

- NOTES:**
- FOR ROCK DOWEL, ANCHORS, AND SHOTCRETE DETAILS SEE SHEET C-7.
 - SITE LOCATIONS AND DIMENSIONS SHOWN ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL SITE LOCATIONS AND DIMENSIONS WITH THE ENGINEER IN THE FIELD PRIOR TO STARTING WORK.
 - PHOTOS ARE PROVIDED TO SHOW THE GENERAL AREA DESIGNATED FOR MITIGATION AND MAY NOT ACCURATELY REFLECT THE TOTAL AREA THAT REQUIRES MITIGATION. CONTRACTOR SHALL CONFIRM EACH LOCATION AND COORDINATE AND MARK THE LIMITS OF EACH MITIGATION METHOD WITH THE ENGINEER IN THE FIELD PRIOR TO STARTING WORK.
 - SCALING AND/OR SHOTCRETE LIMITS PROVIDED ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE AND MARK THE LIMITS WITH THE ENGINEER IN THE FIELD PRIOR TO STARTING WORK.
 - SCALING SHALL INCLUDE SAFE REMOVAL OF ALL ROCKS THAT ARE LOOSE, OVERHANGING, OR CREATING A SAFETY HAZARD TO THE PUBLIC, AS DETERMINED BY THE ENGINEER IN THE FIELD. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY MEASURES FOR SAFE SCALING AND REMOVAL OF THE ROCKS AT NO ADDITIONAL COST TO THE STATE.
 - CONTRACTOR SHALL BE PREPARED TO PERFORM ADDITIONAL ROCK SLOPE SCALING ALONG THE ENTIRE TRAIL AT LOCATIONS NOT IDENTIFIED ON THE PLANS, BUT DEEMED HAZARDOUS BY THE ENGINEER IN THE FIELD. THIS WORK SHALL BE INCLUDED IN THE PAYMENT FOR ADDITIONAL ROCK SLOPE SCALING AS DESCRIBED IN THE PROPOSAL AND SPECIFICATIONS SECTION 02232 - ROCK SLOPE SCALING.
 - CONTRACTOR'S EQUIPMENT AND WORK DEBRIS INCLUDING SCALED ROCKS SHALL BE REMOVED OFF THE TRAIL AT THE END OF EACH DAY.
 - ANY DAMAGE TO EXIST FACILITIES SHALL BE REPAIRED TO ORIGINAL OR BETTER CONDITION BY THE STATE AT THE CONTRACTOR'S EXPENSE.
 - LOCATIONS OF EXISTING VERTICAL POSTS SHOWN ON THIS SITE PLAN ARE APPROXIMATE AND ARE SHOWN TO ASSIST WITH LOCATING MITIGATION SITES. NOT ALL EXISTING POSTS ALONG THE TRAIL ARE DEPICTED ON THIS PLAN.

MITIGATION SCHEDULE

SITE #	MITIGATION METHOD	DESCRIPTION
6	SCALING	APPROX. AREA = 35.0' x 8.0'
	SHOTCRETE	APPROX. VOLUME = 25.0' x 6.0' x 0.67' 12 ANCHORS, 5' EMBEDMENT. SEE DET 3/C-7, SIM
7	SCALING	APPROX. AREA = 21.0' x 11.0'
	SHOTCRETE	APPROX. VOLUME = 14.0' x 6.0' x 0.67' 7 ANCHORS, 5' EMBEDMENT. SEE DET 3/C-7, SIM
8	SHOTCRETE	APPROX. VOLUME = 8.0' x 7.0' x 2.0' 4 ANCHORS, 5' EMBEDMENT. SEE DET 3/C-7, SIM
9	SCALING	APPROX. VOLUME = 70.0' x 12.0'
	SHOTCRETE	APPROX. VOLUME = 70.0' x 12.0' x 0.67' FULL SLOPE SHOTCRETE. SEE DET 2/C-7
10	SCALING	APPROX. AREA = 20.0' x 20.0'
	SHOTCRETE	APPROX. VOLUME = 18.0' x 2.5' x 1.0' 9 ANCHORS, 5' EMBEDMENT. SEE DET 3/C-7, SIM
11	SHOTCRETE	APPROX. VOLUME = 11.0' x 4.0' x 0.67' 4 ANCHORS, 5' EMBEDMENT. SEE DET 3/C-7, SIM

- LEGEND**
- TRAIL CENTERLINE
 - TRAIL LIMITS
 - , ▨ MITIGATION POINT/AREA

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
<p>STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION</p> <p>DIAMOND HEAD STATE MONUMENT ROCKFALL MITIGATION, PHASE 2 (FY2015) HONOLULU, OAHU, HAWAII</p> <p>SITE PLAN - TRAIL - 1</p>					
DESIGNED: ARN/YP		SUBMITTED: [Signature]		DATE: MAY 2016	
DRAWN: RTN		CHECKED: ARN		SCALE: AS NOTED	
APPROVED: [Signature]		DATE: MAY - 9 2016		DRAWING NO. C-3	

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: [Signature] Expiration Date of License: 2/10/18

MATCHLINE SEE DWG C-4

SITE PLAN - TRAIL - 1
SCALE: 1" = 10'



C:\Users\j... \AppData\Local\Temp\AutoCAD\2016\20160509_1000\20160509_1000.dwg - Plot - 05/09/16 11:14 AM

MATCHLINE SEE DWG C-3

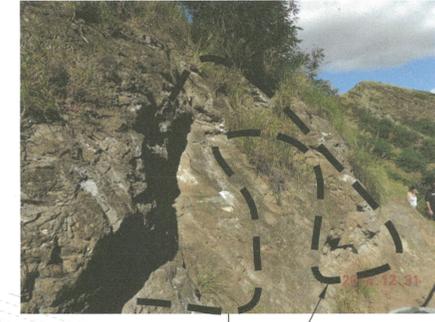
SITE 12 - SCALING AND SHOTCRETE



LIMITS OF SHOTCRETE
APPROX. VOLUME = 14.0' x 8.0' x 0.67'
7 ANCHORS, 5' EMBEDMENT
SEE DETAIL 3, SHT C-7

LIMITS OF SCALING
APPROX. AREA = 375.0' (L) x 20.0' (H)
COORDINATE EXTENTS WITH THE ENGINEER

SITE 14 - SCALING AND SHOTCRETE



LIMITS OF SHOTCRETE
APPROX. VOLUME = 35.0' x 5.0' x 2.5' (AVG)
17 ANCHORS, 5' EMBEDMENT
SEE DETAIL 3, SHT C-7

SITE 13 - SCALING AND SHOTCRETE



LIMITS OF SHOTCRETE
APPROX. VOLUME = 40.0' x 4.0' x 1.0'
20 ANCHORS, 5' EMBEDMENT
SEE DETAIL 3, SHT C-7

THREE (3) ROCK DOWELS, 8'
MINIMUM EMBEDMENT AT LOCATIONS
DETERMINED BY THE ENGINEER.



SITE 15 - SCALING, SHOTCRETE, ROCK DOWELS

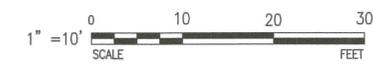


CUT FLUSH AND KILL TREES

LIMITS OF SHOTCRETE
APPROX. VOLUME = 37.0' x 12.0' x 0.67'
FULL SLOPE SHOTCRETE
SEE DETAIL 2, SHT C-7



SITE PLAN - TRAIL - 2
SCALE: 1" = 10'



NOTE:

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MITIGATION SCHEDULE

SITE #	MITIGATION METHOD	DESCRIPTION
12	SCALING	APPROX. AREA = 14.0' x 8.0'
	SHOTCRETE	APPROX. VOLUME = 14.0' x 8.0' x 0.67' 7 ANCHORS, 5' EMBEDMENT. SEE DET 3/C-7, SIM
13	SCALING	INCLUDED IN 375.0' x 20.0' AREA
	SHOTCRETE	APPROX. VOLUME = 40.0' x 4.0' x 1.0' 20 ANCHORS, 5' EMBEDMENT. SEE DET 3/C-7, SIM
14	SCALING	INCLUDED IN 375.0' x 20.0' AREA
	SHOTCRETE	APPROX. VOLUME = 35.0' x 5.0' x 2.5' 17 ANCHORS, 5' EMBEDMENT. SEE DET 3/C-7, SIM
15	SCALING	INCLUDED IN 375.0' x 20.0' AREA
	SHOTCRETE	APPROX. VOLUME = 37.0' x 12.0' x 0.67' FULL SLOPE SHOTCRETE. SEE DET 2/C-7
	ROCK DOWEL	3 DOWELS, 8' MIN. EMBEDMENT

LEGEND

- TRAIL CENTERLINE
- TRAIL LIMITS
- , ▨ MITIGATION POINT/AREA

MATCHLINE SEE DWG C-5

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION DIAMOND HEAD STATE MONUMENT ROCKFALL MITIGATION, PHASE 2 (FY2015) HONOLULU, OAHU, HAWAII SITE PLAN - TRAIL - 2					
DESIGNED: ARN/YP		SUBMITTED:			
DRAWN: RTN		DATE: MAY 2016			
CHECKED: ARN		SCALE: AS NOTED			
APPROVED:		4/30/18 Expiration Date of the License		MAY - 9 2016 DATE	
SIGNATURE		DRAWING NO. C-4			