

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-01-86	1987	98	115

BORING NOTES:

1. THE INFORMATION SHOWN IN THE BORING LOGS WERE OBTAINED FOR THE USE OF THE ENGINEER.
2. THE ENGINEER WILL NOT BE HELD RESPONSIBLE IF THE INFORMATION IS FOUND ERRONEOUS AND/OR DOES NOT INDICATE TRUE CONDITIONS.
3. NO GUARANTEE IS GIVEN AS TO THE CHARACTER OF THE MATERIAL ENCOUNTERED IN ANY BORING NOR IS ANY GUARANTEE GIVEN THAT THE BORING REPRESENTS THE TRUE CHARACTER OF THE MATERIAL WHICH WILL BE ENCOUNTERED DURING CONSTRUCTION.
4. THE INFORMATION FOR THE BORING LOGS WERE TAKEN FROM A GEOTECHNICAL ENGINEERING INVESTIGATION REPORT PREPARED FOR THE PROJECT BY DAMES & MOORE DATED FEBRUARY 28, 1986. THE CONTRACTOR SHALL REVIEW THE ABOVE REPORT AND DRAW HIS OWN CONCLUSIONS.

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	BLOWS/FT. ON SAMPLER	CORE AND % RECOVERY	SAMPLES AND/OR CORES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
7		GRAB			5		SP	BROWN SAND, LOOSE, MOIST, WITH SOME GRAVEL AND OCCASIONAL BOULDERS
		56						
		18						BECOMES MEDIUM DENSE
		70/4"			10			WITH MORE GRAVEL BORING COMPLETED AT 10.0 FEET ON 10-08-85 GROUNDWATER NOT ENCOUNTERED

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	BLOWS/FT. ON SAMPLER	CORE AND % RECOVERY	SAMPLES AND/OR CORES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
		GRAB					SP	BROWN SAND, LOOSE, MOIST, WITH SOME GRAVEL
		20/2"						
		RQD 80%	NX 100%					BROWN TO GRAY BASALT, SLIGHTLY WEATHERED, LITTLE FRACTURED, HARD, STRONG
		RQD 100%	NX 100%		5			BORING COMPLETED AT 7.0 FEET ON 10-08-85 GROUNDWATER NOT ENCOUNTERED

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	BLOWS/FT. ON SAMPLER	CORE AND % RECOVERY	SAMPLES AND/OR CORES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
		GRAB					SP	BROWN SAND, LOOSE, MOIST, WITH SOME ASH
		25					GP	BROWN GRAVEL, DENSE, MOIST, WITH NUMEROUS COBBLES & BOULDERS
22		20			5		SP	BROWN SAND, DENSE, WITH SOME GRAVEL AND ASH
							GP	BROWN GRAVEL, MEDIUM DENSE, WET, WITH SOME SAND AND ASH
17	93	15			10			BORING COMPLETED AT 11.5 FEET ON 10-07-85 GROUNDWATER NOT ENCOUNTERED

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	BLOWS/FT. ON SAMPLER	CORE AND % RECOVERY	SAMPLES AND/OR CORES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
							SP	REDDISH BROWN SAND, LOOSE, MOIST, WITH SOME GRAVEL
		RQD 77%	NX 99%		5			DARK GRAY BASALT, SLIGHTLY WEATHERED, LITTLE FRACTURED, HARD, STRONG
								BORING COMPLETED AT 8.0 FEET ON 10-07-85 GROUNDWATER NOT ENCOUNTERED

ROYCE S. FUKUNAGA

REGISTERED PROFESSIONAL ENGINEER

No. 2107-C

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Royce S. Fukunaga

FUKUNAGA & ASSOCIATES

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

BORING AND TEST PIT LOGS, AND NOTES

MAUNA KEA OBSERVATORY ACCESS ROAD

PHASE II-A

PROJECT NO. HWY.-H-01-86

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-01-86	1987	99	115

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	SAMPLES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
			1	GP		REDDISH BROWN SAND, MEDIUM DENSE, MOIST, WITH GRAVEL
						TEST PIT TERMINATED UPON REFUSAL AT 1.5 FEET ON 10-01-84 GROUNDWATER NOT ENCOUNTERED

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	SAMPLES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
			1	GP		REDDISH BROWN GRAVEL, MEDIUM DENSE, MOIST
			2			DARK GRAY BASALT, INTERBEDDED WITH MODERATELY CEMENTED VOLCANIC ASH, SLIGHTLY WEATHERED, HIGHLY FRACTURED MODERATELY HARD WEAK
			4			TEST PIT TERMINATED UPON REFUSAL AT 4.0 FEET ON 10-01-84 GROUNDWATER NOT ENCOUNTERED

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	SAMPLES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
			2	GP		REDDISH BROWN SAND, MEDIUM DENSE, MOIST, WITH GRAVEL
			4			TEST PIT TERMINATED UPON REFUSAL AT 4.0 FEET ON 10-01-84 GROUNDWATER NOT ENCOUNTERED

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	SAMPLES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
			2	GP		LIGHT GRAY SANDY GRAVEL, MEDIUM DENSE, MOIST
			3	SP		REDDISH BROWN SAND, MEDIUM DENSE, MOIST
			5			HARD BASALTIC ROCK AT 8.0 FEET TEST PIT TERMINATED UPON REFUSAL AT 8.0 FEET ON 09-30-84 GROUNDWATER NOT ENCOUNTERED

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	SAMPLES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
			2	GP		REDDISH BROWN SAND, MEDIUM DENSE, MOIST, WITH GRAVEL
			4			TEST PIT TERMINATED UPON REFUSAL AT 4.0 FEET ON 10-10-84 GROUNDWATER NOT ENCOUNTERED

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	SAMPLES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
			2	GP		LIGHT GRAY SAND, MEDIUM DENSE, MOIST
			4			DARK GRAY BASALT, WITH WEAKLY CEMENTED CINDER SAND, SLIGHTLY WEATHERED, HIGHLY FRACTURED, SOFT, WEAK
						TEST PIT TERMINATED UPON REFUSAL AT 4.0 FEET ON 10-01-84 GROUNDWATER NOT ENCOUNTERED

MOISTURE CONTENT IN %	DRY DENSITY IN PCF	SAMPLES	DEPTH IN FEET	GRAPH SYMBOL	LETTER SYMBOL	DESCRIPTION
			5	GP		REDDISH BROWN SANDY GRAVEL, MEDIUM DENSE, MOIST
						WEAKLY CEMENTED BELOW 2.5 FEET
						TEST PIT COMPLETED TO 8.0 FEET ON 10-01-85 GROUNDWATER NOT ENCOUNTERED

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TEST PIT LOGS

MAUNA KEA OBSERVATORY ACCESS ROAD
PHASE II-A
PROJECT NO HWY-H-01-86

SHEET No. 2 OF 2 SHEETS