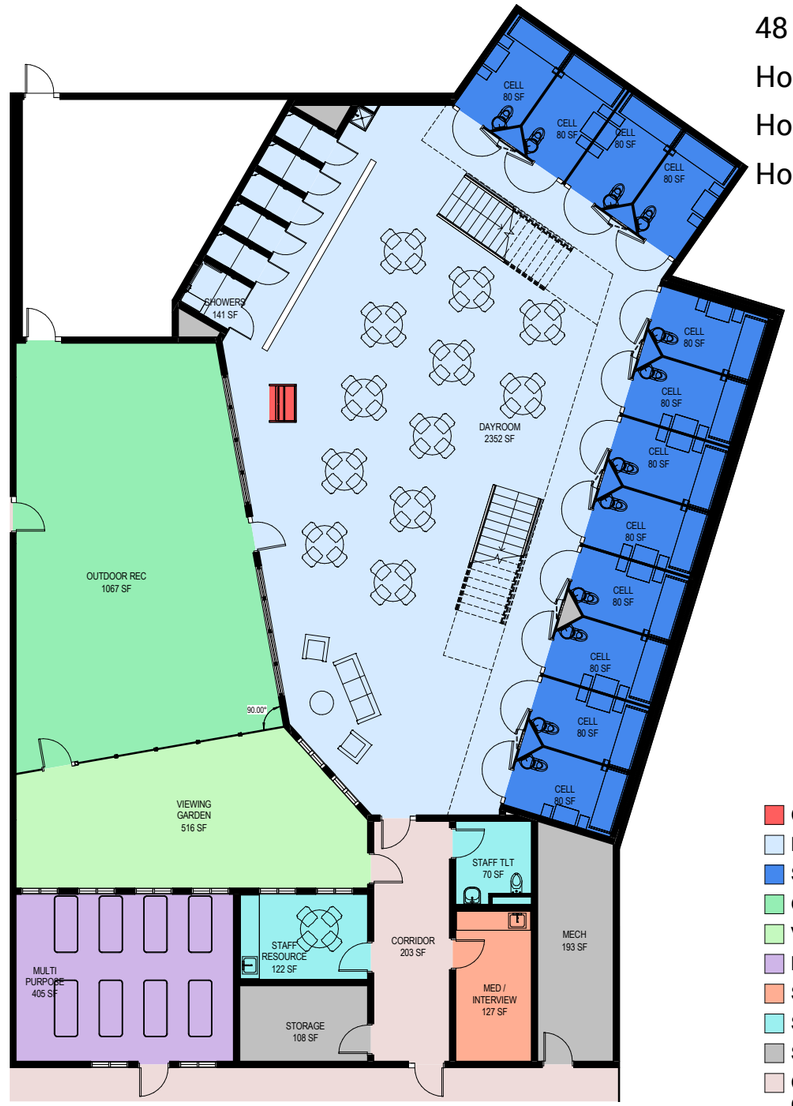

32 BED

Housing pod: 7,598 SF

Housing support: 1,164 SF

Housing total: 8,762 SF

32-BED FLOOR PLAN




48 BED

Housing pod: 8,947 SF

Housing support: 1,250 SF

Housing total: 10,197 SF

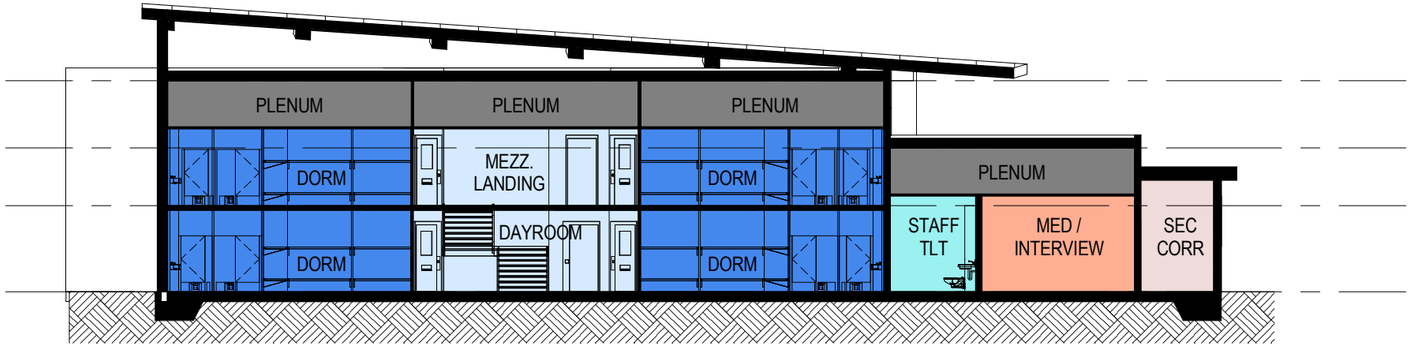
48-BED FLOOR PLAN

- CONTROL
- DAYROOM
- SLEEPING
- OUTDOOR REC
- VIEWING GARDEN
- LARGE MULTI PURPOSE
- SMALL MULTI PURPOSE
- STAFF
- SUPPORT
- CONTROLLED CIRCULATION

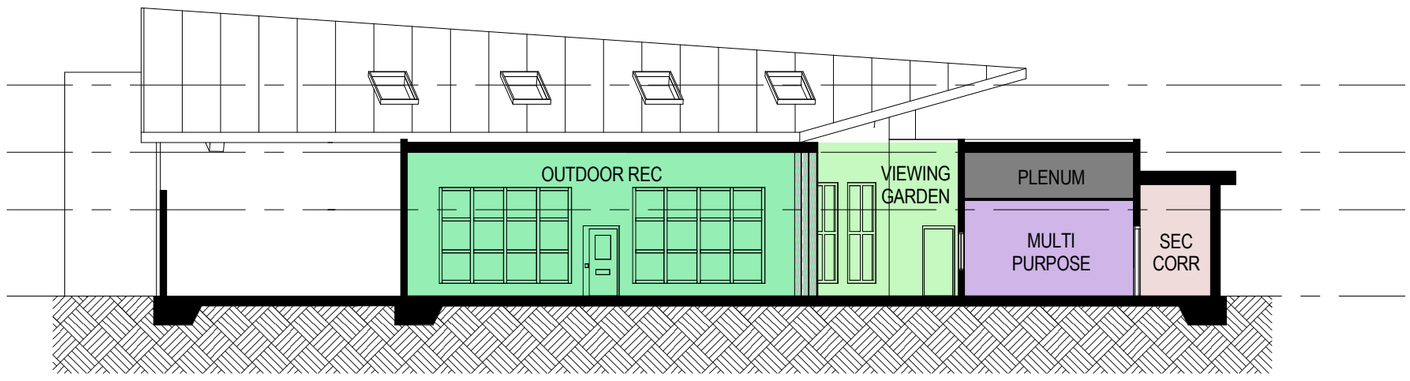
PUBLIC SAFETY DEPARTMENT HAWAII CORRECTIONS

DLR Group

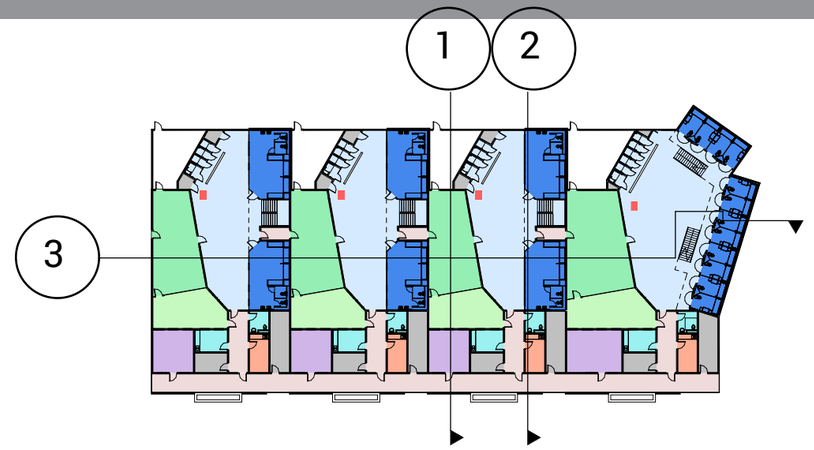
# HCCC | SITE SECTIONS




1 HCCC CROSS SECTION - 1

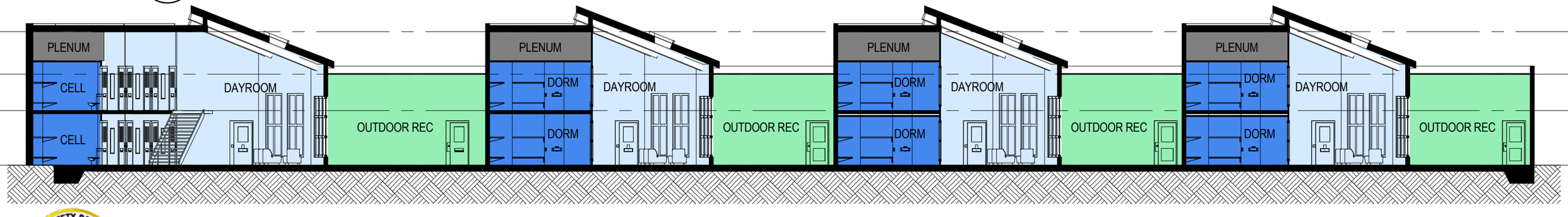



2 HCCC CROSS SECTION - 2




HCCC - KEY PLAN

- CONTROL
- DAYROOM
- SLEEPING
- OUTDOOR REC
- VIEWING GARDEN
- LARGE MULTI PURPOSE
- SMALL MULTI PURPOSE
- STAFF
- SUPPORT
- CONTROLLED CIRCULATION




3 HCCC LONGITUDINAL SECTION - 3

DLR Group

# Street View:
## Public Perception







PUBLIC SAFETY DEPARTMENT HAWAII CORRECTIONS

DLR Group

# Interior Views

# INTERIOR PERSPECTIVE: VIEW FROM DAYROOM



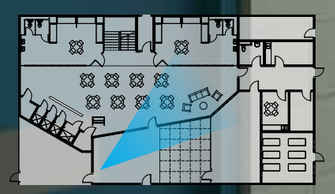
# INTERIOR PERSPECTIVE: VIEW FROM OFFICER'S STATION



# INTERIOR PERSPECTIVE: VIEW FROM MEZZANINE



# INTERIOR PERSPECTIVE: VIEW FROM OUTDOOR REC



# External Walkway





# SCHEMATIC DESIGN REPORT
# FOR
# HAWAII COMMUNITY CORRECTIONAL CENTER
# SECURE HOUSING PROJECT
## Hilo, Hawaii, Hawaii

Prepared for

**DLR Group**
**215 Po'opo'o Place**
**Kailua, HI 96734**

Prepared by

**Austin, Tsutsumi & Associates, Inc.**

Civil Engineers • Surveyors
Honolulu • Wailuku • Hilo, Hawaii

November 10, 2017

AUSTIN, TSUTSUMI & ASSOCIATES, INC. CIVIL ENGINEERS • SURVEYORS
CONTINUING THE ENGINEERING PRACTICE FOUNDED BY H. A. R. AUSTIN IN 1934

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PAUL K. ARITA, P.E.
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# SCHEMATIC DESIGN REPORT
# FOR
# HAWAII COMMUNITY CORRECTIONAL CENTER
# SECURE HOUSING PROJECT

Hilo, Hawaii

## I. INTRODUCTION

The purpose of this report is to provide an overview of the preliminary engineering design of the Hawaii Community Correctional Center (HCCC) Secure Housing Project in Hilo, Hawaii. This report evaluates the existing site conditions and defines requirements for grading, drainage, sewer, water, and fire sprinkler utilities, along with other miscellaneous site improvements.

## II. BACKGROUND

### A. Location

The proposed project is located at parcel TMK: (3) 2-3-023:005 and has a total area of approximately 3.8 acres. The project site is bounded by Waianuenue Avenue to the north, Komohana Street to the west, Punahele Street to the south, and multi-use properties to the east. The landowner and developer of the site is The State of Hawaii Department of Public Safety (DPS). Refer to Exhibit 1 for Location and Vicinity Map.

The site has one main parking lot for visitors with two driveway entrances at Punahele Street. The secondary parking lot for staff is located along Komohana Street. There are six existing buildings on the site.

REPLY TO:
501 SUMNER STREET, SUITE 521 • HONOLULU, HAWAII 96817-5031
PHONE (808) 533-3646 • FAX (808) 526-1267
EMAIL : atahnl@atahawaii.com

OFFICES IN:
HONOLULU, HAWAII
WAILUKU, MAUI, HAWAII
HILO, HAWAII

The majority of the site slopes in a south to north direction. The slopes on the site range from 5 to 20 percent and elevations range from 210 to 250 feet Mean Sea Level (msl).

There is an existing drainage channel running through the center of the site that receives offsite runoff from the Komohana Street and Punahele Street intersection as well as other inlets along Komohana Street. The 54-inch culvert outlet headwall is located in the center of the site and releases the water to the north offsite.

### B. Project Description

The proposed project will develop a secure housing complex of approximately 144 beds (approximately 25,000 sf) on the northwest corner of the existing site. The site improvements related to the proposed secure housing complex include grading, on-site infrastructure including domestic water, wastewater collection, and stormwater management. The existing Komohana street service driveway, parking lot, maintenance shop and former business office will be removed. Existing drainlines, waterlines, and electrical/telcom utilities will be relocated outside of the proposed building footprint. Refer to Exhibit 2 for Preliminary Site Plan.

## III. EXISTING AND PROPOSED INFRASTRUCTURE

### A. Grading & Drainage

On-site stormwater runoff generally flows toward the center of the site into an existing drainage flume. The runoff then disperses in a northerly direction off site. The drainage system includes drain inlets, swales, manholes, and headwalls.

Existing on-site runoff is estimated to be approximately 10.42 cubic feet per second (cfs). Hydrology calculations are based on a 50 year – 1 hour storm recurrence interval.

The existing overland flow patterns will generally remain under the proposed design. The proposed retaining wall will have a graded swale on the retained side to direct stormwater to the north or south sides of the wall.

Downspouts will drain at grade and sheet flow through grassed swales to be retained and treated prior to release.

The project site sits in a designated flood zone “X”, which are areas determined to be outside the 0.2 percent annual chance floodplain. Flood zone information is obtained from the Federal Emergency Management Agency, Flood Insurance Rate Map (FIRM), Panel Nos. 1551660901F and 1551660903F, dated September 29, 2017.

A new retaining wall is proposed to provide the desired grades at the building’s finished floor elevation. The proposed building finished floor elevation is assumed to be 230.0. The majority of the grading will be excavation. The proposed retaining wall will run along the western perimeter of the proposed building and vary in retained height from 4-ft to 10-ft. The existing drainlines and drain manholes that fall within the wall and building footprint will be re-routed and resized to flow toward the south in new 36-inch and 54-inch drainlines. Refer to Exhibit 2 & 3 for Preliminary Site Plan and Preliminary Utility Plan.

**B. Water**

The County of Hawaii, Department of Water Supply (DWS), provides water service for the site. There are three existing water meter boxes (water meter sizes unknown) at the south, south-east and north-west of the lot. These meters are serviced through the existing 16-inch waterline in Waianuenue Avenue and the existing 8-inch waterline in Punahele Street. The existing domestic and fire waterlines on site are 6-inch, 2-1/2-inch and 2-inch. There are two existing fire hydrants along Punahele Street, one existing fire hydrant along Waianuenue Avenue, and one assumed fire hydrant within the site near the Konohana Building.

A new 2-inch water line will connect to the existing lateral at Waianuenue Avenue and reconnect the domestic water service to the existing buildings via existing on-site waterlines. Due to the proposed wall and building, the existing waterline near Komohana Street will be cut and plugged.

Based on the information provided via email on October 31, 2017, the preliminary domestic water demand for the new building is estimated to be 90 gallons per minute (gpm) based on a fixture count of 229.6 Fixture Units.

Pressure requirements for domestic water are to be determined. Requirements for fire sprinkler demand are to be determined. A new fire hydrant may be necessary to meet fire department requirements. Refer to Exhibit 3 for Preliminary Utility Plan.

**C. Wastewater**

Wastewater service for the site is currently provided from the northern corner of the lot by a 10-inch sewer line in Waianuenue Avenue. The sewer system consists of a 6-inch gravity sewer line running through the center of the site with smaller laterals serving each of the existing buildings.

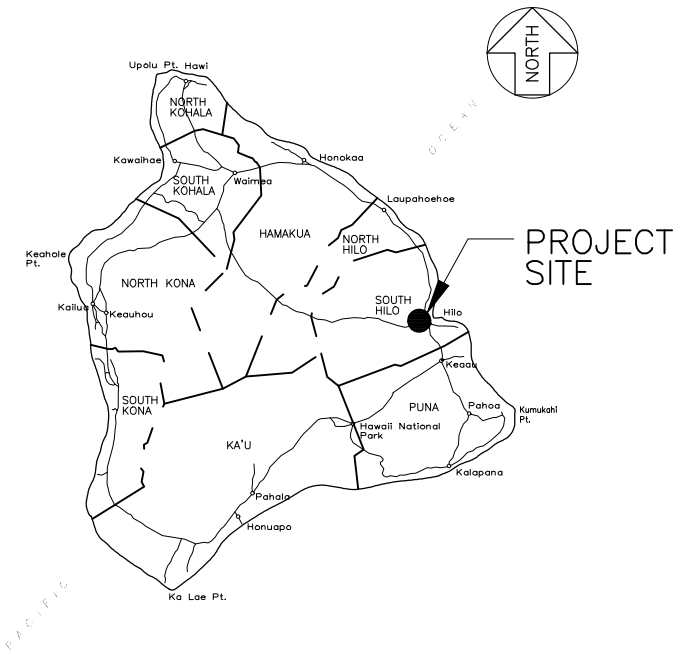
A new 6-inch sewerline will connect the new building to an existing onsite sewer manhole. New cleanouts and manholes will need to be installed to avoid conflict with the new building and wall. The wastewater will be processed by the Department of Public Works Wastewater Management Division.

A preliminary wastewater contribution for the new building is calculated to be approximately 28,800 gallons per day (gpd) (average daily demand) based on the total bed count. The existing sewer main line is assumed to have the capacity to accommodate the proposed building. Further research is required to confirm the capacity of the municipal sewer system. Refer to Exhibit 3 for Preliminary Utility Plan.

**D. Gas**

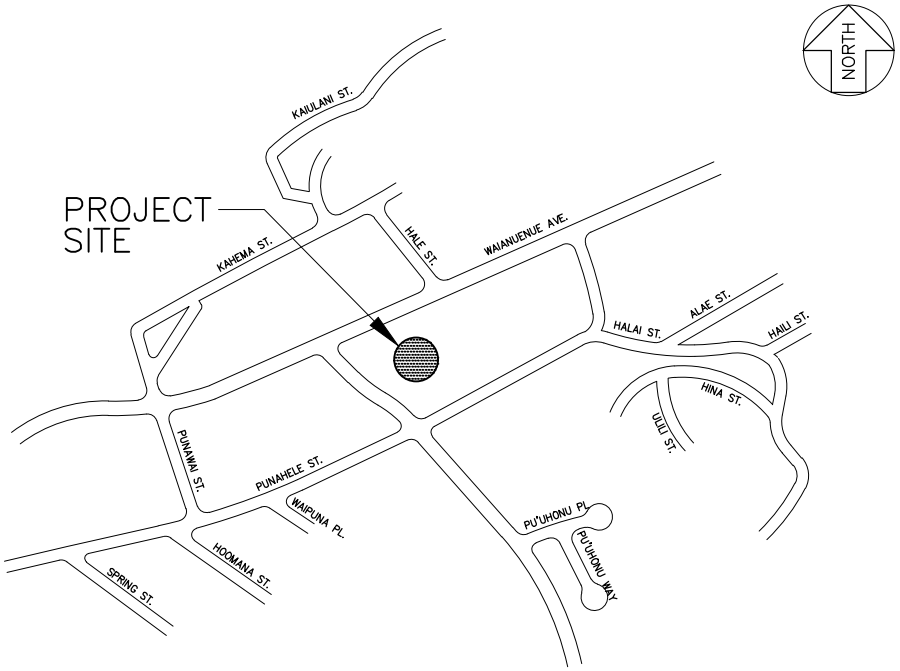
There are two different size liquid propane gas (LPG) tanks on-site. 2-inch gas lines service the LPG tank behind the Komohana Building tank and 1-inch gas lines service the LPG tank behind the Punahele Building and currently serve 3 of the 6 existing buildings.

A new 2-inch gas line will be installed and tee off of the existing 2-inch gas line that is currently installed behind the Punahele Building. The existing LPG gas tank behind the Komohan Building will serve the proposed building. Service tank storage may have to be expanded pending gas demand requirements. Refer to Exhibit 3 for Preliminary Utility Plan.




## ISLAND OF HAWAII

NOT TO SCALE




## LOCATION MAP

NOT TO SCALE

SCHEMATIC DESIGN REPORT

# HAWAII COMMUNITY CORRECTIONAL CENTER SECURE HOUSING PROJECT TMK: (3) 2-3-023: 003

HILO, HAWAII, HAWAII

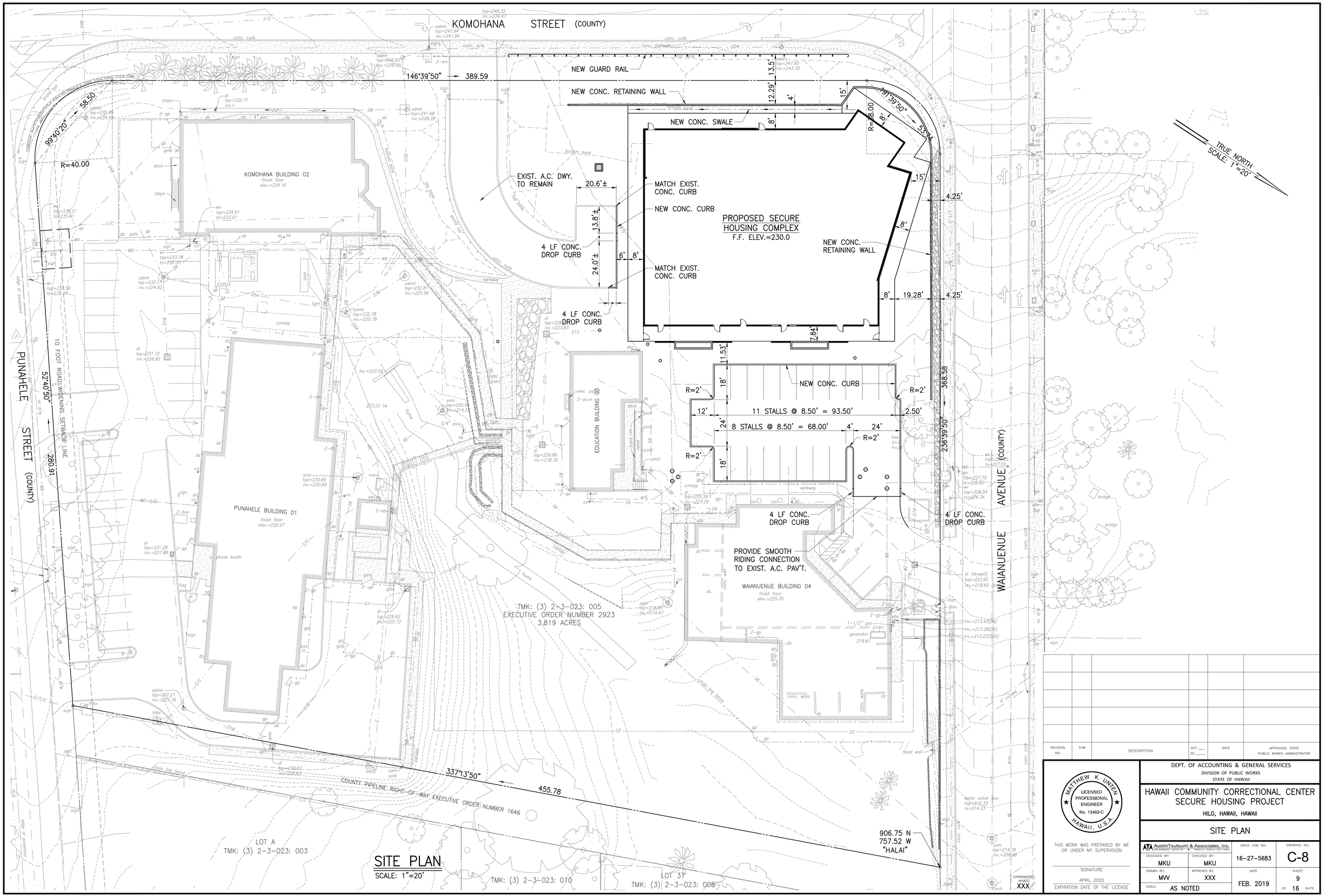
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS,SURVEYORS ● HONOLULU, WAILUKU, HILO, HAWAII

PROJECT LOCATION AND VICINITY MAP

EXHIBIT 1

JOB NO. 17-118
\\files\Projects\PROSPECTIVES\DLR Secure Housing Project for DPS\Exhibits\CCC\HCCC\EXH1-VICINITY MAP.dwg

NOV. 2017




SITE PLAN
SCALE: 1"=20'

| REVISION NO. | SYM. | DESCRIPTION | SHT. ___ OF ___ | DATE | APPROVED: STATE PUBLIC WORKS ADMINISTRATOR |
|---|---|---|---|---|---|

MATTHEW K. UNTEN
LICENSED PROFESSIONAL ENGINEER
No. 13463-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE

APRIL 2020
EXPIRATION DATE OF THE LICENSE

DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS
STATE OF HAWAII

HAWAII COMMUNITY CORRECTIONAL CENTER
SECURE HOUSING PROJECT
HILO, HAWAII, HAWAII

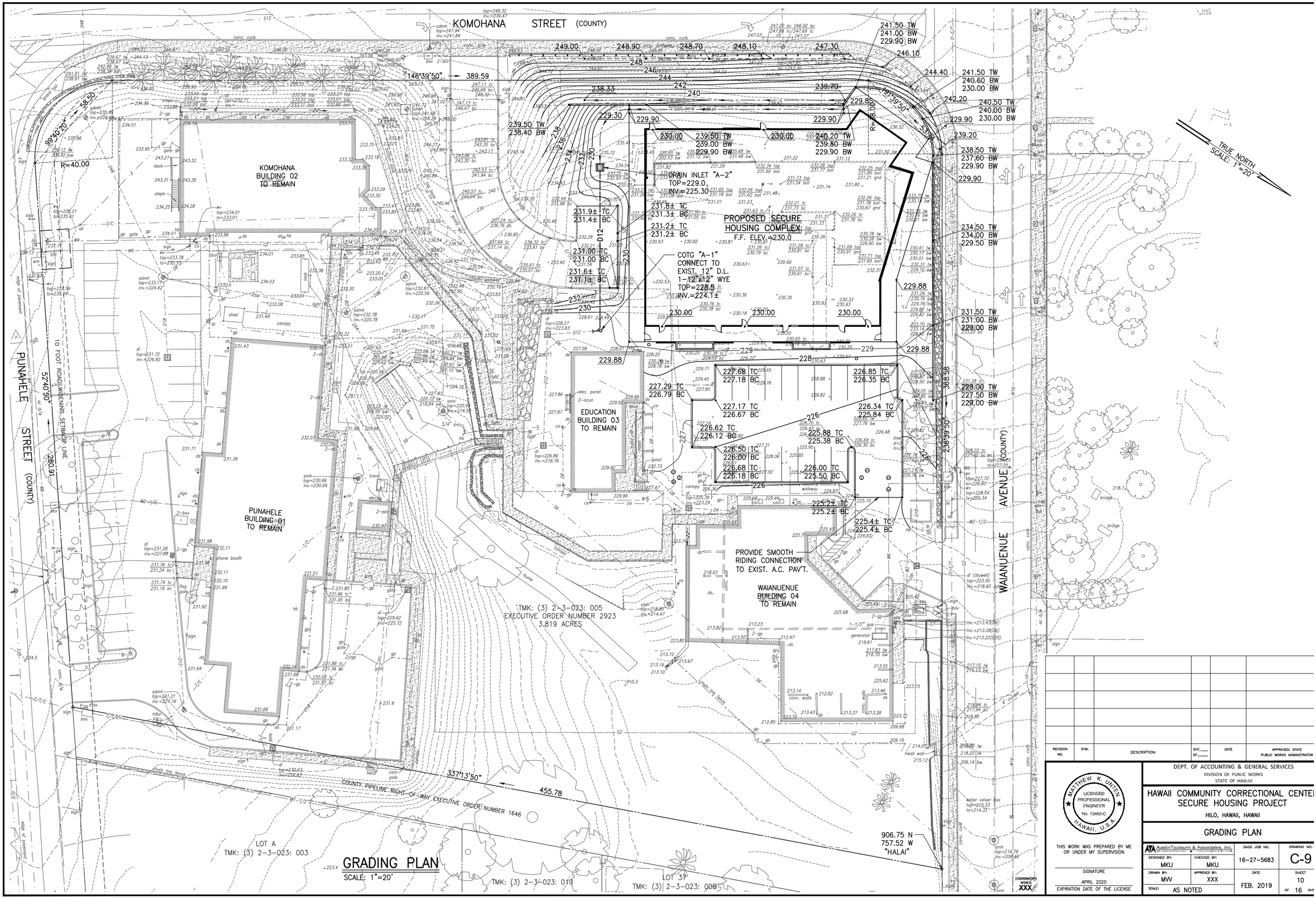
SITE PLAN

ATA AustinTsutsumi & Associates, Inc.
ENGINEERS | SURVEYORS ★ HONOLULU | HAILIMA | HILO, HAWAII

| DESIGNED BY: | CHECKED BY: | DAGS JOB NO. | DRAWING NO. |
|---|---|---|---|
| MKU | MKU | 16-27-5683 | C-8 |
| DRAWN BY: | APPROVED BY: | DATE | SHEET |
| MVV | XXX | FEB. 2019 | 9 OF 16 SHTS |
| SCALE: AS NOTED | | | |

FILE ___ DRAWER ___ FOLDER ___

Y:\2017\17-118\ENGINEERING\DWG\9 C-8 SITE PLAN.DWG
JOB NO. 0-17-118
030119




GRADING PLAN
SCALE: 1"=20'

| REVISION NO. | SYM. | DESCRIPTION | SHT. ___ OF ___ | DATE | APPROVED: STATE PUBLIC WORKS ADMINISTRATOR |
|---|---|---|---|---|---|

MATTHEW K. UNTEN
LICENSED PROFESSIONAL ENGINEER
No. 13463-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE

APRIL 2020
EXPIRATION DATE OF THE LICENSE

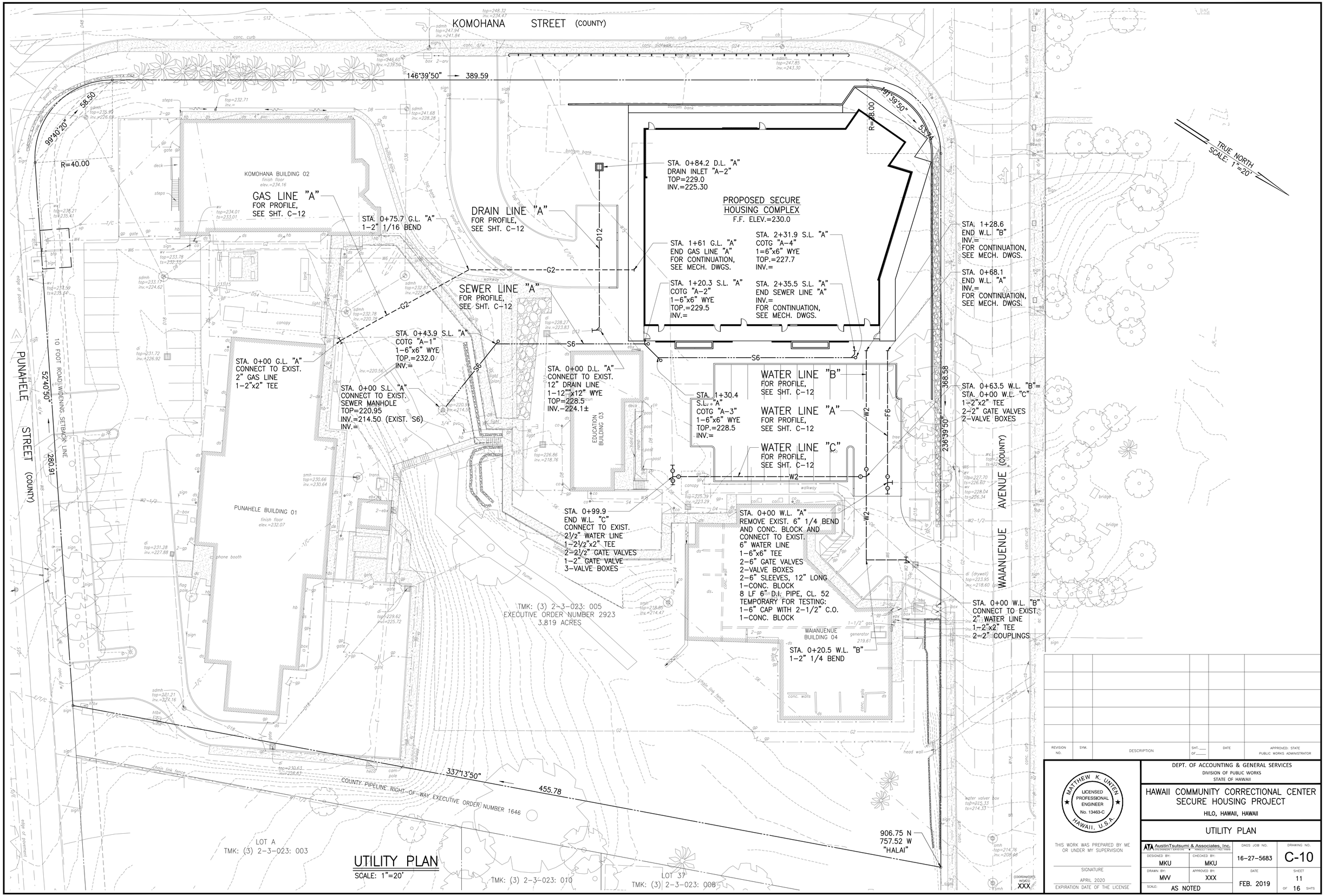
DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS
STATE OF HAWAII

HAWAII COMMUNITY CORRECTIONAL CENTER
SECURE HOUSING PROJECT
HILO, HAWAII, HAWAII

GRADING PLAN

AustinTsutsumi & Associates, Inc.

| DESIGNED BY: | CHECKED BY: | DAGS JOB NO. | DRAWING NO. |
|---|---|---|---|
| MKU | MKU | 16-27-5683 | C-9 |
| DRAWN BY: | APPROVED BY: | DATE | SHEET |
| MVV | XXX | FEB. 2019 | 10 OF 16 SHT |
| SCALE: AS NOTED | | | |




| REVISION NO. | SYM. | DESCRIPTION | SHT. ___ OF ___ | DATE | APPROVED: STATE PUBLIC WORKS ADMINISTRATOR |
|---|---|---|---|---|---|

MATTHEW K. UNTEN
LICENSED PROFESSIONAL ENGINEER
No. 13463-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE

APRIL 2020
EXPIRATION DATE OF THE LICENSE

DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS
STATE OF HAWAII

HAWAII COMMUNITY CORRECTIONAL CENTER
SECURE HOUSING PROJECT
HILO, HAWAII, HAWAII

UTILITY PLAN

| ATA AustinTsutsumi & Associates, Inc. | | DAGS JOB NO. | DRAWING NO. |
|---|---|---|---|
| DESIGNED BY: MKU | CHECKED BY: MKU | 16-27-5683 | C-10 |
| DRAWN BY: MVV | APPROVED BY: XXX | DATE FEB. 2019 | SHEET 11 OF 16 SHTS |
| SCALE: AS NOTED | | | |

FILE ___ DRAWER ___ FOLDER ___

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JOB NO. 0-17-118
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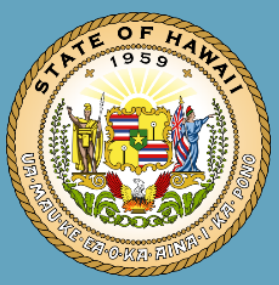
STATE OF HAWAII
1959


PUBLIC SAFETY DEPARTMENT
HAWAII
CORRECTIONS


STATE OF HAWAII
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PUBLIC SAFETY DEPARTMENT
HAWAII
CORRECTIONS