



**CONTINUING ELIGIBILITY INSPECTION (CEI) REPORT
FOR FLOOD CONTROL WORKS
Honolulu Engineer District
CEPOH-EC-T**

Kawainui08rpt-fcp.doc

1. Project Name: Kawainui Marsh Flood Control Project
2. Date of Inspection: November 7 & 14, 2007
3. Inspection Personnel:

	<u>Name</u>	<u>Agency/Office</u>	<u>Telephone No.</u>
a.	Dan Meyers	CEPOH-EC-T	438-8875
b.	Jarrett Hara	CEPOH-EC-T	438-1681
c.	Darin Aihara	CEPOH-EC-T	438-1659
d.	Trey Maddox	COE/DPW	656-1404 x1109
e.	Tyler Sugihara	DFM/Road Main Div.	768-3600
f.	Irvin Oba	DFM/Road Main Div.	262-4346
g.	Robert Medeiroi	DLNR	228-5553
h.	Kristen Akamine	DLNR/Eng	587-0281
i.	Denise Manuel	DLNR/Eng	587-0246

4. Ratings for FY08
Project Rating: **"MS, Marginally Satisfactory"**
Project Condition Code: **"MA, Minimally Acceptable"**
Project Status: **"Active"**
5. Discussion:

The DLNR attendee's only attended the Kawainui Marsh inspection on November 7, 2007. The right bank of the Oneawa Channel inspection took place right after the Kawainui Marsh inspection. The left bank of the Oneawa Channel inspection took place on November 14, 2007, Mr. Trey Maddox did not attend that inspection and Mr. Darin Aihara only attended that inspection.

Remove all woody vegetation from the levee. Also, cut back vegetation 15' from the toe of the levee.

Station numbers need to be established on the Oneawa levee headwall culverts similar to those on the levee floodwall. The maintenance easement needs to be surveyed in along the Oneawa Channel and all encroachments removed. All the deficiencies were brought to the C&C's attention during the inspection.





LEVEE - NOTE: Sta. 0+00 Levee Rock Wall Begins
High-water transmitter Sta. 15+30, Marshside of levee
Sta. 64+04 wall ends



a. Sta. 0+00, Overview, cut back woody vegetation 15' back from the toe of the levee (town side).



b. Sta. 5+00, town side (TS), remove woody vegetation from levee.



c. Sta. 15+50, overview, USGS stream gauge (marsh side).



d. Sta. 23+30, marsh side (MS), patch concrete.



e. Sta. 29+15, MS, patch concrete.



f. Sta. 30+00, Overview of levee, minimal vegetation.



g. Sta. 32+50, MS, repair cracked concrete.



h. Sta. 42+10, MS, patch concrete.



h. Sta. 43+00, TS, cut back woody vegetation 15' from toe.



i. Sta. 46+00, MS, repair eroded toe.



j. Sta. 48+00, MS, repair eroded toe.



k. Sta. 55+20, MS, erosion at the toe of the side slope was repaired.



1. Sta. 57+00, MS, facing north, erosion at the toe of the side slope repaired.



m. Sta. 64+00, MS, looking south, Overview.



ONEAWA CHNL - RIGHT BANK
Sta. 91+25 - Sta 2+00



a. Sta. 91+25, Interior drain line outlets.



b. Sta. 93+00, RB, cutback coconut trees within maintenance easement and repair gate.



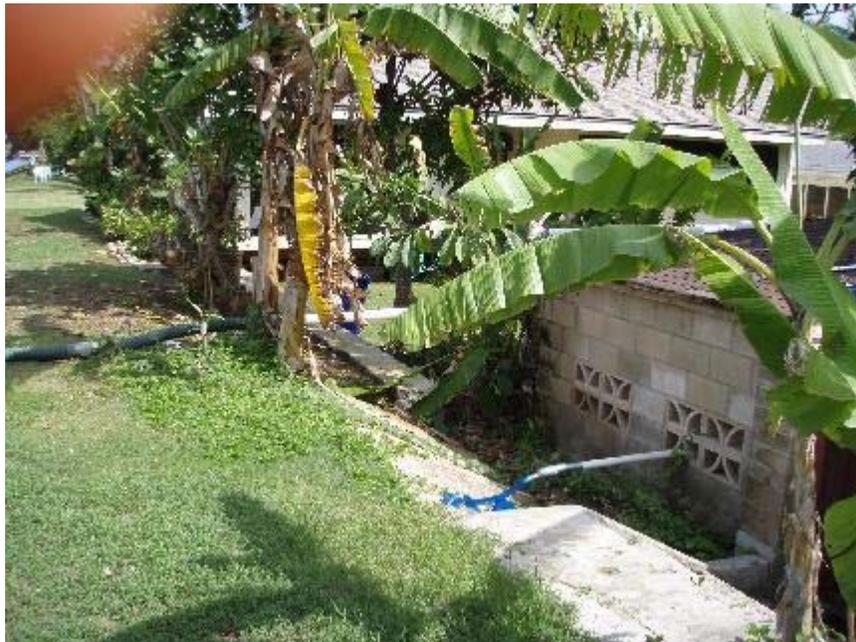
c. Sta. 90+00, RB, remove all unauthorized encroachments within the maintenance easement.



d. Sta. 89+00 - 88+00, RB, remove waddy vegetation on town side (TS) side slope.



e. Sta. 89+77, RB, boat roller removed and side slope restored.



f. Sta. 89+65, RB, remove all unauthorized encroachments, woody vegetation and concrete, from TS side slope.



g. Sta. 89+61, RB, 24" Pipe outlet.



h. Sta. 89+50, RB, remove all unauthorized encroachments, woody vegetation and CRM wall, on TS side slope.



i. Sta. 88+00, RB, remove woody vegetation within maintenance easement.



j. Sta. 86+30, RB, remove woody vegetation within maintenance easement.



k. Sta. 85+31, RB, 18" pipe outlet, side slope repaired on both sides of the outlet.



l. Sta. 83+78, RB, unauthorized concrete steps removed.



m. Sta. 80+78, LB, under bridge, 24" pipe outlet. (no picture)



n. Sta. 81+60, RB, restore eroded levee side slope and re-establish ground cover vegetation.



o. Sta. 79+50, remove woody vegetation within maintenance easement and re-establish ground cover vegetation.



p. Sta. 77+85, RB, remove unauthorized boat rollers from side slope.



q. Sta. 77+85, RB, remove woody vegetation within maintenance easement.



r. Sta. 77+00, RB, unauthorized concrete ramp removed.



s. Sta. 76+10, RB, unauthorized concrete ramp removed.



- t. Sta. 75+50, verify maintenance easement and remove unauthorized encroachments within the easement.



- u. Sta. 75+00, RB, unauthorized PVC drain outlet removed.



v. Sta. 74+30, RB, 18" Pipe Outlet, erosion around the outlet has been repaired. Repaint station on culvert to show 74+30.



w. Sta. 72+00, RB, remove woody vegetation within maintenance easement.



x. Sta. 67+95, RB, vegetation removed at 18" Pipe outlet, remove young koa trees around the outlet.



y. Sta. 60+00, RB, remove unauthorized 3" black HDPE pipe and restore side slope.



z. Sta. 63+00, RB, remove coconut tree from side slope.



aa. Sta. 63+28, RB, remove unauthorized 4" white PCV pipe and restore side slope.



bb. Sta. 62+50, RB, remove woody vegetation within maintenance easement.



cc. Sta. 62+28, RB, 18" Pipe Outlet, remove woody vegetation.



dd. Sta. 60+00, RB, remove unauthorized 1.5" pvc drainline and restore side slope.



ee. Sta. 58+00, RB, remove woody vegetation within maintenance easement.



ff. Sta. 55+50, RB, 18" Pipe Outlet, concrete at the toe repaired.



gg. Sta. 55+51, RB, overview, woody vegetation along side slope removed.



hh. Sta. 55+00, RB, repair eroded toe (2 areas).



ii. Sta. 53+00, RB, repair toe damage.



jj. Sta. 52+00, RB, repair eroded toe.



kk. Sta. 47+72, RB, 18" Culvert, woody vegetation removed around culvert.



11. Sta. 46+72, RB, steps removed, backfill needed on side slope.



mm. Sta. 43+00, RB, remove coconut and plumeria trees within maintenance easement.



nn. Sta. 41+58, RB, remove unauthorized encroachment, drain pipe, and restore side slope.



oo. Sta. 41+30, RB, remove woody vegetation within maintenance easement.



pp. Sta. 40+40, RB, facing marsh, Begin Riprap, woody vegetation removed.

Note: Kalaheo St. Bridge starts at Sta. 40+40.



qq. Sta. 38+20, Overview, remove trees within maintenance easement.



rr. Sta. 38+20, RB, 24" Ditch Outlet.



ss. Sta. 37+75, RB, 24" Pipe Outlet, remove tree within maintenance easement.



tt. Sta. 33+00, RB, 24" Pipe Outlet.



uu. Sta. 33+00 - 32+00, RB, remove trees within maintenance easement.



vv. Sta. 31+25, RB, unauthorized concrete ramp removed, maintain side slope.



ww. Sta. 29+00 - Sta. 35+00, RB, remove woody vegetation within maintenance easement.



xx. Sta. 29+25, RB, 24" Culvert.



yy. Sta. 28+90, RB, remove unauthorized stone structure and restore toe.



zz. Sta. 25+00, RB, Overview, steps removed and side slope restored. Verify that the coconut trees are outside of the maintenance easement. Remove all trees within the easement



aaa. Sta. 24+00, RB, 24" Pipe Outlet, woody vegetation around outlet removed.



bbb. Sta. 19+00, RB, Overview, 24" Pipe Outlet, unauthorized boat ramp and woody vegetation removed.



ccc. Sta. 13+00, RB, maintenance easement road gate.



ddd. Sta. 13+00, RB, looking towards the marsh, repair triangle flap gate.



eee. Sta. 12+90, RB, concrete culvert, remove all trees within maintenance right of way and restore maintenance easement.



fff. Sta. 7+50, RB, Overview, remove all trees within maintenance easement.



ggg. Sta. 6+40, RB, remove unauthorized encroachment, boat ramp.



hhh. Sta. 6+45, remove unauthorized encroachment, sprinkler system, and restore side slope.

GROIN -



a. Sta. 6+00, RB, Begin Riprap, remove all vegetation from rip rap.



b. 5+24, RB, Begin Revetment / Groin, Overview, remove all vegetation from revetment, naupaka plant.

c. Sta. 5+00, RB, End Riprap. (no picture)



d. Sta. 4+74, RB, End of groin, picture of the head.



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ONEAWA CHNL - LEFT BANK

Sta 2+00 TO Sta. 91+25

Sta. 6+74, LB, Begin Revetment

Sta. 4+82, LB, End Revetment Sta.



a. Sta. 4+32, LB, beginning of project connected to existing CRM Wall, Overview. Remove unauthorized encroachments, sprinkler system at the hinge.



b. approx. Sta. 5+00, LB, remove naupaka plant within maintenance easement.



c. Sta. 6+10, LB, unauthorized stairs removed.



d. Sta. 6+31, LB, remove woody vegetation within maintenance easement.



e. Sta. 6+50, LB, stairs removed.



f. Sta. 7+20, LB, remove woody vegetation to within maintenance easement, stairs removed on side slope.



g. Sta. 7+13, LB, remove naupaka plant at toe.



h. Sta. 7+71, LB, remove platform within maintenance easement.



- i. Sta. 9+80, LB, remove unauthorized encroachment within maintenance easement.



- j. Sta. 10+67, LB, verify easement right of way, remove encroachments within maintenance easement.



k. Sta. 11+14, LB, remove all unauthorized encroachments: steps, mooring cleat and sprinkler system. Restore side slope.



l. Sta. 10+14 - 12+65, LB, remove woody vegetation on side slope. Remove unauthorized encroachments, sprinkler system, within maintenance easement.



m. Sta. 12+67, LB, restore crest elevation and side slope.



n. Sta. 13+84, LB, remove all unauthorized encroachments, landing and stairs, and re-establish rip rap to match existing grade.



o. Sta. 14+19, LB, remove all unauthorized encroachments, woody vegetation and sprinkler system, within maintenance easement.



p. Sta. 14+71, LB, remove woody vegetation along side slope.



q. Sta. 15+06, LB, remove unauthorized encroachment, sprinkler system, and restore existing maintenance easement.



r. Sta. 15+33, LB, remove palm trees within maintenance easement.



s. Sta. 16+78, LB, remove mangrove plant on side slope.



t. Sta. 17+07, LB, remove unauthorized encroachments, sprinkler system, and add 1-man rock to the toe.



u. Sta. 17+98, LB, remove unauthorized encroachments, ramp and sprinkler system, within maintenance easement and restore side slope.



v. Sta. 18+77, LB, restore crest elevation and remove woody vegetation.



w. Sta. 23+15 - 23+90, LB, remove unauthorized encroachment, sprinkler system, and restore ground cover vegetation.



x. Sta. 26+33, LB, remove naupaka plant within maintenance easement.



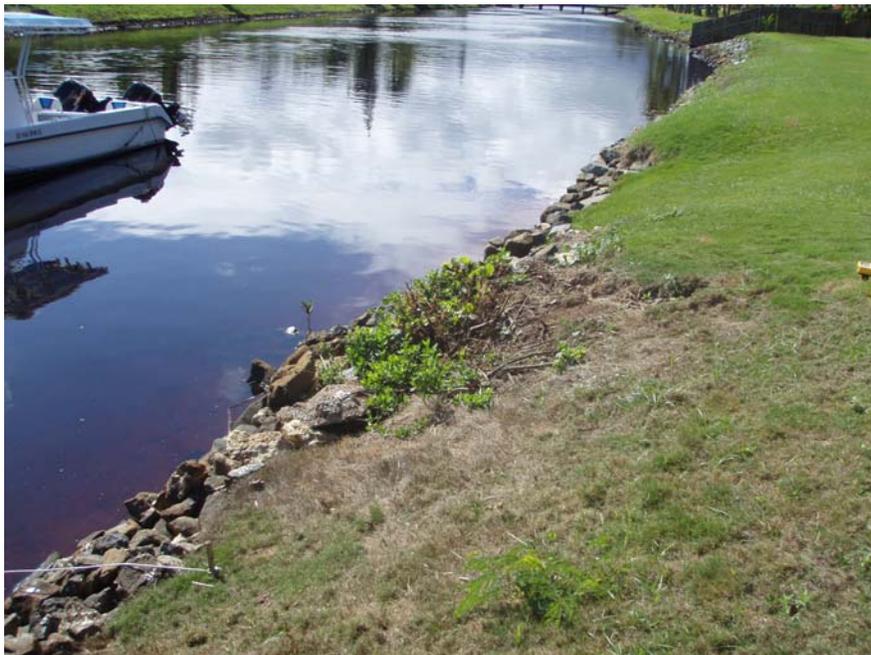
y. Sta. 26+32, LB, remove coconut tree(s) and unauthorized encroachments within maintenance easement.



z. Sta. 28+04, LB, remove juvenile tree from side slope.



aa. Sta. 28+46, LB, remove woody vegetation within maintenance easement.



bb. Sta. 29+15, remove bush and unauthorized encroachment, pin, on the side slope.



cc. Sta. 29+42, LB, unauthorized earthen boat ramp, restore depressed channel side slope and maintenance easement to original condition. Place 1-man rock at toe to prevent erosion.



dd. Sta. 31+41, LB, remove banana tree.



ee. Sta. 31+50, LB, pipe outlet.



ff. Sta. 33+09, LB, remove palm trees within maintenance easement.



gg. Sta. 36+78, LB, restore crest elevation.

Note: approx. Sta. 38+70, LB, centerline of Kalaheo St. Bridge.



hh. Sta. 38+30, LB, 24" Pipe Outlet.



ii. Sta. 38+64, LB, remove tree within maintenance easement.



jj. Sta. 40+55, LB, 4' x 5' Box Culvert.



kk. Sta. 40+65, LB, remove coconut trees within maintenance easement.



ll. Sta. 41+58, LB, remove coconut trees (8 ea.) within maintenance easement.



mm. Sta. 41+58, LB, remove unauthorized encroachment, drain pipe, hidden under grass.



nn. Sta. 45+17, LB, remove 3 mangrove plants.



oo. Sta. 45+50, LB, concrete culvert, cut grass and repair crack.



pp. Sta. 46+37, LB, remove unauthorized encroachments: fence, bush and sprinkler system, within maintenance easement.



qq. Sta. 51+18, LB, remove unauthorized fence and tree within maintenance easement.



rr. Sta. 52+75 (verify station), LB, 4' x 6' Box Culvert, remove woody vegetation and repair cracks in the concrete.



ss. Sta. 54+44, LB, cut back woody vegetation within maintenance easement.



tt. Sta. 55+25, LB, remove unauthorized encroachments, steps and woody vegetation, within maintenance easement.



uu. Sta. 57+00, LB, verify maintenance easement. Remove tree and fence if within the easement.



vv. Sta. 57+55, LB, remove unauthorized encroachment, 4" PVC pipe.



ww. Sta. 58+75, LB, remove unauthorized concrete block at toe.



xx. Sta. 59+10 - 61+00, remove woody vegetation within maintenance easement.



yy. Sta. 60+85, LB, 42" Drain outlet, repair cracks in concrete.



zz. Sta. 63+87, LB, remove palm tree within maintenance easement.



aaa. Sta. 64+13, LB, remove mangrove plant.



bbb. Sta. 65+87, LB, remove unauthorized structure, CMU landing, and restore toe.



ccc. Sta. 66+63, LB, remove unauthorized fill and restore to match existing.



ddd. Sta. 69+60, LB, 36" pipe outlet, monitor settlement and repair cracks in the concrete.



eee. Sta. 72+75, LB, 24" Pipe outlet, add material to scoured area around the outlet.



fff. Sta. 74+38 - 74+75, LB, remove unauthorized encroachments, pins and steps. Restore side slope and toe.



ggg. Sta. 75+63, LB, re-establish side slope and remove debris.



hhh. Sta. 76+00, LB, 42" drain outlet, repair cracks in the concrete.



iii. Sta. 77+37, LB, remove unauthorized encroachment, 4" PVC pipe.



jjj. Sta. 78+32, LB, remove palm tree from side slope.



kkk. Sta. 80+78, LB, repair cracking culvert face.

Note: Sta. 82+02, centerline of the Oneawa St. Bridge.



lll. Sta. 83+81, LB, re-establish eroded side slope.



mmm. Sta. 85+55, LB, 36" Pipe Outlet, repair cracked concrete.



nnn. Sta. 86+40, LB, end of project. Verify maintenance easement and re-establish.



ooo. Sta. 86+40 - 87+40, LB, looking Makai, remove unauthorized steps and re-establish toe.



ppp. Sta. 88+00, LB, grease 18" flapgate. (picture taken in 2005)



qqq. Sta. 93+00, Overview.

6. Conclusion:

IAW ER 500-1-1, (dated 30 September 2001), and based on this CEI, the Project Condition Code is MINIMALLY ACCEPTABLE and the project is considered ACTIVE in the Rehabilitation and Inspection Program.

Signed: _____
Jarrett Hara, CEPOH-EC-T

Signed: _____
Dan Meyers, CEPOH-EC-T

Signed: _____
Jim Pennaz, P.E., Ch, CEPOH-EC-T

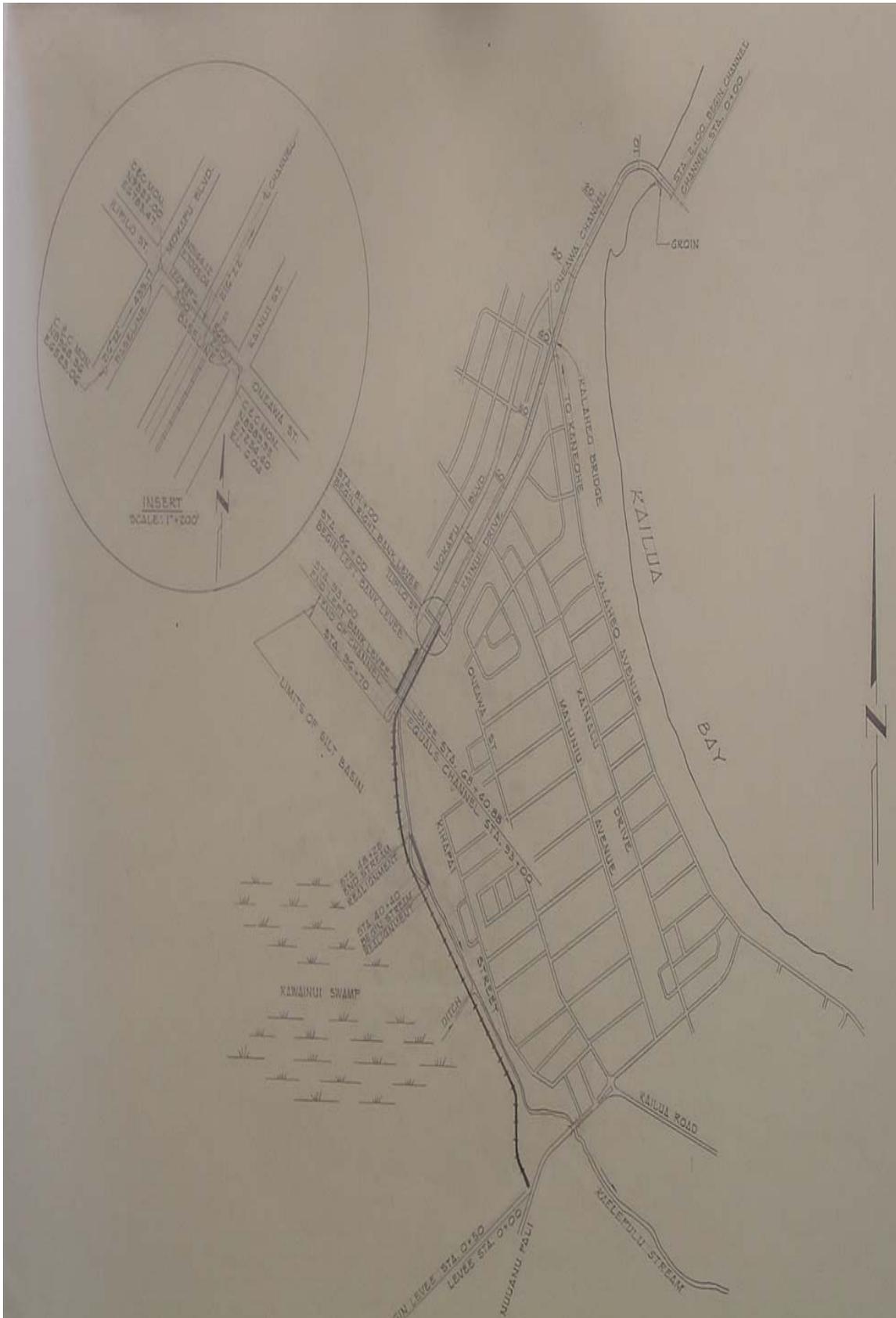
Enclosure(s)

1. Site Plans
2. Oneawa Channel Features



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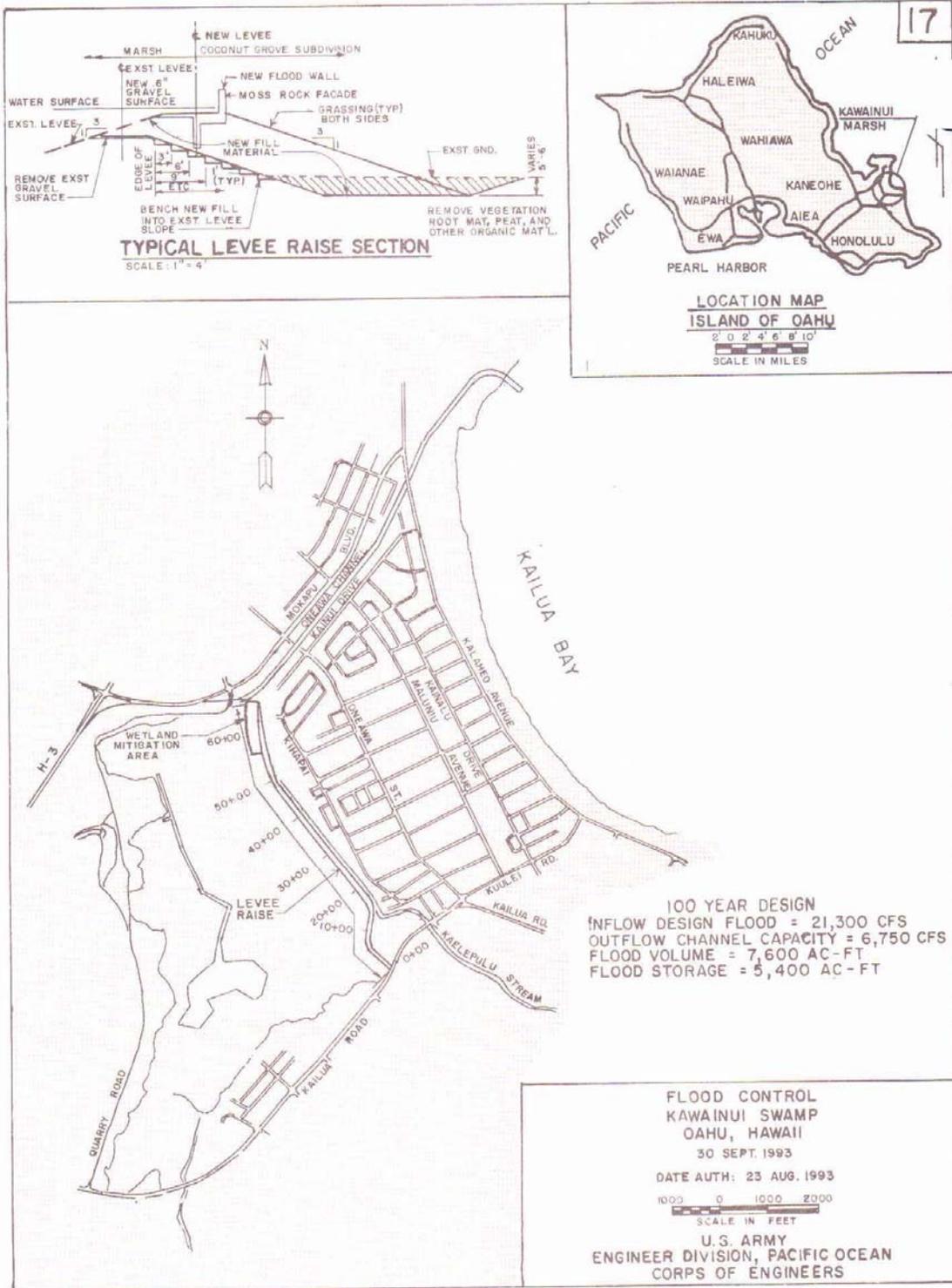
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ONEAWA CHANNEL
FEATURES

Start Chnl in Silting Basin		Sta. 96+70	P ____
			P ____
Fence	RB	Sta. 93+00	P ____
			P ____
24" Pipe Outlet	RB	Sta. 89+61	P ____
			P ____
18" Pipe Outlet	LB	Sta. 88+00	P ____
			P ____
36" Pipe Outlet	LB	Sta. 85+55	P ____
			P ____
18" Pipe Outlet	RB	Sta. 85+31	P ____
18" Pipe Outlet	LB	Sta. 82+50	P ____
Oneawa St.	Centerline	Sta. 82+02	P ____
18" Flapgate,	LB	Sta. 81+50	P ____
18" Flapgate,	RB	Sta. 81+50	P ____
24" Pipe Outlet	LB	Sta. 80+78	P ____
42" Drain Outlet	LB	Sta. 76+00	P ____
			P ____
18" Pipe Outlet	RB	Sta. 74+30	P ____
			P ____
24" Pipe Outlet	LB	Sta. 72+75	P ____
			P ____
36" Pipe Outlet	LB	Sta. 69+60	P ____
			P ____
18" Pipe Outlet	RB	Sta. 67+95	P ____
			P ____



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18" Pipe Outlet	RB	Sta. 62+28	P____ P____
42" Drain Outlet	LB	Sta. 60+85	P____ P____
18" Pipe Outlet	RB	Sta. 55+50	P____
4' x 6' Box Outlet	LB	Sta. 53+78	P____ P____
18" Pipe Outlet	RB	Sta. 47+72	P____ P____
48" Pipe Outlet	LB	Sta. 45+50	P____ P____
4' x 5' Box Outlet	LB	Sta. 40+55	P____
Kalaheo St Bridge Begin Riprap	RB	Sta. 40+40	P____ P____
24" Pipe Outlet	LB	Sta. 38+30	P____ P____
Drain Ditch Outlet	RB	Sta. 38+20	P____
24" Pipe Outlet	RB	Sta. 37+75	P____
24" Pipe Outlet	RB	Sta. 33+00	P____
24" Pipe Outlet	LB	Sta. 29+75	P____
24" Pipe Outlet	RB	Sta. 29+50	P____
24" Pipe Outlet	RB	Sta. 24+00	P____
42" Pipe Outlet	LB	Sta. 21+55	P____
18" Pipe Outlet	RB	Sta. 19+00	P____
18" Pipe Outlet	RB	Sta. 12+90	P____



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Begin Rip Rap, Start of Project	LB	Sta. 4+32	P_____
			P_____
Begin Riprap	RB	Sta. 6+00	P_____
			P_____
End Riprap	RB	Sta. 5+00	P_____
			P_____
Begin Groin	RB	Sta. 5+24	P_____
			P_____
End Groin, End of Project	RB	Sta. 4+74	P_____
			P_____
End Channel		Sta. 2+00	P_____