

STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 ENGINEERING DIVISION

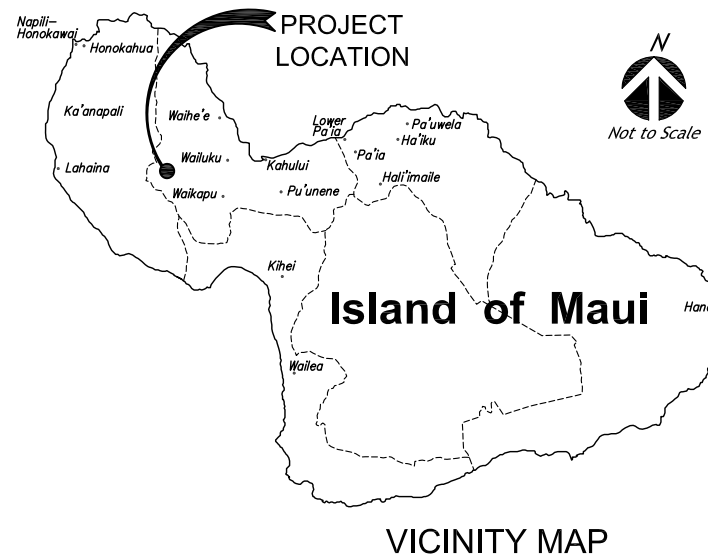
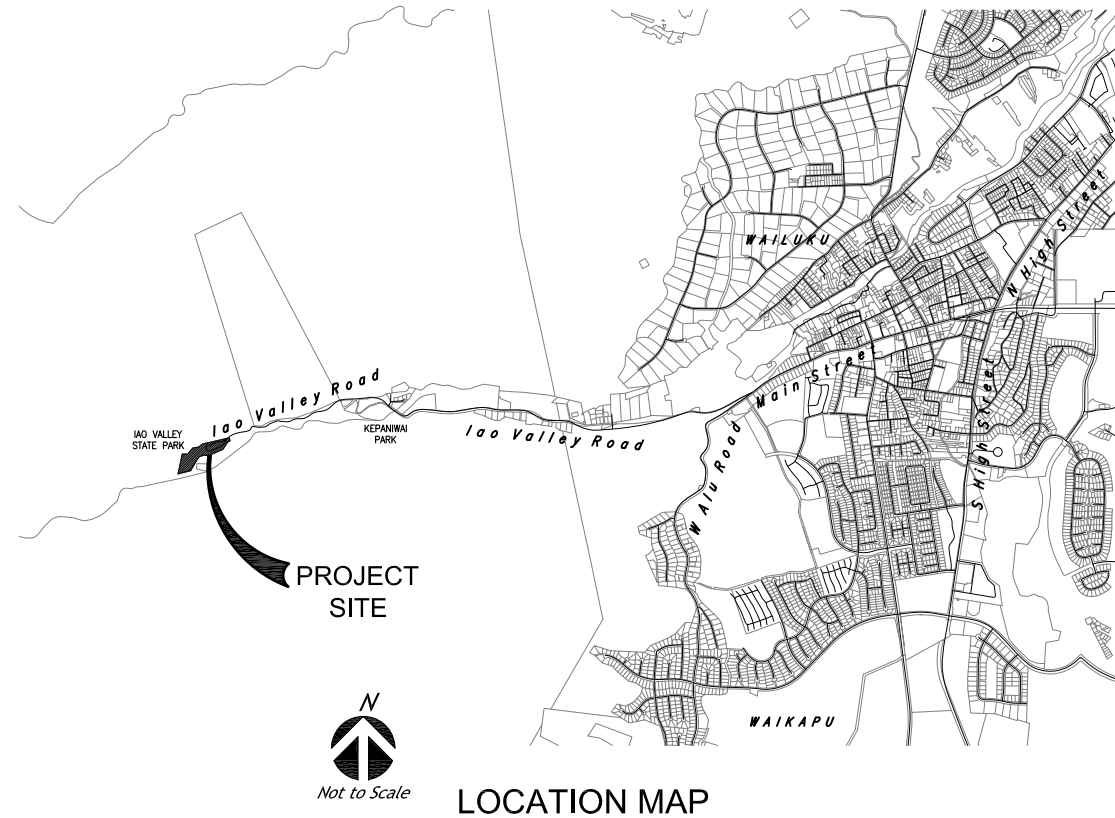
FOR
 DIVISION OF STATE PARKS

JOB NO. J45CM41A

IAO VALLEY STATE MONUMENT FLOOD REPAIRS

WAILUKU, MAUI, HAWAII

TMK: 3-3-001: 012 (Portion)



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APPROVED: _____ DATE: Dec 23, 2016

Curt A. Cottrell

CURT A. COTTRELL
 ADMINISTRATOR
 DIVISION OF STATE PARKS
 DEPARTMENT OF LAND AND NATURAL RESOURCES

APPROVED: _____ DATE: Dec 23, 2016

Carty S. Chang

CARTY S. CHANG, P.E.
 CHIEF ENGINEER
 ENGINEERING DIVISION
 DEPARTMENT OF LAND AND NATURAL RESOURCES

DRAWING NO.
T-1

CONSTRUCTION NOTES

- ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986," AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984," AS AMENDED, OF THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU, AND THE COUNTIES OF KAUAI, MAUI AND HAWAII.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS" AND CHAPTER 55, "WATER POLLUTION CONTROL", AS WELL AS CHAPTER 14 OF THE REVISED ORDINANCES OF HONOLULU AS AMENDED. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION.
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES, APPURTENANCES, AND STRUCTURES WHERE SHOWN IN THESE PLANS ARE BASED ON AVAILABLE RECORDS, VERIFIED WHENEVER POSSIBLE BY FIELD OBSERVATIONS. NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF SAID INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES AND SHALL PROTECT SUCH UTILITIES AT ALL TIMES. DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. PROTECTION AGAINST INJURY TO PERSONNEL RESULTING FROM CONTACT WITH THE EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- PURSUANT TO CHAPTER 6E, HRS, IN THE EVENT ANY ARTIFACTS OR HISTORIC FEATURES ARE UNCOVERED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND WORK AND NOTIFY THE STATE HISTORIC PRESERVATION DIVISION (692-8015) AND THE STATE PARKS ARCHAEOLOGIST (578-0286), AND THE ENGINEER. IN THE EVENT ANY SUSPECTED HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND WORK AND NOTIFY THE MAUI POLICE DEPARTMENT, THE STATE HISTORIC PRESERVATION DIVISION (692-8015) AND THE STATE PARKS ARCHAEOLOGIST (578-0286), AND THE ENGINEER.
- THE CONTRACTOR SHALL VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION IN WRITING. CONTRACTOR SHALL TAKE ALL RESPONSIBILITY FOR THE INFORMATION SHOWN ON THESE PLANS AND THE PROJECT DOCUMENTS. ANY MODIFICATION OR REPLACEMENT OF UNACCEPTED WORK DUE TO INCORRECT INTERPRETATION OF INFORMATION SHALL BE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL RESTORE, TO THEIR ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST TO THE STATE, ALL IMPROVEMENTS AND NATURAL FEATURES DAMAGED DIRECTLY OR INDIRECTLY AS A RESULT OF THE PROJECT AND CONSTRUCTION, INCLUDING STREAMS, TRAILS, ETC. ANY RESTORATION TO HISTORIC ELEMENTS SHALL BE APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL SUBMIT A STATEMENT OF WORK AND A HEALTH AND SAFETY PLAN SPECIFIC TO THIS PROJECT FOR THE ENGINEER'S APPROVAL PRIOR TO COMMENCING WORK. NO WORK SHALL COMMENCE WITHOUT AN APPROVED STATEMENT OF WORK AND A HEALTH AND SAFETY PLAN.
- NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION OPERATION SO AS TO CAUSE ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW INTO EXISTING DRAINAGE SYSTEMS, OR ADJOINING PROPERTIES, STREETS, DOWNSLOPE AREAS, OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY AT NO ADDITIONAL COST TO THE STATE.
- CONTRACTOR SHALL COORDINATE WITH THE STATE DLNR PARKS DIVISION IN REGARDS TO VEHICLE PARKING, SITE ACCESS, AND STAGING OF MATERIALS AND EQUIPMENT DURING CONSTRUCTION. ANY DAMAGES TO THE EXISTING PROPERTIES AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AND RESTORED TO THE ORIGINAL CONDITION OR BETTER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTORS WORKING AT HEIGHT - A FALL PROTECTION PLAN IS REQUIRED WHENEVER A WORKER IS WORKING AT HEIGHT. THE PLAN SHALL BE AVAILABLE AT THE WORK SITE AT ALL TIMES. WORKERS AFFECTED BY THE FALL PROTECTION PLAN SHALL BE TRAINED IN ALL ITS ELEMENTS AND THE PLAN SHALL BE MADE AVAILABLE TO THEM. ALL WORKERS WORKING ON STEEP SLOPES REQUIRED TO HAVE A CERTIFICATE OF TRAINING OR TRAINING REFRESHER COURSE FROM AN INDEPENDENT GOVERNMENT APPROVED OR COMMERCIAL TRAINING FACILITIES FOR WORKING AT HEIGHT DATED NO LATER THAN 24 MONTHS PRIOR TO BEING ON STEEP SLOPES. NO PERSONS SHALL BE ALLOWED ON STEEP SLOPES WITHOUT SUCH CERTIFICATION.
- TOPOGRAPHIC SURVEY WAS CONDUCTED IN NOVEMBER 2016. CURRENT GEOLOGICAL CONDITIONS MAY VARY FROM THAT SHOWN ON THIS PLAN. CONTRACTOR SHALL VERIFY AND MARK ALL MITIGATION AREAS WITH THE ENGINEER PRIOR TO STARTING WORK.

- ~~ANY UNUSED DRILLED ANCHOR HOLE(S) SHALL BE BACKFILLED WITH GROUT, OR OTHER MATERIAL APPROVED BY THE ENGINEER IN WRITING, BY THE CONTRACTOR PRIOR TO DEMOBILIZATION AT NO ADDITIONAL COST TO THE STATE. IF IT IS DETERMINED BY THE ENGINEER THAT THE ANCHOR HOLE LOCATION IS VISIBLE FROM THE TRAIL, GROUT SHALL BE SCULPTED AND TINTED TO MATCH THE SURROUNDING GEOLOGY IN COLOR AND TEXTURE AT NO ADDITIONAL COST TO THE STATE.~~
- ~~ALL ROCK DOWELS AND ANCHORS SHALL BE GROUTED IN THE PRESENCE OF THE ENGINEER. ANY GROUTING PERFORMED WITHOUT THE ENGINEER'S PRESENCE IS GROUNDS FOR REJECTION OF THE DOWEL OR ANCHOR AT THE CONTRACTOR'S EXPENSE. IN ADDITION, THE CONTRACTOR SHALL BE PREPARED TO DEMONSTRATE AND VERIFY TO THE ENGINEER THE DEPTH OF ANY ANCHOR HOLE OR ANCHOR INSTALLED.~~

CONSTRUCTION NOTES (Cont'd)

- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS. STATE WILL OBTAIN ENVIRONMENTAL PERMITS.
- PRIOR TO MOBILIZATION TO THE SITE, CONTRACTOR SHALL SUBMIT A METHOD STATEMENT PLAN FOR THE ENGINEER'S REVIEW AND APPROVAL DESCRIBING ALL ASPECTS OF THIS CONSTRUCTION WORK IN FINE DETAILS INCLUDING MOBILIZATION, STAGING, ANY DRILLING OPERATION, SHOTCRETING, AND OTHER RELATED WORK. CONTRACTOR SHALL NOT MOBILIZE TO THE SITE WITHOUT FIRST RECEIVING THE APPROVED METHOD STATEMENT PLAN.
- CONTRACTOR SHALL HIRE A PROFESSIONAL INDEPENDENT SECURITY GUARD DURING PARK CLOSURES AT NO ADDITIONAL COST TO THE STATE. THE SECURITY GUARD SHALL BE FLUENT IN ENGLISH AND SHALL BE ABLE TO COMMUNICATE EFFECTIVELY WITH THE VISITING PUBLIC AND THE PARKS STAFF.
- ~~ALL GROUTED ANCHORS AND DOWELS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO COVERING THE ANCHOR OR DOWEL WITH CONCRETE PLUG OR CAP. ANY PLUGGING OF ANCHOR HOLES WITHOUT PRIOR APPROVAL OF THE ENGINEER SHALL BE REASON FOR REJECTION OF THE ANCHOR OR DOWEL.~~
- AT NO TIME SHALL WATER FROM DEWATERING OPERATIONS ENTER INTO STREAM. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING APPROPRIATE PROVISIONS TO DISPOSE OF DEWATERING WATER AND FOR OBTAINING THE REQUIRED PERMITS.

EROSION CONTROL NOTES

- MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY CONSTRUCTION WORK IS INITIATED. THESE MEASURES SHALL BE PROPERLY CONSTRUCTED, REPAIRED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE INCIDENTAL AND INCLUDED WITHIN THE CONTRACTOR'S BID.
- PROTECT DITCHES FROM CONSTRUCTION RUNOFF USING SILT FENCING OR SILT SOCKS.
- CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF CLEARED SURFACED AREA.
- STORM WATER RUNOFF FLOWING TOWARD THE CONSTRUCTION AREA SHALL BE DIVERTED, USING APPROPRIATE CONTROL MEASURES.
- ~~CONTRACTOR TO REMOVE DAILY, PRIOR TO AND AFTER THE DAY'S WORK, ALL SOIL AND LOOSE DEBRIS ON AND ALONG THE PATH AND HILLSIDE.~~
- CONTROL DUST GENERATED BY CONSTRUCTION VEHICLES AND ACTIVITIES, USING WATER OR OTHER APPROPRIATE MEASURES.

HISTORICAL PRESERVATION NOTES

- SHOULD HISTORIC REMAINS SUCH AS ARTIFACTS, BURIALS, CONCENTRATION OF SHELL OR CHARCOAL BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL CEASE IMMEDIATELY IN THE IMMEDIATE VICINITY OF THE FIND AND THE FIND SHALL BE PROTECTED FROM FURTHER DAMAGE. THE CONTRACTOR SHALL CORDON OFF THE AREA AND IMMEDIATELY NOTIFY THE STATE HISTORIC PRESERVATION DIVISION AT (808) 692-8015, WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND THE APPROPRIATE MITIGATION MEASURES IF NECESSARY. IF HUMAN BURIALS ARE FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY OF MAUI POLICE DEPARTMENT.

DLNR STREAM CHANNEL ALTERATION PERMIT NOTES

- THE CONTRACTOR SHALL PROTECT AND PRESERVE THE NATURAL CHARACTER OF THE STREAM BANK AND STREAM BED TO THE GREATEST EXTENT POSSIBLE. THE CONTRACTOR SHALL PLANT OR COVER LANDS DENUDED OF VEGETATION AS QUICKLY AS POSSIBLE TO PREVENT EROSION AND USE NATIVE PLANT SPECIES COMMON TO RIPARIAN ENVIRONMENTS TO IMPROVE THE HABITAT QUALITY OF THE STREAM ENVIRONMENT.

PUBLIC HEALTH, SAFETY AND CONVENIENCE NOTES

- THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
- 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.
- 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, CONVENIENCE AND SAFETY OF THE PUBLIC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT SAFETY MEASURES ARE IN PLACE AND OPERATIONAL BEFORE ANY SCALING OR OTHER MITIGATION WORK IS INITIATED. THESE MEASURES SHALL BE PROPERLY CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL MEET THE CURRENT INDUSTRY STANDARDS AND AS APPROVED BY THE ENGINEER. SAFETY MEASURES SHALL NOT BE REMOVED WITHOUT WRITTEN APPROVAL FROM THE STATE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE PARK IS CLEAR OF ALL DEBRIS, TRASH, EQUIPMENT, AND/OR ANY OTHER HAZARDOUS MATERIALS OR TOOLS AND IS SAFE FOR PUBLIC USE PRIOR TO THE PARK OPENING TO THE PUBLIC.
- THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY CONSTRUCTION PERMITS.
- THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION, AND ANY DAMAGE TO THEM SHALL BE REPAIRED AND/OR PAID FOR BY THE CONTRACTOR AS DETERMINED BY THE STATE.
- THE CONTRACTOR SHALL SUBMIT WITH THE BID DOCUMENTS A COPY OF THE PUBLIC SAFETY PLAN REFLECTING A DETAILED DESCRIPTION OF HOW PUBLIC SAFETY COULD BE AFFECTED AND DESCRIPTION OF METHODS USED BY THE CONTRACTOR TO SAFE GUARD THE PUBLIC AND SURROUNDING PROPERTIES AGAINST ROCKFALL HAZARDS DURING THE CONSTRUCTION WORK.
- CONTRACTOR SHALL COORDINATE WORK HOURS AND TRAIL CLOSURES WITH THE STATE PARKS STAFF AND DLNR. NOTICE FOR FULL DAY CLOSURES OF THE PARK SHALL BE GIVEN AT LEAST 30 DAYS IN ADVANCE. ALL TRAIL CLOSURE REQUESTS MUST BE REVIEWED AND APPROVED BY THE STATE PRIOR TO ISSUANCE. SEE SPECIFICATIONS SECTION 01019 - GENERAL SPECIFICATIONS FOR INFORMATION REGARDING WORK HOURS, TRAIL CLOSURES, CONSTRUCTIONS SCHEDULING, ETC.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO TITLE 11, HAWAII ADMINISTRATIVE RULES, CHAPTER 46, "COMMUNITY NOISE CONTROL" IN WHICH MAXIMUM ALLOWABLE NOISE LEVELS HAVE BEEN SET. IF THE CONSTRUCTION ACTIVITIES FOR THIS PROJECT WILL EXCEED THE ALLOWABLE NOISE LEVELS, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A PERMIT FROM THE DIRECTOR OF THE DEPARTMENT OF HEALTH. THE CONTRACTOR SHALL OBTAIN A COPY OF CHAPTER 46 AND BECOME FAMILIAR WITH THE NOISE LEVEL RESTRICTIONS AND THE PROCEDURES FOR OBTAINING A PERMIT FOR CONSTRUCTION ACTIVITIES.

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
		ADDENDUM NO. 1		Dec 23, 2016	
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
IAO VALLEY STATE MONUMENT FLOOD REPAIRS					
NOTES					
DESIGNED:			SUBMITTED:		
DRAWN:			DATE: DECEMBER 2, 2016		
CHECKED:			SCALE:		
APPROVED:			DRAWING NO.		
CHIEF ENGINEER			DATE		
JOB NO. J45CM41A			SHEET NO. 2 OF 19 SHEETS		

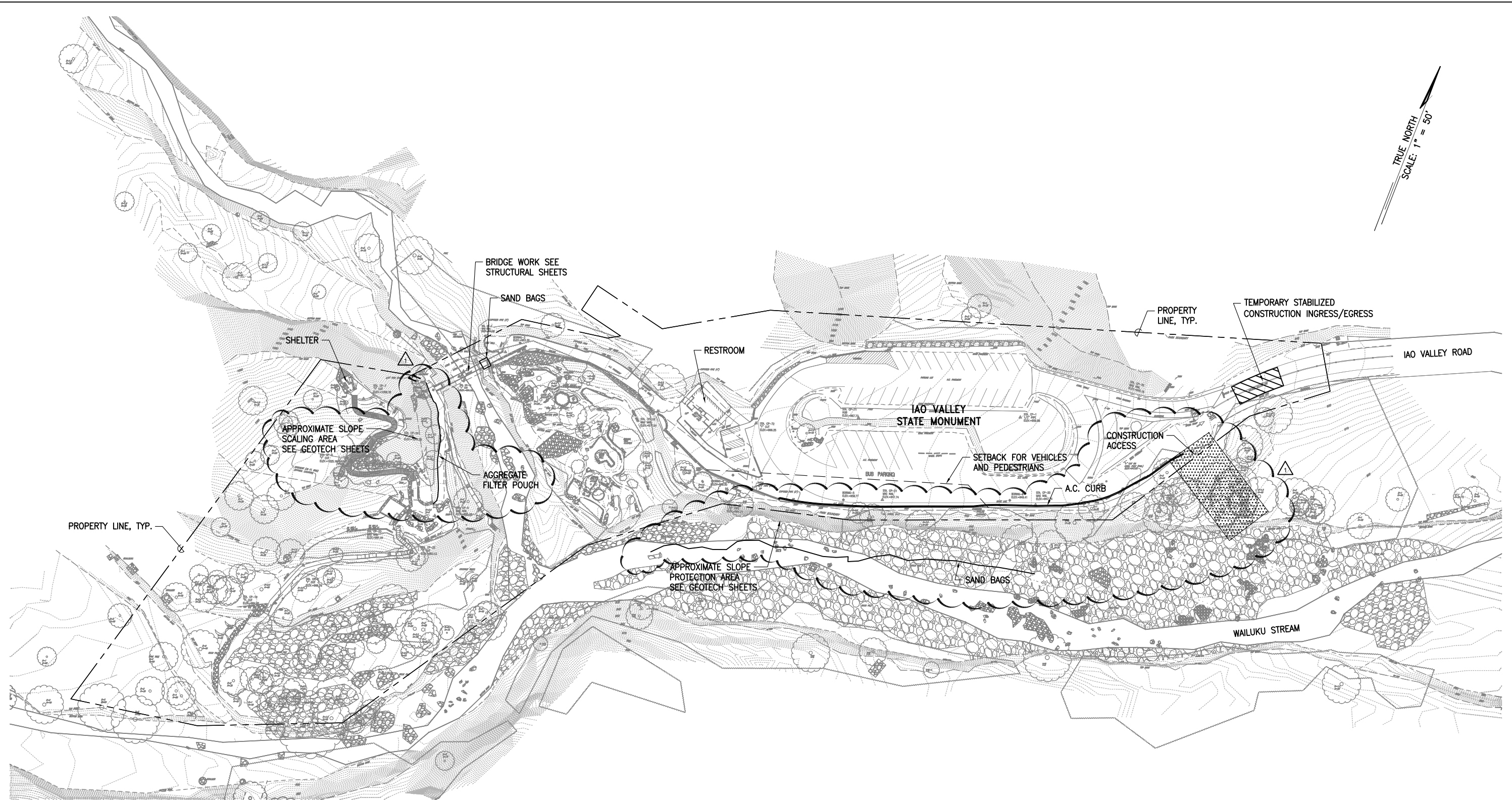
Carty Chang
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State of Hawaii
Engineering Program Administrator



This work was prepared by me or under my supervision.

[Signature]

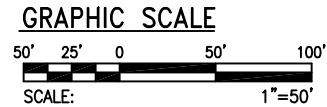
expiration date of the license: 4/30/2018



TRUE NORTH
SCALE: 1" = 50'

OVERALL PLAN
SCALE : 1"=50'

NOTE:
EXISTING TOPOGRAPHIC FEATURES ARE FROM FIELD SURVEY BY CONTROL POINT SURVEYING, INC. DATED NOVEMBER 15, 2016.



BENCHMARK
USC&GS DISK "U 6 1950"
ON THE WEST SIDE OF MARKET STREET, ON THE CONCRETE BALUSTRADE AT THE SOUTH END OF THE BRIDGE OVER IAO STREAM
TOP OF BRASS DISK
ELEV. = 249.10 L.M.S.L.

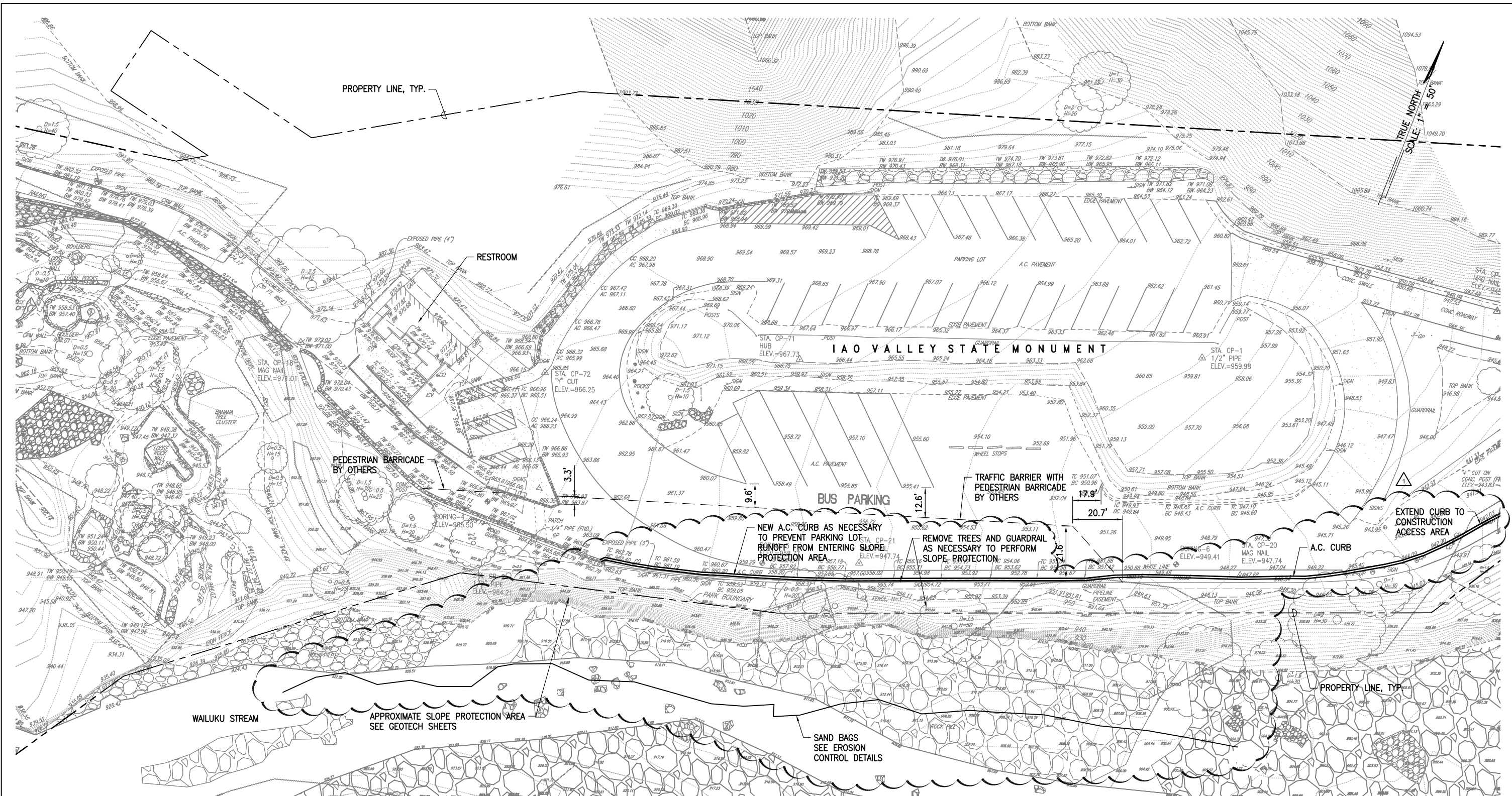
NOTES
HORIZONTAL DATUM: NAD 83(PA11) (2010.00) HI ZONE 2 STATE PLANE COORDINATES, U.S. FEET.
ELEVATIONS ESTABLISHED ONSITE USING STATIC GPS OBSERVATIONS.

UNDERGROUND UTILITY LINES AND/OR STRUCTURES, IF SHOWN, ARE PROVIDED FOR INFORMATION ONLY AND ARE BASED ON INFORMATION SHOWN ON PLANS/MAPS PREPARED BY OTHERS. THE INFORMATION SHOWN, THEREFORE, MAY OR MAY NOT BE REPRESENTATIVE OF ACTUAL FIELD CONDITIONS. THE UNDERGROUND UTILITY LINES AND/OR STRUCTURES MAY OR MAY NOT BE PRESENT AT THE LOCATIONS SHOWN OR OTHER UNDERGROUND UTILITY LINES AND/OR STRUCTURES NOT SHOWN MAY BE PRESENT.

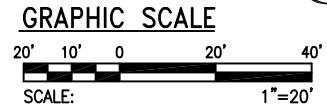
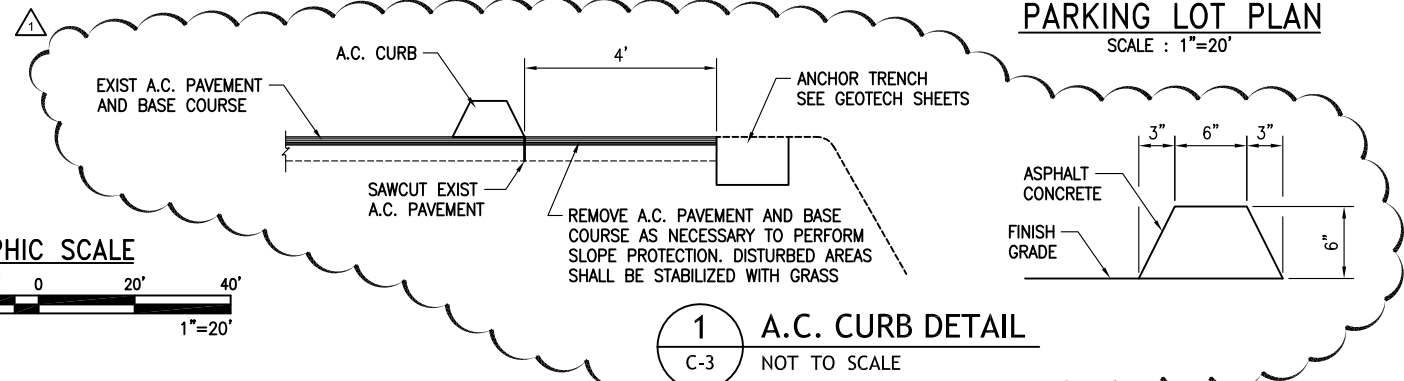
UNLESS OTHERWISE NOTED, ALL LOCATIONS OF UNDERGROUND UTILITY LINES AND/OR STRUCTURES ARE APPROXIMATE. NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE USER(S) OF THIS TOPOGRAPHIC SURVEY MAP SHALL VERIFY THE INFORMATION, AS NEEDED, DURING DESIGN AND CONSTRUCTION.

REVISION NO.	SYMBOL	DESCRIPTION	SHEET OF	DATE	APPROVED
				Dec 23, 2016	
ADDENDUM NO. 1 STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION IAO VALLEY STATE MONUMENT FLOOD REPAIRS OVERALL PLAN					
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APPROVED:			DRAWING NO.		
 This work was prepared by me or under my supervision.			C-2		
CHIEF ENGINEER			DATE		
expiration date of the license: 4/30/2018 JOB NO. J45CM41A			SHEET NO. 3 OF 19 SHEETS		

Carty Chang
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State of Hawaii
Engineering Program Administrator

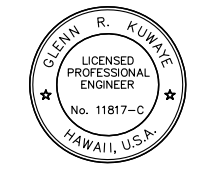


PARKING LOT PLAN
SCALE: 1"=20'



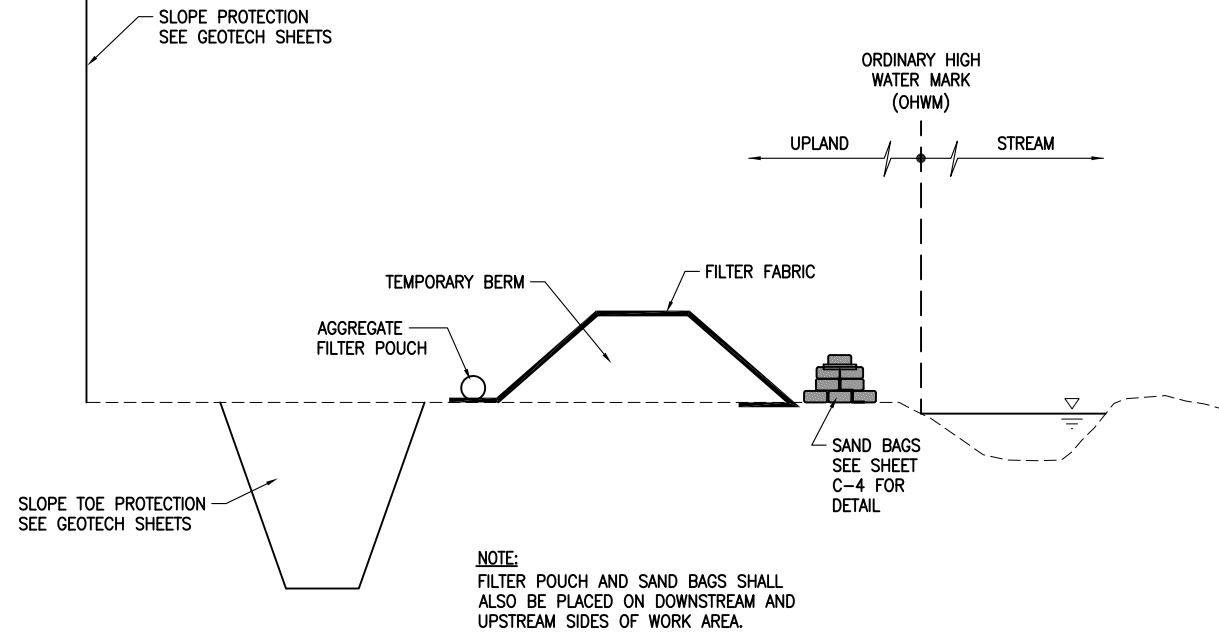
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Dec 23, 2016					
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
IAO VALLEY STATE MONUMENT FLOOD REPAIRS					
PARKING LOT PLAN					
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APPROVED:			DRAWING NO.		
CHIEF ENGINEER			DATE		
C-3			SHEET NO. 4 OF 19 SHEETS		

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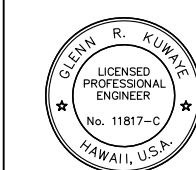
PARKING LOT



1 EROSION CONTROL MEASURES AT SLOPE TOE PROTECTION
C-4 NOT TO SCALE

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EROSION CONTROL DETAILS					
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DRAWN:			DATE: DECEMBER 2, 2016		
CHECKED:			SCALE:		
APPROVED:			DRAWING NO.		
CHIEF ENGINEER			DATE		
JOB NO. J45CM41A			SHEET NO. OF 19 SHEETS		

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Glenn R. Kuwate

expiration date of the license: 4/30/2018

C-5