FED. ROAD DIST. NO.	STATE	FEDERAL — AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(6)R	2006	81	173

			(STA 17 <sup>e</sup>		DRIVING WI		DATE OF DRILLING 2/23/9 WATER LEVEL None
D E P T H	G R A P H	S A M P L	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)		DESCRIPTION
- 0 -			o /6"	94	24	Clayey SILT (ML—CL stiff, with sand.	.) — Mottled reddish brown, mo
Y			9/6" 30/3"	94	24	WEATHERED BASALT to medium hard	Γ (WM-WH) — Mottled gray, der
- 5 -						Begin NX coring 91% Recovery fro RQD = 53%	
						Completely weat End NX coring o	hered basalt from 7 to 8 feet. It 8 feet.
-10			96/9"	121	9		
			10 /No	Penetra	tion		
-15 	# '+ '+ '+ -		10/110	· onout		End boring at 15 f	eet.
-20-							Plate B

			STA 18 96.8		DRIVING WI	. <u>140 lb.</u> DATE OF DRILLING <u>2/23/99</u> 30 in. WATER LEVEL None
D E P T H O	G R A P H	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
			36	84	24	Clayey SILT (ML-CL) — Reddish brown, moist, stiff, with sand.
			70/10"	87	30	
10—			100/8"	103	25	WEATHERED BASALT (WM-WH) - Gray, medium hard  Begin NX coring at 9 feet.  100% Recovery from 9 to 14 feet.  RQD = 93%
15—						End boring at 14 feet.

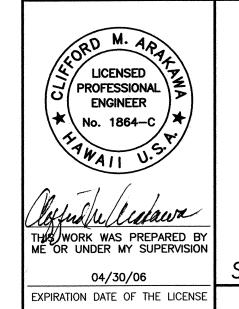
			95.8			140 lb. DATE OF DRILLING 2/22/99 30 in. WATER LEVEL None
D E P T H	G R A P H	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0 —			39	81	20	Clayey SILT (ML-CL) — Reddish brown, moist, stiff, with sand.
			60	95	23	Brown color from 3 feet.
5 —			59	93	28	
			41	88	31	
10—						Sandy SILT (ML-CL) — Mottled reddish brown, moist stiff.
-15-			49	78	38	į
				:		End boring at 15.5 feet.

						BORING LOG	W.O. <u>99–314</u>
	g no Nce eli		-			. 140 lb. 30 in.	DATE OF DRILLING <u>2/22/9</u> WATER LEVEL <u>None</u>
DEPTH.	G R A P H	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)		DESCRIPTION
- 0						with aravel.	) — Reddish brown, moist, stif
			24	91	23	Clayey SILT (ML-CL with sand.	.) — Reddish brown, moist, stif
			33	84	27		
- 5 — —			38	81	42		
-10			88/9"	83	34		
						WEATHERED BASALT brown, dense.	T (WH-WM) — Mottled grayish
-15			10/No	Penetrat	tion	End boring at 15 f	eet.
-20-	-						Plate (

				В	ORING LOG	W.O	99-3144
BORING NO	B22	(STA 20			140 lb.		
SURFACE ELL		78.7	<u> </u>	DROP	30 in.	_ WATER LEVEL	None
D G R A T P H	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	, D	DESCRIPTION	
		12	79	27	Clayey SILT (ML-CL) medium stiff, with	<ul> <li>Reddish brown, m sand.</li> </ul>	oist,
_ 5 —		28	98	29	Stiff from 5 feet.		
-10-		71	94	30	WEATHERED BASALT (dense.	(WC-WH) - Mottled	brown,
-15		85/9"	94	33	End boring at 15 fee	<b>t.</b>	
<b>—20</b> —							Plate B22

					E	BORING LOG W.O. 99-3144
			3 (STA 21 63.1:	-		T.         140 lb.         DATE OF DRILLING         2/22/99           30 in.         WATER LEVEL         None
DEPTH	G R A P H	S A M P L E	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0 -			26	76	25	Clayey SILT (ML—CL) — Reddish brown, moist, stiff, with sand.
			72	78	23	
-5-			26	79	24	
_10-			43	80	33	
+		+				MODERATELY WEATHERED BASALT (WM) — Gray, medium hard.
—15— <del>†</del>	-1 <sub>+</sub> -1 <sub>+</sub> -1	#				End boring at 15 feet.
_20_						Plate B23

- 1. Boring Logs and Locations Reproduced From the "Soils Investigation" Report for Puunene Avenue/Mokulele Highway Widening Project, Puunene, Maui, Hawaii for Sato & Associates, Inc., By Ernest K. Hirata & Associates, Inc., W.O. 99—3144, Dated October 1, 1999.
- 2. The Boring Logs Indicate the Approximate Subsurface Soil Conditions Encountered Only At Those Times and Locations Where Borings Were Made, and May Not Represent Conditions At Other Times and Locations.
- 3. The Boring Logs are for Design Purposes Only, and are Not Intended for Use in Developing Cost Estimates By The Contractor.



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

BORING LOGS

MOKULELE HIGHWAY WIDENING

<u>Maui Humane Society</u> To <u>Vicinity of Kolaloa Bridge</u>

Federal - Aid Project No. NH-A311(6)R Scale: AS NOTED Date: JUNE 2005

SHEET No. 1 OF 2 SHEETS

FED. ROAD	STATE	FEDERAL — AID	FISCAL	SHEET	TOTAL
DIST. NO.		PROJ. NO.	YEAR	NO.	SHEETS
HAWAII	HAW.	NH-A311(6)R	2006	82	173

					В	ORING LOG	W.O	99-3144
			(STA 22 45.4:		DRIVING WT.	140 lb. 30 in.	DATE OF DRILLING WATER LEVEL	
DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DE	ESCRIPTION	
— O —			41	82	18	Sandy SILT (ML-CL) - stiff.	- Reddish brown, sli	ghtly mois
			10/No	Penetrat	ion	WEATHERED BASALT (V	MH—WM) — Mottled edium hard.	grayish
<b> 5</b>						Begin NX coring at 100% Recovery from RQD = 100% End NX coring at 6	5 feet. n 5 to 6 feet. 6 feet.	
-10-			9/6"	107	16			
			40/4"	Tip R	ecovery			
			40/3"	Tip R	ecovery			
15						End boring at 14 feet.	•	
20								Plate B2

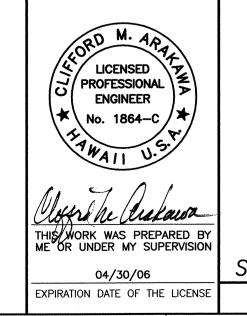
SURFA			32.5			140 lb.       DATE OF DRILLING 2/19/99         30 in.       WATER LEVEL None
DEPTH	G R A P H	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
- 0 -			16	85	15	Silty SAND (SM) — Mottled brown, moist, medium dense, with gravel.
<b>n wi</b> ndowskie (1900)			14	79	21	Sandy SILT (ML-CL) — Mottled brown, moist, mediu stiff.
- 5			10	94	15	
40			7	83	31	
-10						Silty SAND (SM) — Mottled brown, moist, medium dense.
-15			22	82	8	
						End boring at 15.5 feet.
-20-						Plate B2

SURFACE E	LEV	· · · · · · · · · · · · · · · · · · ·		ROP	T. 140 lb. DATE OF DRILLING 2/19/S 30 in. WATER LEVEL None
D G R A P H	<b>™ 1%</b> ≻0	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0		18	98	21	Silty SAND (SM) — Mottled brown, slightly moist, medium dense.
		17	96	6	
-5-		12	95	11	
		2	83	35	Clayey SILT (ML—CL) — Mottled brown, moist, medium stiff, with sand.  Soft at 9 feet.
_10_		2	63	33	Soft at a feet.
—15—		34	76	44	Stiff from 14 feet.
		32	106	12	Silty sand at 16 feet.
		35	87	31	

					В	ORING LOG	<b>W.O.</b> <u>99–3144</u>
BORING	NO	B27	(STA 25	0+00)	DRIVING WT.	140 lb.	DATE OF DRILLING 2/19/9
SURFA	CE ELI	EV	32.1:	<u>±</u>	DROP	30 in.	WATER LEVEL None
DEPTHO	G R A P H	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)		DESCRIPTION
- U	0		20	78	18	Sandy SILT (ML—CL with gravel. Cobble from 0.5	) — Brown, moist, medium stiff to 1 foot.
			13	96	15		
- 5 -			13	90	17		
-10			19	87	37	Clayey silt at 9	feet.
-15-			37	96	14	Stiff at 14 feet.	
						End boring at 15.5	feet.
-20-				,			Plate B

					В	ORING LOG	W.O. <u>99–3144</u>
							DATE OF DRILLING 2/19/99
SURFA	CE ELI	EV	32.4:		DROP	30 in.	WATER LEVEL None
DEPTHO	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DI	ESCRIPTION
0						Silty SAND (SM) — Mo gravel.	ttled brown, moist, dense, wi
			38	98	13		
- 5 -	5 —		9	80	22	Medium dense from 4 feet.	
			13	99	12		
			9	79	14	Sandy SILT (ML—CL) -	- Brown, moist, medium stiff.
-10-							
			25/No	Penetrat	tion	Silty SAND (SM) - Br	own, moist, medium dense.
	3 9		10/6"	104	17		
<b>—15</b> —						End boring at 14.5 fe	et.
-20-			·			·	Plate B2

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STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

BORING LOGS

MOKULELE HIGHWAY WIDENING

Maui Humane Society

To Vicinity of Kolaloa Bridge Federal — Aid Project No. NH—A311(6)R Scale: AS NOTED Date: JUNE 2005

SHEET No. 2 OF 2 SHEETS