

**FILE COPY**

**NOV 23 2015**

**DAVID Y. IGE  
GOVERNOR  
STATE OF HAWAII**



**JOBIE M. K. MASAGATANI  
CHAIRMAN  
HAWAIIAN HOMES COMMISSION**

**SHAN S. TSUTSUI  
LT GOVERNOR  
STATE OF HAWAII**

**WILLIAM J. AILA, JR.  
DEPUTY TO THE CHAIRMAN**

**STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS**

P. O. BOX 1879  
HONOLULU, HAWAII 96805

November 9, 2015

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

**RECEIVED**  
**15 NOV 10 P 3:07**  
**OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL**

Dear Director Glenn,

With this letter, the Department of Hawaiian Home Lands hereby transmits the draft environmental assessment and anticipated finding of no significant impact (DEA-AFONSI) for the St. Rita Catholic Church Master Plan situated at TMK (1) 8-9-005:001, in the Wai'anae District on the island of O'ahu for publication in the next available edition of the Environmental Notice.

Enclosed is a completed OEQC Publication Form, two copies of the DEA-AFONSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

If there are any questions, please contact Julie-Ann Cachola, Planner at (808) 779-5084 or (808) 620-9483.

Aloha and Mahalo,

Kaleo Manuel, Acting Planning Program  
Manager

Enclosures

Cc: St. Rita Catholic Church

**FILE COPY**

July 2015 Revision

**APPLICANT ACTION  
SECTION 343-5(e), HRS  
PUBLICATION FORM**

**NOV 23 2015**

**Project Name: St. Rita Catholic Church Master Plan**  
**HRS §343-5 Trigger(s): Use of State Lands (Hawaiian Home Lands) and demolition and construction of new Church within the Special Management Area**

**Island:** O'ahu  
**District:** Wai'anae  
**TMK:** (1) 8-9-005:001, (1) 8-9-007:002 (por.) and (1) 8-9-007:004 (por.)  
**Permits:** NPDES, ADA, SMA Use Permit (Major), CUP-minor, Building, Street Usage, Grading, Grubbing, Stockpiling, Trenching

**Approving Agency:** Department of Hawaiian Home Lands  
Planning Office  
P.O. Box 1879  
Honolulu, HI 96805  
Telephone: (808) 620-9483 or (808) 779-5084  
Contact: Julie-Ann Cachola, Planner  
[julie-ann.cachola@hawaii.gov](mailto:julie-ann.cachola@hawaii.gov)

**Applicant:** Roman Catholic Church – State of Hawaii  
St. Rita's Church  
89-318 Farrington Highway  
Wai'anae, Hawai'i 96792  
Telephone: (808) 668-7833  
Contact: Deacon Hal Levy

**Consultant:** Hawai'i Planning, LLC  
1031 Nu'uuanu Avenue, #2306  
Honolulu, Hawai'i 96817  
Telephone: 808-347-3999  
Contact: Dennis Silva, Jr. AICP

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

15 NOV 10 P 3:08

RECEIVED

**Status (check one only):**

**DEA-AFNSI**

Submit the approving 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@hawaii.gov](mailto:oeqc@hawaii.gov); a 30-day comment period ensues upon publication in the periodic bulletin.

**FEA-FONSI**

Submit the approving 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@hawaii.gov](mailto:oeqc@hawaii.gov); no comment period ensues upon publication in the periodic bulletin.

**FEA-EISPN**

Submit the approving 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@hawaii.gov](mailto:oeqc@hawaii.gov); a 30-day consultation period ensues upon publication in the periodic bulletin.

**Act 172-12 EISPN**

Submit the approving agency notice of determination/transmittal on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to [oeqc@hawaii.gov](mailto:oeqc@hawaii.gov). NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.

**DEIS**

The applicant simultaneously transmits to both the OEQC and the approving agency, 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@hawaii.gov](mailto:oeqc@hawaii.gov)); a 45-day comment period ensues upon publication in the periodic bulletin.

FEIS

The applicant simultaneously transmits to both the OEQC and the approving agency, 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](mailto:oeqc@doh.hawaii.gov)); no comment period ensues upon publication in the periodic bulletin.

Section 11-200-23  
Determination

The approving agency simultaneously transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the applicant. No comment period ensues upon publication in the periodic bulletin.

Statutory hammer  
Acceptance

The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it failed to timely make a determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and that the applicant's FEIS is deemed accepted as a matter of law.

Section 11-200-27  
Determination

The approving agency simultaneously transmits its notice to both the applicant 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):

In 1934, St. Rita Catholic Church was granted a license to approximately 1.7 acres of Hawaiian Home Lands in Nānākuli in order to service the new homestead community at Nānākuli. The Church is over 100 years old and the accessory structures were constructed in the 1930s. There were about 100 homesteaders at the time. Today, Nānākuli is the largest homestead community in the State, with 1,050 lessees.

St. Rita Catholic Church is proposing to construct a new meeting hall to accommodate 300 people, demolish and construct a new church to expand its occupancy load from 180 people to 400 people, and construct a single-story, 2,200 square-foot office building.

The church facilities are commonly utilized in areas of Education, Liturgy, Outreach Programs, and Community-Oriented activities. In Education and Liturgy, the facilities are used for Bible Study, youth ministry, socials and dances, and special presentations. The Outreach programs assist in counseling, services such as baby sitting during meetings and church mass services, and prayer groups to work with people in need. In addition, the State of Hawai'i Department of Education (DOE), American Legion, Elderly groups, and activities for better health care such as aerobic and dieting workshops frequently utilize the facilities. Coupled with the growth in population in this region in the last 60 years and the facility usage described above, there is ever-increasing demand for expansion of the St. Rita Catholic Church.



Draft Environmental Assessment  
St. Rita Catholic Church Master Plan  
Nānākuli, O‘ahu, Hawai‘i  
November 2015

Prepared for:  
The Roman Catholic Church in Hawai‘i  
St. Rita Catholic Church

Prepared by:



Hawai‘i Planning, LLC

## Table of Contents

<b>1.0 INTRODUCTION AND PROJECT DESCRIPTION .....</b>	<b>8</b>
1.1 Purpose of the Environmental Assessment .....	8
1.4.1 Need for Project Improvements .....	14
1.4.2 Project Objectives .....	14
1.4.3 New Facilities .....	15
1.5.2 Landscape Improvements .....	16
1.6 Project Phasing and Estimated Costs .....	16
1.7 Listing of Permits and Approvals.....	17
<b>2.0 AFFECTED ENVIRONMENT .....</b>	<b>19</b>
2.1 Geology, Topography and Soils.....	19
2.1.1 Topography .....	20
2.1.2 Soils.....	20
2.2 Natural Hazards .....	21
2.2.1 Earthquake Hazards.....	21
2.2.2 Hurricane Hazards.....	23
2.2.3 Tsunami and Flood Hazards.....	24
2.3 Hydrology .....	25
2.3.1 Hydrogeological Resources.....	26
2.3.2 Surface and Coastal Waters.....	26
2.4 Botanical and Faunal Resources .....	27
2.4.1 Existing Botanical Resources .....	27
2.4.2 Existing Avifauna and Faunal Resources .....	27
2.5 Air Quality.....	28
2.6 Noise.....	28
2.7 Visual Resources .....	29
2.8 Historic, Archaeological, and Cultural Resources .....	30
2.8.1 Historic and Archaeological Resources .....	30

2.8.2	Results of Fieldwork .....	31
2.8.3	Description of Historic Properties and Significance .....	33
2.8.4	Cultural Resources .....	34
2.9	Infrastructure Facilities .....	34
2.9.1	Water and Fire System Facilities .....	34
2.9.2	Wastewater Facilities.....	34
2.9.3	Grading and Drainage .....	35
2.9.4	Solid Waste Facilities.....	36
2.9.5	Transportation Facilities.....	36
2.10	Public Facilities and Utilities .....	40
2.10.1	Educational Facilities.....	40
2.10.2	Recreational Facilities.....	40
2.10.3	Police, Fire Protection and Emergency Services.....	40
2.10.4	Electrical and Communication Facilities .....	41
<b>3.0</b>	<b>ENVIRONMENTAL CONSEQUENCES .....</b>	<b>42</b>
3.1	Geology, Topography and Soils.....	42
3.2	Natural Hazards .....	43
3.2.1	Earthquakes .....	43
3.2.2	Hurricanes .....	44
3.2.3	Tsunami and Flooding.....	44
3.3	Hydrology .....	45
3.3.1	Hydrogeological Resources.....	45
3.3.2	Surface and Coastal Waters.....	45
3.4	Botanical and Faunal Resources .....	46
3.5	Air Quality.....	46
3.6	Noise.....	47
3.7	Visual Resources .....	48
3.8	Historic, Archaeological, and Cultural Resources .....	48
3.9	Socio-Economic Factors .....	50
3.9.1	Economic and Fiscal Factors.....	51

3.9.2	Social Factors .....	52
3.10	Infrastructure Facilities .....	52
3.10.1	Water and Fire System Facilities .....	52
3.10.2	Wastewater Facilities .....	53
3.10.3	Grading and Drainage .....	53
3.10.4	Solid Waste Facilities .....	53
3.10.5	Transportation Facilities .....	53
3.11	Public Facilities and Utilities .....	54
3.11.1	Educational Facilities .....	54
3.11.2	Medical Facilities .....	54
3.11.3	Recreational Facilities .....	55
3.11.4	Police, Fire Protection, and Emergency Services .....	55
3.11.5	Electrical and Communication Facilities .....	55
3.12	Secondary and Cumulative Impacts .....	55
3.12.1	Secondary Effects .....	55
3.12.2	Cumulative Impacts .....	56
<b>4.0</b>	<b>CONFORMANCE WITH STATE AND COUNTY PLANS, POLICIES, AND CONTROLS .....</b>	<b>58</b>
4.1	State Land Use District .....	58
4.2	Chapter 344, HRS, State Environmental Policy .....	58
4.3	Coastal Zone Management .....	62
4.4	Historic Preservation .....	66
4.5	City and County of Honolulu General Plan .....	67
4.6	City and County of Honolulu Waianae Sustainable Communities Plan .....	68
4.7	City Zoning Regulations .....	69
4.7.1	Consistency with District Objectives .....	69
4.7.2	Consistency with Development Standards .....	70
4.7.3	City Land Use Approvals Required .....	70
4.8	City Special Management Area .....	70
<b>5.0</b>	<b>ALTERNATIVES CONSIDERED .....</b>	<b>77</b>

5.1	No Action Alternative.....	77
5.2	Delayed Action Alternative .....	77
5.3	Project Design Alternatives .....	77
5.3.1	Rehabilitate Existing Buildings Alternative.....	77
5.3.2	New Facilities Alternative.....	77
<b>6.0</b>	<b>CONSULTED AGENCIES AND ORGANIZATIONS .....</b>	<b>78</b>
6.1	Pre-Assessment Consultation.....	78
6.2	Presentations to Organizations .....	79
6.2.1	Nānākuli-Mā’ili Neighborhood Board .....	79
6.2.2	Department of Hawaiian Homelands .....	79
<b>7.0</b>	<b>FINDINGS AND ANTICIPATED DETERMINATION .....</b>	<b>80</b>
7.1	Findings .....	80
7.2	Anticipated Determination .....	84
<b>8.0</b>	<b>REFERENCES.....</b>	<b>85</b>

## APPENDICES

- A – Pre-Consultation Comments and Response Letters
- B – Architectural Plans
- C – Tree Assessment
- D – Archaeological Assessment
- E – Due Diligence Report – Infrastructure
- F – Traffic Impact Analysis Report
- G – Department of Hawaiian Homelands Conditional Approval Letter

## **FIGURES**

- 1 – Location Map
- 2 – Tax Map Key
- 3 – Aerial Photograph
- 4 – Existing Site Plan
- 5 – Site Photographs
- 6 – Proposed Site Plan
- 7 – Rendering
- 8 – Topography Map
- 9 – Soil Survey
- 10 – Flood Zone Map
- 11 – Wai‘anae Sustainable Communities Plan Map
- 12 – Special Management Area Map

## **TABLES**

- 1 – Summary of St. Rita Church Activities
- 2 – Project Phasing and Estimated Costs
- 3 – Allowable Noise Limits
- 4 – Building Summary
- 5 – Level of Service Criteria
- 6 – Demographic Information for Nānākuli Census Data Place (CDP), 2010

## **EXHIBITS**

1 – History of Volcanic and Seismic Hazards (USGS 2002)

2 – Major Storm Tracks (USGS 2002)

## ACRONYMS

<b>ADA</b>	American with Disability Act
<b>ALISH</b>	Agricultural Lands of Importance to the State of Hawai'i
<b>BMP</b>	Best Management Practices
<b>BWS</b>	Board of Water Supply
<b>CDP</b>	Census Data Place
<b>CWRM</b>	Commission on Water Resource Management
<b>CZM</b>	Coastal Zone Management
<b>DBEDT</b>	Department of Business, Economic Development & Tourism
<b>DHHL</b>	Department of Hawaiian Home Land
<b>DLNR</b>	State Department of Land and Natural Resources
<b>DOE</b>	State of Hawai'i Department of Education
<b>DOH</b>	State of Hawai'i Department of Health
<b>DOT</b>	State of Hawai'i Department of Transportation
<b>DPP</b>	Department of Planning & Permitting
<b>EA</b>	Environmental Assessment
<b>FEMA</b>	Federal Emergency Management Agency
<b>FHAT</b>	State of Hawai'i Flood Hazard Assessment Tool
<b>FHWA</b>	Federal Highway Administration
<b>FONSI</b>	Finding of No Significant Impact
<b>HAR</b>	Hawai'i Administrative Rules
<b>HCM</b>	Highway Capacity Manual
<b>HECO</b>	Hawaiian Electric Company
<b>HRS</b>	Hawai'i Revised Statutes
<b>IWS</b>	Individual Wastewater System
<b>LOS</b>	Level of Service
<b>LSB</b>	University of Hawai'i Land Study Bureau
<b>LUC</b>	State of Hawai'i Land Use Commission
<b>LUO</b>	Land Use Ordinance
<b>NAAQS</b>	National Ambient Air Quality Standards
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>ROH</b>	Revised Ordinances of Honolulu
<b>SCP</b>	Wai'anae Sustainable Communities Plan
<b>SHPD</b>	DLNR - State Historic Preservation Division
<b>SMA</b>	Special Management Area
<b>TIAR</b>	Traffic Impact Analysis Report
<b>TMK</b>	Tax Map Key
<b>TMP</b>	Traffic Management Plan
<b>USGS</b>	United States Department of the Interior, Geological Survey
<b>WRCC</b>	Western Regional Climate Center
<b>WTE</b>	Waste-to-Energy

## **1.0 INTRODUCTION AND PROJECT DESCRIPTION**

The St. Rita Catholic Church is proposing to construct a new multi-purpose building to accommodate 300 people, renovate and extend the existing church to accommodate from the present occupancy load of 180 to 400, and construct a single-story office building approximately 2,200 square feet.

### **1.1 Purpose of the Environmental Assessment**

The St. Rita Catholic Church triggers the State environmental review under Chapter 343, Hawai'i Revised Statutes (HRS) because the new meeting hall and the demolition and construction of a new church occur within the City and County of Honolulu's Special Management Area (SMA) and requires a SMA Use Permit – Major from the City Council. Therefore, this project is also subject to the State's environmental review process under Chapter 25 – SMA, Revised Ordinances of Honolulu (ROH), as amended.

#### **Applicant and Approving Agency**

Hawai'i Planning, LLC is serving as the "Agent" on behalf of the Roman Catholic Church in Hawai'i (Applicant) in the preparation of this environmental document. The project is an "Applicant Action" under the State's environmental review statutes.

This Draft Environmental Assessment (EA) was prepared pursuant to Chapter 343, Environmental Impact Statements, HRS, and Title 11, Chapter 200 – Environmental Impact Statement Rules. A Negative Declaration, also referred to as a Finding of No Significant Impact (FONSI), is anticipated for this project.

Pre-assessment consultation was conducted with various agencies and community organizations under the environmental review process. This process is elaborated later in Chapter 6 – Consulted Agencies and Organizations in this Draft EA. Copies of

comment letters received from consulted parties and responses are included in Pre-Consultation Comments and Responses – Appendix A.

### **Project Summary**

**Project Name:** St. Rita Catholic Church Master Plan

**Applicant:** Roman Catholic Church – State of Hawai'i  
St. Rita's Church  
89-318 Farrington Highway  
Wai'anae, Hawai'i 96792  
Telephone: (808) 668-7833  
Contact: Deacon Hal Levy

**Authorized Agent:** Hawai'i Planning, LLC  
1031 Nu'uuanu Avenue, #2306  
Honolulu, Hawai'i 96817  
Telephone: (808) 347-3999  
Contact: Dennis Silva, Jr., AICP

**Approving Agency:** Department of Hawaiian Homelands (DHHL)  
State of Hawai'i

**Property Owner:** Department of Hawaiian Homelands, State of Hawai'i

**Project Location:** Nānākuli, City and County of Honolulu

**Tax Map Keys:** 8-9-005: 001 & 8-9-007: Por. 002 & Por. 004

**Project Area:** 37,876 square feet (church, parking, & new meeting hall) & 36,024 square feet (parking lot). Approximate Total of 1.7 acres.

**Project Description:** The St. Rita Catholic Church is proposing to construct a new meeting hall to accommodate 300 people, demolish and construct a new church to accommodate from the present occupancy load of 180 to 400, and construct a single-story office building of approximately 2,200 square feet.

**Existing Use:** Church with portable trailers, Quonset hut, and parking lot.

**State Land Use District Classification:** Urban

**Wai‘anae Sustainable  
Communities Plan:**

Rural Community

**Special Management Area:**

The project area is within the Special Management Area.

**City Zoning District:**

R-5 – Residential (Church, facilities, and parking) and Country (part of parking lot)

**Applicant Background**

A narrative history of St. Rita Catholic Church is described in this section. St. Rita was established and attached to Sacred Hearts as a mission church in June 1928. The Nānākuli Hawaiian Homestead was opening up homestead lots in the Nānāikapono area in 1931 and the new homesteaders petitioned the Hawaiian Homes Commission for lots of various churches including a Catholic church. To date, St. Rita in Nānākuli and Malia Puka o ka Lani in Keaukaha are the only two Roman Catholic churches on Hawaiian Homelands originally founded to serve Native Hawaiians and now also serve their greater neighborhood communities.

In 1955, with the help of Mr. Eyre Scott and others, the church building was expanded with two wings off either side of the original building and the twin bell towers were fashioned. The church building style was modeled after similar style churches built by the Sacred Hearts Fathers throughout the Hawaiian Islands (<http://stritananakuli.org/history.html>).

In 1998, with the existing facilities in dire need of repairs from termite damage along with population growth, St. Rita embarked on an ambitious plan to provide additional space and safer facilities. A two-phased development plan was implemented.

The City allowed the trailers to remain as long as St. Rita replaces them as soon as possible. The existing portables have been in use for the past two decades as a

primary support for additional spaces to meet the growing church demand in the Nānākuli community.

## **1.2 Project Location and Vicinity**

The improvements proposed for St. Rita Catholic Church would occur within properties owned by the Department of Hawaiian Homelands (DHHL) and leased by the church located in the Nānākuli community on the western end of the Island of O’ahu ; Tax Map Keys 8-9-005: 001 & 8-9-007: 004 (portion). The project site is situated along Farrington Highway, mauka and across the Nānākuli Beach Park. Figure 1 is a graphic showing the location of the project. Figure 2 – Tax Map Key illustrates the TMKs in which St. Rita Church is situated.

As illustrated in Figure 3 – Aerial Photograph and Figure 4 – Existing Site Plan, the primary vehicular thoroughfares in the immediate area of the project site are Farrington Highway, or Nānākuli Avenue and right-turn on Pua Avenue which runs roughly parallel to Farrington Highway, which is located about 450 feet mauka (east) of Farrington Highway. Figure 4 also illustrates existing church and associated facilities.

Nānākuli is located within the Wai’anae Sustainable Communities Plan (SCP) region. St. Rita Catholic Church is located within the Rural Community SCP designation. Rural Community areas are defined by a line that generally follows the limits of the Community Growth Boundary, which consists of existing urban and suburban development along the Farrington Highway corridor. Chapter 4 of this Draft EA will provide a more detailed discussion of the Project’s compliance with the Wai’anae SCP.

### **Existing Surrounding Uses**

Uses in the surrounding vicinity consist of predominantly of residential use to the west and north (mauka) of the church, Nānākuli Beach Park to the south (makai), and vacant land to the east of the parking lot of St. Rita Church. Figure 5 – Site Photographs illustrates the existing conditions of St. Rita Church and the surrounding vicinity.

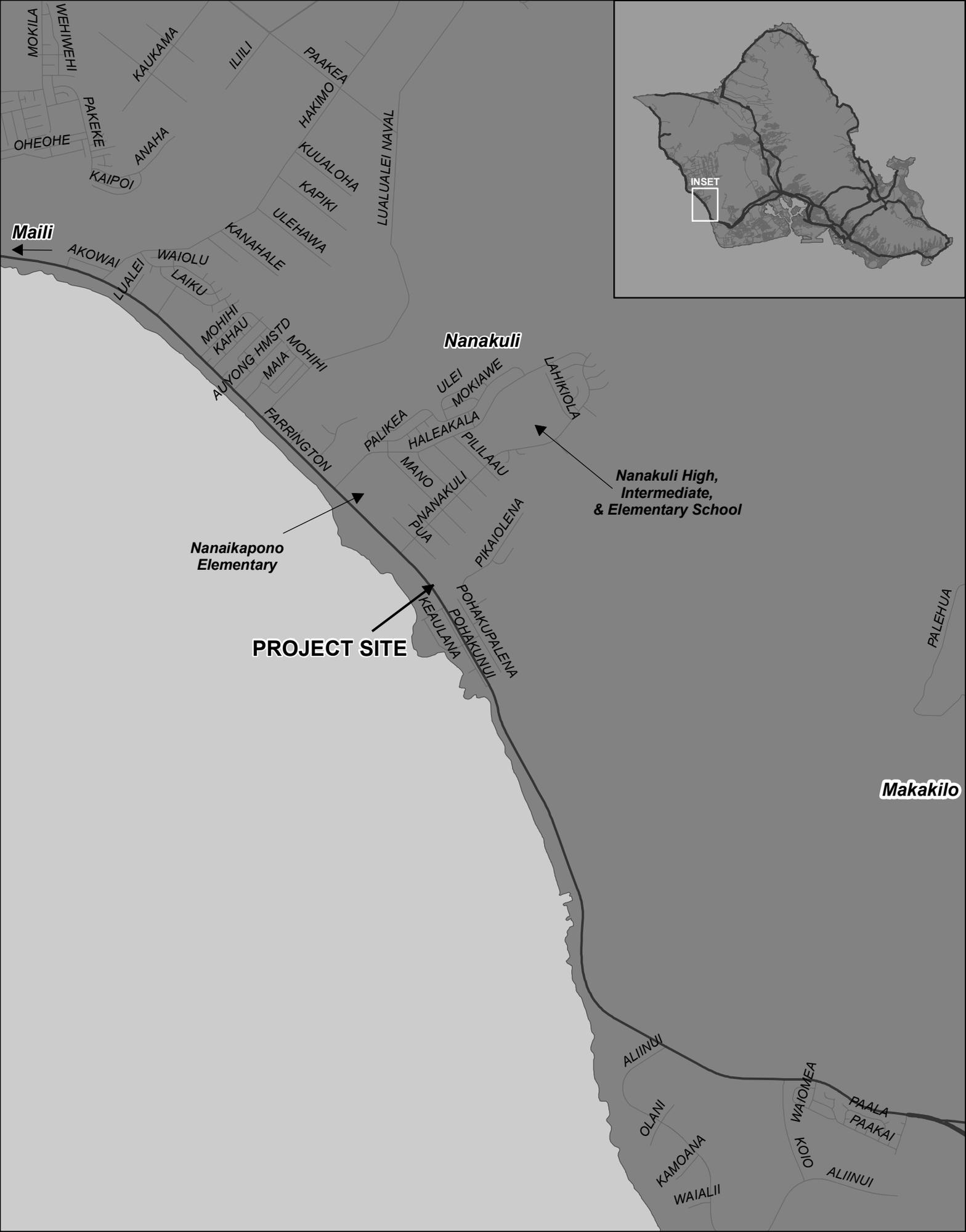


Figure 1: Location Map



AVENUE

AVENUE

NANAKULI

NANAKULI BEACH

FIRST DIVISION		
ZONE	SEC.	PLAT
8	9	05
CONTAINING		PARCELS

Figure 2 - Tax Map Keys



Figure 2 - Aerial Photo







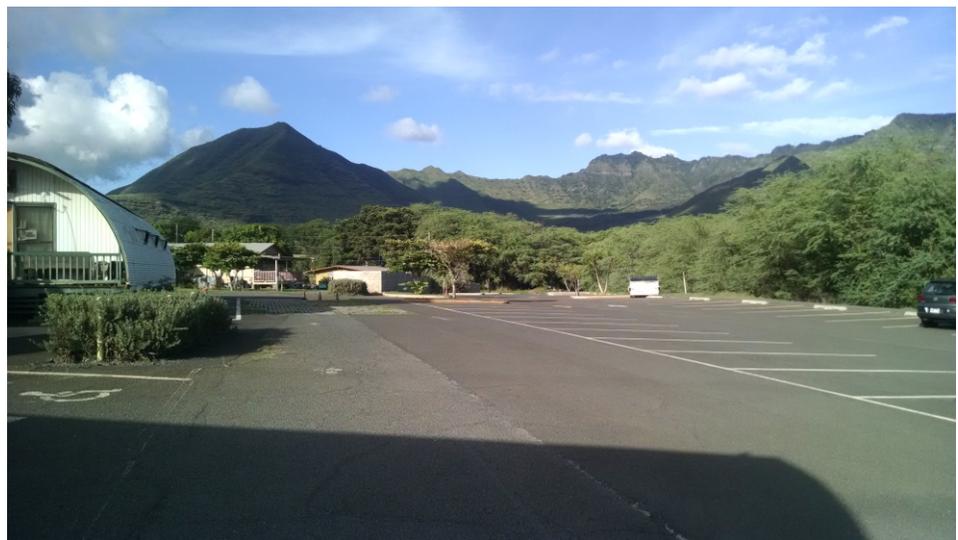
1. St. Rita Church Facade



2. View towards quonset hut looking mauka



3. View of existing parking and portable trailers



4. Mauka view of quonset hut and parking lot

### **1.3 Project Site and Existing Conditions**

#### **Property Information**

The St. Rita Catholic Church site is comprised of three contiguous lots identified as Tax Map Keys (TMK) 8-9-005: 001 and 8-9-007: portion 002 & 004. Parcel 001 is 37,876 square feet and the portion of parcels 002 and 004 is 35,124 square feet. Together the project site totals 73,000 square feet (1.68 acres). The three parcels are owned by the Department of Hawaiian Homelands (DHHL). There is a lease agreement between DHHL and St. Rita Catholic Church.

#### **Existing Conditions and Facilities**

The project site has driveway connections providing vehicular access from: 1) Farrington Highway; and 2) Pua Avenue, via Nānākuli Avenue. The project site presently contains 103 parking stalls with 2 handicapped accessible stalls. The existing facilities on parcel 001 include: 1) Church (to be demolished and re-constructed with the front façade to resemble the existing appearance); 2) Rectory (to be demolished); 3) Four portables and restrooms (to be removed); and 5) Quonset hut (to be demolished).

The Church conducts masses on Saturday at 5:00 p.m. and Sunday at 7:00 a.m., 9:00 a.m., and 5:00 p.m. Table 1 – Summary of St. Rita Catholic Church Activities, lists the various activities held at the Church. The Miscellaneous Sessions consists of Bible study, and other small-group gatherings. As shown in Table 1 the peak demand for the Church occur on Sunday Mass at 7:00 a.m. and 9:00 a.m.

<b>Table 1 – Summary of St. Rita Church Activities</b>			
<b>Description of Church Activities</b>	<b>Days of Activity (Weekday/Weekend)</b>	<b>Start Time of Activity</b>	<b>Approximate Average Number of Attendees</b>
Mass – 5:00 p.m.	Weekend (Saturday)	5:00 p.m.	70-85
Mass – 7:00 a.m.	Weekend	7:00 a.m.	75-100
Mass – 9:00 a.m.	Weekend	9:00 a.m.	150-200
Mass – 5:00 p.m.	Weekend	5:00 p.m.	50-65
Food Pantry	Weekday	9am – 11am	10-20
Catholic Charities	Weekday	2 to 3 times per week; 4 hours	2-5
General Office	Weekday (Mon. – Tues. – Wed.)	9am-4pm	3
Miscellaneous Sessions	Weekday	7:00 p.m.	5 – 10
Religious Education	Sundays	10:45 a.m. to 12:00 pm	75
Prayer Meeting	Thursdays	7:30pm-9:00pm	10
Community Hot Meal Program	Last Thursday of each month	5:30 p.m. to 7:30 p.m.	100 – 150
Alcoholics Anonymous Meetings	Thursdays	7:00 p.m. to 9:00 p.m.	5 – 10
Bible Study	Tuesdays	7:00 p.m. to 9:00 p.m.	25
Source: St. Rita Catholic Church (2014)			

#### **1.4 Project Need and Objectives**

The St. Rita Catholic Church has not undergone any major renovations or improvements since 2002 which was the expansion of the parking lot (Phase I). In 2011, the restrooms were renovated and a septic tank system was installed to accommodate campus growth. Also in 2011, an architect was hired to complete the Church master plan. The Quonset hut was built in the 1930s and is in poor condition. St Ritas church is over 100 years old, originally used at Wheeler Army Airfield and moved to its present location in 1934 to serve as the Parish Church. Therefore, the Church, and accessory structures have remained unchanged since their construction in the 1930s not counting the hall that was burned down in 1982.

#### **1.4.1 Need for Project Improvements**

St. Rita Catholic Church was established over 80 years ago in Nānākuli. It is centrally located along Farrington Highway fronting Nānākuli Beach Park. Its central location provides a convenience and familiarity to people living in the Wai‘anae Coast.

The church facilities are commonly utilized in areas of Education, Liturgy, Outreach Programs, and Community-Oriented activities. In Education and Liturgy, the facilities are used for Bible Study, youth ministry, socials and dances, and special presentations. The Outreach programs assist in counseling, services such as baby sitting during meetings and church mass services, and prayer groups to work with people in need. In addition, the State of Hawai‘i Department of Education (DOE), American Legion, Elderly groups, and activities for better health care such as aerobic and dieting workshops frequently utilize the facilities. Coupled with the growth in population in this region in the last 60 years and the facility usage described above, there is ever-increasing demand for expansion of the St. Rita Catholic Church.

The existing Church accommodates 180 parishioners with some attendees seated outside. The expansion of the Church will accommodate 400 people. This will serve the immediate demand for more seating and future population growth in the Nānākuli and Wai‘anae communities. The demolition and construction will adjust the existing orientation of the altar, which will provide additional space and accessibility to and from the existing parking lot. The new altar will be situated on the west side of the Church facing east. The steeple/bell tower, which is the distinctive feature of St. Rita Church shall remain. Based on the International Building Code’s occupancy load, an additional 2,500 sf (35’ x 70’) is required to accommodate an additional 220 people in the Church.

#### **1.4.2 Project Objectives**

As stated in the Welcome page of the St. Rita’s website ([www.stritananakuli.org](http://www.stritananakuli.org)), “As a fast growing rural parish with a large Hawaiian population we feel a special calling to stand together in truth and justice for the rights of the first people (kānaka maoli) of this

land. As part of the universal Church, our outreach extends beyond our boundaries to the global community and we affirm the human dignity of all peoples.” As the population continues to grow in this region of the island, there is greater demand for a new and larger meeting hall and a larger capacity church.

A new meeting hall building will address St. Rita’s long-term project objective of supporting their parish by providing improved and expanded facilities, office and storage space. This new meeting hall will replace the existing Quonset hut and portables and will provide considerably more gathering space for special church events and fellowship following church services.

It is imperative that St. Rita address these needs in order to continue its mission as a religious institution providing education, liturgy, outreach programs and community oriented activities. In education and liturgy, the facilities are used for Bible study, youth ministry, socials and dances, and special presentations.

### **1.4.3 New Facilities**

The existing church, portables, and Quonset Hut will be removed and demolished.

Refer to Figure 4 – Existing Site Plan for facilities that will be demolished or removed.

Refer to Figure 6 – Proposed Site Plan for new facilities on the St. Rita Church property.

The façade of the existing church and bell tower will be designed into the construction of the new church facility. The Architectural Plans, Appendix B illustrates the proposed facilities as discussed in the following sub-sections.

#### **New Church:**

The enlargement of the church shall accommodate 400 people and will be 5,650 square feet in size. This will accommodate the immediate need for more seating and future population growth in the community.

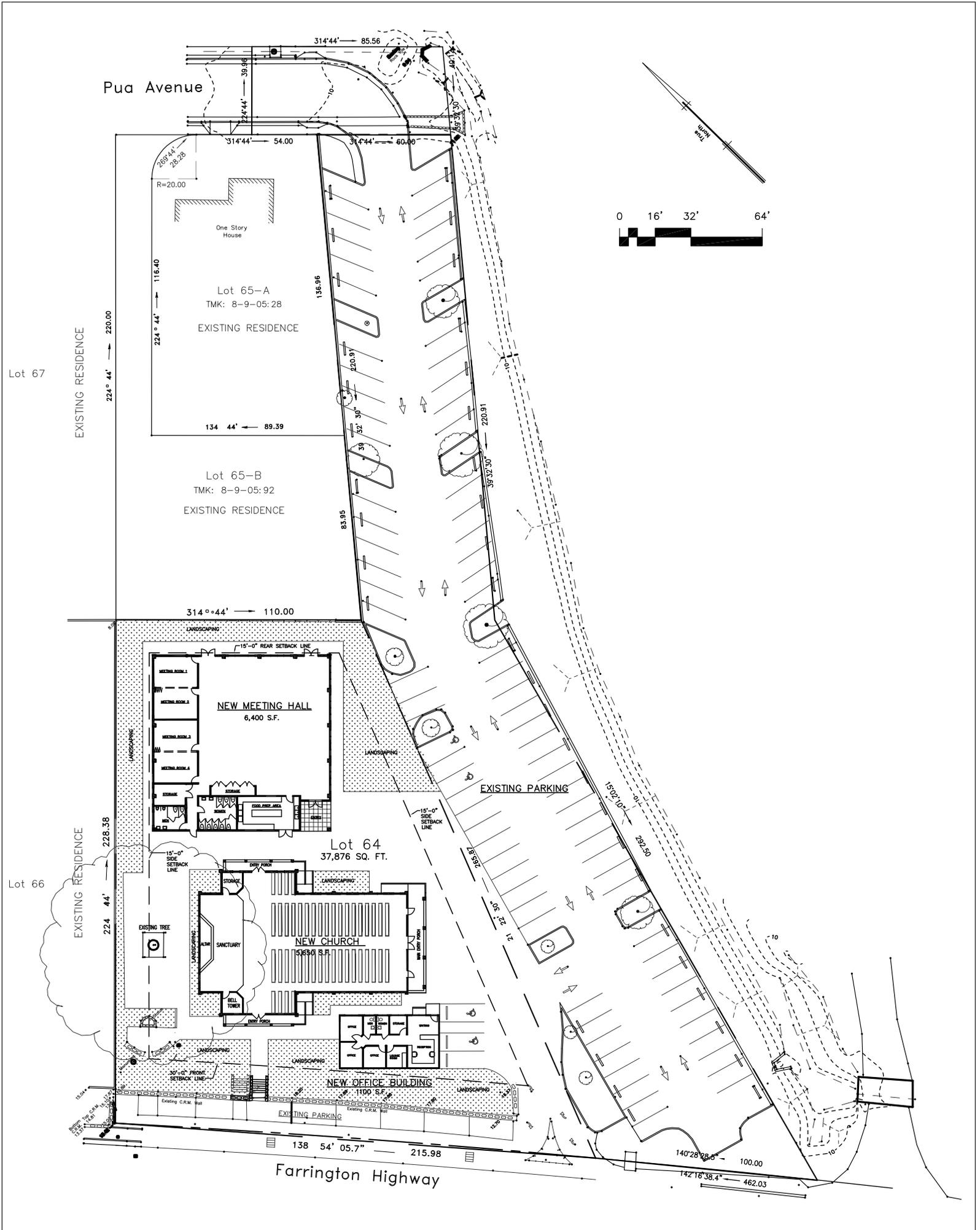


Figure 6 - Proposed Site Plan

The steeple, or bell tower, which is a unique feature of St. Rita Church, shall be integrated with the new church design.

### **New Meeting Hall:**

The new Community Hall shall accommodate most of the services lost from the existing community hall that was destroyed by fire in 1987. The Community Hall shall be comprised of the following spaces: Large Meeting area, classrooms, warm-up kitchen, storage, and men's and women's restrooms. The new Meeting Hall will be 6,400 square feet in size. The new church and new meeting hall will not have simultaneous events. This mitigates the parking capacity issue for St. Rita Church. Figure 7 – Rendering illustrates the new meeting hall, new church, and new office building on project site.

### **New Office Building:**

The new Office Building will be 2,200 square feet and will include the following spaces: Three (3) offices of 150 square feet each, a reception area of approximately 200 square feet, a waiting room, and men's and women's restrooms.

## **1.5.2 Landscape Improvements**

Landscaping will be provided throughout the site. Grass and tropical plants will be utilized for aesthetics and to reduce or buffer sound generated to and from the property. Landscaping will also be provided to minimize heat and rain water run-offs on the property.

## **1.6 Project Phasing and Estimated Costs**

Table 2 lists the milestones, year completed or projected completion, and cost per phase of the St. Rita Church Master Plan.



Figure 7 - Rendering

**Table 2 – Project Phasing and Estimated Costs**

<b>Milestone</b>	<b>Year Completed/Estimate</b>	<b>Cost</b>
Parking Lot	2002	\$450,000
Permitting and Environmental Assessment	2013-2015	\$150,000
New Office Building	2016-2017	\$270,000
New Multipurpose Building	2017-2018	\$3,200,000
Church demolition and Reconstruction	2018-2020	\$2,000,000
<b>Total Estimated Costs</b>		<b>\$6,070,000</b>

Source: St. Rita Church

According to Table 2, the projected completion of the St. Rita Church Master Plan is 2020.

### 1.7 Listing of Permits and Approvals

A listing of required discretionary land use approvals and ministerial permits for this project is provided.

<b>State Agencies</b>		
<b>Permit or Approval</b>	<b>Approval Agency</b>	<b>Status</b>
National Pollutant Discharge Elimination System (NPDES)	Department of Health	Application not yet submitted
American with Disability Act (ADA)	Disability and Communication Access Board	Application not yet submitted
<b>City and County Agencies</b>		
<b>Permit or Approval</b>	<b>Approving Agency</b>	<b>Status</b>
Environmental Assessment	Department of Planning & Permitting (DPP)	Draft EA to be submitted
Special Management Area Use Permit (Major)	DPP	Application not yet submitted
Conditional Use Permit (Minor) – Joint Development & Meeting Facility	DPP	Application not yet submitted
Building Permits	DPP	Application not yet submitted

<b>City and County Agencies</b>		
<b>Permit or Approval</b>	<b>Approving Agency</b>	<b>Status</b>
Grading, Grubbing, Stockpiling, Trenching	DPP	Application not yet submitted
Street Usage Permit	Department of Transportation Services	Application not yet submitted

## 2.0 AFFECTED ENVIRONMENT

### Climate

The State of Hawai'i climate is relatively moderate throughout the island chain, although, some differences in conditions may occur from one location to another due to the mountainous topography associated with each island. Annual and daily variation in temperature depends to a large degree on elevation above sea level, distance inland, and exposure to the trade winds. On O'ahu, the Ko'olau and Wai'anae mountain ranges are oriented almost perpendicular to the trade winds, which account for much of the variation in local climatology.

O'ahu's temperatures have small seasonal variation such that the temperature range averages only seven (7) degrees between the warmest months (August and September) and the coolest months (January and February) and about 12 degrees between day and night. Annual rainfall averages about 23.8 inches per year. Monthly average rainfall varies from a low of generally less than 1 inch of rainfall during the summer (June to August), and less than four (4) inches during the winter periods (November to January) (Western Regional Climate Center - WRCC 2010).

Winds are predominantly "trade winds" from the east-northeast except for occasional periods when "Kona" storms generate strong winds from the south, or when the trade winds are weak and land breeze to sea breeze circulations develop. Wind speeds typically vary between 5 and 15 miles per hour providing relatively good ventilation much of the time. Lower velocities (less than 10 mph) occur frequently when the usual northeasterly trade winds tend to fall giving way to light, variable wind conditions through the winter and on into early spring.

### **2.1 Geology, Topography and Soils**

The Island of O'ahu is entirely volcanic in terms of geologic origin. Throughout time, the volcanic landscape of O'ahu has been subject to the natural forces of erosion and sedimentation, resulting in such physiographic features as beaches, reefs, coastal

plains, saddles, dunes, uplands, cliffs, and valleys. The Island of O‘ahu is a volcanic doublet, formed of the Wai‘anae Range on the west and the younger Ko‘olau Range on the east. Both are the eroded remnants of great shield volcanoes that have lost much of their original shield outlines and are now long narrow ridges shaped largely by erosion.

### **2.1.1 Topography**

The topography of the project site is generally flat to sloping in the center of the parking lot site, and sloping steeply on the perimeter of the site. The church portion of the property is elevated from Farrington Highway. See Figure 8 - Topography Map for slope conditions for the St. Rita Church project site.

### **2.1.2 Soils**

The soil in the project area is composed of well-drained soils called Pulehu Clay Loam (PsA). This soil type occurs on alluvial fans, stream terraces, and in basins on the islands of O‘ahu and Kaua‘i. These soils are developed in alluvium washed from basic igneous rock and support a natural vegetation consisting of kiawe trees, koa haole, bristly foxtail, and swollen grass. The existing vegetation on the site relies on rainfall that amounts to 10 to 35 inches annually. Figure 9 - Soil Survey illustrates the soil type for the project site.

***Land Study Bureau Classification.*** The University of Hawai‘i Land Study Bureau’s (LSB) Detailed Land Classification – Island of O‘ahu classifies land type for all lands other than those in the urban district, which are not considered to have the potential to produce crops. Land type classifications provide for an overall crop productivity rating, with and without irrigation, and for selected crop productivity ratings for seven crops. Overall LSB ratings range from A to E, with A representing the class of highest productivity, and E the lowest. The parking lot section of the project site is designated as E. The remaining parcel is undesignated.

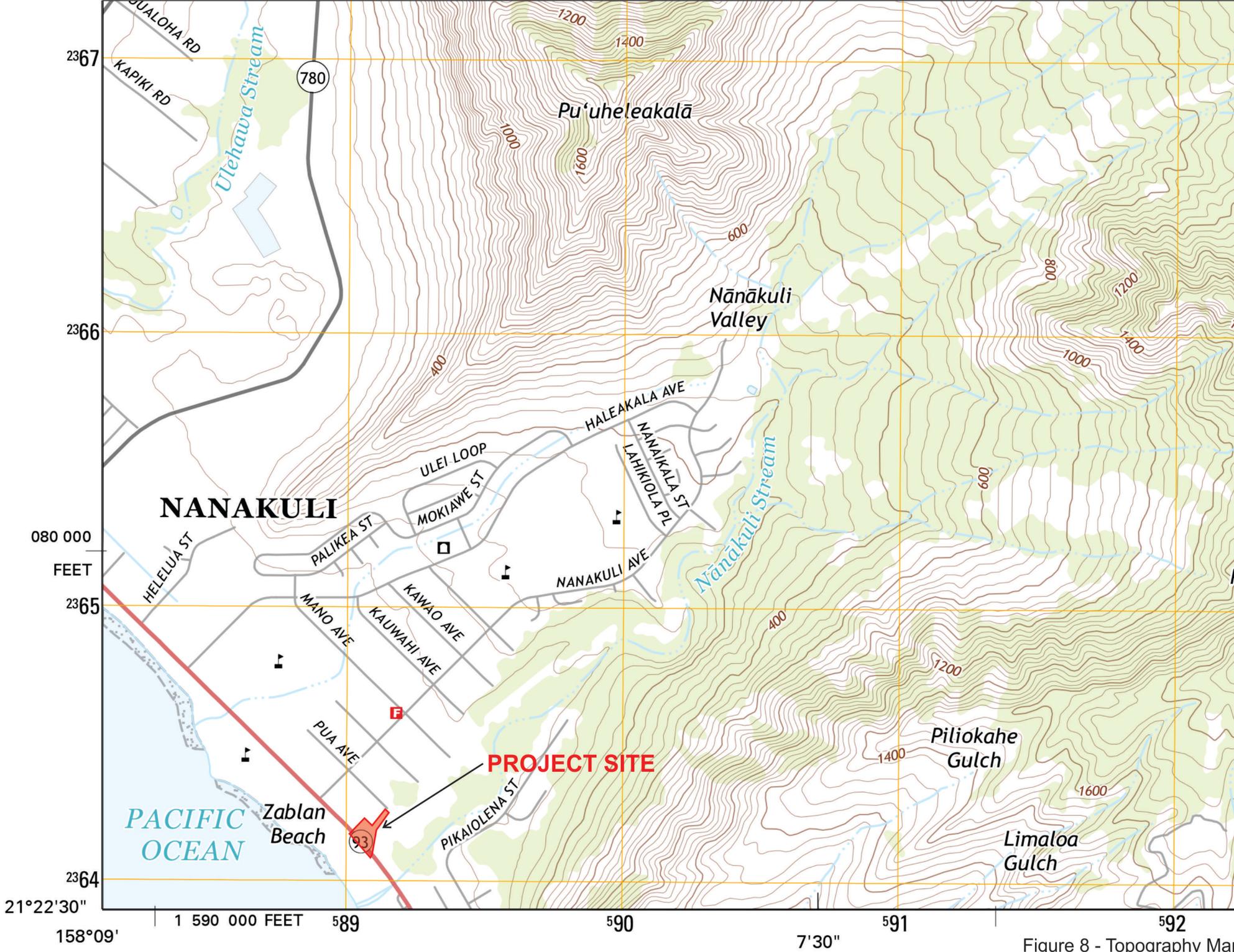


Figure 8 - Topography Map

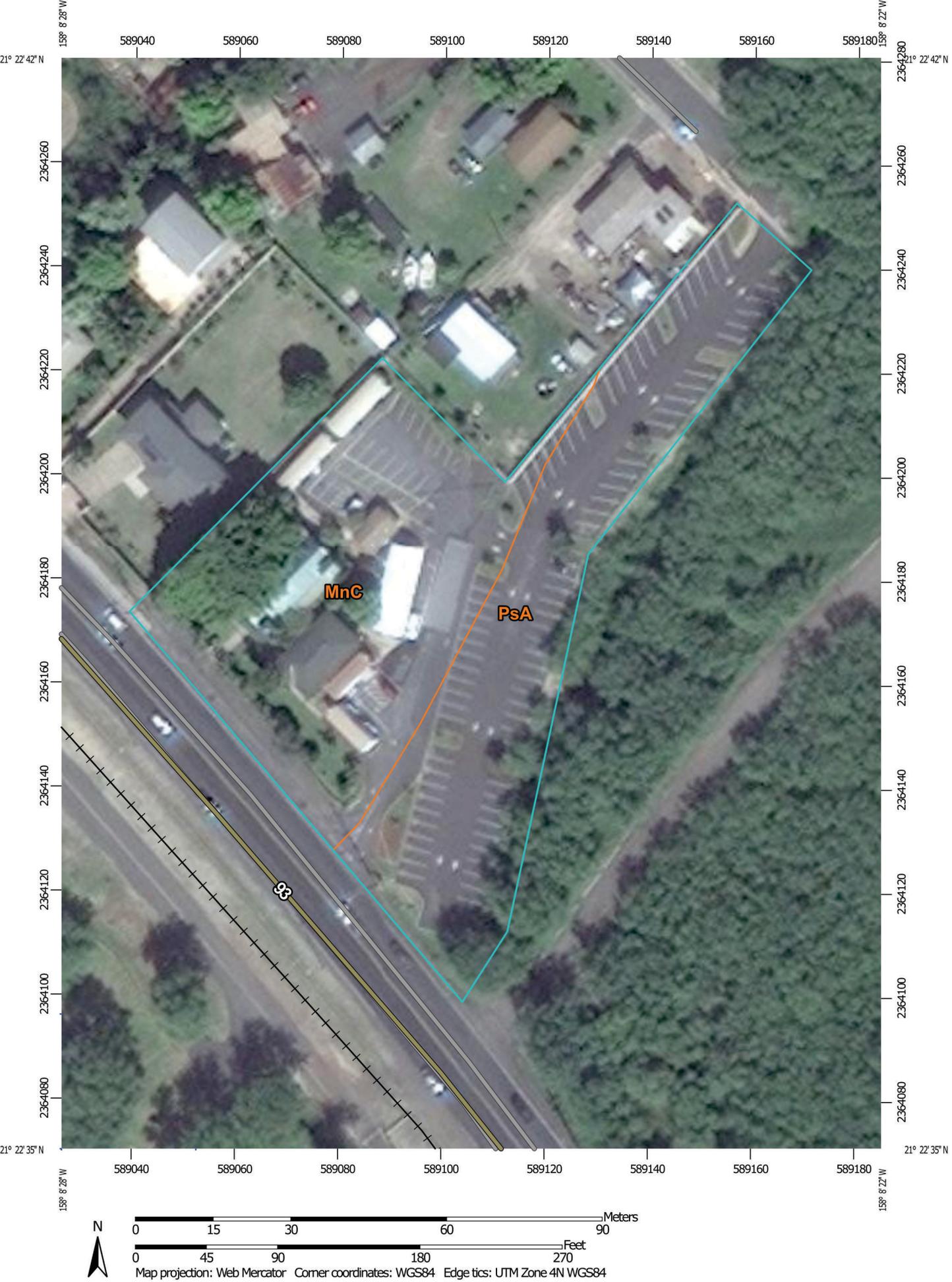


Figure 9 - Soil Survey

***Agricultural Lands of Importance to the State of Hawai'i.*** The State Department of Agriculture's Agricultural Lands of Importance to the State of Hawai'i (ALISH), established a classification system for identification of agriculturally important lands to the State of Hawai'i. Three classes of lands are established which are: 1) prime, 2) unique, and 3) other. Lands not included under this system are "unclassified." The project site along with the surrounding area is unclassified.

## **2.2 Natural Hazards**

This section addresses natural hazards applicable to the project. Of the potential natural hazards, only earthquakes, hurricane, and tsunami flooding hazards are applicable. There are no other known potential urban-related hazards applicable to the project site such as airport clear zones, nuisances, or other hazardous waste issues associated with the project site.

### **2.2.1 Earthquake Hazards**

Earthquakes in the State are mainly associated with volcanic eruptions resulting from the inflation or shrinkage of magma reservoirs beneath which shift segments of the volcano. Earthquakes may occur before or during an eruption or from the underground movement of magma toward the surface. However, earthquakes also occur due to the shifting of tectonic plates. Except for the Island of Hawai'i, the Hawaiian Islands are generally not situated in a high seismic area subject to numerous large earthquakes (Macdonald et al. 1983).

Volcanism is the source of energy for approximately 95 percent of the earthquakes on the Island of Hawai'i. The central region encompassing the islands of Maui and O'ahu are subject to seismicity generally related to tectonic activity on the seafloor near the Hawaiian Islands. Tectonic activity capable of generating hazardous earthquakes is related to seafloor fractures and suspected faults around the islands. The northwestern region consisting of Kaua'i and Ni'ihau has experienced tremors from earthquakes originating farther south, but no known seismic activity has originated among these

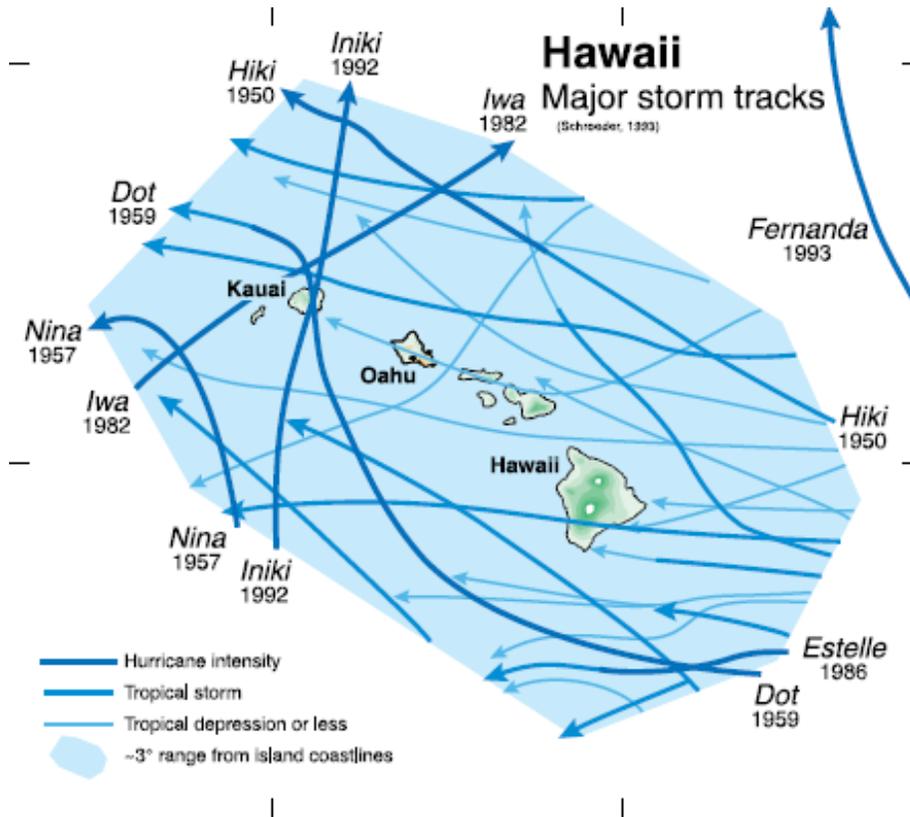
northern islands. The earthquake risk for these northwestern islands was evaluated as minimal (USGS 2002).

The largest seismic areas pertinent to O'ahu are the Moloka'i Seismic Zone and the Diamond Head Fault. The Diamond Head Fault passes through Koko Crater and extends along the seafloor northeast of O'ahu. Several earthquakes of 4.0 to 5.0 magnitude have been detected along this fault. The Moloka'i Fracture Zone is an extension of a transform fault from the East Pacific Rise that extends from Moloka'i to the Gulf of California. This fracture is tectonic in origin and suspected to contribute to central region seismicity associated with an active seafloor. Because two known earthquakes (1871 and 1938) have occurred along the fracture, it is referred to as the Moloka'i Seismic Zone (USGS 2002).

Most of the earthquakes that have occurred in the past have been volcanic earthquakes causing little or no damage to the other islands. Available historical data indicates that the number of major earthquakes occurring have generally been fewer and of lower magnitude than those on other islands such as Hawai'i. Strong earthquakes of magnitude 5 or higher, based on the Richter Scale can cause property damage and endanger lives. Exhibit 1 identifies the recent (since 1950) significant earthquakes occurring in the Hawaiian Islands (USGS 2002).



relatively rare in the modern record. More commonly, near-misses that generate large swells and moderately high winds causing varying degrees of damage are the result of hurricanes passing close to the islands (USGS 2002). Exhibit 2 graphically shows the path of hurricanes passing the Hawaiian Islands.



**Exhibit 2 – Major Storm Tracks (USGS 2002)**

### 2.2.3 Tsunami and Flood Hazards

Tsunamis are caused by a sudden movement of the seafloor that generates a series of waves which travel across the ocean until they reach a coastline. Seafloor movements may include faulting, landslides, or submarine volcanic eruptions. Landslides originating either under the sea or above sea level and then sliding into the water may also generate a tsunami. Tsunamis manifest themselves as either large breaking waves, often largest around headlands where they are concentrated by wave refraction, or as rapidly rising sea level like a flooding tide. The high degree of volcanism and

seismic instability in and around the Pacific Ocean has contributed to a history of tsunami occurrences.

The coastline of the Hawaiian Island is thus under the continuous threat of tsunami inundation because this region is one of the most geologically active regions on Earth. The geography of the shoreline often plays an important role in the form of the tsunami. Tsunami waves may be very large in an embayment, actually experiencing amplification in long funnel-shaped bays. Fringing and barrier reefs appear to have a mitigating influence on tsunamis by dispersing the wave energy (USGS 2002).

Floods caused by heavy rainfall and strong winds normally occur during the winter months with January typically being the most frequent flood period. Heavy rainfall can also be associated with the tropical storm and hurricane season between the months of June and October. Areas subject to recurrent rainstorm floods are generally the coastal plains and flood plains (USGS 2002).

Figure 10 graphically illustrates the flood zones associated with the project site. According to the State of Hawai'i Flood Hazard Assessment Tool (FHAT), the St. Rita Church is located in flood zones X, AE, and D. Zone X is defined as areas determined to be outside the 0.2% annual chance floodplain. Zone AE is the 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Zone AE is within this Special Flood Hazard area and mandatory flood insurance purchase applies in these zones.

### **2.3 Hydrology**

This section discusses the regional hydrology present in the project area which includes ground water and surface water resources.

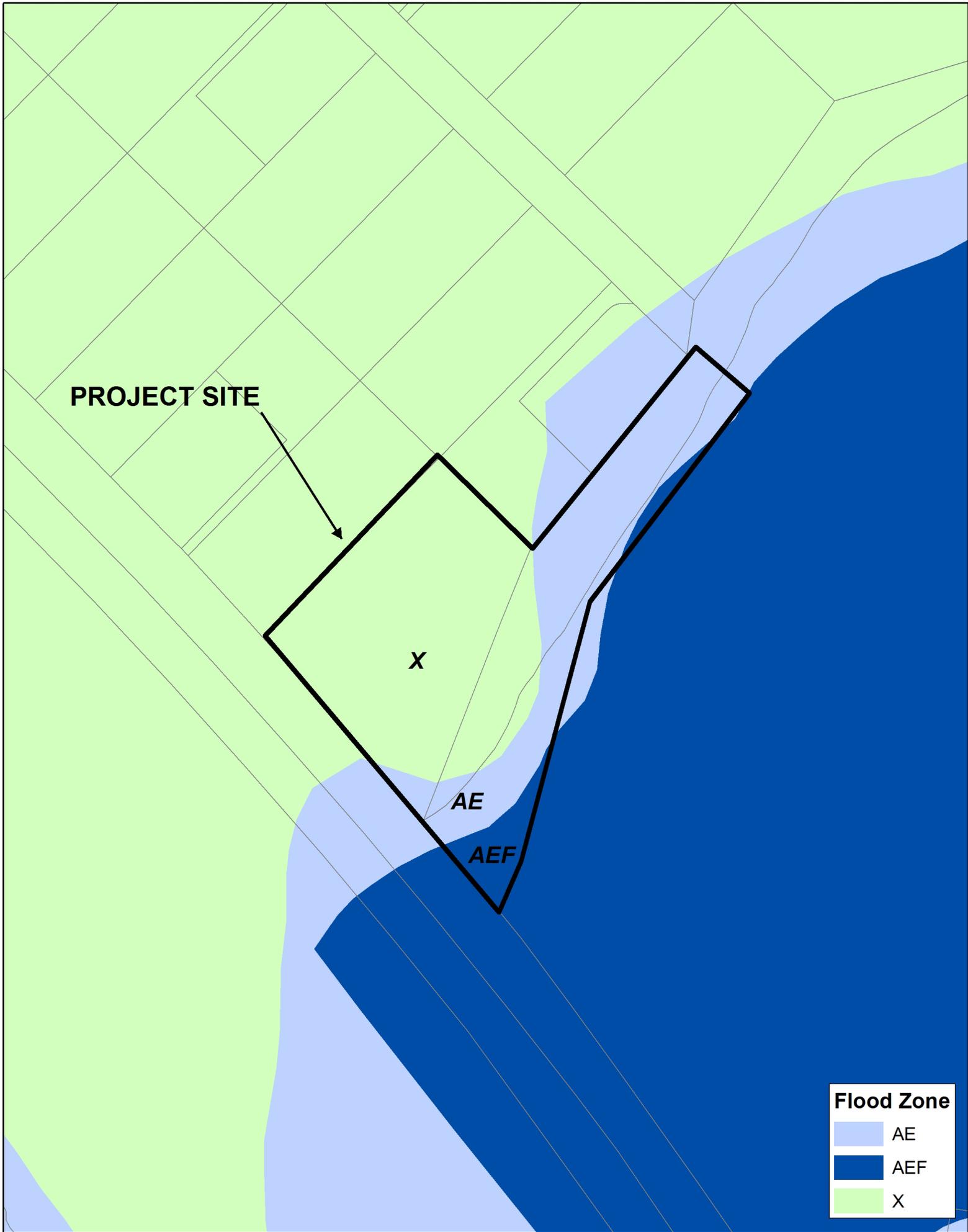


Figure 10 - Flood Zone Map

### **2.3.1 Hydrogeological Resources**

The State Department of Land and Natural Resources (DLNR), Commission on Water Resource Management (CWRM) has established ground water hydrologic units to provide a consistent basis for managing ground water aquifers. Under the State's Water Resource Protection Plan, an aquifer coding system classifies the island's aquifers to identify and describe these aquifers. This system is comprised of Aquifer Sectors, and then Aquifer Systems located within these sectors.

The Nānākuli area is within the Wai'anae Aquifer Sector (303) which is further divided into four aquifer systems which are the Kea'au, Mākaha, Wai'anae, and Nānākuli. The project site is located within the Nānākuli Unit (30301) (CWRM 2008). The Wai'anae Aquifer Sector has an estimated sustainable yield of 16 million gallons per day (mgd) and the Nānākuli Unit has a sustainable yield of 2 mgd (CWRM 2008).

### **2.3.2 Surface and Coastal Waters**

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.

Coastal waters from Ko 'Olina throughout the Leeward Coast are considered Class "A" marine waters by the State of Hawai'i 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.

## **2.4 Botanical and Faunal Resources**

### **2.4.1 Existing Botanical Resources**

A Tree Assessment was completed for the St. Rita Church site (see Appendix C). The purpose of the Tree Assessment was to recommend mitigation measures regarding the existing Weeping Banyan (*Ficus benjamina*). The Tree Assessment, Appendix C, provided the following mitigation measures:

Recommended mitigation to retain the Weeping Banyan in its present location while constructing the new church building and the surrounding support buildings and pavement.

1. Initial minor crown branch pruning along the east side of the tree to allow clear vertical construction of the west elevation of the new church building to be performed by a Certified Arborist. (Estimated cost: \$2,500.00 to \$3,000.00)
2. Enlarge planter opening by three (3) feet on all four sides and do not disturb or damage the exposed surface roots.
3. Prior to construction carefully expose and properly prune and remove exposed roots on the east side of the Weeping Banyan tree at a minimum of 15' away from the face of the tree trunk along the entire length of the building width. Root pruning to be performed by a Certified Arborist. (Estimated Cost cannot be determined.)
4. Provide a 48" deep root control barrier along the entire length of the new planter edge to prevent future roots from undermining the new church building.

### **2.4.2 Existing Avifauna and Faunal Resources**

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).

## **2.5 Air Quality**

National Ambient Air Quality Standards (NAAQS) have been established for seven major air pollutants: carbon monoxide (CO), nitrogen oxides (NOx), ozone (O3), particulate matter smaller than 10 microns (PM10), particulate matter smaller than 2.5 microns (PM2.5), sulfur oxides (SOx), 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 exceeding occurrences 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.

## **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).

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 listed in the following Table:

**Table 3 – Allowable Noise Limits**

<b>Zoning</b>	<b>Daytime: 7:00 a.m. to 10:00 p.m.</b>	<b>Nighttime: 10:00 p.m. to 7:00 a.m.</b>
Residential	55dBA	45dBA
Apartment	60dBA	50dBA
Community Business	60dBA	60dBA

## **2.7 Visual Resources**

### **Existing Conditions**

The visual environment of the project area consists of wide, unobstructed views of the Wai’anae 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 St. Rita Church, there are direct views of the ocean as the church is elevated from Farrington Highway.

## **2.8 Historic, Archaeological, and Cultural Resources**

The Archaeological Assessment, Appendix D, discusses historic, archaeological and cultural resources related to the St. Rita Church project site.

### **2.8.1 Historic and Archaeological Resources**

#### **Settlement Patterns and Anticipated Finds**

Settlement patterns in Nānākuli were likely similar to the rest of the Wai‘anae District (e.g., Cordy 2002). Initial settlement probably began with small groups of people living near the coast to take advantage of the abundant marine resources. The population then spread farther inland behind the coastal dunes and along the coastal trail which is roughly the route of today’s Farrington Highway. Finally, the back valley areas were settled as people began to utilize more agriculturally productive zones. Archaeological evidence has shown that the upper valley currently hosts many house sites and dryland agricultural terraces. Early descriptions of Nānākuli depict a barren land with few houses and an area that lacks water and agricultural resources. However, the land may have appeared desolate from the coast because many of the people lived in the upper valley, and this was not visible from the shore.

Based on previous archaeological work nearby at the former Camp Andrews, anticipated finds include sinkholes and historic military remnants. Sinkholes may house human burials, traditional Hawaiian artifacts, and midden, and it is possible that these might be found during subsurface testing. The O.R.&L. railroad tracks are located across the highway from the project area, and the historic St. Rita’s Church building still remains on the property. As the project area is mostly paved, however, it is not likely that other structural remnants or surface archaeological features will be found. It is possible that historic material may be encountered during subsurface testing. This may take the form of concrete slabs, walls, or foundations; metal, wood, or glass building

materials; or bottles, ceramics, and other such items typically recovered from historic-era sites in Hawai'i.

### **2.8.2 Results of Fieldwork**

Pedestrian survey and subsurface testing were conducted in the 1.81-acre (.73 ha) project area. No archaeological sites were found. Excavation of five test trenches did not yield any evidence of subsurface cultural material or features.

#### **Pedestrian Survey**

The surface survey included 100% of the 1.81-acre (.73 ha) parcel. The property is mostly paved on the east side, and structures or landscaped lawns occur within the unpaved areas on the west. The history of the structures on the St. Rita's Church property is discussed in the historic background section of this report. Some of the structures are more than 50 years old, and their treatment during construction should be determined in consultation with the architecture branch of SHPD. The O.R.&L. railroad tracks were observed across Farrington Highway from the subject property, well outside the project boundaries. No other surface archaeological remains were identified.

#### **Subsurface Testing**

A total of five trenches were excavated throughout the property to determine the presence or absence of subsurface cultural deposits or material (Table 3, see Figure 11 in Appendix D). Trenches were placed in unpaved areas and distributed so that stratigraphy could be seen in different areas of the parcel. Stratigraphy generally consisted of several layers of fill, sometimes above a natural sand layer.

TR 1 was excavated on the west side of the parcel in the grassy lawn fronting the large banyan tree (see Figure 11, Appendix D). The trench measured 5.2 m long and generally .65 m wide, although the width was as great as 1.6 m in caved-in areas. The trench was excavated to 170 cm below surface (cmbs) to a depth well below the proposed construction. Excavation could not continue further because the trench kept

caving in. Stratigraphy consisted of two layers of fill atop a culturally-sterile A-horizon, with a natural marine sand deposit below (Figure 12, Appendix D). The A-horizon consisted of a darkened sand layer, darker in some areas than others, although no charcoal fragments were observed. No cultural deposits or material were identified. TR 2 was placed in an unpaved island within the parking lot, on the south side of the property (see Figure 11, Appendix D). The trench measured 3.4 m long and typically .67 m wide, but extended to 1.2 m where there were cave-ins. It was excavated to 180 cmbs, well below the depth proposed for construction. Excavation could not continue further because the trench kept caving in. Stratigraphy consisted entirely of fill (Figure 13, Appendix B). No cultural material or deposits were found.

TR 3 was located on the east side of the property, just outside the paved parking lot (see Figure 11, Appendix D). It measured 3.1 m long and 1.06 m wide. The trench was excavated to 205 cmbs, well below the depth of the proposed construction. Excavation could not continue further because the trench kept caving in. Stratigraphy consisted entirely of fill (Figure 14, Appendix D). No cultural deposits or material were identified.

TR 4 was placed on the northeast side of the parcel, just outside the paved parking lot (see Figure 11, Appendix D). The trench measured 3.05 m long, 0.8 m wide, and 165 cm deep, well below the depth proposed for construction. Excavation could not continue further because the trench kept caving in. Stratigraphy consisted of five layers of fill, a buried road pavement, and a basal deposit of natural marine sand (Figure 15, Appendix D). No cultural deposits or material were identified.

### **Summary of Findings**

Pedestrian survey of TMK: (1) 8-9-005:001 did not yield any evidence of former use of the parcel. Much of the property is either paved or occupied by structures. Subsurface testing was conducted in five locations throughout the church grounds to determine the presence or absence of subsurface cultural material or deposits, and none were found. Stratigraphy consists mostly of fill, with some areas of natural marine sand exposed.

The entire property appears to have been disturbed to a depth of 40 cmbs and greater, possibly by the 1930s-era filling of the parcel mentioned in the literature (O'Hare et al. 2013). The three research questions developed at the onset of the project were all answered negatively, as no surface or subsurface archaeological remains were found. Several of the church buildings may be considered historic structures, however, and their treatment should be determined in consultation with the SHPD architecture branch.

### **2.8.3 Description of Historic Properties and Significance**

#### **SUMMARY AND RECOMMENDATIONS**

An archaeological assessment was conducted for TMK: (1) 8-9-005:001 in Nānākuli Ahupua'a, Wai'anae District, on the Island of O'ahu. This was done in preparation for ground disturbance associated with church improvements, including demolishing some of the current structures and constructing new buildings. Excavations for the proposed construction are expected to reach a depth no greater than 3 feet (0.9 m). The archaeological assessment included pedestrian survey that covered 100% of the property, as well as test excavations consisting of five trenches. No surface archaeological remains were found during pedestrian survey of the parcel. The entire property has been disturbed by development, including paving of the parking lot, construction of the current buildings, and landscaping of the lawns. Likewise, subsurface testing did not yield any evidence of subsurface cultural material or deposits. Stratigraphy generally consisted of several layers of fill, sometimes above a natural sand layer. Some of the structures are more than 50 years old, however, and their treatment during construction should be determined in consultation with the architecture branch of SHPD. In sum, archaeological survey was conducted at TMK: (1) 8-9-005:001 in Nānākuli, and no archaeological remains were found. Construction associated with church improvements will have no effect on archaeological sites because no archaeological sites occur there. Archaeological monitoring is recommended because of the possibility of encountering sinkholes with archaeological material or human remains. Isolated human burial remains may be discovered during construction activities, even

though no evidence of human burials was found during the survey. Should human burial remains be discovered during construction activities, work in the vicinity of the remains should cease and the SHPD should be contacted.

#### **2.8.4 Cultural Resources**

The Archaeological Assessment, Appendix D provides discussion of Nānākuli's historical and cultural background in addition to previous archaeological studies in the area. Refer to the Background section in the Archaeological Assessment report.

### **2.9 Infrastructure Facilities**

#### **2.9.1 Water and Fire System Facilities**

##### Existing:

According to the Due Diligence Report - Infrastructure, Appendix D, domestic water is presently provided through the ¾" water meter (30 gpm capacity). When the water demand is known, the meter can be upgraded to meet the needs of the new development. The location of the existing onsite distribution water lines is not known. A new water line will be provided under the development to distribute the domestic water to the various building components.

There is presently no fire protection waterline on the property. Water for domestic use is provided from the 8" PVC BWS main on Farrington Highway. Fire hydrant L139 is located on Farrington Highway at the west property corner. The fire hydrant on Farrington Highway will not provide adequate coverage for the proposed development.

#### **2.9.2 Wastewater Facilities**

##### Existing and Planned:

No municipal sanitary sewer system is available for the project to connect to. Disposal of sewage effluent will be onsite via an Individual Wastewater System (IWS) which includes a septic tank and leaching field. The Church, in anticipation of their future

development plans had constructed two IWS on site; a 1,500 gallon Orenco septic tank and a 2,000 gallon Orenco septic tank. The 1,500 gallon system is connected to a 6' wide by 55' biodiffusers and the 2,500 gallon system is connected to 12' wide by 55' biodiffusers.

The 1,500 gallon system serves the present church but will ultimately be connected to the new Rectory and the new Administrative Offices. The 2,500 gallon system will serve the new multipurpose building. Refer to the Site Utility Plan enclosed in Appendix C – Due Diligence Report - Infrastructure.

### **2.9.3 Grading and Drainage**

#### Existing:

In general, while the land will be graded to retain the existing sheet flow pattern, the City's new Water Quality Design Standards require measures to retain runoff on site, by employing bio-retention areas, grassed swales, permeability measures such as drywells, infiltrators, etc.

The land slopes to the southeast toward the parking area on the adjacent parcel. Runoff leaves the site in a general overland sheet flow pattern. A smaller portion of the runoff leaves the site as concentrated flow near the driveway entrance to Farrington Highway.

On Farrington Highway, a series of grated inlets and 24" diameter storm drain pipe intercept runoff from the highway and conveys the flow in the southwesterly direction, then at a manhole turns mauka into the parking area on the adjacent parcel to another manhole, which turns the system southeasterly again and outlets with a headwall in the parking area's fill slope. The manhole in the parking area has a grated inlet cover and it appears that when the parking area was constructed, filling a low area, the manhole was converted to an inlet and the system extended to the headwall. Ultimately, the storm runoff flows to the Nānākuli Stream, which crosses Farrington Highway and outlets into the ocean.

#### **2.9.4 Solid Waste Facilities**

The City Department of Environmental Services' Refuse Division provides municipal solid waste curbside collection for all single-family residences and a limited number of multi-family properties, non-residential customers, and City agencies on the island. Bulky items are collected on a monthly basis (every 4<sup>th</sup> Monday) and either recycled or delivered to the Waianae Collection Yard. Green waste is collected every other Thursday.

The Honolulu Program of Waste Energy Recovery (H-Power) energy recycling plant is a waste-to energy (WTE) facility operated by the City located in the Campbell Industrial Park in Kapolei. Approximately 90 percent of the volume and 70 to 75 percent of the weight of solid waste received at H-Power is diverted from the landfill, and converted into renewable electric energy. The ash and residue from H-Power are delivered to the Waimanalo Gulch Landfill.

The Waimanalo Gulch Landfill located in Kapolei is owned by the City and is a permitted landfill accepting solid waste on O'ahu. This landfill accepts: 1) non-combustible municipal solid waste; and 2) ash and residue from the H-Power facility. Construction and demolition waste are not permitted at either H-Power or the Waimanalo Gulch Sanitary Landfill, and is taken to the privately-owned PVT Nānākuli Construction and Demolition Material Landfill in Nānākuli (R.W. Beck, Inc., October 2008).

#### **2.9.5 Transportation Facilities**

A Traffic Impact Analysis Report (TIAR), Appendix F, was completed on September 2014. The purpose of this study is to analyze the traffic impacts resulting from the proposed St. Rita Catholic Church. The TIAR also included the development of a Traffic Management Plan (TMP), which assesses the traffic and parking operations of the proposed Church expansion. This report presents the findings and recommendations of the study. The scope of this study includes:

1. Evaluation of existing roadways and traffic conditions, during the Sunday peak hour of traffic.
2. Development of the trip generation and parking generation characteristics of the proposed project.
3. Analysis of the 2019 traffic conditions without the proposed project.
4. Identification and analysis of traffic impacts resulting from the development of the full build out of the proposed project.
5. Recommendation of improvements, as necessary, that would mitigate the traffic and parking impacts identified in this study.

### **Parking**

The Land Use Ordinance (LUO) Table 21-6.1 – Off-Street Parking Requirements, states that the parking requirement for meeting facilities is 1 stall per 75 square feet of assembly area or 1 stall per 5 fixed seats, whichever is greater. The parking requirement for offices is 1 stall per 400 square feet.

**Table 4 – Building Summary**

<b>Proposed Facility</b>	<b>Square Footage</b>	<b>Required Parking</b>	<b>Provided Parking</b>
Community Hall	6,400	85 stalls	95 stalls + 4 handicapped stalls = <b>99 parking stalls</b>
New Church	5,650	80 stalls	
Office	2,200	6 stalls	
<b>Total</b>	<b>14,250</b>	<b>171 stalls</b>	

Although the table illustrates that St. Rita Church will be under-parked, the church and community hall will not be used simultaneously. The community hall will be utilized for post-services gatherings or other special events at different times from church services. Moreover, as stated in the Draft TIAR and TMP, “Attendant-assisted parking in the aisles of the parking lot should accommodate another 30 spaces. The total of 129 parking spaces on-site would accommodate the proposed 400-seat church.”

## **Roadways**

Farrington Highway is the primary arterial highway on the Leeward coast of O'ahu. Farrington Highway is a four-lane highway, which is oriented generally in the north-south directions. Farrington Highway is signalized at Nānākuli Avenue. Farrington Highway has a posted speed of 35 miles per hour (mph).

Nānākuli Avenue is a two-way, two-lane roadway, which intersects Farrington Highway at a signalized four-legged intersection, opposite the Nānākuli Beach Park Driveway. A protected-permissive left-turn phase is provided on southbound Farrington Highway at Nānākuli Avenue. Exclusive left-turn lanes are not provided on Farrington Highway at Nānākuli Avenue.

Pua Avenue is a two-way, two-lane local street, which is stop-controlled at its four-legged intersection with Nānākuli Avenue. Pua Avenue runs roughly parallel to Farrington Highway, which is located about 450 feet mauka (east) of Farrington Highway.

## **Level of Service**

The Draft TIAR defines Level of Service A to F from the Highway Capacity Manual (HCM): HCM defines Level of Service (LOS) as "a quality measure describing operational conditions within a traffic stream". Several factors may be included in determining LOS, such as: speed, travel time, freedom to maneuver, traffic interruptions, driver comfort, and convenience. LOS's "A", "B", and "C" are considered satisfactory Levels of Service. LOS "D" is generally considered a "desirable minimum" operating level of service. LOS "E" is an undesirable condition, and LOS "F" is an unacceptable condition. Intersection LOS is primarily based upon delay. Worksheets for the capacity analysis, performed throughout this study, are compiled in the Appendix. The table below summarizes the LOS criteria."

**Table 5 – Level of Service Criteria**

<b>Level of Service Criteria (HCM)</b>		
<b>LOS</b>	<b>Signalized Intersections</b>	<b>Unsignalized Intersections</b>
	Control Delay (seconds/vehicles)	Control Delay (seconds/vehicles)
<b>A</b>	≤ 10	≤ 10
<b>B</b>	>10-20	>10-15
<b>C</b>	>20-35	>15 – 25
<b>D</b>	>35 – 55	>25 – 35
<b>E</b>	>55 – 80	>35 – 50
<b>F</b>	>80	>50

Source: Draft TIAR and TMP for St. Rita Catholic Church, September 8, 2014

**Sunday Peak Hour Traffic Analysis With Project:** The intersection of Farrington Highway and Nānākuli Avenue is expected to operate at LOS "B", during the Sunday peak hour of traffic with the proposed project. The traffic movements at the intersection are expected to operate at satisfactory Levels of Service. The other intersections in the study area are expected to operate at LOS "B" or better.

Parishioners and visitors leaving our parking lot to go towards Ko‘Olina are encouraged to exit through the mauka exit onto Pua Avenue and down Nānākuli Avenue to the traffic light before safely turning left onto Farrington Highway.

To mitigate parking and traffic flow impacts, the TIAR recommends the following:

1. Tandem parking operations should be implemented by St. Rita Catholic Church, as necessary, to avoid members having to park on the streets in the neighborhood. An additional 30 parking stalls, for a total of 129 parking stalls, are expected to be required on Sunday for the 400-seat church.
2. St. Rita Catholic Church should urge its members to avoid making left turns to and from Farrington Highway at its existing driveway.

3. St. Rita Catholic Church should make arrangements for off-site parking and shuttle service, during special events, when the parking demands exceed the on-site parking capacity.

## **2.10 Public Facilities and Utilities**

### **2.10.1 Educational Facilities**

The St. Rita Catholic Church is in the vicinity of the recently constructed Nānāikapono Elementary School. It is also 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.

### **2.10.2 Recreational Facilities**

#### **2.10.3 Police, Fire Protection and Emergency Services**

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.

#### **2.10.4 Electrical and Communication Facilities**

The St. Rita Church project site is served by Hawaiian Electric Company (HECO) and Hawaiian Tel for land-line communications.

## **3.0 ENVIRONMENTAL CONSEQUENCES**

### **3.1 Geology, Topography and Soils**

Construction of the proposed improvements would occur within the lot area of the existing facilities. No significant impacts to the present geology and topography associated with this site are expected from construction of the project. There are no unique or significant geological land formations present on the property that would be affected. No major cut or fill activities are anticipated that would significantly alter present geologic land forms.

Improvements would be constructed on land that has already been disturbed and graded as part of the Church's initial parking lot, driveways, and church. Therefore, minimal grading and only minor excavations for building foundations are anticipated because the existing topography of the site is already level. Therefore, this project should not have a significant long-term impact on the site's existing geology, topography, or soil conditions.

#### **Short-Term Construction Effects**

Construction of the project would inevitably involve temporary land-disturbing activities that cause minor short-term effects and nuisances. Construction activities would not have a significant impact on the environment, and standard construction best management practices are available to mitigate such effects which are discussed further.

Various mitigation measures will be incorporated into the project's design to minimize potential short-term erosion impacts during such construction activities. Such measures will be instituted following site-specific assessments, incorporating structural and non-structural Best Management Practices (BMPs), as deemed appropriate. Erosion control measures considered may include: use of temporary sprinklers in non-active construction areas; stationing water trucks nearby during construction to provide

sprinkling in active areas; use of temporary silt fencing, sand bags, or screens; or thorough watering of disturbed areas after construction activity has ceased for the day. However, the actual measures implemented will be developed during the final design of this project, and would comply with the City's erosion and sedimentation control regulations. Design plans will be submitted to pertinent City agencies for ministerial review and approval. If applicable, State Department of Health (DOH) National Pollutant Discharge Elimination System (NPDES) permits would be obtained.

The contractor will work with Church officials to determine an area to be used for staging. The contractor will also implement necessary measures such as temporary chain-link fences to protect materials and construction-related equipment from theft or vandalism. To ensure the safety of pedestrians near the site, construction areas would be clearly marked and temporary fences used to keep unauthorized persons out.

### **3.2 Natural Hazards**

The project will not significantly increase the risk of human health or property due to exposure to natural hazards, and discussion of the project's effects and susceptibility to natural hazards is provided.

#### **3.2.1 Earthquakes**

Most of the earthquakes that have occurred in the State were volcanic earthquakes causing little or no damage to the Island of O'ahu. O'ahu is periodically subject to episodes of seismic activity of varying intensity due to its proximity to the Moloka'i Seismic Zone and the Diamond Head Fault. However, earthquakes cannot be avoided or predicted with any degree of certainty, and an earthquake of sufficient magnitude (greater than 5 on the Richter Scale) may cause structural or other damage to the project improvements.

The proposed building improvements would be structurally designed and constructed in accordance with the City's building code. Therefore, the susceptibility of being

damaged from an earthquake would be no different from other structures or buildings present in the surrounding Nānākuli community.

### **3.2.2 Hurricanes**

The three major elements that make a hurricane hazardous are: 1) strong winds and gusts, 2) large waves and storm surge, and 3) heavy rainfall (FEMA 1993). Impacts from hurricanes can be severe and lead to beach erosion, large waves, high winds, and marine over-wash, despite the fact that the hurricane may have missed a particular island (USGS 2002). Study of the aftermath of Hurricane Iniki found that a significant threat related to hurricane overwash along the coastline in the Hawaiian Islands is due to water-level rise from wave forces rather than wind forces.

A hurricane of significant strength and high winds passing directly over or close to the Island of O'ahu could cause damage to the project improvements along with other existing uses in the surrounding area. One element of a hurricane that may cause damages to the project improvements are strong winds and gusts. The project site is also situated near the coastline making it susceptible to damage from wave forces from a hurricane of significant strength. Heavy rainfall from a hurricane should not seriously affect the project improvements because the site is not located within a flood area.

To minimize potential hurricane damages to the project, new buildings and structures would be designed and constructed in conformance to applicable building codes. Therefore, the risk of potential damage from high winds or over-wash should be minimized. Therefore, the property should be at no greater risk of damage than other residential buildings in the surrounding neighborhoods.

### **3.2.3 Tsunami and Flooding**

The project site is not located within a designated flood area based upon the FIRM. Therefore, project improvements should not be subject to significant damage from potential flooding events that occur in the surrounding community.

To minimize potential damages from a tsunami or flooding, new buildings and structures would be designed and constructed in conformance to applicable building codes. Therefore, the risk of potential damage from these hazards should be minimized and of no greater risk of damage than other residential buildings in the surrounding Nānākuli community.

### **3.3 Hydrology**

This section discusses the regional hydrology present in the project area which includes ground water and surface water resources.

#### **3.3.1 Hydrogeological Resources**

The State Department of Land and Natural Resources (DLNR), Commission on Water Resource Management (CWRM) has established ground water hydrologic units to provide a consistent basis for managing ground water aquifers. Under the State's Water Resource Protection Plan, an aquifer coding system classifies the island's aquifers to identify and describe these aquifers. This system is comprised of Aquifer Sectors, and then Aquifer Systems located within these sectors.

The Nānākuli area is within the Waianae Aquifer Sector (303) which is further divided into five aquifer systems which are the Keaau, Makaha, Waianae, Lualualei, and Nānākuli. The project site is located within the Nānākuli unit (30301) (CWRM 2015). The Waianae Aquifer Sector has an estimated sustainable yield of 16 million gallons per day (mgd) and the Nānākuli unit has a sustainable yield of 2 mgd (CWRM 2015).

#### **3.3.2 Surface and Coastal Waters**

There are no perennial or intermittent streams present in the immediate vicinity of the project site. Coastal waters in the Nānākuli area are designated as "Class A" based upon the State Department of Health's (DOH) Water Quality Standards Map for O'ahu. The objective of Class A water use is to protect recreational purposes and aesthetic

enjoyment. Any other use is permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation use in these waters. Based upon the State DOH water quality standards (Chapter 11-54, HAR), these waters are not to act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for that class.

### **3.4 Botanical and Faunal Resources**

#### **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.

### **3.5 Air Quality**

#### **Construction Period**

During construction, site clearing, grubbing and grading will generate dust in the immediate area which has the potential to impact the adjacent residential neighborhood. 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 impact on air quality. Vehicular emissions from traffic associated with the church and church-related uses will be negligible.

## **3.6 Noise**

### **Short-Term Construction Impacts**

Construction activities will generate noise that may have short-term impact on the adjacent residences to the north and northwest of St. Rita Church. Development 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.

All construction activities will comply with the State of Hawai'i 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 a.m. to 10:00 p.m.) and 45 dBA nighttime (10:00 p.m. to 7:00 a.m.).

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.

The DOH currently regulates construction noise under a permit system. Under current procedures, noisy construction activities are restricted to hours between 7:00 a.m. and 6:00 p.m., Monday through Friday, excluding certain holidays, and 9:00 a.m. and 6:00 p.m. 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 during events listed in Table 1 – Summary of St. Rita Church Activities. The TIAR prepared for St. Rita Church provides more details of traffic flow during church services and other church-related activities.

### **3.7 Visual Resources Impacts and Mitigation**

Although St. Rita Church will be demolished and re-constructed; the same façade and historical architectural context will be designed into the new construction and the view from Farrington Highway will remain consistent to the current view. The new meeting hall will be constructed behind the church and will have no visual impact from Farrington Highway.

### **3.8 Historic, Archaeological, and Cultural Resources**

The Archaeological Assessment, Appendix D generated the following three questions as part of their research and assessment of the project site:

## Research Questions

Research questions will broadly address the identification of the above archaeological resources and may become more narrowly focused based on the kinds of resources that are found. Initial research questions are as follows:

1. Is there any evidence of pre-contact use of the property and what is the nature of that use? The project area is located in a coastal environment, a context favored for human burial in traditional Hawai'i. Burials have been found in sinkholes and other contexts in Nānākuli, thus it is possible that human remains will be encountered during the survey. Other evidence of traditional Hawaiian use of the study area might include isolated artifacts, midden deposits, and/or buried cultural layers.
2. Are there vestiges of historic use of the property? Remnants of historic-era land use would likely be related to historic use of the church or the nearby O.R.&L railway, and might include structural remnants, walls, and/or historic artifacts. WWII-era use of the area might be evident in military structures or military-related artifacts.
3. What time periods are represented by the archaeological remains on the properties? If fire pits or other datable archaeological features are encountered, radiocarbon dating may inform on the period of use for the area. Wood taxa identification should be performed prior to dating, and only material suitable for dating should be submitted for analysis. Historic occupation may be dated by material remains such as bottles or ceramics.

As stated previously in this EA, much of the property is either paved or occupied by structures. Subsurface testing was conducted in five locations throughout the church grounds to determine the presence or absence of subsurface cultural material or deposits, and none were found. Stratigraphy consists mostly of fill, with some areas of natural marine sand exposed. The entire property appears to have been disturbed to a depth of 40 cmbs and greater, possibly by the 1930s-era filling of the parcel mentioned

in the literature (O’Hare et al. 2013). The three research questions developed at the onset of the project were all answered negatively, as no surface or subsurface archaeological remains were found. Several of the church buildings may be considered historic structures, however, and their treatment should be determined in consultation with the SHPD architecture branch.

**3.9 Socio-Economic Factors**  
**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 6 – Demographic Information for Nānākuli Census Data Place (CDP), 2010**

	Nānākuli CDP		Honolulu County	
	Number	Percent	Number	Percent
<b>Population</b>	12,666		953,207	
<b>Race</b>				
White	613	4.8	198,732	20.8
Black/African American	97	0.8	19,256	2.0
Amer Indian/Alaskan Native	29	0.2	2,438	0.3
Asian	1,159	9.2	418,410	43.9
Native Hawaiian/Other Pacific Islander	5,265	41.6	90,878	9.5
Other Race	59	0.5	10,457	1.1

	Nānākuli CDP		Honolulu County	
Two or more Races	5,444	43.0	213,036	22.3
<b>Total Households</b>				
Average 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 St. Rita Church expansion is intended to serve the existing community. 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 will benefit from the community hot meal program that the Church provides. The census data also shows that the CDP has large numbers of children under 18.

#### **3.9.1 Economic and Fiscal Factors**

This section discusses the effects of the project on both the County and State's economic and fiscal factors. Construction of the proposed project will have different effects in relation to the City and State of Hawai'i's finances. The project would not generate any new permanent full-time jobs. Therefore, the primary economic and fiscal effects would be associated with short-term construction jobs that will generate a small minor positive economic impact.

The estimated construction cost for this project of \$6,070,000 would create construction jobs during the duration of construction activities, as well as industries that support and service construction activities directly and indirectly. Three broad types of jobs are distinguished below:

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

Direct construction jobs would typically consist of on-site laborers, tradesmen, mechanical operators, supervisors, etc. These new jobs created would also generate additional personal income for construction workers that are the wages paid directly to them or operational employees associated with a development. Direct construction jobs created would also stimulate indirect and induced employment and spending of wages within other industries on the island such as retail, restaurants, material distributors, and other related businesses supporting the construction industry. These construction jobs would be filled by residents from the Island of O‘ahu employed within the construction industry.

### **3.9.2 Social Factors**

The proposed project will not directly or indirectly cause changes to the population or demographics. The proposed meeting hall and reconstructed church will be intended to serve the existing community. The Nānākuli CDP has a lower median income than the County as a whole, indicating that many families face economic challenges.

## **3.10 Infrastructure Facilities**

### **3.10.1 Water and Fire System Facilities**

#### Planned:

An onsite fire protection system will have to be provided for new building permits. According to Honolulu Fire Department letter dated November 3, 2014, 1) a fire department access road shall be provided to 150 feet of the exterior of any building or facility in accordance with NFPA 1, UFC, 2006 edition and 2) a water supply capable of delivering the required fire flow shall be provided to within 150 feet of any building.

The new onsite fire system will be connected to the BWS 8" main on Farrington Highway with an 8" Detector Check meter (fire only) and an 8" fire line through the parking area on the adjacent lot. The new fire hydrant will be located near the east property corner nearest to the new Community Hall (See Due Diligence Report - Infrastructure, Appendix D).

### **3.10.2 Wastewater Facilities**

### **3.10.3 Grading and Drainage**

#### Planned:

A new onsite storm drain system will be extended through the new development to intercept storm runoff from building downspouts and area drains (See Due Diligence Report - Infrastructure, Appendix E). Permanent post construction water quality measures including use of an onsite retention system may be required.

### **3.10.4 Solid Waste Facilities**

#### **Short-Term Construction Impacts**

With the redevelopment of St. Rita Catholic Church, there will be short-term impacts on solid waste facilities. Development will involve excavation, grading, construction of new buildings and infrastructure. All construction debris will be properly disposed of and recyclable and reusable materials will be carried out accordingly.

However, following the redevelopment of St. Rita Catholic Church, there will be no significant impact to solid waste facilities.

### **3.10.5 Transportation Facilities**

Construction related traffic will result from the movement of slow-moving heavy construction vehicles and equipment. Additional traffic would occur from construction workers traveling to and from the job site.

However, any additional traffic delays are not expected to have a significant impact on traffic facilities or operations because construction workers generally arrive before the weekday morning commuter peak hour and leave before the afternoon peak hour which starts around 4:15 p.m. Construction activities would also be temporary until work is completed. A Street Usage Permit would be obtained from the City if any temporary closure of a traffic lane is required during construction.

A traffic control plan will be developed during the project's design phase for implementation by the contractor after the ministerial review and approval by the City. If necessary, off-duty police would be hired to assist with traffic control. The Nānākuli-Mā'ili Neighborhood Board and area residents are also planned to be notified of construction activities prior to initiation.

### **3.11 Public Facilities and Utilities**

#### **3.11.1 Educational Facilities**

Project improvements planned are expected to have no long-term impact on educational facilities in the surrounding area. The project does not involve any new housing units that may generate new students attending schools in the area. Therefore, the project will not increase student enrollment or place additional demands on existing school faculty and administration.

#### **3.11.2 Medical Facilities**

Project improvements planned should have minimal long-term impact on medical facilities in the surrounding area. The project does not involve any new housing units that would generate new residents or visitors to the island that would place increased demand on medical service from nearby facilities.

### **3.11.3 Recreational Facilities**

#### **3.11.4 Police, Fire Protection, and Emergency Services**

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 Fire Department dated November 3, 2014 addressed the need for fire access roads and adequate water supply for fire-fighting. The St. Rita's Church project 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.

#### **3.11.5 Electrical and Communication Facilities**

The St. Rita Church Master plan has no impact on electrical and communication facilities.

### **3.12 Secondary and Cumulative Impacts**

#### **3.12.1 Secondary Effects**

Secondary effects, also referred to as indirect effects, are effects cause by a project, but occur later in time or farther removed in distance than direct impacts, but are still reasonably foreseeable. Such effects may include impacts on environmental resources or public facilities that occur from a project's influence on land use. For example, a new housing development would have a secondary impact on the State's consumption of fossil fuels as a result of the increase in solid waste removal routes necessary to serve the new homes. Secondary impact assessments are concerned with impacts that are sufficiently "likely" to occur and not with the speculation of any impact that can be conceived of or imagined.

The proposed St. Rita Church Master Plan is expected to have secondary impacts on the resident population, land use patterns, public facilities, infrastructure, or the natural

environment in the immediate area and surrounding Nānākuli community. The project involves a new meeting hall, reconstructed church, and office building. The new church building will be able to accommodate more parishioners, thus having secondary impacts toward traffic before and after church services. Refer to the TIAR, Appendix F for mitigation measures related to traffic impacts.

### **3.12.2 Cumulative Impacts**

Cumulative impacts are typically defined as the effects on the environment which result from the incremental impact of a project when added to past, present, and reasonably foreseeable future actions within the study year. The estimation of future impacts is important for cumulative impact analysis. However, the focus must be on “reasonably foreseeable” actions that are those likely to occur or probable rather than those that are merely possible or subject to speculation. The prediction of reasonably foreseeable impacts thus requires judgment based on information obtained from reliable sources such as approved development or construction plans, entitlements, and similar documents.

The discussion of impacts presented within this EA has provided information to assist in addressing the applicable cumulative effects associated with the project and other reasonably foreseeable future actions being implemented. The St. Rita Church Master Plan should not have significant cumulative impacts on the surrounding environment. Most of the effects are confined to the project site, would not require off-site infrastructure improvements, and are short-term (construction effects).

### **Effects on Physical and Natural Environment**

The St. Rita Church Master Plan would affect approximately 1.7 acres of DHHL leased land within the existing developed site. Improvements would have minimal affect on the various physical resources and natural environment such as soils, topography,

botanical, faunal, natural hazards, and hydrology as discussed in the respective sections of this EA.

### **Effects on Social and Economic Factors**

The St. Rita Church Master Plan would have minimal, if any, affect on the resident population because it does not involve adding new housing units. It would not induce changes to the surrounding land use patterns, character of the community, or cause significant social impacts as discussed in this document. Therefore, this project should not have significant cumulative impacts on the social factors in the surrounding community.

### **Effects on Infrastructure and Public Facilities**

The St. Rita Church Master Plan would have minimal affect on existing infrastructure facilities serving the site and immediate area along with public facilities. No off-site improvements would be required due to this project as discussed in various sections of this EA. No significant cumulative impacts are expected on existing school facilities, medical facilities, and police and fire protection services. The project improvements would not generate additional residents migrating to O'ahu and would not create additional demands on these facilities or the activities and services provided.

## **4.0 CONFORMANCE WITH STATE AND COUNTY PLANS, POLICIES, AND CONTROLS**

This chapter discusses the project's conformance with the State Land Use District regulations, State Environmental Policy (Chapter 344, HRS), and the regulations, policies, and goals set forth by the City's Wai'anae Sustainable Communities Plan, Special Management Area (Chapter 205A, HRS), and Land Use Ordinance.

### **4.1 State Land Use District**

Pursuant to Chapter 205, HRS, all lands in the State of Hawai'i are classified by the State Land Use Commission (LUC) into four major districts which are referred to as State Land Use Districts. These four land use districts are the Urban, Rural, Agriculture, and Conservation Districts.

The State LUC's Land Use District Boundary Map for Wai'anae shows that the proposed St. Rita Catholic Church project site and surrounding areas are classified as being within the State's "Urban and Agriculture Districts (adjacent to project site)." Thus, under Chapter 205, HRS, Urban District lands on the Island of O'ahu are regulated by the ordinances and regulations of the City and County of Honolulu.

### **4.2 Chapter 344, HRS, State Environmental Policy**

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

*Section 344-3(2). Enhance the quality of life by:*

- A. Setting population limits so that the interaction between the natural and manmade environments and the population is mutually beneficial.*
- B. Creating opportunities for the residents of Hawaii to improve their quality of life through diverse economic activities which are stable and in balance with the physical and social environments.*

- C. Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian.*
- D. Establishing a commitment on the part of each person to protect and enhance Hawaii's environment and reduce the drain on nonrenewable resources.*

**Discussion:** The proposed project would be consistent with these environmental policies regarding the quality of life. The church improvements would have minimal, if any effect, on the existing or future resident population in Nānākuli and will not adversely impact the interaction between natural and man-made environments. Construction activities would create short-term job opportunities to improve the quality of life for residents employed in the construction industry and would generate indirect benefits to other businesses. Improvements would increase the church's sense of identity within Nānākuli and the island. The physical design of the new facilities would provide aesthetic balance with the natural environment, including the incorporation of sustainability concepts to reduce the use of non-renewable resources.

*Section 344-4. Guidelines:*

- 1. Population.*
  - A. Recognize population impact as a major factor in environmental degradation and adopt guidelines to alleviate this impact and minimize future degradation;*
  - B. Recognize optimum population levels for counties and districts within the State, keeping in mind that these will change with technology and circumstance, and adopt guidelines to limit population to the levels determined.*

**Discussion:** The proposed project would not affect the existing or future resident population in Nānākuli or elsewhere in the State. Proposed improvements do not involve construction of any new homes or visitor units, and short-term construction jobs are expected to be filled by Hawai'i residents. Therefore, resident population will not be affected by in-migration.

- 2. Land, water, mineral, visual, air, and other natural resources*
  - A. Encourage management practices which conserve and fully utilize all natural resources;*

- B. Promote irrigation and waste water management practices which conserve and fully utilize vital water resources;*
- D. Encourage management practices which conserve and protect watersheds and water sources, forest, and open space areas;*
- G. Promote the optimal use of solid wastes through programs of waste prevention, energy resource recovery, and recycling so that all our wastes become utilized.*

**Discussion:** The proposed project would be consistent with these guidelines because the improvements would not adversely impact natural resources. Buildings will be designed to incorporate sustainability concepts to reduce the use of non-renewable resources and conserve water, and best management practices will incorporate measures to protect the environment. Project improvements would not significantly impact natural resources such as watersheds, forest preserves, or unique ecological preserves. As part of the project's sustainable design, the church's operations will incorporate feasible measures to recycle waste, minimize energy use, and minimize waste generation.

### *3. Flora and fauna*

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

**Discussion:** This project would not impact endangered plants or animals since none are known to be present on the project site or within the immediate surrounding area. Design plans would not introduce new plants or animals to the area that may contribute to an ecological hazard on flora or fauna in the region. Landscape improvements will incorporate the use of native plants and vegetation.

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

- A. Establish, preserve and maintain scenic, historic, cultural, park and recreation areas, including the shorelines, for public recreational, educational, and scientific uses.*

- B. Protect the shorelines of the State from encroachment of manmade improvements, structures, and activities.*
- C. Promote open space in view of its natural beauty not only as a natural resource but as an ennobling, living environment for its people.*

**Discussion:** The project will not adversely impact scenic or park and recreation areas, and will not encroach into shoreline areas as discussed in this document. Historic or cultural resources should not be adversely impacted by construction activities as mitigative measures will be implemented as prescribed under a burial treatment plan approved by the O'ahu Island Burial Council. Project improvements will actually increase the amount of open space and landscaping present on the church property.

*5. Economic Development.*

- A. Encourage industries in Hawaii which would be in harmony with our environment;*
- B. Establish visitor destination areas with planning controls which shall include but not be limited to the number of rooms;*

**Discussion:** St. Rita Catholic Church is a non-profit religious organization that provides community services for their parish along with social services that benefits the larger community. These operations are harmonious with the environment and community. Project improvements do not involve any new homes that would impact the Nānākuli community.

*6. Energy.*

- A. Encourage the efficient use of energy resources.*

**Discussion:** Buildings will be designed to incorporate sustainability concepts to reduce the use of non-renewable resources and efficient use of energy sources.

*7. Community life and housing.*

- B. Develop communities which provide a sense of identity and social satisfaction in harmony with the environment and provide internal opportunities for shopping, employment, education, and recreation;*

- E. Recognize community appearances as major economic and aesthetic assets of the counties and the State; encourage green belts, plantings, and landscape plans and designs in urban areas; and promote mountain-to-ocean vistas.*

**Discussion:** Project improvements will support Nānākuli’s identity as a rural area and enhance the church’s presence in the community. Improvements will be designed to be compatible with the church site and design characteristics along with the surrounding area. Additional open space and landscaping added will improve the aesthetic value of the church property.

*9. Education and culture.*

- A. Foster culture and the arts and promote their linkage to the enhancement of the environment.*

**Discussion:** The redeveloped St. Rita’s Church with improved facilities will support cultural and arts activities occurring within the Nānākuli community.

*10. Citizen participation.*

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

**Discussion:** The environmental review process undertaken for this project allows for public and government agency input during the review of the Draft EA. Public consultation efforts help provide decision-makers with a diverse array of information and comments to consider when evaluating this project.

#### **4.3 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 St. Rita Church expansion.

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:** Although the Church will be demolished and reconstructed, the front façade design will remain consistent with the current design that has become a landmark for the Nānākuli community. During construction, findings of Hawaiian and/or American historical significance will be protected and preserved where relevant.

### ***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 architectural plans and rendering protects and preserves coastal scenic and open space resources. The heights of the proposed structures will be designed in compliance with the development standards of the R-5 Residential district in the LUO.

### ***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:** St. Rita Church expansion provides a facility open to the public in Nānākuli which is important to the social and spiritual fabric of a community.

### ***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 agencies and groups, and the 30-day public review period allows for public participation and input regarding the proposed St. Rita Church expansion. Refer to Pre-Consultation Comments and Responses, Appendix A for agencies consulted during this process, comments received, and responses to agency and stakeholder comments. In addition, the Project was presented to the Nānākuli-Mā'ili Neighborhood Board to stimulate public awareness of the St. Rita Catholic Church master plan.

### ***Beach Protection***

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

**Discussion:** The Project will not impact public beaches in the area. The Church site is located mauka of Farrington Highway.

## **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.

### **4.4 Historic Preservation**

Hawaii Revised Statutes (HRS) Section 6E – Historic Preservation provides the following definitions that will be included in the discussion of St. Rita Church and historic preservation issues:

#### *Section 6E-2 - Definitions*

*"Historic preservation" means the research, protection, restoration, rehabilitation, and interpretation of buildings, structures, objects, districts, areas, and sites, including underwater sites and burial sites, significant to the history, architecture, archaeology, or culture of this State, its communities, or the nation.*

*"Historic property" means any building, structure, object, district, area, or site, including heiau and underwater site, which is over fifty years old.*

**Discussion:** St. Rita Church is a historic property based on the definition above, however, the architecture and design has no cultural significance to Hawai'i. The existing structures do not coincide with the aforementioned definition of historic preservation. An Archaeological Assessment, Appendix D, was conducted for the subject property and there are no known burial sites, significant to the history, architecture, archaeology or culture of the State of Hawai'i. The existing structures are severely termite damaged and may contain hazardous materials due to the time of construction. Therefore, the existing structures will be demolished and a new meeting hall (6,400 sf) and new church (5,650 sf) will be constructed on site. In consultation with

the Historic Hawaii Foundation, the new church building will maintain the current façade which is well-known as the gateway to the Nānākuli community.

#### **4.5 City and County of Honolulu 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.*

**Discussion:** The architectural plans and rendering reflect the character of the Nānākuli community. With the current condition of the existing St. Rita Church facilities, demolition and reconstruction will be much needed to serve the surrounding community. St. Rita Church has been a fixture of the Nānākuli community for decades and reconstruction will ensure many more years of serving the adjacent and surrounding communities.

## **Chapter X. Culture and Recreation**

*Objective B: To protect O‘ahu’s cultural, historic, architectural, and archaeological resources.*

*Policy 2: Identify, and to the extent possible, preserve and restore buildings, sites, and areas of social, cultural, historic, architectural, and archaeological significance.*

*Policy 6: Provide incentives for the restoration, preservation, and maintenance of social, cultural, historic, architectural, and archaeological resources.*

**Discussion:** During the construction phase of the project, any archaeological or historical findings will be protected and preserved accordingly. Refer to the Archaeological Assessment in Appendix D for a detailed discussion on archaeological issues pertaining to the St. Rita Church site.

### **4.6 City and County of Honolulu Waianae 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 Ka‘ena Point, and enclosed by the leeward slopes of the Wai‘anae Mountain Range. The Wai‘anae SCP (March 2012) 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. Figure 11 – Wai‘anae Sustainable Communities Plan map illustrates St. Rita Church’s SCP designation of Rural Residential.

### **Rural Residential**

Most of the lands makai of the Community Growth Boundary are designated and colored “Rural Residential.” This general designation is intended to include single-family homes, town homes, small 2-story apartment buildings, and various relatively low density community support facilities that are permitted in residentially zoned areas, including schools and churches.

### **4.7 City Zoning Regulations**

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 6, the parcel that includes the church and parking lot is zoned R-5 Residential. A sliver of the parking lot is zoned Country. The intent of the City and County’s residential districts is to provide areas for urban residential development. The proposed church is permitted by conditional use permit-minor (meeting facility) in the R-5 Residential district. The R-5 residential district requires a minimum lot size of 5,000 square feet with building heights of 25 feet.

#### **4.7.1 Consistency with District Objectives**

The City and County of Honolulu LUO, Section 21-3.70 Residential districts – Purpose and intent states,

*(a) The purpose of the residential district is to allow for a range of residential densities. The primary use shall be detached residences. Other types of dwellings may also be*

Legend

- Community Growth Boundary
- Special Area Plan Boundary
- Rural Residential
- Medium Density Residential
- Resort
- Industrial
- Golf Course
- Agriculture
- Preservation
- Military
- Country Town
- Rural Community Commercial Center

Wai'anae Sustainable Communities Plan  
Exhibit A-1

### LAND USE MAP



Department of Planning and Permitting  
City & County of Honolulu

Wai'anae Sustainable Communities Plan Boundary

Special Area Plan Boundary

**PROJECT SITE**

Mākaha

Wai'anae

Mā'ili/Lualualei

Nānākuli

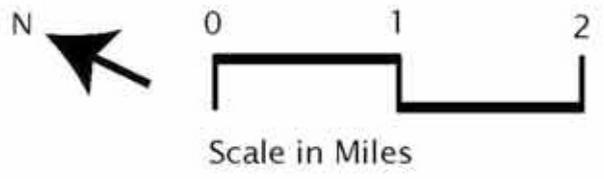


Figure 11 - Wai'anae Sustainable Communities Plan Map

*allowed, including zero lot line, cluster and common wall housing arrangements. Non-dwelling uses which support and complement residential neighborhood activities shall also be permitted.*

**Discussion:** The proposed new Meeting Hall and reconstructed Church supports and complements a residential neighborhood. There will be traffic impacts from the Church, but there are mitigation measures previously discussed in this EA.

#### **4.7.2 Consistency with Development Standards**

#### **4.7.3 City Land Use Approvals Required**

##### Conditional Use Permit (Minor) Requirement

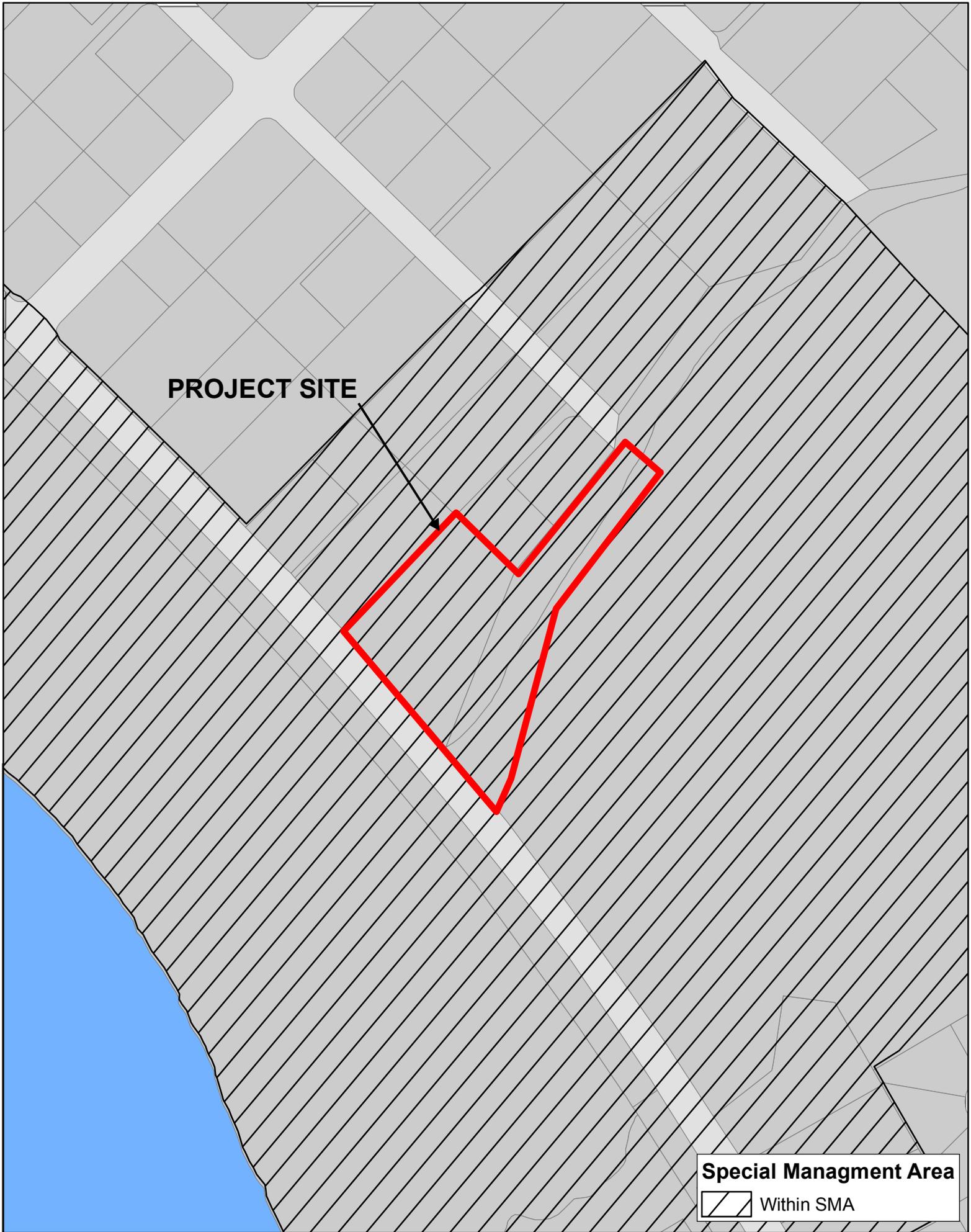
Section 21-5.380 of the City's LUO states that a proposed project will be considered and treated as one zoning lot when it is developed on two or more zoning lots. A Conditional Use Permit (Minor) is required to undertake such a development if the owner(s) or lessees believe that the joint development of their property would result in a more efficient use of land. An application for a Conditional Use Permit (Minor) for this project will be submitted to the City DPP, and more information will be included in that application.

#### **4.8 City Special Management Area**

The project site is located within the City's Special Management Area (SMA), and Figure 12 shows the site in relation to the established SMA area. Therefore, the proposed master plan improvements for this project will be subject to the requirements of Chapter 25, Revised Ordinances of Honolulu (ROH). A Special Management Area Use Permit (Major) will be required for the project. The proposed project's consistency with applicable SMA objectives and policies, as set forth in Chapter 205A-2, HRS and pertinent review guidelines as set forth in Section 25-3.2, ROH, are discussed below.

#### **A. Objectives:**

1. *Provide coastal recreational opportunities accessible to the public.*



**PROJECT SITE**

**Special Management Area**  
Within SMA

Figure 12 - Special Management Area

2. *Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture.*
3. *Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*
4. *Provide public or private facilities and improvements important to the State's economy in suitable locations.*
5. *Reduce hazard to life and property from tsunamis, storm waves, stream flooding, erosion, subsidence, and pollution.*
6. *Protect beaches for public use and recreation.*

**B. Policies:**

1. *Recreational Resources:*

- b. Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by;*
- ii. Requiring replacement of coastal resources having significant recreational value, included but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;*
- iii. Providing and managing adequate public access , consistent with conservation of natural resources, to and along shorelines with recreational value;*
- iv. Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*

**Discussion:** The project will not adversely affect coastal resources with significant recreational value because improvements would be constructed within the property located mauka of Farrington Highway. The project should not adversely impact water quality of shoreline areas in the vicinity. Drainage plans will be appropriately designed and reviewed by the City for approval.

2. *Historic Resources:*

- a. Identify and analyze significant archaeological resources;*
- b. Maximize information retention through preservation of remains and artifacts or salvage operations; and*
- c. Support State goals for protection, restoration, interpretation, and display of historic resources.*

**Discussion:** Section 2.8 – Historic, Archaeological and Cultural Resources provides discussion and summary of archaeological findings as concluded from the Archaeological Assessment, Appendix D. There are no significant archaeological findings as concluded from the Archaeological Assessment.

3. *Scenic and Open Space Resources:*
  - a. *Identify valued scenic resources in the coastal zone management area;*
  - b. *Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*
  - c. *Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources.*

**Discussion:** Valued scenic resources in the project area were identified and discussed in this document. The project will not have significant impacts on shoreline open space and scenic resources.

4. *Coastal Ecosystems:*
  - c. *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*
  - e. *Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

**Discussion:** The project will not adversely impact valuable coastal ecosystems. Best management practices will be implemented to minimize short-term construction related effects.

5. *Economic uses:*
  - a. *Concentrate coastal dependent development in appropriate areas;*
  - b. *Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area;*

**Discussion:** Project improvements will occur within property already used for church related activities in Nānākuli. Buildings and site improvements will be designed to minimize adverse social, visual, and environmental impacts as discussed in the document.

6. *Coastal Hazards:*

- b. Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards.*
- c. Ensure that developments comply with requirements of the Federal Flood Insurance Program.*

**Discussion:** The project site is located within a tsunami evacuation area, and will be designed to meet applicable City building code requirements. The existing and proposed structures on the project site are not situated within a designated flood area.

7. *Managing Development:*

- c. Communicate the potential short- and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.*

**Discussion:** The EA addresses the short and long-term impacts of project improvements and its distribution during the public review process supports communication of information to the public.

8. *Public participation:*

- a. Promote public involvement in coastal zone management processes;*

**Discussion:** The processing of this environmental document allows for public participation to address comments and concerns associated with the project. The EA will also comply with this policy through its use in the submittal of a Special Management Area Use Permit for the proposed project. The processing of this application will involve consultation with the Nānākuli-Mā'ili Neighborhood Board and a public hearing held by the City DPP, as well as the review and approval by the City

Department of Planning and Permitting and City Council, to ensure the project's consistency with coastal management policies.

9. *Beach Protection:*

- a. *Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;*

**Discussion:** The new meeting hall and redeveloped church are located inland from the shoreline setback line, and will not affect natural shoreline processes. Farrington Highway separates this project site from the beach.

**C. Review Guidelines (Section 25-3.2, ROH)**

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 area 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 recreational amenities and minimum danger of floods, landslides, erosion, siltation or failure in the event of earthquake.*

**Discussion:** The applicant is open to reasonable terms and conditions to allow the project to be consistent with applicable SMA policies. Based upon the assessment results, no unique terms or conditions should be required for this project. The church site is open to the public and parish members for services and other activities conducted that will continue with this project. The site does not affect access to public beaches, recreation areas, or natural reserves which are currently provided by surrounding roadways. The project would not negatively affect public recreation areas and wildlife preserves. No major alterations to existing land forms would occur with this

project as the site is already developed. Project improvements would increase open space and landscaping over present conditions. Construction of the project is not expected to have an adverse effect on water resources along with scenic and recreational amenities as discussed in this document. Best management practices would be implemented by the contractor in compliance with permit conditions. Improvements will not create a potential for flooding, landslides, erosion, siltation, or structural failure in the event of an earthquake.

- b) *No development shall be approved unless the 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 is 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 project should not have any substantial adverse environmental or ecological impact based upon the assessment results addressed in this document. Necessary mitigation measures to minimize project related effects have been identified in various sections. This assessment also includes evaluating the potential cumulative impact from this project on the environment. The project would be consistent with the pertinent SMA objectives and policies as previously addressed. Proposed improvements would be consistent with the City's Sustainable Communities Plan for Wai'anae as discussed in a previous section.

- c) *The 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 project would not significantly impact the various factors identified under this review guideline, and no unique measures or conditions should be required.

Project improvements would have no effect on several of these factors which include:

1) the dredging, filling, or altering of any bay, estuary, salt marsh, river mouth, slough, or lagoon; 2) reducing the size of any beach or area used for public recreation; 3) reducing access or imposing restrictions on public access to tidal and submerged lands, beaches, rivers and streams; and 4) fisheries and fishing grounds, wildlife habitats, and existing agricultural uses of land.

## **5.0 ALTERNATIVES CONSIDERED**

### **5.1 No Action Alternative**

The current status of the existing St. Rita Church structure and associated trailers and structures are near or at a dilapidated condition. A no action alternative creates a safety hazard for present and future parishioners of St. Rita Church. Part of the Church's overall mission is to serve the adjacent and surrounding community; a no action alternative will not meet this mission of the Church.

### **5.2 Delayed Action Alternative**

A delayed action alternative presents the same issues as stated in the previous section.

### **5.3 Project Design Alternatives**

#### **5.3.1 Rehabilitate Existing Buildings Alternative**

This alternative was considered, but the existing Church building and associated trailers and structures are in such a state of disrepair that it is not a cost-effective approach. Moreover, safety for Church parishioners is of utmost importance and the demolition and reconstruction of these Church and facilities serves this ultimate purpose and mission.

#### **5.3.2 New Facilities Alternative**

Section 1.4.3 – New Facilities in this EA describes the construction of the new Church, new meeting hall, and new office building. This alternative serves the need of Church parishioners and the Nānākuli community and surrounding communities for the present and future residents.

## 6.0 CONSULTED AGENCIES AND ORGANIZATIONS

### 6.1 Pre-Assessment Consultation

Include Agencies and organizations consulted with during the pre-consultation phase

The following public agencies were sent pre-consultation letters for the preparation of this EA:

#### State of Hawaii

- Department of Business, Economic Development & Tourism (DBEDT)
- DBEDT, Office of Planning
- Department of Education
- Department of Hawaiian Homelands
- Department of Land & Natural Resources, Land Division\*
- DLNR, State Historic Preservation Division
- Department of Health – Office of Environmental Quality Control\*
- Department of Health – Environmental Health Administration\*
- Department of Health – Wastewater Branch
- Office of Hawaiian Affairs
- Department of Transportation\*

#### City & County of Honolulu

- Board of Water Supply
- Department of Community Services\*
- Department of Design and Construction\*
- Department of Emergency Management\*
- Department of Environmental Services
- Department of Facility Maintenance\*
- Department of Parks and Recreation\*
- Department of Transportation Services\*
- Department of Planning and Permitting
- Fire Department\*
- Police Department

#### Private Organizations & Individuals

- Councilmember Kymberly Marcos Pine
- Representative Karen Awana
- Hawaiian Electric Company
- Historic Hawaii Foundation\*
- Chairperson, Nānākuli-Ma'ili Neighborhood Board # 36

Those agencies with a (\*) provided comments, which have been incorporated into this

EA. Agency/stakeholder comment and response letters are provided in Appendix A.

## **6.2 Presentations to Organizations**

### **6.2.1 Nānākuli-Mā'ili Neighborhood Board**

The applicant's consultant, Hawai'i Planning LLC, presented the proposed St. Rita Church Master Plan to the Neighborhood Board on November 18, 2014. The Neighborhood Board unanimously supported the project by a vote of 9-0.

### **6.2.2 Department of Hawaiian Homelands**

The applicant met with the Department of Hawaiian Homelands on April 30, 2015 to discuss the St. Rita Church master plan and request a conditional approval letter.

Appendix G – DHHL Conditional Approval Letter is enclosed for review and reference.

## 7.0 FINDINGS AND ANTICIPATED DETERMINATION

### 7.1 Findings

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

This section discusses the project's relation to the 13 Significance Criteria established under the State Department of Health's Administrative Rules Title 11, Chapter 200.

1) *Involve an irrevocable commitment to loss or destruction of any natural or cultural resource;*

**Discussion:** Proposed improvements would not result in the irrevocable commitment to loss or destruction of any natural or cultural resource. Project improvements will involve a commitment of existing developed land already used by the church.

2) *Curtails the range of beneficial uses of the environment;*

**Discussion:** The project would not curtail the range of beneficial uses associated with this church property. The property is presently used for church related services and activities, and these activities will continue to occur along with being enhanced by project improvements.

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;*

**Discussion:** The improvements would not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS. A discussion of the project's consistency with applicable guidelines is provided in Chapter 4 of this document.

- 4) *Substantially affects the economic welfare, social welfare and cultural practices of the community or state;*

**Discussion:** The project will provide minor short-term economic benefits in the form of construction jobs and additional tax revenue to the State. It will also provide minor longer-term economic benefits supporting the mission and operations of the church. The church presently provides important social benefits to the Wai'anae community that would continue with the project. Such benefits include providing weekly meals for those in need, and conducting normal church activities such as services, bible studies, etc. Project improvements would support the church's ability to better meet the long-term needs and activities of their parish and the public. The project is not expected to significantly affect traditional native Hawaiian cultural practices or other traditional cultural practices occurring in the surrounding area.

- 5) *Substantially affect public health;*

**Discussion:** The project would not substantially affect public health as discussed in various sections of this document. Short-term construction-related effects would be mitigated by complying with pertinent State or City regulations and conditions of ministerial permits obtained. Best management practices will also be implemented as part of construction activities.

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

**Discussion:** The project should not have any substantial secondary impacts on the social environment, infrastructure facilities, and public facilities. Improvements do not involve adding residential housing or visitor accommodation units that may generate population changes and increase demands on public facilities. The project should not contribute to in-migration of residents to the island.

7) *Involves a substantial degradation of environmental quality;*

**Discussion:** The project would not contribute to a substantial degradation to the quality of the surrounding environment. Improvements are limited to construction of a new Meeting Hall, new church, and new office building. Necessary upgrades to infrastructure will be coordinated with the City which includes continued connection to the municipal sewer system for wastewater treatment and disposal. Appropriate mitigative measures will be implemented to address impacts on the environment in coordination with appropriate government agencies. This includes implementing best management practices during construction to minimize erosion and other short-term impacts in compliance with ministerial permits and conditions.

8) *Individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;*

**Discussion:** This project involves the construction of a new Meeting Hall, new church, and office building as described in this EA. Impacts associated with these improvements were addressed, and are mainly associated with construction activities. Cumulative impacts from these improvements were considered and addressed in relation to other developments planned in the vicinity as discussed in Chapter 3. In evaluating environmental impacts, it was determined that the project should not contribute to a significant cumulative effect on the environment. This project does not involve the commitment for larger actions on the St. Rita Church property.

9) *Substantially affect a rare, threatened, or endangered species, or its habitat;*

**Discussion:** There are no known endangered, threatened, or rare botanical resources on the project site, or faunal and avifaunal species inhabiting the property that may be affected by construction activities or operation of the improved church facilities. The property is already development with the existing church facilities and paved parking. Necessary control measures and best management practices would be implemented to minimize runoff and other potential short-term impacts associated with construction activity. Thus, the project is not expected to substantially affect rare, threatened, or endangered species or potential habitat for such species.

10) *Detrimentially affect air or water quality or ambient noise levels;*

**Discussion:** The project should not result in a detrimentally significant impact on air, water quality, or ambient noise levels. Impacts associated with these factors would be limited to short-term construction activities. However, such impacts are expected to be minor due to the small amount of excavation and type of construction activities planned. To further minimize impacts, construction activities would be subject to applicable State and City regulations and permit conditions.

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

**Discussion:** The project is not located in a flood plain. The site is within the City's updated tsunami evacuation area, however. Written procedures will be developed addressing evacuation procedures to further increase personal safety. The project site is not in an erosion-prone area, and structures will be designed in compliance with applicable City building codes and standards.

*12) Substantially affect scenic vistas and view planes identified in county or state plans or studies;*

**Discussion:** The proposed Meeting Hall and new Church should not affect scenic vistas or viewplanes as discussed in this document. New buildings will comply with the City setback requirements and will be under the maximum building height limit allowed for this property.

*13) Require substantial energy consumption.*

**Discussion:** The project will not require substantial energy consumption or increased capacity of supporting electrical facilities. Design plans will be appropriately coordinated with HECO.

## **7.2 Anticipated Determination**

A Finding of No Significant Impact (FONSI) determination should be warranted for the St. Rita Catholic Church master Plan project based upon the information provided and assessment results conducted for the project. The results of the assessments conducted have determined that the proposed project should not have a significant impact on the surrounding environment. The findings supporting this determination are based upon the previous discussion of the project's impact on the environment in relation to the aforementioned 13 Significance Criteria.

## 8.0 REFERENCES

City and County of Honolulu (City). 1992. *General Plan: Objectives and Policies*. Honolulu, Hawai'i.

City and County of Honolulu (City). 1990. *Revised Ordinances of Honolulu, as amended*. Honolulu, Hawai'i.

City and County of Honolulu, Department of Planning and Permitting (City). March 2012. *Wai'anae Sustainable Communities Plan*. On-line version. [<http://www.honoluludpp.org/Planning/DevelopmentSustainableCommunitiesPlans/WaianaPlan.aspx>]. Honolulu, Hawai'i.

State of Hawai'i, Department of Transportation, Highways Division. (March 2011). Farrington Highway Intersection Improvements at Haleakala Avenue and Nānākuli Avenue, Final Environmental Assessment/FONSI.

Commission on Water Resource Management (CWRM). June 2008. *Water Resources Protection Plan, Hawai'i Water Plan*. Department of Land and Natural Resources, State of Hawai'i. Prepared by Wilson Okamoto Corporation. Honolulu, Hawai'i.

Helber Hastert & Fee. (August 2011). Draft Environmental Assessment, St. Augustine By-The-Sea Church Master Plan. Waikīkī, O'ahu, Hawai'i.

Imata & Associates, Inc. (October 2014). Due Diligence Report – St. Rita Catholic Church.

Keala Pono. (December 2014). DRAFT — Archaeological Assessment of the St. Rita's Church Grounds at TMK: (1) 8-9-005:001, Nānākuli Ahupua'a, Wai'anae District, Island of O'ahu, Hawai'i.

Kimura International. (April 2013). Nānākuli Public Library, Final Environmental Assessment/FONSI.

Macdonald, Gordon A., Abbott, Agatin T., and Peterson, Frank L. 1983. *Volcanoes in the Sea, The Geology of Hawai'i*. Second Edition. University of Hawai'i Press. Honolulu, Hawai'i.

Department of Health. Community Noise Control. Chapter 11-46, Hawai'i Administrative Rules. On-line version. State of Hawai'i. [<http://co.doh.hawaii.gov/sites/har/admrules/Rules/1/11-46.pdf>].

Department of Health. Water Quality Standards. Chapter 11-54, Hawai'i Administrative Rules. On-line version. State of Hawai'i.  
[\[http://co.doh.hawaii.gov/sites/har/admrules/Rules/1/11-54.pdf\]](http://co.doh.hawaii.gov/sites/har/admrules/Rules/1/11-54.pdf).

Higashi, Irvin. (March 2015). St. Rita Catholic Church Tree Assessment Report.

State of Hawai'i. Hawai'i Revised Statutes. Chapter 343, Environmental Impact Statements. 1998 (as amended).

Traffic Management Consultant. (September 2014). Draft Traffic Impact Analysis Report and Traffic Management Plan for the Proposed St. Rita Catholic Church.

U.S. Department of Agriculture, Soil Conservation Service (SCS). August 1972. *The Soil Survey of the Islands of Kaua'i, O'ahu, Maui, Moloka'i, and Lana'i, State of Hawai'i*. In cooperation with the University of Hawai'i, Agricultural Experiment Station. Washington D.C.

U.S. Department of the Interior, Geological Survey (USGS). January 2002. *Atlas of Natural Hazards in the Hawaiian Coastal Zone*. Prepared by Fletcher, Charles H., Grossman, Eric E., Richmond, Bruce M., and Gibbs, Ann E. in cooperation with the University of Hawai'i, State Office of Planning, and National Oceanic and Atmospheric Administration. Geologic Investigations, Series I-2761. U.S. Government Printing Office.

Western Regional Climate Center (WRCC). 2007. National Oceanic and Atmospheric Administration, U.S. Department of Commerce. Historical Climate Information. Climate Data Summary. [\[http://wrcc.dri.edu/\]](http://wrcc.dri.edu/)

## **Appendix A**

### **Pre-Consultation Comment and Response Letters**



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

In reply, please refer to:  
File:  
EPO 14-229

October 21, 2014

Dennis Silva, Jr., AICP  
Hawaii Planning LLLC  
Email: hawaiiplanning@gmail.com

Dear Mr. Silva:

**SUBJECT: Pre-Assessment Consultation for EA for St. Rita Catholic Church**

The Department of Health (DOH), Environmental Health Administration (EHA), Environmental Planning Office (EPO), acknowledges receipt of your letter to the Director dated October 14, 2014. Thank you for allowing us to review the letter and 3 enclosures detailing the proposed project. EPO recommends that you review the standard comments at: <http://health.hawaii.gov/epo/home/landuse-planning-review-program/>. You are required to adhere to all applicable standard comments.

We encourage you to examine and utilize the Hawaii Environmental Health Portal. The portal provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings. The Portal is continually updated. Please visit it regularly at: <https://eha-cloud.doh.hawaii.gov>

You may also wish to review the recently revised Water Quality Standards Maps that have been updated for all islands. The new Water Quality Standards Maps can be found at: <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/water-quality-standards/>.

The EPO suggests that you examine the new digital FEMA maps for Honolulu and Sea Level Rise projects available on the SOEST website: <http://www.soest.hawaii.edu/coasts/sealevel>. I find the Honolulu fly-through with 3 foot sea level rise (projected for 2100) very interesting.

We also suggest that you examine the many sources available on strategies to support the sustainable and healthy design of communities and buildings, including the:

2014 National Climate Change Report – Highlights for Hawaii:

[http://ipcc-wg2.gov/AR5/images/uploads/WGIIAR5-Chap29\\_FGDall.pdf](http://ipcc-wg2.gov/AR5/images/uploads/WGIIAR5-Chap29_FGDall.pdf);

U.S. Health and Human Services: [www.hhs.gov/about/sustainability](http://www.hhs.gov/about/sustainability);

U.S. Environmental Protection Agency's sustainability programs: [www.epa.gov/sustainability](http://www.epa.gov/sustainability);

U.S. Green Building Council's LEED program: [www.usgbc.org/leed](http://www.usgbc.org/leed);

Smart Growth America: [www.smartgrowthamerica.org](http://www.smartgrowthamerica.org);

International Well Building Standard: <http://delosliving.com>; and

Intergovernmental Panel on Climate Change (IPCC):

[http://ipcc-wg2.gov/AR5/images/uploads/WGIIAR5-Chap29\\_FGDall.pdf](http://ipcc-wg2.gov/AR5/images/uploads/WGIIAR5-Chap29_FGDall.pdf)

We request you share all of this information with others to increase community awareness on sustainable, innovative, inspirational, and healthy community design.

Please reply via email to [laura.mcintyre@doh.hawaii.gov](mailto:laura.mcintyre@doh.hawaii.gov) confirming receipt of this emailed letter.

Mahalo,

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



February 19, 2015

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

Subject: Pre-Consultation - Draft Environmental Assessment  
St. Rita Catholic Church – 89-318 Farrington Highway  
Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion)  
Nānākuli, O'ahu, Hawai'i

Dear Ms. Phillips-McIntyre,

Thank you for your letter dated October 21, 2014 regarding the above-referenced project. The information provided in the websites you reference will be implemented into the Draft EA where relevant.

A copy of the Draft EA will be provided to the Department of Health, Environmental Planning Office. We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

A handwritten signature in black ink, appearing to read "Dennis Silva, Jr.", is written over the printed name below.

Dennis Silva, Jr., AICP  
Principal

DEPARTMENT OF EMERGENCY MANAGEMENT  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET • HONOLULU, HAWAII 96813  
PHONE: (808) 723-8960 • FAX: (808) 524-3439

KIRK CALDWELL  
MAYOR



MELVIN N. KAKU  
DIRECTOR

PETER J.S. HIRAI  
DEPUTY DIRECTOR

October 22, 2014

Dennis Silva, Jr., AICP  
Hawaii Planning, LLC.  
American Savings Bank Tower  
1001 Bishop Street, Suite 2755  
Honolulu, Hawaii 96813

Dear Dennis:

In response to your letter dated October 14, 2014, requesting any comments for the proposed St. Rita Catholic Church expansion project located at 89-318 Farrington Highway. The City and County of Honolulu (City) Department of Emergency Management (DEM) would like to just comment that the project site is located within the tsunami evacuation zone.

Thank you for allowing us to participate in the planning process of this project. Should you have any questions please contact us at 723-8960.

Sincerely,

A handwritten signature in blue ink that reads "Melvin N. Kaku". The signature is stylized and cursive.

Melvin N. Kaku  
Director



February 19, 2015

Mr. Melvin N. Kaku  
Director  
Department of Emergency Management  
City and County of Honolulu  
650 S. King Street  
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment  
St. Rita Catholic Church – 89-318 Farrington Highway  
Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion)  
Nānākuli, O'ahu, Hawai'i

Dear Mr. Kaku,

Thank you for your letter dated October 22, 2014 regarding the above-referenced project. The Draft EA includes discussion of the St. Rita Church site located within the tsunami evacuation zone.

A copy of the Draft EA will be provided to the Department of Emergency Management. We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

A handwritten signature in black ink, appearing to read "Dennis Silva, Jr.", is written over the company name.

Dennis Silva, Jr., AICP  
Principal

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

KIRK CALDWELL  
MAYOR



MICHELE K. NEKOTA  
DIRECTOR

JEANNE C. ISHIKAWA  
DEPUTY DIRECTOR

October 23, 2014

Mr. Dennis Silva, Jr., AICP  
Hawaii Planning LLC  
American Savings Bank Tower  
1001 Bishop Street, Suite 2755  
Honolulu, Hawaii 96813

Dear Mr. Silva:

**SUBJECT:** Pre-Assessment Consultation for Draft Environmental Assessment, St. Rita Catholic Church-89-318 Farrington Highway  
Tax Map Keys: 8-9-005:001 and 8-9-007: 004 (portion)  
Nanakuli, Oahu, Hawaii

Thank you for the opportunity to review and comment at the pre-assessment consultation stage of an environmental assessment for the proposed church expansion of St. Rita Catholic Church.

The Department of Parks and Recreation has no comment. As the proposed project will have no impact on 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,

A handwritten signature in black ink that reads "Michele K. Nekota".

Michele K. Nekota  
Director

MKN:jr  
(584682)



October 27, 2014

Dennis Silva Jr, AICP  
Hawai'i Planning LLC  
American Savings Bank Tower  
1001 Bishop Street, Suite 2755  
Honolulu, HI 96813

RE: Pre-Assessment Consultation for Draft Environmental Assessment  
St Rita Catholic Church, 80-318 Farrington Highway  
Nānākuli, O'ahu, Hawai'i

Dear Mr. Silva,

Thank you for including Historic Hawai'i Foundation in the Pre-Assessment Consultation for the Draft Environmental Assessment for the proposed work at St Rita Catholic Church. Since 1974, Historic Hawai'i Foundation has served as the state-wide historic preservation non-profit organization, advocating and encouraging the preservation of Hawai'i's significant historic places.

Based on the correspondence dated October 14, 2014, the proposed project consists of renovating and extending the existing church, construction of a new multi-purpose room, and construction of new office building. Though not clear in the provided documents, it appears that demolition of some of the existing structures and portions of the existing church would also be included in the scope of work.

Historic Hawai'i Foundation strongly recommends that the Draft Environmental Assessment include an evaluation of the St Rita Church for historic significance and assess how the proposed alterations would affect its historic integrity. Measures to avoid, minimize and mitigate any adverse effects need to be addressed in the Environmental Assessment.

The website for St Rita's Church suggests that the building has the potential to be historically significant. To make a formal determination of historic significance and eligibility for designation on the Hawai'i or National Registers of Historic Places, the building should be evaluated by a qualified architectural historian or preservation architect (i.e. a preservation professional who meets the professional qualification standards per the Secretary of the Interior's Qualification Standards found at 36 CFR Part 61).

Please also note that, as a property owned by the Department of Hawaiian Homelands, any alterations or demolition would be subject to review by the State Historic Preservation Division under HRS Chapter 6E-08. Additionally, if there are any federal funds, permits, licenses or approvals involved in the project, it will also be subject to National Historic Preservation Act (NHPA) Section 106 Review and Consultation. Therefore, the Draft Environmental Assessment should identify if any of these conditions exist.

If you should have questions or concerns related to these comments please contact Megan Borthwick, Preservation Program Manager, at [megan@historichawaii.org](mailto:megan@historichawaii.org) or by phone at (808) 523-2900. Historic Hawai'i Foundation would like to continue to participate in this consultation.

Sincerely,

Kiersten Faulkner, AICP  
Executive Director



February 19, 2015

Ms. Kiersten Faulkner, AICP  
Executive Director  
Historic Hawaii Foundation  
680 Iwilei Road, Suite 690  
Honolulu, HI 96817

Subject: Pre-Consultation - Draft Environmental Assessment  
St. Rita Catholic Church – 89-318 Farrington Highway  
Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion)  
Nānākuli, O’ahu, Hawai’i

Dear Ms. Faulkner,

Thank you for your letter dated October 27, 2014 regarding the above-referenced project. We acknowledge your comments on the potential historic significance of the existing St. Rita Church structures. The plans are to demolish the existing structures and reconstruct a new meeting hall and new church due to the following reasons: The current structures are old and consist of unsafe conditions, such as potentially containing hazardous materials and severe termite damage.

The façade of St. Rita Church is well-known as the entrance to the Nānākuli community. Thus, the new church will maintain the familiar street frontage along Farrington Highway and consist of the same façade to address any historical significance issues.

The Draft EA will include discussion on the project’s consistency and relevance to HRS Chapter 6E – Historic Preservation.

A copy of the Draft EA will be provided to the Historic Hawaii Foundation. We appreciate your participation in this process.

Sincerely,

Hawai’i Planning LLC

A handwritten signature in black ink, appearing to read "Dennis Silva, Jr.", is written over the printed name below.

Dennis Silva, Jr., AICP  
Principal



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

FORD N. FUCHIGAMI  
INTERIM DIRECTOR

Deputy Directors  
RANDY GRUNE  
AUDREY HIDANO  
ROSS M. HIGASHI  
JADINE URASAKI  
IN REPLY REFER TO:

HWY-1982  
HWY-PS 2.8344

October 30, 2014

Mr. Dennis Silva, Jr., AICP  
Hawaii Planning LLC  
American Savings Bank Tower  
1001 Bishop Street, Suite 2755  
Honolulu, Hawaii 96813

Dear Mr. Silva:

Subject: SMA/HRS 343 Environmental Assessment Pre-Consultation  
St. Rita Catholic Church Expansion  
State Route No. 93 - Farrington Highway ~ M.P. 4.4  
Waianae District, Nanakuli, Oahu  
TMK: (1) 8-9-005:001 & 8-9-007:004 (por)

Thank you for consulting with our department regarding the subject project. At this time, we have the following comments:

1. Farrington Highway is on the National Highway System (NHS) designated as an urban principal arterial under the jurisdiction of our department. As part of the NHS and the State Highway System our department is concerned with preserving the functional classification of this arterial highway.
2. The subject project proposes to expand the church by the construction of a new multi-purpose building to accommodate 300 people, extend the existing church to accommodate 220 additional people, and construct a new 900 sq. ft. office building. Vehicular access to the subject church is via Farrington Highway and Pua Avenue, where access to Farrington Highway is a right-in and right-out access.
3. This proposed expansion project will inherently produce added trips that will impact Farrington Highway. It is recommended the Applicant prepare a Traffic Impact Report (TIR) to assess and address the proposed project's impacts to the operations and safety of Farrington Highway. The TIR and Environmental Assessment should be submitted to our department for review.
4. The study area for the TIR shall at a minimum include Farrington Highway from Nanakuli Avenue to Pohakunui Avenue.
5. Access to Farrington Highway shall continue as a right-in and right-out access.

Mr. Dennis Silva, Jr.  
October 30, 2014  
Page 2

HWY-PS 2.8344

6. The TIR should assess all modes of transportation, and peak hour and special events/ functions periods.
7. The Applicant shall be responsible to provide transportation improvements to mitigate any transportation impacts caused by the subject church expansion project at their cost.

Again, the DOT appreciates the opportunity to provide comments. If you have any questions, please contact Ken Tatsuguchi, Engineering Program Manager, Highways Division, Planning Branch at 587-1830. Please reference file review number 2014-220 in all contacts and correspondence regarding these comments.

Very truly yours,



FORD N. FUCHIGAMI  
Interim Director of Transportation



February 19, 2015

Mr. Ford M. Fuchigami  
Interim Director of Transportation  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment  
St. Rita Catholic Church – 89-318 Farrington Highway  
Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion)  
Nānākuli, O'ahu, Hawai'i

Dear Mr. Fuchigami,

Thank you for your letter dated October 30, 2014 regarding the above-referenced project. The Draft EA includes discussion of the traffic impacts related to St. Rita Church expansion. The Draft EA also includes the Traffic Impact Analysis Report (TIAR) and Traffic Management Plan enclosed as an Appendix.

A copy of the Draft EA will be provided to the Department of Transportation. We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

A handwritten signature in black ink, appearing to read "D. Silva, Jr.", is written over the company name.

Dennis Silva, Jr., AICP  
Principal

DEPARTMENT OF COMMUNITY SERVICES  
CITY AND COUNTY OF HONOLULU

715 SOUTH KING STREET, SUITE 311 • HONOLULU, HAWAII 96813 • AREA CODE 808 • PHONE: 768-7762 • FAX: 768-7792



KIRK CALDWELL  
MAYOR

GARY K. NAKATA  
ACTING DIRECTOR

October 29, 2014

Mr. Dennis Silva, Jr., AICP  
Principal  
Hawaii Planning LLC  
American Savings Bank Tower  
1001 Bishop Street, Suite 2755  
Honolulu, Hawaii 96813

Dear Mr. Silva:

**SUBJECT:** Pre-Assessment Consultation for Draft Environmental Assessment  
St. Rita Catholic Church, 89-318 Farrington Highway  
Tax Map Keys: 8-9-005:001 and 8-9-007:004 (portion)  
Nanakuli, Oahu, Hawaii

We have reviewed your letter dated October 14, 2014, and the enclosed documents regarding this Pre-Assessment Consultation for Draft Environmental Assessment for the St. Rita Catholic Church multi-purpose building project.

Our review of the documents indicates that the proposed project will have no adverse impacts on any Department of Community Services' activities or projects at this time.

Thank you for providing us with the opportunity to comment on this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read "Gary K. Nakata".

Gary K. Nakata  
Acting Director

GKN:sgk

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



MANUEL P. NEVES  
FIRE CHIEF

LIONEL CAMARA JR.  
DEPUTY FIRE CHIEF

November 3, 2014

Mr. Dennis Silva, Jr., AICP  
Hawaii Planning LLC  
American Savings Bank Tower  
1001 Bishop Street, Suite 2755  
Honolulu, Hawaii 96813

Dear Mr. Silva:

Subject: Preassessment Consultation for a Draft Environmental Assessment  
St. Rita Catholic Church  
89-318 Farrington Highway  
Nanakuli, Oahu, Hawaii  
Tax Map Keys: 8-9-005: 001 and 8-9-007: 004 (Portion)

In response to your letter dated October 14, 2014, 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 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]<sup>TM</sup>, 2006 Edition, Section 18.2.3.2.2.)

A fire department access road shall extend to within 50 ft 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<sup>TM</sup>, 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

Mr. Dennis Silva, Jr., AICP  
Page 2  
November 3, 2014

constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet 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. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1, UFC™, 2006 Edition, Section 18.2.3.4.1.1, as amended.)

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

Should you have questions, please contact Battalion Chief Terry Seelig of our Fire Prevention Bureau at 723-7151 or [tseelig@honolulu.gov](mailto:tseelig@honolulu.gov).

Sincerely,



SOCRATES D. BRATAKOS  
Assistant Chief

SDB/SY:bh

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

MARK N. GARRITY, AICP  
DEPUTY DIRECTOR

TP10/14-584786R

November 5, 2014

Mr. Dennis Silva, Jr., AICP  
Principal  
Hawaii Planning LLC  
1001 Bishop Street, Suite 2755  
Honolulu, Hawaii 96813

Dear Mr. Silva:

**SUBJECT:** Pre-Assessment Consultation for Draft Environmental Assessment (DEA), St. Rita Catholic Church, Nanakuli, Oahu, Hawaii

In response to your letter dated October 14, 2014, we have the following comments:

1. The DEA should discuss any traffic impacts the project may have on any surrounding City roadways, including short-term impacts during construction, and measures to mitigate these impacts applying complete streets principles.
2. Farrington Highway is under the jurisdiction of the Hawaii State Department of Transportation and should be consulted on impacts to their roadway.
3. The area Neighborhood Board, as well as the area residents, businesses, emergency personnel, Oahu Transit Services, Inc. (TheBus), 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.
4. Any construction materials and equipment should be transferred to and from the project site during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize any possible disruption to traffic on the local streets.

Mr. Dennis Silva, Jr., AICP  
November 5, 2014  
Page 2

Thank you for the opportunity to review this matter. Should you have any questions, please contact Renee Yamasaki of my staff at 768-8383.

Very truly yours,

  
Michael D. Formby  
Director



February 19, 2015

Mr. Michael D. Formby  
Director  
Department of Transportation Service  
City and County of Honolulu  
650 S. King Street, 3<sup>rd</sup> Floor  
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment  
St. Rita Catholic Church – 89-318 Farrington Highway  
Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion)  
Nānākuli, O'ahu, Hawai'i

Dear Mr. Formby,

Thank you for your letter dated November 5, 2014 regarding the above-referenced project. The Draft EA includes discussion of the traffic impacts related to St. Rita Church expansion. The Draft EA Appendices section includes the Traffic Impact Analysis Report (TIAR) and Traffic Management Plan. St. Rita Church project consultants are working with the State Department of Transportation on impacts related to Farrington Highway.

Construction materials and equipment will be transferred to and from the project site during off-peak hours (8:30am to 3:30pm).

A copy of the Draft EA will be provided to the Department of Transportation Services. We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

A handwritten signature in black ink, appearing to read "Dennis Silva, Jr.", is written over the company name.

Dennis Silva, Jr., AICP  
Principal

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

November 7, 2014

Hawai'i Planning LLC  
Attn: Dennis Silva, Jr., Principal  
American Savings Bank Tower  
1001 Bishop Street, Suite 2755  
Honolulu, HI 96813

via email: [hawaiiplanningllc@gmail.com](mailto:hawaiiplanningllc@gmail.com)

Dear Mr. Silva,

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment, St. Rita Catholic Church – 89-318 Farrington Highway, Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion); Nanakuli, O'ahu, Hawai'i

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; (2) Division of Forestry & Wildlife; (3) Commission on Water Resource Management; and (4) Engineering Division. 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,

A handwritten signature in blue ink, appearing to read "Russell Y. Tsuji".

Russell Y. Tsuji  
Land Administrator

Enclosure(s)



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

October 20, 2014

MEMORANDUM

TO:

**DLNR Agencies:**

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division – Oahu District
- Historic Preservation

FROM:

*R* Russell Y. Tsuji, Land Administrator *VEN*

SUBJECT:

Pre-Assessment Consultation for Draft Environmental Assessment, St. Rita Catholic Church – 89-318 Farrington Highway

LOCATION:

89-318 Farrington Highway, Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion), Nanakuli, O`ahu, Hawai`i

APPLICANT:

St. Rita Catholic Church by its consultant, Hawai`i Planning LLC

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by **November 6, 2014**. 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: \_\_\_\_\_  
Date: \_\_\_\_\_

*Steve Molmen*  
*10/22/14*  
*SM*



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

October 20, 2014

MEMORANDUM

TO: *From*

**DLNR Agencies:**

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division – Oahu District
- Historic Preservation

RECEIVED  
LAND DIVISION  
2014 OCT 27 PM 3:01  
DEPT. OF LAND & NATURAL RESOURCES  
STATE OF HAWAII

FROM: *To!*

*R* Russell Y. Tsuji, Land Administrator *✓*

SUBJECT:

Pre-Assessment Consultation for Draft Environmental Assessment, St. Rita Catholic Church – 89-318 Farrington Highway

LOCATION:

89-318 Farrington Highway, Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion), Nanakuli, O'ahu, Hawai'i

APPLICANT:

St. Rita Catholic Church by its consultant, Hawai'i Planning LLC

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by **November 6, 2014**. 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:

*Lisa Hadwan*

Print Name:

LISA HADWAN

Date:

10-21-14



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

October 20, 2014

MEMORANDUM

TO:

**DLNR Agencies:**

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division – Oahu District
- Historic Preservation

FR:

TD:

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Pre-Assessment Consultation for Draft Environmental Assessment, St. Rita Catholic Church – 89-318 Farrington Highway

LOCATION:

89-318 Farrington Highway, Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion), Nanakuli, O'ahu, Hawai'i

APPLICANT:

St. Rita Catholic Church by its consultant, Hawai'i Planning LLC

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by **November 6, 2014**. 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: WILLIAM M. TAM, Deputy Director

Date: October 29, 2014

FILE ID:	RFD. 4077.3
DOC ID:	11836 ✓

2014 OCT 21 AM 10:41

RECEIVED  
LAND DIVISION

OCT 31 PH 2:39

DEPARTMENT OF LAND & NATURAL RESOURCES  
STATE OF HAWAII

✓



WILLIAM J. AILA, JR.  
CHAIRPERSON  
KAMANA BEAMER  
MICHAEL G. BUCK  
MILTON D. PAVAO  
LINDA ROSEN, M.D., M.P.H.  
JONATHAN STARR

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

October 29, 2014

REF: RFD.4077.3

TO: Russell Tsuji, Administrator  
Land Division

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

SUBJECT: Pre-Assessment Consultation for Draft EA, St. Rita Catholic Church 89-318 Farrington Hwy,  
Nanakuli

FILE NO.:  
TMK NO.: 8-9-005:001 & 8-9-007:004

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/>.
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/czrm/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/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://www.hawaiiscape.com/wp-content/uploads/2013/04/LICH\\_Irrigation\\_Conservation\\_BMPs.pdf](http://www.hawaiiscape.com/wp-content/uploads/2013/04/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/info\\_permits.htm](http://hawaii.gov/dlnr/cwrm/info_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:

Our records show there is an existing unused well, Well No. 2308-001, at TMK 8-9-007-004. This well was drilled in 1949 and is currently not equipped with a pump. If the well has been abandoned, it should be properly sealed to avoid potential contamination of the underlying aquifer. An application for a permit to seal the well should be submitted and approved by the Commission prior to any sealing work. Section 3.1 of the Hawaii Well Construction and Pump Installation Standards provides that all wells must be properly abandoned and sealed whenever:

- The well has served its purpose;
- The use of the well has been permanently discontinued;
- The well is not being properly maintained;
- The physical condition of the well is causing a waste of ground water, or is impairing or threatens to impair the quality of the ground water resources; or
- The well is in such a state of disrepair that its continued use is impractical or it is a hazard to public health or safety.

If the well has not been abandoned, Hawai'i Administrative Rules (Title 13 Chapter 168 Subtitle 7) requires the submission of monthly water use reporting, including pumping, chloride concentrations, temperature, and (pump off) water level data. If the well has no usage for the time frame represented for that report, then well owners must report that "0" gallons was pumped. In order to stop reporting on a well, the well needs to be properly sealed and abandoned. Failure to submit the required monthly reports is a violation of the above-referenced administrative rule and may be subject to fines of up to \$5,000 per day.

If there are future plans to withdraw water from the well, an application for a pump installation permit should be submitted and approved by the Commission prior to any pump installation permit.

If there are any questions, please contact W. Roy Hardy at 587-0225.



RECEIVED  
LAND DIVISION

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

2014 OCT 31 PM 2:39



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

October 20, 2014

MEMORANDUM

TO: *PR*

**DLNR Agencies:**

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division – Oahu District
- Historic Preservation

TO

FROM:

SUBJECT:

*PR*

Russell Y. Tsuji, Land Administrator

Pre-Assessment Consultation for Draft Environmental Assessment, St. Rita Catholic Church – 89-318 Farrington Highway

LOCATION:

89-318 Farrington Highway, Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion), Nanakuli, O`ahu, Hawai`i

APPLICANT:

St. Rita Catholic Church by its consultant, Hawai`i Planning LLC

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by **November 6, 2014**. 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:

*Carly S. Chong*  
Carly S. Chong, Chief Engineer

Date:

10/30/14

14 OCT 21 PM 9:27 ENGINEERING

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

LD/ Russell Y. Tsuji

Ref.: Pre-Assessment Consultation for DEA for St. Rita Catholic Church, Nanakuli  
Oahu.068

**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 Zones AE and X. The National Flood Insurance Program regulates developments within Zone AE as indicated in bold letters below, but not Zone X.**
- ( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is \_\_\_\_.
- (X) **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.**

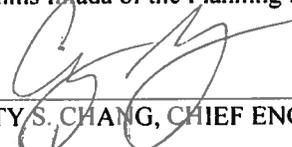
**Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable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

- (X) **Mr. Mario Siu Li at (808) 768-8098 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. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.
- ( ) Mr. Stanford Iwamoto at (808) 241-4846 of the County of Kauai, Department of Public Works.
- ( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- ( ) 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: \_\_\_\_\_  
\_\_\_\_\_

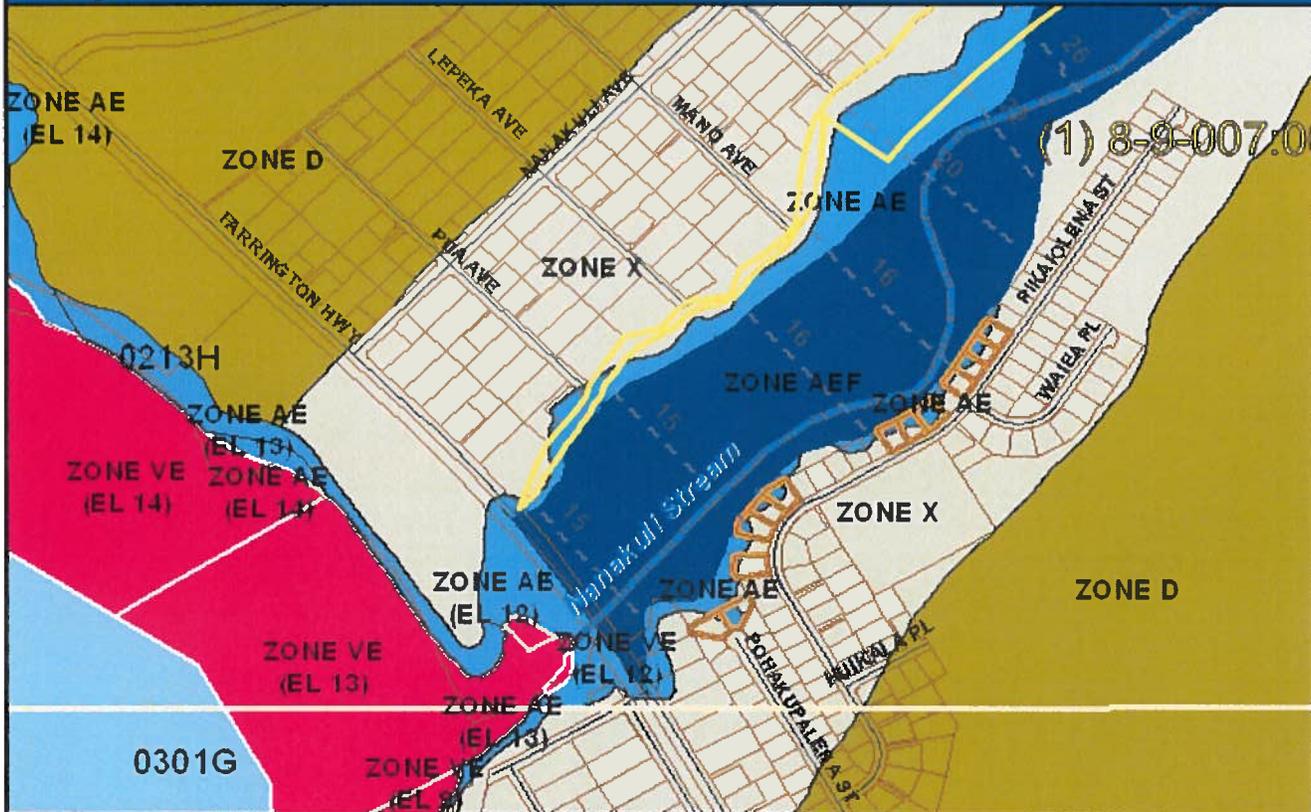
Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed:   
CARTY S. CHANG, CHIEF ENGINEER

Date: 10/30/14



# State of Hawaii FLOOD HAZARD ASSESSMENT REPORT



## NATIONAL FLOOD INSURANCE PROGRAM

### FLOOD ZONE DEFINITIONS

**SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD** – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- Zone A:** No BFE determined.
- Zone AE:** BFE determined.
- Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

**NON-SPECIAL FLOOD HAZARD AREA** – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

### OTHER FLOOD AREAS

- Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

### PROPERTY INFORMATION

**COUNTY:** HONOLULU  
**TMK NO:** (1) 8-9-007-004  
**PARCEL ADDRESS:**  
**FIRM INDEX DATE:** JANUARY 19, 2011  
**LETTER OF MAP CHANGE(S):** NONE  
**FEMA FIRM PANEL(S):** 15003C0213H  
**PANEL EFFECTIVE DATE:** JANUARY 19, 2011

**PARCEL DATA FROM:** APRIL 2014  
**IMAGERY DATA FROM:** MAY 2006

### IMPORTANT PHONE NUMBERS

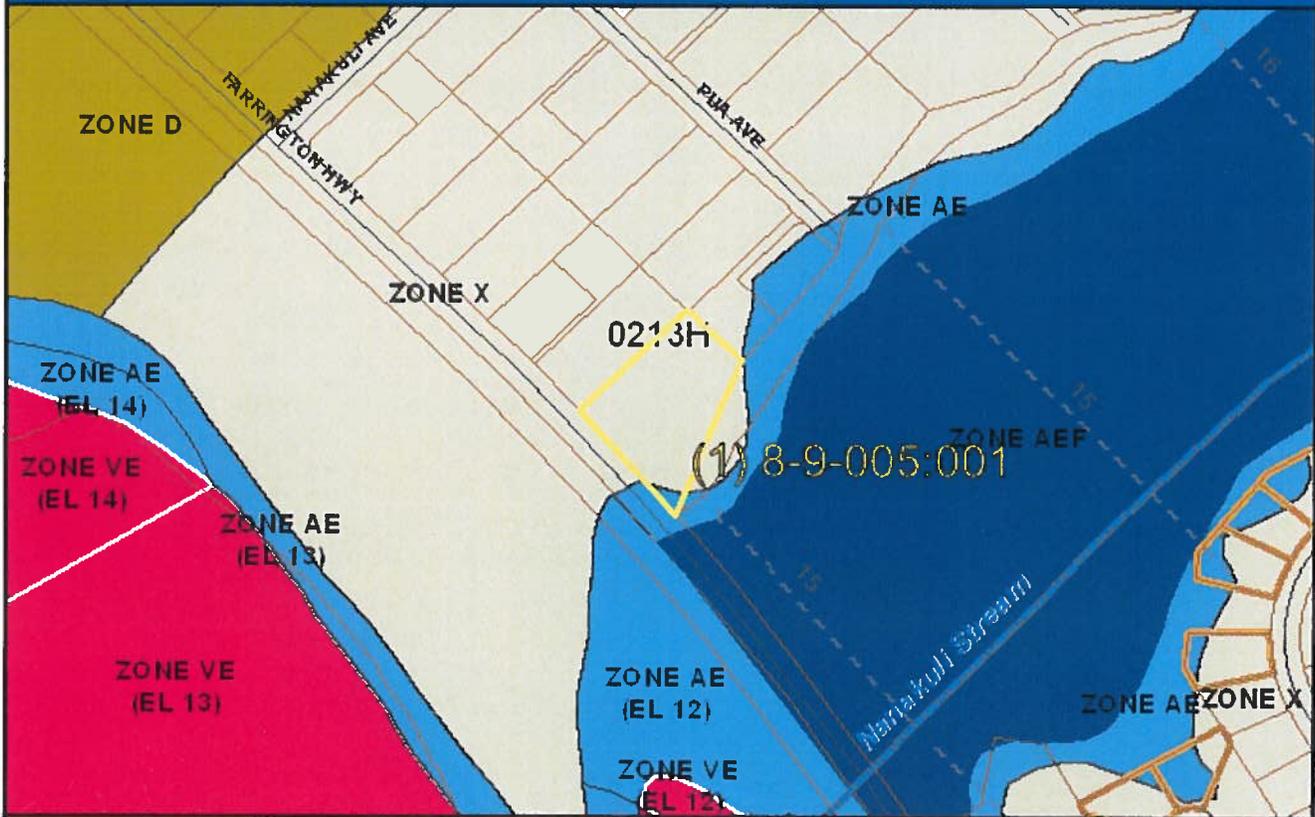
**County NFIP Coordinator**  
 City and County of Honolulu  
 Mario Siu-Li, CFM (808) 768-8098  
**State NFIP Coordinator**  
 Carol Tyau-Beam, P.E., CFM (808) 587-0267

*Disclaimer: The Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use of the information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR from any liability, which may arise from its use.*

*If this map has been identified as 'PRELIMINARY' or 'UNOFFICIAL', please note that it is being provided for informational purposes and is not to be used for official/legal decisions, regulatory compliance, or flood insurance rating. Contact your county NFIP coordinator for flood zone determinations to be used for compliance with local floodplain management regulations.*



# FLOOD HAZARD ASSESSMENT REPORT



## NATIONAL FLOOD INSURANCE PROGRAM

### FLOOD ZONE DEFINITIONS

**SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD** – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- Zone A:** No BFE determined.
- Zone AE:** BFE determined.
- Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

**NON-SPECIAL FLOOD HAZARD AREA** – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

### OTHER FLOOD AREAS

- Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

### PROPERTY INFORMATION

**COUNTY:** HONOLULU  
**TMK NO:** (1) 8-9-005-001  
**PARCEL ADDRESS:** 89-318 FARRINGTON HWY  
 WAIANA, HI 96792  
**FIRM INDEX DATE:** JANUARY 19, 2011  
**LETTER OF MAP CHANGE(S):** NONE  
**FEMA FIRM PANEL(S):** 15003C0213H  
**PANEL EFFECTIVE DATE:** JANUARY 19, 2011

**PARCEL DATA FROM:** APRIL 2014  
**IMAGERY DATA FROM:** MAY 2006

### IMPORTANT PHONE NUMBERS

**County NFIP Coordinator**  
 City and County of Honolulu  
 Mario Siu-Li, CFM (808) 768-8098  
**State NFIP Coordinator**  
 Carol Tyau-Beam, P.E., CFM (808) 587-0267

*Disclaimer: The Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use of the information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR from any liability, which may arise from its use.*

*If this map has been identified as 'PRELIMINARY' or 'UNOFFICIAL', please note that it is being provided for informational purposes and is not to be used for official/legal decisions, regulatory compliance, or flood insurance rating. Contact your county NFIP coordinator for flood zone determinations to be used for compliance with local floodplain management regulations.*

DEPARTMENT OF DESIGN AND CONSTRUCTION  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11<sup>TH</sup> FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8480 • Fax: (808) 768-4567  
Web site: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR



ROBERT J. KRONING, P.E.  
DIRECTOR DESIGNATE

MARK YONAMINE, P.E.  
DEPUTY DIRECTOR

November 3, 2014

Hawaii Planning LLC  
1001 Bishop Street, Suite 2755  
American Savings Bank Tower  
Honolulu, Hawaii 96813

Attn: Dennis Silva, Jr.

Dear Mr. Silva:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment  
St. Rita Catholic Church – 89-318 Farrington Highway  
Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion)  
Nanakuli, Oahu, Hawaii

The Department of Design and Construction does not have comments to offer on the pre-assessment consultation.

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

Sincerely,

A handwritten signature in black ink, appearing to read "for M. Yonamine".

Robert J. Kroning, P.E.  
Director Designate

RJK: cf (584649)

DEPARTMENT OF FACILITY MAINTENANCE  
**CITY AND COUNTY OF HONOLULU**

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

KIRK CALDWELL  
MAYOR



ROSS S. SASAMURA, P.E.  
DIRECTOR AND CHIEF ENGINEER

EDUARDO P. MANGLALLAN  
DEPUTY DIRECTOR

IN REPLY REFER TO:  
DRM 14-975

November 10, 2014

Mr. Dennis Silva, Jr., AICP  
Principal  
Hawaii Planning LLC  
American Savings Bank Tower  
1001 Bishop Street, Suite 2755  
Honolulu, Hawaii 96813

Dear Mr. Silva:

**SUBJECT:** Pre-Assessment Consultation for Draft Environmental Assessment  
St. Rita Catholic Church – 89-318 Farrington Highway  
Tax Map Keys: 8-9-005:001 and 8-9-007:004 (portion)  
Nanakuli, Oahu, Hawaii

Thank you for the opportunity to review your letter dated October 14, 2014, on the above subject.

We have no comments at this time.

If you have any questions, please call Mr. Dexter Akamine of the Division of Road Maintenance at 768-3697.

Sincerely,

A handwritten signature in black ink, appearing to read "Ross S. Sasamura".

Ross S. Sasamura, P.E.  
Director and Chief Engineer

NEIL ABERCROMBIE  
GOVERNOR



JESSICA E. WOOLEY  
DIRECTOR

**STATE OF HAWAII**  
**OFFICE OF ENVIRONMENTAL QUALITY CONTROL**

**Department of Health**  
235 South Beretania Street, Suite 702  
Honolulu, Hawaii'i 96813  
Telephone (808) 586-4185  
Facsimile (808) 586-4186  
Email: oeqchawaii@doh.hawaii.gov

November 10, 2014

Mr. Dennis Silva, Jr., AICP  
Hawaii'i Planning, LLC  
American Savings Bank Tower  
1001 Bishop Street, Suite 2755  
Honolulu, Hawaii'i 96813

**SUBJECT:** Pre-Assessment Consultation for Draft Environmental Assessment  
St. Rita Catholic Church – 89-318 Farrington Highway  
Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion)  
Nānākuli, O'ahu, Hawaii'i

Dear Mr. Silva,

This letter responds to your October 14, 2014, letter to Ms. Jessica Wooley, Director of the Office of Environmental Quality Control, regarding early consultation for the subject project. A brief review of the letter, attached maps and site plan does not provide sufficient information to determine whether the proposed expansion triggers Chapter 343, Hawaii'i Revised Statutes. Furthermore, there is no information about the environmental setting or regulatory clearances the project may require.

It is recommended that you consult HRS §343-5, to see whether the proposed action requires an environmental assessment (EA). Although the subject mentions consultation for a draft environmental assessment (DEA), the letter is not clear about what the trigger for an EA is.

If Chapter 343, HRS, applies, there is a need to identify the approving agency that will process the DEA and issue the Chapter 343, HRS, determination. The content requirements for an EA is listed in §11-200-10, Hawaii'i Administrative Rules.

Feel free to contact me at (808) 586-4185 if you have further questions.

Sincerely,

  
Herman Tuiolosega  
Senior Planner



April 28, 2015

Ms. Jessica Wooley  
Director  
State of Hawai'i  
Department of Health  
Office of Environmental Quality Control  
235 S. Beretania Street, Suite 702  
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment  
St. Rita Catholic Church – 89-318 Farrington Highway  
Tax Map Keys: 8-9-005: 001 & 8-9-007: 004 (portion)  
Nānākuli, O'ahu, Hawai'i

Dear Ms. Wooley

Thank you for your letter dated November 10, 2014 regarding the above-referenced project. The Chapter 343, HRS statutory triggers for this project are: 1) use of State lands as the St. Rita Church leases from the Department of Hawaiian Homelands (DHHL); and 2) Special Management Area-Major Permit, which requires an EA.

A copy of the Draft EA will be provided to the Department of Health, Office of Environmental Quality Control. We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

A handwritten signature in black ink, appearing to read "Dennis Silva, Jr.", is written over the company name.

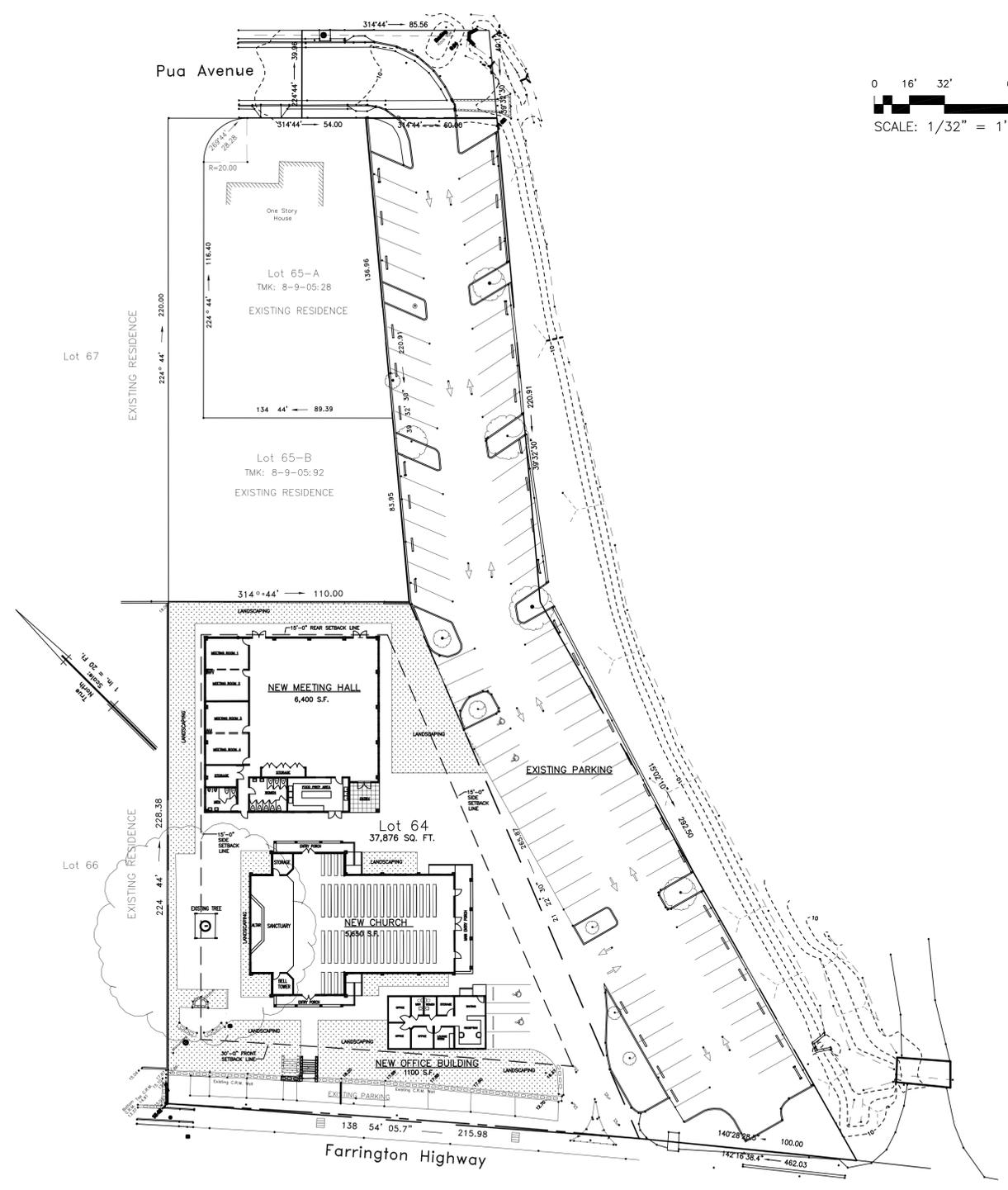
Dennis Silva, Jr., AICP  
Principal

**Appendix B**  
**Architectural Plans**



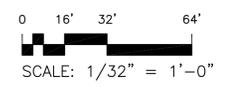
**EXISTING SITE PLAN**

SC: 1/32" = 1'-0"



**PROPOSED SITE PLAN**

SC: 1/32" = 1'-0"



**FRANCISCO ARCHITECT**

FIDEL A. FRANCISCO, AIA  
 2379 Liloa Rise  
 Honolulu, Hawaii

Architecture  
 Planning  
 Interiors



This work was prepared by me or under my supervision. Construction of this project will be under my observation.

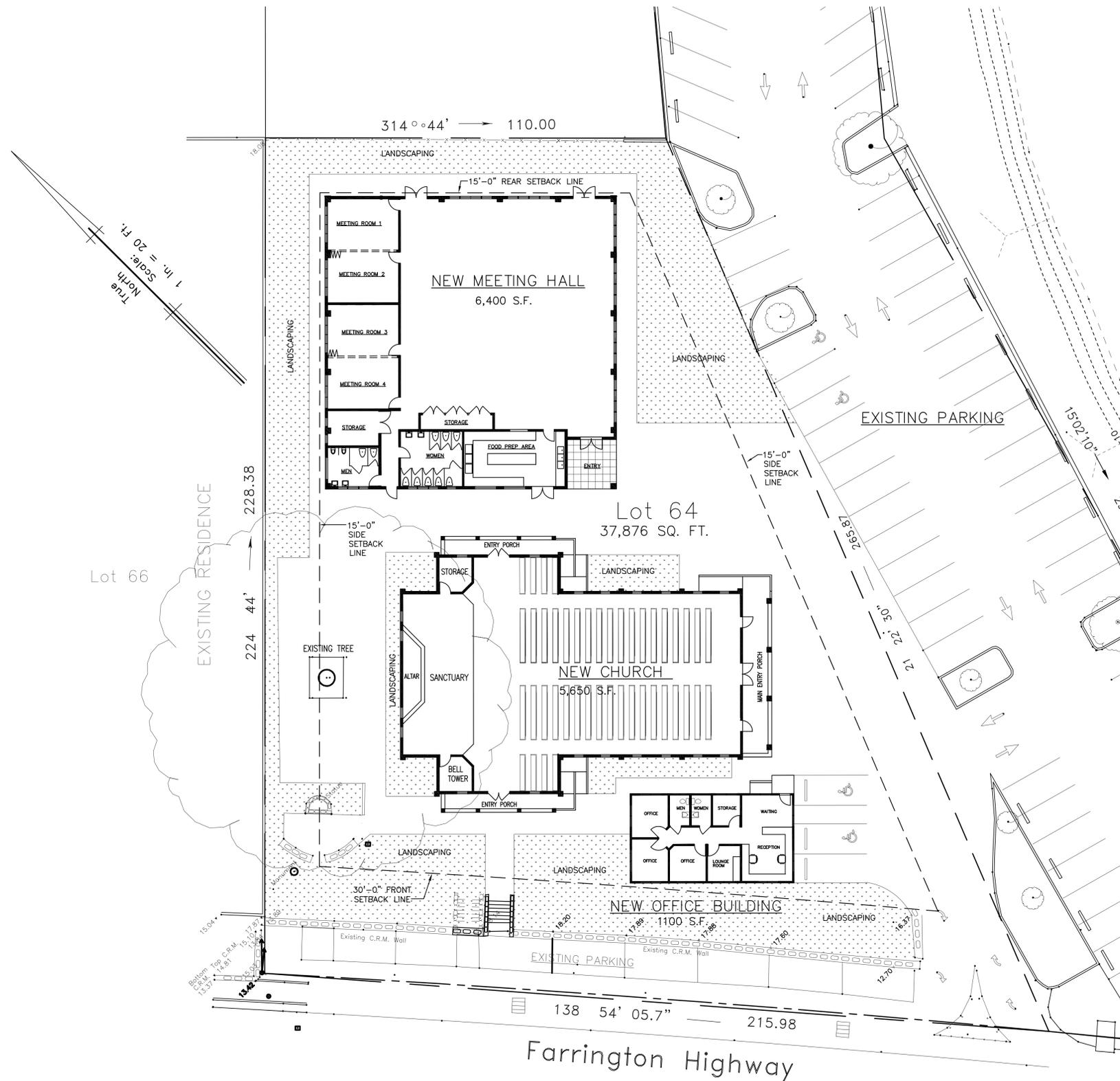
REVISIONS	BY

**ST. RITA'S CATHOLIC CHURCH**  
 89-318 FARRINGTON HIGHWAY  
 NANAKULI, HI 96792  
 TMK: 8-9-005:001

EXISTING SITE PLAN  
 PROPOSED SITE PLAN

DATE: MAR 2015  
 SCALE: AS NOTED  
 DRAWN BY:  
 JOB NO.:  
 SHEET:  
**A101**  
 OF SHEETS

THESE DRAWINGS, IDEAS AND ARRANGEMENTS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT, AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED. REUSE, REPRODUCTION OR PUBLICATION IN WHOLE OR PART IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM THE ARCHITECT. TITLE TO THESE PLANS AND ANY ACCOMPANIMENTS SHALL REMAIN WITH THE ARCHITECT. VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE ACCEPTANCE OF THESE RESTRICTIONS.



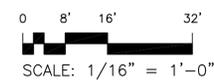
Lot 66

Lot 64  
37,876 SQ. FT.

Farrington Highway

**NEW PROPOSED SITE PLAN**

SC: 1/16" = 1'-0"



FRANCISCO ARCHITECT  
FIDEL A. FRANCISCO, AIA  
2379 Liloa Rise  
Honolulu, Hawaii

Architecture  
Planning  
Interiors



This work was prepared by me or under my supervision. Construction of this project will be under my observation.

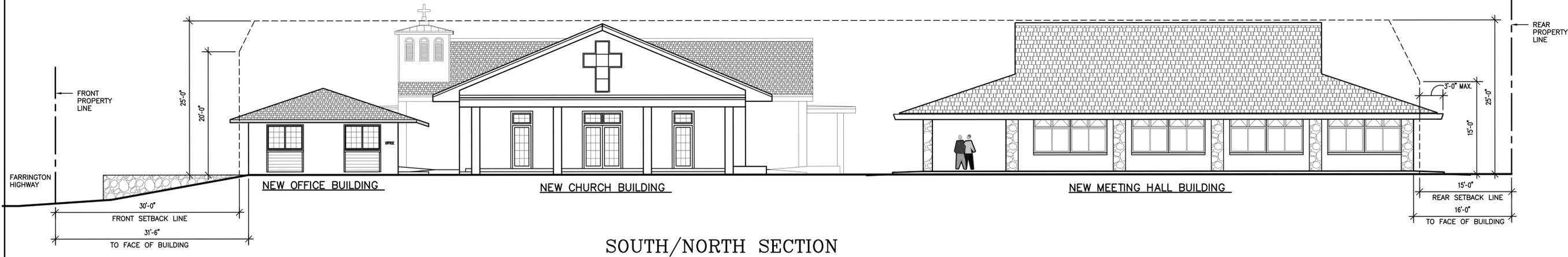
REVISIONS	BY

**ST. RITA'S CATHOLIC CHURCH**  
89-318 FARRINGTON HIGHWAY  
NANAKULI, HI 96792  
TMK: 8-9-005:001

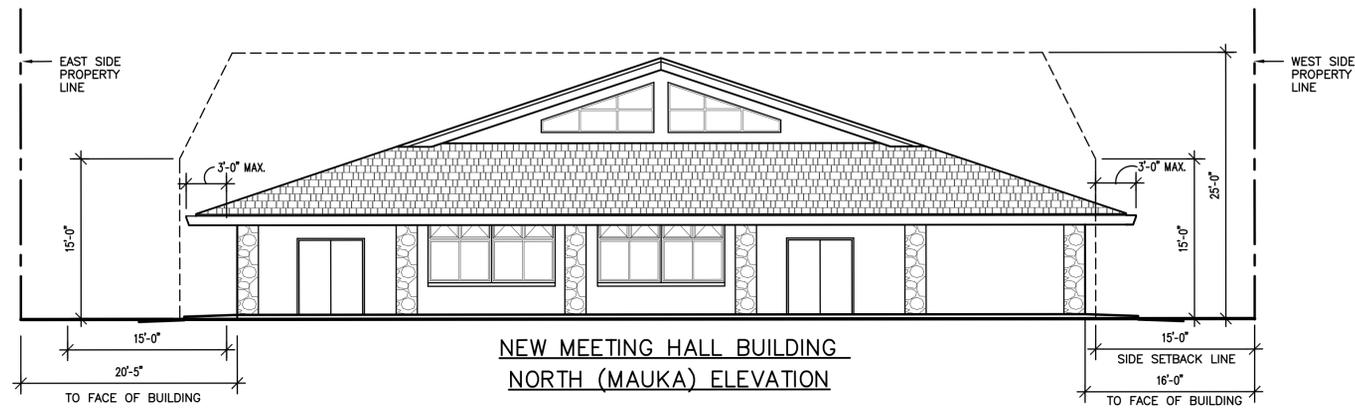
PROPOSED SITE PLAN

DATE	MAR 2015
SCALE	AS NOTED
DRAWN BY	
JOB NO.	
SHEET	A102
OF SHEETS	

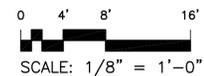
THESE DRAWINGS, IDEAS AND ARRANGEMENTS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT, AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED. REUSE, REPRODUCTION OR PUBLICATION IN WHOLE OR PART IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM THE ARCHITECT. TITLE TO THESE PLANS AND ANY ACCOMPANIMENTS SHALL REMAIN WITH THE ARCHITECT. VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE ACCEPTANCE OF THESE RESTRICTIONS.



SOUTH/NORTH SECTION



NEW MEETING HALL BUILDING  
NORTH (MAUKA) ELEVATION



**PROPOSED SITE SECTION/ELEVATION**

SC: 1/16" = 1'-0"



FRANCISCO ARCHITECT

FIDEL A. FRANCISCO, AIA  
2375 Liliuokalani Place  
Honolulu, Hawaii

Architecture  
Planning  
Interiors



This work was prepared by me or under my supervision. Construction of this project will be under my observation.

REVISIONS	BY

ST. RITA'S CATHOLIC CHURCH

89-318 FARRINGTON HIGHWAY  
NANAKULI, HI 96792  
TMK: 8-9-005: 001

PROPOSED SITE SECTION

DATE MAR 2015

SCALE AS NOTED

DRAWN BY

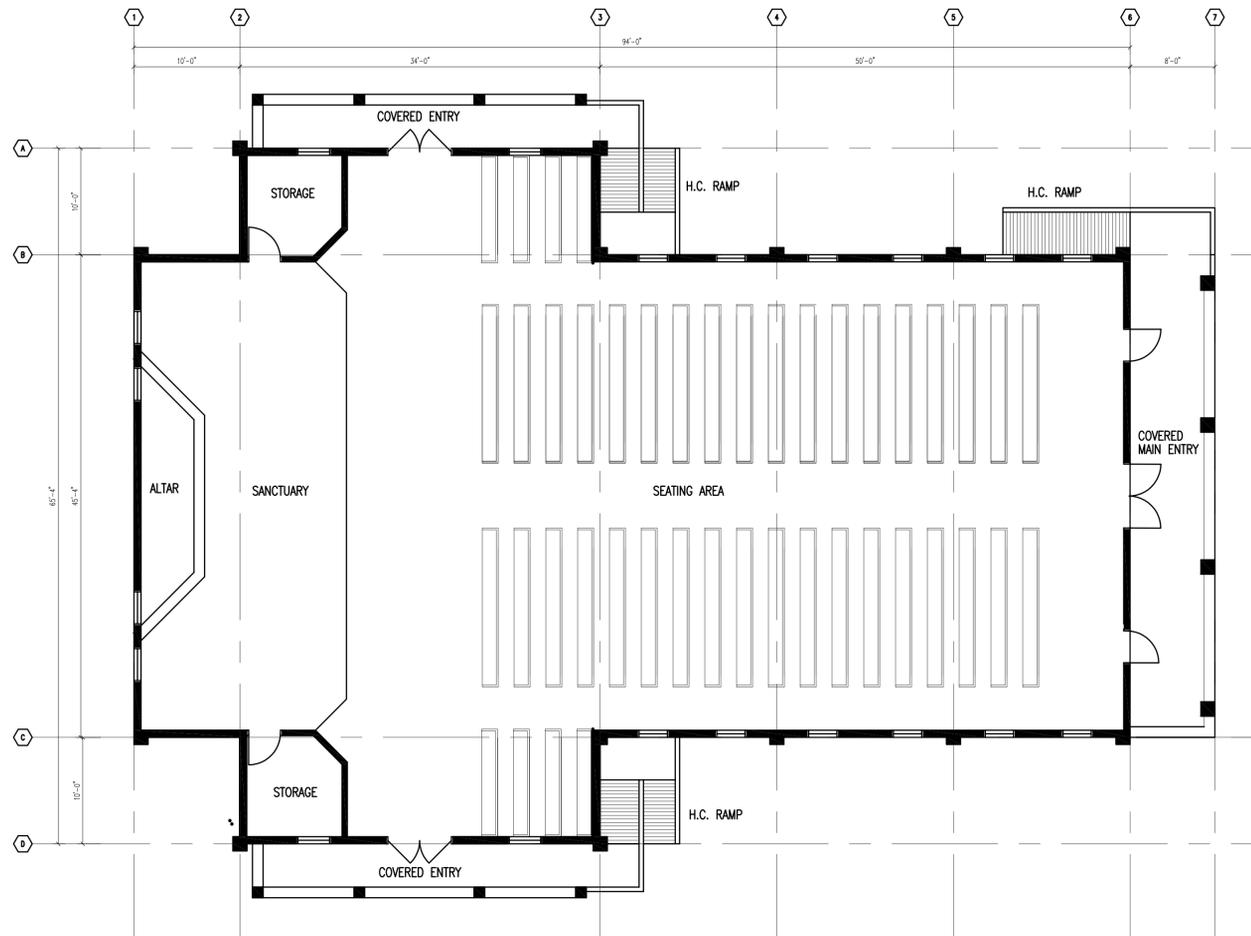
JOB NO.

SHEET

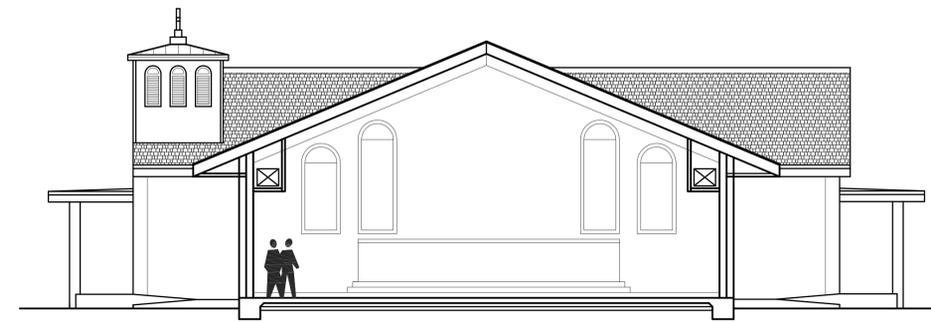
A103

OF SHEETS

THESE DRAWINGS, IDEAS AND ARRANGEMENTS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT, AND THEIR USE AND PUBLICATION IN WHOLE OR PART IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM THE ARCHITECT. TITLE TO THESE PLANS AND ANY ACCOMPANIMENTS SHALL REMAIN WITH THE ARCHITECT. VISUAL CONTACT WITH THEM SHALL CONSTITUTE FIRM FACIL ACCEPTANCE OF THESE RESTRICTIONS.

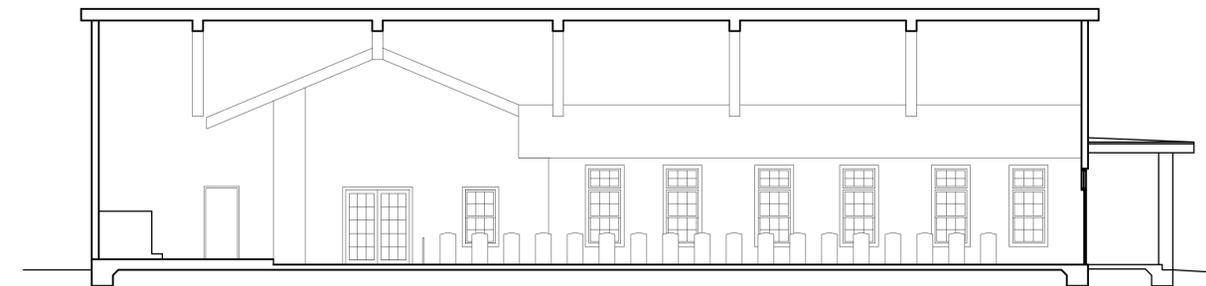


NEW CHURCH BUILDING – FLOOR PLAN

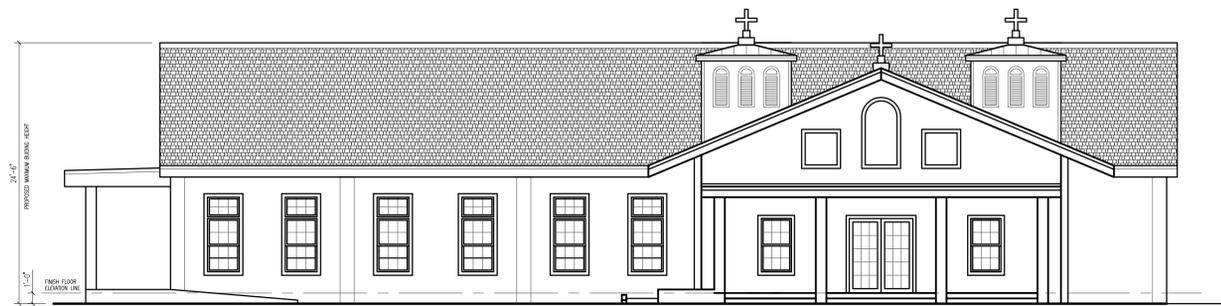


NEW CHURCH BUILDING  
CROSS SECTION

0 4' 8' 16'  
SCALE: 1/8" = 1'-0"



NEW CHURCH BUILDING  
LONGITUDINAL SECTION



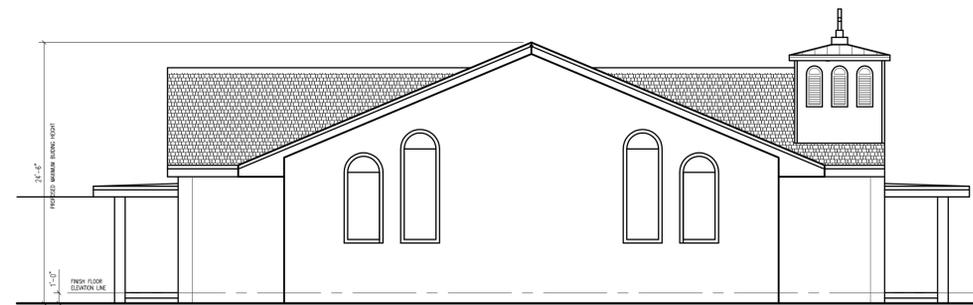
NEW CHURCH BUILDING  
NORTH (MAUKA) ELEVATION



NEW CHURCH BUILDING  
SOUTH (MAKAI) ELEVATION



NEW CHURCH BUILDING  
EAST (DIAMOND HEAD) ELEVATION



NEW CHURCH BUILDING  
WEST (MAKAHA) ELEVATION

PROPOSED DRAWINGS

SC: 1/8" = 1'-0"



FRANCISCO  
ARCHITECT  
FIDEL A. FRANCISCO, AIA  
2376 Lili'uokai Place  
Honolulu, Hawaii

Architecture  
Planning  
Interiors



This work was prepared by me  
or under my supervision.  
Construction of this project  
will be under my observation.

REVISIONS	BY

ST. RITA'S CATHOLIC CHURCH

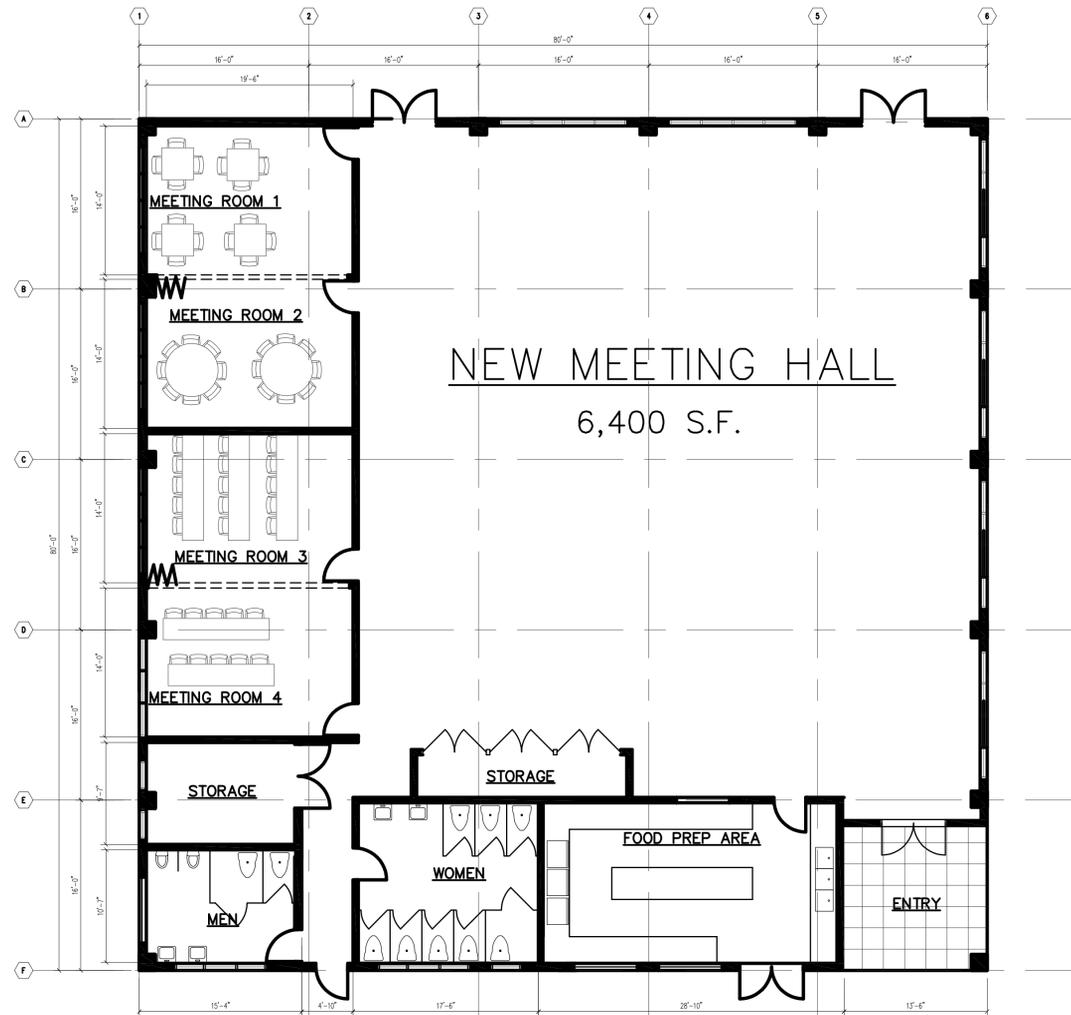
89-318 FARRINGTON HIGHWAY  
NANAKULI, HI 96792  
TMK: 8-9-005: 001

PRELIMINARY CHURCH PLAN

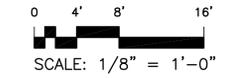
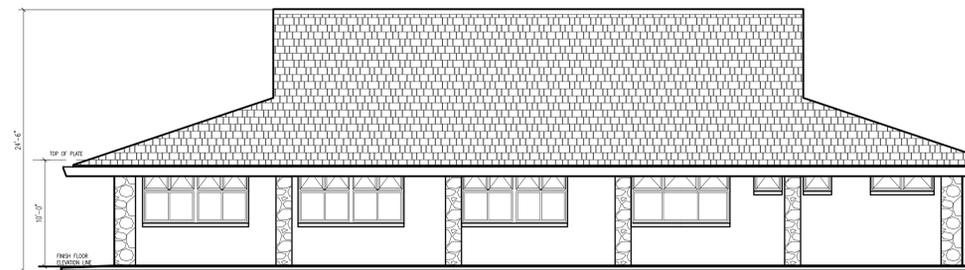
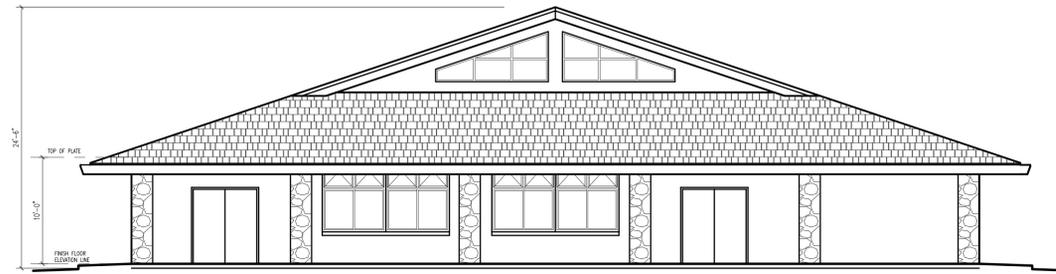
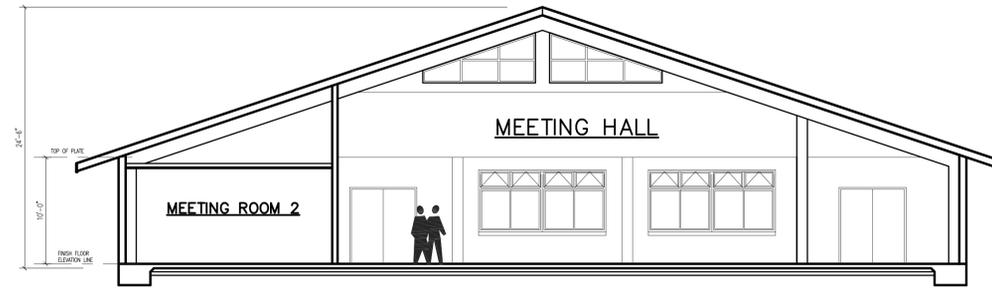
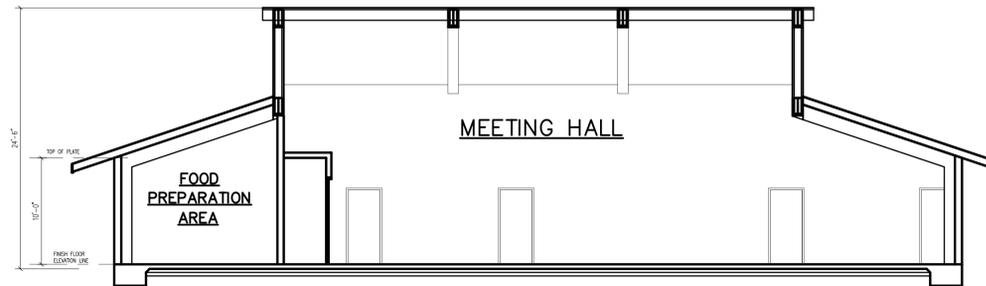
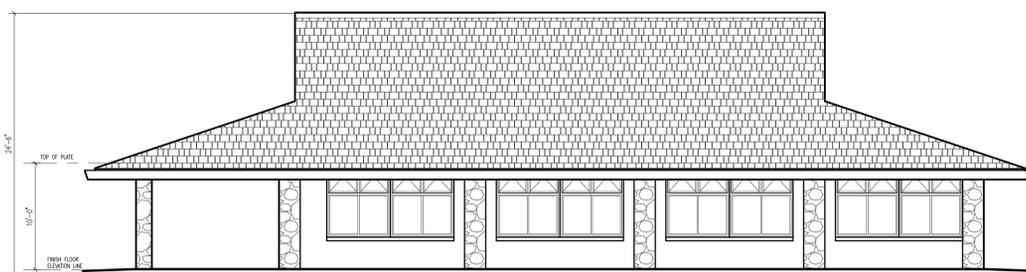
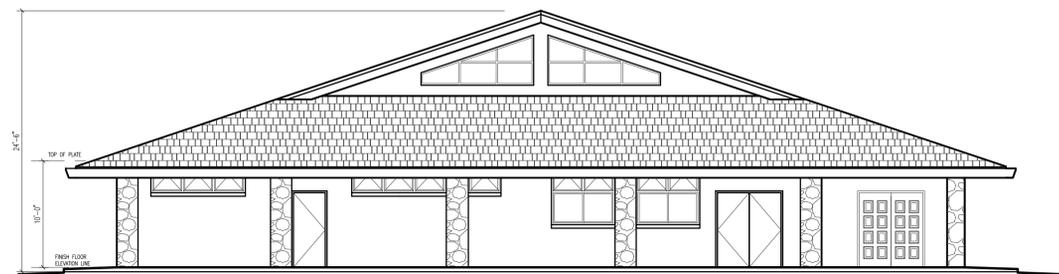
DATE MAR 2015  
SCALE AS NOTED  
DRAWN BY  
JOB NO.

SHEET  
A201  
OF SHEETS

THESE DRAWINGS, IDEAS AND ARRANGEMENTS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT, AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED. REUSE, REPRODUCTION OR PUBLICATION IN WHOLE OR PART IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM THE ARCHITECT. TITLE TO THESE PLANS AND ANY ACCOMPANIMENTS SHALL REMAIN WITH THE ARCHITECT. VISUAL CONTACT WITH THEM SHALL CONSTITUTE FIRM FACIA ACCEPTANCE OF THESE RESTRICTIONS. FILED 3-2015



NEW MEETING HALL BUILDING – FLOOR PLAN



FRANCISCO  
ARCHITECT  
FIDEL A. FRANCISCO, AIA  
2376 Liliuokai Place  
Honolulu, Hawaii

Architecture  
Planning  
Interiors



This work was prepared by me  
or under my supervision.  
Construction of this project  
will be under my observation.

REVISIONS	BY

ST. RITA'S CATHOLIC CHURCH

89-318 FARRINGTON HIGHWAY  
NANAKULI, HI 96792  
TMK: 8-9-005: 001

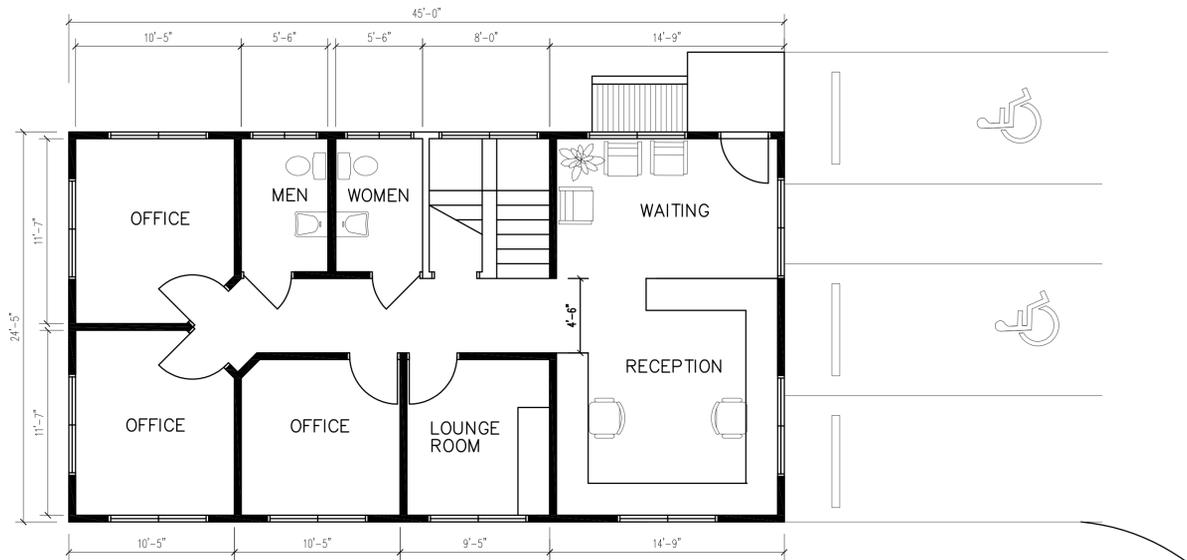
PRELIMINARY MULTI-PURPOSE BUILDING PLAN

DATE	MAR 2015
SCALE	AS NOTED
DRAWN BY	
JOB NO.	
SHEET	A202
OF	SHEETS

PROPOSED DRAWINGS

SC: 1/8" = 1'-0"

THESE DRAWINGS, IDEAS AND ARRANGEMENTS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT, AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED. REUSE, REPRODUCTION OR PUBLICATION IN WHOLE OR PART IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM THE ARCHITECT. TITLE TO THESE PLANS AND ANY ACCOMPANIMENTS SHALL REMAIN WITH THE ARCHITECT. VISUAL CONTACT WITH THEM SHALL CONSTITUTE FIRM FACIA ACCEPTANCE OF THESE RESTRICTIONS. FILE NO. 3-2015



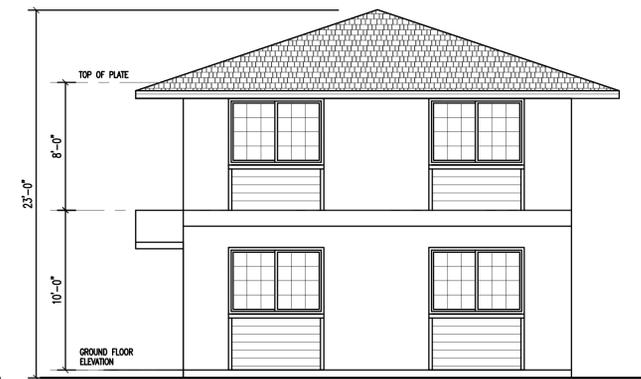
NEW OFFICE BUILDING – FLOOR PLAN



NEW OFFICE BUILDING – SECOND FLOOR PLAN



NEW OFFICE BUILDING  
SOUTH (MAKAI) ELEVATION



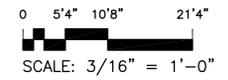
NEW OFFICE BUILDING  
WEST (MAKAHA) ELEVATION



NEW OFFICE BUILDING  
NORTH (MAUKA) ELEVATION



NEW OFFICE BUILDING  
EAST (DIAMOND HEAD) ELEVATION



FRANCISCO ARCHITECT

FIDEL A. FRANCISCO, AIA  
2379 Alioa Place  
Honolulu, Hawaii

Architecture

Planning

Interiors



This work was prepared by me or under my supervision. Construction of this project will be under my observation.

REVISIONS	BY

ST. RITA'S CATHOLIC CHURCH  
89-318 FARRINGTON HIGHWAY  
NANAKULI, HI 96792  
TMK: 8-9-005:001

PRELIMINARY OFFICE BUILDING PLAN

DATE	MAR 2015
SCALE	AS NOTED
DRAWN BY	
JOB NO.	
SHEET	A203
OF SHEETS	

PROPOSED DRAWINGS

SC: 3/16" = 1'-0"

THESE DRAWINGS, IDEAS AND ARRANGEMENTS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT, AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED. REUSE, REPRODUCTION OR PUBLICATION IN WHOLE OR PART IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM THE ARCHITECT. TITLE TO THESE PLANS AND ANY ACCOMPANIMENTS SHALL REMAIN WITH THE ARCHITECT. VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE ACCEPTANCE OF THESE RESTRICTIONS.

**Appendix C**  
**Tree Assessment**

*ISA Certified Arborist (#WE-9185A) • 533 Ihe Street • Honolulu, Hawaii 96817  
• Phone (808) 382-9949 • Fax (808) 735-0844 • Email: irvinhigashi@hawaiiantel.net*

---

**PROJECT: ST. RITA CATHOLIC CHURCH**

---

**DATE: March 23, 2015**

The following Tree Assessment and recommended mitigation report was requested by Mr. Fidel Franscisco, Architect, regarding the existing Weeping Banyan (*Ficus benamina*).

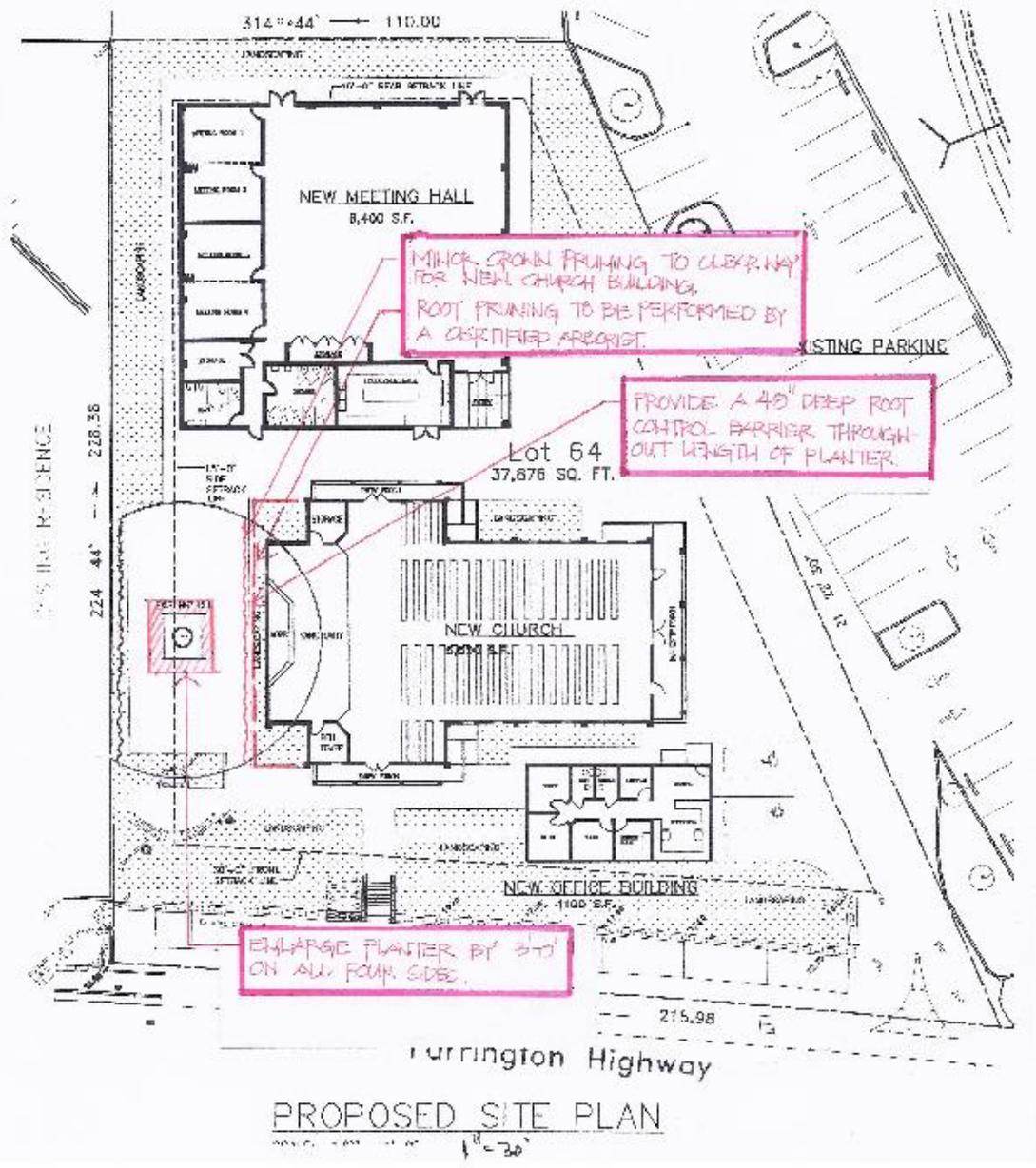
The tree is located at 89-318 Farrington Highway, Waianae, Hawaii 96792. The impacted Weeping Banyan tree is a large mature healthy specimen with a sixty inch trunk diameter, sixty-foot height and one-hundred foot crown spread. The tree is surrounded by concrete pavement with a ten foot square opening. The surface root encumbers the entire planter opening and is uplifting the pavement .

Exposed roots are visible along the bottom of the retaining wall along the west –side property line. The crown of the tree along the west property line has been pruned back as to not overhang onto the adjacent property.





3. Prior to construction carefully expose and properly prune and remove exposed roots on the east side of the Weeping Banyan tree at a minimum of 15' away from the face of the tree trunk along the entire length of the building width. Root pruning to be performed by a Certified Arborist. (Estimated Cost cannot be determined.)
4. Provide a 48" deep root control barrier along the entire length of the new planter edge to prevent future roots from undermining the new church building.

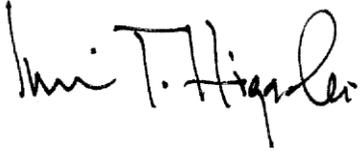


5. Set-up a temporary irrigation system and shall be maintained to provide water to the Weeping Banyan tree.

6. Monitor tree during construction for health reasons.
7. No stockpiling of any supplies, equipment or debris within the drip line of the tree.

If you have any questions, please contact me at 808-382-9949.

Respectfully submitted,

A handwritten signature in black ink that reads "Irvin T. Higashi". The signature is written in a cursive style with a large initial 'I' and a distinct 'H'.

Irvin T. Higashi,  
ISA Certified Arborist #WE-9185A  
Landscape Architect

**Appendix D**  
**Archaeological Assessment**

**DRAFT—Archaeological Assessment of the St. Rita’s Church  
Grounds at TMK: (1) 8-9-005:001, Nānākuli Ahupua‘a,  
Wai‘anae District, Island of O‘ahu, Hawai‘i**



**Prepared For:**  
St. Rita's Catholic Church  
89-318 Farrington Hwy.  
Nānākuli, Hawai‘i 96792

December 2014

Keala Pono 



**DRAFT— Archaeological Assessment of the St. Rita’s Church  
Grounds at TMK: (1) 8-9-005:001, Nānākuli Ahupua‘a,  
Wai‘anae District, Island of O‘ahu, Hawai‘i**

**Prepared For:**

St. Rita’s Catholic Church  
89-318 Farrington Hwy.  
Nānākuli, Hawai‘i 96792

**Prepared By:**

Windy McElroy, PhD  
Christine Hitt, BA  
and  
Dietrix Duhaylonsod, BA

December 2014





## **MANAGEMENT SUMMARY**

An archaeological assessment was conducted for TMK: (1) 8-9-005:001 in Nānākuli Ahupua‘a, Wai‘anae District, on the island of O‘ahu. The church is planning renovations and improvements, including removal and replacement of several buildings on the church grounds. The archaeological assessment included pedestrian survey that covered 100% of the property, as well as test excavations consisting of five trenches. No surface or subsurface archaeological remains were identified. Some of the church buildings are more than 50 years old, however, and their treatment during construction should be determined in consultation with the architecture branch of SHPD. Archaeological monitoring is recommended.



## CONTENTS

MANAGEMENT SUMMARY .....	i
FIGURES .....	iv
TABLES .....	iv
INTRODUCTION .....	1
Project Location .....	1
Natural Environment .....	1
The Undertaking .....	4
BACKGROUND .....	6
<i>Inoa 'Āina</i> Nānākuli: Place Names .....	6
Nānākuli 'Ōlelo No 'eau and Mo 'olelo .....	8
'Ōlelo No 'eau .....	8
Mo 'olelo .....	9
Power and Warfare in Wai'anae .....	10
Land Use and Subsistence .....	10
<i>Heiau</i> .....	12
Nānākuli in the Historic Period .....	12
Māhele Land Tenure and Historic Land Use .....	14
Historic Maps .....	15
St. Rita's Church Structures .....	21
Previous Archaeology .....	21
Settlement Patterns and Anticipated Finds .....	27
Research Questions .....	27
METHODS .....	29
RESULTS .....	30
Pedestrian Survey .....	30
Subsurface Testing .....	30
Summary of Findings .....	35
SUMMARY AND RECOMMENDATIONS .....	36
GLOSSARY .....	37
REFERENCES .....	39

## FIGURES

Figure 1. Project location on a 7.5 minute USGS Waianae quadrangle map. ....	2
Figure 2. Project area (outlined in red) on TMK plat (1) 8-9:005. ....	3
Figure 3. Soils in the vicinity of the project area. ....	5
Figure 4. Portion of an 1854 Hawaiian Government Survey map (Webster 1854). ....	16
Figure 5. Portion of 1912 Hawai'i Territory Survey Map (Newton 1912). ....	17
Figure 6. Portion of a 1925 Hawaii Territory Survey map (Wall 1925). ....	18
Figure 7. Portion of a 1930 Hawaiian Homes Commission map (Evans 1930). ....	19
Figure 8. Portion of a 1953 USGS Schofield Barracks Quadrangle map (USGS 1953). ....	20
Figure 9. Previous archaeological studies in the vicinity of the project area. ....	22
Figure 10. Excavation of TR 2 with backhoe. Orientation is to the west. ....	29
Figure 11. Location of Trenches 1–5. ....	31
Figure 12. TR 1 northwest face profile drawing (left) and photo (right). ....	33
Figure 13. TR 2 east face profile drawing (left) and photo (right). ....	33
Figure 14. TR 3 west face profile drawing (left) and photo (right). ....	34
Figure 15. TR 4 northwest face profile drawing (left) and photo (right). ....	34
Figure 16. TR 5 northeast face profile drawing (left) and photo (right). ....	35

## TABLES

Table 1. Māhele Data for Nānākuli. ....	14
Table 2. Previous Archaeology in Nānākuli. ....	23
Table 3. Sediment Descriptions. ....	32

## INTRODUCTION

At the request of St. Rita's Catholic Church, Keala Pono Archaeological Consulting conducted an archaeological assessment of TMK: (1) 8-9-005:001 in Nānākuli Ahupua'a, Wai'anae District, on the island of O'ahu. The church is planning renovations and improvements, including removal and replacement of some of the buildings on the church grounds. The archaeological assessment was designed to identify any historic properties that may be located on the property in anticipation of the proposed construction.

This report is drafted to meet the requirements and standards of state historic preservation law, as set out in Chapter 6e of the Hawai'i Revised Statutes and the State Historic Preservation Division (SHPD) draft *Rules Governing Standards for Archaeological Inventory Surveys and Reports*, §13–276. The report begins with a description of the project area and a historical overview of land use and archaeology in the area. The next section delineates methods used in the fieldwork, followed by the results of the archaeological survey. Project results are summarized and recommendations are made in the final section. Hawaiian words, flora and fauna, and technical terms are defined in a glossary at the end of the document.

### Project Location

The project area is located in Nānākuli in Wai'anae District on the leeward coast of O'ahu (Figures 1 and 2). The survey area includes 1.81 acres (.73 ha), covering TMK: (1) 8-9-005:001, owned by St. Rita's Catholic Church. The parcel lies at approximately 20 feet (6 m) in elevation and is roughly 150 feet (45 m) from the coast. It is bounded by other private parcels on the north and west, Nānākuli Stream on the east, and Farrington Highway on the south. Topography is relatively flat and there is a substantial drop down to the stream and the highway that mark the eastern and southern boundaries, respectively. The property is mostly paved, and several structures are currently standing on the western portion of the lot, utilized by the church. Much of the remainder of the parcel is a paved parking lot. Vegetation within the project area consists mainly of landscaped plants and grasses, including a large banyan tree on the west side of the property. A thick stand of *kiawe* trees lines the eastern boundary of the survey area, along the drop off to Nānākuli Stream.

### Natural Environment

Nānākuli Valley is cut into the Wai'anae Mountain Range, a heavily eroded shield volcano. Erosion has removed most of the western slope and exposed the internal structure of the volcano. The caldera of the Wai'anae volcano was located just west of Kolekole Pass, and extended from the northern side of Mākaha Valley to the head of Nānākuli Valley (Macdonald et al. 1983).

Nānākuli Valley is 1.2 miles (1.9 km) wide at its mouth and extends 3.1 miles (5 km) inland, and is part of the Wai'anae District on the leeward side of O'ahu (Cordy 2002:77). It is situated between the *ahupua'a* of Lualualei on the northwest and Honouliuli on the southeast and encompasses a total area of 1,602 acres (648 ha) (Juvik and Juvik 1998:306). Cordy defines the *ahupua'a* boundaries further:

The south border of Nānākuli is at Nānākuli Point on the shore. Back across the coastal trail (today's highway), the south ridge of the valley begins and rises to Pu'u Manawahua. The ridge then meets the main ridgeline of the Wai'anae mountains, which forms the back of the valley with Mauna Kapu and the light grey cliffs of Palikea at 3,098 feet. The north ridge then heads back toward the sea, forming the north side of the valley. The ridge dips in the back then rises to the high peak called Pu'u Heleakalā. (Cordy 2002:79)

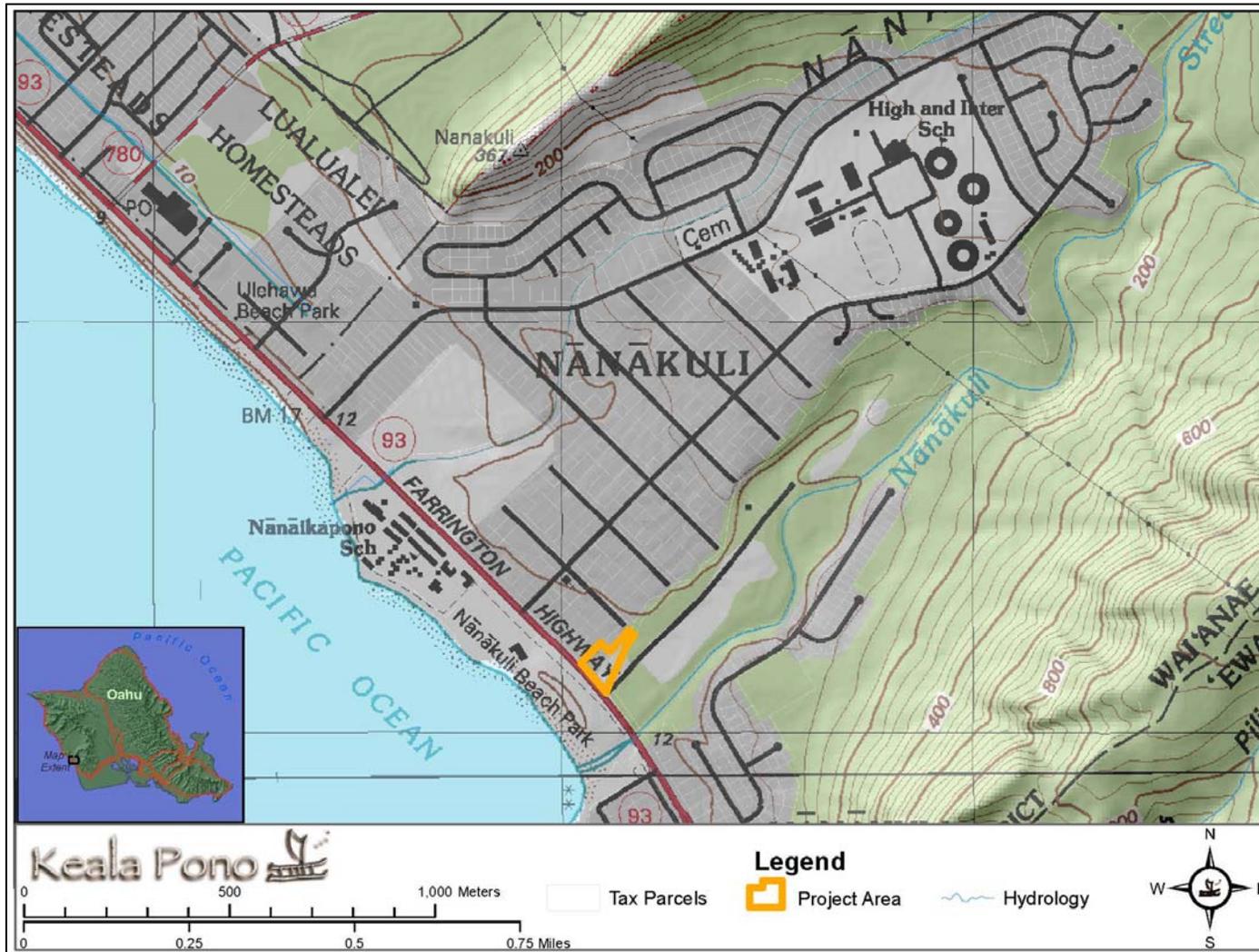


Figure 1. Project location on a 7.5 minute USGS Waianae quadrangle map.

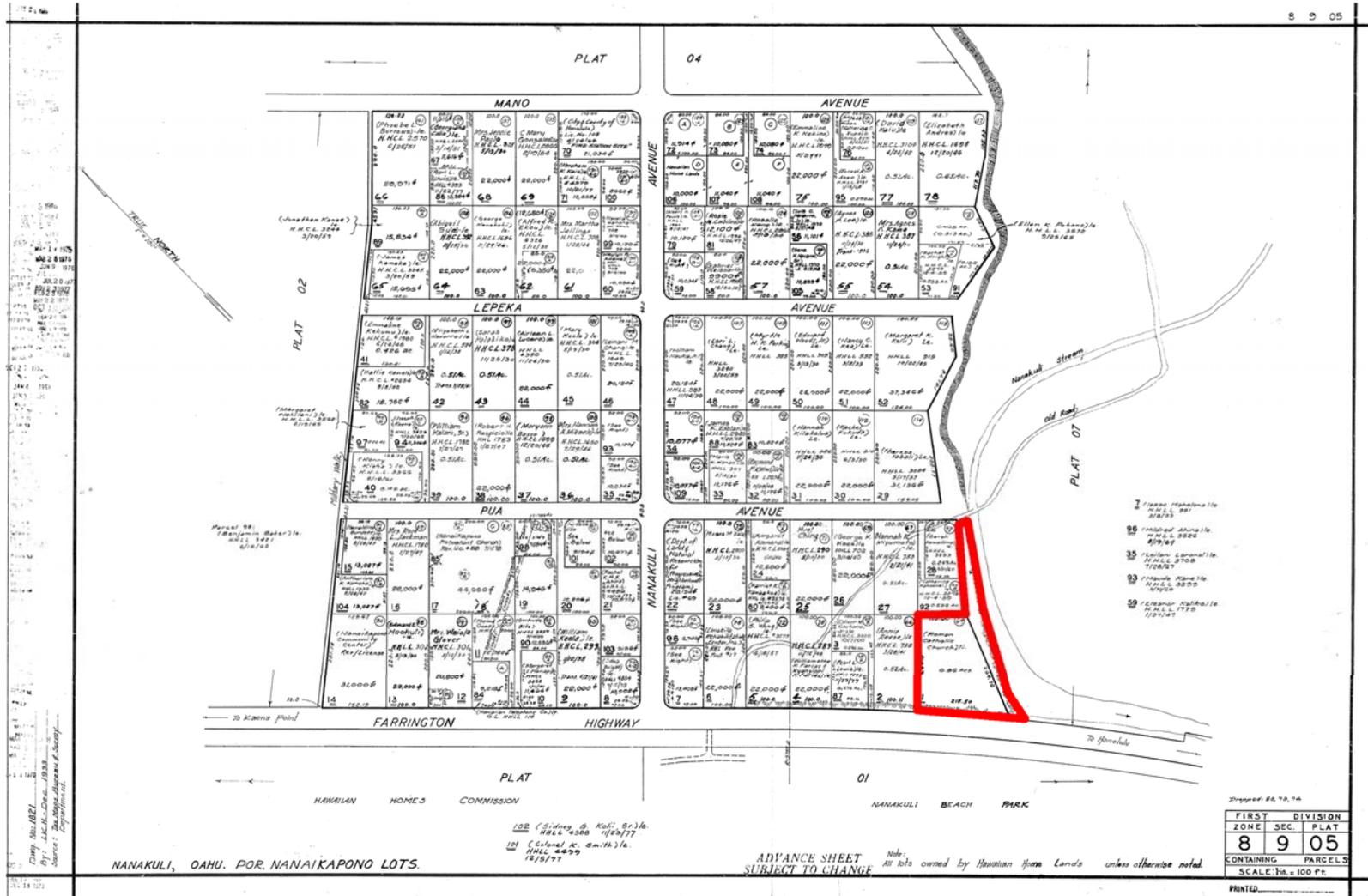


Figure 2. Project area (outlined in red) on TMK plat (1) 8-9:005.

Similar to the other Wai‘anae valleys, there is a lower valley and an upper valley, which gradually increases in elevation. The valley’s many tributaries are located in the upper portion, all emerging from the ‘Ewa side, and merge in the lower valley. They are intermittent streams that appear to not have run full-time in the past, due to the lack of remains of irrigated fields (Cordy 2002:79). Nānākuli Stream is immediately east of the survey area.

Situated on the dry coastal plain, the project area receives low rainfall of only 20–30 inches (51–76 cm) per year, and the wind generally comes from the east, over the Ko‘olau and Wai‘anae mountain ranges (Juvik and Juvik 1998:50). Soils consist of Mamala stony silty clay loam, 0–12% slopes (MnC) on the west side of the project area, Pulehu clay loam, 03% (PsA) on the east side, and a small portion of Beaches (BS) on the south side (Foote et al. 1972) (Figure 3).

### **The Undertaking**

Renovations and improvements are planned for the west side of the property. The existing church building will be renovated, with the façade left in place. Several buildings will be demolished and replaced with new structures. These include the Quonset hut currently used for the food pantry, as well as four trailers utilized as offices and classrooms. A new multipurpose structure will be built in this area. Excavations for the construction are not expected to exceed 3 feet (.9 m) in depth.

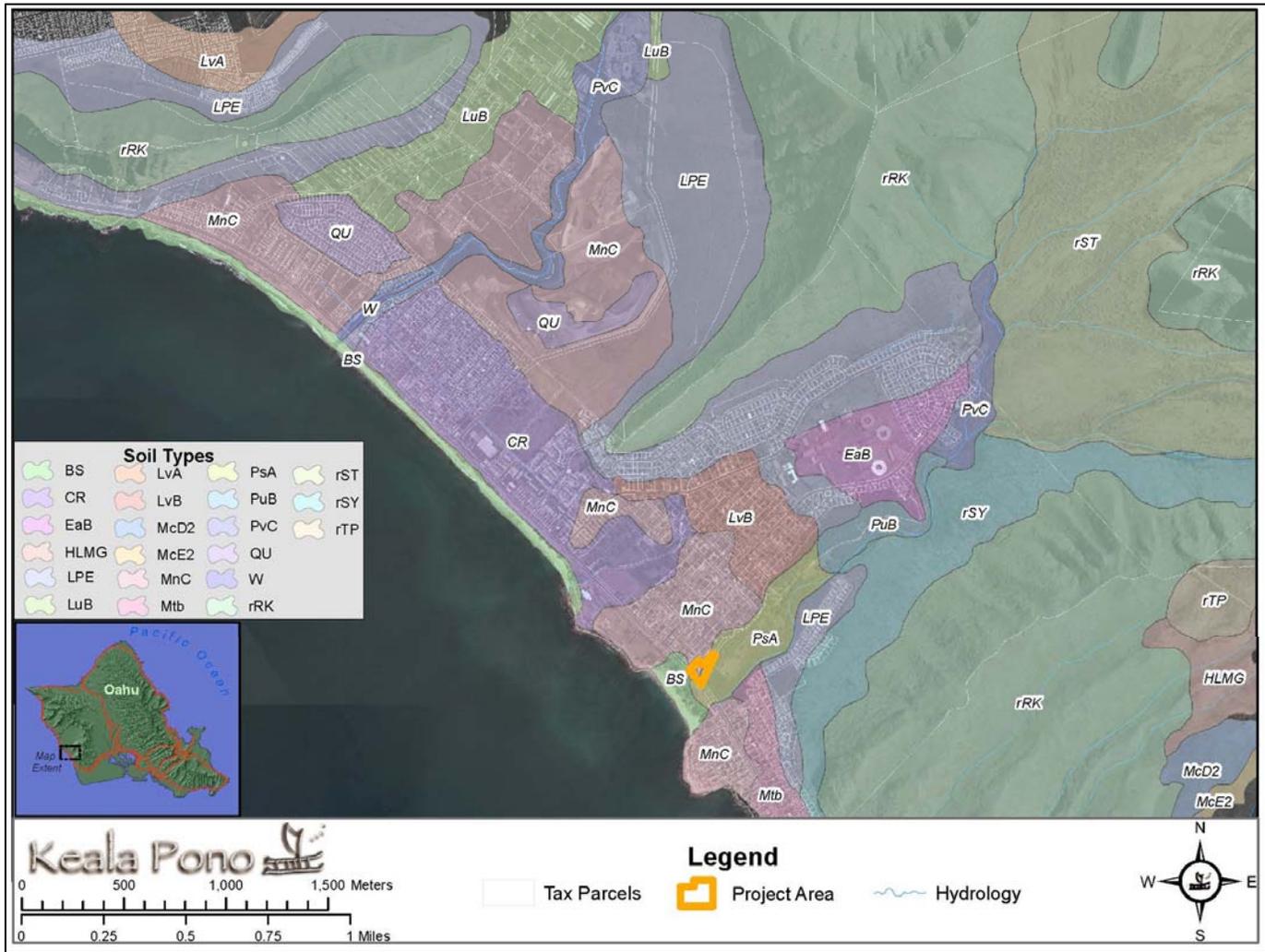


Figure 3. Soils in the vicinity of the project area.

## BACKGROUND

This section of the report presents traditional and historic background information for Nānākuli, including place names, Hawaiian proverbs and *mo'olelo*, land use, Māhele land tenure data, and a summary of previous archaeological research.

### ***Inoa 'Āina Nānākuli: Place Names***

Nānākuli literally means “look at knee” or “look deaf” (Pukui et al. 1974). There are several stories that attempt to explain the origin of the name.

One *mo'olelo* relates that Nānākuli is named in honor of the tattooed knee of Ka'ōpuluhulu, a priest whose chief, Kahāhana, turned a deaf (*kuli*) ear to his advice (Pukui et al. 1974):

Kahahana dug up bones from their burial places “to make arrows for rat-shooting and hooks for fishing. The bones of chiefs were bartered for skirts for chiefesses and handles for *kāhili*. Ka'ōpuluhulu pleaded with him in vain to stop this disrespectful deed, but Kahahana turned a deaf ear to Ka'ōpuluhulu's pleas. As a sign of protest, Ka'ōpuluhulu, his followers, relatives and members of his household tattooed their knees to signify Kahahana's unwillingness to listen to advice. (Kamakau 1992:133)

Sterling and Summers (1978) share another story based on the “look deaf” translation, as told to noted historian and author Mary Kawena Pukui in 1945 by Simeona Nawa'a:

Simeona Nawa'a came in to the Museum and sat down to talk to me. In the course of the conversation he told me these things:

Nanakuli – It was Kanui, a native woman of Wai'anae who told him why this place was so named. In the olden days, this place was sparsely inhabited because of the scarcity of water. The fishing was good but planting very poor. When it rained, some sweet potatoes would be put into the ground, but the crops were always poor and miserable.

There were a few brackish pools from which they obtained their drinking water and it is only when they went to the upland of Waianae that they were able to get fresh water. They carried the water home in large calabashes hung on mamaka or carrying sticks and used their water very carefully after they got it home. They spent most of their time fishing and most of the fish they caught were dried as gifts for friends and relatives in the upland. Sometimes they carried dried and fresh fish to these people in the upland and in exchange received poi and other vegetable foods. And as often as not, it was the people of the upland who came with their products and went home with fish.

Because of the great scarcity of water and vegetable food, they were ashamed to greet passing strangers. They remained out of sight as much as possible. Sometimes they met people before they were able to hide, so they just looked at the strangers with expressionless faces and acted as though they were stone deaf and did not hear the greeting. This was so that the strangers would not ask for water which they did not have in that locality.

The strangers would go on to other places and mention the peculiar, deaf people who just stared and they would be told that the people were not deaf but ashamed of their inability to be hospitable. So the place they lived was called Nana, or look, and kuli, deaf—that is, Deaf mutes who just look (Nawa'a 1956:2740 in Sterling and Summers 1978:61–62)

Another interpretation comes from an early 20<sup>th</sup> century resident of Nānākuli, Wm. Z.H. Olepau in 1933 as follows:

There were two women who went up the hill of “PuuHakila” or PuuHela to dry their Kapas. While the kapas were being dried they left and went down the hill to the pool for some water. They heard dogs barking so they stood, looking around for the barking was deafening. (Sterling and Summers 1978:62)

Olepau then explains why Nānākuli may have been named for the knee:

- (1) Women used to go to the top of a hill to dry their kapa, and when they got there, they looked at their knees – nana kuli.
- (2) Royalists of the valley used to sit with their knees up and watch their knees – nana kuli.

W.Z. Olepau, resident of Nanakuli, Mar. 20, 1933. (Sterling and Summers 1978:62)

Another explanation for the “looking at the knees” translation is related to an incident in the travels of the famous O‘ahu chief Kūali‘i. His attendants wished to relieve the king of his fatigue by pressing his knees (Thrum 1922:87).

While many stories attempt to interpret the meaning behind the place name Nānākuli, there are still others that refute that Nānākuli is the correct spelling, and thus the wrong meaning, for the *ahupua‘a*. Fred Cachola and Lehua Kapaku are two Nānākuli residents who share their beliefs with regard to the spelling of the name. In an interview, Cachola explains how he heard about the meaning when he was a school principal at Nānāikapono Elementary, from longtime resident Mrs. Eli:

So she said that the first principal of that school was Reverend Awai and that he knew that the tradition of that area, Nānākuli, had a Hawaiian hidden meaning which she told me was “Nānā-i-ka-ule.” I was kind of smiling. And she said, “Yeah, because that’s how in the old days this place was known for promiscuity. It got this name from ancient times. And it might have something to do with the mountain range.” Look at your map. Look at your map. The one that you were showing me. Because you can see the *ule* over there. See? There it is. See the testicles over here, and the penis sticking out there. So it could be [in] reference to that... And, that’s one interpretation of the name. And, it’s very Hawaiian. To me, it’s a very Hawaiian thing, very Hawaiian. (McGuire and Hammatt 2000:9)

In another interview, Lehua Kapaku, a resident of Nānākuli since 1960, shared a different story:

The Māui legend names off the various places this side of O‘ahu. Māui had so many brothers and he had two sisters. One was Lualualei and [the other was] his baby sister whom he treasured. The baby sister’s name was Nānāku‘ulei [which means] *look to my pretty lei*. To have the name “Lualualei” which is *sacred wreath*, and, then having a baby sister [whose name means] *looking deaf*, I just didn’t agree. I wasn’t satisfied with that. So, I accepted the Māui legend part where his baby sister was Nānāku‘ulei... This is the only place in the whole State to have a derogatory name, *look deaf*. You look at any other place, they have nice names... Only Nānākuli. So, it may have been a misprint... (McGuire and Hammatt 2000:13)

A major landmark in Nānākuli is Pu‘u Heleakalā, a hill located on the northwestern side of the valley. Not to be confused with the famous “Haleakalā” on Maui, Heleakalā translates to “snare by the sun,” for the *pu‘u* blocks the rays of the sun as it sets (Pukui et al. 1974:44). Pukui offers further insight into the name:

#### Heleakala Hill

A barren hill in Nanakuli, Waianae. Sometimes called Haleakala which Mrs. Pukui believes is probably wrong.

Hele – snare  
a – belonging to  
kala – sun

Heleakala meaning, where the sun is snared. This hill faces right into the setting sun and reference is made as to this place being ‘where the sun’s rays are broken.’ (Pukui 1953 in Sterling and Summers 1978:62)

The *pu‘u* is also described in the following historic account, originally printed in the Hawaiian language newspaper *Ka Nupepa Kuokoa*:

...It wasn’t long when we arrived at Nānākuli and then to a place which bears a peculiar name, said to be the one on which the rays of the sun was broken. This is a barren hill as though plants hated all of its sides. I saw the cave in which Hina made tapa cloths on the slope of a hill facing a stream whose mouth was at a place with a peculiar name. (Kuokoa 1899 in Sterling and Summers 1978:62)

Other peaks include Pu‘u Manawahua, Mauna Kapu, and Palikea toward the back of the valley. Pu‘u Manawahua is 2,401 feet (732 m) high, and the name means “great grief hill” or “nausea hill” (Pukui et al. 1974:202). Mauna Kapu separates the Nānākuli and Honouliuli Forest Reserves and can be translated as “sacred mountain” (Pukui et al. 1974:148). Palikea rises 3,098 feet (944 m) high on the Lualualei side of Nānākuli. The name translates to “white cliff” (Pukui et al. 1974:177).

Nānākuli Beach Park is a recent name given by the City and County of Honolulu to the stretch of coastline including Pili o Kahe, Zablan Beach, and Kalaniana‘ole Beach. On the south end of the park is Pili o Kahe, which translates to “clinging to Kahe” (Pukui et al. 1974:185). Next to Pili o Kahe is Zablan Beach, named for a family who is connected with the area (Clark 1977:84). On the north end of the park is Kalaniana‘ole Beach, named after Prince Jonah Kūhiō Kalaniana‘ole, who created the Hawaiian Homes Commission Act of 1920. The beach was given the name in 1940 at the request of the Nānākuli Homestead community.

### **Nānākuli ‘*Ōlelo No‘eau* and *Mo‘olelo***

‘*Ōlelo no‘eau* and *mo‘olelo* offer insight into what life may have been like in Nānākuli in ancient Hawai‘i. They also share topics of interest of the time that were meant to be passed down from one generation to the next.

#### **‘*Ōlelo No‘eau***

Whereas no ‘*ōlelo no‘eau* were found specifically for Nānākuli, the following sayings relating to the greater Wai‘anae District paint a picture of the region in times past. They describe a mountain goddess, a coconut grove, and also politics and power of the land.

He lokomaika‘i ka manu o Kaiona.

*Kind is the bird of Kaiona.*

Said of one who helps a lost person find his way home. The goddess Kaiona, who lived the Wai‘anae Mountains of O‘ahu, was said to have pet birds who could guide anyone lost in the forest back to his companion.

(Pukui 1983:85)

Ka wahine hele lā o Kaiona, alualu wai li‘ulā o ke kaha pua ‘ōhai.

*The woman, Kaiona, who travels in the sunshine pursuing the mirage of the place where the ‘ōhai blossoms grow.*

Kaiona was a goddess of Ka‘ala and the Wai‘anae Mountains. She was a kind person who helped anyone who lost his way in the mountains by sending a bird, a ‘*iwa*, to guide the lost one out of the forest. In modern times Princess Bernice Pauahi was compared to Kaiona in songs.

(Pukui 1983:177)

E nui ke aho, e ku‘u keiki, a moe i ke kai, no ke kai la ho‘i ka ‘āina.

*Take a deep breath, my son, and lay yourself in the sea, for then the land shall belong to the sea.*

Uttered by the priest Ka'opulupulu at Wai'anae. Weary with the cruelty and injustice of Kahāhana, chief of O'ahu, Ka'opulupulu walked with his son to Wai'anae, where he told his son to throw himself into the sea. The boy obeyed, and there died. Ka'opulupulu was later slain and taken to Waikīkī where he was laid on the sacrificial altar at Helumoa.  
(Pukui 1983:44)

Ka malu niu o Pōkā'i.

*The coco-palm shade of Pōkā'i.*

Refers to Wai'anae, on O'ahu. At Pōkā'i was the largest and best-known coconut grove on O'ahu, famed in chants and songs.

(Pukui 1983:160)

Kapakahi ka lā ma Wai'anae.

*Lopsided is the sun at Wai'anae.*

Used to refer to anything lopsided, crooked, or not right. First uttered by Hi'iaka in a rebuke to Lohi'au and Wahine'ōma'o for talking when she had warned them not to.

(Pukui 1983:164)

Malolo kai e! Malolo kai!

*Tide is not high! Tide is not high!*

Said of a threatening disaster. Robbers once lived at a place in Wai'anae now known as Malolo-kai. Their spies watched for travelers to kill and rob. When there were only a few that could be easily overcome, the spies cried, "Low tide!" which meant disaster for the travelers. But if there were too many to attack, the cry was "High tide!"

(Pukui 1983:232)

Ola Wai'anae i ka makani Kaiaulu.

*Wai'anae is made comfortable by the Kaiaulu breeze.*

Chanted by Hi'iaka at Ka'ena, O'ahu, after her return from Kaua'i.

(Pukui 1983:272)

### ***Mo'olelo***

From the following *mo'olelo* about fishing, we can learn what the social and political life may have been like in pre-contact in Nānākuli.

In the time when Kahekili, ruler of Maui ruled Oahu, after the battle with Kahahana, his own nephew, there lived a man at Nanakuli, Waianae, island of Oahu. He was a man that never thought of nor kept any of the gods of old Hawaii. He was ungodly lazy, poor and simply lived on the charity of his host.

One night, he had a dream. A small stone image spoke to him saying, "Say! Say! Wake up you and come and get me. I am dying of cold where I am. Come and get me. There I am, placed by the small heap of rocks placed on the ridge." The man awoke with a start and found that it was a dream. He thought nothing of this thing, this worthless idea of a stone speaking and fell off to sleep again. After he had fallen asleep again, the stone image bestirred him. He awoke and went where the stone had instructed him. When he got there, he found the stone, carried it home, washed it clean and kept it.

The next night, the stone told that there are visitors at the shore, a school of fish and that he should fetch nets and a canoe. The man looked around and said that he couldn't get any fish because he lacked a canoe and nets. Therefore, he went to speak to the konohiki of the land, "I have been told that there are visitors to the shore. It will be well to get the nets and canoes ready to go to sea."

The konohiki of the land made ready with nets and canoes and set out to sea. On this trip, there were so much fish caught that a stench rose up on the shore. People went from Ewa, Waianae and Waialua to

get some fish but the supply was inexhaustible. The fish kept coming to the same place for several days. When the fish came the keeper of the stone god took one fish and gave it to him because he was told to do so in a dream. Whenever fish was caught, one should be given to him. The keeper did so.

He became a great favorite of the konohiki's and received property, fish nets, canoe and land, such wealth as he have never seen before. The konohiki continued caring for him and they shared their wealth together for a long time.

One day some keepers of gods discovered the man had a stone and so some of them, from Ewa, came and carried it away. The spirit of that stone image went to his keeper to tell him where he had been taken, the land and the house in which it was placed. Then its keeper went and found it in the very place that the stone image described...

(signed) D. Kalakaua

(Kalakaua Ms.:241 in Sterling and Summers 1978:63)

The legendary hero Maui, a significant figure in Hawaiian *mo'olelo*, is associated with several places in Nānākūli, including a rock, a shelter, and a spring:

Site 148. Large rock said to be named Maui, about 1.1 mile from Nanakuli station toward Puu o Hulu.

Northeast of the road on the property of E.P. Fogarty is a rock said to be named after the Hawaiian hero, Maui who is said to have landed here when he first came to the Hawaiian islands from the south. This stone at the time was surrounded by water, and it was here that Maui reposed and sunned himself. In the bluff just northeast of the rock is a shelter in which he lived, and in the vicinity was a spring where he obtained water. The large rock is now split in half and adorned with many small, oddly-shaped rocks. It is said to be bad fortune to build one's house across a line drawn directly from the rock to the shore. J.J. Mathews is said to have collected detailed information in regard to this site. (McAllister 1933:110)

### **Power and Warfare in Wai'anae**

In the 1400s, the Māweke-Kumuhonua line unified O'ahu's rule, Līhu'e (also known as Wai'anae Uka) was the royal center, and oral histories portray this time as peaceful and prosperous. Of the Māweke line, La'akona, who lived in 'Ewa and controlled Wai'anae, reigned until Haka, an evil ruler, assumed power between 1520 and 1540. He was later captured and slain somewhere between the valleys of Mākaha and Wai'anae (Cordy 2002:26).

In the 1600s and 1700s, population grew on O'ahu and the island was ruled under Kala'imanuia (1600–1620), Kākuihihewa (1640–1660), Kūali'i (1720–1740), and Peleiōholani (1740–1779). Power declined and was built back up several times among these rulers, but by 1778 the Kingdom included Moloka'i, O'ahu, and portions of Kaua'i (Cordy 2002:32).

In 1783 Maui invaded O'ahu after Maui's ruler Kahekili tricked O'ahu's chief Kahāhana into killing his high priest. The O'ahu army was defeated and Kahāhana was caught and killed in 1785. In response, Kahāhana's supporters revolted, but with many losses in 'Ewa, they pulled back to the valleys of Wai'anae where many more were killed. The Maui Kingdom ruled O'ahu for ten years under Kahekili and his son Kalanikūpule until they were defeated by Kamehameha's Hawai'i Kingdom army in 1795.

### **Land Use and Subsistence**

The Wai'anae coast was one of three dry areas on the island of O'ahu (Handy et al. 1972). Due to low rainfall and intermittent streams, there were not many options for agriculture. Sweet potato, or *'uala* (*Ipomoea batatas*), was the staple crop, planted throughout the dry slopes of the Wai'anae region (Handy 1940:156). Throughout the district, a pattern of small coastal villages with farms in the upper valleys was likely the norm (Cordy 2002).

The seas fronting the district were prime fishing grounds, thus fishing and sweet potato cultivation were the main subsistence activities:

Undoubtedly there were also small settlements subsisting mainly on sweet potato, in the valleys where constant streams were lacking (Nanakuli and Makua). Along this coast the fishing is excellent. In famine times, then, there was reef fishing, and the Wai‘anae Mountains had wild banana, *ti*, fern, and other roots that were edible...(Handy et al. 1972:275–276)

Handy (1940) describes a broken platform, pavings, and a house site in Nānākuli, indicating traditional habitation along the stream. Handy also talked with a rancher, however, who stated that “there are no terrace remains anywhere in Nanakuli valley, nor any available water for irrigation, except at the very head of the valley’s head, far up the mountains” (Handy 1940:83). The rancher also mentioned that at the top of the valley there are abandoned terraces, platforms, and orange trees that mark habitation sites.

We know much of Wai‘anae’s cultural history through John Papa ‘Ī‘Ī’s series of articles in the Hawaiian newspaper *Ka Nupepa Kuokoa*. ‘Ī‘Ī was born in 1800 and died in 1870, and his writing was translated by Mary Kawena Pukui in 1959 in a book titled *Fragments of Hawaiian History*. Below are entries that detail his experiences while visiting relatives in Nānākuli:

Ii’s aunt on his father’s side, Kaneiakama, came from Waianae with her husband Paakonia. They visited the family’s houses to rest a while before continuing on to Honolulu to their landlord. These people, who were bracelet-makers and residents of that land of the foamy sea, were well known. They were of chiefly stock and were privileged to place their bundles with those of the chiefs. Their landlord, Pahoā, was in charge of Ka‘ahumanu’s extensive lands, granted her by her husband, Kamehemeha; and there were very few *ahupua‘a* in which she did not have a portion, for she was a great favorite of the king. Ka‘ahumanu was fond of Kaneiakama and admired her skill in composing chants. Because of this, perhaps, the land at Waianae was given to Kaneiakama and her husband. (I‘i 1993:26)

There were three such journeys, one by way of Pohakea, one through Kolekole, and one by a route below Puu o Kapolei. On the first two trips they went to Pahoauka, where his aunt and uncle lived. (I‘i 1993:27)

Ii was eight or nine years old when he was again seized by a desire to go to visit his aunt Kaneiakama, and he was given permission to do so. He had heard that his aunt was at Nanakuli, so he and his attendant departed by way of Puu o Kapolei to Waimanalo and on to Nanakuli. There he found his aunt and her husband who were in charge of the fishing.” (I‘i 1993:29)

During his visit Ii observed how the children of Nanakuli produced a long quavering sound while chanting. This was performed while the children sat on the branches of the breadfruit trees. They sat apart from each other on branches from the base to the top, chanting. When the boy listened carefully to the long, drawn out sound, he could distinguish the words that they were chanting. He asked his aunt to let him join the children, and he quickly saw how the quavery sound was produced. He noted that one of the boys held up two fingers on his right hand and tapped his throat in order to make the quaver. Ii learned the chant at once. This is the chant that they were using:

Kau koli‘i ka la i luna o Maunaloa,	The sun sends a streak of light on Maunaloa,
E ke ao e lele koa,	The clouds go scurrying by,
Halulu i ka mauna	There is a rumble on the mountain top
Kikaha ke kuahiwi o Kona he la‘i,	That echoes from the mountain of Kona, the calm,
Ku papu Hilo i ka ua,	Hilo stands directly in the rain,
Paliloa Hamakua,	Hamakua’s cliffs are tall,
‘Ope‘ope Kohala i ka makani,	Kohala is buffeted by the wind,
Huki Kauiki pa i ka lani, etc.	Kauiki reaches and touches the sky, etc.

This was memorized by all and was chanted in perfect unison, and the boy noticed how pleasing it was. Thus did Ii enjoy himself with the children of Nanakuli, and he continued to spend his spare time with them. (I'i 1993:29)

### ***Heiau***

‘Ilihune Heiau was a noted religious structure in Nānākuli. Nothing of it remains today, however, as many *heiau* were used as cattle pens, and rocks were moved during the time of ranching. The scant information known for the *heiau* is as follows:

Ahupuaa: Nanakuli

“poor, destitute”

Comments: Site 147. Approximate site of Ilihune heiau, Nanakuli, of which nothing remains. Thrum notes: A small walled heiau of pookanaka class; used about 1860 by Frank Manini as a cattle pen, for which natives prophesied his poverty and death.” (McAllister 1933:110)

On the night of Po Kane there are some who hear a voice of a child calling e------. This voice trails off and ends up at a place called a heiau by some – a cattle pen by others. (Mrs. Annie Soong, Nov. 1954 in Sterling and Summers 1978:62)

Archaeological research has found a small shrine in the upper valley, but it is hard to determine if there were others due to the disturbance of the ruins (Cordy 2002:84). Another *heiau* overlooking Nānākuli includes one from Honouliuli Ahupua‘a:

Puu Kuaa Heiau

pu‘u ku‘ua. PEM: relinquished hill. Honouliuli Ahupua‘a

“Site 137. Puu Kuaa heiau, Palikea, Honouliuli. The heiau was located on the ridge overlooking Nanakuli, as well as Honouliuli, at the approximate height of 1800 feet. [This is far from Palikea as currently identified.] Most of the stones of the heiau were used for a cattle pen... That portion of the *heiau* which has not been cleared for pineapples has been planted in ironwoods.” Coordinates at 1800 ft. elevation. (McAllister 1933:108)

### **Nānākuli in the Historic Period**

The historic period in Hawai‘i begins after Western contact in 1778. In the late 1700s to early 1800s, foreigners and locals provided written accounts of visits and descriptions of what life was like during this period. One of the earliest accounts of the area is from 1798 when George Vancouver sailed along the Wai‘anae coast and described what he saw:

From these shores we were visited by some of the natives, in the most wretched canoes I had ever yet seen amongst the South-Sea islanders; they corresponded however with the appearance of the country, which from the commencement of the high land to the wet land of Opooroah, was composed of one barren rocky waste, nearly destitute of verdure, cultivation, or inhabitants, with little variation all the way to the west point of the island. Not far from the s.w. point is a small grove of shabby cocoanut trees, and along those shores are a few straggling fishermen’s huts. Nearly in the middle of the side of the island is the only village we had seen westward from Opooroah. In its neighborhood the bases of the mountains retire further from the sea-shore, and a narrow valley, presenting a fertile cultivated aspect, seemed to separate the wind distance through, the hills. The shore here forms a small sandy bay. On its southern side, between the two rocky precipices, in a grove of cocoanut trees is situated the village... The few inhabitants who visited us from the village, earnestly intreated our anchoring, and told us, that if we would stay until morning, their chief would be on board with a number of hogs, and a great quantity of vegetables. (Vancouver 1967:217)

In the early 1800s, John Papa ʻĪʻī visited his aunt in Nānākuli, describing in little detail that ʻulu trees were present and fishing was taking place. There were also reports in 1818 by Hunnewell and 1828 by Chamberlain that there were a number of villages in the area (Cordy 2002:80).

In the early 1800s, many chiefs in Waiʻanae had their people go to the mountains to gather sandalwood, an item in high demand for trade with foreigners (Cordy 2002:41). This new effort changed the traditional way of life, and may have contributed to population decline during this time. By the mid to late 1800s, much of the land was leased for ranching purposes.

In the *1880 Hawaiian Kingdom Statistical and Commercial Directory and Tourist's Guide*, a writer describes his visit to Nānākuli, observing that much of the land was being used for grazing:

Leaving Waianae, a ride of about two miles brought me to the Lualualei Valley, another romantic place opening to the sea and surrounded in every other direction by high mountains. This valle is occupied as a grazing farm by Messrs. Dowsett & Galbraith, who lease some sixteen thousand acres from the Crown. Its dimensions do not differ materially from those of the Waianae Valley, except that it is broader—say, two miles in width by a length of six or seven miles. The hills which inclose [sic] it, however, are not so precipitous as thos at Waianae, and have, therefore, more grazing land on their lower slopes, a circumstance which adds greatly to the value of the property as a stock farm. Although only occupied for grazing purposes at present, there is nothing in the nature of the soil to prevent the cultivation of the sugar cane, Indian corn, etc. Arrangements for irrigation, however, will be a necessary preliminary to cultivation.

From the Lualualei Valley to the Nanakuli Valley I had a rather dreary ride of three miles. The intervening country towards the sea is barren, with a little pasturage at the base of the mountains. The track, however, is in very good order, much better than I expected to find it, looking to the mountainous and rocky character of the country through which it passes. At Nanakuli and Hoaeae, close adjoining, the Messrs. Robinson have cattle ranches. The pasture here cannot be compared with that in the valleys I had just left behind, but inland among the mountain ranges it is much better. This, indeed, is a characteristic of the ranges throughout the island.

During my journey along the western coast of this island, where the road is generally so much more fatiguing to the traveler than that of the windward side, I have often pulled up to give both horse and rider a spell, whilst I entered into a chat with some group of natives whom I have fallen in with, or those whose hamlets I have been passing at the time. More than once, too, I have passed the night at their houses. I have always found them very sociable and thoroughly hospitable....(Bowser 1881:493-494)

Handy's *The Hawaiian Planter*, published in 1940, gives further description of Nānākuli in the late 1800s, including an account from a rancher who had been living and working there for 50 years:

On the south side of the stream, about a quarter of a mile inland from the main coastal road, there is a broken platform (Paepae) built of small rocks with apparently a small paved area below, close to the stream bed. Extending inland along the south bank of the stream bed for about 75 yards there is a rough stone facing from 1 to 2 feet high in general level along the top. This might be judged to be a terrace area were it not that the ground behind the stone facing is not level; however, that might be due to washing out when the stream was in flood. According to Ernest Rankin, a rancher in this and other valleys for years past and now living on a homestead on the ridge north and above this site, the stonework just described was not terracing for taro patches but was built by a man named Whitney 40 years ago when he located a house and cattle shelter at that point. Behind the terrace there are six large old monkeypod trees, indicating earlier habitation. On the north side of the stream at this point, there is a fairly recent habitation site, with several large trees, also papayas and traces of sugar cane plantings. Nearby are a tiny stone paving and the remains of an old Hawaiian house.

According to Rankin there are no terrace remains anywhere in Nanakuli valley, nor any available water for irrigation, except at the very head of the valley's head, far up in the mountains. High in the small gulches at the valley's head there are some abandoned terraces, stone platforms, and orange trees marking the sites of ancient Hawaiian habitations. But as long ago as 1890 when Rankin first frequented the valley as a cowboy, there was not one Hawaiian living there. (Handy 1940:83)

### Māhele Land Tenure and Historic Land Use

From 1848 through 1855, the Māhele divided and privatized the land across the islands, and the entire Wai‘anae District, aside from Mākaha, was designated as Crown Land. At this time the area was sparsely populated by Hawaiians. For example, only five Māhele land claims were made for all of Nānākuli (LCA 830, 833, 846, 7455, and 8153), and none were awarded (Table 1). The Nānākuli claims mention a *muliwai* and pond in addition to house lots and agricultural plots in *kula* lands and *wauke* plantations in the uplands. It is not clear exactly where the LCAs were located, although Berdy et al. (2002:10) surmise that they were situated in the upper valley where permanent habitation sites have been found. Only a small population of roughly 50 individuals lived in coastal Nānākuli during the mid-1800s (Cordy 1997). By 1881 there were just four Nānākuli residents listed in the Hawaiian Island Directory (Cordy 1997).

**Table 1. Māhele Data for Nānākuli**

LCA	Claimant	<i>‘Ili</i>	Awarded	Description
830	Mahiki		No	3 <i>‘āpana</i> , 1 house lot, cairns, streams
833	Kahaanui	Kaape	No	4 <i>‘āpana</i> , 1 house lot, cairns, streams
846	Awa		No	5 <i>‘āpana</i> , 1 house lot, streams
7455	Kuluahi	Hapai	No	1 <i>‘āpana</i> , 1 <i>kula</i> , 1 house lot, <i>wauke</i> , <i>muliwai</i> , pond
8153	Haulula	Kuamokahi	No	1 <i>‘āpana</i> , 1 <i>kula</i> , 1 house lot, <i>wauke</i> , <i>‘uala</i>

The Waianae Sugar Plantation was founded in 1878 by H.A. Wiedemann, and the leeward community grew substantially. During the 1890s the O‘ahu Railway and Land Co. (O.R.&L.) railroad was constructed to bring crops and animals from the Leeward Coast to Pearl Harbor. This railway would eventually run through all of the Wai‘anae District and around Ka‘ena Point to Kahuku. Vestiges of the old rail line can still be seen along Farrington Highway.

After the overthrow of the monarchy in 1893, the Crown Lands were combined with the Government Lands. In 1898, when Hawai‘i became a U.S. Territory, all lands combined were ceded to the United States. It was not until the passage of the 1920 Hawaiian Homes Commission Act that the ceded lands (roughly 188,000 acres) were set aside to benefit Native Hawaiians (Juvik and Juvik 1998:228). Following this, Native Hawaiian homesteading in Nānākuli ensued, with 241 lots for applicants to choose from. The establishment of the Nānākuli Hawaiian homestead community is described below:

Among the areas designated as Hawaiian homesteads was a hot, stickery portion of Nānākuli. By 1929 this land had been divided into house lots and plans were underway to bring in homesteaders. From the beginning, there was criticism of the project. Frederick Ohrt, manager of the Water Board in Honolulu, said there wasn't enough water in Nānākuli to supply the homesteaders (McGrath et al. 1973:111).

In the early 1900s, a series of parcels were sold in nearby Lualualei, classified as pastoral lands because of the dearth of water. Roughly 40 families settled on the smaller lots, while families such as the Von Holts, McCandlesses, and Dowsetts laid claim to the large parcels there.

In March 1917, 31.36 acres within Nānākuli were set aside as a U.S. military reservation which was designated as Camp Andrews in 1941. A 1943 article in *Paradise of the Pacific* explains how Camp Andrews, an overnight

rest and recreation center, was the answer to relaxation for “fighting men” of the time and had cabins and picnic benches (Allen 1999).

The answer to this problem was construction of a camp accessible to railroad and highway transportation. Camp Andrews resulted—a peaceful haven where there is no routine, no reveille, and where a thousand men and fifty officers can rest after returning from the bloody shambles of the Southwest Pacific.

Camp Andrews... is located at Nanakuli on the south-western shore of Oahu, twenty-six miles from “Pearl.” It had been established early in 1941 by the Hawaiian Detachment but in December of that year it was turned over to Commander Hickey. Dances and USO shows help provide fun for the men during their “away from it all” two days at Camp Andrews. (*Paradise of the Pacific* 1943)

Sugarcane production and military activity dominated the first half of the 20<sup>th</sup> century on the Leeward Coast. World War II was devastating for the Waianae Sugar Plantation as high paying defense jobs created a labor shortage. All sugarcane production in the Wai‘anae District was eliminated during the 1940s due to labor shortages, water shortages, military procurement of land, and other more productive agricultural regions taking over. The O.R.&L. railway was officially abandoned in 1946.

During World War II, concrete bunkers, pill-boxes and gun emplacements were built along the Leeward Coast. Many of these concrete features are still present today. At times as many as 20,000 troops were training in the Wai‘anae District. McGrath et al. write, “American troops caused more destruction on the Waianae coast than the Japanese” (1973:135–136).

### **Historic Maps**

The earliest map found for Nānākuli is an 1854 Government Survey map (Figure 4). Few details are depicted, but the coastline and mountains can be seen, and two points on the mountains are labeled. “HALEMANU” is on the northwest, and “GREEN HILL” is on the southeast. The expanse to the east of Green Hill is labeled as “J. MEEK’S LAND.” The coastal road is shown, and an old house is illustrated along the shore.

A 1912 Hawaii Territory survey map shows the Nānākuli region in more detail (Figure 5). Several places are named, such as Heleakalā and Manawahua Peaks. Two points half way up the valley are labeled “end of fence,” indicating that a fence line once stood there. Nānākuli Cemetery is shown adjacent to Haleakalā Avenue, and a “Tank, Pump, and Tunnel Site” are illustrated to the east. An electric transmission line crosses the valley, and the military reservation is shown near the coast. Also along the shoreline are the Government Road, O.R.&L. railroad track, a park, and an area of standing water.

A 1925 Hawaii Territory survey map depicts the 1,101-acre Nānākuli Forest Reserve and surrounding area (Figure 6). Places labeled on the mountains surrounding Nānākuli include Heleakalā Peak, Palikea, Pōhākea, Maunakapu, and Manawahua. The coastal road and shoreline are illustrated, but no other details are shown in Nānākuli.

By 1930, Nānākuli is illustrated as a large community with many residences (Figure 7). A Hawaiian Homelands map shows the Nānākuli subdivision much as it stands today. A feature that appears to be a rock wall runs across the military reservation. Nānākuli Beach Park is depicted with a flooded area near the current highway. Just *makai* of the highway was an “Old Road” and the O.R.&L. railway.

A 1953 USGS map also depicts a modern Nānākuli community (Figure 8). Additions include water tanks at the coast and farther inland, as well as a pipeline and quarry *mauka* of the subdivision. A jeep trail extends the length of the valley into the forest reserve, and the Palikea Trail runs along the ridge.

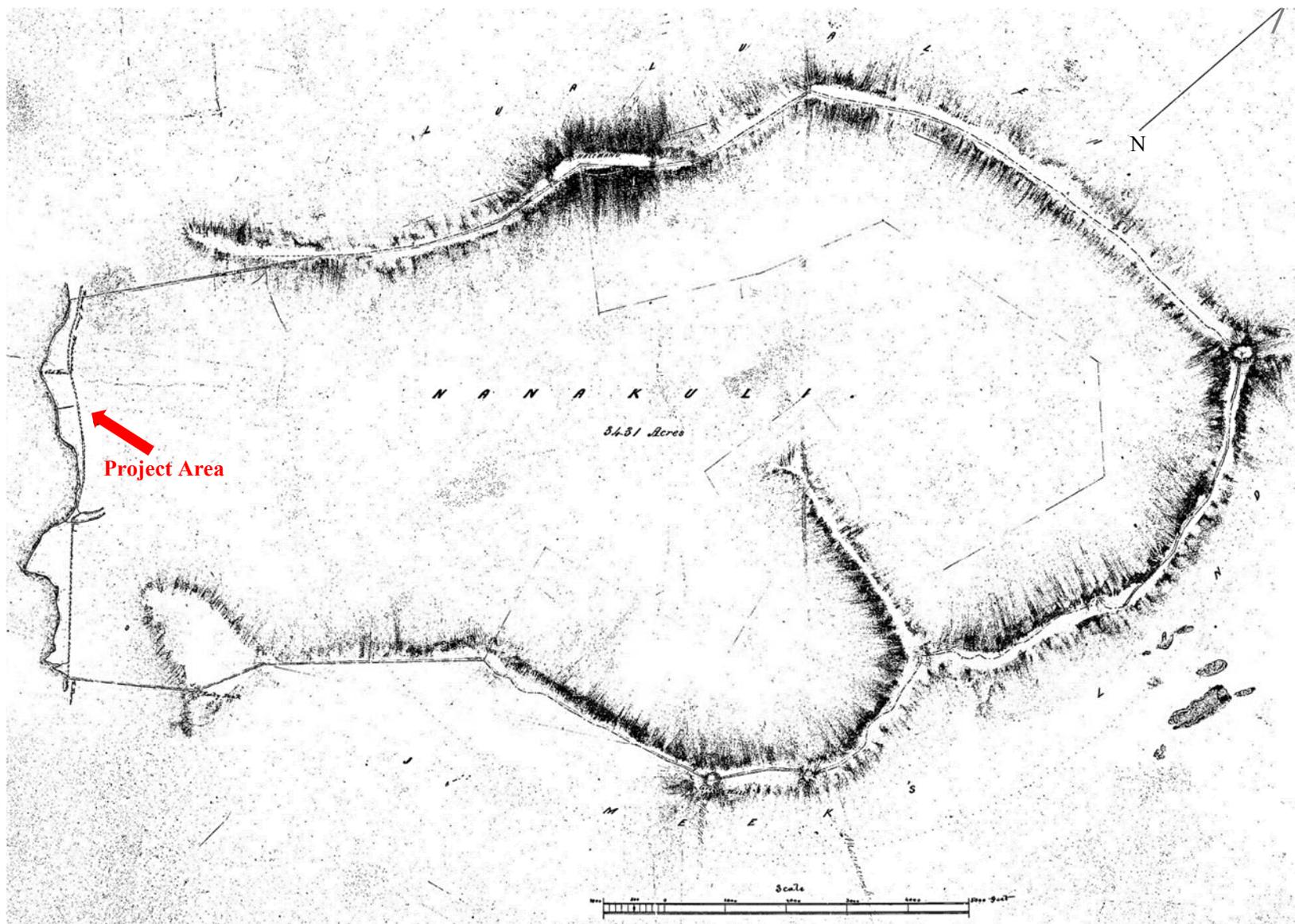


Figure 4. Portion of an 1854 Hawaiian Government Survey map (Webster 1854).

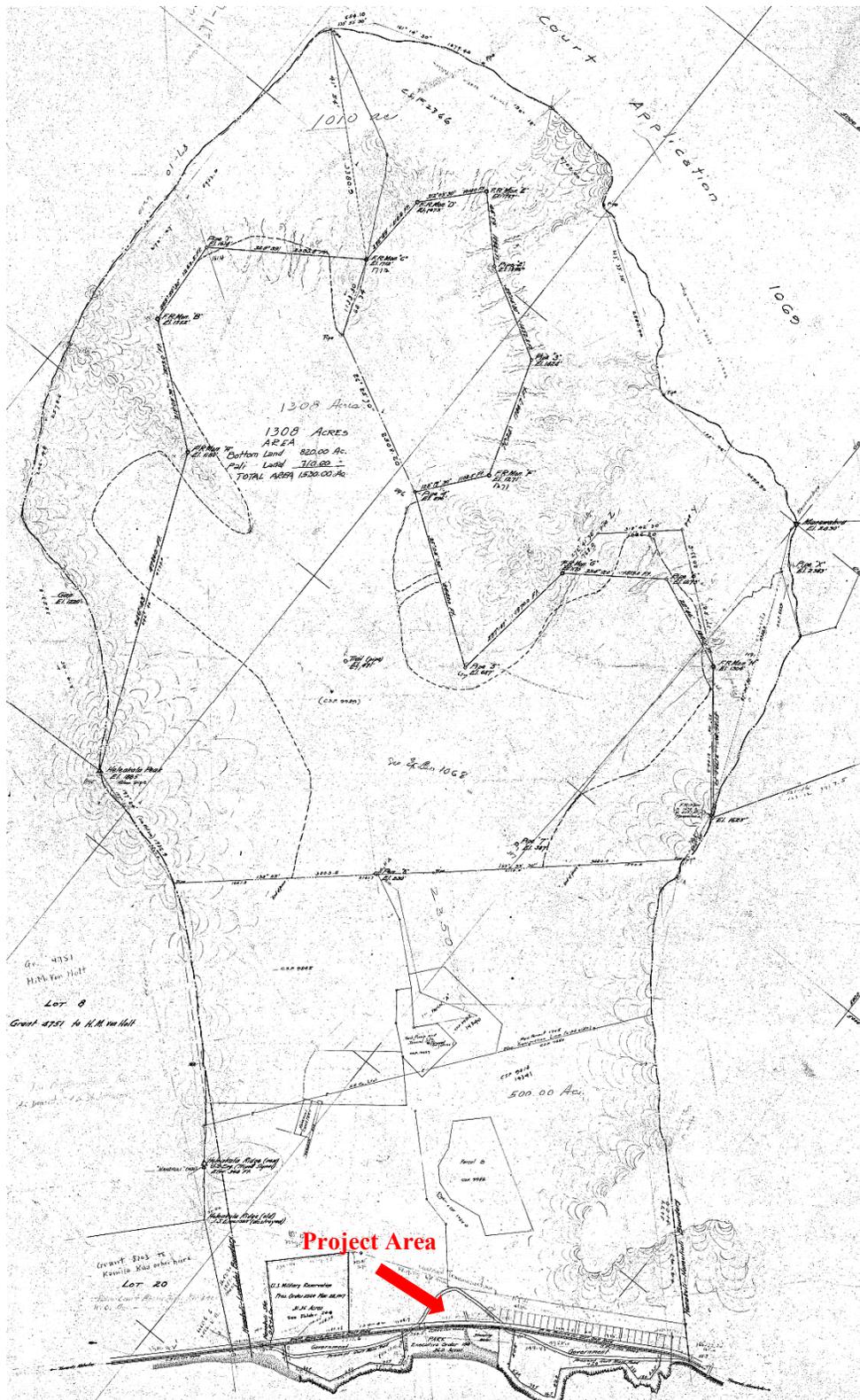


Figure 5. Portion of 1912 Hawai'i Territory Survey Map (Newton 1912).

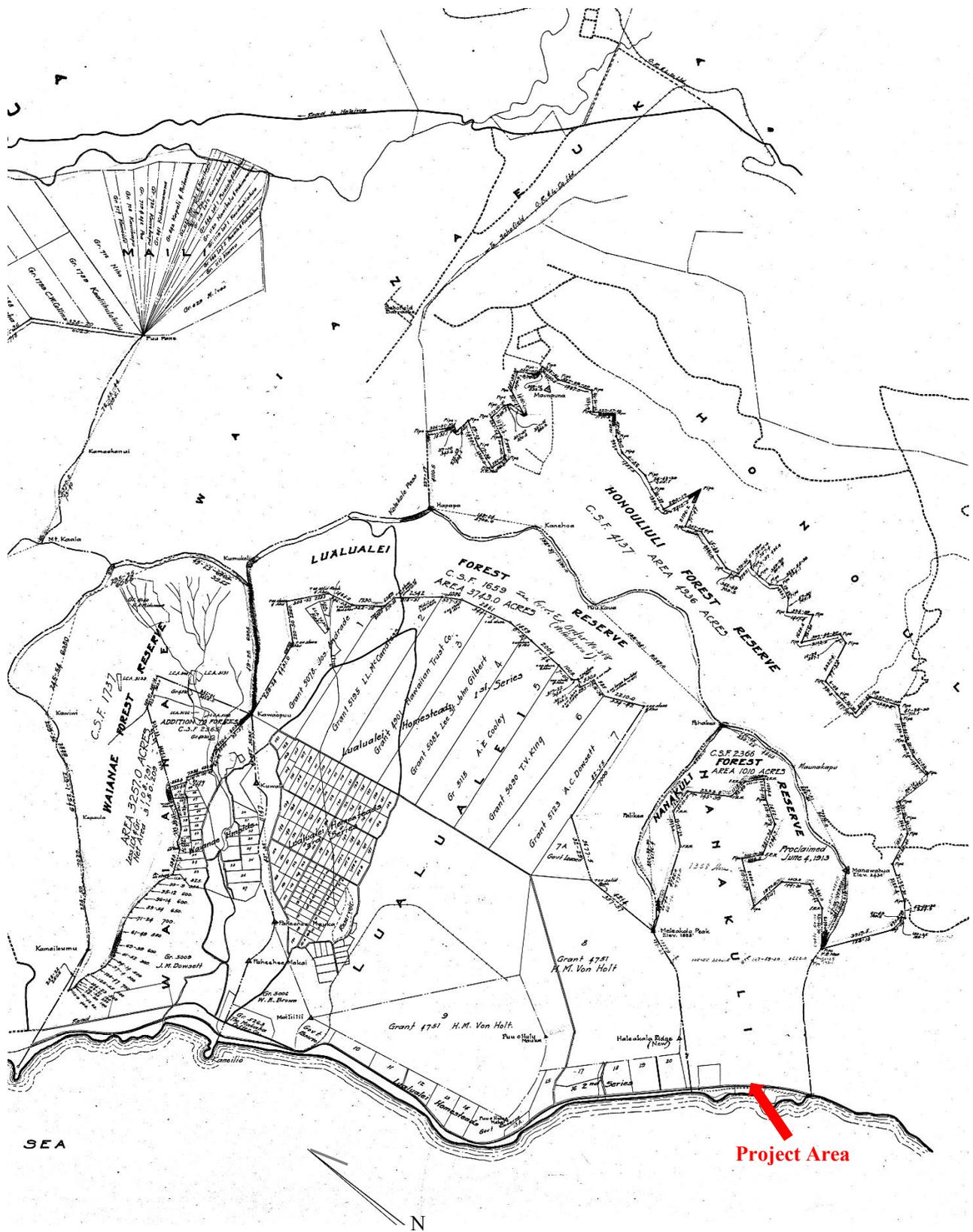


Figure 6. Portion of a 1925 Hawaii Territory Survey map (Wall 1925).



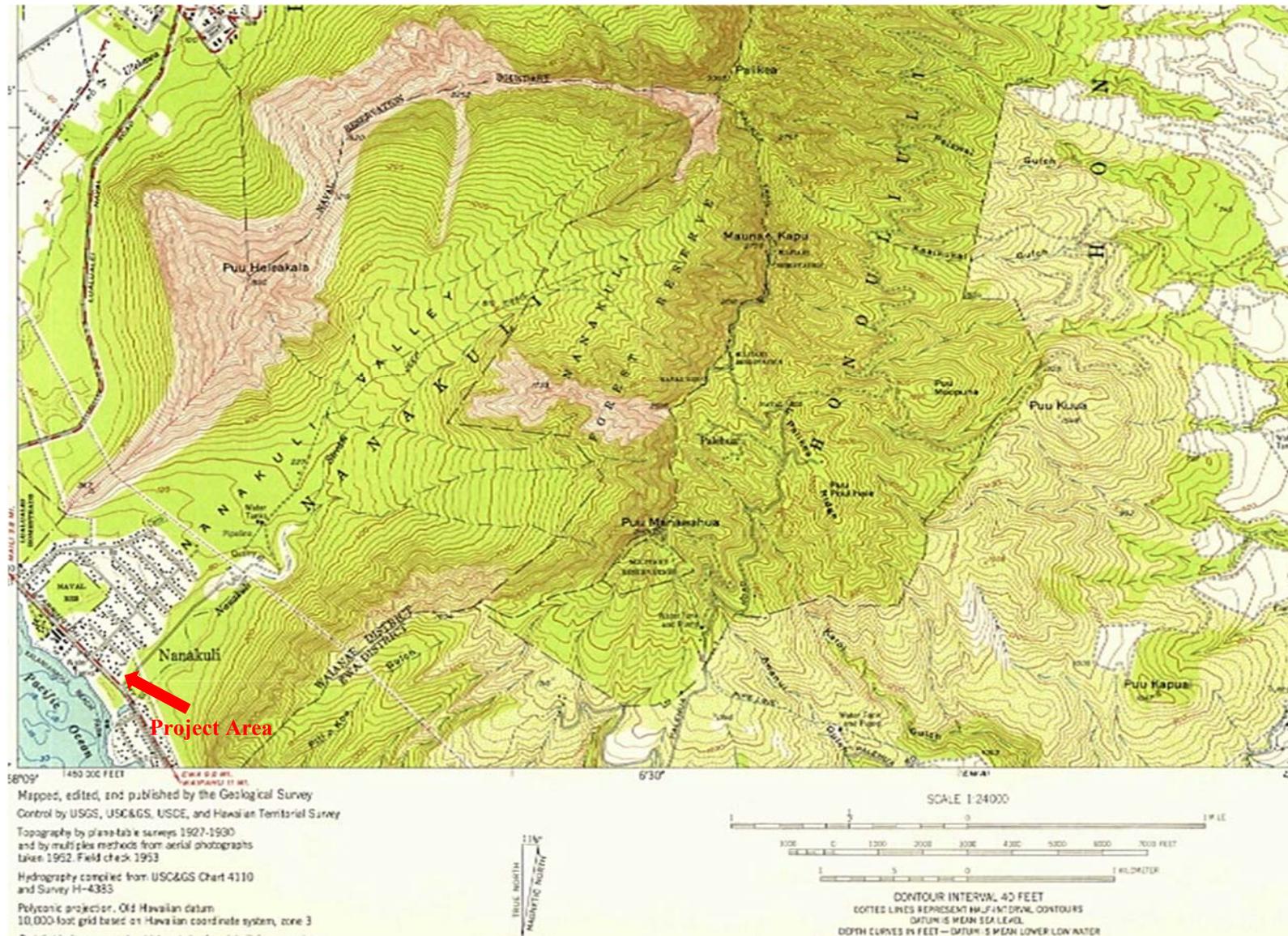


Figure 8. Portion of a 1953 USGS Schofield Barracks Quadrangle map (USGS 1953).

## St. Rita's Church Structures

The St. Rita's main chapel has a long history. A 2012 article states that the structure is 114 years old (Wasowicz 2012), placing its construction at 1898. It was first used as a chapel at Schofield Barracks in Wahiawā before being moved to 'Ewa to serve the plantation village as the Immaculate Conception Church (Kim n.d.). The exact date of this first move is not known, but would have occurred before 1929, when a new chapel was constructed at the 'Ewa location (ICC n.d.). The chapel was finally transported to Nānākuli in 1934, where it was a mission church for Wai'anae Sacred Hearts (O'Hare et al. 2013). The property was backfilled at this time to provide more area for parking (O'Hare et al. 2013). Also at this time, a Quonset hut and 1920s-era rectory were moved onto the property (O'Hare et al. 2013). Details of this early history are provided on the church website:

Saint Rita Catholic Church in Nanakuli began as a mission church of Immaculate Conception parish in Ewa and was administered by the Sacred Hearts Fathers. Legend has it that in 1928, the OR&L train that ran from Honolulu to Haleiwa by way of Kaena Point stopped at the Nanakuli Depot water tank for a refill for its steam engine. (This is the beach site now known as "Depots" by the locals in Nanakuli.) On board that train was Bishop Stephen Alencastre, who was on his way to dedicate the new church at Sacred Hearts Church in Waianae. He was approached at the very back of the train by several native Hawaiians who asked the Bishop to put a Catholic Church in Nanakuli. Among the petitioners were Albert K. Akana and his wife Rita Pangelinan Akana. St. Rita was established and attached to Sacred Hearts as a mission church in June of 1928. (Kim n.d.)

In 1955 the chapel building was enlarged with a new wing on either side of the structure with twin bell towers (Kim n.d.). A devastating fire destroyed much of the church in 1987 (O'Hare et al. 2013). Affected buildings included the kitchen, parish hall, garage, thrift shop, and maintenance shed. A 2008 Environmental Assessment for a new parking lot listed four structures on the property: the 2,108 sq. ft. chapel, the 1,288 sq. ft. rectory, the 792 sq. ft. religious education Quonset hut, and a 220 sq. ft. restroom (Francisco Architect Imata and Associates 2000). The Environmental Assessment does not consider the church buildings as historic properties:

Based upon research and information gathered, the proposed project site is not historical, archeological, or cultural site. A *Nanakuli Development Plan* report prepared by Wilson Okamoto & Associates, Inc. for the State of Hawaii Department of Hawaiian Home Lands in 1985 states that the area is not a historical site. The report also indicated that no archeological sites were identified during a reconnaissance survey conducted by the State. Furthermore, records at State Historic Preservation Division confirms that there are no known historic site at the proposed project locations. An archeological survey conducted in the area located only lithic scatter and modern trash dump, and the survey shows that the area has been heavily disturbed by land clearing in the past. (Francisco Architect Imata and Associates 2000:12, grammatical errors in the original)

It is unclear which State reconnaissance survey and archaeological survey are referred to, as no references are provided in the Environmental Assessment.

### Previous Archaeology

Many archaeological projects have been carried out in Nānākuli (Table 2). The following paragraphs summarize the most relevant studies which lie in the vicinity of the project area. Their locations are illustrated in Figure 9.

The first archaeological work in Nānākuli was done by J.G. McAllister from 1929 to 1930, as part of an island-wide archaeological survey on O'ahu. He identified one site, 'Ilihune Heiau, Site 147, near the mouth of the valley, of which he noted that nothing remained (see *Heiau* section).

Extensive archaeological work has been carried out in undeveloped areas of Nānākuli Valley, just east and northeast of the current area of study (Cordy 1990, Cordy et al. 1990, Pak and Cordy 1990, Cordy 1993, Cordy

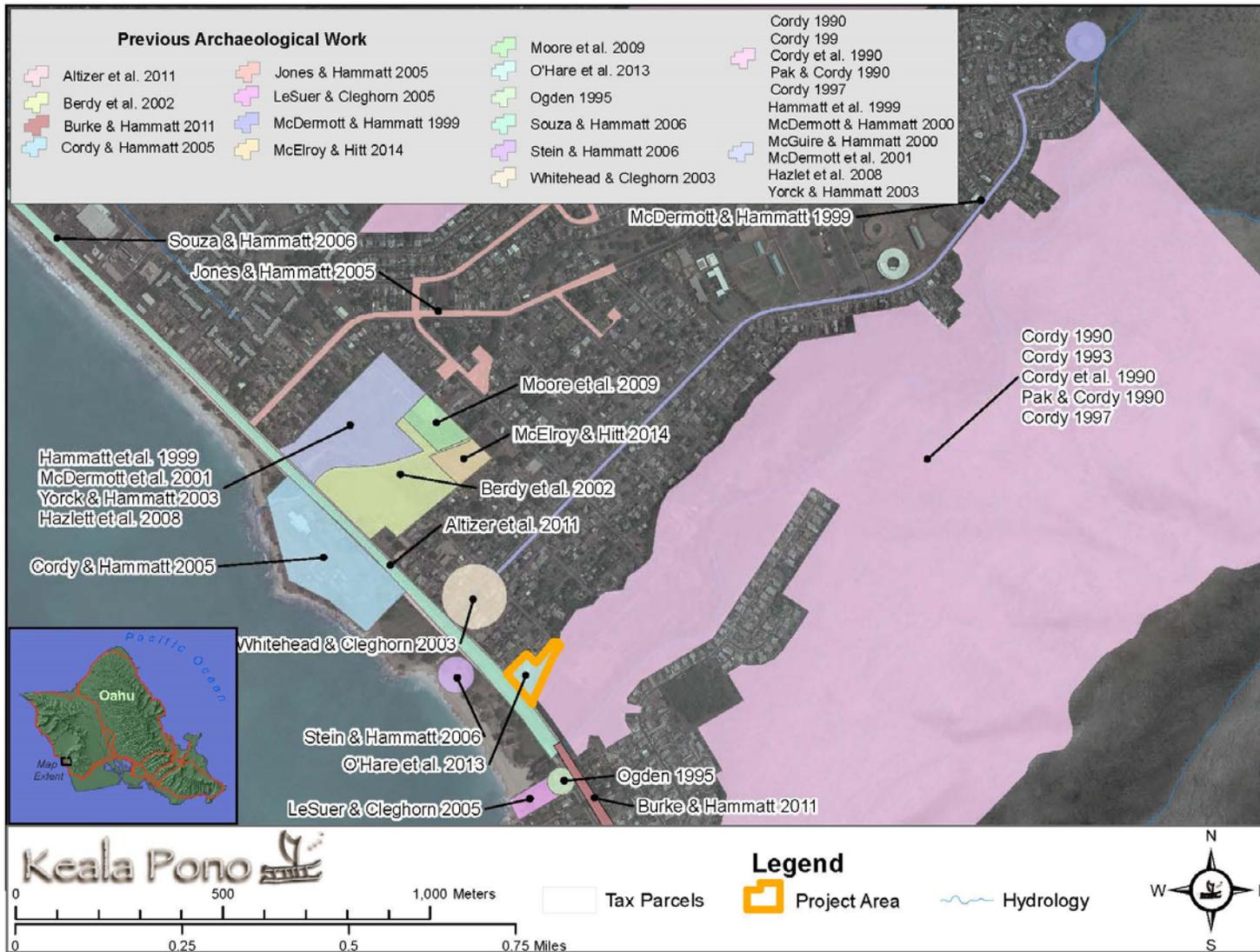


Figure 9. Previous archaeological studies in the vicinity of the project area.

**Table 2. Previous Archaeology in Nānākuli**

<b>Author and Year</b>	<b>Location</b>	<b>TMK</b>	<b>Type of Study</b>	<b>Findings</b>
McAllister 1933	Island-wide	Multiple	Survey	‘Ilihune Heiau, now destroyed.
Cordy 1990, Cordy et al. 1990, Pak & Cordy 1990, Cordy 1993	Nānākuli Ahupua‘a	Multiple	Survey	Identified agricultural, habitation, and religious sites, mostly in the upper valley. Summarized in Cordy 1997.
Nakamura & Pantaleo 1994	Nānākuli & Lualualei Ahupua ‘a	Multiple	Reconnaissance Survey	Extensive surface disturbance noted.
Ogden Environmental and Energy Services Company 1995	MILCON-313, Naval Undersea Warfare Engineering Station (NUWES) Facility, Lualualei and Nānākuli	8-9-006:088	Subsurface Testing	No cultural properties were identified.
Cordy 1997	Nānākuli Ahupua‘a	8-9	Inventory Survey	Recorded agricultural sites, scattered habitation sites, and possible religious structures in upper Nānākuli Valley. Few sites were located in the lower valley, although the beach region was not included.
McDermott & Hammatt 1999	Proposed Nānākuli 242 Reservoir Site, and Nānākuli Ave.	8-9-008:003	Inventory Survey	No significant historic properties were identified.
Hammatt et al. 1999	Portion of former location of Camp Andrews	8-9-002:065	Assessment	Identified remains of Camp Andrews and numerous sinkholes which may provide additional information on traditional land use, flora and fauna.
McDermott & Hammatt 2000	Proposed Nānākuli IV Elementary Site	8-9-002:065, 023, por. 1	Inventory Survey with Subsurface Testing	Recorded sinkholes containing historic trash, traditional Hawaiian artifacts and midden, paleontological remains, and a human burial.
McGuire & Hammatt 2000	Proposed Nānākuli IV Elementary Site	8-9-002:065, 023, por. 1	Traditional Practices Assessment	Little documentation found for traditional cultural practices; historic land use includes ranching and military recreation. Describes the traditional practice of placing burials within sinkholes found on the subject property.
McDermott et al. 2001	Proposed Nānākuli IV Elementary Site	8-9-002:065, 023, por. 1	Inventory Survey with Subsurface Testing	Identified Site 50-80-07-5946, the remains of Camp Andrews and Site 50-80-07-5947, sinkholes with cultural deposits.
Berdy et al. 2002	Proposed Nanakuli Kokua Ohana Center	8-9-002:001	Inventory Survey with Subsurface Testing	Identified the two previously recorded sites above (5946 and 5947) and extended the boundaries of Site 5946.

**Table 2. (cont.)**

<b>Author and Year</b>	<b>Location</b>	<b>TMK</b>	<b>Type of Study</b>	<b>Findings</b>
Yorck & Hammatt 2003	Proposed Nānākuli IV Elementary Site	8-9-002:065	Monitoring	No cultural properties were identified.
Whitehead & Cleghorn 2003	Nānākuli Water System Improvements, Nānākuli Ave.	8-9-005	Monitoring	No archaeological features or sites were reported, although a possible cultural layer consisting of charcoal flecking and single piece of marine shell was recorded.
Cordy & Hammatt 2005	Ka Waihona O Ka Na‘auao Public Charter School	8-9-001:004	Monitoring	No cultural properties were identified.
Jones & Hammatt 2005	Dept. of Hawaiian Homelands Subdivision	Multiple	Monitoring	No cultural properties were identified.
LeSuer & Cleghorn 2005	Nānākuli Beach Park	8-9-006:001	Monitoring	No cultural properties were identified.
Ostroff & Desilets 2005	Farrington Highway	Multiple	Monitoring	Recorded five charcoal deposits, one of which may have been associated with Site 50-80-07-6671 in Lualualei.
Souza & Hammatt 2006	Farrington Highway	8-9-005:007, 8-7-006:013	Monitoring	No cultural properties were identified.
Stein & Hammatt 2006	Nānākuli Beach Park	8-9-001:002	Monitoring	No cultural properties were identified.
Hazlett et al. 2008	Proposed Nānākuli IV Elementary Site	8-9-002:065	Data Recovery	Excavated Sinkholes 1, 4, 9, & 12. Water within the sinkholes was found to be non-potable.
Yucha & Hammatt 2008	Nānākuli Beach Park	8-9-001:002	Monitoring	No cultural properties were identified.
Moore et al. 2009	Boys & Girls Club of Hawaii, Nanakuli Youth Education Town (YET)	8-9-002: 067	Monitoring	Two surface scatters encountered, consisting of basalt flakes, a coral abrader, and midden.
Altizer et al. 2011	Farrington Highway	Multiple	Archaeological Field Inspection and Literature Review	Identified three cultural resources: a section of O.R.&L. Railroad; an historic section of Farrington Highway; and previously recorded subsurface charcoal deposits.
Burke & Hammatt 2011	Farrington Highway	Multiple	Monitoring	No cultural properties were identified.

**Table 2. (cont.)**

<b>Author and Year</b>	<b>Location</b>	<b>TMK</b>	<b>Type of Study</b>	<b>Findings</b>
O'Hare et al. 2013	St. Rita's Church	8-9-005-001 por.	Archaeological Field Inspection and Literature Review	Recommended no further work.
McElroy & Hitt 2014	Hale Makana o Nānākuli	8-9-002:001	Monitoring	No cultural properties were identified.
McElroy et al. 2014	Proposed Nānākuli Library	8-9-002:065 por.	Archaeological Monitoring Plan	Assigned SIHP 50-80-07-7677 to the coral pillars of Camp Andrews and recommended them for preservation.

1997). These surveys are summarized in Cordy (1997). Archaeological resources recorded include agricultural areas, scattered habitation sites, and possible religious structures in upper Nānākuli Valley. The region up to the Forest Reserve boundary was surveyed, and most sites were located in the upper valley. Few sites were found in the lower valley, although the beach area was not surveyed.

A number of archaeological projects were completed at the former Camp Andrews site, located to the west of the current project area. In 1999 an archaeological assessment was conducted (Hammatt et al. 1999). The only remains found were a concrete bunker and two coral columns at the camp entrance, however an archaeological inventory survey was recommended. This began in 2000 with identification and subsurface testing of additional sinkhole features (McDermott and Hammatt 2000). Although 17 sinkholes were recorded, only the two largest were excavated. They contained historic trash, traditional Hawaiian artifacts and midden, paleontological remains, and a human burial. A traditional practices assessment was also conducted (McGuire and Hammatt 2000). Little information was found for the pre-contact period, and ranching and military recreation were among the historic-era land uses for the parcel.

Additional archaeological inventory survey work was completed in 2001 where traditional artifacts and midden, extinct avifauna, and small amounts of human bone were recovered from the sinkholes (McDermott et al. 2001). Also documented were additional features of Camp Andrews, including road remnants, trash piles, and concrete foundations. Two State Inventory of Historic Places (SIHP) site numbers were designated: 50-80-07-5946 for the historic remnants of Camp Andrews, and 50-80-07-5947 for the sinkhole features. Archaeological monitoring was later conducted for the Nānākuli IV Elementary School (Yorck and Hammatt 2003) and the Boys & Girls Club of Hawai‘i Youth Education Town (Moore et al. 2009), both located in the area that was surveyed. The only findings consisted of a few traditional artifacts (basalt flakes and a coral abrader) and midden, all found on the surface (Moore et al. 2009).

Sinkholes 1, 4, 9, and 12 were excavated and extensive laboratory analyses were conducted (Hazlett et al. 2008). The water within the sinkholes was found to be non-potable and the sinkholes were therefore not used as wells. The data gathered added little new information, and no further work was recommended. A later archaeological inventory survey identified portions of the two sites mentioned above (SIHP 50-80-07-5046 and -5947) (Berdy 2002). The boundaries were extended for Site 5046, the remains of Camp Andrews. They now include a concrete pad and fence line in the *makai* portion of TMK: (1) 8-9-002:001. Several sinkholes were also identified. The most recent work (McElroy et al. 2014), an archaeological monitoring plan for the proposed Nānākuli Library, assigned a separate site number for the coral pillars at the entrance of the former Camp Andrews (SIHP 50-80-07-7677) and recommended them for preservation.

Four archaeological monitoring projects were conducted along Farrington Highway. In 2005, five charcoal deposits were found during monitoring, but none were given site numbers (Ostroff and Desilets 2005). A year later, archaeological monitoring conducted for fiber optic installation along much of the same route produced no cultural material or deposits (Souza and Hammatt 2006). A literature review and field inspection were completed for a portion of the same highway corridor (Altizer et al. 2011). Three cultural resources were identified, including a portion of the old O.R.&L. railroad track (Site 50-80-12-9714); a historic section of Farrington Highway (Site 50-80-7-6824); and the subsurface deposits previously recorded by Ostroff and Desilets (2005). In 2011 archaeological monitoring on Farrington Highway to the south of the project area produced no findings (Burke and Hammatt 2011).

An archaeological field inspection and literature review was conducted for the subject property (O’Hare et al. 2013). No surface archaeological features were identified, and research indicated that “the area was not a focus for pre-Contact or early historic habitation or agriculture” (O’Hare et al.

2013:40). No further work was recommended, although it was noted that consultation with the SHPD architecture branch should take place if the historic church structures are to be modified.

Other work in the vicinity of the project area did not produce any significant finds (see Table 2). These include an archaeological survey and assessment (McDermott and Hammatt 1999), monitoring (Whitehead and Cleghorn 2003, Cordy and Hammatt 2005, LeSuer and Cleghorn 2005, McElroy and Hitt 2014), and subsurface testing (Ogden 1995).

### **Settlement Patterns and Anticipated Finds**

Settlement patterns in Nānākuli were likely similar to the rest of the Wai‘anae District (e.g., Cordy 2002). Initial settlement probably began with small groups of people living near the coast to take advantage of the abundant marine resources. The population then spread farther inland behind the coastal dunes and along the coastal trail which is roughly the route of today’s Farrington Highway. Finally, the back valley areas were settled as people began to utilize more agriculturally productive zones. Archaeological evidence has shown that the upper valley currently hosts many house sites and dryland agricultural terraces. Early descriptions of Nānākuli depict a barren land with few houses and an area that lacks water and agricultural resources. However, the land may have appeared desolate from the coast because many of the people lived in the upper valley, and this was not visible from the shore.

Based on previous archaeological work nearby at the former Camp Andrews, anticipated finds include sinkholes and historic military remnants. Sinkholes may house human burials, traditional Hawaiian artifacts, and midden, and it is possible that these might be found during subsurface testing. The O.R.&L. railroad tracks are located across the highway from the project area, and the historic St. Rita’s Church building still remains on the property. As the project area is mostly paved, however, it is not likely that other structural remnants or surface archaeological features will be found. It is possible that historic material may be encountered during subsurface testing. This may take the form of concrete slabs, walls, or foundations; metal, wood, or glass building materials; or bottles, ceramics, and other such items typically recovered from historic-era sites in Hawai‘i.

### **Research Questions**

Research questions will broadly address the identification of the above archaeological resources and may become more narrowly focused based on the kinds of resources that are found. Initial research questions are as follows:

1. Is there any evidence of pre-contact use of the property and what is the nature of that use? The project area is located in a coastal environment, a context favored for human burial in traditional Hawai‘i. Burials have been found in sinkholes and other contexts in Nānākuli, thus it is possible that human remains will be encountered during the survey. Other evidence of traditional Hawaiian use of the study area might include isolated artifacts, midden deposits, and/or buried cultural layers.
2. Are there vestiges of historic use of the property? Remnants of historic-era land use would likely be related to historic use of the church or the nearby O.R.&L railway, and might include structural remnants, walls, and/or historic artifacts. WWII-era use of the area might be evident in military structures or military-related artifacts.
3. What time periods are represented by the archaeological remains on the properties? If fire pits or other datable archaeological features are encountered, radiocarbon dating may inform on the period of use for the area. Wood taxa identification should be performed prior to dating, and only material suitable for dating should

be submitted for analysis. Historic occupation may be dated by material remains such as bottles or ceramics.

Once these basic questions are answered, additional research questions may be developed in consultation with SHPD, tailored to the specific kinds of archaeological resources that were identified.

## METHODS

Pedestrian survey and subsurface testing were conducted on December 15, 2014 by Windy McElroy, PhD and Dietrix Duhaylonsod, BA. McElroy served as Principal Investigator, overseeing all aspects of the project. The survey was completed in one day.

For the pedestrian survey, the ground surface was visually inspected for surface archaeological remains, with transects walked between the existing structures and in the parking lot. Of the 1.81-acre (.73 ha) survey area, 100% was covered on foot. Vegetation was mostly light to non-existent and did not hinder the survey. Because of the high visibility, the spacing between archaeologists was wide, with archaeologists spread approximately 10 m apart in the parking lot, with closer spacing between the buildings. Archaeological sites and their boundaries were identified visually, with any feature possibly made or used by humans and more than 50 years old considered a site, although none were found aside from the historic buildings.

Test trenches (TR) were excavated in five locations throughout the survey area. A backhoe was used for digging of the trenches (Figure 10). Vertical provenience was measured from the surface, and trenches were excavated to a depth well below the estimated 3 ft. (.9 m) depth proposed for construction. Profiles were drawn and photographed, and sediments were described using Munsell soil color charts and a sediment texture flowchart (Thien 1979). Trench locations were recorded with a 3 m-accurate Garmin GPSmap 62st, and all trenches were backfilled after excavation.

The scale in all field photographs is marked in 10 cm increments. The north arrow on all maps points to magnetic north. Throughout this report rock sizes follow the conventions outlined in *Field Book for Describing and Sampling Soils*: Gravel <7 cm; Cobble 7–25 cm; Stone 25–60 cm; Boulder >60 cm (Schoeneberger 2002:2–35). No material was collected, and no laboratory analyses were conducted.



**Figure 10. Excavation of TR 2 with backhoe. Orientation is to the west.**

## RESULTS

Pedestrian survey and subsurface testing were conducted in the 1.81-acre (.73 ha) project area. No archaeological sites were found. Excavation of five test trenches did not yield any evidence of subsurface cultural material or features.

### **Pedestrian Survey**

The surface survey included 100% of the 1.81-acre (.73 ha) parcel. The property is mostly paved on the east side, and structures or landscaped lawns occur within the unpaved areas on the west. The history of the structures on the St. Rita's Church property is discussed in the historic background section of this report. Some of the structures are more than 50 years old, and their treatment during construction should be determined in consultation with the architecture branch of SHPD. The O.R.&L. railroad tracks were observed across Farrington Highway from the subject property, well outside the project boundaries. No other surface archaeological remains were identified.

### **Subsurface Testing**

A total of five trenches were excavated throughout the property to determine the presence or absence of subsurface cultural deposits or material (Table 3, see Figure 11). Trenches were placed in unpaved areas and distributed so that stratigraphy could be seen in different areas of the parcel. Stratigraphy generally consisted of several layers of fill, sometimes above a natural sand layer.

TR 1 was excavated on the west side of the parcel in the grassy lawn fronting the large banyan tree (see Figure 11). The trench measured 5.2 m long and generally .65 m wide, although the width was as great as 1.6 m in caved-in areas. The trench was excavated to 170 cm below surface (cmbs) to a depth well below the proposed construction. Excavation could not continue further because the trench kept caving in. Stratigraphy consisted of two layers of fill atop a culturally-sterile A-horizon, with a natural marine sand deposit below (Figure 12). The A-horizon consisted of a darkened sand layer, darker in some areas than others, although no charcoal fragments were observed. No cultural deposits or material were identified.

TR 2 was placed in an unpaved island within the parking lot, on the south side of the property (see Figure 11). The trench measured 3.4 m long and typically .67 m wide, but extended to 1.2 m where there were cave-ins. It was excavated to 180 cmbs, well below the depth proposed for construction. Excavation could not continue further because the trench kept caving in. Stratigraphy consisted entirely of fill (Figure 13). No cultural material or deposits were found.

TR 3 was located on the east side of the property, just outside the paved parking lot (see Figure 11). It measured 3.1 m long and 1.06 m wide. The trench was excavated to 205 cmbs, well below the depth of the proposed construction. Excavation could not continue further because the trench kept caving in. Stratigraphy consisted entirely of fill (Figure 14). No cultural deposits or material were identified.

TR 4 was placed on the northeast side of the parcel, just outside the paved parking lot (see Figure 11). The trench measured 3.05 m long, .8 m wide, and 165 cm deep, well below the depth proposed for construction. Excavation could not continue further because the trench kept caving in. Stratigraphy consisted of five layers of fill, a buried road pavement, and a basal deposit of natural marine sand (Figure 15). No cultural deposits or material were identified.

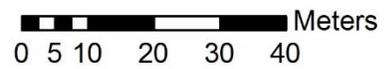


Figure 11. Location of Trenches 1-5.

**Table 3. Sediment Descriptions**

<b>Location</b>	<b>Layer</b>	<b>Depth (cmbs)</b>	<b>Color</b>	<b>Description</b>	<b>Interpretation</b>
TR 1	I	0–16	10YR 3/3	Sandy clay loam; 60% roots; 2% basalt gravel; sprinkler line at 12 cmbs; smooth, very abrupt boundary.	Fill
	II	16–40	10YR 6/3 mottled	Medium sand; 40% roots; smooth, very abrupt boundary.	Fill
	III	40–50	10YR 4/4–10YR 2/1	Medium sand; 20% roots; smooth, very abrupt boundary.	A Horizon
	IV	50–170+	10YR 8/3	Medium sand; base of excavation.	Natural
TR 2	I	0–19	2.5YR 3/4	Clay loam; 10% roots; 10% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	II	19–36	10YR 4/1	Medium sand; 5% roots; 90% basalt gravel; modern debris; smooth, very abrupt boundary.	Gravel Base Course
	III	36–83	10YR 5/3	Medium sand; 2% roots; 50% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	IV	83–180+	10YR 4/3 mottled	Medium sand; 10% basalt gravel; base of excavation.	Fill
TR 3	I	0–75	10YR 4/3	Sandy clay loam; 1% roots; 60% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	II	75–110	5YR 4/3	Silt loam; 60% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	III	110–205+	10YR 2/2	Silt loam; 60% basalt gravel; base of excavation.	Fill
TR 4	I	0–10	7.5YR 8/1	Sandy clay loam; 25% roots; 50% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	II	10–55	7.5YR 5/2	Silt loam; 5% roots; 70% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	III	55–60	2.5YR 2.5/4	Silt loam; 70% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	IV	60–80	5YR 2.5/2	Silt loam; 70% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	V	80–94	N/A	Asphalt, smooth, very abrupt boundary.	Former Paved Road
	VI	94–140	5YR 2.5/2	Silt loam; 70% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	VI	140–165+	7.5 YR 7/4	Sandy clay; base of excavation.	Natural
TR 5	I	0–28	10R 3/4	Sandy clay loam; 50% roots; 50% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	II	28–60	7.5YR 4/2	Silt loam; 10% basalt gravel; modern debris; smooth, very abrupt boundary.	Fill
	III	60–80	10YR 6/6, mottled	Medium sand; smooth, very abrupt boundary.	Disturbed Sand
	IV	80–175+	10YR 8/3	Medium sand; base of excavation.	Natural

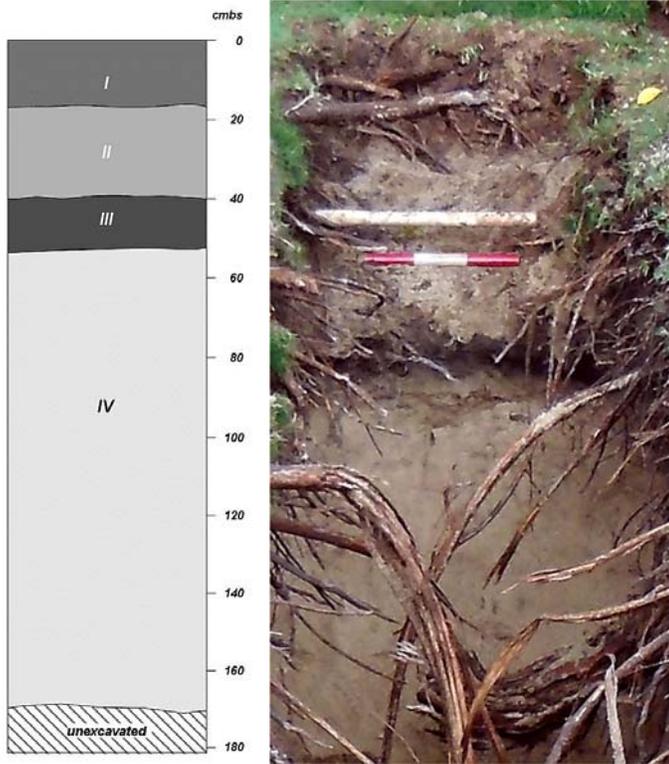


Figure 12. TR 1 northwest face profile drawing (left) and photo (right).

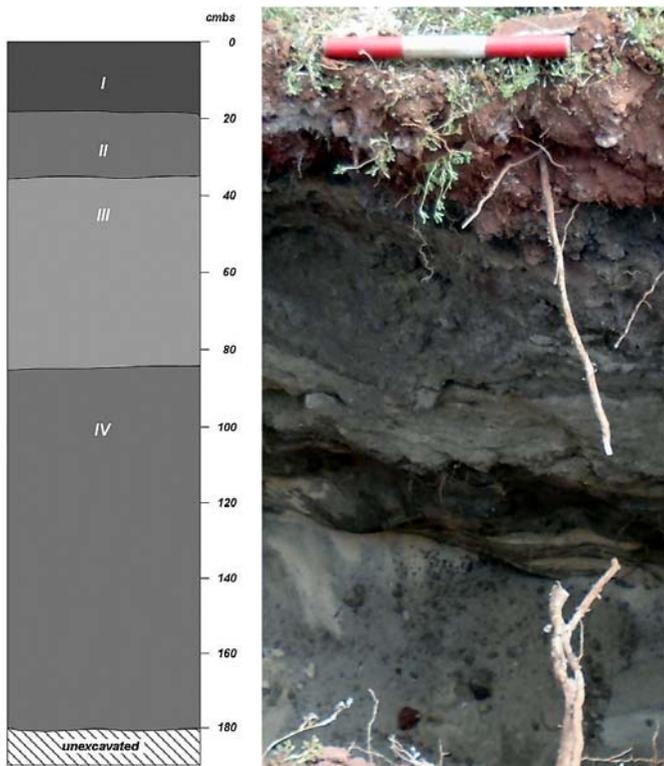


Figure 13. TR 2 east face profile drawing (left) and photo (right).

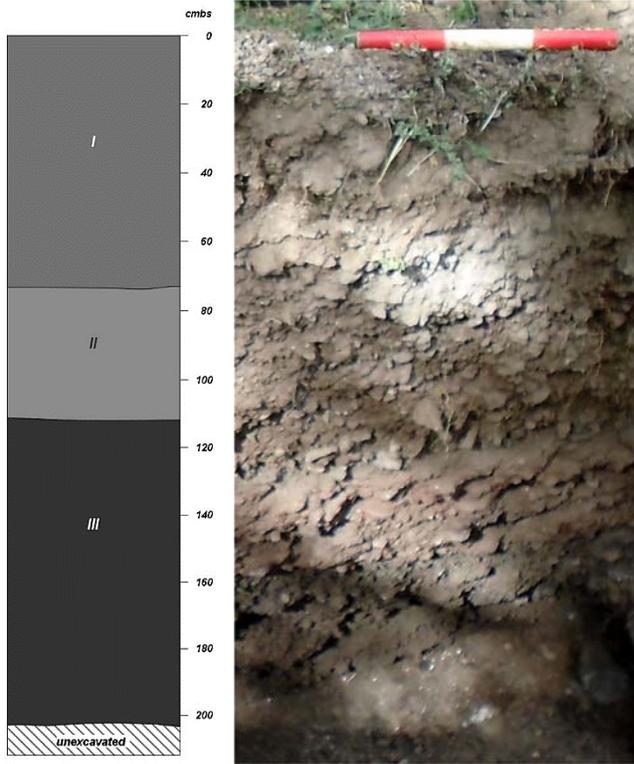


Figure 14. TR 3 west face profile drawing (left) and photo (right).

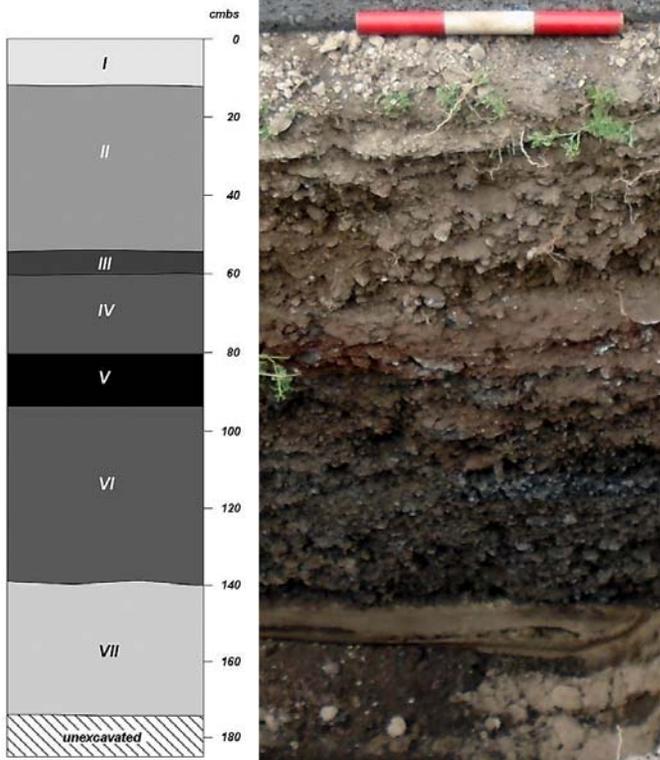


Figure 15. TR 4 northwest face profile drawing (left) and photo (right).

TR 5 was placed on the northwest side of the property, just outside the paved parking lot (see Figure 11). The trench measured 2.7 m long and .8 m wide. It was excavated to 175 cmbs, well below the depth of the proposed construction. Excavation could not continue further because the trench kept caving in. Stratigraphy consisted of two layers of fill and a basal layer of natural marine sand which was disturbed in the upper 20 cm (Figure 16). A linear darkened smear occurred within the second layer of fill at 45 cmbs. The sediment was darkened in this area, but no charcoal fragments, fire cracked rock, or other remnants indicative of a fire feature were identified. No cultural material or deposits were found in the trench.

### Summary of Findings

Pedestrian survey of TMK: (1) 8-9-005:001 did not yield any evidence of former use of the parcel. Much of the property is either paved or occupied by structures. Subsurface testing was conducted in five locations throughout the church grounds to determine the presence or absence of subsurface cultural material or deposits, and none were found. Stratigraphy consists mostly of fill, with some areas of natural marine sand exposed. The entire property appears to have been disturbed to a depth of 40 cmbs and greater, possibly by the 1930s-era filling of the parcel mentioned in the literature (O'Hare et al. 2013). The three research questions developed at the onset of the project were all answered negatively, as no surface or subsurface archaeological remains were found. Several of the church buildings may be considered historic structures, however, and their treatment should be determined in consultation with the SHPD architecture branch.

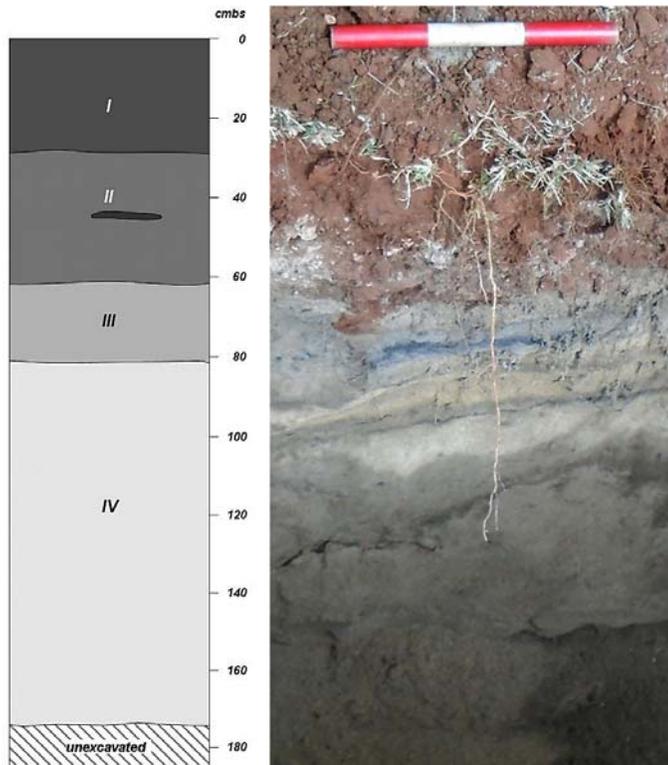


Figure 16. TR 5 northeast face profile drawing (left) and photo (right).

## SUMMARY AND RECOMMENDATIONS

An archaeological assessment was conducted for TMK: (1) 8-9-005:001 in Nānākuli Ahupua‘a, Wai‘anae District, on the Island of O‘ahu. This was done in preparation for ground disturbance associated with church improvements, including demolishing some of the current structures and constructing new buildings. Excavations for the proposed construction are expected to reach a depth no greater than 3 feet (.9 m). The archaeological assessment included pedestrian survey that covered 100% of the property, as well as test excavations consisting of five trenches.

No surface archaeological remains were found during pedestrian survey of the parcel. The entire property has been disturbed by development, including paving of the parking lot, construction of the current buildings, and landscaping of the lawns. Likewise, subsurface testing did not yield any evidence of subsurface cultural material or deposits. Stratigraphy generally consisted of several layers of fill, sometimes above a natural sand layer. Some of the structures are more than 50 years old, however, and their treatment during construction should be determined in consultation with the architecture branch of SHPD.

In sum, archaeological survey was conducted at TMK: (1) 8-9-005:001 in Nānākuli, and no archaeological remains were found. Construction associated with church improvements will have no effect on archaeological sites because no archaeological sites occur there. Archaeological monitoring is recommended because of the possibility of encountering sinkholes with archaeological material or human remains. Isolated human burial remains may be discovered during construction activities, even though no evidence of human burials was found during the survey. Should human burial remains be discovered during construction activities, work in the vicinity of the remains should cease and the SHPD should be contacted.

## GLOSSARY

<b><i>ahupua‘a</i></b>	Traditional Hawaiian land division usually extending from the uplands to the sea.
<b><i>‘āina</i></b>	Land.
<b><i>‘āpana</i></b>	Piece, slice, section, part, land segment, lot, district.
<b><i>heiau</i></b>	Place of worship and ritual in traditional Hawai‘i.
<b><i>‘ili</i></b>	Land division, next in importance to <i>ahupua‘a</i> and usually a subdivision of an <i>ahupua‘a</i> .
<b><i>inoa</i></b>	Name, title, or namesake.
<b><i>kiawe</i></b>	The algaroba tree, <i>Prosopis</i> sp., a legume from tropical America, first planted in 1828 in Hawai‘i.
<b><i>koa haole</i></b>	The small tree <i>Leucaena glauca</i> , historically-introduced to Hawai‘i.
<b><i>kula</i></b>	Plain, field, open country, pasture, land with no water rights.
<b><i>kuleana</i></b>	Right, title, property, portion, responsibility, jurisdiction, authority, interest, claim, ownership.
<b>Māhele</b>	The 1848 division of land.
<b><i>makai</i></b>	Toward the sea.
<b><i>mauka</i></b>	Inland, upland, toward the mountain.
<b><i>mele</i></b>	Song, chant, or poem.
<b>midden</b>	A heap or stratum of refuse normally found on the site of an ancient settlement. In Hawai‘i, the term generally refers to food remains, whether or not they appear as a heap or stratum.
<b><i>moku</i></b>	District, island.
<b><i>mo‘olelo</i></b>	A story, myth, history, tradition, legend, or record.
<b><i>muliwai</i></b>	River mouth, estuary, or pool near the mouth of a stream, enlarged by ocean water left there at high tide.
<b><i>‘ōlelo no‘eau</i></b>	Proverb, wise saying, traditional saying.
<b><i>oli</i></b>	Chant.
<b><i>‘opihi</i></b>	Limpets, four types of which are endemic to Hawai‘i: <i>Cellana exarata</i> ( <i>‘opihi makaiauli</i> ), <i>C. sandwicensis</i> ( <i>‘opihi alinalina</i> ), <i>C. talcosa</i> ( <i>‘opihi ko‘ele</i> ), and <i>C.</i>

*melanostoma* (no Hawaiian name). 'Opihi are a prized food in Hawai'i and considered a rare treat today.

**pre-contact** Prior to A.D. 1778 and the first written records of the Hawaiian Islands made by Captain James Cook and his crew.

**pu'u** Hill, mound, peak.

**'uala** The sweet potato, or *Ipomoea batatas*, a Polynesian introduction.

**'ulu** The Polynesian-introduced tree *Artocarpus altilis*, or breadfruit.

**wauke** The paper mulberry, or *Broussonetia papyrifera*, which was made into tapa cloth in traditional Hawai'i.

## REFERENCES

- Allen, G.  
1999 *Hawaii's War Years 1941–1945*. University of Hawaii Press, Honolulu.
- Altizer, K., M. McDermott, and H.H. Hammatt  
2011 *Archaeological Field Inspection and Literature Review for the Farrington Highway Intersection Improvements at Nānākuli Avenue and Haleakalā Avenue, Nānākuli and Lualualei Ahupua 'a, Wai 'anae District, O'ahu Island, Multiple TMKs*. Cultural Surveys Hawaii, Kailua, Hawai'i.
- Berdy, C., M. Elmore, and J. Kennedy  
2002 *An Archaeological Inventory Survey with Subsurface Testing Report for the Property Located at TMK: 8-9-002:001 in Nanakuli Ahupua 'a, Wai 'anae District, Island of O'ahu*. Archaeological Consultants of the Pacific, Inc., Hale'iwa, Hawai'i.
- Bowser, G.  
1881 *Hawaiian kingdom statistical and commercial directory and tourists' guide 1880/1881*. Honolulu.
- Burke, K. and H. Hammatt  
2011 *Archaeological Monitoring Report for the Farrington Highway Part 1, Phases A and B, 12" and 24" Water Main Installation Project, Nānākuli and Honouliuli Ahupua 'a, Wai 'anae and 'Ewa Districts, Island of O'ahu, TMK: [1] 8-9-01, 02, 05 through 07 and [1] 9-2-03*. Cultural Surveys Hawai'i, Inc, Kailua, Hawai'i.
- Clark, J.  
1977 *the Beaches of Oah 'u*. University of Hawai'i Press, Honolulu.
- Cordy, D.L. and H.H. Hammatt  
2005 *Archaeological Monitoring Report for the Installation of Fiber Optic Cable at Ka Waihona O Ka Na 'auau Public Charter School, Nānākui Ahupua 'a, Wai 'anae, O'ahu TMK: 1-8-9-001:004*. Cultural Surveys Hawaii, Kailua, Hawai'i.
- Cordy, R.  
1990 *Basic Planning Information from DLNR 1988-1990 Archeological Survey of the DHHL Nanakuli Lands*. State Historic Preservation Division, Department of Land and Natural Resources, Kapolei, Hawai'i.  
  
1993 *Basic Planning Information from DLNR 1988-1990 Archeological Survey of the DHHL Nanakuli Lands*. State Historic Preservation Division, Department of Land and Natural Resources, Kapolei, Hawai'i.  
  
1997 *Learning about Nanakuli's Past: the 1988–1991 Archaeological Survey of Nanakuli*. State Historic Preservation Division, Department of Land and Natural Resources. Manuscript on file at the Kapolei, O'ahu Office of the State Historic Preservation Division.  
  
2002 *An Ancient History of Wai 'anae*. Mutual Publishing, Honolulu.

- Cordy, R., N. Pak, C. Johnson, M.J. Lee, and M. McFarden  
1990 *Nanakuli: A Leeward O'ahu Valley. Detailed archaeological survey report: Report 3 DHHL-DLNR*. State Historic Preservation Division, Department of Land and Natural Resources, Kapolei, Hawai'i.
- Evans, T.J.K.  
1930 "Nanakuli Residence Lots First Series." Hawaiian Homes Commission, March–July, 1930. Scale 1 inch = 100 feet.
- Foote, D., E. Hill, S. Nakamura, and F. Stephens  
1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. United States Department of Agriculture, Soil Conservation Service. Published in cooperation with the University of Hawaii Agricultural Experiment Station, Washington, D.C.
- Francisco Architect Imata and Associates, Inc.  
2000 *Final Environmental Assessment for St. Rita Catholic Church Proposed New Parking Lot*. Francisco Architect Imata and Associates, Inc., Honolulu
- Hammatt, H.H., M. McDermott, and R. Chiogioji  
1999 *Archaeological Assessment of an Approximately 15-Acre Parcel, Ahupua'a of Nānākuli, Wai'anae District, Island of O'ahu*. Cultural Surveys Hawaii, Inc. Kailua, Hawai'i.
- Handy, E.S.C.  
1940 *The Hawaiian Planter, Volume I*. Bishop Museum Bulletin No. 161, Bishop Museum, Honolulu.
- Handy, E.S., E.G. Handy, and M.K. Pukui  
1972 *Native Planters in Old Hawaii; Their Life, Lore, and Environment*. Bernice P. Bishop Museum Bulletin 23, Bishop Museum Press, Honolulu.
- Hazlett, A., D.W. Shideler, O.L. O'Leary, C.R. O'Hare, J.E. Dockall, and H.H. Hammatt  
2008 *Data Recovery Report for Site 50-80-07-5947, Nānākuli Ahupua'a, Wai'anae District, O'ahu*. Cultural Surveys Hawaii, Inc. Kailua, Hawai'i.
- I'i, J.P.  
1993 *Fragments of Hawaiian History*. Bishop Museum Press, Honolulu.
- ICC (Immaculate Conception Church)  
n.d. *History* <<http://www.immaculateconceptionewa.com/about/>> Accessed 12/23/14.
- Jones, C.K. and H.H. Hammatt  
2005 *Archaeological Monitoring Report for the Fiber Optic Cable Installation of the DHHL Subdivision in Nānākuli Ahupua'a, Wai'anae District, Island of O'ahu TMK [1] 8-9; 8-9-02-23, 36, 38; 8-9-03:63; 8-9-04:78, por. 79; 8-9-07:01*. Cultural Surveys Hawaii, Kailua, Hawai'i.
- Juvik, S. and J. Juvik (editors)  
1998 *Atlas of Hawai'i* (Third ed.). University of Hawai'i Press, Honolulu.
- Kamakau, S.M.  
1992 *Ruling Chiefs of Hawai'i*. The Kamehameha Schools Press, Honolulu.

- Kim, A.  
n.d. *Our History*. <<http://stritananakuli.org/history.html>> Accessed 12/23/14.
- Le Suer, C.C. and P. Cleghorn  
2005 *Archaeological Monitoring for Nānākuli Beach Park (Zablan Beach Park) Parking Lot Improvements Project, Nānākuli, O‘ahu Island, Hawai‘i (TMK 8-9-06:01)*. Pacific Legacy, Inc., Kailua, Hawai‘i.
- Macdonald, G.A., A.T. Abbott, and F.L. Peterson  
1983 *Volcanoes in the Sea: The Geology of Hawaii*. University of Hawaii Press, Honolulu.
- McAllister, J.G.  
1933 *Archaeology of O‘ahu*. Bishop Museum, Bulletin 104, Honolulu.
- McDermott, M., R. Chiogioji, and K. McGuire  
2001 *Archaeological Inventory Survey of the Proposed 15-Acre Nanakuli IV Elementary School Site (A portion of the Former Camp Andrews), Nanakuli Ahupua‘a, Wai‘anae District, Island of O‘ahu (TMK: 8-0-02:65)*. Cultural Surveys Hawaii, Kailua, Hawai‘i.
- McDermott, M. and H.H. Hammatt  
1999 *Archaeological Inventory Survey of the Proposed Nanakuli 242 Reservoir Site, with Archaeological Assessment of the Proposed 20” Transmission Main Along Nanakuli Avenue, Nanakuli, Wai‘anae District, Island of O‘ahu (TMK 8-9-8:03)*. Cultural Surveys Hawaii, Kailua, Hawai‘i.  
  
2000 *End-of-Fieldwork Results for the location of Sink Features (for Land Surveyor Recording) and Excavation of Two Large Sink Features BA Subset of the Work for the Archaeological Inventory Survey for the Proposed Nanakuli IV Elementary School, Nanakuli, Wai‘anae, O‘ahu (TMK 8-9-02: por. 01)*. Cultural Surveys Hawaii, Kailua, Hawai‘i.
- McElroy, W.K., D. Duhaylonsod, and C. Hitt  
2014 *Archaeological Monitoring Plan for the Proposed Nānākuli Library, Nānākuli Ahupua‘a, Wai‘anae District, Island of O‘ahu, Hawai‘i*. Keala Pono Archaeological Consulting, Kāne‘ohe, Hawai‘i.
- McElroy, W.K. and C.Hitt  
2014 *DRAFT—Archaeological Monitoring for the Construction of Hale Makana o Nānākuli, Nānākuli Ahupua‘a, Wai‘anae District, Island of O‘ahu, Hawai‘i*. Keala Pono Archaeological Consulting, Kāne‘ohe, Hawai‘i.
- McGrath, E.J. Jr., K.M. Brewer and R. Krause  
1973 *Historic Wai‘anae, a Place of Kings*. Island Heritage Limited, Norfolk Island, Australia.
- McGuire, K. and H.H. Hammatt  
2000 *A Traditional Practices Assessment for the Proposed Nanakuli IV Elementary School Site, Nanakuli, Wai‘anae District, Island of O‘ahu (TMK 8-9-02: 65, 23, por. 1)*. Cultural Surveys Hawaii, Kailua, Hawai‘i.

- Moore, J.R., E. Yoshifuku, and J. Kennedy  
 2009 *An Archaeological Monitoring Report for a Property Located at TMK: (1) 8-9-02:067 in Nanakuli Ahupua'a, Wai'anae District, Island of O'ahu*. Archaeological Consultants of the Pacific, Hale'iwa, Hawai'i.
- Nakamura, B. and J. Pantaleo  
 1994 *Aspects of the History of Lualualei and Nanakuli, Wai'anae, O'ahu*. Aki Sinoto Consulting, Honolulu.
- Newton, H.E.  
 1912 "Nanakuli Waianae, Oahu." Hawaii Territory Survey, February 1912. Scale 1 inch = 500 feet.
- O'Hare, C.R., D.W. Shideler, and H.H. Hammatt  
 2013 *Draft Archaeological Literature Review and Field Inspection for the St. Rita's Catholic Church Improvements Project, Nānākuli Ahupua'a, Wai'anae District, O'ahu TMK: [1] 8-9-005:001 por.* Cultural Surveys Hawaii, Kailua, Hawai'i.
- Ogden Environmental and Energy Services Co., Inc.  
 1995 *Archaeological Subsurface Testing in Conjunction with Milcon P-313, Range Operations Center Naval Undersea Warfare Engineering Station Detachment, Lualualei at Nanakuli, O'ahu Island, Hawai'i, Pre-Final Report*. Honolulu.
- Ostroff, B. and M. Desilets  
 2005 *Archaeological Monitoring Results for the Installation of a Waterline along Farrington Highway between Hakimo Road and Haleakala Avenue Intersections, Nanakuli and Lualualei Ahupua'a, District of Wai'anae, O'ahu Island, Hawai'i*. Garcia and Associates, Kailua, Hawai'i.
- Pak, N. and R. Cordy  
 1990 *Status Report 4 DHHL-DLNR Nanakuli, Archaeological Inventory Survey (TMK 8-4-04:08)/(TMK 8-9-07:08)*. State Historic Preservation Division, Department of Land and Natural Resources, Kapolei, Hawai'i.
- Paradise of the Pacific*  
 1943 "Providing Fun for Fighting Men." December 1943:62-63.
- Pukui, M.K.  
 1983 *Ōlelo No'eau; Hawaiian Proverbs and Poetical Sayings*. Bernice P. Bishop Museum Special Publication No. 71. Bishop Museum Press, Honolulu.
- Pukui, M.K., S.H. Elbert and E.T. Mookini  
 1974 *Place Names of Hawai'i*. University of Hawaii, Honolulu.
- Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and W.D. Broderson (editors)  
 2002 *Field Book for Describing and Sampling Soils, Version 2.0*. Natural Resources Conservation Service, National Soil Survey Center, Lincoln, Nebraska.
- Souza, T. and H.H. Hammatt  
 2006 *Archaeological Monitoring Report For the Fiber Optic Duct Line Phase 1 from Nānākuli Avenue to Hakimo Road in Nānākuli Ahupua'a, Wai'anae District, O'ahu TMK [1] 8-9-005:007, 8-7-006:013*. Cultural Surveys Hawaii, Kailua, Hawai'i.

- Stein, E. and H.H. Hammatt  
2006 *Archaeological Monitoring Report for the Nānākuli Beach Park Sewer Connection for the Recreation Center Project, Nānākuli Ahupua‘a, Wai‘anae District, O‘ahu Island [TMK: (1) 8-9-001:002]*. Cultural Surveys Hawaii, Kailua, Hawai‘i.
- Sterling, E.P. and C.C. Summers  
1978 *Sites of Oahu*. Bishop Museum Press, Honolulu.
- Thien, S.  
1979 A Flow Diagram for Teaching Texture-By-Feel Analysis. *Journal of Agronomic Education* 8:54–55.
- Thrum, T.G.  
1922 *Hawaiian Annual*. Honolulu.
- United States Geological Survey (USGS)  
1953 “Schofield Barracks, Hawaii.” Contour interval 40 feet. Scale 1:24,000.
- Vancouver, G.  
1967 *A Voyage of Discovery to the North Pacific Ocean and Round the World*. Amsterdam, N. Israel: Da Capo Press, New York.
- Wall, W.E.  
1925 “Honouliuli Forest Reserve.” Hawaii Territory Survey, September 1925. Scale 1 inch = 2,000 feet.
- Wasowicz, L.  
2012 *Marin woman works to save Hawaiian church*. <<http://www.catholic-sf.org/ns.php?newsid=24&id=60214>> Accessed 12/23/14.
- Webster, W.  
1854 “Nanakuli, Waianae, Oahu (Crown Land).” Hawaiian Government Survey Register No. 113. Honolulu 27<sup>th</sup> May, 1854. Scale 1:12,000.
- Whitehead, B. and P.L. Cleghorn  
2003 *Archaeological Monitoring of Nānākuli Water System Improvements, Nānākuli Avenue, Nānākuli, Island of O‘ahu (TMK: 8-9-005)*. Pacific Legacy, Inc., Kailua, Hawai‘i.
- Yorck, J. and H.H. Hammatt  
2003 *Archaeological Monitoring Report for the Nānākuli IV Elementary School Project, Nānākuli Ahupua‘a, Wai‘anae District, Island of O‘ahu [TMK (1) 8-9-02: 65]*. Cultural Surveys Hawaii, Kailua, Hawai‘i.
- Yucha, T. and H.H. Hammatt  
2008 *Archaeological Monitoring Report for the Nānākuli Beach Park (Cove Location) Sewer Connection, Nānākuli Ahupua‘a, Wai‘anae District, O‘ahu Island [TMK (1) 8-9-006: 001]*. Cultural Surveys Hawaii, Kailua, Hawai‘i.

**Appendix E**

**Due Diligence Report - Infrastructure**

# Due Diligence Report

for

## SAINT RITA'S CHURCH

Nanakuli, Oahu, Hawaii

Tax Map Key: 8-9-005: 001

Area = 0.8695 Acres

**Owner:**

ROMAN CATHOLIC CHURCH

**Prepared By:**

*imata & associates, inc.*

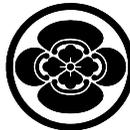
*The Century Center*

*1750 Kalakaua Avenue, Suite 115*

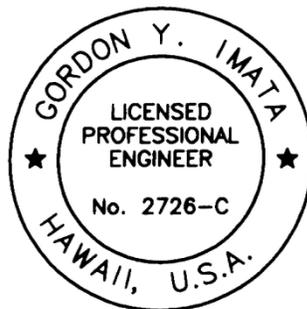
*Honolulu, Hawaii 96826*

*Phone: (808) 946-6588 Fax: (808) 955-5873*

*E-mail: imata@aloha.net*



October 3, 2014



**THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION.**

---

## **INTRODUCTION:**

St. Rita's Church is located over several contiguous parcels on Hawaiian Home Lands, Nanakuli Residential Lots 64, 65-A and 65-B, First Series. Tax Map Key: 8-9-005: 001, 028 and 092. Several building and site improvements have been constructed over the years particularly on tax map key parcel 001 fronting Farrington Highway, where the church and administrative offices are located. The Hawaiian Homes Land to the southeast (Honolulu side) has been developed as a paved parking area for church use. The parking area extends northwesterly along DHHL Lots 64, 65-B and 65-A to Pua Avenue. This Due Diligence Report is generally limited to an evaluation of parcel 001 as the proposed development area.

## **EXISTING CONDITIONS:**

A large portion of the existing site is comprised of hard surface components, either buildings, pavement area or other hardscape. The buildings on site include the Church, a quonset hut, a restroom storage building, a one story structure, two (2) sheds, and three (3) portable buildings. Other areas on site include concrete walkways, ac paved parking areas and a courtyard.

## **PROPOSED DEVELOPMENT**

The proposed development will raze the site, removing all of the existing buildings, concrete walkways and ac parking areas. A new Church, Community Hall and Office building will be constructed with new concrete pavement for circulation between the main building elements.

## **GRADING AND DRAINAGE**

In general, while the land will be graded to retain the existing sheet flow pattern, the City's new Water Quality Design Standards require measures to retain runoff on site, by employing bio-retention areas, grassed swales, permeability measures such as drywells, infiltrators, etc.

The land slopes to the southeast toward the parking area on the adjacent parcel. Runoff leaves the site in a general overland sheet flow pattern. A smaller portion of the runoff leaves the site as concentrated flow near the driveway entrance to Farrington Highway.

On Farrington Highway, a series of grated inlets and 24" diameter storm drain pipe intercept runoff from the highway and conveys the flow in the southwesterly direction, then at a manhole turns mauka into the parking area on the adjacent parcel to another manhole, which turns the system southeasterly again and outlets with a headwall in the parking area's fill slope. The manhole in the parking area has a grated inlet cover and it

appears that when the parking area was constructed, filling a low area, the manhole was converted to an inlet and the system extended to the headwall. Ultimately, the storm runoff flows to the Nanakuli Stream, which crosses Farrington Highway and outlets into the ocean.

A new onsite storm drain system will be extended through the new development to intercept storm runoff from building downspouts and area drains. (See Schematic Grading and Drainage Plan). Permanent post construction water quality measures including use of an onsite retention system may be required.

### **SANITARY SEWER SYSTEM**

No municipal sanitary sewer system is available for the project to connect to. Disposal of sewage effluent will be onsite via an Individual Wastewater System (IWS) which includes a septic tank and leaching field. The Church, in anticipation of their future development plans had constructed two IWS on site; a 1,500 gallon Orenco septic tank and a 2,000 gallon Orenco septic tank. The 1,500 gallon system is connected to a 6' wide by 55' biodiffusers and the 2,500 gallon system is connected to 12' wide by 55' biodiffusers.

The 1,500 gallon system serves the present church but will ultimately be connected to the new Rectory and the new Administrative Offices. The 2,500 gallon system will serve the new multipurpose building.

### **DOMESTIC WATER AND FIRE SYSTEM**

PID: 9262071280

M/N: 13033458      ¾" (Domestic)

Domestic water is presently provided through the ¾" water meter (30 gpm capacity). When the water demand is known, the meter can be upgraded to meet the needs of the new development. The location of the existing onsite distribution water lines is not known. A new water line will be provided under the development to distribute the domestic water to the various building components.

There is presently no fire protection waterline on the property. Water for domestic use is provided from the 8" PVC BWS main on Farrington Highway. Fire hydrant L139 is located on Farrington Highway at the west property corner. The fire hydrant on Farrington Highway will not provide adequate coverage for the proposed development.

An onsite fire protection system will have to be provided for new building permits. According to Honolulu Fire Department letter dated November 3, 2014, 1) a fire

department access road shall be provided to 150 feet of the exterior of any building or facility in accordance with NFPA 1, UFC, 2006 edition and 2) a water supply capable of delivering the required fire flow shall be provided to within 150 feet of any building.

The new onsite fire system will be connected to the BWS 8" main on Farrington Highway with an 8" Detector Check meter (fire only) and an 8" fire line through the parking area on the adjacent lot. The new fire hydrant will be located near the east property corner nearest to the new Community Hall. ( See Preliminary Site Utility Plan)

### **GAS**

No municipal gas system is available in the vicinity of the project. Any gas required for use on the site would have to be with an onsite fuel tank.

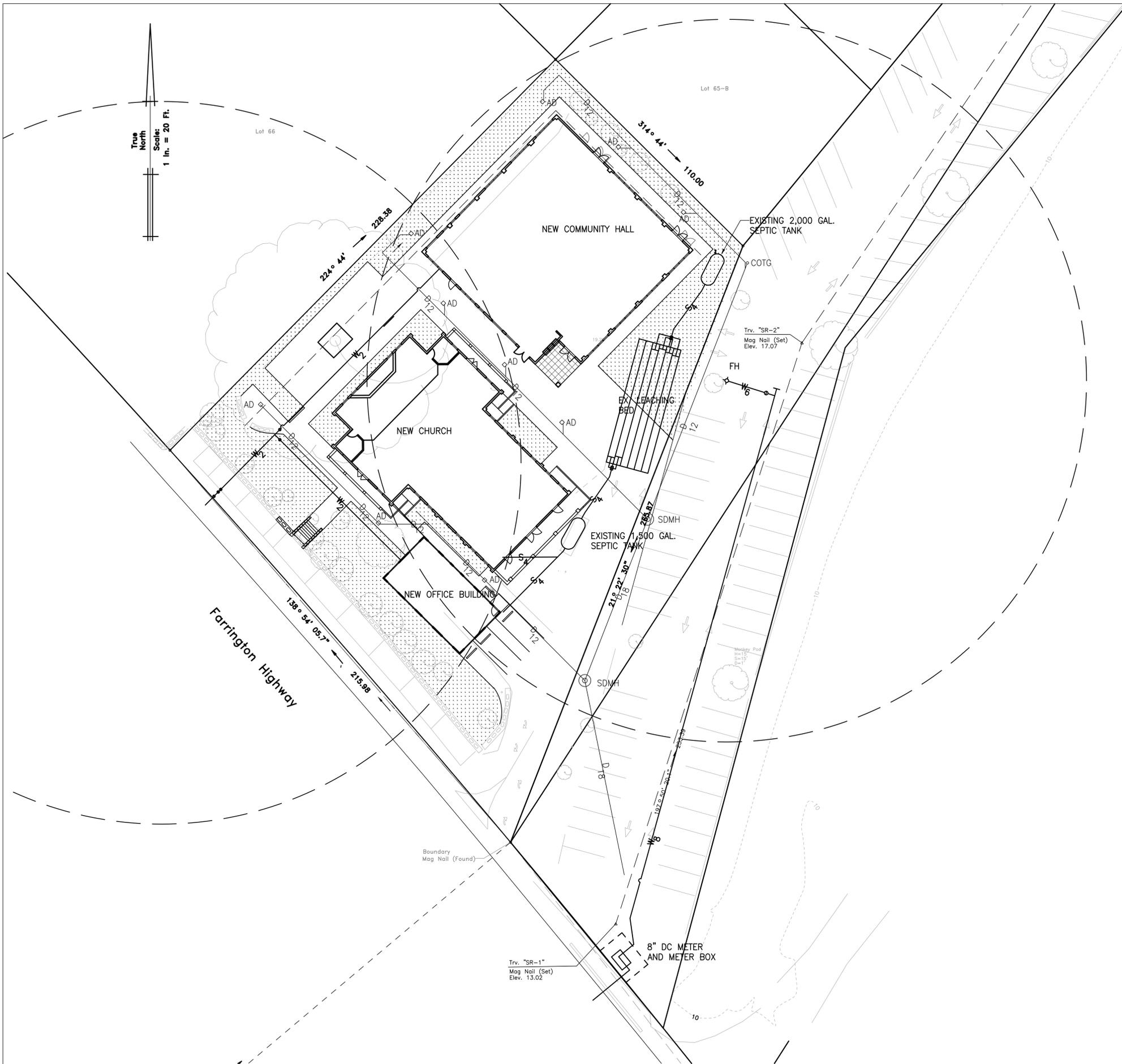
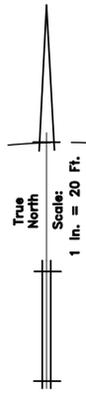
### **FEMA FLOOD DESIGNATION**

The site is predominately in FEMA FIRM Zone X. However, the southernmost corner of the parcel is within the Zone AE Flood Fringe with flood elevation 15. Existing ground elevations are between 12.5 and 15.0. It appears that no structures are proposed to be constructed in the Flood Fringe area. (See FIRM Community Map No. 15003C0213H dated January 19, 2011.)

### **ACCESSIBLE ROUTES**

The opportunity to provide a barrier free facility can best be addressed during the design of the project. Design professionals will generally incorporate accommodations for the handicapped in a new facility since it is much more cost effective than retrofitting in the future.

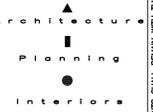
Accessible routes to Farrington Highway should be incorporated to public transportation services.



**ONSITE FIRE PROTECTION PLAN**  
SCALE: 1" = 20'-0"

**FRANCISCO ARCHITECT**

FIDEL A. FRANCISCO  
2379 Liloa Rise  
Honolulu, Hawaii

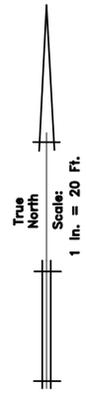


REVISIONS	BY

**ST. RITA'S CATHOLIC CHURCH**  
89-318 FARRINGTON HIGHWAY  
NANAKULI, HI 96792  
TMK: 8-9-005:001

DATE	JULY 2014
SCALE	AS NOTED
DRAWN BY	GYI
JOB NO.	XXXXX
SHEET	
OF	SHEETS

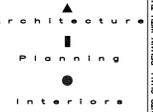
THESE DRAWINGS, IDEAS AND ARRANGEMENTS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT, AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED. REUSE, REPRODUCTION OR PUBLICATION IN WHOLE OR PART IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM THE ARCHITECT. TITLE TO THESE PLANS AND ANY ACCOMPANIMENTS SHALL REMAIN WITH THE ARCHITECT. VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE ACCEPTANCE OF THESE RESTRICTIONS.



**SITE GRADING AND DRAINAGE PLAN**  
SCALE: 1" = 20'-0"

**FRANCISCO ARCHITECT**

FIDEL A. FRANCISCO/AMA  
2379 Liloa Rise  
Honolulu, Hawaii

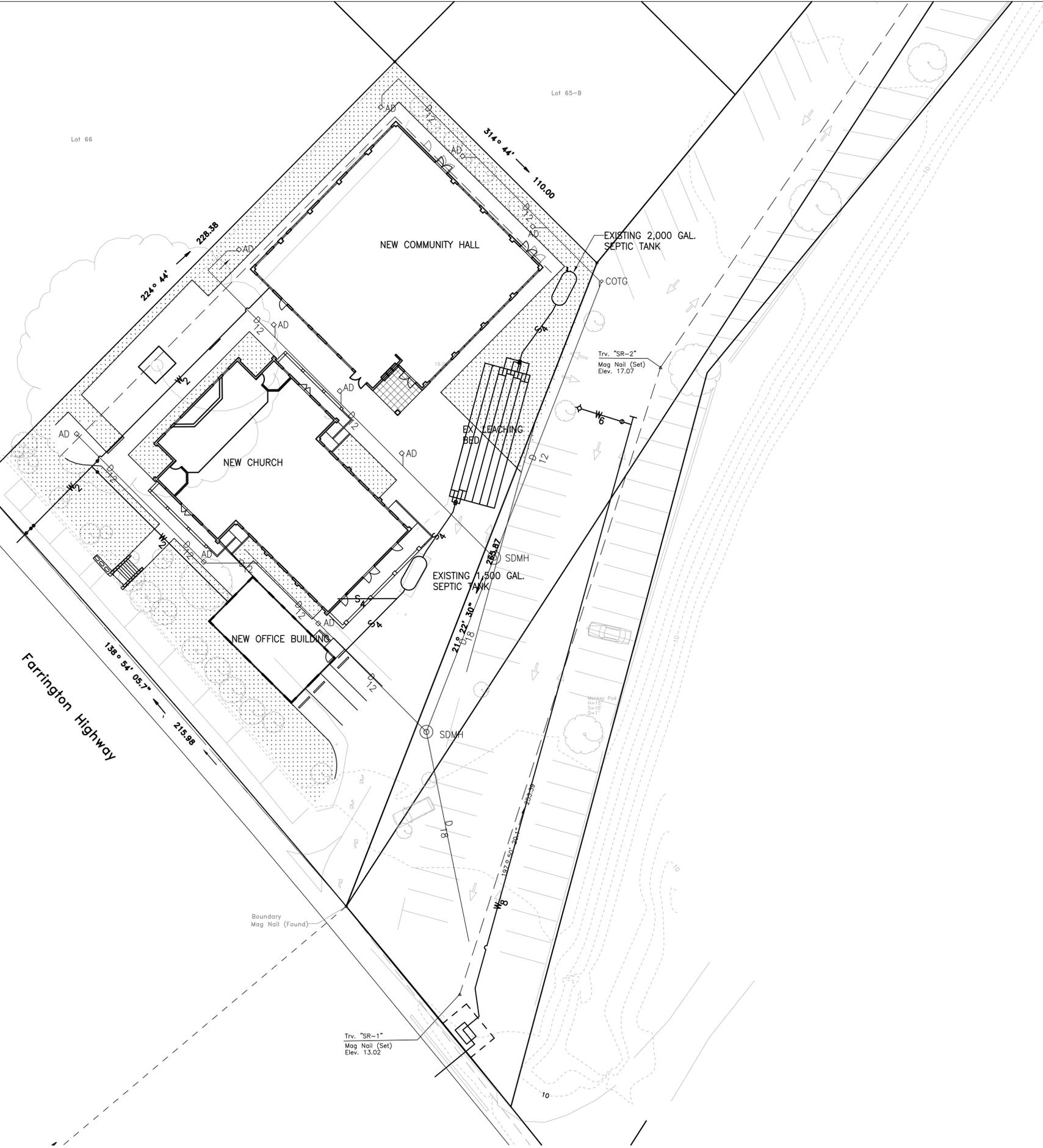


REVISIONS	BY

**ST. RITA'S CATHOLIC CHURCH**  
89-318 FARRINGTON HIGHWAY  
NANAKULI, HI 96792  
TMK: 8-9-005:001

DATE	JULY 2014
SCALE	AS NOTED
DRAWN BY	GYI
JOB NO.	XXXXX
SHEET	
OF	SHEETS

THESE DRAWINGS, IDEAS AND ARRANGEMENTS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT, AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED. REUSE, REPRODUCTION OR PUBLICATION IN WHOLE OR PART IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM THE ARCHITECT. TITLE TO THESE PLANS AND ANY ACCOMPANIMENTS SHALL REMAIN WITH THE ARCHITECT. VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE ACCEPTANCE OF THESE RESTRICTIONS.



**SITE UTILITY PLAN**  
SCALE: 1" = 20'-0"

**FRANCISCO ARCHITECT**  
FIDEL A. FRANCISCO AIA  
2379 Liloa Rise  
Honolulu, Hawaii



REVISIONS	BY

**ST. RITA'S CATHOLIC CHURCH**  
89-318 FARRINGTON HIGHWAY  
NANAKULI, HI 96792  
TMK: 8-9-005:001

DATE	JULY 2014
SCALE	AS NOTED
DRAWN BY	GYI
JOB NO.	XXXXX
SHEET	
OF	SHEETS

THESE DRAWINGS, IDEAS AND ARRANGEMENTS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT, AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED. REUSE, REPRODUCTION OR PUBLICATION IN WHOLE OR PART IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM THE ARCHITECT. TITLE TO THESE PLANS AND ANY ACCOMPANIMENTS SHALL REMAIN WITH THE ARCHITECT. VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE ACCEPTANCE OF THESE RESTRICTIONS.

**Appendix F**  
**Traffic Impact Analysis Report**

**DRAFT TRAFFIC IMPACT ANALYSIS REPORT  
AND**

**TRAFFIC MANAGEMENT PLAN**

**FOR THE PROPOSED**

**ST. RITA CATHOLIC CHURCH**

**NANAKULI, OAHU, HAWAII**

**TAX MAP KEYS: 8-9-05:001, 028, & 092 and 8-7-07:004**

**I. Introduction**

**A. Project Description**

St. Rita Catholic Church is proposing to expand its existing church in Nanakuli, Oahu, Hawaii. The church expansion will include an office building, a community hall (multi-purpose building), and reconstruction of the existing church. The site is located on the mauka (east) side of Farrington Highway. The project site also fronts the makai (west) side of Pua Avenue. The project site is identified as Tax Map Keys: 8-9-05:001, 028, & 092 and 8-7-07:004. Figure 1 depicts the location and vicinity map.

The proposed development plan includes: the reconstruction of the existing church from a seating capacity of 180 seats to 400 seats; a community hall with 6,400 square feet of gross floor area (SFGFA), and an office building with 1,200 SFGFA. About 121 parking stalls exist on the project site. The construction of the proposed community hall and office space will remove about 18 stalls, resulting in about 103 stalls remaining on site. Full build out of the proposed development plan is expected by the Year 2019. Site access will continue to be provided by two existing driveways: one driveway on Farrington Highway, about 800 feet south of Nanakuli Avenue; and the other driveway at the south end of Pua Avenue.

Sunday services are held from 7:00 AM to 8:30 AM and from 9:00 AM to 10:30 AM. The community hall is expected to be used for mass, while the new church is being constructed. Activities in both the new church and the community hall are not expected to occur simultaneously on Sundays. The weekday activities include: a food pantry, which feeds the homeless about three times a week; and counseling services provided by Catholic Charities about two to three times a week. St. Rita Catholic Church does not have any plans to operate a daycare center. The project site is depicted on Figure 2.



Figure 1. Location and Vicinity Map

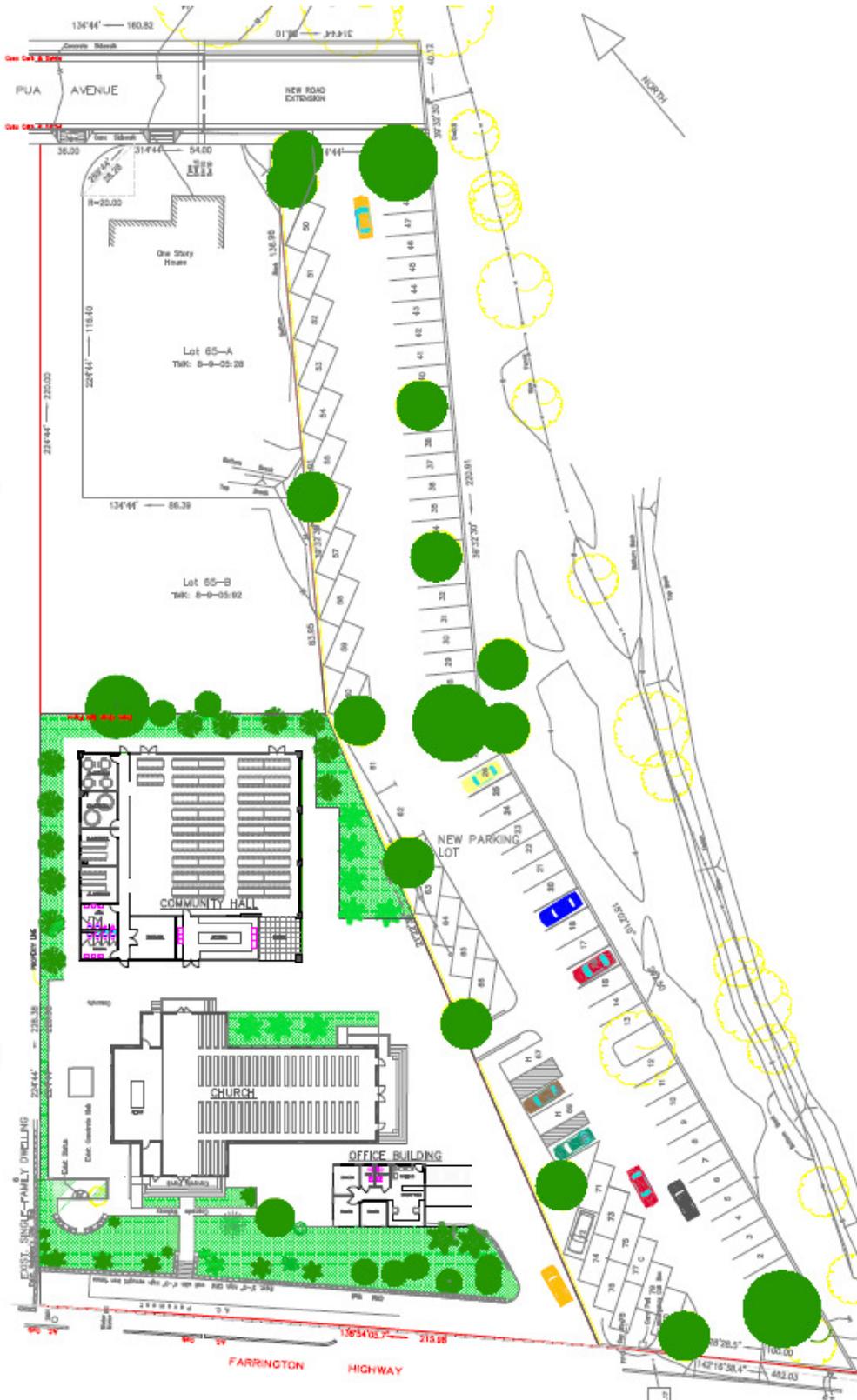


Figure 2. Conceptual Site Plan



## B. Purpose and Scope of the Study

The purpose of this study is to analyze the traffic impacts resulting from the proposed St. Rita Catholic Church. This Traffic Impact Analysis Report (TIAR) also includes the development of a Traffic Management Plan (TMP), which assesses the traffic and parking operations of the proposed Church expansion. This report presents the findings and recommendations of the study. The scope of this study includes:

1. Evaluation of existing roadways and traffic conditions, during the Sunday peak hour of traffic.
2. Development of the trip generation and parking generation characteristics of the proposed project.
3. Analysis of the 2019 traffic conditions without the proposed project.
4. Identification and analysis of traffic impacts resulting from the development of the full build out of the proposed project.
5. Recommendation of improvements, as necessary, that would mitigate the traffic and parking impacts identified in this study.

## C. Methodologies

### 1. Capacity Analysis Methodology

The highway capacity analysis, performed for this study, is based upon procedures presented in the Highway Capacity Manual (HCM), published by the Transportation Research Board, 2000. HCM defines Level of Service (LOS) as "a quality measure describing operational conditions within a traffic stream". Several factors may be included in determining LOS, such as: speed, travel time, freedom to maneuver, traffic interruptions, driver comfort, and convenience. LOS's "A", "B", and "C" are considered satisfactory Levels of Service. LOS "D" is generally considered a "desirable minimum" operating level of service. LOS "E" is an undesirable condition, and LOS "F" is an unacceptable condition. Intersection LOS is primarily based upon delay. Worksheets for the capacity analysis, performed throughout this study, are compiled in the Appendix. Table 1 summarizes the LOS criteria.

<b>Table 1. Level of Service Criteria (HCM)</b>		
<b>LOS</b>	<b>Signalized Intersections</b>	<b>Unsignalized Intersections</b>
	Control Delay (sec/veh)	Control Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50



## 2. Trip Generation Methodology

The trip generation methodology is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in Trip Generation, 8th Edition. ITE trip rates are developed for church by correlating the vehicle trip generation data with the seating capacity of a church, i.e., the vehicle trips per hour (vph) per seat.

The Sunday peak hour trip generation rates for the proposed Church were developed from the existing trip rates, which were observed at the current site for the St. Rita Catholic Church Sunday services.

## 3. Parking Generation Methodology

The trip generation methodology is based upon generally accepted techniques developed by the ITE and published in Parking Generation, 4th Edition. ITE parking rates are developed by correlating the peak parking generation data with various activity/land use characteristics, such as the occupied stalls per seat.

The Sunday parking generation rate for the proposed Chapel were developed from the parking generation rate, which was observed at the existing St. Rita Catholic Church during the Sunday masses.

## II. Existing Conditions

### A. Roadways

Farrington Highway is the primary arterial highway on the Leeward coast of Oahu. Farrington Highway is a four-lane highway, which is oriented generally in the north-south directions. Farrington Highway is signalized at Nanakuli Avenue. Farrington Highway has a posted speed of 35 miles per hour (mph).

Nanakuli Avenue is a two-way, two-lane roadway, which intersects Farrington Highway at a signalized four-legged intersection, opposite the Nanakuli Beach Park Driveway. A protected-permissive left-turn phase is provided on southbound Farrington Highway at Nanakuli Avenue. Exclusive left-turn lanes are not provided on Farrington Highway at Nanakuli Avenue.

Pua Avenue is a two-way, two-lane local street, which is stop-controlled at its four-legged intersection with Nanakuli Avenue. Pua Avenue runs roughly parallel to Farrington Highway, which is located about 450 feet mauka (east) of Farrington Highway.



## **B. Existing Peak Hour Traffic Volumes and Operating Conditions**

### **1. Field Investigation and Data Collection**

Turning movement traffic count surveys and pedestrian traffic surveys were conducted at the intersections of Farrington Highway at Nanakuli Avenue, and Nanakuli Avenue at Pua Avenue on Sunday, July 13, 2014, from 8:00 AM to 10:00 AM. A turning movement traffic count survey also was conducted the existing St. Rita Catholic Church Driveways on Farrington Highway and on Pua Avenue, during the same time period. The traffic survey data are presented in the Appendix.

### **2. Existing Sunday Peak Hour Traffic**

The St. Rita Catholic Church Sunday masses were held at 7:00 AM and at 9:00 AM. The peak hour of generator was expected to occur between the departing trips from the early mass and the arriving trips for the second mass. The existing Sunday peak hour generator for the St. Rita Catholic Church occurred between 8:15 AM and 9:15 AM, which was selected as the Sunday peak hour of traffic for this analysis. Farrington Highway carried about 1,900 vehicles per hour (vph), total for both directions, during the Sunday peak hour of traffic. The peak direction of traffic on Farrington Highway was in the southbound direction with a 61/39-percent split. Nanakuli Avenue carried about 300 vph, total for both directions. The south leg of Pua Avenue carried 60 vph. St. Rita Catholic Church generated at total of 108 vph, entering and exiting the site, during the Sunday peak hour of generator.

The intersection of Farrington Highway and Nanakuli Avenue operated at LOS "B", during the existing Sunday peak hour of traffic. The shared left-turn/through movement on makai bound Nanakuli Avenue operated at LOS "C". The other traffic movements at the intersection operated at LOS "B" or better.

Pua Avenue operated at LOS "B" and LOS "A" at Nanakuli Avenue in the northbound and southbound directions, respectively. The St. Rita Driveway on Farrington Highway operated at LOS "B". Figure 3 depicts the existing Sunday peak hour traffic.

### **3. Parking Data Collection**

A parking survey was conducted on Sunday, July 27, 2014 from 7:30 AM to 9:30 AM at the St. Rita Catholic Church. The parking survey began with 54 parked vehicles at the St. Rita Catholic Church. The vehicles entering and exiting the site were surveyed at one minute increments to monitor the parking occupancy. The peak parking demand of 60 vehicles occurred at the end of the survey period. The parking survey data are presented in the Appendix.

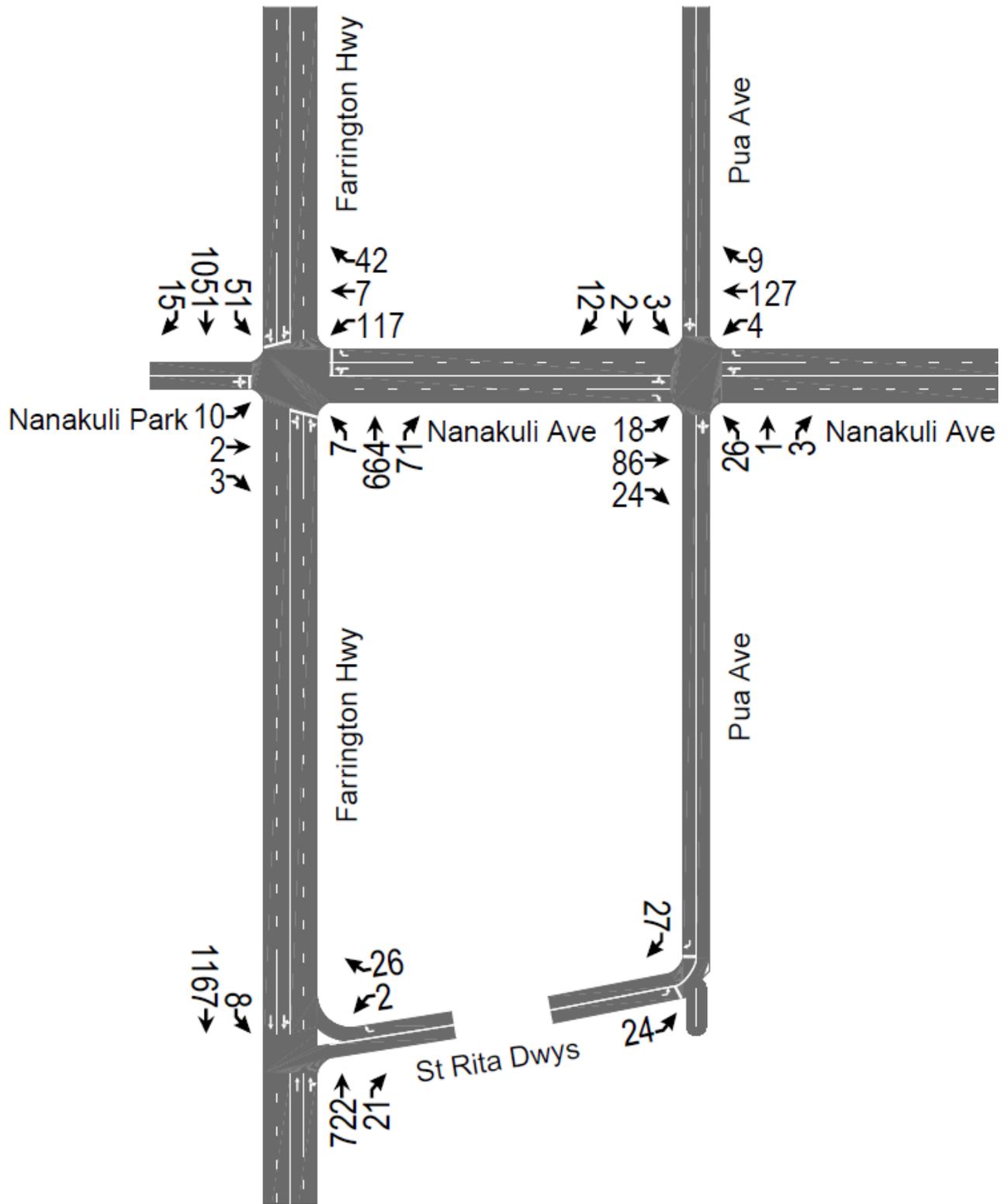


Figure 3. Existing Sunday Peak Hour Traffic



### III. Future Traffic Conditions

#### A. Future Highway Improvements

The State Department of Transportation (DOT) is planning to widen Farrington Highway to provide exclusive left-turn lanes in both directions at Nanakuli Avenue. The Draft Farrington Highway Intersections Improvements at Nanakuli Avenue and Haleakala Avenue, dated July 2009, was prepared by PB Americas, Inc. for DOT. The DOT-planned improvements are not expected to be implemented within the timeframe of this study, and are not taken into account in this traffic impact analysis.

#### B. External Traffic

The population forecast for Leeward Oahu was published in the Oahu Transportation Regional Plan 2030, prepared for the Oahu Metropolitan Planning Organization (OMPO) in April 2006, and amended in May 2007. The population of Waianae is expected to increase by 13.6 percent over a 25-year period. The employment of Waianae is expected to increase by 12.5 percent over a 25-year period. The PB traffic study for the Farrington Highway improvements used a more conservative background growth in traffic of 1.1 percent per year, based upon the OMPO traffic forecast. A growth factor of 1.055 was uniformly applied to the existing Sunday peak hour traffic demands to estimate the Year 2019 Sunday peak hour traffic demands without the proposed project.

#### C. Sunday Peak Hour Traffic Analysis Without Project

The intersection of Farrington Highway and Nanakuli Avenue is expected to continue to operate at LOS "B", during the Sunday peak hour of traffic without the proposed expansion. The shared left-turn/through movement on makai bound Nanakuli Avenue is expected to operate at LOS "C", while the other traffic movements are expected to operate at LOS "B" or better.

Pua Avenue is expected to operate at LOS "B" and LOS "A" at Nanakuli Avenue in the northbound and southbound directions, respectively. The St. Rita Driveway on Farrington Highway is expected to operate at LOS "B". Figure 4 depicts the Sunday peak hour traffic without the proposed expansion.

### IV. Traffic Impact Analysis

#### A. Project Generated Traffic

##### 1. Trip Generation Characteristics

The observed trip generation for St. Rita Catholic Church compared very closely with the ITE trip rates for a church. Table 2 compares the trip generation based upon the ITE rates for a church (ITE Code 560) in vehicles per hour per seat (vphs), the observed trip generation rates for the existing conditions and the proposed expansion. The proposed expansion is expected to generate a net increase of 132 vph, during the Sunday peak hour of traffic.

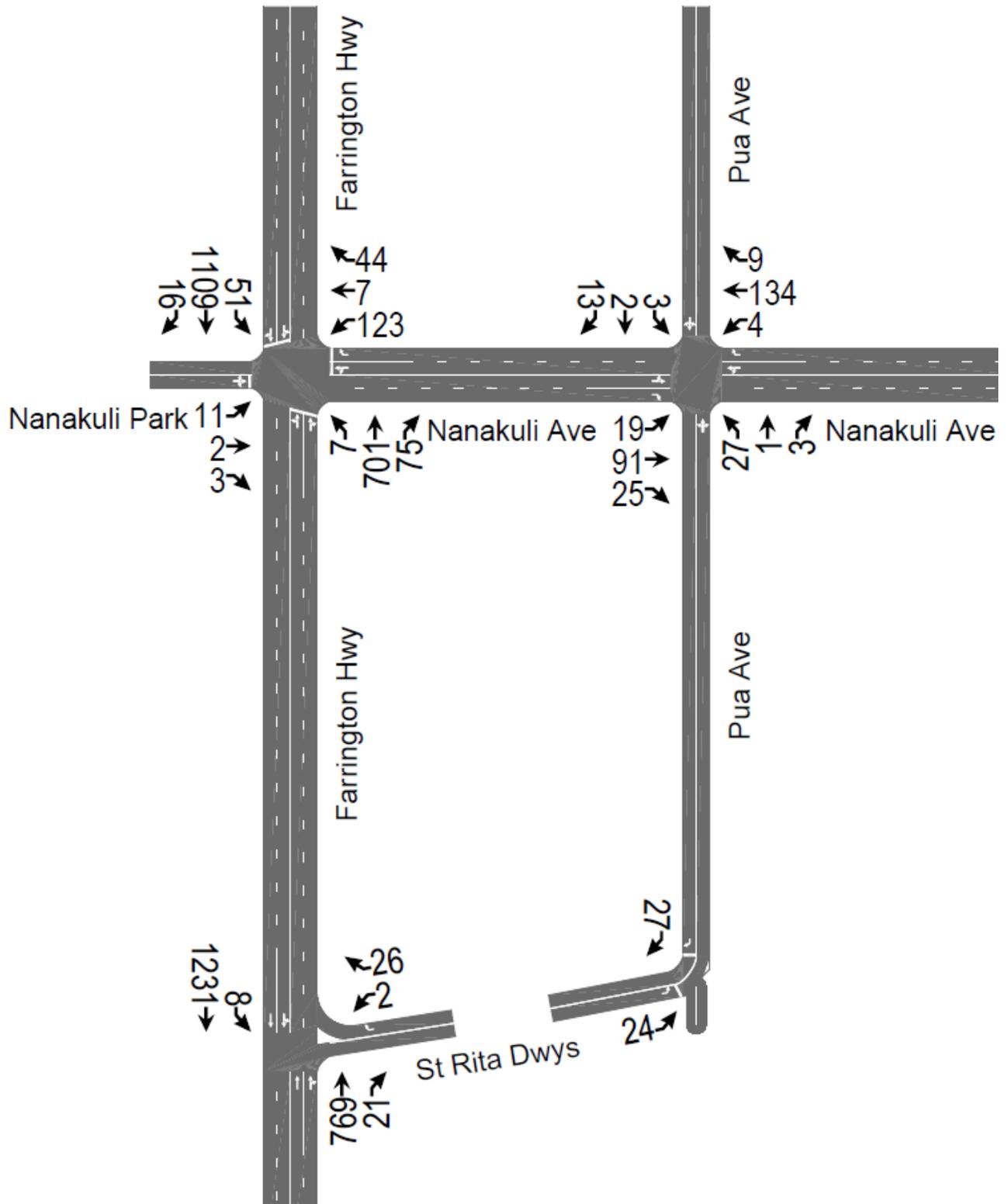


Figure 4. Sunday Peak Hour Traffic Without Project



<b>Table 2. Sunday Trip Generation Characteristics</b>							
<b>Scenario</b>	<b>Seats</b>	<b>Trips (vph)</b>			<b>Trip Rates (vphps)</b>		
		<b>Enter</b>	<b>Exit</b>	<b>Total</b>	<b>Enter</b>	<b>Exit</b>	<b>Total</b>
<b>ITE (560)</b>	<b>180</b>	56	54	110	0.31	0.30	0.61
<b>Observed</b>	<b>180</b>	56	52	108	0.31	0.29	0.60
<b>Proposed</b>	<b>400</b>	124	116	240	0.31	0.29	0.60
<b>Net Increase</b>	<b>220</b>	<b>68</b>	<b>64</b>	<b>132</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

## 2. Trip Distribution

The trip distribution is based upon the existing traffic patterns. The Sunday peak hour site-generated traffic assignment for the proposed project is depicted on Figure 5.

### B. Sunday Peak Hour Traffic Analysis With Project

The intersection of Farrington Highway and Nanakuli Avenue is expected to operate at LOS "B", during the Sunday peak hour of traffic with the proposed project. The traffic movements at the intersection are expected to operate at satisfactory Levels of Service. The other intersections in the study area are expected to operate at LOS "B" or better. Figure 6 depicts the Sunday peak hour traffic with the proposed project.

## V. Traffic Management Plan

### A. Sunday Peak Hour Parking Generation

The average Sunday parking demand for a church with 400 seats is 80 parking spaces, or 0.20 space per seat, based upon the parking generation rate for churches, developed by ITE and published in Parking Generation, 4th Edition, 2010. The Sunday parking generation rate of 0.33 space per seat was developed from the observed peak parking demand of 60 stalls and the existing 180-seat St. Rita Catholic Church. The observed parking generation rate of 0.33 space/seat was used to estimate the peak parking demand for the proposed project.

### B. Sunday Parking Impacts

The 103-stall on-site parking capacity would require an additional 30 spaces to accommodate the 400-seat church. Attendant-assisted parking in the aisles of the parking lot should accommodate another 30 spaces. The total of 133 parking spaces on-site would accommodate the proposed 400-seat church.

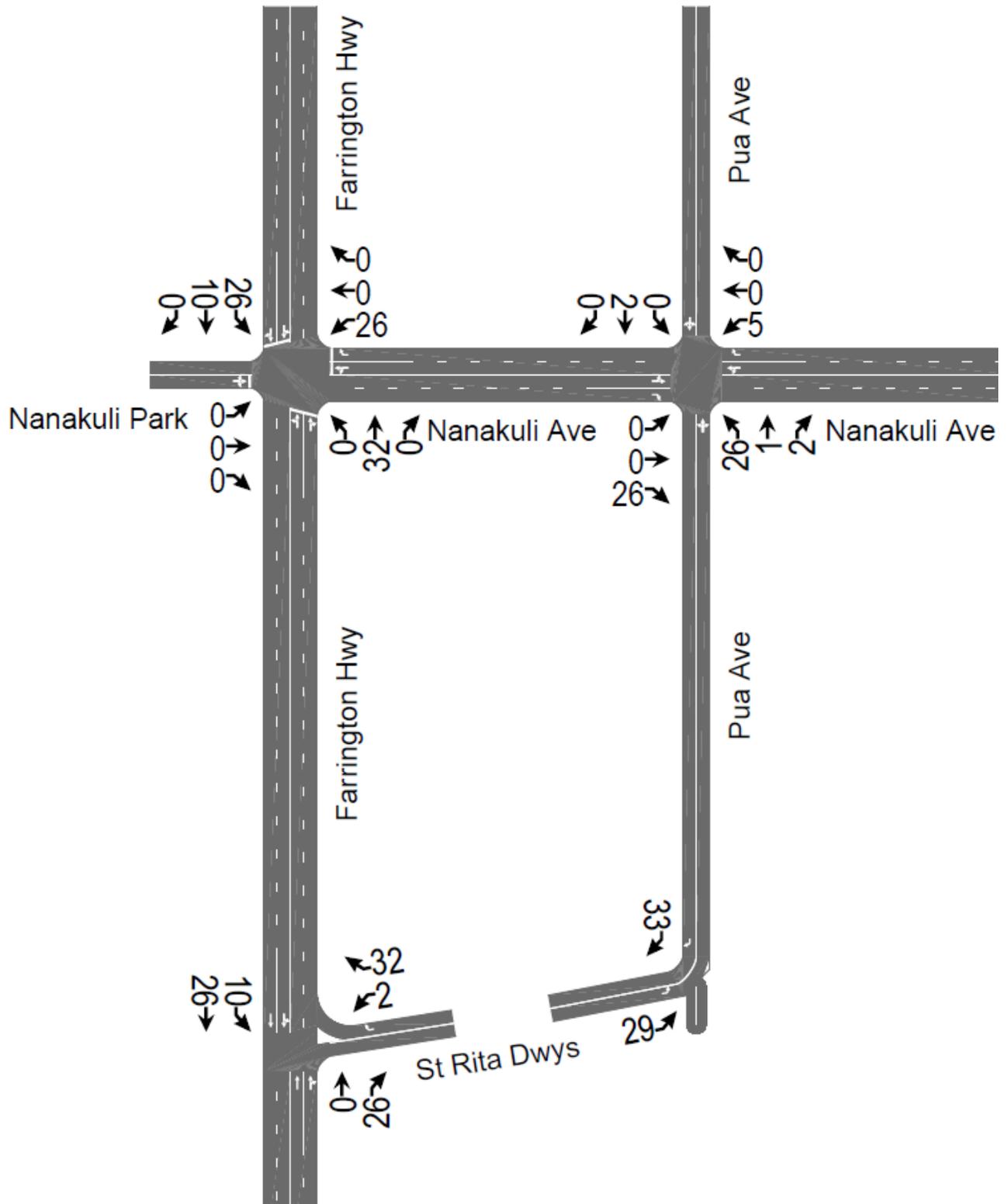


Figure 5. Sunday Peak Hour Site Traffic Assignment

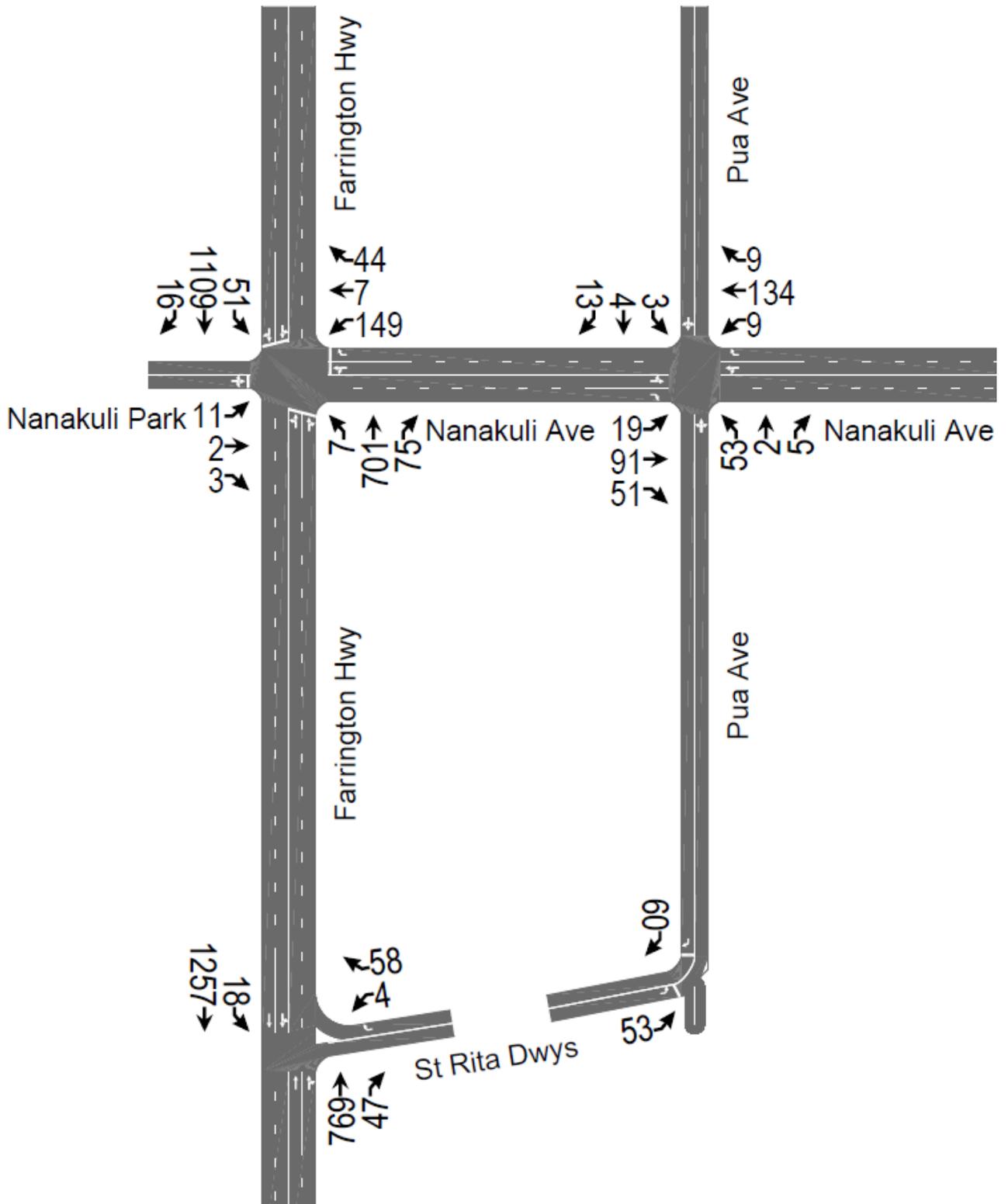


Figure 6. Sunday Peak Hour Traffic With Project



## **VI. Recommendations and Conclusions**

### **A. Recommendations**

1. Tandem parking operations should be implemented by St. Rita Catholic Church, as necessary, to avoid members having to park on the streets in the neighborhood. An additional 30 parking stalls, for a total of 133 parking stalls, are expected to be required on Sunday for the 400-seat church.
2. St. Rita Catholic Church should urge its members to avoid making left turns to and from Farrington Highway at its existing driveway.
3. St. Rita Catholic Church should make arrangements for off-site parking and shuttle service, during special events, when the parking demands exceed the on-site parking capacity.

### **B. Conclusions**

The proposed St. Rita Catholic Church is expected to generate its peak traffic between Sunday morning masses, when ambient traffic conditions are significantly lower than the weekday peak hour traffic. The traffic generated by the proposed St. Rita Catholic Church expansion is not expected to significantly impact traffic operations during the Sunday peak hour of traffic.

While 103-stall parking capacity, provided on site, will exceed the ITE parking generation for a 400-seat church on Sundays, the parking survey indicated that parking demand for St. Rita Catholic Church is expected to exceed the ITE estimate by about 30 parking stalls. The excess parking demand should be accommodated by implementing tandem parking operations on site.

Table 3 summarizes the capacity analysis at the intersections in the study area:



**Table 3. Summary of Capacity Analysis**

Scenario	Intersection	MOE	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Sunday Peak Hour Traffic	Farrington Highway/ Nanakuli Avenue	LOS	B			C		A	A			B		
		v/c	0.05			0.56		0.12	0.46			0.64		
		Delay	17.6			28.4		5.1	8.2			10.5		
	Nanakuli Avenue/ Pua Avenue	LOS	A	A	-	A	A	-	B			A		
		v/c	0.02	-	-	0.00	-	-	0.05			0.02		
		Delay	7.6	0.0	-	7.5	0.0	-	10.5			9.5		
	Farrington Highway/ St Rita Driveway	LOS	N/A	N/A	N/A	B			N/A	-	-	A	A	N/A
		v/c	N/A	N/A	N/A	0.05			N/A	-	-	0.01	-	N/A
		Delay	N/A	N/A	N/A	10.8			N/A	-	-	9.3	0.2	N/A
Sunday Peak Hour Traffic Without Project	Farrington Highway/ Nanakuli Avenue	LOS	B			C		A	A			B		
		v/c	0.05			0.59		0.12	0.48			0.66		
		Delay	19.3			31.3		5.6	8.4			11.0		
	Nanakuli Avenue/ Pua Avenue	LOS	A	A	-	A	A	-	B			A		
		v/c	0.02	-	-	0.00	-	-	0.05			0.03		
		Delay	7.6	0.0	-	7.5	0.0	-	10.7			9.5		
	Farrington Highway/ St Rita Driveway	LOS	N/A	N/A	N/A	B			N/A	-	-	A	A	N/A
		v/c	N/A	N/A	N/A	0.05			N/A	-	-	0.01	-	N/A
		Delay	N/A	N/A	N/A	11.0			N/A	-	-	9.6	0.2	N/A
Sunday Peak Hour Traffic With Project	Farrington Highway/ Nanakuli Avenue	LOS	B			C		A	A			B		
		v/c	0.04			0.64		0.11	0.50			0.69		
		Delay	19.8			33.1		5.3	9.8			12.9		
	Nanakuli Avenue/ Pua Avenue	LOS	A	A	-	A	A	-		B			A	
		v/c	0.02	-	-	0.01	-	-		0.11			0.03	
		Delay	7.6	0.0	-	7.6	0.0	-		11.4			9.8	
	Farrington Highway/ St Rita Driveway	LOS	N/A	N/A	N/A	B			N/A	-	-	A	A	N/A
		v/c	N/A	N/A	N/A	0.11			N/A	-	-	0.03	-	N/A
		Delay	N/A	N/A	N/A	11.5			N/A	-	-	9.6	0.5	N/A

**Appendix G**

Department of Hawaiian Homelands Conditional Approval Letter

DAVID Y. IGE  
GOVERNOR  
STATE OF HAWAII

SHAN S. TSUTSUMI  
LT GOVERNOR  
STATE OF HAWAII



JOBIE M. K. MASAGATANI  
CHAIRMAN  
HAWAIIAN HOMES COMMISSION

WILLIAM J. AILA, JR.  
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS

P. O. BOX 1879  
HONOLULU, HAWAII 96805

May 21, 2015

bc: LMD Reading  
LMD File: LI 503  
LMD Staff: KY

The Honorable George I. Atta  
City and County of Honolulu  
Department of Planning & Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813

Dear Mr. Atta:

Subject: Letter of Authorization  
St. Rita Catholic Church - 89-318 Farrington Highway  
Land Use and Environmental Permits  
Tax Map Keys: 8-9-005:001 & 8-9-007:004 (portion)  
Nanakuli, Oahu, Hawaii

This letter is to authorize Hawaii Planning LLC to represent St. Rita Catholic Church in the processing of the Environmental Assessment (EA), Special Management Area Use Permit - Major, and Conditional Use Permit - Minor. As the property owner of Tax Map Keys 8-9-005:001 and 8-9-007:004, we currently have a church license with St. Rita Catholic Church.

The St. Rita Catholic Church is proposed to construct a new multi-purpose building that can accommodate 300 people (6,400 square feet), demolish and reconstruct the church building (5,650 square feet) to accommodate from the present occupancy load of 180 to 400, and construct a new office building of approximately 1,100 square feet.

DHHL has reviewed St. Rita's conceptual plans and is giving conditional approval for the purposes of the EA, subject to further review and acceptance by the Hawaiian Homes Commission (the Approving Agency for the EA) and the City DPP.

Should you have any questions or need clarification, please have your staff contact Ward "Kalei" Young, Supervising Land Agent, at 620-9463.

Aloha,

Jobie M. K. Masagatani, Chairman  
Hawaiian Homes Commission

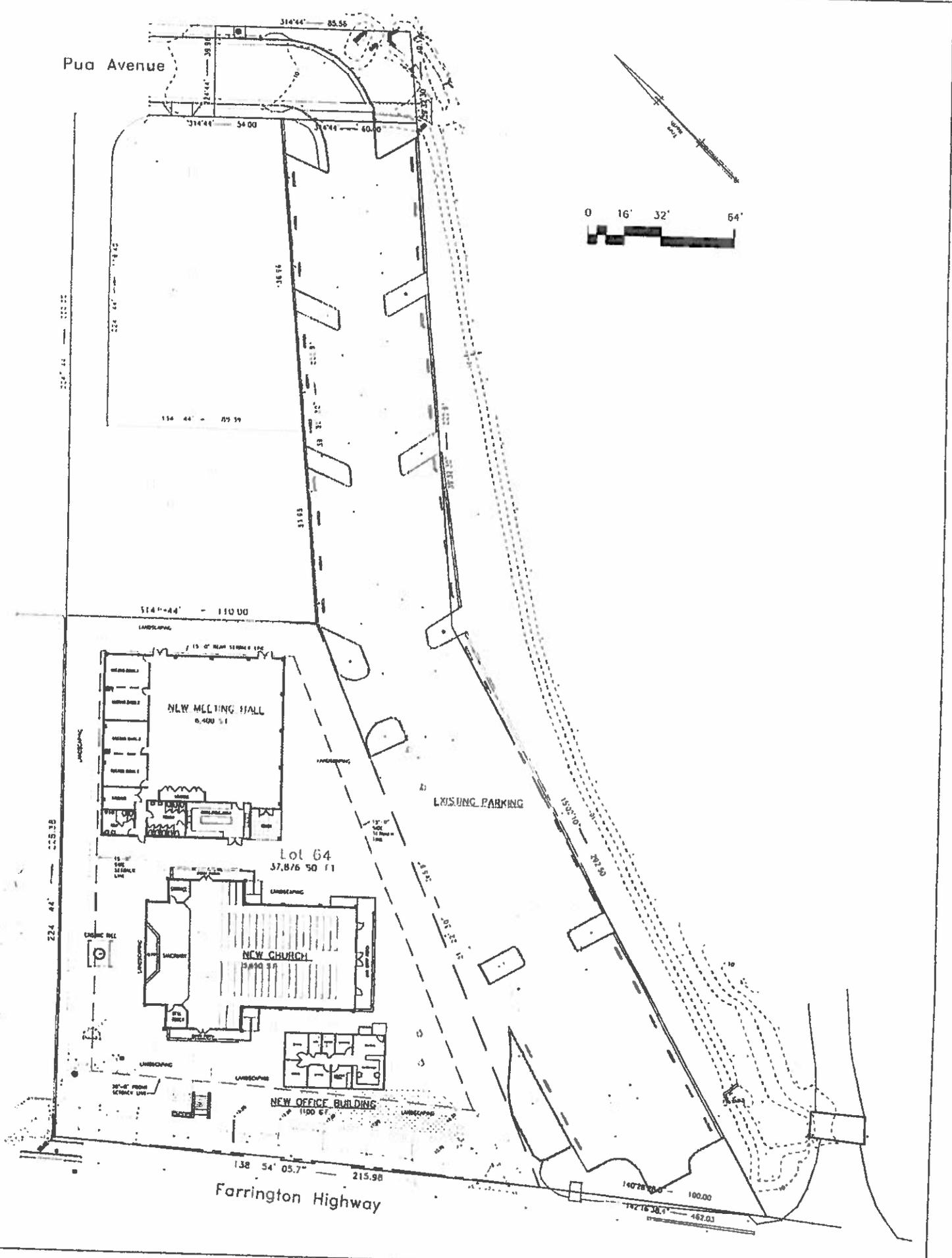


Figure 6 - Proposed Site Plan