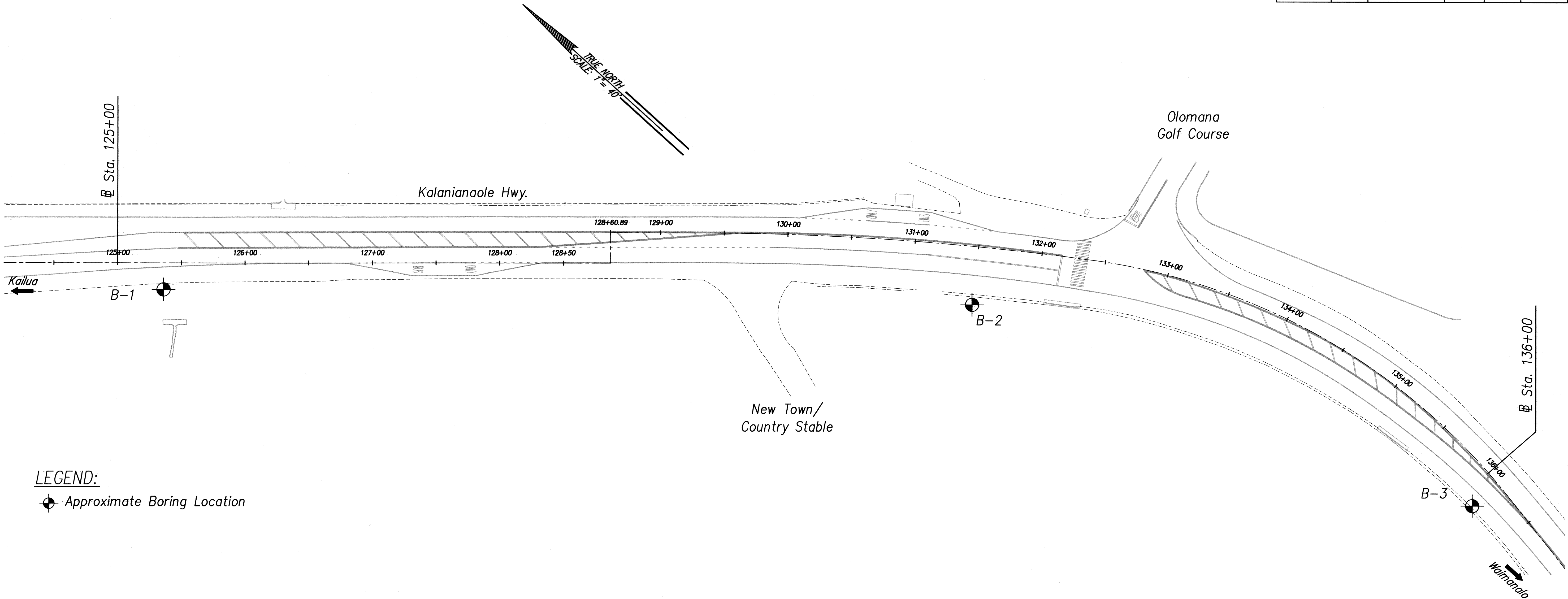


FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72A-02-06	2008	35	66



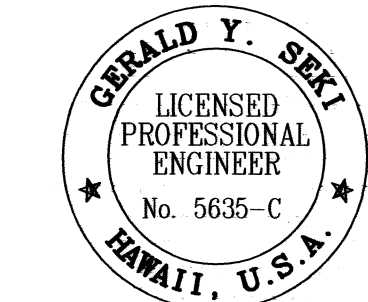
**LEGEND:**

⊕ Approximate Boring Location

**GEOTECHNICAL NOTES:**

1. A Geotechnical Engineering Report Entitled "Geotechnical Engineering Exploration, Kalanianaʻole Highway Median Improvements, Vicinity Of Olomana Golf Course, Waimanalo, Oahu, Hawaii", Dated May 12, 2008, Has Been Prepared By Geolabs, Inc. A Copy Of The Report Is On File At The Office Of The Engineer For Review By The Contractor.
2. The Information Presented In The Logs Of Borings Depict The Subsurface Conditions Encountered At That Specified Location And At The Time Of The Field Exploration Only. Variations Of Subsoil Conditions From Those Depicted In The Logs Of Borings May Occur Between And Beyond The Borings.
3. The Penetration Resistance Shown On The Logs Of Borings Indicate The Number Of Blows Required For The Specific Sampler Type Used. The Blow Counts May Need To Be Factored To Obtain The Standard Penetration Test (spt) Blow Counts.
4. The Data Given Is For General Information Only. Bidders Shall Examine The Site And The Boring Data And Draw Their Own Conclusions Therefrom As To The Character Of Materials To Be Encountered. The Engineer Will Not Assume Responsibility For Variations Of Subsoil Quality Or Conditions Other Than At The Boring Locations Shown And At The Time The Borings Were Taken.

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	



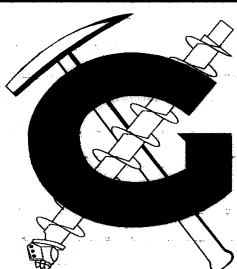
SIGNATURE  
*Gerald Y. Sefti*  
APRIL 30, 2010  
EXPIRATION DATE OF LICENSE  
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**BORING LOCATION PLAN**  
  
KALANIANAʻOLE HIGHWAY MEDIAN  
IMPROVEMENTS VICINITY OF OLOMANA  
GOLF COURSE PROJECT NO. 72A-02-06  
SCALE: 1" = 40'      DATE: June 2008  
**SHEET No. C-33 OF 43 SHEETS**

36



		<b>GEOLABS, INC.</b> Geotechnical Engineering		KALANIANA'OLE HIGHWAY MEDIAN IMPROVEMENTS VICINITY OF OLOMANA GOLF COURSE WAIMANALO, OAHU, HAWAII			Log of Boring <div>2</div>					
Laboratory			Field				Approximate Ground Surface Elevation (feet MSL): 54 *					
Other Tests	Moisture Content (%)	Dry Density (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)	Pocket Pen. (tsf)	Depth (feet)	Sample	Graphic	USCS	Description	
LL=62 PI=39	34	84			23						4-inch ASPHALTIC CONCRETE	
	30				14						Gray SANDY GRAVEL (fill)	
	26	91			20		5				Grayish brown SILTY CLAY, very stiff, moist (alluvium)	
	34				7		10				Grayish brown CLAYEY SILT with decomposed gravel, stiff, very moist (residual soil)	
											Boring terminated at 11.5 feet	
							25					


Date Started: November 3, 2006  
 Date Completed: November 3, 2006  
 Logged By: S. Latronic  
 Total Depth: 11.5 feet  
 Work Order: 5699-00(B)

Water Level: 9.1 ft. 11/3/06 1050 HRS  
 Drill Rig: CME-75  
 Drilling Method: 4" Auger  
 Driving Energy: 140 lb. wt., 30 in. drop

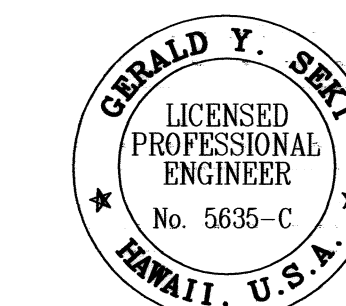
Plate  

A - 2

BORING LOG 5699-00(B) G-1 GEOLABS.DLL 5/10/07

	<b>GEOLABS, INC.</b> Geotechnical Engineering		KALANIANA'OLE HIGHWAY MEDIAN IMPROVEMENTS VICINITY OF OLOMANA GOLF COURSE WAIMANALO, OAHU, HAWAII		Log of Boring <div>3</div>						
	Laboratory		Field		Approximate Ground Surface Elevation (feet MSL): 44 *						
Other Tests	Moisture Content (%)	Dry Density (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)	Pocket Pen. (tsf)	Depth (feet)	Sample	Graphic	USCS	Description
	26	93			9					GW MH/ CH	6-inch ASPHALTIC CONCRETE Gray SANDY GRAVEL (fill) Grayish brown SILTY CLAY with some gravel, medium stiff, moist (fill)
	12				10					SP	Tan SAND with traces of wood and charcoal, loose to medium dense, damp (fill)
	12	90			7		5				grades to loose
	28				79		10			MH	Grayish brown CLAYEY SILT, very stiff, moist (residual soil)
	16	100			60/.5' Ref.		15			ML	Brownish gray SANDY SILT, hard, damp (saprolite)
					20/.0' Ref.		20				Brownish gray BASALT, highly weathered, medium hard (basalt formation)
							25				Boring terminated at 20 feet
Date Started: November 3, 2006		Date Completed: November 3, 2006		Water Level: ∇ Not Encountered		Logged By: S. Latronic		Drill Rig: CME-75		Plate	
Total Depth: 20 feet		Work Order: 5699-00(B)		Drilling Method: 4" Auger		Drilling Energy: 140 lb. wt., 30 in. drop		A - 3			

ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____
NOTE BOOK	DRAWN BY _____
	TRACED BY _____
	DESIGNED BY _____
	QUANTITIES BY _____
	CHECKED BY _____
No. _____	



*Conn Y. Lee*  
SIGNATURE  
**APRIL 30, 2010**  
EXPIRATION DATE OF LICENSE  
THIS WORK WAS PREPARED BY ME  
UNDER MY SUPERVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

BORING LOGS - 2

KALANIANA'OLE HIGHWAY MEDIAN  
IMPROVEMENTS VICINITY OF OLOMANA  
GOLF COURSE PROJECT NO. 72A-02-06

SCALE: N/A                      DATE: June 2008

**SHEET No. C-35 OF 43 SHEETS**