



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

July 17, 2023

**Interstate Route H-1, Seismic Retrofit, Waialae Viaduct Inbound and  
Outbound Project  
Federal-Aid Project No. NH-H1-1(277)**

**EXEMPTION NOTICE**

Pursuant to Hawaii Revised Statutes (HRS), Chapter 343, and  
Hawaii Administrative Rules (HAR), Section 11-200.1

**AGENCY OR APPLICANT ACTION**

- This exempted action is an agency action as defined by Section 343-5(b), HRS, and Section 11-200.1-8, HAR,
- This exempted action is an applicant action as defined by Section 343-5(e), HRS, and Section 11-200.1-9, HAR

**EXEMPTION TYPE:**

The exemption declaration for the action described below is based on the Exemption List for the State of Hawaii Department of Transportation (HDOT), reviewed, and concurred to by the Environmental Council on 02/01/2022.

- Exemption List Type: 2.
- Item Number: 3.
- Applicable language from the exemption list: "Reconstruct, upgrade, or minor expansion of existing roadways and shoulders."

**DESCRIPTION OF ACTION**

**Proposing Agency or Applicant:** State of Hawaii, Department of Transportation, Highways

**Project Name & Address/Location:** Interstate Route H-1, Seismic Retrofit of Waialae Viaduct Inbound and Outbound Project, Kahala

**Anticipated Start Date:** Fall 2024

**Anticipated End Date:** Fall 2025

**Island and District:** Oahu Island, Honolulu District

**Tax Map Key(s) and other geolocation means:** The Project is located within the State Right-Of-Way (ROW) of the Interstate Freeway 1 (H-1 Freeway) adjacent to the Kahala Mall (TMK 3-5-016: 001) (See Attachment 1). The Project's center is located at approximately 21°16'42.9"LAT N, 157°47'11.9"LONG W.

**All Necessary Permits and Approvals:**

- HRS, Chapter 6E-8 Historic Preservation Review
- HRS, Chapter 195D Conservation of Aquatic Life, Wildlife, and Land Plants compliance
- National Pollution Discharge Elimination System General Permit, Form C: Authorizing Discharges of Storm Water Associated with Construction Activities
- State of Hawaii Department of Health (HDOH) Noise Permit or Variance, if required

**NARRATIVE**

The Project proposes to retrofit the Waialae Viaduct in accordance with HDOT Design Criteria to ensure the bridge will not collapse after an earthquake event. The Project consists of the following two components:

1. Wrap the "outrigger" portion of several existing bent caps with fiber reinforced polymers (FRP) to strengthen the beam torsional capacity and transfer the bending movement from the superstructure to the center column(s) due to loading in the longitudinal direction. This will also address potential bent cap shear problems due to loading in the transverse direction. Installation of the FRP will require demolition and reconstruction of a portion of various concrete planters atop the bentcaps; and
2. Thicken pilecaps in several locations and add a top layer of reinforcing steel and dowels. This work will require excavation and backfill work not to exceed five feet below the surface, and reconstruction of the sidewalk and median.

The Project represents an upgrade to an existing roadway, and is considered an action exempt from Chapter 343, HRS environmental review requirements based on HDOT Exemption List Type 2, Item 3.

### RECEIVING ENVIRONMENT

Constructed in the late 1960's, the Waiialae Viaduct is a 29-foot-wide, precast concrete bridge accommodating traffic on the H-1 Freeway above Waiialae Avenue, a minor arterial roadway within the Kaimuki and Kahala neighborhoods. The viaduct is located within the H-1 State ROW and is bounded by various commercial and residential uses. The viaduct begins near the intersection of Waiialae Avenue and 21st Avenue to the west and terminates near Kealaolu Avenue to the east, where the H-1 Freeway then transitions to Kalaniana'ole Highway. Three lanes of travel in each direction are supported on the viaduct, which follows a relatively straight alignment at the bridge structure and its approaches. The bridge consists of separate Inbound and Outbound superstructures supported by common bent substructures.

### ENVIRONMENTAL ANALYSIS

We have considered the potential effects of the proposed project and all related activities to the environmental resources checked below:

	Not Applicable
<input checked="" type="checkbox"/> Land Use and Zoning Conformance	<input type="checkbox"/>
<input checked="" type="checkbox"/> Traffic (Vehicles, Bicycles, Pedestrian)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Infrastructure (Roads, Buildings, Utilities)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Air Quality Pollutant Emissions	<input type="checkbox"/>
<input checked="" type="checkbox"/> Noise Emissions	<input type="checkbox"/>
<input checked="" type="checkbox"/> Solid, Hazardous, and Liquid Waste Management	<input type="checkbox"/>
<input type="checkbox"/> Social	<input checked="" type="checkbox"/>
<input type="checkbox"/> Economic	<input checked="" type="checkbox"/>
<input type="checkbox"/> Health and Safety	<input checked="" type="checkbox"/>
<input type="checkbox"/> Recreation	<input checked="" type="checkbox"/>
<input type="checkbox"/> Public Beach Access	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Historic, Cultural and Archaeological Resources and Practices	<input type="checkbox"/>
<input type="checkbox"/> Visual/Aesthetic	<input checked="" type="checkbox"/>
<input type="checkbox"/> Environmental Justice	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Rare, Threatened, and/or Endangered Species	<input type="checkbox"/>
<input type="checkbox"/> Surface and Ground Water Resources	<input checked="" type="checkbox"/>
<input type="checkbox"/> Wetlands	<input checked="" type="checkbox"/>
<input type="checkbox"/> Floodplains	<input checked="" type="checkbox"/>
<input type="checkbox"/> Riparian/Coastal Resources	<input checked="" type="checkbox"/>
<input type="checkbox"/> Other	<input checked="" type="checkbox"/>

## **Summary of Impact Analysis:**

### **Land Use and Zoning Conformance**

The viaduct is located within a State ROW and zoned for B-2 Community Business uses. No changes to zoning or land use are required for the Project.

An approximately 0.07-acre portion of the Project extents will be within the Special Management Area (SMA) boundary, including the temporary construction staging area. Pursuant to Revised Ordinances of Honolulu, Chapter 25, “development” does not include the repair or maintenance of roads and highways within existing right-of-way or the repair and maintenance of existing structures. As such, during consultation for the Project, the City and County of Honolulu (City) Department of Planning and Permitting (DPP) concurred that an SMA Use Permit would not be needed. Should work be proposed within the SMA, HDOT will keep DPP apprised of Project details.

### **Traffic (Vehicles, Bicycles, Pedestrian)**

The Waialae Viaduct accommodates traffic on the H-1 Freeway above Waialae Avenue and begins near the intersection of Waialae Avenue and 21<sup>st</sup> Avenue to the west and terminates near Kealaolu Avenue to the east, where the H-1 Freeway then transitions to Kalanianaʻole Highway. Under the viaduct, Waialae Avenue is an approximately 94-foot-wide divided roadway with an approximately 10-foot-wide median. Pedestrian facilities include sidewalks along both sides of the roadway. There are no existing bicycle facilities; however, the City *Oahu Bike Plan* (2019) identifies a future bike lane (Project ID 3-163) along this segment of Waialae Avenue. The project is classified as Priority 3, which are proposed for implementation after Priorities 1 and 2 projects are completed. Accordingly, there is no estimated timeline for construction of the bike lane. Public transit facilities include several bus stops along Waialae Avenue within and in the vicinity of the Project area.

During construction, wrapping the “outrigger” portion of the viaduct with FRP may require closing portions of turn lanes. Additionally, thickening and reinforcing pilecaps in the Waialae Avenue median will require closing portions of turn lanes in both directions. When working on the pilecaps/footings on each side of the roadway, the right lane would need to be closed or shifted to the left, which may encroach into the turn lane.

Construction is not expected to affect traffic flow on the H-1 Freeway in either direction, such that all lanes are expected to remain open and normal speeds would be maintained.

Work on the pilecaps may require temporary sidewalk closures where needed; however, pedestrian facilities are not anticipated to be adversely impacted, and access to the sidewalks along either side of Waiālae Avenue will be maintained to the extent practicable. The planned Project will not adversely impact future bike lanes planned for the area. If the proposed bike lane is installed prior to construction of the Project, intermittent closures or shifts of turn lanes on Waiālae Avenue may impact bicycle facilities.

### **Infrastructure (Roads, Buildings, Utilities)**

Utilities within the viaduct are limited to local conduits, junction boxes, and irrigation lines required for bridge lighting and planters. Within Waiālae Avenue below the viaduct, numerous underground utilities are located within the ROW, including an electrical conduit, water mains, sewer mains, and a gas line. Since these utilities are outside the exterior columns, they are not likely to be affected by the Project. During consultation conducted for the Project, the Hawaiian Electric Company (HECO) expressed no objection. Should HECO or other utilities have existing easements and facilities within the Project area, maintenance access will continue to be provided. HDOT will continue to keep the various utilities apprised of the Project.

### **Air Quality Pollutant Emissions**

Short-term, intermittent air quality impacts related to construction activities are anticipated. Construction activities would generate emissions of U.S. Environmental Protection Agency criteria pollutants, as well as greenhouse gases. Long-term air quality impacts are not anticipated.

### **Noise Emissions**

Unavoidable, but temporary, noise impacts to the surrounding environment may occur during construction of the Project. Because construction activities are anticipated to be audible within the Project Site and at adjoining properties, the quality of the acoustic environment may be degraded during periods of construction.

### **Solid, Hazardous, and Liquid Waste Management**

A review of historical and regulatory records found various sites with potential environmental impacts in the vicinity of the Project site, including documented releases from former and/or current service and auto repair stations and dry cleaners (launderettes), and potential releases associated with the nearby Ocean View Cemetery and the Waiālae Golf Course, developed in 1918 and 1927, respectively. Therefore, it is possible that contaminated soil and groundwater are present beneath the Project site. Historical petroleum and solvent releases have been reported and, with the exception of a force sewer main setback, releases have been remediated to HDOH environmental action levels.

Petroleum contamination remains in the setback, and it is not known how far contamination has migrated, if at all. It is possible that impacted soil and groundwater remain in the vicinity of the Project site at concentrations that may impact the proposed construction.

Although there are no reported releases for the Ocean View Cemetery and the Waialae Golf Course sites, it is possible that pesticide-impacted soil and groundwater associated with 90 to 100 years of grounds maintenance, is present at the Project site. Additionally, the Ocean View Cemetery and similar older cemeteries are potential sources of contaminants including solvents and embalming fluids with a variety of metals.

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

Pursuant to Section 6E-8, HRS and Section 13-275, HAR, the Project is subject to historic preservation review by the State Department of Land and Natural Resources (DLNR), State Historic Preservation Division (SHPD). In support of the review, an Archaeological Literature Review and Field Inspection (Honua Consulting, April 2023) and Reconnaissance Level Survey (Mason Architects, April 2023) were conducted for the Project.

One historic property retaining historical significance pursuant to Section 13-275-6, HAR was identified in the Project area: the Waialae Viaduct, which was constructed in the late 1960s. The proposed work on the Waialae Viaduct includes demolition and reconstruction of several concrete planter boxes, which are considered character-defining features. However, the work entails replacing the planter boxes in-kind, which means the new planter boxes will be reconstructed to follow the original design in size and form, with an unpainted concrete finish. As such, there will be no effect to the viaduct structure. The integrity of its location, design, setting, materials, workmanship, feeling, and association will not be impaired.

Based on the identification, inventory, and evaluation of historic properties within the Project area and an assessment of the potential for project activities to affect significant properties, it is anticipated that project activities will not affect the Waialae Viaduct. The Project is currently under review by SHPD.

### **Rare, Threatened, and/or Endangered Species**

Except for the concrete planter boxes, there is no vegetation on the Waialae Viaduct. Vegetation around the concrete columns and sidewalk area along Waialae Avenue is sparse and consists of ornamentals and groundcover used for landscaping, including golden pothos (*Epipremnum pinnatum*) and weedy species including obscure morning glory (*Ipomea obscura*), creeping indigo (*Indigofera spicata*), crabgrass (*Digitaria spp.*), and purple nut sedge (*Cyperus rotundus*). There are no native or Polynesian-introduced plant varieties in the Project area.

In accordance with State guidelines, the HDOT consulted with the DLNR Division of Forestry and Wildlife (DOFAW), and the DLNR Division of Aquatic Resources for information or input related to Chapter 195D, HRS resources. Terrestrial and avian fauna in the Project vicinity primarily consists of introduced species typical of urban environments. According to the U.S. Fish and Wildlife Service Information for Planning and Consultation tool and information provided by DOFAW during the consultation period, Federal- and State-listed Endangered species, including the Hawaiian hoary bat (*Lasiurus semotus*), Hawaiian seabirds, and Hawaiian waterbirds, may overfly the Project vicinity on occasion. However, given the urbanized, developed character of the site and the lack of vegetation, it is unlikely that these species will occur. Additionally, the State threatened Manu o Kū or white tern (*Gygis alba*) is known to nest in the vicinity of the Project.

The Project is approximately one mile inland from the shoreline; therefore, impacts to marine species are not anticipated.

The invasive Coconut Rhinoceros Beetle (CRB) (*Oryctes rhinoceros*) is known to occur on the island of Oahu. When host material or plants, including various species of live palm plants, are moved, there is a risk of spreading CRB. The Project site does not include potential host material or plants of the CRB.

### **Cumulative and Secondary Impacts**

Potential secondary impacts are attributed to construction-related activities, including short-term impacts to traffic, noise, air quality, and visual resources. The implementation of construction best management practices (BMPs) will mitigate potential secondary impacts. The Project involves upgrades to an existing structure; therefore, no adverse cumulative impacts are anticipated in the long term. The Project represents ongoing maintenance of various infrastructure in the area. During consultation conducted for this Exemption Declaration, the City Department of Design and Construction notified HDOT of a City project currently in design which includes the resurfacing of streets in the vicinity of the Waialae Viaduct. The City anticipates construction of this project in Fiscal Year 2025. Construction of the Project is expected to commence in Fall 2024 and is anticipated to last one year. HDOT will coordinate with the City, as needed.

### **MITIGATION**

#### **Traffic (Vehicles, Bicycles, Pedestrian)**

During construction, work and staging areas will be contained within the State ROW. Proposed work on the pilecaps and footings within the Waialae Avenue median is anticipated to require the temporary closure of portions of lanes in both directions, and speed limits may be reduced.

Potential short-term impacts to traffic and bicycle facilities are anticipated to be minimal to moderate, and would be mitigated through BMPs, including, but not limited to, traffic control at intersections, temporarily shifting lanes as needed, and the adjustment of traffic signals. Construction is anticipated to occur during the working hours of 8:30 a.m. and 3:00 p.m. on Mondays through Fridays, excluding holidays, to the extent practicable.

During consultation conducted for the Project, the City Department of Transportation Services (DTS) requested that HDOT coordinate with the DTS-Transportation Mobility Division regarding potential impacts to public transit routes operated by Oahu Transit Services, Inc. HDOT will coordinate with DTS prior to and during construction, as required. Additionally, HDOT will keep area representatives, community members, and emergency personnel apprised of the Project's construction status and potential impacts on the adjoining local street area network.

### **Air Quality Pollutant Emissions**

Construction of the Project will comply with provisions of Section 11-60.1-33, HAR. To mitigate potential impacts to air quality during construction, a dust control management plan will be prepared and BMPs will be implemented.

### **Noise Emissions**

To mitigate potential impacts related to noise, construction BMPs will be implemented and may include, but not be limited to, the use of properly muffled and quieted equipment. A Noise Permit and/or Variance, if required, will be obtained prior to construction. The Project will comply with HDOH construction noise limits and curfew times in accordance with Section 11-46, HAR.

### **Solid, Hazardous, and Liquid Waste Management**

Given the potential presence of contaminated medium, preparation of a Construction Environmental Hazard Management Plan to manage onsite contamination during construction activities is anticipated to be required and submitted to the HDOH Hazard Evaluation and Emergency Response Office for review. Furthermore, contaminated medium will be disposed of appropriately and in accordance with Federal and State regulations.



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

Based on the identification, inventory, and evaluation of historic properties within the Project area and an assessment of the potential for project activities to affect significant properties, it is anticipated that project activities will not affect the Waiālae Viaduct; therefore, no mitigation measures are proposed. The Project is currently under review by SHPD.

## **Rare, Threatened, and/or Endangered Species**

While the Project site does not include nesting or forage habitat for federally threatened or endangered terrestrial or avian species listed above, Hawaiian hoary bats, Hawaiian seabirds, and Manu o Kū/white tern may utilize or overfly the area. To avoid and minimize potential impacts the proposed Project may have upon threatened and endangered species, the following measures will be implemented:

### Hawaiian hoary bats

- During construction, work and staging areas will be contained within the State ROW. The removal of woody vegetation taller than 15 feet is not anticipated to be required. However, if required, site clearing, including the trimming and removal of woody plants greater than 15 feet tall will not be conducted during the bat birthing and pup rearing season (June 1 through September 15).
- No barbed wire fencing will be used or installed as a part of the Project.

### Hawaiian seabirds

- Lighting used during construction as well as any lighting installed as part of the Project will be downward facing and shielded.
- The Project is not anticipated to include night work. However, should night work be required during seabird fledging season between September 15 and December 15, lights will be used only when necessary and will be fully shielded and downward facing. Additionally, if required, a qualified biologist may be present at the Project site during this period to monitor and assess the risk of seabirds being attracted or grounded due to lighting.
- If needed, automatic motion sensor switches and controls on outdoor lights may be installed or lights may be turned off when human activity is not occurring in the lighted area. No permanent lighting will be installed as part of the Project.
- Though not anticipated, where fences extend above vegetation, three strands of polytape will be integrated into the fence to increase visibility.

Manu o Kū/White Tern

- Tree trimming or removal is not anticipated for construction of the Project. However, if required, a qualified biologist may survey the site for the presence of white terns prior to actions that could disturb trees.
- If a nest is discovered, DOFAW will be notified.

Additionally, construction BMPs will be implemented to mitigate potential impacts caused by invasive species:

- Though not anticipated, should CRB be detected on material or plants removed from the Project site during construction, the State Department of Agriculture will be contacted in accordance with the State's CRB Response Plan.
- To minimize potential impacts to vulnerable birds from nonnative predators such as cats, rodents, and mongooses, BMPs to minimize predator presence will be implemented, as needed, and will include, but not be limited to, removing cats and providing covered trash receptacles.

In addition, the following non-species-specific measures will be implemented:

- During construction, the movement of plant or soil material between worksites will be minimized and good housekeeping practices and erosion-control device(s) shall be employed at the construction site to prevent debris and soil from leaving the site. Invasive species controls shall be maintained to ensure that all materials transported from off-site are free of species such as detrimental fungal pathogens, pests, or invasive plant parts that could harm native species and ecosystems.
- All equipment, materials, and personnel will be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

**CONSULTATION**

The following parties have been consulted about this declaration exemption (Name, affiliation, consultation date). Consultation letters are provided in Attachment 2.

<b>Affiliation</b>	<b>Name &amp; Title</b>	<b>Consultation Date</b>	<b>Consultation Received</b>
HDOH-Clean Air Branch	Marianne Rossio, P.E.	3/3/2023	No response received. <sup>1</sup>
HDOH Clean Water Branch	Alec Wong, P.E., Chief	3/3/2023	No response received. <sup>1</sup>
HDOH Solid and Hazardous Waste Branch	Lene Ichinotsubo	3/3/2023	No response received. <sup>1</sup>
HDOH Hazard Evaluation and Emergency Response Office	Fenix Grange, Chief	3/3/2023	No response received. <sup>1</sup>
DLNR Office of Conservation and Coastal Lands	Samuel J. Lemmo, Administrator	3/3/2023	No response received. <sup>1</sup>
DLNR DOFAW	David Smith, Administrator	3/3/2023	5/31/2023
DLNR Division of Aquatic Resources	Brian Neilson, Administrator	3/3/2023	6/23/2023
Office of Hawaiian Affairs	Sylvia M. Hussey, Executive Director	3/3/2023	No response received. <sup>1</sup>
City DTS	J. Roger Morton, Director	3/3/2023	4/26/2023
City DPP	Dawn Takeuchi Apuna, Director Designate	3/3/2023	4/20/2023
City Department of Design and Construction	Haku Milles, P.E., LEED AP, Director	3/3/2023	3/17/2023
Honolulu Fire Department	Sheldon K. Hao, Chief	3/3/2023	No response received. <sup>1</sup>
Honolulu Police Department	Arthur J. Logan, Chief	3/3/2023	No response received. <sup>1</sup>
Waiālae-Kahala Neighborhood Board No. 3	Richard Turbin, Chair	3/3/2023	No response received. <sup>1</sup>

<b>Affiliation</b>	<b>Name &amp; Title</b>	<b>Consultation Date</b>	<b>Consultation Received</b>
HECO	Shelee Kimura, President & CEO	3/3/2023	4/19/2023
Hawaiian Telecom	Su Shin, President and General Manager c/o Michael Harley, Network Engineer	3/3/2023	No response received. <sup>1</sup>
Spectrum	Main Office	3/3/2023	No response received. <sup>1</sup>

<sup>1</sup>Responses were not received through 5/31/2023, beyond the 30-day comment period.

**EXEMPTION DECLARATION**

The primary, secondary, and cumulative impacts of the action described above have been considered pursuant to Chapter 343, HRS and Chapter 11-200.1, HAR. The HDOT declares that the action described above will have minimal or no significant impact on the environment and is therefore exempt from the requirement to prepare an environmental assessment.

This document (File No. HWY-DS 2.1637) is on file in our Department and is available for public review.



EDWIN H. SNIFFEN  
Director of Transportation

Jul 18, 2023

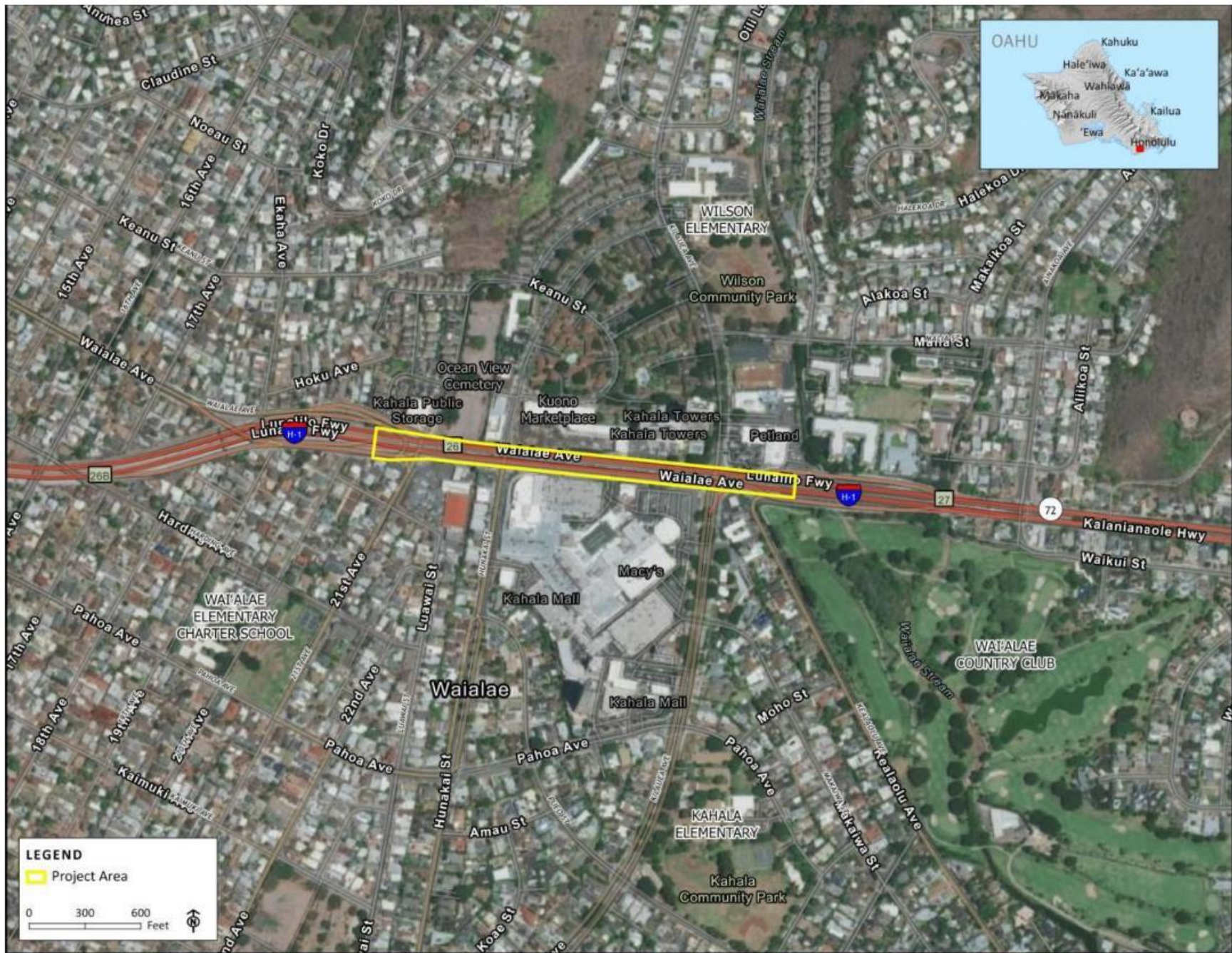
Date

Attachments

Attachment 1

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# **Project Vicinity Map**



Project Vicinity Map

Attachment 2

# **Documentation of Consultation**

## **Standard Consultation Letter (File No. HWY-DS 2.0749) & Consulted Parties**

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1. State of Hawaii (State) Department of Health (HDOH)-Clean Air Branch
2. HDOH Clean Water Branch
3. HDOH Solid and Hazardous Waste Branch
4. HDOH, Hazard Evaluation and Response Office
5. State Department of Land and Natural Resources (DLNR), Office of Conservation and Coastal Lands
6. DLNR, Division of Forestry and Wildlife
7. DLNR, Division of Aquatic Resources
8. Office of Hawaiian Affairs
9. City and County of Honolulu (City) Department of Transportation Services
10. City Department of Planning and Permitting
11. City Department of Design and Construction
12. Honolulu Fire Department
13. Honolulu Police Department
14. Waialae-Kahala Neighborhood Board No. 3
15. Hawaiian Electric Company, Inc.
16. Hawaiian Telecom
17. Spectrum



JOSH GREEN, M.D.  
GOVERNOR

HIGHWAY DESIGN BRANCH, ROOM 688A  
BRIDGE DESIGN SECTION, ROOM 611  
CADASTRAL DESIGN SECTION, ROOM 600  
ENVIRONMENTAL DESIGN SECTION, ROOM 688A  
HIGHWAY DESIGN SECTION, ROOM 609  
HYDRAULIC DESIGN SECTION, ROOM 636  
TECHNICAL DESIGN SECTION, ROOM 688



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
601 KAMOKILA BOULEVARD  
KAPOLEI, HAWAII 96707

EDWIN H. SNIFFEN  
DIRECTOR

Deputy Directors:  
DREANALEE K. KALILI  
TAMMY L. LEE  
ROBIN K. SHISHIDO  
JAMES KUNANE TOKIOKA

IN REPLY REFER TO:

HWY-DS 2.0749

March 3, 2023

Mr. Haku Milles, P.E., LEED AP, Director  
City and County of Honolulu  
Department of Design and Construction  
650 South King Street, 11th Floor  
Honolulu, Hawaii 96813

Dear Mr. Milles:

Subject: Request for Consultation Under Hawaii Revised Statutes (HRS), Chapter 343  
Proposed Exemption Declaration and Preliminary Permit Determination for  
Interstate Route H-1, Seismic Retrofit, Waialae Viaduct Inbound and Outbound  
Kahala, Oahu, Hawaii  
Federal-Aid Project No. NH-H1-1(277)

Pursuant to HRS Chapter 343, we are requesting comment on the proposed exemption declaration for the Seismic Retrofit of Waialae Viaduct project located in Kahala, Oahu, Hawaii (Figure 1). The project is located within the State Right-Of-Way (ROW) of the Interstate Route H-1 and is adjacent to Kahala Mall (Tax Map Key: 3-5-016:001) as well as other commercial and residential uses.

The project involves the use of State lands or funds, which is the trigger to complete the Hawaii Environmental Policy Act Review Process pursuant to HRS Chapter 343-5(a) and its associated Hawaii Administrative Rules (HAR), Section 11-200.1-8(a)(1). In accordance with HAR, Section 11-200.1-15, the project involves the repair and maintenance of an existing structure and is therefore a class of action that may be declared exempt from the preparation of an Environmental Assessment or Environmental Impact Statement.

As part of the early consultation process required for the exemption declaration pursuant to HAR, Section 11-200.1-17(b), the Hawaii Department of Transportation (HDOT), Highways is seeking your input regarding the proposed project to assist in determining if it will have minimal or no significant impacts to the surrounding environment and may proceed without further environmental review.

### **Project Description**

Constructed in the late 1960's, the Waialae Viaduct is a 29-foot-wide, precast concrete bridge accommodating traffic on the Interstate Route H-1 freeway above Waialae Avenue, a minor

arterial roadway within the Kaimuki and Kahala neighborhoods. The viaduct is located within the H-1 State ROW and is bounded by various commercial and residential uses. The viaduct begins near the intersection of Waiālae Avenue and 21st Avenue to the west and terminates near Kealaolu Avenue to the east, where H-1 then transitions to Kalanianaʻole Highway. Three (3) lanes of travel in each direction are supported on the viaduct, which follows a relatively straight alignment at the bridge structure and its approaches.

The bridge consists of separate inbound and outbound superstructures supported by common bent substructures. The bents consist of a post-tensioned concrete cap supported by columns, which have either shallow spread footings or prestressed concrete piles at the base. Additionally, concrete planter boxes are located atop every other concrete bent within the gap between the inbound and outbound superstructures.

HDOT, Highways is proposing to retrofit the Waiālae Viaduct in accordance with its Design Criteria. While the viaduct is considered to be in fair to good condition, retrofits are proposed to ensure that the bridge will not collapse after an earthquake event. The project will consist of the following two components:

Wrap the “outrigger” portion of several existing bent caps with fiber reinforced polymers (FRP) to strengthen the beam torsional capacity and transfer the bending moment from the superstructure to the center column(s) due to loading in the longitudinal direction (Figures 2 and 3). This will also address potential bent cap shear problems due to loading in the transverse direction. Installation of the FRP will require demolition and reconstruction of a portion of various concrete planters atop the bentcaps as identified in Figure 3.

Thicken pilecap in several locations and add a top layer of reinforcing steel and dowels to support piles in tension and increase shear strength (Figures 2 and 4). This work will require excavation and backfill work not to exceed 5 feet below the surface, and reconstruction of the sidewalk and median.

During construction, work and staging areas will be contained within the State ROW. Proposed work on the pilecaps and footings within the median is anticipated to require the temporary closure of portions of lanes in both directions, and speed limits may be reduced. Potential short-term impacts to traffic are anticipated to be minimal to moderate, and would be mitigated through Best Management Practices, including traffic control at intersections, temporarily shifting lanes as needed, and the adjustment of traffic signals. Steel plates would also be used during non-working hours to cover open excavations.

If you have comments on the proposed project, please reply to this request for consultation within thirty (30) days of letter receipt or by April 3, 2023. Comments can be provided directly to Mr. Andrew J. Hirano by U.S. mail at 601 Kamokila Boulevard, Kapolei, Hawaii 96707 or via email at [andrew.j.hirano@hawaii.gov](mailto:andrew.j.hirano@hawaii.gov).

Mr. Haku Milles, P.E., LEED AP, Director  
March 3, 2023  
Page 3

HWY-DS 2.0749

We appreciate your time and consideration of our request.

Sincerely,

*Henry Kennedy*

HENRY KENNEDY  
Engineering Program Manager  
Highways Design Branch

Enclosures

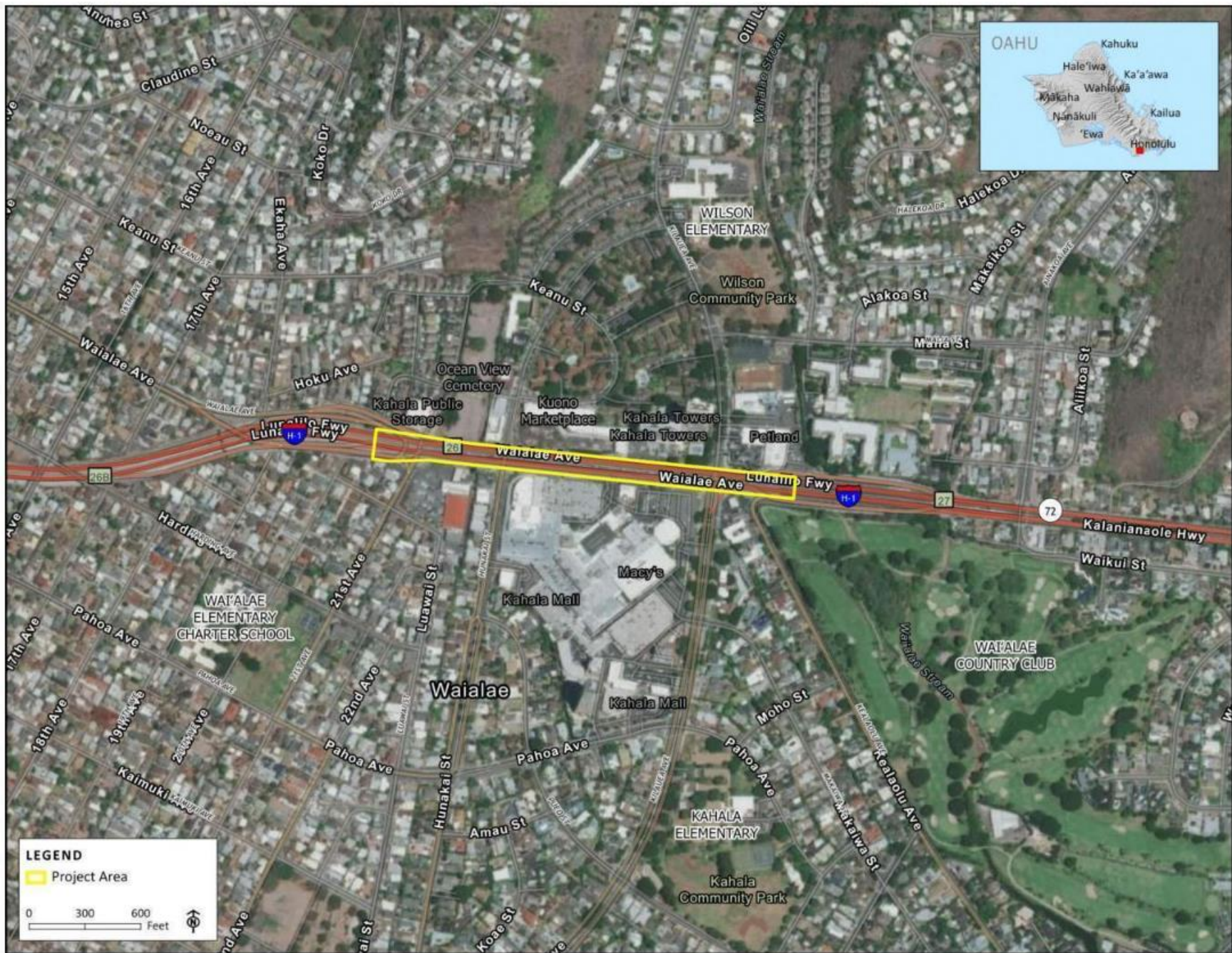


Figure 1: Project Location

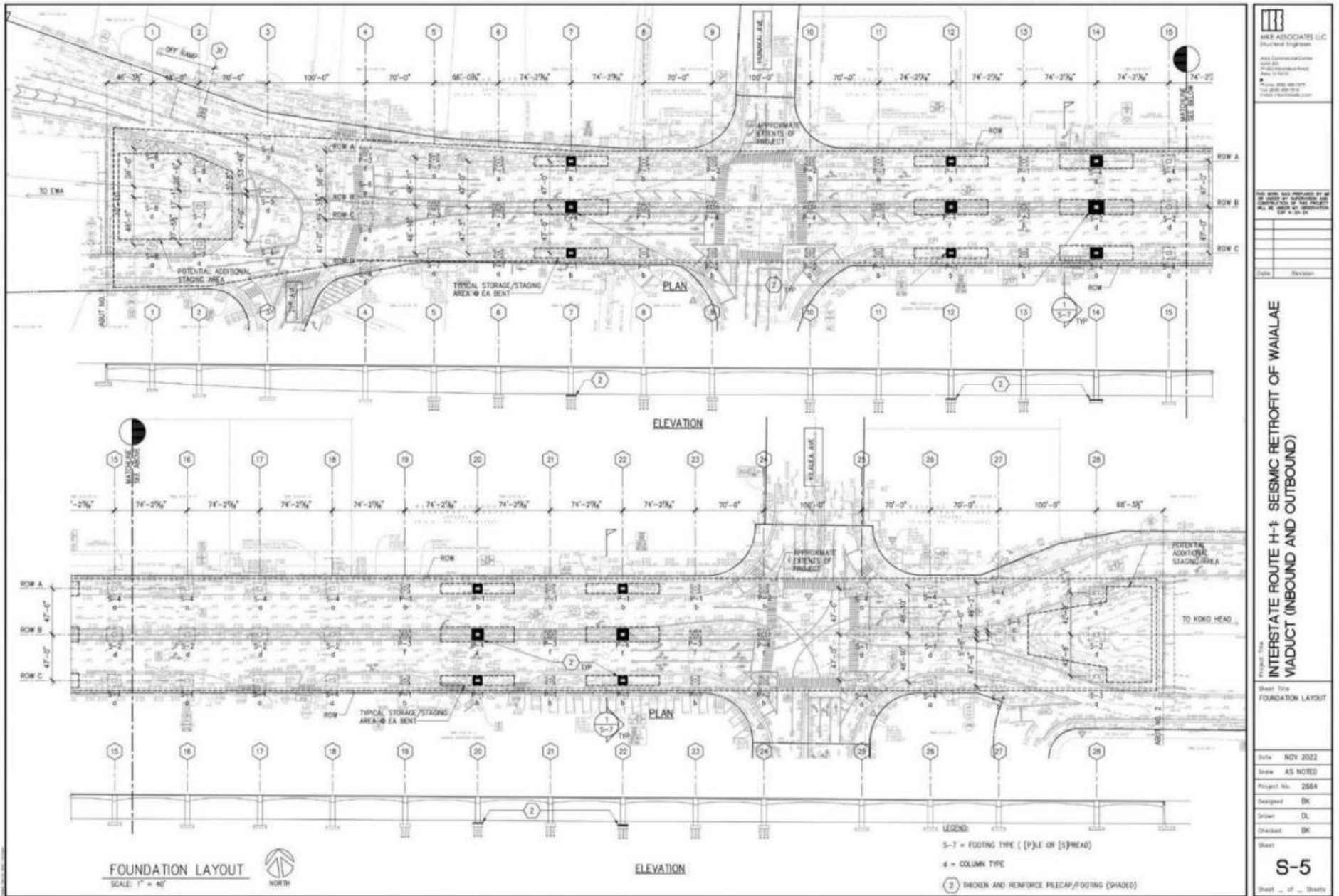


Figure 2: Preliminary Plan and Elevation – Foundations

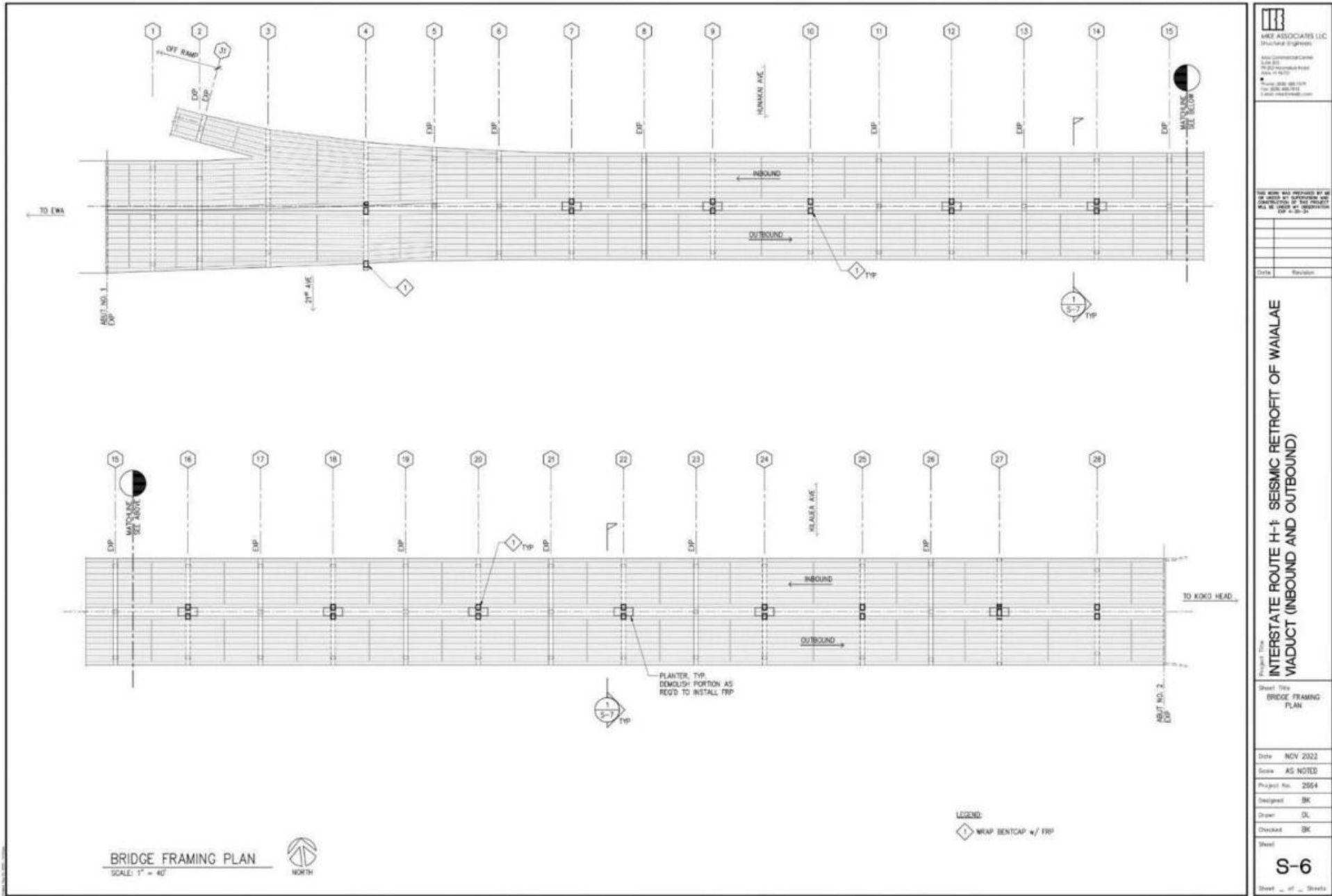
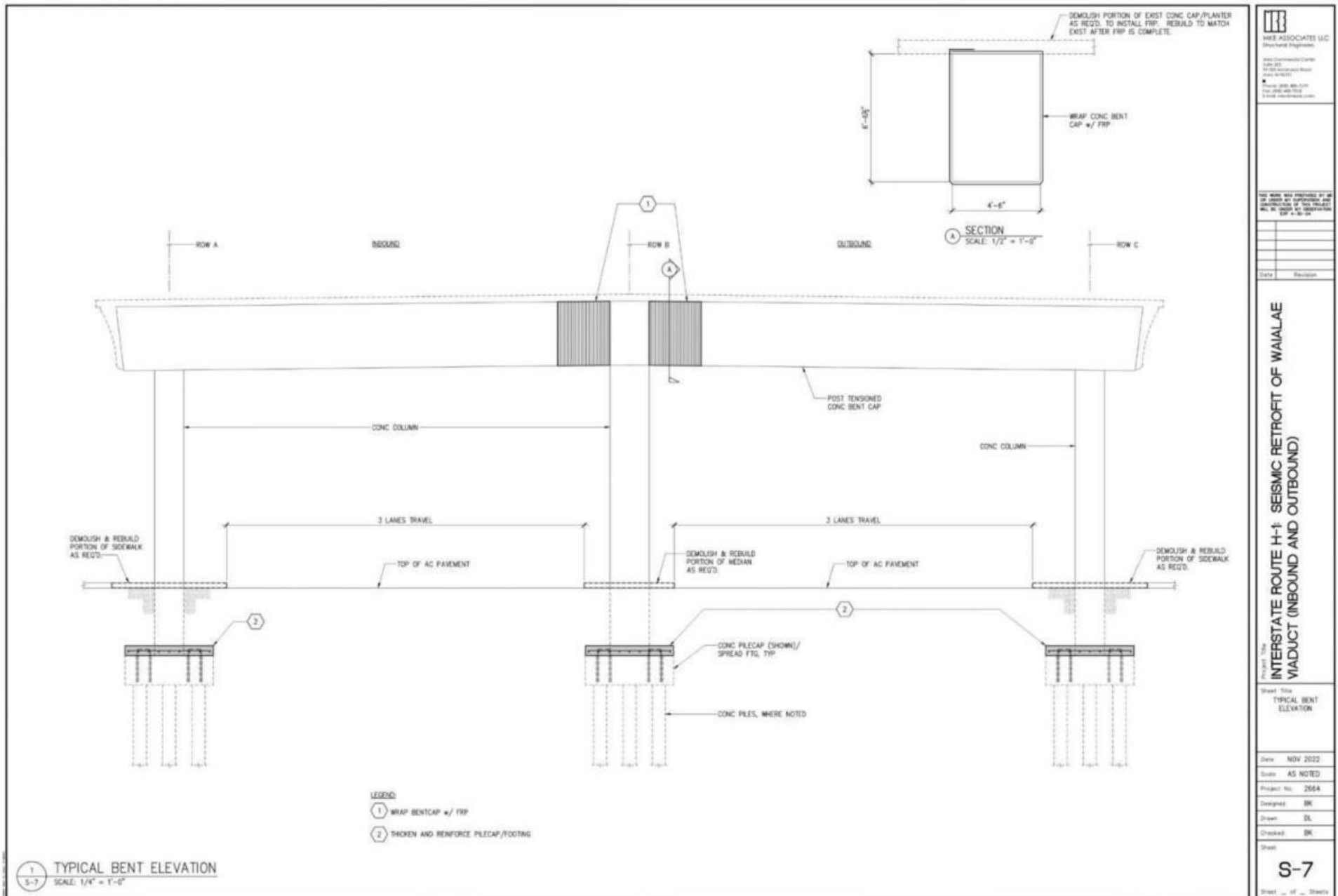


Figure 3: Preliminary Bridge Framing Plan



**H&E ASSOCIATES LLC**  
 Structural Engineers  
 4000 Commercial Center  
 Suite 300  
 10700 Lakeland Road  
 Dallas, TX 75224  
 Phone: (972) 496-1200  
 Fax: (972) 496-1202  
 Email: info@h-e.com

THIS DRAWING WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS. EXPIRES 08/31/24

Date	Revision

**INTERSTATE ROUTE H-1 SEISMIC RETROFIT OF WAIALAE VIADUCT (INBOUND AND OUTBOUND)**

Sheet Title  
**TYPICAL BENT ELEVATION**

Date: NOV 2022  
 Scale: AS NOTED  
 Project No: 2664  
 Designed: BK  
 Drawn: DL  
 Checked: BK  
 Sheet

**S-7**

Sheet - of - Sheets

**Figure 4: Typical Bent Elevation**

## **Responses Received**

---

1. City and County of Honolulu (City)  
Department of Design and Construction  
March 17, 2023
2. Hawaiian Electric Company, Inc.  
April 19, 2023
3. City Department of Planning and Permitting  
April 20, 2023
4. City Department of Transportation Services  
April 26, 2023
5. State Department of Land and Natural  
Resources, Division of Forestry and Wildlife  
May 31, 2023



DEPARTMENT OF DESIGN AND CONSTRUCTION  
CITY AND COUNTY OF HONOLULU

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

RICK BLANGIARDI  
MAYOR



HAKU MILLES, P.E.  
DIRECTOR

BRYAN GALLAGHER, P.E.  
DEPUTY DIRECTOR

CDD-B 23-899101

March 17, 2023

Mr. Henry Kennedy  
Highways Design Branch  
Department of Transportation  
State of Hawaii  
601 Kamokila Boulevard  
Kapolei, Hawaii 96707

Attention: Mr. Andrew J. Hirano

Dear Mr. Kennedy:

**SUBJECT:** Request for Consultation under Hawaii Revised Statutes, Chapter 343  
Proposed Exemption Declaration and Preliminary Permit Determination  
for Interstate Route H-1, Seismic Retrofit, Waialae Viaduct Inbound and  
Outbound  
Kahala, Oahu, Hawaii  
Federal-Aid Project No. NH-H1-1(277)

Thank you for your letter dated March 3, 2023 regarding the subject proposed project and seeking input if it will have minimal or no significant impacts to the surrounding environment.

At this time, we have no comments regarding the subject project but want to inform you that the City and County of Honolulu Department of Design and Construction has a nearby resurfacing project currently in design. The Rehabilitation of Localized Streets, Phase 26A project includes one (1) street mauka of the Waialae Viaduct, and this project is tentatively being programmed for construction in Fiscal Year 2025. Enclosed is a map of the project located in the Kaimuki, Diamond Head, and Kahala areas, with the viaduct highlighted in yellow.

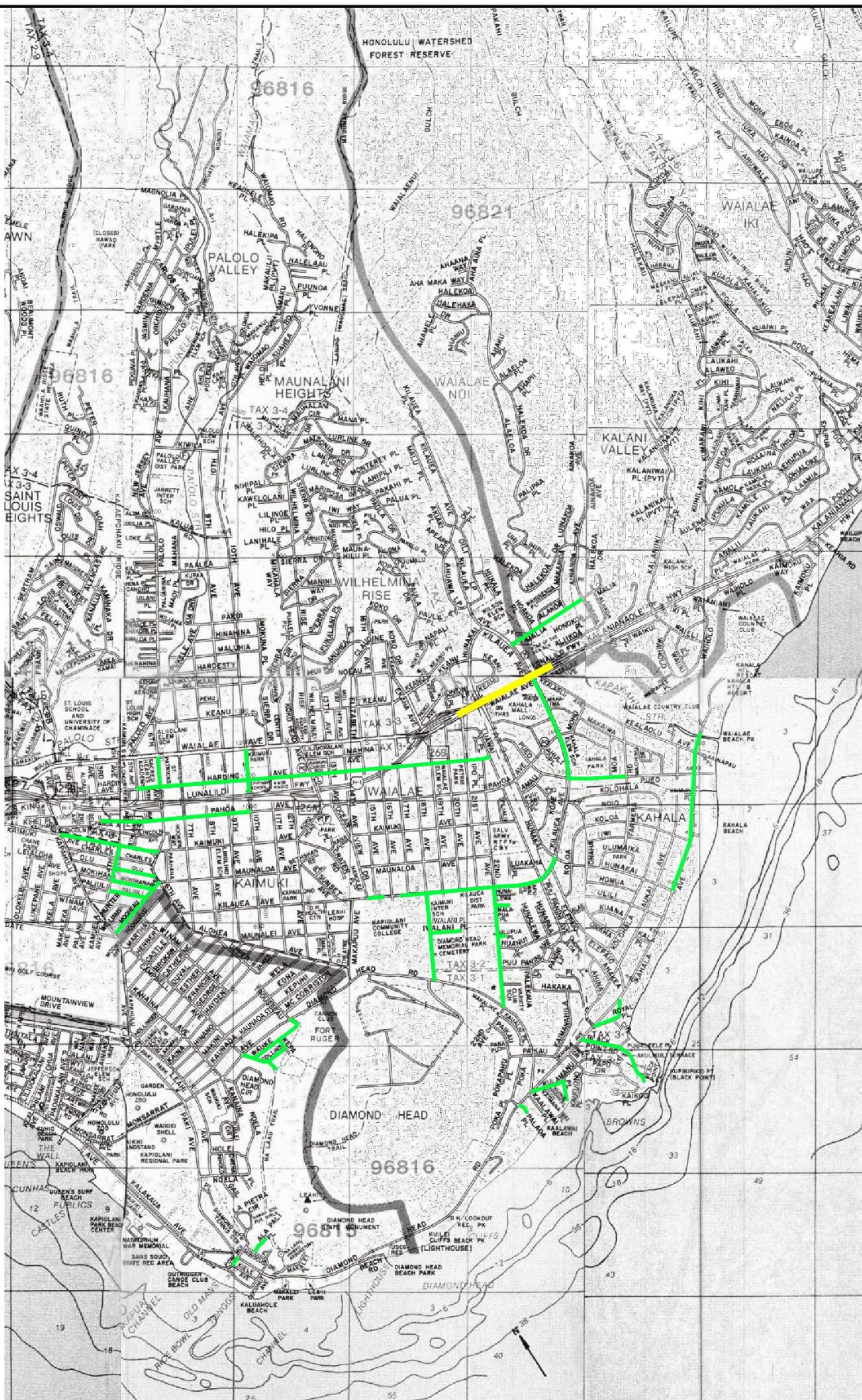
Should you have any questions, please contact Pam Noguchi of the Civil Division at (808) 768-8814.

Sincerely,


  
For Haku Milles, P.E., LEED AP  
Director

PN:HK:pto (898414)

Enclosure



**LEGEND**

 REHABILITATION OF LOCALIZED STREETS, PHASE 26A

PROPOSED REHABILITATION OF STREETS  
**REHABILITATION OF LOCALIZED STREETS, PHASE 26A**  
 HONOLULU, OAHU, HAWAII


 **Austin Tsutsumi & ASSOCIATES, INC.**  
 Engineers & Surveyors  
**ROLS PHASE 26A STREET MAP**

EXHIBIT  
**3**

## Noelle Besa Wright

---

**From:** brian@mkellc.com  
**Sent:** Wednesday, April 19, 2023 12:04 PM  
**To:** Noelle Besa Wright; Tracy Camuso  
**Subject:** FW: request for consultation-proposed exemption declaration H-1 Waialae Viaduct Inbound and Outbound

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Noelle/Tracy,

FYI.

Best Regards,  
Brian Kung, P.E.  
MKE Associates LLC  
(808) 488-7579 x104

This email message is intended solely for the person or entity to which it is addressed and should not be opened, read, or utilized by any other party. If you have received this email in error, please contact the sender immediately and delete the material from any computer that has received it.

---

**From:** Hirano, Andrew J <[andrew.j.hirano@hawaii.gov](mailto:andrew.j.hirano@hawaii.gov)>  
**Sent:** Wednesday, April 19, 2023 10:54 AM  
**To:** Brian Kung (MKE) <[brian@mkellc.com](mailto:brian@mkellc.com)>  
**Subject:** Fw: request for consultation-proposed exemption declaration H-1 Waialae Viaduct Inbound and Outbound

FYI. Response from HECO.

---

**From:** Liu, Rouen <[rouen.liu@hawaiianelectric.com](mailto:rouen.liu@hawaiianelectric.com)>  
**Sent:** Wednesday, April 19, 2023 10:36 AM  
**To:** Hirano, Andrew J <[andrew.j.hirano@hawaii.gov](mailto:andrew.j.hirano@hawaii.gov)>  
**Cc:** Kuwaye, Kristen <[kristen.kuwaye@hawaiianelectric.com](mailto:kristen.kuwaye@hawaiianelectric.com)>  
**Subject:** [EXTERNAL] request for consultation-proposed exemption declaration H-1 Waialae Viaduct Inbound and Outbound

Dear Mr. Hirano,

Thank you for the opportunity to comment on the subject project exemption declaration. Hawaiian Electric Company has no objection. Should Hawaiian Electric have existing easements and facilities on the subject property, we will need continued access for maintenance of our facilities. We appreciate your efforts to keep us apprised of the subject project in the planning process. As the proposed H-1 Seismic Retrofit Waialae Viaduct Inbound and Outbound project comes to fruition, please continue to keep us informed.

Should there be any questions, please contact me at 808-543-7245.

Thank you,  
Rouen Liu  
Permit Engineer  
Hawaiian Electric Company

---

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File

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

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



RICK BLANGIARDI  
MAYOR

DAWN TAKEUCHI APUNA  
DIRECTOR

JIRO A. SUMADA  
DEPUTY DIRECTOR

April 20, 2023

2023/ELOG-429(JD)

Mr. Andrew J. Hirano  
State of Hawaii Department of Transportation  
601 Kamokila Boulevard  
Kapolei, Hawaii 96707

Dear Mr. Hirano:

**SUBJECT: Request for Comments**  
**Interstate Route H-1, Seismic Retrofit**  
**Waialae Viaduct Inbound and Outbound - Kahala**

This responds to your letter, received March 3, 2023, requesting comments on the proposed Chapter 343, Hawaii Revised Statutes exemption and whether a Special Management Area (SMA) Permit will be required for the Seismic Retrofit of Waialae Viaduct Project located in Kahala. The Department of Planning and Permitting (DPP) concurs that the Project may be exempt from the preparation of an Environmental Assessment or Environmental Impact Statement, pursuant to Hawaii Administrative Rules (HAR) Section 11-200.1-15. We also concur that a SMA Permit is not required for the proposed work within the existing right-of-way (ROW).

Pursuant to City and County of Honolulu Department of Land Utilization (now the DPP) Comprehensive Exemption List, dated August 12, 1981, the Project may be exempt from the preparation of an environmental disclosure document under Class 1, Item 4: repair and maintenance of roads and highways within existing ROWs. We concur with your determination that the Project is an exempt action.

Pursuant to Chapter 25, Revised Ordinances of Honolulu (ROH), Section 25-1.3(2)(c) and (g), "development" within the SMA does not include the repair or maintenance of roads and highways within existing ROWs; or the repair and maintenance of existing structures. Only "development" is subject to the permitting requirements of Chapter 25, ROH.

Lastly, you state that the temporary staging area will be located within the State ROW. However, please keep us informed as you identify and confirm the actual

Mr. Andrew J. Hirano  
April 20, 2023  
Page 2

location of the temporary staging area. We will provide further comments if it is within the SMA and located outside of the ROW.

Should you have any questions, please contact Jordan Dildy, of our Zoning Regulations and Permits Branch, at (808) 768-8027 or via email at [jdildy@honolulu.gov](mailto:jdildy@honolulu.gov).

Very truly yours,

*for Dawn Takeuchi Apuna*  
Dawn Takeuchi Apuna  
Director

DEPARTMENT OF TRANSPORTATION SERVICES  
CITY AND COUNTY OF HONOLULU

711 KAPIOLANI BOULEVARD, SUITE 1600  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

RICK BLANGIARDI  
MAYOR



J. ROGER MORTON  
DIRECTOR

JON Y. NOUCHI  
DEPUTY DIRECTOR

TP4/23-901477

April 26, 2023

Andrew J. Hirano, Project Manager  
State of Hawaii  
Department of Transportation  
Highway Design Branch  
601 Kamokila Boulevard  
Kapolei, Hawaii 96707

Dear Mr. Hirano:

**SUBJECT:** Request for Consultation Under Hawaii Revised Statutes (HTS), Chapter 343; Proposed Exemption Declaration and Preliminary Permit Determination for Interstate Route H-1, Seismic Retrofit, Waialae Viaduct Inbound and Outbound; Kahala, Oahu, Hawaii; Federal Project No. NH-H1-1(277)

Thank you for the opportunity to provide written comments regarding the Request for Consultation Under Hawaii Revised Statutes (HTS), Chapter 343; Proposed Exemption Declaration and Preliminary Permit Determination for Interstate Route H-1, Seismic Retrofit, Waialae Viaduct Inbound and Outbound; Kahala, Oahu, Hawaii; Federal Project No. NH-H1-1(277). We have the following comments.

1. **Bicycle Improvements.** Waialae Avenue within the project area is classified as a "Boulevard" planned to have sidewalks, bike lanes, six travel lanes, medians, and bus service mixed with general purpose travel. Additionally, a Priority 3 Bike Lane project (Project ID 3-163 in the 2019 Oahu Bike Plan) is located on Waialae Avenue within the project area. Any improvements or modifications to the roadway should be designed to support the forthcoming bike lane project.
2. **Neighborhood Impacts.** The area representatives, neighborhood board, as well as the area guests, businesses, emergency personnel (fire, ambulance, and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details and status throughout the project and

Mr. Andrew J. Hirano, Project Manager  
April 3, 2023  
Page 2

the impacts that the project may have on the adjoining local street area network.

3. **Bus Stops.** The project site is in the immediate vicinity of bus stops. Please coordinate roadway improvements with DTS – Transportation Mobility Division (TMD). Contact DTS-TMD at [TheBusStop@honolulu.gov](mailto:TheBusStop@honolulu.gov)

Should you have any questions, please contact Greg Tsugawa, of my staff, at (808) 768-6683.

Very truly yours,



J. Roger Morton  
Director



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  
KA 'OIHANA KUMUWAIWAI 'ĀINA

DIVISION OF FORESTRY AND WILDLIFE  
1151 PUNCHBOWL STREET, ROOM 325  
HONOLULU, HAWAII 96813

DAWN N.S. CHANG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

LAURA H.E. KAAKUA  
FIRST DEPUTY

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

May 31, 2023

**MEMORANDUM**

*Log no. 4029*

*Reference no. HWY-DS 2.0953*

**TO:** HENRY KENNEDY, Engineering Program Manager  
Highways Design Branch

**FROM:** LAINIE BERRY, Wildlife Program Manager  
Division of Forestry and Wildlife

**SUBJECT:** **Division of Forestry and Wildlife Comments for Interstate Route H-1, Seismic Retrofit Project, Waialae Viaduct Inbound and Outbound in Kahala, Oahu**

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your request for comments for the Proposed Exemption Declaration for Interstate Route H-1, Seismic Retrofit of the Waialae Viaduct Inbound and Outbound, in Kahala on the island of Oahu TMK: (1) 3-5-016:001. The project is located within the State Right-Of-Way (ROW) of Interstate Route H-1 and is adjacent to the Kahala Mall and other commercial and residential uses. HDOT, Highways is proposing to retrofit the Waialae Viaduct in accordance with its Design Criteria. The project will consist of the following two (2) components: wrapping the "outrigger" portion of several existing bent caps with fiber reinforced polymers (FRP) and thickening pilecap in several locations while adding at top layer reinforcing steel and dowels to support piles in tension and increase shear strength.

The State listed 'Ōpe'ape'a or Hawaiian Hoary Bat (*Lasiurus cinereus semotus*) could potentially occur at or in the vicinity of the project 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 also be avoided for any construction because bats can become ensnared and killed by such fencing material 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 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.

If nighttime construction is required during the seabird fledging season (September 15 to December 15), we recommend that a qualified biologist be present at the project site to monitor and assess the risk of seabirds being attracted or grounded due to the lighting. If seabirds are seen circling around the area, lights should then be turned off. If a downed seabird is detected, please follow DOFAW's recommended response protocol by visiting <https://dlnr.hawaii.gov/wildlife/seabird-fallout-season/#response>.

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>.

The State threatened Manu o Kū or White Tern (*Gygis alba*) is known to nest in the vicinity of the proposed project. If tree trimming or removal is planned, DOFAW strongly recommends a qualified biologist survey for the presence of White Terns prior to any action that could disturb the trees. White Tern pairs typically lay their single egg on a tree branch with no nest. Eggs and chicks can be dislodged by construction equipment or workers that contact trees in which White Terns are nesting. As such, a tree protection program should be in place for any mature trees with nesting or roosting White Terns. If a nest is discovered, please notify DOFAW staff for assistance.

DOFAW recommends using native plant species for landscaping that are 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 also recommends referring to [www.plantpono.org](http://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.

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 on the island of O'ahu. 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/>.

DOFAW is concerned about impacts to vulnerable birds from nonnative predators such as cats, rodents, and mongooses. We recommend taking action to minimize predator presence; remove cats, place bait stations for rodents and mongoose, and provide covered trash receptacles.

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 Myrna N. Giraldo Pérez, Protected Species Habitat Conservation Planning Coordinator at (808) 265-3276 or [myrna.giraldo-perez@hawaii.gov](mailto:myrna.giraldo-perez@hawaii.gov).

Sincerely,

*Lainie Berry*

LAINIE BERRY  
Wildlife Program Manager

JOSH GREEN, M.D.  
GOVERNOR | KE KIA'ĀINA  
SYLMA LUKE  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII  
DEPARTMENT OF LAND AND NATURAL  
RESOURCES DIVISION OF AQUATIC RESOURCES  
1151 PUNCHBOWL STREET, ROOM 330  
HONOLULU, HAWAII 96813

Date: 6/23/2023

DAR # AR6425

DAWN N.S. CHANG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT  
LAURA H.E. KAAKUA  
FIRST DEPUTY  
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

MEMORANDUM

TO: Brian J. Neilson  
DAR Administrator

FROM: Kendall Tucker \_\_\_\_\_, Aquatic Biologist

SUBJECT: Hawaii Revised Statutes (HRS) Chapters 195D and 343 Consultation  
Proposed Exemption Declaration for Interstate Route H-1, Seismic Retrofit,  
Waiialae Viaduct

Request Submitted by: Henry Kennedy- Engineering Program Manager Highways Design Bran  
KAHALA, ISLAND OF OAHU FEDERAL-AID PROJECT NO. NH-H1-1(277)

Location of Project: \_\_\_\_\_

Brief Description of Project:

Constructed in the late 1960's, Waiialae Viaduct is a 29-foot-wide, precast concrete bridge accommodating traffic on Interstate Route H-1 above Waiialae Avenue, a minor arterial roadway within the Kaimuki and Kahala neighborhoods. The viaduct is located within the H-1 State ROW and is bounded by various commercial and residential uses. The viaduct begins near the intersection of Waiialae Avenue and 21st Avenue to the west and terminates near Kealaolu Avenue to the east, where the H-1 then transitions to Kalaniana'ole Highway. Three (3) lanes of travel in each direction are supported on the viaduct, which follows a relatively straight alignment at the bridge structure and its approaches.

Comments:

No Comments  Comments Attached

Thank you for providing DAR the opportunity to review and comment on the proposed project. Should there be any changes to the project plan, DAR requests the opportunity to review and comment on those changes.

Comments Approved:  Date: Jun 23, 2023  
Brian J. Neilson  
DAR Administrator

DAR# AR6425

#### Brief Description of Project

The bridge consists of separate inbound and outbound superstructures supported by common bent substructures. The bents consist of a post-tensioned concrete cap supported by columns, which have either shallow spread footings or prestressed concrete piles at the base. Additionally, concrete planter boxes are located atop every other concrete bent within the gap between the Inbound and Outbound superstructures.

HDOT, Highways is proposing to retrofit the Waiialae Viaduct in accordance with its Design Criteria. While the viaduct is considered to be in fair to good condition, retrofits are

proposed to ensure that the bridge will not collapse after an earthquake event. The project will

consist of the following two (2) components:

1. Wrap the "outrigger" portion of several existing bent caps with fiber reinforced polymers (FRP) to strengthen the beam torsional capacity and transfer the bending movement from the superstructure to the center column(s) due to loading in the longitudinal direction (Figures 2 and 3). This will also address potential bent cap shear problems due to loading in the transverse direction. Installation of the FRP will require demolition and reconstruction of a portion of various concrete planters atop the bentcaps

as identified in Figure 3.

2. Thicken pilecap in several locations and add a top layer of reinforcing steel and dowels to support piles in tension and increase shear strength (Figures 2 and 4). This work will require excavation and backfill work not to exceed 5 feet below the surface, and reconstruction of the sidewalk and median.

The project is located approximately one mile inland from the shoreline; therefore, impacts to marine species are not anticipated. During the construction period, work and staging areas will be contained within the State ROW. Best Management Practices will be implemented to minimize the potential impact of stormwater runoff on the marine environment

DAR# AR6425

Comments

DAR concurs that the proposed activity should have minimal to no impact on aquatic life. BMPs will be employed to reduce stormwater runoff to the marine environment. DAR requests that if for some reason an event occurs that could have an impact on aquatic resources to please contact DAR so that biological staff can come out and do an assessment. Thank you for the ability to comment on the proposed project. If plans to the project change from what was expected above DAR requests the ability to review and comment on the proposed changes. Thank you