

QUEEN KAAHUMANU HIGHWAY, WIDENING, PHASE II  
KEALAKEHE PARKWAY TO KEAHOLE AIRPORT ACCESS  
ROAD PROJECT NO. NH-019-1(38)R

CLOSEOUT MEMO  
MEMORANDUM OF  
AGREEMENT STIPULATION  
10B

Stipulation 10.B. Underpass Feasibility Study, MOA executed on March 17, 2015 reads:

*B. UNDERPASS FEASIBILITY STUDY. The HDOT shall conduct a feasibility study with the objective of facilitating safe pedestrian access across the Queen Ka'ahumanu Highway at the "Trail to Honokohau." The study will examine at-grade crossing locations, the installation of a pedestrian tunnel crossing, and the modification of existing culverts for pedestrian-bicycle use. The study shall seek examples and policies regarding use of existing pedestrian tunnels and modified culverts in Hawai'i and other States. Subsurface crossing(s) shall include provisions for a third-party organization to take responsibility for maintenance, security, and liability for the crossing(s) as has been the policy of HDOT for more than a decade. The HDOT shall identify and select a qualified independent third party to conduct the study. As part of the study, HDOT shall consult with NPS to identify community organizations who may be invited to participate in the feasibility study. Organizations that may be invited to participate include: signatories to this MOA, NHOs, Peoples Advocacy Trails Hawai'i (PATH), County of Hawai'i, local primary and secondary school officials, universities, community groups, the Royal Order of Kamehameha, and the Association of Hawaiian Civic Clubs. As part of the feasibility study the HDOT shall convene a community meeting that has as its objective the development of design guidelines for future Queen Ka'ahumanu Highway expansion projects that includes provisions for trail connectivity and pedestrian crossings under the Queen Ka'ahumanu Highway as well as paralleling the highway. The HDOT shall transmit the findings of the feasibility study (inclusive of any documents or written testimony from the community meeting above) to parties participating in the feasibility study prior to the expiration of this MOA.*

Actions Taken to Complete Stipulation 10.B. Underpass Feasibility Study:

*To use quick links to referenced documents, click on the blue number in the bracket, [00].  
To return to this page, use [Command]+[Home].*

***The HDOT shall identify and select a qualified independent third party to conduct the study.***

HDOT selected RM Towill Corporation's Engineering Department (RMT) to conduct the underpass feasibility study. As a licensed engineering firm they are very familiar with underpass and overpass studies. RMT conducted the following research:

- a. Identified a 10-ft diameter existing drainage culvert located approximately 700-ft from the Trail to Honokōhau as a study site for modification of a drainage structure [01].

- b. Recognized potential at grade crossings in the vicinity of the Trail to Honokōhau at the Queen Ka‘ahumanu Highway intersection at the Kaloko-Honokōhau National Park Road and intersection at Kealakehe Parkway.
- c. Researched existing regulatory policies, design guides and maintenance responsibility for pedestrian tunnels for the following agencies: Federal Highway Administration, State of Hawaii Department of Transportation, Highways Division, City and County of Honolulu, County of Kauai, County of Maui, Hawaii County, and other States (Montana, Oregon, Colorado, Milwaukie, Washington).

***As part of the study, HDOT shall consult with NPS to identify community organizations who may be invited to participate in the feasibility study. Organizations that may be invited to participate include: signatories to this MOA, NHOs, Peoples Advocacy Trails Hawai'i (PATH), County of Hawai'i, local primary and secondary school officials, universities, community groups, the Royal Order of Kamehameha, and the Association of Hawaiian Civic Clubs.***

On 03/09/17, RMT reached out to the National Park Service (NPS) with a draft copy of the Underpass Study and asked NPS for assistance to identify additional community groups [02]. Subsequently, RMT provided email notice on 05/11/17 of an upcoming Community Meeting to discuss the development of the Underpass Study. The email also asked the National Park Service (NPS) and consulting parties to help identify additional community participants. On 06/23/17, an emailed invitation was sent to an expanded lists of Consulting Parties for a 07/25/17 Meeting [06]. Organizations invited included MOA signatories, NHOs, Peoples Advocacy Trails Hawai'i (PATH), County of Hawai'i, local primary and secondary school officials, universities, community groups, the Royal Order of Kamehameha, and the Association of Hawaiian Civic Clubs.

***As part of the feasibility study the HDOT shall convene a community meeting that has as its objective the development of design guidelines for future Queen Ka'ahumanu Highway expansion projects that includes provisions for trail connectivity and pedestrian crossings under the Queen Ka'ahumanu Highway as well as paralleling the highway.***

HDOT held two meetings to discuss the feasibility study and to develop design guidelines. The first meeting was held on 07/25/17. At that meeting, RM Towill presented a PowerPoint presentation which discussed components of the Draft Underpass Feasibility Study [08]. The presentation showed examples of underpasses in the State of Hawaii and its local Cities and Counties as well as underpasses in other States (Oregon, Washington, Connecticut) [Examples].

Design guidelines were also discussed during the 07/25/17 meeting. Example guidelines from the Federal Highways Administration (FHWA), State of Hawaii Department of Transportation (HDOT), local Cities and Counties, and policies from other States (Oregon, Washington) and cities of Los Angeles and Sacramento CA, Scottsdale AZ and the City of Grant, NM were presented. [Guidelines].

It was agreed that the Feasibility Study would focus on four crossing options [Options]: (1) At-Grade, (2) Drainage Culvert Modification (3) Underpass Structure, and (4) Other Non-Structural Accommodations.

A follow-up meeting on 12/07/17 [09] reviewed crossing examples and guidelines and invited questions and input. HDOT then proposed to base future design guidelines on Context Sensitive Design (CSD) that would require “a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources while maintaining safety and mobility”. It was agreed that HDOT would use the CSD approach.

The Underpass Feasibility Study was completed in June 2019 [11]. The design guidelines in the Underpass Feasibility Study identify that the trails in and along the Queen Ka‘ahumanu Highway corridor should be a cornerstone component for applying the CSD approach for future projects [Appendix B].

Two hard copies of the Underpass Feasibility Study were distributed during the 06/26/19 Meeting [10]. Electronic copies were posted on the HDOT Socrata site [highways.hidot.hawaii.gov/stories/s/Queen-Kaahumanu-Widening-Project/d5h2-fqjj] and RMT shared site [https://share.rmtowill.com/index.php/s/bjTqGBKwEjB72eC] [14].

***The HDOT shall transmit the findings of the feasibility study (inclusive of any documents or written testimony from the community meeting above) to parties participating in the feasibility study prior to the expiration of this MOA.***

During a meeting on 10/25/19 Makani Hou requested, and FHWA agreed to provide a synopsis of the Underpass Feasibility Study. The summary [12] was emailed to all consulting parties on 02/26/20.

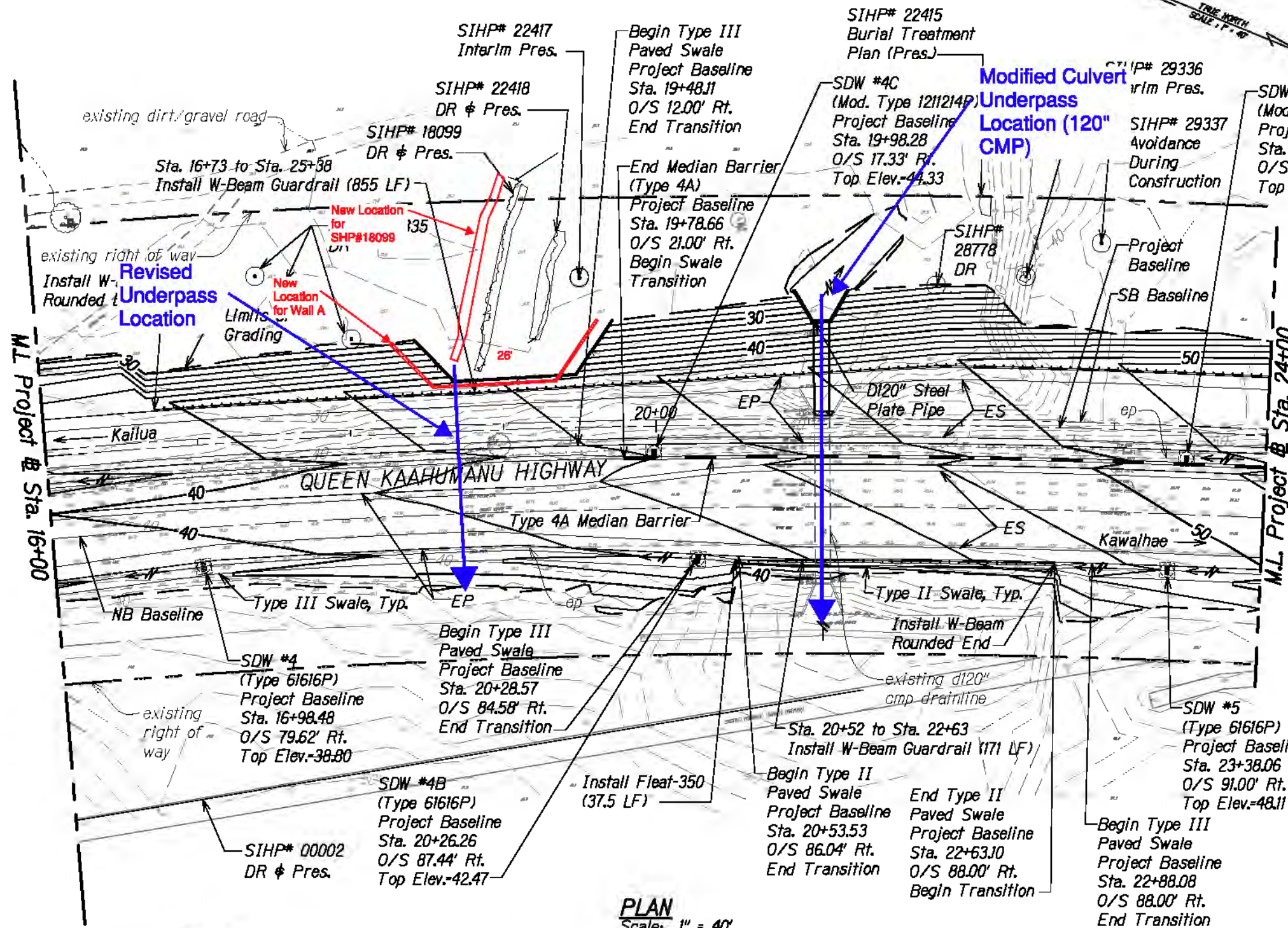
***Other Issues:***

1. During a 04/17/17 meeting, Consulting Parties expressed the importance of having a safe crossing for historic trails that intersect the Queen Kaahumanu Highway [03].
2. Consulting Parties inquired about liability for the maintenance of the overpass during the 05/23/17 meeting. HDOT explained that the maintenance of an underpass for use by organizations would be maintained by that third-party organizations. Therefore, the Stipulation directs it be included in the Underpass Study [05].
3. Makani Hou requested a copy of a third-party agreement to maintain an underpass during the 02/29/20 meeting. The Memorandum of Agreement between the Territory of Hawaii and the Honpa Hongwanji Mission documenting maintenance agreement [13] was emailed to all consulting parties on 03/23/20.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2011	ADD. 254	528

01



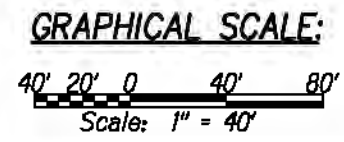
- NOTES:**
1. All inlets shall have inlet filters unless otherwise noted.
  2. For Shallow Drywell, see Det. Sht. 287.
  3. For Median Barrier, see DOT Std. Plan TE-41.

**Underpass Study**

1. Locations for at-grade crossings. Provide a plan from Kealahaka Parkway towards Kailua-Kona to show that the best place for a safe at-grade crossing is at the intersection with Kealahaka Parkway without some kind of at-grade signal.
2. Pedestrian Tunnel Crossing. The "Trail to Mamalahoe" was mapped in the wrong location during the design. With the new location of site SHP #18099, the tunnel and Wall A has to be relocated. Provide a new Plan and Profile drawing with mass grading and elevations at the entrance so that an illustrative sketch can be drawn for the study. The existing Plan and Profile should show the proposed Wall A section and have an invert of about 28'. The Cost should include cutting the Wall.
3. Modification of Existing Culverts. Get pictures of the existing 120" CMP Culvert for a sketch of the entrance and prepare a plan and profile of a path to the existing culvert. Take a section of the circular culvert and the modification to the culvert invert to allow pedestrian and bicycle use. Do a hydraulic calculation of the modified section (SSFM has provided the latest hydrology in their submittal).

**LEGEND:**

- 50— Finish Grade
- - -50- - - existing ground
- Limits of Grading
- existing spot elevation
- SIHP\* XXXXX Archaeology Sites
- Direction of Flow
- Median Barrier
- Shallow Drywell (Type 61616P)
- Shallow Drywell (Mod. Type 1211214P)



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

Signature: *Justin W. Drake* APRIL 30, 2016 EXPIRATION DATE OF THE LICENSE

9/30/15	Archaeological Site Mitigation
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>GRADING AND DRAINAGE PLAN</b> QUEEN KAAHUMANU HIGHWAY WIDENING Kealahaka Pkwy. To Keahole Airport Rd.(Ph. 2) Federal Aid Project No. NH-019-1(38)R Scale: AS NOTED Date: SEPTEMBER 2015	
SHEET No. 6	OF 38 SHEETS



**Urada, Scot T**

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**From:** James Yamamoto <JimmyY@rmtowill.com>  
**Sent:** Thursday, March 09, 2017 6:07 PM  
**To:** aric\_arakaki@nps.gov  
**Cc:** rick\_gmirkin@nps.gov; Chow, Sterling; Soriano, Natasha A; Jason Tateishi; Brian Takeda; Laura Mau; Stacy Armstrong  
**Subject:** Draft Queen Kaahumanu Highway Widening Project Underpass Study Regulatory Policy Summary  
**Attachments:** Queen Kaahumanu Highway Widening Underpass Study Draft Policy Summary.pdf

Hello Mr. Arakaki,

Thank you for assisting us with the completion of the Queen Kaahumanu Highway Widening Project in accordance with the Stipulations of the Memorandum of Agreement for this project.

Stipulation 10B. Underpass Feasibility Study states: "As part of the study, HDOT shall consult with NPS to identify community organizations who may be invited to participate in the feasibility study. Organizations that may be invited to participate include: signatories to this MOA, NHOs, Peoples Advocacy Trails Hawai'i (PATH), County of Hawai'i, local primary and secondary school officials, universities, community groups, the Royal Order of Kamehameha, and the Association of Hawaiian Civic Clubs."

We will be providing a list of community contacts as preliminarily identified in the stipulation above.

Stipulation 10B also states: "The study shall seek examples and policies regarding use of existing pedestrian tunnels and modified culverts in Hawai'i and other States."

To facilitate the consultation between the NPS and HDOT we have attached the Draft Queen Kaahumanu Highway Widening Project Underpass Study Regulatory Policy Summary. We look forward to your Agency's input on how we can improve this draft policy summary.

# **Draft Queen Kaahumanu Highway Widening Project Underpass Study**

## **Regulatory Policy Summary**



# Federal Highway Administration

- Pedestrian Facilities Users Guide (FHWA-RD-01-102)
- One purpose of an underpass is to connect off-road trails and paths across major barriers such as a heavily traveled highways.
- *Underpasses work best when designed to feel open and accessible. Grade separation is most feasible and appropriate in extreme cases where pedestrians must cross roadways such as freeways and high speed, high volume arterials.*

# Federal Highway Administration

- Pedestrian Facilities Users Guide (FHWA-RD-01-102)
- Must be wheelchair accessible.
- *Lighting, drainage, graffiti removal, and security are also major concerns with underpasses.*





# Federal Highway Administration

- FHWA PEDSAFE:  
Pedestrian Safety Guide  
and Countermeasure  
Selection System  
(FHWA-SA-04-003)
- *Pedestrian overpasses  
and underpasses allow  
for the uninterrupted  
flow of pedestrian  
movement separate  
from vehicle traffic.  
However, they should be  
a measure of last  
resort....*

# Federal Highway Administration

- FHWA PEDSAFE:  
Pedestrian Safety Guide  
and Countermeasure  
Selection System  
(FHWA-SA-04-003)
- *Overpasses and  
underpasses must  
accommodate all  
persons, as required by  
the ADA.*



# Federal Highway Administration

- FHWA PEDSAFE:  
Pedestrian Safety Guide  
and Countermeasure  
Selection System  
(FHWA-SA-04-003)
- *The AASHTO Guide for  
the Planning, Design,  
and Operation of  
Pedestrian Facilities  
recommends ... minimal  
widths should be  
between 14 and 16 ft,  
but underpass width  
should be increased if  
the underpass is longer  
than 60 ft.*

# Federal Highway Administration

- Equestrian Design Guidebook for Trails, Trailheads and Campgrounds
- In some cases, underpasses--or *below-grade* crossings--are more suitable than at-grade crossings or bridges.
- Large-diameter structures--culverts and underpasses--generally serve riders well.





FHWA Equestrian Design Guidebook for Trails, Trailheads and Campgrounds

# Hawaii Department of Transportation

- *Statewide Pedestrian Master Plan, Hawaii Pedestrian Toolbox*
- **UNDERPASSES AND TUNNELS**  
*Tunnels and underpasses provide a walkway for pedestrians underneath the roadway. Pedestrians are often more apt to use overpasses than underpasses or tunnels, and overpasses are easier to supervise and maintain. Tunnels are less desirable than bridges due to greater potential costs, reduced sense of security, challenges with monitoring, the possibility of drainage problems, and a perception of lack of safety.*

# Hawaii Department of Transportation

- *Statewide Pedestrian Master Plan, Hawaii Pedestrian Toolbox*
- *Before choosing to install a tunnel, soil exploration is required to determine whether a tunnel can be feasibly constructed and whether drainage will be a problem. Wide openings are more inviting to pedestrians and let in more natural light. Tunnels should be easy to access and should be as short as possible. Approaches to the underpass should allow continuous vision through it."*

# City and County of Honolulu

- City and County of Honolulu Complete Streets Design Manual
- The manual does not include underpasses in the Design Toolbox

# Hawaii County

- Complete Streets  
Resolution 171-11
- The County does not have guidelines at this time but presently does not have pedestrian underpasses in its Standards.



## County of Maui

- Complete Streets Resolution 12-34
- The State Department of Health prepared the Central Maui Pedestrian and Bicycle Master Plan for 2030 with assistance from the County of Maui. This Master Plan does not include pedestrian underpasses in the design guidelines.

## County of Kauai

- Complete Streets Resolution and Complete Streets Bill 2465
- A design manual based on the Model Design Manual for Living Streets is being written. The Model Design Manual for Living Streets does not presently include pedestrian underpasses.

# Oregon

- Oregon Department of Transportation *Oregon Bicycle and Pedestrian Plan*
- This plan includes design guidelines for bicycle and pedestrians.

What does  
it say?

Recommended in  
Queen K  
setting?

# Washington

- Washington Department of Transportation's *Pedestrian Facilities Guidebook*
- This guidebook includes design guidelines for pedestrian underpasses.

Some  
comment &  
Oregon

## Other Communities

- There are other communities that have pedestrian underpass guidelines.
- The States of Oregon and Washington are provided as examples.

↑ where?

## Examples of Underpasses

- Hawaii Department of Transportation
  - Kamehameha Highway in Mililani.
  - Pali Highway in Nuuanu
  - Fort Weaver Road (Honouliuli Stream Bridge) at the Westloch Golf Course
  - Mamalahoa Highway (Bridge) at the Punaluu Golf Course



## Examples of Underpasses

- Hawaii Department of Transportation
- Farrington Highway  
Abandoned Cane Haul Road
- Fort Weaver Road  
Abandoned Cane Haul Road



## Kamehameha Highway Underpass

Mililani Town

Should explain  
reasons why

## Examples of Underpasses

- City and County of Honolulu Streets
- Kipapa Drive in Mililani
- Golf Cart Underpasses
- Kealahou Road in Hawaii Kai (3)
- Lumiaina Street in Waikele (3)

\* Should look at the whys the diff locations elected to put underpasses

\* Should group all golf courses ~~as~~ separately, since this is for 2 specific purpose/situation

\* Are golf courses required to maintain? (private courses)



## Kealahou Street Underpass

Hawaii Kai

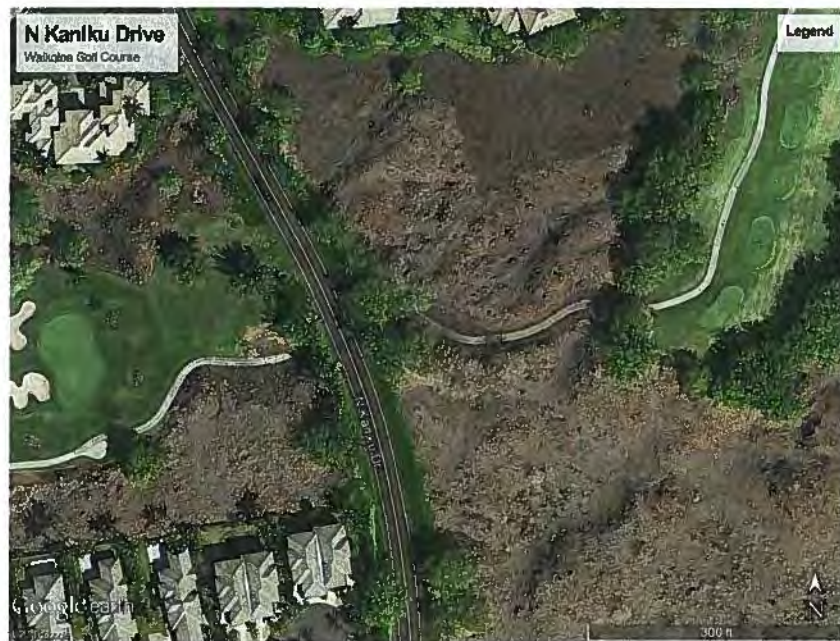
## Examples of Underpasses

- City and County of Honolulu Streets
- Park Row and Mango Tree Road in Ewa
- Geiger Road on Ewa
- Keoneula Boulevard in Ocean Pointe (one with combined drainage box culvert)

## Examples of Underpasses

- Hawaii County or Private Streets
- Alii Highway and Kaluna Street at Keauhou
- Kaniku Drive in Waikoloa (2)
- Abandoned Cane Haul Road in Puna.





## N Kaniku Drive

Waikoloa

## Examples of Underpasses

- County of Maui Streets and Private Streets
- Wailea Ike Drive in Wailea
- South Kamehameha Drive in Maui Lani

## Examples of Underpasses

- County of Kauai and Private Streets
- Nuhou Street and Makaa Street in Puakea
- Kahaku Road in Princeville (2)
- Poipu Road in Koloa

## Examples of Underpasses

- Oregon Department of Transportation Bridge Inventory
- 7C301.74 EB Columbia River Highway

## Examples of Underpasses

- Oregon Department of Transportation Improvement Program
- City of Milwaukie - Kellogg Creek Pedestrian/Bicycle Underpass and Multi-use Trail
- Portland Bureau of Transportation - Sullivan's Gulch Trail Undercrossing of I-205
- City of Sherwood - Cedar Creek Trail and Wildlife Undercrossing at Highway 99W

## Examples of Underpasses

- City of Salem
  - Southwest Barbour/Naito Parkway, Pringle Parkway:  
Underpass on Mill Race Path, Portland Road Underpass
- Portland
  - Southwest Arthur Street/Kelley Avenue

## Examples of Underpasses

- Washington  
Department of  
Transportation
- SR 14 Cape Horn  
Pedestrian  
Undercrossing: Skamania  
County
- SR 14 Pedestrian  
Tunnel: Washougal



## Considerations for Pedestrian Underpass Design

- Highway Width
  - The Queen Kaahumanu Highway is approximately 112 feet wide at this location
- Ventilation
  - Due to the length of the Pedestrian Underpass forced ventilation will probably be required



## Considerations for Pedestrian Underpass Design

- Lighting
  - Due to the length of the Pedestrian Underpass lighting will be required
- Drainage
  - Due to the depth of the Pedestrian Underpass drainage will be required. The drainage may have to rely on drywells due to the depth of the underpass.

## Considerations for Pedestrian Underpass Design

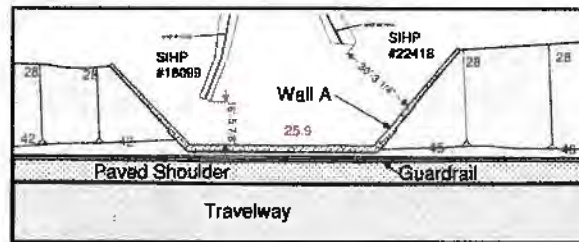
- Americans with Disabilities Act
- *AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities*
- Wheelchair ramp will be required for the Pedestrian Underpass
- *Minimal widths should be between 14 and 16 ft, but underpass width should be increased if the underpass is longer than 60 ft.*

## Considerations for Pedestrian Underpass Design

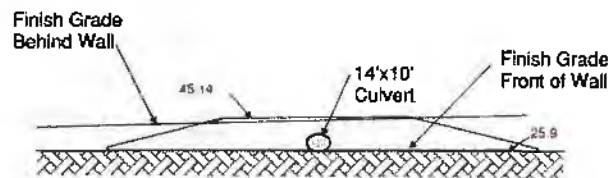
- Existing Utilities
- DEM Sewer Line from Hinalani to Kealakehe will require and new Wastewater Pump Station if the Pedestrian Underpass is constructed at minimum cover under the Highway

## Considerations for Pedestrian Underpass Design

- Queen Kaahumanu Highway Widening Project
- Need to redesign Retaining Wall A for a tunnel.
- DEM sewer line installed.
- Culvert A is a 120" diameter culvert. To pave the bottom to make a walkable path will diminish drainage capacity.



Plan Wall A



Section Wall A

Where is this located on the highway?

# Considerations for Pedestrian Underpass Design

- Use of Drainage Facilities
  - Colorado Urban Flood Control District
  - *Urban Storm Drainage Criteria Manual Volume 2 Chapter 10 Stream Access and Recreational Channels Section*
  - *3.5 Path Underpasses: Underpasses are the preferred alternative when the structure and roadway profile allow for the design to meet both the vertical clearance and frequency of inundation criteria.*

# Considerations for Pedestrian Underpass Design

- Use of Drainage Facilities
- “FHWA Equestrian Design Guidebook for Trails, Trailheads and Campgrounds” regarding
- “Culverts That Carry Water
- With careful design, some culverts that carry water can include a separate trail tread (figure 5-34).”





**Figure 5-35 (picture example of Figure 5-34)**

Equestrian Design Guidebook for Trails, Trailheads and Campgrounds

2024 North King Street  
Suite 200  
Honolulu, Hawaii 96819-3494  
Telephone 808 842 1133  
Fax 808 842 1937  
eMail rmtowill@rmtowill.com



Planning  
Engineering  
Environmental Services  
Photogrammetry  
Surveying  
Project and Construction Management

**Project:** Queen Ka'ahumanu Highway Widening, Phase 2 Project  
National Historic Preservation Act Section 106 Consultation Meeting

**Date/Time:** Friday, April 7, 2017, 9:00 am – 3:00 pm

**Location:** Natural Energy Laboratory of Hawaii Authority (NELHA)  
Hale Iako Building, Room 119,  
73-987 Makako Bay Drive, Kailua-Kona, Hawaii 96740

**Attendees:** See Attached Sign-In List

**Hawaii Department of Transportation (HDOT)**

Scot Urada  
Sterling Chow  
Natasha Soriano

**Makani Hou O Kaloko-Honokohau**

Fred Cachola  
(Also representing Royal Order of Kamehameha)  
Isaac "Paka" Harp

**Federal Highway Administration (FHWA)**

Richelle Takara  
Lisa Powell  
Meesa Otani

**Kona Hawaiian Civic Club**

Cynthia Nazara

**R. M. Towill Corp. (RMTC)**

Jason Tateishi  
Laura Mau  
Michelle Wong

**Office of Hawaiian Affairs (OHA)**

Shane Nelsen  
Lauren Morawski

**National Park Service (NPS)**

Jeff Zimpfer  
Rick Gmirkin

**Facilitators**

Dawn Chang (Kuiwalu)  
Herb Lee (Malama Waiwai)

**A. Welcome and Statement of the Purpose of the Meeting (facilitated by Herb Lee)**

1. Memorandum of Agreement Annual Report dated Feb. 24, 2017 (Distributed on Feb. 24, 2017 and Apr. 4, 2017).
2. Construction Updates.
3. Stipulation 17 of the MOA – Consultation on Post Review Discoveries Related to recent breaches at the Mamalahoa and Road to the Sea Trails.

**B. Opening Pule – Cynthia Nazara (NHO)**

**C. Introductions and meeting protocols (facilitated by Herb)**

It was announced that the meeting would be recorded for note taking purposes and shared with the meeting attendees along with the notes. Fred Cachola requested the meeting notes be drafted similarly to those prepared by Brian Takeda.

**D. Welcoming Remarks (Scot Urada, HDOT Highways Administrator)**

Scot Urada thanked everyone for attending the meeting, and for everyone's continued participation in the project. He acknowledged the oversight and mistakes that occurred on the project last year and explained that the HDOT takes responsibility for what happened. The primary purpose of the meeting is to consult with the NHOs on their thoughts and suggestions for: 1) Mitigation related to the damage to the trails, 2) How best to overcome what has happened and move forward; and 3) Other information pertaining to the construction status. The Annual Report will also be covered.

**E. Remarks by FHWA (Richelle Takara, Assistant Hawaii Division Administrator)**

Richelle Takara expressed FHWA's interest in what the NHOs have to say regarding the breaches and would like to see the project succeed.

**F. Discussion of the MOA Annual Report (facilitated by Dawn Chang)**

1. Each NHO provided a brief background on themselves and their interest in the Project:
  - a. Fred explained that NHOs understand the need for growth and development as well as to protect the sites and practices that are important to Native Hawaiians. He hopes there is an understanding with the HDOT that Hawaiians will always be here and hold a significant importance and meaning to cultural sites and practices. Fred is from Kohala, but has an interest in the project from a preservation point of view of the Native Hawaiian culture and beliefs as very important in his life.
  - b. Paka Harp explained that while he focused on marine resources earlier in his life, he has become involved with the Hawaii Patriotic League. His ohana has ancestral ties to Honokohau and his ohana is buried within the NPS.
  - c. Cynthia Nazara explained that she has a personal connection with the project and would like things done in the right way. She explained that there is no transparency in communication between groups in the project and would like to see that changed.
  - d. While Shane Nelsen from OHA also wanted to make sure all interested parties of the project understand each other he also has cultural and ancestral ties to the Kona (Napoopoo) district.
  - e. Jeff Zimpfer stated that NPS is a signatory for the project.
  - f. Rick Gmirkin stated that NPS was participating in the meeting to provide technical expertise on the trails. Lauren Morawski mentioned the involvement of OHA from the beginning of the project.
2. NHO General comments about the MOA Annual Report
  - a. Dawn iterated that this meeting is not open to the public and only parties named in the MOA were invited. At this point, she asked if there were any questions regarding the MOA annual report.
  - b. Fred stated his disappointment in the 10-month gap in 2015 where no annual report was released and nothing seemed to be done regarding the MOA stipulations. He noted that the 2016 annual report dated February 24, 2017 did not highlight tasks completed in 2015 and requested two separate documents for 2015 and 2016. He believes that if there was careful monitoring and reporting of construction activities including the completion of the MOA stipulations, that the site breaches would have been avoided. He added that there wouldn't have been any consequences if the MOA was followed.

- c. Sterling explained that in 2015, HDOT was focused on hiring cultural monitors and planning for the construction, such as lighting, drainage and landscaping stipulations. The coordination of the relationship building workshop and ahupua`a signage is currently being worked on.
  - d. Fred added that on Page 2, Stipulation 5B, line 2 that HDOT and the University of Hawaii at Hilo (UHH) have entered an agreement that the NHOs have not reviewed and was not provided. He requested to review this agreement. He further explained that he and Paka were shocked and surprised to receive a phone call from Peter Mills at UHH thanking them for their assistance in creating the programs stated in the stipulation as they had no knowledge of any agreement.
  - e. Natasha confirmed that no money has been transferred from HDOT to UHH since the finalization of the 2016 annual report. Arrangements are currently being worked on. A status report will be drafted for review by the NHOs. Fred requested and was provided a copy of the Memorandum of Understanding between HDOT and UHH.
  - f. Fred mentioned that an Archaeological Monitoring Plan (AMP) should have been implemented prior to the start of construction. He believes that if the AMP was implemented and reported as such, the breaches may not have occurred. He mentioned not getting any of the AMP reports. Jason confirmed that as he receives the archaeological monitoring reports, he distributes them via email to the designated points of contact (POC) for the consulted parties. Paka did not receive the report that was sent to Makani Hou. Paka suggested that future documents also be sent to an alternate representative of the group in case the primary POC is unavailable to receive updates. Dawn asked that the consulted parties provide an alternate email address, if available.
  - g. Dawn clarified that Stipulation 4 requires an SHPD-approved data recovery end of fieldwork report be submitted to parties of the MOA and consulted NHOs. HDOT confirmed that Stipulation 1 requires sending of the archaeological and cultural monitoring reports.
  - h. Paka was concerned about the results of the data recovery efforts from the damaged sites. He requested to see the reports once finalized. He would like to be able to update members of the community, using a website, when asked about progress status.
  - i. Stipulations 1, 4, and 19 pertain to archaeological reporting. Stipulation 4 requires that a data recovery end of fieldwork report be distributed to parties of the MOA and NHOs who participated in the consultation process. Stipulations 1 and 19 also pertain to the monitoring and reporting. Jason confirmed that the data recovery field work is complete and the acceptance letter was sent to the MOA contact list. He was not sure if the actual end of fieldwork report was sent but will check if it was. He will confirm who received the data recovery end of fieldwork report and, if needed, he will re-distribute to the appropriate parties. The data recovery report will be distributed once it is complete.
  - j. Lauren asked in regards to Stipulation 5b whether the funds will be extended beyond the five-year period since no UHH programs have been funded in the past two years. HDOT replied that it would.
3. NHO Specific Comments on each stipulation
- a. Stipulation 1 related to On Site Point of Contact (POC). Fred requested that HDOT update the POC list.
  - b. Stipulation 2 related to Area of Potential Effect (APE). The NHOs requested a copy of the Supplemental Archaeological Inventory Survey (SAIS) for review. OHA was unaware of the SAIS and would have recommended a follow-up consultation with the NHOs. NHOs requested confirmation that the side roads were incorporated into the expanded APE and a walkthrough with Cultural Surveys of

Hawaii (CSH). Historical sites that are significant to Native Hawaiians should be included in the SAIS not what is important to others.

- c. Stipulation 3 related to Professional Standards. NHOs disagreed with the “no further action required” determination. As an example, they had concerns about the ability of the archaeological firm to properly identify all the historic properties based upon the previous AIS.
- d. Stipulation 4 related to Archaeological documentation. NHOs requested to review the mitigation plan and questioned if the trails were part of the original AIS. Paka asked for an update on the status of the Burial Treatment Plan. Hawaii District has been asking Burial Council but have not received a response. Paka offered to help on his end to complete the Burial Treatment Amendment.
- e. Stipulation 5A – Fred asked how would NHOs know if plans are done and available?
- f. Stipulation 5B related to Native Hawaiian Cultural Outreach and Education. NHOs asked about the status of the contract with University of Hawaii at Hilo (UHH) because they suggested that The Kohala Center (TKC) may be more appropriate to do some of the work since they are from the district and may be able to do it more cost effectively. FHWA expressed possible procurement restrictions and asked if TKC could be a subcontractor to UHH who is another government entity. However, the NHO felt that it would be appropriate to have UHH pursue the scholarship portion of this stipulation. Fred said that he would follow up with TKC and UHH on this matter.
- g. Stipulation 6 related to Cultural Monitors. Cynthia suggested doing cultural sensitivity training for all employees on the project. NHOs asked how cultural monitoring has been expanded since the breaches. Sterling said that as added measures, a monitor is present for activities within 100 feet from a site.
- h. Stipulation 7 related to Street Lighting. NPS agreed with the lighting plans.
- i. Stipulation 8 related to Noise Study. NHOs explained why they were asking for additional noise studies because some of their cultural ceremonies require silence. They further suggested doing the additional noise study after the project is completed.
- j. Stipulation 9 related to Highway drainage. NPS was satisfied with the drainage plans. Fred and Paka suggested installing additional dry wells north and south of the project to ensure pollution doesn't enter the ocean because of the important marine resources. Paka suggested frequency of the reports should be increased maybe for the first 5 years.
- k. Stipulation 10A related to Pedestrian Crossings. The question of a pedestrian refuge area in the median was raised and HDOT was not sure if a median refuge area was designed into the plans since the median was narrowed.
- l. Stipulation 10B related to Pedestrian Crossings and Underpass Feasibility Study. The NHOs would like to work with HDOT to provide safe crossings for use of historic trails that intersect the highway. Ala Kahakai raised the importance of safe pedestrian crossings to connect the mauka-makai trail, including the use of existing culverts. Solutions such as creating an overpass or underpass so future generations can walk in the footsteps of their ancestors will allow for cultural preservation of the trails. NHOs raised the issue that for overpass structures, the State has responsibility. The MOA states a third party is to maintain the underpass and the NHO questioned this requirement. NHO felt that the study should not only look at an underpass structure, but an overpass structure as well.

- m. Stipulation 11 related to Interpretive Signs. NPS is working with HDOT on the interpretive signs. The interpretive signs have not been fully vetted but may present the opportunity to tell the history of the trails. NPS holding an internal meeting next week for these signs. The NHOs request to be consulted during this process for both the interpretive and ahupua'a signs. The NHOs suggested the website would be a good way to let the other NHOs know of the progress of this stipulation.
- n. Stipulation 12 related to Ahupua'a Signs. The ahupua'a signs will need to abide by HDOT and county standards. The State clarified that for signs inside the highway right of way, it needs to comply with traffic control standards (MUTCD), which is different from signs outside the right-of-way (as in the NPS area). When the ahupua'a program report is finalized, it will be sent to the NHOs. There are local communities that are currently being consulted on not only content of the signs but also the proper placement of the ahupua'a signs. The work currently being done with NHOs on the terrain model relating to ahupua'a boundaries will help this effort.
- o. Stipulation 13 related to Highway Landscaping. The NHOs have been impressed with the landscaping plan and would like to see the landscaping plan applied to the rest of the project beyond the NPS boundaries and not just at the intersections. They also suggested planting Loulu Palm at trail crossings (where trails were bisected) as a visible way of identifying the trails. Paka also suggested other plantings to mark the boundaries of the ahupua'a.
- p. Stipulation 14 related to Relationship Building Workshop. Dawn asked if the NHOs could hold their discussion on this stipulation because it will be the subject of further consultation. NHOs suggested a series of meetings that will make up the relationship building workshop. The NHOs should send comments and suggestions to HDOT about what they want to see in the workshop.
- q. Stipulation 15 related to the Terrain Model. Fred explained that the terrain model is a way of preserving the landscape of the area and the legacy of the culture. NHOs also suggested finding a higher trafficked location such as the airport or Palama Nui Campus instead of at the NPS Visitor Center to display the terrain model. Paka suggested focusing on the digital model first rather than the physical model, then possibly more than one physical model could be made from the same mold. Laura confirmed that the digital model was sent out to the NHOs for their review.
- r. Stipulation 16 related to Archaeological Materials and Records. NHOs requested the location of historical artifacts that were uncovered, the entity that is curating them, and the possibility of viewing the artifacts. OHA would also like to know if HDOT will take possession of the artifacts once the project is completed. Sterling explained that the artifacts are currently being curated by CSH on the Big Island. HDOT doesn't have the capacity to curate the artifacts and the plan is to have CSH continue to curate them. NPS suggested housing the artifacts with the physical terrain model.
- s. Stipulation 17 related to Post-Review Discoveries, specifically the recent breaches of the two trails. Dawn asked if the NHOs could hold comment on this discussion until we have completed all the stipulations to permit more dedicated time to discuss the breaches, identification of the historic properties, adverse effect and mitigation. All agreed.
- t. Stipulation 18 related to Dispute Resolution. Fred felt frustrated that he has not received a response to his October 8, 2016 email sent to HDOT and FHWA. He has consulted with the Native Hawaiian Legal Corporation and feels the NHOs are not being consulted to address the issues at hand and has considered filing a dispute resolution. OHA requested a copy of the report explaining the breaches and would like to see quarterly progress reporting. Paka suggested giving HDOT 30 days to response to Fred's email. HDOT has agreed to be timelier in their responses and information dissemination.

- u. Stipulation 21 related to Amendments to the MOA. Paka felt that the MOA should be amended and the NHOs want to be consulted on any amendments.

#### **G. Construction Updates**

1. Sterling provided a brief overview of the construction updates. Maps highlighting the breached sites were also presented (see attached). He stated that none of the areas near the airport have been disturbed. Paving has occurred at the Hulikoa Intersection and the contractor plans to pave towards the airport.
2. Rick asked if the fencing has been installed at the Mamalahoa Trail. Sterling responded that fencing has been installed.
3. Paka asked if the retaining walls will still be built where the encroached sites are located. Sterling confirmed that there will be no retaining walls in these areas.

#### **H. Stipulation 17 Related to Post-Review Discoveries (specifically the site breaches to the historic trails)**

1. The NHOs questioned what the protocol for notification is and why there wasn't any notification made 72 hours after the breaches occurred. Initially, HDOT did not consider the breaches to be an adverse effect. However, after the detailed investigation was completed, evidence indicated an adverse effect to the historic sites (layout of retaining wall footprint did not logically match with previously graded limits). It was then discovered that the protective fencing was installed in the wrong location due to many different reasons including two different coordinate systems that were used. The discovery of the breaches was a realization of failure on all levels and among different parties.
2. HDOT shared that the action plan is an internal document between HDOT and the contractors as mitigation measure to ensure that this would not happen in the future. An action plan was developed and distributed on April 4, 2017 and is an agreement between the HDOT and the contractor to prevent any future incidents. This action plan is intended to help to prevent mistakes like this from happening on this project and may possibly be used for future highway projects. The action plan dictates procedures for future construction projects to enhance the communication between the contractor and the archaeologists and increase monitoring requirements.
3. The NHOs feel the breaches was a conspiracy and felt it was HDOT's opinion that asking for forgiveness after the work was done was easier than asking for permission.
4. Fred asked how the breaches were discovered. Sterling stated that Jason discovered a discrepancy when reviewing the construction layout of the walls. It was not until the detailed investigation that the fences were determined to be in the wrong location. Further inspection of the sites was completed to make sure no other sites were disturbed. Paka asked why the barrier locations were checked after grading occurred. Fred asked how the breaches occurred when the monitoring plan required protective barriers at the sites. Jason clarified that the fence was installed, just not in the right place.
5. Fred felt that HDOT was trivializing their accountability on the project. Sterling responded that HDOT will be responsible and will move forward towards mitigation. Fred asked how one would mitigate for spiritual hurt.
6. Shane inquired if both archaeological and cultural monitors were present during grading work near the breached areas. Jason responded that cultural and archaeological monitors were present, as well as contractor and RMTC personnel. Shane commented on how the group could work together make the mitigation plan work. Scot responded that the action plan would help to make sure all parties would be on the same page and prevent future incidences.

7. The NHOs asked FHWA what they thought of as potential mitigation. From FHWA's perspective, they were there to listen to NHOs suggestions not to offer potential mitigation suggestions. By listening to the NHOs perspective of the spiritual connection to their ancestors through the historical sites, it would be difficult for FHWA to offer mitigation suggestions since they would be missing that ancestral connection.
8. As additional mitigation, HDOT installed barriers that are more visible and implemented weekly checks to ensure that they remain intact. Furthermore, an archaeological monitor will be present when within 100 ft. of a site and there will be a clear chain of command.
9. Paka suggested as a show of good faith towards mitigation, HDOT will explore the possibility to put the physical terrain model in a central, high-trafficked location like the Kona Airport. Fred suggested using funds to assist Heritage Partnerships Program (HPP) to build a new structure at the Hawaii Visitor Center to accommodate the physical terrain model and artifacts. HDOT expressed some concern about accessibility of the physical terrain model to the non-flying public if it is located in the airport terminal.
10. As potential mitigation for the breaches to the trails, Fred suggested that HDOT consider a "like-like" mitigation for length of adverse impact to the trails, preserve and restore the same amount of trails at the other end of the trail system. Additionally, a scenic point area could be made where interpretive signs could be displayed to educate and inform the public about the trails. Part of the trail by Kealahou High School could also be incorporated into the proposed park plans.
11. Given that the scheduled meeting time was close upon us, Dawn asked the NHOs if they would like to continue this consultation process on mitigation. All agreed that consultation needs to continue to discuss in greater detail the breaches and appropriate mitigation.

#### **I. Next Steps**

1. HDOT committed to preparing and distributing the meeting notes within two weeks.
2. HDOT will coordinate a site visit with the NHOs on the expanded APE, specifically the area of the breaches.
3. HDOT will coordinate a follow up consultation with the NHOs to discuss mitigation of the adverse effects to the historic properties.

#### **J. Closing – Hawaii Aloha led by Fred.**

#### **Items requested by CPs for HDOT consideration:**

1. Draft separate annual report for fiscal year 2015 per the MOA requirements.
2. Provide copy of the agreement and send status report sent to NHOs for Stipulation 5B regarding Native Hawaiian Outreach and Education with the UHH.
3. Update POC list to provide a primary and secondary POC for each organization, and redistribute new POC list to all parties.
4. Send Data Recovery Report to all MOA parties, once finalized.
5. Research the possibility of creating a website to distribute information in a timely manner.
6. Coordinate a time for the NHOs to do a follow-up site visit.



7. Consult with the NHOs regarding the expanded APE and SAIS. Provide SAIS for review.
8. Conduct additional noise studies.
9. Consider feasibility of installing dry wells along the coastline.
10. Consider feasibility of safe highway crossings such as overpasses or underpasses.
11. Distribute ahupua'a program report to the NHOs, once finalized.
12. Consider using native Hawaiian plants as markers for historic trails and ahupua'a boundaries.
13. Update NHOs on the curation of artifacts by CSH.
14. Respond to Fred's email in 30 days.
15. Consider quarterly reporting instead of annual reporting.
16. Install barriers that are more visible and conduct weekly checks. Provide archaeological monitor on-site when construction will occur within 100 ft. of a site.
17. Research the feasibility of building a new structure at the NPS Visitor Center to accommodate the physical terrain model and artifacts.

**Attachments:**

1. Attendance Log
2. Agenda
3. Construction Updates
4. Figure 1: Queen Ka'ahumanu Highway Widening, Ph. 2 project Location and Disturbance Locations (SIHP #s 50-10-27-00002, Mamalahoa Trail; 10714 (Features A and C), Road to the Sea; -28783 (Features A-F), Agricultural Complex; -19947, (Features A, B, & C), Stacked Rocks; and -28811, Pahoehoe Excavation;
5. Figure 2: SIHP #50-10-27-00002, Mamalahoa Trail, Site Locations
6. Figure 3: SIHP #50-10-27-00002, Mamalahoa Trail, Approximate Disturbance Locations
7. Figure 4: SIHP #50-10-27-10714, Features A & C, Road to the Sea Trail System, and Feature A & C, Approximate Disturbance Locations
8. Figure 5: SIHP #50-10-27-28783, Features A – F, Agricultural Complex, Buffer Disturbance Site
9. Figure 6: SIHP #50-10-27-19947, Features A, B, & C, Stacked Rocks, Buffer Disturbance Site
10. Figure 7: SIHP #50-10-27-28811, Pahoehoe Excavation, Buffer Disturbance Site

The above represents R. M. Towill Corporation's understanding of the discussions held. Notifications of any clarifications or discrepancies would be appreciated within 14 calendar days.

Prepared by: Laura Mau and Michelle Wong

**Queen Ka'ahumanu Highway Widening, Phase 2**  
**National Historic Preservation Act Section 106 Consultation Meeting**  
 Date and Time: Friday, April 7, 2017, 9:00 am to 3:00 pm  
 Location: Natural Energy Laboratory of Hawaii Authority, Hale Iako Training Room #119  
 73-987 Makako Bay Dr., Kailua-Kona, HI 96740

Name	Organization	Phone	Mailing Address and Email
Lisa Powell	FHWA	541-2305	300 Ala Moana Blvd. #3-306 lisa.powell@dot.gov
Meesa Otani	FHWA	541-2316	300 Ala Moana Blvd, Box 50206 meesa.otani@dot.gov
Richelle Takara	FHWA	541-2311	300 Ala Moana Blvd. Rm 3-306 Box 50206 Hon HI 96850 richelle.takara@dot.gov
Cynthia Nazara	KICC	156-0105	POB 8284 K.I.C. cynthia@kicmail.hawaii.gov
STERLING CHOW	DOT - HIGHWAYS	933-8866	50 Makawala St., Hilo HI 96728 sterling.chow@hawaii.gov
Scott Under	DOT	581-2220	869 Punchbowl St Honolulu HI 96813
Rick Gmirkov	NPS	430 5213	73-4786 KANALANI ST #14 KAILUA-KONA HI 96740
Fred LaHole	Makani Hoku Kaloko-Honokohau	953-8896	P.O. BOX 190725 HAWAII 96719 fredla@hawaii.gov
JEFF ZIMMER	NPS		
Shane Nelsen	OHA	327-9525	shanen@oha.org
Lauren Morawski	OHA	938-2030	laurenm@oha.org
Natasha Soriano	DOT	933 2044	natasha.a.soriano@hawaii.gov
Jason Tateishi	KM Tamii		

**Queen Ka'ahumanu Highway Widening, Phase 2**  
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 73-987 Makako Bay Dr., Kailua-Kona, HI 96740

Name	Organization	Phone	Mailing Address and Email
Dawn Chang	Kuiwaka	539-3583	dnchang@kuiwaka.com
Herb Lee	Mulama Waiwai	927-5646	herblee@yahoo.com
Laura Mau	RM Tonill Corp	842-1133	lauram@rmtonill.com
Michelle Wong	RM Tonill Corp	842-1133	michellew@rmtonill.com
Isaac Harp - Paka	Makani Hou	756-7379	paka@sandwichisles.net



QUEEN KA'AHUMANU WIDENING PROJECT, PHASE 2  
NATIONAL HISTORIC PRESERVATION ACT SECTION 106  
CONSULTATION MEETING

Date & Time: Friday, April 7, 2017, 9:00 am to 3:00 pm  
Location: Natural Energy Laboratory of Hawaii Authority  
Hale Iako Training Room #119  
73-987 Makako Bay Dr., Kailua-Kona, HI 96740

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AGENDA

- A. Welcome and Introductions
- B. Opening Pule
- C. Introductions
- D. Welcoming Remarks
- E. FHWA Introduction
- F. Memorandum of Agreement Annual Report – Questions?
- G. Construction Updates
- H. Stipulation 17 of the MOA  
Consultation on Post Review Discoveries Related to recent  
breaches at the Mamalahoa and Road to the Sea Trails
  - 1. Identification of Historic Properties
  - 2. Adverse Effect
  - 3. Mitigation
- I. Next Steps
- J. Closing Remarks
- K. Closing Pule

**Queen Ka'ahumanu Highway Widening, Phase 2**

**Memorandum of Agreement**

**Annual Report Calendar Year 2016**

**February 24, 2017**

## ANNUAL REPORT Calendar Year 2016

### Queen Kaahumanu Highway Widening Phase 2 Memorandum of Agreement

February 24, 2017

No.	Stipulation	STATUS AS OF 2016	CURRENT ACTION ITEMS
1	ON SITE POINT OF CONTACT. The FHWA in coordination with the HDOT shall designate an on-site point of contact (POC) within fourteen days of the execution of this MOA. This on-site POC shall maintain hard copies of all documents relative to this MOA and provide electronic copies of them upon request by any consulting party to this MOA. The on-site POC shall be responsible for receiving and distributing any daily archaeological or cultural monitoring reports related to the construction of the Project to the other consulting parties to this MOA via email on a weekly basis. All signatories, concurring parties, and consulting parties to this MOA shall identify a POC for their respective organizations and transmit contact information to the FHWA and HDOT who shall maintain a current POC list.	Contact list is prepared and maintained by HDOT. The FHWA and HDOT has designed their on-site POC as Sterling Chow, Assistant District Engineer, Hawaii Island.  The signatories and concurring parties have identified the POCs from their respective organizations, as provided on the HDOT Contact list.	See attached <a href="#">Exhibit 1-MOA Contact List</a> . Will update as required.
2	AREA OF POTENTIAL EFFECT (APE). The Project's Area of Potential Effect (APE) includes the right-of-way (ROW) of the Queen Ka'ahumanu Highway, the Honokohau Settlement National Historic Landmark, the Kaloko-Honokohau National Historical Park, and trails that are immediately adjacent to and traverse the Project area that have been identified as significant to the Ala Kahakai National Historic Trail corridor (Attachment 2), most notably the Mamalahoa Trail.	During investigation of site breaches which occurred in Summer 2016, it was determined the APE did not include work on side roads, outside the 300-ft. HDOT ROW. The expanded APE including side roads was approved by SHPD on 1/6/2017.  HDOT presently seeking SHPD concurrence on a Supplemental Arch. Inventory Survey (SAIS) reporting on expanded areas. Comments have been received from SHPD and are being addressed.	Late February 2017, HDOT to submit revised SAIS to SHPD addressing initial comments.
3	PROFESSIONAL STANDARDS. The HDOT shall ensure that all work carried out and documents prepared under this MOA are consistent with the recommendations of the August 2012 AIS cited above and conform to the Secretary of the Interior's Standards and Guidelines for Archeological Documentation, the ACHP's Section 106 "Archaeological Guidance" and the SHPO's requirements for data recovery and preservation. Further, all work pertaining to the identification and treatment of archaeological resources, including sites and objects, will be carried out by, or under the direct supervision of, a person or persons meeting the professional qualification for archaeology as found in "The Secretary of the Interior (SOI) Historic Preservation Professional Qualification Standards" (SOI Qualification Standards), per 36 CFR Part §61, Appendix A (Volume 48, No 190 dated September 29, 1983), and Title 13, Chapter 300, Hawai'i Administrative Rules (HAR). The HDOT shall provide, upon request, the documents identified in this MOA in either digital or paper copy to the requestor, subject to the confidentiality provisions of Section 304 of the NHPA.	HDOT affirms the AIS recommendations conform to the Archaeological Guidance of ACHP and that personnel undertaking such work meets the SOI Professional Qualifications Standards. Copies of documents identified in this MOA are available from HDOT-Hawaii District Office. No further action required.	N/A



## ANNUAL REPORT Calendar Year 2016

### Queen Kaahumanu Highway Widening Phase 2 Memorandum of Agreement

February 24, 2017

No.	Stipulation	STATUS AS OF 2016	CURRENT ACTION ITEMS
4	<p>ARCHAEOLOGICAL PRESERVATION AND MITIGATION PLAN (APMP, APRIL 2014), DATA RECOVERY AND PRESERVATION PLAN (DRPP, OCTOBER 2012), ARCHAEOLOGICAL MONITORING PLAN (AMP OCTOBER 2012) and BURIAL TREATMENT PLAN (BTP, OCTOBER 2012).</p> <p>FHWA will ensure that HDOT complies with the implementation of the APMP, AMP, DRPP, and BTP and its compliance with the conditions of approval stipulated by SHPD. The HDOT shall provide the parties to this MOA a copy of the findings of the APMP, AMP and DRPP activities.</p> <p>Further, construction, including ground-disturbing activities will not commence until the data recovery fieldwork has been completed and a data recovery end of fieldwork report has been drafted and approved by SHPD. The end of fieldwork report shall be submitted to all parties of this MOA and NHOs who participated in the consultation process. The Data Recovery Final Report shall be submitted to SHPD for their approval.</p>	<p>(1) Copies of the subject plans are available for review at the office of HDOT, Hawai'i District;</p> <p>(2) Data Recovery Plan (DR) completed June 2015 with 'end of field work' report filed with SHPD (Vitousek).</p> <p>(3) The Final DR report will be completed by Cultural Surveys Hawaii (CSH) after construction of the project is complete.</p> <p>(4) Due to the narrowing of the hwy median, the retaining wall shown in the BTP is no longer required. An Amendment dated Sept 2015 was submitted for approval.</p>	<p>- HDOT to submit the End of Fieldwork Report after construction of the project is complete.</p> <p>- HDOT to follow-up on the BTP Amendment.</p>
5A	<p>A. PROJECT REDESIGN. The FHWA shall ensure that HDOT completes the redesign of the southern portions (between Kealakehe Parkway and Hinalani Street) of the proposed improvements, to minimize the impacts of the highway widening. The objective of the redesign is to avoid, where feasible, historic properties and to propose mitigation action to minimize potential impacts. The revised plans shall be made available for review by the consulting parties of this MOA upon receipt of a timely request to the HDOT.</p>	<p>Project Design - Construction plans for the area between Kealakehe Parkway and Hinalani Street are complete and construction is ongoing.</p>	
5B	<p>B. NATIVE HAWAIIAN CULTURAL OUTREACH AND EDUCATION. The HDOT and the University of Hawai'i at Hilo (UHH) have entered into a Memorandum of Understanding (MOU) to provide cultural programs and education to support Native Hawaiian studies. The HDOT shall ensure that the MOU between HDOT and UHH to provide cultural programs is fully implemented over the five year duration of the agreement. Annual reports documenting the activities of the past calendar year will be made available to all consulting parties.</p>	<p>POC S. Chow, HDOT in consultation with UH-Hilo as of December 2016 to discuss action plan.</p> <p>HDOT held initial meeting with UHH to determine steps to implement UHH outreach and educational programs.</p>	<p>Follow-up ongoing to set the program schedule and budget.</p>
6	<p>CULTURAL MONITORS. HDOT prepared a Cultural Monitoring Scope of Work that describes the minimum qualifications and requirements for cultural monitor positions. The tasks of the cultural monitor(s) include: (a) serve as a liaison with the community to assist in the interpretation of cultural resources, (b) provide cultural education for construction workers, (c) prevent and minimize impacts to historic and cultural resources, (d) monitor the activities of the project archaeologist, and e) prepare daily reports. HDOT will engage a pool of cultural monitors to insure that whenever data recovery activities or construction activities disturb previously undisturbed areas a monitor is present. HDOT provided signatories and concurring parties to the MOA an opportunity to review and comment on the draft Cultural Monitoring scope of work. The FHWA approved the Final Cultural Monitoring Scope of Work on October 22, 2012. The HDOT shall select a cultural monitor(s) from a list of qualified applicants based on the objectives identified above. Participating NHOs were afforded the opportunity to identify and evaluate the potential cultural monitor candidates.</p>	<p>Cultural monitors hired by RMTC as part of the construction inspection program. Daily reports by the monitors are on file with HDOT - Hawai'i District Office.</p>	<p>Will continue cultural monitoring with construction.</p>

## ANNUAL REPORT Calendar Year 2016

### Queen Kaahumanu Highway Widening Phase 2 Memorandum of Agreement

February 24, 2017

No.	Stipulation	STATUS AS OF 2016	CURRENT ACTION ITEMS
7	STREET LIGHTING. Street lighting shall only be provided at signalized intersections (Kealakehe Parkway, Lanihau, Hina Lani (also known as Hina-Lani or Hinalani), Hulikoa, Ka'iminani, and Ke'āhole Airport Road). Luminaire will be a CWES KS04-100 with SF-7 filter that will be "full cut-off" with no up light directed skyward other than incidental reflections. HDOT shall provide confirmation to the NPS that lights are level and properly installed. All lighting will use a "blue-cut" filter (yellow tinted) to prevent shorter wavelength light emission, which is known to disproportionately degrade the appearance of the night sky and disproportionately impact nocturnal wildlife species, and to reduce the perceived glare as seen from the National Parks. The intensity of the installed lighting shall not exceed 10,000 initial (at installation) lumens after filtering, nor exceed the minimum necessary for the task. For those intersections adjacent to the National Park (Kealakehe Parkway, Lanihau, and Hina Lani), the outer streetlights (those first and last encountered by drivers) shall be of lower intensity (at minimum 20% less intense than the other installed lights) to provide improved transition between lit and dark areas and to provide an incremental reduction in total lumen footprint. HDOT may modify the specifications contained herein if new technology becomes available that would better meet the intent of this stipulation, provided the NPS agrees to such change in writing.	Project plans have been completed by the project contractor and reviewed and approved by HDOT. Contractor will install per plan.	N/A
8	NOISE STUDY. The HDOT conducted a noise impact study in March 2014 to determine if the roadway improvements planned has the potential for impacting the activities within the National Park. The study was conducted in accordance with 23 CFR 774. The final report is pending. The findings will be made available to consulting parties in this MOA.	Noise Study Final Report completed on February 2015. On file with HDOT-Hawai'i District Office. No further action required.	N/A
9	HIGHWAY DRAINAGE. The HDOT shall install drainage control (drywells) equipped with oil/water separators to prevent polluted runoff from entering groundwater below the National Parks from a point 1,000 feet north of Hinalani Street to immediately south of the Kealakehe Parkway Intersection. HDOT shall construct the roadway and site the drywells to capture 90+% of storm runoff flows from both northbound and southbound lanes of highway in accordance with the HDOT standard specifications for stormwater treatment. Products utilized by the contractor shall provide that oil/water separators shall meet a minimum removal efficiency of 95%, and removal efficiencies of metals shall meet 95% of copper, 93% of lead, and 95% of zinc. The HDOT shall maintain drywell oil/water separators pursuant to the manufacturer's specifications to provide maximum protection of groundwater from polluted runoff. Annually, the HDOT shall provide NPS with reports of the actual maintenance of the drywells no later than 30 days after the anniversary of the installation of the drywells is completed. The reports shall include drywell location, date filters replaced, condition of filter replaced, and comments. This report shall be also made available to parties of this MOA and NHOs participating in the consultation process.	Incorporation of filtering devices into the construction plans has been done, the drywells shall be constructed per plan with filtering devices. Reporting requirements will become effective after installation as required.	N/A
10A	PEDESTRIAN CROSSINGS. A. The HDOT shall provide at-grade pedestrian crossing at the following three locations: at the intersections of Hinalani Street, Lanihau Street/Park Entrance, and Kealakehe Parkway. These crossings shall incorporate pedestrian refuges (where feasible) in the highway median where there is adequate space available for the pedestrian refuge, and will accommodate bicycle users.	Pedestrian crossings have been designed as required and will be open at the completion of the project, or sooner if feasible from a safety standpoint.	N/A



## ANNUAL REPORT Calendar Year 2016

### Queen Kaahumanu Highway Widening Phase 2 Memorandum of Agreement

February 24, 2017

No.	Stipulation	STATUS AS OF 2016	CURRENT ACTION ITEMS
10B	PEDESTRIAN CROSSINGS. B. UNDERPASS FEASIBILITY STUDY. The HDOT shall conduct a feasibility study with the objective of facilitating safe pedestrian access across the Queen Ka'ahumanu Highway at the "Trail to Honokōhau." The study will examine at-grade crossing locations, the installation of a pedestrian tunnel crossing, and the modification of existing culverts for pedestrian-bicycle use. The study shall seek examples and policies regarding use of existing pedestrian tunnels and modified culverts in Hawai'i and other States. Subsurface crossing(s) shall include provisions for a third party organization to take responsibility for maintenance, security and liability for the crossing(s) as has been the policy of HDOT for more than a decade. The HDOT shall identify and select a qualified independent third party to conduct the study. As part of the study, HDOT shall consult with NPS to identify community organizations who may be invited to participate in the feasibility study. Organizations that may be invited to participate include: signatories to this MOA, NHOs, Peoples Advocacy Trails Hawai'i (PATH), County of Hawai'i, local primary and secondary school officials, universities, community groups, the Royal Order of Kamehameha, and the Association of Hawaiian Civic Clubs. As part of the feasibility study the HDOT shall convene a community meeting that has as its objective the development of design guidelines for future Queen Ka'ahumanu Highway expansion projects that includes provisions for trail connectivity and pedestrian crossings under the Queen Ka'ahumanu Highway as well as paralleling the highway. The HDOT shall transmit the findings of the feasibility study (inclusive of any documents or written testimony from the community meeting above) to parties participating in the feasibility study prior to the expiration of this MOA.	- HDOT requested RMTC to perform the underpass feasibility study. The design concept is completed. - Consultation with the NPS occurred on 1/30/2017 to identify community organizations to participate.	- Anticipated completion of remaining tasks with HDOT in Spring to Mid 2017. - Anticipate community meeting for Spring-Mid 2017 using identified NHOs by NPS. - Feasibility Study to be completed following Spring-Mid 2017 community meeting with NHOs to provide recommendation for the Study.
11	INTERPRETIVE SIGN(S). The HDOT shall research, design, and produce mutually agreed upon interpretive sign(s) in consultation with NPS and NHOs relating to the history of the trails identified in the Project ROW near the Kaloko-Honokōhau National Historical Park and how the trails relate to the surrounding community. The sign(s) shall be (1) designed to meet NPS sign standards, (2) produced by HDOT, and (3) installed by the NPS within the boundaries of the Kaloko-Honokōhau National Historical Park.	HDOT met with NPS on 2/10/2017 to review interpretive signage and applicability to project.	Follow-up with NPS planned for early March 2017 to identify: (1) location of trail signage; and (2) type and information required for signage based on AIS/SAIS and location of historic trails.
12	AHUPUA'A SIGNS. The HDOT shall install ahupua'a markers within the project limits following the guidelines of the HDOT's Ahupua'a Marker Program. The markers (ahu or sign on posts) shall be designed and installed in consultation with community groups and NHOs as prescribed by the Ahupua'a Marker Program. A notice of the proposed installation shall be published in the West Hawai'i Today newspaper. The markers shall be installed as part of the highway widening project.	The current draft of the HDOT Ahupua'a Marker Program will serve as the basis for the planned development of the ahupua'a markers.	HDOT to develop conceptual signage including preliminary specifications and locations for placement within the HDOT ROW. Following this step, HDOT will consult with NHOs.
13	HIGHWAY LANDSCAPING. The HDOT shall coordinate landscaping plans with the NPS in areas within the ROW fronting the Kaloko-Honokōhau National Historical Park; including intersections. The criteria for landscaping material include: native plant species or appropriate Polynesian-introduced species that require low maintenance and are drought tolerant. The plant species to be planted shall be decided upon jointly between HDOT and the NPS in consultation with the NHOs.	- HDOT selected designer & discussed landscaping requirements with NPS. Landscaping plans submitted to and approved by NPS. Plans submitted to NHOs and comments on plant species received.	HDOT to work with landscape designer to address comments on plant species by NHOs

## ANNUAL REPORT Calendar Year 2016

### Queen Kaahumanu Highway Widening Phase 2 Memorandum of Agreement

February 24, 2017

No.	Stipulation	STATUS AS OF 2016	CURRENT ACTION ITEMS
14	RELATIONSHIP BUILDING WORKSHOP. The FHWA and HDOT acknowledge the need to build upon existing and develop new relationships with NHO and communities statewide. The FHWA and HDOT shall commit to sponsoring an initial statewide (one day) relationship building workshop to provide a forum where discussion and knowledge exchange can occur between the FHWA, HDOT, NHOs, concurring parties, and community representatives in a non-project specific context. Other agencies may be invited to participate in this forum as deemed appropriate by a consensus decision between FHWA, HDOT, and OHA, advocating on behalf of NHO interests. This workshop shall be held within 24 months following the execution of this MOA. The subject of the workshop may cover five (5) major areas: (1) identification of issues, challenges or problems that NHOs and HDOT/FHWA have experienced in consultation with each other; (2) a technical training about National Historic Preservation Act Section 106, U.S. Department of Transportation Act Section 4(f), National Environmental Policy Act (NEPA), NHO protocols, relevant Hawaiian history or cultural practices, or other relevant laws and practices (mutually sharing information); (3) a problem-solving session to share knowledge about best practices that would assist NHOs, HDOT and FHWA to have productive and effective consultation; (4) to identify NHO and community representatives interested in participating in the next stage of relationship building that may involve a training course sponsored by the FHWA/HDOT that integrates the NEPA/NHPA/U.S. Department of Transportation Act, Section 4(f) decision making processes for transportation projects in Hawai'i; and (5) explore the development of agreement documents that guide NEPA/NHPA consultation for transportation projects in Hawai'i. The FHWA and HDOT may sponsor additional phases of the relationship building process and will decide within one year after the conclusion of the first workshop as appropriate and/or necessary.	<ul style="list-style-type: none"> <li>- Preliminary planning for workshop undertaken. Completed: Draft Agenda, identified meeting participants; location; and meeting facilitators identified. All subject to change as coordination with NHOs continues.</li> <li>- Workshop temporarily delayed due to archaeological breaches that need to be addressed prior to scheduling.</li> </ul>	<ul style="list-style-type: none"> <li>- Continue meetings for workshop planning. Meeting tentatively planned for May/June 2017</li> <li>- Previously identified March 11, 2017 or alternative meeting date is planned with NHOs for coordination on breaches to archaeological sites, and to address the Agenda and steps required for the Relationship Building Workshop.</li> <li>- Continue to consult and coordinate with NHOs, agencies, and others to develop the Agenda.- Continue to consult and coordinate with NHOs, agencies, and others to develop the Agenda.</li> </ul>
15	TERRAIN MODEL. The HDOT shall commission the construction of a terrain model depicting the lands of Kekaha (between Kailua and Anaehoomalu) in consultation with Makani Hou o Kaloko-Honokōhau. The model shall incorporate topographic relief, traditional place names, historic trails, settlement locations, interpretive signs, and other important landmarks, to be determined. The model may be housed at the Kaloko-Honokōhau National Historical Park under the auspices of the Hawai'i Pacific Parks Association. The model shall be of such scale that it can be transported to other locations and be used as a teaching tool. A second digital model will also be developed and include similar information as the terrain model.	<ul style="list-style-type: none"> <li>- Consultation with NPS and Makani Hou for development of the Terrain Model is ongoing with the first and second meetings with NPS and NHOs completed on 2/10/2017 and 2/21/2017.</li> <li>- Modelmaker is advised that consultation with NHOs may extend beyond his schedule. HDOT will revisit selection of modelmaker as needed.</li> <li>- Concept planning underway with NPS and NHOs.</li> </ul>	<ul style="list-style-type: none"> <li>- Follow-up with NPS and Makani Hou/NHOs is ongoing.</li> <li>- Continue work with NHOs to develop the Terrain Model.</li> <li>- Development of planning process and selection of required terrain data, and physical and digital model layout expected in March/April 2017.</li> </ul>
16	ARCHAEOLOGICAL MATERIALS AND RECORDS. All archaeological materials and records discovered as a result of the subject project shall be housed and curated by the HDOT. The location and methods used shall be subject to review and consultation with SHPD and shall be open for review and inspection by the public upon request to HDOT. If at some future date the NPS has space, personnel, and resources to take on this responsibility, the HDOT shall consult with NPS.	Archaeological materials under curation by HDOT and are available for viewing by the public upon request.	HDOT to continue monitoring and management of archaeological materials.

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No.	Stipulation	STATUS AS OF 2016	CURRENT ACTION ITEMS
17	<p><b>POST-REVIEW DISCOVERIES.</b> If previously unknown potential historic properties are discovered or unanticipated effects on identified historic properties are found during project construction, the HDOT shall take the actions identified below. The HDOT will immediately notify the SHPO, and immediately stop work at the site of the find until appropriate final mitigation measures are implemented.</p> <p>A. If the discovery or unanticipated adverse effect is located within the ROW, the HDOT will notify SHPO and the signatories, invited signatories, concurring parties, and consulting NHOs to this MOA of the findings within 72 hours. If the finding is adjacent to the Park boundary, then the HDOT will also notify the NPS at the same time that the SHPO is notified. All signatories, invited signatories and concurring parties to this MOA shall designate a "point of contact" and contact information for the representative who shall be notified pursuant to this provision or the inadvertent discovery of human skeletal remains as described at 17(C) below.</p> <p>B. The FHWA, the SHPO, and the signatories, invited signatories, concurring parties, and consulting NHOs to this MOA shall consult on the potential significance of the discovered property, National Register of Historic Places eligibility and any proposed treatment. Comments on the significance, of the discovered property, National Register of Historic Places eligibility and any proposed treatment or a request for additional time to provide comments shall be provided by the SHPO, signatories, invited signatories, and concurring parties to the FHWA within 48 hours of any notification as described in 17(A) in order to be considered. HDOT to ensure that any recommended treatment measures are implemented; and HDOT shall provide a final report to the SHPO and all signatories, invited signatories, and concurring parties on these actions when they are completed.</p> <p>C. In the event human skeletal remains are inadvertently discovered during project construction, the requirements of Chapter §6E-43.6, HRS, and Chapter 13-300, HAR, shall determine appropriate treatment. In addition to the parties who are notified of inadvertent discoveries pursuant to Chapter 13-300-40(b), HAR, and (c), the FHWA shall ensure all signatories, invited signatories and concurring parties to this MOA are notified of the inadvertent discovery and afforded a reasonable opportunity to comment on appropriate treatment. Comments shall be directed to the SHPD.</p>	No new post-review discoveries.	N/A
18	<p><b>DISPUTE RESOLUTION.</b> Should any signatory, invited signatory, or concurring party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, FHWA shall consult with such party to resolve the objection. If FHWA determines that such objection cannot be resolved, FHWA will:</p> <p>A. Forward all documentation relevant to the dispute, including the FHWA's proposed resolution, to the ACHP. The ACHP shall provide FHWA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FHWA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. The FHWA will then proceed according to its final decision.</p> <p>B. Make a final decision on the dispute and proceed accordingly if the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period. Prior to reaching such a final decision, the FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.</p> <p>C. Be responsible to carry out all other actions, subject to the terms of this MOA that are not the subject of the dispute.</p>	No action(s) required and none taken to date.	N/A

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### Queen Kaahumanu Highway Widening Phase 2 Memorandum of Agreement

February 24, 2017

No.	Stipulation	STATUS AS OF 2016	CURRENT ACTION ITEMS
19	MONITORING AND REPORTING. At the end of each calendar year following the execution of this MOA, or until it expires or is terminated, the FHWA, with the assistance of HDOT, shall provide all parties to this MOA and NHOs that participated a summary report (report) detailing work undertaken pursuant to its terms. This report shall summarize the implementation of the plans identified in Stipulation 4 and any other agreed upon mitigation measures detailed in this MOA. Such a report shall also include any scheduling changes proposed, any problems encountered, and any disputes and objections received in HDOT's and the FHWA's efforts to carry out the terms of this MOA. A review meeting may be called by the FHWA or HDOT upon request of a signatory, invited signatory or concurring party to this MOA. A Final Report shall be prepared and transmitted to the parties to this MOA, and NHOs that participated in consultation at the expiration of the MOA.	Report completed February 24, 2017	Next report to be sent out January 2018
20	DURATION. The term of this MOA shall apply for a period of five (5) years from the execution of the MOA, unless amended pursuant to Stipulation 21 of this MOA below.	MOA execution date March 2015.	N/A
21	AMENDMENTS. Any signatory, invited signatory, or concurring party to this MOA may request that it be amended, whereupon the parties shall consult in accordance with 36 CFR Part 800 to consider such amendment. The authority to execute any final amendments shall be with the signatories of this MOA. The amendment will be effective on the last date a copy of it is signed by all of the signatories. If the signatories cannot agree to appropriate terms to amend the MOA, any signatory may terminate consultation on the proposed amendment in accordance with Stipulation 22 below. To address minor changes in the projects or the treatment of historic properties affected by the projects, FHWA may propose revisions to the APMP, DRPP, AMP, BTP or Cultural Monitoring Scope of work to the other parties to this MOA. Upon the written concurrence of the signatories and invited signatories, FHWA may revise the plans(s) to incorporate the agreed upon changes without executing a formal amendment to this MOA	No amendments proposed to date.	N/A
22	TERMINATION. If any signatory or invited signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories to attempt to develop an amendment per Stipulation 21, above. If within thirty (30) days or another time period agreed to by the approving signatories an amendment cannot be reached, any approving signatory may terminate consultation on the proposed amendment to the MOA upon written notification to the other signatories. Other provisions of the MOA shall remain in effect.	No amendments proposed to date.	N/A
23	COUNTERPART SIGNATURES. This MOA may be executed in counterparts. Each signature page shall be incorporated into the MOA and considered a part of this MOA.	Executed in final signed MOA.	N/A
24	This Agreement supersedes in its entirety the MOA dated March 5, 1999, as well as the 1999 Final Archaeological Treatment Plan.	No further action required.	N/A

EXHIBIT 1 - MOA CONTACT LIST

E-mail Notification List

Queen Ka'ahumanu Highway Widening, Phase 2

List Derived from Notification of Site Breaches, Meeting 1 (12/6/17) and Terrain Model Mtg 1 (2/10/17)

As of: 23-Feb-17

No.	Organization	Name	Email
1	HDOT	Ford Fuchigami	<a href="mailto:ford.n.fuchigami@hawaii.gov">ford.n.fuchigami@hawaii.gov</a>
2		Ed Sniffen	<a href="mailto:Edwin.H.Sniffen@hawaii.gov">Edwin.H.Sniffen@hawaii.gov</a>
3		Sterling Chow	<a href="mailto:Sterling.Chow@hawaii.gov">Sterling.Chow@hawaii.gov</a>
4		Julann Sonomura	<a href="mailto:Julann.M.Sonomura@hawaii.gov">Julann.M.Sonomura@hawaii.gov</a>
5		Henry Kennedy	<a href="mailto:Henry.Kennedy@hawaii.gov">Henry.Kennedy@hawaii.gov</a>
6		Doena Naboa	<a href="mailto:Deona.Naboa@hawaii.gov">Deona.Naboa@hawaii.gov</a>
7		Pua Aiu	<a href="mailto:Pua.Aiu@hawaii.gov">Pua.Aiu@hawaii.gov</a>
8		Ken Tatsuguchi	<a href="mailto:Ken.Tatsuguchi@hawaii.gov">Ken.Tatsuguchi@hawaii.gov</a>
9	Federal Highway Administration	Ralph Rizzo	<a href="mailto:ralph.j.rizzo@dot.gov">ralph.j.rizzo@dot.gov</a>
10		Lisa Powell	<a href="mailto:Lisa.Powell@dot.gov">Lisa.Powell@dot.gov</a>
11		Meesa Otani	<a href="mailto:meesa.otani@dot.gov">meesa.otani@dot.gov</a>
12	State Historic Preservation Division	Dr. Susan Lebo	<a href="mailto:Susan.A.Lebo@hawaii.gov">Susan.A.Lebo@hawaii.gov</a>
13		Sean Naleimaile	<a href="mailto:Sean.P.Naleimaile@hawaii.gov">Sean.P.Naleimaile@hawaii.gov</a>
14	Office of Hawaiian Affairs	Keola Lindsey	<a href="mailto:keolal@oha.org">keolal@oha.org</a>
15		Lauren Morawski	<a href="mailto:laurenm@oha.org">laurenm@oha.org</a>
16	Historic Hawaii Foundation	Kiersten Faulkner	<a href="mailto:Kiersten@historichawaii.org">Kiersten@historichawaii.org</a>
17	Kaloko-Honokōhau National Historical Park	Tammy Duchesne	<a href="mailto:tammy_duchesne@nps.gov">tammy_duchesne@nps.gov</a>
18		Tyler Paikuli-Campbell	<a href="mailto:Tyler_Paikuli-Campbell@nps.gov">Tyler_Paikuli-Campbell@nps.gov</a>
19		Jeff Zimpfer	<a href="mailto:jeff_zimpfer@nps.gov">jeff_zimpfer@nps.gov</a>
20	Ala Kahakai National Historic Trail	Aric Arakaki	<a href="mailto:aric_arakaki@nps.gov">aric_arakaki@nps.gov</a>
21		Rick Gmirkin	<a href="mailto:rick_gmirkin@nps.gov">rick_gmirkin@nps.gov</a>
22	National Park Service-Interpretation	Mandy Johnson-Campbell	<a href="mailto:amanda_johnson@nps.gov">amanda_johnson@nps.gov</a>
23		Jon Jokiel	<a href="mailto:jon_jokiel@nps.gov">jon_jokiel@nps.gov</a>
24		Rae Godden	<a href="mailto:rae_godden@nps.gov">rae_godden@nps.gov</a>
25	Advisory Council on Historic Preservation	Chris Wilson	<a href="mailto:cwilson@achp.gov">cwilson@achp.gov</a>
26		Mary Ann Nabor	<a href="mailto:mnaber@achp.gov">mnaber@achp.gov</a>
27	Makani Hou o Kaloko-Honokōhau	Isaac Harp	<a href="mailto:paka@sandwichisles.net">paka@sandwichisles.net</a>
28		Fred Cachola	<a href="mailto:fredcachola@gmail.com">fredcachola@gmail.com</a>
29	Kona Hawaiian Civic Club	Cynthia Nazara	<a href="mailto:cynazara@gmail.com">cynazara@gmail.com</a>
30		Hannah Springer	<a href="mailto:ohiwai@gmail.com">ohiwai@gmail.com</a>
30	Royal Order of Kamehameha - Kona	Kuauhau Russ Paio	<a href="mailto:konakuahau@hotmail.com">konakuahau@hotmail.com</a>
31		Nainoa Perry	<a href="mailto:nainoaperry@yahoo.com">nainoaperry@yahoo.com</a>
32	Nakoa Foundation	Kalani Nakoa	<a href="mailto:nakoafoundation@hotmail.com">nakoafoundation@hotmail.com</a>
33	LaiOpua 2020	Bo Kahui	<a href="mailto:bokahui@laiopua.org">bokahui@laiopua.org</a>
34	Others	Luana Keanaaina	
35	R.M. Towill Corporation	Brian Takeda	<a href="mailto:BrianT@rmtowill.com">BrianT@rmtowill.com</a>
36		Jason Tateishi	<a href="mailto:jasont@rmtowill.com">jasont@rmtowill.com</a>
37		Stacy Armstrong	<a href="mailto:stacya@rmtowill.com">stacya@rmtowill.com</a>
38		Jimmy Yamamoto	<a href="mailto:JimmyY@rmtowill.com">JimmyY@rmtowill.com</a>
39	Cultural Surveys Hawaii	Roy Tsutsui	<a href="mailto:RoyT@rmtowill.com">RoyT@rmtowill.com</a>
40		William Folk	<a href="mailto:WFolk@culturalsurveys.com">WFolk@culturalsurveys.com</a>
41		Jon Henning	<a href="mailto:jonh@goodfellowbros.com">jonh@goodfellowbros.com</a>
42	SSFM International	Austin Drake	<a href="mailto:adrake@ssfm.com">adrake@ssfm.com</a>

**Queen Ka‘ahumanu Highway Widening, Phase 2**

**Construction Status**

**April 4, 2017**

## Queen Kaahumanu Highway Widening Phase 2

### Construction Update

April 4, 2017

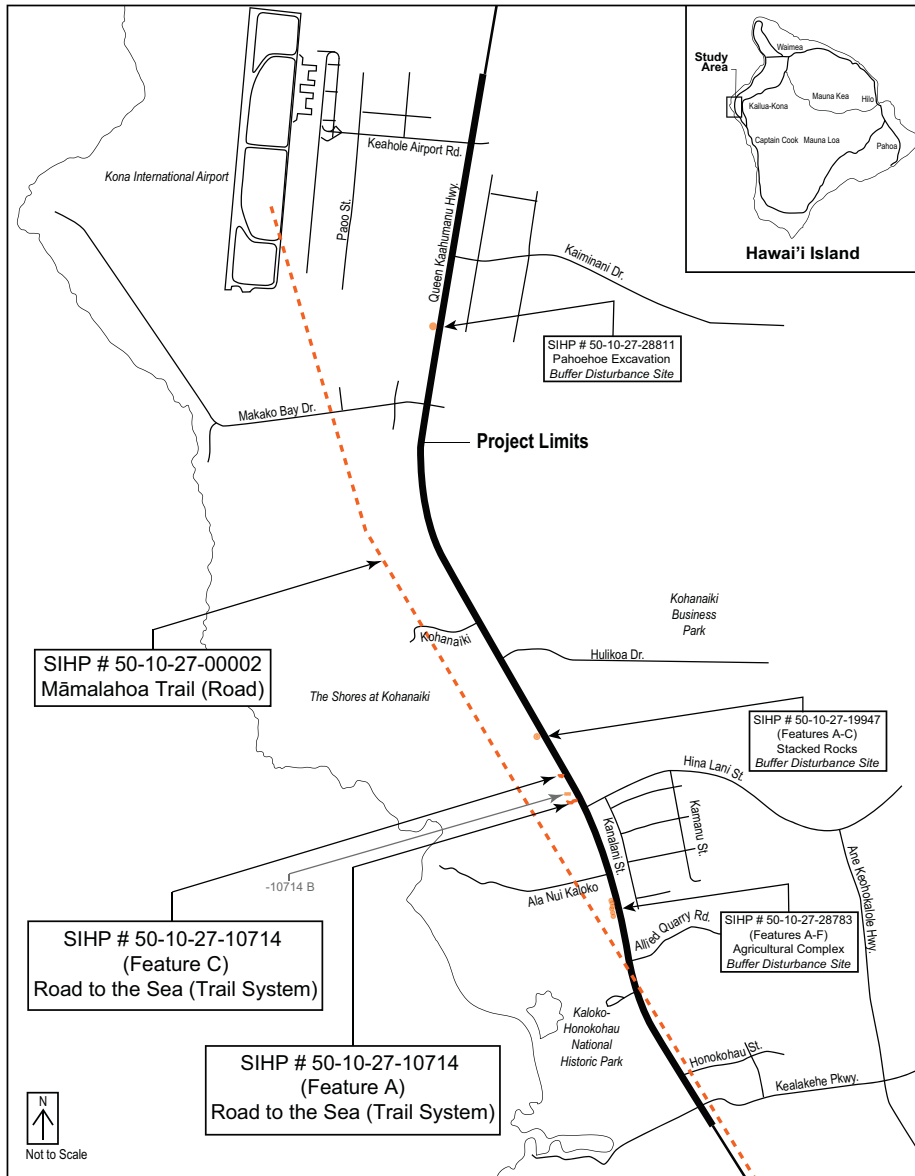
Retaining Walls	<p>Pouring of Retaining Wall A-1, located between the NPS entrance and teh Kaloko Fishpond Road, is completed. Remaining work on Wall A-1 is stripping of forms, waterproofing, and backfilling.</p> <p>Retaining Wall A, located south of the NPS entrance, footing is poured. Reinforcing steel and wall forms are being installed for the main portion of the wall. Remaining work on Wall A is pouring of the wall, stripping of forms, waterproofing, and backfilling.</p> <p>Retaining Wall E, located between Hulikoa Street and Hina Lani Street, footing has been poured. Reinforcing steel and wall forms are being installed for the main portion of the wall. Remaining work on Wall E is pouring of the wall, stripping of forms, waterproofing, and backfilling.</p> <p>Retaining Wall G, located north of Makako Bay Drive, footing and the first portion of the wall has been poured. Forming of the remaining wall is being installed. Remaining work on Wall G is pouring of the remaining portion of the wall, stripping of forms, waterproofing, and backfilling.</p> <p>Wall F, located south of Makako Bay Drive, has been completely poured, however, a design oversight will require retrofit of the wall. Design of the retrofit is ongoing and construction will commence once the design is accepted.</p>
Hulikoa Intersection	<p>Paving is complete and the temporary traffic signal has been installed. Striping of the new roadway and re-striping of the existing roadway is scheduled for Monday April 11, 2017 with the temporary signal being activated on Tuesday April 12, 2017.</p>
Paving	<p>Paving is planned to start at the north end of the project from Keahole Airport Road and working south to Hulikoa Street.</p> <p>Preparation of subgrade is scheduled to start in the next two weeks with installation of triaxial geogrid and base course to follow.</p> <p>Paving is planned to begin in about a month.</p>
Utilities	<p>Installation of sewer and reclaimed waterline crossings Kealakehe Parkway on the Honokohau Harbor side of the road has been completed. Work to connect to the crossings is currently ongoing.</p>
Traffic Signals	<p>Installation of temporary traffic signals at Hina Lani is almost complete. Activation of the temporary signal and removal of the existing signal is planned for late this week or early next week.</p>

**Queen Ka'ahumanu Highway Widening, Phase 2**

**Maps of Disturbed Sites and Buffers**

**December 6, 2016**





### Sites Disturbed:

#### SIHP # 50-10-27-00002, Māmalahoa Trail (Road):

Māmalahoa Trail or Road, extends for miles outside of, and north and south of, the project area. Site -00002 is a historic cross-ahupua'a road commonly referred to as the Māmalahoa Trail. The construction of the road is dated to 1836-1855. It is considered to have been the major seaward road through the region between its construction and 1888, when use of the road became infrequent (Cordy 1991:403, 406). The road, in general, is described as a remarkably straight curb-lined path typically 2.0 to 3.0 meters wide. In some areas the road surface is raised, with low points in the terrain filled in and leveled with stone. At Honokohau, Queen Ka'ahumanu Highway disturbs the Māmalahoa Trail and two sections lie within the present project area.

#### SIHP # 50-10-27-10714 (Features A & C), Road to the Sea (Trail System):

Road to the Sea trail system is located approximately 88 meters northwest of the intersection of Hina Lani Street and the Queen Ka'ahumanu Highway within the portion of the project area that is North of the Kaloko-Honokōhau National Historical Park. Site -10714 is comprised of three features (A, B, and C). The trail is roughly oriented East to West and measures 56.6 meters long within the project area. Within the project area, the trail lacks any formal construction features such as stepping stones or curbing. The trail can be recognized within the project area by observing subtle wear-patterns and color variations on the lava flow. Sections of Features A and C lie within the present project area.

### Buffers Disturbed:

#### SIHP # 50-10-27-28783 (Features A-F), Agricultural Complex ('a'ā excavations)

Site -28783 is an agricultural complex consisting of six 'a'ā excavations (Features A to F) within a low area of undulating 'a'ā located south of Huehue Road within a portion of the project area adjacent to the Kaloko-Honokōhau National Historical Park.

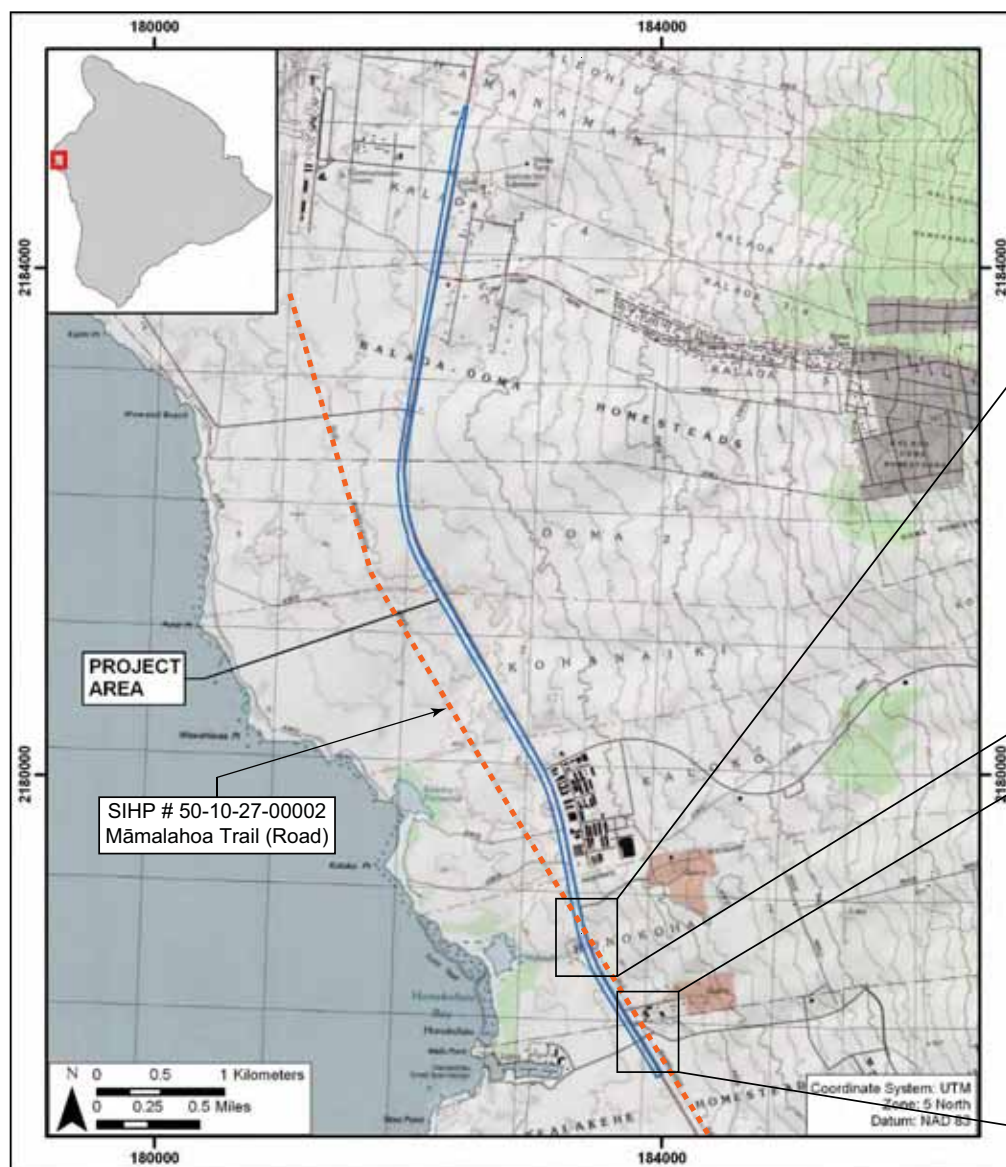
#### SIHP # 50-10-27-19947 (Features A, B, & C), Stacked Rocks

Site -19947 consists of three small cairns, designated Features A to C. The cairns are located at the approximate ahupua'a boundary between Kohanaiki and Kaloko, and are considered to be ahupua'a boundary markers. The cairns are located within a low point of gently undulating pāhoehoe terrain and are constructed of loosely stacked pāhoehoe cobbles and small boulders on top of slightly raised pāhoehoe outcrops. Two of the cairns are aligned in a roughly north-south axis and the third is to the west of these, forming a triangle.

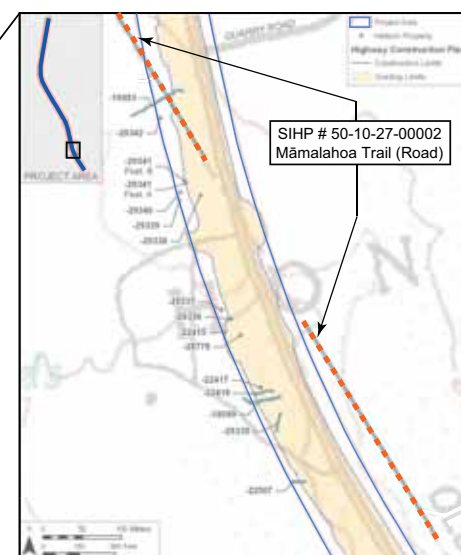
#### SIHP # 50-10-27-28811, Pāhoehoe Excavation

Site -28811 is a pāhoehoe excavation located approximately 715 meters south of the intersection of OTEC Road and the Queen Ka'ahumanu Highway. The site consists of an area where an overlying, uplifted sheet of pāhoehoe has been quarried and removed, exposing a lower pāhoehoe surface. The pāhoehoe excavation measures 3.0 meters north-south by 4.0 meters east-west with a maximum depth of 0.6 meters below the adjacent ground surface. No artifacts or midden were observed in the area.

Figure 1. Queen Ka'ahumanu Highway Widening, Ph. 2, Project Location and Disturbance Locations (SIHP#'s 50-10-27-00002, Māmalahoa Trail; -10714 (Features A & C), Road to the Sea; -28783 (Features A-F), Agricultural Complex; -19947 (Features A, B, & C), Stacked Rocks; and -28811, Pāhoehoe Excavation



1996 U.S. Geological Survey 7.5 minute topographic map (Keāhole Point and Kailua Quadrangles), showing the project area portion of the Queen Ka'ahumanu Highway

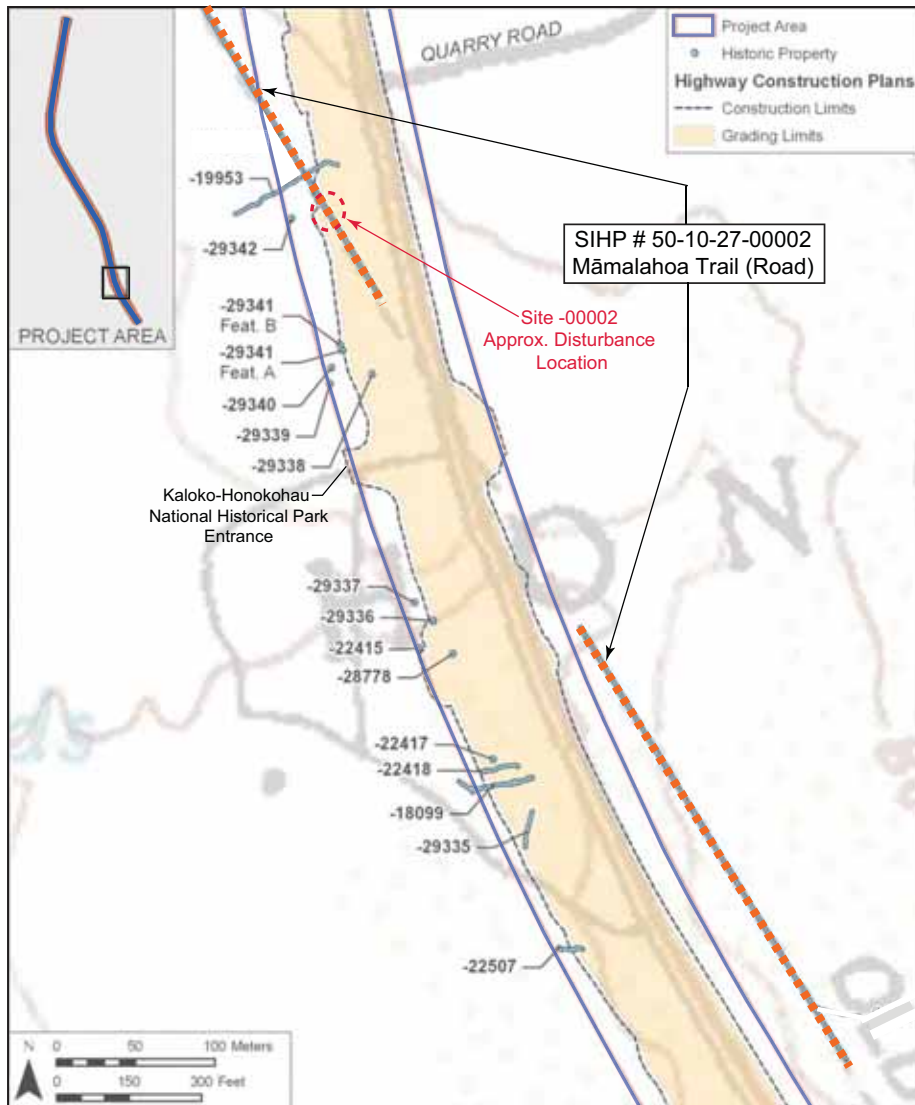


SIHP # -00002 Location at the Honokohau Project Location (see Figure 3 for Disturbance Location)

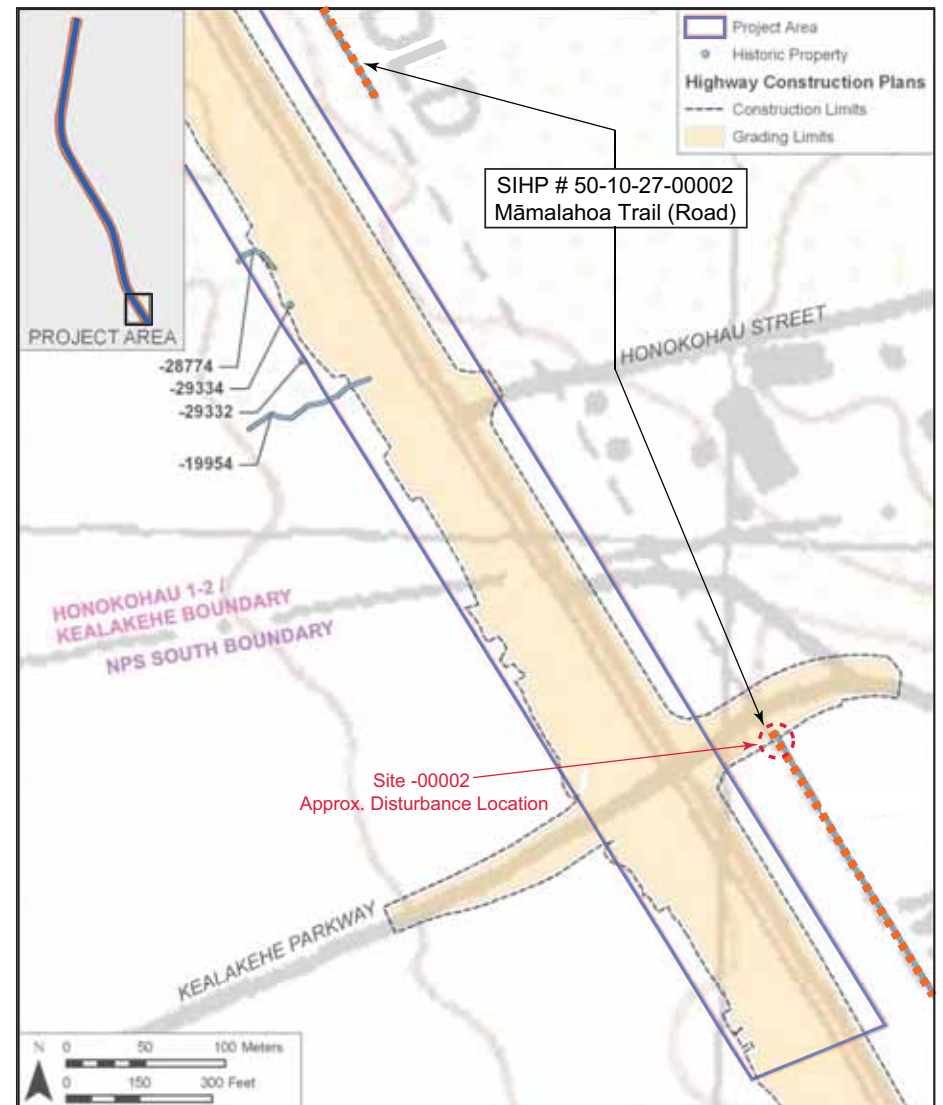


SIHP # -00002 Location at the Kealakehe Project Location (see Figure 3 for Disturbance Location)

Figure 2. SIHP # 50-10-27-00002, Māmalahoa Trail, Site Locations



SIHP # -00002 Disturbance Location Near Quarry Road and Kaloko-Honokohau National Historic Park, North of Honokohau Street



SIHP # -00002 Disturbance Location at Kealahke Parkway

Figure 3. SIHP # 50-10-27-00002, Māmalahoa Trail, Approximate Disturbance Locations



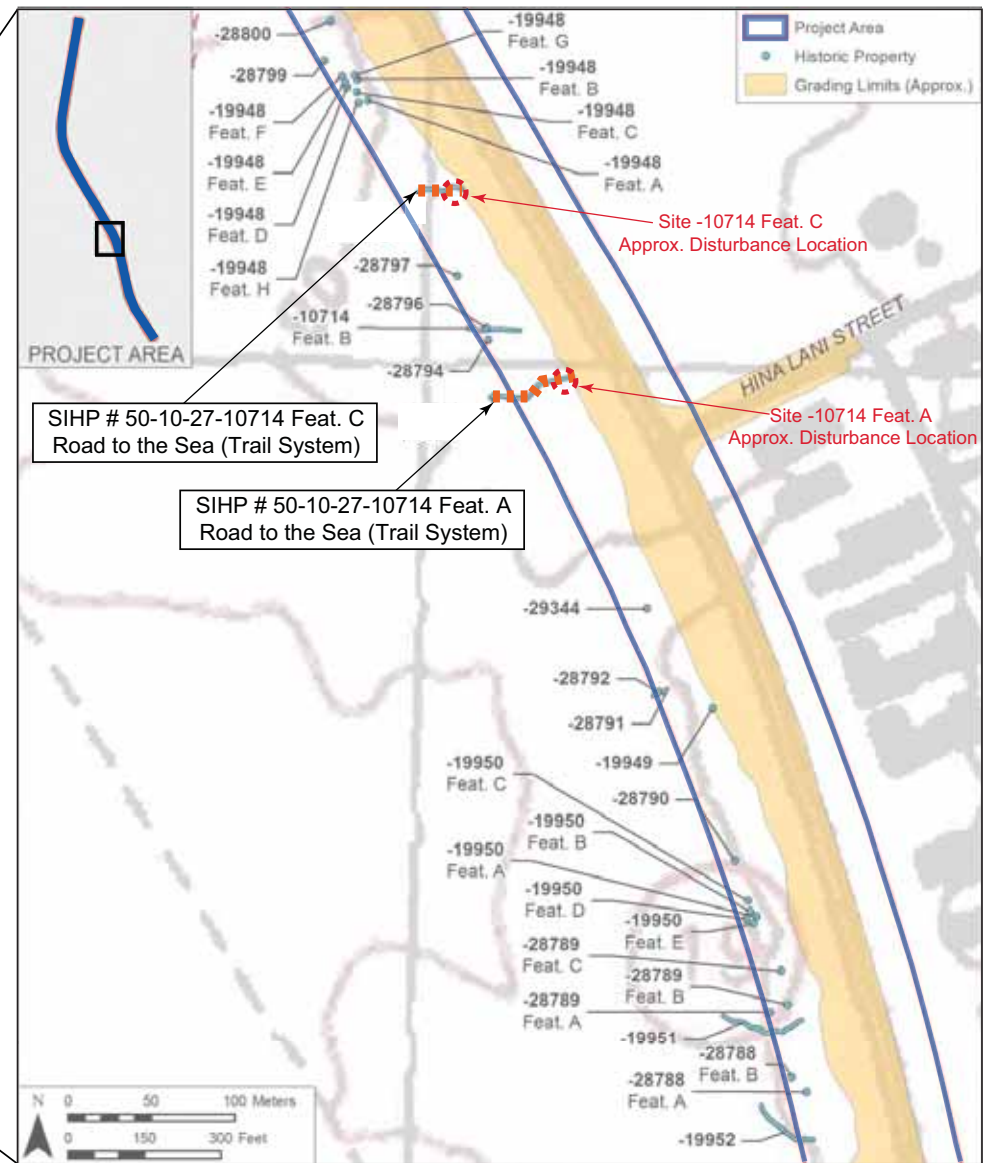
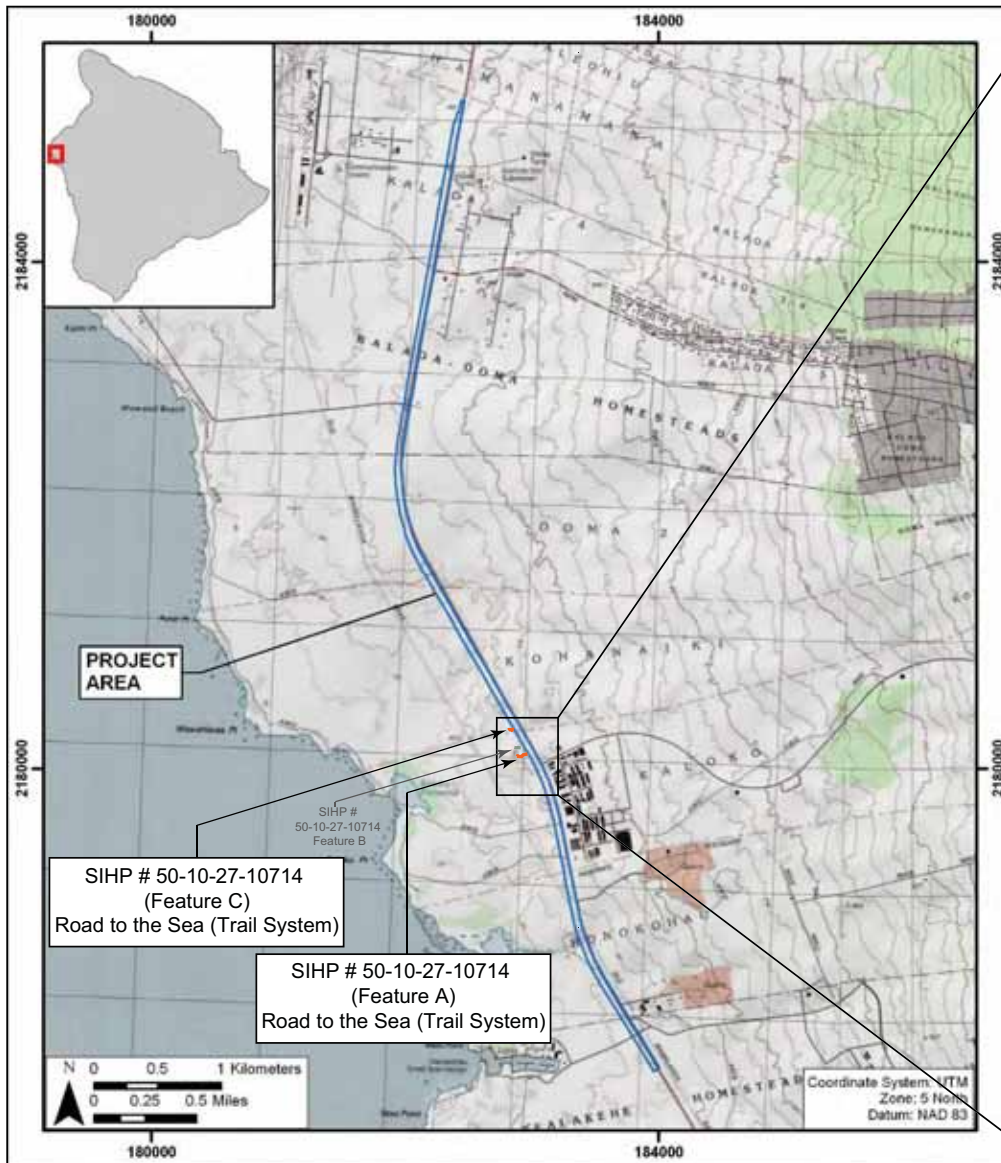


Figure 4. SIHP # 50-10-27-10714 Features A, B, & C), Road to the Sea Trail System, and Feature A & C Approximate Disturbance Locations

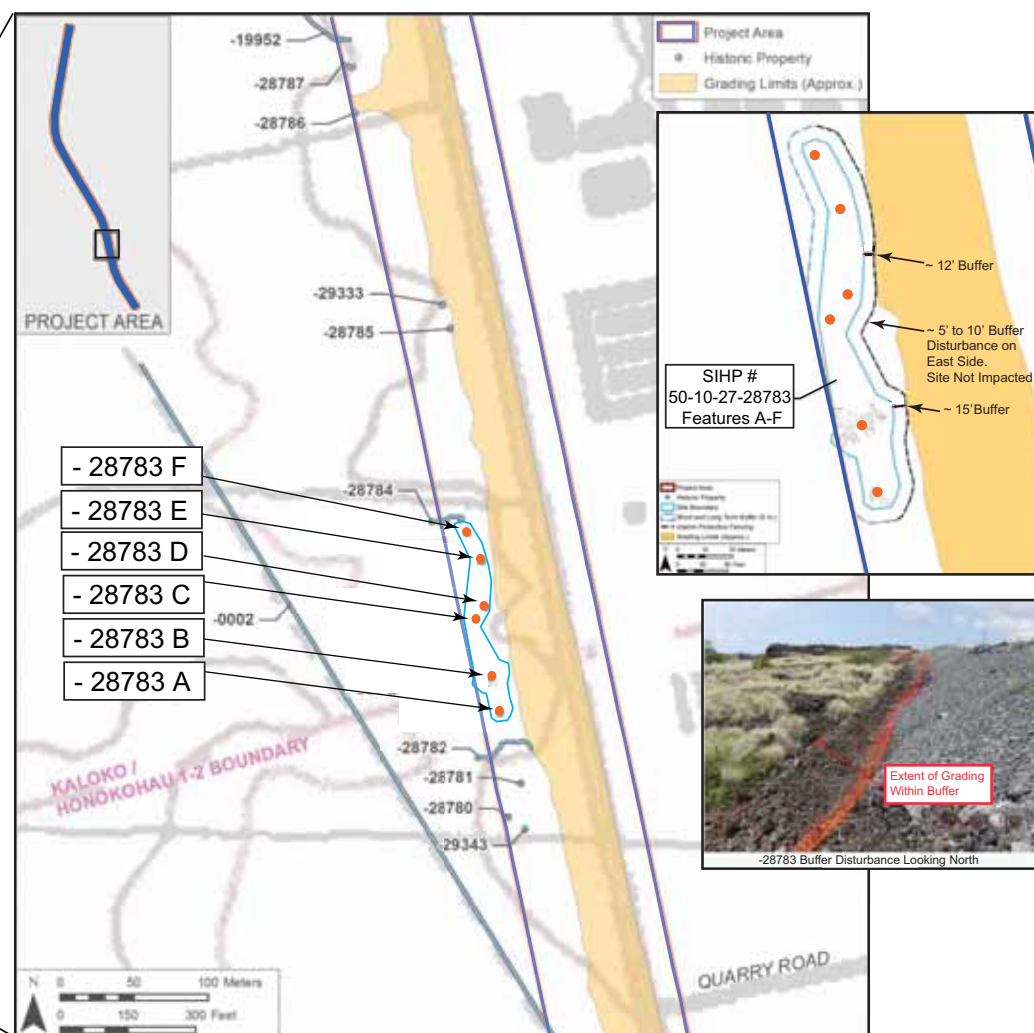
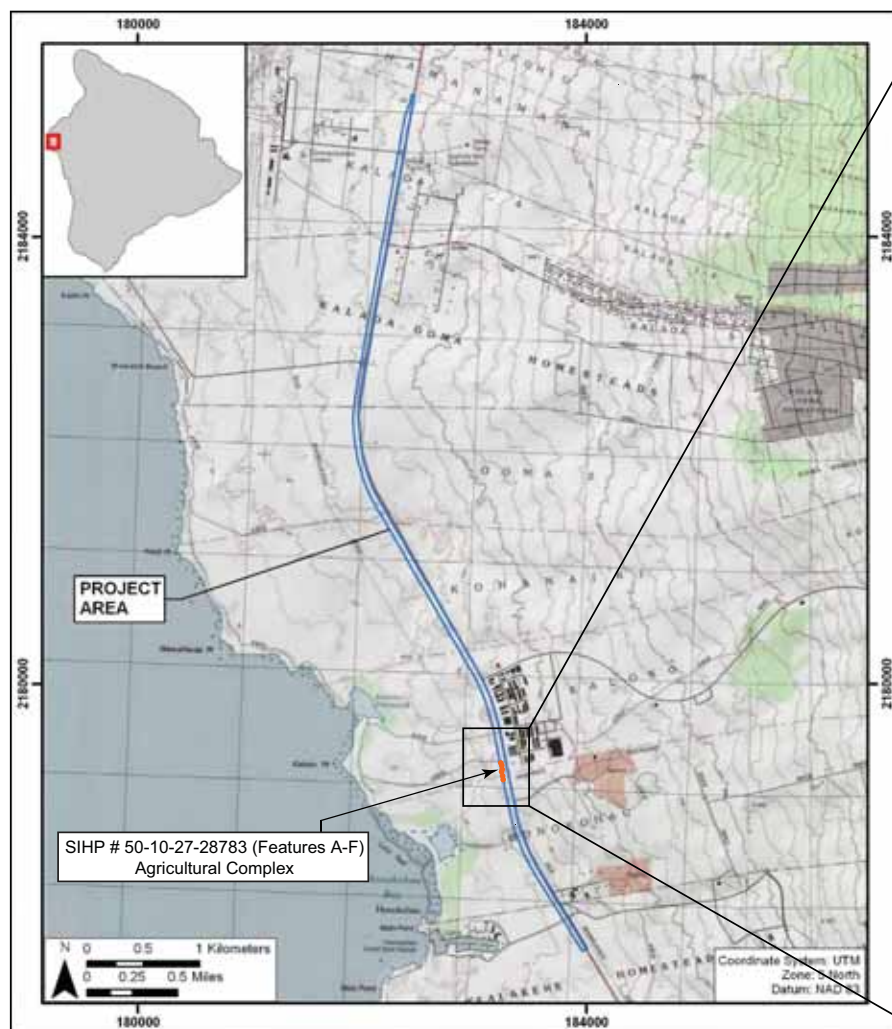
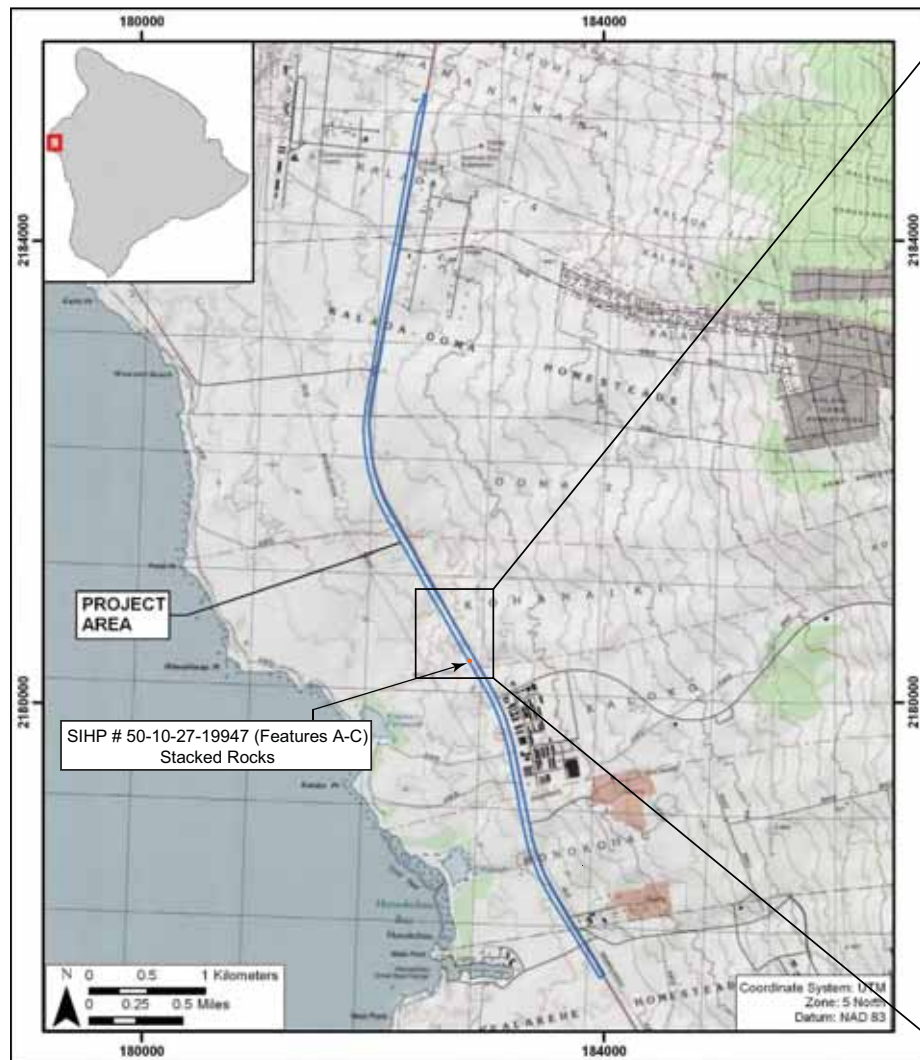
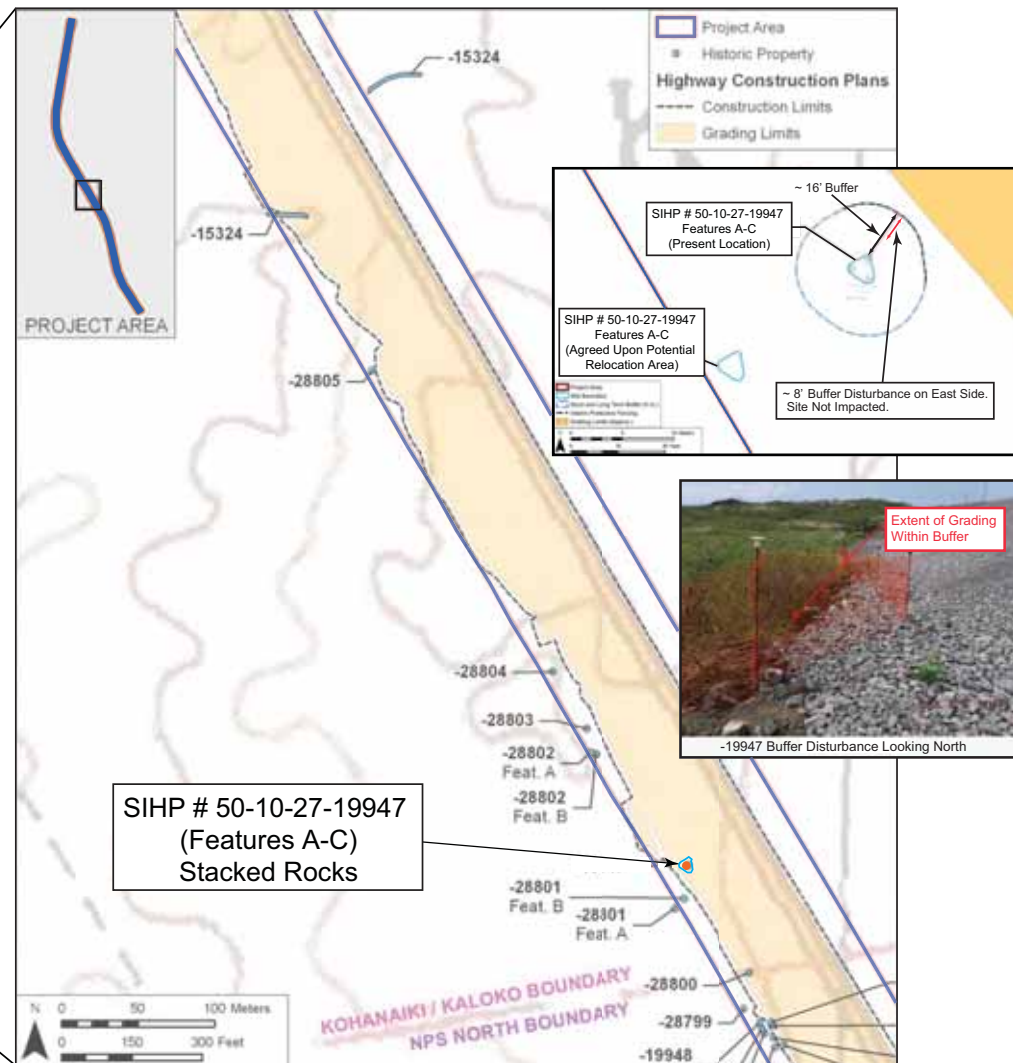


Figure 5. SIHP # 50-10-27-28783 Features A-F, Agricultural Complex, Buffer Disturbance Site





1996 U.S. Geological Survey 7.5 minute topographic map (Keāhole Point and Kailua Quadrangles), showing the project area portion of the Queen Ka'ahumanu Highway



SIHP # -19947 Location at the Boundary Between the Ahupua'a of Kohalaiki and Kaloko and Relationship to Project Site

Figure 6. SIHP # 50-10-27-19947 (Features A, B, & C), Stacked Rocks, Buffer Disturbance Site

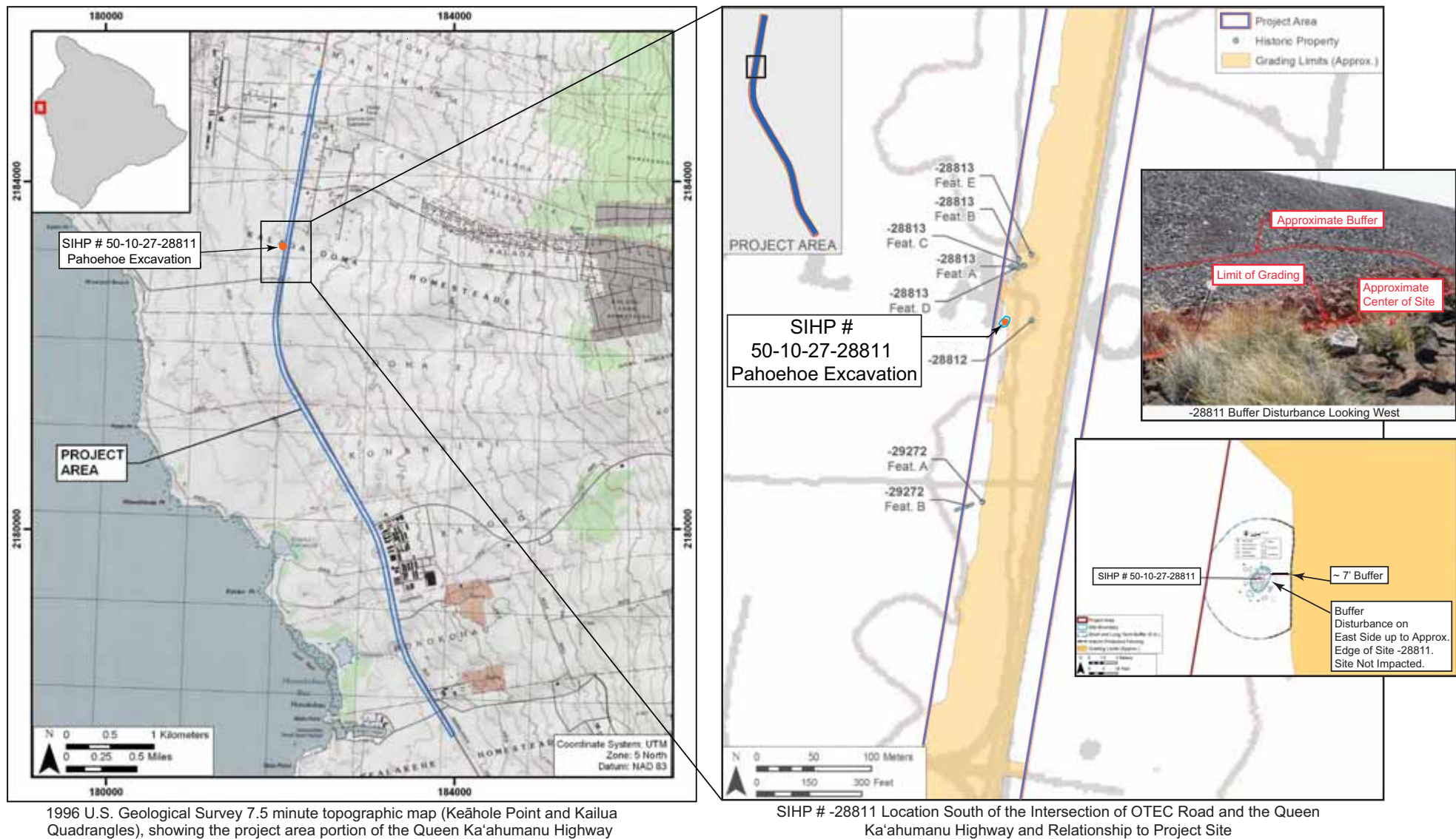


Figure 7. SIHP # 50-10-27-28811, Pahoe hoe Excavation, Buffer Disturbance Site

**Queen Ka‘ahumanu Highway Widening, Phase 2**  
**Final Action Plan**



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## **FINAL ACTION PLAN**

### **for Archaeological Monitoring at Queen Ka'ahumanu Highway Widening Phase 2 Project Cultural Surveys Hawai'i, Inc. (CSH) 11-15-16**

#### **I. CSH's Role(s) as Archaeological Monitor for Project Construction**

As archaeological monitoring consultant to GBI, CSH's role is to provide archaeological monitoring for project construction. This role includes:

- a. Adherence to monitoring provisions as stated in project AMP dated April 2014. Archaeological monitors will have a copy of this document onsite and understand its contents. Monitoring provisions are as follows:
  - i. On-site monitoring of all new ground disturbing activity and monitoring of all work in the proximity of any archaeological preserve; see Section 3 below.
  - ii. Coordination meeting(s) with construction crew to orient crew to monitoring requirements. This will include the CSH lead monitors' attendance at Goodfellow Bros., Inc. (GBI) morning meetings each day for scheduling work area assessments and all other items relevant to CSH monitors
  - iii. Authority to stop work immediately in the area of any findings so that documentation can proceed and appropriate treatment can be determined OR to slow and/or suspend construction activities in order to ensure that the necessary archaeological sampling and recording can take place. This includes investigation and documentation of breached lava tubes
- b. Adherence to all short-term (interim) mitigation measures specified in related project archaeological mitigation documents. Archaeological monitors will have a copy of these documents onsite and understand their contents, Mitigation documents are identified as follows and listed in order of precedence:
  - i. Final Section 4(f) Evaluation (May 2015)
  - ii. Final Archaeological Preservation and Mitigation Plan (APMP; April 2014)
  - iii. Final Data Recovery and Preservation Plan (DRPP; October 2012)
- c. Archaeological Monitors are responsible for preserving the integrity of all archaeological preserves (comprising both Preservation and Avoidance During Construction [ADC] sites); and to ensure that their respective interim protective measures (i.e. protective temporary fencing) remain intact for the duration of the project (see Section 5.5 of the APMP [p146] and DRPP [p273])
  - i. Archaeological preserves along the National Park Service (NPS) property have been protected by continuous interim buffer fencing at project

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construction limits. Additionally, each individual archaeological preserve along the NPS property has been protected by a single interim buffer fence set at the long-term buffer limits.

- ii. Archaeological preserves north of NPS property are individually fenced. Preserve fencing follows short-term buffers as delineated in DRPP/APMP. Exceptions to this stipulation include State Inventory of Historic Places (SIHP) #s -00002 and -10714, which are addressed in the Final Section 4(f) Evaluation but not the APMP.

To ensure ease of identification, each individual archaeological preserve has been marked with a wooden lath and pink flagging bearing the applicable SIHP number, affixed to the southeast corner of the preserve fencing

- iii. Interim protective fences shall not be altered at any time. Archaeological site buffer fencing, identification tags, and preserve flagging have been physically located in the field by CSH and verified by HDOT/RMTC.
- iv. The condition of the interim protective fencing will be checked by the monitoring archaeologists on a weekly basis.

If at any time a fence is found to be in disrepair, the fence shall not be touched and the Lead Archaeological Monitor shall report the finding through the chain of command immediately, beginning with the R.M. Towill Corporation (RMTC) Point-of-Contact and additionally notifying GBI as well. The archaeological monitor shall stop or prevent any work in the immediate area until the fence is corrected.

- d. Adherence to all CSH and client safety protocols

## 2. Coordination

- a. Execution - In order to execute the roles outlined above, effective coordination with all of our clients is of utmost importance. Coordination will be achieved in the following manner:

- i. CSH will conduct periodic on-site meetings with construction personnel, for the following reasons:
  - 1. Review role of archaeological monitors;
  - 2. Review recent changes to monitoring provisions (see Section 1.a.i. above);
  - 3. Review short-term protection measures at archaeological sites
  - 4. Meeting Minutes documenting the time, date, discussion topics, and attendees at the periodic on-site meetings shall be included in the Lead Archaeological Monitor's daily Archaeological Monitoring Form
- ii. GBI shall provide a project schedule via a copy of the Three Week Look Ahead Schedule or via verbal or written direction as to the number of

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resources required. The following week's schedule will be confirmed by Wednesday of the week prior.

- iii. Daily (AM) coordination meetings between GBI Foreman, CSH Lead Archaeological Monitor, and Lead Cultural Monitor:
  - 1. Daily meeting should take place in the AM prior to beginning of construction work
  - 2. Daily meeting will facilitate assignment of monitors to work areas
  - 3. Daily meeting will provide CSH an opportunity to evaluate and report to GBI any areas of archaeological sensitivity/concern in proximity to planned work activities
  - 4. The direction provided by GBI's foreman, any subsequent changes to the daily work areas, and reason for the change will be noted on the daily Archaeological Monitoring Form(s)
- iv. Ongoing daily coordination between GBI Foreman, CSH Lead Archaeological Monitor, and Lead Cultural Monitor about movement of work crews/active work areas, to facilitate movement of monitors and reassessment of any archaeological concerns
  - 1. Ongoing daily coordination can be executed via phone or text
- v. Notifications should be made immediately of any changes to personnel within the following Chains of Command (see Section 2.b.)
  - 1. CSH is to contact both RMTC Point-of-Contact and GBI regarding changes to Lead Archaeological Monitor. Prior to any changes a meeting with CSH, RMTC, and GBI shall be held.
  - 2. Every effort will be made to provide long-term project coverage by CSH's Lead Archaeological Monitor.
- vi. All CSH personnel new to the project will be oriented on their first day prior to beginning work, provided with appropriate written material, and introduced to appropriate available staff of RMTC and GBI
- vii. Lead Archaeological Monitor or Archaeological Supervisor will be responsible for briefing all new Archaeological Monitors, and will also brief new GBI construction personnel including subcontractors as needed.

Record of this additional briefing for new personnel (time, date, names) shall be included in the Lead Archaeological Monitor's daily Archaeological Monitoring Form
- viii. New CSH Archaeological Monitors and/or GBI construction personnel including subcontractors shall undergo cultural sensitivity training administered by the Cultural Monitor Coordinator, or a Cultural Monitor approved by the Coordinator, prior to beginning any work on site.

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Record of this additional briefing for new personnel (time, date, names) shall be included in the Daily Cultural Monitor Report.

- b. Chains of Command - To facilitate efficient and accurate reporting and/or follow-up, any monitoring issues large or small should be reported using the following chains of command and with the RMTC Point-of-Contact

i. CSH chain of command (from bottom of chain up):

1. Archaeological Monitor on ground – (variable)
2. Lead Archaeological Monitor – (TBD)
3. Project Supervisor [REDACTED]
4. Project Director [REDACTED]
5. Project Manager [REDACTED]
6. Principal Investigator [REDACTED]

ii. GBI chain of command (from bottom of chain up):

1. Foreman [REDACTED]
2. Project Engineer [REDACTED]
3. Project Manager [REDACTED]
4. Project Manager [REDACTED]

iii. Cultural Monitor chain of command:

1. Coordinator [REDACTED]
2. Project Coordinator [REDACTED]

iv. RMTC Point-of-Contact:

1. Project Coordinator [REDACTED]

v. HDOT Point-of-Contact

1. Construction Engineer [REDACTED]

3. Protocols for Working Around Archaeological Preserves

- a. Archaeological monitor shall closely monitor all work located within proximity of an archaeological preserve. "Proximity" shall be typically defined as 100 ft (30m) to the outer edge of an archaeological preserve, through the Lead Archaeological Monitor may determine what is appropriate on a case-by-case basis
- b. Archaeological monitor shall ensure that interim protective fencing/short-term buffers are continuously maintained and not breached or damaged by construction activity
- c. Machine operators shall be aware of location of archaeological monitor and physical protective fencing at all times, proceed with extreme caution near

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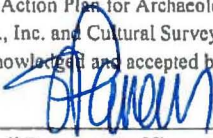
archaeological sites and protective fencing, and be prepared to halt work immediately if directed to do so by the archaeological monitor

- d. Whenever possible, construction equipment equipped with GPS capability will be used when near archaeological buffer limits. If GPS capability is not available, the limits of work shall be clearly defined on the ground and operators shall be made aware of the limits by the archaeologist
- e. Additional physical barrier protection may be installed in areas where ongoing activities are near archaeological preserve locations for extended periods of time (specifically retaining wall construction) to prevent any inadvertent encroachment
  - i. GBI will discuss archaeological sites preservation during the Activity Meeting that includes prior consultation with RMTC and CSH
- f. If any question arises about work activities in the vicinity of an archaeological preserve, OR if an archaeological preserve or its buffer is breached work shall be halted and notification initiated per Sections 1.c.iii. and 2.b.

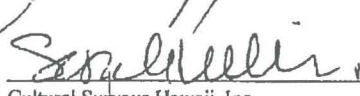
4. Reporting

- a. CSH to provide a weekly archaeological monitoring report, summarizing all of the observations and documentation collected during project monitoring and providing all of the daily reports as supporting documentation

This Action Plan for Archaeological Monitoring was developed through a collaborative effort between HDOT, Goodfellow Bros., Inc. and Cultural Surveys Hawaii, Inc. All monitoring requirements described herein will be strictly adhered to.  
Acknowledged and accepted by:

  
\_\_\_\_\_  
Hawaii Department of Transportation

  
\_\_\_\_\_  
Goodfellow Bros., Inc.

  
\_\_\_\_\_  
Cultural Surveys Hawaii, Inc.

**Alec Harrison**

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**From:** Brian Takeda  
**Sent:** Thursday, May 11, 2017 6:57 PM  
**To:** 'aloha@aohcc.org'; 'Kiersten@historichawaii.org'; 'cynazara@gmail.com'; 'ohiwai@gmail.com'; 'bokahui@laiopua.org'; 'paka@sandwichisles.net'; 'fredcachola@gmail.com'; 'akoafoundation@hotmail.com'; 'sharetheroad@pathhawaii.org'; 'daniel.kawaiaea@nps.org'; 'konakuahau@hotmail.com'; 'nainoaperry@yahoo.com'; 'marciedd@yahoo.com'; 'baschaeferphoto@gmail.com'; 'ruthaloua@gmail.com'; 'cohmayor@hawaiicounty.gov'; 'cohdem@hawaiicounty.gov'; 'parks\_recreation@hawaiicounty.gov'; 'planning@hawaiicounty.gov'; 'Art\_Souza@hawaiidoe.org'; 'jim\_denight@notes.k12.hi.us'; 'Nancy\_Matsukawa@hawaiidoe.org'; 'nakakura@whea.net'; 'kona@hawaii Montessori.org'; 'glenn\_gray@hawaiidoe.org'; 'dstraney@hawaii.edu'; 'kmfletch@hawaii.edu'; 'info@uofnkona.edu'; 'helpdesk@uofnkona.edu'  
**Cc:** Sterling.Chow@hawaii.gov; Natasha.A.Soriano@hawaii.gov; Scot Urada (scot.t.urada@hawaii.gov); Roy Tsutsui; James Yamamoto; Jason Tateishi; Laura Mau  
**Subject:** Queen Kaahumanu Highway, Phase 2 Memorandum of Agreement, Stipulation 10B 051117  
**Attachments:** ATTACHMTS 1&2 Underpass Notice.pdf  
**Importance:** High

Dear Participants,

### **Introduction and Notification of Upcoming Community Meeting Pursuant to Stipulation 10B, Underpass Feasibility Study**

This is concerning the Queen Ka'ahumanu Highway Improvements, Phase 2 Project and the efforts of the Hawai'i Department of Transportation (HDOT) to fulfill the conditions of the project's Memorandum of Agreement (MOA), Stipulation 10B, Underpass Feasibility Study. A copy of the language of MOA Stipulation 10B is provided as **Attachment 1**.

The HDOT project team has completed its examination of the following as required by the stipulation:

- At-grade and pedestrian tunnel crossing locations
- The possibility of modifying the use of existing culverts for pedestrian-bicyclist use
- Policies and examples where pedestrian underpasses and modification of culverts have been utilized in Hawai'i and in other states

The MOA Stipulation 10B also requires that the HDOT consult with the National Park Service (NPS) to identify community organizations that may be invited to participate, such as you, by providing input and comments to the information, above, in a community meeting with the objective to facilitate the:

*"...development of design guidelines for future Queen Ka'ahumanu Highway expansion projects that includes provisions for trail connectivity and pedestrian crossings under the Queen Ka'ahumanu Highway as well as paralleling the highway. "*

A copy of the consultation list that has been prepared with the assistance of the NPS is provided as **Attachment 2**. In addition to the community participants that have been identified the following MOA signatories will be notified and invited:

Advisory Council on Historic Preservation  
 Federal Highway Administration  
 Office of Hawaiian Affairs

### **Request and Notice of Community Meeting**

The HDOT wishes to proceed with the scheduling of this meeting as soon as the June 2017 timeframe and ask for the community's help with the review of the list of community contacts provided in **Attachment 2**, and to furnish any additions or corrections of names on this list. We ask for you to provide your information or any questions you may have no later than **May 30<sup>th</sup>** to the following e-mail:

[ingridf@rmtowill.com](mailto:ingridf@rmtowill.com)

Following your responses we will provide a notice for the date of the planned meeting in the June to July 2017 timeframe. Included in the notification will be:

The meeting Agenda, and a summary of the Meeting Information that is intended to be shared including at-grade and pedestrian tunnel crossing locations that have been used in Hawai'i, the possibility of modifying the use of existing culverts for pedestrian-bicyclist use, and policies and examples where pedestrian underpasses and modification of culverts have been utilized in Hawai'i and in other states.

An important part of the planned meeting will also be to listen to what the community has to say. The information you help provide will be used to identify and develop design guidelines for work on future Queen Ka'ahumanu Highway expansion projects. The guidelines will help to provide for trail connectivity and pedestrian crossings according to the requirements of Stipulation 10B. The HDOT will collect and distribute this information in the form of community recommendations and input from the invited participants in **Attachment 2**, above, and to the parties to the MOA, as follows:

Signatories:

Advisory Council on Historic Preservation  
Federal Highway Administration  
Hawai'i Department of Transportation  
State Historic Preservation Officer

Invited Signatories:

National Park Service

Concurring Parties:

Historic Hawai'i Foundation  
Office of Hawaiian Affairs  
Makani Hou a Kaloko-Honokohau

On behalf of the Department of Transportation we thank you for your consideration and help. We will be forwarding additional information as this becomes available.

Sincerely,

Brian Takeda  
Planning Project Coordinator  
<mailto:BrianT@rmtowill.com>

R. M. Towill Corporation  
2024 North King Street Suite 200  
Honolulu, Hawaii 96819  
voice: 808 842 1133 fax: 808 842 1937 web: [www.rmtowill.com](http://www.rmtowill.com)

## **Attachment 1**

### **Stipulation 10B**

**MEMORANDUM OF AGREEMENT Among the  
ADVISORY COUNCIL ON HISTORIC PRESERVATION, FEDERAL HIGHWAY ADMINISTRATION,  
and the HAWAII STATE HISTORIC PRESERVATION OFFICER**

**Regarding the projects in the vicinity of the District of North Kona, Island of Hawai'i,  
State of Hawai'i which are known as the Queen Ka'ahumanu Highway Intersection  
Improvements for the Kaloko-Honokohau National Historical Park  
and the Queen Ka'ahumanu Highway Widening, Kailua to Ke'ahole**

B. UNDERPASS FEASIBILITY STUDY. The HOOT shall conduct a feasibility study with the objective of facilitating safe pedestrian access across the Queen Ka'ahumanu Highway at the "Trail to Honokohau." The study will examine at-grade crossing locations, the installation of a pedestrian tunnel crossing, and the modification of existing culverts for pedestrian-bicycle use. The study shall seek examples and policies regarding use of existing pedestrian tunnels and modified culverts in Hawai'i and other States. Subsurface crossing(s) shall include provisions for a third party organization to take responsibility for maintenance, security and liability for the crossing(s) as has been the policy of HOOT for more than a decade. The HDOT shall identify and select a qualified independent third party to conduct the study. As part of the study, HDOT shall consult with NPS to identify community organizations who may be invited to participate in the feasibility study. Organizations that may be invited to participate include: signatories to this MOA, NHOs, Peoples Advocacy Trails Hawai'i (PATH), County of Hawai'i, local primary and secondary school officials, universities, community groups, the Royal Order of Kamehameha, and the Association of Hawaiian Civic Clubs. As part of the feasibility study the HDOT shall convene a community meeting that has as its objective the development of design guidelines for future Queen Ka'ahumanu Highway expansion projects that includes provisions for trail connectivity and pedestrian crossings under the Queen Ka'ahumanu Highway as well as paralleling the highway. The HDOT shall transmit the findings of the feasibility study (inclusive of any documents or written testimony from the community meeting above) to parties participating in the feasibility study prior to the expiration of this MOA.



**Attachment 2****QK Ph 2 MOA STIPULATION 10B Underpass Feasibility Study****Hawai'i Department of Transportation, Hawai'i District**

Consultation List as of: May 2017

Community Organization / Individuals	Contact Name		Title
Community Organizations and NHOs			
1 Association of Hawaiian Civic Clubs*	Annelle	Amaral	President
2 Historic Hawai'i Foundation	Kiersten	Faulkner	Executive Director
3 Kona Hawaiian Civic Club	Cynthia	Nazara	President
	Hannah	Springer	
4 La'i'Ōpua 2020	Bo	Kahui	Executive Director
5 Makani Hou o Kaloko-Honokōhau	Isaac	Harp	
	Fred	Cachola	
6 Nakoa Foundation	Abel	Aquino	Director
7 People's Advocacy Trails Hawai'i (PATH)*	Monica	Scheel	President
8 Pu'ukohola Heiau National Historic Site			
9 Royal Order of Kamehameha, Chapter--7 Kona, West Hawai'i, Hawai'i Island*	Kuauhau Russ	Paio	
	Nainoa	Perry	
	Kalani	Nakoa	
10 E Mau Na Ala Hele	Davis	Marcie	President
	Schaefer	Barbara	Board of Directors
11 Ruth Aloua	Aloua	Ruth	
County of Hawai'i			
12 Office of the Mayor	Harry	Kim	Mayor
13 Department of Environmental Management	William A.	Kucharski	Director
14 Department of Parks and Recreation	Charmine L.	Kamaka	Director
15 Department of Planning (West Hawai'i)	Michael	Yee	Planning Director
Primary and Secondary Schools			
16 Department of Education (DOE), Hawai'i District-Honoka'a-Kealakehe-Kohala-Konawaena	Art	Souza	Superintendent
17 Kahakai Elementary School	James	Denight	Principal
18 DOE, Kealakehe High School	Wildred F.	Murakami	Principal
19 DOE, Kealakehe Elementary School	Nancy	Matsukawa	Principal
20 Makua Lani Christian Academy High School	Nancy	Begley	Principal
21 West Hawai'i Explorations Academy	Heather	Nakakura	Director
22 Hawai'i Montesory School	Angela	Geldhof	Executive Director
23 Innovations Public Charter School	Jennifer	Hiro	Teacher Director
24 Holualoa School	Glenn	Gray	
Universities			
25 University of Hawai'i at Hilo	Donald O.	Straney	Chancellor
26 SECE, University of Hawai'i Community College, Pālanuanui			
27 University of the Nations - Flags			

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 Notes: \*Denotes specifically identified parties in the MOA.



Deputy Directors  
JADE T. BUTAY  
ROSS M. HIGASHI  
EDWIN H. SNIFFEN  
DARRELL T. YOUNG

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

**Subject:** Queen Ka'ahumanu Highway Widening, Phase 2 Project  
National Historic Preservation Act Section 106 Consultation Meeting  
Draft Meeting Notes

**Date/Time:** Tuesday, May 23, 2017 9:00 a.m. to 3:00 pm

**Location:** Natural Energy Laboratory of Hawaii Authority (NELHA)  
Hale Iako Building, Room 119  
73-987 Makako Bay Drive, Kailua-Kona, Hawaii 96740

**Agenda:** See attached

**Attendees:** See below

**Hawaii Department of Transportation (HDOT)**

Scot Urada  
Sterling Chow  
Deona Naboa

**Makani Hou O Kaloko-Honokohau (Makani Hou)**

Fred Cachola  
(Also representing Royal Order of Kamehameha)  
Isaac "Paka" Harp

**Federal Highway Administration (FHWA)**

Richelle Takara  
Lisa Powell

**Kona Hawaiian Civic Club**

Cynthia Nazara

**R. M. Towill Corp. (RMTc)**

Jason Tateishi  
Laura Mau  
Michelle Wong

**Office of Hawaiian Affairs (OHA) – Via Phone**

Keola Lindsey  
Lauren Morawski

**State Historic Preservation Division (SHPD)**

Susan Lebo  
Amy Rubingh

**National Park Service (NPS)**

Rick Gmirkin

**Facilitators**

Dawn Chang (Kuiwalu)  
Herb Lee (Malama Waiwai)

**Historic Hawai'i Foundation – Via Phone**

Kiersten Faulkner

**Laiopua Hawaiian Homestead Association**

Bo Kahui

- 
- A. Opening Pule – Cynthia Nazara
  - B. Introductions (facilitated by Herb Lee)
  - C. Welcoming Remarks (Scot Urada, HDOT Highways Administrator)

- 1 Scot Urada thanked everyone for their continued participation and dedication in the project. He acknowledged the oversight and mistakes that occurred on the project, in particular the impacts to the trails. The primary purpose of today's meeting is to consult with the Consulting Parties (CP) on their thoughts on proposed mitigation related to the damage to the trails. He acknowledged through the discussions, not everyone may agree on everything and asked everyone to be able to work together and hoped that through our discussions we can move forward towards a resolution. Everyone has a stake in this and in the end, we hope to all provide something that will be beneficial to the people of Hawaii.

**D. Process Protocols (Facilitated by Herb)**

- 1 Herb explained the process protocols using the word "ALOHA": (1) Akahi as modesty, (2) Lokahi as Unity, (3) Oia i'o as honesty or trust, (4) Ha'aha'a as humility, and (5) Ahonui as patience. These cultural protocols should guide our discussions with one another.
- 2 Moving forward, comments and responses to various documents (i.e. meeting notes, correspondence, etc.) should be submitted no later than 30 days after receipt of the document, unless extended.

**E. Stipulation 17 Related to Consultation on Post-Review Discoveries Related to the recent damage of portions of the Mamalahoa and Road to the Sea Trails (Facilitated by Dawn)**

1. The reason for the meeting is to recognize and respect the importance for preservation and protection of historical resources.
2. Dawn provided an overview of the Section 106 process for the Queen Ka'ahumanu Highway Widening Project which included the following key points:
  - i. Widening of the Queen Ka'ahumanu Highway is a federal undertaking through the use of federal funds.
  - ii. 76 historic properties were identified within the APE.
  - iii. FHWA in consultation with the State Historic Preservation Officer (SHPO) determined that the Project would result in an adverse effect on the historic properties.
  - iv. FHWA and HDOT consulted with various agencies, NHOs (collectively referred to as CPs) and SHPO to avoid, minimize or mitigate adverse effects.
  - v. Pursuant to the consultation, an MOA was entered into originally in 1999 and then subsequently superseded by the current MOA in 2015.
  - vi. FHWA and HDOT are currently in the process of implementing the MOA stipulations.
  - vii. Stipulation 17 of the MOA provides a process for consultation with CPs for post review discoveries of unanticipated effects and is the purpose of this meeting.
- 3 Fred asked to focus on Stipulation 17 regarding notification of post review discoveries. He does not recall being notified about the discoveries within the 72-hour period. He also wanted to know how the construction work continued after the first breach was discovered. Sterling stated that SHPD and FHWA were notified of the breaches within the 72-hour period. However, HDOT waited to confirm the adverse effect determination before notifying the CPs. Jason stated that the five breaches were discovered at the same time.

- 4 Fred also expressed that the action plan was not being followed prior to the breaches highlighting that the morning meetings by the contractor were not being held. Jason clarified that the action plan was drafted after the breaches occurred to prevent future incidences. Prior to the breaches, an SHPD approved Archaeological Monitoring Plan, including the use of cultural monitors, was on site during the work. Jason and Cynthia confirmed that the action plan is now being implemented. Susan asked who reviewed the action plan before it was implemented. Sterling replied that the contractor, the archaeological firm and HDOT reviewed the action plan. Paka views the action plan as Goodfellow Brothers Inc. (GB) and Cultural Surveys Hawaii (CSH) admitting responsibility for the breaches. Sterling clarified that the action plan is an internal management mitigation measure to prevent future incidences.
- 5 Paka wanted an explanation as to why the fencing was in the wrong location and why fill was brought in before the retaining walls were installed. Jason acknowledged that the fences were initially not in the right place but are now in the correct location now. Jason also explained that there is a 5 meter buffer zone around historical sites but retaining walls were required. During the December 2016 site visit, the contractor suggested that the fill near the breach could be removed, but the CPs felt that this would cause more harm than good.
- 6 Dawn then provided an overview of the Section 106 process for the unanticipated effects caused by the recent damage to portions of the historic trails:
  - i. Identification of Historic Properties was confirmed in the Supplemental AIS, including recent site visit with the CPs on May 5, 2017 to see the expanded APE.
    - Paka inquired if any additional sites were discovered during the May 5<sup>th</sup> site visit. Cynthia explained that no additional knowledge or stories of sites in the area was gathered and no sites were discovered during the walkthrough.
  - ii. HDOT, FHWA, and SHPD have made a determination of adverse effect caused by the damage to the trails.
  - iii. Developing proposed mitigation to resolve the adverse effects should consider the following guidelines per 36 CFR 800:
    - Have a nexus to the cause.
    - Be proportional to the adverse effect.
    - Have a benefit to the impacted parties, i.e. native Hawaiians.
    - Have a benefit to larger public.
    - Consider costs.
    - Develop measures to protect and preserve the unique history of the resource.
  - iv. A determination on the appropriate mitigation measures will not be decided at this meeting. Fred asked who makes the final determination on the mitigation measures. The Signatory Parties including SHPO, FHWA, and ACHP will sign and make the final determination on mitigation. Scot indicated that there will need to be coordination with HDOT to ensure they can implement the mitigation measures.

- v. Susan asked whether the expanded APE will also be covered under MOA Stipulation 17. Deona clarified that one of the breached sites was in the expanded APE, so it will be covered under Stipulation 17.
- vi. Fred expressed concerns about the term "breach". He would prefer the word "destroy" because it more accurately reflects the resource as gone and irreplaceable. While "breach" implies it can be repaired. Susan thought we should focus on using a term that could be used for this project instead of what was used on other projects. HDOT responded that it was a term used in another federal project, however it was agreed to consider an alternative word choice when preparing the mitigation documentation. Or add a footnote explaining the term "breach".
- vii. Paka wants in writing all the areas that were previously disturbed and when they were disturbed. Deona clarified that most of the area had been previously disturbed and they can only provide the areas that were disturbed during the project which included the area near Kealakehe Parkway. Paka understood and rescinded the need for a report of the disturbed areas.

#### **F. Review of Mitigation Proposals submitted by CPs**

1. Dawn noted that Fred on behalf of Makani Hou emailed on May 20, 2017 mitigation proposals to FHWA and HDOT (see attached). Fred mentioned that while this was a draft plan by Makani Hou, he conferred with Ala Kahakai, NPS, Kaloko-Honokohau National Park, Royal Order of Kamehameha and the moku of Kona and Kohala in drafting this proposed mitigation plan. Kona Civic Club was not conferred with regarding the draft mitigation proposals submitted by Makani Hou.
2. Dawn proceeded to open the consultation discussion on Proposal #1.
  - i. Reconcile the historic documentation and ownership with an on-the-ground metes and bounds survey of the Mamalahoa Trail, the Trail to the Sea and the Trail to Honokohau. After much discussion, there was agreement that rather than doing a metes and bounds survey, which could be costly and timely, it is more important to know the trail characteristics through GPS. This information would be helpful to confirm the state's ownership under the Highways Act of 1892.
  - ii. Commission cultural oral history survey. Fred explained that he would like to capture as much of the historical oral history from native Hawaiians. He recommended contacting Kepa Maly and others such as the Kohala Center or graduate studies from UH who have done work in this area to complete this item. Cynthia also noted that a lot of oral history has already been recorded and it just needs to be gathered. Paka clarified that the company Kepa Maly and his wife operates is called Kumu Pono Associates and have compiled a lot of research that could be used to supplement this item. Bo also expressed concerns about prioritizing the stipulations in the MOA so as not to jeopardize the completion of the highway construction. Susan asked for clarification on what is being done with regards to the trail survey study regarding oral history documentation. Deona and Sterling clarified that it does not include documenting of oral histories. Paka asked if the Data Recovery Report will only include the parts of the trails that were damaged and or the entire length of the trail. Rick also added that NPS is doing some documentation with Ala Kahakai to help record information about the trails. Fred wanted a type of final report, video clips, so that if someone asks in the future, the answer is not, "I don't know". After much discussion it was the group's consensus that rather than doing new research, it would be helpful to determine what already has been done with respect to the trails.

- iii. Restore and maintain the three trails as was done for portions of the Mamalahoa Trail in the Kaloko-Honokohau National Park. Paka feels more than a one-for-one restoration for the trails needs to be done and should be restored to walking trails. He also asked whether HDOT can coordinate with others to restore trails from the airport to Kailua town. HDOT asked SHPD what would be required from a regulatory process to do trail restoration. SHPD indicated that a preservation plan detailing the restoration process would be appropriate. Time period need to be determined and period of significance. Will restoration cause adverse effect? Rick noted that NPS has funds available for documentation of trails from Kaloko Honokohau to Mahaiula and they are working with the State's Na Ala Hele program. The group felt that this was a very important mitigation measure.
- iv. Plant and main a small grove of Loulu palms to identify the trails. Fred stated that there used to be groves of Loulu palms in the Kaloko-Honokohau National Park area. Cynthia mentioned that there are some kūpuna from the area who don't want the trails marked because it would call attention to them and potentially cause greater harm. There was a discussion that the Loulu may not be appropriate because of maintenance requirements. This item could be addressed through the existing landscaping MOA stipulation.
- v. Construct a Mamalahoa Trail Scenic Overlook with parking area on HDOT property on the mauka side of the highway. Fred explained that this may be the way to create a safe place for people to learn about and see the trails with reasonable and regulated use. Bo said there needs to balance between preservation and use. Fred felt it important for people to walk in the footsteps of the kūpuna. Paka spoke in support for the use of the trails and maybe an "adopt-a-trail" program to help maintain the trails.
- vi. Identify the property owners from the airport to Kailua town who own portions of the Mamalahoa Trail. Fred felt that it was important to involve other landowners that have kuleana for the trails. Paka felt it was important to work with other landowners to ensure that the trail is not destroyed. Some landowners that he is working with have agreed to preserve the historic properties, burials, and trails.
- vii. Dawn asked the CPs to rank the proposed mitigation measures so that FHWA and HDOT would know the importance of the mitigation measures in the event not all the proposed mitigation could be implemented.
  - Fred said let the 3 signatories decide if rank is necessary but his intention was that the Proposal #1 was an integrated approach.
  - Rick said documentation is key, therefore having the historic documentation is important.
  - Bo felt that #6 regarding coordinating with all the landowners would be the hardest to accomplish. While #3 was his priority and wants to see the trails maintained and restored. He still wondered about the difference between preservation vs. use for the trails relating to Item #4. He also added that Loulu is difficult to plant and maintain. Lastly, the remainder should be consolidated.
  - Cynthia felt that #3 regarding restoring and maintaining the trails was her priority.

- Paka would like to see the underpass be constructed now rather than wait for the study because that ensures safe access to the trails.
  - Lauren with OHA supports Makani Hou's proposal #1.
3. Dawn facilitated the discussion on Makani Hou's Proposal #2.
    - i. Commission a research study with Hawaiian archaeologists to identify boundaries of the mauka-makai trails. Fred suggested deleting this provision and replacing it with Stipulation 11 from the existing MOA. Additionally, Fred would like to add signs on the mauka side of the highway.
    - ii. Commission a Hawaiian artist to design appropriate trail signs and markers. HDOT does not have a signage program for mauka-makai trails. Fred suggested using the ahupua'a signage program as a model for the mauka-makai trail signs.
    - iii. Consult with Kama'aina kupuna of the ahupua'a where the trails are located. Fred suggested that both items #3 and #4 from Proposal #2 are addressed in Stipulations 11 and 12. Fred's intent was that Proposal #1 was of higher rank than Proposal #2. Ahupua'a Signs in Oahu were not in the exact location of the ahupua'a boundary because it had to take into consideration existing features and safety to motorists.
    - iv. Install and maintain trail and ahupua'a signs and markers along Queen Ka'ahumanu Highway.
  4. Paka stated that depending on what the response is to the initial proposal, there may be additional mitigation proposed. The CPs saw the mitigation proposals as a collective unit. HDOT will need to determine which items in the mitigation proposal are possible and feasible.
  5. Dawn noted the purpose of his meeting was to provide the CPs an opportunity to provide appropriate mitigation measures for the breaches. Some of the CPs asked whether they would be able to submit additional mitigation measures after the meeting. Some of the CPs expressed that they did not know that the meeting would be the deadline to submit mitigation measures. However, HDOT and FHWA confirmed that this consultation meeting is the CPs opportunity to provide appropriate mitigation measures.
  6. Dawn then asked all the CPs that were either present or on the phone if there were any other proposed mitigation measures that they would like to recommend.
    - i. Fred expressed that Proposal #1 needs to be looked at as a package and whether it can be integrated with other stipulations or activities going on.
    - ii. Paka requested the installation of the underpass now rather than wait for study.
    - iii. Bo advocated for keeping UHH as the holder for the education outreach component. To reconsider another organization would cause a renegotiation of the MOA which is not the purpose of this meeting.
    - iv. Cynthia had no other mitigation to offer.
    - v. OHA supports the community opinion. They were not comfortable with the mitigation deadline and feels the NHOs should know what progress has been made and what FHWA deems as feasible. Further clarification needs to be done on how the stipulations are going to be completed. Their purpose is to work with everyone to make sure the project moves forward.

- vi. Dawn asked if there were any other CPs on the phone who would like to comment and there was no response.
7. CPs asked when the Signatory Parties will make a decision on mitigation and want a rationale for what was chosen. FHWA and SHPD could not commit at this time to a specific date because they need to give HDOT time to determine what is feasible, and confer with ACHP. After further discussion, HDOT and FHWA committed to notifying the CPs within 30 days from this meeting when they will be able to commit to a specific schedule for determining the appropriate mitigation for the trail damage.

**G. Follow up on action items from April 7, 2017 Consultation Meeting (responses by Scot)**

1. Scot stated that the meeting notes from the April 7, 2017 were sent out on April 21, 2017 and he did not receive any response so he would like to finalize the notes. Fred stated that he has comments and would like more time to review the notes and make comments. Paka requested the audio tapes from the April 7 and May 23 consultation meetings. The audio recording from the April 7, 2017 meeting was posted to the RMTC sharepoint site, however, Paka asked that HDOT provide an alternative website other than RMTC to post the information. He suggested either a CD or thumb drive in the meantime. RMTC will coordinate future documents, including meeting notes, audio, and handouts through either CD or thumb drive to the CPs.
2. HDOT invited the CPs to a site visit to look at the expanded APE and identify any additional historic properties on May 5, 2017 led by Deona and in attendance by Cynthia. No additional historic properties were identified.
3. FHWA sent out a revised report on April 28<sup>th</sup> showing separate columns for 2015 and 2016 as per request by CPs for a 2015 report.
4. Hardcopy of UHH Agreement was provided to Makani Hou on 4/7/17, and later placed on RMTC's website. No funds have been transferred to UHH regarding Stipulation 5b Education Outreach. Fred asked why was the UHH agreement entered into before the MOA was signed. FHWA noted that there was an original MOA signed in 1999 that preceded the current MOA that was signed in 2015. The CPs would like a copy of the original 1999 MOA. Fred expressed concerns about using UHH because of funding and excessive administrative overhead. Peter Mills and Keiki Kawai'ae'a are the UHH contacts. HDOT and FHWA had no objection to the CPs discussing with UHH how this stipulation could be accomplished cost effectively.
5. Stipulation 1 is related to point of contact for CPs has been completed. RMTC distributed the updated list with responses from OHA, HHF, ACHP, and Makani Hou on April 27<sup>th</sup>. NPS reiterated that information should be sent out to everyone because they are not getting everything that is sent out.
6. Stipulation 4 is related to archaeological documentation. Data recovery field work has been completed and HDOT is currently working with CSH to complete the report. This item should be moved to the quarterly updates. Paka wants to know what still needs to be done for the report. CSH is completing the writing portion and are also doing archival research.
7. Information will continue to be disseminated using the RMTC sharepoint site in addition to the use of GB website for construction updates. The CPs do not like having two websites. CPs will let the project team know if there are any problems with downloading information from the sharepoint site. NPS hasn't been able to download anything from the sharepoint site. The CPs want an independent website not associated with a company. They are fine with a CD or thumbdrive. Email is fine for smaller documents.



8. The SAIS was provided to the CPs for review on April 8, 2017 and can be downloaded from the RMTTC sharepoint site. Comments were requested by May 19, 2017.
9. Stipulation 8 is related to noise study. Paka wanted to know what the purpose of doing a noise study before construction. He felt that doing a study after the project is complete could be used to compare the results. Scot reported that the noise study is used for a baseline evaluation and projections and is not done after the project. No additional noise study will be done.
10. Stipulation 9 is related to drywells. Scot reported that when the stipulation was negotiated due to concerns raised by NPS, HDOT considered impacts to the NPS, in particular concerns related to all anchialine ponds near the coastline and not just the ones in the park. HDOT understands that NPS is monitoring and collecting data, and drywells per current project plans will be maintained per the MOA stipulation.
11. Stipulation 10B is related to underpass. Paka asked who is liable for maintenance of an overpass. Scot reported that HDOT is generally liable and responsible for maintenance of structures within the DOT right-of-way. However, there are cases where the DOT may allow organizations to perform specific (non-transportation) activities within the DOT right-of-way, and they are responsible under a use and occupancy agreement. Example would be an organization want to put up decorative sign and landscaping, so the organization would be responsible for maintenance and liability by agreement. The use of the underpass for a non-transportation use is a very similar example, thus the stipulation indicates another party to maintain this. Therefore the original MOA stipulation scope will be maintained for the underpass study.
12. Stipulation 12 is related to the ahupua'a signs. The draft ahupua'a report is not available for public distribution yet. The CPs will be consulted for the sign locations once the report is finalized and the signs are ready to be installed.
13. Stipulation 13 is related to landscaping. This item was discussed earlier in the meeting as part of mitigation proposal. Loulu palms may not be appropriate because of maintenance issues. Fred reiterated the intent of his comment was to use native plants. No further consideration needs to be done as the landscape contractor is using native plants.
14. An update regarding the curation of artifacts was emailed on April 8<sup>th</sup> and FHWA included it in the annual report.
15. Scot responded to Fred's email on May 5<sup>th</sup> and Fred Sent a response on May 22<sup>nd</sup>.
16. The Project Team will continue to do annual reports and add quarterly updates. Scot wants to do updates on January 1<sup>st</sup>, April 1<sup>st</sup>, July 1<sup>st</sup>, and October 1<sup>st</sup>. The fourth quarterly report will also be the annual report.
17. The installation of barriers and making them more visible with weekly checks to ensure the integrity is being done following the action plan protocol.
18. Stipulation 15 is related to terrain model. Building a new building at the NPS visitor center was not feasible. Scot has talked to HDOT director regarding feasibility of placing it at the Kona International airport and he is willing to do so. CPs intent is to place it where it has the most benefit to the people. HDOT said they will continue to research the options. Paka requested two additional copies of the model, one at the airport, and second one at the county building in Kona as part of mitigation for the damage to the trails.
19. Timely reports. Scot will work to ensure timely responses and disbursement of information and reported that FHWA will be distributing quarterly reports.

**H. Next Steps**

1. Minutes of the May 23 mitigation meeting will be distributed within 30 days and comments from the CPs should be submitted within 30 days.
2. RMTC and HDOT will research the use of a DVD or thumb drive as an option for distributing information to the CPs.
3. Future construction updates will be at the project website.
4. The relationship building workshop updates and schedule will be sent out shortly.

**I. Miscellaneous Items**

1. Fred raised the issue of Site 06432 related to building a monument with the rocks that were removed. Fred said this was a unique boundary wall and the rocks have been preserved on the site. HDOT said they will need to research this item. A monument using the rocks from the Ka'aloa and O'oma boundary walls could not be built within the DOT right-of-way. The rocks were removed by hand and preserved on site. Deona says that there was no agreement on what to do with the rocks and no monument was agreed upon. More research will need to be done in the meeting minutes regarding what was agreed upon. Paka will review his transcribed minutes and see what was said. This was before the email between Sterling and Paka regarding the stones. Susan asked if CPs want it as a mitigation measure. Fred says it doesn't necessarily need to be a mitigation measure.

**J. Closing Pule – Fred Cachola**



**QUEEN KA'AHUMANU WIDENING PROJECT, PHASE 2  
NATIONAL HISTORIC PRESERVATION ACT, SECTION 106  
CONSULTATION MEETING**

**Date & Time:** Tuesday, May 23, 2017, 9:00 am to 3:00 pm  
**Location:** Natural Energy Laboratory of Hawaii Authority  
Hale Iako Training Room #119  
73-987 Makako Bay Dr., Kailua-Kona, HI 96740

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**AGENDA**

- A. Opening Pule**
- B. Welcoming Remarks**
- C. Introductions**
- D. Process Protocols**
- E. Stipulation 17 of the MOA**
  - Consultation on Post Review Discoveries Related to recent breaches at the Mamalahoa and Road to the Sea Trails**
  - 1. Identification of Historic Properties**
  - 2. Adverse Effect**
  - 3. Proposed Mitigation**
- F. Lunch**
- G. Follow-up of Action Items from April 7, 2017 Consultation Meeting**
- H. Next Steps**
- I. Closing Pule**

**MITIGATION PROPOSALS FOR THE DESTRUCTION OF WAHI PANA DUE TO THE  
CONSTRUCTION OF THE QUEEN KAAHUMANU HIGHWAY AND THE CURRENT  
WIDENING PROJECT PHASE I AND II**

**PROPOSAL # 1: IDENTIFYING, PROTECTING, MAINTAINING THREE MAJOR  
TRAILS.**

This proposal provides for a comprehensive mitigation program to locate, identify, restore, document and maintain, the three major historic trails in the Keahole-Kaloko-Honokohau-Kealahou area that were bisected and destroyed by the initial construction of the Queen Kaahumanu Highway and the current Widening Project, Phase I and II. The rationale for this proposal is for the HDOT and the FHWA to create more public awareness, protection, maintenance, perpetuation and reasonable use of cultural and historical resources that they have destroyed in constructing and widening the Queen Kaahumanu Highway. It will also promote more cultural identity, and renewal among Hawaiians.

Here are suggested steps and processes for HDOT and the FHWA to implement proposal #1.

1. Reconcile the historic documentation with an on-the-ground metes and bounds survey of the Mamalahou Trail, the Trail to the Sea and the Trail to Honokohau. Confirm that the three identified trails are in the same alignment that was originally in existence prior to 1892.
2. Commission a cultural Oral History survey/study for graduate student(s), or other agencies like Cultural Surveys Hawaii, or the Kohala Education Center to interview kamaaina kupuna and researching other historical resources to document all the information they can accumulate on these three trails. The project should in a "Final Report" and video clips that can be shared on social media and you/tube outlets.
3. Restore and maintain the Trails, such as was done for portions of the Mamalahou Trail in the Kaloko-Honokohau National Historic Park. Any stabilization/rehabilitation/restoration needs to follow Secretary of the Interior Standards for Historic Preservation, and needs to include detailed archaeological documentation of the existing trail segments prior to any restoration work.
4. Plant and maintain a small grove (3-4 trees) of Loulu palms to identify the locations where the three trails were bisected and at appropriate intervals (150-200 ft?) of the trail to easily identify and locate the trail routes from a distance - (refer to attached map). Study the feasibility of having appropriate markings/monuments on the highway which show the location of the trails where they were bisected and a brief historical description of the trails.
5. Construct a Mamalahou Trail Scenic/Historic Overlook with a parking area on HDOT property on the mauka area, close to the Honokohau Harbor intersection - similar to what is at the Kiholo Scenic overlook. Include educational/information

signage/monuments which briefly describe the history of the Trail and a summary of the Highways Act of 1892. (see attached map for proposed location of the overlook). This overlook could also be a convenient Trailhead to access Mamalahoa for trail users.

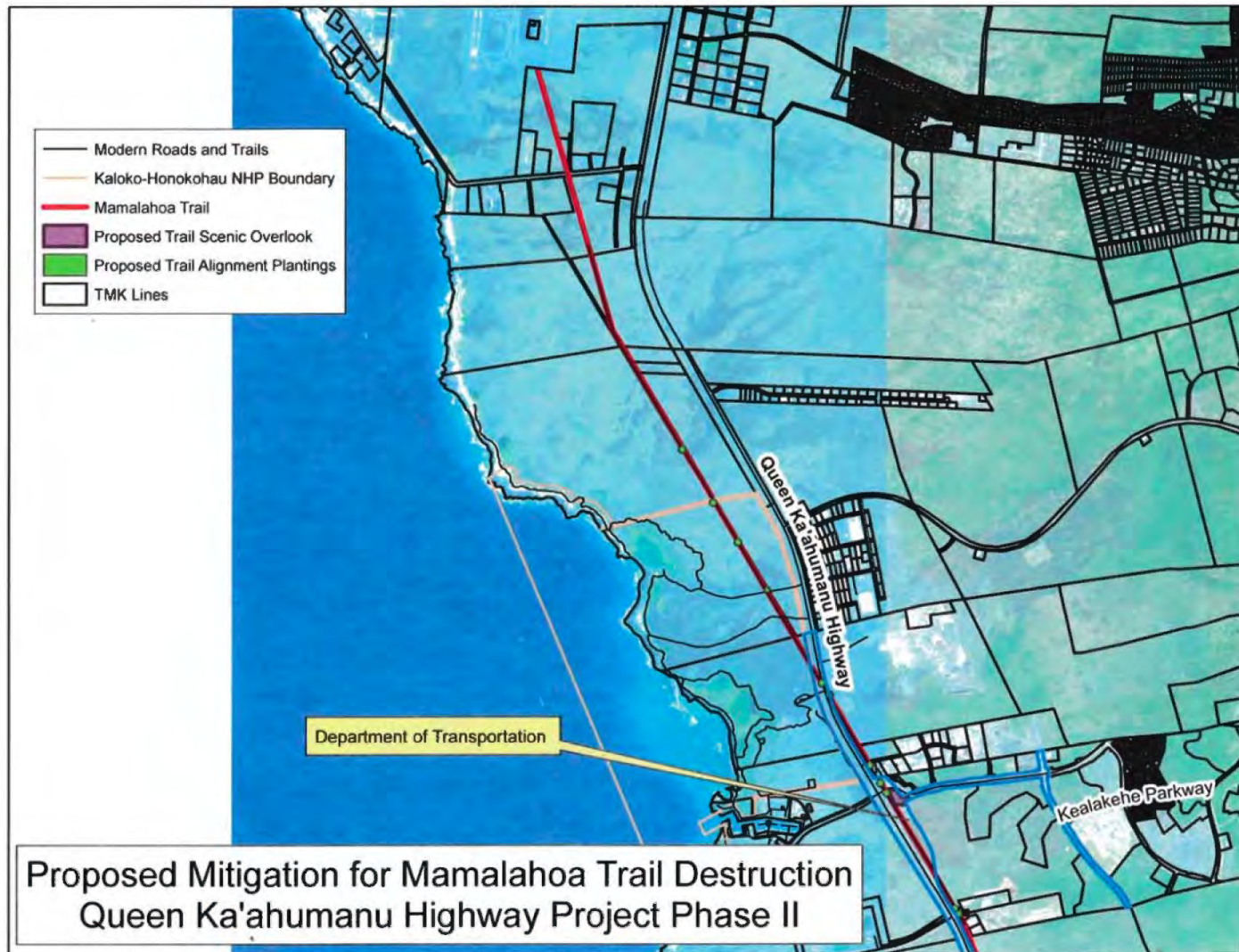
6. Identify the property owners from the Keahole Airport to Kailua town area who have portions of the Mamalahoa Trail on their properties and facilitate a meeting of trail landowners (State DOT, Na Ala Hele, Queen Liliuokalani, etc.) to develop a collaborative plan to identify/locate, restore and maintain the entire Mamalahoa Trail for public access from the airport to Kailua (see attached map for the route). Plan needs to include caveats that any stabilization/rehabilitation/restoration needs to follow Secretary of the Interior Standards for Historic Preservation, and needs to include detailed archaeological documentation of the existing trail segments prior to any restoration work.

PROPOSAL #2: SIGNAGE PROGRAM FOR THE AHUPUA'A AND TRAILS  
BISECTED BY THE CONSTRUCTION THE ENTIRE QUEEN KAAHUMANU  
HIGHWAY, KAILUA TO KAWAIHAE, AND THE WIDENING OF THE HIGHWAY,  
PHASE I AND II.

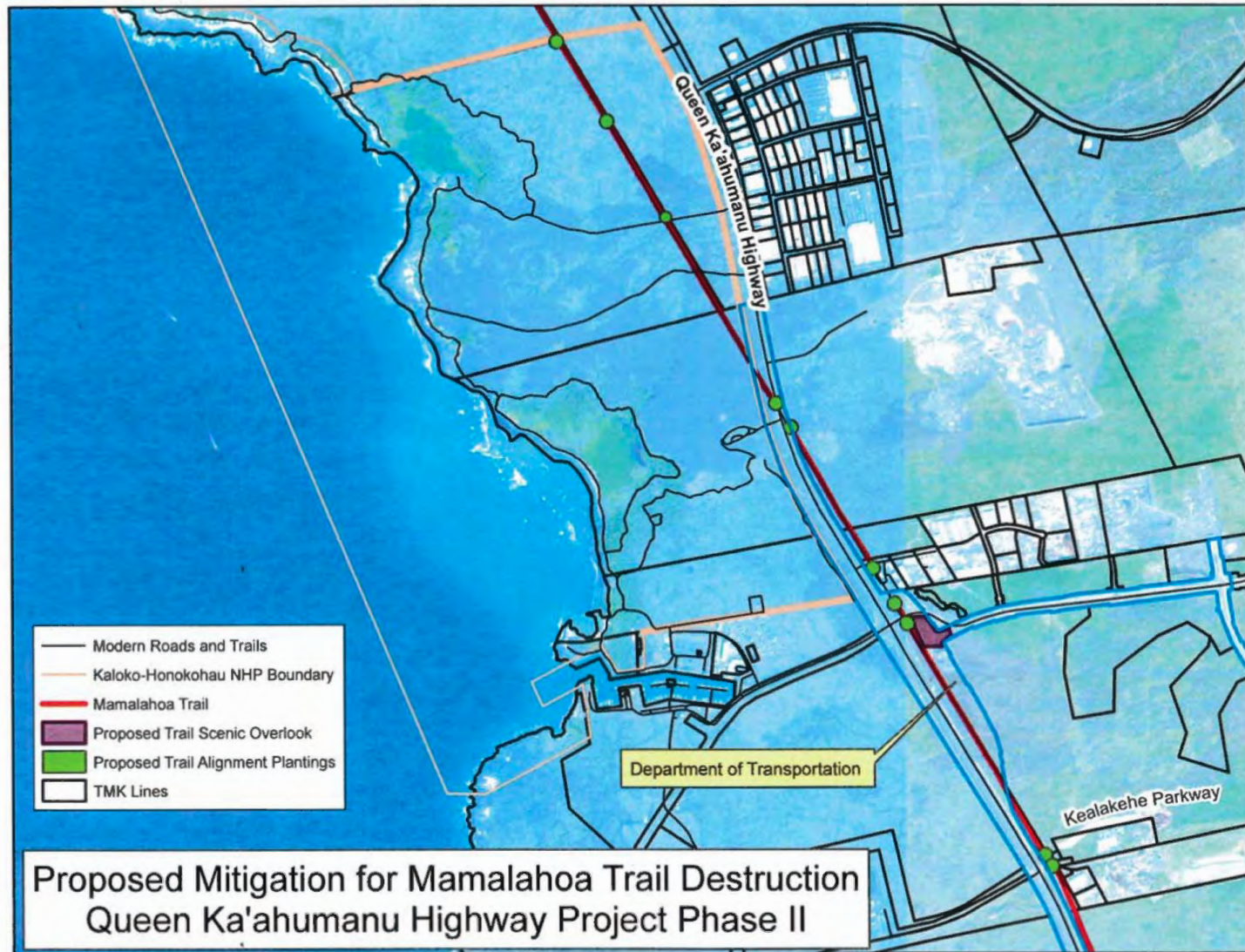
This proposal is to mitigate for the destruction of numerous Ahupua'a "Mauka/Makai" Trails bisected by the initial construction of the Highway and the current Widening Project Phase I and II. Here are suggested steps for the HDOT and the FHWA to implement this proposal.

1. Commission a research/study project for Hawaiian archaeologists to Identify and map all the ahupua'a boundaries and mauka/makai trails that were bisected by the Queen Kaahumanu Project and the locations where bisections occurred. Some of this data may be recovered from the report of Francis Ching's archaeology survey completed prior to the construction of the highway, and other information from the data currently being compiled for the Terrain Model project.
2. Commission Hawaiian artists to design appropriate highway signs/markers to identify the bisected trails and to be installed at the locations where bisection occurred. Plan to use the HDOT program for Ahupua'a markers for the ahupua'a bisected by the highway.
3. Consult with kamaaina kupuna of the ahupua'a where those trails are located to discuss this project and incorporate their mana'o (thoughts) in the plans and implementation of this project.
4. Install and maintain the Ahupua'a and Trail signs at the appropriate locations along the Queen Kaahumanu Highway.

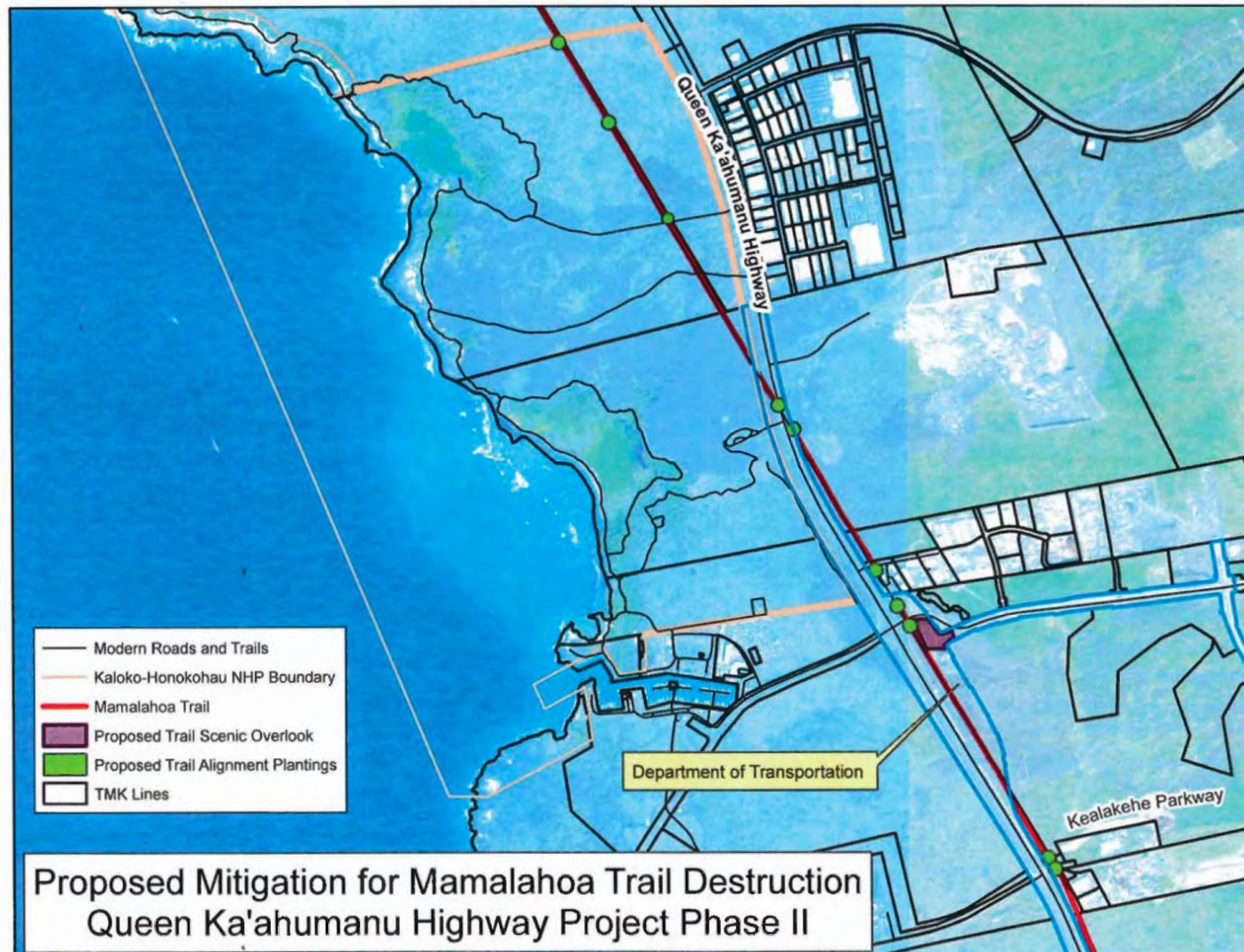
Me ke aloha,  
Fred Keakaokalani Cachola, Pres.  
Makani Hou o Kaloko-Honokohau













**From:** [Michelle Wong](#)  
**To:** [meesa.otani@dot.gov](#); [lisa.powell@dot.gov](#); [richelle.takara@dot.gov](#); [sterling.chow@hawaii.gov](#); [Deona.Naboa@hawaii.gov](#); [aloha@aohcc.org](#); [Kiersten@historichawaii.org](#); [cynazara@gmail.com](#); [mkahawaii@hawaii.rr.com](#); [ohiwai@gmail.com](#); [bokahui@laipua.org](#); [paka@sandwichisles.net](#); [fredcachola@gmail.com](#); [nakoafoundation@hotmail.com](#); [sharetheroad@pathhawaii.org](#); [daniel.kawaiaea@nps.org](#); [konakuahau@hotmail.com](#); [nainoaperry@yahoo.com](#); [marciedd@yahoo.com](#); [baschaeferphoto@gmail.com](#); [ruthaloua@gmail.com](#); [keloal@oha.org](#); [laurenm@oha.org](#); [Tyler\\_Paikuli-Campbell@nps.gov](#); [jeff\\_zimpfer@nps.gov](#); [william\\_thompson@nps.gov](#); [aric\\_arakaki@nps.gov](#); [rick\\_gmirkin@nps.gov](#); [mnaber@achp.gov](#); [Susan.A.Lebo@hawaii.gov](#); [amy.rubingh@hawaii.gov](#); [cohmayer@hawaiicounty.gov](#); [cohdem@hawaiicounty.gov](#); [parks\\_recreation@hawaiicounty.gov](#); [planning@hawaiicounty.gov](#); [Art\\_Souza@hawaiidoe.org](#); [jim\\_denight@notes.k12.hi.us](#); [Nancy\\_Matsukawa@hawaiidoe.org](#); [nakakura@whea.net](#); [kona@hawaiimontessori.org](#); [glenn\\_gray@hawaiidoe.org](#); [dstraney@hawaii.edu](#); [kmfletch@hawaii.edu](#); [info@uofnkona.edu](#); [helpdesk@uofnkona.edu](#); [donald.l.smith@hawaii.gov](#); [Urada, Scot T](#); [Laura Mau](#); [Brian Takeda](#); [Stacy Armstrong](#); [James Yamamoto](#); [Roy Tsutsui](#); [Jason Tateishi](#); [Natasha Soriano \(Natasha.A.Soriano@hawaii.gov\)](#); [wilfred\\_murakami@notes.k12.hi.us](#); [Herb Lee](#)  
**Subject:** Queen Ka'ahumanu Hwy Ph 2 MOA Stip 10B Underpass Feas Study 062317  
**Date:** Friday, June 23, 2017 2:00:51 PM

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Aloha Everyone,  
 SAVE THE DATE - TUESDAY, JULY 25, 2017 - STIPULATION 10B OF THE MOA – UNDERPASS FEASIBILITY STUDY QUEEN KAAHUMANU HIGHWAY WIDENING, PHASE 2

This is in follow-up to our prior e-mail notification for a proposed meeting date to address the requirements of Memorandum of Agreement (MOA) Stipulation 10B. We previously provided information pursuant to the stipulation that we will be prepared to discuss at-grade and pedestrian tunnel crossings; the possibility of modifying the use of existing culverts for pedestrian-bicyclist use; and policies and examples where pedestrian underpasses and modification of culverts have been utilized in Hawai'i and in other states.

#### UNDERPASS FEASIBILITY STUDY MEETING #1:

**Date:** Tuesday, July 25, 2017  
**Time:** 10:00 a.m. – 2:30 p.m.  
**Location:** West Hawaii Civic Center Council Chambers

We have also reviewed our prior distribution list and are providing this notification to additional parties to address the requirements of the MOA stipulation. Accordingly, we ask everyone to please RSVP your replies to myself ([michellew@rmtowill.com](mailto:michellew@rmtowill.com)) no later than **July 21, 2017**.

The agenda for the meeting will be as follows:

- Pule and Opening Remarks
- Review of Stipulation 10B
- Preliminary Considerations for the Design of Underpasses
- Participant Questions and Comments
- Discussion Summary and Tasks prior to next meeting

A second meeting will be convened at a later date to discuss the conceptual design for an underpass that will be based on the public input you provide.  
 Thank you for your on-going commitment and participation in this process and we look

forward to seeing you.  
Sincerely,

Michelle Wong  
Environmental Planner  
<mailto:MichelleW@rmtowill.com>

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Emailed who

Comment

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<scot.t.urada@hawaii.gov>; Laura Mau <lauram@rmtowill.com>; Brian Takeda <BrianT@rmtowill.com>; Stacy Armstrong <StacyA@rmtowill.com>;  
James Yamamoto <JimmyY@rmtowill.com>; Roy Tsutsui <RoyT@rmtowill.com>; Jason Tateishi <JasonT@rmtowill.com>; 'Natasha Soriano  
(Natasha.A.Soriano@hawaii.gov)'; 'wilfred\_murakami@notes.k12.hi.us'; 'Herb Lee' <herblee@thepaf.org>

emailed initial invitation to workshop

helpdesk@uofnkona.edu

asked to speak to a real person

helpdesk@uofnkona.edu

sent out revised rsvp date

## Queen Kaahumanu Highway Widening Project 106 Consultation Meeting

### Attendance

Herb Lee (Facilitator)  
Donald Smith (HDOT)  
Pua Aiu (HDOT)  
Lisa Powell (FHWA)  
Kahaa Rezantes (FHWA)  
Meesa Ontani (FHWA)

### From Palama Nui:

Carrie Kuwada Phipps  
Richard Stevens  
Daniel Stevens  
Director Raynette (Kalei) Haleamu-Kam (Director)  
Paolo Morgan (Student)  
Carrie Kuwada Phipps  
Rachel Solemsaas (Chancellor)  
No'el Tagab-Cruz (Hawai'i Lifestyle program instructor)  
Juanita Thompson (former Student, via video)

Mandy Raslow (ACHP)  
Lauren Morawski (OHA)  
Susan Lebo (SHPD)  
Tamara Luthy (SHPD)  
Fred Cachola (Ka makani hou o Kaloko-Honokohau)  
Paka Harp (Ka makani hou o Kaloko -Honokohau)  
Bo Kahui (La'i Opuu)  
Aric Arakaki (Na Alahele, NPS)  
Mandy (Na Alahele, NPS)  
Kierston Faulkner (HHF)  
Bill Thompson (NPS)  
Jeff Zimpler (NPS)  
Carrie Johnson (OHA)

### Opening Pule Fred Cachola

Opening remarks by Herb Lee to set context for discussion and meeting and to encourage collaboration and cooperation for a productive meeting

Introductions were made.

There was a discussion on the appropriateness of the agenda. Don and Herb clarified that time would be given to all proposals, including the Palama Nui proposal from HDOT and the NHO proposal. Don clarified that the Palama Nui Proposal was one possible option for mitigation.

Don Smith went over the status of the stipulations. The stipulation tracking spreadsheet was passed out to those who needed a copy. Smith started by discussing only the outstanding stipulation, but Cachola asked to go down the list in order, so that it would be easier to follow. Below is a review of comments and discussion of the stipulation items in the order they are presented in the attached spreadsheet.

The last meeting was 2 years ago

#### **Stipulation # 4: Archaeological Preservation and Mitigation Plan**

Lisa Powell reported that the Data Recovery report was sent to SHPD March 16, 2018. The end of fieldwork report is anticipated in mid-2019.

Harp asked if HDOT received a response from SHPD regarding the Burial Treatment Plan Addendum submitted to SHPD? Lisa noted that it was not needed since the roadway was moved. Paka suggest that the report be updated by deleting the burial treatment plan section since it is no longer applicable. Cachola agreed that the report should be adjusted to reflect that the burial is outside the boundaries of the project.

#### **Stipulation #5b Native Hawaiian Cultural Outreach and Education**

Smith noted that the MOU with UH Hilo expired this year and no work had been done on it. However, he has been working with Keiki Kawaiaae'a to develop a new MOU. Smith said that he expects it to be signed within the month. This is one of the reasons the Queen Kaahumanu MOA needs to be amended and extended. The new MOU retains all of the stipulations in the old MOU (as required in the Queen Kaahumanu MOA), with addition of:

a) the Kohala Center has been added, per NHO requests. The Kohala Center will add a layer of oversight as well as being on the same side of the island as the project.

b) funding has been increased to 1.25 million to cover increased salaries and the addition of the Kohala Center.

In addition, Smith has been working on securing funding, so UHH will receive the first year's funding soon after signing the document. Transfer of funds had been one of the issues holding up implementation of the old MOU with UHH.

Susan Lebo (SHPD) asked who would sign? Smith relayed that it would be the Chancellor and the DOT Director and legal representatives.

Cachola expressed frustration and disappointment that nothing had been done. Cachola questioned HDOT's sincerity to accomplish this stipulation. He asked why the clause triggering dispute resolution had not been utilized to ensure this item was completed. He also felt that going down a checklist was not conducive to having a meaningful discussion. According to Cachola, UHH has tried multiple times to attempt to get the funding. He believes this points to HDOT's unwillingness to accomplish this stipulation.

Lee noted that the Consulting Parties (CP) have not seen the MOU. Smith agreed to share it.

Lebo asked if there is a provision in the MOU to stop or terminate the MOU if the effort is not moving forward. Smith said there is language for both addressing not moving forward and for termination.

Smith said that the MOU contained provisions for this.

Lee wanted clarification if this is the same MOU? Smith said it is, with two additions: the addition of Kohala Center and additional funds from \$800,000 and \$1.25 million. There is also additional legal language. The language in the MOU retains the same Queen Kaahumanu MOA stipulations and did not change between the new and old MOU.

Faulkner (HHF) pointed out that the terms MOA and MOU were being mixed and ask for clarification that the MOU with UH will meet the requirements of the Queen Kaahumanu MOA. Fred and Don agreed that it would.

Harp wanted UHH to consult with the CPs on how the UH MOU is implemented. Ala Kahakai wanted to be consulted on any trail work. Don explained that consultation for stipulation 5b was completed as part of the Queen Kaahumanu MOA.

Lebo asked if the MOU has language that says it meets the stipulations in the MOA and is there language to determine if the MOU is being implemented and actions if it is not. She assumes everyone is working in good faith but the MOU should have a measure that allows for corrections if it is not being done.

Smith noted that if HDOT cannot accomplish the stipulations in 5b, it would still be HDOT's responsibility to complete the stipulations in the MOA. HDOT responsibility to ensure the terms of the MOU are met is clearly spelled out in the MOU. (Language below added by HDOT after the meeting)

HDOT would not reopen consultation for the MOU unless UHH does not fulfill the MOU and an alternative must be found. At that point, more consultation would need to be done to make sure the consulting parties agree with any new effort.

Cachola ask that it be noted that nothing can be done.

Amanda (Na Ala Hele, NPS) noted that under E, A, or B that Palamanui could be included in the UHH MOA. It doesn't necessarily have to be an either or, and they could help meet the stipulations. Don noted that the Palama Nui proposal is for the trail breaches.

Lebo asked if the increased funding, from \$800,000 to \$1.25 million will impact FHWA funding for other efforts or other efforts to mitigate damage to the damaged sits. Smith replied that is does not impact FHWA funding or other mitigation efforts.

### **Stipulation #11, Interpretive Signs**

Powell reported that HDOT, FHWA and NPS have signed an MOA to have NPS develop interpretive signs for the trails in the project ROW that are also within the National Park. NPS will invoice DOT for state money. Work should start soon.

Powell noted that the Harpers Ferry Group will be doing the work. Zimpler added that the Harper's Ferry group will come out in August and give recommendations and then the NHO's will be consulted once the consulting group gives options.

Harp noted that he had wanted the trails marked on the highway like at NELHA but DOT was concerned with safety. He thought DOT was going to paint the roadway. Harp would like to know why those details were not in the MOA. He noted that the signage was only being done in the NPS boundaries and not beyond.

#### **Stipulation #17 Post-Review Discoveries**

This item will be addressed later in the agenda.

#### **Stipulation #19 Monitoring and Reporting**

This item is in progress.

#### **Stipulation #21 Amendments**

Smith noted that we are discussing various amendment to the MOA.

#### **Stipulation #1 On site point of contact.**

The HDOT On-site point of contact is Don Smith.

#### **Stipulation #2 Area of Potential effect**

SHPD concurred with the expanded APE on January 6, 2017.

#### **Stipulation #3 Professional Standards**

Both Cachola and Harp challenged the professional qualifications of Cultural Surveys Hawaii. Harp stated that if CSH had done its job, we would not be here today. CSH identified 17 sites, Harp identified 86 sites. Harp says that it is not correct to say professional standards were used because CSH did not place the buffers correctly. Harp reiterated the lack of professional standards by CSH and added that Hawaii is an occupied state and that destruction of sites are war crimes.

#### **Stipulation #6 Cultural Monitors**

This item is complete. Harp took a moment to thank Cynthia Nazara, who was the lead cultural monitor and to acknowledge her passing. He also thanked Sterling Chow, who is no longer with HDOT, for bringing her on the project.

#### **Stipulation #9 Highway Drainage and Stipulation #10a Pedestrian Crossings**

Smith reported that the Drainage and Pedestrian crossings are complete. Both were completed when the highway was completed.

#### **Stipulation #10b Pedestrian Crossings Underpass Feasibility Study**

Pedestrian and Underpass Feasibility Study and Design Guidelines are complete and Smith has 2 copies for distribution and will be available for download. Smith and Cachola agreed that both studies warrant additional discussion, but agreed to hold off in the interest of time.

Aric asked if the study is in draft form. He and Mandy were not allowed to consult on the Underpass Feasibility Study.



**Stipulation #12 Ahupua'a Signs**

Ahupuaa signs have been placed

**Stipulation #13 Landscaping Plans**

Landscaping was part of the construction and is complete.

**Stipulation #14 Relationship Building Workshop**

Relationship Building Workshops are completed. HDOT extended these workshop, so 2 were held on Oahu, 1 on Hawaii Island, and 1 on Maui. Aiu mentioned Kauai and Smith stated those were part of the Listening Sessions

**Stipulation #15 Terrain Model**

Smith stated that this item is complete. The terrain model was located in the room. Harp disagreed that the model is complete because it is missing the mauka to makai trails. Cachola noted that the terrain model was an innovative mitigation measure meant to represent and bring back a landscape that is being destroyed. He noted that Hawaiians are losing their "classrooms" which is needed to finish passing on our knowledge to the next generation. Cachola said they were not consulted and the terrain model before them is not what they had in mind. Cachola reiterated that you cannot check off a box. The terrain model is not done and is not what was expected. It is not a commodity, it is not a check box, and this is not what they had in mind. He noted that if consultation had been done as it should have, we would not be in this situation. Harp noted that during a meeting with RM Towill, the terrain model was forced on them, because the map maker was retiring. They did not have a chance to review the model before it became final.

Smith noted that there were two meetings where HDOT and RM Towill met with stakeholders and discussed the study and terrain models. The information obtained during those meetings, plus information from additional outreach attempts that were made was utilized to complete the study and the model. Out of that consultative effort these items (terrain model, underpass feasibility study, and design guidelines) were developed. Smith said HDOT followed a process and did what we could to obtain the information. Therefore, going forward, we will not reopen the consultation or redo the terrain model.

Lebo said we need to look at the big picture that we are working on a MOA. If parties feel that certain items have not been adequately consulted on to reach a conclusion in the MOA or if we walk away feeling that certain aspects of the stipulations have not been adequately consulted then we will need to emphasize the stipulations that have not been developed or are still under consideration.

Harp and Tamara asked for a list of the meetings and meeting attendees. Don agreed to make these available for download.

Amanda asked if the digital link to the terrain model could be re-sent as she was having difficulty linking to the digital version. Don agreed to resend.

**Stipulation #16 Archaeological materials and records**

Amanda asked where are the archeological materials being housed? Smith responded that they are being housed by CSH in Hilo. Cachola asked if they can be housed by NPS.

Lebo noted that under 6E SHPD selects the archive site. She noted that the State is buildings some archiving facilities, so SHPD may be able to store or curate materials in the future.

Amanda asked if the MOA needs to be amended because it states that at a future date NPS can hold the materials. Lebo said if NPS agreed to take them in the MOA, if they have the facilities, an amendment would not be needed. Amanda suggested reading the stipulation for cultural artifacts.

Amanda – read the stipulation for cultural artifacts.

Otani noted that this stipulation was commented on by ACHP after everyone else had signed, so the initials say that this was done after consultation. But NPS did not have facilities to take the materials. They could take the materials in the future if space or facilities became available. This was agreed to with the Advisory Council 5 years ago.

Lebo agreed but pointed out that since we are drafting an MOA amendment, it is possible if these facilities come on line, NPS can take the artifacts.

Harp asked for an update on the rocks that were dismantled from the O'oma boundary wall. The agreement was that the rocks would be left there for future use by the NHOs. Smith and Otani thought that this had been done. Lebo asked for administrative record to show it had been done. Cachola said it was in the meeting minutes. The work was done, the rocks are stored, and the boundary is very important because Kamehameha III spend the first five years of his life in O'oma. Lebo would like to see the documentation. Harp asked if there can be an agreement allowing the NHOs to access the rocks and erect an ahu? Right now, they cannot legally access the area. Lebo suggested adding a stipulation in the MOA making the rocks available for appropriate use.

Lee ended this portion of the meeting.

Palamanui did a presentation.

Live were Director Raynette (Kalei) Haleamu-Kam; student Paolo Morgan; Richard Stevens and Carrie Kuwada Phipps. On Zoom were: Chancellor Rachel Solemsaas; Hawai'i Lifestyle program instructor No'el Tagab-Cruz; and former student who recently graduated Juanita Thompson.

Harp appreciated the speakers' passion for the trails. However he is concerned about the restoration process. Has documentation been done and is Palama Nui following laws that protect historical resources? He recommends that Dr. Stevens get together with an expert to see what legal processes need to be followed to avoid any issues of unforeseen violations of the law. He does not want to see the spirit for the trails dampened. Suggested that Palama Nui find out what laws are applicable because he doesn't want to see Palama Nui charged with anything for trying to do the right thing.

Cachola expressed appreciation that there is an ohana like this working on the trials, and the geographical and historical environment. He believes that the Palama Nui program meets the needs of the UHH MOU and wished this could have been done six (6) years ago. He urged the Palama Nui presenters to talk to the UH Chancellor to see if they could access the UHH funds.

Racheal, chancellor of UH Community college committed to follow up with UH Chancellor and see how the MOU could benefit this work.

Both Cachola and Harp did not believe that the Palama Nui proposal should be used as mitigation for the trail breaches because there had not been adequate vetting of the NHO proposal. Fred noted that they have brought a power point of their proposal to share with everyone.

Smith noted that the UHH MOU is in process and cannot be changed at this point. However, as mitigation for the breached sites, HDOT could participate with Palama Nui on their trail restoration projects. Smith also noted that the MOU is using federal funds, but the mitigation for the breached sites will be from State funds, so they use different pots of money.

Lebo expressed a concern that that these trails would not be documented as historic properties.

Kahui stated that the process is good. He believes there is a lot more to be done and that there are layers of different efforts. He commends the work being done by Palama Nui, and believes that if they work with DOT they would comply with the law. It is apparent that UH wants to do the right thing for our trails. He noted that we are here to resolve the MOA and believes we can get there, but if it is all about wanting more, then we are never going to get there. We have to come to a resolution, that is my mana'o.

Cachola expressed his disappointment in the meeting and asked for another meeting where the agenda can be mutually agreed on.

Amanda asked for some clarification regarding consultation on the breaches. She noted that the signatories have to agree. Lebo agreed but noted signatories don't have to sign if they don't find the MOA adequate. Amanda wanted to know the role of the invited signatories. Aiu noted that they are invited to sign, but HDOT can move forward as long as the signatories agree. The signatories are:

Cachola noted that HDOT and FHWA committed to notifying the NHOs within 30 days of the last meeting on mitigation, about committing to a schedule to determine mitigation. That was two years ago. That is the kind of frustrations and furry I feel .

Morowski (OHA) reiterated that the mitigation for the damaged sites should come from the NHO's. There needs to be more information and time to discuss and maybe we can understand how HDOT is arriving at these decisions.

Rezantes (FHWA) said he heard Uncle Fred's concerns, and they seem very valid and passionate. But he wanted to clarify that he heard Smith, speaking for HDOT, commit to doing something, but he did not hear Smith say he committed to any one thing. He committed to addressing the breaches. Rezantes wants clarity. FHWA needs to know what we are walking away from in this meeting. He was pleased, HDOT is acknowledging what is happening and encouraged that they are committed to following through.

Rezantes further clarified that he heard Smith say, "We commit to fulfilling our commitment. There are two parts, 1 being the UHH MOU and the 1.25 M, and the second the breaches" Rezantes said he thought Smith said that Palama Nui is an option. He pointed out that he would be concerned, like Uncle Fred, if I heard any more than that.

Smith noted that he cannot fund Palama Nui unless it is tied to mitigation.

Lee asked if there were further comments.

Lebo pointed out that due to rule changes she now needs 3 weeks notice to travel. She asked if HDOT could give adequate notice as SHPD wants to participate in person. Morowski noted that OHA has the same restrictions.

Lee stated in closing: Please make sure everyone understands there are still options on the table and no one is committed to any one option. The purpose of today meeting is to update you, close out some of the stipulations that remained open. We have not met for a while and HDOT is making a good faith effort to move forward on mitigation measures. We have covered primarily outstanding items and shared the work on the MOU with UH.

Lee asked Cachola if he could send out a copy of his proposal for the breaches.

Smith was asked if he would commit to more meetings. He responded that HDOT is not committing to more meetings today. This is not to saying we won't agree to more meetings in the future, just saying we did not commit to that today.

Harp asked if we have a commitment that the terrain model is a draft? Smith replied, "no."

Smith committed to providing additional information on how HDOT wants to move forward before the end of next week.

Herb – Let's adjourn

# **Underpass Feasibility Study for the Queen Kaʻahumanu Highway Widening Phase 2**

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North Kona District, Island of Hawaiʻi



State of Hawaiʻi  
Department of Transportation

June 2019

Underpass Feasibility Study  
for the  
Queen Kaʻahumanu Highway Widening Phase 2

North Kona District, Island of Hawaiʻi  
State of Hawaiʻi  
Federal-Aid Project No. NH-019-1(38)R

State of Hawaiʻi  
Department of Transportation  
Highways Division  
869 Punchbowl Street, Rm. 513  
Honolulu, HI 96813

June 2019

## 1. INTRODUCTION

This feasibility study was prepared in accordance with Stipulation 10. B. of the “*MEMORANDUM OF AGREEMENT Among the ADVISORY COUNCIL ON HISTORIC PRESERVATION, FEDERAL HIGHWAY ADMINISTRATION, and the HAWAII STATE HISTORIC PRESERVATION OFFICER, Regarding the projects in the vicinity of the District of North Kona, Island of Hawai'i, State of Hawai'i which are known as the Queen Ka'ahumanu Highway Intersection Improvements for the Kaloko-Honokōhau National Historical Park and the Queen Ka'ahumanu Highway Widening, Kailua to Ke'āhole*” (MOA).

### 1.1 Background and Project History

In 1996, the Federal Highway Administration (FHWA) and Hawai'i Department of Transportation (HDOT) published the Hawai'i Revised Statutes (HRS), Chapter 343, Environmental Assessment (EA) to widen Queen Ka'ahumanu Highway from a two lane to four lane facility to meet the existing and future demand for highway infrastructure in North Kona. The original project limits extended from Palani Road to Ke'āhole Access Road. However, due to funding constraints, the project was split into two phases. Phase 1 covered widening and improvements on Queen Ka'ahumanu Highway from Palani Road to Kealakehe Parkway, and Phase 2 covered the Kealakehe Parkway to Ke'āhole Airport Access Road. Construction of Phase 1 was completed in 2009.

After the design-build contract was awarded for Phase 2 in 2010 a Native Hawaiian organization (NHO) expressed concern that the original Archaeological Inventory Survey (AIS) dated September 1995 was not comprehensive in its identification of historic properties. Both the National Park Service (NPS) and members of the NHO claimed that the original AIS missed many historic properties fronting the Kaloko-Honokōhau National Park. At their request, additional archaeological surveys were conducted within the project limits in 2010 and 2011. The additional surveys identified 58 newly discovered historic properties.

Due to the number of newly identified historic properties within the project Area of Potential Effect (APE), a new AIS was prepared and submitted to the State Historic Preservation Officer (SHPO) for review. The new AIS was accepted by the SHPO in August 2012.

In 2015, a new Section 106 National Historic Preservation Act (NHPA) Memorandum of Agreement (MOA) and Section 4(f), U. S. Department of Transportation Act, evaluation was prepared to address the newly discovered historic properties. This resulted in a design modification of the Queen Ka'ahumanu Highway Widening Project, Phase 2, to avoid, minimize, and mitigate impacts to the affected historic resources and the requirement for this feasibility study in accordance with the MOA, Stipulation 10.B.

### 1.2 Purpose and Need

In March 2015 the new Section 106 MOA was finalized. On page 3 the MOA stated:

*“WHEREAS, the FHWA and HDOT acknowledge and agree that: a) Historic properties will be impacted through the widening of the highway; and b) mitigation actions will be taken by HDOT. The FHWA shall ensure that HDOT completes the redesign of the southern portions (between*

*Kealakehe Parkway and Hinalani Street) of the proposed improvements, to minimize the impacts of the highway widening.*

*NOW, THEREFORE, the FHWA, the SHPO, the ACHP, the National Park Service, and HDOT agree that the Projects shall be implemented in accordance with the following stipulations in order to take into account the Projects effects on historic properties:"*

**Figure 1** shows the general project location and feasibility study area.

This study was conducted in accordance with Stipulation 10.B. of the MOA, as stated on page 6:

*"10.B. UNDERPASS FEABILITY STUDY. The HDOT shall conduct a feasibility study with the objective of facilitating safe pedestrian access across the Queen Ka'ahumanu Highway at the "Trail to Honokōhau." The study will examine at-grade crossing locations, the installation of a pedestrian tunnel crossing, and the modification of existing culverts for pedestrian-bicycle use. The study shall seek examples and policies regarding use of existing pedestrian tunnels and modified culverts in Hawai'i and other States. Subsurface crossing(s) shall include provisions for a third party organization to take responsibility for maintenance, security and liability for the crossing(s) as has been the policy of HDOT for more than a decade...."*

## **2. EXISTING CONDITIONS**

The Queen Ka'ahumanu Highway Widening Phase 2 Project is well underway. Mass grading and the construction of retaining walls and drainage facilities have been completed and the paving of the southbound lanes is nearing completion. A portion of the southbound lanes are being used for vehicular traffic and soon the entire southbound lanes will be in operation while the northbound lanes are worked on. These existing conditions will be used in the evaluation of the alternatives.

### **2.1 Climate**

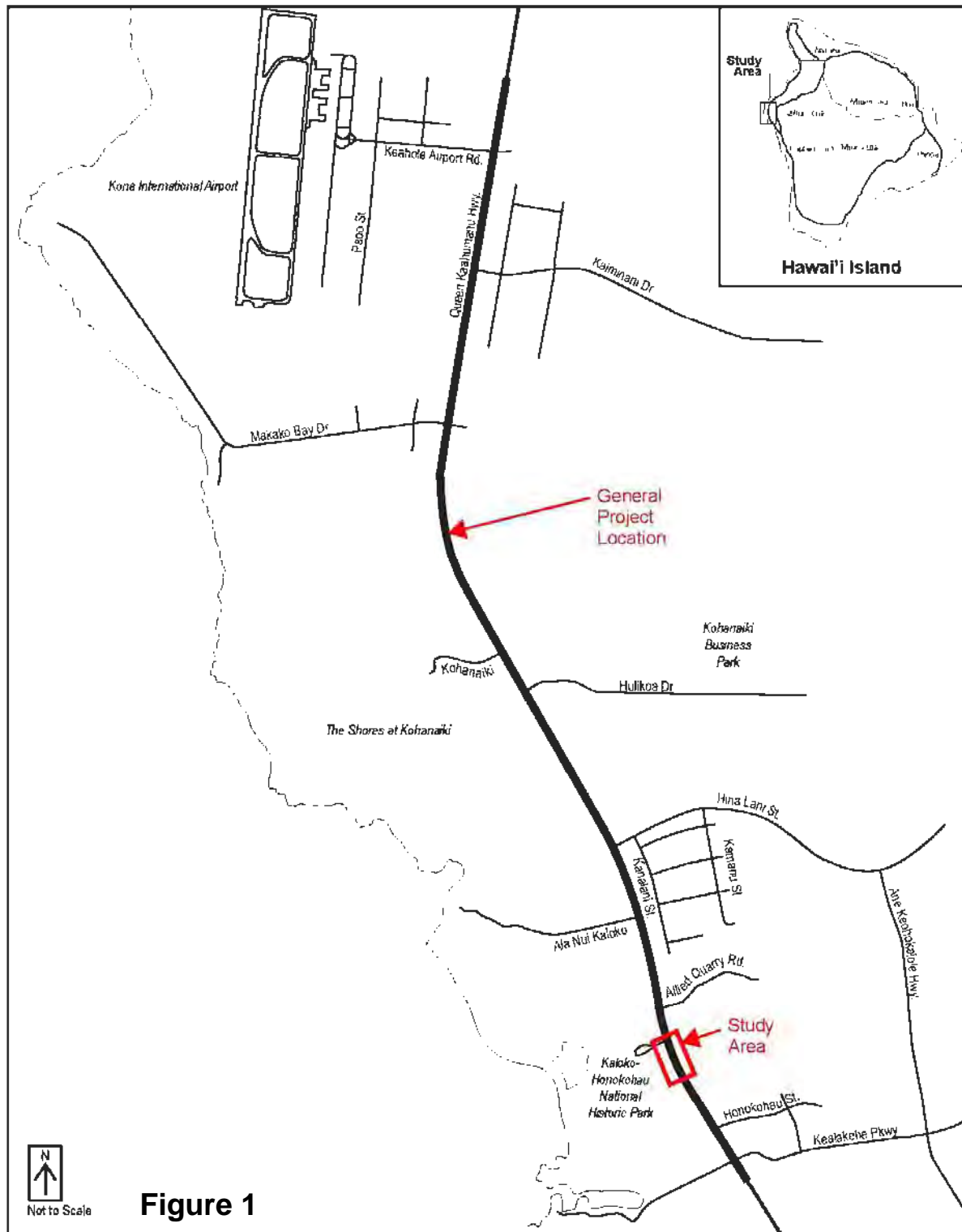
Average annual rainfall in the project area is less than 40 inches and temperatures average about 75 degrees Fahrenheit. Rainfall is greater in the summer months and less in the winter months, a pattern unique to the State. Large rainfall events are possible every year.

### **2.2 Topography and Soils**

The profile of the Queen Ka'ahumanu along the Project Area is relatively flat. The highway is generally level with the land mauka of the highway and generally higher than the land makai of the highway. The change in topography between one side of the highway and the other would require road sloped embankments or retaining walls to maintain stability of the highway.

There are primarily five soil associations within the Queen Ka'ahumanu Highway Widening Phase 2 Project area, as identified by the U.S. Department of Agriculture Natural Resource Conservation Service. The Puu Pa-Pakini-Waiaha association is located in the coastal plains area of the Kailua and Kohala Mountains. This association has the characteristic of having nearly level to steep, well-drained to somewhat excessively drained soils that have a medium-textured sub-soil or medium textured underlying material. The Kukaiau-Ainakea-Paaupau association is located east of Kailua. These soils are well-drained and have a moderately fine textured subsoil. The Lava Flows association is found all along the coastal plains from just north of Kailua to Kapalaloa and inland from Kūki'o to the Hawai'i Belt Road.





These lava flows are nearly barren, excessively drained, and gently sloping to seep. The Kekake-Keel-Kiloa association is located along the Hawaiʻi Belt Road from Palani Junction to Puʻu Alauawa. The Kawaihae association is found along the coastal plains from Puakō Bay to Kawaihae and the lower slopes of the Kohala Mountains. They occur on moderately deep, gently sloping to moderately steep, somewhat excessively drained soils that have a medium-textured sub-soil.

The existing soils can be very hard and difficult to excavate and trench.

### **2.3 Hydrological Characteristics**

There are no perennial streams or major drainage features along the alignment of the Queen Kaʻahumanu Highway Phase 2 project. Most rainfall percolates into the ground as the lava rock is porous and highly permeable.

There are no floodways or wetlands in the project alignment.

The project drainage analysis has determined that for a storm similar to the 1982 event, a flow of 1,330 cubic feet per second can be expected to flow through the watershed that includes the Trail to Honokōhau.

### **2.5 Historical and Archaeological Resources**

After publication of the original 1996 Environmental Assessment (EA) and initial AIS, extensive effort has been made to comprehensively identify and assess the proposed project's impact to historic, archaeological and cultural resources. Additional field surveys were conducted in 2010 and 2011, and a new AIS was prepared as a result.

The new archaeological surveys and APE for the project covered about 95 acres of undisturbed land along the mauka and makai highway shoulders of the existing highway. With the aid of Section 106 consulted parties, 75 historic properties were identified (Monahan et al. 2012). Fifty-four of these properties were newly discovered and reported for the first time (Monahan et al. 2012). To provide a sense of the intensity and nature of the resources, the sites identified can be generally characterized to include the following:

- Trails (number=15)
  - Excavated pits (15)
  - Varied stacked-rock mounds (10)
  - Wall sites (4)
  - Modified outcrops (4)
  - A burial platform
  - Petroglyph sites (2)
  - Rounded boulders (2)
  - Lava tubes (3)
  - A possible temporary habitation
  - Enclosures (3), where one had a particularly formal design
- (continued)

- Site complexes (5)
- Leveled areas (3), including one associated with a mauka-makai trail
- Rock-filled crevices (3)
- Coral-filled crevices (2), and
- Modified depressions/blisters (3)

The close proximity of the sites to be preserved required that the project design be modified and that large retaining wall be constructed to minimize the impact to certain sites like the Trail to Honokōhau.

## **2.6 Parks and Recreational Resources**

There are two recreational resources located adjacent to Queen Kaʻahumanu Highway in the project area for Phase 2: Kaloko-Honokōhau National Historical Park and the Kohanaiki Golf and Ocean Club.

The Kaloko-Honokōhau National Historical Park contains a trail system, fishponds, and other recreational and cultural opportunities and is open to the public. The park was established in 1978 with a mission to provide a center for the preservation, interpretation, and perpetuation of traditional Native Hawaiian activities and culture, while demonstrating historic land use patterns and also provide a needed resource for the education, enjoyment, and appreciation of such traditional Native Hawaiian activities and culture by local residents and visitors.

Many of the trails to be preserved are within the National Park.

The Kohanaiki Golf and Ocean Club is a members-only recreational resource.

## **2.7 Transportation Facilities**

### **Existing Roadway System**

The intersections proposed for the Queen Kaʻahumanu Highway within the study area occur at (from south to north): Kealakehe Parkway, Honokōhau Street, National Park Road, Allied Quarry Road, Ala Nui Kaloko, Hina Lani Street, Hulikoa Drive, Kohanaiki Street, Makako Bay Drive, Kaʻiminani Drive, and Keāhole Airport Road.

### **Existing Bicycle/Pedestrian Facilities**

North of Makala Boulevard in Kailua-Kona and throughout the project area, signage instructs bicyclists to use the 6 - 10 ft wide paved shoulder lanes provided. Sidewalks are not provided on Queen Kaʻahumanu Highway. Despite the lack of dedicated facilities, pedestrians were observed walking in the shoulder lanes along various locations of the highway.

Only the Hina Lani Street and Kealakehe Parkway intersections provide crosswalks within the study area. New crosswalks are planned for the intersections within the project area.

Intersections along Queen Kaʻahumanu Highway were analyzed in 2014 using the methodologies for unsignalized and signalized intersections documented in the *2010 Highway Capacity Manual (HCM)*. Synchro 8.0 was used for signalized intersection delay and travel time analysis. Simtraffic was used for unsignalized intersection delay. The results of the 2014 analysis show a Level of Service (LOS) B for this

portion of the highway. According to the HCM, LOS B for unsignalized intersections indicate an average delay of from 10 to 15 seconds per vehicle.

This portion of the Queen Kaʻahumanu Highway will become a busy 4-lane roadway when the project is completed.

## 2.7 Land Ownership

Within the study area there are three major landowners. The NPS owns the land makai of the study area and HDOT owns the highway ROW. The mauka lands belong to the West Hawaii Business Park, LLC, and the West Hawaii Business Park has received reclassification of the land from Open (O) zoning to Industrial-Commercial Mixed-use (MCX-20). There are plans to develop the property.

## 3. CONSULTATION

On July 25, 2017 a meeting was held to discuss the Underpass Feasibility Study with community organizations identified by the NPS including, signatories to the MOA, NHOs, Peoples Advocacy Trails Hawaiʻi (PATH), County of Hawaiʻi, local primary and secondary school officials, universities, community groups, the Royal Order of Kamehameha, and the Association of Hawaiian Civic Clubs. The discussion centered on the underpass feasibility study but there was not enough time at this meeting to discuss the design guidelines.

A second meeting was held with the same parties on December 7, 2017 to discuss the development of design guidelines for future Queen Kaʻahumanu Highway expansion projects in accordance with Stipulation 10.B. The Meeting Notes and Handouts for the two meetings are in **Appendix A**.

An important item of discussion at the December 7, 2017 meeting was HDOT's development of a Context Sensitive Solutions Process that can accommodate future Queen Kaʻahumanu Highway expansion projects. A possible process for the Queen Kaʻahumanu Highway is provided in **Appendix B**.

The FHWA Office of Planning, Environment, & Realty (HEP) Planning website ([https://www.fhwa.dot.gov/planning/css/what\\_is\\_css/](https://www.fhwa.dot.gov/planning/css/what_is_css/)) provides this definition of Context Sensitive Solutions:

**The FHWA defines context sensitive solutions (CSS)** as: *“a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions.”*

## **4. DESIGN CRITERIA**

### **4.1 Federal Criteria**

#### **4.1.1 At-Grade Crossings**

The FHWA “Manual on Uniform Traffic Control Devices (MUTCD)” (FHWA, January 12, 2017), Criteria for installation and marking at-grade pedestrian crossings at intersections, indicates the following:

*“Standard: When crosswalk lines are used, they shall consist of solid white lines that mark the crosswalk. They shall not be less than 6 inches or greater than 24 inches in width.”*

*“At locations controlled by traffic control signals or on approaches controlled by STOP or YIELD signs, crosswalk lines should be installed where engineering judgment indicates they are needed to direct pedestrians to the proper crossing path(s).”*

#### **Mid-Block Crossings**

A mid-block crossing is a location between intersections where marked crosswalks have been provided. The crosswalk may be signalized or unsignalized, and offer pedestrians a convenient location to cross the roadway without having to use an intersection crossing. Federal guidance on mid-block crossings are found in the FHWA “How to Develop a Pedestrian Safety Action Plan” (FHWA Publication No. FHWA-SA-05-12, Revised March 2009).

#### **Multi-Lane Arterial Highways With Four Lanes**

Signalization may be helpful or even essential to accommodate pedestrian crossings along a multi-lane arterial highway under the following conditions:

- On higher volume roadways
- Where gaps are infrequent
- In a school zone
- Where elderly or disabled pedestrians cross
- Where speeds are high, and
- When a number of other factors are present

#### **Parallel Facilities**

Both the FHWA “Pedestrian Facilities Users Guide” (Publication No. FHWA-RD-01-102, March 2002) and the Institute of Transportation Engineers (ITE) recommends the following when designing a separated pedestrian use path:

1. A minimum width of 5 ft for a sidewalk or walkway and 10 ft for a multi-use path, and
2. A buffer zone of 4 to 6 ft is desirable to separate pedestrians from the street

#### 4.1.2 Pedestrian Tunnel (Underpass)

The FHWA “Pedestrian Facilities Users Guide” (<http://www.pedbikesafe.org/PEDSAFE/index.cfm>) indicates that “One purpose of an underpass is to connect off-road trails and paths across major barriers such as a heavily traveled highway.”

The FHWA “PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System” (<http://www.pedbikesafe.org/PEDSAFE/authors.cfm>) indicates:

- Underpasses work best when designed to feel open and accessible. Grade separation is most feasible and appropriate in extreme cases where pedestrians must cross roadways such as freeways and high speed, high volume arterials.
- Must be wheelchair accessible
- Lighting, drainage, graffiti removal, and security are also major design considerations with underpasses.

Overpasses and underpasses must also accommodate all persons, as required by the “Americans with Disabilities Act (ADA)”:

- The maximum longitudinal grade is 5%
- The maximum cross slope is 2%

The American Association of State Highway and Transportation Officials (AASHTO) “Guide for the Planning, Design, and Operation of Pedestrian Facilities” (AASHTO, July 2004), recommends for underpasses:

- Minimum widths should be between 14 and 16 ft, but an underpass width should be increased if the underpass is longer than 60 ft

#### 4.1.3 Modification of Existing Culverts

There were no criteria found for the design of pedestrian crossings by modifying existing culverts. A culvert is most often used to pass water under a road, trail, or other obstruction from one side to the other at natural drainage and stream crossings. The selection of the culvert type and shape is based on a number of factors including requirements for hydraulic performance, limitation on upstream water surface elevation, and roadway embankment height.

### 4.2 Hawai‘i Department of Transportation Criteria

#### 4.2.1 At-Grade Crossings

The HDOT “Statewide Pedestrian Master Plan, Hawaii Pedestrian Toolbox” (HDOT, May 2013) of the state’s highway system indicates on page 5-1:

“On multi-lane roads with an ADT [average daily traffic] of 12,000 or more, marked crosswalks should always be combined with other pedestrian safety measures, such as stop or yield signs, signalization, or raised medians”, “The HDOT standards require that crosswalks be a minimum of 10 ft (3.0 m) wide and at least as wide as the approaching sidewalk. In high pedestrian areas, crosswalks can be up to 20 ft (6.1 m). The approaching sidewalk and corner area at the intersection needs to be free of obstructions so that pedestrians can freely travel in either direction to cross the street.”

“The HDOT standards call for the width of the ladder bars to be 12 in (30.5 cm) with 18 in (45.7 cm) spacing.”

### **Mid-Block Crossings**

The HDOT “Statewide Pedestrian Master Plan, Hawaii Pedestrian Toolbox” (HDOT, May 2013) indicates on pages 5-26 and 5-27:

“Design treatments at mid-block crossings are generally most effective when used in combinations (e.g. marked crosswalks and signs). As noted above in the section on Crosswalk Markings, the presence of markings on four-lane roads with an ADT of 12,000 or more and no other pedestrian improvements has been associated with a higher level of crashes, if no other treatments, such as signs, flashing lights, signals, etc. are also provided. For this reason, design treatments should normally be used in combination at mid-block crossings. These may include:

- Markings
- Stop or yield signs
- Signalization
- Pedestrian hybrid beacons
- Pedestrian actuated buttons
- Refuge islands
- Curb extensions
- Signs (sometimes with flashing lights) warning motorists of the presence of pedestrians”

#### **4.2.2 Pedestrian Tunnel (Underpass)**

The HDOT “Statewide Pedestrian Master Plan, Hawaii Pedestrian Toolbox” (HDOT, May 2013) provides a general discussion on overpasses and underpasses on page 5-36. Overpasses and underpasses are further discussed on page 5-37:

“Tunnels and underpasses provide a walkway for pedestrians underneath the roadway. Pedestrians are often more apt to use overpasses than underpasses or tunnels, and overpasses are easier to supervise and maintain. Tunnels are less desirable than bridges due to greater potential costs, reduced sense of security, challenges with monitoring, the possibility of drainage problems, and a perception of lack of safety. Before choosing to install a tunnel, soil exploration is required to determine whether a tunnel can be feasibly constructed and whether drainage will be a problem. Wide openings are more inviting to pedestrians and let in more natural light. Tunnels should be easy to access and should be as short as possible. Approaches to the underpass should allow continuous vision through it.”

The Queen Kaʻahumanu Highway Widening project is a Federal Aid Project and will comply with FHWA requirements for underpasses.

#### **4.2.3 Modification of Existing Culverts**

There were no HDOT criteria found for the design of pedestrian crossings by modifying existing culverts.

#### **4.3 Hawaiʻi County Criteria**

##### **4.3.1 At-Grade Crossings**

City and County of Honolulu: Complete Streets Design Manual (City and County of Honolulu, September 2016). Chapter 5: Pedestrian Crossings has recommendations on crosswalks at intersections and at mid-block locations.

Hawaiʻi County: Complete Streets Resolution 171-11 (Ref. C-392/PWPRC, 2011): Hawaiʻi County has no Complete Streets Design Guidelines at this time.

Maui County: Complete Streets Resolution 12-34 (Maui County Council, April 10, 2012): Maui County has no Design Guidelines but the State Department of Health prepared the Central Maui Pedestrian and Bicycle Master Plan for 2030 (County of Maui, March 2012) with assistance from the County of Maui. The Master Plan discusses safe crossing at intersections, sidewalks and shared use paths.

Kauaʻi County: Complete Streets Resolution and Complete Streets Bill 2465 (County of Kauaʻi, September 15, 2010): A design manual for Kauaʻi based on the Model Design Manual for Living Streets is being written. The Model Design Manual for Living Streets discusses intersection design, mid-block crossings, crosswalks, sidewalks and shared use paths

##### **4.3.2 Pedestrian Tunnel (Underpass)**

City and County of Honolulu: Complete Streets Design Manual: No discussion on underpasses.

Hawaiʻi County: Complete Streets Resolution 171-11: Hawaiʻi County has no Complete Streets Design Guidelines at this time.

Maui County: Complete Streets Resolution 12-34: Maui County has no Design Guidelines but the State Department of Health prepared the Central Maui Pedestrian and Bicycle Master Plan for 2030 with assistance from the County of Maui. The Master Plan has no discussion on underpasses.

Kauaʻi County: Complete Streets Resolution and Complete Streets Bill 2465: A design manual for Kauaʻi based on the Model Design Manual for Living Streets is being written. The manual does not discuss underpasses.



#### 4.3.3 Modification of Existing Culverts

While the City and County of Honolulu has no policy on the use of drainage facilities for underpasses at least one drainage structure has been permitted for use as a golf course underpass. The four counties presently have no design criteria for the use of drainage structures and culverts for underpasses.

### 5. DESCRIPTION OF ALTERNATIVES

According to Stipulation 10.B., *The study will examine at-grade crossing locations, the installation of a pedestrian tunnel crossing, and the modification of existing culverts for pedestrian-bicycle use.*

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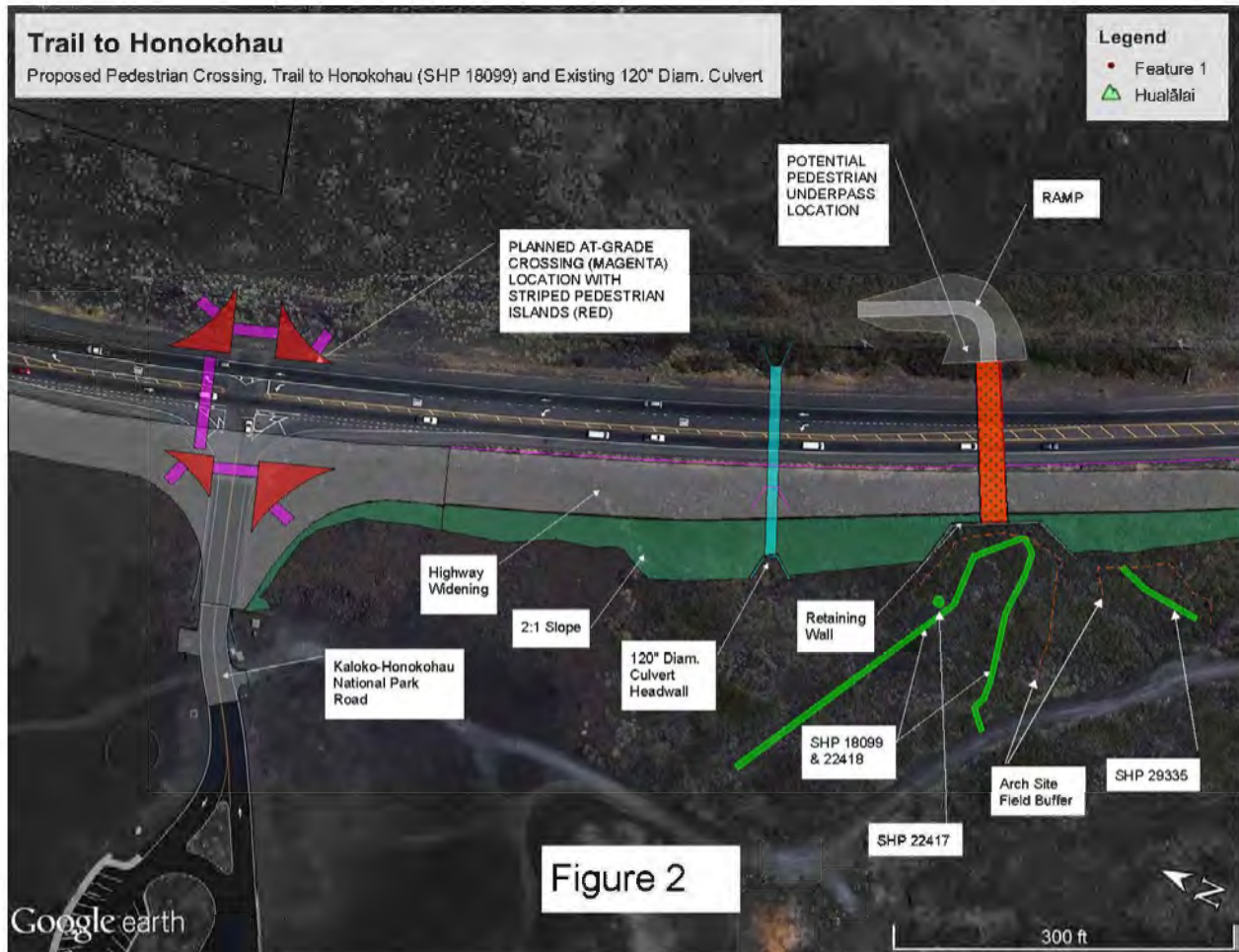
#### 5.1 At-Grade Crossing Locations

The Queen Kaʻahumanu Highway Widening Phase 2 Project construction plans show the proposed locations for new pedestrian crossings of the highway in the proximity of the Trail to Honokōhau. Pedestrian crossings are proposed at the Kaloko-Honokōhau National Park Road and the future Lanihau Street intersection with the Queen Kaʻahumanu Highway and at the Kealakehe Parkway and Honokōhau Small Boat Harbor intersection with the Queen Kaʻahumanu Highway. The Kaloko-Honokōhau National Park Road intersection is approximately 700 ft from the Trail to Honokōhau and the Kealakehe Parkway intersection is approximately 2,300 ft from the Trail to Honokōhau. **Figure 2** shows the new pedestrian crossing proposed at the Kaloko-Honokōhau National Park Road and the future Lanihau Street intersection. **Figure 3** is the Signing and Striping Plan from the construction drawings which also shows the pedestrian crossing at this signalized intersection.

A mid-block crossing was also examined. The Trail to Honokōhau is approximately 20 ft lower than the highway. A 20-ft wall minimizes the impact to the trail. A path with a gentle slope would be required to allow pedestrians to walk up to the highway. As a busy high speed four lane highway, an at-grade mid-block crossing should be signalized. Due to the close proximity to a new signalized highway crossing at the Kaloko-Honokōhau National Park Road and the future Lanihau Street intersection with the Queen Kaʻahumanu Highway a signalized mid-block crossing would not be warranted.

#### 5.2 Pedestrian Tunnel Crossing (Underpass)

The Trail to Honokōhau is located approximately 700 ft from the Kaloko-Honokōhau National Park Road. The mass grading and retaining walls have been completed and the contractor is paving the southbound travel lanes. In the present condition the trail is approximately 20 ft below the grade of the highway. A 20 ft high wall was constructed at this location to allow the highway to be widened while minimizing the impact to the trail. The proposed tunnel can be a 16 ft x 10 ft arch culvert or box drain. The tunnel must also avoid a new gravity sewer that cannot be adjusted. The mauka portal of the underpass will be 20 ft below grade so a ramp will be required to allow the users to walk to the tunnel entrance. Due to the length of the tunnel the underpass will require lighting and ventilation. Solar lighting and ventilation may reduce cost. As required by the Stipulation, a third party entity must be found to manage the



underpass so an entrance structure, security fencing and gates may be requested by the third party management. **Figure 4** shows the plan and section of the proposed underpass.

The Tunnel Crossing would include excavation and placement of material for:

- Ramp within the mauka Right-of-Way to grade
- Tunnel using a Concrete Arch Culvert (similar to the Hualālai vehicular underpass)
- Bedding for foundation
- Backfill of Trench
- Paving
- Support for Existing Utilities
- Concrete Foundation
- 16'x10' Concrete Arch Culvert
- Opening in Retaining Wall
- Outlet Headwall on Mauka Entrance/Exit Portal
- Paving
- Lighting
- Ventilation



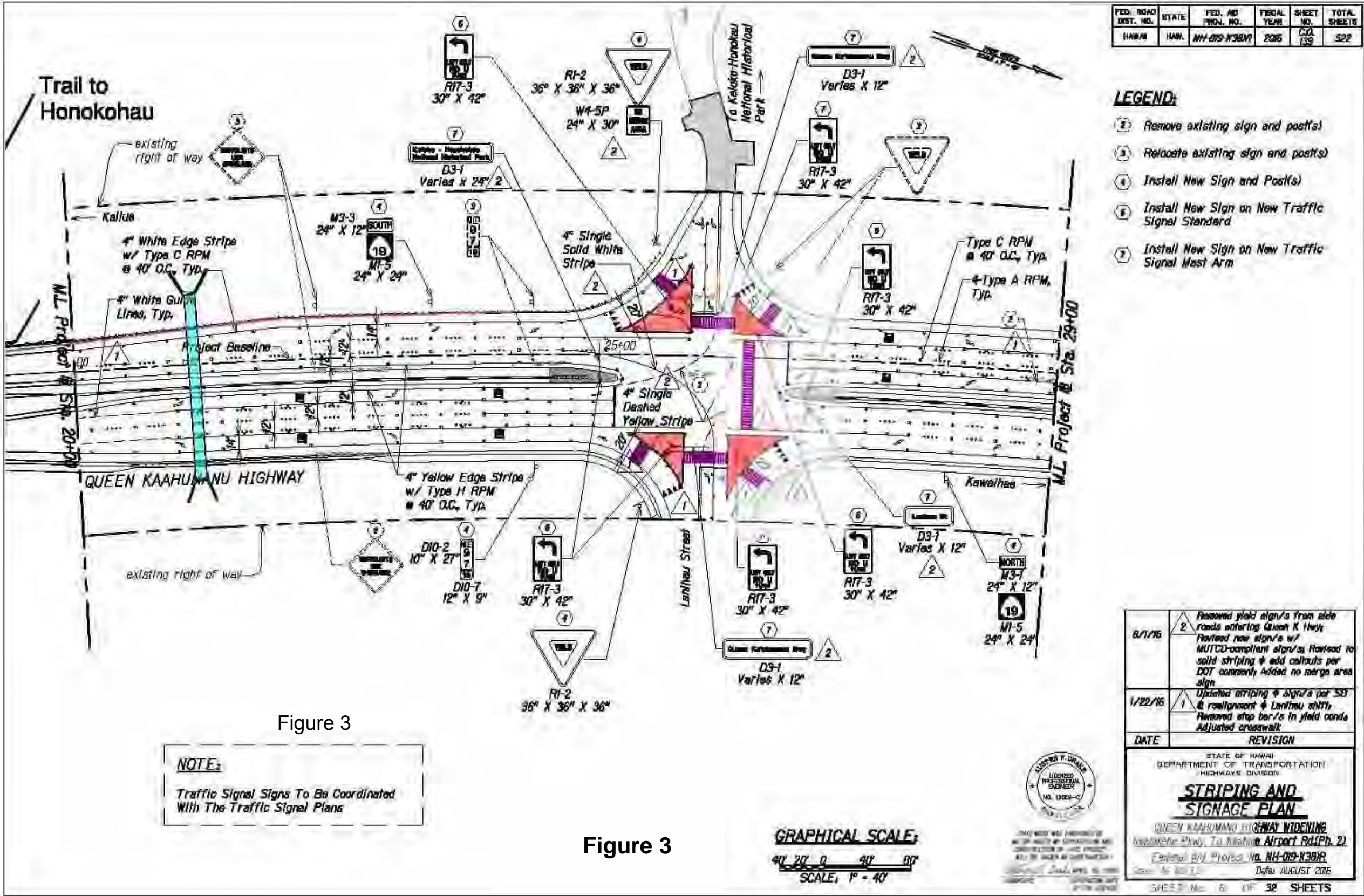
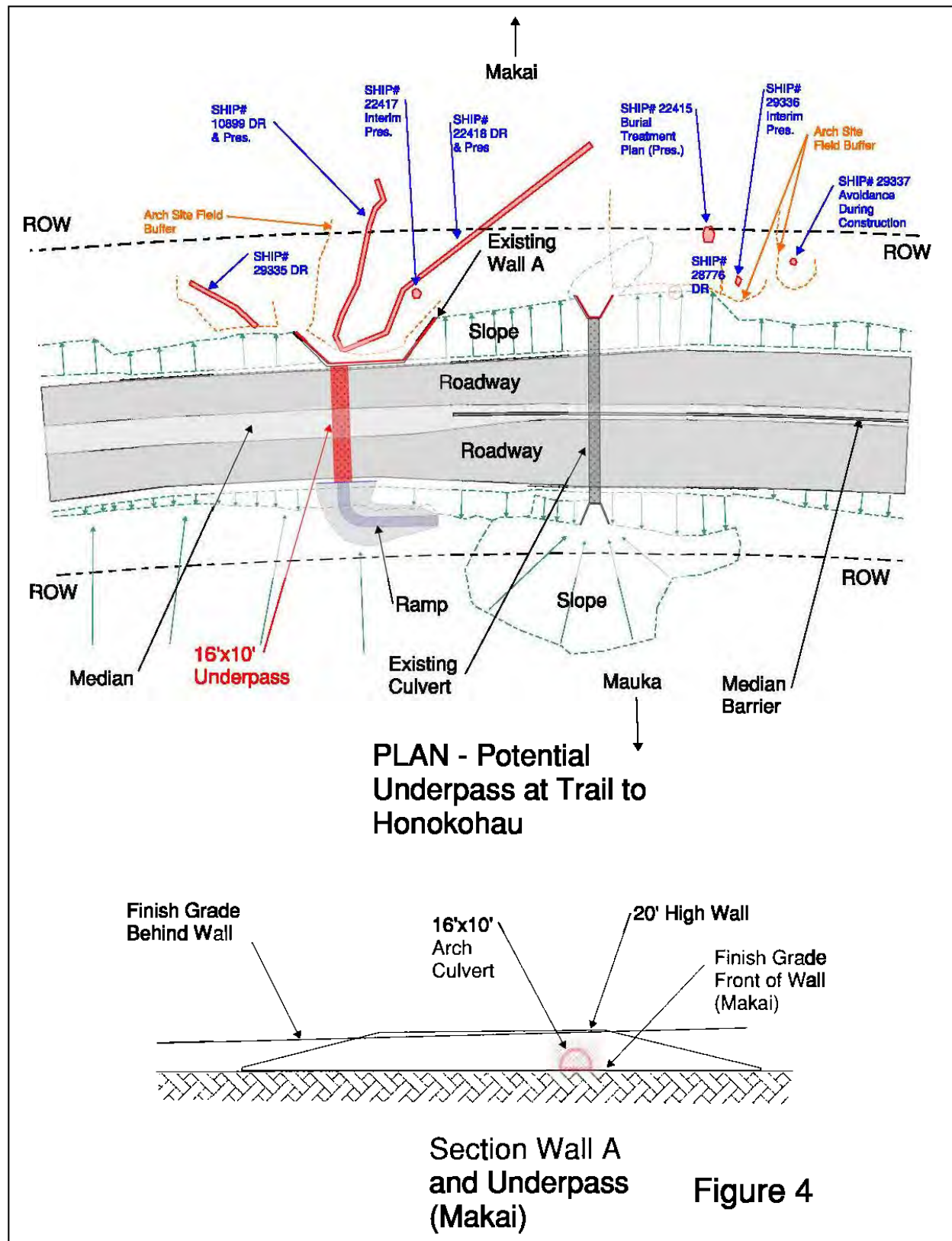


Figure 3

Figure 3





Security gates will potentially capture debris so a debris catching facility will be required upstream of the gates. **Figure 5** shows the plan and section of the proposed culvert modification.

The Modification of Existing Culvert would include excavation and placement of material for:

- Ramp within the mauka Right-of-Way to grade
- Cover and Enclose Outlet Headwalls
- Security Fencing and Gates
- Fencing for Debris
- Paving
- Lighting
- Ventilation

## **6. EVALUATION OF ALTERNATIVES**

### **6.1 At-Grade Crossing**

At-Grade Crossings are being provided at the Kaloko-Honokōhau National Park Road and the future Lanihau Street intersection with the Queen Ka'ahumanu Highway. The intersection is approximately 700-feet away from the Trail to Honokōhau. The land between the trail and the intersection belongs to the National Parks Service and is presently unimproved. There are additional archaeological sites between the Trail to Honokōhau and the intersection as previously shown in **Figure 4**. The intersection is signalized and will provide a safe way to cross the highway and will be operated by the HDOT. The At-

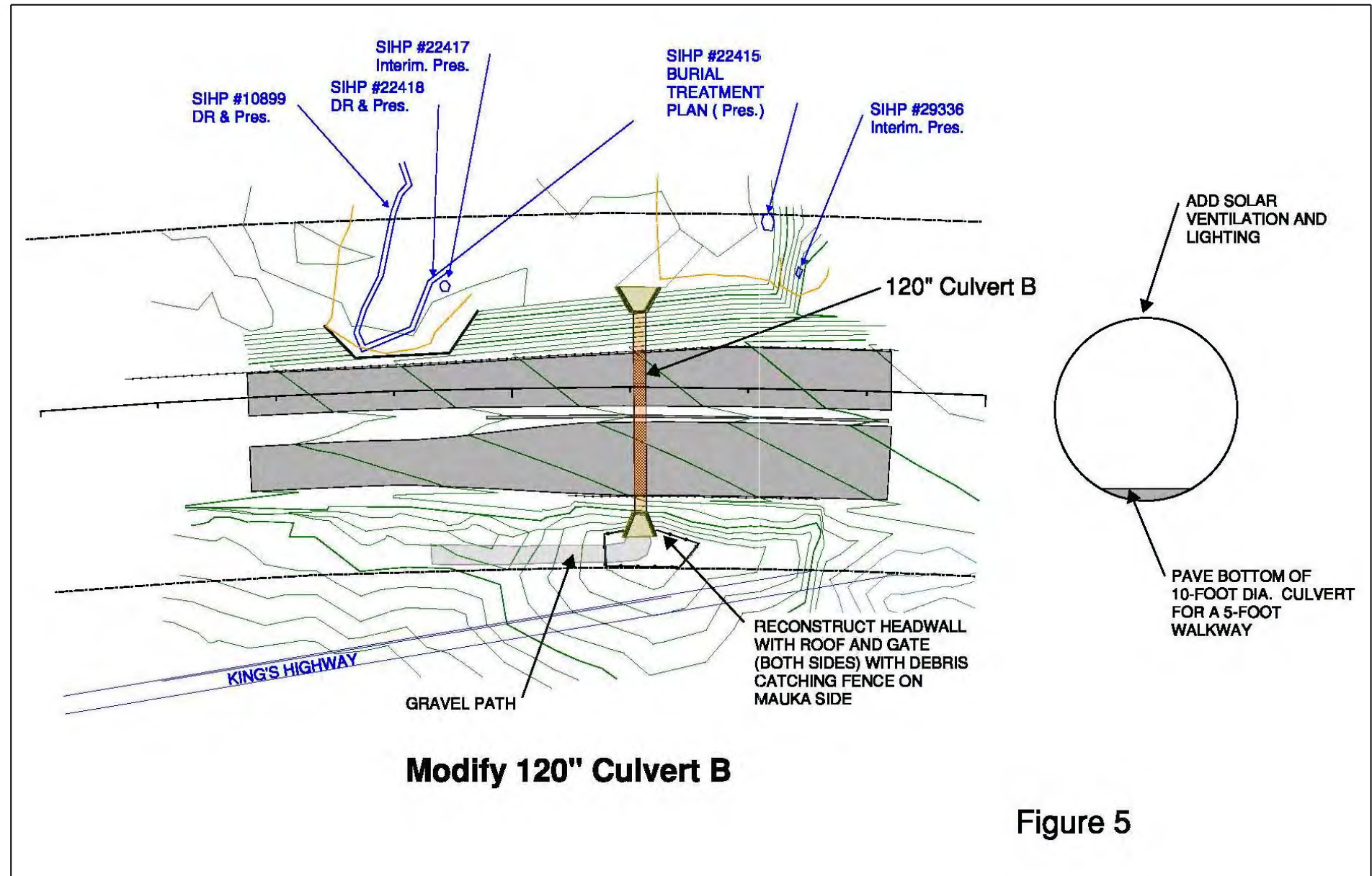
Grade Crossing will connect to the Kaloko- Honokōhau National Park to the future West Hawaii Business Park.

The cost for this At-Grade Crossing is in the project cost.

### **6.2 Pedestrian Tunnel**

All pedestrian tunnels come with risks as described in **Section 4**. The tunnel will require a third party operator that will accept the maintenance, security and liability for the tunnel. Most third party operators decide to control the tunnel entrances with fences and gates to limit access when the tunnel is not in operation. The mauka entrance of the pedestrian tunnel will require a long ADA compliant ramp down to the tunnel gate because the existing ground is over 20-feet higher than the entrance. Although the area has limited rainfall, large storms are possible, so drainage through the tunnel is a design consideration. The tunnel must slope from mauka to makai. The existing retaining wall on the makai side of the highway will have to be modified to create a large 16 ft x10 ft portal. The Trail to Honokōhau on the makai side of the highway is 20-feet lower than the highway so the wall constructed to limit impacts to the Trail, and must remain. The tunnel will be constructed in existing soils which are difficult to excavate. A new water main, non-potable water main and gravity sewer will have to be supported during the installation of the tunnel and the busy highway will require traffic management during construction. The new tunnel will connect the Trail to Honokōhau within the Kaloko- Honokōhau National Park to the land belonging to the West Hawaii Business Park.

The Rough Order of Magnitude Cost Estimate is \$2,995,494.



### 6.3 Modification of Existing Culvert

The existing 120-inch diameter culvert has been extended by the project as previously shown on **Figure 5**. HDOT has determined that runoff from a major storm will flow to this culvert. Similar to the Pedestrian Tunnel, the modified culvert will require a third party operator who must control access during a storm event. To control access, the existing headwalls will need to be modified to include fences and gates. For this reason, a debris catching feature will have to be installed to prevent any blockage at the upstream or mauka gate. The mauka entrance of the modified culvert will require a long ADA compliant ramp down to the culvert gate because the existing ground is over 22-feet higher than the entrance. The modified culvert is approximately 180-feet north of the Trail to Honokōhau within the Kaloko- Honokōhau National Park and leads to the land belonging to the West Hawaii Business Park.

The Rough Order of Magnitude Cost Estimate is \$672,197.

### 6.4 Cost Summary

The cost estimates provided are for an At-Grade Crossing Location at the Kaloko-Honokōhau National Park Road and the future Lanihau Street intersection with the Queen Ka'ahumanu Highway, Pedestrian Tunnel at the Trail to Honokōhau and the modification of the existing 120" Culvert B.

#### Rough Order of Magnitude Cost Estimates

At-Grade Crossing Location	Pedestrian Tunnel	Modification of Existing Culvert
In Project Cost	\$2,955,494	\$672,197

#### Rough Order of Magnitude Estimate

##### 16'x10' Concrete Arch Culvert Pedestrian Tunnel Similar to Hualalai Vehicular Underpass

Items	Quantity	Unit	Unit Cost	Cost
Demolition	793	SY	\$25	\$19,819
Excavation				
Ramp	545	CY	\$125	\$68,125
Culvert	3868	CY	\$125	\$483,542
Support Existing Utilities	1	LS	\$100,000	\$100,000
Bedding	89	TON	\$22	\$1,947
Foundation	80	CY	\$2,000	\$160,000
16'x10' Precast Arch Culvert	120	LF	\$7,515	\$901,800
Create Opening in Wall A	1	LS	\$300,000	\$300,000
Outlet Headwall	1	LS	\$274,074	\$274,074
Backfill	3157	CY	\$40	\$126,289
Base Course	268	TON	\$22	\$5,886
Asphalt	357	TON	\$150	\$53,513
Security Fence and Gate for Headwalls	2	LS	\$10,000	\$20,000
Ventilation	1	LS	\$30,000	\$30,000
Lighting	1	LS	\$20,000	\$20,000
Traffic Control	1	LS	\$25,000	\$25,000
Subtotal				\$2,589,995
Contingency				\$388,499
Total				\$2,978,494

Additional detail on the cost estimates for the Pedestrian Tunnel and the Modification of Existing Culvert are provided below.  
Codeine

**Rough Order of Magnitude Estimate  
16'x10' Concrete Arch Culvert Pedestrian Tunnel  
Similar to Hualalai Vehicular Underpass**

Items	Quantity	Unit	Unit Cost	Cost
Demolition	793	SY	\$25	\$19,819
Excavation				
Ramp	545	CY	\$125	\$68,125
Culvert	3868	CY	\$125	\$483,542
Support Existing Utilities	1	LS	\$100,000	\$100,000
Bedding	89	TON	\$22	\$1,947
Foundation	80	CY	\$2,000	\$160,000
16'x10' Precast Arch Culvert	120	LF	\$7,515	\$901,800
Create Opening in Wall A	1	LS	\$300,000	\$300,000
Outlet Headwall	1	LS	\$274,074	\$274,074
Backfill	3157	CY	\$40	\$126,289
Base Course	268	TON	\$22	\$5,886
Asphalt	357	TON	\$150	\$53,513
Security Fence and Gate for Headwalls	2	LS	\$10,000	\$20,000
Ventilation	1	LS	\$30,000	\$30,000
Lighting	1	LS	\$20,000	\$20,000
Traffic Control	1	LS	\$25,000	\$25,000
Subtotal				\$2,589,995
Contingency				\$388,499
Total				\$2,978,494

**Rough Order of Magnitude Estimate  
Modification of Existing 10' Diameter Aluminum Culvert for Underpass**

Items	Quantity	Unit	Unit Cost	Cost
Demolition	1	LS	\$5,000.00	\$5,000
Excavation and Backfill				
Ramp	104	CY	\$125	\$13,037
Pave Existing Culvert	20	TON	\$225	\$4,576
Modify Inlet Headwall (Walls and Roof)	1	LS	\$235,000	\$235,000
Modify Outlet Headwall (Walls and Roof)	1	LS	\$220,000	\$220,000
Security Fence and Gate for Headwalls	2	LS	\$10,000	\$20,000
Base Course (6")	72	TON	\$22	\$1,583
Asphalt (2")	34	TON	\$150	\$5,104
Chain Link Fence for Debris	170	LF	\$75	\$12,719
Ventilation (solar)	1	LS	\$30,000	\$30,000
Lighting (solar)	1	LS	\$25,000	\$25,000
BMP's/Dust	1	LS	\$12,500	\$12,500
Subtotal				\$584,519
Contingency				\$87,678
Total				\$672,197



## 7.0 RECOMMENDATIONS

### 7.1 Pedestrian Underpass

In the present condition the design and construction of a pedestrian underpass would be problematic. As the Queen Kaʻahumanu Widening design-build project is underway, the site is controlled by the contractor to allow the expeditious completion of this much needed project. Construction drawings and environmental documentation would have to be prepared and approved by all affected agencies and a Change Order would have to be negotiated with the contractor. As described above, the construction of a pedestrian tunnel will require excavation of a trench across the newly constructed highway as well as the existing highway, which is in hard rock. This will take time and require protection of existing utilities and impact traffic. Besides the cost of construction, there will be a delay in the completion of the project, as the contractor adjusts his work schedule to accommodate the construction of the pedestrian tunnel. The Rough Order of Magnitude Estimate does not include the additional cost to the project for design and construction. Then there will be costs for the delay in the project completion to be reimbursed to the contractor and the cost to the commuting public.

The MOA was signed in 2015, over 4 years after the project was awarded. Work commenced on the project soon thereafter. To allow for the timely completion of the project the re-design of the south segment of the project to protect archaeological sites, required by the soon to be approved MOA, was started approximately 6 months earlier. If the decision to construct the underpass was made at that time rather than to conduct a feasibility study, the design and project schedule could have included the tunnel, especially the portal for the tunnel in the retaining wall. The impact to the time of construction and traffic would have been minimized and the construction could have been coordinated with the new water main, non-potable water main and sewer line. The Department of Water Supply has an existing water main along the highway that would have to be protected to construct a tunnel.

### 7.2 Modification of Existing Culvert

The widening work in this area of the project is very far along. The grading, retaining wall and new pavement construction is completed. The contractor's work is mainly on the existing portion of the highway and completing the intersections. The culvert modification does not affect the improvements completed by the contractor and because the modifications required are outside of or under the present work area, it is possible to modify the culvert without significantly affecting the rest of the project activities. Still, the modification will require design and environmental documentation. Also permits will have to be obtained. By the time the approvals are obtained the contractor may have demobilized the equipment necessary to create the ramp for the mauka portal and the synergy of modifying the culvert during construction would be lost.

### 7.3 Future Extensions of the Queen Kaʻahumanu Highway

As future extensions of the Queen Kaʻahumanu Highway are planned, the use of the Context Sensitive Solutions Process can guide the planning process, as described in **Appendix B**. The FHWA describes Context Sensitive Process as: *The Context Sensitive Solutions (CSS) process is a collaborative, interdisciplinary, and holistic approach to the development of transportation projects. The CSS process involves all stakeholders, including community members, elected officials, interest groups, and affected local, state, and federal agencies. The CSS process values equally the needs of agency and community, considering all trade-offs in decision-making.*

An underpass or other highway crossing would be considered where it is possible to connect a historic trail that is presently cut off by the existing Queen Ka'ahumanu Highway. Stipulation 15. Terrain Model states *"The HDOT shall commission the construction of a terrain model depicting the lands of Kekaha (between Kailua and Anaehoomalu) in consultation with Makani Hou O Kaloko-Honokohau. The model shall incorporate topographic relief, traditional place names, historic trails, settlement locations, interpretive signs, and other important landmarks, to be determined."* The terrain model should be the guide for historic trails that could be the initial focus of CSS consideration for possible underpass locations during the planning process of future extensions of the Queen Ka'ahumanu Highway. These trails will require further study and coordination with community groups such as Makani Hou o Kaloko-Honokohau and the National Parks Service Ala Kahakai Trail Association in the planning process to determine if there is an opportunity to provide connectivity across the highway for a significant trail. At Kukio the highway presently has an underpass for a mauka-makai roadway.

**Figure 6** shows a portion of the terrain model map highlighting the future extension of the highway and trails that cross the highway, including:

- Kiholo – Puako (possible name)
- Kapapaloa-Pu'u Anahulu (2 crossings)
- Kiholo-Pu'u Anahulu
- Kiholo-Pu'u Wa'awa'a
- Kiholo Trail
- Kuki'o Trail (2 crossings)
- Makalawaena







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## **Appendix A**

### Consultation Meeting Materials

Notes and Handouts for  
Consultation Meeting on July 25, 2017  
(Meeting 1 of 2)

2024 North King Street  
Suite 200  
Honolulu, Hawaii 96819-3494  
Telephone 808 842 1133  
Fax 808 842 1937  
eMail rmtowill@rmtowill.com



Planning  
Engineering  
Environmental Services  
Photogrammetry  
Surveying  
Project and Construction Management

**Project:** Queen Ka'ahumanu Highway Widening, Phase 2 Project  
Underpass Feasibility Study Consultation Meeting

**Date/Time:** Tuesday, July 25, 2017 10:00 a.m. to 2:30 pm

**Location:** West Hawaii Civic Center Council Chambers  
74-5044 Ane Keohokalole Highway, Building A  
Kailua-Kona, Hawaii 96740

**Attendees:** See Below

**Hawaii Department of Transportation (HDOT)**  
Scot Urada, P.E., Engineer  
Donald Smith, P.E., Deputy Assistant Engineer  
Hawai'i Island  
Natasha Soriano, P.E., Engineer

**Federal Highway Administration (FHWA)**  
Lisa Powell, P.E., Transportation Engineer

**State Historic Preservation Division (SHPD)**  
Amy Rubingh, Archaeologist

**R. M. Towill Corp. (RMTc)**  
Brian Takeda, Project Coordinator  
Jimmy Yamamoto, P.E., Snr. Project Manager  
Jason Tateishi, P.E., Project Manager  
Michelle Wong, Planner

**Facilitators**  
Herb Lee (Mālama Waiwai)

**National Park Service (NPS)**  
Aric Arakaki, Superintendent  
Ala Kahakai National Historic Trail (AKNHT)  
Rick Gmirkin, Community Archaeologist, AKNHT  
Christopher Hawkins, Coordinator, AKNHT  
Cayla Crivello, Intern, AKNHT

**County of Hawaii Planning Department**  
Terry Dunlap, Planner  
Keola Childs, Planner

**Peoples Advocacy for Trails Hawaii (PATH)**  
Tina Clothier, Executive Director  
Franz Weber, Board member

**Makani Hou O Kaloko-Honokohau (Makani Hou)**  
Fred Cachola  
(Also representing Royal Order of Kamehameha)

**Royal Order of Kamehameha**  
Curtis Tyler, Former County of Hawai'i Councilman

**La'i'Ōpua Hawaiian Homestead Association**  
Bo Kahui, Executive Director

**Kona Hawaiian Civic Club**  
Cynthia Nazara, President

**E Mau Na Ala Hele**  
Deborah Chang

**Kama'aina Kekaha, Kona 'Akau**  
Hannah Kihalani Springer

## A. Opening Pule – Cynthia Nazara

## B. Introductions (facilitated by Herb Lee)

## C. Process Protocols (Facilitated by Herb)

- 1 Herb explained the process protocols using the word “ALOHA;” (1) Akahi as modesty, (2) Lokahi as Unity, (3) Oia i’o as honesty or trust, (4) Ha’aha’a as humility, and (5) Ahonui as patience. These cultural protocols should guide our discussions with one another.
- 2 The purpose of this meeting is to allow the community to share their thoughts and provide input on the Memorandum of Agreement (MOA), Stipulation 10B, Underpass Feasibility Study.

## D. Presentation Discussion (Scot Urada, HDOT Engineer)

- 1 MOA Stipulation 10B: Scot U. thanked everyone for attending today’s meeting. Stipulation 10B requires the Hawaii DOT (HDOT) to do a feasibility study to examine an at-grade crossing, underpass, and a modified culvert as highlighted on the slide. Then when this is completed, a copy of the study will be provided to the participants. A copy of Stipulation 10B was provided in a handout. The National Park Service (NPS) was consulted and parties identified to participate are provided in another handout.

The stipulation also requires the identification of a third party to maintain the underpass, and some examples will be shown later in the slide presentation.

Scot U. explained that before design details of the various alternatives are looked at, we should take a step back. For any improvement that HDOT considers, it must go through an evaluation process. For example, if we are told to put in a new runway at the Kamuela Airport, we do not automatically start designing for a 10,000 foot runway. We need to first evaluate and look at different factors to understand the project’s Purpose and Need, and then understand the requirements. The Federal Highway Administration (FHWA) has guidance on Purpose and Need, and the HDOT goes through this process for any improvement.

Scot U. went over 11 items of the evaluation process that included: Purpose & Need, identification & examination of options, meeting objectives, fitting context (e.g. we probably would not want someone to put a 50 story tall building in Kamuela), need to consider environmental impacts, look at cost-benefit (as covered in later slides), HDOT needs to consider not only construction, but operation & maintenance, liability, the appropriate use of public funds, and design “warrants” (e.g. for various improvements, HDOT examines warrants to determine if certain improvements are justified, such as cross walks. If we look at Alii Drive in Kailua-Kona, if every home owner wanted a cross walk next to their driveway, then the roadway would not be able to perform its function).

Scot U. also explained that when an improvement is desired, that it could be for good intentions. Sometimes, however, that improvement may cause unplanned or unintended effects or consequences. The HDOT looked at the various options possible for this project and identified the potential items that everyone should be aware of and to consider. The HDOT feels that whatever is installed should be good for the entire community and that everyone was considered in the process.

Scot U. explained that when information is used for a design purpose, that data must be gathered to evaluate and design the improvements, and that this is where HDOT will need input from the participants. Also, in looking at data, the consideration for the trails is to ask, are we looking to preserve, or to increase their use? In addition, would it be for use by the general public or is it intended for the descendants? Certain improvements may increase or attract more people to the trails, and by itself may further impact the trail.

Fred C. and others felt offended by “Public vs. descendants” in the slide presentation. Scot U. explained that this was intended to explain that the improvements may attract other people (general public) to the trails. In the past, some Consulted Parties felt that they wanted to preserve trails.

- 2 Fred C. asked about Agenda Item 4: Terms and Intent of Stipulation 10B. Fred indicated that Native Hawaiian organizations (NHOs) recommended the construction of an underpass from previous discussion of the MOA, when the MOA was prepared several years ago. There seems to be a paradigm for a construction project rather than a paradigm of cultural restoration. Native Hawaiians would like one trail to be restored so they can walk in the footsteps of their ancestors. Fred questioned whether R. M. Towill (RMTC) is an independent party able to conduct the underpass feasibility study and that RMTC has had many contracts by the HDOT in Kona. Jason T. noted that RMTC was selected by the HDOT to assist them with the completion of the MOA stipulations, including today's discussion of Stipulation 10B, and noted this was the first HDOT contract in over 10 years that RMTC had in Kona.
- 3 Curtis T. stated that it is important that all individual perspectives be shared and should not be debated.
- 4 Deborah C. asked when the current MOA expires. Herb stated that the current MOA was signed in 2015 and would expire after five years, in 2020. The MOA may be extended if agreed to by the signatories.
- 5 Fred C. asked why the HDOT will not take responsibility for the liability of the underpass and whether the liability could be given to a third party. Scot U. responded that the topic will be covered in more detail as this is addressed in the presentation.
- 6 Aric A. asked about Presentation Slide 6: Design Evaluation Process and why there was no mention of cultural impacts and that it should be considered in the design phase. Scot U. indicated that the cultural and environmental impacts were grouped together.
- 7 Keola C. asked if HDOT would allow for more discussion as each option is presented. Scot U. responded yes, such discussions can be done, however given the overall meeting time constraints, that such discussions be limited.

#### **E. Option 1: At-Grade Highway Crossing Discussion**

- 1 Scot U. showed a slide depicting the location of the future signalized intersection, the location of the existing 10 foot culvert that is being extended due to the widened highway, and a possible location for a separate underpass structure. The slide showed approximate distances from the existing trails to the various highway crossing options.
- 2 For the first option, Scot U. explained that the cross walks and signals are the more traditional approach, one that is familiar to drivers. There would be no additional adverse impacts to the trails, low construction maintenance costs, and no steep grades for users. For CONS, this was the furthest of options from the trails, and there were car-pedestrian conflict points. A slide showing the existing Queen Ka'ahumanu Highway at the Palani Road intersection was shown, and Scot U. explained that an at-grade crossing would look very similar to this.
- 3 Curtis T. asked if the existing crosswalks at Kealakehe Parkway and Hinalani Street will remain. Scot U. indicated that the existing crosswalks will remain.
- 4 Keola C. stated that the disadvantage of the at-grade crossing is that it does not account for the cultural context and purposes of the cultural practitioners needing to cross the highway, and requested that this somehow be shown.
- 5 Curtis T. noted another disadvantage relates to traffic. If another signalized intersection were constructed; there would be impacts to traffic movement in the area.
- 6 Tina C. had concerns with pedestrian safety while crossing the highway. The amount of time needed for people to cross the intersection may be longer than provided by a traffic signal. This is because the non-abled, such as Kupuna, may require more time to cross the road.



- 7 Aric A. asked for further discussion from the group on other alternatives to the at-grade highway crossing for future highway expansion projects.
- 8 Franz W. stated that the Makala Boulevard intersection gives pedestrians 30 seconds to cross. That intersection is not as wide as the proposed Queen Ka'ahumanu Highway at-grade crossing which could require as long as 45 seconds to cross. Both motorists and pedestrians may not also have the right attitude [or awareness] that there is an important historic trail at this location, and become frustrated by the wait.
- 9 Curtis T. stated that a traditional approach to pedestrians crossing the highway does not account for the current cultural landscape or psychology of motorists using the highway.
- 10 Chris H. commented that he felt the idea of an at-grade crossing being more traditional and familiar to drivers does not make sense at this location.
- 11 Bo K. asked where the trail would connect to. Will it go from the Kaloko-Honokohau National Historic Park and then to the industrial area on the mauka side of the highway? If this trail was historically a major roadway that led to a significant heiau or site, then restoration of the trail should be considered. However, Bo noted that he does not know of any significant history for the use of the trail, and has not seen anyone use the trail [to go to a particular place]. He stated he would opt for preservation instead.
- 12 Rick G. stated that the trail would provide a traditional connection to the surrounding community, the future regional park, Kealakehe High School, the remainder of the Honokohau Trail located in an archaeological preserve, and future mauka residential communities. The trail may not be the best for bikers though.
- 13 Hannah S. stated that it is up to the community to develop a use for the trail that is fitting for modern times so that community members can use it for recreational needs.

#### **F. Option 2: Drainage Culvert Modification Discussion**

- 1 Scot U. explained that there is an existing 10 foot culvert under the highway and this is being extended. In this location, the bottom of the culvert is over 20 feet from the highway surface, so if we need to consider pedestrians and bicycles, and Americans with Disabilities Act (ADA), long ramps need to be constructed. Another slide was shown from a mainland U.S. location, where a culvert was modified to accommodate both drainage and pedestrians. Scot U. explained that sometimes the "devil is in the details" and when the HDOT looked at this location, there were many things to be considered. Someone would need to operate this, so if there is rainfall, someone will need to monitor it, and if there is water running in the culvert, it may need to be closed to pedestrian traffic. This is a somewhat remote site and so this may have to be monitored 24/7.
- 2 Scot U. went over the PROS where this option: eliminates pedestrian / car conflicts; it is located closer to the trails; and it is a dual use of a structure. The CONS identified by HDOT included: the need for maintenance; the culvert size may need to be increased from its existing 10 feet to accommodate both uses (drainage and pedestrians); someone needs to monitor weather; there is the need to identify a capable third party to maintain and operate the culvert for pedestrians; the culvert may require lighting and ventilation, and this may attract more people (public) to the trails (which might be a source of further impact); the culvert may require further improvements such as paths or ramps to the adjacent trails that cause additional effects; and, modification may be costly.
- 3 Curtis T. stated that regarding the use of a drainage culvert for a pedestrian crossing, that the Hawaiian people have common sense as to when it is appropriate to use it (by avoiding use during storm events). The culvert is more than tall enough for pedestrians to use it. For pedestrians using the culvert, taxpayers should absorb the liability.
- 4 Chris H. stated that there are ways to construct the culvert so it resembles the trail. Chris also does not agree with Slide 12 CONS, Option 2, item 7, "May attract more people (Public) to natural resources", because as a Natural Resource Manager, the main goal is to get people out into nature.

- 5 Hannah S. asked if the culverts were placed based on weather patterns and topography. Scot stated that the culverts are located based on the surrounding topography and general observations by maintenance personnel involving rainfall events.
- 6 Amy R. noted that the PROS and CONS lists for the at-grade highway crossing would look much like the proposed Option 2, modified culvert, if it was presented as the less preferred option.
- 7 Fred C. feels like the modified culvert would be better than an at-grade highway crosswalk as it would allow for trail connectivity. He wants to make sure what is presented is not a declaration, but a discussion. Scot U. reemphasized that when HDOT looked at this, these were things that HDOT could identify as PROS, CONS, and with possible unanticipated or unintended effects, and that HDOT wanted to fully disclose this to all meeting participants for consideration.
- 8 Bo K. stated that if underpass construction is considered, then the culvert modification seems like the most cost effective option. It is closer to the trails than the at-grade highway crossing, but more research would need to be done to determine the best option. However given that the 10 feet culvert already exists, Bo K. felt that he would need to re-think the situation.
- 9 Franz W. does not feel the Options should be divided into PROS and CONS as this is a traditional approach and has been proven ineffective. He also agrees with Chris H., that the use of the trail should not be a CON.
- 10 Chris H. does not think that cost is a justified CON as the cost to modify the culvert could have been incorporated during the design phase. Scot responded that the original purpose of the culvert was for drainage. If the culvert were modified for pedestrian and bicycle traffic, construction standards and numerous design details would need to be followed. Chris H. clarified that if the design was done earlier and included in the project earlier, some of the anticipated retrofit costs could have been avoided.
- 11 Curtis T. explained that the National Historic Preservation Act (NHPA) states that the impact to NHOs and cultural properties must be considered. The list of CONS seems disingenuous as there should be more focus on cultural considerations and impacts as part of the discussion.
- 12 Aric A. does not agree with Slide 7, Information Used for Design, as the use of the trail should be inclusive of everyone in the community. Scot stated that the potential increased use of the trail could cause more damage to the trail. Herb added that the trail may not be able to handle increased pedestrian use due to carrying capacity.
- 13 Fred C. stated that there is a difference between cultural restoration and design engineering. Cultural restoration incorporates the public which includes the Hawaiian people.
- 14 Hannah S. stated that Option 1, At-Grade Highway Crossing, should be listed as "at-highway grade" and Options 2, Culvert Modification and 3, Underpass Construction, should be listed as "at-trail grade".
- 15 Deborah C. asked whether there are variances to the design standards. Scot stated that it is something that can be looked at in more detail.

#### **G. Option 3: Underpass Structure Discussion**

- 1 Scot U. covered a slide showing PROS and CONS for underpass structures. PROS included such a structure would be located at the trails, it is a dedicated structure for pedestrians and cyclists, and it eliminates pedestrian / car conflicts. For CONS, it is the most costly of alternatives, will need a third party to maintain, may require lighting and ventilation, could cause additional negative effects to historic properties such as trails by attracting more people including the homeless, and similar to the modified culvert, may require ramps to provide a transition to the roadway.

Scot U. showed an example of an underpass structure on Kamehameha Highway in Mililani. Mililani is a "walled community" and in this location, the underpass structure provides access from a subdivision across

the highway to Mililani High School. Due to the enclosed community layout, people have to walk far to the intersections before they can cross, thus an underpass was installed, and this is maintained by the Mililani Town Association. In another location, due to the topography where the highway is lower than the surrounding development, there is an overpass structure installed as part of Mililani that provides access for school kids across the highway, that is also maintained by the Mililani Town Association.

Another slide was presented showing an underpass structure at Pali Highway on O'ahu next to the Hongwanji Mission. Similar to Mililani, this provides an undercrossing from the church to the school, and similar to Kamehameha Highway, the traffic volumes are very high, with multiple lanes, and long distances between intersections. The HDOT also does not maintain this underpass structure.

Scot U. showed a third example at North Kaniku Drive on the Big Island. This is an underpass structure for the golf course, and is for a specific purpose. In this example, this was installed as part of a masterplanned development, paid for and maintained by the developer. So in summary, underpasses are located for specific needs, giving consideration for the users, the roadway, and in many instances, provide safe crossings for children.

- 2 Aric A. stated that the homeless situation should not be discussed as this is a larger social issue and the appropriate departments and agencies who handle them should be included in the discussion. Scot U. explained that the homeless is an issue that greatly affects HDOT, and in this location, it could cause a concern. When asked, NPS stated that for the park property in the area, the homeless are not a problem.
- 3 Curtis T. stated that the Hawaiian people value and respect property and land. The use of the trail is a cultural practice that has been lost over the years. More effort could have been made from the beginning to incorporate the construction of the underpass into the design phase to allow for trail connectivity.
- 4 Hannah S. stated that the professional standards for these consultation conversations have recently allowed for discussions between government agencies and the community.
- 5 Fred C. stated that he feels that attracting more people to use the trail is a good thing.
- 6 Keola C. stated that Option 3, adding the construction of the underpass, is the best option for providing cultural restoration to the site.
- 7 Hannah S. agreed with Keola C. and understands the environmental impacts potentially created by constructing the underpass. She feels that the underpass would not increase the potential for environmental impacts as much as vehicular access has.
- 8 Franz W. disagrees with the need for a ramp to allow pedestrians to access the highway from the underpass. He feels that no one will want to walk up to the highway.
- 9 Tina C. does not understand the difference in design between a culvert and an underpass. Scot explained that there is an existing 10 foot drainage culvert that would need to be modified for pedestrian use. There is no existing structure that serves as a pedestrian underpass. Tina suggested that HDOT look at possible exceptions, such as perhaps bicyclists, who may not have to be able to ride through the structure.
- 10 Keola C. would like more information on design specifications for the underpass and feels the underpass should have a more humanistic design that is culturally appropriate, rather than just a box. Scot responded that there are examples of underpasses already used and located in Hawai'i.
- 11 Franz W. stated that the underpass does not necessarily have to be designed to allow bicyclists to ride through them. Rather the design should allow both pedestrians and bicyclists to walk their bicycles through the underpass.
- 12 Curtis T. agreed with Franz. The underpass could resemble a lava tube, for example, where murals could be painted on the walls representing the history of the area.

- 13 Rick G. asked if there are homeless issues in the Mililani Underpass. Scot stated that he is not aware of any homeless but the underpass does have issues with graffiti.
- 14 Tina C. asked if the Mililani Underpass is a safe route for children to get to school. Scot responded that the primary function of the Mililani Underpass is for the students to get to and from school.
- 15 Curtis T. asked if the Mililani Underpass was a culvert that was converted to an underpass. Scot stated that the structure is a concrete arch and is not a culvert.
- 16 Chris H. wanted to know what the Mililani community would say if the underpass was replaced with an at-grade highway crossing.
- 17 Fred C. asked if the underpass examples presented were paid for by private developers. If so, is it possible for a third party to maintain the underpass when the HDOT will not? Scot stated that many of the example underpasses, such as those shown on O'ahu and elsewhere, were paid for and designed by private developers and they have executed an agreement to maintain and assign responsibilities for liability, since the underpasses are in the HDOT right-of-way. The HDOT has executed similar agreements with other parties, such as when a party wants to put in a gateway sign, for example, that is not transportation related. So the party would submit plans to HDOT to show it can be built and is safe for the public, HDOT would review and approve the plans, and an agreement for the party to maintain the underpass would be executed. Fred asked, if a third party paid for the underpass, they can submit plans to HDOT, for review and approval, and the identification of the party to maintain it, and the HDOT could allow that? Scot U. responded yes, that is possible. Fred C. requested that this be placed in the meeting notes.
- 18 Curtis T. stated that if a private or third party developer makes improvements in connection with public roadways, those improvements should be dedicated to the jurisdiction responsible for the roadway. Scot U. responded that many times, in the case of county agencies and as a condition of development, developers design and build the roadways according to county standards, and comply with development conditions, and that once dedicated and built to applicable standards, maintenance of the roadway should become the responsibility of that government agency.
- 19 Franz W. stated that there has been no mention of an overpass option. Scot stated that the decision was made to not include consideration for an overpass during earlier discussions when the MOA was drafted.
- 20 Fred C. stated that earlier discussions would consider only an overpass or an underpass option, not both. Therefore at the time the MOA was negotiated, this stipulation for an underpass feasibility was included. Fred feels that an overpass option should be also considered.
- 21 Hannah S. stated that there is also an example of a vehicular underpass under the Queen Ka'ahumanu Highway near Kuhio (development).

#### **H. Option 4: Other Non-Structural Options Discussion**

- 1 Scot U. covered a fourth option where if events are known, maybe there are other options such as having the police or other escorts help with people crossing the highway.
- 2 Fred C. stated that this option was not discussed during the drafting of the earlier MOA and should be removed.
- 3 Scot U. said that the stipulation did specify "at-grade crossing", and this was an option that would be at-grade, therefore the HDOT looked at it.
- 4 Curtis T. stated that this option should be taken out and we do not need any option with the police involved.
- 5 Chris H. stated that Option 4 Other Non-Structural Options and Option 5 Overpass should remain with a note added to each stating that these options were "discussed but not analyzed".

## I. Presentation Discussion Continued (Scot Urada, HDOT Engineer)

- 1 Scot U. covered benefit-cost, and how HDOT would use this in evaluating options. The slide presented is a very simplified example, and a benefit-cost analysis could include other things such as the cost of vehicular damage, fatalities, etc., based on historic data.
- 2 Scot covered slides on Maintenance and Operation, and explained various items that need to be considered for the various alternatives.
- 3 Appropriate use of Public Funds was presented, showing requirements that need to be met and complied with.
- 4 Scot covered Warrants – using nationally accepted standards and practices, how facilities are warranted. Warrants could apply to different things. What we put in should be consistent with design standards and what drivers or other road users can reasonably anticipate.
- 5 Other considerations, including potential unintended consequences was covered by Scot. Examples of some of the improvements could attract additional people to historic resources, possibly encourage undesired access to properties, attract the homeless, and result in possible negative effects to trails and other things.
- 6 Curtis T. stated that taxpayers should have a say on what is constructed as the money used to fund HDOT projects are paid for by the people. He asked how much money was saved when the proposed landscaping was removed from the project, and could those saved funds be used to construct the underpass instead. The proposed landscaping was a cultural improvement requested by the people. There is an intangible value of culture and the way HDOT perceives that, and implements their projects, needs to change. HDOT projects do not show the experience of “aloha” to visitors coming to Hawaii.
- 7 Tina C. stated that it would be hard to put a dollar value on quality of life. However, the health benefit created by facilities that promote walking and biking could be quantified.
- 8 Fred C. asked if a HDOT engineer could quantify the loss of Hawaiian culture over the years.
- 9 Rick G. stated that there is a Federal code that states that trails are not to be severed or bisected. HDOT has the responsibility to maintain trail connectivity when trails are bisected. Rick G. stated that the NPS has made comments to other projects, such as the Saddle Road Extension, to maintain trail connectivity.
- 10 Fred C. feels that the original construction and later widening of the Queen Ka’ahumanu Highway did not follow federal guidelines relating to Section 4(f) that states that the HDOT must mitigate when bisecting the trail. Scot responded that Section 4(f) would require an agency to avoid, minimize and mitigate. This was a long time ago and he would not be able to comment.
- 11 Curtis T. understands that there are rules and regulations that the HDOT needs to follow. However, if the rules were not followed, and trails were bisected during the construction of the highway, then mitigation for every bisected trail should be done. For example, an overpass should be built for every mauka-makai trail that was bisected by the highway. The bisections were a failure on HDOT’s part to consider the cultural aspects of the trails. The proposed underpass is a compromise by the NHO’s for the mitigation of the trail bisections.
- 12 Aric A. stated that according to the Highways Act of 1892, lands belonging to the Kingdom of Hawai’i are now the property of the State of Hawai’i; therefore trails are owned and should be maintained by the State.
- 13 Keola C. thought that the underpass was already warranted because it is stipulated in the MOA. There is a difference between a project that is warranted and one that is feasible. Scot U. stated that this project needs to study the feasibility of constructing the underpass per the MOA. When HDOT has a project, a process needs to be followed to determine the constructability of the project. Donald S. stated that if money were no

issue, then the engineering and construction is no problem. The crossing has been warranted, but not the underpass.

- 14 Fred C. stated that the Department of the Interior and the NHPA have laws for historic preservation design standards. National standards for historic preservation that affect this Project should be used during the design phase. Fred stated that it seems as if the HDOT is suggesting that the study is not warranted, but that he feels it is warranted.
- 15 Hannah S. asked if the Project would be warranted if evaluated using NHPA standards.
- 16 Tina C. asked if FHWA or HDOT makes the decision on what kind of facility is required. Doesn't HDOT have an influence on how the Federal Highways Administration spends funds? Scot stated that since federal money is being spent, HDOT will need to look at whether the design meet federal requirements. Scot U. agreed that HDOT has influence on how FHWA spends funds.
- 17 Keola C. asked if the construction of the underpass can be seen as a retroactive mitigation and act as a monument for the other bisected trails. The HDOT would not be able to mitigate for impacts to trail bisections outside of the project area.
- 18 Terry D. asked if the Federal Government knew about the portions of trail bisected by highway construction. Scot stated that he does not know what the environmental laws may have been when the highway was first constructed since it predates the current project.

An audience member suggested that to consider the value of trails bisected, the HDOT should look at all trails over the entire Queen Kaahumanu length, from Kailua to Kawaihae, and it could better support the feasibility. Scot U. responded that he was not sure how the county assesses impacts for its projects, but the HDOT assesses the impact caused by the undertaking. Based on this the HDOT would review the area of potential effect within the project limits and then evaluate the impact.

- 19 Fred C. stated that this project is being segmented rather than representing the entire highway in one project. The highway bisected hundreds of trails and this underpass could be used to mediate [mitigate] for all those trails that were bisected by the construction of the highway. There is a cost benefit to constructing this one underpass to mediate [mitigate] for the other bisected trails.
- 20 Scot explained that the intent of the presentation was to discuss the process that HDOT goes through, and when HDOT looked at it, HDOT wanted to present to all parties what HDOT could see as potential concerns and fully disclose this, and not to declare a decision regarding the underpass feasibility study. At this stage the HDOT is gathering input. Donald S. asked the participants if there was a standard outside of what HDOT is examining that would help to justify the underpass. He also asked that if the underpass were feasible, would the NHOs want it at the proposed location. Curtis and Fred both agreed yes, at the proposed location.
- 21 Rick G. would like to make sure that there is an understanding that the HDOT is not precluded from considering the construction of underpasses for other trails bisected by highway projects if this Project elects to construct the underpass.
- 22 Curtis T. feels the Benefit to Cost Ratio is flawed. Projects suggested by NHOs would never meet these standards of a benefit to cost ratio. He feels based on the example, the numbers will never justify the feasibility of an underpass, and that decisions have been made that do not consider NHO opinions.
- 23 Keola C. stated that there are no geotechnical reasons why the underpass is infeasible. The design of the underpass needs to have a humane solution. The Project should consider humane designs and feasibility, rather than arguing about the cost benefit of the construction of the underpass.
- 24 Fred C. stated that the feasibility rather than the cost of the underpass should be discussed. There is a cost benefit to culture. The cost should not be the main reason why the underpass is infeasible because if other

undertakings were able to find the necessary funding, then this project should be able to do the same. The meeting is biased to a conclusion and cultural aspects cannot be discussed in engineering terms.

- 25 Deborah C. asked if there will be additional meetings regarding this topic. HDOT appears to have a responsibility to design guidelines and protocols for the connectivity of the trails bisected.
- 26 Franz W. stated that the feedback from the meeting participants seem to agree with the construction of the underpass. He would like to see how HDOT can complete the underpass and feels that the funds can be found with the right justification.
- 27 Aric A. stated that Section 106, NEPA, and State HRS Chapter 6E are planning tools that HDOT can use to develop projects. HDOT should have consulted the community first and engineer solutions from their input into the design. How can HDOT avoid this in future design projects?
- 28 Fred C. stated that a terrain model is being done that will show the historical landscape present before the highway was constructed. HDOT should consider this project with everything else that is happening on the Project.
- 29 Deborah C. asked if there will be more information on design guidelines. Scot stated that all the input gathered in this meeting will be used during the underpass feasibility study process.
- 30 Curtis T. explained that the stipulation states there will be a community meeting to discuss design guidelines. Will the next presentation include the comments gathered today? Scot stated that the next presentation will incorporate the comments gathered from this meeting, and reflect a better understanding of what the community wants.
- 31 Hannah S. asked when the meeting will be held. Scot stated that due to the very large amount of feedback and information obtained today, the HDOT will have to review it all, further evaluate the information, and he will have a response within 30 days regarding the next meeting date.
- 32 Franz W. stated that there are two projects, the underpass and the highway expansion, that may overlap. It is important for HDOT to have clear context on what project is being discussed.
- 33 Cayla C. stated that the HDOT should recognize the intent of a [historic] feature and try to preserve, restore, and protect what was previously there. HDOT should try to create a safe environment that will allow the community to practice their culture.
- 34 Curtis T. stated that we should not repeat the mistakes that were made in the past.

#### **E. Next Steps**

1. DOT to provide a date when the public meeting will be held to the NHOs within 30 days (August 24, 2017).
2. DOT and RMTC to schedule the next Underpass Feasibility Study Meeting to discuss design guidelines.

#### **Enclosures**

1. Agenda
2. Attachment 1 Stipulation 10B Excerpt
3. Attachment 2 Stipulation 10B Consultation List
4. Examples of Underpasses
5. Development of Design Guidelines
6. Underpass Feasibility Study Presentation

The above represents R. M. Towill Corporation's understanding of the discussions held. Notifications of any clarifications or discrepancies would be appreciated within 30 calendar days.



## **Agenda**

MOA Stipulation 10B – Underpass Feasibility Study  
Queen Kaahumanu Highway Widening, Phase 2  
Kailua-Kona, Hawaii

West Hawaii Civic Center, Council Chambers  
74-5044 Ane Keohokalole Hwy, Kailua-Kona, HI 96740  
Tuesday, July 25, 2017, 10:00 am – 2:30 pm

- |   |                    |
|---|--------------------|
| 1. Pule and Opening Remarks   | 10:00 – 10:10 am   |
| 2. Overview and Focus for the Day   | 10:10 – 10:20 am   |
| 3. Required Consultation with National Park Service<br>to Identify Meeting Participants | 10:20 – 10:30 am   |
| 4. Terms and Intent of Stipulation 10B  | 10:30 – 10:45 am   |
| 5. Design and Other Considerations  | 10:45 am – 1:00 pm |
| 6. Lunch (working)  | 12:00 pm – 1:00 pm |
| 7. Participant Questions and Input  | 1:00 – 2:00 pm     |
| 8. Recap and Summary of Tasks   | 2:00 – 2:30 pm     |



## Attachment 1

### Stipulation 10B

MEMORANDUM OF AGREEMENT Among the  
ADVISORY COUNCIL ON HISTORIC PRESERVATION, FEDERAL HIGHWAY ADMINISTRATION,  
and the HAWAII STATE HISTORIC PRESERVATION OFFICER  
Regarding the projects in the vicinity of the District of North Kona, Island of Hawai'i,  
State of Hawai'i which are known as the Queen Ka'ahumanu Highway Intersection  
Improvements for the Kaloko-Honokohau National Historical Park  
and the Queen Ka'ahumanu Highway Widening, Kailua to Ke'ahole

B. UNDERPASS FEASIBILITY STUDY. The HOOT shall conduct a feasibility study with the objective of facilitating safe pedestrian access across the Queen Ka'ahumanu Highway at the "Trail to Honokohau." The study will examine at-grade crossing locations, the installation of a pedestrian tunnel crossing, and the modification of existing culverts for pedestrian-bicycle use. The study shall seek examples and policies regarding use of existing pedestrian tunnels and modified culverts in Hawai'i and other States. Subsurface crossing(s) shall include provisions for a third party organization to take responsibility for maintenance, security and liability for the crossing(s) as has been the policy of HOOT for more than a decade. The HDOT shall identify and select a qualified independent third party to conduct the study. As part of the study, HDOT shall consult with NPS to identify community organizations who may be invited to participate in the feasibility study. Organizations that may be invited to participate include: signatories to this MOA, NHOs, Peoples Advocacy Trails Hawai'i (PATH), County of Hawai'i, local primary and secondary school officials, universities, community groups, the Royal Order of Kamehameha, and the Association of Hawaiian Civic Clubs. As part of the feasibility study the HDOT shall convene a community meeting that has as its objective the development of design guidelines for future Queen Ka'ahumanu Highway expansion projects that includes provisions for trail connectivity and pedestrian crossings under the Queen Ka'ahumanu Highway as well as paralleling the highway. The HDOT shall transmit the findings of the feasibility study (inclusive of any documents or written testimony from the community meeting above) to parties participating in the feasibility study prior to the expiration of this MOA.

**Attachment 2****QK Ph 2 MOA STIPULATION 10B Underpass Feasibility Study****Hawai'i Department of Transportation, Hawai'i District**

Consultation List as of: July 2017

Community Organization / Individuals	Contact Name		Title
Project Related Parties			
1 FHWA	Meesa	Otani	Environmental Engineer
	Lisa	Powell	Transportation Engineer
	Richelle	Takara	Senior Transportation Engineer
2 HDOT	Donald	Smith	Deputy Asst Engineer (Designate)
	Scott	Urada	DOT Hwys
	Sterling	Chow	Deputy Asst Engineer
	Natasha	Soriano	DOT Hwys
	Deona	Naboa	DOT Hwys Archaeologist
Community Organizations and NHOs			
3 Association of Hawaiian Civic Clubs*	Annelle	Amaral	President
4 Historic Hawai'i Foundation	Kiersten	Faulkner	Executive Director
5 Kona Hawaiian Civic Club	Cynthia	Nazara	President
	Hannah	Springer	
6 La'i'Ōpua 2020	Bo	Kahui	Executive Director
7 Makani Hou o Kaloko-Honokōhau	Isaac	Harp	
	Fred	Cachola	
8 Nakoa Foundation	Abel	Aquino	Director
9 People's Advocacy Trails Hawai'i (PATH)*	Monica	Scheel	President
	Franz	Weber	Board Member
10 Royal Order of Kamehameha, Chapter--7 Kona, West Hawai'i, Hawai'i Island*	Kuauhau Russ	Paio	
	Nainoa	Perry	
	Kalani	Nakoa	
11 Na Ala Hele**	Clement	Chang	Trails and Access Specialist
12 E Mau Na Ala Hele	Davis	Marcie	President
	Schaefer	Barbara	Board of Directors
13 Ruth Aloua**	Aloua	Ruth	
14 Office of Hawaiian Affairs	Keola	Lindsey	Compliance Monitoring Program
	Lauren	Morawski	Compliance Archaeologist, Advocacy
15 National Park Service			
Kaloko-Honokohau NHP	Bill	Thompson	Superintendent
Kaloko-Honokohau NHP	Tyler	Paikuli-Campbell	Cultural Resource Program Manager / Archaeologist
Kaloko-Honokohau NHP	Jeff	Zimpfer	Environmental Protection Specialist
Ala Kahakai National Historic Trail	Aric	Arakaki	Superintendent
Ala Kahakai National Historic Trail	Rick	Gmirkin	Community Archaeologist
Ala Kahakai National Historic Trail**	Alan	Brown	
Ala Kahakai National Historic Trail**	Christopher	Hawkins	Coordinator

**QK Ph 2 MOA STIPULATION 10B Underpass Feasibility Study**  
**Hawai'i Department of Transportation, Hawai'i District**  
 Consultation List as of: July 2017

<b>Community Organization / Individuals</b>	<b>Contact Name</b>		<b>Title</b>
Pu'ukohola Heiau National Historic Site	Daniel	Kawaiaea	Superintendent
<b>Advisory Council on Hitoric Preservation</b>			
16 ACHP	Mary Ann	Naber	Sr Program Analyst/FHWA Liaison
<b>State Historic Preservation Division</b>			
17 SHPD	Susan	Lebo	Archaeology Branch Chief
	Amy	Rubingh	Archaeologist
<b>County of Hawai'i</b>			
18 Office of the Mayor	Harry	Kim	Mayor
19 Department of Environmental Management	William A.	Kucharski	Director
20 Department of Parks and Recreation	Charmine L.	Kamaka	Director
21 Department of Planning (West Hawai'i)	Michael	Yee	Planning Director
<b>Primary and Secondary Schools</b>			
22 Department of Education (DOE), Hawai'i District-Honoka'a-Kealakehe-Kohala-Konawaena	Art	Souza	Superintendent
23 Kahakai Elementary School	James	Denight	Principal
24 DOE, Kealakehe High School	Wildred F.	Murakami	Principal
25 DOE, Kealakehe Elementary School	Nancy	Matsukawa	Principal
26 Makua Lani Christian Academy High School	Nancy	Begley	Principal
27 West Hawai'i Explorations Academy	Heather	Nakakura	Director
28 Hawai'i Montesory School	Angela	Geldhof	Executive Director
29 Innovations Public Charter School	Jennifer	Hiro	Teacher Director
30 Holualoa School	Glenn	Gray	
<b>Universities</b>			
31 University of Hawai'i at Hilo	Donald O.	Straney	Chancellor
32 SECE, University of Hawai'i Community College, Pāalamanui	Kenneth	Fletcher	Director
33 University of the Nations - Flags	Steve	Foth	Drector of Security and Transportation

Notes: \*Denotes specifically identified parties in the MOA.  
 \*\*Names added by NPS.

# Examples of Underpasses

## State of Hawai'i and Counties



**Queen Ka'ahumanu Highway, Phase 2**  
Stipulation 10B, Underpass Feasibility Study  
Memorandum of Agreement (MOA)  
Hawai'i Department of Transportation  
July 25, 2017

## Examples of Underpasses

For roadways involving the  
Hawai'i Department of  
Transportation

- **Farrington Highway  
Abandoned Cane Haul  
Road**
- **Fort Weaver Road  
Abandoned Cane Haul  
Road**

## Examples of Underpasses

For roadways involving the  
Hawai'i Department of  
Transportation

- **Kamehameha Highway in Mililani**
- **Pali Highway in Nuuanu**
- **Fort Weaver Road (Honouliuli Stream Bridge) at the Westloch Golf Course**
- **Mamalahoa Highway (Bridge) at the Punaluu Golf Course**



### Kamehameha Highway Underpass

Connects residential areas across Kamehameha Highway to  
Mililani High School  
Mililani Town (enclosed community)



Kamehameha Highway Underpass  
Mililani Town

## Examples of Underpasses

For roadways involving the  
City and County of  
Honolulu

- **Kipapa Drive in Mililani**
- **Park Row and Mango Tree Road in Ewa**
- **Geiger Road on Ewa**
- **Keoneula Boulevard in Ocean Pointe (one with combined drainage box culvert)**
- **Golf Cart Underpasses**
  - Kealahou Road in Hawaii Kai (3)
  - Lumiaina Street in Waikēle (3)



**Kealahou Street Underpass**  
 (Typical golf course application)  
 Hawaii Kai

## Examples of Underpasses

For roadways involving the  
 City and County of  
 Honolulu

- **Park Row and Mango Tree Road in Ewa**
- **Geiger Road in Ewa**
- **Keoneula Boulevard in Ocean Pointe (one with combined drainage box culvert)**



## Examples of Underpasses

For roadways involving  
Hawai'i County or other  
private roads

- **Alii Highway and Kaluna Street at Keauhou**
- **Kaniku Drive in Waikoloa (2)**
- **Abandoned Cane Haul Road in Puna**



North Kaniku Drive  
(Golf Course)  
Waikoloa



## Examples of Underpasses

For roadways involving the County of Maui Streets and other private roads

- **Wailea Ike Drive in Wailea**
- **South Kamehameha Drive in Maui Lani**

## Examples of Underpasses

For roadways involving the County of Kauai and other private roads

- **Nuhou Street and Makaa Street in Puakea**
- **Kahaku Road in Princeville (2)**
- **Poipu Road in Koloa**

## Other states examples of underpasses

- Oregon Department of Transportation
- **City of Milwaukie - Kellogg Creek Pedestrian/Bicycle Underpass and Multi-use Trail**
- **City of Bend – Highway 372 Haul Trail Crossing**
- **ODOT Bridge Inventory: 7C301.74 EB Columbia River Highway**

## Other states examples of underpasses

- Portland Bureau of Transportation
- **Southwest Barbur/Naito Parkway**
- **Southwest Arthur Street/Kelley Avenue**
- **Sullivan's Gulch Trail Undercrossing of I-205**
- **Portland Road Underpass**
- City of Salem
- **Pringle Parkway: Underpass on Mill Race Path**

## Other states examples of underpasses

- Washington Department of Transportation
- **SR 14 Cape Horn Pedestrian Undercrossing: Skamania County**
- **SR 14 Pedestrian Tunnel: Washougal**
- Connecticut Department of Transportation
- **Skiff Street Pedestrian Tunnel**

# Development of Design Guidelines

## Queen Ka‘ahumanu Highway, Phase 2

Stipulation 10B, Underpass Feasibility Study

Memorandum of Agreement (MOA)

Hawai‘i Department of Transportation

July 25, 2017

# Development of Design Guidelines

## STIPULATION 10.B. UNDERPASS FEASIBILITY STUDY.

The HDOT shall conduct a feasibility study with the objective of facilitating safe pedestrian access across the Queen Ka‘ahumanu Highway at the “Trail to Honokōhau.”

The study will examine at-grade crossing locations, the installation of a pedestrian tunnel crossing, and the modification of existing culverts for pedestrian-bicycle use.

The **study shall seek examples and policies regarding use of existing pedestrian tunnels and modified culverts in Hawai‘i and other States.**

Subsurface crossing(s) shall include provisions for a third party organization to take responsibility for maintenance, security and liability for the crossing(s) as has been the policy of HDOT for more than a decade. The HDOT shall identify and select a qualified independent third party to conduct the study. As part of the study, HDOT shall consult with NPS to identify community organizations who may be invited to participate in the feasibility study.

- **Policies and guidelines set general principles in considering, locating, and installing underpasses**
- **Policy is “a course or principle of action adopted or proposed by a government, party, or business”**
- **Guidelines are generally recommended practices**
- **Various policies , guidelines, and examples are presented**

# Federal Highway Administration (FHWA)

Pedestrian Facilities Users Guide  
(FHWA-RD-01-102)

- **One purpose of an underpass is to connect off-road trails and paths across major barriers such as a heavily traveled highways.**
- ***Underpasses work best when designed to feel open and accessible. Grade separation is most feasible and appropriate in extreme cases where pedestrians must cross roadways such as freeways and high speed, high volume arterials.***
- **Must be wheelchair accessible.**
- ***Lighting, drainage, graffiti removal, and security are also major concerns with underpasses.***

## FHWA Guidance

FHWA PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System (FHWA-SA-04-003)

- ***Pedestrian overpasses and underpasses allow for the uninterrupted flow of pedestrian movement separate from vehicle traffic. However, they should be a measure of last resort....***
- ***Overpasses and underpasses must accommodate all persons, as required by the Americans with Disabilities Act (ADA).***
- ***The AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities recommends ... minimal widths should be between 14 and 16 ft, but underpass width should be increased if the underpass is longer than 60 ft.***

# Hawaii Department of Transportation

## Statewide Pedestrian Master Plan, Hawaii Pedestrian Toolbox

- **“UNDERPASSES AND TUNNELS**  
Tunnels and underpasses provide a walkway for pedestrians underneath the roadway. Pedestrians are often more apt to use overpasses than underpasses or tunnels, and overpasses are easier to supervise and maintain. Tunnels are less desirable than bridges due to greater potential costs, reduced sense of security, challenges with monitoring, the possibility of drainage problems, and a perception of lack of safety.”
- **“Before choosing to install a tunnel, soil exploration is required to determine whether a tunnel can be feasibly constructed and whether drainage will be a problem. Wide openings are more inviting to pedestrians and let in more natural light. Tunnels should be easy to access and should be as short as possible. Approaches to the underpass should allow continuous vision through it.”**

# County Policies, Guidance & Manuals

City and County of Honolulu: Complete Streets Design Manual

Hawaii County: Complete Streets Resolution 171-11

Maui County: Complete Streets

Resolution 12-34

Kauai County: Complete Streets Resolution and Complete Streets Bill 2465

- **The Complete Streets manual does not include underpasses in the Design Toolbox**
- **Hawaii County does not have guidelines at this time, and presently does not have pedestrian underpasses identified in its Standards.**
- **The State Department of Health prepared the Central Maui Pedestrian and Bicycle Master Plan for 2030 with assistance from the County of Maui. This Master Plan does not include pedestrian underpasses in the design guidelines.**
- **A design manual for Kauai based on the Model Design Manual for Living Streets is being written. The Model Design Manual for Living Streets does not presently include pedestrian underpasses.**

## Other States Policies

### Oregon DOT

Oregon Department of Transportation *Oregon Bicycle and Pedestrian Plan*

- **This plan includes design guidelines for bicycle and pedestrians.**
- **“C.1.g. Grade Separation & Out-of-Direction Travel – Though grade-separation may seem to offer safety, excessive added travel distance will discourage pedestrians who want to take a more direct route.”**
- **“A structure that is unused because of inconvenience creates a situation whereby pedestrians are at risk when they attempt to cross the road with no protection.”**

## Oregon DOT

### Multi-use Paths, D.5. Structures

- “The width of a multi-use path structures is the same as the approach paved path, plus 0.6 m (2ft) shy distance on both sides. For example, a 3m (10ft) wide path requires a 4.2, (14ft) wide structure. There a advantages to both overcrossings and under crossings”

### Multi-use Paths – D.5.a. Under-crossings

- “Advantages: They provide an opportunity to reduce approach grades, as the required 3m (10ft) clearance is less than the clearance required for crossing over a roadway. If the roadway is elevated, an undercrossing can be constructed with little or no grade. They are often less expansive to build.”
- “Disadvantages: They may present security problems, due to reduced visibility. An open, well-lighted structure may end up costing as much as an overcrossing. They may require drainage if the sag point is lower than the surrounding terrain.”

# Washington DOT

## Washington Department of Transportation's *Pedestrian Facilities Guidebook*

- This guidebook includes design guidelines for pedestrian underpasses.
- “Grade separated pedestrian crossings are installed when it is necessary to physically separate the crossing of a heavy volume of pedestrians from a roadway with heavy vehicle traffic (including freeways and expressways)”
- “The effectiveness of grade separated crossings depends on their perceived ease of accessibility by pedestrians. An overpass or underpass will not necessarily be used simply because it improves safety. Because of the high cost of grade separated facilities, they should be incorporated in the early stages of new developments that are intended to generate substantial volumes of pedestrians.”

# Washington DOT

## Washington Department of Transportation's *Pedestrian Facilities Guidebook*

According to a study by Zegeer and Zegeer, state and local agencies consider grade – separated crossings to be most beneficial under the following conditions:

- Moderate to high pedestrian demand to cross a freeway or expressway.
- Large number of young children (particularly near schools) who must regularly cross a high-speed or high-volume roadway.
- Streets with high vehicle and pedestrian crossing volumes where there is an extreme hazard for pedestrians (for example, wide streets with high speed traffic and poor sight distance)
- Where one of the above conditions exists in conjunction with a well-defined pedestrian origin and destination (residential neighborhood across a busy street from a school, a parking structure affiliated with a university, or an apartment complex near a shopping mall)



## Other Places in the US

- There are other states such as Texas, Iowa, Montana, Colorado and Michigan and communities such as Los Angeles and Sacramento, CA, Scottsdale AZ, the City of Grants, NM and communities that have pedestrian underpass guidelines.
- **A review of the guidelines indicates they are generally similar to the Oregon and Washington Departments of Transportation.**

## Examples of Underpasses: State of Hawaii and the Counties

For roadways involving the  
Hawaii Department of Transportation

- **Farrington Highway Abandoned Cane Haul Road**
- **Fort Weaver Road Abandoned Cane Haul Road**
- **Kamehameha Highway in Mililani**
- **Pali Highway in Nuuanu**
- **Fort Weaver Road (Honouliuli Stream Bridge) at the Westloch Golf Course**
- **Mamalahoa Highway (Bridge) at the Punaluu Golf Course**



Kamehameha Highway Underpass  
(connecting residential areas across  
Kamehameha Highway to Mililani  
High School in upper right of photo)

### Mililani High School

Kamehameha Highway Underpass (pedestrian  
can be seen at end of underpass)



## Examples of Underpasses: State of Hawaii and the Counties

For roadways involving the  
City and County of Honolulu

- **Kipapa Drive in Mililani**
- **Park Row and Mango Tree Road in Ewa**
- **Geiger Road on Ewa**
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- **Golf Cart Underpasses**
  - **Kealahou Road in Hawaii Kai (3)**
  - **Lumiaina Street in Waikēle (3)**

## Hawaii Kai



Kealahou Street  
Underpass  
(typical golf  
course  
installation)

## Examples of Underpasses: State of Hawaii and the Counties

For facilities involving Hawaii County or  
other private roads

- **Alii Highway and Kaluna Street at Keauhou**
- **Kaniku Drive in Waikoloa (2)**
- **Abandoned Cane Haul Road in Puna.**



## Waikoloa

North Kaniku Drive  
(Golf Course)

## Examples of Underpasses: State of Hawaii and the Counties

For roadways involving the County of Maui  
Streets and other private roads

- **Wailea Ike Drive in Wailea**
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- 7C301.74 EB Columbia River Highway
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- **City of Milwaukie - Kellogg Creek Pedestrian/Bicycle Underpass and Multi-use Trail**
- **Portland Bureau of Transportation - Sullivan's Gulch Trail Undercrossing of I-205**
- **City of Sherwood - Cedar Creek Trail and Wildlife Undercrossing at Highway 99W**
- **Southwest Barbour/Naito Parkway, Pringle Parkway: Underpass on Mill Race Path, Portland Road Underpass**
- **Southwest Arthur Street/Kelley Avenue**
- **SR 14 Cape Horn Pedestrian Undercrossing: Skamania County**
- **SR 14 Pedestrian Tunnel: Washougal**



# Queen Kaahumanu Highway Widening Project - Underpass Feasibility Study

Queen Kaahumanu Highway, Phase 2  
Memorandum of Agreement, Stipulation 10B  
Hawaii Department of Transportation

West Hawaii Civic Center  
July 25, 2017 10:00 AM

## MOA Stipulation 10B

•B. UNDERPASS FEASIBILITY STUDY. The HDOT shall conduct a feasibility study with the objective of facilitating safe pedestrian access across the Queen Ka'ahumanu Highway at the "Trail to Honokōhau." **The study will examine at-grade crossing locations, the installation of a pedestrian tunnel crossing, and the modification of existing culverts for pedestrian-bicycle use.** The study shall seek examples and policies regarding use of existing pedestrian tunnels and modified culverts in Hawai'i and other States. **Subsurface crossing(s) shall include provisions for a third party organization to take responsibility for maintenance, security and liability for the crossing(s) as has been the policy of HDOT for more than a decade.** The HDOT shall identify and select a qualified independent third party to conduct the study. As part of the study, HDOT shall consult with NPS to identify community organizations who may be invited to participate in the feasibility study.

• Organizations that may be invited to participate include: signatories to this MOA, NHOs, Peoples Advocacy Trails Hawai'i (PATH), County of Hawai'i, local primary and secondary school officials, universities, community groups, the Royal Order of Kamehameha, and the Association of Hawaiian Civic Clubs. **As part of the feasibility study the HDOT shall convene a community meeting that has as its objective the development of design guidelines for future Queen Ka'ahumanu Highway expansion projects that includes provisions for trail connectivity and pedestrian crossings under the Queen Ka'ahumanu Highway as well as paralleling the highway.** The HDOT shall transmit the findings of the feasibility study (inclusive of any documents or written testimony from the community meeting above) to parties participating in the feasibility study prior to the expiration of this MOA."



# Stipulation 10B (main points)

- *Stipulation 10B states:*  
*“The HDOT shall conduct a feasibility study with the objective of facilitating safe pedestrian access across the Queen Ka’ahumanu Highway at the “Trail to Honokōhau.”*
- *The study will examine:*
  - At Grade Crossing
  - Underpass
  - Modification of Existing Culverts
  - Identification of a third party to maintain the underpass
  - (other)

## Stipulation 10B

- *“...objective the development of design guidelines for future Queen Ka’ahumanu Highway expansion projects that includes provisions for trail connectivity and pedestrian crossings under the Queen Ka’ahumanu Highway as well as paralleling the highway”*
- *“Subsurface crossing(s) shall include provisions for a third party organization to take responsibility for maintenance, security and liability for the crossing(s) as has been the policy of HDOT for more than a decade.”*
- A feasibility criteria for HDOT is an agreement with a responsible organization that can take responsibility for maintenance, security and liability  
  
(An example is an existing agreement between HDOT and the Mililani Community Association for the Kamehameha Highway underpass (this underpass is included in the examples that follow))



# Purpose and Need

## REQUIREMENT

For any improvement, a **purpose and need** must be identified

1. “Essential in developing a basis of development for the development of reasonable alternatives..” (FHWA)
2. “specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action” (NEPA CEQ reg.)

## ESTABLISHING PURPOSE

- Stipulation: “safe pedestrian crossing ...for pedestrian-bicycle use”
- Stipulation implies the general public, and not only trail users

# Design Evaluation Process

1. Determine purpose & need
2. Examine options
3. Meeting objectives
4. Fits context
5. Environmental impacts
6. Cost-benefit
7. Operations and maintenance
8. Liability
9. Appropriate use of public funds
10. Design warrants
11. Other considerations, unintended consequences

## OTHER CONSIDERATIONS

- Expenditure of public funds require evaluation of alternatives
- Good business practice
- Need to consider ***everyone***: NHOs, NPS, DOT, surrounding businesses, adjoining landowners, general public, taxpayers



# Information used for design

## Data Gathering

1. Identification of users (bike, peds, age, etc.)
2. Travel destinations & frequency
3. Use of trails
4. Current and future situation
5. Access and restrictions to various lands

## Other considerations

1. Preservation vs. use of resources
2. Public vs. descendants (users)
3. Effect to historic resources

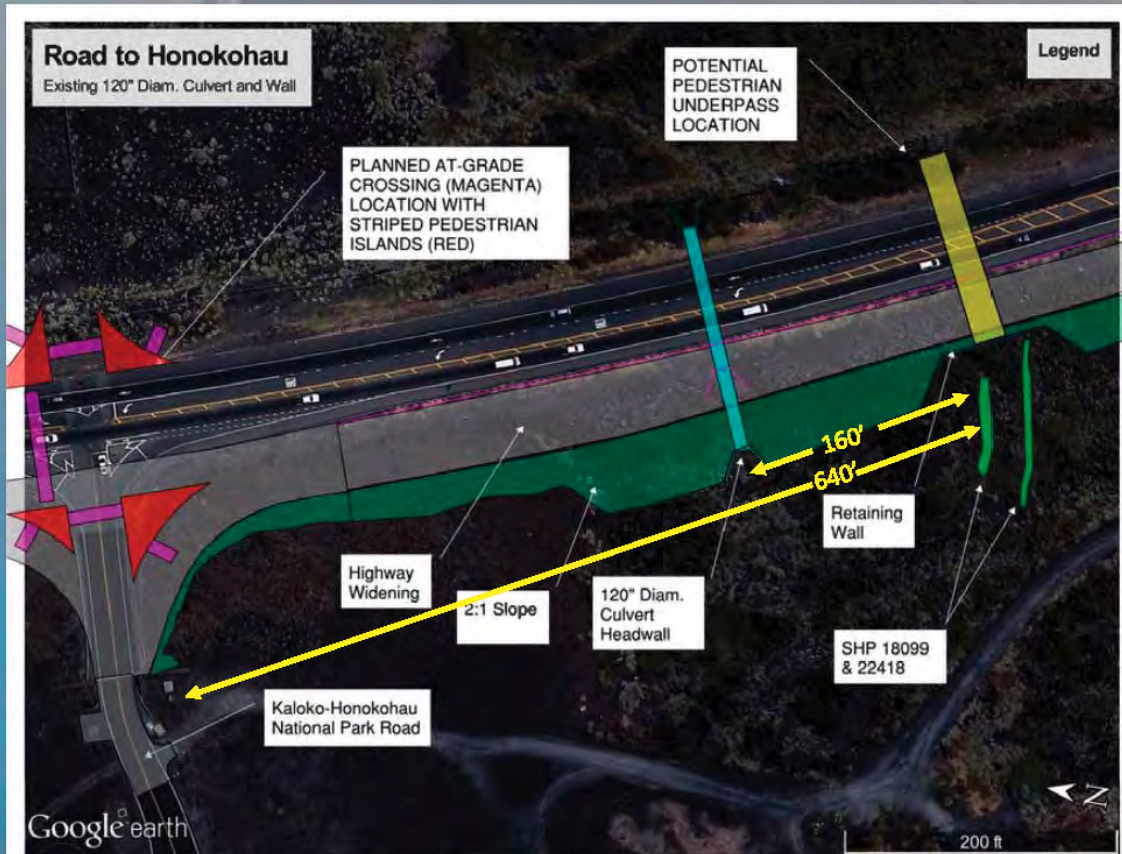
# Crossing Options

## POSSIBLE OPTIONS

1. At grade highway crossing
  2. Drainage culvert modifications
  3. Underpass structure
  4. Other non-structural accommodations
- As part of design, all options should be considered and carefully weighed
  - Factors used to weigh options include: purpose & need, technical factors, feasibility, cost-benefit, safety, maintenance, liability



# Crossing Options at the Trail to Honokohau



## Option 1. At grade highway crossing

### PROS

1. More traditional approach, familiar by drivers
2. No additional adverse impact to historic resources
3. Low construction, maintenance and operational costs
4. No steep grades for users

### CONS

1. Ped-car conflict points
2. Furthest distance of all options from the trails (if crossings are at signals)



## Option 1 – Cross walk example at Queen Kaahumanu Hwy / Palani Rd Inters.



11

## Option 2. Drainage Culvert Modification

### PROS

1. Dual use of a structure
2. Eliminates pedestrian / car conflicts
3. Relatively close to trail

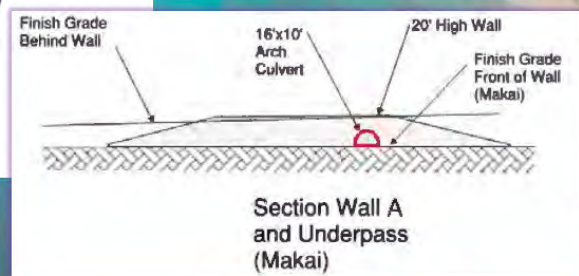
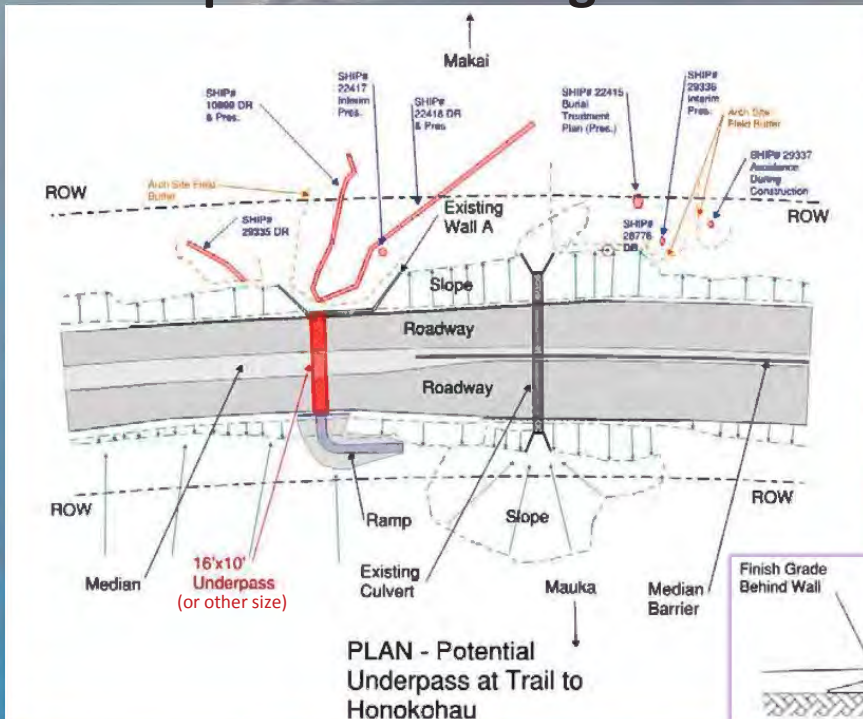
### CONS

1. Requires maintenance of walking surface inside the culvert
2. Requires larger culvert size, must satisfy both drainage and pedestrian access
3. Need to monitor weather and restrict pedestrian use for safety
4. Increased liability to third party and DOT
5. Need to identify capable third party to maintain
6. Requires lighting, ventilation; added cost and complexity to construct, maintain and operate
7. May attract more people (public) to natural resources
8. Possible additional effects to resources
9. Steep grades for users to climb to reach roadway elevation
10. Costly – will affect already constructed roadway and utility improvements and other adjustments

12



## Option 2. Drainage Culvert Modification

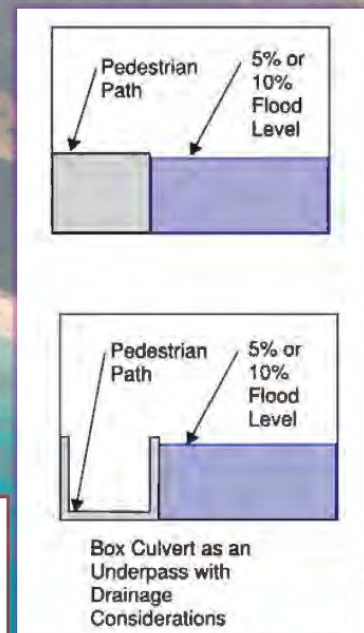
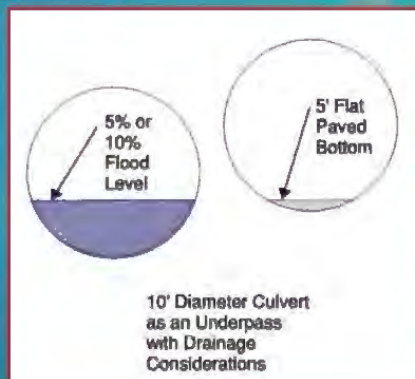


13

## Option 2. Drainage Culvert Modification



Highway 30 Underpass concept  
Mount Vernon, Iowa DOT:  
Note drainage culverts beneath  
walkway and general dimensions  
of 10.4' x 10'



14



## Option 3. Underpass structure

### PROS

1. Eliminates pedestrian / car conflicts
2. Located at the trail
3. Dedicated structure for peds and cyclists

### CONS

1. Most costly of all alternatives, including additional construction adjustments to roadway and utilities (many already constructed)
2. Need to identify capable third party to maintain
3. Requires lighting, ventilation; added cost to construct, maintain and operate
4. May attract more people (public) to natural resources
5. Possible additional effects to resources
6. Another possible facility that may attract homeless, negative effects to nearby businesses and safety
7. Steep grades for users to climb to reach roadway

15

## Option 3. Example A. Underpass at Kamehameha Highway (Mililani High School undercrossing)



16

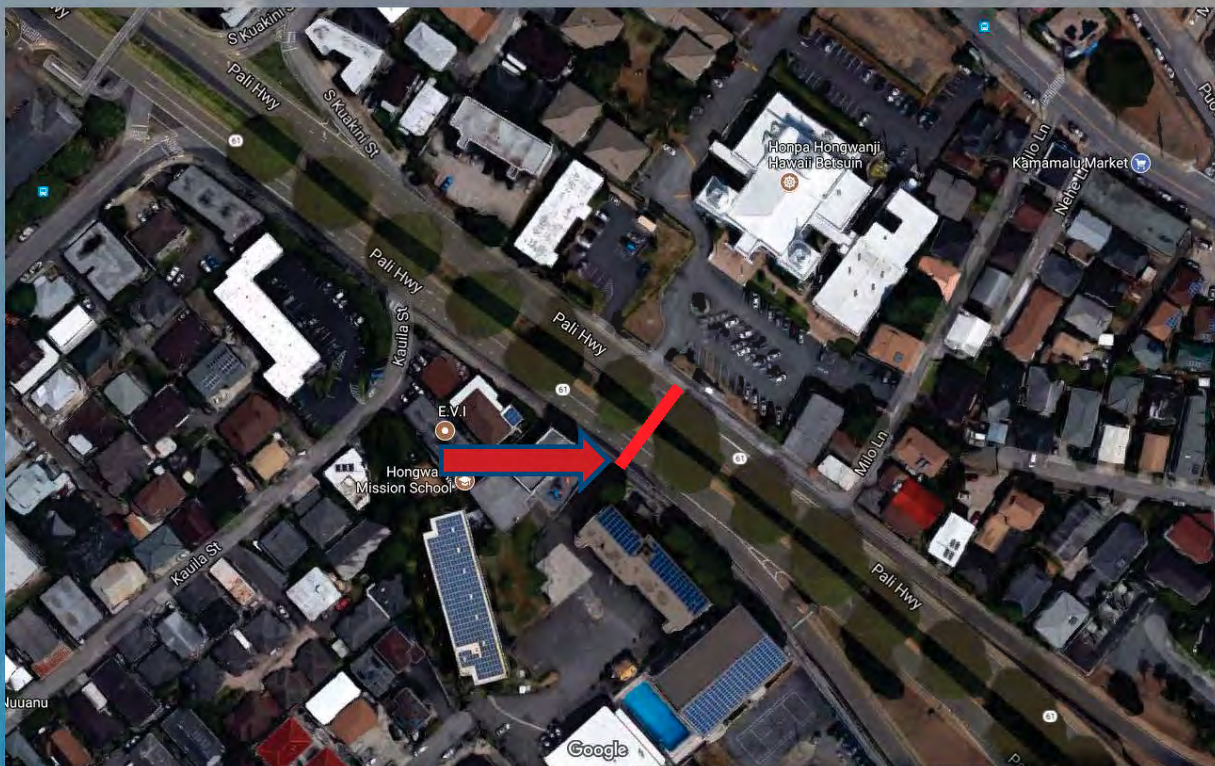


### Option 3. Example A. Underpass at Kamehameha Highway (Mililani High School undercrossing)



Residential community  
with limited access  
(walls along roadways)

### Option 3. Example B. Pali Highway (Hongwanji Mission School undercrossing)





### Option 3. Example B. Pali Highway (Hongwanji Mission School undercrossing)



- High volume roadway
- Connecting school / church
- Lots of young children
- Long distance to next traffic signal / surface crossing

19

### Option 3. Example C. North Kaniku Drive (Waikoloa Golf Course)



- For a specific purpose
- Normally a condition of development
- Paid by developer

20



## Option 4. Other non structural options

### POSSIBLE STRATEGY

Police or other escorts for crossings at agreed & planned dates / times

### PROS

1. Can be performed safely
2. No additional construction costs or adjustments
3. No need for third party maintenance
4. No facility to attract additional people to historic resources, or create additional effects

### CONS

1. Added operational costs and coordination to HDOT
2. Some up front planning & coordination required for each event



## Benefit to Cost ("B-C Ratio")

1. If the estimated benefit of a project or improvement exceeds the cost, then generally it makes sense to do it. If the Benefit/cost ratio is less than one, the project should not be considered.
2. Benefits are usually quantified by a dollar value (time savings by a car, driver, or person; fuel savings; maintenance savings, etc.)

Simplified example: A highway widening will save drivers 5 minutes a day, with 20,000 drivers using this stretch of highway. Average annual income for drivers & occupants are \$40,000/year; the hourly wage is \$19.23. **Project cost is \$20,000,000**; designed to last 20 years.

Benefit to car occupant per day:  $5/60 \times \$19.23 = \$1.60$  / day  
20,000 cars x 1.2 occupant/vehicle x \$1.60 = \$38,400 / day benefit, or  
264 working days/year x \$38,400/day = \$1,137,600 / year  
20 year design life of project x \$1,137,600 = **\$22,752,000 (Total Benefit)**

Benefit/Cost =  $\$22,752,00 / \$20,000,000 = 1.138$  Therefore this example project can be considered



## Maintenance and Operation

1. What is installed need to be maintained
  - Striping
  - Structural inspections
  - Culvert inspections & cleaning
  - Walking surfaces
  - Lighting
  - Graffiti control
  - Other damage to properties
2. Needs to be operated
  - Will it require power?
  - Does it need to be secured every night, or during storms?
  - Access restriction and how is this enforced?
  - Maintain agreement or contract
3. Liability – if something happens to a person using the facility, or other damage caused by the users, who is liable or responsible?
  - Personal injury
  - Flooding
  - Damage to historic resources
  - Assignment of responsibility

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## Appropriate use of public funds

1. Improvement on federal aid roadway
2. Used for appropriate federal improvement type
3. Improvement that will provide a public benefit
4. Used for purposes appropriated by State legislature
5. Evaluation must support selected improvement
6. Constructed within State Right-of-Way
7. Comply with appropriate procurement requirements
8. Must be maintained (Feds does not pay for routine maintenance)

24



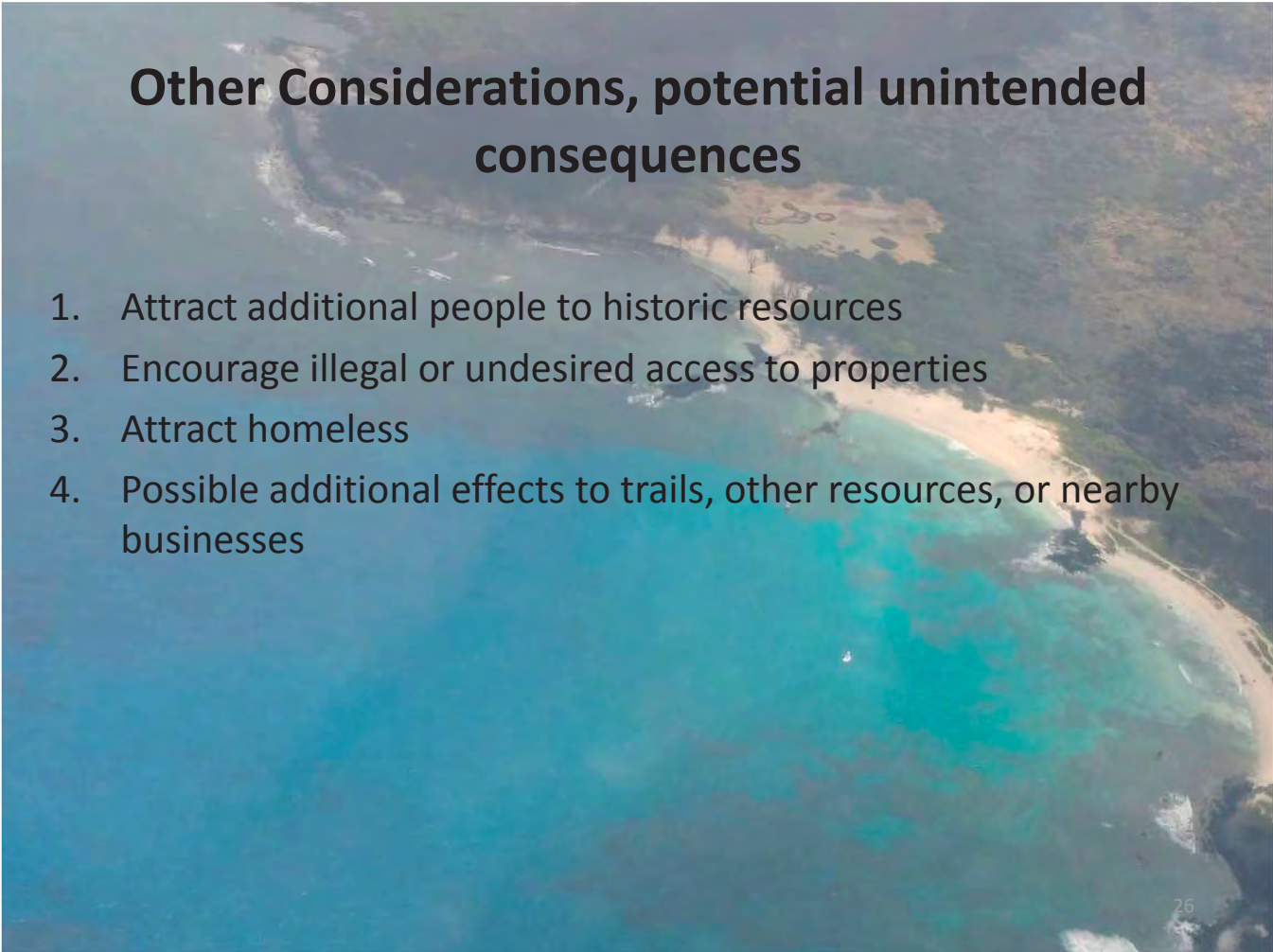


## Warrants

1. Based on data, using nationally accepted design standards and practices, is a particular improvement of facility warranted ?
2. This applies to crossings, traffic signals, etc.

We need to be consistent with design standards, also put in improvements consistent with what drivers or other road users can reasonably anticipate.

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## Other Considerations, potential unintended consequences

1. Attract additional people to historic resources
2. Encourage illegal or undesired access to properties
3. Attract homeless
4. Possible additional effects to trails, other resources, or nearby businesses

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# QUESTIONS AND INPUT FROM CPs

## Data Gathering

1. Identification of users (bike, peds, age, etc.)
2. Travel destinations & frequency
3. Use of trails
4. Current and future situation
5. Access and restrictions to various lands

## Other considerations

1. Preservation vs. use of resources
2. Public vs. descendants (users)
3. Effect to historic resources

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# MEETING RECAP & NEXT STEPS

1. Take and consider your input
2. Complete a draft of the feasibility study
3. Schedule another meeting to close the loop

THANK YOU FOR YOUR PARTICIPATION !

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Notes and Handouts for  
Consultation Meeting on December 7, 2017  
(Meeting 2 of 2)

2024 North King Street  
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eMail rmtowill@rmtowill.com



Planning  
Engineering  
Environmental Services  
Photogrammetry  
Surveying  
Project and Construction Management

**Project:** Queen Ka'ahumanu Highway Widening, Phase 2 Project  
Memorandum of Agreement (MOA) Section 106 Consultation Meetings  
Stipulations 10B-Underpass Feasibility Study; 12-Ahupua'a Markers;  
and 15-Terrain Model

**Date/Time:** Thursday, December 7, 2017, 9:00 am – 3:30 pm

**Location:** Natural Energy Laboratory of Hawaii Authority (NELHA)  
Hale Iako Building, Ocean View Conference Room 208  
73-987 Makako Bay Dr., Kailua-Kona, HI 96740

**Attendees:** See Below

**Hawai'i Department of Transportation (HDOT)**

Donald Smith, P.E., Hawai'i District Engineer  
Natasha Soriano, P.E., Project Manager

**R. M. Towill Corp. (RMTc)**

Jason Tateishi, P.E., Project Manager  
Brian Takeda, Planning Project Coordinator  
Herb Lee, Facilitator, Malama Waiwai

**National Park Service (NPS)**

**Kaloko-Honokōhau National Historic Park**

Jeff Zimpfer, Environmental Protection Specialist

**Ala Kahakai National Historic Trail**

Aric Arakaki, Superintendent  
Rick Gmerkin, Community Archaeologist

**Native Hawaiian Organizations (NHOs) and  
Consulting Parties**

Hannah Kihalani Springer, Kama'āina,  
Ka'ūpūlehu

Fred Cachola, Makani Hou

Bo Kahui, La'i'Opua 2020

Alan Haun, Ph.D., Archaeologist

Amy Rubingh, State Historic Preserv. Div., Kona

Tina Clothier, People's Advocacy Trails Hawai'i

Marcie Davis, E Mau Nā Ala Hele

Barbara Schaefer, E Mau Nā Ala Hele

Deborah L. Chang, E Mau Nā Ala Hele

**Agenda**

1. Morning Session: Stipulation 12, Ahupua'a Signs
2. Morning Session: Stipulation 15, Terrain Model
3. Afternoon Session: Stipulation 10B, Underpass Feasibility Study

Handouts – Development of Design Guidelines (Stipulation 10B)

## Stipulation 12, Ahupua'a Signs

1. D. Smith opened the meeting and thanked everyone for making the time to attend today's session. The task of completing the MOA stipulations will be tough and the HDOT appreciates all of the work put in by the group to assist in the process. H. Lee next provided the pule and aloha protocols to help guide the discussion.
2. D. Smith discussed Stipulation 10B and noted that the boundaries for the location of ahupua'a markers are defined by the U. S. Geological Survey (USGS), and how and where the signs are placed are based on design guidance from the Manual on Uniform Traffic Control Devices or MUTCD.
  - The placement of any sign should be considered temporary, e.g., the signs can be relocated as needed to address community input or concerns.
  - The ahupua'a signs are classified as a sign conveying information about an area. The placement of signs would therefore be constrained by restrictions that involve the need to maintain roadway safety and address state design requirements (for the physical dimensions of signs).
3. R. Gmerkin said the NPS is working with NHOs on the placement of park service signage. The general process used is to first review old maps, prepare handouts, and discuss the location of sites based on the use of the handouts; and, second, they present the collected information back to the community to show where they understand the historical site boundaries are located. This takes time to get community input, but is a worthwhile step as NPS feels it leads to less disagreement. A. Arakaki noted this was in Hōnaunau and that the Keoua Canoe Club was a participant. R. Gmerkin added that the signage contemplated by the NPS in its work with the canoe club, however, might differ from how HDOT would use the state's Ahupua'a marker program.
4. D. Smith said that the placement of the ahupua'a markers has flexibility so that the state can consider community input. He further asked the group if the effort was to raise awareness, or if it was to identify where the ahupua'a boundary is. F. Cachola said that it does both. H. Springer said that if it is to raise awareness, that it should be done with accuracy. At the same time, accuracy might interfere with where the signs could be placed.
5. B. Kahui recommended that samples be provided for the group to look at, to gain understanding and agreement, and then to go out to the community to see what they have to say. D. Smith responded that he wants to make sure that the group understands the process of discussing the signs with the community. If the community wants to take on the role to help identify where the markers should go, the HDOT would be ok with the discussion. However, if the process is to leave the state to identify the marker locations, that this could take a long time.
6. F. Cachola said he feels that if the state only wants the community to identify the sites where the markers should go, then the state is not fulfilling the MOA and would not learn something about where the ahupua'a are located. D. Smith responded that the HDOT will continue to be involved in the process, and clarified that the work to identify the ahupua'a marker locations needs to have a "champion." This effort will take both the state and the community's involvement. F. Cachola responded that in looking at the past, that there is no one here from when the MOA was written and feels the HDOT must be the champion, not the NHOs. This is because if the HDOT is the champion, then this would address the delays and problems of the past.

7. B. Kahui added that while the accuracy of the boundaries is important, that it is not as important as knowing the significance of the place. He suggested that options be considered so that the group can clarify what it can do. F. Cachola added that the actual placement of the signs can vary and that it is more important to have a sense of place. The identification of the moku boundaries is not part of the MOA, but is of political importance.
8. After further discussion the group determined:
  - The state has an existing set of guidelines for the placement and design of ahupua'a markers. The guidelines are intended to incorporate community input.
  - The project limits for the placement of the ahupua'a markers should be within the Queen Ka'ahumanu Highway, Phase 2, from the Kona International Airport to the area of O'oma. This area covers the boundaries of five ahupua'a within an approximate distance of 2.5 miles.
  - O'oma is important because it is the place where King Kamehameha III was raised for the first five years of his life. There is also a rock wall that serves as a boundary that separates O'oma from the other ahupua'a.
  - Once the group decides on the location of the ahupua'a boundaries, the information should be placed in a public notification in West Hawai'i Today to ask for public input into helping address the terms of the MOA Stipulation 12. A field visit by van coinciding with the public notification should be considered.
  - All MOA signatories should be notified as part of the process.

#### HDOT Action Items:

- RMTC to prepare a map showing the ahupua'a boundary locations where the five ahupua'a boundary markers can be placed. The map will be distributed to the group when it is completed.
- The next steps to take following the identification of the boundary locations is to:
  - (1) prepare a public notification for publication in West Hawai'i Today. The public notification will ask the community for its review and comment, and ask the public to RSVP its attendance on a field trip to the ahupua'a boundary locations;
  - (2) provide the group with a sample of the signage that is planned to be used; and (3) confirm the locations based on step 1.

#### Stipulation 15, Terrain Model

1. F. Cachola asked the group to read the stipulation noting that Makani Hou initiated the terrain model to preserve the ancient landscape and to serve as a "living" classroom. He added:
  - In the first Terrain Model meeting the group initiated the information to be included in the model. He recalled that Francis Choy, Archaeologist, was important to the record of history of the area.
  - Interpretive signage should be considered as additional data.
2. D. Smith noted that the options for information to be included would depend on where the model is housed. One option is to build and house the approximately 3.5' by 5' model, but the state doesn't know where the model will be placed, i.e., per Stipulation 15, the model may be housed at the

Kaloko-Honokōhau National Historical Park under the auspices of the Hawai'i Pacific Parks Association (HPPA). However, according to the NPS the space is too small for the model.

3. The following responses were provided:

- B. Schaefer said that the prior consideration for placement at the airport is not a good idea.
- F. Cachola said that there is a record of HPPA identified to accept the model but that because of space limitations at Kaloko-Honokōhau this would not be a good idea. Margo Griffith is the current Director of HPPA.

The work on the terrain model should also be part of a University of Hawai'i (UH) scholarship in archaeology or other field of study; maybe also Kamehameha Schools.

The MOA should also be extended by the HDOT and Federal Highway Administration (FHWA) because the terms would end in 2020. This is to address the time needed to decide on the location of the model.

- B. Kahui said that the Queen Lili'uokalani Trust has a digital presentation at its facility. Both the Queen Lili'uokalani Trust and Kamehameha Schools are also considering venues to showcase Hawaiian history on their respective properties in the Kailua-Kona and Keauhou areas.
  - R. Gmerkin agreed that the group should work with the UH and a higher education program.
  - The UH, Hawai'i Community College, Pālanui campus might also be a prospect for housing the terrain model, but this could take up to five years before being ready.
4. D. Smith said that the group can work toward obtaining information on giving the model to the UH, but that it is likely that the UH will want additional monies for the cost of administration, curation, and other expenses.
5. D. Smith and N. Soriano noted that the model can be made to show different time eras, but that this is not determined yet. B. Takeda noted the two options available: a color projection onto a single color terrain model with vertical relief; and a high-density foam or fiberglass reinforced multicolor model with vertical relief that does not require a projector. D. Smith and N. Soriano asked that the group consider:
- A projected model is more complex to operate and will require technical set-up, power supply, and maintenance, to replace worn parts like projector lamps. A technician would be needed to help set-up the model when it is installed. Due to these constraints this is less likely to be viable.
  - A foam/fiberglass model is more robust and would be more easily transportable in keeping with the intent of the stipulation (e.g., "The model shall be of such scale that it can be transported to other locations and be used as a teaching tool").
6. After further discussion the group determined:
- By January 2018 the final draft of the terrain model map would be completed and distributed to the group for their review and comment. The map should have all of the known information about the area and any revisions could be made at that time.
  - The HDOT will speak with the UH about the possibility of housing the model at the Pālanui campus site. F. Cachola volunteered to accompany HDOT as a representative of the HPPA to hand over the model to the UH if an agreement can be reached.



#### HDOT Action Items:

- RMTC to distribute the terrain model map to the group upon completion in January 2018 for review and comment. The terrain model map will be revised to reflect the comments.
- The HDOT to initiate discussion with UH Pālanui to inquire concerning the placement of the terrain model.

#### Stipulation 10B, Underpass Feasibility Study

1. D. Smith started the discussion and provided the Development of Design Guidelines presentation.
2. F. Cachola noted that all those who initiated the MOA from the HDOT and FHWA are no longer here and reminded the group that the reason for his participation was to be able to “walk in the footsteps of our ancestors” and that there should be at least one, uninterrupted trail. He became involved to save the trail to Kaloko-Honokōhau. The idea for an underpass started to maintain connectivity with the ancient Hawaiian trail system. He feels that if one were to read the entirety of Stipulation 10B that it is technical in its description, but for him it’s more than that, its emotional.
3. D. Smith responded that he does read the intention of the MOA as an emotional response to mitigating the impact of Phase 2, of the Queen Ka’ahumanu Highway project. In good faith, the HDOT wants to pursue the design guidelines so that future roadway projects can be more considerate.
4. T. Clothier asked if other options to an underpass, such as overpasses, are considered. H. Springer asked if drain culverts can be used? D. Smith responded that drainage culverts are intended to serve a drainage and not a pedestrian function, and more importantly that there are no monies available for construction of an underpass or overpass.
5. B. Schaefer asked if this [work on the stipulation] is for other areas of the project only and not part of this project [Phase 2]. D. Smith responded yes, adding that the work on this stipulation is intended to involve future construction projects and that any input the group provides would be of use.
6. H. Springer asked if the use of the drainage culverts could be provided in the future. F. Cachola said he wants the drainage culverts to be addressed now, including at-grade and overpass considerations. He said to see the MOA and added that on Page 3 of the presentation, that he wants to point out that another purpose of the underpass is to restore the integrity and purpose of ancient and historic Hawaiian trails and routes that were bisected by HDOT. He wants this added to the guidelines.
7. H. Springer said that access to the underpass needs to be wheelchair accessible. D. Smith responded that whenever there are federal expenditures used on a project that it must meet these types of requirements, i.e., Americans with Disabilities Act. F. Cachola added that all these guidelines are for pedestrian crossings. The HDOT should add that this is also for “cultural preservation.”
8. D. Smith cited the use of Context Sensitive Design or CSD. The HDOT cannot design a project without taking into consideration the background and cultural use of the site. Future designs, such as for future development of new phases of the Queen Ka’ahumanu Highway or other highway project, would need to take this into consideration.

- CSD considers cultural preservation, equestrian use, connectivity (multiple modes) and a more holistic approach versus how highways are being defined now. Continuity of cultural practices and sensitivity to the cultural landscape are also important factors to consider in the context sensitive design approach.
  - The use of CSD for this project would consider cultural uses and provide a way to move toward what is desired by the group. Applying CSD would also be consistent with the FHWA requirement that it be considered as a part of the project design process.
  - If CSD focusses on pedestrian use so that if an underpass is designed and wheelchair access is not possible, and only pedestrians and not others are allowed to walk through the underpass, it would still be considered as CSD.
  - This focus could be used in the title for all or a part of the Underpass Feasibility Study as "Context Sensitive Design for Historic Hawaiian Trails."
9. R. Gmerkin responded that the study should not lose its focus on pedestrian design. H. Springer added that mauka-makai travel across the highway should also be addressed. D. Smith added that he understands that the trail system can help serve as a means of "cultural rejuvenation" to capture the next generation of youth.
10. F. Cachola noted that on Page 10 [?] of the presentation that the management of use of the underpass by a third party is used arbitrarily by HDOT to avoid taking responsibility. For the Underpass Feasibility Study there is no discussion that the use of the underpass shall be managed by a third party.
- F. Cachola also questioned HDOT's employment of R. M. Towill Corporation to assist with the completion of MOA stipulations due to the volume of work they appear to be doing for the Queen Ka'ahumanu Highway, Phase 2, project.

HDOT Action Items:

- HDOT to develop the Design Guidelines for the Underpass Feasibility Study using the CSD approach. The status of the Draft Underpass Feasibility Study will be reported to the group in January 2018.
- The HDOT to respond to F. Cachola concerning the use of RMTC to assist with the completion of the MOA stipulations.

11. Adjournment: The meeting concluded at 3:25 pm.



# Agenda

## AFTERNOON SESSION

MOA Stipulation 10B – Underpass Feasibility Study  
Queen Kaahumanu Highway Widening, Phase 2  
Kailua-Kona, Hawaii

Natural Energy Laboratory of Hawaii Authority (NELHA)  
Hale Iako Building, Room 208 Ocean View Conference Room  
73-987 Makako Bay Dr., Kailua-Kona, HI 96740  
Thursday, December 7, 2017, 12:30 – 3:30 pm

1. Introduction 12:30 – 1:15 pm
  - A. Welcome/Pule: Herb Lee
  - B. Review Stipulation 10B
  - C. Basic Federal Design Requirements and Guidelines -  
Pedestrian Facilities already in place:
    - Grade
    - Cross Slope
    - ADA Compliance
    - Width
  - D. Additional Comments and Questions
2. Underpass Facilities 1:15 – 2:45 pm
  - A. Examples
  - B. Open Discussion for what the group wants
3. Parallel Facilities 2:45 – 3:15 pm
  - A. Examples
  - B. Open Discussion
4. Summary 3:15 – 3:30 pm

# Development of Design Guidelines

## **Queen Ka'ahumanu Highway, Phase 2**

Stipulation 10B, Underpass Feasibility Study

Memorandum of Agreement (MOA)

Hawai'i Department of Transportation

December 7, 2017

# Development of Design Guidelines

STIPULATION 10.B. UNDERPASS FEASIBILITY STUDY.

**Excerpt: “As part of the feasibility study**  
*the HDOT shall convene a community meeting that has as its objective the development of design guidelines for future Queen **Ka‘ahumanu** Highway expansion projects that includes provisions for trail connectivity and pedestrian crossings under the Queen **Ka‘ahumanu** Highway as well as paralleling the highway.”*

- Guidelines are generally recommended practices

# Federal Highway Administration (FHWA)

## Pedestrian Facilities Users Guide (FHWA-RD-01-102)

## FHWA PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System (FHWA-SA-04-003)

- One purpose of an underpass is to connect off-road trails and paths across major barriers such as a heavily traveled highways.
- *Underpasses work best when designed to feel open and accessible. Grade separation is most feasible and appropriate in extreme cases where pedestrians must cross roadways such as freeways and high speed, high volume arterials.*
- Must be wheelchair accessible.
- *Lighting, drainage, graffiti removal, and security are also major design considerations with underpasses.*
- **Sidewalks and walkways are “pedestrian lanes”** that provide people with space to travel within the public right-of-way that is separated from roadway vehicles.

# FHWA Guidance

## General Design Criteria – Underpasses

- *Overpasses and underpasses must accommodate all persons, as required by the Americans with Disabilities Act (ADA)*
  1. *The maximum longitudinal grade is 5%*
  2. *The maximum cross slope is 2%*
- *The AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities recommends for underpasses:*
  1. *Minimum widths should be between 14 and 16 ft, but an underpass width should be increased if the underpass is longer than 60 ft*



# Hawaii Department of Transportation

Statewide Pedestrian Master Plan, Hawaii  
Pedestrian Toolbox

Section 1 – Thinking about Pedestrians from  
the Start – Creating Pedestrian-Friendly  
Communities - Creating an Effective Pedestrian  
System

“In some cases, an effective pedestrian system  
may include grade separated pedestrian  
crossings. But these must be clearly justified  
and carefully implemented ...”

# Hawaii Department of Transportation

## Statewide Pedestrian Master Plan, Hawaii Pedestrian Toolbox

### Section 5 – Intersections and Crossings

- “UNDERPASSES AND TUNNELS  
Tunnels and underpasses provide a walkway for pedestrians underneath the roadway. Pedestrians are often more apt to use overpasses than underpasses or tunnels, and overpasses are easier to supervise and maintain. Tunnels are less desirable than bridges due to greater potential costs, reduced sense of security, challenges with monitoring, the possibility of drainage problems, and a perception of lack of safety. “Before choosing to install a tunnel, soil exploration is required to determine whether a tunnel can be feasibly constructed and whether drainage will be a problem. Wide openings are more inviting to pedestrians and let in more natural light. Tunnels should be easy to access and should be as short as possible. Approaches to the underpass should allow continuous vision through it.”

# County Policies, Guidance & Manuals

City and County of Honolulu: Complete Streets Design Manual

- *The Complete Streets manual does not discuss pedestrian underpasses*
- *Hawaii County does not have guidelines at this time*

Hawaii County: Complete Streets Resolution 171-11

Maui County: Complete Streets

Resolution 12-34

- *The State Department of Health prepared the Central Maui Pedestrian and Bicycle Master Plan for 2030 with assistance from the County of Maui. This Master Plan does not discuss pedestrian underpasses*

Kauai County: Complete Streets Resolution and Complete Streets Bill 2465

- *A design manual for Kauai based on the Model Design Manual for Living Streets is being written. The Model Design Manual for Living Streets does not presently discuss pedestrian underpasses.*

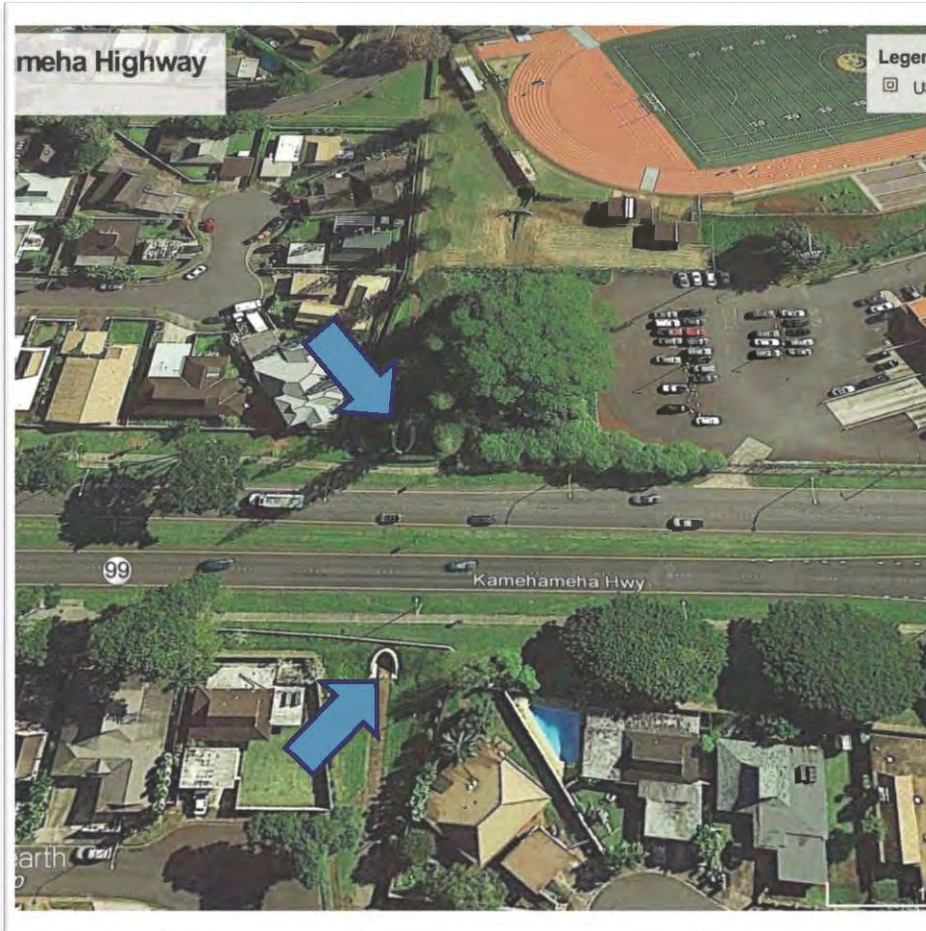
# Additional Comments and Questions

# Underpass Facilities:

## Examples: State of Hawaii and the Counties

For roadways involving the  
Hawaii Department of Transportation

- *Farrington Highway Abandoned Cane Haul Road*
- *Fort Weaver Road Abandoned Cane Haul Road*
- *Kamehameha Highway in Mililani*
- *Pali Highway in Nuuanu*
- *Fort Weaver Road (Honouliuli Stream Bridge) at the Westloch Golf Course*
- *Mamalahoa Highway (Bridge) at the Punaluu Golf Course*



Kamehameha Highway Underpass  
(connecting residential areas across  
Kamehameha Highway to Mililani  
High School in upper right of photo)

Mililani  
High  
School

Kamehameha Highway Underpass (pedestrian  
can be seen at end of underpass)





# Underpass Facilities:

## Examples: State of Hawaii and the Counties

For roadways involving the  
City and County of Honolulu

- *Kipapa Drive in Mililani*
- *Park Row and Mango Tree Road in Ewa*
- *Geiger Road on Ewa*
- *Keoneula Boulevard in Ocean Pointe (one with combined drainage box culvert)*
- *Park Row and Mango Tree Road in Ewa*
- *Geiger Road on Ewa*
- *Keoneula Boulevard in Ocean Pointe (one with combined drainage box culvert)*
- *Golf Cart Underpasses*
  - *Kealahou Road in Hawaii Kai (3)*
  - *Lumiaina Street in Waikele (3)*

## Hawaii Kai



Kealahou Street  
Underpass  
(typical golf  
course  
installation)

# Underpass Facilities:

## Examples: State of Hawaii and the Counties

For facilities involving Hawaii County or other private roads

- *Alii Highway and Kaluna Street at Keauhou*
- *Kaniku Drive in Waikoloa (2)*
- *Abandoned Cane Haul Road in Puna.*

Waikoloa



North Kaniku Drive  
(Golf Course)

# Underpass Facilities:

## Examples: State of Hawaii and the Counties

For roadways involving the County of Maui  
Streets and other private roads

- *Wailea Ike Drive in Wailea*
- *South Kamehameha Drive in Maui Lani*

For roadways involving the County of Kauai  
and other private roads

- *Nuhou Street and Makaa Street in Puakea*
- *Kahaku Road in Princeville (2)*
- *Poipu Road in Koloa*

Underpass Facilities:

Open Discussion: What do you want to see?

# Federal Highway Administration (FHWA)

Pedestrian Facilities Users Guide  
(FHWA-RD-01-102)

FHWA PEDSAFE: Pedestrian Safety  
Guide and Countermeasure Selection  
System (FHWA-SA-04-003)

- ***Sidewalks and walkways are “pedestrian lanes”*** that provide people with space to travel within the public right-of-way that is separated from roadway vehicles.
- *Shared use paths are facilities on exclusive right-of-way and with minimal cross flow by motor vehicles. Shared use paths are sometimes referred to as trails; however, in many states the term trail means an un-improved recreational facility. Care should be taken in using these terms interchangeably. Where shared use paths are called trails, they should meet all design criteria for shared use paths to be designated as bicycle facilities.*



# FHWA Guidance

## General Design Criteria – Parallel Facilities Sidewalks and Walkways

- *Both the FHWA and the Institute of Transportation Engineers (ITE) recommend:*
  1. *A minimum width of 5 feet for a sidewalk or walkway and 10 feet for a multi-use path*
  2. *A buffer zone of 4 to 6 feet is desirable to separate pedestrians from the street*

## General Design Criteria – Parallel Facilities Shared Use Paths

- *The American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities. recommended dimensions for shared use paths is 12 ft (3.7 m) desired minimum and with 2-ft-wide (0.6 m) shoulders on both sides.*

# Hawaii Department of Transportation

Statewide Pedestrian Master Plan, Hawaii  
Pedestrian Toolbox

Section 1 – Thinking about Pedestrians from  
the Start – Creating Pedestrian-Friendly  
Communities - Creating an Effective Pedestrian  
System

1. *Widened, delineated paved shoulders to allow safer travel for pedestrians*
2. *Sidewalks, paths, or walkways that are of sufficient width, clear of obstructions, and separated from traffic lanes*

# Hawaii Department of Transportation

Statewide Pedestrian Master Plan, Hawaii  
Pedestrian Toolbox

Section 1 – Thinking about Pedestrians from  
the Start – Creating Pedestrian-Friendly  
Communities - Creating an Effective Pedestrian  
System

- “Pedestrian systems and facilities need to be functional and effectively used by pedestrians. Pedestrian facilities both encourage people to walk and improve pedestrian safety. The facilities must be well-designed and maintained to be effective. In communities, neighborhoods, and districts, there are a number of elements that contribute to an effective pedestrians system, such as:
  1. *Widened, delineated paved shoulders to allow safer travel for pedestrians*
  2. *Sidewalks, paths, or walkways that are of sufficient width, clear of obstructions, and separated from traffic lanes*

# Hawaii Department of Transportation

## Statewide Pedestrian Master Plan, Hawaii Pedestrian Toolbox

### Section 4 – Sidewalks and Walkways

- “Sidewalks and Walkways Defined “A sidewalk is the space within the right-of-way dedicated to pedestrian travel. Hawaii State Statutes define a “sidewalk” as that portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for use of pedestrians (Hawaii Revised Statutes 291C-1).
- *Sidewalks and walkways should be designed to comfortably accommodate the typical volume of pedestrians that will be using them. In high use areas like central business districts, sidewalks generally should be 10 to 15 ft (3.0 to 4.6 m) or wider to accommodate high pedestrian flows.*
- *However, It is important to avoid **“over design” of excessively wide** sidewalks. Wide spans of empty pavement can appear uninviting to pedestrians.*
- *If the facility is a shared use path (shared with bicyclists), it must be an absolute minimum of 8 ft (2.4 m) wide and often wider depending on the use (see Toolbox Section 7—Shared Use Paths).*

# Hawaii Department of Transportation

## Statewide Pedestrian Master Plan, Hawaii Pedestrian Toolbox

### Section 4 – Sidewalks and Walkways

- “Shoulder Use in Rural Areas”

“Shoulders along roadways in rural areas are sometimes used by pedestrians, even though shoulders are not formally recognized as pedestrian facilities. While this use is generally not the preferred condition, it does occur. As such, it is important for rural roadways and highways to meet at least minimum standards for shoulder width on both sides.

Even in completely undeveloped areas, where the roadways may not be intended as pedestrian routes, it is desirable to provide walking space along the traveled way for occasional or emergency use by pedestrians. This can be achieved by delineating the shoulder for added safety for non-motorized use.”

- **“Shoulder Dimensions**
- Refer to local and state standards for applicable shoulder width requirements. As a general best practice, per the AASHTO Guide for the Planning,
- Design, and Operation of Pedestrian Facilities, shoulders should be:
  1. 4 to 6 ft wide (1.2 to 1.8 m) minimum adjacent to a bike lane and on local roads with lower traffic volumes
  2. 6 ft (1.8 m) width is acceptable on roads with 1500-2000 ADT if minimum width of traveled way is 24 ft (7.3 m)
  3. 8 ft (2.4 m) wide minimum on roads over 2000 ADT

# Hawaii Department of Transportation

## Statewide Pedestrian Master Plan, Hawaii Pedestrian Toolbox

### Section 7 – Shared Use Paths

- “SHARED USE PATHS
- Shared use paths are typically designed to accommodate pedestrians and bicyclists. They commonly serve the needs of a variety of pedestrians, including commuters, school children, neighborhood residents, wheelchair users (and other individuals with disabilities and mobility or navigation challenges), and recreational users such as joggers and skaters.”

- *Dimensions for paths can vary depending on the type of facility, the levels of use, types of users, and the setting. Typical dimensions for shared use paths are based on the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities. Refer to the AASHTO guide, as well as the Bike Plan Hawaii, and the Oahu Bike Plan for more information.*
  1. *The recommended dimensions for shared use paths is 12 ft (3.7 m) desired minimum and with 2-ft-wide (0.6 m) shoulders on both sides.*
  2. *A 10-ft-wide (3.0 m) path may be acceptable where right-of-way is restricted, while a 14 ft-wide (4.3 m) path may be best for heavy use.*



# County Policies, Guidance & Manuals

City and County of Honolulu: Complete Streets Design Manual

Hawaii County: Complete Streets Resolution 171-11

Maui County: Complete Streets

Resolution 12-34

Kauai County: Complete Streets Resolution and Complete Streets Bill 2465

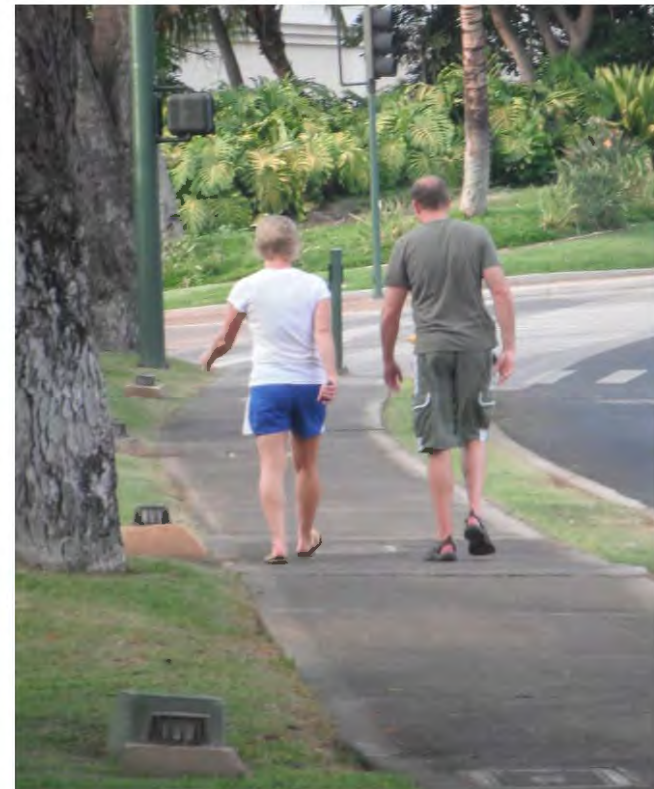
- *The Complete Streets manual has many guidelines for sidewalks, walkways and shared use paths*
- *Hawaii County does not have guidelines at this time*
- *The State Department of Health prepared the Central Maui Pedestrian and Bicycle Master Plan for 2030 with assistance from the County of Maui. This Master Plan discusses sidewalks and shared use paths*
- *A design manual for Kauai based on the Model Design Manual for Living Streets is being written. The Model Design Manual for Living Streets discusses sidewalks and shared use paths*

# Paralell Facilities: Examples:

Shared or Multi-Use Path



Sidewalks and Walkways



# Paralell Facilities: Examples:

Highway Shoulder



Highway Walkway



Paralell Facilities:

Open Discussion: What do you want to see?

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## **Appendix B**

### Design Guidelines For Highway Widening Projects

**1. PURPOSE**

This section establishes the guidelines and procedures for the application of Context Sensitive Solutions (CSS) for future Queen Kaahumanu Highway Widening Projects.

**2. BACKGROUND**

During the development and construction of Queen Kaahumanu Highway Widening Project, the Hawaii Department of Transportation (HDOT) was made aware of adverse impacts to the area. Opportunities to consider the effects of proposed Queen Kaahumanu Highway Widening Projects have had on the environment and to suggest changes to future projects are formalized in this amended Guidelines for future Queen Kaahumanu Widening Projects.

**3. GUIDANCE**

The CSS philosophy and public involvement procedures should be applied to all future Queen Kaahumanu Highway Widening Projects and a cornerstone component of the CSS should be the trails in and along the Queen Kaahumanu Highway Corridor.

Context Sensitive Solutions, also known as Context Sensitive Design (CSD) or Flexible Design is defined by FHWA as, "...a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility. CSD is an approach that considers the total context within which a transportation improvement project will exist."

Although CSS is referred to here as a process, it is first and foremost a philosophy; a method of understanding the way a highway fits into and impacts the environment. Because of this, the steps presented below should not be viewed as limitations, but instead be considered the minimum necessary to fulfill this guidance.

CSS is not an "either/or" process. Safety and mobility do not have to be sacrificed to achieve the goals of CSS. Utilizing the CSS philosophy, planning and design professionals determine which safe solution best fits, given a site's conditions and context. CSS is about making carefully considered decisions based on input from many sources.

CSS is not limited to the planning and design phases of a project. The CSS philosophy must be maintained through the construction and maintenance of a project in order to preserve the stakeholders' vision. To this end, all personnel involved in the planning, design, construction and maintenance of roadway, highway and freeway projects should understand the CSS philosophy and the commitments that must be made in order to establish a successful CSS program.



CSS is not an aesthetic treatment; rather, CSS involves developing a transportation solution that fits into its context. The purpose of the CSS approach is to identify and address both transportation and project area needs during project development. CSS requires the flexibility to consider alternative solutions that can benefit a broad range of stakeholders, while recognizing the fiscal constraints and the limits of the transportation agency. Effective transportation solutions that fit a project's context, rather than project enhancements, are the purpose of CSS.

The cornerstone of a successful CSS program is public involvement. Early, effective and continuous public involvement fosters meaningful participation and a sense of ownership in the project development process. Effective public involvement builds understanding of the issues raised by a project among all those involved in the process. The open collaboration and exchange of information and concerns can promote consensus for project outcomes and trust among all stakeholders.

Further background and guidance on CSS can be found in the following publications:

- Flexibility in Highway Design, U.S. Department of Transportation, Federal Highway Administration
- NCHRP Report 480, A Guide to Best Practices for Achieving Context Sensitive Solutions, Transportation Research Board, and
- A Guide for Achieving Flexibility in Highway Design, American Association of State Highway and Transportation Officials

#### **4. PROCEDURE**

CSS implementation is project specific and details will vary depending on the affected community and on the issues the process seeks to address. The purpose of public involvement is to ensure that effective public outreach occurs early in the project development process.

All projects covered by this guidance should go through a public involvement process and these guidelines should be followed when going through the process:

- Full commitment to the process by DOT management and staff.
- Early establishment of an inter-disciplinary project team.
- Identification and involvement of the full range of stakeholders.
- Identification of problems in the project area that need to be addressed and concurrence from the stakeholders on these problems prior to determining project objectives and potential solutions.
- Understanding of the landscape, community and valued historic, scenic and archeological resources.
- Maintenance of open and continuous communication with the stakeholders.

(Continued)

- Application of a full range of tools and technology, as appropriate, to convey project information to the public, and
- Consideration of a full range of project alternatives, including proposals from the community.

Complex or controversial projects may require public involvement beyond what is outlined in these procedures; the scope and breadth of public outreach for those projects will have to be determined on a case-by-case basis.

**From:** [Takiue, Harry H](#)  
**To:** [Amanda Johnson Campbell](#); [Takara, Richelle \(FHWA\)](#); [Otani, Meesa \(FHWA\)](#); [Clarke, David \(FHWA\)](#); [Ando, Marshall](#); [Lebo, Susan A](#); [mranslow@achp.gov](#); [Tyler Paikuli-Campbell@nps.gov](#); [jeff\\_zimpfer@nps.gov](#); [Aric\\_arakaki@nps.gov](#); [Rick\\_gmirkin@nps.gov](#); [fredcachola@gmail.com](#); [bokahui@laiopua.org](#); [HISTORICHAWAII-Kiersten](#); [Lauren Morawski](#); [keolal@oha.org](#); [shanen@oha.org](#); [mkahawaii@gmail.com](#); [koanazara@gmail.com](#); [Sonomura, Julann M](#); [Aiu, Pua](#); [Tatsuguchi, Ken](#); [Faith Rex](#); [Tanya Lizama](#); [Powell, Lisa \(FHWA\)](#); [pakaharp@gmail.com](#)  
**Subject:** Stipulation 18 Meeting  
**Date:** Wednesday, February 26, 2020 3:59:25 PM  
**Attachments:** [Copy of Underpass summary chart 022620 \(003\).pdf](#)  
[Annotation 2020-02-26 125515.png](#)

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Aloha,

Attached is the underpass summary chart and annotated map Fred requested and for anyone else attending Saturday, February 29 meeting at 9 that Paka set up on Google Hangout.

Thank you,  
Harry Takiue  
Acting District Engineer  
Department of Transportation – Highways  
50 Makaala Street  
Hilo, HI 96720

**10.B. UNDERPASS FEASIBILITY STUDY.** The HDOT shall conduct a feasibility study with the objective of facilitating safe pedestrian access across the Queen Ka'ahumanu Highway at the "Trail to Honokōhau." The study will examine at-grade crossing locations, the installation of a pedestrian tunnel crossing, and the modification of existing culverts for pedestrian-bicycle use. The study shall seek examples and policies regarding use of existing pedestrian tunnels and modified culverts in Hawai'i and other States. Subsurface crossing(s) shall include provisions for a third party organization to take responsibility for maintenance, security and liability for the crossing(s) as has been the policy of HDOT for more than a decade...."

Consulted with: signatories to the MOA, NHO's, PATH, County of Hawaii, school officials, universities, community groups, the Royal order of Kamehameha, the Association of Hawaiian Civic Clubs.

	Use of existing at grade crossing, (700 ft away from trail)	Pedestrian Tunnel	Modification of Existing Culvert	Mid-block crossing
<b>Purpose (FHWA)</b>	to allow pedestrian access from one side of a roadway to the other side.	one purpose: to connect off-road trails and paths across major barriers such as a heavily traveled highway	Main purpose is to transport water.	Mid-block crossings provide a convenient (and safe) location to cross the roadway without having to use an intersection crossing. Nearest intersection crossing is 700 ft away.
<b>Design considerations</b>	should always be combined with other pedestrian safety measures, such as stop or yield signs, signalization, or raised medians. Design standards for width, approaches and ladder bars.	must be ADA compliant, lighting, drainage, graffiti removal and security must be taken into account when designin an underpass.	must be ADA compliant, lighting, drainage, graffiti removal and security must be taken into account when designin an underpass.	Does not make sense to install lights at this crossing as it is too close to other signalized intersections.
<b>Safety considerations</b>	see above.	Perceived as less safe than overpasses. Lighting and width to ensure enough light and ability to see through the tunnel. Could be dangerous druing periods of heavy rain.	Perceived as less safe than overpasses. Lighting and width to ensure enough light and ability to see through the tunnel. Could be dangerous druing periods of heavy rain.	Markings, the presence of markings on four-lane roads with an ADT of 12,000 or more and no other pedestrian improvements has been associated with a higher level of crashes, if no other treatments, such as signs, flashing lights, signals, etc. are also provided.
<b>ADA</b>	Must meet ADA requirements	must be ADA compliant, maximum longitudinal grade is 5%, maximum cross-slope is 2%	must be ADA compliant, maximum longitudinal grade is 5%, maximum cross-slope is 2%	
<b>Proposed Plans</b>	Figure 2	figure 2	figure 2	
<b>Third party operator</b>		HDOT requires a 3rd party operator	HDOT requires a 3rd party operator	
<b>Potential environmental effects</b>	Possible, have to pass unimproved land to get to trail	yes, requires grading, accomoding existing infrastructure, etc.	yes, requires grading, accomoding existing infrastructure, etc.	
<b>Need other landowner Approval</b>	NPS, West Hawaii Business Park	NPS, West Hawaii Business Park	NPS, West Hawaii Business Park	NPS, West Hawaii Business Park
<b>Cost</b>	Already exists	\$3 Mil	\$ 672,197.00	
<b>Feasible</b>	crossing exists. No agreement with NPS or West Hawaii Business Park to use their lands for this purpose.	no, due to construction already started	no due to construction already started	no, due to significant safety and design issues

**Conclusion:** If a future widening is planned, include a crossing as part of a Context Sensitive Design Solution process.

**Challenges:**

1. Need 3rd party land owners to agree (all 3 options)
2. Potential for significant environmental disruption (all three).
3. Need for a 3rd party operator (underpass & existing culvert.
4. Cost (possibly all 3 because of needed improvements to get to trail from any of the options).

## Queen Kaahumanu phase 2 - Underpass, 3rd Party

Takiue, Harry H <harry.h.takiue@hawaii.gov>

Mon 3/23/2020 8:35 AM

To: Amanda Johnson Campbell <amanda\_johnson@nps.gov>; Takara, Richelle (FHWA) <Richelle.TAKARA@dot.gov>; Otani, Meesa (FHWA) <meesa.otani@dot.gov>; Clarke, David (FHWA) <david.clarke@dot.gov>; Ando, Marshall <marshall.ando@hawaii.gov>; Lebo, Susan A <susan.a.lebo@hawaii.gov>; mranslow@achp.gov <mranslow@achp.gov>; Tyler\_Paikuli-Campbell@nps.gov <Tyler\_Paikuli-Campbell@nps.gov>; jeff\_zimpfer@nps.gov <jeff\_zimpfer@nps.gov>; Aric\_arakaki@nps.gov <Aric\_arakaki@nps.gov>; Rick\_gmirkin@nps.gov <Rick\_gmirkin@nps.gov>; fredcachola@gmail.com <fredcachola@gmail.com>; bokahui@laiopua.org <bokahui@laiopua.org>; HISTORICHAWAII-Kiersten <kiersten@historichawaii.org>; Lauren Morawski <laurenm@oha.org>; keolal@oha.org <keolal@oha.org>; shanen@oha.org <shanen@oha.org>; mkahawaii@gmail.com <mkahawaii@gmail.com>; koanazara@gmail.com <koanazara@gmail.com>; Sonomura, Julann M <julann.m.sonomura@hawaii.gov>

 1 attachments (268 KB)

Pali Hwy Honpa Underpass Walkway.pdf;

Aloha Fred and Paka,

This is in follow up to our 02/29/20 discussion and your request for a sample that demonstrates 3rd party responsibility for maintenance of an existing underpass.

The attached example is for the underpass on Pali Highway (dated 1958). There are a number of actions discussed in the Agreement but in Paragraph 2(d) on Page 6, it states that "Honpa", the 3rd party, would be responsible for control, maintenance and repair of the pedestrian underpass.

Please review and let us know if you have any questions.

Thank you,

Harry Takiue

Acting District Engineer  
Department of Transportation – Highways  
50 Makaala Street  
Hilo, HI 96720

A G R E E M E N T

This AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_, 1958, by and between the TERRITORY OF HAWAII, hereinafter called the "TERRITORY", and HONPA HONGWANJI MISSION OF HAWAII, hereinafter called "HONPA",

W I T N E S S E T H:

WHEREAS, Honpa owns property on the Waikiki side of Fort Street between School and Kuakini Streets, hereinafter referred to as the "Temple Premises", and property on the Ewa side of Fort Street, opposite the Temple Premises, hereinafter referred to as the "School Premises";

WHEREAS, on August 4, 1955, the City Planning Commission of the City and County of Honolulu held a public hearing on the Territory's proposal to alter the master plan to provide for the widening of Fort Street, which involves the taking of a portion of the School Premises, at which time, Honpa, through its attorney, stated its objection to the proposal and also filed a written objection to said proposal;

WHEREAS, after the public hearing, Ben E. Nutter, Superintendent of Public Works and Territorial Highway Engineer, submitted to Honpa a plan involving the construction of a pedestrian underpass to provide free access between the Temple Premises and School Premises and also involving the reconstruction and relocation of certain buildings on the School Premises;



WHEREAS, Ben E. Nutter, acting on behalf of the Territory, verbally agreed to perform according to said plan and as provided in the unsigned agreement attached to the letter dated September 14, 1955, addressed to the City Planning Commission and signed by Susumu Yoshikami, President of Honpa, which plan, agreement and letter are filed with the City Planning Commission;

WHEREAS, said objection to the Territory's proposal has been withdrawn in reliance upon said verbal commitment of Ben E. Nutter;


WHEREAS, the Territory and Honpa did on the 14th day of December, 1956, enter into a formal agreement for the reconstruction and relocation of certain buildings on the School Premises and for the construction of a pedestrian underpass connecting the Temple Premises with the School Premises;

WHEREAS, the Territory and Honpa are desirous of replacing said agreement with a substituted agreement:

NOW, THEREFORE, for and in consideration of the covenants and agreements set forth hereinbelow, the Territory and Honpa do hereby mutually agree as follows:

1. The Territory agrees as follows:

(a) The Territory will pay to Honpa the sum of \$100,350.00 of which \$96,850.00 is for compensation for Parcel 89, being a portion of the School Premises and containing an area of 29,810 square feet, and for the rights of access appurtenant to the remainder portion of said School Premises and \$3500.00 for the landscaping, sidewalks and fencing on said Parcel 89.

It is agreed that the buildings on said Parcel 89 are to be separately dealt with as hereinafter otherwise provided. Said Parcel 89 is designated and located on the plan, which is attached hereto and made a part hereof. The rights of access are located on said plan along the new boundary between Parcel 89 and the remainder portion of the School Premises and are shown thusly  on said plan.

(b) The Territory will construct a pedestrian underpass connecting the Temple Premises and School Premises as shown on the plan.

(c) The Territory will reconstruct the concrete school building on the mauka side of the School Premises and will construct a new concrete stairway as shown on the plan. The reconstructed building shall have the equivalent area and same facilities and shall be of the same class of construction as the existing building.

(d) The Territory will pay the sum of \$145,000.00 for the Y.B.A. building on the makai side of the School Premises, provided that Honpa will remove said building from the right of way before August 31, 1958.

(e) The Territory will pay the sum of \$7,165.00 for the dormitory building with the attached wash house located in the rear of the Y.B.A. building.

(f) The Territory will pay the sum of \$33,590.00 for the wooden school building and combination wash room and boiler room mauka of the Y B A

building, provided that Honpa will remove said structures from the right of way before August 31, 1958

(g) The Territory will construct a new ramp, reconstruct the stone pillars and restore the chain between the pillars.

(h) The Territory will construct a wall, chain-link fence, concrete steps and two (2) gates along the new right of way boundary as shown on the plan.

(i) The Territory will provide a new play area at the location shown on the plan.

(j) The Territory will build retaining walls and fill the existing stream bed at the locations shown on the plan.

(k) The Territory will pay the sum of \$1500.00 for the existing garage.

(l) The Territory will pay the sum of \$1500.00 for the existing basketball court.

2. Honpa agrees as follows:

(a) Honpa agrees to the conditions set forth hereinabove in Paragraphs 1(d) and 1(f).

(b) Honpa will convey to the Territory by warranty deed title to Parcel 89 together with the aforesaid rights of access in fee simple absolute free and clear of all encumbrances. The conveyance will be made forthwith upon full payment by the Territory of Hawaii of the sums provided in Paragraphs 1(a), 1(d), 1(e), 1(f), 1(k) and 1(l).

(c) Upon completion of the work provided in Paragraphs 1(b), 1(c), 1(g), 1(h), 1(i) and 1(j), Honpa will forthwith release the Territory from all damages to the remainder portion of the School Premises whether resulting from severance or from the construction of the highway in the manner proposed by the Territory or from any cause whatsoever in connection with the taking of Parcel 89.

(d) Honpa will be responsible for the control, maintenance and repair of the pedestrian underpass upon the completion thereof by the Territory. It is understood that the Territory shall in no way be responsible for the underpass after completion of the same.

3. This Agreement supersedes and replaces the Agreement heretofore made by and between the parties hereto which previous Agreement is hereby cancelled by mutual consent of the parties.

IN WITNESS WHEREOF, the TERRITORY OF HAWAII, by W. M. Wachter, Superintendent of Public Works and Territorial Highway Engineer, and HONPA HONGWANJI MISSION OF HAWAII have executed this Agreement the day and year first above written.

TERRITORY OF HAWAII

By



W. M. WACHTER

Its Superintendent of Public Works  
and  
Territorial Highway Engineer

HONPA HONGWANJI MISSION OF HAWAII

By *Geno Aoki*  
Its Bishop

By *Susumu Yoshikami*  
Its President

By *Yoshikazu Fujino*  
Its Treasurer

APPROVED AS TO FORM:

*Halter J. Shimoda*  
Deputy Attorney General

TERRITORY OF HAWAII                    }  
City and County of Honolulu        } SS.

On this 20<sup>th</sup> day of June, 1958,  
before me appeared *Geno Aoki*,  
*Susumu Yoshikami* and *Yoshikazu Fujino*,  
to me personally known, who, being by me duly sworn, did say  
that they are the Bishop, President and Treasurer, respectively,  
of HONPA HONGWANJI MISSION OF HAWAII, and that the seal  
affixed to the foregoing instrument is the corporate seal  
of said corporation and that said instrument was signed  
and sealed in behalf of said corporation by authority of  
its Board of Directors, and the said *Geno Aoki*,  
*Susumu Yoshikami* and *Yoshikazu Fujino*  
acknowledged said instrument to be the free act and deed of  
said corporation.

*Arlene S. Otani*  
Notary Public, First Judicial Circuit,  
Territory of Hawaii

My commission expires: *June 4, 1961*

## Queen Kaahumanu phase 2 - Underpass, 3rd Party

Takiue, Harry H <harry.h.takiue@hawaii.gov>

Fri 3/27/2020 7:20 AM

**To:** Amanda Johnson Campbell <amanda\_johnson@nps.gov>; Takara, Richelle (FHWA) <Richelle.TAKARA@dot.gov>; Otani, Meesa (FHWA) <meesa.otani@dot.gov>; Clarke, David (FHWA) <david.clarke@dot.gov>; Ando, Marshall <marshall.ando@hawaii.gov>; Lebo, Susan A <susan.a.lebo@hawaii.gov>; mranslow@achp.gov <mranslow@achp.gov>; Tyler\_Paikuli-Campbell@nps.gov <Tyler\_Paikuli-Campbell@nps.gov>; jeff\_zimpfer@nps.gov <jeff\_zimpfer@nps.gov>; Aric\_arakaki@nps.gov <Aric\_arakaki@nps.gov>; Rick\_gmirkin@nps.gov <Rick\_gmirkin@nps.gov>; fredcachola@gmail.com <fredcachola@gmail.com>; bokahui@laiopua.org <bokahui@laiopua.org>; HISTORICHAWAII-Kiersten <kiersten@historichawaii.org>; Lauren Morawski <laurenm@oha.org>; keolal@oha.org <keolal@oha.org>; shanen@oha.org <shanen@oha.org>; mkahawaii@gmail.com <mkahawaii@gmail.com>; koanazara@gmail.com <koanazara@gmail.com>; Sonomura, Julann M <julann.m.sonomura@hawaii.gov>

Aloha Paka,

Thank you for carefully reading the Honpa Hongwanji Agreement. This is in response to your question about liability.

The last sentence in Paragraph 2(d) states:

It is understood that the Territory shall in no way be responsible for the underpass after completion of the same.

The use of the phrase, "in no way" means that responsibility is not limited to any condition and therefore, liability and all possible effects of having the underpass lie with the Honpa Hongwanji.

I hope I was able to help with your understanding.

Thank you,  
Harry Takiue  
Acting District Engineer  
Department of Transportation – Highways  
50 Makaala Street  
Hilo, HI 96720

---

**From:** Paka Harp <pakaharp@gmail.com>

**Sent:** Tuesday, March 24, 2020 7:45 AM

**To:** Takiue, Harry H <harry.h.takiue@hawaii.gov>

**Cc:** Amanda Johnson Campbell <amanda\_johnson@nps.gov>; Takara, Richelle (FHWA) <Richelle.TAKARA@dot.gov>; Otani, Meesa (FHWA) <meesa.otani@dot.gov>; Clarke, David (FHWA) <david.clarke@dot.gov>; Ando, Marshall <marshall.ando@hawaii.gov>; Lebo, Susan A <susan.a.lebo@hawaii.gov>; mranslow@achp.gov <mranslow@achp.gov>; Tyler\_Paikuli-



[Campbell@nps.gov](mailto:Campbell@nps.gov) <[Tyler\\_Paikuli-Campbell@nps.gov](mailto:Tyler_Paikuli-Campbell@nps.gov)>; [jeff\\_zimpfer@nps.gov](mailto:jeff_zimpfer@nps.gov) <[jeff\\_zimpfer@nps.gov](mailto:jeff_zimpfer@nps.gov)>; [Aric\\_arakaki@nps.gov](mailto:Aric_arakaki@nps.gov) <[Aric\\_arakaki@nps.gov](mailto:Aric_arakaki@nps.gov)>; [Rick\\_gmirkin@nps.gov](mailto:Rick_gmirkin@nps.gov) <[Rick\\_gmirkin@nps.gov](mailto:Rick_gmirkin@nps.gov)>; [fredcachola@gmail.com](mailto:fredcachola@gmail.com) <[fredcachola@gmail.com](mailto:fredcachola@gmail.com)>; [bokahui@laiopua.org](mailto:bokahui@laiopua.org) <[bokahui@laiopua.org](mailto:bokahui@laiopua.org)>; HISTORICHAWAII-Kiersten <[kiersten@historichawaii.org](mailto:kiersten@historichawaii.org)>; Lauren Morawski <[laurenm@oha.org](mailto:laurenm@oha.org)>; [keolal@oha.org](mailto:keolal@oha.org) <[keolal@oha.org](mailto:keolal@oha.org)>; [shanen@oha.org](mailto:shanen@oha.org) <[shanen@oha.org](mailto:shanen@oha.org)>; [mkahawaii@gmail.com](mailto:mkahawaii@gmail.com) <[mkahawaii@gmail.com](mailto:mkahawaii@gmail.com)>; [koanazara@gmail.com](mailto:koanazara@gmail.com) <[koanazara@gmail.com](mailto:koanazara@gmail.com)>; Sonomura, Julann M <[julann.m.sonomura@hawaii.gov](mailto:julann.m.sonomura@hawaii.gov)>; Aiu, Pua <[Pua.Aiu@hawaii.gov](mailto:Pua.Aiu@hawaii.gov)>; Tatsuguchi, Ken <[ken.tatsuguchi@hawaii.gov](mailto:ken.tatsuguchi@hawaii.gov)>; Faith Rex <[fred@smshawaii.com](mailto:fred@smshawaii.com)>; Tanya Lizama <[tanya\\_lizama@nps.gov](mailto:tanya_lizama@nps.gov)>; Powell, Lisa (FHWA) <[lisa.powell@dot.gov](mailto:lisa.powell@dot.gov)>  
**Subject:** [EXTERNAL] Re: Queen Kaahumanu phase 2 - Underpass, 3rd Party

Aloha Harry,

Mahalo for sharing the 1958 underpass agreement between the purported Territorial government and the Honpa Hongwangi Mission. Although aged, this is an excellent example of a mitigation stipulation as it provides clear specifics, which a majority of our MOA mitigation stipulations lack.

Fred has asked on a few occasions, who determines when an MOA stipulation is complete? When stipulations lacks specifics, I would assume that completion requires mutual agreement, no? Fred's question lingers so we would appreciate a response.

In regards to the Honpa/territory agreement, as I understand it, after the underpass was completed no further funding would be provided to Honpa by the territory for operation, maintenance, and repair, similar to when a mitigation stipulation is completed under the MOA we're working with.

The question your email responds to was not about control, maintenance, and repair. The question was on liability. HDOT stated that liability for an underpass would need to be a 3rd party responsibility, so we requested an example of liability rather than an example of control, maintenance, and repair.

It might be assumed that Honpa was responsible for liability, but the 1958 agreement lacks a determination on liability. In the agreement, the territory released itself of all responsibility for the underpass upon completion, but does that include liability? If so, should we assume that Honpa would be liable if the underpass constructed by the territory collapsed on underpass users?

Personally, I don't believe that Honpa would or should be liable for something the territory built.

Mahalo, Paka

On Mar 23, 2020, at 8:35 AM, Takiue, Harry H <[harry.h.takiue@hawaii.gov](mailto:harry.h.takiue@hawaii.gov)> wrote:

Aloha Fred and Paka,

This is in follow up to our 02/29/20 discussion and your request for a sample that demonstrates 3rd party responsibility for maintenance of an existing underpass.

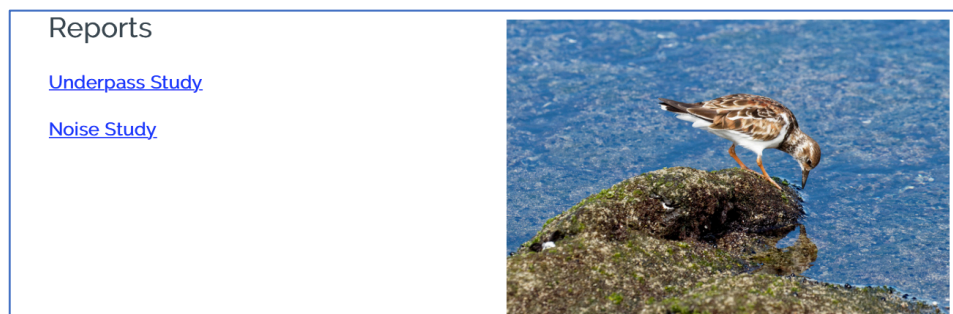
The attached example is for the underpass on Pali Highway (dated 1958). There

are a number of actions discussed in the Agreement but in Paragraph 2(d) on Page 6, it states that "Honpa", the 3rd party, would be responsible for control, maintenance and repair of the pedestrian underpass.


Please review and let us know if you have any questions.

Thank you,  
Harry Takiue  
Acting District Engineer  
Department of Transportation – Highways  
50 Makaala Street  
Hilo, HI 96720

<Pali Hwy Honpa Underpass Walkway.pdf>



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