NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

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DEPUTY COMPTROLLER

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

APR 25 2013

PM-3147.3

Mr. Gary Gill
Acting Director
Office of Environmental Quality Control
Department of Health
State of Hawaii
235 Beretania Street, Room 702
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Final Environmental Assessment/Finding of No Significant Impact
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
Nanakuli Ahupuaa, Waianae District, Oahu, Hawaii

With this letter, the State of Hawaii, Department of Accounting and General Services (DAGS), on behalf of the State of Hawaii, Department of Education (DOE), Hawaii State Public Library System (HSPLS) hereby transmits the Final Environmental Assessment and Finding of No Significant Impact (FEA-FONSI) for the Nanakuli Public Library. The project is located in the Nanakuli Ahupuaa, Waianae District on the island of Oahu. We request publication in the next available edition of the Environmental Notice.

DAGS has included copies of public comments and the corresponding responses from the applicant that were received during the 30-day public comment period on the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFONSI).

Enclosed is a completed Office of Environmental Quality Control (OEQC) Publication Form, two copies of the FEA-FONSI, and a CD with a pdf file of the FEA-FONSI and a MS Word file of the publication form.

If there are any questions, please contact Mr. Marcus Rivera of the Project Management Branch at 586-0479.

Sincerely,

DEAN H. SEKI
Comptroller

Enclosures
c: Hawaii State Public Library System
CDS International
Kimura International, Inc.

AGENCY ACTIONS
SECTION 343-5(B), HRS
PUBLICATION FORM (JULY 2012 REVISION)

Project Name: Nānākuli Public Library
Island: Oahu
District: Waianae District
TMK: 8-9-02:065 (por)
Permits: R-5 Zoning Height waiver, Special Management Area Use Permit-Major
Proposing/Determination Agency: Department of Accounting & General Services (DAGS)
Kalanimoku Building
151 Punchbowl Street
Honolulu, HI 96813
Attn. Mr. Marcus Rivera
808-586-0479

Consultant: Kimura International
1600 Kapiolani Boulevard, Suite 1610
Honolulu, HI 96814
Attn. Ms. Leslie Kurisaki
(808) 944-8848

Status (check one only):

__DEA-AFONSI	Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to oeqc@doh.hawaii.gov); a 30-day comment period ensues upon publication in the periodic bulletin.
_X_FEA-FONSI	Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqc@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
__FEA-EISPN	Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqc@doh.hawaii.gov); a 30-day consultation period ensues upon publication in the periodic bulletin.
__Act 172-12 EISPN	Submit the proposing agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqc@doh.hawaii.gov). NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.
__DEIS	The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to oeqc@doh.hawaii.gov); a 45-day comment period ensues upon publication in the periodic bulletin.
__FEIS	The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to oeqc@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
__ Section 11-200-23 Determination	The accepting authority simultaneously transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the proposing agency. No comment period ensues upon publication in the periodic bulletin.
__Section 11-200-27	

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 not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.
__Withdrawal (explain)	

Summary (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page)**:**

The State Department of Accounting and General Services (DAGS), on behalf of the State of Hawai‘i Department of Education, Hawai‘i State Public Library System (HSPLS) proposes to construct a new public library in Leeward Oahu to serve the Nānākuli and Mā‘ili communities.

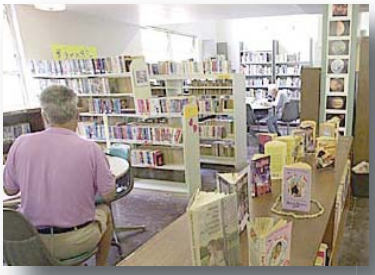
The Nānākuli Public Library is proposed on a 3.7-acre portion of a 15-acre, State-owned property on Farrington Highway that was formerly a U.S. Army Recreation Facility known as Camp Andrews. In 2004, the Nānāikapono Elementary School was developed on the mauka portion of the 15-acre State property. The new library will be built on the makai portion of the property. A small portion of the project site will be set aside for a future Leeward Head Start Facility. The Head Start Facility will be developed separately by the Honolulu Community Action Program (HCAP), and is not part of the library project or this EA.

The Nānākuli Public Library will be a single-story structure approximately 18,000 square feet in size, with areas for the general public and staff use. Public areas include a lobby, check out counter, book circulation areas, and restrooms. The library is envisioned to be a unique, community focal point. In addition to typical library components, it will feature multi-purpose rooms for public meeting space, and a sound room for recording small media such as oral language or history.

The pinnacle of the library will be a multi-purpose Program Room which will be designed to accommodate larger numbers of people. The Program Room will include sliding glass doors that open up onto a covered lanai and an adjacent outdoor area. The outdoor area can host activities such as movie nights, concerts, or other small gatherings.

A common driveway for the library and future Head Start facility is proposed off the existing fire and bus access road for the Nānāikapono Elementary School. No new ingress/egress points are proposed on Farrington Highway. The State of Hawai‘i Department of Transportation (HDOT) has requested that library traffic comply with the right-turn in and right-turn out (RIRO) restriction that applies to the existing fire and bus access road. A RIRO scenario for the library will be evaluated in a revised Traffic Impact Report. The library parking lot will provide approximately 50 parking stalls. Library designers worked closely with Nānāikapono Elementary School personnel to ensure that the site design kept pedestrian and vehicular traffic separate, with pedestrian safety foremost in mind. A pedestrian walkway will connect the library and the school.

Nānākuli Public Library
Final Environmental Assessment
DAGS Job No. 12-36-6513



Hawai‘i State Public Library System
and
Department of Accounting and General Services
Public Works Division
State of Hawai‘i

April 2013

Nānākuli Public Library

Final Environmental Assessment

DAGS Job No. 12-36-6513

Prepared for:

Hawai'i State Public Library System
and
Department of Accounting and General Services
Public Works Division
State of Hawai'i

Prepared by:

KIMURA INTERNATIONAL

April 2013

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LIST OF FIGURES

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LIST OF ACRONYMS

ADA	Americans with Disabilities Act
AIS	archaeological inventory survey
ALISH	Agricultural Lands of Importance in the State of Hawai‘i
BMP	Best Management Practices
BLNR	Board of Land and Natural Resources
BWS	Board of Water Supply
CDP	Census data place
CZM	Coastal Zone Management
DAGS	Department of Accounting and General Services
dB	decibels
dBA	A-weighted sound level
DHHL	Department of Hawaiian Home Lands
DLNR	Department of Land & Natural Resources
DOE	Department of Education
DOH	Department of Health
DOT	Department of Transportation
DP	Development Plan
DPP	Department of Planning and Permitting
DTS	Department of Transportation Services
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMS	Emergency Medical Services
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FHWA	Federal Highway Administration
HAR	Hawai‘i Administrative Rules
HECO	Hawaiian Electric Company
HCAP	Honolulu Community Action Program
HPD	Honolulu Police Department
HRS	Hawai‘i Revised Statutes
HSPLS	Hawai‘i State Public Library System
LCA	Land Commission Award
Leq	Equivalent Sound Level
Ldn	Day-Night Equivalent Sound Level
LOS	Level of Service
LUO	Land Use Ordinance
mgd	million gallons per day
MSL	mean sea level
NAC	Noise Abatement Criteria
NAAQS	National Ambient Air Quality Standards

NPDES	National Pollutant Discharge Elimination System
PCU	Public Charter School
POC	point of contact
ROH	revised ordinances of Honolulu
SCP	Sustainable Communities Plan
SHPD	State Historic Preservation Division
SIHP	State Inventory of Historic Places
SLH	Session Laws of Hawai‘i
SMA	Special Management Area
SMP	Special Management Area Use Permit
TMK	tax map key

Project Summary

Item	Description
Project Name	Nānākuli Public Library (DAGS Job No. 12-36- 6513)
Proposing Agency	State of Hawai‘i, Department of Accounting and General Services (DAGS)
Accepting Agency	State of Hawai‘i, Department of Accounting and General Services
Determination	Finding of No Significant Impact (FONSI)
Location	Farrington Highway, Nānākuli, O‘ahu
Tax Map Key	TMK 8-9-02:065 (por)
Existing Uses	3.7 acre project site is vacant. Other uses within the 15-acre parcel (TMK 8-9-02:065) include Nānāikapono Elementary School.
Landowner	State of Hawai‘i (Department of Education)
Need for Project	A public library is needed to serve the growing communities of Nānākuli and Mā‘ili on O‘ahu’s Leeward Coast.
Project Description	Construction of new 18,000 square foot library with lobby and check out areas, book circulation, and support areas for library staff. A unique feature of this library will be a multi-purpose Program Room and adjoining outdoor area for community events. The library is envisioned to be a unique, community focal point which emphasizes a Hawaiian sense of place. The building architecture will incorporate sustainable design and landscaping will emphasize drought tolerant native species.
Flood Insurance Rate Map	Zone D, areas in which flood hazards are undetermined
State Land Use	Urban
Zoning	R-5, Residential Zoning height waiver will be requested from the Department of Planning & Permitting, as some portions of roof exceed 25 ft.
Special Management Area (SMA)	Project is within the SMA, and a SMA Use Permit-Major is required from the City and County of Honolulu, Department of Planning and Permitting

1 PROJECT DESCRIPTION

1.1 INTRODUCTION

The State Department of Accounting and General Services, on behalf of the State of Hawai‘i Department of Education, Hawai‘i State Public Library System (HSPLS) proposes to construct a new public library to serve the Nānākuli and Mā‘ili communities on O‘ahu’s Leeward Coast. This Environmental Assessment (EA) has been prepared in accordance with the requirements of Chapter 343, Hawai‘i Revised Statutes (HRS), Act 241, Session Laws of Hawai‘i (SLH) 1992, and Chapter 200 of Title 11, Department of Health (DOH) Administrative rules, “Environmental Impact Statement Rules.”

1.2 PROJECT SITE

The Nānākuli Public Library project site is located on Farrington Highway in Nānākuli, approximately 28 miles from downtown Honolulu. The project site is 3.7-acres in size and is a portion of a 15-acre, State-owned parcel (TMK 8-9-002:065) that was formerly a U.S. Army Recreation Facility known as Camp Andrews (Figure 1). The parcel is owned and maintained by the Department of Education (DOE). In 1994, the Nānāikapono Elementary School was constructed on the mauka portion of this 15-acre parcel. The proposed library will be built on the makai portion of the parcel adjacent to Farrington Highway.

A small portion of the 3.7-acre project site has been set aside for a future Leeward Head Start facility. The Head Start facility will be developed separately by the Honolulu Community Action Program, Inc. (HCAP), a 501(c)(3) non-profit organization. The Head Start facility is not a part of the Nānākuli Public Library project or this EA. HCAP currently has no funding for design or construction, nor a timetable for development. However, if funds were to become available, HCAP envisions the construction of two portable classrooms accommodating approximately 30-40 preschoolers and associated staff. At that time, HCAP will be responsible to provide their own on-site parking, their own meters for utilities, and will comply with all applicable City and County standards.

1.3 BACKGROUND AND NEED FOR PROJECT

1.3.1 Background

The Hawai‘i State Public Library System (HSPLS) is under the direction of the State of Hawai‘i Board of Education. Its mission is to “Serve as the lead state agency to provide individuals at each stage of their lives with free access to information and to provide materials and customers services that foster reading and lifelong learning.”

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Figure 1
LOCATION MAP
Nānākuli Public Library

In 1991, the HSPLS developed a Master Plan for public libraries statewide, to assist in meeting its mission. One of the primary results of the master plan was the effort to build new facilities. One of the identified priority areas was a library to serve the Nānākuli and Māʻili areas of the Leeward Coast. Even at that time, the area had experienced a substantial 18.8% growth rate between 1980 and 1990, with an expectation of continued growth through the year 2020. The population growth pattern suggested that a new library would be required to meet the needs of the community.

In 1994, the State initiated planning for the new library by conducting a site selection study to identify and evaluate potential sites. The site selection study also included an environmental analysis of the potential sites. The resulting *New Nānākuli Public Library Environmental Impact Statement and Site Selection Study* (DAGS, November 1994) started with an initial identification of six "possible sites." These were narrowed to five "candidate sites" which were evaluated in the environmental impact statement (EIS). While the study did not recommend one specific site, it clearly identified the advantages and disadvantages of the six candidate sites.

The current Nānākuli Public Library project area was among the candidate sites in the 1994 site selection study, and was referred to as "Site C." Both "Site C" and an adjacent "Site D" were part of the U.S. Army's former recreation facility known as Camp Andrews, which had been turned over to the State of Hawaiʻi. "Site D" is now controlled by the Department of Hawaiian Home Lands. The 15-acre "Site C" is currently identified as TMK 8-9-002:065, and was designated by the State for development of an elementary school, public library, and Head Start facility.

The new Nānāikapono Elementary School was completed in 2004. The Environmental Assessment (EA) for the elementary school, completed in 2001, evaluated environmental conditions for the entire 15-acre State-owned parcel that had been set aside for the school, library, and a Head Start pre-school. However, at the time, no plans had been developed for the library and the EA only addressed the library in concept. Now that a definite program and plans for the library have been developed, a new EA has been prepared.

1.3.2 Need for Project

The Hawaiʻi State Public Library system is made up of the Hawaiʻi State Library and five library districts: West Oʻahu, East Oʻahu, Hawaiʻi, Kauaʻi and Maui. The West Oʻahu Library District, which includes the project area, currently has ten libraries, located in Pearl City, ʻAiea, Salt Lake/Moanalua, Mililani, Wahiawa, Waialua, Waipahu, Ewa Beach, Waiʻanae and Kapolei. The Waiʻanae Public Library is on Farrington Highway across from Waiʻanae Intermediate School, about five miles north of Nānākuli. The next closest library is the Kapolei Public Library, about seven miles from Nānākuli.

Public libraries are an important educational and social institution in our communities, providing access to diverse informational and recreational resources. In addition to being repositories of books and reference materials, public libraries provide a range of free services including access to computers, the Internet, and Internet-enabled services such as wireless (wi-fi) access. Internet

access is critical to the social and economic well being of individuals and families in the 21st century. Information is increasingly available online, including job information and applications, government and social service programs, and educational offerings. Having free, accessible services available to everyone is especially critical in times of economic stress, and in communities along the Leeward Coast, where a significant percentage of the population may not have access to these resources at home, school or work. Public libraries also provide an important social function, as community and cultural gathering places. They provide a place where information can be obtained and disseminated, and people can gather to learn, explore and interact.

1.4 PROJECT DESCRIPTION

The Nānākuli Public Library will be approximately 18,000 square feet in size, with areas for the general public and staff use (Figures 2 and 3). Public areas include a lobby, check out counter, book circulation areas, and restrooms. Resources will include books for children, young adults, adults, reference, and an audio/video collection. Staff spaces will include a single central office, staff lounge/restroom, receiving/workroom, mechanical, and equipment rooms. The building will be a single story structure with on-grade parking, providing approximately 50 parking stalls. A pedestrian walkway will connect the library and the Nānāikapono Elementary School.

The library is envisioned to be a unique, community focal point. Along with the typical library components, the Nānākuli Public Library will feature several unique spaces intended to promote its use within the community. Multi-purpose rooms will be available for public meeting space, and a sound room for recording small media such as oral language or history. When not in use as a sound room, it can be used as a regular meeting room.

The pinnacle of the library will be a multi-purpose Program Room which will be designed to accommodate larger numbers of people. The Program Room will include sliding glass doors that open up onto a covered lanai and adjacent outdoor area.

The building architecture will incorporate green building concepts and sustainable technology, including maximum use of natural lighting and ventilation, emphasis on recycling, and a photovoltaic system installed on the roof. Landscaping will emphasize drought tolerant and low maintenance trees, shrubs and groundcovers. Native Hawaiian plants will be used whenever possible.

A common driveway for the library and future Head Start facility is proposed off the existing fire and bus access road for the elementary school. No new ingress/egress points are proposed on Farrington Highway. A secondary gate will be added to the fire access road to limit vehicular access to the school during non-school hours.

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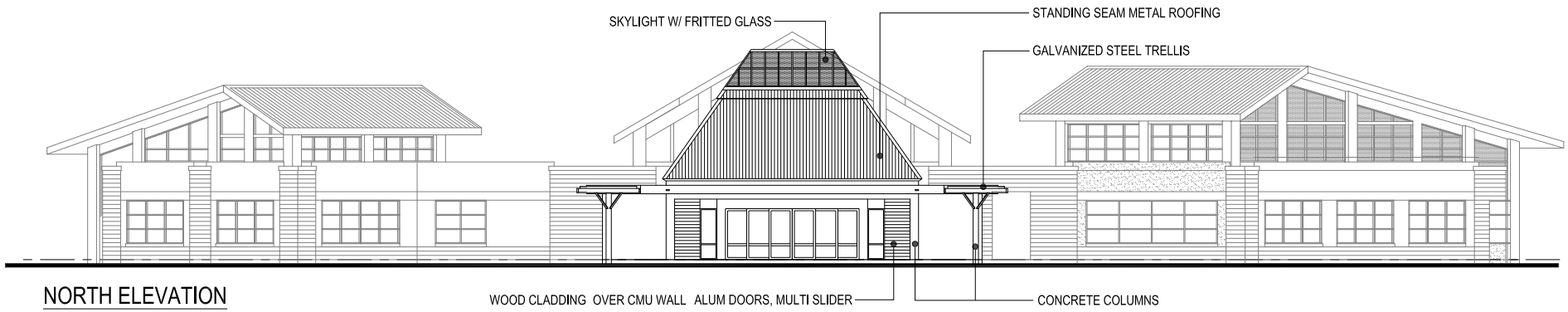
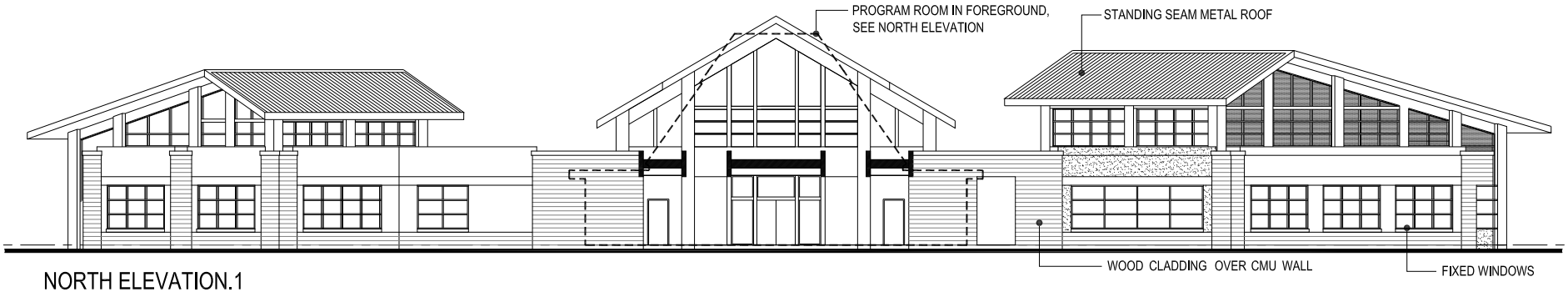
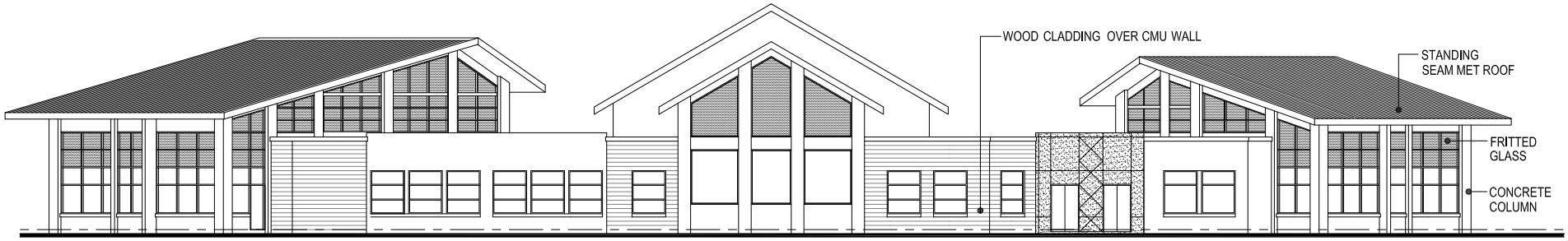
Figure 2
SITE PLAN
Nānākuli Public Library



NORTH ELEVATION



NORTH ELEVATION.1



SOUTH ELEVATION

Note: These are preliminary design concepts and subject to change.

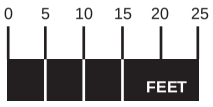
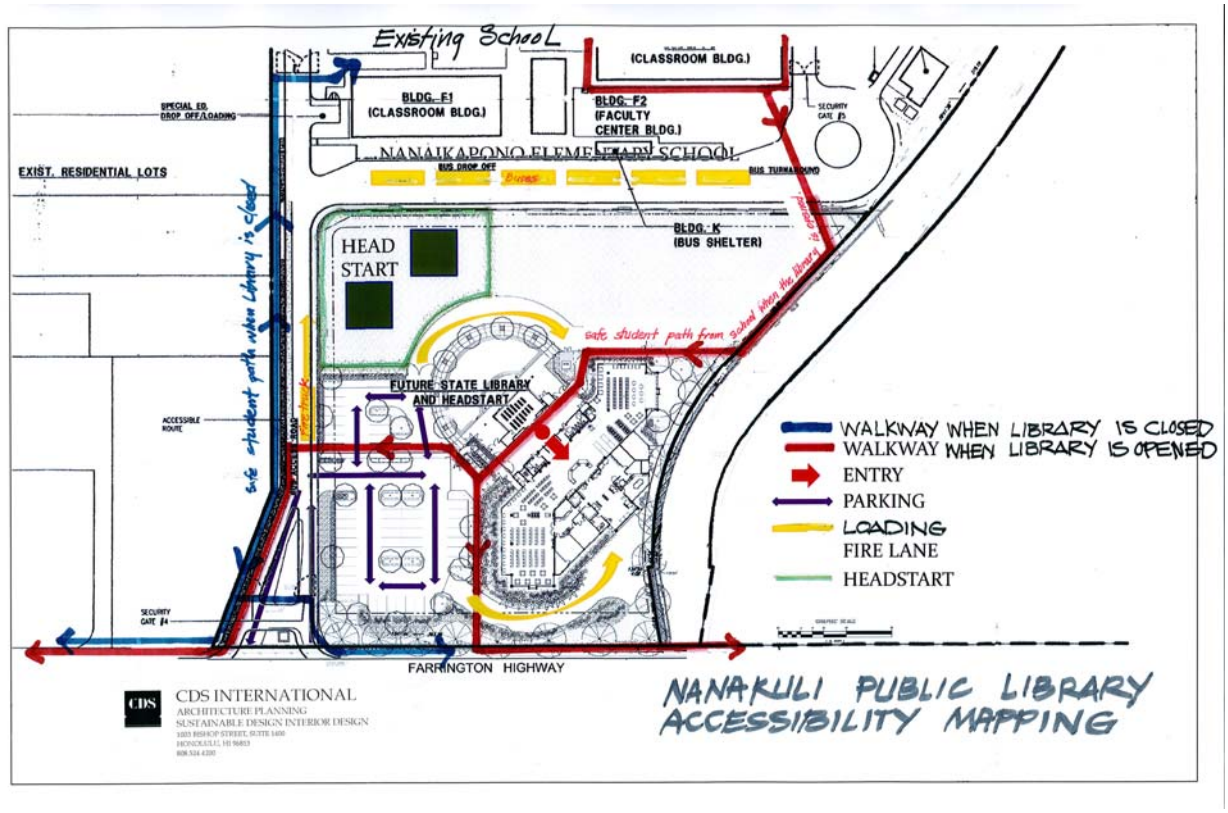


Figure 3
SECTIONS AND ELEVATIONS
Nānākuli Public Library

The site plan for the library was developed in close coordination with administrators from the adjacent Nānāikapono Elementary School. Early on, school personnel had expressed concerns about potential traffic, security and student safety associated with the new library. For example, although siting the library adjacent to the school would provide a direct connection, school administrators were more concerned about the associated safety and security issues. A major concern was the potential for conflicts between library traffic, school buses, parents picking up students, and students walking to and from school.

At the beginning of the design process, school officials were asked to review and comment on three alternative schemes, showing various locations for the library building and parking areas. The scheme preferred by school personnel pushed the library parking and building closer to Farrington Highway in an effort to separate library and school traffic as much as possible. The preferred scheme also provided for an open area between the library and school's fire lane/bus access road. School officials have proposed that this area be grassed, and have indicated they are willing to maintain the grassed area in exchange for being allowed to use it as a playing field. A joint agreement between the HSPLS and the DOE is being discussed. The open field would also function as an overflow parking area for library events, a safer alternative than overflow parking within the bus lane or at the beach park across Farrington Highway.

The sketch below was prepared during the library design process, to illustrate safe pedestrian paths between the school and new library.



When the library is closed, students will walk to and from the school and Farrington Highway along the fire access road. When the library is open, students will be encouraged to walk through the library site. This accessibility map was developed in cooperation with Nānāikapono Elementary School administration and was presented to the community during the design phase.

Construction of the new Nānākuli Public Library is scheduled to begin in early 2014, and completed in about 12 months.

1.5 POSSIBLE ENVIRONMENTAL PERMITS AND APPROVALS

The following is a summary of environmental approvals and consultations that may be required for the proposed action. Chapter 4 includes a more detailed discussion of the project's consistency with federal, State and local land use plans, policies and controls.

Table 1-1: Possible Environmental Permits and Approvals

Approval/Consultation	Agency
State of Hawai'i	
Chapter 343 Hawai'i Revised Statutes *(Environmental Assessment)*	Department of Accounting and General Services *(accepting agency)* Office of Environmental Quality Control
HRS Chapter 6E review (*Historic*)	Department of Land and Natural Resources, State Historic Preservation Division
National Pollutant Discharge Elimination System (NPDES) for construction activities	Department of Health
Community noise permit and noise variance	Department of Health
Construction plan approval	Department of Health
Use and Occupancy Agreement	Department of Transportation
Construction plans approval	Disability Communication Access Board
City and County of Honolulu	
Waiver of building height requirements for R-5 zoned Residential District (LUO Section 21-3.70-1(c)(1))	Department of Planning & Permitting
Special Management Area (SMA) Use Permit	Department of Planning & Permitting
Construction, grading, and trenching permits	Department of Planning & Permitting
Construction plan approval	Department of Planning & Permitting Department of Design and Construction Department of Environmental Services

2 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This chapter discusses the alternatives that were considered throughout the development of the project. They include 1) alternative actions to constructing a new library; 2) alternative sites for a new library; and 3) alternative site plans (within the selected site).

2.1 ALTERNATIVE ACTIONS TO CONSTRUCTING A LIBRARY

2.1.1 No-Action Alternative

The No-Action alternative would not construct a new public library in Nānākuli. Residents of Nānākuli and Māʻili would continue to use the Waiʻanae and Kapolei public libraries. The Waiʻanae Public Library is five miles to the north, and the Kapolei Public Library is seven miles in the opposite direction. The growing population in these communities would continue to be underserved and the situation will worsen as the population grows. This is not an acceptable alternative.

2.1.2 Expansion of Bookmobile Services

In the past, the Nānākuli and Māʻili communities have been served by Bookmobile services provided by the State. Historically, Bookmobiles have been used in rural areas to bring books to communities who are unable to access a regular public library. However, there is currently no Bookmobile service. Moreover, according to HSPLS policy, Bookmobile service is not an acceptable substitute for a permanent library, as it cannot provide the range of services, including Internet access, which is available at a permanent library. Current State policy is to provide adequate library service to all communities. Expansion of Bookmobile service was rejected as a viable option.

2.2 ALTERNATIVE SITES FOR A NEW LIBRARY

An extensive analysis and study of alternative sites in the Nānākuli area was conducted by HSPLS in 1994. The site selection involved a detailed three-step process which included 1) identifying "possible sites" in the area for preliminary evaluation; 2) using a set of minimum criteria to eliminate unsuitable sites and narrowing the choices to "candidate sites" for more in-depth analysis; and 3) evaluating "candidate sites" against established physical, community, and cost evaluation criteria.

The site selection process and results of the environmental analysis was outlined in *A Site Selection Study and Environmental Impact Statement* (DAGS, 1994) and is summarized below.

2.2.1 1994 Site Selection Process

Possible Sites

The first screen in the alternatives analysis resulted in the identification of six "possible sites" for preliminary evaluation. These sites met the basic criteria of 1) utilizing available State-owned lands; 2) being located on a main thoroughfare in a central location; and 3) being convenient to mass transit; and 4) being between one and 2.5 acres in size.

Evaluation Criteria for Possible Sites

A set of minimum criteria reflecting general site requirements and physical and development constraints was then used to eliminate unsuitable sites and narrow the choices for more in-depth analysis. The minimum criteria were developed from standards established by the Department of Accounting and General Services and planning guidelines from the 1991 Library Master Plan.

The minimum criteria included:

- Land Area: The usable area of the library site must be a minimum of 1.2 acres and a maximum of 2.5 acres
- Central and Visible Location: The site should be on and visible from a main thoroughfare in the area, with existing accessibility.
- Site Shape: The length-to-width ratio of the site must not exceed 2.5 to 1.
- Slope: The site should have an average slope of less than 15 percent.
- Landslide Potential: The site must not be located within a known potential landslide area.
- Traffic: The site must not be located in an area hazardous from the standpoint of pedestrian and traffic safety unless mitigative safety provisions can be made
- Historic Sites: Development of the site must not result in the destruction of buildings or sites designated as historic and deserving of protection.
- Displacement: The site should be developable with minimum disruption to the existing community. Displacement of existing residences, businesses or public uses is undesirable.

The minimum criteria were applied to the six possible sites. Additional public and agency input resulted in consideration of two new sites and the combination of two of the sites into one site. At the end of this phase, a total of five sites were deemed suitable for further analysis as "candidate sites."

Candidate Sites

The site selection was narrowed down to five candidate sites, referred to as Sites A, B, C, D and E, and shown in Figure 4. All sites are located in Nānākuli, along Farrington Highway.

Evaluation Criteria for Candidate Sites

A detailed analysis was undertaken of each candidate site, with each site being evaluated against established criteria. The site evaluation criteria are outlined below:

1. Physical Criteria
   a. Site Characteristics
      Slope, Shape, Soil and Foundation Characteristics, Natural Beauty, and Aesthetic qualities
   b. Roadways and Utilities
      Roadways, water service, sewer service, drainage facilities, power and communication
   c. Accessibility and Safety
      Vehicular access, vehicular safety, pedestrian access and safety

2. Community Criteria
   a. Government
      State Land Use designation, City and County Development Plan, Zoning, subdivision/consolidation, Special Management Area, National Flood Insurance Program
   b. Community Effects
      Land ownership, existing use and displacement, surrounding land use, proximity to commercial center, visibility from major highway and scenic value

3. Cost Considerations
   a. Land Acquisition Cots
   b. On-site Improvements
   c. Off-site Improvements

2.2.2 Candidate Site A

Candidate Site A was a State-owned site located at the base of Puʻu o Hulu Kai, at Māʻili Point. The site is located at the intersection of Farrington Highway and Kaukama Street and is surrounded primarily by vacant land except for residential use across Kaukama Street.

Site A encompasses portions of two State-owned parcels (8-7-6:2 and 5), both of which are vacant and unused. Three military related structures (WWII era) are situated in the vicinity of the site.

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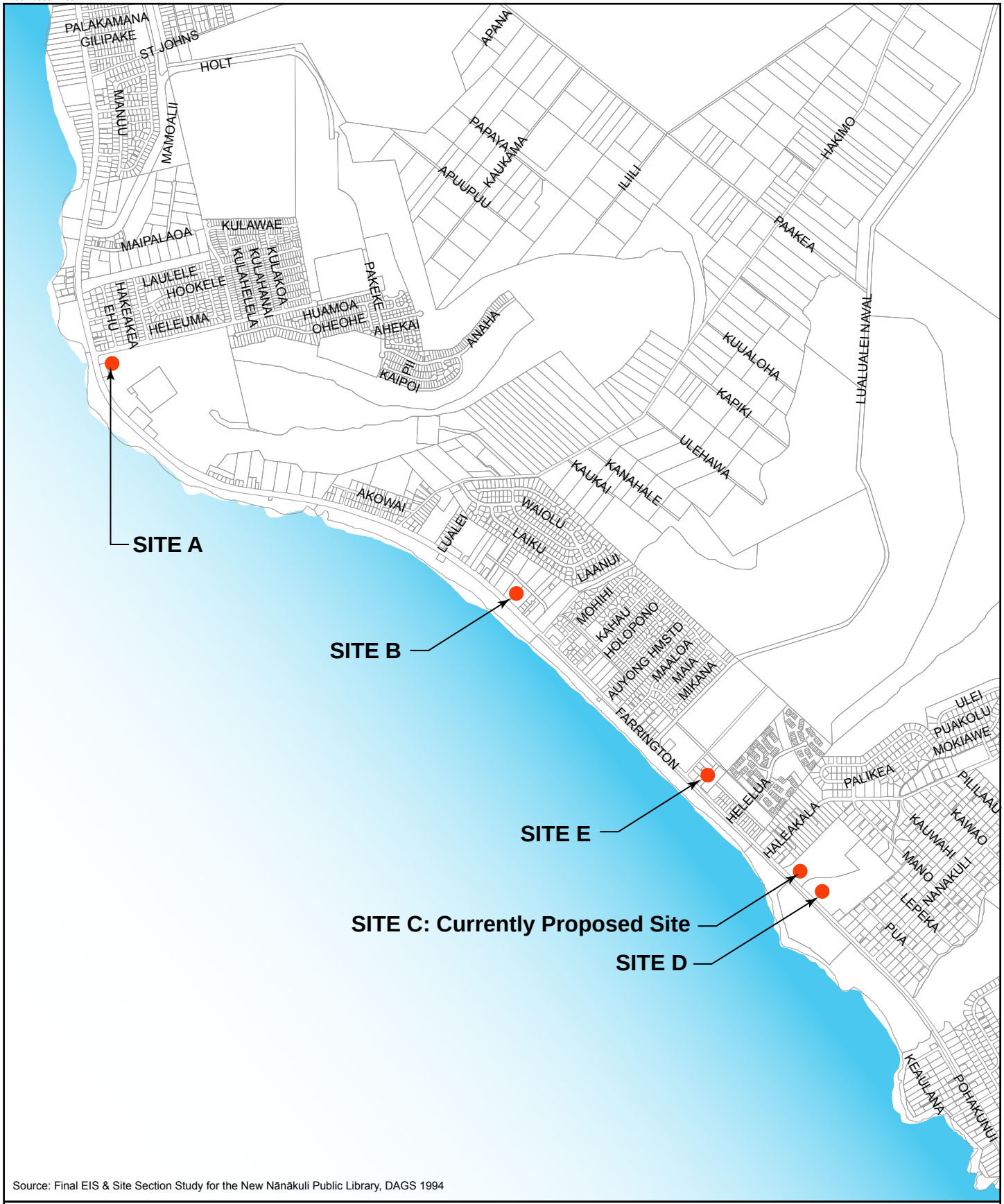

Source: Final EIS & Site Section Study for the New Nānākuli Public Library, DAGS 1994

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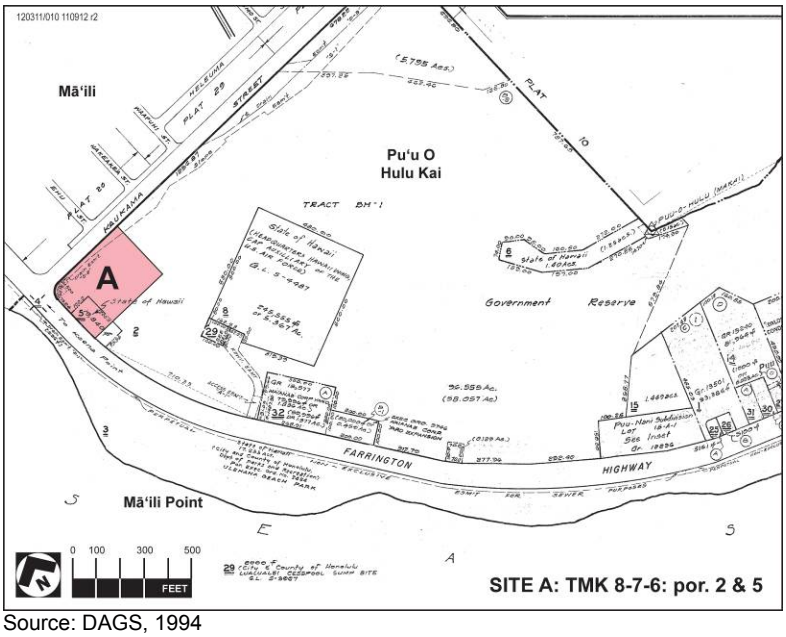
Figure 4

ALTERNATIVE SITES CONSIDERED FOR NĀNĀKULI PUBLIC LIBRARY

Nānākuli Public Library



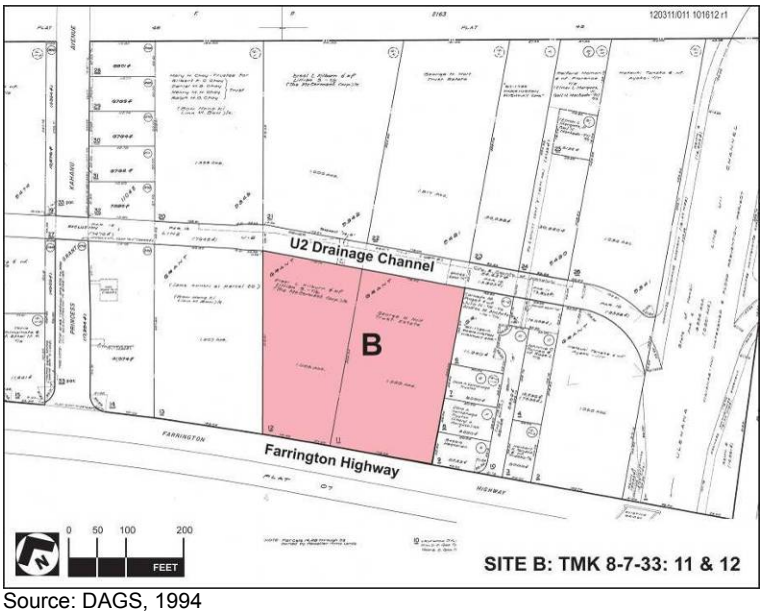
Source: DAGS, 1994

Site A, at the corner of Farrington Highway and Kaukama Street
Photo credit: Google Maps

At the time of the 1994 site selection study, it was noted that the parcels were the subject of a land ownership dispute between the State and the Department of Hawaiian Home Lands (DHHL). The unsettled land dispute was noted as a major disadvantage of Site A. Another major disadvantage was that this site is in the State Conservation District, where a library is not a permitted use. As such, use of this site for a library would have required a State Land Use district boundary amendment. It would also require rezoning as well as a change to the City and County of Honolulu's Development Plan, which designated the site for Preservation use.

2.2.3 Candidate Site B

Site B was comprised of two privately owned parcels between Farrington Highway at the U2 drainage channel, northwest (Makaha-side) of the Ulehawa Stream channel. Site B is surrounded by residential lands with the exception of an adjacent small grocery store to the north.



Source: DAGS, 1994

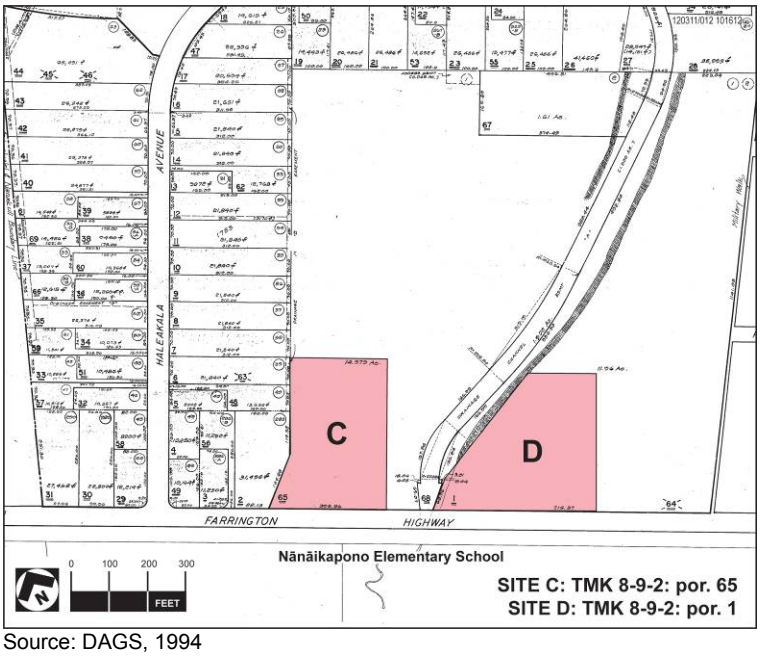
Site B
Photo credit: Google Maps

The western most parcel (Parcel 12) is encumbered by five single family homes and an existing private road that provides the only access to nine homes across the U2 (Ulehawa) drainage channel. The other parcel (Parcel 11) is owned by a single landowner, and is vacant and unused. Both parcels are former government lands converted to private ownership.

At the time of the site selection study, Site B, like Site A, was the subject of a DHHL claims dispute with the State. This was a major disadvantage of this site. The site analysis also noted that a portion of this site is within a "special flood hazard area inundated by 100-year flood" according to the Federal Emergency Management Agency's Flood Insurance Rate Maps. This would require structures to be elevated above the base flood elevation.

2.2.4 Candidate Sites C (Proposed Site) and D

The two sites that were referred to as Sites C and D in the 1994 site selection study are State-owned lands that are part of the former Camp Andrews military reservation. Site C is the currently proposed library site. Site D was a similar sized site located on the west side of the drainage channel.



Source: DAGS, 1994

The currently proposed library site was identified as Site C. It is a part of the former Camp Andrews.
Photo credit: Google Maps

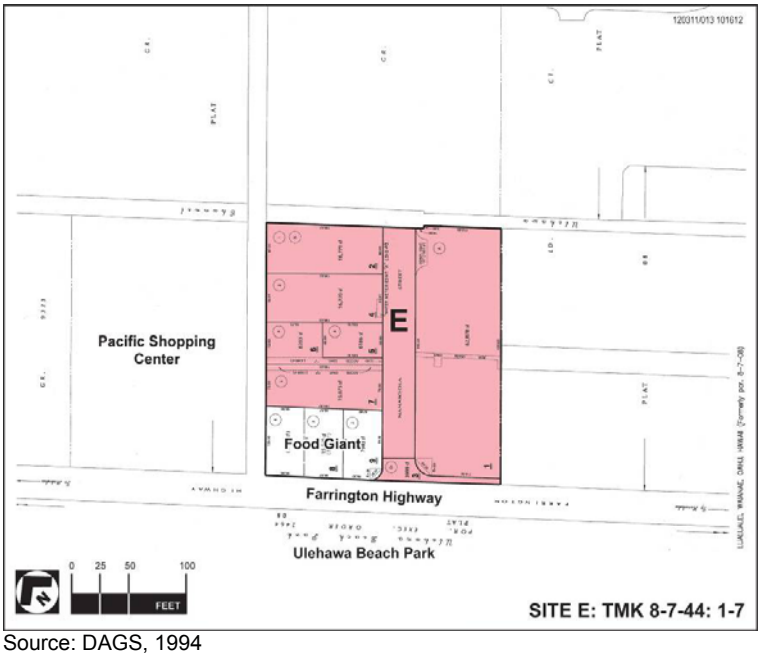
Site D was also part of the former Camp Andrews, but was located to the east of the drainage channel. It is now under the control of the Department of Hawaiian Home Lands.
Photo credit: Google Maps

2.2.5 Candidate Site E

Candidate Site E consisted of three parcels of privately-owned commercial land, east of the Pacific Shopping Center and across an existing road easement. Nānākuli Super Food Giant supermarket is to the southwest of Site E, and Ulehawa Beach Park is located across Farrington Highway.

At the time of the 1994 site selection study, Site E was on the market for sale, but has since been sold and developed with additional commercial uses. The site selection study noted that there were four existing buildings on the site with a total of approximately ten businesses. The potential displacement of these tenants was seen as a major disadvantage of this alternative, and as a result, Site E was not seriously considered as a future library site.

Site E has been developed with additional commercial uses, as shown in the photo below showing existing conditions.



Source: DAGS, 1994

Site E was located to the northeast of and behind Nānākuli Super Food Giant. Use of this would have involved a displacement of approximately ten commercial businesses. The site has since been developed with additional commercial use.
Photo credit: Google Maps

2.2.6 Preferred Library Site

Based in part on the findings of the Site Selection study, in late 1994, the State Board of Land and Natural Resources (BLNR) transferred 15 acres of the former Camp Andrews (including Site D) to the Department of Hawaiian Home Lands (DHHL). That area, located east of the drainage channel, is now proposed for a Nānākuli Village Commercial development.

The BLNR designated that the remaining 15 acres west of the drainage channel be retained by the State for development of a new elementary school and public library. In 2004, the Nānāikapono Elementary School was constructed on the mauka portion of this 15-acre site. The makai portion of the property, what the site selection study called Site C, is the site for the new Nānākuli Public Library.

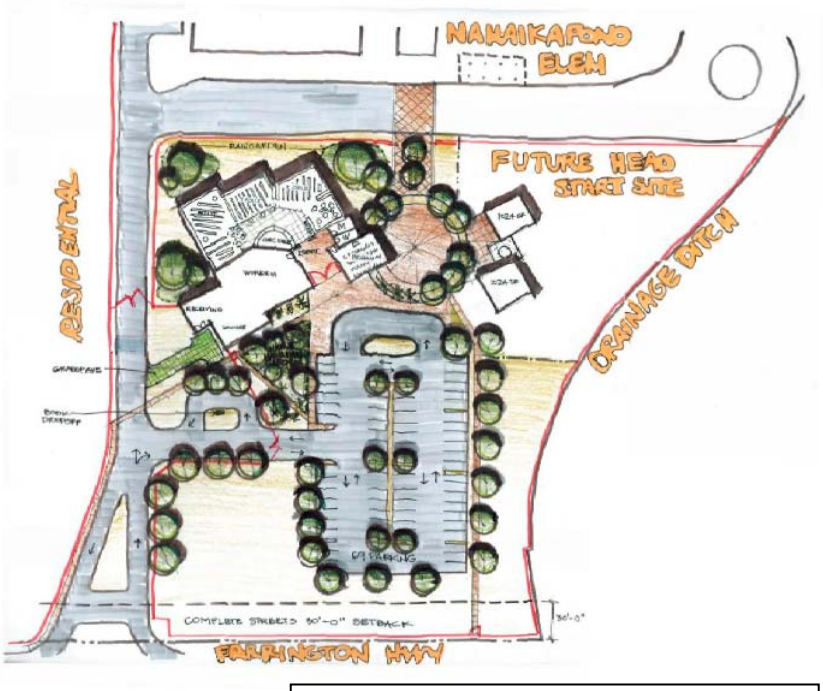
2.3 ALTERNATIVE SITE PLANS

The design phase for the Nānākuli Public Library at the current project site was initiated in early 2012. Early on in the design process, several alternative "schemes" or site plans were evaluated in coordination with representatives from the Nānāikapono Elementary School. This was done in response to school personnel's concerns about potential safety and security concerns, primarily conflicts between library traffic, school bus and car traffic, and students walking to and from school.

The project architects, CDS International, approached the elementary school personnel with three initial schemes, each scheme with varying locations for the buildings and parking areas within the project site.

2.3.1 CDS Scheme A

CDS Scheme A showed a library building in the northwestern corner of the site, close to the elementary school and along the fire access road. The Head Start facility would be in the western corner of the site. Library parking would be on the makai side of the site near Farrington Highway.



Source: CDS International, 2012

Scheme A was eliminated because of potential conflicts between cars, school buses and pedestrians.

Nānāikapono Elementary School personnel stated that although direct connection between the school and new library would encourage library use by the students, they had serious safety and security concerns. One concern was that parents would likely park their vehicles in the bus lane, causing congestion and traffic conflicts with buses and library patrons.

2.3.2 CDS Scheme B

CDS Scheme B reversed the site layout in Scheme A, placing the library parking lot adjacent to the bus lane at the top and the new library fronting Farrington Highway. The school personnel rejected this scheme as they felt it would exacerbate existing traffic and circulation problems. Their main concern was the conflict between vehicle traffic from the new parking lot and the school, particularly during after school pick up. Another issue is that most of the existing bus lane will be shared with the library (for library access), which could cause parents to park in the bus lane. This would create additional problems for the school buses. This scheme also had a connection between the school and new library similar to CDS Scheme A.

Elementary school personnel also rejected Scheme B due to traffic and circulation concerns.

Source: CDS International, 2012

2.3.3 CDS Scheme C (Preferred)

CDS Scheme C located both the library parking and building closer to Farrington Highway, leaving an empty "green space" on the mauka side of the site, between the fire lane and new library. School personnel preferred this scheme as it kept the library traffic away from the school. School personnel offered to maintain (mowing of grass) the green space if HSPLS is willing to do a joint agreement. It was suggested by school personnel that the Head Start facility be located within this buffer area, but in the north corner, closer to the library parking lot. The remainder of the open space buffer can be used by the school, if agreed upon. Access to this space would be at the far corner of the project site, to be controlled by the school.

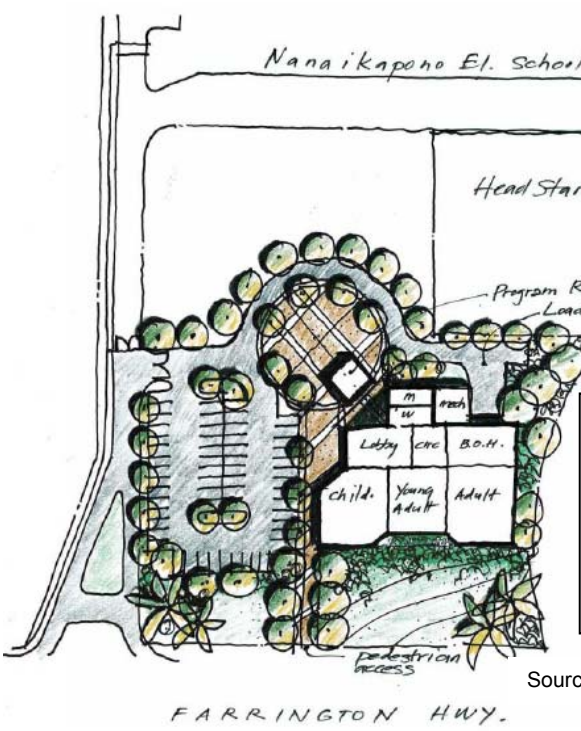
2.3.4 Justification for Scheme C

Based on the consultation with the Nānāikapono Elementary School administration, Scheme C was selected as the preferred site plan. The illustration below shows an early working drawing for Scheme C. It was later agreed that the Head Start site should be flipped to the opposite side of the open space (northwestern corner of the site, next to the parking lot).

In summary, the reasons for selecting Scheme C are as follows:

Traffic

- Pushing the library parking and building closer to Farrington Highway should eliminate the security and traffic concerns, especially during the morning and afternoon hours when students arrive and are released
- Although there is no way to avoid sharing the library's new driveway with the existing bus lane (coming off of Farrington Highway), having the parking further away from the school will help alleviate some of the congestion.



Scheme C kept school and library traffic separate. In the preferred plan, Head Start was flipped to opposite (northern) corner.

Source: CDS International, 2012

- Cattle gates will help control traffic into the school campus.
- Avoiding a vehicle accessed book drop; this will further help eliminate unnecessary vehicle traffic.

Security

- Security was another major concern. Although a direct connection between the school and new library would be encouraging, if the library were located adjacent to the school, there could be security concerns for both the school and library. Scheme C eliminates any direct connection.
- Open space between the library and school give school personnel full view of any activities that may occur on HSPLS site.

Open Area

- This open area allows a "joint use agreement" between Nānāikapono Elementary School/DOE and HSPLS.
- HSPLS would install (and possibly waters) grass and the school would be willing to mow the grass. In return, the school would be allowed to utilize this area as a playing field.
- A joint-use agreement may help mitigate HSPLS concerns about the effort and cost of maintaining this open space.

- Open space could be used for overflow parking for library events. This would be safer than people trying to park within the bus lane or at the beach park across of Farrington Highway.

Honolulu Community Action Program (HCAP) Head Start

- Within the open-space area of the site, Head Start should be located at northern corner, closer to library parking.
- Library parking will be closer to the Head Start. If HCAP wants to construct their own separate parking, a new driveway can easily be configured. This would also isolate the use of the open space to be used by the school in the far western corner of the site.
- The entry to the open space would be located at the upper right corner (by bus turnaround), which keeps the students farthest away from traffic/buses. This entry would be controlled by the school.

3 AFFECTED ENVIRONMENT, IMPACTS AND MITIGATION

3.1 INTRODUCTION

This chapter describes the existing environment, potential project impacts and proposed mitigation. This chapter is organized by resource area, and is generally divided into 1) physical environment, 2) biological environment, 3) socio-economic environment, 4) utilities and infrastructure, 5) traffic, and 6) public services and facilities.

Much of the information in this Chapter describing the existing environment is from the February 2001 *Final Environmental Assessment and Finding of No Significant Impact for the Nānākuli IV Elementary School*. That EA evaluated a 15-acre project area, which includes the site of the current Nānāikapono Elementary School and the current 3.7-acre project site (which includes the future Head Start site).

The 2001 EA included a soils study, flora and fauna reports, an archaeological and cultural impact assessment, and a Phase I environmental site assessment. This information is still valid and is referenced herein. Other reports such as a traffic analysis have been updated to reflect current conditions.

The discussion of environmental impacts includes both direct and indirect impacts. Direct impacts are those caused by the action and occur at the same place and time. Indirect effects may occur later in time or farther in distance, but are still reasonably foreseeable. The analysis in this chapter also identifies possible cumulative environmental impacts. Cumulative impacts are defined as the results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

3.2 PHYSICAL ENVIRONMENT

3.2.1 Location and Adjacent Land Uses

The Nānākuli community is relatively rural in character with a mix of land uses including residential, commercial, industrial, public facilities, recreational, agricultural and military. Commercial uses are primarily located along the Farrington Highway corridor, surrounded by single-family residential development. Land uses on the makai side of Farrington Highway are primarily recreational beach parks and preservation, with the exception of the former Nānāikapono school site, located almost directly across the future library. The former school buildings are currently being used by the Kamehameha Schools Nānākuli Learning Center, Ka Waihona O ka Naʻauao Public Charter School (PCS), Punana Leo, In Peace, and Hawaiʻi Community Action Program (HCAP) Head Start.

The 3.7-acre project site is located directly makai of Nānāikapono Elementary School, which has an enrollment of 910 student in Grades K through 6. There is a bus and fire access road located between the school and the project site, on the east (mauka) side. The site is also bordered by a

drainage channel on the south and southeast, Farrington Highway on the southwest (makai side). The same bus and fire access road forms the northern border of the site. Lands on the other side of the access road are residentially zoned properties.

The lands on the opposite (east) side of the drainage channel were also once part of Camp Andrews, and are now under the control of the Department of Hawaiian Home Lands (DHHL). In 2008, the DHHL approved a 64-year lease on 12 acres to the Nānākuli Hawaiian Homestead Association for development of a Nānākuli Village Center. This is envisioned as a multi-purpose village center that will include retail, commercial, and business activities, as well as residential and cultural spaces. Key features of the village will include the Agnes Cope Learning Center, the International Surfing Hall of Fame, Museum, a 48-unit affordable rental housing complex, and the Nānākuli Commercial Center.

3.2.2 Topography and Soils

Existing Conditions

Geology

The island of Oahu is a volcanic doublet formed by the Waiʻanae range to the west and the younger Koʻolau range on the east. Both are the remnants of great shield volcanoes which have lost most of their original shield outlines, and are now long narrow ridges shaped largely by erosion. The Waiʻanae Range is an estimated 22 miles long, and its narrow ridges are interspersed by the valleys of Mākua, Mākaha, Waiʻanae, Lualualei, and Nānākuli. The project site is located at the base of Nānākuli Valley. The surrounding coastal plain is underlain by elevated coral reef formed when the sea level was higher than it is currently. The ancient reef is partially covered by alluvium carried out from the Waiʻanae Range.

Topography

The project site and surrounding areas slope gently toward the sea with the drainage channel adjacent to the site being the only significant topographic feature. The site elevation ranges from 14.5 to 18.5 feet above mean sea level (MSL). Within the project site, the surface topography is characterized by unpaved roadways, remnant concrete building foundations, and low coral outcroppings.

Soils

As shown in Figure 5, the soils in the project area are classified as coral outcrop (CR), which consist of 80 to 90 percent coral with minimal soil. According to the U.S. Department of Agriculture, “Coral outcrop (CR) consists of coral or cemented calcareous sand. The coral reefs formed in shallow ocean water during the time the ocean stand was at a higher level.”

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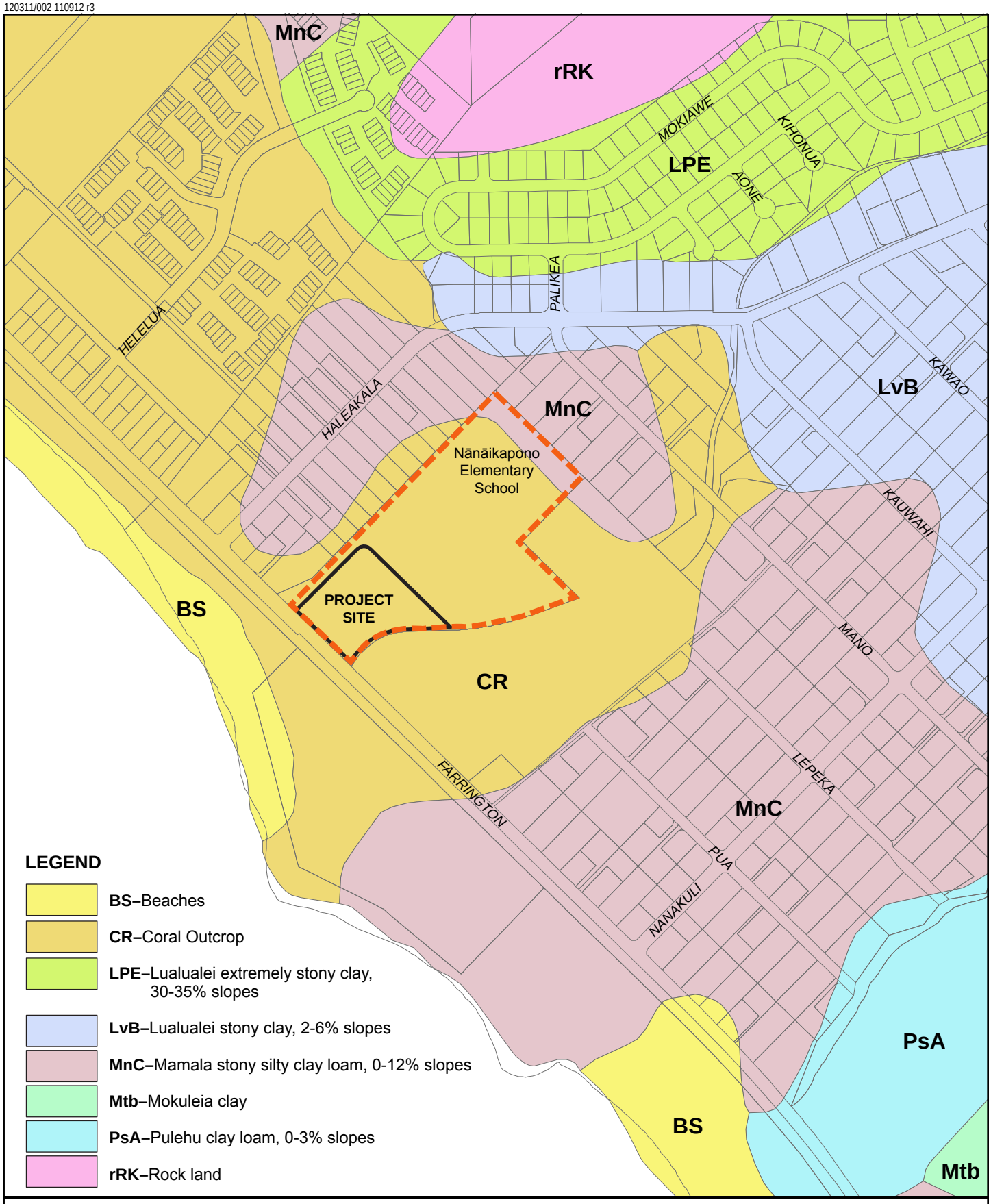

Figure 5
SOILS MAP
Nānākuli Public Library

A Foundation Investigation conducted in 2012 for the Nānākuli Public Library project (Ernest K. Hirata, Associates, Inc. 2012) notes:

> *"The surface soil consisted of clayey silt fill in a stiff condition to depths ranging from about 6 to 30 inches below grade. The clayey silt fill was generally underlain by tan coral in a medium to hard condition extending to the maximum depths drilled. In two borings, pockets of soft reddish brown clayey silt and loose silty gravel were encountered within the coral stratum. Although not encountered in our borings, our past experience in the project area indicates that voids can be expected in the coral stratum. Groundwater was encountered in all borings at depths ranging from about 13.5 to 15 feet."*

The Land Study Bureau's Detailed Land Classification-Island of Oahu evaluates the quality or productive capacity of certain lands on Oahu for selected crops and overall agricultural suitability. The project site is not classified as productive agricultural lands.

The Agricultural Lands of Importance in the State of Hawai'i (ALISH) map, prepared by the State Department of Agriculture in 1977, classifies agriculturally important lands in Hawai'i into three categories: 1) prime agricultural land, 2) unique agricultural land, and 3) other important agricultural land. The project site and surrounding areas was not classified as productive agricultural lands.

Impacts and Mitigation

Site improvements and construction of the library will not have a significant impact on overall geology or topography of the site. Construction activities will include grading and excavation for building foundations, utilities and roadbeds. Grading activity will be required to provide proper drainage and will slightly alter the existing topography. Grading activity will not be extensive. Preliminary estimates are that approximately 4,000 cubic yards of fill will be imported.

Temporary erosion control during construction will be designed in accordance with State and County standards. Construction activities will employ best management practices to prevent soil loss and erosion. Any impact of construction activities on soils will be mitigated by measures outlined in the following regulations:

- Chapter 14, Articles 13-16 as related to Grading, Soil Erosion and Sediment Control, of the Revised Ordinance of Honolulu, 1990, as amended
- Department of Planning and Permitting, Rules relating to Soil Erosion Standards and Guidelines, (1999)
- USDA Soil Conservation Services Erosion and Sediment Control Guide for Hawai'i, (1968)

A National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water associated with construction will be required for the project. The permit requires a Best Management Practices (BMP) plan, which will require compliance with City ordinances pertaining to grading, grubbing, stockpiling, soil erosion and sedimentation.

The construction contractor will be required to monitor during construction to ensure that the minimum standards are employed at all times and that the erosion, sediment, pollutants and runoff is controlled and does not impact adjacent properties, streets and waterways.

Permanent erosion controls which will be utilized within the library site will include impervious surfaces, landscaping ground cover and drainage facilities. The construction BMPs and permanent improvements will ensure that the potential for erosion is minimized to the maximum extent practical.

3.2.3 Air Quality

Existing Conditions

National Ambient Air Quality Standards (NAAQS) have been established for seven major air pollutants: carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O_3), particulate matter smaller than 10 microns (PM_{10}), particulate matter smaller than 2.5 microns ($PM_{2.5}$), sulfur oxides (SO_x), and lead. Air pollutant levels are monitored by the State Department of Health (DOH) at a network of sampling stations statewide. The nearest DOH air quality monitoring station is located eight miles away at Barbers Point. Based on ambient air monitoring data, the U.S. Environmental Protection Agency has classified the island of O‘ahu and the entire State of Hawai‘i as being in attainment of the federal standards. There are occasional exceedances of the more stringent State standards for carbon monoxide near congested roadway intersections.

There are no major sources of air pollution or airborne emissions in the immediate project vicinity. The air quality in the area is considered good and the primary non-point source of emissions are vehicles traveling along Farrington Highway and other roadways.

Impacts and Mitigation

Construction Period

During construction, site clearing, grubbing and grading will generate dust in the immediate area which has the potential to impact the adjacent Nānāikapono Elementary School, nearby residences to the northwest, and the Nānākuli Learning Center, which is located downwind of the library site. The nearest classrooms at Nānāikapono Elementary School are located within 100 feet of the project limits. Classroom buildings are air conditioned and located upwind of the prevailing northeast tradewinds, which should mitigate construction period dust.

The construction contractor will employ fugitive dust emission control measures in compliance with provisions of the State DOH Rules and Regulations (Chapter 43, Section 10) and Hawai‘i Administrative Rules (HAR) Chapter 11-60.1, “Air Pollution Control,” Section 11-60.1-33 on Fugitive Dust.

During excavation, the contractor will sprinkle water, as necessary to control dust. In addition, the following measures will be implemented to minimize dust and air quality impacts:

- Use of dust screens around the construction site;
- Provide an adequate water source at the site prior to start-up of construction activities;
- Pave or revegetate work areas cleared of vegetation as soon as possible to reduce dust;
- Provide adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities;
- Control dust from debris being hauled away from the project site;
- Move construction equipment to and from the work sites during non-peak traffic periods, to the extent possible, in order to minimize disruption to area traffic.

Emissions from construction equipment, trucks and commuting construction workers will not significantly impact ambient air quality due to the relatively low level of vehicular activity in comparison to existing traffic conditions. Slow-moving construction vehicles, however, can disrupt peak traffic hour traffic, increasing congestion and increased vehicular emissions. This will be mitigated by transporting large construction equipment during off-peak traffic hours. Overall, air quality impacts during construction will be temporary in duration.

The construction contractor will identify a primary point of contact (POC) to establish communication with the school administration as well as with the surrounding community.

Long-Term Impacts

The project will not have a long-term adverse affect on air quality. Vehicular emissions from traffic associated with the proposed library will be negligible.

3.2.4 Natural Hazards

Existing Conditions

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) the site is located in Zone D, areas where flood hazard has not been determined (see Figure 6). The property is not subject to any flood regulations.

Areas along the ocean directly across Farrington Highway are designated Flood Zone AE (with base flood elevations of 14 and 15 feet) and VE (coastal flood zone with velocity hazard, elevation 14 feet).

Based on evacuation maps prepared for the O‘ahu Civil Defense Agency, the project site is within the tsunami evacuation area. Nānākuli High and Intermediate School is the nearest designated tsunami shelter in the area. The school is located on Nānākuli Avenue, just over one mile west (and mauka) of the library site.

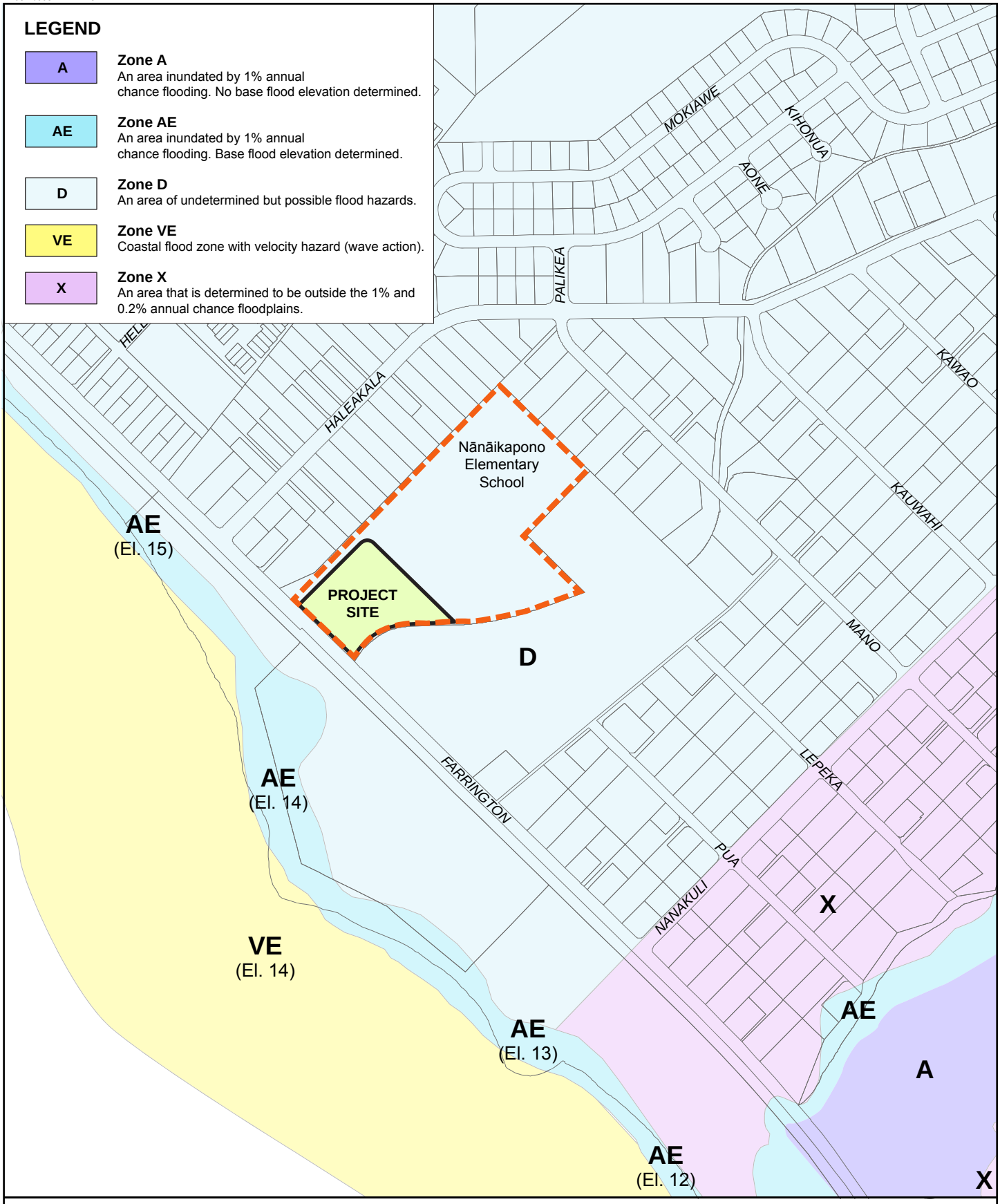

Figure 6

FLOOD INSURANCE RATE MAP (FIRM)

Nānākuli Public Library

Impacts and Mitigation

The project will not increase the risk of human health or property damage due to natural hazards. Although the site is not in a flood zone, the new library's finish floor elevation will be raised three feet above the elevation at the center of the site to approximately 20.0 feet above mean sea level (MSL). This will provide additional protection in the event of storm surges, for example if Farrington Highway is flooded, or if the drainage channel is overwhelmed by torrential rain. This is a precautionary measure and beyond what is required by code.

In the event of a tsunami, occupants of the library as well as others within the designated evacuation zone would be relocated to higher ground. The library will not be designed as a shelter.

All proposed improvements will conform to applicable seismic standards for construction.

3.2.5 Hydrology

Existing Conditions

Ground Water

Nānākuli Valley overlies the Waiʻanae Aquifer, which extends through Lualualei, Waiʻanae, and Mākaha. Groundwater within the project area is characterized as a thin, buoyant, unconfined lens of brackish water floating on salt water due to its proximity to the coastline. This basal lens can be affected by drought, ocean tides, and groundwater withdrawal from wells.

Recharge to the Waiʻanae region's groundwater occurs via rainfall in the mountains that percolates down into perched water tables, deep basalt aquifers, and shallow aquifers within the caprock, becoming part of the groundwater resource.

Surface Water

The gentle slope throughout the valley accounts for the poorly defined surface drainage system. Two intermittent streams flow through Nānākuli Valley: Nānākuli Stream and Ulehawa Stream. The latter has been channelized near its outlet at the ocean. Nānākuli Stream is located a half mile south and Ulehawa Stream located 1.5 miles north of the project site. Man-made channels within the area also direct surface runoff to the existing stream channels.

The southeast boundary of the project site is bordered by a concrete drainage channel that crosses under Farrington Highway and empties into the ocean at Nānākuli Beach Park.

Coastal Waters

Coastal waters from Ko Olina throughout the Leeward Coast are considered Class "A" marine waters by the State of Hawaiʻi Department of Health. Class A marine waters are recognized with the objective that "their use for recreational purposes and aesthetic enjoyment be protected." This

classification allows other uses that are compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters.

Impacts and Mitigation

The proposed construction and operation of the library will not adversely impact surface, coastal or groundwater resources. During construction, storm runoff has the potential to carry increased amounts of sediment into storm drain systems and streams due to erosion of exposed soils. This could potentially impact surface and nearshore coastal waters.

Excavation and grading activities for the library will comply with the City and County's grading ordinance and the conditions of the National Pollutant Discharge Elimination System (NPDES) obtained for the project. Construction materials wastes will be appropriately disposed of and will not enter surface waters or the ocean.

3.2.6 Noise

Existing Conditions

The dominant noise sources at the project site are traffic along Farrington Highway and the school bus/fire access road, wind, and occasional distant aircraft flyovers. Noise level measurements along Farrington Highway were conducted in 2011 for the Hawai'i Department of Transportation's Farrington Highway Intersection Improvements Environmental Assessment (DOT 2011). That project is proposing to construct a median lane between Helelua and Nānākuli Stream, including the area fronting the project site.

In 2009, the DOT measured ambient or existing noise levels throughout this corridor, with the intent of comparing it to future, anticipated noise levels after its highway improvements are completed. One of the measurement locations was directly in front of the Nānākuli Public Library site, at the school bus and fire access road. In 2009, measured noise level at the entry road was 68 dBA Leq, representing an A-weighted scale "averaged" over time.

The land uses along Farrington Highway near the library site include residences, schools, and recreational areas, and fall within the Federal Highway Administration's (FHWA) land use Category B. These uses have a Noise Abatement Criteria (NAC) of 67 dBA. When predicted traffic noise levels (i.e., from the highway improvements) approach or exceed the NAC, a noise impact has occurred. The DOT's 2009 study showed that existing noise levels along Farrington Highway already approach or exceed the FHWA's NAC criteria.

Existing noise levels along Farrington Highway also appear to exceed State standards for residential areas. Noise is regulated by the Department of Health under HAR Chapter 11-42, "Vehicular Noise Control for O'ahu," and Chapter 46, "Community Noise Control." The current allowable noise limits for residential, apartment, and community business properties on O'ahu are as follows:

Zoning	Daytime 7:00 AM to 10:00 PM	Nighttime 10:00 PM to 7:00 AM
Residential	55 dBA	45 dBA
Apartment	60 dBA	50 dBA
Community Business	60 dBA	50 dBA

Impacts and Mitigation

Short-Term Construction Impacts

Construction activities will generate noise that may have short-term impact on the adjacent Nānāikapono Elementary School, residents to the northwest, and to a lesser extent, on the Nānākuli Learning Center and Ka Waihona O ka Naʻauao Charter School located across Farrington Highway. Development of the library will involve excavation, grading, construction of new buildings and infrastructure. Noise levels will be a function of the methods employed during each stage of construction. The noisiest period is expected to be during site preparation, where earth moving equipment will operate on-site. These noise impacts are unavoidable but will be temporary. The construction contractor will be required to work with the Nānāikapono Elementary School to coordinate noisy construction activities. To the extent possible, noisy construction will be scheduled during the summer months, before or after school hours, and non-testing periods to minimize impact on the school.

All construction activities will comply with the State of Hawaiʻi Department of Health (DOH) Administrative Rules Chapter 11-46 on Community Noise Control. In residential zoned districts such as the project site, maximum permissible noise levels are 55 dBA in the daytime (7:00 AM to 10:00 PM) and 45 dBA nighttime (10:00 PM to 7:00 AM). In cases where construction noise exceeds, or is expected to exceed the maximum permissible noise levels at the property line, a permit will be obtained from the DOH to operate vehicles, construction equipment, power tools, etc. that emit noise levels in excess of "maximum permissible" levels. To reduce the noise impact of construction activities, the contractor will try to limit high noise level work to before and after school hours.

The DOH currently regulates construction noise under a permit system. Under current procedures, noisy construction activities are restricted to hours between 7:00 AM and 6:00 PM, Monday through Friday, excluding certain holidays, and 9:00 AM and 6:00 PM on Saturdays. Construction is not permitted on Sundays. The majority of construction work will be performed during the day to ensure minimal nighttime noise impacts on surrounding residences.

Operational Noise

The primary source of additional noise following the completion of the new library will be traffic entering and exiting the site. The traffic impact report prepared for the library project estimated that additional hourly traffic will be fewer than 100 vehicles per hour. This represents less than 3 percent of existing traffic volumes.

3.2.7 Visual

Existing Conditions

The visual environment of the project area consists of wide, unobstructed views of the Waiʻanae Mountain range and views to the ocean across Farrington Highway. The project area is within the "Nānākuli Viewshed" identified by the City's Coastal View Study (1987). Farrington Highway, the coastal road through the region, provides "continuous" or "intermittent coastal views" in some areas. The coastal view study does not identify any significant stationary viewpoints along the Nānākuli coastline. From Farrington Highway immediately fronting the library site, direct views of the ocean are obstructed by the buildings of the Kamehameha Schools Nānākuli Learning Center and the Ka Waihona O Ka Naʻauao Charter School (the former site Nānāikapono Elementary School campus).

Impacts and Mitigation

The proposed project is located on the mauka side of the highway and will not impact makai views along Farrington Highway. The visual environment looking mauka from the highway will change from an open, undeveloped site with overgrown vegetation and kiawe trees to a more urbanized and developed environment, with landscaped trees lining the highway.

The scale of the library will be in keeping with the single-story Nānāikapono Elementary School and the adjacent residential neighborhood. The height of the building will generally be one-story; no taller than the existing school cafeteria or the nearby Boys and Girls Club. Only the main reading areas and the main reception/lobby will be higher, utilizing windows to bring more natural light into these spaces. The general ambiance is intended to resemble a seaside village, with the varying roof forms and the contrast between the slope roof and the flat roofs. Besides giving the buildings a village feel, the slope roof allows solar (photovoltaic) panels to be placed on the metal roofs.

The project will utilize natural building materials and earth tones, as well as landscaping with native vegetation. Proposed landscaping includes native trees (e.g., *kou*) along the property line fronting the highway, to soften the library's visual appearance.

3.3 BIOLOGICAL ENVIRONMENT

3.3.1 Botanical Resources

The 2001 EA for the Nānākuli IV Elementary included biological studies for the entire 15-acre study area which included the library site. There is no reason to believe that biological conditions have changed significantly since that time. During the previous survey, existing vegetation consisted primary of non-native species including some landscape plants that apparently survived since the previous use of the site as a military recreation facility. The most common species found on site are kiawe, koa haole, and dry, scrubland grasses and shrubs.

Fauna that would likely be found within the project area include mammals that typically inhabit developed areas of O'ahu, including feral cats (*Felis catus*) rats (*Rattus* sp), house mouse (*Mus musculus*) and Indian mongoose (*Herpestes a. auropunctatus*).

Birds associated with the kiawe and lowland vegetation type in the area include the waxbills, sparrows, bulbuls, pigeons, and doves. All bird species observed during the 1991 study were introduced species. No candidate, proposed, or listed threatened or endangered species were encountered during the survey. There is no reason to believe that any have since inhabited the site.

3.3.2 Terrestrial Fauna and Avifauna

Avifauna found on the project site would include alien species common to urban environments, such as the Common Mynah (*Acridotheres tristis*), Red crested Cardinal (*Paroaria coronata*), Northern Cardinal (*Cardinalis cardinalis*), House Finch (*Carpodacus mexicanus*), Java Sparrow (*Padda oryzivora*), Rock Pigeon (*Columba livia*), Spotted Dove (*Streptopelia chenensis*), Zebra Dove (*Geopelia striata*), Red-vented Bulbuls (*Pycnonotus cafer*), and Japanese White-eye (*Zosterops japonicus*).

Impacts and Mitigation

The project site does not provide unique habitat in the area, and no significant impacts on any plant or animal species is anticipated. No candidate, proposed, or listed threatened or endangered species will be disturbed. The previous botanical survey concluded, "the vegetation on the site can be found on low elevation, leeward places on most Hawaiian Islands. It is made up of mostly alien species which are considered to be of no value. No great harm will result from clearing of this site."

The inclusion of landscaping for the library will re-attract birds such as those that are presently found on the site.

3.4 SOCIO-ECONOMIC ENVIRONMENT

3.4.1 Demographic Characteristics

Existing Conditions

According to the 2012 U.S. Census, the Nānākuli Census Designated Place (CDP) had a total population of 12,666 persons, more than 40 percent of them Native Hawaiian. Average household size in the Nānākuli CDP was 4.76 persons, compared to the Honolulu County-wide average of 2.96 persons. There were also a much higher percentage of household members under 18 years of age; almost 64% in the Nānākuli CDP compared to about 35% in the County as a whole. Nānākuli CDP households also had a lower median income, $54,639 compared to a median income of $70,093 for the County.

Table 3-1: Demographic Information for Nānākuli Census Data Place (CDP), 2010

	Nānākuli CDP		Honolulu County	
	Number	**Percent**	**Number**	**Percent**
Population	12,666		953,207	
Race				
White	613	4.8	198,732	20.8
Black/African American	97	0.8	1,9256	2.0
Amer Indian/Alaskan Native	29	0.2	2,438	0.3
Asian	1,159	9.2	418,410	43.9
Nat Hawn/Other Pac Islander	5,265	41.6	90,878	9.5
Other race	59	0.5	10,457	1.1
Two or more Races	5,444	43.0	213,036	22.3
Total Households				
Avg household size	4.76		2.96	
Median household income	$54,639		$70,093	
Households with One or more People Under 18 Years of Age	1,691	63.6%	107,388	35.2%

Source: U.S. Census Bureau, American Fact Finder

Impacts and Mitigation

The proposed project will not directly or indirectly cause changes to the population or demographics. The library will be a public facility intended to serve the existing community. At the same time, the demographic profile of the Nānākuli CDP reveals a great need for access to the informational and educational resources and services of a public library. The CDP has a lower median income than the County as a whole, indicating that many families face economic challenges and may have limited access to computers or the Internet. The Leeward Coast has large numbers of homeless individuals, who otherwise may not have access to computers. The census data also shows that the CDP has large numbers of children under 18. These children and their families are likely to find it inconvenient to travel five miles or more to the nearest public library in Nānākuli or Kapolei.

3.4.2 Archaeological, Historic, and Cultural Resources

As part of the EA for the elementary school, a historical and archaeological survey was conduced in 1999[1] to evaluate the presence of potential cultural resources within the study area. The survey included background research of previous archaeological work within the area, a historical literature review, and field inspections. Subsequent to the 2001 EA, Cultural Surveys Hawai‘i prepared an Archaeological Inventory Survey (AIS)[2] for the entire 15-acre study area, including the 3.7-acre library site.

[1] Cultural Surveys Hawai‘i. *Archaeological Assessment of an Approximately 15-acre Parcel, Ahupua‘a of Nānākuli, Wai‘anae District, Island of O‘ahu,* December 1999.
[2] Cultural Surveys Hawai‘*i, Archaeological Inventory Survey of the Proposed I5-Acre Nānākuli IV Elementary School Site (A Portion of the Former Camp Andrews), Nānākuli Ahupua'a, Wai'anae District, Island of O'ahu (TMK: 8-9-02: 65).* November 2001.

Existing Conditions

Prior to construction of Camp Andrews, the project site was used for agriculture. Camp Andrews was constructed prior to 1942 and used as a U.S. military recreational facility until 1952. Camp Andrews consisted of cabins, cook house, a canteen, septic systems, a barber shop, armory, etc. The U.S. Navy acquired the property from the U.S. Army in 1952. All structures on the property were demolished by the U.S. Army prior to transfer to the U.S. Navy and the site has remained vacant since then. The U.S. navy transferred the property to the State of Hawai‘i in 1962.

During the archaeological field inspection, no surface Hawaiian archaeological remains were identified. The only intact construction associated with the former military use of the site were concrete bunkers and two coral block pillars marking the former entrance to Camp Andrews. Other remnants of the former use include concrete foundations and an unpaved roadway. Numerous limestone sink formations were also observed in the mauka portions of the study area, outside the limits of the library site. Most of the sinks were filled with limestone boulders and cobbles at some time in the past. Such sinkholes have been known to contain paleontological remains of prehistoric animal life, primarily birds, and have also been associated with native Hawaiian burials.

As recommended by the State Historic Preservation Division (SHDP), an archaeological inventory survey (AIS) of the 15-acre property was conducted by Cultural Surveys Hawai‘i (November 2001) to further investigate the remains of Camp Andrews and to sample the sink hole features for cultural and palaeontological deposits.

Based on the 2001 AIS and in consultation with SHPD, two State Site historic sites were designated within the larger 15-acre study area. State Inventory of Historic Places (SIHP) site #50-80-07-5946 consists of the historic remains of Camp Andrews itself. This site was found to be significant under State and National Register of Historic Places criteria “for its information content regarding World War II events and military construction.” This historic site includes features within the current library site.

The AIS adequately recorded the available information about this site in the form of historic accounts, maps, photographs, and written descriptions. No further historic preservation work was recommended for this historic site. No further archaeological work is needed for the current library project.

The second historic site identified during the 2001 AIS was State Site 50-80-07-5947, which covers the traditional Hawaiian cultural remains that were found in the mauka areas of the property, including the palaeontological sink deposits. Mitigation was also completed for this site prior to construction of the elementary school. The current library project does not impact this historic site.

Impacts and Mitigation

The construction of the library site will not adversely impact any historic resources on the property. No further archaeological work or mitigation is required. The 2001 AIS study concludes the following about the remnants of Camp Andrews:

> Regarding State Site 50-80-07-5946, the historic remains of Camp Andrews, this inventory survey has adequately recorded the available information for this historic property. This information was recorded in the form of historic accounts, oral interview data, historic and modern maps, historic and modern photographs, and written descriptions. Accordingly, no further historic preservation work is recommended for Site 50-80-07-5946. (McDermott et al. November 2001:134)

The SHPD agreed to this in a review letter of November 13, 2001 : "No mitigation work is recommended for Site 5946 and we concur with this recommendation." The AIS was officially accepted by SHPD in a review dated December 7, 2001.

It should be noted that the library project will not impact the two coral obelisks fronting Farrington Highway, which are part of the historic remains of Camp Andrews. Although they can legally be demolished and have no functional purpose, they have become a kind of community landmark. In the future, community members interested in their historical significance may wish to add interpretive signage noting the association of these coral structures with the former Camp Andrews.

Cultural Impact Assessment

A cultural impact assessment was prepared in October 2000 by Cultural Surveys Hawai'i[3] for the elementary school EA. That study included the current project area. In addressing Hawaiian customary and traditional rights and their applicability to the project are the following scope of work was followed:

1. Examination of historical documents, Land Commission Award, historic maps, with the specific purpose of identifying traditional Hawaiian activities including gathering of plant, animal and other resources or agricultural pursuits as indicated in the historic record.
2. A review of the existing archaeological information pertaining to the sites on the property toward understanding traditional land use activities and to identify and describe the cultural resources, practices and beliefs associated with the site, and to identify present uses, if any.
3. Conduct oral interviews with knowledgeable persons about the historic and traditional practices in the project area and region.

[3] Cultural Surveys Hawai'i. *A Traditional Practices Assessment for the Proposed Nānākuli IV Elementary School Site, Nānākuli, Wai'anae District, Island of O'ahu.* October 2000.

The specific areas studied included sink features, burials, access to Hawaiian trails, native Hawaiian hunting and gathering practices, religious sites, and other archaeological and historical concerns such as historic properties. No Hawaiian trails were identified within the Camp Andrews area. Although no specific hunting/gathering practices were identified, the discovery of extinct faunal remains suggest a possible association with past hunting and gathering practices within the project area (DAGS, February 2001).

The 2001 EA noted that *"Of primary concern is the many sink features found within the Camp Andrews area. Besides the faunal remains, a human burial was identified in one of the two sinkholes that were tested. The many sink features may be valuable for interpreting past history, past life and environmental patterns."* The EA noted that no heiau (religious shrines) or other surface site were found or identified within or near the project site.

As noted previously, the sink features were located in the mauka portions of the study area, outside the current library site.

Impacts and Mitigation

The previous EA concluded that none of the plants identified on site are of cultural concern and that the interviewees and community members did not indicate that any type of gathering activity took place within the 15-acre study area. It concluded that it is unlikely that Hawaiian practices and traditions in relation to plant gathering will be impacted.

As noted above, an AIS was subsequently conducted as part of the elementary school project, and mitigation implemented for the two historic properties identified in the study area, including the remains of historic Camp Andrews. No additional mitigation is required for the library project.

HRS Chapter 6E Consultation

The HRS Chapter 6E consultation for the library project has been completed. The State Historic Preservation Division (SHPD) evaluated the proposed use of the 30-acre site (which includes the current library site) in accordance with HRS Chapter 6E during the environmental review for the elementary school. At that time, an AIS was requested and completed for the remnants of Camp Andrews. In a letter dated November 13, 2001, the SHPD determined that no further historic preservation work was recommended. The AIS was accepted on December 7, 2001.

The SHPD has been informed of the library project, and was sent a pre-assessment consultation letter notifying them that the current EA was being prepared. No additional comments have been received.

3.5 UTILITIES AND INFRASTRUCTURE

3.5.1 Potable Water

Existing Conditions

Water for the Nānākuli area is drawn from the Ewa and Wai‘anae Wells by the City and County Board of Water Supply (BWS) and conveyed through a network of distribution lines. The project site will be served by the 2.0 million gallon Nānākuli 242 reservoir. The existing water system in the vicinity consists of a 24-inch, 12-inch, and 6-inch water transmission line located along Farrington Highway.

Impacts and Mitigation

The water system for the library project will be designed in accordance with Board of Water Supply and the Honolulu Fire Department standards. All water service will come off of the domestic municipal water system located in Farrington Highway.

Nānāikapono Elementary School currently has a combined (fire and domestic) water service with a master meter. The new library will be utilizing the same water service. Domestic water service will be provided off a BWS water meter which will be connected to the water main in Farrington Highway. A new reduced pressure backflow preventer will be installed to ensure that cross connection protection is provided to the municipal water system. This new water service will provide independent separate billing accounts for the library and the school.

Irrigation water service will be provided off of the same water meter used for the domestic service. An additional backflow prevention device will be utilized to ensure that the domestic service is protected from the irrigation service.

Fire protection water will be provided directly off of the school’s system. The library buildings will be protected by a sprinkler system. Two new onsite fire hydrants will be provided in the parking lot and backside of the proposed library to provide additional fire protection coverage. The existing off-site fire hydrant located on Farrington Highway will provide adequate coverage for the street side of the project.

The construction of the library will not have a significant impact on the existing water system. An early consultation letter from the Board of Water Supply dated June 28, 2012 stated that the existing water system is adequate to accommodate the proposed development based on current data. During design and construction, close coordination will be maintained with the BWS to ensure that the water system will not be adversely impacted and to minimize interruption of water service to adjacent areas.

3.5.2 Sanitary Sewer

Existing Conditions

The existing municipal sewer system in the vicinity of the project site includes several gravity lines along Farrington Highway, including a 30-inch interceptor, a 24-inch line, an 18-inch line and an 8-inch line Wastewater is conveyed to the Waiʻanae Wastewater Treatment Plant for treatment and disposal through an ocean outfall.

Impacts and Mitigation

The sewer system will be designed in accordance with the City and County of Honolulu's Department of Design and Construction Wastewater Division design standards. The sewer will be conveyed into the municipal sewage system in Farrington Highway. The library will not include a kitchen or industrial activity, and there is no requirement for a grease trap/oil interceptor.

The development of the library will not have a significant impact on the existing wastewater system. During design and construction, coordination with the City and County will be maintained to ensure that the system will not be adversely impacted, and to minimize interruption of wastewater service to adjacent areas.

3.5.3 Electrical, Telephone, Cable

Existing Conditions

Electrical service to the project area is provided by Hawaiian Electric Company, Inc. (HECO), through a network of underground ductlines and overhead power lines. Hawaiian Telcom provides telephone service. Existing underground and overhead lines are located throughout the project area. Cable TV service in the area is provided by Oceanic Time Warner Cable (Oceanic).

Hawaiʻi Gas, formerly known as The Gas Company, has existing underground lines along Farrington Highway between Helelua Street and Auyong Homestead Road. No gas service connection will be provided for the project site.

Impacts and Mitigation

The primary electrical power for the library will be tapped within an existing manhole which is located along the access road in front of Nānāikapono Elementary School. A HECO transformer and concrete pad will be installed on the northeast side of the library building.

A new 600A, 208Y/120V, 3-phase, service switchboard will be located in a switchgear closet near the entry to the library. Secondary HECO service duct banks will consist of concrete-encased, Schedule 40 conduits. Secondary conductors will consist of 600V copper cables.

A photovoltaic system using micro-inverters will be installed on various areas of the roof to supplement electrical power use. The library will utilize natural day-lighting strategies to minimize energy consumption.

An early consultation letter from Hawaiian Telcom dated July 2, 2009 (see Chapter 7) indicates that Hawaiian Telcom has underground facilities in the vicinity of the project site. Coordination with Hawaiian Telcom will continue throughout the design stages of the project to ensure that there are no adverse impacts to these facilities.

During project design, project plans will be submitted to HECO, Hawaiian Telcom and Oceanic Time Warner for review and comment and to insure adequate service to mitigate any impacts to utility facilities or service.

3.5.4 Drainage

Existing Conditions

Sheet flow run-off from the project site is generally directed by topography toward Farrington Highway and the existing concrete drainage channel on the southeast side of the project site. The drainage channel crosses underneath Farrington Highway before emptying into the ocean. The drainage channel is trapezoidal shaped and has a width of 25 to 48 feet and a depth of 7 feet.

The drainage channel is on a parcel owned by the Department of Hawaiian Home Lands (DHHL) (TMK: 8-9-002: 001) that is part of the DHHL's future commercial development property. The City's Geographic Information System (GIS) website shows the drainage channel as part of TMK 8-9-002:001. However, the tax maps show the drainage channel as a separate lot TMK: 8-9-002:068, and the City's public access data base does not include information on ownership of this parcel. Preliminary research indicates there has been disagreement in the past over whether the drainage channel belongs to the DHHL or the City. The question of who has jurisdiction over the concrete drainage channel requires further investigation by DAGS and the City and County of Honolulu, and remains an unresolved issue.

Impacts and Mitigation

The construction of the library will increase the impervious surface area of the site. As required by County standards, the increase in storm water runoff generated from the project will be contained within the site. Water retention tactics such as drywells, French drains, and bio swales will be utilized to allow percolation of the collected runoff into the ground. Runoff from roof areas will be collected in gutters and downspouts and will be directly connected to drywells. Where possible, open drainage will be used to minimize maintenance requirements.

There is existing runoff from the project site that enters the channel, and this will continue. Proposed drainage improvements include connection to an existing penetration on the mauka end of the drainage channel, and construction of a new drain penetration on the makai end. Sheet flow surface runoff will also continue to enter the channel. All drainage improvements will be designed to City standards. Regardless of who controls the drainage channel, the library project

will comply with all applicable City and/or State requirements, including the amended City and County of Honolulu, Rules Relating to Storm Drainage Standards that will become effective June 1, 2013.

A drainage study for the onsite runoff will be provided in the final design phase of this project. This study will include the drainage tributary areas and calculations for the onsite retention of storm water runoff.

During construction, appropriate measures will be implemented to prevent pollutants from entering the storm drain system. These measures include installing sediment barriers and filters at storm drain inlets, and repaving and revegetating areas as soon as practicable. Additionally, a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharge associated with construction will be obtained. The contractor will be required to comply with all conditions associated with this permit.

3.5.5 Solid and Hazardous Wastes

Existing Conditions

The City and County of Honolulu's Department of Environmental Service is responsible for refuse pick up, hauling and disposal from the surrounding areas. Solid waste from residential and commercial properties in the area is disposed at the Waimanalo Gulch Sanitary Landfill. Construction waste is disposed of at the PVT Land Company landfill located on Lualualei Naval Road in Nānākuli The PVT Land Company landfill is a licensed construction and demolition material solid waste landfill, and also accepts asbestos-containing material and petroleum contaminated soil.

A Phase I Environmental Site Assessment (ESA) was conducted in 1999 as part of the EA for the elementary school. The ESA evaluated the 15-acre former Camp Andrews site for hazardous and toxic waste substances. It investigated past and present land uses of the property and surrounding areas to determine if the potential for hazardous materials contamination exists.

According to the Phase I ESA, prior to 1942 and the construction of Camp Andrews, the site was used for agriculture. When occupied by the US Army's Camp Andrew, the site featured a large number of structures, including cabins, cook houses, canteens, septic systems and an armory. All of the structures were demolished when the land was turned over to the Navy in 1952. Since that time, the specific portion of the parcel proposed for the library has remained undeveloped.

The Phase I ESA found several abandoned 55-gallon drums with unknown contents in various locations on the northern end of the property. Their presence triggered a limited Phase II Environmental Site Assessment where soil sampling was performed on the surface soils directly beneath the drums. The laboratory analysis of the soil samples indicated elevated levels of lead, arsenic and Dichlorodiphenyldichloroethylene (DDE) in three specific locations on the parcel. All three locations were within the present day Nānāikapono Elementary School. The report concluded that the soil in the affected areas should be excavated, characterized and disposed of

properly. It is assumed that the recommendations were followed during the construction of the elementary school.

The 1999 Phase I ESA did not identify any suspicious 55-gallon drums on the southern portion of the parcel where the library is currently proposed. A site reconnaissance performed by Kimura International, Inc. for a 2012 Phase I ESA update also failed to identify any suspicious 55-gallon drums. The 2012 site inspection found the site to be littered with significant amounts of household trash, including bedding, clothes, food wrappers, and a refrigerator. An empty 5-gallon bucket with a "Chevron 1000 THF Hydraulic Fluid" label on its side was found. However, the interior of the bucket was dry and filled with a small amount of dry dirt. Several tires were also found on the site. In addition, a relatively elaborate homeless camp has been constructed on the eastern border of the property. The area surrounding the camp was covered with a large amount of household trash. A rusted 55-gallon drum was identified in the camp site, but it appeared to be filled with household trash. Old concrete foundations and debris of Camp Andrew structures are still present on the site. A black asphaltic membrane was found on some pieces of concrete debris. It is suspected that this membrane contains asbestos.

Impacts and Mitigation

Because the 2012 site inspection conducted by Kimura International did not identify any additional suspect hazardous materials, additional soil sampling is not recommended at this time. However, Kimura International indicates that it is possible that clearing, grubbing and grading activities will uncover significant amounts of potentially hazardous household wastes that have been buried beneath overgrowth. The contractor should be made aware of this fact, and contingency plans for dealing with potentially hazardous household waste should be produced. Excess soil from grading and excavation activities will be subject to soil characterization per landfill and State of Hawai‘i Department of Health, Solid and Hazardous Waste Branch regulations.

3.6 TRAFFIC

A Traffic Impact Report (TIR) for the project was prepared by Julian Ng, Inc. in December 2012 (Appendix A), and was included in the Draft EA. The report estimated traffic generated by the project and was prepared to identify the potential impacts of the proposed library.

The December 2012 TIR described analyses that used “Level of Service” (LOS) to describe traffic operating conditions. Six Levels of Service ranging from LOS A (representing free flow and very little delay) to LOS F (describing congested over-capacity conditions and very long delays) are used. LOS for intersections are based on average delays per vehicle. According to the traffic impact report, for peak hour conditions, LOS D or better are considered acceptable.

Several previous traffic studies for the area have been conducted over the past 15 years. A traffic study and addendum[4] completed in 1999 and 2000 for the relocation of the Nānāikapono Elementary School (from its former site makai of Farrington Highway to its current location)

[4] Wilson Okamoto & Associates, Inc. *Traffic Impact Analysis Report for the Nānākuli IV Elementary School,* December 1999 and supplement, August 2000.

also considered the impact of traffic generated by a new public library and Head Start. Those studies concluded that the project would not have significant impacts to peak hour traffic conditions and that the existing intersections could adequately serve the project traffic. The December 2012 traffic impact report provided an update on traffic conditions and a new estimate of the traffic generated by the library.

In June 2010, another traffic study[5] was completed for the State of Hawai‘i Department of Transportation (HDOT)’s proposed improvements to Farrington Highway. The HDOT project will widen the highway between Haleakalā Avenue and Nānākuli Avenue, and will relocate the old railroad tracks on the makai side and add left-turn lanes. This project design has been completed and construction is expected to begin within a year. The highway improvements are expected to be completed prior to completion of the library construction.

During the Draft EA comment period, the HDOT reviewed the December 2012 TIR. In a March 28, 2013 Draft EA comment letter (see Chapter 7), the HDOT requested that a revised TIR be prepared for review and acceptance prior to the access being granted. The HDOT also requested analysis of a right-turn in and right-turn out (RIRO) restriction to the library access road. These issues are discussed further in the section entitled “Ongoing Consultation with HDOT Highways Division.” A revised TIR is currently being prepared.

3.6.1 Existing Conditions

The following is a description of existing conditions as presented in the December 2012 Traffic Impact Report.

Existing Roadways

The project site is located on Farrington Highway, a four-lane undivided highway under the jurisdiction of the State of Hawai‘i Department of Transportation. Farrington Highway is the primary roadway along the Wai‘anae coast in Leeward Oahu, and near the project site, is aligned northwest-to southeast. Posted speed limit is 35 miles per hour.

The Nānāikapono Elementary School is located on the mauka portion of the same State-owned parcel that includes the library project site. Primary vehicular access to the school is provided from Mano Avenue, and a fire lane to Farrington Highway has been used for school bus access. This bus access/fire lane is located along the northwest (Ka‘ena Point side) boundary of the project site. Where the bus access meets Farrington Highway, the driveway is split with a center island to channelize movements and to deter left turns. Use of the bus access road is restricted by two cattle gates across the driveway, located approximately 50 feet from the highway. The gates are normally in a closed position and are only opened before and after school to allow school buses to enter. Once on campus, school buses queue and load along a loading area located on the makai (southwest) side of the school campus.

[5] P.B. Americas, Inc. *Traffic Study, Farrington Highway Intersection Improvements at Nānākuli Avenue and Haleakalā Avenue,* June 2010.

Fire lane entry on Farrington Highway is used for school bus access.
(Photo credit: Google Maps)

Approximately 300 feet to the northwest (Ka‘ena Point) of the project site, Farrington Highway intersects with Haleakalā Avenue at a signalized intersection. In the opposite direction, the nearest signalized intersection is located at Nānākuli Avenue, approximately 2,000 feet southeast of the site. A traffic signal for a mid-block crosswalk across the highway is located between the site and Nānākuli Avenue, approximately 1,400 feet southeast of the driveway.

Both Haleakalā Avenue and Nānākuli Avenue provide access into Nānākuli Valley, which is primarily residential in nature but also includes the campuses of Nānākuli High School and Nānākuli Elementary School. Mano Avenue is one of the many residential streets in the valley parallel to the highway that link Haleakalā Avenue and Nānākuli Avenue. The primary access to the Nānāikapono Elementary School is via a driveway from Mano Avenue.

Existing Peak Hour Traffic

The December 2012 TIR included traffic counts taken at the intersection of the existing bus driveway with Farrington Highway during weekday morning and early afternoon periods. Peak hours were recorded at 6:30 AM to 7:30 AM (“AM Peak Hour”) and from 2:15 PM to 3:15 PM (“Early PM Peak Hour”) and 4:00 PM to 5:00 PM (“Late PM Peak Hour”). Traffic count summaries can be found in Appendix A.

Although the existing bus driveway was designed for right turns in and out only, there are no signs prohibiting left turns. There is a sign indicating “Bus Entry Only” posted near the driveway. During the recent traffic counts, several school buses were observed making left turns in. Although no delays to highway traffic were observed while buses were making left turns into the driveway, these movements can block the left lane (southeast-bound) on Farrington Highway as bus drivers wait for a gap in opposing traffic. Blockage can also result if the locked gate is not opened in a timely manner, as there is room for only one bus between the gate and the highway. In addition, several privately-owned vehicles were counted turning in or out.

3.6.2 Impacts and Mitigation

The current plan for the library includes vehicular access using the existing bus access driveway. Cars will turn into the library parking lot from the bus access road. It is also anticipated that the future Head Start will use this same driveway.

Project Traffic Generated

The December 2012 TIR estimated the increase in project-related traffic using "trip rates" from the current version of *Trip Generation*, published by the Institute of Transportation Engineers, a widely-used and accepted reference manual. The standard rates for a library were applied to an 18,000 square foot facility for a future condition in which all turning movements from and onto the highway would be permitted (i.e., no restrictions on left turns). Existing traffic volumes on the highway were used for project trip distribution. The analysis also assumed that all the traffic generated by the library is new (added) traffic in the area, a "worst case" evaluation as some of the traffic generated by the library can be expected to be linked trips (e.g., stopping at the library on the way home). The results are shown in Table 3, Project Traffic Generation and Distribution of the traffic impact report (Appendix A).

The project impacts of the proposed Nānākuli Public Library to hourly traffic volumes on Farrington Highway would be less than 100 vehicles per hour northwest of Haleakala Avenue and southeast of Nānākuli Avenue. This hourly impact is a threshold often used to determine if a traffic impact study should be conducted. The impacts to traffic volumes beyond these intersections are also less than 3% of existing peak hour volumes, another criterion that is used to determine if impacts are to be considered significant. The traffic study included analyses of the project impacts at the proposed site access and at the two nearest signalized intersections and found that the impact would not be considered significant.

Intersection Analysis

Intersection analyses were performed to further illustrate the minor impacts of the traffic added by the proposed project. The results of the intersection analysis can be found in Tables 4 and 5 of the traffic impact report (Appendix A).

Traffic at two signalized intersections were evaluated—Haleakala Avenue at Farrington Highway, and Nānākuli Avenue at Farrington Highway. A baseline (no project) was compared to two future scenarios or "cases" for the year 2024. In Case "A" all turning movements are allowed at the project site driveway; in Case "B" only right turns would be allowed at the driveway. Project impact was evaluated by assigning the project traffic to projections of peak hour traffic volumes at these intersections for the year 2024, estimating the impact of the additional library traffic.

The analysis shows that restriction of turning movements at the driveway (Case B) would result in additional traffic on Farrington Highway between Haleakala Avenue and Nānākuli Avenue, as drivers find alternative routes to travel between the site and the southeastbound lanes of the

highway. However, regardless of whether all turning movements are allowed or limited to right turns, the project traffic impact is not significant.

Conclusions and Recommendations of the December 2012 TIR

The December 2012 traffic impact report concluded that project generated traffic onto Farrington Highway will not be significant. The TIR estimated that the hourly impacts of the proposed Nānākuli Public Library to traffic volumes on Farrington Highway would be less than 100 vehicles per hour and less than 3% of existing peak hour volumes.

The project proposes to use an existing bus access road on Farrington Highway, which is currently designated for school bus use only. Use of this driveway would alleviate the need to add another driveway along the Farrington Highway frontage. The additional use would be mitigated by the project plans to move the existing school gates farther from the highway, increasing the storage capability of the driveway when the bus gate is not opened in a timely manner.

The December 2012 TIR noted that the preferred proposal for the library was to allow all turning movements, including left turns in and out, utilizing roadway improvements created by the Farrington Highway Intersection Improvements (FHII) project. This HDOT project will add left turn lanes at the Haleakala Avenue and Nānākuli Avenue intersections, and also widen the highway across the project site frontage. It was proposed that the widened area be used as a median turn lane to facilitate left turns in to and out of the project site.

It was also proposed that in order to accommodate all turning movements (including school buses), the bus access driveway at Farrington Highway be redesigned with left turns from and into the new median lane on Farrington Highway.

Regulatory signage and pavement markings should also be installed to discourage blockage of the intersection by queues formed by the nearby traffic signals. For example, the existing sign which states "BUS ENTRY ONLY PUBLIC ENTRY ON MANO AVENUE" should be replaced by a smaller sign reading "PUBLIC ENTRY ON MANO AVENUE" that would be part of, or supplement, the existing school message board located at the corner.

Ongoing Consultation with HDOT Highways Division

Consultation Prior to Draft EA. The Nanakuli Public Library Draft Environmental Assessment, which included the December 2012 TIR, was published in January 2013. Prior to publication of the Draft EA, the Department of Accounting and General Services (DAGS), the project architect, project civil engineer, and project traffic engineer met with the Hawai'i Department of Transportation, Highways Division on two separate occasions to present the findings of the traffic impact report[6]. At the meetings, the HDOT expressed concerns over allowing left turns to and from Farrington Highway. Although the traffic impact report indicated that the project would

[6] Meeting between HDOT, DAGS, project architect CDS International and project traffic engineer Julian Ng on December 20, 2012.

not have a significant impact on traffic, the HDOT noted their primary concern was traffic safety.

HDOT's Draft EA Comment Letter dated March 28, 2013. Subsequent to publication of the Draft EA and their review of the TIR, the HDOT sent a Draft EA comment letter dated March 28, 2013 (see Chapter 7). The letter states that, *"The Traffic Impact Report (TIR) dated December 2012 is not acceptable. DOT recommends that the Applicant be required to revise the TIR to address all of the applicable comments below and submit a revised TIR for DOT's review and acceptance prior to the access being granted."*

Among the requested edits were that the traffic analysis in the revised TIR *"should reflect the horizon (base) year for the proposed library instead of the year 2024"* and *"a traffic analysis of the right-turn in and right-turn out (RIRO), including a right turn in warrant analysis should be made"*.

The letter further stated that:

> *The proposed use of the existing Nānāikapono School bus RIRO only access may be granted as the access for the library, subject to review and approval of Highways Division and the following:*
>
> *a. The access shall be modified to more effectively deter left-turns from Farrington Highway and the driveway. This could include physical barriers, striping, and signage.*
> *b. Impacts from the project may require the Applicant to provide other transportation mitigation improvements to the existing RIRO intersection and along the Farrington Highway corridor, all in accordance with State Highway standards and recommended in the revised Traffic Impact Assessment, all at no cost to the DOT.*
> *c. The library and school shall maintain control over the access and enforce restrictions with respect to RIRO.*
> *d. In addition to being an access point for school buses to the existing Nānāikapono Elementary School, the RIRO shall be restricted to providing access to the proposed library and related uses only. Any change in land use shall require the review and approval of DOT.*

Right-Turn In and Right-Turn Out Restriction on Farrington Highway. In response to the HDOT's comments and in order to secure their approval for access onto Farrington Highway, DAGS has agreed to a right-turn in and right-turn out (RIRO) restriction for library traffic. The existing fire lane is already limited to RIRO, and HDOT has requested that library traffic also comply with this condition. A RIRO scenario for the library will be evaluated in the revised TIR. Any required modifications to the driveway will be determined during the design phase. Although the HDOT has suggested physical barriers to enforce the RIRO, the desire to deter vehicles from turning left to and from Farrington Highway must be balanced with the need to maintain emergency access. The original purpose of the driveway was to provide fire access to

the school, and it is important that modification to the driveway not compromise the ability of emergency vehicles to easily gain access.

Revised Traffic Impact Report. As requested by HDOT in its March 28, 2013 comment letter, a revised TIR for the project will be prepared by Julian Ng, Inc. for review and approval. The revised TIR will reflect the horizon (base) year for the proposed library instead of 2024, and will evaluate the impacts of a RIRO condition on surrounding traffic and on library users.

Restricting turning movements at the library entry to right turns will require library users coming from the Waianae direction to take a circuitous route, turning mauka on Haleakala Avenue and/or Nānākuli Avenue and then returning to the Waianae bound lane of Farrington Highway in order to turn right into the site. Likewise, cars leaving the library in the Honolulu-bound direction will have to turn right on Farrington Highway, right (mauka) on Haleakala Avenue, and then circle back to Farrington Highway on Nānākuli Avenue or another road where left turns in the Honolulu-bound direction are permitted. This situation will have an impact on the adjacent signalized intersections, and increase traffic on the surrounding surface streets. Enforcement of a right-turn only policy could also be a challenge, and vehicles attempting to make "illegal" left turns to or from the highway could present an even greater safety hazard.

The revised TIR will be submitted to HDOT for review and approval. Appropriate design modifications to the driveway will be incorporated, including appropriate measures to reinforce any restrictions on turning movements required by HDOT.

Public Transit

O'ahu Transit Services, *The Bus,* provides public bus transportation along Farrington Highway, and serving the entire Leeward Coast. Bus routes passing directly in front of the project site include Route C ("Country Express"), Route 93, Route 40, and PH1, all of which provide service between downtown Honolulu (or Pearl Harbor) and Nānākuli, and continuing service west to Mākaha. The nearest bus stops are located at the intersection of Farrington Highway and Haleakalā Avenue, approximately 700 feet from the front door of the new library. Crosswalks and a traffic signal at the intersection will assist pedestrians in crossing Haleakalā Avenue and Farrington Highway between the library and the bus stops.

Existing local routes 40 and 403 provide 24-hour service; between these routes daytime service is approximately three buses per hour in each direction, and night service is about one bus per hour. The local bus service is supplemented by express bus service that includes Route C, with two buses per hour (except between 9 AM and 3 PM, when there are a total of 8 buses); Route 93, with 10 bus trips to Honolulu during a 2-1/2 hour morning peak (7 buses on State holidays) and 10 buses from downtown Honolulu (Alapa'i Transit Center) during a 3-hour afternoon peak (7 buses on State holidays), and Route PH1 that provides a single round trip between Wai'anae and Pearl Harbor Naval Shipyard (to Pearl Harbor in the morning, from Pearl Harbor in the afternoon). Access to other bus routes that serve other parts of O'ahu would require transfers in other parts of the island.

Public transit is also provided with paratransit services ("Handi-Van"). The project will not directly affect bus routes or paratransit operations, other than increased patronage as the result of adding a new destination. Assuming bus passenger totals are 20% of the traffic generation, the increase would be as much as 15 passengers per hour (about 30% of the seated capacity of a standard bus).

Pedestrian Safety

The library site plan was developed through extensive consultation with Nānāikapono Elementary School personnel, who had expressed concerns about student safety, the potential for conflicts between vehicles and pedestrians, and the need to minimize congestion during the morning drop-off and afternoon pick-up periods. As discussed in Chapter 2, three site schemes were evaluated with school personnel, each placing the library building and parking lot in different locations on the site. The scheme preferred by the school personnel sited the library building and parking lot closer to Farrington Highway, as far away from the school bus drop-off and pick-up areas as possible. This scheme became the basis for the proposed site plan. In addition, initial plans for a vehicle-accessed book drop were eliminated, to further minimize unnecessary vehicle traffic around the library.

The library project includes a clearly designated pedestrian path between the school and the library. The path also provides a safe route for students passing through the site to get to the sidewalk on Farrington Highway heading north (Māʻili direction).

Construction Impacts

The project will have short-term construction impacts on local school traffic. During construction of the new library, vehicles and construction equipment will travel to and from the site. Materials will be transported to the site, using the existing school bus and fire access. Some vehicles may stop temporarily along this roadway, though no vehicles or equipment will be permanently staged on the entry road. The road will remain open for use by school buses and fire response vehicles at all times.

No lane closures are planned for Farrington Highway during construction. Construction vehicles will not park on Farrington Highway. A permit will be obtained from the State Department of Transportation before any work on any portion of Farrington Highway begins. A traffic control plan will be prepared prior to construction.

The construction contractor will notify the area Neighborhood Board, residents and businesses if the library construction has any direct impact on their daily operations.

Transportation of equipment and materials to the site will be conducted outside of peak traffic hours, which are 6:00 AM to 8:00 AM and 2:30 PM to 7:00 PM, to minimize traffic delays or obstructions.

Farrington Highway is a State roadway, and no City streets will be impacted by the project. The project is not expected to impact public bus service along Farrington Highway. However, the

City Department of Transportation Services (DTS) has requested that the project construction documents include the following note regarding transit services:

> *"This project may affect bus routes, bus stops and paratransit operations, therefore, the Contractor shall notify the Department of Transportation Services, Public Transit Division at 768-8396 and O'ahu Transit Services, Inc. (bus operations: 848-4578 or 852-6016, and paratransit operations: 454-5041 or 454-5020) of the scope of work, location, proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project at least two weeks prior to construction."*

3.7 PUBLIC SERVICES AND FACILITIES

3.7.1 Police, Fire and Emergency Services

Existing Conditions

Police, fire and emergency services are provided through the City and County of Honolulu. The project is within Honolulu Police Department's District 8, Kapolei/Wai'anae, which services a large area from Ewa and Kapolei up through the entire Leeward Coast. The nearest police substation is the Wai'anae Substation, located about five miles away in Wai'anae.

Nānākuli Fire Station Number 28 is located mauka of Farrington Highway on Nānākuli Avenue near Mano Street, less than a mile from the library site.

The City and County of Honolulu Department of Emergency Services provides emergency medical services on O'ahu, including Nānākuli which has 24-hour service coverage.

Impacts and Mitigation

The project will not have a long-term impact on the need for fire, police or emergency services, or on facilities or operations. During construction, there may be temporary traffic congestion in the project vicinity

An early consultation letter from the Honolulu Police Department dated June 29, 2012 stated, "This project may cause an increase in calls for police service because of the anticipated traffic congestion during the construction phase. However, once the project is completed, it should have no significant impact on the facilities or services of the Honolulu Police Department."

An early consultation letter from the Honolulu Fire Department dated June 28, 2012 addressed the need for fire access roads and adequate water supply for fire fighting. The library will comply with all fire-related design and building requirements. During the design process, civil drawings will be submitted to the Honolulu Fire Department of review and approval.

During construction of the library, the existing bus and fire access road will remain open and free of obstructions. Once the library has opened, it will share use of the existing fire and bus access road for access to the library. This situation will not adversely impact fire access.

3.7.2 Schools

Existing Conditions

The proposed library is adjacent to the new Nānāikapono Elementary School. It is also directly across Farrington Highway from the Kamehameha Schools Nānākuli Learning Center and the Ka Waihona O ka Na‘auao Public Charter School, which are utilizing the old Nānāikapono school campus. Other public schools in the area include Nānākuli Elementary, and Nānākuli High and Intermediate School.

Impacts and Mitigation

During construction of the library, noise and dust will impact the adjacent Nānāikapono Elementary School. During construction, dust screens will be utilized and the contractor will spray water as necessary to control dust. Activities that create excessive noise and dust will be scheduled for non-school hours, when possible. Noise and dust will be somewhat mitigated because the classrooms at the school are air conditioned and enclosed, and the library site is downwind from the school. Although inconvenient, these construction impacts will be temporary and are far outweighed by the long-term benefits of the new library.

In April 2012, the Department of Education provided written review comments to the Nānākuli Public Library Project Development Report. The DOE’s primary concerns were focused on safety and security. Of greatest concern was pedestrian safety of students, as well as library and Head Start patrons, entering the campus on foot from Farrington Highway. As discussed in Chapter 2, project architects worked closely with personnel from the Nānāikapono Elementary School to develop a site plan that responded to these safety and security concerns. The final location of the library building, parking lot, and pedestrian walkway were established based on this consultation. The inclusion of an open space area between the library and the school also addressed traffic safety and security concerns. The pedestrian pathway between the school and library provides a safe route for students going to the library or continuing on to Farrington Highway.

Overall, the library is a compatible and complimentary use to the three schools in the immediate area, as well as Nānākuli High and Intermediate School. The library will provide a place for students to study after school, and to access both print and on-line materials. The potential for joint use of the grassy area between the library and the school will provide an added recreational resource for Nānāikapono Elementary School.

4 CONSISTENCY WITH EXISTING PLANS, POLICIES AND CONTROLS

4.1 STATE OF HAWAIʻI

4.1.1 Hawaiʻi State Plan

The 1996 Hawaiʻi State Plan (Chapter 226, HRS) is the umbrella document in the statewide planning system. It serves as a written guide for the future long-range development of the state by describing a desired future for the residents of Hawaiʻi and providing a set of goals, objectives, and policies that are intended to shape the general direction of public and private development.

The project, to construct a new public library in Nānākuli, is consistent with the following State plan objectives and policies:

> Facility systems-in general
> (b)(1) Accommodate the needs of Hawaiʻi's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.
>
> (b)(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.
>
> Socio-cultural advancement-education
> (b)(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.
>
> (b)(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.
>
> (b)(4) Promote educational programs which enhance understanding of Hawaiʻi's cultural heritage.
>
> (b)(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.
>
> (b)(8) Emphasize quality educational programs in Hawaiʻi's institutions to promote academic excellence.
>
> Socio-cultural advancement—culture
>
> (b) (1) Foster increased knowledge and understanding of Hawaiʻi's ethnic and cultural heritages and the history of Hawaiʻi.
>
> (b)(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaiʻi's people and which are sensitive and responsive to family and community needs.

4.1.2 State Land Use Classification

The State Land Use Commission, pursuant to Chapter 205 and 205A, HRS and Chapter 15-15, Hawai‘i Administrative rules, is empowered to classify all lands in the State into one of four land use districts: urban, rural, agricultural and conservation. The entire project site and surrounding lands are located within the Urban district (Figure 7). A library is a compatible use in the Urban district. Activities or uses within the Urban district are regulated by the City and County of Honolulu.

4.1.3 Coastal Zone Management

Coastal Zone Management ("CZM") objectives and policies (Section 205A-2, HRS) and the Special Management Area ("SMA") guidelines (Section 25-3.2 ROH) have been developed to preserve, protect, and where possible, to restore the natural resources of the coastal zone of Hawai‘i. All lands in the State of Hawai‘i and the area extending seaward from the shoreline are classified as valuable coastal resources within the State's CZM area.

The project site is within the City and County of Honolulu's SMA, and is therefore subject to the City's SMA requirements, Chapter 25, ROH. Council Resolution No. 01-185, CD1, adopted on July 11, 2011, approved SMA Permit No. 2001/SMA-25 for the adjacent elementary school. However, according to the Department of Planning and Permitting (letter dated July 10, 2012, see Chapter 7), *"The previous EA for the elementary school did not contain any drawings or details of the public library and the Head Start facility…a new SMA Major permit will be required for the proposed [library] facilities."* A SMA Major permit will be obtained for the proposed library.

Part II of Chapter 205A, HRS contains the general objectives and policies upon which all counties have established Special Management Areas (SMA). The following discusses the project's conformance with the objectives of the State's CZM program:

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

> **Discussion:** The proposed improvements are limited to the mauka side of Farrington Highway, and will not affect existing fishing, surfing or other coastal recreational opportunities accessible to the public.

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

> **Discussion:** The construction of the library will have no adverse effect on natural or manmade historic or prehistoric resources. The 3.7-acre library site is located within a larger, 15-acre site comprised a large portion of the Army's former Camp Andrews. The

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Figure 7

STATE LAND USE MAP

Nānākuli Public Library

15-acre site, including the library site, was studied as part of the EA for the Nānākuli IV (Nānāikapono) Elementary School. An archaeological inventory survey (AIS) of the 15-acre site was conducted in November 2001. The AIS was designed to further investigate the remains of Camp Andrews and to sample sink holes located within the site for cultural and paleontological deposits.

The AIS study designates the remnants of Camp Andrews (including a small vaulted concrete structure and the two coral obelisks fronting Farrington Highway) as SIHP # 50-80-07-5946. The AIS adequately recorded and documented information associated with former Camp Andrews, and the SHPD determined that no further historic preservation work was recommended. Although there is no requirement for their preservation, the two coral obelisks fronting the highway will not be impacted by the library project, and will be retained. The AIS also evaluated 17 sink holes on the property. None of the sink holes is within the 3.7 acre library site.

Scenic and Open Space Resources

CZM Objective: *Protect, preserve, and where desirable, restore and improve the quality of coastal scenic and open space resources.*

Discussion: The highest point of the library roof will be 35'-9" high, which is higher than the surrounding structures and exceed the 25-foot building height under the existing R-5 zoning. The reason for the high ceilings and roof is to include clerestories, or high windows to utilize natural lighting. The slope of the roofs will also accommodate photovoltaic panels. A zoning variance will be obtained. The building will not obstruct views along the coastline.

Coastal Ecosystems

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

Discussion: The Project will not adversely impact coastal ecosystems or water quality. Best management practices and erosion control measures will be employed during construction of the structures and during to minimize soil loss and control erosion and discharge from the site. The increase in impermeable surfaces will increase runoff but this will be absorbed by drainage structures and landscaped areas on site. There will not be an increase in runoff from the site or into the ocean.

Economic Uses

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

Discussion: The project will provide a badly needed educational facility and community resource, which will serve Leeward Coast, particularly the Nānākuli and Māʻili communities. An investment in educational resources for Hawaiʻi's residents demonstrates an investment in the overall economic future of the State.

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

Discussion: The library site is located within the tsunami evacuation area, but will not affect the occurrence or likelihood of damage from tsunami, storm waves, flooding, erosion, or subsidence. In the event of a tsunami, library staff and patrons will be relocated to higher ground. The library is not within a designated flood hazard area. However, to mitigate the potential for flood damage, the new library finish floor elevations will be raised three feet above the elevation at the center of the site, to approximately 19.0 feet above mean sea level (MSL). This will provide additional protection in the event of storm surges from across Farrington Highway, or overflow from the drainage channel during heavy rain events.

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

Discussion: The Project has no impact on this CZM objective.

Public Participation
CZM Objective: *Stimulate public awareness, education, and participation in coastal management.*

Discussion: The Project has no impact on this specific CZM objective. An early consultation notice was sent to a number of federal, State and City and County agencies and community organizations. The Draft EA will be distributed to these same agencies and groups, and the 30-day public review period allows for public participation and input regarding the proposed school improvement project.

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

Discussion: The Project will not impact public beaches in the area.

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

Discussion: The Project will not impact the protection or use of marine and coastal resources. During construction, best management practices will mitigate erosion and runoff to prevent impacts to coastal water quality and marine resources.

4.2 CITY AND COUNTY OF HONOLULU

4.2.1 County General Plan

General Plan Objectives and Policies

The project is in conformance with the following policies and guidelines of the City and County of Honolulu's *1992 General Plan Objectives and Policies.* The General Plan is a statement of the long-rang social, economic, environmental and design objectives for the general welfare and prosperity of the people of O'ahu. The Plan is also a statement of broad policies that facilitate the attainment of the Plan objectives. The General Plan addresses eleven subject areas, which include population; economic activity; the natural environment; housing; transportation and utilities; energy; physical development and urban design; public safety; health and education; culture and recreation; and government operations and fiscal management.

Chapter VII, Physical Development and Urban Design

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

Policy 8: Locate community facilities on sites that will be convenient to the people they are intended to serve.

Objective E: To create and maintain attractive, meaningful, and stimulating environments throughout O'ahu.

Policy 3: Encourage distinctive community identities for both new and existing districts and neighborhoods.

Policy 5: Require new developments in stable, established communities and rural areas to be compatible with the existing communities and areas.

Policy 9: Design public structures to meet high aesthetic and functional standards and to complement the physical character of the communities they serve.

Chapter IX. Health and Education

Objective B: To provide a wide range of educational opportunities for the people of O'ahu.

Policy 2: Encourage the provision of informal educational programs for people of all age groups.

Chapter X. Culture and Recreation

Objective A: To foster the multiethnic culture of Hawai'i.

Policy 2: Encourage greater public awareness, understanding, and appreciation of cultural heritage and contributions to Hawai'i made by the City's various ethnic groups.

Policy 4: Encourage the protection of the ethnic identities of the older communities of O‘ahu.

4.2.2 Wai‘anae Sustainable Communities Plan

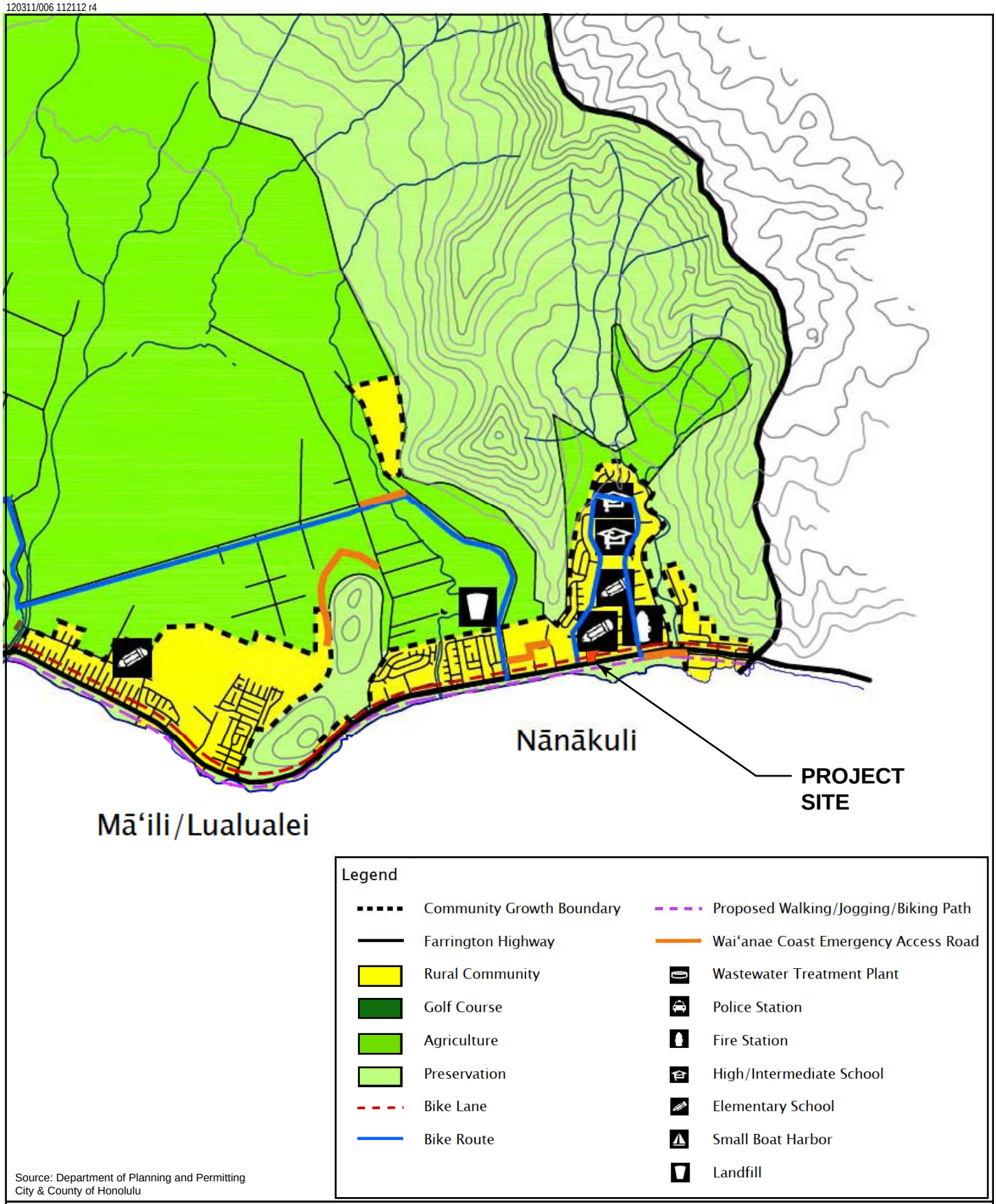
The City and County of Honolulu’s Development Plan (DP) program provides a relatively detailed framework for implementing General Plan objectives and policies for the growth and development of O‘ahu at a regional level.

The project site is located in the Wai‘anae Sustainable Communities Plan (SCP) area, encompassing the leeward coast of O‘ahu from Nānākuli to Kaena Point, and enclosed by the leeward slopes of the Wai‘anae Mountain Range. The Wai‘anae SCP (October 2010) is one of eight community oriented plans on O‘ahu intended to help guide public policy, investment, and decision-making over the next 25 years. The vision for the Wai‘anae District is oriented toward maintaining and enhancing the region’s ability to sustain its unique character, current population, growing families, rural lifestyle, and economic livelihood, all of which contribute to the regional vitality and future potential.

The plan notes that future development in Wai‘anae should encourage agriculture, renewable energy generation, green technology, ecosystem and cultural site restoration, and economic development, all for the benefit of future generations. The library incorporates sustainable design including use of natural lighting and ventilation where possible, low maintenance and durable materials, a photovoltaic system on the roof, and drought tolerant landscaping with canopy trees near the building for shading. The multi-purpose Program Room which opens to an outdoor area provides a venue for community and cultural events. The open grassed area will be jointly used and maintained by the Nānāikapono Elementary School, maximizing use of this area.

Chapter 4 of the SCP, Public Facilities and Infrastructure Policies and guidelines, does not specifically mention a new public library for Nānākuli. The SCP land use map (Figure 8) shows the adjacent elementary school and the general area as “rural community.” The Wai‘anae SCP notes public facilities should be designed to be both functionally efficient and aesthetically pleasing. The following “sound design principles” from the SCP will be followed in the project:

- The use of building forms and materials that reflect Hawai‘i’s diverse cultural and architectural heritage.
- The predominantly residential scale of the built environmental of the Wai‘anae District. Massive building forms would not be compatible with this residential scale.
- The hot, dry climate of the coastal plain zone of the Wai‘anae District. Public buildings should therefore incorporate “natural” cooling devices including lanais, wide roof overhangs, natural air circulation, strategically placed shade trees, and cooler colors for exterior walls.



Source: Department of Planning and Permitting
City & County of Honolulu

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Figure 8
WAI'ANAE SUSTAINABLE COMMUNITIES PLAN
Nānākuli Public Library

- Related open areas including front yard areas, parking lots, playgrounds, and garden spaces should be generously planted with colorful trees, shrubs and ground covers. Drought-tolerant native plant species should be favored.

In a Draft EA comment letter dated February 26, 2013 (see Chapter 7), the Department of Planning and Permitting commented, "Although not specifically discussed in the Waianae Sustainable Communities Plan (SCP), the proposed library is generally consistent with SCP policies to improve the quality of public facilities and services in the Waianae Area, to avoid siting of facilities makai of Farrington Highway and on Agricultural land, and to locate facilities next to parks or other compatible facilities to maximize use."

The SCP also states that sea level rise should be taken into account when choosing the location of a public building. In the *Oahu Metropolitan Planning Organization's Transportation Asset Climate Change Risk Assessment* (November 2011), Farrington Highway along the Leeward coast was one of five transportation assets evaluated for vulnerability to sea level rise, inundation, and other climate change-induced effects. Overall risk for Farrington Highway in 2050 and 2100 was considered "High." By year 2050, with a one-foot sea level rise, Farrington Highway was predicted to have Moderate-high Vulnerability and High Structural Impact. By year 2100, with a three-foot projected sea level rise, Farrington Highway would have High Vulnerability, High Structural Impact.

Farrington Highway along the Leeward coast is especially vulnerable to climate change because of its proximity to the ocean, its high population and commercial activity, and because it is the only publicly available ingress and egress along the entire coast. However, modeling maps completed as part of the above risk assessment showed that even with a three-foot sea level rise by year 2100, the Nanakuli Public Library site would not be directly impacted.

4.2.3 County Zoning

The City and County of Honolulu's Land Use Ordinance (LUO) (Section 21, ROH) is its zoning ordinance, which regulates land use in a manner that will encourage orderly development in accordance with adopted land use policies.

As shown in Figure 9, the entire 15-acre parcel that includes the school and proposed library is zoned R-5 Residential. The intent of the City and County's residential districts is to provide areas for urban residential development. Both the new Nānāikapono Elementary School and the proposed library are permitted in the R-5 zone. The R-5 residential zone requires a minimum lot size of 5,000 square feet with building heights of 25 feet.

The highest point of the proposed library will be 35 feet and 9 inches, which will thus require a waiver for the height requirements of the LUO Section 21-3.70-1(c)(1). The higher ceiling/roof line was incorporated to allow maximum use of natural daylighting through the use of clerestories, or high windows. The slope of the roofs will also be utilized for the photovoltaic (PV) panels. These features contribute to a more energy efficient and sustainable design.

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Figure 9

ZONING AND SPECIAL MANAGEMENT AREA MAP

Nānākuli Public Library

The adjacent elementary school cafeteria building was also granted a height waiver. According to an early consultation letter from the City and County of Honolulu's Department of Planning and Permitting (DPP) dated July 10, 2012, Zoning Waiver No. 2001/W-73 allowed the cafeteria building to exceed the maximum height limit.

4.2.4 Special Management Area

Coastal Zone Management objectives and policies (Section 205A-2, HRS) and the Special Management Area (SMA) guidelines (Section 25-3.2 ROH) have been developed to preserve, protect, and where possible, to restore the natural resources of the coastal zone of Hawai'i. As shown the figure, the entire 15-acre parcel, which includes the elementary school and the library site, is within the County's SMA, requiring compliance with the County's SMA requirements. A Special Management Area Use Permit (SMP)-Major is required for development valued at over $500,000, which includes the proposed project improvements.

Prior to its construction in 2004, the Nānāikapono Elementary School obtained a SMP-Major. Although that SMP application and EA included the library site, the EA did not provide detailed information on the proposed library. As such, The Department of Planning and Permitting has determined that another SMP is required for the library project.

The library is consistent with the SMA guidelines found in Section 25-3.2, ROH, which are used by the Honolulu City Council to review development within the SMA. The relationship between the proposed action and the SMA review guidelines in Section 25-3.2 ROH are discussed below:

(a) All development in the special management area shall be subject to reasonable terms and conditions set by the council to ensure that:

(1) Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas and natural reserves is provided to the extent consistent with sound conservation principles;

(2) Adequate and properly located public recreation areas and wildlife preserves are reserved;

(3) Provisions are made for solid and liquid waste treatment, disposition and management which will minimize adverse effects upon special management area resources; and

(4) Alterations to existing land forms and vegetation; except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation or failure in the event of earthquake.

Discussion: The project improvements are located across Farrington Highway from the Nānākuli Beach Park, and will not impact access to or use of these public recreation areas. The improvements will not adversely impact water, sewer or electrical utilities. Appropriate utility connections will be provided. The improvements will not involve extensive grading or ground disturbance. The project is not in a flood prone area. However, as an added precaution, the finish floor elevation of the library will be elevated

three feet above the center elevation of the site to protect against coastal surges and potential overflow of the drainage channel.

(b) No development shall be approved unless the [Honolulu City] council has first found that:

> (1) The development will not have any substantial, adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interest. Such adverse effect shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect and the elimination of planning options;
> (2) The development is consistent with the objectives and policies set forth in Section 25-3.1 and area guidelines contained in HRS Section 205A-26;
> (3) The development is consistent with the county general plan, development plans and zoning. Such a finding of consistency does not preclude concurrent processing where a development plan amendment or zone change may also be required.

Discussion: The analysis provided in this chapter (Chapter 4) of the Environmental Assessment demonstrates the proposed action's consistency with the Special management area guidelines in Chapter 205A-26. As discussed in Chapter 3, there are no substantial adverse environmental impacts anticipated as a result of the project.

(c) The [Honolulu City] council shall seek to minimize, where reasonable:

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

Discussion: The proposed project does not include dredging or filling, will not impact any beach or public recreation area, or affect any water bodies. The library is located on the mauka side of Farrington Highway, and will not interfere with the line of sight from the highway to the sea or along the coast. Construction will comply with State and

County development standards to ensure there are no adverse impacts to water quality, fishing areas, wildlife habitats, or agricultural areas.

4.3 OTHER CONSIDERATIONS

4.3.1 Unavoidable Adverse Effects

All potential environmental impacts discussed in Chapter 3 can either be avoided or mitigated to an extent that they would not be significant.

4.3.2 Energy Requirements and Conservation Potential of Various Alternatives and Mitigation Measures

The proposed library incorporates energy efficient and energy saving design including the use of natural daylighting and ventilation where possible, and the inclusion of photovoltaic panels. Landscaping will be done with drought tolerant native species and shade trees around the library provided for cooling.

4.3.3 Relationship of Short-Term Uses and Long-Term Productivity

In the short-term, the project will have temporary construction-related impacts such as noise, dust, and traffic congestion on the surrounding areas. The improvements will require a commitment of public construction funds. However, the short-term effects are minor when compared to the long-term benefit of the proposed library. The project will provide a needed and long-desired community resource for the Leeward coast community. Its long-term productivity far outweighs the short-term tradeoffs.

4.3.4 Irretrievable and Irreversible Resource Commitments

Resources that are committed irreversibly or irretrievably are those that cannot be recovered if the project is implemented. The proposed project will involve the commitment of capital, labor, fuels and equipment. General industrial resources will be spent during project construction and for long-term operation and maintenance of the new library. The currently vacant site will be occupied by a new library structure. However, these improvements are consistent with the adjacent use of the parcel as an elementary school. The library is also compatible with the educational facilities located across Farrington Highway at the old Nānāikapono Elementary School site.

5 DETERMINATION, FINDINGS AND REASONS SUPPORTING THE CHAPTER 343 HRS DETERMINATION

5.1 CHAPTER 343 HRS DETERMINATION

Based on the information and analysis in this Environmental Assessment, the State of Hawai‘i Department of Accounting and General Services has determined that the project will not result in a significant impact on the environment. As such, it anticipates issuing a Finding of No Significant Impact (FONSI), pursuant to the State of Hawai‘i HRS Chapter 343. An Environmental Impact Statement (EIS) is not required.

5.2 CHAPTER 343 HAWAI‘I REVISED STATUTES (HRS) SIGNIFICANCE CRITERIA

In determining whether an action may have significant impact on the environment, the applicant or agency must consider all phases of the project, its expected consequences both primary and secondary, its cumulative impact with other projects, and its short and long-term effects. The State of Hawai‘i Department of Health Rules Section 11-200-12 (Hawai‘i Administrative Rules, revised 1996) establish 13 “Significance Criteria” to be used as a basis for identifying whether significant environmental impact will occur.

An agency will determine an action may have a significant impact on the environment if it meets any of the following criteria:

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

The project will not result in an irrevocable commitment to loss or destruction of any natural or cultural resources. The project site is dominated by introduced plant and animal species. The site does not provide unique habitat and no candidate, proposed, or listed threatened or endangered species will be disturbed. The 3.7-acre library site is part of a larger 15-acre area that was the subject of a 2001 archaeological inventory survey. During the survey, the remains of historic Camp Andrews were adequately recorded and the SHPD subsequently concurred that no further historic preservation work was needed.

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

The proposed project does not curtail the range of beneficial uses of the environment. The library will be constructed on a State-owned site that has long been designated for construction of a library. The library use is compatible with surrounding land uses. The site is adjacent to an existing elementary school and across Farrington Highway from two other private educational campuses. The library is a beneficial use of the environment.

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

The proposed project is consistent with the environmental policies in Chapter 344, HRS, which establishes a state policy to "Conserve the natural resources…safeguarding the State's unique natural environmental characteristics in a manner which will foster and promote the general welfare, create and maintain conditions under which humanity and nature can exist in productive harmony, and fulfill the social, economic and other requirement of the people of Hawai'i" [§344-3(1)].

The project also supports the stated policy to "enhance the quality of life by…Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian…"[§344-3(2)].

4. Substantially affects the economic or social welfare of the community or state;

The construction of a new library to serve the Leeward Coast will have a positive impact on the economic and social welfare of the community. Construction will have minor, short-term air, noise and traffic impacts. However, these are far outweighed by the project's overall and long-term benefits.

5. Substantially affects public health;

The temporary construction-period noise and dust impacts will be minor and short-term, and are insignificant when weighed against the project's overall, long-term positive impacts.

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

The new library will not induce secondary impacts such as population changes or effects on other public facilities. The library is intended to serve the existing residents of Nānākuli and Mā'ili who currently must access libraries in other communities.

7. Involves a substantial degradation of environmental quality;

Construction period impacts related to noise and air quality will be temporary and short-term. Mitigation measures will include dust barriers around the construction area, equipment noise attenuation, and use of best management practices to control erosion and runoff. There will not be any long-term degradation of environmental quality associated with operation of the library.

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

The proposed project is limited to construction of a new library to serve the existing community, and does not have a cumulative effect or commitment for larger action.

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

No rare, threatened or endangered species or its habitat will be impacted by the project. Plant and animals found at the site are introduced species, and there are no significant biological resources.

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

The project will result in short-term construction period increases in fugitive dust and noise that will inconvenience students and faculty at the adjacent Nanikapono Elementary School. These impacts will be mitigated to the extent possible by scheduling noisy construction during non-school hours. There will be no long term impacts to air or water quality or noise.

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 project site is within the tsunami evacuation area. In the event of a tsunami, library employees and patrons will be evacuated to the nearest shelter. The site is not within a designated flood hazard area. Best management practices will be used during construction to prevent adverse impacts to coastal water quality.

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

The library will be located on the mauka side of Farrington Highway and will not impact coastal views from the highway. It will not impact scenic vistas or viewplanes identified in county or state plans or studies.

13. Requires substantial energy consumption.

The library will not require substantial energy consumption. Energy resources will be consumed during project construction. The library has been designed to be energy efficient and includes the use of photovoltaic panels to generate solar energy and landscaping with drought tolerant native plants.

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7 PERSONS AND AGENCIES INVOLVED IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT

7.1 AGENCIES AND ORGANIZATIONS CONSULTED

The following agencies and organizations were contacted during the early consultation for the Draft EA. The comments received during the early consultation are summarized in Section 7.2 and copies of the letters are included at the end of this chapter.

Federal

U.S. Army Engineer Division
- Civil Works Technical Branch
- Regulatory Branch

State

Department of Agriculture
Department of Business, Economic Development & Tourism, Office of Planning
Department of Hawaiian Home Lands
Department of Land and Natural Resources
- Land Division
- State Historic Preservation Division

Department of Education
- Planning Section
- Nānākuli High and Intermediate School
- Nānāikapono Elementary School
- Ka Waihona O Ka Naauao Public Charter School
- Maili Elementary School
-

Department of Health
- Environmental Planning Office
- Office of Environmental Quality Control

Office of Hawaiian Affairs
University of Hawaii
- Environmental Center
- University of Hawaii-West O‘ahu
- Leeward Community College at Wai‘anae

City and County of Honolulu

Department of Design and Construction
Economic Development Office
Department of Environmental Services

Department of Facility Maintenance
Fire Department
Department of Planning & Permitting
Department of Parks and Recreation
Police Department
Department of Transportation Services
Board of Water Supply

Other Organizations

Nānākuli Māʻili Neighborhood Board
Hawaiian Electric Company
Hawaiian TelCom
Oceanic Time Warner Cable
Kamehameha Schools
Waiʻanae Coast Culture & Arts
Nānākuli Hawaiian Homestead
INPEACE Kupu Ola Program
Hawaiian Civic Club
Waiʻanae Coast Rotary Club
Concerned Elders of Waiʻanae
Nānākuli YET Center
Head Start
Friends of the Library of Hawaii
Alu Like
Boys and Girls Club of Waiʻanae
Konishiki Kids Foundation
Lualualei Hawaiian Civic Club
Princess Kahanu Estates Homestead Association
Queen Liliʻuokalani Children's Center
Ulu Ke Kukui Transitional Housing
Waiʻanae Coast Comprehensive Health Center
Waiʻanae Community Outreach
Waiʻanae Neighborhood Place
Waiʻanae Military Civilian Advisory Council

Elected Officials

City Councilmember Tom Berg, Honolulu City Council District 1
Senator Maile Shimabukuro, 21st Senatorial District
Representative Jo Jordan, Representative District 45
Representative Karen Awana, Representative District 44

7.2 COMMENTS RECEIVED DURING PRE-ASSESSMENT CONSULTATION

Letters soliciting comments were sent to the agencies and organizations listed above in June 2013, and a total of 14 written responses were received. A summary of the comments is included in the table below, and copies of the letters are included at the end of this chapter.

Table 7-1: Summary of Comments Received During Pre-Assessment Consultation

Agency or Individual	Format/Date/Reference	Comments	Action/Response
Federal			
Department of the Army, Corps of Engineers, Regulatory Branch	June 29, 2012	Project site appears to be absent of navigable waters subject to Corps jurisdiction. Recommend thorough aquatic resource survey describing potential water bodies, especially those impacted by project.	No waterbodies (wetlands, drainage ditches, gulches, streams) on site.
State of Hawaii			
Department of Education	June 27, 2012	Resent April 5, 2010 letter providing comment on 2010 Project Development Report. Ingress/egress points not clear. Concern with pedestrian safety and Nānākuli Elementary School. Request you confer with school personnel to ensure proper access.	EA will show proposed access. Designers conferred with Nānāikapono Elementary School staff in designing vehicular access and pedestrian pathways between school and library.
Department of Business, Economic Development and Tourism	July 10, 2012	DEA should include discussion of CZM consistency, and SMA goals and objectives. Consult with Dept. of Planning & Permitting for SMA requirements.	Included in EA.
Department of Health	June 20, 2012	Review Standard Comments on DOH website and apply strategies to protect environment and build sustainable communities.	Will comply, discussed in EA.
Department of Land & Natural Resources, Land Division	Letter dated July 6, 2012	Land Division—no comments Engineering Division—project site located in FIRM Zone D, Include water demands and infrastructure required to meet project needs.	Discussed in EA.
Department of Transportation	Letter dated June 25, 2012	Provide 4 printed copies and one CD of DEA for DOT review.	Will comply.

Agency or Individual	Format/Date/Reference	Comments	Action/Response
City & County of Honolulu			
Dept. of Design and Construction	Letter dated July 12, 2012	No comments	No action required.
Department of Facility Maintenance	Letter dated July 19, 2012	No comments.	No action required.
Honolulu Fire Department	Letter dated June 28, 2012	Provide fire access roads and water supply for fire flow as required. Submit civil drawings to HFD for review and approval.	Will comply.
Dept. of Parks & Recreation	Letter dated June 27, 2012	No comment. Project will not impact any DPR program or facility. You may remove us as consulted party.	No action required.
Police Department	Letter dated June 29, 2012	Project may cause increase in calls for police service because of traffic congestion during construction. Once project completed, it should have no significant impact on HPD facilities or services.	Added information to EA.
Department of Planning & Permitting	July 10, 2012	SMA-site is within SMA. SMA Permit previously approved for elementary school, but EA did not contain drawings or details of library and Head Start. New SMA Major permit will be required. Height Requirements-EA should identify any encroachment (e.g., height, height setback, yards) and indicate a new Zoning Waiver would be required if library building exceeds the R-5 Residential District development standards. Parking Requirements- Parking for proposed public uses are now reviewed and determined by Director on a case-by-case basis. Project Impacts-DEA should discuss impacts on coastal resources including coastal views and open space. Address site preparation such as grading work and new solid or wastewater demands. Discuss consistency with amended	Info added to EA.

Agency or Individual	Format/Date/Reference	Comments	Action/Response
		Wai‘anae SCP. Clarify relationship with Head Start facility.	
Dept. of Transportation Services	Letter dated July 10, 2012	Should include TIAR discussing traffic impacts on surrounding roadways, short term impacts, mitigation, and cumulative impacts of Head Start project being co-located on same site. Keep Neighborhood Board, residents and businesses apprised construction. Transport equipment and materials to site outside of peak hours. EA should describe public transit and impacts.	Added information to EA. Will comply.
Board of Water Supply	Letter dated June 28, 2012	Existing water system is adequate to accommodate proposed development based on current data.	Added information to EA.

7.3 COMMENTS RECEIVED DURING THE DRAFT EA COMMENT PERIOD

The Draft EA was completed and notice of availability was published in the January 23, 2013 edition of the Office of Environmental Quality Control (OEQC) *The Environmental Notice*. This commenced a 30-day public comment period which ended on February 22, 2013.

The Draft EA was sent to the agencies and organizations listed above, and hard copies were made available for general public review at the Wai‘anae Public Library, Kapolei Public Library, and the Hawai‘i State Library. The Draft EA could also be accessed and downloaded from the OEQC web site. The following comments were received during the public commend period:

Table 7-2: Summary of Comments Received During Draft EA Comment Period

Agency or Individual	Format/Date/Reference	Comments	Action/Response
State of Hawaii			
Department of Health, Indoor and Radiological Health Branch	Letter dated February 12, 2013	Project shall comply with Administrative Rules pertaining to community noise control and asbestos	Will comply.
Department of Education	Memo dated February 20, 2013	DOE is not the owner of library or school site. Land owned by State of HI, DOE has managerial responsibility. Suggest EA include map showing library site in relation to school. Suggest map illustrating pedestrian path for Nānāikapono students be more clearly marked. There is one route students use to enter or exit school, different from route students use during school day for activities at library.	EA Figure 1 shows library site in relation to school. FEA will include new figure showing existing pedestrian path for students.
Department of Health, Environmental Planning Office	Letter dated January 31, 2013	Review standard comments at www.hawaii.gov/health/epo Examine info on sustainable design, encourage application of sustainability strategies and principles.	Will comply with all applicable permit requirements and water quality standards.
Department of Health, Clean Water Branch	Letter dated March 11, 2013	1. Project must meet antidegradation policy, designated uses for water classification, water quality criteria. 2. May be required to obtain NPDES. 3. Recommend contact Army Corps of Engineers, Regulatory Branch regarding permitting requirements. 4. All construction or operational	Project will comply with all applicable water quality criteria and standards. NPDES permit will be obtained for construction activity. Department of the

Agency or Individual	Format/Date/Reference	Comments	Action/Response
		discharges must comply with State Water Quality Standards.	Army permit is not required.
Department of Land and Natural Resources	Letter dated January 23, 2013	Land Division-no comments Engineering Division-no additional comments Commission on Water Resource Management-Comments related to water resources are checked off: 1. Recommend coordination with county to incorporate into Water Use and Development Plan. Contact Planning Dept. and Dept. of Water Supply. 2. Coordinate with DLNR Engineering Division. 3. N/A 4. Recommend use of water efficient fixtures and practices. 5. Recommend use of best management practices for stormwater management. 6. Recommend use of alternative water sources wherever practicable. 7. Recommend participating in Hawaii Green Business Program. 8. Recommend adopting landscape irrigation conservation and best management practices.	CWRM comments: 1. City and Co. Planning Dept. and BWS have reviewed Draft EA; BWS indicates existing water system adequate to accommodate proposed development. 2. DLNR Engineering reviewed Draft EA, have no comments. 4. Water efficient fixtures included in design; landscaping utilizes drought tolerant, low maintenance vegetation. 5. BMPs to be used to address stormwater management per County and State regulations. 6. Alternate source for potable water unavailable. Landscaping uses drought tolerant plantings to reduce irrigation demand. 7. By pursuing LEED Certification, the library should go above and beyond goals and requirements of

Agency or Individual	Format/Date/Reference	Comments	Action/Response
			Green Business Program. 8. Design will incorporate landscape irrigation conservation BMPs endorsed by Landscape Industry Council of Hawaii as best as possible considering cost, constructability, maintenance and safety.
Office of Planning	Letter dated February 19, 2013	1. Properly identify accepting authority (DAGS or DOE?) 2. Table 1-1 did not list NPDES permit. 3. Further address unresolved traffic issues and discussions between DAGS and State Dept. of Transportation. 4. Revise statement on page 4-12 as noted	1. Page 5-1 to be corrected. 2. Table to be revised to add NPDES. 3. Final EA will provide update on traffic issue. 4. Statement to be revised.
Department of Transportation	Memo dated February 26, 2013 Memo dated March 28, 2013	1. Traffic Impact report dated December 2012 is not acceptable. DOT recommends TIR be revised to address comments and submit for DOT review and acceptance. 2. Trip generation and distribution in TIR are acceptable. 3. Traffic analysis should reflect the horizon (base) year for the proposed library instead of year 2024. 4. Traffic analysis of right-turn in and right-turn out (RIRO), including right-turn warrant analysis should be made. 5. Proposed use of existing Nānāikapono School bus RIRO access may be granted as access for the library, subject to review and approval of DOT Highways division and the following. 5a. Access shall be modified to	1. TIR currently being revised as requested. 2. No action required. 3. Will comply. 4. Traffic engineer to clarify with DOT what "right turn-in warrant analysis" consists of. 5. see responses below: 5a. Any modifications will be done as part of design which is subject to review and approval by DOT Highways

Agency or Individual	Format/Date/Reference	Comments	Action/Response
		move effectively deter left turns. 5b. Impacts may require other transportation mitigation improvements. 5c. Library and school shall maintain control over access and enforce RIRO restrictions. 5d. RIRO shall be restricted to providing access to proposed library and related uses only. 6. TIR to reflect DOT's policy that LOS and delay levels with project shall remain at "without project" levels for horizon year. 7. Applicant shall dedicate ROW for recommended transportation mitigation improvements to the State, as required and approved by DOT.	Division. 5b. To be determined during design. 5c. School and library will be responsible to open and close cattle gates. Enforcement of restrictions is a police function. 6. No anticipated mitigation improvements other than retiming nearby traffic signals. 7. Details to be determined during design.
City & County of Honolulu			
Dept. of Design and Construction	Letter dated February 22, 2013	No comments.	No action required.
Dept. of Planning and Permitting	Letter dated February 26, 2013	<u>Planning Division</u> 1. Library generally consistent with Waianae Sustainable Communities Plan. 2. EA should discuss possible impact of sea level rise on facility. 3. Proposed library would provide more accessible library and community services for Nānākuli and Māili communities. <u>Engineering Branch</u> 1. Identify entity with jurisdiction over concrete drainage channel. 2. Final EA should reference amended Rules Relating to Storm Drainage Standards that will become effective June 1, 2013. <u>Zoning Regulations and Permits Branch</u> 1. Final EA should clarify relationship of Head Start facility to existing school and new library. 2. Grading permit will be required.	<u>Planning Division</u> 1. Comment will be noted in EA. 2. Final EA to include discussion on sea level rise. 3. No action required. <u>Engineering Branch</u> 1. Ownership of drainage channel (DHHL or City) remains unresolved. Project will not result in a net increase in runoff entering the drainage channel. Drainage improvements will be designed to

Agency or Individual	Format/Date/Reference	Comments	Action/Response
		Final EA should discuss volume of grading and excavation.	City standards and comply with applicable City and/or State requirements. 2. Once ownership of drainage channel is determined, all pertinent standards and regulations per regulating governmental agency will be followed. Zoning Regulations and Permits Branch 1. Will comply. 2. Will comply.
Honolulu Fire Department	Letter dated February 13, 2013	1. Fire access roads provided as described. 2. Water supply for fire flow to be provided as described. 3. Submit civil drawings to HFD for review and approval.	1, 2, 3. Will comply.
Police Department	Letter dated February 11, 2013	Project should have no significant impact on facilities or operations of police dept.	No action required.
Department of Transportation Services	Letter dated February 12, 2013	No comments to offer at this time.	No action required.
Board of Water Supply	Letter dated February 14, 2013	Comments in letter dated June 28, 2012 are still applicable.	No further action required.
Friends of the Library of Hawai‘i	Letter dated January 28, 2013	EA confirms this project will have very positive effect on community.	No action required.
Hawaiian Electric Company	Letter dated February 22, 2013	No objections to the project.	No action required.

Comments Received During Pre-Assessment Consultation

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

REPLY TO
ATTENTION OF:

June 25, 2012

Regulatory Branch

File Number **POH-2012-00162**

Kimura International Inc.
Attn: Glenn T. Kimura
1600 Kapiolani Boulevard, Suite 1610
Honolulu, HI 96814

RECEIVED JUN 29 2012

Dear Mr. Kimura:

This responds to your letter dated June 15, 2012 requesting review comments for the proposed Nanakuli Public Library in Leeward Oahu. We have assigned this project the reference number **POH-2012-00162**. Please cite this reference number in any future communications with this office regarding this project.

We have completed our review of the submitted documents pursuant to Section 10 of the Rivers and Harbors Act of 1899 (Section 10) and Section 404 of the Clean Water Act (Section 404). For your information, Section 10 requires that a Department of the Army (DA) permit be obtained from the U.S. Army Corps of Engineers (Corps) prior to undertaking any construction, dredging, or other activity occurring in, over, or under or affecting navigable waters of the U.S. For tidal waters, the shoreward limit of the Corps jurisdiction extends to the Mean High Water Mark. Section 404 requires that a DA permit be obtained for the discharge (placement) of dredged and/or fill material into waters of the U.S., including wetlands. For tidally influenced waters, in the absence of adjacent wetlands, the shoreward limit of the Corps jurisdiction extends to the High Tide Line, which in Hawai'i may be approximated by reference to the Mean Higher High Water Mark. For non-tidal waters, the lateral limits of the Corps jurisdiction extend to the Ordinary High Water Mark or the approved delineated boundary of any adjacent wetlands.

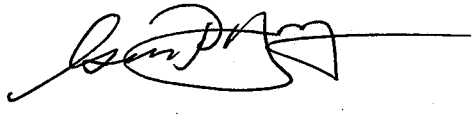
Based on the information provided, the project site appears to be absent of navigable waters subject to the Corps jurisdiction. Therefore, Section 10 authorization may not be required. However, there is insufficient information provided to determine if the proposed project will involve activities under Section 404. Fill material, permanent or temporary, may include, but is not limited to: rock, dirt, sandbags, silt fences or concrete. To avoid unintentional violation to federal regulation and law, we advise you to contact our office prior to conducting any activity that may result in the discharge of dredged and/or fill material. Section 404 authorization may be required for this action.

When developing the Environmental Assessment, we recommend you conduct a thorough aquatic resource survey, describing information regarding any potential water bodies, including wetlands, drainage ditchers, gulches, stream, etc., on-site, especially those that may be impacted by the proposed project. The survey should include descriptions of aquatic features proposed for impact, flow, duration and the flow path of each feature into navigable waters.

We recommend you contact the Corps to determine if any of the proposed work constitutes a "discharge of fill" and submit an application with associated drawings that meet our drawing recommendations found at *http://www.poh.usace.army.mil/EC-R/EC-R.htm*. Click on "Apply for Permit" on the right-hand side, and then click on "Rec – Sect 404 Clean Water Act Drawings." Providing photographs of the parcel would also expedite our review. As a reminder, only the Corps has the authority to determine if any of these features are or are not waters of the U.S. and, potentially subject to regulations. A request for an approved Jurisdictional Determination can be submitted prior to, or concurrently with, an application for the proposed work.

Thank you for giving us the opportunity to review this proposal and providing us with the opportunity to comment. Should you have any questions, please contact Ms. Michelle Lazaro at (808) 835-4307, or through email at *Michelle.K.Lazaro@usace.army.mil*. You are encouraged to provide comments on your experience with the Honolulu District Regulatory Branch by accessing our web-based customer survey form at *http://per2.nwp.usace.army.mil/survey.html*.

Sincerely,



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

NEIL ABERCROMBIE
GOVERNOR

KATHRYN S. MATAYOSHI
SUPERINTENDENT

STATE OF HAWAI`I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI`I 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

RECEIVED JUN 29 2012

June 27, 2012

Mr. Glenn T. Kimura, President
Kimura International, Inc.
1600 Kapiolani Boulevard
Honolulu, Hawaii 96814

Dear Mr. Kimura:

SUBJECT: Early Consultation on the Nanakuli Public Library

The Department of Education (DOE) asks why your June 15, 2012 letter, requesting early consultation on a new public library in Nanakuli, makes no reference to the 2010 Project Development Report for the library. A copy of our April 5, 2010 letter, providing comments on the Report, is attached for your review.

In 2010, the Report discussed access to the proposed facility from Farrington Highway. In your recent letter it is stated that no new ingress/egress points are proposed on Farrington Highway, but it is not clear why, or, whether there are existing ingress/egress points that are intended to be utilized. This is of particular concern to the DOE, if the intent is to drive all traffic through the campus of Nanakuli Elementary School. Our concern about the safety of pedestrian traffic remains the same as stated in our April 2010 letter.

The DOE request that you confer with school personnel, and the Nanakuli Complex Area Superintendent in your next stage of planning, to ensure that proper access is provided. Should you have any questions, please call Heidi Meeker of the Facilities Development Branch at 377-8301.

Sincerely yours,

Duane Y. Kashiwai
Public Works Administrator

DYK:jmb

c: Randall Miura, Acting CAS, Nanakuli/Waianae Complex Areas

LINDA LINGLE
GOVERNOR

KATHRYN S. MATAYOSHI
INTERIM SUPERINTENDENT

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

April 5, 2010

TO: Mr. Joseph M. Earing
Planning Branch, Public Works Division
Department of Accounting and General Services

FROM: Duane Y. Kashiwai, Public Works Administrator
Facilities Development Branch
Department of Education

SUBJECT: Review of the Nanakuli Public Library Project Development Report

The Department of Education (DOE) would like to provide the following comments after reviewing the Project Development Report for the Nanakuli Public Library to be built adjacent to the DOE's Nanaikapono Elementary School in Nanakuli, Waianae.

The DOE's concerns are focused on safety and security. We would like to be sure that sufficient time is spent in the planning of traffic patterns around the site. Of greatest concern is the pedestrian safety of students, as well as library and Head Start patrons, entering the campus on foot from Farrington Highway.

We would like to see designated pedestrian walkways in both corners of the site to allow pedestrians coming from either direction on the highway to enter the property without having to cross traffic pulling in or out of the site. There is a clear need for a wide sidewalk along the southwest boundary to permit people to walk into the site to the side of the proposed shared driveway entry serving the library and Head Start buildings and beyond the proposed new gate across the driveway used by the school buses. We believe a second pedestrian path near the drainage channel would guide pedestrians away from crossing the new facility parking and lead them directly to the library, Head Start building and Nanaikapono Elementary.

We think it is important that plans for the library and Head Start building fully recognize the bus traffic that will enter and circle around the site twice a day during the school year.

The DOE has no comment on the proposed layout of the library building other than to note the probable use of the library by students after school and the occasional use of the library meeting room for school/community meetings.

The DOE has a preference for placing the library closer to the driveway (Option A) rather than having the library closer to the drainage channel. We think it may be safer to contain public access to the library at night and on weekends closer to the site's entrance.

The DOE welcomes the development of the balance of the DOE property. The building and improvements will create a new backyard for the school. The improved site will also bring up issues of fencing, gates and traffic patterns between all the institutions using the property. We urge early and frequent discussions with the principal at Nanaikapono Elementary in your planning and design process.

Thank you for the opportunity to review the Project Development Report. If you have any questions, please call Heidi Meeker of the Planning Section at 377-8301.

DYK:HM:jmb

c: Lisa DeLong, CAS, Nanakuli/Waianae Complex Areas

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

12-117
EA Nanakuli Library

June 20, 2012

RECEIVED JUN 25 2012

Mr. Glenn T. Kimura, President
Kimura International
1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

SUBJECT: Nanakuli Public Library (DAGS Job No. 12-36-6513) TMK: 8-9-02:065 Environmental Assessment—Early Consultation

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your letter, dated **June 15, 2012.** Thank you for allowing us to review and comment on the subject document. The document was routed to the various branches of the Environmental Health Administration. We have no comments at this time, but reserve the right to future comments. We strongly recommend that you review all of the Standard Comments on our website: www.hawaii.gov/health/environmental/env-planning/landuse/landuse.html. Any comments specifically applicable to this application should be adhered to.

The United States Environmental Protection Agency (EPA) provides a wealth of information on their website including strategies to help protect our natural environment and build sustainable communities at: http://water.epa.gov/infrastructure/sustain/ . The DOH encourages State and county planning departments, developers, planners, engineers and other interested parties to apply these strategies and environment principles whenever they plan or review new developments or redevelopments projects. We also ask you to share this information with others to increase community awareness on healthy, sustainable community design. If there are any questions about these comments please contact me.

Sincerely,

Laura Leialoha Phillips McIntyre, AICP
Environmental Planning Office Manager
Environmental Health Administration
Department of Heath
919 Ala Moana Blvd., Ste. 312
Honolulu, Hawaii 96814
Phone: 586-4337
Fax: 586-4370
laura.mcintyre@doh.hawaii.gov

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
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

July 6, 2012

Kimura International Inc.
Attention: Mr. Glenn T. Kimura
1600 Kapiolani Blvd., Suite 1610
Honolulu, HI 96814

email: lkurisaka@kimurainternational.com

Dear Mr. Kimura,

SUBJECT: Nanakuli Public Library (DAGS Job No. 12-36-6513), Environmental Assessment – Early Consultation

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 (1) Land Division – Oahu District; and (2) Engineering Division on the subject matter. No other comments were received as of our suspense date. The State Historic Preservation Division may be responding to you separately. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)

7210

KIMURA INTERNATIONAL

RECEIVED

'12 JUN 18 A8 :07

DEPT OF LAND
& NATURAL RESOURCES
STATE OF HAWAII

June 15, 2012

Mr. William J. Aila, Jr.
Chairperson
State of Hawaii
Department of Land & Natural Resources
P.O. Box 621
Honolulu, HI 96809

RECEIVED
LAND DIVISION
2012 JUN 18 P 3:09
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

Dear Mr. Aila:

Subject: **Nanakuli Public Library (DAGS Job No. 12-36- 6513)**
TMK 8-9-02:065
Environmental Assessment--Early Consultation

The State Dept of Accounting and General Services, on behalf of, the State of Hawai'i Department of Education, Hawaii State Public Library System (HSPLS) proposes to construct a new public library in Leeward Oahu to serve the Nanakuli and Mā'ili communities. An Environmental Assessment (EA) is being prepared in accordance with the State of Hawai'i Chapter 343 HRS environmental guidelines and requirements. We are conducting early consultation to solicit input from you or your agency.

The Nanakuli Public Library is proposed on a 3.7-acre portion of a 15-acre, State-owned property on Farrington Highway that was formerly a U.S. Army Recreation Facility known as Camp Andrews. In 2004, the Nanaikapono Elementary School was developed on the mauka portion of the State property. The new library will be built on the makai portion of the property (see location map). A small portion (approximately 25,000 SF) of the "Project Site" will be set aside for a future Leeward Head Start Facility. However, the Head Start Facility will be developed separately, and is not part of the library project or this EA.

The new library building will be approximately 18,000 square feet in size with lobby and check out areas, book circulation, a program room for community events, and support areas for library staff. Other design components being considered include food concessions, an outdoor plaza, and a large lawn area that could be used for community events. The library is envisioned to be a unique, community focal point which emphasizes a Hawaiian sense of place. The building architecture will incorporate green building concepts and sustainable technology. Landscaping will emphasize drought tolerant native species.

A common driveway for the library and future Head Start facility is being considered off the existing fire and bus access road for the elementary school. No new ingress/egress points are proposed on Farrington Highway. A secondary gate can be added to the fire access road to limit vehicular access to the school during non-school hours. The EA will include an assessment of the project's traffic impacts.

1600 Kapiolani Blvd., Suite 1610
Honolulu, HI 96814
Tel: 808 944-8848 • Fax: 808 941-8999

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

June 19, 2012

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
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
_X_ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Nanakuli Public Library (DAGS Job No. 12-36-6513), Environmental Assessment – Early Consultation
LOCATION: Farrington Highway, formerly a portion of the U. S. Army Recreation Facility known as Camp Andrews; TMK (1) 8-9-002:065
APPLICANT: Kimura International for the State Dept. of Accounting and General Services, on behalf of the State of Hawai'i Department of Education, Hawaii State Public Library System

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by July 6, 2011.

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 Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed:
Print Name: Tom Ohee
Date: 6/20/2012

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

June 19, 2012

MEMORANDUM

RECEIVED
LAND DIVISION
2012 JUL -6 A 8:12
DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

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
X Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Nanakuli Public Library (DAGS Job No. 12-36-6513), Environmental Assessment - Early Consultation
LOCATION: Farrington Highway, formerly a portion of the U. S. Army Recreation Facility known as Camp Andrews; TMK (1) 8-9-002:065
APPLICANT: Kimura International for the State Dept. of Accounting and General Services, on behalf of the State of Hawai'i Department of Education, Hawaii State Public Library System

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by July 6, 2011.

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 Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: _____
Print Name: CARTY CHANG, CHIEF ENGINEER
Date: 7/5/12

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/ Russell Y. Tsuji
REF: DEA Early Consultation for Nanakuli Public Library (DAGS Job No. 12-36-6513)
Oahu.003

COMMENTS

( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ___.

(X) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone D, an area where flood hazards are undetermined.

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

( ) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

( ) Mr. Mario Siu Li at (808) 523-4247 of the City and County of Honolulu, Department of Planning and Permitting.

( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.

( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.

( ) Ms. Wynne Ushigome at (808) 241-4890 of the County of Kauai, Department of Public Works.

(X) The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands requiring water service from the Honolulu 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.

(X) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

( ) Additional Comments: _____

_____

( ) Other: _____

_____

Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 7/5/12

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

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

IN REPLY REFER TO:

STP 8.0892

June 25, 2012

RECEIVED JUL 10 2012

Mr. Glenn T. Kimura
President
Kimura International, Inc
1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Subject: Nanakuli Public Library
Environmental Assessment (EA) – Early Consultation
TMK: (1) 8-9-002:065

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project.

DOT understands the State Department of Accounting and General Services (DAGS), on behalf of the Department of Education (DOE) Hawaii State Public Library System (HSPLS), proposes to construct a new 18,000 square foot public library on a 3.7 acre site adjacent to the Nanaikapono Elementary School. Access is being considered off the existing fire and bus access road for the elementary school. No new ingress/egress points are proposed on Farrington Highway.

While an EA and traffic impact analysis report (TIAR) were prepared for the school in 2001 that included the subject library, the DOT understands that another EA will be prepared for the library along with an updating of the TIAR.

DOT appreciates the opportunity to provide comments. When the Draft EA is prepared, the DOT requests that 4 printed copies and one CD be provided for our review and comment. If there are any other questions, including the need to meet with DOT staff, please contact Mr. Garrett Smith of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Very truly yours,

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

PETER B. CARLISLE
MAYOR

LORI M.K. KAHIKINA, P.E.
DIRECTOR

CHRIS TAKASHIGE, P.E.
DEPUTY DIRECTOR

July 12, 2012

RECEIVED JUL 16 2012

Mr. Glenn T. Kimura, President
Kimura International
1600 Kapiolani Boulevard, Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Nanakuli Public Library (DAGS Job No. 12-36-6513)
TMK 8-9-02:065
Environmental Assessment – Early Consultation

Thank you for the opportunity to review and comment.

The Department of Design and Construction has no comments on this project. Should you have any questions, please contact me at 768-8480.

Sincerely,

Lori M. K. Kahikina P. E.
Director

LMKK:pg(471662)

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768-3381
Website: www.honolulu.gov

PETER B. CARLISLE
MAYOR

WESTLEY K.C. CHUN, Ph.D., P.E., BCEE
DIRECTOR & CHIEF ENGINEER

KENNETH A. SHIMIZU
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 12-637

July 19, 2012

RECEIVED JUL 26 2012

Mr. Glenn Kimura
Kimura International, Inc.
1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Subject: Nanakuli Public Library (DAGS Job No. 12-36-6513)
TMK: 8-9-02:065
Environmental Assessment – Early Consultation

Thank you for the opportunity to review and provide our preliminary comments regarding issues that should be addressed in the forthcoming Draft EA for the Nanakuli Public Library Project (DAGS Job. No. 12-36-6513).

We have no comments to offer at this time.

Should you have any questions, please call Dexter Akamine of the Division of Road Maintenance at 768-3696.

Sincerely,

Westley K.C. Chun, Ph.D., P.E., BCEE
Director & Chief Engineer

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

PETER B. CARLISLE
MAYOR

KENNETH G. SILVA
FIRE CHIEF

EMMIT A. KANE
DEPUTY FIRE CHIEF

June 28, 2012

RECEIVED JUN 30 2012

Mr. Glenn Kimura, President
Kimura International
1600 Kapiolani Boulevard, Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Subject: Environmental Assessment - Early Consultation
Nanakuli Public Library
Tax Map Key: 8-9-002: 065

In response to your letter of June 15, 2012, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) reviewed the material provided and requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; Uniform Fire Code [UFC]™, 2006 Edition, Section 18.2.3.2.2.)

   A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; UFC™, 2006 Edition, Section 18.2.3.2.1.)

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an

approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1; UFC™, 2006 Edition, Section 18.3.1, as amended.)

3. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Socrates Bratakos of our Fire Prevention Bureau at 723-7151 or sbratakos@honolulu.gov.

Sincerely,

KENNETH G. SILVA
Fire Chief

KGS/SY:bh

DEPARTMENT OF PARKS & RECREATION

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
Phone: (808) 768-3003 • Fax: (808) 768-3053
Website: www.honolulu.gov

PETER B. CARLISLE
MAYOR

GARY B. CABATO
DIRECTOR

ALBERT TUFONO
DEPUTY DIRECTOR

June 27, 2012

RECEIVED JUL 06 2012

Mr. Glenn T. Kimura, President
Kimura International
1600 Kapiolani Boulevard, Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Subject: Environmental Assessment-Early Consultation
Nanakuli Public Library
TMK: 8-9-02:065

Thank you for the opportunity to review and comment at the early consultation phase of the Environmental Assessment for the Nanakuli Public Library.

The Department of the Parks and Recreation has no comment, as the proposed activities will have no impact to any program or facility of the Department. You may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact Mr. John Reid, Planner, at 768-3017.

Sincerely,

GARY B. CABATO
Director

GBC:jr
(471667)

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

PETER B. CARLISLE
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. McCAULEY
DEPUTY CHIEFS

OUR REFERENCE EO-LKA

June 29, 2012

RECEIVED JUL 05 2012

Mr. Glenn T. Kimura, President
Kimura International, Inc.
1600 Kapiolani Boulevard, Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

This is in response your letter dated June 15, 2012, requesting comments on the Environmental Assessment, Early Consultation, for the Nanakuli Public Library project.

This project may cause an increase in calls for police service because of the anticipated traffic congestion during the construction phase. However, once the project is completed, it should have no significant impact on the facilities or services of the Honolulu Police Department.

If there are any questions, please call Major Kerry Inouye of District 8 (Kapolei) at 723-8403.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By
BART S. HUBER
Assistant Chief
Support Services Bureau

Serving and Protecting With Aloha

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

PETER B. CARLISLE
MAYOR

DAVID K. TANOUE
DIRECTOR

JIRO A. SUMADA
DEPUTY DIRECTOR

2012/ELOG-1213(JL)

July 10, 2012

RECEIVED JUL 11 2012

Mr. Glenn Kimura
Kimura International
1600 Kapiolani Boulevard, Suite 1610
Honolulu, HI 96814

Dear Mr. Kimura:

Subject: Environmental Assessment (EA) – Early Consultation
Nanakuli Public Library (DAGS Job No. 12-36-6513)
Tax Map Key 8-9-2: 65

This is in response to your letter received on June 18, 2012, requesting early consultation comments for the EA regarding the proposed public library and a future Leeward Head Start facility, to be located on the (makai) undeveloped/vacant portion of the above site.

The 3.7-acre makai portion of the 15-acre lot, owned by the State of Hawaii is zoned R-5 Residential District. The mauka portion of the lot contains the existing Nanakuli IV Elementary School, which was developed in 2003 and considered a public use and structure for the purposes of the Land Use Ordinance (LUO). Your letter indicates the new library building will be about 18,000 square feet in size. About 25,000 square feet of the project site will be set aside for a future Head Start facility. We have the following comments at this time.

1. Special Management Area (SMA): The site is in the SMA. Council Resolution No. 01-185, CD1, adopted on July 11, 2001, approved SMA Permit No. 2001/SMA-25 for the elementary school. The previous EA for the elementary school did not contain any drawings or details of the public library and the Head Start facility; a site plan and elevation drawings of the proposed library should be included in the Draft EA. Please note that a new SMA Major permit will be required for the proposed facilities.

2. Height Requirements: Zoning Waiver No. 2001/W-73 allowed the school cafeteria building to exceed the maximum height limit. The Draft EA should identify any encroachments (e.g., height, height setback, yards) and indicate a new Zoning Waiver would be required if the library building exceeds the R-5 Residential District development standards.

3. Parking Requirements: Waiver No. 2002/W-4 was previously approved to allow the school to reduce the number of parking spaces required. However, the parking for proposed public uses and structures now are reviewed and determined by the Director of the Department of Planning and Permitting (DPP) on a case-by-case basis, i.e., the DPP no longer processes a zoning waiver for public use projects with parking deficiencies.

4. Project Impacts: The Draft EA should discuss the impacts of the project on coastal resources, including coastal views and open space resources of the area. The EA should also address site preparation work, such as grading work and new solid waste or wastewater demands.

5. The site is within the Waianae Sustainable Communities Plan (SCP) area. Please note that Ordinance No. 12-3, amending the Waianae SCP was enacted on March 2, 2012. The Draft EA should discuss consistency with the amended SCP.

6. Although your letter indicates the new Head Start facility will not be included in the Draft EA for the public library, please clarify the relationship of the Head Start facility to the existing school and new library, i.e., explain if the Head Start facility will be developed separately by a non-profit on land, which would be leased from the State, or if the State Department of Education will develop the facility.

We look forward to receiving a copy of the Draft EA for our review. Please contact Ms. Jenny Lee at 768-8027, if you have any questions.

Very truly yours,

Elizabeth Char

for David K. Tanoue, Director
Department of Planning and Permitting

DKT:nw

DEPARTMENT OF TRANSPORTATION SERVICES

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

PETER B. CARLISLE
MAYOR

WAYNE Y. YOSHIOKA
DIRECTOR

KAI NANI KRAUT, P.E.
DEPUTY DIRECTOR

TP6/12-471448R

July 10, 2012

RECEIVED JUL 16 2012

Mr. Glenn T. Kimura, President
Kimura International, Inc.
1600 Kapiolani Boulevard, Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Subject: Pre-Consultation for Draft Environmental Assessment (DEA) Nanakuli Public Library (DAGS Job No. 12-36-6513); Tax Map Key (TMK): 8-9-02:065; Nanakuli, Oahu, Hawaii

This responds to your letter of June 15, 2012, requesting our comments concerning this proposed project. We have the following comments:

- The DEA should include a traffic impact assessment report (TIAR) that should discuss traffic impacts on the surrounding City roadways, as a result of the project, including short-term impacts during construction and proposed mitigating measures. The DEA TIAR must also deal with the cumulative traffic impacts of this project and the future Head Start project being co-located on the same site.

- The area Neighborhood Board, as well as the area residents, businesses, etc., should be kept apprised of the details of the proposed project and the impacts, particularly during construction, the project may have on the adjoining local street area network.

- The transportation of equipment and materials to the project sites should be conducted outside of peak traffic hours, which are 6:00 a.m. – 8:00 a.m., and 2:30 p.m. – 7:00 p.m., to minimize any traffic delays or obstructions to local City roadways.

- A street usage permit from the City's Department of Transportation Services (DTS) should be obtained for work that may impact City streets.

Our Public Transit Division (PTD) has the following comments:

- Your DEA should include a description of Public Transit, and the impact of your project on Public Transit bus and paratransit operations during construction. Basic information is available on our websites: www.thebus.org and www.honolulu.gov/dts. For more details, you may contact our staff at 768-8370. Because your project will affect bus routes and services, you must contact them to coordinate your planned activities with them.

- Construction notes should include the following note regarding transit services:

  "This project may affect bus routes, bus stops, and paratransit operations, therefore, the Contractor shall notify the Department of Transportation Services, Public Transit Division at 768-8396 and Oahu Transit Services, Inc. (bus operations: 848-4578 or 852-6016 and paratransit operations: 454-5041 or 454-5020) of the scope of work, location, proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project at least two weeks prior to construction."

We reserve further comment pending submission of the DEA.

Thank you for the opportunity to review this matter. Should you have any further questions, please contact Michael Murphy of my staff at 768-8359.

Very truly yours,

WAYNE Y. YOSHIOKA
Director

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

June 28, 2012

Mr. Glenn T. Kimura, President
Kimura International, Inc.
1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814

RECEIVED JUL 0 3 2012

Dear Mr. Kimura:

Subject: Your Letter Dated June 15, 2012 Requesting Comments on the Nanakuli Public Library Environmental Assessment—Early Consultation, TMK: 8-9-2:65

Thank you for your letter on the proposed public library.

The existing water system is adequate to accommodate the proposed development. However, please be advised that this information is based upon current data and, therefore, the Board of Water Supply reserves the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

The proposed project is subject to Board of Water Supply Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

If you have any questions, please contact Robert Chun at 748-5443.

Very truly yours,

SUSAN UYESUGI
Program Administrator
Customer Care Division

Comments Received During Draft EA Comment Period

NEIL ABERCROMBIE
GOVERNOR

KATHRYN S. MATAYOSHI
SUPERINTENDENT

RECEIVED - DAGS
DIV. OF PUBLIC WORKS
2013 FEB 20 PM 1:43

STATE OF HAWAI`I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI`I 96804

DIVISION OF PUBLIC WORKS

TO:	INITIAL:	FOR:
1 PW Adm		Approval
PW Sec		Signature
Staff Svcs Office		Information
Planning Br		Your File
2 Proj Mgmt Br		See Me
Construction Mgmt Br		Comments
Technical Svcs Office		Investigate &
Leasing Br		Report

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

February 20, 2013

TO: Mr. James K. Kurata, Public Works Administrator
Department of Accounting and General Services

ATTN: Mr. Marcus Rivera

FROM: Duane Y. Kashiwai, Public Works Administrator
Facilities Development Branch
Department of Education

SUBJECT: Draft Environmental Assessment Nanakuli Public Library

The Department of Education (DOE) Facilities Development Branch (FDB) has reviewed the Draft Environmental Assessment (DEA) for the Nanakuli Public Library. It should be noted that the FDB is responsible for school facilities from kindergarten to grade 12, and is not responsible for the facilities of the Hawaii State Public Library System. Our comments on the plans for the Nanakuli Library are based on the proximity of the library to the campus of Nanaikapono Elementary School.

Very early in the planning of the library, the FDB was concerned about the traffic patterns to be established for the library and the safety of pedestrians entering or exiting the Nanaikapono campus. FDB is pleased that a significant effort was made to coordinate the plans for the library with the school. The school administrators are satisfied with the proposed layout of the library and its traffic pattern.

FDB would like to point out that the Department of Education is not the owner of either the library or the school site. The land is owned by the State of Hawaii and managerial responsibility for the sites is delegated to the DOE by executive order.

FDB would like to suggest that it would be beneficial to all reviewers of the DEA to see a map showing the library site in relation to the school. Although the school's location is accurately described, a map of both facilities will make it much clearer as to why planning coordination was so important.

Secondly, because the safety of student pedestrians was so critical to the library plan, we suggest that a map illustrating the pedestrian path for Nanaikapono students be more clearly marked. There is one route students will be expected to use to enter or exit school. It is a distinctly

different route than the one students will use during the school day for scheduled activities at the library. The Figure 2. map may give the mistaken impression that students will be expected to cross the library site to enter school on the town side of the library, adjacent to the drainage channel.

Thank you for your consideration of the impacts of the library on Nanaikapono Elementary and for the opportunity to review the DEA. If you have any questions, please call Heidi Meeker of the Planning Section at 377-8301.

DYK:HM:jmb

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3144.3

Mr. Duane Y. Kashiwai
Public Works Administrator
Facilities Development Branch
Department of Education
P.O. Box 2360
Honolulu, Hawaii 96804

Dear Mr. Kashiwai:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your memo dated February 20, 2013, providing comments on the Draft Environmental Assessment (EA) for this project.

You requested that the Final EA include a map showing the library site in relation to Nanaikapono Elementary School. Figure 1 in the EA shows the location of the school and the library, and illustrates their proximity.

A map illustrating the existing pedestrian path for Nanaikapono students will be included in the Final EA.

If you have additional comments or questions, please feel free to call Marcus Rivera at (808) 586-0479.

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
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

February 21, 2013

State of Hawaii
Department of Accounting and General Services
Attention: Mr. Marcus Rivera
1151 Punchbowl Street
Honolulu, HI 96813

via email: marcus.r.rivera@hawaii.gov

Dear Mr. Rivera,

SUBJECT: Nanakuli Public Library, Draft Environmental Assessment (DEA)

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 (1) Land Division – Oahu District; (2) Engineering Division; and (3) Commission on Water Resource Management on the subject matter. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)

C: Kimura International, Inc.
Attn: Ms. Leslie Kurisaki (via email)

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
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

January 23, 2013

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
_X_Office of Conservation & Coastal Lands
_X_Land Division Oahu District
_X_Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Nanakuli Public Library, Draft Environmental Assessment (DEA)
LOCATION: Nanakuli, Waianae District, Island of Oahu; Tax Map Key Number: Various 8-9-02:065 (por)
APPLICANT: State of Hawaii, Department of Accounting and General Services and the Hawaii State Public Library System (HSPLS)

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document. If we have not provided you with a copy of the CD, a copy is available for checkout on the Oahu shelf next to our reception area.

Please submit any comments by February 20, 2013. 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 Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: T Chee
Print Name: Tiffany Chee
Date: JAN 29, '13

c: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
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

January 23, 2013

MEMORANDUM

RECEIVED
LAND DIVISION
2013 JAN 30 PM 1:42
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

TO: FR:

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
X Office of Conservation & Coastal Lands
X Land Division Oahu District
X Historic Preservation

FROM: TO: Russell Y. Tsuji, Land Administrator
SUBJECT: Nanakuli Public Library, Draft Environmental Assessment (DEA)
LOCATION: Nanakuli, Waianae District, Island of Oahu; Tax Map Key Number: Various 8-9-02:065 (por)
APPLICANT: State of Hawaii, Department of Accounting and General Services and the Hawaii State Public Library System (HSPLS)

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document. If we have not provided you with a copy of the CD, a copy is available for checkout on the Oahu shelf next to our reception area.

Please submit any comments by February 20, 2013. 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 Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed:
Print Name: Carty S. Chang, Chief Engineer
Date: 1/25/13

c: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
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

January 23, 2013

2013 JAN 24 P 1:16

MEMORANDUM

TO: From

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
X Office of Conservation & Coastal Lands
X Land Division Oahu District
X Historic Preservation

FROM: TO: Russell Y. Tsuji, Land Administrator
SUBJECT: Nanakuli Public Library, Draft Environmental Assessment (DEA)
LOCATION: Nanakuli, Waianae District, Island of Oahu; Tax Map Key Number: Various 8-9-02:065 (por)
APPLICANT: State of Hawaii, Department of Accounting and General Services and the Hawaii State Public Library System (HSPLS)

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document. If we have not provided you with a copy of the CD, a copy is available for checkout on the Oahu shelf next to our reception area.

Please submit any comments by February 20, 2013. 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 Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: _____
Print Name: William M. Tam, Deputy Director
Date: February 12, 2013

c: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON

WILLIAM D. BALFOUR, JR.
SUMNER ERDMAN
LORETTA J. FUDDY, A.C.S.W., M.P.H.
NEAL S. FUJIWARA
JONATHAN STARR
TED YAMAMURA

WILLIAM M. TAM
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

February 12, 2013

RECEIVED
LAND DIVISION
2013 FEB 12 AM 10:05
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

TO: Russell Tsuji, Administrator
Land Division

FROM: William M. Tam, Deputy Director
Commission on Water Resource Management

SUBJECT: Nanakuli Public Library, Draft Environmental Assessment (DEA)

FILE NO.:
TMK NO.: Various: 8-9-02:065 (por)

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore, all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://www.hawaii.gov/dlnr/cwrm.

Our comments related to water resources are checked off below.

☒ 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.

☒ 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

☐ 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.

☒ 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EPA as having high water efficiency can be found at http://www.epa.gov/watersense/pp/index.htm.

☒ 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://hawaii.gov/dbedt/czm/initiative/lid.php.

☒ 6. We recommend the use of alternative water sources, wherever practicable.

☒ 7. We recommend participating in the Hawaii Green Business Program, that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program description can be found online at http://energy.hawaii.gov/programs/achieving-efficiency/green-business-program

☒ 8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at http://landscapehawaii.org/_library/documents/lich_irrigation_conservation_bmps.pdf

☐ 9. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

Permits required by CWRM:
Additional information and forms are available at http://hawaii.gov/dlnr/cwrm/resources_permits.htm.

☐ 10. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water. The Water Use Permit may be conditioned on the requirement to use dual line water supply systems for new industrial and commercial developments.

☐ 11. A Well Construction Permit(s) is (are) required before any well construction work begins.

☐ 12. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.

☐ 13. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.

☐ 14. Ground water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

☐ 15. A Stream Channel Alteration Permit(s) is (are) required before any alteration(s) can be made to the bed and/or banks of a stream channel.

☐ 16. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is (are) constructed or altered.

☐ 17. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.

☐ 18. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

☐ OTHER:

If there are any questions, please contact Neal Fujii at 587-0264.

Steve Molmen/DLNR/StateHiUS@STATEHIUS
02/21/2013 08:05 AM

To Marcus R Rivera/dags@dags
cc lkurisaka@kimurainternational.com
bcc
Subject Nanakuli Public Library, Draft Environmental Assessment (DEA)

Dear Mr. Rivera,

Attached, please find our comments on the subject project. No hard copy will be sent. Ms. Leslie Kurasaki is copied on this email.

DOC021.pdf

Best regards,

Steve Molmen, Supervising Land Agent
Land Division
Department of Land and Natural Resources
State of Hawaii
1151 Punchbowl Street, Suite 220
Honolulu, HI 96809-0621
Tel.: (808) 587-0439
Fax: (808) 587-0455
Email: steve.molmen@hawaii.gov

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3146.3

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

Dear Mr. Tsuji:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your letter dated February 21, 2013, transmitting comments from the Department of Land and Natural Resources' (DLNR) Land Division, Engineering Division, and Commission on Water Resource Management (CWRM).

The following responds to the checked items in the CWRM comments:

Item 1. The City and County of Honolulu Planning Department and the Board of Water Supply (BWS) have reviewed the Draft Environmental Assessment (EA). The BWS has indicated that the existing water system is adequate to accommodate the proposed development

Item 2. The DLNR's Engineering Division has reviewed the Draft EA and indicated that they have no comments on the project.

Item 4. Water efficient fixtures have been included in the library design and landscaping will utilize drought tolerant and low maintenance vegetation.

Item 5. Best management practices will be utilized to address stormwater management as per County and State regulations.

Item 6. Alternative water source for potable water is unavailable. Landscaping will include the use of drought tolerant plantings to reduce the irrigation demand.

Item 7. By pursuing LEED Certification, the proposed Nanakuli Public Library should go above and beyond the goals and requirements of the Green Business Program.

Item 8. Design for the Nanakuli Public Library will incorporate the landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii as best as practically possible considering overall cost, constructability, maintenance and safety.

If you have additional comments or questions, please feel free to call Marcus Rivera at (808) 586-0479.

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

February 12, 2013

RECEIVED FEB 14 2013

Mr. Marcus Rivera
State of Hawaii
Department of Accounting and General Services
1151 Punchbowl Street
Honolulu, HI 96813

Dear Mr. Rivera:

This correspondence is in response to your request for comments to the Draft Environmental Assessment (DEA) for the Nanakuli Public Library project (TMK: 8-9-02:065), Nanakuli, Oahu.

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

- Chapter 11-46 Community Noise Control
- Chapter 11-501 Asbestos Requirements
- Chapter 11-503 Fees for Asbestos Removal & Certification
- Chapter 11-504 Asbestos Abatement Certification Program

Please be advised that Chapter 11-42, "Vehicular Noise Control for Oahu" was repealed in June 2000 and is no longer enforced by the department.

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

Sincerely,

Jeffrey M. Eckerd
Program Manager
Indoor and Radiological Health Branch

c: Leslie Kurisaki, Kimura International, Inc.

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3132.3

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

Dear Mr. Eckerd:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your Draft Environmental Assessment comment letter dated February 12, 2013. The project activities will comply with the cited Department of Health Administrative Rules regarding community noise control and asbestos.

If you have additional comments or questions, please feel free to call Marcus Rivera at (808) 586-0479

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:
13-019
Nanakuli Library

January 31, 2013

TO: Marcus Rivera
Department of Accounting and General Services

FROM: Laura McIntyre, Program Manager
Department of Health, Environmental Planning Office

SUBJECT: Nanakuli Public Library, State of Hawaii, Department of Accounting and General Services and the Hawaii State Public Library System, Nanakuli, Waianae District, Island of Oahu, TMK: (1) 8-9-002: 065 (por.) (PM-3060.3)

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your letter dated January 18, 2013. Thank you for allowing us to review and comment on the subject document. The document was routed to the relevant Environmental Health divisions and offices. They will provide specific comments to you if necessary. EPO recommends that you review the Standard Comments (www.hawaii.gov/health/epo under the land use tab). You are required to adhere to all Standard Comments specifically applicable to this application.

EPO suggests that you examine the many sources available on strategies to support the sustainable design of communities, including the:
U.S. Environmental Protection Agency's sustainability programs: www.epa.gov/sustainability
U.S. Green Building Council's LEED program: www.new.usgbc.org/leed

The DOH encourages everyone to apply these sustainability strategies and principles early in the planning and review of projects. We also request that for future projects you consider conducting a Health Impact Assessment (HIA). More information is available at www.cdc.gov/healthyplaces/hia.htm. We request you share all of this information with others to increase community awareness on sustainable, innovative, inspirational, and healthy community design.

We request a written response confirming receipt of this letter and any other letters you receive from DOH in regards to this submission. You may mail your response to 919 Ala Moana Blvd., Ste. 312, Honolulu, Hawaii 96814. However, we would prefer an email submission to epo@doh.hawaii.gov. We anticipate that our letter(s) and your response(s) will be included in the final document. If you have any questions, please contact me at (808) 586-4337.

c: ✓Leslie Kurisaki, Kimura International, Inc.

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3133.3

Ms. Laura McIntyre
Program Manager
Environmental Planning Office
Department of Health
State of Hawaii
919 Ala Moana Boulevard, Suite 312
Honolulu, Hawaii 96814

Dear Ms. McIntyre:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your memo dated January 31, 2013, regarding this project. We have reviewed the Standard Comments on the Department of Health's website relating to: 1) Hazard Evaluation and Emergency Response, 2) Clean Air, 3) Clean Water, 4) Safe Drinking Water, 5) Solid and Hazardous Waste, 6) Wastewater, and 7) Indoor and Radiological Health. The project will adhere to all applicable Standard Comments.

If you have additional comments or questions, please feel free to call Marcus Rivera at (808) 586-0479

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD/CWB

03041PJF.13

March 11, 2013

RECEIVED MAR 12 2013

Mr. Marcus Rivera
Department of Accounting and General Services
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Rivera:

SUBJECT: Comments on the Draft Environmental Assessment for the Nanakuli Public Library Project Waianae, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated January 13, 2013, requesting comments on your project. The DOH-CWB has reviewed the subject 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. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://www.hawaii.gov/health/environmental/env-planning/landuse/CWB-standardcomment.pdf.

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

   a. Anti-degradation 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. You may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). 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, you must submit the CWB Individual NPDES Form through the e-Permitting Portal and the hard copy certification statement with $1,000 filing fee. Please open the e-Permitting Portal website at: https://eha-cloud.doh.hawaii.gov/epermit/View/home.aspx. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the "CWB Individual NPDES Form." Follow the instructions to complete and submit this form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 438-9258) 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. Non-compliance 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.

If you have any questions, please visit our website at: http://www.hawaii.gov/health/environmental/water/cleanwater/index.html, or contact the Engineering Section, CWB, at 586-4309.

Sincerely,

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

JF:np

c: Ms. Leslie Kurisaki, Kimura International, Inc.
DOH-EPO #13-019 [via e-mail only]

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3134.3

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

Dear Mr. Wong:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your Draft Environmental Assessment comment letter dated March 11, 2013. We provide the following responses to your comments:

1. The project activities will comply with all applicable water quality criteria and standards.

2. The project will obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities.

3. There will be no work in, over or under any waters of the United States. This has been verified with the Army Corps of Engineers Regulatory Branch.

4. All discharges related to project construction or operation activities will comply with State Water Quality Standards.

If you have additional comments or questions, please feel free to call Marcus Rivera at (808) 586-0479

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

OFFICE OF PLANNING
STATE OF HAWAII

NEIL ABERCROMBIE
GOVERNOR

JESSE K. SOUKI
DIRECTOR
OFFICE OF PLANNING

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

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

Ref. No. P-13879

February 19, 2013

RECEIVED FEB 20 2013

To: Marcus Rivera
Department of Accounting and General Services

From: Jesse K. Souki, Director

Subject: Draft Environmental Assessment for Nanakuli Public Library, Nanakuli, Waianae District, Oahu, Tax Map Key (1)8-9-02: 065 (por)

Thank you for the opportunity to provide comments on the Draft Environmental Assessment (EA) for the Nanakuli Public Library. The Office of Planning has reviewed the subject EA and has the following comments:

1. According to the Draft EA, the State Department of Accounting and General Services (DAGS) is the proposing agency. As it is an agency action, we suggest that you properly identify the accepting authority pursuant to Hawaii Revised Statutes (HRS) §343-5, and Hawaii Administrative Rules (HAR) §11-200-4(a). We note that the **Project Summary** lists DAGS as the accepting agency, while **Section 5.1** on page 5-1 states that, "Based on the information and analysis in this Environmental Assessment, the State of Hawaii Department of Education has determined that the project will not result in a significant impact on the environment." ✓ DOE → DAGS

2. **Table 1-1** on page 1-8, did not list National Pollutant Discharge Elimination System (NPDES) Permit. As the proposed project size is 3.7 acres, you should contact the State Department of Health to confirm whether a NPDES Permit is required for the proposed project. ✓ NPDES added

3. We note discussion on traffic safety concerns associated with left turns to and from Farrington Highway between DAGS and the State Department of Transportation, Highways Division, is still ongoing. We expect that the Final EA will further address this unresolved issue. TIR

4. Because this parcel lies within the Special Management Area, on page 4-12 it states, "The analysis provided in this chapter (Chapter 4) of the Environmental Assessment demonstrates the proposed action's consistency with the objectives and policies contained in Chapter 205A-26." It should be corrected to read as follows: "The

analysis provided in this chapter (Chapter 4) of the Environmental Assessment demonstrates the proposed action's consistency with the **special management area guidelines** in Chapter 205A-26."

If you have any questions regarding this comment letter, please contact Leo Asuncion, Coastal Zone Management Program Manager, at 587-2875.

c: √Ms. Leslie Kurisaki, Kimura International

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3135.3

Mr. Jesse K. Souki
Director
Office of Planning
State of Hawaii
235 South Beretania Street, 6th floor
Honolulu, Hawaii 96813

Dear Mr. Souki:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your memo dated February 19, 2013, regarding this project. We provide the following responses to your comments:

1. The Department of Accounting and General Services (DAGS) is the proposing and accepting agency. Section 5.1 on Page 5-1 will be corrected to state that the "Department of Accounting and General Services has determined that the project will not result ...".

2. Table 1-1 on Page 1-8 will be revised to list a National Pollutant Discharge Elimination System permit as required for the project.

3. The Final Environmental Assessment will provide an update on the ongoing discussions between DAGS and the State Department of Transportation, Highways Division (DOT-H). At the request of the DOT-H, the Traffic Impact Report will be revised to evaluate the horizon (base) year for the proposed library rather than the year 2024 and an analysis of the right-turn in and right-turn out (RIRO) condition. Other transportation mitigation improvements will be developed during the design review of the driveway modification.

4. Paragraph will be corrected as noted.

If you have additional comments or questions, please feel free to call Marcus Rivera at (808) 586-0479

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

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

IN REPLY REFER TO:
DIR 0098
STP 8.1154

March 28, 2013

TO: THE HONORABLE DEAN H. SEKI, COMPTROLLER
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

ATTN: JAMES K. KURATA, ADMINISTRATOR
PUBLIC WORKS DIVISION

FROM: GLENN OKIMOTO, PH.D.
DIRECTOR OF TRANSPORTATION

SUBJECT: NANAKULI PUBLIC LIBRARY
DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
TMK: 8-9-002:065N (POR)

The State Department of Transportation (DOT) previously commented on the subject proposed action in its letter STP 8.1129, dated February 26, 2013 (attached), and now offers the following supplemental comments.

1. The Traffic Impact Report (TIR) dated December 2012 is not acceptable. DOT recommends that the Applicant be required to revise the TIR to address all of the applicable comments below and submit a revised TIR for DOT's review and acceptance prior to the access being granted. - TIR

2. For purposes of assessing the traffic impacts to Farrington Highway, the trip generation and distribution as identified in the TIR are acceptable. - TIR

3. The traffic analyses should reflect the horizon (base) year for the proposed library instead of year 2024. - TIR

4. A traffic analysis of the right-turn in and right-turn out (RIRO), including a right-turn in warrant analysis should be made. The traffic analyses and Level of Service (LOS) tables shall include: (1) horizon year without the project, (2) horizon year with the project, without recommended mitigation improvements, and (3) horizon year with the project, with recommended mitigation improvements for the horizon year. - TIR

5. The proposed use of the existing Nanaikapono School bus RIRO only access may be granted as the access for the library, subject to the review and approval of Highways Division, and the following:

   a. The access shall be modified to more effectively deter left-turns from Farrington Highway into the driveway. This could include physical barriers, striping, and signage.

   b. Impacts from the project may require the Applicant to provide other transportation mitigation improvements to the existing RIRO intersection and along the Farrington Highway corridor, all in accordance with State Highway standards and recommended in the revised Traffic Impact Assessment, all at no cost to the DOT.

   c. The library and school shall maintain control over the access and enforce restrictions with respect to RIRO.

   d. In addition to being an access point for school buses to the existing Nanaikapono Elementary School, the RIRO shall be restricted to providing access to the proposed library and related uses only. Any change in land use shall require the review and approval of DOT.

6. The TIR shall be revised to reflect DOT's policy that the operating LOS and delay levels for the with project conditions with recommended mitigation improvements in the Farrington Highway corridor, between the Haleakala Avenue intersection and the Nanakuli Avenue intersection, shall basically remain at the without project conditions levels for the horizon year. All recommended transportation mitigation improvements shall be provided by the Applicant.

7. The Applicant shall dedicate right-of-way for the recommended transportation mitigation improvements to the State, as required and approved by DOT.

DOT appreciates the opportunity to provide comments. If there are any questions, please contact Mr. Garrett Smith of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

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

IN REPLY REFER TO:

STP 8.1129

RECEIVED MAR 07 2013

February 26, 2013

TO: THE HONORABLE DEAN H. SEKI, COMPTROLLER
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

ATTN: JAMES K. KURATA, ADMINISTRATOR
PUBLIC WORKS DIVISION

FROM: GLENN M. OKIMOTO, PH.D.
DIRECTOR OF TRANSPORTATION

SUBJECT: NANAKULI PUBLIC LIBRARY
DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
TMK: 8-9-002:065 (POR.)

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project. DOT previously commented during the Early Consultation for the DEA in its letter STP 8.0892 dated June 25, 2012 (see Section 7.2 of the DEA).

Given the project's nature and location, the DOT anticipates that State highway facilities (Farrington Highway) may be impacted. The DOT Highways Division is still conducting its review and has not yet provided comments. The Statewide Transportation Planning Office will inform you of any further DOT comments once received.

DOT appreciates the opportunity to provide comments. If there are any questions, please contact Mr. Garrett Smith of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

c: Leslie Kurisaki, Kimura International, Inc.

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

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

IN REPLY REFER TO:
DIR 0922
STP 8.0892

June 25, 2012

Mr. Glenn T. Kimura
President
Kimura International, Inc
1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Subject: Nanakuli Public Library
Environmental Assessment (EA) – Early Consultation
TMK: (1) 8-9-002:065

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project.

DOT understands the State Department of Accounting and General Services (DAGS), on behalf of the Department of Education (DOE) Hawaii State Public Library System (HSPLS), proposes to construct a new 18,000 square foot public library on a 3.7 acre site adjacent to the Nanaikapono Elementary School. Access is being considered off the existing fire and bus access road for the elementary school. No new ingress/egress points are proposed on Farrington Highway.

While an EA and traffic impact analysis report (TIAR) were prepared for the school in 2001 that included the subject library, the DOT understands that another EA will be prepared for the library along with an updating of the TIAR.

DOT appreciates the opportunity to provide comments. When the Draft EA is prepared, the DOT requests that 4 printed copies and one CD be provided for our review and comment. If there are any other questions, including the need to meet with DOT staff, please contact Mr. Garrett Smith of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Very truly yours,

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

EKT:jm

bc: HWY-P

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3136.3

The Honorable Glenn M. Okimoto, Ph.D.
Director of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Dr. Okimoto:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your Draft Environmental Assessment (DEA) comment memos dated February 26, 2013 and March 28, 2013. We offer the following responses to your comments:

1. A revised Traffic Impact Report (TIR) will be prepared by our traffic consultant to address all applicable comments.

2. No response needed.

3. Revisions will be made.

4. The project traffic engineer will work with the Department of Transportation (DOT) Highways Division staff to clarify what is being requested and provide further analysis in the revised TIR.

5. a. Appropriate modification of the access road will be determined during the design process and is subject to review and approval by DOT Highways Division. While we acknowledge there is a need to deter vehicles from turning left into the property, other considerations need to be kept in mind prior to modifying the access road. Specifically, any modification should not compromise the ability of emergency vehicles to easily gain access to the site. The original purpose of the driveway was to provide fire access to the school, and it is important that this critical function be maintained.

b. The "other transportation mitigation improvements" may include additional signs. As stated above, this will be determined during the review and approval of design modifications to the driveway.

c. The library and school will "maintain control" over the access road by having the responsibility to open and close the cattle gates. Appropriate design features and signage will be included to inform the public of the right-turn in and right-turn out (RIRO) conditions. However, any "enforcement of restrictions" is a police responsibility. Should there be problems with enforcement, the school and/or library should contact the police department.

d. Comment acknowledged.

6. Revisions will be made to conform. We are anticipating no recommended transportation mitigation improvements other than retiming of the nearby traffic signals.

7. Details will be determined during the design and review of the driveway modifications.

If you have additional comments or questions, please feel free to call Marcus Rivera at (808) 586-0479

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

MR

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

KIRK CALDWELL
MAYOR

CHRIS T. TAKASHIGE, P.E., CCM
DIRECTOR

MARK YONAMINE, P.E.
DEPUTY DIRECTOR

February 22, 2013

Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810-0119

Attn: James K. Kurata

Dear Mr. Kurata:

Subject: Draft Environmental Assessment for Nanakuli Public Library

The Department of Design and Construction does not have any comments to offer on this draft environmental assessment.

Thank you for the opportunity to review and comment. Should there be any questions, please contact me at 768-8480.

Sincerely,

for Chris T. Takashige, P.E., CCM
Director

CTT: cf (498851)

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3145.3

Mr. Chris T. Takashige, P.E., CCM
Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Takashige:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your letter dated February 22, 2013, stating that your department has no comments to offer on the Draft Environmental Assessment for this project.

If you have future comments or questions, please feel free to call Marcus Rivera at (808) 586-0479.

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

KIRK CALDWELL
MAYOR

GEORGE I. ATTA
FAICP, LEED AP, CEI
DIRECTOR DESIGNATE

JIRO A. SUMADA
DEPUTY DIRECTOR
2013/ELOG-183(JL)

February 26, 2013

Mr. Marcus Rivera
State of Hawaii
Department of Accounting and General Services
1151 Punchbowl Street
Honolulu, HI 96813

Dear Mr. Rivera:

Subject: Draft Environmental Assessment (DEA) – Comments
Nanakuli Public Library (DAGS Job No. 12-36-6513)
Tax Map Key 8-9-2: 65

We have reviewed the DEA submitted on January 22, 2013, for the proposed public library to be located on the (makai) undeveloped portion of the above site and have the following comments. Please address or incorporate them in the Final EA.

Planning Division

1. Although not specifically discussed in the Waianae Sustainable Communities Plan (SCP), the proposed library is generally consistent with SCP policies to improve the quality of public facilities and services in the Waianae area, to avoid siting of facilities makai of Farrington Highway and on Agricultural land, and to locate facilities next to parks or other compatible facilities to maximize use.

2. The SCP also states that sea level rise should be taken into account when choosing the location of a public building. The DEA should discuss the possible impact of sea level rise on this facility.

3. The Waianae Coast is currently served by the Waianae Library near Waianae Town. The proposed Nanakuli Public Library would provide more accessible library and community services for the Nanakuli and Maili communities of the Waianae Coast.

If there are questions regarding the above comments, please contact Randy Hara of the Policy Branch at 768-8041.

Civil Engineering Branch

1. The Final EA should identify the entity that has jurisdiction of the concrete drainage channel. If the City has ownership and/or responsibilty of the channel, then the project shall comply with the City's storm water quality standards pursuant to the "Rules Relating to Storm Drainage Standards". Otherwise, the project may be required to meet other Department of Health requirements.

2. In reference to the drainage in Section 3.5.4 under Impacts and Mitigation, the Final EA shall reference the amended City and County of Honolulu, Rules Relating to Storm Drainage Standards that will become effective June 1, 2013. The drainage design and water quality alternatives will be governed by the classification of the proposed project in terms of acreage and/or parking lot size. However, jurisdictional for this project appears to be with the State Department of Health since drainage to facilities owned or maintained by the City hive not been identified at this time.

Please contact Don Fuji, if you have any comments, regarding the above at 768-8107.

Zoning Regulations and Permits Branch

1. As mentioned in our letter of July 10, 2012, the Final EA should clarify the relationship of the Head Start facility to the existing school and new library, i.e., explain if the Head Start facility will be developed separately by a non-profit on land, which would be leased from the State, or if the State Department of Education will develop the facility.

2. A grading permit will be required. The Final EA should discuss the volume of grading and excavation in cubic yard, and present the specifics of the Best Management Practices (BMP) to minimize runoff during construction period.

Please contact Jenny Lee of our staff at 768-8027, if you have any questions, regarding the above comments.

Very truly yours,

By _____
George I. Atta, FAICP, LEED AP, CEI
Director Designate
Department of Planning and Permitting

GIA:nw

Cc: Kimura International (Leslie Kurisaki)

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3137.3

Mr. George I. Atta
Director Designate
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Dear Mr. Atta:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your letter dated February 26, 2013, regarding this project. We provide the following responses to your comments:

Planning Division

1. Acknowledged. Your comment will be added to this discussion in the Final Environmental Assessment (EA).

2. The Final EA will include a brief discussion about the potential impact of sea level rise on the library, specifically the findings and conclusions of the *Oahu Metropolitan Planning Organization's Transportation Asset Climate Change Risk Assessment* (November 2011). Farrington Highway along the Leeward coast was one of five transportation assets evaluated for vulnerability to sea level rise, inundation, and other climate change-induced effects. The overall risk for Farrington Highway in year 2050 and year 2100 was considered "High." By year 2050, with a one-foot sea level rise, Farrington Highway is predicted to have a Moderate-High Vulnerability and High Structural Impact. By year 2100, with a three-foot projected sea level rise, Farrington Highway would have a High Vulnerability and High Structural Impact.

   Farrington Highway along the Leeward coast is especially vulnerable to climate change because of its proximity to the ocean and the area's high population and commercial activity. The highway is also the only publicly available ingress and egress along the

entire coast. However, modeling maps completed as part of the risk assessment showed that even with a three-foot sea level rise by year 2100, the Nanakuli Public Library site would not be directly impacted.

3. Acknowledged.

Civil Engineering Branch

1. We have researched the issue of who has jurisdiction over the concrete drainage channel but the issue remains unresolved. The drainage channel is on a parcel owned by the Department of Hawaiian Home Lands (DHHL) (TMK: 8-9-002: 001) and is part of the DHHL's future commercial development property. The City's GIS website shows the drainage channel as part of TMK 8-9-002:001. However, the tax maps show the drainage channel as a separate lot (TMK: 8-9-002:068), and the City's public access database does not include information on ownership of this parcel.

   Based on our discussions with individuals at the Department of Accounting and General Services (DAGS) and the Department of Land and Natural Resources (DLNR), there also appears to be a complicated history of disagreement over whether the drainage channel belongs to the DHHL or the City. We will be sending you a separate letter on this issue as further investigation into the ownership question is needed.

   As far as the Nanakuli Public Library itself, the proposed project will not result in a net increase in runoff entering the drainage channel. The existing runoff from the project site that enters the channel will continue after the project is completed. Proposed drainage improvements as part of the project include connection to an existing drain penetration on the mauka end of the drainage channel and construction of a new drain penetration on the makai end of the channel. Existing sheet flow surface runoff will also continue to enter the channel. All drainage improvements done as part of the project will be designed to City standards and the library project will comply with all applicable City and/or State requirements (regardless of who controls the concrete drainage channel).

2. The Final EA will reference the amended City and County of Honolulu Rules Relating to Storm Drainage Standards that will become effective June 1, 2013.

Zoning Regulations and Permits Branch

1. A portion of the Nanakuli Public Library site has been set aside for a future Head Start preschool facility. This facility would be developed separately by the Honolulu Community Action Program (HCAP), a non-profit entity. There are no contractual agreement(s) between HCAP and the Department of Education (DOE) or the Hawaii State Public Library System (HSPLS), and these State agencies would not be involved in the development of the HCAP facility.

The HCAP has indicated that it currently has no funding for design or construction of the preschool facility and no timetable for development at the site. However, if funds were to become available, they envision the construction of two portable classrooms accommodating approximately 30-40 preschoolers and associated staff. At that time, the HCAP will be responsible to provide their own on-site parking and meters for utilities, and will comply with all applicable City and County design and construction standards.

2. A grading permit will be obtained as part of the Nanakuli Public Library project. Preliminary estimates are that approximately 4,000 cubic yards of fill will be imported. This information will be included in the Final EA. Specifics on the best management practices are yet to be developed, but the project will follow all City Department of Planning and Permitting requirements, as well as State National Pollutant Discharge Elimination System requirements for control and protection of soil loss from erosion during construction activities.

If you have additional comments or questions, please feel free to call Marcus Rivera at (808) 586-0479

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL
MAYOR

EMMIT A. KANE
ACTING FIRE CHIEF

ROLLAND J. HARVEST
ACTING DEPUTY FIRE CHIEF

February 13, 2013

RECEIVED FEB 14 2013

Mr. Marcus Rivera
Department of Accounting and
General Services
State of Hawaii
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Rivera:

Subject: Draft Environmental Assessment
Nanakuli Public Library
Tax Map Key: 8-9-002: 065 (portion)

In response to a letter from Public Works Administrator James Kurata dated January 18, 2013, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; Uniform Fire Code [UFC]™, 2006 Edition, Section 18.2.3.2.2.)

   A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA1; UFC™, 2006 Edition, Section 18.2.3.2.1.)

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter

constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1; UFC™, 2006 Edition, Section 18.3.1, as amended.)

3. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Socrates Bratakos of our Fire Prevention Bureau at 723-7151 or sbratakos@honolulu.gov.

Sincerely,

EMMIT A. KANE
Acting Fire Chief

EAK/SY:jl

cc: Ms. Leslie Kurisaki, Kimura International, Inc.✓

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3138.3

Chief Emmit A. Kane
Acting Fire Chief
Honolulu Fire Department
City and County of Honolulu
636 South Street
Honolulu, Hawaii 96813-5007

Dear Chief Kane:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your Draft Environmental Assessment comment letter dated February 13, 2013. The project will comply with the Honolulu Fire Department requirements for access roads and water supply for fire flow protection. Civil drawings will be submitted to the Honolulu Fire Department for review and approval.

If you have additional comments or questions, please feel free to call Marcus Rivera at (808) 586-0479

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

KIRK W. CALDWELL
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. McCAULEY
DEPUTY CHIEFS

OUR REFERENCE WNK-WS

February 11, 2013

RECEIVED FEB 14 2013

Mr. Marcus Rivera, Project Manager
Project Management Branch
Department of Accounting and
General Services
State of Hawaii
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Rivera:

This is in response to a letter from Public Works Administrator James K. Kurata of your agency requesting comments on the Draft Environmental Assessment for the Nanakuli Public Library project.

This project should have no significant impact on the facilities or operations of the Honolulu Police Department.

If there are any questions, please call Major Kerry Inouye of District 8 (Kapolei) at 723-8403.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By
CLAYTON G. KAU
Assistant Chief
Support Services Bureau

cc: Ms. Leslie Kurisaki, Kimura
International, Inc.

Serving and Protecting With Aloha

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3139.3

Assistant Chief Clayton G. Kau
Support Services Bureau
Honolulu Police Department
City and County of Honolulu
801 South Beretania Street
Honolulu, Hawaii 96813

Dear Assistant Chief Kau:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your Draft Environmental Assessment comment letter dated February 11, 2013, stating that the Nanakuli Public Library project should have no significant impact on the facilities or operation of the Honolulu Police Department.

If you have additional comments or questions, please feel free to call Marcus Rivera at (808) 586-0479

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHAEL D. FORMBY
DIRECTOR DESIGNATE

MARK N. GARRITY, AICP
DEPUTY DIRECTOR

TP1/13-499022R

February 12, 2013

RECEIVED FEB 16 2013

Mr. Marcus Rivera
State of Hawaii
Department of Accounting and
General Services
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Rivera:

Subject: Draft Environmental Assessment (DEA) Nanakuli Public Library, Nanakuli, Oahu, Hawaii

In response to your letter of January 18, 2013, we have no comments to offer at this time.

Thank you for the opportunity to review this matter. Should you have any further questions, please contact Michael Murphy of my staff at 768-8359.

Very truly yours,

MICHAEL D. FORMBY
Director Designate

cc: Ms. Leslie Kurisaki
Kimura International, Inc.

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3140.3

Mr. Michael Formby
Director Designate
Department of Transportation Services
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Formby:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your Draft Environmental Assessment comment letter dated February 12, 2013, stating that your agency has no comments at this time.

If you have future comments or questions, please feel free to call Marcus Rivera at (808) 586-0479

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

February 14, 2013

RECEIVED FEB 20 2013

Mr. Marcus Rivera
Department of Accounting and General Services
State of Hawaii
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Rivera:

Subject: Letter from the Department of Accounting and General Services, State of Hawaii, Dated January 18, 2013, Regarding the Draft Environmental Assessment for the Nanakuli Public Library on Farrington Highway
Tax Map Key: 8-9-002: 065

The comments in our letter dated June 28, 2012, which is included in the subject document, are still applicable.

If you have any questions, please contact Robert Chun at 748-5443.

Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

cc: Ms. Leslie Kurisaki (Kimura International, Inc.)

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3141.3

Mr. Ernest Y.W. Lau
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96813

Dear Mr. Lau:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your Draft Environmental Assessment comment letter dated February 14, 2013, stating that the comments in your letter dated June 28, 2012 are still applicable.

If you have further comments or questions, please feel free to call Marcus Rivera at (808) 586-0479

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

FRIENDS OF THE LIBRARY OF HAWAI'I

January 28, 2013

Mr. Marcus Rivera
State of Hawai'i
Department of Accounting and General Services
1151 Punchbowl Street
Honolulu, Hawai'i 96813

Re: Nanakuli Public Library

Dear Mr. Rivera:

It was a pleasure to read the Draft Environmental Assessment regarding the Nanakuli Public Library. This thorough assessment confirms building this public library in Nanakuli will have a very positive impact on the community, with no negative impact of any kind to the environment. This project will enhance the current site by providing a focal point of a library, surrounded by new landscaping and a green space bordering the Nanaikapono Elementary School.

It's very exciting to see the corridor of educational facilities available for the community– Nanaikapono Elementary School, Nanakuli Intermediate & High School, and soon the Nanakuli Public Library. As evidenced by the public meeting I attended, this community is very anxious to have a public library.

Sincerely yours,

Byrde Cestare

Byrde Cestare
Executive Director

cc: Ms. Leslie Kurisaki, Kimura International, Inc.

690 Pohukaina Street • Honolulu, Hawai'i 96813-5185 • 808-536-4174 • Fax 808-536-5232
email: friends@friendsofthelibraryofhawaii.org • www.friendsofthelibraryofhawaii.org

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3142.3

Ms. Byrde Cestare
Executive Director
Friends of the Library of Hawaii
690 Pohukaina Street
Honolulu, Hawaii 96813-5185

Dear Ms. Cestare:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513
TMK 8-9-02:065 (por)

Thank you for your Draft Environmental Assessment comment letter dated January 28, 2013, supporting this project.

If you have further comments or questions, please feel free to call Marcus Rivera at (808) 586-0479.

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

Hawaiian Electric Company
Engineering Department
PO Box 2750 • Honolulu, HI 96840

RECEIVED FEB 28 2013

February 22, 2013

Mr. Glenn Kimura
Kimura International, Inc.
1600 Kapiolani Blvd , Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Subject: **Draft Environmental Assessment**
Nanakuli Public Library

Thank you for the opportunity to comment on the subject project. Hawaiian Electric Company (HECO) has no objections to the project. Should HECO have existing easements and facilities on the subject property, we will need continued access for maintenance of our facilities.

We appreciate your efforts to keep us apprised of the proposed project in the planning process. As the Nanakuli Public Library project comes to fruition, please continue to keep us informed. Further along in the design, we will be better able to evaluate the effects on our system facilities.

If you have any questions, please call me at 543-7245.

Sincerely,

Rouen Q. W. Liu
Permits Engineer

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

MARIA E. ZIELINSKI
DEPUTY COMPTROLLER

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

APR 24 2013

PM-3143.3

Mr. Rouen Q. W. Liu
Permits Engineer
Engineering Department
Hawaii Electric Company
P.O. Box 2750
Honolulu, Hawaii 96840

Dear Mr. Liu:

Subject: Draft Environmental Assessment
Nanakuli Public Library
D.A.G.S. Job No. 12-36-6513

Thank you for your Draft Environmental Assessment comment letter dated February 22, 2013. We note that you have no objections to the project. The Hawaiian Electric Company will be kept informed of this project as its design work proceeds toward completion.

If you have further comments or questions, please feel free to call Marcus Rivera at (808) 586-0479.

Sincerely,

DEAN H. SEKI
Comptroller

c: Leslie Kurisaki, Kimura International

Appendix A

Traffic Impact Report
Nanakuli Public Library

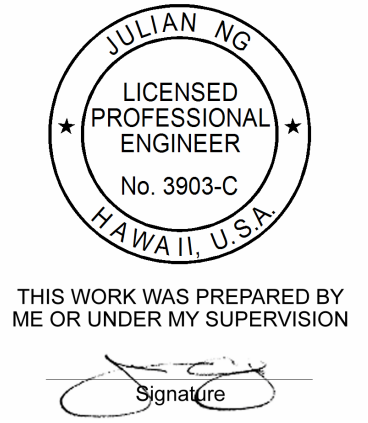
Julian Ng, Incorporated
November 2012

Traffic Impact Report
Nanakuli Public Library

Nanakuli, Oahu, Hawaii

Prepared for:

State of Hawaii
Department of Accounting and General Services



Expiration Date: 4/30/2014

Prepared by:

Julian Ng Incorporated
P.O. Box 816
Kaneohe, HI 96744

December 2012

Traffic Impact Report
Nanakuli Public Library
Nanakuli, Oahu, Hawaii

Table of Contents

Traffic Impact Report
Nanakuli Public Library
Nanakuli, Oahu, Hawaii

December 2012

Summary

This traffic impact report was prepared to identify the potential impacts of the proposed public library in Nanakuli, Oahu. If the traffic generated by the proposed project is considered to be all new traffic on the highway, the project impacts would be 0.4%, 2.7%, and 2.5% of existing highway volumes in the AM Peak Hour, the afterschool peak hour, and the PM Peak Hour, respectively. As some of the traffic generated by the library can be expected to be linked trips, the project impact to highway traffic volumes would be less than listed above, and would not be considered significant.

The project is located on the makai portion of a larger State-owned parcel that currently houses the Nanaikapono Elementary School. The project site is presently vacant, with the school located on the mauka portion of the parcel. The vacant site will be used for the proposed library and a facility for the Nanakuli Head Start program, but the Head Start facility is not part of the current project. While the primary vehicular access to the school is provided from Mano Avenue, an existing driveway to Farrington Highway has been used for school bus access. The siting of the school does not allow access through its campus, so potential vehicular access to the proposed library is limited to its frontage with the highway, and vehicular access has been proposed using the existing bus-only driveway to Farrington Highway, rather than introducing another driveway along the site frontage.

A highway widening project by the State of Hawaii Department of Transportation (HDOT) to add left turn lanes at the nearby signalized intersections of Farrington Highway with Haleakala Street and with Nanakuli Avenue will also add a median lane along the frontage of the project site. Possible use of this added lane for turns in or out of the site driveway is being considered. Modifications to the existing driveway connection may be necessary to reinforce turn restrictions or to accommodate new turning movements; limitations applicable for the future use of the existing driveway are being discussed with the HDOT. Plans for the modifications will be prepared in consultation with, and subject to the approval of, the HDOT.

Because any restrictions to use of the site driveway could affect the impact of the proposed project, additional analyses were conducted to verify that project impacts would not be significant. Future traffic volumes at the nearby signalized intersections of Farrington Highway and Haleakala Avenue, and Farrington Highway and Nanakuli Avenue, were developed for two driveway use alternatives, based on projections shown in the traffic study prepared as part of the HDOT project to widen Farrington Highway. The intersection analyses showed that while the increased traffic would slightly increase delays at these intersections, these increases would not be significant and levels of service would not change.

Introduction

The State of Hawaii Department of Accounting and General Services is preparing plans to construct a Nanakuli Public Library on a site located between Nanaikapono Elementary School and Farrington Highway. A parking lot will be provided for library patrons and vehicular access to the library will utilize an existing driveway that is currently limited to school bus use. Figure 1 shows the project location.

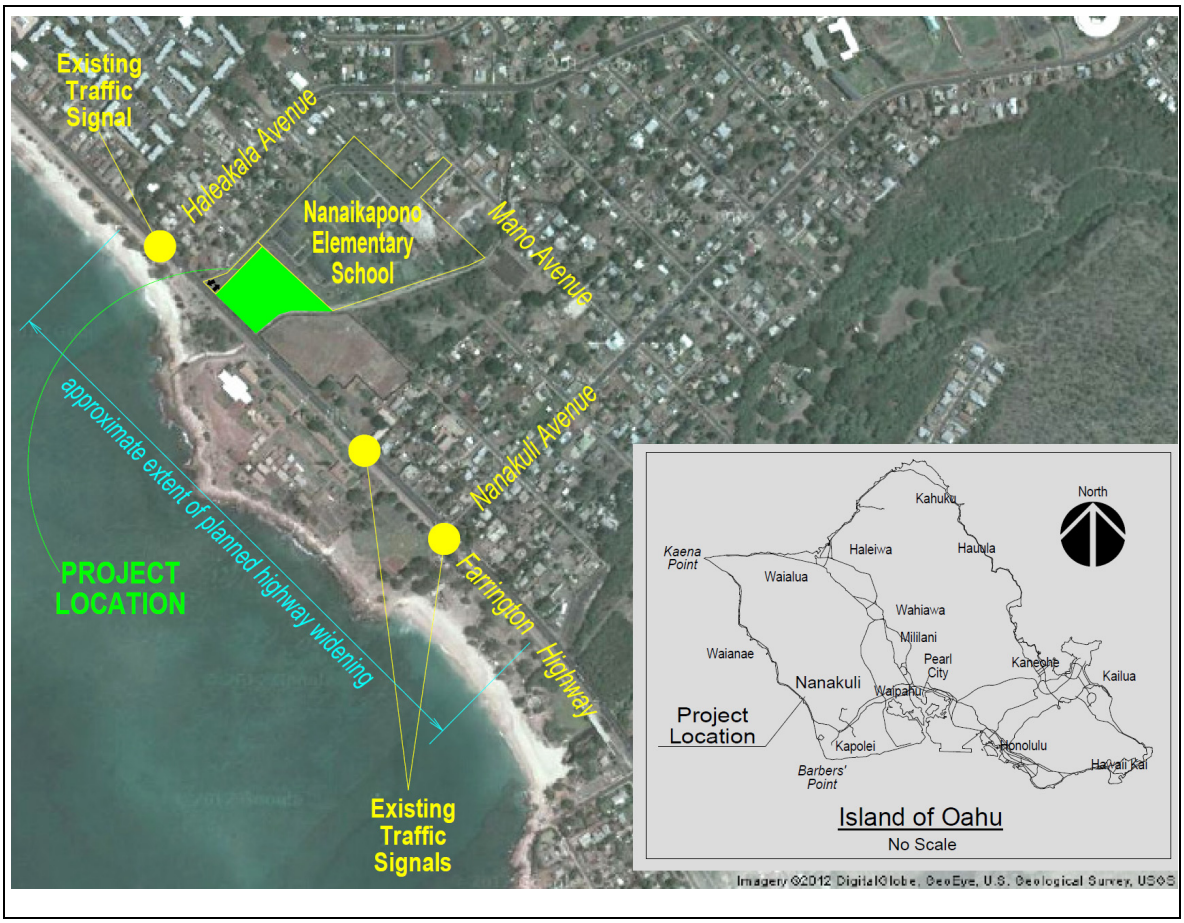


Figure 1 – Location Map

While an earlier (completed in August 2000) traffic report had evaluated the impact of adding traffic generated by a new public library and found acceptable conditions at the nearest signalized intersections on Farrington Highway, this traffic impact report provides an update on traffic conditions and a new estimate of the traffic generated by the library. The potential impacts of the proposed project and future conditions at the driveway connection to the highway were also analyzed to determine if there are any significant changes and the effects of any restrictions to turning movements at the site driveway.

Background Information

Traffic engineers use the "Level of Service" concept to describe traffic operating conditions. Six Levels of Service ranging from "A" representing free flow and very little delay to "F" describing congested over-capacity conditions and very long delays. Levels of Service for intersections are based on average delays per vehicle, which are computed from capacities and other operating characteristics, using the methods described in the *Highway Capacity Manual*[1]. The table below summarizes the criteria for Levels of Service.

Average Delay (seconds per vehicle)		General Description of Delay	Level of Service (LOS)
Signalized Intersections	Unsignalized Intersections		
≤ 10	≤ 10	Little or no delay	A
> 10 and ≤ 20	> 10 and ≤ 15	Short traffic delays	B
> 20 and ≤ 35	> 15 and ≤ 25	Average traffic delays	C
> 35 and ≤ 55	> 25 and ≤ 35	Long traffic delays	D
> 55 and ≤ 80	> 35 and ≤ 50	Very long traffic delays	E
> 80	> 50	Very long traffic delays	F

For peak hour conditions, Level of Service D or better are considered acceptable.

This traffic study included a review of two earlier traffic studies of peak hour conditions in the immediate area. Traffic studies[2] were done for the relocation Nanaikapono Elementary School from its former site makai of Farrington Highway to the current site; the initial study addressed the school relocation and a supplement evaluated the additional use of the site by a new public library and the Head Start program. Those studies concluded that the project would not have significant impacts to peak hour traffic conditions and that the existing intersections could adequately serve the projected traffic.

A traffic study[3] was completed in June 2010 to support the design of improvements to Farrington Highway in this area. This study identified the need for improvements but recognized that even with the improvements, as traffic volumes increase, poor operating conditions will occur in the future. The improvements include the relocation of the old railroad tracks on the makai side and the relocation of the southeastbound lanes to provide room to add left turn lanes on the highway; due to the length of the left turn lanes at the intersections, the widening would occur continuously from northwest of Haleakala Avenue to southeast of Nanakuli Avenue. The project design has been substantially completed and construction is expected to begin within a year.

---

1 Transportation Research Board, National Research Council, *Highway Capacity Manual,* Washington, D.C. 2000.

2 Wilson Okamoto & Associates, Inc., *Traffic Impact Analysis Report for the Nanakuli IV Elementary School,* December 1999, and supplement, August 2000.

3 PB Americas, Inc., *Traffic Study, Farrington Highway Intersection Improvements at Nanakuli Avenue and Haleakala Avenue,* June 2010.

Existing Traffic Conditions

Farrington Highway is a four-lane undivided highway under the jurisdiction of the State of Hawaii Department of Transportation. The highway is the primary roadway along the Waianae coast in Leeward Oahu, and near the project site, is aligned northwest-to-southeast. Posted speed limit is 35 miles per hour.

A bus access driveway with a non-regulatory sign (white lettering on green field, normally used in destination signs) that reads "BUS ENTRY ONLY PUBLIC ENTRY ON MANO AVENUE" is located near the northwest (Kaena Point side) edge of the project site. The driveway is split with a center island near the highway to channelized movements and to deter left turns. Vehicular use is restricted by two cattle gates across the driveway that are placed approximately 50 feet from the highway; these gates are normally in a closed position across the driveway and are controlled by Nanaikapono Elementary School. They are opened before and after school to allow school buses access to a bus loading area located on the makai (southwest) side of the school campus. Turns from the highway into the driveway are made from lanes that are shared with the through movements. A stop sign controls exiting traffic on the driveway.

Approximately 300 feet to the northwest (toward Kaena Point) of this driveway, Farrington Highway intersects with Haleakala Avenue at a signalized intersection. In the opposite direction, the nearest signalized intersection is located at Nanakuli Avenue, approximately 2,000 feet southeast of the existing driveway. A traffic signal for a midblock crosswalk across the highway is located between the driveway and Nanakuli Avenue, approximately 1,400 feet southeast of the driveway.

Haleakala Avenue and Nanakuli Avenue provide access into Nanakuli Valley, which is primarily residential in nature but also includes the campuses of Nanakuli High School and Nanakuli Elementary School. Mano Avenue is the first of several residential streets in the valley parallel to the highway that link Haleakala Avenue and Nanakuli Avenue. The access to the Nanaikapono Elementary School for all vehicles other than school buses is via a driveway from Mano Avenue.

A manual traffic count was taken at the intersection of the existing bus driveway with Farrington Highway during three two-hour periods of a weekday with schools in session. A morning period was counted to capture peak conditions before the start of the school day, which coincides with peak commuting traffic. An early-afternoon period was counted to capture after-school traffic period and a later afternoon period was counted for the afternoon commute traffic.

Peak hours were recorded 6:30 AM to 7:30 AM ("AM Peak Hour"), 2:15 PM to 3:15 PM ("Early PM Peak Hour"), and 4:00 PM to 5:00 PM ("Late PM Peak Hour"). School traffic is included in the AM and Early PM peak hours. The count data is summarized in the Appendix and peak hour traffic volumes are shown in Figure 2.

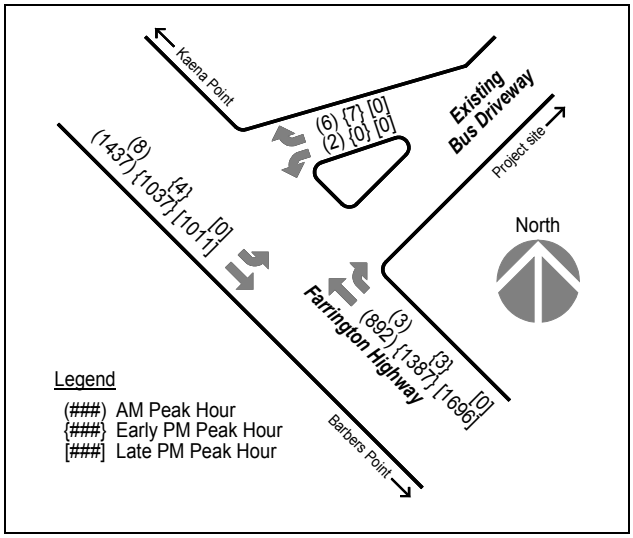


Figure 2 – Existing Peak Hour Traffic

Although the existing bus driveway was designed for right turns in and right turns out, there are no signs prohibiting left turns, and several buses were counted making left turns. While not observed during the count, left turns entering the site from the highway can result in blockage of the left lane (southeast-bound) on the highway, as bus drivers wait for a gap in opposing traffic; blockage can also result when the gate is not opened in a timely manner, as there is room for only one bus between the gate and the highway.

The analysis of a stop-controlled "T"-intersection was applied to the driveway to provide a basis for comparing operating conditions. While the analysis assumes that mainline traffic streams arrive randomly, application in a situation where traffic flows are "platooned" (platooned flow occurs when groups of vehicles are followed by large gaps, and are typically caused by the cycling of nearby traffic signals) will provide only an indication of the operations.

Table 1 – Results of Unsignalized Intersection Analyses
Driveway at Farrington Highway – Existing (Counted) Traffic

	AM Peak Hour		Early PM Peak Hour		Late PM Peak Hour	
(see note below)	enter	exit	enter	exit	enter	exit
Utilization (volume/capacity)	0.02	0.31	0.03	0.04	0.00	0.00
Average Delay per vehicle (seconds)	14.2	66.0	30.9	25.6	30.5*	30.0*
Level of Service	B	F	D	D	D	D

Note: "enter" is for left turns from Farrington Highway, "exit" for driveway exits onto the highway

* no vehicles were counted making these movements, but if there were any, these values indicate the minimum delays that can be expected

The traffic counts were also compared with the traffic counts and projections made in the earlier studies for the similar situation (no library). The 2010 traffic study included a review of plans for development on the Waianae coast, and it used an increase of 1.3% per year to account for growth. Table 2 shows that peak hour traffic volumes have not increased as projected in the earlier traffic reports.

Table 2 – Comparison of Traffic Counts and Projections

Volumes on Farrington Highway northwest bound / southeast bound	AM Peak Hour		PM Peak Hour	
	NW	SE	NW	SE
December 1999 counts (1)	990 1,654	1040 1471	2,059 1,039	2,034 1,067
Projected 2002 (1)	*969* *1,430*	*976* *1,546*	*2,055* *1,040*	*2,054* *1,040*
April 2009 counts (2)	892 1,540	917 1,540	1,620 974	1,688 1,080
Projected 2012 (2)	*928* *1,602*	*954* *1,601*	*1,685* *1,013*	*1,755* *1,123*
October 2012 counts	898 1,445	895 1,439	1,696 1,011	1,696 1,011
Projected 2030 (2)	*1,160* *2,002*	*1,193* *2,003*	*2,106* *1,267*	*2,194* *1,404*

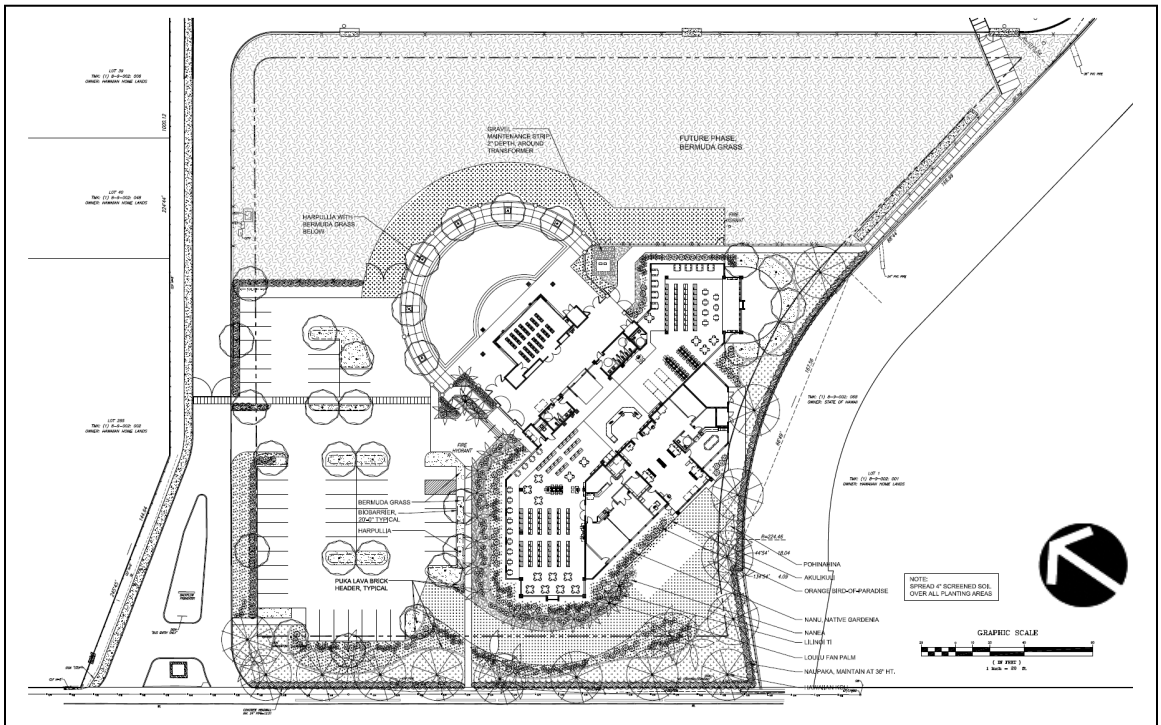
NW = northwest of driveway SE = southeast of driveway

Sources: (1) Wilson Okamoto & Associates, Inc., *Traffic Impact Analysis Report for the Nanakuli IV Elementary School,* December 1999, and supplement, August 2000.

(2) PB Americas, Inc., *Traffic Study, Farrington Highway Intersection Improvements at Nanakuli Avenue and Haleakala Avenue,* June 2010.

Project Traffic Generation and Impact

The proposed project is a new public library with a total building area of 18,000 square feet. A preliminary site plan is shown as Figure 3.



Source: CDS International, Inc.

Figure 3 – Preliminary Site Plan

Project traffic has been estimated using trip rates from the current version of *Trip Generation,* published by the Institute of Transportation Engineers, a widely-used and accepted reference manual. The rates for Library (Land Use category 590) were used; the use is described as follows:

> *A library can be either a public or private facility that consists of shelved books, reading room or area and, sometimes, meeting rooms.* [4]

The trip rates were applied for a 18,000 square foot library and the project traffic assigned to the driveway for a future condition in which all turning movements from and onto the highway would be permitted, using the highway traffic as an indicator of the trip distribution and assuming that the traffic generated by the library is all added traffic (this would be a worst-case evaluation, as some of the traffic entering and leaving the site could be due to linked trips that would already be on the highway). The "PM Peak Hour of Generator" has been assumed to coincide with the early afternoon peak hour. Table 3 shows the trip rates and summarizes the trip generation and distribution computations.

[4] Institute of Transportation Engineers, *Trip Generation Manual, 9th Edition,* Washington, D.C. 2012. p. 1162

Table 3 – Project Traffic Generation and Distribution

	AM Peak Hour		Early PM Peak Hour		Late PM Peak Hour	
	Trip rate	% enter	Trip rate	% enter	Trip rate	% enter
Trip factors (per 1,000 GSF)	1.04	71%	7.20	52%	7.30	48%
Project traffic generated (vehicles per hour)	enter	exit	enter	exit	enter	exit
18,000 GSF Library	13	6	67	63	63	68
to northwest (Kaena Point)	-	2	-	36	-	43
from northwest (Kaena Point)	8	-	29	-	24	-
from southeast (Barbers Point)	5	-	38	-	39	-
to southeast (Barbers Point)	-	4	-	27	-	25
Increase in traffic on the highway	NW	SE	NW	SE	NW	SE
Compared to counted volumes	0.4%	0.4%	2.7%	2.7%	2.5%	2.4%

Note: "enter" is for turns from Farrington Highway, "exit" for driveway exits onto the highway

NW = northwest of driveway SE = southeast of driveway

As shown in Table 3, the project is not expected to have significant traffic impacts, as the added traffic to the highway, either to the northwest or the southeast, is less than 100 vehicles per hour, an impact often used[5] to determine if a traffic impact study should be conducted. The impacts to traffic volumes are also less than 3% of existing traffic, another criterion that is used to determine if impacts are to be considered significant.

Intersection Analyses

Intersection analyses were performed to further illustrate the minor impacts of the traffic added by the proposed project. Two cases were compared with a base case (no project) for the future year 2024. In Case "A" all turning movements are allowed at the site driveway; in Case "B" only right turns would be allowed at the driveway. The restriction of turning movements at the driveway would result in additional traffic on the highway between Haleakala Avenue and Nanakuli Avenue, as drivers find alternative routes to travel between the site and the southeastbound lanes of the highway. Project impacts at these intersections were evaluated by assigning the project traffic to projections of peak hour traffic volumes at these intersections for the year 2024 to provide illustrations of the impact of adding the project traffic. Tables 4 and 5 show the results of the intersection analyses.

[5] Institute of Transportation Engineers, *Transportation Impact Analyses for Site Development,* Washington, D.C. 2005. p. 5.

Table 4 – Results of Signalized Intersection Analyses
Haleakala Avenue at Farrington Highway – 2024

	AM Peak Hour			Early PM Peak Hour			Late PM Peak Hour		
(see other notes below)	base	"A"	"B"	base	"A"	"B"	base	"A"	"B"
Overall Intersection									
Utilization (volume/capacity)	0.83	0.83	0.83	0.66	0.68	0.71	0.93	0.94	0.97
Average Delay per vehicle (seconds)	40.8	40.9	41.3	24.9	25.3	26.3	44.7	46.6	50.4
Level of Service	D	D	D	C	C	C	D	D	D
Left Turns from Southeast bound Farrington Highway									
Utilization (volume/capacity)	0.91	0.91	0.92	0.76	0.76	0.81	0.90	0.90	0.96
Average Delay per vehicle (seconds)	85.6	85.6	87.6	49.8	49.8	53.9	141	141	153
Level of Service	F	F	F	D	D	D	F	F	F
Through Lanes, Southeast bound Farrington Highway									
Utilization (volume/capacity)	0.83	0.83	0.83	0.61	0.63	0.62	0.45	0.46	0.45
Average Delay per vehicle (seconds)	22.5	22.7	22.6	14.9	15.2	15.1	8.3	8.4	8.3
Level of Service	C	C	C	B	B	B	A	A	A
Northwest bound approach, Farrington Highway									
Utilization (volume/capacity)	0.82	0.82	0.83	0.68	0.71	0.74	0.94	0.96	0.97
Average Delay per vehicle (seconds)	47.8	47.9	48.2	30.5	31.4	32.4	47.4	51.1	54.1
Level of Service	D	D	D	C	C	C	D	D	D
Shared Lane on Haleakala Avenue									
Utilization (volume/capacity)	0.83	0.83	0.83	0.59	0.59	0.62	0.92	0.92	0.96
Average Delay per vehicle (seconds)	72.9	72.9	73.2	29.9	29.9	30.6	139	139	149
Level of Service	E	E	E	C	C	C	F	F	F

Note: "base" is the baseline condition, derived by interpolating projections for future traffic shown in the June 2010 report prepared by PB Americas, Inc., *Traffic Study, Farrington Highway Intersection Improvements at Nanakuli Avenue and Haleakala Avenue*

"A" is the condition in which traffic generated by the Nanakuli Public Library is added to the baseline traffic, all turns permitted at driveway

"B" is the condition in which traffic generated by the Nanakuli Public Library is added to the baseline traffic, right turns only at driveway

Table 5 – Results of Signalized Intersection Analyses
Nanakuli Avenue at Farrington Highway – 2024

(* = per vehicle)	AM Peak Hour			Early PM Peak Hour			Late PM Peak Hour		
(see other notes below)	base	"A"	"B"	base	"A"	"B"	base	"A"	"B"
Overall Intersection									
Utilization (volume/capacity)	0.88	0.88	0.88	0.62	0.63	0.64	0.97	0.98	1.00
Average Delay * (seconds)	36.8	36.9	37.1	25.9	26.6	26.5	43.7	46.5	49.1
Level of Service	D	D	D	C	C	C	D	D	D
Left Turns from Southeast bound Farrington Highway									
Utilization (volume/capacity)	0.73	0.73	0.76	0.34	0.35	0.45	0.84	0.85	0.99
Average Delay * (seconds)	102	102	105	45.9	46.2	50.0	172	175	207
Level of Service	F	F	F	D	D	D	F	F	F
Other Lanes, Southeast bound Farrington Highway									
Utilization (volume/capacity)	0.88	0.88	0.88	0.84	0.86	0.85	0.51	0.52	0.52
Average Delay * (seconds)	30.2	30.4	30.3	27.1	28.0	27.6	12.9	13.0	12.9
Level of Service	C	C	C	C	C	C	B	B	B
Left Turns from Northwest bound Farrington Highway									
Utilization (volume/capacity)	0.31	0.31	0.31	0.12	0.12	0.12	0.08	0.08	0.08
Average Delay * (seconds)	89.8	89.8	89.8	44.3	44.3	44.3	120	120	120
Level of Service	F	F	F	D	D	D	F	F	F
Other Lanes, Northwest bound Farrington Highway									
Utilization (volume/capacity)	0.75	0.75	0.75	0.67	0.70	0.70	0.98	1.00	1.00
Average Delay * (seconds)	27.4	27.5	27.5	23.4	24.1	24.1	46.5	51.3	51.4
Level of Service	C	C	C	C	C	C	D	D	D
Makaibound approach, Nanakuli Avenue									
Utilization (volume/capacity)	0.94	0.94	0.95	0.40	0.40	0.43	0.93	0.93	0.99
Average Delay * (seconds)	88.0	88.0	88.3	24.7	24.7	25.0	132	131	140
Level of Service	F	F	F	C	C	C	F	F	F
Maukabound approach opposite Nanakuli Avenue									
Utilization (volume/capacity)	0.01	0.01	0.01	0.04	0.04	0.04	0.17	0.17	0.18
Average Delay * (seconds)	45.1	45.1	45.1	20.4	20.4	20.4	88.0	88.0	88.4
Level of Service	D	D	D	C	C	C	F	F	F

Note: "base" is the baseline condition, derived by interpolating projections for future traffic shown in the June 2010 report prepared by PB Americas, Inc., *Traffic Study, Farrington Highway Intersection Improvements at Nanakuli Avenue and Haleakala Avenue*

"A" is the condition in which traffic generated by the Nanakuli Public Library is added to the baseline traffic, all turns permitted at site driveway

"B" is the condition in which traffic generated by the Nanakuli Public Library is added to the baseline traffic, right turns only at site driveway

Driveway Evaluation

Traffic turning into or out of the site driveway will be affected by the traffic on the highway. Due to the proximity to the traffic signal at the intersection of Farrington Highway and Haleakala Avenue, queuing on the northwest bound lanes that occurs when highway traffic is stopped at the traffic signal will affect the capacity of the driveway and the delays to driveway traffic. Both would be dependent on the available space in the northwest bound lanes and the willingness of drivers on the highway to allow cars from the driveway to enter traffic. Because the volume of driveway traffic will be less than the makaibound traffic on Haleakala Avenue, sufficient capacity at the driveway can be expected and average delays longer than one cycle length are not anticipated.

Conclusions and Recommendations

The hourly impacts of the proposed Nanakuli Public Library to traffic volumes on Farrington Highway were estimated to be less than 100 vehicles per hour and less than 3% of existing peak hour volumes. The impact, therefore, is considered not significant.

The project site is bounded by existing residences to the northwest, the Nanaikapono Elementary School to the northeast, a drainage channel to the southeast, and Farrington Highway to the southwest. The only vehicular access available for this site would be directly from Farrington Highway; an existing driveway used by school buses will be used to provide vehicular access to the parking lot of the proposed library. Use of this driveway would alleviate the need to add another driveway along the highway frontage. This driveway is currently designated for school bus use only, and the additional use would be mitigated by the project plans to move the existing school gates farther from the highway, thereby increasing the storage capability of the driveway when the bus gate is not opened in a timely manner.

Two alternatives were evaluated for use of the driveway. Case “A” considered the situation in which both left turns and right turns are allowed at the driveway, and Case “B’ considered a restricted use in which only right turns are permitted. In Case “B” additional turning movements at the nearby signalized intersections, which will increase the project impacts at the nearby intersections, are expected. In either case, however, the analyses at the signalized intersections showed that the added traffic will not have significant impacts to peak hour traffic conditions.

A planned improvement of Farrington Highway to add left turn lanes at the existing signalized intersections with Haleakala Avenue and with Nanakuli Avenue will also include widening of the highway across the project site frontage. The widened area could be used as a median turn lane to facilitate left turns in to and out of the project site. However, since there is concern about left turns from and onto the highway, allowable turns to and from the driveway will be determined by the State Department of Transportation. Any modifications to the driveway that would be needed will be made in consultation with the State Department of Transportation.

APPENDIX A

MANUAL COUNT DATA

(1 PAGE FOLLOWS)

Manual Counts Taken Tuesday, October 16, 2012	Farrington Highway				Nanaikapono School bus driveway		Total Count	Total In & Out Only	School Buses at Driveway				POVs at Driveway			
	eastbound		westbound						onto highway		from highway		onto highway		from highway	
	Left	Through	Through	Right	Right Turn	Left Turn			Right	Left	Left	Right	Right	Left	Left	Right
6:30 AM - 6:45 AM	**0**	**414**	**186**	**0**	**0**	**0**	**600**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
6:45 AM - 7:00 AM	**7**	**335**	**232**	**2**	**0**	**1**	**577**	**10**	**0**	**0**	**5**	**1**	**0**	**1**	**2**	**1**
7:00 AM - 7:15 AM	**1**	**364**	**237**	**1**	**6**	**1**	**610**	**9**	**6**	**0**	**1**	**1**	**0**	**1**	**0**	**0**
7:15 AM - 7:30 AM	**0**	**324**	**237**	**0**	**0**	**0**	**561**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:30 AM - 7:45 AM	0	253	229	1	1	0	484	2	0	0	0	0	1	0	0	1
7:45 AM - 8:00 AM	0	330	237	0	0	0	567	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	329	284	0	0	0	613	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	369	214	0	0	0	583	0	0	0	0	0	0	0	0	0
6:30 AM - 7:30 AM	**8**	**1,437**	**892**	**3**	**6**	**2**	**2,348**	**19**	**6**	**0**	**6**	**2**	**0**	**2**	**2**	**1**
approach	**1,445**		**895**		**8**				**6**		**8**		**2**		**3**	
approach PHF	**0.87**		**0.94**		**0.29**		**0.96**									
departure	**1,439**		**898**		**11**				**14**				**5**			

1:30 PM - 1:45 PM	0	271	302	0	0	0	573	0	0	0	0	0	0	0	0	0
1:45 PM - 2:00 PM	0	226	313	0	0	0	539	0	0	0	0	0	0	0	0	0
2:00 PM - 2:15 PM	0	263	299	0	0	0	562	0	0	0	0	0	0	0	0	0
2:15 PM - 2:30 PM	**0**	**367**	**396**	**1**	**0**	**0**	**764**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
2:30 PM - 2:45 PM	**0**	**233**	**291**	**1**	**1**	**0**	**526**	**2**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
2:45 PM - 3:00 PM	**2**	**221**	**353**	**1**	**2**	**0**	**579**	**5**	**1**	**0**	**2**	**0**	**1**	**0**	**0**	**1**
3:00 PM - 3:15 PM	**2**	**216**	**347**	**0**	**4**	**0**	**569**	**6**	**4**	**0**	**2**	**0**	**0**	**0**	**0**	**0**
3:15 PM - 3:30 PM	0	331	374	0	0	0	705	0	0	0	0	0	0	0	0	0
2:15 PM - 3:15 PM	**4**	**1,037**	**1,387**	**3**	**7**	**0**	**2,438**	**14**	**6**	**0**	**4**	**2**	**1**	**0**	**0**	**1**
approach	**1,041**		**1,390**		**7**				**6**		**6**		**1**		**1**	
	0.71		**0.88**		**0.44**		**0.80**									
departure	**1,037**		**1,394**		**7**				**12**				**2**			

4:00 PM - 4:15 PM	**0**	**258**	**409**	**0**	**0**	**0**	**667**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:15 PM - 4:30 PM	**0**	**250**	**397**	**0**	**0**	**0**	**647**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:30 PM - 4:45 PM	**0**	**247**	**437**	**0**	**0**	**0**	**684**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:45 PM - 5:00 PM	**0**	**256**	**453**	**0**	**0**	**0**	**709**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM - 5:15 PM	0	227	431	0	0	0	658	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	198	390	0	0	0	588	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	250	451	0	0	0	701	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	209	388	0	0	0	597	0	0	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	**0**	**1,011**	**1,696**	**0**	**0**	**0**	**2,707**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
approach	**1,011**		**1,696**		**0**				**0**		**0**		**0**		**0**	
	0.98		**0.94**		**0.00**		**0.95**									
departure	**1,011**		**1,696**		**0**				**0**				**0**			

APPENDIX B

LEVEL OF SERVICE CALCULATIONS

(3 PAGES OF
TWO-WAY STOP CONTROL SUMMARY SHEETS
AND
18 PAGES OF
HCS2000 DETAILED REPORT SHEETS
FOLLOWS)

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JN*
Agency/Co.	*Julian Ng Incorporated*
Date Performed	*11/3/2012*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Nanaikapono Bus Driveway*
Jurisdiction	*HWY*
Analysis Year	*2012 counts*

Project Description *Nanakuli Public Library*

East/West Street: *Farrington Highway* | North/South Street: *Nanaikapono Bus Driveway*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*8*	*1437*	*0*	*0*	*892*	*3*
Peak-hour factor, PHF	*0.87*	*0.87*	*0.96*	*0.96*	*0.94*	*0.94*
Hourly Flow Rate (veh/h)	*9*	*1651*	*0*	*0*	*948*	*3*
Proportion of heavy vehicles, P_{HV}	*75*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration	*LT*	*T*			*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*2*	*0*	*6*
Peak-hour factor, PHF	*0.96*	*0.96*	*0.96*	*0.29*	*0.96*	*0.29*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*6*	*0*	*20*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*100*	*0*	*100*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
Volume, v (vph)	*9*						*26*	
Capacity, c_m (vph)	*400*						*84*	
v/c ratio	*0.02*						*0.31*	
Queue length (95%)	*0.07*						*1.16*	
Control Delay (s/veh)	*14.2*						*66.0*	
LOS	*B*						*F*	
Approach delay (s/veh)	--	--				*66.0*		
Approach LOS	--	--				*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JN*
Agency/Co.	*Julian Ng Incorporated*
Date Performed	*11/3/2012*
Analysis Time Period	*MID Peak Hour*

Site Information

Intersection	*Nanaikapono Bus Driveway*
Jurisdiction	*HWY*
Analysis Year	*2012 counts*

Project Description *Nanakuli Public Library*

East/West Street: *Farrington Highway* | North/South Street: *Nanaikapono Bus Driveway*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*4*	*1037*	*0*	*0*	*1387*	*3*
Peak-hour factor, PHF	*0.71*	*0.71*	*0.80*	*0.80*	*0.88*	*0.88*
Hourly Flow Rate (veh/h)	*5*	*1460*	*0*	*0*	*1576*	*3*
Proportion of heavy vehicles, P_{HV}	*100*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration	*LT*	*T*			*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*0*	*0*	*7*
Peak-hour factor, PHF	*0.80*	*0.80*	*0.80*	*0.80*	*0.80*	*0.80*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*0*	*0*	*8*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*86*	*0*	*100*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
Volume, v (vph)	*5*						*8*	
Capacity, c_m (vph)	*144*						*183*	
v/c ratio	*0.03*						*0.04*	
Queue length (95%)	*0.11*						*0.14*	
Control Delay (s/veh)	*30.9*						*25.6*	
LOS	*D*						*D*	
Approach delay (s/veh)	--	--				*25.6*		
Approach LOS	--	--				*D*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JN*
Agency/Co.	*Julian Ng Incorporated*
Date Performed	*11/3/2012*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Nanaikapono Bus Driveway*
Jurisdiction	*HWY*
Analysis Year	*2012 counts*

Project Description *Nanakuli Public Library*

East/West Street: *Farrington Highway* | North/South Street: *Nanaikapono Bus Driveway*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*1011*	*0*	*0*	*1696*	*0*
Peak-hour factor, PHF	*0.87*	*0.87*	*0.96*	*0.96*	*0.94*	*0.94*
Hourly Flow Rate (veh/h)	*0*	*1162*	*0*	*0*	*1804*	*0*
Proportion of heavy vehicles, P_{HV}	*75*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration	*LT*	*T*			*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*0*	*0*	*1*
Peak-hour factor, PHF	*0.96*	*0.96*	*0.96*	*0.29*	*0.96*	*0.29*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*0*	*0*	*3*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*100*	*0*	*100*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
Volume, v (vph)	*0*						*3*	
Capacity, c_m (vph)	*141*						*147*	
v/c ratio	*0.00*						*0.02*	
Queue length (95%)	*0.00*						*0.06*	
Control Delay (s/veh)	*30.5*						*30.0*	
LOS	*D*						*D*	
Approach delay (s/veh)	--	--				*30.0*		
Approach LOS	--	--				*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Haleakala*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*AM Peak Hour*	Analysis Year	*2024*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane group	*L*	*T*			*TR*						*LR*	
Volume, V (vph)	*348*	*1800*			*1052*	*24*				*58*		*248*
% Heavy vehicles, %HV	*3*	*3*			*3*	*3*				*3*		*3*
Peak-hour factor, PHF	*0.92*	*0.92*			*0.92*	*0.92*				*0.92*		*0.92*
Pretimed (P) or actuated (A)	*P*	*P*			*P*	*P*				*P*		*P*
Start-up lost time, l_1	*2.0*	*2.0*			*2.0*						*2.0*	
Extension of effective green, e	*2.0*	*2.0*			*2.0*						*2.0*	
Arrival type, AT	*3*	*3*			*3*						*3*	
Unit extension, UE	*3.0*	*3.0*			*3.0*						*3.0*	
Filtering/metering, I	*1.000*	*1.000*			*1.000*						*1.000*	
Initial unmet demand, Q_b	*0.0*	*0.0*			*0.0*						*0.0*	
Ped / Bike / RTOR volumes				*0*	*0*	*0*	*0*			*60*	*0*	*0*
Lane width	*12.0*	*12.0*			*12.0*						*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*			*0*						*0*	
Min. time for pedestrians, G_p				*3.2*			*3.2*			*3.9*		

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = *38.0*	G = *65.0*	G =	G =	G = *42.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *160.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*378*	*1957*			*1169*						*333*	
Lane group capacity, c	*416*	*2371*			*1422*						*403*	
v/c ratio, X	*0.91*	*0.83*			*0.82*						*0.83*	
Total green ratio, g/C	*0.24*	*0.68*			*0.41*						*0.26*	
Uniform delay, d_1	*59.3*	*19.1*			*42.3*						*55.6*	
Progression factor, PF	*1.000*	*1.000*			*1.000*						*1.000*	
Delay calibration, k	*0.50*	*0.50*			*0.50*						*0.50*	
Incremental delay, d_2	*26.3*	*3.4*			*5.5*						*17.4*	
Initial queue delay, d_3												
Control delay	*85.6*	*22.5*			*47.8*						*72.9*	
Lane group LOS	*F*	*C*			*D*						*E*	
Approach delay	*32.7*			*47.8*						*72.9*		
Approach LOS	*C*			*D*						*E*		
Intersection delay	*40.8*			X_C = *0.83*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Haleakala*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/28/2012*	Jurisdiction	*HWY*
Time Period	*AM Peak Hour*	Analysis Year	*2024 + NPL Case A*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane group	*L*	*T*			*TR*						*LR*	
Volume, V (vph)	*348*	*1808*			*1054*	*24*				*58*		*248*
% Heavy vehicles, %HV	*3*	*3*			*3*	*3*				*3*		*3*
Peak-hour factor, PHF	*0.92*	*0.92*			*0.92*	*0.92*				*0.92*		*0.92*
Pretimed (P) or actuated (A)	*P*	*P*			*P*	*P*				*P*		*P*
Start-up lost time, l_1	*2.0*	*2.0*			*2.0*						*2.0*	
Extension of effective green, e	*2.0*	*2.0*			*2.0*						*2.0*	
Arrival type, AT	*3*	*3*			*3*						*3*	
Unit extension, UE	*3.0*	*3.0*			*3.0*						*3.0*	
Filtering/metering, I	*1.000*	*1.000*			*1.000*						*1.000*	
Initial unmet demand, Q_b	*0.0*	*0.0*			*0.0*						*0.0*	
Ped / Bike / RTOR volumes				*0*	*0*	*0*	*0*			*60*	*0*	*0*
Lane width	*12.0*	*12.0*			*12.0*						*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*			*0*						*0*	
Min. time for pedestrians, G_p				*3.2*			*3.2*			*3.9*		

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = *38.0*	G = *65.0*	G =	G =	G = *42.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *160.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*378*	*1965*			*1172*						*333*	
Lane group capacity, c	*416*	*2371*			*1422*						*403*	
v/c ratio, X	*0.91*	*0.83*			*0.82*						*0.83*	
Total green ratio, g/C	*0.24*	*0.68*			*0.41*						*0.26*	
Uniform delay, d_1	*59.3*	*19.2*			*42.4*						*55.6*	
Progression factor, PF	*1.000*	*1.000*			*1.000*						*1.000*	
Delay calibration, k	*0.50*	*0.50*			*0.50*						*0.50*	
Incremental delay, d_2	*26.3*	*3.5*			*5.5*						*17.4*	
Initial queue delay, d_3												
Control delay	*85.6*	*22.7*			*47.9*						*72.9*	
Lane group LOS	*F*	*C*			*D*						*E*	
Approach delay	*32.8*			*47.9*						*72.9*		
Approach LOS	*C*			*D*						*E*		
Intersection delay	*40.9*			X_C = *0.83*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Haleakala*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*AM Peak Hour*	Analysis Year	*2024 + NPL Case B*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane group	*L*	*T*			*TR*						*LR*	
Volume, V (vph)	*352*	*1804*			*1054*	*28*				*60*		*248*
% Heavy vehicles, %HV	*3*	*3*			*3*	*3*				*3*		*3*
Peak-hour factor, PHF	*0.92*	*0.92*			*0.92*	*0.92*				*0.92*		*0.92*
Pretimed (P) or actuated (A)	*P*	*P*			*P*	*P*				*P*		*P*
Start-up lost time, l_1	*2.0*	*2.0*			*2.0*						*2.0*	
Extension of effective green, e	*2.0*	*2.0*			*2.0*						*2.0*	
Arrival type, AT	*3*	*3*			*3*						*3*	
Unit extension, UE	*3.0*	*3.0*			*3.0*						*3.0*	
Filtering/metering, I	*1.000*	*1.000*			*1.000*						*1.000*	
Initial unmet demand, Q_b	*0.0*	*0.0*			*0.0*						*0.0*	
Ped / Bike / RTOR volumes				*0*	*0*	*0*	*0*			*60*	*0*	*0*
Lane width	*12.0*	*12.0*			*12.0*						*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*			*0*						*0*	
Min. time for pedestrians, G_p				*3.2*			*3.2*			*3.9*		

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = *38.0*	G = *65.0*	G =	G =	G = *42.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *160.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*383*	*1961*			*1176*						*335*	
Lane group capacity, c	*416*	*2371*			*1421*						*404*	
v/c ratio, X	*0.92*	*0.83*			*0.83*						*0.83*	
Total green ratio, g/C	*0.24*	*0.68*			*0.41*						*0.26*	
Uniform delay, d_1	*59.5*	*19.1*			*42.5*						*55.6*	
Progression factor, PF	*1.000*	*1.000*			*1.000*						*1.000*	
Delay calibration, k	*0.50*	*0.50*			*0.50*						*0.50*	
Incremental delay, d_2	*28.1*	*3.5*			*5.7*						*17.6*	
Initial queue delay, d_3												
Control delay	*87.6*	*22.6*			*48.2*						*73.2*	
Lane group LOS	*F*	*C*			*D*						*E*	
Approach delay	*33.2*			*48.2*						*73.2*		
Approach LOS	*C*			*D*						*E*		
Intersection delay	*41.3*			X_C = *0.83*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Haleakala*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*MD Peak Hour*	Analysis Year	*2024*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane group	*L*	*T*			*TR*						*LR*	
Volume, V (vph)	*232*	*1102*			*673*	*7*				*26*		*252*
% Heavy vehicles, %HV	*3*	*3*			*3*	*3*				*3*		*3*
Peak-hour factor, PHF	*0.92*	*0.92*			*0.92*	*0.92*				*0.92*		*0.92*
Pretimed (P) or actuated (A)	*P*	*P*			*P*	*P*				*P*		*P*
Start-up lost time, l_1	*2.0*	*2.0*			*2.0*						*2.0*	
Extension of effective green, e	*2.0*	*2.0*			*2.0*						*2.0*	
Arrival type, AT	*3*	*3*			*3*						*3*	
Unit extension, UE	*3.0*	*3.0*			*3.0*						*3.0*	
Filtering/metering, I	*1.000*	*1.000*			*1.000*						*1.000*	
Initial unmet demand, Q_b	*0.0*	*0.0*			*0.0*						*0.0*	
Ped / Bike / RTOR volumes				*0*	*0*	*0*	*0*			*60*	*0*	*0*
Lane width	*12.0*	*12.0*			*12.0*						*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*			*0*						*0*	
Min. time for pedestrians, G_p				*3.2*			*3.2*			*3.6*		

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = *17.0*	G = *28.0*	G =	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*252*	*1198*			*740*						*302*	
Lane group capacity, c	*331*	*1951*			*1091*						*511*	
v/c ratio, X	*0.76*	*0.61*			*0.68*						*0.59*	
Total green ratio, g/C	*0.19*	*0.56*			*0.31*						*0.33*	
Uniform delay, d_1	*34.6*	*13.5*			*27.1*						*24.9*	
Progression factor, PF	*1.000*	*1.000*			*1.000*						*1.000*	
Delay calibration, k	*0.50*	*0.50*			*0.50*						*0.50*	
Incremental delay, d_2	*15.2*	*1.5*			*3.4*						*5.0*	
Initial queue delay, d_3												
Control delay	*49.8*	*14.9*			*30.5*						*29.9*	
Lane group LOS	*D*	*B*			*C*						*C*	
Approach delay	*21.0*			*30.5*						*29.9*		
Approach LOS	*C*			*C*						*C*		
Intersection delay	*24.9*			X_C = *0.66*			Intersection LOS			*C*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Haleakala*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/28/2012*	Jurisdiction	*HWY*
Time Period	*MD Peak Hour*	Analysis Year	*2024 + NPL A*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane group	*L*	*T*			*TR*						*LR*	
Volume, V (vph)	*232*	*1130*			*709*	*7*				*27*		*252*
% Heavy vehicles, %HV	*3*	*3*			*3*	*3*				*3*		*3*
Peak-hour factor, PHF	*0.92*	*0.92*			*0.92*	*0.92*				*0.92*		*0.92*
Pretimed (P) or actuated (A)	*P*	*P*			*P*	*P*				*P*		*P*
Start-up lost time, l_1	*2.0*	*2.0*			*2.0*						*2.0*	
Extension of effective green, e	*2.0*	*2.0*			*2.0*						*2.0*	
Arrival type, AT	*3*	*3*			*3*						*3*	
Unit extension, UE	*3.0*	*3.0*			*3.0*						*3.0*	
Filtering/metering, I	*1.000*	*1.000*			*1.000*						*1.000*	
Initial unmet demand, Q_b	*0.0*	*0.0*			*0.0*						*0.0*	
Ped / Bike / RTOR volumes				*0*	*0*	*0*	*0*			*60*	*0*	*0*
Lane width	*12.0*	*12.0*			*12.0*						*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*			*0*						*0*	
Min. time for pedestrians, G_p				*3.2*			*3.2*			*3.6*		

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = *17.0*	G = *28.0*	G =	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*252*	*1228*			*779*						*303*	
Lane group capacity, c	*331*	*1951*			*1091*						*511*	
v/c ratio, X	*0.76*	*0.63*			*0.71*						*0.59*	
Total green ratio, g/C	*0.19*	*0.56*			*0.31*						*0.33*	
Uniform delay, d_1	*34.6*	*13.7*			*27.5*						*24.9*	
Progression factor, PF	*1.000*	*1.000*			*1.000*						*1.000*	
Delay calibration, k	*0.50*	*0.50*			*0.50*						*0.50*	
Incremental delay, d_2	*15.2*	*1.6*			*4.0*						*5.0*	
Initial queue delay, d_3												
Control delay	*49.8*	*15.2*			*31.4*						*29.9*	
Lane group LOS	*D*	*B*			*C*						*C*	
Approach delay	*21.1*			*31.4*						*29.9*		
Approach LOS	*C*			*C*						*C*		
Intersection delay	*25.3*			X_C = *0.68*			Intersection LOS			*C*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Haleakala*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*MD Peak Hour*	Analysis Year	*2024 + NPL B*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane group	*L*	*T*			*TR*						*LR*	
Volume, V (vph)	*247*	*1116*			*709*	*34*				*40*		*252*
% Heavy vehicles, %HV	*3*	*3*			*3*	*3*				*3*		*3*
Peak-hour factor, PHF	*0.92*	*0.92*			*0.92*	*0.92*				*0.92*		*0.92*
Pretimed (P) or actuated (A)	*P*	*P*			*P*	*P*				*P*		*P*
Start-up lost time, l_1	*2.0*	*2.0*			*2.0*						*2.0*	
Extension of effective green, e	*2.0*	*2.0*			*2.0*						*2.0*	
Arrival type, AT	*3*	*3*			*3*						*3*	
Unit extension, UE	*3.0*	*3.0*			*3.0*						*3.0*	
Filtering/metering, I	*1.000*	*1.000*			*1.000*						*1.000*	
Initial unmet demand, Q_b	*0.0*	*0.0*			*0.0*						*0.0*	
Ped / Bike / RTOR volumes				*0*	*0*	*0*	*0*			*60*	*0*	*0*
Lane width	*12.0*	*12.0*			*12.0*						*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*			*0*						*0*	
Min. time for pedestrians, G_p				*3.2*			*3.2*			*3.6*		

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = *17.0*	G = *28.0*	G =	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*268*	*1213*			*808*						*317*	
Lane group capacity, c	*331*	*1951*			*1085*						*514*	
v/c ratio, X	*0.81*	*0.62*			*0.74*						*0.62*	
Total green ratio, g/C	*0.19*	*0.56*			*0.31*						*0.33*	
Uniform delay, d_1	*35.0*	*13.6*			*27.8*						*25.2*	
Progression factor, PF	*1.000*	*1.000*			*1.000*						*1.000*	
Delay calibration, k	*0.50*	*0.50*			*0.50*						*0.50*	
Incremental delay, d_2	*18.9*	*1.5*			*4.7*						*5.5*	
Initial queue delay, d_3												
Control delay	*53.9*	*15.1*			*32.4*						*30.6*	
Lane group LOS	*D*	*B*			*C*						*C*	
Approach delay	*22.1*			*32.4*						*30.6*		
Approach LOS	*C*			*C*						*C*		
Intersection delay	*26.3*			X_C = *0.71*			Intersection LOS			*C*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Haleakala*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*PM Peak Hour*	Analysis Year	*2024*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane group	*L*	*T*			*TR*						*LR*	
Volume, V (vph)	*187*	*1152*			*1933*	*22*				*23*		*177*
% Heavy vehicles, %HV	*3*	*3*			*3*	*3*				*3*		*3*
Peak-hour factor, PHF	*0.92*	*0.92*			*0.92*	*0.92*				*0.92*		*0.92*
Pretimed (P) or actuated (A)	*P*	*P*			*P*	*P*				*P*		*P*
Start-up lost time, l_1	*2.0*	*2.0*			*2.0*						*2.0*	
Extension of effective green, e	*2.0*	*2.0*			*2.0*						*2.0*	
Arrival type, AT	*3*	*3*			*3*						*3*	
Unit extension, UE	*3.0*	*3.0*			*3.0*						*3.0*	
Filtering/metering, I	*1.000*	*1.000*			*1.000*						*1.000*	
Initial unmet demand, Q_b	*0.0*	*0.0*			*0.0*						*0.0*	
Ped / Bike / RTOR volumes				*0*	*0*	*0*	*0*			*60*	*0*	*0*
Lane width	*12.0*	*12.0*			*12.0*						*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*			*0*						*0*	
Min. time for pedestrians, G_p				*3.2*			*3.2*			*4.3*		

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = *31.0*	G = *155.0*	G =	G =	G = *39.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *240.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*203*	*1252*			*2125*						*217*	
Lane group capacity, c	*226*	*2795*			*2264*						*237*	
v/c ratio, X	*0.90*	*0.45*			*0.94*						*0.92*	
Total green ratio, g/C	*0.13*	*0.80*			*0.65*						*0.16*	
Uniform delay, d_1	*102.9*	*7.8*			*38.2*						*98.9*	
Progression factor, PF	*1.000*	*1.000*			*1.000*						*1.000*	
Delay calibration, k	*0.50*	*0.50*			*0.50*						*0.50*	
Incremental delay, d_2	*38.3*	*0.5*			*9.1*						*40.1*	
Initial queue delay, d_3												
Control delay	*141.2*	*8.3*			*47.4*						*139.0*	
Lane group LOS	*F*	*A*			*D*						*F*	
Approach delay	*26.8*			*47.4*						*139.0*		
Approach LOS	*C*			*D*						*F*		
Intersection delay	*44.7*			X_C = *0.93*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Haleakala*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/28/2012*	Jurisdiction	*HWY*
Time Period	*PM Peak Hour*	Analysis Year	*2024 + NPL A*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane group	*L*	*T*			*TR*						*LR*	
Volume, V (vph)	*187*	*1176*			*1976*	*22*				*23*		*177*
% Heavy vehicles, %HV	*3*	*3*			*3*	*3*				*3*		*3*
Peak-hour factor, PHF	*0.92*	*0.92*			*0.92*	*0.92*				*0.92*		*0.92*
Pretimed (P) or actuated (A)	*P*	*P*			*P*	*P*				*P*		*P*
Start-up lost time, l_1	*2.0*	*2.0*			*2.0*						*2.0*	
Extension of effective green, e	*2.0*	*2.0*			*2.0*						*2.0*	
Arrival type, AT	*3*	*3*			*3*						*3*	
Unit extension, UE	*3.0*	*3.0*			*3.0*						*3.0*	
Filtering/metering, I	*1.000*	*1.000*			*1.000*						*1.000*	
Initial unmet demand, Q_b	*0.0*	*0.0*			*0.0*						*0.0*	
Ped / Bike / RTOR volumes				*0*	*0*	*0*	*0*			*60*	*0*	*0*
Lane width	*12.0*	*12.0*			*12.0*						*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*			*0*						*0*	
Min. time for pedestrians, G_p				*3.2*			*3.2*			*4.3*		

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = *31.0*	G = *155.0*	G =	G =	G = *39.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *240.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*203*	*1278*			*2172*						*217*	
Lane group capacity, c	*226*	*2795*			*2264*						*237*	
v/c ratio, X	*0.90*	*0.46*			*0.96*						*0.92*	
Total green ratio, g/C	*0.13*	*0.80*			*0.65*						*0.16*	
Uniform delay, d_1	*102.9*	*7.9*			*39.6*						*98.9*	
Progression factor, PF	*1.000*	*1.000*			*1.000*						*1.000*	
Delay calibration, k	*0.50*	*0.50*			*0.50*						*0.50*	
Incremental delay, d_2	*38.3*	*0.5*			*11.5*						*40.1*	
Initial queue delay, d_3												
Control delay	*141.2*	*8.4*			*51.1*						*139.0*	
Lane group LOS	*F*	*A*			*D*						*F*	
Approach delay	*26.6*			*51.1*						*139.0*		
Approach LOS	*C*			*D*						*F*		
Intersection delay	*46.6*			X_C = *0.94*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Haleakala*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*PM Peak Hour*	Analysis Year	*2024 + NPL B*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Lane group	*L*	*T*			*TR*						*LR*	
Volume, V (vph)	*199*	*1164*			*1976*	*47*				*36*		*177*
% Heavy vehicles, %HV	*3*	*3*			*3*	*3*				*3*		*3*
Peak-hour factor, PHF	*0.92*	*0.92*			*0.92*	*0.92*				*0.92*		*0.92*
Pretimed (P) or actuated (A)	*P*	*P*			*P*	*P*				*P*		*P*
Start-up lost time, l_1	*2.0*	*2.0*			*2.0*						*2.0*	
Extension of effective green, e	*2.0*	*2.0*			*2.0*						*2.0*	
Arrival type, AT	*3*	*3*			*3*						*3*	
Unit extension, UE	*3.0*	*3.0*			*3.0*						*3.0*	
Filtering/metering, I	*1.000*	*1.000*			*1.000*						*1.000*	
Initial unmet demand, Q_b	*0.0*	*0.0*			*0.0*						*0.0*	
Ped / Bike / RTOR volumes				*0*	*0*	*0*	*0*			*60*	*0*	*0*
Lane width	*12.0*	*12.0*			*12.0*						*12.0*	
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*		*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*			*0*						*0*	
Min. time for pedestrians, G_p				*3.2*			*3.2*			*4.3*		

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = *31.0*	G = *155.0*	G =	G =	G = *39.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y =	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *240.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*216*	*1265*			*2199*						*231*	
Lane group capacity, c	*226*	*2795*			*2260*						*240*	
v/c ratio, X	*0.96*	*0.45*			*0.97*						*0.96*	
Total green ratio, g/C	*0.13*	*0.80*			*0.65*						*0.16*	
Uniform delay, d_1	*103.8*	*7.8*			*40.5*						*99.8*	
Progression factor, PF	*1.000*	*1.000*			*1.000*						*1.000*	
Delay calibration, k	*0.50*	*0.50*			*0.50*						*0.50*	
Incremental delay, d_2	*49.4*	*0.5*			*13.6*						*49.2*	
Initial queue delay, d_3												
Control delay	*153.2*	*8.3*			*54.1*						*149.0*	
Lane group LOS	*F*	*A*			*D*						*F*	
Approach delay	*29.5*			*54.1*						*149.0*		
Approach LOS	*C*			*D*						*F*		
Intersection delay	*50.4*			X_C = *0.97*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Nanakuli*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*AM Peak Hour*	Analysis Year	*2024*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*0*	*1*	*0*	*0*	*1*	*1*
Lane group	*L*	*TR*		*L*	*TR*			*LTR*			*LT*	*R*
Volume, V (vph)	*87*	*1763*	*7*	*16*	*1052*	*303*	*0*	*0*	*2*	*290*	*1*	*55*
% Heavy vehicles, %HV	*3*	*3*	*0*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Pretimed (P) or actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up lost time, l_1	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Extension of effective green, e	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Arrival type, AT	*3*	*3*		*3*	*3*			*3*			*3*	*3*
Unit extension, UE	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	*3.0*
Filtering/metering, I	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Initial unmet demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*			*0.0*			*0.0*	*0.0*
Ped / Bike / RTOR volumes	*25*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*60*	*0*	*0*
Lane width	*12.0*	*12.0*		*12.0*	*12.0*			*12.0*			*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*		*0*	*0*			*0*			*0*	*0*
Min. time for pedestrians, G_p	*3.5*			*3.2*			*3.2*			*3.9*		

Phasing	EB Only	Thru & RT	WB Only	04	NS Perm	06	07	08
Timing	G = *12.0*	G = *83.0*	G = *5.0*	G =	G = *40.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *160.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*95*	*1924*		*17*	*1472*			*2*			*316*	*60*
Lane group capacity, c	*131*	*2194*		*55*	*1973*			*399*			*335*	*364*
v/c ratio, X	*0.73*	*0.88*		*0.31*	*0.75*			*0.01*			*0.94*	*0.16*
Total green ratio, g/C	*0.08*	*0.63*		*0.03*	*0.58*			*0.25*			*0.25*	*0.25*
Uniform delay, d_1	*72.4*	*24.9*		*75.8*	*24.8*			*45.1*			*58.9*	*46.9*
Progression factor, PF	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Delay calibration, k	*0.50*	*0.50*		*0.50*	*0.50*			*0.50*			*0.50*	*0.50*
Incremental delay, d_2	*29.3*	*5.3*		*14.0*	*2.6*			*0.0*			*36.7*	*1.0*
Initial queue delay, d_3												
Control delay	*101.7*	*30.2*		*89.8*	*27.4*			*45.1*			*95.6*	*47.9*
Lane group LOS	*F*	*C*		*F*	*C*			*D*			*F*	*D*
Approach delay	*33.6*			*28.1*			*45.1*			*88.0*		
Approach LOS	*C*			*C*			*D*			*F*		
Intersection delay	*36.8*			X_C = *0.88*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Nanakuli*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/28/2012*	Jurisdiction	*HWY*
Time Period	*AM Peak Hour*	Analysis Year	*2024 + NPL A*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*0*	*1*	*0*	*0*	*1*	*1*
Lane group	*L*	*TR*		*L*	*TR*			*LTR*			*LT*	*R*
Volume, V (vph)	*87*	*1767*	*7*	*16*	*1057*	*303*	*0*	*0*	*2*	*290*	*1*	*55*
% Heavy vehicles, %HV	*3*	*3*	*0*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Pretimed (P) or actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up lost time, l_1	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Extension of effective green, e	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Arrival type, AT	*3*	*3*		*3*	*3*			*3*			*3*	*3*
Unit extension, UE	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	*3.0*
Filtering/metering, I	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Initial unmet demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*			*0.0*			*0.0*	*0.0*
Ped / Bike / RTOR volumes	*25*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*60*	*0*	*0*
Lane width	*12.0*	*12.0*		*12.0*	*12.0*			*12.0*			*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*		*0*	*0*			*0*			*0*	*0*
Min. time for pedestrians, G_p	*3.5*			*3.2*			*3.2*			*3.9*		

Phasing	EB Only	Thru & RT	WB Only	04	NS Perm	06	07	08
Timing	G = *12.0*	G = *83.0*	G = *5.0*	G =	G = *40.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *160.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*95*	*1929*		*17*	*1478*			*2*			*316*	*60*
Lane group capacity, c	*131*	*2194*		*55*	*1973*			*399*			*335*	*364*
v/c ratio, X	*0.73*	*0.88*		*0.31*	*0.75*			*0.01*			*0.94*	*0.16*
Total green ratio, g/C	*0.08*	*0.63*		*0.03*	*0.58*			*0.25*			*0.25*	*0.25*
Uniform delay, d_1	*72.4*	*25.0*		*75.8*	*24.8*			*45.1*			*58.9*	*46.9*
Progression factor, PF	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Delay calibration, k	*0.50*	*0.50*		*0.50*	*0.50*			*0.50*			*0.50*	*0.50*
Incremental delay, d_2	*29.3*	*5.4*		*14.0*	*2.7*			*0.0*			*36.7*	*1.0*
Initial queue delay, d_3												
Control delay	*101.7*	*30.4*		*89.8*	*27.5*			*45.1*			*95.6*	*47.9*
Lane group LOS	*F*	*C*		*F*	*C*			*D*			*F*	*D*
Approach delay	*33.7*			*28.2*			*45.1*			*88.0*		
Approach LOS	*C*			*C*			*D*			*F*		
Intersection delay	*36.9*			X_C = *0.88*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Nanakuli*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*AM Peak Hour*	Analysis Year	*2024 + NPL B*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*0*	*1*	*0*	*0*	*1*	*1*
Lane group	*L*	*TR*		*L*	*TR*			*LTR*			*LT*	*R*
Volume, V (vph)	*91*	*1765*	*7*	*16*	*1057*	*303*	*0*	*0*	*2*	*292*	*1*	*63*
% Heavy vehicles, %HV	*3*	*3*	*0*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Pretimed (P) or actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up lost time, l_1	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Extension of effective green, e	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Arrival type, AT	*3*	*3*		*3*	*3*			*3*			*3*	*3*
Unit extension, UE	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	*3.0*
Filtering/metering, I	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Initial unmet demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*			*0.0*			*0.0*	*0.0*
Ped / Bike / RTOR volumes	*25*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*60*	*0*	*0*
Lane width	*12.0*	*12.0*		*12.0*	*12.0*			*12.0*			*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*		*0*	*0*			*0*			*0*	*0*
Min. time for pedestrians, G_p	*3.5*			*3.2*			*3.2*			*3.9*		

Phasing	EB Only	Thru & RT	WB Only	04	NS Perm	06	07	08
Timing	G = *12.0*	G = *83.0*	G = *5.0*	G =	G = *40.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *160.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*99*	*1926*		*17*	*1478*			*2*			*318*	*68*
Lane group capacity, c	*131*	*2194*		*55*	*1973*			*399*			*335*	*364*
v/c ratio, X	*0.76*	*0.88*		*0.31*	*0.75*			*0.01*			*0.95*	*0.19*
Total green ratio, g/C	*0.08*	*0.63*		*0.03*	*0.58*			*0.25*			*0.25*	*0.25*
Uniform delay, d_1	*72.6*	*24.9*		*75.8*	*24.8*			*45.1*			*59.0*	*47.2*
Progression factor, PF	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Delay calibration, k	*0.50*	*0.50*		*0.50*	*0.50*			*0.50*			*0.50*	*0.50*
Incremental delay, d_2	*32.8*	*5.4*		*14.0*	*2.7*			*0.0*			*37.8*	*1.1*
Initial queue delay, d_3												
Control delay	*105.3*	*30.3*		*89.8*	*27.5*			*45.1*			*96.8*	*48.3*
Lane group LOS	*F*	*C*		*F*	*C*			*D*			*F*	*D*
Approach delay	*34.0*			*28.2*			*45.1*			*88.3*		
Approach LOS	*C*			*C*			*D*			*F*		
Intersection delay	*37.1*			X_C = *0.88*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Nanakuli*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*MD Peak Hour*	Analysis Year	*2024*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*0*	*1*	*0*	*0*	*1*	*1*
Lane group	*L*	*TR*		*L*	*TR*			*LTR*			*LT*	*R*
Volume, V (vph)	*42*	*1226*	*8*	*8*	*674*	*206*	*2*	*13*	*6*	*152*	*10*	*44*
% Heavy vehicles, %HV	*3*	*3*	*0*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Pretimed (P) or actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up lost time, l_1	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Extension of effective green, e	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Arrival type, AT	*3*	*3*		*3*	*3*			*3*			*3*	*3*
Unit extension, UE	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	*3.0*
Filtering/metering, I	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Initial unmet demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*			*0.0*			*0.0*	*0.0*
Ped / Bike / RTOR volumes	*25*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*60*	*0*	*0*
Lane width	*12.0*	*12.0*		*12.0*	*12.0*			*12.0*			*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*		*0*	*0*			*0*			*0*	*0*
Min. time for pedestrians, G_p	*3.4*			*3.2*			*3.2*			*3.6*		

Phasing	EB Only	Thru & RT	WB Only	04	NS Perm	06	07	08
Timing	G = *7.0*	G = *29.0*	G = *4.0*	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*46*	*1342*		*9*	*957*			*23*			*176*	*48*
Lane group capacity, c	*136*	*1598*		*78*	*1431*			*579*			*444*	*494*
v/c ratio, X	*0.34*	*0.84*		*0.12*	*0.67*			*0.04*			*0.40*	*0.10*
Total green ratio, g/C	*0.08*	*0.46*		*0.04*	*0.42*			*0.33*			*0.33*	*0.33*
Uniform delay, d_1	*39.3*	*21.6*		*41.3*	*20.9*			*20.3*			*23.0*	*20.7*
Progression factor, PF	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Delay calibration, k	*0.50*	*0.50*		*0.50*	*0.50*			*0.50*			*0.50*	*0.50*
Incremental delay, d_2	*6.6*	*5.5*		*3.0*	*2.5*			*0.1*			*2.6*	*0.4*
Initial queue delay, d_3												
Control delay	*45.9*	*27.1*		*44.3*	*23.4*			*20.4*			*25.7*	*21.1*
Lane group LOS	*D*	*C*		*D*	*C*			*C*			*C*	*C*
Approach delay	*27.7*			*23.6*			*20.4*			*24.7*		
Approach LOS	*C*			*C*			*C*			*C*		
Intersection delay	*25.9*			X_C = *0.62*			Intersection LOS			*C*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Nanakuli*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/28/2012*	Jurisdiction	*HWY*
Time Period	*MD Peak Hour*	Analysis Year	*2024 + NPL A*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*0*	*1*	*0*	*0*	*1*	*1*
Lane group	*L*	*TR*		*L*	*TR*			*LTR*			*LT*	*R*
Volume, V (vph)	*43*	*1252*	*8*	*8*	*710*	*206*	*2*	*13*	*6*	*152*	*10*	*46*
% Heavy vehicles, %HV	*3*	*3*	*0*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Pretimed (P) or actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up lost time, l_1	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Extension of effective green, e	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Arrival type, AT	*3*	*3*		*3*	*3*			*3*			*3*	*3*
Unit extension, UE	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	*3.0*
Filtering/metering, I	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Initial unmet demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*			*0.0*			*0.0*	*0.0*
Ped / Bike / RTOR volumes	*25*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*60*	*0*	*0*
Lane width	*12.0*	*12.0*		*12.0*	*12.0*			*12.0*			*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*		*0*	*0*			*0*			*0*	*0*
Min. time for pedestrians, G_p	*3.4*			*3.2*			*3.2*			*3.6*		

Phasing	EB Only	Thru & RT	WB Only	04	NS Perm	06	07	08
Timing	G = *7.0*	G = *29.0*	G = *4.0*	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*47*	*1370*		*9*	*996*			*23*			*176*	*50*
Lane group capacity, c	*136*	*1599*		*78*	*1433*			*579*			*444*	*494*
v/c ratio, X	*0.35*	*0.86*		*0.12*	*0.70*			*0.04*			*0.40*	*0.10*
Total green ratio, g/C	*0.08*	*0.46*		*0.04*	*0.42*			*0.33*			*0.33*	*0.33*
Uniform delay, d_1	*39.3*	*21.9*		*41.3*	*21.3*			*20.3*			*23.0*	*20.7*
Progression factor, PF	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Delay calibration, k	*0.50*	*0.50*		*0.50*	*0.50*			*0.50*			*0.50*	*0.50*
Incremental delay, d_2	*6.8*	*6.1*		*3.0*	*2.8*			*0.1*			*2.6*	*0.4*
Initial queue delay, d_3												
Control delay	*46.2*	*28.0*		*44.3*	*24.1*			*20.4*			*25.7*	*21.1*
Lane group LOS	*D*	*C*		*D*	*C*			*C*			*C*	*C*
Approach delay	*28.6*			*24.2*			*20.4*			*24.7*		
Approach LOS	*C*			*C*			*C*			*C*		
Intersection delay	*26.6*			X_C = *0.63*			Intersection LOS			*C*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Nanakuli*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*MD Peak Hour*	Analysis Year	*2024 + NPL B*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*0*	*1*	*0*	*0*	*1*	*1*
Lane group	*L*	*TR*		*L*	*TR*			*LTR*			*LT*	*R*
Volume, V (vph)	*56*	*1240*	*8*	*8*	*712*	*206*	*2*	*13*	*6*	*165*	*10*	*73*
% Heavy vehicles, %HV	*3*	*3*	*0*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Pretimed (P) or actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up lost time, l_1	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Extension of effective green, e	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Arrival type, AT	*3*	*3*		*3*	*3*			*3*			*3*	*3*
Unit extension, UE	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	*3.0*
Filtering/metering, I	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Initial unmet demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*			*0.0*			*0.0*	*0.0*
Ped / Bike / RTOR volumes	*25*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*60*	*0*	*0*
Lane width	*12.0*	*12.0*		*12.0*	*12.0*			*12.0*			*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*		*0*	*0*			*0*			*0*	*0*
Min. time for pedestrians, G_p	*3.4*			*3.2*			*3.2*			*3.6*		

Phasing	EB Only	Thru & RT	WB Only	04	NS Perm	06	07	08
Timing	G = *7.0*	G = *29.0*	G = *4.0*	G =	G = *30.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *90.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*61*	*1357*		*9*	*998*			*23*			*190*	*79*
Lane group capacity, c	*136*	*1599*		*78*	*1433*			*579*			*444*	*494*
v/c ratio, X	*0.45*	*0.85*		*0.12*	*0.70*			*0.04*			*0.43*	*0.16*
Total green ratio, g/C	*0.08*	*0.46*		*0.04*	*0.42*			*0.33*			*0.33*	*0.33*
Uniform delay, d_1	*39.7*	*21.7*		*41.3*	*21.3*			*20.3*			*23.3*	*21.1*
Progression factor, PF	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Delay calibration, k	*0.50*	*0.50*		*0.50*	*0.50*			*0.50*			*0.50*	*0.50*
Incremental delay, d_2	*10.3*	*5.8*		*3.0*	*2.8*			*0.1*			*3.0*	*0.7*
Initial queue delay, d_3												
Control delay	*50.0*	*27.6*		*44.3*	*24.1*			*20.4*			*26.3*	*21.8*
Lane group LOS	*D*	*C*		*D*	*C*			*C*			*C*	*C*
Approach delay	*28.5*			*24.3*			*20.4*			*25.0*		
Approach LOS	*C*			*C*			*C*			*C*		
Intersection delay	*26.5*			X_C = *0.64*			Intersection LOS			*C*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Nanakuli*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*PM Peak Hour*	Analysis Year	*2024*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*0*	*1*	*0*	*0*	*1*	*1*
Lane group	*L*	*TR*		*L*	*TR*			*LTR*			*LT*	*R*
Volume, V (vph)	*68*	*1218*	*16*	*3*	*1967*	*280*	*13*	*7*	*6*	*183*	*9*	*56*
% Heavy vehicles, %HV	*3*	*3*	*0*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Pretimed (P) or actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up lost time, l_1	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Extension of effective green, e	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Arrival type, AT	*3*	*3*		*3*	*3*			*3*			*3*	*3*
Unit extension, UE	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	*3.0*
Filtering/metering, I	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Initial unmet demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*			*0.0*			*0.0*	*0.0*
Ped / Bike / RTOR volumes	*25*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*60*	*0*	*0*
Lane width	*12.0*	*12.0*		*12.0*	*12.0*			*12.0*			*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*		*0*	*0*			*0*			*0*	*0*
Min. time for pedestrians, G_p	*3.7*			*3.2*			*3.2*			*4.3*		

Phasing	EB Only	Thru & RT	WB Only	04	NS Perm	06	07	08
Timing	G = *12.0*	G = *163.0*	G = *5.0*	G =	G = *40.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *240.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*74*	*1341*		*3*	*2442*			*29*			*209*	*61*
Lane group capacity, c	*88*	*2630*		*37*	*2485*			*168*			*224*	*233*
v/c ratio, X	*0.84*	*0.51*		*0.08*	*0.98*			*0.17*			*0.93*	*0.26*
Total green ratio, g/C	*0.05*	*0.75*		*0.02*	*0.72*			*0.17*			*0.17*	*0.17*
Uniform delay, d_1	*113.1*	*12.1*		*115.2*	*32.1*			*85.8*			*98.7*	*87.1*
Progression factor, PF	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Delay calibration, k	*0.50*	*0.50*		*0.50*	*0.50*			*0.50*			*0.50*	*0.50*
Incremental delay, d_2	*59.2*	*0.7*		*4.2*	*14.4*			*2.2*			*44.9*	*2.7*
Initial queue delay, d_3												
Control delay	*172.2*	*12.9*		*119.5*	*46.5*			*88.0*			*143.6*	*89.9*
Lane group LOS	*F*	*B*		*F*	*D*			*F*			*F*	*F*
Approach delay	*21.2*			*46.6*			*88.0*			*131.5*		
Approach LOS	*C*			*D*			*F*			*F*		
Intersection delay	*43.7*			X_C = *0.97*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	*JN*	Intersection	*Farrington Nanakuli*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/28/2012*	Jurisdiction	*HWY*
Time Period	*PM Peak Hour*	Analysis Year	*2024 + NPL A*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*0*	*1*	*0*	*0*	*1*	*1*
Lane group	*L*	*TR*		*L*	*TR*			*LTR*			*LT*	*R*
Volume, V (vph)	*69*	*1241*	*16*	*3*	*2005*	*280*	*13*	*7*	*6*	*183*	*9*	*57*
% Heavy vehicles, %HV	*3*	*3*	*0*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Pretimed (P) or actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up lost time, l_1	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Extension of effective green, e	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Arrival type, AT	*3*	*3*		*3*	*3*			*3*			*3*	*3*
Unit extension, UE	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	*3.0*
Filtering/metering, I	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Initial unmet demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*			*0.0*			*0.0*	*0.0*
Ped / Bike / RTOR volumes	*25*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*60*	*0*	*0*
Lane width	*12.0*	*12.0*		*12.0*	*12.0*			*12.0*			*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*		*0*	*0*			*0*			*0*	*0*
Min. time for pedestrians, G_p	*3.7*			*3.2*			*3.2*			*4.3*		

Phasing	EB Only	Thru & RT	WB Only	04	NS Perm	06	07	08
Timing	G = *12.0*	G = *163.0*	G = *5.0*	G =	G = *40.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *240.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*75*	*1366*		*3*	*2483*			*29*			*209*	*62*
Lane group capacity, c	*88*	*2630*		*37*	*2485*			*168*			*224*	*233*
v/c ratio, X	*0.85*	*0.52*		*0.08*	*1.00*			*0.17*			*0.93*	*0.27*
Total green ratio, g/C	*0.05*	*0.75*		*0.02*	*0.72*			*0.17*			*0.17*	*0.17*
Uniform delay, d_1	*113.1*	*12.3*		*115.2*	*33.4*			*85.8*			*98.7*	*87.2*
Progression factor, PF	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Delay calibration, k	*0.50*	*0.50*		*0.50*	*0.50*			*0.50*			*0.50*	*0.50*
Incremental delay, d_2	*61.4*	*0.7*		*4.2*	*17.9*			*2.2*			*44.9*	*2.8*
Initial queue delay, d_3												
Control delay	*174.5*	*13.0*		*119.5*	*51.3*			*88.0*			*143.6*	*90.0*
Lane group LOS	*F*	*B*		*F*	*D*			*F*			*F*	*F*
Approach delay	*21.4*			*51.4*			*88.0*			*131.3*		
Approach LOS	*C*			*D*			*F*			*F*		
Intersection delay	*46.5*			X_C = *0.98*			Intersection LOS			*D*		

HCS2000™ DETAILED REPORT

General Information		***Site Information***	
Analyst	*JN*	Intersection	*Farrington Nanakuli*
Agency or Co.	*Julian Ng Incorporated*	Area Type	*All other areas*
Date Performed	*12/21/2012*	Jurisdiction	*HWY*
Time Period	*PM Peak Hour*	Analysis Year	*2024 + NPL B*
		Project ID	*NPL*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	*1*	*2*	*0*	*1*	*2*	*0*	*0*	*1*	*0*	*0*	*1*	*1*
Lane group	*L*	*TR*		*L*	*TR*			*LTR*			*LT*	*R*
Volume, V (vph)	*80*	*1231*	*16*	*3*	*2006*	*280*	*13*	*7*	*6*	*195*	*9*	*80*
% Heavy vehicles, %HV	*3*	*3*	*0*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*
Peak-hour factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Pretimed (P) or actuated (A)	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*	*P*
Start-up lost time, l_1	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Extension of effective green, e	*2.0*	*2.0*		*2.0*	*2.0*			*2.0*			*2.0*	*2.0*
Arrival type, AT	*3*	*3*		*3*	*3*			*3*			*3*	*3*
Unit extension, UE	*3.0*	*3.0*		*3.0*	*3.0*			*3.0*			*3.0*	*3.0*
Filtering/metering, I	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Initial unmet demand, Q_b	*0.0*	*0.0*		*0.0*	*0.0*			*0.0*			*0.0*	*0.0*
Ped / Bike / RTOR volumes	*25*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*60*	*0*	*0*
Lane width	*12.0*	*12.0*		*12.0*	*12.0*			*12.0*			*12.0*	*12.0*
Parking / Grade / Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking maneuvers, N_m												
Buses stopping, N_B	*0*	*0*		*0*	*0*			*0*			*0*	*0*
Min. time for pedestrians, G_p	*3.7*			*3.2*			*3.2*			*4.3*		

Phasing	EB Only	Thru & RT	WB Only	04	NS Perm	06	07	08
Timing	G = *12.0*	G = *163.0*	G = *5.0*	G =	G = *40.0*	G =	G =	G =
	Y = *5*	Y = *5*	Y = *5*	Y =	Y = *5*	Y =	Y =	Y =
Duration of Analysis, T = *0.25*						Cycle Length, C = *240.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	*87*	*1355*		*3*	*2484*			*29*			*222*	*87*
Lane group capacity, c	*88*	*2630*		*37*	*2485*			*160*			*224*	*233*
v/c ratio, X	*0.99*	*0.52*		*0.08*	*1.00*			*0.18*			*0.99*	*0.37*
Total green ratio, g/C	*0.05*	*0.75*		*0.02*	*0.72*			*0.17*			*0.17*	*0.17*
Uniform delay, d_1	*113.9*	*12.2*		*115.2*	*33.5*			*85.9*			*99.8*	*88.9*
Progression factor, PF	*1.000*	*1.000*		*1.000*	*1.000*			*1.000*			*1.000*	*1.000*
Delay calibration, k	*0.50*	*0.50*		*0.50*	*0.50*			*0.50*			*0.50*	*0.50*
Incremental delay, d_2	*92.9*	*0.7*		*4.2*	*18.0*			*2.5*			*57.9*	*4.5*
Initial queue delay, d_3												
Control delay	*206.8*	*12.9*		*119.5*	*51.4*			*88.4*			*157.7*	*93.4*
Lane group LOS	*F*	*B*		*F*	*D*			*F*			*F*	*F*
Approach delay	*24.6*			*51.5*			*88.4*			*139.6*		
Approach LOS	*C*			*D*			*F*			*F*		
Intersection delay	*49.1*			X_C = *1.00*			Intersection LOS			*D*		