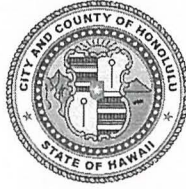


DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honolulu.gov/dpp

RICK BLANGIARDI
MAYOR



DAWN TAKEUCHI APUNA
DIRECTOR

JIRO A. SUMADA
DEPUTY DIRECTOR

May 30, 2023

2022/ED-19(CK)

Ms. Mary Alice Evans
Acting Director
Office of Planning and Sustainable Development
Environmental Review Program
State of Hawaii
235 South Beretania Street, Room 702
Honolulu, Hawaii 96813

Dear Ms. Evans:

SUBJECT: Chapter 25, Revised Ordinances of Honolulu
Final Environmental Assessment (EA)
Project: Konane Slope Stabilization Project
Applicant: Puu Alii Community Association (Shawn Scott)
Agent: Planning Solutions, Inc. (Makena White)
Location: 46-40, 50, and 70 Konane Place – Kaneohe
Tax Map Keys: 4-6-001:002, 060, and 062
Determination: Finding of No Significant Impact (FONSI)

We have reviewed the Final EA for the subject Project, which was received on May 8, 2023. Based on the requirements of Chapter 343, Hawaii Revised Statutes, and Chapter 25, Revised Ordinances of Honolulu, we have determined that preparation of an Environmental Impact Statement is not required, and hereby issue a FONSI.

With this letter, the Department of Planning and Permitting transmits the Final EA and FONSI for the Konane Slope Stabilization Project, located at 46-40, 50, and 70 Konane Place in Kaneohe, Oahu, for publication in the June 8, 2023 edition of *The Environmental Notice*. The Final EA includes copies of public comments received and the corresponding responses from the Applicant that were received during the 30-day public comment period on the Draft EA and Anticipated FONSI.

Ms. Mary Alice Evans
May 30, 2023
Page 2

We have uploaded an electronic copy of the Final EA, Publication Form, and FONSI to your online submittal site. Should you have any questions, please contact Christi Keller, of our Zoning Regulations and Permits Branch, at (808) 768-8087 or via email at c.keller@honolulu.gov.

Very truly yours,



Dawn Takeuchi Apuna
Director

**NON-CHAPTER 343 DOCUMENT
PUBLICATION FORM
OFFICE OF ENVIRONMENTAL QUALITY CONTROL**

Project Name: Konane Slope Stabilization Project

Applicable Law: Chapter 25, Revised Ordinances of Honolulu, Special Management Area (SMA)

Type of Document: Final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI)

Island: Oahu

District: Council District 3; Koolau Poko Sustainable Communities Plan Area

TMK: (1) 4-6-001:002, 060, and 062

Permits Required: SMA Use Permit; Development Permits; NPDES NOI-C.

Applicant or Proposing Agency: Puu Alii Community Association
Contact: David Leandro
dleandro@prgthawaii.com
(808) 235-0320
46-40, 50, and 70 Konane Place
Kaneohe, Hawaii 96744

Approving Agency or Accepting Authority: City and County of Honolulu
Department of Planning and Permitting
Contact: Christi Keller
c.keller@honolulu.gov
(808) 768-8087
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Consultant: Planning Solutions, Inc.
Contact: Makena White, AICP
makena@psi-hi.com
(808) 550-4538
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawaii 96813

Status: Final EA - Public Review Comments Incorporated

Project Summary: The Puu Alii Community Association (PCA) is proposing to implement a slope stabilization project on a portion of its property in Kaneohe, Oahu, Hawaii. The proposal requires a Special Management Area Use Permit. The purpose of the project is to stabilize the slope between PCA structures and City-owned Lilipuna Road in a manner that provides for a shoulder/swale on Lilipuna Road. The project design employs Best Management Practices to reduce the potential for erosion and stormwater quality degradation, and a City-approved landscape plan for visual screening.

Reasons Supporting Determination: Please refer to the analysis in the Final EA.

**FINAL ENVIRONMENTAL ASSESSMENT &
FINDING OF NO SIGNIFICANT IMPACT, KŌNANE
SLOPE STABILIZATION PROJECT**

PREPARED FOR:



Pu'u Ali'i Community Association

PREPARED BY:



**P L A N N I N G
S O L U T I O N S**

JUNE 2023

TABLE OF CONTENTS

CHAPTER 1 : INTRODUCTION.....	1-1
1.1 OVERVIEW OF THE PROPOSED ACTION.....	1-1
1.2 PURPOSE OF THE PROPOSED ACTION.....	1-1
1.3 NEED FOR THE PROPOSED ACTION.....	1-1
1.4 ENVIRONMENTAL ASSESSMENT TRIGGER.....	1-5
1.5 PERMITS AND APPROVALS.....	1-7
CHAPTER 2 : DESCRIPTION OF PROPOSED ACTION.....	2-1
2.1 DESCRIPTION OF THE PROPOSED ACTION.....	2-1
2.1.1 Installation of Erosion and Sediment Control Plan Measures.....	2-2
2.1.2 Tree Removal and Grubbing.....	2-7
2.1.3 Earthwork and Soil Stabilization.....	2-10
2.1.4 Grassing.....	2-14
2.2 IMPLEMENTATION OF THE DPP-APPROVED MLP.....	2-15
2.2.1 Planting.....	2-15
2.2.2 Vegetation Establishment.....	2-22
2.3 PRELIMINARY SCHEDULE FOR THE PROPOSED ACTION.....	2-22
2.4 PROJECT BUDGET.....	2-23
2.5 ALTERNATIVES.....	2-23
2.5.1 Framework for Consideration of Alternatives.....	2-23
2.5.2 Alternatives for Detailed Consideration.....	2-24
2.5.3 Alternatives Considered but Rejected (Alternative Construction Methods).....	2-24
CHAPTER 3 : EXISTING ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION.....	3-1
3.1 BIOLOGICAL RESOURCES.....	3-1
3.1.1 Existing Conditions.....	3-1
3.1.2 Potential Impacts.....	3-2
3.1.3 Avoidance, Minimization, and Mitigation Measures.....	3-3
3.2 GEOLOGY, TOPOGRAPHY, AND SOILS.....	3-3
3.2.1 Existing Conditions.....	3-3
3.2.2 Potential Impacts.....	3-6
3.2.3 Avoidance, Minimization, and Mitigation Measures.....	3-6
3.3 VISUAL RESOURCES.....	3-7
3.3.1 Existing Conditions.....	3-7
3.3.2 Potential Impacts.....	3-11
3.3.3 Avoidance, Minimization, and Mitigation Measures.....	3-26
3.4 HYDROLOGY.....	3-26
3.4.1 Existing Conditions.....	3-26
3.4.2 Potential Impacts.....	3-29
3.4.3 Avoidance, Minimization, and Mitigation Measures.....	3-31

3.5	TRAFFIC	3-32
3.5.1	Existing Conditions	3-32
3.5.2	Potential Impacts	3-32
3.5.3	Avoidance, Minimization, and Mitigation Measures	3-33
3.6	ARCHAEOLOGICAL AND CULTURAL RESOURCES.....	3-34
3.6.1	Existing Conditions	3-34
3.6.2	Potential Impacts	3-36
3.6.3	Avoidance, Minimization, and Mitigation Measures	3-36
3.7	OTHER RESOURCES AND TOPICS	3-36
3.8	SECONDARY AND CUMULATIVE IMPACTS	3-38
CHAPTER 4 : CONSISTENCY WITH LAND USE PLANS, POLICIES, AND CONTROLS 4-1		
4.1	STATE OF HAWAI‘I.....	4-1
4.1.1	Hawai‘i State Plan, HRS Chapter 226	4-1
4.1.2	Hawai‘i 2050 Sustainability Plan	4-2
4.1.3	Hawai‘i Land Use Law; HRS §205	4-3
4.1.4	Coastal Zone Management Program, HRS §205A.....	4-4
4.2	CITY AND COUNTY OF HONOLULU	4-10
4.2.1	O‘ahu General Plan.....	4-10
4.2.2	Ko‘olau Poko Sustainable Communities Plan (KPSCP)	4-12
4.2.3	Land Use Ordinance, ROH Chapter 21	4-13
4.2.4	Special Management Area Review, ROH Chapter 25.....	4-14
4.2.5	Planned Development – Housing Permit (Permit File No. 73/PDH-4)	4-18
CHAPTER 5 : DETERMINATION.....		5-1
5.1	SIGNIFICANCE CRITERIA.....	5-1
5.2	FINDINGS.....	5-1
5.2.1	Irrevocable Loss or Destruction of Valuable Resource	5-2
5.2.2	Curtails Beneficial Uses	5-2
5.2.3	Conflicts with Long-Term Environmental Policies or Goals	5-2
5.2.4	Substantially Affects Economic or Social Welfare	5-2
5.2.5	Public Health Effects	5-2
5.2.6	Produce Substantial Secondary Impacts	5-2
5.2.7	Substantially Degrade the Environment	5-3
5.2.8	Cumulative Effects or Commitment to a Larger Action.....	5-3
5.2.9	Effects on Rare, Threatened, or Endangered Species	5-3
5.2.10	Affects Air or Water Quality or Ambient Noise Levels.....	5-3
5.2.11	Environmentally Sensitive Area	5-4
5.2.12	Affects Scenic Vistas and View Planes	5-4
5.2.13	Requires Substantial Energy Consumption	5-4
5.3	DETERMINATION	5-4
CHAPTER 6 : CONSULTATION AND DISTRIBUTION.....		6-1
6.1	SCOPING PERIOD CONSULTATION	6-1
6.2	DISTRIBUTION OF THE DEA/AFONSI.....	6-3

6.3 RESPONSE TO COMMENTS AND DISTRIBUTION OF THE FEA/FONSI 6-5
CHAPTER 7 : REFERENCES..... 7-1

LIST OF APPENDICES

APPENDIX A. MASTER LANDSCAPE PLAN: KŌNANE SLOPE EXCERPT
APPENDIX B. PCA AND CCH CORRESPONDENCE, 2018 AND 2019
APPENDIX C. GEOTECHNICAL REPORTS AND UPDATE
APPENDIX D. SCOPING LETTER AND RESPONSES
APPENDIX E. PERMIT FILE NO. 73/PDH-4
APPENDIX F. KĀNE‘OHE NEIGHBORHOOD BOARD NO. 30, 1/19/2023 MEETING

LIST OF FIGURES

Figure 1-1 Location Map 1-2
Figure 1-2 Vicinity Map 1-3
Figure 1-3 SMA Map..... 1-6
Figure 2-1 ESCP for the North Zone 2-5
Figure 2-2 ESCP for South Zone..... 2-6
Figure 2-3 Approximate Tree Removal Plan for the North Zone 2-8
Figure 2-4 Approximate Tree Removal Plan for the South Zone 2-9
Figure 2-5 Grading Plan and Slope Stabilization for the North Zone 2-11
Figure 2-6 Grading Plan for the South Zone 2-12
Figure 2-7 North Zone RockMesh HR™ Soil Stabilization Oblique Detail..... 2-14
Figure 2-8 Conceptual Plant Placement on Steep Slope 2-15
Figure 2-9 Planting Plan for the North Zone: 1 of 2..... 2-18
Figure 2-10 Planting Plan for the North Zone: 2 of 2..... 2-19
Figure 2-11 Planting Plan for the South Zone: 1 of 2..... 2-20
Figure 2-12 Planting Plan for the South Zone: 2 of 2..... 2-21
Figure 2-13 Buttress Fill Alternative..... 2-25
Figure 3-1 Open Space and Significant Views in Ko‘olau Poko 3-8
Figure 3-2 Existing Conditions along Kōnane Slope 3-9
Figure 3-3 Key to Site Photo Locations 3-10

Figure 3-4	Key to Views 1A and 1B from Lilipuna Road Looking South at Buildings 37 and 38 (North Zone)	3-13
Figure 3-5	View 1A From Lilipuna Road at Building 38 (North Zone)	3-14
Figure 3-6	View 1B From Lilipuna Road at Building 38 (North Zone)	3-15
Figure 3-7	Key to Views 2A and 2B from Lilipuna Road Looking South at Buildings 35 and 36 (South Zone)	3-16
Figure 3-8	View 2A from Lilipuna Road Looking Southeast at Buildings 35 and 36 (South Zone).....	3-17
Figure 3-9	View 2B from Lilipuna Road Looking Southeast at Buildings 35 and 36 (South Zone).....	3-18
Figure 3-10	Key to Views 3A and 3B from Lilipuna Road Looking Northeast at Buildings 35 and 36 (South Zone).....	3-19
Figure 3-11	View 3A Looking East from 46-107 Lilipuna Road at Buildings 35 and 36 (South Zone).....	3-20
Figure 3-12	View 3B Looking East from 46-107 Lilipuna Road at Buildings 35 and 36 (South Zone).....	3-21
Figure 3-13	Key to Views 4A, 4B, and 4C from Lilipuna Road Looking Northeast Opposite Buildings 35 and 36 (North and South Zone).....	3-22
Figure 3-14	View 4A from Lilipuna Road Looking Northeast Opposite Buildings 35 and 36 (North and South Zone)	3-23
Figure 3-15	View 4B from Lilipuna Road Looking Northeast Opposite Buildings 35 and 36 (South Zone)	3-24
Figure 3-16	View 4C from Lilipuna Road Looking Northeast Opposite Buildings 35 and 36 (South Zone)	3-25
Figure 3-17:	Average Rainfall in the Project Area	3-27
Figure 3-18	USFWS Wetlands Inventory Map	3-28

LIST OF TABLES

Table 1-1	Permits and Approvals.....	1-7
Table 2-1	Approximate Tree Removal Plan for the North Zone	2-7
Table 2-2	Approximate Tree Removal Plan for the South Zone	2-7
Table 2-3	Estimated Earthwork Quantities for the North Zone	2-13
Table 2-4	Approximate Earthwork Quantities for the South Zone.....	2-14
Table 2-5	Planting Plan for the North Zone: Approximate Species and Count.....	2-16
Table 2-6	Planting Plan for the South Zone: Approximate Species and Count.....	2-17
Table 2-7	Preliminary Schedule for the Proposed Action.....	2-23
Table 3-1	Existing and Proposed Kōnane Slope Safety Factors	3-5
Table 3-2	Existing and Anticipated (under the Proposed Action) Runoff Coefficients	3-29
Table 3-3	Drainage Assessment Calculations	3-30

Table 3-4	2011 Traffic Volumes on Lilipuna Road Station No. B72654500000	3-32
Table 4-1	Summary of Conditions on Permit File No. 73/PDH-4	4-19
Table 6-1	Early Consultation for the Proposed Action	6-2
Table 6-2	Distribution of the DEA	6-4
Table 6-3	Comments on the DEA/AFONSI	6-6

LIST OF ACRONYMS

AFONSI	Anticipated Finding of No Significant Impact
ASTM	American Society for Testing and Materials
BLNR	Board of Land and Natural Resources
BMP	Best Management Practices
CCH	City and County of Honolulu
CMU	Concrete Masonry Units
CZM	Coastal Zone Management
DBEDT	Department of Business, Economic Development and Tourism
DES	Department of Environmental Services
DFM	Department of Facility Maintenance
DLNR	Department of Land and Natural Resources
DLU	Department of Land Utilization (now DPP)
DOH	Hawai‘i State Department of Health
DPP	Department of Planning and Permitting
DTS	Department of Transportation Services
EA	Environmental Assessment
EIS	Environmental Impact Statement
ERP	Environmental Review Program
ESCP	Erosion and Sediment Control Plan
FEA	Final Environmental Assessment
FONSI	Finding of No Significant Impact
HAR	Hawai‘i Administrative Rules
HCC	Honolulu City Council
HDOT	State of Hawai‘i, Department of Transportation
HRS	Hawai‘i Revised Statutes
KPSCP	Ko‘olaupoko Sustainable Community Plan
MLP	Master Landscape Plan
msl	Mean Sea Level
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System

OCCL	Office of Conservation and Coastal Lands
PCA	Pu‘u Ali‘i Community Association
PSI	Planning Solutions, Inc.
ROH	Revised Ordinances of Honolulu
SHPD	State Historic Preservation Division
SMA	Special Management Area
SMP	Special Management Area Permit
SWPPP	Storm Water Pollution Prevent Plan
TMK	Tax Map Key
USFWS	U.S. Fish & Wildlife Service

CHAPTER 1: INTRODUCTION

1.1 OVERVIEW OF THE PROPOSED ACTION

The Pu‘u Ali‘i Community Association (PCA) is proposing to implement a slope stabilization project on a portion of Tax Map Key (TMK) Nos. (1) 4-6-001:002, 060, and 062. These TMKs make up a portion of the PCA development in He‘eia ahupua‘a, Ko‘olaupoko moku, in Kāne‘ohe, O‘ahu, Hawai‘i (see Figure 1-1). These parcels are in the State of Hawai‘i’s Urban Land Use District, the City and County of Honolulu (CCH) Special Management Area (SMA) and are zoned R-10 Residential by the CCH. The project site is located on sloped land between the PCA-owned Kōnane Place and City-owned Lilipuna Road, in an area henceforth referred to as “Kōnane Slope” (Figure 1-2). The Proposed Action involves the Honolulu City Council approving an SMA permit and then PCA stabilizing Kōnane Slope by grading it to an engineered slope and installing soil nails, a wire mesh system, and erosion control matting or erosion control matting with shallow soil anchors as appropriate per area.

Once the slope is stabilized, the PCA will install and maintain landscaping per its CCH Department of Planning and Permitting (DPP) approved 2020 Master Landscape Plan (MLP) (see Appendix A for relevant excerpts). The proposed grading plans evaluated in this Environmental Assessment (EA) are also in accordance with the grading plans approved for the Project by DPP on June 8, 2021 (DPP File No. 2022/CP-47 for Buildings 37 and 38; and DPP File No. 2022/CP-117 for Buildings 35 and 36).

1.2 PURPOSE OF THE PROPOSED ACTION

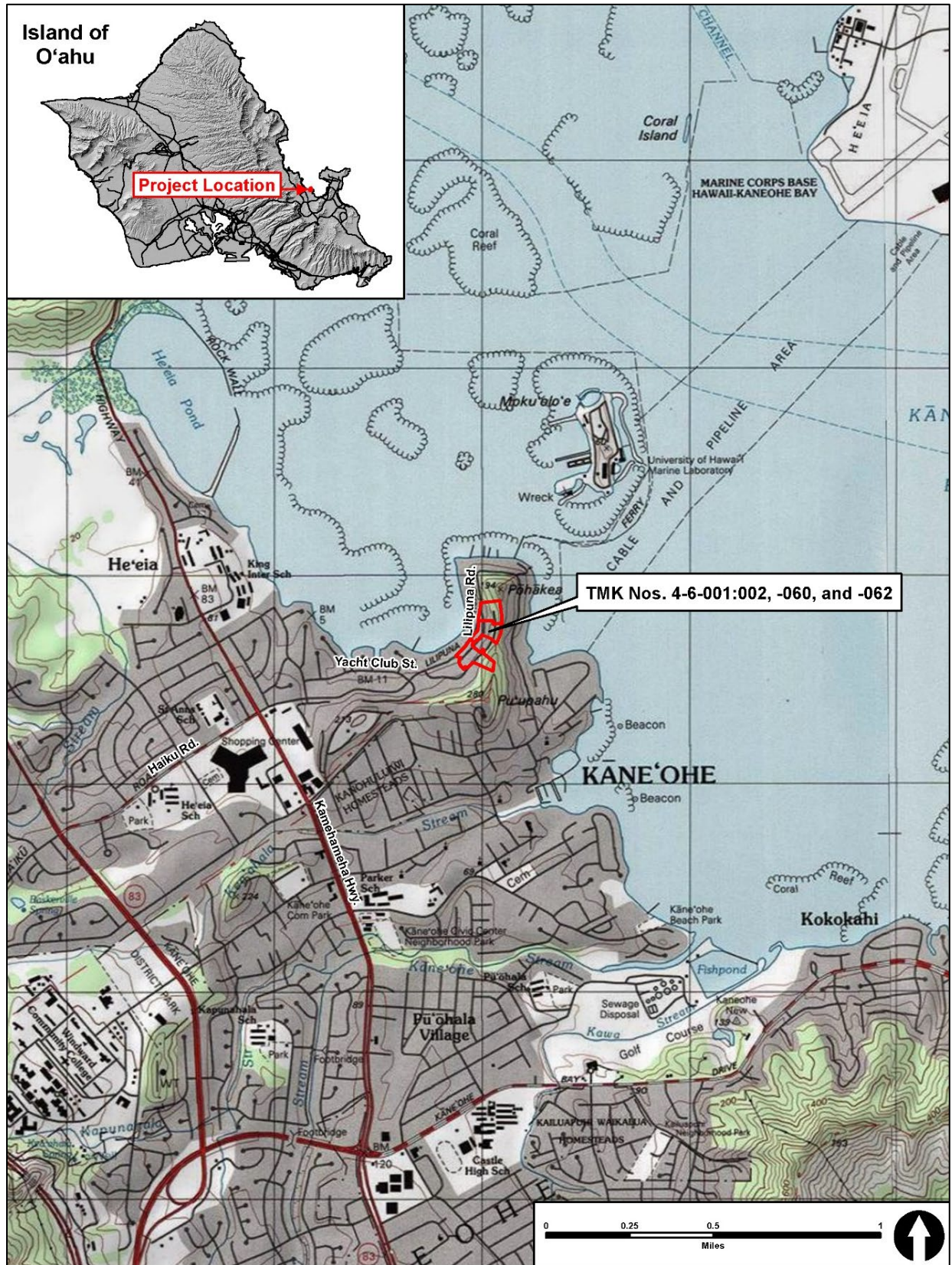
The purpose of the Proposed Action is to stabilize the Kōnane Slope between the PCA-owned Kōnane Place and City-owned Lilipuna Road per the recommendations of a Geotechnical Report and in a manner that provides for a shoulder and swale on Lilipuna Road to allow: (i) for better drainage, (ii) improved pedestrian and vehicular traffic safety in the area, and (iii) planting of street trees as per the DPP-approved MLP. It should be noted that PCA is required to install street trees within its property along Lilipuna Road per the MLP and the street tree plan for Lilipuna Road fronting Pōhākea Point Condominium.¹ These trees cannot be installed until the slope stabilization work has been completed as the shoulder area at the toe of the slope must be graded prior to planting the trees. Lilipuna Road is a main thoroughfare in the area that would likely be adversely impacted if Kōnane Slope were to fail.

1.3 NEED FOR THE PROPOSED ACTION

On January 11, 2019, CCH, Department of Facility Maintenance (DFM) addressed a letter [Ref. No. SWQ 18-005(D)] to PCA, wherein it reported that on or about November 21, 2018, DFM had received reports from one or more community members that soil and sediment was being discharged from the Pu‘u Ali‘i property, TMK No. (1) 4-6-002:002. On November 30, 2018, DFM investigated the report and determined that the evidence of the reported discharge was

¹ Street trees are those trees which are approved for planting in or along rights-of-way managed by the City and County of Honolulu.

Figure 1-1 Location Map



Source: PSI (2022)

Figure 1-2 Vicinity Map



Source: PSI (2022)

inconclusive. Consequently, only a warning was issued, as opposed to a violation; the letter is provided in Appendix B.

Also in 2019, the PCA Board sought to retain a landscape architect to address overgrowth and provide groundcover on the Kōnane Slope. The landscape architect raised concerns about the stability of Kōnane Slope below Buildings 37 and 38 and declined to submit a proposal for the landscaping on the slope because it was too steep. The landscape architect further indicated that groundcover would not be able to grow well on such a steep slope, that the slope's incline presents conditions that are very difficult, if not impossible, for the PCA and its landscape contractors to maintain, and opined that the slope stability and erosion issues would need to be addressed prior to any landscaping.

On October 22, 2019, PCA responded to DFM's letter, identifying the measures it had taken up to that point to address the potential for soil sediment discharge(s) from its property, as well as further steps it planned to take from that point on. In that letter, PCA indicated that it was working with JPB Engineering, Inc. to prepare a Geotechnical Report characterizing the Kōnane Slope. PCA's response to DFM is provided in Appendix B.

The resulting September 26, 2019, and July 31, 2020, Geotechnical Reports (Appendix C) entitled *Geotechnical Report: Pu'u Ali'i Slope Investigation, 46-40, 50, and 70 Kōnane Place, Kāne'ohe, O'ahu, Hawai'i* (JPB Engineering, Inc., 2020) drew the following principal conclusion:

The results of our investigation indicate that majority of the subject slope areas are unstable and susceptible to soil creep. We have concluded that the slope below Buildings 37 and 38 should be stabilized by installing soil nails and covering the slope with a wire mesh system in combination with erosion control matting. For the slope below Buildings 35 and 36, most of the slope area can be stabilized by grading the slope but the final slope orientation would still be susceptible to the effects of soil creep. To address this, a shallower anchoring system on top of erosion control matting is recommended.

Based on these findings, the PCA has worked with DPP for several years to develop an MLP which would work with the newly stabilized Kōnane Slope while also having street trees planted at the base of Kōnane Slope and other appropriate vegetation along the slope to provide a buffer between the project and the downslope neighbors. There is no evidence that the roots of existing volunteer trees are, themselves, stabilizing the slope. The Geotechnical Reports are clear that there is soil creep in both the north and south zones of the Kōnane Slope. This is further indicated by the uncorrected lean of several trees along the Kōnane Slope. While tree roots may act to provide some soil reinforcement in surface soils, they do not interface with the deeper soils that have been determined to be unstable through geotechnical investigation and testing.

In addition, and based on the Geotechnical Reports, PCA retained consultants to design and construct an effective system for slope stabilization, runoff protection, and ground cover along the Kōnane Slope and install temporary runoff protection to protect against soil sediment discharges in the interim. The Proposed Action, as characterized in this report, is intended to address those needs.

1.4 ENVIRONMENTAL ASSESSMENT TRIGGER

The subject parcels (Figure 1-2) are located in the Special Management Area (SMA) and, consequently, will require an SMA Permit (SMP), pursuant to Revised Ordinances of Honolulu (ROH), Chapter 25 (Figure 1-3). The subject parcels are not shoreline parcels. Because the total cost of the Proposed Action is more than \$500,000, it will require an SMP Major, which is granted via a Honolulu City Council (HCC) resolution. Pursuant to ROH, Chapter 25-3.3(c), an Environmental Assessment (EA) prepared in accordance with Hawai‘i Revised Statutes (HRS) Chapter 343, is required to support the SMP Major application.

This EA is intended to satisfy that requirement and to provide the necessary information and analysis needed to permit the DPP and HCC to support issuance of an SMP Major. This EA has been prepared in accordance with the requirements of ROH Chapter 25, HRS Chapter 343, and Hawai‘i Administrative Rules (HAR) Title 11, Chapter 200.1.

Figure 1-3 SMA Map



Source: PSI (2022)

1.5 PERMITS AND APPROVALS

In addition to the requirement for an SMP Major issued by the HCC noted in Section 1.4, the Proposed Action will also require several other permits and approvals prior to implementation. The permits and approvals required for the Kōnane Slope Stabilization Project which have been identified to date are summarized in Table 1-1 below.

Table 1-1 Permits and Approvals

<i>Permit or Approval</i>	<i>Approving Agency</i>
SMP Major	Honolulu City Council
HRS §6E Historic Preservation Review	State Historic Preservation Division
National Pollutant Discharge Elimination System (NPDES) – General Construction Activity	Department of Health (DOH), Clean Water Branch
Construction Permit	DPP
Grading, Grubbing, and Stockpiling Permit	DPP
Street Usage Permit for Construction	Department of Transportation Services (DTS)

Source: Compiled by PSI (2022)

CHAPTER 2: DESCRIPTION OF PROPOSED ACTION

This Chapter describes the Kōnane Slope Stabilization Project which triggers the requirement for this EA via the need for an SMP Major, as discussed in Section 1.4. As stipulated in HAR, §11-200.1, it also describes the project alternatives which were considered during initial planning for the project, including alternatives which were at first considered but ultimately eliminated from further evaluation and analysis. Finally, this Chapter goes on to describe activities related to implementation of the DPP-approved MLP. In sum, the sequence of work will generally occur as follows:

1. Installation and maintenance of the measures called for in the Erosion and Sediment Control Plan (ESCP) (see Section 2.1.1).
2. Tree removal and grubbing (see Section 2.1.2).
3. Earthwork and soil stabilization (see Section 2.1.3).
4. Stabilization of the area using Bermudagrass/ryegrass mix or turfgrass and 60-day establishment/monitoring period (see Section 2.1.4).
5. Additional landscaping per the MLP (see Section 2.2.1).
6. Vegetation establishment/monitoring (6-month period) (Section 2.2.2).
7. Removal of final ESCP measures as modified throughout construction (Section 2.2.2).

While the MLP-related work is a follow-on to the Kōnane Slope Stabilization Project and is not part of the Proposed Action, it is described and analyzed here because it is required by the CCH and will result in changes to the project ~~areasite~~ areasite from current conditions when the work is complete. Thus, the analysis in Chapters 3, 4, and 5 are based on the combined implementation of the activities described in Sections 2.1 and 2.2

2.1 DESCRIPTION OF THE PROPOSED ACTION

Because of the varied topography in the project site and to minimize the area without vegetation during the work, the Proposed Action is proposed to be bifurcated into two zones, identifiable according to the buildings they are in front of: (i) Building 35 and 36; and (ii) Buildings 37 and 38 (Figure 1-2). For ease of reference, henceforth the area between Buildings 37 and 38 and Lilipuna Road is referred to as the “North Zone” and the area between Buildings 35 and 36 and Lilipuna Road is referred to as the “South Zone”. Many common measures will apply to both zones, but each zone will also undergo different treatments as part of the slope stabilization process. The Proposed Action is consistent with the recommendations in JPB Engineering, Inc.’s Geotechnical Report (Appendix C).

South Zone. The slope stabilization work is intended to begin in the South Zone with clearing of the existing vegetation and grubbing, followed by grading to reduce the angle of the slope, and installation of erosion control matting and Platipus™ anchors. Upon completion of the stabilization work, permanent landscaping will be established. Additional landscaping will follow in compliance with the MLP (see Section 2.2).

North Zone. The slope stabilization work in the North Zone consists of clearing and grubbing of the existing vegetation, followed by grading to reduce the angle of the slope where possible. The slope will then be stabilized by grading the slope and installing a soil nail anchoring system with erosion control matting. On-site soils will be used as fill, where needed. Permanent landscaping consisting of Bermudagrass/ryegrass mix will be established following the slope stabilization work. Additional landscaping will follow in compliance with the MLP (see Section 2.2).

The work in both zones also includes construction of a 12-foot-wide drainage swale between the toe of the slope and Lilipuna Road. The swale will be landscaped with turfgrass and street trees upon completion of the stabilization work. Applicable BMPs will be implemented at all stages.

It is noted that the sequence of work between the North and South Zones may change, including being worked on concurrently, depending on the contractor that is selected to perform the work, its sequencing of the work, and the availability of materials and equipment.

The following subsections characterize the measures that will be taken as part of the Proposed Action. Where there are substantial differences between the measures employed in the North and South Zones, there are separate discussions for each zone.

For all construction activities noted in the following subsections:

- No grading or other major earthwork will be conducted on Saturdays, Sundays, or holidays at any time without prior notice to the director of DPP. Further, all work will be conducted in conformity with the *Community Noise Control Standards* contained in HAR § 11-46 *Community Noise Control*.
- During implementation of the grading plan for the Proposed Action, the contractor(s) will be responsible for conforming to all applicable provisions of HAR, § 11-54 *Water Quality Standards* and HAR, § 11-55 *Water Pollution Control*, as well as ROH, § 14 *Public Works Infrastructure Requirements*. PCA has obtained an NPDES permit from the Hawai'i Department of Health (DOH), Clean Water Branch. A project-specific Storm Water Pollution Prevention Plan has also been prepared.
- Pursuant to HRS, Chapter 6E, in the event any artifacts or human remains are encountered during earthwork operations, the contractor(s) shall immediately suspend work in the immediate area of the find and notify the Honolulu Police Department, the Department of Land and Natural Resources (DLNR), and the State Historic Preservation Division (SHPD).

2.1.1 INSTALLATION OF EROSION AND SEDIMENT CONTROL PLAN MEASURES

PCA will require all contractors to follow CCH's *Rules Relating to Water Quality* throughout implementation of the Proposed Action.² In addition, PCA will designate either the contractor or an authorized representative or agent to be responsible for implementation of the ESCP for the Proposed Action. All measures incorporated into the ESCP which are intended to control erosion and other pollutants will be in place prior to commencement of any earthwork. Specific terms of the ESCP include the following elements:

² <https://www.honolulu.gov/dfmswq/rules-relating-to-water-quality.html>

- *Slope Protection.* Slope protection will be required in all areas with slopes greater than 15 percent and on other areas with moderate slopes that are prone to erosion unless they are being actively worked. In these instances, contractor(s) will use a diversion upstream (e.g., dikes, swales, slope drains, etc.), as appropriate, to divert water around the slope or provide a 10-foot buffer zone at the toe of the slope.
- *Temporary Stabilization.* Temporary stabilization will be required on disturbed areas which are at final grade or at the end of each day's work.
- *Permanent Stabilization.* All surfaces of disturbed areas will be permanently stabilized using vegetative covering, wire mesh (north zone only), and permanent erosion control matting, prior to removing temporary erosion and sediment control measures. Any remaining trapped sediment will be removed once the permanent stabilization measures have been established and the last of the ESCP measures have been removed.
- *Preserve Existing Vegetation.* Within the project site, all existing vegetation will be removed. Trees and other vegetation adjacent to the project site will be protected by temporary construction fencing throughout project implementation. The trees adjacent to the project will be evaluated by the project arborist to determine where root pruning is required to protect them from construction injury. Root pruning will be conducted by PCA staff under the arborist's supervision.
- *Perimeter Control.* Perimeter controls are required downslope of all disturbed areas.
- *Sediment Barriers and Fences.* Sediment fences or barriers shall be used downslope of all disturbed areas until slopes are stabilized. A sediment fence or other equivalent barriers will be installed at the toe of the slope and on contours at the following intervals: (i) slope $\geq 2:1$ at 10-foot spacing; (ii) slope $\geq 4:1$ and $< 2:1$ at 15-foot spacing; and (iii) slope $< 4:1$ at 20-foot spacing.
- *Inlet Protection.* All storm drain inlets on-site and those off-site with the potential to receive runoff from the project site shall use an inlet protection device unless directed to a sediment basin. Sediment levels may not exceed one third of the height of a sediment barrier or inlet protection device at any point along the length of the sediment barrier or inlet protection device. Sediment barriers and inlet protection devices will be unclogged and cleaned when performance is compromised. Torn, weathered, or sagging sediment barriers or inlet protection devices must be repaired or replaced immediately.
- *Tracking Control.* PCA will require all contractors to minimize sediment being tracked onto off-site roadways, sidewalks, and other paved areas by vehicles and equipment exiting the project site by restricting vehicle traffic to properly designated areas and using additional controls to remove sediment from vehicle tires prior to leaving the site. Vehicular parking, and movements on the project site must be confined to paved surfaces or predefined parking areas and vehicle paths, which will be marked with flags or boundary fencing. All pollutants and materials that are dropped, washed, tracked, spilled, or otherwise discharged from the project site to off-site streets, sidewalks, or other paved areas must be cleaned using dry methods such as sweeping and vacuuming. Washing pollutants and materials that are discharged from the project site to the

municipal storm drain system drain inlets or catch basins will be prohibited unless the material is sediment, and the inlets are directed to a sediment basin or sediment trap.

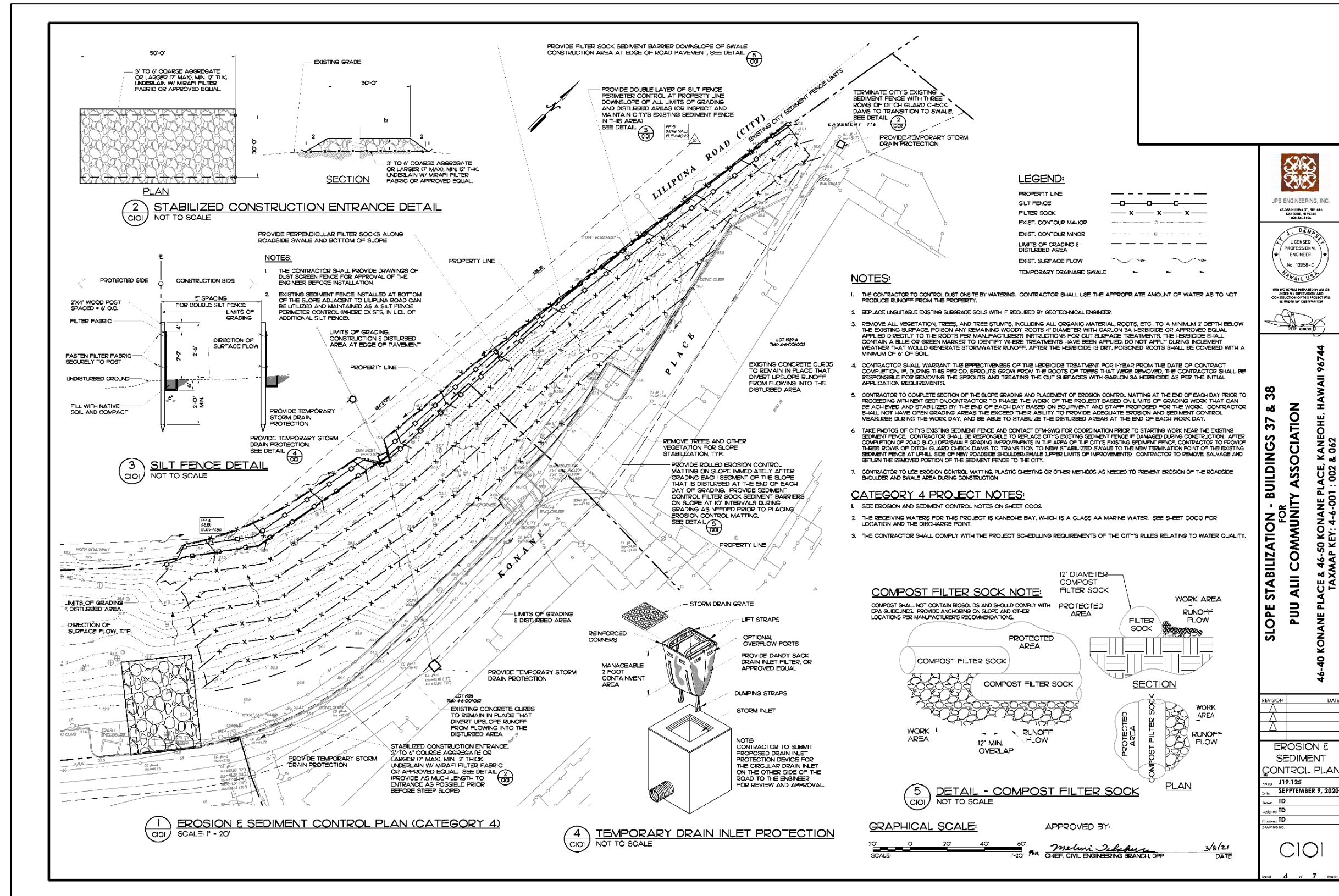
- *Best Management Practices.* BMPs shall not be removed from the project vicinity until final stabilization is complete. Specific pre-construction BMPs include: (i) stabilizing the construction entrance(s); (ii) emplacing silt fences; and (iii) emplacing drain inlet protection. During construction, BMPs will include: (i) temporary soil stabilization; (ii) wind erosion control; (iii) material delivery and storage measures; (iv) material use measures; (v) a stockpiling plan; (vi) spill prevention and control measures; (vii) solid waste management; (viii) hazardous materials management; (ix) concrete waste management; (x) sanitary/septic waste management; and (xi) filter socks. Permanent, post-construction BMPs will be slope stabilization with erosion control matting.

The sequence of implementation for the ESCP will commence with stabilization of the construction entrance(s), installation of perimeter controls including inspection, maintenance, and reuse of CCH's existing silt fence along portions of Lilipuna Road and the PCA property line where appropriate and installing inlet protection and temporary fencing for protected areas. Minor clearing and grubbing will be performed, as necessary for the installation of BMPs identified above. Once BMPs are installed, the contractor will clear and grade the site and construct the swale at the toe of the slope, followed by clearing, grubbing, and grading the project site to final grades. BMPs will be relocated, reconstructed, and maintained as needed during this work to keep them consistently effective throughout construction. Work will be performed while creating the least possible disturbance of vegetative areas and the CCH's silt fence adjacent to the construction limits, however, portions or all the CCH silt fence may need to be removed when needed during construction and installation of permanent BMPs. The contractor(s) will initiate permanent stabilization beginning with rolled erosion control matting or sediment barriers, immediately once the grading is complete, followed by the appropriate stabilization/anchoring system for each zone. Once the stabilization systems are in place, the project site will be hydromulched with a common Bermudagrass/ryegrass mix to quickly establish permanent vegetation on the slope. Once the vegetative cover has been fully established, the contractor will remove or dismantle the temporary erosion and sediment control measures. The contractor(s) will be required to practice good housekeeping measures throughout the duration of construction and will conduct weekly inspections to ensure that all terms of the ESCP are being properly implemented.

It should be noted that the MLP-related plantings will be installed on, and in addition to, the grass established as the permanent vegetative solution; the grass will not be removed.

Figure 2-1 depicts the ESCP for the North Zone. Figure 2-2 depicts the ESCP for the South Zone.

Figure 2-1 ESCP for the North Zone



JPB ENGINEERING, INC.
 47-088 HOLENA ST., STE. 414
 KANEHOE, HI 96744
 (808) 941-1111

TR. J. DEMPSEY
 LICENSED PROFESSIONAL ENGINEER
 No. 12058-C
 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THE PROJECT WILL BE UNDER MY CLOSE PERSONAL SUPERVISION.

SLOPE STABILIZATION - BUILDINGS 37 & 38 FOR PUU ALII COMMUNITY ASSOCIATION
 46-40 KONANE PLACE & 46-50 KONANE PLACE, KANEHOE, HAWAII 96744
 TAXMAP KEY: 4-4-001 : 002 & 062

REVISION	DATE

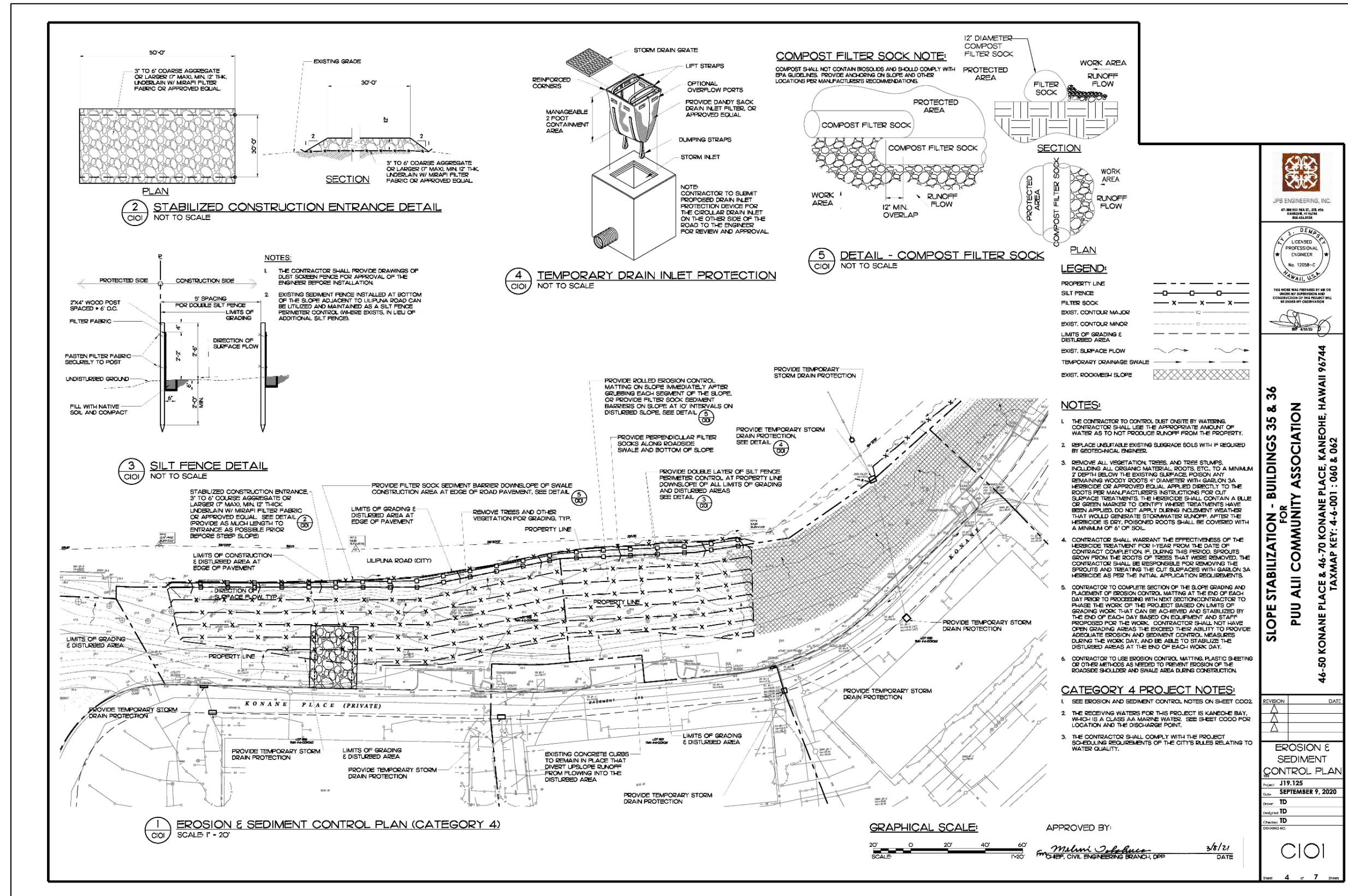
EROSION & SEDIMENT CONTROL PLAN
 No. J19.125
 Date: SEPTEMBER 9, 2020
 Drawn: TD
 Check: TD
 Engineer: TD
 Designer: TD

CIOI

Sheet 4 of 7

Source: JPB Engineering, Inc. (2020)

Figure 2-2 ESCP for South Zone



Source: JPB Engineering, Inc. (2020)

2.1.2 TREE REMOVAL AND GRUBBING

A substantial quantity of volunteer trees and other vegetation have colonized Kōnane Slope in addition to previously planted landscaping. These will need to be removed prior to implementation of the Proposed Action. Tree removal typically happens before the ESCP with the stumps left for clearing and grubbing. However, depending on the contractor selected, clearing and grubbing of all vegetation, including the trees, may take place following the establishment of the ESCP. Table 2-1 and Table 2-2 summarize the type and approximate number of trees to be removed in the North and South Zones, respectively. Figure 2-3 and Figure 2-4 depict the approximate tree removal plan for the North and South Zones, respectively.

Table 2-1 Approximate Tree Removal Plan for the North Zone

<i>Type</i>	<i>Number</i>
Mango	1
Octopus	2
Formosan Koa	4
Java Plum	14
Christmasberry	2
Date Palm	1
Golden Shower	3
Hala	5
Hawaiian Kou	4
Milo	3
Tulipwood	2
Dwarf Hau	1
Weeping Debdar	9

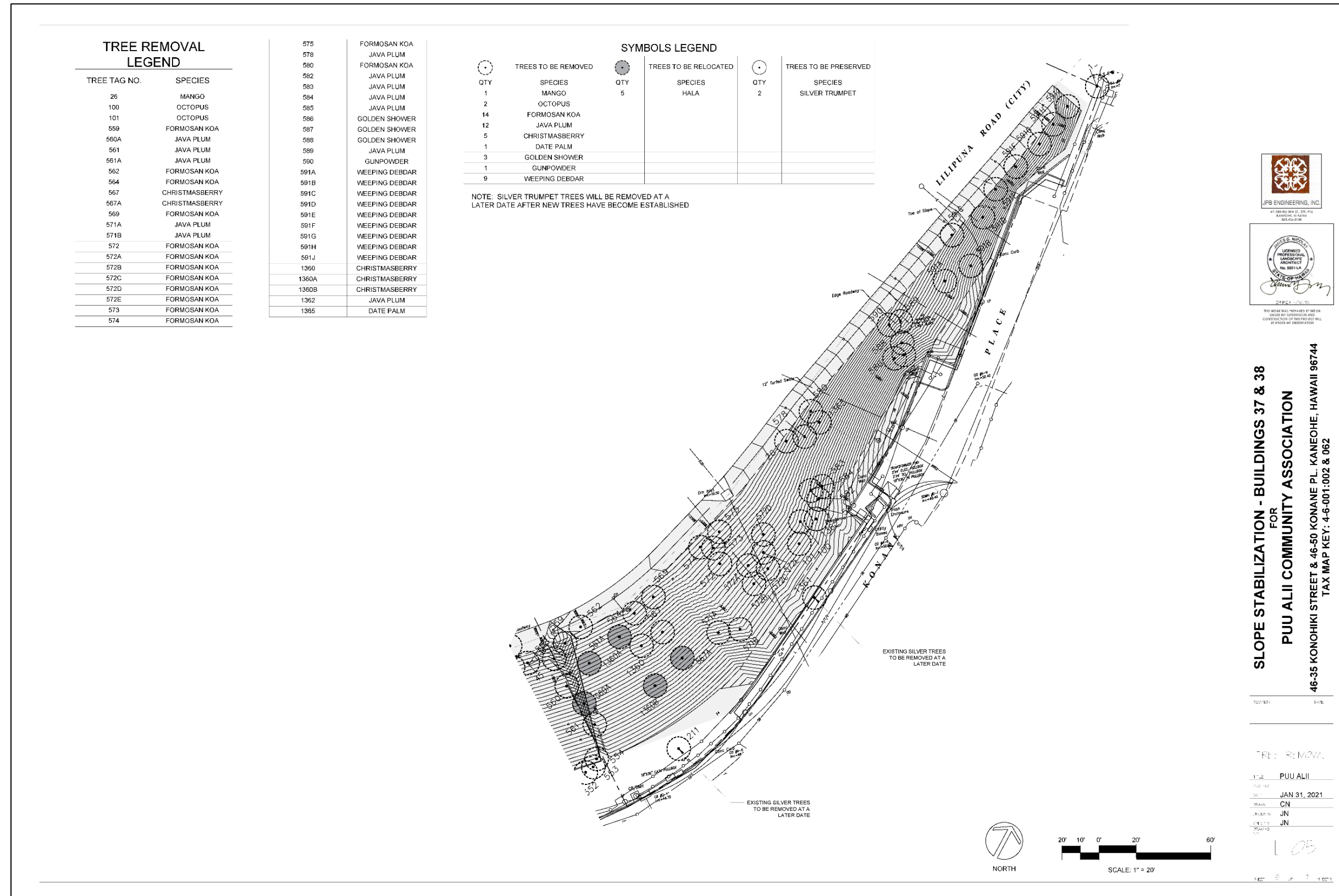
Source: Carol Kwan Consulting LLC Tree Inventory (2022)

Table 2-2 Approximate Tree Removal Plan for the South Zone

<i>Type</i>	<i>Number</i>
<i>Albizia lebbbeck</i>	23
Java Plum	18
Formosan Koa	18
Guava	2
Octopus Tree	1
Coconut Palm	4
Kamani	4
Geiger Tree	4
Tulipwood	3
Noni	6

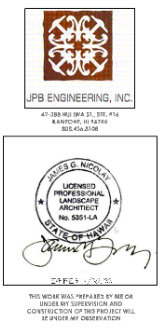
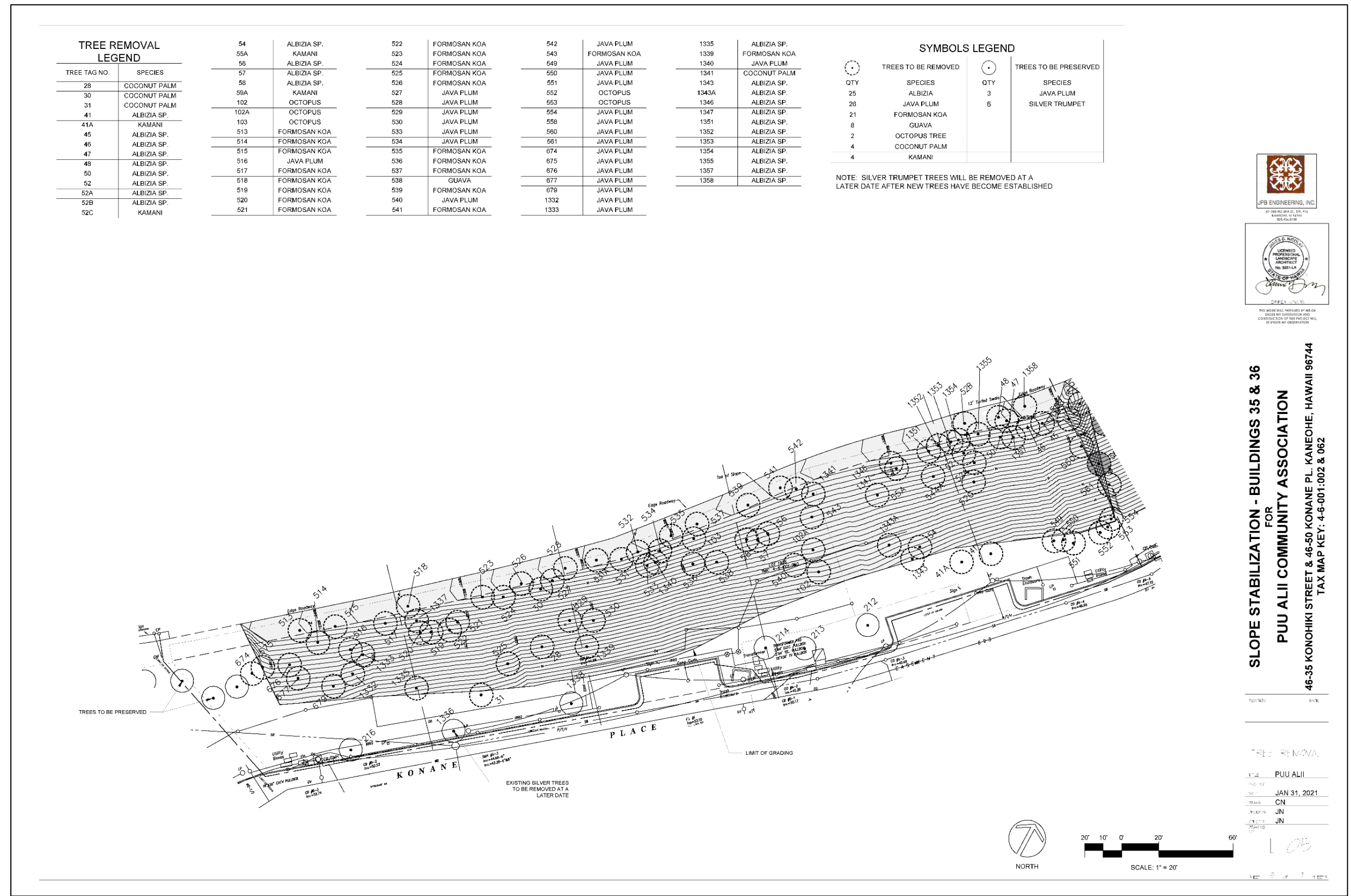
Source: Carol Kwan Consulting LLC Tree Inventory (2022)

Figure 2-3 Approximate Tree Removal Plan for the North Zone



Source: Nicolay Design Inc. (2020)

Figure 2-4 Approximate Tree Removal Plan for the South Zone



SLOPE STABILIZATION - BUILDINGS 35 & 36
FOR
PUU ALII COMMUNITY ASSOCIATION
46-35 KONOHIKI STREET & 46-50 KONANE PL. KANEHOE, HAWAII 96744
TAX MAP KEY: 4-6-001.002 & 062

1" = 20'
 PUU ALII
 JAN 31, 2021
 CN
 JN
 JN
 JN

Source: Nicolay Design Inc. (2020)

2.1.3 EARTHWORK AND SOIL STABILIZATION

2.1.3.1 *General Overview*

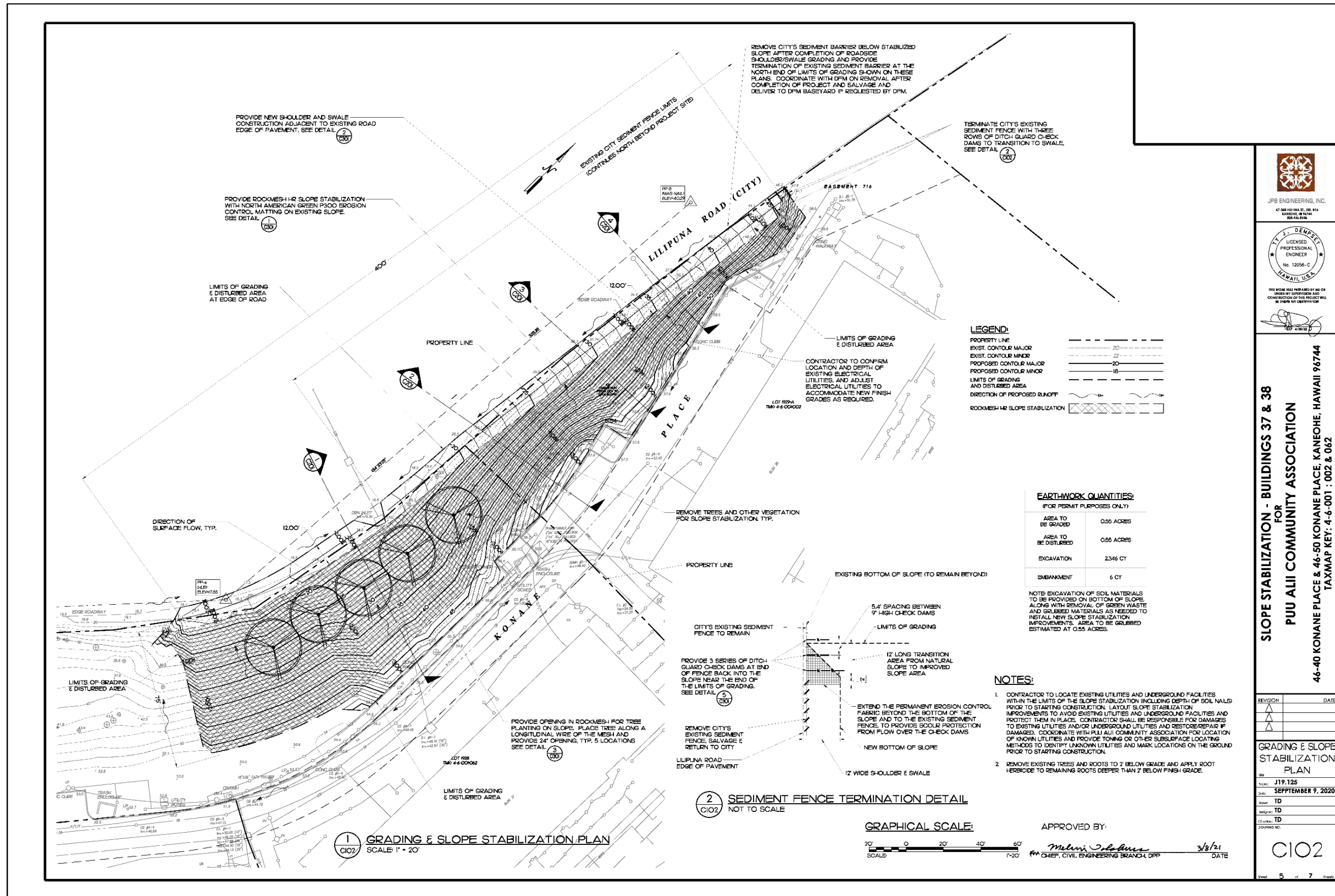
Once the ESCP measures have been emplaced (Section 2.1.1) and all trees and other vegetative ground cover have been removed to the extent required (Section 2.1.2), the area will be graded according to civil engineer's grading plan. Figure 2-5 and Figure 2-6 depicts the grading plan for the North and South Zones, respectively. All grading work will be done in accordance with ROH, Chapter 18A, Articles 1, 2, 3 and 4 §14-13, 14, 15, and 16 relating to grading, soil erosion, and sediment control. PCA will mandate that the contractor(s) conduct their earthwork and slope stabilization tasks in a manner that avoids rocks, soil, or debris falling, sliding, or flowing onto adjoining properties, streets, or natural watercourses and to take immediate remedial action should such a situation occur.

Prior to beginning grading operations, the limits of the area to be graded shall be flagged or otherwise clearly demarcated. Next, the contractor(s) will take note of all underground pipes, cables, or duct lines that are known to exist within the project site via a search of available records and plans. In areas which are known to harbor underground interconnections, the contractor(s) will verify the location and depth of the facilities and exercise proper care in excavating that area. Where connections of new utilities are shown in the plans, the contractor(s) shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation of the new lines. At this time, the contractor(s) will also ensure that adequate provisions are made to prevent surface water from damaging the cut face of an excavated area or the sloped surfaces of fill. In addition, adequate provisions will be made to prevent any sediment-laden runoff from escaping the project site.

The contractor will complete each section of the slope grading and placement of erosion control matting at the end of each day prior to proceeding with the next section. The contractor will phase the work based on the limits of the grading work that can be achieved and stabilized by the end of each day, based on equipment and staff present. Once all cut and fill has been completed, any exposed areas will be sodded, planted, or have permanent landscaping or pavements in place as soon as final grade has been established. All work will be completed according to Note #5 on C101 sheet (see Figure 2-1). Planting will be implemented within a reasonable time following grading and stabilization work; grading to final grade shall be continuous, and any area within which work has been interrupted or delayed shall be planted within a reasonable time (Section 2.1.4). All fills on slopes greater than 5:1 will be keyed.³

³ In engineering, a keyway is a longitudinal slot cut into and along the foot of a slope, to accept and support overlain and compacted fill, helping to prevent relative motion between the slope and the fill overlay.

Figure 2-5 Grading Plan and Slope Stabilization for the North Zone



JPB ENGINEERING, INC.
 47-088 HUI'UA ST., 2ND FLD.
 KANEHOE, HI 96744
 808-933-1111

T. J. DEMPSEY
 LICENSED PROFESSIONAL ENGINEER
 NO. 12058-C
 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THE PROJECT WILL BE UNDER MY CLOSE PERSONAL SUPERVISION.

SLOPE STABILIZATION - BUILDINGS 37 & 38
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 46-40 KONANE PLACE & 46-50 KONANE PLACE, KANEHOE, HAWAII 96744
 TAXMAP KEY: 4-4-001 : 002 & 062

REVISION	DATE

GRADING & SLOPE STABILIZATION PLAN

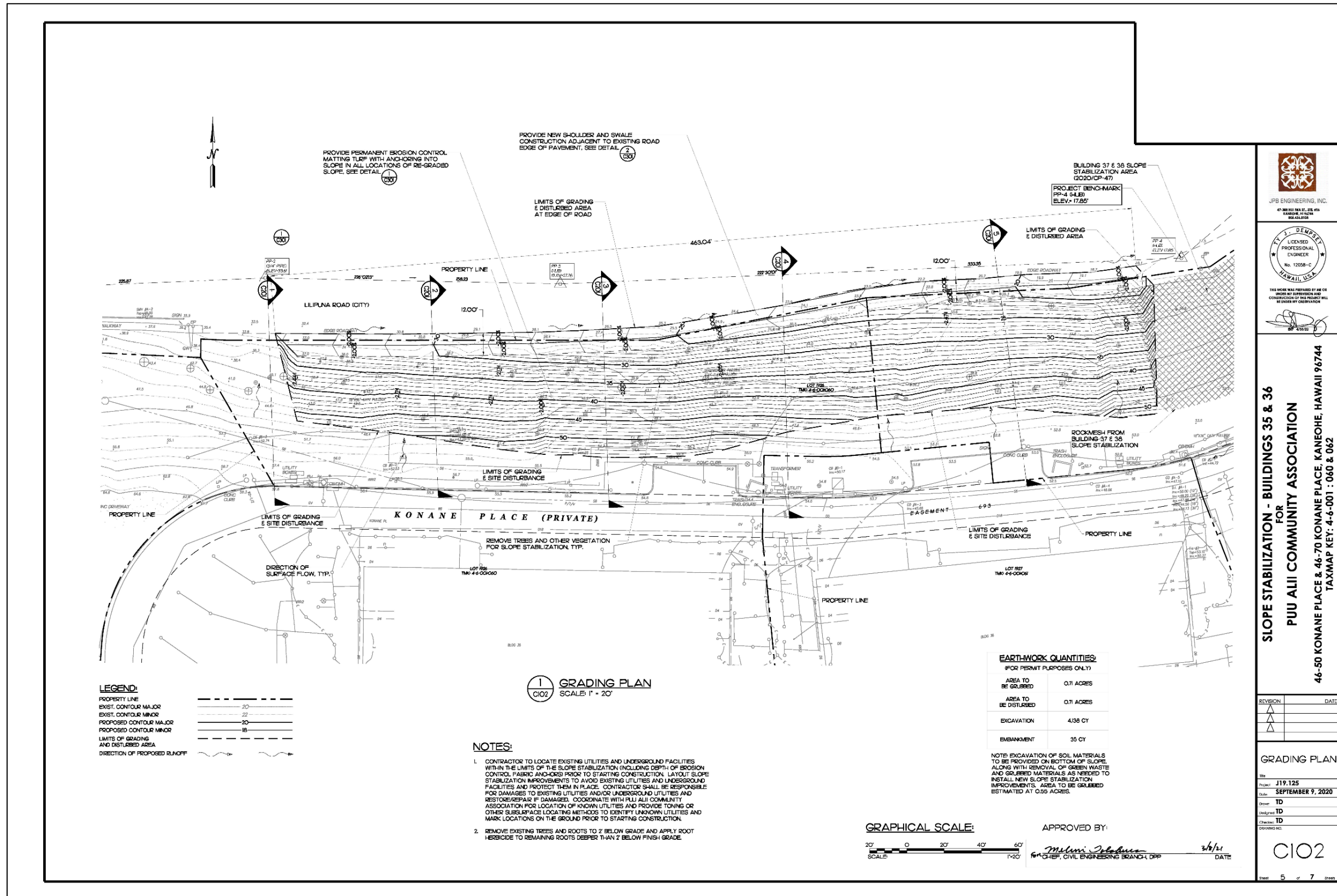
Job No. J19-125
 Date: SEPTEMBER 9, 2020
 Drawn by: TD
 Checked by: TD
 In Charge: TD
 Designer: TD

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Sheet 5 of 7

Source: JPB Engineering, Inc. (2020)

Figure 2-6 Grading Plan for the South Zone



Source: JPB Engineering, Inc. (2020)

2.1.3.2 North Zone Earthwork

The earthwork and soil stabilization operations in the North Zone will commence with grading, including all excavation and fill for the area, per the *Grading and Slope Stabilization Plan* shown in Figure 2-5. Table 2-3 summarizes the estimated earthwork quantities required in the North Zone of the project site.

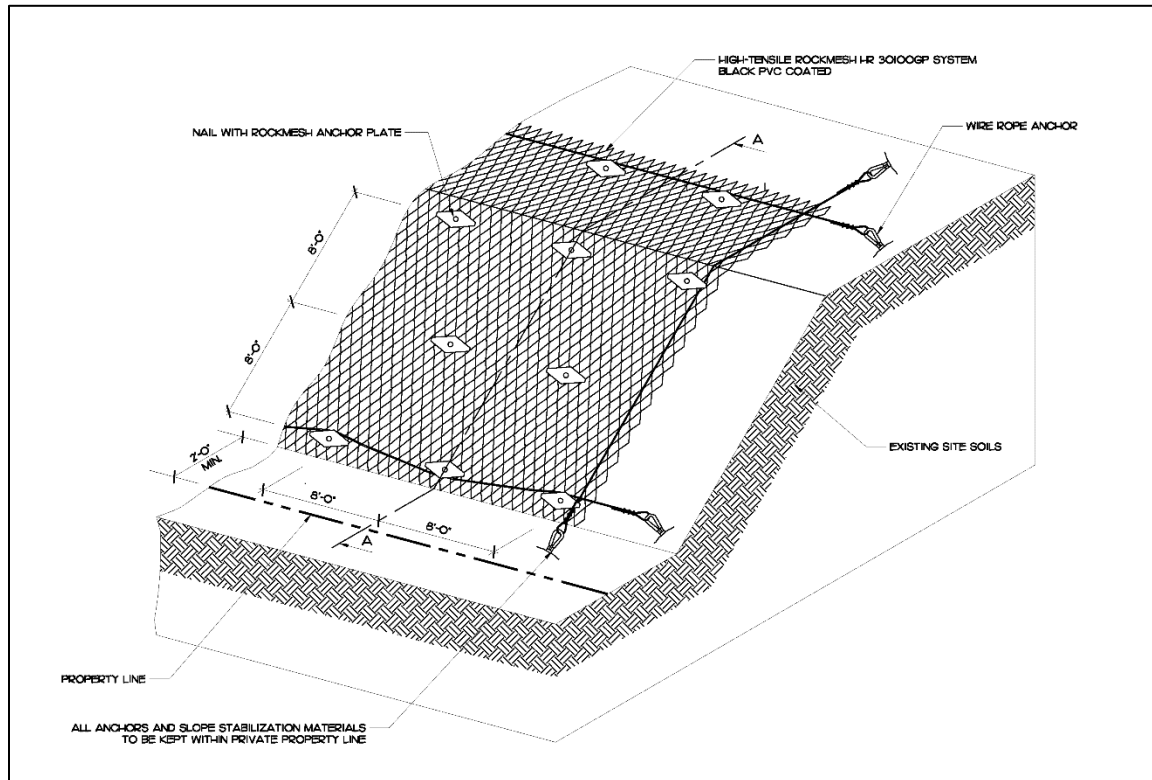
Table 2-3 Estimated Earthwork Quantities for the North Zone

<i>Description</i>	<i>Quantity</i>
Area to be Graded	0.55 ac.
Area to be Disturbed	0.55 ac.
Excavation	2,346 c.y.
Embankment	6 c.y.

Source: JPB Engineering, Inc. (2020)

Once the preliminary earthwork is completed, PCA’s contractor(s) will install North American Green P3000 erosion control matting (or an equivalent material) topped with RockMesh HR™ steel wire mesh geo-composite system, manufactured by Maccaferri USA, Inc., attached to grouted soil nails drilled into the slope to stabilize the soil (Figure 2-5). The RockMesh HR™ System will be affixed to the slope with a series of anchor plates, U-bolt soil nails, and mesh connectors. Reinforced openings in the RockMesh HR™ for tree planting will be created at intervals, per the Grading and Slope Stabilization Plan for the North Zone. Figure 2-7 provides a schematic depiction of the slope stabilization system in place.

Figure 2-7 North Zone RockMesh HR™ Soil Stabilization Oblique Detail



Source: JPB Engineering, Inc. (2020)

2.1.3.3 South Zone Earthwork

The earthwork operations in the South Zone will commence with grading, including all excavation and fill for the area, per the grading plan shown in Figure 2-6. Table 2-4 summarizes the earthwork quantities required in the South Zone of the project site. Due to the more moderate slope in the South Zone, no additional soil stabilization via RockMesh HR™ or soil nails is required. However, Platipus ARGs Percussive Driven Earth anchors will be placed through a layer of North American Green P3000 erosion control matting, laid over the slope surface to control soil creep.

Table 2-4 Approximate Earthwork Quantities for the South Zone

<i>Description</i>	<i>Quantity</i>
Area to be Graded	0.71 ac.
Area to be Disturbed	0.71 ac.
Excavation	4,138 c.y.
Embankment	35 c.y.

Source: JPB Engineering, Inc. (2020)

2.1.4 GRASSING

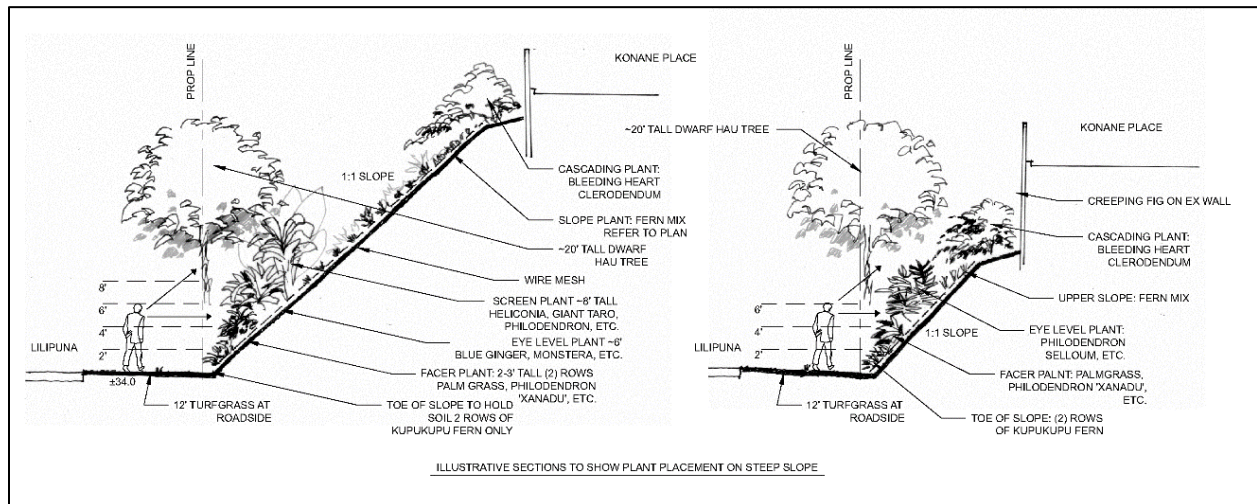
Once all grubbing, grading, earthwork, and soil stabilization measures described in the preceding subsections are complete, planting of the disturbed area with permanent landscaping consisting of Bermudagrass/ryegrass mix will occur.

2.2 IMPLEMENTATION OF THE DPP-APPROVED MLP

2.2.1 PLANTING

Planting will follow the stabilization work and will be installed per zone within a reasonable amount of time. This will subsequently be followed by the installation of additional landscaping per zone within a reasonable amount of time, consistent with the MLP (see Appendix A for relevant excerpts). Subsequent plantings are intended to implement the MLP that provides a vegetated buffer to soften the view of the Pu‘u Ali‘i development from viewers traveling along Lilipuna Road or looking up from residences along Kāne‘ohe Bay in compliance with the CCH Cluster/PD-H guidelines. To achieve this secondary objective, the MLP design calls for layers of plantings, placing taller trees within the Pu‘u Ali‘i property lower on Kōnane Slope and between the buildings, tropical foliage plants along the face of the slope, and shrubbery in select locations along the face of the slope. Figure 2-8 provides illustrative sections to show plant placement on steep sloped land at a conceptual level.

Figure 2-8 Conceptual Plant Placement on Steep Slope



Source: JPB Engineering, Inc. (2020)

While there is variation in the species and number of plantings between the North and South Zones, the concept throughout the projects area is consistent. Table 2-5 and Table 2-6 summarize the approximate plantings in the North and South Zones, respectively. The approximate planting plan for the North Zone is shown in Figure 2-9 and Figure 2-10 and the plan for the South Zone is shown in Figure 2-11 and Figure 2-12.

Table 2-5 Planting Plan for the North Zone: Approximate Species and Count

<i>Common Name</i>	<i>Botanical Name</i>	<i>Count</i>
Trees and Large Palms		
Geometry Tree	<i>Bucida buceras</i>	1
False Olive	<i>Elaeodendron orientale</i>	6
Tulipwood	<i>Harpulia pendula</i>	5
Dwarf Hau	<i>Hibiscus tilleaceus 'Dwarf'</i>	9
Lignum vitae	<i>Lignum vitae</i>	1
Areca Palm, Large	<i>Chrysalidocarpus lutescens</i>	4
Winin Palm	<i>Veitchia joannis</i>	11
Hala	<i>Pandanus tectorius</i>	18
Cockspur Coral Tree	<i>Erythrina crista-galli</i>	1
Woody Shrubs, Large Tropical, and Small Palms		
Tiare Gardenia	<i>Gardenia taitensis</i>	14
Song of India	<i>Dracaena reflexa</i>	9
Areca Palm, Small	<i>Chrysalidocarpus lutescens</i>	17
Raphis Palm	<i>Rhapis excelsa</i>	23
Giant Taro	<i>Alocasia macrorrhizos</i>	18
Philo Selloum	<i>Philodendrom selloum</i>	12
Monstera	<i>Monstera deliciosa</i>	28
Bleeding Heart	<i>Clerodendrum thomsonia</i>	31
Hanging Heliconia	<i>Heliconia rostrata</i>	9
Red Alcahypha	<i>Alcahypha wilkensisiana</i>	6
Red Ti	<i>Cordeline sp.</i>	21
El Dorado	<i>Pseuderanthemum reticulatum</i>	24
Mass Planted Tropicals and Groundcover		
Blue Ginger	<i>Dichorisandra thrysflora</i>	150
Dryland Taro	<i>Colocasia/Alocasia</i>	150
Ludovia lancifolia	<i>Ludovia lancifolia</i>	10
White Ginger	<i>Alpina vittate</i>	10
Spiral Ginger	<i>Costus woodsonii</i>	100
Parrot's Beak Heliconia	<i>Heliconia psittacorum</i>	300
Dwarf Jamaican Heliconia	<i>Heliconia stricta</i>	644
Heliconia "Nicky"	<i>Heliconia psittacorum x marginata 'Nickeriensis'</i>	50
Palmgrass	<i>Molineria capitulata</i>	500
Sanchezia	<i>Sanchezia speciosa</i>	251
Kupukupu Fern	<i>Nephrolepsis cordifolia</i>	8280
Lau'ae Fern	<i>Phymatosorus sp.</i>	974
Palapalai Fern	<i>Microlepis strigose</i>	486
Birdnest Fern	n/a	100
Turf Grass	<i>Zoysia 'El dorado Toro'</i>	6203

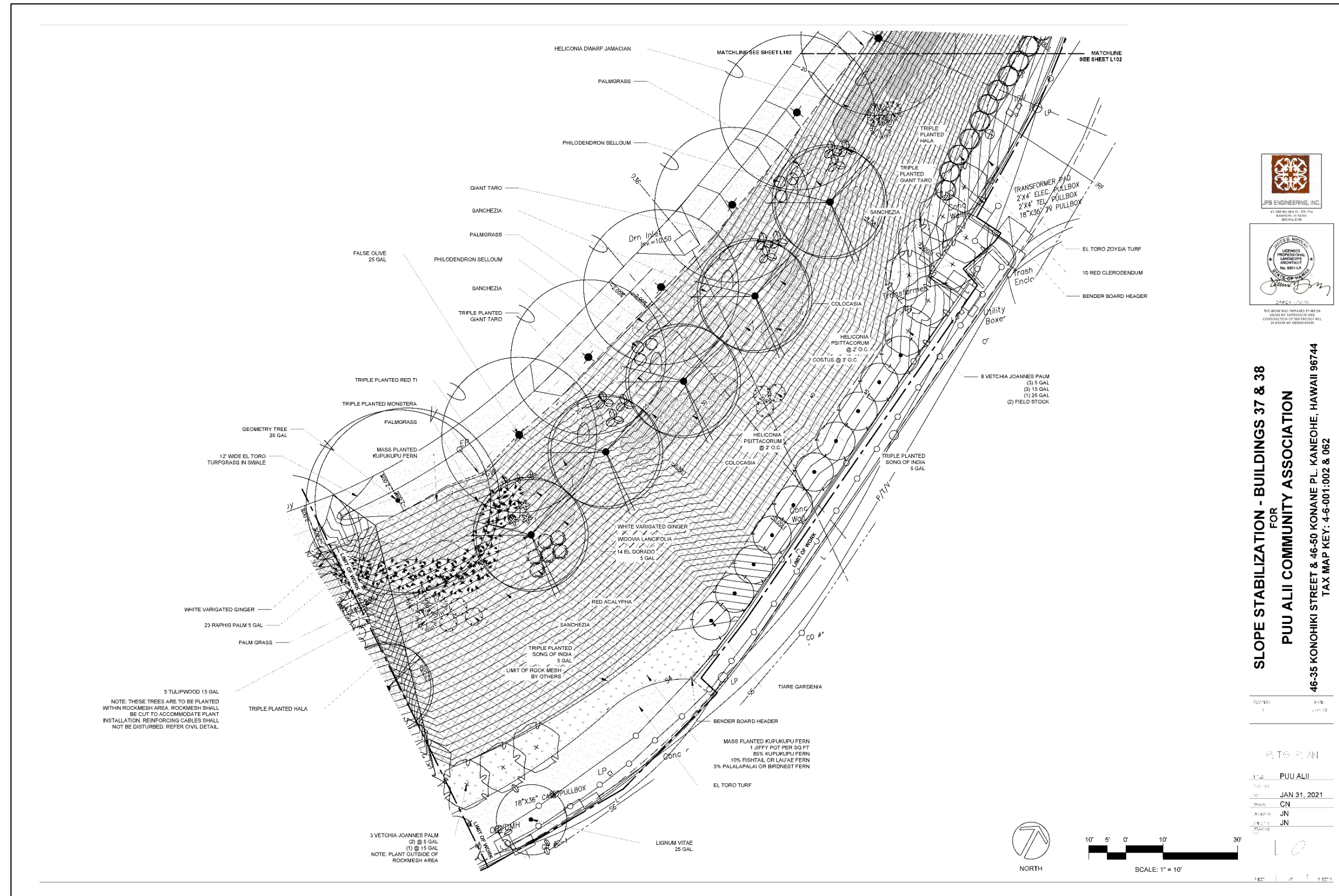
Source: Nicolay Design Inc. (2020)

Table 2-6 Planting Plan for the South Zone: Approximate Species and Count

<i>Common Name</i>	<i>Botanical Name</i>	<i>Count</i>
Trees and Large Palms		
Geometry Tree	<i>Bucida buceras</i>	2
False Olive	<i>Elaeodendron orientale</i>	1
Tulipwood	<i>Harpulia pendula</i>	15
Geiger Tree	<i>Cordia sebestena</i>	17
Lignum vitae	<i>Lignum vitae</i>	7
Veitchia Palm	<i>Veitchia joannis</i>	4
Hala	<i>Pandanus tectorius</i>	8
Woody Shrubs, Large Tropical, and Small Palms		
Tiare Gardenia	<i>Gardenia taitensis</i>	11
Pink Mussaendra	<i>Mussaendra x 'Doña Luz'</i>	5
Crepe Gardenia	<i>Tabernaemontana divaricata</i>	17
Rose Jatropha	<i>Jatropha integerrima</i>	6
Rhaphis Palm	<i>Rhaphis excelsa</i>	30
Heliconia Red Caribaea	<i>Heliconia caribaea 'Purpurea'</i>	13
Heliconia Yellow Caribaea	<i>Heliconia caribaea 'Gold'</i>	5
Giant Taro	<i>Alocasia macrorrhizos</i>	3
Philo Selloum	<i>Philodendrom selloum</i>	33
Red Ixora	<i>Ixora 'Nora Grant'</i>	9
Red King Ixora	<i>Ixora coccinea</i>	8
El Dorado	<i>Pseuderanthemum reticulatum</i>	150
Purple Caricature	<i>Graptophyllum pictum</i>	54
Croton	<i>Codiaeum sp.</i>	86
Wax Ficus	<i>Ficus macrophylo crassifolia</i>	200
Mass Planted Tropicals and Groundcover		
Lau'ae	<i>Phymatosorus grossus</i>	7100
Parrot's Beak Heliconia	<i>Heliconia psittacorum</i>	200
White Var. Costus	<i>Costus aribicus</i>	300
Palmgrass	<i>Molineria capitulata</i>	500
Sanchezia	<i>Sanchezia speciosa</i>	144
Kupukupu Fern	<i>Nephrolepis cordifolia</i>	5228
Lau'ae or Fishtail Fern	<i>Phymatosorus grossus or Nephrolepis falcata</i>	615
Palapalai Fern	<i>Microlepis strigose</i>	407
Turf Grass	<i>Zoysia 'El dorado Toro'</i>	18624

Source: Nicolay Design Inc. (2020)

Figure 2-9 Planting Plan for the North Zone: 1 of 2



Source: Nicolay Design Inc. (2020)

Figure 2-10 Planting Plan for the North Zone: 2 of 2

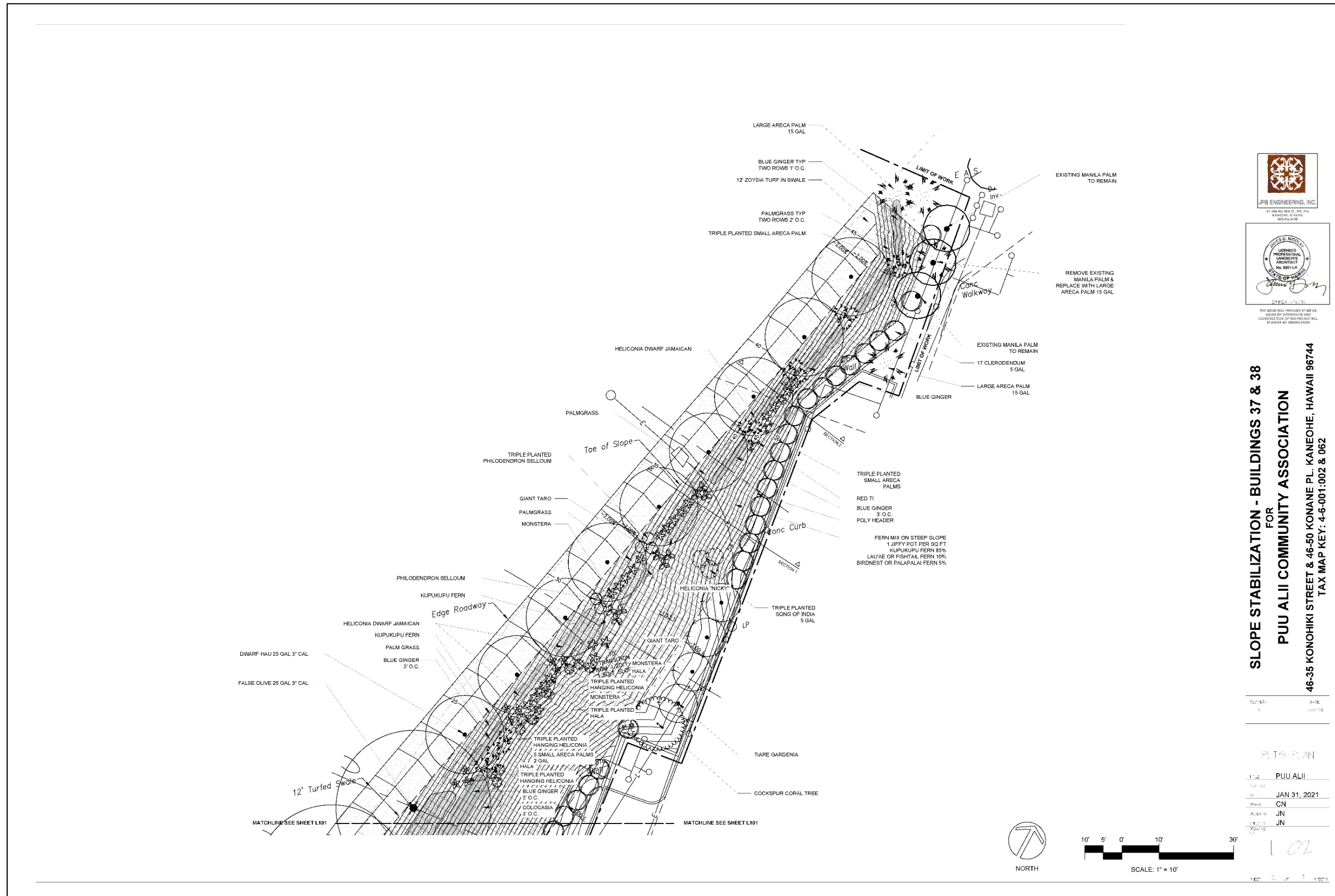
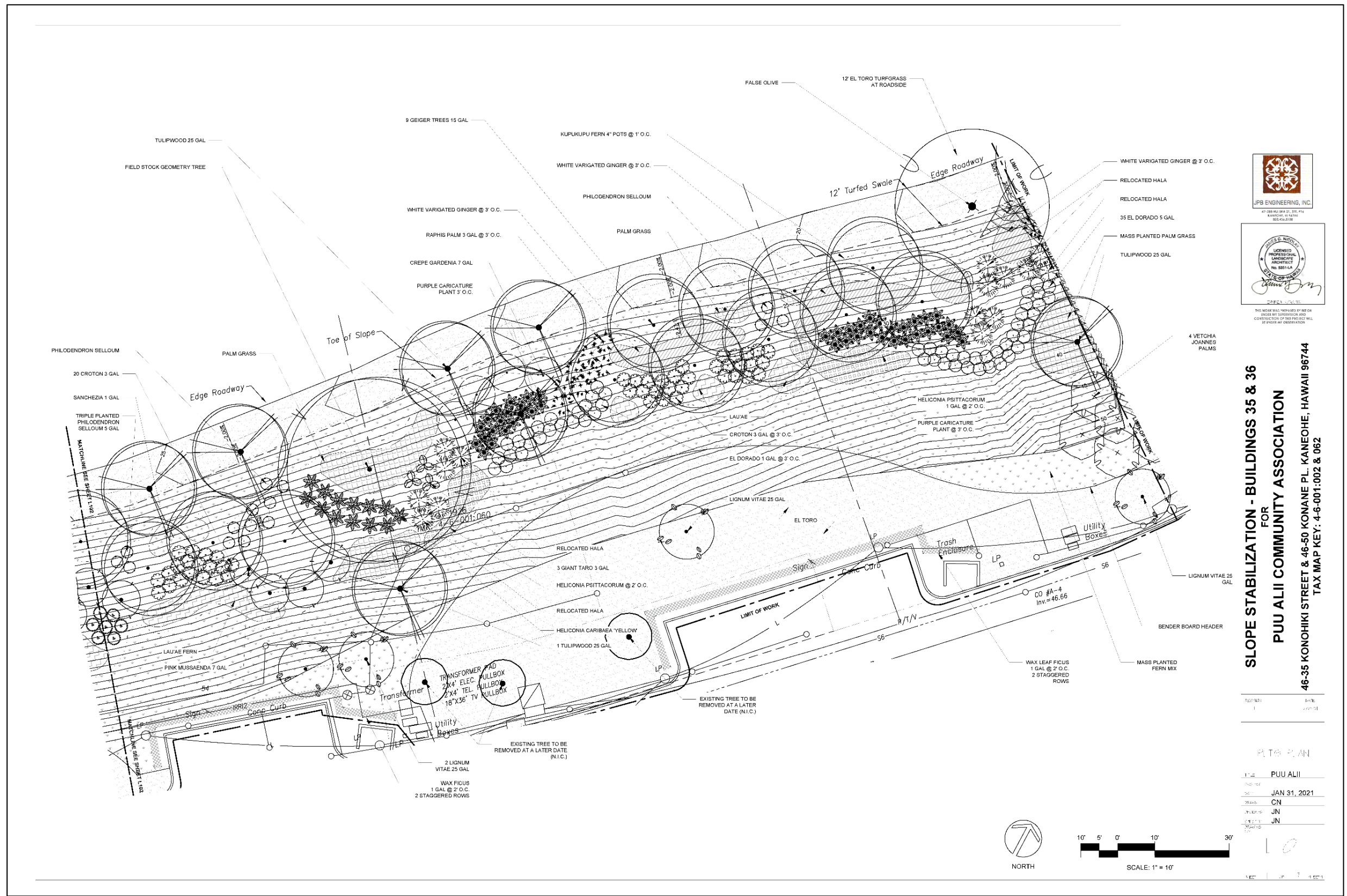
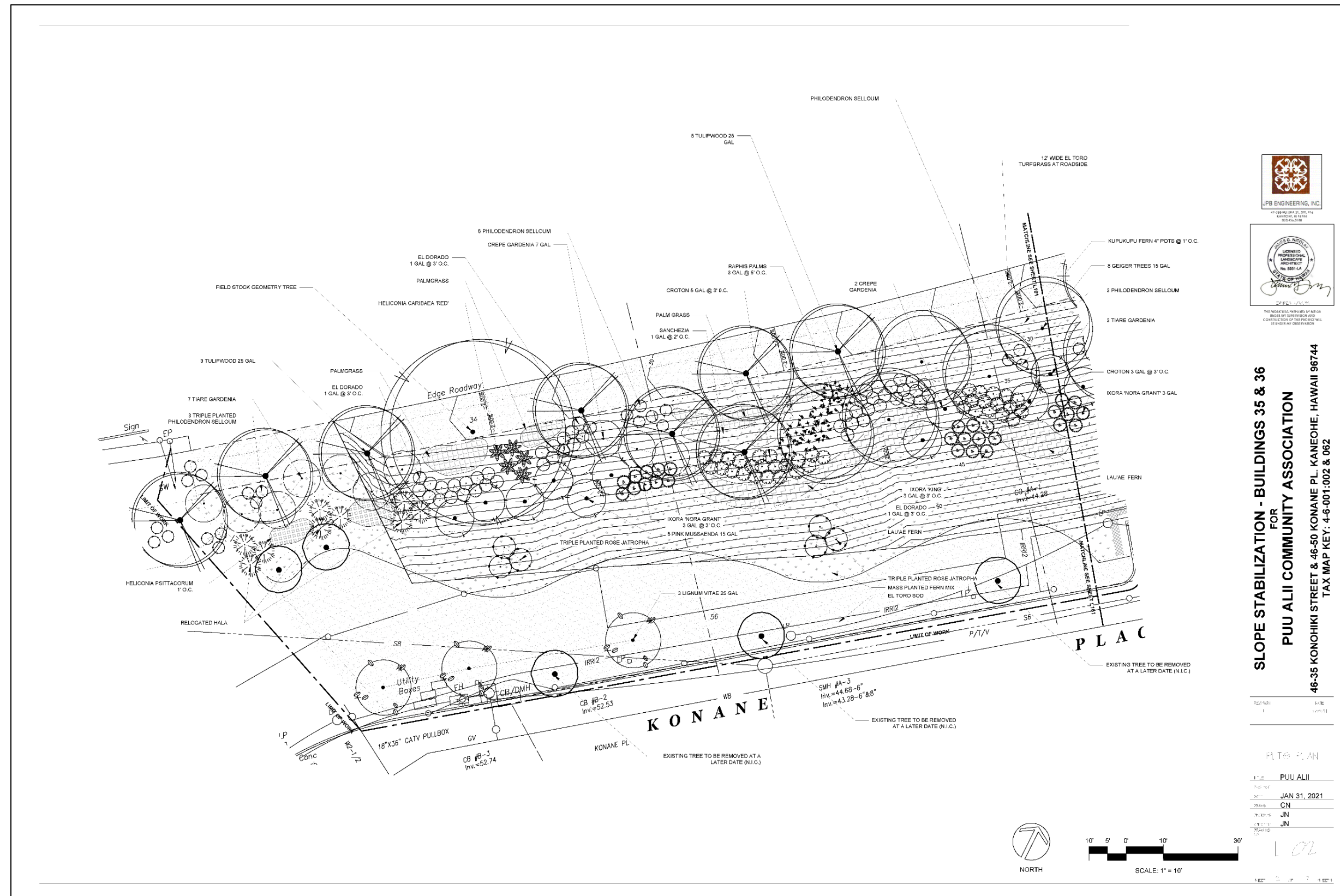


Figure 2-11 Planting Plan for the South Zone: 1 of 2



Source: Nicolay Design Inc. (2020)

Figure 2-12 Planting Plan for the South Zone: 2 of 2



Source: Nicolay Design Inc. (2020)

2.2.2 VEGETATION ESTABLISHMENT

Once all landscaping has been installed, pursuant to the MLP discussed in Section 2.1.4, PCA's contractor(s) will oversee an approximately 180-day (six month) post-installation establishment and maintenance period for each of the North and South Zones. The principal goal of this phase is to monitor and assess the establishment of the vegetative landscaping and to take any remedial action required to ensure that it flourishes in the project site. Once established, the vegetation will serve its aesthetic function as a visual buffer to the Pu'u Ali'i property from nearby vantage points. During this post-installation maintenance period, regular inspections will be carried out to ensure that the plantings are properly irrigated and viable and thriving. If any plantings do not meet the inspection criteria, they may be remedied or replaced by the landscape contractor. At the completion of the establishment periods, which may extend beyond 180-days if any plants have failed to establish within the establishment and maintenance period, maintenance of the landscaping will be turned over to PCA's landscape maintenance contractor for ongoing maintenance. The landscape maintenance at the site is: (i) monitored weekly by the Landscape Maintenance Contractor and the PCA Maintenance Staff; and (ii) reviewed approximately every four months during a PCA Landscape Committee walkthrough to ensure that all areas receive appropriate landscape maintenance work as part of the rotation between phases. Most temporary erosion and sediment control measures will be removed prior to installation of the landscaping. After establishment, the remaining temporary measures will be removed.

The PCA has both a certified arborist and a licensed landscape architect who monitor and advise on issues of plant establishment, health, stability, and ongoing issues such as trimming, pest/disease control, etc. The certified arborist conducts annual inspections of the trees on the property and helps to develop the scope of work for pruning contracts in coordination with PCA staff, to ensure that trees are maintained in accordance with industry standards and best management practices. The PCA will notify DPP of any significant landscape changes as part of the MLP, if any, on an annual basis.

2.3 PRELIMINARY SCHEDULE FOR THE PROPOSED ACTION

PCA intends to complete the Kōnane Slope Stabilization Project, including all the tasks identified in preceding subsections, as expeditiously as practicable. The major project-related tasks, and their preliminary schedule for completion, are presented in Table 2-7 below. Readers should note that this preliminary construction schedule is estimated; dates may be adjusted depending on the contractor selected, and the availability of labor, equipment, and materials.

Table 2-7 Preliminary Schedule for the Proposed Action

<i>Task</i>	<i>Estimated Start Date</i>	<i>Estimated Completion Date</i>
Pre-Assessment Scoping	2/25/2022	3/28/2022
Environmental Assessment	7/8/2022	5/2023
SMP Major	5/2023	9/2023
Other Permitting, Construction Bidding, and Contractor Selection	10/2023	1/2024 (Est. 2-4 months after SMP acquired)
Erosion and Sediment Control	2/2024 (Est. 4-5 months after SMP acquired).	3/2024 (Est. 6 months after SMP acquired)
Grubbing and Grading	3/2024 (Est. 6-7 months after SMP acquired)	6/2024 (Est. 8-10 months after SMP acquired)
Planting (approximately 6-8 weeks per zone)	6/2024 (Est. 7-9 months after SMP acquired)	10/2024 (Est. 11-13 months after SMP acquired)
Vegetation Establishment Monitoring (6 month duration per zone)	8/2024 (Est. 8-9 months after SMP acquired)	4/2025 (Est. 17-18 months after SMP acquired)

Source: Compiled by Planning Solutions, Inc. (2022)

2.4 PROJECT BUDGET

The estimated project cost is approximately \$3.5 to \$3.65 million.

2.5 ALTERNATIVES

2.5.1 FRAMEWORK FOR CONSIDERATION OF ALTERNATIVES

Title 11, Chapter 200.1, HAR contains the administrative rules implementing environmental review under HRS Chapter 343. HAR § 11-200.1-9 deals with applicant actions such as the Kōnane Slope Stabilization Project. It requires that, for actions not exempt, the applicant must consider the environmental factors and available alternatives and disclose those in an EA or Environmental Impact Statement (EIS). HAR § 11-200.1-18 establishes the process for the preparation and content of an EA. Among the requirements listed, HAR § 11-200.1-18(d)(7) requires the identification and analysis of impacts of alternatives considered during project planning.

In accordance with those requirements, PCA has considered several alternatives before determining that the Proposed Action described above is the preferred alternative. The process consisted of formally defining the purpose and need for the project (Section 1.1 and 1.2), identifying other ways in which those objectives might be achieved and evaluating each alternative with respect to the project’s objectives and its potential environmental impacts. Possibilities considered involved the “No Action” alternative; alternative construction methods, including buttress fill without soil reinforcement, buttress fill with soil reinforcement, grading with soil reinforcement and Tecco® mesh, and retaining walls; and alternative timing (i.e., delayed action).

2.5.2 ALTERNATIVES FOR DETAILED CONSIDERATION

PCA has concluded that the only viable alternatives that merit detailed consideration in this EA are:

- *Proposed Action.* PCA has concluded that regrading and installing soil reinforcement and surface stabilization measures, as proposed in this chapter (Section 2.1) and on its present timeline (Table 2-7), would best enable it to meet its purpose and need, as defined in Sections 1.2 and 1.3. Thus, the Proposed Action also represents PCA’s preferred alternative.
- *No Action Alternative.* Under the No Action Alternative, existing conditions on Kōnane Slope would not be changed in any way. In this scenario, no attempt would be made to alter existing conditions. There would be no implementation of erosion or sediment control measures, and no regrading or stabilization of Kōnane Slope. As a result, it would be challenging to impossible to plant the vegetation called for under the MLP in the North Zone, including the street trees along Lilipuna Road. Some understory plantings could be performed, but these plants would not likely survive due to the steepness of the terrain and the movement over time of the underlying soils. For the South Zone, some trees could be planted on the face of the slope. However, the street trees (required by the CCH Cluster/PD-H guidelines) along Lilipuna Road could not be planted, as they require a relatively flat area be graded adjacent to the roadway. While the No Action Alternative does not meet the project’s purpose and need, as defined in Sections 1.2 and 1.3, it is included here pursuant to the recommendations of HRS, Chapter 343 and HAR § 11-200.1, and to serve as a baseline for comparison and contrast with the Proposed Action.

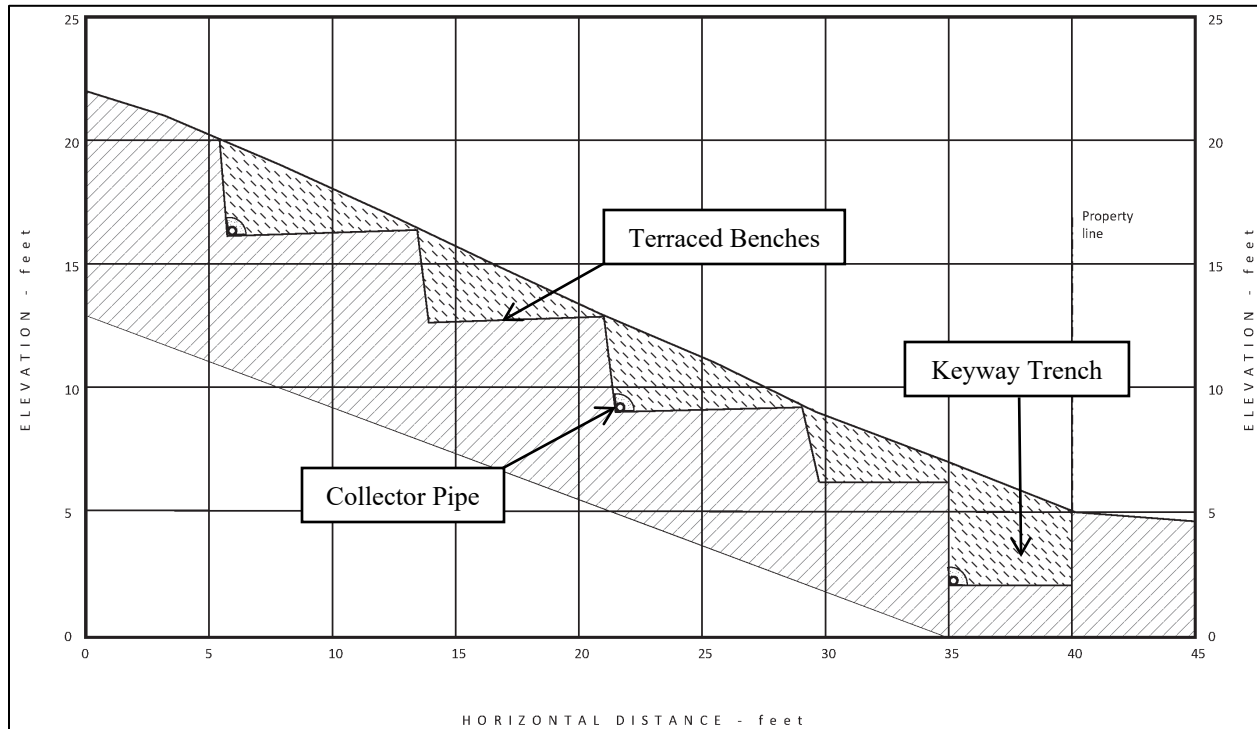
2.5.3 ALTERNATIVES CONSIDERED BUT REJECTED (ALTERNATIVE CONSTRUCTION METHODS)

The following subsections briefly summarize the other alternatives considered and the factors that were used to support excluding them from further detailed consideration.

2.5.3.1 *Buttress Fill Without Soil Reinforcement Alternative*

During preliminary planning for the Kōnane Slope Stabilization Project, PCA worked with its consultants to evaluate alternative methods of soil stabilization, including a “buttress fill without soil reinforcement” alternative (Figure 2-13). Under this alternative, PCA would work with a qualified civil engineer, who would determine areas to be filled to bring the finished slopes to the recommended maximum 2:1 (horizontal to vertical ratio) inclination as recommended in the Geotechnical Report for areas without soil reinforcement. The work would involve removing all surface vegetation followed by benching and keying the fill into the existing soils. Benches would consist of a terrace a minimum of eight-feet wide, with the maximum rise between benches of four feet. Subdrains would be placed at the base of each bench to collect and direct drainage away from the slope to an appropriate discharge area to maintain slope stability at the interface between the existing soils and the imported fill. Once the finished slope is achieved, the project site will be covered in erosion control matting and then planted with vegetation.

Figure 2-13 Buttrass Fill Alternative



Source: JPB Engineering, Inc. (2020)

In evaluating the Buttrass Fill Without Soil Reinforcement Alternative, PCA concluded that it was not a viable approach to stabilizing Kōnane Slope and fulfilling the project’s purpose and need, as identified in Section 1.2 and 1.3 of this report. The reason being there was insufficient horizontal distance (i.e., width of slope) in the North Zone to achieve the recommended 2:1 inclination without soil reinforcement. Additionally, significantly more grading and deeper benches would be needed. As such, the alternative was not selected for detailed consideration.

For the South Zone, buttrass fill was more feasible because of the horizontal distance (width) of the slope. However, it was determined that adding fill would be at higher risk of sediment runoff and storm water impairment due to increased soil movement operations compared to excavating (cutting) the slope as detailed in the Proposed Action. In addition, this alternative would have been more expensive to implement without resulting in a higher quality product.

2.5.3.2 Buttrass Fill with Soil Reinforcement Alternative

The buttrass fill with soil reinforcement alternative is the alternative above (Section 2.4.3.1) with the added use of soil nails to stabilize the deep soils plus Tecco® 65/3 + P33 mesh along with erosion control fabric to stabilize the surface soils in the North Zone. While this alternative would result in a stable solution, it was not selected due to an increased quantity of soil movement resulting in increased costs and increased risk of sediment runoff and storm water impairment due to longer construction duration.

2.5.3.3 Grading with Soil Reinforcement and Tecco® Mesh Alternative

The grading with soil reinforcement and Tecco® 65/3 + P33 mesh alternative for the North Zone was similar to the Proposed Alternative discussed in Section 2.1. During the ninety percent design development, it was determined that Tecco® mesh could not be modified with reinforced openings to accommodate the planting of woody plants (trees and shrubs). As such, PCA would not have been able to comply with the MLP or the CCH Cluster/PD-H Guidebook requirements for a vegetative visual buffer and street trees. Because of this, alternative steel mesh products were researched, and the specified product was changed to RockMesh HR™, which can be modified with reinforced openings to accommodate woody plants. This alternative was not considered for the South Zone as stabilization with soil nailing/steel mesh was not recommended for that area because it is not needed as the slope in the South Zone is not as steep as the North Zone. In addition, the slope in the South Zone can be stabilized by grading to the 2:1 configuration. To address the soil creep issue, the shallower anchor (platypus) system is instead recommended.

2.5.3.4 Retaining Wall Alternative

During preliminary planning for the Kōnane Slope Stabilization Project, PCA also considered a retaining wall alternative. Under this alternative, PCA would construct one or more retaining walls, which would be capable of fulfilling the project's purpose and need, as defined in Sections 1.2 and 1.3. Two different types of retaining walls were considered: (i) cast-in-place concrete and (ii) a semi-flexible structural retaining wall based on linked but non-grouted concrete masonry units connected to a soil reinforcing system. This type of retaining wall system is commonly referred to as "Mechanically Stabilized Earth" or "MSE".

Cast-in-place. For cast-in-place concrete retaining walls, the construction sequence would be to clear and grub the site by removing all surface vegetation followed by excavating sufficient amounts of soil within the area to safely construct the retaining wall footings. The amount of soil that would need to be excavated would depend upon the width of the footing, which is determined by the height of the retaining wall and the amount of material to be retained. For the Kōnane Slope, a major amount of soil would have needed to be excavated in the North Zone especially. Weepholes would be provided periodically along the base of the wall just above the footing to allow for the release of hydrostatic pressure from moisture trapped within the soil behind the retaining wall.

Mechanically Stabilized Earth (MSE). For a MSE system, the area behind the wall would be excavated to the depth of the wall footing and the width of the soil reinforcing strips. The wall would then be constructed layer-by-layer with the concrete masonry units (CMU) being connected to the reinforcing strip placed within the backfill area and then covered by a layer of compacted soil. The layers of CMU would also be mechanically connected to each other to deter lateral movement of the wall. Weep holes would not be installed for this type of wall, but a layer of drain rock is typically installed behind wall with a perforated drainage piped near the base to collect and divert moisture.

Using either retaining wall system, for the North Zone with its steeper terrain, either a series of grade adjustment retaining walls along the slope or one large retaining wall along Lilipuna Road would have been required. One large retaining wall installed immediately adjacent to Lilipuna

Road would have been visually unattractive for neighbors and for those traversing Lilipuna Road. For the South Zone, a series of grade adjustment retaining walls were considered.

Either retaining wall system would present obstacles for implementing the MLP to comply with the CCH Cluster/PD-H Guidebook requirements for a vegetative visual buffer and street trees. In addition to trees and shrubs to buffer upslope views between Lilipuna Road and the buildings, additional plants would be necessary to soften the look of the retaining walls. Depending on the number of retaining walls, the landscape of Kōnane Slope would be 'split' into various tiers parallel to the roadway. This could result in a less naturalistic landscape character when viewed from Lilipuna Road.

For the North and South Zones, installing grade adjustment retaining walls along the slope would prevent trees from being planted sufficiently distant from the walls to keep roots from damaging them. In addition, trees could not be planted within the MSE's reinforced soil areas without damaging the reinforced soil areas. For the North Zone, if one large wall along Lilipuna Road were installed, trees and other landscaping could be planted within the upper retained soil, but the wall itself could not be adequately screened by a vegetative buffer as provided under the MLP and required by the CCH Cluster/PD-H Guidebook.

Both types of retaining walls were eliminated from consideration for both the North Zone and South Zone because: (i) retaining walls would require significantly more earthwork, (ii) the MLP could not be implemented, (iii) construction would be significantly more disruptive and expensive, (iv) the construction duration would have been significantly longer, (v) retaining walls would be subject to vandalism, particularly by graffiti, and (vi) the visual impacts of large, concrete retaining walls are anticipated to be greater.

2.5.3.5 Delayed Action Alternative

PCA initiated the Kōnane Slope Stabilization Project after receiving a letter from DFM dated January 11, 2019, identifying potential discharges from the Pu'u Ali'i property. As noted in the DFM's letter, ROH Chapter 18A, Articles 1, 2, 3, and 4 ~~§14-12.23(a)~~ provides that it is unlawful for any person to discharge or cause to be discharged any pollutant into any drainage facility which causes a pollution problem in State waters or causes a violation of any provision of the City NPDES permit or the water quality standards of the State of Hawai'i.⁴ Violations of ROH Chapter 18A, Articles 1, 2, 3, and 4 ~~14, Article 12, Drainage Flood and Pollution Control, Section 14-12.28~~ may lead to enforcement actions and subject to an administrative fine of a minimum of \$1,000.00 up to a maximum of \$25,000.00 per violation per day.

PCA's decision to proceed with the Proposed Action was also instigated after PCA was notified by a landscape consultant that landscaping concerns on the Kōnane Slope could not be addressed due to the steep grade in the area. This expert opinion prompted the geotechnical investigations described above. The conclusions of the geotechnical study reinforced the view that grading and civil engineering solutions were necessary to ensure long-term slope stability.

⁴ In the interim between publication of the draft and this final EA, the City and County of Honolulu sections relating to grading, soil erosion, and sediment, originally contained in ROH, Chapter 14 are now in ROH, Chapter 18A.

The Geotechnical Report concluded that the Kōnane Slope is subject to soil creep and that some areas are at risk of soil slippage which require stabilization measures. Based on the results of the investigation, PCA concluded that delaying the Proposed Action was not a viable alternative and eliminated it from further consideration.

CHAPTER 3: EXISTING ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION

This chapter describes the potential environmental effects of the Kōnane Slope Stabilization Project and its alternative (No Action), as described in Chapter 2. This chapter is organized by resource category (e.g., water quality, air quality, noise, etc.). The discussion under each topic includes: (i) an overview of the existing conditions on the project site; (ii) the potential environmental impacts that may result from implementation of the Proposed Action and its alternative; and, where appropriate (iii) measures that PCA will take to avoid, minimize, or mitigate potential adverse effects. The scale of the discussion and analysis is commensurate with the potential for impacts. Where appropriate, the larger environmental context (e.g., Kāneʻohe Bay) is discussed, and in other cases the focus is narrower (e.g., Kōnane Slope). The discussion of impacts also distinguishes between short-term impacts (e.g., those occurring during earthmoving and planting) and those that may result over the long term.

3.1 BIOLOGICAL RESOURCES

3.1.1 EXISTING CONDITIONS

The existing vegetation consists of trees, palms, shrubs, herbaceous species, groundcovers, and grasses, most of which are invasive. A small percentage of the trees pre-existed the construction of the residential development. These were primarily the invasive species of Java plum and *Albizia lebbbeck*. As part of the landscaping for the residential development, another invasive species, Formosan koa, was planted as street trees as well as landscape trees along the slope. *Wedelia*, which is also invasive, was planted as the groundcover. The invasiveness of this species first became a concern in Hawaiʻi in the early 2000s, as identified via a 2001 *Senate Concurrent Resolution 45*, 2002 State Legislature Reference Bureau report, many years after the Puʻu Aliʻi development.

Since the existing landscaping present on the project site was planted, various unauthorized plantings have been added, including golden shower and noni trees, mock orange shrubs, and giant taro, a herbaceous species, but most of the landscape has been overtaken by invasive trees, palms, grasses, herbaceous species, and vines. In addition to the invasive plants, there are small areas where invasive species (e.g., Java plum, *Albizia lebbbeck*) have been removed, and new trees planted as part of the implementation of a previous landscape plan that was not approved by DPP. These include weeping debdar, milo, hala, and Hawaiian kou trees. In addition, due to the recent removal of a dozen trees for safety and health reasons, replacement trees that comply with the MLP were planted. These include tulipwood, Geiger tree, lignum vitae, and dwarf hau.

It is possible that the endangered Hawaiian Petrel (*Pterodroma sandwichensis*), and the threatened Newell's Shearwater (*Puffinus newelli*) may occasionally overfly the site during the nesting season. These two species have recently been detected on/over the Island of Oʻahu (Young et al. 2019). The primary cause of mortality in both Hawaiian Petrels and Newell's Shearwaters is thought to be predation by alien mammalian species at the nesting colonies (USFWS 1983, Simons and Hodges 1998, Ainley et al., 2001). Collision with man-made structures is considered to be the second most significant cause of mortality of these seabird species in Hawaiʻi. Nocturnally flying

seabirds, especially fledglings on their way to sea in the summer and fall, can become disoriented by exterior lighting. When disoriented, seabirds can collide with manmade structures, and if they are not killed outright, the dazed or injured birds are easy targets of opportunity for feral mammals (Hadley 1961; Telfer 1979; Sincock 1981; Reed et al., 1985; Telfer et al., 1987; Cooper and Day, 1998; Podolsky et al. 1998; Ainley et al., 2001; Hue et al., 2001; Day et al 2003). Additionally, Wedge-tailed Shearwaters (*Ardenna pacifica*), a coastal nesting non-listed indigenous seabird could also potentially overfly the site on a seasonal basis. There is no suitable nesting habitat for any of the three seabird species mentioned above on or adjacent to the project site.

The O‘ahu population of White-Tern (*Gygis alba*) is listed as a threatened species by the State of Hawai‘i; it is not listed under federal statute. This ephemeral species was not observed during site visits, nor was it expected. The current resident population of White Terns on O‘ahu is found on the leeward side of the island concentrated in the Waikīkī area, well removed from the Kāne‘ohe project site.

Neither of the two resident owl species on O‘ahu, the introduced Barn Owl (*Tyto alba*) and the indigenous endemic sub-species of the Short-eared Owl, or pueo as it is locally known (*Asio flammeus sandwichensis*), have been observed on or near the project site. The latter species has become increasingly scarce on the island; the O‘ahu population is listed as an endangered species by the State of Hawai‘i it is not listed under federal statute. It is probable that this resident indigenous species occasionally uses resources in the general project area on a seasonal basis. While this species is not habitat-restricted on O‘ahu, there is less suitable nesting habitat than there once was. Moreover, the sheer number and densities of mammalian predator on the island make it very difficult for this ground-nesting diurnal species to successfully nest except within protected areas that have a strong mammalian predator control program in place.

3.1.2 POTENTIAL IMPACTS

The project site is located on a slope between an existing apartment complex and Lilipuna Road and, as noted above, is occupied by the ruderal vegetation typical of the area. The project site does not harbor any known threatened or endangered species or habitat upon which it relies, nor have any protected avian species been observed roosting in, or overflying, the project site. The common invasive vegetation to be removed from the North and South Zones of the project site, respectively, are identified in Figure 2-3 and Figure 2-4 and enumerated in Table 2-1 and Table 2-2.

The principal danger to protected avian species including native Hawaiian seabirds is caused by the potential for young birds to be downed after becoming disoriented by artificial light during their fledging season, which runs from September 15th until December 15th. However, because the Kōnane Slope Stabilization Project incorporates neither outdoor lighting, nor any elevated artificial structures which could increase the potential for inadvertent bird collisions, the Proposed Action is not anticipated to have any deleterious impacts to protected seabirds.

Because organic material is deleterious to soil stability, all the existing vegetation within the project limits will be removed as part of the slope stabilization project. Relocation of some of the younger trees was considered, but it would not be safe for workers to relocate them due to the steepness of the slope, nor would it be cost effective compared to purchasing new trees from a nursery. Note that the young lignum vitae trees were planted outside of the project limits and will remain and be protected during the construction.

3.1.3 AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

To avoid potential impacts to roosting native Hawaiian hoary bats or ‘ōpe‘ape‘a, contractor(s) will avoid disturbing, removing, or trimming any woody vegetation 15 feet or higher between June 1 and September 15 during the Hawaiian hoary bat pupping season to avoid any inadvertent impacts to this protected species. Barbed wire fencing will also be avoided for any construction.

All work for the Proposed Action will be conducted during typical work hours between 8:00 a.m. and 4:00 p.m.; no work is planned during dawn and dusk twilight, and no impacts to pueo or their nests are anticipated. Should a pueo nest be observed in the project area, DOFAW staff will be notified, and a buffer zone established until nesting is complete. To avoid impacts to protected sensitive avian species, including native Hawaiian seabirds, no artificial lighting will be included, and no elevated artificial structures will be placed on the project site as part of the Kōnane Slope Stabilization Project.

Several of the BMPs described in Section 2.1.1 that will be implemented as part of the Proposed Action to address erosion and sediment control will also help to manage the spread of invasive species.

3.2 GEOLOGY, TOPOGRAPHY, AND SOILS

3.2.1 EXISTING CONDITIONS

As previously discussed in Section 1.3, to better understand existing conditions on the project site, PCA worked with JPB Engineering, Inc. to investigate and prepare a soil report characterizing the nature and scale of the situation. The resulting Geotechnical Report is included in Appendix C and forms the basis for the information and analysis in this section of the report.

As shown in Figure 1-2 and described in Section 2.1, the project site forms an irregularly shaped crescent across three parcels, for a total approximate area of 1.26 acres, between the PCA-owned Kōnane Place and City-owned Lilipuna Road. At the highest elevation of Kōnane Slope, ground surface drops from an approximate elevation of 56 feet above mean sea level (+MSL) to approximately 23 feet +MSL. The overall gradient of the slope varies throughout the slope, but the average gradient is about 45 percent. At the highest slope areas, the gradient is up to 69 percent.

The site lies on the Lilipuna Peninsula, a remnant of a gigantic block that is a part of the Nu‘uanu Landslide. This immense landslide was created during a series of cataclysmic eruptions of the Kāne‘ohe Caldera, one of a chain that formed the Ko‘olau Range. The Ko‘olau Range is a series of lava flows intersected by crystalline igneous sheet dikes (Stearns, 1985). ~~The volcanic rocks are typically deeply weathered to a formation called saprolite. Within the project area, the saprolite formation is overlain by a silty clay assigned to the Kāne‘ohe series. This soil is characterized by a moderate expansion potential and a high corrosion potential with respect to uncoated steel but a moderate corrosion potential with respect to concrete. The erosion hazard is considered moderate on slopes like those found in the study area (Foote, et al., 1972).~~ According to the Natural Resource Conservation Service’s Web Soil Survey the underlying soils within the slope stabilization area as Alaeloa silty clay, with, 15 to 35 percent slopes (AeE) for the southern majority of the site, and a smaller area on the north side classified as Alaeloa silty clay, 40 to 70 percent slopes.

On September 3 and 5, 2019, and January 28-30, 2020, JPB Engineering, Inc.'s field engineer conducted reconnaissance of Kōnane Slope and advanced 15 test borings to a maximum depth of approximately 15 feet. The field engineer logged, classified, and recovered relatively undisturbed samples of the earth materials drawn from selected vertical intervals in each boring. Ground water level observations were recorded during drilling and at intervals after completion of the borings, which were backfilled with tamped soil following exploration. The samples were transported to JPB Engineering, Inc.'s office for laboratory testing and further classification. The laboratory testing program comprised determinations of natural moisture content, dry unit weight, plasticity, direct shear, and unconfined compressive strength properties.

The study revealed surficial soil consisting of orange brown, very moist, medium-stiff to hard clay-like silt (Unified Soil Classification: MH) with cobbles and boulders extending to an average maximum depth of nine feet. This deposit is a part of the Kāne'ōhe Caldera series described above. Beneath the surficial soil, a zone of mottled-brown, very moist, very stiff to hard saprolite was penetrated to the maximum depth explored. No free ground water was observed in any of the borings. The following subsections provide details concerning the soil tests performed.

3.2.1.1 Expansive Soils

The results of the Atterberg limits tests, (see Appendix C, Plates No. B1 and B2) indicate that the surficial soil has moderate plasticity characteristics (average plasticity index = 23 percent) and high-water retention properties (average liquid limit = 56 percent). The plasticity index is the range of water contents which a soil can assume between the saturated and dry states and is the difference between the liquid and plastic limits. The liquid limit is the maximum amount of water that a soil is capable of absorbing without becoming fluid, the plastic limit is the minimum amount of water a soil can hold without crumbling. The Atterberg limits test data suggests that the surficial soil has moderate expansive properties. Expansive soils swell or heave when they absorb moisture and shrink or contract which they lose moisture. When expansive soils swell, they lose cohesion, become weaker and are prone to movement even on shallow slopes, but when they dry out, they regain cohesion and therefore acquire greater strength.

3.2.1.2 Soil Strength

Laboratory tests conducted on selected samples found:

- Surficial soil under saturated conditions yielded a low average residual friction angle of about 19 degrees and a nominal cohesion value of about 155 pounds per square foot (see Appendix C, Plates No. B3 through B6 and B9 through B14 and B16). Unconfined compressive strength tests reached an average ultimate undrained shear strength of 3,210 pounds per square foot (see Appendix C, Plates No. B17 and B21).
- Saprolite formation yielded a slightly higher average residual friction angle of approximately 20 degrees and lower cohesion value of 85 pounds per square foot (see Appendix C, Plates No. B7, B8 and B15). Unconfined compressive strength tests reached an average ultimate undrained shear strength approaching 3,735 pounds per square foot (see Appendix C, Plates No. B22 through B25).

These results confirm that the surficial soils and underlying saprolite are capable of supporting vertical structural loads of at least moderate intensity. This indicates that the soils are capable of

supporting a building, wall, or other structure that has been properly designed to not exceed its load bearing capacity.

3.2.1.3 Slope Stability

As part of JPB Engineering, Inc.’s investigation, a series of limit equilibrium slope stability analyses was conducted for the Kōnane Slope. These computations are based on the results of laboratory test data, subsurface relationships inferred from the test boring data, and topographic information. The analyses are predicted using Bishop’s Method, in which the potential failure surfaces are rotational and arcuate; therefore, these surfaces are called “slip circles.”

A safety factor, defined as the ratio of driving forces to resisting forces, is computed for each trial slip circle. Driving forces include soil weight, earthquake effects and hydrostatic pressures due to groundwater. Resisting forces, acting along the potential slip circles, primarily consist of the strength properties of the soils. If the sum of the resisting forces is greater than the sum of the driving forces, a safety factor greater than unity results. Conversely, a safety factor less than unity is computed when the sum of the driving forces is greater than that of the resisting forces. The slip circle corresponding to the minimum calculated safety factor is called the “critical circle.” In conventional engineering practice, the minimum desirable safety factor against slope failure is 1.50 under static conditions and 1.25 under earthquake conditions.

Using proprietary software, JPB Engineering, Inc. completed numerous analytical trials for both the existing and proposed slope orientations to search for the theoretical safety factor at each of ten slope sections, the positions and orientations of which are depicted in Appendix C, Plate No. A19 through A24. The results of those trials are outline in Table 3-1 below.

Table 3-1 Existing and Proposed Kōnane Slope Safety Factors

<i>Slope Section</i>	<i>Minimum Factor of Safety</i>			
	<i>Existing Slope</i>		<i>Proposed Slope</i>	
	<i>Static</i>	<i>Seismic</i>	<i>Static</i>	<i>Seismic</i>
North Zone				
A-A'	1.115	0.936	1.691	1.404
B-B'	1.222	1.063	1.586	1.363
C-C'	1.325	1.107	1.549	1.352
D-D'	1.175	1.017	1.503	1.326
E-E'	1.075	0.885	n/a	n/a
South Zone				
F-F'	1.374	1.101	1.838	1.509
G-G'	1.576	1.288	1.654	1.347
H-H'	1.203	1.018	1.513	1.268
I-I'	1.093	0.858	1.594	1.284
J-J'	1.662	1.320	1.660	1.320

Note: **Bold** indicates result does not meet minimum desirable safety factor against slope failure.
 Source: JPB Engineering, Inc. (2020)

In addition to slip failure, even gentle slopes that are underlain by clay-like soils are also susceptible to soil creep, which is caused by the slow, downward movement of earth under the influences of gravity and moisture changes. Clay-like soils tend to expand in a direction at right angles to the slope when they absorb moisture, but tend to shrink in a vertical direction due to the

influence of gravity when they lose moisture. The cumulative effect, or creep, is a continuing pattern of downslope soil displacement in minute, stepwise increments.

Whenever the inclination of a slope is equal to or greater than the friction angle of the clay-like soil beneath it, soil creep will ensue as the soil loses its cohesion due to moisture absorption. As mentioned previously, the average internal friction angle of the surficial soil is about 19 degrees, but the average angle of the slope is about 24 degrees (45 percent). Therefore, the surficial soil is susceptible to creep. The horizontal components of creep movement are reflected as stretching displacements, while the vertical components appear as settlements. Some areas have a slope inclination that is relatively close to the internal friction angle of the surficial soil, particularly within the South Zone; these areas would not be susceptible to soil creep.

3.2.2 POTENTIAL IMPACTS

JPB Engineering, Inc.'s analysis indicates that the majority of the existing Kōnane Slope is currently unstable. Therefore, under the No Action Alternative the precarious conditions along Kōnane Slope would persist, leaving it “unstable and susceptible to soil creep,” (JPB Engineering, Inc., 2020), particularly exacerbated by heavy rains and/or under the influence of seismicity (Table 3-1). Over wet and dry cycles, the soil would continue to creep, further aggravating the situation. This would continue to adversely affect the landscape on the slope and support for the project and increase the potential for erosion. The toe of the slope would likely gradually encroach on Lilipuna Road and, in the event of a seismic event, could result in slope failure.

Under the Proposed Action (Section 2.1), JPB Engineering, Inc.'s analysis indicates the Kōnane Slope would be stable, as quantified in Table 3-1. Therefore, although the Proposed Action would modify the geology, topography, and soil on the Kōnane Slope, it would have a beneficial effect on the stability of the geology, topography, and soil. The Proposed Action would provide a benefit to surrounding land uses, human health and safety, the vegetation on the slope, and would limit the potential for erosion. Thus, modifying the slope over the 1.2526-acre area of the Kōnane Slope and the removal of over 6,400 cubic yards of material from the Kōnane Slope is not considered to be a significant adverse effect.

3.2.3 AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

The Proposed Action is an avoidance and minimization measure to address the potential geological, topographical, and soil impacts that could result from slope failure, as discussed in Section 1.3. In particular, and on the advice of soil engineers, permanent erosion control matting is being used to ensure that erosion and sediment runoff are minimized in comparison with a similar slope with natural plantings and trees. The permanent matting will provide an additional layer of soil stability, whereas with the natural slope, some erosion may continue to occur. The Proposed Action is assessed to be a benefit to the geology, topography, and soil resources; thus, no mitigation measures are warranted. However, as discussed in Section 2.1.1, BMPs will be used during construction to avoid and minimize the potential impacts of erosion resulting from implementation of the Proposed Action.

3.3 VISUAL RESOURCES

3.3.1 EXISTING CONDITIONS

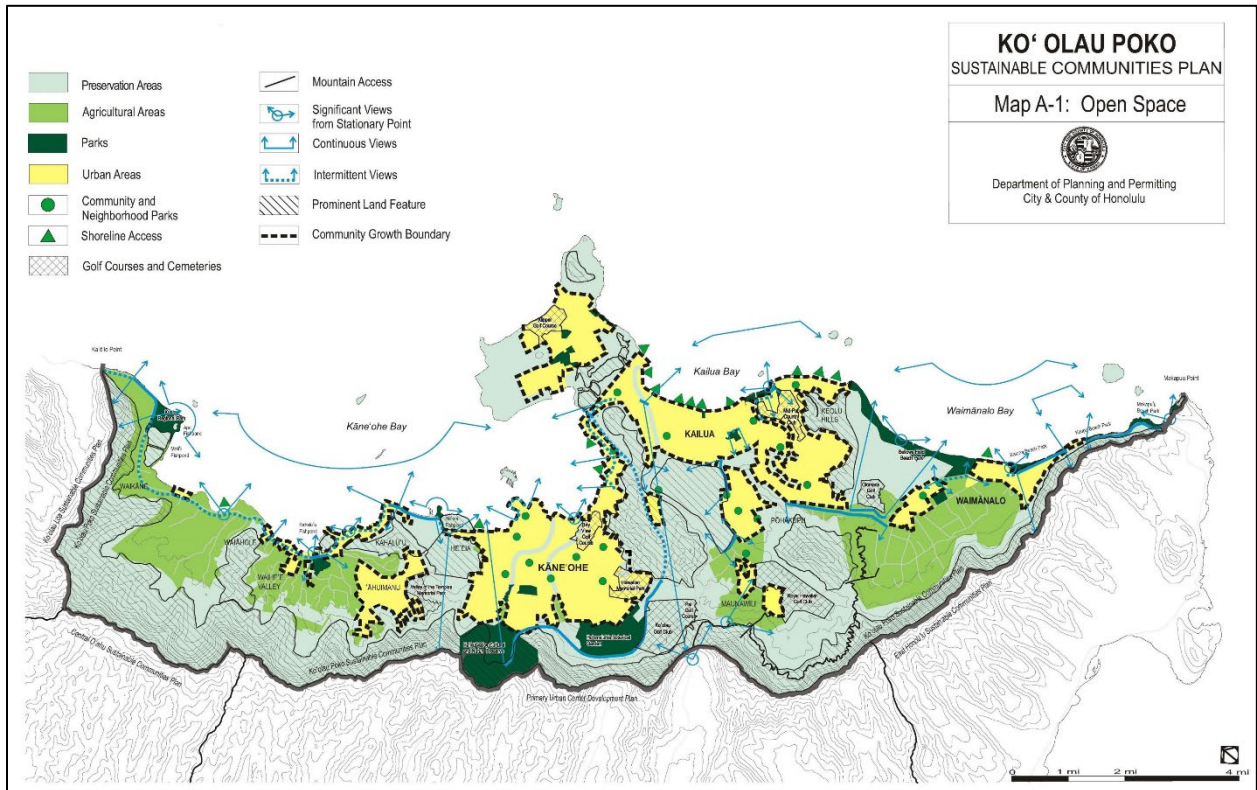
This section describes the visual resources in the project vicinity. It also characterizes the existing visual conditions along Kōnane Slope, discusses the visual impacts the Proposed Action and its alternative may have, and identifies how the Kōnane Slope Stabilization Project addresses its potential visual impacts.

At a regulatory policy level, CCH's *Ko'olau Poko Sustainable Communities Plan* (KPSCP; DPP, 2017) makes a clear priority of preserving and enhancing scenic, recreational, and cultural features of the Ko'olaupoko landscape that help define the community's sense of place. It further establishes that:

Ko'olau Poko's striking topographic features, outstanding beaches and bays, lush valleys, perennial streams and other natural features and landmarks continue to visually define the "windward" sense of place. Views of ridgelines or upper slopes of coastal headlands and mountains from the vantage point of coastal waters, major roads, parks and other public places, are kept free from land disturbance or the encroachment of structures or other projects that would affect the scenic viewplanes.

Figure A-1 from the KPSCP is reproduced here as Figure 3-1. As can be seen from that figure, there are several identified important vistas from stationary points along the southern side of Kāne'ōhe Bay, including significant continuous and intermittent views of Moku O Lo'e, Pu'u Pahu, He'eia, and Mōkapu. Moku O Lo'e is also known locally as Coconut Island and is currently home to the University of Hawai'i, Institute of Marine Biology; Pu'u Pahu is the traditional placename for the hill where the Pu'u Ali'i development and the project site is located.

Figure 3-1 Open Space and Significant Views in Ko‘olau Poko



Source: DPP (2017)

Figure 3-2 depicts conditions at selected locations along the project site on April 5, 2022. Figure 3-3 provides a key identifying the location and approximate viewplane for each photo.

Figure 3-2 Existing Conditions along Kōnane Slope



A



B



C



D



E



F

Source: Planning Solutions, Inc. (April 5, 2022).

Figure 3-3 Key to Site Photo Locations



Source: Planning Solutions, Inc. (2022)

As can be seen from these site photos in Figure 3-2, Kōnane Slope is covered with grass, groundcovers, and vines, and dotted with a mixture of landscaped plantings and volunteer vegetation including invasive *Albizia lebbbeck* and Java plum trees. The height, angle, and size of the slope varies throughout the project site. Finally, the identified scenic resources in the area (i.e., Pu‘u Pahu and Moku O Lo‘e) are either not visible or only partially visible from public vantage points along Lilipuna Road. In general, the views of ridgelines, upper slopes of coastal headlands, and mountains, as identified in the KPSCP (DPP, 2017) from the vantage point of Lilipuna Road are intermittent and screened by intervening topography, vegetation, and structures. Similarly, while the visual presence of the Pu‘u Ali‘i development is partially softened by plantings, volunteer vegetation, and the height differential between Lilipuna Road and the top of Kōnane Slope, all the buildings remain—at minimum—partially visible from this public thoroughfare.

3.3.2 POTENTIAL IMPACTS

3.3.2.1 Construction Phase

During construction of the proposed Kōnane Slope Stabilization Project, construction activities, equipment, material, vehicles, and workers will all be present on site at varying times and intensities. These impacts will affect the visual character of the area, as the existing vegetation is removed, the topography of the project site altered, and the new stabilization measures and plantings are installed. All these activities will be visible to residents of Pu‘u Ali‘i, as well as people living and traveling along Lilipuna Road, and will contribute to a modest, albeit temporary, visual impact due to construction activities. However, none of these impacts will directly affect any protected scenic or aesthetic resource and will be brief and limited in scope.

3.3.2.2 Operational Phase

The landscape design, which is consistent with the DPP-approved MLP (see Appendix A for relevant excerpts), was conceived to create a landscape buffer between Lilipuna Road and the Pu‘u Ali‘i development by using a combination of street trees, tropical foliage plants and groundcovers. The plantings to be established along Kōnane Slope as part of the MLP will replace the existing invasive and difficult to manage vegetation currently impeding airflow in the area. While most slope stabilization solutions are restricted landscape-wise to grasses or so-called “naturalized landscapes,” this would be unacceptable in this situation as no landscape buffer or street trees would be planted as required by the CCH Cluster/PD-H guidelines. At the completion of the slope stabilization work, the MLP will be implemented using a variety of plants to create a green planting buffer and provide street trees along Lilipuna Road.

To better understand how the Proposed Action might impact visual and scenic resources in the project site, PCA worked with Nicolay Design Inc. to prepare a series of renderings called *Kōnane Slope Planting Landscape Growth Visualizations* (Nicolay Design, 2020). These images were prepared with Structure Studios VIP3D ver. 2.600, a three-dimensional modeling software which creates artistic, three-dimensional representations of landscape elements. The series of images are intended to generally explain the planned growth of the plantings included as part the MLP that will be implemented following the Kōnane Slope Stabilization Project (Section 2.1.4). Figures 3-4 through 3-16 provide the renderings to help visualize the design intent and visual effect of trees and other landscaping as they mature.

As can be seen from the renderings, the effect that the Proposed Action will have on views along Lilipuna Road and the residences found there will vary to some extent depending on the specific vantage point and the stage of growth: (i) newly installed, (ii) after several years' grow-in, and (iii) when plantings are fully matured. The quality of views is also dependent on the height, grade, and cover present on the portion of Kōnane Slope being observed. To further demonstrate the relative impacts related to implementation of the MLP following the proposed slope stabilization, Figure 2-8 provides typical cross sections which illustrate how a variety of factors will contribute to the visual impact from a given vantage point. On the left, the location of the viewer, the slope, the intervening vegetation, and the profile of the structures on or above Kōnane Place are all factors that contribute to a direct line of sight, whereas on the right these same factors prevent a direct view of the Pu'u Ali'i development. The following subsections further elaborate on the stages of growth.

3.3.2.3 Newly Installed Plantings

These images (see Figures 3-4 through 3-16) are approximations of plantings about one year after their installation and maintenance period concludes. At this stage street trees, conforming to CCH standards, will still be saplings with individual canopies of leaves. Field stock trees will have larger branch structure but partial canopies. Tropical understory plants will have grown significantly taller than their installation size but may not yet spread into a continuous screen. Groundcover ferns will spread across the entire slope, although there may still be gaps. The landscape will likely be sparse for the first several years after installation.

3.3.2.4 After Several Years

These images (see Figures 3-4 through 3-16) are approximations of plantings after approximately five or six years of growth. Street trees will have increased in height, caliper thickness, and canopy size. Closely planted trees (e.g., Dwarf Hau, Rough Kou/Geiger Trees) should form continuous canopies connecting multiple trees into a continuous mass. Larger trees (e.g., False Olive) may have large, dense canopies of leaves but may still appear as "individual trees" rather than forming a continuous canopy. Tropical understory plantings will mature and form a mostly continuous foliage screen at the lower portion of the slope. Groundcover ferns will reach maturity and should blanket the slope. The landscape will be filled out several years after installation.

3.3.2.5 Mature Design Effect

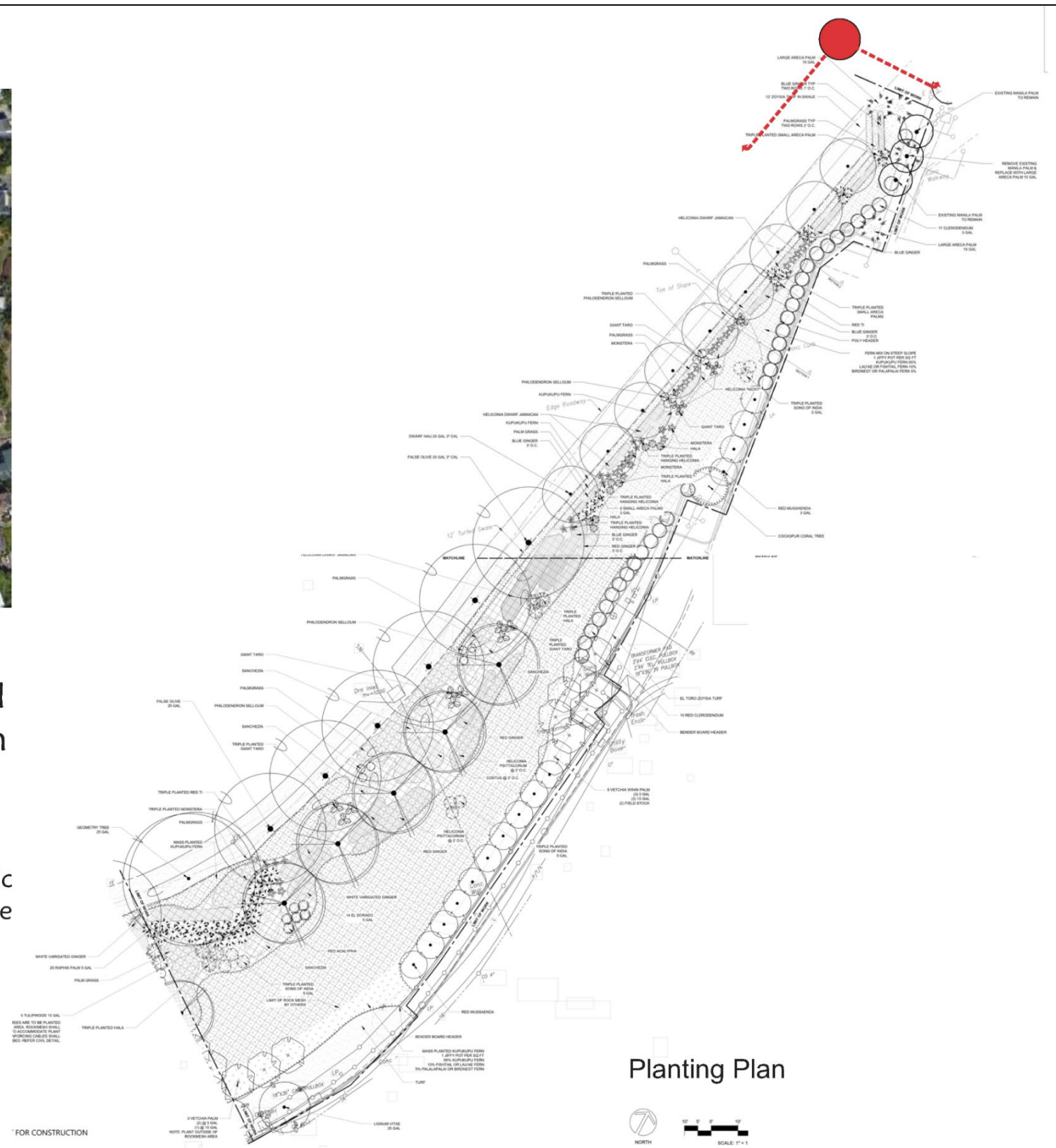
These images (see Figures 3-4 through 3-16) approximate the long-term replacement of a forest-like Kōnane Slope approximately two decades after installation and beyond. Trees will have reached their mature heights and spreads. They will form a dense canopy approximately the height of the slope. Understory plantings will now be fully shaded and a naturalized "green wall" of tropical plants will exist parallel to the roadway. By this stage, some trees may need to be trimmed and some understory plants will be at the end of their useful lives and ready for replacement. The landscape will have a forest-like effect of mature trees, similar to present conditions.

Figure 3-4 Key to Views 1A and 1B from Lilipuna Road Looking South at Buildings 37 and 38 (North Zone)



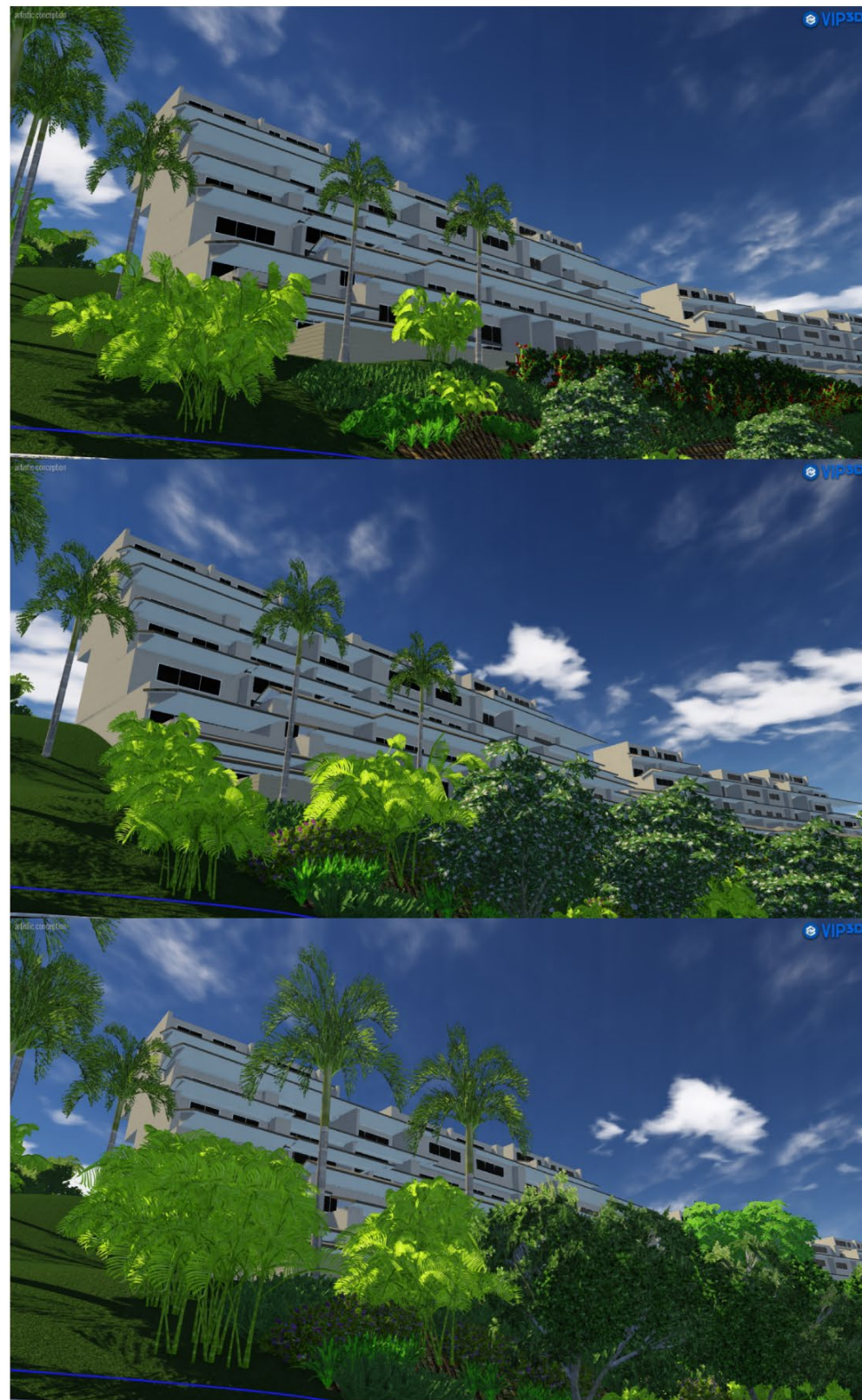
Views 1A & 1B : From Lilipuna Road at Buildings 37 & 38 Looking South

Note : The software does not capture panoramic images. Therefore, two views from the same point have been taken.



Source: Nicolay Design (2020)

Figure 3-5 View 1A From Lilipuna Road at Building 38 (North Zone)



View 1A : From Lilipuna Road at Building 38 / Northernmost End of Puu Alii Looking Towards Building 38

Newly-installed Plantings

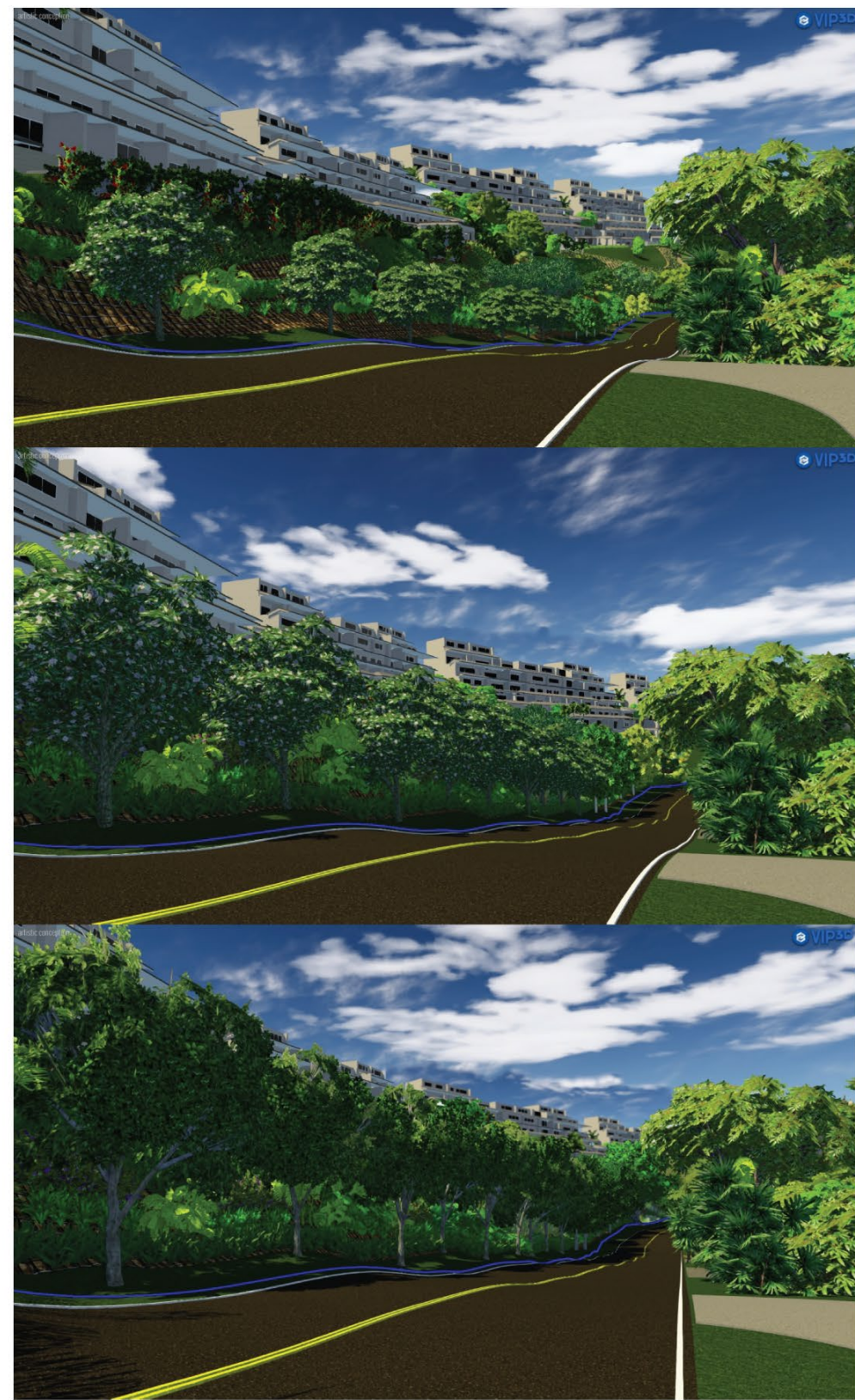
Note : There are existing naturalized forest trees at the north end of Building 38 that provide additional buffering to the north end of the building. These trees are not illustrated as they are outside of the planting plan area.

Several Years Later

Mature Design Effect

Source: Nicolay Design (2020)

Figure 3-6 View 1B From Lilipuna Road at Building 38 (North Zone)



View 1B : From Lilipuna Road at Building 38 / Northernmost End of Puu Alii
Looking South down Lilipuna Road

Newly-installed Plantings

Several Years Later

Mature Design Effect

Source: Nicolay Design (2020)

Figure 3-7 Key to Views 2A and 2B from Lilipuna Road Looking South at Buildings 35 and 36 (South Zone)



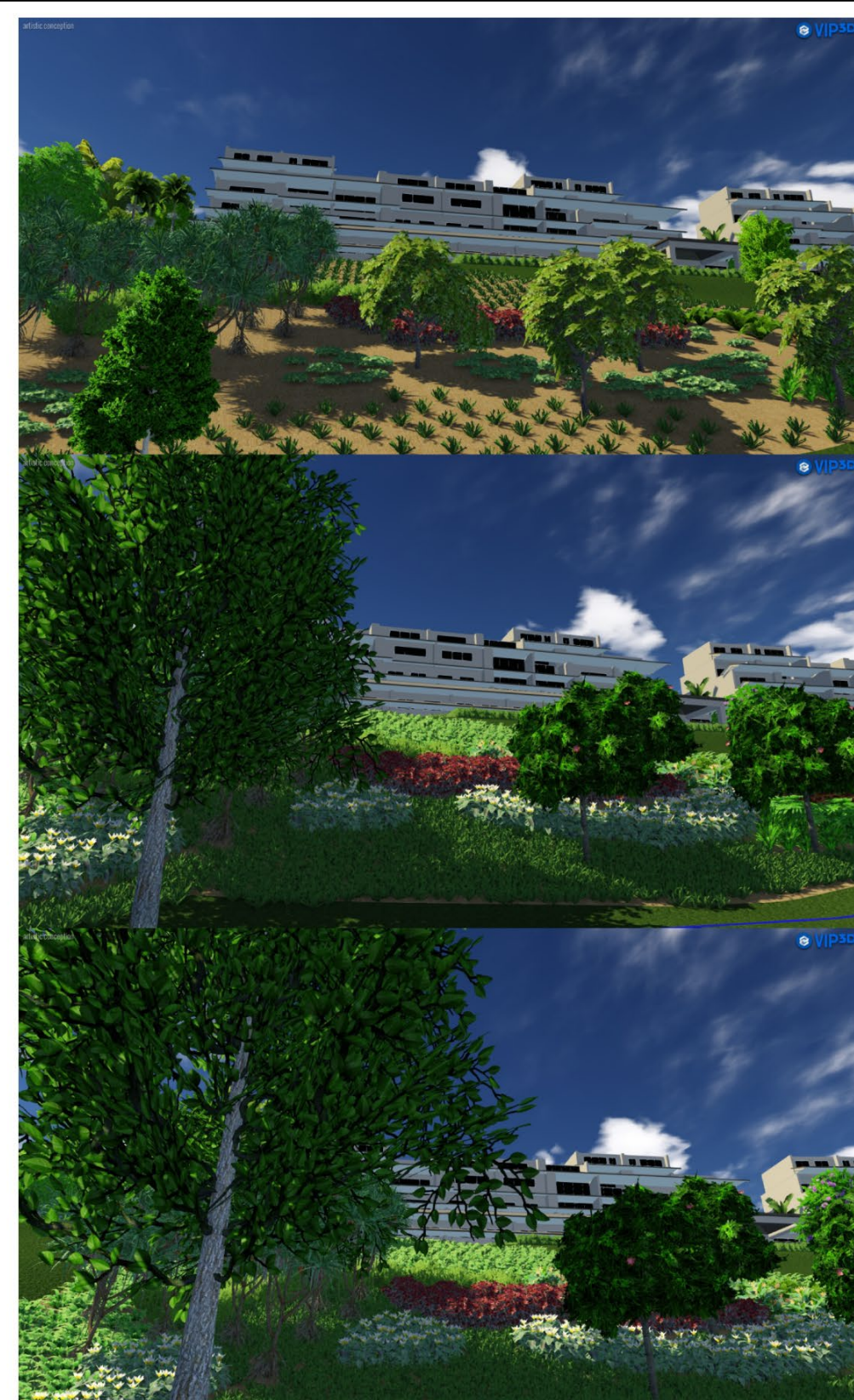
View 2: From Lilipuna Road at Buildings 35 & 36 Looking South

Note : The software does not capture panoramic images. Therefore, two views from the same point have been taken.



Source: Nicolay Design (2020)

Figure 3-8 View 2A from Lilipuna Road Looking Southeast at Buildings 35 and 36 (South Zone)



View 2A : From Lilipuna Road between
Buildings 35 & 36 / Looking Southeast &
Upslope towards Buildings

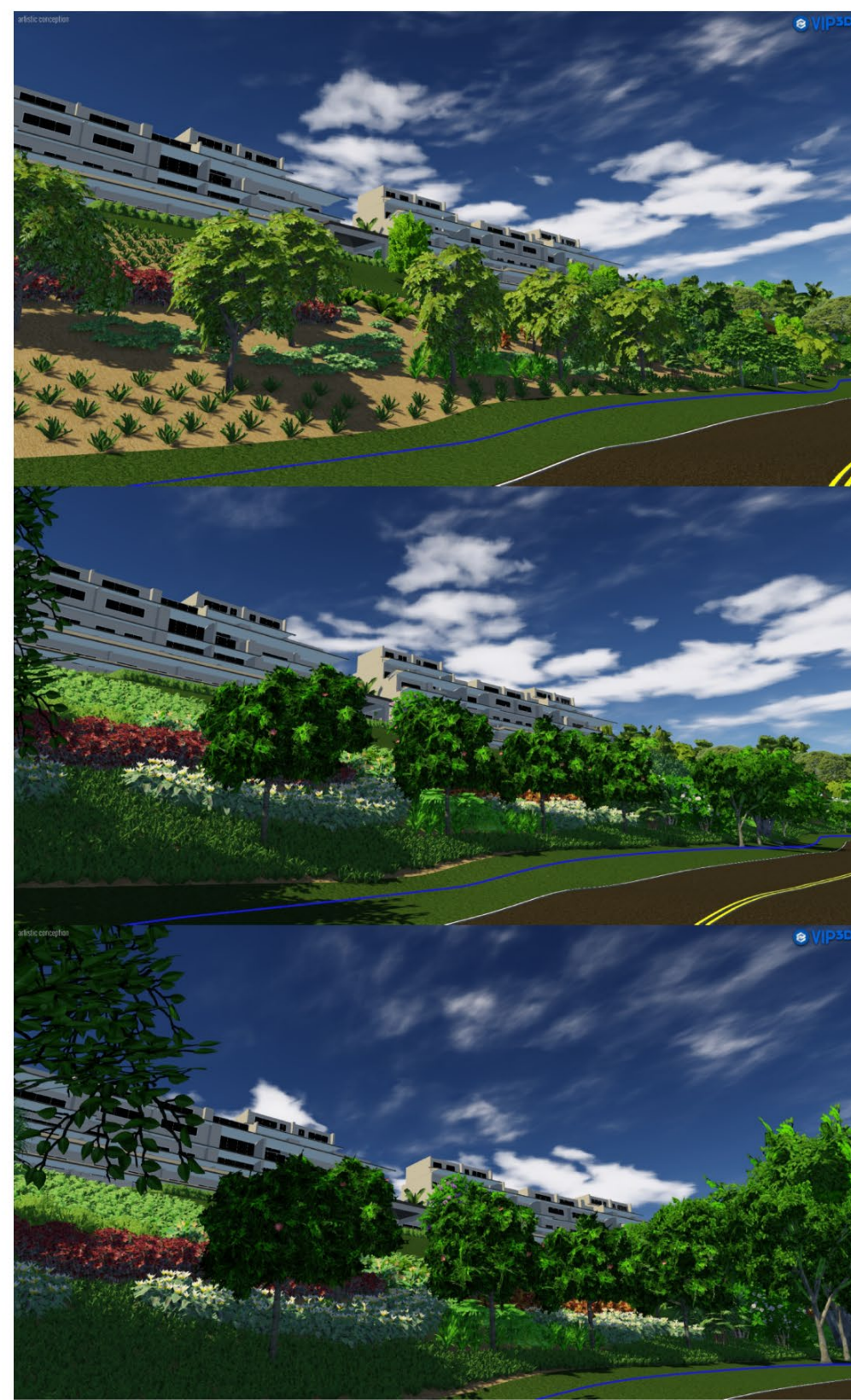
Newly-installed Plantings

Several Years Later

Mature Design Effect

Source: Nicolay Design (2020)

Figure 3-9 View 2B from Lilipuna Road Looking Southeast at Buildings 35 and 36 (South Zone)



View 2B : From Lilipuna Road Looking Southwest & Upslope towards Buildings 35 & 36

Newly-installed Plantings

Several Years Later

Mature Design Effect

Source: Nicolay Design (2020)

Figure 3-10 Key to Views 3A and 3B from Lilipuna Road Looking Northeast at Buildings 35 and 36 (South Zone)



Views 3A & 3B: From Lilipuna Road at Buildings 35 & 36 Looking Northeast

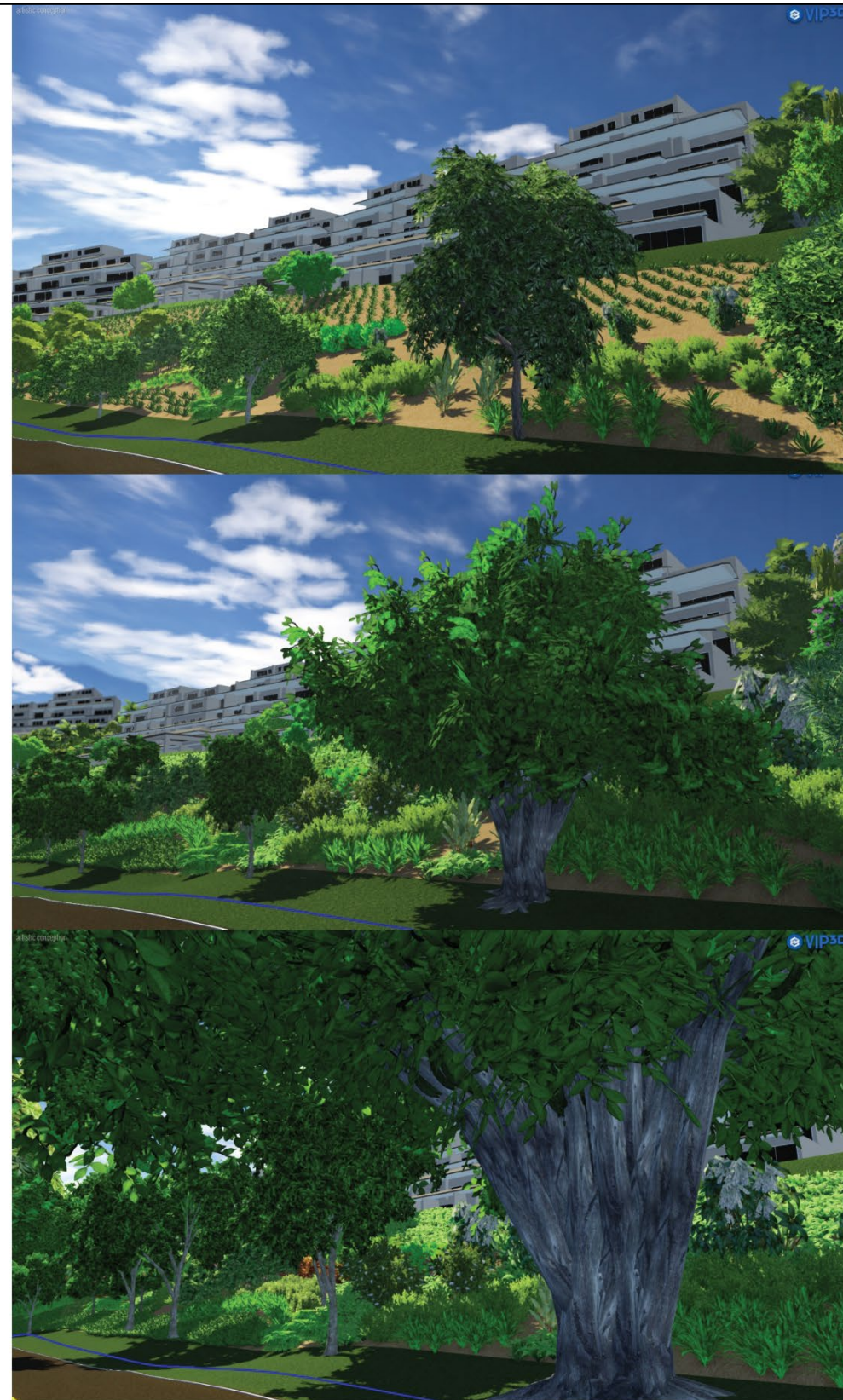
Note : The software does not capture panoramic images. Therefore, two views from the same point have been taken.



Planting Plan

Source: Nicolay Design (2020)

Figure 3-11 View 3A Looking East from 46-107 Lilipuna Road at Buildings 35 and 36 (South Zone)



View 3A : Near Turquoise-roof House
Looking East towards Buildings 35 & 36

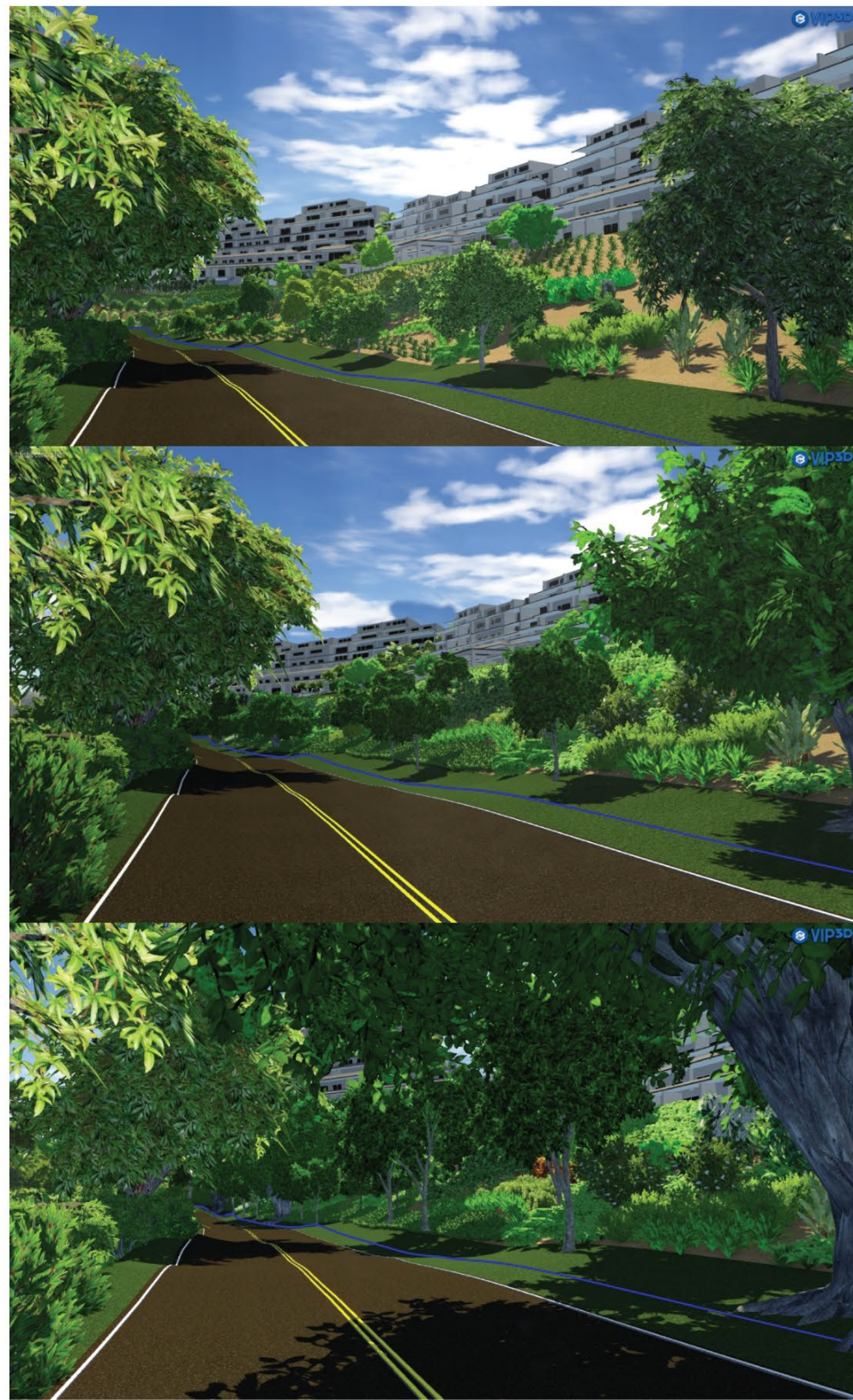
Newly-installed Plantings

Several Years Later

Mature Design Effect

Source: Nicolay Design (2020)

Figure 3-12 View 3B Looking East from 46-107 Lilipuna Road at Buildings 35 and 36 (South Zone)



View 3B : Near Torquoise-roof House
looking Northeast towards Building 36

Newly-installed Plantings

Several Years Later

Mature Design Effect

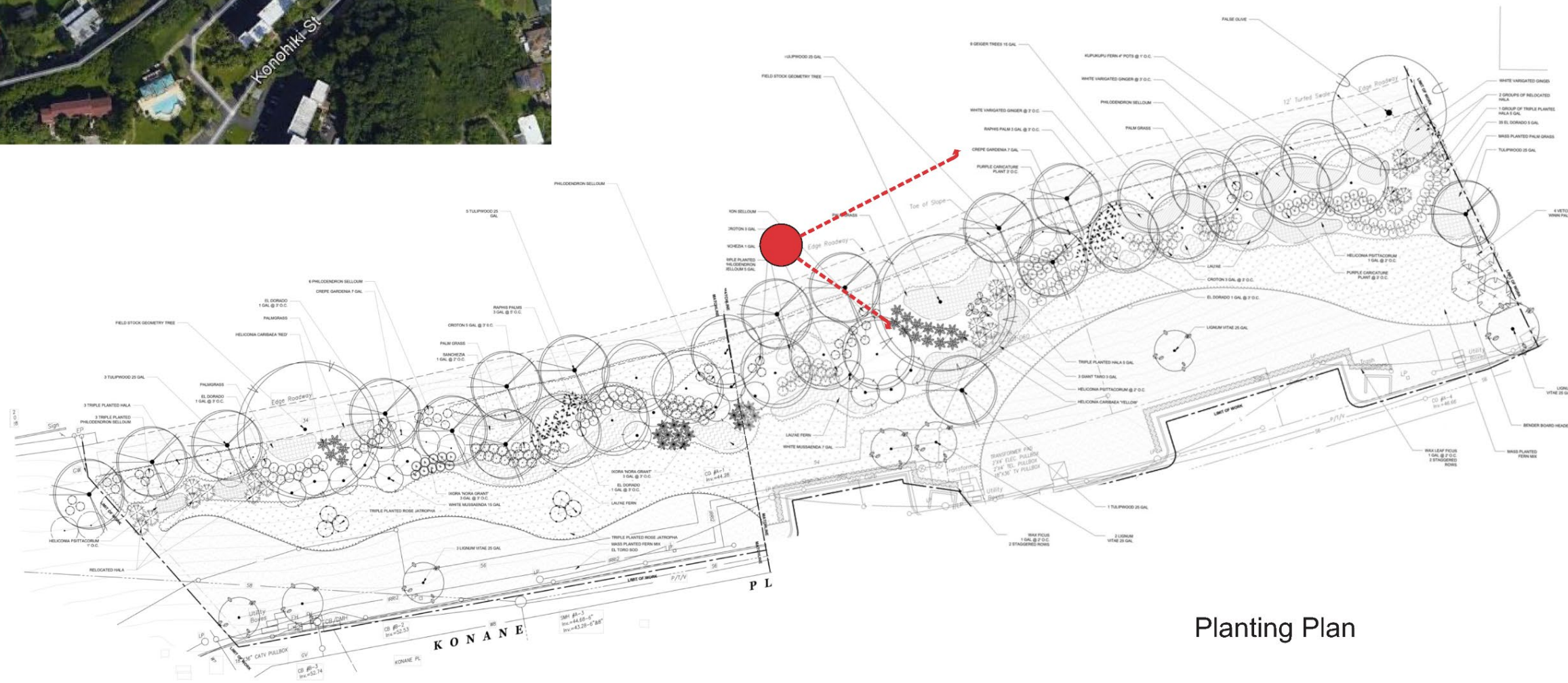
Source: Nicolay Design (2020)

Figure 3-13 Key to Views 4A, 4B, and 4C from Lilipuna Road Looking Northeast Opposite Buildings 35 and 36 (North and South Zone)



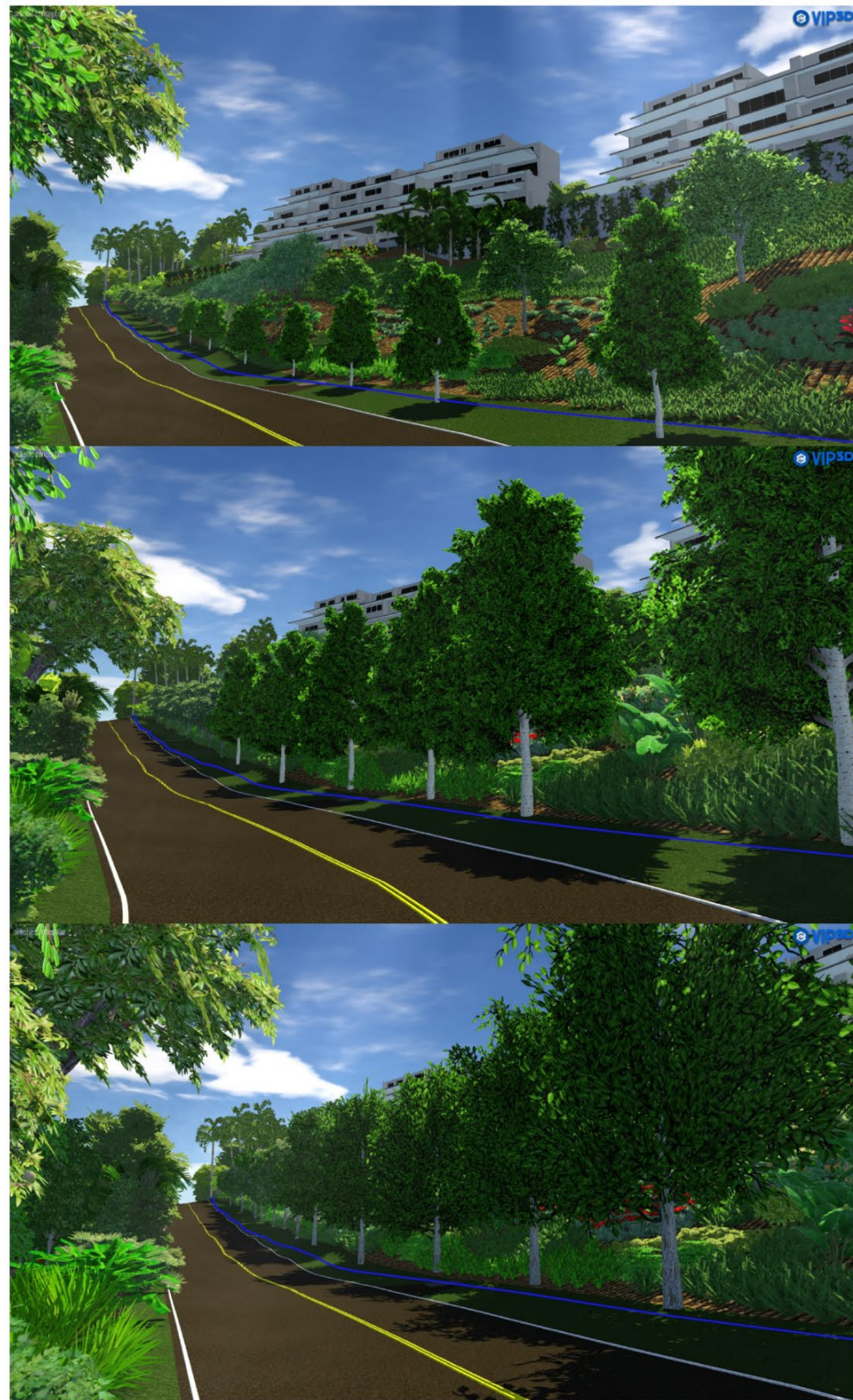
Views 4A, 4B & 4C: From Lilipuna Road Opposite Gap between Buildings 35 & 36 Looking

Note : The software does not capture panoramic images. Therefore, two views from the same point have been taken.



Source: Nicolay Design (2020)

Figure 3-14 View 4A from Lilipuna Road Looking Northeast Opposite Buildings 35 and 36 (North and South Zone)



View 4A : On Lilipuna between Buildings
35 & 36 Looking Northeast down Lilipuna
towards Buildings 37 & 38

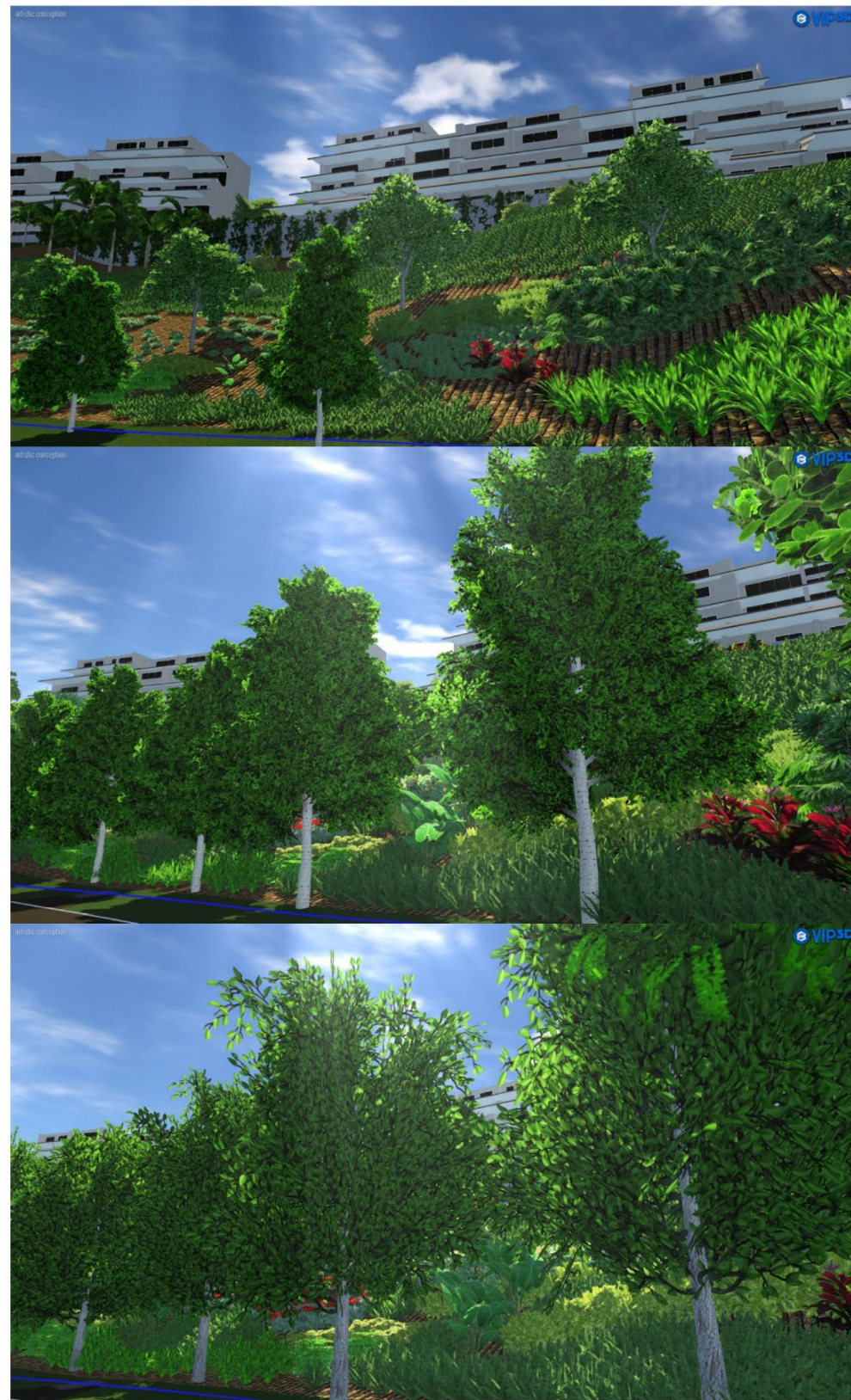
Newly-installed Plantings

Several Years Later

Mature Design Effect

Source: Nicolay Design (2020)

Figure 3-15 View 4B from Lilipuna Road Looking Northeast Opposite Buildings 35 and 36 (South Zone)



View 4B : On Lilipuna between Buildings
35 & 36 Looking Northeast towards
Buildings 37 & 38

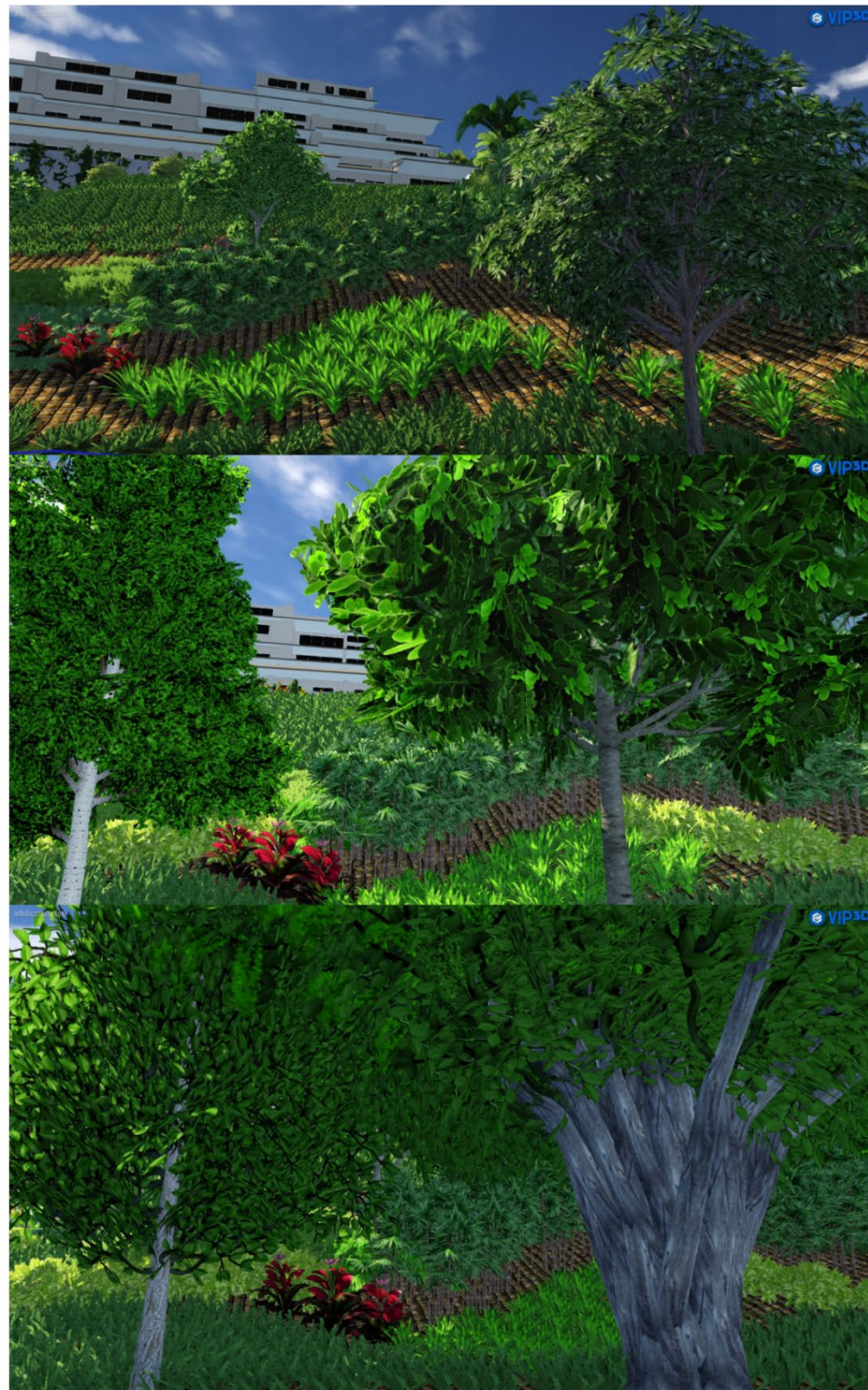
Newly-installed Plantings

Several Years Later

Mature Design Effect

Source: Nicolay Design (2020)

Figure 3-16 View 4C from Lilipuna Road Looking Northeast Opposite Buildings 35 and 36 (South Zone)



View 4C : On Lilipuna between Buildings
35 & 36 Looking Northeast towards
Buildings 37 & 38

Newly-installed Plantings

Several Years Later

Mature Design Effect

Source: Nicolay Design (2020)

In general, the visualizations effectively communicate the likely outcome of the implementation of the MLP following the proposed slope stabilization. As can be seen from the renderings in Figures 3-4 through 3-16, views inland from Lilipuna Road will initially be relatively open when the new plantings are installed, but, over time, the plantings would grow in and the foliage spread, so that the views will be similar to, or better than, current conditions. It is anticipated that the Proposed Action will allow for a more pleasing view than the current condition because the plantings have been selected for their form and function whereas the existing vegetation near Lilipuna Road primarily consists of weedy volunteer species. In evaluating the visual impact of the Proposed Action, PCA has concluded that the potential impacts to visual resources would not be significant because:

- The Pu‘u Ali‘i development is currently visible, albeit buffered by topography and volunteer vegetation present on Kōnane Slope, and will continue to be so once the project is complete and MLP plantings become established;
- The landscaping will provide a level of visual buffering which will be comparable to, or better (i.e., obscuring more than), the level provided by the vegetation currently present on Kōnane Slope;
- The slope stabilization work will result in a slope that is less steep in most areas and therefore will result in better long-term management and maintenance of landscaping on the slope; and
- No scenic or aesthetic resources identified in the KPSCP or other regulatory documents will be affected.

The No Action Alternative does not involve modification to the existing environment that has the potential to impact visual resources in any way.

3.3.3 AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

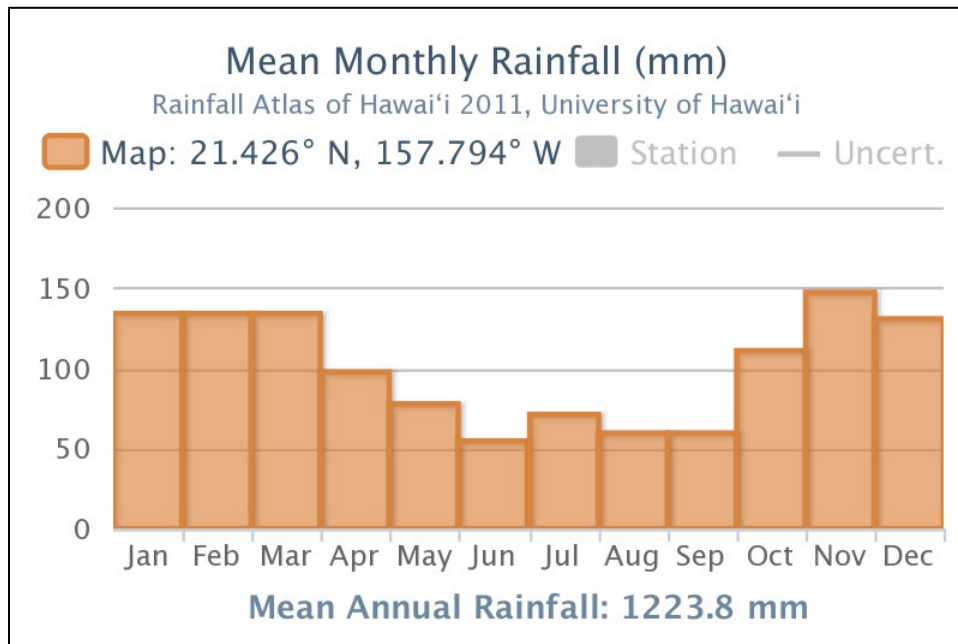
The Proposed Action, as described in Section 2.1 and, specifically, the plantings and vegetation establishment detailed in Sections 2.1.4 and 2.1.5, incorporates measures to avoid and minimize visual impacts. The Proposed Action is assessed to not have a substantial or significant impact on visual resources; no mitigation measures are warranted.

3.4 HYDROLOGY

3.4.1 EXISTING CONDITIONS

According to the University of Hawai‘i’s *Rainfall Atlas of Hawai‘i* (Giambelluca et al., 2013) annual rainfall in the project area is approximately 1228 mm or 48 inches. Figure 3-17 provides a histogram of average rainfall by month. As can be seen from that graph, rainfall in the project area peaks in the late fall and winter months and then decreases substantially throughout the warmer months of spring and summer; this pattern is typical throughout the Hawaiian Islands.

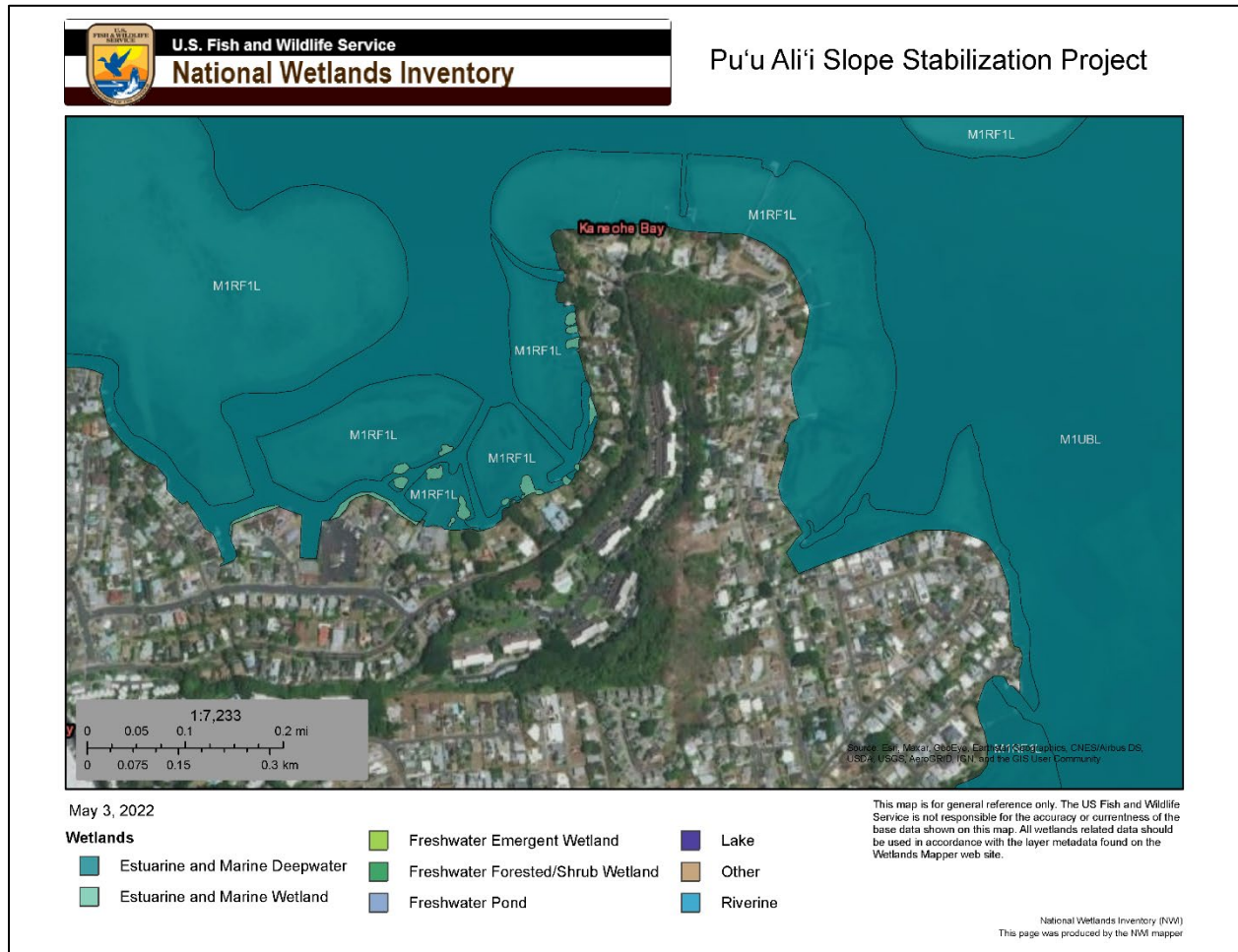
Figure 3-17: Average Rainfall in the Project Area



Source: Rainfall Atlas of Hawai'i (2013)

As confirmed by the U.S. Fish and Wildlife Services (USFWS) Wetlands Inventory Map, there are no perennial rivers, streams, or other freshwater bodies in the vicinity of the proposed project (Figure 3-17). As shown in the map, the principal wetland near the project site is Kāneʻohe Bay, which is roughly 200 feet away and is characterized as a marine subtidal system with coral reef, corresponding to the classification code M1RF1L. The marine designation includes the open ocean and nearshore environment, with marine habitat exposed to waves and currents of the open ocean and with substrate continually covered with tidal waters in a water regime determined by the ebb and flow of ocean tides.

Figure 3-18 USFWS Wetlands Inventory Map



Source: USFWS (2022)

The waters of Kāne‘ohe Bay near the project site are designated Class AA by DOH. Pursuant to HAR, Chapter 11, Title 54-3(c)(1):

The objective of class AA waters that these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions . To the extent practicable, the wilderness character of these areas shall be protected. No zones of mixing shall be permitted in this class.

Water quality monitoring evaluated in DOH’s 2022 *Draft State of Hawai‘i Water Quality Monitoring and Assessment Report* (DOH, 2022) shows that the central portion of Kāne‘ohe Bay, in the vicinity of the Proposed Action, has been relatively compromised over time and is not attaining water quality standards for multiple parameters including: (i) *Enterococci* bacteria, (ii) total nitrogen, (iii) nitrogen dioxide (NO₂); (iv) nitrogen oxoanion (NO₃); (v) ammonium (NH₄); (vi) total phosphorous; (vii) turbidity; and (viii) chlorophyll a (Chl a).

JPB Engineering, Inc.’s Geotechnical Report indicates that no groundwater was present in the boring holes in Kōnane Slope made during their investigation (Appendix C).

3.4.2 POTENTIAL IMPACTS

3.4.2.1 Site Drainage Discussion

The Proposed Action involves the graded stabilization of Kōnane Slope, which is located entirely on PCA-owned property, in two phases. The Proposed Action is intended to improve on the existing site drainage conditions, since a new shoulder and swale will be provided adjacent to the existing Lilipuna roadway. The proposed shoulder and swale will be developed adjacent to the existing roadway’s edge of pavement to minimize the amount of runoff that could otherwise flow into the roadway, as is currently the case, and will better direct the runoff from the slope into the existing drain inlet by the side of the road. The site will be further improved with erosion control measures and a new permanent vegetative cover (see Section 2.2). The total area to be improved is 1.26 acres; 0.71 acres comprise the South Zone, and 0.55 acres in the North Zone (see Section 2.1).

The runoff coefficient for the project site is estimated to currently be 0.40 based on the steepness of the slope and the absence of any impervious surfaces. The conditions following the implementation of the Proposed Action will have a higher quality of vegetation (see Section 2.2) than the existing conditions, so the resulting runoff coefficient would be slightly less than the existing runoff coefficient and is estimated at 0.38 for the South Zone and a more conservative 0.40 for the North Zone; the runoff coefficients for the Proposed Action are summarized in Table 3-2 below.

Table 3-2 Existing and Anticipated (under the Proposed Action) Runoff Coefficients

<i><u>Zone</u></i>	<i><u>Existing Runoff Coefficient</u></i>	<i><u>Anticipated (under the Proposed Action) Runoff Coefficient</u></i>
<u>North Zone</u>	<u>0.40</u>	<u>0.40</u>
<u>South Zone</u>	<u>0.40</u>	<u>0.38</u>

Source: Dempsey Pacific Inc. (2020) *Drainage Assessment for Pu‘u Ali‘i Community Association Buildings 35 & 36, TMK: (1) 4-6-001:060, -062 and Drainage Assessment for TMK: (1) 4-6-001:002, -062.*

The rainfall intensity at the project site is 2.63 inches of 1-hour rainfall according to the *Rainfall Atlas of Hawai‘i* (Giambelluca et al., 2013) for the 10-year recurrence interval at the site.⁵ Due to the steepness of the slope and the short travel time, the time of concentration for the existing and proposed condition is estimated at five minutes, which is the shortest time interval used for design purposes. A correction factor of 2.8 is used for the existing and proposed conditions. Therefore, to summarize:

- The A for the South Zone is 0.71 ac., and the North Zone is 0.51 ac.
- The design rainfall intensity (“I”) is 7.36 inches/hour for the existing and proposed 10-year conditions (i.e., I = 7.36) for both South Zone and North Zone.
- The 10-year peak runoff rate in cubic feet per second (“Q”) for the existing and proposed conditions in both zones is determined by the formula (i.e., C*I*A = Q) summarized in Table 3-3.

⁵ Applicable for drainage areas less than 100 acres in total size.

Table 3-3 Drainage Assessment Calculations

<u>Zone</u>	<u>Coefficient (C)</u>	<u>Intensity (I)</u>	<u>Area (A)</u>	<u>Cubic Feet per Second (Q)</u>
South Zone: Existing	0.40	7.36	0.71 ac.	2.09 cfs
South Zone: Proposed	0.38	7.36	0.71 ac.	1.99 cfs
North Zone: Existing	0.40	7.36	0.51 ac.	1.50 cfs
North Zone: Proposed	0.40	7.36	0.51 ac.	1.50 cfs

Source: Dempsey Pacific Inc. (2020) *Drainage Assessment for Pu'u Ali'i Community Association Buildings 35 & 36, TMK: (1) 4-6-001:060, -062 and Drainage Assessment for TMK: (1) 4-6-001:002, -062.*

3.4.2.2 Conclusions: South Zone

The proposed drainage area and slope vegetation will remain the same, or better, than the existing conditions. Since the proposed improvements will not change the existing drainage patterns and will provide better slope stabilization and permanent vegetative cover, no adverse impacts are anticipated to occur to adjacent properties and the peak runoff rates are anticipated to be reduced by 0.10 cfs. To better facilitate the runoff from the slope, a 12 ft. shoulder and swale will be added at the base of the slope to direct the runoff into the existing drain inlet. The existing roadway has an average running slope of 11 percent. The new 12 ft. wide shoulder and swale will have a 2 percent cross slope away from the edge of pavement and towards the middle of the swale. A Manning's coefficient of 0.035 can be used for this new grassed shoulder and swale. Based on a hydraulic analysis of the grassed swale, the PCA anticipates the grassed swale to have an approximate flow depth of 0.132 ft. and approximate flow velocity of 2.296 ft. per second (fps). The swale is 12 ft. wide at the bottom of the swale just before draining into the drain inlet.

Based on the 12 ft. wide grassed swale at 2.0 percent cross slope, the approximately 0.132 ft. flow depth would be approximately 0.012 ft. higher than the 0.12 ft. swale depth, so no substantial water would be anticipated to flow onto the street pavement. The grassed swale is sized appropriately to convey the existing and proposed runoff anticipated from the slope to flow into the existing drain inlet with an improved grass swale, compared to the existing conditions where the runoff flows along the outside edges of the road pavement, since the existing bottom of slope ties into the edge of road pavement in most areas.

3.4.2.3 Conclusions: North Zone

For the North Zone, the proposed drainage area and slope vegetation will remain the same, or better, than the existing conditions. Since the proposed improvements will not change the existing drainage patterns and will provide better slope stabilization and permanent vegetative cover, no adverse impacts will occur to adjacent properties. To better facilitate the runoff from the slope, a 5 ft., or wider, shoulder and swale will be added at the base of the slope to direct the runoff into the existing drain inlet. The existing roadway has an average running slope of 11 percent. The new 5 ft. wide (or more) shoulder and swale will have a 2 percent cross slope away from the edge of pavement and towards the base of the slope. A Manning's coefficient of 0.035 can be used for this new grassed shoulder and swale. Based on the drainage area of the existing slope on the north side of the existing drain inlet is 0.30 acres, while the drainage area for the slope on the south side

of the existing drain inlet is 0.21 acres. For the grassed swale on the north side of the drain inlet, the 0.30 acres of drainage area would be 58.8 percent of the total runoff from the slope, or have an anticipating peak runoff rate of 0.88 cfs. Based on a hydraulic analysis of the grassed swale, the PCA anticipates the grassed swale to have a flow depth of 0.124 ft. and flow velocity of 2.199 feet per second (fps). The swale is 10 ft. wide at the bottom of the swale just before draining into the drain inlet. Based on the 10 ft.-wide grassed swale at 2.0 percent cross slope, the 0.124 ft. flow depth would be less than the 0.2 ft. swale depth, so no water would be anticipated to flow onto the street pavement. The swale width gradually gets narrower running up the road which corresponds to the drainage area and runoff flowrates getting smaller, so the grassed swale is sized appropriately to convey the existing and proposed runoff anticipated from the slope to flow into the existing drain inlet with an improved grass swale, compared to the existing conditions where the runoff flows along the outside edges of the road pavement, since the existing bottom of slope ties into the edge of road pavement in most areas.

3.4.2.4 Conclusions: General

On a regional basis, no adverse impacts to surface water or groundwater resources are anticipated due to implementation of the Kōnane Slope Stabilization Project. The project site is located close to Kāneʻohe Bay, an inlet of the Pacific Ocean, but is located mauka of the Lilipuna Road. However, the Proposed Action does not involve any activities which would alter any stream channels, wetlands, or other surface water bodies. Earthmoving for the proposed project will disturb the existing ground cover and create temporary potential for increased soil erosion in a relatively modest area of approximately 1.26 acres total; however, the project will be implemented in zones which will limit the total area exposed at any one time to less than one acre (Section 2.1). Over the long term, once all construction activities are complete and the project-related landscaping has been established, the Proposed Action should reduce the potential for pollutants entrained in storm water to leave the project site and enter Kāneʻohe Bay, better safeguarding the nearshore environment and marine ecosystems.

On a localized basis, and as discussed in Section 3.4.2.1, 3.4.2.2, and 3.4.2.3, the proposed drainage area and slope vegetation will generally remain the same, or better, than the existing conditions. Since the proposed improvements will not change the existing drainage patterns and provide better slope stabilization and permanent vegetative cover, no adverse impacts are expected to occur to adjacent properties or Kāneʻohe Bay. The proposed shoulder and swale will receive water moving downslope and direct the runoff into the existing drain inlet(s) along Lilipuna Road. Based on the width and slope of the proposed swale, no substantial water would be anticipated to flow onto the street pavement.

The No Action Alternative does not involve modifications to the existing environment that directly have the potential to impact water resources. Indirectly, the increased potential for erosion over the long term under the No Action Alternative has the potential to result in adverse effects Kāneʻohe Bay waters.

3.4.2.3.3 AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

The Proposed Action, as described in Section 2.1 and, specifically, the ESCP detailed in Section 2.1.1, incorporates measures to avoid and minimize impacts to surface water resources. As discussed in Section 1.5, an NPDES permit has been obtained and the applicable BMPs identified

in Section 2.1.1 will be implemented. The Proposed Action is assessed to not have a substantial or significant impact on hydrologic resources; no mitigation measures are warranted.

3.5 TRAFFIC

3.5.1 EXISTING CONDITIONS

Public surface road access to the project site is solely via Lilipuna Road (Figure 1-2), which is owned and maintained by CCH. Lilipuna Road is an urban-collector, single-lane, two-way road which serves the Pu‘u Ali‘i development and nearby residences and is directly adjacent to the project site. The speed limit on the portion of Lilipuna Road fronting the project site is 25 miles per hour. The State of Hawai‘i, Department of Transportation, Highways Division, Highways Planning Survey Section (HDOT) conducts occasional traffic counts for Lilipuna Road. As of the date this Final EA was prepared, the most recent data available for Lilipuna Road (Station No. B72654500000) from HDOT was from May 24-25, 2011; a summary of the relevant data is provided in Table 3-2. Although this data is the most recent available, it is dated. However, in the absence of more recent data, there are several factors which led the PCA to consider this data broadly representative of existing conditions: (i) Lilipuna Road has not undergone significant development in the intervening years; (ii) the broader Kāne‘ohe region has seen a slight reduction in total population in the interim; (iii) the traffic-related impacts (i.e., equipment, material, and worker vehicle-trips) from construction of the proposed project are modest and temporary; and (iv) once constructed the proposed project will have no impact on traffic whatsoever.

As can be seen from this data, the total traffic volumes on Lilipuna Road are quite modest, and tend to exhibit the typical residential pattern of use, with commuter volume surging in the morning and afternoon, with lower volumes at other times. Overall, total traffic volumes on Lilipuna Road may be characterized as low, averaging approximately 3.3 vehicles per minute during the morning peak hour from 7:15-8:15 a.m. on May 24, 2011, and fewer, 2.8 per minute, from 7:00 to 8:00 a.m. on May 25, 2011.

Table 3-4 2011 Traffic Volumes on Lilipuna Road Station No. B72654500000

<i>Date and Parameter</i>	<i>Westbound</i>	<i>Eastbound</i>	<i>Total</i>
May 24, 2011			
24-Hour Volume	1,305	1,341	2,646
AM Peak (7:15-8:15 a.m.)	86	117	203
Non-Commuter PM Peak (1:45-2:45 p.m.)	86	84	170
PM Peak (5:15-6:15 p.m.)	132	97	229
May 25, 2011			
24-Hour Volume	1,333	1,325	2,658
AM Peak (7:00-8:00 a.m.)	66	107	173
Non-Commuter PM Peak(2:15-3:15 p.m.)	105	96	201
PM Peak (3:45-4:45 p.m.)	131	115	246

Source: HDOT, Site ID No. B72654500000 (2011)

3.5.2 POTENTIAL IMPACTS

Activities required to implement the Kōnane Slope Stabilization Project will, during the short-term construction phase, generate additional vehicle trips on area roadways, including directly affecting

Lilipuna Road. Specific activities with the potential to generate vehicle trips on area roadways include the following: (i) construction workers' commutes to and from the project site; (ii) delivery of construction material and equipment to the property; and (iii) removal of construction waste and debris. Adequate space exists on Pu'u Ali'i property so that vehicle parking associated with construction activities will not interfere with the active traffic lanes along Lilipuna Road.

It is anticipated that there will be brief and intermittent traffic delays on Lilipuna Road during construction because it will be reduced to a single lane serving two-way traffic. On most construction days, activities on Lilipuna Road will be very brief and either not require any lane closures or require the closure of a single lane for periods of roughly 30 minutes. During the following activities, longer closures of one lane on Lilipuna Road will be required:

- *Loading of soil for off-site disposal.* Per the discussion in Section 2.1.3, the total earthmoving volumes for the project consist of approximately 2,340 cubic yards for the North Zone and 4,103 cubic yards for the South Zone, as indicated in Table 2-3 and Table 2-4, respectively. This quantity of earth will require approximately 320 truckloads. The truck and equipment to load them will be present in the mauka lane of Lilipuna Road during this operation. Assuming 32 days will be required to complete this activity, an average of approximately 10 large trucks will be present on Lilipuna Road, a volume which the road can easily accommodate.
- *Establishment of shoulder and swale.* Final grading and planting of the grass swale and shoulder will require roughly 5 days and the closure of the mauka land on Lilipuna Road.

In total, the volume of construction-related vehicle trips would be small and spread throughout the day and will not be concentrated during the morning and afternoon peak-hour traffic. The temporary use of the mauka/eastbound lane of Lilipuna Road would only occur per a City-issued Street Usage Permit (Section 1.5); it is likely that this will limit the closure to normal work hours.⁶ Further, all work for the Kōnane Slope Stabilization Project will be conducted during typical work hours between 8:00 a.m. and 4:00 p.m.; no work is planned during dawn and dusk twilight.

Even if the contractor selected to implement the Proposed Action determines that additional closures of the mauka/eastbound lane of Lilipuna Road are necessary to complete the work, the impact to traffic will be limited in scope and less than significant.

The No Action Alternative does not involve activities that directly have the potential to impact traffic in the area. Indirectly, the encroachment of the Kōnane Slope onto Lilipuna Road due to soil creep or related to a seismic event could have a substantial effect on traffic on Lilipuna Road.

3.5.3 AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

PCA and the selected contractor would implement the following avoidance and minimization measures:

- Development of a Traffic Control Plan, obtain a Street Usage Permit, and comply with permit conditions.

⁶Monday through Friday (excluding holidays) from 7:00 a.m. to 6:00 p.m. and Saturday from 9:00 a.m. to 6:00 p.m.

- Coordinate with the No. 30 Kāneʻohe Neighborhood Board, emergency services, Oʻahu Transit Services (operators of The Handi-Van), and area residents to keep them apprised of the relevant details of the proposed project and any potential impacts construction may have on area roadways.
- Conduct regular inspections of the portion of Lilipuna Road utilized by large trucks and promptly clean any vegetation, dust, or other debris from the affected roadway during each construction day.

The Proposed Action has been assessed to not have a substantial or significant impact on traffic; no mitigation measures are warranted.

3.6 ARCHAEOLOGICAL AND CULTURAL RESOURCES

3.6.1 EXISTING CONDITIONS

No site-specific archaeological or cultural studies have been prepared for the Kōnane Slope Stabilization Project. However, a substantial amount of information is available as a result of nearby planning efforts, which has been used to consider the potential for impacts to archaeological, historical, or cultural resources which might result from the Proposed Action or its No Action Alternative. Those include:

- Wong, C.T.Y. (2016) *Draft Environmental Assessment for a New Residence for Charles Tsu Yew Wong, 46-107 Lilipuna Road, Kāneʻohe, Oʻahu, TMK 4-6-001-007*.
- Department of Design and Construction (2017) Kahanahou Wastewater Pump Station Upgrade and Sewer Improvements, Kaneohe, Oahu. Prepared by Townscape, Inc., Honolulu, Hawaiʻi.
- Department of Environmental Services (DES) (2018) *Final Environmental Assessment for Heʻeia Wastewater Pump Station*. Prepared by Shimabukuro, Endo & Yoshizaki, Inc., Honolulu, Hawaiʻi.

The project site is located in Heʻeia ahupuaʻa, Koʻolaupoko moku, on Kāneʻohe Bay, Oʻahu, Hawaiʻi. In pre-contact times, the extensive salt marshes of Heʻeia, inland from the fishponds (“loko” in ʻōlelo Hawaiʻi) that dotted the shoreline, were unsuitable for cultivation. However, according to *Native Planters in Old Hawaiʻi: Their Life, Lore, and Environment* (Handy, Handy, and Pukui 1972), fringing these salt marshes to the south, flanking both sides of Heʻeia Stream from which they were irrigated, lay vast terraced lowland flats of Heʻeia ahupuaʻa, which were still largely planted with commercial taro in the mid-1930s. The southern portion of those loʻi (i.e., taro paddies) were irrigated from Kalimukele Stream, which turns south and flows into Kāneʻohe Bay. On the north side of the ahupuaʻa, the small stream called Pūʻolena supplements Heʻeia Stream. These terraces extended up the main stream channel to the junction of Heʻeia Stream and ʻIolekaʻa, flowing from the west and southwest, respectively. A small stream named Kaiwikeʻe flows into ʻIolekaʻa from the Koʻolau Range off to the southwest. Up all of these valleys are old loʻi, now abandoned.

Heʻeia (“Washed Away”) is named for the washing away of the primordial ancestor Wākea, his wife Haumea, and all their retinue in a tidal wave which overwhelmed their encampment there,

during their epic war against Kānekumuhonua. According to one traditional mo‘ōlelo, Kānekumuhonua was vexed with the goddess Haumea for snatching god Wākea away from his warriors after he had been seized in Kalihi Valley for taking wild bananas. In search of vengeance, he pursued Wākea, Haumea, and their followers to He‘eia. It was near the small islet of Kapapa, located in Kāne‘ohe Bay, that the kahuna who had foretold of this cataclysm taught Wākea to make a heiau (a temple) of his clasped hands and an offering therein of a “pig”—humuhumunukunukuāpua‘a—caught in the waters beside him.

Another traditional mo‘ōlelo associated with this ahupua‘a involves Mā‘eli‘eli, the “Dragon Woman” or mo‘o of He‘eia. According to native Hawaiian mythology, mo‘o are shapeshifting, reptilian creatures that are frequently associated with bodies of water. Mo‘o often take the forms of monstrous reptiles, tiny geckos, and humans. They were revered as ‘aumakua, and could have power over the weather and water. They were believed to be amphibious, and many fishponds in Hawai‘i were considered to be home to a mo‘o. When a mo‘o dies, its petrified body becomes part of the landscape. Such is the case with Mā‘eli‘eli, whose petrified body forms Pu‘u Mā‘eli‘eli overlooking Kaneohe Bay today. According to W.D. Westervelt in his *Legends of Maui, A Demi-God of Polynesia* (Westervelt 1910):

Maui went to the Koolau side and rested at Kaha-luu, a diving place in Koolaupoko. In that place there is a noted hill called Ma-eli-eli. This is the story of that hill. Maui threw up a pile of dirt and concealed rubbish under it. The two gods, Kane and Kanaloa, came along and asked Maui what he was doing. He said, ‘What you see. You two dig on that side to the foot of the pali, (precipice) and I will go down at Kaha-luu. If you two dig through first, you may kill me. If I get through first I will kill you.’ They agreed, and began to dig and throw up the dirt. Then Maui dug three times and tossed up some of the hills of that place. Kane and Kanaloa saw that Maui was digging very fast, so they put forth very great strength and threw the dirt into a hill. Meanwhile Maui ran away to the other side of the island. Thus by the aid of the gods the hill Ala-eli-eli was thrown up and received its name ‘eli,’ meaning ‘dig.’ ‘Ma-eli-eli’ meant ‘the place of digging.’

In the post-contact period, as the native Hawaiian population fell, many areas which were formerly cultivated fell into disuse. Those areas which continued to be worked were either cultivated by Hawaiians who owned the land, or Asian immigrant communities that either leased the land or were hired to cultivate it. According to the *Cultural Impact Assessment for the He‘eia Wastewater Pump Station Improvements Project* (Cultural Surveys Hawai‘i, 2018), a Japanese fishing community known as Kinimura Camp was located along the shoreline somewhat north of the current Proposed Action in the early 1900s, and the fishermen accessed freshwater from artisanal springs there.

In more recent decades, the immediate vicinity of the Kōnane Slope Stabilization Project has been completely urbanized since the McCormack Land Company, Inc. first began to develop Pu‘u Ali‘i in the mid-1970s, and now consists primarily of homes and roadways linking them to the broader Windward O‘ahu community. While complete construction records of these developments are not available, the intensive cut, fill, and other modifications of landforms associated with the construction of Lilipuna Road and the Pu‘u Ali‘i development, considered together with the passage of time and the effects of the nearshore semitropical environment make it unlikely that significant cultural artifacts remain intact underground. Furthermore, nearly the entire Kōnane

Slope was previously modified via grading and planting when the project was developed, including the buildings fronting the Kōnane Slope as recently as the early- to mid-1990s. In addition, informal interviews with PCA staff indicate that they are unaware of any archaeological sites, historic properties, or cultural resources or practices within or in the immediate vicinity of the Kōnane Slope Stabilization Project and PCA has not received any requests by cultural practitioners to access the project site. PCA staff report that they have not witnessed anyone collecting resources on Kōnane Slope; furthermore, there are no native or uncommon species present that are associated with traditional or customary native Hawaiian practices or beliefs.

3.6.2 POTENTIAL IMPACTS

The Proposed Action involves the disturbance of roughly 1.25 acres, the removal of existing vegetation, and the removal of more than 6,400 cubic yards of soil. PCA has concluded that the Proposed Action will not have a significant impact on archaeological, historic, or cultural resources or any traditional and customary practices that rely on them. It has reached this conclusion because:

- The area has been extensively modified by previous developments, including Lilipuna Road, Pu‘u Ali‘i, storm drains and other utilities, and private residences.
- There is no evidence of archaeological sites, historic properties, or cultural practices or resources within or in the immediate vicinity of the Kōnane Slope and PCA has not received any requests by cultural practitioners to access the project site for such purposes.
- The project will not affect access to the nearby shoreline.

The No Action Alternative does not involve any work of any kind and does not have the potential to cause any impact to archaeological, historic, or cultural properties.

3.6.3 AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

If human skeletal remains are encountered during the monitoring effort, the contractor halt all ground-disturbing activity in the immediate area of the discovery, stabilize the remains, and immediately notify SHPD, police, and medical examiner, as appropriate. If the skeletal material is determined to be Historic or Pre-Contact (as opposed to recent), the project would seek SHPD guidance on how to proceed with the discovery, and the human skeletal remains will be handled in compliance with HRS Chapter 6E, HAR § 13-300, and DLNR-SHPD directives. If the remains are determined to be recent, the Honolulu Police Department and medical examiner would determine the appropriate course of action.

3.7 OTHER RESOURCES AND TOPICS

The Proposed Action, as articulated in Section 2.1, is relatively straightforward and simple in concept: stabilizing Kōnane Slope in order to halt soil creep and eliminate the potential for adverse impacts to Lilipuna Road, nearby residences, and Kāne‘ohe Bay. As previously discussed, following the Proposed Action, the Kōnane Slope will be landscaped pursuant to the MLP. Because there will be no change in the type or intensity of use of the project site, and will continue to be used exactly as it is at the present time, the Proposed Action is already consistent with all

applicable land use rules and regulations and does not have the potential to substantially impact a variety of other resources which are typically addressed in EAs. For these reasons, the discussion of the following topics is truncated with the understanding that the Proposed Action does not have the potential to substantially or significantly adversely impact these resources during or after implementation; they include:

- *Air Quality*. Air quality in the region is good; all federal and state air quality standards have been attained. As discussed in Section 2.1.3, dust will be controlled during construction. The proposed project does not involve activities or uses that have potential to meaningfully affect air quality on a regional scale.
- *Coastal Hazards*. According to the *Atlas of Natural Hazards in the Hawaiian Coastal Zone* (USGS, 2002), the Overall Hazard Assessment for the Mōkapu sector north of Pukaulua Point, including the coastline closest to the project site, is moderate to high (5), reflecting the low coastal slope and the proximity to the drainages of the Ko‘olau Range. The project site is outside the: (i) 3.2-ft. Sea Level Rise exposure area, (ii) 3.2-ft. passive flooding area; and (iii) 3.2 ft. annual high wave flooding area; coastal erosion data is not available for Kāne‘ohe Bay. The Proposed Action is located in the Federal Emergency Management Agency’s Flood Zone X, which is an area determined to be outside of the 0.2 percent annual chance floodplain; no base flood elevations or depths are shown within these zones. In addition, the project site is not located in any flood plain, tsunami evacuation zone, beach, estuary, fresh waterbody, or coastal waters, and will not have an impact on such areas.
- *Noise*. The predominant noise source in the vicinity of the project site is related to traffic along Lilipuna Road, and to a lesser extent, Kōnane Place. This is supplemented by noise related to aircraft operations at Marine Corps Base Hawai‘i on the Mōkapu Peninsula further south in Kāne‘ohe Bay. While construction activities will generate some noise, none of the activities required to implement the Proposed Action have the potential to meaningfully affect the sonic environment. All work for the Proposed Action will be conducted during typical work hours between 8:00 a.m. and 4:00 p.m.
- *Public Utilities and Infrastructure*.
 - *Water*. The Board of Water Supply provides potable water to all of the parcels affected by the Proposed Action. This will continue to be the case once the project is implemented, and once constructed, the Kōnane Slope Stabilization Project will not cause any substantial increases in demand for water over the long term.
 - *Electricity and Communications*. Overhead electrical lines provide electrical and communications services to the project parcels. This will continue to be the case and the Proposed Action will not cause any substantial increase in demand.
 - *Wastewater*. The project parcels and all adjacent properties are served by the municipal sewer system operated by the DES. This will continue during and after implementation of the Proposed Action. Further, the Kōnane Slope Stabilization Project will not impose any increased demands on the sewer system.

- Storm Water Management. Currently, storm water falling on the project site is allowed to flow across, and percolate into, the ground. All of the slope stabilization technologies employed as part of the Kōnane Slope Stabilization Project (see Section 2.1) are water permeable, and storm water will continue to flow across and percolate into the ground across the project site during and after the Proposed Action is implemented. Furthermore, stormwater will be better managed as a result of the Proposed Action, which will implement an 12-foot swale at the bottom of Kōnane Slope to prevent runoff onto Lilipuna Road.
- Solid Waste. The project site is served by the DES Solid Waste Division, which provides weekly collection of solid waste, recycling, and green waste. This will continue to be the case during and after implementation of the Proposed Action and no substantial changes to solid waste generation are anticipated over the long term.
- Fire. The project parcel is served by the Kāneʻohe Fire Station No. 17 located at 45-910 Kamehameha Highway, approximately 0.75 miles from the project site. The nearest fire hydrants are located directly adjacent to the project site along Lilipuna Road, less than 20 feet away from some portions of the project site.
- Parks. The nearest parks are Heʻeia Neighborhood Park located 46-465 Kamehameha Highway, Kāneʻohe Community Park located at 45-529 Keaʻahala Road, and Kāneʻohe Beach Park located at 45-15 Waikalua Road. All of these parks are within 1 mile of the project site.
- Police. The project is in Honolulu Police Department’s Patrol District No. 4, serving Kailua, Kāneʻohe, and Kahuku. The closest police station is the Kāneʻohe Police Station located at 45-270 Waikalua Road, approximately 0.75 miles from the project site.
- Schools. The project parcel is in the Castle-Kahuku public school complex. While no children live on the project site, those living on the affected parcels would be eligible to attend Heʻeia Elementary School at 46-202 Haʻikū Road, King Intermediate School located at 46-155 Kamehameha Highway, and Castle High School located at 45-386 Kāneʻohe Bay Drive.
- Other Services. Primary medical services in Kaneohe are provided by: (i) Adventist Health Castle (formerly Castle Medical Center) located at 640 ʻUlukahiki Street in Kailua, (ii) Straub Medical Center’s Kaneohe Clinic located at 46-056 Kamehameha Highway #221; and (iii) Windward Urgent Care located at 46-001 Kamehameha Highway, Suite 107. In addition, Emergency Medical Services Division staff and trucks are located at the Kāneʻohe Fire Station and co-respond with the Honolulu Fire Department.

3.8 SECONDARY AND CUMULATIVE IMPACTS

During the preliminary planning process, PCA evaluated whether the Kōnane Slope Stabilization Project, while individually limited in scope, might contribute to significant impacts on the natural or human environment when considered cumulatively along with other projects in the area. A cumulative impact is an impact on the environment which results from the incremental impact of

a proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. A cumulative impact occurs when the incremental environmental effects of the Proposed Action added to other past, present, and reasonably foreseeable future actions result in substantial significant impacts.

The Proposed Action consists of emplacement of erosion and sediment control measures around the project site, removal of existing vegetation within that area, application of a variety of slope stabilization measures, and replanting the area per PCA's approved MLP. PCA's contractor(s) will also conduct a 180-day post-installation maintenance period to monitor and ensure that the new plantings flourish. The Proposed Action is not contingent upon any other action, public or private, and will not individually cause future actions to be taken by any public or private entities. Therefore, the project will not generate any adverse secondary or cumulative impacts.

There are, however, some beneficial secondary impacts that will accrue because of the Kōnane Slope Stabilization Project. First, a stabilized slope will pose less risk of slope failure, which in turn reduces the potential to cause significant adverse impacts to Lilipuna Road and downslope areas, including Kāne'ōhe Bay (e.g., soil creep, mass wasting, and/or stormwater runoff). Second, once the project has established a well-managed landscape per the MLP, the stabilization work together with the implementation of the MLP will generally improve the appearance of, and airflow to and within, the project site. Finally, the Proposed Action will allow the PCA to replace the existing vegetation with the general plant palette approved by DPP ~~invasive plant species, which have opportunistically colonized the project site, to be replaced with native species and other non-invasive plantings that are preferable for the relevant agencies at the present time.~~

CHAPTER 4: CONSISTENCY WITH LAND USE PLANS, POLICIES, AND CONTROLS

This chapter discusses the relationship of the Proposed Action to applicable land use plans, policies, and regulations at the county, state, and federal level. Compliance with existing regulations and requirements, complying with the conditions of the permits required (Section 1.5), and implementing the avoidance and minimization measures outlined in various sections of Chapter 3, will help to ensure that the Proposed Action will not result in significant impacts on current land use policies and programs at the local and state level.

4.1 STATE OF HAWAI‘I

4.1.1 HAWAI‘I STATE PLAN, HRS CHAPTER 226

Adopted in 1978 and last revised in 1991, the *Hawai‘i State Plan* is intended to guide the future long-range development of the State by:

- Identifying goals, objectives, policies, and priorities for the State;
- Providing a basis for determining priorities and allocating limited resources, such as public funds, services, human resources, land, energy, water and other resources; and
- Establishing a system for plan formulation and program coordination to provide for an integration of all major state, and county activities.

The *Hawai‘i State Plan* is a policy document. It depends on implementing laws and regulations to achieve its goals. While not all sections of the *Hawai‘i State Plan* are directly applicable to the Kōnane Slope Stabilization Project, the most relevant are identified and discussed below.

§226-4: State Goals. In order to ensure, for present and future generations, those elements of choice and mobility that ensure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:

- (1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii’s present and future generations.*
- (2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.*
- (3) Physical, social and economic well-being, for individuals and families in Hawai‘i, that nourishes a sense of community responsibility, of caring, and of participation in community life.*

Discussion: The Kōnane Slope Stabilization Project is intended to stabilize Kōnane Slope, which lies between the Pu‘u Ali‘i apartment complex and CCH-owned Lilipuna Road, and is currently unstable and experiencing soil creep which could be exacerbated by heavy rains and/or seismicity. As such, the Proposed Action has been identified as needed by both CCH and PCA to maintain and stabilize the natural processes acting on Kōnane Slope, so that Lilipuna Road, adjacent

properties, and Kāneʻohe Bay will not be adversely impacted by soil erosion and/or sedimentation. This effort is wholly consistent with the *Hawaiʻi State Plan*’s goal of maintaining a desirable physical environment comprised of clean, beautiful, and stable natural systems.

§226-13 Objectives and policies for the physical environment--land, air, and water quality.

(a) *Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:*

(1) *Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.*

(2) *Greater public awareness and appreciation of Hawaii's environmental resources.*

(b) *To achieve the land, air, and water quality objectives, it shall be the policy of this State to:*

(2) *Promote the proper management of Hawaii's land and water resources.*

(3) *Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.*

(5) *Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.*

(6) *Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.*

Discussion: The Kōnane Slope Stabilization Project, at its core, is about properly managing land under PCA’s care. Since CCH first identified the concerns about soil discharge from Kōnane Slope in its January 11, 2019, letter prompting the need for the Proposed Action (see Section 1.3), PCA has been designing the Kōnane Slope Stabilization Project to maintain and improve this slope and reducing the threat of erosion. The landscaping that will be implemented following the Proposed Action will enhance the physical appearance of the area. For these reasons, PCA believes that the Proposed Action is fully consistent with these objectives and policies for Hawaiʻi’s natural environment drawn and consequently with the *Hawaiʻi State Plan* as a whole.

4.1.2 HAWAIʻI 2050 SUSTAINABILITY PLAN

The *Hawaiʻi 2050 Sustainability Plan* is a blueprint for Hawaiʻi’s preferred future. It is the most comprehensive planning process since the *Hawaiʻi State Plan* was developed over four decades ago. The State of Hawaiʻi’s Office of Planning and Sustainable Development’s Statewide Sustainability Program recently updated the *Hawaiʻi 2050 Sustainability Plan* to: (i) serve as the State’s sustainability and climate strategic action plan; (ii) align the State’s goals, policies, and actions with the United Nations’ *Sustainable Development Goals*; and (iii) recommend sustainability and climate change actions for 2020–2030. The updated *Hawaiʻi 2050 Sustainability Plan* identifies eight “focus areas” intended to guide the State towards an equitable, resilient, and sustainable future:

1. **Promote a Sustainable Economic Recovery** through strategies that support local agriculture, green workforce development and education, and sustainable and regenerative tourism.
2. **Reduce Greenhouse Gas Emissions** by continuing to monitor the state's emissions and reduce greenhouse gas (GHG) emissions through strategies in the energy, transportation, agriculture and waste sectors.
3. **Improve Climate Resilience** by continuing to monitor and adapt to climate impacts and take actions to increase the resilience of the natural and built environments and their occupants.
4. **Advance Sustainable Communities** through strategies that improve land use and access to green space, advance sustainable practices in schools, and encourage sustainable buildings and infrastructure.
5. **Advance Equity** by ensuring equitable access to resources, addressing affordable housing and homelessness crises, and improving gender equity.
6. **Institutionalize Sustainability Throughout Government** by increasing the government's capacity through institutionalized collaboration to address sustainability and greening government operations.
7. **Preserve the Natural Environment**, including a focus on clean water, marine resources and ecosystems, and natural resource protection.
8. **Perpetuate Traditional Ecological Knowledge and Values** as Hawai'i collectively tackles these sustainability and climate challenges.

Discussion: Of these, the seventh focus area (i.e., Preserve the Natural Environment) is the most relevant to the Proposed Action, touching on the need to provide for the careful use and management of natural resources. While the central theme of the *Hawai'i 2050 Sustainability Plan* is on the replenishment and preservation of the natural environment for future generations, it's equally applicable for the present, and the plan goes on to establish a series of strategies that are intended to achieve immediate progress across these focus areas. Specifically, Strategy 36 calls on the State of Hawai'i to, "continue to adopt strategies that protect land-based natural resources." To the extent that the Proposed Action will result in a stabilized, naturalistic condition for Kōnane Slope and prevent erosion and sedimentation from affecting adjacent areas, including Kāne'ōhe Bay, it is consistent with the natural resource preservation focus of the *Hawai'i 2050 Sustainability Plan*.

4.1.3 HAWAI'I LAND USE LAW; HRS §205

Chapter 205, HRS established the State Land Use Commission and gives this body the authority to designate all lands in the State as Urban, Rural, Agricultural, or Conservation District. The counties make all land use decisions within the Urban Land Use District in accordance with their respective county general plans, development plans, and zoning ordinances. The counties also regulate land use in the State Rural and Agricultural Districts, but within the limits specified by HRS, Chapter 205.

The proposed project is located in the State’s Urban Land Use District. HAR §15-15-18 characterizes the Urban Land Use District as exhibiting “city-like” concentrations of people, structures, streets, with an urban level of services and other related land uses. It also stresses the importance of ensuring availability of basic services and utilities in urban areas.

Discussion: The Proposed Action, while modest in scope, is consistent with the land uses envisioned for the State Urban Land Use District, contributing to safe and efficient travel along Lilipuna Road by ensuring the stability and aesthetic value of the adjacent Kōnane Slope. This, in turn, should contribute to the envisioned concentration of people and structures in appropriate areas within the Urban Land Use District. In addition, the Kōnane Slope Stabilization Project will not alter or detract from the overall character of the surrounding community; therefore, it is an appropriate land use in the Urban Land Use District.

4.1.4 COASTAL ZONE MANAGEMENT PROGRAM, HRS §205A

The objectives of the Hawai‘i Coastal Zone Management (CZM) Program are set forth in HRS, Chapter 205A. The State Office of Planning and Sustainable Development administers Hawai‘i’s CZM Program. The program is intended to promote the protection and maintenance of valuable coastal resources. All lands in Hawai‘i are classified as valuable coastal resources. A general discussion of the project’s consistency with the objectives and policies of Hawai‘i’s CZM Program follows.

4.1.4.1 Recreational Resources

Objective: Provide coastal recreational opportunities accessible to the public.

Policies:

- A) Improve coordination and funding of coastal recreational planning and management; and*
- B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:
 - i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
 - ii) Requiring restoration of coastal resources that have significant recreational value, including but not limited to coral reefs, surfing sites, fishponds, sand beaches, and coastal dunes, when these resources will be unavoidably damaged by development; or requiring monetary compensation to the State for recreation when restoration is not feasible or desirable;*
 - iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
 - iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
 - v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value**

consistent with public safety standards and conservation of natural resources;

vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;

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

viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.

Discussion: The Proposed Action will have no effect on coastal recreational resources. It is not near a dedicated public right-of-way to access the shoreline. While the project is in the vicinity of the shoreline and near areas used by the public for recreation, including surfing, boating, and fishing, the project will be confined to the project parcels and not affect access or recreation in a way material different than the existing residential use of the subject parcel, if at all. Conversely, if the Kōnane Slope Stabilization Plan is not implemented, per the No Action Alternative, it has the potential to cause significant adverse impacts to Lilipuna Road and downslope areas, including public access to recreational coastal resources along Kāneʻohe Bay. These impacts could be produced by soil creep, mass wasting, and/or stormwater runoff.

4.1.4.2 Historic Resources

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

Policies:

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: There are no known archaeological or historic resources present on the project site, it is not within a historic or cultural district, and project activity will be confined to parcels that have been heavily modified for decades. Section 3.5 provides archaeological, historical, and cultural background information for the area. That section also outlines why it has been determined that no historic resources will be directly or adversely affected by the proposed project. Thus, the Proposed Action is consistent with this policy of the CZM Program.

4.1.4.3 Scenic and Open Space Resources

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

Policies:

- A) Identify valued scenic resources in the coastal zone management area;*
- B) Ensure that new developments are compatible with their visual environment by designing and locating those developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*
- C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*
- D) Encourage those developments that are not coastal dependent to locate in inland areas.*

Discussion: As discussed in Section 3.2, scenic and aesthetic resources will not be adversely affected by the Proposed Action. Instead, the intent of the Proposed Action is to preserve, maintain, and improve on the condition of Kōnane Slope, which has been identified by CCH and JPB Engineering, Inc. as “unstable and susceptible to soil creep.” This unstable state may, in turn, lead to failure of portions of the slope and resultant discharge of pollutants onto Lilipuna Road, adjacent properties, and Kāne‘ohe Bay. The Kōnane Slope Stabilization Project will remediate that situation, protecting the natural and visual environment while minimizing the alteration of natural landforms and existing public views to and along the shoreline.

4.1.4.4 Coastal Ecosystems

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

Policies:

- A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*
- B) Improve the technical basis for natural resource management;*
- C) Preserve valuable coastal ecosystems, of significant biological or economic importance, including reefs, beaches, and dunes;*
- D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*
- E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

Discussion: The Proposed Action will not interact with or affect coastal ecosystems or any other water body in any manner. As described in Section 3.6, the project site does not provide habitat for, nor will it attract protected species once the project is implemented, and is not near protected habitat, reserves, or conservation districts.

4.1.4.5 Economic Uses

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

Policies:

- A) Concentrate coastal dependent development in appropriate areas;*
- B) Ensure that coastal dependent development and coastal related development are located, designed, and constructed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts in the coastal zone management area; and*
- C) Direct the location and expansion of coastal development to areas designated and used for that development and permit reasonable long-term growth at those areas, and permit coastal development outside of designated areas when:
 - i) Use of designated locations is not feasible;*
 - ii) Adverse environmental effects and risks from coastal hazards are minimized; and*
 - iii) The development is important to the State's economy.**

Discussion: The Proposed Action is a slope stabilization project in a coastal, residentially zoned community. The parcel has been placed in the State Urban Land Use District and is zoned R-10 Residential by CCH. As such, it is appropriately located on a parcel which is already in residential use, consistent with these state and county land use designations. The project does not involve the development of a previously undeveloped shoreline area, nor would it have an impact on coastal dependent/related development.

4.1.4.6 Coastal Hazards

Objective: Reduce hazard to life and property from coastal hazards.

Policies:

- A) Develop and communicate adequate information about the risks of coastal hazards;*
- B) Control development, including planning and zoning control, in areas subject to coastal hazards;*
- C) Ensure that developments comply with requirements of the National Flood Insurance Program; and*
- D) Prevent coastal flooding from inland projects.*

Discussion: The project site is not a shoreline parcel and therefore is not experiencing shoreline erosion. Although the project site is within the tsunami evacuation zone, it complies with the related programs. The Proposed Action will not cause or contribute to coastal flooding or hazards.

4.1.4.7 Managing Development

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

Policies:

- A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*
- B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and*
- C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.*

Discussion: PCA has initiated contact (see Chapter 6) and continues to work cooperatively with all government agencies with oversight responsibilities to facilitate efficient processing of permits and informed decision-making by the responsible parties. In addition, PCA has, via public outreach and this EA, attempted to communicate the potential impacts of the Proposed Action to the public in clear and understandable terms. The proposed activity conforms with applicable state and county land use designations and rules. No variances are being requested.

4.1.4.8 Public Participation

Objective: Stimulate public awareness, education, and participation in coastal management.

Policies:

- A) Promote public involvement in coastal zone management processes;*
- B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and*
- C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.*

Discussion: A public notice of availability for the DEA will be published in the Environmental Review Program (ERP's) bi-monthly bulletin, *The Environmental Notice*. Once available, the public will have an opportunity to review and comment on the DEA, pursuant to the requirements of HAR 11-200.1. The SMA Major Permit process will provide additional opportunities for public participation.

4.1.4.9 Beach and Coastal Dune Protection

Objective: Protect beaches and coastal dunes for public use and recreation, for the benefit of coastal ecosystems, and use as natural buffers against coastal hazards.

Policies:

- A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;*
- B) Prohibit construction of private shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;*
- C) Minimize the construction of public shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;*
- D) Minimize grading of and damage to coastal dunes;*
- E) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and*
- F) Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.*

Discussion: The Proposed Action poses no risk to beaches or dunes. The subject parcels are not experiencing shoreline erosion, no structures are planned seaward of the shoreline setback, and no interactions with littoral processes would be involved.

4.1.4.10 Marine and Coastal Resources

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

Policies:

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

E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Discussion: The Proposed Action will not adversely impact the protection, use, and sustainable development of marine and coastal resources. No new structures are slated to occur within 60 feet of the shoreline and the Proposed Action will not take place on shoreline parcels.

4.2 CITY AND COUNTY OF HONOLULU

4.2.1 O‘AHU GENERAL PLAN

The *O‘ahu General Plan* was adopted in 1977, and has been subsequently amended (most recently in November 2021). The *O‘ahu General Plan* is a comprehensive statement of objectives and policies which sets forth the long-range aspirations of O‘ahu’s residents and the strategies of actions to achieve them. It is the focal point of a comprehensive planning process that addresses physical, social, economic and environmental concerns affecting CCH. This planning process serves as the coordinating means by which CCH government provides for the future growth of the metropolitan area of Honolulu.

First, the *O‘ahu General Plan* emphasizes protection and stewardship of the natural environment. Section III, Natural Environment and Resource Stewardship, identifies several objectives directly relevant to the Kōnane Slope Stabilization Project.

Objective A

To protect and preserve the natural environment.

Policy 1

Protect O‘ahu’s natural environment, especially the shoreline, valleys, ridges, watershed areas, and wetlands from incompatible development.

Policy 4

Require development projects to give due consideration to natural features and hazards such as slope, inland and coastal erosion, flood hazards, water-recharge areas, and existing vegetation, as well as to plan for coastal hazards that threaten life and property.

Policy 9

Increase tree canopy and ensure its integration into new developments, and protect significant trees on public and private lands.

Discussion: The proposed slope stabilization project is intended to reduce the potential for soil sediment discharges and/or failure of Kōnane Slope which, if not addressed, as discussed in Section 1.3, could adversely affect: (i) Lilipuna Road, (ii) downslope private residences, and (iii) Kāne‘ohe Bay. As such, the Proposed Action itself is a natural resource stewardship measure, intended to protect nearby sensitive resources, including the shoreline. The Proposed Action, as described in Section 2.2, and its BMPs have been conceived with due consideration to slope, erosion, stormwater runoff, and other critical factors. Last, implementation of the DPP-approved

MLP, as described in Section 2.2, will over time result in an increased tree canopy along Lilipuna Road, pursuant to Section III. Objective A, Policy 9 of the *O‘ahu General Plan*.

The *O‘ahu General Plan* poses several objectives related to housing and then lays out a series of policies intended to help realize these objectives. Section IV, Housing and Communities, Objective A, proposes “to ensure a balanced mix of housing opportunities and choices for all residents at prices they can afford.” Further developing this theme, Section IV, Policies 3 and 4, state:

Objective A

To ensure a balanced mix to housing opportunities and choices for all residents at prices they can afford.

Policy 3

Encourage innovative residential developments that result in lower costs, sustainable use of resources, more efficient use of land and infrastructure, greater convenience and privacy, and a distinct community identity.

Policy 4

Support and encourage programs to maintain and improve the condition of existing housing.

Discussion: While not explicitly related to housing, the Kōnane Slope Stabilization Project is very much oriented towards creating and maintaining a livable community for PCA and the adjacent community through efficient use, and management of, the property under its care. By stabilizing Kōnane Slope, PCA will be acting to safeguard nearby residences, Lilipuna Road, and Kāne‘ohe Bay from the potential adverse impacts of soil creep and slope instability. As a result, stabilization will allow for PCA’s continued and sustainable use of its property as well. As such, the Proposed Action is intended to maintain and improve the condition of the residential properties under PCA’s care.

The *O‘ahu General Plan* further devotes an entire chapter to the subject of transportation. Section V, Transportation and Utilities, Objective A states CCH’s policy, “to create a multi-modal transportation system that moves people and goods safely, efficiently, and at reasonable cost and minimizes fossil fuel consumption and greenhouse gas emissions; serves all users, including limited income, elderly, and disabled populations; and is integrated with existing and planned development.” Specific policies follow from that, include:

Policy 9

Consider environmental, social, cultural, and climate change and natural hazards impacts, as well as construction and operating costs, as important factors in planning transportation system improvements.

Discussion: Since its inception, PCA has worked with competent professionals to design and engineer the Kōnane Slope Stabilization Project as a way of addressing the natural processes acting on Kōnane Slope, causing the soil creep and instability noted in Section 1.3. By stabilizing Kōnane Slope, PCA intends to manage the effects of environmental change on its property, preventing

adverse impacts to adjacent transportation infrastructure (i.e., Lilipuna Road) and private residences.

4.2.2 KO‘OLAUPOKO SUSTAINABLE COMMUNITIES PLAN (KPSCP)

The KPSCP (2017) is intended to supplement the *O‘ahu General Plan* and further its objectives and policies with recommendations specific to the Ko‘olaupoko community. The Plan Area for the KPSCP region spans from Ka Lae O Ka ‘Ō‘io (Ka ‘ō‘io Point) in the north to Makapu‘u Point in the south and is further defined by the peaks of the Ko‘olau Range and the shoreline. The KPSCP Plan Area includes small rural communities like Waikāne, Waiāhole, Kahalu‘u, He‘eia, and Waimānalo; it also includes the more populated suburban communities of Kailua and Kāne‘ohe, where the Proposed Action is located.

Per the directives of the *O‘ahu General Plan*, the KPSCP Plan Area is expected to experience essentially no growth over its 25-year projection horizon. Policies in support of this goal limit the potential for expansion of the region’s housing stock, commercial centers and economic activity, and are focused on maintaining the patterns of development characteristics of its urban fringe and rural areas. In terms of organization, the KPSCP provides policies and guidelines across the following domains: (i) open space preservation; (ii) parks and recreation, (iii) historic and cultural resources; (iv) agriculture; (v) residential use; (vi) commercial and industrial uses; (vii) institutional uses; and (viii) military uses.

Potential visual impacts to scenic resources identified in the KPSCP have already been addressed in Section 3.2. While most of the other resource categories are not directly applicable to the Proposed Action, Section 3.1 of the KPSCP does identify open space as a key element of the KPSCP’s vision for the area’s future and prioritizing its preservation and maintenance (DPP, 2017):

Open space preservation is a key element of the vision for Ko‘olau Poko’s future. Long-term protection and preservation of scenic resources, agricultural areas, natural areas, and recreational areas are important to maintaining the character and attractiveness of Ko‘olau Poko for both residents and visitors. Open space also functions to provide access to shoreline and mountain areas, define community boundaries, prevent urban sprawl, provide buffers between agricultural uses and residential neighborhoods, create a system of linear greenways along roadways and drainage channels, provide flood storage and habitat where functionally necessary and feasible, and prevent development in areas susceptible to landslides and similar hazards.

PCA has concluded that the Kōnane Slope Stabilization Project is supportive of the KPSCP’s vision for Kāne‘ohe and the Ko‘olaupoko region. By grubbing, grading, and landscaping Kōnane Slope, PCA intends to preserve the area as an effective greenway, defining the boundary between the Pu‘u Ali‘i development, Lilipuna Road, and the surrounding community, and serving as a visual buffer for them. In addition, while not actively needed to prevent development on Kōnane Slope, the Proposed Action will serve to remediate an area which has been identified as being susceptible to seismicity and landslides, thereby maintaining it as a functioning open space buffer between residential uses and the Lilipuna Roadway.

As discussed in Section 3.3, at a regulatory policy level, CCH's KPSCP (DPP, 2017) makes a clear priority of preserving and enhancing scenic, recreational, and cultural features of the Ko'olaupoko landscape that help define the community's sense of place. It further establishes that:

Ko'olau Poko's striking topographic features, outstanding beaches and bays, lush valleys, perennial streams and other natural features and landmarks continue to visually define the "windward" sense of place. Views of ridgelines or upper slopes of coastal headlands and mountains from the vantage point of coastal waters, major roads, parks and other public places, are kept free from land disturbance or the encroachment of structures or other projects that would affect the scenic viewplanes.

Figure A-1 from the KPSCP is reproduced in this report as Figure 3-1. As can be seen from that figure, there are several identified important vistas from stationary points along the southern side of Kāne'ōhe Bay, including significant continuous and intermittent views of Moku O Lo'e, Pu'u Pahu, He'eia, and Mōkapu. Moku O Lo'e is also known locally as Coconut Island and is currently home to the University of Hawai'i, Institute of Marine Biology; Pu'u Pahu is the traditional placename for the hill where the Pu'u Ali'i development and the project site is located.

During construction of the proposed Kōnane Slope Stabilization Project, construction activities, equipment, material, vehicles, and workers will all be present on site at varying times and intensities. These impacts will temporarily affect the visual character of the area, as the existing vegetation is removed, the topography of the project site altered, and the new stabilization measures and plantings are installed. All these activities will be visible to residents of Pu'u Ali'i, as well as people living and traveling along Lilipuna Road, and will contribute to a modest, albeit temporary, visual impact due to construction activities. However, none of these impacts will directly affect any protected scenic or aesthetic resource and will be short-term and limited in scope.

Finally, while not directly relevant to the Proposed Action, the Kōnane Slope Stabilization Project will not conflict with, or preclude any of the other policy objectives of the KPSCP.

4.2.3 LAND USE ORDINANCE, ROH CHAPTER 21

The purpose of CCH's Land Use Ordinance, contained in ROH, Chapter 21, is to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies, including the *O'ahu General Plan* and the KPSCP. These standards govern the location, height, area, and siting of structures, yard areas, off-street parking facilities, and open spaces, and the use of structures and land for agriculture, industry, business, residences, and other uses.

All of the project site has been designated as being in the R-10 Residential Zone according to CCH. Kōnane Slope, as a part of the Pu'u Ali'i development, is not a distinct land use, but is ancillary to the residential use of the remainder of these lots and serving as a greenspace buffer between the Pu'u Ali'i development, Lilipuna Road, and nearby residences. As such, and because Lilipuna Road is the primary point of vehicular access to the project parcels, Kōnane Slope may be best characterized as a "front yard" setback. Pursuant to ROH, Chapter 21-10.1, a front yard is defined as follows:

Yard, Front. *“Front yard” means any yard bounded by a street except that a single yard may be designated as a front yard by the owner of a zoning lot containing a single-family or two-family dwelling unit or a duplex bounded by more than one street in residential districts. The front yards designated must conform to district regulations for front yards. All front yards are measured at right angles to the street right-of-way or the established street setback line, whichever is the greater distance from the street center line set by adopted street right-of-way maps and standards (see Figure 21-10.6, see page 286).*

Pursuant to ROH §21-3.70-1(c)(3)(H)(ii), in the R-10 zone side and rear yards must be at least 11 feet.

Discussion: As described in Section 2.1, the proposed Kōnane Slope Stabilization Project will maintain the required setback in the R-10 Residential Zone in both the North Zone and South Zone. By implementing the Proposed Action, PCA believes that it will be able to maintain this setback in a clean and passable condition, free from weeds and noxious growths, and with its instability and soil creep properly addressed and stabilized. As such, the Proposed Action is wholly consistent with the Land Use Ordinance (LUO) contained in ROH §21.

4.2.4 SPECIAL MANAGEMENT AREA REVIEW, ROH CHAPTER 25

As discussed in Section 1.4, the Proposed Action is in the CCH’s SMA (Figure 1-3), and therefore will require SMA Major Permit coverage prior to being initiated. The following subsections discuss the project’s consistency with *SMA Review Guidelines* contained in ROH, Chapter 25, which relates to shoreline management. Each subsection addresses one of the guidelines listed in this ordinance. For ease of review, the guidelines are reproduced in italics, followed by a discussion of the project’s consistency with them.

4.2.4.1 Public Access

Impacts on Public Access

All development in the special management area shall be subject to reasonable terms and conditions set by the council to ensure that: §25-3.2a(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;

Discussion: The Proposed Action would take place entirely within TMK Nos. (1) 4-6-001:002, 060, and 062, which are privately-owned parcels within the Pu‘u Ali‘i development. Because there is no public shoreline access via the site, and because no work will take place in any off-site public shoreline access, no impacts related to public access are anticipated. The improvements to the parcel will not affect the shoreline and would not impair off-site public access to beaches, recreation areas, or reserves. The public will continue to have unfettered lateral access along the shoreline near the project parcel. Conversely, if the Kōnane Slope Stabilization Plan is not implemented, per the No Action Alternative, it has the potential to cause significant adverse impacts to Lilipuna Road and downslope areas, including public access to recreational coastal resources along Kāne‘ohe Bay. These impacts could be produced by soil creep, mass wasting, and/or stormwater runoff.

4.2.4.2 Recreation Areas and Wildlife Reserves

Impacts on Recreation Areas and Wildlife Reserves

All development in the special management area shall be subject to reasonable terms and conditions set by the council to ensure that: §25-3.2a(2): Adequate and properly located public recreation areas and wildlife preserves are reserved;

Discussion: As discussed in Section 3.6, the closest public recreation areas—aside from Kaneohe Bay as a whole—are He‘eia Neighborhood Park located 46-465 Kamehameha Highway, Kāne‘ohe Community Park located at 45-529 Kea‘ahala Road, and Kāne‘ohe Beach Park located at 45-15 Waikalua Road. All these parks are within one mile of the project site. Because all of the work related to the Proposed Action would be confined to TMK Nos. (1) 4-6-001:002, 060, and 062, there is no potential for these activities to impact public recreation areas or wildlife reserves.

4.2.4.3 Solid and Liquid Waste Treatment Facilities

Impacts on Solid and Liquid Waste Treatment Facilities

All development in the special management area shall be subject to reasonable terms and conditions set by the council to ensure that: §25-3.2a(3): Provisions are made for solid and liquid waste treatment, disposition, and management which will minimize adverse effects upon special management area resources;...

Discussion: The Proposed Action will not have any impact on solid or liquid waste treatment facilities, aside from minor deposits of solid waste (e.g., material packaging) to an appropriate landfill during implementation. Once complete, the proposed residences will not deposit any solid or liquid waste into the municipal wastewater and/or solid waste management system. No adverse impact on SMA resources would occur.

4.2.4.4 Land Forms, Vegetation, and Water Resources

Impacts on Land Forms, Vegetation, and Water Resources

All development in the special management area shall be subject to reasonable terms and conditions set by the council to ensure that: §25-3.2a(4) Alterations to existing land forms and vegetation; except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation or failure in the event of earthquake.

Discussion: The Kōnane Slope Stabilization Project is intended to make modest alterations to existing land forms and vegetation, but will not alter any existing water resources. These measures are solely planned to address instability and slope creep which has been identified by various parties including CCH and JPB Engineering, Inc. (see Section 1.3). However, the site will continue to have the similar physiographic and topographic characteristics, and thus, would have a similar appearance as it does at the present time (see Section 3.2). All grubbing, grading, and planting will be implemented according to DPP-approved plans.

4.2.4.5 *Cumulative Impacts*

Cumulative Impacts and Impacts on Planning Options

No development shall be approved unless the council has first found that:

§25-3.2b(1) The development will not have any substantial, adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interest. Such adverse effect shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect and the elimination of planning options;

Discussion: The Proposed Action consists of grubbing, grading, stabilizing, and replanting Kōnane Slope in order to address ongoing soil creep and instability identified by CCH (see Section 1.3). The Kōnane Slope Stabilization Project will not make any cumulative contribution to adverse environmental impacts, nor is it part of a larger action which could have substantial adverse effects, or which would eliminate planning options in the future.

4.2.4.6 *CZM Program Objectives and SMA Guidelines*

Consistency with CZM Program Objectives and Policies and with the State SMA Guidelines

No development shall be approved unless the council has first found that: §25-3.2b (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;

Discussion: As discussed in detail in Section 4.1.4, the Proposed Action is consistent with the objectives and policies of the CZM Program. CCH's SMA Review Guidelines, discussed in this section, are based upon and consistent with the State of Hawai'i's CZM Guidelines. The Office of Planning and Sustainable Development in the Department of Business, Economic Development and Tourism (DBEDT) was provided with a copy of this report to permit their confirmation that the project is consistent with the CZM Program's policies and objectives. The nature and scope of this project does not trigger the requirement for a CZM consistency review.

4.2.4.7 *County General Plan, Development Plans, and Zoning*

Consistency with County General Plan, Development Plans, and Zoning

No development shall be approved unless the council has first found that: §25-3.2b(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: Section 4.2.1 documents the Proposed Action's consistency with the O'ahu General Plan, the KPSCP, and the LUO.

4.2.4.8 Bays, Salt Marshes, River Mouths, Sloughs, or Lagoons

Impacts on Bays, Salt Marshes, River Mouths, Sloughs, or Lagoons

The council shall seek to minimize, where reasonable: §25-3.2c(1) Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;

Discussion: The Proposed Action described and analyzed in this report will not include any dredging, filling, or other modifications to any bay, estuary, salt marsh, river mouth, slough, or lagoon.

4.2.4.9 Beaches and Public Recreation

Impacts on Beaches and Public Recreation

The council shall seek to minimize, where reasonable: §25-3.2c(2) Any development which would reduce the size of any beach or other area usable for public recreation;

Discussion: The Kōnane Slope Stabilization Project will not reduce the size of any beach or other area suitable for recreation. All work related to the Proposed Action will be confined to the TMK Nos. (1) 4-6-001:002, 060, and 062, a minimum of approximately 175 feet from the shoreline, with an intervening roadway and residences separating the project from Kāneʻohe Bay.

4.2.4.10 Other Coastal Resources within the SMA

Impacts on Other Coastal Resources within the Special Management Area

The council shall seek to minimize, where reasonable: §25-3.2c(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;

Discussion: The Proposed Action will not restrict public access to any coastal resource in the area. It is not near a dedicated public right-of-way to access the shoreline.

4.2.4.11 Lines of Sight Toward the Sea

Impacts on Lines of Sight Toward the Sea

The council shall seek to minimize, where reasonable: §25-3.2c(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;

Discussion: As discussed in Section 2.1.2, the Proposed Action will involve substantial grubbing and vegetation removal which may improve some views towards Kaneohe Bay from the Puʻu Aliʻi development. However, as described in Section 2.1.4, once slope stabilization measures have been installed, Kōnane Slope will be landscaped with new plantings. As these plantings mature, views towards the shoreline may again become impacted / modified in some areas, but to a lesser degree than existing conditions, as shown in Figure 3-3 through Figure 3-16, however, the MLP is

intended to incorporate vegetation in a manner that does not significantly constrain views toward Kāneʻohe Bay. However, none of the proposed grubbing, tree removal, or plantings will interfere with or detract from the line of sight toward the sea from the nearest state highway, Kamehameha Highway (State Route 830).

4.2.4.12 Water Quality, Open Water, Fisheries, Fishing Grounds, Wildlife Habitats and Agricultural Land Use

Impacts on Water Quality, Open Water, Fisheries, Fishing Grounds, Wildlife Habitats and Agricultural Land Use

The council shall seek to minimize, where reasonable: §25-3.2c(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: No project-related activities will involve work in, or discharges to, area waterbodies. No adverse impacts to area water quality, fisheries, fishing grounds, wildlife habitat, or agricultural lands are anticipated because of the Proposed Action.

4.2.5 PLANNED DEVELOPMENT – HOUSING PERMIT (PERMIT FILE NO. 73/PDH-4)

During preliminary scoping for this report, PCA consulted with DPP regarding the Proposed Action. In that process, DPP requested that PCA review Puʻu Aliʻi’s Planned Development – Housing Permit (i.e., 73/PDH-4) which forms the basis for the necessary development permits relating to the project. Permit File No. 73/PDH-4 was passed as Ordinance No. 4421 by the HCC on March 3, 1975. This permit allowed the original developer of Puʻu Aliʻi (i.e., the McCormack Land Co.), then known as the Lilipuna Hillside Project, to designate a portion of R-3 Residential and A-2 Apartment Districts in Kāneʻohe to Planned Development – Housing District No. R-45. Section II of Ordinance No. 4421 places a series of conditions on the approval of 73/PDH-4 which are summarized in Table 4-1 below. The complete text of the document is included as Appendix E of this report. The first 15 conditions were recommended by the Department of Land Utilization (DLU, now DPP) and the final three conditions were imposed by the Council as part of Ordinance No. 4421.

Table 4-1 Summary of Conditions on Permit File No. 73/PDH-4

<i>No.</i>	<i>Condition</i>	<i>Summary</i>
1	Preliminary Plans	Preliminary site and grading plans based on accurate topographic survey must be approved by DPP Director prior to development of final grading and building plans.
2	Road Right-of-Way (ROW)	A portion of project site fronting Lilipuna Road will be dedicated to the City to create a 56-ft. ROW
3	Sewers	He‘eia Sewage Pumping Station shall be expanded at applicant’s expense according to Department of Public Works’ requirements.
4	Fire Hydrants	Hydrants shall be located and spaced per BWS rules and regulations.
5	Soils, Grading, and Drainage	Grading and building placement for each phase shall comply with the State Water Quality Standards and recommendations of the U.S. Soil Conservation Service. The applicant must also undertake a soils, erosion, and drainage study; and provide erosion and sediment control measures.
6	Detail Documents	Final detailed plans for each phase covering all building and site improvements, including but not limited to a landscaping plan, must be approved by the DPP Director prior to implementation.
7	Refuse Collection	The applicant shall provide refuse storage and collection areas in accordance with Department of Public Works, Refuse Division.
8	Flexibility	The architect shall be provided a reasonable degree of flexibility in preparation of detailed project engineering and architectural plans.
9	Street Naming	Street names shall be submitted to DPP for transmittal to, and approval of, the Honolulu City Council.
10	Utilities	All utilities shall be underground. The water system must meet BWS’ specifications; sewer lines and easements must meet the Department of Public Works requirements.
11	Transfer of Rights	Any assignment or transfer of interest in the area designated by 73/PDH-4 shall be subject to the approval and consent of the Honolulu City Council until completion of each phase as planned.
12	Maintenance of Common Areas, Utilities, and Structures	Legal documentation shall be prepared for each phase ensuring perpetual maintenance of all structures, improvements, utilities, and grounds.
13	Covenants	All conditions on 73/PDH-4 must be incorporated into a set of restrictive covenants running with the land and transferrable to any new owner(s).
14	Recordation	The developer is required to file a declaration of the restrictive easements with the Bureau of Conveyances.
15	Time Limit	Failure to secure building permits in accordance with construction phasing plans within one year of adoption of this ordinance may constitute grounds for its repeal by the Honolulu City Council.
16	Sales	The developer shall submit the sales agreement for review and approval by the DPP Director in consultation with Corporation Counsel as to content and form.
17	Violations	Alleged violations of these conditions may be reviewed by the Honolulu City Council and they may authorize the DPP Director to take any lawful action necessary to prevent further noncompliance and compel compliance.
18	Future Minor Alterations	The homeowners association shall: (i) receive and compile all homeowner requests for future alterations and improvements; (ii) secure architects to prepare, in consultation with DPP, a package of alternative designs for the requested alterations; (iii) review the proposal with association membership for comment and approval; and (iv) transmit the design package to DPP for review and evaluation.

Note: DLU is now DPP

Source: City and County of Honolulu (1975)

Discussion: As discussed in Sections 1.2 and 1.3, the Proposed Action is a slope stabilization project, intended to effectively stabilize the Kōnane Slope, provide for permanent runoff protection, better drainage, and improved pedestrian and vehicular traffic in the area. Following the Proposed Action, the MLP will be implemented to provide for vegetation along Kōnane Slope as well as street trees along Lilipuna Road, consistent with the City's PDH guidelines. It should be noted that Condition Nos. 1 through 10, and 12 through 16 have already been met and were required predicates for the continued development of Pu'u Ali'i, per the terms of this permit. Condition No. 11, which pertains to transfer of rights, continues with the property in the event of any change of ownership. Finally, Condition Nos. 17 and 18 are potentially ongoing and would not be disrupted by the proposed slope stabilization project.

Most of the conditions related to 73/PDH-4 were required to be, and have already been, met prior to construction. Thus, there is no potential for the Proposed Action to adversely impact Pu'u Ali'i's compliance with them. Consequently, PCA has concluded that none of the measures required to implement the proposed Kōnane Slope Stabilization Project are in conflict with the conditions established in 73/PDH-4 and summarized in Table 4-1.

CHAPTER 5: DETERMINATION

5.1 SIGNIFICANCE CRITERIA

HAR § 11-200.1-14 establishes procedures for determining if an EIS should be prepared or if a FONSI is warranted. HAR § 11-200.1-14(d) provides that proposing agencies should issue an environmental impact statement preparation notice for actions that it determines may have a significant effect on the environment. HAR § 11-200.1-13(b) lists the following criteria to be used in making that determination.

In most instances, an action shall be determined to have a significant effect on the environment if it:

1. Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;
2. Curtails the range of beneficial uses of the environment;
3. Conflicts with the State's long-term environmental policies or goals as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders;
4. Substantially affects the economic or social welfare of the community or State;
5. Substantially affects public health;
6. Involves substantial secondary impacts, such as population changes or effects on public facilities;
7. Involves a substantial degradation of environmental quality;
8. Is individually limited but cumulatively has considerable effect on the environment or involves a commitment for larger actions;
9. Substantially affects a rare, threatened, or endangered species, or its habitat;
10. Detrimentally affects air or water quality or ambient noise levels;
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;
12. Substantially affects scenic vistas and viewplanes identified in county or state plans or studies; or,
13. Requires substantial energy consumption.

5.2 FINDINGS

The potential effects of the proposed Kōnane Slope Stabilization Project and its action alternatives, as described in Chapter 2 and Chapter 3, respectively, were evaluated relative to these thirteen significance criteria. PCA's findings with respect to each criterion are summarized in the following subsections.

5.2.1 IRREVOCABLE LOSS OR DESTRUCTION OF VALUABLE RESOURCE

The Kōnane Slope Stabilization Project consists of the grubbing, grading, stabilization, and replanting of Kōnane Slope in order to address instability and soil creep which has been identified there. It does not involve the loss of any significant or valuable cultural or natural resources and is intended as a beneficial land management measure.

5.2.2 CURTAILS BENEFICIAL USES

The Proposed Action is located on parcels zoned R-10 Residential by CCH, and which have been in continuous use for that purpose for decades. This is also the case for the private residences adjacent to the project site along Lilipuna Road. None of the proposed grubbing, grading, slope stabilization measures, or plantings will curtail beneficial use(s) of these properties, nor will it curtail or interfere with safe and efficient passage along Lilipuna Road once minor interruptions related to project implementation are complete (see Section 3.4). They are solely intended to allow for the continued use of the project buffer as a greenspace buffer between the Pu‘u Ali‘i development and the community beyond. Thus, the Proposed Action will not curtail any existing beneficial use of the area and will allow for the continued beneficial use of the project site.

5.2.3 CONFLICTS WITH LONG-TERM ENVIRONMENTAL POLICIES OR GOALS

The Kōnane Slope Stabilization Project is consistent with all applicable plans, policies, and controls, as discussed throughout Chapter 4, including the *Hawai‘i State Plan*, the *O‘ahu General Plan*, and the KPSCP. All of the action alternatives are consistent with the State’s long-term environmental policies and goals as expressed in HRS, Chapter 344 and elsewhere in state law.

5.2.4 SUBSTANTIALLY AFFECTS ECONOMIC OR SOCIAL WELFARE

The Proposed Action will not have substantial effects on economic or social welfare. Its purpose is to allow PCA to responsibly manage Kōnane Slope so that it can continue to serve as a greenspace buffer between the Pu‘u Ali‘i development, Lilipuna Road, and adjacent private residences in compliance with applicable rules and regulations.

5.2.5 PUBLIC HEALTH EFFECTS

The Kōnane Slope Stabilization Project will not adversely affect air or water quality, including water sources used for drinking or recreation. Neither will it generate other emissions that will have a significant adverse effect on public health. The Proposed Action is expected to allow for better airflow in and around the project site.

5.2.6 PRODUCE SUBSTANTIAL SECONDARY IMPACTS

The Proposed Action will not produce substantial adverse secondary impacts. The Kōnane Slope Stabilization Project will not foster population growth, promote economic development, or stress public facilities or services. Instead, it is solely intended to allow PCA to maintain its Kōnane Slope as a stable and safe greenspace buffer between the Pu‘u Alii development, Lilipuna Road, and adjacent private residences, pursuant to all applicable rules, regulations, and agreements.

However, there are some beneficial secondary impacts that will accrue as a result of the Kōnane Slope Stabilization Project. First, a stabilized slope will pose less risk of slope failure, which in turn reduces the potential for Lilipuna Road and other areas downslope to be adversely impacted. Second, although the project site will be temporarily grubbed of vegetation during the construction and establishment period, once the slope stabilization work is completed, landscaping will be installed per the MLP that will generally improve the appearance of, and airflow through, the project site. Third, and finally, the Proposed Action will allow the invasive plant species which have opportunistically colonized the project site to be replaced with native species and other plantings that are preferable for the relevant agencies at the present time and which will be more manageable, allowing for regular maintenance. Conversely, if the Kōnane Slope Stabilization Plan is not implemented, per the No Action Alternative, it has the potential to cause significant adverse impacts to Lilipuna Road and downslope areas, including Kāne‘ohe Bay. These impacts could be produced by soil creep, mass wasting, and/or stormwater runoff.

5.2.7 SUBSTANTIALLY DEGRADE THE ENVIRONMENT

The Proposed Action will not have substantial long-term adverse environmental effects. The work will temporarily elevate noise levels and generate limited nuisance airborne dust during construction activities, but these impacts will be localized and of limited duration. Adequate measures to control the intensity of construction-related noise and dust will be taken and the effects will be brief and minimal.

5.2.8 CUMULATIVE EFFECTS OR COMMITMENT TO A LARGER ACTION

As discussed in Section 3.7, the Kōnane Slope Stabilization Project does not represent a commitment to a larger action and is not intended to facilitate substantial economic or population growth. It is intended solely to remediate the instability and soil creep which has been documented on Kōnane Slope in compliance with all applicable rules and regulations.

5.2.9 EFFECTS ON RARE, THREATENED, OR ENDANGERED SPECIES

No rare, threatened, or endangered species are known to utilize the project site, and once slope stabilization measures are complete the area will continue to function as a greenspace buffer between the Pu‘u Ali‘i development, Lilipuna Road, and nearby residences. In addition, the Proposed Action will not utilize a resource or habitat needed for the protection of rare, threatened, or endangered species nor will it attract the protected species once the project is implemented.

5.2.10 AFFECTS AIR OR WATER QUALITY OR AMBIENT NOISE LEVELS

Noise levels and airborne emissions will temporarily increase during the grubbing, grading, slope stabilization, and planting efforts detailed in Section 2.1. BMPs will be implemented and any effects will be brief, relatively minor, and restricted to immediately adjacent areas. Once the Kōnane Slope Stabilization Project is completed, it will not produce airborne emissions, waterborne pollution, or noise.

5.2.11 ENVIRONMENTALLY SENSITIVE AREA

The Proposed Action is intended to address instability and soil creep that has been identified on Kōnane Slope, adjacent to Lilipuna Road, nearby residences, and Kaneohe Bay. As such, it is located in an erosion-prone and geologically hazardous area and intended to remedy those conditions. The Proposed Action is located in the Federal Emergency Management Agency's Flood Zone X, which is an area determined to be outside of the 0.2 percent annual chance floodplain; no base flood elevations or depths are shown within these zones. In addition, the project site is not located in any flood plain, tsunami evacuation zone, beach, estuary, fresh waterbody, or coastal waters, and will not have an impact on such areas.

5.2.12 AFFECTS SCENIC VISTAS AND VIEW PLANES

As discussed in Section 3.2, no scenic or aesthetic resources identified in the KPSCP, or other regulatory documents will be affected by the Proposed Action.

5.2.13 REQUIRES SUBSTANTIAL ENERGY CONSUMPTION

The Kōnane Slope Stabilization Project will require the use of some energy. However, once these relatively brief operations are complete, the site will not require the use of any appreciable quantities of energy aside from periodic vegetation maintenance.

5.3 DETERMINATION

In view of the foregoing, PCA has concluded that the proposed project will not have a significant adverse impact on the environment. Consequently, ~~PCA anticipates that the DPP will issue~~ has issued a FONSI for the Proposed Action.

CHAPTER 6: CONSULTATION AND DISTRIBUTION

6.1 SCOPING PERIOD CONSULTATION

A critical component of the planning effort for the Proposed Action was developing and implementing an early consultation program to inform public agencies and obtain their input regarding the project's purpose, scope, potential impacts, and recommended mitigation measures. Pursuant to HAR § 11-200.1-18, PCA sought, at the earliest practicable time, the advice and input of DPP, CCH agency responsible for implementing the *O'ahu General Plan*, other agencies that have jurisdiction over resources with the potential to be affected by the Proposed Action, and the owners of adjacent parcels. Early consultation letters were mailed to the individuals, organizations, and agencies listed in Table 6-1 on or about February 25, 2022, in addition, the scoping letter was also posted on PCA's website in order to notify residents of Pu'u Ali'i. Pursuant to HAR § 11-200.1-18, the complete text of the original scoping letter, comments received, and response letters are provided in Appendix D.

Table 6-1 Early Consultation for the Proposed Action

<i>Level</i>	<i>Agency</i>	<i>Division</i>	<i>Recipient</i>	<i>Response</i>
Federal	U.S. Army Corps of Engineers, Honolulu District	Regulatory Branch	Linda Speerstra, Chief	No
State	Department of Business, Economic Development and Tourism	Office of Planning and Sustainable Development	Mary Alice Evans, Director	No
State	Office of Hawaiian Affairs	--	Sylvia Hussey, CEO	No
State	Department of Land and Natural Resources	Division of Forestry and Wildlife	David Smith, Administrator	No
State	Department of Land and Natural Resources	Office of Conservation and Coastal Lands	Michael Cain, Acting Director	No
CCH	Department of Planning and Permitting	Urban Design Branch	Dean Uchida, Director	Yes
CCH	Department of Facility Maintenance	Storm Water Management Division	Dawn Szewczyk, Director	No
CCH	Honolulu City Council	--	Esther Kia'āina, Councilmember	No
CCH	Kāne'ōhe Neighborhood Board No. 30	--	Mo Radke, Chairperson	No
Private	Ali'i Shores Yacht Club	--	Tamara Whitney, Agent	No
Private	The Outdoor Circle	--	Winston Welch, Executive Director	No
Private	Kamehameha Schools	--	Kaniau Meyers, Sr. Land Operations Manager	No
Neighbor	--	--	Pearl Anderson	No
Neighbor	--	--	David and Vicky Ardren	Yes
Neighbor	--	--	Juliana Chaize	Yes
Neighbor	--	--	Dominic Henriques	No
Neighbor	--	--	Richard Kozuma	No
Neighbor	--	--	Florence Lee	No
Neighbor	--	--	Hugh Okuda	Yes
Neighbor	--	--	Marcus Rosehill	Yes
Neighbor	--	--	Sherman Cruz	Yes
Neighbor	--	--	Betty and David Shiroma Trust Estate	Yes
Neighbor	--	--	Kenneth Simon	Yes
PCA Owner	--	--	David Swann	Yes
Neighbor	--	--	Peter Tingstrom	No
Neighbor	--	--	Charles Wong	No
Neighbor	--	--	Roy Yee	Yes

Source: Compiled by Planning Solutions, Inc.

6.2 DISTRIBUTION OF THE DEA/AFONSI

The PCA provided the DEA to the parties listed in Table 6-2 with a request for review and comment. In addition, all owners of units within the Pu‘u Ali‘i community were notified about the availability of the DEA. A copy of the DEA/AFONSI was also provided to the Hawai‘i Documents Center and the Kāne‘ohe Regional Library. Finally, a presentation was made of the DEA and Proposed Action to the Kāne‘ohe Neighborhood Board No. 30 on January 19, 2023, and a site visit was conducted by PCA Board members for interested members of the Neighborhood Board on February 23, 2023.

Prior to the presentation to the Neighborhood Board (NB), and pursuant to Honolulu City Council Ordinance No. 21-27, all Pu‘u Ali‘i condominium owners and adjoining property owners, were notified via U.S. mail and/or email of the presentation. Additionally, owners within 300 feet of the parcels that are part of the Proposed Action were also mailed written notification of the Neighborhood Board meeting. The written notification, affidavit attesting to the notification, the agenda for this meeting, and all written testimony provided on the Proposed Action are included as Appendix F of this report. Written testimony received during the Neighborhood Board presentation were all supportive of the Proposed Action. Some comments made during the Neighborhood Board were in opposition to the project, citing concerns about: (i) the legitimacy of the project’s need, conception, and planning; (ii) potential for the project to adversely impact nearby private property; and (iii) concerns related to impacts to Lilipuna Road and Kāne‘ohe Bay.

Some of the testimony received during the NB meeting were similar to written comments received from area residents during the DEA comment period, including some comments in support of and some opposing the Proposed Action.

Table 6-2 Distribution of the DEA

Federal Agencies	City and County of Honolulu
U.S. Army Corps of Engineers, Honolulu District	Board of Water Supply
U.S. Department of Agriculture	Department of Community Services
U.S. Department of Commerce	Department of Design and Construction
U.S. Department of Homeland Security	Department of Environmental Services
U.S. Department of Housing and Urban Development	Department of Facility Services
U.S. Department of Transportation – Federal Aviation Administration	Department of Parks and Recreation
U.S. Department of Transportation – Federal Highway Administration	Department of Planning and Permitting
U.S. Environmental Protection Agency, Region 9	Department of Transportation Services
U.S. Fish and Wildlife Service, Pacific Islands Field Office	Honolulu Fire Department
State Agencies	Honolulu Police Department
Department of Agriculture	Elected Officials
Department of Accounting and General Services	U.S Senator Brian Schatz
Department of Business, Economic Development, and Tourism (DBEDT)	U.S. Senator Mazie Hirono
DBEDT, Hawai‘i Housing and Finance Development Corporation	U.S. Representative Kaiiali‘i Kahele
DBEDT, Hawai‘i State Energy Office	U.S. Representative Ed Case
DBEDT, Office of Planning and Sustainable Development	Governor David Ige
Department of Defense	Mayor Rick Blangiardi
Department of Education	State Senator Gil Riviere, District 23
Department of Hawaiian Home Lands	State Senator Jarrett Keohokalole, District 24
Department of Health (DOH), Clean Air Branch	State Representative Lisa Kitagawa, District 48
DOH, Clean Water Branch	State Representative Patrick Pihana Branco, District 50
DOH, Environmental Health Services Division	Councilmember Esther Kia‘āina, District 3
DOH, Wastewater Branch	Kāne‘ohe Neighborhood Board No. 30
Department of Human Services	Other
Department of Labor and Industrial Relations	Outdoor Circle
Department of Land and Natural Resources (DLNR)	Kamehameha Schools
DLNR, Division of Forestry and Wildlife	Vicky-Lynn Chun Fat-Ardren
DLNR, State Historic Preservation Division	David Ardren
Department of Transportation, Long Range Planning Branch	Katylynn Chun Fat-Ardren
Office of Hawaiian Affairs	Sherman Cruz
Utilities	Juliana Chaize
Hawai‘i Gas	Nicolas Chaize
Hawaiian Electric Co., Inc.	Ilima Chaize
Hawaiian Telcom	Florence Lee

Libraries and Depositories	Betty & David Shiroma Trust Estate
Hawai'i State Library Documents Center	Estelle Shiroma
Kaneohe Public Library	Jonathan Shiroma
Media	Sara Shiroma
Honolulu Star Advertiser	Marcus Rosehill
Honolulu Civil Beat	Richard Kozuma
	Hugh Okuda
	Barbara Okuda
	Russell Martin
	Charles Wong
	Kenneth Simon
	Roy Yee
	Andre Yee
	Dominic Henriques
	Pearl Anderson
	Peter Tingstrom
	Otome Meyers
	David Meyers
	Randall Meyers
	Ross Meyers
	Sonya Torweihe
	Jim Cook
	Carol Cook
	David Swann
	Marie-Charlotte Neidermeier
	Ali'i Shores Yacht Club

Source: Compiled by Planning Solutions, Inc.

6.3 RESPONSE TO COMMENTS AND DISTRIBUTION OF THE FEA/FONSI

Table 6-3 lists the individuals, agencies, and organizations that submitted written comments on the DEA/AFONSI during the 30-day comment period (i.e., November 23 through December 23, 2022). Responses to the comments received on the DEA were provided to those individuals and groups (see Section 6.3) and have been incorporated, as appropriate, into the relevant sections of the FEA. The PCA is providing a response to their comments and a copy of the FEA/FONSI to each of the agencies and individuals that submitted written comments (see Table 6-3); a copy of the FEA/FONSI is also being provided to the Hawai'i Documents Center and the Kāne'ohe Regional Library. Copies of all comments received, and the responses provided, are reproduced at the end of this chapter.

Table 6-3 Comments on the DEA/AFONSI

<u>No.</u>	<u>Commenter</u>	<u>Agency/Organization</u>
<u>1</u>	<u>Mr. David Swann</u>	<u>n/a</u>
<u>2</u>	<u>Ms. Dahlia M. Zotos</u>	<u>n/a</u>
<u>3</u>	<u>Ms. Jiny Kim, Acting Island Wildlife Manager</u>	<u>U.S. Fish and Wildlife Service</u>
<u>4</u>	<u>Ms. Christine L. Kinimaka, Public Works Administrator</u>	<u>Department of Accounting and General Services</u>
<u>5</u>	<u>Mr. Anton C. Krucky, Director</u>	<u>Department of Community Services</u>
<u>6</u>	<u>Mr. Scott Nakasone, Assistant Division Director</u>	<u>Department of Human Services</u>
<u>7</u>	<u>Mr. Glenn Hayashi, Assistant Chief of Police</u>	<u>Honolulu Police Department</u>
<u>8</u>	<u>Mr. Kolvin Kekua, Network Engineer</u>	<u>Hawaiian Telcom</u>
<u>9</u>	<u>Mr. Craig Uchimura, Acting Assistant Chief</u>	<u>Honolulu Fire Department</u>
<u>10</u>	<u>Ms. Vicky Ardren</u>	<u>n/a</u>
<u>10</u>	<u>Mr. David Ardren</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Katylynn Chun-Fat</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Juliana Chaize</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Nico Chaize</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Ilima Chaize</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Jim Cook</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Carol Cook</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Sherman Cruz</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Barbara Cruz</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Kerry Gilbert</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Michael Kohn</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Dustin Lau</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Quyen Lee</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Russell Inouye</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Jane Mann</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Russell Martin</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Otome Meyers</u>	<u>n/a</u>
<u>10</u>	<u>Mr. David Meyers</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Randall Meyers</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Ross Meyers</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Hugh Okuda</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Barbara Okuda</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Marcus Rosehill</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Jeanette Rosehill</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Estelle Shiroma</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Jonathan Shiroma</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Sarah Shiroma</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Betty T. Shiroma Trust</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Kenneth Simon</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Elise Tello</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Gaylord Town</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Wandee Town</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Sonya Torweihe</u>	<u>n/a</u>

<u>No.</u>	<u>Commenter</u>	<u>Agency/Organization</u>
<u>10</u>	<u>Mr. Ben Wong</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Cindy Wong</u>	<u>n/a</u>
<u>10</u>	<u>Ms. Andre Yee</u>	<u>n/a</u>
<u>10</u>	<u>Mr. Roy Yee</u>	<u>n/a</u>
<u>11</u>	<u>Ms. Laila Groves</u>	<u>n/a</u>
<u>12</u>	<u>Mr. Scott J. Glenn, Director</u>	<u>Office of Planning and Sustainable Development</u>
<u>13</u>	<u>Mr. Haku Milles, Director Designate</u>	<u>Department of Design and Construction</u>
<u>14</u>	<u>Mr. Carty S. Change, Chief Engineer</u>	<u>DLNR Engineering Division</u>
<u>15</u>	<u>Ms. Lainie Berry, Wildlife Program Manager</u>	<u>DLNR Division of Forestry and Wildlife</u>
<u>16</u>	<u>Mr. Richard C. Casias</u>	<u>RCC Group, LLC</u>
<u>17</u>	<u>Ms. Laura H. Thielen, Director</u>	<u>Department of Parks and Recreation</u>
<u>18</u>	<u>Ms. Dawn B. Szewczyk, Director and Chief Engineer</u>	<u>Department of Facility Maintenance</u>
<u>19</u>	<u>Ms. Dawn Takeuchi Apuna, Director</u>	<u>Department of Planning and Permitting</u>

Source: Planning Solutions, Inc.

From: [dave swann](mailto:dave.swann)
To: c.keller@honolulu.gov
Cc: [Shawn Scott \(sjscott91266@gmail.com\)](mailto:sjscott91266@gmail.com); [Makena White](#); [Councilmember Esther Kia'aina](#); [Rep. Lisa Kitagawa](#)
Subject: Draft Environmental Assessment response letter for the Puu Alii slope stabilization project
Date: Friday, November 25, 2022 8:40:16 AM
Attachments: [JPB engineering webpage.pdf](#)
[florez address 3822.png](#)
[email from VP of board.png](#)
[APPROVED Minutes PCA 2019-06-25.pdf](#)
[oahu marine water classification.png](#)
[8-28-2020 florez letter to DPP.pdf](#)
[paul weidig puu alii address.pdf](#)

Nov. 25, 2022,

City and County of Honolulu
Department of Planning and Permitting
Christi Keller
650 South King Street, 7th Floor
Honolulu, Hawaii
96813

Dear Ms. Keller,

In response to the Draft Environmental Assessment (DEA) for the Puu Alii slope stabilization project published in the Nov. 23 issue of The Environmental Notice, I am providing you with facts for the record that are important to understand why Puu Alii should be required to conduct, at a minimum, an Environmental Impact Statement for this project.

I understand that it is the job of Planning Solutions to write a DEA that helps to justify the need for the slope project since they are being paid by Puu Alii to act as their advocate. However, there are many troubling facts surrounding this project that cannot be explained away by Planning Solutions.

I was on the Puu Alii (PCA) board of directors from 2011 to 2019 and was landscape chair from March 2012 to November 2018. I have been involved in landscaping matters at Puu Alii regarding the Konane slope from 2005 to the present day, and I have intimate knowledge about how this project came to be.

I watched the PCA board slowly begin to falter and cave in due to the extreme pressures coming from a small number of condo owners demanding that their views of Kaneohe Bay be restored - meaning a demand for all the trees along Lilipuna Road to be cut down so that owners living in the lower units of phase 4 of Pohakea Point could have views of Kaneohe Bay. This relentless pressure was voiced by owners coming to PCA meetings and disrupting the meetings by screaming and demanding that the PCA cut down all the "weed" trees on the Konane slope.

These angry demands and outbursts occurred at every PCA meeting beginning sometime in 2017, and during 2018, that pressure grew to the point that PCA board directors began to resign due to the hateful and sometimes even violent discourse around this issue (the police were called due to threats against PCA board directors by resident Nick Florez at one point).

By early 2019, the situation had reached such a low point that several directors, including the board president, resigned in a single night. In April 2019, I was voted off the PCA board, along with other directors. This was due to this one issue - view planes within phase 4 of Pohakea Point and the demand that the trees on the hillside be cut down and replaced with only ground cover (The DPP later denied the "only ground cover" option in May of 2020).

In June 2019, the PCA board approved the hiring of geotechnical firm "**JPB Engineering**" (see attachment **APPROVED Minutes PCA 2019, page 4, Item B**) to conduct soil tests on the Konane slope hillside. At that time, the senior engineer at JPB Engineering was a man named **Paul Weidig**. *Mr. Weidig*

lived at Pohakea Point in building 38 directly above the Konane slope.

The PCA board director who chose JPB Engineering to conduct the soil tests is the same **Nick Florez mentioned above who threatened board members**. Mr. Florez owns a condo in building 38 - *four floors below Mr. Weidig - who has repeatedly advocated for all the trees on the slope to be cut down (see attachment below of Florez' August 28, 2020 letter to the DPP demanding that all the trees be cut down for view plane purposes)*.

Back in 2006-2007, I served on the Phase 4 board with Mr. Weidig, who was at that time phase 4 board president. (Puu Alii has 4 phases, phase 1,2,3, and 4). **Mr. Weidig on many occasions stated his desire to cut down all the "weed" trees along Lilipuna Road down below his condo in building 38.**

I informed the current PCA board many times in writing about this conflict of interest and have been told by PCA counsel that Mr. Weidig retired in August 2019 and that the issue is therefore irrelevant. The PCA board ignores the fact that Weidig was still employed by JPB Engineering in June 2019 when JPB was hired by the Puu Alii board to conduct the soil tests on the Konane hillside. ***This is a clear conflict of interest.***

There were heavy rains in early 2019 that caused flooding along Lilipuna Road. The cause of this flooding and erosion was the denuding of an area of the Konane slope on Puu Alii property by the PCA board directly in front of David Ardern's home at 46-061 Lilipuna Road in late 2017. I know this because I was still the landscape chair and was involved in that action in late 2017.

I expressed concern to the landscape architect Randall Monaghan and arborist Kevin Eckert that this denuding action was too extreme and that too much of the required screen of trees had been removed. They agreed and had small slender trees planted there in an attempt to re-forest the area - the trees are still there but have not grown to any degree and the area is still very barren and denuded.

Nothing more was planted in this denuded area which **is a violation of the city ordinance that requires a buffer or screen of trees to exist all along Lilipuna Road for the benefit of the owners of single-family homes on Lilipuna Road.**

Another important fact that cannot be ignored is that ever since Pohakea Point was built in 1989-1990, there has never been a single incident of a landslide on Lilipuna Road, nor has there been any incidents of erosion or flooding - until after the area of the slope in front of David Ardren's home was denuded in late 2017. Puu Alii caused the runoff and erosion that is now taking place and now Puu Alii is using that action as an excuse to completely denude the entire Konane slope.

Puu Alii, in an attempt to appease the view plane-obsessed condo owners in lower phase 4, is using the premise that the Konane slope is "unstable" as an excuse to cut down all the trees on the hillside so that the issue of view planes is finally put to rest. And they are doing so by using a soil report created under the direction of a soil engineer *who actually lived at Pohakea Point directly above the Konane slope and who has gone on record of his desire to cut down all the trees on the Konane slope.*

There have been claims that trees on the hillside having **"uncorrected leans."** I have many photographs of trees with the exact same "lean" all over the 52-acre Puu Alii and Pohakea Point property - some are much worse than along Lilipuna Road. Yet the PCA board only had soil tests conducted on the Konane slope and nowhere else on the property. It is obvious that the **board paid for a report that said exactly what the PCA board wanted it to say - that the trees on the Konane slope need to all be cut down.**

In December 2019, I received an email from the vice president of the PCA board at the time (and currently) that justifies the "junk trees" being removed for view plane purposes without once mentioning anything about "unstable soil" - which is another example that shows what the real reason is behind the board's desire for the slope "stabilization" project (see attachment below).

The homeowners along Lilipuna Road and the officials at the DPP have been provided all of this information along with photographs and other documents. In fact, the DPP was about to give Puu Alii their

final grading permit in early July when Honolulu City Council member Esther Kia'aina requested that the DPP require that Puu Alii obtain the SMA permit - which is required by law. Ms. Kia'aina was contacted by homeowners on Lilipuna Road and myself in an attempt to have some sort of responsible oversight of this project.

I have provided Ms. Kia'aina and her staff all of this information and they were surprised that the DPP almost allowed this project to go forward without the required SMA permit. We have also learned that Pohakea Point was built without getting the required SMA permit - which means that *Pohakea Point was built illegally*.

There are claims that this project will stabilize the slope **"to be at less an incline."** This is obviously *not true* - based on Planning Solutions' drawings and the actual plans created by Ty Dempsey, the incline will be made *much steeper*. This is an extremely risky project that is based on a false premise - that the slope is so "unstable" that it must be torn down to a depth of two feet and rebuilt. In order to proceed, the current soil report that has no credibility due to it being created under an obvious conflict of interest, must be thrown out.

Then, a geotechnical firm that has no relationship with anyone at Puu Alii, should be hired to conduct soil tests in locations that include areas not on the Konane slope in order to get some type of baseline figure of soil stability. Without that, there is no way to know how stable or unstable the soil on the slope is compared to the soil all around it. For all anyone knows, the entire 52-acre Puu Alii property could be just as "unstable" as the Konane slope. What then? Destroy the entire site?

If these new soil tests show that the slope is in fact "unstable" to a degree where some action must be taken, **then a plan must be created that is safer and less risky to the homeowners along Lilipuna Road and to Kaneohe Bay** - such as a retaining wall, plantings of more trees and vegetation, etc. If this project is allowed to go forward and the SMA permit is granted and the likely damage occurs to Kaneohe Bay and the homes along Lilipuna Road, I am prepared to assist the Lilipuna Road homeowners in a class action lawsuit against Puu Alii when this turns into a complete disaster.

All involved entities will be held responsible due to the fact that I have repeatedly tried to inform and warn everyone involved of the fraudulent basis of this extremely unsafe and unsound project - a project that is really based on a desire to provide view planes for condo owners and nothing more. Even under the best of circumstances, the "swale" mentioned by Planning Solutions will simply divert all of the soil runoff from the disrupted and rootless slope right into Kaneohe Bay - runoff that will occur for many years after the project is completed.

It should be noted here that the **only response within the DEA from anyone at Puu Alii concerning this project is from a resident who is demanding that the project not interfere with her view plane of the bay** - which effectively proves the point at hand that this entire project is nothing more than an effort to provide views to condo owners at Puu Alii. If the City and County of Honolulu Planning and Permitting Department allows this obvious fraud to go forward unchecked, then the City and County of Honolulu Planning and Permitting Department will be just as responsible as Puu Alii and their paid advocates for the project's destructive consequences.

Finally, I urge the DPP to require Puu Alii to conduct an **Environmental Impact Statement for this project** due to the many negative construction and grading-related environmental impacts that will occur during and after the project is completed. Aside from the Lilipuna Road homeowners' safety and well-being being compromised by this project, Kaneohe Bay is a **Class AA marine water**, one of only four Class AA marine water areas surrounding Oahu (see attached map below); Allowing the bay to be polluted to any extent for this deceitful project would be a costly and wasteful fraud perpetrated on the citizens of Hawaii.

Please notify me of your receipt of this email.

Sincerely,

David Swann
46-081 Konohiki Street #3565
Kaneohe, Hawaii 96744
808-389-5141



POHAKEA
POINT

2020 SEP -3 PM 4: 16

DEPT OF PLANNING
AND PERMITTING
CITY & COUNTY OF HONOLULU

2020/ELOG-1740

POHA KEA POINT PHASE IV

Kane'ohe, Hawai'i 96744

August 28, 2020
Kathy H. Sokugawa
Acting Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street 7th Floor
Honolulu Hawaii 96813

Dear Ms. Sokugawa:

RE: Master Landscape Plan for Puu Alii Community Association

I am writing to you on behalf of the Board of Directors of Poha Kea Point Phase IV regarding the Master Landscape Plan (MLP) that has been forwarded to your office by the Puu Alii Community Association (PCA) for approval. As you are aware, there are actually five associations that comprise and represent the 540 member of residential ownership of the property covered under the MLP. The PCA, which is comprised of a 12 member Board, 3 from each Phase, and four independent Phase Associations, representing each of the individual phases. I am president of the Phase IV Association. I am also 1 of the 3 phase iv directions on the PCA Board.

The reason for this letter is to express to you our concern that the MLP has been developed without Phase IV input and that the plan is not supported by our Association. Attached is a letter from all 3 Phase 4 members of the PCA expressing how the PCA has shut out any Phase IV involvement in the development of the MLP and their request for the Phase IV association intervene with DPP on this matter and for which this letter is provided.

Among the concerns of the Phase IV Association is that the MLP as proposed does not appear to be in compliance with the Ordinance, Specifically,

1. Section 6 of the Ordinance (detail documents) states in relevant part;

"The applicant shall obtain, **for each phase** of the project, the approval of the Director of Land Utilization and appropriate governmental agencies on final

detailed documents covering all building and site improvements, including but not limited to [...] landscaping.” [Emphasis added].

Ordinance 4421 clearly states that a detailed plan **for each phase** of the project must be approved. Instead, the PCA is attempting to gain a single approval from the entire membership for the entire combined property. Phase IV attempted to participate in the MLP process as a Phase and submitted three letters recommending changes to the MLP during its review process. These letters were ignored and never responded to. Phase IV even hired a professional landscape design consultant to assist in the design development of the MLP and the PCA refused to allow our designer to work with the PCA to develop this plan. It is noted here that all three of the phase 4 representatives on the PCA Board voted against approval of the current MLP.

2. Exhibit K, the current landscape plan in effect, clearly calls for ground cover only for the areas fronting buildings 37 and 38, where the current MLP shows this area to be highly vegetated, to include trees that would obstruct natural cross wind ventilation and obstruct owner views of the Kaneohe Bay¹. It appears that the urban design branch desires the MLP to comply with current street tree and cluster housing requirements that were not in effect at the time of ordinance 4421. The PCA is glad to accommodate the urban design branch as this only negatively affects Phase IV, who has no input or representation on the MLP and is precisely why the Ordinance requires each Phase to approve the plan, not the PCA.
3. The PCA is currently submitting the MLP under section 18 of the Ordinance, which provides procedures for “future **minor** alterations”. However, the MLP is a complete total restructuring of the entire landscape which in no way could be considered a minor alteration. Per section 8 of the Ordinance, major modifications require City Council approval. This requirement of the Ordinance is being ignored.

1. ¹ While the civil engineering and facility maintenance branch approved the ground cover only design, the urban design branch has rejected an earlier submitted ground cover only design, ignoring the ordinance and instead placing personal preferences of what the design should entail, rather than what the Ordinance and relevant statutes requires.

4. Section 8 of the Ordinance states;

“The design concept of the project as indicated plane shall be maintained”.

The PCA retained land use attorney, Onaona Theone, to in part define the design intent as specified by the Ordinance. After extensive research into the project records, Ms. Theone concluded;

“A review of the Project’s history reveals that the design clearly intended to maximize makai views for a majority of the units and for all units in Phases III & IV.”

The PCA itself issued a resolution on May 28, 2019, that states;

“Whereas, the Association in fulfilling the aforementioned above duties and obligations under the DCCRs and other governing documents, hereby proclaims that the design intent of the original landscape plan established under ordinance 4421 and is provided for in exhibit K of the Ordinance shall be maintained in perpetuity. This shall serve as the basis of any future owner, Board and Department of Planning and Permitting approved plan.

Whereas, it is hereby declared by the PCA Board of Directors that the design intent includes maximizing, restoring and maintaining ocean and mountain views for the owners of the Association to the full extent practicable and as allowed under the law.”

The current plan submitted by the PCA and without the support of Phase IV, violates the design intent of the Ordinance, as defined by the PCA’s own land use attorney and as proclaimed by the PCA’s own Board of Directors.

In addition to the above noted violations of the Ordinance, the MLP is simply a design in which the PCA has ability to, actually implement. Despite repeated requests from Phase IV for the PCA to provide a cost estimate and timeline for implementation, absolutely no action has been taken in this regard by the PCA. Any credible MLP submitted DPP must come with it an approved time line for implementation and an approved budget to ensure that the work will be performed within a reasonable timeframe.

Summary:

Phase IV has been excluded for the development and from providing input for the detailed MLP. Further, the current MLP does not have formal Phase IV approval. In addition, the current MLP contains multiple violations of the Ordinance as well as the PCA's own governing documents. Finally, the MLP has no approved budget or timeline for implementation. It is requested that the DPP disapprove the MLP as submitted until such time as the noted violations of the Ordinance are addressed, particularly with regard to obtaining Phase IV approval, and until such time as an approved budget and timeline for implementation can be established.

Should you have any questions, please call me at (808) 224-0770 or email florezinc@yahoo.com.

Sincerely,

FOR THE BOARD OF DIRECTORS
POHA KEA POINT PHASE IV

A handwritten signature in black ink, appearing to read 'Nickolas Florez', with a long horizontal flourish extending to the right.

Nickolas Florez
President Poha Kea Point Phase IV AOA

cc: Phase IV Board of Directors
Puu Aii Community Association
Brad Saito DPP Counsel
Ikaika Anderson District 3 City Council

MINUTES OF THE REGULAR BOARD OF DIRECTORS' MEETING
OF PU'U ALI'I COMMUNITY ASSOCIATION

June 25, 2019

6:00PM, Poha Kea Point Phase 3 Rec-Room Pavilion

I. **CALL TO ORDER:**

There being a quorum present, President Shawn Scott called the regular meeting of the Board of Directors to order at 6:00 pm.

Directors Present: President: Shawn Scott (III)
Vice-President: Helene Jo (I)
Secretary: David Chung (II)
Treasurer: Timothy Emery (I)
Directors: Jim DeWilde (I)
Maryann McMaster (II)
Matt Small (II)
Susan Stahl (III)
Nick Florez (IV)
Kent Frosch (IV)
Mark German (IV)

II. **ESTABLISH A QUORUM:** 11 of 12 members present: quorum established.

GUESTS: Christopher Shea Goodwin, Association Attorney
John Bouchie, Management Executive, Hawaiiana Management Company, Ltd.
Sandy White, General Manager
Kevin Garbett, PCA Operations Manager (present at Open Session only)
Cheryl Carvalho, PCA Office Manager

III. **EXECUTIVE SESSION:**

President Scott recessed the Open Session at 6:01 pm and entered into Executive Session to discuss legal and personnel matters. The Open session was reconvened at 7:09 p.m.

IV. **APPROVE MINUTES:**

May 28, 2019 – Board of Directors' Meeting.

Director Stahl noted a correction to include Kevin Garbett as a guest present at the last Board meeting.

Director Florez reported that his narrative is not reflected in the revised draft and that he would like the Resolution to be re-written in the minutes to reflect full context of the motion. Director Frosch moved that approval of the meeting minutes be deferred until the next Board of Directors meeting after the working group could review the recording tape and Director Florez statements. The motion passed unanimously.

Vice President Jo moved to have the Owners Forum at the beginning of the regular Board meeting after the President's report. The motion passed unanimously.

V. **PRESIDENT’S REPORT:**

President Scott reported that he took some time off to visit with his daughter who recently gave birth. Both mother and child are doing well. It is moments like these that make life worth living. He also reported that the Board continues to work methodically and diligently to conduct the Association’s business. This is evidenced by the jam packed agenda.

VI. **OWNER’S FORUM**

A half an hour session of owner’s forum was held to discuss owners concerns on maintenance, landscape, Phase I Pavilion and general matters.

VII. **ADMINISTRATIVE BUSINESS FOR THE BOARD:**

- President Scott stated that the PCA Board of Directors accepts with regret the written resignation of Monique Datta from the Pu’u Ali’i Community Association Board effective June 10, 2019.

- **Appointment of replacement of Director (Phase III):**

- **Phase III Director:** Vice President Jo nominated Jim Maus as a Director representing Phase III. The vote to approve Jim Maus as Phase III Director was unanimous. Jim Maus was seated as a Director representing Phase III.

- **Appointments to Committees:**

- **Committee Appointments:** There is a vacancy in the MTP Committee and another vacancy in the Audit Committee. G/M White to post the MTP Committee Phase III vacancy on the website; Audit Committee vacancy will need to be a Board member. These vacancies will be addressed at next month’s Board Meeting.

Director Emery resigned as Chair of the Community Relations Committee.

Community Relations Committee Co-Chair - Vice President Jo volunteered and was nominated to Co-Chair of the Community Relations Committee with a homeowner as the other Co-Chair. The motion was passed with Directors Scott, Jo, Chung, Emery, DeWilde, McMaster, Small, Stahl, German, and Frosch in favor; and Director Florez abstained.

- **Development of Policy and Procedures & Standard Operating Procedures:**

- Secretary Chung moved for approval of the resolution to develop Policies and Procedures and Standard Operating Procedures. After a lengthy discussion, Secretary Chung moved to call the question. The motion to call the question, passed unanimously.

The original motion for approval of the resolution passed with Directors Scott, Jo, Chung, Emery, DeWilde, Small, and Stahl in favor; Directors McMaster, Florez, and Frosch opposed; and Director German abstained.

- Secretary Chung moved to approve the Policy and Procedure on Policies and Procedures.

President Scott moved to amend the motion to approve the Policy and Procedures on Policies and Procedures for review and amendment every 5 years. The amended motion passed with Directors Scott, Jo, Chung, Emery, DeWilde, McMaster, Small, and Stahl in favor; Directors Florez and Frosh opposed; and Director German abstained.

- Secretary Chung moved that Directors Jo and Stahl form a working group to work with the Secretary and to address appropriate content for meeting minutes and present to the Board at our next meeting and that the Owner's Forum discussion will be written and added as a supplement to the meeting minutes. The motion passed with Directors Scott, Jo, Chung, Emery, DeWilde, Small, and Stahl in favor; Directors McMaster and Florez opposed; and Directors German and Frosh abstained.

VIII. COMMITTEE REPORTS:

A. FACILITIES & MAINTENANCE COMMITTEE: - Jim DeWilde

1. Electronic Security Gates – Director DeWilde moved to approve up to \$4,000 to purchase and install 2 electronic security gate openers for the Pohakea Point pavilion to be done in conjunction with the fence and gate repair as part of the fence repair budget. The motion passed unanimously.
2. Areca Palms Removal as Part of Phase I Pavilion Update – Director DeWilde moved to authorize the removal of the Areca palms with root structures and transplanting the birds of paradise plants from the sides of the Phase I pavilion to the tennis courts at a cost not to exceed \$12,251.30. The motion passed unanimously.
3. Phase I Pavilion-Change Orders – Director DeWilde moved to adopt a process for quick Board approval of contractor change orders for the Phase I pavilion restoration and the Phase I and II road restoration project with approval by the Committee and email vote taken by the Board.

After discussion, Director DeWilde withdrew his motion, with the understanding that a more workable system would be discussed at the next Facilities Committee and presented to the Board at the next meeting.

4. Phase II – Retile Pool – Director DeWilde moved to authorize the complete overhaul repair of the entire Phase II pool tiles at a cost not to exceed \$54,973.80 with funds from the designated reserve fund.

After a lengthy discussion, Secretary Chung moved to call the question. The motion to call the question passed with Directors Scott, Jo, Chung, Emery, DeWilde, Small, and Stahl in favor; Directors Florez, and Frosh opposed and Directors McMaster and German abstained.

The original motion to authorize a complete overhaul of the Phase II pool tiles passed with Directors Scott, Jo, Chung, Emery, DeWilde, Stahl, and Frosch in favor; Directors Small, Florez, and German opposed; and Director McMaster abstained.

B. MTP COMMITTEE: - Nick Florez

1. Geotechnical Investigation and Civil Design

Director Florez moved to approve the proposal for geotechnical investigation and civil design by JPB Engineering in the amount of \$20104.70 to augment the ground cover design in zone 1; funding to come from MTP budget.

After discussion, President Scott moved to amend the motion that the Board approve up to \$19,986.90 to augment the ground cover design in zone 1 pending additional contractor bids on the same the scope of work, and pending legal review; funding to come from MTP budget. The amended motion passed unanimously. The office would assist Director Florez in obtaining additional bids in two weeks.

C. LANDSCAPE COMMITTEE: - Shawn Scott

1. Kendall Hazard Tree Trimming Proposal

President Scott moved to approve of up to \$58,000, for trimming and removal of hazardous trees, subject to additional bids and funding availability. The motion passed with Directors Scott, Jo, Chung, Emery, Small, Stahl, and Frosch in favor; Directors McMaster, Florez, and German opposed; and Director DeWilde abstained.

2. Landscape Update

President Scott reported a property walk-through scheduled with Andrew Kendall on Friday, June 28, 2019, weather permitting.

President Scott moved to approve that the majority of Committee members (when meeting with a quorum) can appoint a temporary chairperson for their committee meeting when the Chair is not available. Motion approved with Directors Scott, Jo, Chung, Emery, DeWilde, McMaster, Small, Stahl, Frosch, and German in favor; and Director Florez abstained.

D. TREASURER'S REPORT/FINANCE: - Timothy Emery

1. May Financial Statements - Director Emery distributed documents and gave a verbal financial report.

2. 2019 Budget: Director Emery gave a verbal report.

Treasurer Emery moved to authorize the PCA to borrow up to \$250,000 from the Reserve Funds for use in the Operations Budget in 2019 when needed as a line of credit. Payback will start in 2020 over a four year period with no interest. The motion passed with Directors Scott, Jo, Chung, Emery, Small, Stahl, and Frosch in favor; Directors McMaster, Florez, and German opposed; and Director DeWilde abstained.

3. Reserve Study:

Treasurer Emery moved to authorize a reserve study conducted by a reserve study professional to be completed as soon as possible at a cost of not more than \$15,000; written proposals from Armstrong Consulting for \$3,500, Association Reserves for \$6,480 and Trinity EDR for \$8,250 were just received.

After discussion, Secretary Chung moved to amend the motion to authorize a level 1 reserve study conducted by Armstrong Consulting as soon as possible at the cost of up to \$5,000. The amended motion passed unanimously.

4. Treasurer Emery moved to authorize a working group consisting of Timothy Emery, Treasurer, David Chung, Secretary, and Mike Henton to develop an investment policy for the PCA over the next few months for Board approval. The motion passed unanimously

Treasurer Emery moved to authorize David Chung, Secretary to negotiate with Territorial Savings Bank for a new PCA savings account with a better interest rate (i.e. 1% vs 0.20%), and to approve the standard bank signing resolution to effect this change. The motion passed unanimously.

Treasurer Emery moved to authorize Tim Emery, Treasurer to direct Hawaiiana Property Management to consolidate a few lower paying savings accounts within the \$250,000 FDIC insurance limits and to open two new \$245,000 certificates of deposit for up to one year maturity at the best rates available within the FDIC insurance limits of \$250,000. For example, Home Street Bank is offering 2.75% for a 9 month CD. The motion passed unanimously.

E. **NEIGHBORHOOD WATCH:** - Susan Stahl

Director Stahl reported most of the security incident reports were parking violations. Recently a truck was reported stolen from a Phase IV reserved stall. Director Stahl reminded residents should lock their vehicle at all times and to not leave any personal items visible in their vehicle.

IX. **COMMUNITY MANAGER'S REPORT:**

General Manager provided the Board with a written report. A copy of which will be filed at the office of Hawaiiana Management Company. The Board accepted the GM report as written.

X. **UNFINISHED BUSINESS:**

None.

XI. **NEW BUSINESS:**

None.

XII. **ADJOURNMENT:**

There being no other business to conduct, President Scott adjourned the meeting at 10:09 p.m.

XIII. DATE, TIME, AND PLACE OF NEXT MEETING

Tentatively the next Regular Board of Directors' Meeting for Puu Alii Community Association will be held on Tuesday, July 23, 2019 at 7:00 p.m. at PKP Phase 3 Recreation Room Pavilion.

Submitted/Approved by: Cheryl Carvalho, Recording Secretary



● **Helene Jo** <helenesjo@yahoo.com>

To: dave swann



Dec 9 at 2:58 AM



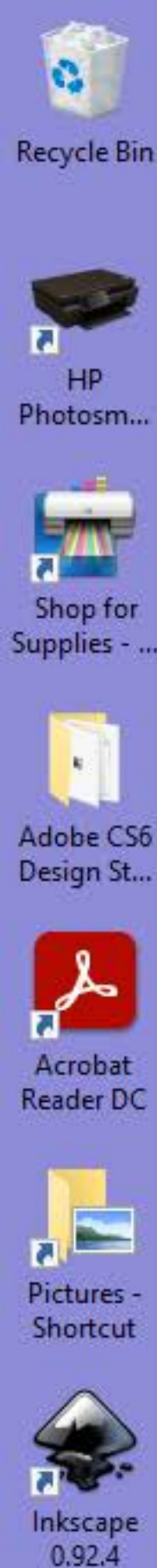
Dave,

One of the options we are looking at is a retaining wall or walls and some other things to stabilize the slope. We have other engineers involved in this project so, no, it is not just one person and Nick Florez. There is no reason to keep the junk trees as long as we keep a screen. If we can protect the view of the Phase 4 people and the Lilipuna neighbors with the placement and selection of trees then why is there so much angst?

-Helene

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Nick F Florez | Kaneohe, Hawaii
Age: 61
 Phone Number: 732-716-1958, 732-716-9545
 Addresses: 46-040 Konane Pl Apt 3822, Kaneohe, HI ; 1002 Ventana Dr, Coraopolis, PA ; 46-040 Konane Pl, Kaneohe, HI
 Relatives: V Florez, Richard J Florez, Richard J Florez
 Email: @att.net
 Seen As: Nickolas Florez
 Previous Locations: Whiting, NJ; Honolulu, HI; Manchester, NJ; Allen, TX; Austin, TX; Lakehurst, NJ; San Diego, CA; Fpo, AP
 Nick is 61 years of age and is last known to have resided in Kaneohe, Hawaii. We may have email addresses and phone nu...

Public records available for people named Nick Florez [View Public Records](#)

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JPB ENGINEERING, INC.

Structural & Geotechnical Engineering

Menu



About JPB Engineering Systems



JPB Engineering was started in February of 2008 by Jonathan Brandt, S.E. Mr. Brandt has over 19 years of structural engineering design experience and is proficient in all types of structural building design. Prior to obtaining his structural and civil licenses, he spent over four years in the field as a journeyman carpenter in the construction industry. He is a licensed structural and civil engineer in Hawaii and a licensed civil engineer in the State of California and Guam. As principal of JPB Engineering, he is responsible for all phases of the design and works closely with the project architect and contractor to ensure the quality of the project.

In January of 2011 Paul Weidig P.E., joined JPB Engineering with over 40 years of experience as an engineering geologist and geotechnical engineer. His association enables the company to offer geotechnical and geoanalytical engineering services in addition to structural engineering capabilities. He holds civil engineering and geotechnical engineering specialty licenses in Oregon, California and Nevada as well as geology and engineering geology specialty licenses in those states. As the senior geotechnical engineer, he manages all geotechnical project phases from project coordination to subsurface investigation. He oversees laboratory testing and report preparation to assure that all geotechnical engineering standards and accepted practices are met.

JPB Engineering provides complete geotechnical, geoanalytical and geologic engineering reports on sites for new residential, commercial and industrial buildings. These include projects as small as single private residences to large shopping malls and business parks. We specialize in the investigation of landslides, ground shifting and other forms of earth movement, and in providing recommendations for corrective work.

In June of 2014 Sharie Igawa-Ono, Arch, CDT, joined JPB Engineering with over 15 years of experience in Architecture and Waterproofing Consultation. She is licensed as an architect in California and Hawaii. She specializes in building envelope design and waterproofing, but also has extensive experience designing tenant improvement, warehouse and retail building shell type projects. In the last 4 years, she has helped the firm to grow in size and ability to service large repair and renovation design and construction management projects.

With structural and construction management support in-house, we are able to coordinate our efforts more efficiently and approach challenges with different perspectives. This close collaboration allows us to quickly produce innovative solutions that will materialize into savings that get passed on to the client.

JPB Engineering can give you high-quality and timely engineering service at an affordable cost. You will receive our personal attention, whether you are an individual homeowner or a large corporation. We strongly believe in detailed communication so that every aspect of your project is given due consideration and that alternative avenues to solving problems are thoroughly explored. We extend our services throughout the Islands, California and Guam; and offer free estimates and proposals.

Team JPB



Jonathan Brandt, S.E.,
Principal



Julian Coloma
Project Structural Engineer



Brian Tabuso
Project Geotechnical Engineer



Tyler Ferge
Project Structural Engineer



Colin Nguyen
Project Structural Engineer



Mark Hopkins
Geotechnical Field Superintendent



Amie Miranda-Pesquera
Office Manager



Sharie Igawa-Ono, AIA, CDT
Senior Architect



Paul Weidig P.E.
Senior Geotechnical Engineer

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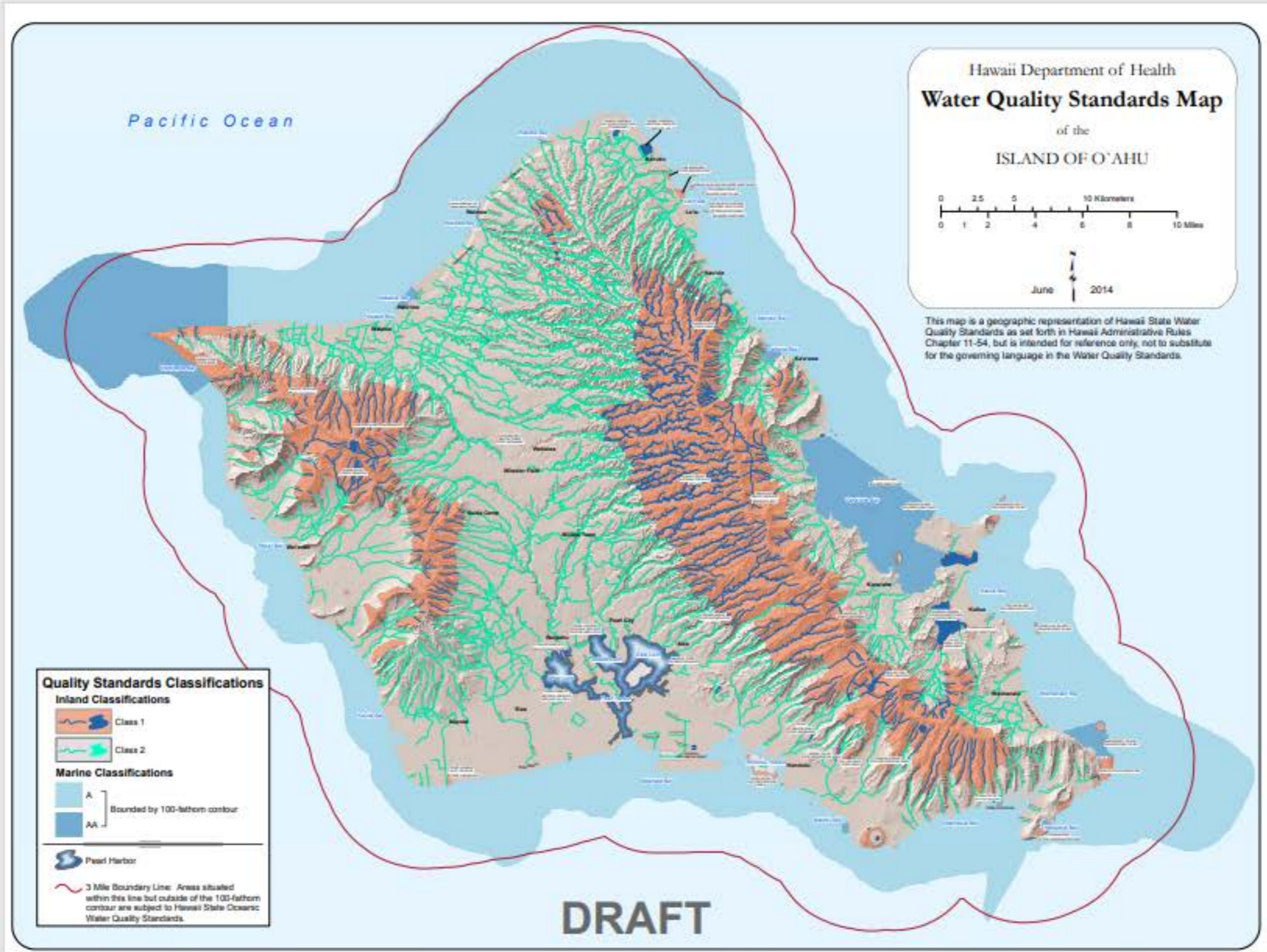
[HOME \(HTTPS://WWW.JPBENGINEERING.COM/\)](https://www.jpbenengineering.com/) [CONTACT](#)

[\(HTTPS://WWW.JPBENGINEERING.COM/CONTACT/INDEX.ASP\)](https://www.jpbenengineering.com/contact/index.asp)

[\(MAILTO:INFO@JPBENGINEERING.COM\)](mailto:info@jpbenengineering.com)

Hawaii Web Design (http://www.thinking2.com/web_services/index.asp)

 (http://www.thinking2.com/web_services/simi-valley-web-design.asp)



Paul

Weidig

City

All States ▾

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Paul Weidig in the US

We found 3 records in 4 states for Paul Weidig in the US. The top state of residence is Louisiana, followed by Hawaii. The average Paul Weidig is around 70 years of age with around 100% falling in to the age group of 61-80. Uncover where Paul Weidig lives along with previous & current home addresses, cell phone numbers, email addresses, background report, criminal check, social profiles, professional history and more.

[Learn More About Paul Weidig](#)

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Paul C Weidig |

[View Profile](#)

Kaneohe, Hawaii

Age: 73

📞 Phone Number: 808-741-7388, 808-479-6335, 808-234-5656

🏠 Addresses: 46-035 Konohiki St Apt 3864, Kaneohe, HI ; 46-035 Konohiki St, Kaneohe, HI ; 98-1048 Alania St, Aiea, HI

✉ Email: pwe***@hotmail.com

📍 Previous Locations: Honolulu, HI; Alameda, CA



June 23, 2023

David Swann

Via Email: swann433@yahoo.com

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Mr. Swann:

Thank you for your November 25, 2022, email concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing our letter and preparing your response. To simplify your review, we have reproduced your substantive comments below in italics, followed by our response:

Comment 1:

In response to the Draft Environmental Assessment (DEA) for the Puu Alii slope stabilization project published in the Nov. 23 issue of The Environmental Notice, I am providing you with facts for the record that are important to understand why Puu Alii should be required to conduct, at a minimum, an Environmental Impact Statement for this project.

I understand that it is the job of Planning Solutions to write a DEA that helps to justify the need for the slope project since they are being paid by Puu Alii to act as their advocate. However, there are many troubling facts surrounding this project that cannot be explained away by Planning Solutions.

Response:

The Pu‘u Ali‘i Community Association (PCA) acknowledges your position that an Environmental Impact Statement (EIS) for the Kōnane Slope Stabilization Project should be required. However, the PCA, in consultation with the Department of Planning and Permitting (DPP), continues to believe that an Environmental Assessment is the appropriate level of environmental review and that the Proposed Action is not anticipated to have significant adverse impacts and will be implemented using the recommended Best Management Practices (BMPs), avoidance, minimization, and mitigation measures discussed in the DEA, as appropriate. Further, HAR § 11-200.1-14 establishes procedures for determining if an EIS should be prepared or if a Finding of No Significant Impact (FONSI) is warranted. HAR § 11-200.1-14(d) provides that if an approving agency, through its judgment and experience, determines that an action may have a significant effect on the environment, then an EIS would be required. HAR § 11-200.1-13(b) lists the thirteen significance criteria to be used in making

that determination. Furthermore, each of these thirteen criteria have been examined in detail in Chapter 5 of the DEA and found not to reach a level of statutory significance. As a result, the Proposed Action has received a FONSI by the DPP and an EIS is not required.

Comment 2:

I was on the Puu Alii (PCA) board of directors from 2011 to 2019 and was landscape chair from March 2012 to November 2018. I have been involved in landscaping matters at Puu Alii regarding the Konane slope from 2005 to the present day, and I have intimate knowledge about how this project came to be.

I watched the PCA board slowly begin to falter and cave in due to the extreme pressures coming from a small number of condo owners demanding that their views of Kaneohe Bay be restored - meaning a demand for all the trees along Lilipuna Road to be cut down so that owners living in the lower units of phase 4 of Pohakea Point could have views of Kaneohe Bay. This relentless pressure was voiced by owners coming to PCA meetings and disrupting the meetings by screaming and demanding that the PCA cut down all the "weed" trees on the Konane slope.

These angry demands and outbursts occurred at every PCA meeting beginning sometime in 2017, and during 2018, that pressure grew to the point that PCA board directors began to resign due to the hateful and sometimes even violent discourse around this issue (the police were called due to threats against PCA board directors by resident Nick Florez at one point).

By early 2019, the situation had reached such a low point that several directors, including the board president, resigned in a single night. In April 2019, I was voted off the PCA board, along with other directors. This was due to this one issue - view planes within phase 4 of Pohakea Point and the demand that the trees on the hillside be cut down and replaced with only ground cover (The DPP later denied the "only ground cover" option in May of 2020).

Response:

The PCA acknowledges that the above is your account of past events taking place prior to the publication of the DEA. We understand that you ran for re-election when your term was up and that you were not re-elected to the PCA Board. The PCA Board has worked within the rules to establish a Master Landscape Plan (MLP) and address the concerns of its members, while also aiming to be good neighbors within the larger community.

As discussed in Sections 1.2 and 1.3 of the DEA, the purpose and need for the Proposed Action is to stabilize the Kōnane Slope between the PCA-owned land and the City-owned Lilipuna Road, as recommended in the Geotechnical Report prepared by JPB Engineering (JPB). The need to address runoff from the Kōnane Slope was first identified in a January 11, 2019, letter from the City and County of Honolulu Department of Facility Maintenance that identified an alleged discharge of soil and sediment from the PCA property onto Lilipuna Road.

Also in 2019, the PCA Board sought to retain a landscape architect to address overgrowth and provide for groundcover on the Kōnane Slope. The landscape architect raised concerns about the stability of Kōnane Slope below Buildings 37 and 38 and declined to submit a proposal for the landscaping on the slope because it was too steep. The landscape architect further indicated that groundcover would not be able to grow well on such a steep slope and opined that the slope stability and erosion issues would need to be addressed prior to any landscaping.

Recognizing the urgency to address any runoff or risk of potential failure of the slope, the PCA Board took reasonable and appropriate action to address these issues with a permanent solution, including retaining a qualified engineering firm in July 2019 to complete geotechnical investigations and soil borings along the Kōnane Slope. Soil borings fronting Buildings 37 and 38 were completed in September 2019 by JPB. JPB also produced a Geotechnical Report dated March 5, 2020, addressing the slope below Buildings 37 and 38, as well as an Addendum dated April 23, 2020, and a revised Geotechnical Report dated July 31, 2020, addressing the slope below Buildings 35 through 38. The original scope of the soil work included only areas below Buildings 37 and 38, but upon further investigation, it was necessarily expanded to include the area below Buildings 35 and 36.

Once the slope is stabilized, the PCA will implement the MLP for the Kōnane Slope.

Comment 3:

*In June 2019, the PCA board approved the hiring of geotechnical firm "**JPB Engineering**" (see attachment **APPROVED Minutes PCA 2019, page 4, Item B**) to conduct soil tests on the Konane slope hillside. At that time, the senior engineer at JPB Engineering was a man named Paul Weidig. Mr. Weidig lived at Pohakea Point in building 38 directly above the Konane slope.*

*The PCA board director who chose JPB Engineering to conduct the soil tests is the same **Nick Florez mentioned above who threatened board members**. Mr. Florez owns a condo in building 38 - four floors below Mr. Weidig - who has repeatedly advocated for all the trees on the slope to be cut down (see attachment below of Florez' August 28, 2020 letter to the DPP demanding that all the trees be cut down for view plane purposes).*

*Back in 2006-2007, I served on the Phase 4 board with Mr. Weidig, who was at that time phase 4 board president. (Puu Alii has 4 phases, phase 1,2,3, and 4). **Mr. Weidig on many occasions stated his desire to cut down all the "weed" trees along Lilipuna Road down below his condo in building 38.***

*I informed the current PCA board many times in writing about this conflict of interest and have been told by PCA counsel that Mr. Weidig retired in August 2019 and that the issue is therefore irrelevant. The PCA board ignores the fact that Weidig was still employed by JPB Engineering in June 2019 when JPB was hired by the Puu Alii board to conduct the soil tests on the Konane hillside. **This is a clear conflict of interest.***

Response:

Your contention that the PCA Board's retaining of JPB for the engineering work was improper because Mr. Paul Weidig owned a unit in the PCA project is without merit. There is no ethical or legal prohibition against PCA's retention of a vendor who employs a PCA member. The PCA Board solicited bids from several engineering firms and the contract to JPB was properly awarded through a competitive-bid process in late June 2019. Furthermore, Mr. Weidig retired on August 10, 2019, before the soil sampling was conducted, and, as confirmed by a letter dated July 9, 2021, from JPB to the PCA, a copy of which is attached, Mr. Weidig did not work on or bill any time for work on the slope stabilization project.

JPB was selected from among three bidders due to JPB's bid amount for the scope of work being the lowest. The initial motion to accept the bid without competition was amended to require three bids and legal review.

Comment 4:

There were heavy rains in early 2019 that caused flooding along Lilipuna Road. The cause of this flooding and erosion was the denuding of an area of the Konane slope on Puu Alii property by the PCA board directly in front of David Ardern's home at 46-061 Lilipuna Road in late 2017. I know this because I was still the landscape chair and was involved in that action in late 2017.

I expressed concern to the landscape architect Randall Monaghan and arborist Kevin Eckert that this denuding action was too extreme and that too much of the required screen of trees had been removed. They agreed and had small slender trees planted there in an attempt to re-forest the area - the trees are still there but have not grown to any degree and the area is still very barren and denuded.

Nothing more was planted in this denuded area which is a violation of the city ordinance that requires a buffer or screen of trees to exist all along Lilipuna Road for the benefit of the owners of single-family homes on Lilipuna Road.

Response:

The PCA does not know for sure what caused the flooding in late 2018 (not early 2019 as you state), but it most closely coincided with the work that the City did to install a silt screen. The City cut off the toe of the slope in the process and created a channel for water to funnel into. This channel has since filled in with dirt, so we have not seen the concentrated runoff with more recent heavy rainfall. We acknowledge that your statements above are your opinions regarding the area. The City completed an investigation that it deemed inconclusive. The PCA continues to work with the City since this incident to come up with a long-term solution. Implementation of the MLP following the slope stabilization project will include street trees and other vegetation that will act as a buffer between the PCA project along Lilipuna Road.

Comment 5:

Another important fact that cannot be ignored is that ever since Pohakea Point was built in 1989-1990, there has never been a single incident of a landslide on Lilipuna Road, nor has there been any incidents of erosion or flooding - until after the area of the slope in front of David Ardren's home was denuded in late 2017. Puu Alii caused the runoff and erosion that is now taking place and now Puu Alii is using that action as an excuse to completely denude the entire Konane slope.

Response:

As discussed in Section 1.3 of the DEA, based on the Geotechnical Reports prepared for the Kōnane Slope, the PCA Board took action to retain consultants to design and construct an effective system for slope stabilization, runoff protection, and groundcover along the slope. The Proposed Action will also allow the implementation of landscaping that is manageable for the PCA. The Geotechnical Reports identified credible risks of slope failure. The Proposed Action is intended to address those risk factors so as to minimize the risk of the Kōnane Slope failing and to provide a long-term solution for runoff from the PCA project. See the response to Comment 4, above, for additional information.

Comment 6:

Puu Alii, in an attempt to appease the view plane-obsessed condo owners in lower phase 4, is using the premise that the Konane slope is "unstable" as an excuse to cut down all the trees on the hillside so that the issue of view planes is finally put to rest. And they are doing so by using a soil report created under the direction of a soil engineer who actually lived at Pohakea Point directly above the Konane slope and who has gone on record of his desire to cut down all the trees on the Konane slope.

*There have been claims that trees on the hillside having "**uncorrected leans.**" I have many photographs of trees with the exact same "lean" all over the 52-acre Puu Alii and Pohakea Point property - some are much worse than along Lilipuna Road. Yet the PCA board only had soil tests conducted on the Konane slope and nowhere else on the property. It is obvious that the **board paid for a report that said exactly what the PCA board wanted it to say - that the trees on the Konane slope need to all be cut down.***

In December 2019, I received an email from the vice president of the PCA board at the time (and currently) that justifies the "junk trees" being removed for view plane purposes without once mentioning anything about "unstable soil" - which is another example that shows what the real reason is behind the board's desire for the slope "stabilization" project (see attachment below).

Response:

As discussed in the response to Comment 3 above, Mr. Weidig did not work on or bill any time for work on the Geotechnical Reports prepared by JPB.

Your comment is that there are other trees on the PCA property that also have uncorrected leans. An “uncorrected lean” happens in trees when either the soil is unstable, or the tree has a defect in its root system so that it is basically failing at a slow rate. Most of the time, it is due to unstable soils.

The PCA retains an arborist that examines trees on the property on a regular basis. Any trees that the arborist recommends removing will be removed. The arborist’s assessment includes evaluation of each tree’s health and structural condition as well as its likelihood to impact important targets, including persons and property. Failure in the Kōnane Slope area of a tree(s) and/or the underlying soil could lead to blockage of Lilipuna Road, potential impact of traffic on the roadway, and sediment reaching a sensitive waterway. As such, it is a high target area with constant occupancy. While many trees on the property are leaning, uncorrected leans that are indicative of ongoing failure of the underlying soils are rare. To date, the arborist has only observed this occurring on Kōnane Slope within range of a high target area. If, at some point, the arborist observes uncorrected leans of trees in other high target areas of the property, those would be reported to the PCA for its further investigation and action.

Section 3.8 of the DEA recognizes that the Proposed Action, in addition to stabilizing the slope and addressing runoff, will allow implementation of the MLP, which will improve the appearance of and from the project area as well as airflow to the project area.

Comment 7:

The homeowners along Lilipuna Road and the officials at the DPP have been provided all of this information along with photographs and other documents. In fact, the DPP was about to give Puu Alii their final grading permit in early July when Honolulu City Council member Esther Kia'aina requested that the DPP require that Puu Alii obtain the SMA permit - which is required by law. Ms. Kia'aina was contacted by homeowners on Lilipuna Road and myself in an attempt to have some sort of responsible oversight of this project.

I have provided Ms. Kia'aina and her staff all of this information and they were surprised that the DPP almost allowed this project to go forward without the required SMA permit. We have also learned that Pohakea Point was built without getting the required SMA permit - which means that Pohakea Point was built illegally.

Response:

The PCA and Poha Kea Point projects were entitled prior the Special Management Area (SMA) law being enacted. Therefore, these projects did not require an SMA permit when they were built. The PCA continues to seek all permits that City and County of Honolulu, DPP is requiring for the Proposed Action.

Comment 8:

There are claims that this project will stabilize the slope "to be at less an incline." This is obviously not true - based on Planning Solutions' drawings and the actual plans created by Ty Dempsey, the incline will be made much steeper. This is an extremely risky project that is based on a false premise - that the slope is so "unstable" that it must be torn down to a depth of two feet and rebuilt. In order to proceed, the current soil report that has no credibility due to it being created under an obvious conflict of interest, must be thrown out.

Response:

As discussed in Section 3.2 of the DEA, the slope stabilization work will result in a less steep slope within portions of the South Zone. The current slope within the South Zone has localized steeper slope areas near the bottom of the slope exhibiting signs of ground movement towards Lilipuna Road. Following completion of the slope stabilization work, the slope will be a stable 2:1 (or flatter) slope throughout the South Zone for slope stability. The current slope within the North Zone is quite steep in certain areas, which require a soil nail earth anchoring system to stabilize the slope, as the slope cannot be flattened due to the site constraints at the bottom and top of the slope.

The Geotechnical Reports were not prepared under any conflict of interest. Please refer to the response to Comment 3 above.

Comment 9:

Then, a geotechnical firm that has no relationship with anyone at Puu Alii, should be hired to conduct soil tests in locations that include areas not on the Konane slope in order to get some type of baseline figure of soil stability. Without that, there is no way to know how stable or unstable the soil on the slope is compared to the soil all around it. For all anyone knows, the entire 52-acre Puu Alii property could be just as "unstable" as the Konane slope. What then? Destroy the entire site?

If these new soil tests show that the slope is in fact "unstable" to a degree where some action must be taken, then a plan must be created that is safer and less risky to the homeowners along Lilipuna Road and to Kaneohe Bay - such as a retaining wall, plantings of more trees and vegetation, etc. If this project is allowed to go forward and the SMA permit is granted and the likely damage occurs to Kaneohe Bay and the homes along Lilipuna Road, I am prepared to assist the Lilipuna Road homeowners in a class action lawsuit against Puu Alii when this turns into a complete disaster.

Response:

Please refer to the attached comparison topographic map, which compares the 1987 topographic map and 2019 topographic map. The areas circled in red are a representation (i.e.,

do not identify all) of areas where the contours of the slope differ from 1987 to 2019. Please refer to the response to Comment 3 above. The PCA retained JPB through a competitive bidding process. As discussed in Section 1.3 of the FEA and the response to Comment 2 above, following notification by the City of potential runoff from the Kōnane Slope area, and comments from the landscape architect then retained by the PCA that the Kōnane Slope area was too steep to maintain with groundcover alone and his recommendation that the PCA complete soil sampling to determine the potential for slippage and slope failure, the PCA retained JPB to evaluate the slope area. Furthermore, under Ordinance No. 4421 approving the PCA project, the PCA was required to submit a detailed landscape plan to DPP. The MLP was discussed with PCA owners at twelve town hall-style meetings, revisions were made based on owner feedback, and the MLP was approved by a majority of the owners prior to submittal to DPP. That plan was submitted to and approved by DPP in 2021 as the MLP. DPP, through the MLP, is requiring that the PCA install street trees, amongst other landscaping elements. Installation of street trees is not possible with the slope in its current state and requires that the slope be graded and stabilized prior to installation. This information is discussed in Section 2.5.2 of the DEA and has been expanded on in Section 1.3 of the Final EA.

As discussed throughout the DEA and in the response to Comment 2 above, the Proposed Action is intended to prevent a failure in the slope which would result in a potential risk to both PCA owners, users of Lilipuna Road, and owners below Lilipuna Road. Once the PCA Board was made aware of these risks, the PCA Board began taking actions to minimize that risk. Section 2.1.1 and Chapter 3 of the DEA discuss the recommended BMPs to be implemented as needed during construction of the project as well as the recommended avoidance, minimization and mitigation measures associated with the Proposed Action. For hydrological resources, Section 2.1.1 of the DEA discusses the Erosion and Sediment Control Plan (also referred to as the "ESCP") with specific measures to avoid and minimize impacts to surface water resources. Additionally, Sections 1.5 and 2.1.1 of the DEA note that a National Pollutant Discharge Elimination System permit has been obtained for the project and touches on the BMPs associated with that permit.

Comment 10:

All involved entities will be held responsible due to the fact that I have repeatedly tried to inform and warn everyone involved of the fraudulent basis of this extremely unsafe and unsound project - a project that is really based on a desire to provide view planes for condo owners and nothing more. Even under the best of circumstances, the "swale" mentioned by Planning Solutions will simply divert all of the soil runoff from the disrupted and rootless slope right into Kaneohe Bay - runoff that will occur for many years after the project is completed.

Response:

Your comment is acknowledged, although the Applicant disagrees with your characterization of the purpose and need for the Proposed Action. It is the PCA Board's understanding that your objection to the slope stabilization project is founded in your opposition to removing the

existing trees on the slope. As in Section 2.5 of the DEA, under **any** slope stabilization scenario, the trees and existing vegetation, which currently is comprised of many damaged trees that may and have failed, causing a safety issue, as well as invasive trees and others that are no longer approved for use by various government agencies with authority over such matters, must be removed. Following completion of the slope stabilization work, the PCA will implement the MLP which will include newly planted trees, groundcover, and other specified vegetation on the Kōnane Slope, which is also intended to address soil stabilization, runoff, and provide a buffer of the Project from the neighbors below Kōnane Slope.

Comment 11:

*It should be noted here that the **only response within the DEA from anyone at Puu Alii concerning this project is from a resident who is demanding that the project not interfere with her view plane of the bay** - which effectively proves the point at hand that this entire project is nothing more than an effort to provide views to condo owners at Puu Alii. If the City and County of Honolulu Planning and Permitting Department allows this obvious fraud to go forward unchecked, then the City and County of Honolulu Planning and Permitting Department will be just as responsible as Puu Alii and their paid advocates for the project's destructive consequences.*

Response:

The PCA acknowledges that some PCA owners want removal of the vegetation along Kōnane Slope for their views and that some neighbors along Lilipuna Road want a buffer. The PCA has considered the interests of all parties along with the need to address the stabilization of the Kōnane Slope to prevent a possible failure of the slope, as well as the issue of airflow/ventilation of the buildings due to being blocked by the current vegetation on the slope. The PCA believes that the Proposed Action will address the above issues and interests once the Proposed Action and MLP are implemented.

Comment 12:

*Finally, I urge the DPP to require Puu Alii to conduct an **Environmental Impact Statement for this project** due to the many negative construction and grading-related environmental impacts that will occur during and after the project is completed. Aside from the Lilipuna Road homeowners' safety and well-being being compromised by this project, Kaneohe Bay is a **Class AA marine water**, one of only four Class AA marine water areas surrounding Oahu (see attached map below); Allowing the bay to be polluted to any extent for this deceitful project would be a costly and wasteful fraud perpetrated on the citizens of Hawaii.*

Response:

As discussed in the DEA, the Proposed Action is not anticipated to have significant adverse impacts and will be implemented using the recommended BMPs, avoidance, minimization, and mitigation measures discussed in the DEA, as appropriate. Finally, as noted above, HAR § 11-200.1-14 establishes procedures for determining if an EIS should be prepared or if a FONSI is warranted. HAR § 11-200.1-14(d) provides that if an approving agency, through its judgment and experience, determines that an action may have a significant effect on the environment, then an EIS would be required. HAR § 11-200.1-13(b) lists the thirteen significance criteria to be used in making that determination. Furthermore, each of these thirteen criteria have been examined in detail in Chapter 5 of the DEA and found not to reach a level of statutory significance. As a result, the Proposed Action has received a FONSI by the DPP and an EIS is not required.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,



Mākena White, AICP

Attachments

1. July 9, 2021 Letter from JPB to PCA
2. Topographic Map



JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

07/09/2021

To: Puu Alii Community Association
46-058 Aliianela Place
Kaneohe, Hawaii 96744

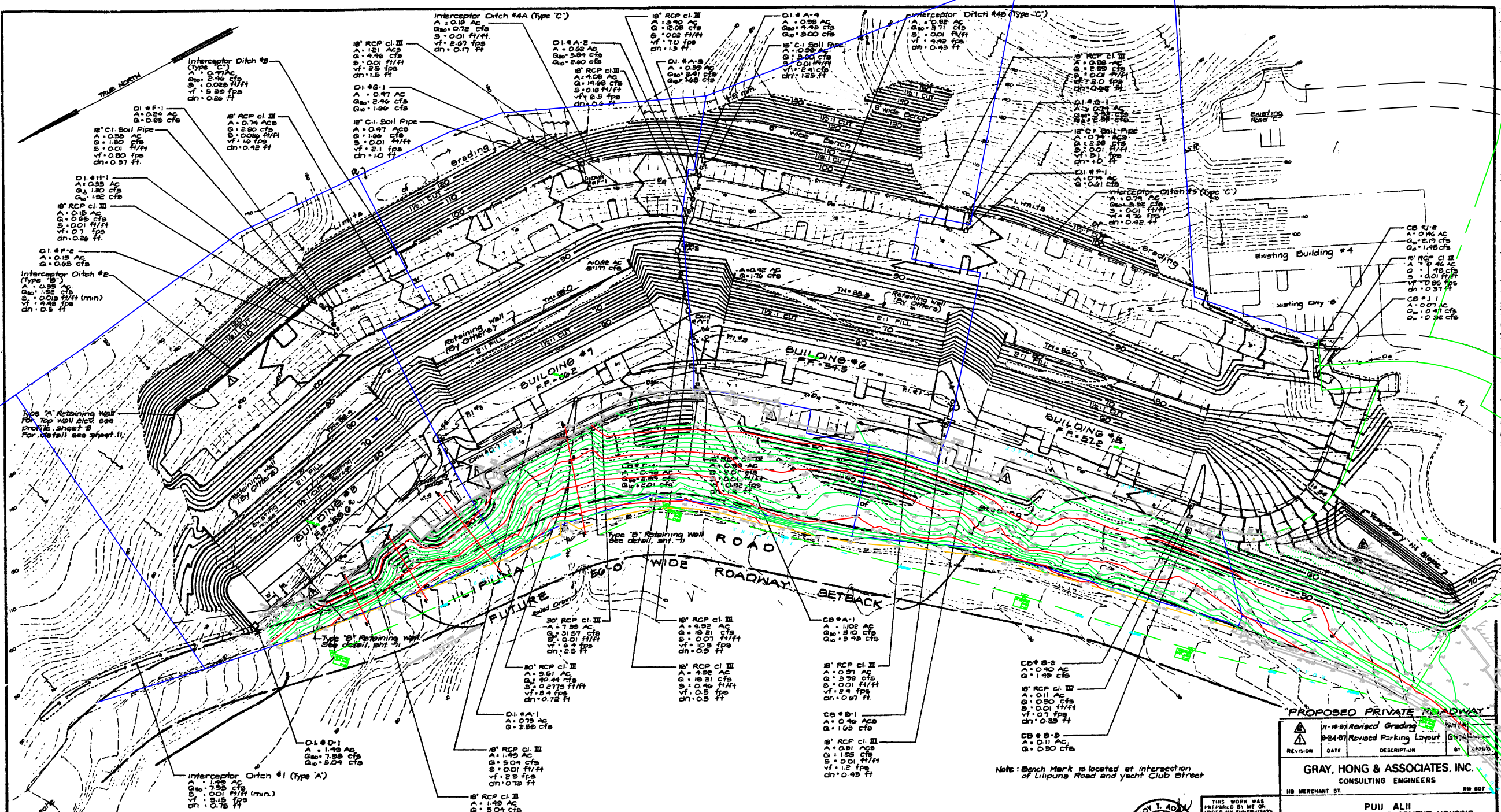
Subject: Employment Verification

This letter is to confirm that Paul Weidig is no longer employed with JPB Engineering Inc. His last day and effective date of retirement was on 8/10/2019. Mr. Weidig was not involved in any services provided to Puu Alii Community Association for the slope stabilization project.

If you should have any questions, please feel free to contact me.

Regards,

Amie Miranda-Pesquira
Company Administrator/HR Manager



TRUE NORTH

Interceptor Ditch #2 (Type 'B')
 A = 0.35 AC
 S = 0.005 ft/ft (min)
 V = 2.48 fps
 dn = 0.5 ft

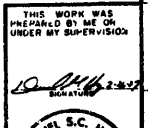
Type 'A' Retaining Wall
 For top wall elev see profile sheet B
 For detail see sheet II

- LEGEND**
- - - Existing Contour
 - 70 — Finish Grade
 - 104.0 — Top of Wall Elevation
 - FF. 50.0 — Finish Floor Elevation
 - Interceptor Ditch
 - Limits of Grading
 - Existing Drainage Pattern



Note: Bench Mark is located at intersection of Lilipuna Road and Yacht Club Street

EARTHWORK SUMMARY
 EXCAVATION = 42,600 C.Y.
 EMBANKMENT = 34,200 C.Y.
 AREA TO BE GRADED = 7.7 ACS.



PROPOSED PRIVATE ROADWAY

REVISION	DATE	DESCRIPTION	BY
11-18-83		Revised Grading	
8-24-87		Revised Parking Layout	

GRAY, HONG & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 110 MERCHANT ST. RM 807

PUI ALII
 A PLANNED DEVELOPMENT HOUSING PHASE
 HEEIA, KANEONE, OAHU, HAWAII

GRADING PLAN

APPROVED BY: *[Signature]*
 CHECKED BY: *[Signature]*

C-2

AC 01117 GUFFY E PC PI GUYETC

11/27/22

Puu Alii Community Association
46-058 Alii Anela Place
Kaneohe, HI 96744

Planning Solutions Attn: Makena White
711 Kapiolani Blvd. Suite 950
Honolulu, Hawaii 96813

Dear Ms. White,

I received your letter dated 11/21/22. It's about the slope stabilization project for Konane Slope. My apartment was affected, as my stairs was removed and I had to vacate my unit for over a month. After it was finished, I called to say there was another leak on my wall. I have had 2 leaks before, plus twice I had bees infestation. I feel that these were caused by the slope slipping.

I have put in a call awhile ago to the office here, but have not received a call back yet. It's been almost 6 months. I don't know why I am being ignored on this. I did not make a single complaint when told to leave. I pay my dues on time and never made a complaint to the office ever.

I hope you can help me on this matter. Please call me at 808-343-4790. I don't want to call the office again since I'm being ignored. I hope to hear from you. Thank you

Sincerely,

Dahlia M. Zotos

Dahlia M. Zotos



June 23, 2023

Dahlia M. Zotos
46-035 Konohiki Street, Apt. 3851
Kāneʻohe, Hawaiʻi 96744-6116

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Ms. Zotos:

Thank you for your November 27, 2022, letter concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response. To simplify your review, we have reproduced your comment below in italics, followed by our response:

Comment 1:

I received your letter dated 11/21/22. It's about the slope stabilization project for Kōnane Slope. My apartment was affected, as my stairs was removed and I had to vacate my unit for over a month. After it was finished, I called to say there was another leak on my wall. I have had 2 leaks before, plus twice I had bees infestation. I feel that these were caused by the slope slipping.

I have put in a call awhile ago to the office here, but have not received a call back yet. It's been almost 6 months. I don't know why I am being ignored on this. I did not make a single complaint when told to leave. I pay my dues on time and never made a complaint to the office ever.

I hope you can help me on this matter. Please call me at 808-343-4790. I don't want to call the office again since I'm being ignored. I hope to hear from you. Thank you.

Response:

Thank you for submitting your comment. The nature of the concerns you cite are beyond the scope of the DEA. However, we have passed your comments along to the appropriate parties at the Puʻu Aliʻi Community Association and as of the date of this letter, we understand that a representative from the Phase IV board has reached out to you regarding your stated concerns.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at

the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

A handwritten signature in blue ink that reads "Mākena". The signature is written in a cursive, flowing style.

Mākena White, AICP



United States Department of the Interior



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

In Reply Refer To:
2023-0019148-S7-001

December 2, 2022

Ms. Dawn Takeuchi Apuna
c/o Ms. Christi Keller
Zoning Regulations and Permit Branch
Department of Planning & Permitting
City and County of Honolulu
Honolulu, Hawai'i 96813

Subject: Technical Assistance for the Proposed Kōnane Slope Stabilization Project,
Kāneʻohe, Oʻahu

Dear Ms. Apuna:

Thank you for your letter of November 21, 2022, requesting a species list and guidance in preparation of your environmental assessment for the proposed Kōnane Slope Stabilization Project, located at 46-40, 50, and 70 Kōnane Place, on the island of Oʻahu [TMKs 4-6-001: 002, 060, and 062]. The project proposes the implementation of slope stabilization measures on a portion of the Puʻu Aliʻi Community Association property along Lilipuna Road in Kāneʻohe. The proposal also includes the creation of a shoulder and vegetated swale along Lilipuna Road and consists of two zones: South and North.

South Zone: The slope stabilization work consists of clearing and grubbing of existing vegetation, followed by grading to reduce the angle of the slope, and installation of erosion control matting and Platipus anchors. Upon completion of the stabilization work, permanent landscaping will be established.

North Zone: The slope stabilization work consists of clearing and grubbing of existing vegetation, followed by grading to reduce the angle of the slope, where possible. The slope will then be stabilized by grading the slope and installing a soil nail anchoring system with erosion control matting. On-site soils will be used as fill, where needed. Permanent landscaping consisting of a Bermuda grass/rye grass mix will be established following the slope stabilization work.

PACIFIC REGION 1

IDAHO, OREGON*, WASHINGTON,
AMERICAN SAMOA, GUAM, HAWAIʻI, NORTHERN MARIANA ISLANDS

*PARTIAL

The work in both zones includes the construction of a 12-foot-wide drainage swale between the toe of the slope and Lilipuna Road. The swale will be landscaped with turfgrass and street trees upon completion of the stabilization work.

Our letter has been prepared under the authority of and in accordance with provisions of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*), as amended (ESA). We have reviewed the information you provided and pertinent information in our files, as it pertains to federally listed species in accordance with section 7 of the ESA. Our data indicate the following federally listed species may occur or transit through the vicinity of the proposed project area: the endangered 'ōpe'ape'a (Hawaiian hoary bat, *Lasiurus cinereus semotus*); endangered 'ua'u (Hawaiian petrel, *Pterodroma sandwichensis*), endangered Hawai'i distinct population segment (DPS) of 'akē'akē (band-rumped storm-petrel, *Hydrobates castro*), and threatened 'a'o (Newell's shearwater, *Puffinus auricularis newelli*), hereafter collectively referred to as Hawaiian seabirds.

Hawaiian hoary bat

The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet or taller are cleared during the pupping season, there is a risk that young bats could inadvertently be harmed or killed since they are too young to fly or may not move away. Hawaiian hoary bats forage for insects from as low as 3 feet to higher than 500 feet above the ground and can become entangled in barbed wire used for fencing.

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

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

Hawaiian seabirds

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

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

- Fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.

- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.

We appreciate your efforts to conserve protected species. If you have questions regarding this response, please contact Charmian Dang, Fish and Wildlife Biologist (phone: 808-792-9400, email: Charmian_Dang@fws.gov). When referring to this project, please include this reference number: 2023-0019148-S7-001.

Sincerely,

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



June 23, 2023

Jiny Kim, Acting Island Team Manager
c/o Charmian Dang, Fish and Wildlife Biologist
Via Email: Charmian_Dang@fws.gov

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Ms. Kim:

Thank you for your December 2, 2022, letter (Ref. No. 2023-0019148-S7-001) concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response.

Thank you for providing the information and recommendations regarding the protected species that may occur in the immediate vicinity of the project area. As outlined in Section 3.1.2 of the DEA, no protected species, including those listed in your letter, have been observed in the project area. The Pu‘u Ali‘i Community Association will work with its contractors to understand and observe the measures related to the Hawaiian hoary bat and Hawaiian seabirds contained in Section 3.1.3 of the DEA, as applicable, which will avoid and minimize impacts to protected species.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program’s website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

Mākena White, AICP

DAVID Y. IGE
GOVERNOR
KE KIA'AINA



AUDREY HIDANO
COMPTROLLER
KA LUNA HO'OMALU HANA LAULĀ

MEOH-LENG SILLIMAN
DEPUTY COMPTROLLER
KA HOPE LUNA HO'OMALU HANA LAULĀ

STATE OF HAWAII | KA MOKU'ĀINA O HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | KA 'OIHANA LOIHELU A LAWELAWÉ LAULĀ
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)22.206

DEC - 1 2022

Makena White, AICP
Planning Solutions, Inc.
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawaii 96813

Dear Mr. White:

Subject: Draft Environmental Assessment and
Anticipated Finding of No Significant Impact
Konane Slope Stabilization Project, Puu Alii Community Association
Kaneohe, Oahu, Hawaii
TMK: (1) 4-6-001: 002, 060, and 062

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

If you have any questions, your staff may call Gayle Takasaki of the Planning Branch at (808) 586-0584.

Sincerely,

A handwritten signature in black ink, appearing to read "CKinimaka".

CHRISTINE L. KINIMAKA
Public Works Administrator

GT:mo



June 23, 2023

Christine L. Kinimaka, Public Works Administrator
c/o Gayle Takasaki, Planning Branch
Department of Accounting and General Services
State of Hawai'i
PO Box 119
Honolulu, HI 96810-119

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Ms. Kinimaka:

Thank you for your December 1, 2022, letter (Ref. No. (P)22.206) concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response.

Thank you for confirming that the proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities and that you had no further comments to offer.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

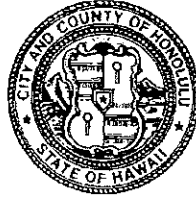
If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

Mākena White, AICP

DEPARTMENT OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU

925 DILLINGHAM BOULEVARD, SUITE 200 • HONOLULU, HAWAII 96817
PHONE: (808) 768-7762 • FAX: (808) 768-7792
www.honolulu.gov/dcs



RICK BLANGIARDI
MAYOR

ANTON C. KRUCKY
DIRECTOR
AEDWARD LOS BANOS
DEPUTY DIRECTOR

December 02, 2022

Mākena White, AICP
Planning Solutions, Inc.
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawai'i 96813

Dear Ms. White:

**SUBJECT: DRAFT Environmental Assessment and Anticipated Finding of No Significant Impact (DEA/AFONSI)
Kōnane Slope Stabilization, Pu'u Ali'i Community Association
TMK: (1) 3-7-002:081 Honolulu, O'ahu, Hawai'i**

Thank you for your notice of a Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA/AFONSI) for the Kōnane Slope Stabilization project.

Our review indicates that the proposed project will have no adverse impacts on any Department of Community Services activities or projects in the surrounding neighborhood.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Anton C. Krucky". The signature is written in a cursive style with a large, sweeping flourish at the end.

Anton C. Krucky
Director



June 23, 2023

Anton C. Krucky, Director
Department of Community Services
City and County of Honolulu
925 Dillingham Blvd., Suite 200
Honolulu, HI 96817

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Mr. Krucky:

Thank you for your December 2, 2022, letter concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response.

Thank you for confirming that the proposed project does not adversely impact any of the Department of Community Services' activities or projects in the surrounding neighborhood.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

Mākena White, AICP

DAVID Y. IGE
GOVERNOR



CATHY BETTS
DIRECTOR

JOSEPH CAMPOS II
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF HUMAN SERVICES
BENEFIT, EMPLOYMENT AND SUPPORT SERVICES DIVISION
1010 Richards Street, Suite 512
Honolulu, Hawaii 96813

Re: 22-0351

December 1, 2022

Mr. Makena White
AICP
Planning Solutions, Inc.
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawaii 96813

Dear Mr. White:

Subject: Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA/AFONSI) Konane Slope Stabilization Project, Puu Alii Community Association, 70 Konane Place Kaneohe, Oahu, Hawaii, TMK Nos. (1) 4-6-001:002, -060, and -062

This is in response to your letter dated November 23, 2022 requesting the Department of Human Services (DHS) to comment on the above-named project.

DHS has reviewed the Konane Slope Stabilization project and the map of the area. At this time, DHS has no comments.

If you should have any questions regarding this matter, please contact Ms. Lisa Galino, Child Care Program Specialist at (808) 586-5712.

Sincerely,

A handwritten signature in black ink that reads "Scott Nakasone".

Scott Nakasone
Assistant Division Administrator

c: Cathy Betts, Director



June 23, 2023

Scott Nakasone, Assistant Division Administrator
Department of Human Services
State of Hawai'i
1010 Richards Street, Suite 512
Honolulu, HI 96813

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Mr. Nakasone:

Thank you for your December 1, 2022, letter (Ref. No. 22-0351) concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

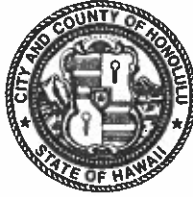
If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

Mākena White, AICP

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU

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



RICK BLANGIARDI
MAYOR

ARTHUR J. LOGAN
CHIEF

KEITH K. HORIKAWA
RADE K. VANIC
DEPUTY CHIEFS

OUR REFERENCE EO-GK

December 6, 2022

SENT VIA EMAIL

Mr. Makena White
makena@psi-hi.com

Dear Mr. White:

This is in response to the letters received from the Department of Planning and Permitting (DPP) as well as your office, informing of the preparation and availability of the Draft Environmental Assessment for the Konane Slope Stabilization Project by the Puu Alii Community Association, along Lilipuna Road in Kaneohe.

The Honolulu Police Department recommends that adequate notification be made to area residents due to the narrow road of Konane Place to provide ingress and egress of construction vehicles, equipment, and deliveries during the construction phase of the project.

If there are any questions, please call Major Crizalmer Caraang of District 4 (Kaneohe, Kailua, Kahuku) at (808) 723-8639.

Thank you for the opportunity to review this project.

Sincerely,


Glenn Hayashi
Assistant Chief of Police
Support Services Bureau

cc: Ms. Christi Keller, DPP
c.keller@honolulu.gov



June 23, 2023

Glenn Hayashi, Assistant Chief of Police
c/o Major Crizalmer Caraang, District 4
Support Services Bureau
Honolulu Police Department
City and County of Honolulu
801 South Beretania Street
Honolulu, HI 96813

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Assistant Chief Hayashi:

Thank you for your December 6, 2022, letter (Ref. No. EO-GK) concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response.

The Pu‘u Ali‘i Community Association and its contractor(s) will provide adequate notification to area residents related to ingress and egress of construction vehicles, equipment, and deliveries during the construction phase of the project due to the narrow road of Kōnane Place.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program’s website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

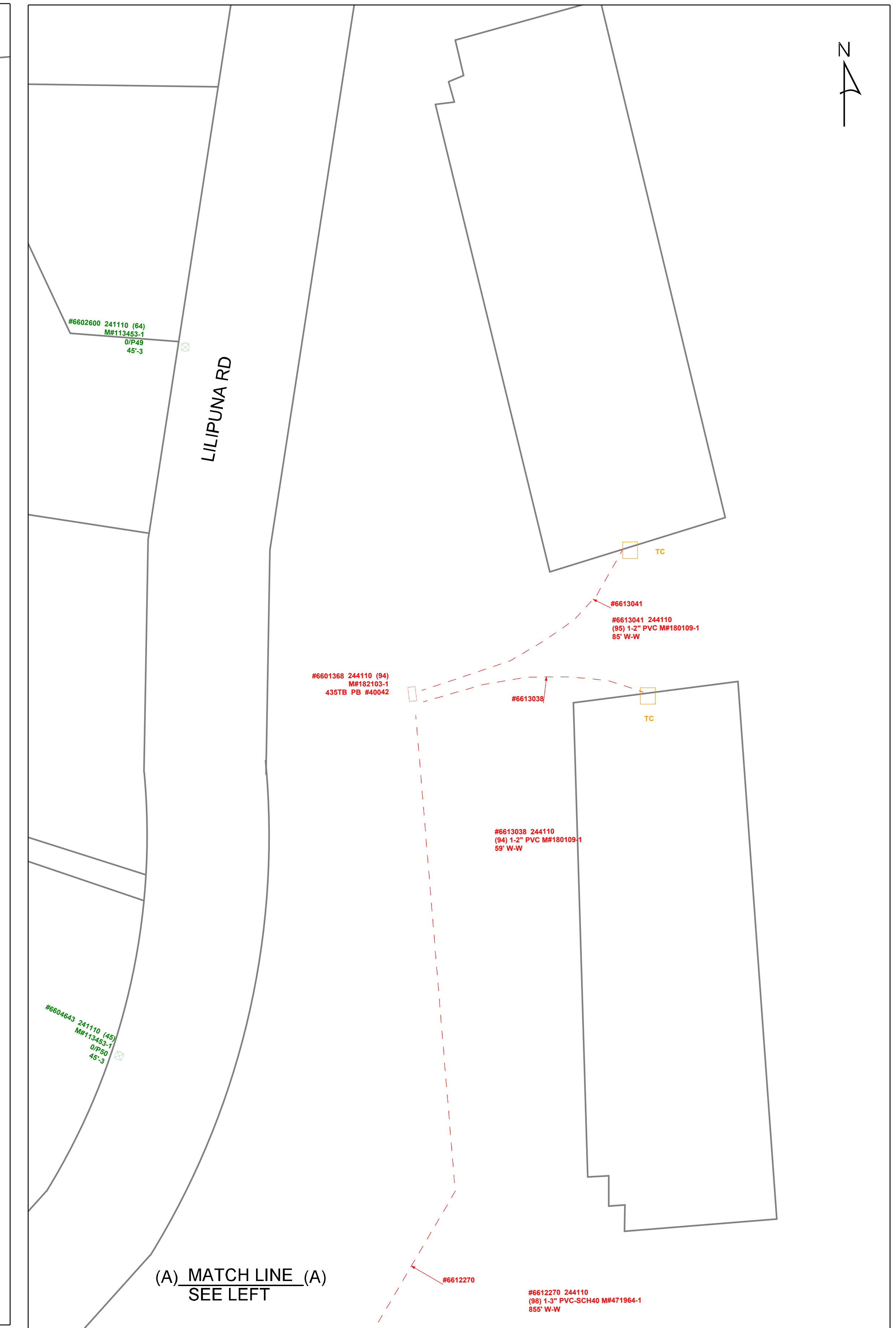
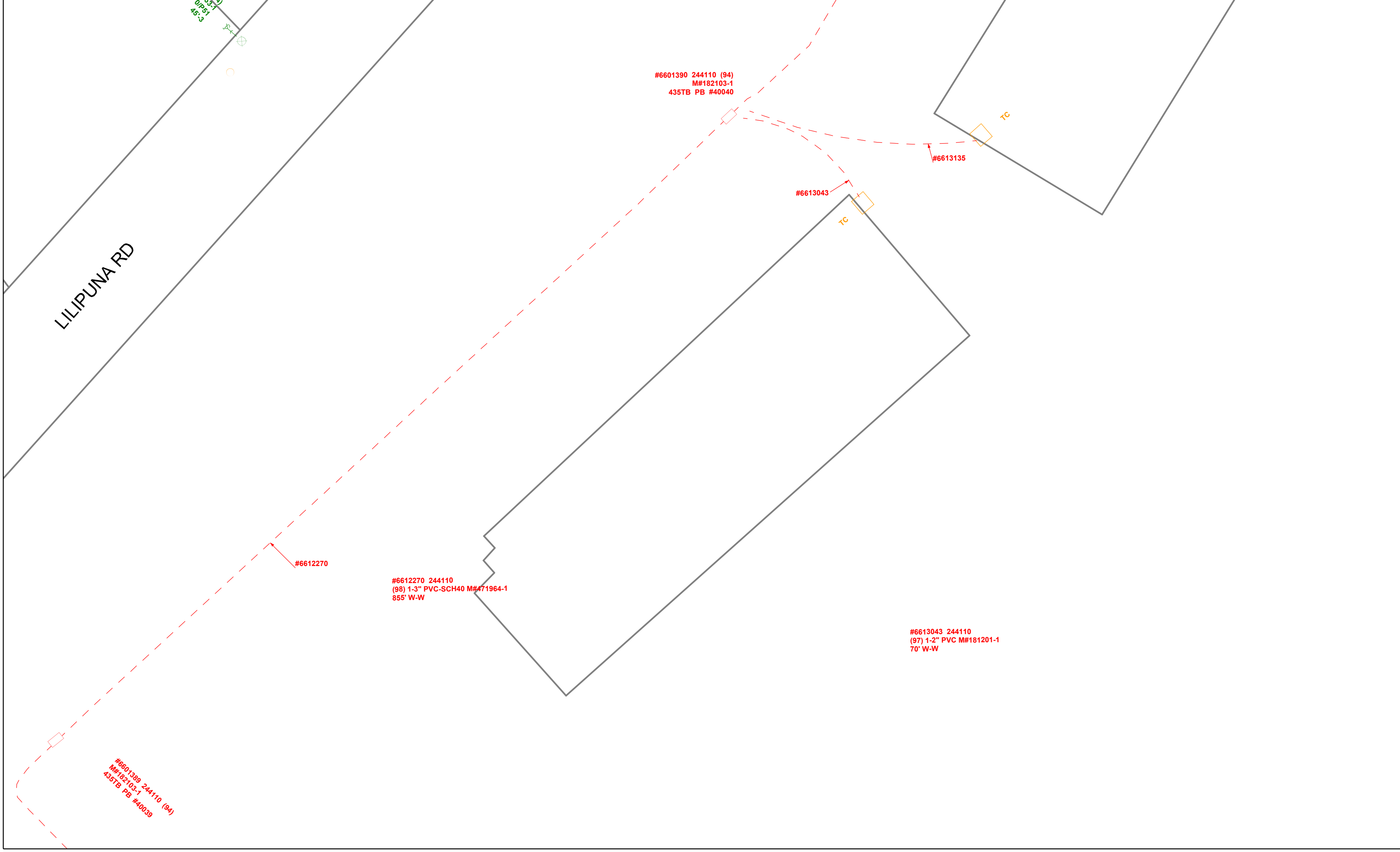
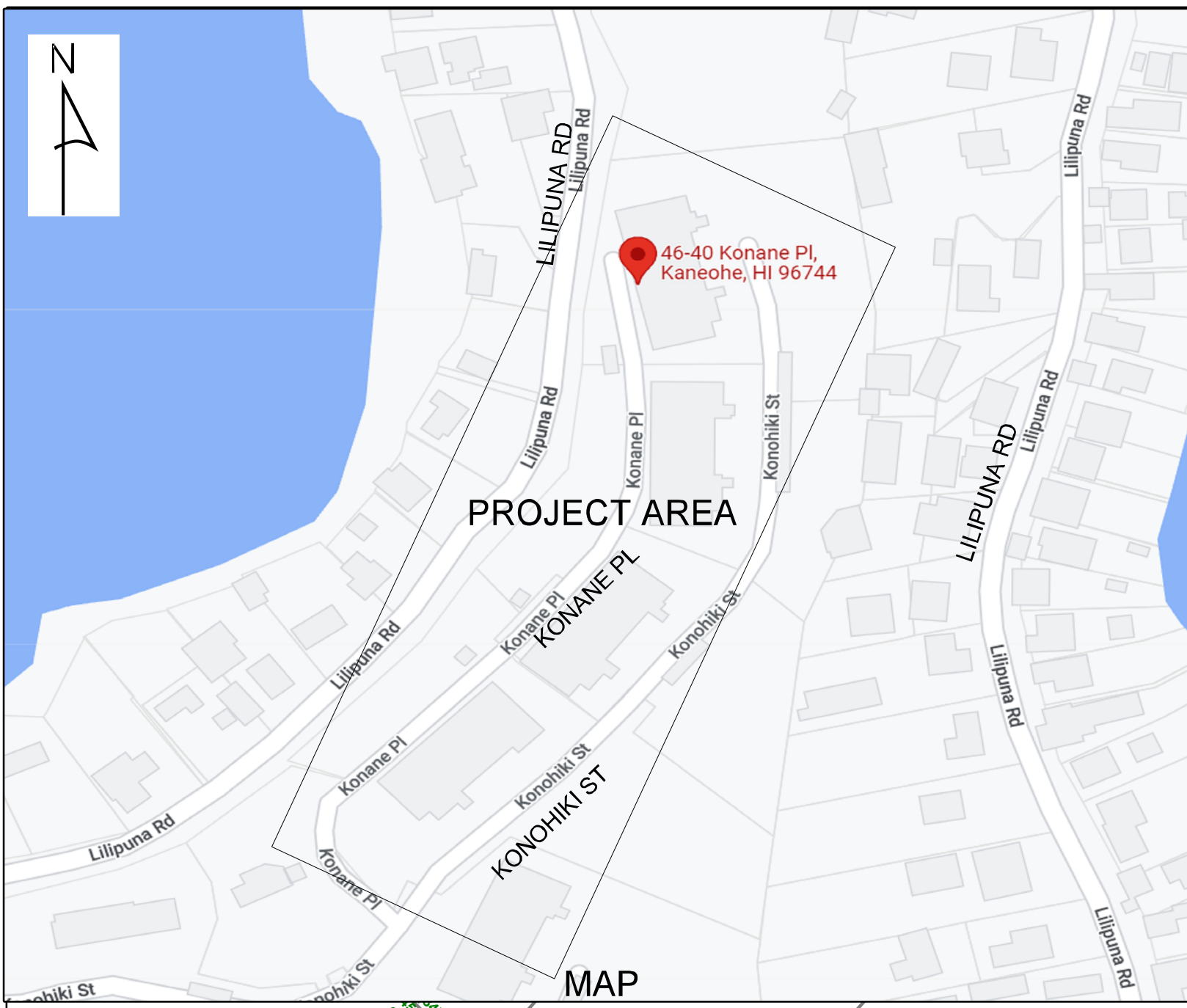
Mākena White, AICP

Aloha Makena,

After looking over the plans for this project, HT does have infrastructure in the area, according to our records there are pullboxes and 3" conduit. Please refer to the attached pdf for the locations of these facilities. Please let me know if you have any questions, thank you.

Mahalo,
Kolvin Kekua
Network Engineer – Outside Plant
Hawaiian Telcom
O: 808-460-9613 | C: 808-799-6172
kolvin.kekua@hawaiiantel.com





NOTE AREA—
HT FACILITIES IN THE PROJECT AREA.

SPECIAL CIRCUITS

ASGNMT REC'S DATE _____
 DESIGN REVIEW REQ'D YES NO
 IF YES, ATTACH COMPLETED
 SPECIAL SERVICES CHANGE NOTICE

- T1
- DATA
- TRUNK
- SELEX
- OTHER
- NONE

TRANSMISSION CRITERIA

BRIDGE TAP(S) FOOTAGE _____
 END SECTION FOOTAGE _____
 LOOP ELR _____ OHMS LOOP EML _____ dB
 OFFICE LOOP LIMIT _____ OHMS

**WORK SAFELY
HIGH VOLTAGE**

POWER CO. _____ KV PHASE _____
 CONNECTED _____
 GROUNDED _____
 COMMENTS _____

PROPRIETARY INFORMATION FOR USE BY AUTHORIZED HAWAIIAN TELCOM EMPLOYEES ONLY

CODES:	DATE PRE-FIELDED:	PCAT:
JOB PRE-FIELDED BY:	DATE PRE-FIELDED:	C.O.:
PIPELINE NO.:	ENG. KOLVIN KEKUA TEL. 808-490-9613	TITLE:
	DRAWN BY KOLVIN KEKUA DATE 12/12/2022	KONANE ST EA SOW
	APP'D _____ SHT 1 OF 1	
Hawaiian Telcom	W.C.:	WO NO.:
		CTRL.:

ISSUE
 ORIGINAL
 REV NO. _____
 DATE: _____



June 23, 2023

Kolvin Kekua, Network Engineer
Hawaiian Telcom
Via email: Kolvin.Kekua@hawaiiantel.com

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Mr. Kekua:

Thank you for your December 12, 2022, email concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response.

We appreciate the information regarding Hawaiian Telcom's infrastructure in the immediate vicinity of the project area, specifically, pullboxes and a 3" conduit in the locations noted on the attachment included with your December 12, 2022, email. The Pu'u Ali'i Community Association will work with its contractors to ensure that the proposed action will not interfere with any Hawaiian Telcom infrastructure or operations.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

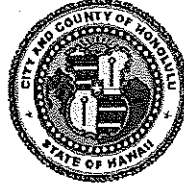
Mahalo,

Mākena White, AICP

HONOLULU FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU

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

RICK BLANGIARDI
MAYOR



SHELDON K. HAO
FIRE CHIEF

JASON SAMALA
DEPUTY FIRE CHIEF

December 12, 2022

Makena White, AICP
Planning Solutions, Inc.
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawaii 96813

Dear Makena White:

Subject: Draft Environmental Assessment/Anticipated Finding of No Significant Impact
Konane Slope Stabilization Project
Puu Alii Community Association
70 Konane Place
Kaneohe, Oahu, Hawaii
Tax Map Keys: 4-6-001: 002, 060 and 062

In response to your letter received on November 30, 2022, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 meters) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2018 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1, as amended.)

A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; 2018 Edition, Section 18.2.3.2.1.)

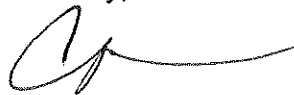
2. Fire department access roads shall be in accordance with NFPA 1; 2018 Edition, Section 18.2.3.

Makena White, AICP
Page 2
December 12, 2022

3. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into the jurisdiction. The approved water supply shall be in accordance with NFPA 1; 2018 Edition, Sections 18.3 and 18.4.
4. Submit civil drawings to the City and County of Honolulu's Department of Planning and Permitting and route them to the HFD for review and approval.
5. The abovementioned provisions are required by the HFD. This project may necessitate that additional requirements to be met as determined by other agencies.

Should you have questions, please contact Acting Battalion Chief Kendall Ching of our Fire Prevention Bureau at 808-723-7154 or kching3@honolulu.gov.

Sincerely,



CRAIG UCHIMURA
Acting Assistant Chief

CU/MD:bh



January 23, 2023

Craig Uchimura, Acting Assistant Chief
c/o Acting Battalion Chief Kendall Ching
Honolulu Fire Department
636 South Street
Honolulu, Hawai'i 96813-5007

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Assistant Chief Uchimura:

Thank you for your December 12, 2022, letter concerning the Draft Environmental Assessment for the Kōnane Slope Stabilization Project (DEA). We appreciate the time you and your staff spent preparing your response. To simplify your review, we have reproduced your substantive comments below in italics, followed by our response:

Comment 1:

- 1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 meters) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2018 Edition, Section 18.2.3.2.2 and 18.2.3.2.2.1, as amended.)*

A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building (NFPA 1; 2018 Edition, Section 18.2.3.2.1.)

Response:

Thank you for this information. The proposed design for the Kōnane Slope Stabilization Project for the Pu'u Ali'i Community Association (PCA) project, as characterized in Chapter 2 of the DEA/AFONSI, conforms to all applicable requirements of the NFPA, including those related to fire prevention and access. Please note that no portions of the buildings or private roadways within the PCA project are being altered by the Proposed Action. The Proposed Action is limited to the proposed slope stabilization work on the Kōnane Slope, followed by the implementation of a master landscape plan.

Comment 2:

- 2. The fire department access roads shall be in accordance with NFPA 1; 2018 Edition, Section 18.2.3.*

Response:

All fire department access roads shall be in accordance with all applicable provisions of the NFPA.

Comment 3:

- 3. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into the jurisdiction. The approved water supply shall be in accordance with NFPA 1; 2018 Edition, Section 18.3 and 18.4.*

Response:

Adequate firefighting water, from an approved source and meeting the requirements of all applicable provisions of the NFPA will be available.

Comment 4:

- 4. Submit civil drawings to the City and County of Honolulu's Department of Planning and Permitting and route them to the HFD for review and approval.*

Response:

All civil drawings for the proposed project will be submitted to HFD for review and approval once they are finalized.

Comment 5:

- 5. The abovementioned provisions are required by the HFD. This project may necessitate that additional requirements to be met as determined by other agencies.*

Response:

The PCA will continue to coordinate with all other agencies with oversight applicable to the proposed project.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at

Page 3
Craig Uchimura, Acting Assistant Chief
January 23, 2023

the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Sincerely,

A handwritten signature in blue ink that reads "Makena". The signature is written in a cursive, flowing style.

Makena White, AICP

From: [JGC](#)
To: c.keller@honolulu.gov; [Esther Kiaaina](#); moradke@gmail.com; [Rep. Lisa Kitagawa](#); sjscott91266@gmail.com; [Makena White](#); [dave swann](#)
Cc: [Marcus Rosehill](#); [Estelle Shiroma](#); [Hugh Okuda](#); [David Ardren](#); Dustin.lau@hotmail.com; [Vicki Chun Fat](#); [Mr. Quentin Lee](#); [Roy Yee](#); [Nico Chaize](#); [Ben Wong](#)
Subject: Re: Pu"u Ali"i Draft Environmental Assessment
Date: Sunday, December 18, 2022 6:57:47 PM

Dec. 18, 2022,

City and County of Honolulu
Department of Planning and Permitting
Christi Keller
650 South King Street, 7th Floor
Honolulu, Hawaii
96813

Dear Ms. Keller,

Please consider this email to be our collective response to the Draft Environmental Assessment (DEA) for the Puu Alii slope stabilization project that was published on Nov. 23, 2022 in The Environmental Notice.

As expected, Planning Solutions has done the best job it could to highlight the benefits and rewards of the Puu Alii slope stabilization Project, while at the same time downplaying all negative impacts to our homes and Kaneohe Bay. We realize that Planning Solutions is a paid advocate for Puu Alii, and we understand their role and why they have come to the conclusions that they have come to.

However, we believe that this project, at the very least, rises to the threshold of requiring an **Environmental Impact Statement (EIS)** due to the construction-related impacts that will result from this project. The slope is above our homes and **only 100 to 200 feet away from the waters of Kaneohe Bay and less than 50 feet away from our properties** with nothing but Lilipuna Road between the slope and our homes - the danger and risk to both the bay and our homes from the construction and grading of the slope is very real and is very likely to cause drainage and runoff damage for years to come.

The DEA states many times that the slope project will not impact to the surrounding environment "significantly" and any impacts will be "modest temporary impacts." This is ridiculous and insulting - the entire project will last for at least **nine months, five days a week from early morning till late afternoon**. The noise, air and water pollution will be long lasting and intense from dust, mud, dirt and soil. Any strong rains will turn the slope into a muddy quagmire and all runoff will go directly into Kaneohe Bay - just as it did over 30 years ago when Pohakea Point was built.

The stormwater discharge point on Lilipuna Road on the Puu Alii side of the road is only 100 feet from the water and goes directly into Kaneohe

Bay - which means that the likely-hood of Kaneohe Bay being polluted with soil runoff during and after the project's completion is very high. We know this because this is exactly what happened back in 1989-90 when Pohakea Point was built - without the required EA or EIS or SMA permit. Due to these past experiences, we urge the DPP to require Puu Alii to conduct an EIS for this project.

It rains a lot in Kaneohe, and often the rains are very heavy. Once the slope is cleared of vegetation and grubbed, there will be nothing but a barren dirt hillside for months that will be subjected to numerous heavy rains. There will be no way to catch all the runoff from these heavy rains with barriers or mats - it is inevitable that some or even much of this runoff will make its way down to Lilipuna Road and straight into the stormwater discharge point - or worse, into our properties. This runoff will then go directly into Kaneohe Bay directly in front of our homes. This will be continual throughout the duration of the nearly year-long project and will continue until the vegetation grows to a substantial degree. It is dishonest and intentionally misleading for anyone to claim that this will not be the case.

The development of this project will result in **certain unavoidable construction-related impacts**. Potential effects include **noise, air and water quality impacts** occurring during the site preparation and construction phases of the project which will last up to a year. These impacts will arise as a direct result of construction activities, such as the **generation of noise from construction equipment**, the generation of **dust and other airborne pollutants, and erosion from wind and stormwater runoff during grading and other construction activity**.

These impacts have been clearly admitted to in the "**Construction and Grading Notes**" in construction engineer Ty Dempsey's "**Construction and Grading Plans**" dated June 25, 2020. These plans created by Mr. Dempsey clearly state that the project will impact one of only four **Class AA Marine Water areas* around Oahu - otherwise known as Kaneohe Bay**, as well as a dozen single family homes - our homes - directly below the project area on Lilipuna Road. These impacts listed on Mr. Dempsey's construction and grading plans include **noise, air and water quality impacts, dust and airborne pollutants during construction, as well as erosion from wind and stormwater runoff during grading**.

*Chapter 54 of the Department of Health Hawaii Administrative Rules, water quality standards, states:

"Haw. Code R. § 11-54-3

(c) Marine waters.(1) Class AA.

It is the objective of class AA waters that these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. To the extent practicable, the wilderness character of these areas shall be protected. No zones of mixing shall be permitted in this class:

(A) Within a defined reef area, in waters of a depth less than 18 meters (ten fathoms); or(B) In waters up to a distance of 300 meters (one thousand feet) off shore if there is no defined reef area and if the depth is greater than 18 meters (ten fathoms).

The uses to be protected in this class of waters are oceanographic research, the support and propagation of shellfish and other marine life,

conservation of coral reefs and wilderness areas, compatible recreation, and aesthetic enjoyment. The classification of any water area as Class AA shall not preclude other uses of the waters compatible with these objectives and in conformance with the criteria applicable to them."

We are also very concerned that the massive clearing and grubbing of the slope will destabilize the Pohakea Point buildings, foundations, road (Konane Place) and parking lot above the slope. The residents of Pokakea Point will be subjected to these dangers unless further geotechnical studies are conducted - which is another reason why a full EIS should be required by the DPP.

All of this is made worse by the fact that there is nothing legitimate about the project - it is **entirely based on an intentionally misleading assertion from a single Puu Alii board member back in 2020** that the slope is "unstable" and that it needs to be completely denuded and destroyed and rebuilt from several feet deep below the current ground level.

This single board member (Nick Florez) was then allowed by the Puu Alii board to hand pick the one geotechnical company (JPB Engineering) in the state that employed a senior engineer (Paul Weidig) who lived four floors above Mr. Florez in building 38 of Puu Alii/Pohakea Point directly above the slope and who was in charge of all soil tests that would justify the destruction of the very same slope in question (more about this below).

We have been provided with direct evidence that both individuals shared the same goal - remove all the "weed" trees on the slope to enhance view planes for themselves and other condo owners at Puu Alii/Pohakea Point (Mr. Weidig eventually sold his condo in June of 2022 during the scoping process by Planning Solutions).

The DEA implies that the Konane hillside was cleared and graded back in the late 1980s - this is not true. The "weed" trees that are still on the hillside were never cut down when Pohakea Point was built. They were left there in order to maintain a buffer between Pokakea Point and the single family homes on the Makai side of Lilipuna Road. The original plans for Pokakea Point clearly shows this as "trees to remain" on the Konane slope. This means that the original root system has been there for many decades and the hillside has been stabilized by this old root system.

Another fact that Puu Alii has been untruthful about is that **there has never been a single documented incident of a landslide or soil runoff on the slope until Puu Alii denuded the area in front of David Ardren's home at the top of the hill on Lilipuna Road in 2017. Puu Alii caused the runoff issues to begin in 2017 by cutting down all the trees in that area and is now trying to use this action as an excuse to cut down all of the trees on the entire hillside.**

Furthermore, there is a large amount of evidence provided to us by a former Puu Alii/Pohakea Point landscape chair and board member that shows that the actual original intention of this project is to **remove over 130 trees on the slope so that view planes will be opened up for condo owners (including Nick Florez, the board member who hired JPB)** at Puu Alii/Pohakea Point. It is clear that the environmental risks to Kaneohe Bay and to us homeowners on Lilipuna Road below the slope is of no concern to the view-plane obsessed Puu Alii board by their statements at numerous board meetings

and communications with us over the years.

The 3D renderings included in the DEA look impressive but are nothing more than a PR fantasy that bears little resemblance to reality. Puu Alii will be planting young, immature saplings and not tall mature trees (8 feet tall 25 gallon trees are listed in the DEA as the largest trees to be planted). **This will violate the ordinance that requires a green buffer of trees all along Lilipuna Road to screen Puu Alii from our homes.** Puu Alii has been telling us the same untruths and false promises about the slope and the required buffer for years and we know their dishonesty will not change with this project.

It is worth repeating the most egregious fact of all - the **senior engineer in charge of all projects and soil testing** at the Geotechnical firm (JPB Engineering) **who conducted the soil tests on the slope actually lived at Puu Alii/Pohakea Point directly above the slope in building 38** at the exact same time Puu Alii hired JPB. This very same senior engineer stated his desire to remove all the trees on the slope many times in his role as phase 4 board president. This is such an **obvious conflict of interest** that defies all logic and reason on the part of all parties involved in promoting this highly dangerous and dishonest project.

To repeat - we are in **strong opposition to this project** and respectfully request that an EIS be required for this project. We also ask that more trees and vegetation be planted on the slope to strengthen the decades-old root system that is already in place to stop the periodic runoff that occurs during heavy rains. The existing trees can be trimmed to allow more sunlight in to help the new trees fill in the many barren places on the hillside.

Under no circumstances should the denuding, grubbing and grading of the hillside above our homes be allowed to go forward. Our homes and Kaneohe Bay should not be put at risk for the benefit of a few condo owners at Puu Alii.

Please let us know that you received this email.

Sincerely,

Ms. Vicky Ardren 46-061 Lilipuna Road, Kaneohe, HI 96744 808-620-8244

Mr. David Ardren 46-061 Lilipuna Road, Kaneohe HI 96744 808-277-7813

Ms. Katylynn Chun-Fat 46-061 Lilipuna Road, Kaneohe, HI 96744 808-277-8092

Ms. Juliana Chaize 46-071 Lilipuna Road, Kaneohe, HI 96744 808-520-5327

Mr. Nico Chaize 46-071 Lilipuna Road, Kaneohe, HI 96744 808-620-0611

Ms. Ilima Chaize 46-071 Lilipuna Road, Kaneohe, HI 96744 808-683-9010

Mr. Jim Cook 46-045 Lilipuna Road, Kaneohe, HI 96744 808-247-4525

Ms. Carol Cook 46-045 Lilipuna Road, Kaneohe, HI 96744 808-221-5962

Mr. Sherman Cruz 46-069 Lilipuna Road, Kaneohe, HI 96744 248-760-4276

Ms. Barbara Cruz 46-069 Lilipuna Road, Kaneohe, HI 96744 248-760-4276

Mr. Kerry Gilbert kaikane123@yahoo.com

Mr. Michael Kohn 808-428-0105

Mr. Dustin Lau 808-722-8293

Mr. Quyen Lee 46-073 Lilipuna Road, Kaneohe, HI 96744 808-286-6870

Mr. Russell Inouye 808-371-7900

Ms. Jane Mann auburn73@gmail.com

Mr. Russell Martin 46-099 Lilipuna Road, Kaneohe, HI 96744 808-225-5356

Mr. Otome Meyers 46-044 Lilipuna Road, Kaneohe, HI 96744 808-255-5249

Mr. David Meyers 46-044 Lilipuna Road, Kaneohe, HI 96744 808-255-5249

Mr. Randall Meyers 46-044 Lilipuna Road, Kaneohe, HI 96744 808-348-1758

Mr. Ross Meyers 46-044 Lilipuna Road, Kaneohe, HI 96744 808-225-5249

Mr. Hugh Okuda 46-099 Lilipuna Road, Kaneohe, HI 96744 808-375-8757

Ms. Barbara Okuda 46-099 Lilipuna Road, Kaneohe, HI 96744 808-375-8757

Mr. Marcus Rosehill 46-089 Lilipuna Road, Kaneohe, HI 96744 808-342-2089

Ms. Jeanette Rosehill 46-089 Lilipuna Road, Kaneohe, HI 96744 808-342-2089

Ms. Estelle Shiroma 46-083 Lilipuna Road, Kaneohe, HI 96744 530-848-9361

Mr. Jonathan Shiroma 46-083 Lilipuna Road, Kaneohe, HI 96744

Ms. Sarah Shiroma 46-083 Lilipuna Road, Kaneohe, HI 96744

Ms. Betty T. Shiroma Trust same

Mr. Kenneth Simon 46-109 Lilipuna Road, Kaneohe, HI 96744

Ms. Elise Tello elisetello@gmail.com

Mr. Gaylord Town 808-388-9306

Ms. Wandee Town 808-808-234-0119

Ms. Sonya Torweihe 46-044 Lilipuna Road, Kaneohe, HI 96744

Mr. Ben Wong 46-062 Lilipuna Road, Kaneohe, HI 96744 808-387-4666

Mr. Cindy Wong 46-062 Lilipuna Road, Kaneohe, HI 96744 808-391-8894

Ms. Andre Yee 46-117 Lilipuna Road, Kaneohe, HI 96744 808-927-2598

Mr. Roy Yee 46-117 Lilipuna Road, Kaneohe, HI 96744 808-927-2598



July 23, 2023

Ms. Vicky Ardren
46-061 Lilipuna Road,
Kāneʻohe, HI 96744
vchunfat@gmail.com

Mr. David Ardren
46-061 Lilipuna Road,
Kāneʻohe, HI 96744
dardren2k7@yahoo.com

Ms. Katylynn Chun-
Fat
46-061 Lilipuna Road
Kāneʻohe, HI 96744

Ms. Juliana Chaize
46-071 Lilipuna Road,
Kāneʻohe, HI 96744
jchaize@icloud.com

Mr. Nico Chaize
46-071 Lilipuna Road
Kāneʻohe, HI 96744
nico@nicospier38.com

Ms. Ilima Chaize
46-071 Lilipuna Road
Kāneʻohe, HI 96744

Mr. Jim Cook
46-045 Lilipuna Road,
Kāneʻohe, HI 96744

Ms. Carol Cook
46-045 Lilipuna Road,
Kāneʻohe, HI 96744

Mr. Sherman Cruz
46-069 Lilipuna Road,
Kāneʻohe, HI 96744

Ms. Barbara Cruz
46-069 Lilipuna Road
Kāneʻohe HI 96744

Mr. Kerry Gilbert
kaikane123@yahoo.com

Mr. Michael Kohn
c/o Juliana Chaize

Mr. Dustin Lau
Dustin.lau@hotmail.com

Mr. Quyen Lee
46-073 Lilipuna Road
Kāneʻohe, HI 96744
qwlee2004@gmail.com

Mr. Russell Inouye
c/o Juliana Chaize

Ms. Jane Mann
auburn73@gmail.com

Mr. Russell Martin
46-099 Lilipuna Road,
Kāneʻohe, HI 96744

Mr. Otome Meyers
46-044 Lilipuna Road,
Kāneʻohe, HI 96744

Mr. David Meyers
46-044 Lilipuna Road,
Kāneʻohe, HI 96744

Mr. Randall Meyers
46-044 Lilipuna Road
Kāneʻohe, HI 96744

Mr. Ross Meyers
46-044 Lilipuna Road
Kāneʻohe, HI 96744

Mr. Hugh Okuda
46-099 Lilipuna Road
Kāneʻohe, HI 96744
hokuda@gmail.com

Ms. Barbara Okuda
46-099 Lilipuna Road,
Kāneʻohe, HI 96744

Mr. Marcus Rosehill
46-089 Lilipuna Road
Kāneʻohe, HI 96744
mjrosehill@hotmail.com

Ms. Jeanette Rosehill
46-089 Lilipuna Road
Kāneʻohe, HI 96744

Ms. Estelle Shiroma
46-083 Lilipuna Road
Kāneʻohe, HI 96744,
estelle.shiroma@gmail.com

Mr. Jonathan Shiroma
46-083 Lilipuna Road
Kāneʻohe, HI 96744

Ms. Sarah Shiroma
46-083 Lilipuna Road
Kāneʻohe, HI 96744

Ms. Betty T. Shiroma
Trust
46-083 Lilipuna Road
Kāneʻohe, HI 96744

Mr. Kenneth Simon
46-109 Lilipuna Road
Kāneʻohe, HI 96744

Ms. Elise Tello
elisetello@gmail.com

Mr. Gaylord Town
Ms. Wandee Town
c/o Juliana Chaize

Ms. Sonya Torweihē
46-044 Lilipuna Road
Kāneʻohe, HI 96744

Mr. Ben Wong
46-062 Lilipuna Road
Kāneʻohe, HI 96744
letsgofishinghawaii@gmail.com

Mr. Cindy Wong
46-062 Lilipuna Road
Kāneʻohe, HI 96744

Ms. Andre Yee
46-117 Lilipuna Road,
Kāneʻohe, HI 96744

Mr. Roy Yee
46-117 Lilipuna Road
Kāneʻohe, HI 96744,
roy.yee@cityhawaii.com

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Sir or Madam:

Thank you for your December 18, 2022, email comments concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response. To simplify your review, we have reproduced your substantive comments below in italics, followed by our response:

Comment 1:

*However, we believe that this project, at the very least, rises to the threshold of requiring an **Environmental Impact Statement (EIS)** due to the construction-related impacts that will result from this project. The slope is above our homes and **only 100 to 200 feet away from the waters of Kaneohe Bay and less than 50 feet away from our properties** with nothing but Lilipuna Road between the slope and our homes - the danger and risk to both the bay and our homes from the construction and grading of the slope is very real and is very likely to cause drainage and runoff damage for years to come.*

Response:

The purpose and need for the Proposed Action, as discussed in Sections 1.2 and 1.3 of the DEA, is to stabilize the Kōnane Slope between the PCA-owned land and the City-owned Lilipuna Road, as recommended in the Geotechnical Report prepared by JPB Engineering (JPB), and with the goal of preventing any adverse impacts to adjacent properties and Kaneohe Bay which might result from failure of the slope. While the PCA acknowledges your concerns, the Proposed Action is not anticipated to have significant adverse impacts and will be implemented using the recommended Best Management Practices (BMPs), avoidance, minimization, and mitigation measures discussed in the DEA, as appropriate. Further, HAR § 11-200.1-14 establishes procedures for determining if an Environmental Impact Statement (EIS) should be prepared or if a Finding of No Significant Impact (FONSI) is warranted. HAR § 11-200.1-14(d) provides that if an approving agency, through its judgment and experience, determines that an action may have a significant effect on the environment, then an EIS would be required. HAR § 11-200.1-13(b) lists the thirteen significance criteria to be used in making that determination. Furthermore, each of these thirteen criteria have been examined in detail in Chapter 5 of the DEA and found not to reach a level of statutory significance. As a result, the Proposed Action has received a FONSI by the Department of Planning and Permitting (DPP) and an EIS is not required.

Comment 2:

*The DEA states many times that the slope project will not impact to the surrounding environment "significantly" and any impacts will be "modest temporary impacts." This is ridiculous and insulting - the entire project will last for at least **nine months, five days a week from early morning till late***

afternoon. The noise, air and water pollution will be long lasting and intense from dust, mud, dirt and soil. Any strong rains will turn the slope into a muddy quagmire and all runoff will go directly into Kaneohe Bay - just as it did over 30 years ago when Pohakea Point was built.

Response:

The PCA understands that implementation of the Proposed Action will result in modest, temporary impacts to the area due to construction activities. With specific regard to their level of significance, HAR § 11-200.1-13(b) lists the thirteen criteria to be used in making that determination. Each of these thirteen criteria have been examined in detail in Chapter 5 of the DEA. DPP, in reviewing the Proposed Action against the significance criteria, determined that the issuance of a FONSI is appropriate. See also the response to Comment 1 above.

PCA will require all contractors to follow City and County of Honolulu's (CCH) *Rules Relating to Water Quality* throughout implementation of the Proposed Action as well as the conditions of the National Pollutant Discharge Elimination System (NPDES) permit for the slope stabilization work. In addition, and as discussed in Section 2.1.1 of the DEA, the PCA will designate either the contractor or an authorized representative or agent to be responsible for implementation of the *Erosion and Sediment Control Plan* (ESCP) for the Proposed Action. All measures incorporated into the ESCP which are intended to control erosion and other pollutants will be in place prior to commencement of any earthwork. Specific terms of the ESCP include the following elements: (i) slope protection; (ii) temporary stabilization on disturbed areas which are at final grade or at the end of each day's work; (iii) permanent stabilization; (iv) preserving all trees and other vegetation in adjacent areas; (v) perimeter controls downslope of all disturbed areas; (vi) sediment barriers and fences; (vii) inlet protection; (viii) tracking control to minimize sediment being tracked onto off-site roadways, sidewalks, and other paved areas by vehicles and equipment.

In addition to the ESCP, the PCA will also require its contractor(s) to observe a series of BMPs. These BMPs shall not be removed from the project vicinity until final stabilization is complete.

- Specific pre-construction BMPs include: (i) stabilizing the construction entrance(s); (ii) emplacing silt fences; and (iii) emplacing drain inlet protection.
- During construction, BMPs will include: (i) temporary soil stabilization; (ii) wind erosion control; (iii) material delivery and storage measures; (iv) material use measures; (v) a stockpiling plan; (vi) spill prevention and control measures; (vii) solid waste management; (viii) hazardous materials management; (ix) concrete waste management; (x) sanitary/septic waste management; and (xi) filter socks.
- Permanent, post-construction BMPs will be slope stabilization with erosion control matting (i.e., the Proposed Action).

It is the PCA's belief that these measures will prevent any lasting adverse impacts to downslope properties and/or Kaneohe Bay.

Comment 3:

The stormwater discharge point on Lilipuna Road on the Puu Alii side of the road is only 100 feet from the water and goes directly into Kaneohe Bay - which means that the likely-hood of Kaneohe Bay being polluted with soil runoff during and after the project's completion is very high. We know this because this is exactly what happened back in 1989-90 when Pohakea Point was built - without the required EA or EIS or SMA permit. Due to these past experiences, we urge the DPP to require Puu Alii to conduct an EIS for this project.

Response:

As discussed in the DEA, the Proposed Action is not anticipated to have significant adverse impacts and will be implemented using the recommended BMPs, avoidance, minimization, and mitigation measures discussed in the DEA, as appropriate, as well as the conditions in the project's NPDES permit. As discussed in Sections 1.2 and 1.3, the purpose and need for the Proposed Action includes stabilizing the slope in a manner that would better address storm water runoff and erosion from the project site as compared to erosion existing conditions. Section 2.2 of the DEA describes both the temporary and permanent erosion control measures that will be implemented as part of the Proposed Action, including the installation of the 12-foot-wide drainage swale at the bottom of Kōnane Slope and between Lilipuna Road. Further, HAR § 11-200.1-14 establishes procedures for determining if an EIS should be prepared or if a FONSI is warranted. HAR § 11-200.1-14(d) provides that if an approving agency, through its judgment and experience, determines that an action may have a significant effect on the environment, then an EIS would be required. HAR § 11-200.1-13(b) lists the thirteen significance criteria to be used in making that determination. Furthermore, each of these thirteen criteria have been examined in detail in Chapter 5 of the DEA and found not to reach a level of statutory significance. As a result, the Proposed Action has received a FONSI by the DPP and an EIS is not required.

Comment 4:

It rains a lot in Kaneohe, and often the rains are very heavy. Once the slope is cleared of vegetation and grubbed, there will be nothing but a barren dirt hillside for months that will be subjected to numerous heavy rains. There will be no way to catch all the runoff from these heavy rains with barriers or mats - it is inevitable that some or even much of this runoff will make its way down to Lilipuna Road and straight into the stormwater discharge point - or worse, into our properties. This runoff will then go directly into Kaneohe Bay directly in front of our homes. This will be continual throughout the duration of the nearly year-long project and will continue until the vegetation grows to a substantial degree. It is dishonest and intentionally misleading for anyone to claim that this will not be the case.

Response:

As stated in Section 2.1.3.1 of the DEA, all grading work will be done in accordance with Revised Ordinances of Honolulu Chapter 18A, Articles 1, 2, 3 and 4, as applicable, relating to grading, soil erosion, and sediment control. The proposed grading plans evaluated in the DEA are also in accordance with the grading plans approved for the Project on June 8, 2021 (DPP File No. 2022/CP-47 for Buildings 37 and 38; and DPP File No. 2022/CP-117 for Buildings 35 and 36). The PCA will mandate that the contractor(s) conduct their earthwork and slope stabilization tasks in a manner that avoids rocks, soil, or debris falling, sliding, or flowing onto adjoining properties, streets, or natural watercourses and to take immediate remedial action should such a situation occur.

Regarding your concerns about rain events causing erosion from the project area to downslope properties and/or Kāneʻohe Bay, and as discussed in Section 2.1.3.1 of the DEA, the contractor will complete each section of the slope grading and placement of erosion control matting at the end of each day prior to proceeding with the next section. The contractor will phase the work based on the limits of the grading work that can be achieved and stabilized by the end of each day, based on equipment and staff present. Once all cut and fill has been completed, any exposed areas will be sodded, planted, or have permanent landscaping or pavements in place as soon as the final grade has been established. Planting will be implemented within a reasonable time following grading and stabilization work; grading to final grade shall be continuous, and any area within which work has been interrupted or delayed shall be planted within a reasonable time.

The PCA believes that these measures, in combination with the ESCP and BMPs articulated above, will prevent any erosive storm water from carrying particulate from the project site.

Comment 5:

*The development of this project will result in **certain unavoidable construction-related impacts**. Potential effects include **noise, air and water quality impacts** occurring during the site preparation and construction phases of the project which will last up to a year. These impacts will arise as a direct result of construction activities, such as the **generation of noise from construction equipment, the generation of dust and other airborne pollutants, and erosion from wind and stormwater runoff during grading and other construction activity**.*

*These impacts have been clearly admitted to in the "**Construction and Grading Notes**" in construction engineer Ty Dempsey's "**Construction and Grading Plans**" dated June 25, 2020. These plans created by Mr. Dempsey clearly state that the project will impact one of only four **Class AA Marine Water areas*** around Oahu - otherwise known as Kaneohe Bay, as well as a dozen single family homes - our homes - directly below the project area on Lilipuna Road. These impacts listed on Mr. Dempsey's construction and grading plans include **noise, air and water quality impacts, dust and airborne pollutants during construction, as well as erosion from wind and stormwater runoff during grading**.*

**Chapter 54 of the Department of Health Hawaii Administrative Rules, water quality standards, states:*

"Haw. Code R. § 11-54-3

(c) Marine waters.(1) Class AA.

*It is the objective of class AA waters that **these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions.** To the extent practicable, the wilderness character of these areas shall be protected. No zones of mixing shall be permitted in this class:*

(A) Within a defined reef area, in waters of a depth less than 18 meters (ten fathoms); or (B) In waters up to a distance of 300 meters (one thousand feet) off shore if there is no defined reef area and if the depth is greater than 18 meters (ten fathoms).

*The uses to be protected in this class of waters are oceanographic research, the **support and propagation of shellfish and other marine life, conservation of coral reefs and wilderness areas,** compatible recreation, and aesthetic enjoyment. The classification of any water area as Class AA shall not preclude other uses of the waters compatible with these objectives and in conformance with the criteria applicable to them."*

Response:

The PCA respectfully points out that the Construction and Grading Plans dated June 25, 2020, have been superseded by the plans as shown in the DEA, dated September 9, 2020 (e.g., Figure 2.1 and Figure 2.2). We also note the DEA makes clear that the Proposed Action will result in modest, temporary construction-period impacts. However, as discussed throughout the DEA, the Proposed Action is not anticipated to have significant adverse impacts and will be implemented using the recommended BMPs, avoidance, minimization, and mitigation measures discussed in the DEA and above, as appropriate, as well as the terms and conditions of the project's NPDES permit, including the applicable provisions of HAR Title 11, Chapter 54 and Title 11, Chapter 55. See discussions in Section 2.1 and 3.4.4 of the DEA. Further, HAR § 11-200.1-14 establishes procedures for determining if an EIS should be prepared or if a FONSI is warranted. HAR § 11-200.1-14(d) provides that if an approving agency, through its judgment and experience, determines that an action may have a significant effect on the environment, then an EIS would be required. HAR § 11-200.1-13(b) lists the thirteen significance criteria to be used in making that determination. Furthermore, each of these thirteen criteria have been examined in detail in Chapter 5 of the DEA and found not to reach a level of statutory significance. As a result, the Proposed Action has received a FONSI by the DPP and an EIS is not required.

Comment 6:

We are also very concerned that the massive clearing and grubbing of the slope will destabilize the Pohakea Point buildings, foundations, road (Konane Place)

and parking lot above the slope. The residents of Pohakea Point will be subjected to these dangers unless further geotechnical studies are conducted - which is another reason why a full EIS should be required by the DPP.

Response:

The PCA acknowledges your concerns; however, in the absence of any supporting measurements, calculations, or analysis it is not able to address this comment further. It is important to note that all the engineering, design, and landscaping plans which have been developed as part of the Kōnane Slope Stabilization Work has been prepared by professionals licensed in the State of Hawai'i and applying all applicable best practices and industry standards. In sum, the PCA does not believe that the Proposed Action, as defined in the DEA, poses a threat to its buildings, foundations, roads, or parking lots. To the contrary, as discussed in Sections 1.2, 1.3, and 3.8 of the DEA, the Proposed Action is intended to stabilize the Kōnane Slope to prevent potential adverse impacts to downslope areas.

Comment 7:

All of this is made worse by the fact that there is nothing legitimate about the project - it is entirely based on an intentionally misleading assertion from a single Puu Alii board member back in 2020 that the slope is "unstable" and that it needs to be completely denuded and destroyed and rebuilt from several feet deep below the current ground level.

This single board member (Nick Florez) was then allowed by the Puu Alii board to hand pick the one geotechnical company (JPB Engineering) in the state that employed a senior engineer (Paul Weidig) who lived four floors above Mr. Florez in building 38 of Puu Alii/Pohakea Point directly above the slope and who was in charge of all soil tests that would justify the destruction of the very same slope in question (more about this below).

We have been provided with direct evidence that both individuals shared the same goal - remove all the "weed" trees on the slope to enhance view planes for themselves and other condo owners at Puu Alii/Pohakea Point (Mr. Weidig eventually sold his condo in June of 2022 during the scoping process by Planning Solutions).

The DEA implies that the Konane hillside was cleared and graded back in the late 1980s - this is not true. The "weed" trees that are still on the hillside were never cut down when Pohakea Point was built. They were left there in order to maintain a buffer between Pokakea Point and the single family homes on the Makai side of Lilipuna Road. The original plans for Pokakea Point clearly shows this as "trees to remain" on the Konane slope. This means that the original root system has been there for many decades and the hillside has been stabilized by this old root system.

Response:

To the best of the PCA's knowledge, the statements in the above comment are factually inaccurate. The need for the project (see Section 1.3 "Need for the Proposed Action") arose from the January 11, 2019, CCH, Department of Facility Maintenance (DFM) addressed a letter [Ref. No. SWQ 18-005(D)] to PCA, wherein it reported that on or about November 21, 2018, DFM had received reports from one or more community members that soil and sediment was being discharged from the Pu'u Ali'i property, TMK No. (1) 4-6-002:002. DFM's letter to PCA is provided in Appendix B of the DEA.

Also in 2019, the PCA Board sought to retain a landscape architect to address overgrowth and provide for groundcover on the Kōnane Slope to address the erosion problems noted in DFM's letter. The landscape architect raised concerns about the stability of Kōnane Slope below Buildings 37 and 38 and declined to submit a proposal for the landscaping on the slope because it was too steep. The landscape architect further indicated that groundcover would not be able to grow well on such a steep slope, that it would be insufficient to provide the desired erosion control, and opined that the slope stability and erosion issues would need to be addressed prior to any landscaping.

Recognizing the urgency to address any runoff or risk of potential failure of the slope, the PCA Board took reasonable and appropriate action to address these issues with a permanent solution, including retaining a qualified engineering firm in July 2019 to complete geotechnical investigations and soil borings along the Kōnane Slope. Soil borings fronting Buildings 37 and 38 were completed in September 2019 by JPB. JPB also produced a Geotechnical Report dated March 5, 2020, addressing the slope below Buildings 37 and 38, as well as an Addendum dated April 23, 2020, and a revised Geotechnical Report dated July 31, 2020, addressing the slope below Buildings 35 through 38 (collectively, "the Report"). The original scope of the soil work included only areas below Buildings 37 and 38, but upon further investigation, it was necessarily expanded to include the area below Buildings 35 and 36.

On October 22, 2019, PCA responded to DFM's letter, identifying the measures it had taken up to that point to address the potential for soil sediment discharge(s) from its property, as well as further steps it planned to take from that point on. In that letter, PCA indicated that it was working with JPB to prepare a Geotechnical Report characterizing the Kōnane Slope. PCA's response to DFM is also provided in Appendix B of the DEA.

The resulting Reports (See DEA, Appendix C) entitled *Geotechnical Report: Pu'u Ali'i Slope Investigation, 46-40, 50, and 70 Kōnane Place, Kāne'ohe, O'ahu, Hawai'i* (JPB Engineering, Inc., 2020) drew the following principal conclusion:

The results of our investigation indicate that majority of the subject slope areas are unstable and susceptible to soil creep. We have concluded that the slope below Buildings 37 and 38 should be stabilized by installing soil nails and covering the slope with a wire mesh system in combination with erosion control matting. For the slope below Buildings 35 and 36, most of the slope area can be stabilized by grading the slope but the final slope orientation would still be susceptible to the effects of soil creep. To address this, a shallower anchoring system on top of erosion control matting is recommended.

Based on the Geotechnical Reports, PCA retained consultants to design and construct an effective system for slope stabilization, runoff protection, and ground cover along the Kōnane Slope and install temporary runoff protection to protect against soil sediment discharges in the interim. The Proposed Action, as characterized in the DEA, is intended to address those needs.

With direct regard for the solicitation process, the PCA Board solicited bids from several engineering firms and the contract to JPB was properly awarded through a competitive-bid process in late June 2019. JPB was selected from among three bidders due to JPB's bid amount for the scope of work being the lowest. The initial motion to accept the bid without competition was amended to require three bids and legal review. Furthermore, Mr. Weidig retired on August 10, 2019, before the soil sampling was conducted, and, as confirmed by letter dated July 9, 2021, from JPB to the PCA, a copy of which is attached, Mr. Weidig did not work on or bill any time for work on the slope stabilization project.

As discussed in Section 2.5 of the DEA, several alternatives to the Proposed Action were explored. Due to the need to stabilize the Kōnane Slope while also meeting the City's requirements for street trees and a vegetative buffer along the slope, the Proposed Action is the best available means to meet and achieve the Proposed Action's stated purpose.

With respect to your comment that the DEA asserts that the entire hillside was cleared in the later 1980s, Section 3.6.1 of the DEA notes that nearly the entire slope was modified via grading and plant when the PCA project was developed. While specific trees were noted to remain on the planting plans, no specific trees to remain are indicated for the area fronting buildings 37 and 38. In any event, the PCA has worked with DPP over the last handful of years to develop a Master Landscape Plan (MLP) which would allow the PCA to stabilize the Kōnane Slope while also having street trees planted at the base of Kōnane Slope and other appropriate vegetation along the slope to provide a buffer between the project and the downslope neighbors.

There is no evidence that the roots themselves are stabilizing the slope. The Reports are clear that there is soil creep in both the north and south zones of the Kōnane Slope. This is further indicated by the uncorrected lean of several trees along the Kōnane Slope. While tree roots may act to provide some soil reinforcement in surface soils, they do not interface with the deeper soils that have been determined to be unstable through geotechnical investigation and testing. As such, the presence or absence of existing trees is irrelevant to the issue of slope stability.

Comment 8:

*Another fact that Puu Alii has been untruthful about is that **there has never been a single documented incident of a landslide or soil runoff on the slope until Puu Alii denuded the area in front of David Ardren's home at the top of the hill on Lilipuna Road in 2017. Puu Alii caused the runoff issues to begin in 2017 by cutting down all the trees in that area and is now trying to use this action as an excuse to cut down all of the trees on the entire hillside.***

Response:

As discussed in the response to Comment 7 above, the first documentation of a possible discharge from the PCA property came in DFM’s January 11, 2019, letter [Ref. No. SWQ 18-005(D)] to PCA, wherein it reported that on or about November 21, 2018, DFM had received reports from one or more community members that soil, and sediment were being discharged from the Pu‘u Ali‘i property. Please note that this is more than a year after the 2017 vegetation management you note, and in an area that you acknowledge has “numerous heavy rains”. Even then, as the DFM acknowledged, the results of their investigation were inconclusive, and only a warning was issued. Since that time, the PCA has worked collaboratively with CCH to prepare plans to address concerns related to the stability of Kōnane Slope, including grading, construction, and landscaping plans, all of which have been reviewed and approved by DPP.

Comment 9:

*Furthermore, there is a large amount of evidence provided to us by a former Puu Alii/Pohakea Point landscape chair and board member that shows that the actual original intention of this project is to **remove over 130 trees on the slope so that view planes will be opened up for condo owners (including Nick Florez, the board member who hired JPB) at Puu Alii/Pohakea Point. It is clear that the environmental risks to Kaneohe Bay and to us homeowners on Lilipuna Road below the slope is of no concern to the view-plane obsessed Puu Alii board by their statements at numerous board meetings and communications with us over the years.***

Response:

The PCA acknowledges your concerns. However, we note that you do not provide any information supporting your assertions, and despite being in possession of a “large amount of evidence”. Consequently, we are unable to address any of the alleged evidence. However, we note that the PCA Board has worked for several years to develop the MLP and address the concerns of its owners, while also aiming to be good neighbors within the larger community. As discussed below, the Applicant acknowledges that the issues with the slope stabilization were in part discovered when the PCA sought to address a number of landscape concerns along the slope. Section 4.2.4.11 of the DEA further acknowledges that the Proposed Action and implementation of the MLP will improve views toward Kāne‘ohe Bay as compared to existing conditions. Please note that Mr. Nick Florez is no longer a member of the PCA Board and has not been since April 28, 2021, when he was not re-elected.

As discussed in Sections 1.2 and 1.3 of the DEA, the purpose and need for the Proposed Action is to stabilize the Kōnane Slope between the PCA-owned land and the City-owned Lilipuna Road, as recommended in the Geotechnical Report prepared by JPB. The need to address runoff from the Kōnane Slope was first identified in a January 11, 2019, letter from CCH DFM that identified an alleged discharge of soil and sediment from the PCA property onto Lilipuna Road.

Also in 2019, the PCA Board sought to retain a landscape architect to address overgrowth and provide for groundcover on the Kōnane Slope. The landscape architect raised concerns about

the stability of Kōnane Slope below Buildings 37 and 38 and declined to submit a proposal for the landscaping on the slope because it was too steep. The landscape architect further indicated that groundcover would not be able to grow well on such a steep slope and opined that the slope stability and erosion issues would need to be addressed prior to any landscaping.

Recognizing the urgency to address any runoff or risk of potential failure of the slope, the PCA Board took reasonable and appropriate action to address these issues with a permanent solution, including retaining a qualified engineering firm in July 2019 to complete geotechnical investigations and soil borings along the Kōnane Slope. Soil borings fronting Buildings 37 and 38 were completed in September 2019 by JPB. JPB also produced a Geotechnical Report dated March 5, 2020, addressing the slope below Buildings 37 and 38, as well as an Addendum dated April 23, 2020, and a revised Geotechnical Report dated July 31, 2020, addressing the slope below Buildings 35 through 38 (collectively, “the Report”). The original scope of the soil work included only areas below Buildings 37 and 38, but upon further investigation, it was necessarily expanded to include the area below Buildings 35 and 36.

Once the slope is stabilized, the PCA will implement the MLP for the Kōnane Slope.

Comment 10:

*The 3D renderings included in the DEA look impressive but are nothing more than a PR fantasy that bears little resemblance to reality. Puu Alii will be planting young, immature saplings and not tall mature trees (8 feet tall 25 gallon trees are listed in the DEA as the largest trees to be planted). **This will violate the ordinance that requires a green buffer of trees all along Lilipuna Road to screen Puu Alii from our homes.** Puu Alii has been telling us the same untruths and false promises about the slope and the required buffer for years and we know their dishonesty will not change with this project.*

Response:

Once the slope stabilization work is completed as described in the Proposed Action, the PCA will install and maintain landscaping per its DPP-approved MLP (see Appendix A of the DEA for relevant excerpts). The proposed grading plans evaluated in the DEA are also in accordance with the grading plans approved for the Project on June 8, 2021 (DPP File No. 2022/CP-47 for Buildings 37 and 38; and DPP File No. 2022/CP-117 for Buildings 35 and 36). The PCA acknowledges that the renderings included as part of the DEA are interpretations intended to help interested agencies, organizations, and individuals visualize how the completed landscaping under the MLP may appear once it has been implemented. Although the renderings were prepared with careful attention to plant dimensions, grow in times, canopy, and other important factors to provide as accurate a visualization as possible, the PCA of course cannot guarantee that the final plantings will look as shown in the renderings. The time that trees will need to reach maturity will ultimately depend on growing and weather conditions present on-site following planting. Also note that, in addition to the street trees planted along the bottom of the slope, the MLP also calls for understory plantings that will fill in the landscape as the street trees grow. The computer-generated images provide a timeline *estimate*

of how the plantings should mature in Kāne‘ohe’s conditions. Within the limitations of the software, they approximate short-term, mid-term and long-term character of the landscape.

For a revised description of anticipated conditions, see Section 3.3.2 of the FEA. The PCA landscape consultant and arborist recognized that any solution utilizing trees would require several years to create the desired buffer effect. Tropical, non-woody plants grow significantly faster than trees and are used in a complimentary fashion to the trees. In consultation with DPP staff, a design was created to utilize a “green wall” of faster-growing tropical understory vegetation to provide pedestrian-level buffering. Especially in the early years following installation, these plants are expected to create a vegetative buffer zone in the foreground/lower third of the slope while trees fill in at taller heights.

Comment 11:

*It is worth repeating the most egregious fact of all - the **senior engineer in charge of all projects and soil testing** at the Geotechnical firm (JPB Engineering) who conducted the soil tests on the slope actually lived at Puu Alii/Pohakea Point directly above the slope in building 38 at the exact same time Puu Alii hired JPB. This very same senior engineer stated his desire to remove all the trees on the slope many times in his role as phase 4 board president. This is such an **obvious conflict of interest** that defies all logic and reason on the part of all parties involved in promoting this highly dangerous and dishonest project.*

Response:

As noted in our response to Comment 7, the PCA Board solicited bids from several engineering firms and the contract to JPB was properly awarded through a competitive-bid process in late June 2019. There is no ethical or legal prohibition against PCA’s retention of a vendor who employs a PCA owner. JPB was selected from among three bidders due to JPB’s bid amount for the scope of work being the lowest. The initial motion to accept the bid without competition was amended to require three bids and legal review. Furthermore, the “senior engineer” you indicate, Mr. Weidig, retired on August 10, 2019, before the soil sampling was conducted, and, as confirmed by letter dated July 9, 2021, from JPB to the PCA, a copy of which is attached, Mr. Weidig did not work on or bill any time for work on the slope stabilization project. Furthermore, as your letter notes, Mr. Weidig has since sold his unit in July 2022 and is no longer a PCA owner.

Comment 12:

*To repeat - we are in **strong opposition to this project** and respectfully request that an EIS be required for this project. We also ask that more trees and vegetation be planted on the slope to strengthen the decades-old root system that is already in place to stop the periodic runoff that occurs during heavy rains. The existing trees can be trimmed to allow more sunlight in to help the new trees fill in the many barren places on the hillside.*

Under no circumstances should the denuding, grubbing and grading of the hillside above our homes be allowed to go forward. Our homes and Kaneohe Bay should not be put at risk for the benefit of a few condo owners at Puu Alii.

Response:

The PCA acknowledges your opposition to the Proposed Action. Please see the response to Comment 1 above as to why an EA, not an EIS, is appropriate for the Proposed Action, and refer to Sections 1.2 and 1.3 of the DEA for the purpose and need for the Proposed Action, which is necessary to stabilize the Kōnane Slope. As discussed in the response to Comment 2 above, the Proposed Action will be implemented in compliance with the applicable laws and regulations and the project permit conditions, including BMPs to avoid impacts to Lilipuna Road and downslope properties. The PCA appreciates your participation in the Revised Ordinances of Honolulu, Chapter 25 environmental review process for the Kōnane Slope Stabilization Project.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

A handwritten signature in blue ink that reads "Mākena".

Mākena White, AICP

Attachment: July 9, 2021 Letter from JPB to PCA



JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

07/09/2021

To: Puu Alii Community Association
46-058 Aliianela Place
Kaneohe, Hawaii 96744

Subject: Employment Verification

This letter is to confirm that Paul Weidig is no longer employed with JPB Engineering Inc. His last day and effective date of retirement was on 8/10/2019. Mr. Weidig was not involved in any services provided to Puu Alii Community Association for the slope stabilization project.

If you should have any questions, please feel free to contact me.

Regards,

Amie Miranda-Pesquira
Company Administrator/HR Manager

From: [Groves, Urai Laila \(US\)](mailto:Groves,Urai.Laila@hawaii.gov)
To: c.keller@honolulu.gov
Cc: moradke@gmail.com; sjscott91266@gmail.com; [Makena White](mailto:Makena.White@hawaii.gov); ekiaaina@honolulu.gov; repkitagawa@capital.hawaii.gov; ["grovesu2@aol.com"](mailto:grovesu2@aol.com)
Subject: Re: Draft Environment Assessment Response for the Puu Alii Slope Stabilization Project (KSSP)
Date: Sunday, December 18, 2022 6:44:19 PM
Attachments: [ATTACHMENT Report Tabuso by Weidig.png](#)

December 18, 2022,

City and County of Honolulu
Department of Planning and Permitting
Ms. Christi Keller, Planner
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Dear Ms. Keller,

I served on the board of directors at the Puu Alii Community Association (PCA) from 2009 to 2011 and recall the Konane slope view plane issue being a constant problem as far back as 2004 all the way up to my time on the board and after. I have attended many PCA board meetings over the last 15 years and the view plane issue was often a source of outbursts and angry demands from condo owners living in the lower units in phase 4 at Pohakea Point, where JPB Inc. conducted its soil reports, No. 19235.01G and No. 20003.01G. Over the years, I observed that the PCA board was searching for creative justifications to open more views and would take short cuts during the process. Some of the board members would succumb to group pressure and allowing board members with forceful personality to dominate their decision making process.

I recently read the **Draft Environmental Assessment (DEA) in The Environmental Notice** dated November 23, 2022 for the Konane Slope Stabilization Project (**KSSP**). This is my response to the DEA.

- A. JPB Engineering, Inc. (JPB) prepared two soil reports, Project, No. 19235.01G and JPB, Project 20003.01G, and these soil reports are obsolete.

On the "Limitations" provision of both JPB soil reports, dated September 2019 and July 2020, **Mr. Tabuso** wrote, *"If more than one year passes between the date of this report and initiation of construction, the contents of this report must be reviewed and, if necessary, modified in light of intervening changed conditions."* (DEA, Appendix C-Geotechnical Reports)

These reports must be reviewed by a qualified professional to determine if these should be modified. The best way this can be done would be by a neutral, qualified expert. Since the **KSSP** is a major undertaking in an SMA and with many stakeholders, **additional due diligence** should be exercised. An Environmental Impact Statement (EIS) should be conducted - including soil tests done in various areas within Puu Alii away from the slope in order to compare the relative stability of soils. Without these comparisons, there is no way to know if the soil on the slope is more or less "unstable" than the soil around it.

- B. The nexuss and interrelationships of contributors behind the **KSSP** raise several concerns. A conflict of interest and the underling motive behind the **KSSP** are among those concerns. A few facts that I would like to emphasize.

Mr. **Brian Tabuso** is the engineer at JPB Engineering, Inc. who wrote the soil report that the **entire KSSP is based upon**. Mr. Tabuso worked directly under the Principal Engineer, Mr. Paul Weidig at JPB for years. I have attached a title page from a soil report Mr. Tabuso wrote for Woodcreek Crossing condo association in 2018, and **Mr. Paul Weidig authenticated** this report. This is the same Mr. Paul Weidig, who lived at Pohakea Point in building 38 right above the

Konane slope at the time Puu Alii hired JPB. (ATTACHMENT: Report Tabuso by Weidig).

For years, Mr. Weidig and Mr. Florez (an owner in the same building and self-appointed PCA/DPP liaison) are adamant advocates to open up more Kaneohe Bay (KBay) views at the condo. The DPP should have adequate written artifacts evidencing Mr. Florez's demands from the DPP. It is my understanding that Mr. Florez unilaterally selected JPB Inc. to conduct the soil test reports without showing any evidence that 3 independent bids were ever considered as required by the PCA internal controls and procedure.

Also, as far as I know, there have never been any documented landslides on the Konane slope - but yet, at the height of the view plane demands at Puu Alii in 2019, suddenly the hillside is declared "unstable - by a single soil engineer whose superior lived at Puu Alii.

C. Potential Major Negative Impacts if this KSSP should be permitted to proceed without additional due diligence

The grading, grubbing, stockpiling, pollution, noise, discharges, and interruption to public traffic access on the Lilipuna Road, etc., will have negative impacts on the community in the vicinity of the KSSP. Marine/firshery life in KBay rely on a healthy ecosystem and does not need **any** pollution to be discharged into the bay. The home owners along the Lilipuna Road will lose further screening of trees for many, many more years (much of the screen of trees has already been cut down). Most of the home owners have been living in their homes long before the Poha Kea Point condo complex was permitted to be built. It would be socially and morally irresponsible to allow these potential negative impacts to materialize under a project that has been deceptive, in light of the facts summarized in section **B**.

While we cannot go back to live in the past, understanding the past can help to gain a deeper insight to the current state.

In Chapter 3 of this DEA, the future renderings of trees shielding buildings 35-38 in the proposed **KSSP** are compelling conceptual images. However, the "**future renderings**" are supposed to be the current state where trees are camouflaging the existing buildings in the complex. This has not been the case, because Puu Alii has failed to implement sensible and suitable tree management and practice programs in its overall property management policy in order to ensure and uphold its obligation **of maintaining the screening of trees** along the perimeter of its complex ever since it was built in 1990 as an H.P.R. If the PCA had done that, the current view plane would be a non-issue. The association has had a myopic approach in the tree management sphere, especially along the Konane slope, and has created this current situation. Despite the DPP's repeated warnings to cease cutting and removing trees along the slope, the PCA has not complied with these orders. In light of the association's behavior, neglect, and failure since 1990, the homeowners along Lilipuna Road do not have any confidence that the PCA will ensure that the "future renderings" as depicted in this DEA will ever materialize.

Futhermore, I believe this **KSSP will create the problem that the PCA is claiming to solve.**

D. Environmental Assessment Trigger.

This DEA is in place for the public to review and comment, because the home owners on the Lilipuna Road and community members voiced their concerns to our public officials. Otherwise, the PCA would have circumvented this process, intentionally or not.

In Chapter 1, section 1.2 PURPOSE OF THE PROPOSED ACTION of this DEA:

This sentence, "*Lilipuna Road is a main thoroughfare in the area that would likely be adversely impacted if Konane Slope were to fail,*" is one of the reasons that the **KSSP** should not be permitted to further proceed without more due process and due diligence, such as a comprehensive, thorough and thoughtful EIS. The construction phase of the **KSSP** will adversely

disrupt the traffic and community members who live in the area. I should reiterate that 1) *there has not been any documented incidents of any landslides or Konane slope failure*, and 2) *I believe that the KSSP will create the very problem that the PCA is asserting the KSSP will solve.*

I am a proponent for condo owners having views, but I do not support gaining more views by way of the destruction of the slope and removing more trees. This approach will further introduce more negative impacts to the community. While a few condo owners believe that the lower unit owners have suffered far too long due to their views being impacted, the homeowners along the Lilipuna have suffered twice as much since the construction of buildings 35, 36, 37, 38 in this complex. They have lost the lush green hillside ([replaced with monolithic buildings](#)) fronting their homes. They have lost most of the screening of trees buffering their homes from the monolithic buildings. They have endured loud noises, music, conversations, profanity, and arguments originated from the dwellers in the complex. A homeowner was approached by a few condo owners, who asked (homeowner) if certain trees in their yard could be trimmed or removed, so they (condo owners) could see more views from their units. They have lost their privacy in the last decades, because many of the large trees that have been on the Konane slope for over 50 years have been removed. Prior to the complex was permitted to be built in 1990, they were assured (Ordinance 4421) the buffer of trees shall always be maintained along and surround the perimeter of the complex. If this **KSSP** should be permitted to proceed, the homeowners along the Lilipuna Road will suffer even much more. There is a very real potential risk of the slope and/or mud sliding down and destroying the homes on Lilipuna Road if heavy rains should pour down during & after the grading and grubbing of the slope. The entire Konane slope would be completely denuded for many, many years. The DEA mentioned the use of best practices during construction phases of the project, but Contractors' Best Practices cannot guarantee preventing the forces of nature and laws of physics. We as a community must consider the homeowners as our neighbors.

I still have hope that someone at the DPP, in the interest of protecting the natural resources of Hawaii, will realize what is at stake here and at least require Puu Alii to conduct an **EIS** before any more pointless destruction of water and land occurs to Kaneohe Bay and along Lilipuna Road.

Respectfully,

Laila Groves
Puu Alii - Poha Kea Point resident
46-081 Konohiki Street #3565
Kaneohe, HI 96744
(808) 220-8084

WOODCREEK CROSSING SLOPE REMEDIATION 95-1315, 95-1321 AND 95-1361 WĪKA'O STREET MILILANI, O'AHU, HAWAI'I

Project No: 16214.01GS

Date: November 13, 2017

Prepared for:

A.O.A.O. Launani Valley Community Association

c/o:

Trinity ERD
Attn: Kevin Agliam
735 Bishop Street, Suite 430
Honolulu, Hawai'i 96813

Prepared by:

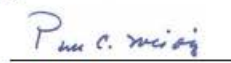
JPB Engineering, Inc.
47-388 Hui 'Iwa Street, Suite 16
Kāne'ohe, Hawai'i 96744

Authored by:



Brian T. Tabuso
Project Engineer

Authenticated by:



Paul C. Weidig
Licensed Professional Engineer No. 8,047-C



Exp 4/30/2018
This work was prepared by me
or under my supervision.



June 23, 2023

Ms. Laila Groves

Via Email: laila.groves@baesystems.com

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Ms. Groves:

Thank you for your December 18, 2022, email concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response. To simplify your review, we have reproduced your substantive comments below in italics, followed by our response:

Comment 1:

I served on the board of directors at the Puu Alii Community Association (PCA) from 2009 to 2011 and recall the Konane slope view plane issue being a constant problem as far back as 2004 all the way up to my time on the board and after. I have attended many PCA board meetings over the last 15 years and the view plane issue was often a source of outbursts and angry demands from condo owners living in the lower units in phase 4 at Pohakea Point, where JPB Inc. conducted its soil reports, No. 19235.01G and No. 20003.01G. Over the years, I observed that the PCA board was searching for creative justifications to open more views and would take short cuts during the process. Some of the board members would succumb to group pressure and allowing board members with forceful personality to dominate their decision making process.

Response:

The Pu‘u Ali‘i Community Association (PCA) acknowledges your comments.

Comment 2:

A. JPB Engineering, Inc. (JPB) prepared two soil reports, Project, No. 19235.01G and JPB, Project 20003.01G, and these soil reports are obsolete.

On the “Limitations” provision of both JPB soil reports, dated September 2019 and July 2020, Mr. Tabuso wrote, “If more than one year passes

between the date of this report and initiation of construction, the contents of this report must be reviewed and, if necessary, modified in light of intervening changed conditions." (DEA, Appendix C-Geotechnical Reports)

*These reports must be reviewed by a qualified professional to determine if these should be modified. The best way this can be done would be by a neutral, qualified expert. Since the **KSSP** is a major undertaking in an SMA and with many stakeholders, **additional due diligence** should be exercised. An Environmental Impact Statement (EIS) should be conducted - including soil tests done in various areas within Puu Alii away from the slope in order to compare the relative stability of soils. Without these comparisons, there is no way to know if the soil on the slope is more or less "unstable" than the soil around it.*

Response:

The PCA engaged JPB Engineering, Inc. (JPB) to prepare a review of the project's geotechnical reports for changes to the project site conditions that may have occurred since the most recent July 31, 2020, report date. It also reviews compliance with the most recent generally accepted professional standards for similar studies. This review, dated February 21, 2023, is included as Appendix C to the forthcoming Final Environmental Assessment (FEA). Since there have been no significant changes to the project site conditions based on JPB's site visit on February 2, 2023, no modifications to the reports are necessary at this time. This review is also included here as Attachment 1.

While the PCA acknowledges your statement that an Environmental Impact Statement (EIS) should be required, the Proposed Action is not anticipated to have significant adverse impacts and will be implemented using the recommended Best Management Practices (BMPs), avoidance, minimization, and mitigation measures discussed in the DEA, as appropriate. Further, HAR § 11-200.1-14 establishes procedures for determining if an EIS should be prepared or if a Finding of No Significant Impact (FONSI) is warranted. HAR § 11-200.1-14(d) provides that if an approving agency, through its judgment and experience, determines that an action may have a significant effect on the environment, then an EIS would be required. HAR § 11-200.1-13(b) lists the thirteen significance criteria to be used in making that determination. Furthermore, each of these thirteen criteria have been examined in detail in Chapter 5 of the DEA and found not to reach a level of statutory significance. As a result, the Proposed Action has received a FONSI by the Department of Planning and Permitting (DPP) and an EIS is not required.

Comment 3:

*B. The nexuss and interrelationships of contributors behind the **KSSP** raise several concerns. A conflict of interest and the underling motive behind the **KSSP** are among those concerns. A few facts that I would like to emphasize.*

*Mr. **Brian Tabuso** is the engineer at JPB Engineering, Inc. who wrote the soil report that the **entire KSSP is based upon**. Mr. Tabuso worked directly under the Principal Engineer, Mr. Paul Weidig at JPB for years. I have attached a title page from a soil report Mr. Tabuso wrote for Woodcreek Crossing condo association in 2018, and **Mr. Paul Weidig authenticated** this report. This is the same Mr. Paul Weidig, who lived at Pohakea Point in building 38 right above the Konane slope at the time Puu Alii hired JPB. (ATTACHMENT: Report Tabuso by Weidig).*

For years, Mr. Weidig and Mr. Florez (an owner in the same building and self-appointed PCA/DPP liaison) are adamant advocates to open up more Kaneohe Bay (KBay) views at the condo. The DPP should have adequate written artifacts evidencing Mr. Florez's demands from the DPP. It is my understanding that Mr. Florez unilaterally selected JPB Inc. to conduct the soil test reports without showing any evidence that 3 independent bids were ever considered as required by the PCA internal controls and procedure.

Response:

Mr. Florez did not unilaterally select JPB for the assessment of Kōnane Slope. The PCA Board solicited bids from several engineering firms and the contract to JPB was properly awarded through a competitive-bid process in late June 2019. There is no ethical or legal prohibition against PCA's retention of a vendor who employs a PCA owner. JPB was selected from among three bidders due to JPB's bid amount for the scope of work being the lowest. The initial motion to accept the bid without competition was amended to require three bids and legal review. Furthermore, Mr. Weidig retired on August 10, 2019, before the soil sampling was conducted, and, as confirmed by letter dated July 9, 2021, from JPB to the PCA, a copy of which is attached, Mr. Weidig did not work on or bill any time for work on the slope stabilization project, neither did he authenticate those reports.

Furthermore, Mr. Weidig sold his unit in the PCA project in July 2022, and is no longer a PCA owner. Please note that Mr. Nick Florez is no longer a member of the PCA Board and has not been since April 28, 2021, when he was not re-elected.

Comment 4:

Also, as far as I know, there have never been any documented landslides on the Konane slope - but yet, at the height of the view plane demands at Puu Alii in 2019, suddenly the hillside is declared "unstable - by a single soil engineer whose superior lived at Puu Alii.

Response:

As discussed in Sections 1.2 and 1.3 of the DEA, the purpose of the Kōnane Slope Stabilization Project is not to remedy an existing slope failure but to prevent one before it occurs. On January 11, 2019, the City and County of Honolulu (CCH), Department of Facility Maintenance (DFM) addressed a letter [Ref. No. SWQ 18-005(D)] to PCA, wherein

it reported that on or about November 21, 2018, DFM had received reports from one or more community members that soil, and sediment was being discharged from the Pu'u Ali'i property, TMK No. (1) 4-6-002:002. On November 30, 2018, DFM investigated the report, and a warning was issued. On October 22, 2019, PCA responded to DFM's letter, identifying the measures it had taken up to that point to address the potential for soil sediment discharge(s) from its property, as well as its intent to engage JPB to investigate and prepare the subject reports. Considering the foregoing, the PCA believes that its actions to date have been responsive to the CCH's concerns and proactive in identifying the underlying issue (i.e., soil creep and soil instability) and its potential remedy. As discussed in the response to Comment 3 above, Mr. Weidig did not work on the geotechnical report for the Proposed Action.

Comment 5:

*C. Potential Major Negative Impacts if this **KSSP** should be permitted to proceed without additional due diligence*

*The grading, grubbing, stockpiling, pollution, noise, discharges, and interruption to public traffic access on the Lilipuna Road, etc., will have negative impacts on the community in the vicinity of the KSSP. Marine/fishery life in KBay rely on a healthy ecosystem and does not need **any** pollution to be discharged into the bay. The home owners along the Lilipuna Road will lose further screening of trees for many, many more years (much of the screen of trees has already been cut down). Most of the home owners have been living in their homes long before the Poha Kea Point condo complex was permitted to be built. It would be socially and morally irresponsible to allow these potential negative impacts to materialize under a project that has been deceptive, in light of the facts summarized in section **B**.*

While we cannot go back to live in the past, understanding the past can help to gain a deeper insight to the current state.

*In Chapter 3 of this DEA, the future renderings of trees shielding buildings 35-38 in the proposed **KSSP** are compelling conceptual images. However, the "**future renderings**" are supposed to be the current state where trees are camouflaging the existing buildings in the complex. This has not been the case, because Puu Alii has failed to implement sensible and suitable tree management and practice programs in its overall property management policy in order to ensure and uphold its obligation **of maintaining the screening of trees** along the perimeter of its complex ever since it was built in 1990 as an H.P.R. If the PCA had done that, the current view plane would be a non-issue. The association has had a myopic approach in the tree management sphere, especially along the Konane slope, and has created this current situation. Despite the DPP's repeated warnings to cease cutting and removing trees along the slope, the PCA has not complied with these orders. In light of the association's behavior, neglect, and failure since 1990, the homeowners along Lilipuna Road do not have any confidence that the PCA*

will ensure that the “future renderings” as depicted in this DEA will ever materialize.

Futhermore, I believe this KSSP will create the problem that the PCA is claiming to solve.

Response:

For a detailed discussion of grading, grubbing, air quality, noise, discharges, and traffic and related impacts, see Chapter 3 of the FEA. As noted in those sections, the impacts are anticipated to be temporary and not rise to the level of significance. As discussed in those sections, BMPs will be employed to minimize the temporary construction impacts.

Regarding the renderings, the PCA acknowledges that the renderings included as part of the DEA are interpretations intended to help interested agencies, organizations, and individuals visualize how the completed landscaping under the Master Landscape Plan (MLP) may appear once it has been implemented. Although the renderings were prepared with careful attention to plant dimensions, grow in times, canopy, and other important factors to provide as accurate a visualization as possible, the PCA of course cannot guarantee that the final plantings will look as shown in the renderings. The time that trees will reach maturity will ultimately depend on growing and weather conditions present on-site following planting. Note also that in addition to the street trees planted along the bottom of the slope, the MLP also calls for understory plantings that will fill in the landscape as the street trees grow and which are intended to act as a buffer, consistent with DPP's Planned Development Housing guidelines, between the PCA project and the downslope neighbors. The computer-generated images provide a timeline *estimate* of how the plantings should mature in Kaneohe's conditions. Within the limitations of the software, they approximate short-term, mid-term and long-term character of the landscape.

For a revised description of anticipated conditions, see Section 3.3 of the FEA. The PCA landscape consultant and arborist recognized that any solution utilizing trees would require several years to create the desired buffer effect. Tropical, non-woody plants grow significantly faster than trees and are used in a complimentary fashion to the trees. In consultation with DPP staff, a design was created to utilize a “green wall” of faster-growing tropical understory vegetation to provide pedestrian-level buffering. Especially in the early years following installation, these plants are expected to create a vegetative buffer zone in the foreground/lower third of the slope while trees fill in at taller heights.

As an owner of a unit in the PCA project, you are aware that the current vegetation along the Kōnane Slope and the incline of Kōnane Slope present conditions that are very difficult, if not impossible, for the PCA and its landscape contractors to maintain, which has led to overgrowth and volunteer growth over the years. The steep slope presents a safety hazard to the Landscape Maintenance staff and at times, they have had to use specialized equipment to access areas needing to be maintained. There have been reports of worker injuries while attempting to maintain the existing vegetation on the slope.

The Proposed Action (i.e., the slope stabilization project) and the MLP are intended to, in addition to stabilizing the slope, create conditions that make it reasonable for the PCA to

maintain on a regular basis. The PCA worked for several years with DPP, and continues to work with DPP, to address claims that certain trees should not have been removed. The MLP is intended to provide clear guidance going forward on the landscaping for the PCA project.

Comment 6:

D. Environmental Assessment Trigger.

This DEA is in place for the public to review and comment, because the home owners on the Lilipuna Road and community members voiced their concerns to our public officials. Otherwise, the PCA would have circumvented this process, intentionally or not.

In Chapter 1, section 1.2 PURPOSE OF THE PROPOSED ACTION of this DEA:

*This sentence, "Lilipuna Road is a main thoroughfare in the area that would likely be adversely impacted if Konane Slope were to fail," is one of the reasons that the **KSSP** should not be permitted to further proceed without more due process and due diligence, such as a comprehensive, thorough and thoughtful EIS. The construction phase of the **KSSP** will adversely disrupt the traffic and community members who live in the area. I should reiterate that 1) there has not been any documented incidents of any landslides or Konane slope failure, and 2) I believe that the KSSP will create the very problem that the PCA is asserting the KSSP will solve.*

Response:

As stated in Section 1.4 of the DEA, the project site is in the Special Management Area (SMA) and, consequently, will require an SMA Permit (SMP), pursuant to Revised Ordinances of Honolulu (ROH), Chapter 25. Because the total cost of the proposed project is more than \$500,000, it will require an SMP Major, which is granted via a Honolulu City Council resolution. Pursuant to ROH, Chapter 25-3.3(c), the PCA and its consultants have prepared the DEA in accordance with Hawai'i Revised Statutes, Chapter 343, and Hawai'i Administrative Rules, Title 11, Chapter 200.1, to support the SMP Major application. These laws and implementing regulations apply to all development in the SMA.

The PCA is grateful for your careful review of the DEA and acknowledges your concerns regarding the necessity for the Proposed Action. However, the PCA also notes the need for the project was identified by the CCH, as discussed above in the response to Comment 4. The Proposed Action was only subsequently developed as a response to the warning received from DFM and the results of the geotechnical report indicating that the slope is not stable and is susceptible to creep, which are dangerous conditions that must be addressed.

In addition to reviewing the 2020 *Master Landscape Plan*; (ii) the *Grading Plan for Buildings 37 and 38* (File No. 2022/CP-47); and (iii) the *Grading Plan for Buildings 35 and 36* (File No. 2022/CP-117) for the project, DPP has reviewed the DEA and Anticipated FONSI for the Proposed Action. DPP has also reviewed the FEA and determined, consistent

with the criteria in HAR Title 11, Chapter 200.1, that the proposed project can be safely implemented, with the applicable BMPs, without adverse impacts to natural and human resources within the vicinity of the project area.

The PCA understands that implementation of the Proposed Action will result in modest, temporary impacts to the area due to construction activities. With specific regard to their level of significance, HAR § 11-200.1-13(b) lists the thirteen criteria to be used in making that determination. Furthermore, each of these thirteen criteria have been examined in detail in Chapter 5 of the DEA and found not to reach a level of statutory significance. DPP, in reviewing the Proposed Action against the significance criteria, determined that the issuance of a FONSI is appropriate.

The PCA will require all contractors to follow CCH's *Rules Relating to Water Quality* throughout implementation of the Proposed Action as well as the conditions of the National Pollutant Discharge Elimination System (NPDES) permit for the slope stabilization work. In addition, and as discussed in Section 2.1.1 of the DEA, the PCA will designate either the contractor or an authorized representative or agent to be responsible for implementation of the *Erosion and Sediment Control Plan* (ESCP) for the Proposed Action. All measures incorporated into the ESCP which are intended to control erosion and other pollutants will be in place prior to commencement of any earthwork. Specific terms of the ESCP include the following elements: (i) slope protection; (ii) temporary stabilization on disturbed areas which are at final grade or at the end of each day's work; (iii) permanent stabilization; (iv) preserving all trees and other vegetation in adjacent areas; (v) perimeter controls downslope of all disturbed areas; (vi) sediment barriers and fences; (vii) inlet protection; (viii) tracking control to minimize sediment being tracked onto off-site roadways, sidewalks, and other paved areas by vehicles and equipment.

In addition to the ESCP, the PCA will also require its contractor(s) to observe a series of BMPs. These BMPs shall not be removed from the project vicinity until final stabilization is complete.

Comment 7:

I am a proponent for condo owners having views, but I do not support gaining more views by way of the destruction of the slope and removing more trees. This approach will further introduce more negative impacts to the community. While a few condo owners believe that the lower unit owners have suffered far too long due to their views being impacted, the homeowners along the Lilipuna have suffered twice as much since the construction of buildings 35, 36, 37, 38 in this complex. They have lost the lush green hillside (replaced with monolithic buildings) fronting their homes. They have lost most of the screening of trees buffering their homes from the monolithic buildings. They have endured loud noises, music, conversations, profanity, and arguments originated from the dwellers in the complex. A homeowner was approached by a few condo owners, who asked (homeowner) if certain trees in their yard could be trimmed or removed, so they (condo owners) could see more views from their units. They have lost their privacy in the last decades, because

*many of the large trees that have been on the Konane slope for over 50 years have been removed. Prior to the complex was permitted to be built in 1990, they were assured (Ordinance 4421) the buffer of trees shall always be maintained along and surround the perimeter of the complex. If this **KSSP** should be permitted to proceed, the homeowners along the Lilipuna Road will suffer even much more. There is a very real potential risk of the slope and/or mud sliding down and destroying the homes on Lilipuna Road if heavy rains should pour down during & after the grading and grubbing of the slope. The entire Konane slope would be completely denuded for many, many years. The DEA mentioned the use of best practices during construction phases of the project, but Contractors' Best Practices cannot guarantee preventing the forces of nature and laws of physics. We as a community must consider the homeowners as our neighbors.*

*I still have hope that someone at the DPP, in the interest of protecting the natural resources of Hawaii, will realize what is at stake here and at least require Puu Alii to conduct an **EIS** before any more pointless destruction of water and land occurs to Kaneohe Bay and along Lilipuna Road.*

Response:

The PCA acknowledges your concerns regarding potential adverse impacts as a result of the Kōnane Slope Stabilization Project. However, there appears to be confusion regarding the nature of the work required to implement the project and the types of BMPs which will be implemented to avoid adverse impacts.

First, it is inaccurate to state that “the entire Kōnane slope would be completely denuded for many, many years.” At no time during implementation of the project will more than one acre of earth be exposed for soil stabilization work, as discussed in Section 3.4.3 of the DEA. The contractor will complete each section of the slope grading and placement of erosion control matting at the end of each day prior to proceeding with the next section. The contractor will phase the work based on the limits of the grading work that can be achieved and stabilized by the end of each day, based on equipment and staff present. Once all cut and fill has been completed, any exposed areas will be sodded, planted, or have permanent landscaping or pavements in place as soon as final grade has been established.

Second, during implementation of the grading plan for the Proposed Action, the contractor(s) will be responsible for conforming to all applicable provisions of HAR, § 11-54 *Water Quality Standards* and HAR, § 11-55 *Water Pollution Control*, as well as ROH, § 14 *Public Works Infrastructure Requirements*. PCA has obtained an NPDES permit from the Hawai‘i Department of Health, Clean Water Branch. A project-specific Storm Water Pollution Prevention Plan has also been prepared. Specific pre-construction BMPs which will be implemented as part of the proposed project include: (i) stabilizing the construction entrance(s); (ii) emplacing silt fences; and (iii) emplacing drain inlet protection. During construction, BMPs will include: (i) temporary soil stabilization; (ii) wind erosion control; (iii) material delivery and storage measures; (iv) material use measures; (v); a stockpiling plan; (vi) spill prevention and control measures; (vii) solid waste management; (viii)

hazardous materials management; (ix) concrete waste management; (x) sanitary/septic waste management; and (xi) filter socks. The slope stabilization and erosion control matting of the Kōnane Slope Stabilization Project will serve as the permanent, post-construction BMPs.

Third and finally, regarding noise impacts, no grading or other major earthwork will be conducted on Saturdays, Sundays, or holidays at any time without prior notice to the director of DPP. All work will be conducted in conformity with the *Community Noise Control Standards* contained in HAR § 11-46 *Community Noise Control*.

Please see the response to Comment 5 above, which discusses the intent of the MLP to provide a buffer between the PCA project and downslope neighbors. Please refer to the response to Comment 6 on why an EA is appropriate for the Proposed Action.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

A handwritten signature in blue ink that reads "Makena".

Mākena White, AICP

Attachments:

1. JPB Engineering, Inc. review dated February 21, 2023
2. July 9, 2021 Letter from JPB to PCA



JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

February 21, 2023

Project No. 19235.02G

To: Pu'u Ali'i Community Association
46-058 Ali'i'ānela Place
Kāne'ohe, Hawai'i 96744

Subject: Review Letter
Pu'u Ali'i Slope Stabilization
46-40, 50 and 70 Kōnane Place
Kāne'ohe, Kaua'i, Hawai'i

Pursuant to your request, JPB Engineering, Inc. has reviewed the geotechnical reports dated September 26, 2019, and July 31, 2019. Since there has been no significant changes to the Project site conditions based on our site visit on February 2, 2023, no modifications to the reports are necessary at this time.

Services performed by JPB Engineering, Inc. reflect the level of care and skill ordinarily exercised by others in good standing and who currently offer comparable professional guidance under similar conditions. No other warranty is expressed or implied.

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

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brian Tabuso", written over a horizontal line.

Brian Tabuso, P.E.
Project Engineer





JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

07/09/2021

To: Puu Alii Community Association
46-058 Aliianela Place
Kaneohe, Hawaii 96744

Subject: Employment Verification

This letter is to confirm that Paul Weidig is no longer employed with JPB Engineering Inc. His last day and effective date of retirement was on 8/10/2019. Mr. Weidig was not involved in any services provided to Puu Alii Community Association for the slope stabilization project.

If you should have any questions, please feel free to contact me.

Regards,

Amie Miranda-Pesquira
Company Administrator/HR Manager



**STATE OF HAWAII
OFFICE OF PLANNING
& SUSTAINABLE DEVELOPMENT**

JOSH GREEN, M.D.
GOVERNOR

SCOTT J. GLENN
DIRECTOR

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

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

Coastal Zone
Management
Program

DTS 202211231538NA

Environmental Review
Program

December 19, 2022

Land Use Commission

Mr. Mākena White
Planning Solutions, Inc.
Pacific Park Plaza, Suite 950
711 Kapi'olani Boulevard
Honolulu, HI 96813

Land Use Division

Special Plans Branch

State Transit-Oriented
Development

Statewide Geographic
Information System

Dear Mr. White:

Statewide
Sustainability Branch

Subject: Draft Environmental Assessment for Kōnane Slope Stabilization Project, Pu'u Ali'i Community Association at 70 Kōnane Place, Kāne'ohe, O'ahu, Hawai'i, Tax Map Key: (1) 4-6-001: 002, 060, and 062

The Office of Planning and Sustainable Development (OPSD) is in receipt of your review request, dated November 23, 2022, on the Draft Environmental Assessment (Draft EA) for the proposed Kōnane Slope Stabilization Project.

According to the Draft EA, The Pu'u Ali'i Community Association (PCA) proposes to implement the Kōnane slope stabilization over 1.25-acres on a portion of parcels of 002, 060, and 062 for runoff protection, better drainage and improved pedestrian and vehicular traffic safety in the area. The project site is on sloped land between the PCA-owned Kōnane Place and City-owned Lilipuna Road. The proposed slope stabilization involves grading to an engineered slope and installing soil nails, a wire mesh system, and erosion control matting or erosion control matting with shallow soil anchors as appropriate per area. Once the slope is stabilized, PCA will install and maintain landscaping on the slope.

The project site is located within the county designated Special Management Area (SMA), and an assessment in accordance with the procedural steps set forth in Hawai'i Revised Statutes (HRS) Chapter 343 is required to support the SMA use permit application for the proposed project, pursuant to Revised Ordinances of Honolulu Chapter 25.

Mr. Mākena White
December 19, 2022
Page 2

It is estimated to take 3 years to complete the slope stabilization project, and the estimated cost is approximately \$3.65 million.

The Draft EA states that all the technical reports that form the basis for project analyses were prepared by qualified professionals and meet all applicable standards. The OPSD concurs with the installation of Erosion and Sediment Control Plan measures throughout the proposed action as discussed in 2.1.1 of the Draft EA and has no further comments at this time.

If you have any questions regarding this comment letter, please contact Shichao Li of our office at (808) 587-2841 or by email at shichao.li@hawaii.gov.

Sincerely,



Scott J. Glenn
Director



June 23, 2023

Scott J. Glenn, Director
Office of Planning and Sustainable Development
State of Hawai'i
P.O. Box 2359
Honolulu, Hawai'i 96804

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Director Glenn:

Thank you for your December 19, 2022, letter (Ref. No. DTS 202211231538NA) concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you and your staff spent reviewing the DEA and preparing your response.

Thank you for your Office's concurrence with the installation of the Erosion and Sediment Control Plan measures proposed in Section 2.1.1 of the DEA, and confirming that you have no further comments at this time.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

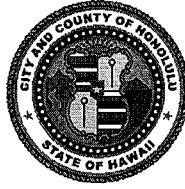
Mahalo,

Mākena White, AICP

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

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

RICK BLANGIARDI
MAYOR



HAKU MILLES, P.E.
DIRECTOR DESIGNATE

BRYAN GALLAGHER, P.E.
ACTING DEPUTY DIRECTOR

December 20, 2022

SENT VIA EMAIL

Ms. Makena White, AICP
makena@psi-hi.com

Dear Ms. White:

Subject: Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA/AFONSI)
Konane Slope Stabilization Project; Puu Alii Community Association
70 Konane Place, Kaneohe, Oahu, Hawaii
TMK Nos. (1) 4-6-001:002, -060, and -062

Thank you for the opportunity to review and comment. The Department of Design and Construction has no comments to offer at this time.

Should you have any further questions, please contact me at (808) 768-8481.

Sincerely,


for Haku Milles, P.E., LEED AP
Director Designate

HM:krm (892625)



June 23, 2023

Haku Milles, P.E., LEED AP, Director Designate
Department of Design and Construction
City and County of Honolulu
Via email: ddc@honolulu.gov

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Mr. Milles:

Thank you for your December 20, 2022, letter concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you and your staff spent reviewing the DEA and responding. We understand that your Department has no comments to offer on the Proposed Action.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

Mākena White, AICP

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

LD/Russell Y. Tsuji

**Ref: Draft Environmental Assessment (DEA) & Anticipated Finding of No Significant Impact (AFONSI) for Kōnane Slope Stabilization Project
Location: 70 Kōnane Place, Kaneohe, Island of Oahu, Hawaii
TMK(s): (1) 4-6-001:002, -060, & -062
Applicant: Planning Solutions on behalf of Pu‘u Ali‘i Community Association**

COMMENTS

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

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

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

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7139.
- Kauai: County of Kauai, Department of Public Works (808) 241-4849.

Signed: 
CARTY S. CHANG, CHIEF ENGINEER

Date: Dec 15, 2022



June 23, 2023

Mr. Carty S. Chang, Chief Engineer
Engineering Division
Department of Land and Natural Resources
State of Hawai'i
P.O. Box 621
Honolulu, HI 96809

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Mr. Chang:

Thank you for your December 15, 2022, memorandum concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you and your staff spent reviewing the DEA and preparing your response.

Thank you for providing the information concerning the National Flood Insurance Program and the local agencies, which may stipulate higher standards. The project is working with the City and County of Honolulu, Department of Planning and Permitting, and as stated in Section 4.1.4.6 of the DEA, will comply with all applicable standards. As discussed in Section 3.7 of the Draft EA, the project site is in the Federal Emergency Management Agency's Flood Zone X, which is an area determined to be outside of the 0.2 percent annual chance floodplain.

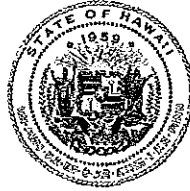
If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Sincerely,

Mākena White, AICP
Planner

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
DEPARTMENT OF LAND AND NATURAL RESOURCES

Division of Forestry and Wildlife
1151 Punchbowl Street, Room 325
Honolulu, Hawaii 96813

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

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE
MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES
ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

December 19, 2022

MEMORANDUM

Log no. 3932

TO: RUSSELL Y. TSUJI, Land Administrator
Land Division

FROM: LAINIE BERRY, Wildlife Program Manager
Division of Forestry and Wildlife

SUBJECT: **Division of Forestry and Wildlife Comments for the Draft Environmental Assessment & Anticipated Finding of No Significant Impact (DEA-AFONSI) for the Kōnane Slope Stabilization Project on O'ahu**

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your request for comments for the DEA-AFONSI regarding the Kōnane Slope Stabilization Project located at 46-40, 50, and 70 Kōnane Place in Kāne'ohe, on the island of O'ahu; TMKs: (1) 4-6-001:002, 4-6-001:060, & 4-6-001:062. The proposed project consists of stabilizing the slope between the Pu'u Ali'i Community Association (PCA) structures and City-owned Lilipuna Road by grading it to an engineered slope and installing soil nails, a wire mesh system, and erosion control matting or erosion control matting with shallow soil anchors as appropriate per area. PCA will also install and maintain landscaping per its approved *Master Landscape Plan* by the City and County of Honolulu, Department of Planning and Permitting.

DOFAW concurs with the mitigation measures included in the DEA-AFONSI intended to avoid construction and operational impacts to the State-listed Hawaiian Hoary bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*). DOFAW provides the following additional comments regarding the potential for the proposed work to affect listed species in the vicinity of the project area.

The State endangered Hawaiian Short-eared Owl or pueo (*Asio flammeus sandwichensis*) could potentially occur in the project vicinity. Pueo are most active during dawn and dusk twilights. Before clearing any vegetation, DOFAW recommends twilight pre-construction surveys by a qualified biologist. If pueo nests are present, DOFAW staff should be notified and a buffer zone should be established in which no clearing occurs until nesting is completed.

Artificial lighting can adversely impact seabirds that may pass through the area at night by causing them to become disoriented. This disorientation can result in their collision with manmade structures or the grounding of birds. For nighttime work that might be required, DOFAW recommends that all lights used be fully shielded to minimize the attraction of seabirds. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season, from September 15 through December 15, when

young seabirds make their maiden voyage to sea. Permanent lighting also poses a risk of seabird attraction, and as such should be minimized or eliminated to protect seabird flyways and preserve the night sky. For illustrations and guidance related to seabird-friendly light styles that also protect seabirds and the dark starry skies of Hawai'i, please visit <https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf>.

DOFAW recommends that the applicant reviews the proposed *Master Landscape Plan* (Tables 2-5 and 2-6) by referring to www.plantpono.org for guidance on the selection and evaluation of landscaping plants and to determine the potential invasiveness of plants proposed for use in the project. We recommend using native plant species for landscaping appropriate for the area; i.e., plants for which climate conditions are suitable for them to thrive, plants that historically occurred there, etc. **Please do not plant invasive species.**

DOFAW recommends minimizing the movement of plant or soil material between worksites. Soil and plant material may contain detrimental fungal pathogens (e.g., Rapid 'Ōhi'a Death), vertebrate and invertebrate pests (e.g., Little Fire Ants, Coconut Rhinoceros Beetles, etc.), or invasive plant parts (e.g., Miconia, Pampas Grass, etc.) that could harm our native species and ecosystems. We recommend consulting the O'ahu Invasive Species Committee (OISC) at (808) 266-7994 to help plan, design, and construct the project, learn of any high-risk invasive species in the area, and ways to mitigate their spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

The invasive Coconut Rhinoceros Beetle (CRB) or *Oryctes rhinoceros* is known to occur in the vicinity of the project area. On July 1, 2022, the Hawai'i Department of Agriculture (HDOA) approved Plant Quarantine Interim Rule 22-1. This rule restricts the movement of CRB-host material within or to and from the island of O'ahu, which is defined as the Quarantine Area. Regulated material (host material or host plants) is considered a risk for potential CRB infestation. Host material for the beetle specifically includes a) entire dead trees, b) mulch, compost, trimmings, fruit and vegetative scraps, and c) decaying stumps. CRB host plants include the live palm plants in the following genera: *Washingtonia*, *Livistona*, and *Pritchardia* (all commonly known as fan palms), *Cocos* (coconut palms), *Phoenix* (date palms), and *Roystonea* (royal palms). When such material or these specific plants are moved there is a risk of spreading CRB because they may contain CRB in any life stage. For more information regarding CRB, please visit <https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/coconut-rhinoceros-beetle/>.

We appreciate your efforts to work with our office for the conservation of our native species. These comments are general guidelines and should not be considered comprehensive for this site or project. It is the responsibility of the applicant to do their own due diligence to avoid any negative environmental impacts. Should the scope of the project change significantly, or should it become apparent that threatened or endangered species may be impacted, please contact our staff as soon as possible. If you have any questions, please contact Paul Radley, Protected Species Habitat Conservation Planning Coordinator at (808) 295-1123 or paul.m.radley@hawaii.gov.

Sincerely,

Lainie Berry

LAINIE BERRY
Wildlife Program Manager



June 23, 2023

Lainie Berry, Wildlife Program Manager
c/o Myrna N. Giraldo-Perez, Protected Species Habitat Conservation Planning Associate
Division of Forestry and Wildlife
Department of Land and Natural Resources
Via email: myrna.giraldo-perez.researcher@hawaii.gov

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Ms. Berry:

Thank you for your December 19, 2022, letter (Log No. 3932) concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you and your staff spent reviewing the DEA and preparing your response. To simplify your review, we have reproduced your substantive comments below in italics, followed by our response:

Comment 1:

*DOFAW concurs with the mitigation measures included in the DEA-AFONSI intended to avoid construction and operational impacts to the State-listed Hawaiian Hoary bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*).*

Response:

Thank you for confirming that these avoidance and minimization measures proposed in Section 3.1.3 of the DEA are appropriate to avoid construction and operation impacts to Hawaiian hoary bats.

Comment 2:

*The State endangered Hawaiian Short-eared Owl or pueo (*Asia flammeus sandwichensis*) could potentially occur in the project vicinity. Pueo are most active during dawn and dusk twilights. Before clearing any vegetation, DOFAW recommends twilight pre-construction surveys by a qualified biologist. If pueo nest are present, DOFAW staff should be notified and a buffer zone should be established in which no clearing occurs until nesting is completed.*

Response:

Thank you for this information. All work for the Proposed Action will be conducted during typical work hours between 8:00 a.m. and 4:00 p.m.; no work is planned during dawn and dusk twilight, and no impacts to pueo or their nests are anticipated. The area to be cleared is regularly maintained on a quarterly basis by ground crews; in addition, it is likely feral cats and dogs are regularly present. Further, there is little appropriate habitat for pueo within the project area, nor have they been observed in the area. For these reasons, it is highly unlikely that pueo nests are present on the ground in the project area and the Pu'u Ali'i Community Association (PCA) does not believe that pre-construction surveys by a qualified biologist are warranted. Should a pueo nest be observed in the project area, DOFAW staff will be notified, and a buffer zone established until nesting is complete.

Please note that Section 3.1.1 of the Final Environmental Assessment (FEA) has been revised to include the pueo as a species that may use resources in the general project area. Section 3.1.3 of the FEA has also been revised to include DOFAW's suggested avoidance and minimization measures.

Comment 3:

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

Response:

Thank you for this information. As noted above, all work for the proposed project will be conducted during typical work hours between 8:00 a.m. and 4:00 p.m.; no work is planned outside of those hours, no elevated structures are proposed, and no artificial lighting, temporary or permanent, is included as part of the proposed project, either during or after the construction period. Consequently, the PCA does not anticipate adverse impacts to seabirds that may pass through the area.

Comment 4:

DOFAW recommends that the applicant reviews the proposed Master Landscape Plan (Tables 2-5 and 2-6) by referring to www.plantpono.org for guidance on the selection and evaluation of landscaping plants and to

*determine the potential invasiveness of plants proposed for use in the project. We recommend using native plant species for landscaping appropriate for the area; i.e., plants for which climate conditions are suitable for them to thrive, plants that historically occurred there, etc. **Please do not plant invasive species.***

Response:

The planting plans for Kōnane Slope were prepared by the same consultant as for the *Master Landscape Plan* (MLP) discussed in Section 2.2 of the DEA; the planting design for Kōnane Slope is consistent with the MLP. This consultant selected plants for their ability to thrive in the specific microclimatic conditions of this slope following construction and stabilization; the overwhelming majority of groundcovers on the slope are native fern species. Minimizing the use of plants identified as ‘invasive’ is one of several design criteria used in both the MLP and the Kōnane Slope planting plans, of which the plants are generally non-invasive. The landscape architect and arborist reviewed the plant palette to minimize the use of potentially invasive species without compromising the design. It should be noted that the arborist, Carol Kwan, actively coordinates with members of the Hawai‘i Invasive Species Council and was honored by the Hawai‘i State Legislature in March 2023, with a Hawai‘i Invasive Species Awareness Month award for her contributions.

The plant selections were evaluated using the more comprehensive Hawai‘i Pacific Weed Risk Assessment plant lists in addition to the www.plantpono.org website and, as appropriate, communicating directly with the University of Hawai‘i Weed Risk Assessment Specialist, Charles Chimera regarding certain species. In addition, the project’s landscape architect and arborist reviewed the Kōnane Slope planting design with Department of Planning and Permitting staff at the preliminary design stage to solicit comment on the proposed pallet of vegetation to be used as part of the MLP.

Plant species were reviewed not only with a cursory check of the Plant Pono website but more particularly by reviewing individual Hawai‘i Pacific Weed Risk Assessment (HPWRA) evaluation reports for any plant species considered potentially invasive on the project site. The Plant Pono website provides excellent guidelines for laymen but the detailed evaluation reports from HPWRA allow a more fine-grained assessment for knowledgeable professionals to determine whether a species displays traits likely to, or a documented history of, invasiveness in particular microclimates (i.e., a plant may be highly invasive in a dry area but not invasive in a wet area, etc.).

The project landscape architect communicated directly with Charles Chimera by email to seek specific guidance on the suitability of *Molineria capitulata*, commonly known as Palmgrass and frequently confused with *Setaria palmifolia*, also commonly known as Palmgrass. While *Setaria palmifolia* is a highly invasive plant (WRA Score 22.0/High Risk), *Molineria capitulata* is not (WRA Score 6.0/Evaluate). Mr. Chimera advised that *Molineria capitulata* was suitable for the project area, but cautioned that it should not be planted alongside flowing watercourses. No *Setaria palmifolia* will be used in the project area.

Comment 5:

DOFAW recommends minimizing the movement of plant or soil material between worksites. Soil and plant material may contain detrimental fungal pathogens (e.g., Rapid 'Ōhi'a Death), vertebrate and invertebrate pests (e.g., Little Fire Ants, Coconut Rhinoceros Beetle, etc.), or invasive plant parts (e.g., Miconia, Pampas Grass, etc.) that could harm our native species and ecosystems. We recommend consulting the O'ahu Invasive Species Committee (OISC) at (808) 266-7994 to help plan, design, and construct the project, learn of any high-risk invasive species in the area, and ways to mitigate their spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

*The invasive Coconut Rhinoceros Beetle (CRB) or *Oryctes rhinoceros* is known to occur in the vicinity of the project area. On July 1, 2022, the Hawai'i Department of Agriculture (HDOA) approved Plant Quarantine Interim Rule 22-1. This rule restricts the movement of CRB-host material within or to and from the island of O'ahu, which is defined as the Quarantine Area. Regulated material (host material or host plants) is considered a risk for potential CRB infestation. Host material for the beetle specifically includes a) entire dead trees, b) mulch, compost, trimmings, fruit and vegetative scraps, and c) decaying stumps. CRB host plants include the live palm plants in the following genera: *Washingtonia*, *Livistona*, and *Pritchardia* (all commonly known as fan palms), *Cocos* (coconut palms), *Phoenix* (date palms), and *Roystonea* (royal palms). When such material or these specific plants are moved there is a risk of spreading CRB because they may contain CRB in any life stage. For more information regarding CRB, please visit <https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/coconut-rhinoceros-beetle/>.*

Response:

The PCA will work with its contractors to take appropriate steps to minimize the risk of spreading invasive species. The PCA's consultants are not aware of any noxious weeds in the project area. Please note that arborist Carol Kwan has been approved by the O'ahu Invasive Species Committee to conduct surveys for noxious weeds and other invasive species and has done so for numerous construction projects. In addition, she inspects the trees at the PCA property annually, including within the project area, and she has not observed any noxious weeds or other target species at the site during these inspections.

Site topsoil will be stockpiled, amended and re-used for landscape planting on the Kōnane Slope to minimize opportunities for soil-borne invasive species to be introduced into the area to the extent the PCA is able to do so. The PCA's contractor will ultimately decide how any removed soil material will be disposed of or repurposed off site, but during the contractor bidding process, language can be inserted into the Request for Proposals requiring the contractor to provide documentation as to the disposition of removed soil.

In addition, several of the BMPs described in Section 2.1.1 of the DEA that will be implemented as part of the Proposed Action to address erosion and sediment control will also help to manage the spread of invasive species. These include: (i) perimeter controls, (ii) sediment barriers and fences, (iii) inlet protection, (iv) tracking control, and (v) wind erosion control. Furthermore, it is expected that all the existing vegetation that will be removed from the project site will be delivered to a City and County of Honolulu approved green waste disposal site in accordance with City's regulations.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

A handwritten signature in blue ink that reads "Mākena". The signature is fluid and cursive, with the first letter being a large capital 'M'.

Mākena White, AICP

December 23, 2022

Mr. Makena B. White, AICP
Planning Solutions, Inc.
711 Kapī'olani Boulevard, Suite 950
Honolulu, HI 96813

via electronic only: makena@psi-hi.com

**Re: Submittal of Initial Review Comments on Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA/AFONSI)
Kōnane Slope Stabilization Project, Pu'u Ali'i Community Association**

Dear Mr. White:

The RCC Group LLC (RCC) is a Davis, California-based environmental consulting practice, with more than 35 years of professional experience in providing these services to the regulated community. Our practice area focuses on environmental management systems (EMS), hydrogeologic and watershed assessment, as well as environmental engineering studies. As a matter of full transparency, I have been married to Estelle N. Shiroma, D.Env. for over 30 years and have considered the Shiroma family residence at **46-083 Lilipuna Road** my second home for at least as many years. Estelle is the Trustee of the Betty T. Shiroma Trust. Consequently, I believe that my own professional voice merits a place as a *Participant* in the regulatory process outlined in the *Planning Solutions Inc.* letter dated November 23rd, 2022.

In my capacity as Managing Member of RCC and a California-registered Professional Geologist (PG), I have reviewed and now submit the following initial comments on the ***Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA/AFONSI)***.

It is my professional judgment, based upon over 35 years of experience in complex site assessment, groundwater resource assessment and watershed hydrology, as well as surface and groundwater quality protection, the referenced DEA dated November 2, 2022 and supporting documents are **substantially deficient**. I have based my analysis on the information set forth in the DEA and supporting documents made available online by the Environmental Review Program of the State's Office of Planning and Sustainable Development. In following best practices of my own profession, I have also reviewed additional technical resources and documents found in the public domain in preparing my initial comments on the DEA.

Specifically, this **DEA does not** satisfy the requirements to provide the necessary environmental information and technical analysis needed to allow the Department of Planning and Permitting (DPP) and Honolulu City Council (HCC) to support issuance of a Special Management Area Permit (SMP) Major (>\$500,000 in projected cost).

Please find below my comments on the inadequacy of the DEA and the potential for the Proposed Action on the “*Kōnane Slope*” to cause unintended significant environmental impacts to the neighboring properties, as well as the local site conditions.

DEA CHAPTER 1: INTRODUCTION

Section 1.3 NEED FOR THE PROPOSED ACTION

I found **insufficient evidence** to rely solely on Geotechnical Reports (DEA Appendix C) titled “*Geotechnical Report: Pu’u Ali’i Slope Investigation, 46-40, 50, and 70 Kōnane Place, Kāne’ohe, O’ahu, Hawai’i*” as prepared by JPB Engineering, Inc. (JPB). Several issues including, but not limited to, the field investigations, number and depths of soil borings, methods employed, and equipment used were inadequate or insufficient to assess existing conditions.

The unsupported depictions of subsurface conditions did not follow Best Practices of a hydrogeologic or engineering geologic assessment, and JPB did not consider numerous other environmental and engineering geologic factors when they prepared their principal conclusion: “*The results of our investigation indicate that majority of the subject slope areas are unstable and susceptible to soil creep.*”

The field staff and post-field analysis did not properly characterize the slope as undergoing active soil creep or exhibiting a “failed condition.”

- No evidence was offered regarding historical reports or knowledge of unstable slope conditions from topographic leveling surveys of the subject property, or “*Kōnane Slope*”, or the self-assessment of onsite stormwater drainage failures from an aging infrastructure.
- No evidence was offered by the geotechnical engineering consultant or their subcontractors to document that building foundations were inspected and that evidence of foundation failures or related issues of concern were observed.
- No evidence was provided that a qualified engineering hydrologist had evaluated the original 1989-1990 design of the onsite storm water conveyance system for adequacy or that stormwater management improvements could be designed and implemented to reduce the potential for “excess moisture” to the subsurface property and associated “*Kōnane Slope*”.
- No professional geological expertise was utilized in the preparation of the geotechnical reports, which would have been essential to correct or in some cases improve the accuracy of geologic setting information, as well as publicly available mapped soil surveys. As a consequence of preparing geotechnical report with incorrect technical information, the inclusion of these technical errors in the DEA was unavoidable.
- No independent technical analysis was provided with regard to a 2018 reported discharge of elevated turbidity in stormwater from a nearby property.

- In my 30 years of visiting the Shiroma family residence and area neighborhood at different times of the year, I have never observed unusual stormwater discharges or sediment discharges from the “*Kōnane Slope*”. If I had observed something of concern that could cause harm to my family’s property or the neighbors, I would have promptly cautioned our family and the neighbors and notified an appropriate public works authority.

In brief, the geotechnical reports provided no substantive or reasonable evidence of the instability of the “*Kōnane Slope*” and associated subject property. Laboratory testing of collected surface soil samples can develop technically correct findings, which are evaluated out of context and often do not consider the actual environmental setting from where the samples were collected.

DEA CHAPTER 3.2: GEOLOGY, TOPOGRAPHY, AND SOILS

In my reading of this section of the DEA I found the reporting of inaccurate technical information an Inconsistent use of publicly available data and information. Contemporary references were not utilized, in support of the writing. In particular, publicly available USGS and USDA technical sources were not utilized In such a way to better understand the existing site conditions. Two examples of a deficiencies and resulting inaccuracies includes the following:

- As illustrated on the excerpt from the USGS Open File Report 1089 from 2007 (attached), the site is underlain by Pleistocene-age Koolau Volcanics, and not “a formation called saprolite. (page 3-2)” Saprolite is an adjective not a noun and it describes a deeply weathered condition of rock formations. Since JPB never collected samples of rock materials below 15 feet, it’s impossible to know the nature of the rock or its integrity. As an example, “saprolitic basalt” rock types can have different groundwater movement characteristics than a “saprolitic tuff” rock type, and both types can be found in the Koolau Volcanics formation.
- The USGS information sources illustrate the integrity of existing site conditions, and the presence of intrusive dikes, which can enhance the structural integrity of the local hillsides.
- As illustrated on the excerpt from the USDA web soil survey (attached), the site is underlain by two similar clay rich soil types, which are known to occur in steeply sloping settings. soil scientists and geologists alike understand that the nature of surface soils are derived from parent materials - bedrock. The limited number of soil borings installed by JPB did not take into consideration there may be different soil types on the subject property.

DEA: CHAPTER 3.4: HYDROLOGY

In my review of this section of the DEA, I found the reporting of technical information that typically did not apply to the hydrology issue. Similarly, information that would support any slope failure study and the occurrence and movement of groundwater was lacking. In addition, there was inconsistent use of publicly available data and information.

Examples of deficiencies and resulting inaccuracies include the following:

- Hydrology discussions for this location must include comprehensive surface water and groundwater conditions, as well as sources of water, specifically precipitation and leakage from man-made water supply systems.
- Detailed discussions of wetlands are necessary but irrelevant.
- No hydrology discussions are complete without discussions of precipitation.
- No hydrology discussions are complete without identifying the occurrence and movement of groundwater at the site and vicinity.
- No hydrology discussion is complete without an assessment of stormwater quantity and quality, including the presence of man-made pollutants such as oil and grease and metals.

DEA CHAPTER 3.5: TRAFFIC

In my review of this section of the DEA, the most serious issue I found was that current traffic information was missing. Using traffic information from **11 years prior** is wholly inadequate, and any conclusions drawn would be considered deficient by any traffic consultant.

The discussion regarding traffic from the Proposed Action does not take into account the added noise that will be experienced by residents on both sides of Lilipuna Road when the trees and vegetation have been removed.

CONCLUSIONS

There are numerous deficiencies and inaccuracies in other chapters within the DEA. The discussion of alternatives was irrelevant since the entire Section 3 was, in my opinion, heavily flawed.

In brief, these are my conclusions regarding the inadequacy of the DEA and the potential for the Proposed Action on the “*Kōnane Slope*” to cause unintended significant environmental impacts to the neighboring properties. They are listed in no particular order of importance.

- The DEA dated November 2, 2022, and supporting documents are **substantially deficient**.
- The **DEA does not** satisfy the requirements to provide the necessary environmental information and technical analysis needed to allow the DPP and Honolulu City Council to support issuance of a SMP Major.
- The Proposed Action appears to be a costly technical solution to a problem that does not exist.
- The reduction of excess stormwater draining from impervious sources above the “*Kōnane Slope*” can be cost effectively controlled and redirected.

- No amount of geotechnical underpinnings can stabilize the foundational integrity of existing condo buildings, if the geotechnical analysis has not considered historical design and construction methods, and the failures of the existing aging infrastructure, which includes but is not limited to stormwater conveyance systems.

In my opinion, the applicant would be better served to consider the following alternatives:

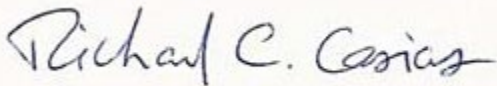
- (1) Conduct a thorough engineering assessment of storm water that falls on the impervious portions of the property (buildings, paved areas, access roads),
- (2) Identify drainage failures and weaknesses in the infrastructure that allow stormwater to infiltrate the subsurface soils and regional bedrock with potentially contaminated stormwater,
- (3) Implement a comprehensive improvement program to better capture onsite stormwater runoff and direct it to the existing municipal storm water drainage system,
- (4) Establish a semi-annual vegetation and tree health management program conducted by qualified arborists and vegetation management staff to protect the existing vegetation that currently thrives on the “*Kōnane Slope*”, and
- (5) Establish a program outlined above, which could include reducing the heights of selected trees to ensure their long-term success in windstorms and preserve the vistas of selected Pu'u Ali'i Community Association members.

Above all, the “*Kōnane Slope*” needs to be properly maintained and protected to ensure that it continues to serve as a visual and noise attenuating buffer to be preserved in perpetuity.

It is my hope that a mutually agreeable solution will serve neighbors living at Pu'u Ali'i and Lilipuna Road residents.

* * *

Please do not hesitate to contact me with questions.



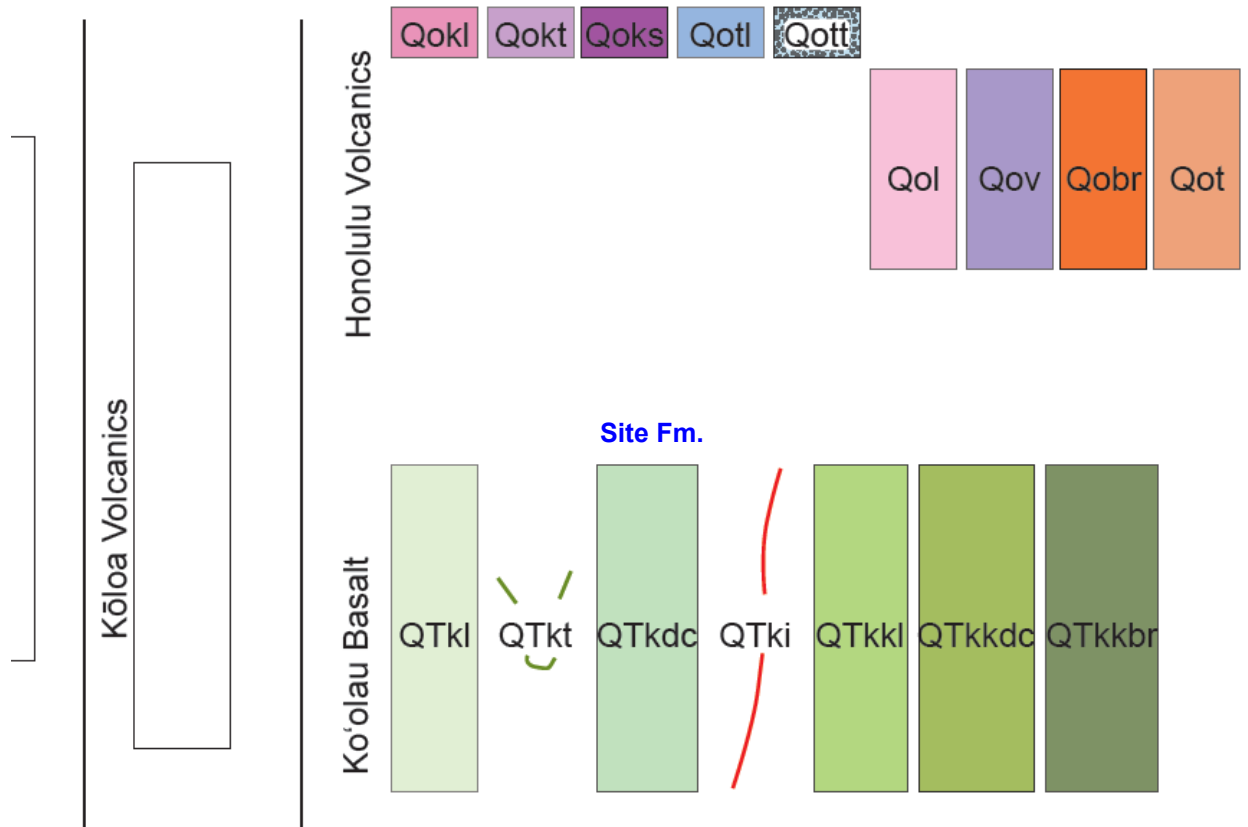
Richard C. Casias
CA Professional Geologist No. 7122 Expires January 31, 2024
Principal Scientist – RCC Group, LLC

cc: Estelle N. Shiroma, Trustee of Betty T. Shiroma Trust

Enclosures



VOLCANIC AND INTRUSIVE ROCKS AND SPARSE INTERBEDDED SEDIMENTAL



LIST OF MAP UNITS ON SHEET 3 (THIS MAP)

See explanatory pamphlet for complete descriptions

F THE ISLANDS

Disconformity

Site Rock Types: Ko'olau Basalt (Pleistocene(?) and Pliocene)—Divided into:

QTKl	Lava flows
QTkt	Vitric and lithic tuff
QTkdc	Dike complex
QTki	Intrusive rocks

)

~~Kailua Member—Divided into:~~

QTKkl	Lava flows
QTKkdc	Dike complex within Kailua Member
QTKkbr	Breccia deposits

nable

AND OF O'AHU

Conformable, possibly interbedded

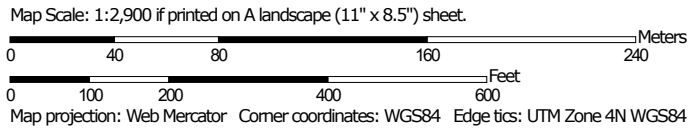
of:

Wai'anae Volcanics (Pliocene)—Divided into:

Soil Map—Island of Oahu, Hawaii
(PU 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i 'U ALI' SLOPE INVESTIGATION)



Soil Map may not be valid at this scale.




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Island of Oahu, Hawaii
Survey Area Data: Version 17, Aug 30, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 29, 2017—Oct 11, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AeE	Alaeloa silty clay, older substrate, 15 to 35 percent slopes, MLRA 167	9.7	23.6%
ALF	Alaeloa silty clay, 40 to 70 percent slopes	21.1	51.0%
Ph	Pearl Harbor clay, 0 to 2 percent slopes, MLRA 163	0.2	0.6%
Totals for Area of Interest		41.3	100.0%



June 23, 2023

Mr. Richard C. Casias

Via Email: rccgroupllc@gmail.com

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Mr. Casias:

Thank you for your December 23, 2022, letter concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response. To simplify your review, we have reproduced your substantive comments below in italics, followed by our response:

Comment 1:

*The RCC Group LLC (RCC) is a Davis, California-based environmental consulting practice, with more than 35 years of professional experience in providing these services to the regulated community. Our practice area focuses on environmental management systems (EMS), hydrogeologic and watershed assessment, as well as environmental engineering studies. As a matter of full transparency, I have been married to Estelle N. Shiroma, D.Env. for over 30 years and have considered the Shiroma family residence at **46-083 Lilipuna Road** my second home for at least as many years. Estelle is the Trustee of the Betty T. Shiroma Trust. Consequently, I believe that my own professional voice merits a place as a Participant in the regulatory process outlined in the Planning Solutions Inc. letter dated November 23rd, 2022.*

*In my capacity as Managing Member of RCC and a California-registered Professional Geologist (PG), I have reviewed and now submit the following initial comments on the **Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA/AFONSI)**.*

*It is my professional judgment, based upon over 35 years of experience in complex site assessment, groundwater resource assessment and watershed hydrology, as well as surface and groundwater quality protection, the referenced DEA dated November 2, 2022 and supporting documents are **substantially deficient**. I have based my analysis on the information set forth in the DEA and supporting documents made available online by the Environmental Review Program of the State's Office of Planning and Sustainable Development. In following best practices of my own profession, I*

have also reviewed additional technical resources and documents found in the public domain in preparing my initial comments on the DEA.

*Specifically, this **DEA does not** satisfy the requirements to provide the necessary environmental information and technical analysis needed to allow the Department of Planning and Permitting (DPP) and Honolulu City Council (HCC) to support issuance of a Special Management Area Permit (SMP) Major (>\$500,000 in projected cost).*

Response:

The Pu‘u Ali‘i Community Association (PCA) acknowledges that you are married to a longtime Lilipuna Road resident, Estelle Shiroma, that you are familiar with the area, and that you are a professional geologist licensed in the State of California.

Comment 2:

DEA CHAPTER 1: INTRODUCTION

Section 1.3 NEED FOR THE PROPOSED ACTION

*I found **insufficient evidence** to rely solely on Geotechnical Reports (DEA Appendix C) titled “Geotechnical Report: Pu‘u Ali‘i Slope Investigation, 46-40, 50, and 70 Kōnane Place, Kāne‘ohe, O‘ahu, Hawai‘i” as prepared by JPB Engineering, Inc. (JPB). Several issues including, but not limited to, the field investigations, number and depths of soil borings, methods employed, and equipment used were inadequate or insufficient to assess existing conditions.*

The unsupported depictions of subsurface conditions did not follow Best Practices of a hydrogeologic or engineering geologic assessment, and JPB did not consider numerous other environmental and engineering geologic factors when they prepared their principal conclusion: “The results of our investigation indicate that majority of the subject slope areas are unstable and susceptible to soil creep.”

The field staff and post-field analysis did not properly characterize the slope as undergoing active soil creep or exhibiting a “failed condition.”

•No evidence was offered regarding historical reports or knowledge of unstable slope conditions from topographic leveling surveys of the subject property, or “Kōnane Slope”, or the self-assessment of onsite stormwater drainage failures from an aging infrastructure.

•No evidence was offered by the geotechnical engineering consultant or their subcontractors to document that building foundations were inspected and that evidence of foundation failures or related issues of concern were observed.

•No evidence was provided that a qualified engineering hydrologist had evaluated the original 1989-1990 design of the onsite storm water conveyance

system for adequacy or that stormwater management improvements could be designed and implemented to reduce the potential for “excess moisture” to the subsurface property and associated “Kōnane Slope”.

•No professional geological expertise was utilized in the preparation of the geotechnical reports, which would have been essential to correct or in some cases improve the accuracy of geologic setting information, as well as publicly available mapped soil surveys. As a consequence of preparing geotechnical report with incorrect technical information, the inclusion of these technical errors in the DEA was unavoidable.

•No independent technical analysis was provided with regard to a 2018 reported discharge of elevated turbidity in stormwater from a nearby property.

•In my 30 years of visiting the Shiroma family residence and area neighborhood at different times of the year, I have never observed unusual stormwater discharges or sediment discharges from the “Kōnane Slope”. If I had observed something of concern that could cause harm to my family's property or the neighbors, I would have promptly cautioned our family and the neighbors and notified an appropriate public works authority.

In brief, the geotechnical reports provided no substantive or reasonable evidence of the instability of the “Kōnane Slope” and associated subject property. Laboratory testing of collected surface soil samples can develop technically correct findings, which are evaluated out of context and often do not consider the actual environmental setting from where the samples were collected.

Response:

The statements in your comments, and quoted above, in your opinion call into question the veracity and accuracy of the JPB Engineering, Inc. (JPB) soil reports which form the basis for the project need, as characterized in the DEA. However, the comment does not provide contravening evidence to support your claim that these reports include incorrect technical information, nor does the comment cite specific examples that might allow the PCA to better understand and assess the merits of your critique. All the technical reports that form the basis for analyses in the DEA were prepared by qualified professionals, certified in the State of Hawai‘i, and meet all applicable standards. In the absence of any countervailing documentation, surveys, boring samples, calculations, or other information, the statement that the JPB reports are, “inadequate or insufficient,” is without merit.

Your personal sporadic observations of the project site notwithstanding, on January 11, 2019, the City and County of Honolulu (CCH), Department of Facility Maintenance (DFM) addressed a letter [Ref. No. SWQ 18-005(D)] to PCA, wherein it reported that on or about November 21, 2018, DFM had received reports from one or more community members that soil, and sediment was being discharged from the Pu‘u Ali‘i property, TMK No. (1) 4-6-002:002. You state that there was no independent investigation into the alleged discharge, however, on November 30, 2018, DFM investigated the reports, and issued a warning to the

PCA. On October 22, 2019, PCA responded to DFM's letter, identifying the measures it had taken up to that point to address the potential for soil sediment discharge(s) from its property, as well as its intent to engage JPB to investigate and prepare the subject reports.

Also in 2019, the PCA Board sought to retain a landscape architect to address overgrowth and provide groundcover on the Kōnane Slope. The landscape architect raised concerns about the stability of Kōnane Slope below Buildings 37 and 38 and declined to submit a proposal for the landscaping on the slope because it was too steep. The landscape architect further indicated that groundcover would not be able to grow well on such a steep slope and opined that the slope stability and erosion issues would need to be addressed prior to any landscaping.

Recognizing the urgency to address any runoff or risk of potential failure of the slope, the PCA Board took reasonable and appropriate action to address these issues with a permanent solution, including retaining a qualified engineering firm in July 2019 to complete geotechnical investigations and soil borings along the Kōnane Slope. Soil borings fronting Buildings 37 and 38 were completed in September 2019 by JPB. JPB also produced a Geotechnical Report dated March 5, 2020, addressing the slope below Buildings 37 and 38, as well as an Addendum dated April 23, 2020, and a revised Geotechnical Report dated July 31, 2020, addressing the slope below Buildings 35 through 38 (collectively, "the Report"). The original scope of the soil work included only areas below Buildings 37 and 38, but upon further investigation, it was necessarily expanded to include the area below Buildings 35 and 36. Please note that the Report has been submitted to DPP and DFM for their independent review as part of the slope stabilization and EA processes.

The PCA believes that its actions to date have been responsive to the CCH's concerns. PCA has proactively identified the underlying issue (i.e., soil creep and soil instability) and has proposed a remedy through the Proposed Action.

With respect to your assertion that building foundations were not inspected, there are no buildings located on the project site (i.e., the Kōnane Slope between Kōnane Place and Lilipuna Road).

The field work, soil data obtained in the field and via laboratory testing, and the resulting Report were all prepared using typical, industry-standard engineering practices. A geologist was not used on this project because engineering analyses of slope stability do not require a geologist. These analyses show that the calculated factor of safety values at the various location across the existing Kōnane Slope areas are below the acceptable values, and therefore the slope at these locations is deemed unstable. Alterations to the slope as a result of the proposed grading in the Proposed Action would further decrease the factor of safety of the existing slope, unless stabilization measures are put in place. Please note that historical reports, or knowledge of unstable slope conditions from topographic leveling surveys on the subject slope, are not required to conduct a slope stability analysis. Slope stability analyses are based on field and laboratory data, and existing slope geometry. The two most important factors that determine the stability of a slope are slope geometry and the strength of the materials on it. It comes down to resisting forces versus driving forces, shear strength versus shear stress. These forces and stresses are determined from boring and lab testing results which are then used in computations to determine stability.

Note also that the engineering consultants for the Proposed Action reviewed the original utility plans for the PCA project, including the existing storm drain system. The existing storm drain system captures all of the runoff from the developed impervious areas of the PCA project site above the Kōnane Slope, and then conveys the water through a 30” drain line into the City’s storm drain system along Lilipuna Road. Therefore, stormwater runoff from the site’s impervious surfaces do not drain onto the Kōnane Slope.

Comment 3:

DEA CHAPTER 3.2: GEOLOGY, TOPOGRAPHY, AND SOILS

In my reading of this section of the DEA I found the reporting of inaccurate technical information an Inconsistent use of publicly available data and information. Contemporary references were not utilized, in support of the writing. In particular, publicly available USGS and USDA technical sources were not utilized In such a way to better understand the existing site conditions. Two examples of a deficiencies and resulting inaccuracies includes the following:

- As illustrated on the excerpt from the USGS Open File Report 1089 from 2007 (attached), the site is underlain by Pleistocene-age Koolau Volcanics, and not “a formation called saprolite. (page 3-2)” Saprolite is an adjective not a noun and it describes a deeply weathered condition of rock formations. Since JPB never collected samples of rock materials below 15 feet, it's impossible to know the nature of the rock or its integrity. As an example, “saprolitic basalt” rock types can have different groundwater movement characteristics than a “saprolitic tuff” rock type, and both types can be found in the Koolau Volcanics formation.*

- The USGS information sources illustrate the integrity of existing site conditions, and the presence of intrusive dikes, which can enhance the structural integrity of the local hillsides.*

- As illustrated on the excerpt from the USDA web soil survey (attached), the site is underlain by two similar clay rich soil types, which are known to occur in steeply sloping settings. soil scientists and geologists alike understand that the nature of surface soils are derived from parent materials - bedrock. The limited number of soil borings installed by JPB did not take into consideration there may be different soil types on the subject property.*

Response:

All the information which the PCA and its consultants have reviewed, including the JPB soil reports included as Appendix C of the DEA, indicate that the term saprolite is correctly employed as a noun, generally defined as chemically weathered rock in situ. The correct adjectival form of saprolite is “saprolitic,” which is used accurately in your comments. In response to your comment, the PCA has reviewed the Natural Resource Conservation Service’s Web Soil Survey which were submitted with your comments. That output clearly identifies

the underlying soils within the slope stabilization area as Alaeloa silty clay, with, 15 to 35 percent slopes (AeE) for the southern majority of the site, and a smaller area on the north side classified as Alaeloa silty clay, 40 to 70 percent slopes. Section 3.2 of the Final Environmental Assessment (FEA) has been updated to include this information.

The *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii* (Foote et al., 1972) prepared for the U.S. Department of Agriculture, Soil Conservation Service, defines Alaeloa silty clay as follows:

This soil occurs on smooth side slopes and toe slopes in the uplands. Included in mapping were small areas of dark brown soils on uplands and wet soils in the drainageways. Also included were small, eroded areas and gently sloping to moderately sloping areas.

In a representative profile the surface layer is dark reddish-brown silty clay about 10 inches thick. The subsoil, about 48 inches thick, is dark-red and red silty clay that has subangular blocky structure. The substratum is soft, weathered basic igneous rock. The soil is medium acid in the surface layer and strongly acid in the subsoil[.]

Thus, JPB's description of the soil as saprolite is generally accurate as a blanket term for the site's Alaeloa silty clay soils.

In sum, the PCA believes that: (i) saprolite as a term is properly used in the JPB Report; (ii) the JPB analysis adequately considers subsurface soil composition; and (iii) the presence of other soils elsewhere on the PCA property is not materially relevant in considering the potential environmental impacts of the Kōnane Slope Stabilization Project as the Proposed Action is limited to the Kōnane Slope fronting buildings 35 through 38 of the PCA project.

Please note that there is no prescribed boring depth for slope stability studies. Typically, borings depths should extend below potential failure surface, into hard stratum, or to a depth for which failure is unlikely because of slope geometry. In the case of the Kōnane Slope, if the borings were extended to depths greater than 15 feet, information beyond that depth would not have any effect on the analyses because indications of slippage were located at a shallower depth (i.e., less than 15 feet below the ground surface). JPB believes that sufficient borings were completed to characterize the subsurface soils on the project site. Borings were placed in critical areas of the slope in order to create a section profile of the slope to do the analyses.

Comment 4:

DEA: CHAPTER 3.4: HYDROLOGY

In my review of this section of the DEA, I found the reporting of technical information that typically did not apply to the hydrology issue. Similarly, information that would support any slope failure study and the occurrence and movement of groundwater was lacking. In addition, there was inconsistent use of publicly available data and information.

Examples of deficiencies and resulting inaccuracies include the following:

•Hydrology discussions for this location must include comprehensive surface water and groundwater conditions, as well as sources of water, specifically precipitation and leakage from man-made water supply systems.

•Detailed discussions of wetlands are necessary but irrelevant.

•No hydrology discussions are complete without discussions of precipitation.

•No hydrology discussions are complete without identifying the occurrence and movement of groundwater at the site and vicinity.

•No hydrology discussion is complete without an assessment of stormwater quantity and quality, including the presence of man-made pollutants such as oil and grease and metals.

Response:

The DEA was prepared pursuant to Revised Ordinances of Honolulu Section 25-3.3(c), and meets all of the content requirements of Hawai'i Revised Statutes, Chapter 343 and its implementing regulations contained in Hawai'i Administrative Rules, Title 11, Chapter 200.1, for an EA. The hydrological information contained in the DEA is intended to provide a clear summary of existing conditions and assess the potential for the Proposed Action, or its alternatives, to adversely impact surface or ground water bodies, and the discussion therein is commensurate with the above-referenced laws and regulations. It is noted that there are no surface water resources within the project site.

With specific regard to the assessment of groundwater occurrence within the project site, both the text of the DEA (see Section 3.4.1) and the JPB Geotechnical Reports (see Appendix C) note that the bore holes were inspected for groundwater, but none was observed. Please note that Section 3.4.1 has been revised to include a discussion of precipitation and an assessment of storm water quantities within the project area; these revisions are reflected in the FEA and confirm that anticipated site runoff will be less than or equal to existing conditions.

Comment 5:

DEA CHAPTER 3.5: TRAFFIC

*In my review of this section of the DEA, the most serious issue I found was that current traffic information was missing. Using traffic information from **11 years prior** is wholly inadequate, and any conclusions drawn would be considered deficient by any traffic consultant.*

The discussion regarding traffic from the Proposed Action does not take into account the added noise that will be experienced by residents on both sides of Lilipuna Road when the trees and vegetation have been removed.

Response:

The State of Hawai'i, Department of Transportation, Highways Division, Highways Planning Survey Section (HDOT) conducts occasional traffic counts for Lilipuna Road. At the time the DEA was written, the most recent data available for Lilipuna Road (Station No. B72654500000) from HDOT was from May 24-25, 2011; a summary of the relevant data was included in Table 3-2 of the DEA. Although this data is the most recent available, the DEA acknowledges that it is dated. However, in the absence of more recent data, there are several factors which led the PCA to consider this data broadly representative of existing conditions: (i) Lilipuna Road has not undergone significant development in the intervening years; (ii) the broader Kāneʻohe region has seen a slight reduction in total population in the interim; (iii) the traffic-related impacts (i.e., equipment, material, and worker vehicle-trips) from construction of the proposed project are modest and temporary; and (iv) once constructed the proposed project will have no impact on traffic whatsoever. Finally, noise impacts related to the Proposed Action are considered separately from traffic impacts in Section 3.7 of the DEA. The discussion therein acknowledges that there will be some temporary construction noise impacts but that these will be limited in scale and duration.

Comment 6:

CONCLUSIONS

There are numerous deficiencies and inaccuracies in other chapters within the DEA. The discussion of alternatives was irrelevant since the entire Section 3 was, in my opinion, heavily flawed.

In brief, these are my conclusions regarding the inadequacy of the DEA and the potential for the Proposed Action on the “Kōnane Slope” to cause unintended significant environmental impacts to the neighboring properties. They are listed in no particular order of importance.

*•The DEA dated November 2, 2022, and supporting documents are **substantially deficient**.*

*•The **DEA does not** satisfy the requirements to provide the necessary environmental information and technical analysis needed to allow the DPP and Honolulu City Council to support issuance of a SMP Major.*

•The Proposed Action appears to be a costly technical solution to a problem that does not exist.

•The reduction of excess stormwater draining from impervious sources above the “Kōnane Slope” can be cost effectively controlled and redirected.

•No amount of geotechnical underpinnings can stabilize the foundational integrity of existing condo buildings, if the geotechnical analysis has not considered historical design and construction methods, and the failures of the existing aging infrastructure, which includes but is not limited to stormwater conveyance systems.

Response:

The PCA is grateful for your review of the DEA and acknowledges your comments regarding your opinions on the adequacy of the DEA and the necessity for the Proposed Action. The DEA and FEA were prepared in compliance with the Revised Ordinances of Honolulu Chapter 25, HRS Chapter 343, HAR Title 11, Chapter 200.1, and the information requested by DPP as the approving agency.

The PCA notes that, rather than a “problem that does not exist,” the need for the project was identified initially by the CCH, as discussed above in the response to Comment 2, when it investigated a purported stormwater discharge from the PCA property. The slope instability and soil creep were then identified by the Report. The Proposed Action was subsequently developed as a response to the warning received from DFM and the findings of the Report. The DEA notes that the Proposed Action is preventative in nature to prevent slope failure.

The Proposed Action also responds to the requirements of the approved Master Landscape Plan (MLP) for the Kōnane Slope. To meet the requirements of the MLP, the Proposed Action must be implemented (i.e., the slope must first be stabilized).

Although you assert that excess stormwater can be controlled by other means, you do not provide information on what other means are available. As discussed in Sections 1.2 and 1.3 of the DEA, the purpose and need of the Proposed Action is not solely to address stormwater discharge from the PCA property, it is also needed to stabilize the Kōnane Slope and to implement the MLP, including the installation of street trees along Lilipuna Road. The current slope is too steep to allow for proper maintenance of vegetation on the existing slope. Furthermore, it will provide for improved pedestrian and vehicular traffic safety.

As discussed in the response to Comment 2 above, there are no buildings on the Kōnane Slope and therefore stabilization of the project buildings themselves is not the focus of the Report. The soil nails are recommended to stabilize the Kōnane Slope. The soil nails are not intended to underpin building foundations.

Comment 7:

In my opinion, the applicant would be better served to consider the following alternatives:

- (1) Conduct a thorough engineering assessment of storm water that falls on the impervious portions of the property (buildings, paved areas, access roads),*
- (2) Identify drainage failures and weaknesses in the infrastructure that allow stormwater to infiltrate the subsurface soils and regional bedrock with potentially contaminated stormwater,*
- (3) Implement a comprehensive improvement program to better capture onsite stormwater runoff and direct it to the existing municipal storm water drainage system,*

(4) Establish a semi-annual vegetation and tree health management program conducted by qualified arborists and vegetation management staff to protect the existing vegetation that currently thrives on the “ Kōnane Slope”, and

(5) Establish a program outlined above, which could include reducing the heights of selected trees to ensure their long-term success in windstorms and preserve the vistas of selected Pu'u Ali'i Community Association members.

Response:

The PCA acknowledges your recommendations and notes that there is substantial overlap between your recommended course of action, ongoing vegetation maintenance at the subject property, and improvements to the site conditions that are part of the Proposed Action. Storm water quantity and quality has been assessed, areas of weakness and potential slope failure have been identified, and the PCA is attempting to implement a comprehensive improvement program which will direct stormwater into the existing storm water drainage system.

The existing site drainage conditions are discussed in Section 3.4.2 of the DEA/FEA. Except for one swale, there are no drainage improvements currently on the Kōnane Slope, however, the PCA project does have an existing storm water drainage system *above* the Kōnane Slope project site that helps collect runoff from the PCA project's impervious portions of the property and conveys the runoff into the City's stormwater drainage system along Lilipuna Road.

Section 3.4 of the DEA and FEA discuss not only the existing site drainage conditions, but also the anticipated drainage conditions following implementation of the Proposed Action, which, as described in Section 2.1, is intended to implement an action to better capture storm water runoff. As discussed, the swale that will be developed at the bottom of the Kōnane Slope will improve the drainage conditions and direct the movement of storm water into the CCH's existing drainage system.

As discussed in Section 2.2 of the FEA, the PCA's DPP-approved MLP is intended to implement new landscaping for the entire Kōnane Slope that: *(i)* allows for vegetation that is easier for the PCA manage, *(ii)* will work with the newly stabilized slope; and *(iii)* satisfies all DPP requirements. The PCA has ongoing landscape maintenance contracts and after handover from the construction period, ongoing maintenance of the Kōnane Slope plantings will be undertaken as part of the condominium's landscape works. The landscape maintenance at the site is reviewed monthly during a PCA Landscape Committee walkthrough to ensure that all areas receive appropriate landscape maintenance work.

The PCA has both a certified arborist and a licensed landscape architect who monitor and advise on issues of plant establishment, health, stability, and ongoing issues such as trimming, pest/disease control, etc. The certified arborist conducts annual inspections of the trees on the property and helps to develop the scope of work for pruning contracts in coordination with PCA staff to ensure that trees are maintained in accordance with industry standards and best management practices.

Comment 8:

Above all, the “Kōnane Slope” needs to be properly maintained and protected to ensure that it continues to serve as a visual and noise attenuating buffer to be preserved in perpetuity.

It is my hope that a mutually agreeable solution will serve neighbors living at Pu‘u Ali‘i and Lilipuna Road residents.

Response:

The PCA, having evaluated a variety of potential alternatives as summarized in Section 2.5 of the DEA, believes that the Kōnane Slope Stabilization Project, as characterized in Section 2.1 of the DEA, is the best means available to address the slope stabilization and vegetation issues currently existing, and to maintain the slope on a long-term basis. As discussed in Section 2.2 of the DEA, following the Proposed Action, the PCA will implement the MLP, which is intended to serve as a buffer between the PCA project and neighboring properties.

The PCA worked with DPP for several years to develop the MLP, which considers viewpoints from both PCA owners and downslope neighbors. In the PCA's view, the MLP is a compromise of asks from PCA owners and neighbors to the project. The PCA believes that implementation of the Proposed Action and the MLP is the best solution to address the various perspectives.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

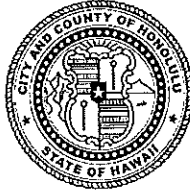
Mahalo,



Mākena White, AICP

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 • INTERNET: www.honolulu.gov



RICK BLANGIARDI
MAYOR

LAURA H. THIELEN
DIRECTOR

KĒHAULANI PU'U
DEPUTY DIRECTOR

December 20, 2022

Makena White, AICP
Planner
Planning Solutions, Inc.
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawaii 96813

Dear Makena White:

**SUBJECT: Draft Environmental Assessment and Anticipated Finding of
No Significant Impact (DEA/AFONSI)
Konane Slope Stabilization Project, Puu Alii Community Association
70 Konane Place, Kaneohe, Oahu, Hawaii
Tax Map Key Nos. (1) 4-6-002:002, 060, and 062**

The Division of Urban Forestry (DUF), Department of Parks and Recreation (DPR), reviewed the submittal for the above-noted project and has the following comments:

1. Chapter 2: Description of Proposed Action
 - a. Pages 33 through 36, Figures 2-9 through 2-12, Planting Plan for the North and South Zones:
 - i. It appears that some of the trees are within the City's Right-of-Way (ROW).
2. Chapter 4: Consistency with Land Use Plans, Policies, and Controls
 - a. Pages 93 and 94, Table 4-1, Summary of Conditions on Permit File No. 73/PDH-4:
 - i. Item No. 2, it states, "A portion of the project site fronting Lilipuna Road will be dedicated to the City to create a 56 foot ROW."
 - ii. Under Discussion, it states, "...the MLP will be implemented to provide for vegetation along Konane Slope as well as street trees along Lilipuna Road, consistent with the City's PDH guidelines."

3. Appendix A. Landscape Master Plan: Konane Slope Excerpt
 - a. Pages 110 through 114, Puu Alii Master Landscape Plan – Konane Slope & Lilipuna Streetscape Landscape Concept Sections, Pages 4 through 8:
 - i. It appears that the street trees will be planted inside of the property boundaries.

4. It is unclear if street trees will be within the City's ROW or within the private property. When the time comes, submit street tree plans to the Department of Planning and Permitting, Urban Design Branch for review

Should you have any questions regarding these comments, please contact Brandon Au, Acting DUF Landscape Architect at (808) 971-7151.

Sincerely,


Laura H. Thielen
Director

LHT:as
(892994)

cc: B. Au, DUF



June 23, 2023

Ms. Laura Thielen, Director
c/o Brandon Au, Acting Landscape Architect
Department of Parks and Recreation
City and County of Honolulu
1000 Ulu'ōhi'a Street, Suite 309
Kapolei, Hawai'i 96707

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Ms. Thielen:

Thank you for your December 20, 2022, letter concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response.

The Pu'u Ali'i Community Association (PCA) acknowledges your Department's remaining questions regarding the placement of vegetation within the PCA property as well as the City and County of Honolulu (CCH) right-of-way (ROW) along Lilipuna Road. The placement of trees and other vegetation will be conducted pursuant to the *Master Landscape Plan* (MLP; see DEA, Section 2.2).

Invasive trees currently growing within the City's right-of-way along the Kōnane Slope project area will be removed as part of the Proposed Action. All new trees to be planted will be within the PCA's private property boundary, including street trees for Lilipuna Road. As such, future maintenance of the street trees will be performed by the PCA. Street tree plans were approved by the Department of Planning and Permitting (DPP) on August 24, 2021. These clearly indicate that the street trees will be planted within the PCA private property. The plans will be resubmitted to DPP for approval at the appropriate time since street tree planting will not be completed within the two-year time limit due to the need to complete the EA for the Proposed Action.

The MLP, including the locations and placement of vegetation along the CCH ROW have been reviewed and approved by the DPP. The PCA will continue to consult with DPP throughout the Revised Ordinances of Honolulu, Chapter 25 environmental review and Special Management Area permitting processes.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at

the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

A handwritten signature in blue ink that reads "Makena". The signature is written in a cursive, flowing style.

Mākena White, AICP

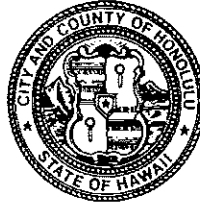
DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU

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

RICK BLANGIARDI
MAYOR

DAWN B. SZEWCZYK, P.E.
DIRECTOR AND CHIEF ENGINEER

WARREN K. MAMIZUKA
DEPUTY DIRECTOR



IN REPLY REFER TO:
DRM 22-393

December 21, 2022

Planning Solutions, Inc.
Attention: Makena White, AICP
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawaii 96813

Dear Ms. White:

Subject: Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA/AFONSI) Konane Slope Stabilization Project, Up'u Ali'i Community Association, 70 Konane Place, Kaneohe, Oahu, Hawaii, TMK Nos. (1) 4-6-001:002, -060, and -062

Thank you for the opportunity to review the subject project.

We have no comments at this time, as we do not have any facilities or easements on the subject properties.

If you have any questions, please call Mr. Kyle Oyasato of the Division of Road Maintenance at (808) 768-3697.

Sincerely,

A handwritten signature in black ink, appearing to read "Dawn B. Szewczyk".

Dawn B. Szewczyk, P.E.
Director and Chief Engineer



June 23, 2023

Dawn B. Szewczyk, P.E., Director & Chief Engineer
Department of Facility Maintenance
City and County of Honolulu
1000 Ulu'ōhi'a Street, Suite 215
Kapolei, HI 96707

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Ms. Szewczyk:

Thank you for your December 21, 2022, letter (Ref. No. DRM 22-393) concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing the DEA and preparing your response.

Thank you for confirming that the Department of Facility Maintenance does not have any facilities or easements on the PCA property, and that your Department does not have any other comments to offer.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

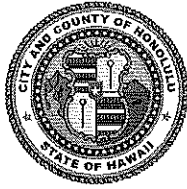
Mahalo,

Mākena White, AICP

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honolulu.gov/dpp

RICK BLANGIARDI
MAYOR



DAWN TAKEUCHI APUNA
DIRECTOR DESIGNATE

JIRO A. SUMADA
DEPUTY DIRECTOR

December 22, 2022

2022/ED-19(CK)

Mr. Makena White
Planning Solutions, Inc.
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawaii 96813

Dear Mr. White:

SUBJECT: Comments on Draft Environmental Assessment (DEA)
Konane Slope Stabilization Project
46-40, 50, and 70 Konane Place - Kaneohe
Tax Map Keys 4-6-001:002, 060, and 062

This is in response to the submittal, received October 28, 2022, of the above-referenced DEA as required under Chapter 25, Revised Ordinances of Honolulu (ROH). We understand that the Project proposes to implement a slope stabilization and landscaping replacement project on a portion of the Puu Alii Condominium Association property in the R-10 Residential District and Special Management Area (SMA) in Kaneohe, Oahu (Project). Because it is located in the SMA, and has an estimated cost of greater than \$500,000, the Project will require approval of an SMA Use Permit by Resolution of the City Council prior to implementation. Our comments are as follows:

1. *Compliance with Existing DPP Approvals*

The proposed landscape plan evaluated in the DEA is in accordance with the 2020 Department of Planning and Permitting (DPP)-approved Master Landscape Plan (MLP). The proposed grading plans evaluated in the DEA are also in accordance with the grading plans approved for the Project on June 8, 2021 (DPP File No. 2022/CP-47 for Buildings 37 and 38; and DPP File No. 2022/CP-117 for Buildings 35 and 36). These approvals should be included into the discussion in the Final EA (FEA).

2. *General Plan and Sustainable Communities Plan (SCP) Consistency*

The FEA should include a discussion of the more relevant sections of the Oahu General Plan as it relates to the Proposed Action. The FEA should include a discussion of the Project's consistency with *Section III. Natural Environmental and Resource Stewardship* of the Oahu General Plan.

In its discussion about conformance with the Koolau Poko SCP, the FEA should include a discussion of how the Project preserves scenic views of the ridges and upper valley slopes from the coastal waters of Kaneohe Bay.

3. *Sections 3.1.2 and 3.1.3 Biological Resources*

The FEA should include a discussion of potential impacts and mitigation measures related to protected migratory birds and Hawaiian seabirds that may roost or forage in the area.

4. *Landscape Monitoring –Protection of Visual Resources, Soil Stability, and Water Quality*

The FEA should expand upon the Project's proposal to monitor the growth of vegetation planted under the MLP for a period of six months. Will such a time frame be sufficient for plant establishment and stability? By what criteria will the health and stability of the landscaping and other proposed vegetation be measured? By whom, when, and how will additional monitoring and or replanting be required?

5. *Hydrology, Drainage, and Water Quality*

The Hydrology section of the DEA currently focuses on the movement of soils proposed by the Project. The FEA should also provide a discussion of the source, volume, direction, and existing and proposed facilities for correction of storm water drainage under the existing condition, construction phase, landscape establishment phase, and long-term operational phase, particularly as it relates to runoff anticipated to remain on the property, collect and drain through the proposed swale along Lilipuna Road, and/or eventually drain to Kaneohe Bay. For example, will the Project result in increased runoff? What is the relationship of the proposed drainage swale to these runoff volumes, drainage patterns, and existing versus proposed infrastructure between the subject property and the waters of Kaneohe Bay?

Further, the Project proposes removal of over 6,400 cubic yards of soil material. The FEA should disclose the proposed disposal location for this material.

6. *Geotechnical Reports*

The "Limitations" sections of the two Geotechnical Reports included in Appendix C to the DEA (JPB Engineering Inc., September 26, 2019 and July 31, 2020 and) each state that "*if more than one year passes between the date of this report and initiation of construction, the contents of this report must be reviewed and, if necessary, modified in light of intervening changed conditions.*" Therefore, the FEA should incorporate a review of these reports for changes to Project site conditions, and the most recent generally accepted professional standards for similar studies, that may have occurred since the most recent July 31, 2020, report date.

7. *Historical and Cultural Resources*

We understand that the State Historic Preservation Division (SHPD) has been experiencing staffing issues for an extended period of time, and as a result, receiving timely responses to requests for comments and recommendations regarding mitigation for potential impacts to unknown archaeological resources remains an ongoing challenge. That said, please continue to pursue SHPD recommendations, and document your outreach efforts to SHPD staff throughout the preparation of the FEA for the proposed Project.

8. *Community Outreach*

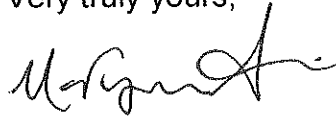
Section 4.1.4.8 of the DEA describes public notification and publication requirements during the DEA. Please be aware that pursuant to Section 25-5.1(b), ROH, prior to submitting the application for an SMA Use Permit, the Applicant must present the Project to the applicable Neighborhood Board (NB) and/or Community Association unless the NB or Community Association fails to provide the Applicant with an opportunity to present the Project within 60 days of the date of the written request or they provide the Applicant with written notice that it has no objection to the Project or no presentation is necessary.

We understand from previous correspondence that the Project will be presented before the Kaneohe Neighborhood Board in January, 2023. We recommend that any comments received at this presentation be incorporated into the FEA if practicable within the Project timeframe. Compliance with this code section will also be reviewed when we receive the SMA Use Permit application.

Mr. Makena White, AICP
December 22, 2022
Page 4

Thank you for the opportunity to comment on this proposal. Should you have any questions, please contact Christi Keller, of our staff, at (808) 768-8087 or via email at c.keller@honolulu.gov.

Very truly yours,

for 
Dawn Takeuchi Apuna
Director Designate



June 23, 2023

Dawn Takeuchi Apuna, Director
c/o Christi Keller (c.keller@honolulu.gov)
Department of Planning and Permitting
City and County of Honolulu

**Subject: Response to Comment on Draft Environmental Assessment for the
Kōnane Slope Stabilization Project**

Dear Ms. Takeuchi Apuna:

Thank you for your December 22, 2022, letter (Reference No. 2022/ED-19(CK)) concerning the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time that you and your staff spent reviewing the DEA and preparing your response. To simplify your review, we have reproduced your substantive comments below in italics, followed by our response:

Comment 1:

1. Compliance with Existing DPP Approvals

The proposed landscape plan evaluated in the DEA is in accordance with the 2020 Department of Planning and Permitting (DPP)-approved Master Landscape Plan (MLP). The proposed grading plans evaluated in the DEA are also in accordance with the grading plans approved for the Project on June 8, 2021 (DPP File No. 2022/CP-47 for Buildings 37 and 38; and DPP File No. 2022/CP-117 for Buildings 35 and 36). These approvals should be included into the discussion in the Final EA (FEA).

Response:

Section 1.1 of the Final Environmental Assessment (FEA) has been amended to include a discussion of these approvals.

Comment 2:

2. General Plan and Sustainable Communities Plan (SCP) Consistency

The FEA should include a discussion of the more relevant sections of the Oahu General Plan as it relates to the Proposed Action. The FEA should include a

discussion of the Project's consistency with Section III. Natural Environmental and Resource Stewardship of the Oahu General Plan.

In its discussion about conformance with the Koolau Poko SCP, the FEA should include a discussion of how the Project preserves scenic views of the ridges and upper valley slopes from the coastal waters of Kaneohe Bay.

Response:

Sections 4.2.1 and 4.2.2 of the FEA have been revised to incorporate additional discussion of the project's consistency with the above-referenced portions of the *O'ahu General Plan* and the *Ko'olau Poko SCP*.

Comment 3:

3. *Sections 3.1.2 and 3.1.3 Biological Resources*

The FEA should include a discussion of potential impacts and mitigation measures related to protected migratory birds and Hawaiian seabirds that may roost or forage in the area.

Response:

Sections 3.1.2 and 3.1.3 of the FEA have been revised to incorporate additional discussion of the project's potential impacts and mitigation measures related to migratory birds and Hawaiian seabirds. The revised language reflects that the principal danger to protected avian species including native Hawaiian seabirds is caused by the potential for young birds to be downed after becoming disoriented by artificial light during their fledging season, which runs from September 15th until December 15th. However, because the Kōnane Slope Stabilization Project incorporates neither outdoor lighting, nor any elevated artificial structures which could increase the potential for inadvertent bird collisions, the Proposed Action is not anticipated to have any deleterious impacts to protected seabirds and no additional mitigation is required.

Comment 4:

4. *Landscape Monitoring -Protection of Visual Resources, Soil Stability, and Water Quality*

The FEA should expand upon the Project's proposal to monitor the growth of vegetation planted under the MLP for a period of six months. Will such a time frame be sufficient for plant establishment and stability? By what criteria will the health and stability of the landscaping and other proposed vegetation be measured? By whom, when, and how will additional monitoring and or replanting be required?

Response:

The six-month monitoring period identified in the DEA is tied to proposed contractual conditions and warranty requirements by the landscaping contractor and subcontractor(s). However, the monitoring will not be limited to a six-month period. The Pu‘u Ali‘i Community Association (PCA) has ongoing landscape maintenance contracts and after handover from the construction period, ongoing maintenance of the Kōnane Slope plantings will be undertaken as part of the condominium’s landscape works. The landscape maintenance at the site is: (1) monitored weekly by the Landscape Maintenance Contractor and the PCA Maintenance Staff; and (2) reviewed approximately every four months during a PCA Landscape Committee walkthrough to ensure that all areas receive appropriate landscape maintenance work as part of the rotation between phases.

The PCA has both a certified arborist and a licensed landscape architect who monitor and advise on issues of plant establishment, health, stability, and ongoing issues such as trimming, pest/disease control, etc. The certified arborist conducts annual inspections of the trees on the property and helps to develop the scope of work for pruning contracts in coordination with the PCA staff, to ensure that trees are maintained in accordance with industry standards and best management practices. The PCA will notify the Department of Planning and Permitting (DPP) of any significant landscape changes as part of the Master Landscape Plan, if any, on an annual basis.

Section 2.2.2 of the FEA has been revised to incorporate this additional discussion regarding vegetation establishment and management.

Comment 5:

5. *Hydrology, Drainage, and Water Quality*

The Hydrology section of the DEA currently focuses on the movement of soils proposed by the Project. The FEA should also provide a discussion of the source, volume, direction, and existing and proposed facilities for correction of storm water drainage under the existing condition, construction phase, landscape establishment phase, and long-term operational phase, particularly as it relates to runoff anticipated to remain on the property, collect and drain through the proposed swale along Lilipuna Road, and/or eventually drain to Kaneohe Bay. For example, will the Project result in increased runoff? What is the relationship of the proposed drainage swale to these runoff volumes, drainage patterns, and existing versus proposed infrastructure between the subject property and the waters of Kaneohe Bay?

Further, the Project proposes removal of over 6,400 cubic yards of soil material. The FEA should disclose the proposed disposal location for this material.

Response:

The site drainage patterns for the existing and proposed conditions were reviewed by DPP's Civil Engineering Branch (CEB) as part of the grading construction plans 2020/CP-47 and 2020/CP-117. Attached are copies of two drainage assessments that CEB had reviewed which summarize the existing and proposed drainage conditions at the project site. The Proposed Action is not anticipated to increase runoff from the project site as the improvements will not be placing impervious surface areas on the slope, and will remain vegetated and permeable. The proposed drainage swale was sized to accommodate the runoff from the slope, which is anticipated to have improved drainage conditions following implementation of the Proposed Action compared to the existing slope conditions, which discharge directly to the edge of the pavement in many areas along Lilipuna Road. Please see the additional discussion added to Section 3.4.2 of the FEA to address your comment, which identifies the existing and anticipated runoff conditions after implementation of the Proposed Action. Overall, runoff conditions from the project site will improve. Please note, however, that the Proposed Action is not a drainage reduction/mitigation project, but rather a slope stabilization project. The drainage assessment conducted for the DPP CEB was to double check that the proposed slope stabilization project does not cause adverse drainage impacts to downslope properties. The Proposed Action is expected to improve the drainage conditions at the bottom of the slope along the road shoulder of Lilipuna Road, to provide a wide swale to handle the existing runoff which flows down the slope (compared to existing conditions, the runoff flows onto the road and there is not really any road drainage currently).

Please also note that the existing storm drain system on the PCA project site captures all of the runoff from the developed impervious areas of the site *above* the Kōnane Slope, which then conveys the water through a 30" drain line into the City's storm drain system along Lilipuna Road.

The Slope Stabilization Project has the benefit of additional review and comments from the City's Department of Environmental Services, Storm Water Quality Division during the design phase, which provided suggestions and recommendations for erosion and sediment control Best Management Practices, shown on the grading plans approved by DPP. The Department of Facility Maintenance (DFM) typically would not review a slope stabilization grading construction plan project with a similar scope of work, however DFM reviewed the proposed project in detail due to DFM's temporary sediment fencing placed near the bottom of the project site along the northern portion of the project. The Department of Health Clean Water Branch also reviewed the proposed project for National Pollutant Discharge Elimination System (NPDES) permit requirements, which will aid the contractor by being able to follow the storm water pollution prevention plan for the NPDES permit approved for the Proposed Action.

To the extent practicable, the contractor will reuse the soil material from the Proposed Action onsite. However, the PCA's contractor will ultimately make the determination regarding how any soil material will be repurposed or disposed of offsite and will be conducted in a manner consistent with all applicable rules and regulations. During the contractor bidding process, language can be inserted into the Request for Proposal requiring the contractor to provide documentation as to the disposition of removed soil.

At this time, the Applicant has no plans to reuse any of the removed soil material at locations on the PCA property other than on the Kōnane Slope.

Comment 6:

6. *Geotechnical Reports*

The "Limitations" sections of the two Geotechnical Reports included in Appendix C to the DEA (JPB Engineering Inc., September 26, 2019 and July 31, 2020 and) each state that "if more than one year passes between the date of this report and initiation of construction, the contents of this report must be reviewed and, if necessary, modified in light of intervening changed conditions." Therefore, the FEA should incorporate a review of these reports for changes to Project site conditions, and the most recent generally accepted professional standards for similar studies, that may have occurred since the most recent July 31, 2020, report date.

Response:

By letter dated February 21, 2023, JPB Engineering, Inc. (JPB) reviewed the geotechnical reports for the Kōnane Slope to determine whether any significant changes to the project site conditions occurred necessitating an update of the geotechnical reports. Based on a February 2, 2023, site visit, JPB determined that no modifications to the geotechnical reports are needed at this time. The report also reviews compliance with the most recent generally accepted professional standards for similar studies. The February 2023 JPB review is included as Appendix C to the Final Environmental Assessment (FEA), and also included here as Attachment 2.

Comment 7:

7. *Historical and Cultural Resources*

We understand that the State Historic Preservation Division (SHPD) has been experiencing staffing issues for an extended period of time, and as a result, receiving timely responses to requests for comments and recommendations regarding mitigation for potential impacts to unknown archaeological resources remains an ongoing challenge. That said, please continue to pursue SHPD recommendations, and document your outreach efforts to SHPD staff throughout the preparation of the FEA for the proposed Project.

Response:

The State Historic Preservation Division (SHPD) has indicated that, for a Hawai'i Revised Statutes, Chapter 6E-42 review (e.g., reviews related to the issuance of state and county permits and approvals), SHPD will not review until the permit or approval application, in this case for an SMP Major application, is complete. Therefore, SHPD will not commence its review until after the completion of the FEA and issuance of the Finding of No Significant Impact (FONSI),

which are requirements for a completed SMP Major application. As soon as the FEA-FONSI for the Kōnane Slope Stabilization Project is complete, the PCA will submit its complete SMP Major application to SHPD for their review.

Comment 8:

8. *Community Outreach*

Section 4.1.4.8 of the DEA describes public notification and publication requirements during the DEA. Please be aware that pursuant to Section 25-5.1(b), ROH, prior to submitting the application for an SMA Use Permit, the Applicant must present the Project to the applicable Neighborhood Board (NB) and/or Community Association unless the NB or Community Association fails to provide the Applicant with an opportunity to present the Project within 60 days of the date of the written request or they provide the Applicant with written notice that it has no objection to the Project or no presentation is necessary.

We understand from previous correspondence that the Project will be presented before the Kaneohe Neighborhood Board in January, 2023. We recommend that any comments received at this presentation be incorporated into the FEA if practicable within the Project timeframe. Compliance with this code section will also be reviewed when we receive the SMA Use Permit application.

Response:

As described in Chapter 6 of the FEA, the presentation of the project to the Kāne‘ohe Neighborhood Board No. 30 (NB) occurred on January 19, 2023. The NB agenda and written testimony received at the meeting are included as Appendix F to the FEA. Pursuant to Ordinance No. 21-027, and in consultation with DPP staff, prior to the January 19, 2023, meeting, PSI, on behalf of the Applicant, sent written notification of the scheduled NB meeting to adjoining landowners as well as owners within 300 feet of the Kōnane Slope project site parcels. Some of the comments received during the NB meeting were similar to written comments received from area residents during the DEA comment period, including some comments in support of the Proposed Action and some comments from individuals opposed to the Proposed Action. Our responses to the comments received on the DEA are provided in our response letters to those individuals and groups, and have been incorporated, as appropriate, into the relevant sections of the FEA.

At the NB meeting, a NB member asked for additional information on the timeline for the landscaping on the Kōnane Slope to become established. Supplemental language in response to this question regarding the anticipated timeline for landscape establishment has been added to Section 3.3 of the FEA. Additionally, one or more NB members requested a site visit of the PCA property and the project site. In February 2023, a PCA Board representative and PCA staff representatives met with three NB members to walk along the project site and respond to follow-up questions, including describing the existing and proposed project elements, and project objectives, such as, but not limited to, improving erosion and drainage conditions from

the slope, and that the project design is expected to improve safety conditions along the portion of Lilipuna Road that fronts the Kōnane Slope.

Thank you again for participating in the environmental review process for the Kōnane Slope Stabilization Project. You may download a copy of the Final Environmental Assessment at the Environment Review Program's website (<https://planning.hawaii.gov/erp/>) once its availability is announced in The Environmental Notice.

If you have any questions or concerns in the future regarding this project, please contact me at (808) 550-4538.

Mahalo,

A handwritten signature in blue ink that reads "Mākena".

Mākena White, AICP

Attachments:

1. Drainage Assessments
2. JPB Review Reports

Dempsey Pacific Inc.

Civil Engineering Design & Consulting Services

March 24, 2020

City and County of Honolulu
Civil Engineering Branch
650 S. King Street, 8th Floor
Honolulu, HI 96813

RE: Drainage Assessment for Slope Stabilization for Puu Alii Community Association
TMK: (1) 4-6-001:002 & 062

Dear DPP,

This project involves slope stabilization of an existing slope on the property. The existing drainage conditions will be improved since a new shoulder and swale will be provided adjacent to the existing roadway edge of pavement to minimize the amount of runoff that would flow onto the roadway (like the current existing conditions) and will better direct the runoff from the slope into the existing drain inlet by the side of the road. The site will be improved with a TECCO mesh and erosion control fabric with new permanent vegetative cover. The area to be improved is 0.51 acres in size. The runoff coefficient is estimated to be 0.40 based on the steepness of the slope, but without any impervious surfaces. The proposed conditions will have a higher quality of vegetation than the existing conditions, so the proposed runoff coefficient would be slightly less than the existing runoff coefficient, however we will use the same runoff coefficient for both existing and proposed conditions. $C = 0.40$.

The rainfall intensity at the project site is 2.63 inches of 1-hour rainfall according to the NOAA Rainfall Atlas for the 10-year recurrence interval at the site (applicable for drainage areas less than 100 acres in size). Do to the steepness of the slope and short travel time, the time of concentration for the existing and proposed condition is estimated at 5 minutes (smallest T_c for design purposes). A correction factor of 2.8 is used for the existing and proposed conditions. Therefore the design rainfall intensity is 7.36 inches/hour for the existing and proposed 10-year conditions. $I = 7.36$

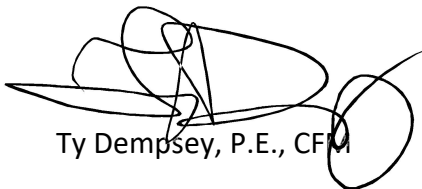
The area of the property being improved is 0.51 acres. $A = 0.51$

The 10-year peak runoff rate for the existing and proposed conditions is estimated at:

$$Q = C I A = (0.40) (7.36) (0.51) = 1.50 \text{ cfs}$$

The proposed drainage area and slope vegetation will remain the same (or better) than the existing conditions. Since the proposed improvements will not change the existing drainage patterns and provide better slope stabilization and permanent vegetative cover, no adverse impacts will occur to adjacent properties. To better facilitate the runoff from the slope, a 5' or wider shoulder and swale will be added at the base of the slope to direct the runoff into the existing drain inlet. The existing roadway has an average running slope of 11%. The new 5' wide (or wider) shoulder and swale will have a 2% cross slope away from the edge of pavement and towards the base of the slope. A Manning's coefficient of 0.035 can be used for this new grassed shoulder and swale. Based on the drainage area of the existing slope on the north side of the existing drain inlet is 0.30 acres, while the drainage area for the slope on the south side of the existing drain inlet is 0.21 acres. For the grassed swale on the north side of the drain inlet, the 0.30 acres of drainage area would be 58.8% of the total runoff from the slope, or have an anticipated peak runoff rate of 0.88 cfs. Based on a hydraulic analysis of the grassed swale (see attached hydraulic analysis report), we'd anticipate the grassed swale to have a flow depth of 0.124' and flow velocity of 2.199 fps. The swale is 10' wide at the bottom of the swale just before draining into the drain inlet. Based on the 10' wide grassed swale at 2.0% cross slope, the 0.124' flow depth would be less than the 0.2' swale depth, so no water would be anticipated to flow onto the street pavement. The swale width gradually gets narrower running up the road which corresponds to the drainage area and runoff flowrates getting smaller, so the grassed swale is sized appropriately to convey the existing and proposed runoff anticipated from the slope to flow into the existing drain inlet with an improved grass swale, compared to the existing conditions where the runoff flows along the outside edges of the road pavement (since the existing bottom of slope ties into the edge of road pavement in most areas).

Sincerely,

A handwritten signature in black ink, appearing to read 'Ty Dempsey', with a large, stylized flourish extending to the right.

Ty Dempsey, P.E., CFM



NOAA Atlas 14, Volume 4, Version 3
Location name: Kaneohe, Hawaii, USA*
Latitude: 21.4253°, Longitude: -157.7933°
Elevation: 92.7 ft**



* source: ESRI Maps
 ** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

S. Perica, D. Martin, B. Lin, T. Parzybok, D. Riley, M. Yekta, L. Hiner, L.-C. Chen, D. Brewer, F. Yan, K. Maitaria, C. Trypaluk, G. M. Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aerials](#)

PF tabular

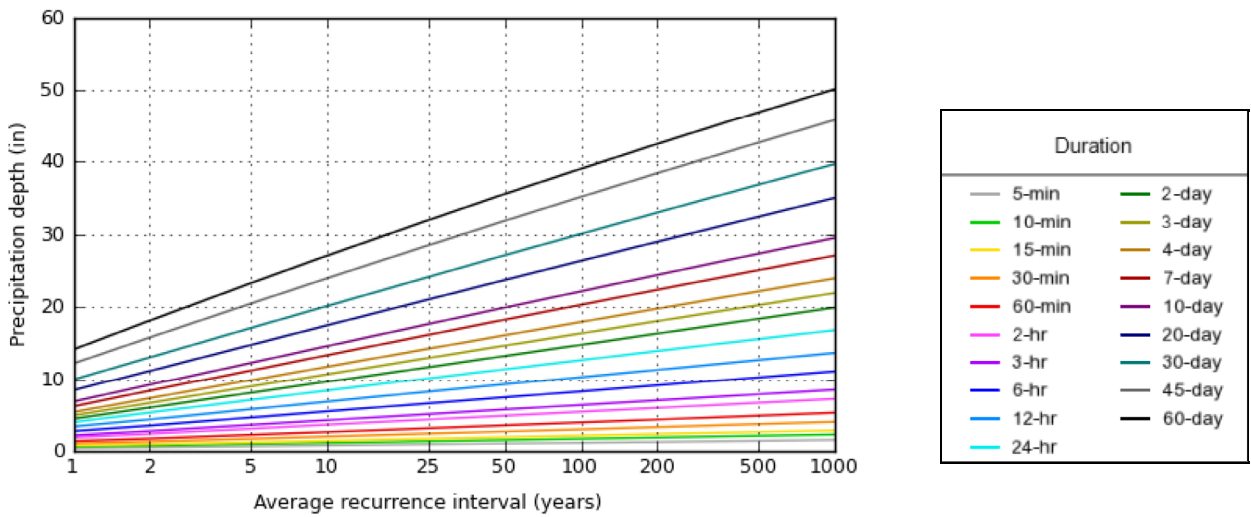
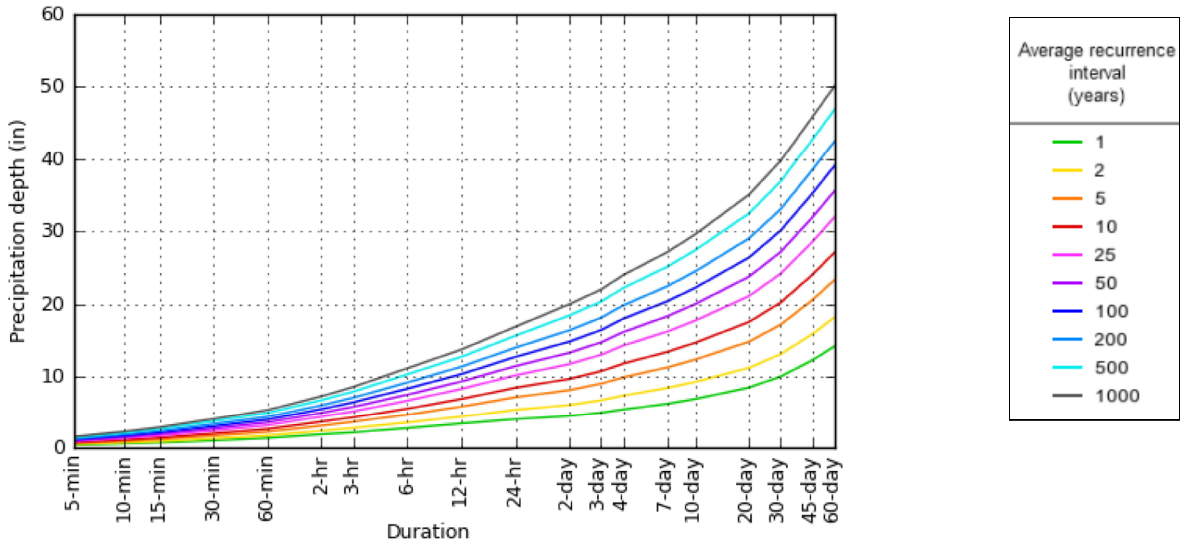
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.401 (0.351-0.443)	0.499 (0.431-0.560)	0.648 (0.557-0.731)	0.762 (0.650-0.864)	0.916 (0.767-1.05)	1.03 (0.849-1.19)	1.15 (0.927-1.34)	1.26 (0.999-1.50)	1.42 (1.08-1.72)	1.54 (1.14-1.90)
10-min	0.595 (0.520-0.657)	0.739 (0.639-0.830)	0.961 (0.826-1.08)	1.13 (0.964-1.28)	1.36 (1.14-1.55)	1.53 (1.26-1.77)	1.70 (1.37-1.99)	1.87 (1.48-2.23)	2.11 (1.61-2.56)	2.28 (1.69-2.82)
15-min	0.747 (0.653-0.826)	0.928 (0.802-1.04)	1.21 (1.04-1.36)	1.42 (1.21-1.61)	1.71 (1.43-1.95)	1.92 (1.58-2.22)	2.13 (1.73-2.50)	2.35 (1.86-2.80)	2.65 (2.02-3.21)	2.87 (2.12-3.54)
30-min	1.05 (0.919-1.16)	1.31 (1.13-1.47)	1.70 (1.46-1.92)	2.00 (1.70-2.26)	2.40 (2.01-2.75)	2.70 (2.23-3.12)	3.00 (2.43-3.52)	3.31 (2.62-3.93)	3.72 (2.84-4.52)	4.04 (2.98-4.99)
60-min	1.38 (1.21-1.53)	1.72 (1.49-1.93)	2.23 (1.92-2.52)	2.63 (2.24-2.98)	3.16 (2.65-3.61)	3.55 (2.93-4.11)	3.95 (3.20-4.63)	4.36 (3.44-5.18)	4.90 (3.74-5.95)	5.31 (3.92-6.56)
2-hr	1.89 (1.64-2.07)	2.37 (2.05-2.68)	3.09 (2.66-3.50)	3.64 (3.11-4.14)	4.37 (3.66-5.01)	4.91 (4.05-5.68)	5.44 (4.41-6.38)	5.98 (4.73-7.12)	6.69 (5.11-8.15)	7.23 (5.34-8.96)
3-hr	2.15 (1.87-2.35)	2.77 (2.40-3.12)	3.62 (3.12-4.09)	4.27 (3.64-4.84)	5.12 (4.30-5.86)	5.76 (4.75-6.66)	6.39 (5.18-7.48)	7.03 (5.56-8.35)	7.87 (6.01-9.56)	8.51 (6.29-10.5)
6-hr	2.76 (2.39-3.03)	3.52 (3.05-3.96)	4.64 (4.00-5.24)	5.50 (4.69-6.23)	6.61 (5.56-7.57)	7.44 (6.15-8.62)	8.28 (6.71-9.69)	9.13 (7.23-10.8)	10.3 (7.83-12.5)	11.1 (8.20-13.7)
12-hr	3.39 (2.93-3.72)	4.37 (3.78-4.93)	5.79 (4.99-6.54)	6.85 (5.85-7.77)	8.24 (6.92-9.44)	9.27 (7.66-10.7)	10.3 (8.34-12.1)	11.3 (8.96-13.4)	12.7 (9.67-15.4)	13.7 (10.1-16.9)
24-hr	3.99 (3.51-4.45)	5.33 (4.68-5.95)	7.09 (6.20-7.95)	8.40 (7.32-9.47)	10.1 (8.72-11.5)	11.4 (9.74-13.1)	12.7 (10.7-14.8)	13.9 (11.6-16.5)	15.6 (12.7-18.8)	16.8 (13.5-20.7)
2-day	4.47 (3.97-4.94)	6.02 (5.33-6.67)	8.08 (7.13-8.99)	9.63 (8.47-10.8)	11.7 (10.2-13.2)	13.2 (11.4-15.1)	14.8 (12.6-17.1)	16.3 (13.8-19.1)	18.4 (15.2-21.9)	19.9 (16.1-24.2)
3-day	4.93 (4.38-5.45)	6.67 (5.91-7.38)	8.97 (7.91-9.96)	10.7 (9.39-11.9)	13.0 (11.3-14.6)	14.7 (12.6-16.7)	16.4 (14.0-18.9)	18.1 (15.2-21.1)	20.3 (16.7-24.2)	21.9 (17.8-26.6)
4-day	5.39 (4.78-5.95)	7.32 (6.49-8.09)	9.86 (8.69-10.9)	11.8 (10.3-13.1)	14.2 (12.4-16.1)	16.1 (13.9-18.3)	17.9 (15.3-20.7)	19.8 (16.6-23.1)	22.2 (18.3-26.5)	24.0 (19.4-29.1)
7-day	6.19 (5.49-6.83)	8.38 (7.42-9.25)	11.2 (9.90-12.5)	13.4 (11.7-14.9)	16.2 (14.1-18.2)	18.3 (15.7-20.8)	20.3 (17.3-23.4)	22.4 (18.9-26.2)	25.1 (20.7-30.0)	27.1 (22.0-32.9)
10-day	6.84 (6.06-7.56)	9.20 (8.15-10.2)	12.3 (10.8-13.6)	14.6 (12.8-16.3)	17.6 (15.4-19.9)	19.9 (17.2-22.7)	22.2 (18.9-25.6)	24.4 (20.6-28.6)	27.3 (22.6-32.7)	29.5 (24.0-35.9)
20-day	8.44 (7.49-9.30)	11.2 (9.89-12.3)	14.8 (13.0-16.4)	17.5 (15.3-19.5)	21.0 (18.3-23.7)	23.7 (20.5-27.0)	26.4 (22.5-30.4)	29.0 (24.4-33.9)	32.4 (26.8-38.8)	35.0 (28.4-42.6)
30-day	9.96 (8.83-11.0)	13.0 (11.6-14.4)	17.1 (15.1-19.0)	20.1 (17.7-22.5)	24.1 (21.0-27.2)	27.1 (23.4-30.9)	30.1 (25.6-34.7)	33.0 (27.8-38.6)	36.8 (30.4-44.0)	39.7 (32.2-48.3)
45-day	12.2 (10.8-13.5)	15.8 (14.0-17.5)	20.5 (18.1-22.7)	24.0 (21.1-26.8)	28.5 (24.8-32.1)	31.9 (27.5-36.3)	35.2 (30.0-40.6)	38.4 (32.4-45.0)	42.7 (35.2-51.0)	45.8 (37.1-55.7)
60-day	14.1 (12.6-15.6)	18.1 (16.1-20.1)	23.3 (20.6-25.9)	27.1 (23.8-30.3)	32.0 (27.8-36.1)	35.6 (30.7-40.5)	39.0 (33.3-45.1)	42.5 (35.8-49.7)	46.9 (38.7-56.0)	50.1 (40.6-60.9)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

[Back to Top](#)

PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 21.4253°, Longitude: -157.7933°

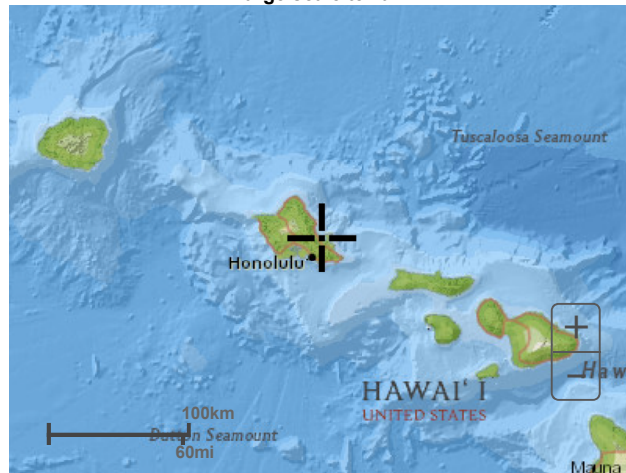


Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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[National Oceanic and Atmospheric Administration](#)
[National Weather Service](#)
[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

[Disclaimer](#)

Hydraulic Analysis Report

Project Data

Project Title: Puu Alii Community Association Slope Stabilization

Designer: Dempsey Pacific Inc.

Project Date: Wednesday, March 25, 2020

Project Units: U.S. Customary Units

Notes: Northern Portion of grassed swale (north of existing drain inlet)

Channel Analysis: Grassed Swale

Notes:

Input Parameters

Channel Type: Triangular

Side Slope 1 (Z1): 50.0000 ft/ft

Side Slope 2 (Z2): 2.0000 ft/ft

Longitudinal Slope: 0.1100 ft/ft

Manning's n: 0.0350

Flow: 0.8800 cfs

Result Parameters

Depth: 0.1240 ft

Area of Flow: 0.4001 ft²

Wetted Perimeter: 6.4811 ft

Hydraulic Radius: 0.0617 ft

Average Velocity: 2.1995 ft/s

Top Width: 6.4505 ft

Froude Number: 1.5564

Critical Depth: 0.2170 ft

Critical Velocity: 0.7189 ft/s

Critical Slope: 0.0056 ft/ft

Critical Top Width: 76.27 ft

Calculated Max Shear Stress: 0.8515 lb/ft²

Calculated Avg Shear Stress: 0.4237 lb/ft²

Dempsey Pacific Inc.

Civil Engineering Design & Consulting Services

June 24, 2020

City and County of Honolulu
Civil Engineering Branch
650 S. King Street, 8th Floor
Honolulu, HI 96813

RE: Drainage Assessment for Puu Alii Community Association Buildings 35 & 36
TMK: (1) 4-6-001:060 & 062

Dear DPP,

This project involves a phase 2 area of graded slope stabilization of an existing slope on the property. The existing drainage conditions will be improved since a new shoulder and swale will be provided adjacent to the existing roadway edge of pavement to minimize the amount of runoff that would flow onto the roadway (like the current existing conditions) and will better direct the runoff from the slope into the existing drain inlet by the side of the road. The site will be improved with erosion control fabric with new permanent vegetative cover. The area to be improved is 0.71 acres in size. The runoff coefficient is estimated to be 0.40 based on the steepness of the slope, but without any impervious surfaces. The proposed conditions will have a higher quality of vegetation than the existing conditions, so the proposed runoff coefficient would be slightly less than the existing runoff coefficient and estimated at 0.38. Therefore the runoff coefficients will be $C = 0.40$ (existing), $C = 0.38$ (proposed).

The rainfall intensity at the project site is 2.63 inches of 1-hour rainfall according to the NOAA Rainfall Atlas for the 10-year recurrence interval at the site (applicable for drainage areas less than 100 acres in size). Due to the steepness of the slope and short travel time, the time of concentration for the existing and proposed condition is estimated at 5 minutes (smallest T_c for design purposes). A correction factor of 2.8 is used for the existing and proposed conditions. Therefore the design rainfall intensity is 7.36 inches/hour for the existing and proposed 10-year conditions. $I = 7.36$

The area of the property being improved is 0.71 acres. $A = 0.71$

The 10-year peak runoff rate for the existing conditions is estimated at:

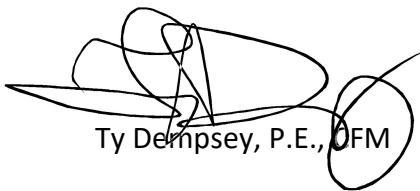
$$Q = C I A = (0.40) (7.36) (0.71) = 2.09 \text{ cfs}$$

The 10-year peak runoff rate for the proposed conditions is estimated at:

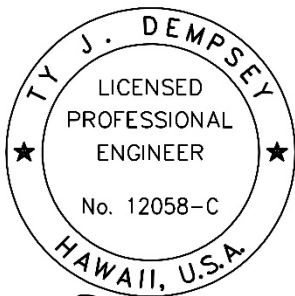
$$Q = C I A = (0.38) (7.36) (0.71) = 1.99 \text{ cfs}$$

The proposed drainage area and slope vegetation will remain the same (or better) than the existing conditions. Since the proposed improvements will not change the existing drainage patterns and provide better slope stabilization and permanent vegetative cover, no adverse impacts will occur to adjacent properties and the peak runoff rates are anticipated to be reduced by 0.10 cfs. To better facilitate the runoff from the slope, a 12' shoulder and swale will be added at the base of the slope to direct the runoff into the existing drain inlet. The existing roadway has an average running slope of 11%. The new 12' wide shoulder and swale will have a 2% cross slope away from the edge of pavement and towards the middle of the swale. A manning's coefficient of 0.035 can be used for this new grassed shoulder and swale. Based on a hydraulic analysis of the grassed swale (see attached hydraulic analysis report), we'd anticipate the grassed swale to have a flow depth of 0.132' and flow velocity of 2.296 fps. The swale is 12' wide at the bottom of the swale just before draining into the drain inlet. Based on the 12' wide grassed swale at 2.0% cross slope, the 0.132' flow depth would 0.012' higher than the 0.12' swale depth, so no substantial water would be anticipated to flow onto the street pavement. The grassed swale is sized appropriately to convey the existing and proposed runoff anticipated from the slope to flow into the existing drain inlet with an improved grass swale, compared to the existing conditions where the runoff flows along the outside edges of the road pavement (since the existing bottom of slope ties into the edge of road pavement in most areas).

Sincerely,




Ty Dempsey, P.E., OFM



TY J. DEMPSEY
LICENSED
PROFESSIONAL
ENGINEER
No. 12058-C
HAWAII, U.S.A.

Exp. 11/30/22



THIS WORK WAS PREPARED BY ME OR UNDER
MY SUPERVISION AND CONSTRUCTION OF THIS
PROJECT WILL BE UNDER MY OBSERVATION.



NOAA Atlas 14, Volume 4, Version 3
Location name: Kaneohe, Hawaii, USA*
Latitude: 21.4253°, Longitude: -157.7933°
Elevation: 92.7 ft**

* source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

S. Perica, D. Martin, B. Lin, T. Parzybok, D. Riley, M. Yekta, L. Hiner, L.-C. Chen, D. Brewer, F. Yan, K. Maitaria, C. Trypaluk, G. M. Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aeriels](#)

PF tabular

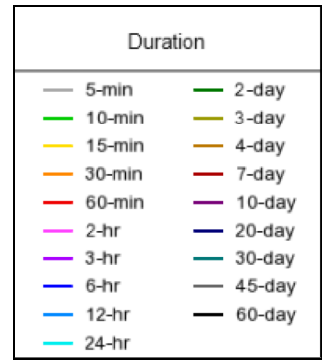
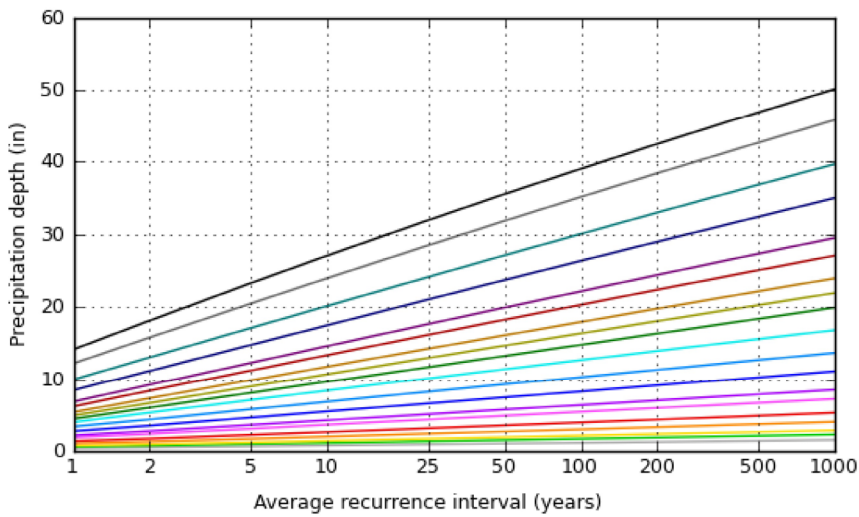
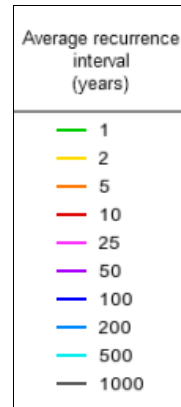
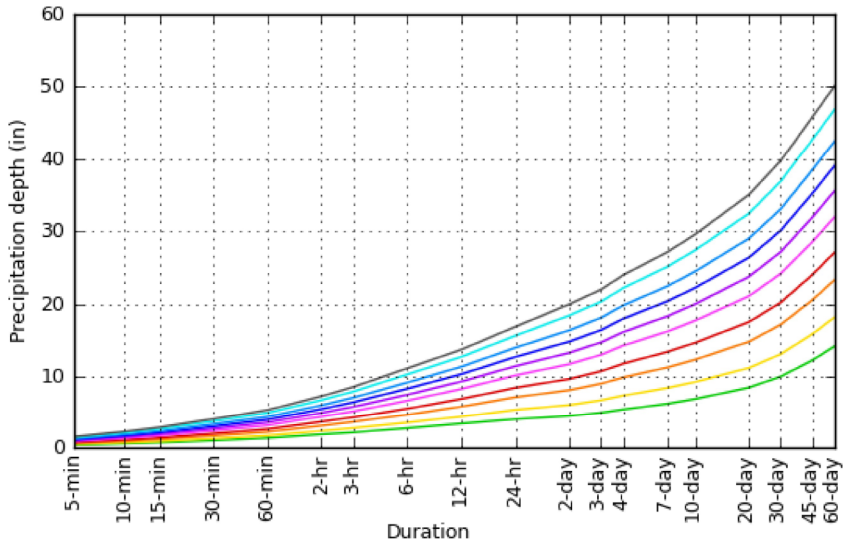
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.401 (0.351-0.443)	0.499 (0.431-0.560)	0.648 (0.557-0.731)	0.762 (0.650-0.864)	0.916 (0.767-1.05)	1.03 (0.849-1.19)	1.15 (0.927-1.34)	1.26 (0.999-1.50)	1.42 (1.08-1.72)	1.54 (1.14-1.90)
10-min	0.595 (0.520-0.657)	0.739 (0.639-0.830)	0.961 (0.826-1.08)	1.13 (0.964-1.28)	1.36 (1.14-1.55)	1.53 (1.26-1.77)	1.70 (1.37-1.99)	1.87 (1.48-2.23)	2.11 (1.61-2.56)	2.28 (1.69-2.82)
15-min	0.747 (0.653-0.826)	0.928 (0.802-1.04)	1.21 (1.04-1.36)	1.42 (1.21-1.61)	1.71 (1.43-1.95)	1.92 (1.58-2.22)	2.13 (1.73-2.50)	2.35 (1.86-2.80)	2.65 (2.02-3.21)	2.87 (2.12-3.54)
30-min	1.05 (0.919-1.16)	1.31 (1.13-1.47)	1.70 (1.46-1.92)	2.00 (1.70-2.26)	2.40 (2.01-2.75)	2.70 (2.23-3.12)	3.00 (2.43-3.52)	3.31 (2.62-3.93)	3.72 (2.84-4.52)	4.04 (2.98-4.99)
60-min	1.38 (1.21-1.53)	1.72 (1.49-1.93)	2.23 (1.92-2.52)	2.63 (2.24-2.98)	3.16 (2.65-3.61)	3.55 (2.93-4.11)	3.95 (3.20-4.63)	4.36 (3.44-5.18)	4.90 (3.74-5.95)	5.31 (3.92-6.56)
2-hr	1.89 (1.64-2.07)	2.37 (2.05-2.68)	3.09 (2.66-3.50)	3.64 (3.11-4.14)	4.37 (3.66-5.01)	4.91 (4.05-5.68)	5.44 (4.41-6.38)	5.98 (4.73-7.12)	6.69 (5.11-8.15)	7.23 (5.34-8.96)
3-hr	2.15 (1.87-2.35)	2.77 (2.40-3.12)	3.62 (3.12-4.09)	4.27 (3.64-4.84)	5.12 (4.30-5.86)	5.76 (4.75-6.66)	6.39 (5.18-7.48)	7.03 (5.56-8.35)	7.87 (6.01-9.56)	8.51 (6.29-10.5)
6-hr	2.76 (2.39-3.03)	3.52 (3.05-3.96)	4.64 (4.00-5.24)	5.50 (4.69-6.23)	6.61 (5.56-7.57)	7.44 (6.15-8.62)	8.28 (6.71-9.69)	9.13 (7.23-10.8)	10.3 (7.83-12.5)	11.1 (8.20-13.7)
12-hr	3.39 (2.93-3.72)	4.37 (3.78-4.93)	5.79 (4.99-6.54)	6.85 (5.85-7.77)	8.24 (6.92-9.44)	9.27 (7.66-10.7)	10.3 (8.34-12.1)	11.3 (8.96-13.4)	12.7 (9.67-15.4)	13.7 (10.1-16.9)
24-hr	3.99 (3.51-4.45)	5.33 (4.68-5.95)	7.09 (6.20-7.95)	8.40 (7.32-9.47)	10.1 (8.72-11.5)	11.4 (9.74-13.1)	12.7 (10.7-14.8)	13.9 (11.6-16.5)	15.6 (12.7-18.8)	16.8 (13.5-20.7)
2-day	4.47 (3.97-4.94)	6.02 (5.33-6.67)	8.08 (7.13-8.99)	9.63 (8.47-10.8)	11.7 (10.2-13.2)	13.2 (11.4-15.1)	14.8 (12.6-17.1)	16.3 (13.8-19.1)	18.4 (15.2-21.9)	19.9 (16.1-24.2)
3-day	4.93 (4.38-5.45)	6.67 (5.91-7.38)	8.97 (7.91-9.96)	10.7 (9.39-11.9)	13.0 (11.3-14.6)	14.7 (12.6-16.7)	16.4 (14.0-18.9)	18.1 (15.2-21.1)	20.3 (16.7-24.2)	21.9 (17.8-26.6)
4-day	5.39 (4.78-5.95)	7.32 (6.49-8.09)	9.86 (8.69-10.9)	11.8 (10.3-13.1)	14.2 (12.4-16.1)	16.1 (13.9-18.3)	17.9 (15.3-20.7)	19.8 (16.6-23.1)	22.2 (18.3-26.5)	24.0 (19.4-29.1)
7-day	6.19 (5.49-6.83)	8.38 (7.42-9.25)	11.2 (9.90-12.5)	13.4 (11.7-14.9)	16.2 (14.1-18.2)	18.3 (15.7-20.8)	20.3 (17.3-23.4)	22.4 (18.9-26.2)	25.1 (20.7-30.0)	27.1 (22.0-32.9)
10-day	6.84 (6.06-7.56)	9.20 (8.15-10.2)	12.3 (10.8-13.6)	14.6 (12.8-16.3)	17.6 (15.4-19.9)	19.9 (17.2-22.7)	22.2 (18.9-25.6)	24.4 (20.6-28.6)	27.3 (22.6-32.7)	29.5 (24.0-35.9)
20-day	8.44 (7.49-9.30)	11.2 (9.89-12.3)	14.8 (13.0-16.4)	17.5 (15.3-19.5)	21.0 (18.3-23.7)	23.7 (20.5-27.0)	26.4 (22.5-30.4)	29.0 (24.4-33.9)	32.4 (26.8-38.8)	35.0 (28.4-42.6)
30-day	9.96 (8.83-11.0)	13.0 (11.6-14.4)	17.1 (15.1-19.0)	20.1 (17.7-22.5)	24.1 (21.0-27.2)	27.1 (23.4-30.9)	30.1 (25.6-34.7)	33.0 (27.8-38.6)	36.8 (30.4-44.0)	39.7 (32.2-48.3)
45-day	12.2 (10.8-13.5)	15.8 (14.0-17.5)	20.5 (18.1-22.7)	24.0 (21.1-26.8)	28.5 (24.8-32.1)	31.9 (27.5-36.3)	35.2 (30.0-40.6)	38.4 (32.4-45.0)	42.7 (35.2-51.0)	45.8 (37.1-55.7)
60-day	14.1 (12.6-15.6)	18.1 (16.1-20.1)	23.3 (20.6-25.9)	27.1 (23.8-30.3)	32.0 (27.8-36.1)	35.6 (30.7-40.5)	39.0 (33.3-45.1)	42.5 (35.8-49.7)	46.9 (38.7-56.0)	50.1 (40.6-60.9)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

[Back to Top](#)

PF graphical

PDS-based depth-duration-frequency (DDF) curves
 Latitude: 21.4253°, Longitude: -157.7933°

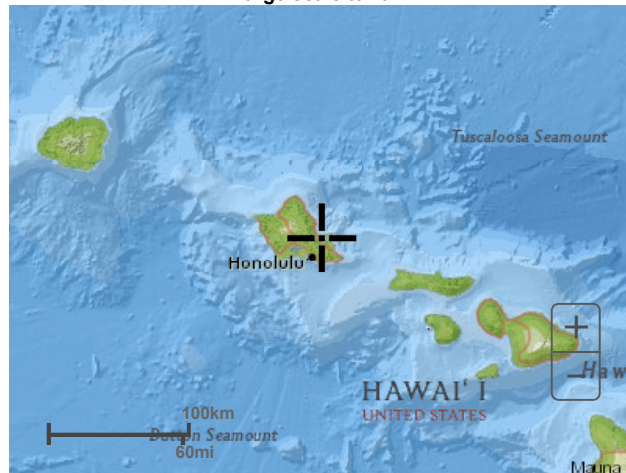


Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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[US Department of Commerce](#)
[National Oceanic and Atmospheric Administration](#)
[National Weather Service](#)
[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

[Disclaimer](#)

Hydraulic Analysis Report

Project Data

Project Title:

Designer:

Project Date: Wednesday, March 25, 2020

Project Units: U.S. Customary Units

Notes:

Channel Analysis: Grassed Swale

Notes:

Input Parameters

Channel Type: Triangular

Side Slope 1 (Z1): 50.0000 ft/ft

Side Slope 2 (Z2): 2.0000 ft/ft

Longitudinal Slope: 0.1100 ft/ft

Manning's n: 0.0350

Flow: 1.3000 cfs

Result Parameters

Depth: 0.1436 ft

Area of Flow: 0.5361 ft²

Wetted Perimeter: 7.5023 ft

Hydraulic Radius: 0.0715 ft

Average Velocity: 2.4249 ft/s

Top Width: 7.4670 ft

Froude Number: 1.5948

Critical Depth: 0.2536 ft

Critical Velocity: 0.7772 ft/s

Critical Slope: 0.0053 ft/ft

Critical Top Width: 89.16 ft

Calculated Max Shear Stress: 0.9856 lb/ft²

Calculated Avg Shear Stress: 0.4905 lb/ft²



JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

February 15, 2023

Project No. 19235.02G

To: Pu'u Ali'i Community Association
46-058 Ali'ianela Place
Kāne'ohe, Hawai'i 96744

Attn: Helene Jo, Board Vice President

Subject: Summary Report
Pu'u Ali'i Slope Inspection
46-40, 50 and 70 Kōnane Place
Kāne'ohe, Kaua'i, Hawai'i

Pursuant to your request, on February 2, 2023, JPB Engineering, Inc. (JPB) completed a visual site inspection of the slope in front of Buildings 35 through 38 at the above-referenced property. The purpose of the site visit was to determine if, since our geotechnical exploration and our last site visit of November 19, 2021, there has been significant changes to the subject slope that could affect its stability and to inspect the slope for any signs of movement.

During JPB's site visit, JPB inspected the pavement and curb edges for significant gaps or separations between the concrete and soil. JPB also checked the existing retaining walls, particularly in front of Buildings 38 and 37, for cracks or separations as well as substantial erosion near the base. Photos of these observed conditions are attached herein.

Towards the north end and bottom of the slope, recent surface sloughing was observed. This observed sloughing is likely related to the recent heavy rainfall and such occurrences could continue to develop in areas of steeper topography.

In general, it is JPB's opinion that there has been no significant change in the slope since our last visit. JPB also found no indication of substantial soil movement.

As recommended in our previous letter, the wall cracks should be exposed by removing the vines to determine their extent. A structural engineer should be consulted to determine if the cracks pose a significant concern to the stability of the wall.





JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

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




Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brian Tabuso", written over a light blue horizontal line.

Brian Tabuso, P.E.
Project Engineer



Pu'u Ali'i Slope Inspection
46-40, 50 and 70 Kōnane Place
Kāne'ohe, Kaua'i, Hawai'i

<p>Location: 1</p> <p>Observed Condition:</p> <p>Surface sloughing near the north terminus of the slope.</p>	
<p>Location: 2</p> <p>Observed Condition:</p> <p>Retaining wall obscured by vines.</p>	
<p>Location: 3</p> <p>Observed Condition:</p> <p>Gap between vines and retaining wall.</p>	



JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

February 21, 2023

Project No. 19235.02G

To: Pu'u Ali'i Community Association
46-058 Ali'i'ānela Place
Kāne'ohe, Hawai'i 96744

Subject: Review Letter
Pu'u Ali'i Slope Stabilization
46-40, 50 and 70 Kōnane Place
Kāne'ohe, Kaua'i, Hawai'i

Pursuant to your request, JPB Engineering, Inc. has reviewed the geotechnical reports dated September 26, 2019, and July 31, 2019. Since there has been no significant changes to the Project site conditions based on our site visit on February 2, 2023, no modifications to the reports are necessary at this time.

Services performed by JPB Engineering, Inc. reflect the level of care and skill ordinarily exercised by others in good standing and who currently offer comparable professional guidance under similar conditions. No other warranty is expressed or implied.

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

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brian Tabuso", written over a horizontal line.

Brian Tabuso, P.E.
Project Engineer



CHAPTER 7: REFERENCES

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Appendix A. Master Landscape Plan: Kōnane Slope Excerpt

MASTER LANDSCAPE PLAN GOALS & OBJECTIVES

THIS DOCUMENT HAS TWO PRIMARY PURPOSES:

1. TO UPDATE & SATISFY THE REQUIREMENTS OF ORDINANCE 4421; AND
2. TO PROVIDE AN ORGANIZED LONG-TERM APPROACH TO MANAGING THE PUU ALII LANDSCAPE

THIS DOCUMENT IS INTENDED TO SUPPLEMENT 'EXHIBIT K'

THESE PLANS ARE INTENDED TO PROVIDE SPECIFICITY FOR LONG-TERM IMPACTS - PARTICULARLY TREES - WHICH ARE IMPORTANT TO PUU ALII'S VISUAL IMPACT WITHIN THE LARGER CONTEXT OF IT'S NEIGHBORS, WITHIN KANEOHE, AND AS A PART OF THE LARGER WINDWARD SIDE LANDSCAPE.

THESE PLANS ARE ALSO INTENDED TO PROVIDE FLEXIBILITY FOR MINOR ITEM - SHRUBS & GROUNDCOVERS.

THE DESIGN IS GUIDED BY THESE OBJECTIVES:

1. MAINTAIN TO A CERTAIN EXTENT PUU ALII'S LUSH, TROPICAL LANDSCAPE AND ITS 'LANDMARK' LANDSCAPE ELEMENTS - THE TALL COOK PINES, LARGE CANOPY TREES, THE NATURALIZED FOREST SLOPES MAUKA OF ITS BUILDINGS AND ITS LANDSCAPE SCREENING AS SEEN FROM SURROUNDING AREAS.
 2. RECOGNIZE THAT PUU ALII HAS AN EXISTING, MATURE LANDSCAPE - IN MANY AREAS A 'GERIATRIC' LANDSCAPE OF TREES WHICH HAVE OUTLIVED THEIR INTENDED LIFESPANS AS WELL AS UNINTENDED / INVASIVE "VOLUNTEER" TREES & "SURVIVOR" TREES WHICH NOW DOMINATE MANY AREAS.
 3. UPDATE ITS LANDSCAPE TO REMOVE OVERGROWN, UNHEALTHY AND / OR UNDESIRABLE TREES.
 4. REMOVE TREES WHICH HAVE OVERGROWN AND ENCROACHED INTO OVERHEAD POWER LINES AND UNDERGROUND SERVICES.
 5. OPEN ITS LANDSCAPE TO FRAME VIEWS TOWARDS BOTH KANEOHE BAY AND TOWARDS THE KOOLAU PALI ... AND TO INCREASE BREEZES & AIR CIRCULATION WHERE POSSIBLE.
 6. ALLOW THE LANDSCAPE TO BE REPLACED, RECYCLED AND UPGRADED IN A PHASED MANNER - RETAIN & REPLACE DESIRABLE TREES TO MAINTAIN THE EXISTING LANDSCAPE CHARACTER ... AND TO REMOVE UNDESIRABLE TREES SO AS TO ALSO RETAIN THE EXISTING OVERALL LANDSCAPE CHARACTER.
- EXCEPT WHERE REQUIRED TO STABILIZE SLOPES OR REMOVE INVASIVE WEED SPECIES, IT IS INTENDED THAT TREE REMOVALS AND SUBSTITUTIONS BE DONE IN AN ORGANIZED, PHASED MANNER TO UPGRADE THE EXISTING LANDSCAPE CHARACTER.
7. UPDATE THE LANDSCAPE TO REDUCE THE NUMBER OF HIGH-MAINTENANCE TREES & SHRUBS AND REPLACE THESE WITH SPECIES REQUIRING LESS CARE, LESS IRRIGATION AND WHICH ARE BETTER ADAPTED TO KANEOHE'S WET MICROCLIMATE.
- IN MANY CASES, THIS WILL INCLUDE REMOVING INVASIVE SPECIES AND, IF APPROPRIATE, REPLACING THEM WITH NON-INVASIVE SPECIES.
8. ENSURE THAT THE LANDSCAPE SATISFIES THE GOALS AND OBJECTIVES OF THE CLUSTER HOUSING GUIDELINES.
 9. ALLOW REASONABLE FLEXIBILITY TO IMPLEMENT AND ADJUST THE PLAN TO ACCOUNT FOR UNFORSEEABLE EVENTS - TREES WHICH MAY BE AFFECTED BY FUTURE PESTS & DISEASES; TREES WHICH MAY BE DAMAGED BY STORMS OR SITE CONDITIONS; EVER-EVOLVING MARKET, MAINTENANCE AND OWNER PREFERENCES AND OPERATIONAL NEEDS.
 10. THE MASTER LANDSCAPE PLAN CANNOT SPECIFY EVERY TREE & SHRUB OVER MANY YEARS. IT IS INTENDED TO BE A GUIDING DOCUMENT ONLY.

ORGANIZATION

THIS DOCUMENT HAS THREE SECTIONS:

1. TREE PLANTING PLANS FOR PRIORITY AREAS - THE PROJECT'S BOUNDARIES, STREET FRONTAGES, ENTRIES, VIEW PLANE AREAS ETC.

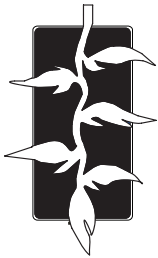
THESE ARE TO SPECIFICALLY IDENTIFY TREES WHICH ARE TO BE REMOVED OVER TIME; REPLACED OR ADDED IN AREAS WHICH AFFECT PUU ALII'S IMPACTS WITHIN THE COMMUNITY.

2. CONCEPTUAL LANDSCAPE PLANS, SECTIONS & IMAGES FOR SPECIFIC LANDSCAPE AREAS.

THESE ARE TO PROVIDE ADDITIONAL DETAIL AT LARGER SCALE TO ADDRESS LANDSCAPE ELEMENTS & FUNCTIONS WHILE ALLOWING GREATER FLEXIBILITY FOR LANDSCAPE DETAIL AND UNDERSTORY PLANTING.

3. PLANT PALETTES FOR OWNER PRIORITY AREAS.

THESE ARE TO IDENTIFY UNDERSTORY GROUNDCOVERS, SHRUBS, SMALL PALMS, ACCENT PLANTS ETC FOR THE AREAS NEAR RESIDENTIAL ENTRIES WHERE OWNERS & RESIDENTS SHOULD HAVE FLEXIBILITY TO CREATE LANDSCAPE ENVIRONMENTS SPECIFICALLY TAILORED TO THEIR INDIVIDUAL SITE CONDITIONS, SPECIFIC STYLE PREFERENCES AND OPERATIONAL NEEDS.



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Honolulu, Hawaii
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Tel: 1 808 721 3502

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PUU ALII
MASTER
LANDSCAPE PLAN

GOALS &
OBJECTIVES

JULY 10, 2020

Page 1 of 2

LANDSCAPE DESIGN PRIORITIES:

THE MASTER LANDSCAPE PLAN IS INTENDED TO BE A TEMPLATE FOR LANDSCAPE IMPROVEMENTS OVER MANY YEARS. IT COMBINES SPECIFICITY FOR PUBLICLY-IMPORTANT AREAS AND FLEXIBILITY FOR AREAS IMPORTANT TO THE OWNERS.

THE MASTER LANDSCAPE PLAN IS INTENDED TO PROVIDE SPECIFIC DESIGN INFORMATION FOR HIGH PRIORITY AREAS AFFECTING THE PUBLIC - PUBLIC ROADWAY FRONTAGES AND VIEW PLANE AREAS. REGARDLESS OF WHEN THESE AREAS ARE IMPLEMENTED, PLANTS INDICATED ON THE PLAN SHALL BE INSTALLED AS SHOWN OR AS REFINED IN GREATER DETAIL ON AREA-SPECIFIC PERMIT OR BID DRAWINGS.

FOR BOUNDARY ZONE AND BUFFER ZONES BETWEEN PUU ALII AND ADJOINING RESIDENTIAL PROPERTIES, THE MASTER LANDSCAPE PLAN PROVIDES DESIGN INFORMATION BUT FLEXIBILITY SHOULD BE ALLOWED AS PLANTINGS ON ADJACENT PROPERTIES MAY CHANGE OVER TIME.

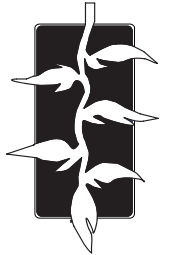
FOR INTERNAL ROADWAYS AND PARKING AREAS, THE MASTER LANDSCAPE PLAN SHALL COMPLY WITH RELEVANT ORDINANCES FOR STREET TREES & SHADE TREES FOR OPEN PARKING AREAS OR ALLOW A ONE-FOR-ONE REPLACEMENT OF ORIGINALLY-INSTALLED STREET TREES. REGARDLESS OF WHEN THESE AREAS ARE IMPLEMENTED, STREET TREES ARE SPECIFIED AND SHALL BE INSTALLED AS PER PLAN.

FOR AREAS IMMEDIATELY AROUND BUILDING ENTRIES & AREAS USED PRIMARILY BY RESIDENTS, THE MASTER LANDSCAPE PLAN IS INTENDED TO ALLOW RESIDENTS TO SELECT TREES, PALMS & SHRUBS FROM DEFINED PLANT PALETTES. REGARDLESS OF WHEN THESE AREAS ARE IMPLEMENTED, TREES SHALL BE INSTALLED IN THE GENERAL POSITIONS NOTED IN PLAN. PALM TREES AND UNDERSTORY PLANTS SHALL BE INSTALLED IN THE GENERAL LOCATIONS INDICATED AND ADJUSTED TO FRAME VIEWS AND EXISTING NEARBY VEGETATION.

SUBSTITUTION OF TREE SPECIES MAY BE MADE WITH SPECIES OF SIMILAR MATURE SIZE, GROWTH HABIT AND GROWTH RATE DUE TO THE ORIGINAL SPECIES BEING COMMERCIALY UNAVAILABLE, SUBJECT TO ATTACK BY PESTS OR DISEASES OR IF THEY ARE OTHERWISE DETERMINED TO BE UNSUITABLE.



KEY LEGEND	
	PUBLIC ROAD FRONTAGES & IMPORTANT VIEW PLANES AREA: 296,355 SQ FT
	BOUNDARY & BUFFER ZONES AREA: 707,540 SQ FT
	PARKING AREAS AREA: 573,182 SQ FT
	OWNER PROPERTY AREAS AREA: 958,062 SQ FT



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**PUU ALII
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LANDSCAPE PLAN**

**GOALS &
OBJECTIVES**

JULY 10, 2020

Page 2 of 2

LANDSCAPE CONCEPTS:

MAXIMIZE VIEWS FROM PUU ALII UNITS WITHOUT COMPROMISING LANDSCAPE SCREENING

CREATE APPROPRIATE LANDSCAPE BUFFER BETWEEN LILIPUNA & PUU ALII BY:

- CREATING A "GREEN WALL" OF PEDESTRIAN-LEVEL PLANTING ON THE LOWER SLOPE AREAS. IN GENERAL, PROVIDE THREE LAYERS OF PLANTING

SHRUBS & TROPICALS SHALL BE SELECTED FOR THEIR ABILITY TO GROW TO NATURAL SCREENING SHAPES & SIZES WITHOUT ADDITIONAL IRRIGATION, LITTLE TRIMMING AND WITH PERIODIC MAINTENANCE ONLY

- ADDING A CANOPY OF MIXED SMALL, MEDIUM & LARGE TREES TO THE LILIPUNA STREETScape. IN GENERAL, USE TREES WITH NATURAL SIZE & HABIT GROW TO THE SAME SIZE OR SMALLER THAN THE HEIGHT OF THE ADJACENT SLOPE. THESE TREES SHOULD BE TRIMMED TO ALLOW VIEWS IF THEY GROW ABOVE SIGHTLINES

TREES HAVE BEEN SELECTED FOR SCALE AS WELL AS TOLERANCE FOR TRIMMING

- STRATEGICALLY PLACE LARGE TREES ALONG LILIPUNA IN THE "GAPS" BETWEEN PUU ALII BUILDINGS TO PRESERVE DIRECT VIEWS. THESE TREES SHOULD NOT BE TRIMMED FOR VIEWS TO RELIEVE MONOTONY OF SINGLE-LEVEL TREE CANOPY

- STRATEGICALLY PLACE STREET TREES & LOWER SLOPE TREES TO SCREEN NORTH & SOUTH VIEWS FROM LILIPUNA TOWARDS PUU ALII BUILDINGS WHILE PRESERVING OR FRAMING OUTWARD VIEWS FROM PUU ALII UNITS

- ON KONANE PLACE, USE SMALL STREET TREES ONLY & SHIFT THEM AWAY FROM THE CENTER OF PUU ALII BUILDINGS TO PRESERVE VIEWS FROM LOWER FLOOR UNITS

- REPLACE EXISTING SILVER TRUMPET TREES ON KONANE PLACE ONE-FOR-ONE WITH LIGNUM VITAE TREES

- USE CLUSTERS OF TALL, THIN PALM TREES TO FRAME FUTURE VIEWS

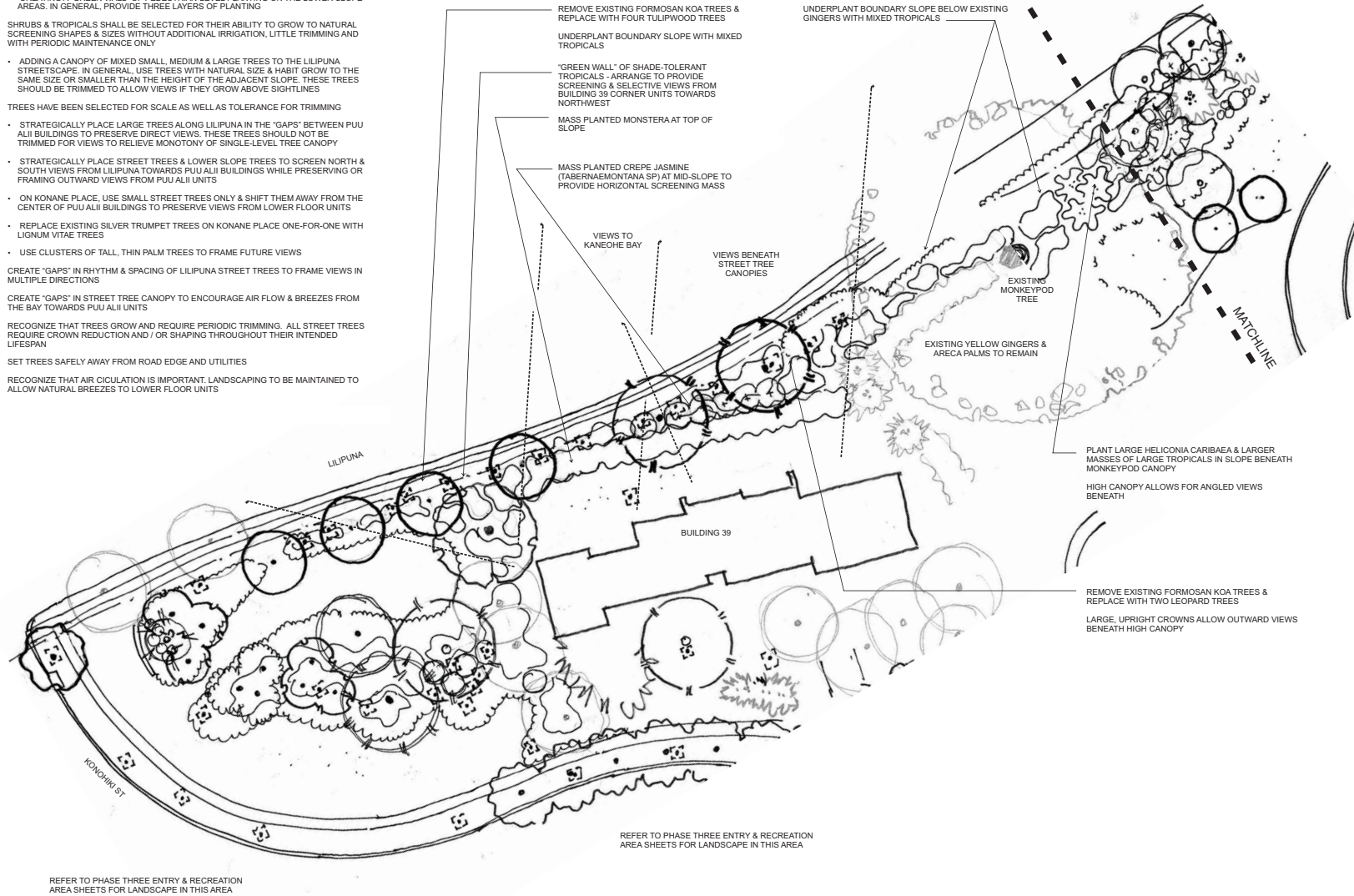
CREATE "GAPS" IN RHYTHM & SPACING OF LILIPUNA STREET TREES TO FRAME VIEWS IN MULTIPLE DIRECTIONS

CREATE "GAPS" IN STREET TREE CANOPY TO ENCOURAGE AIR FLOW & BREEZES FROM THE BAY TOWARDS PUU ALII UNITS

RECOGNIZE THAT TREES GROW AND REQUIRE PERIODIC TRIMMING. ALL STREET TREES REQUIRE CROWN REDUCTION AND / OR SHAPING THROUGHOUT THEIR INTENDED LIFESPAN

SET TREES SAFELY AWAY FROM ROAD EDGE AND UTILITIES

RECOGNIZE THAT AIR CIRCULATION IS IMPORTANT. LANDSCAPING TO BE MAINTAINED TO ALLOW NATURAL BREEZES TO LOWER FLOOR UNITS



LANDSCAPE CONCEPT PLAN
SCALE : 1" = 20'

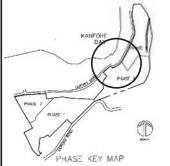


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PUU ALII MASTER LANDSCAPE PLAN

KONANE SLOPE & LILIPUNA STREETScape LANDSCAPE CONCEPTS



JULY 10, 2020

Page 1 of 8

NOTES:

REFER TO BID / PERMIT DRAWINGS FOR DETAILED UNDERSTORY PLANTING
 SECTIONS ALIGN WITH JPB ENGINEERING INC. GRADING SECTIONS THROUGH SLOPE AREA. KONANE PLACE AND BUILDINGS ARE ADDED FOR VISUAL REFERENCE ONLY
 LANDSCAPING TO BE MAINTAINED TO ALLOW NATURAL BREEZES TO LOWER FLOOR UNITS

TRIM FALSE OLIVE & HAROULIA STREET TREES TO PRESERVE VIEWS FROM PUU ALII UNITS TOWARDS KANEHOE BAY
 DO NOT TRIM GEOMETRY TREES FOR VIEWS - ALLOW TO GROW TO NATURAL HEIGHT TO RELIEVE MONOTONY OF UNIFORM CROWN HEIGHT

CONSOLIDATE DENSE STREET TREES & SCREENING TREES ON LILIPUNA OPPOSITE EXISTING LARGE TREES TO MINIMIZE BLOCKAGE OF VIEWS

LARGE GEOMETRY TREE FLANKED BY FIVE TULIPWOOD TREES

UNDERSTORY 'GREEN WALL' OF MIXED TROPICALS & SHRUBS IN SHADED AREAS BENEATH TREE CANOPIES
 REFER BID DRAWINGS FOR PRECISE PLANTING

COLORFUL SUN-LOVING FLOWERING SHRUBS ON EXPOSED SLOPES (WHERE GRADES ARE NOT TOO STEEP FOR REGULAR MAINTENANCE)
 ACALYPHA, CARICATURE PLANT, IKORA ETC

REFER BID DRAWINGS FOR PRECISE PLANTING

EXISTING TORQUOISE-ROOFED HOUSES

ONE GEOMETRY TREE TO SCREEN VIEW OF HOUSES FROM BUILDINGS 35 & 36
 THIS TREE SHOULD NOT BE TRIMMED FOR VIEWS

FOUR TULIPWOOD TREES WITH TIARE & LARGE ARECA PALMS IN FRONT TO SCREEN VIEW OF HOUSES FROM BUILDINGS 33, 34 & RECREATION BUILDING

DOUBLE ROW OF SMALL GEIGER TREES PLANTED ON LOW SLOPE

PLANTING POSITION PREVENTS FRUITS FROM FALLING ONTO PAVEMENT & ALLOWS VIEWS OVER LOW CANOPY

MASS PLANTED PHILODENDRON & RED TI BENEATH

VIEWS ABOVE LOW TREE CANOPIES

SINGLE GEOMETRY TREE & CLUSTERED TULIPWOOD TREES OPPOSITE 'GAP' BETWEEN BUILDINGS
 THIS TREE SHOULD NOT BE TRIMMED FOR VIEWS

THREE TULIPWOOD TREES FRAME VIEWS TO KANEHOE BAY

VIEWS ABOVE LOW TREE CANOPIES

EXISTING LARGE TREE (OFFSITE)

CONSOLIDATE DENSE STREET TREES & SCREENING TREES ON LILIPUNA OPPOSITE EXISTING LARGE MANGO TREE TO MINIMIZE BLOCKAGE OF VIEWS

LARGE GEOMETRY TREE - THIS TREE SHOULD NOT BE TRIMMED FOR VIEWS

TWO LARGE ARECA PALMS & ONE TULIPWOOD TREE MID SLOPE TO SCREEN UPSLOPE VIEWS

TURFGRASS ON GENTLE UPPER SLOPE

COVERED CARPORT

BUILDING 36

SECTION FOUR

COLORFUL SUN-LOVING FLOWERING SHRUBS

TWO LIGNUM VITAE TREES - NEAR CARPORT TO MINIMIZE BLOCKAGE OF VIEWS

TALL HELICONIA CARIBAEA, HALA TREE & TULIPWOOD TREE MID-SLOPE TO SCREEN LATERAL VIEWS AND HIDE VIEW OF TORQUOISE-ROOFED HOUSES

TWO LIGNUM VITAE TREES - NEAR CARPORT TO MINIMIZE BLOCKAGE OF VIEWS

SCREEN PARKING AREA WITH HEDGE OF LOW-MAINTENANCE WAX FICUS

MASS PLANTED SMALL GEIGER TREES PLANTED ON LOW SLOPE. EXTEND CLUSTER OF EIGHT TREES BEHIND TULIPWOODS

PLANTING POSITION PREVENTS FRUITS FROM FALLING ONTO PAVEMENT & ALLOWS VIEWS OVER LOW CANOPY

UNDERSTORY 'GREEN WALL' PROVIDES PEDESTRIAN-LEVEL PRIVACY

REMOVE EXISTING SILVER TRUMPET STREET TREES & REPLACE WITH THREE LIGNUM VITAE TREES - STAGGER PLANTING POSITIONS TO AVOID UNDERGROUND UTILITIES

TURFGRASS ON GENTLE UPPER SLOPE

BUILDING 35

SECTION FIVE

KONANE PL

GROUNDCOVER ON SLOPE

LILIPUNA

EXISTING LARGE TREE (OFFSITE)

LANDSCAPE CONCEPT PLAN

SCALE : 1" = 20'



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 96816 U.S.A.

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PUU ALII MASTER LANDSCAPE PLAN

KONANE SLOPE & LILIPUNA STREETSCAPE LANDSCAPE CONCEPTS



JULY 10, 2020

NOTES:

REFER TO BID / PERMIT DRAWINGS FOR DETAILED UNDERSTORY PLANTING
 SECTIONS ALIGN WITH JPB ENGINEERING INC. GRADING SECTIONS THROUGH SLOPE AREA. KONANE PLACE AND BUILDINGS ARE ADDED FOR VISUAL REFERENCE ONLY
 LANDSCAPING TO BE MAINTAINED TO ALLOW NATURAL BREEZES TO LOWER FLOOR UNITS

DWARF HAU AS STREET TREES @ 20' SPACING WHERE SLOPE IS LOWER
 TRIM TREES TO MAINTAIN HEIGHT OF +/- 15' TO 20' SUFFICIENT TO ALLOW VIEWS OVER TOP OF CANOPY
 ARECA PALMS NEAR BASE OF STEEP SLOPE TO SCREEN
 REMOVE TALL CANES WHEN THEY BLOCK VIEWS

EIGHT FALSE OLIVE STREET TREES @ +/-30' SPACING WHERE SLOPE IS +/- 35' HIGH OR GREATER
 TRIM TREES TO MAINTAIN HEIGHT OF +/- 35' TO 40' SUFFICIENT TO ALLOW VIEWS OVER TOP OF CANOPY
 "GREEN WALL" OF SHADE-TOLERANT TROPICAL UNDERSTORY BENEATH INTERLOCKING CANOPIES OF TREES (BLUE GINGER, HELICONIAS, ALOCASIA, ETC)
 REFER TO BID DRAWINGS FOR PRECISE PLANTING

TRIM FALSE OLIVE TREES TO PRESERVE VIEWS FROM PUU ALII UNITS TOWARDS KANEHOE BAY
 DO NOT TRIM GEOMETRY TREES FOR VIEWS - ALLOW TO GROW TO NATURAL HEIGHT TO RELIEVE MONOTONY OF UNIFORM CROWN HEIGHT

GROUP LARGE, DENSE CANOPY TREES OPPOSITE EXISTING MANGO TREE ON OPPOSITE SIDE OF STREET TO CONSOLIDATE SCREENING AND FRAME VIEWS TO KANEHOE BAY

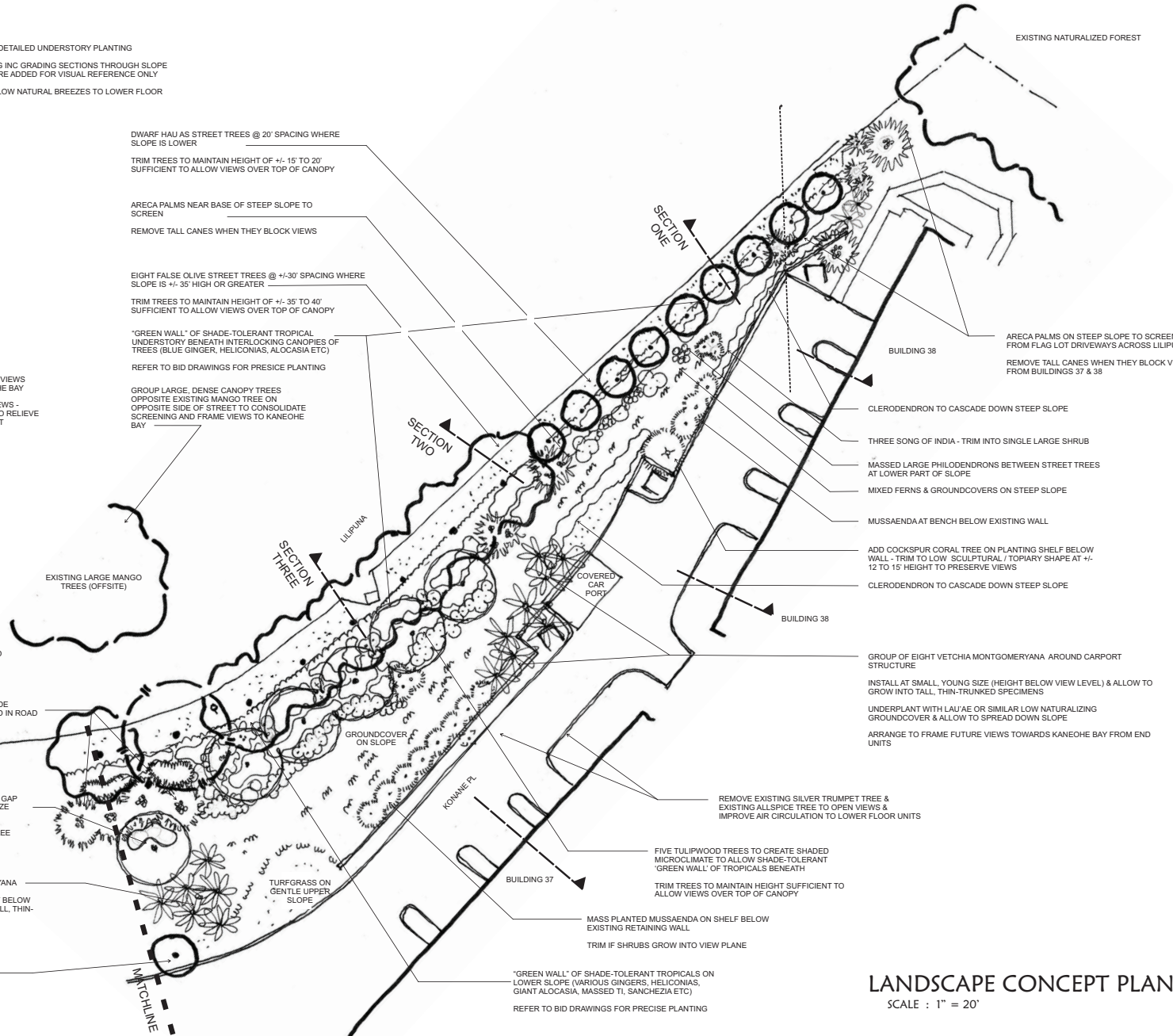
ONE LARGE GEOMETRY TREE STRATEGICALLY PLANTED ALONGSIDE CURVE IN ROADWAY TO SCREEN ANGLED VIEWS FROM LILIPUNA
 DO NOT TRIM THIS TREE FOR VIEWS

FOUR HALA AT LOWER SLOPE TO PROVIDE SCREENING FOR ANGLED VIEWS AT BEND IN ROAD

CONSOLIDATE DENSE TREES OPPOSITE GAP BETWEEN PUU ALII BUILDINGS TO MINIMIZE OBSTRUCTION OF VIEWS
 DO NOT TRIM MID-SLOPE TULIPWOOD TREE

CLUSTER OF SIX VETCHIA MONTGOMERYANA
 INSTALL AT SMALL, YOUNG SIZE (HEIGHT BELOW VIEW LEVEL) & ALLOW TO GROW INTO TALL, THIN-TRUNKED SPECIMENS

LIGNUM VITAE STREET TREE



EXISTING NATURALIZED FOREST

ARECA PALMS ON STEEP SLOPE TO SCREEN VIEWS FROM FLAG LOT DRIVEWAYS ACROSS LILIPUNA
 REMOVE TALL CANES WHEN THEY BLOCK VIEWS FROM BUILDINGS 37 & 38

BUILDING 38

CLERODENDRON TO CASCADE DOWN STEEP SLOPE

THREE SONG OF INDIA - TRIM INTO SINGLE LARGE SHRUB

MASSED LARGE PHILODENDRONS BETWEEN STREET TREES AT LOWER PART OF SLOPE

MIXED FERNS & GROUNDCOVERS ON STEEP SLOPE

MUSSAENDA AT BENCH BELOW EXISTING WALL

ADD COCKSPUR CORAL TREE ON PLANTING SHELF BELOW WALL - TRIM TO LOW SCULPTURAL / TOPIARY SHAPE AT +/- 12 TO 15' HEIGHT TO PRESERVE VIEWS

CLERODENDRON TO CASCADE DOWN STEEP SLOPE

BUILDING 38

GROUP OF EIGHT VETCHIA MONTGOMERYANA AROUND CARPORT STRUCTURE

INSTALL AT SMALL, YOUNG SIZE (HEIGHT BELOW VIEW LEVEL) & ALLOW TO GROW INTO TALL, THIN-TRUNKED SPECIMENS

UNDERPLANT WITH LAU'AE OR SIMILAR LOW NATURALIZING GROUNDCOVER & ALLOW TO SPREAD DOWN SLOPE

ARRANGE TO FRAME FUTURE VIEWS TOWARDS KANEHOE BAY FROM END UNITS

REMOVE EXISTING SILVER TRUMPET TREE & EXISTING ALLSPICE TREE TO OPEN VIEWS & IMPROVE AIR CIRCULATION TO LOWER FLOOR UNITS

FIVE TULIPWOOD TREES TO CREATE SHADED MICROCLIMATE TO ALLOW SHADE-TOLERANT "GREEN WALL" OF TROPICALS BENEATH

TRIM TREES TO MAINTAIN HEIGHT SUFFICIENT TO ALLOW VIEWS OVER TOP OF CANOPY

MASS PLANTED MUSSAENDA ON SHELF BELOW EXISTING RETAINING WALL

TRIM IF SHRUBS GROW INTO VIEW PLANE

"GREEN WALL" OF SHADE-TOLERANT TROPICALS ON LOWER SLOPE (VARIOUS GINGERS, HELICONIAS, GIANT ALOCASIA, MASSED TI, SANCHEZIA ETC)
 REFER TO BID DRAWINGS FOR PRECISE PLANTING

LANDSCAPE CONCEPT PLAN
 SCALE : 1" = 20'



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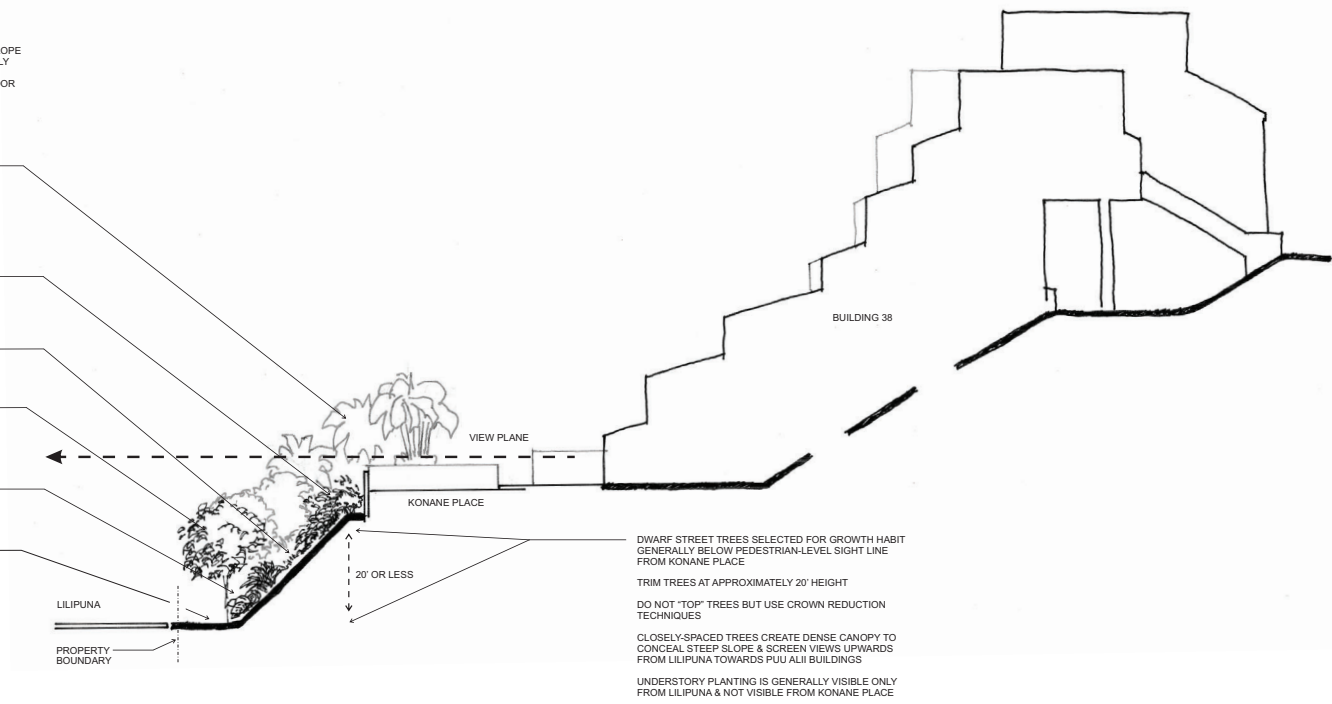


JULY 10, 2020

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 SECTIONS ALIGN WITH JPB ENGINEERING INC. GRADING SECTIONS THROUGH SLOPE AREA. KONANE PLACE AND BUILDINGS ARE ADDED FOR VISUAL REFERENCE ONLY
 LANDSCAPING TO BE MAINTAINED TO ALLOW NATURAL BREEZES TO LOWER FLOOR UNITS

- CLUSTERS OF ARECA PALMS BEYOND
STRATEGICALLY LOCATE FOR SCREENING
TRIM TALLEST CANES TO PRESERVE VIEWS
- CLERODENDRON AT NARROW PLANTING BENCH AT
TOP OF STEEP SLOPE / BELOW EXISTING WALL
ALLOW TO CASCADE DOWN STEEP SLOPE
- MASS PLANTED NATURALIZING FERN ON STEEP
SLOPE
- DWARF HAU (HIBISCUS TILLEACEUS) AS STREET
TREE AT BASE OF STEEP SLOPE
TRIM TO MAINTAIN HEIGHT BELOW SIGHTLINE
- MASS PLANTED MONSTERA AT BASE OF STEEP
SLOPE WITH NATURALIZING GINGER BEHIND
- 12' WIDE TURFED SWALE & STREET TREE PLANTING
ZONE AT BASE OF SLOPE



SECTION ONE : THRU STEEPEST SLOPE AREA AT BUILDING 38 - NORTH END
 SCALE 1 inch = 10 feet



PLANT PALETTE



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**PUU ALII
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 LANDSCAPE
 PLAN**

**KONANE SLOPE &
 LILIPUNA
 STREETScape
 LANDSCAPE
 CONCEPT
 SECTIONS**

JULY 10, 2020

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 LANDSCAPING TO BE MAINTAINED TO ALLOW NATURAL BREEZES TO LOWER FLOOR UNITS

SMALL FLAT GRASSY AREA BEHIND PARKING BAYS WITH CLERODENDRON AT CREST OF STEEP SLOPE TO SCREEN HEADLIGHTS

ALLOW TO CASCADE DOWN STEEP SLOPE

MASS PLANTED NATURALIZING FERN ON STEEP SLOPE

STRATEGICALLY PLACED ARECA PALM MID SLOPE FOR SCREENING

TRIM TALLEST CANES TO PRESERVE VIEWS

FALSE OLIVE (ELAEODENDRON ORIENTALE) AS STREET TREE AT BASE OF STEEP SLOPE

TRIM TO MAINTAIN HEIGHT BELOW SIGHTLINE

MIXED MASS PLANTED TROPICALS ON LOWER HALF OF STEEP SLOPE TO CREATE "GREEN WALL"

12' WIDE TURFED SWALE & STREET TREE PLANTING ZONE AT BASE OF SLOPE

LILIPUNA

PROPERTY BOUNDARY

COCKSPUR CORAL TREES PLANTED BELOW WALL - TRIM TO TOPIARY SHAPE WHEN THEY GROW INTO VIEW PLANE & OBSTRUCT VIEWS TOWARDS KANEHE BAY
 ARECA PALMS BEYOND

BUILDING 38

KONANE PLACE

35' TYPICAL

FALSE OLIVE TREES SELECTED FOR GROWTH HABIT GENERALLY BELOW PEDESTRIAN-LEVEL SIGHT LINE FROM KONANE PLACE WHERE HEIGHT DIFFERENCE IS +/- 35' OR GREATER

TRIM TREES AT VIEW PLANE LEVEL (APPROXIMATE 35' TO 40' HEIGHT) TO MAINTAIN VIEWS TOWARDS KANEHE BAY
 DO NOT TOP TREES BUT USE CROWN REDUCTION TECHNIQUES

CLOSELY-SPACED TREES CREATE DENSE CANOPY TO CONCEAL STEEP SLOPE & SCREEN VIEWS UPWARDS FROM LILIPUNA TOWARDS PUU ALII BUILDINGS

UNDERSTORY PLANTINGS ARE VISIBLE FROM LILIPUNA BUT DIFFICULT TO SEE FROM KONANE PLACE

NOTE: IT IS NOT INTENDED THAT THE COCKSPUR CORAL TREES GROW TO FULL SIZE. THEY SHOULD BE PRUNED TO LOW, HORIZONTAL FORM AT APPROXIMATE EYE LEVEL ON KONANE PLACE

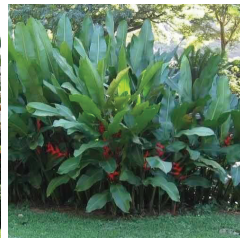
SECTION TWO : THRU STEEP SLOPE AREA AT BUILDING 38 - SOUTH END
 SCALE 1 inch = 10 feet



FALSE OLIVE TREES



ARECA PALM



HELICONIA



LARGE PHILODENDRON
 MINIATURE HELICONIA



COCKSPUR CORAL TREE

PLANT PALETTE



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 LANDSCAPING TO BE MAINTAINED TO ALLOW NATURAL BREEZES TO LOWER FLOOR UNITS

MUSSAENDA SHRUBS MASS PLANTED BELOW EXISTING RETAINING WALL

MASS PLANTED NATURALIZING FERN ON STEEP SLOPE

SONG OF INDIA FOR COLOR ACCENT
 STRATEGICALLY PLACED ARECA PALM MID SLOPE FOR SCREENING BEYOND

TRIM TALLEST CANES TO PRESERVE VIEWS

STAGGERED TULIPWOOD TREES (HARPULIA PENDULA) AT LOWER THIRD OF SLOPE TO CREATE SHADED MICROCLIMATE FOR MASSES TROPICALS FORMING "GREEN WALL" TO PROVIDE PRIVACY
 TRIM THESE TREES IF THEY GROW TALLER THAN THE FALSE OLIVE TREES

FALSE OLIVE (ELAEODENDRON ORIENTALE) AS STREET TREE AT BASE OF STEEP SLOPE

TRIM TO MAINTAIN HEIGHT BELOW SIGHTLINE

12' WIDE TURFED SWALE & STREET TREE PLANTING ZONE AT BASE OF SLOPE

LILIPUNA

PROPERTY BOUNDARY

VETCHIA MONTGOMERYANA PLANTED AS SMALL CONTAINER-GROWN PALMS WILL EVENTUALLY GROW INTO TALL, SLENDER SINGLE TRUNKED PALM TREES

CLUSTER AROUND EXISTING CARPORT & BELOW WALL TO FRAME VIEWS

MATURE SIZE

INSTALLATION / YOUNG SIZE

VIEW PLANE

KONANE PLACE

35' TYPICAL

STRATEGICALLY PLACED HALA FOR SCREENING BEYOND

MIXED MASS PLANTED TROPICALS ON LOWER HALF OF STEEP SLOPE TO CREATE "GREEN WALL"

BUILDING 37

FALSE OLIVE TREES SELECTED FOR GROWTH HABIT GENERALLY BELOW PEDESTRIAN-LEVEL SIGHT LINE FROM KONANE PLACE WHERE HEIGHT DIFFERENCE IS +/- 35' OR GREATER

TRIM TREES AT VIEW PLANE LEVEL TO MAINTAIN VIEWS TOWARDS KANEIHE BAY
 DO NOT "TOP" TREES BUT USE CROWN REDUCTION TECHNIQUES

TULIPWOOD TREES ARE LESS TALL AND OFFSET CANOPIES TREES CREATE SHELTERED AREA FOR LARGER TROPICAL PLANTS TO SCREEN VIEWS
 LOWER BRANCHES MAY BE TRIMMED TO INCREASE AIR CIRCULATION UPSLOPE AFTER "GREEN WALL" IS WELL ESTABLISHED



VETCHIA WININ / VETCHIA MONTGOMERYANA

SECTION THREE : THRU SLOPE AT BUILDING 37 - MIDDLE

SCALE 1 inch = 10 feet



FALSE OLIVE TREES



TULIPWOOD TREE



SONG OF INDIA



LOW MAINTENANCE MONSTERA & PHILODENDRON FOR TEXTURE (Dominant)

LOW-MAINTENANCE MASS PLANTED SANCHEZIA, HELICONIAS & GINGERS FOR SCREENING (Dominant)

GIANT ALOCASIA, HELICONIA CARIBAEA & LARGE FOLIAGE PLANTS (Large Screening)

SHADE-TOLERANT FOLIAGE COLOR FOR ACCENT (Use Sparingly)

PLANT PALETTE - STREET TREES & SCREENING TREES

PLANT PALETTE - UNDERSTORY 'GREEN WALL'



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 LANDSCAPING TO BE MAINTAINED TO ALLOW NATURAL BREEZES TO LOWER FLOOR UNITS

STRATEGICALLY PLACED HALA FOR PRIVACY BEYOND

STRATEGICALLY PLACED LARGE, DENSE CANOPY TREES BEYOND - GEOMETRY TREE, FALSE OLIVE & CLUSTERED TULIPWOOD TREES ALIGNED WITH EXISTING LARGE MANGO TREE ACROSS LILIPUNA TO CONSOLIDATE SCREENING & FRAME VIEWS (SOME VIEWS WILL BE BLOCKED BY OFF-SITE TREES)

STAGGERED SMALLER GEIGER TREES ALLOW AIR CIRCULATION & VIEWS
 TRIM THESE TREES IF THEY GROW ABOVE SIGHT LINE



PROPERTY BOUNDARY
 LILIPUNA

12' WIDE TURFED SWALE & STREET TREE PLANTING ZONE AT BASE OF SLOPE
 GREEN WALL ON LOWER SLOPE

MATURE SIZE

INSTALLATION / YOUNG SIZE

VIEW PLANE

PARKING
 KONANE PLACE

VARIES

MORE GENTLE SLOPE WITH COLORFUL & FLOWERING SHRUBS IN OPEN AREA VISIBLE FROM KONANE PLACE & GRASSY AREAS NEAR TOP OF SLOPE

VETCHIA MONTGOMERYANA PLANTED AS SMALL CONTAINER-GROWN PALMS WILL EVENTUALLY GROW INTO TALL, SLENDER SINGLE TRUNKED PALM TREES

CLUSTER AROUND EXISTING CARPORT & BELOW WALL TO FRAME VIEWS

LIGNUM VITAE AS STREET TREE ON KONANE PLACE

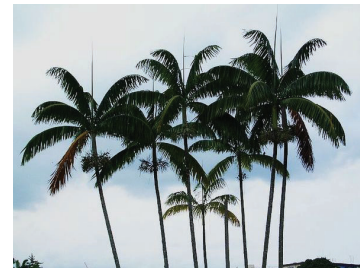
BUILDING 36

STRATEGICALLY PLACED LARGE TREES ALONG LILIPUNA FOR VARIETY. THESE TREES ARE PLACED TO FRAME KANEHE BAY VIEWS/BLOCK VIEWS FROM LILIPUNA. THESE TREES SHOULD NOT BE TRIMMED.

STAGGERED DOUBLE ROW OF GEIGER TREES (CORDIA SEBESTANA) PROVIDES LOWER CANOPY & ENABLES FRAMED VIEWS TOWARDS KANEHE BAY AS WELL AS COLORFUL BACKDROP

TRIM TREES AT +/- 25' HEIGHT TO MAINTAIN VIEWS & AIR CIRCULATION

SLIGHTLY LESS STEEP SLOPE ALLOW FOR EASIER MAINTENANCE ACCESS & A BROADER MIX OF COLORFUL PLANTS VISIBLE FROM KONANE PLACE



VETCHIA WININ / VETCHIA MONTGOMERYANA

SECTION FOUR : THRU BUILDING 36 - MIDDLE

SCALE 1 inch = 10 feet



LOW-MAINTENANCE COLORFUL SHRUBS - RED ACALYPHA, WHITE MUSSAENDA, CARICATURE PLANT, GREEN ACALYPHA, IXORA, ELDERADO & HYMENOCALIS



GEOMETRY TREE



FALSE OLIVE TREE



GEIGER TREE



TULIPWOOD TREE



HALA

PLANT PALETTE - STREET TREES

PLANT PALETTE - SCREENING TREES

PLANT PALETTE - UNDERSTORY SLOPE



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TULIPWOOD TREES BEYOND
 STRATEGICALLY PLACED MUSSAENDA FOR PRIVACY
 STAGGERED SMALLER GEIGER TREES ALLOW AIR CIRCULATION & VIEWS
 TRIM THESE TREES IF THEY GROW ABOVE SIGHT LINE
 LARGE CANOPY TREE BEYOND
 ALLOW THESE TREE TO GROW TO ITS NATURAL HEIGHT UNTRIMMED

REMOVE OVERGROWN SILVER TRUMPET TREES ALONG KONANE PLACE & REPLACE WITH LIGNUM VITAE TREES
 CLUSTER LIGNUM VITAE ON MAKAI SIDE NEAR CARPORT STRUCTURES & OPPOSITE BUILDING CORNERS TO OPEN UNOBSTRUCTED VIEWS

SURROUND PARKING AREAS & CARPORTS WITH LOW-MAINTENANCE WAX-LEAF FICUS HEDGES TO SCREEN HEADLIGHTS

PROPERTY BOUNDARY
 LILIPUNA
 12' WIDE TURFED SWALE & STREET TREE PLANTING ZONE AT BASE OF SLOPE
 GREEN WALL ON LOWER SLOPE WITH MORE COLORFUL SHRUBS (MUSSAENDA, ACALYPHA, CARICATURE PLANT ETC) ON KONANE PLACE SIDE

PARKING BEYOND

VIEW PLANE

KONANE PLACE

VARIES

BUILDING 35

STRATEGICALLY PLACED LARGE TREES ALONG LILIPUNA FOR VARIETY. THESE TREES ARE PLACED TO FRAME KANEHOE BAY VIEWS/BLOCK VIEWS FROM LILIPUNA. THESE TREES SHOULD NOT BE TRIMMED.

STAGGERED DOUBLE ROW OF GEIGER TREES (CORDIA SEBESTANA) PROVIDES LOWER CANOPY & ENABLES FRAMED VIEWS TOWARDS KANEHOE BAY AS WELL AS COLORFUL BACKDROP

TRIM TREES AT +/- 25' HEIGHT TO MAINTAIN VIEWS & AIR CIRCULATION

SLIGHTLY LESS STEEP SLOPE ALLOW FOR EASIER MAINTENANCE ACCESS & A BROADER MIX OF COLORFUL PLANTS VISIBLE FROM KONANE PLACE

SECTION FIVE : THRU BUILDING 35 - MIDDLE

SCALE 1 inch = 10 feet



GEOMETRY TREE

TULIPWOOD TREE

GEIGER TREE

SHRUBS - HELICONIA & RAPHIS, ELDORADO, MUSSAENDA & HELICONIA

LIGNUM VITAE TREE

WAX LEAF FICUS

PLANT PALETTE



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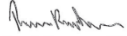
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JULY 10, 2020

Appendix B. PCA and CCH Correspondence, 2018 and 2019

<p>DEPARTMENT OF FACILITY MAINTENANCE CITY AND COUNTY OF HONOLULU 1005 Ulukouia Street, Suite 215, Kapaeha, Hawaii 96707 Phone: (808) 708-3242 • Fax: (808) 708-3281 Website: www.honolulu.gov</p> <p>KIRK CALDWELL MAYOR</p>  <p>ROSS S. SASAMURA, P.E. DIRECTOR AND CHIEF ENGINEER EDUARDO P. MANCILLAN DEPUTY DIRECTOR IN REPLY REFER TO: BWD 18-006 03</p> <p>January 11, 2019</p> <p>Ms. Sandy White, General Manager Puu Alii Community Association 46-059 Alii Anela Place Kaneohe, Hawaii 96744</p> <p>Dear Ms. White:</p> <p>Subject: LETTER OF WARNING Discharge of Pollutant into the City and County of Honolulu ("City") Municipal Separate Storm Sewer System ("MS4") Location: Lilipuna Road fronting Poha Kea Point Condominium Date of Investigation: November 30, 2018 Tax Map Key: 4-6-001:002</p> <p>On or about November 21, 2018, it was reported that soil sediment (pollutant) was discharged from the Puu Alii Community Association property onto Lilipuna Road, which is part of the City's MS4. On November 30, 2018, the Department of Facility Maintenance investigated the report however, the evidence of the reported discharge was inconclusive. As a result, this letter is for informational purposes only.</p> <p>City ordinances prohibit all pollutants and non-storm water discharges from entering the City's MS4. The City's MS4 is the system for the conveyance of storm water, including roads and streets with drainage systems, catch basins, curbs, gutters, ditches, man-made channels, or storm drains owned by the City.</p> <p>Section 14-12.23(a) of the Revised Ordinances of Honolulu 1990 provides that it is unlawful for any person to discharge or cause to be discharged any pollutant into any drainage facility which causes a pollution problem in State waters, or causes a violation of any provision of the City NPDES permit or the water quality standards of the State of Hawaii.</p>	<p>Ms. Sandy White, General Manager January 11, 2019 Page 2</p> <p>Violations of the Revised Ordinances of Honolulu, Chapter 14, Article 12, "Drainage Flood and Pollution Control," Section 14-12.28, may lead to enforcement actions and subject to an administrative fine of a minimum of \$1,000.00 up to a maximum of \$25,000.00 per violation per day.</p> <p>Please take a moment to read the enclosed brochures.</p> <p>If you have any questions, please call Ms. Genalyn Wagner of the Storm Water Quality Branch, at 768-3270.</p> <p>Sincerely,  Ross S. Sasamura, P.E. Director and Chief Engineer</p> <p>Enclosures: The Storm Water Issue Handout Yard Waste Tip Card Storm Water Best Management Practices - Property Maintenance Brochure</p> <p>cc: State of Hawaii, Department of Health - Clean Water Branch</p>
---	--



PU'U ALII COMMUNITY ASSOCIATION

46-058 Ali'i Anela Place
Kane'ohe, Hawai'i 96744
Phone: 235-0320 Fax: 235-2404
Manager@puualii.org

October 22, 2019

Transmitted Via email

Department of Facility Maintenance
ATTN: Ponciana Quindica
City & County of Honolulu
1000 Uluohia Street, Suite 215
Kapolei, Hawaii 96707

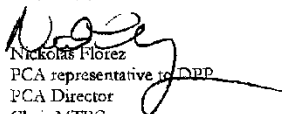
Subject: DFM letter ser SWQ 18-005, dtd January 11, 2019 regarding Letter of Warning –Discharge of Pollutant

Dear Ms. Quindica:

In response to the subject letter, the Pu'u Ali'i Community Association (PCA) would like to inform your office of what actions have and are being taken to prevent soil sediment discharges into the City's MS4 system. The PCA Board has provided approval for design of a slope stabilization and soil runoff protection system fronting buildings 37 & 38 of the Konane slope. As part of this design effort, a soil characterization study has already been performed by JBP Engineering Inc., and is provided for your reference. The report does indicate that the slope is unstable and subject to soil creep. JBP is now working with Dempsey Pacific to design an effective slope stabilization/runoff protection and ground cover system. This design is expected to be completed on or before November 19, 2019.

Upon approval and funding by the PCA's Board of Directors, the project will be submitted to DPP for permitting and approval. Due to the nature of the work, expedited approval would be very much appreciated. In the interim, temporary runoff protection will be installed by separate contract to protect against soil sediment discharges.

Very truly yours,


Nicholas Florez
PCA representative to DPP
PCA Director
Chair MTPC

Copy to:
Joette Yago – DPP
Richard Brownlie
Carol Kwan
Oneone Theone

Attachments:

JPB Geotechnical Report – Pu'u Ali'i slope investigation dtd 9/26/19

Appendix C. Geotechnical Reports and Update

GEOTECHNICAL REPORT

**PU'U ALI'I SLOPE INVESTIGATION
46-40 Kōnane Place
Kāne'ōhe, O'ahu, Hawai'i**

JPB Engineering Project No. 19235.01G



**GEOTECHNICAL REPORT
PU'U ALI'I SLOPE INVESTIGATION
46-40 KŌNANE PLACE
KĀNE'OHE, O'AHU, HAWAI'I**

Project No: 19235.01G

Date: September 26, 2019

Prepared for:

Pu'u Ali'i Community Association
Attn: Nick Florez
46-058 Ali'i'ānela Place
Kāne'ohe, Hawai'i 96744

Prepared by:

JPB Engineering, Inc.
47-388 Hui 'Iwa Street, Suite 16
Kāne'ohe, Hawai'i 96744

Authored by:



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





JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

September 26, 2019

Project No. 19235.01G

To: Pu'u Ali'i Community Association
46-058 Ali'i'ānela Place
Kāne'ohe, Hawai'i 96744

Attn: Nick Florez

Subject: Geoanalytical Report
Pu'u Ali'i Slope Investigation
46-40 Kōnane Place
Kāne'ohe, O'ahu, Hawai'i

Attached is our report of the geoanalytical investigation we conducted for the slope in front of Buildings 7 and 8. The principal conclusions and recommendations are as follow:

- ◆ The borings revealed surficial soil consisting of medium-stiff to hard clayey silt with cobbles and boulders extending to a maximum depth nine feet. Beneath the surficial soil, a zone of very stiff to hard saprolite was penetrated to the maximum depth explored, about 15.0 feet.
- ◆ The results of our investigation indicate that the subject slope is unstable and is susceptible to soil creep. Options for stabilizing the slope are presented in the report.
- ◆ We should be retained to review the construction plans and specifications, and to inspect the foundation excavations and to monitor the earthwork construction in order to verify that the recommendations of this report are followed.

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

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brian T. Tabuso". The signature is fluid and somewhat stylized, with the first and last names being the most prominent.

Brian T. Tabuso, P.E.
Project Engineer

TABLE OF CONTENTS

EXECUTIVE SUMMARY

INTRODUCTION..... Page 1
 Purpose..... 1
 Scope 1
FINDINGS..... 2
 Site Description..... 2
 Geologic Setting..... 2
 Earth Materials 2
CONCLUSIONS..... 3
 Expansive Soils..... 3
 Soil Strength 3
 Land Stability 4
 Slope Conditions..... 5
 Stabilization Options..... 5
RECOMMENDATIONS 5
 Site Preparation 5
 Clearing and Grubbing..... 5
 Buttress Fill 5
 Excavation 5
 Fill Material 5
 Benching and Keying 6
 Subdrains..... 6
 Fill Placement and Compaction..... 6
 Finished Slope 6
 Wire Mesh System..... 6
 Soil Nail..... 6
 Wire Mesh 6
 Supplemental Services..... 7
LIMITATIONS 7

APPENDICES

Appendix A - Field Exploration

Vicinity Map Plate No. A1
Site Plan..... A2
Logs of Borings A3 – A8
Unified Soil Classification System..... A9
Sections A10
Typical Buttress Fill Details..... A11

Appendix B - Laboratory Testing

Atterberg Limits Test Data Plate No. B1
Direct Shear Test Data..... B2 – B7
Unconfined Compressive Strength Test Data B8 – B10

Appendix C - References

DISTRIBUTION



INTRODUCTION

Purpose

A geotechnical investigation has been conducted on an existing slope in front of Buildings 37 and 38 situated at 46-40 Kōnane Place in the Pu'u Ali'i complex in Kāneohe. The purposes of this study have been to gather information on the nature, distribution and characteristics of the subsurface earth materials and ground water conditions at the site, and to prepare specific recommendations for use in slope stabilization design and construction.

Scope

The scope of this investigation is described in our proposal of July 23, 2019. On September 3 and 5, 2019, our field engineer conducted a reconnaissance of the property and mapped the locations of six test borings that were drilled and sampled to a maximum depth of about 15 feet. Our field engineer logged, classified and recovered relatively undisturbed samples of the earth materials drawn from selected vertical intervals in each boring. Ground water level observations were recorded during drilling and at intervals after completion of the borings, which were backfilled with tamped soil following exploration.

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

This report contains our findings regarding site soil, ground water and other geologic conditions; conclusions pertaining to expansive soils, soil strength and land stability; and, recommendations for retaining wall design and construction.

In Appendix A, the location of the project site is shown in relationship to surrounding landmarks and cultural features on Plate No. A1, Vicinity Map. The approximate locations of the test borings are depicted in relationship to the existing structures, existing ground surface elevation contours, and the property boundaries on Plate No. A2, Site Plan. Geotechnical descriptions and related data recorded during the field exploration phase of our study are displayed on Plates No. A3 through A8, Logs of Borings. A key to the soil symbols and identification criteria used on the logs is presented on Plate No. A9, Unified Soil Classification System. Subsurface relationships inferred from the test boring information are portrayed in profile on Plate No. A10, Sections. Construction details are shown on Plate No. A11, Typical Buttress Fill Details.

The results of the natural moisture content and dry unit weight tests are posted on the Logs of Borings, on which are also indicated the types of other laboratory tests conducted on corresponding samples. The remaining laboratory test data are contained in Appendix B. The results of the plasticity tests are shown on Plate No. B1, Atterberg Limits Test Data. Summaries of the strength tests appear on Plates No. B2 through B7, Direct Shear Test Data, and on Plates No. B8 through B10, Unconfined Compressive Strength Test Data. References consulted during the course of our investigation are listed in Appendix C.



FINDINGS

Site Description

As shown on Plates No. A1 and A2, the subject properties are an irregularly-shaped parcel encompassing approximately 2.481 and 2.446 acres near the cul-de-sac terminus of Kōnane Place between Lilipuna Road and Konohiki Street (State of Hawai'i, 1998). The existing buildings are a multi-story, concrete structures built in 1990. At the highest areas of the slope, ground surface drops from about elevation 52 feet to approximate elevation 26 feet; resulting in an overall gradient approaching 43 percent. At the time of our exploration, the subject slopes were covered with dried grass and leaves, vines and dotted with haole koa and plum trees.

Geologic Setting

The site lies on the Lilipuna peninsula, a remnant of a gigantic block that is a part of the Nu'uuanu Landslide. This immense landslide was created during a series of cataclysmic eruptions of the Kāne'ohe Caldera, one of a chain of now extinct volcanoes that formed the Ko'olau Range. The Ko'olau Range is a series of lava flows intersected by crystalline igneous sheet dikes (Stearns, 1985). The volcanic rocks are typically deeply weathered to a formation called saprolite.

Within the study area, the saprolite formation is overlain by a silty clay assigned to the Kāne'ohe series. This soil is characterized by a moderate expansion potential and a high corrosion potential with respect to uncoated steel but a moderate corrosion potential with respect to concrete. The erosion hazard is considered moderate on slopes which are of the inclination found in the study area (Foote, et al., 1972).

Earth Materials

The borings revealed surficial soil consisting of orange-brown, very moist, medium-stiff to hard clayey silt (Unified Soil Classification: MH) with cobbles and boulders extending to a maximum depth nine feet. This deposit is a part of the Kāne'ohe series described above.

Beneath the surficial soil, a zone of mottled-brown, very moist, very stiff to hard saprolite was penetrated to the maximum depth explored, about 15.0 feet. Further subsurface details are shown on Plates No. A3 through A9.

Ground Water

Each test boring was checked for the presence of ground water during and at intervals following exploration. No free ground water was observed in any of the borings.



CONCLUSIONS

Expansive Soils

The results of the Atterberg limits tests, shown on Plate No. B1, indicate that the surficial soil has low plasticity characteristics (plasticity index = 21 percent) and intermediate water retention properties (liquid limit = 54 percent). The plasticity index is the range of water contents which a soil can assume between the saturated and dry states and is the difference between the liquid and plastic limits. The liquid limit is the maximum amount of water that a soil is capable of absorbing which becoming fluid, the plastic limit is the minimum amount of water a soil can hold without crumbling.

The Atterberg limits test data suggests that the surficial soil has low expansive properties. Expansive soils swell or heave when they absorb moisture and shrink or contract which they lose moisture. At the same time, when expansive soils swell they lose cohesion, become weaker and are prone to movement even on shallow slopes, but when they dry out, they regain cohesion and therefore acquire greater strength.

Soil Strength

Laboratory direct shear tests conducted on selected samples of the surficial soil under saturated conditions yielded a low average residual friction angle of about 17° and a nominal cohesion value of about 260 pounds per square foot, as shown on Plates No. B2 through B5. Similar tests completed on selected samples of the underlying saprolite formation yielded a slightly higher average residual friction angle of approximately 19° and lower cohesion value of 90 pounds per square foot, as illustrated on Plates No. B6 and B7. The internal friction angle is a measure of soil grittiness whereas the cohesion component is a measure of soil stickiness.

Unconfined compressive strength tests completed on selected samples of the surficial soil reached an average ultimate undrained shear strength of 1,685 pounds per square foot, as shown on Plates No. B8 and B9. Similar tests performed on a selected sample of the underlying saprolite attained an ultimate undrained shear strength approaching 2,985 pounds per square foot, also as illustrated on Plate No. B10.

All of these results confirm that the surficial soils and underlying saprolite are weak and that their strength decreases as their moisture content increases.



Land Stability

A series of limit equilibrium slope stability analyses was conducted for the study area slope. These computations are based on the results of laboratory test data, subsurface relationships inferred from the test boring data and topographic information. The analyses are predicted using Bishop's Method, in which the potential failure surfaces are rotational and arcuate; therefore, these surfaces are called "slip circles."

A safety factor, defined as the ratio of driving forces to resisting forces, is computed for each trial slip circle. Driving forces include soil weight, earthquake effects and hydrostatic pressures due to ground water. Resisting forces, acting along the potential slip circles, primarily consist of the strength properties of the soils. If the sum of the resisting forces is greater than the sum of the driving forces, a safety factor greater than unity results. Conversely, a safety factor less than unity is computed when the sum of the driving forces is greater than that of the resisting forces. The slip circle corresponding to the minimum calculated safety factor is called the "critical circle."

Through the assistance of appropriate computer programs, we completed numerous analytical trials to search for the theoretical safety factor at each of three slope sections, the positions and orientations of which are depicted on Plate No. A10. The results of those trials are outline in the table below.

Slope Section	Minimum Factor of Safety	
	Static	Seismic
A – A'	1.115	0.936
B – B'	1.222	1.063
C – C'	1.325	1.107
D – D'	1.175	1.017

In conventional engineering practice, the minimum desirable safety factor against slope failure is 1.50 under static conditions and 1.25 under earthquake conditions. The analytical results indicate that the slope in front of Buildings 37 and 38 are unstable.

In addition to slip failure, even gentle slopes that are underlain by clayey soils are also susceptible to soil creep, which is caused by the slow, downward movement of earth under the influences of gravity and moisture changes. Clayey soils tend to expand in a direction at right angles to the slope when they absorb moisture, but tend to shrink in a vertical direction due to the influence of gravity when they lose moisture. The cumulative effect, or creep, is a continuing pattern of downslope soil displacement in minute, stepwise increments.



Whenever the inclination of a slope is equal to or greater than the friction angle of the clayey soil beneath it, soil creep will ensue as the soil loses its cohesion due to moisture absorption. As mentioned previously, the average internal friction angle of the surficial soil is about 17°, but the average angle of the slope is about 30°. Therefore, the surficial soil is susceptible to creep. The horizontal components of creep movement are reflected as stretching displacements, while the vertical components appear as settlements.

Slope Conditions

The results of our investigation indicate that the slope in front of Building 37 is unstable and that the entire slope in front of both buildings is susceptible to soil creep.

Stabilization Options

We have concluded that the slope areas in front of Building 37 can be stabilized by installing soil nails and covering the slope face with a wire mesh system. At the areas where the slopes are vulnerable to soil creep, they can be stabilized by either constructing a buttress fill or a wire mesh system. Specific recommendations are discussed below.

RECOMMENDATIONS

Site Preparation

Clearing and Grubbing - All vegetation, including surface grasses, weeds, and shrubs along with any roots over half an inch in diameter should be removed from the proposed building area. Debris resulting from clearing and grubbing operations should be hauled off site to an approved disposal area.

Buttress Fill

Excavation – The limits of grading shall be determined by the project civil engineer. The final horizontal and vertical limits of required excavation should be determined by the project geotechnical engineer. Benching, keying and subdrain details recommended below are shown schematically on Plate No. A11. All excavated material should be hauled off site to an approved disposal area.

Fill Material – Prior to use, all soils intended for use as backfill should be approved by the project geotechnical engineer. All imported soils should have a plasticity index not exceeding 20, when tested in accordance with ASTM Designation D 4318-10, and at least 20 percent of the particles should pass the No. 100 sieve, when tested in accordance with ASTM Designation D 422-07.



Benching and Keying – Each bench should consist of a terrace at least eight feet wide and inclined at about five percent into the slope. The rises between the adjacent benches should not exceed four feet.

The original ground should be keyed in addition to benching. The keyway should consist of a level trench at least five feet wide and at least three feet deep. The benches and keyway should be scarified to a depth of six inches, brought to at least two percent over the optimum moisture content and compacted to not less than 90 percent relative compaction, in accordance with ASTM Designation D 1557-12.

Subdrains – Subdrains should be provided along the heels of the benches, as shown schematically on Plate No. A11. Each subdrain should consist of a perforated collector pipe surrounded by drain rock. The collector pipe should be perforated, composed of Schedule 40 PVC and surrounded by one cubic foot of “3B fine” drain rock per ASTM Designation C33-90, No.67 gradation, for every lineal foot of drain pipe. The drain rock should be completely wrapped with Mirafi™ 140N geotextile fabric, or equivalent, to retard impregnation of the drain rock by the contiguous fine-grained soils. The collector pipes should be sloped to drain by gravity (holes down) to appropriate discharge points located away from any slope. Collector pipes extending beyond the fill limits should be solid and the outlets should be screened with No. 10 galvanized, welded wire mesh to prevent rodent intrusion. Final subdrain locations and elevations should be determined in the field by the project geotechnical engineer.

Fill Placement and Compaction - All fill material should be placed in horizontal lifts not exceeding eight inches in loose thickness. Each lift should be brought to at least the optimum moisture content and compacted to not less than 90 percent relative compaction, per ASTM Designation D 1557-12. All earthwork operations must be observed and the soils tested by the project geotechnical engineer or his representative.

Finished Slope – The slope should be protected by vegetation or other erosion control system as soon as possible after grading is complete. The project arborist or civil engineer should be consulted.

Wire Mesh System

Soil Nail – Soil nails should consist of an IBO system incorporating Titan 40/16 bars or equivalent. The nails should be spaced on maximum eight-foot centers vertically and horizontally. The nails should be installed at an angle of 45° from the horizontal and staggered in rows. All nails should reach a minimum length of 15 feet. Grout should consist of a rapid-setting mix with an ultimate compressive strength of 4,000 pounds per square inch at 28 days cure in accordance to ASTM C 109-16a.

Wire Mesh – The wire mesh system should consist of the Tecco® G65/3 + P33 or equivalent. Before the mesh is installed, a layer of Tecmat® erosion control fabric or equivalent should be placed on the slope to facilitate development of vegetation.



Supplemental Services

JPB Engineering, Inc. should be retained to review the construction plans and specifications to determine whether the recommendations contained in this report are adequately reflected in those documents. The results of our review would be described in writing. JPB Engineering, Inc. should be retained to monitor and test the earthwork construction and subdrain installations to verify that the recommendations of this report are followed.

LIMITATIONS

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

Site conditions and cultural features described in the text are those existing at the time of our field reconnaissance and exploration on September 3 and 5, 2019, and may not necessarily be representative of such conditions at other places and times. Similarly, the test borings represent subsurface conditions at the times and locations indicated; it is not warranted that they are representative of such conditions at other locations and times. The locations and elevations of the test borings are referenced to a plan titled: *Grading Plan, Puu Alii, A Planned Development Housing, Phase IV, Heeia, Kaneohe, Oahu, Hawaii* (scale: 1" = 40'), dated August 24, 1987, by Gray, Hong & Associates; *Pu`u Alii Tree Planting & Removal, Pu`u Ali`i Tree Planting Plan, 46-058 Alii Anela Place, Kaneohe HI 96744* (scale: 1" = 50'), Sheet L1.6 of seven sheets, undated, and are to be considered approximate only.

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



APPENDIX A

Field Exploration



APPENDIX A

Field Exploration

On September 3, and 5, 2019 our field engineer conducted a reconnaissance of the site, and the surrounding vicinity. The location of the project is shown in relationship to surrounding landmarks and cultural features on Plate No. A1, Vicinity Map.

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

The borings were advanced to a maximum depth of approximately 15 feet below existing grade. At selected vertical intervals in each boring, relatively undisturbed samples of the earth materials were obtained by means of a 3.0-inch-O.D. (2.5-inch-I.D.) split-barrel sampler containing stacks of thin-walled, brass rings, each one inch thick. The sampler was advanced by hammer blows produced by a 140-pound hammer freely falling 30 inches, in accordance with ASTM Designation D 1586-84. The number of blows required to drive the sampler a total distance of 18 inches was recorded, and the sum of the hammer blows for the second and third six-inch increments, or blow count, was recorded for each drive. The blow counts recorded for the split-barrel sampler are approximately twice those of the corresponding "Standard Penetration" blow counts. All of the samples were sealed in moisture-proof containers and transported in shock-resistant cases to our laboratory for further classification and testing.

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

The Logs of Borings are depicted on Plates No. A3 through A8. A key to the soils symbols and identification criteria used on the logs is presented on Plate No. A9, Unified Soil Classification System. Subsurface relationships inferred from the test boring information are portrayed in profile on Plate No. A10, Sections. Construction details are shown on Plate No. A11, Typical Buttress Fill Details.





Base: United States Geological Survey, 1998, *Kāneʻohe Quadrangle, Hawaiʻi - Honolulu Co., Island of Oʻahu, 7.5 Minute Series (Topographic)*

VICINITY MAP

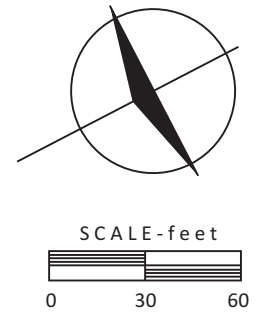
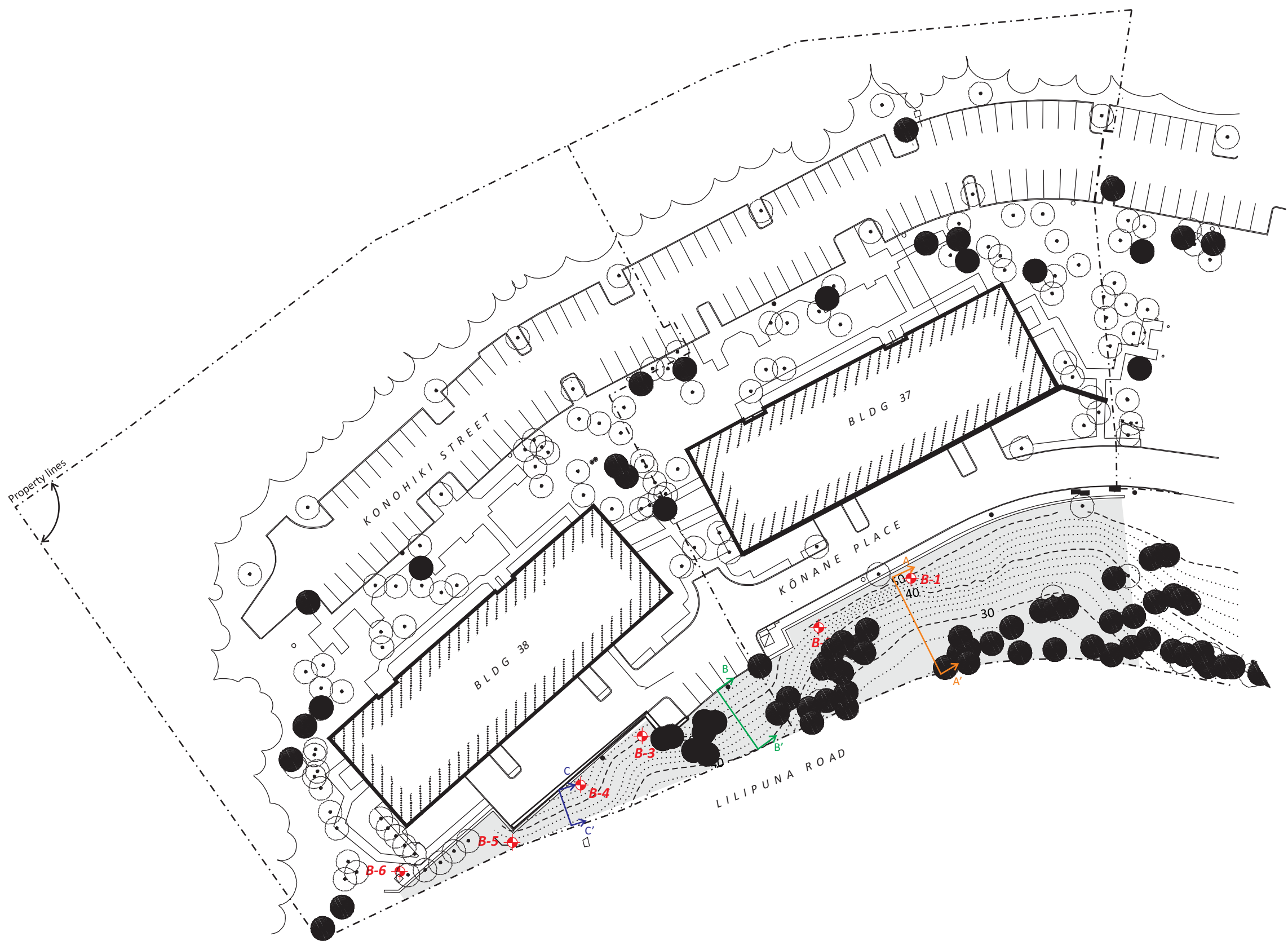


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
46-40 Kōnane Place
Kāneʻohe, Oʻahu, Hawaiʻi

DATE: September, 2019

PROJECT NO. 19235.01G



- L E G E N D -

- B-6** Approximate location of test boring
- Subject slope
- Existing structure
- Existing ground elevation contour - feet

- N O T E -

See Plate No. A10 for Sections



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Base: Gray, Hong & Associates, Inc., 1987, *Grading Plan, Puu Alii, A Planned Development Housing, Phase IV, Heeia, Kaneohe, Oahu, Hawaii* (scale: 1" = 40'), dated August 24, 1987.

-, *Pu'u Alii Tree Planting & Removal, Pu'u Ali'i Tree Planting Plan, 46-058 Alii Anela Place, Kaneohe HI 96744* (scale: 1" = 50'), Sheet L1.6 of seven sheets, undated.

SITE PLAN

PU'U ALI'I SLOPE INVESTIGATION
46-40 Kōnane Place
Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019


PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-1
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
	80	31.8			41	SB-1			MH	CLAYEY SILT, orange-brown, very moist, very stiff
UC	80	34.6	0.69		28	SB-2	5			stiff
	85	34.6			44	SB-3				very stiff
DS	68	45.0			13	SB-4	10			SAPROLITE, mottled-brown, very moist, medium-stiff
UC	66	56.4	2.99		36	SB-5				very stiff
							15			Bottom of Boring No. B-1 @ 14.5 ft. No free ground water observed.
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: September, 2019	PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-2
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
UC	75	49.1	0.62		26	SB-1			MH	CLAYEY SILT, orange-brown, very moist, stiff
DS	71	39.6			12	SB-2	5			medium-stiff
UC	72	40.9	0.49		16	SB-3				stiff
	62	50.6			24	SB-4	10			SAPROLITE, mottled-brown, very moist, stiff
	61	53.7			47	SB-5				very stiff
							15			Bottom of Boring No. B-2 @ 14.5 ft. No free ground water observed.
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: September, 2019	PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-3
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
DS	71	27.3			36	SB-1			MH	CLAYEY SILT, orange-brown, moist, very stiff
										Boulders
					33	CP-1	5			
					37	CP-2				
					64	CP-3	10			SAPROLITE, hard
					62	CP-4	15			
										Bottom of Boring No. B-3 @ 15.0 ft. No free ground water observed.
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel CP - Cone Penetrometer SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING

 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: September, 2019	PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-4
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
UC	79	28.1	4.95		24	SB-1			MH	CLAYEY SILT, orange-brown, moist, stiff
DS	79	30.0			116	SB-2	5			Boulder
					78	CP-1				hard
					52	CP-2	10			SAPROLITE, very stiff
					31	CP-3	15			
							20			Bottom of Boring No. B-4 @ 15.0 ft. No free ground water observed.

SAMPLE TYPE

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

OTHER LABORATORY TESTS

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

LOG OF BORING



JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019


PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-5
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
AL	74	29.2		21	29	SB-1			MH	CLAYEY SILT, orange-brown, moist, stiff
	84	23.3			39	SB-2	5			stiff
DS	69	47.5			19	SB-3	10			SAPROLITE, mottled-brown, very moist, stiff
	69	37.3			39	SB-4				very stiff
	94	25.5			68	SB-5	15			hard
							20			Bottom of Boring No. B-5 @ 14.5 ft. No free ground water observed.

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: September, 2019	PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-6
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
DS	75	28.1			21	SB-1	0		MH	CLAYEY SILT, orange-brown, moist, stiff
							5			Stopped on a boulder.
							10			Bottom of Boring No. B-6 @ 3.5 ft. No free ground water observed.
							15			
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength
SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING

 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: September, 2019	PROJECT NO. 19235.01G

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

UNIFIED SOIL CLASSIFICATION SYSTEM

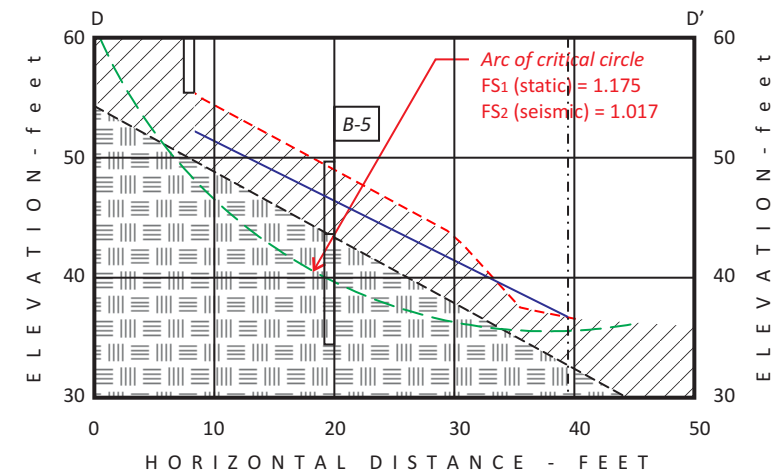
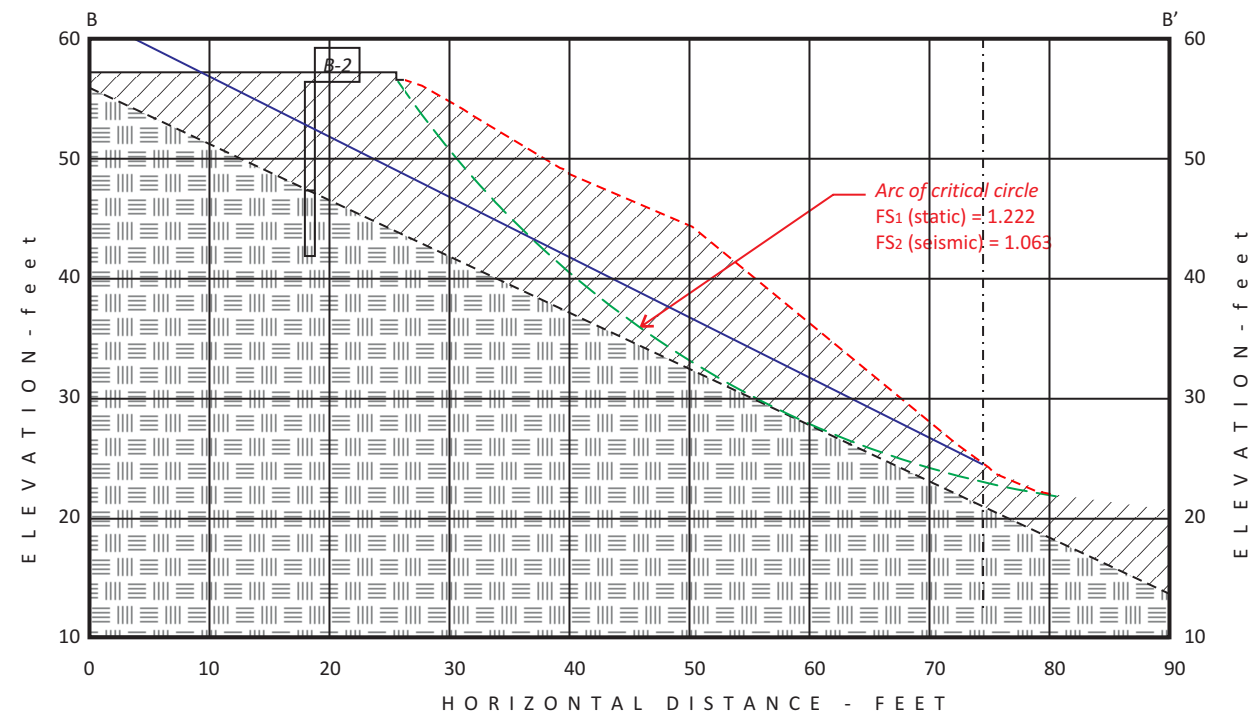
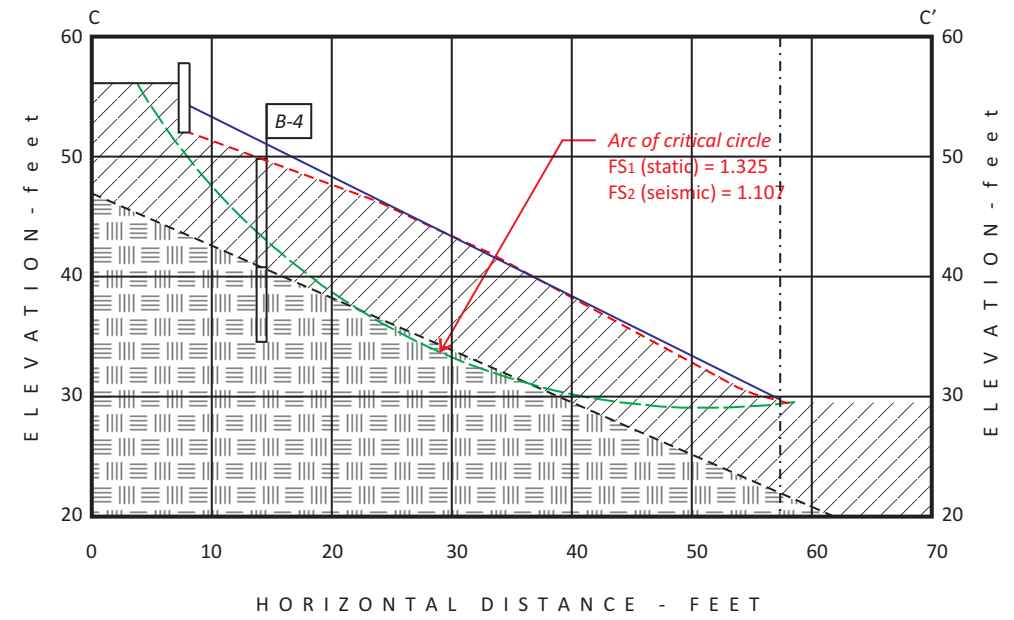
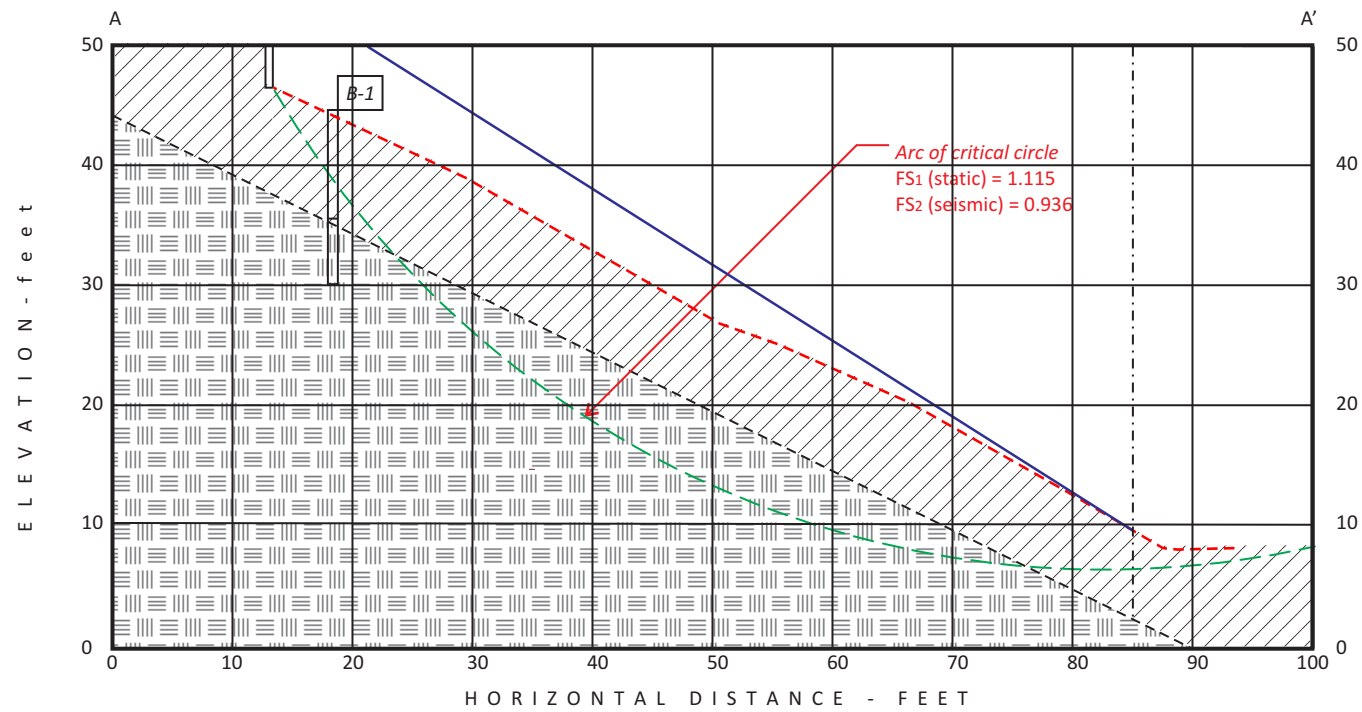


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- L E G E N D -

- Clayey silt
- Saprolite
- Existing grade
- Proposed 2:1 grade
- Property line



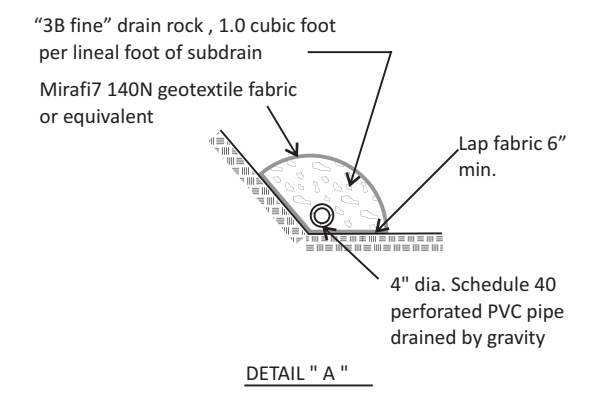
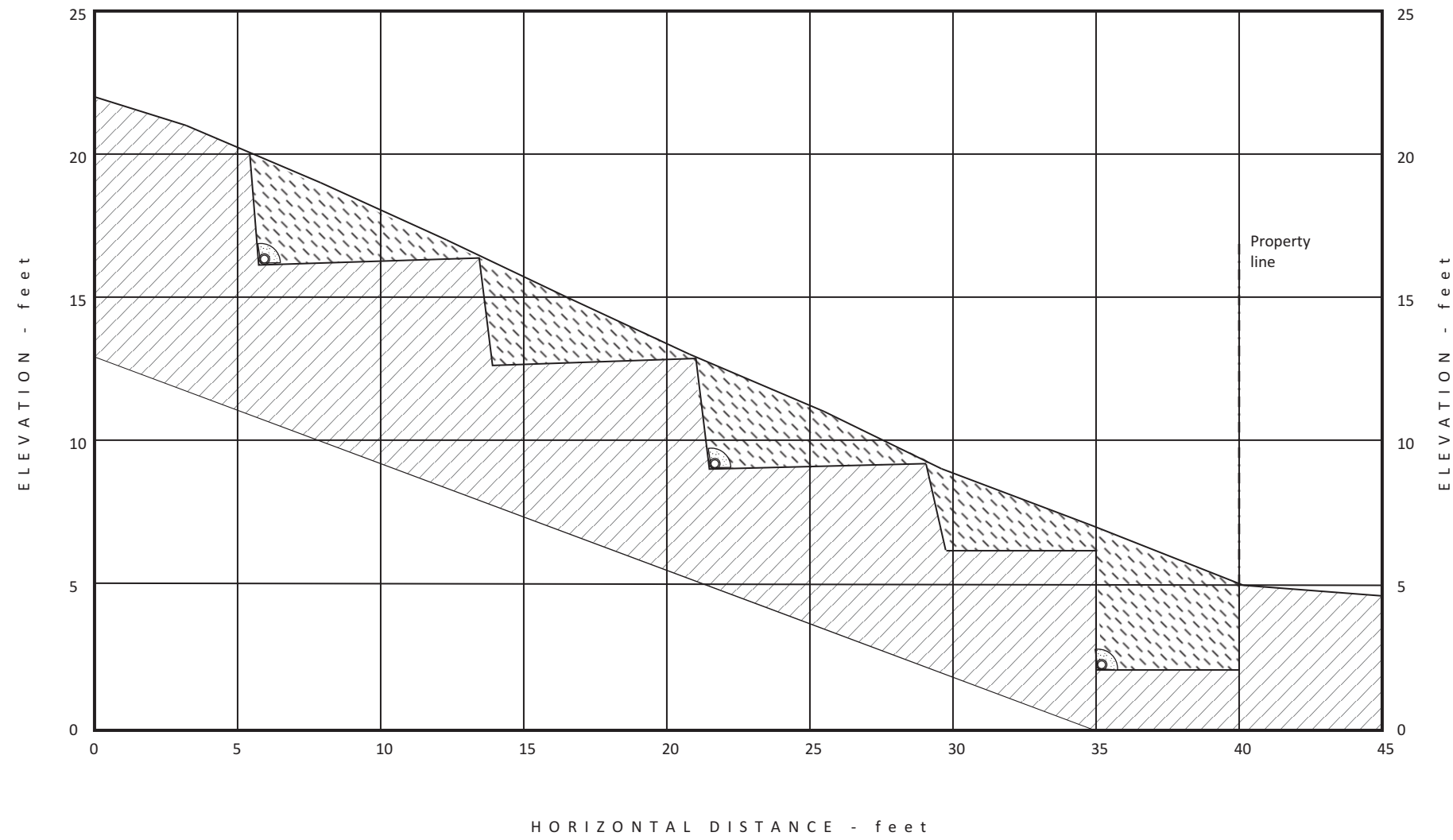
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SECTIONS

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TYPICAL BUTTRESS FILL DETAIL

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APPENDIX B

Laboratory Testing



APPENDIX B

Laboratory Testing

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

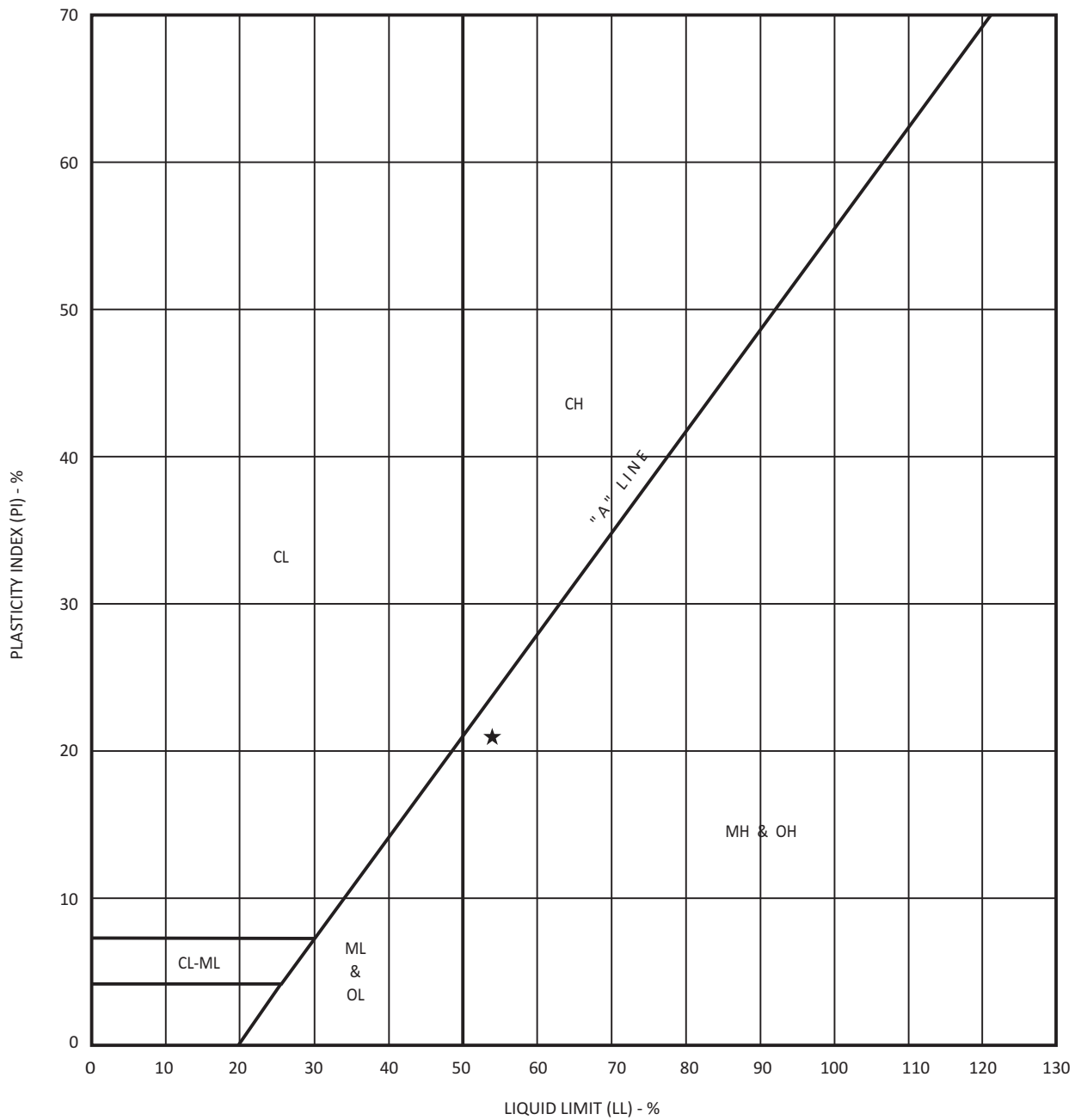
Natural moisture content tests (ASTM Designation D 2216-92) and dry unit weight tests (ASTM Designation D 2937-94) were conducted on selected samples of the earth materials recovered from each test boring. The results are posted on the Logs of Borings, opposite the depth appropriate to each sample.

Atterberg limits tests (ASTM Designation D 4318-84) were performed on a selected sample of the surficial soil to evaluate its plasticity characteristics. The results are depicted on Plate No. B1, Atterberg Limits Test Data.

Consolidated, drained direct shear tests (ASTM Designation D 3080-90) were conducted at normal pressures of 500, 1,000 and 1,500 pounds per square foot on selected samples of the surficial soil and saprolite formation to evaluate their internal strength characteristics. The data are summarized on Plates No. B2 through B7, Direct Shear Test Data.

Unconfined compressive strength tests (ASTM Designation 2166-91) were completed on selected samples of the surficial soils and underlying saprolite formation to estimate their undrained strength properties. The results are illustrated on Plates No. B8 through B10, Unconfined Compressive Strength Test Data.





Point Code	Boring No.	Sample No.	Depth (ft)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Unified Soil Classification
★	B-5	SB-1	1.0	54	33	21	MH

ATTERBERG LIMITS TEST DATA

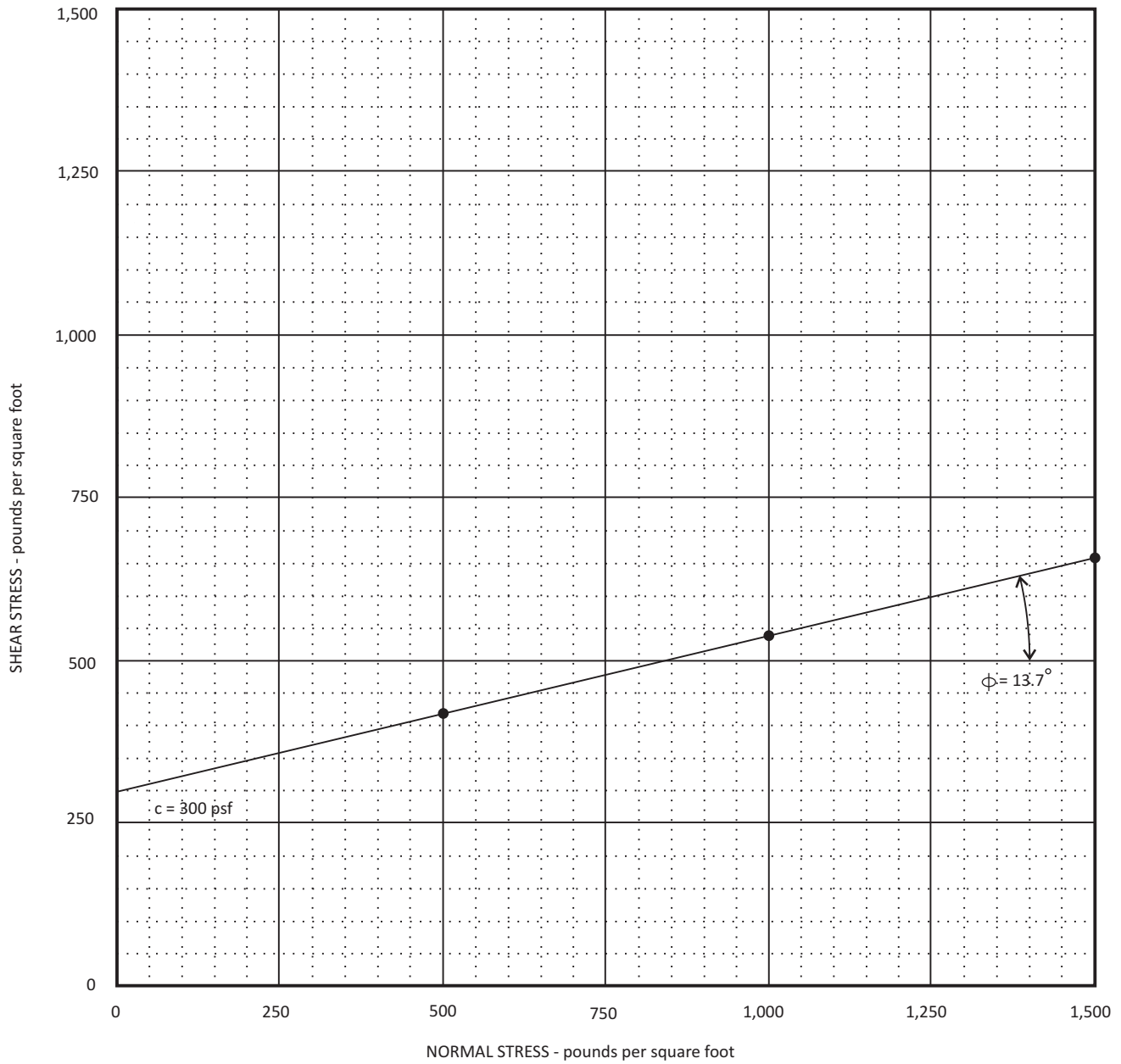


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 Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-3	SB-1	1.0	78	41.2	500	420
B-3	SB-1	1.0	77	42.4	1,000	545
B-3	SB-1	1.0	77	39.1	1,500	665

DIRECT SHEAR TEST DATA

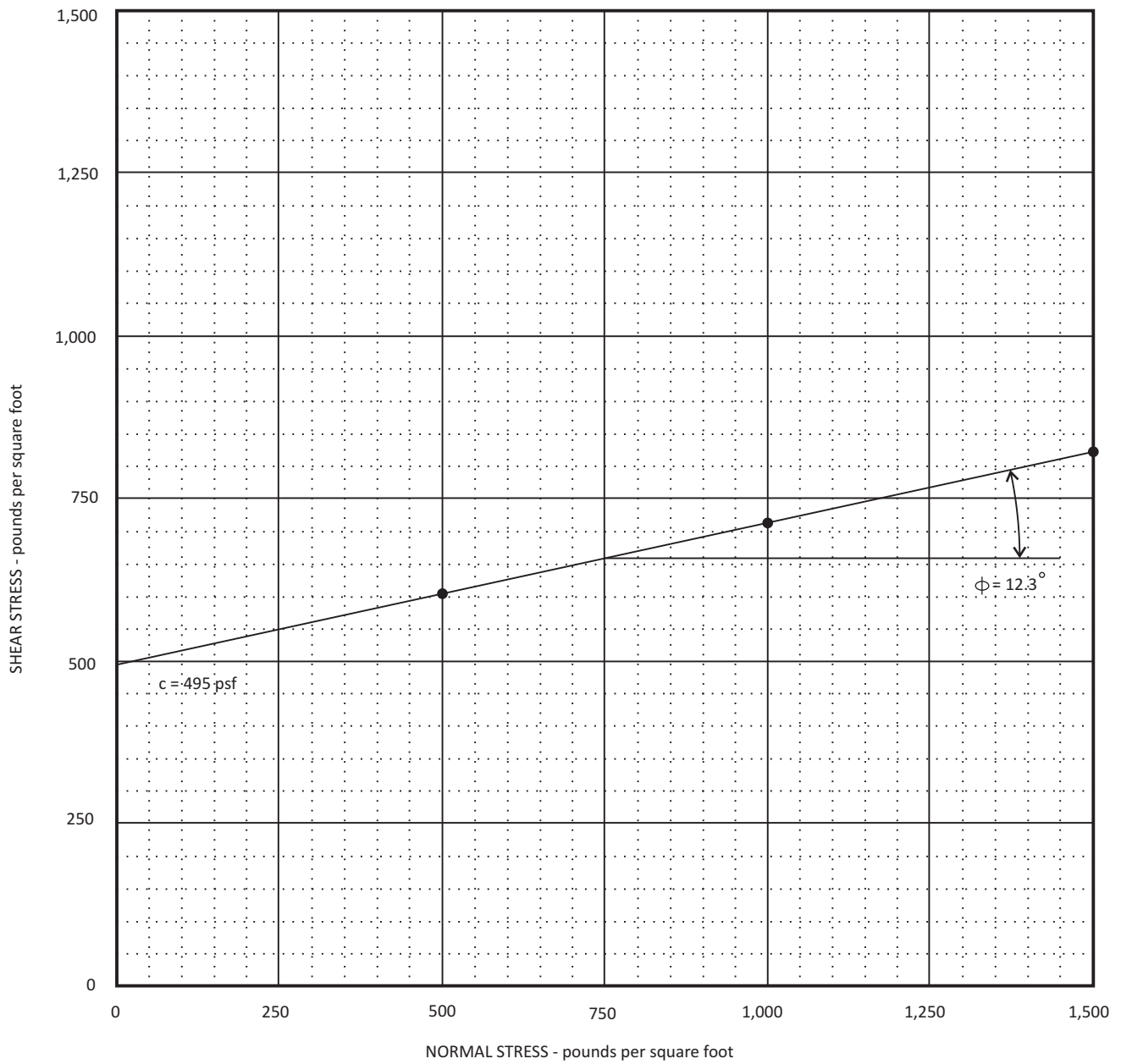


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DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-6	SB-1	1.0	70	46.1	500	605
B-6	SB-1	1.0	69	42.7	1,000	715
B-6	SB-1	1.0	68	46.1	1,500	820

DIRECT SHEAR TEST DATA

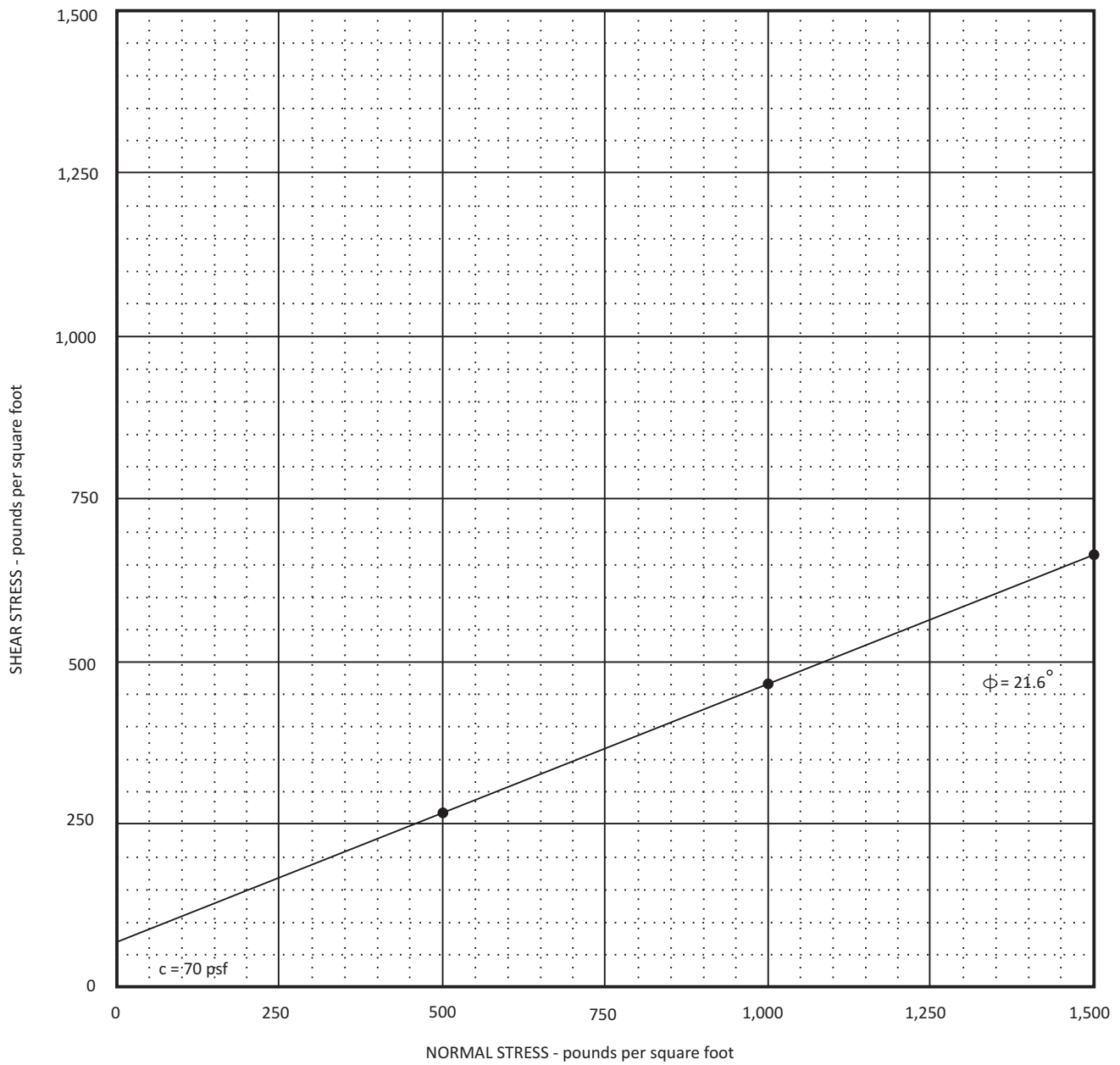


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DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-2	SB-2	4.0	74	47.3	500	270
B-2	SB-2	4.0	73	46.9	1,000	465
B-2	SB-2	4.0	72	49.5	1,500	665

DIRECT SHEAR TEST DATA

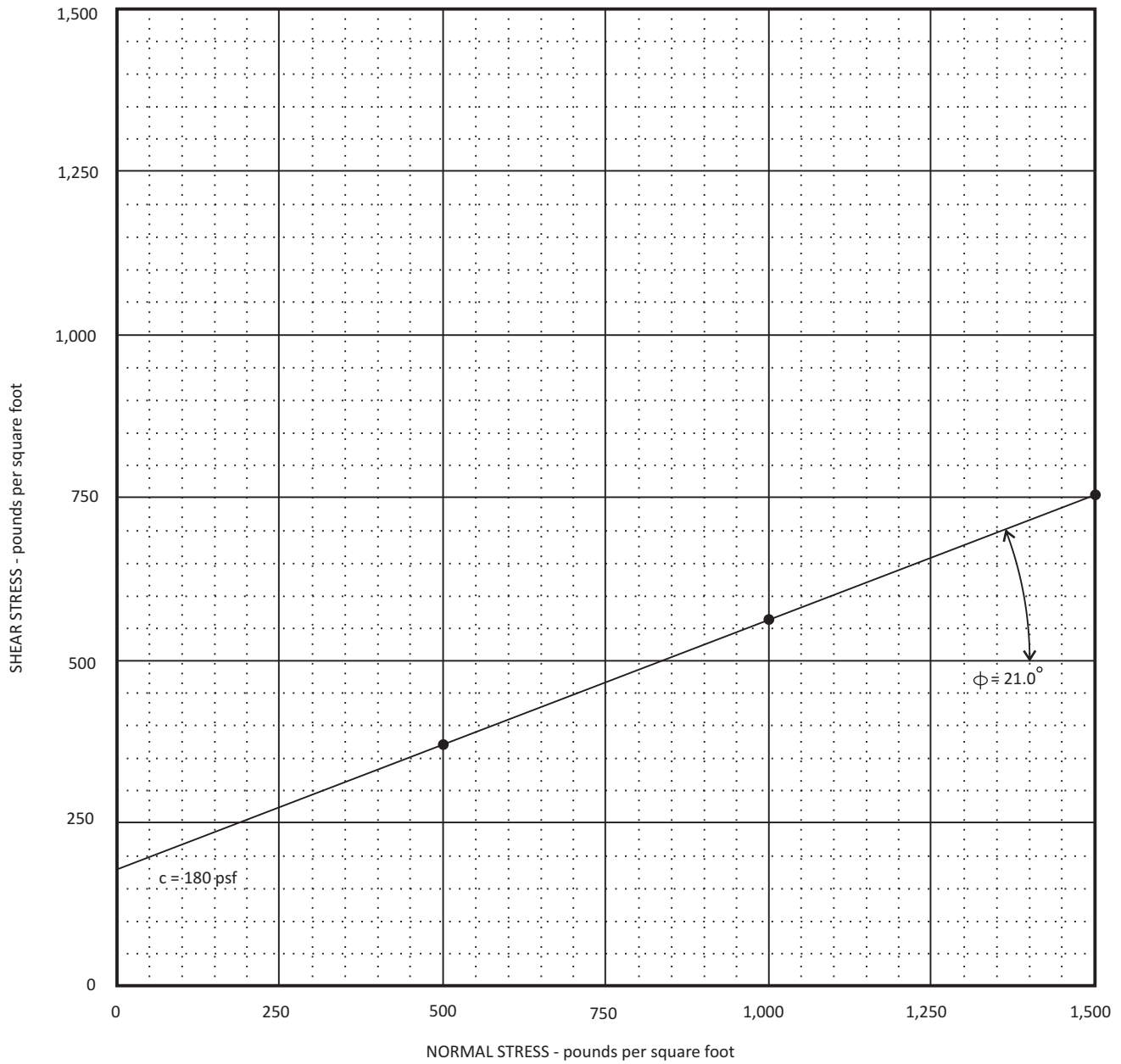


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DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-4	SB-2	4.0	86	37.2	500	370
B-4	SB-2	4.0	85	37.4	1,000	565
B-4	SB-2	4.0	86	36.2	1,500	755

DIRECT SHEAR TEST DATA

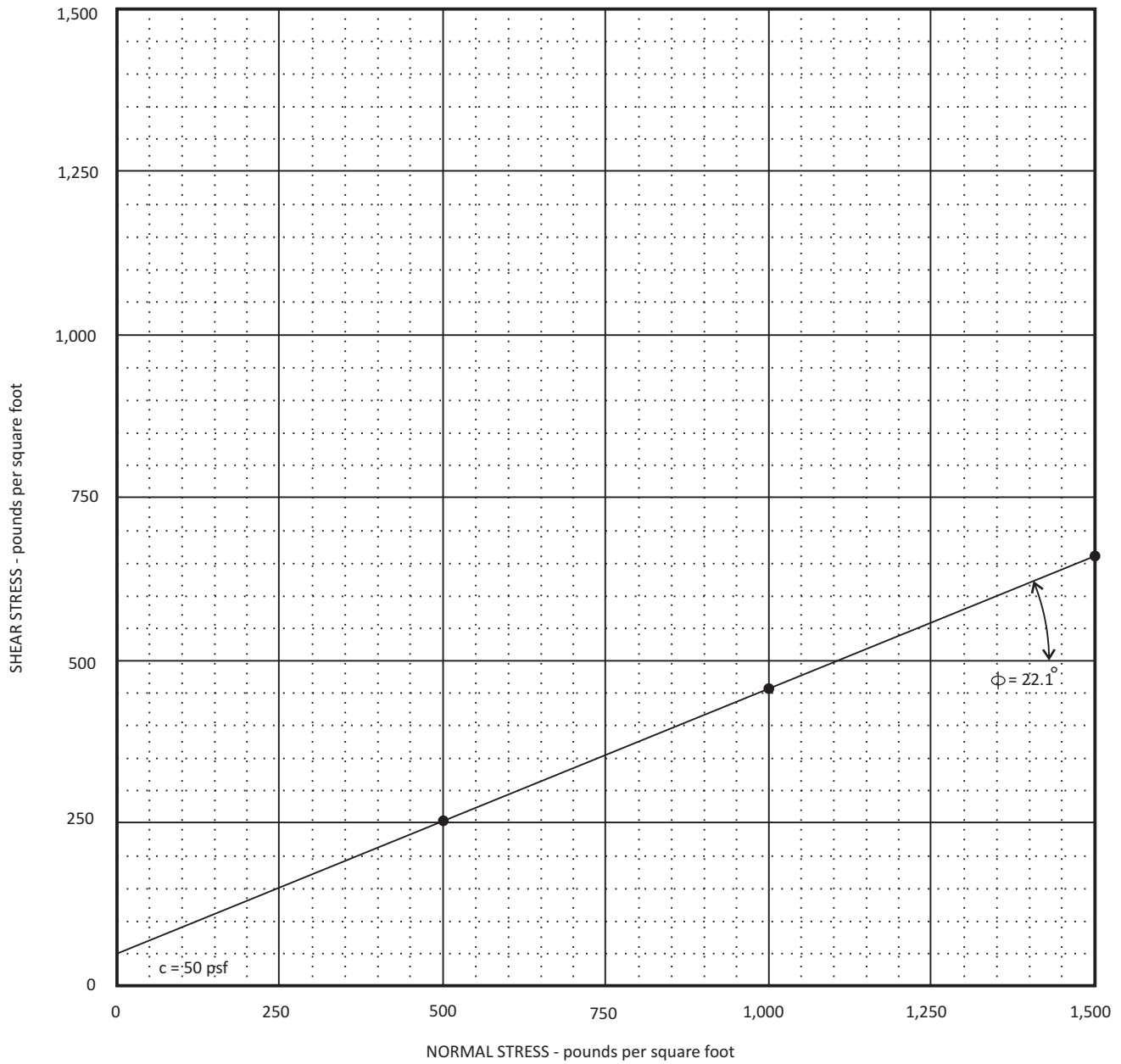


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DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-5	SB-3	7.0	74	46.4	500	255
B-5	SB-3	7.0	74	47.3	1,000	455
B-5	SB-3	7.0	74	46.8	1,500	660

DIRECT SHEAR TEST DATA

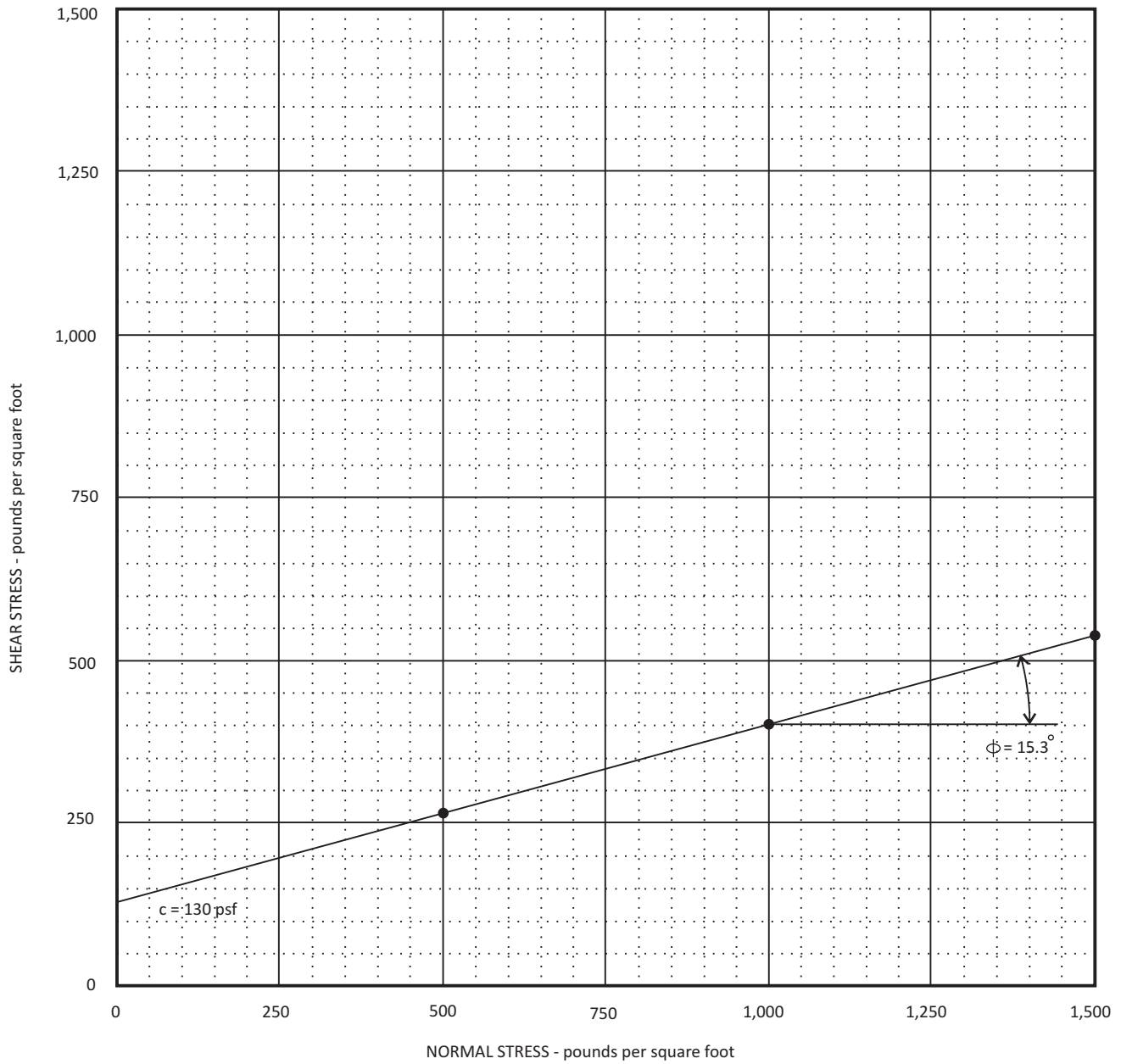


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 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-1	SB-4	10.0	70	52.7	500	265
B-1	SB-4	10.0	68	57.2	1,000	405
B-1	SB-4	10.0	66	58.8	1,500	540

DIRECT SHEAR TEST DATA

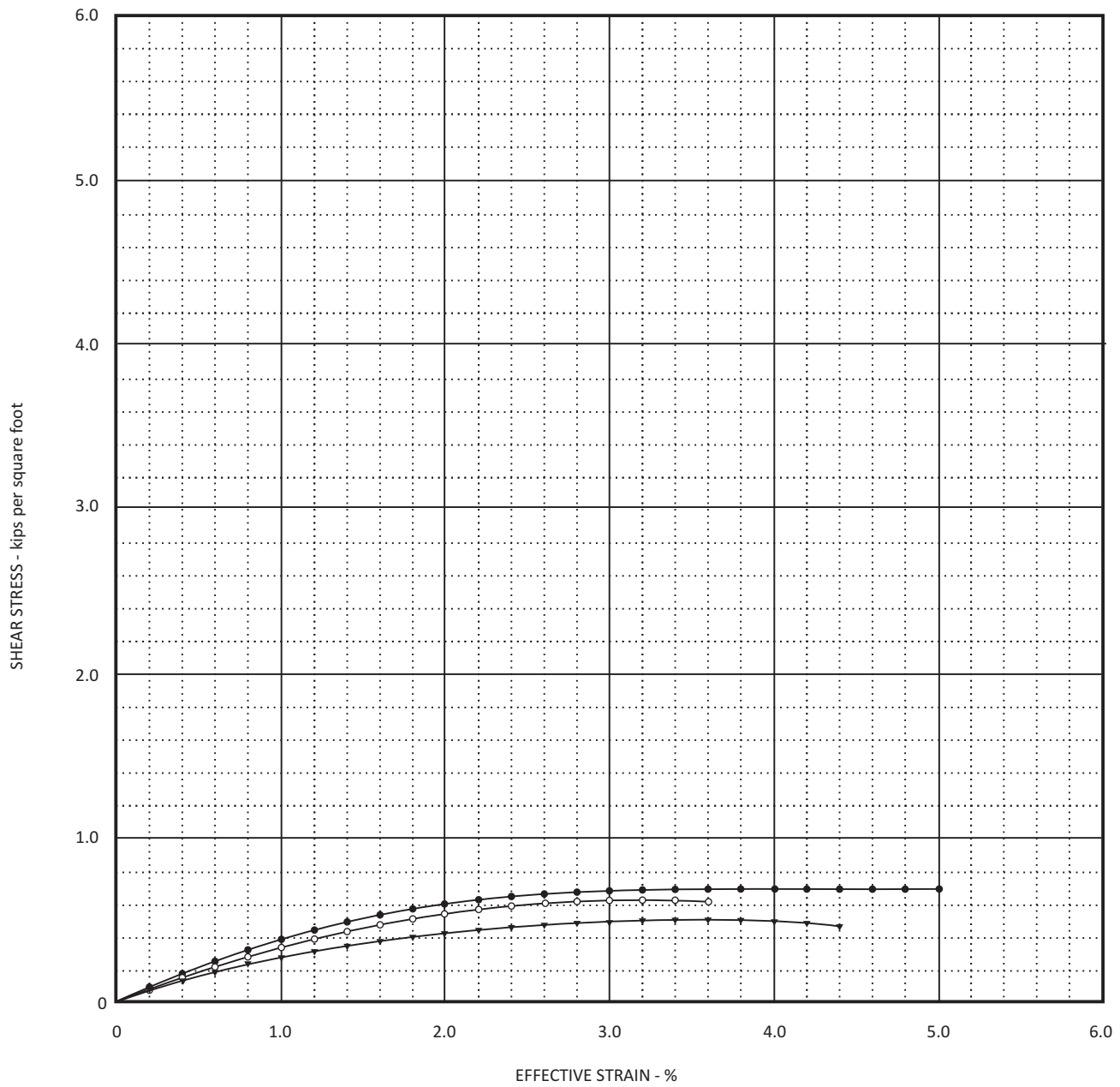


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DATE: September, 2019

PROJECT NO. 19235.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
●	B-1	SB-2	4.0	80	33.8	5.0	685
○	B-2	SB-1	1.0	75	49.1	3.2	620
▼	B-2	SB-3	7.0	72	40.9	4.0	490

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

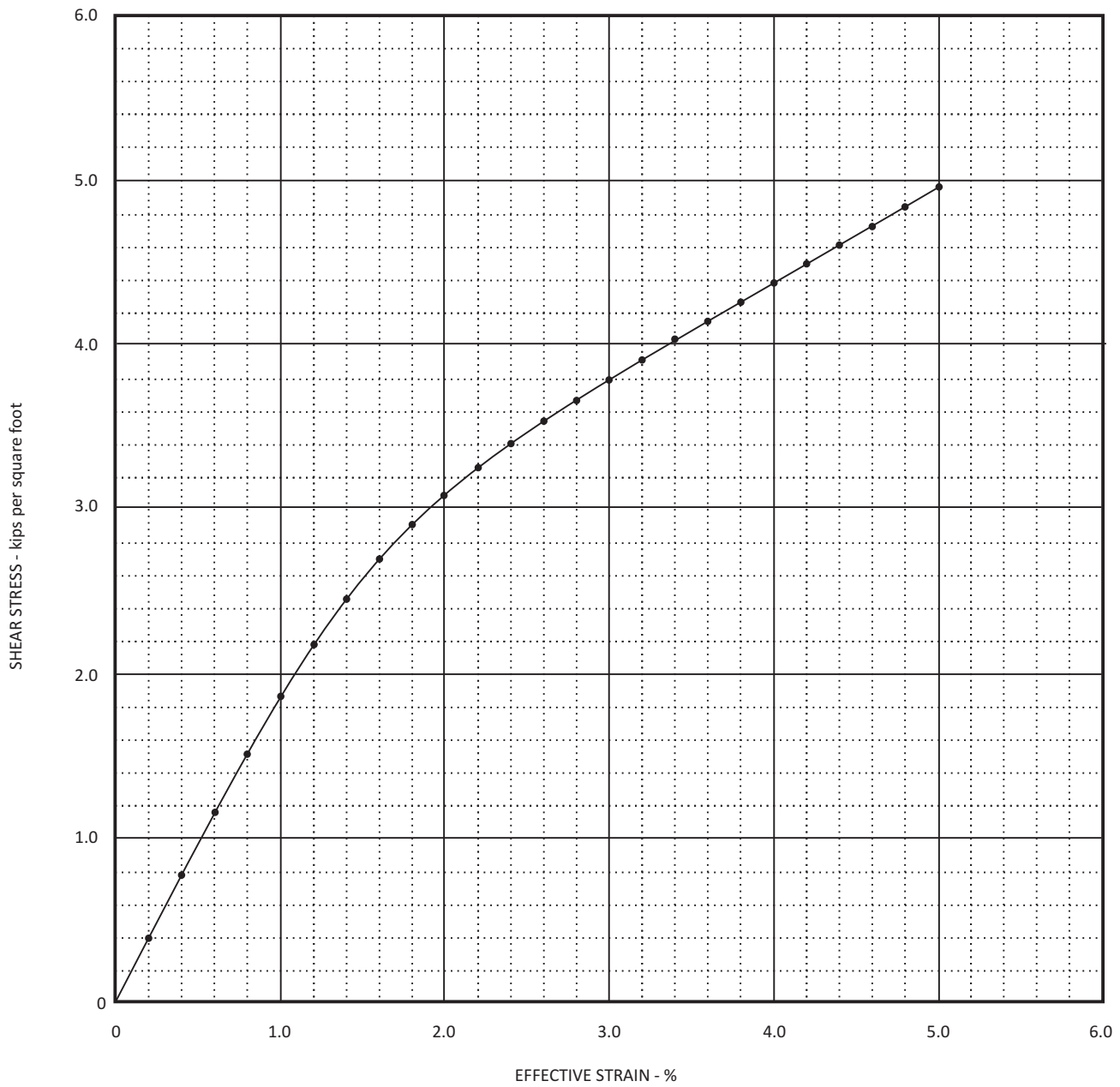


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DATE: September, 2019

PROJECT NO. 19235.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
•	B-4	SB-1	1.0	79	28.1	5.0	4,950

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

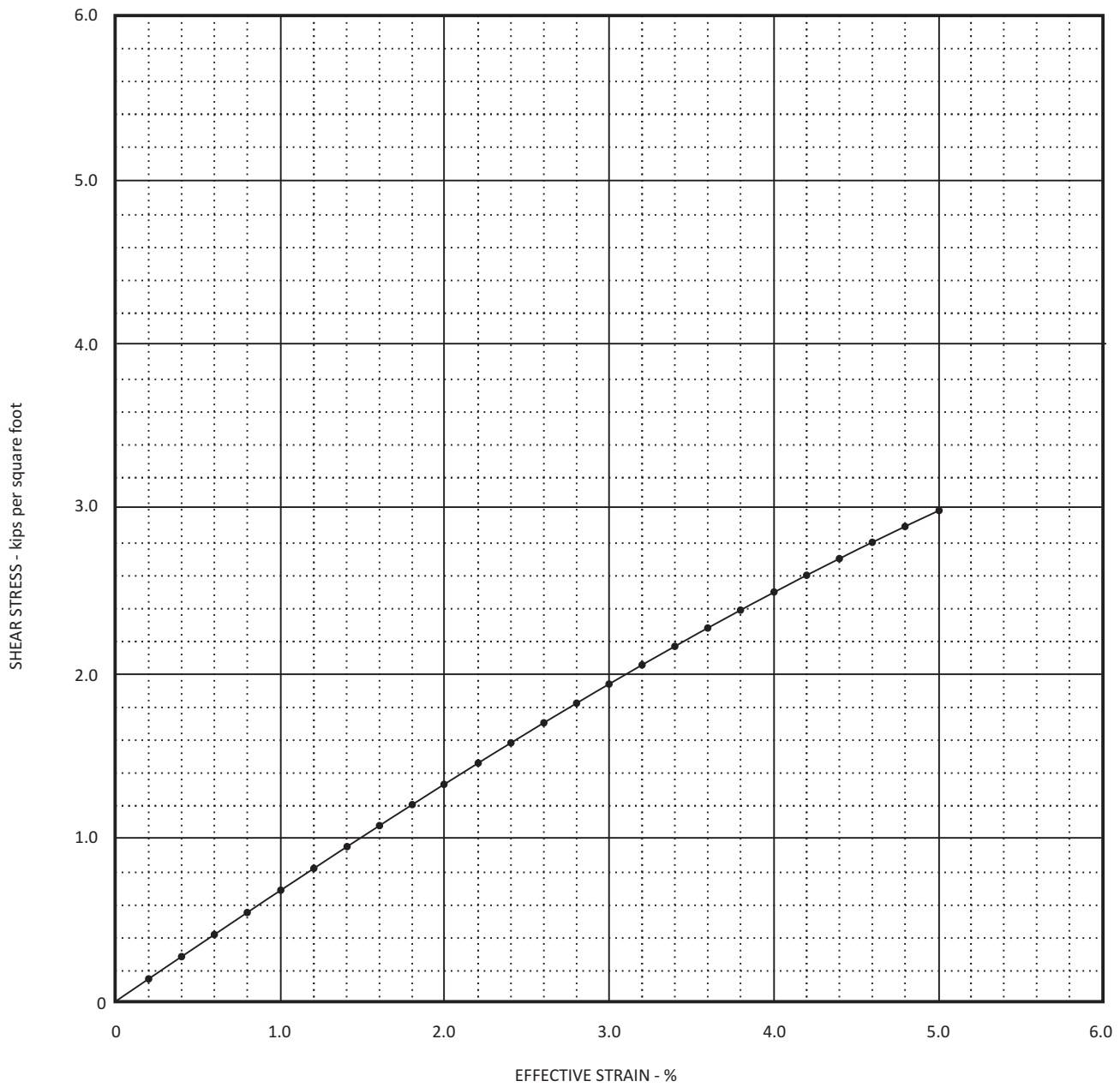


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DATE: September, 2019

PROJECT NO. 19235.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
•	B-1	SB-5	13.0	66	56.4	5.0	2,985

UNCONFINED COMPRESSIVE STRENGTH TEST DATA



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DATE: September, 2019

PROJECT NO. 19235.01G

APPENDIX C

References



APPENDIX C

References

1. —, *Pu`u Alii Tree Planting & Removal, Pu`u Ali`i Tree Planting Plan, 46-058 Alii Anela Place, Kaneohe HI 96744* (scale: 1" = 50'), Sheet L1.6 of seven sheets, undated.
2. Foote, D.; Hill, E. L.; Nakamura, S.; and Stephens, F., 1972, *Soil Survey of the Islands of Kaua`i, O`ahu, Maui, Moloka`i and Lāna`i, State of Hawai`i*, United States Department of Agriculture.
3. Gray, Hong & Associates, 1987, *Puu Alii, A Planned Development Housing, Phase IV, Heeia, Kaneohe, Oahu, Hawaii* (scale: 1" = 40'), dated August 24, 1987.
4. State of Hawai`i, Department of Taxation, 1996, Taxation Maps Bureau *Tax Map Key 4-6-001:002 and 4-6-001:062* (scale: 1"= 60').
5. Stearns, H. T., 1985, *Geology of the State of Hawai`i*, Pacific Books, Palo Alto, California.
6. United States Geological Survey, 1998, *Honolulu Quadrangle, Hawai`i – Honolulu Co., Island of O`ahu, 7.5-Minute Series (Topographic)* (scale: 1:24,000).



DISTRIBUTION

Pu'u Ali'i Community Association (1)
Attn: Nick Florez
46-058 Ali'i'ānela Place
Kāne'ohe, Hawai'i 96744
florezinc@yahoo.com



GEOTECHNICAL REPORT

**PU'U ALI'I SLOPE INVESTIGATION
46-40, 50 and 70 Kōnane Place
Kāne'ōhe, O'ahu, Hawai'i**

JPB Engineering Project No. 20003.01G



GEOTECHNICAL REPORT PU'U ALI'I SLOPE INVESTIGATION 46-40, 50, AND 70 KŌNANE PLACE KĀNE'OHE, O'AHU, HAWAI'I

Project No: 20003.01G

Date: July 31, 2020

Prepared for:

Pu'u Ali'i Community Association
Attn: David Chung, MTPC Chair
46-058 Ali'i'ānela Place
Kāne'ohe, Hawai'i 96744

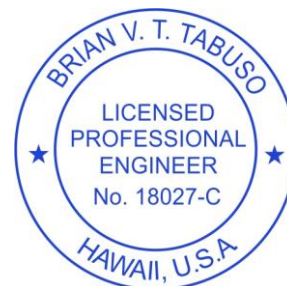
Prepared by:

JPB Engineering, Inc.
47-388 Hui 'Iwa Street, Suite 16
Kāne'ohe, Hawai'i 96744

Authored by:



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



This work was prepared
by me or under my
supervision.





JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

July 31, 2020

Project No. 20003.01G

To: Pu'u Ali'i Community Association
46-058 Ali'i'ānela Place
Kāne'ohe, Hawai'i 96744

Attn: David Chung, MTPC Chair

Subject: Geoanalytical Report
Pu'u Ali'i Slope Investigation
46-40, 50 and 70 Kōnane Place
Kāne'ohe, O'ahu, Hawai'i

Attached is our report of the geoanalytical investigation we conducted for the slope at the Pu'u Ali'i community in Kāne'ohe. The principal conclusions and recommendations are as follow:

- ◆ The borings revealed surficial soil consisting of medium-stiff to hard clayey silt with cobbles and boulders extending to a maximum depth nine feet. Beneath the surficial soil, a zone of very stiff to hard saprolite was penetrated to the maximum depth explored, about 15.0 feet.
- ◆ The results of our investigation indicate that majority of the subject slope areas are unstable and susceptible to soil creep. We have concluded that the slope below Buildings 37 and 38 should be stabilized by installing soil nails and covering the slope with a wire mesh system in combination with erosion control matting. For the slope below Buildings 35 and 36, most of the slope area can be stabilized by grading the slope but the final slope orientation would still be susceptible to the effects of soil creep. To address this, a shallower anchoring system on top of erosion control matting is recommended.
- ◆ We should be retained to review the construction plans and specifications, and to inspect the foundation excavations, mesh installations and to monitor the earthwork construction in order to verify that the recommendations of this report are followed.

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

Respectfully submitted,

Brian T. Tabuso, P.E.
Project Engineer

TABLE OF CONTENTS

EXECUTIVE SUMMARY

INTRODUCTION..... Page 1
 Purpose..... 1
 Scope..... 1
FINDINGS..... 2
 Site Description..... 2
 Geologic Setting..... 2
 Earth Materials..... 2
CONCLUSIONS..... 3
 Expansive Soils..... 3
 Soil Strength..... 3
 Land Stability..... 4
 Slope Conditions..... 5
RECOMMENDATIONS..... 5
 Site Preparation..... 5
 Clearing and Grubbing..... 5
 Excavation..... 5
 Fill Material..... 6
 Fill Placement and Compaction..... 6
 Finished Slope..... 6
 Wire Mesh System..... 6
 Soil Nail..... 6
 Wire Mesh..... 6
 Shallow Anchors..... 6
 Supplemental Services..... 7
LIMITATIONS..... 7

APPENDICES

Appendix A - Field Exploration

 Vicinity Map..... Plate No. A1
 Site Plan..... A2
 Logs of Borings..... A3 – A17
 Unified Soil Classification System..... A18
 Existing Sections..... A19 – A21
 Proposed Sections..... A22 – A24

Appendix B - Laboratory Testing

 Atterberg Limits Test Data..... Plate No. B1 – B2
 Direct Shear Test Data..... B3 – B16
 Unconfined Compressive Strength Test Data..... B17 – B25

Appendix C - References

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INTRODUCTION

Purpose

A geotechnical investigation has been conducted on an existing slope in front of Buildings 35 through 38 of the Pu'u Ali'i community situated at 46-40, 50 and 70 Kōnane Place in Kāneohe. The purposes of this study have been to gather information on the nature, distribution and characteristics of the subsurface earth materials and ground water conditions at the slope, and to prepare specific recommendations for use in slope stabilization design and construction.

Scope

The scope of this investigation is described in our proposals dated July 23 and December 18, 2019. On September 3 and 5, 2019 and January 28 through 30, 2020, our field engineer conducted a reconnaissance of the property and mapped the locations of 15 test borings that were drilled and sampled to a maximum depth of about 15 feet. Our field engineer logged, classified and recovered relatively undisturbed samples of the earth materials drawn from selected vertical intervals in each boring. Ground water level observations were recorded during drilling and at intervals after completion of the borings, which were backfilled with tamped soil following exploration.

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

This report contains our findings regarding site soil, ground water and other geologic conditions; conclusions pertaining to expansive soils, soil strength and land stability; and, recommendations for design and construction of slope stabilization options.

In Appendix A, the location of the project site is shown in relationship to surrounding landmarks and cultural features on Plate No. A1, Vicinity Map. The approximate locations of the test borings are depicted in relationship to the existing structures, roads and parking spaces, existing ground surface elevation contours, and the property boundaries on Plate No. A2, Site Plan. Geotechnical descriptions and related data recorded during the field exploration phase of our study are displayed on Plates No. A3 through A17, Logs of Borings. A key to the soil symbols and identification criteria used on the logs is presented on Plate No. A18, Unified Soil Classification System. Subsurface relationships inferred from the test boring information are portrayed in profile on Plates No. A19 through A24, Sections.

The results of the natural moisture content and dry unit weight tests are posted on the Logs of Borings, on which are also indicated the types of other laboratory tests conducted on corresponding samples. The remaining laboratory test data are contained in Appendix B. The results of the plasticity tests are shown on Plate No. B1, Atterberg Limits Test Data. Summaries of the strength tests appear on Plates No. B3 through B16, Direct Shear Test Data, and on Plates No. B17 through B25, Unconfined Compressive Strength Test Data. References consulted during the course of our investigation are listed in Appendix C.



FINDINGS

Site Description

As shown on Plates No. A1 and A2, the subject properties are an irregularly-shaped parcel encompassing approximately 3.315, 2.481 and 2.446 acres near the cul-de-sac terminus of Kōnane Place between Lilipuna Road and Konohiki Street (State of Hawai'i, 1998). The existing buildings are a multi-story, concrete structures built in 1990. At the highest areas of the slope, ground surface drops from about elevation 56 feet to approximate elevation 23 feet; resulting in an overall gradient approaching 69 percent. At the time of our exploration, the subject slope was covered with dried grass and leaves, vines and dotted with haole koa and plum trees.

Geologic Setting

The site lies on the Lilipuna peninsula, a remnant of a gigantic block that is a part of the Nu'uuanu Landslide. This immense landslide was created during a series of cataclysmic eruptions of the Kāne'ohe Caldera, one of a chain that formed the Ko'olau Range. The Ko'olau Range is a series of lava flows intersected by crystalline igneous sheet dikes (Stearns, 1985). The volcanic rocks are typically deeply weathered to a formation called saprolite.

Within the study area, the saprolite formation is overlain by a silty clay assigned to the Kāne'ohe series. This soil is characterized by a moderate expansion potential and a high corrosion potential with respect to uncoated steel but a moderate corrosion potential with respect to concrete. The erosion hazard is considered moderate on slopes which are of the inclination found in the study area (Foote, et al., 1972).

Earth Materials

The borings revealed surficial soil consisting of orange-brown, very moist, medium-stiff to hard clayey silt (Unified Soil Classification: MH) with cobbles and boulders extending to an average maximum depth of nine feet. This deposit is a part of the Kāne'ohe series described above.

Beneath the surficial soil, a zone of mottled-brown, very moist, very stiff to hard saprolite was penetrated to the maximum depth explored, about 15.0 feet. Further subsurface details are shown on Plates No. A3 through A18.

Ground Water

Each test boring was checked for the presence of ground water during and at intervals following exploration. No free ground water was observed in any of the borings.



CONCLUSIONS

Expansive Soils

The results of the Atterberg limits tests, shown on Plates No. B1 and B2, indicate that the surficial soil has moderate plasticity characteristics (average plasticity index = 23 percent) and high water retention properties (average liquid limit = 56 percent). The plasticity index is the range of water contents which a soil can assume between the saturated and dry states and is the difference between the liquid and plastic limits. The liquid limit is the maximum amount of water that a soil is capable of absorbing without becoming fluid, the plastic limit is the minimum amount of water a soil can hold without crumbling.

The Atterberg limits test data suggests that the surficial soil has moderate expansive properties. Expansive soils swell or heave when they absorb moisture and shrink or contract which they lose moisture. At the same time, when expansive soils swell they lose cohesion, become weaker and are prone to movement even on shallow slopes, but when they dry out, they regain cohesion and therefore acquire greater strength.

Soil Strength

Laboratory direct shear tests conducted on selected samples of the surficial soil under saturated conditions yielded a low average residual friction angle of about 19° and a nominal cohesion value of about 155 pounds per square foot, as shown on Plates No. B3 through B6 and B9 through B14 and B16. Similar tests completed on selected samples of the underlying saprolite formation yielded a slightly higher average residual friction angle of approximately 20° and lower cohesion value of 85 pounds per square foot, as illustrated on Plates No. B7, B8 and B15. The internal friction angle is a measure of soil grittiness whereas the cohesion component is a measure of soil stickiness.

Unconfined compressive strength tests completed on selected samples of the surficial soil reached an average ultimate undrained shear strength of 3,210 pounds per square foot, as shown on Plates No. B17 and B21. Similar tests performed on a selected sample of the underlying saprolite attained an ultimate undrained shear strength approaching 3,735 pounds per square foot, also as illustrated on Plates No. B22 through B25.

All of these results confirm that the surficial soils and underlying saprolite are capable of supporting structural loads of at least moderate intensity.



Land Stability

A series of limit equilibrium slope stability analyses was conducted for the study area slope. These computations are based on the results of laboratory test data, subsurface relationships inferred from the test boring data and topographic information. The analyses are predicted using Bishop's Method, in which the potential failure surfaces are rotational and arcuate; therefore, these surfaces are called "slip circles."

A safety factor, defined as the ratio of driving forces to resisting forces, is computed for each trial slip circle. Driving forces include soil weight, earthquake effects and hydrostatic pressures due to ground water. Resisting forces, acting along the potential slip circles, primarily consist of the strength properties of the soils. If the sum of the resisting forces is greater than the sum of the driving forces, a safety factor greater than unity results. Conversely, a safety factor less than unity is computed when the sum of the driving forces is greater than that of the resisting forces. The slip circle corresponding to the minimum calculated safety factor is called the "critical circle."

Through the assistance of appropriate computer programs, we completed numerous analytical trials for both the existing and proposed slope orientations to search for the theoretical safety factor at each of ten slope sections, the positions and orientations of which are depicted on Plate No. A19 through A24. The results of those trials are outline in the table below.

Slope Section	Minimum Factor of Safety			
	Existing Slope		Proposed Slope	
	Static	Seismic	Static	Seismic
A – A'	1.115	0.936	1.691	1.404
B – B'	1.222	1.063	1.586	1.363
C – C'	1.325	1.107	1.549	1.352
D – D'	1.175	1.017	1.503	1.326
E – E'	1.075	0.885		
F – F'	1.374	1.101	1.838	1.509
G – G'	1.576	1.288	1.654	1.347
H – H'	1.203	1.018	1.513	1.268
I – I'	1.093	0.858	1.594	1.284
J – J'	1.662	1.320	Same	Same

In conventional engineering practice, the minimum desirable safety factor against slope failure is 1.50 under static conditions and 1.25 under earthquake conditions. The analytical results indicate that the majority of the existing slope areas are unstable but will be stable after they are reinforced.



In addition to slip failure, even gentle slopes that are underlain by clayey soils are also susceptible to soil creep, which is caused by the slow, downward movement of earth under the influences of gravity and moisture changes. Clayey soils tend to expand in a direction at right angles to the slope when they absorb moisture, but tend to shrink in a vertical direction due to the influence of gravity when they lose moisture. The cumulative effect, or creep, is a continuing pattern of downslope soil displacement in minute, stepwise increments.

Whenever the inclination of a slope is equal to or greater than the friction angle of the clayey soil beneath it, soil creep will ensue as the soil loses its cohesion due to moisture absorption. As mentioned previously, the average internal friction angle of the surficial soil is about 19°, but the average angle of the slope is about 24°. Therefore, the surficial soil is susceptible to creep. The horizontal components of creep movement are reflected as stretching displacements, while the vertical components appear as settlements. Some areas have a slope inclination that is relatively close to the internal friction angle of the surficial soil. These areas would not be susceptible to soil creep.

Slope Conditions

We have concluded that the slope below Buildings 37 and 38 should be stabilized by installing soil nails and covering the slope with a wire mesh system in combination with erosion control matting. For the slope below Buildings 35 and 36, most of the slope area can be stabilized by grading the slope but the final slope orientation would still be susceptible to the effects of soil creep. To address this, a shallower anchoring system on top of erosion control matting is recommended. Specific recommendations are discussed below.

RECOMMENDATIONS

Site Preparation

Clearing and Grubbing – All vegetation, including surface grasses, weeds, trees and shrubs along with any roots over half an inch in diameter should be removed from the proposed construction area. Debris resulting from clearing and grubbing operations should be hauled off site to an approved disposal area. Depressions resulting from clearing and grubbing operations should be dug out to firm soil and backfilled with suitable materials and compacted in accordance with the following recommendations.

Excavation – Proposed slopes should be excavated at an inclination not steeper 50 percent (2.0 horizontal to 1.0 vertical) unless reinforced as recommended in this report.



Fill Material – Prior to use, all soils intended for use as backfill should be approved by the project geotechnical engineer. All imported soils should have a plasticity index not exceeding 20, when tested in accordance with ASTM Designation D 4318-10, and at least 20 percent of the particles should pass the No. 100 sieve, when tested in accordance with ASTM Designation D 422-07.

Fill Placement and Compaction – All fill material should be placed in horizontal lifts not exceeding eight inches in loose thickness. Each lift should be brought to at least the optimum moisture content and compacted to not less than 90 percent relative compaction, per ASTM Designation D 1557-12. All earthwork operations must be observed and the soils tested by the project geotechnical engineer or his representative.

Finished Slope – All slopes should be protected by vegetation and erosion control system as soon as grading and slope stabilization are complete.

Wire Mesh System

Soil Nail – Soil nails should consist of an IBO system incorporating Titan 40/16 bars or equivalent. The nails should be spaced on maximum eight-foot centers vertically and horizontally. The nails should be installed at an angle of 45° from the horizontal and staggered in rows. Soil nails should reach a minimum length of 20 feet. Grout should consist of a rapid-setting mix with an ultimate compressive strength of 4,000 pounds per square inch at 28 days cure in accordance to ASTM C 109-16a.

Wire Mesh – The wire mesh system should consist of the RockMesh HR or equivalent. Beneath the wire mesh, a layer of North American Green Eronet erosion control matting or equivalent should be placed on the slope to facilitate vegetation and prevent slope erosion.

Shallow Anchors

Slope areas susceptible to soil creep which are not stabilized with the wire mesh system should be installed with percussion-driven mechanical earth anchors such as the Platipus® Anchors system or equivalent. The anchors should be spaced on maximum five-foot centers vertically and horizontally. The anchors should be installed perpendicular to the slope face and staggered in rows. The anchors should reach a minimum length of six feet. The final length must be verified and approved in the field by the project geotechnical engineer.

The slope should be covered with erosion control matting such as the North American Green TMAX reinforcement mat or equivalent. A bearing plate and wedge grip should be placed at each anchor point above the matting to secure it in place. The anchors should be seated and locked off. Shortly after the installation of the anchor and matting system, the slope should be revegetated.



Supplemental Services

JPB Engineering, Inc. should be retained to review the construction plans and specifications to determine whether the recommendations contained in this report are adequately reflected in those documents. The results of our review would be described in writing. JPB Engineering, Inc. should be retained to monitor and test the earthwork construction, observe mesh installations and inspection foundations excavations to verify that the recommendations of this report are followed.

LIMITATIONS

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

Site conditions and cultural features described in the text are those existing at the time of our field reconnaissance and exploration on September 3 and 5, 2019 and on January 28 through 30, 2020, and may not necessarily be representative of such conditions at other places and times. Similarly, the test borings represent subsurface conditions at the times and locations indicated; it is not warranted that they are representative of such conditions at other locations and times. The locations and elevations of the test borings are referenced to a plan titled: *Pu'u Alii Tree Planting & Removal, Pu'u Ali'i Tree Planting Plan, 46-058 Alii Anela Place, Kaneohe HI 96744* (scale: 1" = 50'), Sheet L1.5 and L.16 of seven sheets, undated; *Topographic Survey at "PUU ALII COMMUNITY ASSOCIATION", Pohakea Point, Slope Along Lilipuna Road, TMK: (1) 4-6-01:2, 54, 59-62, Heeia, Koolaupoko, Oahu, Hawaii* (scale: 1" = 20'), dated October 16, 2019, by Kevin K. Ke'a, and are to be considered approximate only.

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



APPENDIX A

Field Exploration



APPENDIX A

Field Exploration

On September 3, and 5, 2019 and January 28 through 30, 2020 our field engineer conducted a reconnaissance of the site, and the surrounding vicinity. The location of the project is shown in relationship to surrounding landmarks and cultural features on Plate No. A1, Vicinity Map.

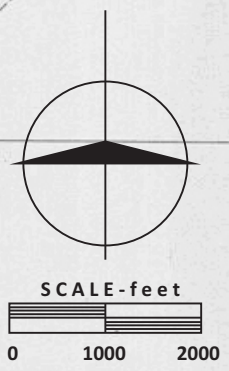
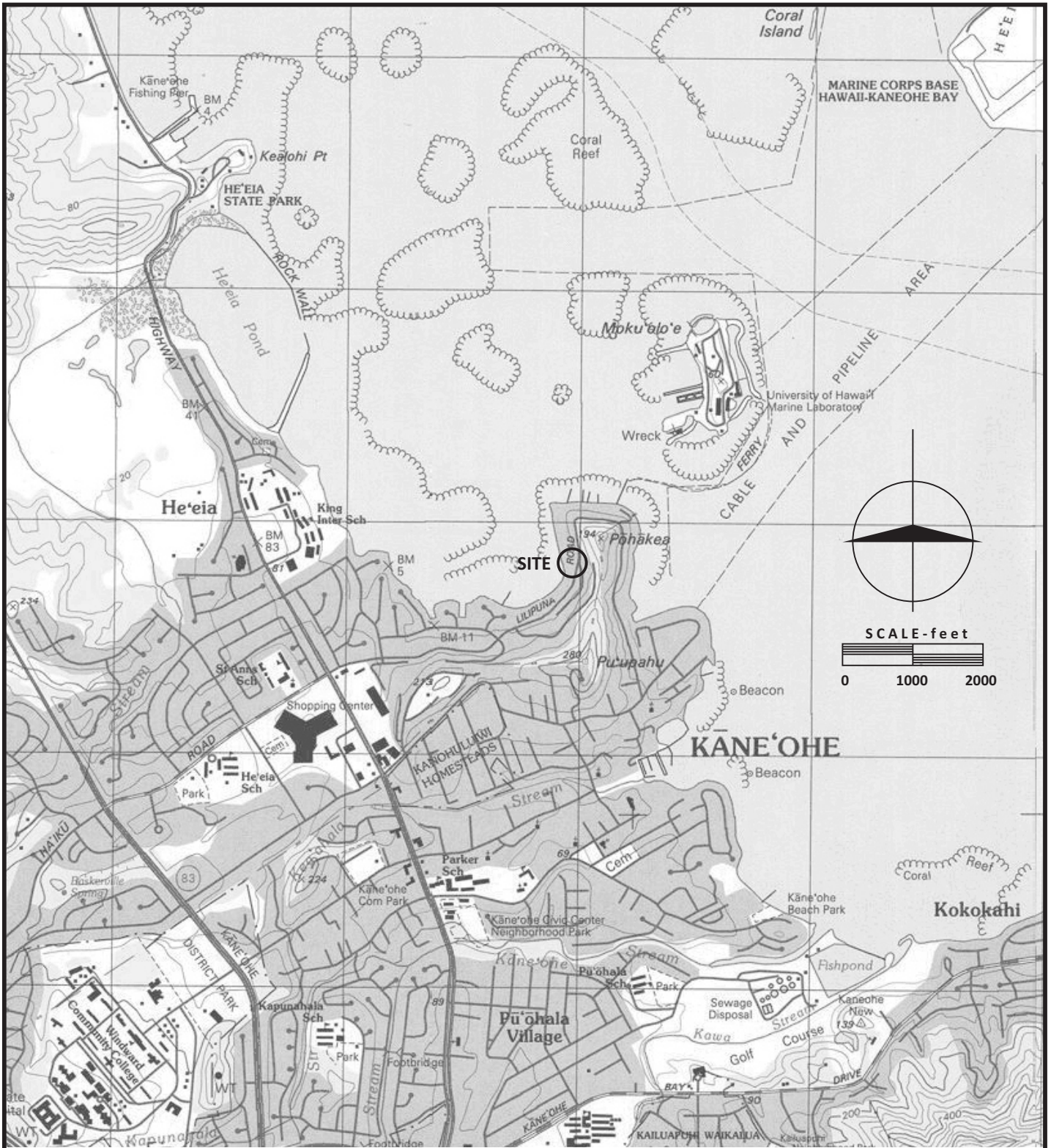
Our geotechnical exploration program was conducted under the supervision of our field representative who logged, classified, and recovered relatively undisturbed samples of the earth materials drawn from selected vertical intervals in each of 15 test borings. The approximate locations of the test borings are depicted in relationship to the existing buildings, existing ground surface elevation contours, and the property boundaries on Plate No. A2, Site Plan.

The borings were advanced to a maximum depth of approximately 15 feet below existing grade. At selected vertical intervals in each boring, relatively undisturbed samples of the earth materials were obtained by means of a 3.0-inch-O.D. (2.5-inch-I.D.) split-barrel sampler containing stacks of thin-walled, brass rings, each one inch thick. The sampler was advanced by hammer blows produced by a 140-pound hammer freely falling 30 inches, in accordance with ASTM Designation D 1586-84. The number of blows required to drive the sampler a total distance of 18 inches was recorded, and the sum of the hammer blows for the second and third six-inch increments, or blow count, was recorded for each drive. The blow counts recorded for the split-barrel sampler are approximately twice those of the corresponding "Standard Penetration" blow counts. All of the samples were sealed in moisture-proof containers and transported in shock-resistant cases to our laboratory for further classification and testing.

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

The Logs of Borings are depicted on Plates No. A3 through A17. A key to the soils symbols and identification criteria used on the logs is presented on Plate No. A18, Unified Soil Classification System. Subsurface relationships inferred from the test boring information are portrayed in profile on Plates No. A19 through A24, Existing and Proposed Sections.





Base: United States Geological Survey, 1998, *Kāneʻohe Quadrangle, Hawaiʻi - Honolulu Co., Island of Oʻahu, 7.5 Minute Series (Topographic)*

VICINITY MAP



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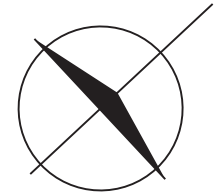
PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāneʻohe, Oʻahu, Hawaiʻi

DATE: September, 2019

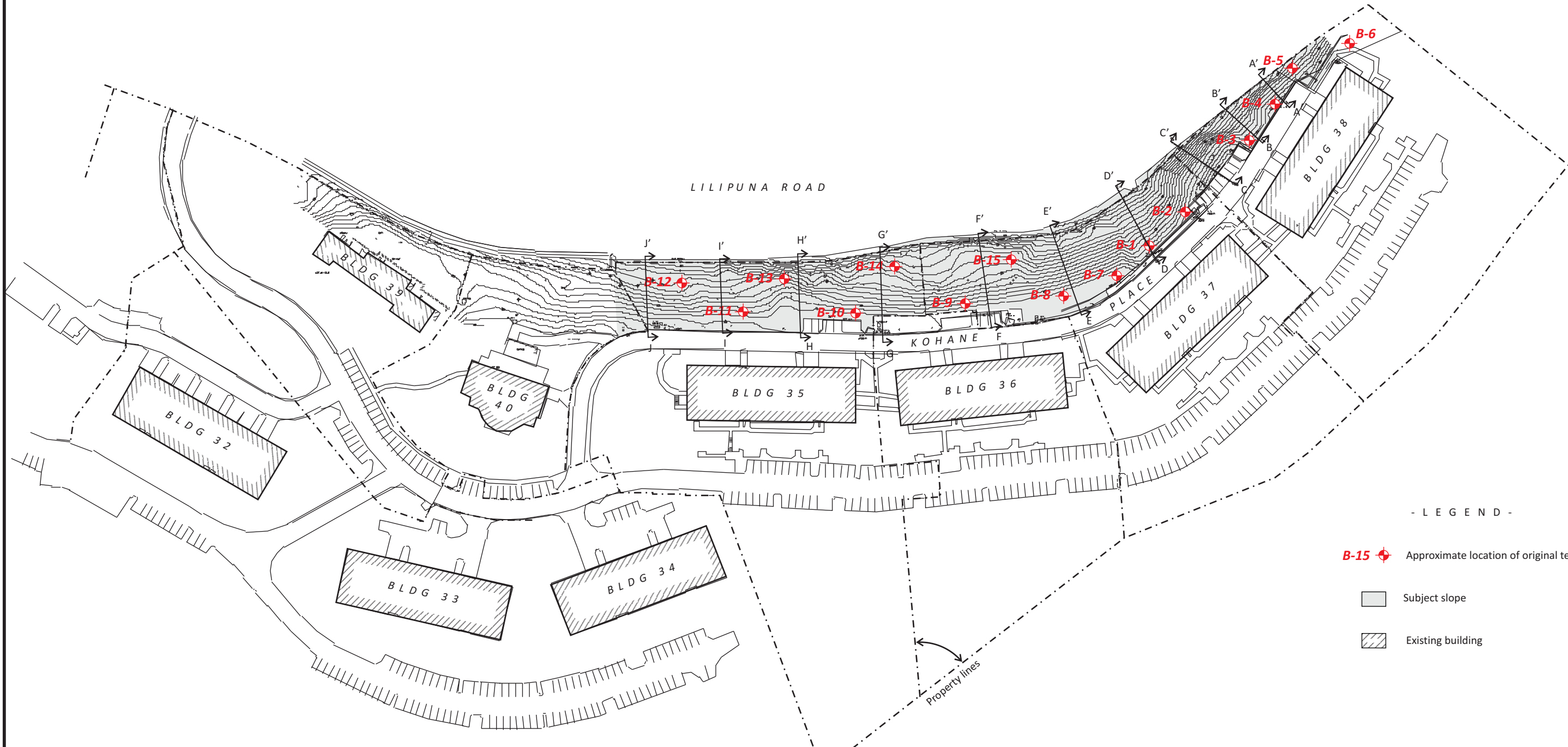
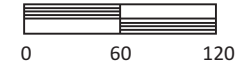
PROJECT NO. 19235.01G

- NOTE -

See Plate No. A19 through A21 for Sections



SCALE-feet



- LEGEND -

- ◆ B-15 Approximate location of original test boring
- Subject slope
- Existing building



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Base: -, Pu'u Alii Tree Planting & Removal, Pu'u Ali'i Tree Planting Plan, 46-058 Alii Anela Place, Kaneohe HI 96744 (scale: 1"=50'-0"), Sheets L1.5 and L1.6 undated.

Kevin K. Ke'a, 2019, Topographic Survey at "PUU ALII COMMUNITY ASSOCIATION", Pohakea Point, Slope Along Lilipuna Road, TMK: (1) 4-6-01:2, 54, 59-62, Heeia, Koolaupoko, Oahu, Hawaii (scale: 1" = 20'), dated October 16, 2019.

SITE PLAN

PU'U ALI'I SLOPE INVESTIGATION
46-40 Kōnane Place
Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020


PROJECT NO. 20003.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-1
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
	80	31.8			41	SB-1			MH	CLAYEY SILT, orange-brown, very moist, very stiff
UC	80	34.6	0.69		28	SB-2	5			stiff
	85	34.6			44	SB-3				very stiff
DS	68	45.0			13	SB-4	10			SAPROLITE, mottled-brown, very moist, medium-stiff
UC	66	56.4	2.99		36	SB-5				very stiff
							15			Bottom of Boring No. B-1 @ 14.5 ft. No free ground water observed.
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING

 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i	
	DATE: September, 2019	PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-2
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
UC	75	49.1	0.62		26	SB-1			MH	CLAYEY SILT, orange-brown, very moist, stiff
DS	71	39.6			12	SB-2	5			medium-stiff
UC	72	40.9	0.49		16	SB-3				stiff
	62	50.6			24	SB-4	10			SAPROLITE, mottled-brown, very moist, stiff
	61	53.7			47	SB-5	15			very stiff
							20			Bottom of Boring No. B-2 @ 14.5 ft. No free ground water observed.

SAMPLE TYPE

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

OTHER LABORATORY TESTS

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

LOG OF BORING



JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019


PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-3
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
DS	71	27.3			36	SB-1			MH	CLAYEY SILT, orange-brown, moist, very stiff
										Boulders
					33	CP-1	5			
					37	CP-2				
					64	CP-3	10			SAPROLITE, hard
					62	CP-4	15			
										Bottom of Boring No. B-3 @ 15.0 ft. No free ground water observed.
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel CP - Cone Penetrometer SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING

 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: September, 2019	PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-4
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
UC	79	28.1	4.95		24	SB-1			MH	CLAYEY SILT, orange-brown, moist, stiff
DS	79	30.0			116	SB-2	5			Boulder
					78	CP-1				hard
					52	CP-2	10			SAPROLITE, very stiff
					31	CP-3	15			
							20			Bottom of Boring No. B-4 @ 15.0 ft. No free ground water observed.

SAMPLE TYPE

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

OTHER LABORATORY TESTS

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

LOG OF BORING



JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019


PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-5
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
AL	74	29.2		21	29	SB-1			MH	CLAYEY SILT, orange-brown, moist, stiff
	84	23.3			39	SB-2	5			stiff
DS	69	47.5			19	SB-3	10			SAPROLITE, mottled-brown, very moist, stiff
	69	37.3			39	SB-4				very stiff
	94	25.5			68	SB-5	15			hard
							20			Bottom of Boring No. B-5 @ 14.5 ft. No free ground water observed.

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: September, 2019	PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-6
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: September 3, 2019	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
DS	75	28.1			21	SB-1	0		MH	CLAYEY SILT, orange-brown, moist, stiff
							5			Stopped on a boulder.
							10			Bottom of Boring No. B-6 @ 3.5 ft. No free ground water observed.
							15			
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: September, 2019	PROJECT NO. 19235.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-7
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: January 28, 2020	TYPE DRILL RIG: Big Beaver XL / 4" solid stem augers	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
DS	81	37.7			17	SB-1			MH	CLAYEY SILT, reddish-brown, very moist, medium-stiff
UC	82	35.7	3.92		19	SB-2	5			stiff
	85	36.0			28	SB-3				SAPROLITE, mottled-brown, very moist, stiff
UC	78	41.5	4.01		26	SB-4	10			
	82	37.5			42	SB-5	15			very stiff
							20			Bottom of Boring No. B-1 @ 14.5 ft. No free groundwater observed.

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING

 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: March, 2020	PROJECT NO. 20003.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-8
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: January 28, 2020	TYPE DRILL RIG: Big Beaver XL / 4" solid stem augers	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
AL	87	34.6		23	18	SB-1	5		MH	CLAYEY SILT, reddish-brown, very moist, stiff
	82	37.8			18	SB-2				
UC	82	39.0	3.51		26	SB-3				
	78	40.2			38	SB-4				
UC	75	44.0	3.53		34	SB-5				
							10			SAPROLITE, mottled-brown, very moist, very stiff
							15			Bottom of Boring No. B-2 @ 14.5 ft. No free groundwater observed.
							20			

SAMPLE TYPE

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

OTHER LABORATORY TESTS

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

LOG OF BORING



JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020


PROJECT NO. 20003.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-9
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: January 28, 2020	TYPE DRILL RIG: Big Beaver XL / 4" solid stem augers	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
DS	83	34.5			20	SB-1			MH	CLAYEY SILT, reddish-brown, very moist, stiff
UC	86	36.1	4.68		35	SB-2	5			very stiff
	85	34.2			43	SB-3				
UC	70	33.2	2.52		35	SB-4	10			SAPROLITE, mottled-brown, very moist, very stiff
	88	31.8			70	SB-5				hard
							15			Bottom of Boring No. B-3 @ 14.0 ft. No free groundwater observed.
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: March, 2020	PROJECT NO. 20003.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-10
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: January 28, 2020	TYPE DRILL RIG: Big Beaver XL / 4" solid stem augers	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
	78	29.8			21	SB-1			MH	CLAYEY SILT, reddish-brown, very moist, stiff
DS	76	36.3			24	SB-2	5			
UC	74	39.8	3.97		43	SB-3				very stiff
	79	34.8			42	SB-4	10			SAPROLITE, mottled-brown, very moist, stiff
UC	83	35.4	7.44		75	SB-5				very stiff
							15			Bottom of Boring No. B-4 @ 14.5 ft. No free groundwater observed.
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: March, 2020	PROJECT NO. 20003.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-11
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: January 29, 2020	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
DS	72	36.5			20	SB-1			MH	CLAYEY SILT, reddish-brown, very moist, stiff
UC	79	27.5	4.43		29	SB-2	5			moist
	76	32.9			30	SB-3				very stiff
UC	80	37.4	4.30		33	SB-4	10			
	82	32.1			63	SB-5	15			SAPROLITE, mottled-brown, very moist, vert stiff
										hard
							20			Bottom of Boring No. B-5 @ 14.5 ft. No free groundwater observed.

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: March, 2020	PROJECT NO. 20003.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-12
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: January 29, 2020	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION			
UC	78	35.4	4.10		26	SB-1	5		MH	CLAYEY SILT, reddish-brown, very moist, stiff			
	73	31.5			27	SB-2							
DS	72	35.1			37	SB-3							very stiff
UC	72	32.9	3.40		33	SB-4	10			SAPROLITE, mottled-brown, very moist, very stiff			
	69	36.8			54	SB-5							
							15				Bottom of Boring No. B-6 @ 14.5 ft. No free groundwater observed.		
							20						

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: March, 2020	PROJECT NO. 20003.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-13
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: January 29, 2020	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
DS	75	30.1			30	SB-1			MH	CLAYEY SILT, reddish-brown, very moist, very stiff
UC	78	26.6	3.90		32	SB-2	5			
	75	33.5			47	SB-3				SAPROLITE, mottled-brown, very moist, very stiff
UC	71	35.6	3.12		70	SB-4	10			hard
	78	37.5			93	SB-5				
							15			Bottom of Boring No. B-7 @ 14.5 ft. No free groundwater observed.
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: March, 2020	PROJECT NO. 20003.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-14
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: January 30, 2020	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
AL	76	44.3		25	17	SB-1	5		MH	CLAYEY SILT, reddish-brown, very moist, stiff
	71	37.5			19	SB-2				
UC	70	35.1	2.56		28	SB-3				
DS	64	36.8			26	SB-4	10			SAPROLITE, mottled-brown, very moist, stiff
UC	68	41.5	3.76		42	SB-5				
							15			Bottom of Boring No. B-8 @ 14.5 ft. No free groundwater observed.
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING


 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i	
	DATE: March, 2020	PROJECT NO. 20003.01G

BORING LOCATION: See Site Plan	DRILLER: JPB Engineering, Inc.	BORING NO. B-15
BORING ELEVATION:	LOGGED BY: Moku Hopkins	
DATE DRILLED: January 30, 2020	TYPE DRILL RIG: Minuteman	

OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	UNCONFINED STRENGTH (ksf)	PLASTICITY INDEX (%)	BLOW COUNT (Blows per foot)	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	UNIFIED SOIL CLASSIFICATION	GEOTECHNICAL DESCRIPTION
DS	84	33.0			29	SB-1			MH	CLAYEY SILT, reddish-brown, very moist, stiff
UC	81	37.7	3.97		39	SB-2	5			very stiff
	70	39.5			38	SB-3				SAPROLITE, mottled-brown, very moist, very stiff
UC	67	47.7	2.33		32	SB-4	10			
	64	44.8			41	SB-5				
							15			Bottom of Boring No. B-9 @ 14.5 ft. No free groundwater observed.
							20			

SAMPLE TYPE	OTHER LABORATORY TESTS
BK - Bulk CB - Core Barrel DN - Denison Sampler SB - Split Barrel SP - Standard Penetration ST - Shelby Tube	AL - Atterberg Limits CN - Consolidation DS - Direct Shear Strength SA - Sieve Analysis SS - Shrink/Swell UC - Unconfined Compression

LOG OF BORING

 JPB ENGINEERING, INC <i>Structural & Geotechnical Engineering</i>	PU'U ALI'I SLOPE INVESTIGATION 46-40 Kōnane Place Kāne'ohe, O'ahu, Hawai'i
DATE: March, 2020	PROJECT NO. 20003.01G

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

UNIFIED SOIL CLASSIFICATION SYSTEM

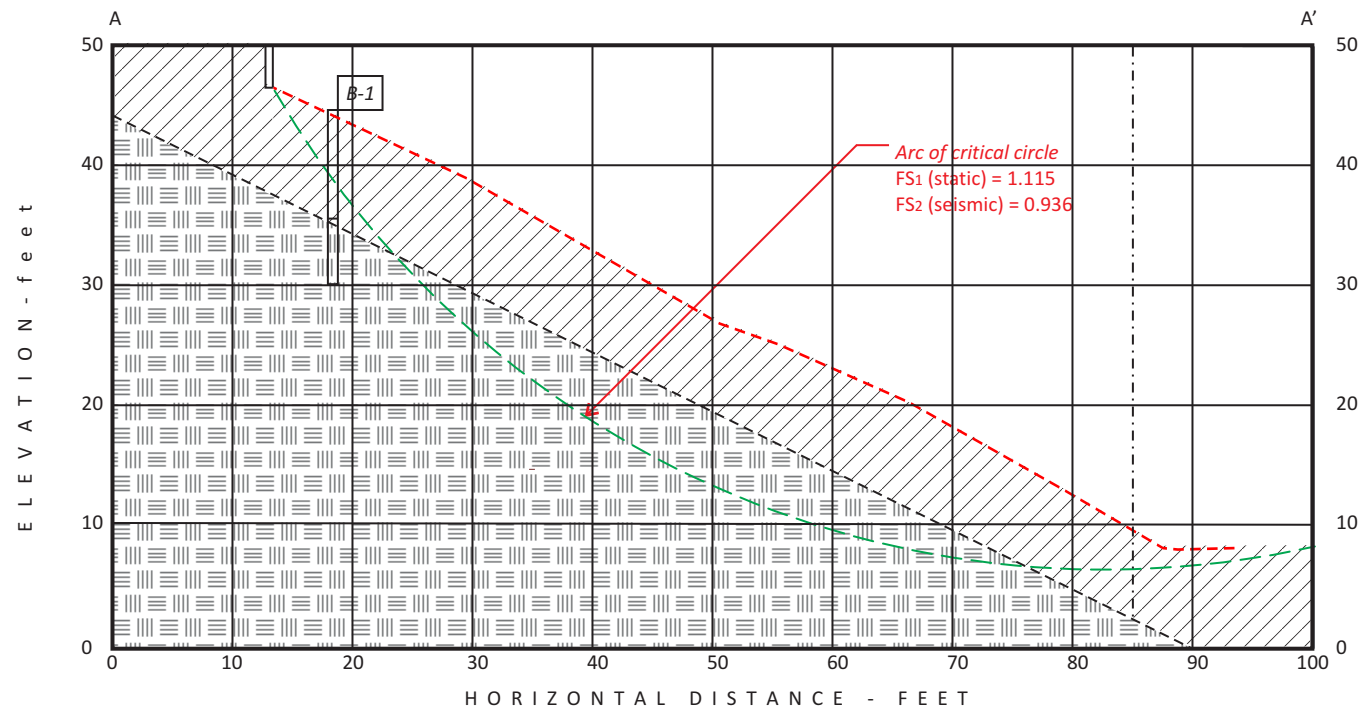


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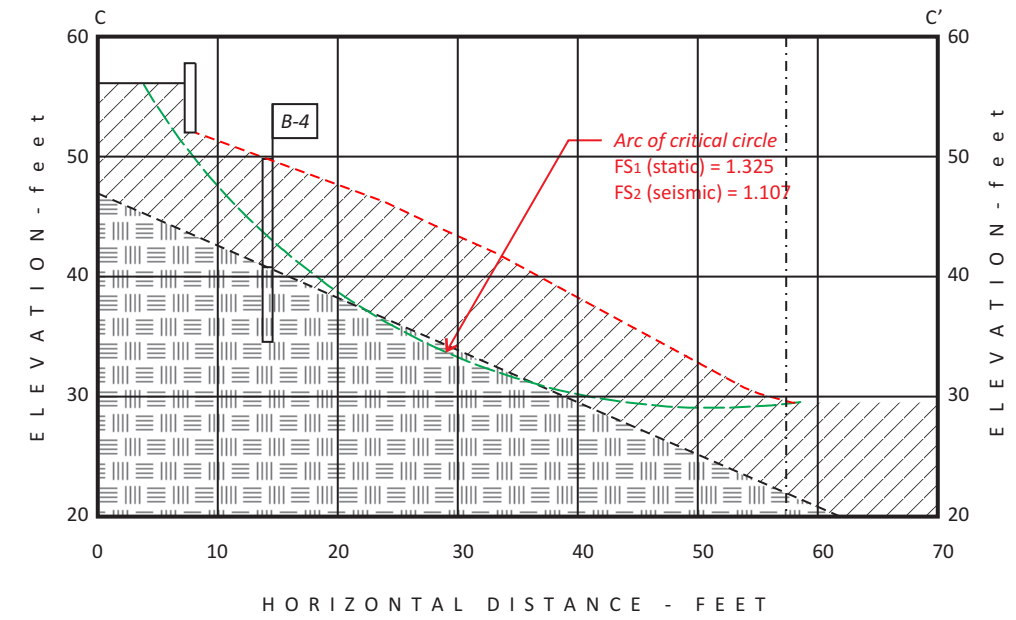
PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G

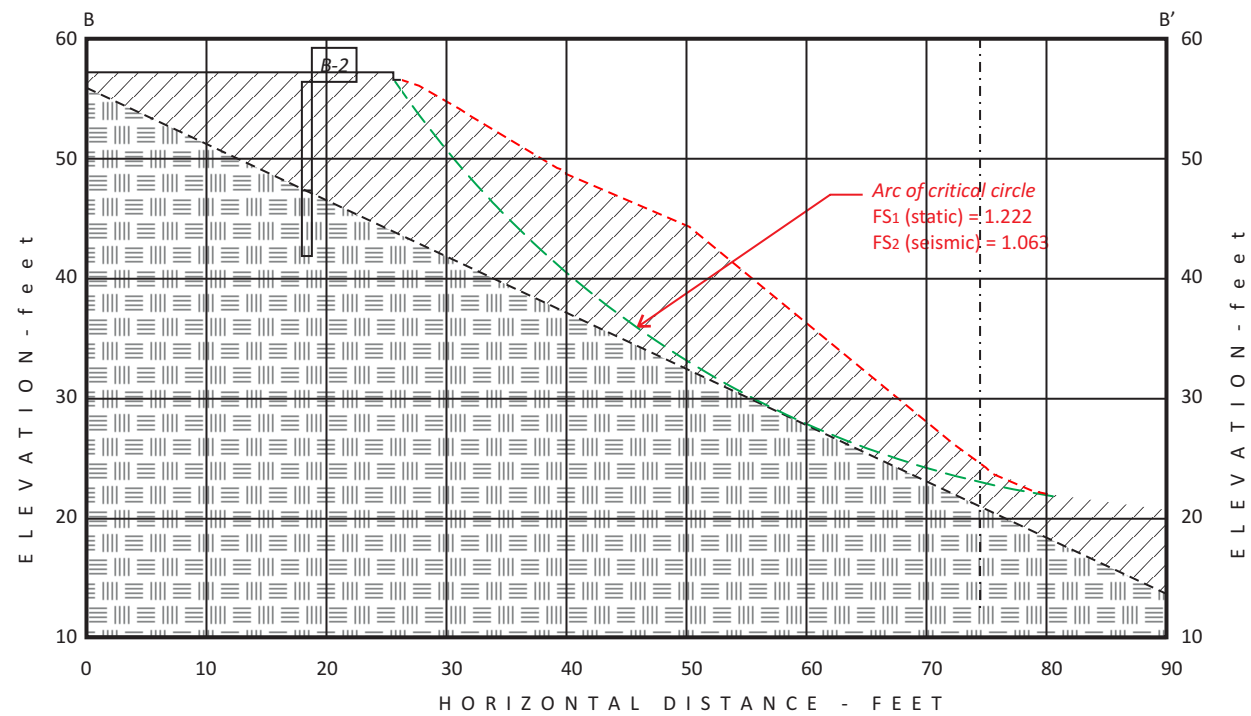


ELEVATION - feet



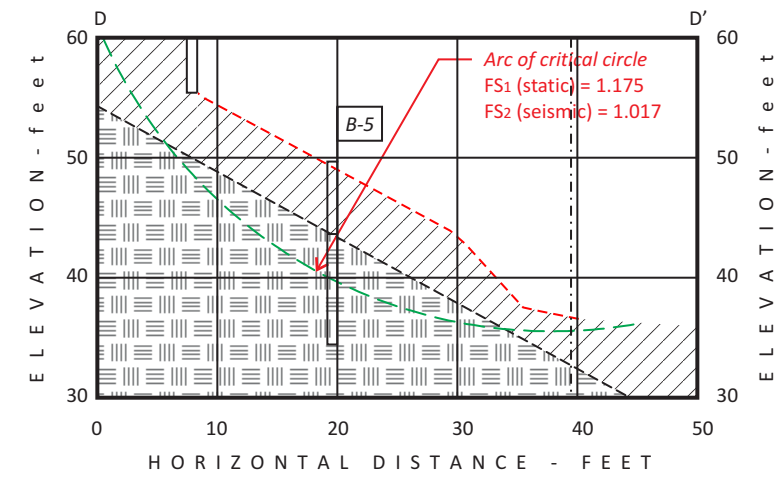
ELEVATION - feet

HORIZONTAL DISTANCE - FEET



ELEVATION - feet





HORIZONTAL DISTANCE - FEET



ELEVATION - feet

HORIZONTAL DISTANCE - FEET

- LEGEND -

-  Clayey silt
-  Saprolite
-  Existing grade
-  Property line



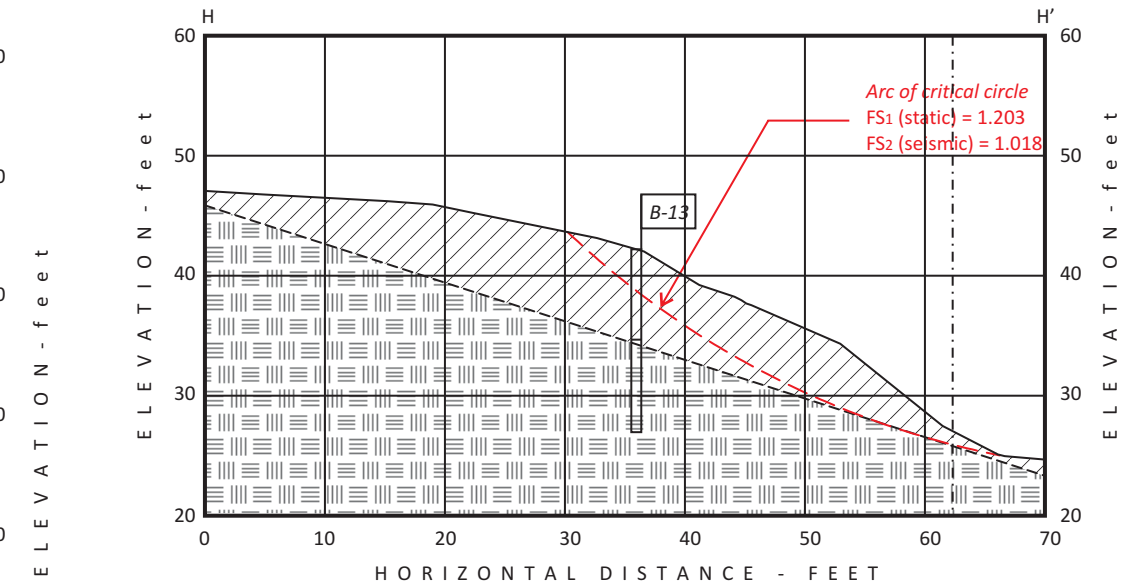
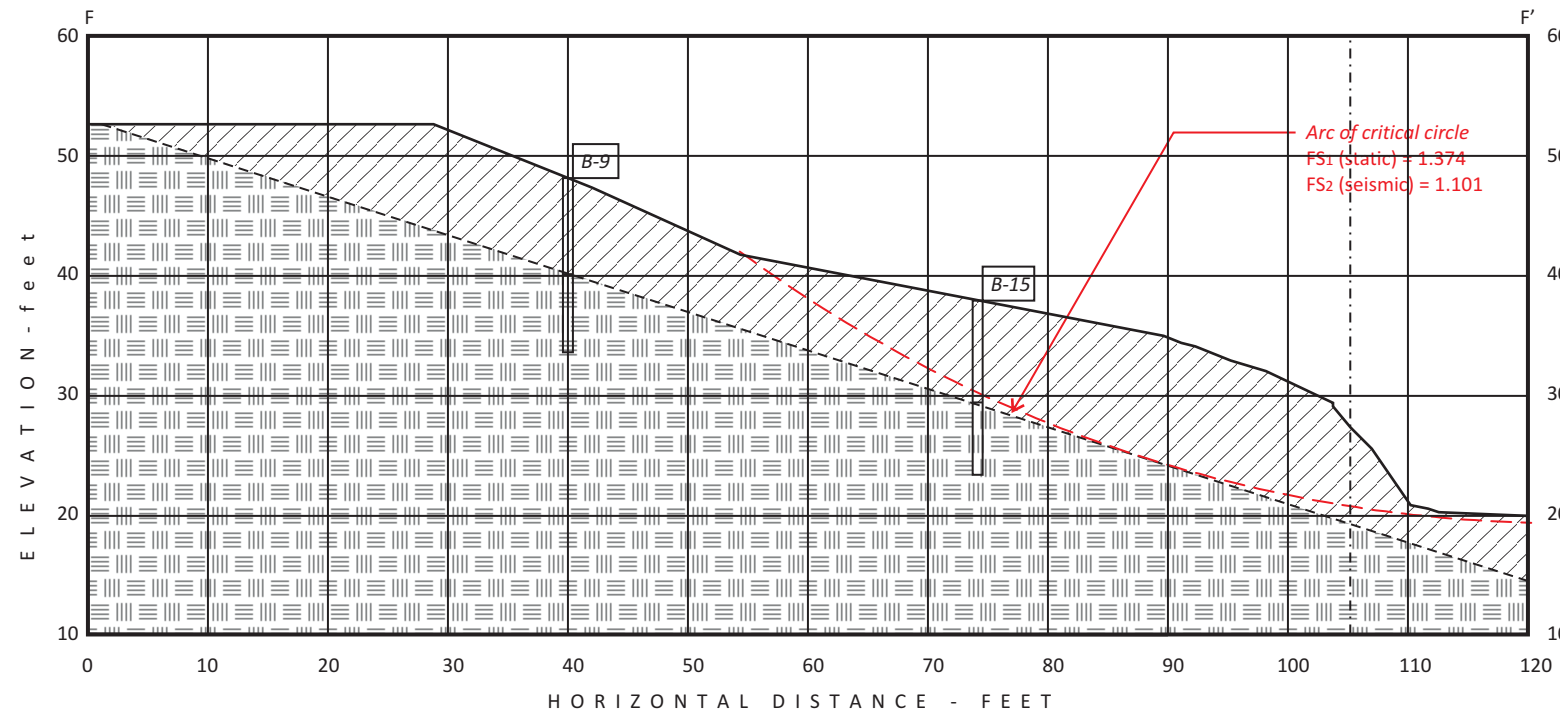
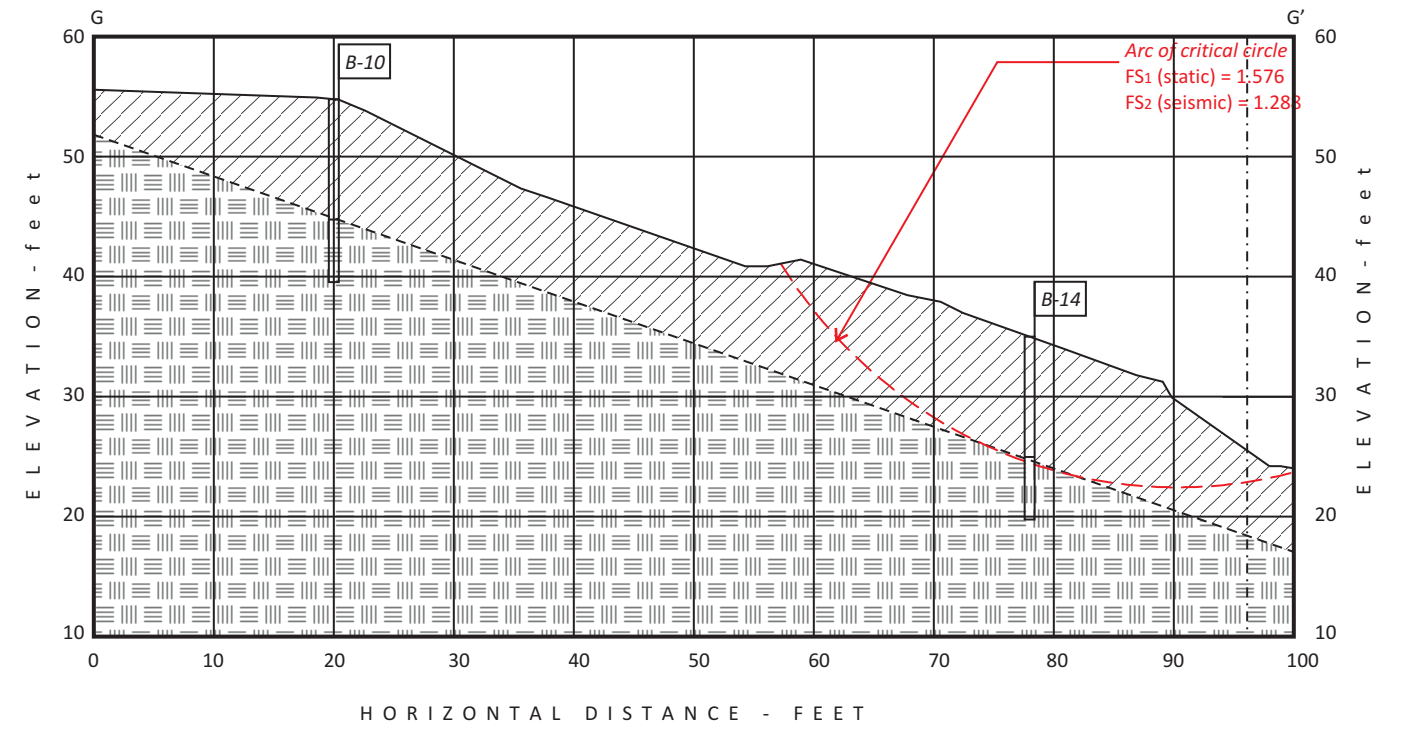
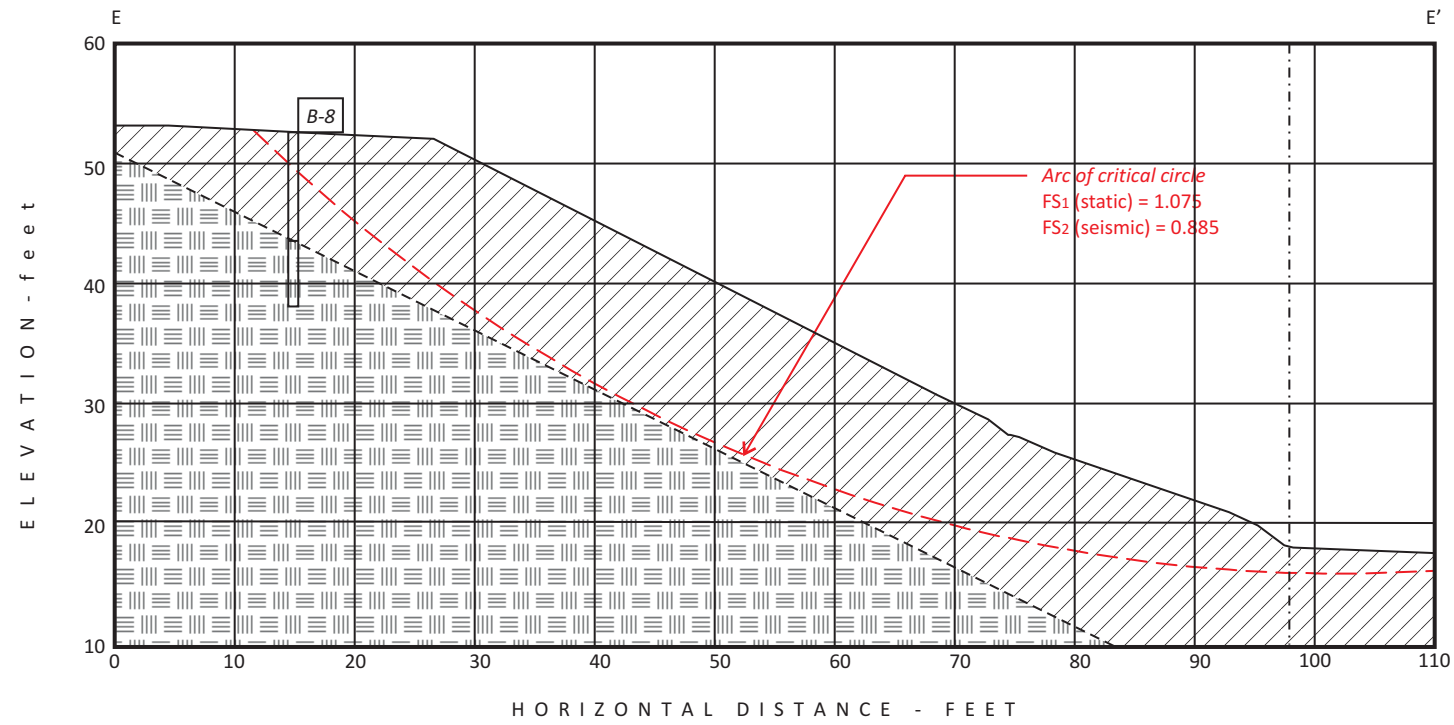
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EXISTING SECTIONS

PU'U ALI'I SLOPE INVESTIGATION
46-40 Kōnane Place
Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



- L E G E N D -

-  Clayey silt
-  Saprolite



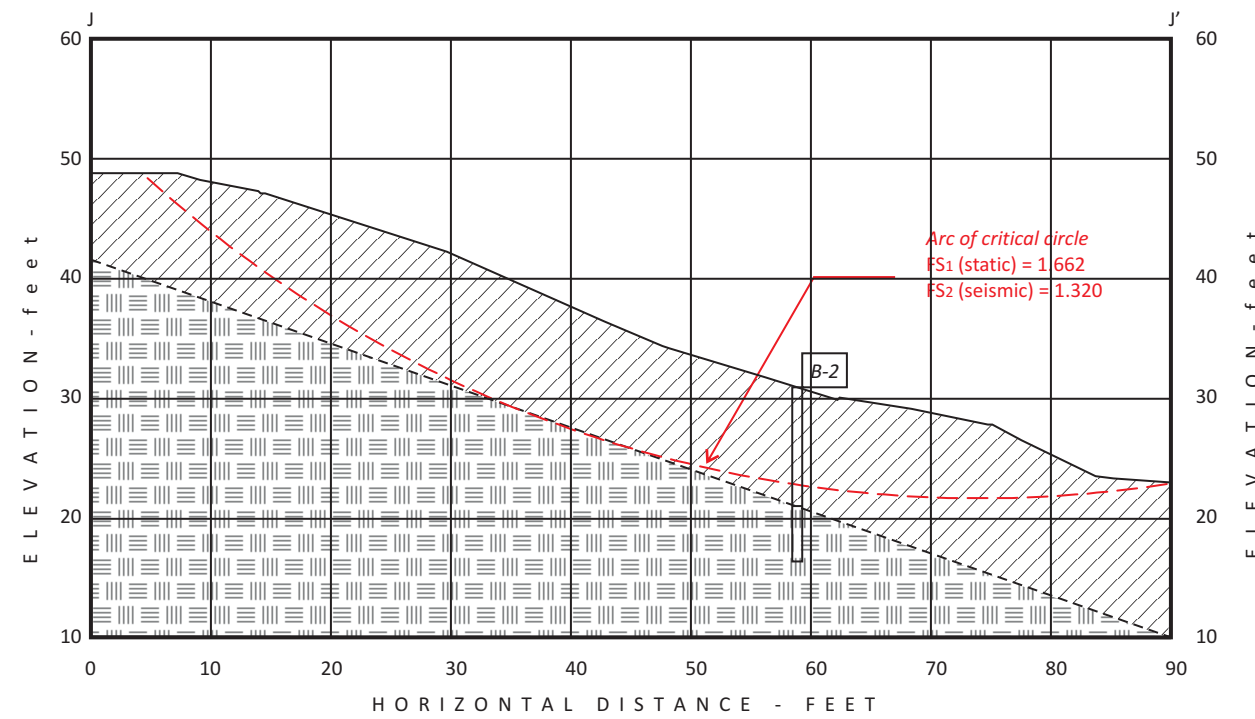
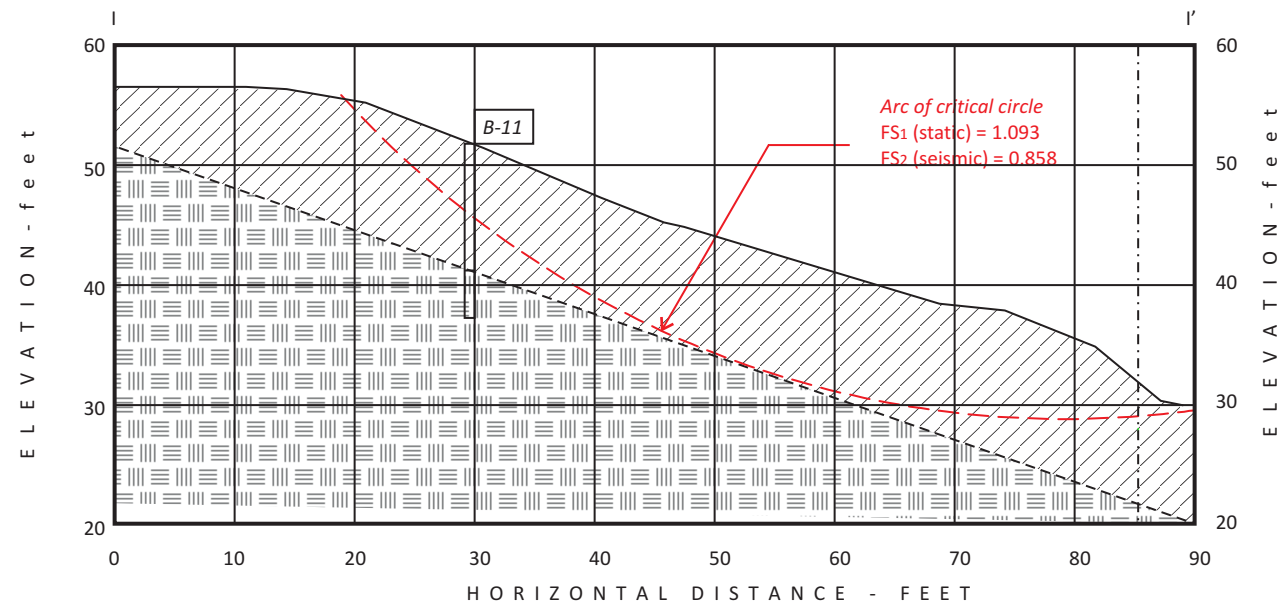
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EXISTING
SECTIONS

PU'U ALI'I SLOPE INVESTIGATION
46-40 Kōnane Place
Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 19235.01G



- L E G E N D -

- Clayey silt
- Saprolite



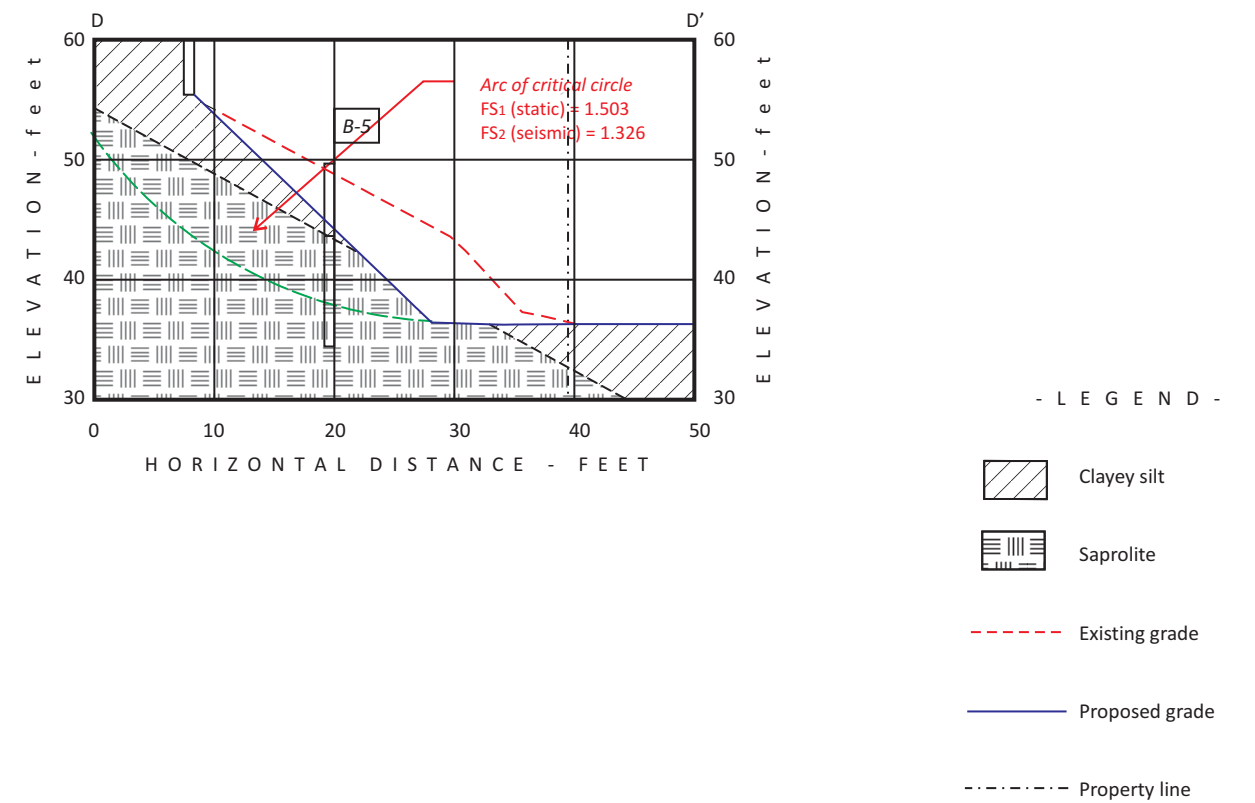
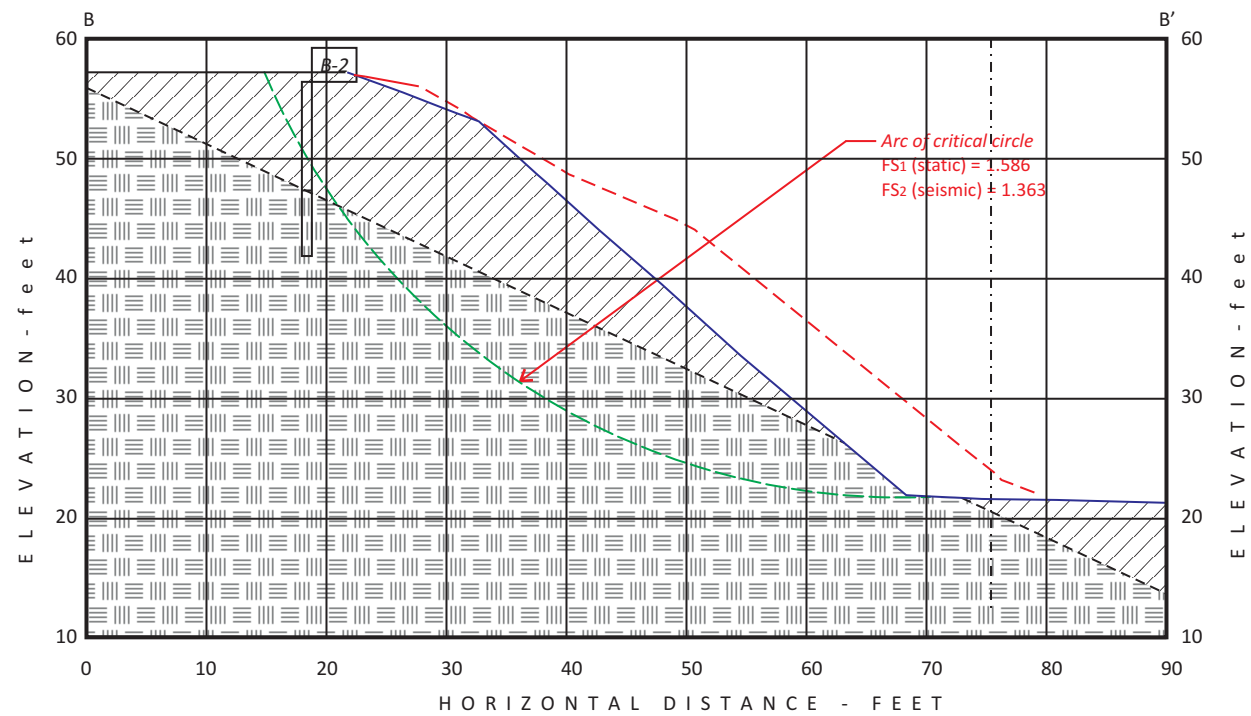
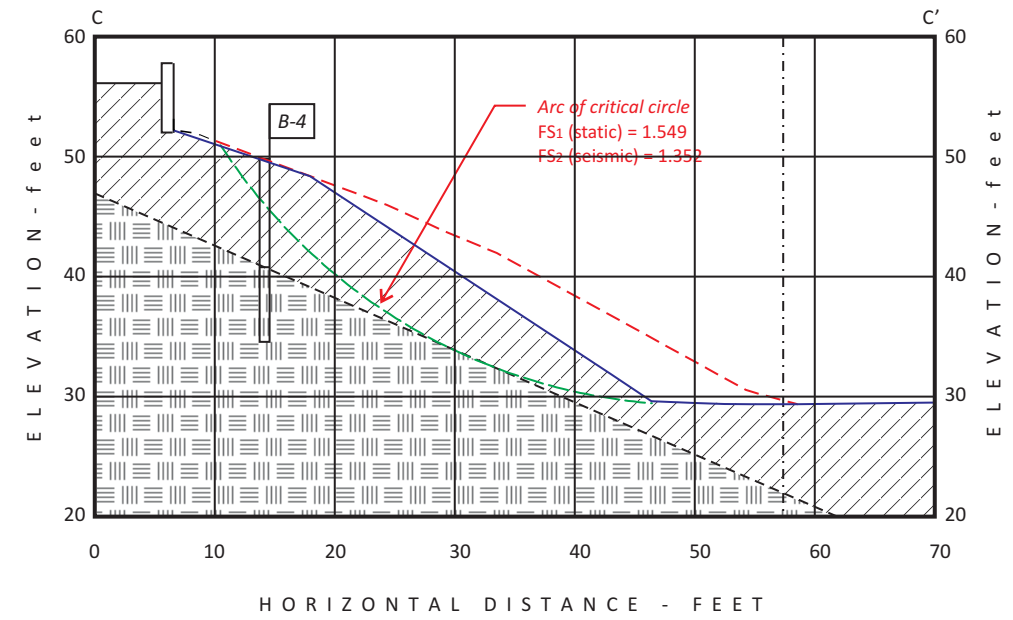
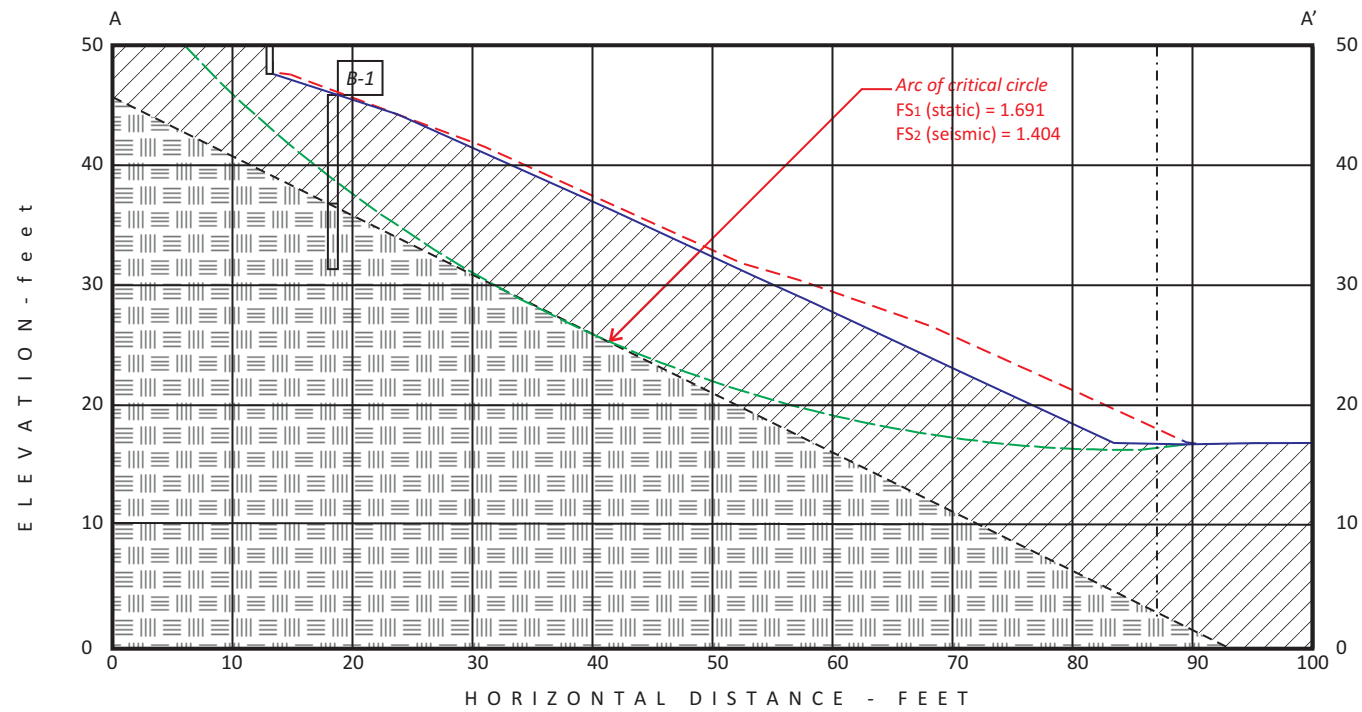
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**PROPOSED
 SECTIONS**

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



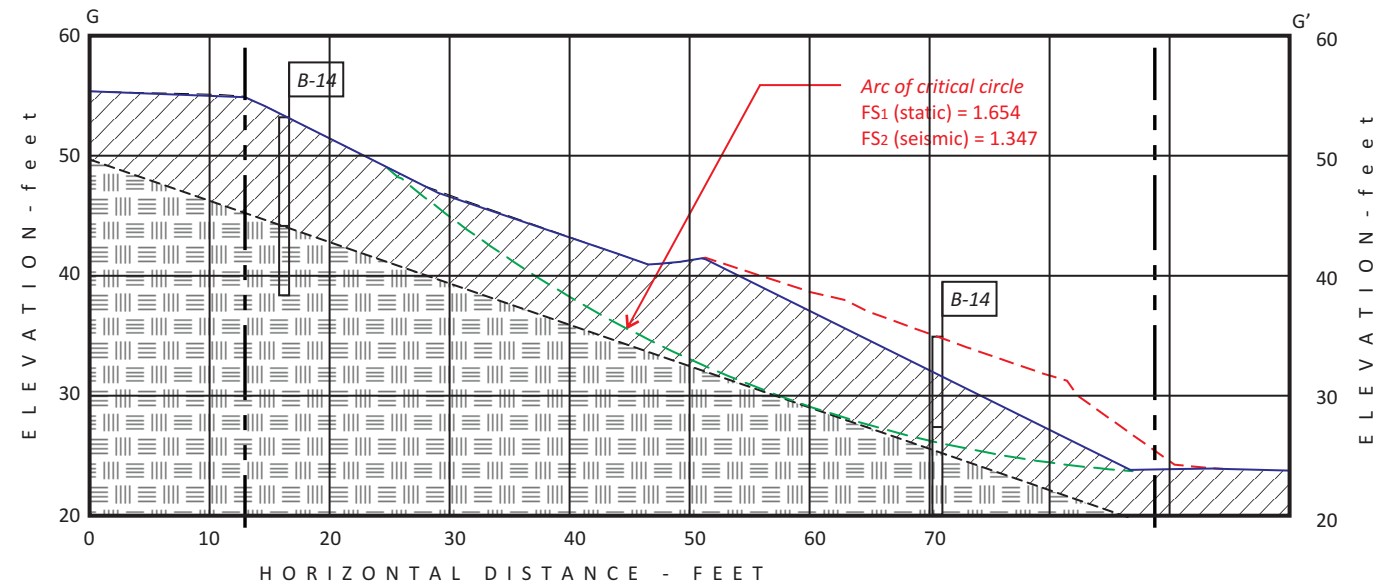
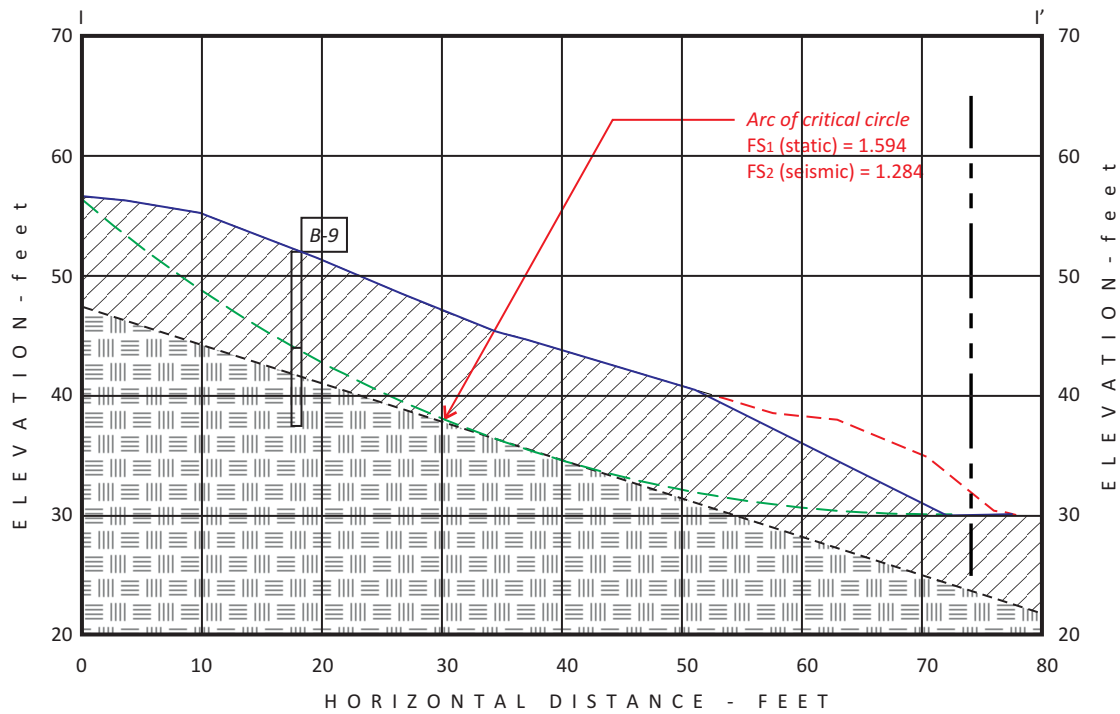
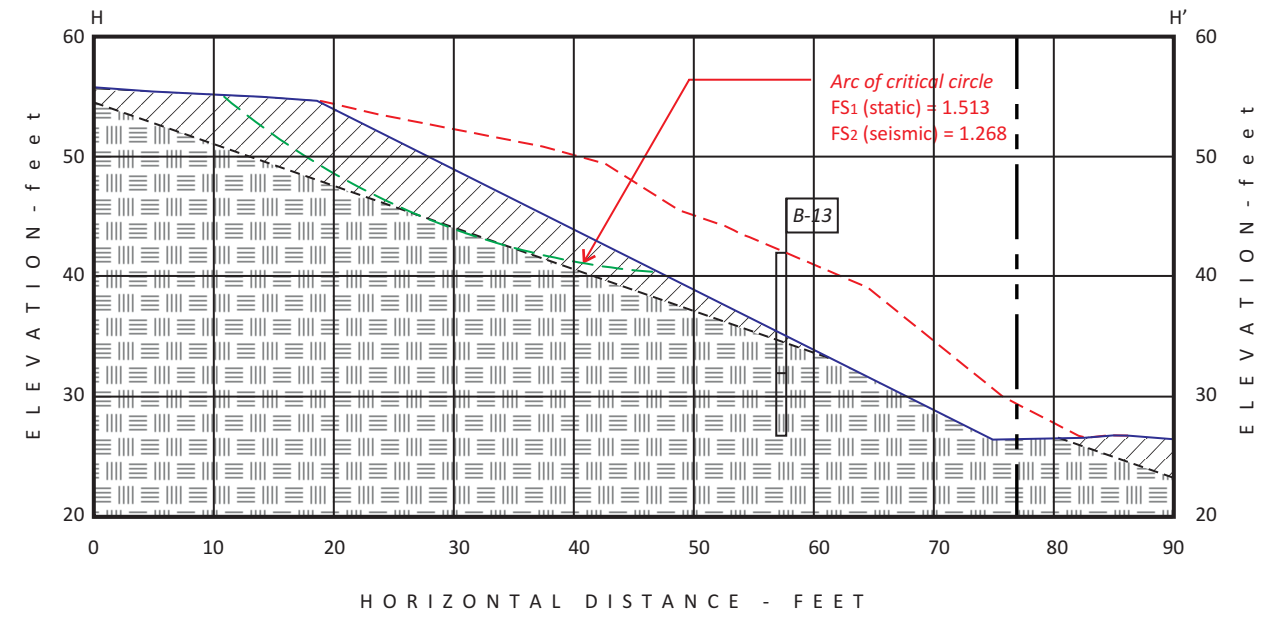
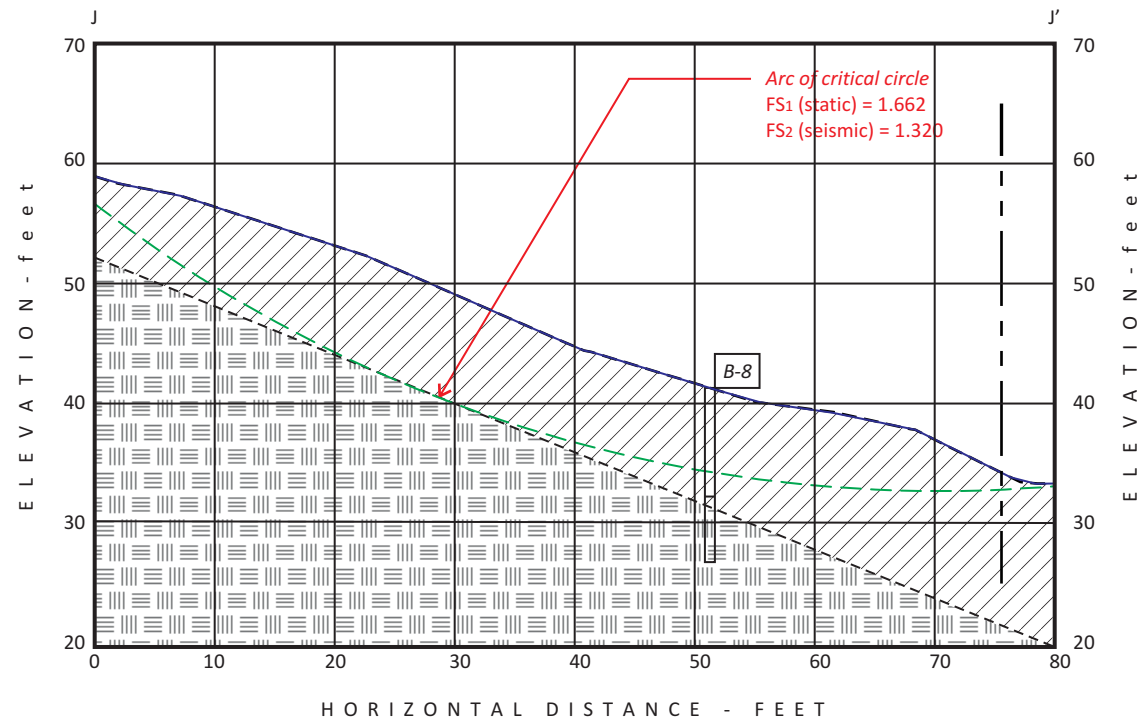
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PROPOSED SLOPE SECTIONS

PU'U ALI'I SLOPE INVESTIGATION
46-40 Kōnane Place
Kāne'ohe, O'ahu, Hawai'i

DATE: July, 2020

PROJECT NO. 20003.01G



- L E G E N D -

- Clayey silt
- Saprolite



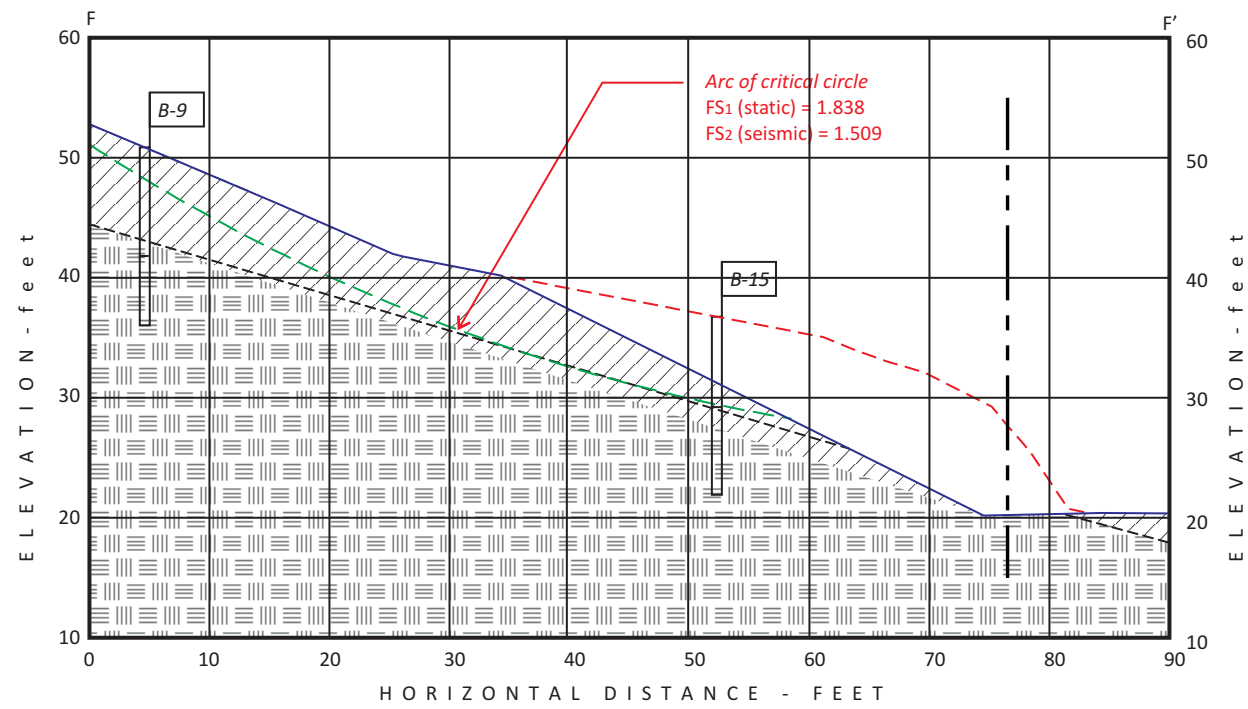
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PROPOSED
SECTIONS

PU'U ALI'I SLOPE INVESTIGATION
46-40 Kōnane Place
Kāne'ohe, O'ahu, Hawai'i

DATE: April, 2020

PROJECT NO. 20003.01G



- L E G E N D -
-  Clayey silt
 -  Saprolite



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PROPOSED
SECTIONS

PU'U ALI'I SLOPE INVESTIGATION
46-40 Kōnane Place
Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 19235.01G

APPENDIX B

Laboratory Testing



APPENDIX B

Laboratory Testing

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

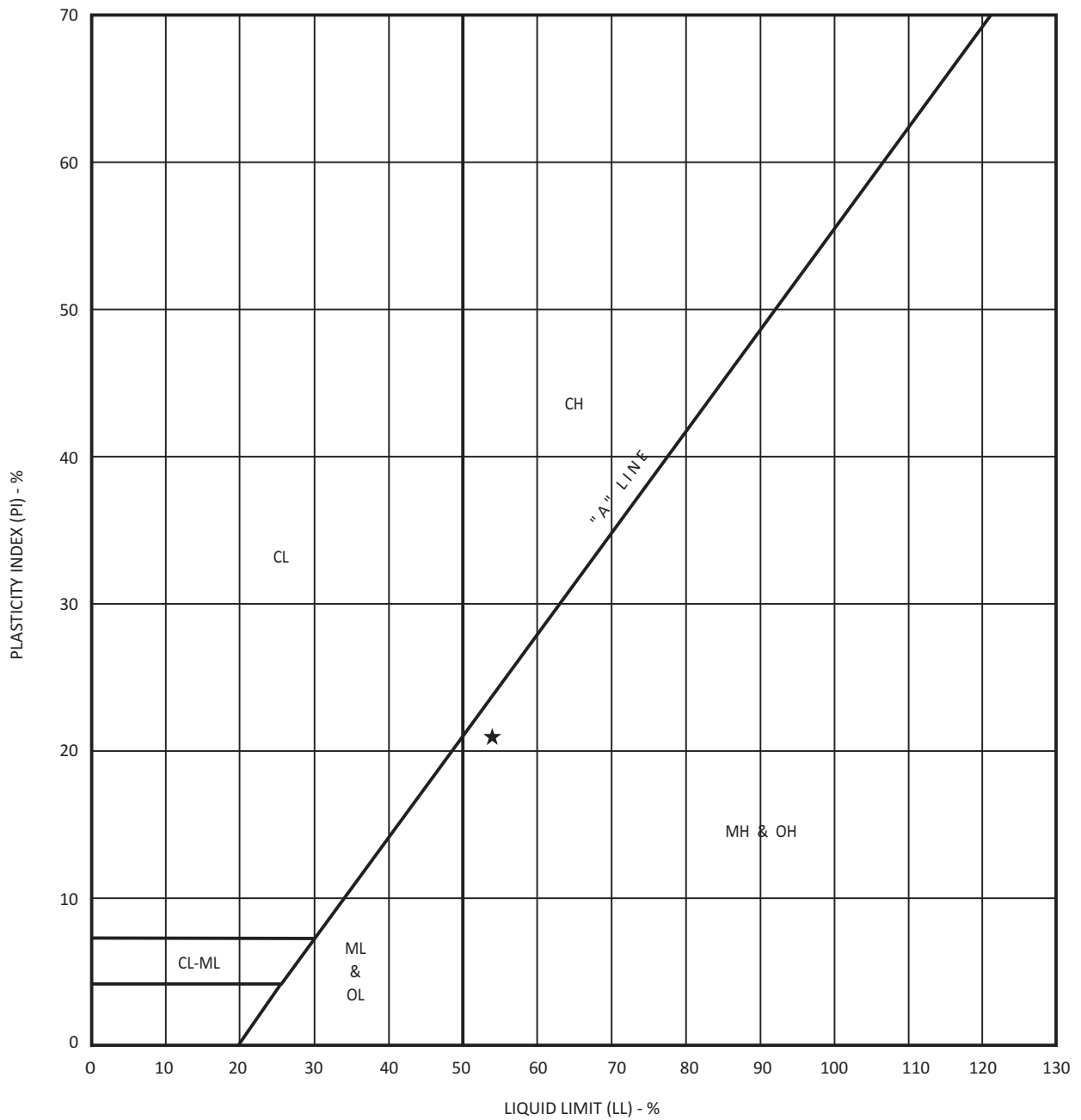
Natural moisture content tests (ASTM Designation D 2216-92) and dry unit weight tests (ASTM Designation D 2937-94) were conducted on selected samples of the earth materials recovered from each test boring. The results are posted on the Logs of Borings, opposite the depth appropriate to each sample.

Atterberg limits tests (ASTM Designation D 4318-84) were performed on a selected sample of the surficial soil to evaluate its plasticity characteristics. The results are depicted on Plates No. B1 and B2, Atterberg Limits Test Data.

Consolidated, drained direct shear tests (ASTM Designation D 3080-90) were conducted at normal pressures of 500, 1,000 and 1,500 pounds per square foot on selected samples of the surficial soil and saprolite formation to evaluate their internal strength characteristics. The data are summarized on Plates No. B3 through B16, Direct Shear Test Data.

Unconfined compressive strength tests (ASTM Designation 2166-91) were completed on selected samples of the surficial soils and underlying saprolite formation to estimate their undrained strength properties. The results are illustrated on Plates No. B17 through B25, Unconfined Compressive Strength Test Data.





Point Code	Boring No.	Sample No.	Depth (ft)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Unified Soil Classification
★	B-5	SB-1	1.0	54	33	21	MH

ATTERBERG LIMITS TEST DATA

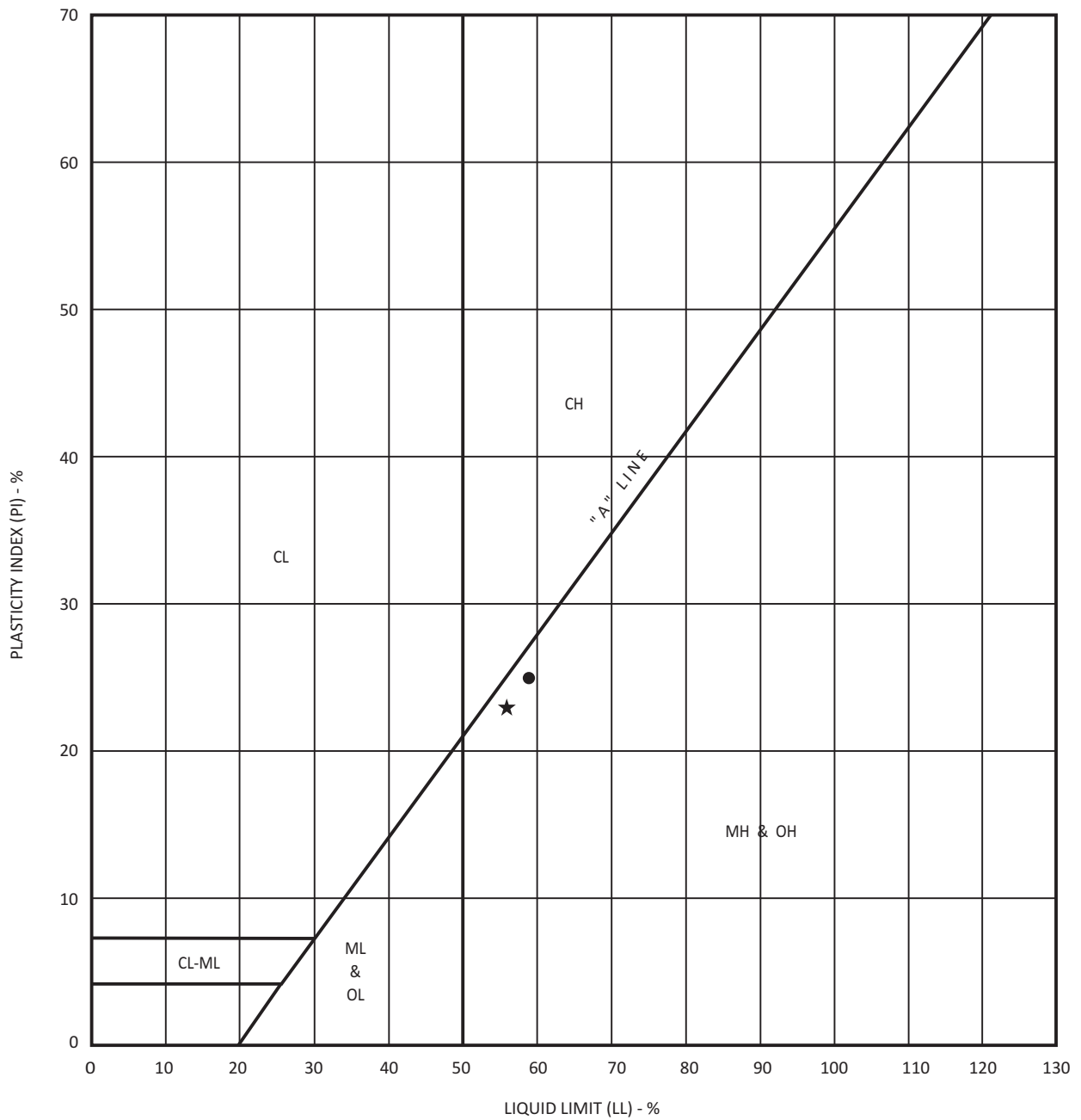


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PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'āhu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Unified Soil Classification
★	B-2	SB-1	1.0	56	33	23	MH
●	B-8	SB-1	1.0	59	34	25	MH

ATTERBERG LIMITS TEST DATA

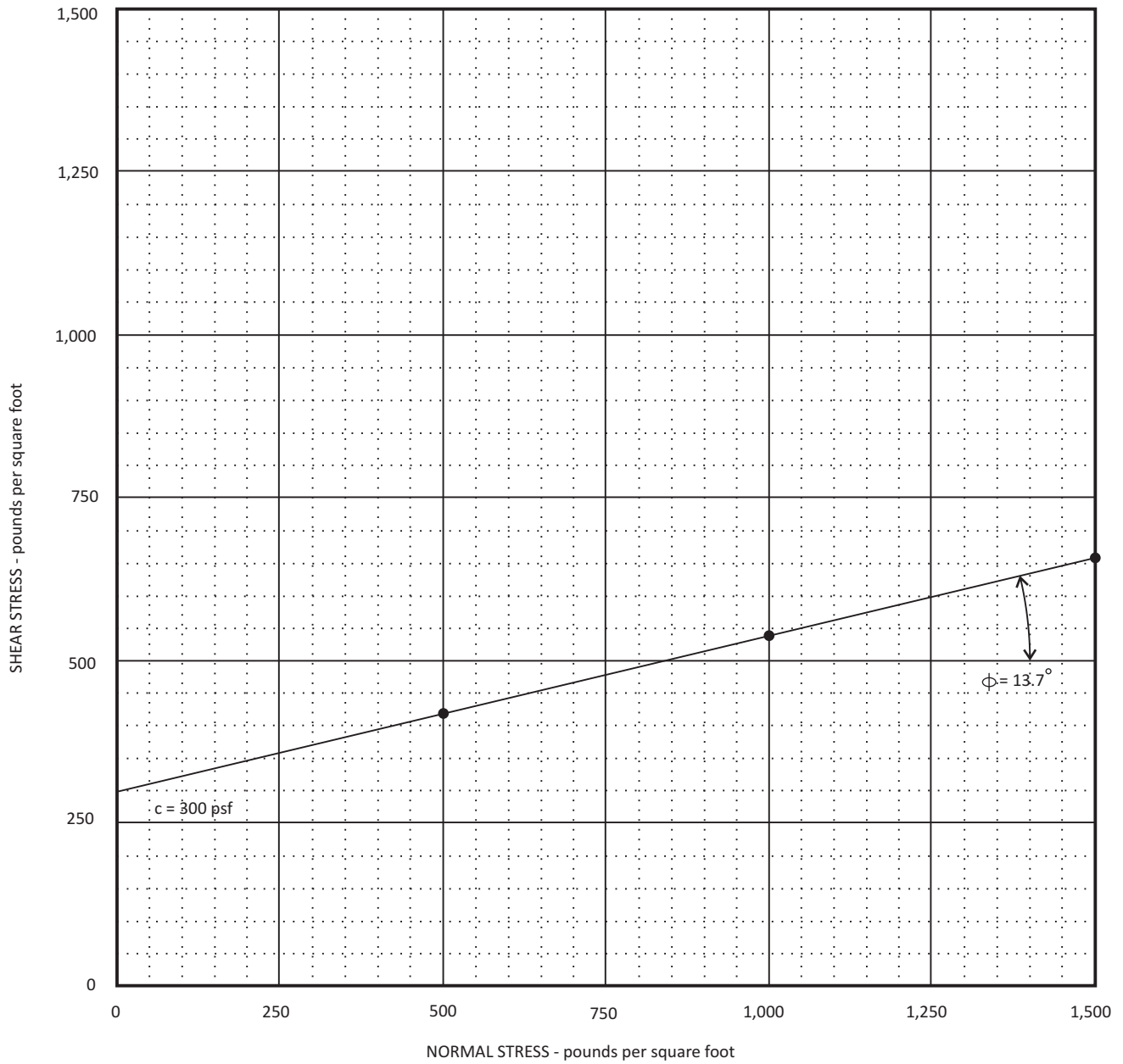


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PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-3	SB-1	1.0	78	41.2	500	420
B-3	SB-1	1.0	77	42.4	1,000	545
B-3	SB-1	1.0	77	39.1	1,500	665

DIRECT SHEAR TEST DATA

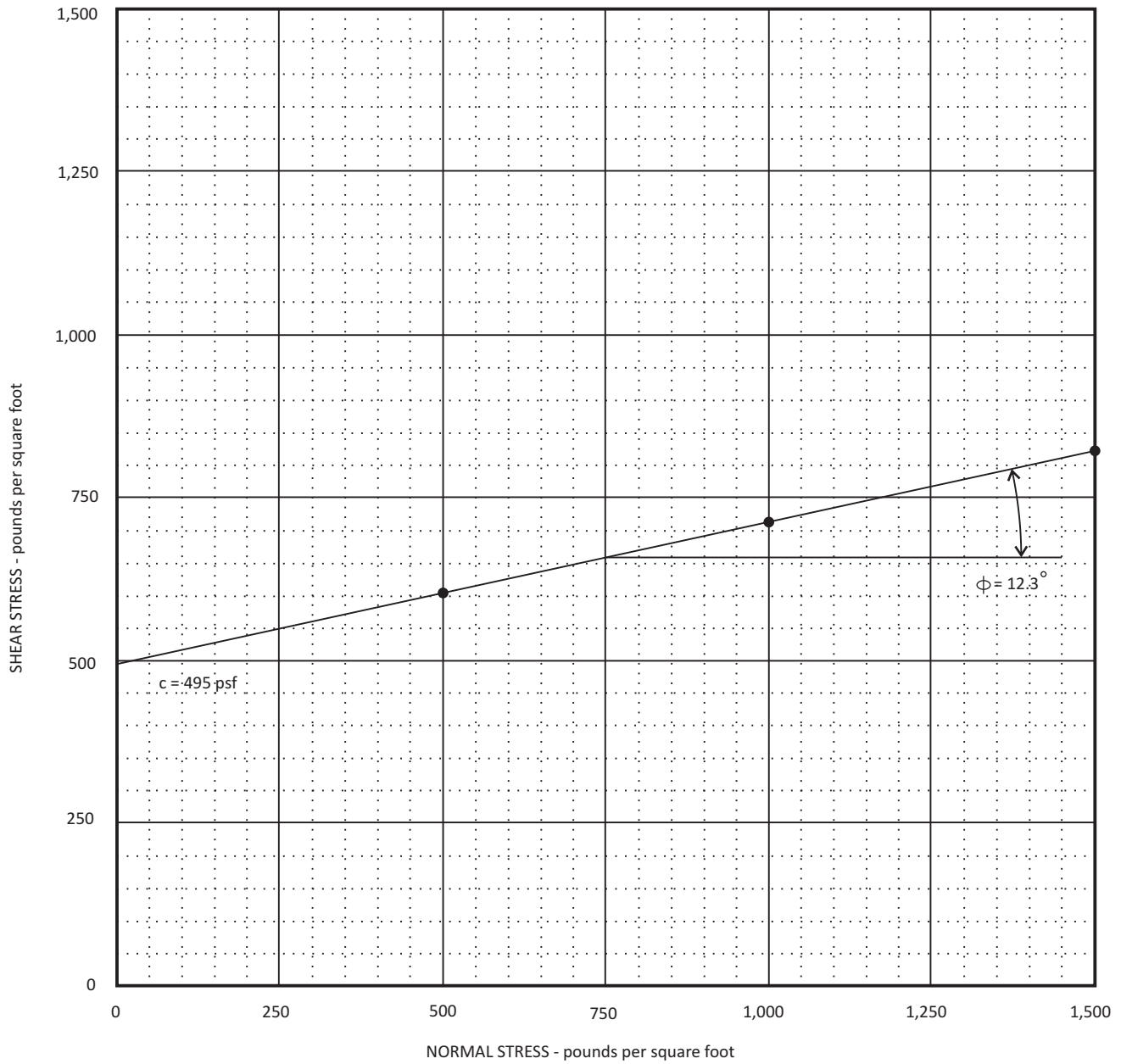


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PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'āhu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-6	SB-1	1.0	70	46.1	500	605
B-6	SB-1	1.0	69	42.7	1,000	715
B-6	SB-1	1.0	68	46.1	1,500	820

DIRECT SHEAR TEST DATA

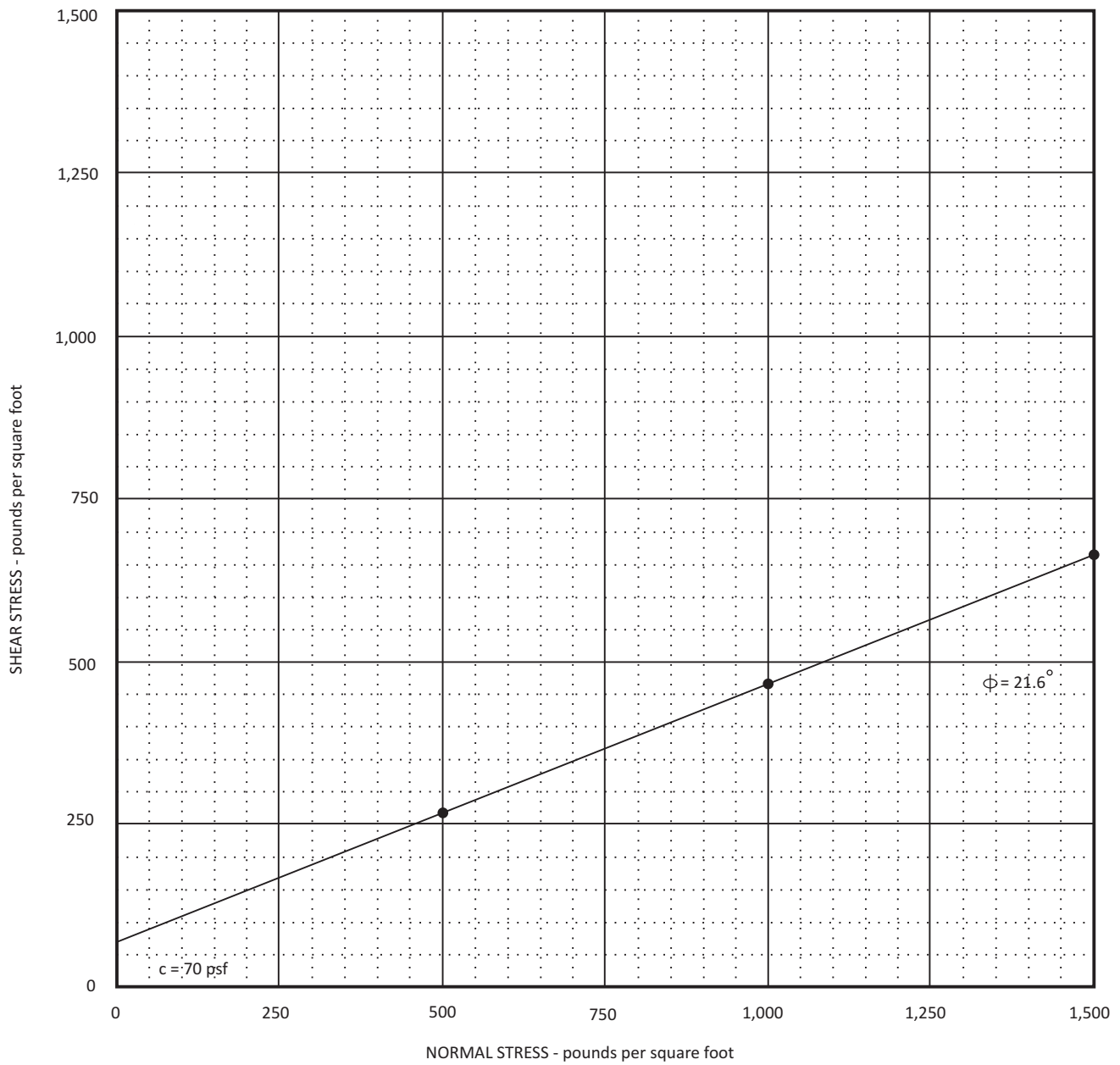


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PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-2	SB-2	4.0	74	47.3	500	270
B-2	SB-2	4.0	73	46.9	1,000	465
B-2	SB-2	4.0	72	49.5	1,500	665

DIRECT SHEAR TEST DATA

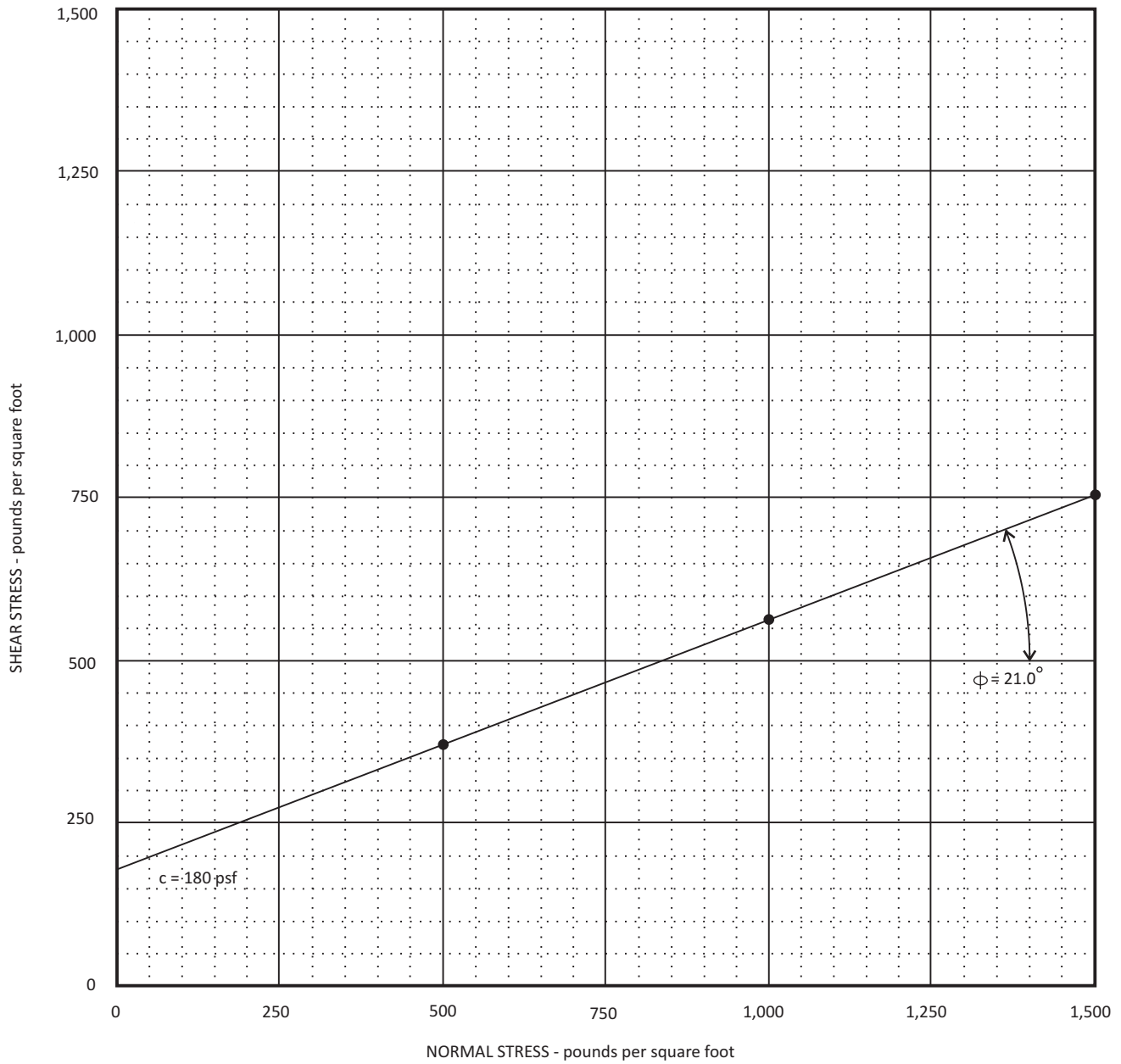


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PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-4	SB-2	4.0	86	37.2	500	370
B-4	SB-2	4.0	85	37.4	1,000	565
B-4	SB-2	4.0	86	36.2	1,500	755

DIRECT SHEAR TEST DATA

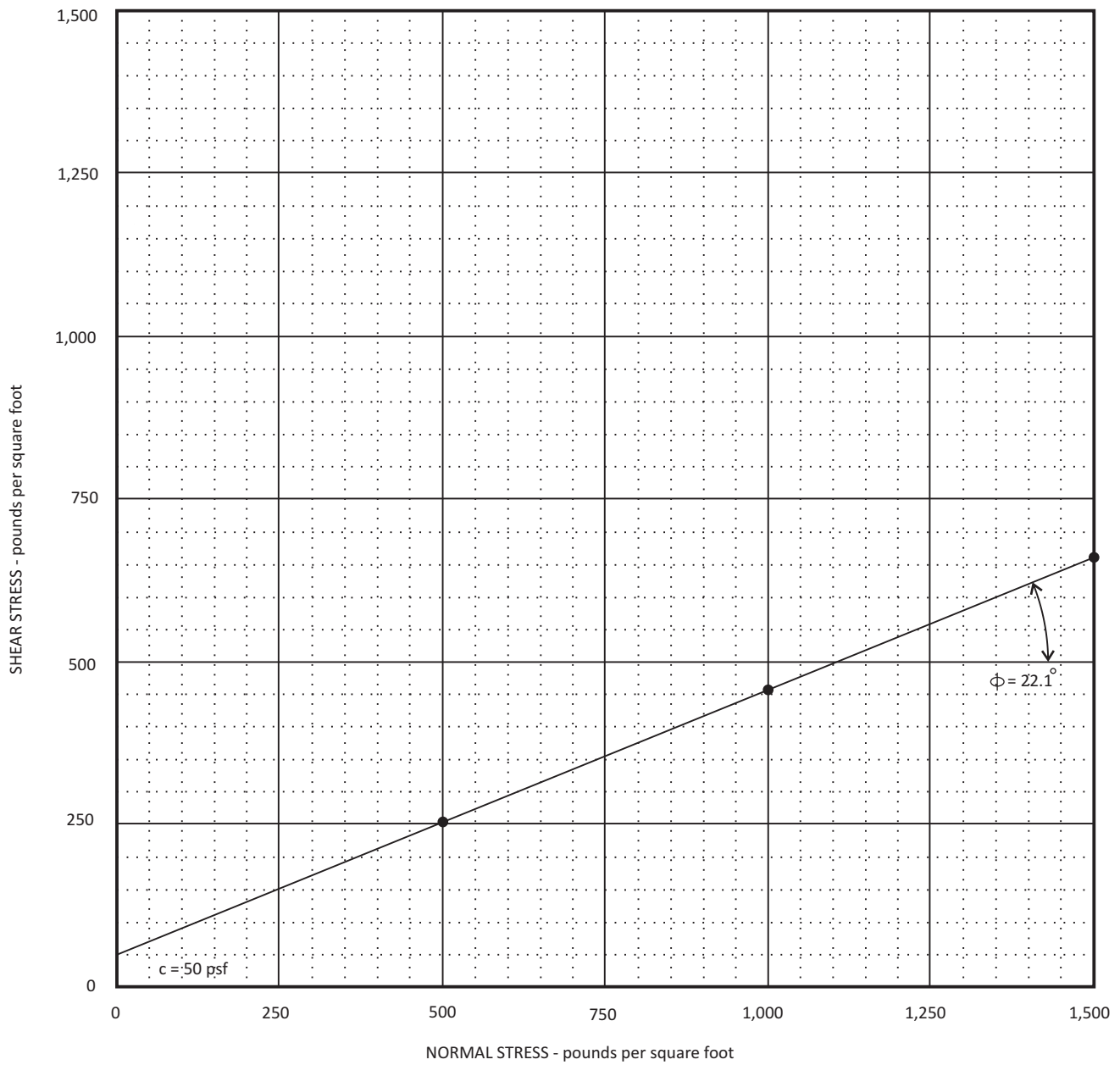


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'āhu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-5	SB-3	7.0	74	46.4	500	255
B-5	SB-3	7.0	74	47.3	1,000	455
B-5	SB-3	7.0	74	46.8	1,500	660

DIRECT SHEAR TEST DATA

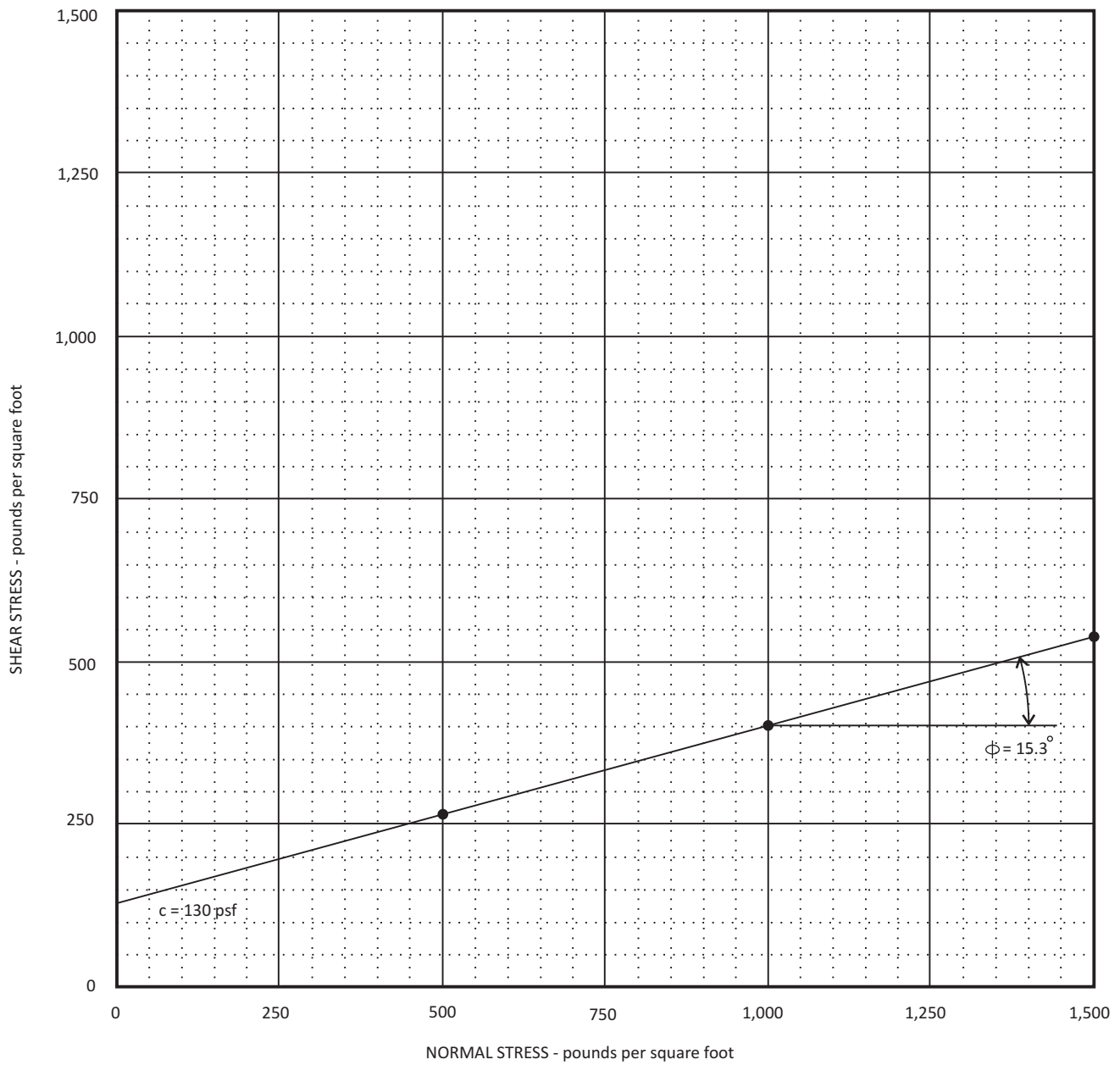


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-1	SB-4	10.0	70	52.7	500	265
B-1	SB-4	10.0	68	57.2	1,000	405
B-1	SB-4	10.0	66	58.8	1,500	540

DIRECT SHEAR TEST DATA

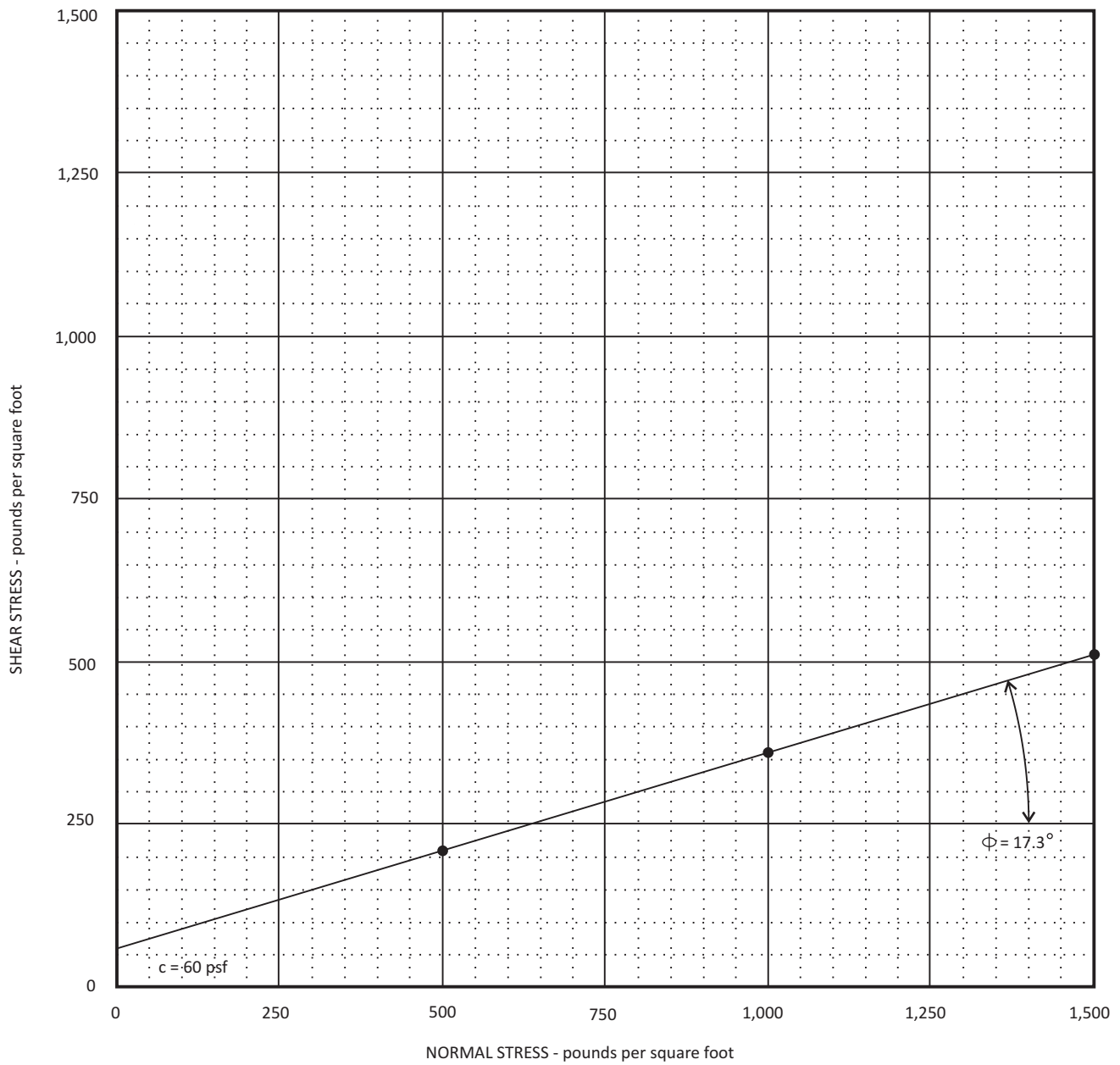


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-7	SB-1	1.0	83	41.3	500	360
B-7	SB-1	1.0	82	41.1	1,000	515
B-7	SB-1	1.0	82	41.1	1,500	675

DIRECT SHEAR TEST DATA

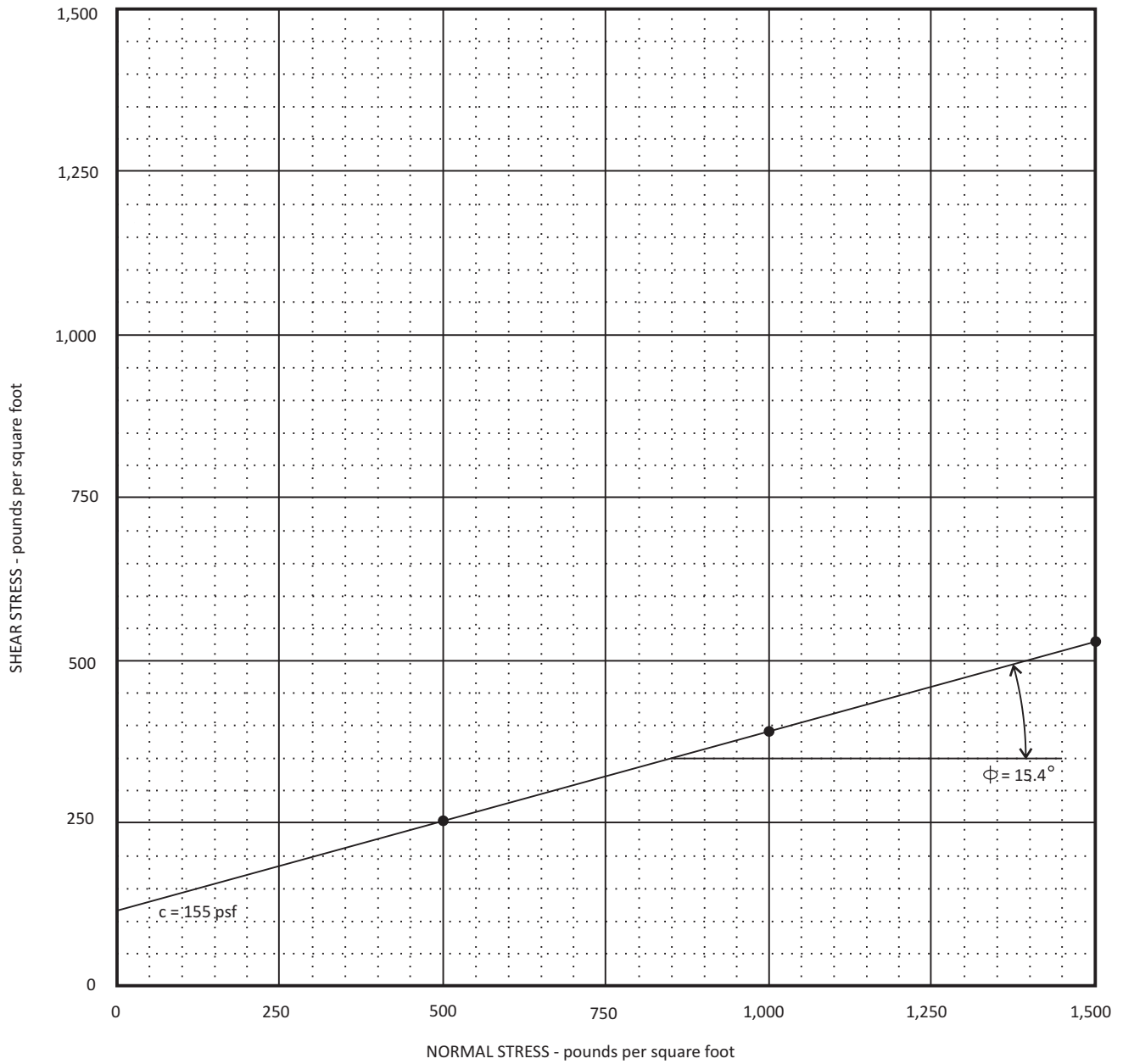


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-9	SB-1	1.0	81	41.8	500	255
B-9	SB-1	1.0	81	42.1	1,000	390
B-9	SB-1	1.0	82	40.0	1,500	530

DIRECT SHEAR TEST DATA

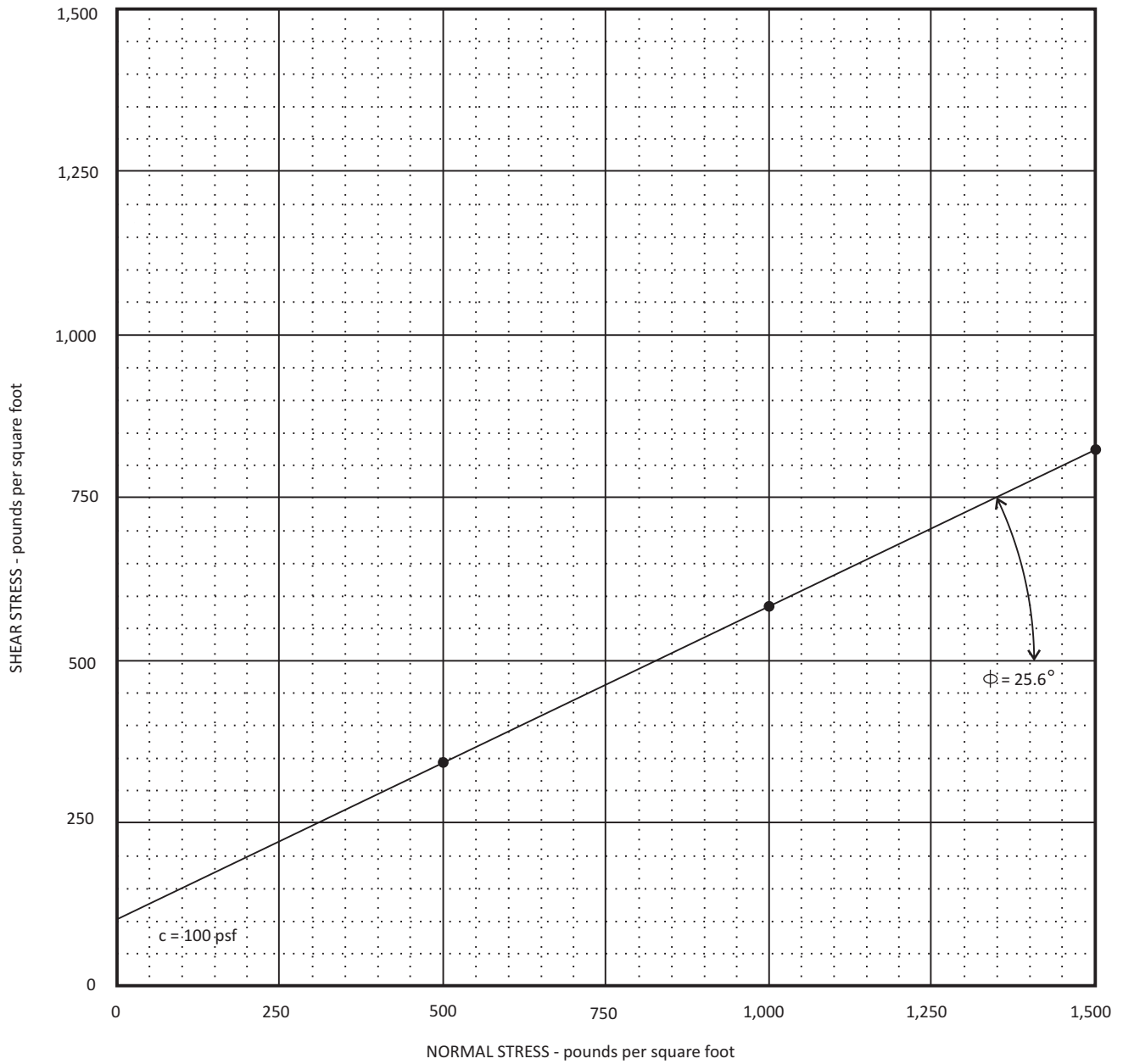


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-10	SB-2	4.0	84	40.1	500	340
B-10	SB-2	4.0	83	40.4	1,000	580
B-10	SB-2	4.0	83	38.3	1,500	820

DIRECT SHEAR TEST DATA

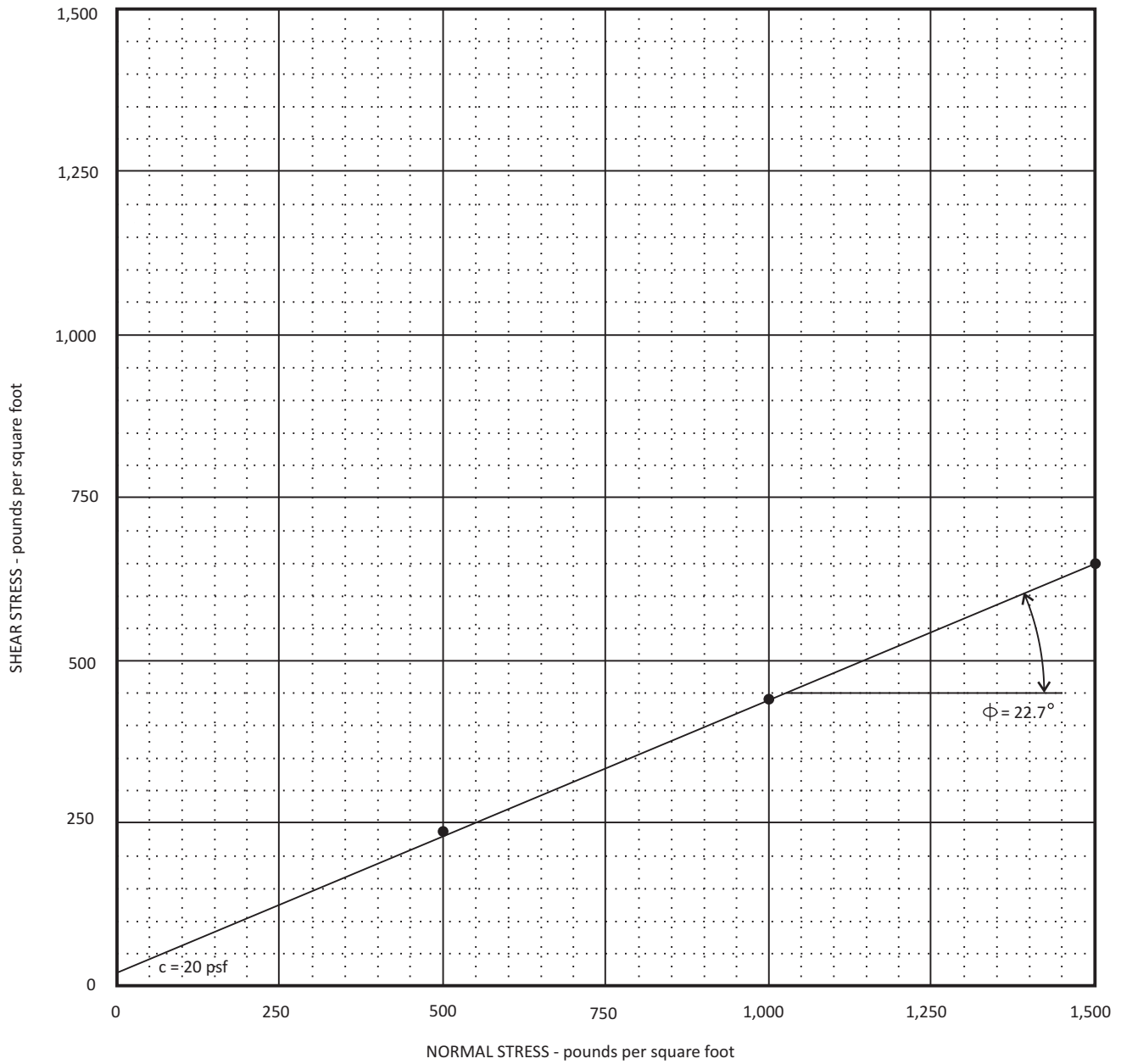


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-11	SB-1	1.0	68	53.5	500	230
B-11	SB-1	1.0	68	50.6	1,000	440
B-11	SB-1	1.0	68	50.6	1,500	650

DIRECT SHEAR TEST DATA

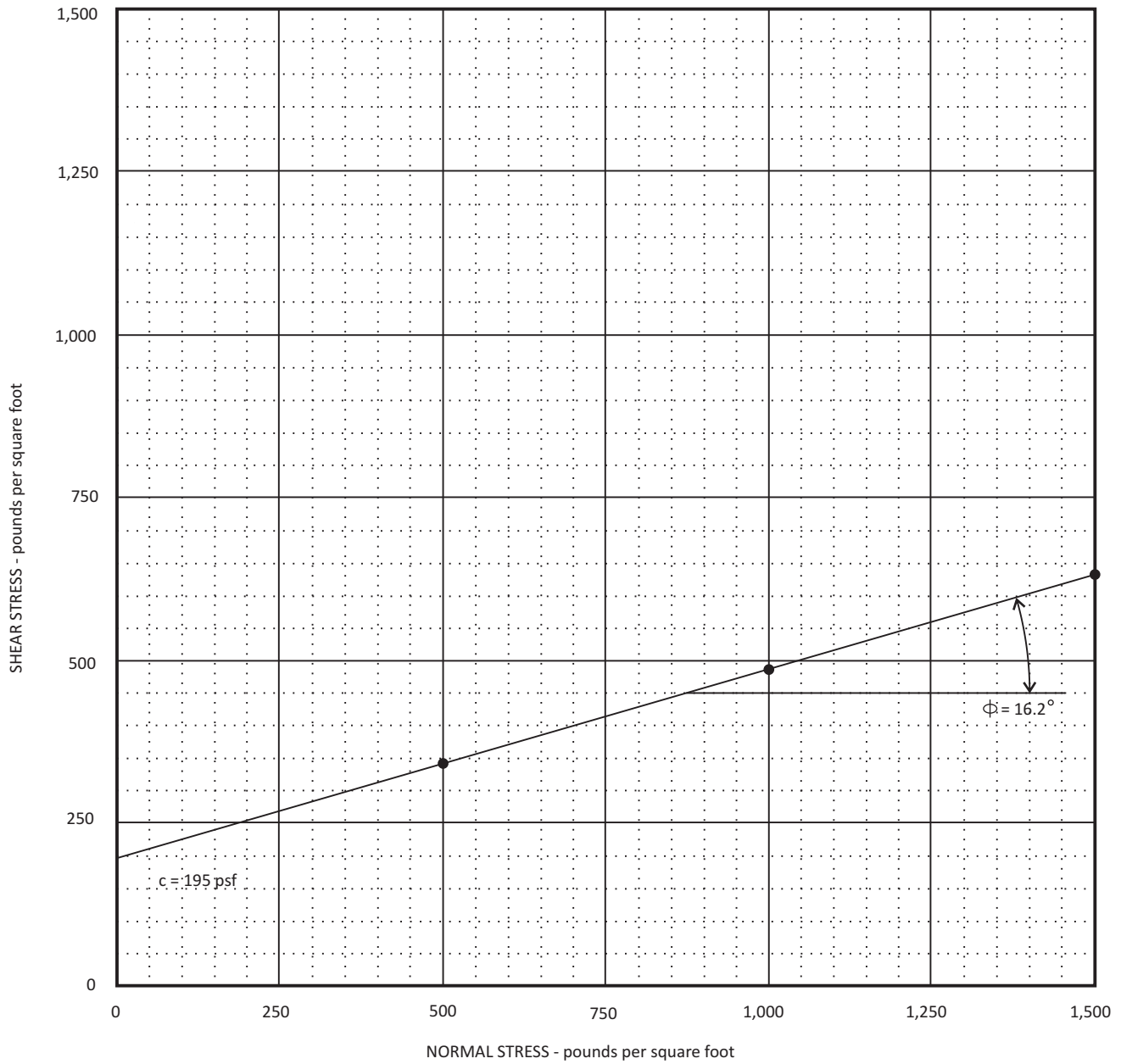


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-12	SB-3	7.0	68	51.7	500	340
B-12	SB-3	7.0	69	49.4	1,000	485
B-12	SB-3	7.0	67	53.4	1,500	630

DIRECT SHEAR TEST DATA

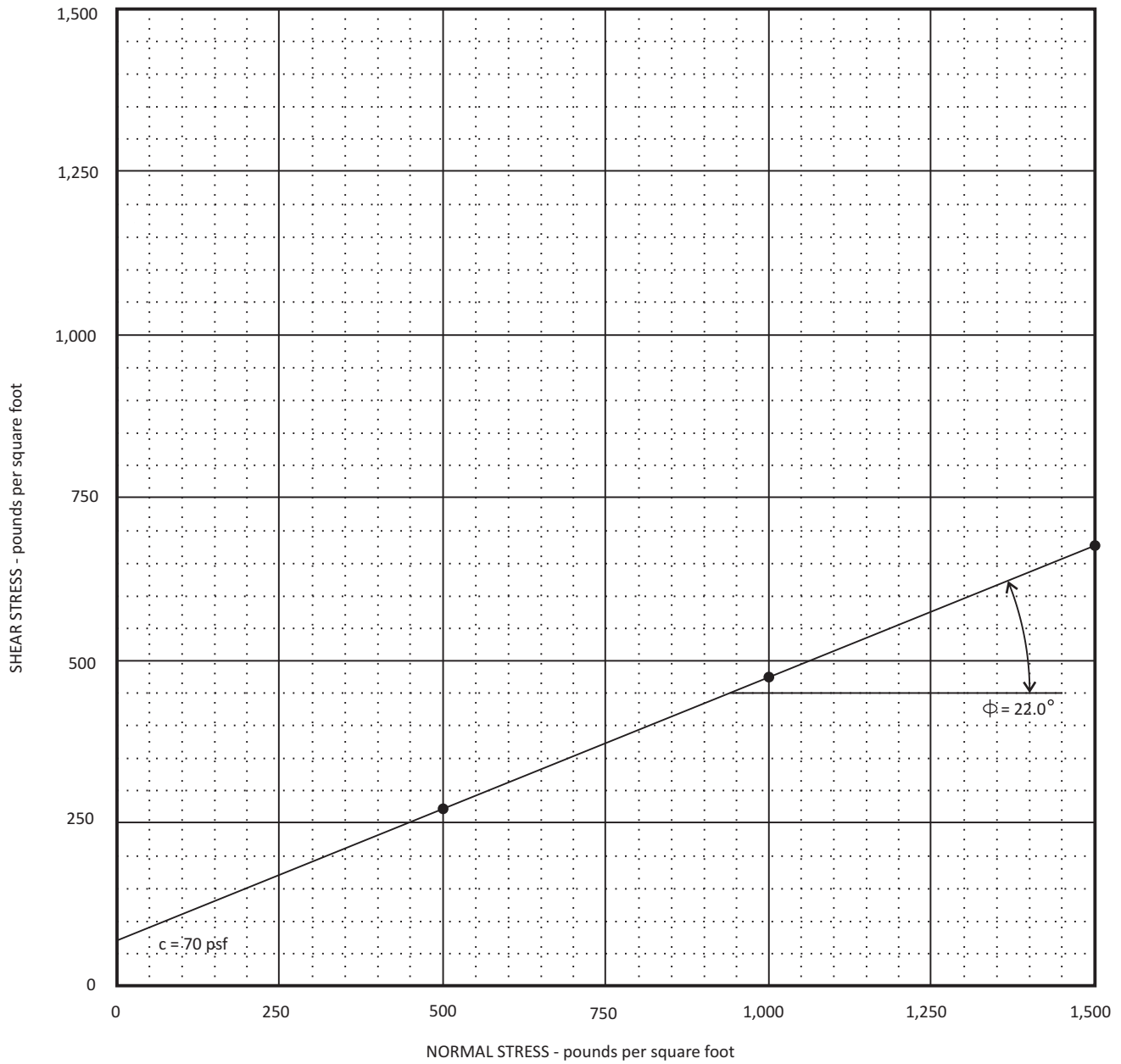


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-13	SB-1	1.0	74	42.1	500	360
B-13	SB-1	1.0	73	42.1	1,000	515
B-13	SB-1	1.0	72	46.7	1,500	675

DIRECT SHEAR TEST DATA

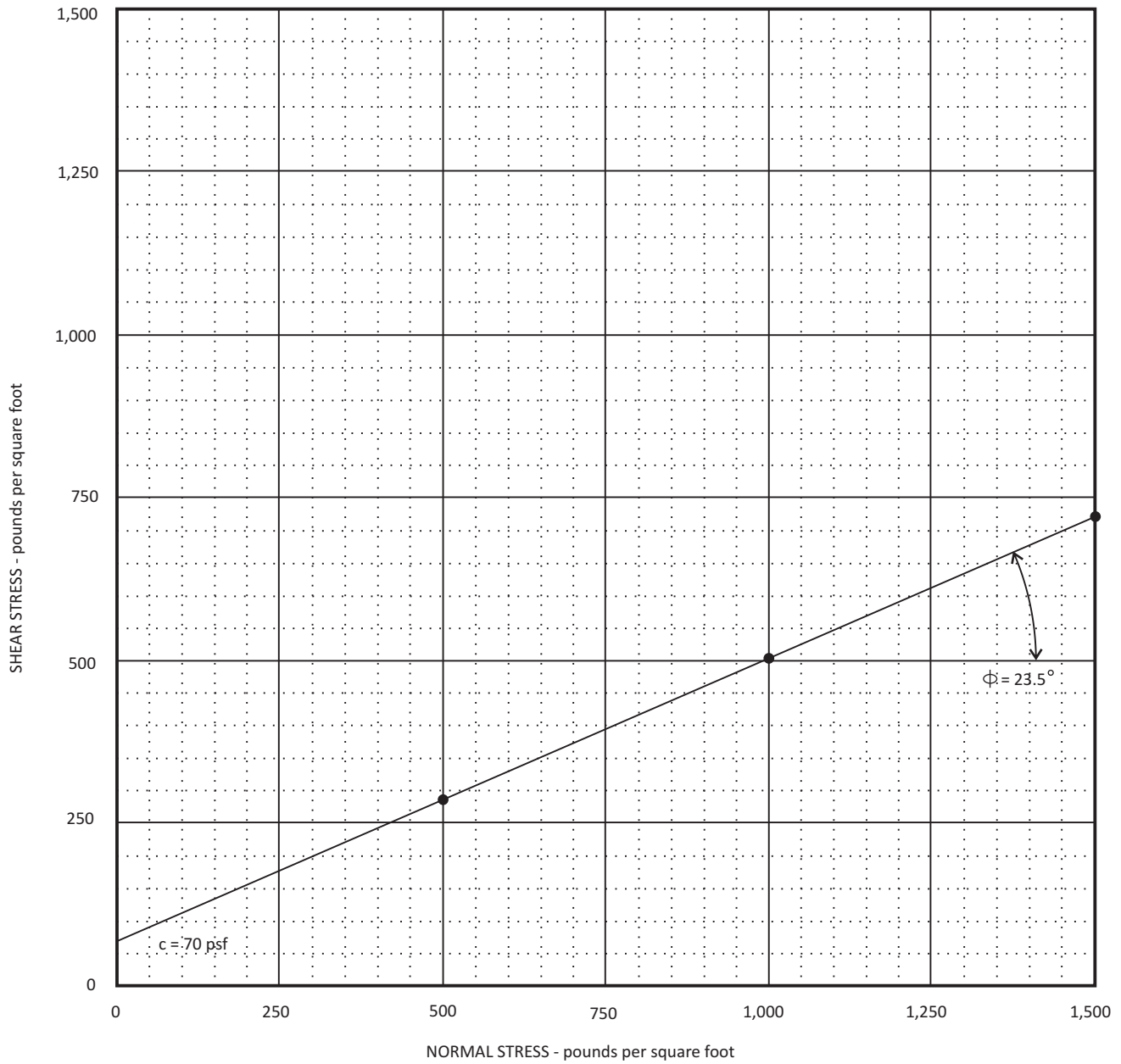


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-14	SB-3	7.0	61	55.4	500	290
B-14	SB-3	7.0	60	58.1	1,000	505
B-14	SB-3	7.0	59	57.8	1,500	725

DIRECT SHEAR TEST DATA

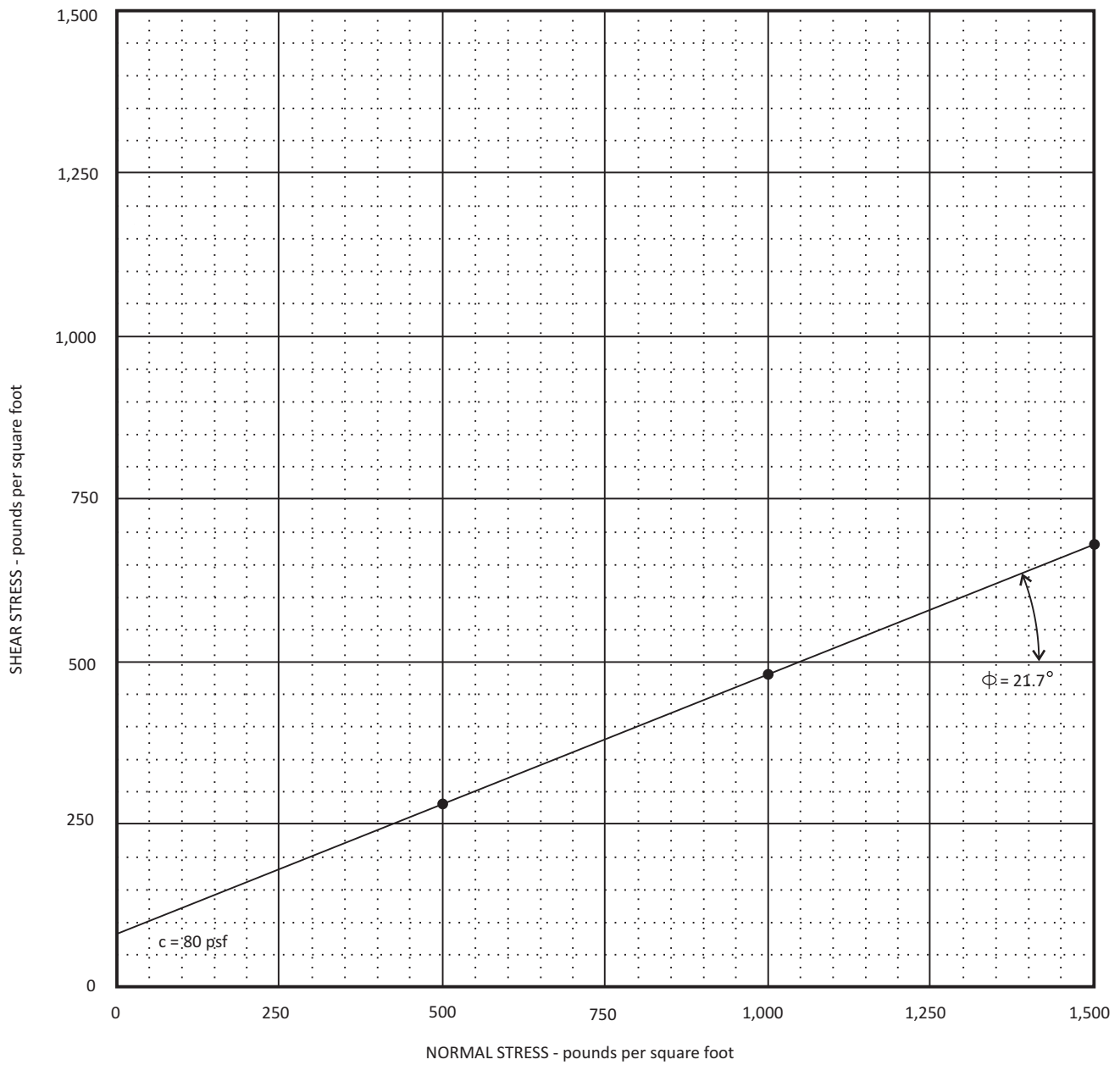


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Normal Stress (psf)	Shear Stress (psf)
B-15	SB-1	1.0	82	41.8	500	280
B-15	SB-1	1.0	80	43.0	1,000	480
B-15	SB-1	1.0	80	41.7	1,500	675

DIRECT SHEAR TEST DATA

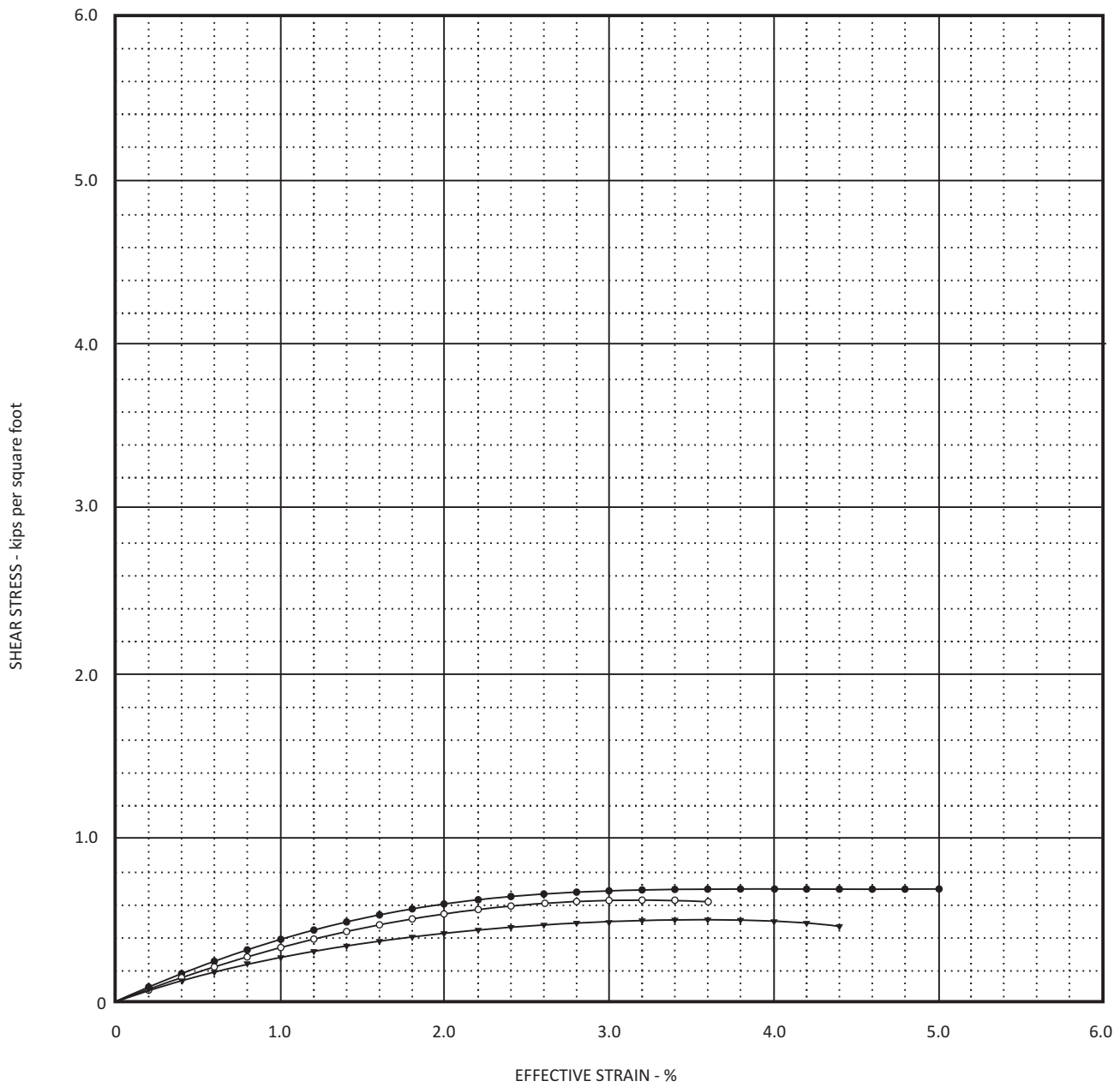


JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ohe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
●	B-1	SB-2	4.0	80	33.8	5.0	685
○	B-2	SB-1	1.0	75	49.1	3.2	620
▼	B-2	SB-3	7.0	72	40.9	4.0	490

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

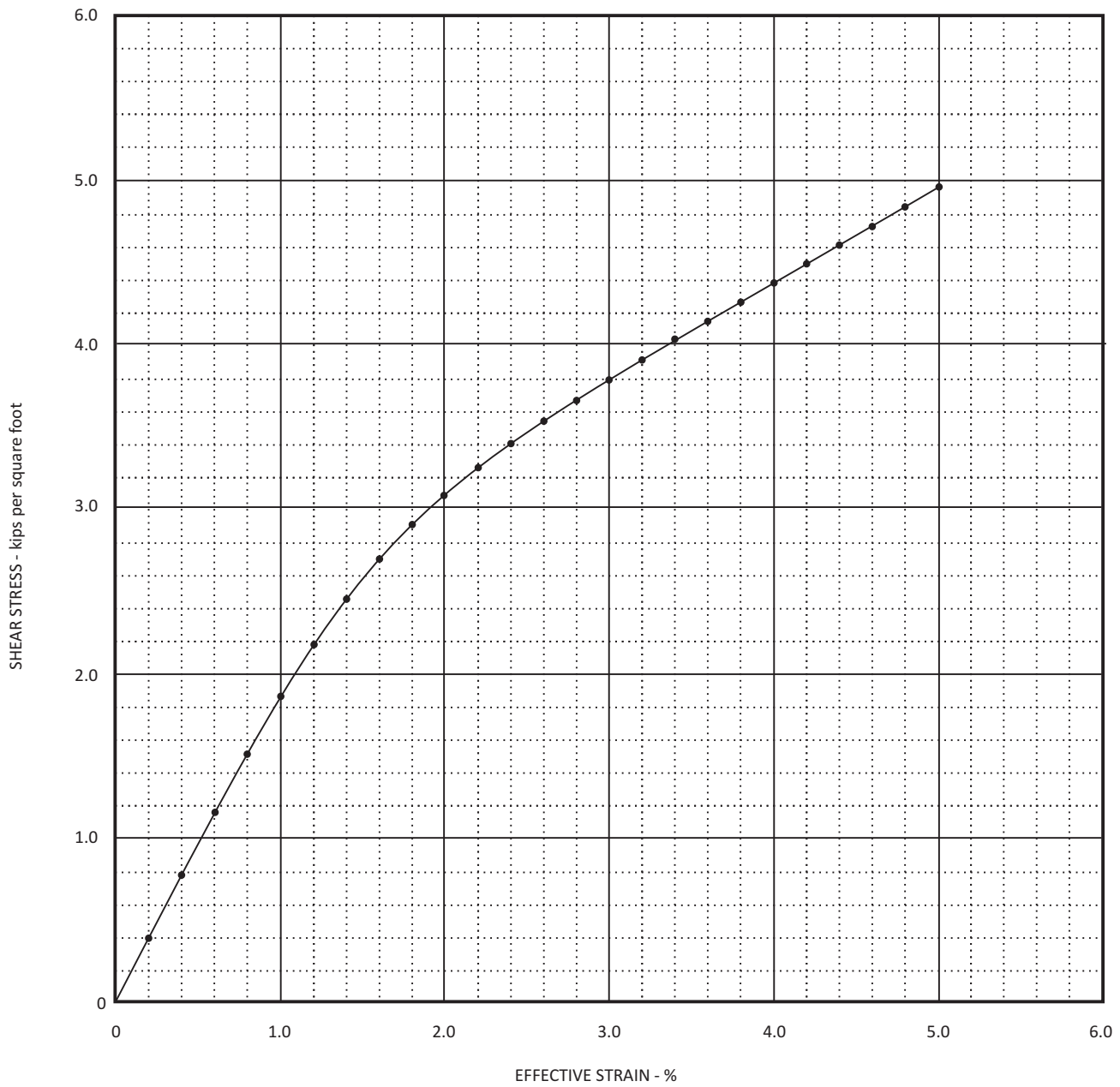


JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
•	B-4	SB-1	1.0	79	28.1	5.0	4,950

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

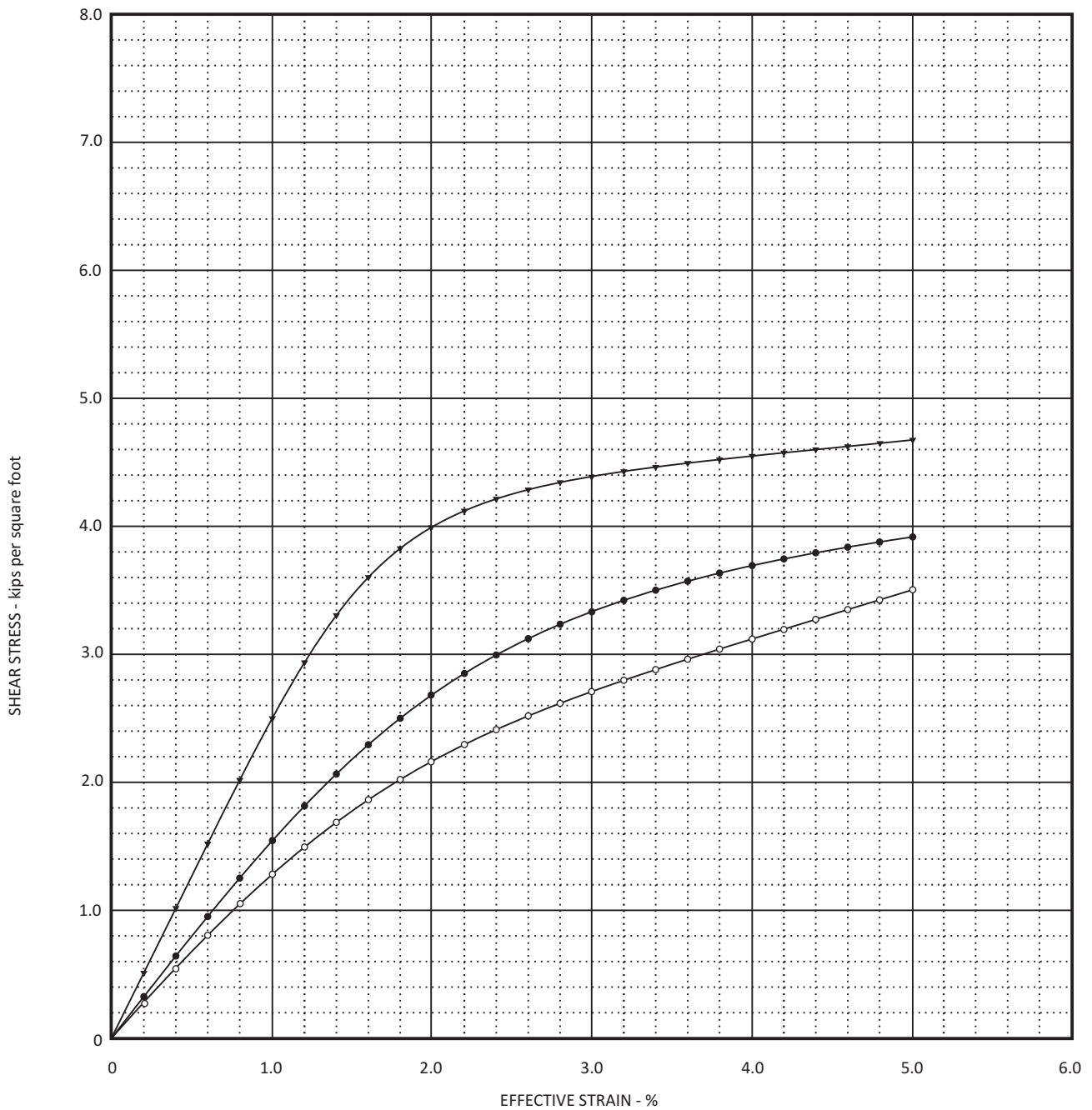


JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
●	B-7	SB-2	4.0	82	35.7	5.0	3,915
○	B-8	SB-3	7.0	82	37.8	5.0	3,505
▼	B-9	SB-2	4.0	86	36.1	5.0	4,675

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

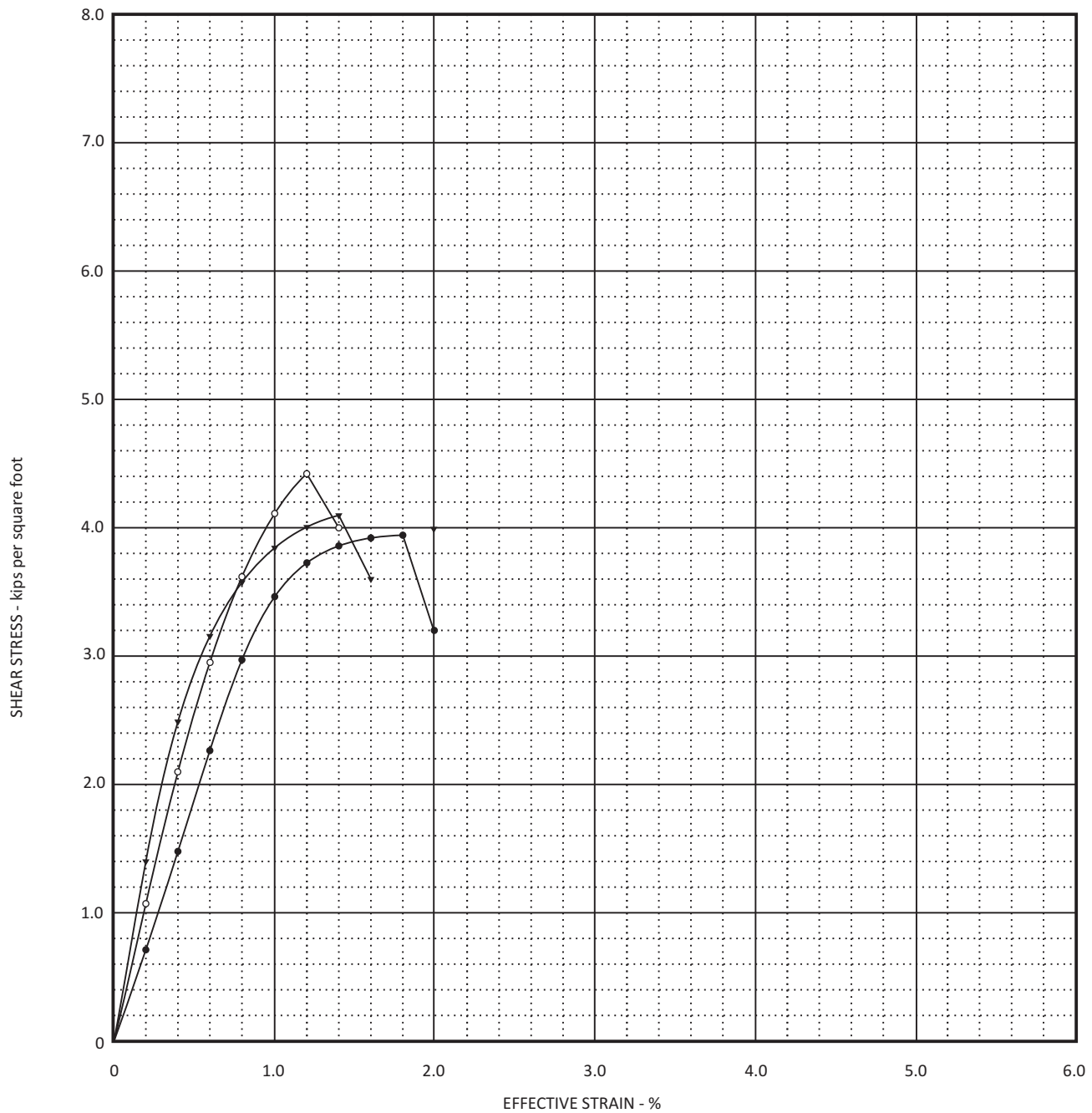


JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 19235.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
●	B-10	SB-3	7.0	74	39.8	1.8	3,940
○	B-11	SB-2	4.0	79	27.5	1.2	4,425
▼	B-12	SB-1	1.0	78	35.4	1.4	4,095

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

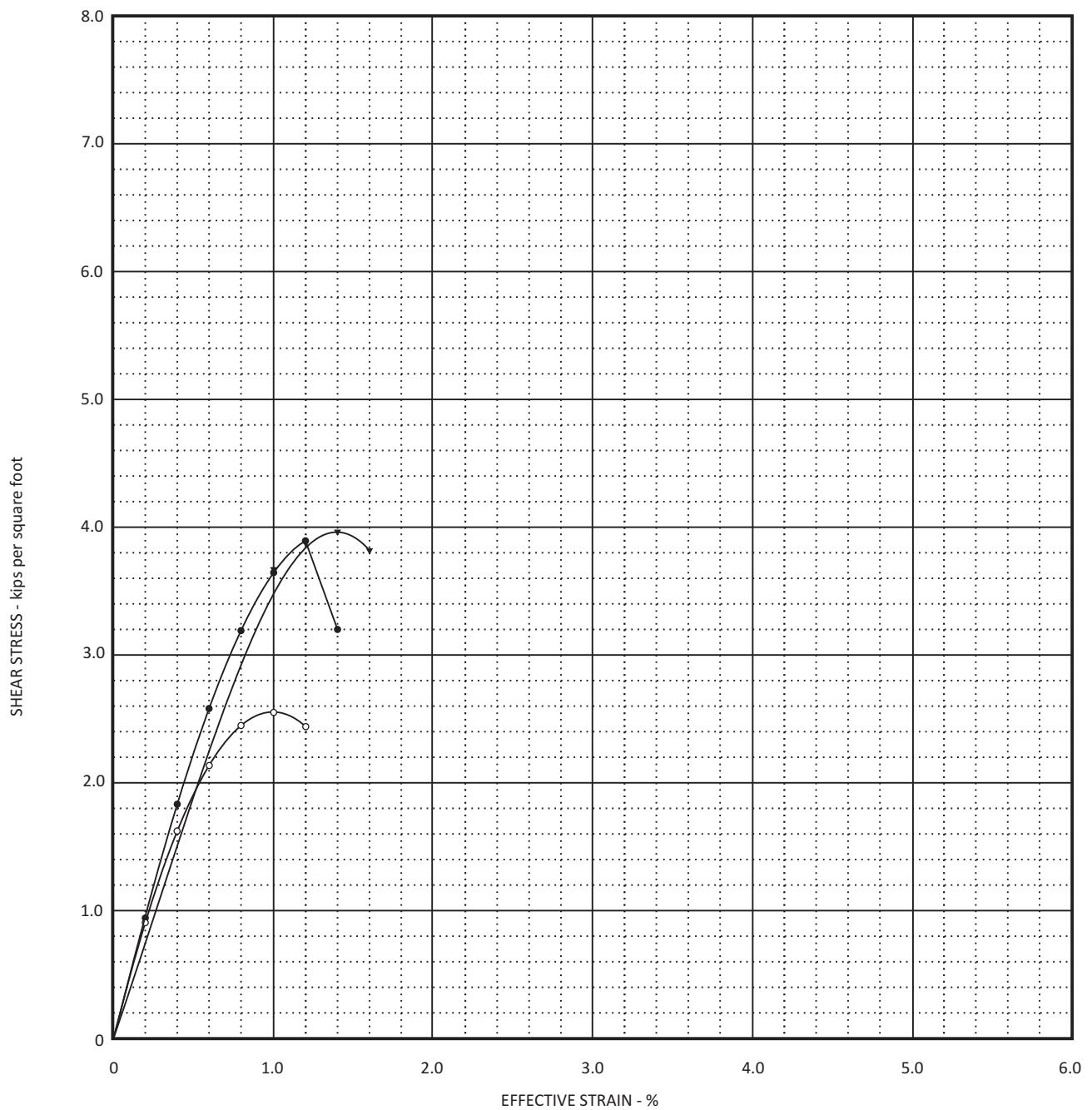


JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
●	B-13	SB-2	4.0	78	26.6	1.2	3,895
○	B-14	SB-3	7.0	70	35.1	1.0	2,555
▼	B-15	SB-2	4.0	81	37.7	1.4	3,965

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

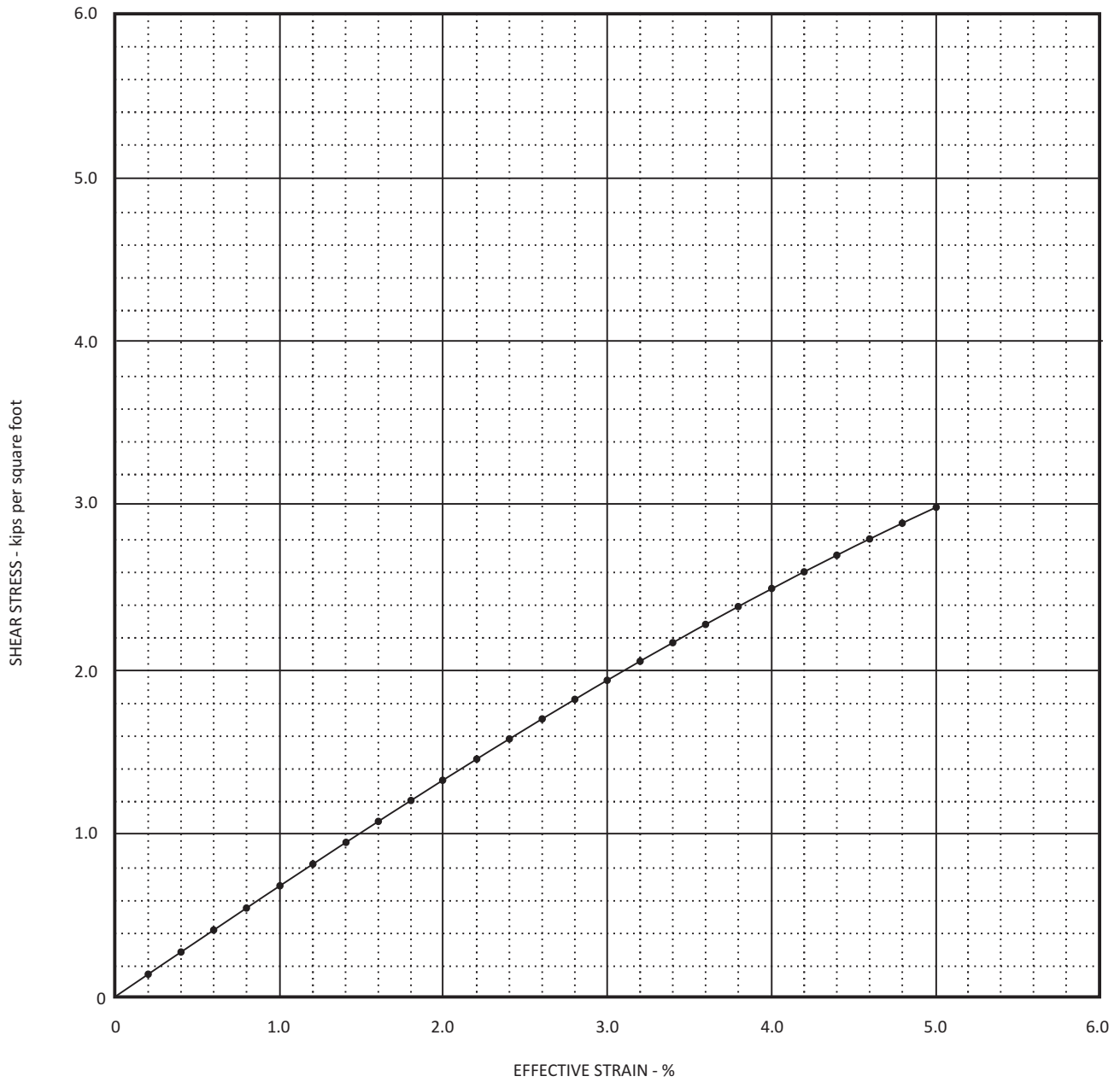


JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
•	B-1	SB-5	13.0	66	56.4	5.0	2,985

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

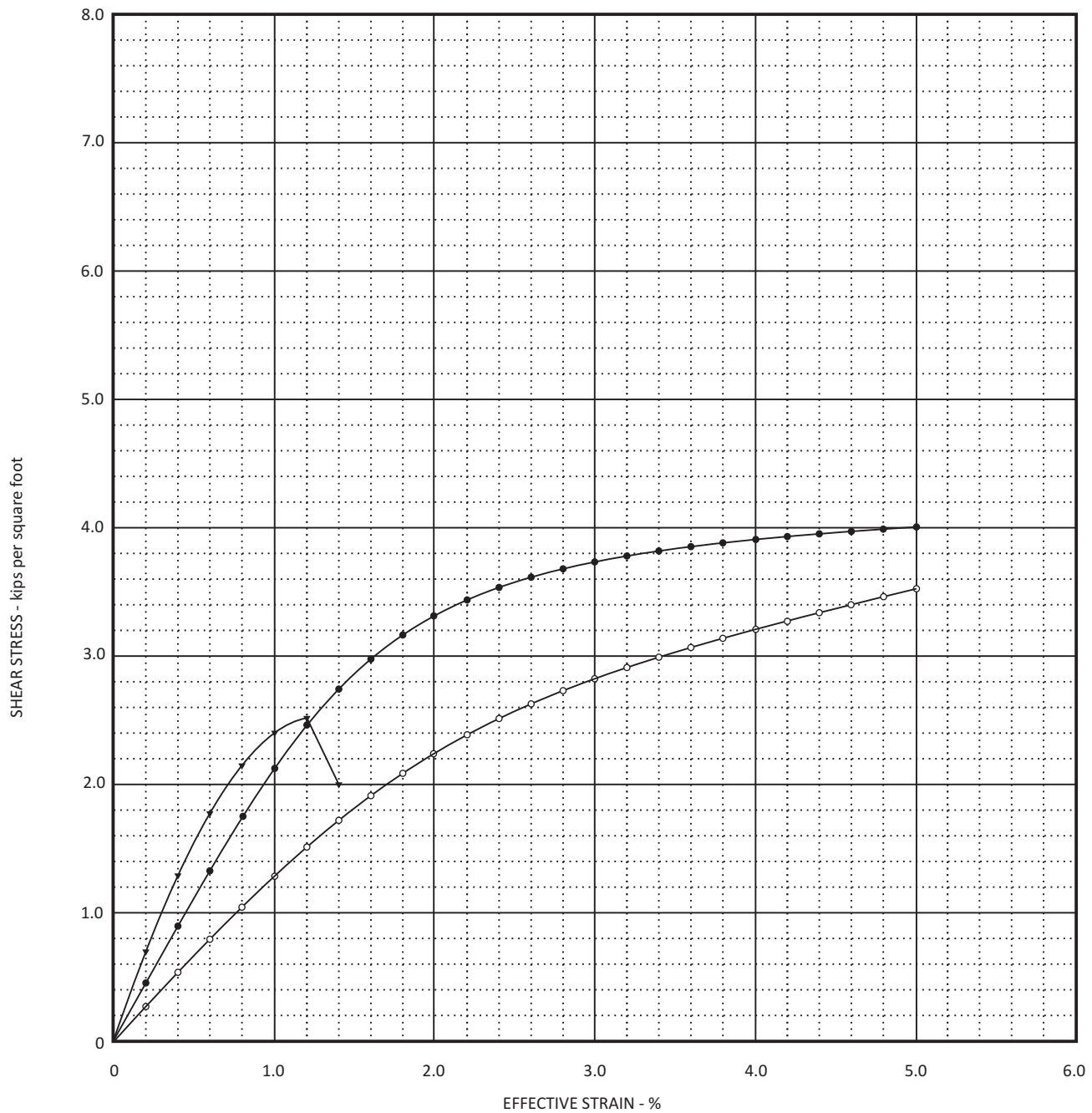


JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: September, 2019

PROJECT NO. 19235.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
●	B-7	SB-4	10.0	78	41.5	5.0	4,005
○	B-8	SB-5	13.0	75	44.0	5.0	3,525
▼	B-9	SB-4	10.0	70	33.2	1.2	2,515

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

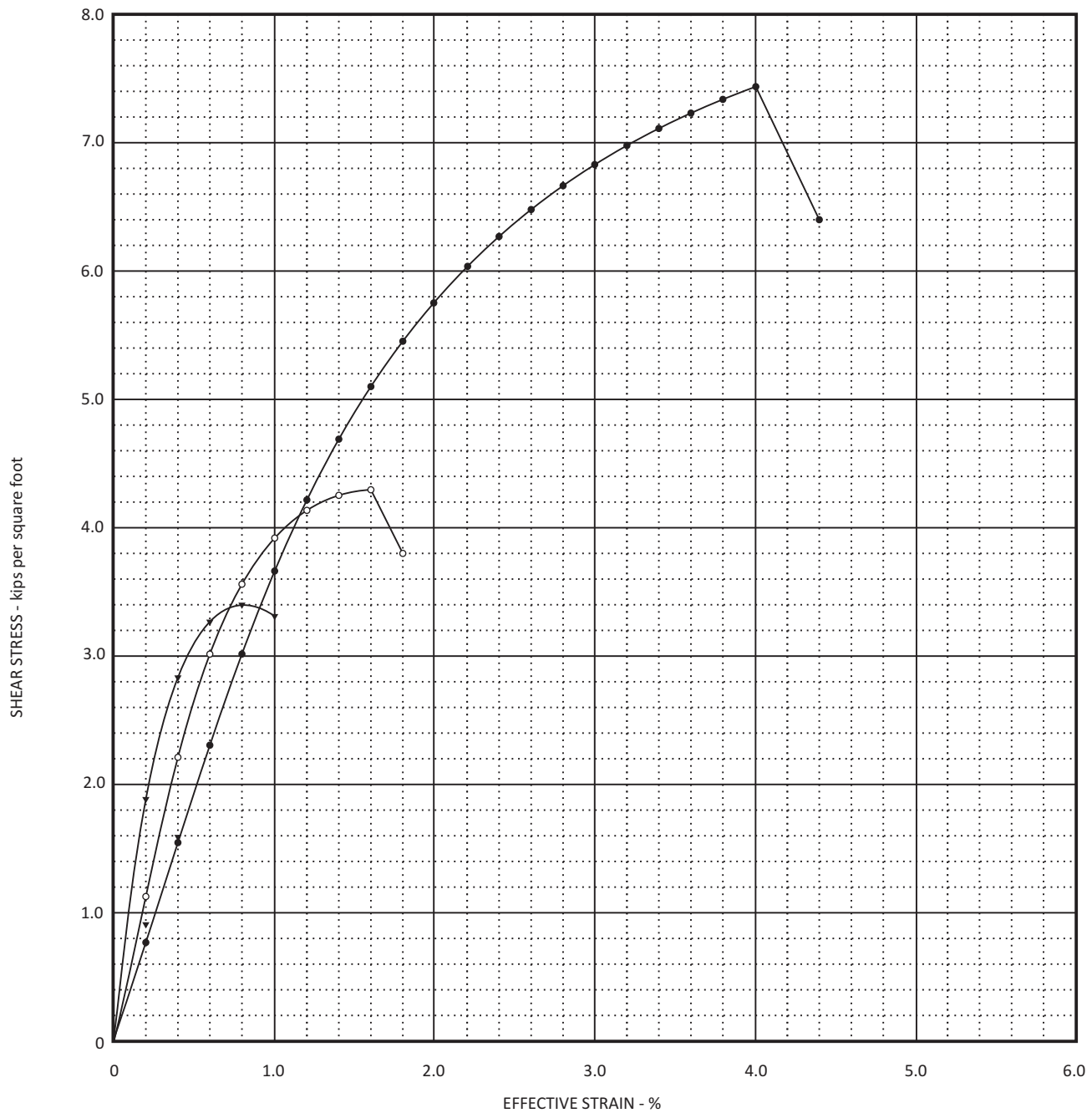


JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'āhu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
●	B-10	SB-5	13.0	83	35.4	4.0	7,435
○	B-11	SB-4	10.0	80	37.4	1.5	4,295
▼	B-12	SB-4	10.0	72	32.9	0.8	3,400

UNCONFINED COMPRESSIVE STRENGTH TEST DATA

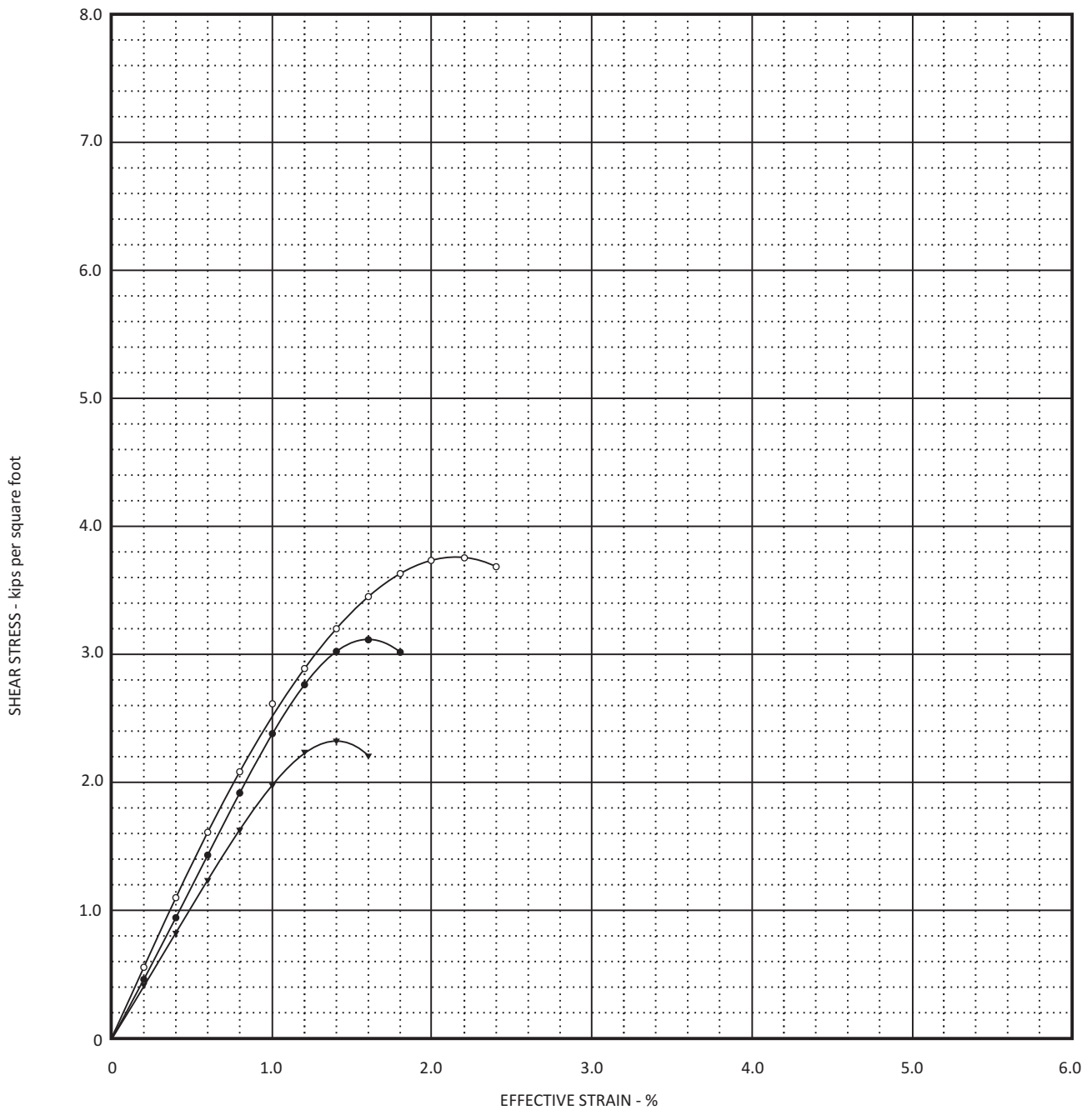


JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G



Point Code	Boring No.	Sample No.	Depth (ft)	Dry Unit Weight (pcf)	Moisture Content (%)	Peak Effective Strain (%)	Unconfined Compressive Strength (psf)
●	B-13	SB-4	10.0	78	37.5	1.8	3,115
○	B-14	SB-5	13.0	68	41.5	2.2	3,755
▼	B-15	SB-4	10.0	67	47.7	1.4	2,325

UNCONFINED COMPRESSIVE STRENGTH TEST DATA



JPB ENGINEERING, INC
Structural & Geotechnical Engineering

PU'U ALI'I SLOPE INVESTIGATION
 46-40 Kōnane Place
 Kāne'ōhe, O'ahu, Hawai'i

DATE: March, 2020

PROJECT NO. 20003.01G

APPENDIX C

References



APPENDIX C

References

1. —, *Pu`u Alii Tree Planting & Removal, Pu`u Ali`i Tree Planting Plan, 46-058 Alii Anela Place, Kaneohe HI 96744* (scale: 1" = 50'), Sheet L1.6 of seven sheets, undated.
2. Foote, D.; Hill, E. L.; Nakamura, S.; and Stephens, F., 1972, *Soil Survey of the Islands of Kaua`i, O`ahu, Maui, Moloka`i and Lāna`i, State of Hawai`i*, United States Department of Agriculture.
3. State of Hawai`i, Department of Taxation, 1996, Taxation Maps Bureau *Tax Map Key 4-6-001:002 and 4-6-001:062* (scale: 1"= 60').
4. Stearns, H. T., 1985, *Geology of the State of Hawai`i*, Pacific Books, Palo Alto, California.
5. United States Geological Survey, 1998, *Kāne`ohe Quadrangle, Hawai`i – Honolulu Co., Island of O`ahu, 7.5-Minute Series (Topographic)* (scale: 1:24,000).



DISTRIBUTION

Pu'u Ali'i Community Association (1)
Attn: David Chung, MTPC Chair
46-058 Ali'i'ānela Place
Kāne'ohe, Hawai'i 96744
davidcoahu@gmail.com





JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

February 15, 2023

Project No. 19235.02G

To: Pu'u Ali'i Community Association
46-058 Ali'ianela Place
Kāne'ohe, Hawai'i 96744

Attn: Helene Jo, Board Vice President

Subject: Summary Report
Pu'u Ali'i Slope Inspection
46-40, 50 and 70 Kōnane Place
Kāne'ohe, Kaua'i, Hawai'i

Pursuant to your request, on February 2, 2023, JPB Engineering, Inc. (JPB) completed a visual site inspection of the slope in front of Buildings 35 through 38 at the above-referenced property. The purpose of the site visit was to determine if, since our geotechnical exploration and our last site visit of November 19, 2021, there has been significant changes to the subject slope that could affect its stability and to inspect the slope for any signs of movement.

During JPB's site visit, JPB inspected the pavement and curb edges for significant gaps or separations between the concrete and soil. JPB also checked the existing retaining walls, particularly in front of Buildings 38 and 37, for cracks or separations as well as substantial erosion near the base. Photos of these observed conditions are attached herein.

Towards the north end and bottom of the slope, recent surface sloughing was observed. This observed sloughing is likely related to the recent heavy rainfall and such occurrences could continue to develop in areas of steeper topography.

In general, it is JPB's opinion that there has been no significant change in the slope since our last visit. JPB also found no indication of substantial soil movement.

As recommended in our previous letter, the wall cracks should be exposed by removing the vines to determine their extent. A structural engineer should be consulted to determine if the cracks pose a significant concern to the stability of the wall.





JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

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




Respectfully submitted,

A handwritten signature in black ink, appearing to read 'B. Tabuso', is written over a faint, light blue circular stamp. The signature is fluid and cursive.

Brian Tabuso, P.E.
Project Engineer



Pu'u Ali'i Slope Inspection
46-40, 50 and 70 Kōnane Place
Kāne'ohe, Kaua'i, Hawai'i

<p>Location: 1</p> <p>Observed Condition:</p> <p>Surface sloughing near the north terminus of the slope.</p>	
<p>Location: 2</p> <p>Observed Condition:</p> <p>Retaining wall obscured by vines.</p>	
<p>Location: 3</p> <p>Observed Condition:</p> <p>Gap between vines and retaining wall.</p>	



JPB ENGINEERING, INC.
Structural & Geotechnical Engineering

February 21, 2023

Project No. 19235.02G

To: Pu'u Ali'i Community Association
46-058 Ali'i'ānela Place
Kāne'ohe, Hawai'i 96744

Subject: Review Letter
Pu'u Ali'i Slope Stabilization
46-40, 50 and 70 Kōnane Place
Kāne'ohe, Kaua'i, Hawai'i

Pursuant to your request, JPB Engineering, Inc. has reviewed the geotechnical reports dated September 26, 2019, and July 31, 2019. Since there has been no significant changes to the Project site conditions based on our site visit on February 2, 2023, no modifications to the reports are necessary at this time.

Services performed by JPB Engineering, Inc. reflect the level of care and skill ordinarily exercised by others in good standing and who currently offer comparable professional guidance under similar conditions. No other warranty is expressed or implied.

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

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brian Tabuso", written over a horizontal line.

Brian Tabuso, P.E.
Project Engineer



Appendix D. Scoping Letter and Responses

Name	Organization	Mailing Address or Email
Linda Speerstra, Chief	Regulatory Branch	Fort Shafter HI 96858-5440
Mary Alice Evans, Director	DBEDT - Office of Planning and Sustainable Development	PO Box 2359 Honolulu HI 96804
Sylvia Hussey, Ed.D, CEO	Office of Hawaiian Affairs	560 N. Nimitz Hwy #200 Honolulu HI 96817
David Smith, Administrator	DLNR-Division of Forestry and Wildlife (DOFAW)	1151 Punchbowl Street Honolulu HI 96813
Michael Cain, Administrator	Office of Conservation and Coastal Lands (OCCL)	PO Box 621 Honolulu HI 96809
Dean Uchida, Director	Dept. of Planning & Permitting	650 S. King Street, 7th Floor Honolulu HI 96813
Dawn Szewczyk, P.E., Director	Department of Facility Maintenance, Storm Water Management	1000 'Ulu'ōhi'a St., Ste. 215 Kapolei HI 96707
Councilmember Esther Kia'āina	City and County of Honolulu District 3	530 South King Steet, Room 202 Honolulu HI 96813
Chairperson Mo Radke	Kaneohe Neighborhood Board	moradke@gmail.com
Tamara Whitney	Alii Shores Yacht Club	P.O. Box 4307 Kaneohe HI 96744
Tamara Whitney	Alii Shores Yacht Club	46-181 Nahiku Street Kaneohe HI 96744
Winston Welch, Executive Director	Outdoor Circle	1314 S King Street, Suite 306 Honolulu HI 96814
Kaniau Meyers, Sr. Land Operations Manager	Kamehameha Schools	kameyer@ksbe.edu
David & Vicky Arden		46-061 Lilipuna Rd Kaneohe HI 96744
Cruz Sherman		46-069 Lilipuna Rd Kaneohe HI 96744
Juliana Chaize		46-071 Lilipuna Rd Kaneohe HI 96744
Florence Lee		46-077 Lilipuna Rd Kaneohe HI 96744
Betty & David Shiroma Trust Estate		46-083 Lilipuna Rd Kaneohe HI 96744
Betty & David Shiroma Trust Estate		747 Plum Ln Davis CA 95616- 3237
Marcus Rosehill		46-089 Lilipuna Rd Kaneohe HI 96744
Richard Kozuma		46-093 Lilipuna Rd Kaneohe HI 96744
Richard Kozuma		PO Box 4774 Kaneohe HI 96744
Hugh Okuda		46-099 Lilipuna Rd Kaneohe HI 96744
Charles Wong		46-107 Lilipuna Rd Kaneohe HI 96744

Name	Organization	Mailing Address or Email
Kenneth Simon		46-109 Lilipuna Rd Kaneohe HI 96744
Kenneth Simon		99-1205 Halawa Valley Street Aiea HI 96701-3291
Roy Yee		46-117 Lilipuna Rd Kaneohe HI 96744
Dominic Henriques		46-123 Lilipuna Rd Kaneohe HI 96744
Dominic Henriques		PO Box 6624 Kaneohe HI 96744
Pearl Anderson		46-129 Lilipuna Rd Kaneohe HI 96744
Peter Tingstrom		46-133 Lilipuna Rd Kaneohe HI 96744
David Swann		swann433@yahoo.com



February 25, 2022

**Subject: Scoping Request for Kōnane Slope Stabilization, Pu'u Ali'i Community Association
70 Kōnane Place, Kāne'ohe, O'ahu, Hawai'i
TMK Nos. (1) 4-6-001:002, -060, and -062**

Dear Sir or Madam,

The Pu'u Ali'i Community Association (PCA) is proposing to implement a slope stabilization project on its property, located on TMK Nos. (1) 4-6-001:002, -060, and -062, located at 70 Kōnane Place, Kāne'ohe, O'ahu, Hawai'i (see Attachment 1). The subject parcels are in the State of Hawai'i's Urban Land Use district and the City and County of Honolulu's (CCH) R-10 Residential District. The site is also located in the CCH's Special Management Area (SMA) (see Attachment 2). The proposal requires a Special Management Area Permit (SMP). Because the total value of the proposed project exceeds \$500,000, the SMP will be an SMP Major, which is granted via a resolution from the Honolulu City Council.

The purpose of the project is to stabilize the slope (henceforth, "Kōnane Slope") between PCA structures and CCH-owned Lilipuna Road in a manner that provides for a shoulder/swale on Lilipuna Road. The project design employs best management practices to reduce the potential for erosion and stormwater quality degradation that could impact Lilipuna Road if not addressed.

In early 2019, following heavy rains, the PCA property experienced increased erosion, tree roots exposure, and flooding onto Lilipuna Road. The PCA retained a qualified engineering firm in July 2019 to complete geotechnical investigations and soil borings along the Kōnane Slope. A geotechnical report prepared for the PCA concluded that the Kōnane Slope is much less stable than it was in the 1980s and that most sections of the slope do not meet the minimum desirable safety factor (based on conventional engineering practice) of 1.5 for static conditions, and that several areas of the slope were less than 1 during seismic conditions.

The results of a topographical survey show that the existing slope has moved significantly since construction of the last phase of the PCA project in the late 1980s/early 1990s. Thus, if the slope is saturated and there is a seismic event, the slope is not expected to remain in place due to the risk of slipping, which could result in a landslide with soil, trees and boulders descending onto Lilipuna Road. The geotechnical report also concluded that the "majority of the subject slope areas are unstable and susceptible to soil creep," (i.e., slowly shifting downslope with each wet/dry cycle). Another indication of the soil creep on the Kōnane Slope are the many trees that have uncorrected leans. This indicates that the soil on the Kōnane Slope continues to move, demonstrating the urgency of the slope stabilization project.

The proposed project seeks to stabilize the Kōnane Slope by grading the slope to be at less of an incline, installing soil nails, and covering the slope with a wire mesh system in combination with erosion control matting. Once the slope is stabilized, landscaping along the slope will be planted.

A conceptual drawing for the slope stabilization project is provided in Attachment 3. Because the proposed project requires an SMP Major, an Environmental Assessment (EA) is being prepared, per the Revised Ordinances of Honolulu (ROH), Chapter 25. PCA has retained Planning Solutions, Inc. (PSI) to assist them in preparing the EA and SMP Major application. In addition to the approvals and permits mentioned above, HRS 6E Historic Preservation Review, grading, building, and other permits may be required prior to proceeding.

To better address the potential concerns of agencies, organizations, and individuals that may be interested in the proposed project, PSI has prepared this information and the attached figures for your review and comment. At this time, we are seeking any input you may have regarding the project's nature, scope, potential alternatives, or any permits or approvals that may be required. In particular, we are interested in hearing about any resources or plans in the area that could be affected by the proposed project and any specific information you feel should be discussed and evaluated in the EA.

We would appreciate your response within 30 days of receipt of this letter. Please respond either by regular mail to 711 Kapi'olani Boulevard, Suite 950, Honolulu, HI 96813 or by email at makena@psi-hi.com. If you have any questions or concerns, please contact me at (808) 550-4538.

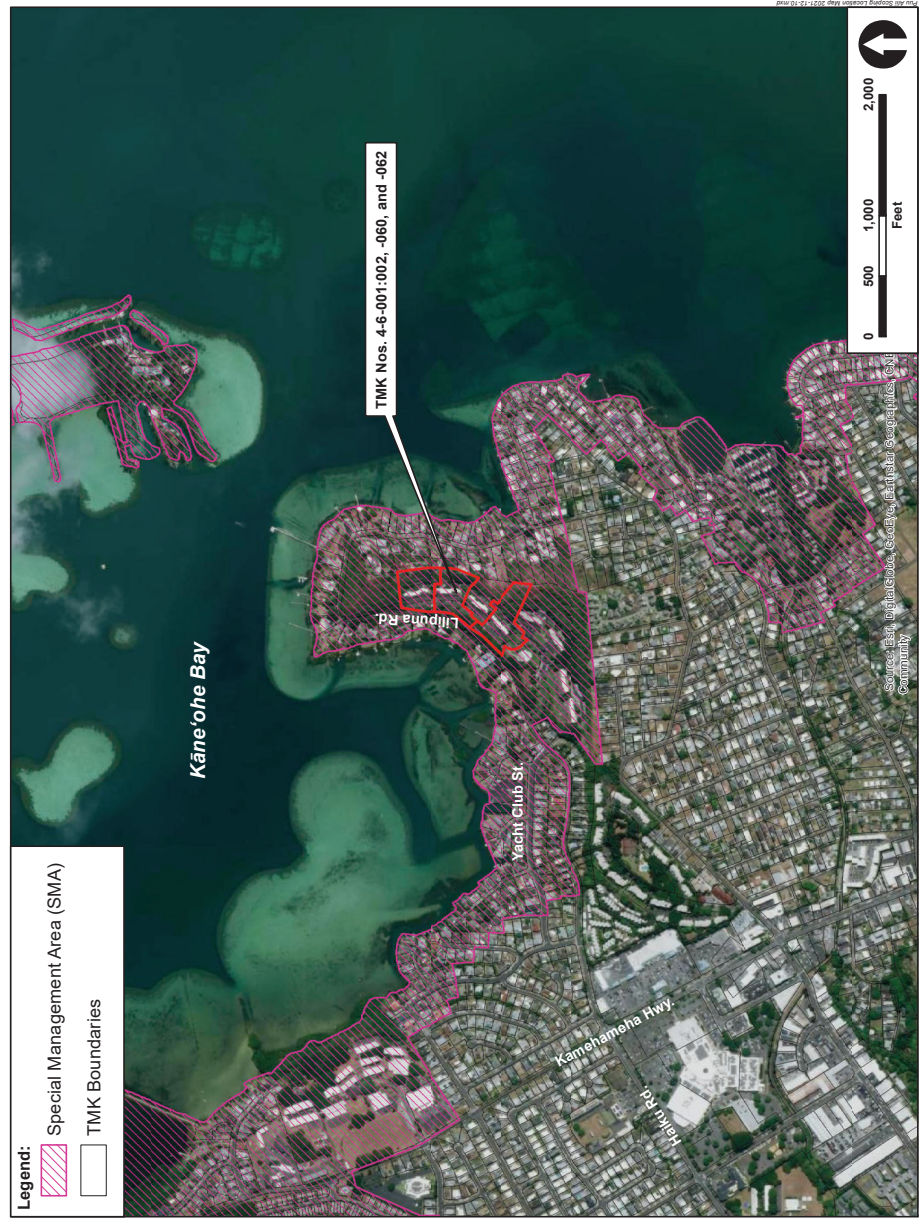
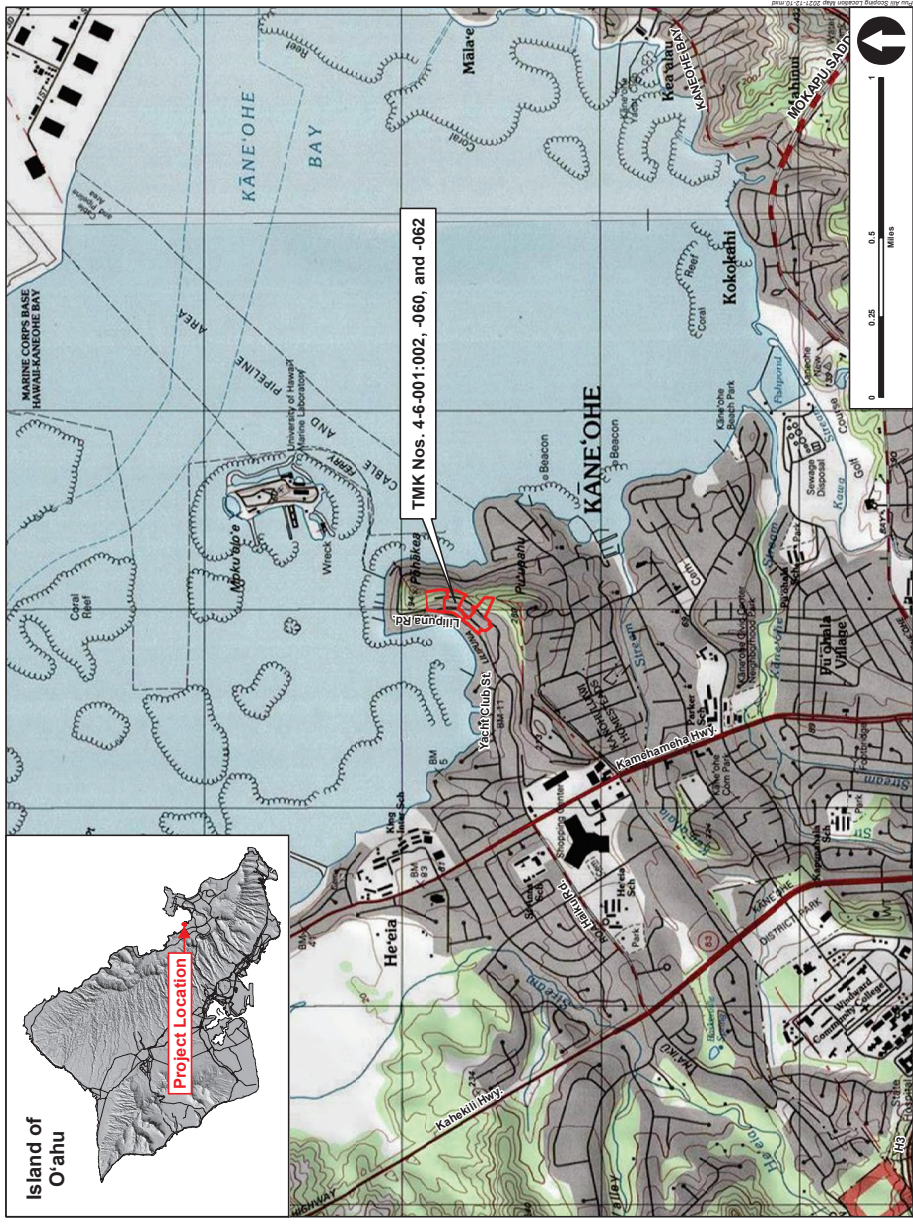
Sincerely,

Mākena White, AICP
Planner

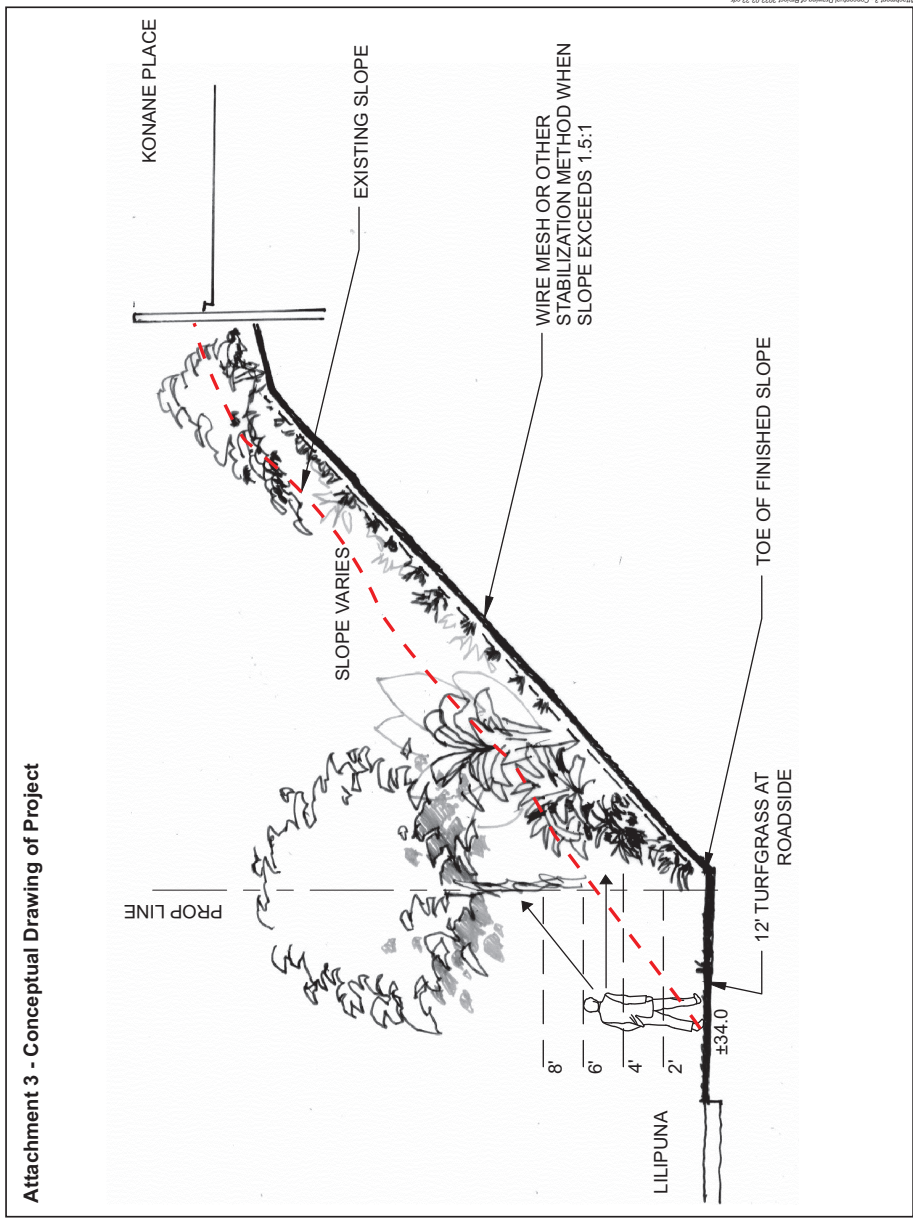
cc: Pu'u Ali'i Community Association (electronic copy only)

Attachments:

1. Location Map
2. SMA Map
3. Project Conceptual Drawing



Attachment 3 - Conceptual Drawing of Project





**STATE OF HAWAII
OFFICE OF PLANNING
& SUSTAINABLE DEVELOPMENT**

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

DAVID Y. IGE
GOVERNOR
MARY ALICE EVANS
DIRECTOR
Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: <https://planning.hawaii.gov/>

DTS202203020918NA

March 10, 2022

Coastal Zone
Management
Program

Environmental
Review Program

Land Use
Commission

Land Use Division

Special Plans
Branch

State Transit-
Oriented
Development

Statewide
Geographic
Information System

Statewide
Sustainability Branch

Mr. Makena White
Planning Solutions
711 Kapiolani Boulevard, Suite 950
Honolulu, HI 96813

Dear Mr. White:

Subject: Pre-Assessment Consultation for an Environmental Assessment –
Konane Slope Stabilization, Pu'u Ali'i Community Association at
70 Konane Place, Kaneohe Oahu, Hawaii, Tax Map Key Nos. (1)
4-6-001: 002, 060, and 062

The Office of Planning and Sustainable Development (OPSD) is in receipt of your Environmental Assessment (EA) pre-consultation request, received on March 2, 2022, for the proposed slope stabilization project located at 70 Konane Place, Kaneohe, Oahu.

According to the pre-consultation letter, the Pu'u Ali'i Community Association (PCA) is proposing to implement a slope stabilization project on its property between PCA structures and Lilipuna Road. The proposed action involves grading the slope to decrease the incline, installing soil nails, covering the slope with a wire mesh system in combination with erosion control matting, and landscaping along the slope once it is stabilized. The proposed project area is located entirely within the county designated special management area (SMA), under the Hawaii Coastal Zone Management (CZM) Law, Hawaii Revised Statutes (HRS) Chapter 205A, and a SMA Use Permit is required.

The OPSD has reviewed the subject pre-consultation request and has the following comments to offer:

1. The EA should discuss the triggers for the preparation of an EA under HRS Chapter 343 and/or Revised Ordinances of Honolulu (ROH) Chapter 25 that any proposed development requiring a SMA use permit shall be subject to an assessment by the Department of Planning and Permitting, City and County of Honolulu, in accordance with the procedural steps set forth in HRS Chapter 343.

Mr. Makena White
March 10, 2022
Page 2

2. The Hawaii CZM Law, HRS Chapter 205A, requires all state and county agencies to enforce the CZM objectives and policies. The subject EA should include an assessment with mitigation measures, if needed, as to how the proposed project conforms to each of the CZM objectives and supporting policies set forth in HRS Chapter 205A-2, as amended.
3. Given that the subject EA will serve as a supporting document for the SMA Use Permit application, the OPSD recommends that the EA specifically discuss the compliance with the requirements of SMA use under ROH Chapter 25 for the proposed slope stabilization project by consulting with the Department of Planning and Permitting, City and County of Honolulu.
4. The OPSD has developed guidance documents on stormwater runoff strategies, which offer techniques to prevent land-based pollutants and sediment from potentially affecting water resources. The OPSD recommends that the subject EA consider the following stormwater assessment guidance to mitigate stormwater runoff impacts:
 - Stormwater Impact Assessments can be used to identify and analyze information on hydrology, sensitivity of coastal and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area.
https://files.hawaii.gov/dbedt/op/czm/initiative/stomwater_impact/final_stormwater_impact_assessments_guidance.pdf

The OPSD looks forward to reviewing the Draft EA when it is available.

If you have any questions regarding this comment letter, please contact Sarah Chang of our office at (808) 587-2877, or by email at sarah.m.chang@hawaii.gov.

Mahalo,

Mary Alice Evans

Mary Alice Evans
Director



P L A N N I N G
S O L U T I O N S

October 26, 2022

Mary Alice Evans, Director
Office of Planning & Sustainable Development
State of Hawai'i
P.O. Box 2359
Honolulu, Hawai'i 96804

**Subject: Scoping Response for the Kōnane Slope Stabilization Project, Pu'u Ali'i
Community Association
70 Kōnane Place, Kāne'ohe, O'ahu, Hawai'i
TMK Nos. (1) 4-6-001:002, -060, and -062
OPSD File No.: DTS202203020918NA**

Dear Ms. Evans:

On behalf of the Pu'u Ali'i Community Association, thank you for your participation in the scoping process for the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing our letter and preparing your response.

All the technical reports that form the basis for analyses in the DEA were prepared by qualified professionals and meet all applicable standards. The content of the forthcoming DEA is intended to address the substance of your comments, and your complete scoping letter and this response will be reproduced in that report.

A copy of the DEA will be provided to you when it becomes available. In the meantime, if you have any questions or concerns regarding the DEA, please contact me at (808) 550-4538 or via email at makena@psi-hi.com.

Mahalo,

Mākena White, AICP

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

850 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-8041
DEPT. WEB SITE: www.honolulu.gov • CITY WEB SITE: www.honolulu.gov

RICK BLANGIARDI
MAYOR



March 15, 2022

2022/ELOG-438(JY)
73/PDH-4

DEAN UCHIDA
DIRECTOR

DAWN TAKEUCHI APUNA
DEPUTY DIRECTOR

EUGENE H. TAKAHASHI
DEPUTY DIRECTOR

Mr. Makena White
Planning Solutions
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawaii 96813

Dear Mr. White:

SUBJECT: Request for Pre-Consultation Comments
Konane Slope Stabilization (Project)
Planned Development - Housing Permit No. 73/PDH-4
Puu Alii/Poha Kea Point
70 Konane Place - Heeia
Tax Map Keys 4-6-001: 002, 060, and 062

This is in response to your letter, received February 28, 2022, requesting comments on the scope and content to be addressed in a Draft Environmental Assessment (DEA), as required by Chapter 343, Hawaii Revised Statutes for the Project. The following items should be addressed in the DEA:

1. Long-term Planning Policies and Objectives: The DEA should address the proposed Projects consistency with the relevant policies of the General Plan and the Koolaupoko Development Plan.
2. Onsite Structure: The DEA should describe all existing structures on the Project site including residences, pavement, fences/walls, etc. If any existing structures are proposed to remain in place, the DEA should describe what and where they are located, and whether they were lawfully established (permitted). Such structures should be in the DEA's analysis of compliance with the applicable development standards in the Land Use Ordinance (LUO; Chapter 21, Revised Ordinances of Honolulu [ROH]).

Mr. Makena White
March 15, 2022
Page 2

3. Special Management Area (SMA): The Project has been determined as "development" as defined in the SMA Ordinance, (Chapter 25, ROH). The DEA should include its analysis of the required components for an SMA Use Permit under Chapter 25, ROH. Chapter 25, ROH is available at:

www.honolulu.gov/rep/site/ocs/roh/ROH_Chapter_25_article_1_12.pdf
4. Flood Zone: The DEA should identify the Project's Flood Zone, as mapped by the Federal Emergency Management Agency, and evaluate the proposed Project's compliance with the City's Flood Hazard Areas Ordinance (Chapter 21A, ROH) which is available online at:

www.honolulu.gov/rep/site/ocs/roh/ROH_Chapter_21A_.pdf
5. Coastal Hazards: The Project site is susceptible to Sea Level Rise (SLR), tsunamis and storm surge. Recent amendments to Chapter 205A, HRS, under Act 16 (2020), reiterate the need to evaluate potential impacts related to coastal hazards and SLR. As such, the following items need to be evaluated in a site-specific Coastal Hazards Study and analyzed in both the DEA and SMA Use Permit application for the Project. This study should include analysis of potential impacts and mitigation measures associated with implementation of the Project related to, but not limited to, the following:
 - SLR – Potential impacts relating to SLR at the Project site, based on review of the State's Sea Level Rise Exposure Area Mapping Tool, of 0.5 feet in the near term and 3.2 feet of SLR by as soon as 2060.
 - Storm Surge – Potential impacts and hurricane storm surge inundation levels at the Project site during Category 1 through 4 hurricane events, based on review of the National Oceanic and Atmospheric Administration's (NOAA) National Hurricane Storm Surge Hazard Maps.
 - Potential cumulative impacts of coastal hazards and property inundation should SLR exacerbate existing flooding, coastal erosion, wave-action, or other coastal hazards that may occur at the Project site.

The DEA should also explore project alternatives, site design, project design features, Best Management Practices, and appropriate mitigation measures to reduce potential impacts related to coastal hazards to the extent possible. Relevant sources of information are available online at the following links:


Mr. Makena White
March 15, 2022
Page 3

- Vulnerability Report:
climate.hawaii.gov/wp-content/uploads/2019/02/SLR-Report_Dec2017-with-updated-disclaimer.pdf
- Hawaii Sea Level Rise Exposure Area Mapping Tool:
www.pacioos.hawaii.edu/shoreline/slr-hawaii/
- NOAA SLR Mapping Tool:
www.nhc.noaa.gov/nationalsurge/
- Honolulu Office of Climate Change, Sustainability and Resiliency Climate Ready Oahu Web Explorer:
www.resilientoahu.org/water
- Storm Surge:
[Noaa.maps.arcgis.com/apps/MapSeries/index.html?appid=d9ed7904dbec441a9c4dd7b277935fad&entry=3](https://noaa.maps.arcgis.com/apps/MapSeries/index.html?appid=d9ed7904dbec441a9c4dd7b277935fad&entry=3)

The DEA must also discuss the Project's approved Planned Development-Housing Permit, File No. 73/PDH-4 and the necessary development permits relating to the Project. We strongly recommend you contact the Kaneohe Neighborhood Board and any relevant neighborhood associations or commissions to request an opportunity to present the Project proposal at the next available Neighborhood Board meeting and association board meeting(s).

Should you have any further questions on this matter, please contact Joette Yago, of our Urban Design Branch, at (808) 768-8034 or jyago@honolulu.gov.

Very truly yours,


Eugene H. Takahashi
Deputy Director

cc: PCA (Shawn Scott)
Carlsmith Ball LLP (Onaona Thoene)



**P L A N N I N G
S O L U T I O N S**

October 26, 2022

Dawn Takeuchi Apuna, Acting Director
c/o Christi Keller
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawai'i 96813

Subject: Scoping Response for the Kōnane Slope Stabilization Project, Pu'u Ali'i Community Association
70 Kōnane Place, Kāne'ohe, O'ahu, Hawai'i
TMK Nos. (1) 4-6-001:002, -060, and -062
DPP File No.: 2022/ELOG-438(JY)73/PDH-4

Dear Ms. Takeuchi Apuna:

On behalf of the Pu'u Ali'i Community Association, thank you for your participation in the scoping process for the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing our letter and preparing your response.

All the technical reports that form the basis for analyses in the DEA were prepared by qualified professionals and meet all applicable standards. The content of the forthcoming DEA is intended to address the substance of your comments, and your complete scoping letter and this response will be reproduced in that report.

A copy of the DEA will be provided to you when it becomes available. In the meantime, if you have any questions or concerns regarding the DEA, please contact me at (808) 550-4538 or via email at makena@psi-hi.com.

Mahalo,



Makena White, AICP

DAVID Y. IGE
GOVERNOR OF HAWAII



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

April 7, 2022

Mākena White, Planner
Planning Solutions
Pacific Park Plaza, Suite 950
711 Kapi'olani Boulevard
Honolulu, Hawai'i 96813-5213

Dear Mākena White,

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your request for comments regarding the Kōnane slope stabilization project on the Pu'u Ali'i Community Association (PCA) property located at 70 Kōnane Place, Kāne'ohē, on the island of O'ahu, TMKs: (1) 4-6-001:002, 4-6-001:060, and 4-6-001:062. The proposed project consists of stabilizing the slope between PCA structures and the City and County of Honolulu-owned Lilipuna Road in a manner that provides for a shoulder/swale on Lilipuna Road. Stabilization of the slope involves grading it to be at less of an incline, installing soil nails, covering the slope with a wire mesh system in combination with erosion control matting, and landscaping along the slope once it is stabilized. The project design employs best management practices to reduce the potential for erosion and stormwater quality degradation that could impact Lilipuna Road if not addressed.

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

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

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

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOLAWE ISLAND RECREATION COMMISSION
LAND
STATE PARKS

Log no. 3550

The State endangered Hawaiian Short-eared Owl or Pueo (*Asio flammeus sandwichensis*) could also potentially occur in the vicinity of the project site. The Pueo is a crepuscular species that most active during dawn and dusk twilights. DOFAW recommends twilight pre-construction surveys by a qualified biologist prior to clearing vegetation. If Pueo nests are present, a buffer zone should be established in which no clearing occurs until nesting ceases, and DOFAW staff should be notified.

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

To prevent the spread of Rapid 'Ōhi'a Death (ROD), if 'ōhi'a trees are present and will be removed, trimmed, or potentially injured DOFAW requests that the information and guidance at the following website be reviewed and followed: <https://cms.ctahr.hawaii.edu/rod>.

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

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

Sincerely,

DAVID G. SMITH
Administrator



P L A N N I N G
S O L U T I O N S

October 26, 2022

David G. Smith, Administrator
Division of Forestry and Wildlife
Department of Land and Natural Resources
State of Hawai'i
1151 Punchbowl Street, Room 325
Honolulu, Hawai'i 96813

**Subject: Scoping Response for the Kōnane Slope Stabilization Project, Pu'u Ali'i
Community Association
70 Kōnane Place, Kāne'ohe, O'ahu, Hawai'i
TMK Nos. (1) 4-6-001:002, -060, and -062
DOFAW Log No. 3550**

Dear Mr. Smith:

On behalf of the Pu'u Ali'i Community Association, thank you for your participation in the scoping process for the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing our letter and preparing your response.

All the technical reports that form the basis for analyses in the DEA were prepared by qualified professionals and meet all applicable standards. The content of the forthcoming DEA is intended to address the substance of your comments, and your complete scoping letter and this response will be reproduced in that report.

A copy of the DEA will be provided to you when it becomes available. In the meantime, if you have any questions or concerns regarding the DEA, please contact me at (808) 550-4538 or via email at makena@psi-hi.com.

Mahalo,

Mākena White, AICP

From: [dave swann](#)
To: [Makena White](#)
Cc: [Esther Kiaajina](#); [Dean Uchida](#)
Subject: Puu Alii Konane Slope "Slope Stabilization" Letter to Lilipuna Road Homeowners
Date: Wednesday, March 2, 2022 12:28:57 PM

March 2, 2022,

Makena White
Planning Solutions
711 Kapiolani Blvd, Suite 950
Honolulu, Hawaii 96813

Dear Mr. White,

My name is David Swann and I live at Pohekea Point, which is part of the Puu Alii Condominiums. I was shown a copy of the recent letters you sent to the homeowners along Lilipuna Road regarding the SMA permit for a slope "stabilization" project that Puu Alii is seeking from the DPP. While I do not live on Lilipuna Road, I do live in building 35 which overlooks part of the Konane slope. Also, I believe I should provide you with information for the written record that you probably haven't been given access to. **This is to ensure that everyone involved in this project fully understands what is at stake here in terms of the very likely legal action that will be taken against Puu Alii and all involved entities in this deeply flawed and dishonest project.**

First of all, a bit of background. I was on the Puu Alii (PCA) board of directors from 2011 to 2019 and was landscape chair from March 2012 to November 2018. I have been involved in landscaping matters at Puu Alii regarding the Konane slope from 2005 to the present day, and I have intimate knowledge about how this project came to be. To give you a very short version of events, I watched the PCA board slowly begin to falter and cave in due to the extreme pressures coming from a small number of condo owners demanding that their views of Kaneohe Bay be restored - meaning a demand for all the trees along Lilipuna Road to be cut down so that owners living in the lower units of phase 4 of Pohakea Point could have views of Kaneohe Bay. This relentless pressure was voiced by owners coming to PCA meetings and disrupting the meetings by screaming and demanding that the PCA cut down all the "weed" trees on the Konane slope.

These angry demands and outbursts occurred at every PCA meeting beginning sometime in 2017, and during 2018, that pressure grew to the point that PCA board directors began to resign due to the hateful and sometimes even violent discourse around this issue (the police were called due to threats against PCA board directors at one point). By early 2019, the situation had reached such a low point that several directors, including the board president, resigned in a single night. In April 2019, I was voted off the PCA board, along with other directors. This was due to this one issue - view planes within phase 4 of Pohakea Point and the demand that the trees on the hillside be cut down and replaced with only ground cover (The DPP later nixed the "only groundcover" option in early 2020).

In June 2019, the PCA board approved the hiring of geotechnical firm "**JPB Engineering**" to conduct soil tests on the Konane slope hillside (this is in the June 2019 meeting minutes of the PCA board). At that time, the senior engineer at JPB Engineering was a man named **Paul Weidig**. *Mr. Weidig lives at Pohakea Point in building 38 directly above the Konane slope.* The PCA board director who chose JPB Engineering to conduct the soil tests is a man named **Nick Florez**. Mr. Florez lives in building 38 - *four floors below Mr. Weidig.*

Back in 2006-2007, I served on the Phase 4 board with Mr. Weidig, who was at that time phase 4 board president. (Puu Alii has 4 phases, phase 1,2,3, and 4). **Mr. Weidig on many occasions stated his desire to cut down all the "weed" trees along Lilipuna Road down below his condo in building 38.** I have an old email from Mr. Weidig to the then general manager Billy Kay (now deceased) that clearly states Weidig's desire to remove all the trees on the Konane slope. I informed the current PCA board

many times in writing about this conflict of interest and have been told by PCA counsel that Mr. Weidig retired in August 2019 and that the issue is therefore irrelevant. The PCA board ignores the fact that Weidig was still employed by JPB Engineering in June 2019 when JPB was hired by the Puu Alii board to conduct the soil tests on the Konane hillside. *This is a clear conflict of interest.*

In your letter, you mention the heavy rains in early 2019 that caused flooding along Lilipuna Road. The cause of this flooding and erosion was the denuding of an area of the Konane slope on Puu Alii property by the PCA board directly in front of David Ardren's home at 46-061 Lilipuna Road in late 2017. I know this because I was still the landscape chair and was involved in that action in late 2017. I expressed concern to the landscape architect Randall Monaghan and arborist Kevin Eckert that this denuding action was too extreme and that too much of the required screen of trees had been removed. They agreed and had small slender trees planted there in an attempt to re-forest the area - the trees are still there but have not grown to any degree and the area is still very barren and denuded. **This is a violation of the city ordinance that requires a buffer or screen of trees to exist all along Lilipuna Road for the benefit of the owners of single-family homes on Lilipuna Road.**

Another important fact that must be mentioned is that ever since Pohakea Point was built in 1989-1990, there has never been a single incident of a landslide on Lilipuna Road, nor has there been any incidents of erosion or flooding - until after the area of the slope in front of David Ardren's home was denuded in late 2017. Puu Alii caused the flooding and erosion that is now taking place and now Puu Alii is using that action as an excuse to completely denude the entire Konane slope. Worse, Puu Alii, in an attempt to appease the view plane-obsessed condo owners in lower phase 4, is using the premise that the Konane slope is "unstable" as an excuse to cut down all the trees on the hillside so that the issue of view planes is finally put to rest. And they are doing so by using a soil report created under the direction of a soil engineer *who actually lives at Pohakea Point directly above the Konane slope and who has gone on record of his desire to cut down all the trees on the Konane slope.*

Your letter also mentions trees on the hillside having "**uncorrected leans.**" I have many photographs of trees with the exact same "lean" all over the 52-acre Puu Alii and Pohakea Point property - some are much worse than along Lilipuna Road. Yet the PCA board only had soil tests conducted on the Konane slope and nowhere else on the property. **The board paid for a report that said exactly what the PCA board wanted it to say - that the trees on the Konane slope need to all be cut down.** I know this because I have emails and text messages from PCA board members describing the project as a way to rid Puu Alii of "weed" trees and how phase 4 was going to "get the slope project" like it was a benefit that the PCA board was bestowing upon them.

The homeowners along Lilipuna Road and the officials at the DPP have been provided all of this information along with photographs and other documents. In fact, the DPP was about to give Puu Alii their final grading permit in early July when Honolulu City Council member Esther Kia'aina requested that the DPP require that Puu Alii obtain the SMA permit - which is required by law. Ms. Kia'aina was contacted by homeowners on Lilipuna Road and myself in an attempt to have some sort of responsible oversight of this project. I have provided Ms. Kia'aina and her staff all of this information and they were surprised that the DPP almost allowed this project to go forward without the required SMA permit. We have also learned that Pohakea Point was built without getting the required SMA permit - which means that *Pohakea Point was built illegally.*

You also mention in your letter that the project will stabilize the slope **"to be at less an incline."** This is obviously *not true* - based on your drawing and the actual plans created by Ty Dempsey, the incline will be made *much steeper*. This project is an extremely risky project that is based on a false premise - that the slope is so "unstable" that it must be torn down to a depth of five feet and rebuilt. In order to proceed, the current soil report that has no credibility due to it being created under an obvious conflict of interest, must be thrown out. Then, a geotechnical firm that has no relationship with anyone at Puu Alii, must be hired to conduct soil tests in locations that include areas not on the Konane slope in order to get some type of baseline figure of stability. Without that, there is no way to know how stable or unstable the soil on the slope is compared to the soil all around it. For all anyone knows, the entire 52-acre Puu Alii property could be just as "unstable" as the Konane slope. What then? Destroy the entire site?

If these new soil tests show that the slope is in fact "unstable" to a degree where some action must be taken, **then a plan must be created that is safer and less risky to the homeowners along Lilipuna Road and to Kaneohe Bay** - such as a retaining wall, etc. If this project is allowed to go forward and the SMA permit is granted and the likely damage occurs to Kaneohe Bay and the homes along Lilipuna Road, I am prepared to join a class action lawsuit against Puu Alii and all involved entities due to the fact that I have repeatedly tried to inform and warn everyone involved of the fraudulent basis of this extremely unsafe and unsound project - a project that is really based on a desire to provide view planes for condo owners and nothing more. Even under the best of circumstances, the "swale" you mention in your letter will simply divert all of the soil runoff from the disrupted and rootless slope right into Kaneohe Bay - runoff that will occur for many years after the project is completed.

Please feel free to contact me at any time if you have any questions - I am more than happy to share all photographs, emails, texts, maps, etc. with anyone interested in determining the actual truth of this matter.

Sincerely,
David Swann
808-389-5141

From: [Marie N](#)
To: [Makena White](#)
Subject: Scoping Request for Kōnane Slope Stabilization, Pu'u Ali'i Community Association
Date: Friday, March 18, 2022 1:06:09 PM

Dear Mākena,

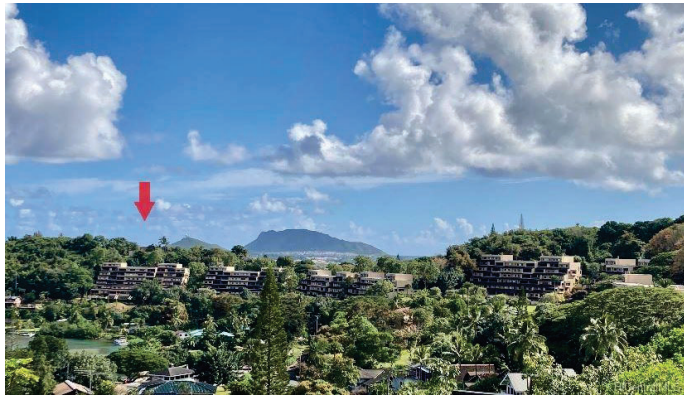
I am writing to you in reference to your letter "Scoping Request for Kōnane Slope Stabilization, Pu'u Ali'i Community Association" dated February 25, 2022.

It is important to us that the view from our new Poha Kea Point unit #3813 at 46-040 Konane Pl, Kaneohe, HI 96744, is being preserved. Planting of trees that would impair the view (also over time with growth) would result in a significant loss in value of our unit. Slope stabilization by any kind of trees should be done in such way that owners of the Poha Kea Point units are not being disadvantaged and deprived of the views they paid for. I attached a photo of the current view for your reference.

I would kindly ask that you confirm that you received this e-mail. Please call me under 808-451-9394 with any further questions.

Kind regards,

Marie-Charlotte Niedermeier



March 23, 2022

Mr. Makena White
Planning Solutions
711 Kapiolani Blvd., Suite 950
Honolulu, Hawaii 96813

Cc: Regular mail

Dear Mr. White,

This letter is in response to your letter dated February 25, 2022 regarding the soil stabilization plan for the Konane slope on the property of Pohakea/Pu'u Ali'i.

We believe this project is extremely risky and is hazardous to our properties as well as to our health, safety and well being. Furthermore, we believe this plan will cause massive additional soil runoff into Kaneohe Bay for many years to come.

We are aware that the soil report was conducted by JPB Engineering. Their senior engineer at the time that the company was hired by Pu'u Ali'i currently lives at Pohakea Point right above the Konane slope. We are also aware that this individual has wanted all the trees on the Konane slope to be removed for many years. This is a conflict of interest and we believe it is plausible that this conflict of interest could have had an effect on the soil report conclusions.

Therefore, the soil report has no credibility as an unbiased document and we believe that if Pu'u Ali'i wants to pursue this matter further, they should hire a geotechnical company that has no connection to Pu'u Ali'i to conduct new soil tests. The new soil tests should include other areas of Pu'u Ali'i property so that a determination can be made to see how unstable the soil on Konane slope is, compared to the areas around it.

If the new soil tests show that the soil on the Konane slope is unacceptably unstable compared to other steep hillsides within Pu'u Ali'i in all four phases, then safer alternatives should be pursued, such as building a retaining wall or replanting many more mature trees on the slope in order to restore the strength the root system on the hillside. Under no circumstances should the current plan of grading and grubbing the slope be considered or allowed to go forward. Until proven otherwise, we view this soil stabilization plan to be a poorly disguised attempt to provide views of Kaneohe Bay to certain condo owners within Pohakea Point, at the expense of the health of Kaneohe Bay and Lilipuna homeowners.

Sincerely,

Ms. Vicky-Lynn Chun Fat-Ardren	46-061 Lilipuna Road, Kaneohe, HI 96744	808-620-8244
Mr. David Ardren	46-061 Lilipuna Road Kaneohe, HI 96744	808-277-7813
Ms. Katylynn Chun Fat-Ardren	46-061 Lilipuna Road, Kaneohe 96744	808-277-8092
Mr. Kenneth Simon	46-109 Lilipuna Road Kaneohe, HI 96744	
Mr. Roy Yee	46-117 Lilipuna Road, Kaneohe, HI 96744	808-927-2598
Mrs. Juliana Chaize	46-071 Lilipuna Road, Kaneohe, HI 96744	808-520-5327
Mr. Nicolas Chaize	46-071 Lilipuna Road, Kaneohe, HI 96744	808-620-0611
Ms. Ilima Chaize	46-071 Lilipuna Road, Kaneohe, HI 96744	808-683-9010
Betty T. Shiroma Trust	46-083 Lilipuna Road, Kaneohe, HI 96744	
Ms. Estelle Shiroma	46-083 Lilipuna Road, Kaneohe, HI 96744	530-848-9361
Mr. Jonathan Shiroma	46-083 Lilipuna Road, Kaneohe, HI 96744	
Ms. Sara Shiroma	46-083 Lilipuna Road, Kaneohe, HI 96744	
Mr. Hugh Okuda	46-099 Lilipuna Road, Kaneohe, HI 96744	808-375-8757

Ms. Barbara Okuda	46-099 Lilipuna Road, Kaneohe, HI 96744	808-375-8757
Mr. Sherman Cruz	46-069 Lilipuna Road, Kaneohe, HI 96744	248-760-4276
Mr. Marcus Rosehill	46-089 Lilipuna Road, Kaneohe, HI 96744	808-342-2089
Russell Martin	46-099 Lilipuna Road #2, Kaneohe, HI 96744	808-225-5356
Jim Cook	46-045 Lilipuna Road, Kaneohe, HI 96744	808-247-4525
Carol Cook	46-045 Lilipuna Road, Kaneohe, HI 96744	808-247-4525
Otome Meyers	46-044 Lilipuna Road, Kaneohe, H 96744	808-255-5249
David Meyers	46-044 Lilipuna Road, Kaneohe, HI 96744	808-683-1770
Randall Meyers	46-044 Lilipuna Road, Kaneohe, HI 96744	808-348-1758
Ross Meyers	46-044 Lilipuna Road, Kaneohe, HI 96744	808-255-5249
Sonya Torweihe	46-044 Lilipuna Road, Kaneohe, HI 96744	

Cc: Via regular mail

Roy and Andre Yee

*46-117 Lilipuna Road
Kaneohe, HI 96744
Phone: (808) 235-0209*

March 25, 2022

Mr. Makena White
Planning Solutions
711 Kapiolani Blvd, Suite 950
Honolulu, HI 96813

Subject: Scoping Request for Koname Slope Stabilization, Puu Alii Community Association

Dear Mr. White,

We do not support the extensive grubbing and grading of the land for the reasons outlined in our letter.

We have lived at 46-117 Lilipuna Road since 1976, over 46 years, and during this period the hillside has gone from a totally forested hillside to the whole development of Pohakea and Puu Alii. Our home is just below the Pohakea Recreational Center so we are just outside of the proposed project area.

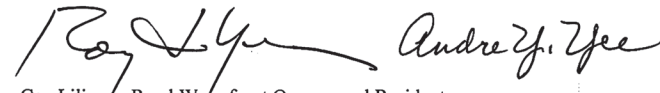
However, we did agree to attach our name to the letter dated 3/23/22 submitted by the waterfront property owners in the direct impact area. We want to add our historic perspective and suggestions.

During heavy rains over the years we have experienced the bay fronting Lilipuna Road turn an ugly brown and silting of the reefs. Our property is at one of the high points of Lilipuna so the runoff was funneled on either side of us to the lowest point of the proposed project area and the opposite direction to the south.

1. The massive clearing and grubbing of the slope would result in huge mud runoff during any heavy rainfall and further contaminate our beautiful bay. Planting of trees and other shrubbery would take a very long time to stabilize the slope, if according to the plan, would be very steep.
2. In addition, it would subject the foundations of the Pohakea buildings above not to mention the roadway and parking to become very unstable. The current residents and property owners in Pohakea should be concerned how the clearing and grubbing would affect the stability of their properties on the resultant steep slope.
3. Further geotechnical study is necessary to ensure the buildings and road foundations above are not compromised in anyway.

4. To that end, more planting of trees and shrubbery between the existing growth now would be in order.
5. A permanent retaining wall must be considered in any event to prevent any soil and muddy run off to the street and properties below.
6. In addition, the extension of an asphalt walkway and curbing from around 46-109 Lilipuna Road to the NE end of the Pohakea property would provide safety for the residents of Pohakea that frequently exercise along the Lilipuna Road.
7. Maintenance of the steep slope would not be easy and costly, therefore more likely to be postponed and become overgrown and unsightly along Lilipuna Road.
8. There is no storm drain system that extends from the entrance to Pohakea to the end of the property on Lilipuna, so all the runoff will naturally go into the Lilipuna waterfront homes.
9. If improving of the view planes for the Pohakea units is one of the goals, the topping of the mature tall trees would be a more cost-effective solution that must be considered.

Very Truly Yours,



Cc: Lilipuna Road Waterfront Owners and Residents
Esther Kiaaina, Dean Uchida, Joette Yago, Rep Lisa Kitagawa, Dave Swann



P L A N N I N G
S O L U T I O N S

October 26, 2022

**Subject: Scoping Response for the Kōnane Slope Stabilization Project, Pu'u Ali'i
Community Association
70 Kōnane Place, Kāne'ohe, O'ahu, Hawai'i
TMK Nos. (1) 4-6-001:002, -060, and -062**

Dear Scoping Participant:

On behalf of the Pu'u Ali'i Community Association, thank you for your participation in the scoping process for the *Draft Environmental Assessment for the Kōnane Slope Stabilization Project* (DEA). We appreciate the time you spent reviewing our letter and preparing your response.

All the technical reports that form the basis for analyses in the DEA were prepared by qualified professionals and meet all applicable standards. The content of the forthcoming DEA is intended to address the substance of your comments, and your complete scoping letter and this response will be reproduced in that report.

A copy of the DEA will be provided to you when it becomes available. In the meantime, if you have any questions or concerns regarding the DEA, please contact me at (808) 550-4538 or via email at makena@psi-hi.com.

Mahalo,

Mākena White, AICP

Appendix E. Permit File No. 73/PDH-4

A BILL FOR AN ORDINANCE TO DESIGNATE A PORTION OF R-3 RESIDENTIAL AND A-2 APARTMENT DISTRICTS SITUATED AT KANEOHE, OAHU, HAWAII, TO PLANNED DEVELOPMENT-HOUSING DISTRICT NO. R-45, KNOWN AS "LILIPUNA HILLSIDE."

BE IT ORDAINED by the People of the City and County of Honolulu:

SECTION I. A portion of R-3 Residential and A-2 Apartment Districts, situated at Kaneohe, Oahu, Hawaii, is hereby designated as Planned Development-Housing District No. R-45. The boundaries and area of said Planned Development-Housing District No. R-45 shall be described as follows:

Being portions of Royal Patent 1420, Land Commission Award 10204, Apana 1 to Mahi, Royal Patent 1559, Land Commission Award 10743 Apana 1 to Palaau, Lot 1425 of Land Court Application 1100 and the whole of Lot 1179 Land Court Application 1100 situated approximately 450.00 feet off the makai side of Kamehameha Highway between Lilipuna Roads at Heeia, Koolaupoko, Oahu, Hawaii, and covered by Tax Map Key 4-6-01: 2 and 4-6-02: 1, 8, 31 and portion of 3.

Beginning at the northwest corner of this parcel of land, same being on the south side of Lilipuna Road, the coordinates of said point of beginning referred to Government Survey Triangulation Station "HEEIA" being 8,110.83 feet south and 6,795.15 feet east and running by azimuths measured clockwise from true South:

1. 258° 27' 132.66 feet along the South side of Lilipuna Road;

Thence on a curve to the right with a radius of 970.00 feet, the chord azimuth and distance being:

2. 259° 45' 11" 44.12 feet;
3. 261° 06' 53" 1.98 feet along the South side of Lilipuna Road;
4. 263° 55' 30" 124.40 feet along same;
5. 178° 31' 2.95 feet along same;

Thence on a curve to the right with a radius of 295.00 feet, the chord azimuth and distance being:

6. 261° 06' 47" 96.91 feet;
7. 270° 34' 272.15 feet along the South side of Lilipuna Road;
8. 354° 00' 120.03 feet along Lot 1425 of Land Court Application 1100;
9. 262° 41' 30" 335.31 feet along remainders of Lots 1425, 1424, 1423 and 1422 of Land Court Application 1100 (Map 122);

10. 278° 51' 218.67 feet along Lots 1421, 1420, 1419 and 1418 of Land Court Application 1100 (Map 122);
11. 272° 15' 451.67 feet along Lots 1417, 1416, 1415, 1414, 1413, 1412 and 1411 of Land Court Application 1100 (Map 122);
12. 235° 00' 297.95 feet along Lots 1411, 1410, 1409 and 1408 of Land Court Application 1100 (Map 122);
13. 190° 11' 114.96 feet along Lot 1407 of Land Court Application 1100 (Map 122);
14. 135° 30' 13.46 feet along Lot 1407 of Land Court Application 1100 (Map 122);
15. 222° 02' 30" 93.19 feet along Lot 1406 of Land Court Application 1100 (Map 122);
16. 240° 00' 74.50 feet along Lot 1405 of Land Court Application 1100 (Map 122);
17. 153° 50' 126.25 feet along Lot 1405 of Land Court Application 1100 (Map 122) to the Southeasterly side of Lilipuna Road;

Thence along the Southeasterly side of Lilipuna Road for the next thirty-two (32) courses, the direct azimuths and distances being:

18. 246° 24' 59.91 feet;
19. 246° 45' 116.42 feet;
20. 258° 22' 96.53 feet;
21. 256° 21' 130.77 feet;
22. 242° 45' 66.32 feet;
23. 230° 28' 68.39 feet;
24. 227° 30' 106.65 feet;
25. 224° 53' 229.89 feet;
26. 213° 31' 115.54 feet;
27. 222° 13' 109.06 feet;
28. 216° 11' 76.25 feet;
29. 190° 09' 83.60 feet;
30. 183° 00' 131.02 feet;
31. 186° 53' 107.71 feet;
32. 189° 32' 98.08 feet;

33.	190°	56'	112.13 feet;
34.	155°	55'	107.98 feet;
35.	173°	05'	106.74 feet;
36.	165°	42'	102.46 feet;
37.	166°	02'	40.50 feet;
38.	192°	26'	20.27 feet;
39.	221°	27'	11.51 feet;
40.	244°	27'	22.29 feet;
41.	247°	22'	29.42 feet;
42.	262°	30'	29.25 feet;
43.	278°	00'	104.31 feet;
44.	278°	58'	99.15 feet;
45.	280°	25'	100.15 feet;
46.	278°	31'	99.68 feet;
47.	281°	20'	72.34 feet;
48.	286°	08'	52.03 feet;
49.	304°	00'	48.17 feet;

Thence following along the Westerly side of Land Court Application 1002 for the next twelve (12) courses, the direct azimuths and distances being:

50.	59°	20'	335.24 feet;
51.	358°	04'	92.10 feet;
52.	353°	40'	160.00 feet;
53.	351°	40'	170.00 feet;
54.	2°	40'	210.00 feet;
55.	8°	10'	50.00 feet;
56.	23°	30'	185.00 feet;
57.	7°	10'	480.00 feet;
58.	354°	50'	130.00 feet;
59.	19°	30'	196.00 feet;
60.	5°	30'	110.00 feet;
61.	85°	13'	1,422.00 feet;

62. 44° 51' 677.82 feet along the Northwesterly side of Lilipuna Road;
63. 135° 00' 133.28 feet along Lot 1176-A-1 of Land Court Application 1100 (Map 88);
64. 44° 51' 525.21 feet along Lots 1176-A-1 to 1176-A-7 inclusive of Land Court Application 1100 (Map 88);
65. 135° 00' 56.72 feet along Lot 1177 of Land Court Application 1100 (Map 75);
66. 57° 04' 103.96 feet along Lot 1177 of Land Court Application 1100 (Map 75);
67. 81° 30' 80.00 feet along Lot 1178 of Land Court Application 1100 (Map 75);

Thence on a curve to the right with a radius of 630.00 feet, the chord azimuth and distance being:

68. 5° 16' 38" 43.38 feet;
69. 6° 15' 175.60 feet along Lot 1178 of Land Court Application 1100;

Thence on a curve to the left with a radius of 170.00 feet, the chord azimuth and distance being:

70. 352° 04' 17" 83.28 feet;

Still on a curve to the left with a radius of 30.00 feet, the chord azimuth and distance being:

71. 281° 22' 17" 50.05 feet;
72. 314° 51' 15.00 feet along Lot 1178 of Land Court Application 1100;
73. 44° 51' 98.96 feet along the North side of Lilipuna Road;
74. 134° 51' 180.51 feet along Lot H-6-D of Land Court Application 1100;
75. 153° 34' 425.76 feet along Lot H-6-B of Land Court Application 1100;
76. 243° 34' 206.09 feet along remainders of Royal Patent 1559, Land Commission Award 10743, Apana 1 to Palaau and Lot 1425 of Land Court Application 1100;
77. 151° 45' 787.19 feet along remainders of Royal Patent 1559, Land Commission Award 10743, Apana 1 to Palaau, Royal Patent 1420, Land Commission Award 10204 Apana 1 to Mahi, Lot 1425 of Land Court Application 1100 and along Lot 1180 of Land Court Application 1100 to the point of beginning and containing an area of 54.52 acres more or less,

as shown on the map attached hereto, marked Exhibit "A" and by reference made a part hereof.

SECTION II. This ordinance shall incorporate the Detailed Land Use/Site Vicinity Plan marked Exhibit "B", Existing Site Plan marked Exhibit "C", Slope Analysis Plan marked Exhibit "D", Proposed Site Plan marked Exhibit "E", Grading Plan and Storm Drain Utility Master Plan marked Exhibit "F", Sewer and Water Utility Master Plan marked Exhibit "G", Floor Plans and Elevations marked Exhibits "H" and "I", Profiles Plan marked Exhibit "J", Landscaping Plan marked Exhibit "K", Phasing Plan marked Exhibit "L", Calculations marked Exhibit "M", applicant's Proposed Estimated Unit Price marked Exhibit "N", and the February 14, 1974 letter of agreement between McCormack Land Company and the Department of Education regarding provision of an off-site pedestrian walkway by the applicant marked Exhibit "O", on file with the Department of Land Utilization and by reference made a part hereof, subject to the following conditions:

1. Preliminary Plans

The applicant shall obtain the approval of the Director of Land Utilization on preliminary site and grading plans based on an accurate topographical survey of site, prior to development of the final grading and building plans.

2. Road Right-of-Way

An area of the site fronting Lilipuna Road to the furthest access points from Kamehameha Highway shall be dedicated, as appropriate for each phase, to the City to create a 56-foot right-of-way for Lilipuna Road in accordance with the Department of Public Works' and Department of Transportation Services' requirements. Any work of a particular phase proposed for dedication to the City and County shall be bonded with the City according to the Subdivision Rules and Regulations prior to occupancy of that phase. Interior roads width shall be no less than 24 feet.

3. Sewers

Heeia sewage pump station shall be expanded by the applicant according to the Department of Public Works' requirements prior to the occupancy of the units in Phase 3, Exhibit "L".

4. Fire Hydrants

Fire hydrants shall be located and spaced in adherence to the Board of Water Supply's rules and regulations.

5. Soils, Grading, and Drainage

Grading and building placement for each phase shall comply with the State Water Quality Standards and recommendations of the U.S. Soil Conservation Service and a soils engineer, and be approved by the Department of Public Works and the Director of Land Utilization. The applicant shall provide, for each phase, any and all safeguards and improvements as may be recommended by the U.S. Soils Conservation Service for approval by the Department of Health, the Department of Public Works, and the Director of Land Utilization, including but not limited to temporary erosion control measures, revegetation of graded areas and installation of temporary diversion ditches.

The applicant shall undertake a soils, erosion and drainage study to determine and resolve any potential danger to affected areas, including but not limited to properties on makai side of Lilipuna Road opposite the project site, due to drainage from the project site for review and approval by the Department of Public Works. The study shall (a) evaluate the existing drainage situation; (b) determine the increased runoff generated by the project and the resulting impact on the drainage aggravation to the affected areas; and (c) propose measures to provide drainage protection to resolve the problem.

The applicant shall also provide proper erosion and sediment control measures to retain and control the increase in storm runoff which is generated by development of each phase. The design and plan for such measures shall be approved by the Department of Health and Department of Public Works prior to the issuance of a grading permit for each phase of the project.

6. Detail Documents

The applicant shall obtain, for each phase of the project, the approval of the Director of Land Utilization and appropriate governmental agencies on final detailed documents covering all building and site improvements, including but not limited to parking, grading, drainage, sewers, water and electric utilities, easements, walkways, roadways, street and area lighting, fire hydrants, refuse storage and collection areas, fences, guardrails, screens, signs, landscaping and recreational facilities.

The detailed plans shall clearly indicate that the makai views of the existing residences above the site will in no way be obstructed due to the project.

The landscaping plan, for each phase of the project, shall include information on existing plant material to be retained, the type and size of the proposed plants, especially those within and around parking areas, all retaining walls and pavement materials, and an irrigation system to support the landscaping.

All buildings for each phase shall be staked and all trees for removal shall be identified for approval by the Department of Land Utilization. This approval shall be obtained prior to issuance of a grading permit for each phase of the project.

The applicant shall obtain approval of the Department of Land Utilization and all appropriate agencies on the conceptual design and alignment of an off-site pedestrian walkway linking Kahāhipa Street and Haiku Road in the vicinity of Alaloa Street prior to the issuance of a grading permit. If required by the Department of Education, pursuant to the provision of Exhibit "O", the applicant shall obtain approval of the final plans by the Department of Land Utilization and appropriate agencies on, and complete construction of the walkway.

7. Refuse Collection

The applicant shall provide refuse storage and collection areas for all portions of the project in accordance with the requirements of the Department of Public Works, Refuse Division. Such areas shall contain facilities for container scrubdown.

8. Flexibility

The architect shall be provided a reasonable degree of flexibility in the preparation of detailed engineering and architectural plans for this project. As work progresses on these drawings, it may be found that it would be advantageous to shift buildings slightly in order to preserve a particularly desirable element of the landscaping, improve cross ventilation, or to accommodate certain unforeseen site conditions.

In addition, as detailed architectural plans are developed, it may be found that certain building configurations may need to be altered slightly for the above reasons.

The project may be subdivided as authorized and approved by the Director of Land Utilization. In no case, however, shall the above alterations or subdivision harm the general intent of the design concept of the project, nor will there be any increase in the density (545 units) or increase in the floor area, 625,000 square feet for proposed dwelling units and recreation buildings or decrease in the recreational facilities. The design concept of the project as indicated on the submitted plans shall be maintained. "spec. 1"

Any major modifications to the conditions stated herein shall be subject to approval by the City Council. The Director of Land Utilization may approve the modifications which in his determination are minor in nature.

9. Street Naming

Street names shall be submitted to the Department of Land Utilization for transmittal to and approval by the City Council.

10. Utilities

All utilities shall be underground within the project site and shall include:

- a. Installation of a complete water system to meet the Board of Water Supply's specifications.
- b. Construction of necessary sewer lines and provisions of sewer easement to meet the Department of Public Works' requirements.

11. Transfer of Rights

Any assignment and/or transfer of any substantial interest in the land parcel designated as a Planned Development District by ordinance shall be subject to the approval and consent of the City Council, (except for such assignment and/or transfer to any mortgagee or to any purchaser upon foreclosure). Such approval and consent shall not be unreasonably withheld provided that the assignee and/or transferee agrees in writing to comply with all the conditions imposed herein.

This requirement of obtaining City Council's approval and consent shall become null and void, as to a particular phase of the project, upon the applicant/developer satisfying the following conditions for each such phase:

- a. Completion of all construction in each phase, according to approved plans as well as sale of housing units within that phase of the Planned Development project; and
- b. Compliance with all the conditions and restrictions imposed by this ordinance as to the particular phase.

12. Maintenance of Common Areas, Utilities, and Structures

Legal documents shall be drawn up for each phase, inclusive of previous phases, to ensure perpetual maintenance of landscaping and plants, common grounds and buildings, including common walls and repair and maintenance of all units and utilities by the designated management for the completed phases of the project, similar to that specified in the Comprehensive Zoning Code, Section 21-280(i)(5), Special Permit Section for Cluster Development.

13. Covenants

The developer shall be required to incorporate all of the conditions set forth herein as part of the restrictive covenants running with the land and shall be referred to in any conveyance document to any future owners.

The homebuyers, through covenants, shall be advised that the site is within the U.S. Marine Corps "Normally acceptable" to "Normally unacceptable" aircraft noise area for less than 5% of the time during Kona wind conditions.

14. Recordation

The applicant/developer of the property encompassed by this Planned Development shall be required to file with the Bureau of Conveyances or the Assistant Registrar of the Land Court of the State of Hawaii, a declaration of the above-mentioned restrictive conditions for each phase of the development.

A certified copy of the document as issued by the Bureau of Conveyances or Assistant Registrar shall be presented to the Department of Land Utilization as evidence of recordation, prior to occupancy of any building.

15. Time Limit

Failure to secure building permits, in accordance with the applicant's proposed construction phasing plan (Exhibit "L"), within one year of adoption may constitute grounds for City Council to repeal this ordinance. The City Council may grant a time extension provided that the applicant makes a timely request in writing and submits acceptable reasons which justify the time extension.

16. Sales

The developer shall submit the sales agreement to the Director of Land Utilization for his review and approval in consultation with the Corporation Counsel as to content and form.

17. Violations

When a report is made to the City Council by the Director of Land Utilization of alleged violations of any of the conditions imposed herein, the Council may review said violations and upon its findings that the applicant has not complied with any of said conditions, the Council may authorize the Director of Land Utilization to take any lawful action necessary (1) to prevent further noncompliance or (2) to compel compliance with the conditions imposed herein.

18. Future Minor Alterations

The project homeowners association shall:

- a. Receive and compile all requests for future alterations and improvements by individual homeowners.
- b. Secure services of an architect and/or landscape architect to prepare, in consultation with the Department of Land Utilization, a design package with alternative plan options for the requested alterations.
- c. Review the proposal with the association membership for its comments and approval.
- d. Transmit the design package to the Department of Land Utilization for review and evaluation.

After approval of the plans by the Department of Land Utilization and appropriate agencies, copies of the plans shall be filed with the Department of Land Utilization, Building Department and the homeowners association. All future applicants for home improvement alterations shall then follow the design package requirements for construction.

SECTION III. This ordinance shall take effect upon its approval.

INTRODUCED BY:

Rudy Pucasso

_____ Councilmen

DATE OF INTRODUCTION:

DECEMBER 10, 1974

Honolulu, Hawaii

APPROVED AS TO FORM AND LEGALITY:

Joseph T. Cole
Deputy Corporation Counsel

Approved this 3rd day of March, 1975.

Frank F. Fasi
FRANK F. FASI, Mayor
City and County of Honolulu

Appendix F. Kāne‘ohe Neighborhood Board No. 30, 1/19/2023 Meeting



January 5, 2023

Regarding: Notification of Presentation to Neighborhood Board No. 30 Regarding the Pu‘u Ali‘i Community Association’s Kōnane Slope Stabilization Project at 46-40, 46-50, and 46-70 Kōnane Place, Kāne‘ohe, O‘ahu, Hawai‘i (TMK Nos. (1) 4-6-001:002, 060, and 062)

Dear Recipient,

The Pu‘u Ali‘i Community Association (PCA) is preparing to conduct the Kōnane Slope Stabilization Project at the above referenced location in Kāne‘ohe, O‘ahu and has requested the assistance of Planning Solutions, Inc. (PSI). As part of the planning for the proposed project, the PCA has prepared the *Draft Environmental Assessment and Anticipated Finding of No Significant Impacts for the Kōnane Slope Stabilization Project* (DEA-AFONSI). A notice of availability for the DEA-AFONSI was published in the November 23, 2022, edition of Environmental Review Program’s bi-monthly bulletin, *The Environmental Notice*. You may download a copy of the DEA-AFONSI with this link:

https://files.hawaii.gov/dbedt/erp/Other_TEN_Publications/2022-11-23-OA-Chapter-25-DEA-Konane-Slope-Stabilization-Project.pdf

Pursuant to Ordinance 21-27, a representative of the PCA will make a brief presentation of the proposed project at the upcoming meeting of the Kāne‘ohe Neighborhood Board No. 30 on Thursday, January 19, 2023, at 7:00 p.m. HST. PSI is providing a written notice of this upcoming presentation to the owners of all adjoining properties to satisfy the ordinance, as well as other owners in the vicinity of the project. Due to the ongoing COVID-19 pandemic, the meeting will be held online via Zoom. You can download the Zoom application here for free: <https://zoom.us/download>. Please refer to the Neighborhood Board website for the agenda, at this link, and select the link for “Kāne‘ohe”:

<https://www.honolulu.gov/cms-nco-menu/site-nco-sitearticles/865-site-nco-agenda-minutes-list-cat/20543-neighborhood-boards-agenda-minutes-listing.html?nb=30&year=2022>

The agenda is anticipated to be posted six (6) calendar days prior to the meeting date. Once the January 2023 agenda is posted, the video conferencing information and Zoom link for the meeting should be in that agenda for you to access the meeting should you wish to. If, in the meantime, you have any questions or concerns about this letter or the proposed project, please email me at makena@psi-hi.com or call (808) 550-4538.

Sincerely,

Mākena White, AICP

Attachment 1 - Notification Recipients

TMK	First Name	Last Name	Title	Address	City	State	Zip
45045040	TIMOTHY W/LISA ANN K L RESIDENT	FOXEN TR	FEE OWNER	1603 IWI WAY 45-075 LILIPUNA RD	HONOLULU	HI	96816 96744
45001066	BERNADINE M RESIDENT	CANITE TR	FEE OWNER	361-B OLOMANA ST 45-037 LILIPUNA RD	KAILUA	HI	96734 96744
45001029	KWOCK T RESIDENT	YEE 1971 TR	FEE OWNER	900 FORT STREET MALL STE 1570 45-026 LILIPUNA RD	HONOLULU	HI	96813 96744
45001065	GLENN H MIYASATO TR	SHELLEY Y MIYASATO TR	FEE OWNER	45-041 LILIPUNA RD	KANEOHE	HI	96744
45001021	KAREN M MATSUKAWA	RONALD Y MATSUKAWA	FEE OWNER	45-044 LILIPUNA RD	KANEOHE	HI	96744
45001023	HELEN H RESIDENT	NIP TR	FEE OWNER	645 HAKAKA ST 45-040 LILIPUNA RD	HONOLULU	HI	96816 96744
45045039	RESIDENT CASEY G JOHNSON FISCKO FAMILY TR	LILLIAN DANG	FEE OWNER FEE OWNER	45-075B LILIPUNA RD 45-075 LILIPUNA RD APT A 1855 WILLOW ST	KANEOHE SAN DIEGO	HI CA	96744 96744 92106
46001019	DOMINIC HENRIQUES TR	MIKI-LEE HENRIQUES TR	FEE OWNER	46-123 LILIPUNA RD	KANEOHE	HI	96744
45001060	FROEBEL A GARCIA RESIDENT	MERCEDES G GARCIA	FEE OWNER	98-630 MOANALUA LOOP APT 128 45-049 LILIPUNA RD	AIEA	HI	96701 96744
45001047	MARLA J	BERRY TR	FEE OWNER	45-047 LILIPUNA RD	KANEOHE	HI	96744
46001024	BETTY T RESIDENT ESTELLE	SHIROMA TR, C/O ESTELLE SHIROMA SHIROMA	FEE OWNER	747 PLUM LANE 46-083 LILIPUNA RD 747 PLUM LANE	DAVIS	CA	95616 96744 95616
46001025	FLORENCE Y J	LEE TRUST	FEE OWNER	46-077 LILIPUNA RD	KANEOHE	HI	96744
46001023	MARCUS F ROSEHILL TR	MARCUS D E ROSEHILL, VIOLET-MARIE M ROSEHILL TR	FEE OWNER	46-089 LILIPUNA RD	KANEOHE	HI	96744
45001027	MARK B & MARY T	HECKMAN TRUST	LESSEE	45-028 LILIPUNA RD	KANEOHE	HI	96744
45001068	NORIHISA	SHIMOJIMA TR	FEE OWNER	45-035 LILIPUNA RD	KANEOHE	HI	96744
45001061	JOSE & SALLY M	LEONIDA	FEE OWNER	45-045 LILIPUNA RD	KANEOHE	HI	96744
45001018	TERUKO	NOTO TR	FEE OWNER	45-052 LILIPUNA RD	KANEOHE	HI	96744
46001034	BETTY T	SHIROMA TRUST, C/O ESTELLE SHIROMA	FEE OWNER	46-083 LILIPUNA RD	KANEOHE	HI	96744
45001052	ROBERT K & JENNIFER A	WHITTON	FEE OWNER	45-017 LILIPUNA RD	KANEOHE	HI	96744
45001017	DORIS S RESIDENT	YOSHIOKA TR, MILES M YOSHIOKA TRUSTEE	FEE OWNER	1206 KAINUI DR 45-054 LILIPUNA RD	KAILUA	HI	96734 96744
46001029	OTOME M	MYERS TRUST	FEE OWNER	46-055 LILIPUNA RD	KANEOHE	HI	96744
46001022	RICHARD T RICHARD T. KOZUMA	KOZUMA or RESIDENT	FEE OWNER	46-344 HOLOKUKU PL 46-093 LILIPUNA RD	KANEOHE	HI	96744 96744
45001024	RICHARD L & JACQUELINE P RESIDENT	FORDE, C/O MR. & MRS. RICHARD L FORDE	FEE OWNER	11780 CRYSTAL VIEW LANE 45-036 LILIPUNA RD	LONGMONT	CO	80504 96744
45045042	GARY M & DIANE E	HIRATA TRUST	FEE OWNER	45-063 LILIPUNA RD	KANEOHE	HI	96744
45001045	HSBC BANK USA NATIONAL ASSOC C/O PNC BANK SANJEEV K RESIDENT	TANEJA	FEE OWNER FEE OWNER	3232 NEWARK DR PO BOX 801243 45-055 LILIPUNA RD	MIAMISBURG DALLAS	OH TX	45342 75380 96744
46001064	CHARLES T Y	KAMEHAMEHA SCHOOLS WONG TR	FEE OWNER	PO BOX 3466 46-107 LILIPUNA RD	HONOLULU	HI	96801 96744
45001044	PHYLLIS L	ISHIZAKI TRUST, WAYNE S ISHIZAKI TRUST	FEE OWNER	45-059 LILIPUNA RD	KANEOHE	HI	96744
46001005	KENNETH D KENNETH D SIMON	SIMON or RESIDENT	FEE OWNER	99-1205 HALAWA VALLEY ST 46-109 LILIPUNA RD	AIEA	HI	96701 96744
46001028	DAVID M H ARDEN	VICKY L M CHUN FAT-ARDEN	FEE OWNER	46-061 LILIPUNA RD	KANEOHE	HI	96744
45001108	EDWARD H & SHEILA-ANNE P	EBERT TR	FEE OWNER	45-030 LILIPUNA RD	KANEOHE	HI	96744
45001020	MARK S TOGAMI TR	LYNNE H TOGAMI TR	FEE OWNER	45-046 LILIPUNA RD	KANEOHE	HI	96744
45001067	WILLIAM R / PATRICIA D	DIXON TRUST	FEE OWNER	45-031 LILIPUNA RD	KANEOHE	HI	96744
46001026	JULIANA G CHAIZE 2020 TR	NICOLAS L R CHAIZE 2020 TR	FEE OWNER	46-071 LILIPUNA RD	KANEOHE	HI	96744
46001021	BARBARA A OKUDA	HUGH Y OKUDA TR	FEE OWNER	46-099 LILIPUNA RD	KANEOHE	HI	96744
45001025	WILLIAM F & LYNETTE T	DUBBS SR	FEE OWNER	45-032 LILIPUNA RD	KANEOHE	HI	96744
45001049	RICHARD F	LINDOW	FEE OWNER	45-033 LILIPUNA RD	KANEOHE	HI	96744
46001030	LAURA D PETERSON	JONATHAN P WILLIAMS	FEE OWNER	46-047 LILIPUNA RD	KANEOHE	HI	96744
45001046	EUFELIA P ESPINOZA	TIMOTHY J LIEN	FEE OWNER	45-051 LILIPUNA RD	KANEOHE	HI	96744
45045038	DENNIS M GRUIDL JUSTIN A HOWE RESIDENT JEFFREY E THE CHONG FAMILY TR JOHN W HENRY	MICHELLE L GROLEAU CHRISTINA HOWE ALLEN TR SHARON M BROWN-HENRY	FEE OWNER FEE OWNER FEE OWNER FEE OWNER FEE OWNER	45-081 LILIPUNA RD APT A 1133 SIR GALAHAD DR 45-081 LILIPUNA RD APT B 45-081 LILIPUNA RD APT C 45-081 LILIPUNA RD APT D 45-081 LILIPUNA RD APT E	KANEOHE CHESAPEAKE KANEOHE KANEOHE KANEOHE	HI VA HI HI HI	96744 23323 96744 96744 96744 96744

TMK	First Name	Last Name	Title	Address	City	State	Zip
	NONOY J REUTER	LOREN D REUTER	FEE OWNER	45-081 LILIPUNA RD APT F	KANEOHE	HI	96744
	IDEA INC DBA KABUSHIKI KAISHA IDEA		FEE OWNER	AKASAKA IDEA BUILDING 2F	AKASAKA, MINATO-KU, TOKYO 107-0052		JAPAN
	RESIDENT			45-081 LILIPUNA RD APT G			96744
	RESIDENT			45-85B LILIPUNA RD			96744
45045036	PATRICK N / JO-ANN C	CUSTINO TR	FEE OWNER	45-089 LILIPUNA RD	KANEOHE	HI	96744
45001019	JUAN A & NONA M	ORTIZ	FEE OWNER	45-050 LILIPUNA RD	KANEOHE	HI	96744
45001054	JUDY L SCOVILLE-LAYFIELD	JONELLE K LAYFIELD, JORY L SCOVILLE	FEE OWNER	PO BOX 6477	KANEOHE	HI	96744
	RESIDENT			45-013 LILIPUNA RD UNIT 3			96744
	NURIA GALEANO	JOSE A GALEANO, JR	FEE OWNER	45-013 LILIPUNA RD UNIT 4	KANEOHE	HI	96744
	YEE FAMILY TR		FEE OWNER	960 CRYSTAL CT	FOSTER CITY	CA	94404
	RESIDENT			45-013 LILIPUNA RD UNIT A1			96744
	MICHAEL P SAVAGE	JULIE L SAVAGE	FEE OWNER	129 HERITAGE LN	MADISON	AL	35758
	RESIDENT			45-013 LILIPUNA RD UNIT B			96744
	RESIDENT			45 1 A LILIPUNA RD			96744
46001027	SHERMAN	CRUZ TR	FEE OWNER	46-069 LILIPUNA RD	KANEOHE	HI	96744
45045041	DEBORAH P K CHANG TR	HARRY K A CHANG JR TR	FEE OWNER	45-069 LILIPUNA RD	KANEOHE	HI	96744
	THOMAS K W KAM EST	THOMAS K W KAM JR TR, RUTH P KAM TR	FEE OWNER	45-069 LILIPUNA RD	KANEOHE	HI	96744
46001006	KENNETH D	SIMON	FEE OWNER	99-1205 HALAWA VALLEY ST	AEIA	HI	96701
45001109	TIARE L	FULLERTON	FEE OWNER	45-017 LILIPUNA RD	KANEOHE	HI	96744
	TIARE L	FULLERTON		45-017A LILIPUNA RD	KANEOHE	HI	96744
45001048	JAMES M OLSEN	ELISABETH K OLSEN	FEE OWNER	18 SAN JACINTO	HEIDELBERG	69124	GERMANY
45001051	PAUL R & ELIZABETH M BARNES	TIPPAUL T BARNES	FEE OWNER	45-029 LILIPUNA RD #1	KANEOHE	HI	96744
	NAOMI A LEE	STEVEN W LEE	FEE OWNER	45-029 A LILIPUNA RD	KANEOHE	HI	96744
46001020	ANDRE Y YEE TR	ROY J YEE TR	FEE OWNER	46-117 LILIPUNA RD	KANEOHE	HI	96744
46001003	PETER B & GINA G	TINGSTROM	FEE OWNER	46-133 LILIPUNA RD	KANEOHE	HI	96744
46001018	PEARL T	ANDERSON TR	FEE OWNER	46-129 LILIPUNA RD	KANEOHE	HI	96744
46001031	JAMES D & CAROL A	COOK	FEE OWNER	46-045 LILIPUNA RD	KANEOHE	HI	96744

Additional Recipients

Michael	Kohn			P.O. Box 241	Kunia	HI	96759
Dustin	Lau			46-192 Nakao Place	Kaneohe	HI	96744
Quyen	Lee			46-073 LILIPUNA RD	KANEOHE	HI	96744
Russell	Inouye			46-271 Lilipuna Road	Kaneohe	HI	96744
Ben	Wong			46-062 LILIPUNA RD	KANEOHE	HI	96744
Cindy	Wong			46-062 LILIPUNA RD	KANEOHE	HI	96744
Vicky-Lynn	Chun Fat-Ardren			46-061 Lilipuna Rd	Kaneohe	HI	96744
David	Ardren			46-061 Lilipuna Rd	Kaneohe	HI	96744
Katylynn	Chun Fat-Ardren			46-061 Lilipuna Rd	Kaneohe	HI	96744
Sherman	Cruz			46-069 Lilipuna Rd	Kaneohe	HI	96744
Barbara	Cruz			46-069 Lilipuna Rd	Kaneohe	HI	96744
Juliana	Chaize			46-071 Lilipuna Rd	Kaneohe	HI	96744
Nicolas	Chaize			46-071 Lilipuna Rd	Kaneohe	HI	96744
Ilima	Chaize			46-071 Lilipuna Rd	Kaneohe	HI	96744
Florence	Lee			46-077 Lilipuna Rd	Kaneohe	HI	96744
Betty & David	Shiroma Trust Estate			46-083 Lilipuna Rd	Kaneohe	HI	96744
Estelle	Shiroma			46-083 Lilipuna Rd	Kaneohe	HI	96744
Jonathan	Shiroma			46-083 Lilipuna Rd	Kaneohe	HI	96744
Sara	Shiroma			46-083 Lilipuna Rd	Kaneohe	HI	96744
Jeanette	Rosehill			46-089 Lilipuna Rd	Kaneohe	HI	96744
Richard	Kozuma			PO Box 4774	Kaneohe	HI	96744
Russell	Martin			46-099 Lilipuna Rd, #2	Kaneohe	HI	96744
Dominic	Henriques			46-123 Lilipuna Rd	Kaneohe	HI	96744
Dominic	Henriques			PO Box 6624	Kaneohe	HI	96744
Pearl	Anderson			46-129 Lilipuna Rd	Kaneohe	HI	96744
Otome	Myers			46-055 Lilipuna Rd	Kaneohe	HI	96744
David	Myers			46-055 Lilipuna Rd	Kaneohe	HI	96744
Randall	Myers			46-055 Lilipuna Rd	Kaneohe	HI	96744
Ross	Myers			46-055 Lilipuna Rd	Kaneohe	HI	96744
Sonya	Torweihe			46-055 Lilipuna Rd	Kaneohe	HI	96744
Dahlia M.	Zotos			46-035 Konohiki Street, Apt. 3851	Kaneohe	HI	96744
Laila	Groves			46-081 Konohiki Street #3565	Kaneohe	HI	96744

TMK	First Name	Last Name	Title	Address	City	State	Zip
	Christine L. Kinimaka	c/o Gayle Takasaki	Department of Accounting and General Services	PO Box 119	Honolulu	HI	96810
	Scott Nakasone	c/o Lisa Galino	Department of Human Services	1010 Richards Street, Suite 512	Honolulu	HI	96813
	Anton C.	Krucky, Director	Department of Community Services	925 Dillingham Blvd, Suite 200	Honolulu	HI	96817
	Asst. Chief of Police Glenn Hayash	c/o Major Crizalmer Caraang	Honolulu Police Department	801 South Beretania Street	Honolulu	HI	96813
	Haku	Miles, P.E., LEED AP, Director Designate	Department of Design and Construction	650 S. King Street, 11th Floor	Honolulu	HI	96813
	Laura H.	Thielen, Director	Department of Parks & Recreation	1000 Uluohia Street, Suite 309	Kapolei	HI	96707
	Dawn B. KERRY	Szewczyk, P.E., Director & Chief Engineer	Department of Facility Maintenance	1000 Uluohia Street, Suite 215	Kapolei	HI	96707
	ELISE	GILBERT			kaikane123@yahoo.com		
	David	TELLO			elisetello@gmail.com		
	Marie-Charlotte	Swann			swann433@yahoo.com		
	Jane	Neidermeier			mcniedermeier@gmail.com		
	Quentin	Mann			auburn73@gmail.com		
	Scott J. Glenn, Director	Lee			qwlee2004@gmail.com		
	Dawn Takeuchi Apuna	c/o Shichao Li	OPSD		shichao.li@hawaii.gov		
	Lainie Berry	c/o Christi Keller	DPP		c.keller@honolulu.gov		
	Jiny Kim	c/o Paul M. Radley	DOFAW		paul.m.radley@hawaii.gov		
	Kolvin	c/o Charmian Dang	USFWS		Charmian_Dang@fws.gov		
	Acting Asst. Chief Craig Uchimura	Kekua, Network Engineer			kolvin.kekua@hawaiiantel.com		
	Russell Y. Tsuji	c/o Acting Battalion Chief Kendall Ching			kching3@honolulu.gov		
	Carty S.	c/o Barbara Lee	DLNR-Land Division		barbara.j.lee@hawaii.gov		
	Richard C.	Chang	DLNR-Engineering Division		DLNR.Eng@hawaii.gov		
		Casias	RCC Group LLC		rccgroupllc@gmail.com		

James Hayes
Planning Solutions, Inc.
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawai'i 96813
(808) 550-4538
makena@psi-hi.com

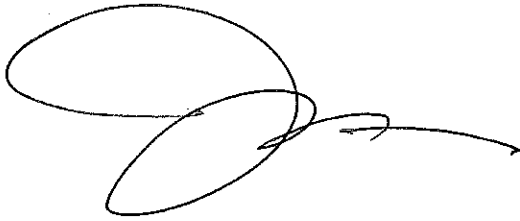
Department of Planning and Permitting
City and County of Honolulu
TO: 650 South King Street, 7th Floor
Honolulu, Hawai'i 96813

IN THE MATTER OF: Pu'u Ali'i Community Association
46-40 and 46-50 Kōnane Place
Kāne'ohe, Hawai'i 96744
Draft Environmental Assessment and
Anticipated Finding of No Significant Impact

AFFIDAVIT OF JAMES HAYES:

JAMES HAYES, being first duly sworn on oath, deposes and says that:

1. Pursuant to submission of Pu'u Ali'i Community Association's Draft Environmental Assessment and Anticipated Finding of No Significant Impact for the Kōnane Slope Stabilization Project (DEA/AFONSI), that James Hayes, acting as their agent, has notified all Pu'u Ali'i condominium owners and other owners of properties within 300 feet of the Kōnane Slope Stabilization Project, 46-40 and 46-50 Kōnane Place, Kāne'ohe, Hawai'i 96744, hereinafter referred to as "the Project Site."
2. He used the United States Postal Service, regular mail, and individually mailed a total of one hundred twenty-six (126) letters to the property owners identified in Attachment 1. The letters for two (2) international recipients were mailed via registered mail on Monday, December 19, 2022. The remaining recipients that were in the United States were mailed on Thursday, January 5, 2023. The recipients of these notification letters and their addresses are set forth in Attachment 1 attached hereto and incorporated herein. An additional fifteen (15) notifications were sent via email where no mailing address was available.
3. Each letter, provided in Attachment 2 attached hereto and incorporated herein, provided notification of a presentation being made on the project at the Kāne'ohe Neighborhood Board No. 30 meeting, at 7:00 p.m. on Thursday, January 19, 2023, via link, regarding Pu'u Ali'i Community Association's DEA/AFONSI for the Kōnane Slope Stabilization Project.

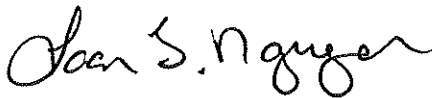


James Hayes

Subscribed and sworn to before me this

12th day of April, 2023.

Notary Public, State of Hawai'i



Print Name Loan T. Nguyen
My commission expires: 10/23/2024

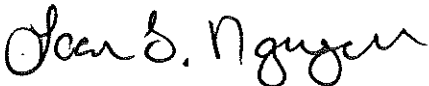
NOTARY CERTIFICATION
(Hawai'i Administrative Rules, §5-11-8)

DOCUMENT DESCRIPTION: Affidavit of James Hayes

DOCUMENT DATE: 04-12-2023

NO. OF PAGES: 6

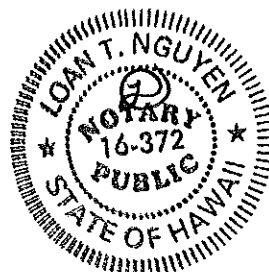
JURISDICTION: First

SIGNATURE OF NOTARY: 

PRINT NAME: Loan T. Nguyen

DATE OF CERTIFICATION: 04/12/2023

STAMP:





KANEOHE NEIGHBORHOOD BOARD NO. 30

c/o NEIGHBORHOOD COMMISSION ♦ 925 DILLINGHAM BOULEVARD SUITE 160 ♦ HONOLULU, HAWAII, 96817
PHONE (808) 768-3710 ♦ FAX (808) 768-3711 ♦ INTERNET: <http://www.honolulu.gov>

**REGULAR MEETING AGENDA
THURSDAY, JANUARY 19, 2023 AT 7:00 P.M.
VIA WEBEX ONLINE PLATFORM OR CALL-IN
OR KAPALAMA HALE 925 DILLINGHAM BLVD.
CONFERENCE ROOM 260**

Meeting Link: <https://cchnl.webex.com/cchnl/j.php?MTID=mf1afafe45fe1fd14869928a559286529>
Meeting number: 2489 400 1689
Password: NB30 (6230 from phones and video systems)
Join by video system: Dial 24894001689@cchnl.webex.com
You can also dial 173.243.2.68 and enter your meeting number.
Join by phone: +1-408-418-9388 United States Toll
Access code: 2489 400 1689

Rules of Speaking: To ensure the maximum opportunity for all attendees to be heard, the following guidelines apply: Anyone wishing to speak is asked to type their question in the chat box or raise their hand using the "raise hand" function in the online zoom platform - which is indicated by a hand.
If accessing the meeting using your phone and you have a comment, indicate this by pressing the symbols *3 – this will show the moderator that the person calling from that number wishes to speak. To mute/unmute your phone, press *6
Please wait until recognized by the chair to begin comments and address those comments to the chair. All official reports, comments or concerns shall be three (3) minutes or less.
Please Kōkua: To help all attendees the opportunity to hear presentations & comments, please place your device on mute until you would like to speak. When you are recognized, unmute yourself and make your comments.
Note: The Board may act on any agenda item. As required by the State Sunshine Law (HRS 92), specific issues not noted on this agenda cannot be voted on, unless added to the agenda. A two-thirds vote (12) of this 17-member Board is needed to add an item to the agenda. Items may not be added if they are of major importance and will affect a significant number of people.

- I. **CALL TO ORDER** – Chair Mo Radke 7:00 – 7:01

- II. **FILLING OF VACANCIES ON THE BOARD:** One (1) Vacancy in Each of the Following Subdistricts:
Subdistrict 2; Subdistrict 12 – Pikoiloa; Subdistrict 13

- III. **CITY/STATE/FED MONTHLY REPORTS** – Three (3) minutes each 7:02 – 7:11
 - A. Honolulu Fire Department
 - B. Honolulu Police Department
 - C. Marine Corps Base Hawaii

- IV. **BOARD BRIEFINGS** 7:12 - 7:22
 - A. Planning Solutions - Julia Tam (10 mins.) 7:23 - 7:28
 - Puu Alii Slope Stabilization Q & A (5 mins.)

- V. **RESIDENT/ COMMUNITY CONCERNS** Three (3) minutes each 7:29 - 7:39
 - A. Community discussion

- VI. **ELECTED OFFICIALS** Three (3) minutes each 7:40 - 8:15
 - Please note the following changes to elected official reports:
 - A. Representative Jill Tokuda
 - B. Governor Green's Representative
 - a. Congress and Governor Q&A
 - C. Mayor Rick Blangiardi's Representative
 - D. Councilmember Esther Kiaaina
 - a. City and County Q&A
 - E. Senator Jarrett Keohokalole
 - F. Representative Lisa Kitagawa
 - G. Representative Scot Matayoshi
 - a. State Officials: Q&A

VII. COMMUNITY ORGANIZATIONS Three (3) minutes each 8:16 - 8:19
A. Windward Community College

VIII. BOARD BUSINESS 8:20 – 8:39
A. Approval of November 2022 regular meeting minutes

IX. BOARD COMMITTEE REPORTS / ASSIGNMENTS 8:40 – 8:45
A. Treasurer's Report - Yamashiro
B. Attended Meeting Reports
C. Community Engagement Committee - Lam, Bryant, Peltier, Faagai
D. Emergency Preparedness Committee - , Faagai
E. Education Committee - Sevier, Carlisle
F. Transportation - Sevier, Lam, Faagai
G. Military Affairs - Radke,
H. Haiku Stairs - Vacant
I. State Legislative - Burk, Peltier
J. Environmental - Bryant, Faagai
K. HPD Liaison - Christenson
L. Planning - Lam, Faagai
M. Homeless - Burbage, Faagai
N. Kāne'ōhe Bay Regional Council - Bryant

X. ANNOUNCEMENTS
A. Next Regular Board Meeting – Thursday, February 16, 2023 at 7:00 p.m. using the virtual login credentials listed at the top of page 1 of this document.

XI. ADJOURNMENT

A mailing list is maintained for interested persons and agencies to receive this board's agenda and minutes. Additions, corrections, and deletions to the mailing list may be directed to the Neighborhood Commission Office (NCO) at Kapālama Hale, 925 Dillingham Boulevard, Suite 160, Honolulu, Hawaii 96817, by telephone on (808) 768-3710, or e-mailing nco@honolulu.gov.

Agenda documents and minutes are also available online at <http://www.honolulu.gov/nco/boards.html>.

If you need an auxiliary aid/service or other accommodation due to a disability or an interpreter for a language other than English, please call Neighborhood Assistant Spencer Johnson on (808) 768-3710, or by e-mailing spencer.johnson@honolulu.gov between 8:00 a.m. and 4:00 p.m. at least three (3) business days before the scheduled meeting. It may not be possible to fulfill requests received after this date.

All written testimony must be received in the Neighborhood Commission Office forty-eight hours prior to the meeting. If within 48 hours of the meeting, written and/or oral testimony may be submitted directly to the board at the meeting. If submitting written testimony, please note the Board and agenda item(s) your testimony concerns. Send such to the Neighborhood Commission Office, 925 Dillingham Boulevard, Suite 160, Honolulu, HI 96817.

Neighborhood Commission Office

From: Conrad Leslie <cleslie@qsengineering.com>
Sent: Friday, January 13, 2023 7:29 PM
To: Neighborhood Commission Office
Subject: NCO Testimony Form

CAUTION: Email received from an **EXTERNAL** sender. Please confirm the content is safe prior to opening attachments or links.

Board or Commission Kaneohe Neighborhood Board #30

Agenda Item IV A, Puu Alii Slope Stabilization Project

I am very concerned about living adjacent to an unstable slope at Puu Alii. The unstable slope is a geologic hazard that needs to be mitigated for public safety, environmental, and loss prevention reasons. I am a full-time resident and owner for 20 years at Puu Alii. I live at a building located approximately 75' feet from the unstable slope at Konane Place. I sincerely ask the Kaneohe Neighborhood Board to support the Puu Alii slope stabilization project.

I have approximately 30 years of experience in geotechnical and environmental engineering consulting. I have worked at various levels of responsibility ranging from staff level engineer collecting soil samples to project manager overseeing geotechnical investigations for billion dollar Liquefied Natural Gas projects. I rose to the position of vice president and regional manager at one of the top 100 geotechnical engineering firms in the USA (Kleinfelder Inc). I understand geologic hazards, and I know the public safety, environmental, and legal consequences associated with failing to mitigate an unstable slope at a large condominium complex. The unstable slope at Puu Alii poses a geologic hazard that needs to be mitigated to protect life, property, and infrastructure onsite and offsite; as well as prevent sediment runoff (a significant environmental problem) from the currently eroded slope into Kaneohe Bay during heavy rain events.

Testimony

The unstable slope was discovered in 2019 during a comprehensive geotechnical investigation triggered by a DPP citation. The scope of work included drilling exploratory borings along the slope, collection of soil samples, on site standard penetration testing, laboratory analysis / testing of soil samples, and slope stability modeling. Based on the results of the investigation, a licensed professional engineer (that was found competent by the State of Hawaii to make slope stability determinations) concluded that the slope was unstable. The slope safety factors failed and are below the acceptable limits for a safe slope. In addition, the slope is currently creeping towards a public road.

Geologic drilling / sampling was performed in front of my lanai. I personally observed the field work, spoke with field supervisors, and reviewed the report once it was completed. The geotechnical report was subsequently submitted to the DPP for review. None of the qualified and competent reviewers have found any reasons to doubt the conclusions and recommendations of the geotechnical report, or the qualifications of the firm that performed the work.

The licensed professional engineer recommended mitigation of the geologic hazard and worked with other civil engineers, an arborist, professional landscape architect, construction companies, and other contractors to develop design plans to stabilize the slope. The DPP was involved during the entire design review and final design selection process. The DPP eventually approved the preferred design, and the project is currently advancing through the Special Management Area (SMA) process.

As an important part of the SMA process, the project is being presented to the Kaneohe Neighborhood Board for consideration. I sincerely ask for the support of the Kaneohe Neighborhood Board in making this important project happen.

Work to stabilize the slope needs to commence soon. Failure to perform the timely mitigation of a recognized geologic hazard has the potential to cause harm, goes against standard of care, loss prevention practices, and engineering -based strategies to protect public life, property and infrastructure. An unstable slope is a potential liability. This project once completed will have a net positive impact on the neighborhood in that it will mitigate a known public safety issue, provide sediment runoff control keeping runoff contamination away from the Kaneohe Bay, and beautify the new slope with a DPP approved landscaping plan designed by an award-winning landscape architect.

Attachment

Prefix Mr

Name Conrad Leslie

Phone Number (808) 517-4839

Email cleslie@qsengineering.com

City Kaneohe

State HI

Please enter the
security code



Neighborhood Commission Office

From: Helene Jo <helenesjo@yahoo.com>
Sent: Saturday, January 14, 2023 10:14 AM
To: Neighborhood Commission Office
Subject: NCO Testimony Form

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Board or
Kaneohe Neighborhood Board #30
Commission

Agenda Iteming Solutions Puu Alii Slope Stabilization

Let's not forget that the main reason to get this project completed in a timely way is because of the safety hazard an unstable slope presents to anyone traveling on Lilipuna Road and living across the street. We have seen recent photos from California of what heavy rain and wind can do. We also have to be mindful of the earthquakes we sometimes have perhaps not strong enough to bring a house down but with rain-saturated soil could release the Konane Slope. There is no insurance that covers Testimony ground movement and if there was a disaster, it would put a strain on individual and government resources to address the damage which could include loss of life. Meanwhile the costs to complete this necessary project continue to increase. The homeowners of the Puu Alii Community Association want to do the right thing and protect our neighbors and community. We are financially backing this project but need the support of the Kaneohe Neighborhood Board and City Council to move this forward.

Attachment

Prefix Ms

Name Helene Jo

Phone Number 8087226321

Email helenesjo@yahoo.com

City Kaneohe

State HI

Please enter the
security code

Neighborhood Commission Office

From: Steven Loretero <sloretero@gmail.com>
Sent: Sunday, January 15, 2023 6:19 PM
To: Neighborhood Commission Office
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Board or
Kaneohe Neighborhood Board #30
Commission

Puu Alii Slope Stabilization

Mr. Mo Radke,

I encourage the Kaneohe Neighborhood Board to support the Puu Alii Slope Stabilization project for the safety, and wellbeing of not only the homeowners downslope of the project, but also the shoreline of Kaneohe Bay. Geological experts have reported that the slope is unstable and must be Testimony mitigated to prevent not only an environmental but a financial disaster to the 540 owners of the Puu Alii Community Association and surrounding area. Not to mention the potential loss of life and property. Opponents of the project claim that this project is just an attempt to restore views for the owners of Puu Alii. Majority of the owners of the Puu Alii Community do not live on the slope and would not have their views improved by this project. This project is about the owners of Puu Alii being responsible neighbors and mitigating the problems with the slope as recommended by the experts.

Attachment

Prefix Mr

Name Steven Loretero

Phone Number 808-391-2946

Email sloretero@gmail.com

City Kaneohe

State Hawaii

Please enter the

security code



Neighborhood Commission Office

From: Shawn Scott <sjscott91266@gmail.com>
Sent: Monday, January 16, 2023 7:11 AM
To: Neighborhood Commission Office
Subject: NCO Testimony Form

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Board or
Hawaii Kai Neighborhood Board #1
Commission

~~Kganda Slope~~ Project

The Puu Alii Community is taking on this project to prevent landslides onto the neighboring roadway.

This was prompted by a warning letter from the City and County of Honolulu. We solicited input from soil experts, a civil engineer, and a landscape architect to determine if and where there was risk of Testimony landslides. Based on the soil type and steepness of the slope in places there is a relatively high risk of earth movement. Given the facts, it was clear that we needed to come up with a long-term solution to address this problem. Failure to act would create a liability for the community and its board of directors.

Attachment

Prefix Mr

Name Shawn Scott

Phone Number

Email sjscott91266@gmail.com

City Kaneohe

State Hawaii

Please enter the
security code

Neighborhood Commission Office

From: Jauchia Blythe <bobawublythe@gmail.com>
Sent: Monday, January 16, 2023 3:27 PM
To: Neighborhood Commission Office
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Board or
Kaneohe Neighborhood Board #30
Commission

Agenda Item regarding B Puu Alii slope stabilization

Aloha! I am a resident of Puu Alii for over 15 years and a member of the Landscape Committee. I would like to humbly ask for your support for our Konane slope stabilization project. I have learned from soil studies and engineering analysis that the slope is unstable and unsafe for residents and homes in Puu Alii and around Lilipuna. Currently the slope is covered with weeds and unattractive invasive species, and in some areas, just bare dirt. The landscape committee has consulted experts in Testimony soil stabilization, botanists, landscape designers, and a master landscape plan (MLP) was proposed. The MLP has been supported and approved by our homeowners and the HI Department of Planning and Permitting. In this plan, invasive plants will be removed, stabilizing material will be installed on the slope, and new plants, including many native Hawaiian species will be planted to beautify the area. We have obtained funding through a special assessment from homeowners. No government financial assistance is required for this project

Attachment

Prefix Dr

Name Jauchia Blythe

Phone Number 8084972645

Email bobawublythe@gmail.com

City Kaneohe

State HI

Please enter the
security code

[REDACTED]