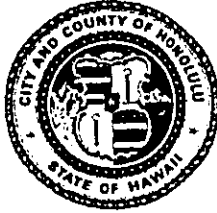


Kahawainui Stream Flood Control Repair Project

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

850 SOUTH KING STREET
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR



KENNETH E. SPRAGUE
DIRECTOR AND CHIEF ENGINEER

IN REPLY REFER TO:

96-12-0378

May 29, 1996

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

96 MAY 31 P1:25

RECEIVED

Mr. Gary Gill
Director
Office of Environmental Quality Control
220 South King Street, Suite 400
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Negative Declaration for Kahawainui Stream Flood Control Repair Project, Laie, Oahu, Hawaii, Tax Map Key: 5-5-05, 08 and 09

The City and County of Honolulu's Department of Public Works has reviewed the comments received during the 30-day public comment period which began on February 8, 1996. The agency has determined that this project will not have significant environmental effect and has issued a negative declaration. Please publish this notice in the June 23, 1996, OEQC Bulletin.

We have enclosed a completed OEQC Bulletin Publication form and four copies of the final environmental assessment.

Please contact Tyler Sugihara at 523-4932 if you have any questions.

Very truly yours,


KENNETH E. SPRAGUE
Director and Chief Engineer

Encl.

cc: Corps of Engineers
(Attention: Mr. Jim Pennaz)

64

1996-06-23-OA-*FEA*. *Kahawainui Stream Flood Control Repair Project* **FILE COPY** JUN 23 1996

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

FINAL
ENVIRONMENTAL ASSESSMENT
FOR
KAHAWAINUI STREAM FLOOD CONTROL REPAIR PROJECT
LAIE, OAHU, HAWAII

TAX MAP KEY: 5-5-05, 08, and 09

RECEIVED
96 MAY 31 P1:25
OFFICE OF ENVIRONMENTAL QUALITY

This environmental document is prepared pursuant to Chapter 343, HRS.

PROPOSING AGENCY: DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

RESPONSIBLE OFFICIAL: *Kenneth E. Sprague* 5/20/96
KENNETH E. SPRAGUE DATE
Director and Chief Engineer

PREPARED BY
DIVISION OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS

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I. GENERAL DESCRIPTION OF THE PROPOSED ACTION

A. Technical

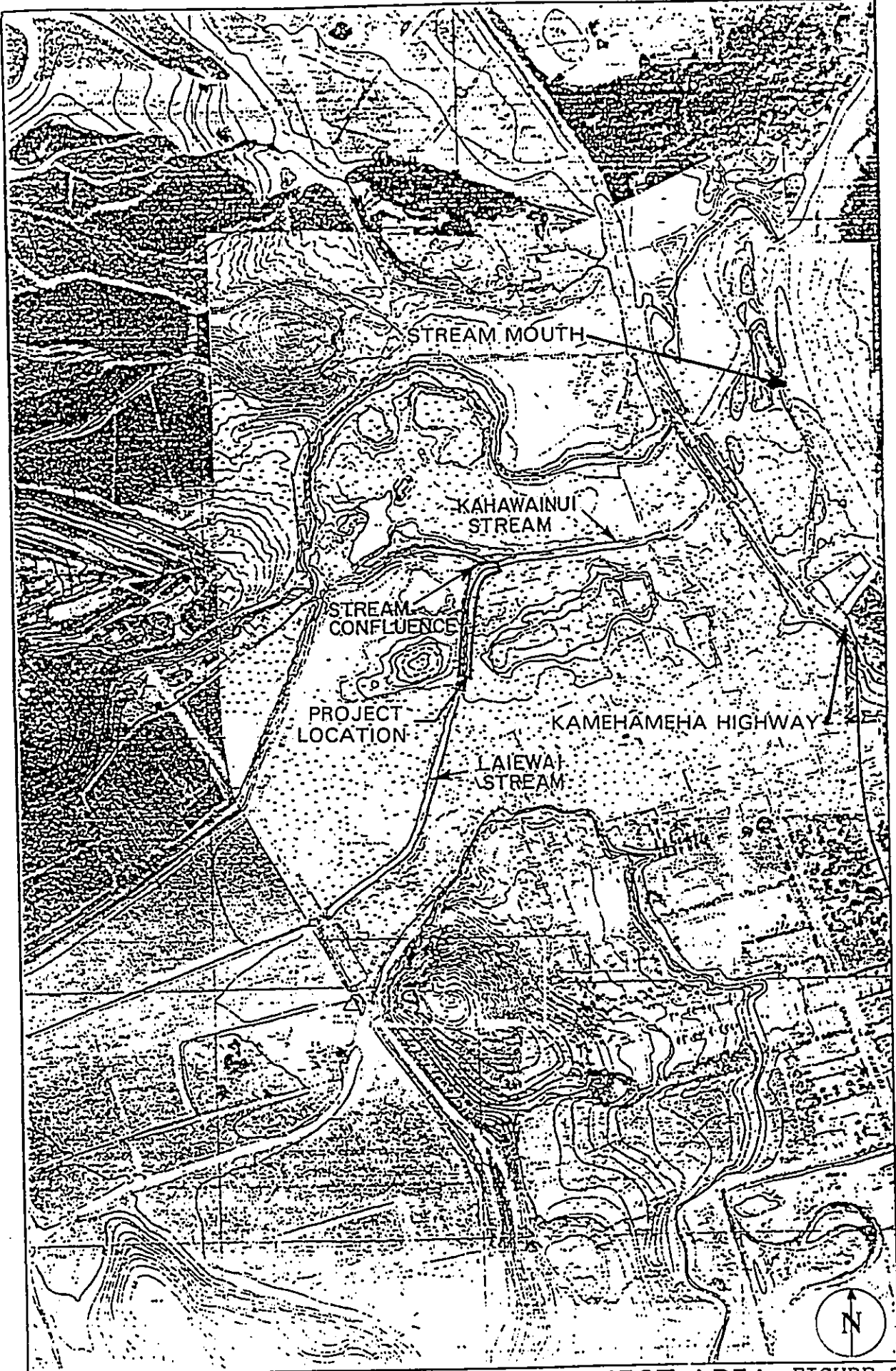
The proposed project is located in Laie along the Laiewai and Kahawainui Streams at tax map key parcels 5-5-05:22, 5-5-08:61, and 5-5-09:03, 07, and 23 on the northeast coast of the island of Oahu. A location map is shown in Figure 1 and a topographic map of the project area is shown in Figure 2.

The project will modify the recently constructed Kahawainui Stream Flood Control Project to repair damages and prevent future damages to areas identified as the "I-wall" and "Levee A". The damages were sustained during a series of storms which occurred between March 19 and 23, 1991. The storms generated flows equivalent to a 15-year storm event which resulted in a peak flow of about 6,000 cubic feet per second (cfs). Based on field observations, the constructed floodwall and levee were not adequately protected from storm induced erosive currents within the stream and wave effects in the upper reaches along the natural Laiewai Stream.

The damages involve erosion of the stream bank fronting the I-wall and erosion of a 100-foot section of the toe of Levee A. The erosion has progressed to within approximately 2 feet of the existing floodwall and if not repaired, may cause failure of the floodwall and the levee. These damages threaten the structural integrity of the flood control project. As an interim measure, riprap has been temporarily placed in the eroded areas to help protect the stream bank and levee from further erosion.

The I-wall damages will be repaired by replacing approximately 315 linear feet of soil along the stream bank fronting the I-wall and armoring the I-wall with a 6-inch thick Articulating Block Mat (ABM). The modified side slope of the stream bank at the floodwall will be 1.5-horizontal to 1-vertical. The ABM will be anchored at the top by a trench 2 feet deep and backfilled with mortared riprap while the toe of the ABM will be imbedded in a toe trench 5 feet deep and backfilled with cobbles.

Approximately 200 feet of Levee A will be repaired and modified and the side slope will be restored and extended to the level of the eroded stream bed. The levee side slope riprap will be replaced to the original design and the extended side slope will be



TOPOGRAPHIC MAP OF PROJECT AREA FIGURE 2

armored by a 6-inch thick ABM. The top of the ABM will be anchored by the reconstructed riprap slope lining while the toe of the ABM will be imbedded in a toe trench 5 feet deep below the stream bed or to the maximum potential erosion depth and backfilled with cobbles. Transition between the proposed modifications and the existing levee will involve removing the existing concrete riprap toe at the base of the concrete riprap lining, filling and extending the stream bank on a side slope of 2-horizontal to 1-vertical to the bottom of the eroded stream bed, and protecting the new fill with a 6-inch thick ABM.

The project will also include grading work on a portion of the West bank of the Laiewai Stream to redirect the flow of water from an existing pond toward the center of the channel of the Kahawainui Stream. This redirection of flow from the pond area should reduce the erosive currents which damaged Levee A.

The construction plans for the proposed repairs and improvements are contained in Appendix A. The construction work will be accomplished through a competitive bidding contract supervised by the U.S. Army Corps of Engineers (COE). Construction is anticipated to begin in mid 1996 and will take approximately 6 months to complete.

B. Socio Economic

The proposed modifications to the Kahawainui Stream Flood Control project are necessary to prevent potential failure of the flood control project during a storm event. Project failure will result in flood waters inundating the area. The constructed project has instilled a sense of security in the Laie community and project failure may result in loss of human life.

The Kahawainui Stream Flood Control project initially cost \$4,956,000 to construct and has averted an estimated \$11,000,000 in flood damages due to its construction. The proposed modifications are required to ensure continued flood protection for the area.

The project repair cost is estimated at \$738,000 including planning, design and construction. Of this cost, \$553,000 would be borne by the COE, and the remaining \$185,000 by the City and County of Honolulu.

C. Environmental Characteristics

The final Environmental Impact Statement (EIS) for the Kahawainui Stream Flood Control project was accepted in June 1987. The proposed project is a modification of a portion of this recently constructed flood control project and should not have additional impacts to those previously identified in the 1987 EIS. The COE considers the proposed project to be a modification of an existing project and has determined that it is categorically excluded from National Environmental Policy Act (NEPA) documentation.

The COE also determined that a Clean Water Act, Section 404 Permit is not required for the proposed project. Although a Section 404 permit is not required, the COE prepared a Public Notice dated January 12, 1996 for the proposed repairs, entitled, Notice of U.S. Army Corps of Engineers Compliance With Section 404, Clean Water Act Regulatory Requirements and Intent to Discharge Dredged and Fill Material Into Kahawainui Stream, Laie, Oahu, Hawaii. The notice is included in Appendix B.

The State Department of Land and Natural Resources (DLNR) was consulted on the applicability of a Conservation District Use Application (CDUA) permit and was informed that a permit was not required. A Stream Channel Alteration Permit (SCAP) application has been prepared and submitted to the DLNR Commission on Water Resource Management (CWRM) for review. Approval for the SCAP will be obtained prior to construction commencement.

The COE has requested Water Quality Certification (WQC) from the State Department of Health (DOH). Construction will not commence until the WQC or a waiver is obtained.

The State of Hawaii, Office of State Planning, Coastal Zone Management (CZM) Office in their letter dated October 10, 1995 determined that a consistency determination was made for the original Kahawainui Stream Flood Control Project in 1985 and the present project is also consistent to the maximum extent practicable.

The Kahawainui Stream Flood Control Project received a City and County of Honolulu Special Management Area Use Permit (SMP) on January 13, 1988. The City's Department of Land Utilization (DLU) reviewed the proposed project and determined that the repairs are in substantial conformance with the original Kahawainui

Stream Flood Control Project's SMP in their letter of May 30, 1995 and that SMP requirements have been satisfied. Their letter is included in Appendix B.

II. DESCRIPTION OF THE AFFECTED ENVIRONMENT

The proposed project is a modification of the Kahawainui Stream Flood Control project and will affect the same general area previously disturbed by the Kahawainui Stream Flood Control project and addressed in the EIS accepted in June 1987.

A. Location

The project is located within the Kahawainui Stream watershed on the northeastern side of the island of Oahu on the eroded remnants of the Koolau Shield volcano. The Kahawainui Stream watershed encompasses approximately 5.3 square miles and consists of the area between Omao Gulch to the north and Waialele Gulch to the south. The project repairs and modifies the streambank area along the Kahawainui and Laiewai Streams.

B. Population

Laie is the principal urban center in the Kahawainui Stream watershed. According to the 1993-1994 State Data Book, the Laie census area was identified to have a population of 5577 residents in 1990.

C. Climate

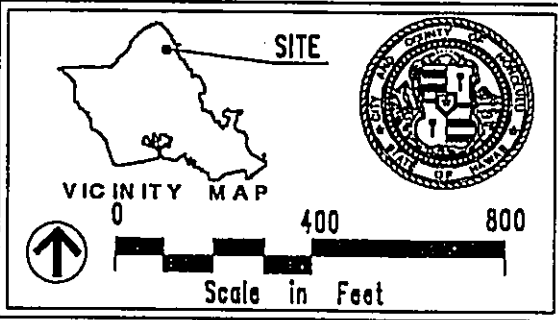
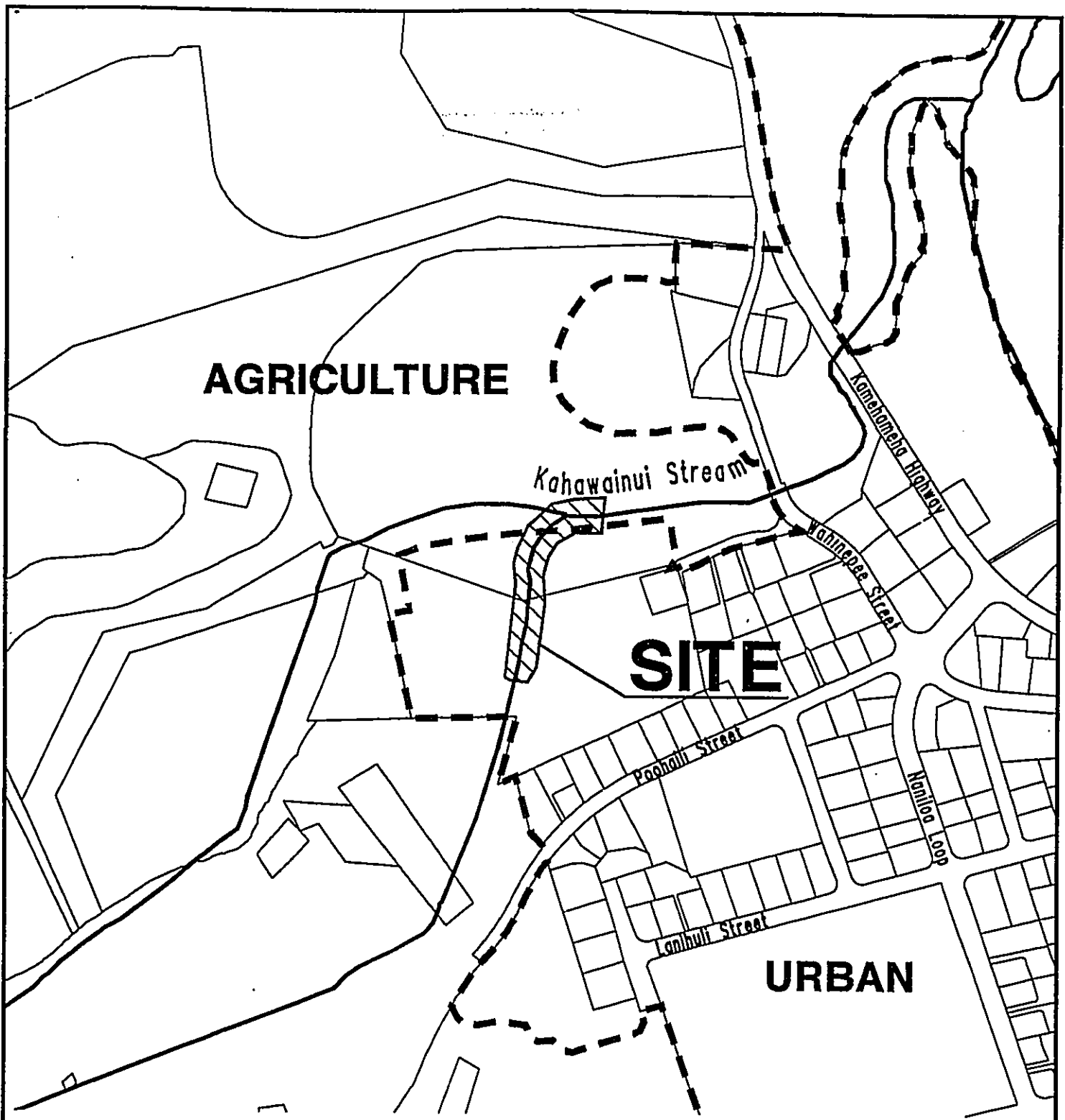
Average annual rainfall in the Kahawainui Stream watershed ranges from 45 inches along the coastal plain to over 100 inches in higher elevations of the drainage basin. Temperatures are moderate throughout the year and winds are primarily from the northeast.

D. Land Use

Approximately 60 percent of the watershed is forest reserve land with the remaining area in pasturage, diversified agriculture, and residential and small commercial developments. A State land use map is provided in Figure 3.

E. Historic or Cultural Sites

The area near the Kahawainui and Laiewai Streams was inhabited and environmentally exploited by prehistoric



LAND USE MAP
Modifications to the
Kahawainui Stream
Flood Control Project
 FIGURE 3

Prepared By: Department of Public Works
 March 1988

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~~and~~ Hawaiian populations. Archaeological investigations and studies were conducted jointly by the DLNR and the COE as part of the Environmental Impact Statement (EIS) prepared for the Kahawainui Stream Flood Control project. The EIS indicated that the historical sites and cultural resources in the vicinity of the project do not appear to qualify for inclusion on the National Register of Historic Places.

F. Wildlife and Flora

Vegetation in the Kahawainui and Laiewai Stream area consists of strand vegetation along the coast and wetland vegetation along the ponds, streams, ditches, and in associated marshes and swamps. Open guava forest characterizes much of the watershed, with residential and agricultural developments influencing the vegetation throughout the coastal plain.

Kahawainui and Laiewai Streams do not appear to have a diverse aquatic faunal community. Surveys revealed tilapia, mosquito fish, guppies, bullfrogs and crayfish within the stream near the project area. No invertebrates were observed. Near the mouth of the Kahawainui Stream, juvenile mullet, mosquito fish and tilapia were observed. Marine waters adjacent to the project provide habitat for marine organisms including corals and fishes.

Terrestrial fauna occurring within the area include common introduced species of birds and mammals. The U.S. Fish and Wildlife Service surveyed the project area on May 31, 1995 to determine if federally protected waterbirds would likely be affected by the project. Service biologists observed a pair of endangered koloa (*Anas wyvilliana*) in a small temporary pool east of the project site. Neither this pool nor the project site provide suitable nesting habitat for the koloa. No other waterbirds were detected in the project area although the endangered Hawaiian common moorhen (*Gallinula chloropus sandvicensis*) was previously observed in 1983 to be nesting in the ponds north of the project site. These ponds are essentially unchanged since that time but appear to be presently unused by this species.

G. Soils

The lower elevations of the watershed is characterized by a broad coastal plain consisting of coral reef, dense sand and detrital sediment deposits. Soils in the area include beach sands, and coral outcrops on the

coastal plain and clays, loams, and silty clays throughout the area. Soils on steep slopes are typically subject to erosion. The project will repair the grouted riprap which was used to armor the stream bank along the Kahawainui and Laiewai Streams.

H. Drainage

Elevation ranges within the Kahawainui Stream watershed from sea level to approximately 2,300 feet, with deeply dissected cliffs and valleys characterizing higher elevations. The watershed is drained by a network of nine gulches which combine to form the Kahawainui Stream, about one mile from the ocean.

I. Groundwater

Groundwater is characterized by basal water floating on salt water and by dike-confined fresh water at higher elevations.

J. Water Quality

According to Hawaii Administrative Rules Chapter 11-54, Water Quality Standards, the Kahawainui and Laiewai Streams are designated as "Class 2" streams. Marine waters which the Kahawainui Stream discharges to are designated "Class A" waters. In the past, there may have been high ammonia and nitrate concentrations recorded for Kahawainui Stream, possibly due to agricultural activities or possible discharges of wastewater from the Laie Wastewater Treatment Plant to the wetlands upstream of the project.

K. Air Quality

Due to the rural nature and few stationary air pollution sources in the area, air quality in the area is generally good.

L. Noise

Noise levels are influenced primarily by traffic along Kamehameha Highway and within Laie town and are generally low.

M. Recreation

Recreation in the project area consist primarily of occasional fishing by neighboring residents. Access to the project area has been minimized since the area is intended for flood control purposes.

III. SUMMARY OF THE MAJOR IMPACTS

The proposed repair project should not significantly impact the environment.

Population levels, land use, drainage, groundwater, and recreational activities should not be significantly affected by the project because any anticipated changes would have occurred with the initial Kahawainui Stream Flood Control project.

Cultural resources should not be adversely affected by the project since the EIS for the Kahawainui Stream Flood Control Project previously determined that the cultural resources would not be adversely affected by the project or are located outside of the project boundaries. Since the proposed project will affect only a portion of the area studied in the EIS, no additional impacts are anticipated. The State Historic Preservation Division concurred that the proposed repair project will have no effect on any historic sites in their letter dated June 5, 1995.

Wildlife and flora should not be significantly impacted by the project. Vegetation was previously removed at the project site during construction of the Kahawainui Stream Flood Control project. Although the cobble backfill used to anchor the toe of the ABM may be exposed during extremely low flows which can affect the surface flow of the Kahawainui and Laiewai Stream, no significant environmental impacts are anticipated. The U.S. Fish and Wildlife Service in their letter of June 2, 1995 indicated that the proposed project is not likely to adversely affect any threatened or endangered species.

The major impacts, if any, would occur during construction. The construction may temporarily inconvenience residents along the contractor's haul/access route and in the vicinity of the project. Alternative haul/access routes will be considered to minimize inconveniences to residents. Construction activities may also affect air quality, noise and water quality. Air quality may be affected with increased exhaust emissions from vehicles and dust emissions. Increased noise may result from construction equipment and the construction activities. Water quality of the Kahawainui and Laiewai Streams may be impacted because the repair work will be near to the stream area or within the stream. Mitigation measures proposed to minimize these impacts are described in Section V.

IV. ALTERNATIVES CONSIDERED

There were four alternatives that were considered for the proposed action: (1) no action; (2) the proposed action; (3) modification of the levee and stream bank fronting the concrete I-wall using lining materials other than ABM; and (4) use of gabions, welded wire mesh baskets filled with rocks.

Under the "no action" alternative, the integrity of the flood control project would be jeopardized which could result in flood inundation, property damage and potential loss of life. The "no action" alternative is not acceptable because the potential for loss of life and aversion of property damages far exceeds the cost of the proposed action.

The proposed action would repair the damaged areas of the flood control project, prevent further erosion of the levee and stream bank area fronting the I-wall area and would address all concerns.

Other lining material such as loose riprap, concrete, and grouted riprap were investigated. However, ABM was determined to be the preferred lining material because of the ease of implementation.

The use of gabions was considered; however, mangrove growth problems within the gabion wire baskets have occurred in other projects which increased project maintenance costs. In addition the wire baskets of the gabions would corrode due to the brackish water environment.

V. MITIGATION MEASURES PROPOSED

In order to minimize adverse impacts to biological resources, water quality, air quality and noise emission levels, the following mitigation measures will be incorporated:

1. During construction, the construction contractor will be required to adhere to all applicable Federal, State of Hawaii, and City and County environmental protection regulations.
2. Turbidity in the Kahawainui and Laiewai streams caused by the project will be minimized to the maximum extent practicable with existing known control methods. The COE will monitor water quality before, during, and after construction to assure water quality standards are not exceeded.

3. Fills will be protected from erosion with ABM as soon after completion as practicable.
4. All construction activities within and adjacent to the water will be conducted according to sound engineering management practices to insure that no debris, organic materials, petroleum products, or other deleterious materials be placed or allowed to fall, flow, leach or otherwise enter the water.
5. All construction-related materials will be free of pollutants.
6. A contingency plan for containing and controlling accidental spills of petroleum products at the construction site will be developed.
7. The contractor will be required to develop an environmental protection plan, which will detail the measures to be used to comply with the environmental regulations. The plan will also include details of how environmental resources will be protected from secondary effects of constructions.

VI. AGENCIES CONSULTED

The following agencies were consulted in compliance with the preassessment consultation requirements. Written responses received from these agencies are included in Appendix B.

A. Federal Agencies

1. U.S. Army Corps of Engineers
2. U.S. Department of the Interior, Fish & Wildlife Services
3. U.S. Department of Agriculture, Natural Resource Conservation Service

B. State Agencies

1. Department of Health
2. Department of Land and Natural Resources
3. University of Hawaii, Environmental Center
4. State Representative Colleen Meyer, District 46
5. State Senator Mike McCartney, District 23

C. City Agencies

1. Department of Land Utilization
2. Department of Transportation Services
3. Koolauloa Neighborhood Board No. 28
4. Councilmember Steve Holmes, District 2

D. Other Groups

1. Hawaiian Electric Company, Inc.
2. Hawaii Reserves, Inc.
3. Laie Community Association

Comments received during the draft Environmental Assessment comment period are contained in Appendix C. Responses to these comments are also contained in Appendix C.

VII. DETERMINATION

After completing an assessment of the potential environmental effects of the proposed project and consulting formally with other governmental agencies, it has been determined that an Environmental Impact Statement is not required. Therefore, this document constitutes a notice of Negative Declaration.

VIII. FINDINGS AND REASONS SUPPORTING THE DETERMINATION

The proposed project would not have a significant effect on the environment and therefore preparation of an environmental impact statement is not required. The "Significance Criteria," Section 12 of Hawaii Administrative Rules Title 11, Chapter 200, "Environmental Impact Statement Rules," were reviewed and analyzed. Based on the analysis, the following were concluded:

- A. No irrevocable commitment to loss or destruction of any natural or cultural resource would result.

Studies of the project area indicated that no significant natural or cultural resources are present at the project site or would be affected by the project. The Kahawainui Stream Flood Control Project which is being repaired by this project did not have significant impacts to natural or cultural resources.

- B. The action would not curtail the range of beneficial uses of the environment.

The project repairs damaged portions of an existing flood control project. The use of the environment within the project area will not be significantly changed.

- C. The proposed action does not conflict with the state's long-term environmental policies or goals and guidelines.

The State's environmental policies and guidelines set forth in Chapter 344, Hawaii Revised Statutes, State Environmental Policy is intended to establish a state policy which will encourage productive and enjoyable harmony between man and his environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man, and enrich the understanding of the ecological systems and natural resources important to the people of Hawaii. The proposed project does not consume significant natural resources and will enhance the quality of life by maintaining flood protection for the community.

- D. The economic or social welfare of the community or state would not be substantially affected.

Construction of the repairs to the Kahawainui Stream Flood Control Project would result in temporary economic benefits to the construction industry and indirectly to other economic sectors as well. Flood damages resulting from the failure of the flood control project would be averted.

- E. The proposed action does not substantially affect public health.

The repair of the Kahawainui Stream Flood Control Project will ensure continued flood protection of the community. Public health impacts resulting from the failure of the levees and retaining wall would be avoided.

- F. No substantial secondary impacts, such as population changes or effects on public facilities, are anticipated.

The repair of the flood control project should not have significant impacts on population changes or public facilities. These impacts would have occurred with the

initial construction of the Kahawainui Stream Flood Control Project.

- G. No substantial degradation of environmental quality is anticipated.

The project should not significantly affect the environmental quality of the project area. Temporary construction impacts which may be anticipated will be mitigated as previously discussed in Section V.

- H. The proposed action does not involve a commitment to larger actions, nor would cumulative impacts result in considerable effects on the environment.

The project will repair a portion of the existing Kahawainui Stream Flood Control Project. This project is not a phase of a larger project and is not a commitment to a larger project.

- I. No rare, threatened or endangered species or their habitat would be affected.

Studies of the project area indicated that no rare, threatened or endangered species or their habitat would be affected.

- J. Air quality, water quality or ambient noise levels would not be detrimentally affected.

Air quality, water quality or ambient noise levels would not be adversely affected by the completed project. Construction of the project may result in temporary impacts to air quality, water quality or ambient noise levels. However, these impacts would be mitigated by measures previously discussed in Section V.

- K. The project would not affect environmentally sensitive areas, such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuaries, fresh water, or coastal waters.

The project repairs an existing flood control project which previously affected a flood plain. Prior to construction of the flood control project an Environmental Impact Statement was prepared for the project. No significant impacts are expected from the proposed project.

IX. LIST OF REFERENCES

1. City and County of Honolulu, Final Environmental Impact Statement for the Kahawainui Stream Flood Control, Department of Public Works, Division of Engineering, June 1987.
2. U.S. Army Corps of Engineers, Kahawainui Stream, Island of Oahu, Final Detailed Project Report and Environmental Impact Statement, Honolulu District, November 1985.
3. U.S. Army Corps of Engineers, Modifications to Completed Project Report for the Kahawainui Stream Flood Control Project, Oahu, Hawaii, U.S. Army Engineer District, Honolulu, February 1992.

A P P E N D I X A

*CONSTRUCTION PLANS FOR KAHAWAINUI STREAM
FLOOD CONTROL REPAIR PROJECT*

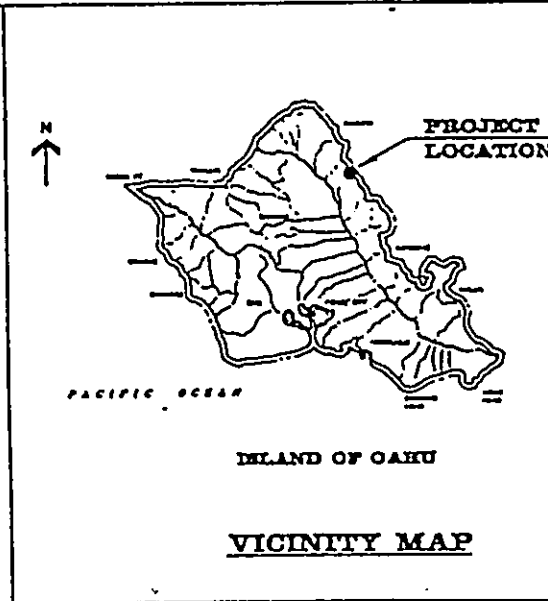
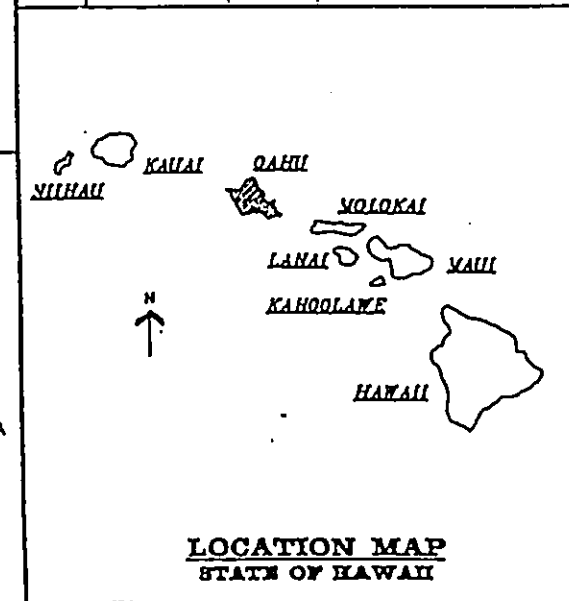
MODIFICATIONS TO THE KA FLOOD CONTROL

**LAIE, OAHU, HA
TMK: 5 - 5 - 05, 0**

SCHEDULE OF DRAWINGS

RING NUMBER	DRAWING NUMBER	SHEET NUMBER	DESCRIPTION OF DRAWINGS	REVISION STATUS
①	871 90 04	1	TITLE SHEET	
②	871 90 04	2	CONSTRUCTION NOTES	
③	871 90 04	3	GENERAL PLAN & EROSION CONTROL, LOCATION AND VICINITY MAPS	
④	871 90 04	4	PLAN & PROFILE - LEVEE "A"	
⑤	871 90 04	5	PLAN & PROFILE - "I" WALL & LEVEE "B"	
⑥	871 90 04	6	TYPICAL SECTIONS - LEVEE "A" STA. 0+50 TO 2+50	
⑦	871 90 04	7	TYPICAL SECTIONS - "I" WALL AND LEVEE "B" STA. 0+15.80 TO 3+15	
⑧	871 90 04	8	CROSS SECTIONS - LEVEE "A" STA. 0+50 TO 2+50	
⑨	871 90 04	9	CROSS SECTIONS - "I" WALL & LEVEE "B" STA. 0+15.80 TO 3+15	
⑩	871 90 04	10	BORING LOG LOCATION PLAN & BORING LOGS	
⑪	871 90 04	11	CONTRACTOR'S HAUL AND ACCESS ROUTE	

ABM	ARTICULATING BLOCK MAT
BM	BENCH MARK
BOT.	BOTTOM
BW	BOTTOM OF WALL
C	CENTER LINE
CL	CHORD LENGTH
CONC.	CONCRETE
CRM	CONCRETE RUBBLE MASONRY
D	DIAMETER
E	EAST
EL. OR ELEV.	ELEVATION
EXIST.	EXISTING
EXST.	EXISTING
FT.	FEET
GA	GAGE
GR.	GROUND
H	HIGHT
INV.	INVERT



	EXISTING SLOPE
	NEW SLOPE
	BENCH MARK
	EXISTING GROUND (CONTOUR-2FT. INTERVAL)
	DIRECTION OF FLOW
	CENTERLINE LEVEE & "I" WALL
	PROPERTY LINE
	CONSTRUCTION EASEMENT
	APPROXIMATE TOE ABM
	TOP ABM
	APPROXIMATE BOTTOM OF BANK
	LIMITS OF GRADING
	FILTER FENCE

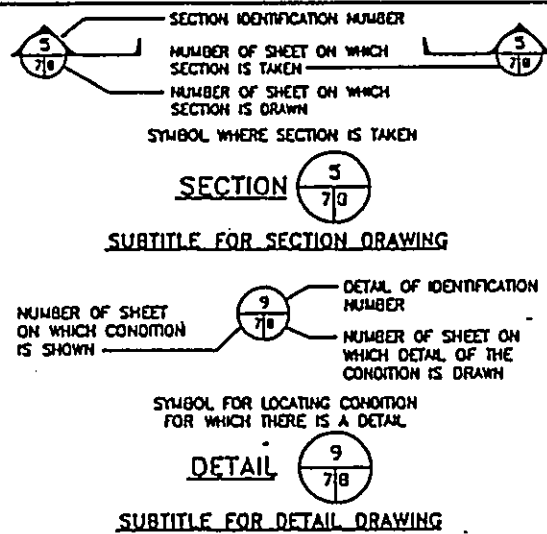
THE KAHAWAINUI STREAM CONTROL PROJECT

HAWAII
- 5 - 05, 08 & 09

ABBREVIATIONS

BEARING BLOCK MAT	L	LENGTH
MARK	Lc	LENGTH OF CURVE
M	MIN	MINIMUM
N OF WALL	N	NORTH
R LINE	O/S	OFFSET
LENGTH	PC	POINT OF CURVATURE
NOTE	PI	POINT OF INTERSECTION
NOTE RUBBLE MASONRY	PT	POINT OF TANGENCY
SDR	R	RADIUS
SDM	RT	RIGHT
SDG	S	SLOPE
SDH	SHL OR SHL	SHEET
SDI	STA	STATION
SDJ	T	TANGENT
SDK	TP	TOP OF PIPE
SDL	TW	TOP OF WALL
SDM	WS	WATER SURFACE

SECTION/DETAIL CROSS REFERENCING CONVENTIONS



CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION DEPARTMENT OF HEALTH, STATE OF HAWAII	DATE
CHIEF, HIGHWAYS DIVISION, DEPARTMENT OF TRANSPORTATION (APPROVAL GRANTED FOR EGRESS & INGRESS TO KAMEHAMEHA HIGHWAY ONLY)	DATE
DIRECTOR & CHIEF ENGINEER DEPARTMENT OF PUBLIC WORKS CITY & COUNTY OF HONOLULU	DATE

SYMBOLS ON PLAN

EXISTING SLOPE		EXISTING FENCE
NEW SLOPE		EXISTING 1" WATER LINE
BENCH MARK		CONTRACTOR'S OPERATIONS AND STORAGE AREA
EXISTING GROUND (CONTOUR-2FT. INTERVAL)		PRIMARY CONTRACTOR'S ACCESS AND HAUL ROUTE
DIRECTION OF FLOW		SECONDARY CONTRACTOR'S ACCESS AND HAUL ROUTE
CENTERLINE LEVIE & "F" WALL		EXISTING ROADS, STREETS, HIGHWAY
PROPERTY LINE		
CONSTRUCTION EASEMENT		
APPROXIMATE TOP ASH		
TOP ASH		
APPROXIMATE BOTTOM OF BANK		
LIMITS OF GRADING		
FILTER FENCE		



SUBMITTED	BARRETT CONSULTING GROUP TRANS PACIFIC LAND CORP. 475 WASHINGTON ST., SUITE 610 HONOLULU, HAWAII 96813
CHIEF, DEPT. OF HEALTH, STATE OF HAWAII	APPROVAL, RECOMMENDED
CHIEF, PLANNING DIVISION	APPROVED
CHIEF, PLANNING & ECONOMIC DEV.	APPROVED
CHIEF, DIVISION OF CIVIL & MECHANICAL ENGR.	APPROVED
COL. C. W. L. HONOLULU DISTRICT OFFICE	

REV	DATE	DESCRIPTION	BY	CHK	APPD
REVISIONS					
		U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN HONOLULU DISTRICT HONOLULU, HAWAII			
		MODIFICATIONS TO THE KAHAWAINUI STREAM FLOOD CONTROL PROJECT			
TITLE SHEET					
DATE	5/31/93	LOCATION	LAKI, OAHU, HAWAII		
LDC CODE	7990-91	PROJECT	871	TYPE	90
		SCALE	04	SHEET	1

**US Army Corps
of Engineers**

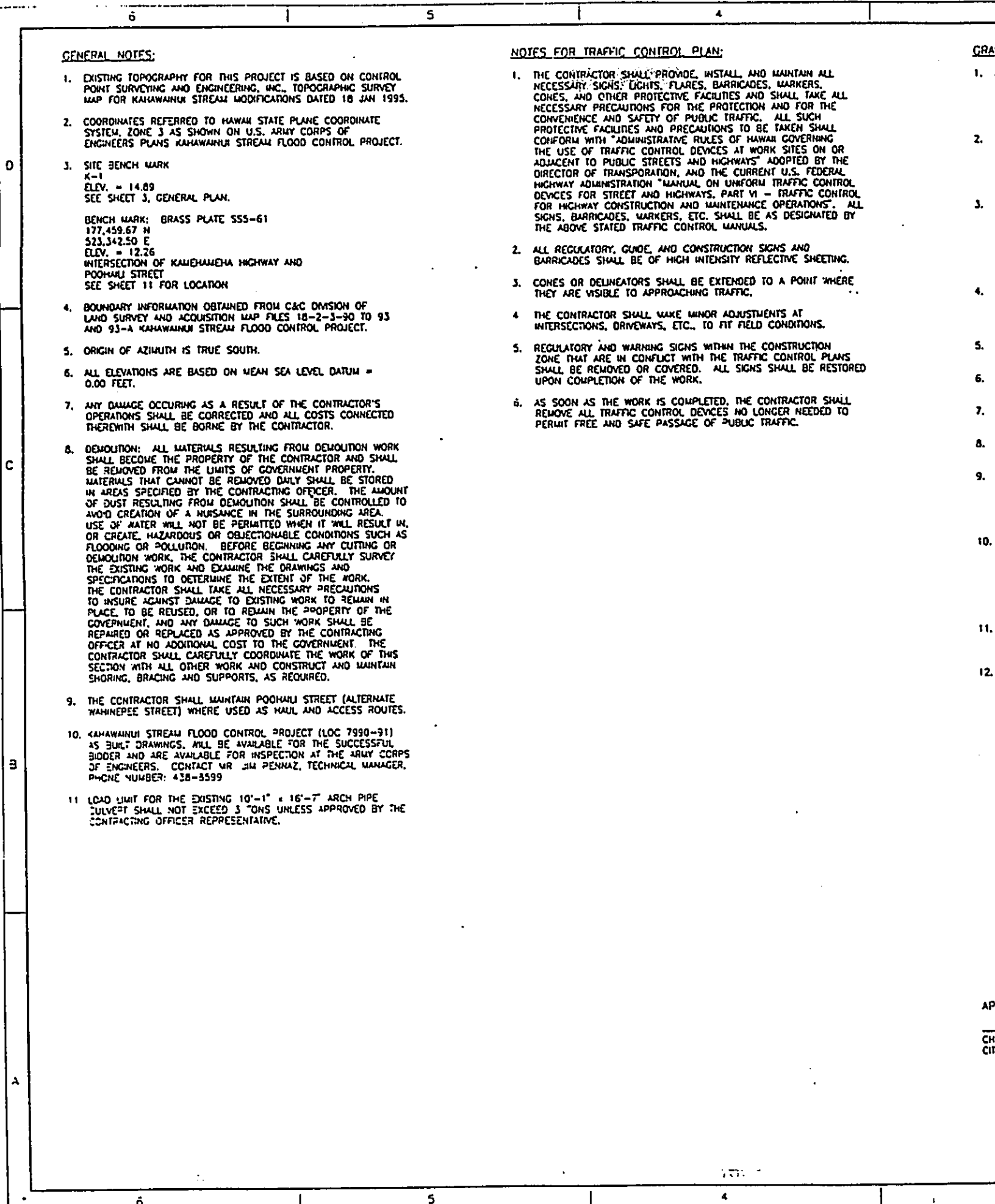
GENERAL NOTES:

1. EXISTING TOPOGRAPHY FOR THIS PROJECT IS BASED ON CONTROL POINT SURVEYING AND ENGINEERING, INC., TOPOGRAPHIC SURVEY MAP FOR KAHAWAIIKI STREAM MODIFICATIONS DATED 18 JAN 1995.
2. COORDINATES REFERRED TO HAWAII STATE PLANE COORDINATE SYSTEM, ZONE 3 AS SHOWN ON U.S. ARMY CORPS OF ENGINEERS PLANS KAHAWAIIKI STREAM FLOOD CONTROL PROJECT.
3. SITE BENCH MARK
K-1
ELEV. = 14.89
SEE SHEET 3, GENERAL PLAN.

BENCH MARK: BRASS PLATE 555-61
177,459.67 N
523,342.50 E
ELEV. = 12.26
INTERSECTION OF KAHAHAMEHA HIGHWAY AND
POOHAKU STREET
SEE SHEET 11 FOR LOCATION
4. BOUNDARY INFORMATION OBTAINED FROM C&C DIVISION OF LAND SURVEY AND ACQUISITION MAP FILES 18-2-3-90 TO 93 AND 93-A KAHAWAIIKI STREAM FLOOD CONTROL PROJECT.
5. ORIGIN OF AZIMUTH IS TRUE SOUTH.
6. ALL ELEVATIONS ARE BASED ON MEAN SEA LEVEL DATUM = 0.00 FEET.
7. ANY DAMAGE OCCURRING AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED AND ALL COSTS CONNECTED THEREWITH SHALL BE BORNE BY THE CONTRACTOR.
8. DEMOLITION: ALL MATERIALS RESULTING FROM DEMOLITION WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF GOVERNMENT PROPERTY. MATERIALS THAT CANNOT BE REMOVED DAILY SHALL BE STORED IN AREAS SPECIFIED BY THE CONTRACTING OFFICER. THE AMOUNT OF DUST RESULTING FROM DEMOLITION SHALL BE CONTROLLED TO AVOID CREATION OF A NUISANCE IN THE SURROUNDING AREA. USE OF WATER WILL NOT BE PERMITTED WHEN IT WILL RESULT IN, OR CREATE, HAZARDOUS OR OBJECTIONABLE CONDITIONS SUCH AS FLOODING OR POLLUTION. BEFORE BEGINNING ANY CUTTING OR DEMOLITION WORK, THE CONTRACTOR SHALL CAREFULLY SURVEY THE EXISTING WORK AND EXAMINE THE DRAWINGS AND SPECIFICATIONS TO DETERMINE THE EXTENT OF THE WORK. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO INSURE AGAINST DAMAGE TO EXISTING WORK TO REMAIN IN PLACE, TO BE REUSED, OR TO REMAIN THE PROPERTY OF THE GOVERNMENT, AND ANY DAMAGE TO SUCH WORK SHALL BE REPAIRED OR REPLACED AS APPROVED BY THE CONTRACTING OFFICER AT NO ADDITIONAL COST TO THE GOVERNMENT. THE CONTRACTOR SHALL CAREFULLY COORDINATE THE WORK OF THIS SECTION WITH ALL OTHER WORK AND CONSTRUCT AND MAINTAIN SHORING, BRACING AND SUPPORTS, AS REQUIRED.
9. THE CONTRACTOR SHALL MAINTAIN POOHAKU STREET (ALTERNATE WAHINEPEE STREET) WHERE USED AS HAUL AND ACCESS ROUTES.
10. KAHAWAIIKI STREAM FLOOD CONTROL PROJECT (LOC 7990-91) AS BUILT DRAWINGS, WILL BE AVAILABLE FOR THE SUCCESSFUL BIDDER AND ARE AVAILABLE FOR INSPECTION AT THE ARMY CORPS OF ENGINEERS. CONTACT MR. JIM PENNAZ, TECHNICAL MANAGER, PHONE NUMBER: 438-3599
11. LOAD LIMIT FOR THE EXISTING 10'-1" x 16'-7" ARCH PIPE CULVERT SHALL NOT EXCEED 3 TONS UNLESS APPROVED BY THE CONTRACTING OFFICER REPRESENTATIVE.

NOTES FOR TRAFFIC CONTROL PLAN:

1. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION AND FOR THE CONVENIENCE AND SAFETY OF PUBLIC TRAFFIC. ALL SUCH PROTECTIVE FACILITIES AND PRECAUTIONS TO BE TAKEN SHALL CONFORM WITH "ADMINISTRATIVE RULES OF HAWAII CONCERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS" ADOPTED BY THE DIRECTOR OF TRANSPORTATION, AND THE CURRENT U.S. FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS, PART VI - TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS". ALL SIGNS, BARRICADES, MARKERS, ETC. SHALL BE AS DESIGNATED BY THE ABOVE STATED TRAFFIC CONTROL MANUALS.
2. ALL REGULATORY, GUIDE, AND CONSTRUCTION SIGNS AND BARRICADES SHALL BE OF HIGH INTENSITY REFLECTIVE SHEETING.
3. CONES OR DELINEATORS SHALL BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
4. THE CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS AT INTERSECTIONS, DRIVEWAYS, ETC., TO FIT FIELD CONDITIONS.
5. REGULATORY AND WARNING SIGNS WITHIN THE CONSTRUCTION ZONE THAT ARE IN CONFLICT WITH THE TRAFFIC CONTROL PLANS SHALL BE REMOVED OR COVERED. ALL SIGNS SHALL BE RESTORED UPON COMPLETION OF THE WORK.
6. AS SOON AS THE WORK IS COMPLETED, THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL DEVICES NO LONGER NEEDED TO PERMIT FREE AND SAFE PASSAGE OF PUBLIC TRAFFIC.



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GRADING NOTES:

1. ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 14, ARTICLES 13, 14, 15 AND 16, AS RELATED TO GRADING, SOIL EROSION AND SEDIMENT CONTROL, OF THE REVISED ORDINANCES OF HONOLULU, 1990, AS AMENDED.
2. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
3. EXPOSED AREAS SHALL BE SOODED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL GRADING WORK HAS BEEN COMPLETED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA WITHIN WHICH WORK HAS BEEN DELAYED OR INTERRUPTED SHALL BE PLANTED, MATCH EXISTING GRASS TYPE. PROVIDE 90 DAY TURF ESTABLISHMENT PERIOD.
4. THE CITY SHALL BE INFORMED OF THE LOCATION OF THE BORROW/ DISPOSAL SITE FOR THE PROJECT WHEN THE APPLICATION FOR A GRADING PERMIT IS MADE. THE DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
5. NO WORK IS ALLOWED ON SATURDAYS, SUNDAYS AND FEDERAL HOLIDAYS. THE PROHIBITION IS FOR ANY AND ALL WORK.
6. THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
7. TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED UNTIL PERMANENT EROSION CONTROLS ARE IN PLACE AND ESTABLISHED.
8. TEMPORARY EROSION CONTROL PROCEDURES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO APPLICATION FOR A GRADING PERMIT.
9. ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATER FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT-LOADED RUN-OFF FROM LEAVING THE SITE.
10. ALL GRADING AND DEWATERING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, CHAPTER 11-55, "WATER POLLUTION CONTROL" AND CHAPTER 11-54, "WATER QUALITY STANDARDS" AND IF APPLICABLE, THE NPDES PERMIT FOR THE PROJECT.
11. ALL MEASURES TO CONTROL EROSION (INCLUDING SILT CURTAIN) AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTH MOVING OPERATION IS INITIATED.
12. NON-COMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHOULD COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE CONTRACTOR. FURTHERMORE, VIOLATORS SHALL BE SUBJECT TO ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES.

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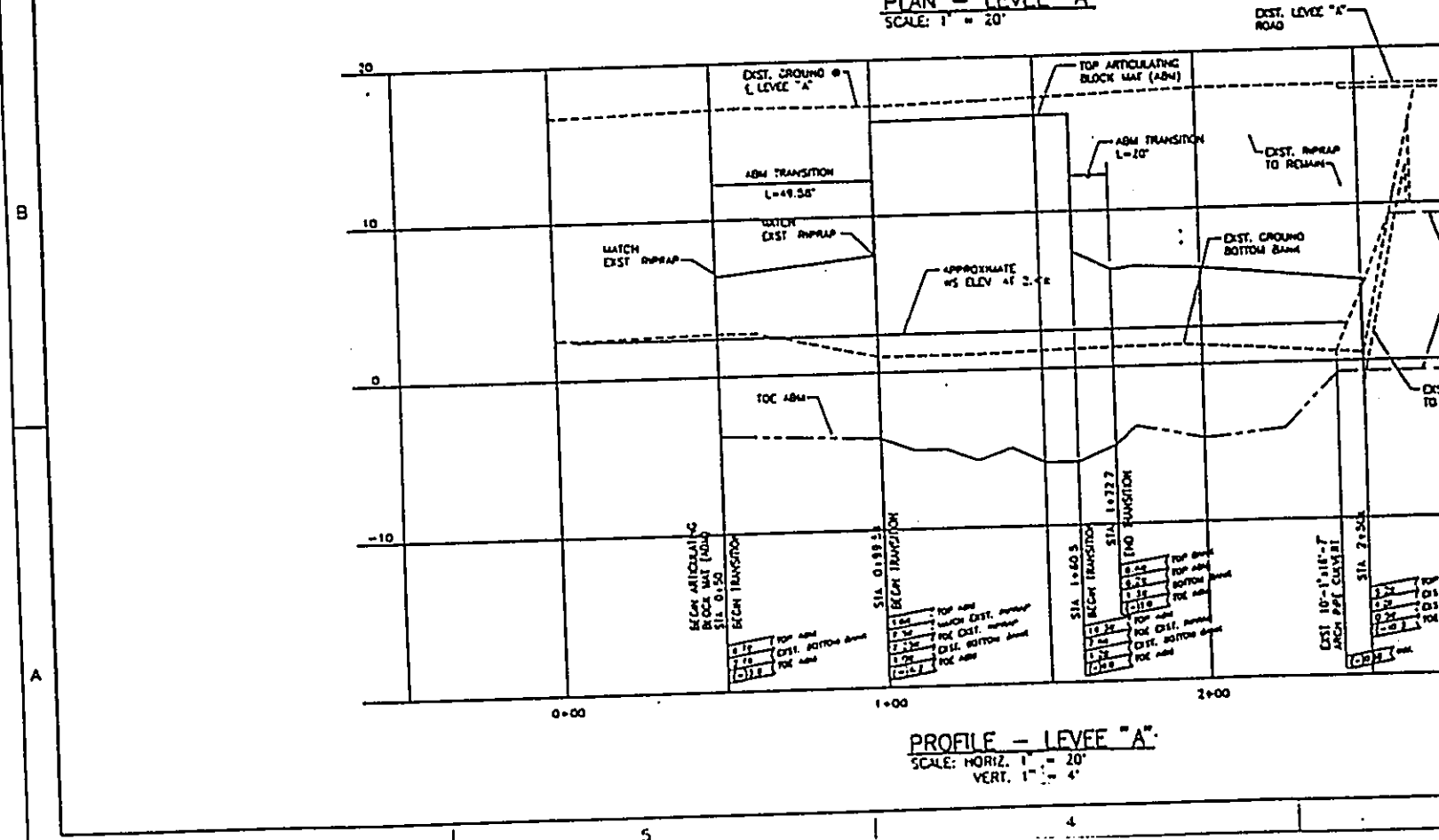
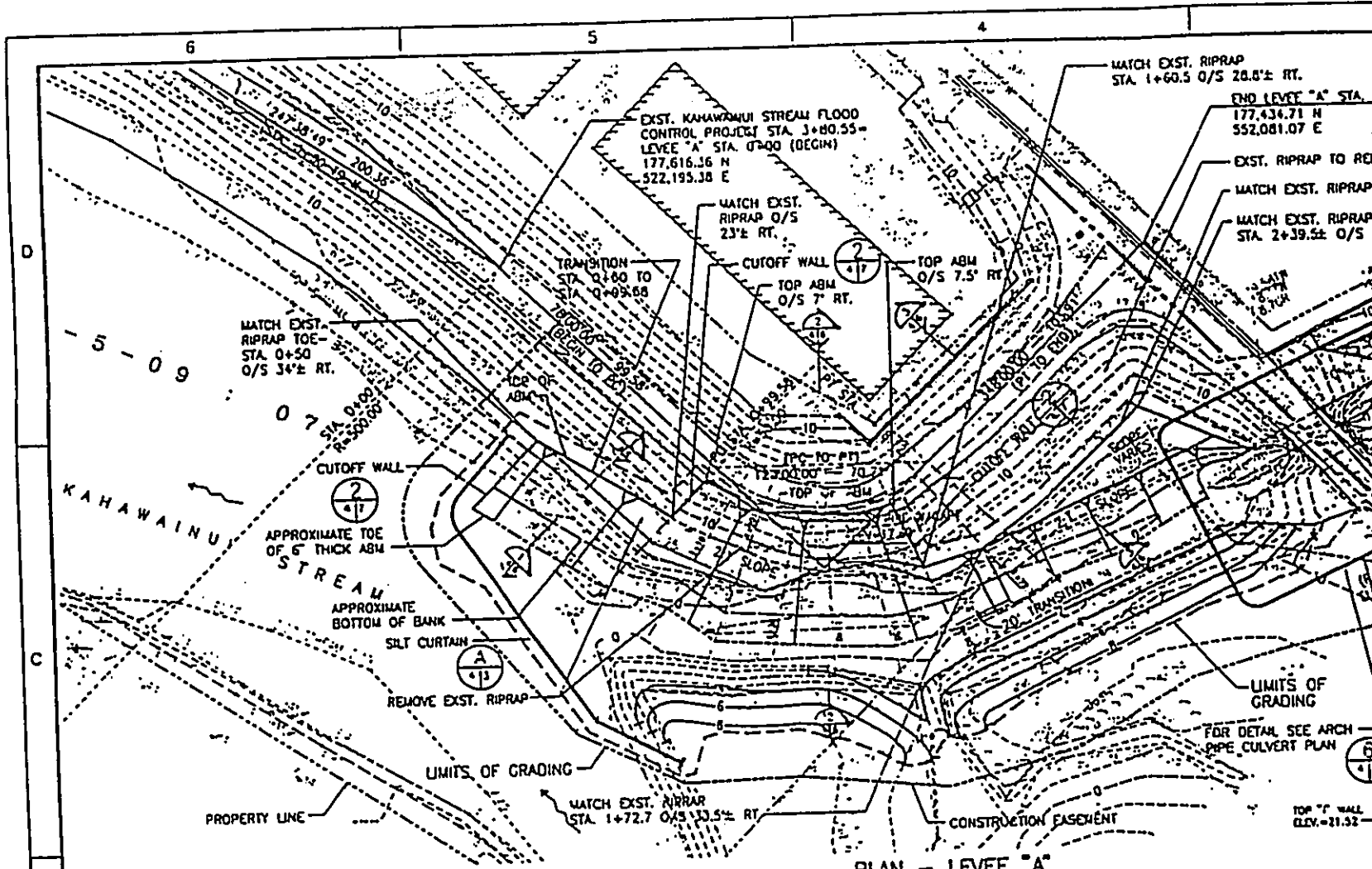
CHIEF, DIVISION OF ENGINEERING, DPW
 CITY & COUNTY OF HONOLULU

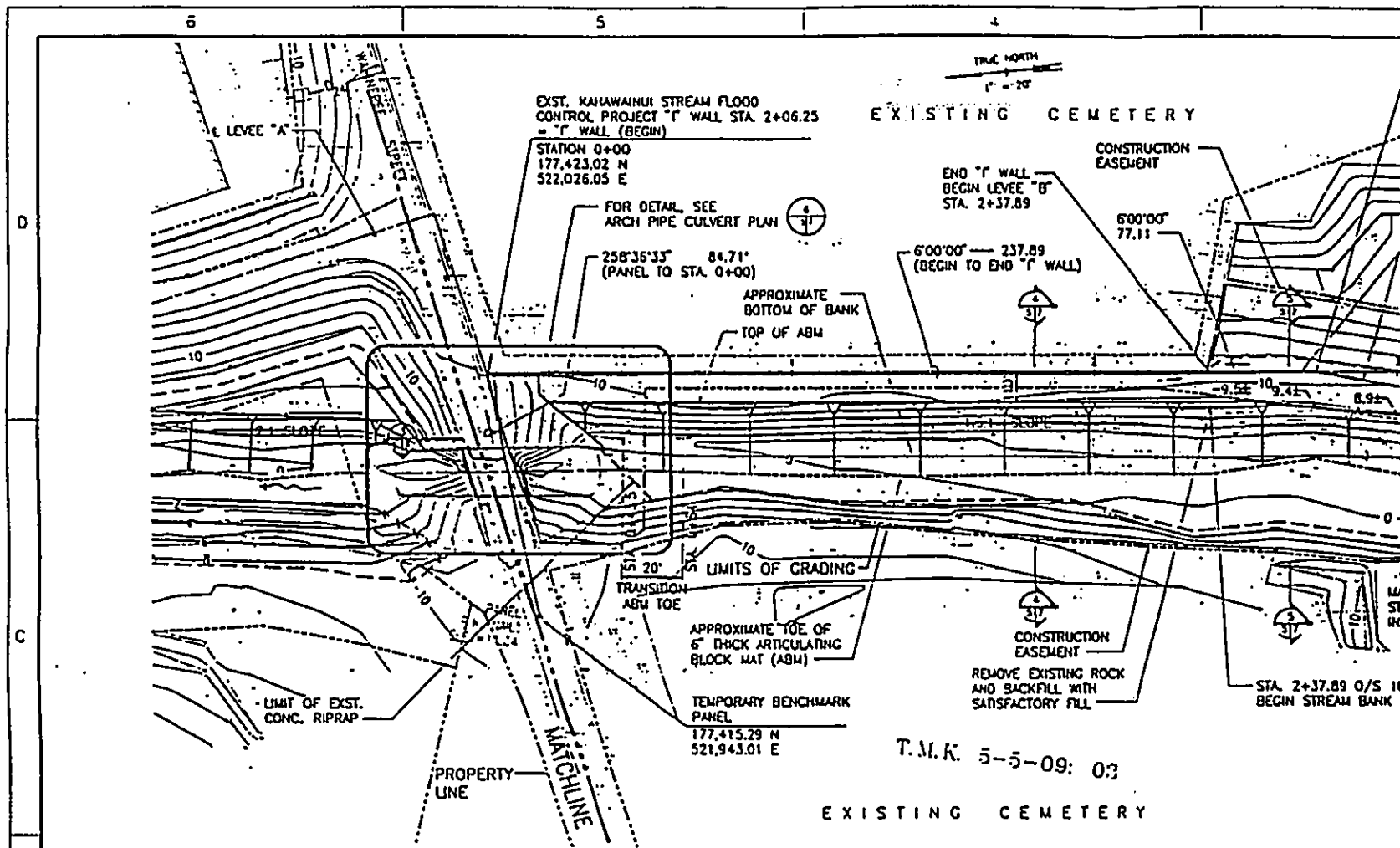
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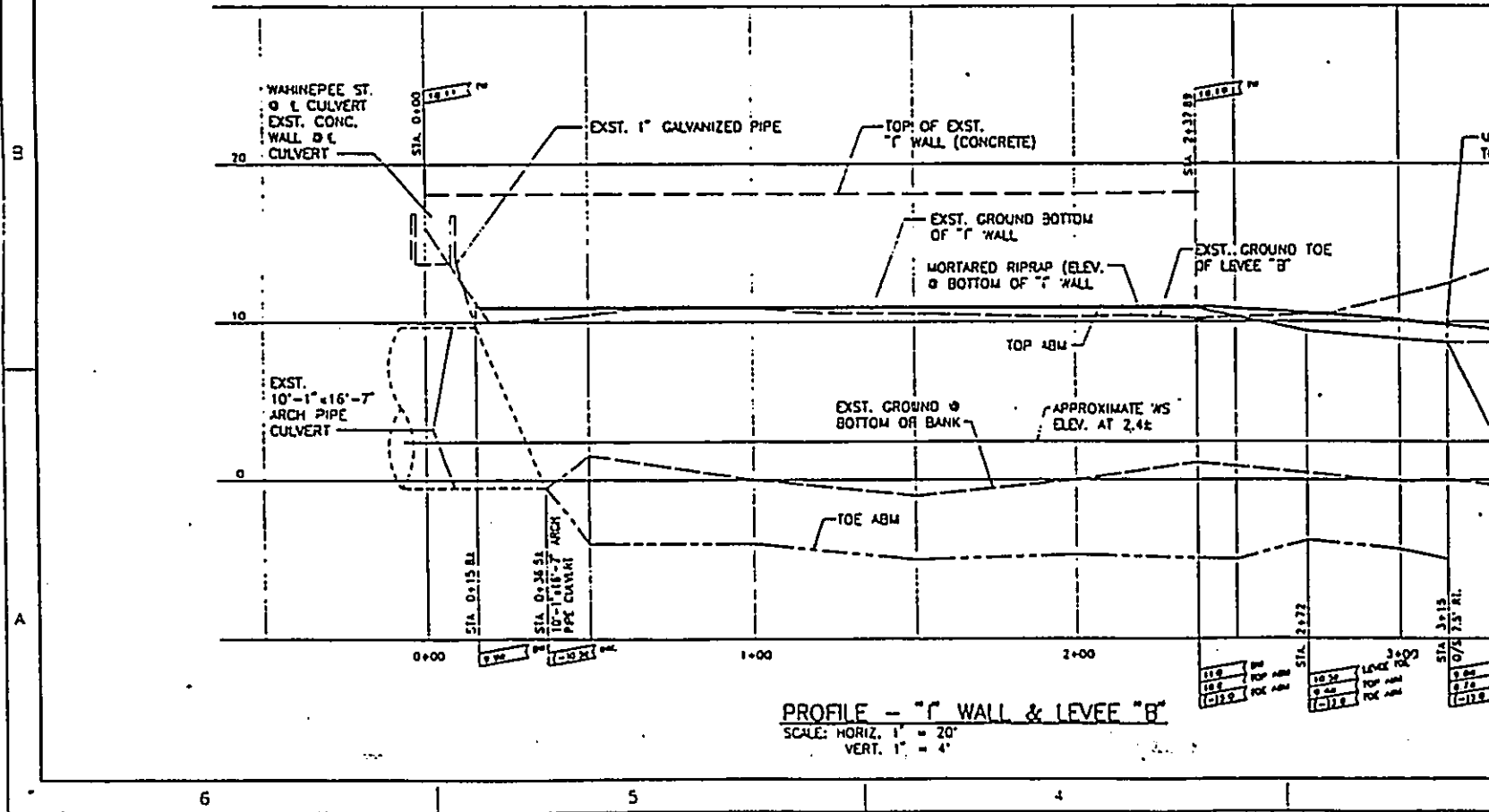
REV	DATE	ZONE	DESCRIPTION	DATE	BY	CHKD	APPVD
REVISIONS							
TRANS PACIFIC LAND CORP 875 WILSON ST., SUITE 610 HONOLULU, HAWAII 96813			U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN HONOLULU DISTRICT HONOLULU, HAWAII				
PREPARED AM/RM	CHECKED EB	MODIFICATIONS TO THE MAHAWAIKI STREAM FLOOD CONTROL PROJECT					
CONSTRUCTION NOTES							
DATE 3/31/93		LOCATION LHC, OAHU, HAWAII					
LOC CODE 7990-91		DRAWING NUMBER 871 90 04 2					

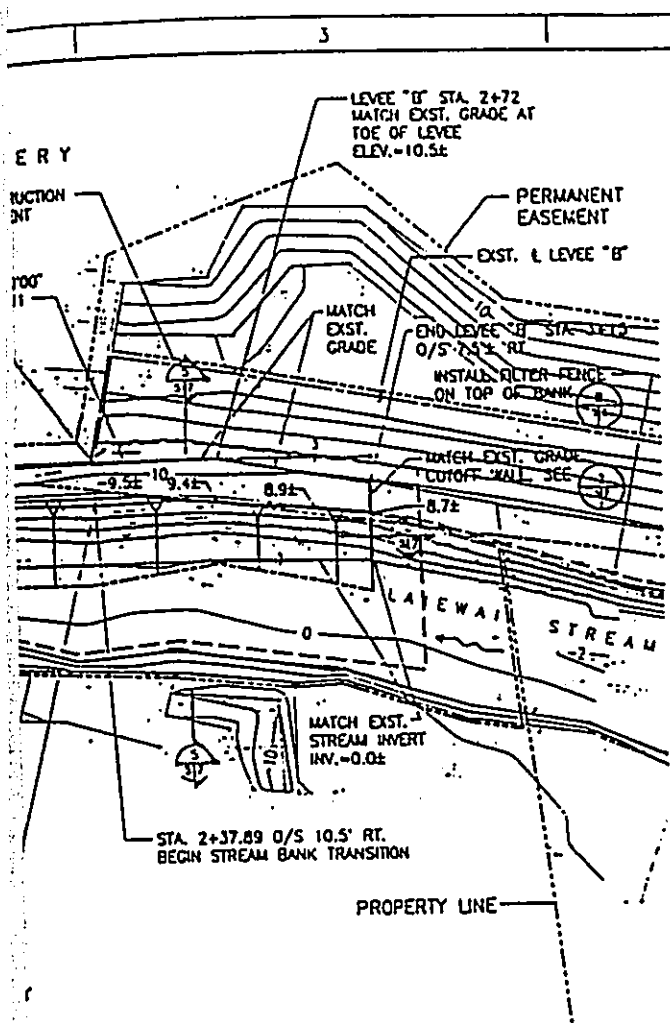
US Army Corps
of Engineers





PLAN - "I" WALL & LEVEL "B"
 SCALE: 1" = 20'

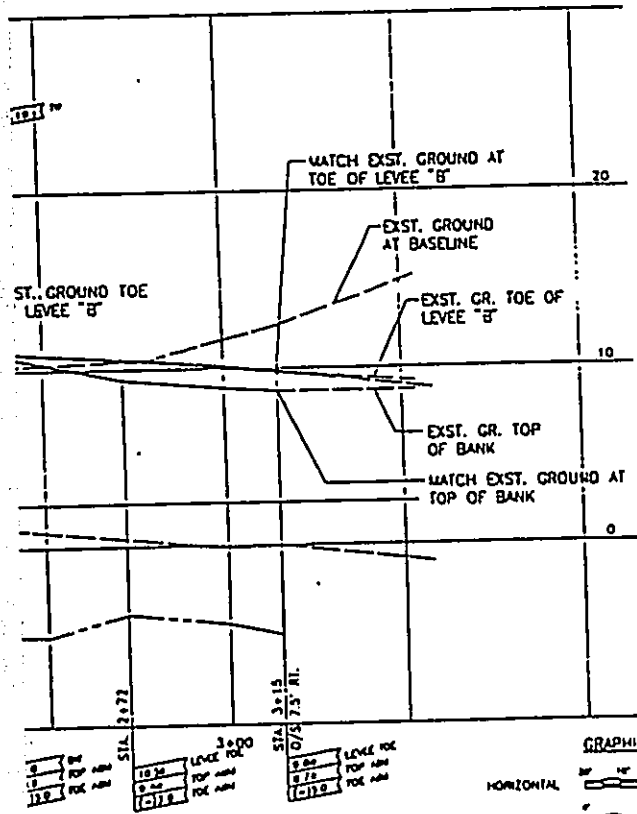




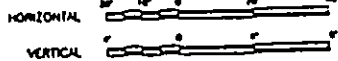
NOTES:

- EXISTING 'T' WALL & LEVEE 'B' REFER TO KAHAWAINUI STREAM FLOOD CONTROL PROJECT (LOC 7990-91) "AS-BUILT" DRAWINGS. "AS-BUILT" DRAWINGS ARE AVAILABLE FOR THE SUCCESSFUL BIDDER AND ARE AVAILABLE FOR INSPECTION AT THE ARMY CORPS OF ENGINEERS. CONTACT IS MR. JIM PENNAZ, TECHNICAL MANAGER, PHONE NUMBER: 438-8599.
- SUPPLEMENTAL TOPOGRAPHIC SURVEYS WERE OBTAINED FROM AIR SURVEY HAWAII IN JULY 1982, WESLEY M. THOMAS IN AUGUST 1984 AND CITY AND COUNTY OF HONOLULU IN SEPTEMBER 1986.
- COORDINATES BASED ON STATE OF HAWAII PLANE COORDINATE SYSTEM, ZONE III.
- ELEVATIONS ARE REFERENCED FROM MEAN SEA LEVEL DATUM AT ELEV. 0.00 FEET.
- CONTROLS BASED ON BRASS PLATES

SS5-6I	177,459.67 N	523,342.50 E	EL. 12.26
SS5-6J	178,308.42 N	522,770.49 E	EL. 11.37
BRASS BM CAP.	178,210.34 N	522,840.75 E	EL. 10.64
- EXISTING TOPOGRAPHY FOR THIS PROJECT IS BASED ON CONTROL POINT SURVEYING AND ENGINEERING, INC. TOPOGRAPHY MAP FOR KAHAWAINUI STREAM MODIFICATIONS DATED 18 JAN 1995.



GRAPHIC SCALES:



APPROVED:

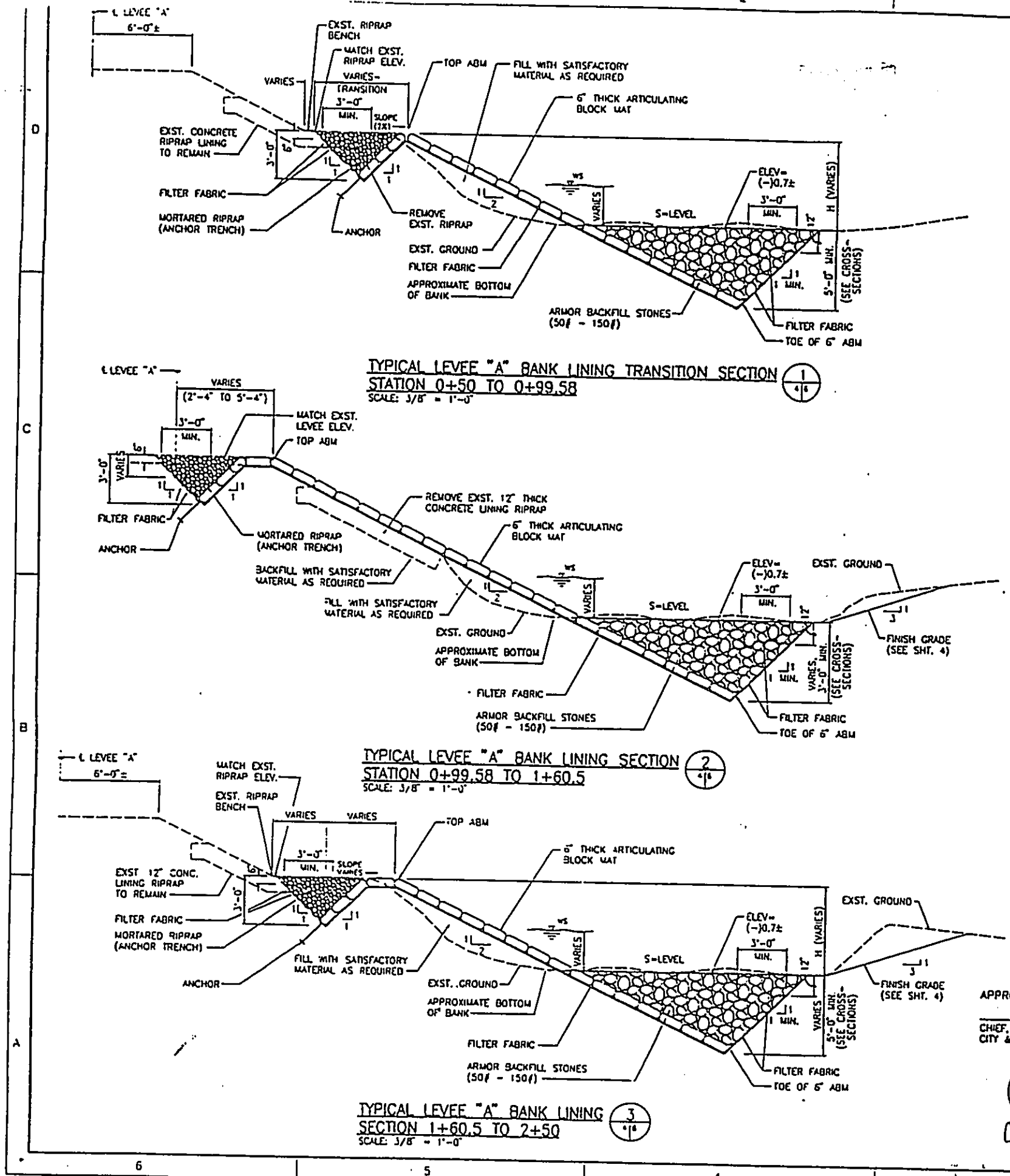
CHIEF, DIVISION OF ENGINEERING, DPW
CITY & COUNTY OF HONOLULU

DATE



REV	DATE	BY	DESCRIPTION
REVISIONS			
TRANS PACIFIC LAND COMP 615 KAWAII ST. SUITE 618 HONOLULU, HAWAII 96813		U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN DISTRICT HONOLULU, HAWAII	
PREPARED AM/RM	CHECKED EB	MODIFICATIONS TO THE KAHAWAINUI STREAM FLOOD CONTROL PROJECT	
PLAN & PROFILE 'T' WALL & LEVEE 'B'			
DATE 3/31/85	LOCATION LAIE, OAHU, HAWAII	DRAWING NUMBER	
LOC CODE 7990-91	PHONE -	CLASS 871	REVISIONS 90 04 5

US Army Corps of Engineers

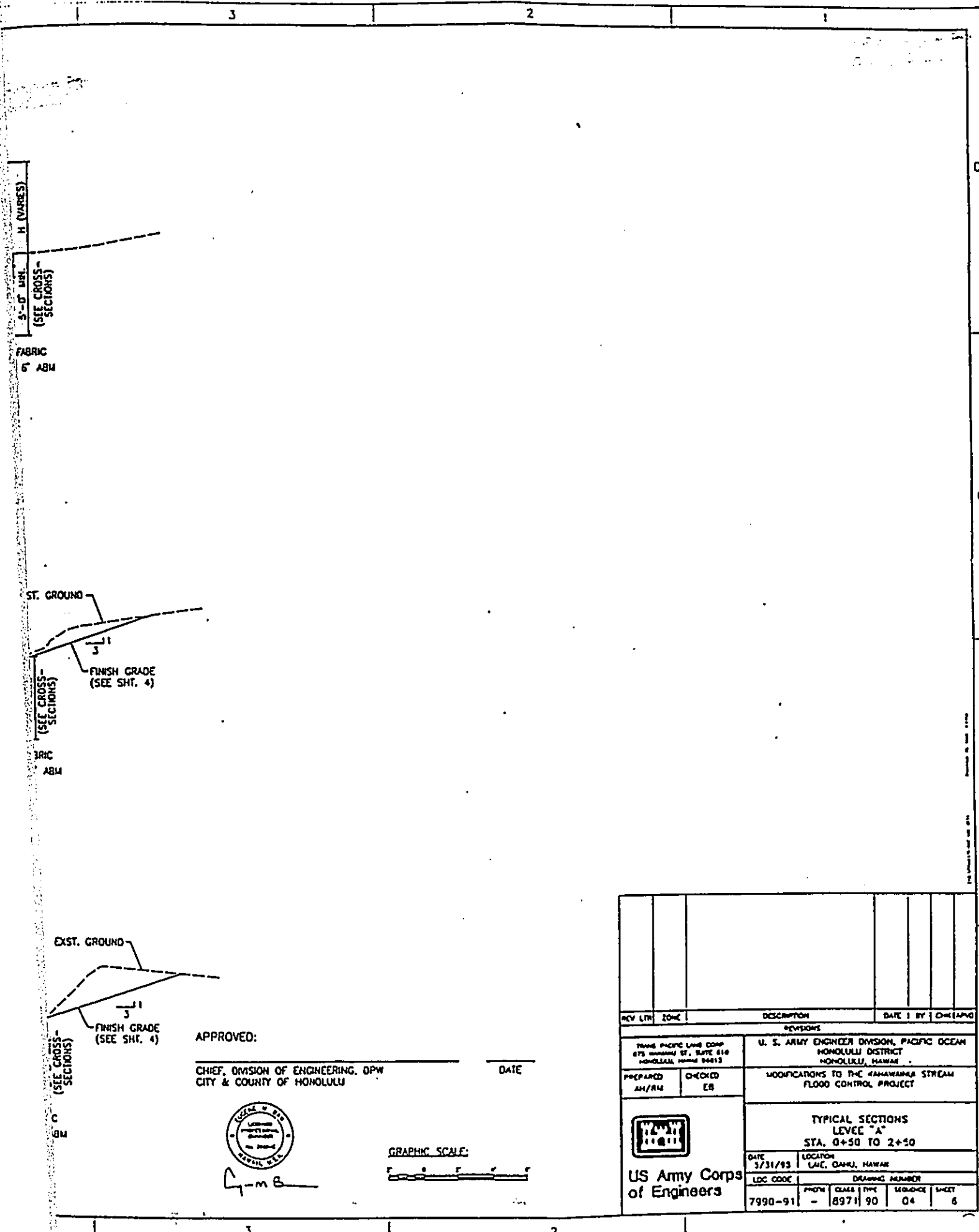


TYPICAL LEVEL "A" BANK LINING TRANSITION SECTION
 STATION 0+50 TO 0+99.58
 SCALE: 3/8" = 1'-0"

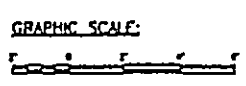
TYPICAL LEVEL "A" BANK LINING SECTION
 STATION 0+99.58 TO 1+60.5
 SCALE: 3/8" = 1'-0"

TYPICAL LEVEL "A" BANK LINING SECTION
 STATION 1+60.5 TO 2+50
 SCALE: 3/8" = 1'-0"

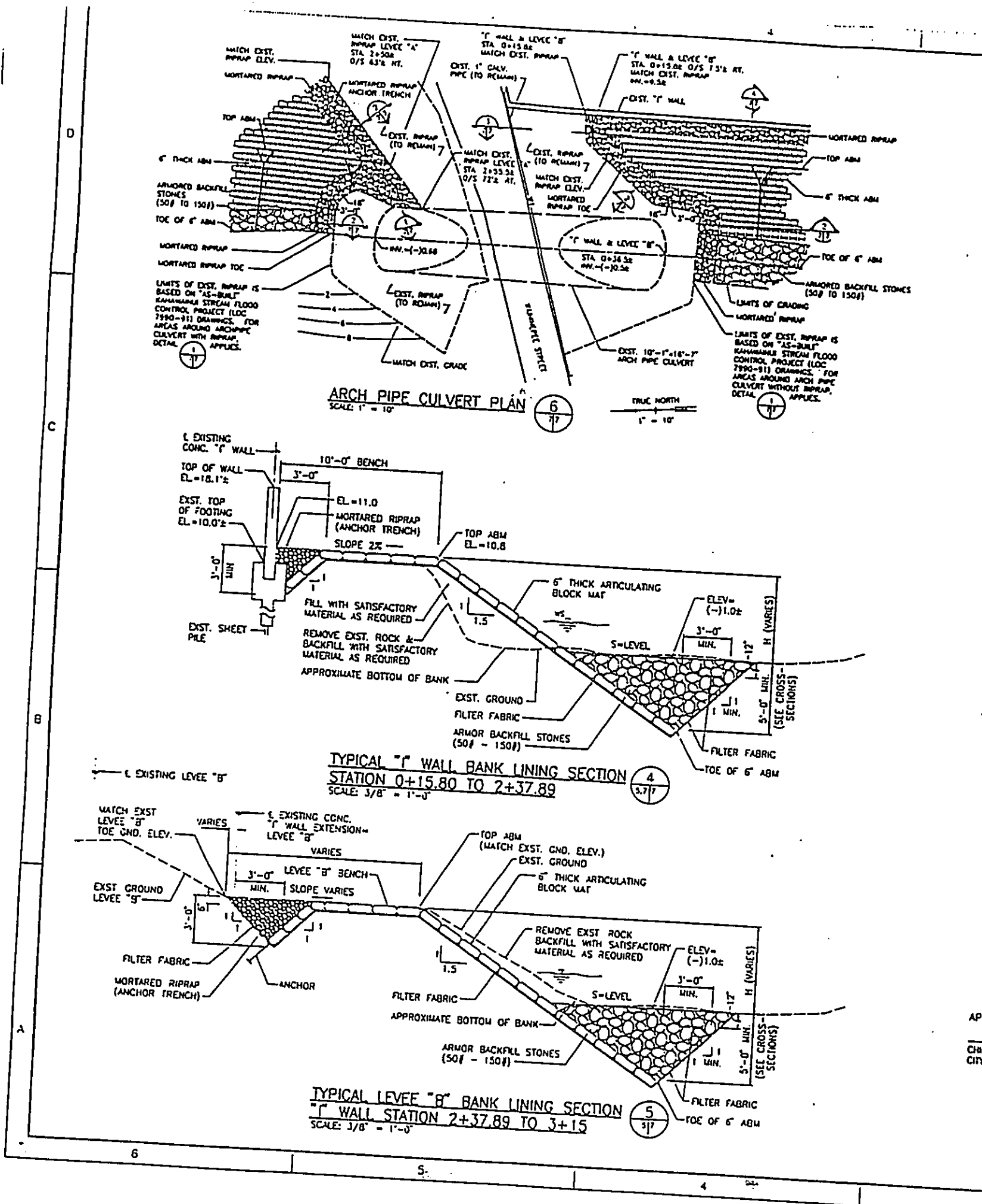
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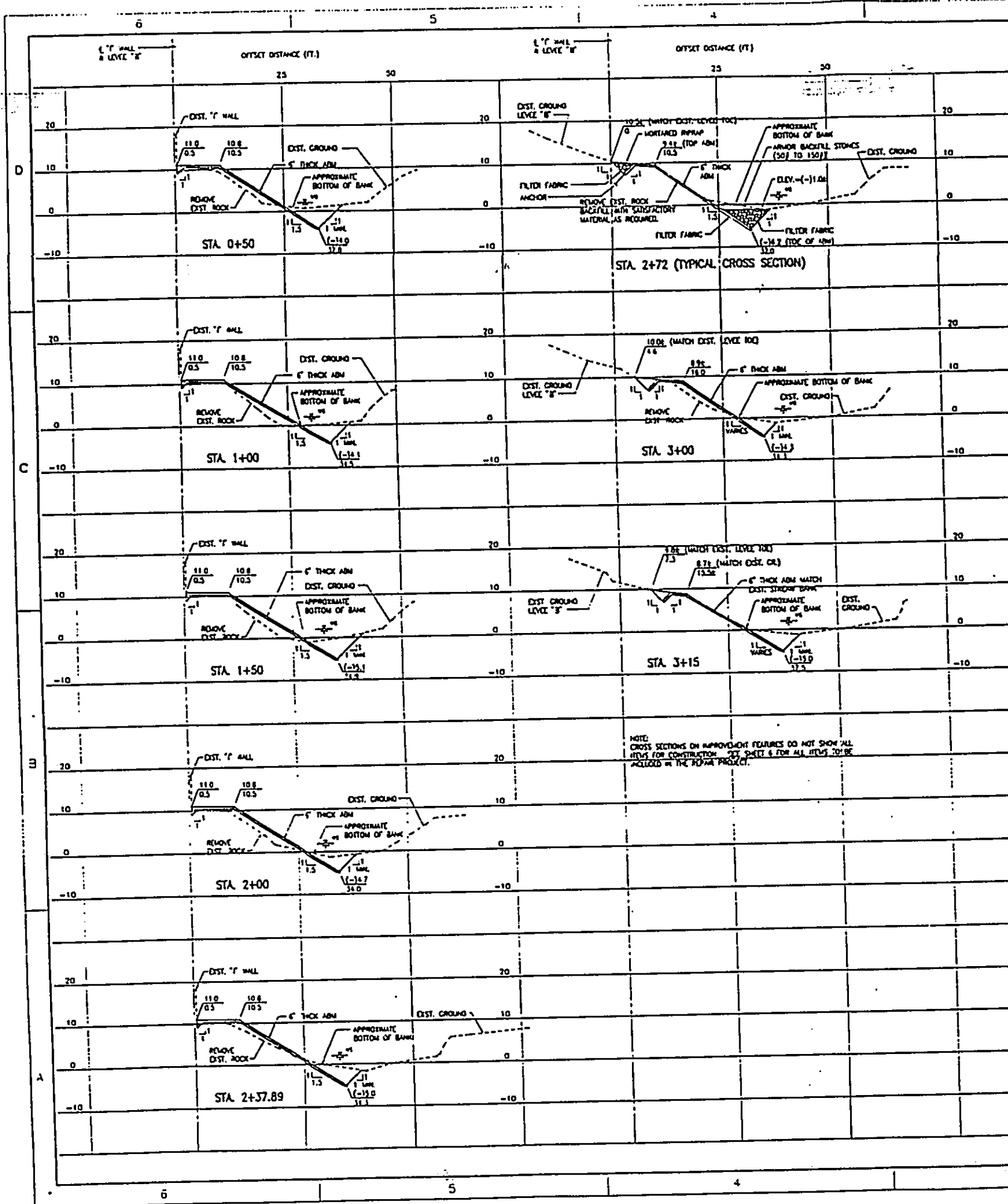


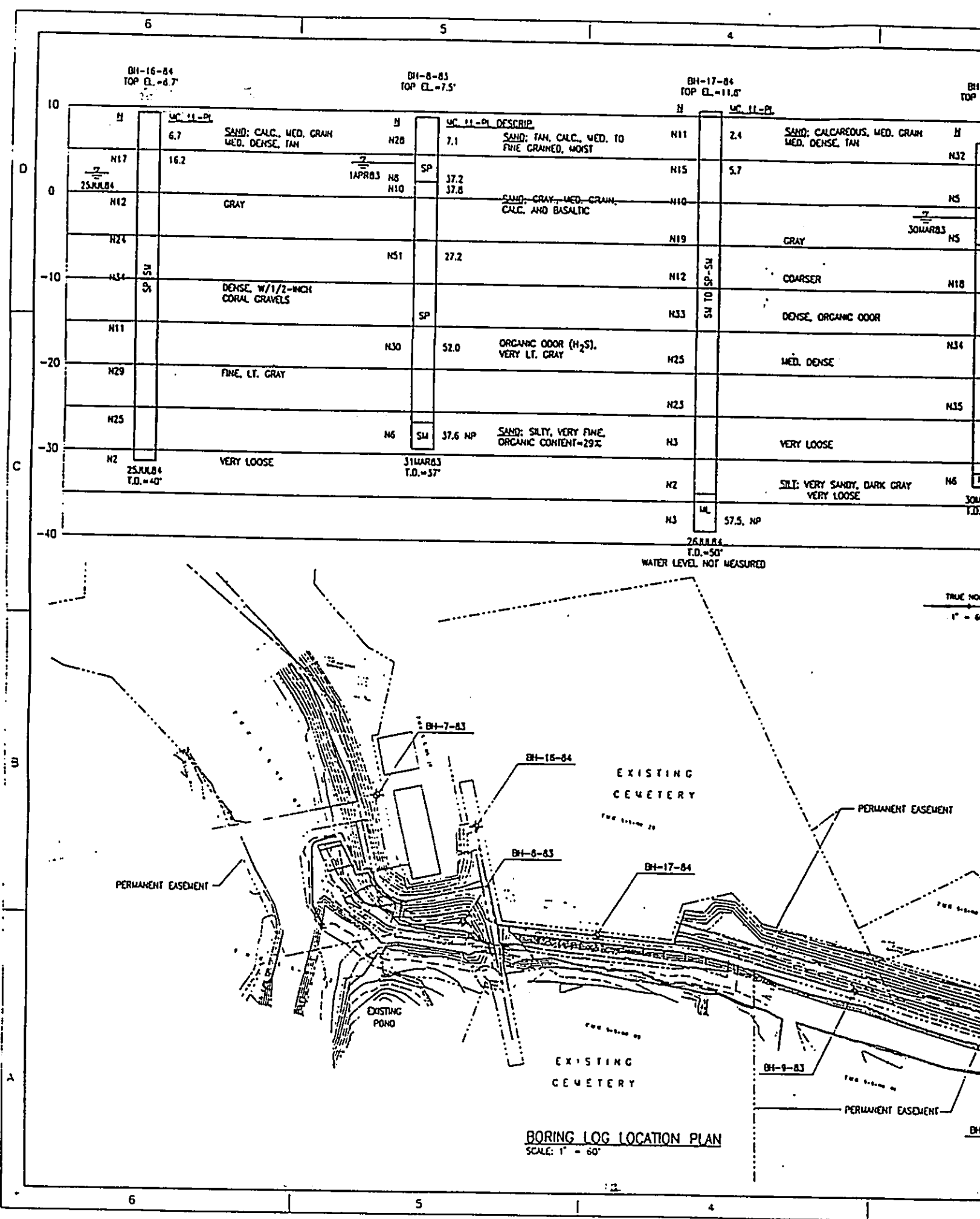
APPROVED: _____ DATE _____
 CHIEF, DIVISION OF ENGINEERING, OPW
 CITY & COUNTY OF HONOLULU



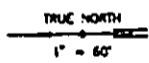
REV	LET	ZONE	DESCRIPTION	DATE	BY	CHK/APPD
PACIFIC LANE CORP 875 WASHINGTON ST., SUITE 810 HONOLULU, HAWAII 96813			U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN HONOLULU DISTRICT HONOLULU, HAWAII			
PREPARED AH/AM	CHECKED EB	MODIFICATIONS TO THE HANAWAHE STREAM FLOOD CONTROL PROJECT				
US Army Corps of Engineers			TYPICAL SECTIONS LEVEL "A" STA. 0+50 TO 2+50			
DATE 3/31/83	LOCATION LAIE, OAHU, HAWAII					
LDC CODE 7990-91	PHONE -	CLASS -	TYPE 8971	SEQUENCE 90	SHEET 04	TOTAL SHEETS 6







BH-7-83 TOP EL.=7.0'		BH-16-84 TOP EL.=8.1'		BH-9-83 TOP EL.=10.0'	
1	MC 11-PI	86.3,55-34	FILL: BRN. SAND SILTY, PLASTIC BANDS OF TAN SAND (1/4") SL. GRAVEL	2	MC 11-PI
2	SM	49.0,53-37 40.9, 60-35	MOIST; SPECIFIC GRAVITY=2.81 UNIT WEIGHT=109 pcf SATURATED AT 7.0	3	MC 11-PI
3	SM	44.4, 43-31	V. WET, SANDY, SM. SHELL FRAG.	4	MC 11-PI
4	SM	32.5	SAND; LT. GRAY, MED. GRAY, CALC., SL. BASALT CONTENT	5	MC 11-PI
5	SM	36.3	FINER GRAY, SL. OODR OF H ₂ S	6	MC 11-PI
6	SM	37.0	FINER GRAY, SL. OODR	7	MC 11-PI
7	SM	63.0,40-38	SILT; GRAY/BROWN, PLASTIC, ORGANIC OODR, V. LOOSE	8	MC 11-PI

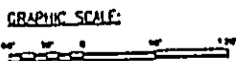
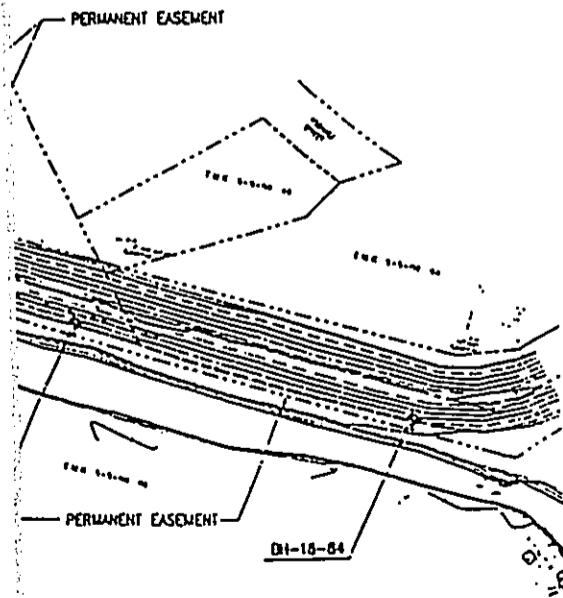


ABBREVIATIONS:

BH	BORING HOLE
BRN.	BROWN
CALC.	CALCAREOUS
DESCRIP.	DESCRIPTION
EL.	ELEVATION
H ₂ S	HYDROGEN SULFIDE
LL	LIQUID LIMIT
LT.	LIGHT
M.C.	MOISTURE CONTENT
MED.	MEDIUM
PCF	POUNDS PER CUBIC FOOT
PL	PLASTIC LIMIT
SL	SILT/SLIGHTLY
SM.	SMALL
T.D.	TOTAL DEPTH
V.	VERY
W/	WITH
N	BLOWS/FT.
NP	NON PLASTIC
→	STATIC WATER LEVEL & DATE

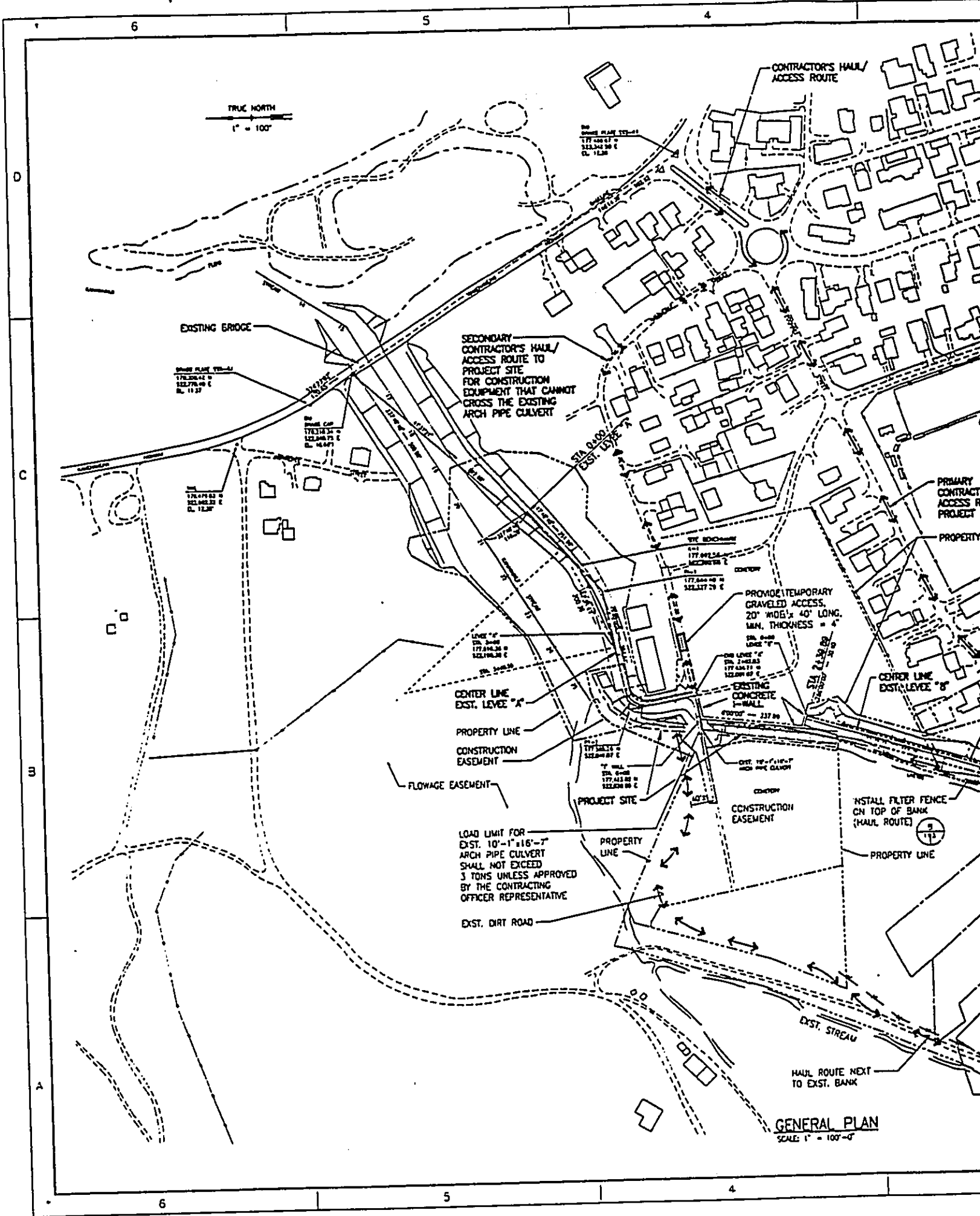
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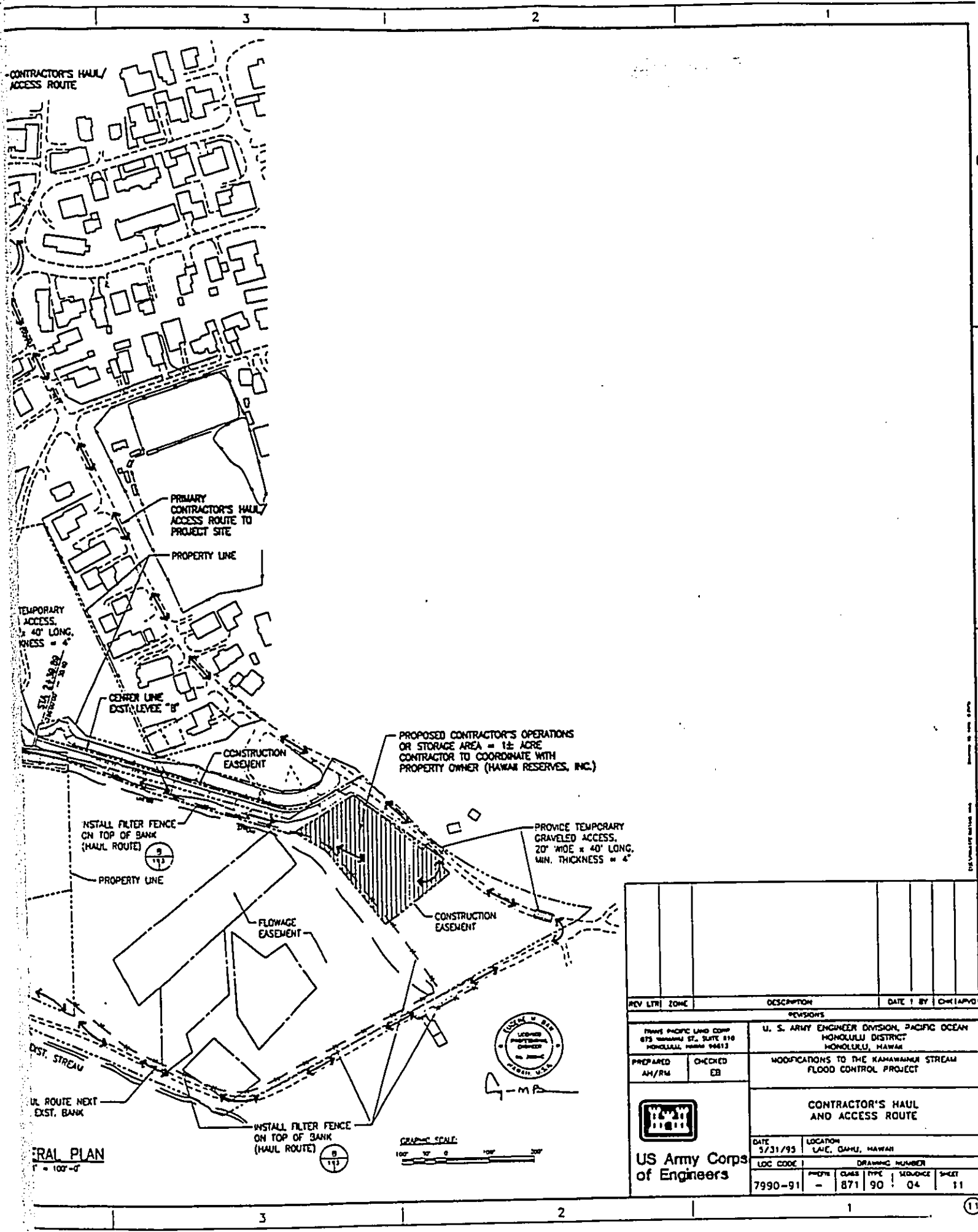
- REFERENCE: KAHAWAHAU STREAM FLOOD CONTROL PROJECT (LOC CODE 7990-91) "AS-BUILT" DRAWINGS
- LOCATION OF BORINGS (IN PLAN) ARE SHOWN WAS EXTRAPOLATED FROM REFERENCED "AS-BUILT" DRAWINGS SHEET 26.
- DATE SHOWN AT BOTTOM OF LOG IS DATE BORING WAS COMPLETED.
- LETTERS WITHIN BORING LOGS ARE LABORATORY CLASSIFICATION ACCORDING TO THE UNIFIED CLASSIFICATION SYSTEM (UL-STD-619B, 1968).



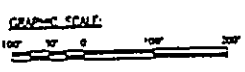
REV	DATE	DESCRIPTION	BY	CHECKED
U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN HONOLULU DISTRICT HONOLULU, HAWAII				
MODIFICATIONS TO THE KAHAWAHAU STREAM FLOOD CONTROL PROJECT				
BORING LOG LOCATION PLAN & BORING LOGS				
DATE	LOCATION			
3/31/83	LAE, OAHU, HAWAII			
LOC CODE	DRAWING NUMBER			
7990-91				

US Army Corps of Engineers.





GENERAL PLAN
1" = 100'-0"



REV	LTN	ZONE	DESCRIPTION	DATE	BY	CHKD	APP'D
REVISIONS							
TRAVIS PACIFIC LAND CORP 675 KAMAHAMU ST., SUITE 810 HONOLULU, HAWAII 96813			U. S. ARMY ENGINEER DIVISION, PACIFIC OCEAN HONOLULU DISTRICT HONOLULU, HAWAII				
PREPARED AM/RM		CHECKED EB		MODIFICATIONS TO THE KAMAHAMU STREAM FLOOD CONTROL PROJECT			
CONTRACTOR'S HAUL AND ACCESS ROUTE							
DATE 5/31/93			LOCATION LAIE, OAHU, HAWAII				
LOC CODE 7990-91			DRAWING NUMBER 871 90 04 11				

US Army Corps
of Engineers

A P P E N D I X B

*AGENCY COMMENTS RECEIVED
DURING PREASSESSMENT CONSULTATION*

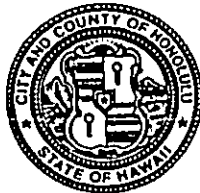
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MAY 31 10 25 AM '95

DEPARTMENT OF LAND UTILIZATION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813 • (808) 523-4432

JEREMY HARRIS
MAYOR



95-1618
eng.

PATRICK T. ONISHI
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

95-02279 (ASK)
87/SMA-024

May 30, 1995

RECEIVED
DIV. OF ENGINEERING
MAY 31 12 04 PM '95

MEMORANDUM

TO: KENNETH E. SPRAGUE, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: PATRICK T. ONISHI, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

SUBJECT: SPECIAL MANAGEMENT AREA PERMIT DETERMINATION FOR
KAHAWAINUI STREAM FLOOD CONTROL REPAIR PROJECT

This responds to your April 18, 1995 memorandum regarding Special Management Area requirements for proposed repair work to the existing Kahawainui Stream Flood Control Project located in Laie. The Project received a Special Management Area Use Permit (SMP) on January 13, 1988. Proposed repairs are in substantial conformance with the approved SMP. Thus, SMP requirements have been satisfied.

Should you have further questions, please contact Ardis Shaw-Kim of our staff at extension 5349.

PATRICK T. ONISHI
Director of Land Utilization

PTO:am

A:kahawai.as7
G:kahawai.aok

RECEIVED
DEPT. OF PUBLIC WORKS

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Public Notice

US Army Corps
of Engineers
Honolulu District

Public Notice No. CW96-0001

Date: 12 January, 1996

Reply to: District Engineer (CEPOD-ET-PP) Respond by: 12 February 1996
US Army Corps of Engineers
Building 230
Ft. Shafter, HI 96858-5440

NOTICE OF U.S. ARMY CORPS OF ENGINEERS COMPLIANCE WITH SECTION
404, CLEAN WATER ACT REGULATORY REQUIREMENTS AND INTENT TO
DISCHARGE DREDGED AND FILL MATERIAL INTO KAHAWAINUI STREAM,
LAIE, OAHU, HAWAII
CORPS OF ENGINEERS CIVIL WORKS AUTHORIZATION NO. CW96-0001

1. PROJECT PROPONENT: U.S. Army Corps of Engineers, Honolulu Engineer District, Building 230, Fort Shafter, Hawaii 96858-5440 and the City and County of Honolulu, Department of Public Works, 650 South King Street, Honolulu, Hawaii 96813
2. APPLICABLE STATUTORY AUTHORITIES: Section 404 of the Clean Water Act (33 U.S.C. 1344).
3. LOCATION OF PROPOSED ACTIVITY: Kahawainui Stream Flood Control Project, Laie, Oahu, Hawaii.
4. DESCRIPTION OF PROPOSED ACTIVITY: The U. S. Army Corps of Engineers, Honolulu Engineer District, and the City and County of Honolulu, Department of Public Works are proposing to construct repairs and modifications to the Kahawainui Stream Flood Control Project which was damaged by the runoff of heavy rains from a storm in March 1991. This damage consisted of erosion of the stream bank fronting the concrete I-wall and erosion of the toe of "Levee A".

The modification will consist of replacing the soil eroded from the slope of the stream bank in front of the I-wall with clean fill material, and armoring the I-wall with a 6-inch thick Articulating Block Mat (ABM). The top of the ABM will be anchored in a trench 2 feet deep and backfilled with mortared riprap. The toe of the ABM will be imbedded in a toe trench 5 feet deep and backfilled with cobbles. The Levee "A" slope will be restored and extended to the level of the eroded stream bed. The side

slope riprap will be replaced to the original design, and the extended side slope will be armored by a 6-inch thick ABM. The contractor will be allowed to either dewater the stream in the area of construction, or work using silt containment devices. A total of approximately 600 cubic yards (CY) of basalt stones, 1,550 CY of clean fill material and 380 CY of concrete will be discharged into the stream.

Primary construction materials would consist of basalt stone, clean fill material and concrete. The stone material will be obtained from one or more commercial quarries on the island of Oahu. The concrete for the ABM will be obtained from a commercial source. The source of the clean fill material has not yet been identified.

The work staging and storage area would be located on vacant land adjacent to the project. This is the same area used as the work and storage area for the original project.

The attached figures show the locations of the proposed modifications and other project information.

5. IMPACTS OF THE PROPOSED ACTION ON THE ENVIRONMENT:

Construction activities will increase dust and vehicle exhaust emissions in the project area; however, these effects will be temporary and only affect the near vicinity of the project. The contractor will be required to conform with State air quality standards. There will be an increase in exhaust emissions from vehicles, but it is expected to be insignificant because of the small number of vehicles and the rapid dispersal caused by the trade winds.

Noise levels will be increased during construction by the operation of heavy construction equipment. Noise levels would be distracting but temporary in this quiet area of residences and cemetery.

There will be an increase in turbidity if construction is done in the water. If the reach involved is dewatered, no increase in turbidity is expected. Water pumped from the stream during dewatering would be stored on the land side of the right bank levee and allowed to percolate into the ground or evaporate.

Social well-being would be enhanced because the repaired/modified project will better perform the task for which it was built.

The unavoidable impacts identified above can be mitigated as follows:

During construction, the construction contractor will be required to adhere to applicable Federal, State of Hawaii and City and County environmental protection regulations. This is a standard requirement in all Corps construction contract specifications. For example, the contractor will be required to develop an environmental protection plan, which will detail the measures to be used, based on the construction methods to be used, to comply with the regulations.

Turbidity caused by construction of the repair/modifications will be minimized to the maximum extent practicable with existing known methods to control turbidity, and the Corps will also monitor water quality before, during and after construction to assure water quality standards are not exceeded.

Fills will be protected from erosion with ABM as soon after completion as practicable.

All construction-related materials will be placed or stored in ways to avoid disturbance to the stream.

All construction-related materials will be free of pollutants.

A contingency plan for containing and controlling accidental spills of petroleum products at the construction site will be developed.

The Contractor's Environmental Protection Plan, required by the specifications for the construction contract, will include details of how environmental resources will be protected from secondary effects of construction. This requirement for an environmental protection plan is standard in Corps construction contracts. The plan must be approved by the Corps Contracting Officer who is responsible to assure that the contractor's operations do not violate applicable federal, state or local standards. The following items will be included among others in the Environmental Protection Plan:

Lumber or other construction materials treated with creosote or other preservatives substances will not be permitted to contact the water until after at least one week of drying.

Construction materials, petroleum products, human wastes, debris and landscaping substances (herbicides, fertilizers, pesticides) will not be permitted to fall, flow or leach into the stream.

Equipment and site specific Best Management Practices to assure water quality standards are not exceeded.

6. IMPACTS ON CULTURAL RESOURCES: The proposed project will have no effect on any historic properties. There are no such properties in the project area. The State of Hawaii Historic Preservation Officer concurred in this determination by letter dated June 20, 1995.

7. IMPACTS ON ENDANGERED SPECIES: There are no Federally listed endangered, threatened, candidate or proposed species of plants or animals or their critical habitat within the study area. The endangered Hawaiian duck, Hawaiian stilt and Hawaiian coot have been observed in nearby areas, and the Hawaiian moor hen may also occur in nearby areas, but the project is not likely to adversely effect any listed species. The US. Fish and Wildlife Service concurred in this determination by letter dated June 28, 1995.

8. COASTAL ZONE MANAGEMENT AND WATER QUALITY CERTIFICATIONS: The following paragraphs outline the status of the Coastal Zone Management assessment and the Section 401 Water Quality Certification.

a.. Federal Coastal Zone Consistency Determination from the State of Hawaii, Office of State Planning, Coastal Zone Management (CZM) Office.

A consistency determination was made for the original project in 1985. The State of Hawaii Office of State Planning has determined by letter dated October 10, 1995 that the present project is also consistent to the maximum extent practicable.

b. Section 401 Water Quality Certification (WQC) from the State of Hawaii Department of Health, Clean Water Branch (DOH).

An application for Water Quality Certification is being prepared for submission to the Clean Water Branch, Hawaii State Department of Health.

9. OTHER GOVERNMENT AUTHORIZATIONS: The authorization to discharge fill does not obviate the need for the Government and local sponsor, respectively, to obtain other federal, state or local authorizations required by federal, state or local laws.

10. EVALUATION FACTORS: The decision whether or not to discharge fill will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. The evaluation will apply the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404 (b)(1) of the Clean Water Act. (40 CFR Part 230)

11. COMMENTS AND INQUIRIES: The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; and other interested parties to consider and evaluate the impacts of the proposed activity on water quality and the public interest. The Corps will consider comments received to determine whether to discharge, or to modify or mitigate the discharge for the proposed project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used to determine the need for a public hearing and to determine the overall public interest in the proposed activity and the impacts on water quality. Interested parties may submit in writing any comments that they may have on the proposed activity. Comments should be submitted to the Honolulu District no later than 30 days from the date of this notice. Written comments should be mailed to the address indicated in the letterhead and should make reference to Public Notice No. CW-0004. Additional information may be obtained from:

Mr. William B. Lennan, Ecologist,
U.S. Army Engineer District, Honolulu
Building 230
Fort Shafter, Hawaii 96858-5440
Telephone (808)438-2264

12. REQUEST FOR PUBLIC HEARING: Within 30 days from the date of this notice, any person may request, in writing, that the U.S. Army Corps of Engineers, Honolulu District hold a public hearing to consider the effect of the discharge on water quality or other factor of public interest. Requests for public hearings shall state clearly and concisely, the reasons and rationale for such requests.

Attachment
Figures (3 sheets)

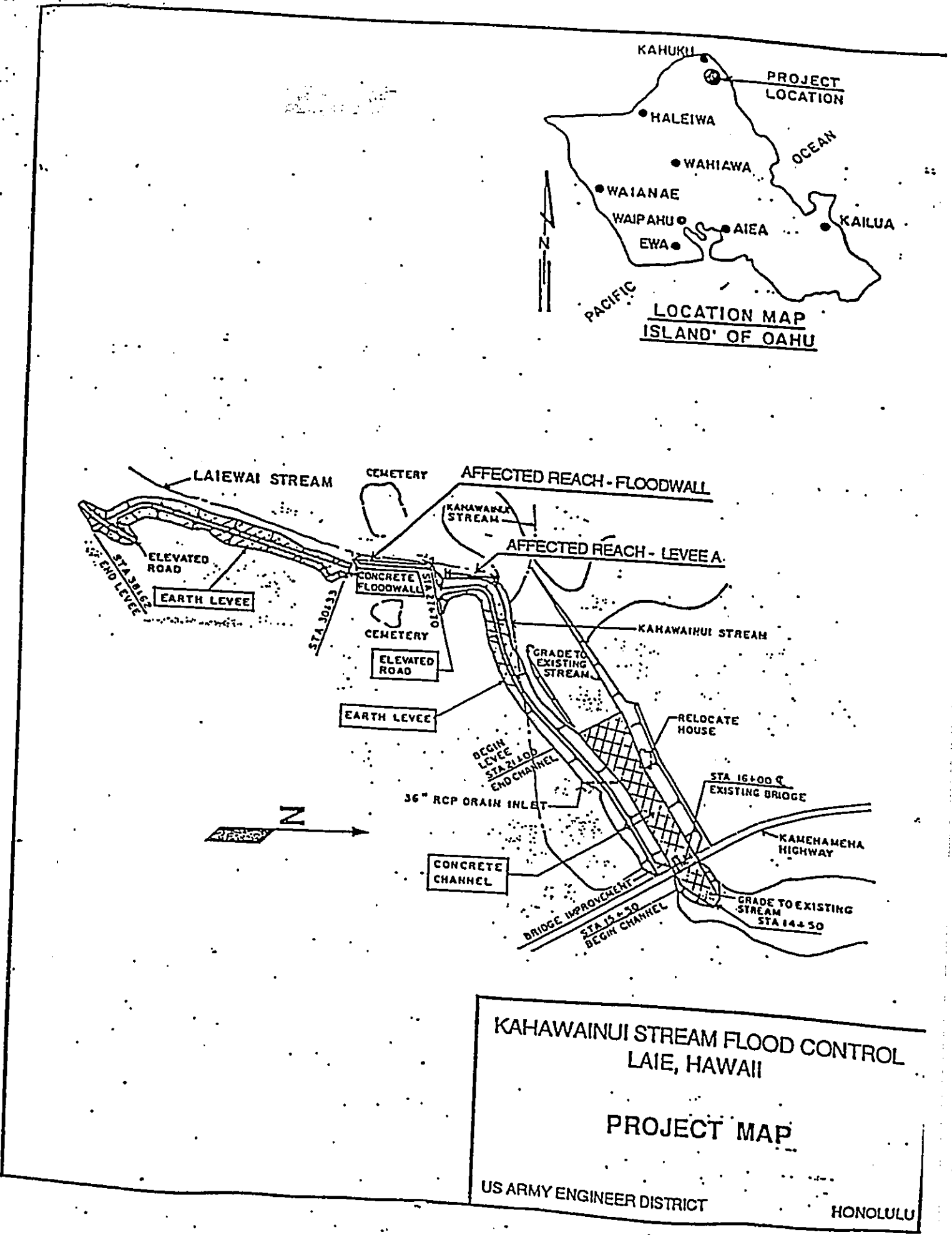
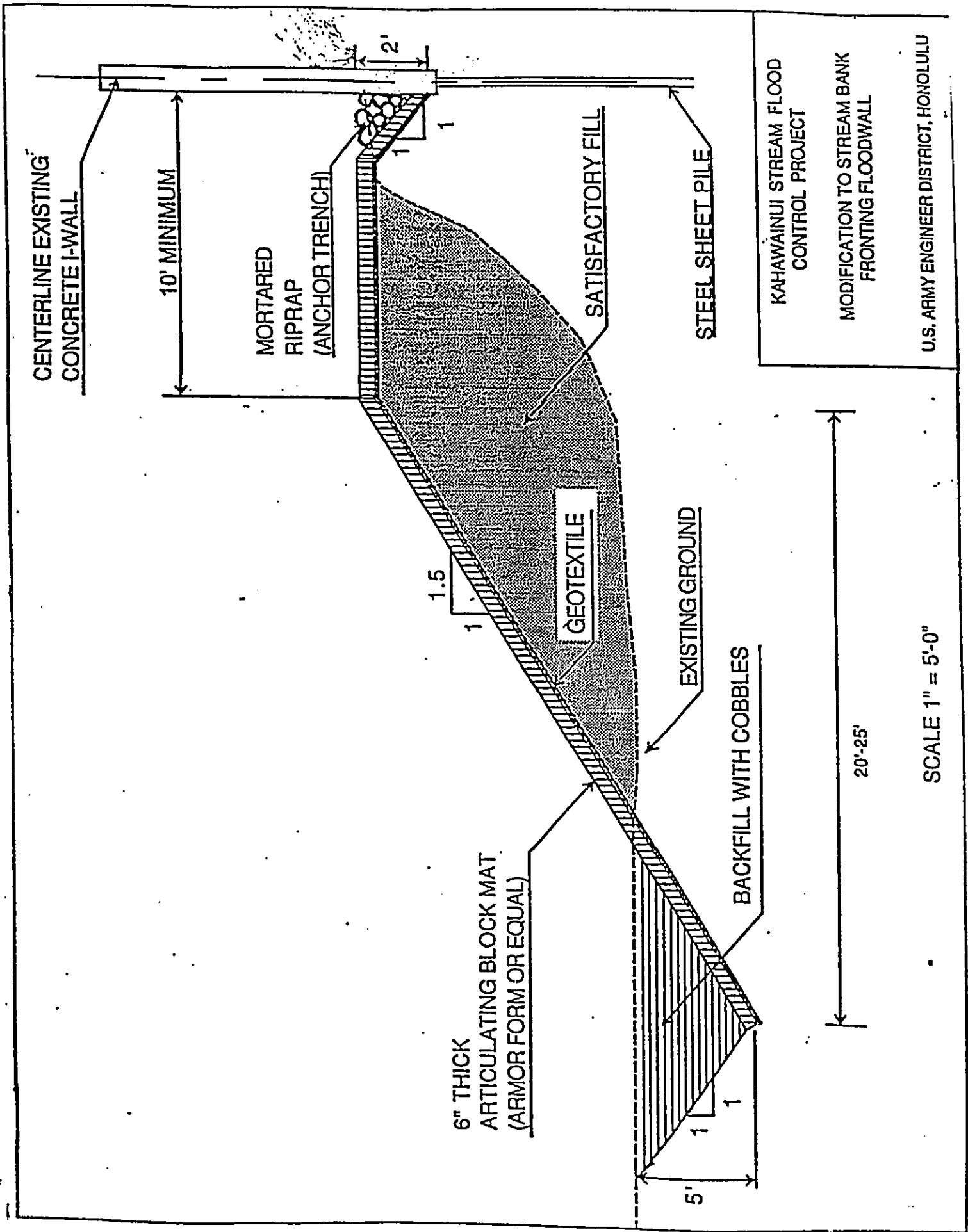
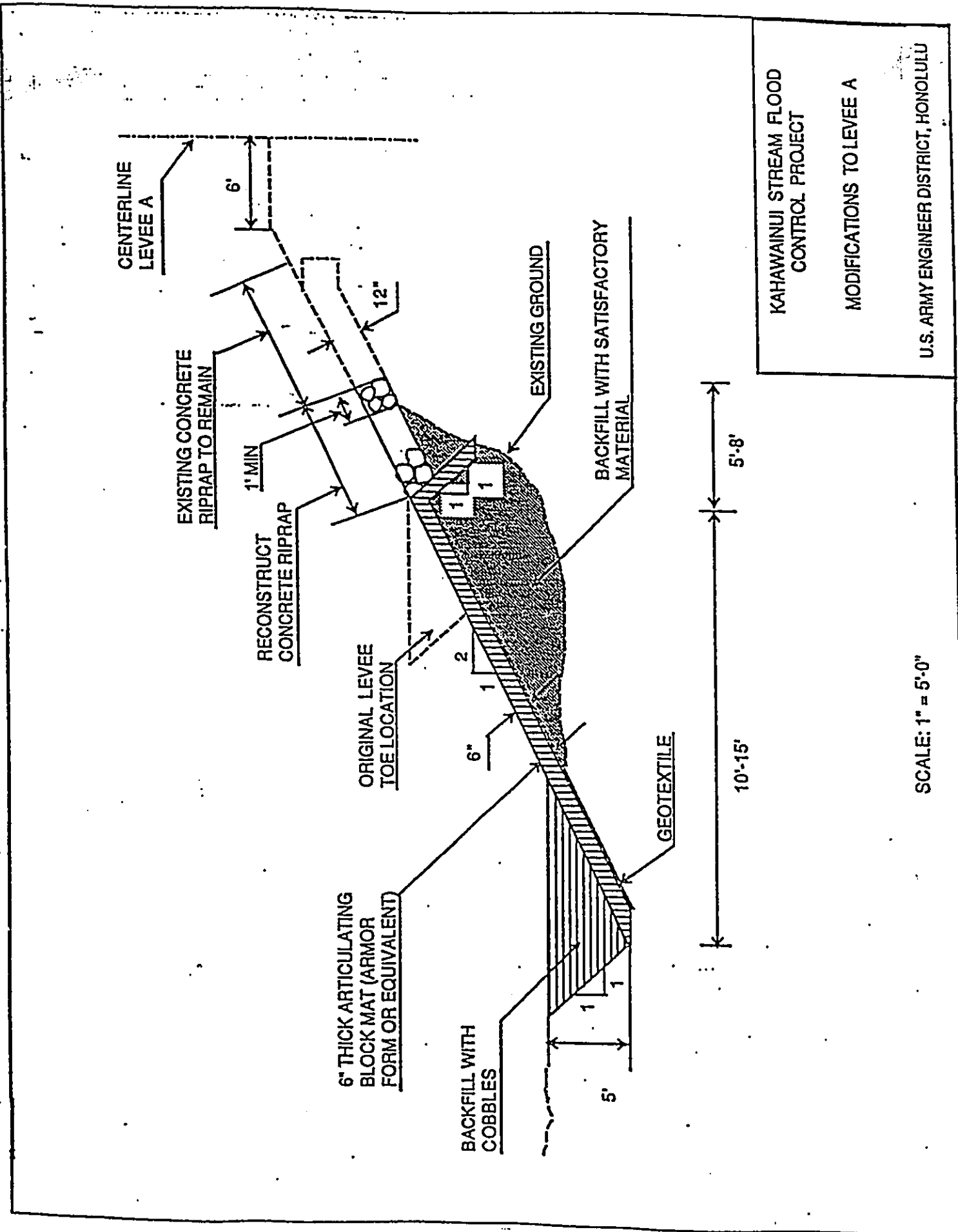


Figure 1





KAHAWAINUI STREAM FLOOD CONTROL PROJECT

MODIFICATIONS TO LEVEE A

U.S. ARMY ENGINEER DISTRICT, HONOLULU

SCALE: 1" = 5'-0"

Figure 3



DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

May 8, 1995

REPLY TO
ATTENTION OF

Planning Division

Mr. Kenneth E. Sprague
City and County of Honolulu
Department of Public Works
650 South King Street
Honolulu, Hawaii 96813

RECEIVED
DEPT. OF PUBLIC WORKS
MAY 9 1 56 PM '95

Dear Mr. Sprague:

Thank you for the opportunity to review and comment on the Preliminary Draft Environmental Assessment (PDEA) for the Kahawainui Stream Flood Control Repair Project, Laie, Oahu (TMK 5-5-5 and 5-5-9). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. DA Permit Requirements. These items were previously addressed in the Final Detailed Project Report and Environmental Impact Statement (FDPR/EIS) which we completed in November 1985.

b. Flood Plain Management. The flood hazard information provided in the FDPR/EIS remains unchanged.

c. Page 11 of the PDEA. "...concrete or grouted riprap cannot be placed underwater without dewatering." The Corps will be dewatering the toe area in order to place the articulating block mat.

Sincerely,

Ray H. Jyo, P.E.
Director of Engineering

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DIV. OF ENGINEERING
MAY 9 3 02 PM '95



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE
PACIFIC ISLANDS OFFICE
500 ALA MOANA BLVD, SUITE 3-580
HONOLULU, HI 96813
tel:(808) 541-3441 fax:(808) 541-3470

95-1657
Eng

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JUN 5 9 38 AM '95

JUN 02 1995

In Reply Refer To: JMB

Kenneth E. Sprague, Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

Re: Preliminary Draft Environmental Assessment, Kahawainui Stream Flood Control Repair Project, #95-12-0171

Dear Mr. Sprague:

The U.S. Fish and Wildlife Service (Service) has reviewed the Preliminary Draft Environmental Assessment (Preliminary DEA) for the Kahawainui Stream Flood Control Repair Project. The project sponsor is the Department of Public Works (DPW). The Service offers the following comments for your consideration.

The purpose of the project is to repair and/or replace damaged flood control structures along Laiewai and Kahawainui Streams in Laie, Oahu, in order to prevent further erosion and potential failure of these structures during flood conditions. Portions of the earthen levee would be lined with armor mat, levee toes would be extended below streambed level, and portions of the streambed would be replaced with cobble backfill. Construction activities would be managed to minimize impacts to downstream water quality.

On May 31, 1995, Service biologists surveyed the area to determine if federally protected waterbirds would likely be affected by the project. A pair of endangered koloa (*Anas wyvilliana*) were observed resting in a small temporary pool east of the project site. Neither this pool nor the project site provide suitable nesting habitat for the koloa. No other waterbirds were detected in the project area. The two ponds across the stream from the project site are known to be suitable habitat for the endangered Hawaiian common moorhen (*Gallinula chloropus sandvicensis*), which were observed nesting in one pond in 1983. These ponds are essentially unchanged since that time, but appear to be presently unused by this species.

The Service believes that the proposed project is not likely to adversely affect any threatened or endangered species. The areas of the levee and stream that will be impacted by the project are

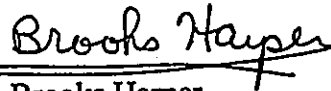
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unsuitable nesting habitat for endangered waterbirds. No presently occupied waterbird habitat will be destroyed or substantially altered by the project.

The Service appreciates your Department's intent to protect water quality in the stream and nearshore waters by committing to the mitigation measures listed in the Preliminary DEA. One aspect of the project that should be more fully discussed in the DEA is the effect of the extensive cobble backfill on surface stream flows. The DEA should discuss whether percolation between cobbles could eliminate surficial flow in the repaired segment of the stream during low flow periods.

The Service appreciates the opportunity to provide comments on the proposed project. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Jeff Burgett at (808) 541-3441.

Sincerely,



Brooks Harper
Field Supervisor
Ecological Services

cc: DAR, Honolulu
COE, Honolulu

United States
Department of
Agriculture

Natural
Resources
Conservation
Service

3049 Ualena Street

Suite 801
Honolulu, HI
96819-1950

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DIV. OF ENGRG.
May 16 2 52 PM '95

May 1, 1995

Mr. Tyler Sugihara
Division of Engineering
Dept. Of Public Works
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Sugihara:

Subject: Preliminary Draft Environmental Assessment,
Kahawainui Stream Flood Control Repair Project

We have reviewed the Draft Environmental Assessment for
Kahawainui stream flood control repair and have no comments to
make at this time.

Thank you for the opportunity to review this project.

Sincerely,


Ken Kaneshiro
State Conservationist

cc: Mike Bajinting
District Conservationist

The Natural Resources Conservation Service
formerly the Soil Conservation Service,
works hand-in-hand with the American people
to conserve natural resources on private lands

AN EQUAL OPPORTUNITY EMPLOYER

BENJAMIN J. CAYETANO
Governor of Hawaii



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

REF: OCEA: TES

P. O. Box 621
Honolulu, Hawaii 96809

FILE NO.: 95-520

95-1582

eng

MAY 23 1995

The Honorable Kenneth E. Sprague
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Attn: Tyler Sugihara

Dear Mr. Sprague:

SUBJECT: Preliminary Draft Environmental Assessment for the
Kahawainui Stream Flood Control Project, Laie, Oahu,
TMK: 5-5-05; 5-5-09

We have reviewed the preliminary information for the subject project transmitted by your letter dated April 20, 1995, and have no comment to offer at this time. We do however, look forward to reviewing the DEA when it becomes available.

Thank you for the opportunity to comment in this process. Please feel free to contact Steve Tagawa at our Office of Conservation and Environmental Affairs at 587-0377, should you have any questions.

Aloha,

Gilbert S. Coloma-Agaran
MICHAEL D. WILSON

ST:tes

Chairperson
MICHAEL D. WILSON
Board of Land and Natural Resources

Deputy Director
GILBERT COLOMA-AGARAN

Aquaculture Development
Aquatic Resources
Boating and Ocean Recreation
Bureau of Conveyances
Conservation and Environmental Affairs
Conservation and Resources Enforcement
Forestry and Wildlife
Historic Preservation
Land Management
State Parks
Water and Land Development

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BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

June 5, 1995

Tyler Sugihara
Department of Public Works
City and County of Honolulu
650 south King Street
Honolulu, Hawai'i 96813

1570578
MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT
PROGRAM
AQUATIC RESOURCES
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

LOG NO: 14733 ✓
DOC NO: 9505EJ20

Dear Mr. Sugihara:

SUBJECT: Kahawainui Stream Flood Control Repair Project,
La'ie, Ko'olaupua, O'ah
TMK: 5-5-05: 18, 22; 5-5-09:03, 07, 23

Thank you for the opportunity to review this project which proposes modifications and repair to recently constructed channel improvements and levee along Kahawainui Stream. As part of the EIS for the original project, archaeological investigations were conducted and determined that historic sites in the vicinity were outside of the boundaries of the project and would not be adversely affected. Because this project consists of modifications and repairs to the existing channel improvements and will not extend outside the original project boundaries, we believe that this project will have "no effect" on historic sites.

If you have any questions please call Elaine Jourdane at 587-0015.

Aloha,

A handwritten signature in black ink, appearing to read "Don Hibbard".

Don Hibbard, Administrator
Historic Preservation Division

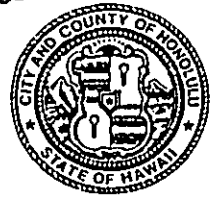
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DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

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PACIFIC PARK PLAZA
711 KAPIOLANI BOULEVARD, SUITE 1200
HONOLULU, HAWAII 96813

May 23 1.55 PM '95



95-1567
eng

JEREMY HARRIS
~~FRANK F. FOST~~
MAYOR

CHARLES O. SWANSON
~~JOSEPH M. MAGALDI, JR.~~
DIRECTOR

~~AMAR CARRAL~~
~~DEPUTY DIRECTOR~~

TE-2046
PL95.1.128

May 23, 1995

MEMORANDUM

TO: KENNETH E. SPRAGUE, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: CHARLES O. SWANSON, DIRECTOR

SUBJECT: KAHAWAINUI STREAM FLOOD CONTROL REPAIR PROJECT
PRELIMINARY DRAFT ENVIRONMENTAL ASSESSMENT
TMK: 5-5-05 AND 09

This is in response to your memorandum 95-12-0171 dated April 20, 1995 requesting our comments on the subject project.

Based on our review, we have no objections or comments to offer at this time.

Should you have any questions, please contact Lance Watanabe of my staff at local 4199.

for Peter H-P-116

CHARLES O. SWANSON

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William A. Bonnet
Manager
Environmental Department

May 22, 1995

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Mr. Kenneth E. Sprague
Department of Public Works
City & County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Sprague:

**Subject: Preliminary Draft Environmental Assessment
Kahawainui Stream Flood Control Repair Project**

Thank you for the opportunity to comment on your April 20, 1995 draft environmental assessment report for the Kahawainui Stream Flood control project, as proposed by Department of Public Works of the City & County of Honolulu. Hawaiian Electric's comments are as follows:

1. The contractor is to exercise extreme caution when the excavation and construction crosses or is in close proximity to HECO's facilities.
2. The contractor is to comply with the directions of the State of Hawaii Occupational Safety and Health Law (DOSH).
3. When excavation is adjacent to or under existing facilities, the contractor is responsible for properly sheeting and bracing the excavation and stabilizing the existing ground to render it safe and secure from possible slides, cave-ins, and settlement, and for properly supporting existing facilities with beams, struts or underpinning to fully protect these from damage.
4. Should it become necessary, any work required to relocate HECO facilities shall be done by HECO. The contractor shall be responsible for all costs and coordination.
5. The contractor shall be liable for any damages to HECO's facilities.
6. The contractor shall immediately report any damages to HECO's Trouble Dispatch at phone number 543-7874.

HECO will reserve further comment pertaining to the protection of existing power lines in the project area until construction plans are finalized. Our point of contact for this project, and the originator of these comments, is Pat Calizar (543-7731), senior civil-structural engineer. I suggest your staff and contractor(s) deal directly with Pat to coordinate HECO's input on this project.

Sincerely,



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95-1638

Eng

HAWAII RESERVES, INC.
55-510 Kamehameha Highway
Lāie, Hawaii 96762-1193
808-293-9201 Telephone
808-293-5722 Fax

May 31, 1995

VIA FACSIMILE
AND U.S. MAIL

Mr. Kenneth E. Sprague
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

Attention: Tyler Sugihara

Dear Mr. Sprague:

Re: Preliminary Draft Environmental Assessment - Kahawainui Stream
Flood Control Repair Project - 95-12-0171

Thank you for forwarding a copy of the above assessment for our review and comment.

Our only comments are on Section III, Summary of Major Impacts. We request that prior to construction, the contractor be required to coordinate construction traffic access, staging areas, noise, and safety issues as they relate to the community. We fully support this scope of work defined in this proposal and will do all that we can to support this project during construction. Please notify us as to the project point of contact within your department and keep us informed as to your project schedule. If we may be of any help, please contact me at 293-6432.

Sincerely,

Jeffrey Tyau
Jeffrey Tyau
Engineering Manager

JKT/daw

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L A I E
*Community
Association*

MAY 8 7 23 AM '95

P.O. Box O, Laie, HI 96762

May 4, 1995

Mr. Kenneth E. Sprague
Director and Chief Engineer
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

RECEIVED
DIV. OF ENGINEERING
MAY 8 8 59 AM '95

Dear Mr. Sprague:

The Laie Community Association has reviewed your transmittal 95-12-0171, Preliminary Draft Environmental Assessment, Kahawainui Stream Flood Control Repair Project sent to Mr. Roger McKenzie on 20 April, 1995. We feel it is very unfortunate that we must again spend taxpayers money repairing a project that is only a little over 10 years old. However, repair of the project is absolutely essential in order to prevent further damage and eventual complete deterioration of the project, again putting the community of Laie at risk. We strongly encourage doing whatever is necessary to upgrade the system to a point where it will withstand the forces of nature for many years to come.

Mahalo for you attention to this matter.

Very truly yours



Dale A. Hammond
First Vice President,
Laie Community Association

HUI LAU LIMA O'LAIE

A P P E N D I X C

*COMMENTS RECEIVED
DURING THE
DRAFT ENVIRONMENTAL ASSESSMENT
COMMENT PERIOD
AND RESPONSES TO COMMENTS*



DEPARTMENT OF THE ARMY
 PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS
 RECEIVED - SHAFTER, HAWAII 96858-5440
 DIV. OF ENGINEERING

96-0623
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REPLY TO ATTENTION OF MAR 4 2 26 PM '96
 February 29, 1996

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Planning and Operations Division

Mr. Kenneth E. Sprague
 Director and Chief Engineer
 City and County of Honolulu
 Department of Public Works
 650 South King Street
 Honolulu, Hawaii 96813

Dear Mr. Sprague:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the Kahawainui Stream Flood Control Repair Project, Laie, Oahu (TMK 5-5-5, 08, and 09). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. COE Letter dated May 8, 1995. The permit and flood hazard information provided in paragraphs a and b remains unchanged. The information provided in paragraph c regarding the dewatering is no longer valid.

b. Draft EA. Recommend paragraph 4 be revised as follows: "The COE has requested Water Quality Certification (WQC) from the State Department of Health. Construction will not commence until WQC or a waiver is obtained."

Sincerely,

Paul Mizue, P.E.
 Acting Chief, Planning
 and Operations Division

96-12-0264

April 15, 1996

Mr. Paul Mizue, P.E.
Acting Chief, Planning and
Operations Division
Department of the Army
Pacific Ocean Division
Corps of Engineers
Fort Shafter, Hawaii 96858-5440

Dear Mr. Mizue:

Subject: Comments on the Draft Environmental Assessment (EA) for Kahawainui
Stream Flood Control Repair Project, TMK: 5-5-05, 08, and 09,
Laie, Oahu, Hawaii

Thank you for your comments dated February 29, 1996 on the draft EA for the
Kahawainui Stream Flood Control Repair Project.

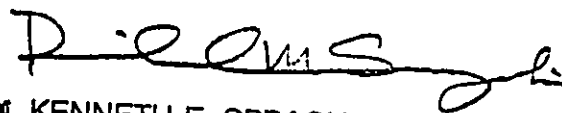
We offer the following responses to your comments:

The change in dewatering requirements of the toe area to place the Articulated Block
Mat (ABM) has been noted. No change to the EA was deemed necessary.

The paragraph in Section I.C., Environmental Characteristics, pertaining to the
Department of Health Section 401 Water Quality Certification, will be revised as
recommended.

Please contact Mr. Tyler Sugihara at 523-4932, if you have any questions.

Very truly yours,



For KENNETH E. SPRAGUE
Director and Chief Engineer

TS:MT:nf

cc: Office of Environmental Quality Control
U.S. Army Corps of Engineers
bcc: Environmental Engineer



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DIV. OF UNITED STATES Department of the Interior
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FISH AND WILDLIFE SERVICE

96-0645
III
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PACIFIC ISLANDS ECOREGION
300 ALA MOANA BOULEVARD, ROOM 3108
BOX 50088
HONOLULU, HAWAII 96850
PHONE: (808) 541-3441 FAX: (808) 541-3470

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MAR 5 2 35 PM '96

In Reply Refer To: CAW

Mr. Kenneth E. Sprague
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

MAR 04 1996

Re: Draft Environmental Assessment, Kahawainui Stream Flood Control Repair Project, Laie, Oahu, Hawaii (96-12-0100)

Dear Mr. Sprague:

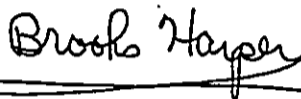
The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Environmental Assessment, Kahawainui Stream Flood Control Repair Project, Laie, Oahu, Hawaii. The project sponsor is the U.S. Army Corps of Engineers (Corps) and the City and County of Honolulu, Department of Public Works (DPW). The Service offers the following comments for your consideration.

The purpose of the project is to repair and/or replace damaged flood control structures along Laiewai and Kahawainui Streams in Laie, Oahu, in order to prevent further erosion and potential failure of these structures during flood conditions. Portions of the earthen levee would be lined with armor mat, levee toes would be extended below streambed level, and portions of the streambed would be replaced with cobble backfill. The Corps issued a Public Notice on January 12, 1996, which outlined the conservation measures that will be a requirement of the construction contract. Based on the implementation of these conservation measures by the contractor and a commitment by the Corps to monitor water quality before, during, and after construction, as outlined in the Public Notice, the Service does not anticipate significant adverse impacts to fish and wildlife resources to result from the proposed work. Therefore, the Service would concur with a Negative Declaration finding and determination that an environmental impact statement is not required for the project.

Draft Environmental Assessment
Kahawainui Stream
Laie, Oahu, Hawaii
Page 2

The Service appreciates the opportunity to provide comments on the proposed project. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Christine Willis at 808/541-3441.

Sincerely,



Brooks Harper
Field Supervisor
Ecological Services

cc: COE, Honolulu
DAR, Honolulu
CWB, Honolulu
DLNR, Honolulu
CZMP, Honolulu
NMFS, Honolulu



United States
Department of
Agriculture

Natural Resources Conservation Service

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DIVISION OF PUBLIC WORKS
P. O. Box 50004
Honolulu, HI
96850-0001

March 11, 1996

96-0724
Law. dk
Eng

Mr. Kenneth E. Sprague
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Sprague:

Subject: No. 96-12-0100, Draft Environmental Assessment, Kahawainui Stream Flood Control Repair Project, Laie, Oahu, Hawaii

We have reviewed the above-mentioned document and offer the following comment:

The mitigation measures proposed should reduce water quality problems.

We thank you for the opportunity to review this document.

Sincerely,

KENNETH M. KANESHIRO
State Conservationist

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The Natural Resources Conservation Service
formerly the Soil Conservation Service, works
hand-in-hand with the American people to
conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P.O. BOX 621
HONOLULU, HAWAII 96809

MICHAEL D. WILSON
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
GILBERT S. COLOMA-AGARAN

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT
WATER RESOURCE MANAGEMENT

MAR 12 1996

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REF: EASCFC505.RCOM

LM-NV

The Honorable Kenneth E. Sprague
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Sprague:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT, KAHAWAINUI STREAM FLOOD REPAIR PROJECT AT LAIE, OAHU, HAWAII (96-12-0100)

We have received your department's transmittal relevant to the subject matter.

The informational materials were distributed to our divisions for their review and comments. As a result, the following comments were received by our Division of Land Management:

1. Forestry and Wildlife:
"No objections to the proposed project"
2. Natural Area Reserve System:
"No objections to the proposed project"
3. State Parks:
"No objections to the proposed project"
4. Aquatic Resources:
" Although some disturbance and turbidity may occur in the stream during construction, no significant long-term adverse impact is expected from the activities proposed.
The mitigation measures mentioned in the DEA (Section V) for the project are adequate and would limit or prevent excessive impact to aquatic resource values. In addition, we suggest that site work be scheduled for periods of minimal rainfall to minimize erosion and siltation during construction."

We received no other comments within the suspense date. May we suggest that the City and County of Honolulu, Department of Public Works consult directly with the following Department of Land and Natural Resources Divisions:

1. Commission on Water Resource Management
(Stream Channel Alteration Permits)

Should you or your staff have any questions, please feel free to contact Mr. Nicholas A. Vaccaro of the Land Division at 587-0438.

Aloha,

Nicholas A. Vaccaro
for MICHAEL D. WILSON

Attachment (s)

C: Michael H. Nekoba
Colbert M. Matsumoto
Oahu District Land Office

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P.O. BOX 621
HONOLULU, HAWAII 96809

96-0840
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MICHAEL D. WILSON
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
GILBERT S. COLOMA-AGARAN

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND ENVIRONMENTAL AFFAIRS
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT
WATER RESOURCE MANAGEMENT

MAR 20 1996

Ref.: EASFC505.FUCOM
LM-NV

The Honorable Kenneth E. Sprague
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Sprague:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT, KAHAWAINUI STREAM
REPAIR PROJECT AT LAIE, OAHU, HAWAII (96-12-0100)

This is a follow-up to our previous correspondence (Ref.: EASFC505.RCOM) wherein, informing you of The Department of Land and Natural Resources's Divisions comments on the proposed project.

We are transmitting to you recently received comments pertaining to the subject matter from the Commission on Water Resource Management and Water and Land Development. Their comments are as follows:

1. Commission on Water Resource Management (CWRM)
 - (a) " We have concerned about the potential for ground water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the Department of Health and the developer's acceptance of any resulting requirements related to water quality."
 - (b) " Based on the information provided, it appears that a Stream Channel Alteration Permit pursuant to Section 13-169-50, HRS will be required before the project can be completed."
 - (c) " We are currently entering a contested case hearing concerning stream ground interaction in close proximity to this work. Ground water use permits for Hawaii Reserve Inc are involved in the contested case hearing. The property involved in this contested case is TMK: 5-5-08:43 and Kahawainui Stream is at least one stream involved in this contested case hearing."

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2 Water and Land Development

" No objections to the proposed project."

Should your office require additional information on the above mentioned comments may we suggest that you or your staff contact the Commission on Water Resource Management at 587-0274.

The Department of Land and Natural Resources has no other comments on the proposed project. If you have any questions, please feel free to contact Mr. Nicholas A. Vaccaro of the Division of Land Management at 587-0438.

Aloha,

Robert S. Coloma-Ayran
for MICHAEL D. WILSON

C: Michael H. Nekoba
Colbert M. Matsumoto
Oahu District Land Office

96-12-0263

April 15, 1996

Mr. Michael D. Wilson, Director
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Wilson:

Subject: Comments on the Draft Environmental Assessment (EA) for Kahawainui Stream
Flood Control Repair Project, TMK: 5-5-05, 08, and 09, Laie, Oahu, Hawaii

Thank you for your comments dated March 12 and 20, 1996 on the draft EA for the
Kahawainui Stream Flood Control Repair Project.

We offer the following responses to your comments pertaining to the Commission on Water
Resource Management (CWRM):

The U.S. Army Corps of Engineers is working with the Department of Health on water quality
impacts on the affected streams. Construction of the project will not commence until the
Water Quality Certification or a waiver is obtained.

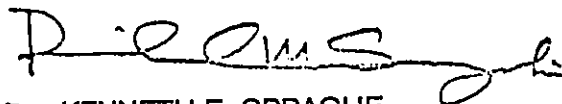
A Stream Channel Alteration Permit (SCAP) application was submitted to your department on
April 2, 1996. Construction of the project will not commence until the SCAP is secured.

We thank you for informing us of the contested case hearing concerning stream and
groundwater interaction at TMK: 5-5-08-43.

Since your comments appear to be provided as information, no changes to the assessment
were deemed necessary.

Please contact Mr. Tyler Sugihara at 523-4932, if you have any questions.

Very truly yours,



FOR KENNETH E. SPRAGUE
Director and Chief Engineer

TS:MT:nf

cc: Office of Environmental Quality Control
U.S. Army Corps of Engineers
bcc: Environmental Engineer

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

220 SOUTH KING STREET
FOURTH FLOOR
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4186
FACSIMILE (808) 586-4186

RECEIVED
DIV. OF ENGINEERING
GARY GILL
DIRECTOR
MAR 7 3 30 PM '96

March 5, 1996

Kenneth Sprague
Department of Public Works
650 South King Street
Honolulu, HI 96813

Attn: Tyler Sugihara

Dear Mr. Sprague:

Subject: Draft Environmental Assessment (EA) for Kahawainui Stream Flood Control
Repair Project, Laie; TMK 5-5-5, 8 & 9

Please include the following in the final EA:

1. A map of the neighborhood that shows the streams involved in this project.
2. A full description of Laiewai and Kahawainui Streams; their aquatic, cultural and recreational characteristics; and the impact of the project on these characteristics.
3. A definition and description of *gabions*, which are mentioned on page 8 as one of the alternatives.
4. A discussion of how a negative declaration determination was reached, according to the significance criteria listed in HRS Title 11-200-12. Refer to the enclosed sample discussion as a guideline.

If you have any questions, please call Nancy Heinrich at 586-4185.

Sincerely,


GARY GILL
Director

c: Jim Pennaz, US Army Corps of Engineers

accomplishment of project objectives and an evaluation of various criteria. A highway makai of the existing facility would better accommodate the major direction of traffic flow. In addition, travel along State Highway 130 will improve due to fewer intersections and the "restricted" access of the bypass.

Most of the right-of-way required for Alternative 1 would pass through former cane fields, now fallow. A macadamia nut orchard near Keaau-Paho Road may be impacted, depending on specific alignment decisions. No parcels would be left without access, although some adjacent parcels may not be provided direct access to the bypass.

Alternative 1 would improve the level-of-service from the present peak hour LOS E to LOS C or better through the design year of 2013. Benefits would include improved public safety and more efficient delivery of goods and services, including emergency services, to Puna residents. Evacuation of residents in the event of natural disaster may become easier after bypass construction.

D. Determination and Reasons Supporting the Determination

The proposed project would not have a significant effect on the environment and therefore preparation of an environmental impact statement is not required. The "Significance Criteria," Section 12 of Hawaii Administrative Rules Title 11, Chapter 200, "Environmental Impact Statement Rules," were reviewed and analyzed. Based on the analysis, the following were concluded:

1. *No irrevocable commitment to loss or destruction of any natural or cultural resource would result.* The right-of-way for Alternative 1 is primarily in former cane lands, now unused. No significant natural resources are present. Protection of potential cultural resources would be accomplished through an archaeological mitigation program comprised of either advance subsurface testing or monitoring during construction. Such a program would require approval of the State Division of Historic Preservation.
2. *The action would not curtail the range of beneficial uses of the environment.* The project, while certainly curtailing use of lands within the right-of-way to transportation and utilities uses, would increase access to Lower Puna, thereby facilitating beneficial uses of other lands in the District.
3. *The proposed action does not conflict with the state's long-term environmental policies or goals and guidelines.* The State's environmental policies and guidelines are set forth in Chapter 344, Hawaii Revised Statutes, "State Environmental Policy." Two broad policies are espoused: conservation of natural resources, and enhancement of the quality of life. The proposed project does not consume significant natural resources. It would include

mitigative measures to minimize various categories of pollution, while promoting general welfare and improving the efficiency of transportation allowing fulfillment of the social, economic and other requirements of residents. The project is further supportive of the following guidelines specific to transportation established in Chapter 344:

- Encourage transportation systems in harmony with the lifestyle of the people and environment of the State;
- Adopt guidelines to alleviate environmental degradation caused by motor vehicles; and
- Encourage public and private vehicles and transportation systems to conserve energy, reduce pollution emission, including noise, and provide safe and convenient accommodations for their users.

4. *The economic or social welfare of the community or state would not be substantially affected.* Construction of the bypass would result in temporary economic benefits to the construction industry and indirectly to other economic sectors as well. Operation of the bypass would reduce traffic through Keaau, perhaps decreasing revenues to merchants. The population base and degree of competition for customers, however, is expected to increase greatly as the development plans of W. H. Shipman, Ltd. are implemented. The net result to individual merchants will depend on their respective competitive situation. No significant social impacts are anticipated, although the rural character of 8 ½ Mile Camp may be lessened by the proximity of the bypass. Improved access and mitigation measures may offset this impact.
5. *The proposed action does not substantially affect public health.* The project would reduce both noise and emissions of air pollutants within Keaau village. It will facilitate provision of emergency and other public services.
6. *No substantial secondary impacts, such as population changes or effects on public facilities, are anticipated.* The bypass project arises from needs established by a rapidly growing population. To the extent that access to Lower Puna is improved, subdivision build-out may accelerate somewhat. This impact, however, may be more responsive to general economic conditions rather than simply improved traffic conditions. An improved roadway network will improve access to public facilities in and around Keaau.
7. *No substantial degradation of environmental quality is anticipated.* The project area is unremarkable in terms of environmental resources, and standard mitigation measures would suffice to protect ambient environmental quality. Some redistribution of noise and vehicle exhaust emissions would take place. While conditions within Keaau village would be improved, noise levels near

3 1/2 Mile Camp would be elevated. Mitigation measures can be employed to reduce the impacts to acceptable levels. The project is not expected to result in concentrations of air pollutants exceeding State or federal standards for ambient air quality.

8. *The proposed action does not involve a commitment to larger actions, nor would cumulative impacts result in considerable effects on the environment. The proposed project is self-contained and independent of other proposed highway improvements or other types of projects. It does however, address deficiencies in the roadway network recognized in various State and County planning documents.*
9. *No rare, threatened or endangered species or their habitats would be affected. A small amount of potential forage habitat for Hawaiian Hawks, Owls and Bats would be removed, but the large home ranges of these animals render the loss insignificant. No endangered, threatened or candidate floral species would be affected by the project.*
10. *Air quality, water quality or ambient noise levels would not be detrimentally affected. The net effect of the project on air quality would be to reduce emissions within Keaau village, while increasing emissions along the bypass corridor. Improved traffic flow, however, would reduce the possibility of "hot spot" formation. Potential violations of State Ambient Air Quality Standards within Keaau would be alleviated. Noise in Keaau would be reduced, but that at residences near the bypass would be significantly increased. Implementation of various mitigation measures will be necessary to minimize this impact. No significant water quality impacts are anticipated either during construction or operation of the bypass.*
11. *The project would not affect environmentally sensitive areas, such as flood plains, tsunami zones, erosion-prone areas, geologically hazardous lands, estuaries, fresh waters or coastal waters. No environmentally sensitive areas would be affected. The project site is on basically flat land well inland of the coast. Tsunami inundation is unlikely. Seismic risks are minimal; no structures are anticipated as part of the project. The volcanic hazards are comparable to those in Hilo.*

96-12-0265

April 16, 1996

Mr. Gary Gill, Director
Office of Environmental
Quality Control
State of Hawaii
220 S. King Street, Suite 400
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Comments on the Draft Environmental Assessment (EA) for Kahawainui
Stream Flood Control Repair Project, TMK: 5-5-05, 08, and 09,
Laie, Oahu, Hawaii

Thank you for your comments dated March 5, 1996, on the draft EA for the Kahawainui Stream Flood Control Repair Project.

We offer the following responses to your comments:

1. Maps showing the neighboring areas, streams involved in the project and land uses will be included in the assessment.
2. The assessment will be revised to include aquatic, cultural and recreational characteristics of the Laiewai and Kahawainui Streams and the impact of the project on these characteristics.
3. Gabions are metal mesh baskets filled with rocks. This definition and description will be provided in the assessment.
4. The section on determination of negative declaration will be revised using the information you provided as a guide.

Please contact Mr. Tyler Sugihara at 523-4932, if you have any questions.

Very truly yours,



¹⁰³ KENNETH E. SPRAGUE
Director and Chief Engineer

TS:MT:nf

cc: U.S. Army Corps of Engineers
bcc: Environmental Engineer

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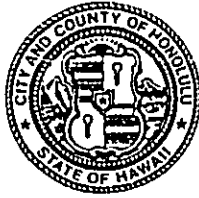
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DEPARTMENT OF TRANSPORTATION SERVICES

CITY AND COUNTY OF HONOLULU

PACIFIC PARK PLAZA
711 KAPIOLANI BOULEVARD, SUITE 1200
HONOLULU, HAWAII 96813

JEREMY HARRIS
MAYOR



96-0705
enw.ck
eng.

CHARLES O. SWANSON
DIRECTOR

March 11, 1996

2/96-00840R

MEMORANDUM

TO: KENNETH E. SPRAGUE, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: CHARLES O. SWANSON, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHAWAINUI STREAM
FLOOD CONTROL REPAIR PROJECT

In response to your memorandum dated February 15, 1996, we reviewed the subject draft environmental assessment. Our April 1995 comments, provided in response to the request to review a preliminary copy of the subject document, remain unchanged. We have no objections or comments regarding the transportation or traffic impacts of the proposed project.

Should you have any questions regarding this matter, please call Faith Miyamoto of the Transportation System Planning Division at Local 6976.

F. Miyamoto
for CHARLES O. SWANSON

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William A. Bonnet
Manager
Environmental Department

96-0772
Eng

March 14, 1996

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MAR 18 11 58 AM '96

Mr. Kenneth E. Sprague
Department of Public Works
City & County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Sprague:

Subject: Kahawalnui Stream Flood Control Repair Project

Thank you for the opportunity to comment on your February 1996 Draft Environmental Assessment as proposed by the Department of the Public Works of the City & County of Honolulu. We have reviewed the subject document and have no additional comments at this time on the proposed project. We would like to point out that the comments submitted in the letter dated May 22, 1995 still apply. HECO shall reserve further comments pertaining to the protection of existing powerlines bordering the project area until construction plans are finalized. Again, thank you for the opportunity to comment on this Draft Environmental Assessment.

Sincerely,

William A. Bonnet

96-12-0348

May 17, 1996

Mr. William A. Bonnet, Manager
Environmental Department
Hawaiian Electric Company, Inc.
P. O. Box 2750
Honolulu, Hawaii 96840-0001

Dear Mr. Bonnet:

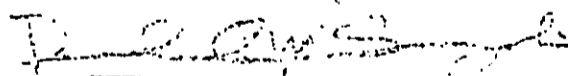
Subject: Comments on the Draft Environmental Assessment (EA) for Kahawainui
Stream Flood Control Repair Project, Laie, Oahu, Hawaii,
Tax Map Key: 5-5-05, 08, and 09

Thank you for your comments dated March 14, 1996, on the draft EA for the
Kahawainui Stream Flood Control Repair Project.

We share your concern for protecting existing powerlines and other Hawaiian Electric
Company, Inc. facilities. However, the proposed repair project is located away from
existing powerlines and there are no known Hawaiian Electric Company, Inc. facilities in
the vicinity of the repair project.

Please contact Mr. Tyler Sugihara at 523-4932 if you have any questions.

Very truly yours,



KENNETH E. SPRAGUE
Director and Chief Engineer

TS:MT:tt

cc: Office of Environmental Quality Control
U.S. Army Corps of Engineers
bcc: Environmental Engineer



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DIV. OF ENGINEERING
MAR 14 3 51 PM '96

HAWAII RESERVES, INC.

55-510 Kamehameha Highway

Laie, Hawaii 96762-1193

808-293-9201 Telephone

808-293-6456 Fax

March 11, 1996

96-0747

eng
eng

Mr. Kenneth E. Sprague,
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Attention Tyler Sugihara

Re: Draft Environmental Assessment, Kahawainui Stream Flood Control Repair
Project, 95-12-0171

Dear Mr. Kenneth E. Sprague,

Thank you for the opportunity to review the draft EIS for the above project. As noted in our earlier responses, we strongly support this project and commit to working with your department and the selected contractor to complete this project with minimal impacts to the community or the environment. Our comments are as follows:

1. Drawing sheet 11, Contractor's Haul and Access Route. At A3, install filter fence on top of bank (haul route). We have no requirement for a filter fabric fence along the haul route, but would like it noted that the haul route must be returned to its original condition. This is an expense that might be avoidable. This area is a large open field with no scheduled use during construction hours.
2. Since we have discussed the haul route, that you have included in your drawings, a project to install a 12" water line down Poohaili Street has been approved for installation in our water system. Depending on the timing of both of these projects, there may not be conflict. We continue to be concerned about the routing traffic through the community streets, since the streets in question are near a park with narrow streets. We would like to additionally restrict large truck traffic on Poohaili and Waihinepee streets to 15 miles per hour. We have recently completed an alternate traffic route for construction traffic for the construction of the Laie Treatment Plant. This route removes all traffic from the community and is preferred from a community impact stand point. We would like to discuss requiring construction traffic for this repair project to also be required to use this route. This route would not be more time

March 11, 1996
Page 2

consuming or delay causing in any way for the contractor. Due to the timing nature of any alternate routing requirements, it might be best to include a note on the drawing that prior to actual construction the contractor is required to meet with myself to verify haul route requirements. I have attached a map showing the proposed access route. I have also included some blank copies for your use.

3. Page 7, Description of the affected environment, item J. Revise to read "... In the past, there may have been high ammonia and nitrate concentrations recorded for Kahawainui Stream, possibly due to agricultural, aquaculture activities or possibly from discharges of wastewater from the Laie Wastewater Treatment plant to the wetlands upstream of the Project." I am not aware on any conclusive report that has been done that either concludes an increase in the stated constituents has occurred or identified the source of such chemicals. Nor have any studies compared the constituent concentrations that may be due to normal agricultural and aquaculture activities in other parts of the island. To conclude that there is a problem or that if there is a problem, the source is not currently supported by sufficient scientific evidence at this time.

If you have any question regarding any of the above comments please call me at 293-6432.

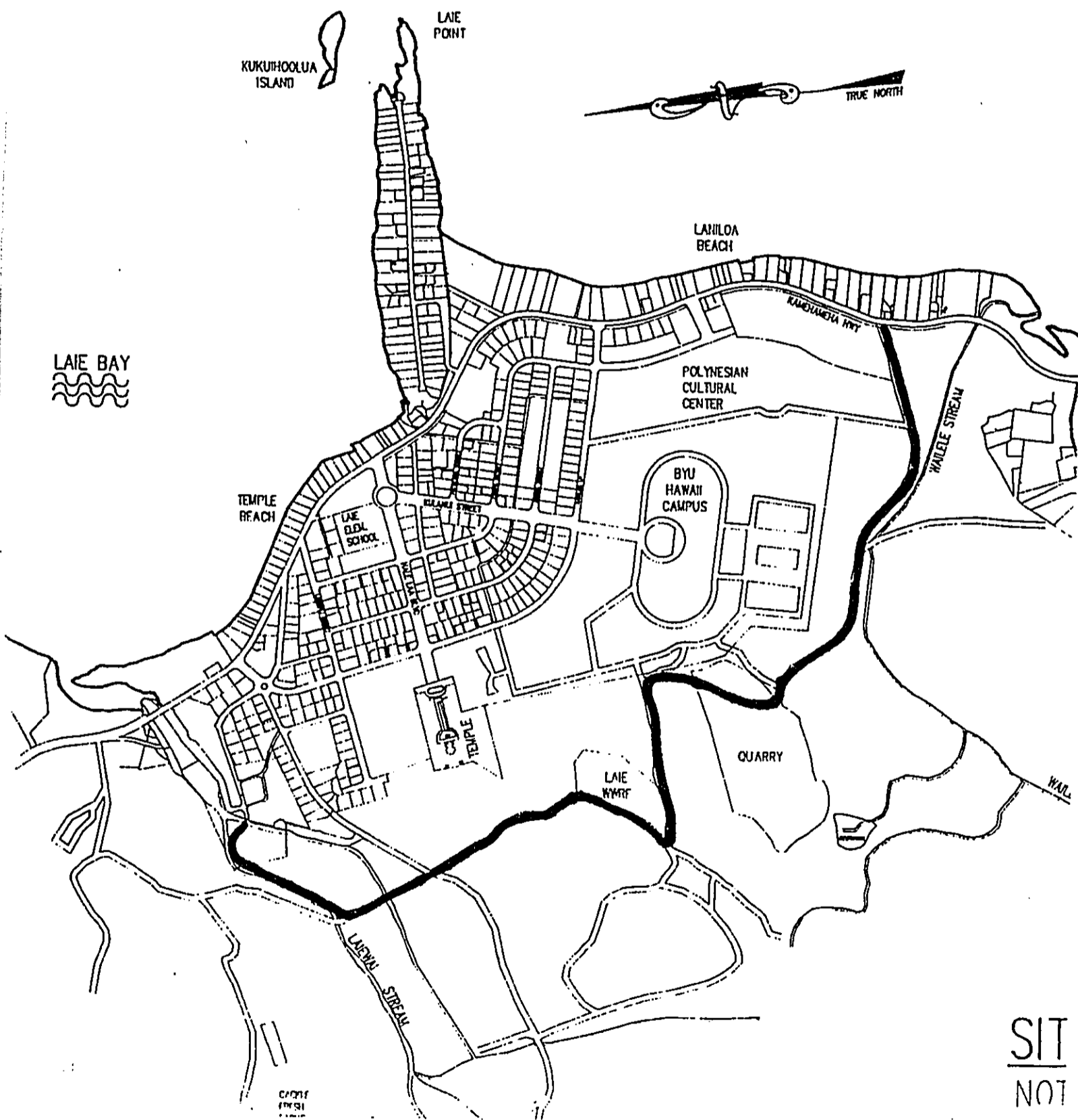
Thank you,


Jeffrey Tyau
Engineering Manager

ISLAND LOCATION MAP

NOT TO SCALE

REVISED CONTRACTOR
ACCESS ROUTE.



SIT
NOT

96-12-0347

May 17, 1996

Mr. Jeffrey Tyau
Engineering Manager
Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, Hawaii 96762-1193

Dear Mr. Tyau:

Subject: Comments on the Draft Environmental Assessment (EA) for
Kahawainui Stream Flood Control Repair Project, Laie, Oahu,
Hawaii, Tax Map Key: 5-5-05, 08 and 09

Thank you for your comments dated March 11, 1996, on the draft EA for the
Kahawainui Stream Flood Control Repair Project.

We offer the following responses to your comments:

1. The filter fabric fence along the haul route reduces fugitive dust problems and protects water quality of the Laiewai Stream adjacent to the haul route. This fence is deemed necessary and was designed based on comments from the State Department of Health.
2. The haul route shown on the construction plans is the same route used for the construction of the Kahawainui Stream Flood Control Project. The proposed repair project should not result in large amounts of construction traffic and the alternative route proposed would require additional fugitive dust controls since the use of unpaved roads would be significantly increased. Although the haul route shown on the construction plans is preferred, the contractor will be required to contact Hawaii Reserves, Inc., concerning the construction haul route.

Mr. Jeffrey Tyau

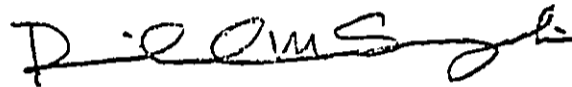
Page 2

May 17, 1996

3. The section describing the water quality of the affected environment was not intended to identify the cause of reported high ammonia and nitrate concentrations recorded for the Kahawainui Stream. The section will be revised as requested.

Please contact Mr. Tyler Sugihara at 523-4932 if you have any questions.

Very truly yours,



KENNETH E. SPRAGUE
Director and Chief Engineer

PS:MT:tt

cc: Office of Environmental Quality Control
U.S. Army Corps of Engineers
bcc: Environmental Engineer