DAVID Y. IGE
GOVERNOR

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JUL 08 2018

JADE T. BUTAY
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IN REPLY REFER TO:

HWY-M 2.240-18

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MAUI DISTRICT
650 PALAPALA DRIVE
KAHULUI, HAWAII 96732-2321

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OFC. OF ENVIRONMENTAL
QUALITY CONTROL

June 22, 2018

Scott J. Glenn, Director
Office of Environmental Quality Control
Department of Health, State of Hawai'i
235 S. Beretania Street, Room 702
Honolulu, Hawai'i 96813

Dear Mr. Glenn:

Subject: Publication of Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFONSI) for the Kahului Baseyard and Materials Testing Laboratory Project

With this letter, the State of Hawai'i, Department of Transportation, Highways Division, Maui District, hereby transmits the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFONSI) for the Kahului Baseyard and Materials Testing Laboratory Project for publication in the next available edition of *The Environmental Notice*.

Enclosed is a completed Office of Environmental Quality Control (OEQC) Publication Form, one (1) copy of the DEA-AFONSI, and three (3) Adobe Acrobat Portable Document Format (PDF) files of the same on a compact disc, and an electronic copy of the Publication Form in Microsoft (MS) Word. Simultaneous with this letter, we have submitted the summary of the action in text file by electronic mail to your office.

Should you have any questions, please contact Mr. Ervin Pigao, Design Section, Maui District, Highways Division, at (808) 873-3535 or by email at ervinanthony.r.pigao@hawaii.gov.

Sincerely,

Robin K. Shishido, P.E.
District Engineer, Maui

18-695

EP:apr

Enclosures: 1. OEQC Publication Form; 2. DEA-AFONSI (1 Hard Copy); 3. CD containing OEQC Publication Form (in MS Word) and DEA-AFONSI (in PDF, 3 copies)

AGENCY
PUBLICATION FORM

Project Name:	Kahului Baseyard and Materials Testing Laboratory
Project Short Name:	Kahului Baseyard
HRS §343-5 Trigger(s):	(1) Propose the use of state or county lands or the use of state or county funds
Island(s):	Maui
Judicial District(s):	Wailuku-Kahului
TMK(s):	(2) 3-8-006:075
Permit(s)/Approval(s):	National Pollutant Discharge Elimination System (NPDES) Permit County of Maui Building Permit
Proposing/Determining Agency:	State of Hawai'i Department of Transportation Highways Division – Maui District Office
Contact Name, Email, Telephone, Address	Ervin R. Pigao, P.E. ervinanthony.r.pigao@hawaii.gov (808) 873-3535 650 Palapala Drive Kahului, Hawai'i 96732
Accepting Authority:	(for EIS submittals only)
Contact Name, Email, Telephone, Address	
Consultant:	SSFM International
Contact Name, Email, Telephone, Address	Jennifer M. Scheffel jscheffel@ssfm.com (808) 356-1273 99 Aupuni Street, Suite 202 Hilo, HI 96720

Status (select one)	**Submittal Requirements**
__X__ DEA-AFNSI	Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.
____ FEA-FONSI	Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.
____ FEA-EISPN	Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.
____ Act 172-12 EISPN ("Direct to EIS")	Submit 1) the proposing agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.
____ DEIS	Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.
____ FEIS	Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.

18-695

____ FEIS Acceptance Determination	The accepting authority simultaneously transmits to both the OEQC and the proposing agency a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
FEIS Statutory Acceptance	Timely statutory acceptance of the FEIS under Section 343-5(c), HRS, is not applicable to agency actions.
____ Supplemental EIS Determination	The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
____ Withdrawal	Identify the specific document(s) to withdraw and explain in the project summary section.
____ Other	Contact the OEQC if your action is not one of the above items.

Project Summary

The State of Hawai'i Department of Transportation (HDOT) Highways Division, Maui District Office plans to construct a permanent baseyard and materials testing laboratory on HDOT property in Kahului, Maui. Currently, the site contains three temporary field office trailers and was previously used as the staging area for the construction of Airport Access Road.

The proposed baseyard and laboratory would occupy approximately 3.6 acres of land within a 19.6-acre parcel (Tax Map Key [TMK]: (2) 3-8-006:075) on the southwest side of the intersection of Hāna Highway and Airport Access Road. The Proposed Action includes construction of an 800 to 1000 square foot building to be used as a materials testing laboratory for concrete, asphalt, and soil/aggregates, and the installation of infrastructure to make the existing field office trailers permanent.

Draft Environmental Assessment and
Anticipated Finding of No Significant Impact

Kahului Baseyard and Materials Testing Laboratory

Kahului, Maui, Hawai'i

Prepared for:
State of Hawai'i Department of Transportation
Highways Division – Maui District Office

Prepared by:

SSFM INTERNATIONAL

July 2018

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Kahului Baseyard and Materials Testing Laboratory

Kahului, Maui, Hawai‘i

Prepared for:

State of Hawai‘i Department of Transportation
Highways Division – Maui District Office
650 Palapala Drive
Kahului, Hawai‘i 96732

Prepared by:

SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawai‘i 96817

July 2018

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Project Summary

Project Name	Kahului Baseyard and Materials Testing Laboratory
Location	Kahului, Maui, Hawai‘i
District	Wailuku-Kahului
Project Site Tax Map Key	(2) 3-8-006:075
Landowner	State of Hawai‘i Department of Transportation
Project Site Existing Uses	The project site contains three temporary field office trailers and was previously used as the staging area for the construction of Airport Access Road.
State Land Uses	Urban
Maui County Zoning	LI, Light Industrial
Proposed Action	The State of Hawai‘i Department of Transportation (HDOT) Highways Division, Maui District Office plans to construct a permanent baseyard and materials testing laboratory on HDOT property in Kahului, Maui. The proposed baseyard and laboratory would occupy approximately 3.6 acres of land within a 19.6-acre parcel on the southwest side of the intersection of Hāna Highway and Airport Access Road. The Proposed Action includes construction of an 800 to 1000 square foot building to be used as a materials testing laboratory for concrete, asphalt, and soil/aggregates, and the installation of infrastructure to make the existing field office trailers permanent.
Anticipated Impacts	The Proposed Action is not expected to negatively alter existing conditions at the site or have negative impacts on the environment.
Proposing Agency	State of Hawai‘i Department of Transportation Highways Division – Maui District Office 650 Palapala Drive Kahului, Hawai‘i 96732
Anticipated Determination	Finding of No Significant Impact (FONSI)
Project Site Permits/ Approvals Required	National Pollutant Discharge Elimination System (NPDES) Permit County of Maui Building Permit
EA Preparer	SSFM International 99 Aupuni Street, Suite 202 Hilo, HI 96720 Contact: Jennifer Scheffel (808) 356-1273
Individuals, Community Groups, and Agencies Consulted	See **Chapter 6: Agencies and Organizations Consulted**

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Acronyms

AAQS	Ambient Air Quality Standards
BMP	Best Management Practices
CAA	Clean Air Act
COM	County of Maui
CWRM	Commission on Water Resources Management
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act of 1972
DLNR	Department of Land and Natural Resources
DOH	State of Hawai‘i Department of Health
DWS	Department of Water Supply
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency
FHWA	Federal Highways Administration
HAR	Hawai‘i Administrative Rules
HDOT	State of Hawai‘i Department of Transportation
HRS	Hawai‘i Revised Statutes
ICAC	Interagency Climate Adaptation Committee
ITE	Institute of Transportation Engineers
MBTA	Migratory Bird Treaty Act
MECO	Maui Electric Company
MPD	Maui Police Department
msl	mean sea level
NAAQS	National Ambient Air Quality Standards
NPDES	National Pollutant Discharge Elimination System
TMK	Tax Map Key
UH SOEST	University of Hawai‘i School of Ocean and Earth Science and Technology
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency

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1. PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1. Project Overview

The State of Hawai'i Department of Transportation (HDOT) Highways Division, Maui District Office plans to construct a permanent baseyard and materials testing laboratory on HDOT property in Kahului, Maui. Currently, the site contains three temporary field office trailers and was previously used as the staging area for the construction of Airport Access Road.

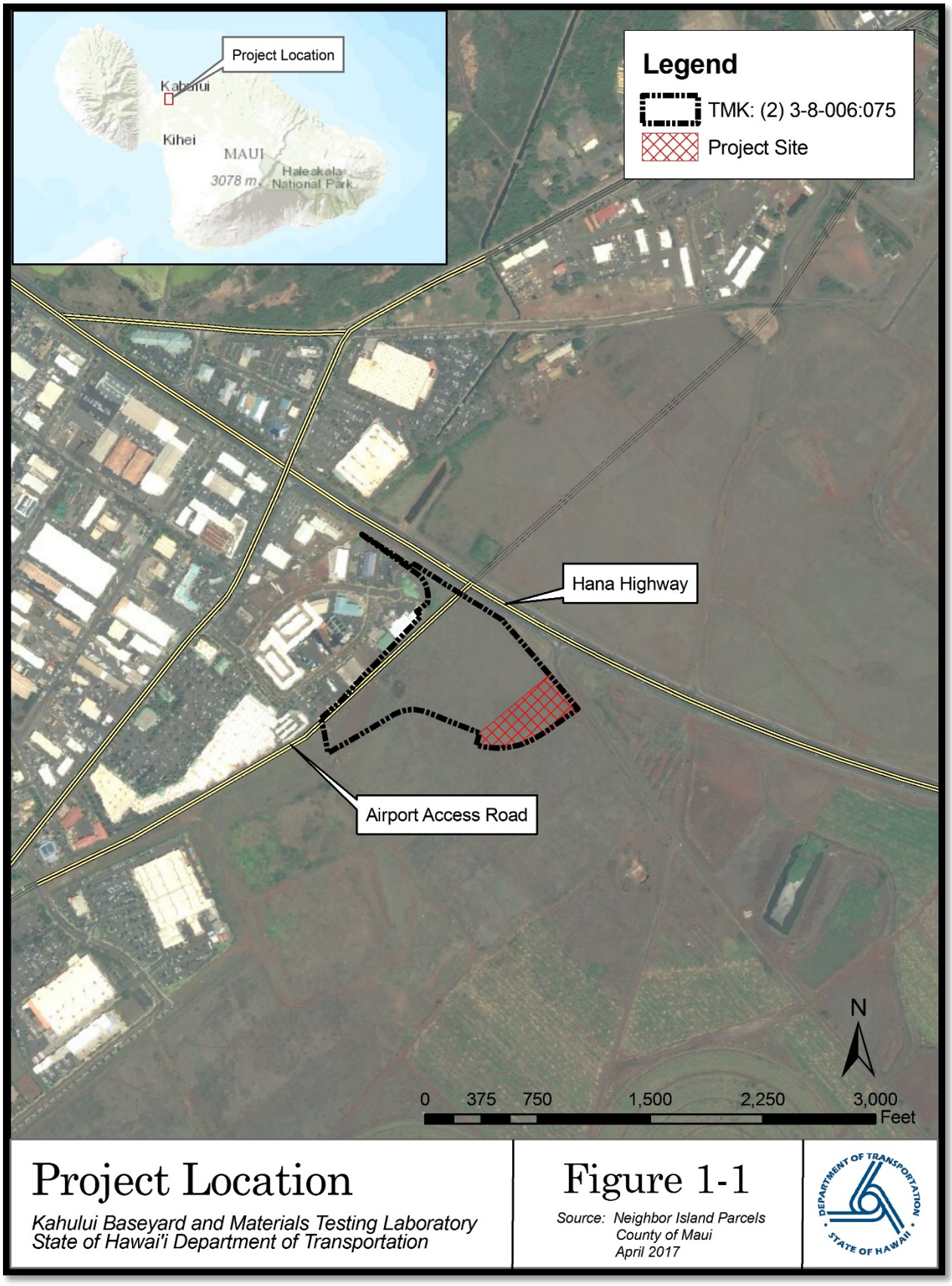
The proposed baseyard and laboratory would occupy approximately 3.6 acres of land within a 19.6-acre parcel (Tax Map Key [TMK]: (2) 3-8-006:075) on the southwest side of the intersection of Hāna Highway and Airport Access Road, as shown in **Figure 1-1**. The Proposed Action includes construction of an 800 to 1000 square foot building to be used as a materials testing laboratory for concrete, asphalt, and soil/aggregates, and the installation of infrastructure to make the existing field office trailers permanent.

1.2. Purpose and Need for the Proposed Action

The purpose of the Proposed Action is to establish a permanent field office and materials testing laboratory in Kahului on the island of Maui.

Title 23, Code of Federal Regulations (CFR), Part 637, Subpart B prescribes policies, procedures, and guidelines to assure the quality of materials and construction in all Federal-aid highway projects on the National Highway System. State transportation departments, including HDOT, are responsible for ensuring that materials incorporated into highway construction projects conform substantially to requirements of the plans and specifications. This requires materials testing in a qualified construction materials laboratory. There is currently not a materials testing laboratory in Kahului. Therefore, the Proposed Action is needed to ensure compliance with 23 CFR 637B and District requirements.

The Fiscal Year 2015 through 2018 Statewide Transportation Improvement Program for Maui includes over 20 projects in Central Maui (HDOT, 2017). The field office trailers are needed to provide permanent office space for HDOT construction engineers and personnel.



Project Location

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 1-1

Source: Neighbor Island Parcels
County of Maui
April 2017

1.3. Permits and Approvals Required for the Proposed Action

In addition to the environmental disclosure requirements of HRS Chapter 343, implementation of the Proposed Action would require coordination with state and county agencies for permits or approvals as presented in **Table 1-1**.

Table 1-1. Permits and Approvals Required for the Proposed Action

Permit or Approval	Description	Regulation(s)	Administrative Authority
National Pollutant Discharge Elimination System, Notice of Intent	Form C required for stormwater discharge associated with construction activities that disturb one (1) acre or more of total land area.	• Clean Water Act, Section 401 • Hawai'i Administrative Rules, Section 11-55	Department of Health, Clean Water Branch
Grading Permit	Required for excavation of fill, or for the temporary storage of soils, sand, gravel, rock, or any similar material.	• Maui County Code, Chapter 20.08	County of Maui Department of Public Works
Grubbing Permit	Required for any act by which vegetation, including trees, timber, shrubbery, and plants is uprooted and removed from the surface of the ground.	• Maui County Code, Chapter 20.08	County of Maui Department of Public Works
Building Permit	Required for the construction, alteration, moving, demolition, repair, and use of any building or structure within the county.	• Maui County Code, Title 16	County of Maui Department of Public Works

1.4. Anticipated Findings and Determination

Based on the significance criteria set forth in Hawai'i Administrative Rules (HAR) 11-200 and discussed in **Section 5.1**, it is anticipated that the Proposed Action will not have a significant effect on the environment and that a Finding of No Significant Impact (FONSI) will be filed with the State of Hawai'i Office of Environmental Quality Control following the public comment period.

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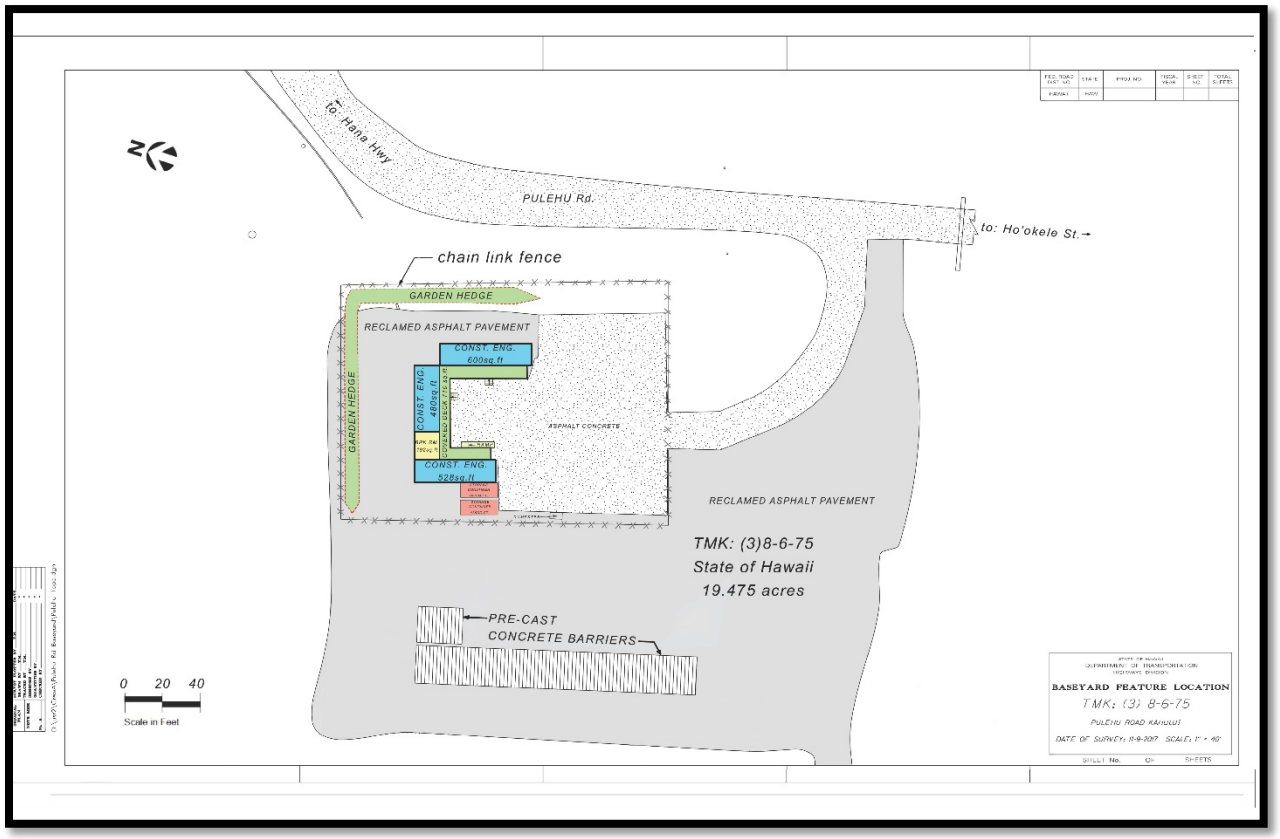
2. PROPOSED ACTION AND ALTERNATIVES

2.1. No-Action Alternative

Under the No-Action Alternative, the materials testing laboratory would not be constructed. The temporary field office trailers would remain on the site and would continue to utilize the temporary, above-ground septic tanks that require emptying on a regular basis. The existing facilities on shown on the site plan in **Figure 2-1**.

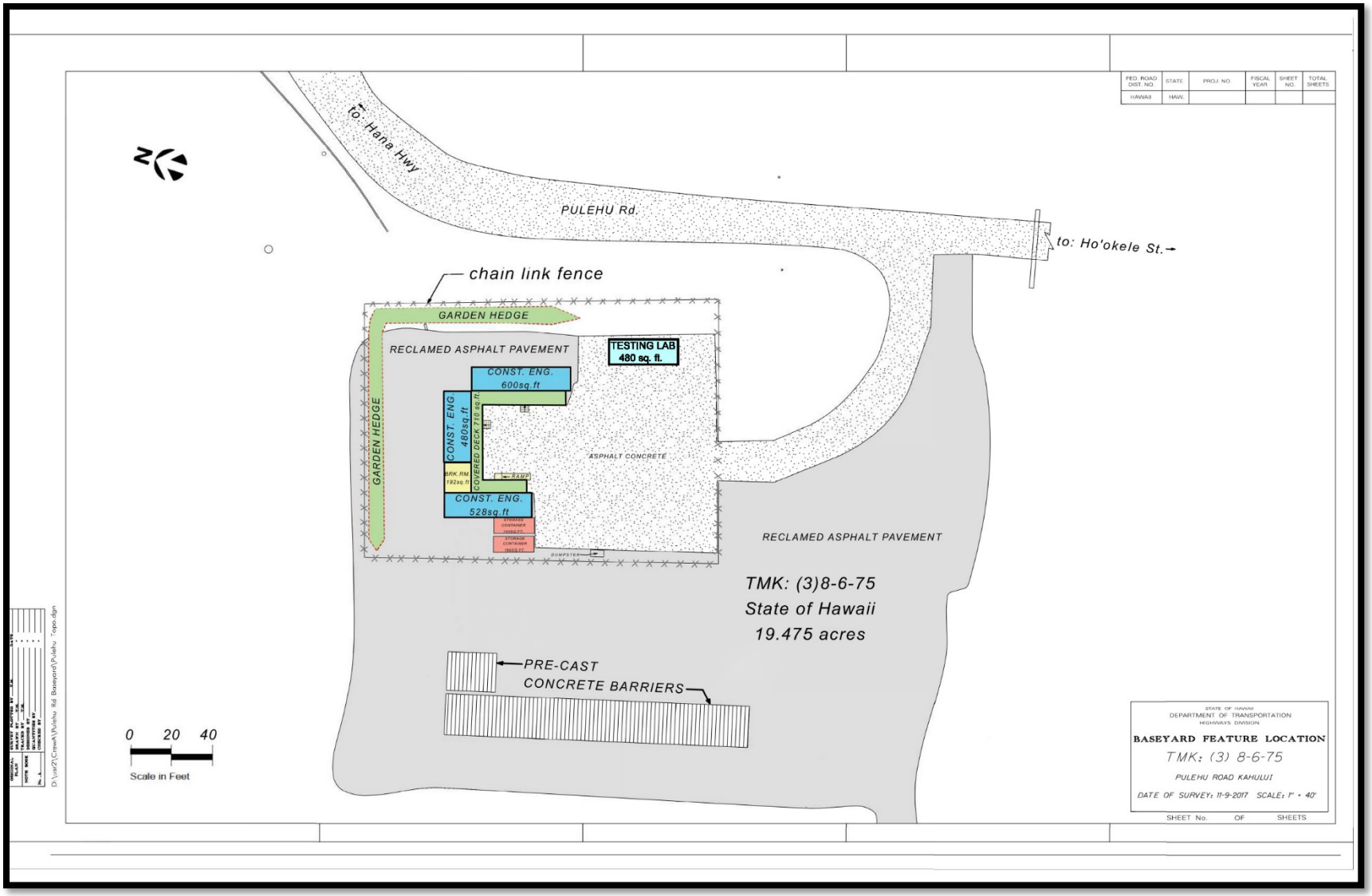
Figure 2-1. Existing Facilities Site Plan



2.2. Proposed Action

The Proposed Action includes the construction of an approximate 480 square foot materials testing laboratory and infrastructure to make the existing field office trailers permanent. The materials testing laboratory would be constructed of either wood or metal and would include construction of a concrete foundation. The laboratory would be connected to the existing electrical and water supply on the site. Wastewater would be processed through a septic system (i.e., septic tank and leach field) to be constructed as part of the Proposed Action. The Proposed Action would also include connection of the existing temporary field office trailers to the new septic system. There would be no change to the existing access to the site or the existing asphalt parking area. The proposed site plan is included as **Figure 2-2**.

Figure 2-2. Proposed Site Plan



3. ENVIRONMENTAL SETTING, POTENTIAL IMPACTS, AND MINIMIZATION AND MITIGATION MEASURES

3.1. Climate and Air Quality

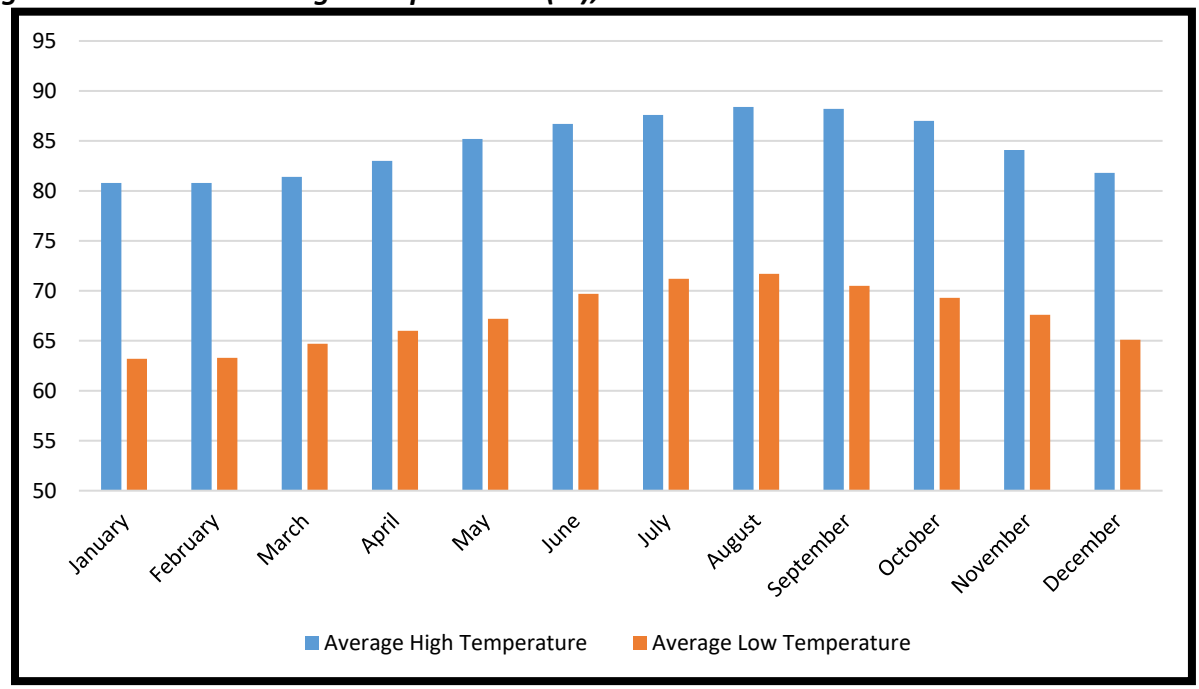
Existing Conditions

Climate

The Proposed Action is located in Kahului on the island of Maui. Kahului has a hot, semi-arid climate with a dry summer season due to its location on the leeward side of the island. Temperatures in this area are moderate and equable throughout the year. This reflects the small seasonal variation in the energy received from the sun and the tempering effect of the surrounding Pacific Ocean. Being situated in the tropics, Hawai'i has a relatively uniform day length and temperature.

The Kahului area has an average high temperature of 84.6 degrees Fahrenheit (°F) and an average low temperature of 67.5°F. As shown in **Figure 3-1**, the warmest months are August and September, and the coolest months are January and February. Kahului averages approximately 15.7 inches of rain per year (NWS, 2017c).

Figure 3-1. Kahului Average Temperatures (°F), 2000-2017



Sources: NWS, 2017a, 2017b

The prevailing winds throughout the year in Hawai'i are the northeasterly trade winds. Trade wind frequency varies from more than 90% of the time during the summer season to only 50% in January, with an overall frequency of 70%. Westerly, or Kona, winds occur primarily during the winter months, generated by low pressure systems near the islands.

Trade winds are produced by the outflow of air from the Pacific Anticyclone high pressure system, also known as the Pacific High. The center of this system is located well north and east of the Hawaiian chain and moves to the north and south seasonally. In the summer months, the center moves to the north, causing the trade winds to be at their strongest from May through September. In the winter, the center moves to the south, resulting in decreasing trade wind frequency from October through May.

Wind patterns of a more transient nature increase during the winter months. Winds from extra-tropical storms can be very strong from almost any direction, depending on the strength and position of the storm. Kona winds are generally from a southerly to southwesterly direction, and are sometimes associated with slow moving low pressure systems known as Kona lows situated to the west of the island chain. These storms are often accompanied by heavy rains.

Air Quality

The Clean Air Act of 1972 and its 1990 Amendments (CAA) and subsequent legislation regulate air emissions from area, stationary, and mobile sources. Both the U.S. Environmental Protection Agency (USEPA) and the State of Hawai'i have instituted Ambient Air Quality Standards (AAQS) to maintain air quality in the interest of public health and secondary public welfare.

At the present time, seven parameters are regulated: particulate matter, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, carbon monoxide, ozone and lead. The Hawai'i AAQS are in some cases considerably more stringent than the comparable National Ambient Air Quality Standards (NAAQS). In particular, the Hawai'i 1-hour AAQS for carbon monoxide is four times more stringent than the comparable national limit. **Table 3-1** illustrates the NAAQS and State AAQS and the units of measure (micrograms per cubic meter, $\mu g/m^3$ and parts per million, ppm).

As described above, the prevailing winds throughout the year in Hawai'i are the northeasterly trade winds. These trade winds keep the air quality generally good. The Department of Health (DOH) operates a network of air quality monitoring stations at various locations around the state, including one in Kahului. The Kahului station was established in January 2015 and monitors $PM_{2.5}$. The monitoring objective for this station is to monitor air quality impacts associated with cane burning. In 2015, the highest concentration of $PM_{2.5}$ was 19.8 $\mu g/m^3$, with a 98^{th} percentile of 11.5 $\mu g/m^3$. The annual average was 5.4 $\mu g/m^3$ and there were no occurrences of 24-hour concentrations greater than 35 $\mu g/m^3$ (the Federal standard) (DOH, 2016). With the discontinuation of the sugar cane industry on Maui, it is expected that concentrations of $PM_{2.5}$ will be consistent throughout the year and the largest sources of air pollution will most likely be associated with automobile traffic using the roadway network in the project area.

In addition to the NAAQS and the State AAQS, the DOH regulates fugitive dust. HAR Section 11-60.1-33, Fugitive Dust, states that no person shall cause or permit visible fugitive dust to become airborne without taking reasonable precautions, and no person shall cause or permit the discharge of visible fugitive dust beyond the property lot line on which the fugitive dust originates (DOH, 2014). This rule applies to construction projects and would, therefore, be applicable to the Proposed Action.

Table 3-1. State of Hawai'i and National Ambient Air Quality Standards

Pollutant	Units	Averaging Time	Maximum Allowable Concentration		
			National Primary	National Secondary	State of Hawaii
Particulate Matter <10 microns (PM_{10})	µg/m³	Annual 24 Hours	- 150[a]	- 150[a]	50 150[b]
Particulate Matter <2.5 microns ($PM_{2.5}$)	µg/m³	Annual 24 Hours	12[c] 35[d]	15[c] 35[d]	- -
Sulfur Dioxide (SO_2)	ppm	Annual 24 Hours 3 Hours 1 Hour	- - - 0.075[e]	- - 0.5[b] -	0.03 0.14[b] 0.5[b] -
Nitrogen Dioxide (NO_2)	ppm	Annual 1 Hour	0.053 0.100[f]	0.053 -	0.04 -
Carbon Monoxide (CO)	ppm	8 Hours 1 Hour	9[b] 35[b]	- -	4.4[b] 9[b]
Ozone (O_3)	ppm	8 Hours	0.070[g]	0.070[g]	0.08[g]
Lead	µg/m³	3 Months Quarter	0.15[h] 1.5[i]	0.15[h] 1.5[i]	- 1.5[i]
Hydrogen Sulfide	ppb	1 Hour	-	-	25[b]

Notes:
[a]Not to be exceeded more than once per year on average over three years.
[b]Not to be exceeded more than once per year.
[c]Three-year average of the weighted annual arithmetic mean.
[d]98th percentile value averaged over three years.
[e]Three-year average of fourth-highest daily 1-hour maximum.
[f]98th percentile value of the daily 1-hour maximum averaged over three years.
[g]Three-year average of annual fourth-highest daily 8-hour maximum.
[h]Rolling 3-month average.
[i]Quarterly average.
Source: DOH, 2015

Potential Impacts

Only short-term construction-related impacts to air quality are anticipated with implementation of the Proposed Action. During construction, potential emission sources that may affect air quality at the project site include the following:

- Diesel and/or gasoline-powered construction equipment and motor vehicles would contribute to additional CO and CO_2 in the air.
- Fugitive dust emissions resulting from construction of the materials testing laboratory.

Because levels of criteria pollutants in Hawai'i are consistently below Federal and State AAQS, and because the prevailing trade winds rapidly carry pollutants offshore limiting the effect on receptors, increases in levels of criteria pollutants at the project site from construction activities are not expected to be

significant. It is not anticipated that Federal or State AAQS would be exceeded during construction activities.

The Proposed Action would not add an emission source; therefore, there would be no impact to the existing air quality upon completion of construction.

Under the No-Action Alternative, no construction activities would occur and no additional emission sources would be added; therefore, there would be no impact to the existing air quality.

Minimization and Mitigation Measures

A dust control plan, to be approved by the DOH, would be developed and implemented to minimize fugitive dust during construction. The plan would include some or all of the following measures:

- Watering of active work areas
- Screening piles of materials from wind, if appropriate
- Cleaning nearby paved roads affected by construction
- Covering open trucks carrying construction materials
- Limiting areas to be disturbed at any given time
- Mulching or chemically stabilizing inactive areas that have been disturbed

Additionally, contractors would be required to maintain equipment with emissions controls.

3.2. Noise

Existing Noise Environment

Noise is defined as unwanted sound and is one of the most common environmental issues of concern to the public. A number of factors affect sound as it is perceived by the human ear. These include the actual level of the sound (i.e., noise), the frequencies involved, the period of exposure to the noise, and changes or fluctuations in the noise levels HAR, Section 12-200.1 – Occupational Noise Exposure

The State of Hawai'i Community Noise Control Rule (HAR Chapter 11-46) 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 during exposure. The accepted unit of measure for noise levels is the decibel (dB).

The State of Hawaii regulates noise exposure in the following statutes and rules:

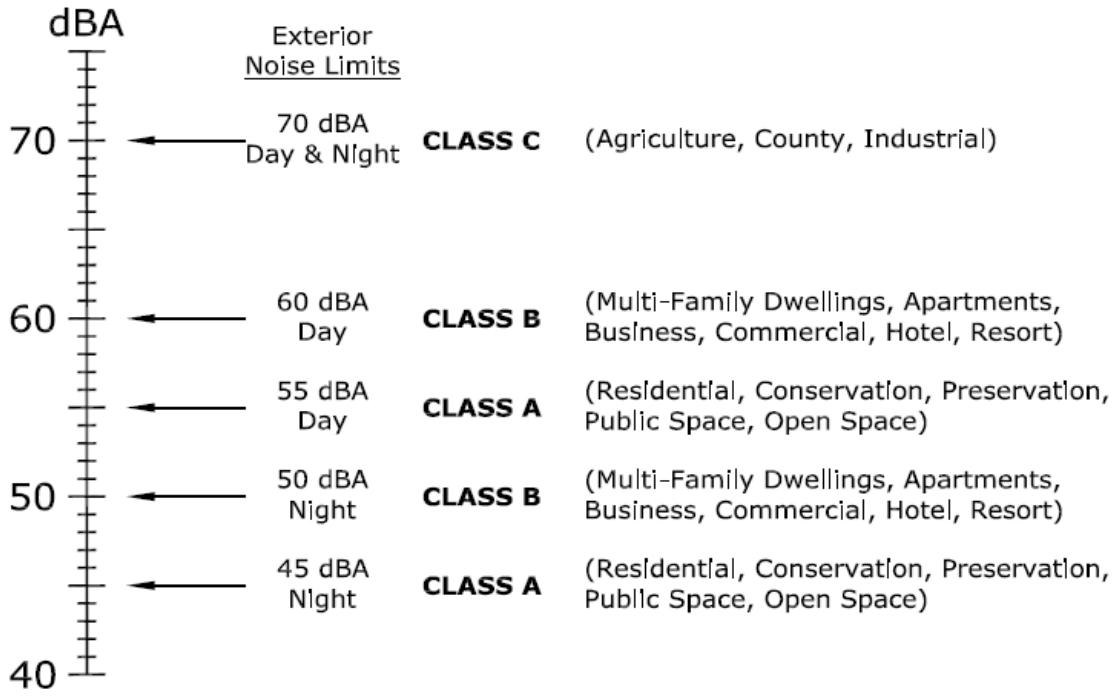
- HRS, Section 342F – Noise Pollution
- HAR, Section 11-46 – Community Noise Control

The State of Hawai'i Community Noise Control Rule (HAR Chapter 11-46) defines three classes of zoning districts and specifies corresponding maximum permissible sound levels due to stationary noise sources such as air conditioning units, exhaust systems, generators, compressors, pumps, etc. The Community Noise Control Rule does not address most moving sources, such as vehicular traffic noise, air traffic noise, or rail traffic noise. However, the Community Noise Control Rule does regulate noise related to construction activities, which may not be stationary.

The maximum permissible noise levels are enforced by the DOH for any location at or beyond the property line and shall not be exceeded for more than 10% of the time during any 20-minute period. The specified noise limits which apply are a function of the zoning and time of day as shown in **Figure 3-2**. 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 the DOH.

Figure 3-2. Hawai'i Maximum Permissible Sound Levels for Various Zoning Districts

Zoning District	**Day Hours** (7 AM to 10 PM)	**Night Hours** (10 PM to 7 AM)
CLASS A Residential, Conservation, Preservation, Public Space, Open Space	55 dBA (Exterior)	45 dBA (Exterior)
CLASS B Multi-Family Dwellings, Apartments, Business, Commercial, Hotel, Resort	60 dBA (Exterior)	50 dBA (Exterior)
CLASS C Agriculture, Country, Industrial	70 dBA (Exterior)	70 dBA (Exterior)



As discussed in Section 4.2, the Proposed Action is located in the Light Industrial zone (COM Planning Commission, 2010), which is designated as "Class C". The project site is subject to noise generated from

traffic on nearby Airport Access Road and Hāna Highway, as well as overflights of aircraft from the Kahului Airport.

Potential Impacts

Noise would be generated during construction by construction equipment used to build the materials testing lab. Noise generation would be short-term and limited to the project area. Construction equipment may include excavators, trucks, and other heavy equipment. Earthmoving equipment (e.g., bulldozers and diesel-powered trucks) would probably be the loudest equipment used during construction. Typical noise emission levels for construction equipment is provided in **Table 3-2**.

Table 3-2. Typical Noise Emission Levels for Construction Equipment

Type of Equipment	Noise Level at 50 feet (dBA)
Air Compressor	81
Backhoe	80
Bulldozer	82
Chain Saw	85
Concrete/Grout Pumps	82
Crawler Service Crane (100-ton)	83
Dump Truck	88
Excavator	85
Front End Loader	80
Generator	81
Jackhammer (compressed air)	85
Lift Booms	85
Pick-Up Truck	55
Power-Actuated Hammer	88
Water Pump	76
Water Truck	55

Source: FHWA, 2015

Upon completion of construction, noise effects would be minimal and similar to the existing noise. Vehicles and equipment from the baseyard are expected to leave the baseyard at the start of the work shift and return at the end of the work day. There may be repairs and preventative maintenance which occurs within a normal work day. The baseyard is expected to close during weekday nights, holidays, and weekends. Noise from the materials testing laboratory would be enclosed within the building and is not expected to add to the existing noise environment.

Under the No-Action Alternative, no construction activities would occur and no additional noise sources would be added. The temporary baseyard would continue to operate at its current capacity; therefore, there would be no change to the existing noise environment.

Minimization and Mitigation Measures

Noise generated from construction activities and the use of machinery would be minimized by requiring contractors to adhere to state and county noise regulations. Construction activities would be conducted on weekdays and in daytime hours. The construction contractor would be required to obtain a Community Noise Permit from the DOH Indoor and Radiological Health Branch. In the event that work occurs after normal working hours (i.e., at night or on weekends), or if permissible noise levels are exceeded, the construction contractor would be required to obtain a Community Noise Variance and comply with any permit conditions.

3.3. Topography, Geology, and Soils

Existing Conditions

The Proposed Action would occupy 3.6 acres of land within a 19.6-acre parcel in a commercially developed area on lands formerly used for sugar cane production. The project site is approximately 20 feet above mean sea level (msl) with little to no slope.

As shown in **Figure 3-3**, the project site is located on the Kula Volcanics geological unit. Kula Volcanics are lavas that have weathered into deep soils because of the long time that has lapsed since the last lava flow in the area (Stearns, H.T. and G.A. MacDonald, 1942).

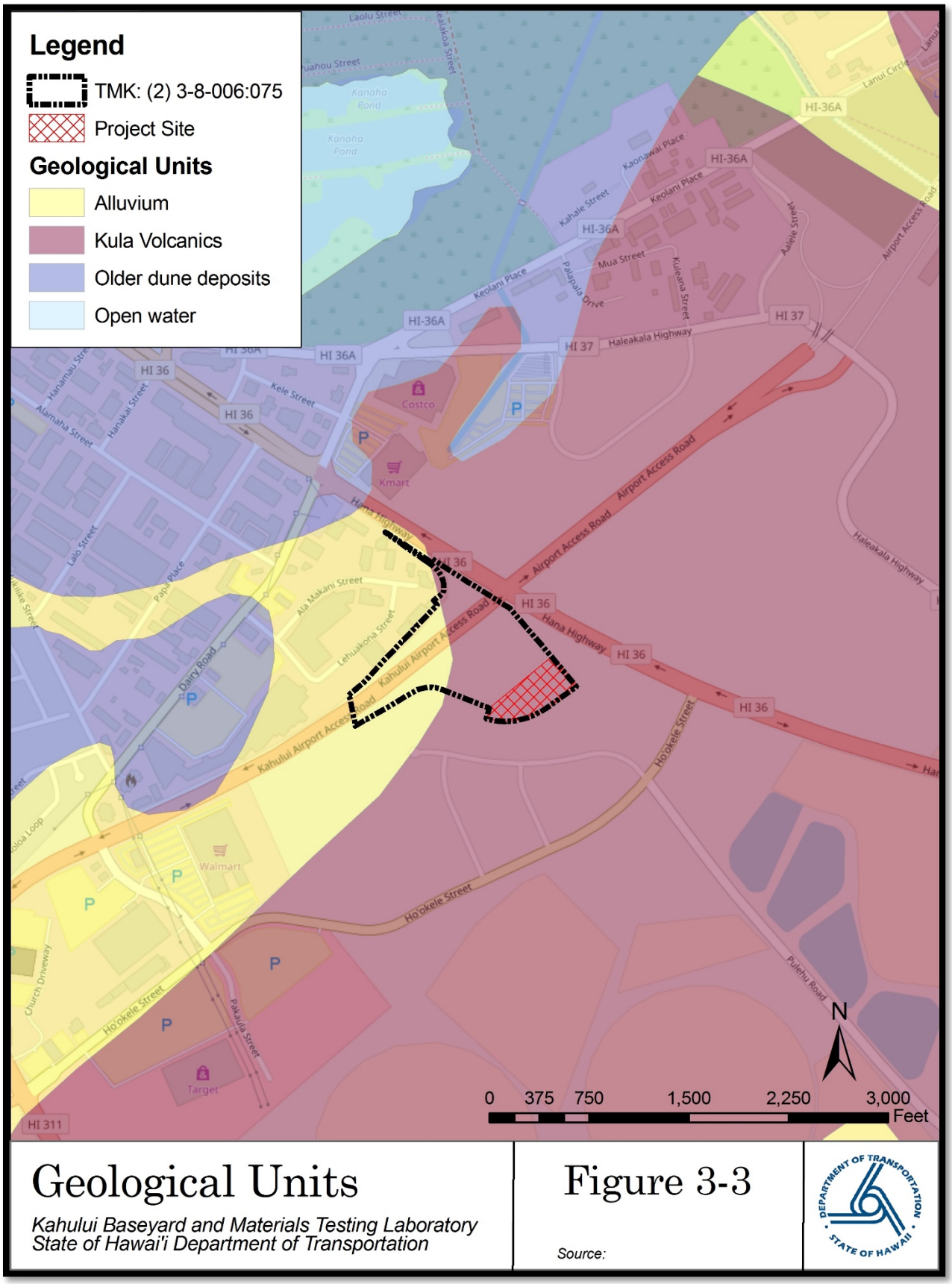
As shown in **Figure 3-4**, the project site overlays EaA, Ewa silty clay loam, 0 to 3 percent slope. The well-drained volcanic soils of the Ewa Soil Series occur in basins and alluvial fans on Maui and O'ahu. Soils of this series occur at elevations between sea level and 150 feet msl in areas receiving 10 to 30 inches of rainfall annually. The EaA soil type exhibits a very slow runoff and a very slight erosion hazard. In general, the EaA soils are used for commercial cultivation of sugar cane and for residential developments (Foote, et.al, 1972).

Potential Impacts

Construction of the Proposed Action would include grading and site preparation for the materials testing laboratory and infrastructure associated with the laboratory and field office trailers. Short-term construction activities may include minor soil loss and erosion.

Overall, the Proposed Action would not have a significant effect on the topography, geology, or soils of the area. The soil type of the area is appropriate for building construction.

Under the No-Action Alternative, no construction activities would occur; therefore, there would be no impacts to topography, geology, or soils.

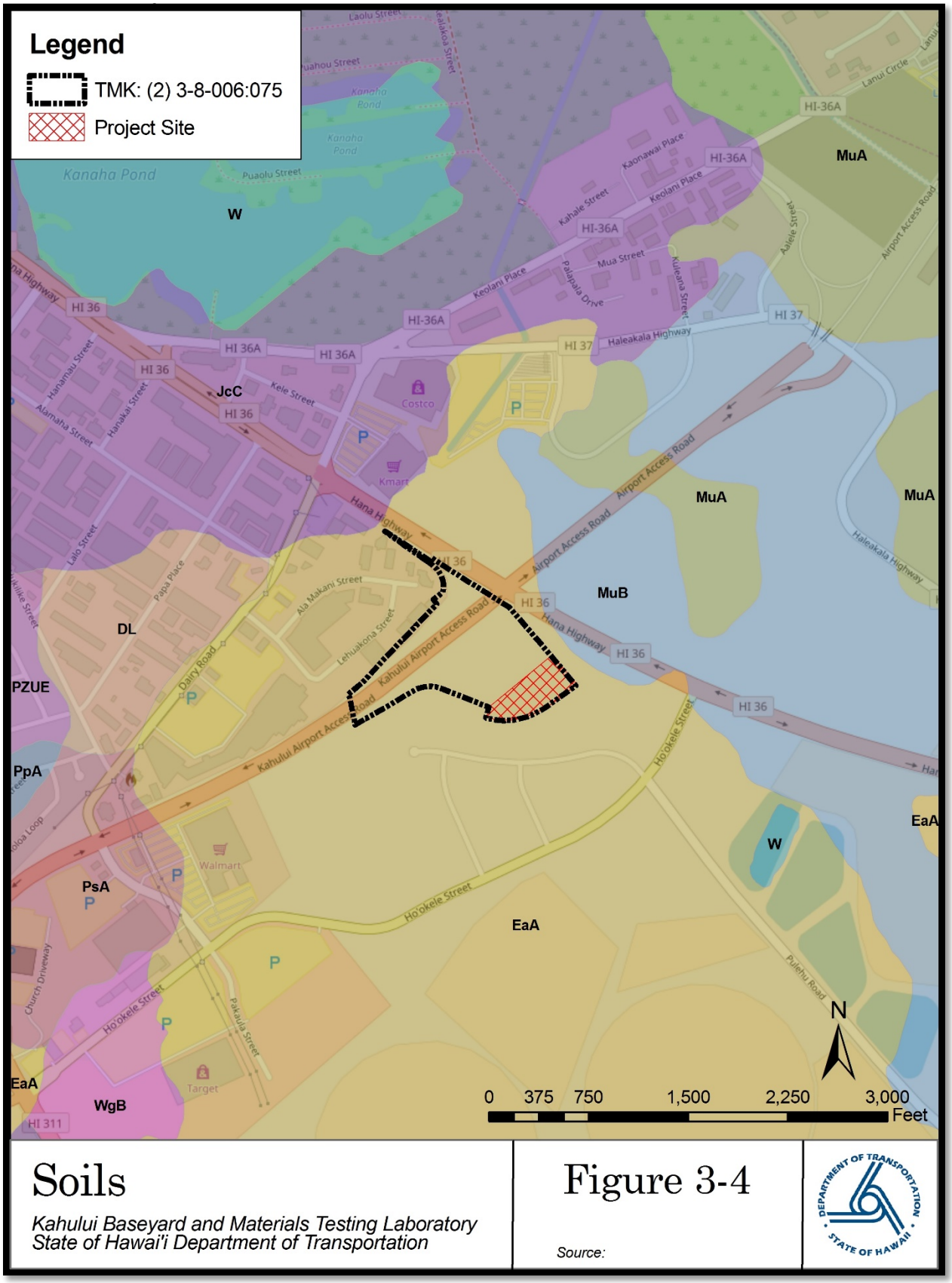


Geological Units

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 3-3

Source:



Soils

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 3-4

Source:

Minimization and Mitigation Measures

HDOT would obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for stormwater discharge associated with construction activities. As part of the permit process, HDOT would prepare a construction site Best Management Practices (BMP) plan that would include an erosion and sediment control plan, a site-specific plan to minimize erosion of soil and discharge of other pollutants into State waters, and descriptions of measures that would minimize the discharge of pollutants via stormwater after construction is complete. BMPs would be installed prior to ground-disturbing activities and would be inspected and maintained throughout the construction period.

HDOT would also obtain Grading and Grubbing Permits from the County of Maui Department of Public Works, Development Services Division. The contractor would be required to comply with the General Provisions for the permits, as well as the standard permit conditions.

3.4. Natural and Man-Made Hazards

Existing Conditions

Floods

Flood zones are geographic areas that the Federal Emergency Management Agency (FEMA) has defined according to varying levels of flood risk. Flood zones are depicted on Flood Insurance Rate Maps. As shown in **Figure 3-5**, the majority of the project area is located in Flood Zone X. Flood Zone X is the flood insurance rate zone that corresponds to areas outside the one percent annual chance floodplain (FEMA, 2016).

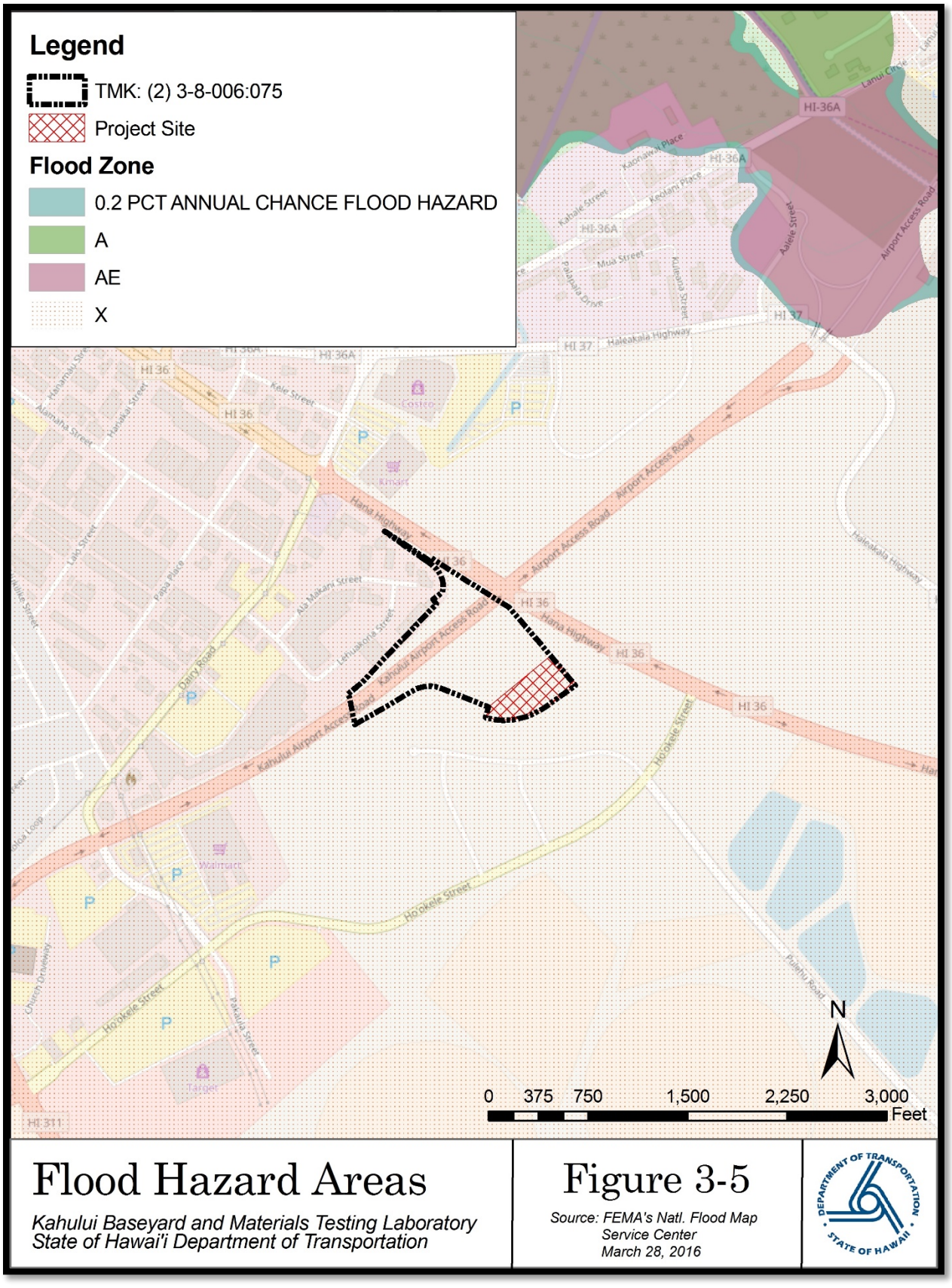
Earthquakes

As a series of islands formed by volcanoes, the Islands of Hawai'i are very seismically active. Most of the earthquakes in Hawai'i occur on the Big Island and are associated with volcanic activity. However, other earthquakes are caused by the weight of the Hawaiian Islands on the Pacific lithosphere.

As of October 18, 2017, the island of Maui had experienced 18 earthquakes in the past 365 days, with the largest earthquake having a 4.7 magnitude (Earthquake Track, 2017). Earthquakes on the island of Hawai'i and between the islands can sometimes be felt on Maui, as well.

Hurricanes and Tropical Storms

The Hawaiian Islands are seasonally affected by Pacific hurricanes from June through the November. On average, there are between four and five tropical cyclones observed in the Central Pacific every year. The state has been affected by significant hurricanes over the years. These include Hiki (1950), Nina (1957), Dot (1959), Iwa (1982), Iniki (1992), and Iselle (2014) (HNN, 2016a). In addition to damaging winds and heavy rains, hurricanes cause heavy surf and wave action that can damage beach areas. According to a report presented at the International Union of Conservation of Nature World Conservation Congress, global climate change could mean that Hawai'i may experience more frequent and more severe hurricanes in the future (HNN, 2016b).



Flood Hazard Areas

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 3-5

Source: FEMA's Natl. Flood Map Service Center
March 28, 2016

Tsunami

As shown in **Figure 3-6**, the project area is within the Tsunami Evacuation Zone. A tsunami involves the generation of a series of destructive ocean waves that can affect all shorelines. These waves can occur at any time with limited or no warning, and are most commonly generated by earthquakes in marine and coastal regions (NOAA, 2017).

Climate Change and Sea Level Rise

Climate change is currently considered a threat to all coastal areas. Over time, changes due to sea level rise are anticipated to erode beaches and cause damage to low-lying areas. Stronger storms and more severe flooding also have the possibility as sea levels continue to rise.

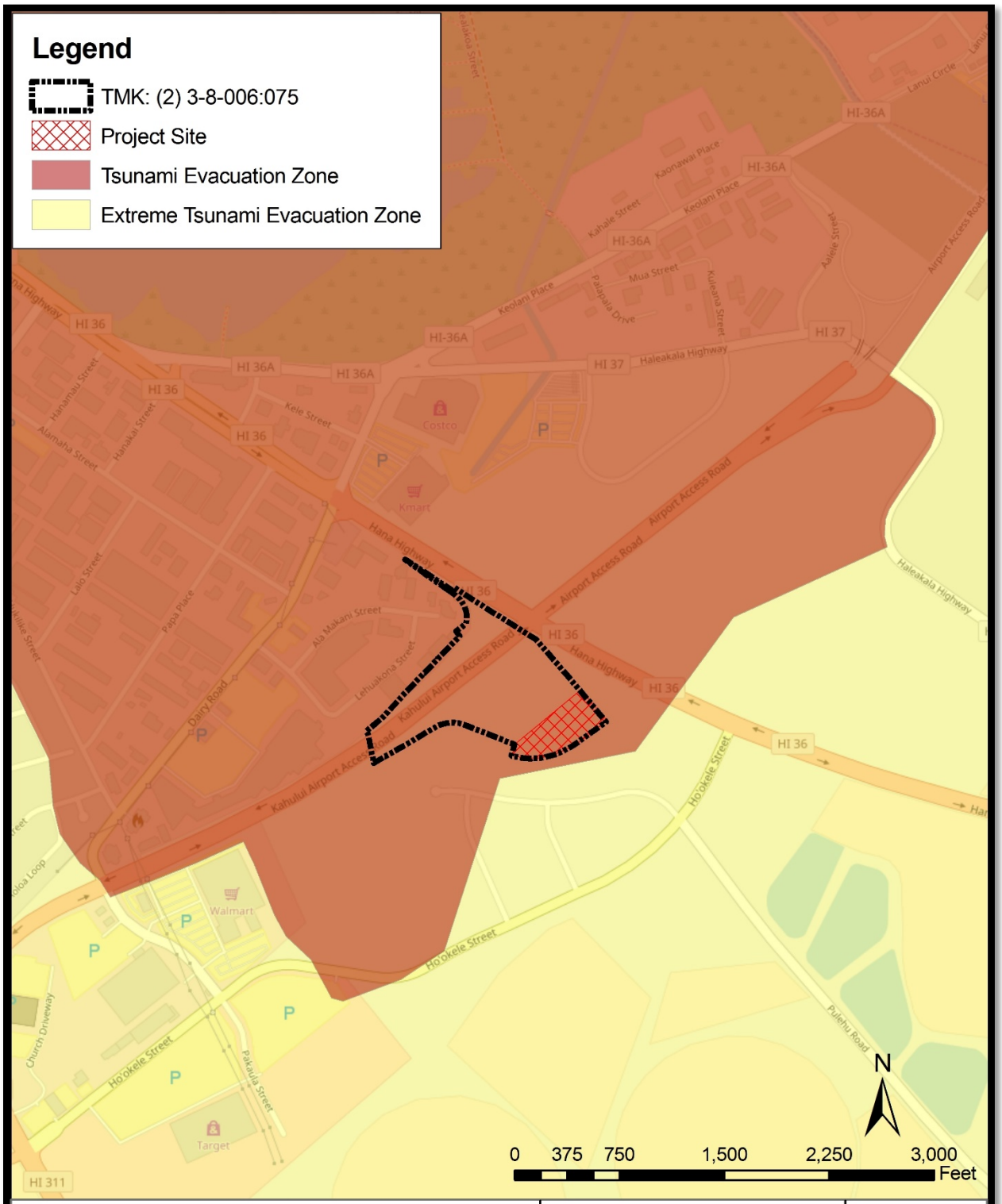
Planning for sea level rise is challenging as there are several changing and unknown factors. The U.S. Army Corps of Engineers (USACE) has developed tools and references for guidance. With regard to long-range planning, the USACE highlights the following:

> *The climate for which the project was designed can change over the full lifetime of a project to the extent that stability, maintenance, and operation may be impacted, possibly with serious consequences, but also potentially with beneficial consequences* (USACE, 2014a).

The USACE supports a SMART (S: Specific; M: Measurable; A: Attainable; R: Risk Informed; T: Timely) planning approach, which is risk-informed, decision-focused planning that integrates planning and engineering when assessing sea level rise. A method for calculating global sea level rise was advanced by the USACE in their publication, *Sea Level Change Considerations for Civil Works Programs* (EC1165-2-212, October 2011) (USACE, 2011).

For this EA, the USACE Sea Level Rise Calculator (USACE, 2014b) was utilized to provide sea level rise projections through 2100. In addition, future planning work by HDOT for other improvements beyond this design period will consider future additional data, trends, and projections that become available.

In addition to the USACE tools and references, there are also ongoing efforts at the State and County levels to evaluate changes that need to be made to current rules, regulations, and practice standards, with the ultimate goal of establishing a standard that can be implemented State-wide. The Interagency Climate Adaptation Committee (ICAC) is currently developing a Sea Level Rise Report to be completed by July 2018. The intent of this report is to serve as the framework for the State and the ICAC to address other climate-related threats and climate change adaptation priorities, ultimately leading to a Climate Adaptation Plan for the State of Hawai'i, which will be prepared by the State of Hawai'i Office of Planning (State of Hawai'i, 2016). The University of Hawai'i School of Ocean and Earth Science and Technology (UH SOEST) has also been studying sea level rise.



Tsunami Evacuation Zones

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 3-6

Source: Tsunami Evacuation Zone
County of Maui, 2013
Extreme Tsunami Evacuation Zone
County of Maui, 2016

Potential Impacts

Natural Hazards

Natural hazards cannot be controlled; rather, they can only be remediated for after the events occur. Construction of the materials testing laboratory and associated infrastructure would not create conditions that would exacerbate natural hazards. The Maui County Emergency Management Agency is responsible for administering and operating the various local, State, and Federal civil defense programs for the County. In the event of a hurricane or tsunami, watches and/or warnings are issued by the Central Pacific Hurricane Center and the Pacific Tsunami Warning Center, respectively. In the event of a hurricane or tsunami warning, construction would halt until such time as the warning is lifted and proper evacuation procedures would be followed.

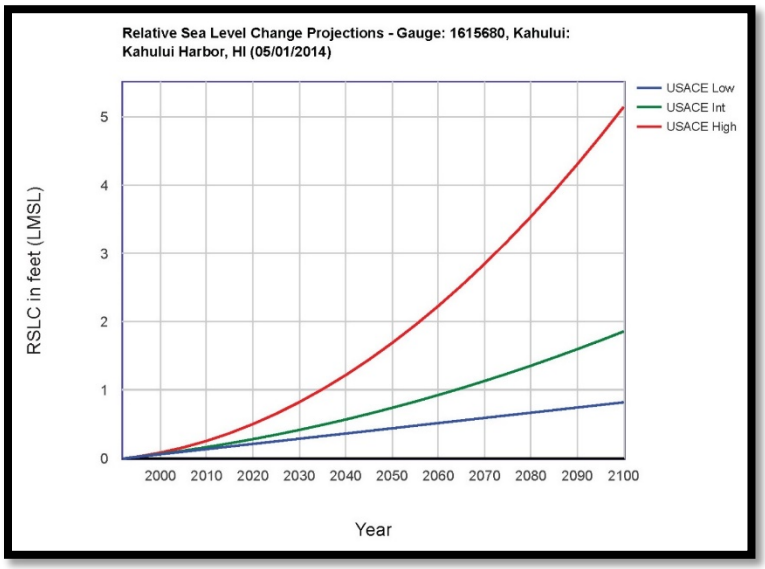
The Proposed Action would be designed to withstand the level of forces necessary to minimize the likelihood that an extreme event would damage the structure. The Proposed Action does not involve habitable uses nor will it encourage such uses. In the event of a hurricane warning, workers would follow civil defense instructions regarding evacuations. If a tsunami warning were to occur while workers are on-site, evacuation procedures would be followed to safely get out of the tsunami evacuation area and move Upcountry.

Under the No-Action Alternative, no construction would occur. The temporary baseyard would continue to operate at its current capacity, and workers would continue to listen to civil defense warnings and follow civil defense instructions during times of emergency.

Climate Change and Sea Level Rise

The project site is approximately 20 feet above msl. As shown in **Figure 3-7**, there could be approximately one to five feet of sea level rise at Kahului Harbor. Therefore, the project site is not expected to be directly affected by sea level rise with either the Proposed Action or the No-Action Alternative.

Figure 3-7. Sea Level Rise Projections, Kahului Harbor



Source: USACE Sea Level Rise Calculator

Minimization and Mitigation Measures

The design and construction of the Proposed Action would be in accordance with all applicable County of Maui building standards. No other minimization or mitigation measures are proposed or expected to be required.

3.5. Water Resources

Existing Conditions

Groundwater

The State of Hawai'i Department of Land and Natural Resources (DLNR) Commission on Water Resources Management (CWRM) has established a groundwater hydrologic unit and coding system for groundwater resource management. The project site is located within the Kahului Aquifer System (60301) of the Central Aquifer Sector and has an estimated yield of one million gallons per day.

Surface Waters and Wetlands

There are no surface waters or wetlands on the project site.

Potential Impacts

Construction of the Proposed Action would include grading and site preparation for the materials testing laboratory and infrastructure associated with the laboratory and field office trailers. Short-term construction activities may include minor soil loss and erosion. Grading and grubbing activities would be limited to the area which is necessary for construction of the materials testing laboratory and associated infrastructure to minimize erosion potential. Construction activities are not likely to introduce to, nor release from the soil any materials which could adversely affect groundwater. Dewatering activities are no anticipated for this project.

The Proposed Action would have no effects to surface waters and wetlands since there are none on or near the site. The Proposed Action is not expected to have adverse effects to groundwater.

Under the No-Action Alternative, no construction would occur and there would be no impacts to water resources during construction. The temporary baseyard would continue to operate at its current capacity.

Minimization and Mitigation Measures

HDOT would obtain coverage under the NPDES General Permit for stormwater discharge associated with construction activities. As part of the permit process, HDOT would prepare a construction site BMP plan that would include an erosion and sediment control plan, a site-specific plan to minimize erosion of soil and discharge of other pollutants into State waters, and descriptions of measures that would minimize the discharge of pollutants via stormwater after construction is complete. BMPs would be installed prior to ground-disturbing activities and would be inspected and maintained throughout the construction period.

HDOT would also obtain Grading and Grubbing Permits from the County of Maui Department of Public Works, Development Services Division. The contractor would be required to comply with the General Provisions for the permits, as well as the standard permit conditions.

In addition to the above permits, the Proposed Action would implement the following measures recommended by the County of Maui (COM) Department of Water Supply (DWS) during the pre-assessment consultation for the project to minimize infiltration and runoff during construction:

- Prevent cement products, oil, fuel, or other toxic substances from falling or leaching into the ground.
- Remove all construction debris and toxic substances daily to prevent entry into the ocean.
- Maintain vehicles and equipment to prevent oil or other fluids from leaking.
- Rinse concrete trucks and tools off-site.
- Properly install and maintain erosion control barriers, such as silt fencing or straw bales.
- Disturb the smallest area possible.
- Retain ground cover until the last possible date. Stabilize denuded areas by sodding or planting as soon as possible. Use high seeding rates to ensure rapid stand establishment. Apply biocides only during dry periods of low rainfall to minimize chemical runoff.
- Keep runoff on site.

3.6. Biological Resources

Existing Conditions

A biological resources assessment survey was conducted of the project site in May and April 2017. The results of the surveys indicated that the flora and fauna assemblages in the survey area are typical of those found in disturbed, low- to mid-elevation areas on Maui. No Federally listed threatened or endangered plant of animal species or proposed listed or candidate species were observed during the pedestrian surveys. The *Biological Resources Survey Report for Department of Transportation Baseyard Project, Kahului, Island of Maui* is provided in **Appendix B**.

The following sections provide more details about flora, fauna, and special status species identified at the project site.

Flora

A total of 55 plant species were recorded in the project area, of which only seven species are native to the Hawaiian Islands.

1. Pōpolo *(Solanum americanum)*
2. ʻuhaloa *(Waltheria indica)*
3. Kīpūkai *(Heliotropium curassavicum)*
4. ʻilima *(Sida fallax)*
5. Naupaka kahakai *(Scaevola taccada)*
6. Kou *(Cordia subcordata)*
7. Pōhinahina *(Vitex rotundifolia)*

All are indigenous plants that are common throughout the Hawaiian Islands.

Vegetation in the project area consists of two vegetation types: ruderal and landscaped. The ruderal vegetation type is found throughout most of the project site except in areas where native vegetation has been planted. Most of the plant species found in this vegetation type are non-natives adapted to

colonizing disturbed areas. Landscaped vegetation consists of native species, including ʻilima, naupaka kahakai, kou, and pōhinahina, which are all planted as landscaping around the perimeter of the project site.

Overall, the vegetation in the project area is disturbed from previous and current land use activities. The vegetation types and species identified are not considered unique, and over 87% of the plant species identified are non-native.

Fauna

A total of five birds were observed in and around the survey area, which includes the following:

1. Common myna *(Acridotheres tristis)*
2. Cattle egret *(Bubulcus ibis)*
3. Spotted dove *(Spilopelia chinensis)*
4. Zebra dove *(Geopelia striata)*
5. Chestnut munia *(Lonchura atricapilla)*

All of these species are non-native to Hawai'i, although the cattle egret is protected by the Migratory Bird Treaty Act (MBTA). Although not observed, the MBTA-protected Pacific golden plover *(Pluvialis fulva)* could also occur in the project area because there is appropriate foraging habitat.

One mammal, the non-native Asian mongoose *(Herpestes javanicus)* was observed in the project area. Axis deer *(Axis axis)* tracks were also observed. Other non-native mammals that could be expected in the project area include the dog *(Canus familiaris),* cat *(Felis catus),* feral pig *(Sus scrofa),* rat *(Rattus* spp.), and mouse *(Mus musculus).*

No terrestrial reptiles or amphibians were observed in the project area. There are no terrestrial reptiles or amphibians native to the Hawaiian Islands.

Native invertebrates were not detected in the project area. Non-native invertebrate species observed include butterflies, wasps and bees, spiders, and ants.

Special Status Species

Although the project area does not provide suitable habitat for the federally and state endangered Hawaiian petrel *(Pterodroma sandwichensis)* and the threatened Newell's shearwater *(Puffinus auricularis newelli)*, these seabirds may fly over the project area at night while travelling to and from their upland nesting sites to the ocean.

Although not observed during the pedestrian survey, the project area does provide suitable forage and roost habitat for the federally and state endangered Hawaiian hoary bat *(Lasiurus cinereus semotus).*

Potential Impacts

Construction of the Proposed Action is not expected to have a significant, adverse effect on flora resources due to the lack of special status or rare native species. Weedy, non-native plant species are common in the project area. Most of these species are widespread in Hawai'i, and their control is not expected to result in a significant decrease in their overall number or distribution. However, construction activities are known to spread invasive species to new areas through the movement of vehicles and materials. Through

the implementation of BMPs and the measures discussed below, it is not expected that construction of the Proposed Action would cause the spread of weedy, non-native species.

Construction of the Proposed Action may temporarily displace fauna species. However, construction would be short-term and temporary and fauna species are expected to be able to find suitable foraging habitat nearby.

Hawaiian seabirds are attracted to lights. After circling the lights, they may collide with nearby wires, buildings, or other structures, or they may land on the ground due to exhaustion. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Outdoor lighting during construction of the Proposed Action could result in seabird disorientation, fallout, and injury or mortality. It is not expected that there would be any nighttime construction or outdoor lighting. If nighttime construction is required, minimization and mitigation measures described below would be implemented. Therefore, construction of the Proposed Action is not expected to impact Hawaiian seabirds.

During construction of the Proposed Action, the Hawaiian hoary bat may be temporarily displaced from the project area. Hawaiian hoary bats forage in open, wooded, and linear habitats with a wide range of vegetation types. They typically roost in trees greater than 16-feet-tall with dense canopy foliage or in the subcanopy when the canopy is sparse and there is open access for launching into flight. Hawaiian hoary bats have been documented roosting in similar structures as the kou tree in the landscaped vegetation type in the survey area. The Hawaiian hoary bat may also forage in the project area. Direct impacts could occur during vegetation removal if a juvenile bat that is too small to fly but too large to be carried by a parent is present in a tree or branch that is cut down. To prevent direct impacts to Hawaiian hoary bats during construction, the minimization and mitigation measures described below would be implemented.

Upon completion of construction, the primary potential impact that the Proposed Action poses is to Hawaiian seabirds that may become disoriented by new exterior lighting. To minimize potential impacts to Hawaiian seabirds, minimization and mitigation measures would be implemented, as described below.

Under the No-Action Alternative, no construction would occur. Therefore, there would be no impacts to biological resources. The baseyard would continue to operate as its current capacity, and no additional impacts to biological resources would be expected.

Minimization and Mitigation Measures

The following measures would be implemented to minimize the unintentional introduction or transport of new terrestrial invasive species to Maui:

- All construction equipment and vehicles arriving from outside Maui would be washed and inspected before entering the project area.
- Construction materials arriving from outside of Maui would be washed and/or visually inspected, as appropriate, for excessive debris, plant materials, and invasive or harmful non-native species, including plants, amphibians, reptiles, and insects.
- Inspection and cleaning activities would be conducted at a designated location. The inspector would be a qualified botanist and/or entomologist that is able to identify invasive species that are of concern relevant to the point of origin of the equipment, vehicle, or material.

- When possible, raw materials (e.g., fill and construction materials) would be purchased from a local supplier on Maui to avoid introducing non-native species not present on the island.
- If landscaping occurs, native Hawaiian plants or non-invasive plants would be used to the maximum extent possible. If native plants do not meet landscaping objectives, plants with a low risk of becoming invasive may be substituted.

The following measures would be implemented to minimize potential impacts to Hawaiian seabirds:

- Construction activity would be restricted to daylight hours as much as practicable during the seabird breeding season (April through November) to avoid the use of nighttime lighting that could attract seabirds.
- All outdoor lights would be shielded to prevent upward radiation.
- Outside lights that are not needed for security and safety would be turned off from dusk through dawn during the fledgling fallout period (September 15 through December 15).

To minimize impacts to the Hawaiian hoary bat, the following measures would be implemented:

- No trees taller than 15 feet would be trimmed or removed between June 1 and September 15 when flightless juvenile bats may be roosting.
- Any fences that are erected as part of the project would have a barbless top-strand to prevent entanglements of the Hawaiian hoary bat on barbed wire.

3.7. Cultural and Historic Resources

Existing Conditions

Cultural Practices and Traditional Uses

A Cultural Impact Assessment was prepared for the project in accordance with the Guidelines for Assessing Cultural Impacts (OEQC, 1997). Letters of inquiry were sent to 35 individuals and organizations that may have knowledge or information pertaining to the collection of cultural resources and/or traditional cultural practices currently or previously conducted in the vicinity of the project area. Five individuals responded with only one having concerns about the Proposed Action.

The project site is located in an area rich with traditional and customary practices during the pre-Contact and early historic eras. However, based on historical research and the responses to the letter of inquiry, it is reasonable to conclude that there is no evidence of cultural practices related to Hawaiian rights, including gathering, access, or other customary activities currently occurring at the site or in the immediate vicinity.

The Cultural Impact Assessment Report is provided in **Appendix C**.

Archaeological and Historic Resources

Numerous archaeological investigations have been conducted over the past 20 years along and in the vicinity of the project area. In the archaeological investigations conducted as part of the Kahului Airport Master Plan efforts, no archaeological or historic resources were found on or in the vicinity of the project site (Munekito & Hiraga, Inc., 2012).

Potential Impacts

Cultural Practices and Traditional Uses

As previously stated, the findings of the Cultural Impact Assessment indicate that the project area has not been used for traditional cultural purposes within recent times. In addition, no "valued cultural, historic, or natural resources" have been identified within or near the project area. Therefore, there would be no impacts to cultural practices and traditional uses during construction or operation of the Proposed Action or under the No-Action Alternative.

Archaeological and Historic Resources

The project site has been previously disturbed during its use as a staging area for the Airport Access Road extension and the placement of the temporary field trailers that currently occupy the site. Therefore, it is unlikely that construction of the Proposed Action would have adverse impacts to archaeological and historic resources. However, it is possible that subsurface historic resources may be encountered during ground-disturbing activities associated with the construction of the materials testing laboratory and the septic system.

Upon completion of construction, operation of the Proposed Action would not involve ground disturbing activities; therefore, there would be impact to archaeological and historic resources.

Under the No-Action Alternative, no construction would occur. Therefore, there would be no impacts to archaeological and historic resources.

Minimization and Mitigation Measures

No minimization or mitigation measures are proposed for cultural practices and traditional uses since there would be no impacts.

In the unlikely event that subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sinkholes are identified during the demolition and/or construction work, all work shall be ceased in the immediate vicinity of the find, the find would be protected from additional disturbance, and SHPD would be notified.

3.8. Socioeconomic Characteristics

Existing Conditions

The Wailuku-Kahului area is the economic and population center of the island. The region's economic character encompasses a broad range of commercial, service, industrial, residential, and government activities. The residential areas of Kahului contain a diverse mix of residents from all income classes and ethnic groups. In addition, the region is surrounded by large agricultural acreages which include former sugar cane fields. The 2030 socioeconomic forecast suggests that the Wailuku-Kahului area will grow faster than other parts of the island as former sugar cane fields are developed into residential subdivisions (County of Maui Department of Planning, 2012).

Potential Impacts

Construction of the Proposed Action would result in temporary, positive economic activity in the form of construction jobs and materials procurements.

The Proposed Action would not change the use of the area and does not have the potential to create changes to land use in the surrounding area or affect growth of the surrounding population. Therefore, the Proposed Action would have no impacts to the socioeconomic environment.

The No-Action Alternative would have no impact on area demographics or economic conditions. The field offices would continue to operate under existing conditions. Therefore, the No-Action Alternative would have no impacts to the socioeconomic environment.

Minimization and Mitigation Measures

No minimization or mitigation measures are proposed or expected to be required.

3.9. Public Facilities and Services

Existing Conditions

Parks and Recreation Areas

The project site is located in a commercial, industrial, and agricultural area. There are no parks or recreation areas in the immediate vicinity of the site.

Medical Facilities

The nearest medical facility to the project site is Minit Medical Urgent Care located at 270 Dairy Road, Suite 239, approximately 0.6 mile from the project site. Other walk-in clinics and their distance from the project site include the following:

- Maui Medical Group, 110 East Kaahumanu Avenue (approximately 1.7 miles)
- Pacific Medical Group, 95 Lono Avenue (approximately 2.1 miles)

The Maui Memorial Medical Center (MMMC) is located approximately 3.6 miles west of the project site at 221 Mahalani Street. MMMC is a full-service hospital with 24-hour emergency care.

Emergency Services

Police

Police protection services are provided by the Maui Police Department (MPD). The Proposed Action is located in District I, the Wailuku Patrol District. It is served by the Wailuku Police Station located at 55 Mahalani Street in Wailuku, approximately 2.8 miles from the project site.

Fire and Emergency Medical Service

Fire protection and emergency medical services are provided by the County of Maui Department of Fire and Public Safety, and the project site is served by the Kahului Fire Station located at 200 Dairy Road approximately 2.0 miles from the project site.

Potential Impacts

Parks and Recreation Areas

The Proposed Action and the No-Action Alternative would have no impact to parks and recreation areas since there are none in the vicinity of the project site.

Medical Facilities and Emergency Services

No significant impacts are expected to medical facility and emergency services during construction and operation of the Proposed Action. Although it is likely that the Proposed Action would require the occasional police and fire protection and medical services, it would not be an increase over the existing conditions and would not represent a significant amount relative to the overall regional demand. The Proposed Action would be designed and built in compliance with the applicable County fire code requirements.

Minimization and Mitigation Measures

No minimization or mitigation measures are proposed or expected to be required.

3.10. Utilities

Existing Conditions

Potable Water

There are no water lines that go to the site. Water at the site is currently provided by an on-site water tank that is refilled as necessary.

Wastewater

There is no wastewater infrastructure at the project site. Wastewater is currently being contained in plastic above-ground septic holding tanks. These tanks are emptied by a vacuum truck as needed.

Electric

Electric service at the project site is provided by the Maui Electric Company (MECO).

Solid Waste

Solid waste at the project site is currently handled through a rented dumpster. The dumpster is emptied by a solid waste contractor and the waste is taken to the Central Maui Landfill in Puunene.

Potential Impacts

Potable Water

As previously stated, there are no water lines at the project site. Therefore, construction of the Proposed Action would have no impacts to potable water infrastructure. During construction, water would be required primarily for dust control. However, non-potable water could be used for this purpose. If non-potable water is used, there would be no impact to potable water during construction of the Proposed Action.

Upon the completion of construction, the DWS projects a water demand from the Proposed Action of approximately 21,600 gallons per day. Water would continue to be supplied via an on-site water tank that would be refilled as necessary.

Under the No-Action Alternative, there would be no construction. The temporary baseyard would continue to operate at its current capacity and the potable water demand would remain the same as under current conditions.

Wastewater

As previously stated, there is no wastewater infrastructure at the project site. Therefore, construction of the Proposed Action would have no impacts to wastewater infrastructure. Portable toilets may be installed during construction to supplement the existing toilets in the temporary trailers.

Upon completion of construction, the Proposed Action would include a septic tank and leach field that would replace the existing plastic above-ground septic holding tanks. All wastewater plans would conform to applicable provisions of HAR 11-62, Wastewater Systems, and Maui County Code Chapters 14-23, Construction Standards, and 14-27, Private Wastewater Disposal Systems.

Under the No-Action Alternative, there would be no construction. The temporary baseyard would continue to operate at its current capacity and utilize the plastic above-ground septic holding tanks.

Electric

During construction of the Proposed Action, HDOT would coordinate with MECO to ensure that electrical lines are not adversely impacted and that electric service would not be interrupted to adjacent areas. Therefore, construction of the Proposed Action is not expected to impact the electric utility.

The Proposed Action would require electrical service to the new materials testing laboratory. All electrical plans and establishment of service would comply with MECO's Engineering Specifications and Standards and the Maui Electric Rules.

Under the No-Action Alternative, there would be no construction. Electricity to the existing temporary field office trailers would continue to be supplied by MECO with no change in use.

Solid Waste Disposal

Construction of the Proposed Action would result in the generation of small amounts of construction and demolition debris. The Central Maui Landfill handles construction waste in accordance with applicable DOH regulations. No hazardous waste is expected from construction of the Proposed Action.

The Proposed Action would continue to utilize a rented dumpster to handle daily solid waste. Hazardous waste produced from the materials testing laboratory, if any, would be disposed of at an appropriate location as per the COM Department of Environmental Management, Solid Waste Division, and in compliance with the applicable provisions of HAR 11-260.1 – 11-279.1, Hazardous Waste Management.

Under the No-Action Alternative, there would be no construction. The temporary baseyard would continue to operate at its current capacity and produce the same amount of solid waste as current operations.

Minimization and Mitigation Measures

The following measure is proposed to minimize impacts to utilities:

- Use recycled water from the Kahului Wastewater Treatment Plant for dust control to reduce potable water demand for the project.

3.11. Transportation and Traffic

Existing Transportation System

The closest major road to the Baseyard is Hana Highway. Hāna Highway is a four-lane divided highway near the project site. HDOT has published traffic data from 2015 for Hāna Highway near the project site, which is provided in **Table 3-3**.

Table 3-3. Hana Highway Traffic (2015)

	Total	To Kaupakulua Road	To Ka'ahumanu Avenue
24-hour total volume	43,900	---	---
AM Peak Hour (7:00 am – 8:00 am)	3,700	1,000	2,700
PM Peak Hour (3:00 pm – 4:00 pm)	3,700	2,400	1,300

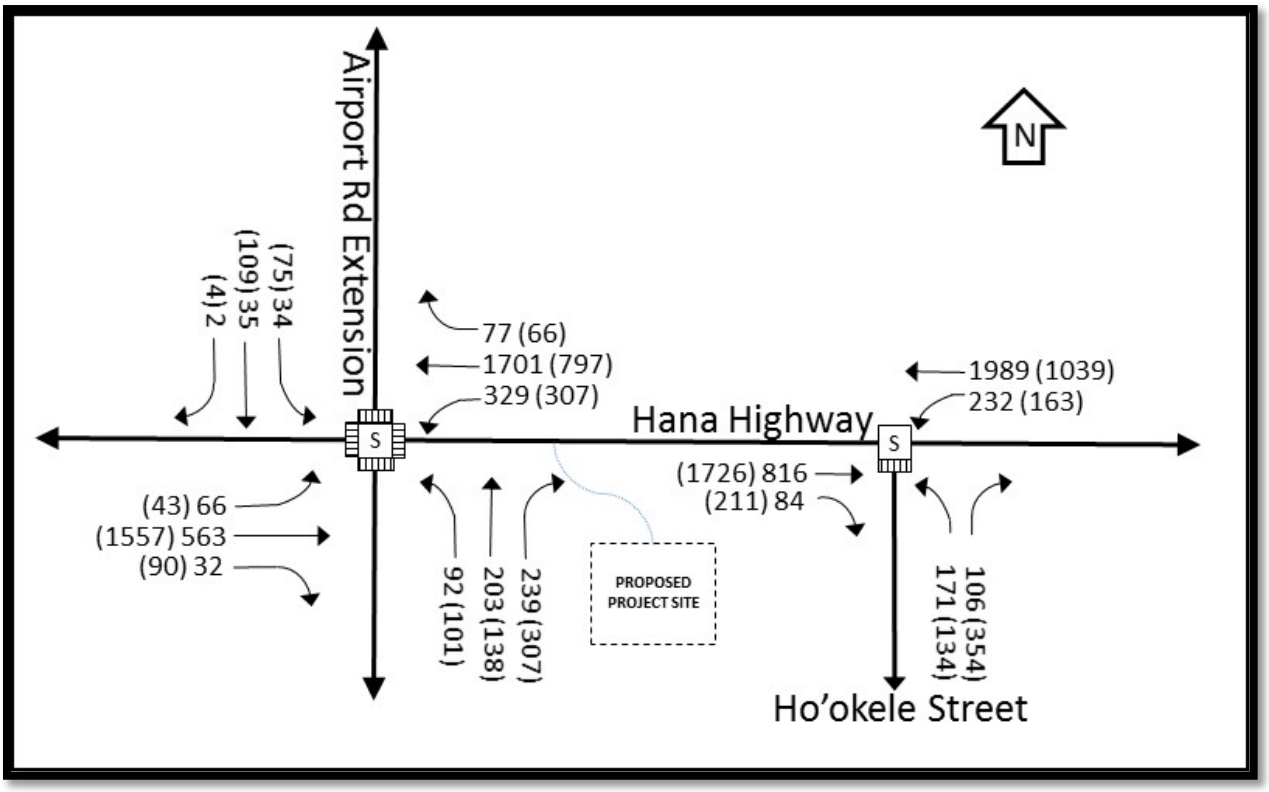
Source: HDOT, 2015

There is an unnamed site access road that leads about 350 feet from Hāna Highway to the project driveway that was formerly the western end of Pūlehu Road. The unnamed site access road is a two-lane local dead end road that only connects Hāna Highway to the Project site. It is paved and approximately 30 feet wide. The access road beyond the site driveway is blocked with a concrete barrier. The only users of the site access road are employees and visitors to the baseyard.

Prior to 2011, Pūlehu Street was the only intersection with Hāna Highway between Dairy Road and Haleakalā Highway. In 2014, Ho'okele Street was connected to Hāna Highway and the Pūlehu Road intersection with Hāna Highway was downgraded to discourage public use. In 2016, the Airport Access Road extension was built and formed another intersection with Hāna Highway about 400 feet west of the point where the site access road intersects Hāna Highway.

Intersection traffic counts were taken in 2017 at the intersection of Hāna Highway and Airport Access Road and the intersection of Hāna Highway and Ho'okele Street. Counts were taken during the morning peak hour (7:10 am – 8:10 am) and afternoon peak hour (4:15 pm – 5:15 pm). Turn volumes at these intersections are shown in **Figure 3-8**.

Figure 3-8. 2017 Peak Hour Turn Volumes – AM(PM)



Potential Impacts

During construction, there is the potential for traffic impacts due to the movement of construction workers, equipment, and materials. Due to the limited scope of the Proposed Action, increases in traffic would be short-term and minor.

Upon completion of construction, the only expected traffic to and from the Proposed Action would consist of trips from an estimated 11 employees and up to two deliveries a day. The Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* (ITE, 2017) publishes average trip general rates from hundreds of different land uses, each having numerous studies of sites nationwide. ITE Land Use 110, General Light Industrial[1], was used to estimate the number of trips expected from the Proposed Action. **Table 3-4** provides the estimated number of trips associated with the Proposed Action. The complete traffic assessment report is included as **Appendix D**.

[1] ITE definition of Land Use Code 110 General Light Industrial: "… a free standing facility devoted to single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing …"

Table 3-4. Estimated Trips Associated with the Proposed Action

	Average Trip Generation per Employee	Estimated Trips for 11 Employees
AM Peak Hour	0.52 trips/hour (83% in/17% out)	6 (5 in/1 out)
PM Peak Hour	0.49 trips/hour (22% in/78% out)	5 (1 in/4 out)
Weekday	3.05 trips/day	34 trips/day

Based on the estimated 34 trips per day from 11 employees, traffic impacts to Hāna Highway from the Proposed Action would be almost non-existent.

Under the No-Action Alternative, there would be no construction. The temporary baseyard would continue to operate at its current capacity and produce the same amount of traffic as current operations.

Minimization and Mitigation Measures

The following measures are proposed to minimize impacts to the transportation system and traffic:

- The contractor would be required to keep all construction vehicles in proper operating condition and ensure that all loads are properly secured to prevent dust, debris, leakage, or other adverse conditions from affecting public roadways.
- Deliveries of construction materials would be scheduled to avoid peak traffic, as practicable.
- Traffic exiting the site access road would be restricted to right turns onto Hāna Highway.

3.12. Visual Resources

Existing Scenic and Visual Environment

The project site is located at the southwest corner of Airport Access Road and Hāna Highway in Kahului on the island of Maui. The area is predominantly industrial, commercial, and agricultural. Scenic resources in the vicinity of the project site include views of Haleakāla Volcano and the West Maui Mountains. Open space resources in the vicinity of the project site include fallow sugarcane fields.

Potential Impacts

No unique scenic resources would be impacted by construction and operation of the Proposed Action.

Construction of the Proposed Action would introduce construction equipment and activity to the intersection of Airport Access Road and Hāna Highway. The project site is currently an industrial site and was previously used as a staging area for construction of Airport Access Road; therefore, construction activities would be consistent with the existing conditions of the area. Therefore, impacts to the existing scenic and visual environment during construction would be less than significant.

Upon completion of construction, there would be an additional building at the site. This building would be a one-story building of approximately 480 square feet and would be located adjacent to the existing field office trailers. The new structure would be consistent with the existing buildings on the site; therefore, impacts to the existing scenic and visual environment during construction would be less than significant.

Under the No-Action Alternative, no construction would occur. Therefore, there would be no impacts to visual resources. The baseyard would continue to operate as its current capacity, and no additional impacts to visual resources would be expected.

Minimization and Mitigation Measures

The design and construction of the Proposed Action would be in accordance with all applicable COM building standards. No other minimization or mitigation measures are proposed or expected to be required.

3.13. Irretrievable and Irreversible Commitment of Resources

Implementation of the Proposed Action would not result in the irretrievable and irreversible commitment of resources other than the financial resources, fuel, land, and other consumable materials required for construction. Development of the Proposed Action would involve the commitment of State-owned land for use as a baseyard and materials testing laboratory, which is considered appropriate as it is currently being utilized as a temporary baseyard with field offices. The expansion and continuation of this use will continue and expand upon HDOT's capabilities to ensure that materials incorporated into highway construction projects conform substantially to requirements of the plans and specifications of Title 23, CFR, Part 637, Subpart B, which prescribes policies, procedures, and guidelines to assure the quality of materials and construction in all Federal-aid highway projects on the National Highway System.

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4. RELATIONSHIP TO STATE AND COUNTY LAND USE PLANS AND POLICIES

4.1. State Planning Documents

The Hawai'i State Plan

The Hawai'i State Plan, codified as HRS Chapter 226, provides goals, objectives, policies, and priorities for the State. The Hawai'i State Plan also provides a basis for determining priorities, allocating limited resource, and improving coordination of State and County plans, policies, programs, projects, and regulatory activities. It establishes a set of themes, goals, objectives, and policies that are meant to guide the State's long-range growth and development activities. The Proposed Action is consistent with the following applicable objectives and policies of the Hawai'i State Plan:

Section 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 Hawai'i's land-based, shoreline, and marine resources.
(2) Effective protection of Hawai'i's unique and fragile environmental resources.
(b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:
(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.
(8) Pursue compatible relationships among activities, facilities, and natural resources.

Discussion: The Proposed Action includes the construction and operation of a materials testing laboratory and the permanent operation of the existing temporary field office. The Proposed Action is an industrial land use and the project site is located on a parcel zoned LI, Light Industrial.

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

(a) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawai'i's scenic assets, natural beauty, and multi-cultural/historical resources.
(b) To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of the State to:
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.

Discussion: The Proposed Action is located at the currently undeveloped southwest corner of Airport Access Road and Hāna Highway. Views in the area include those of Haleakāla Volcano, the West Maui Mountains, and former sugar cane fields. The Proposed Action would be designed and constructed as per Maui County Code Chapter 16.26B, Building Codes. A Building Permit would be obtained from the COM Department of Public Works – Development Services Administration prior to construction.

Section 226-14. *Objective and policies for facility systems – in general.*

(a) Planning for the State's facility systems in general whall be directed towards the achievement of the objective of water, transportation, waste disposal, and energy and telecommunications systems that support statewide social, economic, and physical objectives.
(b) To achieve the general facility systems objective, it shall be the policy of this State to:
(1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.

Discussion: The Proposed Action includes the construction and operation of a materials testing laboratory and the permanent operation of the existing temporary field office, which will support existing and future HDOT operations on Maui, including maintenance of existing facilities and construction of new facilities

Section 226-15. *Objectives and policies for facility systems – solid and liquid wastes.*

(c) Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate her problems in housing, employment, mobility, and other areas.
(d) To achieve solid and liquid waste objectives, it shall be the policy of this State to:
(1) Encourage the adequate development of sewerage facilities that complement planned growth.

Discussion: The Proposed Action includes the replacement of the temporary plastic above-ground septic holding tanks with a permanent in-ground septic tank and leaching field to accommodate the permanent facility.

Section 226-16. *Objectives and policies for facility systems – water.*

(a) Planning for the State's facility systems with regard to water shall be directed towards the achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.
(b) To achieve the facility systems water objective, it shall be the policy of this State to:
(1) Coordinate development of land use activities with existing and potential water supply.
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.

Discussion: The Proposed Action would continue to have potable water supplied to an on-site water tank that would be refilled as necessary. It is not expected that a water line would be installed to the project site.

In an effort to promote water conservation, it is recommended that non-potable water be used during construction for dust control. Non-potable water is available from the Kahului Wastewater Treatment Plant.

Section 226-17. *Objectives and policies for facility systems – transportation.*

(a) Planning for the State's facility systems with regard to transportation shall be directed towards the following objectives:
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the state.
(b) To achieve the transportation objectives, it shall be the policy of this State to:
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;
(4) Provide for improved accessibility to shipping, docking, and storage facilities;

Discussion: The Proposed Action would support existing and future HDOT operations on Maui, including maintenance of existing facilities and construction of new facilities by creating a permanent baseyard and materials testing laboratory on the island of Maui.

Section 226-23. *Objective and policies for socio-cultural advancement – leisure.*

(a) Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.
(b) To achieve the leisure objective, it shall be the policy of this State to:
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.

Discussion: The Proposed Action would support existing and future HDOT operations on Maui, including maintenance of existing facilities and construction of new facilities by creating a permanent baseyard and materials testing laboratory on the island of Maui. Recreational experiences would be heightened with improved roadway facilities on Maui.

Section 226-27. *Objective and policies for socio-cultural advancement – government.*

(a) Planning for the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:
(1) Efficient, effective, and responsive government services at all levels in the State.
(2) Fiscal integrity responsibility, and efficiency in the state government and county governments.
(b) To achieve the government objectives, it shall be the policy of this State to:
(1) Provide for necessary public goods and services not assumed by the private sector.

Discussion: The Proposed Action would support existing and future HDOT operations on Maui, including maintenance of existing facilities and construction of new facilities by creating a permanent baseyard and materials testing laboratory on the island of Maui.

Section 226-109. *Climate change adaptation priority guidelines.*

Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:

(1) Ensure that Hawai'i's people are educated, informed, and aware of the impacts climate change may have on their communities;

(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;

(3) Invest in continued monitoring and research of Hawai'i's climate and the impacts of climate change on the State;

(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;

(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;

(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;

(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;

(8) Foster cross-jurisdictional collaboration between County, State, and Federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;

(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and

(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.

Discussion: HDOT supports the Hawai'i State Plan Climate Change Adaption Priority Guidelines and acknowledges the importance of planning for potential impacts. Full support and participation will be provided towards ongoing efforts to better understand, plan, and ultimately adapt to Hawai'i's changing climate.

The following themes of Part I of the Hawai'i State Plan are not applicable to the Proposed Action for the following reasons:

- ***Section 226-5.*** *Objective and policies for population:* The Proposed Action would not result in population growth.
- ***Section 226-6.*** *Objectives and policies for the economy – in general:* The Proposed Action would not result in increased and diversified employment opportunities other than the temporary construction jobs.

- ***Section 226-7.*** *Objectives and policies for the economy – agriculture:* The Proposed Action is not an agricultural project.
- ***Section 226-8.*** *Objective and policies for the economy – visitor industry:* The Proposed Action does not involve the visitor industry.
- ***Section 226-9.*** *Objective and policies for the economy – federal expenditures:* The Proposed Action does not include the use of federal funds.
- ***Section 226-10.*** *Objective and policies for the economy – potential growth and innovative activities:* The Proposed Action does not include opportunities for investment or employment growth.
- ***Section 226-10.5.*** *Objective and policies for the economy – information industry:* The Proposed Action does not include nor impact telecommunications or information technology resources.
- ***Section 226-13.*** *Objectives and policies for the physical environment – land, air, and water quality:* The Proposed Action does not involve actions to improve the existing quality of Hawai'i's land, air, and water quality; however, the appropriate BMPs and additional measures to minimize impacts to land, air, and water quality would be implemented as appropriate during construction and operation of the Proposed Action.
- ***Section 226-18.*** *Objective and policies for facility systems – energy.* The Proposed Action does not include new energy facility systems.
- ***Section 226-18.5.*** *Objective and policies for facility systems – telecommunications.* The Proposed Action does not include new telecommunication facilities.
- ***Section 226-19.*** *Objectives and policies for socio-cultural advancement – housing.* The Proposed Action does not include development of housing.
- ***Section 226-20.*** *Objectives and policies for socio-cultural advancement – health.* The Proposed Action does not include health facilities or services.
- ***Section 226-21.*** *Objectives and policies for socio-cultural advancement – education.* The Proposed Action does not include educational programs or facilities.
- ***Section 226-22.*** *Objectives and policies for socio-cultural advancement – social services.* The Proposed Action does not include social services or activities.
- ***Section 226-24.*** *Objectives and policies for socio-cultural advancement – individual rights and personal well-being.* The Proposed Action would have no impact to personal rights and personal well-being.
- ***Section 226-25.*** *Objectives and policies for socio-cultural advancement – culture.* The Proposed Action would have no impacts to cultural identities, traditions, values, customs, and arts of Hawai'i's people.
- ***Section 226-26.*** *Objectives and policies for socio-cultural advancement – public safety.* The Proposed Action would have no impact on public safety programs.

The themes of Part II of the Hawai'i State Plan are not applicable to the Proposed Action since the Proposed Action does not involve the preparation of planning documents.

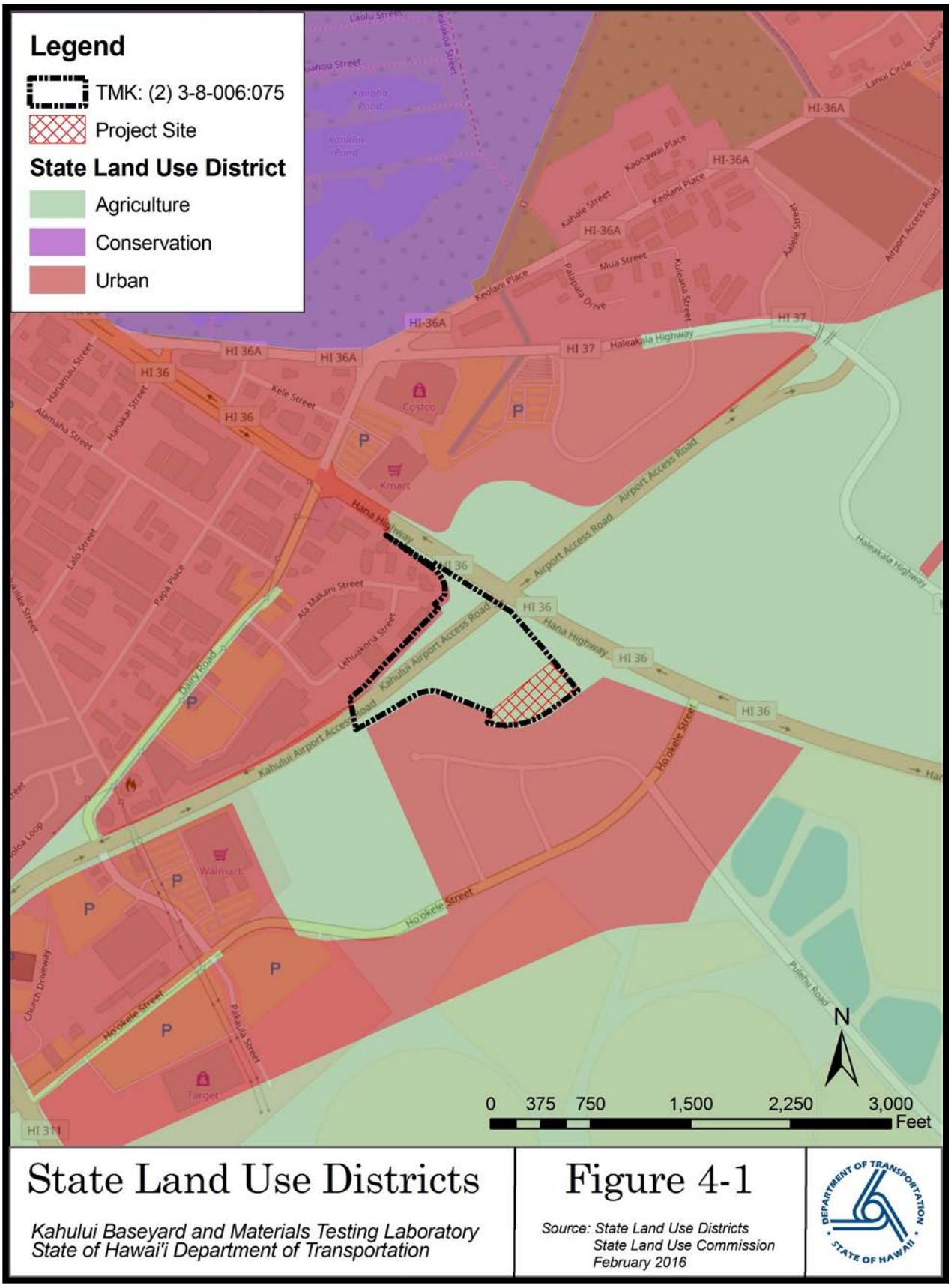
The following themes of Part III of the Hawai'i State Plan are not applicable to the Proposed Action for the following reasons:

- ***Section 226-103.*** *Economic priority guidelines.* The Proposed Action would not provide investment capital for new and expanding enterprises. The Proposed Action would have no impact on the visitor industry, agricultural industry, water use and development, energy use and development, or the information industry.
- ***Section 226-104.*** *Population growth and land resources priority guidelines.* The Proposed Action would not result in population growth nor any change in land use.
- ***Section 226-105.*** *Crime and criminal justice.* The Proposed Action does not involve the criminal justice system.
- ***Section 226-106.*** *Affordable housing.* The Proposed Action would not provide housing.
- ***Section 226-107.*** *Quality education.* The Proposed Action would have no impact on education opportunities or facilities.
- ***Section 226-108.*** *Sustainability.* The Proposed Action would have no impact on sustainability programs.

State Land Use Law

Hawai'i was the first of the fifty States to have a State Land Use Law and a State Plan. Today, Hawai'i remains unique among the fifty states with respect to the extent of control that the state exercises in land use regulation. The state has four classifications: Agricultural, Conservation, Rural, and Urban. The State Land Use Law HRS, Chapter 205 initially set the boundaries for the four classifications: Urban, Agricultural, Conservation, and Rural.

Discussion: **Figure 4-1** identifies the project site as located in the Agriculture state land use district. Although the Agriculture land use district is generally limited to uses associated with agriculture or renewable energy, the project site has been used as a construction staging area and HDOT field office for years. Additionally, as shown in **Figure 4-2** in **Section 4.2**, the project site is zone LI, Light Industrial. A discussion of the LI zone is provided in **Section 4.2**.



State Land Use Districts

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 4-1

Source: State Land Use Districts
State Land Use Commission
February 2016

4.2. County of Maui Planning Documents

Maui Island Plan, General Plan 2030

The *Maui Island Plan General Plan 2030* (Maui Island Plan) was adopted in December 2012. The Maui Island Plan provides for a recommended path for the County's development. The Proposed Action is consistent with the following applicable objectives and policies of the Maui Island Plan:

Cultural, Historical, and Archaeological Resources Issues

GOAL

2.1 Our community respects and protects archaeological and cultural resources while perpetuating diverse cultural identities and traditions.

OBJECTIVE

2.3 Enhance the island's historic, archaeological, and cultural resources.

POLICY

2.1.3.c Support regulations to require developers, when appropriate, to prepare an Archaeological Inventory Survey, Cultural Impact Assessment, and Ethnographic Inventories that are reviewed and commented upon by the Office of Hawaiian Affairs, Native Hawaiian advisory bodies, the State Historic Preservation Division (SHPD), and the Office of Environmental Quality Control, and systematically comply with the steps listed in SHPD's administrative rules, including consultation and monitoring during construction phases of the projects.

Discussion: The Draft EA has been prepared in accordance with Act 50 and HAR Chapter 6E regarding cultural and historic/archaeological resources, respectively. The Draft EA will be distributed to agencies and area libraries for a 30-day review period.

Watersheds, Streams, and Wetlands Issues

GOAL

2.3 Healthy watersheds, streams, and riparian environments

OBJECTIVE

2.3.2 Decreased NPS and point source pollution

POLICY

2.3.2.a Enforce water pollution related standards and codes.

Discussion: HDOT would obtain coverage under the NPDES General Permit for stormwater discharge associated with construction activities. As part of the permit process, HDOT would prepare a construction site BMP plan that would include an erosion and sediment control plan, a site-specific plan to minimize erosion of soil and discharge of other pollutants into State waters, and descriptions of measures that would minimize the discharge of pollutants via stormwater after construction is complete. BMPs would

be installed prior to ground-disturbing activities and would be inspected and maintained throughout the construction period.

HDOT would also obtain Grading and Grubbing Permits from the County of Maui Department of Public Works, Development Services Division. The contractor would be required to comply with the General Provisions for the permits, as well as the standard permit conditions.

In addition to the above permits, the Proposed Action would implement the following measures recommended by the COM DWS during the pre-assessment consultation for the project to minimize infiltration and runoff during construction:

- Prevent cement products, oil, fuel, or other toxic substances from falling or leaching into the ground.
- Remove all construction debris and toxic substances daily to prevent entry into the ocean.
- Maintain vehicles and equipment to prevent oil or other fluids from leaking.
- Rinse concrete trucks and tools off-site.
- Properly install and maintain erosion control barriers, such as silt fencing or straw bales.
- Disturb the smallest area possible.
- Retain ground cover until the last possible date. Stabilize denuded areas by sodding or planting as soon as possible. Use high seeding rates to ensure rapid stand establishment. Apply biocides only during dry periods of low rainfall to minimize chemical runoff.
- Keep runoff on site.

Wastewater

GOAL

6.2 Maui will have wastewater systems that comply with or exceed State and Federal regulations; meet levels-of-service needs; provide adequate capacity to accommodate projected demand; ensure efficient, effective, and environmentally sensitive operation; and maximize wastewater reuse where feasible.

OBJECTIVE

6.2.2 Adequate levels of wastewater service with minimal environmental impacts.

POLICY

6.2.2.a Meet or exceed all State and Federal standards regulating wastewater disposal or reuse.

Discussion: The Proposed Action includes construction of a septic tank and leach field that would replace the existing plastic above-ground septic holding tanks. All wastewater plans would conform to applicable provisions of HAR 11-62, Wastewater Systems and Maui County Code Chapters 14-23, Construction Standards, and 14-27, Private Wastewater Disposal Systems.

Transportation

GOAL

6.4 An interconnected, efficient, and well-maintained, multi-modal transportation system.

OBJECTIVE

6.4.2 Safe, interconnected transit, roadway, bicycle, equestrian, and pedestrian network.

POLICY

6.4.2.d Identify and improve hazardous and substandard sections of roadways, drainage infrastructure, and bridges, provided that the historical integrity of the roads and bridges are protected.

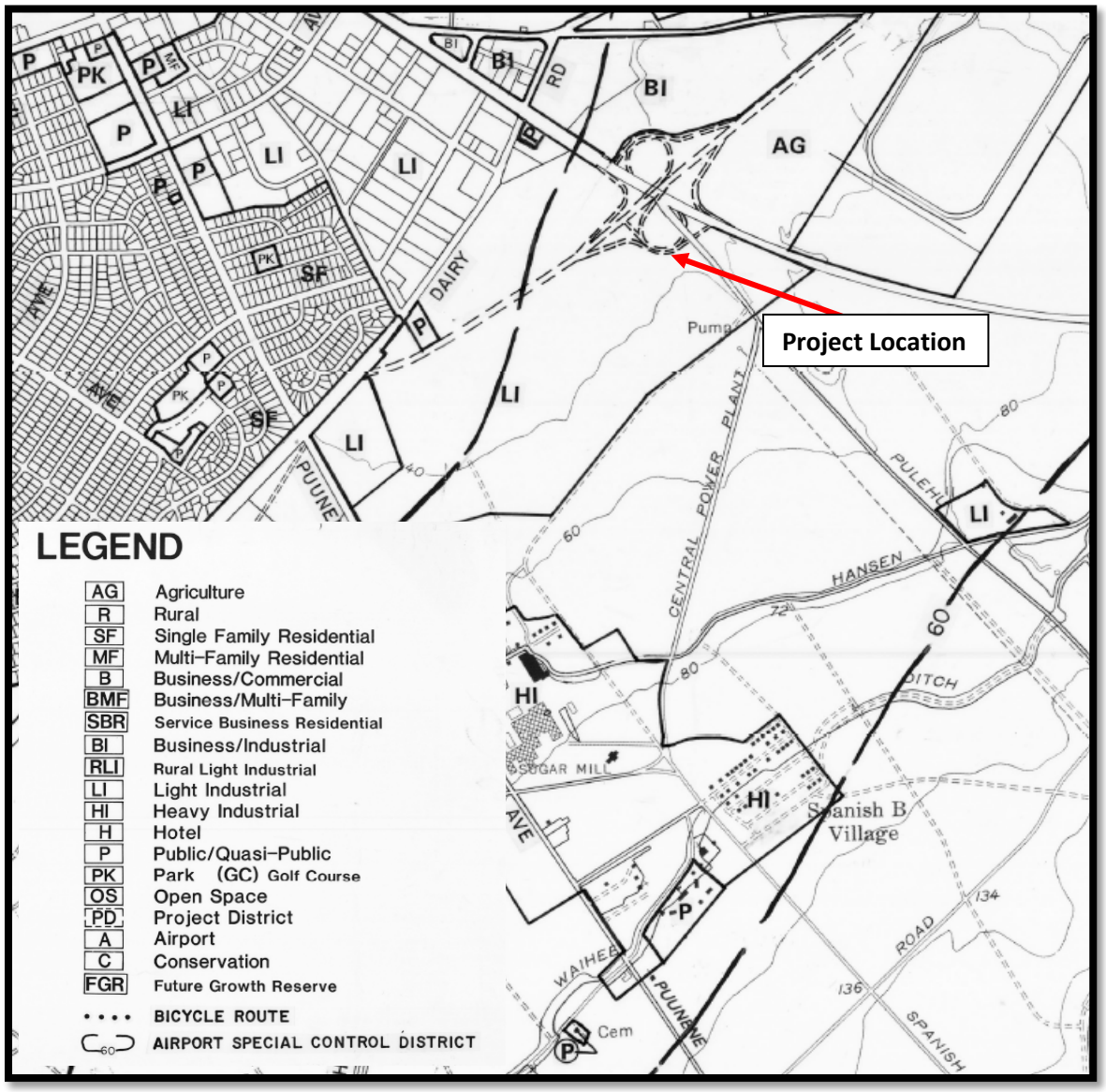
Discussion: The Proposed Action would establish a permanent field office and materials testing laboratory in Kahului on the island of Maui. The materials testing laboratory would test roadway materials to ensure that they conform substantially to requirements of 23 CFR 637B and the District. Materials would be tested during both new roadway construction and maintenance of existing roadways to ensure that roadways are safe.

Wailuku-Kahului Community Plan

The *Wailuku-Kahului Community Plan* (Maui County Council, 2002) reflects the conditions of the Wailuku-Kahului region at the time of its writing, as well as the anticipated conditions in the region. The *Wailuku-Kahului Community Plan* provides specific recommendations to address the goals, objectives, and policies contained in the General Plan. The *Wailuku-Kahului Community Plan* is currently being updated to be consistent with the Maui Island Plan, which was updated and adopted in 2012.

As per the current *Wailuku-Kahului Community Plan,* the Proposed Action is located in an area designated LI (Light Industrial) (see **Figure 4-2**). The LI zone is designated for warehousing, light assembly, service, and craft-type industrial operations. It is expected that the updated *Wailuku-Kahului Community Plan* would maintain the LI designation for the subject parcel. Therefore, the Proposed Action is consistent with the *Wailuku-Kahului Community Plan*.

Figure 4-2. Wailuku-Kahului Community Plan Land Use Designations



Source: County of Maui Planning Commission, 2010

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5. FINDINGS AND CONCLUSIONS

5.1. Significance Criteria

HAR 11-200 provides significance criteria for which all projects in Hawai'i are assessed. These significance criteria and their relationship to the Proposed Action are as follows:

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

Construction of the Proposed Action may temporarily displace fauna species. However, construction would be short-term and temporary and fauna species are expected to be able to find suitable foraging habitat nearby. Upon completion of construction, the primary potential impact that the Proposed Action poses is to Hawaiian seabirds that may become disoriented by new exterior lighting. To minimize potential impacts to Hawaiian seabirds, minimization and mitigation measures would be implemented, as described in **Section 3.6**.

No known cultural resources are located on the site. In the unlikely event that subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sinkholes are identified during the demolition and/or construction work, all work shall be ceased in the immediate vicinity of the find, the find would be protected from additional disturbance, and SHPD would be notified.

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

There would be no change to the current or potential land use within the project area with implementation of the Proposed Action.

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

The Proposed Action would not conflict with the State's long-term environmental policies. BMPs would be implemented during construction to minimize impacts associated with ground-disturbance. In addition, resource specific measures would be implemented to minimize impacts associated with construction and operation of the Proposed Action.

(4) Substantially affects the economic, social welfare, or cultural practices of the community or State.

The Proposed Action would not change the use of the area and does not have the potential to create changes to land use in the surrounding area or affect growth of the surrounding population. Therefore, the Proposed Action would have no adverse social or economic impacts. No "valued cultural, historic, or natural resources" have been identified within or near the project area. Therefore, the Proposed Action would have no adverse impacts to cultural practices of the community.

(5) Substantially affects public health.

The Proposed Action would have some temporary, minor impacts on air, noise, and water quality during construction; however, these impacts would be minimized to the extent practicable by the employment of BMPs and compliance with permit conditions. The Proposed Action would not result in any post-construction or long-term effects on public health.

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

The Proposed Action would not alter the existing land use pattern; therefore, there would be no secondary impacts, such as population changes or effects on public facilities.

(7) Involves a substantial degradation of environmental quality.

Other than short-term construction impacts, the Proposed Action would not result in impacts that can be expected to degrade the environmental quality in the project area.

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

The Proposed Action is a standalone project and would have no cumulative impacts or commitments for larger actions. The Proposed Action would support the ongoing operations of HDOT as they pertain to road construction and maintenance.

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

During construction of the Proposed Action, there may be short-term and temporary impacts to the Hawaiian hoary bat and seabirds. During operation of the Proposed Action, outside nighttime lighting may affect seabirds. With the implementation of the following measures, the Proposed Action would not substantially affect rare, threatened, or endangered species or their habitat.

To minimize impacts to the Hawaiian hoary bat, the following measures would be implemented:

- No trees taller than 15 feet would be trimmed or removed between June 1 and September 15 when flightless juvenile bats may be roosting.
- Any fences that are erected as part of the project would have a barbless top-strand to prevent entanglements of the Hawaiian hoary bat on barbed wire.

The following measures would be implemented to minimize potential impacts to Hawaiian seabirds:

- Construction activity would be restricted to daylight hours as much as practicable during the seabird breeding season (April through November) to avoid the use of nighttime lighting that could attract seabirds.
- All outdoor lights would be shielded to prevent upward radiation.
- Outside lights that are not needed for security and safety would be turned off from dusk through dawn during the fledgling fallout period (September 15 through December 15).

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

Only short-term construction-related impacts to air quality are anticipated with implementation of the Proposed Action. During construction, potential emission sources that may affect air quality at the project site include the following:

- Diesel and/or gasoline-powered construction equipment and motor vehicles would contribute to additional CO and CO_2 in the air.
- Fugitive dust emissions resulting from construction of the materials testing laboratory.

A dust control plan, to be approved by the DOH, would be developed and implemented to minimize fugitive dust during construction. The plan would include some or all of the following measures:

- Watering of active work areas
- Screening piles of materials from wind, if appropriate
- Cleaning nearby paved roads affected by construction
- Covering open trucks carrying construction materials
- Limiting areas to be disturbed at any given time
- Mulching or chemically stabilizing inactive areas that have been disturbed

Additionally, contractors would be required to maintain equipment with emissions controls.

Construction of the Proposed Action would include grading and site preparation for the materials testing laboratory and infrastructure associated with the laboratory and field office trailers. Short-term construction activities may include minor soil loss and erosion. Grading and grubbing activities would be limited to the area which is necessary for construction of the materials testing laboratory and associated infrastructure to minimize erosion potential. Construction activities are not likely to introduce to, nor release from the soil any materials which could adversely affect groundwater.

HDOT would obtain coverage under the NPDES General Permit for stormwater discharge associated with construction activities. As part of the permit process, HDOT would prepare a construction site BMP plan that would include an erosion and sediment control plan, a site-specific plan to minimize erosion of soil and discharge of other pollutants into State waters, and descriptions of measures that would minimize the discharge of pollutants via stormwater after construction is complete. BMPs would be installed prior to ground-disturbing activities and would be inspected and maintained throughout the construction period.

HDOT would also obtain Grading and Grubbing Permits from the County of Maui Department of Public Works, Development Services Division. The contractor would be required to comply with the General Provisions for the permits, as well as the standard permit conditions.

In addition to the above permits, the Proposed Action would implement the following measures recommended by the COM-DWS during the pre-assessment consultation for the project to minimize infiltration and runoff during construction:

- Prevent cement products, oil, fuel, or other toxic substances from falling or leaching into the ground.
- Remove all construction debris and toxic substances daily to prevent entry into the ocean.
- Maintain vehicles and equipment to prevent oil or other fluids from leaking.
- Rinse concrete trucks and tools off-site.
- Properly install and maintain erosion control barriers, such as silt fencing or straw bales.
- Disturb the smallest area possible.
- Retain ground cover until the last possible date. Stabilize denuded areas by sodding or planting as soon as possible. Use high seeding rates to ensure rapid stand establishment. Apply biocides only during dry periods of low rainfall to minimize chemical runoff.
- Keep runoff on site.

Noise would be generated during construction by construction equipment used to build the materials testing lab. Noise generation would be short-term and limited to the project area. Noise generated from construction activities and the use of machinery would be minimized by requiring contractors to adhere to state and county noise regulations. Construction activities would be conducted on weekdays and in daytime hours. The construction contractor would be required to obtain a Community Noise Permit from the DOH Indoor and Radiological Health Branch. In the event that work occurs after normal working hours (i.e., at night or on weekends), or if permissible noise levels are exceeded, the construction contractor would be required to obtain a Community Noise Variance and comply with any permit conditions.

(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 Action is not located within a floodplain, on the beach, in an erosion-prone area, on geologically hazardous land, or near an estuary, fresh water, or coastal waters. However, it is located within the tsunami evacuation zone. The Proposed Action would be designed to withstand the level of forces necessary to minimize the likelihood that an extreme event would damage the structure. The Proposed Action does not involve habitable uses nor will it encourage such uses. In the event of a hurricane warning, workers would follow civil defense instructions regarding evacuations. If a tsunami warning were to occur while workers are on-site, evacuation procedures would be followed to safely get out of the tsunami evacuation area and move Upcountry.

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

The project site is located at the southwest corner of Airport Access Road and Hāna Highway in Kahului on the island of Maui. The area is predominantly industrial, commercial, and agricultural. Scenic resources in the vicinity of the project site include views of Haleakāla Volcano and the West Maui Mountains. Open space resources in the vicinity of the project site include fallow sugarcane fields.

The Proposed Action includes construction of a new building at the site. This building would be a one-story building of approximately 480 square feet and would be located adjacent to the existing field office trailers. The new structure would be consistent with the existing buildings on the site. Therefore, the Proposed Action would not substantially affect scenic vistas or viewplanes.

(13)Requires substantial energy consumption.

The Proposed Action would not consume a substantial amount of energy.

Construction activities would result in a short-term increase in power demand, but the increase would be of short duration and would cease upon project completion. In the long term, the baseyard and materials testing laboratory would save energy by providing a more convenient starting point for road construction and maintenance in the region.

5.2. Anticipated Finding of No Significant Impact

Based on the significance criteria set forth in HAR 11-200 and discussed in **Section 5.1**, it is anticipated that the Proposed Action would not have a significant effect on the environment and that a Finding of No

Significant Impact (FONSI) will be filed with the State of Hawai‘i Office of Environmental Quality Control following the public comment period.

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6. AGENCIES AND ORGANIZATIONS CONSULTED

6.1. Pre-Assessment Consultation

The following agencies and organizations were consulted during the preparation of the Draft EA. Those who formally replied are indicated by an asterisk (*). All written comments received during the early consultation period of the Draft EA and responses are included in **Appendix A**.

State of Hawai'i

- Department of Business, Economic Development & Tourism
- Office of Planning *
- Department of Health (DOH), Clean Water Branch *
- DOH, Environmental Planning Office *
- DOH, Clean Air Branch
- DOH, Indoor and Radiological Health Branch *
- Department of Accounting and General Services *
- Department of Land and Natural Resources (DLNR), Division of Aquatic Resources
- DLNR, Division of Forestry and Wildlife
- DLNR, Division of State Parks
- DLNR, Engineering Division *
- DLNR, State Historic Preservation Division
- DLNR, Land Division
- DLNR, Land Division – Maui District *

County of Maui

- Department of Transportation
- Planning Department *
- Department of Public Works
- Department of Parks and Recreation *
- Police Department *
- Department of Fire and Public Safety
- Department of Water Supply *
- Department of Environmental Management

Organizations

- Maui Electric Company
- Hawaiian Telcom
- Spectrum Cable

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7. LIST OF CONTRIBUTORS

Table 7-1 identifies the personnel that contributed to the completion of this Draft EA.

Table 7-1. Contributors to the Environmental Assessment

Name	Role
SSFM International, Inc.	
Jennifer M. Scheffel	Project Manager and Primary Author
Susan LeBrun	Sr. Traffic Engineer, Traffic Impact Assessment
Clarice Masaki	Engineer, Traffic Impact Assessment
SWCA Environmental Consultants	
Jaap Eijzenga	QA/QC, Biological Resources Reconnaissance Report
Francis Quitazol	Field Lead and Primary Author, Biological Resources Reconnaissance Report
Scientific Consultant Services, Inc.	
Cathleen Dagher	Senior Archaeologist, Cultural Impact Assessment

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8. REFERENCES

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Appendix A

Pre-Assessment Consultation Letters and Responses

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ALAN M. ARAKAWA
MAYOR

OUR REFERENCE

YOUR REFERENCE

POLICE DEPARTMENT
COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411

TIVOLI S. FAAUMU
CHIEF OF POLICE

DEAN M. RICKARD
DEPUTY CHIEF OF POLICE

September 7, 2017

Ms. Jennifer M. Scheffel
Sr. Environmental Planner
SSFM International, Inc.
501 Summer Street, Suite 620
Honolulu, Hawaii 96817

Dear Ms. Scheffel:

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawaii
TMK: (2) 3-8-006:075
Pre-Assessment Consultation for Draft Environmental Assessment

This is in response to your letter dated August 28, 2017, requesting comments on the above subject.

There are no objections to the proposed project, from the police standpoint, in regards to pedestrian and vehicular movement. This project will not affect the flow of pedestrian or vehicle traffic.

Thank you for giving us the opportunity to comment on this project.

Sincerely,

Assistant Chief John Jakubczak
for: TIVOLI S. FAAUMU
Chief of Police

SSFM International

March 9, 2018

SSFM 2015_034.004

John Jakubczak, Assistant Chief
County of Maui Police Department
55 Mahalani Street
Wailuku, HI 96793

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawai'i
Tax Map Key (TMK): (2) 3-8-006:075
Response to Pre-Assessment Consultation Comments for
Draft Environmental Assessment

Dear Assistant Chief Jakubczak,

Thank you for your letter dated September 7, 2017 regarding the subject project. We note that the County of Maui Police Department does not have any objections to the proposed project and does not believe that the project will affect the flow of pedestrian or vehicle traffic.

Your September 7th letter, along with this response, will be included in the Draft Environmental Assessment. We appreciate your participation in the pre-assessment consultation review process.

Should you have any additional comments or questions regarding the proposed project, please contact me at (808) 356-1273 or via email at jscheffel@ssfm.com.

SSFM INTERNATIONAL, INC.

Jennifer M. Scheffel
Sr. Environmental Planner

DAVID Y. IGE
GOVERNOR OF HAWAII

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

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:
EMD/CWB

09004PST.17

September 6, 2017

Ms. Jennifer M. Scheffel
Sr. Environmental Planner
SSFM
501 Summer Street, Suite 620
Honolulu, Hawaii 96817

Dear Ms. Scheffel:

SUBJECT: Comments on the Pre-Assessment Consultation for Environmental Assessment (EA) for the Paia Relief Route, Federal Aid Project No. STP-036-1(11), Paia, Island of Maui, Hawaii TMKs: (2) 2-5-004:036, (2) 2-5-005:0018, 025, & (2) 2-5-006:018

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated August 28, 2017, requesting comments on the subject project. The DOH-CWB has reviewed the document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. The State of Hawaii, Department of Transportation may be responsible for fulfilling additional requirements related to our program. We recommend that they also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. The Applicant may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

   For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for an NPDES individual permit must be submitted at least 180 calendar days before

the commencement of the discharge. To request NPDES permit coverage, the Applicant must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee ($1,000 for an individual NPDES permit or $500 for a Notice of General Permit Coverage). The Applicant can open the e-Permitting Portal website located at: https://eha-cloud.doh.hawaii.gov/epermit/. They will be asked to do a one-time registration to obtain their login and password. After they register, they can click on the Application Finder tool and locate the appropriate form. They can then follow the instructions to complete and submit the form.

3. If the Applicant's project involves work in, over, or under waters of the United States, it is highly recommended that they contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

   Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:

   a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological

bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g., minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.

c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.

d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.

e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: http://health.hawaii.gov/cwb, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

Alec Wong

ALEC WONG, P.E., CHIEF
Clean Water Branch

c: DOH-EPO [via e-mail Noella.Narimatsu@doh.hawaii.gov only]

SSFM International

March 9, 2018 SSFM 2015_034.004

Mr. Alec Wong, P.E., Chief
State of Hawaii Department of Health
Clean Water Branch
PO Box 3378
Honolulu, HI 96801-3378

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawai'i
Tax Map Key (TMK): (2) 3-8-006:075
Response to Pre-Assessment Consultation Comments for
Draft Environmental Assessment

Dear Mr. Wong,

Thank you for your letter dated September 6, 2017 (File No. 09004PST.17) and duplicate letter dated September 28, 2017 (File No. 09031PMHK.17) regarding the subject project. The Draft Environmental Assessment (EA) will include an adequate review of the standard comments provided on the Department of Health's website. We offer the following responses to your additional comments:

1. The proposed project will be designed in compliance with the applicable Administrative Rules of the Department of Health (DOH), including Chapters 11-54 and 11-55.
2. National Pollutant Discharge Elimination System and related permits will be identified and addressed in the Draft EA.
3. The proposed project will not involve work in, over, or under waters of the U.S.; therefore, a Department of the Army Section 404 permit and Section 401 Water Quality Certification are not required.
4. Discharges associated with the proposed project will comply with the applicable Water Quality Standards contained in the Administrative Rules of the DOH, including Chapters 11-54 and 11-55.
5. The project will be designed to be consistent with the State's position regarding sustaining water quality and beneficial uses of State waters.
   a. The Draft EA will include a discussion on storm water.
   b. The Draft EA will include a discussion on water quality and the beneficial uses of State waters. The project will be designed to minimize impacts on natural resources and water quality.
   c. The project does not include landscaping or associated irrigation.
   d. Green building practices will be considered during project design. The project does not include landscaping or associated irrigation.
   e. A discussion of the existing storm water infrastructure on the site, which includes a retention basin adjacent to Airport Access Road, will be included in the Draft EA.

March 9, 2018

Your September 6th and September 28th letters, along with this response, will be included in the Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Should you have any additional comments or questions regarding the proposed project, please contact me at (808) 356-1273 or via email at jscheffel@ssfm.com.

SSFM INTERNATIONAL, INC.

Jennifer M. Scheffel
Sr. Environmental Planner

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DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
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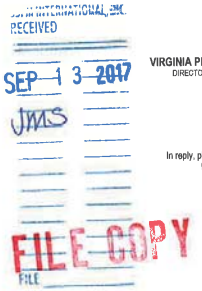
In reply, please refer to:
File:



September 11, 2017

Ms. Jennifer M. Scheffel
SSFM International, Inc.
501 Sumner Street, Suite 680
Honolulu, HI 96817

Dear Ms. Scheffel:

Thank you for your submittal requesting comments to the Pre-Assessment Consultation for Draft Environmental Assessment for the Kahului Baseyard Project, Kahului, Island of Maui, Hawaii, Tax Map Key (TMK): (2) 3-8-006:075.

Project activities shall comply with the following Administrative Rules of the Department of Health:

- Chapter 11-46 Community Noise Control

Should you have any questions, please contact me at (808) 586-4700.

Sincerely,

Jeffrey M. Eckerd
Program Manager
Indoor and Radiological Health Branch

SSFM International

March 9, 2018

SSFM 2015_034.004

Mr. Jeffrey M. Eckerd, Program Manager
State of Hawaii Department of Health
Indoor and Radiological Health Branch
PO Box 3378
Honolulu, HI 96801-3378

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawai'i
Tax Map Key (TMK): (2) 3-8-006:075
Response to Pre-Assessment Consultation Comments for
Draft Environmental Assessment

Dear Mr. Eckerd,

Thank you for your letter dated September 11, 2017 regarding the subject project. Project activities will comply with Hawaii Administrative Rules Chapter 11-46, Community Noise Control.

Your September 11th letter, along with this response, will be included in the Draft Environmental Assessment. We appreciate your participation in the pre-assessment consultation review process.

Should you have any additional comments or questions regarding the proposed project, please contact me at (808) 356-1273 or via email at jscheffel@ssfm.com.

SSFM INTERNATIONAL, INC.

Jennifer M. Scheffel
Sr. Environmental Planner

ALAN M. ARAKAWA
Mayor

KA'ALA BUENCONSEJO
Director

BRIANNE L. SAVAGE
Deputy Director

DEPARTMENT OF PARKS & RECREATION
700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

(808) 270-7230
FAX (808) 270-7934

September 11, 2017

Ms. Jennifer M. Scheffel
Sr. Environmental Planner
SSFM International
501 Sumner Street, Suite 620
Honolulu, HI 96817

Dear Ms. Scheffel:

SUBJECT: KAHULUI BASEYARD PROJECT, KAHULUI, ISLAND OF MAUI, HAWAII, TAX MAP KEY (TMK): (2) 3-8-006:075, PRE-ASSESSMENT CONSULTATION FOR DRAFT ENVIRONMENTAL ASSESSMENT

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Kahului Baseyard Project. The Department of Parks and Recreation has no comments on the proposed action at this time, and look forward to reviewing future documents as they develop.

Feel free to contact me, or Cheryl Akiona, Chief of Planning and Development, TA at 270-7388 or Cheryl.Akiona@co.maui.hi.us, should you have any questions.

Sincerely,

KA`ALA BUENCONSJO
Director of Parks & Recreation

c: Cheryl Akiona, Chief of Planning and Development, TA

KB:CA:do

SSFM International

March 9, 2018

SSFM 2015_034.004

Ms. Ka'ala Buenconsjo, Director
County of Maui
Department of Parks and Recreation
700 Hali'a Nakoa Street, Unit 2
Wailuku, HI 96793

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawai'i
Tax Map Key (TMK): (2) 3-8-006:075
Response to Pre-Assessment Consultation Comments for
Draft Environmental Assessment

Dear Ms. Buenconsjo,

Thank you for your letter dated September 11, 2017 regarding the subject project. We note that the County of Maui Department of Parks and Recreation has no comments on the proposed action at this time. We will provide a copy of the Draft Environmental Assessment for your review upon publication.

Your September 11th letter, along with this response, will be included in the Draft Environmental Assessment. We appreciate your participation in the pre-assessment consultation review process.

Should you have any additional comments or questions regarding the proposed project, please contact me at (808) 356-1273 or via email at jscheffel@ssfm.com.

SSFM INTERNATIONAL, INC.

Jennifer M. Scheffel
Sr. Environmental Planner

ALAN M. ARAKAWA
Mayor

DAVID TAYLOR, P.E.
Director

GLADYS C.BAISA
Deputy Director

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
www.mauiwater.org

September 13, 2017

Jennifer M. Scheffel, Sr. Environmental Planner
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Re: Pre-Consultation for a Draft Environmental Assessment (DEA) on the Kahului Baseyard Project
TMKs: (2) 3-8-006:075

Dear Ms. Scheffel,

Thank you for the opportunity to comment on the Kahului Baseyard Project.

Source Availability and System Infrastructure
The project overlies the Kahului Aquifer on Hana Highway and Airport Access Road and will include the construction of a baseyard and materials testing laboratory. The laboratory should maintain laboratory procedures, management, employee training and record keeping in compliance with EPA requirements and maintain certification with a program such as the American Association of State Highway and Transportation Officials (AASHTO). Best Management Practices (BMPs) for materials handling, storage and waste are attached.

The EA should include the source of potable and non-potable water to the proposed project. The Department of Water Supply maintains a 12-inch water line within approximately 175 feet of the project TMK and the nearest fire hydrant to the same TMK is approximately 175 feet. Maui Business Park Phase II Water System, a private system, also provides water service in the newly developed surrounding area.

The Department of Water Supply projects 21,600 gallons per day water demand based on industrial water use guidelines in the Water System Standards, 2002, Hawaii Table 100 - 18.

Pollution Prevention
In order to protect ground and surface water resources as well as our coastal areas, we recommend that in addition to any required BMPs the following measures designed to minimize infiltration and runoff be implemented during construction:

- Prevent cement products, oil, fuel and other toxic substances from falling or leaching into the ground. Remove all construction debris and toxic substances daily to prevent entry into the ocean.
- Maintain vehicles and equipment to prevent oil or other fluids from leaking. Concrete trucks and tools used for construction should be rinsed off-site.
- Properly install and maintain erosion control barriers such as silt fencing or straw bales.
- Disturb the smallest area possible.
- Retain ground cover until the last possible date. Stabilize denuded areas by sodding or planting as soon as possible. Use high seeding rates to ensure rapid stand establishment. Apply biocides only during dry periods of low rainfall to minimize chemical run-off.
- Keep run-off on site.

Additionally, using recycled water (available from the Kahului Wastewater Treatment Plant at a reasonable cost) for dust control will reduce potable water demand for the project.

Should you have questions, please contact Audrey Dack, staff planner, at (808) 463-3109 or audrey.dack@co.maui.hi.us.

Sincerely,

David S. Taylor, P.E.
Director

apd
cc: DWS Engineering
Attachment

"By Water All Things Find Life"

LAND USE TYPE: Commercial/Industrial

LAND USE: Material handling, storage, waste disposal

CONCERN: Commercial and industrial materials and wastes

GOAL: Waste reduction, prevent pollution

SUGGESTED PRACTICES:
Management, Employee Training, Communication, and Record Keeping

Management:
Management involvement in the waste reduction and pollution prevention initiatives is essential to its successful implementation in the work place. By setting the example and encouraging staff participation through incentives or awards, management can increases employee awareness about environmentally sound practice. A first step is to involve management in conducting a waste stream analysis to determine the potential for waste reduction and pollution prevention. This analysis should include the following steps:

- Identify plant processes where chemicals are used and waste is generated;
- Evaluate existing waste management and reduction methods;
- Research alternative technologies;
- Evaluate feasibility of waste reduction options;
- Implement measures to reduce waste; and
- Periodically evaluate your waste reduction program
- Develop an energy and materials conservation plan to promote the use of efficient technologies, well maintained inventories, and reduced water and energy consumption.
- Sound environmental management should include the currency and completeness of site and facility plans, facility records and inventory management, discharge permits, manifests for disposal of wastes, contracts with haulers for wastes, and contracts with service agents to handle recycling of solvents or to regularly service equipment.

Employee Training:

- Training programs should be developed which include the following:
- Proper operation of process equipment
- Loading and unloading of materials;
- Purchasing, labeling, storing, transferring, and disposal of materials;
- Leak detection, spill control, and emergency procedures; and
- Reuse/recycling/material substitution.
- Employees should be trained prior to working with equipment or handling of materials, and should be periodically refreshed when new regulations or procedures are developed. Employees should be made aware of MSDS sheets and should understand their information.
- Employee awareness of the environmental and economic benefits of waste reduction and pollution prevention, and the adverse consequences of ignoring them, can also facilitate employee participation.

Communication:

- Posting of signs, communication with staff, education and training, and posting of manuals for spill control, health and safety (OSHA operation and maintenance of facility and equipment, and emergency response are essential. Storage areas for chemicals and equipment, employee bathrooms, manager's office, and waste handling stations are suggested areas for posting communication. A bulletin board solely for environmental concerns should be considered.
- Regular inspection and maintenance schedules should be posted and understood by staff.

Record Keeping:
Facility plans, plumbing plans, and subsurface disposal system plans and specifications must be updated to reflect current facility configuration. Copies of associated approvals and permits should be maintained on file.

OSHA requirements, health and environmental emergency procedures, materials management plans, inventory records, servicing/repair/inspections logs, medical waste tracking and hazardous waste disposal records must be maintained up to date and made available for inspection by regulatory officials.

REFERENCE: EPA Handbook - Ground Water and Wellhead Protection. EPA 1994

March 9, 2018 SSFM 2015_034.004

Mr. David S. Taylor, P.E., Director
County of Maui
Department of Water Supply
200 South High Street
Wailuku, HI 96793-2155

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawai'i
Tax Map Key (TMK): (2) 3-8-006:075
Response to Pre-Assessment Consultation Comments for
Draft Environmental Assessment

Dear Mr. Taylor,

Thank you for your letter dated September 13, 2017 regarding the subject project. We offer the following responses to your comments.

Source Availability and System Infrastructure
Operation of the proposed project will be in compliance with U.S. Environmental Protection Agency requirements regarding laboratory procedures, management, employee training, and record keeping. The materials testing laboratory will be overseen by the Department of Transportation's (DOT) Materials Testing and Research Branch, which is accredited under the American Association of State Highway and Transportation Officials Accreditation Program. Best Management Practices (BMPs) for materials handling, storage, and waste will be implemented.

The Draft Environmental Assessment (EA) will include a discussion regarding the source of potable and non-potable water for the proposed project, as well as an analysis of water needs and impacts to the existing system.

Pollution Prevention
The recommended BMPs will be implemented in addition to any required BMPs to minimize infiltration and runoff during construction. In addition, DOT will consult with the Kahului Wastewater Treatment Plant regarding the use of treated, recycled water for dust control during construction.

Your September 13th letter, along with this response, will be included in the Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Should you have any additional comments or questions regarding the proposed project, please contact me at (808) 356-1273 or via email at jscheffel@ssfm.com.

501 Sumner Street | Suite 620 | Honolulu, Hawaii 96817 | Tel 808.531.1308 | Fax 855.329.7736 | www.ssfm.com
Planning | Project & Construction Management | Structural, Civil & Traffic Engineering

SSFM INTERNATIONAL, INC.

Jennifer M. Scheffel
Sr. Environmental Planner

DAVID Y. IGE
GOVERNOR

RODERICK K. BECKER
Comptroller

AUDREY HIDANO
Deputy Comptroller

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

(P)1309.7

SEP 21 2017

RECEIVED
SEP 22 2017
Jms

FILE COPY
FILE

Ms. Jennifer M. Scheffel, Senior Environmental Planner
SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Ms. Scheffel:

Subject: Pre-Assessment Consultation for
Draft Environmental Assessment Kahului Baseyard Project for the
State of Hawaii Department of Transportation
Kahului, Island of Maui, Hawaii
TMK: (2) 3-8-006: 075

Thank you for the opportunity to comment on the subject project document. The proposed baseyard and laboratory are not located near any of our properties. We have no comments, concerns, or regulatory requirement at this time.

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

Sincerely,

RODERICK K. BECKER
Comptroller

c: Mr. Wade Shimabukuro, DAGS Maui District Office

SSFM International

March 9, 2018

SSFM 2015_034.004

Mr. Roderick K. Becker, Comptroller
State of Hawaii Department of Accounting and General Services
PO Box 119
Honolulu, HI 96810-0119

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawai'i
Tax Map Key (TMK): (2) 3-8-006:075
Response to Pre-Assessment Consultation Comments for
Draft Environmental Assessment

Dear Mr. Becker,

Thank you for your letter dated September 21, 2017 (File No. (P)1309.7) regarding the subject project. We note that the proposed project is not located near any Department of Accounting and General Services' properties and that you have no comments, concerns, or regulatory requirements at this time.

Your September 21st letter, along with this response, will be included in the Draft Environmental Assessment. We appreciate your participation in the pre-assessment consultation review process.

Should you have any additional comments or questions regarding the proposed project, please contact me at (808) 356-1273 or via email at jscheffel@ssfm.com.

SSFM INTERNATIONAL, INC.

Jennifer M. Scheffel
Sr. Environmental Planner

501 Sumner Street | Suite 620 | Honolulu, Hawaii 96817 | Tel 808.531.1308 | Fax 855.329.7736 | www.ssfm.com
Planning | Project & Construction Management | Structural, Civil & Traffic Engineering

OFFICE OF PLANNING
STATE OF HAWAII
235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
DIRECTOR
OFFICE OF PLANNING

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: http://planning.hawaii.gov/

Ref. No. P-15751

September 22, 2017

Ms. Jennifer M. Scheffel
Senior Environmental Planner
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Ms. Scheffel:

Subject: Pre-Assessment Consultation for a Draft Environmental Assessment – Kahului Baseyard Project, Kahului, Island of Maui, Hawaii
TMK: (2) 3-8-006: 075

Thank you for the opportunity to provide comments on the pre-consultation request for the preparation of a Draft Environmental Assessment (Draft EA) on the Kahului Baseyard proposed by the State Department of Transportation (HDOT). The pre-consultation review material was transmitted to our office via letter dated August 28, 2017.

It is our understanding that the proposed project seeks to build a permanent baseyard building that will be used as a testing laboratory in support of HDOT Highways Division, Maui District Office operations. The material testing laboratory will examine materials such as concrete, asphalt, and soil/aggregates. The project also calls for the installation of permanent infrastructure to support three onsite field office trailers.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. Pursuant to Hawaii Administrative Rules (HAR) § 11-200-10(4) – general description of the action's technical, economic, social, and environmental characteristics, this project must demonstrate that it is consistent with a number of state environmental, social, economic goals, and policies. Hawaii Revised Statutes (HRS) Chapter 226, the Hawaii State Planning Act, provides goals, objectives, policies, planning coordination and implementation, and priority guidelines for growth, development, and the allocation of resources throughout the state.

   The Draft EA should include a discussion on the project's ability to meet all parts of HRS Chapter 226. The analysis should examine consistency with these statutes or clarify where it is in conflict with them. If any of these statutes are not applicable to

the project, the analysis should affirmatively state such determination, followed by discussion paragraphs.

2. The coastal zone management (CZM) area is defined as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea" (HRS § 205A-1).

   HRS Chapter 205A-5(b) requires all state and county agencies to enforce the CZM objectives and policies. The Draft EA should include an assessment as to how the proposed action conforms to each of the goals and objectives as listed in HRS § 205A-2. Compliance with HRS § 205A-2 is an important component for satisfying the requirements of HRS Chapter 343.

3. Pursuant to HAR § 11-200-10(6) – identification and summary of impacts and alternatives considered; in order to ensure that the surface water and marine resources of the Island of Maui remain protected, the negative effects of stormwater inundation caused by the proposed development activities should be evaluated in the Draft EA.

   Issues that may be examined include, but are not limited to, project site characteristics in relation to flood and erosion prone areas, open spaces, the potential vulnerability of surface water resources, drainage infrastructure currently in place, soil absorption characteristics of the area, and examining the amount of permeable versus impervious surfaces in the project area. These items should be considered when developing mitigation measures for the protection for surface water resources and the coastal ecosystem, pursuant to HAR § 11-200-10(7).

   OP has developed a number of resources and recommends consulting these guidance documents and stormwater evaluative tools when developing strategies to address polluted runoff. They offer useful techniques to keep land-based pollutants and sediment in place and prevent nearshore water contamination while considering the best management practices (BMP) suited for the project and the types of contaminants affecting the project area. The evaluative tools that should be used during the design process include:

   - Hawaii Watershed Guidance provides direction on mitigation strategies for urban development activities that will safeguard watersheds and implement watershed plans http://files.hawaii.gov/dbedt/op/czm/initiative/nonpoint/HI Watershed Guidance Final.pdf

- Stormwater Impact Assessments can be used to identify and analyze information on hydrology, sensitivity of coastal and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area. http://files.hawaii.gov/dbedt/op/czm/initiative/stomwater_imapct/final_stormwater_impact_assessments_guidance.pdf
- Low Impact Development (LID), A Practitioners Guide covers a range of structural BMP's for stormwater control management, onsite infiltration techniques, water reuse methods, and building layout designs that minimize negative environmental impacts. http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf

If you have any questions regarding this comment letter, please contact Joshua Hekekia of our office at (808) 587-2845.

Sincerely,

for Leo R. Asuncion
Director

SSFM International

March 9, 2018

SSFM 2015_034.004

Mr. Leo R. Asuncion, Director
State of Hawaii Office of Planning
PO Box 2359
Honolulu, HI 96804

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawai'i
Tax Map Key (TMK): (2) 3-8-006:075
Response to Pre-Assessment Consultation Comments for
Draft Environmental Assessment

Dear Mr. Asuncion,

Thank you for your letter dated September 22, 2017 (Ref. No. P-15751) regarding the subject project. We offer the following responses to your comments.

1. The Draft Environmental Assessment (EA) will include a discussion of the proposed project's consistency with all parts of the Hawaii State Planning Act (Hawaii Revised Statutes [HRS] Chapter 226).
2. The Draft EA will include an assessment as to how the proposed project conforms to each of the goals and objectives provides in HRS Chapter 205A-2.
3. The Draft EA will include an analysis of potential impacts associated with water resources from construction and operation of the proposed project. Minimization and mitigation measures, if required, will be developed that consider project site characteristics, locations of flood and erosion prone areas, open spaces, the potential vulnerability of surface water resources, current drainage infrastructure at the site, soil absorption characteristics, and the amount of impervious surface currently on site and planned.

   The recommended guidance documents developed by the Office of Planning will be reviewed during the design of the proposed project and the development of the Draft EA.

Your September 22nd letter, along with this response, will be included in the Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Should you have any additional comments or questions regarding the proposed project, please contact me at (808) 356-1273 or via email at jscheffel@ssfm.com.

SSFM INTERNATIONAL, INC.

Jennifer M. Scheffel
Sr. Environmental Planner

501 Sumner Street | Suite 620 | Honolulu, Hawaii 96817 | Tel 808.531.1308 | Fax 855.329.7736 | www.ssfm.com
Planning | Project & Construction Management | Structural, Civil & Traffic Engineering

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

September 29, 2017

SSFM International, Inc.
Attn: Ms. Jennifer M. Scheffel,
Sr. Environmental Planner
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

via email: jscheffel@ssfm.com

Dear Ms. Scheffel:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for **Kahului Baseyard Project** located at Kahului, Island of Maui; TMK: (2) 3-8-006:075

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 and (b) Land Division – Maui 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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

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LAND DIVISION
2017 SEP 14 PM 12:41
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

'17 SEP 08 PM 12 07 ENGINEERING

September 8, 2017

MEMORANDUM

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
From: X Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Maui District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for **Kahului Baseyard Project**
LOCATION: Kahului, Island of Maui; TMK: (2) 3-8-006:075
APPLICANT: SSFM International of behalf of Hawaii Department of Transportation

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **September 25, 2017.**

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.

Attachments

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

Signed: _____

Print Name: Carty S. Chang, Chief Engineer

Date: 9/12/17

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji
Ref: Pre-Assessment Consultation for Draft Environmental Assessment for Kahului Baseyard Project, Kahului, Island of Maui; TMK: (2) 3-8-006:075

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 designated Flood Hazard.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zone designations can be found using the Flood Insurance Rate Map (FIRM), which can be accessed through the Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may take precedence over the NFIP standards as local designations prove to be more restrictive. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators 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: 9/12/17

DAVID Y. IGE
GOVERNOR OF HAWAII

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

RECEIVED
LAND DIVISION
2017 SEP 19 AM 11:0

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STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
MAUI DISTRICT
LAND DIVISION
2017 SEP 12 AM 8:29

September 8, 2017

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for **Kahului Baseyard Project**
LOCATION: Kahului, Island of Maui; TMK: (2) 3-8-006:075
APPLICANT: SSFM International of behalf of Hawaii Department of Transportation

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **September 25, 2017.**

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.

Attachments

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

Signed: _____
Print Name: Daniel Ornellas
Date: 9/15/17

cc: Central Files

SSFM International

March 9, 2018

SSFM 2015_034.004

Mr. Russell Y. Tsuji, Land Administrator
State of Hawaii Department of Land and Natural Resources
Land Division
PO Box 621
Honolulu, HI 96809

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawai'i
Tax Map Key (TMK): (2) 3-8-006:075
Response to Pre-Assessment Consultation Comments for
Draft Environmental Assessment

Dear Mr. Tsuji,

Thank you for your letter dated September 29, 2017 regarding the subject project, and thank you for distributing our pre-assessment consultation letter throughout the Department of Land and Natural Resources. We note that the Land Division – Maui District does not have any objections to the proposed project. We provide the following responses to the comments provided by the Engineering Division.

Engineering Division

The proposed project location is not located in a Flood Hazard Zone.

The Draft Environmental Assessment (EA) will include a discussion on the water demands and infrastructure required to meet project needs. If water service is provided by the local Department/Board of Water Supply system, the Department of Transportation will pay the required resource development charge and Water Facilities Charges.

Upon the completion of the determination of the water needs for the proposed project, the water demands and calculations will be provide to the Department of Land and Natural Resources, Engineering Division so that it can be included in the State Water Projects Plan Update projections.

Your September 29th letter, along with this response, will be included in the Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Should you have any additional comments or questions regarding the proposed project, please contact me at (808) 356-1273 or via email at jscheffel@ssfm.com.

SSFM INTERNATIONAL, INC.

Jennifer M. Scheffel
Sr. Environmental Planner

501 Sumner Street | Suite 620 | Honolulu, Hawaii 96817 | Tel 808.531.1308 | Fax 855.329.7736 | www.ssfm.com
Planning | Project & Construction Management | Structural, Civil & Traffic Engineering

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DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:
EPO 17-223

September 21, 2017

Ms. Jennifer M. Scheffel
Sr. Environmental Planner
SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817
Email: jscheffel@ssfm.com

Dear Ms. Scheffel:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment (PAC DEA) for Kahului Baseyard Project, Kahului, Maui
TMK: (2) 3-8-006:075

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your PAC DEA to our office on August 30, 2017.

We understand from the PAC DEA project summary that *"The Proposed Action includes construction of an 800 to 1000 square foot building to be used as a material testing laboratory for concrete, asphalt, and soil/aggregates, and the installation of infrastructure to make the existing field office trailers permanent."*

Hawaii's environmental review laws require Environmental Assessments (EAs) and Environmental Impact Statements (EISs) to consider health in the discussion and the mitigation measures to reduce negative impacts. In its definition of 'impacts,' §11-200-2, Hawaii Administrative Rules (HAR) includes health effects, whether primary (direct), secondary (indirect), or cumulative. Further, §11-200-12(b)(5), HAR, lists public health as one of the criteria for determining whether an action may have a significant impact on the environment.

In the development and implementation of all projects, EPO strongly recommends regular review of State and Federal environmental health land use guidance. State standard comments to support sustainable healthy design are provided at: http://health.hawaii.gov/epo/landuse. Projects are required to adhere to all applicable standard comments.

We suggest you review the requirements of the Clean Water Branch (Hawaii Administrative Rules {HAR}, Chapter 11-54-1.1, -3, 4-8) and/or the National Pollutant Discharge Elimination System (NPDES) permit (HAR, Chapter 11-55) at: http://health.hawaii.gov/cwb. If you have any questions, please contact the Clean Water Branch (CWB), Engineering Section at (808) 586-4309 or cleanwaterbranch@doh.hawaii.gov. If your project involves waters of the U.S., it is highly recommended that you contact the Army Corps of Engineers, Regulatory Branch at: (808) 835-4303.

Any waste generated by the project (that is not a hazardous waste as defined in state hazardous waste laws and regulations), needs to be disposed of at a solid waste management facility that complies with the applicable provisions (HAR, Chapter 11-58.1 "Solid Waste Management Control"). The open burning of any of these wastes, on or off site, is strictly prohibited. You may wish you review the Minimizing Construction & Demolition Waste Management Guide at: http://health.hawaii.gov/shwb/files/2016/05/constdem16.pdf Additional information is accessible at: http://health.hawaii.gov/shwb. For specific questions call (808) 586-4226.

EPO also encourages you to examine and utilize the Hawaii Environmental Health Portal at: https://eha-cloud.doh.hawaii.gov. This site provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings.

To better protect public health and the environment, the U.S. Environmental Protection Agency (EPA) has developed an environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and combines environmental and demographic indicators in maps and reports. EPO encourages you to explore, launch and utilize this powerful tool in planning your project. The EPA EJSCREEN tool is available at: http://www.epa.gov/ejscreen.

We hope this information is helpful. If you have any questions please contact us at DOH.epo@doh.hawaii.gov or call us at (808) 586-4337. Thank you for the opportunity to comment.

Mahalo nui loa,

Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

LM:nn

c: DOH: DHO Maui, CWB, HEER, SLD {via email only}

Attachment: U.S. EPA EJSCREEN Report for Project Area

Please be advised:
The Environmental Planning Office (EPO), along with the Clean Air, Clean Water, and Wastewater Branches will be moving in December 2017. The new address, for EPO, ***as of January 1, 2018****, will be:*
Environmental Planning Office, DOH, Hale Ola, 2827 Waimano Home Road #109, Pearl City, Hawaii 96782
Please feel free to come and visit our new offices anytime. Please note that there is a security guard at the bottom of the hill (before entering DOH property). Our office phone numbers, email and website will all remain the same.

Attachment: U.S. EPA EJSCREEN Report for Project Area

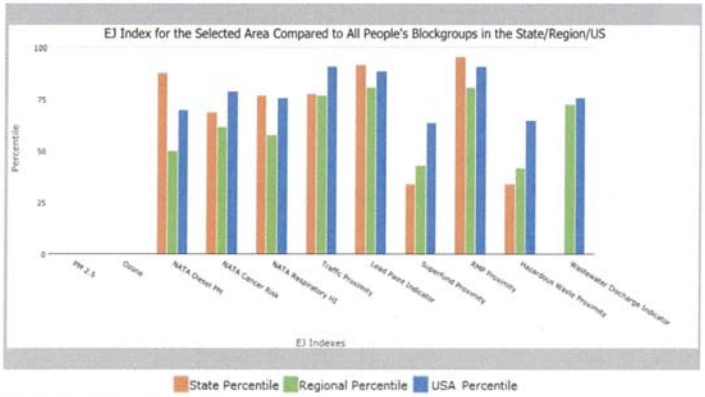
EJSCREEN Report (Version 2017)

1 mile Ring Centered at 20.882227,-156.449514, HAWAII, EPA Region 9

Approximate Population: 2,438

Input Area (sq. miles): 3.14

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	N/A	N/A	N/A
EJ Index for Ozone	N/A	N/A	N/A
EJ Index for NATA* Diesel PM	88	50	70
EJ Index for NATA* Air Toxics Cancer Risk	69	62	79
EJ Index for NATA* Respiratory Hazard Index	77	58	76
EJ Index for Traffic Proximity and Volume	78	77	91
EJ Index for Lead Paint Indicator	92	81	89
EJ Index for Superfund Proximity	34	43	64
EJ Index for RMP Proximity	96	81	91
EJ Index for Hazardous Waste Proximity	34	42	65
EJ Index for Wastewater Discharge Indicator	N/A	73	76



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report (Version 2017)

1 mile Ring Centered at 20.882227,-156.449514, HAWAII, EPA Region 9

Approximate Population: 2,438

Input Area (sq. miles): 3.14

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EPA United States Environmental Protection Agency

EJSCREEN Report (Version 2017)

1 mile Ring Centered at 20.882227,-156.449514, HAWAII, EPA Region 9

Approximate Population: 2,438

Input Area (sq. miles): 3.14

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m³)	N/A	N/A	N/A	9.9	N/A	9.14	N/A
Ozone (ppb)	N/A	N/A	N/A	41.8	N/A	38.4	N/A
NATA* Diesel PM (µg/m³)	0.25	0.149	83	0.978	<50th	0.938	<50th
NATA* Cancer Risk (lifetime risk per million)	31	34	49	43	<50th	40	<50th
NATA* Respiratory Hazard Index	1.1	1	70	2	<50th	1.8	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	750	1000	73	1100	67	590	84
Lead Paint Indicator (% Pre-1960 Housing)	0.41	0.16	85	0.24	72	0.29	70
Superfund Proximity (site count/km distance)	0.006	0.1	19	0.15	5	0.13	1
RMP Proximity (facility count/km distance)	1.5	0.39	94	0.98	79	0.73	85
Hazardous Waste Proximity (facility count/km distance)	0.0062	0.1	23	0.12	2	0.093	2
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0	0.04	N/A	13	59	30	40
Demographic Indicators							
Demographic Index	60%	51%	76	47%	69	36%	82
Minority Population	92%	77%	75	59%	84	38%	91
Low Income Population	29%	26%	62	36%	44	34%	46
Linguistically Isolated Population	7%	6%	71	9%	56	5%	78
Population With Less Than High School Education	17%	9%	85	17%	57	13%	69
Population Under 5 years of age	7%	6%	67	7%	61	6%	65
Population over 64 years of age	20%	16%	72	13%	83	14%	80

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

SSFM International

March 9, 2018 SSFM 2015_034.004

Ms. Laura Leialoha Phillips McIntyre, AICP, Program Manager
State of Hawaii Department of Health
Environmental Planning Office
PO Box 3378
Honolulu, HI 96801-3378

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawai'i
Tax Map Key (TMK): (2) 3-8-006:075
Response to Pre-Assessment Consultation Comments for Draft Environmental Assessment

Dear Ms. McIntyre,

Thank you for your letter dated September 21, 2017 (File No. EPO 17-223) regarding the subject project. We offer the following responses to your comments.

The Standard Comments provided via the Department of Health, Environmental Planning Office's website will be reviewed during the development of the Draft Environmental Assessment (EA). Applicable strategies will be incorporated into project design and included in the Draft EA.

The Draft EA will include a discussion of public health impacts related to construction and operation of the proposed project. This shall include a review of State and Federal environmental health land use guidance, including but not limited to, those of the State of Hawaii Department of Health and the U.S. Environmental Protection Agency. Furthermore, we appreciate your information regarding available online resources. We will utilize these resources during the preparation of the Draft EA.

Your September 21st letter, along with this response, will be included in the Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Should you have any additional comments or questions regarding the proposed project, please contact me at (808) 356-1273 or via email at jscheffel@ssfm.com.

SSFM INTERNATIONAL, INC.

Jennifer M. Scheffel
Sr. Environmental Planner

501 Sumner Street | Suite 620 | Honolulu, Hawaii 96817 | Tel 808.531.1308 | Fax 855.329.7736 | www.ssfm.com
Planning | Project & Construction Management | Structural, Civil & Traffic Engineering

ALAN M. ARAKAWA
Mayor

WILLIAM R. SPENCE
Director

MICHELE CHOUTEAU McLEAN
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

November 21, 2017

Jennifer M. Scheffel
SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Ms. Scheffel:

SUBJECT: REQUEST FOR COMMENT ON THE PRE-ASSESSMENT CONSULTATION FOR THE KAHULUI BASEYARD PROJECT FOR THE COUNTY OF MAUI, TMK (2) 3 8-006:075 (RFC 2017/0100)

Thank you for the opportunity to comment on the above as yet to be proposed project. At this time, the Department of Planning has no comment.

Should you have any questions please contact Staff Planner Paul Fasi by email at paul.fasi@mauicounty.gov or by phone at (808) 270-7814.

Sincerely,

CLAYTON I. YOSHIDA, AICP

for WILLIAM SPENCE
Planning Director

xc: John S. Rapacz, Planning Program Administrator (PDF)
Paul F. Fasi, Staff Planner (PDF)
Project File
General File

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SSFM International

March 9, 2018

SSFM 2015_034.004

Mr. Clayton I. Yoshida, AICP
County of Maui
Department of Planning
2200 Main Street, Suite 315
Wailuku, HI 96793

SUBJECT: Kahului Baseyard Project
Kahului, Island of Maui, Hawai'i
Tax Map Key (TMK): (2) 3-8-006:075
Response to Pre-Assessment Consultation Comments for Draft Environmental Assessment

Dear Mr. Yoshida,

Thank you for your letter dated November 21, 2017 regarding the subject project. We note that the County of Maui Department of Planning does not have any comments at this time.

Your November 21st letter, along with this response, will be included in the Draft Environmental Assessment. We appreciate your participation in the pre-assessment consultation review process.

Should you have any additional comments or questions regarding the proposed project, please contact me at (808) 356-1273 or via email at jscheffel@ssfm.com.

SSFM INTERNATIONAL, INC.

Jennifer M. Scheffel
Sr. Environmental Planner

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Appendix B

Biological Resources Survey Report

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SWCA®
ENVIRONMENTAL CONSULTANTS
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Biological Resources Survey Report for Department of Transportation Baseyard Project, Kahului, Island of Maui

Prepared for

SSFM International

Prepared by

SWCA Environmental Consultants

June 2017

BIOLOGICAL RESOURCES SURVEY REPORT FOR DEPARTMENT OF TRANSPORTATION BASEYARD PROJECT, KAHULUI, ISLAND OF MAUI

Prepared for

SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawai'i 96817
Attn: Jennifer Scheffel, Environmental Planner

Prepared by

SWCA Environmental Consultants
Bishop Square ASB Tower
1001 Bishop Street, Suite 2800
Honolulu, Hawai'i
(808) 548-7899
www.swca.com

SWCA Project No. 42827

June 2017

EXECUTIVE SUMMARY

SSFM International requested that SWCA Environmental Consultants (SWCA) conduct a terrestrial flora and fauna biological resources survey for the proposed Department of Transportation Baseyard in the town of Kahului on the island of Maui.

This report summarizes the findings of the biological resources survey conducted for the project by SWCA botanist Danielle Frohlich and wildlife biologist James Breeden on May 27, 2017. The flora and fauna survey area is approximately 1.8 acres just off of Hana Highway Route 36. All vascular plant species (and their relative abundance), vegetation types, and wildlife species were recorded.

The vegetation types and plant species identified during the survey are not considered unique. Seven indigenous plant species—pōpolo *(Solanum americanum),* ʻuhaloa *(Waltheria indica),* kīpūkai *(Heliotropium curassavicum),* ʻilima *(Sida fallax),* naupaka kahakai *(Scaevola taccada),* kou *(Cordia subcordata),* and pōhinahina (*Vitex rotundifolia*)—are native to the Hawaiian Islands and were observed in the survey area. These species are not considered rare, and are not federally or state-listed threatened or endangered species, species proposed for listing, or candidate species. No federally or state-listed endangered plant species were observed in or near the survey area. Therefore, the proposed project is not expected to have a significant, adverse effect on terrestrial vegetation.

No federally or state-listed endangered birds were observed in the survey area. Five bird species in total were observed in the survey area, all of which are common, non-native introduced bird species. One of the bird species—the non-native cattle egret (*Bubulcus ibis*)—is protected under the Migratory Bird Treaty Act. No federally or state-listed endangered wildlife species were observed in or near the survey area; however, potential roosting trees for the Hawaiian hoary bat (*Lasiurus cinereus semotus*), a federally and state-listed endangered mammal, exist in the survey area. Mitigation recommendations to address potential roosting habitat are outlined in the report. The survey area does not overlap critical habitat of any listed terrestrial faunal species. For these reasons, the proposed project is not expected to have a significant, adverse effect on terrestrial wildlife.

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APPENDICES

FIGURES

TABLES

1. INTRODUCTION

SSFM International requested that SWCA Environmental Consultants (SWCA) conduct a biological resources survey for the Department of Transportation Baseyard Project in Kahului, on the island of Maui.

This report summarizes the findings of the biological resources assessment conducted by SWCA biologist Danielle Frohlich and wildlife biologist James Breeden on May 27, 2017. The flora and fauna survey area is 1.8 acres and is located less than a mile from Kahului International Airport.

2. DESCRIPTION OF THE SURVEY AREA

The survey area is on the northern side of the island of Maui, is less than a mile from Kahului International Airport and south of Hana Highway Route 36. The biological resources survey focused on 1.8 acres within State of Hawaii Parcel Tax Map Key (2) 3-8-006:075 (Figure 1).

Mean annual rainfall for the survey area is approximately 17 inches (44.67 cm). Rainfall is typically highest in November and lowest in June (Giambelluca et al. 2013). The National Oceanic and Atmospheric Administration (NOAA) weather recording station at Kahului International Airport (HOG) recorded above-average rainfall for 2017 through the end of April (NOAA 2017).

The survey area is a vacant lot in a commercial developed area on lands formerly used for sugar cane production. Over a century of agricultural use and the recent commercial development of nearby parcels has replaced the native ecosystem with predominantly non-native plant species. In 2011 the U.S. Fish and Wildlife Service (USFWS) conducted a biological assessment survey to determine the presence of the endangered Blackburn's sphinx moth (*Manduca blackburnii*) for the adjacent Airport Access Road Project. The USFWS survey found that although plant species in the family of the moth's host plants existed on the site, no evidence of the Blackburn's sphinx moth was detected and therefore the project posed no threat to the endangered moth.

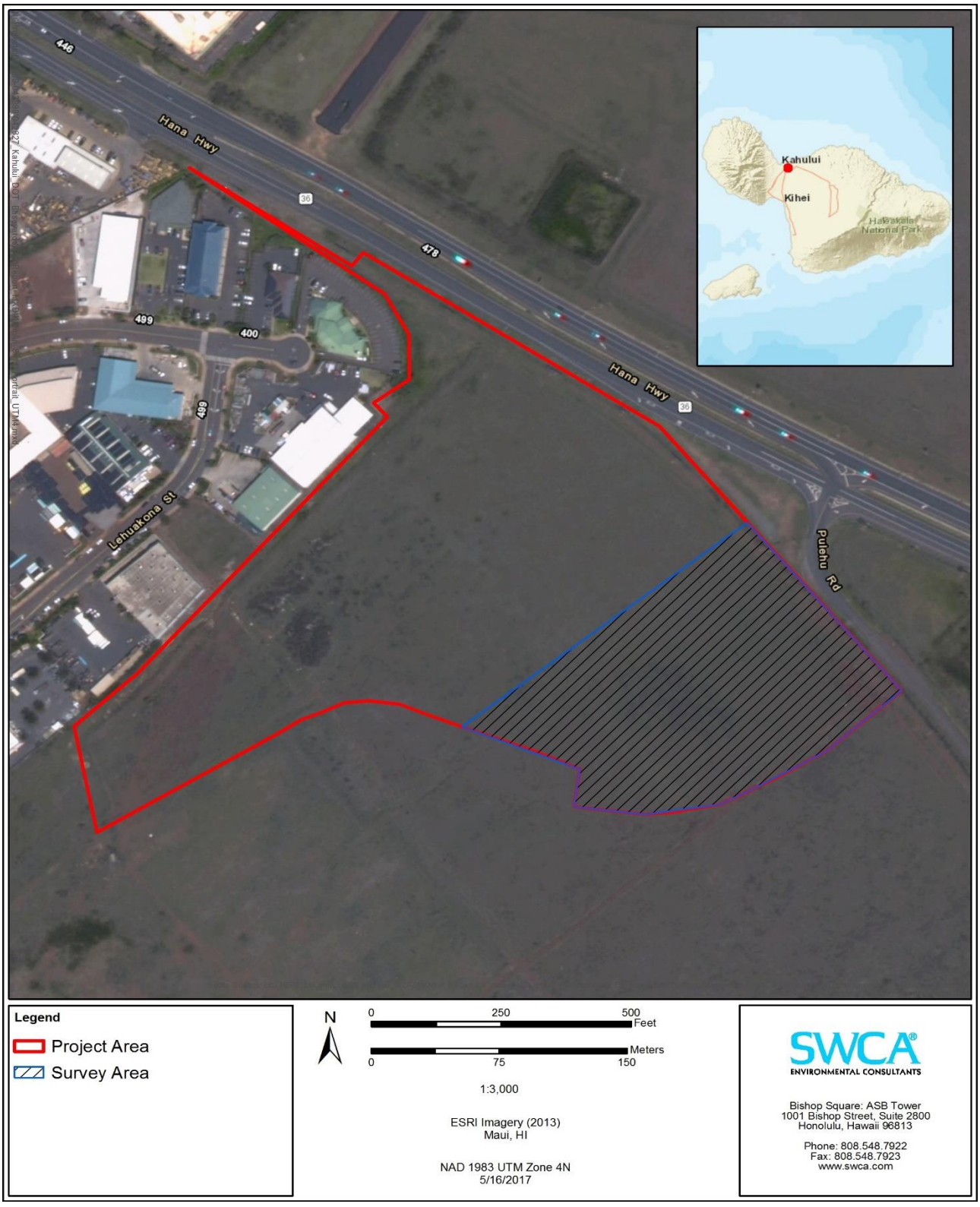

Figure 1. Project site.

3. METHODS

SWCA reviewed available scientific and technical literature regarding natural resources in and near the survey area. This literature review encompassed a thorough search of referenced scientific journals, technical journals and reports, environmental assessments, environmental impact statements, relevant government documents, USFWS online data, and unpublished data that provide insight into the area's natural history and ecology. SWCA also reviewed available geospatial data, aerial photographs, and topographic maps of survey area.

3.1. Flora

SWCA conducted a pedestrian flora (botanical) survey on May 24, 2017, to document all vascular plant species and vegetation types. Areas more likely to support native plants (e.g., rocky outcrops and shady areas) were more intensively examined.

Plants recorded during the survey are indicative of the season ("rainy" versus "dry") and the environmental conditions at the time of the survey. It is likely that additional surveys conducted at a different time of the year would result in minor variations in the species and abundances of plants observed.

3.2. Terrestrial Fauna

SWCA's James Breeden conducted a pedestrian survey for terrestrial fauna on April 27, 2017, during the morning hours (09:00–11:00) when wildlife were most likely to be active. Visual and auditory observations were made. Birds were observed using 10 × 42–mm binoculars. All observed birds, mammals, reptiles, amphibians, and invertebrate species were noted during the survey, including scat, tracks, and other visual indicators of presence. Acoustic surveys for the Hawaiian hoary bat (*Lasiurus cinereus semotus*)—the only native terrestrial mammal species that is still extant within the Hawaiian Islands—were not conducted, but areas of suitable habitat for roosting and foraging were noted during the survey.

4. RESULTS

In general, the flora and fauna assemblages in the survey area are typical of those found in disturbed, low- to mid-elevation areas on Maui. No federally listed threatened or endangered plant or animal species or proposed listed or candidate species were observed during the pedestrian surveys. The federally endangered Hawaiian hoary bat may forage and/or roost in the survey area because suitable habitat is present in the survey area (see Results: Mammals section). The survey area does not encompass any designated or proposed critical habitat for any threatened or endangered species.

4.1. Flora

No federally and state-listed threatened, endangered, or candidate plant species, or rare native Hawaiian plant species, were observed in the survey area. In all, 55 plant species were recorded in the survey area during the time of the survey. Of these, only seven species—pōpolo *(Solanum americanum),* ʻuhaloa *(Waltheria indica),* kīpūkai *(Heliotropium curassavicum),* ʻilima *(Sida fallax),* naupaka kahakai *(Scaevola taccada),* kou *(Cordia subcordata),* and pōhinahina (*Vitex rotundifolia*)—are native to the Hawaiian Islands. Four of these, ʻilima, naupaka kahakai, kou, and pōhinahina, were cultivated. All are indigenous

species that are common throughout the Hawaiian Islands (Wagner et al. 1999).[1] Appendix A provides a list of all plant species observed by SWCA biologists in the survey area during the May 24, 2017, survey.

The vegetation in the survey area consists of two vegetation types: ruderal, and landscaped.

4.1.1. Ruderal Vegetation

This vegetation type is found throughout most of the survey site, except in areas where native vegetation has been planted. Most of the plant species found in this vegetation type are non-natives adapted to colonizing disturbed areas. The most common shrub species in this vegetation type are koa haole (*Leucaena leucocephala*) and tomato *(Solanum lycopersicum* var. *cerasiforme).* Abundant and common herbaceous species found in the ruderal vegetation type are ʻuhaloa, *Boerhavia coccinea,* and golden crown-beard *(Verbesina encelioides).* Commonly seen grass and sedge species include buffelgrass (*Cenchrus ciliaris*), Henry's crabgrass (*Digitaria ciliaris*), lovegrass *(Eragrostis amabilis),* and Guinea grass (*Urochloa maxima*). *Macroptilium atropurpureum,* a perennial legume, is occasionally seen vining over other species in the area.

4.1.2. Landscaped Vegetation

This vegetation type consists of native species, including ʻilima, naupaka kahakai, kou, and pōhinahina, all planted as landscaping around the perimeter of the survey area (Figure 2).

Figure 2. Landscaped Vegetation type

1 The taxonomy and nomenclature of the flowering plants are in accordance with Wagner et al. (1999), Wagner and Herbst (2003), and Staples and Herbst (2005). Recent name changes are those recorded in Wagner et al. (2012). Common/Hawaiian names are provided first, followed by scientific names in parenthesis. If no common or Hawaiian name is known, only the scientific name is provided.

4.2. Fauna

4.2.1. Avifauna

In all five bird species were observed in and around the survey area and include the following: common myna (*Acridotheres tristis*), cattle egret (*Bubulcus ibis*), spotted dove (*Spilopelia chinensis*), zebra dove (*Geopelia striata*), and chestnut munia (*Lonchura atricapilla*) (Table 1). Of these the cattle egret is the only species protected by the Migratory Bird Treaty Act (MBTA). Although not observed, the MBTA-protected Pacific golden plover (*Pluvialis fulva*) could also occur in the survey area because foraging habitat occurs within the ruderal and landscaped vegetation types.

Seabirds, particularly the federally and state endangered Hawaiian petrel (*Pterodroma sandwichensis*) and threatened Newell's shearwater (*Puffinus auricularis newelli*), may fly over the survey area at night while travelling to and from their upland nesting sites to the ocean. The Hawaiian petrel does nest and the Newell's shearwater may nest in the mountainous interior of Maui (Mitchell et al. 2005). No suitable nesting sites for these species are present in the survey area.

Table 1. Birds Observed by SWCA in and near the Survey Area

Common Name	Scientific Name	Status	MBTA
Cattle egret	*Bubulcus ibis*	NN	X
Chestnut munia	*Lonchura atricapilla*	NN	–
Common myna	*Acridotheres tristis*	NN	–
Spotted dove	*Spilopelia chinensis*	NN	–
Zebra dove	*Geopelia striata*	NN	–
Total		**5**	**1**

Notes: Status: E = endangered, M = migrant, NN = non-native permanent resident; MBTA = protected under the Migratory Bird Treaty Act.

4.2.2. Mammals

One mammal, the non-native small Asian mongoose (*Herpestes javanicus*) was observed during the pedestrian survey. Axis deer (*Axis axis*) tracks were also observed. Other non-native mammals that could be expected in the survey area include dog (*Canis familiaris*), cat (*Felis catus*), feral pig (*Sus scrofa*), rat (*Rattus* spp.), and mouse (*Mus musculus*). Although not observed, forage and roost habitat for the federally and state endangered Hawaiian hoary bat does occur in the survey area within the ruderal (forage habitat) and landscaped (forage and roost habitat) vegetation types.

4.2.3. Reptiles and Amphibians

No terrestrial reptiles or amphibians were detected. There are no terrestrial reptiles and amphibians native to the Hawaiian Islands.

4.2.4. Insects and Other Invertebrates

Native invertebrates were not detected during the survey. Non-native invertebrate species observed during the survey are the monarch butterfly (*Danaus plexippus*), large orange sulphur butterfly (*Phoebis*

agarithe), blue mud dauber (*Chalybion californicum*), gray wall jumping spider (*Menemerus bivittatus*), black crazy ant (*Paratrechina longicornis*), green darner (*Anax junius*), and honey bee (*Apis* sp.). Host plants for the Blackburn's sphinx moth were not detected during the survey.

5. DISCUSSION AND RECOMMENDATIONS

5.1. Flora

Overall, the vegetation in the survey area is disturbed from previous and current land-use activities. The vegetation types and species identified are not considered unique. Over 87% of the plant species seen are not native to the Hawaiian Islands. The seven observed native species (four of which were cultivated) are indigenous (found in Hawai'i and elsewhere) and are common throughout the Hawaiian Islands. No threatened or endangered plants were found during the survey, and no designated plant critical habitat occurs in the area. Therefore, the proposed project is not expected to have a significant, adverse effect on flora (botanical) resources.

Weedy, non-native plant species are common in the survey area. Most of these weedy species are widespread in Hawai'i, and their control is not expected to result in a significant decrease in their overall number or distribution. However, construction activities are known to spread invasive species to new areas through the movement of vehicles and materials. For this reason, SWCA recommends the following invasive species minimization measures to avoid the unintentional introduction or transport of new terrestrial invasive species to Maui:

- All construction equipment and vehicles arriving from outside Maui should be washed and inspected before entering the project area.
- Construction materials arriving from outside of Maui should also be washed and/or visually inspected (as appropriate) for excessive debris, plant materials, and invasive or harmful non-native species (plants, amphibians, reptiles and insects).
- Inspection and cleaning activities should be conducted at a designated location. The inspector should be a qualified botanist and/or entomologist that is able to identify invasive species that are of concern relevant to the point of origin of the equipment, vehicle, or material.
- When possible, raw materials (e.g., fill and construction materials) should be purchased from a local supplier on Maui to avoid introducing non-native species not present on the island.

If landscaping occurs as part of the project, native Hawaiian plants or non-invasive plants should continue to be used to the maximum extent possible. If native plants do not meet landscaping objectives, plants with a low risk of becoming invasive could be substituted. Additional information on selecting appropriate plants for landscaping can be obtained from the following online sources:

- Plant Pono: http://www.plantpono.org/
- Native Plants Hawai'i: http://nativeplants.hawaii.edu/

5.2. Fauna

One non-native MBTA listed species—the cattle egret—was recorded in the survey area. The federally and state endangered Hawaiian petrel and threatened Newell's shearwater may fly over the survey area at night while travelling to and from their interior nesting sites to the ocean. In addition, one federally and state endangered mammal—the Hawaiian hoary bat—may occur in the survey area based on the available

habitat. Other threatened and endangered species were considered initially but dismissed from further analysis because of a lack of suitable habitat or because the survey area is out of their habitat range.

5.2.1. Migratory Bird Treaty Act

SWCA observed one non-native bird species federally protected under the MBTA during this survey: the cattle egret. Construction in the survey area may temporarily displace some individuals of this species; however, long-term effects are not expected. Cattle egret individuals (likely limited to a few individuals) are expected to be able to find suitable foraging habitat nearby. The temporary displacement of these individuals in the survey is not expected to affect individual survival or the overall species population.

5.2.2. Seabirds

Major threats to the endangered Hawaiian petrel and threatened Newell's shearwater include the attraction of adults and newly fledged juveniles to bright lights while transiting between their nest sites and the ocean. Juvenile birds are particularly vulnerable to light attraction and are sometimes grounded when they become disoriented by lights (Mitchell et al. 2005). Many of these grounded birds are vulnerable to mammalian predators or to being struck by vehicles. The following recommendations are provided to avoid and minimize light attraction of the endangered Hawaiian petrel and threatened Newell's shearwater to the survey area:

- Construction activity should be restricted to daylight hours as much as practicable during the seabird breeding season (April through November) to avoid the use of nighttime lighting that could attract seabirds.
- All outdoor lights should be shielded to prevent upward radiation. This has been shown to reduce the potential for seabird attraction (Reed et al. 1985; Telfer et al. 1987). A selection of acceptable seabird-friendly lights can be found at http://kauaiseabirdhcp.com/lighting-homes-businesses/.
- Outside lights that are not needed for security and safety should be turned off from dusk through dawn during the fledgling fallout period (September 15–December 15).

5.2.3. Hawaiian Hoary Bat

Hawaiian hoary bats occur on Maui in native, non-native, agricultural, and developed landscapes (U.S. Department of Agriculture 2009; USFWS 1998). Hawaiian hoary bats forage in open, wooded, and linear habitats with a wide range of vegetation types. These animals are insectivores and are regularly observed foraging over streams, reservoirs, and wetlands up to 300 feet (100 m) offshore (U.S. Department of Agriculture 2009). Hawaiian hoary bats typically roost in trees greater than 16 feet (5 m) with 1) dense canopy foliage or 2) in the subcanopy when the canopy is sparse and there is open access for launching into flight (Gorresen et al. 2013; U.S. Department of Agriculture 2009). Hawaiian hoary bats have been documented roosting in similar in structure to the kou tree in the landscaped vegetation type in the survey area. In addition, the Hawaiian hoary bat could forage over the ruderal and landscaped vegetation types.

Direct impacts to bats could occur during vegetation removal if a juvenile bat that is too small to fly but too large to be carried by a parent is present in a tree or branch that is cut down. To prevent direct impacts to the Hawaiian hoary bat, the following measures are recommended:

- No trees taller than 15 feet (4.6 m) in the survey area should be trimmed or removed between June 1 and September 15 when flightless juvenile bats may be roosting in the trees.

- Any fences that are erected as part of the project should have a barbless top-strand wire to prevent entanglements of the Hawaiian hoary bat on barbed wire.

Implementation of these measures, which have been promulgated by the USFWS (1998), are expected to avoid all direct impacts to Hawaiian hoary bats.

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Appendix A.

Checklist of Plants Observed at the Kahului DOT Baseyard Project on May 24, 2017

Table A-1 provides an inventory checklist of plant species observed by SWCA Environmental Consultants on May 24, 2017, at the Kahului DOT Baseyard survey area. The plant names are arranged alphabetically by family and then by species into two groups: monocots and dicots. The taxonomy and nomenclature of the flowering plants are in accordance with Wagner et al. (1999), Wagner and Herbst (2003), and Staples and Herbst (2005). Recent name changes are those recorded in Wagner et al. (2012).

Table A-1. Checklist of Plants Observed at Kahului DOT Baseyard Survey Area on May 24, 2017

Family	Scientific Name and Authorship	Status	Hawaiian and/or Common Name
MONOCOTS			
Poaceae	*Cenchrus ciliaris* L.	X	buffelgrass
Poaceae	*Cenchrus echinatus* L.	X	common sandbur, ‘ume‘alu, mau‘u kukū
Poaceae	*Chloris barbata* Sw.	X	swollen fingergrass, mau‘u lei
Poaceae	*Digitaria ciliaris* (Retz.) Koeler	X	Henry's crabgrass, kūkaepua‘a
Poaceae	*Echinochloa crusgalli* (L.) P.Beauv.	X	barnyard grass
Poaceae	*Eleusine indica* (L.) Gaertn.	X	wiregrass, mānienie ali‘i
Poaceae	*Eragrostis amabilis* (L.) Wight & Arn.	X	lovegrass
Poaceae	*Setaria verticillata* (L.) P.Beauv.	X	bristly foxtail, mau‘u pilipili
Poaceae	*Urochloa maxima* (Jacq.) R.D.Webster	X	Guinea grass
Poaceae	*Cenchrus ciliaris* L.	X	buffelgrass
Poaceae	*Cenchrus echinatus* L.	X	common sandbur, ‘ume‘alu, mau‘u kukū
Poaceae	*Chloris barbata* Sw.	X	swollen fingergrass, mau‘u lei
Poaceae	*Digitaria ciliaris* (Retz.) Koeler	X	Henry's crabgrass, kūkaepua‘a
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Poaceae	*Setaria verticillata* (L.) P.Beauv.	X	bristly foxtail, mau‘u pilipili
Poaceae	*Urochloa maxima* (Jacq.) R.D.Webster	X	Guinea grass
DICOTS			
Amaranthaceae	*Alternanthera pungens* Kunth	X	khaki weed
Amaranthaceae	*Amaranthus spinosus* L.	X	spiny amaranth, pakai kukū
Amaranthaceae	*Amaranthus viridis* L.	X	slender amaranth, pakai, ‘āheahea, pākaikai, pakapakai (Ni‘ihau)
Asclepiadaceae	*Asclepias physocarpa* (E.Mey.) Schltr.	X	balloon plant
Asclepiadaceae	*Calotropis procera* (Aiton) W.T.Aiton	X	
Asteraceae	*Ageratum conyzoides* L.	X	maile hohono, maile honohono, maile kula

Table A-1. Checklist of Plants Observed at Kahului DOT Baseyard Survey Area on May 24, 2017

Asteraceae	*Conyza canadensis* var. *canadensis*	X	horseweed, lani wela, ilioha, ʻawïʻawï, pua mana
Asteraceae	*Crassocephalum crepidioides* (Benth.) S.Moore	X	
Asteraceae	*Emilia fosbergii* Nicolson	X	pualele (Niʻihau)
Asteraceae	*Lactuca sativa* L.	X	prickly lettuce
Asteraceae	*Parthenium hysterophorus* L.	X	false ragweed, Santa Maria
Asteraceae	*Pluchea carolinensis* (Jacq.) G.Don	X	sourbush, marsh fleabane
Asteraceae	*Senecio madagascariensis* Poir.	X	
Asteraceae	*Sonchus oleraceus* L.	X	sow thistle, pualele
Asteraceae	*Tridax procumbens* L.	X	coat buttons
Asteraceae	*Verbesina encelioides* (Cav.) Benth. & Hook.	X	golden crown-beard
Asteraceae	*Youngia japonica* (L.) DC.	X	Oriental hawksbeard
Boraginaceae	*Cordia subcordata* Lam.	I	kou
Boraginaceae	*Heliotropium curassavicum* L.	I	kïpūkai, nena, seaside heliotrope, lau poʻopoʻohina (Niʻihau)
Brassicaceae	*Lepidium oblongum* Small	X	pepperwort, peppergrass
Chenopodiaceae	*Dysphania carinata* (R.Br.) Mosyakin & Clemants	X	goosefoot, pigweed, lamb's quarters
Clusiaceae	*Clusia rosea* Jacq.	X	autograph tree, copey, Scotch attorney
Convolvulaceae	*Ipomoea obscura* (L.) Ker Gawl.	X	morning glory
Convolvulaceae	*Ipomoea triloba* L.	X	little bell
Cucurbitaceae	*Coccinia grandis* (L.) Voigt	X	ivy gourd, scarlet-fruited gourd
Cucurbitaceae	*Cucumis dipsaceus* Ehrenb. ex Spach	X	hedgehog gourd, teasel gourd
Euphorbiaceae	*Euphorbia heterophylla* L.	X	kaliko, spurge
Euphorbiaceae	*Euphorbia hirta* L.	X	hairy spurge, garden spurge, koko kahiki
Euphorbiaceae	*Euphorbia hypericifolia* L.	X	graceful spurge
Euphorbiaceae	*Ricinus communis* L.	X	castor bean, pāʻaila, kaʻapehā, kamākou, kolï, lāʻau ʻaila
Fabaceae	*Crotalaria incana* L.	X	fuzzy rattlepod, kūkaehoki, kolomona (Niʻihau)
Fabaceae	*Indigofera spicata* Forssk.	X	creeping indigo
Fabaceae	*Leucaena leucocephala* (Lam.) de Wit	X	koa haole
Fabaceae	*Macroptilium atropurpureum* (DC.) Urb.	X	
Fabaceae	*Senna alata* (L.) Roxb.	X	candle bush
Goodeniaceae	*Scaevola taccada* (Gaertn.) Roxb.	I	naupaka kahakai, huahekili, naupaka kai, auaka (Niʻihau)
Lamiaceae	*Leonotis nepetifolia* (L.) R.Br.	X	lion's ear
Malvaceae	*Malva parviflora* L.	X	cheese weed
Malvaceae	*Sida ciliaris* L.	X	
Malvaceae	*Sida fallax* Walp.	I	ʻilima
Nyctaginaceae	*Boerhavia coccinea* Mill.	X	
Papaveraceae	*Argemone mexicana* L.	X	Mexican poppy

Table A-1. Checklist of Plants Observed at Kahului DOT Baseyard Survey Area on May 24, 2017

Solanaceae	*Solanum americanum* Mill.	I?	glossy nightshade, pōpolo, ʻolohua, polopolo, pōpolohua (Niʻihau)
Solanaceae	*Solanum lycopersicum* var. *cerasiforme* (Dunal) D.M.Spooner, G.J.Anderson & R.K.Jansen	X	tomato, ʻōhiʻa lomi, kamako, ʻōhiʻa, ʻōhiʻa haole
Sterculiaceae	*Waltheria indica* L.	I?	ʻuhaloa, ʻalaʻala pū loa, hala ʻuhaloa, hiʻaloa, kanakaloa
Verbenaceae	*Vitex rotundifolia* L.f.	I	kolokolo kahakai, hinahina kolo, mānawanawa, māwanawana, pōhinahina, pōlinalina (Oʻahu), beach vitex

LEGEND: P-Polynesian introduced, P?- probably Polynesian introduced but possibly introduced in historic times, I- indigenous, I?- probably indigenous but possibly naturalized, E- endemic, E?- probably endemic but possibly naturalized, X- non-native, X*- non-native cultivated

Appendix C

Cultural Impact Assessment

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SCS Project No. 2087-1 CIA

A CULTURAL IMPACT ASSESSMENT FOR THE PROPOSED DEPARTMENT OF TRANSPORTATION (DOT) KAHULUI BASEYARD PROJECT

WAILUKU AHUPUA‘A, WAILUKU DISTRICT
ISLAND OF MAUI, HAWAI‘I
[TMK: (2) 3-8-006:075 POR.]

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INTRODUCTION

At the request of SSFM International, Scientific Consultant Services, Inc. (SCS) prepared a Cultural Impact Assessment (CIA) in advance of a proposed State of Hawai‘i Department of Transportation (HDOT) Kahului Baseyard. The HDOT plans to construct a permanent baseyard and materials testing laboratory property in Kahului, Wailuku Ahupua‘a, Wailuku District, Maui Island, Hawai‘i [TMK: (2) 3-8-006:075 por.] (Figures 1 through 3). The subject property is owned by the HDOT.

The Hawaii State Office of Environmental Quality Control (OEQC 1997:11) states that "an environmental assessment of cultural impacts" gathers information about cultural practices and cultural features that may be affected by significant environmental effects:

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

The purpose of a Cultural Impact Assessment is to identify the possibility of previous and/or currently conducted traditional cultural practices and traditional resources procured within a project area and the greater ahupua‘a, and then to assess the potential for impacts to these cultural resources.

PROJECT DESCRIPTION

The proposed baseyard and laboratory would occupy approximately 3.6 acres of land within a 19.6-acre parcel situated on the southwest side of the intersection of Hāna Highway and Airport Access Road on lands owned by the State DOT Highways Division (see Figure 2). The proposed action includes construction of an 800 to 1000 square foot building to be used as a materials testing laboratory for concrete, asphalt, and soil/aggregates, and the installation of infrastructure to make the existing field office trailers permanent.

CULTURAL IMPACT ASSESSMENT METHODOLOGY

The Constitution of the State of Hawai‘i clearly states the duty of the State and its agencies is to preserve, protect, and prevent interference with the traditional and customary rights of native Hawaiians. Article XII, Section 7 (2000) requires the State to "protect all rights,

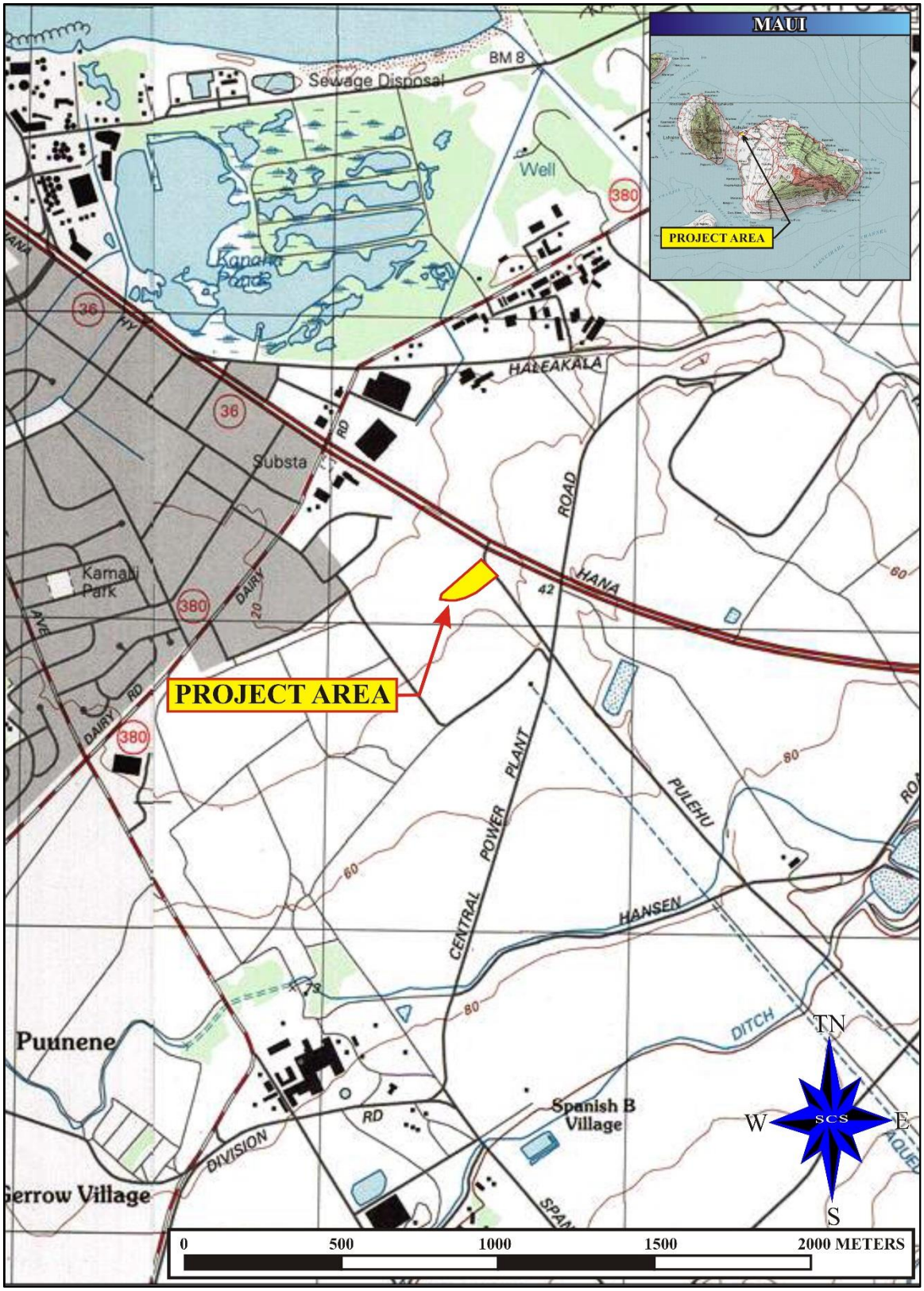

Figure 1: USGS Quadrangle (Paia, HI 1997; 1:24,000) Map Showing Project Area Location.

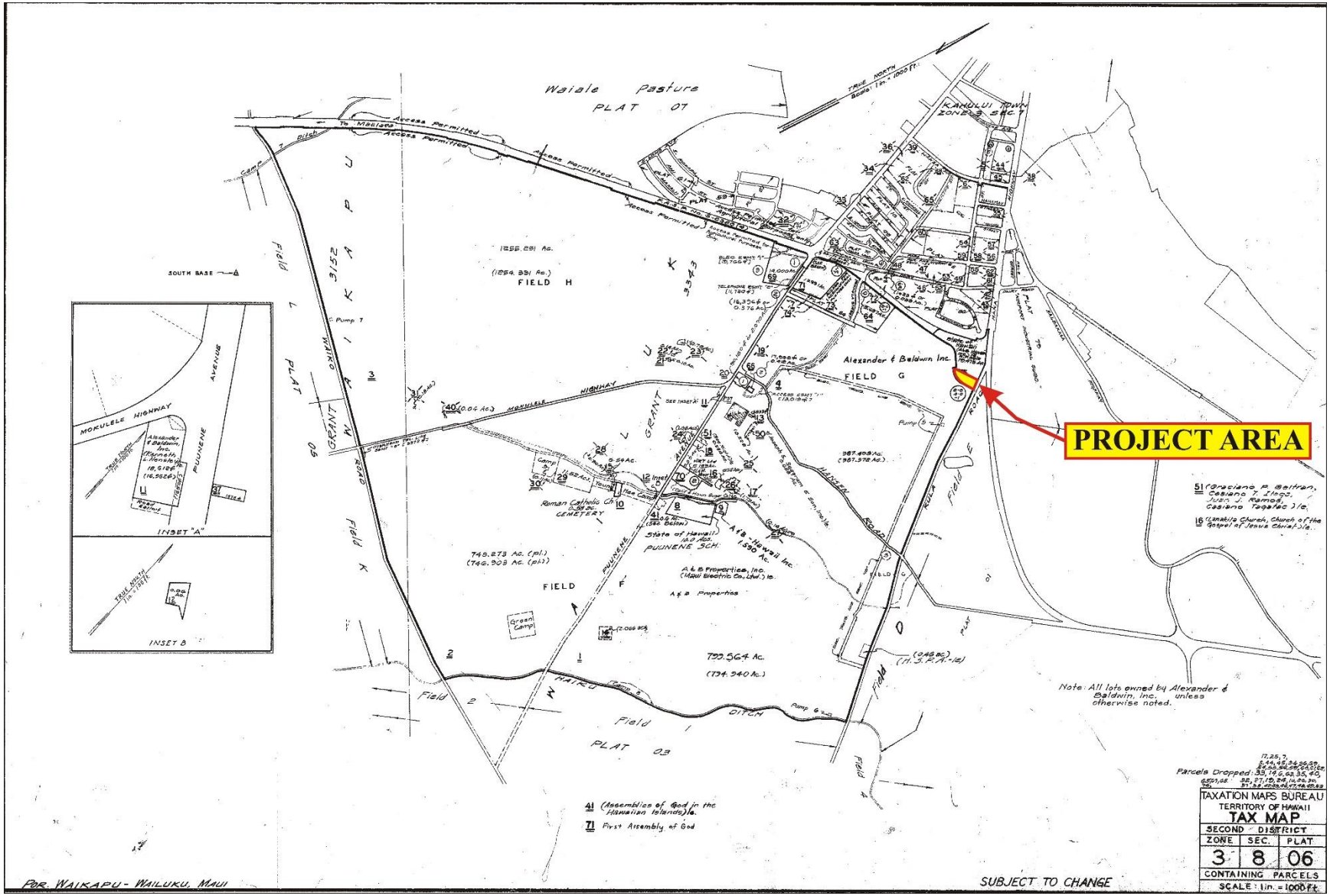

Figure 2: Tax Map Key [TMK: (2) 32-8-006] Showing Project Area Location.

Figure 3: Aerial Photograph (Google Earth Image (2017); Imagery Date 1/13/2013) Showing Project Area Location.

customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by *ahupua*ʻ*a* tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778." Additionally, Article IX and XII, of the state constitution, other state laws, and the courts of the State, impose on government agencies a duty to promote and protect cultural beliefs and practices, and resources of native Hawaiians as well as other ethnic groups.

Kamehameha III (Kauikeaouli) preserved the peoples traditional right to subsistence. As a result, in 1850, the Hawaiian Government confirmed the traditional access rights to native Hawaiian *ahupua*ʻa tenants to gather specific natural resources for customary uses from undeveloped private property and waterways under the Hawaiian Revised Statutes (HRS) 7-1. In 1992, the State of Hawaiʻi Supreme Court, reaffirmed HRS 7-1 and expanded it to include, "native Hawaiian rights…may extend beyond the *ahupua*ʻ*a* in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner" [Pele Defense Fund v. Paty, 73 Haw.578, 620, 837 P.2d 1247, 1272 (1992)].

Act 50, enacted by the Legislature of the State of Hawaiʻi (2000) with House Bill (HB) 2895, relating to Environmental Impact Statements, proposes that:

> …there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawaii's culture, and traditional and customary rights… [H.B. NO. 2895].

Act 50 also requires state agencies and other developers to assess the effects of proposed land use or shoreline developments on the "cultural practices of the community and State" as part of the HRS Chapter 343 (2001) environmental review process. It also re-defined the definition of "significant effect" to include "the sum of effects on the quality of the environment including actions that impact a natural resource, limit the range of beneficial uses of the environment, that are contrary to the State's environmental policies, or adversely affect the economic welfare, social welfare or cultural practices of the community and State." Cultural resources can include a broad range of often overlapping categories, including places, behaviors, values, beliefs, objects, records, stories, etc. (H.B. 2895, Act 50, 2000).

The purpose of a CIA is to identify the possibility of on-going cultural activities and resources within a project area, or its vicinity, and then assessing the potential for impacts on these cultural resources. The CIA is not intended to be a document of in depth archival-

historical land research, or a record of oral family histories, unless these records contain information about specific cultural resources that might be impacted by a proposed project.

GEOGRAPHICAL EXTENT

As defined by the Hawaii State Office of Environmental Quality Control (OEQC 1997:11), the geographical extent should be greater than the area over which the proposed project will take place in order to ensure that cultural practices that occur outside of the project area, but which may still be affected, are included in the assessment. For example, a project that may not itself physically impact traditional gathering practices, but may block access to those locations would be included within the assessment. The concept of geographical expansion is recognized by using, as an example, "the broad geographical area, e.g. district or *ahupua'a.*" In some cases, the geographical extent could extend beyond the *ahupua'a* if cultural practices do so as well.

OEQC GUIDELINES FOR ASSESSING CULTURAL IMPACTS

According to the Guidelines for Assessing Cultural Impacts established by the Hawaii State Office of Environmental Quality Control (OEQC 1997:12):

> The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religions and spiritual customs. The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural, which support such cultural beliefs.

The meaning of "traditional" was explained by in *National Register Bulletin*:

> "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations', usually orally or through practice. The traditional cultural significance of a historic property then is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. . . [Parker and King 1998:1]

This CIA was prepared as much as possible in accordance with the suggested methodology and content protocol in the Guidelines for Assessing Cultural Impacts (OEQC 1997:11-13). In outlining the "Cultural Impact Assessment Methodology," the OEQC (1997:11) states that:

> "…information may be obtained through scoping community meetings, ethnographic interviews and oral histories…"

This Cultural Impact Assessment was prepared in accordance with the Guidelines for Assessing Cultural Impacts (OEQC 1997:11-13). The Guidelines recommend that preparers of assessments analyzing cultural impacts adopt the following protocol:

1. Identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or ahupua'a;
2. Identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;
3. Receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;
4. Conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;
5. Identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and
6. Assess the impact of the proposed action. alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

CULTURAL IMPACT ASSESSMENT CONTENTS

The Guidelines state that an assessment of cultural impacts should address, but not be limited to:

A. Discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained.
B. Description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken.
C. Ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any

constraints or limitations which might have affected the quality of the information obtained.

D. Biographical information concerning the individuals and organizations consulted their particular expertise and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or interviewed their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area.
E. Discussion concerning historical and cultural source materials consulted, the institutions and repositories searched, and the level of effort undertaken. This discussion should include, if appropriate, the particular perspective of the authors, any opposing views, and any other relevant constraints, limitations or biases.
F. Discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site.
G. Discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area affected directly or indirectly by the proposed project.
H. Explanation of confidential information that has been withheld from public disclosure in the assessment.
I. Discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs.
J. Analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.
K. A bibliography of references and attached records of interviews which were allowed to be disclosed.

If on-going cultural activities and/or resources are identified within the project area, assessments of the potential effects on the cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

PROJECT METHODOLOGY

This report contains archival and documentary research, as well as communication with organizations and individuals having knowledge of the project area, its cultural resources, and its

practices and beliefs. An example of the initial letter of inquiry is presented in Appendix A, an example of the follow up letter is presented in Appendix B, copies of the posted newspaper notice, and affidavit are presented in Appendix C. This Cultural Impact Assessment was prepared in accordance with the suggested methodology and content protocol provided in the Guidelines for Assessing Cultural Impacts (OEQC 1997:13), whenever possible. The assessment concerning cultural impacts may include, but not be limited to the following:

ARCHIVAL RESEARCH

Archival research focused on a historical documentary study involving both published and unpublished sources. These included legendary accounts of native and early foreign writers; early historical journals and narratives; historic maps, land records, such as Land Commission Awards, Royal Patent Grants, and Boundary Commission records; historic accounts, and previous archaeological reports.

Historical and cultural source materials were extensively used and can be found listed in the References Cited portion of this report. Such scholars as Samuel Kamakau, Martha Beckwith, Jon J. Chinen, Lilikalā Kameʻeleihiwa, R. S. Kuykendall, Marion Kelly, E. S. C. Handy and E.G. Handy, John Papa ʻĪʻī, Gavin Daws, A. Grove Day, and Elspeth P. Sterling and Catherine C. Summers, and Mary Kawena Pukuʻi and Samuel H. Elbert continue to contribute to our knowledge and understanding of Hawaiʻi, past and present. The works of these and other authors were consulted and incorporated in this report where appropriate. Land use document research was supplied by the Waihona ʻAina (2017) Database and the Honolulu's Real Property Assessment and Tax Billing Information website.

INTERVIEWS

In general, interviews are conducted in accordance with Federal and State laws and guidelines when knowledgeable individuals are able to identify traditional cultural practices and/or resources procured in the project area or in the environs. If they have knowledge of traditional stories, practices and beliefs, and resources associated with a project area or if they know of historical properties within the project area, they are sought out for additional consultation and interviews. Individuals who have particular knowledge of traditions passed down from preceding generations and a personal familiarity with the project area are invited to share their relevant information concerning particular cultural resources. Often people are recommended for their expertise, and indeed, organizations, such as Hawaiian Civic Clubs, the Island Branch of Office of Hawaiian Affairs (OHA), historical societies, Island Trail clubs, and Planning Commissions are depended upon for their recommendations of suitable informants.

These groups are invited to contribute their input and suggest further avenues of inquiry, as well as specific individuals to interview. It should be stressed again that this process does not include formal or in-depth ethnographic interviews or oral histories as described in the OEQC's *Guidelines for Assessing Cultural Impacts* (1997). The assessments are intended to identify potential impacts to ongoing cultural practices, or resources, within a project area or in its close vicinity.

If knowledgeable individuals are identified, personal interviews are sometimes taped and then summarized. These draft summaries are returned to each of the participants for their review and comments. After corrections are made, each individual is to sign an information release form, making the interview available for this study. When telephone interviews occur, a summary of the information is also sent for correction and approval or dictated by the informant and then incorporated into the document. If no cultural resource information is forthcoming and no knowledgeable informants are suggested for further inquiry, interviews are not conducted.

Scientific Consultant Services, Inc. did not conduct any in-person or telephone interviews during the consultation process for the proposed Kahului Baseyard project. None of the individuals and organizations contacted during the consultation process came forward to indicate that they would like to be interviewed. If any individuals or organizations with knowledge about traditional cultural practices previously or currently conducted in Wailuku Ahupua'a had made it known to SCS that they would like to be interviewed, interviews would have been conducted and the information obtained from them would have been presented in this document.

KA PA'A KAI O KA'AINA V. LAND USE COMM'N, STATE OF HAWAI'I

The Land Use Commission (LUC) is also required to apply the analytical framework set forth by the Hawaii Supreme Court in Ka Pa'akai O Ka'Aina v. Land Use Comm'n, State of Hawai'i, 94 Hawai'i 31, 7 P.3d 1068 (2000) (hereinafter, "***Ka Pa'akai***"). In this case, a coalition of native Hawaiian community organizations challenged an administrative decision by the Land Use Commission (the "***LUC***") to reclassify nearly 1,010 acres of land from conservation to urban use, to allow for the development of a luxury project including upscale homes, a golf course, and other amenities. The native Hawaiian community organizations appealed, arguing that their native Hawaiian members would be adversely affected by the LUC's decision because the proposed development would infringe upon the exercise of their traditional and customary rights. Noting that "[a]rticle XII, section 7 of the Hawaii Constitution obligates the LUC to protect the reasonable exercise of customarily and traditionally exercised rights of native Hawaiians to the extent feasible when granting a petition for reclassification of district boundaries," the Hawai'i

Supreme Court held that the LUC did not provide a sufficient basis to determine "whether [the agency] fulfilled its obligation to preserve and protect customary and traditional rights of native Hawaiians" and, therefore, the LUC "failed to satisfy its statutory and constitutional obligations." Ka Paʻakai, 94 Hawaiʻi at 46, 53, 7 P.3d at 1083, 1090.

The Hawaiʻi Supreme Court in Ka Paʻakai provided an analytical framework in an effort to effectuate the State's obligation to protect native Hawaiian customary and traditional practices while reasonably accommodating competing private interests. In order to fulfill its duty to preserve and protect customary and traditional native Hawaiian rights to the extent feasible, the LUC must—at a minimum—make specific findings and conclusions as to the following:

(1) the identity and scope of "valued cultural, historical, or natural resources" in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;

(2) the extent to which those resources--including traditional and customary native Hawaiian rights--will be affected or impaired by the proposed action; and

(3) the feasible action, if any, to be taken by the LUC to reasonably protect native Hawaiian rights if they are found to exist.

See Ka Paʻakai, 94 Hawaiʻi at 47, 7 P.3d at 1084.

To fulfill these purposes outlined by Ka Paʻakai, the Cultural Impact Assessment has reviewed historical research and suggestions from contacts knowledgeable about traditional cultural practices which were conducted within the project area corridor and in the surrounding environs. The potential effect of the proposed project on cultural resources, practices or beliefs, its potential to isolate cultural resources, practices or beliefs from their setting, and the potential of the project to introduce elements which may alter the setting in which cultural practices take place has been analyzed, as required by the OEQC (1997).

ENVIRONMENTAL SETTINGS

Of the Hawaiian Islands, Maui is second in size, with the island of Hawaiʻi being the largest (Handy and Handy 1972:485). The island of Maui was formed from two separate shield volcanoes: Haleakalā in East Maui and Puʻu Kukui in West Maui. The isthmus between the two cones is primarily composed of alluvial fans made of out-washed silts and gravels that are overlain by coralline sands blown inland from the coast. Lower sand strata have become firmly

lithified, forming a soft rock known as eolianite (Stearns 1966: 10). Lithified sand dunes rest on alluvial fans near the shore between Kahului and Waiheʻe, and they extend inland across most of the western edge of the isthmus.

PROJECT AREA

The project area is located approximately 1.5 miles (2.14 kilometers) inland from the northern coastline of the Island of Maui. The project area is situated on the southwest side of the intersection of Hāna Highway and Airport Access Road at an elevation of approximately 80 feet amsl. currently surrounded by vacant lands formerly under commercial sugarcane cultivation.

CLIMATE AND RAINFALL

The Kahului area is fairly dry owing in part to the 'rain shadow' effect of Haleakala. Temperatures within the project area range from 60 to 98 degrees Fahrenheit during the summer months and from 50 to 93 degrees Fahrenheit during the winter (Armstrong 1983:64). According to Armstrong (1983: 62), annual rainfall in the project area is between the 500 mm (20 in.) and 760 mm (30 in.) isohyets. Giambelluca *et al.* (1986) indicate the project area sits more or less on the 500 mm (20 in.) isohyet.

PROJECT AREA SOILS

According to (Foote *et. al*. 1972: Sheet Number 104), the project area is comprised of soils of the Soil Ewa Series, specifically Ewa silty clay loam, 0 to 3 percent slopes (EaA; Figure 4). The well-drained volcanic soils of the Ewa Soil Series occur in basins and alluvial fans on Maui and Oʻahu. Soils of this series occur at elevations between sea level to 150 feet above mean sea level (amsl) in areas receiving 10 to 30 inches of rainfall annually. The EaA soil type exhibit a very slow runoff and a very slight erosion hazard. In general, the EaA soils are used for the commercial cultivation of sugar cane and for residential developments (Foote *et. al*. 1972: 29-30).

TRADITONAL AND HISTORICAL CULTURAL CONTEXT

Archaeological settlement pattern data suggests that initial colonization and occupation of the Hawaiian Islands first occurred on the windward shoreline areas of the main islands between A. D. 850 and 1100, with populations eventually settling in drier leeward areas during later periods (Kirch 2011). Although coastal settlement was dominant, native Hawaiians began

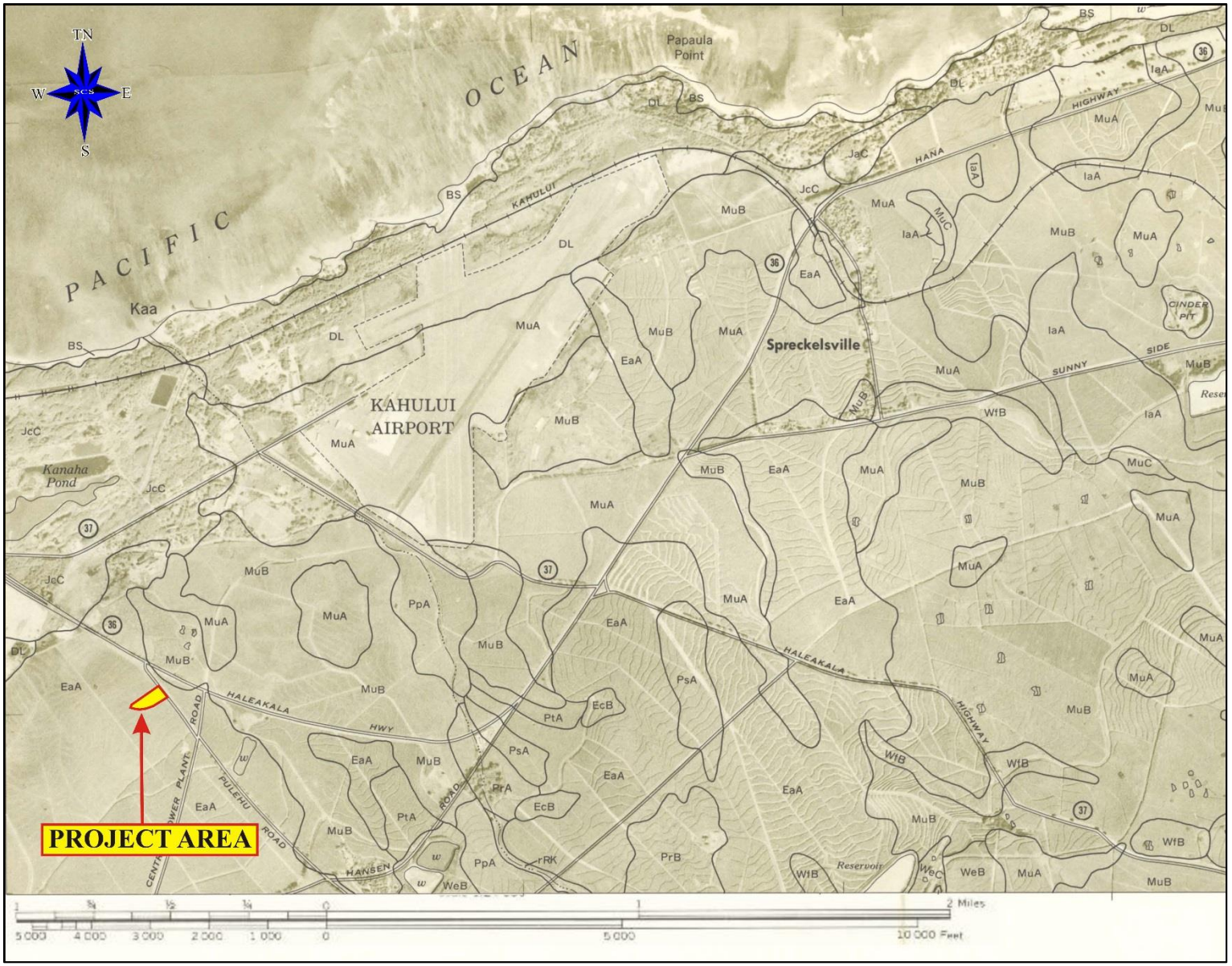

Figure 4: USDA Soil Series Map (Foote et al. 1972: Sheet Number 104) Showing Soil Series Type Within the Project Area.

cultivating and living in the upland kula (plains) zones. Greater population expansion to inland areas began around the 14th century and continued through the 16th century. Large scale or intensive agriculture was implemented in association with habitation, religious, and ceremonial activities. Coastal lands were used primarily for settlement while staple crops (i.e. kalo/taro) were cultivated in near-coastal reaches, as well as, in watered regions along the plain and in the uplands.

TRADITIONAL SETTLEMENT PATTERNS

The Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various *ahupua'a*. Traditionally, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys provided ideal conditions for wetland *kalo* (*Colocasia esculenta*) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as *kō* (sugar cane, *Saccharum officinaruma*) and *mai'a* (banana, *Musa* sp.), were also grown and, where appropriate, such crops as *'uala* (sweet potato, *Ipomoea batatas*) were produced. This was the typical agricultural pattern seen during the pre-Contact Period on all the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985).

In general, the coastal lands were preferred for chiefly residence. Easily accessible resources such as offshore and onshore fishponds, the sea with its fishing and surfing—known as the sports of kings, and some of the most extensive and fertile wet taro lands were located in the coastal areas (Kirch and Sahlins, 1992 Vol. 1:19). Inland resources necessary for subsistence could easily be brought to the *ali'i* residences on the coast from nearby inland plantations. The majority of farming was situated in the lower portions of stream valleys where there were broader alluvial flat lands or on bends in the streams where alluvial terraces could be modified to take advantage of the stream flow. Dry land cultivation occurred in colluvial areas at the base of gulch walls or on flat slopes (Kirch 1985; Kirch and Sahlins 1992, Vol. 2:59).

As the initial settlers of the Hawaiian Islands "chose protected bays and beach areas where fresh water was available and there was good inshore and offshore fishing" (Handy and Handy 1972:268). On the Island of Maui, it is quite likely that Kahului was one of the areas that attracted the first occupants. Kahului (literally "the winning") Bay is known for a surf break now known as Kahului Breakwater (Pukui *et al*. 1989:67), but it may have been the site where the *ali'i* chose to surf, as well.

PAST POLITICAL BOUNDARIES

Traditionally, the island of Maui was divided into twelve districts (Sterling 1998:3). The division of Maui's lands into districts (*moku*) and sub-districts was performed by a *kahuna* (priest, expert) named Kalaihaʻōhia, during the time of the *aliʻi* Kakaʻalaneo (Beckwith 1979:383; Fornander [1919-20, Vol. 6:248] places Kakaʻalaneo at the end of the 15th century or the beginning of the 16th century). Land was considered the property of the king or *aliʻi ʻai moku* (the *aliʻi* who eats the island/district), which he held in trust for the gods. The title of *aliʻi ʻai moku* ensured rights and responsibilities to the land but did not confer absolute ownership. The king kept the parcels he wanted, his higher chiefs received large parcels from him and, in turn, distributed smaller parcels to lesser chiefs. The *makaʻāinana* (commoners) worked the individual plots of land.

In general, several terms, such as *moku*, *ahupuaʻa*, *ʻili* or *ʻiliʻ āina* were used to delineate various land sections. A district (*moku*) contained smaller land divisions (*ahupuaʻa*) that customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the *ahupuaʻa* were therefore able to harvest from both the land and the sea. Ideally, this situation allowed each *ahupuaʻa* to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The *ʻili ʻāina* or *ʻili* were smaller land divisions next to importance to the *ahupuaʻa* and were administered by the chief who controlled the *ahupuaʻa* in which it was located (Lyons 1875:33; Lucas 1995:40). The *moʻoʻāina* were narrow strips of land within an *ʻili*. The land holding of a tenant or *hoa ʻāina* residing in a *ahupuaʻa* was called a *kuleana* (Lucas 1995:61). The project area is located in Wailuku Ahupuaʻa, which has been literally translated as "water [of] destruction" (Pukui *et al*. 1974:225).

PRE-CONTACT PERIOD (PRE-1778)

Contact with the western world occurred on January 18, 1778, with the arrival of Captain James Cook in the Hawaiian Islands during his third voyage into the Pacific Ocean (Daws 1968:1). This section discusses traditional life prior to Cook's arrival.

The Wailuku District was once known as "The Four Streams Area" (*Na Wai Eha*). This area is comprised the four great valleys [Waiheʻe, Waiehu, Wailuku, and Waikapū] which cut far back into the slopes of West Maui and drain the eastward watershed of Puʻu Kukui and the ridges radiating northeastward, eastward, and southeastward from it" (Handy and Handy 1972:497). This area once was renowned for "…its majesty and splendid living, whose native

songs gather flowers in the dew and weave wreaths of ohelo berries" (S.W. Nailiili in Sterling 1998:93). The area from Waiheʻe to Wailuku was formally the most extensive continuous area of wet taro cultivation in the Hawaiian Islands. Wailuku, itself, has been described as a "chiefly center" (Sterling 1998:90), although the seat of power was almost certainly concentrated in and around the ʻĪao Valley, on the west side of Wailuku District.

A major inland fishpond was located at the present-day spot of Kanahā Pond and Bird Sanctuary, just west of the project area. This was sometimes referred to as two, artificially joined ponds (Kanahā and Mauoni). According to Puea-a-Makakaualii [a.k.a. Mrs. Rosalie Blaisdell, an informant of J.F. G. Stokes (1918) cited in Sterling 1998:87]:

> Kapiiohookalani, king of Oahu and half of Molokai, built the banks of *kuapa* on Kanaha and Mauoni, known as the twin ponds of Kapiioho...he used men from Oahu and Molokai as well as those of Maui...Tradition relates that the laborers stood so closely together that they passed the stones from hand to hand. The line extended from Makawela...to Kanaha.

Prior to the completion of the ponds, Kapiioho was killed in the battle at Kawela , Molokaʻi by Alapainui, of Hawaiʻi Island. The ponds were subsequently completed by Kamehamehanui, a chief of Maui and older brother of Kahekili. Kamehamehanui, then, placed a *kapu* on the bank or *kuapa* or wall which divided the pond into two (Mrs. Rosalie Blaisdell cited in Sterling 1998:87).

WAHI PANA (LEGENDARY PLACES)

According to Kamakau (1870 in Sterling 1998: 2), "...the ancient name of the island of Maui was Ihikapalaumaewa...". The island was renamed "...after a famous child of Wakea and Papa who became ancestor of the people of Maui (Kamakau (1870 cited in Sterling 1998: 2). The town of Kahului is situated within the Wailuku Ahupuaʻa and Wailuku District. The following is a brief summary of the salient aspects of these data. The project area is located in the *ahupuaʻa* of Wailuku.

A famous chant from the Rebecca Nuuhiwa Audio collection (in Sterling 1998:62), called The Four Winds, is associated with Wailuku:

> Wailuku's wind is the Makani-lawe-mailie, the wind that takes it easy. Waiehu's wind is the Makani-hooʻeha-ili, the wind that hurts

> the skin. Waikapu's wind is the Makani-ko-kololio, the gusty wind. Waihee's wind is the Makani-kili-ʻoʻpu.

According to Fornander (in Sterling 1998"63), "Wailuku is the source of the flying clouds. It is the broad plain where councils are held".

"Wailuku" translated literally means "water of destruction" (Pukui *et al*. 1974:225) and the Wailuku area was witness to many battles, from the Battles of ʻĪao and Sand Hills to the Battles of Kepaniwai and Kakanilua. The most famous battle was that of Kepaniwai where Kamehameha I, in July 1790, finally wrested control of Maui Island. Kamehameha I and his warriors landed at the Kawela portion of Kahului Bay and proceeded up ʻĪao and other valleys to score a decisive victory. Of additional note is that in the Kauahea area of ʻĪao Valley (southeast of ʻĪao Stream below Pihana Heiau), warriors apparently dwelt and were "trained in war skills and there was a boxing site in the time of Kahekili" (Sterling 1998:89).

As Wailuku District was a center of political power, it was often at war with its rival in Hāna. By the end of the 18th century, Kahekili resided with his entourage in Wailuku and it was on the sand dunes that Kahekili and his warriors engaged those of Kalaniʻōpuʻū, Chief from Hawaiʻi Island.

In his bid to conquer Kahekili and obtain Maui (A.D.1776), Kalaniʻopuʻu brought his famous, and fearless, ʻĀlapa warriors who were slaughtered by Kahekili's men. "The dead lay in heaps strewn like *kukui* branches; corpses lay heaped in death; they were slain like fish enclosed in a net…" (Kamakau 1991:85-89).

George W. Bates recounted his journey from Wailuku to Kahului in 1854:

> Leaving Wai-lu-ku [town], and passing along toward the village Kahului, a distance of three miles, the traveler passes over the old battle-ground named after the village. It is distinctly marked by moving sand-hills, which owe their formation to the action of the northeast trades. Here these winds blow almost with the violence of a sirocco, and clouds of sand are carried across the northern side of the isthmus to a height of several hundred feet. These sand-hills constitute a huge "Golgotha" for thousands of warriors who fell in ancient battles. In places laid bare by the action of the winds, there were human skeletons projecting, as if in the act of struggling for resurrection from their lurid sepulchers. In many portions of the plain who cart-loads were exposed in this way. Judging of the

> numbers of the dead, the contest of the old Hawaiians must have been exceedingly bloody. . . .[*Sandwich Island Notes*, 309]

G.W. Bates' interpretation of a major battleground site in Kahului may not have been accurate, although there are many oral traditions about battles in this general area.

The 1776 encounter between Kahekili and Kalani'ōpu'ū resulted in a temporary truce which was broken in 1790 by the battle of Kepaniwai, when Kamehameha I consolidated his control over Maui Island. There were so many warriors and canoes invading from Hawai'i Island that it was called the Great Fleet. During Kamehameha's campaign, it was recorded that the bay from Kahului to Hopukoa was filled with war canoes and they extended to Kalae'ili'ili at Waihe'e and below Pu'uhele and Kamakailima:

> . . . Kamehameha and his chiefs went on to the principal encounter at Wailuku. The bay from Kahului to Hopukoa was filled with war canoes. For two days there was constant fighting in which many of the most skillful warriors of Maui took part, but Kamehameha brought up the cannon, Lopaka, with men to haul it and the white men, John Young and Isaac Davis, to handle it; and there was great slaughter. (Kamakau 1991: 148).

From Kahului, Kamehameha marched on to Wailuku Village where Kalanikupule, Kahekili's son, waited with his warriors.

POST-CONTACT PERIOD (POST-1778)

Early records, such as journals kept by explorers, travelers and missionaries, document Hawaiian traditions that survived long enough to be written down, and archaeological investigations have assisted in the understand of past cultural activities.

Traditional land utilization was rapidly and dramatically supplanted by sugar cane cultivation during the 1850s (Dorrance and Morgan 2000). Documentation of 19th century land use in the area is much more pronounced, which also may mean that limited traditional period activities occurred in and near the current project area. Many of the awarded Land Commission Awards (see Māhele discussion below) in Wailuku Ahupua'a were under sugar cane cultivation by the mid-nineteenth century. Sites and features built during this period include water irrigation ditches, terraces, freestanding walls, historic houses, and mill structures. Cultivation of sugar

cane dominated land use in Wailuku Ahupuaʻa from the 1880s through the 1990s (see Tuggle and Welch 1995:24).

In 1837, the village of Kahului consisted of twenty-six *pili*-grass houses living close to the sea and depending on fishing in the coastal waters for the majority of their food (Bartholomew and Bailey 1994). Mullet was still harvested from the twin ponds in the early 1900s and people swam in the spring waters that were continuously refreshed (*ibid*.). Thomas Hogan built the first western building, a warehouse, near the shoreline of Kahului in 1863 (Clark 1980). The dredging of Kahului harbor through the years filled in large sections of the ponds, eventually blocking the outlet to the sea.

As the sugar industry developed, Kahului became a cluster of warehouses, stores, wheelwright and blacksmith shops close to the harbor. A small landing was constructed in 1879 to serve the sugar company (Clark 1980). In the late 1800s, Kahului possessed a new custom house, a saloon, Chinese restaurants, a railroad and a small population of residents. Kahului ʻs main focus was shipping. The 1900 bubonic plague outbreak destroyed much of the town as officials decided to burn down the Chinatown area in an effort to contain the epidemic. The Chinese, Japanese and Hawaiian residents were displaced by this action. To further insure isolation, authorities encircled the entire town with corrugated iron rat-proof fences which ended the spread of the plague (Bartholomew and Bailey 1994). The Kahului Railroad Company built a 1,800 foot long rubble-mound breakwater in 1910 and dredging of the harbor now allowed ships with a 25-foot draft to dock at the new 200-foot wharf (Clark 1980).

THE MĀHELE AND HISTORIC LAND USE

While it is a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kauikeaouli (Kamehameha III) was forced to establish laws changing the traditional Hawaiian economy to that of a market economy (Kameʻeleihiwa 1992; Kelly 1983, 1998; Daws 1962; Kuykendall 1938 Vol. I). The Māhele of 1848 divided Hawaiian lands between the king, the chiefs, the government, and began the process of private ownership of lands. The subsequently awarded parcels were called Land Commission Awards (LCAs). Once lands were thus made available and private ownership was instituted, the *makaʻāinana* (commoners), if they had been made aware of the procedures, were able to claim the plots on which they had been cultivating and living. These claims did not include any previously cultivated but presently fallow land, *ʻokipū* (on Oʻahu), stream fisheries, or many other resources necessary for traditional survival (Kelly 1983; Kameʻeleihiwa 1992; Kirch and Sahlins 1992). If

occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed LCA and issued a Royal Patent after which they could take possession of the property (Chinen 1961).

Literally hundreds of Land Commission Awards are documented for Wailuku Ahupuaʻa (see, *e.g.*, Sterling 1998:86; Burgett and Spear 2003), although, in keeping with the broad settlement pattern outlined above, most of these were located in and around ʻĪao Valley, west of the Wailuku Town and well removed from the project area. The existence of such large numbers of LCAs, however, attests to the large settlements in the lower ʻĪao Valley during the mid-nineteenth century; residents of Kahului were no doubt drawn into this sphere of influence. According to the Waihona ʻAina database (2017), there were over 400 *kuleana* awarded in the district of Wailuku, but none were identified in the project area.

At the time of the Māhele the subject property was considered Crown Lands (c. 1848). However, in 1882, the fee title to many lots/parcels in the Wailuku area were acquired by Claus Spreckles under Land Grant 3343 (from King Kalakaua), including the lands comprising the current project area (Fredericksen and Fredericksen 1988:8-11). Land Grant 3343 consisted of 24,000 acres of land which extended from Wailuku to Pāʻia and towards Maʻalaea. In 1885, Claus Spreckles sold his lands to the Hawaiian Commercial and Sugar Company, a California company owned by the Spreckles, for five dollars. The company was located in San Francisco, California, while the plantation headquarters were located on Maui, in Spreckelsville. In 1898, Hawaiian Commercial and Sugar Company was purchased by James Castle, William Castle, Henry Baldwin, and Samuel Alexander, the latter two founding the Alexander and Baldwin Company (aka A&B). Subsequently, the Hawaiian Commercial and Sugar Company constructed the Puunene Mill, in 1902 to increase sugarcane production, and the Koolau Ditch, in 1904 to transport more water to the mill. Also in the 1920s, a railroad was constructed to haul the cane (see Tuggle and Welch 1995:19). By 1928, the annual crop production had reached 70,000 tons of sugar.

PREVIOUS ARCHAEOLOGY

Multiple archaeological investigations have been conducted over the past few years near the present project area in Kahului, Maui. Inventory Survey and Monitoring programs have yielded variable results. The subsequent text provides a brief overview of previous archaeological work conducted in the very general vicinity of the Kahului Airport area, followed by a listing of the known sites occurring within or very near the airport itself (Figure 5).

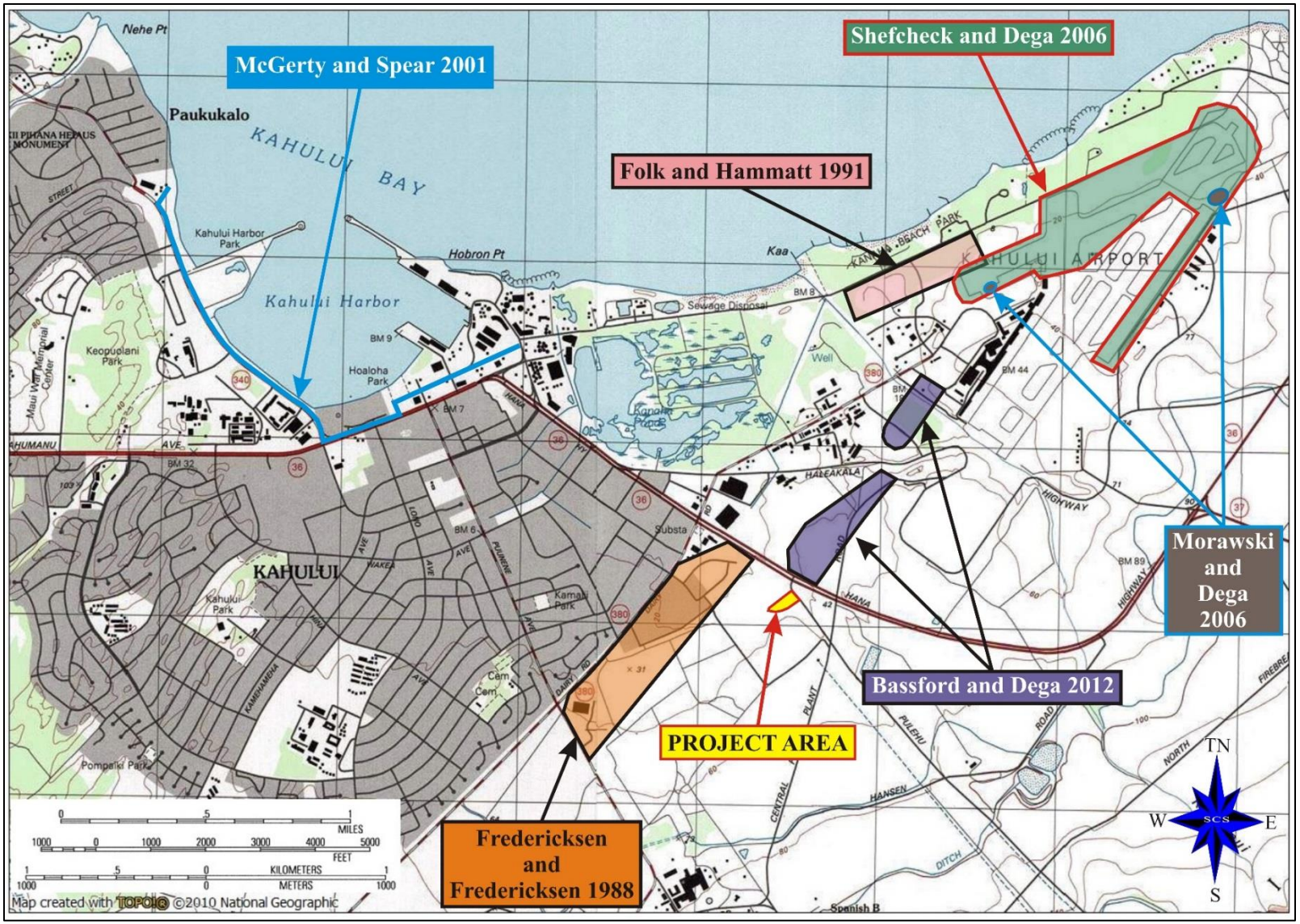

Figure 5: USGS Quadrangle (Paia, HI 1997; 1:24,000) Map Showing Previous Archaeological Studies in the Vicinity of the Project Area.

To date, Xamanek Researches (Fredericksen and Fredericksen 1988) conducted the most intensive study of the area through Archaeological Inventory Survey (AIS). The AIS led to the identification, but not full recordation, of what were initially interpreted as several volcanic glass concentrations, historic irrigation ditches, and old stream gravels. The volcanic glass debris was subsequently re-interpreted as slag associated with mill production. No subsurface cultural deposits were identified.

Cultural Surveys of Hawaii, Inc. (Folk and Hammatt 1991) conducted an Archaeological Inventory Survey adjacent to Kalialinui Drainage Canal (which was under construction in 1990 during the fieldwork), between the airport and Hana Highway. The survey resulted in the documentation of a buried A-horizon and two basalt boulder alignments. The A-horizon, a former living surface, was encountered in sandy deposits near the coastline, an environment quite different from the current project area.

Scientific Consultant Services , Inc. (Shefcheck and Dega 2006) conducted Archaeological Monitoring during construction activities in and around the airport property. The proposed access road work was divided into two phases. Phase I [TMK: (2) 3-8-006 por.] referred to the western half of the new road, from the corner of Dairy Road and Puunene Avenue, to the nexus of the proposed road and Hana Highway. This first phase included improvements to Dairy Road itself, as well as the construction of a new road originating just east of the First Assembly of God Subdivision and stretching eastward to Hana Highway. Phase II [TMK: (2) 3-8-001 por.] was continued east from Hana Highway to the north side of Kahului Airport. The second phase also included improvements Hana Highway itself.

Phase I consisted of roadway and drainage improvements in areas that have been previously disturbed and impacted by the existing airport infrastructure. Phase II included all additional work necessary to complete the project and will include improvements/construction in areas not previously impacted by existing airport infrastructure. The proposed Runway Safety Area improvements (RSA) encompassed an area 250 to 300 feet on either side of the runway, the centerline of which defines the limits of the RSA work. Archaeological Monitoring of these areas did not lead to the identification of any historic properties (Shefcheck and Dega 2006).

Scientific Consultant Services, Inc. (McGerty and Spear 2001) conducted an Archaeological Assessment for the Wailuku Force Main Project in Wailuku and Kahului, Maui [Portions of TMK: (2) 3-4-027; 3-7-001, 002, 003, 004, 007-011; 3-8-007]. As noted in the Kahului area and throughout Hawai‘i, and as summarized by McGerty and Spear (2001), there is

an acute positive relationship between the presence of sandy substrate and traditional native Hawaiian burials (see Kirch 1985). Archaeological studies conducted around the perimeter of Kahului Bay and slightly inland (inclusive of the current project area) have led to the identification of deposits related to remnants of the old Kahului Railroad bed, historic refuse, pre-Contact artifacts, midden, and isolated findspots of human remains. The depth of these cultural resources varies depending on previous construction activities in an area but often, these deposits have been identified from 0.2–2.0 meters below the ground surface. Many of these resources are associated with sandy substrata, which is similar to that in the project area.

ARCHAEOLOGICAL PROJECTS CONDUCTED IN THE VICINITY

Multiple archaeological sites have been identified within the airport proper. These sites, and one letter report pertaining to a recent Archaeological Reconnaissance Survey of the airport area, are discussed individually below to provide a more immediate understanding of the archaeology of this area. This information is paraphrased from a Xamanek Researches, LLC Letter to the State Historic Preservation Division dated January 20, 2006 (Fredericksen 2006):

State Site 50-50-05-1777: a Traditional-type cultural deposit occurring in subsurface contexts. Subsurface features, midden, and artifacts were documented at the site, all interpreted as related to prehistoric habitation. The site was dated to A.D. 1380-1700, firmly within the pre-Contact Period.

State Site 50-50-05-1798: multiple burials and is located outside the RSA to the northeast of "Runway 5-23." Significant features at the site include a burial re-interment area (from c. 20 years ago), a subterranean terrace wall, and associated pond field deposits (gleys, alluvium).

State Site 50-50-05-1799: a 4 m long rock alignment and a possible coral pavement. The site was identified to the north of State Site 50-50-04-1798.

State Site 50-50-05-2849: an extensive subterranean cultural deposit located at the east end of the airport property at Papaʻula Point. Papaʻula Point is translated by Mary Kawena Pukui as "red flats" (Pukui *et al* 1974:180).

State Site 50-50-05-4197: features related to the former World War II Naval Air Station (NASKA).

State Site 50-50-05-1783: c Kanahā Pond itself. Kanahā Pond is said to have been built by the legendary Aliʻi Kihaapiʻilani, brother in law of ʻUmi who lived around A.D. 1500 (Pukui *et al* 1974:83). *Āeʻo* (Hawaiian stilt) populate the pond and 50 or more other bird species have been observed in this area, indicating the rich resources the pond offers. Kanahā Pond is currently designated as wildlife refuge.

Letter Report (Xamanek Researches, LLC. dated January 20, 2006): Xamanek conducted a Field Inspection within a portion of the Kahului Airport [TMK: (2) 3-8-001:019]. Several previously unknown sites were identified during the Field Inspection. These consisted of a re-deposited surface scatter, a linear wall, and a possible platform. Further work related to these sites occurred during Scientific Consultant Services recent Archaeological Inventory Survey (Bassford and Dega 2012).

In 2006, Scientific Consultant Services, Inc. (Morawski and Dega 2006) conducted an Archaeological Inventory Survey of multiple areas around the airport runways [TMK: (2) 3-8-001:019]. The inventory survey yielded negative findings as no Traditional- or Historic-type cultural materials were identified either on the ground surface or in subsurface deposits.

In 2012, Scientific Consultant Services, Inc. (Bassford and Dega 2012) conducted Archaeological Inventory Survey for the proposed consolidated rental car facility and associated improvements at Kahului Airport in Kahului, Wailuku Ahupuaʻa, Wailuku District, Maui Island, Hawaiʻi [TMK: (2) 3-8-001:123, 239 and 3-8-079:021]. During the survey two archaeological sites were newly identified (State Sites 50-50-04-7347 and 50-50-04-7348). State Site 50-50-04-7374 consisted of an historic-era concrete flume. State Site 50-50-04-7348 consisted of small generator building which was interpreted as associated with former Navy use of the lands

CONSULTATION

Consultation was conducted via telephone, e-mail, and the U.S. Postal Service. The initial letters of inquiry (see Appendix A) were mailed between September 8 and October 2, 2017. Follow-up letters were mailed on September 28 and October 2, 2017 (see Appendix B). Consultation was sought from the thirty-five individuals and organizations listed below:

1. Dr. Kamanaʻopono M. Crabbe, Office of Hawaiian Affairs;
2. Alika Atay, community member;
3. Thelma Shimaoka, Office of Hawaiian Affairs;

4. Roy Newton, Office of Hawaiian Affairs;
5. Maui Sierra Club;
6. Lucienne de Naie, President, Maui Tomorrow Foundation;
7. Robert K. Luʻuwai, community member;
8. Kumu Kaponoʻai Molitau, kumu hula and cultural practitioner;
9. Paulette Kaʻonohi Kaleikini, President, Hui Malama I Na Kupuna o Hawaii Nei;
10. Chris "Ikkaika" Nakahashi, Cultural Historian, State Historic Preservation Division;
11. Filipino Community Center;
12. Japanese Cultural Society of Maui;
13. Joseph "Iokepa" Naeʻole, community member;
14. Clifford Naeʻole, community member and Hawaiian Cultural Advisor, Ritz-Carlton;
15. Johanna Kamaunu, Wailuku District Representative, Maui/Lanaʻi Islands Burial Council;
16. Kaniloa Kamaunu, Wailuku District Representative, Aha Moku O Maui;
17. Albert Perez, Executive Director, Maui Tomorrow Foundation;
18. Leimana DaMate, Executive Director, State of Hawaiʻi Aha Moku Advisory Committee;
19. Andrew "Keaana" Phillips, Burial Sites Specialist, State Historic Preservation Division;
20. Kamika Kepaʻa, Native Hawaiian Preservation Council;
21. Hokuao Pellegrino, traditional cultural practitioner and Kamehameha Schools employee ;
22. Lui Hokoana, President of Central Maui Hawaiian Civic Club, and UH-Maui College Chancellor;
23. Sharon Char, formerly with the Central Maui Hawaiian Civic Club;
24. Liana Horovitz, UHMC Hawaiian History lecturer;
25. Roselle Bailey, Kumu Hula, cultural practitioner;
26. Rose Duey, Cultural practitioner;
27. Hokulani Holt-Padilla, cultural practitioner and UHMC lecturer;
28. Joyclynn Costa, cultural practitioner ;
29. Gaylord Kubota, Retired Executive Director of the Sugar Museum and Local Historian ;
30. Kīʻope Raymond, UHMC Hawaiian Language faculty member, cultural practitioner ;
31. Clyde Kahalehau, Wailuku District Representative, Aha Moku;
32. Ellie Marshman Castillo, Secretary of Wailuku District, Aha Moku;
33. William Hoʻohuli, community member;
34. Foster Ampong, Aha Moku O Maui, Wailuku ;
35. Keʻeaumoku Kapu, CEO, Aha Moku O Maui, Inc.

In addition, a Cultural Impact Assessment Notice was published on September 17, 20, and 21, 2017, in *The Honolulu Star-Advertise*r and the *Maui News* (see Appendix B). The

newspaper notice was published in the October 2017 issue of the OHA newspaper, *Ka Wai Ola* (see Appendix C). The letters of inquiry, follow-up letters, and newspaper notice all stated that SCS was seeking information of cultural resources or activities conducted in vicinity of the proposed project area, stated the Tax Map Key number, and where to respond with pertinent information. Based on the responses, an assessment of the potential effects on cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

RESPONSES

Analysis of the potential effect of the project on cultural resources, practices or beliefs, the potential to isolate cultural resources, maintain practices or beliefs in their original setting, and the potential of the project to introduce elements that may alter the setting in which cultural practices take place is a requirement of the OEQC (1997). As stated earlier, this includes the cultural resources of the different groups comprising the multi-ethnic community of Hawai‘i.

During the consultation process, SCS sought consultation from thirty-five individuals and organizations. This process resulted in SCS receiving five written responses to the inquiries seeking any information that individuals or organizations may have which might contribute to the knowledge of traditional cultural activities that were, or are currently, conducted in the vicinity of the proposed HDOT Kahului Baseyard, in Kahului, Wailuku Ahupua‘a, Wailuku District, Maui Island, Hawai‘i [TMK: (2) 3-8-006:075 por.].

No interviews were conducted as none of the thirty-five individuals or organizations contacted by SCS during the consultation process indicated they would like to participate in that manner.

The written responses are presented below.

Johanna Kamaunu, Wailuku District Representative, Maui/Lana‘i Islands Burial Council;

A series of e-mail conversations occurred between Johanna Kamaunu, Wailuku District Representative, Maui/Lana‘i Islands Burial Council, and Cathleen Dagher, SCS Senior Archaeologist, between September 30 and November 9, 2017 regarding the project area maps (see Figures 1 through 3). Mrs. Kamaunu sent SCS an e-mail dated. The pertinent e-mails are presented below:

E-mail dated September 30, 2017 from Johanna Kamaunu to Ms. Dagher:

Aloha Cathleen,

Is there a reason for using this particular map? Not included are the new roads, completed shopping centers, business and airport developments. If one is not available could you provide a picture of the site from each corner of the property.

Mahalo,

Johanna

Ms. Dagher responded via an e-mail dated October 2, 2017:

Aloha Johanna~

I'm not sure of which map you are speaking. I sent you a USGS Quadrangle map a TMK map, and a Google Earth Satellite Image (2016). I believe these are the most currently available versions of each map. The Maui County interactive website may have a more updated version of the TMK. Unfortunately, we do not have photographs of the project area.

Mahalo and Aloha,

Cathy

On October 16, 2017, Ms. Dagher wrote:

Aloha Johanna~

I requested our client send the additional geographical information you recently asked me for. Unfortunately, all they have on file is Google Earth image, which is attached. I requested a copy of the construction plans, as well. While the construction plans have not been prepared, they are looking what they do have. I will keep you in the loop.

Aloha,

Cathy

Mrs. Kamaunu responded in an e-mail dated October 16, 2017:

> Mahalo Kathy (sic) for doing that. There is some question about the area that the maps might clarify. As you may know, the topo if the area is significantly changed over the last 10 years much less the last 1OO years.
>
> This opportunity has opened discussions regarding Maui's historical landscape that hasn't taken place outside of academia nor the intimate knowledge of generational families.
>
> Hope it will prove beneficial.
>
> Mahalo
>
> Johanna

In an e-mail dated November 9, 2017, from Ms. Dagher to Mrs. Kamaunu, Ms. Dagher sent a follow-up e-mail with an additional map:

> Aloha Johanna~
>
> I was just looking through my files on this project and found this map. Thought you might be interested in seeing it, as it does show a more current view of the area. I will be wrapping this report up, so please do let me know if you or Kaniloa [Kamaunu] have any information or concerns that you would like to have included in the CIA.
>
> Aloha,
>
> Cathy
>
> **Concerns:** None

Chris "Ikaika" Nakahashi, Cultural Historian, State Historic Preservation Division

In an e-mail dated September 12, 2017, Mr. Nakahashi stated:

> Aloha Cathy,
>
> Mahalo for contacting me regarding the CIA for the proposed HDOT Baseyard in Kahului.
>
> The people listed at the bottom of your September 11, 2017, letter are appropriate to contact regarding the traditional cultural practices in the ahupua'a of Wailuku, on the island of Maui.

Please include Keʻeaumoku Kapu in your contact list for this CIA.

I recommend SCS to utilize the media (e.x. OHA's Ka Wai Ola, Maui News, etc.) to solicit additional information for this CIA.

I recommend SCS to contact and meet with the native tenants and people that currently live or previously lived in the ahupuaʻa of Wailuku on Maui for information about the cultural customs and practices for this CIA.

Please let me know if I can assist with anything else.

A hui hou,

Christopher "Ikaika" Nakahashi, M.S.
Cultural Historian
Department of Land & Natural Resources
State Historic Preservation Division

Concerns: None

Please note that Keʻeaumoku Kapu, CEO, Aha Moku O Maui, Inc., was included in the consultation process for this project, as suggested by Christopher "Ikaika" Nakahashi, SHPD Cultural Historian..

Foster Ampong, Aha Moku O Maui, Wailuku Moku Representative

In an e-mail dated September 13, 2017, Mr. Ampong requested:

Aloha Ms. Cathleen Dagher,

Please add me to your notification list for the Cultural Impact Assessment (CIA) for the proposed State of Hawaiʻi Department of Transportation (HDOT) Kahului Baseyard in Kahului, Wailuku Ahupuaʻa, Wailuku District, Maui Island, Hawaiʻi [TMK: (2) 3-8-006:075 por.]

Mahalo.

Foster Ampong
Aha Moku O Wailuku

Concerns: None

Mr. Ampong was included the consultation process for this project, as he requested. Mr. Ampong notified members of the community the SCS was seeking individuals knowledgeable

about traditional cultural practices previously or currently conducted in the area, as SCS was preparing a CIA for the proposed action.

Hokulani Holt-Padilla, cultural practitioner and UHMC lecturer

In an e-mail dated October 2, 2017, Ms. Holt-Padilla replied:

> I'm sorry but I have no comment on this proposal. I have not been able to do any research on it.
>
> ‘O au iho nō,
>
> Hōkūlani
>
> Hōkūlani Holt
> Director, Ka Hikina O Ka Lā
> Hawai'i Papa o ke Ao
> University of Hawaii Maui College
>
> **Concerns:** None

P. Kaanohi Kaleikini, President, Hui Malama I Na Kupuna o Hawaii Nei

P. Kaanohi Kaleikini replied to SCS’s inquiry via a series of e-mails between October 10 and October 17, 2017. Unfortunately, we were unable to reach Ms. Kaleikini to obtain her permission to include the above-mentioned e-mails. Thus, we are unable to include her comments.

CULTURAL IMPACT ASSESSMENT SUMMARY

This Cultural Impact Assessment was prepared in accordance with the Guidelines for Assessing Cultural Impacts (OEQC 1997:11-13). The Guidelines recommend that a CIA consult relevant individuals/organizations, conduct ethnographic interviews and archival and historical research, identify cultural resources and practices located within the project area or in proximity, and finally, assess the impact of the proposed action and its mitigation measures on the cultural practices or resources identified.

Letters of inquiry were sent to thirty-five individuals and organizations that may have knowledge or information pertaining to the collection of cultural resources and/or traditional cultural practices currently, or previously, conducted in the vicinity of the proposed project area. The consultation process resulted in SCS receiving written responses from five individuals. Of

the five responses, one expressed concerns about the proposed permanent baseyard and materials testing laboratory.

IDENTIFED CULTURAL PRACTICES

The purpose of a CIA is to identify the possibility of on-going cultural activities and resources within a project area, or its vicinity, and then assessing the potential for impacts on these cultural resources. The project site was located in an area rich with traditional and customary practices during the pre-Contact and early historic eras. However, based on historical research and the above responses, it is reasonable to conclude that there is no evidence of cultural practices related to Hawaiian rights related to gathering, access or other customary activities currently occurring at the site or in the immediate vicinity.

IMPACT ASSESSMENT

The Cultural Impact Assessment has reviewed historical research and information received from community members. This information has been analyzed for the potential effect of the project on cultural resources, practices or beliefs, its potential to isolate cultural resources, practices or beliefs from their setting, and the potential of the project to introduce elements which may alter the setting in which cultural practices take place, as recommended by the OEQC Guidelines (1997).

Analysis of the potential effect of the project on cultural resources, practices or beliefs, its potential to isolate cultural resources, practices or beliefs from their setting, and the potential of the project to introduce elements which may alter the setting in which cultural practices take place is a requirement of the OEQC (No. 10, 1997). The findings of the current study indicate the project area has not been used for traditional cultural purposes within recent times.

The historical research and the above responses indicates it is reasonable to conclude, in accordance with the purposes outlined by Ka Paʻakai, addition, the current study did not identify any "valued cultural, historic, or natural resources" in the petition area. In addition, pursuant to Act 50, that Hawaiian rights related to gathering, access or other customary activities within the project area will not be affected and there will be no direct adverse effect upon cultural practices or beliefs by the proposed project.

CONCLUSON AND RECOMMENDATIONS

Based upon this review and analysis, sufficient information has been provided in this document to determine that while traditional cultural practices are likely to have previously been conducted within the project are, no traditional cultural practices are currently known to be conducted within the proposed project area. This determination has been substantiated by the culture-historical background, the summarized results of prior archaeological studies in the project area, and in the neighboring areas, and primarily in the concerns expressed by the cultural informants during the consultation process of the current CIA. In addition, the findings of the current study did not identify any "valued cultural and natural resources" within the proposedKahului Baseyard project located in Kahului, Wailuku Ahupua'a, Wailuku District, Maui Island, Hawai'i [TMK: (2) 3-8-006:075 por.].

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APPENDIX A: EXAMPLE LETTER OF INQUIRY

SCIENTIFIC CONSULTANT SERVICES, Inc.
1347 Kapiolani Blvd. Suite 408 Honolulu, Hawai`i 96814

Aloha kāua,

At the request of SSFM International, Scientific Consultant Services, Inc. (SCS) is in the process of preparing a Cultural Impact Assessment (CIA) in advance of a proposed State of Hawai‘i Department of Transportation (DOT) Kahului Baseyard. The HDOT plans to construct a permanent baseyard and materials testing laboratory property in Kahului, Wailuku Ahupua‘a, Wailuku District, Maui Island, Hawai‘i [TMK: (2) 3-8-006:075 por.] (Figures 1 through 3). The subject property is owned by the HDOT.

The proposed baseyard and laboratory would occupy approximately 3.6 acres of land within a 19.6-acre parcel (Tax Map Key [TMK]: (2) 3-8-006:075) on the southwest side of the intersection of Hāna Highway and Airport Access Road (see Figure 1). The Proposed Action includes construction of an 800 to 1000 square foot building to be used as a materials testing laboratory for concrete, asphalt, and soil/aggregates, and the installation of infrastructure to make the existing field office trailers permanent.

According to the *Guidelines for Assessing Cultural Impacts* (Office of Environmental Quality Control, Nov. 1997):

> The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs…The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural which support such cultural beliefs…

We are seeking any information that you or other individuals have which might contribute to the knowledge of traditional cultural activities that were, or are currently, conducted in the vicinity

of the proposed DOT Kahului Baseyard Project. We are also asking for any information pertaining to traditional cultural activities or traditional rights, which may be impacted by the proposed project. The results of the cultural impact assessment are dependent on the response and contributions made by individuals and organizations.

Enclosed are maps showing the proposed project area. Please contact me at the Scientific Consultant Services, Honolulu, office at (808) 597-1182 or via e-mail (cathy@scshawaii.com) with any information or recommendations concerning this Cultural Impact Assessment.

Sincerely yours,

Cathleen Dagher
Senior Archaeologist
Enclosures (3)

APPENDIX B: EXAMPLE FOLLOW-UP LETTER

SCIENTIFIC CONSULTANT SERVICES, Inc.
1347 Kapiolani Blvd. Suite 408 Honolulu, Hawai`i 96814

Aloha kāua,

This is our follow-up letter to our September 11, 2017, letter which was in compliance with the statutory requirements of the State of Hawai`i Revised Statute (HRS) Chapter 343 Environmental Impact Statements Law, and in accordance with the State of Hawai`i Department of Health's Office of Environmental Quality Control (OEQC) Guidelines for Assessing Cultural Impacts as adopted by the Environmental Council, State of Hawai`i, on November 19, 1997.

At the request of SSFM International, Scientific Consultant Services, Inc. (SCS) is in the process of preparing a Cultural Impact Assessment (CIA) in advance of a proposed State of Hawai'i Department of Transportation (HDOT) Kahului Baseyard. The HDOT plans to construct a permanent baseyard and materials testing laboratory property in Kahului, Wailuku Ahupua'a, Wailuku District, Maui Island, Hawai'i [TMK: (2) 3-8-006:075 por.] (Figures 1 through 3). The subject property is owned by the HDOT.

The proposed baseyard and laboratory would occupy approximately 3.6 acres of land within a 19.6-acre parcel (Tax Map Key [TMK]: (2) 3-8-006:075) on the southwest side of the intersection of Hāna Highway and Airport Access Road (see Figure 1). The Proposed Action includes construction of an 800 to 1000 square foot building to be used as a materials testing laboratory for concrete, asphalt, and soil/aggregates, and the installation of infrastructure to make the existing field office trailers permanent.

According to the *Guidelines for Assessing Cultural Impacts* (Office of Environmental Quality Control, Nov. 1997):

> The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational,

> and religious and spiritual customs…The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural which support such cultural beliefs…

We are seeking any information that you or other individuals have which might contribute to the knowledge of traditional cultural activities that were, or are currently, conducted in the vicinity of the proposed DOT Kahului Baseyard Project. We are also asking for any information pertaining to traditional cultural activities or traditional rights, which may be impacted by the proposed project. The results of the cultural impact assessment are dependent on the response and contributions made by individuals and organizations.

Please contact me at the Scientific Consultant Services, Honolulu, office at (808) 597-1182 or via e-mail (cathy@scshawaii.com) with any information or recommendations concerning this Cultural Impact Assessment.

Sincerely yours,

APPENDIX C: NEWSPAPER NOTICE AND AFFIDAVITS

Scientific Consultant Services, Inc. (SCS) is seeking information on cultural resources and traditional, previously or on-going, cultural activities within or near the proposed State of Hawai‘i Department of Transportation (HDOT) Kahului Baseyard. The HDOT plans to construct a permanent baseyard and materials testing laboratory property on approximately 3.6 acres of land within a 19.6-acre parcel in Kahului, Wailuku Ahupua‘a, Wailuku District, Maui Island, Hawai‘i [TMK: (2) 3-8-006:075 por.]. The subject property is owned by the HDOT. Please respond within 30 days to Cathleen Dagher at (808) 597-1182.

3087

AFFIDAVIT OF PUBLICATION

STATE OF HAWAII, }
County of Maui. } ss.

Rhonda M. Kurohara being duly sworn deposes and says,that she is in Advertising Sales of the Maui Publishing Co., Ltd., publishers of THE MAUI NEWS, a newspaper published in Wailuku, County of Maui, State of Hawaii; that the ordered publication as to Scientific Consultant Services, Inc. (SCS) is preparing a Cultural Impact Assessment

of which the annexed is a true and correct printed notice, was published 3 times in THE MAUI NEWS, aforesaid, commencing on the 17th day of September, 2017, and ending on the 21st day of September, 2017 (three days inclusive), to-wit: on September 17, 20, 21, 2017

and that affiant is not a party to or in any way interested in the above entitled matter.

This 1 page Scientific Consultant Services, Inc., dated September 17, 20, 21, 2017, was subscribed and sworn to before me this 21st day of September, 2017, in the Second Circuit of the State of Hawaii, by Rhonda M. Kurohara

Notary Public, Second Judicial Circuit, State of Hawaii

BETTY E. UEHARA
My Commission expires 09-26-2019

BETTY E. UEHARA NOTARY PUBLIC No. 83-344 STATE OF HAWAII

Scientific Consultant Services, Inc.

(SCS) is seeking information on cultural resources and traditional, previously or on-going, cultural activities within or near the proposed State of Hawai'i Department of Transportation (HDOT) Kahului Baseyard. The HDOT plans to construct a permanent baseyard and materials testing laboratory property on approximately 3.6 acres of land within a 19.6-acre parcel in Kahului, Wailuku Ahupua'a, Wailuku District, Maui Island, Hawai'i [TMK: (2) 3-8-006:075 por.]. The subject property is owned by the HDOT. Please respond within 30 days to Cathleen Dagher at (808) 597-1182.

(MN: Sept. 17, 20, 21, 2017)

2087

AFFIDAVIT OF PUBLICATION

IN THE MATTER OF
CIA for DLNR Kahului Baseyard Project (SCS Proj 2087)

STATE OF HAWAII }
} SS.
City and County of Honolulu }

Doc. Date: SEP 21 2017 **# Pages:** 1

Notary Name: Patricia K. Reese First Judicial **Circuit**

Doc. Description: Affidavit of Publication

Notary Signature — SEP 21 2017 Date

PATRICIA K. REESE NOTARY PUBLIC No. 86-467 STATE OF HAWAII

Scientific Consultant Services, Inc. (SCS) is seeking information on cultural resources and traditional, previously or on-going, cultural activities within or near the proposed State of Hawai'i Department of Transportation (HDOT) Kahului Baseyard. The HDOT plans to construct a permanent baseyard and materials testing laboratory property on approximately 3.6 acres of land within a 19.6-acre parcel in Kahului, Wailuku Ahupua'a, Wailuku District, Maui Island, Hawai'i [TMK: (2) 3-8-006:075 por.]. The subject property is owned by the HDOT. Please respond within 30 days to Cathleen Dagher at (808) 597-1182. (SA1029406 9/17, 9/20, 9/21/17)

Gwyn Pang being duly sworn, deposes and says that she is a clerk, duly authorized to execute this affidavit of Oahu Publications, Inc. publisher of The Honolulu Star-Advertiser, MidWeek, The Garden Island, West Hawaii Today, and Hawaii Tribune-Herald, that said newspapers are newspapers of general circulation in the State of Hawaii, and that the attached notice is true notice as was published in the aforementioned newspapers as follows:

Honolulu Star-Advertiser 3 times on:
09/17, 09/20, 09/21/2017

MidWeek 0 times on:

The Garden Island 0 times on:

Hawaii Tribune-Herald 0 times on:

West Hawaii Today 0 times on:

Other Publications: 0 times on:

PATRICIA K. REESE NOTARY PUBLIC No. 86-467 STATE OF HAWAII

And that affiant is not a party to or in any way interested in the above entitled matter.

Gwyn Pang
Gwyn Pang

Subscribed to and sworn before me this 21 day of September A.D. 20 17

Patricia K. Reese, Notary Public of the First Judicial Circuit, State of Hawaii

My commission expires: Oct 07, 2018

Ad # 0001029406

SP.NO.: _____ L.N.

Appendix D

Traffic Impact Assessment

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Traffic Assessment for Hawaii Department of Transportation Kahului Baseyard

Wailuku Ahupua'a, Wailuku District

Island of Maui, Hawai'i

[TMK: (2) 3-8-006:075 POR]

March 2018 (DRAFT)

SUBMITTED TO:

State of Hawaii
Department of Transportation

SUBMITTED BY:

SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817
(808) 531-1308

www.ssfm.com

Project Background:

The State of Hawaii Departments of Transportation (HDOT), Highways Division, Maui District, is planning to utilize HDOT property at the southwest corner of the intersection of Hana Highway and Airport Access extension in Kahului [Tax Map Key: (3) 8-6-75] as a Construction and Maintenance Field Office and Baseyard. See Figure 1. The plans include two phases (See Figure 2):

Phase I: moving 3 construction trailers to the site to be used as field offices, preparation of a maintenance storage and staging area, and fencing. (Already Completed)

Phase II: Construction of a 24'x40' field materials laboratory (2018)

HDOT is planning to use the site as a long-term facility.

This technical memo summarizes the expected Traffic effects of the proposed Baseyard.

Site Description and Access:

The 19.475 acre property owned by HDOT will have an area approximately 300 feet by 300 feet (approximately 2 acres) dedicated to the Baseyard uses. The site is bound on its West Side by Airport Road, East Side be Ho'okele Street, South Side by Pulehu Road and North Side by the site access road and Hana Highway. The site access road to the site connects to Hana Highway. The Baseyard hours of operation are expected to be approximately 7 am to 5 pm weekdays only.

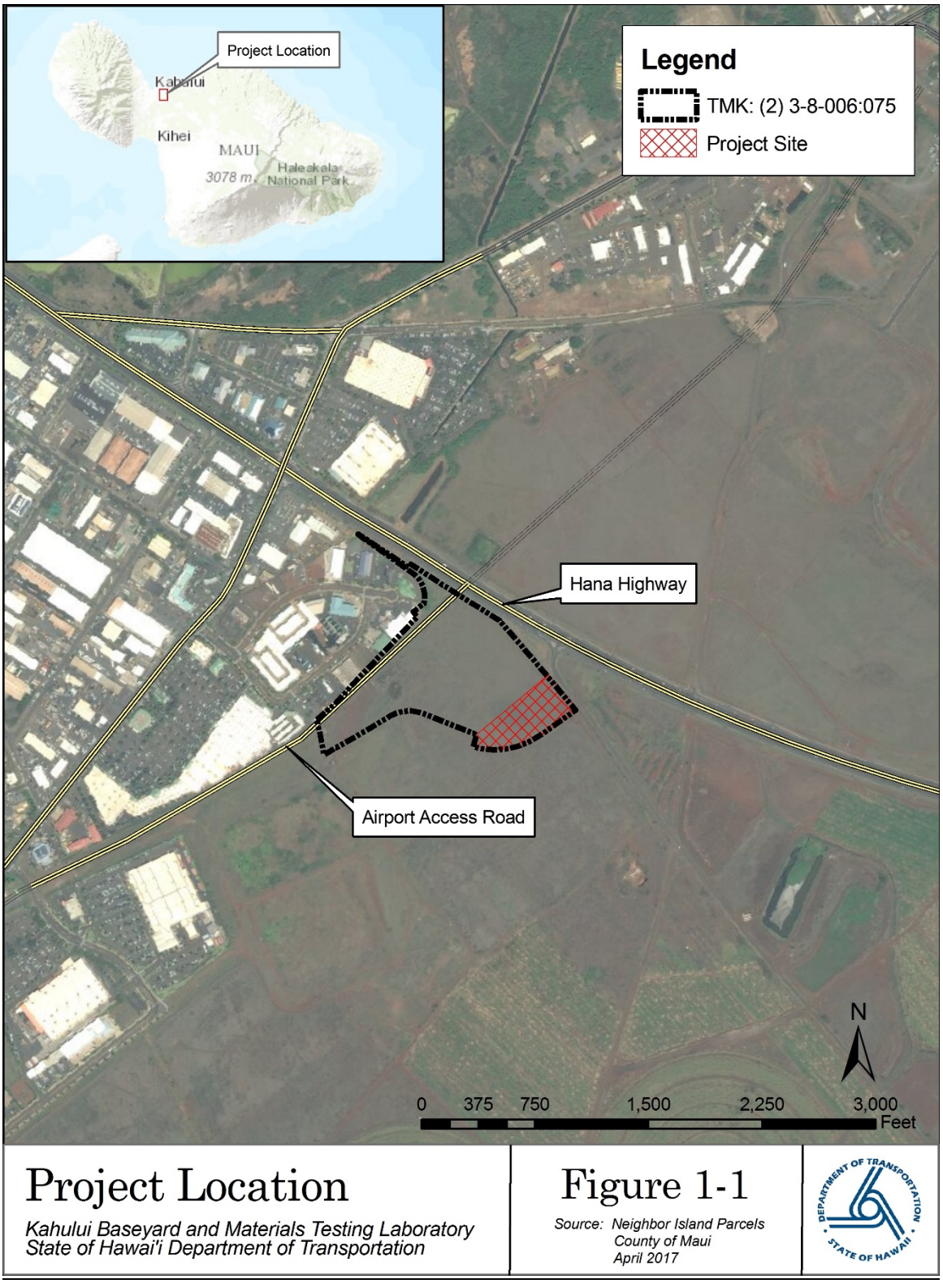

Figure 1 – Project Location

Figure 2 - Site Plan

Existing Roads and Traffic

The closest major road to the Baseyard is Hana Highway. The State of Hawai'i Department of Transportation has published traffic data for Hana Highway traffic taken in 2015 near the project site. Hana Highway is a 4 lane divided highway. Table 1 summarizes the ADT.

Table 1- Hana Highway Traffic (2015)

Roadway	Location	2015 ADT
Hana Highway	Between Kaupakulau Road and Kaahumanu Avenue	43,900

Source: *Historical Traffic Station Maps* (HDOT)

Peak hour volumes on a typical day in 2015 at the count location were 1,000 vehicles per hour (vph) toward Kaupakulau Road and 2,700 vph toward Kaahumanu Avenue in the AM (3,700 vph) total and 2,400 vph toward Kaupakulau Road and 1,300 vph toward Kaahumanu Avenue in the PM (total 3,700 vph).

The unnamed site access road that leads about 350 feet from Hana Highway to the project driveway was formerly the western end of Pulehu Road. Prior to 2011, Pulehu Street was the only intersection with Hana Highway between Diary Road and Haleakela Highway. In 2014, Ho'okele Street was connected to Hana Highway and the Pulehu Road intersection with Hana Highway was downgraded to discourage public use, since the Pulehu Road connection to Ho'okele Street was removed and Ho'okele Street provided a direct connection to Hana Highway. In 2016, the Airport Road extension was built and formed another intersection with Hana Highway about 400 feet west of the point where the site access road intersects Hana Highway.

The unnamed site access road (formerly Pulehu Street) is a two-lane local dead end road that only connects Hana Highway to the Project site. It is paved and approximately 30 feet wide. The access road beyond the site driveway is blocked with a concrete barrier. The only users of the site access road are employees and visitors to the Baseyard. East of Ho'okele Street, Pulehu Road is owned by the City and County of Maui and extends over 11 miles almost all the way to Kula Highway.

Hana Highway nearby intersections have the following peak hour turn volumes, as taken in a 2017 count. Morning peak hour of traffic is 7:10-8:10 AM and afternoon peak hour of traffic is 4:15-5:15 PM

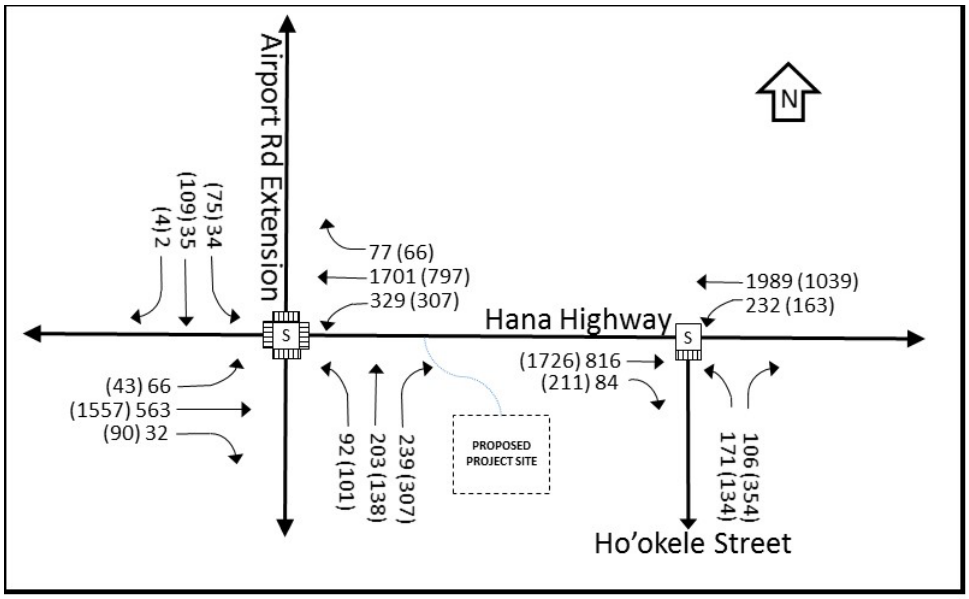

Figure 3- 2017 AM (PM) Peak Hour Turn Volumes

Project Traffic

The Baseyard has three construction trailers used as field offices and will have a materials testing laboratory for testing construction materials such as asphalt, concrete, and soil. The new laboratory will be built from mid-2018 and completed by the end of 2018. It will be approximately 800-1000 square feet in size. The only expected traffic to and from the Baseyard site will consist of trips from an estimated 11 employees and approximately 1-2 deliveries a day. Nine employees work in the three field office trailers and another two employees will work at the materials testing lab.

Institute of Transportation Engineers (ITE) Trip Generation (10th Edition) publishes average trip generation rates from hundreds of different land uses, each having numerous studies of sites nationwide. ITE Land Use 110 (General Light Industrial)[1] was used to estimate the number of trips expected from the Baseyard.

Table 2 - Estimated Trips based on ITE Land Use Code 110 General Light Industrial

	Avg Trip Gen/employee	Est. trips for 11 employees
AM Peak Hour	0.52 trips/hr (83% in/17% out)	6 (5 in/1 out)
PM Peak Hour	0.49 trips/hr (22% in/78% out)	5 (1 in/4 out)
Weekday	3.05 trips/day	34 trips/day

Peak hour Baseyard volumes are much less than the 100 vehicles in the peak hour suggested by the Institute of Transportation Engineers as a threshold for conducting a traffic study (from *Transportation*

[1] ITE definition of Land Use Code 110 General Light Industrial: "… a free standing facility devoted to single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing …"

Analyses for site Development, 2005). Traffic impacts to the highway would be almost non-existent due to the activity of 11 employees and an estimated 1-2 deliveries per day.

Special Traffic Issues:

Site traffic will use Hana Highway for going to and from the Baseyard site. Exiting the Site to Hana Highway could present a hazard for left turners, especially during peak hours. Ideally, exiting traffic would only be able to turn right. Due to the high speeds and peak hour traffic volumes, drivers who intend to go west could more safely turn right and drive east on Hana Highway, then make a U-turn at Ho'okele Street.

Construction/heavy equipment will occasionally utilize the Baseyard to deliver or pick up construction materials such as precast concrete barriers. These vehicles will find it especially challenging to find adequate gaps to turn left from the site access road onto Hana Highway, and should be directed to turn right only onto Hana Highway.

Sight Distance: The sightlines are unobstructed to the west and to the east, and Hana Highway has a relatively straight horizontal and vertical alignment in this location.

Site Photos

3 Field Office Trailers (2017) at the Baseyard

View from site access road looking west

View from site access road looking east

View from Hana Hwy median looking east

Baseyard driveway at site access road

Concrete barrier blocking access east of Baseyard driveway

Conclusion

The proposed HDOT construction Baseyard is not expected to have a significant impact to traffic conditions in the area. The proposed use as a materials testing lab and construction staging area is estimated to generate around 35 vehicle trips on an average weekday, with peak hour driveway movements totaling only 5-6 trips in the peak hour, considerably less than the 100 vehicles per hour used as a threshold for conducting an in-depth traffic impact analysis report.

Due to the high speeds and traffic volumes on Hana Highway, it is recommended that traffic exiting the site access road should be restricted to right only movements.