

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION
FOR
DIVISION OF STATE PARKS

JOB NO. J45CS41B-1

ROCKFALL MITIGATION IMPROVEMENTS FERN GROTTO

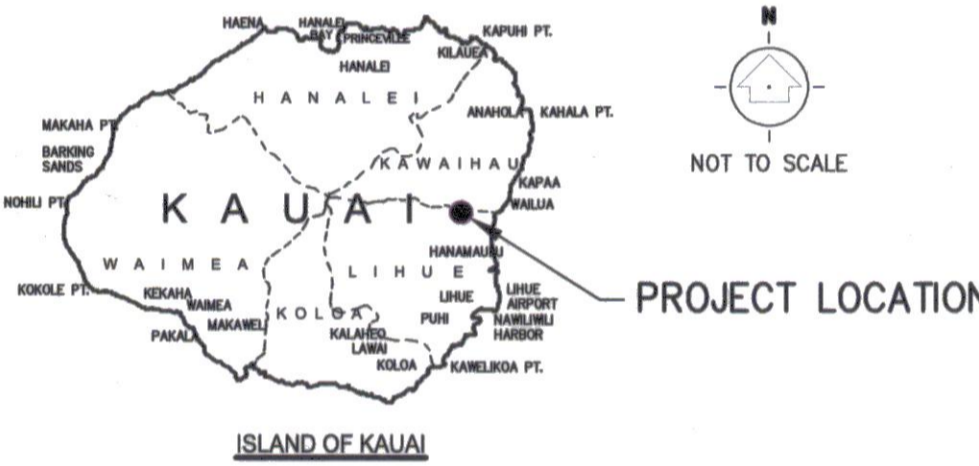
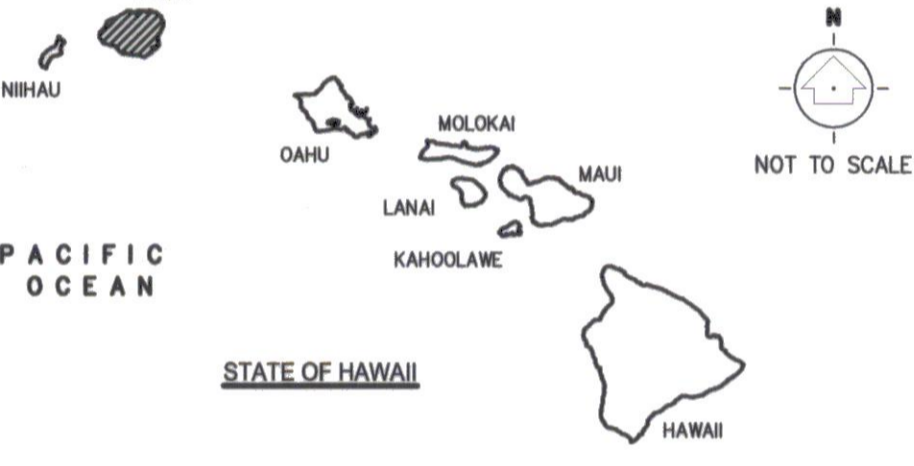

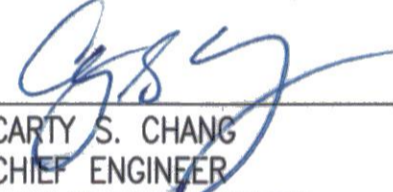

WAILUA, KAUAI, HAWAII

TAX MAP KEY (4)3-9-002:018 & (4)3-9-002:030

PREPARED BY:



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HONOLULU, HAWAII 96813

LOCATION MAP		INDEX TO DRAWINGS			APPROVALS
 <p style="text-align: center;">ISLAND OF KAUAI</p>	 <p style="text-align: center;">STATE OF HAWAII</p>	DWG NO.	SHT NO.	DESCRIPTION	
		T-1	1	TITLE SHEET	<div style="margin-bottom: 20px;">  <p>CARTY S. CHANG CHIEF ENGINEER ENGINEERING DIVISION DEPARTMENT OF LAND AND NATURAL RESOURCES</p> <p style="text-align: right;">11/24/15 DATE</p> </div> <div>  <p>CURT A. COTTRELL ADMINISTRATOR DIVISION OF STATE PARKS DEPARTMENT OF LAND AND NATURAL RESOURCES</p> <p style="text-align: right;">NOV. 20, 2015 DATE</p> </div>
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CONSTRUCTION NOTES

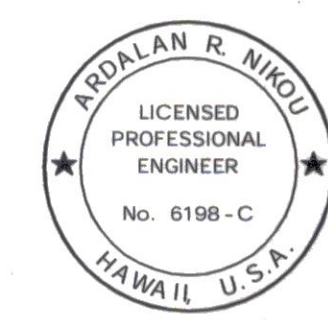
1. ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986," AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984," AS AMENDED, OF THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU, AND THE COUNTIES OF KAUAI, MAUI AND HAWAII.
2. 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.
3. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES, APPURTENANCES, AND STRUCTURES 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.
4. 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 KAUAI POLICE DEPARTMENT, THE STATE HISTORIC PRESERVATION DIVISION (692-8015) AND THE STATE PARKS ARCHAEOLOGIST (578-0286), AND THE ENGINEER.
5. 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.
6. 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.
7. 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.
8. 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, 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.
9. 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.

PUBLIC HEALTH, SAFETY AND CONVENIENCE NOTES

1. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
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. 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.
4. THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY CONSTRUCTION PERMITS.
5. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION, AND ANY DAMAGE TO THEM SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR.
6. 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.

ABBREVIATIONS

⊙	AT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
CONC	CONCRETE
CONST	CONSTRUCT
CY	CUBIC YARDS
DIA, ∅	DIAMETER
DLNR	DEPARTMENT OF LAND AND NATURAL RESOURCES
EA	EACH
EPA	ENVIRONMENTAL PROTECTION AGENCY
EXIST	EXISTING
FT	FEET, FOOT
G	GRAMS
GA	GAUGE
GPS	GLOBAL POSITIONING SYSTEM
HRS	HAWAII REVISED STATUTES
ID	IDENTIFICATION
L	LONG, LENGTH
LF	LINEAR FEET
M2	METERS SQUARED
MAX	MAXIMUM
MIN	MINIMUM
MM	MILLIMETER
N	NORTH
ND	NOMINAL DIAMETER
NO.	NUMBER
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
PVC	POLYVINYL CHLORIDE
LB	POUND
SS	STAINLESS STEEL
TMK	TAX MAP KEY
TYP	TYPICAL
W	WIDE, WIDTH
W/	WITH
WWF	WELDED WIRE FABRIC

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION ROCKFALL MITIGATION IMPROVEMENTS FERN GROTTO WAILUA, KAUAI, HAWAII GENERAL AND ROCKFALL MITIGATION NOTES					
		DESIGNED: RMO SUBMITTED: <i>[Signature]</i> DRAWN: RMO DATE: OCTOBER 2015 CHECKED: ARN SCALE: AS NOTED APPROVED: <i>[Signature]</i> DRAWING NO.			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.		CHIEF ENGINEER NOV 24 2015 DATE C-1			



LEGEND

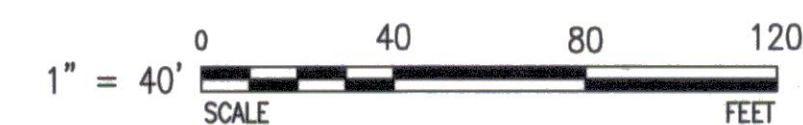
- PROPERTY LINES
- EXIST ROCKFALL IMPACT FENCE

NOTES:

1. THE INFORMATION PROVIDED ON PLANS IS BASED ON GPS FIELD MEASUREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR TAKING HIS/HER OWN MEASUREMENTS AND COORDINATING ANY DISCREPANCIES WITH THE ENGINEER PRIOR TO ORDERING ANY MATERIALS.
2. PLANS SHOW THE SCHEMATIC LOCATIONS OF THE EXISTING ROCKFALL IMPACT BARRIER. ACTUAL ROCKFALL IMPACT BARRIER LOCATIONS SHALL BE COORDINATED WITH THE ENGINEER IN THE FIELD.
3. PRIOR TO INSTALLATION OF VARIOUS CONTRACT ITEMS AND IMPROVEMENTS, ALL VEGETATION, DEBRIS, AND ROCKS SHALL BE CLEARED OR CUT FLUSH WITHIN THE LIMITS OF THE IMPROVEMENTS AND AS NEEDED OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
4. CONTRACTOR SHALL PROVIDE APPLICABLE BEST MANAGEMENT PRACTICES DURING CONSTRUCTION TO PREVENT ANY SILT AND OTHER POTENTIAL CONTAMINANTS FROM LEAVING THE PROJECT SITE AND ENTERING THE RIVER. AS A MINIMUM REQUIREMENT, INSTALL AND MAINTAIN COMPOST FILTER SOCKS BELOW ANY DISTURBED AREA AS INDICATED ON THE PLANS.
5. ANY DAMAGE TO THE EXISTING ROCKFALL IMPACT BARRIER SYSTEMS AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THE ORIGINAL CONDITION OR BETTER BY THE CONTRACTOR AND AT NO ADDITIONAL COST TO THE STATE.
6. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL NECESSARY PROTECTION MEANS INCLUDING BARRICADES, FENCES, AND OTHER SAFETY MEANS TO PROTECT THE PUBLIC AGAINST FALLING ROCKS AND DEBRIS DURING THEIR CONSTRUCTION OPERATION.
7. CONTRACTOR SHALL REMOVE ALL ROCKS, SOILS, AND OTHER DEBRIS THAT ARE OBSTRUCTING INSTALLATION OF THE IMPROVEMENTS AT NO ADDITIONAL COST TO THE STATE.

GENERAL SITE PLAN

SCALE: 1" = 40'



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STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION ROCKFALL MITIGATION IMPROVEMENTS FERN GROTTO WAILUA, KAUAI, HAWAII GENERAL SITE PLAN					
DESIGNED: RMO		SUBMITTED: <i>[Signature]</i>			
DRAWN: RMO		DATE: OCTOBER 2015			
CHECKED: ARN		SCALE: AS NOTED			
APPROVED: <i>[Signature]</i>		DRAWING NO. C-2			
Signature: <i>[Signature]</i>		DATE: NOV 24 2015			
Expiration Date of the License: 4/30/16		CHIEF ENGINEER			