



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

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

September 24, 2009
Honolulu, Hawaii

Application for a Stream Channel Alteration Permit (SCAP.2175.3)
Amelia Street Sewer Relief Project, Kalihi Stream
Kalihi, Oahu, TMKs: (1) 1-3-015:035 and 072

APPLICANT:

City and County of Honolulu
Department of Design and Construction
650 South King Street
Honolulu, HI 96813

LANDOWNERS:

Mr. Paul Lum (035)
15127 Inverness Street
San Leandro, CA 94579

State of Hawaii (072)
Department of Land and Natural Resources
Honolulu, HI

SUMMARY OF REQUEST:

Application for a Stream Channel Alteration Permit (SCAP.2175.3) for City and County of Honolulu, Department of Design and Construction's (DDC) Amelia Street Sewer Relief Project in Kalihi Stream, Kalihi, Oahu, TMKs: (1) 1-3-015:035 and 072.

LOCATION: See Exhibit 1.

BACKGROUND:

Kalihi Stream originates on the leeward slopes of the Koolau mountain at an elevation of 2200 feet and flows 6.1 miles before emptying into Keehi Lagoon on Oahu's south shore. Kalihi Stream is classified as a perennial stream flowing continuously in the southwesterly direction. The eastern (left bank) of the stream in the project area is mostly armored throughout the site. The western (right) bank generally consists of fill material (mostly concrete boulders) partially covered with vegetation. The stream bed is composed of boulders, fine sediment, coarse sand and gravel.

This project will replace an existing 10-inch sewer line with a new 16-inch sewer line at two, non-tidal crossings in Kalihi Stream. At the North School Street crossing, the new sewer line will be suspended under the existing bridge, and work will include temporary placement of scaffolding in Kalihi Stream. At the downstream crossing, the new sewer line will be installed by open trenching and backfilling along the

same alignment and to the same depth as the existing pipe. Approximately 350 lineal feet (lf) of sewer line will be replaced at the North School Street site and 800 lf at the Amelia Street site.

DESCRIPTION:

In-stream construction will occur in two phases. The first phase requires diversion of the stream flow which will be done in two parts in order to replace the existing underground sewer line. Stream flow will be diverted to one side for two weeks while the contractor replaces the existing sewer line behind the diversion barrier. Geo-textile filter fabric will be placed between sand bags placed around the entire construction work area. Where appropriate, natural streambed materials such as large rock cobbles and boulders will be used for temporary soil stabilization for the stream bank. Upon completion of the first part, stream flow will be diverted to the other side of the stream for two weeks while the contractor replaces the remaining section of the existing sewer line. Diversion of the stream flow will cease when the second part has been completed.

Approximately 55 lf of concrete jacket will be installed around the new sewer main across Kalihi Stream. The concrete jacket will be formed with non-treated wood forms reinforced with masonry pins and additional non-treated forms where necessary. A temporary high density polyethylene (HDPE) sewer by-pass line will be suspended across Kalihi Stream via cable or beam, be connected to manholes on both banks, and be in service for two months.

The second phase of in-stream construction work will consist of placing scaffolding in Kalihi Stream in order to hang the sewer line off the North School Street bridge crossing. The scaffold system will be galvanized steel and wood planks with minimal construction residue. This work will take approximately 30 days.

Best Management Practices (BMPs) have been prepared for the construction activities associated with the Kalihi Stream crossing, temporary diversion of Kalihi Stream, construction activities on Amelia Street and North School Street, and the construction staging area. Excavated material will be hauled to an upland dewatering area which would be surrounded by a berm to prevent return flow to the stream. There will be no change in pre-construction contours, and disturbed vegetative ground cover will be replaced at the completion of construction. The contractor will assign an individual to conduct daily visual inspections of the construction site to ensure that the construction activities do not result in adverse impacts.

ANALYSIS:

The U.S. Army Corps of Engineers made the following comments:

- The applicant's February-March 2008 biology and water quality survey for the project found only non-native invertebrates and fish in the project area, in agreement with a previous survey conducted approximately 2500 feet upstream from the current project area in 1997.
- The Corps determined that there would be "no historic properties affected" by the project, the scaffolding would have little potential to disturb the substrate, and the proposed trenching and backfilling would be within the previously disturbed alignment of the existing sewer pipe. The current on-line version of the Hawaii and National Register of Historic Places did not include any listed or eligible properties in the vicinity of the Area of Potential Effect.
- The Corps planned to verify authorization of the proposed activity under the Corp's Nationwide Permit authority for Utility Line Activities.

The DOH Clean Water Branch commented that the project is subject to Section 401 Water Quality Certification (WQC).

The City and County of Honolulu, Department of Planning and Permitting made the following comments:

- The project is not located in the Special Management Area (SMA) and is not subject to SMA use permit requirements.

- According to the Flood Insurance Rate Map (FIRM), the project is located within the AE floodway district. The applicant shall certify that the proposed work will not result in any increase to the regulatory flood elevations.
- The applicant is responsible for complying with the environmental assessment requirements of HRS Chapter 343.
- The project does not involve any grading and is not subject to the City’s grading ordinance.

Historic Preservation commented that no historic properties will be affected by the project because intensive cultivation and residential development/urbanization have altered the land.

Engineering Division made the following comments:

- The project site is located in Flood Zone X, XS and AE Floodway (AEF) according to the Flood Insurance Rate Map (FIRM) and that the National Flood Insurance Program (NFIP) does not have any regulations for developments within Flood Zones X and XS but does regulate developments within Zone AEF.
- The project must comply with the rules and regulations of the NFIP.
- Because a portion of this project is being constructed in a flood zone designated AEF, strict adherence to the NFIP regulations must be followed.

The Department of Hawaiian Home Lands, State Parks, Forestry and Wildlife, and Land Division had no objections to the project.

The U.S. Fish and Wildlife Service, University of Hawaii Environmental Center, Office of Hawaiian Affairs, and Division of Aquatic Resources did not submit comments as of the date of preparation of this submittal.

RECOMMENDATION:

That the Commission approve a Stream Channel Alteration Permit (SCAP.2175.3) for the City and County of Honolulu, Department of Design and Construction’s Amelia Street Sewer Relief Project in Kalihi Stream in Kalihi, Oahu at TMKs: (1) 1-3-015:035 and 072 subject to the standard conditions in Exhibit 7.

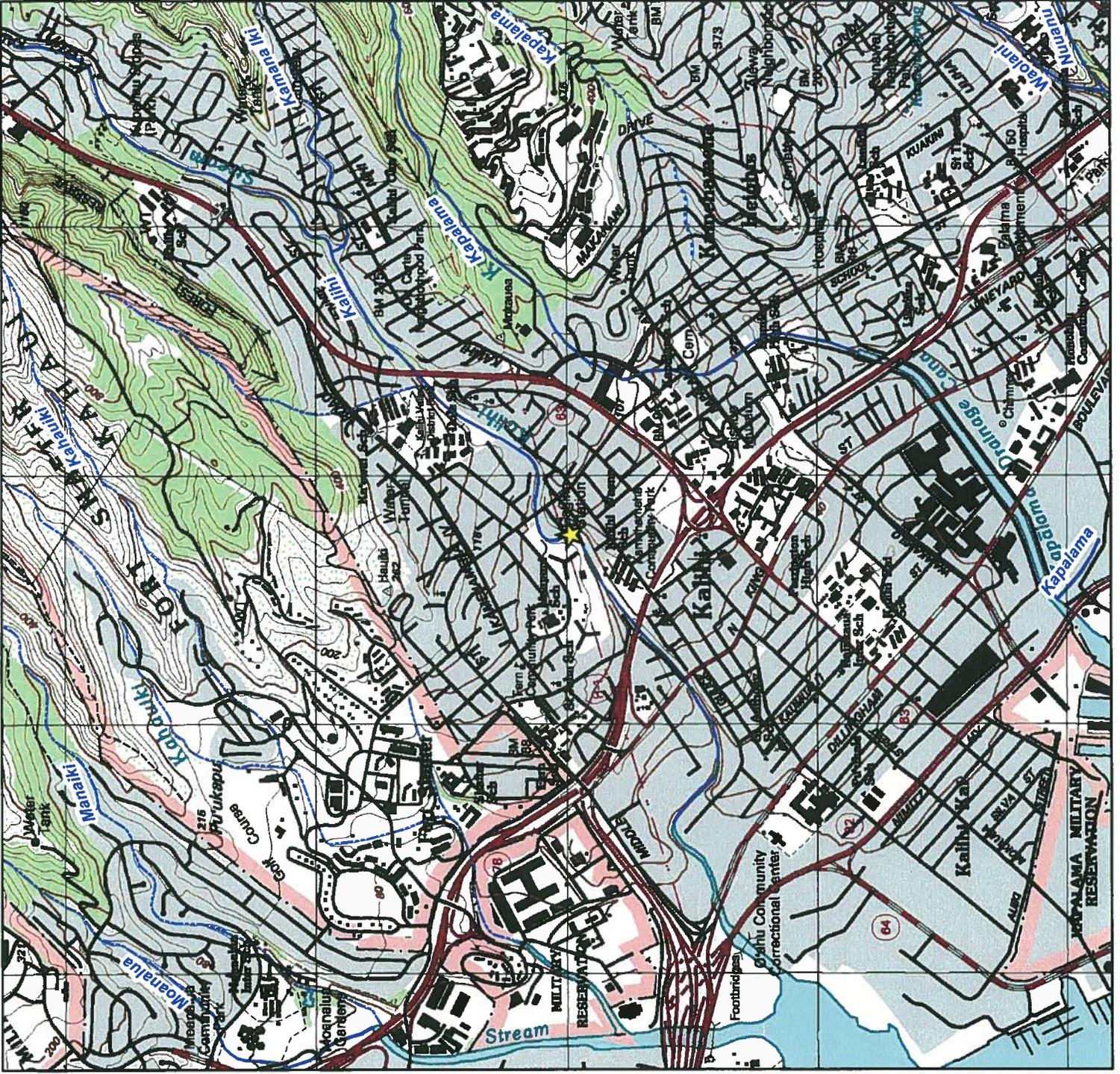
Respectfully submitted,


 KEN C. KAWAHARA, P.E.
 Deputy Director

- Exhibits:
1. Location Map
 2. Overall Site Plan
 3. Plan and Profile
 4. Diagram of Temporary Stream Diversion
 5. Sandbag Protection
 6. Photos of Kalihi Stream
 7. Standard Stream Channel Alteration Permit Conditions

APPROVED FOR SUBMITTAL:


 LAURA H. THIELEN



Department of Land and Natural Resources
 Commission on Water Resource Management
 Stream Protection and Management Branch

ISLAND OF OAHU

LEGEND

Streams

— Ephemeral

— Intermittent

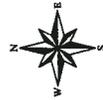
— Perennial

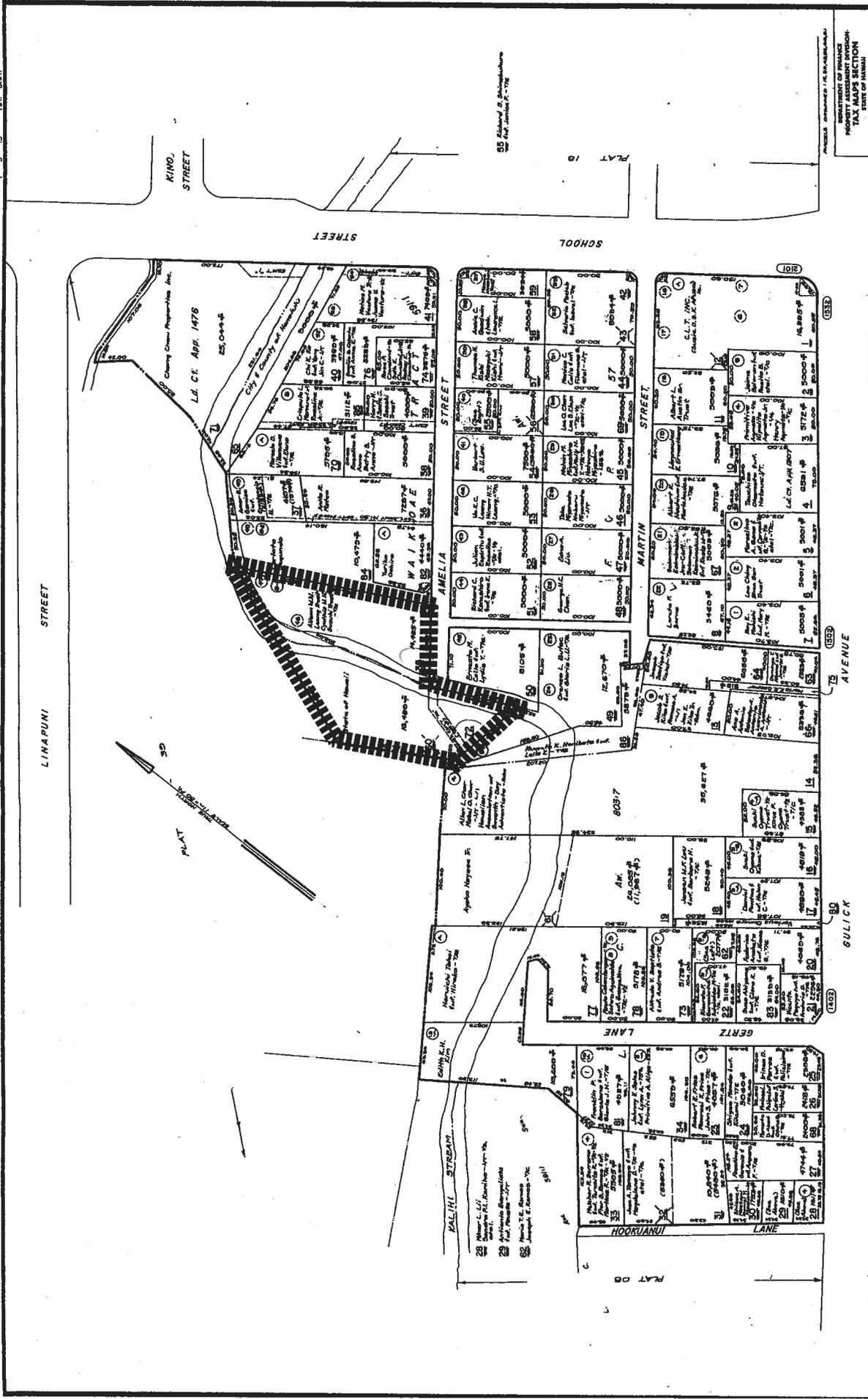
★ (1) 1-3-015:035

This map was produced by the Department of Land and Natural Resources (DLNR), Commission on Water Resource Management for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from DLNR.

Datum: North American Datum 1983

Tax Map Key (TMK) layer is comprised of tax assessor parcels derived from paper plat maps with attributes from public tax assessor records and is updated by each respective county.





DEPARTMENT OF FINANCE
PROPERTY ASSESSMENT DIVISION
TAX MAP DIVISION
CITY & COUNTY OF HONOLULU

PLAT	15
ZONE	3
SEC.	3

TAX MAP
SCALE 1" = 50 FT.

FOR PROPERTY ASSESSMENT PURPOSES
SUBJECT TO CHANGE

PLAT 18

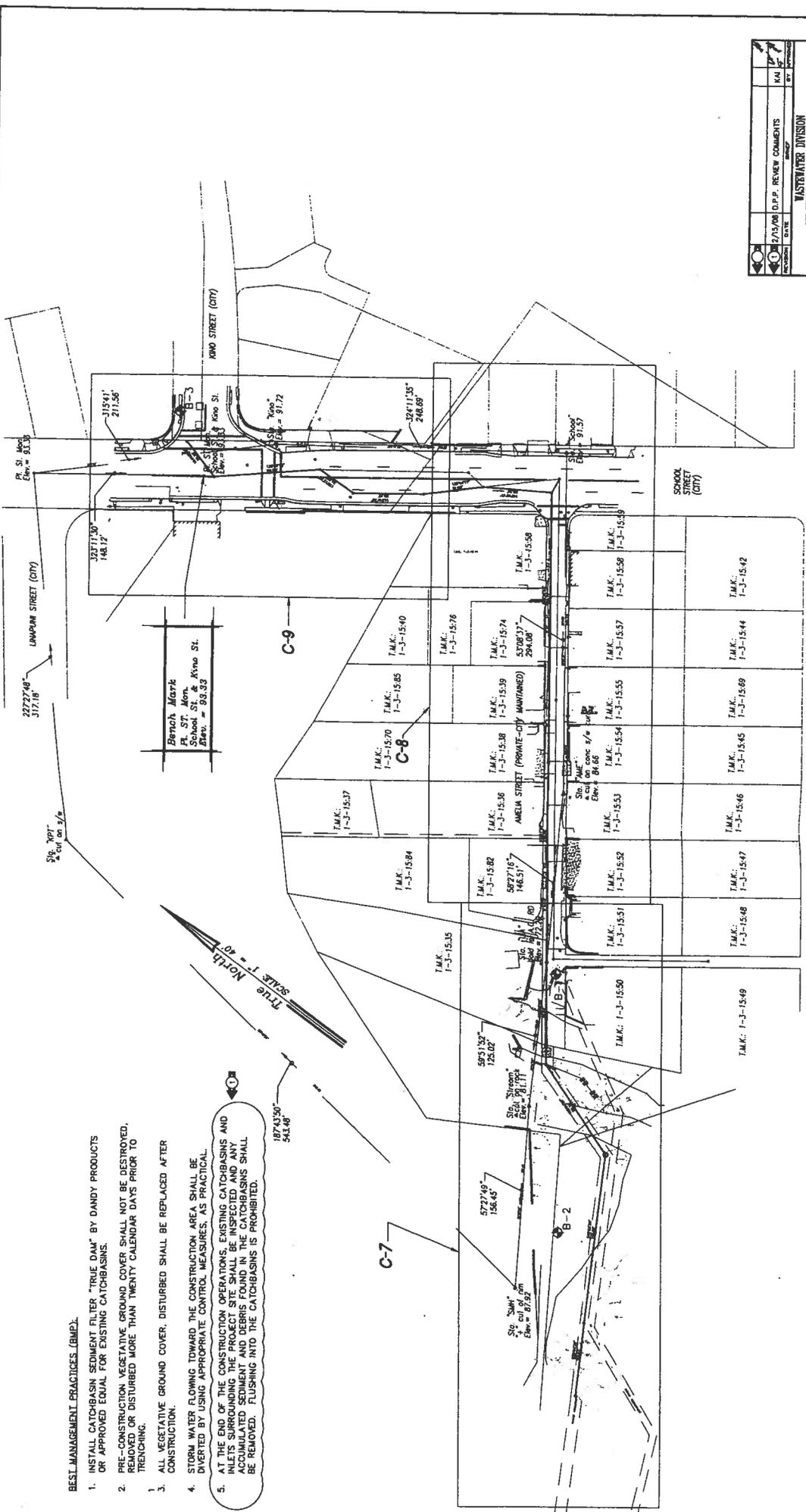
PLAT 07

PLAT 16

PLAT 07

PLAT 07

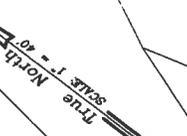
WAIKOAE, KALIHII, OAHU, HAWAII



BEST MANAGEMENT PRACTICES (BMP):

1. INSTALL CATCHBASIN SEDIMENT FILTER "TRUE DAM" BY DANDY PRODUCTS OR APPROVED EQUAL FOR EXISTING CATCHBASINS.
2. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN TWENTY CALENDAR DAYS PRIOR TO TRENCHING.
3. ALL VEGETATIVE GROUND COVER, DISTURBED SHALL BE REPLACED AFTER CONSTRUCTION.
4. STORM WATER FLOWING TOWARD THE CONSTRUCTION AREA SHALL BE DIVERTED BY USING APPROPRIATE CONTROL MEASURES, AS PRACTICAL.

5. AT THE END OF THE CONSTRUCTION OPERATIONS, EXISTING CATCHBASINS AND INLETS SURROUNDING VEGETATIVE GROUND COVER SHALL BE RESTORED TO ORIGINAL CONDITION. ACCUMULATED SEDIMENT AND DEBRIS FOUND IN THE CATCHBASINS SHALL BE REMOVED. FLUSHING INTO THE CATCHBASINS IS PROHIBITED.



DATE	2/15/08	D.P.P.	REVIEW COMMENTS	SCALE	1/4" = 1'-0"
PROJECT	WASTEWATER DIVISION REPAIRS TO AMELIA STREET SEWER COLLECTION CITY AND COUNTY OF HAWAII				
PROJECT	AMELIA STREET SEWER RELIEF PROJECT				
DESIGNED BY	UCK	CHKD BY	UCK	DATE	2/15/08
APPROVED BY	 UCK PROJECT MANAGER				



W2-02

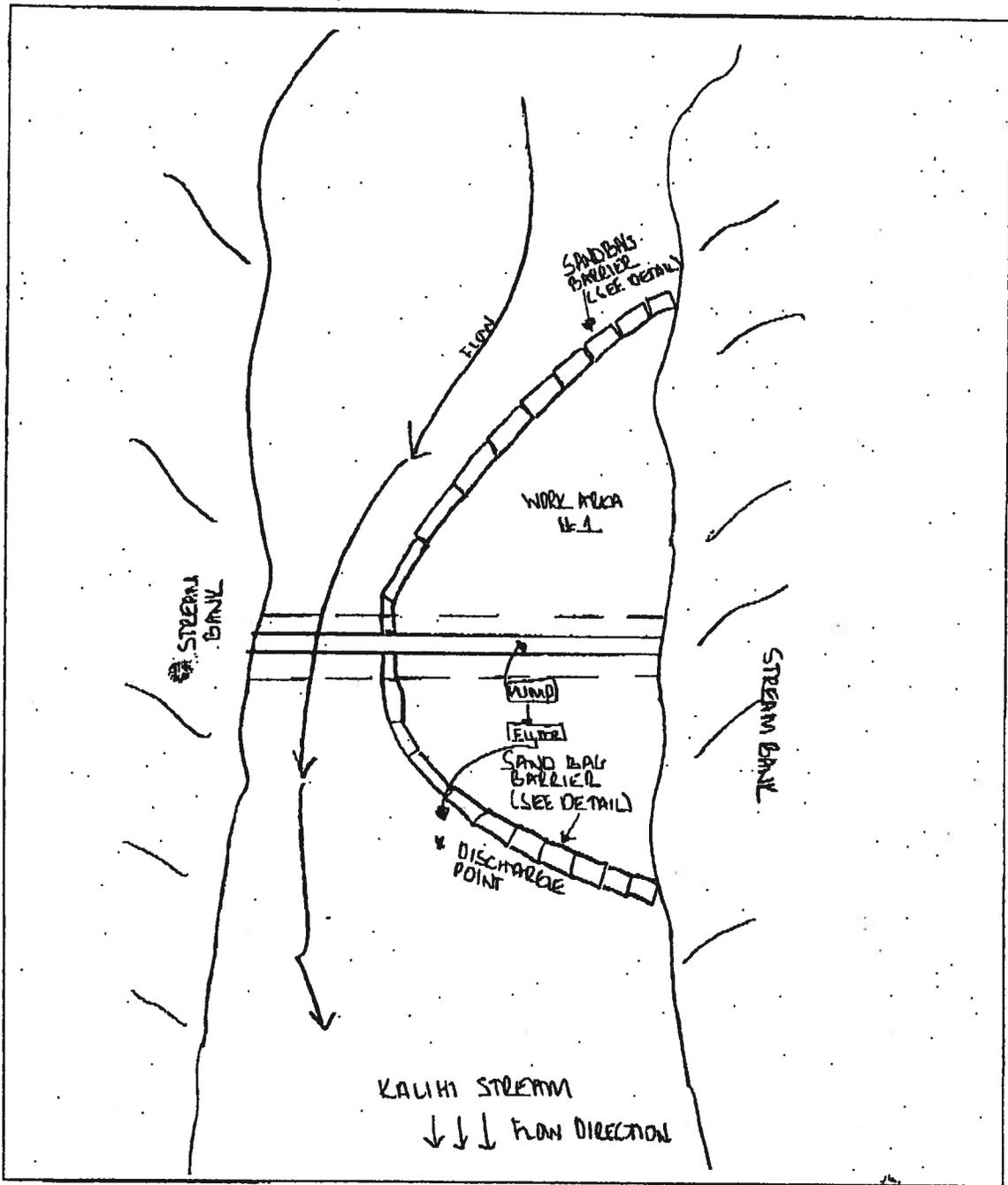


Diagram of Temporary Stream Diversion

WORK AREA #1 (REVISED) - SAND BAR BARRIER

Project: Amella Street Sewer Relief Project
 Job No: W2-02

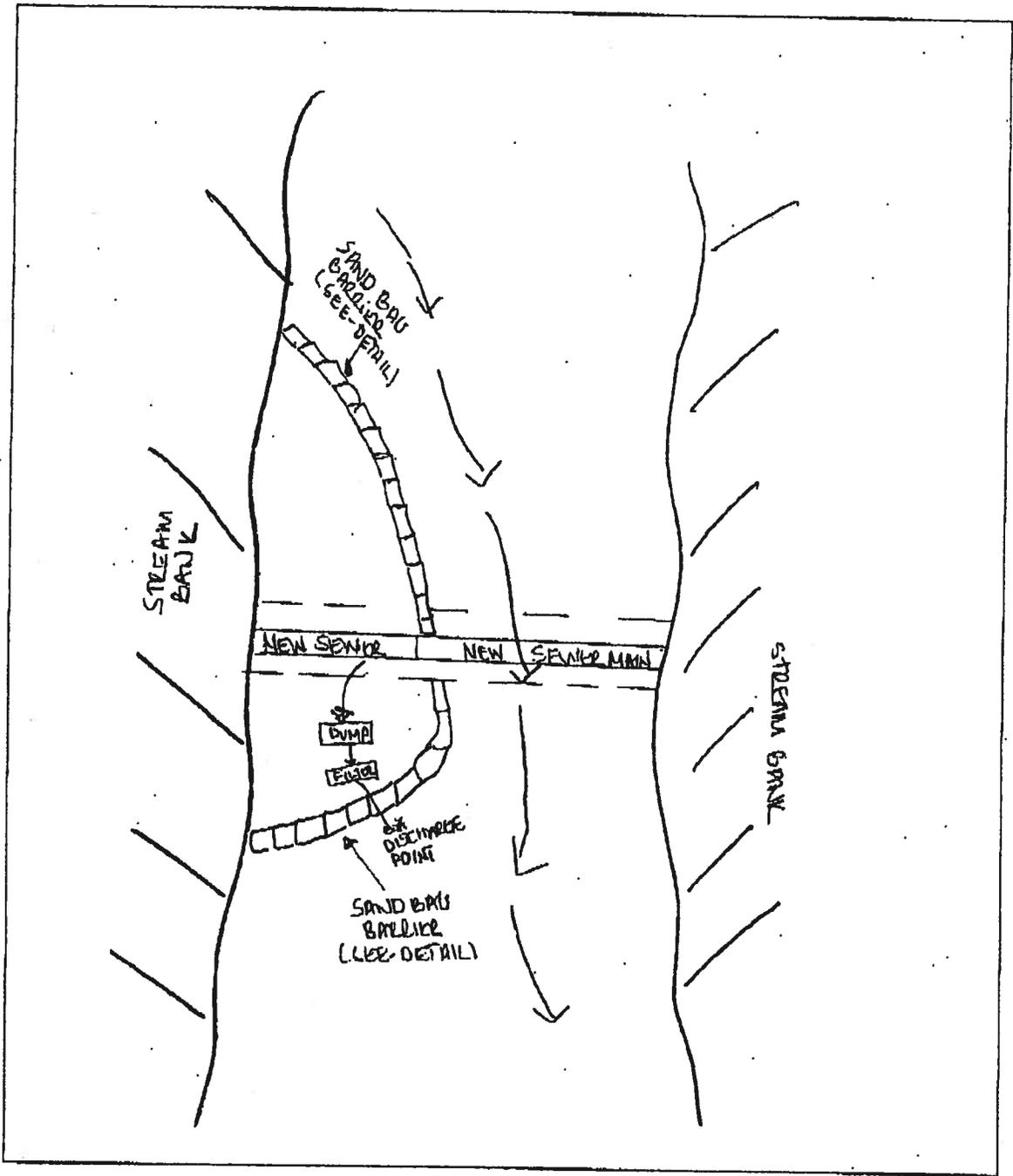
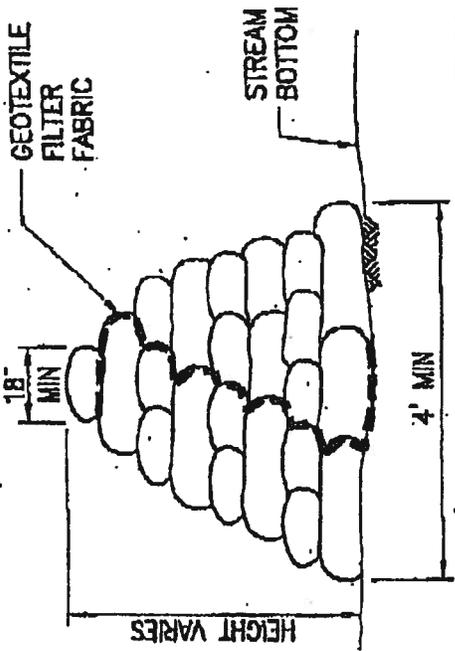


Diagram of Temporary Stream Diversion

WORK AREA #2 (REVISED)-SAND BAR BARRIER

Project: Amelia Street Sewer Relief Project
 Job No: W2-02



SANDBAG PROTECTION

NOT TO SCALE.

TYPICAL DIMENSIONS PER SANDBAG

- WIDTH: 16" TO 18"
- LENGTH: 24" TO 30"
- THICKNESS: 6" TO 8"
- WEIGHT: 90 TO 125 POUNDS

SANDBAG NOTES:

1. INSTALL SANDBAGS AS SHOWN.
2. STRIP VEGETATION AND DEBRIS BEFORE LAYING SANDBAGS.
3. SANDBAGS SHOULD BE FILLED ONE-HALF TO TWO-THIRDS FULL.
4. PLACE THE SUCCEEDING BAGS ON THE UNFILLED OR TIED PORTION OF THE PREVIOUSLY LAYED BAG AND STAMP INTO PLACE TO ELIMINATE VOIDS AND FORM A TIGHT SEAL.
5. STAGGER THE JOINT CONNECTIONS WHEN MULTIPLE LAYERS ARE NECESSARY / AND STACK THE SANDBAGS IN PYRAMID FASHION.
6. SANDBAG BERM SHALL BE MIN. 48" WIDE AT BASE AND 18" WIDE AT CREST.
7. SANDBAGS SHALL BE COMPOSED OF POLYPROPYLENE-, POLYETHYLENE- OR POLYAMIDE-WOVEN FABRIC, WITH MINIMUM UNIT WEIGHT 4 OUNCES PER SQUARE YARD, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
8. GRADE OF MATERIAL IN SANDBAGS SHALL BE COARSE SAND OR GRAVEL.

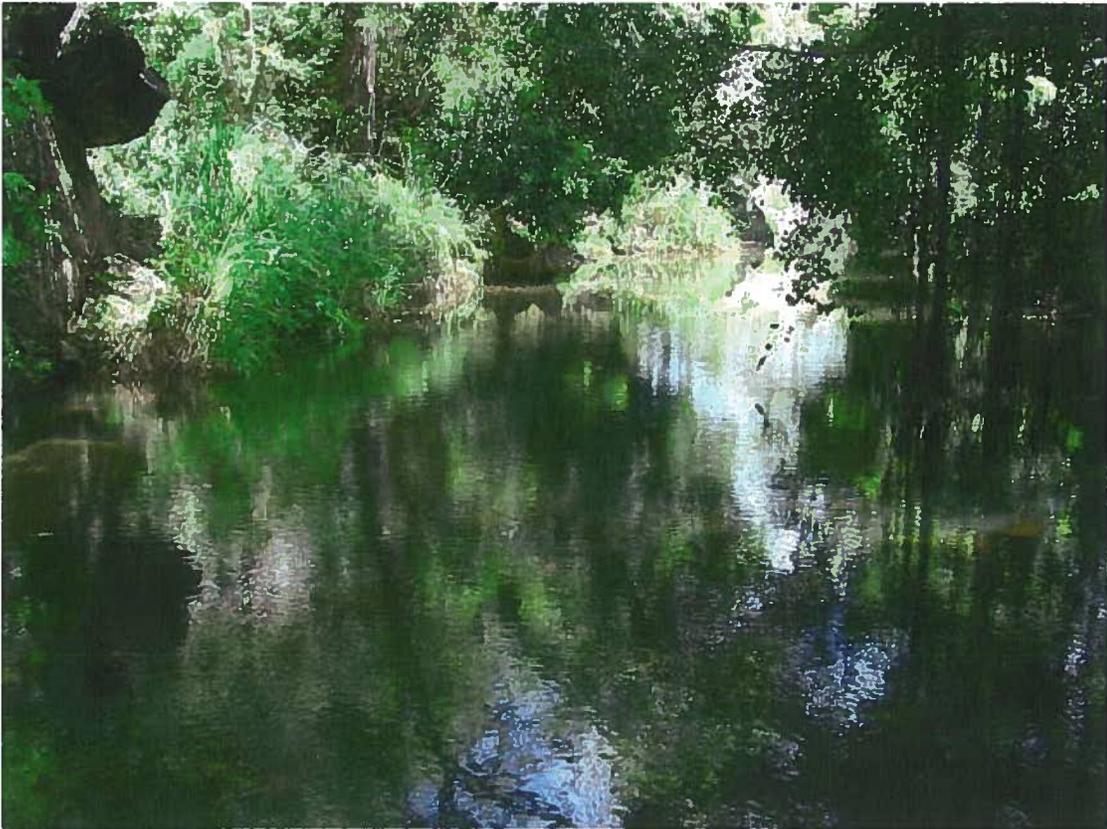


Kalihi Stream upstream of School Street Bridge

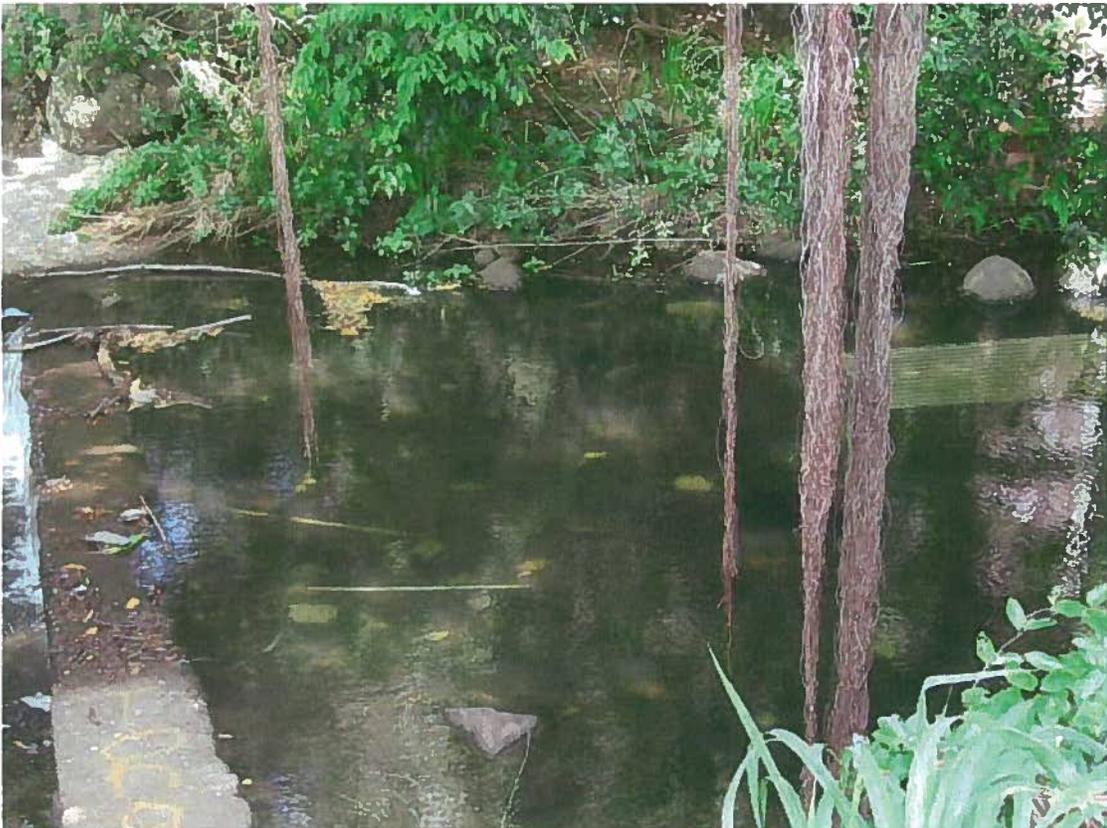


Kalihi Stream upstream of School Street Bridge

EXHIBIT 6



Upstream of Kalihi Stream crossing at end of Amelia Stream



Sewer line crossing Kalihi Stream at end of Amelia Street

STANDARD STREAM CHANNEL ALTERATION PERMIT CONDITIONS
(Revised 9/19/07)

1. The permit application and staff submittal approved by the Commission at its meeting on September 24, 2009, shall be incorporated herein by reference.
2. The applicant shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments.
3. The applicant, 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 applicant or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.
4. The applicant shall notify the Commission, by letter, of the actual dates of project initiation and completion. The applicant shall submit a set of as-built plans and photos 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 applicant shall submit one set of construction plans and specifications to determine consistency with the conditions of the permit and the declarations set forth in the permit application.
6. *The applicant shall develop site-specific, construction best management practices (BMPs) that are designed, implemented, operated, and maintained by the applicant and its contractor to properly isolate and confine construction activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting state waters. BMPs shall control erosion and dust during construction and schedule construction activities during periods of low stream flow.*
7. *The applicant shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The applicant 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. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the applicant 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.