

Emergency Improvements in the Vicinity of 3708 Nu'uanu Pali Drive CDUA

Attachment 1: DDC Statement of Exemption

**DEPARTMENT OF DESIGN AND CONSTRUCTION
KA 'OIHANA HAKULAU A ME KE KAPIU
CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8480 • FAX: (808) 768-4567 • WEBSITE: hcnplulu.gov

RICK BLANGIARDI
MAYOR
MEIA



HAKU MULES, P.E.
DIRECTOR
PO'O

MARK YONAMINE, P.E.
DEPUTY DIRECTOR
HOPE PO'O

CDD-SS 25-935149

February 18, 2025

DECLARATION OF EXEMPTION

from the preparation of an environmental assessment under the authority of
Chapter 343, HRS, and Chapter 11-200.1, HAR

Project Title: *Emergency Improvements in the Vicinity of 3708 Nu'uanu Pali Drive*

Job Number: 09-23

Project Description: *The work consists of clearing an approximately 55-foot-long section of rock wall that was damaged by the uprooted banyan tree to allow for reconstruction of the wall and installation of a shotcrete soil nail wall on the adjacent slope. A new concrete barrier with rock veneer will sit on top of the soil nail wall. The other three damaged sections of rock wall will remain in place. A new approximately 80-foot-long by 2 %-foot-tall section of rock wall will be installed in front (on the roadway side) of the existing 1 %-foot-tall rock wall. Additionally, the area around the wall downhill will be stabilized with turf reinforcement matting and seeding. A total of ten (10) trees are to be removed. This includes two (2) mango trees (*Mangifera indica*), four (4) ironwood trees (*Casuarina equisetifolia*), one (1) Alexander palm (*Archontophoenix alexandrae*), one (1) mulberry (*Morus nigra*) and two Chinese banyan trees. These trees have been identified as the source of damage for the wall or erosional hazards.*

Reference: *DDC Exemption List dated September 1, 2020*

Exemption Class: *Part 1 Exemptions, General Type of Action 2 - Replacement or reconstruction of existing structures and facilities where the new structure will be located generally on the same site and will have substantially the same purpose, capacity, density, height, and dimensions as the structure replaced.*

Declaration of Exemption
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Exempt Item Number: 26

Exempt Item Description: *Fencing, curbing, walls and gates*

Exempt Item Number: 42

*limited to, roadways, driveways, parking lots,
multi-use pathways*

Exemption Class:

*Part 2 Exemptions, General Type of Action 3 -
Construction and location of single, new, small
facilities or structures and the alteration and
modification of the same and installation of new,
small, equipment and facilities and the alteration and
modification of same, including but not limited to:*

- a. Single-family residences less than 3,500 square feet, not in conjunction with the building of two or more such units;*
- b. Multi-unit structures designed for not more than four dwelling units if not in conjunction with the building of two or more such structures;*
- c. Stores, offices, and restaurants designed for total occupant load of 20 persons or less per structure, if not in conjunction with the building of two or more such structures; and*
- d. Water, sewage, electrical, gas, telephone, and other essential public utility services extensions to serve such structures or facilities; accessory or appurtenant structures, including garages, carports, patios, swimming pools, and fences; and acquisition of utility easements.*

Exempt Item Number: 19

Exempt Item Description: *Fencing, curbing, walls and gates*

Exempt Item Number: 33

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Exempt Item Description: *Retaining walls and slope retaining structures, except in shoreline areas*

Exemption Class: *Part 2 Exemptions, General Type of Action 4 - Minor alterations in the conditions of land, water, or vegetation*


Exempt Item Number: 5

Exempt Item Description: *Removal of trees that endanger life or property and of nonsignificant trees*


Exempt Item Number: 6

Exempt Item Description: *Slopes and embankments*

I have considered the potential effects of the above listed project as provided by Chapter 343, HRS, and Chapter 11-200.1 HAR. I declare that this project will probably have minimal or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment.

For 
Haku Milieš, P.E., LEED AP
Director Designate
Date: FEB 20 2025

HL:JY:bm


Original: CDD-Environmental Documentation
Copy: DDC-Program Coordination Branch
CDD-Project Manager
CDD-Central File (Project)

Emergency Improvements in the Vicinity of 3708 Nu'uanu Pali Drive CDUA

Attachment 2: SHPD Submittal and Determination Letter

DEPARTMENT OF DESIGN AND CONSTRUCTION
KA 'OIHANA HAKULAU A ME KE KĀPILI
CITY AND COUNTY OF HONOLULU

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RICK BLANGIARDI
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HAKU MILLES, P.E.
DIRECTOR
PO'O

BRYAN GALLAGHER, P.E.
DEPUTY DIRECTOR
HOPE PO'O

CDD-SS 23-910099

October 2, 2023

SUBMITTED VIA HICRIS

Alan S. Downer, Ph.D., Administrator
State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Boulevard, Suite 555
Kapolei, Hawaii 96707

Dear Dr. Downer:

SUBJECT: Chapter 6E-8 Historic Preservation Review
Repairs in the Vicinity of 3708 Nu'uuanu Pali Drive
Honolulu Ahupua'a, Kona Moku, Island of O'ahu
TMKs: (1) 2-2-054:001

The City and County of Honolulu's (CCH) Department of Design and Construction (DDC) is proposing emergency repairs in the vicinity of 3708 Nu'uuanu Pali Drive, in Honolulu Ahupua'a, Kona Moku, Island of O'ahu. The purpose of this project is to repair four damaged sections of rock wall along Nu'uuanu Pali Drive. The project area is located within the CCH right-of-way (ROW) and partially within TMK (1) 2-2-054:001 (see enclosed TMK Map uploaded in the project documents for project limits and TMKs).

In accordance with Hawaii Revised Statutes (HRS) Chapter 6E-8 and Hawaii Administrative Rules Chapter 13-275-3, we are requesting historic preservation review and a determination letter for the subject project. This letter provides a project description and a summary of previous studies and findings in the vicinity of the project area. No Federal funding is anticipated for this project; therefore, no consultation under Section 106 of the National Historic Preservation Act is expected.

Project Area and Description of the Project

Four sections of rock wall along Nu'uuanu Pali Drive have been damaged. An approximately 55-foot-long section of rock wall was damaged by an approximately 80 foot-tall Chinese banyan tree (*Ficus microcarpa*) that uprooted and collapsed in 2021 (Photos 1

and 2). At three other locations, small sections of rock wall have been damaged by tree roots or other causes (Photos 3 to 5).

The approximately 55-foot-long section of rock wall that was damaged by the banyan tree that uprooted will be cleared. The slope below the edge of the roadway will be excavated to a depth of approximately 15 feet and an approximately 5-foot to 15-foot tall reinforced concrete soil nail wall will be constructed. To support the wall, 15-foot-long soil nails will be drilled into the slope under the roadway and embedded in 8-inch diameter holes. The area behind the wall will be regraded and stabilized with hydroseed and turf reinforcement matting. The top of the soil nail wall will be at the same grade as the roadway. The soil nail wall will be colored to match the surrounding environment. A new concrete barrier with rock veneer will sit on top of the soil nail wall. Cross-section views of this work are shown on the Construction Plans, Drawing Nos. CP301 to CP303. The existing rock wall along this section of the road is approximately 1 % -feet tall. For public safety the new concrete barrier will be 2 % -feet tall, but will match the original wall in form, color, and texture. The new barrier will not obstruct any views along the scenic roadway.

The other three damaged sections of rock wall will remain in place. A new approximately 80-foot-long by 2 % -foot-tall section of rock wall will be installed in front (on the roadway side) of the existing 1 % -foot-tall rock wall (see Construction Plans, Sheet 6). The excavation for the foundation of the new rock wall will be approximately! % -feet below grade (see Construction Plans, Drawing No. S3.1).

A total of ten (10) trees are to be removed. This includes two (2) mango trees (*Mangifera indica*), four (4) ironwood trees (*Casuarina equisetifolia*), one (1) Alexander palm (*Archontophoenix alexandrae*), one (1) mulberry (*Morus nigra*) and two Chinese banyan trees. These ten (10) trees are in direct conflict with the existing wall, new walls, and or supporting structures. In addition, the project will remove the Chinese banyan tree that previously fell. Tree removal consists of removing trees as low as possible to ground level or face of wall and then treating the stump with herbicide (Garlon 4). An additional six (6) trees are to be pruned. This includes five (5) large iconic banyan trees. The five (5) banyan trees are to be directionally pruned back, reducing their leverage and weight which will reduce the risk of them uprooting. The project will also remove vines from and prune one (1) ironwood tree.

During construction compost filter socks will be installed downslope of the work area to prevent the discharge of sediment to the Nu'uanu Stream below. All temporary best management practices including the compost filter socks will be removed and properly disposed of at the completion of construction.

The total project area including all work areas, staging areas, and BMPs is approximately 7,300 square feet, as shown on Drawing No. GC101 of the Construction Plans.

Prior ground disturbance within this project limits includes construction of the roadway.

Environmental Context

The project area is located along the canopy covered Nu'uanu Pali Drive just off the Pali Highway in Nu'uanu Valley. The average rainfall in the project area is approximately 100 inches per year. Elevation at the project site is approximately 550 feet above mean sea level.

Soils identified within the project area include Lolekaa silty clay (LoB) on 3 to 8 percent slopes, Lolekaa silty clay (LoC) on 8 to 15 percent slopes, and Lolekaa silty clay (LoD) on 15 to 25 percent slopes. Vegetation along this section of Nu'uanu Pali Drive includes mango trees, Alexander palm, ironwood trees, Chinese banyan trees, mulberry trees, golden pothos (*Epipremnum aureum*), common laua'e fern (*Phymatosorus grossus*), wedelia (*Sphagneticola trilobata*), palm grass (*Setaria palmifolia*), and Guinea grass (*Megathyrsus maximus*).

Historic Context

The following summary of the historic context is based on information drawn from previous historical studies.

Pre-Contact

In 1795, Nu'uanu Valley was the location in which the famous Battle of Nu'uanu took place. King Kamehameha I and his estimated 12,000 men battled Kalanikupule's forces, the then ruler of Maui and O'ahu, for control over the main Hawaiian Islands. Kalanikupule's forces were pushed up Nu'uanu Valley with the aid of cannons manned by John Young, an English seaman turned Kamehameha advisor (Day 1984:133). When they retreated to the back of Nu'uanu Valley, Kalanikupule's outnumbered forces found themselves at the edge of the Pali cliff and either jumped or were pushed over the cliff by Kamehameha's advancing forces.

Nu'uanu Valley was rich in water resources and was a very important agricultural area with numerous lo'i and 'auwai, and contained both pre-Contact and early historic habitations. The valley was once abundant with irrigated taro, sugarcane, and banana planted in the lowlands, and dryland taro and sweet potato cultivated in the uplands (Handy 1940). Handy and Handy write that "Nu'uanu was a bountiful valley of ever-flowing streams, with taro lands extending from seaward back into extensive terraced areas at least half-way to the upper end of the valley." (Handy and Handy 1972).

Post-Contact

With the growth of Honolulu and the increasing population and trade, the valley was favored by ali'i as a place to escape. In 1845, Kamehameha III constructed his summer residence in Nu'uuanu Valley for himself and Queen Kalama. The site (State Site No. 50-80-0409) is located off of Nu'uuanu Pali Drive approximately one mile northeast of the project area. Kaniakapupu, known formerly as Luakaha "place of relaxation," was placed on the Hawaii Register of Historic Places on June 13, 1986 and was added to the National Register of Historic Places on October 15, 1986 (Day 1984).

In the mid-1800s, traditional agriculture shifted to maritime trade and the demands on labor for the sandalwood trade. By the late 1800s and early 1900s, Honolulu was a developing urban center. The population continued to grow and after the Great Mahele, traditional land use began to change. The development of residential subdivisions in the valleys of Honolulu, including Nu'uuanu, began in the early 1900s.

Pali Trail and Pali Road

At least as far back as the late 1700s, there have been written accounts of a trail winding through Nu'uuanu Valley and traversing the sheer cliffs of the Pali to the windward side of O'ahu. In 1845, in response to agricultural development in Kane'ohe and other windward ahupua'a, Kamehameha III secured funds to make the old Pali Trail accessible to horses. This included widening the trail to six feet, paving sections with stone, and reducing the grade to no more than 15 percent. In 1882, construction began to further widen the road to twenty feet and reduce the grade to 8 percent. Due to rain damage and high cost, this winding road down the side of the Pali did not open until 1897. The Old Pali Road remained in use for 55 years until the present day four-lane Pali Highway opened in 1962.

Nu'uuanu Pali Drive appears to have run adjacent to or been part of the Old Pali Road, providing access to Kamehameha III summer residence, Kaniakapupu, as early as 1845. Nu'uuanu Pali Drive began appearing on Hawaiian Territory Survey maps as early as 1902 (Figure 1), as well as on a 1914 U.S. Army Map of O'ahu (Figure 2). The improvement to these roads made Nu'uuanu Valley more accessible to Honolulu, which consequently led to the development of Nu'uuanu Valley as a residential area for people of royalty, politics, and business (Pacific Worlds 2003).



Figure 1. Portion of 1902 Hawaii Territory Survey Map of O'ahu by Walter E. Wall.

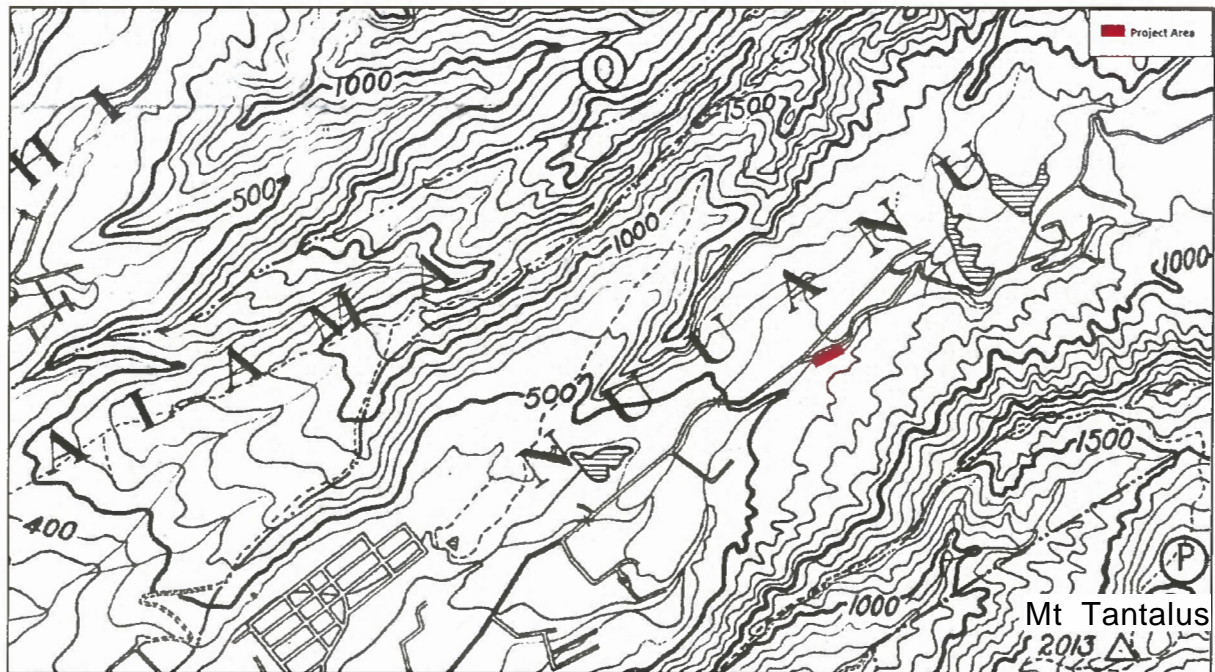


Figure 2. Portion of 1914 U.S. Army Map of O'ahu.

Background and Previous Archaeological Research

Background research for the identification of historic properties in the project vicinity included review of the Hawaii and National Register of Historic Places, the Office of Hawaiian Affairs' KTpuka database, prior archaeological studies from the State Historic Preservation Division (SHPD) library, the Historic Hawaii Foundation website, and historic maps.

No historic properties listed on either the Hawaii and National Register of Historic Places were identified in the project area. Previously documented historic properties within 1,000 feet of the project site include:

James L. Coke Residence, 3649 Nu'uuanu Pali Drive;
Edgar & Lucy Kalanikumaikiekie Davis Henriques Residence, 20 Old Pali Place;
Robert Purvis Residence, 3346 Kaohinani Drive; and
W.W. Goodale Moir Residence, 3311 Kahawalu Drive.

These historic properties are not located within the project area and would not be affected by the proposed work.

A few archaeological investigations have been conducted in the vicinity of the proposed project area. Prior archaeological studies that included work in the vicinity of the proposed project area are summarized in Table 1.

Table 1. Archaeological Studies in the Vicinity of Nu'uuanu Pali Drive

Name (Year)	Location	Findings	Distance from Project Area
Moore et al. 2006	Eastern ridge of Nu'uuanu Ahupua'a; TMK: 1-2-2-047:005	Approximately 46-acre parcel, 450-1025 ft elevation. Two boundary walls recorded (SIHP No. 50-80-14-6767).	Approximately 1,000 feet
Hammatt 1988; Anderson & Williams 1993; Dixon et al. 1994	4121 & 4151 Nu'uuanu Pali Drive TMKs: 1-2-2055:002 & 004	SIHP No. 50-80-14-4929- Twenty features dating to nineteenth century occupation including three retaining walls, possible boundary wall, house foundation, trash dump, stone bathhouse, terraces, drainage system, two bridges, two trails, walls and stone alignment.	Approximately 3,800 feet

Mason 1989	East side of Nu'uanu Pali Drive across from the Board of Water Supply pumping station at Reservoir No. 3.	King Kamehameha III's (Kauikeaouli) summer estate, Kaniakapupu (SIHP Site No. 50-80-14-409)	Approximately 1 mile
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Conclusion and Effect Determination

As discussed above, Nu'uanu Pali Drive appears to have run adjacent to or been part of the Old Pali Road, providing access to Kamehameha III summer residence, Kaniakapupu as early as 1845. Nu'uanu Pali Drive appearing on Hawaiian Territory Survey maps as early as 1902 (Figure 1), as well as a 1914 U.S. Army Map of O'ahu (Figure 2). We were not able to confirm when the rock walls lining this section of Nu'uanu Pali Drive were constructed but are likely over 50-years old. The rock walls add to the scenic character of the historic roadway.

Where the existing rock wall collapsed a concrete barrier with rock veneer will be constructed. The other sections of rock wall that have been damaged by tree roots or other causes will be protected in place and a new rock wall will be constructed in front of the existing rock wall on the roadway side. The new concrete barrier with rock veneer and new rock wall will match the original rock wall in form, color, and texture.

Tree removal has been minimized to the extent practical. Only trees and tree roots in direct conflict with the existing wall, new walls, and or supporting structures will be removed. Five of the large iconic banyan trees that add to the scenic character of the roadway will be directionally pruned back. The pruning is intended to reduce the risk of additional trees uprooting and resultant damage to the rock walls and roadway.

As discussed above no historic properties listed, or eligible for listing, on either the Hawaii or National Register of Historic Places have been identified within the project area. With the design considerations described above, impacts to the rock walls and scenic character of the roadway will be avoided. Therefore, we request SHPD's concurrence of the City's determination of "no historic properties affected" for the subject project.

Please note that the following are listed under the project plan's State Historic Preservation Division Notes and General Construction Notes (see sheet 2 of the Construction Plans):

Alan S. Downer, Ph.D., Administrator
October 2, 2023
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In the event that subsurface historic resources, including human skeletal remains, cultural deposit, artifacts, sand deposits, or sink holes are identified during the demolition and/or construction work, cease work in the immediate vicinity of the find, protect the find from additional disturbance, and contact the State Historic Preservation Division at (808) 692-8015.

Pursuant to Chapter 6E, HRS, in the event any artifacts or human remains are uncovered during construction operations, the contractor shall immediately suspend work and notify the Honolulu Police Department, the State Department of Land and Natural Resources-Historic Preservation Division at (808) 692-8015. In addition, the contractor shall notify the responsible City agency.

Please feel free to contact Anthony Simon Jr. by telephone at (808) 768-8819 if you have any questions. We look forward to working with you on this needed project.

Sincerely,

A handwritten signature in black ink, appearing to read "Bryan Guller", with a long horizontal flourish extending to the right.

Pf- Haku Milles, P.E., LEED AP
Director

AS:KK:bm

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

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
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RYAN K. P. KANAKA'OLE
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ACTING DEPUTY DIRECTOR - WATER

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MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES
ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

May 8, 2024

Haku Milles, Director
Department of Design and Construction
City and County of Honolulu
650 South King St.
Honolulu Hawai'i 96813
c/o Anthony Simon Jr.
anthony.simon@honolulu.gov

IN REPLY REFER TO:
Project No.: 2023PR01220
Doc. No.: 2404SCH12
Archaeology, Architecture

Dear Haku Milles:

**SUBJECT: Hawaii Revised Statutes Chapter 6E-8 Historic Preservation Review –
Request for Concurrence with Project Effect Determination
Repairs in the Vicinity of 3708 Nu'uuanu Pali Drive
DDC Job No. 09-23; In Reply to: CDD-SS 23-910099
Honolulu Ahupua'a, Honolulu (Kona) District, Island of O'ahu
TMK: (1) 2-2-054:001 por.; (1) 2-2-054:999 (Nu'uuanu Pali Drive)**

This letter provides the State Historic Preservation Division's (SHPD's) review of the City and County of Honolulu Department of Design and Construction's (DDC's) proposed Repairs in the Vicinity of 3708 Nu'uuanu Pali Drive project. The submittal includes construction plans, TMK maps, HRS 6E Submittal Form, photographs, and a DDC cover letter dated October 2, 2023 (CDD-SS 23-910099) requesting for SHPD's concurrence with an effect determination of "No historic properties affected." SHPD received the project submittal on October 11, 2023.

The project area is approximately 7,300 square feet. The DDC is proposing emergency repairs in the vicinity of 3708 Nu'uuanu Pali Drive, Honolulu. The scope of work includes repairing four damaged sections of rock wall along Nu'uuanu Pali Drive. Anticipated ground disturbance includes the excavation of a 55-foot-long section of slope below the roadway for construction of an approximately 5- to 15-foot-tall soil nail wall, with 15-foot-long soil nails drilled into the slope under the roadway and embedded in 8-inch diameter holes. Additionally, a total of 10 trees are to be removed. Tree removal consists of removing trees as low as possible to ground level or face of wall and then treating the stump with herbicide.

A review of SHPD's records shows that archaeological studies have been conducted in the vicinity of the project area. These studies documented several historic properties including Kaniakapupu (summer house of King Kamehameha III) and the Kahapa'akai Complex, as well as boundary walls and water-related features. The proposed project will not impact these historic properties. Aerial photographs indicate that the subject property has been previously graded and developed for roadway construction. The USDA soil survey (Foote et al. 1972) identifies the soils as Lolekaa silty clay, 3 to 8% slopes (LoB) areas. Low potential exists for the project to impact subsurface historic properties within this location.

The rock wall lining the subject sections of Nu'uuanu Pali Drive are likely over 50 years old and are considered historic properties per HRS §6E-2. Where the existing rock wall has collapsed, a concrete barrier with rock veneer will be constructed. The other sections of rock wall that have been damaged by tree roots or other causes and will be protected

Haku Milles
May 8, 2024
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in place and a new rock wall will be constructed in front of the existing rock wall on the roadway side. The new concrete barrier with rock veneer and new rock wall will match the original rock wall in form, color, and texture.

SHPD requests receiving within 60 days after project completion, photographic documentation of the new concrete barrier with rock veneer and new rock wall. Please submit the photographs to HICRIS Project No. 2023PR01220 using the Project Supplement option.

Based on the information provided and the proposed scope of work, the **SHPD concurs** with DDC's determination of "No historic properties affected" for the current project. Pursuant to HAR §13-275-7(e), when the SHPD comments that the action shall not affect any significant historic properties, the HRS §6E historic preservation review ends. The HRS §6E-8 historic preservation review process is ended for the subject project.

Please attach to the construction plans: In the unlikely event that subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sink holes are identified during the demolition and/or construction work, cease work in the immediate vicinity of the find, protect the find from additional disturbance, and contact the State Historic Preservation Division, at (808) 692-8015.

Please contact Mary Kodama, Historic Architect, at mary.kodama@hawaii.gov or at (808) 652-8629 for any architectural concerns or Samantha Hemenway, O'ahu Island Archaeologist, at samantha.hemenway@hawaii.gov or at (808) 692-8011, for any matters regarding archaeological resources or this letter.

Aloha,

Susan A. Lebo

Susan A. Lebo, PhD
Archaeology Branch Chief
Acting Administrator, State Historic Preservation Division

cc: Jinghai Yang, jinghai.yang@honolulu.gov
Lian Zhu, lian.zhu@aecom.com
Courtney Hymes, courtney.cacace@aecom.com
Keith Kalani, kcalani@honolulu.gov
Megan Laurance, megan.laurance@aecom.com

Emergency Improvements in the Vicinity of 3708 Nu'uanu Pali Drive CDUA

Attachment 3: Mitigation Plan for Nu'uanu Stream

CDUA MITIGATION PLAN FOR NU‘UANU STREAM

PROJECT NAME: Emergency Improvements in the Vicinity of 3708 Nu‘uanu Pali Drive

Conservation District Subzone: Preservation District

Identified Land Use: P-13 Land and Resource Management. C-2 (*Erosion control, including replanting of trees and groundcover, placement of biodegradable or synthetic materials for slope stabilization, construction of minor swales and check dams, not to include shoreline erosion control structures.*)
(See Hawai‘i Administrative Rules (HAR) §13-5-22 through §13-5-25)

Project Address: Adjacent to 3708 Nu‘uanu Pali Drive, State of Hawaii Parcel

Ahupua‘a, District, Island: Honolulu, O‘ahu

Tax Map Key(s): ((1) 2-2-054:001

Plan Objectives

To minimize sediment transport, prevent water quality degradation, and ensure the protection of the adjacent downhill stream (Nu‘uanu Stream) during and after construction of the soil nail wall and emergency improvements.

Pre-Construction Mitigation Measures

Erosion and Sediment Control Plan (ESCP):

See Attachment 4 Drawing No. GC001 and GC101 for ESCP sheets, which have been approved by the Department of Planning and Permitting Civil Engineering Branch. The ESCP will include the following pre-construction mitigation measures:

- Install perimeter control in the form of filter socks along the slope at 10 feet and 25 feet interval to intercept sediment and construction runoff before it reaches the stream.
- Provide good housekeeping BMPs such as dust control, liquid waste management, and spill prevention

Storm Water Pollution Prevention Plan (SWPPP):

A stormwater pollution prevention plan is prepared for this project that the contractor must sign and complete before a notice to proceed can be issued. The SWPPP will include the following pre-construction mitigation measures:

- Training Log must be completed by the contractor for stormwater training topics such as erosion control BMPs, sediment control BMPs, non-stormwater BMPs, emergency procedures and good housekeeping BMPs.
- A Spill prevention and control plan must be submitted by the contractor and include a notification list and emergency spill cleanup contractor.
- Waste and litter management procedures must be submitted by the contractor.
- A severe storm contingency plan must be submitted by the contractor.

Construction Mitigation Measures

Storm Water Pollution Prevention Plan (SWPPP):

A stormwater pollution prevention plan is prepared for this project that the contractor must sign and complete before a notice to proceed can be issued. The SWPPP will include the following construction mitigation measures:

- Contractor will complete BMP and storm water pollution prevention inspection and maintenance reports.
- If an incident occurs regarding non-stormwater or polluted stormwater discharge in the stream, a Discharge Report must be completed by the contractor.
- Monthly compliance report must be completed and submitted to Department of Health within 2 days before the end of each month during construction.

Post-Construction Mitigation Measures

Construction and Post-Construction: Storm Water Pollution Prevention Plan (SWPPP):

A stormwater pollution prevention plan is prepared for this project that the contractor must sign and complete before a notice to proceed can be issued. The SWPPP will include the following post-construction mitigation measures:

- Corrective actions report will be documented in the inspection and maintenance reports to ensure that a corrective action is taken should there be an incident regarding a discharge into the stream.

Slope Stabilization and Vegetation Restoration:

The project includes some items that will serve as post-construction mitigation measures:

- Hydroseeding exposed slopes with native or erosion-resistant plant species will provide a more stable embankment that is less susceptible to storm events that could cause damage or contaminate the adjacent stream.
- Installation of turf reinforcement matting and biodegradable erosion control blankets will support vegetation establishment over the regraded areas.

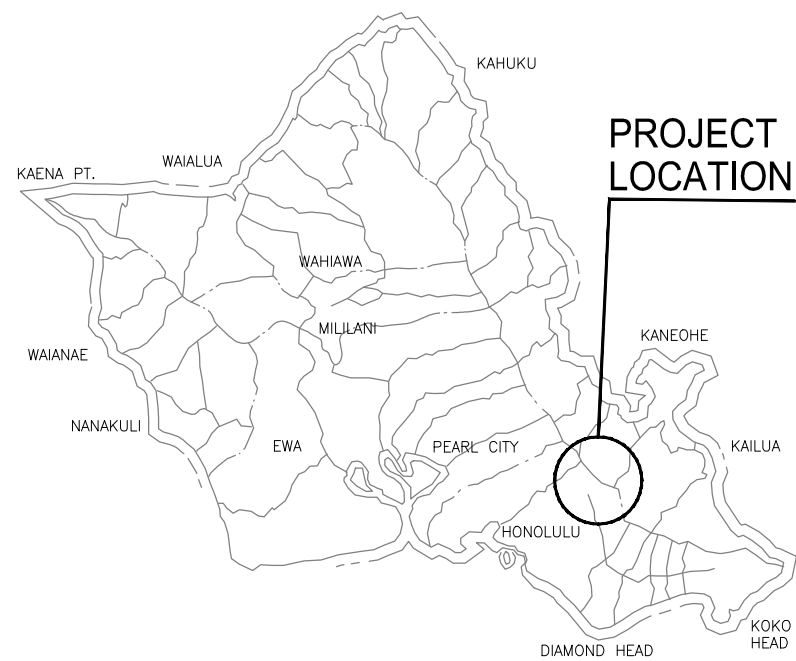
Emergency Improvements in the Vicinity of 3708 Nu'uanu Pali Drive CDUA

Attachment 4: Construction Plans

Emergency Improvements in the Vicinity of 3708 Nu'uanu Pali Drive CDUA

Attachment 5: Location/TMK Map

LOCATION MAP



ISLAND OF OAHU
Not to Scale

LEGEND



PROJECT AREA



TMK BOUNDARY



Emergency Improvements in the Vicinity of 3708 Nu'uanu Pali Drive CDUA

Attachment 6: Existing Condition Photos

Existing Condition Photographs
Repairs in the Vicinity of 3708 Nuʻuanu Pali Drive



Photo 1. Uprooted Chinese banyan tree that damaged an approximately 55-foot-long section of CMR wall, view looking east.



Photo 2. Uprooted Chinese banyan tree tree that damaged an approximately 55-foot-long section of CMR wall, view looking west.

Existing Condition Photographs
Repairs in the Vicinity of 3708 Nuʻuanu Pali Drive



Photo 3. Small section of CRM wall damaged by Chinese banyan tree roots.



Photo 4. Small section of CRM wall damaged by Chinese banyan tree roots and an ironwood tree growing on the roadway side of the CRM wall.

Existing Condition Photographs
Repairs in the Vicinity of 3708 Nuʻuanu Pali Drive



Photo 5. Small section of damaged CRM wall.

Emergency Improvements in the Vicinity of 3708 Nu'uanu Pali Drive CDUA

Attachment 7: Soil Map

Soil Map—Island of Oahu, Hawaii




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 19, Sep 11, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2024—Jul 1, 2024

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

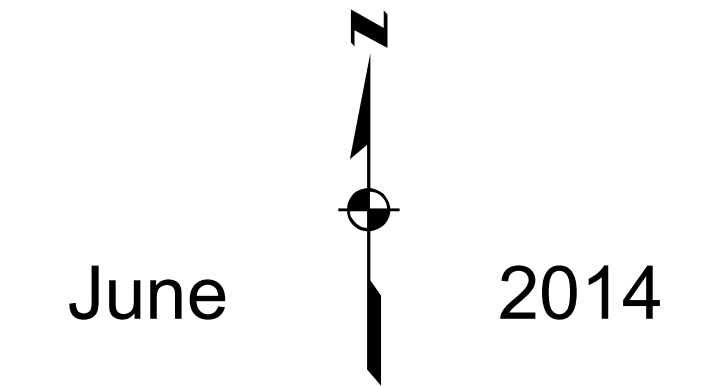
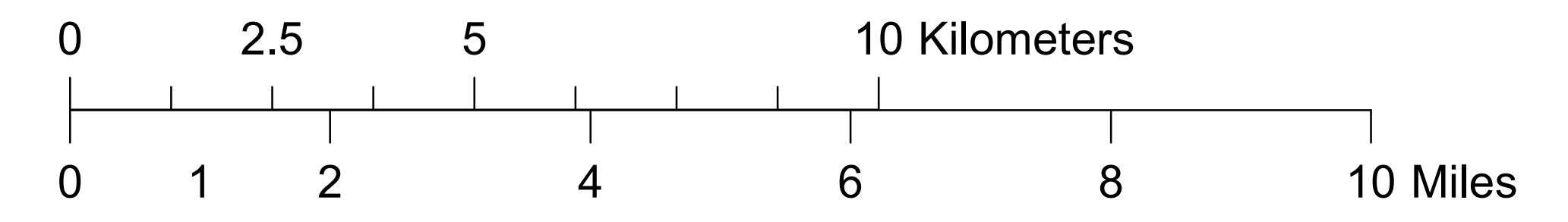
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LoB	Lolekaa silty clay, 3 to 8 percent slopes	1.6	27.3%
LoC	Lolekaa silty clay, 8 to 15 percent slopes	0.2	3.3%
LoD	Lolekaa silty clay, 15 to 25 percent slopes	1.1	19.0%
LoF	Lolekaa silty clay, 40 to 70 percent slopes	3.0	50.4%
Totals for Area of Interest		5.9	100.0%

Emergency Improvements in the Vicinity of 3708 Nu'uanu Pali Drive CDUA

Attachment 8: Water Quality Standards Map

Pacific Ocean

Hawaii Department of Health
Water Quality Standards Map
of the
ISLAND OF O`AHU



This map is a geographic representation of Hawaii State Water Quality Standards as set forth in Hawaii Administrative Rules Chapter 11-54, but is intended for reference only, not to substitute for the governing language in the Water Quality Standards.

Quality Standards Classifications

Inland Classifications

- Class 1
- Class 2

Marine Classifications

- A
- AA

Bounded by 100-fathom contour

Pearl Harbor

3 Mile Boundary Line: Areas situated within this line but outside of the 100-fathom contour are subject to Hawaii State Oceanic Water Quality Standards.

DRAFT