

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
OFFICE OF CONSERVATION AND COASTAL LANDS
HONOLULU, HAWAII

January 12, 2018

**BOARD OF LAND AND
NATURAL RESOURCES
STATE OF HAWAII
HONOLULU, HAWAII**

REGARDING: Conservation District Use Application (CDUA) **HA-3805** for the *Hilea Bridge Replacement Project*

APPLICANT: Central Federal Lands Highway Division, Federal Highways Administration

AGENT: Central Federal Lands Highway Division, Federal Highways Administration

LOCATION: Māmalahoa Highway, Ka'ū District, Island of Hawaii

TMKs: (3) 9-5-017:007

AREA OF PARCELS: 3.4 acres

AREA OF USE: 0.7 acres

SUBZONE: *General*

DESCRIPTION OF AREA:

Existing Development

Hilea Bridge is located along Māmalahoa Highway (i.e., State Route 11), approximately 1.2 miles southwest of the Alahaki Road and Ninole Loop Road intersection in the Ka'ū district of the Island of Hawaii (**Exhibit 1**). For reference, the portion of the project area located *makai* (seaward) of the highway *and* outside of the established Hawaii Department of Transportation (HDOT) right-of-way (ROW) is within the State Land Use (SLU) Conservation District General Subzone (**Exhibit 2**) and is therefore the focus of this review and application (**Exhibit 3**).

The Hilea Bridge was built in 1940 and is a two (2) span, wooden-timber bridge approximately 41-foot long and 24-foot wide (**Exhibit 4**). The support "piers" consist of a timber on cement rubble masonry (CRM) wall (**Exhibit 5**), while the bridge abutments are constructed of concrete attached to CRM walls for support (**Exhibit 6**). Māmalahoa Highway is a two-lane undivided highway and is part of the Hawaii Belt Road, which encircles Hawaii Island; near Hilea Bridge, travel lanes are approximately 10-foot wide with 2-foot shoulders on either side of the road. Guardrails extend approximately 50-foot on the southeastern corner of the makai side of the bridge and approximately 50-foot on the mauka side of the bridge (**Exhibit 7**).

The land surrounding Hīlea Bridge is largely undeveloped. Hīlea Stream is an intermittent stream that drains a watershed of approximately 31,500 acres on the southern slope of Mauna Loa, and flows beneath Hīlea Bridge. On the northern side of the bridge are rock walls that limit runoff and sediment during storm events. On the *makai* side of the bridge (within the Conservation District) the landscape grades towards the ocean (**Exhibit 8**). Utilities located on the *makai* side of the bridge include a power pole within 100-feet of the northern end of the bridge, and overhead power lines; there is no water or sewer lines in proximity to the bridge or proposed work area.

Water Resources

Hīlea Stream is classified by the State of Hawaii as a “non-perennial stream” (*i.e., rivers which do not have a constant flow throughout the year*) with a total channel length of 16.9 miles; the watershed area is 49.2 square miles, with a maximum elevation of 9,610 feet above sea level (asl).

It has been noted that the streambed in the location of Hīlea Bridge is nearly always dry, although the stream is incised about 3- to 6-feet relative to the surrounding land (**Exhibit 9**). Within the project area, the bed of Hīlea Stream consists of basaltic lava and includes sand- to boulder-sized deposited material, while downstream of the bridge the stream channel splits into three (3) channels. The two “bars” (*i.e., elevation highpoints in a stream*) which define the three channels consist of hard basalt deposits which have resisted erosion – the three channels re-merge into one channel approximately 215 feet *makai* of the bridge (**Exhibit 10**).

Kāwā Bay, located southeast of Hīlea Bridge, is identified in the Hawaii General Plan as a Natural Beauty Site. The undeveloped shoreline at Kāwā protects nesting areas for the critically-endangered Hawaiian hawksbill turtle. The land includes the 2-acre Ka’alaiki intertidal fishpond, estuary, and spring system, which is the second-largest on the island.

Floral and Faunal Resources

In October 2014, an agent for the applicant conducted field reconnaissance surveys of the project area; representative portions of the project area were driven or walked to describe the floral and faunal resources at the project site. Five (5) main vegetation types were identified in the survey area: Guinea Grass Grassland; Non-native Forest (dominated by Java Plum and koa haole); Lantana Scrubland; Ōhia Open Forest; and Ruderal (*i.e., roadside*) Vegetation (**Exhibit 11**).

The survey found that no state- or federally-listed threatened, endangered, or candidate plant species were recorded in the survey area. Eight (8) native species were observed in the project area, including Ōhia and uhaloa, although these indigenous species (found on the Hawaiian Islands as well as other tropical locations) are not considered rare throughout the Hawaiian Islands.

Mammalian species observed during the field survey include cattle, horses, and mongoose. While not observed during the survey, other mammals that can be expected onsite include dogs, cats, rats, and mice. The bird species observed in and near the project area are species typically found in Hawaii’s urban areas, landscaped gardens and parklands. While no federal/State listed threatened or endangered species were observed during the site survey, a total of seven (7) listed species have the potential to occur within the project area: these include the Hawaiian goose and the Hawaiian hoary bat. Only non-native insect species were observed during the survey, including the honey

bee, the black witch moth, and the koa haole moth. In-stream surveys were not conducted as the streambed and surrounding stream area was dry.

Existing Cultural, Architectural, and Archeological Resources

Previous archeological studies have identified historic properties near the project area that include both pre- and post-Western contact structures (i.e., walls), as well as house sites and one (1) burial site; staff notes that none of these finds are located within the project area.

An archeological field survey, as well as a field inspection of historic architectural resources was conducted by agents for the applicant in 2015. The inspection was conducted along the roadway for a distance of approximately 0.5 miles to either side of the bridge. Two (2) historic architectural resource were found in the vicinity of Hīlea Bridge, 1) the Hīlea Bridge itself, and 2) the bypass portion of Māmalahoa Highway (**Exhibit 12**).

Hīlea Bridge is included in the 2013 *Hawaii State Bridge Inventory and Evaluation*, which describes the bridge as eligible for listing on the National Register of Historic Places under Criterion C for its *association with early development in timber bridge construction in Hawaii*. This bridge is considered a good example of wood bridges built in the 1940's, in the use of materials, method of construction, craftsmanship, and design. Hīlea bridge is one of two (2) remaining timber bridges in the Hawaii State Highway System, representing a rare example of historic bridge type.

Māmalahoa Highway was determined to retain integrity of location, design, setting, materials, workmanship, feeling, and association. This historic property is evaluated as eligible for inclusion in the National Register under Criterion A (*associated with events that have made a significant contribution to the broad patterns of our history*) and Criterion D (*have yielded, or likely to yield, information important to prehistory or history*). The assessment of significance an evaluation of eligibility is based on the historic property's association with *important late nineteenth and early twentieth century events in establishing a regional transportation network that has its roots in antiquity*.

An agent for the applicant conducted a Cultural Impact Assessment (CIA) to evaluate the potential effect of the proposed project on cultural beliefs, practices and resources. Based on the preliminary results of the CIA, the applicant has stated that cultural resources and practices are not expected to be affected by the proposed project. Any cultural practices conducted near the project area (should any occur) would be temporarily restricted during construction for safety reasons, however, all permitted activities would be able to resume after improvements have been completed. No changes to coastal or shoreline access, current use of the area, or parking along the roadway will be altered or impacted by the proposed use.

PROPOSED LAND USES:

The *Federal Highway Administration, Central Federal Lands Highway Division*, in partnership with the *State of Hawaii Department of Transportation (HDOT)*, is proposing to replace Hīlea Bridge on Hawaii Island. A portion of the Hīlea Bridge project area (i.e., areas located makai of the Māmalahoa Highway right-of-way (ROW) is within the State Land Use (SLU) Conservation District, General Subzone and is the subject of this Conservation District Use Application (CDUA).

The existing bridge was built in 1940 (**Exhibit 13**) and is considered a two-span, wooden-timber bridge, approximately 41-feet long by 24-feet wide. As part of the proposed project, the existing bridge will be replaced with a 100-foot long, single span bridge (**Exhibit 14, 14a**). The proposed project would also include a temporary bypass route and crossing, approach and staging areas for construction activities (**Exhibit 15, 15a**). The existing Hilea Bridge would be demolished and replaced with a new single-span bridge that would accommodate two (2) 11-foot travel lanes, a 9-foot shoulder on each side, and a 1-foot, 2-inch wide guardrail on each side of the highway. The roadway approaches to the bridge would be widened, which will require extending embankment slopes or installing retaining walls.

The bridge railings and transitions would meet requirements for crashworthiness. Concrete post and beam railings will have a height of 3-feet 6-inches, with concrete end posts with metal railings being provided along the length of the approach slab as a transition from the metal guardrails of the roadway (**Exhibit 16**).

The replacement bridge would be approximately 100-feet long with a sloping downhill profile from south to north, centered on the existing roadway baseline alignment. The bridge structure will be supported on shallow footing foundations bearing on or embedded into hard basalt. The existing stone abutments will be removed, and grading will take place to transition from the existing channel to the new bridge abutments. The new bridge abutments will be “socketed” into the underlying basalt rock and will be set back from the main channel to provide greater hydraulic capacity.

There will be limited construction in the Conservation District. Activities will include widening the bridge and approaches, and slope stabilization within the existing ROW. Stream channel grading will be conducted to increase hydraulic capacity; this grading will extend from the bridge ROW into the Conservation District.

The purpose of the project is to improve Hilea Bridge and its approach to maintain the stream crossing on Māmalahoa Highway as a safe and functional component of the regional transportation system. The project is needed because the existing bridge does not meet the current (2014) *American Association of State Highway Transportation Officials* (AASHTO) and HDOT structural and design standards for load capacity, bridge, railing and transitions, and bridge approaches. The bridge is considered structurally deficient and functionally obsolete.

Alternatives Analysis

Planning measures for alternatives to the use of the historic Hilea Bridge have been considered by the applicant. Based on an evaluation by the applicant, it is not prudent to maintain the existing bridge in its current condition. A new single-span bridge to replace Hilea bridge is proposed to address structural and functional deficiencies and the stated project purpose and need. The replacement bridge will meet current seismic and load standards and the replaced bridge rails will address the safety deficiencies while being consistent with other bridge designs along the route. This option addresses all structural and safety concerns associated with the existing structure. However, the historic integrity of this structure has been taken into consideration during design. Consideration for the historical aspects of the bridge will be addressed during resolution of adverse effects to this historic property through consultation with the SHPD and consulting parties.

SUMMARY OF COMMENTS:

The Office of Conservation and Coastal Lands (OCCL) referred the application to the following state agencies for review and comment: DLNR – Hawaii District Land Office (HDLO), State Historic Preservation Division (SHPD), Division of Forestry and Wildlife (DOFAW), the Division of Aquatic Resources (DAR), and the Commission on Water Resource Management (CWRM). Additional State Agencies include the Office of Environmental Quality Control (OEQC), the State Department of Health (DOH), the Department of Transportation (HDOT), and the Office of Hawaiian Affairs (OHA). The application was also provided to the County of Hawaii – Planning Department and County of Hawaii - Department of Water supply, as well as the Pāhala Public and School Library for additional public review and comment.

Comments received from the following agencies have been summarized by staff as follows:

DLNR – Forestry and Wildlife (DOFAW)

DOFAW has reviewed the project description and we offer the following comments pursuant to Hawaii Revised Statutes Chapter 195D (HRS 195D):

The State and Federally listed Hawaiian hoary bat has the potential to occur in the vicinity of the project area. Therefore, DOFAW recommends avoiding using barbed wire, as bat mortalities have been documented as a result of becoming ensnared by barbed wire during flight. If any trees are planned for removal during the bat breeding season there is a risk of injury or mortality to juvenile bats. To minimize the potential for impact to this species, woody plants greater than 15-feet tall should not be disturbed, removed, or trimmed during the bat birthing and pup rearing season (June 1 through September 15). Site clearing should be timed to avoid disturbance to breeding Hawaiian hoary bats. The endangered Hawaiian Hawk or ‘io may occur in the project vicinity. DOFAW recommends surveying the area to ensure no Hawaiian hawk nests are present if trees are to be cut. Finally, we note that artificial lighting can adversely impact seabirds that may pass through the area at night causing disorientation which could result in a collision with manmade objects or grounding of birds. If nighttime lighting is required during construction or operation, DOFAW recommends that any lights used be fully shielded to minimize impacts.

Should the proposed location of the project change, or should it become evident in the future that listed species are being impacted, DOFAW requests that the project proponent reinitiate consultation.

Applicant Response: Thank you for your comments on the CDUA for the subject project. We acknowledge and have reviewed the information you provided regarding Hawaiian hoary bat, Hawaiian hawk, and lighting restrictions for Hawaiian seabirds.

During project development, the applicant incorporated the following commitments into our HEPA/NEPA compliance documentation for the project to protect these sensitive resources:

- 1. Any fences that are erected as part of the project would have barbless top-strand wire to prevent entanglements of the Hawaiian hoary bat on barbed wire. No fences in the survey area were observed with barbed wire. However, if fences are present within the project limits, the top strand of barbed wire will be removed or replaced with barbless wire;*

2. *In general, no trees taller than 15-feet would be trimmed or removed as a result of this project between June 1 and September 15, when juvenile bats that are not yet capable of flying may be roosting in the trees; however, if a limited number of trees need to be cleared during that time period, a qualified biologist would use appropriate protocols to ensure no juvenile bats are in the affected trees before trimming or cutting;*
3. *If brush or tree clearing is anticipated to occur during the hawk breeding season (March through September), a nest survey would be conducted in the project areas before construction. This survey would be conducted by a qualified biologist using appropriate survey methods;*
4. *Construction activity would be restricted to daylight hours during the seabird peak fallout period (September 15 to December 15) to avoid the use of nighttime lighting that could attract seabirds. Dark sky procedures would be used outside the peak fallout period if night work is required; and*
5. *All outdoor lights would be shielded to prevent upward radiation.*

DLNR – Hawaii District Land Office (HDLO)

The agency had no comments on the proposed project.

DLNR – State Historic Preservation Division (SHPD)

The project documents reviewed by the SHPD support the following:

1. The revised APE totals 3.5 acres;
2. Two (2) historic properties have been identified within the overall APE: Hilea Bridge, and a 1940s by-pass portion of the Māmalahoa Highway;
3. A Determination of Eligibility (DOE) for the two (2) historic properties as eligible for inclusion in the National Register of Historic Places (NRHP) and the Hawaii Register of Historic Place (HRHP);
4. The effect determination is “Adverse Effect” as the undertaking would result in the demolition of the bridges. However, the integrity and significance of the highway would remain unchanged.
5. Pursuant to HAR §13-275-7, the effect determination is “*Effect, with Proposed Mitigation Commitments*”.

Based on the above information, **SHPD has no objections** to the issuance of CDUP HA-3805 permit for the proposed Hilea Bridge Replacement Project.

Applicant Response: *No response from applicant*

DLNR – Division of Aquatic Resources (DAR)

The agency had no comments on the proposed project.

State Department of Health (DOH) – Clean Water Branch

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your memo, dated September 5, 2017, requesting comments on your Conservation District Use

Application for the Hilea Bridge Replacement Project (CDUA HA-3805). The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: <http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf>

1. Any project and its potential impacts to State waters must meet the following criteria:
 - A. Antidegradation policy (*HAR, Section 11-54-1.1*), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
 - B. Designated uses (*HAR, Section 11-54-3*), as determined by the classification of the receiving State waters.
 - C. Water quality criteria (*HAR, Sections 11-54-4 through 11-54-8*).
2. You may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (*HAR, Chapter 11-55*). For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for a NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee (\$1,000 for an individual NPDES permit or \$500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: <https://ehacloud.doh.hawaii.gov/epermit/>. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.
3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements. Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.
4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.

5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:

- a. *Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.*
- b. *Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g. minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.*
- c. *Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.*
- d. *Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.*
- e. *Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.*

Applicant Response: Thank you for sending comments on the Conservation District Use Application for the subject project. We acknowledge and have reviewed the information you provided on the Hawaii Administrative Rules HAR 11-54 antidegradation policy, designated uses, and water quality criteria; NPDES permitting requirements; Clean Water Act Section 404 permits, Section 401 water quality certification; and state storm water management requirements. These resources are helpful and are being utilized in project planning and permitting.

The FHWA-CFLHD (i.e., applicant) has applied for and received the Section 401 water quality certification (WQC0919.FNL.17) for the subject project on August 10, 2017; Section 404 permit is anticipated in December 2017, and the NPDES Notice of General Permit Coverage was issued on May 31, 2017.

FHWA will continue to work with your staff as we maintain compliance with all permits on this project. We appreciate your participation in the environmental review process.

Office of Hawaiian Affairs (OHA)

No comments were received from agency

State Department of Transportation (HDOT)

The agency had no comments on the proposed project.

County of Hawaii – Planning Department

The agency had no comments on the proposed project.

County of Hawaii – Dept. of Water Supply (DWS)

The agency had no comments on the proposed project.

Public Library

No comments were received from the public

ANALYSIS:

Following review and acceptance for processing, the Applicant's Agent was notified, by letter dated September 5, 2017 that:

- A. Your proposal to conduct the *Hilea Bridge Replacement Project* located in Ka'ū District, Island of Hawaii is considered an identified land use within the Conservation District General Subzone pursuant to Hawaii Administrative Rules (HAR), §13-5-22, P-6, **PUBLIC PURPOSE USES (D-1)**, *Not for profit land uses undertaken in support of a public service by an agency of the county, state, or federal government, or by an independent non-governmental entity, except that an independent non-governmental regulated public utility may be considered to be engaged in a public purpose use. Examples of public purpose uses may include but are not limited to public roads, marinas, harbors, airports, trails, water systems and other utilities, energy generation from renewable resources, communication systems, flood or erosion control projects, recreational facilities, community centers, and other public purpose uses, intended to benefit the public in accordance with public policy and the purpose of the conservation district.* Please note that the final decision to approve or deny this proposal rests with the Board of Land and Natural Resources (BLNR);
- B. Pursuant to HAR §13-5-40, Hearings, a public hearing *is not* required;
- C. A Final Environmental Assessment (FEA) with a Finding of No Significant Impact (FONSI) was published in the Office of Environmental Quality Control (OEQC) publication, *The Environmental Notice (EN)* on April 8, 2017, and
- D. Please be informed that, the applicant's responsibility includes complying with the provisions of Hawaii's Coastal Zone Management law (Chapter 205A, *Hawaii Revised Statutes*) that pertain to the Special Management Area (SMA) requirements administered by the various counties. Negative action by the Chair of the BLNR on this application can be expected should you fail to obtain and provide us, at least thirty (30) days prior to Chairpersons action, one of the following from the appropriate county:
 1. An official determination that the proposal is exempt from the provisions of the county rules relating to the SMA;
 2. An official determination that the proposed development is outside the SMA; or

3. An SMA Use Permit for the proposed development.

By letter dated July 13, 2017 the County of Hawaii Planning Department issued Special Management Area Minor Permit No. 17-000373 for the proposed project.

The OCCL published notification of this Conservation District Use Application (CDUA) in the *September 23, 2017* issue of the Office of Environmental Quality Control (OEQC) publication the Environmental Notice.

§13-5-30 CRITERIA:

The following discussion evaluates the merits of the proposed land use by applying the criteria established in HAR §13-5-30.

- 1) *The proposed use is consistent with the purpose of the Conservation District. The objective of the Conservation District is to conserve, protect, and preserve the important natural resources of the state through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare.*

The applicant has stated that HDOT operates and maintains Māmalahoa Highway (and the associated Hīlea Bridge) for the benefit of the public. Public roads are an identified land use in the Conservation District. As part of a public purpose use, the proposed project is considered to be consistent with the purpose of the conservation district; in particular, it would help to provide for public health, safety and welfare. OCCL Staff notes that one objective is to minimize the impacts associated with storm events; by improving drainage and flood controls in this area, the surrounding landscape will be better preserved.

- 2) *The proposed land use is consistent with the objectives of the Subzone of the land on which the use will occur. The objective of the General Subzone is to designate open space where specific conservation uses may not be defined, but where urban use would be premature.*

The applicant states that Māmalahoa Highway (and the associated Hīlea Bridge) is a public roadway and is considered a public purpose use, which is an identified land use in all subzones of the Conservation District. As an identified land use in the general subzone, the proposed project is considered to be consistent with the objectives of that subzone and would not diminish the open space associated with the Conservation District. OCCL Staff notes that the existing bridge has been in use for over 70 years and therefore constitutes a necessary public resource. The bridge work will aim to improve the safe use of the road, while improving stormwater management in this area.

- 3) *The proposed land use complies with the provisions and guidelines contained in Chapter 205A, HRS entitled "Coastal Zone Management", where applicable.*

OCCL Staff has evaluated the statements and information provided in the CDUA and FEA to further address consistency with Chapter 205A.

Recreational Resources:

Applicant Statement: The proposed project does not affect recreational resources or planning, and would not adversely affect water quality, other natural resources or other recreational resources, nor would it restrict shoreline uses such as hiking, fishing, or water sports. The project is located in a rural setting and there are no designated bicycle and pedestrian facilities through the project area. The existing bicyclist usage is minimal, mostly touring and recreational. Because of the lower volume of traffic on the road and the short construction zone, standard traffic control practices described in the Manual of Uniform Traffic Control Devices (MUTCD) would be proposed to accommodate bicyclists.

OCCL staff believes that the proposed improvement would have no long-term impact or modify current recreational uses in this area. As the project site is a heavily used highway, staff believes the uses of the area are minimal to non-existent. Access to the shoreline and other areas nearby will not be altered or diminished.

Historical Resources:

Applicant Statement: The Archeological Inventory Survey (AIS) identified and analyzed the significance of the archeological resources within the project area. The proposed project would demolish and replace Hilea Bridge and therefore have an "adverse effect" in accordance with federal regulations and "effect, with proposed mitigation commitments" in accordance with state regulations. A Memorandum of Agreement between the FHWA and State Historic Preservation Office stipulates the mitigation measures, including the following:

- *Documentation of the historic bridge;*
- *Development of interpretive material in consultation with the State Historic Preservation Division (SHPD), consulting parties, and the local community;*
- *Installation of interpretive material before construction is completed at a site identified with stakeholder input; and*
- *Inclusion of material salvaged from the existing structure, as practicable.*

OCCL staff notes that a mitigation plan for the project provides for precautionary archeological monitoring to identify any potentially unidentified subsurface historic properties. It was stated by the applicant that in the unlikely event that any unanticipated archeological resources are unearthed during development activities, in compliance with HAR 13-280, work in the immediate vicinity of the finds would be halted and SHPD would be contacted.

Scenic and Open Space Resources:

Applicant Statement: Valued scenic resource in the coastal zone in this area are the viewplane from Highway 11 towards the coast, and the views of Mauna Loa and the mountains near Pāhala from the highway. The proposed project would not adversely affect any sight lines or scenic resources in any way. Furthermore, the project maintains the quality of scenic and open space resources by the leaving the coastal area in an open condition.

OCCL staff notes that the proposed project is at ground level, and currently views are blocked by vegetation growing along the road, not the bridge. This project will have no

impact on viewplanes and will not modify or alter the open space character of the area as the project will be primarily within the established ROW, and includes very little vegetation removal.

Coastal Ecosystems/Marine Resources:

Applicant Statement: The nature, location, and design of the proposed bridge replacement, along with best management practices (BMP) that would be undertaken during construction, would minimize impacts to coastal biological resources and represent appropriate stewardship and protection. No coastal ecosystems are present on or directly adjacent to the bridge.

OCCL staff notes that this drainage channel ends at the ocean, more specifically Kāwā Estuary and wetland area. Staff visited the site and noted that the proposed project will better direct stormwater to the channel areas, rather than flooding the roadway and reaching the ocean across a large area. This project will diminish the erosion potential of the channel and thus decrease sediments reaching the shoreline.

- 4) *The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.*

The applicant states the proposed project would provide a replacement bridge that substantially coincides with the footprint of the existing bridge. It would not have a significant adverse effect on important natural and cultural resources. Biological surveys of the project area found no threatened or endangered plant or animal species, but seven (7) species have the potential to occur in the project area, including but not limited to the Hawaiian hoary bat and Hawaiian hawk. BMPs and protocols would be implemented to avoid and minimize contact with special-status species and protected migratory birds that may be encountered in the project area.

The proposed project is not expected to affect any archeological resources, as none were identified in the project area. The existing Hilea Bridge is more than 50 years old, and has been determined to be eligible for listing in the National and State Registers of Historic Places. The project would adversely affect the bridge, but mitigation as agreed upon with SHPD would be implemented to minimize the potential impacts. The contractor would be required to comply with state laws and administrative rules for handling inadvertent discoveries of cultural artifacts and human remains during construction.

OCCL staff believes that the goal of improving the stormwater management of this flow through bridge will directly improve the natural character and resources of the immediate area. Flooding in the past has caused significant soil erosion, loss of habitat, and near shore turbidity that should be reduced once the project is complete (**Exhibit 17**).

- 5) *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

Hīlea Bridge is located along Māmalahoa Highway, in a relatively undeveloped area. The proposed project involves replacement of Hīlea Bridge to maintain the stream crossing on Māmalahoa Highway as a safe and functional component of the regional transportation system for highway users. The project would involve some short-term impacts during construction (e.g., noise, dust, erosion), but these would be minimal with implementation of BMPs. OCCL staff believes that over the long term, the project is not expected to result in any impacts to the surrounding area, and may improve the natural character of the area by better controlling stormwater flux.

- 6) *The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable.*

The applicant states that the proposed project would replace the existing Hīlea Bridge with a longer (100-foot), single-span bridge, which would alter the visual appearance of the project site. Even though the proposed project would result in visual changes to the site, features of the new bridge would be similar in character of the recently replaced Keiwi Stream Bridge at MP 50.35 on State Route 11. From the vantage point of highway users, the longer bridge and new bridge railing structures would be the most noticeable change compared to existing conditions, but in general, this and other visual changes would be considered minimal and would not affect the quality of views toward the bridge. Other project features, such as land-width alterations and road shoulder establishment, would be even less noticeable compared to existing conditions than the bridge length and railing.

The applicant further states the project would not result in a substantial change to the existing landscape or result in a noticeable change to the project viewplane because the project site is not highly visible from areas outside the project sites immediate vicinity. Therefore, in terms of the Natural Beauty Site and Kawa Bay and Estuary, views from Kawa Bay would not be affected as a result of the proposed project.

OCCL staff believes the existing environmental aspects of the area will be preserved, and not modified. The proposed bridge replacement project will be restricted to road level impacts and aims to modify an important highway structure for public use and safety.

- 7) *Subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.*

The proposed project does not involve the subdivision of Conservation District lands.

- 8) *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

OCCL staff notes that the project is being proposed in order to improve and existing, heavily used, public roadway and bridge. The proposed project will maintain the highway crossing in this area, while improving the stormwater management flux in this area. The bridge improvements are also being pursued in order to provide a safe and effective bridge structure to promote public health, safety, and welfare.

Full closure of Māmalahoa Highway may be needed for certain construction activities. Provisions would be made to restrict these full closures to when road use is minimal, such as nighttime periods. Provisions would also be made to restrict these full closures as much as practicable. The public would be notified well in advance of all closures. Emergency and incident responders would be allowed access through the construction area at all times.

CULTURAL AND HISTORICAL IMPACT REVIEW:

Please Provide the identify and scope of cultural, historical, and natural resources in which traditional and customary native Hawaiian rights are exercised in the area:

Applicant Statement: As described above, [an agent for the applicant] conducted a Cultural Impact Assessment (CIA) to evaluate the potential effect of the proposed project on cultural beliefs, practices, and resources.

OCCL staff notes that based on a review of the submitted material, and a site visit to the project area there appears to be no current cultural and historical use of the project site. The project site is a heavily used highway and bridge system that spans a non-perennial stream where fishing and gathering would be intermitted or non-existent. Cultural uses of the area relate to more *mauka* (i.e., farming and grazing) and *makai* (i.e., Kāwā Bay and Estuary) locations; none of which would be impacted, altered, or modified by this proposed project.

Identify the extent to which those resources, including traditional and customary Native Hawaiian rights, will be affected or impaired by the proposed action:

Applicant Statement: Based on the results of the CIA, cultural resources and practices are not expected to be affected by the proposed project. Cultural practices near the project area (should any occur) would be temporarily restricted during the construction period for safety reasons. All permitted activities would resume once the improvements have been completed. Should cultural resources or human remains be inadvertently discovered during construction, all work would immediately cease, the appropriate agencies (including the Office of Hawaiian Affairs) would be contacted, and the contractor would comply with applicable State law and administrative rules for handling them.

Staff notes that the traditional, customary, and historic uses in this area are primarily restricted to the *mauka* uplands and coastal areas. Based on the CIA and supporting documents it appears there is no direct use of this project site, and therefore the proposed changes and modifications to the existing bridge and highway should have no influence on native and customary practices. As stated previously, the stream is non-perennial and typically dry, therefore gathering of natural resources would not be pursued. Downstream of the bridge and project area is the Kāwā Bay and Estuary – here cultural practices are being pursued. The proposed project will not impact or alter the current use of the Bay or estuary.

To determine whether there may be additional concerns, the applicant contacted several cultural experts and/or Native Hawaiian organizations, including *Hawaiian Civic Club of Kau, Kau Preservation, O Kau Kakou, Hawaii County Cultural Resources Commission and the Historic Hawaii Foundation* for their consultation and input.

What feasible action, if any, could be taken by the Board of Land and Natural Resources in regard to your application to reasonably protect Native Hawaiian rights?

Applicant Statement: No further action is expected to be required to protect Native Hawaiian rights.

OCCL staff agrees with this statement since the proposed projects design and planning included a Cultural Impact Assessment (CIA), interviews and talk-story with local residents, and consultation with Hawaiian organizations located in the project region. Additionally, the proposed project is a replacement of an existing structure that has been in heavy use for over 70 years, and will be primarily contained within the footprint of the existing ROW; thus, minimizing new impacts to resources. The SHPS did not include any provisions for protecting or monitoring existing cultural resources, therefore OCCL staff believes that customary and traditional rights conducted in the vicinity of the project site would not be adversely affected by the proposed project.

DISCUSSION:

The proposed project being applied for under this Conservation District Use Application (CDUA) is the Hilea Bridge Replacement Project. The objective is to replace the outdated Hilea bridge structure, and improve the highway around the new bridge. The Hilea Bridge was constructed over 70 years ago and no longer meets the current *American Association of State Highway Transportation Officials* and *Hawaii Department of Transportation* (HDOT) structural and design standards; the Hilea Bridge is considered to be structurally deficient and functionally obsolete.

Project components include: installing temporary roadways and bridges; demolishing existing bridge structures; erecting structural members such as beams and columns; pouring concrete; excavating, placing fill, grading, and paving; installing temporary and permanent erosion control devices; and installing highway appurtenances such as signage, barriers, and pavement markings. These improvements will be necessary to accommodate the wider bridge structure, and to minimize the impact of stormwater events that flow through this area. Staff notes that only a portion of this project will occur within the SLU Conservation District, while other portions (i.e., temporary access roadway) will not be located in the SLU Conservation District.

OCCL staff visited the project site and determined that this rural area will not be detrimentally affected by the proposed project since: the existing bridge has been in operation for over 70 years; the highway is the main thoroughfare through this area for residents and visitors; the existing bridge does not meet current safety standards; the new bridge design will better accommodate stormwater and reduce flooding of the highway, and the proposed structure will be primarily contained within the existing HDOT right-of-way.

OCCL staff evaluates the appropriateness of a project based on a complete and comprehensive assessment that has been assembled from acceptance of the application, to the writing of this staff report. This report outlines the effects the proposed land uses represent to natural resources, recreation, the community, and the environment within the project area; based on the information provided staff believes project impacts will not be significant or cumulative. Additionally, this project's public benefit appears to be necessary for fulfilling the HDOT mission which is: *to provide a safe, efficient, accessible, and inter-modal transportation system that ensures the mobility of people and goods, and enhances and/or preserves economic prosperity and the quality of life.*

In conclusion, staff believes that this project, as proposed, is consistent with Conservation District objectives, and based on the above discussion and information received, Staff recommends as follows:


RECOMMENDATION:

Based on the preceding analysis, Staff recommends that the Board of Land and Natural Resources **APPROVE** this application for the *Hīlea Bridge Replacement Project* located in the Ka'ū District, Island of Hawai'i, on Tax Map Key: (3) 9-5-017:007, subject to the following conditions:

1. The permittee shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, state, and county governments, and applicable parts of this chapter;
2. The permittee shall obtain appropriate authorization from the department for the occupancy of state lands, **if applicable**;
3. The permittee shall comply with all applicable department of health administrative rules;
4. Before proceeding with any work authorized by the department or the board, the permittee shall submit four copies of the construction plans and specifications to the chairperson or an authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit application. Three of the copies will be returned to the permittee. Plan approval by the chairperson does not constitute approval required from other agencies;
5. Unless otherwise authorized, **any work or construction to be done on the land shall be initiated within one year of the approval of such use**, in accordance with construction plans that have been signed by the chairperson, and **shall be completed within three years of the approval of such use**. The permittee shall notify the department in writing when construction activity is initiated and when it is completed;
6. All representations relative to mitigation set forth in the accepted environmental assessment or impact statement for the proposed use are incorporated as conditions of the permit;
7. The permittee understands and agrees that the permit does not convey any vested right(s) or exclusive privilege;
8. In issuing the permit, the department and board have relied on the information and data that the permittee has provided in connection with the permit application. If, subsequent to the issuance of the permit such information and data prove to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and the department may, in addition, institute appropriate legal proceedings;
9. When provided or required, potable water supply and sanitation facilities shall have the approval of the department of health and the county department of water supply;
10. Provisions for access, parking, drainage, fire protection, safety, signs, lighting, and changes on the landscape shall be provided;

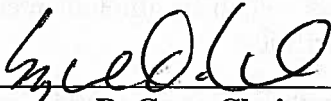
11. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the permittee shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
12. Obstruction of public roads, trails, lateral shoreline access, and pathways shall be avoided or minimized. **If obstruction is unavoidable, the permittee shall provide alternative roads, trails, lateral beach access, or pathways acceptable to the department;**
13. **Except in case of public highways, access roads shall be limited to a maximum of two lanes;**
14. During construction, appropriate mitigation measures shall be implemented to minimize impacts to off-site roadways, utilities, and public facilities;
15. Cleared areas shall be revegetated, in accordance with landscaping guidelines provided in this chapter, within thirty days unless otherwise provided for in a plan on file with and approved by the department;
16. Use of the area shall conform with the program of appropriate soil and water conservation district or plan approved by and on file with the department, where applicable;
17. The permittee shall obtain a county building or grading permit or both for the use prior to final construction plan approval by the department, **if applicable;**
18. For all landscaped areas, landscaping and irrigation shall be contained and maintained within the property, and shall under no circumstances extend seaward of the shoreline as defined in section 205A-1, HRS;
19. Artificial light from exterior lighting fixtures, including but not limited to floodlights, uplights, or spotlights used for decorative or aesthetic purposes, shall be prohibited if the light directly illuminates or is directed to project across property boundaries toward the shoreline and ocean waters, except as may be permitted pursuant to section 205A-71, HRS. All exterior lighting shall be shielded to protect the night sky;
20. The permittee acknowledges that the approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native Hawaiians in the immediate area, to the extent the practices are provided for by the Constitution of the State of Hawaii, and by Hawaii statutory and case law; and
21. Other terms and conditions as prescribed by the chairperson.
22. Failure to comply with any of these conditions shall render a permit void under the chapter, as determined by the chairperson or board.

Respectfully submitted,



Alex J. Roy, M.Sc., Staff Planner
Office of Conservation and Coastal Lands

Approved for submittal:



Suzanne D. Case, Chairperson
Board of Land and Natural Resources



Source: CSH
 Base Map: USGS Topographic Map, Naalehu (1995) and Punaluu (1982) Quadrangles

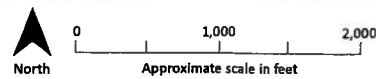


EXHIBIT 1 CDUA: HA-3805

LEGEND

 Project Area

Project Location – Hilea Bridge
 Hilea/Ninole Bridge Project
 Hawaii Bridges Program –
 Central Federal Lands Highway Division and
 Hawaii Department of Transportation

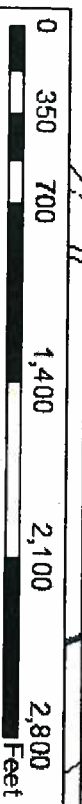


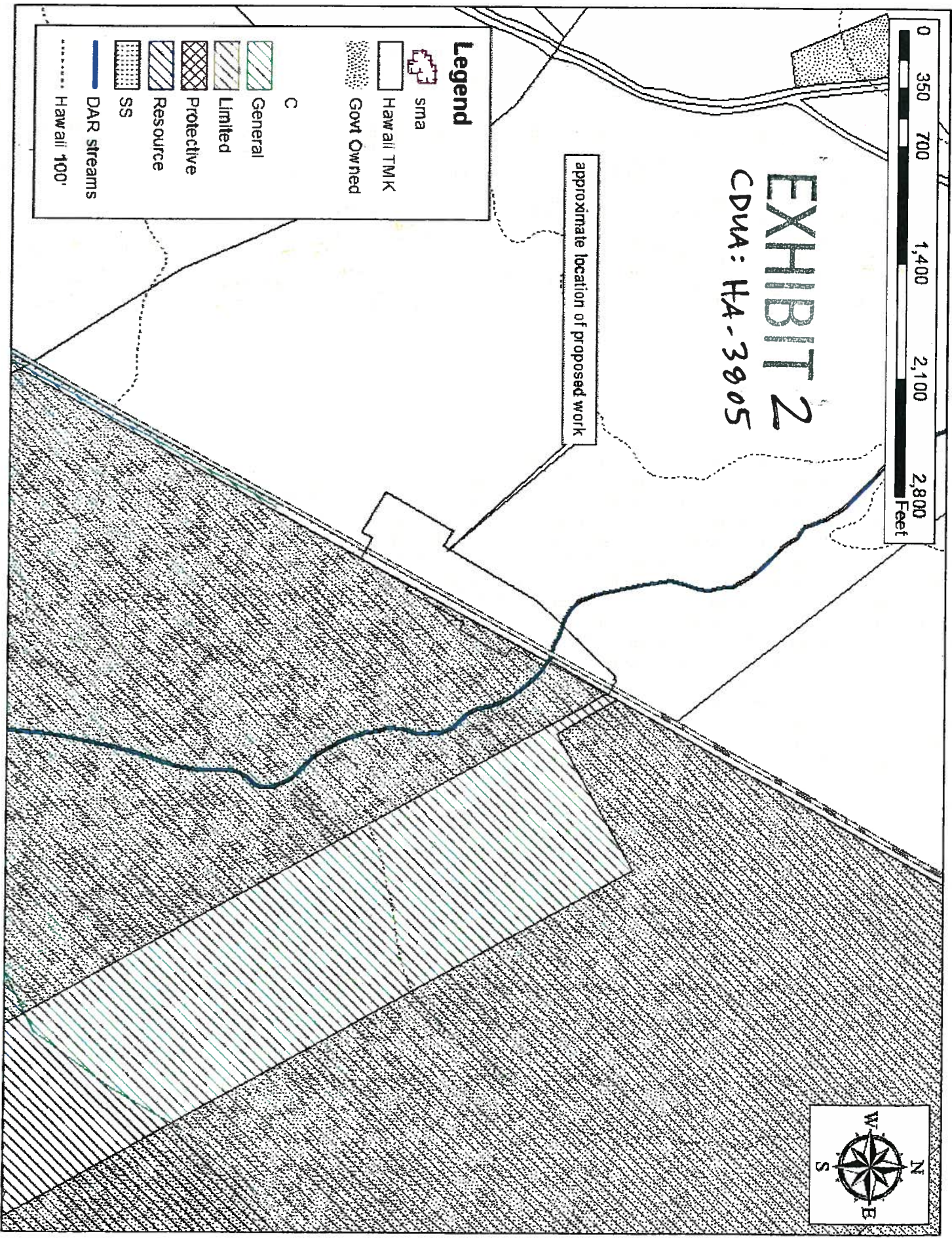
EXHIBIT 2

CDWA: HA-3805

approximate location of proposed work

Legend

- sma
- Hawaii TMIK
- Govt Owned
- General
- Limited
- Protective
- Resource
- SS
- DAR streams
- Hawaii 100'



Legend










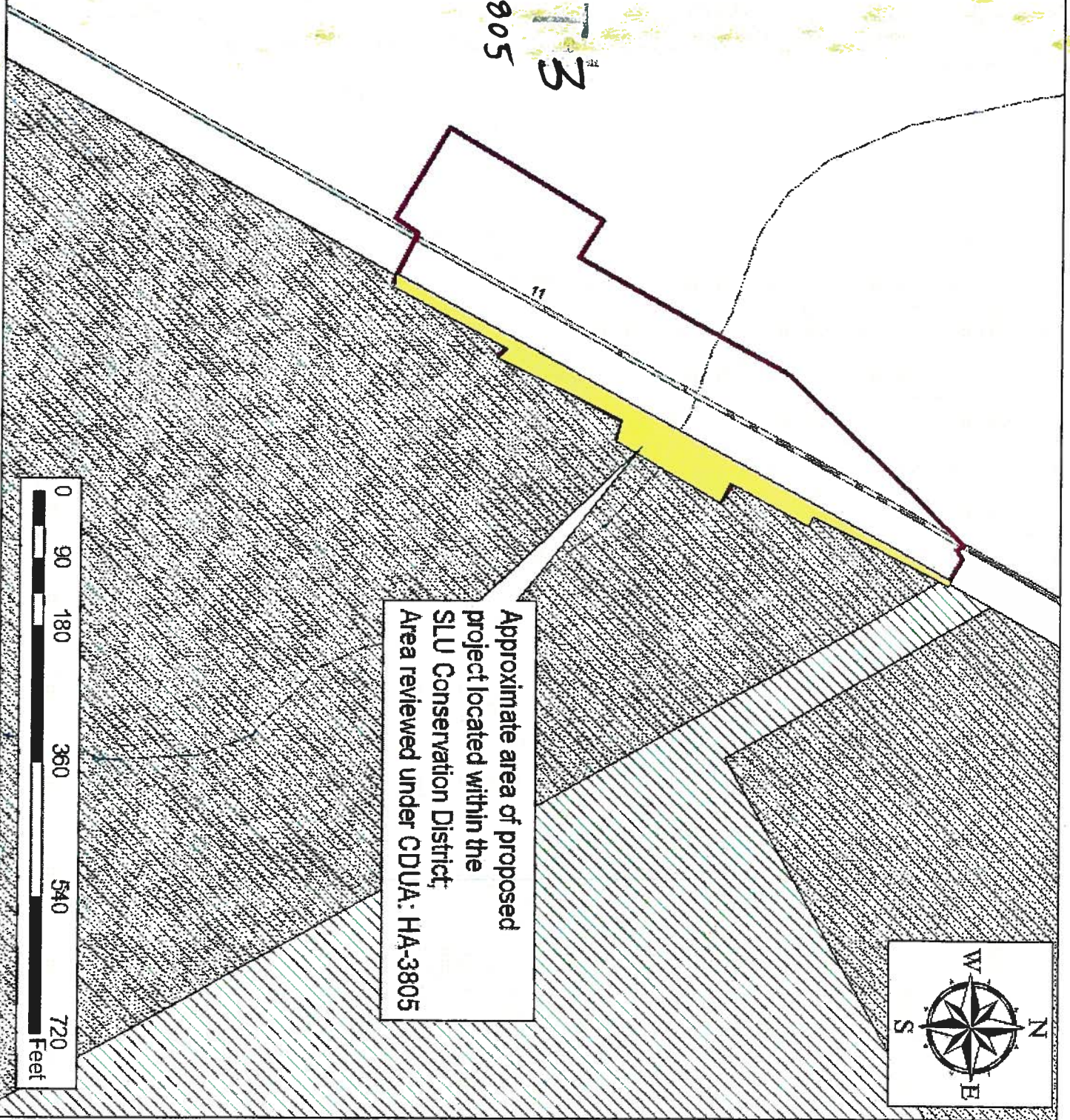
	DAR streams
	Govt Owned
	Hawaii TMIK
	C
	General
	Limited
	Protective
	Resource
	SS

EXHIBIT 3

CDUA: HA-3805



Approximate area of proposed project located within the SLU Conservation District; Area reviewed under CDUA: HA-3805



EXHIBIT 4

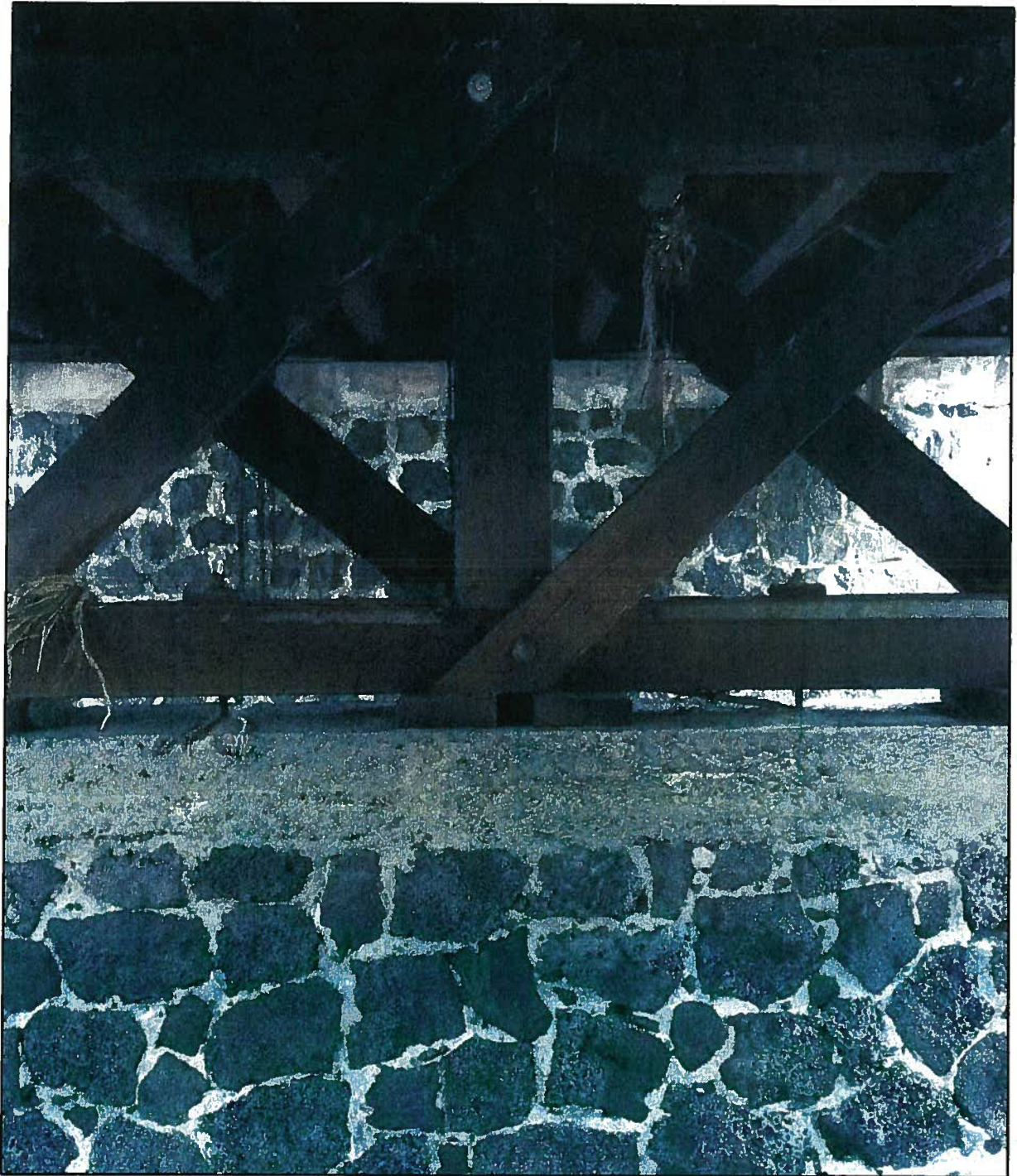
CDMA: HA-3805



Hilea Bridge asphalt deck, view to southwest



Hilea Bridge timber columns and footings on makai side of bridge, view upstream



Hilea Bridge (SIHP # 50-10-74-30298) structural support beams and foundation, view to north

EXHIBIT 5

CDUA: HA-3805

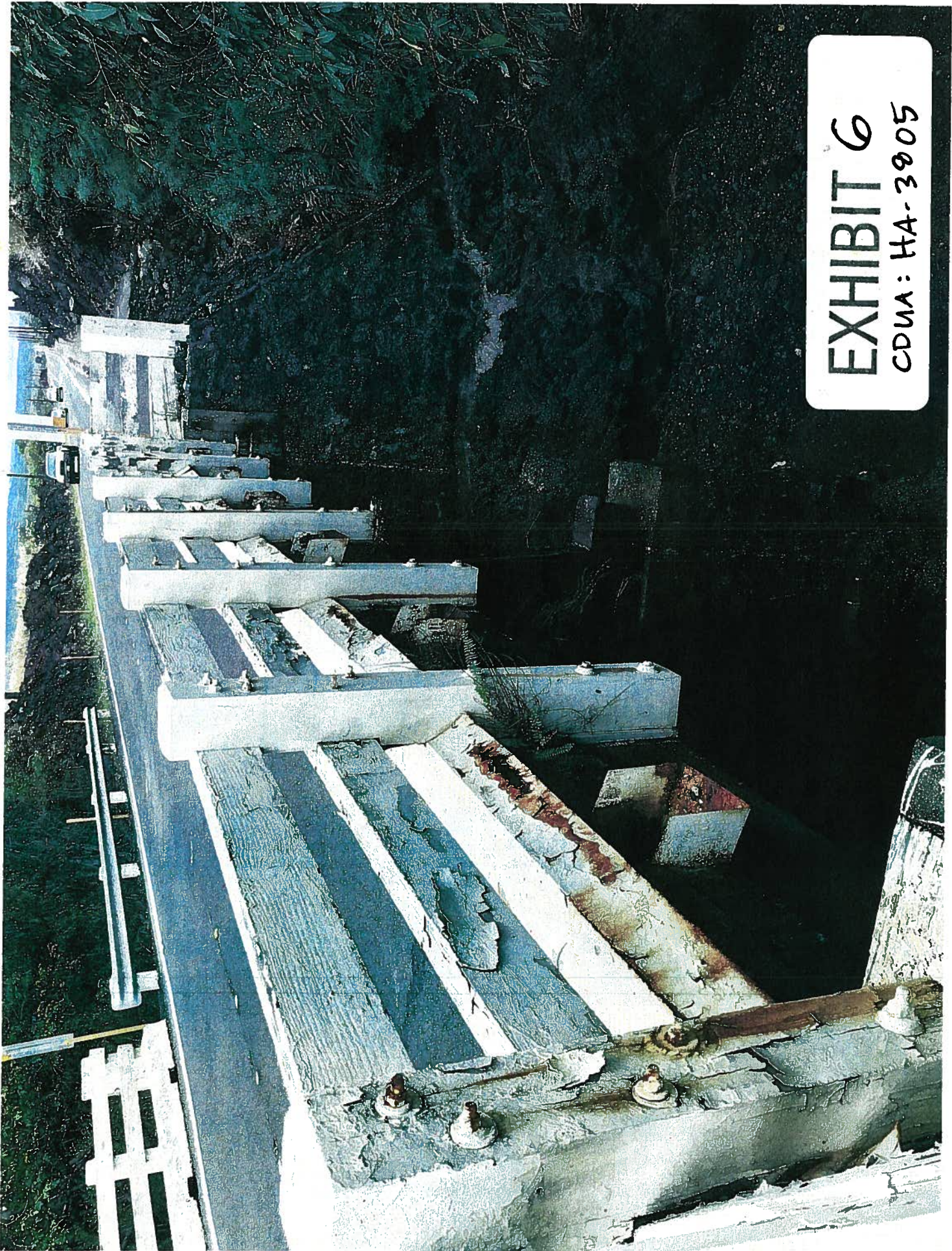


EXHIBIT 6
CDUA: HA-3905

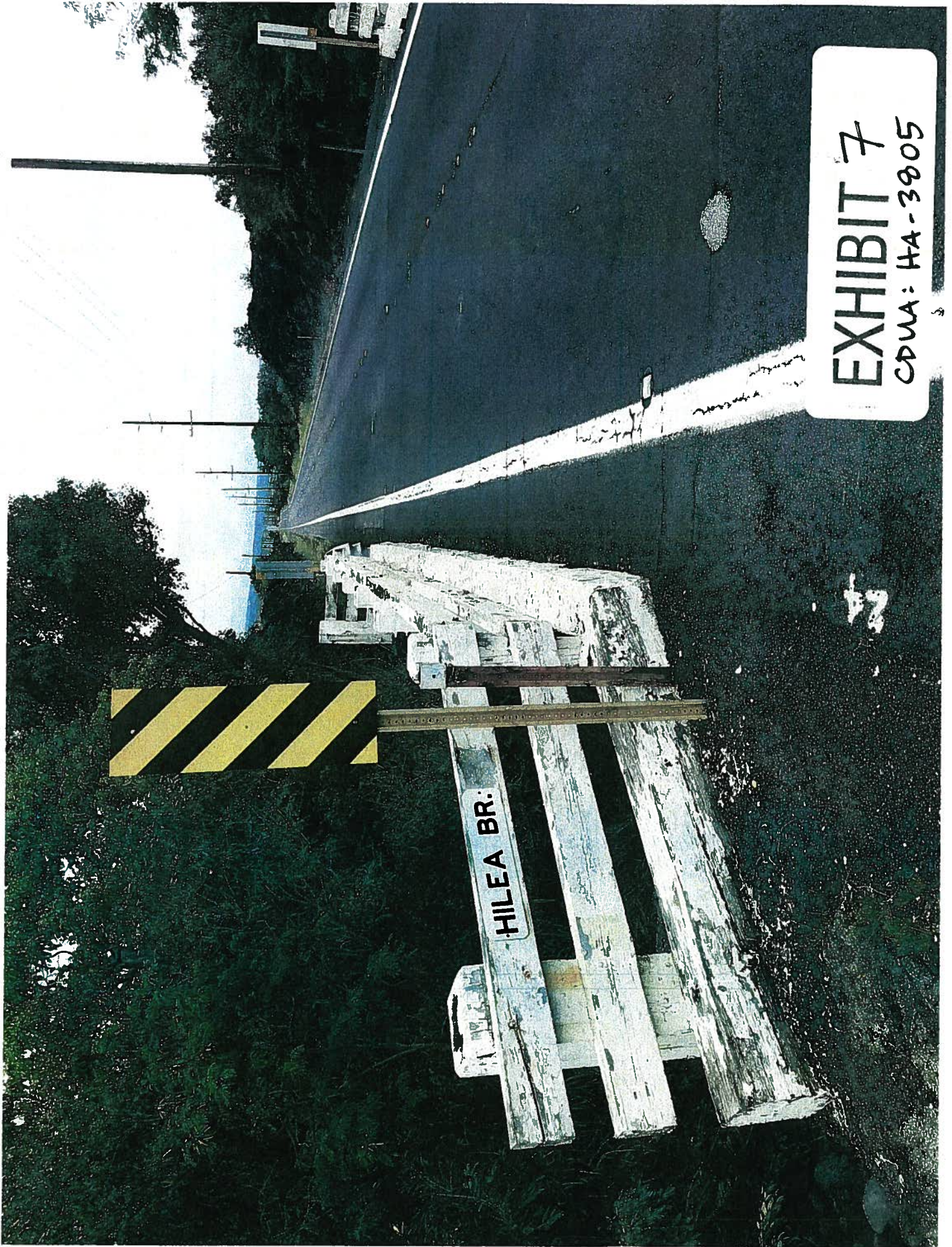
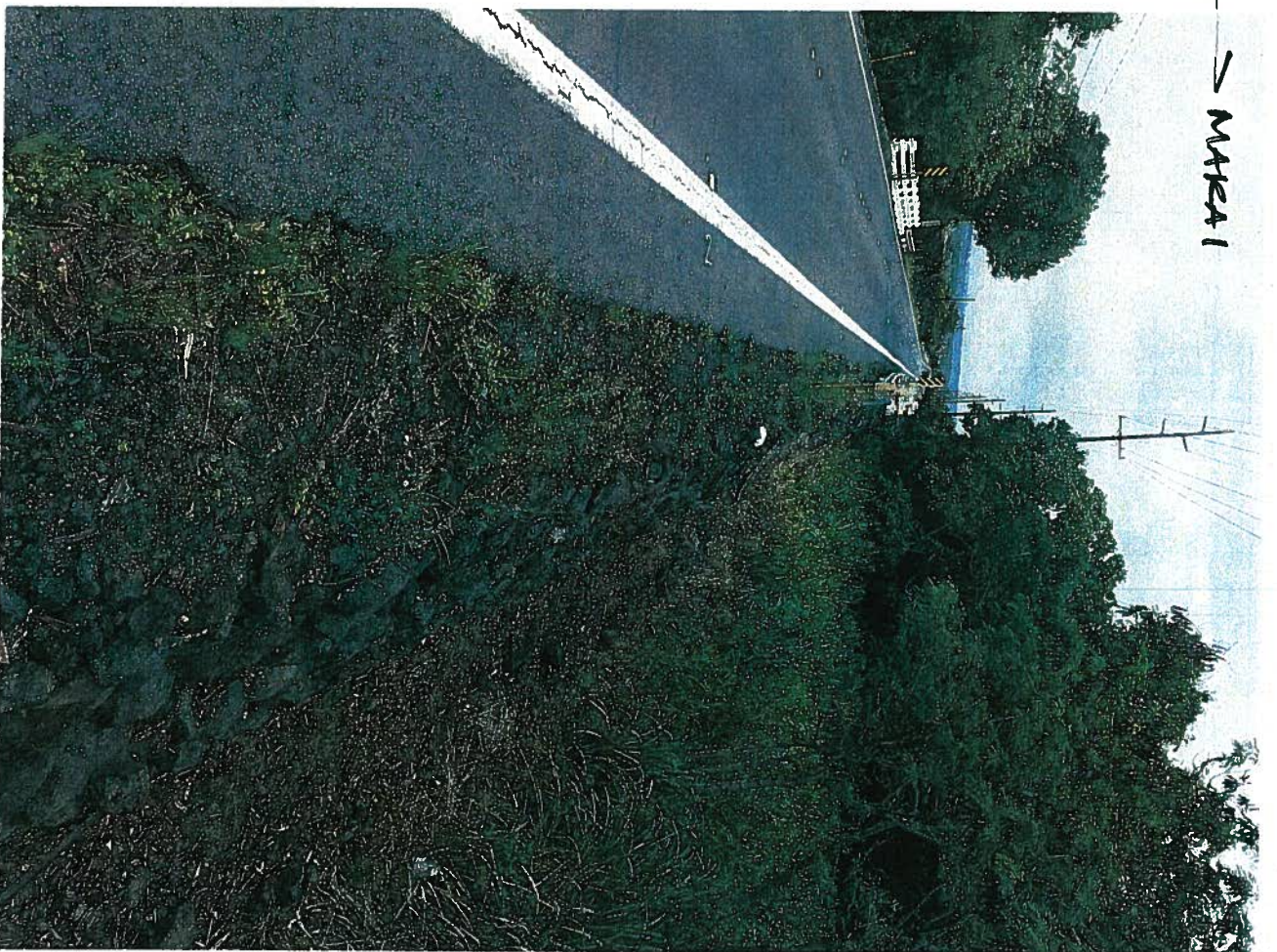
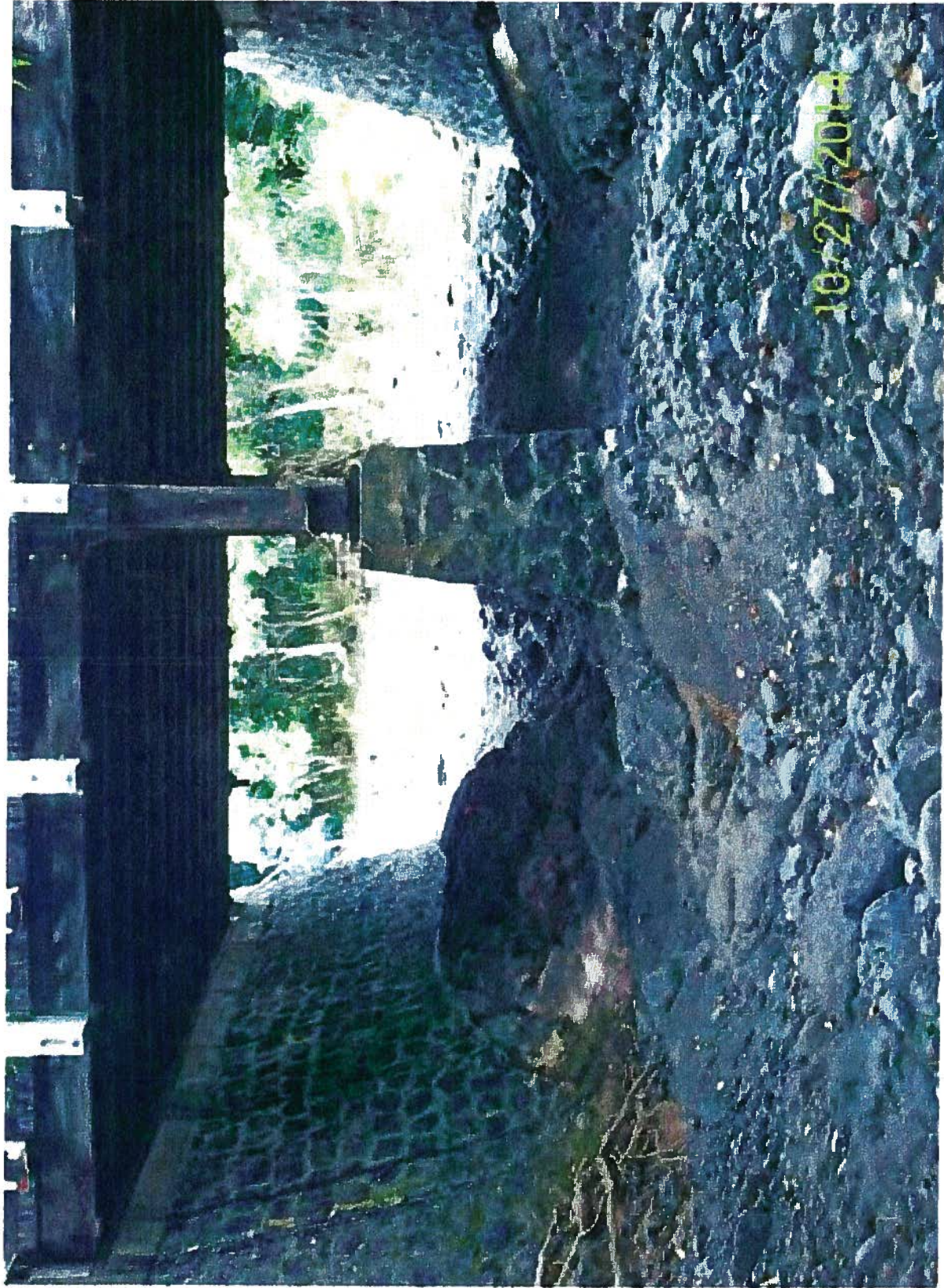


EXHIBIT 7
CDWA: HA-3905

EXHIBIT 8

CDVA: HA-3805

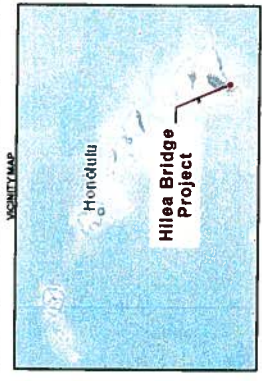
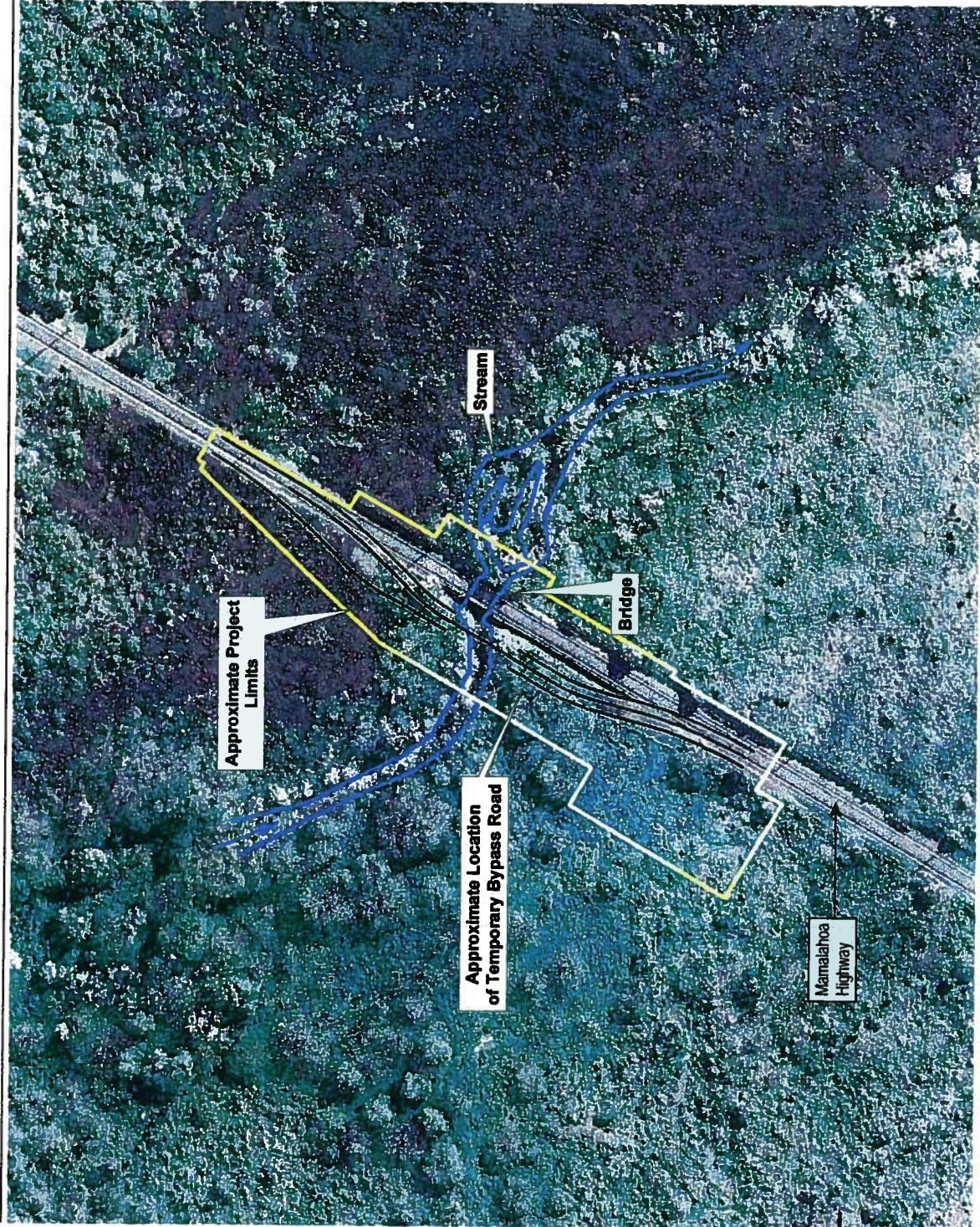




Hilea Stream is usually a dry streambed at State Route 11.

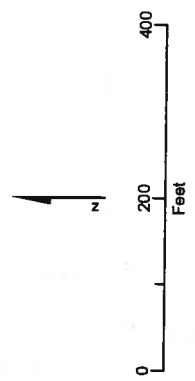
CDWA:
HA-3005

EXHIBIT 9



- LEGEND**
- Approximate Project Limits
 - Approximate Location of Temporary Bypass Road
 - Waters of the U.S. and Flow Directions

Notes:
 1. High-Res Imagery Source: Google Earth 01/08/2013
 2. Low-Res Imagery Source: Digital Globe 02/27/2010
 3. Imagery base map is not orthorectified, therefore project features may not properly align with the imagery.



**Project Limits and Survey Area – Hilea Bridge
 Hilea/Nicole Bridge Project
 Hawaii Bridges Program –
 Central Federal Lands Highway Division and
 Hawaii Department of Transportation**

T:\2008\10\0800_002_H007_HawaiiBridges_Proposals_Fig-10_VB.dwg sheet 001/018

CH2M-HILL

EXHIBIT 10 CDUA: HA-3905



Guinea grass grassland in the Hīlea Bridge survey area.



Mixed non-native forest adjacent to Hīlea Stream.

EXHIBIT II CDMA: HA-3805

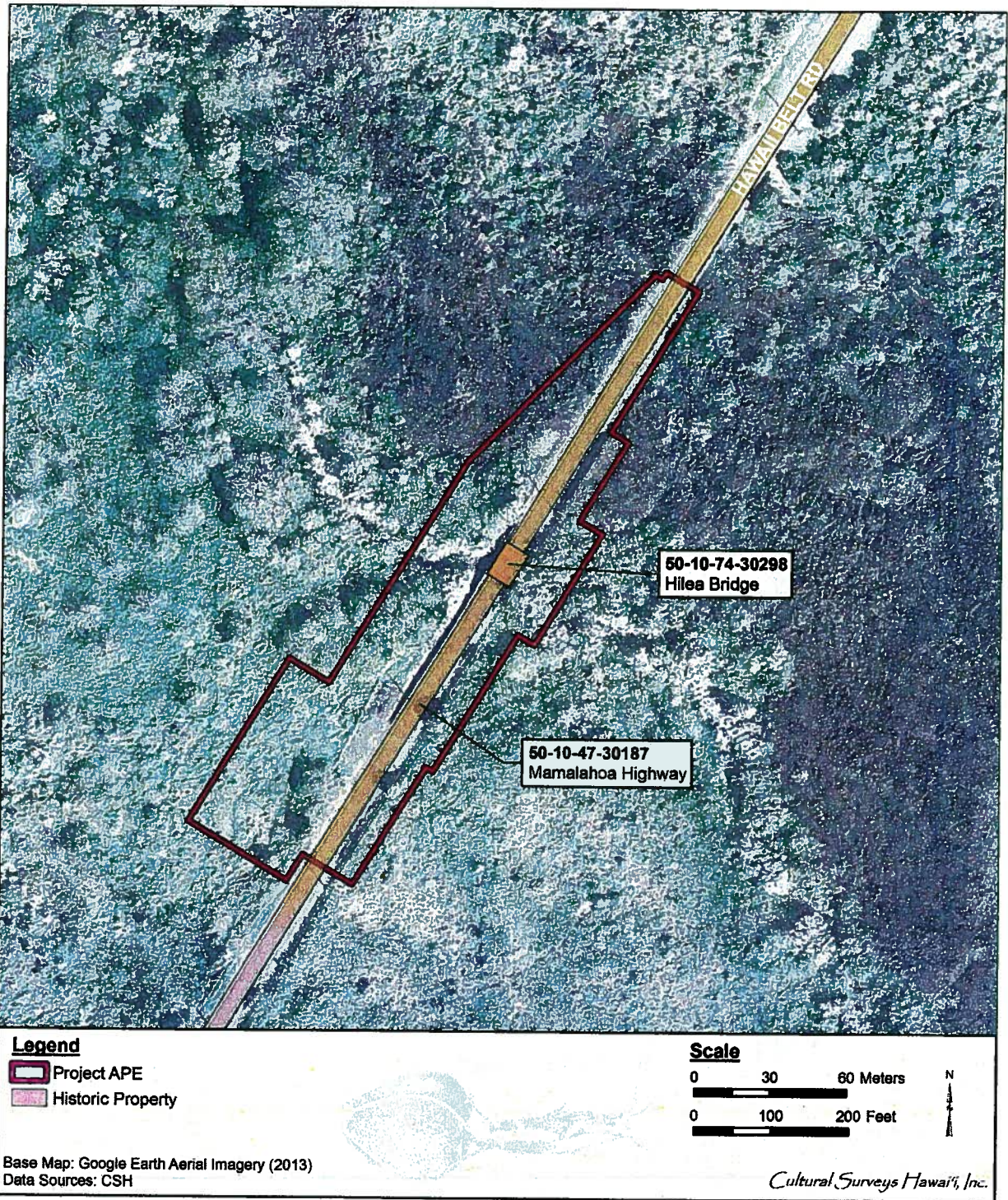
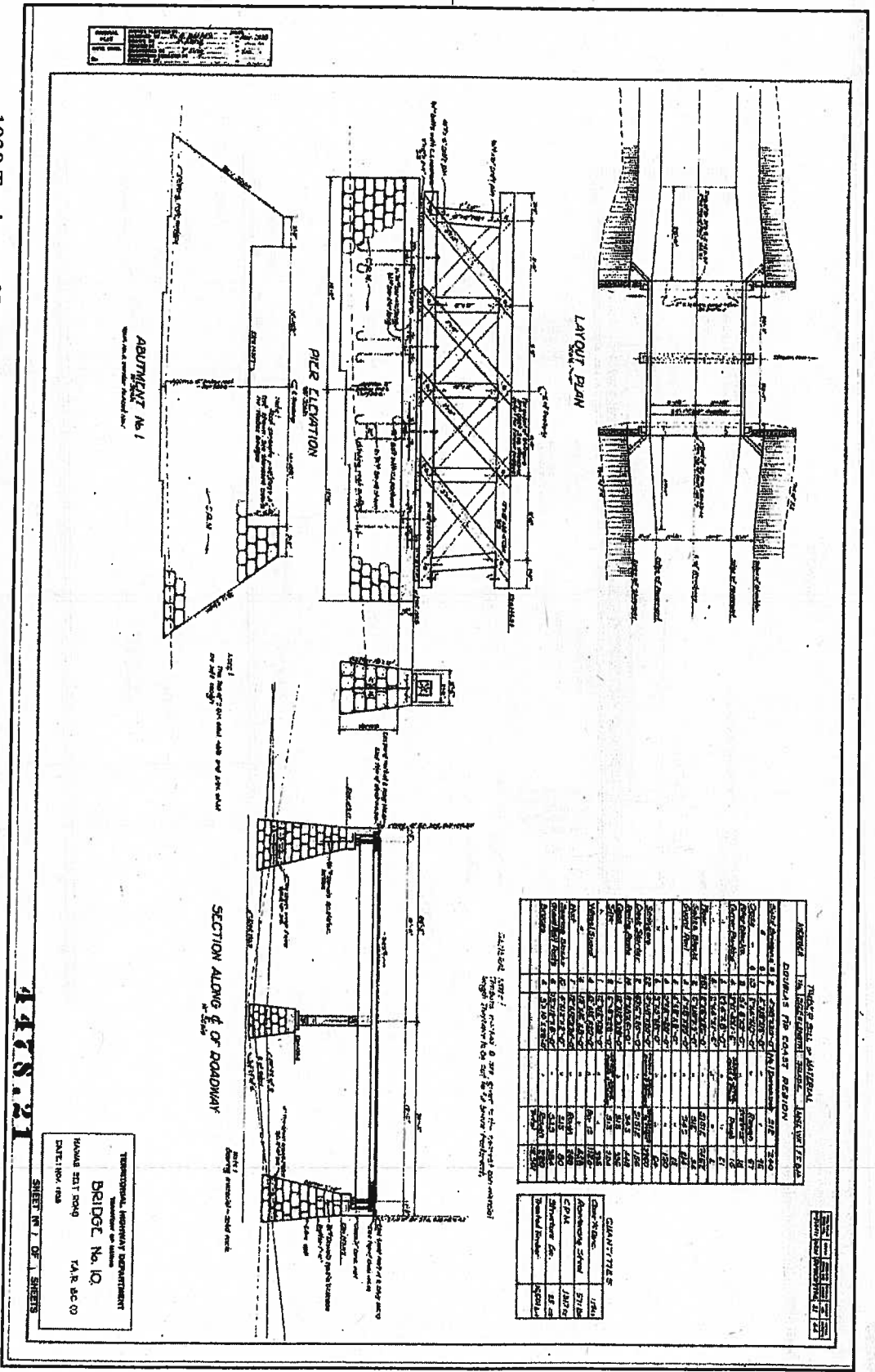


EXHIBIT 12 CDMA: HA-3805

2013 aerial photograph showing the location of historic properties within the project APE

AISR for the Hilea Bridge, Hilea, Ka'u, Hawai'i Island

TMKs: [3] 9-5-017:007 por., 008 por., and 9-5-017 Hawai'i Belt Road/Mamalahoa Highway ROW



1938 Territory of Hawaii, Territorial Highway Department, Bridge No. 10 (Hilea Bridge) plans

AISR for the Hilea Bridge, Hilea, Ka'u, Hawaii Island
 TMS: [3] 9-5-017:007 por., 008 por., and 9-5-017 Hawaii Belt Road/Māmalaha Highway ROW.

EXHIBIT 13
 CDNA : HA - 3805

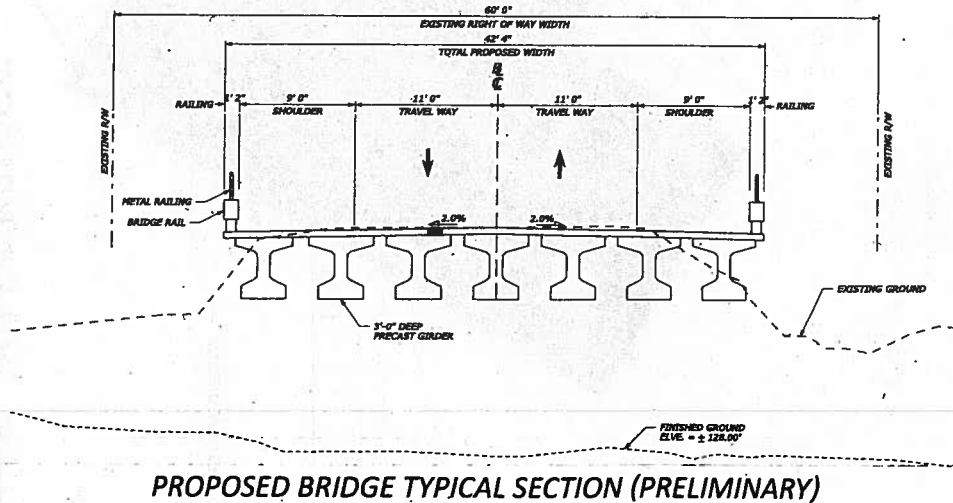
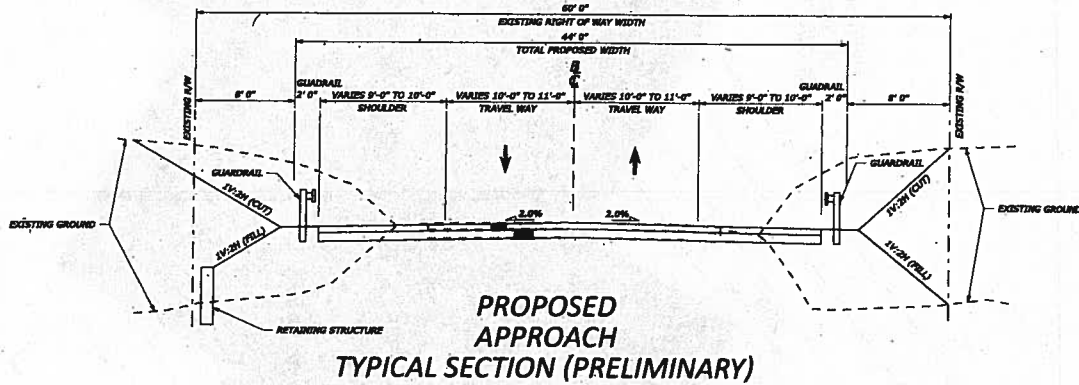
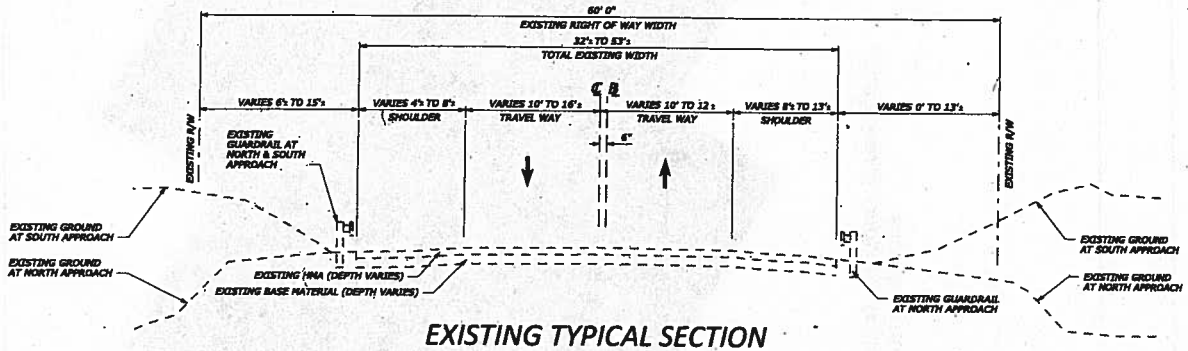
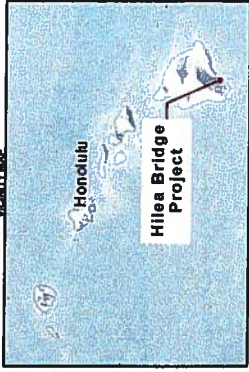


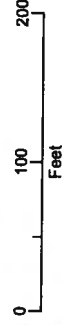
EXHIBIT 14A
CDMA: HA-3805

Typical Sections – Hilea Bridge
Hilea/Ninole Bridge Project
Hawaii Bridges Program –
Central Federal Lands Highway Division and
Hawaii Department of Transportation



- LEGEND
- Approximate Project Limits
 - Stream
 - Detour Route

Notes:
1. Imagery Source: ESRI World Imagery



Hilea Bridge Project
General Project Limits
Central Federal Lands - Kauai, Hawaii

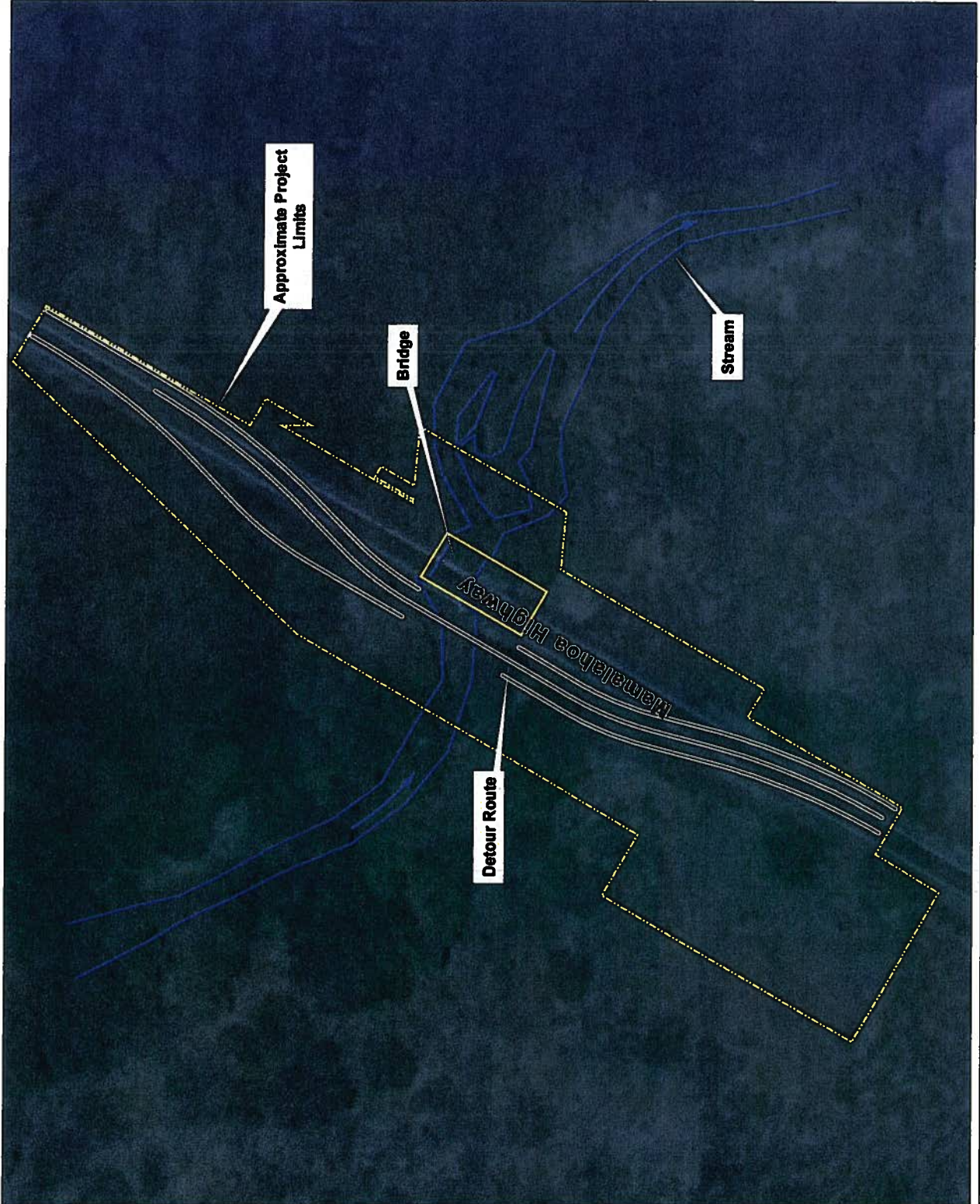


EXHIBIT 15A

CPUA: HA-3805



Representative bridge railings on the Keaiwa Stream Bridge, located at Mile Post 50.35, approximately 6-7 miles from the Hilea and Ninole Bridges.

EXHIBIT 16

CDUA: HA-3805

Railing Section
Hilea/Ninole Bridge Project
Hawaii Bridges Program –
Central Federal Lands Highway Division and
Hawaii Department of Transportation

Overtopping of roadway northeast of Hilea Bridge during Tropical Storm Iselle.



EXHIBIT 17
CDUA: HA-3805