STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

May 16, 2017
Honolulu, Hawai‘i

Application for a Stream Channel Alteration Permit (SCAP.4564.3)
Koa Ridge Makai Development, Castle & Cooke Homes Hawaii, Inc.
Kīpapa Stream, Waipi‘o, O‘ahu

APPLICANT:
Castle & Cooke Homes Hawaii, Inc.
680 Iwilei Road, Suite 510
Honolulu, Hawaii 96817

LANDOWNER
Castle & Cooke Homes Hawaii, Inc.
680 Iwilei Road, Suite 510
Honolulu, Hawaii 96817

U.S. Army
572 Santos Dumont Ave., Bldg. 105
Wheeler Army Airfield
Schofield Barracks, HI 96857

SUMMARY OF REQUEST

The purpose of the proposed project is the construction of an Offsite Detention Basin and Koa Ridge Makai Drain Line No. 1 which will be located adjacent to and joining with Kīpapa Stream. The purpose of the detention basin is to mitigate impacts of stormwater runoff resulting from future development in Koa Ridge Makai. The purpose of the drain line is to convey and discharge stormwater runoff into Kīpapa Stream after it has been treated in the Koa Ridge Makai storm water treatment facilities.

LOCATION: Kīpapa Stream, Waipi‘o, O‘ahu. **Exhibit 1**.

STREAM DESCRIPTION

Upstream of the project area, Kīpapa Stream is a perennial stream approximately 13.9 miles long and a drainage area of 8.96 square miles. The average annual flow ranges from approximately 4 cubic feet per second (cfs) to 25 cfs. The streambed consists of boulders, cobble, and gravel.

Kīpapa Stream eventually joins Waikele Stream and travels through developed areas in Waipahu before discharging into Pearl Harbor.

Per a stream assessment report by AECOS Inc. (2008), no federally endangered or threatened aquatic species were found and none are anticipated to utilize stream habitats of the project area. No native species were observed in the vicinity, however, *Awaous stamineus*, a native goby, was observed in a deep pool upstream of the project area indicating that native fish use the stream segment as a migration corridor.

Water quality: The stream is designated a Class 2 Inland Water by the State Department of Health. The objective of class 2 waters is to protect their use for recreation, propagation of aquatic life, agricultural and industrial water supplies, etc. The waters shall not act as receiving waters for any discharge which has not received the best degree of treatment compatible with this class.

BACKGROUND

On February 21, 2017, a complete stream channel alteration permit application was received for Kīpapa Stream.

On March 15, 2017, a letter acknowledging receipt of the subject application was sent to the Applicant, initiating the Commission's process for agency review.

PROJECT DESCRIPTION

Detention Basin. The purpose of the offsite Detention Basin is to mitigate the adverse impacts of increased stormwater runoff resulting from future development of Koa Ridge Makai. The proposed site is above the right bank (facing downstream) of Kīpapa Stream and the basin would receive runoff from Mililani Mauka via an existing drain line. **Exhibit 2**. Located offsite is a 10-foot by 8-foot box culvert and baffled chute energy dissipator within the detention basin. A stilling basin and earthen berm, 24-feet high, will be constructed to meet the required storage volume. An outlet structure for low flows will also be provided. A reinforced concrete emergency spillway, 16-foot by 4.5-foot, will also be constructed.

The proposed action will consist of the construction of a portion of the 4-foot thick dumped riprap apron (180 cubic yards) and 24-inch thick grouted riprap channel (40 cubic yards) that is located within the ordinary high water mark of the stream. **Exhibit 3**. Riprap will be used for bank stabilization and erosion control. Turf reinforcement matting (235 square feet within the ordinary high water mark) will also be installed on the right bank to assist in the re-establishment of vegetation and provide increased bank stabilization to preserve water quality. Best management practices include a temporary gabion, cofferdam and turbidity barrier and will be removed upon project completion. **Exhibit 4** shows an example of dumped riprap in the Hanapepe River. **Exhibit 5** looks upstream of the proposed drainage basin outlet and is representative of the stream in the area.

Drain Line No. 1. The purpose of the offsite Drain Line No. 1 is to convey stormwater runoff from the first phase of the Koa Ridge Makai development into Kīpapa Stream. **Exhibit 1**. The proposed action consists of 3-foot thick dumped riprap (30 cubic yards) and geotextile fabric placed downstream of the Drain Line along the east bank of the stream and within the ordinary high water mark. **Exhibit 6**. The improvements will provide bank stabilization to preserve water quality. Best management practices consist of a turbidity barrier and a temporary cofferdam and will be removed upon project completion. **Exhibit 7** is looking upstream of the Drain Line No. 1 outlet.

AGENCY REVIEW COMMENTS

City and County of Honolulu, Dept. of Public Works: No comments.

Department of Hawaiian Home Land (DHHL): No comments.

Department of Land and Natural Resources (DLNR), Aquatic Resources: The proposed project is not expected to have adverse impacts on the aquatic environment as the majority of the construction will occur outside of the stream channel. Stream flow will not be affected as only the right bank of Kipapa Stream will be impacted by the proposed project. Other mitigative measures should be implemented during construction to minimize the potential for erosion, siltation and pollution of the aquatic environment.

1) lands denuded of vegetation should be planted or covered as quickly as possible to prevent erosion and the vegetation cleared along stream banks should be covered with TRM to prevent further erosion and soil from falling into the stream environment;
2) schedule site work during periods of minimal rainfall;
3) prevent construction materials, petroleum products, debris and landscaping products from falling, blowing or leaching into the aquatic environment.

DLNR, Engineering: The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR) are in effect when development falls within a designated Flood Hazard. The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zone designations can be found using the Flood Insurance Rate Map which can be accessed through the Flood Hazard Assessment Tool (http://gis.hawaiinfip.org/FHAT). Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may take precedence over the NFIP standards as local designations prove to be more restrictive. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators.

DLNR, Forestry and Wildlife: No comments.

DLNR, Historic Preservation: No comments.

DLNR, Land Division: Not subject to our regulatory authority.

DLNR, State Parks: Not subject to our regulatory authority.

Dept. of Health (DOH), Clean Water Branch:

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. The Applicant 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). Open the website at: https://ehacloud.doh.hawaii.gov/epermit/. The Applicant will be asked to do a one-time registration to obtain a login and password. After registration, 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 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 in original). 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.

Staff: The administration of the Federal Clean Water Act (33 U.S.C. §1251 et seq.) and the State Water Pollution Act (HRS Ch. 342D; HAR Ch. 11-54 Water Quality Standards; and HAR Ch. 11-55 Water Pollution Control) is under the Department of Health, Clean Water Branch. HAR §11-54-1 through §11-54-8 defines Best Management Practices and water quality criteria applicable to inland and nearshore waters and are based on the Federal Clean Water Act. HAR Ch. 11-55 Appendix C defines discharges of storm water associated with construction activity.

Office of Hawaiian Affairs: No comments.

US Army Corps of Engineers: No comments.

US Fish and Wildlife Service (FWS): We have no objections but note that the endangered Hawaiian hoary bat may be present within the proposed project area. The Hawaiian hoary bat roosts in both exotic and native woody vegetation and, while foraging, will leave young unattended in "nursery" trees and shrubs when they forage. If trees or shrubs suitable for bat roosting are cleared during the breeding season, there is a risk that young bats could inadvertently be harmed or killed. To minimize impacts to the endangered Hawaiian hoary bat, woody plants greater than 15 feet (4.6 meters) 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 Hawaiian hoary bats in the project area.

ENVIRONMENTAL REVIEW CHAPTER 343, HAWAII REVISED STATUTES

DOH, Office of Environmental Quality Control: An environmental assessment was triggered due to State and County lands and funds used for the project (HRS §343-5(a)). On June 5, 2009, the Land Use Commission accepted the Koa Ridge Final Environmental Impact Statement (FEIS). The FEIS was published in the Environmental Notice on June 23, 2009. (http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2009-06-23-OA-FEIS-Koa-Ridge-Waiawa.pdf).

LEGAL AUTHORITIES

Water as a Public Trust. Under the public trust and HRS §l74C, there is a presumption in favor of the four public trust purposes, yet allowing for use and development in a reasonable and beneficial manner. The state water resources trust thus embodies a dual mandate of protection and reasonable and beneficial use. The four public trust purposes are:

1. Maintenance of waters in their natural state;
2. Domestic water use of the general public, particularly drinking water;
3. The exercise of Native Hawaiian and traditional and customary rights, including appurtenant rights; and
4. Reservations of water for use on Hawaiian home lands. *Water Use Permit Applications*, 94 Hawaii 97, 9 P.3d 409 (2000); and *Waiola O Molokai, Inc.*, 103 Hawaii 401, 83 P.3d (2004).

HRS §174C-66 Jurisdiction over water quality. The Department of Health shall exercise the powers and duties vested in it for the administration of the State's water quality control program as provided by law.

HRS §174C-71 Protection of instream uses. The commission shall establish and administer a statewide instream use protection program. In carrying out this part, the commission shall cooperate with the United States government or any of its agencies, other state agencies, and the county governments and any of their agencies. In the performance of its duties the commission shall:

(3) Protect stream channels from alteration whenever practicable to provide for fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses;
  (A) The commission shall require persons to obtain a permit from the commission prior to undertaking a stream channel alteration; provided that routine streambed and drainageway maintenance activities and maintenance of existing facilities are exempt from obtaining a permit;
  (C) The commission shall establish guidelines for processing and considering applications for stream channel alterations consistent with section 174C-93;

HAR §13-169-49 Interim instream flow standard for Leeward Oahu. The Interim Instream Flow Standard for all streams on Leeward Oahu, as adopted by the commission on water resource management on October 19, 1988, shall be that amount of water flowing in each stream on the effective date of this standard, and as that flow may naturally vary throughout the year and from

year to year without further amounts of water being diverted offstream through new or expanded diversions, and under the stream conditions existing on the effective date of the standard.

HAR §13-169-50 Permit required. (a) Stream channels shall be protected from alteration whenever practicable to provide for fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses. No stream channel shall be altered until an application for a permit to undertake the work has been filed and a permit is issued by the commission; provided that routine streambed and drainageway maintenance activities and maintenance of existing facilities are exempt from obtaining a permit.

HAR §13-169-52 Criteria for ruling on application.

(c) In reviewing an application for a permit, the commission shall cooperate with persons having direct interest in the channel alteration and be guided by the following general considerations:

(1) Channel alterations that would adversely affect the quantity and quality of the stream water or the stream ecology should be minimized or not be allowed.

(2) Where instream flow standards or interim instream flow standards have been established pursuant to subchapters 3 and 4, no permit shall be granted for any channel alteration which diminishes the quantity or quality of stream water below the minimum established to support identified instream uses, as expressed in the standards.

(3) The proposed channel alteration should not interfere substantially and materially with existing instream or non-instream uses or with channel alterations previously permitted.

STAFF REVIEW

HAR §13-169-52(c) set out the general criteria for ruling on SCAP applications.

(1) Channel alterations that would adversely affect the quantity and quality of the stream water or the stream ecology should be minimized or not be allowed.

Staff: The Department of Health is the lead agency regarding water quality (HRS §174C-66). Commission staff believes that any adverse effects to the quantity and quality of the stream water or the stream ecology are small, temporary, and would be mitigated through DOH permitting and BMPs.

(2) Where instream flow standards or interim instream flow standards have been established pursuant to subchapters 3 and 4, no permit shall be granted for any channel alteration which diminishes the quantity or quality of stream water below the minimum established to support identified instream uses, as expressed in the standards.

Staff: The interim instream flow standard for Leeward O‘ahu is that amount of water flowing in each stream on the effective date of this standard (December 10, 1988), and as that flow may naturally vary throughout the year (HAR §13-169-49). The identified instream uses includes fish habitat and stream flow contribution to the nearshore waters. The quantity and quality of stream water is unchanged.

(3) The proposed channel alteration should not interfere substantially and materially with existing instream or non-instream uses or with channel alterations previously permitted.

Staff: Instream uses, such as ecosystem maintenance or recreation, are unchanged. There are no identified non-instream uses.

RECOMMENDATION

That the Commission:

1. Approve the Stream Channel Alteration Permit (SCAP.4564.3) application for streambank stabilization measures and erosion control consisting of dumped riprap and grouted riprap located at the outlet of the Offsite Detention Basin and Drain Line No. 1 per the submittal and subject to the standard conditions in **Exhibit 8**.

Respectfully submitted,

JEFFREY T. PEARSON, P.E.
Deputy Director

Exhibits:
1. Location Map.
2. Detention Basin General Plan.
3. Stream Bank Improvements at the Outlet of the Drainage Basin.
4. Dumped Riprap at Hanapepe River, Kaua'i.
5. Looking Upstream of the Proposed Drainage Basin Outlet.
6. Drain Line Erosion Control and BMP Plan.
7. Looking Upstream of the Proposed Drain Line Outlet.
8. Standard Stream Channel Alteration Permit and Stream Diversion Works Permit Conditions.

APPROVED FOR SUBMITTAL:

SUZANNE D. CASE
Chairperson

Location Map.

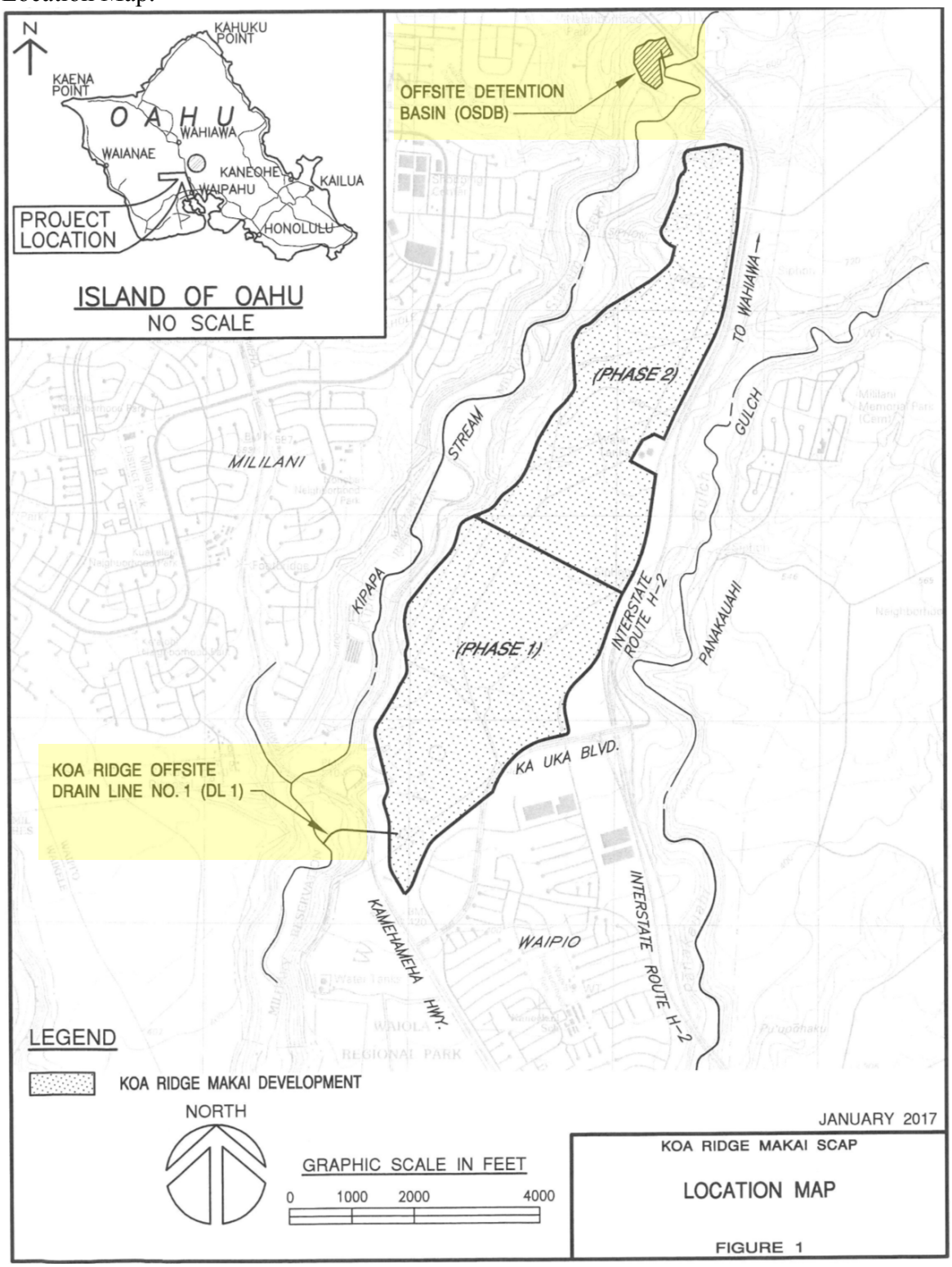

EXHIBIT 1

Detention Basin General Plan.

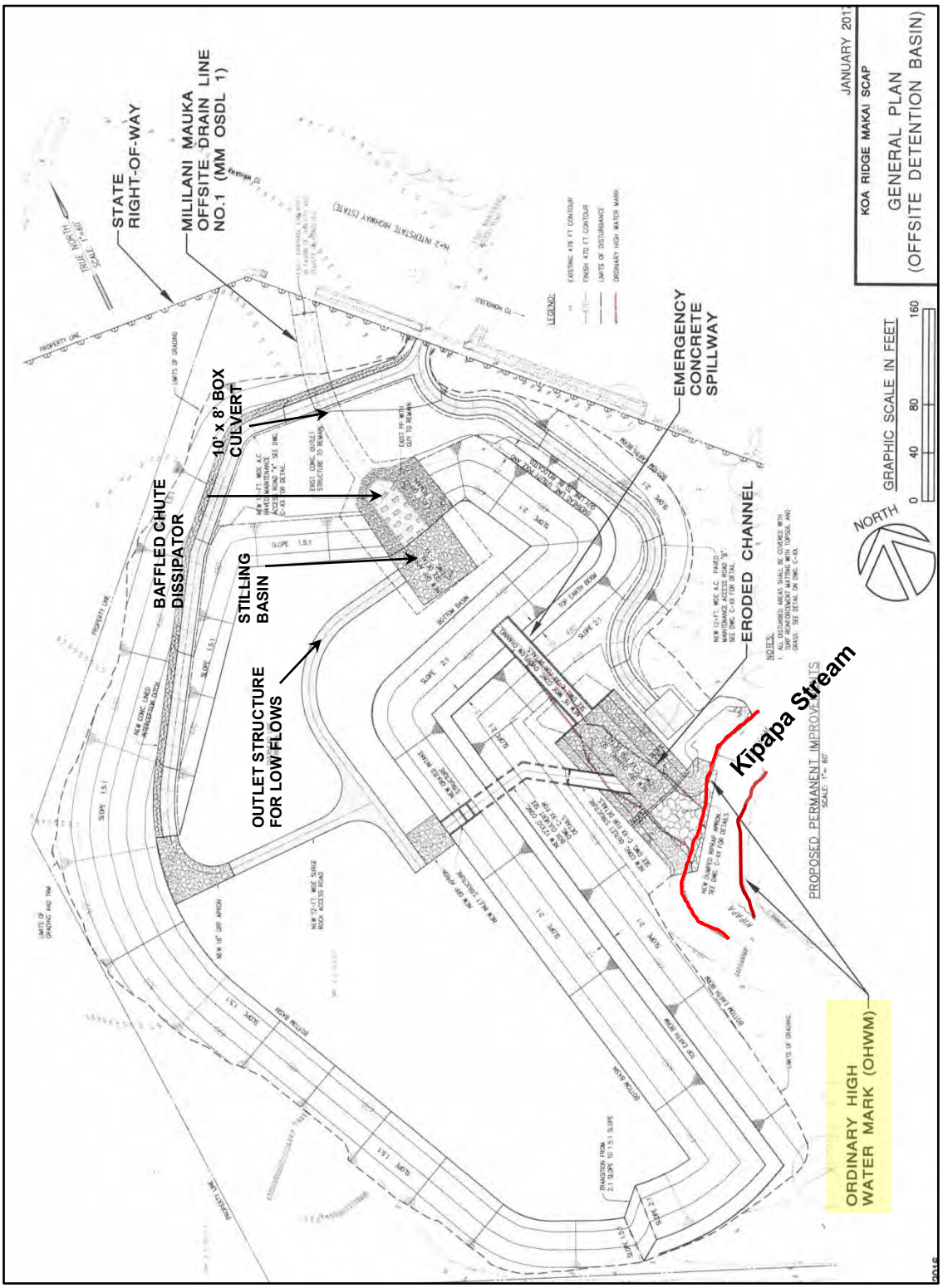

EXHIBIT 2

Stream Bank Improvements at the Outlet of the Drainage Basin.

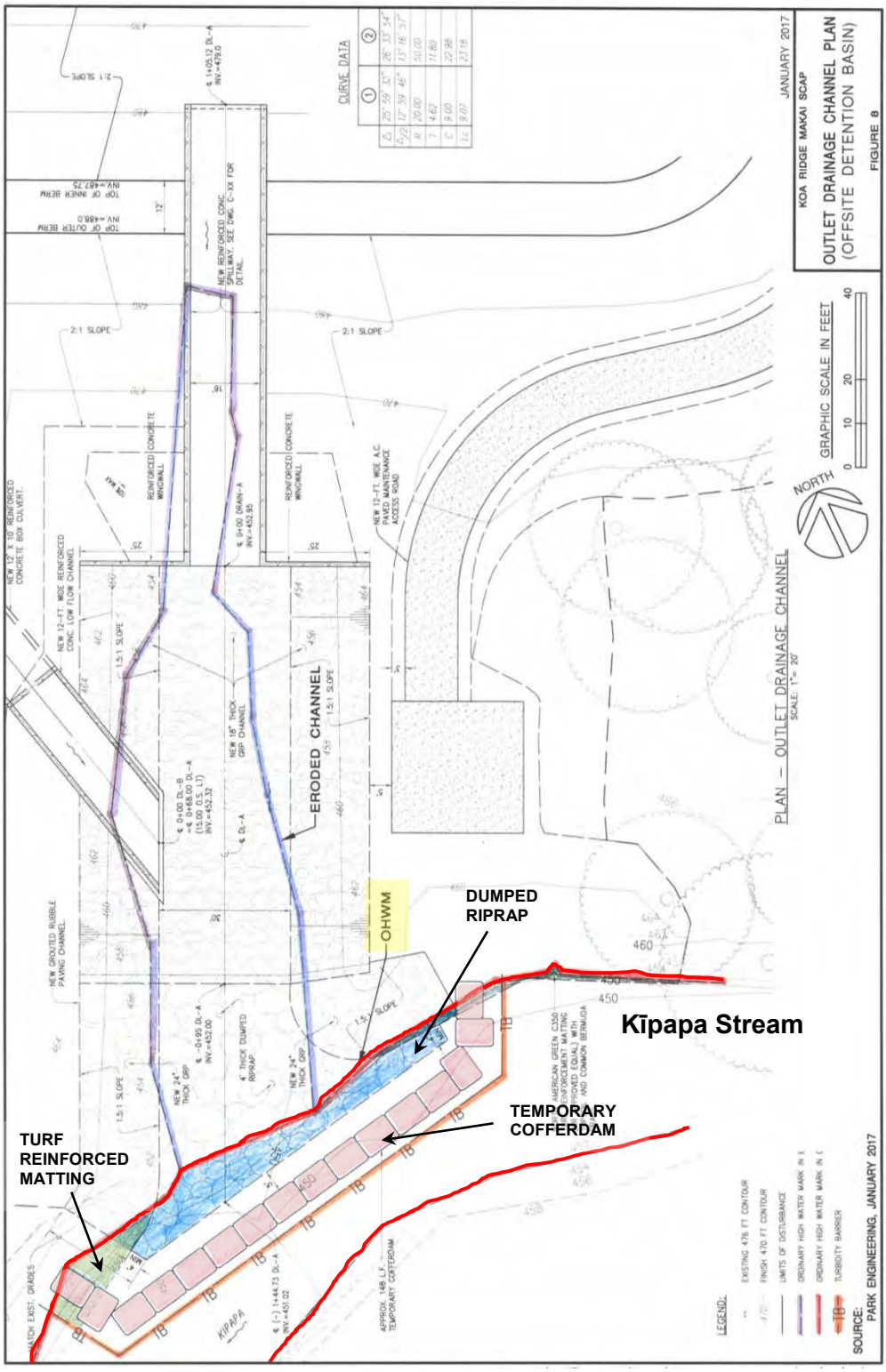

EXHIBIT 3

Dumped Riprap at Hanapepe River, Kaua‘i.

EXHIBIT 4

Looking Upstream of the Proposed Drainage Basin Outlet.

EXHIBIT 5

Drain Line Erosion Control and BMP Plan.

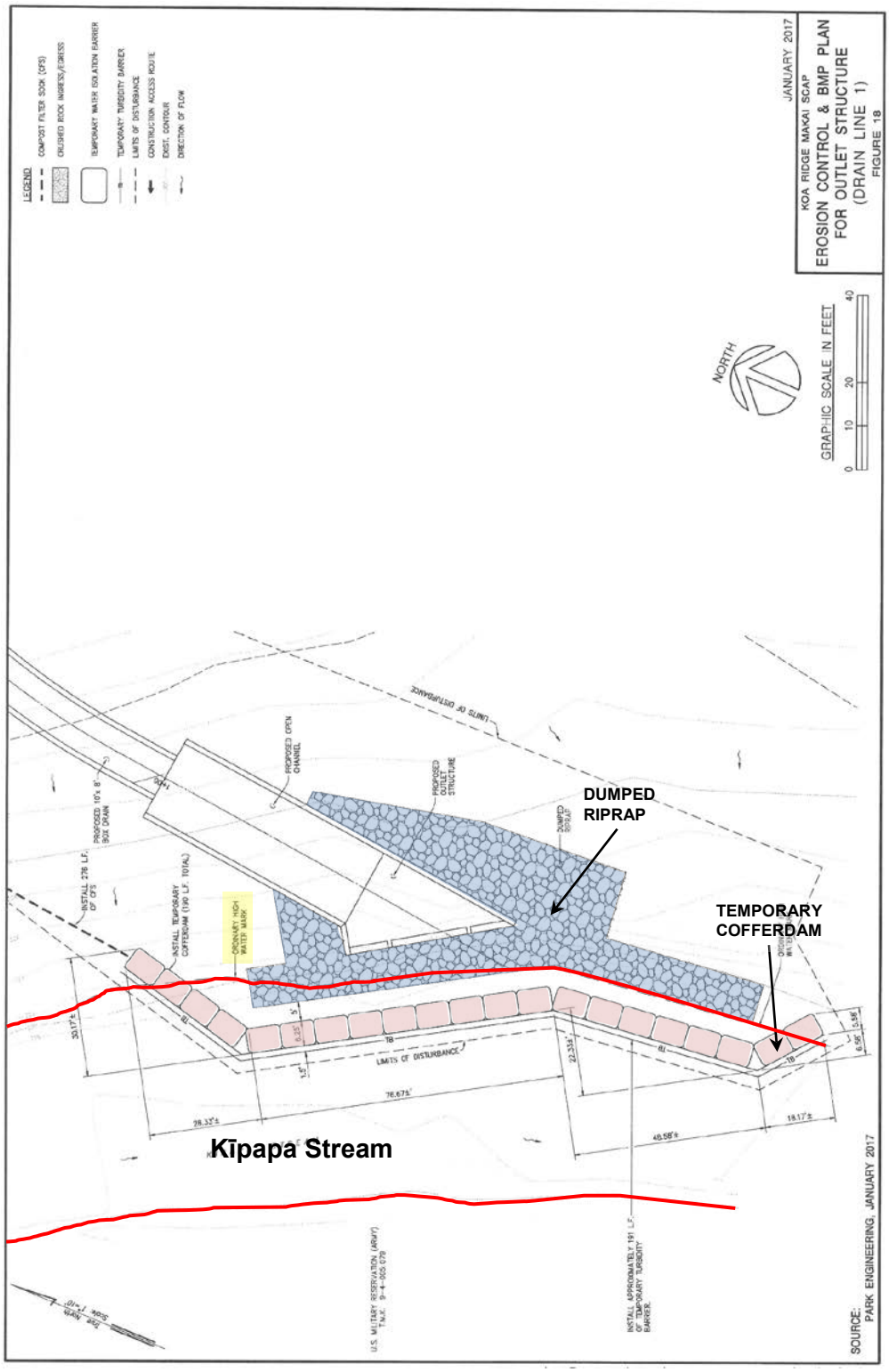

EXHIBIT 6

Looking Upstream of the Proposed Drain Line Outlet.

Photo 7. Photo looking east at area where DL 1 will be constructed.

Photo 8. Looking upstream at Kipapa Stream from location of proposed DL 1 outlet

EXHIBIT 7

STANDARD STREAM CHANNEL ALTERATION PERMIT AND
STREAM DIVERSION WORKS PERMIT CONDITIONS
(Revised January 28, 2016)

1. The permit application and staff submittal approved by the Commission at its meeting on the above date shall be incorporated herein by reference.

2. The project may require other agency approvals regarding wetlands, water quality, grading, stockpiling, endangered species, and floodways. The permittee shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments.

3. The permittee, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the permittee or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.

4. The permittee shall notify the Commission, by letter, of the actual dates of project initiation and completion. The permittee shall submit a set of as-built plans and photos in pdf format of the completed work to the Commission upon completion of this project. This permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The proposed work under this stream channel alteration permit shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

5. Before proceeding with any work authorized by the Commission, the permittee shall submit one set of construction plans and specifications in PDF format to determine consistency with the conditions of the permit and the declarations set forth in the permit application.

6. The permittee shall implement site-specific, construction Best Management Practices in consultation with the DOH Clean Water Branch and other agencies as applicable, that are designed, implemented, operated, and maintained by the permittee and its contractor to properly isolate and confine activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting State waters per HRS Ch. 342D Water Pollution; HAR §11-54-1 through §11-54-8 Water Quality Standards; and HAR Ch. 11-55 Water Pollution Control, Appendix C.

7. The permittee shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The permittee shall plant or cover lands denuded of vegetation as quickly as possible to prevent erosion and use native plant species common to riparian environments to improve the habitat quality of the stream environment.

8. If subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the permittee shall stop work in the area of the find and contact the Department's Historic Preservation Division immediately. Work may commence only after written concurrence by the State Historic Preservation Division.

EXHIBIT 8