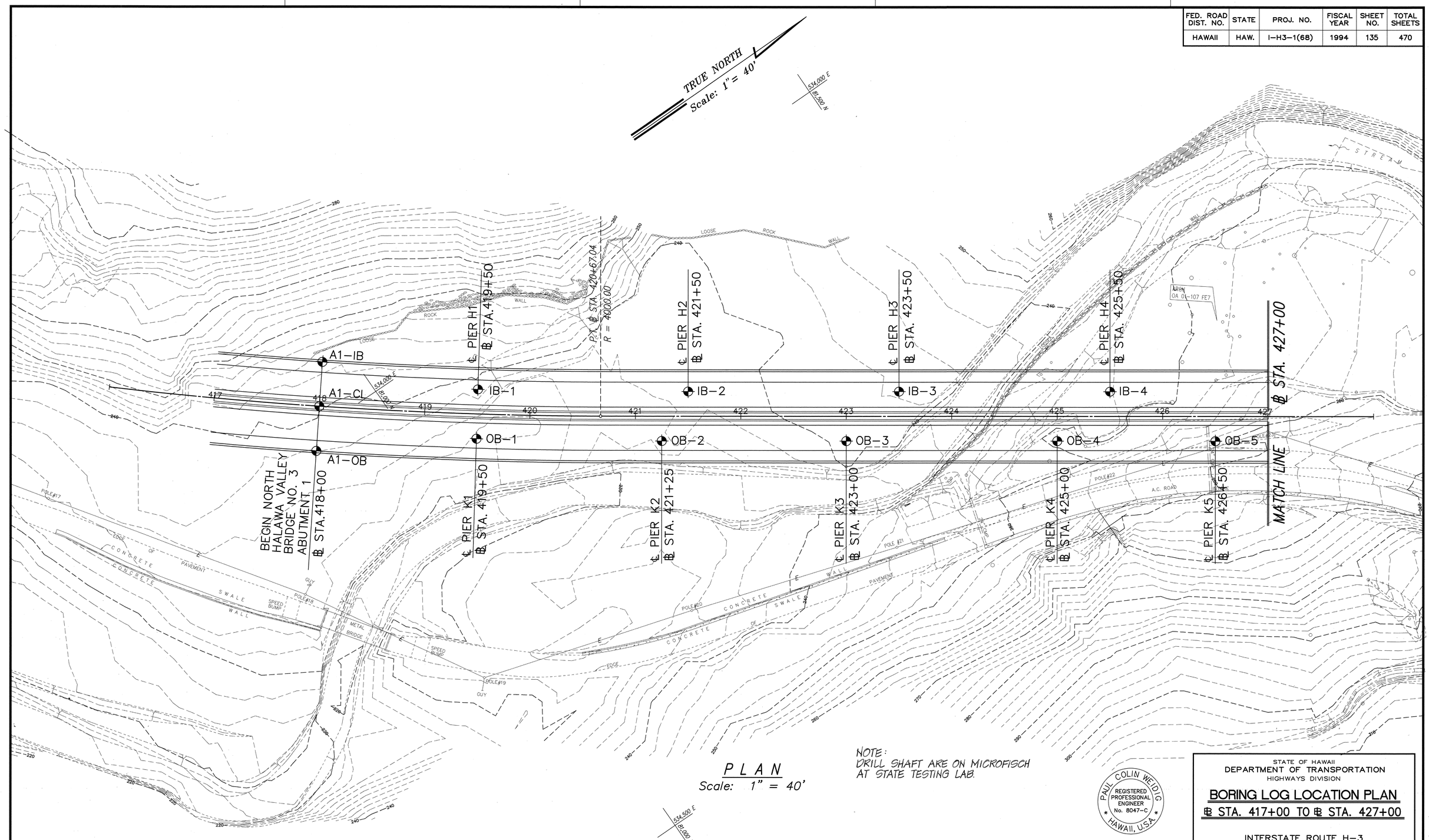
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	135	470



PLAN
Scale: 1" = 40'

NOTE:
DRILL SHAFT ARE ON MICROFISCH AT STATE TESTING LAB.

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOG LOCATION PLAN

℄ STA. 417+00 TO ℄ STA. 427+00

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

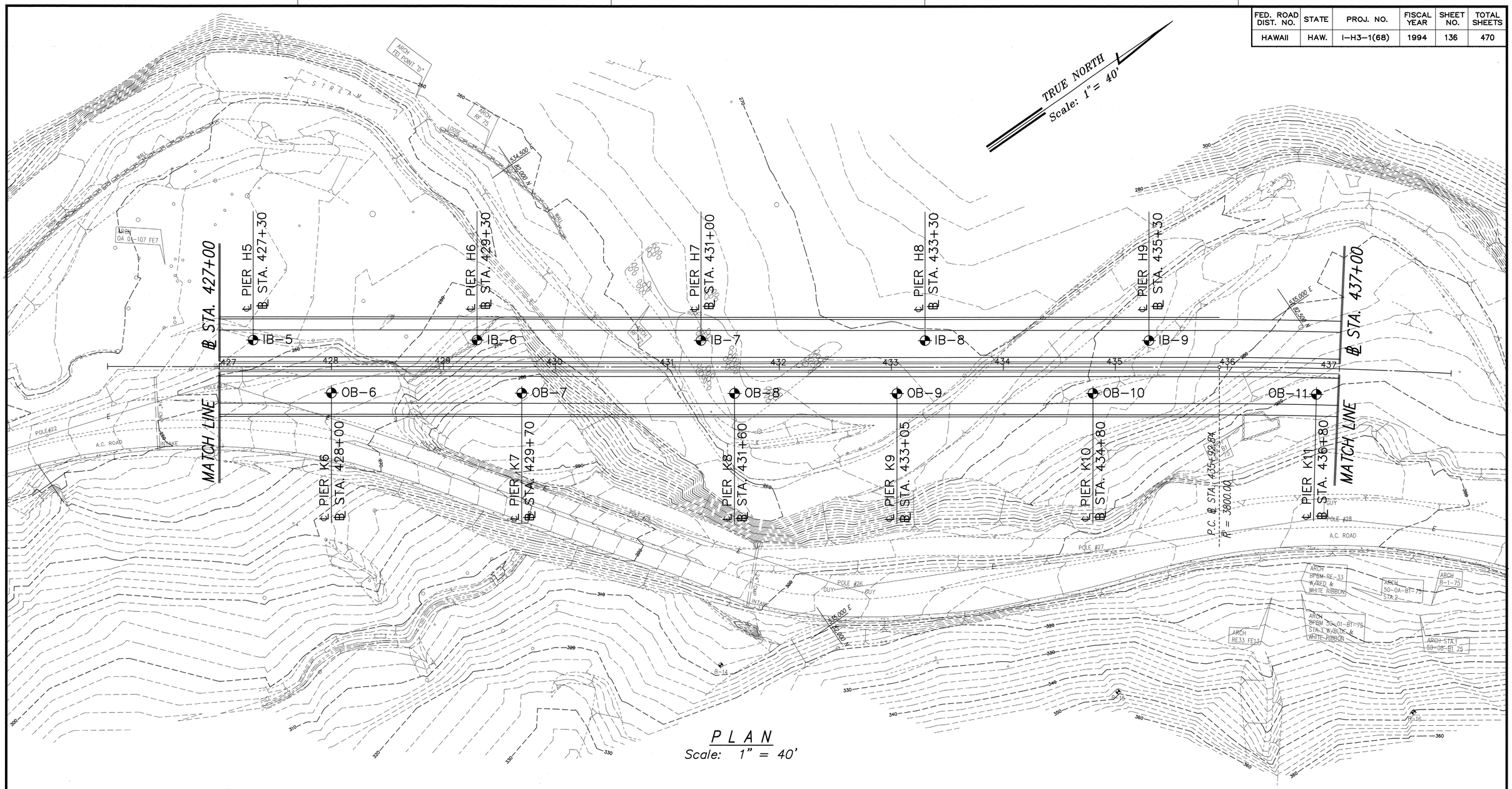
SHEET No. B1 OF 59 SHEETS

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

ROTATED: 55° 20' 57"
BASE PT: 0,0

LIB: STATE\DOT\I-3\H3030\
BORING1 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	136	470



PLAN
Scale: 1" = 40'

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

ROTATED: 55° 20' 57"
BASE PT: 5.0

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOG LOCATION PLAN

℄ STA. 427+00 TO ℄ STA. 437+00

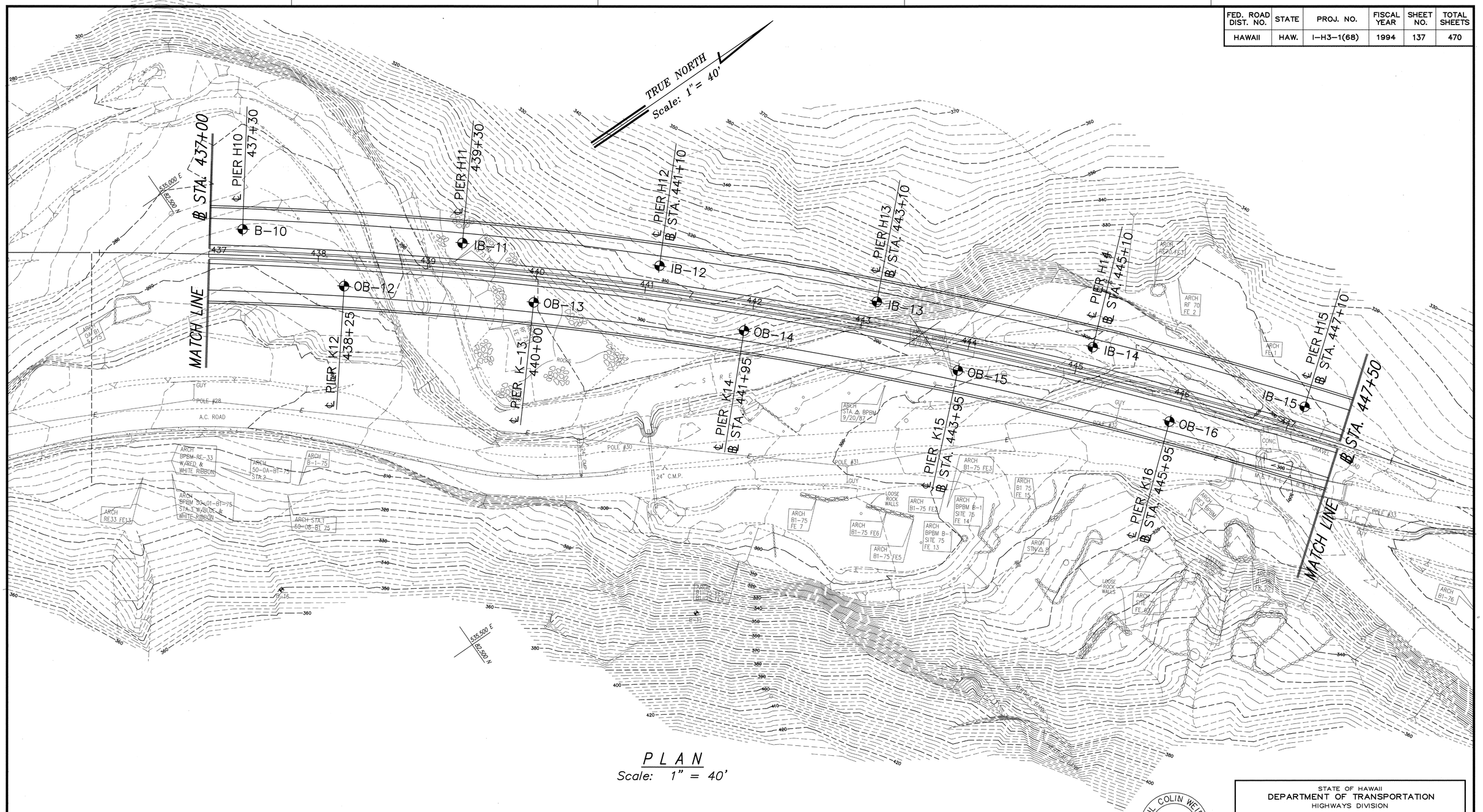
INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B2 OF 59 SHEETS

LIB: STATE\DOT\H-3\H-3030\BORING22 RSD 3/21/94

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	137	470



PLAN
Scale: 1" = 40'

PAUL COLIN WEIDIG
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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOG LOCATION PLAN
℄ STA. 437+00 TO ℄ STA. 447+50

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

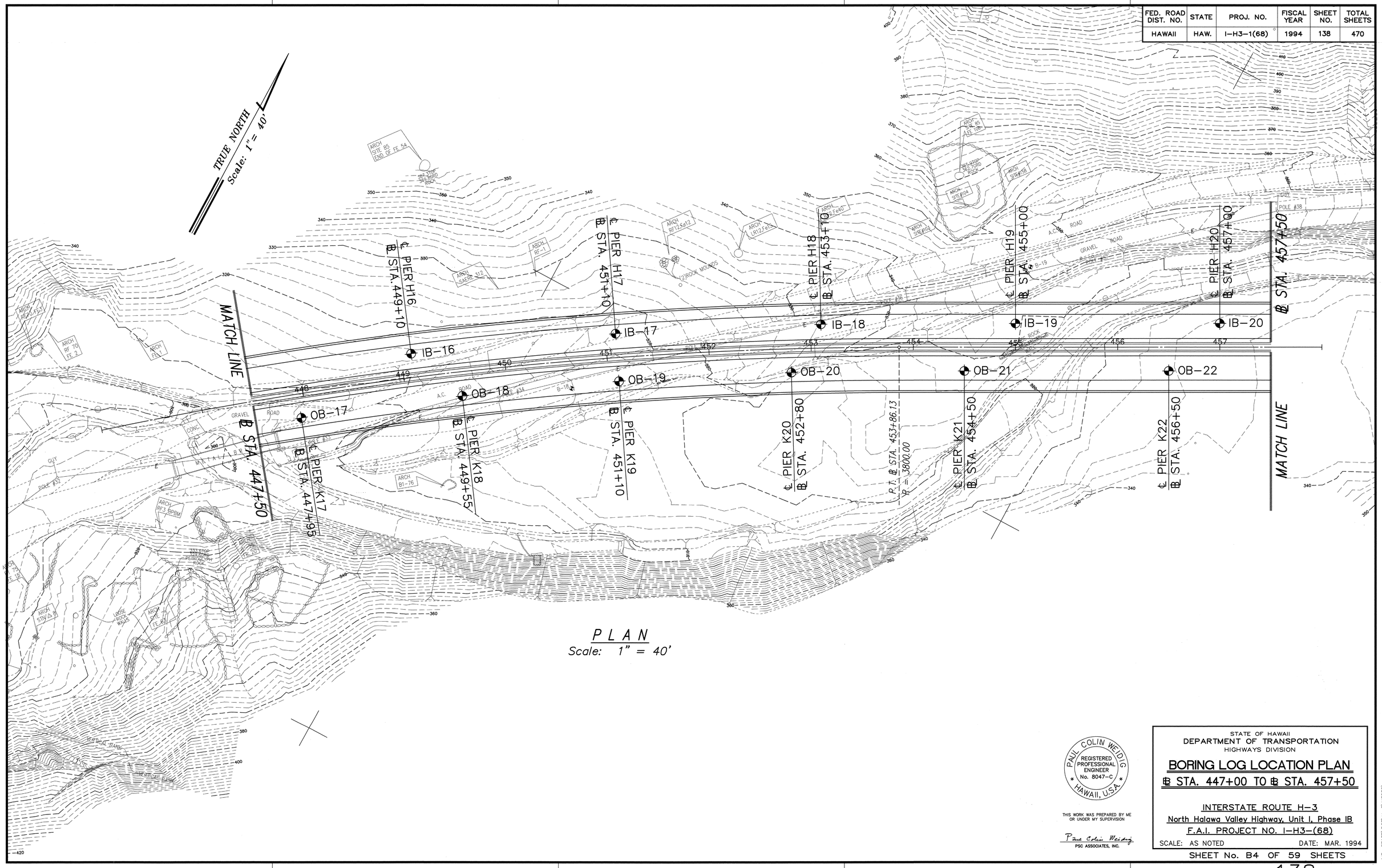
SHEET No. B3 OF 59 SHEETS

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

ROTATED: 55° 20' 57"
BASE PT: 0.0

LIB: STATE\DOT\I-3\I-3030\BORINGS 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	138	470



PLAN
Scale: 1" = 40'

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

ROTATED: 28° 18' 37"
BASE PT: 5.0

P. COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOG LOCATION PLAN

℄ STA. 447+00 TO ℄ STA. 457+50

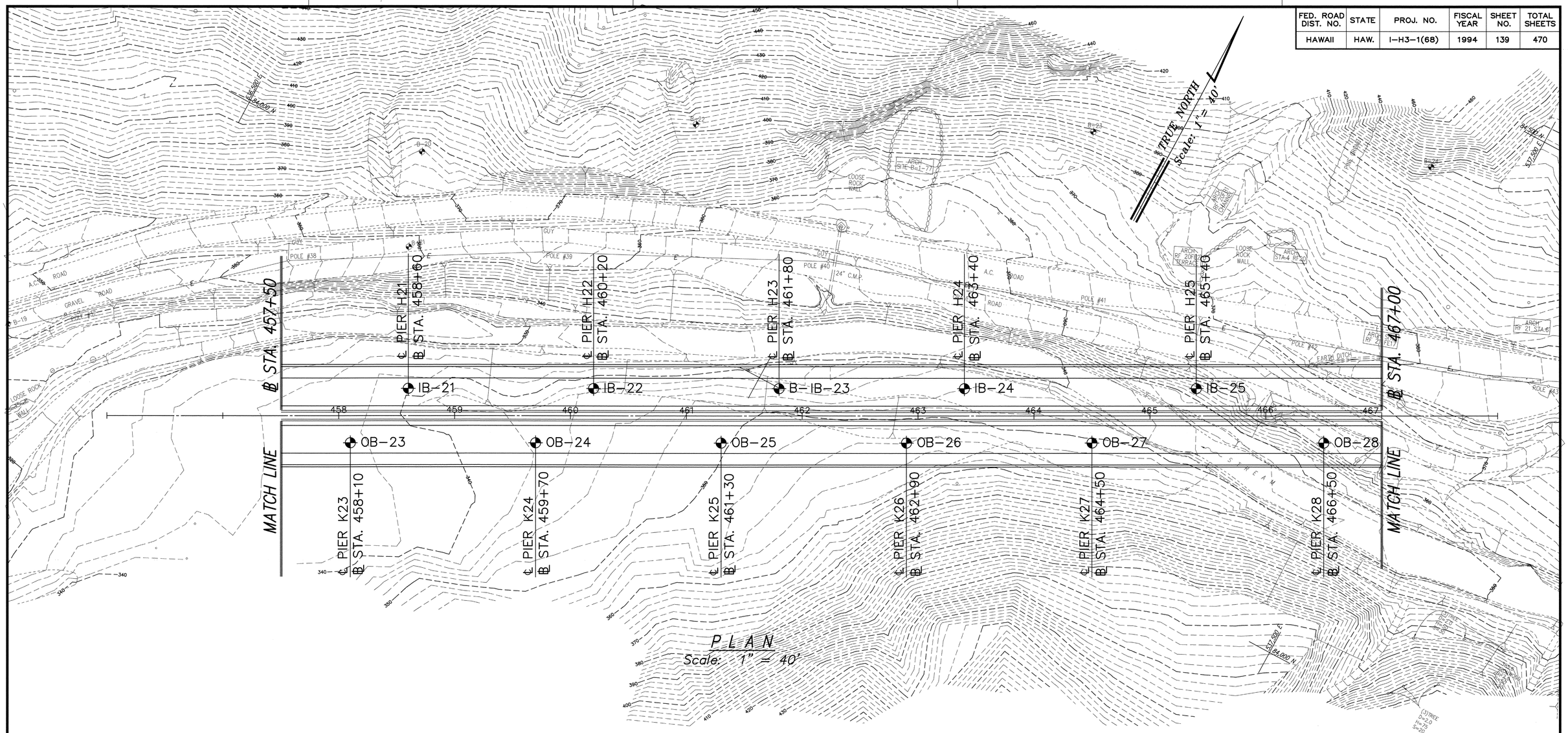
INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B4 OF 59 SHEETS

LIB: STATE\DOT\H-3\H3030\
BORING4 3/21/94
RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	139	470



ORIGINAL PLAN		
NOTE BOOK	No.	

		DATE
SURVEY PLOTTED BY		
TRAVERSE BY		
TRACED BY		
DESIGNED BY		
QUANTITIES BY		
CHECKED BY		

ROTATED: 28° 18' 37"
BASE PT: 0.0

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOG LOCATION PLAN

℄ STA. 457+50 TO ℄ STA. 467+00

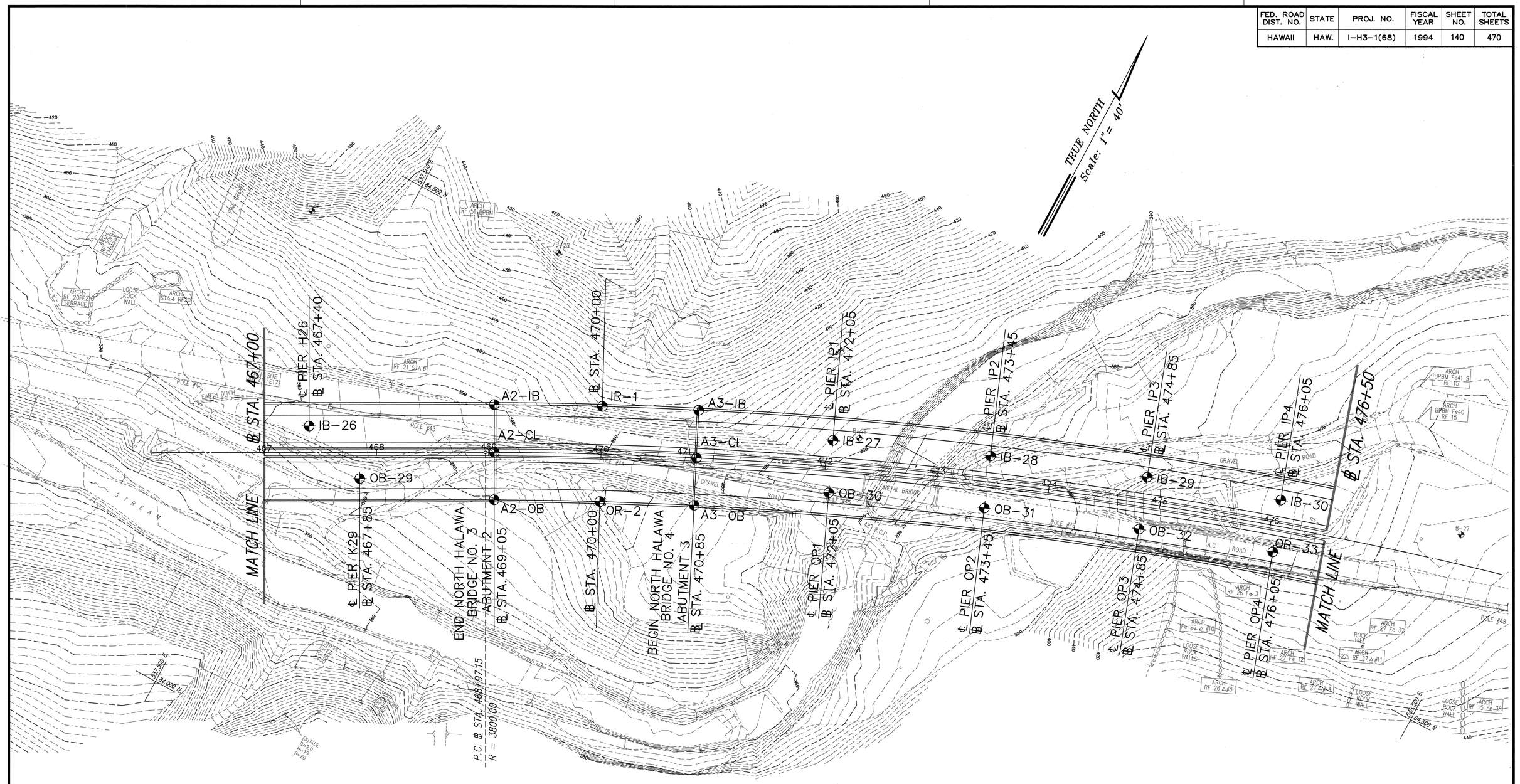
INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B5 OF 59 SHEETS

LIB: STATE\DOT\H-3\H3030\
BORING5 3/21/94 RSD

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	140	470



PLAN

Scale: 1" = 40'

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

ROTATED: 28° 18' 37"
BASE PT: 0.0

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

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PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOG LOCATION PLAN

℄ STA. 467+00 TO ℄ STA. 477+00

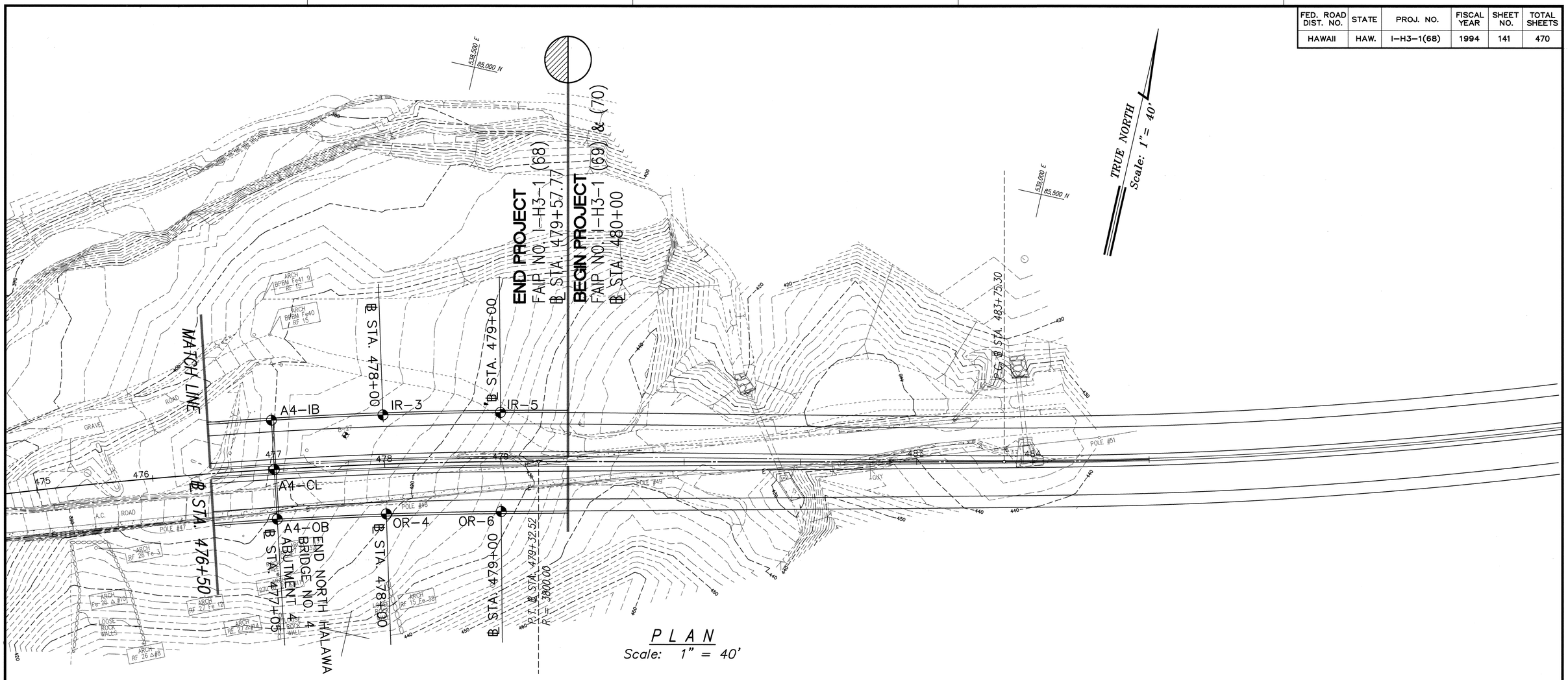
INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B6 OF 59 SHEETS

LIB: STATE\DOT\I-3\I-3030\BORINGS 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	141	470



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

ROTATED: 12° 41' 57"
BASE PT. 5.0

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOG LOCATION PLAN

℄ STA. 477+00 TO END

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B7 OF 59 SHEETS

LIB: STATE\DOT\H-3\H-3039\
BORING7 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	142	470

SAMPLE TYPE			OTHER LABORATORY TESTS		
BK	-Bulk	DM -Dames & Moore	CN	-Consolidation	PR -Proctor Compaction
CB	-Core Barrel	SP -Standard Penetration	DS	-Direct Shear	SA -Sieve Analysis
DN	-Denison Barrel	ST -Shelby Tube	PI	-Atterberg Limits	UC -Unconfined Compression

BORING LOG LEGEND

MAJOR DIVISIONS			SYMBOLS CODE	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS More than 50% of material is larger than No. 200 Sieve size	GRAVEL AND GRAVELLY SOILS Less than 50% of coarse fraction passes the No. 4 Sieve	CLEAN GRAVELS Less than 12% of fine fraction passes the No. 200 Sieve	GW	Well-graded gravels, gravel - sand mixtures, little or no fines
			GP	Poorly-graded gravels, gravel - sand mixtures, little or no fines
		SILTY OR CLAYEY GRAVELS At least 12% of fine fraction passes the No. 200 Sieve	GM	Silty gravels, gravel - sand - silt mixtures
			GC	Clayey gravels, gravel - sand - clay mixtures
	SAND AND SANDY SOILS At least 50% of coarse fraction passes the No. 4 Sieve	CLEAN SANDS Less than 12% of fine fraction passes the No. 200 Sieve	SW	Well-graded sands, gravelly sands, little or no fines
			SP	Poorly-graded sands, gravelly sands, little or no fines
		SILTY OR CLAYEY SANDS At least 12% of fine fraction passes the No. 200 Sieve	SM	Silty sands, sand - silt mixtures
			SC	Clayey sands, sand - clay mixtures
FINE GRAINED SOILS More than 50% of material is smaller than No. 200 Sieve size	SILTS AND CLAYS Liquid limit is less than 50	Plasticity index is above "A" Line	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		Plasticity index is below "A" Line	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit is greater than 50	Plasticity index is above "A" Line	CH	Inorganic clays of high plasticity
		Plasticity index is below "A" Line	MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils
			OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS			Pt	Peat, humus, swamp soils with high organic contents

UNIFIED SOIL CLASSIFICATION SYSTEM

PSC ASSOCIATES, INC.
SOILS, FOUNDATION, AND GEOLOGICAL ENGINEERS

INTERSTATE ROUTE H-3, NORTH HALAWA VALLEY HIGHWAY
Unit I, Phase IB, North Halawa Valley, Oahu, Hawaii

DATE: January, 1994 | PROJECT NO. 93110.10

BORING LOCATION: Center Sta. 418+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +240.5 ft | LOGGED BY: J. Brock/H. Clark
DATE(S) DRILLED: 06/23/93 06/24/93 | TYPE RIG: Rotary Wash
BORING A1-CL

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
DS PI PR	80	47.7				BK-1		MH	**CLAYEY, SANDY SILT,** reddish-brown, stiff, dry to moist, fine to coarse sand - Alluvium
UC	77	38.5			32	DM-2	5	CH	**SILTY CLAY,** dark brown, hard, dry to moist - Alluvium
								GM GC	**SILTY, CLAYEY COBBLES AND BOULDERS,** gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
								GC	**CLAYEY COBBLES AND BOULDERS,** gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	100	28.2			42	DM-3	10	SC GC	**CLAYEY, GRAVELLY SAND,** mottled orange and gray-brown, dense, wet - Alluvium
								GC	**CLAYEY COBBLES AND BOULDERS,** gray-brown, very dense, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	76	43.8			90	DM-4	15		**SAPROLITE,** dark green, soft, weak, highly to extremely weathered
UC	69	53.0	42			CB-5	20		greenish-brown to brown-gray
			73			CB-6	25		greenish-brown to gray-green and orange-brown mottled

BORING LOCATION: Center Sta. 418+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +240.5 ft | LOGGED BY: J. Brock/H. Clark
DATE(S) DRILLED: 06/23/93 06/24/93 | TYPE RIG: Rotary Wash
BORING A1-CL

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
			75			CB-7	30		greenish-brown to reddish-brown, soft, weak to moderately strong
			78			CB-8	35		greenish-brown to brown-gray, soft to moderately hard, highly weathered
			75			CB-9	40		light gray, highly weathered
			82			CB-10	45		gray to gray-brown, moderately hard
UC	157	1.8	100			CB-11	50		gray to dark brown, soft to moderately hard

BORING LOCATION: Center Sta. 418+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +240.5 ft | LOGGED BY: J. Brock/H. Clark
DATE(S) DRILLED: 06/23/93 06/24/93 | TYPE RIG: Rotary Wash
BORING A1-CL

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-12	55		gray to gray-brown, moderately hard
			99			CB-13	60		gray-green to gray-brown and reddish-brown to yellowish-brown, soft to moderately hard, highly to extremely weathered dark green, highly weathered, vesicular
							65		Bottom of Boring No. A1-CL @ 63.0 ft.
							70		
							75		

PAUL COLIN WEIDIG
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No. 8047-C
HAWAII, U.S.A.

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B8 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\I-3\I-3030\ LOGBOR01 3/21/94 RS0

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	143	470

BORING A1-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 418+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +243.4 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 07/08/93 07/13/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, dark reddish-brown, very stiff, dry, with finely disseminated organic matter - Alluvium
CN PI	72	42.4			27	DM-1			GM GC	**CLAYEY, SILTY GRAVEL**, dark reddish-brown, loose to medium dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							5		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, dark gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
					87	DM-2				brown to light brown
SG		8.6			30/4"	DM-3	10			light brown to orange-brown, wet to saturated
			40			CB-4	15			mottled brown and light brown, saturated
			40			CB-5	20			**SAPROLITE**, green-gray, soft, weak, highly to extremely weathered, very closely fractured
							25			

BORING A1-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 418+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +243.4 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 07/08/93 07/13/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			40			CB-11				dark brown to brownish-gray
UC	153	1.3	81			CB-12	55			dark brown to greenish-gray
			5			CB-13	60			greenish-gray, weak to moderately strong, highly weathered, vesicular, olivine crystals visible in vesicles
							65			Bottom of Boring No. A1-IB ? 65.0 ft.
							75			

BORING A1-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 418+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +237.9 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 07/06/93 07/07/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			0			CB-8				gray-brown
			0			CB-9	30			
		31.1			66/6"	SP-10	35			
			45			CB-11				gray, soft to moderately hard, weak to moderately strong
			95			CB-12	40			dark gray to greenish-gray, weak
			60			CB-13	45			dark gray to gray-brown, soft
							50			

BORING A2-CL

BORING LOCATION: Center Sta. 469+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +384.9 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 06/05/93 06/08/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GW	**SANDY GRAVEL**, gray-brown, dense, moist, fine to coarse sand, fine to coarse gravel - Road Bed Fill
									CH	**SILTY CLAY**, medium brown to dark gray-brown, stiff, moist - Alluvium
UC	85	50.0			31	DM-1	5			
					44	DM-2	10		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, dark gray-brown to gray, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
										gray-brown, dense to very dense, moist to wet
					47/3"	DM-3	15			
									CH	**SILTY, SANDY, GRAVELLY CLAY**, gray-brown, soft to stiff, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	66	55.0			18	DM-4	20			
DS	75	46.0			70/6"	DM-5	25		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray-brown,

BORING A1-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 418+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +243.4 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 07/08/93 07/13/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			40			CB-6				gray to light gray, highly weathered
UC	134	1.2	60			CB-7	30			green-gray to dark gray, highly to extremely weathered
			75			CB-8	35			dark greenish-gray
			0			CB-9	40			greenish-gray
			73			CB-10	45			
							50			

BORING A1-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 418+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +237.9 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 07/06/93 07/07/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, reddish-brown, dry to moist, stiff - Alluvium
CN PI	80	38.5			51	DM-1	5			
									GM GC	**SILTY, CLAYEY, GRAVEL, COBBLES AND BOULDERS**, reddish-brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	83	14.6			20/6" 23/6"	DM-2 SP-3	10		GM GC	**SILTY, CLAYEY GRAVEL**, gray-brown to light reddish-brown, moist, dense, fine to coarse sand, fine to coarse gravel - Alluvium
					41	DM-4				**SAPROLITE**, gray-brown, soft, weak, highly weathered, vesicular, very closely fractured
UC	53	43.5			73	DM-5	15			gray-brown
UC	68	51.8			66	DM-6	20			dark gray and brown mottled
			0			CB-7	25			

BORING A1-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 418+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +237.9 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 07/06/93 07/07/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-14				gray, soft to moderately hard, weak to moderately strong
			70			CB-15	55			**ASH AND CINDERS**, greenish-gray, soft, weak, highly weathered
			50			CB-16	60			**SAPROLITE**, dark gray to greenish-gray, soft, weak, highly weathered, vesicular, very closely fractured
			50			CB-17	65			dark brown, soft to moderately hard, weak to moderately strong
							70			Bottom of Boring No. A1-OB ? 70.0 ft
							75			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B9 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\I-3\H3030\ LOGS0402 3/21/94 PSC

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	144	470

BORING A2-CL

BORING LOCATION: Center Sta. 469+05
BORING ELEVATION: +384.9 ft
DATE(S) DRILLED: 06/05/93 06/08/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										dense to very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
	91	18.9			72/6"	DM-6				
							30			
										SAPROLITE, gray-brown, soft, weak, highly weathered, very closely fractured
					67	DM-7				dark gray-green
							35			
	84	36.4			107	DM-8				brown
							40			
	87	34.5			120/4"	DM-9				light gray
							45			
							50			

BORING A2-CL

BORING LOCATION: Center Sta. 469+05
BORING ELEVATION: +384.9 ft
DATE(S) DRILLED: 06/05/93 06/08/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
DS	76	46.6			100/2"	DM-15				gray-brown, highly weathered
							80			
		38.9			80	SP-16				gray-brown to dark brown and violet mottled
							85			
		38.1			111/9"	SP-17				gray-brown
							90			
					70/3"	SP-18				BASALT, gray-brown, moderately hard, moderately strong, highly to moderately weathered, closely fractured, vesicular - 'A'a
		40.2			98/6"	SP-19	95			soft to moderately hard, moderately weathered
							100			

BORING A2-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 469+05
BORING ELEVATION: +389.5 ft
DATE(S) DRILLED: 08/17/93 08/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GC	CLAYEY GRAVEL, gray-brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							5			
CN	70	52.0			25	DM-1			GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, reddish-brown, dense to very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							10			
UC	75	39.2			47	DM-2				wet to saturated
							15			
UC	64	59.2			29	DM-3				saturated
							20			
					70	DM-4				
							25			

BORING A2-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 469+05
BORING ELEVATION: +389.5 ft
DATE(S) DRILLED: 08/17/93 08/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-11				
							55			
UC	109	20.1	95			CB-12				light gray
							60			
			95			CB-13				gray, weak to friable, extremely weathered, vesicular
							65			
			70			CB-14				medium gray, weak, highly weathered, very closely fractured, olivine crystals visible in vesicles
							70			
UC	155	2.5	80			CB-15				light gray, hard, moderately strong, moderately weathered, closely fractured
							75			light gray, soft, weak, moderately to highly weathered

BORING A2-CL

BORING LOCATION: Center Sta. 469+05
BORING ELEVATION: +384.9 ft
DATE(S) DRILLED: 06/05/93 06/08/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	80	41.1			136/6"	DM-10				brownish-gray to dark brown
							55			
UC	78	43.1			125	DM-11				gray-brown
							60			
DS	81	37.6			75/6"	DM-12				
							65			
	67	67.8			78/6"	DM-13				
							70			
DS	81	40.7			122/8"	DM-14				grayish-green, highly to extremely weathered
							75			

BORING A2-CL

BORING LOCATION: Center Sta. 469+05
BORING ELEVATION: +384.9 ft
DATE(S) DRILLED: 06/05/93 06/08/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
		37.2			74/6"	SP-20				
							105			Bottom of Boring No. A2-CL ? 101.0 ft.
							110			
							115			
							120			
							125			

BORING A2-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 469+05
BORING ELEVATION: +389.5 ft
DATE(S) DRILLED: 08/17/93 08/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	69	52.1			111	DM-5				
			40			CB-6				
							30			
			92			CB-7				
							35			SAPROLITE, gray to brown, soft, weak to friable, extremely weathered, very closely fractured
			92			CB-8				
							40			
			80			CB-9				brownish-gray, weak, highly weathered
							45			
			60			CB-10				weak to friable, extremely weathered, vesicular
							50			medium to light gray, weak, highly weathered, closely fractured

PAUL COLIN WEIDIG
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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994

SHEET No. B10 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\I-3\H3030\ LOGBORD3 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	145	470

BORING A2-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 469+05
BORING ELEVATION: +389.5 ft
DATE(S) DRILLED: 08/17/93 08/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	79	32.3	82			CB-16				
										CLINKER, tan, soft, weak, highly weathered
							80			
			100			CB-17				ASH AND CINDERS, tan to dark gray, soft, weak, highly weathered, welded texture
							85			
			100			CB-18				ASH, tan to dark gray, soft, weak, highly weathered, welded texture
										BASALT, medium gray, hard, strong, slightly weathered, fractured, vesicular - 'A'a
							90			
UC	164	2.9	100	60		CB-19				
							95			
			80	0		CB-20				brownish-gray to dark gray, soft, friable, highly weathered, very closely fractured - 'A'a
							100			

BORING A2-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 469+05
BORING ELEVATION: +379.4 ft
DATE(S) DRILLED: 08/18/93 08/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	SILTY, CLAYEY GRAVEL, reddish-brown and reddish-orange mottled, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	66	54.5			24	DM-1	5			very dense
SA	66	57.9			32	DM-2	10			
			40			CB-3				
			84			CB-4	15			yellowish-gray, wet to saturated
			57			CB-5	20			gray, dense, saturated
			73			CB-6	25			SAPROLITE, gray, black and

BORING A2-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 469+05
BORING ELEVATION: +379.4 ft
DATE(S) DRILLED: 08/18/93 08/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-12				green, gray, black, orange and yellow mottled
							55			
			100			CB-13				red, brown, green and gray mottled
							60			
UC	63	58.0	87			CB-14				orange, gray and black mottled, with thin ash partings
							65			
UC	90	12.4	98			CB-15				gray, black and brown mottled
							70			
			57			CB-16				purple, black and brown mottled, closely fractured
							75			

BORING A2-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 469+05
BORING ELEVATION: +379.4 ft
DATE(S) DRILLED: 08/18/93 08/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										highly weathered, vesicular - 'A'a
UC	123	10.2	72	70		CB-22				gray to black, hard, moderately weathered
							105			
UC	79	28.5	92	80		CB-23				reddish-gray, black and brown mottled
							110			
										Bottom of Boring No. A2-OB ? 113.0 ft.
							115			
							120			
							125			

BORING A2-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 469+05
BORING ELEVATION: +389.5 ft
DATE(S) DRILLED: 08/17/93 08/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										Bottom of Boring No. A2-IB ? 100.5 ft.
							105			
							110			
							115			
							120			
							125			

BORING A2-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 469+05
BORING ELEVATION: +379.4 ft
DATE(S) DRILLED: 08/18/93 08/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										orange mottled, soft, weak, highly to extremely weathered, very closely fractured, vesicular
			40			CB-7				green, black and orange mottled
							30			
			20			CB-8				green, black, orange and brown mottled
							35			
			37			CB-9				red, black, brown and yellow mottled
							40			
			80			CB-10				red, black, brown and gray mottled
							45			
			73			CB-11				green, black, orange, yellow and brown mottled
							50			

BORING A2-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 469+05
BORING ELEVATION: +379.4 ft
DATE(S) DRILLED: 08/18/93 08/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			75			CB-17				gray, green and brown mottled
							80			
			50			CB-18				gray, green, yellow, red and orange mottled
							85			
			90			CB-19				gray, green, black and brown mottled
							90			
			100			CB-20				gray, green, black and orange mottled, weak to moderately strong, highly to extremely weathered
							95			
										gray, brown, red and orange mottled, weak, with thin ash partings
UC	71	34.8	100	95		CB-21				BASALT, gray, green and black mottled, moderately hard to hard, strong, moderately to
							100			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B11 OF 59 SHEETS

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

ROTATED:
BASE PT: 0.0

LIB: STATE\DOT\I-3\50301
LOGBOR04 1/21/94 RSG

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	146	470

BORING A3-CL

BORING LOCATION: Center Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +385.1 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 07/18/93 07/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GW	**ASPHALTIC CONCRETE**
SA	91	7.3			80/7"	DM-1			SM GM	**SANDY GRAVEL**, gray, dense, moist, fine to coarse sand, fine to medium gravel - Base Rock
									GM GC	**SILTY, GRAVELLY SAND**, gray-brown, moist, dense, fine to coarse sand, fine to coarse gravel - Alluvium
	79	35.6			67	DM-2	5			**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium gray-brown, very dense
UC	69	55.7			49	DM-3	10		GC	**CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
UC PI	79	42.3			108	DM-4	15		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
UC	64	55.3			38	DM-5	20			dense, saturated
							25			

BORING A3-CL

BORING LOCATION: Center Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +385.1 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 07/18/93 07/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	70	48.6			84/7"	DM-11				dark brown and tan mottled, vesicular
UC	70	51.0			128/9"	DM-12	55			dark brown, weak to moderately strong
UC	68	47.0			95/7"	DM-13	60			dark brown and tan mottled
	75	40.0			130/7"	DM-14	65			dark gray, moderately hard
			50			CB-15	70			gray, soft to moderately hard, highly to moderately weathered, very closely fractured
			0			CB-16				
							75			

BORING A3-CL

BORING LOCATION: Center Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +385.1 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 07/18/93 07/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	116	6.3	100	90		CB-23	105			gray to reddish-gray
							110			Bottom of Boring No. A3-CL ? 108.0 ft.
							115			
							120			
							125			

BORING A3-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.1 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 08/24/93 08/26/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			50			CB-6				wet to saturated
			80			CB-7	30			saturated
			67			CB-8	35			
			67			CB-9	40			**CONGLOMERATE: SILTY CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown to gray, dense to very dense, saturated, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
			80			CB-10	45			
							50			brown, very dense

BORING A3-CL

BORING LOCATION: Center Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +385.1 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 07/18/93 07/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	70	47.9			71	DM-6				dark reddish-brown, dense
UC	60	52.5			36	DM-7	30			gray-brown
UC	69	46.9			80/7"	DM-8	35			**SAPROLITE**, dark gray-green, soft, weak to moderately strong, highly to extremely weathered
UC	73	47.1			93	DM-9	40			dark brown, soft to moderately hard, highly weathered
UC	74	47.1			93/9"	DM-10	45			dark gray, moderately strong
							50			

BORING A3-CL

BORING LOCATION: Center Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +385.1 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 07/18/93 07/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-17				dark gray, moderately hard
			100			CB-18	80			gray, highly weathered
			100			CB-19	85			reddish-brown, soft, weak to moderately strong, moderately to highly weathered
UC	113	2.5	100	60		CB-20	90			**BASALT**, gray, moderately hard to hard, moderately strong, moderately weathered, vesicular - 'A'a
			100	30		CB-21	95			
UC	91	20.4	100	100		CB-22	100			dark brown, moderately hard

BORING A3-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.1 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 08/24/93 08/26/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
PI	71	49.7			71	DM-1	5			dense to very dense
					25	DM-2	10			
	70	50.8			104	DM-3	15			brown to gray
			57			CB-4				
			60			CB-5	20		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown to gray, dense to very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							25			

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

ROTATED: BASE PT: 0,0

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

PAUL COLIN WEIDIG — REGISTERED PROFESSIONAL ENGINEER No. 8047-C — HAWAII, U.S.A.

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B12 OF 59 SHEETS

LIB: STATE\DOT\H-3\H3030\ LOGS\BOR05 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	147	470

BORING A3-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.1 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 08/24/93 08/26/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			75			CB-11				
										SAPROLITE, reddish-brown, soft, weak, extremely weathered, very closely fractured
UC	88	21.2	30			CB-12	55			
										CLINKER, gray-brown, medium dense, highly weathered
			80			CB-13	60			**SAPROLITE**, dark gray to brown, soft, weak, highly weathered
										greenish-gray, closely to very closely fractured
			80			CB-14	65			
			80			CB-15	70			highly to extremely weathered
							75			brown, very closely fractured

BORING A3-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.1 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 08/24/93 08/26/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			85	20		CB-21				brown, soft, weak, highly weathered
			80			CB-22	105			gray, moderately hard, moderately strong, moderately weathered, closely to very closely fractured
										CLINKER, gray to brown, soft, weak, highly weathered
UC	81	32.2	87	0		CB-23	110			
										BASALT, gray, moderately hard, strong, moderately to highly weathered, closely fractured, vesicular - 'A'a brown, soft, weak, highly weathered
			87	60		CB-24	115			gray-brown, moderately hard, strong, moderately weathered
							120			Bottom of Boring No. A3-IB ? 120.0 ft.
							125			

BORING A3-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +396.3 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 08/27/93 08/31/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			63			CB-7	30		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, dark brown, medium dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	83	12.6	90			CB-8	35			greenish-gray
UC	69	26.8	90			CB-9	40			**CONGLOMERATE SANDY GRAVEL**, dark brown, soft, weak, medium dense, highly weathered, weakly cemented matrix
			63			CB-10	45			**SAPROLITE**, gray, soft to moderately hard, weak to moderately strong, highly weathered, very closely fractured, vesicular
			90			CB-11	50			

BORING A3-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +396.3 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 08/27/93 08/31/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			85			CB-17	80			gray, soft to moderately hard, weak to moderately strong
			100			CB-18	85			gray, soft to hard, weak to strong, moderately to highly weathered
			90			CB-19	90			soft to moderately hard, weak to moderately strong, closely fractured
			40			CB-20	95			brown, soft, weak, highly to extremely weathered, very closely fractured
			90			CB-21	100			**CLINKER**, gray-brown, soft, weak, highly weathered

BORING A3-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.1 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 08/24/93 08/26/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-16				
										CLINKER, gray, soft, weak, highly weathered
			80			CB-17	80			**SAPROLITE**, gray, soft, weak to moderately strong, moderately to highly weathered, closely fractured
UC	87	30.1	80			CB-18	85			brown, soft, weak, extremely weathered, very closely fractured
			100			CB-19	90			**ASH AND CINDERS**, gray to tan, soft, weak, highly weathered
UC	166	3.2	90	45		CB-20	95			**BASALT**, gray, moderately hard, strong to very strong, moderately to slightly weathered, closely fractured, vesicular - 'A'a
							100			

BORING A3-IB

BORING LOCATION: 23.5 ft. Rt. Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +396.3 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 08/27/93 08/31/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	**SILTY, CLAYEY GRAVEL**, brown, dense to very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
UC	67	53.3			67	DM-1	5			mottled dark brown
					61	DM-2	10			mottled dark brown, dense to very dense
SG	74	47.6			56	DM-3	15		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, dark brown, very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
			0			CB-4				
			60			CB-5				
							20		GM	**SILTY GRAVEL, COBBLES AND BOULDERS**, gray to gray-brown, medium dense to dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium brown, dense
			83			CB-6				
							25			

BORING A3-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +396.3 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 08/27/93 08/31/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-12	55			
	86	28.5	85			CB-13	60			dark gray to brown, soft, weak, highly weathered, very closely fractured
			63			CB-14	65			
			80			CB-15	70			
			80			CB-16	75			dark gray to brown, soft, weak

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B13 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\I-3\H3030\ LOGBOR06 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	148	470

BORING A3-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 470+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +396.3 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 08/27/93 08/31/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
									SAPROLITE, brown, soft, weak, extremely weathered, very closely fractured
			100	30		CB-22			**BASALT**, gray, moderately hard, strong, moderately weathered, very closely fractured, vesicular - 'A'a
							105		
UC	97	8.9	100	78		CB-23			
							110		
UC	116	13.7	100	83		CB-24			
							115		
									Bottom of Boring No. A3-OB ? 117.5 ft.
							120		
							125		

BORING A4-CL

BORING LOCATION: Center Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +407.7 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 06/28/93 06/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
DS SA	80	37.5			21	DM-6		GM	**SILTY GRAVEL**, dark gray and brown mottled, dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							30		
DS SA	84	36.8			84	DM-7		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
	75	42.6			78	DM-8	35		brownish-gray
									SAPROLITE, brown and orange-brown mottled, soft, weak, highly weathered, vesicular gray-brown and orange-brown mottled, very closely fractured
UC	69	23.9			67	DM-9	40		
UC	70	43.8			51	DM-10	45		dark gray, soft to moderately hard, weak to moderately strong
							50		

BORING A4-CL

BORING LOCATION: Center Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +407.7 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 06/28/93 06/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
									gray-brown
			80			CB-18	80		
									BASALT, light gray, hard, strong to moderately strong, moderately to slightly weathered, vesicular - 'A'a
			75	33		CB-19	85		
			60	20		CB-20			reddish-brown, soft to moderately hard, moderately strong, moderately weathered, very closely fractured
			60	7		CB-21	90		
									Bottom of Boring No. A4-CL ? 93.0 ft.
							95		
							100		

BORING A4-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.9 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 09/14/93 09/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
									reddish-brown
			50		48	DM-6 CB-7			
							30		
			68			CB-8			gray to reddish-brown
							35		
			70			CB-9			
									CLINKER, gray, soft to moderately hard, weak, highly weathered
									SAPROLITE, gray, soft, weak, highly weathered, very closely fractured
							40		
			68			CB-10			extremely to completely weathered
							45		
			77			CB-11			gray-brown to greenish gray, soft to moderately hard, weak to moderately strong, highly to extremely weathered
							50		

BORING A4-CL

BORING LOCATION: Center Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +407.7 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 06/28/93 06/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
								GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown, dense, dry, fine to coarse sand, fine to coarse gravel, disseminated organic matter - Alluvium
CN	73	46.6			18	DM-1			
								CH	**SILTY, GRAVELLY CLAY**, brown, very stiff, moist, fine to coarse gravel - Alluvium
UC	69	49.9			33	DM-2	5		
UC	76	44.4			56	DM-3	10	GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
UC PI	73	46.3			44	DM-4	15		
UC	77	44.0			94	DM-5	20		wet to saturated
							25		

BORING A4-CL

BORING LOCATION: Center Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +407.7 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 06/28/93 06/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	75	40.2			66	DM-11			
			45			CB-12			
			80			CB-13			dark gray to brown
							55		
			100			CB-14			dark gray, soft, weak
							60		
			80			CB-15			dark brown, soft to moderately hard, weak to moderately strong, very closely fractured
							65		gray, moderately weathered
			80			CB-16			
							70		
									soft, weak to moderately strong, highly weathered
			83			CB-17			
							75		gray-green, soft to moderately hard

BORING A4-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.9 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 09/14/93 09/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
DS PI PR	73	55.1				BK-1		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
PI					53	DM-2	5		
					38	DM-3	10		gray-brown
					55	DM-4	15		gray, wet to saturated
DS	65	55.7			56	DM-5	20		saturated
							25		

PAUL COLIN WEIDIG
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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B14 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\H-3\H3030\ LOGSCR07 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	149	470

BORING A4-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.9 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 09/14/93 09/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			20			CB-12				gray-brown, soft, weak, extremely weathered
							55			
			87			CB-13				
							60			
			80			CB-14				reddish-gray, weak to moderately strong, highly weathered
							65			
			80			CB-15				
							70			
			90			CB-16				gray, soft to moderately hard
							75			

BORING A4-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.9 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 09/14/93 09/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100	0		CB-22				**BASALT**, gray, moderately hard, moderately weathered, very closely fractured - 'A'a
							105			**ASH AND CINDERS**, brown to dark brown, moderately hard to hard, moderately strong, highly to moderately weathered
			65	0		CB-23				**ASH**, brown to dark brown, moderately hard to hard, weak to moderately strong, moderately weathered
							110			**CLINKER**, gray-brown, hard, moderately strong, moderately weathered
			100	80		CB-24				
							115			**BASALT**, gray, hard, strong, slightly weathered, moderately fractured, vesicular - 'A'a
UC	167	2.2	60	23		CB-25				reddish-brown, soft, weak to moderately strong, highly weathered
							120			
			90	80		CB-26				gray, hard, strong, slightly weathered, closely fractured
							125			

BORING A4-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.7 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 10/17/93 10/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	**SILTY, CLAYEY, GRAVEL, COBBLES AND BOULDERS**, mottled brown, medium-dense to dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
CN	73	46.2			20	DM-1	5			
					53	DM-2	10			dense to very dense, wet to saturated
			67			CB-3	15			gray-brown, very dense, saturated
			30			CB-4	20			
							25			

BORING A4-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.7 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 10/17/93 10/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			60			CB-10				**SAPROLITE**, dark brown to brown, soft, weak, highly to extremely weathered, very closely fractured dark brown to brown
							55			
			40			CB-11				gray-brown, soft to moderately hard, weak to moderately strong, highly weathered
							60			
			100			CB-12				greenish-gray, vesicular
							65			
			85			CB-13				gray to dark gray-brown
							70			
			80			CB-14				
							75			

BORING A4-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.9 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 09/14/93 09/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-17				reddish-gray, soft
							80			
			100			CB-18				gray, soft to moderately hard
							85			
			50			CB-19				grayish-orange, soft, weak, highly to extremely weathered
							90			
			50			CB-20				**CLINKER**, gray, soft to moderately hard, weak, highly weathered
							95			
			40	0		CB-21				
							100			

BORING A4-IB

BORING LOCATION: 23.5 ft. Lt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.9 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 09/14/93 09/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										Bottom of Boring No. A4-IB ? 125.5 ft.
							130			
							135			
							140			
							145			
							150			

BORING A4-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.7 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 10/17/93 10/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			30			CB-5				brownish-gray, dense to very dense
							30			
			65			CB-6				orange-brown
							35			**SAPROLITE**, gray-brown, soft to moderately hard, weak to moderately strong, highly weathered, closely to very closely fractured
			60			CB-7				**SAPROLITE**, gray, soft, weak, highly weathered, very closely fractured
							40			
			60			CB-8				reddish-brown, extremely weathered
							45			
			80			CB-9				greenish-gray to brown and dark brown mottled
							50			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B15 OF 59 SHEETS

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

ROTATED:
BASE PT: 0.0

LIB: STATE\DOT\I-3\30301\
LOGSORIB 3/21/94 RSG

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	150	470

BORING A4-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.7 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 10/17/93 10/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	123	14.6	100	100		CB-15	80			BASALT, gray, soft to moderately hard, weak to moderately strong, moderately to highly weathered, closely fractured, vesicular - 'A'a
			80	40		CB-16				CLINKER, reddish-brown, soft, weak, highly to extremely weathered
			40	30		CB-17	85			BASALT, gray, soft to moderately hard, weak to moderately strong, moderately weathered, closely fractured, vesicular - 'A'a gray-brown, moderately strong, highly weathered
			20	17		CB-18	90			dark gray-brown, moderately strong to strong, moderately weathered
UC	84	27.1	20	13		CB-19	95			gray-brown, moderately hard, moderately strong
							100			

BORING IB- 1

BORING LOCATION: 23.5 ft. Lt. Sta. 419+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +238.3 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/21/93 07/26/93 | TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, dark brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	88	25.0			100/6"	DM-1	5			light gray to gray, very dense
DS	87	26.4			100/6"	DM-2	10			brownish-gray, moist to wet
	71	38.0								
UC	70	43.0			70/6"	DM-3	15			orange-brown, wet to saturated
					100/6"	DM-4	20			CONGLOMERATE: CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, dense, wet to saturated, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
							25			

BORING IB- 1

BORING LOCATION: 23.5 ft. Lt. Sta. 419+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +238.3 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/21/93 07/26/93 | TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	178	1.1	68			CB-10	55			gray-green
			93			CB-11				greenish-brown, gray and orange mottled
UC	134	4.9	72			CB-12	60			gray, green, orange and brown mottled
			77			CB-13	65			orange, brown and gray-green mottled
			78			CB-14	70			orange-brown
							75			

BORING IB- 1

BORING LOCATION: 23.5 ft. Lt. Sta. 419+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +238.3 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/21/93 07/26/93 | TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			83			CB-20	105			red, brown, orange and gray-green mottled, highly weathered
			85			CB-21	110			red, orange and brown mottled
			85			CB-22	115			reddish-brown and gray-green mottled, highly to extremely weathered
			73			CB-23	120			gray, green, orange and brown mottled
UC	61	65.6	75			CB-24	125			red, brown, gray, green and black mottled

BORING A4-OB

BORING LOCATION: 23.5 ft. Rt. Sta. 477+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +410.7 ft | LOGGED BY: P. Padilla
DATE(S) DRILLED: 10/17/93 10/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	83	51.9	100	50		CB-20				gray, hard, strong, slightly weathered
			93	70		CB-21	105			CLINKER, reddish-brown, soft to moderately hard, weak to moderately strong, moderately weathered
							110			BASALT, brown, hard to moderately hard, strong, moderately weathered, closely to very closely fractured, vesicular - 'A'a
UC	154	4.6	100	65		CB-22				gray, hard, moderately to slightly weathered, closely to moderately fractured
							115			
							120			Bottom of Boring No. A4-OB ? 116.5 ft.
							125			

BORING IB- 1

BORING LOCATION: 23.5 ft. Lt. Sta. 419+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +238.3 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/21/93 07/26/93 | TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
					100/6"	DM-5				dark brown to dark gray-brown, saturated
UC	68	33.0			100/6"	DM-6	30			reddish-brown, very dense
			33			CB-7				
							35			gray-brown, dense
			77			CB-8	40			SAPROLITE, reddish-brown and gray-green mottled, soft, weak, highly to extremely weathered, very closely fractured
			53			CB-9	45			gray, green and orange mottled
							50			

BORING IB- 1

BORING LOCATION: 23.5 ft. Lt. Sta. 419+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +238.3 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/21/93 07/26/93 | TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
DS	76	30.9	88			CB-15				highly weathered
			83			CB-16	80			reddish-brown and gray-green mottled
DS	65	57.5	77			CB-17	85			orange-brown and gray-green mottled, highly to extremely weathered
			88			CB-18	90			orange-brown
			88			CB-19	95			orange, brown, red and green mottled, vesicular
							100			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B16 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\I-3\13030\ LOGSORIB 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	151	470

BORING IB- 1

BORING LOCATION: 23.5 ft. Lt. Sta. 419+50
BORING ELEVATION: +238.3 ft
DATE(S) DRILLED: 07/21/93 07/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-25				red, orange and brown mottled
			73			CB-26	130			dark gray, black, red and orange mottled
			90			CB-27	135			red, white, orange, yellow, gray and green mottled
			100			CB-28	140			gray-green to greenish-brown
UC	84	28.7	98			CB-29	145			gray-green to greenish-brown
							150			

BORING IB- 2

BORING LOCATION: 23.5 ft. Lt. Sta. 421+44
BORING ELEVATION: +238.7 ft
DATE(S) DRILLED: 06/19/93 06/21/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	CLAYEY, GRAVELLY SILT, dark brown, stiff, dry to moist, with finely disseminated organic matter - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
DS	70	46.1			45	DM-1	5		SM GM	SILTY, GRAVELLY SAND, light gray, loose, wet, fine to coarse gravel, fine to coarse sand - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							10		GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
DS	74	43.7			26	DM-2	20			CONGLOMERATE: SILTY, CLAYEY, GRAVELLY SAND, yellow-brown, dense, saturated, fine to coarse sand, fine to coarse gravel, weakly cemented matrix
							25			

BORING IB- 2

BORING LOCATION: 23.5 ft. Lt. Sta. 421+44
BORING ELEVATION: +238.7 ft
DATE(S) DRILLED: 06/19/93 06/21/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			73	0		CB-10	55			soft to moderately hard, highly weathered
			78	0		CB-11	60			gray-brown
UC	59	57.4	93	10		CB-12	65			gray-green, weak to moderately strong, highly to extremely weathered
							70			
							75			Bottom of Boring No. IB-2 ? 68.0 ft.

BORING IB- 3

BORING LOCATION: 23.5 ft. Lt. Sta. 423+50
BORING ELEVATION: +242.2 ft
DATE(S) DRILLED: 06/19/93 06/22/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	93	30.3			121/8"	DM-3				brown, very dense, saturated, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
										SAPROLITE, orange-brown to reddish brown, soft, weak, highly to extremely weathered, vesicular
					105/7"	DM-4	30			reddish-gray
			100			CB-5				
			26			CB-6				
							35			gray-brown, soft to medium-hard, weak to moderately strong, highly weathered, olivine crystals visible in vesicles
			60			CB-7				
			100			CB-8	40			
			70			CB-9				CLINKER, reddish-brown, soft, weak, highly to extremely weathered
							45			
			50			CB-10				SAPROLITE, gray, soft, weak to moderately strong, highly weathered, closely fractured
							50			

BORING IB- 1

BORING LOCATION: 23.5 ft. Lt. Sta. 419+50
BORING ELEVATION: +238.3 ft
DATE(S) DRILLED: 07/21/93 07/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			63			CB-30				gray-green and dark gray mottled, soft to moderately hard, weak to moderately strong, highly weathered
			72			CB-31	155			red, gray, green and brown mottled
			70			CB-32	160			reddish-brown
							165			Bottom of Boring No. IB-1 ? 165.0 ft.
							170			
							175			

BORING IB- 2

BORING LOCATION: 23.5 ft. Lt. Sta. 421+44
BORING ELEVATION: +238.7 ft
DATE(S) DRILLED: 06/19/93 06/21/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	56	52.7			95	DM-3				SAPROLITE, green, soft, weak, highly to extremely weathered
	83	30.5			50/4"	DM-4	30			
			50			CB-5				orange-brown and gray-green mottled
							35			reddish-brown, soft to moderately hard, weak to moderately strong
			52			CB-6				
			93			CB-7	40			dark gray-green, highly weathered
UC	161	1.1	87	28		CB-8	45			gray-green, soft, highly to extremely weathered, vesicular
			63	9		CB-9				moderately strong
							50			

BORING IB- 3

BORING LOCATION: 23.5 ft. Lt. Sta. 423+50
BORING ELEVATION: +242.2 ft
DATE(S) DRILLED: 06/19/93 06/22/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, dense to very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							5		GM GC	SILTY, CLAYEY COBBLES AND BOULDERS, reddish-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							10			
UC	86	35.2			35	DM-1	15			CONGLOMERATE: CLAYEY, GRAVELLY SAND, gray-brown, medium-dense to dense, saturated, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
										CONGLOMERATE: SILTY, GRAVELLY SAND, brown, medium-dense to dense, saturated, fine to coarse sand, fine to coarse gravel, trace of clay, highly weathered, weakly cemented matrix
SA	78	36.8			103/11"	DM-2	20			CONGLOMERATE: CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, very dense, saturated, fine to coarse sand, fine to coarse gravel, trace of clay, highly weathered, weakly cemented matrix
							25			CONGLOMERATE: CLAYEY GRAVEL,

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B17 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\I-3\H3030\ LOGBORTO 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	152	470

BORING IB- 3

BORING LOCATION: 23.5 ft. Lt. Sta. 423+50
BORING ELEVATION: +242.2 ft
DATE(S) DRILLED: 06/19/93 06/22/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										weak
			60			CB-11				
							55			CLINKER, brown, hard, moderately strong, moderately to highly weathered
			90			CB-12				SAPROLITE, gray-green, soft to moderately hard, moderately strong, highly weathered, closely fractured, vesicular
		60.5	90			CB-13	60			gray-brown
			96			CB-14	65			reddish-brown to gray, soft, weak, highly to extremely weathered
			90			CB-15	70			
							75			

BORING IB- 4

BORING LOCATION: 23.5 ft. Lt. Sta. 425+50
BORING ELEVATION: +248.0 ft
DATE(S) DRILLED: 07/30/93 08/02/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	SILTY CLAY, orange-brown, soft, moist - Alluvium
							5		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, gray and reddish-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	99	13.1			100/6"	DM-1				
	116	18.8			100/6"	DM-2	10			gray-brown, dense to very dense, moist to wet
	70	49.8			100/6"	DM-3	15			gray, saturated
					20/6"	DM-4	20			gray-green, black, brown and orange, very dense, saturated
			72			CB-5				
							25			

BORING IB- 4

BORING LOCATION: 23.5 ft. Lt. Sta. 425+50
BORING ELEVATION: +248.0 ft
DATE(S) DRILLED: 07/30/93 08/02/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	70	50.3	88			CB-11				green-black, soft, weak, highly to extremely weathered, very closely fractured, vesicular
	61	60.6	78			CB-12	55			dark green, brown and reddish-brown, extremely weathered
			80			CB-13	60			dark green, reddish-brown, highly to extremely weathered, olivine and vesuvianite crystals visible in vesicles
			72			CB-14	65			dark green-black
	64	60.0	80			CB-15	70			red, brown, green and orange mottled
							75			

BORING IB- 4

BORING LOCATION: 23.5 ft. Lt. Sta. 425+50
BORING ELEVATION: +248.0 ft
DATE(S) DRILLED: 07/30/93 08/02/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			82			CB-22				green, gray, red and brown mottled
							105			BASALT, greenish-gray to brown, moderately hard, highly weathered, closely fractured, vesicular, olivine crystals visible in vesicles - 'A'a
UC	113	17.5	100	100		CB-23				gray, brown and red mottled, medium-hard to hard, moderately strong to strong, moderately weathered
							110			
UC	134	8.6	100	100		CB-24				brown, red and gray mottled, soft to medium-hard, weak to moderately strong, highly weathered
							115			
UC	147	5.5	80	53		CB-25				brown, red and gray mottled, medium-hard to hard, moderately strong to strong
							120			
										Bottom of Boring No. IB-4 ? 122.0 ft.
							125			

BORING IB- 3

BORING LOCATION: 23.5 ft. Lt. Sta. 423+50
BORING ELEVATION: +242.2 ft
DATE(S) DRILLED: 06/19/93 06/22/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										Bottom of Boring IB-3 ? 77.5 ft.
							80			
							85			
							90			
							95			
							100			

BORING IB- 4

BORING LOCATION: 23.5 ft. Lt. Sta. 425+50
BORING ELEVATION: +248.0 ft
DATE(S) DRILLED: 07/30/93 08/02/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			72			CB-6			GM	SILTY GRAVEL, COBBLES AND BOULDERS, gray-green, black and brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
			48			CB-7	30		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-green, gray and brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
			77			CB-8	35			CONGLOMERATE: SILTY GRAVEL, COBBLES AND BOULDERS, gray, brown and orange, dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
			67			CB-9	40			reddish-brown to brown, very dense
			78			CB-10	45			orange-brown and red-brown
							50			SAPROLITE, very dark

BORING IB- 4

BORING LOCATION: 23.5 ft. Lt. Sta. 425+50
BORING ELEVATION: +248.0 ft
DATE(S) DRILLED: 07/30/93 08/02/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			88			CB-16				very dark green-black and purple mottled
			60			CB-17	80			red-brown, gray to orange-brown mottled
			77			CB-18	85			orange, red-brown, and dark green to black mottled
			100			CB-19	90			greenish-gray
			97			CB-20	95			green, gray, red and brown mottled
			0			CB-21				green, gray, red and brown mottled
							100			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B18 OF 59 SHEETS

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

ROTATED:
BASE PT: 0.0

LIB: STATE\DOT\I-3\30\30\
LOGBOR11 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	153	470

BORING IB- 5

BORING LOCATION: 19 ft. Lt. Sta. 427+30 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +257.9 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 06/30/93 07/03/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, dark brown, stiff, moist, with gravel and roots - Alluvium
Pi UC	78	28.8			54	DM-1				
UC	74	37.6			82	DM-2	5			mottled dark brown and light brown, dry, with weathered rock fragments
									GM	**SILTY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							10			
UC	69	38.5			33	DM-3			MH	**CLAYEY SILT**, mottled orange-brown, stiff, wet
									GM	**SILTY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							15			
	94	30.4			74/9"	DM-4			GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, dark brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							20			
			20			CB-5				gray-brown
							25			

BORING IB- 5

BORING LOCATION: 19 ft. Lt. Sta. 427+30 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +257.9 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 06/30/93 07/03/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			50			CB-11				gray, closely fractured
							55			
			100			CB-12				gray, weak to moderately strong, olivine crystals visible in vesicles
	82	30.0	75			CB-13				
							60			
			75			CB-14				
							65			
			30			CB-15				greenish-gray, highly to extremely weathered
							70			
			50			CB-16				
							75			

BORING IB- 6

BORING LOCATION: 28 ft. Lt. Sta. 429+30 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +267.4 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 06/28/93 06/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, dark brown, dry, very stiff - Alluvium
CN	98	23.9			57	DM-1				
							5		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, orange-brown, dense to very dense, dry, fine to coarse sand, fine to coarse gravel - Alluvium
UC	81	41.2			84/10"	DM-2	10			brown to reddish-brown
										light brown and gray mottled
UC	72	44.6			50/6"	DM-3	15			dark brown, saturated
					41	DM-4	20			orange-brown, saturated
UC	69	51.0			152/10"	DM-5	25			

BORING IB- 6

BORING LOCATION: 28 ft. Lt. Sta. 429+30 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +267.4 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 06/28/93 06/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										highly weathered
UC	74	42.6			79/8"	DM-11	55			green-gray, weak, with thin cinder partings
						CB-12				
			75			CB-13				mottled brown and dark gray
							60			
			100			CB-14				dark gray, weak to moderately strong
							65			
			90			CB-15				mottled dark gray and gray-brown
							70			
			50			CB-16				mottled gray-green, soft, moderately strong, moderately weathered
							75			

BORING IB- 5

BORING LOCATION: 19 ft. Lt. Sta. 427+30 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +257.9 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 06/30/93 07/03/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			75			CB-6			GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, reddish-brown to gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							30			**SAPROLITE**, greenish-gray, soft, weak, highly to extremely weathered, very closely fractured
			60			CB-7				gray, highly weathered
							35			light brown to greenish-gray, highly to extremely weathered
			50			CB-8				gray, weak to moderately strong, moderately weathered
							40			
			50			CB-9				greenish gray to dark gray, weak, highly to extremely weathered
							45			
			50			CB-10				greenish gray to dark gray, highly weathered
							50			

BORING IB- 5

BORING LOCATION: 19 ft. Lt. Sta. 427+30 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +257.9 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 06/30/93 07/03/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			50			CB-17				dark gray
	85	18.3					80			
			30			CB-18				gray-green
							85			
DS	59	65.5	100			CB-19				
							90			**CLINKER**, mottled dark gray and dark brown, very soft, extremely weathered, faint vesicles
										Bottom of Boring No. IB-5 ? 91.0 ft.
							95			
							100			

BORING IB- 6

BORING LOCATION: 28 ft. Lt. Sta. 429+30 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +267.4 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 06/28/93 06/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	66	52.9			89/6"	DM-6	30			
										SAPROLITE, reddish brown, soft, weak, highly to extremely weathered
	77	35.2			178/9"	DM-7	35			gray-green
UC	77	39.8			140/8"	DM-8	40			mottled orange and brown
	64	58.0			75	DM-9	45			mottled gray and light brown
UC	72	45.8			89/6"	DM-10	50			mottled gray and brown, soft, weak to moderately strong,

PAUL COLIN WEIDIG
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No. 8047-C
HAWAII, U.S.A.

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B19 OF 59 SHEETS

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

ROTATED:
BASE PT: 0.0

LIB: STATE\DOT\I-3\I-3030\
LOGBOR12 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	154	470

BORING IB- 6

BORING LOCATION: 28 ft. Lt. Sta. 429+30 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +267.4 ft | LOGGED BY: E. Menor
DATE(S) DRILLED: 06/28/93 06/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	89	18.3	100			CB-17				dark gray, weak, highly weathered
							80			
			0			CB-18				highly to moderately weathered, very closely fractured
							85			
			0			CB-19				gray-green, weak to moderately strong, highly weathered
							90			Bottom of Boring No. IB-6 ? 89.5 ft.
							95			
							100			

BORING IB- 7

BORING LOCATION: 23.5 ft. Lt. Sta. 431+00 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +264.3 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/26/93 07/28/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			90			CB-6				CONGLOMERATE: SILTY, SANDY, CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, very dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
							30			
			97			CB-7				gray, saturated
							35			
			80			CB-8				gray-brown
							40			
			90			CB-9				brown
							45			
			95			CB-10				gray
							50			

BORING IB- 7

BORING LOCATION: 23.5 ft. Lt. Sta. 431+00 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +264.3 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/26/93 07/28/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			90			CB-16				medium brownish-gray, closely fractured
							80			
UC	88	20.7	100			CB-17				light brownish-gray
							85			
			100			CB-18				medium brownish-gray, weak to moderately strong
							90			
			100			CB-19				light brownish-gray
							95			
UC	72	51.0	98			CB-20				medium brownish-gray
							100			

BORING IB- 8

BORING LOCATION: 23.5 ft. Lt. Sta. 433+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +268.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/30/93 07/07/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	CLAYEY, GRAVELLY SILT, dark brown, stiff, moist, fine to coarse gravel, with finely disseminated organic matter - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, dense to very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							5			
							10		SC GC	CLAYEY, SILTY, GRAVELLY SAND, brown, loose, saturated, fine to coarse gravel, fine to coarse sand - Alluvium
DS	69	49.0			77	DM-1				
SA	78	31.7			39	DM-2	15			orange-brown and red-brown mottled, dense, moist
							20			
UC	88	34.5	47		91/8"	DM-3 CB-4				CONGLOMERATE: SILTY, CLAYEY GRAVEL AND COBBLES, gray-green, dense to very dense, moist, highly weathered, weakly cemented matrix - Conglomerate
							25			

BORING IB- 7

BORING LOCATION: 23.5 ft. Lt. Sta. 431+00 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +264.3 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/26/93 07/28/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									OL GM GC	SANDY SILT, dark gray to black, loose, moist, fine to medium sand, with finely disseminated organic matter
										SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
			78			CB-1	5			
			87			CB-2				wet to saturated
							10			
			60			CB-3				brown, saturated
							15			
			20			CB-4				reddish-brown
							20			
			80			CB-5				orange-gray
							25			

BORING IB- 7

BORING LOCATION: 23.5 ft. Lt. Sta. 431+00 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +264.3 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/26/93 07/28/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	112	17.7	80			CB-11				dark gray, moist
							55			
			80			CB-12				light to medium gray
							60			
			100			CB-13				SAPROLITE, tan and gray to gray-brown mottled, soft, weak, highly weathered
							65			
UC	75	41.0	98			CB-14				light to dark gray and brown mottled
							70			
UC	86	7.1	97			CB-15				dark gray to gray brown
							75			

BORING IB- 7

BORING LOCATION: 23.5 ft. Lt. Sta. 431+00 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +264.3 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/26/93 07/28/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	118	4.7	88	50		CB-21				BASALT, dark gray, soft to moderately hard, weak to moderately strong, highly weathered, closely fractured - 'A'a
							105			
UC	123	5.8	100	40		CB-22				
							110			
										Bottom of Boring No. IB-7 ? 112.0 ft.
							115			
							120			
							125			

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HAWAII, U.S.A.

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PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B20 OF 59 SHEETS

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

ROTATED: BASE PT: 0.0

LIB: STATE\DOT\I-3\3030\ LOGSGR13 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	155	470

BORING IB- 8

BORING LOCATION: 23.5 ft. Lt. Sta. 433+00
BORING ELEVATION: +268.8 ft
DATE(S) DRILLED: 06/30/93 07/07/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			47			CB-5				brown to gray-brown
			70			CB-6	30			gray to gray-brown
			78			CB-7	35			brown to gray-brown
			63			CB-8	40			gray to dark brown
			67			CB-9	45			red-brown to orange-brown and gray-brown mottled, moist to wet
							50			

BORING IB- 9

BORING LOCATION: 23.5 ft. Lt. Sta. 435+30
BORING ELEVATION: +271.8 ft
DATE(S) DRILLED: 08/03/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	SILTY CLAY, brown, soft, moist - Alluvium
									GM GC	SILTY, CLAYEY, GRAVEL, COBBLES AND BOULDERS, reddish-brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
					100	DM-1	5			orange-brown, dense to very dense
		30.3			49	SP-2	10			brown, moist to wet
		34.1			100	SP-3	15			gray-green and brown mottled, very dense, wet to saturated
		42.9			58	SP-4	20			greenish-brown, saturated
			17			CB-5	25			

BORING IB- 9

BORING LOCATION: 23.5 ft. Lt. Sta. 435+30
BORING ELEVATION: +271.8 ft
DATE(S) DRILLED: 08/03/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-11	55			red, brown, black and gray mottled
			93			CB-12	60			red, brown and yellow-orange mottled
			95			CB-13	65			red, brown and black mottled
			97			CB-14	70			gray-green, black and orange mottled
UC	80	36.7	100			CB-15	75			gray-green and reddish-brown, vesicular

BORING IB- 9

BORING LOCATION: 23.5 ft. Lt. Sta. 435+30
BORING ELEVATION: +271.8 ft
DATE(S) DRILLED: 08/03/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100	67		CB-21	105			gray-green to brown, moderately weathered
										Bottom of Boring No. IB-9 ? 108.0 ft.
							110			
							115			
							120			
							125			

BORING IB- 8

BORING LOCATION: 23.5 ft. Lt. Sta. 433+00
BORING ELEVATION: +268.8 ft
DATE(S) DRILLED: 06/30/93 07/07/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										SAPROLITE, tan to orange-brown, soft, weak to moderately strong, highly to extremely weathered
		59.6	73			CB-10	55			
			67			CB-11				light orange-brown to tan, soft to moderately hard, highly weathered
			63			CB-12	60			reddish-brown to dark brown, highly to extremely weathered, vesicular
							65			
										Bottom of Boring No. IB-8 ? 66.0 ft
							70			
							75			

BORING IB- 9

BORING LOCATION: 23.5 ft. Lt. Sta. 435+30
BORING ELEVATION: +271.8 ft
DATE(S) DRILLED: 08/03/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										gray to dark gray
			57			CB-6	30			orange-brown
			97			CB-7	35			reddish-brown to yellow-brown
			82			CB-8	40			
			87			CB-9	45			SAPROLITE, red, brown and gray mottled, soft, weak, very closely fractured, extremely weathered
			83			CB-10	50			red, brown and green mottled

BORING IB- 9

BORING LOCATION: 23.5 ft. Lt. Sta. 435+30
BORING ELEVATION: +271.8 ft
DATE(S) DRILLED: 08/03/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-16	80			red-brown and black mottled
			100			CB-17	85			reddish-brown to brown
			97			CB-18	90			gray, red and brown mottled
UC	116	7.7	80	27		CB-19	95			BASALT, gray-green, soft to medium hard, weak, closely fractured, highly weathered, vesicular - 'A'a
UC	129	7.6	97	27		CB-20	100			gray-brown, moderately strong

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul C. Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994

SHEET No. B21 OF 59 SHEETS

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

ROTATED:
BASE PT: 0.0

LIB: STATE\DOT\I-3\3030\
LOGBOR14 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	156	470

BORING IB-10

BORING LOCATION: 23.5 ft. Lt. Sta. 437+30
BORING ELEVATION: +286.4 ft
DATE(S) DRILLED: 08/03/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	**SILTY, SANDY, GRAVELLY CLAY,** brownish-gray, very stiff, moist, fine to coarse sand, fine to medium gravel - Alluvium
					24	DM-1	5			
	85	23.7			70/3"	DM-2	10			coarse sand, fine to medium gravel - Alluvium
	84	32.3			28	DM-3	15		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							20			
							25			

BORING IB-10

BORING LOCATION: 23.5 ft. Lt. Sta. 437+30
BORING ELEVATION: +286.4 ft
DATE(S) DRILLED: 08/03/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-10	55			**SAPROLITE,** dark gray, soft, weak, highly weathered, very closely fractured
		64.9	90			CB-11	60			
UC	60	61.2	90			CB-12	65			weak to moderately strong
										gray-black, soft to friable, weak, highly to extremely weathered
			98			CB-13	70			dark gray, weak to moderately strong, highly weathered, closely fractured
			80			CB-14	75			greenish-brown, highly to extremely weathered

BORING IB-10

BORING LOCATION: 23.5 ft. Lt. Sta. 437+30
BORING ELEVATION: +286.4 ft
DATE(S) DRILLED: 08/03/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	86	29.5	100			CB-20	105			dark gray and purple mottled, highly to extremely weathered
			100			CB-21	110			dark gray to medium light gray
							115			Bottom of Boring No. IB-10 ? 112.5 ft.
							120			
							125			

BORING IB-11

BORING LOCATION: 23.5 ft. Lt. Sta. 439+30
BORING ELEVATION: +287.3 ft
DATE(S) DRILLED: 07/15/93 07/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
					100/6"	DM-5				orange-brown and reddish-brown mottled, very dense, wet, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
			70			CB-6	30			
			57			CB-7	35			
UC	150	1.9	53			CB-8	40			wet to saturated
UC	62	58.6	88			CB-9	45			saturated
							50			

BORING IB-10

BORING LOCATION: 23.5 ft. Lt. Sta. 437+30
BORING ELEVATION: +286.4 ft
DATE(S) DRILLED: 08/03/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	86	30.7			70/4"	DM-4				
			60			CB-5	30			gray
			65			CB-6	35			**CONGLOMERATE: SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** orange-brown, very dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
			80			CB-7	40			brown to orange-brown, moist to wet
			80			CB-8	45			brown to dark gray, moist
		59.7	98			CB-9	50			orange-brown

BORING IB-10

BORING LOCATION: 23.5 ft. Lt. Sta. 437+30
BORING ELEVATION: +286.4 ft
DATE(S) DRILLED: 08/03/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			75			CB-15	80			dark gray, highly weathered
			88			CB-16	85			orange to brown-gray, weak, highly to extremely weathered
UC	75	36.3	87			CB-17	90			brownish-gray, weak to moderately strong, highly weathered
UC	97	32.7	80			CB-18	95			weak
UC	68	46.6	100			CB-19	100			weak to moderately strong

BORING IB-11

BORING LOCATION: 23.5 ft. Lt. Sta. 439+30
BORING ELEVATION: +287.3 ft
DATE(S) DRILLED: 07/15/93 07/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT,** very dark brown, soft to medium-stiff, dry to moist - Alluvium
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** gray-brown, dense to very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
									GM GC	**SILTY, CLAYEY GRAVEL,** gray-brown, medium-dense, moist to saturated - Alluvium
	105	21.0			67/7"	DM-1	5		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** gray-brown, dense to very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
		18.5			90/7"	DM-2	10			**CONGLOMERATE: CLAYEY GRAVEL, COBBLES AND BOULDERS,** orange-brown and reddish-brown mottled, dense, moist to wet, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
		31.8			34	DM-3	15			**CONGLOMERATE: SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** orange-brown and reddish-brown mottled, dense, wet, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
	106	20.1			104/10"	DM-4	20			
							25			**CONGLOMERATE: CLAYEY GRAVEL, COBBLES AND BOULDERS,**

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B22 OF 59 SHEETS

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

ROTATED:
BASE PT: 0.0

LIB: STATE\DOT\I-3\30301\LOGS0R15 3/21/94 RSG

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	157	470

BORING IB-11

BORING LOCATION: 23.5 ft. Lt. Sta. 439+30 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +287.3 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 07/15/93 07/20/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			85			CB-10				reddish-brown to brown
	98	26.2	83			CB-11	55			orange-brown and reddish-brown mottled
			62			CB-12	60			SAPROLITE, very dark gray to dark gray-green, soft, weak, highly to extremely weathered, vesicular
			53			CB-13	65			very dark gray to blue-gray and black mottled
UC	58	61.7	100			CB-14	70			dark brown to orange-brown and reddish-brown, olivine and vesuvianite crystals visible in vesicles
							75			

BORING IB-11

BORING LOCATION: 23.5 ft. Lt. Sta. 439+30 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +287.3 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 07/15/93 07/20/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			68			CB-20	105			very dark gray to gray-green, weak to moderately strong
			68			CB-21	110			very dark brown to very dark gray and violet mottled
							115			Bottom of Boring No. IB-11 ? 111.0 ft.
							120			
							125			

BORING IB-12

BORING LOCATION: 19 ft. Lt. Sta. 441+10 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +311.1 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 07/21/93 07/24/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	79	41.5			58	DM-5				orange-brown to reddish-brown
							30			brownish-gray, moist to wet
							35			reddish-brown to brownish-gray, wet to saturated
			88			CB-6	40			orange-brown to reddish-brown
UC	163	1.9	87			CB-7	45			orange-brown, moist
							50			

BORING IB-12

BORING LOCATION: 19 ft. Lt. Sta. 441+10 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +311.1 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 07/21/93 07/24/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	90	15.1	98			CB-13				red, brown, black and gray mottled
							80			
UC	70	48.2	98			CB-14				green, brown, orange and red mottled, extremely to completely weathered
							85			
UC	71	52.1	97			CB-15				dark brown, black and orange mottled, extremely weathered
							90			
			88			CB-16				brown, black and purple mottled, extremely to completely weathered
							95			
UC	81	32.4	100			CB-17				dark brown, orange, purple and gray mottled, highly to extremely weathered
							100			

BORING IB-11

BORING LOCATION: 23.5 ft. Lt. Sta. 439+30 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +287.3 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 07/15/93 07/20/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			97			CB-15				dark brown to orange-brown and dark gray
							80			
			67			CB-16				dark gray-green to reddish-brown and purple mottled
							85			
			60			CB-17				purple-brown and black mottled
							90			
			77			CB-18				violet, brown and dark gray mottled
							95			
UC	118	9.7	92			CB-19				dark gray-green to black
							100			

BORING IB-12

BORING LOCATION: 19 ft. Lt. Sta. 441+10 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +311.1 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 07/21/93 07/24/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
					39	DM-1	5		MH	CLAYEY, SANDY, GRAVELLY SILT, very dark brown, stiff to very stiff, moist, fine to coarse sand, fine to coarse gravel - Colluvium
DS	75	39.1			49	DM-2	10		GM GC	CLAYEY, SILTY GRAVEL, COBBLES AND BOULDERS, brownish-gray, very dense, moist, fine to coarse sand, fine to coarse gravel, incipiently cemented - Older Alluvium
					43	DM-3	15			
					63	DM-4	20			dark brownish-gray
							25			

BORING IB-12

BORING LOCATION: 19 ft. Lt. Sta. 441+10 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +311.1 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 07/21/93 07/24/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			93			CB-8				CONGLOMERATE: CLAYEY, SILTY GRAVEL, orange-brown to reddish-brown, very dense, wet, fine to coarse sand, fine to coarse gravel, highly weathered, weakly to well cemented matrix
							55			
UC	71	46.3	98			CB-9				reddish-brown
							60			
			95			CB-10				red, orange, purple and brown mottled, wet
							65			
			47			CB-11				reddish-orange and brown mottled
							70			
UC	57	55.3	98			CB-12				SAPROLITE, red, brown and black mottled, soft, weak, extremely weathered, closely fractured, vesicular
							75			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

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PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B23 OF 59 SHEETS

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

ROTATED: BASE PT: 0.0

LIB: STATE\DOT\I-3\H3030\ LOGSOR16 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	158	470

BORING IB-12

BORING LOCATION: 19 ft. Lt. Sta. 441+10
BORING ELEVATION: +311.1 ft
DATE(S) DRILLED: 07/21/93 07/24/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	84	32.5	100			CB-18				black and violet mottled, weak to moderately strong, extremely weathered
							105			BASALT, dark gray, very hard, very strong, moderately to slightly weathered, moderately fractured, vesicular - 'A'a
UC	172	2.2	100	62		CB-19				
							110			
UC	146	6.1	87	42		CB-20				dark gray to green, hard to very hard, strong
							115			
										Bottom of Boring No. IB-12 ? 116.0 ft.
							120			
							125			

BORING IB-13

BORING LOCATION: 23.5 ft. Lt. Sta. 443+10
BORING ELEVATION: +308.9 ft
DATE(S) DRILLED: 08/05/93 08/10/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
					50	SP-3				
							30			
					88	DM-4				saturated
							35			
					77	DM-5	40			
			0			CB-6				CONGLOMERATE: CLAYEY GRAVEL, COBBLES AND BOULDERS, orange-brown and reddish-brown, mottled, hard, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
							45			
			0			CB-7				moist
							50			

BORING IB-13

BORING LOCATION: 23.5 ft. Lt. Sta. 443+10
BORING ELEVATION: +308.9 ft
DATE(S) DRILLED: 08/05/93 08/10/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	154	8.2	98			CB-13				dark green and red mottled
							80			
			78			CB-14				dark green and red mottled
							85			
			82			CB-15				purple, black and brown mottled, extremely to completely weathered
							90			
UC	98	23.3	60			CB-16				
							95			
			88			CB-17				
							100			

BORING IB-14

BORING LOCATION: 26.5 ft. Lt. Sta. 445+05
BORING ELEVATION: 299.6 ft
DATE(S) DRILLED: 08/02/93 08/04/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	CLAYEY, SILTY GRAVEL, COBBLES AND BOULDERS, dark brown-red brown, dense, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							5			
							10			orange-brown, very dense, saturated
							15			
	100	22.2			58	DM-1				
							20			
	75	46.9			80/8"	DM-2				reddish-brown to dark gray-brown
							25			

BORING IB-13

BORING LOCATION: 23.5 ft. Lt. Sta. 443+10
BORING ELEVATION: +308.9 ft
DATE(S) DRILLED: 08/05/93 08/10/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GC	CLAYEY GRAVEL, orange-brown to reddish-brown, loose, moist, fine to coarse sand, fine to coarse gravel - Colluvium
									GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, orange-brown and reddish-brown mottled, dense, moist to wet, fine to coarse sand, fine to coarse gravel, incipiently cemented - Older Alluvium
							5			
					50/2"	DM-1				saturated
							10			
					50/3"	DM-2				
							15			wet to saturated
							20			
							25			

BORING IB-13

BORING LOCATION: 23.5 ft. Lt. Sta. 443+10
BORING ELEVATION: +308.9 ft
DATE(S) DRILLED: 08/05/93 08/10/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	73	35.4	77			CB-8				SAPROLITE, green, soft, weak, highly to extremely weathered, closely fractured, vesicular
							55			black, brown, orange and red mottled, extremely to completely weathered
			78			CB-9				red-brown to brownish-purple
							60			
UC	115	16.8	95			CB-10				dark gray, green and violet mottled
							65			
			70			CB-11				purple, black and brown mottled
							70			
UC	76	16.9	100			CB-12				purple and black mottled, highly weathered
							75			

BORING IB-13

BORING LOCATION: 23.5 ft. Lt. Sta. 443+10
BORING ELEVATION: +308.9 ft
DATE(S) DRILLED: 08/05/93 08/10/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	160	6.3	97	42		CB-18				BASALT, dark grey, soft to moderately hard, weak to moderately strong, moderately fractured, slightly weathered, vesicular - 'A'a
							105			
UC	81	16.2	100	90		CB-19				red, orange, yellow and purple mottled, soft, highly weathered
							110			
										Bottom of Boring No. IB-13 ? 111.5 ft.
							115			
							120			
							125			

ORIGINAL PLANT	SURVEY PLOTTED BY	DATE
	DRAWN BY	" "
	TRACED BY	" "
NOTE BOOK	DESIGNED BY	" "
	QUANTITIES BY	" "
No.	CHECKED BY	" "

ROTATED: BASE PT: 0.0

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

PAUL COLIN WEIDIG — REGISTERED PROFESSIONAL ENGINEER No. 8047-C — HAWAII, U.S.A.

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B24 OF 59 SHEETS

LIB: STATE\DOT\I-3\H3030\ LOGSOR17 3/21/94 RSG

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	159	470

BORING IB-14

BORING LOCATION: 26.5 ft. Lt. Sta. 445+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: 299.6 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 08/02/93 08/04/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	76	45.8			80/8"	DM-3				orange-brown
							30			
	69	55.1			51	DM-4				SAPROLITE, purple, orange and brown mottled, soft, weak, highly to extremely weathered
							35			
UC	70	53.0			80/9"	DM-5				purple and black mottled
			98			CB-6				
							40			
			95			CB-7				green to very dark gray, highly weathered, vesicular, olivine and vesuvianite crystals visible in vesicles
							45			
			83			CB-8				dark green, purple, brown and black mottled, highly to extremely weathered, very closely fractured
							50			

BORING IB-14

BORING LOCATION: 26.5 ft. Lt. Sta. 445+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: 299.6 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 08/02/93 08/04/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	76	34.4	75			CB-14				very dark gray to black, brown and purple mottled, highly to extremely weathered
							80			
			72			CB-15				purple to orange-brown, highly weathered
							85			
			87			CB-16				
							90			
			93	91		CB-17				
							95			BASALT, very dark gray to gray-green, soft to medium hard, weak to moderately strong, highly weathered, vesicular - 'A'a
							100			Bottom of Boring No. IB-14 ? 96.0 ft.

BORING IB-15

BORING LOCATION: 23.5 ft. Lt. Sta. 447+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +310.9 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 08/05/93 08/07/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	68	52.4			44	DM-5				reddish-brown to orange-brown
			80			CB-6				brown
							30			
			70			CB-7				SAPROLITE, gray and reddish-brown mottled, soft, weak, highly weathered, very closely fractured
							35			
UC	80	35.1	100			CB-8				brown, purple and gray mottled
							40			
			60			CB-9				gray
							45			
			80			CB-10				gray and reddish-brown mottled, weak to moderately strong
							50			

BORING IB-15

BORING LOCATION: 23.5 ft. Lt. Sta. 447+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +310.9 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 08/05/93 08/07/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-16				dark reddish-brown
							80			
UC	112	14.3	80			CB-17				reddish-brown to gray
							85			
UC	132	2.4	90			CB-18				gray, weak to moderately strong, vesicular
							90			
			70			CB-19				brownish-gray, weak to friable
							95			
			90			CB-20				light gray, soft to moderately hard, moderately strong
							100			

BORING IB-14

BORING LOCATION: 26.5 ft. Lt. Sta. 445+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: 299.6 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 08/02/93 08/04/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-9				brown, reddish-brown and very dark gray mottled, highly weathered
							55			
UC	92	16.4	98			CB-10				brown-gray to dark blue gray to green-gray
							60			
UC	58	60.2	95			CB-11				dark brown, orange-brown and violet mottled
							65			
	61	31.5	95			CB-12				greenish-gray to brownish-gray, highly to extremely weathered
							70			
UC	80	25.3	93			CB-13				reddish-brown, purple and gray-green mottled
							75			

BORING IB-15

BORING LOCATION: 23.5 ft. Lt. Sta. 447+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +310.9 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 08/05/93 08/07/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, brown-gray, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
		11.2			70/5"	DM-1	5			
							10			
		8.4			138/10"	DM-2				moist to wet
		32.6			51	DM-3	15			orange-brown to gray-brown, saturated
DS	66	52.1			43	DM-4	20			brown-gray
							25			

BORING IB-15

BORING LOCATION: 23.5 ft. Lt. Sta. 447+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +310.9 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 08/05/93 08/07/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			70			CB-11				brownish-gray
							55			
			0			CB-12				weak to friable, very closely fractured
							60			
UC	56	59.8	70			CB-13				closely fractured
							65			
			50			CB-14				gray
							70			
			95			CB-15				reddish-brown
							75			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B25 OF 59 SHEETS

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

ROTATED: BASE FT. 0.0

LIB: STATE\DOT\H-3\I-3030\ LOGBORIB 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	160	470

BORING IB-15

BORING LOCATION: 23.5 ft. Lt. Sta. 447+05
BORING ELEVATION: +310.9 ft
DATE(S) DRILLED: 08/05/93 08/07/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	93	26.5	85			CB-21				reddish-brown to gray, weak to friable, very closely fractured
							105			
			70			CB-21				
							110			
UC	81	28.2	95			CB-22				brownish-gray
							115			
										Bottom of Boring No. IB-15 ? 117.0 ft.
							120			
							125			

BORING IB-16

BORING LOCATION: 23.5 ft. Lt. Sta. 449+10
BORING ELEVATION: +315.5 ft
DATE(S) DRILLED: 08/11/93 08/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			70			CB-5				
							30			SAPROLITE, light gray, soft, weak, highly weathered, closely fractured
			50			CB-6				
							35			
			90			CB-7				gray, very closely fractured
							40			
			90			CB-8				medium gray
							45			
UC	74	38.0	90			CB-9				brownish-gray, weak to moderately strong, vesicular
							50			

BORING IB-16

BORING LOCATION: 23.5 ft. Lt. Sta. 449+10
BORING ELEVATION: +315.5 ft
DATE(S) DRILLED: 08/11/93 08/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			38			CB-15				dark gray, weak to friable
							80			
			0			CB-16				dark gray
							85			
			60			CB-17				
							90			
			70			CB-18				weak to moderately strong
							95			
			70			CB-19				medium gray
							100			

BORING IB-16

BORING LOCATION: 23.5 ft. Lt. Sta. 449+10
BORING ELEVATION: +315.5 ft
DATE(S) DRILLED: 08/11/93 08/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										CLINKER, reddish-brown, soft to moderately hard, moderately strong, moderately to slightly weathered, very closely fractured
							130			
							135			
							140			
							145			
							150			Bottom of Boring No. IB-16 ? 125.5 ft.

BORING IB-16

BORING LOCATION: 23.5 ft. Lt. Sta. 449+10
BORING ELEVATION: +315.5 ft
DATE(S) DRILLED: 08/11/93 08/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	SILTY, SANDY CLAY, dark brown, stiff, moist - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium moist to wet, dense to very dense
	83	30.4			52	DM-1	5			
							10			
	87	34.0			61	DM-2			GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, saturated, very dense, fine to coarse sand, fine to coarse gravel - Alluvium
							15			
SA					66	DM-3				
							20			
			60			CB-4				
							25			

BORING IB-16

BORING LOCATION: 23.5 ft. Lt. Sta. 449+10
BORING ELEVATION: +315.5 ft
DATE(S) DRILLED: 08/11/93 08/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-10				dark gray, closely fractured
							55			
UC	100	11.8	95			CB-11				brownish-gray to medium gray
							60			
			80			CB-12				brownish-gray, weak to friable
							65			
			90			CB-13				medium gray, weak to moderately strong
							70			
			60			CB-14				medium gray, very closely fractured
							75			

BORING IB-16

BORING LOCATION: 23.5 ft. Lt. Sta. 449+10
BORING ELEVATION: +315.5 ft
DATE(S) DRILLED: 08/11/93 08/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			85			CB-20				brownish-gray, weak to friable, extremely weathered
							105			
			100	30		CB-21				BASALT, medium gray, moderately hard, moderately to slightly weathered, moderately fractured, vesicular - 'A'a
							110			ASH, dark gray, moderately hard, moderately strong, moderately weathered, very closely fractured, welded texture
UC	129	6.0	100	80		CB-22				BASALT, light gray, moderately hard, moderately strong, moderately to slightly weathered, vesicular - 'A'a
							115			
UC	152	3.5	100	40		CB-23				hard, strong, slightly weathered
							120			
			80	30		CB-24				
							125			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B26 OF 59 SHEETS

ORIGINAL PLAN — SURVEY PLOTTED BY ___ DATE; DRAWN BY ___; TRACED BY ___; DESIGNED BY ___; QUANTITIES BY ___; CHECKED BY ___; NOTE BOOK No. ___

ROTATED: BASE FT. 0.0

LIB: STATE\DOT\I-3\H3030\ LOGSOR19 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	161	470

BORING IB-17

BORING LOCATION: 28 ft. Lt. Sta. 451+10
BORING ELEVATION: +318.8 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
DS PI PR	80	47.5				BK-1			GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** brownish-gray, loose, moist, fine to coarse sand, fine to coarse gravel - Alluvium
CN	68	39.7			47	DM-2	5			brown, dense
SA					125	DM-3	10			
DS	72	46.2			62	DM-4	15			very dense, saturated
					50	DM-5	20			dense, moist
							25			

BORING IB-17

BORING LOCATION: 28 ft. Lt. Sta. 451+10
BORING ELEVATION: +318.8 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-13	55			dark gray, weak to friable
			80			CB-14	60			medium gray, weak
UC	63	50.8	90			CB-15	65			gray-brown, weak to friable, weak, extremely weathered, very closely fractured
			90			CB-16	70			medium to dark gray
			100			CB-17	75			medium gray, weak to moderately strong, highly weathered, closely fractured

BORING IB-17

BORING LOCATION: 28 ft. Lt. Sta. 451+10
BORING ELEVATION: +318.8 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100	20		CB-23	105			**BASALT,** dark gray, soft to moderately hard, moderately strong, moderately to highly weathered, moderately fractured, vesicular - 'A'a
UC	110	17.0	100	90		CB-24	110			
UC	85	23.3	98	90		CB-25	115			moderately strong to strong
UC	107	10.9	100	37		CB-26	120			moderately strong
							125			Bottom of Boring No. IB-17 ? 122.0 ft.

BORING IB-18

BORING LOCATION: 23.5 ft. Lt. Sta. 453+10
BORING ELEVATION: 331.08 ft
DATE(S) DRILLED: 08/11/93 08/13/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			83			CB-6				green-gray, highly to extremely weathered
			100			CB-7	30			gray, brown and yellow mottled
			92			CB-8	35			reddish-brown
	50	74.5	78			CB-9				gray, green and black mottled
			100			CB-10	40			red, brown and yellow-orange mottled, closely fractured
			50			CB-11	45			gray, black and red mottled
			0			CB-12	50			black, yellow and orange mottled, extremely weathered,

BORING IB-17

BORING LOCATION: 28 ft. Lt. Sta. 451+10
BORING ELEVATION: +318.8 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	70	34.0	0		80	DM-6				
			0			CB-7				
			80			CB-8	30			**CONGLOMERATE: SILTY, CLAYEY GRAVEL,** brown, dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
			98			CB-9	35			gray-brown, friable, poorly cemented matrix
			98			CB-10	40			**SAPROLITE,** dark gray to brown, soft, weak, highly to extremely weathered, very closely fractured, vesicular
			97			CB-11	45			dark gray, weak to friable, highly weathered, closely fractured
			90			CB-12	50			medium to dark gray, weak

BORING IB-17

BORING LOCATION: 28 ft. Lt. Sta. 451+10
BORING ELEVATION: +318.8 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	103	19.0	100			CB-18	80			
			78			CB-19	85			dark to medium gray, weak to friable, highly to extremely weathered, very closely fractured
			98			CB-20	90			medium gray
			100			CB-21	95			brownish-gray
UC	78	36.0	85			CB-22	100			

BORING IB-18

BORING LOCATION: 23.5 ft. Lt. Sta. 453+10
BORING ELEVATION: 331.08 ft
DATE(S) DRILLED: 08/11/93 08/13/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	**SILTY, SANDY, GRAVELLY CLAY,** brown, soft, moist, fine to coarse sand, fine to coarse gravel - Alluvium.
			85			CB-1	5		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** brown, moist, very dense, fine to coarse sand, fine to coarse gravel - Alluvium.
			45			CB-2	10			gray-brown
			80			CB-3	15			brownish-gray
			52			CB-4	20			**SAPROLITE,** gray, soft, weak, highly to extremely weathered, vesicular
	57	53.4	55			CB-5	25			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul C. Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B27 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\I-3\I3330\ LOGS\R20 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	162	470

BORING IB-18

BORING LOCATION: 23.5 ft. Lt. Sta. 453+10 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: 331.08 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 08/11/93 08/13/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			96			CB-13				very closely fractured red, yellow and orange mottled
	61	50.6	92			CB-14				red, orange and brown mottled
							55			
			100			CB-15				gray, orange and black mottled, highly to extremely weathered, closely fractured brown, yellow and orange mottled, very closely fractured
	54	59.6	68			CB-16				
							60			
		55.2	100			CB-17				blue-gray
							65			
			97			CB-18				green, orange and brown mottled, extremely weathered
							70			
	60	55.0	93			CB-19				purple, yellow and orange mottled, highly to extremely weathered
							75			

BORING IB-18

BORING LOCATION: 23.5 ft. Lt. Sta. 453+10 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: 331.08 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 08/11/93 08/13/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	101	8.2	100	63		CB-25				gray-green and brown mottled, moderately weathered
							105			
			93	52		CB-26				gray, green and yellow mottled, hard, strong
							110			
UC	148	5.2	100	55		CB-27				green and black mottled, moderately hard to hard
							115			
										Bottom of Boring No. IB-18 ? 117.0 ft.
							120			
							125			

BORING IB-19

BORING LOCATION: 23.5 ft. Lt. Sta. 455+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +330.3 ft | LOGGED BY: C. Issacson
DATE(S) DRILLED: 06/23/93 06/25/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
					75	DM-2			MH	CLAYEY, SANDY, GRAVELLY SILT, reddish-brown, very stiff, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium
			75			CB-3	30			SAPROLITE, gray, soft, weak, highly to extremely weathered, very closely fractured
			100			CB-4	35			highly weathered
			75			CB-5	40			dark gray to tan and orange-brown mottled, highly to extremely weathered
			50			CB-6	45			gray
			100			CB-7	50			CLINKER, dark gray-brown, soft to friable, weak, highly weathered

BORING IB-20

BORING LOCATION: 22 ft. Lt. Sta. 457+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +335.4 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 08/11/93 08/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	SILTY CLAY, very dark brown, soft, moist.
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, very dark brown, dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
	89	24.7			98	DM-1	5			brownish-gray to gray-orange, very dense, moist
							10			
UC	85	34.9			195	DM-2			GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, brown to reddish-brown, very dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
							15			
					157	DM-3	20			
			95			CB-4				SAPROLITE, green, orange and yellow-brown mottled, soft, weak, highly to extremely weathered, closely fractured, vesicular
							25			

BORING IB-18

BORING LOCATION: 23.5 ft. Lt. Sta. 453+10 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: 331.08 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 08/11/93 08/13/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	63	45.8	70			CB-20				red, brown and gray mottled
							80			
			97			CB-21				red, brown and black mottled
							85			
			97			CB-22				gray, green and black mottled
							90			
	62	49.3	100	10		CB-23				gray, green, purple and black mottled
							95			BASALT, gray-green, soft to moderately hard, moderately strong, moderately fractured, highly weathered, vesicular - 'A'a
			100	45		CB-24				moderately strong to strong
							100			

BORING IB-19

BORING LOCATION: 23.5 ft. Lt. Sta. 455+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +330.3 ft | LOGGED BY: C. Issacson
DATE(S) DRILLED: 06/23/93 06/25/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
DS	69	49.0			90/9"	DM-1	5		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							10			brown, wet to saturated
							15			gray-brown, saturated
							20			
							25			

BORING IB-19

BORING LOCATION: 23.5 ft. Lt. Sta. 455+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +330.3 ft | LOGGED BY: C. Issacson
DATE(S) DRILLED: 06/23/93 06/25/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			55			CB-8	55			SAPROLITE, dark gray, soft, weak, highly weathered, vesicular
			100			CB-9	60			
			90			CB-10	65			ASH AND CINDERS, light brown, soft, weak, highly weathered
							70			Bottom of Boring No. IB-19 ? 68.0 feet.
							75			

PAUL COLIN WEIDIG
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No. 8047-C
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PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B28 OF 59 SHEETS

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

ROTATED: BASE PT: 0.0

LIB: STATE\DOT\I-3\H3030\ LOGS0R21 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	163	470

BORING IB-20

BORING LOCATION: 22 ft. Lt. Sta. 457+00
BORING ELEVATION: +335.4 ft
DATE(S) DRILLED: 08/11/93 08/16/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			63			CB-5				dark gray, red, brown and black mottled, extremely weathered, very closely fractured
							30			
			33			CB-6				very dark gray, black, and violet mottled
							35			
			80			CB-7				violet and black mottled, extremely weathered
							40			
UC	98	22.2	93			CB-8				gray, green, purple and red mottled, highly to extremely weathered
							45			
			95			CB-9				purple, brown and black mottled, extremely to completely weathered
							50			

BORING IB-20

BORING LOCATION: 22 ft. Lt. Sta. 457+00
BORING ELEVATION: +335.4 ft
DATE(S) DRILLED: 08/11/93 08/16/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-15				green, brown and black mottled, highly weathered
							80			
UC	119	14.5	90			CB-16				purple, green, brown and black mottled, soft, weak, extremely to completely weathered, very closely fractured, vesicular
							85			
			100			CB-17				gray, red, brown and black mottled, highly to extremely weathered
							90			
UC	128	7.7	100	87		CB-18				BASALT, brown to gray, hard, strong, moderately to slightly weathered, vesicular - A'a
							95			
UC	111	3.7	100	78		CB-19				very dark gray-brown, black and purple mottled, soft to moderately hard, moderately strong, moderately to highly weathered
							100			

BORING IB-21

BORING LOCATION: 25.5 ft. Lt. Sta. 458+60
BORING ELEVATION: +339.5 ft
DATE(S) DRILLED: 08/20/93 09/01/93
DRILLER: Geolabs-Hawaii
LOGGED BY: J. Brock\C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	CLAYEY SILT, dark brown, stiff, moist, with scattered fine to coarse sand and gravel - Alluvium
	82	28.8			64	DM-1	5		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
	106	22.9			41	DM-2	10		GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, orange-brown to red-brown, dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
		17.4			63	DM-3			GM GC	SILTY GRAVEL, COBBLES AND BOULDERS, gray, dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
			0			CB-4	15			
			0			CB-5				
			50			CB-6				
			65			CB-7	20		GM	SILTY GRAVEL, COBBLES AND BOULDERS, brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
										SAPROLITE, gray to dark gray,
							25			

BORING IB-21

BORING LOCATION: 25.5 ft. Lt. Sta. 458+60
BORING ELEVATION: +339.5 ft
DATE(S) DRILLED: 08/20/93 09/01/93
DRILLER: Geolabs-Hawaii
LOGGED BY: J. Brock\C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-13				medium to dark gray-brown
							55			
			80			CB-14				brownish-gray
							60			
			40			CB-15				medium to dark gray
							65			
			70			CB-16				brownish-gray, highly to extremely weathered
							70			
UC	68	47.2	90			CB-17				brownish-gray, highly weathered
							75			

BORING IB-20

BORING LOCATION: 22 ft. Lt. Sta. 457+00
BORING ELEVATION: +335.4 ft
DATE(S) DRILLED: 08/11/93 08/16/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-10				purple, gray, red and brown mottled
							55			
			75			CB-11				green, red and purple mottled
							60			
			70			CB-12				black, purple, green and gray mottled, soft to moderately hard, moderately strong, highly to extremely weathered, closely fractured
							65			
			72			CB-13				gray, brown, orange and purple mottled, soft, weak, extremely to completely weathered, very closely fractured
							70			
			92			CB-14				brown to dark brown and orange mottled, highly to extremely weathered
							75			

BORING IB-20

BORING LOCATION: 22 ft. Lt. Sta. 457+00
BORING ELEVATION: +335.4 ft
DATE(S) DRILLED: 08/11/93 08/16/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										Bottom of Boring No. IB-20 ? 101.5 ft.
							105			
							110			
							115			
							120			
							125			

BORING IB-21

BORING LOCATION: 25.5 ft. Lt. Sta. 458+60
BORING ELEVATION: +339.5 ft
DATE(S) DRILLED: 08/20/93 09/01/93
DRILLER: Geolabs-Hawaii
LOGGED BY: J. Brock\C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			98			CB-8				soft, weak, highly to extremely weathered, very closely fractured, vesicular gray, highly weathered, closely fractured
							30			
			20			CB-9				weak to friable, highly to extremely weathered, very closely fractured
							35			
			90			CB-10				brownish-gray, soft, weak, highly weathered
							40			
UC	75	38.0	85			CB-11				medium gray
							45			
			70			CB-12				medium to dark gray, weak to friable, vesicular
							50			

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994

SHEET No. B29 OF 59 SHEETS

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

ROTATED:
BASE FT. 0.0

LIB: STATE\DOT\I-3\J5030\
LOGBOK22 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	164	470

BORING IB-21

BORING LOCATION: 25.5 ft. Lt. Sta. 458+60
BORING ELEVATION: +339.5 ft
DATE(S) DRILLED: 08/20/93 09/01/93
DRILLER: Geolabs-Hawaii
LOGGED BY: J. Brock\C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	90	20.0	80			CB-18				
			100			CB-19	80			
			90			CB-20	85			weak to moderately strong, closely fractured
UC	76	7.6	80			CB-21	90			highly to extremely weathered
UC	94	24.2	80	30		CB-22	95			BASALT, brownish-gray to light gray, moderately hard, moderately strong, moderately weathered, moderately fractured, vesicular - 'A'a
							100			

BORING IB-22

BORING LOCATION: 20.5 ft. Lt. Sta. 460+22
BORING ELEVATION: +344.3 ft
DATE(S) DRILLED: 08/23/93 08/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock/C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									OL	ORGANIC SILT, loose, moist - Alluvium
							5		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, moist, dense, fine to coarse sand, fine to coarse gravel - Alluvium
					82	DM-1				
			34			CB-2	10			
			0			CB-3	15			gray-brown, wet to saturated, very dense
			60			CB-4				
			60			CB-5	20			
							25			

BORING IB-22

BORING LOCATION: 20.5 ft. Lt. Sta. 460+22
BORING ELEVATION: +344.3 ft
DATE(S) DRILLED: 08/23/93 08/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock/C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			40			CB-11				dark gray, olivine crystals visible in vesicles
			58			CB-12	55			dark gray to brown, weak, highly to extremely weathered
UC	80	30.6	100			CB-13	60			dark gray to brown
UC	68	45.9	70			CB-14	65			weak to friable, olivine crystals visible in vesicles
			88			CB-15	70			
							75			

BORING IB-22

BORING LOCATION: 20.5 ft. Lt. Sta. 460+22
BORING ELEVATION: +344.3 ft
DATE(S) DRILLED: 08/23/93 08/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock/C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	87	24.8	98			CB-21				
							105			
UC	70	37.2	100			CB-22				medium to dark brown
							110			
										Bottom of Boring No. IB-22 ? 112.0 ft.
							115			
							120			
							125			

BORING IB-21

BORING LOCATION: 25.5 ft. Lt. Sta. 458+60
BORING ELEVATION: +339.5 ft
DATE(S) DRILLED: 08/20/93 09/01/93
DRILLER: Geolabs-Hawaii
LOGGED BY: J. Brock\C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100	30		CB-23				light gray to medium gray, soft to moderately hard, moderately strong to strong
							105			Bottom of Boring No. IB-21 ? 105.5 ft.
							110			
							115			
							120			
							125			

BORING IB-22

BORING LOCATION: 20.5 ft. Lt. Sta. 460+22
BORING ELEVATION: +344.3 ft
DATE(S) DRILLED: 08/23/93 08/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock/C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			60			CB-6				SAPROLITE, gray-brown, soft to friable, weak, extremely weathered, very closely fractured
							30			
			65			CB-7				vesicular
							35			
			30			CB-8				gray-brown to reddish-brown, weak to friable, extremely weathered
							40			
UC	64	41.5	78			CB-9				ASH AND SPATTER, light to dark brown, soft, weak, extremely weathered, welded texture
							45			SAPROLITE, dark gray-brown, weak to friable, extremely weathered, very closely fractured, vesicular
			70			CB-10				gray-brown, extremely weathered
							50			

BORING IB-22

BORING LOCATION: 20.5 ft. Lt. Sta. 460+22
BORING ELEVATION: +344.3 ft
DATE(S) DRILLED: 08/23/93 08/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock/C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	75	37.0	55			CB-16				dark gray, orange-brown and red mottled
							80			
UC	129	8.7	100			CB-17				dark gray to greenish-brown
							85			
		53.5	70			CB-18				dark gray to gray-brown and reddish-brown
							90			ASH AND CINDERS, light brown, soft, weak, highly to extremely weathered, welded texture
			85			CB-19				
							95			
			100			CB-20				SAPROLITE, light brown, weak to friable, highly to extremely weathered, very closely fractured
							100			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B30 OF 59 SHEETS

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

ROTATED: BASE PT. 0,0

LIB: STATE\DOT\I-3\I-3030\LOGSDR23 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	165	470

BORING IB-23

BORING LOCATION: 23.5 ft. Lt. Sta. 461+80 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +343.5 ft | LOGGED BY: H. Clark
DATE(S) DRILLED: 07/07/93 07/09/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	**SILTY CLAY**, brown, very soft, moist, with roots - Alluvium
	90	21.9			75/6"	DM-1	5		MH	**SANDY, GRAVELLY SILT**, orange-brown, stiff, dry, fine to coarse sand, fine to coarse gravel - Alluvium
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
SA	89	36.3			24/6"	DM-2	10			reddish-brown
										wet to saturated
					38/6"	DM-3	15			orange-brown, moist
			63			CB-4				**SAPROLITE**, light gray to dark brown, soft, weak, highly weathered, vesicular, olivine crystals visible in vesicles
			80			CB-5	20			reddish-gray to brown,highly to extremely weathered, with ash partings
							25			

BORING IB-23

BORING LOCATION: 23.5 ft. Lt. Sta. 461+80 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +343.5 ft | LOGGED BY: H. Clark
DATE(S) DRILLED: 07/07/93 07/09/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			88			CB-12	55			light gray to gray-brown, closely fractured
			100			CB-13	60			orange-brown to gray, highly to extremely weathered, very closely fractured
UC	60	53.1	80			CB-14	65			reddish-brown, weak to moderately strong, olivine crystals visible in vesicles
										ASH AND CINDERS, orange, soft, weak, extremely to completely weathered, welded texture
							70			Bottom of Boring No. IB-23 ? 66.0 ft.
							75			

BORING IB-24

BORING LOCATION: 23.5 ft. Lt. Sta. 463+41 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +345.2 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 09/15/93 09/17/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										SAPROLITE, gray, soft, weak, highly weathered, very closely fractured
			80			CB-6	30			
			70			CB-7				medium gray
							35			brownish-gray to dark gray, weak to friable, weak, extremely weathered, closely fractured, vesicular
			60			CB-8				
							40			
			70			CB-9				
							45			
UC	65	55.6	95			CB-10				**ASH AND SPATTER**, brown and black mottled, soft, weak, highly to extremely weathered, welded texture
										SAPROLITE, dark gray, soft, weak, highly weathered,
							50			

BORING IB-24

BORING LOCATION: 23.5 ft. Lt. Sta. 463+41 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +345.2 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 09/15/93 09/17/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	71	48.6	100			CB-16	80			tan
			80	25		CB-17				**BASALT**, dark gray, soft to moderately hard, strong, moderately to slightly weathered, moderately fractured, vesicular - 'A'a
							85			dark gray, hard, strong, slightly weathered
			43	0		CB-18				
			100	30		CB-19	90			
			78	0		CB-20				
							95			
							100			Bottom of Boring No. IB-24 ? 96.0 ft.

BORING IB-23

BORING LOCATION: 23.5 ft. Lt. Sta. 461+80 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +343.5 ft | LOGGED BY: H. Clark
DATE(S) DRILLED: 07/07/93 07/09/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										ASH AND CINDERS, gray-brown, soft, weak, highly weathered
			68			CB-6				**SAPROLITE**, reddish-gray, soft, weak, highly to extremely weathered, very closely fractured
							30			
			50			CB-7				gray-green to reddish-gray, soft to moderately hard, highly to extremely weathered, closely fractured
			59			CB-8				
							35			
			66			CB-9				gray-green to reddish-brown, vesicular
							40			
			66			CB-10				reddish-orange to reddish-gray, soft
							45			
			71			CB-11				brownish-gray, highly weathered, very closely fractured
							50			

BORING IB-24

BORING LOCATION: 23.5 ft. Lt. Sta. 463+41 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +345.2 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 09/15/93 09/17/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									OL	**ORGANIC SILT**, dark brown, loose, moist - Alluvium
							5		GM	**SILTY GRAVEL COBBLES AND BOULDERS**, brown, very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
					101	DM-1				
			50			CB-2	10			
										saturated
			80			CB-3	15			
			60			CB-4				
							20			**SAPROLITE**, medium gray, soft, weak, highly weathered, very closely fractured
			70			CB-5				
							25			**CLINKER**, mottled brown and dark gray, soft, weak, highly to extremely weathered

BORING IB-24

BORING LOCATION: 23.5 ft. Lt. Sta. 463+41 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +345.2 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 09/15/93 09/17/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										closely fractured, vesicular
										ASH AND CINDERS, tan, soft, weak, highly to extremely weathered, welded texture
			100			CB-11	55			
UC	68	51.6	100			CB-12				**ASH AND SPATTER**, dark brown to reddish-brown, soft, weak, highly to extremely weathered, welded texture
							60			
			100			CB-13				**ASH AND CINDERS**, dark brown, soft, weak, highly to extremely weathered, welded texture
							65			
			100			CB-14				orange-brown, red, yellow-brown and gray mottled
							70			
			100			CB-15				light yellow-brown and red-orange mottled
							75			

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PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B31 OF 59 SHEETS

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

ROTATED: BASE PT: 0,0

LIB: STATE\DOT\I-3\3030\ LOGBOK24 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	166	470

BORING IB-25

BORING LOCATION: 21 ft. Rt. Sta. 465+40
BORING ELEVATION: +363.5 ft
DATE(S) DRILLED: 08/15/93 08/17/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GC	**CLAYEY GRAVEL**, brown, loose, moist, fine to coarse sand, fine to coarse gravel - Alluvium
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	69	39.6			40	DM-1	5			
CN	86	21.3			61	DM-2	10			wet to saturated
SG	101	20.6			140	DM-3	15			gray-brown, very dense, saturated
DS	67	47.6			104	DM-4	20			
							25			

BORING IB-25

BORING LOCATION: 21 ft. Rt. Sta. 465+40
BORING ELEVATION: +363.5 ft
DATE(S) DRILLED: 08/15/93 08/17/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			70			CB-11				gray-brown, brecciated
			90			CB-12	55			light to medium gray, weak to moderately strong, highly weathered
UC	146	5.4	100			CB-13	60			soft to moderately hard, moderately strong
UC	78	34.4	100			CB-14	65			dark gray and brown mottled, weak
UC	140	2.3	95	13		CB-15	70			
										BASALT, light to medium gray, hard to moderately hard, strong, moderately weathered, vesicular - 'A'a
							75			

BORING IB-26

BORING LOCATION: 23.5 ft. Lt. Station 467+40
BORING ELEVATION: +382.0 ft
DATE(S) DRILLED: 06/12/93 06/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, mottled brown and gray, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							5		GC	**CLAYEY GRAVEL, COBBLES AND BOULDERS**, mottled brown and gray, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
DS	72	46.8			40	DM-1	10		GM GC	**SILTY, CLAYEY GRAVEL**, gray-brown, very dense, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium saturated
					30/6"	DM-2	15		GM	**SILTY GRAVEL**, gray-brown, very dense, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium
		32.1			25/7"	DM-3	20		GM GC	**SILTY, CLAYEY GRAVEL**, gray-brown, very dense, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium saturated
							25			

BORING IB-26

BORING LOCATION: 23.5 ft. Lt. Station 467+40
BORING ELEVATION: +382.0 ft
DATE(S) DRILLED: 06/12/93 06/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			50			CB-8				dark gray-brown, soft, weak, highly weathered, very closely fractured
			50			CB-9	55			dark gray to gray-green, soft to moderately hard, moderately strong
			95			CB-10	60			dark gray-brown
UC	62	20.1	75			CB-11	65			dark gray to gray-green and gray-brown mottled
			95			CB-12	70			dark gray, moderately hard, moderately strong, highly weathered
							75			

BORING IB-25

BORING LOCATION: 21 ft. Rt. Sta. 465+40
BORING ELEVATION: +363.5 ft
DATE(S) DRILLED: 08/15/93 08/17/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	65	56.7			95	DM-5				**SAPROLITE**, gray, soft, weak, extremely weathered, very closely fractured, vesicular
			83			CB-6				
			70			CB-7	30			brownish-gray, weak to friable
			80			CB-8	35			
			60			CB-9	40			
			50			CB-10	45			
							50			

BORING IB-25

BORING LOCATION: 21 ft. Rt. Sta. 465+40
BORING ELEVATION: +363.5 ft
DATE(S) DRILLED: 08/15/93 08/17/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			90	30		CB-16				
UC	130	7.7	100	46		CB-17	80			
										ASH, reddish-brown, brown and tan mottled, moderately hard, strong, moderately to highly weathered
UC	120	2.5	100	60		CB-18	85			**BASALT**, dark gray, hard to moderately hard, strong, slightly to moderately weathered, vesicular - 'A'a
UC	87	16.8	90	40		CB-19	90			
							95			**Bottom of Boring No. IB-25 ? 95.0 ft.**
							100			

BORING IB-26

BORING LOCATION: 23.5 ft. Lt. Station 467+40
BORING ELEVATION: +382.0 ft
DATE(S) DRILLED: 06/12/93 06/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
							30			
		50.2			32	SP-4	35			**SAPROLITE**, dark gray, soft, weak, highly weathered
	76	40.5			82	DM-5	40			dark gray to gray-brown, soft, weak, highly weathered
	76	43.8			104	DM-6	45			gray-brown to reddish-brown, soft to moderately hard, weak to friable, highly to extremely weathered
			70			CB-7				
							50			

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

ROTATED: BASE PT. 0.0

PAUL COLIN WEIDIG
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HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994

SHEET No. B32 OF 59 SHEETS

LIB: STATE\DOT\H-3\H3030\ LOGSHR25 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	167	470

BORING IB-26

BORING LOCATION: 23.5 ft. Lt. Station 467+40
BORING ELEVATION: +382.0 ft
DATE(S) DRILLED: 06/12/93 06/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			95			CB-13				dark gray-green, soft to moderately hard
			95	0		CB-14	80			BASALT, brown, moderately hard, moderately strong to strong, moderately to slightly weathered, vesicular - 'A'a
UC	144	0.9	100	0		CB-15				gray-brown
			100	0		CB-16	85			
							90			Bottom of Boring No. IB-26 ? 88.0 ft.
							95			
							100			

BORING IB-27

BORING LOCATION: 23.5 ft. Lt. Sta. 472+05
BORING ELEVATION: +381.7 ft
DATE(S) DRILLED: 09/02/93 09/03/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			90			CB-6				
			90			CB-7	30			gray, wet
			90			CB-8	35			dense to very dense
UC	157	3.3	75			CB-9	40			brown-gray
			60			CB-10	45			
							50			SAPROLITE, reddish-brown, soft, weak, extremely

BORING IB-27

BORING LOCATION: 23.5 ft. Lt. Sta. 472+05
BORING ELEVATION: +381.7 ft
DATE(S) DRILLED: 09/02/93 09/03/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-16				gray, closely fractured
			95			CB-17	80			gray to dark brown, highly to extremely weathered
UC	113	13.6	90	40		CB-18	85			BASALT, gray, moderately hard, strong, moderately weathered, closely fractured, vesicular - 'A'a
			95	80		CB-19	90			
			100	95		CB-20	95			hard, slightly to moderately weathered
							100			

BORING IB-28

BORING LOCATION: 23.5 ft. Lt. Baseline Sta. 473+45
BORING ELEVATION: +387.1 ft
DATE(S) DRILLED: 09/07/93 09/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P.Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM	SILTY GRAVEL, gray-brown, medium-dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium dense
					44	DM-1	5		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
SA			70			CB-2				
			80			CB-3	10			moist to wet
			80			CB-4	15			wet
			80			CB-5	20			saturated
							25			

BORING IB-27

BORING LOCATION: 23.5 ft. Lt. Sta. 472+05
BORING ELEVATION: +381.7 ft
DATE(S) DRILLED: 09/02/93 09/03/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	SILTY CLAY, mottled brown, stiff, moist - Alluvium
			67			CB-1			GM	SILTY GRAVEL, COBBLES AND BOULDERS, gray-brown, dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
							5		GM GC	SILTY, CLAYEY GRAVEL COBBLES AND BOULDERS, gray-dark brown, very dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
			61			CB-2				
							10		GM	SILTY GRAVEL, COBBLES AND BOULDERS, gray-dark brown, dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
			78			CB-3				
							15			
			85			CB-4			GM GC	SILTY, CLAYEY GRAVEL COBBLES AND BOULDERS, grayish-brown, very dense, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							20			
			80			CB-5				CONGLOMERATE: SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, reddish-brown, very dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
							25			

BORING IB-27

BORING LOCATION: 23.5 ft. Lt. Sta. 472+05
BORING ELEVATION: +381.7 ft
DATE(S) DRILLED: 09/02/93 09/03/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										weathered
			80			CB-11				
							55			gray, highly weathered
UC	167	1.9	90			CB-12				
							60			
			40			CB-13				reddish-brown, extremely weathered
							65			
			90			CB-14				gray, highly to extremely weathered, closely fractured
							70			
			70			CB-15				very closely fractured, vesicular
							75			

BORING IB-27

BORING LOCATION: 23.5 ft. Lt. Sta. 472+05
BORING ELEVATION: +381.7 ft
DATE(S) DRILLED: 09/02/93 09/03/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	118	11.6	80	30		CB-21				
							105			reddish-brown, moderately hard, moderately strong, highly weathered, very closely fractured
UC	128	8.0	80	30		CB-22				
										gray, strong, moderately weathered, closely fractured
										CLINKER, brown, moderately hard, weak, highly to moderately weathered
							110			BASALT, gray, moderately hard, strong, moderately weathered, moderately fractured, vesicular - 'A'a
										Bottom of Boring No. IB-27 ? 111.0 ft.
							115			
							120			
							125			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B33 OF 59 SHEETS

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

ROTATED: BASE PT: 0.0

LIB: STATE\DOT\I-3\J3030\ LOGS0026 3/21/94 RSG

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	168	470

BORING IB-28

BORING LOCATION: 23.5 ft. Lt. Sta. 473+45 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +387.1 ft | LOGGED BY: P.Padilla
DATE(S) DRILLED: 09/07/93 09/09/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			40			CB-6				dark brown, very dense
			40			CB-7	30			SAPROLITE, dark brown, soft, weak, highly to extremely weathered, very closely fractured
			60			CB-8	35			gray, soft to moderately hard, highly weathered, closely fractured, vesicular
			80			CB-9	40			
			65			CB-10	45			
							50			

BORING IB-28

BORING LOCATION: 23.5 ft. Lt. Sta. 473+45 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +387.1 ft | LOGGED BY: P.Padilla
DATE(S) DRILLED: 09/07/93 09/09/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-16				gray to gray-brown, soft to moderately hard, weak to moderately strong, highly weathered, closely fractured
			0			CB-17	80			soft
			30			CB-18	85			
			18			CB-19	90			gray, weak
			80			CB-20	95			CLINKER, gray-brown, moderately hard, weak to moderately strong, highly weathered
							100			SAPROLITE, gray, soft to moderately hard, weak to moderately strong, highly to moderately weathered, closely fractured

BORING IB-29

BORING LOCATION: 27 ft. Lt. Sta. 474+83 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +390.5 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 06/15/93 06/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, medium dark gray-brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	83	34.4			9/3"	DM-1	5			
SA	76	46.0			57	DM-2			SC GC GM	CLAYEY, GRAVELLY SAND, gray-brown, medium-dense to dense, wet to saturated, fine to coarse sand, fine to coarse gravel
							10			SILTY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
									GC	CLAYEY GRAVEL, gray-brown, dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
					53	SP-3	15			
					81	DM-4			CH	SILTY CLAY, reddish-brown, very stiff, moist to wet - Alluvium
										SAPROLITE, gray, soft, weak to friable, highly weathered
DS	81	36.5			31	DM-5	20			gray-brown, soft to very soft
							25			

BORING IB-29

BORING LOCATION: 27 ft. Lt. Sta. 474+83 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +390.5 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 06/15/93 06/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			70			CB-12				
			80	0		CB-13	55			reddish-brown, weak, highly to extremely weathered
										brown to gray-brown, vesicular
			80	0		CB-14	60			
			90	0		CB-15	65			
							70			Bottom of Boring No. IB-29 ? 70.0 ft.
							75			

BORING IB-28

BORING LOCATION: 23.5 ft. Lt. Sta. 473+45 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +387.1 ft | LOGGED BY: P.Padilla
DATE(S) DRILLED: 09/07/93 09/09/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			20			CB-11				CLINKER, gray-brown, soft, weak, highly weathered
							55			
			60			CB-12				SAPROLITE, gray, soft to moderately hard, weak, highly weathered, closely fractured, vesicular
							60			
			60			CB-13				
							65			
			70			CB-14				gray-brown, soft, highly to extremely weathered, very closely fractured
							70			
			40			CB-15				
							75			

BORING IB-28

BORING LOCATION: 23.5 ft. Lt. Sta. 473+45 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +387.1 ft | LOGGED BY: P.Padilla
DATE(S) DRILLED: 09/07/93 09/09/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			73			CB-21				CLINKER, gray-brown, soft, weak to moderately strong, highly weathered
							105			
UC	162	2.8	100	83		CB-22				BASALT, gray, hard, strong, moderately to slightly weathered, vesicular - 'A'a
							110			
			95	30		CB-23				
							115			
			100	40		CB-24				
							120			CLINKER, gray-brown, moderately hard, moderately strong, moderately to slightly weathered
										Bottom of Boring No. IB-28 ? 121.0 ft.
							125			

BORING IB-29

BORING LOCATION: 27 ft. Lt. Sta. 474+83 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +390.5 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 06/15/93 06/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	100	27.7			107/8"	DM-6				
			50			CB-7				
			80			CB-8	30			reddish-brown, weak, highly to extremely weathered
			40			CB-9	35			gray, weak to friable, highly weathered
			80			CB-10	40			gray to yellow-brown, highly to extremely weathered, faint joint development
			50			CB-11	45			gray, soft, highly weathered
							50			

PAUL COLIN WEIDIG
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No. 8047-C
HAWAII, U.S.A.

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PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B34 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DGT\I-3\I3030\ LOGS\R27 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	169	470

BORING IB-30

BORING LOCATION: 23.5 ft. Lt. Sta. 476+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +408.1 ft | LOGGED BY: S. Wang
DATE(S) DRILLED: 09/21/93 09/24/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	**SILTY CLAY**, dark brown, stiff, moist to wet - Alluvium
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, dark brown, dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
					13	DM-1	5			medium-dense
					23	DM-2	10			medium-dense to dense
			71			CB-3	15			gray to brown, dense
			67			CB-4	20			brown
			80			CB-5	25			reddish-brown

BORING IB-30

BORING LOCATION: 23.5 ft. Lt. Sta. 476+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +408.1 ft | LOGGED BY: S. Wang
DATE(S) DRILLED: 09/21/93 09/24/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			77			CB-11	55			reddish-gray
			60			CB-12	60			**SAPROLITE**, brownish-gray, soft, weak, moderately to highly weathered, very closely fractured, vesicular
			47			CB-13	65			reddish-gray, soft, weak, highly to extremely weathered
			40			CB-14	70			gray, moderately to highly weathered, closely fractured
			100			CB-15	75			brownish-gray

BORING IB-30

BORING LOCATION: 23.5 ft. Lt. Sta. 476+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +408.1 ft | LOGGED BY: S. Wang
DATE(S) DRILLED: 09/21/93 09/24/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			75	0		CB-21	105			closely fractured
UC	71	51.5	85	47		CB-22	110			**CLINKER**, reddish-gray, soft, weak, moderately weathered
										BASALT, brownish-orange, soft, weak, highly weathered, closely fractured
UC	92	28.1	93	47		CB-23	115			gray to brownish-gray, moderately hard, strong, moderately weathered
							120			Bottom of Boring No. IB-30 ? 116.5 ft.
							125			

BORING IR- 1

BORING LOCATION: 23.5 ft. Lt. Sta. 470+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +409.5 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 08/19/93 08/22/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										gray
			65			CB-6	30			
			60			CB-7	35		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, saturated, fine to coarse sand, coarse gravel - Alluvium
			80			CB-8	40			**SAPROLITE**, gray, soft, highly weathered, closely fractured
			70			CB-9	45			gray to brown-gray, highly to extremely weathered, very closely fractured
			92			CB-10	50			

BORING IB-30

BORING LOCATION: 23.5 ft. Lt. Sta. 476+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +408.1 ft | LOGGED BY: S. Wang
DATE(S) DRILLED: 09/21/93 09/24/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			83			CB-6	30			reddish-brown to gray, saturated
			60			CB-7	35		GC	**CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray to reddish gray, dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
			53			CB-8	40		GW	**SANDY GRAVEL**, reddish-gray, dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
			60			CB-9	45			**CONGLOMERATE: SILTY CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray to brownish-gray, dense, wet, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
			17			CB-10	50			**CONGLOMERATE: SILTY GRAVEL**, gray, dense, wet, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix

BORING IB-30

BORING LOCATION: 23.5 ft. Lt. Sta. 476+05 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +408.1 ft | LOGGED BY: S. Wang
DATE(S) DRILLED: 09/21/93 09/24/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-16	80			soft to moderately hard, weak to moderately strong
			80			CB-17	85			reddish-gray, soft, weak, highly to extremely weathered
			80			CB-18	90			**SAPROLITE**, reddish-gray, soft, weak, highly to extremely weathered, closely fractured, vesicular
			67			CB-19	95			**CLINKER**, gray, soft, weak, highly weathered
			90	15		CB-20	100			reddish-gray, highly to extremely weathered
										BASALT, brownish-gray, moderately hard, strong, moderately weathered, moderately fractured, vesicular - 'A'a

BORING IR- 1

BORING LOCATION: 23.5 ft. Lt. Sta. 470+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +409.5 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 08/19/93 08/22/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, reddish-brown, moist, soft - Alluvium
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, reddish-brown, moist, dense, fine to coarse sand, fine to coarse gravel - Alluvium
	66	55.7			70	DM-1	5			
	70	50.4			54	DM-2	10			brown, wet to saturated, very dense
DS	73	57.1			56	DM-3	15		GC	**CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
	75	39.5			86	DM-4	20			
			65			CB-5	25			

PAUL COLIN WELDIG
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No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weldig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B35 OF 59 SHEETS

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

ROTATED:
BASE FT: 0.0

LIB: STATE\DOT\I-3\3030\
LOGS\R28 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	170	470

BORING IR- 1

BORING LOCATION: 23.5 ft. Lt. Sta. 470+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +409.5 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 08/19/93 08/22/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	83	32.1	96			CB-11				brownish-gray, closely fractured, highly weathered
							55			
			60			CB-12				
							60			gray, highly weathered, very closely fractured
			80			CB-13				
							65			
			95			CB-14				
							70			Bottom of Boring No. IR-1 ? 70.0 ft.
							75			

BORING IR- 3

BORING LOCATION: 45 ft. Lt. Sta. 478+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +415.0 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 09/15/93 09/17/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			53			CB-6				highly to extremely weathered, vesicular
							30			
			70			CB-7				gray to gray-green, highly to extremely weathered
							35			
			75			CB-8				red, purple and brown mottled, extremely weathered
							40			
			68			CB-9				gray and red mottled
							45			
			77			CB-10				gray
							50			

BORING IR- 5

BORING LOCATION: 44 ft. Lt. Sta. 479+00 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +424.0 ft | LOGGED BY: J. Brock/C. Isaacson
DATE(S) DRILLED: 09/17/93 09/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	CLAYEY, SANDY, GRAVELLY SILT, dark brown, soft to medium-stiff, moist, fine to coarse sand, fine to coarse gravel - Alluvium
					32	DM-1	5		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, orange-brown mottled, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
					76	DM-2	10			wet to saturated
					49	DM-3	15		GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, orange-brown, very dense, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	70	49.1			47	DM-4	20			
			70			CB-5	25			

BORING IR- 5

BORING LOCATION: 44 ft. Lt. Sta. 479+00 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +424.0 ft | LOGGED BY: J. Brock/C. Isaacson
DATE(S) DRILLED: 09/17/93 09/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			70			CB-11				brownish-gray, highly weathered, vesicular
							55			
			20			CB-12				gray-brown
							60			
			60			CB-13				brownish-gray to dark gray, highly to extremely weathered
							65			
			95			CB-14				brownish to medium gray, highly weathered
							70			
			20			CB-15				medium-gray
							75			

BORING IR- 3

BORING LOCATION: 45 ft. Lt. Sta. 478+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +415.0 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 09/15/93 09/17/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	SILTY, SANDY, GRAVELLY CLAY, dark brown, soft to stiff, moist, fine to coarse sand, fine to coarse gravel - Alluvium
CN	64	59.5			22	DM-1	5			
UC	62	58.3			44	DM-2	10		GM GC	SILTY CLAYEY GRAVEL, COBBLES AND BOULDERS, brown to orange- brown, dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
					50	DM-3	15			brown to reddish-brown and orange-brown mottled, very dense, wet to saturated
					54	DM-4	20			orange-brown, very dense, saturated
UC	76	41.3			59	DM-5	25			SAPROLITE, gray, soft, weak, extremely weathered, very closely fractured

BORING IR- 3

BORING LOCATION: 45 ft. Lt. Sta. 478+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +415.0 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 09/15/93 09/17/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			60			CB-11				red, dark gray and black mottled
							55			
			65			CB-12				dark gray
							60			
			40			CB-13				
							65			
			20			CB-14				
							70			
										Bottom of Boring No. IR-3 ? 71.0 ft.
							75			

BORING IR- 5

BORING LOCATION: 44 ft. Lt. Sta. 479+00 | DRILLER: Geolabs-Hawaii
BORING ELEVATION: +424.0 ft | LOGGED BY: J. Brock/C. Isaacson
DATE(S) DRILLED: 09/17/93 09/21/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			75			CB-6				saturated
							30			SAPROLITE, dark gray, soft, weak, extremely weathered, very closely fractured
			90			CB-7				medium gray
							35			
			60			CB-8				
							40			
			60			CB-9				brownish-gray to dark gray, weak to friable
							45			ASH, dark gray, soft to friable, weak, extremely weathered
			50			CB-10				SAPROLITE, gray, soft, weak, extremely weathered, very closely fractured
										SAPROLITE, gray, soft, weak, extremely weathered, very closely fractured
							50			

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

ROTATED: BASE PT: 0.0

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B36 OF 59 SHEETS

LIB: STATE\DOT\I-3\I-3030\
LOGS\IR29 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	171	470

BORING IR- 5

BORING LOCATION: 44 ft. Lt. Sta. 479+00
BORING ELEVATION: +424.0 ft
DATE(S) DRILLED: 09/17/93 09/21/93
DRILLER: Geolabs-Hawaii
LOGGED BY: J. Brock/C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-16	80			brown to dark gray
										Bottom of Boring IR-5 ? 81.5 ft.
							100			

BORING OB- 1

BORING LOCATION: 23 ft. Rt. Sta. 419+50
BORING ELEVATION: +233.6 ft
DATE(S) DRILLED: 07/14/93 07/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
SG		43.8			111	DM-5				reddish-brown, dense, extremely weathered, saturated
UC	69	50.6			95	DM-6	30			SAPROLITE, gray-dark gray, soft, weak, highly weathered, very closely fractured, vesicular, olivine crystals visible in vesicles
			0		121	DM-7	35			gray-brown and gray-green mottled, highly to extremely weathered
						CB-8				
			0			CB-9	40			gray-green and orange-brown mottled, weak to moderately strong
UC	70	28.3	63			CB-10	45			dark brown-gray, weak to friable, extremely weathered
							50			

BORING OB- 1

BORING LOCATION: 23 ft. Rt. Sta. 419+50
BORING ELEVATION: +233.6 ft
DATE(S) DRILLED: 07/14/93 07/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	105	3.6	80			CB-18	80			dark orange-gray to gray-green, weak to moderately strong
			99			CB-19				dark gray-brown, gray-green and orange-brown mottled, weak to friable, extremely weathered
UC	73	55.2	100			CB-20	85			gray-green and orange-gray mottled
			65			CB-21	90			orange-gray to gray-brown
			100			CB-22	95			orange-brown, weak to friable, extremely to completely weathered
							100			

BORING OB- 1

BORING LOCATION: 23 ft. Rt. Sta. 419+50
BORING ELEVATION: +233.6 ft
DATE(S) DRILLED: 07/14/93 07/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-28	130			brown to reddish-brown, extremely to completely weathered
			80			CB-29	135			highly to extremely weathered
UC	60	23.2	100			CB-30	140			reddish-gray, extremely to completely weathered
										Bottom of Boring OB-1 ? 141.5 ft.
							145			
							150			

BORING OB- 1

BORING LOCATION: 23 ft. Rt. Sta. 419+50
BORING ELEVATION: +233.6 ft
DATE(S) DRILLED: 07/14/93 07/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	CLAYEY, GRAVELLY SILT, dark brown, moist, soft, fine to medium gravel, finely disseminated organic matter - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, red, gray-green and dark gray mottled, very dense, dry, fine to coarse sand, fine to coarse gravel - Alluvium
	96	25.3			40	DM-1	5			reddish-brown and gray mottled, moist
DS	68	50.9			74	DM-2	10			yellowish-brown to reddish-brown, moist to wet
	77	43.8			65	DM-3	15			orange-brown, dense to very dense, wet to saturated
UC	65	52.9			84	DM-4	20			CONGLOMERATE: SILTY, CLAYEY, SANDY GRAVEL, brownish-yellow, very dense, highly weathered, saturated, fine to coarse sand, fine to coarse gravel, weakly cemented matrix
							25			

BORING OB- 1

BORING LOCATION: 23 ft. Rt. Sta. 419+50
BORING ELEVATION: +233.6 ft
DATE(S) DRILLED: 07/14/93 07/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			79			CB-11				dark gray-green, soft to moderately hard, weak to moderately strong, highly weathered
			41			CB-12				brownish-gray to gray-green, moderately to highly weathered, closely fractured
			0			CB-13	55			dark brown to gray-green, weak to friable, extremely weathered
UC	140	3.1	60			CB-14	60			dark brown to orange-gray, soft to moderately hard, weak to moderately strong, highly to extremely weathered, olivine crystals visible in vesicles
			26			CB-15	65			dark brown to gray-green, weak
			60			CB-16	70			gray-brown to orange-brown
			60			CB-17	75			dark gray-brown to orange-brown

BORING OB- 1

BORING LOCATION: 23 ft. Rt. Sta. 419+50
BORING ELEVATION: +233.6 ft
DATE(S) DRILLED: 07/14/93 07/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
DS	88	49.5	100			CB-23				brownish-gray to reddish-brown, weak, extremely weathered
			100			CB-24	105			orange-brown, weak to friable, extremely to completely weathered
UC	63	71.0	100			CB-25	110			brown to orange-brown, weak, extremely weathered
UC	68	61.3	100			CB-26	115			reddish-brown to brownish-green, closely fractured
			100			CB-27	120			brownish-gray to reddish-brown
							125			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, USA

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994

SHEET No. B37 OF 59 SHEETS

ORIGINAL PLAN: SURVEY PLOTTED BY ___ DATE; DRAWN BY ___; TRACED BY ___; DESIGNED BY ___; QUANTITIES BY ___; CHECKED BY ___; NOTE BOOK No. ___

ROTATED: BASE FT. 0.0

LIB: STATE\DOT\I-3\H3030\ LOGBOR30 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	172	470

BORING OB- 2

BORING LOCATION: 21 ft. Rt. Sta. 421+25
BORING ELEVATION: +237.9 ft
DATE(S) DRILLED: 06/21/93 06/22/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, dark brown, stiff, dry to moist, with gravel and finely disseminated organic matter - Alluvium
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, moist, fine to coarse gravel, fine to coarse sand - Alluvium
	110	33.7			63/11"	DM-1	5			
							10		SC GC	**CLAYEY, GRAVELLY SAND**, mottled orange and reddish-brown, medium-dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
SA	80	52.1			25	DM-2	15			**SAPROLITE**, mottled orange and dark gray, soft, weak, highly to extremely weathered
DS	83	40.0			53	DM-3	20			dark green, highly weathered
							25			

BORING OB- 2

BORING LOCATION: 21 ft. Rt. Sta. 421+25
BORING ELEVATION: +237.9 ft
DATE(S) DRILLED: 06/21/93 06/22/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			67			CB-11	55			dark brown
			57			CB-12	60			dark brown to gray
							65			Bottom of Boring No. OB-2 ? 63.0 ft.
							70			
							75			

BORING OB- 3

BORING LOCATION: 23.5 ft. Rt. Sta. 423+00
BORING ELEVATION: +240.6 ft
DATE(S) DRILLED: 07/26/93 07/29/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
					100	DM-5				
			15			CB-6	30			
			40			CB-7	35			dark brown
			20			CB-8	40			**SAPROLITE**, gray, dark brown and orange mottled, soft, weak, highly to extremely weathered, very closely fractured
			35			CB-9	45			
							50			

BORING OB- 3

BORING LOCATION: 23.5 ft. Rt. Sta. 423+00
BORING ELEVATION: +240.6 ft
DATE(S) DRILLED: 07/26/93 07/29/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			75			CB-15				
UC	146	1.7	73			CB-16	80			greenish-gray, brown and orange mottled, soft, weak, highly to extremely weathered
			100			CB-17	85			gray, green, black and brown mottled, soft to moderately hard, weak to moderately strong
							90			Bottom of Boring No. OB-3 ? 90.0 ft.
							95			
							100			

BORING OB- 2

BORING LOCATION: 21 ft. Rt. Sta. 421+25
BORING ELEVATION: +237.9 ft
DATE(S) DRILLED: 06/21/93 06/22/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	70	38.4			85/11"	DM-4				
			25			CB-5				dark green and reddish-brown mottled, highly to extremely weathered
			20			CB-6				
							30			
			20			CB-7				gray-green, moderately hard, weak to moderately strong, highly weathered
							35			
			52			CB-8				gray-green to black, soft to moderately hard
							40			
UC	154	1.8	52			CB-9				gray to dark green, vertical fractures
							45			
			73			CB-10				
							50			

BORING OB- 3

BORING LOCATION: 23.5 ft. Rt. Sta. 423+00
BORING ELEVATION: +240.6 ft
DATE(S) DRILLED: 07/26/93 07/29/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	**SILTY, CLAYEY GRAVEL**, dark brown, loose to medium-dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, dark brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	93	16.8			78	DM-1	5			
					70	DM-2	10			
					36	DM-3	15			**CONGLOMERATE- SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, dark brown, very dense, wet to saturated, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
					94	DM-4	20			gray-brown, moist
							25			

BORING OB- 3

BORING LOCATION: 23.5 ft. Rt. Sta. 423+00
BORING ELEVATION: +240.6 ft
DATE(S) DRILLED: 07/26/93 07/29/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-10				green, brown, orange, soft to medium hard
							55			
UC	113	13.3	85			CB-11				dark gray, green, brown and orange mottled, soft, vesicular
							60			
UC	92	28.3	90			CB-12				dark gray, black and brown mottled
							65			
			90			CB-13				gray, green and brown mottled
							70			
			90			CB-14				green and black mottled, soft to moderately hard, weak to moderately strong
							75			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B38 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\I-3\J3030\ LOGBOK31 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	173	470

BORING OB- 4

BORING LOCATION: 23.5 ft. Rt. Sta. 425+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +250.3 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/17/93 06/18/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, brown, soft to stiff, moist, with fine to coarse gravel - Alluvium
							5		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
SG DS	69	53.4			50/5"	DM-1	10		SM GM	**SILTY, GRAVELLY SAND**, dark gray, medium-dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, reddish-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	78	42.0			37	DM-2	15		GM	**SILTY GRAVEL**, gray-brown, dense, saturated, fine to coarse gravel, fine to coarse sand - Alluvium
							20			**SAPROLITE**, dark gray to green, soft, weak, highly weathered, vesicular
UC	86	36.8			65	DM-3				**CLINKER**, brown, soft, highly weathered
										SAPROLITE, gray-green, soft, weak, highly to extremely weathered, vesicular
							25			

BORING OB- 4

BORING LOCATION: 23.5 ft. Rt. Sta. 425+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +250.3 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/17/93 06/18/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			72			CB-10	55			**CLINKER**, gray brown, soft, weak, moderately weathered
			40			CB-11	60			**SAPROLITE**, dark brown, soft to moderately hard, weak to moderately strong, highly to extremely weathered, vesicular highly weathered
			75			CB-12	65			
							70			Bottom of Boring No. OB-4 ? 68.0 ft.
							75			

BORING OB- 5

BORING LOCATION: 25 ft. Rt. Sta. 426+52 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +258.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/12/93 06/14/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										- Alluvium
	80	39.8			63	DM-5				**SAPROLITE**, green-gray, very soft, very weak, highly to extremely weathered
							30			
	79	58.6			142	DM-6				**CLINKER**, green to brown, soft, highly weathered **SAPROLITE**, green-gray, moderately hard to hard, highly to extremely weathered, vesicular
							35			
UC	90	31.8			70	DM-7				**CLINKER**, green to brown, soft, weak, highly weathered
										SAPROLITE, green-gray to dark gray, soft, weak, highly weathered
							40			
	85	8.3			84	DM-8				reddish-brown to dark brown, highly to extremely weathered
							45			
UC	77	43.5			90/9"	DM-9				**ASH AND CINDERS**, brownish gray-green, soft, weak, highly weathered
										SAPROLITE, green-gray, very soft, weak, highly to extremely weathered
							50			

BORING OB- 5

BORING LOCATION: 25 ft. Rt. Sta. 426+52 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +258.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/12/93 06/14/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			93	0		CB-16				vesicular
							80			
							85			Bottom of Boring No. OB-5 ? 83.0 ft
							90			
							95			
							100			

BORING OB- 4

BORING LOCATION: 23.5 ft. Rt. Sta. 425+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +250.3 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/17/93 06/18/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	77	43.7			85	DM-4				
			63			CB-5	30			soft to moderately hard, weak to moderately strong, highly weathered
			43			CB-6	35			gray-green to black, weak, highly to extremely weathered
			82			CB-7				**ASH AND CINDERS**, dark brown, soft, highly weathered
							40			**SAPROLITE**, dark gray, soft, weak, highly to extremely weathered, closely fractured
UC	89	3.0	47			CB-8	45			soft to moderately hard, weak to moderately strong, highly weathered
			45			CB-9	50			dark gray to dark green

BORING OB- 5

BORING LOCATION: 25 ft. Rt. Sta. 426+52 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +258.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/12/93 06/14/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, dark red to brown, stiff to very stiff, moist, with some gravel and cobbles - Alluvium
							5			gray-brown, hard, dry
PI CN	95	54.0			25	DM-1				
							10		GM	**SILTY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
	99	28.6			15	DM-2			CH	**SILTY, SANDY, GRAVELLY CLAY**, dark brown to gray, stiff to very stiff, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							15		GM	**SILTY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	77	43.5			88/9"	DM-3			GM GC	**SILTY CLAYEY GRAVEL**, brown, dense to very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							20		GM	**SILTY GRAVEL, COBBLES AND BOULDERS**, gray-brown, loose to medium-dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	67	55.9			11	DM-4			CH	**SILTY CLAY**, mottled orange-brown to reddish-brown and gray, soft, moist to wet
							25			

BORING OB- 5

BORING LOCATION: 25 ft. Rt. Sta. 426+52 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +258.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/12/93 06/14/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	67	55.8			70/9"	DM-10				
							55			green-gray to reddish-brown, extremely to completely weathered
UC	79	39.8			53	DM-11				
			70			CB-12	60			
			97			CB-13				light brown, soft to moderately hard, weak to moderately strong, highly weathered
							65			
			50			CB-14				reddish-brown to gray-green
							70			
DS	66	56.0	95			CB-15				gray-green
							75			

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

ROTATED: BASE PT: 0.0

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

PAUL COLIN WEIDIG — REGISTERED PROFESSIONAL ENGINEER No. 8047-C — HAWAII, U.S.A.

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B39 OF 59 SHEETS

LIB: STATE\DOT\H-3\H3030\ LOGS0K32 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	174	470

BORING LOCATION: 23.5 ft. Rt. 428+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +266.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/10/93 06/12/93 | TYPE RIG: Rotary Wash
BORING OB- 6

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, dark brown, stiff, moist, with scattered fine to medium gravel - Alluvium
							5		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	57	55.7			36	DM-1			CH	**SILTY, GRAVELLY CLAY**, dark brown, very stiff, very moist, with some roots and finely disseminated organic matter, fine to coarse gravel - Alluvium
							10		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
PI UC	81	40.0			27	DM-2			CH	**SILTY CLAY**, with some rounded gravel, dark brown, stiff, moist, with some roots and organics
							15			
DS	78	41.9			16	DM-3				**CONGLOMERATE: SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown to red-brown, very dense, saturated, highly weathered, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
							20			
										brown
	84	51.1			50/3"	DM-4				
							25			

BORING LOCATION: 23.5 ft. Rt. 428+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +266.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/10/93 06/12/93 | TYPE RIG: Rotary Wash
BORING OB- 6

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										vesicular, olivine crystals visible in vesicles
										red-brown to orange-brown
			40	9		CB-11	55			
										mottled gray and reddish-brown, extremely to completely weathered
			40	9		CB-12	60			
										ASH AND CINDERS, red-brown to gray-brown, very soft, weak, highly weathered
			13	13		CB-13	65			**SAPROLITE**, gray-green to orange-brown, soft, weak, extremely to completely weathered, vesicular
DS	70	56.6	13	13		CB-14	70			
										gray-green, soft to moderately hard, weak to moderately strong, highly to extremely weathered
			53	8		CB-15	75			

BORING LOCATION: 23.5 ft. Rt. Sta. 429+70 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: 282.5 ft. | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/21/93 07/24/93 | TYPE RIG: Rotary Wash
BORING OB- 7

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									OL	**ORGANIC SILT**, gray to black, loose, moist - Alluvium
									GM GC	**SILTY, CLAYEY GRAVEL**, gray-brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							5			
SG	79	37.1			70/9"	DM-1			CH	**SILTY, SANDY, GRAVELLY CLAY**, gray-brown to black, stiff to very stiff, moist, fine to coarse sand, fine to coarse gravel - Alluvium
									SC GC	**CLAYEY, GRAVELLY SAND**, gray to black, very dense, moist, fine to coarse gravel, fine to coarse sand - Alluvium
	93	27.2			70/3"	DM-2	10			
			100			CB-3				
			80			CB-4			GM GC	**SILTY, CLAYEY GRAVEL COBBLES AND BOULDERS**, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							15			
			0			CB-5				
							20			
			0			CB-6			GC	**CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							25			

BORING LOCATION: 23.5 ft. Rt. Sta. 429+70 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: 282.5 ft. | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/21/93 07/24/93 | TYPE RIG: Rotary Wash
BORING OB- 7

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										weathered, closely fractured
			95			CB-12				gray to dark gray, weak to friable
							55			
			40			CB-13				medium to dark gray, moderately hard, weak to moderately strong, highly weathered
							60			
			98			CB-14				medium gray to red, soft to moderately hard, moderately to highly weathered
							65			
	153	3.6	94			CB-15				gray, soft, weak, highly to extremely weathered
							70			
			52			CB-16				medium gray, soft to moderately hard, weak to moderately strong, highly weathered
							75			

BORING LOCATION: 23.5 ft. Rt. 428+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +266.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/10/93 06/12/93 | TYPE RIG: Rotary Wash
BORING OB- 6

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										brown to red-brown
										mottled orange-brown, red-brown and dark brown
							30			
UC	70	51.5			41	DM-5				**SAPROLITE**, gray, soft, weak, highly weathered
							35			
UC	67	55.9			88	DM-6				dark gray
							40			**CLINKER**, gray-brown, very soft, weak, highly weathered
UC	77	42.6			86	DM-7				**SAPROLITE**, mottled gray, orange-brown and reddish-brown, soft, weak, extremely to completely weathered
							45			
		32.5			50/3"	DM-8				**CLINKER**, gray-brown, very soft, weak, highly weathered
			83	33		CB-9				**SAPROLITE**, mottled gray, orange-brown and reddish-brown, soft, weak, highly to extremely,
			83	33		CB-10				
							50			

BORING LOCATION: 23.5 ft. Rt. 428+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +266.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/10/93 06/12/93 | TYPE RIG: Rotary Wash
BORING OB- 6

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
							80			Bottom of Boring No. OB-6 ? 79.0 ft.
							85			
							90			
							95			
							100			

BORING LOCATION: 23.5 ft. Rt. Sta. 429+70 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: 282.5 ft. | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/21/93 07/24/93 | TYPE RIG: Rotary Wash
BORING OB- 7

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			86			CB-7			GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							30			
			86			CB-8				
							35			
			90			CB-9				gray-brown
							40			
			98			CB-10				
							45			
			100			CB-11				**SAPROLITE**, dark gray, soft to very soft, friable, moderately to highly
							50			

PAUL COLIN WEIDIG
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No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B40 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\I-3\13030\ LOGS0433 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	175	470

BORING OB- 7

BORING LOCATION: 23.5 ft. Rt. Sta. 429+70
BORING ELEVATION: 282.5 ft.
DATE(S) DRILLED: 07/21/93 07/24/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			98			CB-17	80			gray-brown, soft, weak to friable, extremely weathered, very closely fractured
			97			CB-18	85			weak, closely fractured
			60			CB-19	90			
			80			CB-20	95			medium gray, highly to extremely weathered
UC	154	3.0	100			CB-21	100			dark gray, soft to moderately hard, weak to moderately strong, highly weathered, brecciated

BORING OB- 8

BORING LOCATION: 26 ft. Rt. Sta. 431+60
BORING ELEVATION: +265.9 ft
DATE(S) DRILLED: 07/08/93 07/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	CLAYEY SILT, dark brown, soft, moist - Alluvium
							5		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, reddish-brown to gray-brown, dense to very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
									GM	SILTY GRAVEL, dark gray, dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, reddish-brown to gray-brown, dense to very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							10		GM	SILTY GRAVEL, dark gray, dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, reddish-brown to gray-brown, dense to very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							15		GM	SILTY GRAVEL, dark gray, dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, reddish-brown to gray-brown, dense to very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							20		GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, reddish-brown to gray-brown, dense to very dense, moist to wet, fine to coarse sand, fine to coarse
			87			CB-1	25			

BORING OB- 8

BORING LOCATION: 26 ft. Rt. Sta. 431+60
BORING ELEVATION: +265.9 ft
DATE(S) DRILLED: 07/08/93 07/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			73			CB-7	55			dark brown
			68			CB-8	60			
							65			Bottom of Boring No. OB-8 ? 61.0 ft.
							70			
							75			

BORING OB- 9

BORING LOCATION: 23.5 ft. Rt. Sta. 433+07
BORING ELEVATION: +267.9 ft
DATE(S) DRILLED: 07/15/93 07/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
		46.0			104/18"	SP-6			GM GC	SILTY, CLAYEY GRAVEL, brown, very dense, saturated, fine to coarse gravel - Alluvium
			70			CB-7	30			
			62			CB-8				CONGLOMERATE: SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, very dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
			0			CB-9	35			saturated
			0			CB-10				
			50			CB-11	40			
			90			CB-12	45			
							50			

BORING OB- 7

BORING LOCATION: 23.5 ft. Rt. Sta. 429+70
BORING ELEVATION: 282.5 ft.
DATE(S) DRILLED: 07/21/93 07/24/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	99	19.6	100			CB-22	105			brown to gray, soft, weak to moderately strong, highly to extremely weathered, vesicular, olivine and vesuvianite crystals visible in vesicles, closely fractured
UC	128	4.6	100	100		CB-23				BASALT, medium gray, moderately hard, moderately strong to strong, moderately weathered, vesicular - 'A'a
			78	50		CB-24	110			olivine crystals visible in vesicles
							115			
							120			Bottom of Boring No. OB-7 ? 117.0 ft.
							125			

BORING OB- 8

BORING LOCATION: 26 ft. Rt. Sta. 431+60
BORING ELEVATION: +265.9 ft
DATE(S) DRILLED: 07/08/93 07/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										gravel - Alluvium
			57			CB-2	30			
			57			CB-3				CONGLOMERATE: SILTY, CLAYEY GRAVEL AND COBBLES, dark gray, very dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix gray-green
			73			CB-4	35			
										gray-brown
UC	139	2.4	70			CB-5	40			gray-green
			50			CB-6	45			
							50			

BORING OB- 9

BORING LOCATION: 23.5 ft. Rt. Sta. 433+07
BORING ELEVATION: +267.9 ft
DATE(S) DRILLED: 07/15/93 07/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									SC	SILTY, CLAYEY SAND, dark brown, loose, moist, fine to medium sand - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
					51	DM-1	5			brown, very dense
			50			CB-2				
							10			
			20			CB-3				brown
							15			
			100			CB-4				wet to saturated
							20			
			20			CB-5				very dense, saturated
							25			

PAUL COLIN WEIDIG
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No. 8047-C
HAWAII, U.S.A.

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B41 OF 59 SHEETS

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

ROTATED:
BASE PT: 0.0

LIB: STATE\DOT\H-3\v3030\
LOGBOK34 3/21/94 R30

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	176	470

BORING OB- 9

BORING LOCATION: 23.5 ft. Rt. Sta. 433+07
BORING ELEVATION: +267.9 ft
DATE(S) DRILLED: 07/15/93 07/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			95			CB-13	55			SAPROLITE, gray, soft, weak, highly to extremely weathered, very closely fractured
			95			CB-14	60			gray-brown
			98			CB-15	65			gray
			70			CB-16	70			
			100			CB-17	75			

BORING OB- 9

BORING LOCATION: 23.5 ft. Rt. Sta. 433+07
BORING ELEVATION: +267.9 ft
DATE(S) DRILLED: 07/15/93 07/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	74	28.9	100			CB-23	105			dark brown to dark gray, weak to friable
			100	75		CB-24	110			brown to gray-brown, weak
UC	154	1.0	100	80		CB-25	115			BASALT, brownish-red to dark gray, moderately hard to hard, moderately strong to strong, moderately weathered, vesicular - 'A'a moderately strong
							120			Bottom of Boring No. OB-9 ? 116.5 ft.
							125			

BORING OB-10

BORING LOCATION: 24 ft. Rt. Sta. 434+80
BORING ELEVATION: +272.7 ft
DATE(S) DRILLED: 06/25/93 06/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										to coarse sand, fine to coarse gravel - Alluvium
			100			CB-6	30			SAPROLITE, dark gray, soft, weak, highly weathered, very closely fractured
			95			CB-7	35			
			100			CB-8	40			dark gray to gray-green
			75			CB-9	45			gray-brown, vesicular
			90			CB-10	50			gray-brown to reddish-brown, highly to extremely weathered

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80
BORING ELEVATION: +290.0 ft
DATE(S) DRILLED: 07/30/93 08/02/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray to black, medium-dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	90	31.9			36	DM-1	5			gray-brown, dense
SA					28	DM-2	10			moist to wet
UC	93	29.2			62	DM-3	15			dense to very dense, saturated
	85	34.2			78/8"	DM-4	20			very dense
							25			

BORING OB- 9

BORING LOCATION: 23.5 ft. Rt. Sta. 433+07
BORING ELEVATION: +267.9 ft
DATE(S) DRILLED: 07/15/93 07/20/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	76	26.0	100			CB-18	80			greenish-gray to reddish-gray, extremely to completely weathered, vesicular
UC	132	13.7	100			CB-19	85			reddish-gray, extremely weathered, very closely fractured
UC	87	13.7	96			CB-20	90			gray, highly to extremely weathered, closely fractured
UC	117	11.3	100			CB-21	95			gray-brown
			96			CB-22	100			brownish-gray

BORING OB-10

BORING LOCATION: 24 ft. Rt. Sta. 434+80
BORING ELEVATION: +272.7 ft
DATE(S) DRILLED: 06/25/93 06/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	CLAYEY SILT, dark brown, soft, moist - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, dry to moist, fine to coarse sand, fine to coarse gravel - Alluvium
									MH	CLAYEY, GRAVELLY SILT, dark brown, soft, moist, fine to coarse gravel - Alluvium
							5		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, dry to moist, fine to coarse sand, fine to coarse gravel - Alluvium
DS	79	41.9			33/4"	DM-1	10		GM	SILTY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium
					44	DM-2	15		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
					54	DM-3	20		GM	SILTY GRAVEL, dark gray, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
			75			CB-4				
			8			CB-5	25		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, saturated, fine

BORING OB-10

BORING LOCATION: 24 ft. Rt. Sta. 434+80
BORING ELEVATION: +272.7 ft
DATE(S) DRILLED: 06/25/93 06/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	61	54.2	100			CB-11	55			dark gray to reddish-brown
			100			CB-12	60			gray-brown to reddish-brown
			90	0		CB-13	65			brown, soft, weak to moderately strong, highly weathered
UC	55	59.2	100	20		CB-14	70			gray, moderately hard, weak to moderately strong
							75			Bottom of Boring No. OB-10 ? 73.0 ft.

PAUL COLIN WELDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weldig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B42 OF 59 SHEETS

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

ROTATED: BASE FT: 0.0

LB: STATE\DOT\I-3\5030\ LOGS0035 2/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	177	470

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +290.0 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/30/93 08/02/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	78	41.9			120/7"	DM-5				
			63			CB-6				
			54			CB-7	30			gray-brown to reddish-brown, very dense
			80			CB-8	35			**CONGLOMERATE: SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** gray to reddish-brown, very dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
			80			CB-9	40			gray-brown to reddish-brown
			80			CB-10	45			light gray-green
							50			gray-brown to light

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +290.0 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/30/93 08/02/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-16				
			100			CB-17	80			weak
			100			CB-18	85			
			98			CB-19	90			
UC	78	12.0	95			CB-20	95			
							100			brownish-gray

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +290.0 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/30/93 08/02/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-26				
							130			Bottom of Boring No. OB-11 ? 129.5 ft.
							135			
							140			
							145			
							150			

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +290.0 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/30/93 08/02/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	78	41.9			120/7"	DM-5				
			63			CB-6				
			54			CB-7	30			gray-brown to reddish-brown, very dense
			80			CB-8	35			**CONGLOMERATE: SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** gray to reddish-brown, very dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
			80			CB-9	40			gray-brown to reddish-brown
			80			CB-10	45			light gray-green
							50			gray-brown to light

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +290.0 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/30/93 08/02/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	108	20.0	90			CB-11				gray-green
			80			CB-12	55			**SAPROLITE,** gray, soft, highly weathered, weak, very closely fractured
			100			CB-13	60			brown, friable, vesicular
			95			CB-14	65			
UC	67	51.7	100			CB-15	70			gray-brown, weak, very closely fractured
							75			weak to friable

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +290.0 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/30/93 08/02/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			90			CB-21				
			85			CB-22	105			gray-brown
			80			CB-23	110			
			50			CB-24	115			dark gray, weak to moderately strong
			75			CB-25	120			gray-brown
							125			

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +290.0 ft | LOGGED BY: S. Hickman
DATE(S) DRILLED: 07/30/93 08/02/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** gray to black, medium-dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	90	31.9			36	DM-1	5			gray-brown, dense
SA					28	DM-2	10			moist to wet
UC	93	29.2			62	DM-3	15			dense to very dense, saturated
	85	34.2			78/8"	DM-4	20			very dense
							25			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B43 OF 59 SHEETS

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

ROTATED:
BASE FT: 0.0

LIB: STATE\DOT\I-3\3030\
LOG8OR36 3/21/94 RSG

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	178	470

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80
BORING ELEVATION: +290.0 ft
DATE(S) DRILLED: 07/30/93 08/02/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	106	20.0	90			CB-11				gray-green
			80			CB-12	55			SAPROLITE, gray, soft, highly weathered, weak, very closely fractured
			100			CB-13	60			brown, friable, vesicular
			95			CB-14	65			
UC	67	51.7	100			CB-15	70			gray-brown, weak, very closely fractured
							75			weak to friable

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80
BORING ELEVATION: +290.0 ft
DATE(S) DRILLED: 07/30/93 08/02/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			90			CB-21				
			85			CB-22	105			gray-brown
			80			CB-23	110			
			50			CB-24	115			dark gray, weak to moderately strong
			75			CB-25	120			gray-brown
							125			

BORING OB-12

BORING LOCATION: 23 ft. Rt. Sta. 438+25
BORING ELEVATION: +288.4 ft
DATE(S) DRILLED: 06/24/93 06/25/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
DS PI PR	74	55.1				BK-1			MH	CLAYEY SILT, dark brown, soft to medium-stiff, moist - Alluvium
PI UC	75	41.3			31	DM-2	5		CH	SILTY, GRAVELLY CLAY, dark brown, medium-stiff, moist, fine to coarse gravel - Alluvium
									GM	SILTY GRAVEL, brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
DS	71	44.8			27	DM-3	10		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	79	42.6			99	DM-4	15		GM	SILTY GRAVEL, gray, orange and green mottled, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							20		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
SA	85	37.2			57	DM-5			SM GM	SILTY, GRAVELLY SAND, gray, orange and green mottled, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							25		GM	

BORING OB-12

BORING LOCATION: 23 ft. Rt. Sta. 438+25
BORING ELEVATION: +288.4 ft
DATE(S) DRILLED: 06/24/93 06/25/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			0			CB-12	55			soft to moderately hard, weak to moderately strong, highly weathered
			30			CB-13	60			weak, highly to extremely weathered
			76			CB-14	65			yellowish-orange and gray mottled, soft to moderately hard, weak to moderately strong
			60			CB-15	70			gray to orange-brown and gray-green mottled, highly to completely weathered, closely fractured
			58			CB-16	75			gray, highly weathered

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80
BORING ELEVATION: +290.0 ft
DATE(S) DRILLED: 07/30/93 08/02/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-16				
			100			CB-17	80			weak
			100			CB-18	85			
			98			CB-19	90			
UC	78	12.0	95			CB-20	95			
							100			brownish-gray

BORING OB-11

BORING LOCATION: 23.5 ft. Rt. Sta. 436+80
BORING ELEVATION: +290.0 ft
DATE(S) DRILLED: 07/30/93 08/02/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-26				
							130			Bottom of Boring No. OB-11 ? 129.5 ft.
							135			
							140			
							145			
							150			

BORING OB-12

BORING LOCATION: 23 ft. Rt. Sta. 438+25
BORING ELEVATION: +288.4 ft
DATE(S) DRILLED: 06/24/93 06/25/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
	89	30.1			80	DM-6	30		GM	SILTY GRAVEL, gray-green, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
					75/3"	DM-7	35			SAPROLITE, green to reddish-brown, soft, weak, highly to extremely weathered, very closely fractured
			50			CB-8				gray and orange-brown mottled
			80			CB-9	40			yellowish-gray
			0			CB-10	45			dark brown to gray-green, vesicular
			0			CB-11				brown to gray-green
							50			

SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
DATE	

ORIGINAL PLANS
NOTE BOOK No.

ROTATED: BASE PT. 0.0

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994

SHEET No. B44 OF 59 SHEETS

LIB: STATE\DOT\I-3\I3030\
LOGS0K37 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	179	470

BORING OB-12

BORING LOCATION: 23 ft. Rt. Sta. 438+25 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +288.4 ft | LOGGED BY: H. Clark
DATE(S) DRILLED: 06/24/93 06/25/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										Bottom of Boring No. OB-12 ? 78.0 ft.
							80			
							85			
							90			
							95			
							100			

BORING OB-13

BORING LOCATION: 23.5 ft. Rt. Sta. 440+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +290.3 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 06/24/93 06/26/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	81	12.9	60			CB-3				SAPROLITE, light brown to reddish-brown, soft, weak, highly to extremely weathered light gray to gray-green, soft to moderately hard, highly weathered, vesicular
							30			
			65			CB-4				reddish-gray, soft, extremely to completely weathered
							35			
			100			CB-5				light gray, soft to moderately hard, highly weathered, faint columnar jointing
							40			
UC	68	48.3	100			CB-6				light gray to dark gray-green, weak to moderately strong
							45			
			90			CB-7				dark brown to orange-brown, weak to friable, olivine crystals visible in vesicles
							50			

BORING OB-14

BORING LOCATION: 23.5 ft. Rt. Sta. 441+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +299.6 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 07/26/93 07/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	CLAYEY, SILTY GRAVEL, dark brown, loose to medium-dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
	75	46.3			77	DM-1	5			saturated
									CH	SILTY, SANDY, GRAVELLY CLAY, orange-brown and reddish-brown mottled, stiff to very stiff, moist, fine to coarse sand, fine to coarse gravel - Alluvium
CN	90	33.4			41	DM-2	10			
									GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, orange-brown to reddish-brown, dense to very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
					50 50	DM-3 SP-4	15			
							20			
							25			

BORING OB-14

BORING LOCATION: 23.5 ft. Rt. Sta. 441+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +299.6 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 07/26/93 07/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			90			CB-10				COBBLES AND BOULDERS, orange-brown to reddish brown, dense to very dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
							55			SAPROLITE, light to dark brownish-gray and orange-brown mottled, soft, weak, highly weathered, vesicular
			50			CB-11				brown to dark gray, extremely weathered
							60			
			87			CB-12				reddish-brown, purple and brown mottled, extremely to completely weathered
							65			
DS	107	19.8	90			CB-13				orange-brown, dark brown, dark gray and purple mottled
							70			
			100			CB-14				violet, brown and black mottled, extremely weathered
							75			

BORING OB-13

BORING LOCATION: 23.5 ft. Rt. Sta. 440+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +290.3 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 06/24/93 06/26/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, dry to moist, fine to coarse sand, fine to coarse gravel - Alluvium
							5		GM	SILTY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							10		GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
			50			CB-1	15		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
			40			CB-2	20		GM GC	SILTY, CLAYEY GRAVEL, dark gray, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							25			

BORING OB-13

BORING LOCATION: 23.5 ft. Rt. Sta. 440+00 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +290.3 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 06/24/93 06/26/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			98			CB-8				dark gray, soft to moderately hard, weak to moderately strong
							55			
			100			CB-9				
							60			Bottom of Boring No. OB-13 ? 58.5 ft.
							65			
							70			
							75			

BORING OB-14

BORING LOCATION: 23.5 ft. Rt. Sta. 441+85 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +299.6 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 07/26/93 07/29/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
		44.8			80	SP-5			GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, orange-brown to reddish-brown, dense to very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							30			
UC	159	0.9	88			CB-6				
							35			
			78			CB-7				
							40			
			90			CB-8				
							45			
UC	64	57.5	93			CB-9				CONGLOMERATE: CLAYEY, GRAVELLY SAND, orange-brown to reddish-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
							50			CONGLOMERATE: CLAYEY GRAVEL,

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B45 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\H-3\H-3030\ LOGS0438 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	180	470

BORING OB-14

BORING LOCATION: 23.5 ft. Rt. Sta. 441+85
BORING ELEVATION: +299.6 ft
DATE(S) DRILLED: 07/26/93 07/29/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-15				green-gray, soft to moderately hard, weak to moderately strong, highly weathered, closely fractured
							80			
UC	143	1.5	87			CB-16				highly to extremely weathered
							85			
			38			CB-17				purple, black and brown mottled, soft, weak
							90			
			100			CB-18				gray-green to brownish-gray, weak to moderately strong, very closely fractured
							95			
UC	83	7.0	100			CB-19				brownish-gray to gray, soft to moderately hard, closely to very closely fractured black, orange-brown, red, reddish-brown and brown mottled, soft, weak, extremely weathered
							100			

BORING OB-15

BORING LOCATION: 26 ft. Rt. Sta. 443+95
BORING ELEVATION: +299.9 ft
DATE(S) DRILLED: 06/05/93 06/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	SILTY, CLAYEY GRAVEL COBBLES AND BOULDERS, gray-brown, very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							5		MH	SANDY, CLAYEY SILT, gray, very stiff, wet, with fine to coarse gravel - Alluvium
	111	12.8			69	DM-1			GM GC	SILTY, CLAYEY GRAVEL COBBLES AND BOULDERS, gray-brown, very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							10			
SA					120	DM-2			GM	CLAYEY GRAVEL COBBLES AND BOULDERS, gray-brown to red-brown matrix, very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							15		CH	SILTY, GRAVELLY CLAY, light brown, soft, wet, fine to coarse gravel - Alluvium
UC	75	43.8			62	DM-3				
							20		GC	CLAYEY GRAVEL COBBLES AND BOULDERS, gray-brown to red-brown matrix, very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
									MH	CLAYEY SILT, mottled red-orange and gray, stiff, wet, with weathered rock fragments - Alluvium
							25			

BORING OB-15

BORING LOCATION: 26 ft. Rt. Sta. 443+95
BORING ELEVATION: +299.9 ft
DATE(S) DRILLED: 06/05/93 06/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
DS	68	47.8			30/6"	DM-9				violet and gray mottled
							55			
	74	42.7			61	DM-10				dark gray, reddish-brown and violet mottled, highly to extremely weathered
							60			
DS	96	34.0			74	DM-11				dark gray and violet mottled
							65			
					100/6"	DM-12				dark gray
							70			
		43.0			130/6"	DM-13				
										ASH AND CINDERS, gray, soft to very soft, weak, highly weathered
										CLINKER, dark brown, soft, weak, highly weathered
							75			

BORING OB-15

BORING LOCATION: 26 ft. Rt. Sta. 443+95
BORING ELEVATION: +299.9 ft
DATE(S) DRILLED: 06/05/93 06/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
							105			strong, slightly to moderately weathered, highly vesicular - 'A'a
										Bottom of Boring No. OB-15 ? 100.0 ft.
							110			
							115			
							120			
							125			

BORING OB-14

BORING LOCATION: 23.5 ft. Rt. Sta. 441+85
BORING ELEVATION: +299.6 ft
DATE(S) DRILLED: 07/26/93 07/29/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										Bottom of Boring No. OB-14 ? 101.0 ft.
							105			
							110			
							115			
							120			
							125			

BORING OB-15

BORING LOCATION: 26 ft. Rt. Sta. 443+95
BORING ELEVATION: +299.9 ft
DATE(S) DRILLED: 06/05/93 06/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	72	45.2			70	SP-4				
							30			CONGLOMERATE: SILTY, GRAVELLY SAND, gray to gray-brown, medium-dense to dense, saturated, fine to coarse gravel, fine to coarse sand, highly weathered, weakly cemented matrix
	68	17.0			55	DM-5				
							35			
DS	73	44.6			63	DM-6				CONGLOMERATE: SILTY, CLAYEY, GRAVELLY SAND, violet, orange-brown and gray mottled, very dense, saturated, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
							40			
	62	60.2			31	DM-7				SAPROLITE, orange-brown and dark brown mottled, soft, weak, highly to completely weathered
							45			
					77/6"	DM-8				reddish-brown, extremely to completely weathered
							50			

BORING OB-15

BORING LOCATION: 26 ft. Rt. Sta. 443+95
BORING ELEVATION: +299.9 ft
DATE(S) DRILLED: 06/05/93 06/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
		25.3			50/4"	SP-14				
						CB-15				
							80			SAPROLITE, dark gray, moderately hard, weak to moderately strong, highly weathered
		61.1				CB-16				
										CLINKER, violet and gray mottled, soft, weak, highly weathered
										ASH AND CINDERS, gray-brown, soft, weak, highly weathered
							85			CLINKER, brown, gray-brown and reddish-brown mottled, soft, weak, highly weathered orange and reddish-brown mottled, weak to friable
UC	71	47.5				CB-17				
										BASALT, gray-green, soft, weak highly weathered, clay partings in joints - 'A'a
							90			
UC	77	27.8				CB-18				
							95			
UC	52	19.1				CB-19				gray-green to gray-brown, hard, strong, slightly to moderately weathered, highly vesicular
										CLINKER, gray to violet, soft, weak to friable, highly weathered
										BASALT, gray to gray-brown, moderately hard, moderately
							100			

PAUL COLIN WEIDIG
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PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994

SHEET No. B46 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\I-3\H3030\ LOGBOK38 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	181	470

BORING OB-16

BORING LOCATION: 26.5 ft. Rt. Sta. 445+95 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +308.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/01/93 06/05/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY SILT**, very dark brown, soft to stiff, moist, with fine to coarse gravel - Fill
									MH	**CLAYEY SILT**, dark brown, stiff, wet to saturated, with fine to coarse gravel and small cobbles - Alluvium
CN	120	10.0			17	DM-1	5			
	71	37.7				DN-2				
									GM GC	**SILTY CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray to gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
		58.2			28	SP-3	10			
									GM	**SILTY GRAVEL**, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
					50/3"	SP-4	15		GM	**SILTY GRAVELLY COBBLES AND BOULDERS**, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
									GM	**SILTY GRAVEL**, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel, with scattered cobbles and boulders - Alluvium
							20			
		48.2			10	SP-5			CH	**SILTY CLAY**, brown to reddish-brown, soft, saturated, with fine to
							25			

BORING OB-16

BORING LOCATION: 26.5 ft. Rt. Sta. 445+95 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +308.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/01/93 06/05/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	68	52.2			40	DM-11				
	70	51.4			43	DM-12	55			reddish-brown and dark gray mottled, highly to extremely weathered
	88	32.4			137/6"	DM-13	60			
DS	69	46.2			45	DM-14	65			dark gray to black, highly weathered
		54.3			80	DM-15	70			dark brown, light brown and reddish-brown mottled, vesicular
							75			

BORING OB-16

BORING LOCATION: 26.5 ft. Rt. Sta. 445+95 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +308.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/01/93 06/05/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
							105			Bottom of Boring No. OB-16 ? 100.0 ft.
							110			
							115			
							120			
							125			

BORING OB-17

BORING LOCATION: 23.5 ft. Rt. Sta. 447+95 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +308.7 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 06/01/93 06/05/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										BOULDERS, mottled gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							30			
										CONGLOMERATE, CLAYEY, SANDY GRAVEL, gray, dense, saturated, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
						DN-4	35			
		54.0			24	SP-5				
	92	34.7			94/7"	DM-6	40			
										CONGLOMERATE, CLAYEY GRAVEL, COBBLES AND BOULDERS, dark gray, very dense, saturated, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
	68	53.2			76	DM-7	45			**CONGLOMERATE, CLAYEY GRAVEL**, gray and brown, medium-dense, saturated, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
							50			

BORING OB-16

BORING LOCATION: 26.5 ft. Rt. Sta. 445+95 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +308.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/01/93 06/05/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM	coarse sand and gravel - Alluvium
	90	34.0			64	DM-8				**SILTY GRAVEL, COBBLES AND BOULDERS**, gray-brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							30			**SAPROLITE**, gray-green, soft, weak, highly to extremely weathered, closely fractured
										CLINKER, gray-brown, medium-dense, highly weathered
	80	40.8			80/8"	DM-7	35			**SAPROLITE**, gray-green, soft, weak, highly weathered, closely fractured
										ASH AND CINDERS, brown to dark brown, clayey, soft, weak, highly weathered
		59.7			24	SP-8				**SAPROLITE**, reddish-brown and dark gray mottled, soft, weak, highly to extremely weathered
							40			
	66	56.6			71	DM-9				
							45			
	80	37.8			100/7"	DM-10				dark brown and dark gray mottled, highly weathered
							50			

BORING OB-16

BORING LOCATION: 26.5 ft. Rt. Sta. 445+95 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +308.8 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/01/93 06/05/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	70	42.7			81	DM-16				dark brown and reddish-brown mottled
	70	41.8			100/11"	DM-17	80			reddish-brown and gray mottled
	76	39.0			63	DM-18	85			light brown, reddish-brown, gray and violet mottled, highly to extremely weathered
					50/1"	DM-19	90			**BASALT**, gray, hard, strong, slightly weathered, vesicular - 'A'a
			25	0		CB-20				
			50	0		CB-21				
			83	0		CB-22				
UC	139	3.0	18	15		CB-23	95			gray and violet mottled
							100			

BORING OB-17

BORING LOCATION: 23.5 ft. Rt. Sta. 447+95 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +308.7 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 06/01/93 06/05/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									SC GC	**CLAYEY, GRAVELLY SAND**, medium brown-gray, medium-dense, moist to very moist, fine to coarse sand, fine to coarse gravel - Alluvium
	77	28.7			85/8"	DM-1	5			
									GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, gray-brown, dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
							10			
							15			
	67	46.8			27	DM-2				very dense, saturated
							20			
DS	78	41.3			110	DM-3	25		GC	**CLAYEY GRAVEL, COBBLES AND**

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PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B47 OF 59 SHEETS

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

ROTATED: BASE PT: 0,0

LIB: STATE\DOT\I-3\3030\ LOGBOR40 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	182	470

BORING OB-17

BORING LOCATION: 23.5 ft. Rt. Sta. 447+95
BORING ELEVATION: +308.7 ft
DATE(S) DRILLED: 06/01/93 06/05/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
	65	60.5			69	DM-8				
DS	89	22.7			38	DM-9	55			
	91	30.5			60/7"	DM-10	60			
										SAPROLITE, dark brownish-gray, soft, friable, highly to extremely weathered
							65			brownish-gray, weak, highly weathered
	73	41.9			70/6"	DM-11				
			45			CB-12	70			very closely fractured, faint jointing, vesicular
										brown to dark gray, weak to moderately strong
			80			CB-13	75			

BORING OB-17

BORING LOCATION: 23.5 ft. Rt. Sta. 447+95
BORING ELEVATION: +308.7 ft
DATE(S) DRILLED: 06/01/93 06/05/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
							105			
							110			
							115			
							120			
							125			

olivine crystals visible in vesicles - 'A'a
Bottom of Boring No. OB-17 ? 100.0 ft.

BORING OB-18

BORING LOCATION: 23.5 ft. Rt. Baseline 449+55
BORING ELEVATION: +311.6 ft
DATE(S) DRILLED: 06/17/93 06/18/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	69	53.0			78	DM-5				dark gray, weak, highly weathered
			50			CB-6				
			40			CB-7	30			light brownish-gray, weak to friable, very closely fractured
			50			CB-8	35			CLINKER, brownish-gray, soft, weak, highly to extremely weathered
										SAPROLITE, gray, soft, weak to moderately strong, moderately to highly weathered
UC	67	32.3	95			CB-9	40			
UC			95			CB-10	45			
			75			CB-11	50			

BORING OB-19

BORING LOCATION: 21 ft. Rt. Sta. 451+08
BORING ELEVATION: +317.9 ft
DATE(S) DRILLED: 06/09/93 06/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, dense to very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
SA	109	21.1			43	DM-1	5		GM	SILTY GRAVEL, COBBLES AND BOULDERS, brown, very dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
		38.1			61	DEN-2	10		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, dense to very dense, wet, fine to coarse sand, fine to coarse gravel - Alluvium
	112	20.3			84	DM-3	15			gray-brown to reddish-brown, very dense, saturated
	70	47.3			41	DM-4	20			brown to orange-brown, dense to very dense
							25			

BORING OB-17

BORING LOCATION: 23.5 ft. Rt. Sta. 447+95
BORING ELEVATION: +308.7 ft
DATE(S) DRILLED: 06/01/93 06/05/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-14				
							80			
			40			CB-15				dark gray, soft to moderately hard
							85			
			40			CB-16				brownish-gray and gray-black mottled
							90			
			50			CB-17				medium gray, soft to moderately hard
							95			
UC	146	2.5	100			CB-18				BASALT, medium gray, soft to moderately hard, weak to moderately strong, highly to moderately weathered, incipient joints, vesicular,
							100			

BORING OB-18

BORING LOCATION: 23.5 ft. Rt. Baseline 449+55
BORING ELEVATION: +311.6 ft
DATE(S) DRILLED: 06/17/93 06/18/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GC	ASPHALTIC CONCRETE
SA					62	DM-1				CLAYEY GRAVEL, brown, very dense, moist, fine to coarse gravel - Alluvium
							5			
DS	70	44.6			85	DM-2				
							10		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
							15			
					50	DM-3			GM	SILTY GRAVEL, COBBLES AND BOULDERS, brown, very dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	86	35.2			58	DM-4	20			
							25			SAPROLITE, brownish-gray, soft, weak to friable, highly weathered

BORING OB-18

BORING LOCATION: 23.5 ft. Rt. Baseline 449+55
BORING ELEVATION: +311.6 ft
DATE(S) DRILLED: 06/17/93 06/18/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			60			CB-12				
							55			
			20			CB-13				
							60			brownish-gray, soft to moderately hard, weak to moderately strong, highly to extremely weathered, vesicular
			75			CB-14				highly weathered
							65			
										Bottom of Boring No. OB-18 ? 68.0 ft.
							70			
							75			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994

SHEET No. B48 OF 59 SHEETS

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

ROTATED:
BASE PT. 0.0

LIB: STATE\DGT\I-3\I-3030\
LOGBOR41 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	183	470

BORING OB-19

BORING LOCATION: 21 ft. Rt. Sta. 451+08
BORING ELEVATION: +317.9 ft
DATE(S) DRILLED: 06/09/93 06/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
		51.5			42	DM-5	30		gray-brown to yellow-brown, very dense
UC	64	58.4			51	DM-6	35		SAPROLITE, brown to dark gray, soft, weak, highly weathered
UC	72	49.7			106/8"	DM-7	45		brown to reddish-orange, highly to extremely weathered
							50		

BORING OB-19

BORING LOCATION: 21 ft. Rt. Sta. 451+08
BORING ELEVATION: +317.9 ft
DATE(S) DRILLED: 06/09/93 06/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
		43.8			64	DM-12			brownish-gray to violet-gray
		43.3			48	DM-13	80		gray-green to brown and reddish-orange mottled, highly to extremely weathered
		47.8			40/1"	DM-14	85		dark brownish-gray, highly weathered
		47.9			53	DM-15	90		brown, purple, reddish-orange and gray-green mottled, weak to moderately strong
		37.1			70/2"	DM-16	95		orange-brown and dark gray-brown mottled
							100		

BORING OB-19

BORING LOCATION: 21 ft. Rt. Sta. 451+08
BORING ELEVATION: +317.9 ft
DATE(S) DRILLED: 06/09/93 06/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
							130		Bottom of Boring No. OB-19 ? 125.0 ft.
							135		
							140		
							145		
							150		

BORING OB-20

BORING LOCATION: 23.5 ft. Rt. Sta. 452+80
BORING ELEVATION: +323.5 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark/S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-5			orange to brown, very dense, saturated
			92			CB-6	30		SAPROLITE, brownish gray, soft, weak, highly to extremely weathered, vesicular
			94			CB-7	35		brown to purple and dark gray mottled, soft, extremely to completely weathered, very closely fractured
			88			CB-8	40		brown-gray to dark gray, highly to extremely weathered
			0			CB-9	45		green, gray, and brown mottled
							50		

BORING OB-19

BORING LOCATION: 21 ft. Rt. Sta. 451+08
BORING ELEVATION: +317.9 ft
DATE(S) DRILLED: 06/09/93 06/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
		37.4			90/9"	DM-8	55		brown to dark reddish-brown and gray
		34.8			115	DM-9	60		brown, reddish-orange and dark gray mottled, weak to moderately strong, highly weathered
		56.7			32	DM-10	65		brown to dark gray, weak
		41.3			47	DM-11	70		brown, reddish-orange and yellow-brown mottled
							75		

BORING OB-19

BORING LOCATION: 21 ft. Rt. Sta. 451+08
BORING ELEVATION: +317.9 ft
DATE(S) DRILLED: 06/09/93 06/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
		34.4	80		26/6"	SP-17 CB-18			gray-brown, reddish-orange and dark gray mottled
			85			CB-19	105		
UC	76	9.7	80			CB-20	110		CLINKER, dark gray-brown, soft to very soft, weak, highly to extremely weathered
UC	133	5.0	80	50		CB-21	115		BASALT, dark gray to brown to gray mottled, moderately hard, moderately strong to strong, moderately weathered, vesicular - 'A'a
			90	65		CB-22	120		
			90	70		CB-23	125		moderately hard to hard

BORING OB-20

BORING LOCATION: 23.5 ft. Rt. Sta. 452+80
BORING ELEVATION: +323.5 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark/S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	U.S.C.S	GEOTECHNICAL DESCRIPTION
								GM GC	SILTY, CLAYEY GRAVEL, brown, medium-dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
								GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, dark brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
			73			CB-1	5		
			73			CB-2	10		
			43			CB-3	15		light gray, dense
			70			CB-4	20		orange-brown, moist
							25		

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B49 OF 59 SHEETS

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

ROTATED:
BASE FT. 0.0

LIB: STATE\DOT\I-3\5030\
LOGS0R42 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	184	470

BORING OB-20

BORING LOCATION: 23.5 ft. Rt. Sta. 452+80
BORING ELEVATION: +323.5 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark/S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			0			CB-10				dark gray
			0			CB-11				green, highly to extremely weathered
			100			CB-12	55			gray-green, extremely to completely weathered
UC	81	26.4	100			CB-13	60			brown, purple and yellow mottled, extremely to completely weathered
UC	72	39.9	100			CB-14	65			gray-green, highly to extremely weathered
			85			CB-15	70			gray, green, orange, extremely to completely weathered
							75			

BORING OB-20

BORING LOCATION: 23.5 ft. Rt. Sta. 452+80
BORING ELEVATION: +323.5 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark/S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	117	10.8	100			CB-22	105			gray, purple and brown mottled, extremely weathered
			37			CB-23	110			gray, soft to moderately hard, moderately strong, highly weathered, closely fractured
UC	125	7.1	100			CB-24	115			red, soft, extremely weathered, vesicular
			100	68		CB-25	120			extremely to completely weathered **BASALT**, red, hard, moderately strong to strong, moderately to highly weathered, moderately fractured, vesicular - 'A'a
UC	143	2.2	100	77		CB-26	125			gray, soft to moderately hard

BORING OB-21

BORING LOCATION: 23.5 ft. Rt. Sta. 454+50
BORING ELEVATION: +328.9 ft
DATE(S) DRILLED: 08/05/93 08/06/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									SM GM	**SILTY SAND**, dark brown, loose, moist, with scattered cobbles and boulders, fine to coarse sand, fine to coarse gravel - Alluvium
			100			CB-1			GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, dark brown, dense, moist, fine to coarse sand, coarse gravel - Alluvium very dense
			48			CB-2	5			
							10			dark orange-brown, dense to very dense
			100			CB-3				orange-brown, very dense
			57			CB-4	15			orange-brown and gray-brown mottled, dense to very dense, saturated
			100			CB-5	20			**CONGLOMERATE: SILTY, CLAYEY SAND, GRAVEL AND COBBLES**, gray-green, black and yellow-brown mottled, soft, moist, highly weathered, weakly cemented matrix, fine to coarse sand, fine to
							25			

BORING OB-21

BORING LOCATION: 23.5 ft. Rt. Sta. 454+50
BORING ELEVATION: +328.9 ft
DATE(S) DRILLED: 08/05/93 08/06/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-11				greenish-gray, soft to moderately hard
			100			CB-12	55			grayish-red to dark brown, highly weathered
			72			CB-13	60			dark brown-gray
			80			CB-14	65			reddish-brown, highly to extremely weathered, closely fractured, vesicular
			97			CB-15	70			reddish-brown and orange-gray mottled, extremely to completely weathered
							75			

BORING OB-20

BORING LOCATION: 23.5 ft. Rt. Sta. 452+80
BORING ELEVATION: +323.5 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark/S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-16				gray, black and reddish-brown mottled
		56.0	100			CB-17	80			red, black and brown mottled
			63			CB-18	85			red, purple and brown mottled
			100			CB-19	90			gray, black and red-brown mottled
UC	95	8.5	80			CB-20	95			gray, green and reddish-brown mottled, highly to extremely weathered
			92			CB-21	100			gray-green

BORING OB-20

BORING LOCATION: 23.5 ft. Rt. Sta. 452+80
BORING ELEVATION: +323.5 ft
DATE(S) DRILLED: 08/07/93 08/11/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: H. Clark/S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										Bottom of Boring No. OB-20 ? 126.0 ft.
							130			
							135			
							140			
							145			
							150			

BORING OB-21

BORING LOCATION: 23.5 ft. Rt. Sta. 454+50
BORING ELEVATION: +328.9 ft
DATE(S) DRILLED: 08/05/93 08/06/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										coarse gravel
	76	34.4	100			CB-6				mottled tan and dark gray
							30			
	81	55.8	100			CB-7				greenish-gray
							35			
	104	18.9	100			CB-8				mottled tan and dark gray
							40			
			100			CB-9				**SAPROLITE**, medium brown-gray, soft, weak, highly weathered, very closely fractured
							45			
			87			CB-10				moderately to highly weathered
							50			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B50 OF 59 SHEETS

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

ROTATED: BASE FT. 0.0

LIB: STATE\DOT\I-3\J0330\ LOGS0R43 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	185	470

BORING OB-21

BORING LOCATION: 23.5 ft. Rt. Sta. 454+50
BORING ELEVATION: +328.9 ft
DATE(S) DRILLED: 08/05/93 08/06/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			97			CB-16				gray-brown and reddish-orange mottled
			90			CB-17	80			gray-green to brown, soft to moderately hard, highly weathered
			90			CB-18	85			reddish-brown to orange-black
UC	91	19.4	87	50		CB-19	90			BASALT, green-gray to brown, soft to moderately hard, highly weathered, closely fractured, vesicular - 'A'a
			100	0		CB-20	95			gray, purple, red, green, brown, blue and black mottled, soft, weak
							100			

BORING OB-22

BORING LOCATION: 23.5 ft. Rt. Sta. 456+50
BORING ELEVATION: +334.8 ft
DATE(S) DRILLED: 07/12/93 07/14/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM	CLAYEY, SANDY, GRAVELLY SILT, dark gray, loose, moist, fine to coarse sand, fine to coarse gravel, with finely disseminated organic matter - Alluvium
									GC	
							5		GM GC	CLAYEY GRAVEL, gray-brown, medium-dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
										SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, reddish-brown to gray-brown, dense, wet, fine to coarse gravel, fine to coarse sand - Alluvium
							10		GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, reddish-brown to gray-brown, dense, wet, fine to coarse gravel, fine to coarse sand - Alluvium
							15		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, reddish-brown to gray-brown, dense, wet, fine to coarse gravel, fine to coarse sand - Alluvium
			60			CB-1	20			SAPROLITE, gray-brown, soft, weak, highly weathered, closely fractured, faint jointing
							25			

BORING OB-22

BORING LOCATION: 23.5 ft. Rt. Sta. 456+50
BORING ELEVATION: +334.8 ft
DATE(S) DRILLED: 07/12/93 07/14/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			30			CB-7				gray-green
			100			CB-8	55			gray
UC	85	21.6	95			CB-9	60			ASH AND CINDERS, gray, soft, weak, highly weathered SAPROLITE, gray-brown, soft, weak, highly weathered, closely fractured
UC	87	22.7	95			CB-10	65			gray
			97			CB-11	70			gray-brown, soft to moderately hard, weak to moderately strong, highly weathered, vesicular
							75			

BORING OB-23

BORING LOCATION: 23.5 ft. Rt. Sta. 458+10
BORING ELEVATION: +338.1 ft
DATE(S) DRILLED: 08/16/93 08/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	SILTY, CLAYEY GRAVEL, very dark brown, loose to medium-dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
									GM GC	
							5			SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, very dark brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
					103	DM-1			GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							10			orange-brown
					101	DM-2	15			orange-brown to reddish-brown, very dense, saturated
					95	DM-3	20			dense
			79			CB-4	25			SAPROLITE, dark green-gray, soft, weak, extremely

BORING OB-21

BORING LOCATION: 23.5 ft. Rt. Sta. 454+50
BORING ELEVATION: +328.9 ft
DATE(S) DRILLED: 08/05/93 08/06/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	115	7.4	80	42		CB-21				red, brown and yellow
							105			
UC	109	7.0	97	31		CB-22				gray, black and brown mottled
							110			
			88	65		CB-23				gray, black and purple mottled, hard to moderately hard
							115			
										Bottom of Boring No. OB-21 ? 116.0 ft.
							120			
							125			

BORING OB-22

BORING LOCATION: 23.5 ft. Rt. Sta. 456+50
BORING ELEVATION: +334.8 ft
DATE(S) DRILLED: 07/12/93 07/14/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-2				gray to brown, vesicular
							30			
DS	81	45.6	94			CB-3				gray
							35			
UC	67	36.5	95			CB-4				brown
							40			
			95			CB-5				gray
							45			
			30			CB-6				gray-brown
							50			

BORING OB-22

BORING LOCATION: 23.5 ft. Rt. Sta. 456+50
BORING ELEVATION: +334.8 ft
DATE(S) DRILLED: 07/12/93 07/14/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	95	18.7	98			CB-12				
							80			
UC	124	5.2	95			CB-13				
							85			
										Bottom of Boring No. OB-22 ? 86.0 ft.
							90			
							95			
							100			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B51 OF 59 SHEETS

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

ROTATED: BASE: Ft. 0.0

LIB: STATE\DOT\I-3\I-3030\LOGS\B44 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	186	470

BORING OB-23

BORING LOCATION: 23.5 ft. Rt. Sta. 458+10
BORING ELEVATION: +338.1 ft
DATE(S) DRILLED: 08/16/93 08/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										weathered, very closely fractured, vesicular
			60			CB-5				black, gray and dark purple mottled, extremely to completely weathered
							30			
			25			CB-6				gray to green-gray, extremely weathered
							35			
			40			CB-7				purple, extremely to completely weathered
							40			
UC	81	38.4	67			CB-8				dark gray, extremely weathered
							45			
			92			CB-9				brownish-purple
							50			

BORING OB-23

BORING LOCATION: 23.5 ft. Rt. Sta. 458+10
BORING ELEVATION: +338.1 ft
DATE(S) DRILLED: 08/16/93 08/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			83			CB-15				brown and purple mottled, extremely to completely weathered
							80			
UC	120	4.4	90			CB-16				purple, pinkish-brown and black mottled, weak to moderately strong, closely fractured, highly to extremely weathered
							85			
			82	0		CB-17				dark purple and yellow-orange mottled, extremely to completely weathered, very closely fractured
							90			BASALT, brown to gray, moderately hard to hard, weak to moderately strong, slightly weathered, closely fractured, highly vesicular - 'A'a
UC	118	11.1	100	55		CB-18				brown, gray and purple mottled, moderately hard to hard, moderately strong to strong, slightly weathered, closely fractured
							95			
										Bottom of Boring No. OB-23 ? 97.0 ft.
							100			

BORING OB-24

BORING LOCATION: 25 ft. Rt. Sta. 459+71
BORING ELEVATION: +341.9 ft
DATE(S) DRILLED: 07/12/93 07/14/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			80			CB-5				dark gray-green, highly weathered
							30			
UC	71	48.6	97			CB-6				dark gray to violet, weak to friable, highly to extremely weathered
							35			
			93			CB-7				reddish-orange to orange-brown, weak, extremely to completely weathered
							40			
			80			CB-8				dark gray, soft, highly weathered
							45			
			97			CB-9				dark blue-gray
							50			

BORING OB-25

BORING LOCATION: 23.5 ft. Rt. Sta. 461+30
BORING ELEVATION: +350.0 ft
DATE(S) DRILLED: 09/03/93 09/08/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	SILTY, SANDY CLAY, very dark gray, soft to stiff, moist, fine to medium sand - Alluvium
										gray-brown
					17	DM-1	5			fine to coarse sand
			0			CB-2				
									GM GC	SILTY CLAYEY COBBLES AND BOULDERS, brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
SA			0			CB-3	10			
			0			CB-4				
			0			CB-5	15			
			60			CB-6				wet to saturated
							20			
			40			CB-7				saturated
							25			

BORING OB-23

BORING LOCATION: 23.5 ft. Rt. Sta. 458+10
BORING ELEVATION: +338.1 ft
DATE(S) DRILLED: 08/16/93 08/19/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			75			CB-10				purple, orange and brown mottled
							55			
			85			CB-11				
							60			
			98			CB-12				brown, green and gray mottled, highly to extremely weathered
							65			
			90			CB-13				purple, brown and gray mottled, extremely weathered
							70			
			85			CB-14				purple, brown, green and black mottled, highly to extremely weathered
							75			

BORING OB-24

BORING LOCATION: 25 ft. Rt. Sta. 459+71
BORING ELEVATION: +341.9 ft
DATE(S) DRILLED: 07/12/93 07/14/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	SILTY CLAY, very dark brown, very soft, moist - Alluvium
							5		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
PI	80	38.3			64/4"	DM-1			ML	SANDY, CLAYEY SILT, brown, soft, wet, fine to coarse sand - Alluvium
							10		GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
SA	83	44.0			44	DM-2			GM	SILTY GRAVEL, gray-brown, dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
									GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							15			
			86			CB-3				SAPROLITE, light green-gray to light brown, soft, weak, highly weathered, vesicular
							20			
			82			CB-4				brown and orange-brown mottled, highly to extremely weathered
							25			

BORING OB-24

BORING LOCATION: 25 ft. Rt. Sta. 459+71
BORING ELEVATION: +341.9 ft
DATE(S) DRILLED: 07/12/93 07/14/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	63	48.0	100			CB-10				dark gray-brown, soft to moderately hard, weak to moderately strong
							55			
			100			CB-11				blue-gray
							60			
										Bottom of Boring No. OB-24 ? 61.0 ft.
							65			
							70			
							75			

PAUL COLIN WEIDIG
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No. 8047-C
HAWAII, U.S.A.

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Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B52 OF 59 SHEETS

ORIGINAL PLANS
SURVEY PLOTTED BY ____ DATE
DRAWN BY "
TRACED BY "
DESIGNED BY "
QUANTITIES BY "
CHECKED BY "
NOTE BOOK
No.

ROTATED: BASE PT. 0.0

LIB: STATE\DCT\I-3\I-3030\LOGSOR45 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	187	470

BORING OB-25

BORING LOCATION: 23.5 ft. Rt. Sta. 461+30
BORING ELEVATION: +350.0 ft
DATE(S) DRILLED: 09/03/93 09/08/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			5			CB-8				dark brownish-gray
							30			
			70			CB-9				brown
										SAPROLITE, dark gray, soft, weak to friable, closely fractured, extremely weathered
							35			
			90			CB-10				
							40			
			100			CB-11				medium gray, highly to extremely weathered
							45			
			60			CB-12				brown-black
							50			

BORING OB-25

BORING LOCATION: 23.5 ft. Rt. Sta. 461+30
BORING ELEVATION: +350.0 ft
DATE(S) DRILLED: 09/03/93 09/08/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			90			CB-18				
							80			
UC	74	33.8	90			CB-19				
							85			
			85			CB-20				
							90			
UC	59	57.3	90			CB-21				ASH, tan, very soft, highly weathered
							95			
										Bottom of Boring No. OB-25 ? 97.0 ft.
							100			

BORING OB-26

BORING LOCATION: 23.5 ft. Rt. Sta. 462+90
BORING ELEVATION: +354.3 ft
DATE(S) DRILLED: 09/09/93 09/13/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			90			CB-7				
							30			
UC	72	34.2	80			CB-8				dark gray
							35			
UC	64	57.7	100			CB-9				brownish-gray to gray, weak to friable
							40			
			95			CB-10				
							45			
UC	63	51.4	98			CB-11				dark gray to brownish-gray
							50			

BORING OB-26

BORING LOCATION: 23.5 ft. Rt. Sta. 462+90
BORING ELEVATION: +354.3 ft
DATE(S) DRILLED: 09/09/93 09/13/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-17				highly weathered
							80			
			100			CB-18				
							85			
UC	83	33.0	100			CB-19				
							90			medium brown, moderately hard, slightly weathered, welded texture
UC	70	47.7	100			CB-20				
							95			
			100	80		CB-21				light to dark brown
							100			BASALT, dark gray, hard, strong, slightly weathered, vesicular - 'A'a

BORING OB-25

BORING LOCATION: 23.5 ft. Rt. Sta. 461+30
BORING ELEVATION: +350.0 ft
DATE(S) DRILLED: 09/03/93 09/08/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										ASH, brown, very soft, friable, very closely fractured, extremely weathered
			88			CB-13				SAPROLITE, brownish-gray, soft, weak to friable, closely fractured, extremely weathered, vesicular
							55			
	68	42.3	78			CB-14				dark gray, olivine crystals visible in vesicles
							60			
UC	85	24.3	96			CB-15				brownish-gray, soft, closely fractured, highly to extremely weathered
							65			
			65			CB-16				
							70			
UC	73	24.0	100			CB-17				
							75			medium gray, olivine crystals visible in vesicles

BORING OB-26

BORING LOCATION: 23.5 ft. Rt. Sta. 462+90
BORING ELEVATION: +354.3 ft
DATE(S) DRILLED: 09/09/93 09/13/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	CLAYEY, SANDY SILT, light brown, soft, moist, fine to medium sand - Alluvium
							5			
CN	70	52.0			22	DM-1			SC	CLAYEY, SILTY SAND, brown, soft, moist, fine to medium sand - Alluvium
							10			
SA			0		74	DM-2 CB-3			GC	CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium moist to wet
			80			CB-4				
							15			
			45			CB-5				
							20			
			80			CB-6				SAPROLITE, brownish-gray, soft, weak, highly weathered, very closely fractured, vesicular
							25			

BORING OB-26

BORING LOCATION: 23.5 ft. Rt. Sta. 462+90
BORING ELEVATION: +354.3 ft
DATE(S) DRILLED: 09/09/93 09/13/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: C. Isaacson
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			85			CB-12				
							55			
			60			CB-13				
							60			CLINKER, brownish-gray, soft, weak to friable, highly weathered
			100			CB-14				SAPROLITE, light gray, soft, weak, highly weathered, very closely fractured
							65			
			100			CB-15				brownish-gray to gray
							70			
			100			CB-16				
							75			ASH, light brown, soft, weak,

PAUL COLIN WEIDIG
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No. 8047-C
HAWAII, U.S.A.

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PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B53 OF 59 SHEETS

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

ROTATED: BASE FT: 0.0

LIB: STATE\DOT\I-3\3030\ LOG8OR48 3/21/94 RSG

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	188	470

BORING OB-26

BORING LOCATION: 23.5 ft. Rt. Sta. 462+90 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +354.3 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 09/09/93 09/13/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										Bottom of Boring No. OB-26 ? 101.5 ft.
							105			
							110			
							115			
							120			
							125			

BORING OB-27

BORING LOCATION: 23.5 ft. Rt. Sta. 464+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +350.6 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/03/93 07/06/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			95			CB-6				light gray to dark gray and orange-brown mottled, highly to extremely weathered, very closely fractured, vesicular, olivine crystals visible in vesicles
							30			
			80			CB-7				CLINKER, reddish-brown, soft, weak, highly to extremely weathered
							35			SAPROLITE, dark gray-brown, soft, weak to moderately strong, highly weathered, vesicular
UC	72	34.2	80			CB-8				
							40			
			95			CB-9				gray-brown
							45			
			100			CB-10				
										ASH AND CINDERS, light gray, soft, weak, highly weathered
			100	20		CB-11				SAPROLITE, light gray, soft,
							50			

BORING OB-28

BORING LOCATION: 20 ft. Rt. Sta. 466+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +363.2 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/15/93 06/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	CLAYEY, GRAVELLY SILT, dark brown, very stiff, moist, fine to coarse gravel - Alluvium
SA	78	38.9			23	DM-1	5		ML	SANDY, GRAVELLY SILT, dark brown, medium-dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist to wet, fine to coarse gravel, fine to coarse sand - Alluvium
							10			
	114	21.7			50/2"	DM-2			SM	SILTY, GRAVELLY SAND, mottled red-brown and orange, medium-dense, saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	71	44.3			17	DM-3	15		GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist to wet, fine to coarse gravel, fine to coarse sand - Alluvium
										SAPROLITE, brown to reddish-brown, soft, weak to friable, highly to extremely weathered
	60	61.7			39	DM-4	20			gray-brown, weak, highly weathered
							25			

BORING OB-28

BORING LOCATION: 20 ft. Rt. Sta. 466+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +363.2 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/15/93 06/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			42			CB-12				reddish-violet to gray
							55			
			53			CB-13				dark gray-green, olivine crystals visible in vesicles
							60			
			65			CB-14				gray-green
							65			
										ASH AND CINDERS, reddish-orange to tan, soft, weak, extremely to completely weathered
			80			CB-15				SAPROLITE, dark brown to dark gray and violet mottled, soft to moderately hard, weak to moderately strong, highly to extremely weathered, vesicular
							70			
			72			CB-16				dark gray to dark reddish-brown, soft, weak to friable, highly to extremely weathered
							75			

BORING OB-27

BORING LOCATION: 23.5 ft. Rt. Sta. 464+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +350.6 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/03/93 07/06/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH GM GC	CLAYEY SILT, gray-brown, soft, moist, with finely disseminated organic matter - Alluvium
	80	38.5			27	DM-1				SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, gray-brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
							5			
					51	DM-2	10			
	103	22.9								SAPROLITE, gray-brown, soft, weak to moderately strong, highly weathered
UC	73	47.1			74/10"	DM-3	15			ASH AND CINDERS, reddish-orange, soft, weak, highly to extremely weathered
			80			CB-4				SAPROLITE, gray-brown, soft, weak to moderately strong, highly weathered, closely fractured, vesicular, olivine crystals visible in vesicles
							20			
UC	55	53.3	95			CB-5				very closely fractured
							25			

BORING OB-27

BORING LOCATION: 23.5 ft. Rt. Sta. 464+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +350.6 ft | LOGGED BY: C. Isaacson
DATE(S) DRILLED: 07/03/93 07/06/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	81	30.0	100	60		CB-12				weak to moderately strong, highly weathered, closely fractured, vesicular dark gray-green, highly to extremely weathered
							55			
UC	80	32.5	95	40		CB-13				gray-green, highly weathered
							60			
							65			
							70			
							75			Bottom of Boring No. OB-27 ? 61.5 ft.

BORING OB-28

BORING LOCATION: 20 ft. Rt. Sta. 466+50 | DRILLER: GeoLabs-Hawaii
BORING ELEVATION: +363.2 ft | LOGGED BY: J. Brock
DATE(S) DRILLED: 06/15/93 06/16/93 | TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	70	49.1			29	DM-5				brownish-gray, vesicular
							30			
UC	74	45.6			89/9"	DM-6				green-gray, moderately to highly weathered
							35			
DS	74	44.1			100/8"	DM-7				reddish-brown and dark gray mottled, soft, weak to moderately strong, highly to extremely weathered
					100/9"	DM-8				
							40			gray-green, highly weathered
	85	34.9	100			CB-9				
UC	84	35.9	100			CB-10				
							45			
			50			CB-11				gray-green to dark gray and violet mottled, weak to friable, highly to extremely weathered
							50			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED | DATE: MAR. 1994

SHEET No. B54 OF 59 SHEETS

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

ROTATED: BASE PT: 0,0

LIB: STATE\DOT\I-3\3030\ LOGBOR47 3/21/94 RSD

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	189	470

BORING OB-28

BORING LOCATION: 20 ft. Rt. Sta. 466+50
BORING ELEVATION: +363.2 ft
DATE(S) DRILLED: 06/15/93 06/16/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	126	3.6	80	40		CB-17	80			dark gray to violet, soft to moderately hard, weak to moderately strong
UC	150	1.7	100	42		CB-18	85			dark gray to violet
							90			Bottom of Boring No. OB-28 ? 88.0 ft.
							95			
							100			

BORING OB-29

BORING LOCATION: 23.5 ft. Rt. Sta. 467+85
BORING ELEVATION: +373.6 ft
DATE(S) DRILLED: 08/16/93 08/17/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
					43	DM-5				brown to gray-brown, wet to saturated
							30			gray, yellow and black mottled, saturated
	77	40.4			100	DM-6	35			brown-gray, red, orange and yellow mottled
			100			CB-7				SAPROLITE, green-gray, brown and black mottled, soft, weak, highly to extremely weathered, very closely fractured, vesicular
							40			
			65			CB-8				gray to brown
							45			
			100			CB-9				
			3			CB-10				gray
							50			

BORING OB-29

BORING LOCATION: 23.5 ft. Rt. Sta. 467+85
BORING ELEVATION: +373.6 ft
DATE(S) DRILLED: 08/16/93 08/17/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			60	0		CB-16				red-gray
			60	0		CB-17	80			purple-gray to dark gray, soft to moderately hard
			88	19		CB-18	85			gray-green, soft to moderately hard
							90			Bottom of Boring No. OB-29 ? 92.0 ft.
							95			
							100			

BORING OB-30

BORING LOCATION: 23.5 ft. Rt. Sta. 472+05
BORING ELEVATION: +377.7 ft
DATE(S) DRILLED: 06/29/93 06/30/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										weathered
			20			CB-7	30			ASH, SPATTER AND CINDERS, mottled light and dark gray, soft, weak, highly weathered
			100			CB-8	35			SAPROLITE, mottled gray and brown, soft, weak, highly weathered, closely fractured, vesicular
										gray-brown, moderately hard, moderately strong
			87			CB-9	40			gray, soft, weak
			77			CB-10	45			dark gray-brown, soft to moderately hard
			68			CB-11	50			dark gray-brown

BORING OB-29

BORING LOCATION: 23.5 ft. Rt. Sta. 467+85
BORING ELEVATION: +373.6 ft
DATE(S) DRILLED: 08/16/93 08/17/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, dark brown, medium-dense, moist, fine to fine to coarse sand, fine to coarse gravel - Alluvium
	68	32.3			25	DM-1	5			brown to red orange, yellow and gray mottled
		14.0			35	DM-2	10			brown-gray, red, orange and yellow mottled, medium-dense to dense
					74	DM-3	15			
DS	71	49.6			50	DM-4	20			very dense, moist to wet
							25			

BORING OB-29

BORING LOCATION: 23.5 ft. Rt. Sta. 467+85
BORING ELEVATION: +373.6 ft
DATE(S) DRILLED: 08/16/93 08/17/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			73			CB-11				
							55			
			72			CB-12				gray-green
							60			
			53			CB-13				ASH, red, yellow and orange mottled, soft, weak, extremely to completely weathered
										SAPROLITE, brownish-gray, soft, weak, highly to extremely weathered, very closely fractured, vesicular
							65			
			78			CB-14				brownish-gray, highly weathered
							70			
UC	73	8.5	70	59		CB-15				BASALT, gray to purple, soft to moderately hard, moderately strong, highly weathered, closely fractured, vesicular - 'A'a
							75			

BORING OB-30

BORING LOCATION: 23.5 ft. Rt. Sta. 472+05
BORING ELEVATION: +377.7 ft
DATE(S) DRILLED: 06/29/93 06/30/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM	SILTY GRAVEL, COBBLES AND BOULDERS, gray to brown, dense, dry, fine to coarse sand, fine to coarse gravel - Alluvium
					40/7"	DM-1	5		CH	SILTY CLAY, gray-brown, stiff, moist, with weathered rock fragments - Alluvium
			92			CB-2				SAPROLITE, gray, soft, weak, highly weathered, very closely fractured
			20			CB-3	10			
			100			CB-4	15			
			100			CB-5	20			light gray to gray-green, soft to moderately hard, weak to moderately strong, closely fractured
			60			CB-6	25			light gray-green to reddish-brown, soft to moderately hard, moderately strong, highly to extremely

PAUL COLIN WELDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weldig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B55 OF 59 SHEETS

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

ROTATED:
BASE PT: 0,0

LIB: STATE\DOTVI-3\3030\
LOGBOR48 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	190	470

BORING OB-30

BORING LOCATION: 23.5 ft. Rt. Sta. 472+05
BORING ELEVATION: +377.7 ft
DATE(S) DRILLED: 06/29/93 06/30/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			70			CB-12	55			reddish-brown to gray, soft, weak, highly to extremely weathered
			58			CB-13	60			gray, soft to moderately hard, weak to moderately strong, moderately to highly weathered
			20			CB-14	65			moderately strong, highly weathered
			40			CB-15	70			
	90	28.0	100	47		CB-16	75			BASALT, gray, hard, moderately strong, moderately weathered, close columnar

BORING OB-31

BORING LOCATION: 23.5 ft. Rt. Sta. 473+45
BORING ELEVATION: +374.7 ft
DATE(S) DRILLED: 07/04/93 07/06/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GW	ASPHALTIC CONCRETE
									GM GC	SANDY GRAVEL, gray, dense, moist, fine to coarse sand, fine to coarse gravel - Base Rock
UC	86	31.9			77	DM-1	5			SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, mottled gray and dark brown, medium-dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
									CH	SILTY, GRAVELLY CLAY, gray-brown to reddish-brown, very stiff, moist, fine to coarse gravel - Alluvium
							10			
					18	DM-2	15		GC	CLAYEY GRAVEL, dark brown, medium-dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
UC					22	DM-3	20			SAPROLITE, dark gray brown, soft, weak to moderately strong, highly weathered brown to dark brown
							25			

BORING OB-31

BORING LOCATION: 23.5 ft. Rt. Sta. 473+45
BORING ELEVATION: +374.7 ft
DATE(S) DRILLED: 07/04/93 07/06/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										moderately hard, weak to moderately strong, highly weathered, very closely fractured, vesicular
			20			CB-11	55			
			20			CB-12	60			
			40			CB-13	65			gray to gray-green, highly to extremely weathered
			100			CB-14	70			
			100			CB-15	75			gray to reddish-brown, soft, closely fractured

BORING OB-31

BORING LOCATION: 23.5 ft. Rt. Sta. 473+45
BORING ELEVATION: +374.7 ft
DATE(S) DRILLED: 07/04/93 07/06/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
							105			Bottom of Boring No. OB-31 ? 103.0 ft.
							110			
							115			
							120			
							125			

BORING OB-30

BORING LOCATION: 23.5 ft. Rt. Sta. 472+05
BORING ELEVATION: +377.7 ft
DATE(S) DRILLED: 06/29/93 06/30/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										fractures, highly vesicular - 'A'a
			100	41		CB-17	80			soft to moderately hard
			90	44		CB-18	85			brown, hard
			87	42		CB-19	90			dark brown to gray-brown
							95			Bottom of Boring No. OB-30 ? 93.0 ft.
							100			

BORING OB-31

BORING LOCATION: 23.5 ft. Rt. Sta. 473+45
BORING ELEVATION: +374.7 ft
DATE(S) DRILLED: 07/04/93 07/06/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	111	15.8			98	DM-4				gray-brown
UC	78	42.7			98	DM-5	30			reddish-brown to brown
			33		50/3"	DM-6 CB-7	35			gray, soft to moderately hard, weak to moderately strong
			47			CB-8	40			reddish-brown, soft, highly to extremely weathered
			55			CB-9	45			CLINKER, gray, soft, weak, highly weathered
			51			CB-10	50			SAPROLITE, gray, soft to

BORING OB-31

BORING LOCATION: 23.5 ft. Rt. Sta. 473+45
BORING ELEVATION: +374.7 ft
DATE(S) DRILLED: 07/04/93 07/06/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-16	80			reddish-gray to gray-brown
			100			CB-17	85			reddish-brown to gray or dark gray
			100	53		CB-18	90			BASALT, gray to gray-green, soft to moderately hard, weak to moderately strong, highly weathered, very closely fractured - 'A'a
			87	42		CB-19	95			gray to gray-green and reddish-orange mottled, moderately weathered
			100	36		CB-20	100			gray to to dark gray, highly weathered

PAUL COLIN WEIDIG
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No. 8047-C
HAWAII, U.S.A.

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PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B56 OF 59 SHEETS

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

ROTATED:
BASE FT. 0.0

LIB: STATE\DOT\I-3\H3030\
LOGBOR49 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	191	470

BORING OB-32

BORING LOCATION: 23.5 ft. Rt. Sta. 474+85
BORING ELEVATION: +386.0 ft
DATE(S) DRILLED: 09/12/93 09/12/93
DRILLER: GeoLabs - Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GW	ASPHALTIC CONCRETE
									GM	SANDY GRAVEL, gray, dense, moist, fine to coarse sand, fine to coarse gravel - Base Course
									GM GC	SILTY GRAVEL, brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
					53	DM-1	5			SILTY CLAYEY GRAVEL, COBBLES AND BOULDERS, dark brown, dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
					30	DM-2	10			dark gray-brown, very dense
					26	DM-3	15			dark gray, saturated
					44	DM-4	20			dark gray-brown
			100			CB-5				
			50			CB-6	25			

BORING OB-32

BORING LOCATION: 23.5 ft. Rt. Sta. 474+85
BORING ELEVATION: +386.0 ft
DATE(S) DRILLED: 09/12/93 09/12/93
DRILLER: GeoLabs - Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			50			CB-12	55			brown and dark brown
			50			CB-13	60			dark gray to brown
			80			CB-14	65			SAPROLITE, gray, soft to moderately hard, weak to moderately strong, highly weathered, closely fractured
			80			CB-15	70			CLINKER, dark brown, soft, weak, highly weathered
			90	35		CB-16	75			soft to moderately hard, weak to moderately strong

BORING OB-32

BORING LOCATION: 23.5 ft. Rt. Sta. 474+85
BORING ELEVATION: +386.0 ft
DATE(S) DRILLED: 09/12/93 09/12/93
DRILLER: GeoLabs - Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
							105			Bottom of Boring OB-32 ? 103.0 ft.
							110			
							115			
							120			
							125			

BORING OB-33

BORING LOCATION: 23.5 ft. Rt. Sta. 476+05
BORING ELEVATION: +397.7 ft
DATE(S) DRILLED: 09/05/93 09/06/93
DRILLER: GeoLabs - Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			30			CB-6	30		GM	SILTY SANDY GRAVEL, COBBLES AND BOULDERS, dark gray brown, dense, moist - Alluvium
			87			CB-7	35			CONGLOMERATE- SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, very dense, moist, fine to coarse sand, fine to coarse gravel, highly weathered, weakly cemented matrix
			60			CB-8	40			
			60			CB-9	45			SAPROLITE, gray, soft to moderately hard, weak to moderately strong, highly weathered, very closely fractured
			90			CB-10	50			

BORING OB-32

BORING LOCATION: 23.5 ft. Rt. Sta. 474+85
BORING ELEVATION: +386.0 ft
DATE(S) DRILLED: 09/12/93 09/12/93
DRILLER: GeoLabs - Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			40			CB-7	30			
			80			CB-8	35			CONGLOMERATE- SILTY, CLAYEY GRAVEL, gray, dense, moist, fine to coarse gravel, highly weathered, weakly cemented matrix
			0			CB-9	40			reddish-brown, very dense
			60			CB-10	45			gray
			50			CB-11	50			

BORING OB-32

BORING LOCATION: 23.5 ft. Rt. Sta. 474+85
BORING ELEVATION: +386.0 ft
DATE(S) DRILLED: 09/12/93 09/12/93
DRILLER: GeoLabs - Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
UC	103	17.9	100	100		CB-17	80			BASALT, gray, hard, strong, slightly weathered, moderately fractured, vesicular - 'A'a
UC	98	21.2	100	40		CB-18	85			CLINKER gray-brown to reddish-brown, moderately hard, moderately strong, highly weathered
			100	90		CB-19	90			
UC	149	2.0	100	83		CB-20	95			BASALT, gray, hard, strong, moderately to slightly weathered, moderately fractured, vesicular - 'A'a
			100	100		CB-21	100			slightly weathered to fresh

BORING OB-33

BORING LOCATION: 23.5 ft. Rt. Sta. 476+05
BORING ELEVATION: +397.7 ft
DATE(S) DRILLED: 09/05/93 09/06/93
DRILLER: GeoLabs - Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GW	ASPHALTIC CONCRETE
									GM GC	SANDY GRAVEL, gray, dense, moist, fine to coarse sand, fine to coarse gravel - Base Course
			50			CB-1	5			SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS, brown, very dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
			80			CB-2	10			
			100			CB-3	15			
			80			CB-4	20			brown to dark gray, saturated
			30			CB-5	25			dark gray-brown
										brown, moist

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B57 OF 59 SHEETS

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

ROTATED: BASE PT. 0.0

LIB: STATE\DOT\H-3\H3030\ LOGS\B\RSO 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	192	470

BORING OB-33

BORING LOCATION: 23.5 ft. Rt. Sta. 476+05
BORING ELEVATION: +397.7 ft
DATE(S) DRILLED: 09/05/93 09/06/93
DRILLER: GeoLabs - Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			90			CB-11				**CLINKER**, reddish-brown, moderately hard, moderately strong, highly to extremely weathered
							55			**SAPROLITE**, gray brown, soft to moderately hard, weak to moderately strong, highly to extremely weathered, closely to very closely fractured, vesicular
			83			CB-12				gray-brown
							60			
UC	88	21.8	63			CB-13				
							65			dark gray, soft, weak, extremely to completely weathered
UC	86	33.1	72			CB-14				dark brown, extremely weathered
							70			gray, soft to moderately hard, weak to moderately strong, moderately to highly weathered
UC	141	8.2	100			CB-15				
							75			

BORING OB-33

BORING LOCATION: 23.5 ft. Rt. Sta. 476+05
BORING ELEVATION: +397.7 ft
DATE(S) DRILLED: 09/05/93 09/06/93
DRILLER: GeoLabs - Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
										Bottom of Boring OB-33 ? 102.0 ft.
							105			
							110			
							115			
							120			
							125			

BORING OR- 2

BORING LOCATION: 44 ft. Rt. Sta. 470+00
BORING ELEVATION: +395.3 ft
DATE(S) DRILLED: 08/20/93 08/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			82			CB-7				reddish-orange to greenish-brown
							30			
			78			CB-8				reddish-orange to reddish-brown, saturated
							35			**SAPROLITE**, red, orange and gray mottled, soft, weak, extremely weathered, very closely fractured
			92			CB-9				red, gray and brown mottled, highly to extremely weathered, vesicular
							40			
UC	74	44.3	100			CB-10				brown, black and orange mottled
							45			
			92			CB-11				red, gray, brown and purple mottled
							50			

BORING OR- 4

BORING LOCATION: 39 ft. Rt. Sta. 478+00
BORING ELEVATION: +419.5 ft
DATE(S) DRILLED: 09/13/93 09/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									MH	**CLAYEY, SANDY GRAVELLY SILT**, brown, soft, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
CN	63	62.7			21	DM-1	5			reddish-brown, wet
					99	DM-2	10			brown, soft, moist to wet
	78	43.0			87	DM-3	15		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS**, brown to orange-brown, dense to very dense, wet to saturated, fine to coarse sand, fine to coarse gravel - Alluvium
UC	73	48.3			99	DM-4	20			**SAPROLITE**, gray, brown, soft, weak, extremely to completely weathered, very closely fractured
			100			CB-5				
			63			CB-6	25			brown, dark brown, and gray-brown mottled

BORING OB-33

BORING LOCATION: 23.5 ft. Rt. Sta. 476+05
BORING ELEVATION: +397.7 ft
DATE(S) DRILLED: 09/05/93 09/06/93
DRILLER: GeoLabs - Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			100			CB-16				soft, weak, highly to extremely weathered
							80			
			100			CB-17				**CLINKER**, reddish-brown to gray, soft to moderately hard, moderately strong, highly to extremely weathered
							85			
UC	164	6.4	100	90		CB-18				**BASALT**, gray, hard, strong, slightly weathered, slightly fractured, vesicular - A'a
							90			
UC	82	40.2	100	73		CB-19				gray brown, soft to moderately hard, weak to moderately strong, moderately weathered
							95			
			93	75		CB-20				gray, hard, strong, slightly weathered
							100			

BORING OR- 2

BORING LOCATION: 44 ft. Rt. Sta. 470+00
BORING ELEVATION: +395.3 ft
DATE(S) DRILLED: 08/20/93 08/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									GM GC	**SILTY, CLAYEY GRAVEL**, brownish-gray to orange-gray, medium-dense, moist, fine to coarse sand, fine to coarse gravel - Alluvium
	70	50.0			62	DM-1	5			reddish-brown to gray-brown, very dense
	66	49.9			24	DM-2				
							10			
UC	68	53.7			45	DM-3	15			dark gray to gray-brown
	70	50.7			25	DM-4	20			saturated
			0			CB-5				
			38			CB-6	25			

BORING OR- 2

BORING LOCATION: 44 ft. Rt. Sta. 470+00
BORING ELEVATION: +395.3 ft
DATE(S) DRILLED: 08/20/93 08/26/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: S. Hickman
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			87			CB-12				green, gray and brown mottled
							55			
			75			CB-13				red, orange and brown mottled
							60			
	99	13.6	97			CB-14				red, purple and brown mottled
							65			
DS	66	59.7	82			CB-15				green, gray, brown and yellow mottled
							70			**ASH AND CINDERS**, light brown and yellow-orange mottled, soft, weak, highly to extremely weathered
										Bottom of Boring No. OR-2 ? 72.5 ft.
							75			

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Paul Colin Weidig
PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED DATE: MAR. 1994

SHEET No. B58 OF 59 SHEETS

ORIGINAL PLANS: SURVEY PLOTTED BY ___ DATE; DRAWN BY ___; TRACED BY ___; DESIGNED BY ___; QUANTITIES BY ___; CHECKED BY ___; NOTE BOOK No. ___

ROTATED: BASE FT. 0.0

LIB: STATE\DOT\I-3\13030\ LOGS0R31 3/21/94 RSO

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(68)	1994	193	470

BORING OR- 4

BORING LOCATION: 39 ft. Rt. Sta. 478+00
BORING ELEVATION: +419.5 ft
DATE(S) DRILLED: 09/13/93 09/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			42			CB-7	30			purple, brown, orange and red mottled
			35			CB-8	35			purple, very dark gray and gray-green mottled, extremely weathered
			52			CB-9	40			gray-green
			42			CB-10	45			red, orange, purple, brown and green mottled, vesicular, olivine and vesuvianite crystals visible in vesicles
			50			CB-11	50			brownish-green

BORING OR- 6

BORING LOCATION: 44 ft. Rt. Sta. 479+00
BORING ELEVATION: +427.7 ft
DATE(S) DRILLED: 09/03/93 09/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
									CH	**SILTY, SANDY GRAVELLY CLAY,** dark brown, soft to medium-stiff, moist, fine to coarse sand, fine to coarse gravel - Alluvium
					102	DM-1	5			
							10		GM GC	**SILTY, CLAYEY GRAVEL, COBBLES AND BOULDERS,** brown, very dense, moist to wet, fine to coarse sand, fine to coarse gravel - Alluvium
					85	DM-2	15			gray and brown mottled, wet to saturated
					57	DM-3	20			saturated
			50			CB-4	25			

BORING OR- 6

BORING LOCATION: 44 ft. Rt. Sta. 479+00
BORING ELEVATION: +427.7 ft
DATE(S) DRILLED: 09/03/93 09/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			83			CB-10	55			
			47			CB-11				**CLINKER,** gray, soft to moderately hard, weak, highly weathered
							60			**SAPROLITE,** gray, soft to moderately hard, weak to moderately strong, highly weathered, closely fractured
			10			CB-12				brown, soft, weak, extremely weathered, very closely fractured
			90			CB-13	65			gray, soft to moderately hard, moderately strong, highly weathered, closely fractured
							70			Bottom of Boring No. OR-6 @ 70.5 ft.
							75			

BORING OR- 4

BORING LOCATION: 39 ft. Rt. Sta. 478+00
BORING ELEVATION: +419.5 ft
DATE(S) DRILLED: 09/13/93 09/15/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: J. Brock
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			72			CB-12	55			gray-green
			27			CB-13	60			brownish-orange, purplish-brown and gray mottled
			50			CB-14	65			purplish-brown, black and violet mottled
			10			CB-15	70			gray and reddish-gray mottled
							75			Bottom of Boring No. OR-4 @ 73.5 ft.

BORING OR- 6

BORING LOCATION: 44 ft. Rt. Sta. 479+00
BORING ELEVATION: +427.7 ft
DATE(S) DRILLED: 09/03/93 09/09/93
DRILLER: GeoLabs-Hawaii
LOGGED BY: P. Padilla
TYPE RIG: Rotary Wash

OTHER LAB TESTS	DRY UNIT WEIGHT(pcf)	MOISTURE CONTENT(%)	CORE RECOVERY(%)	R.Q.D (%)	NUMBER OF BLOWS/FT	SAMPLE TYPE AND NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S	GEOTECHNICAL DESCRIPTION
			50			CB-5				
							30			**SAPROLITE,** reddish-brown, soft, weak, highly weathered, closely fractured
			40			CB-6				
			80			CB-7	35			gray, soft to moderately hard, weak to moderately strong, moderately to highly weathered
							40			
			40			CB-8				**CLINKER,** reddish-orange to gray, soft to moderately hard, weak to moderately strong, highly weathered
							45			
			100			CB-9				**CLINKER,** reddish-orange to gray, soft to moderately hard, weak to moderately strong, highly weathered
										SAPROLITE, gray, soft to moderately hard, weak to strong, moderately to highly weathered, fractured
							50			

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

ROTATED:
BASE FT. 0.0

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

PAUL COLIN WEIDIG
REGISTERED PROFESSIONAL ENGINEER
No. 8047-C
HAWAII, U.S.A.

PSC ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

INTERSTATE ROUTE H-3
North Halawa Valley Highway, Unit I, Phase IB
F.A.I. PROJECT NO. I-H3-(68)

SCALE: AS NOTED
DATE: MAR. 1994

SHEET No. B59 OF 59 SHEETS

LIB: STATE\DOT\H-3\H3030\
LOGBOR32 3/21/94 RSO