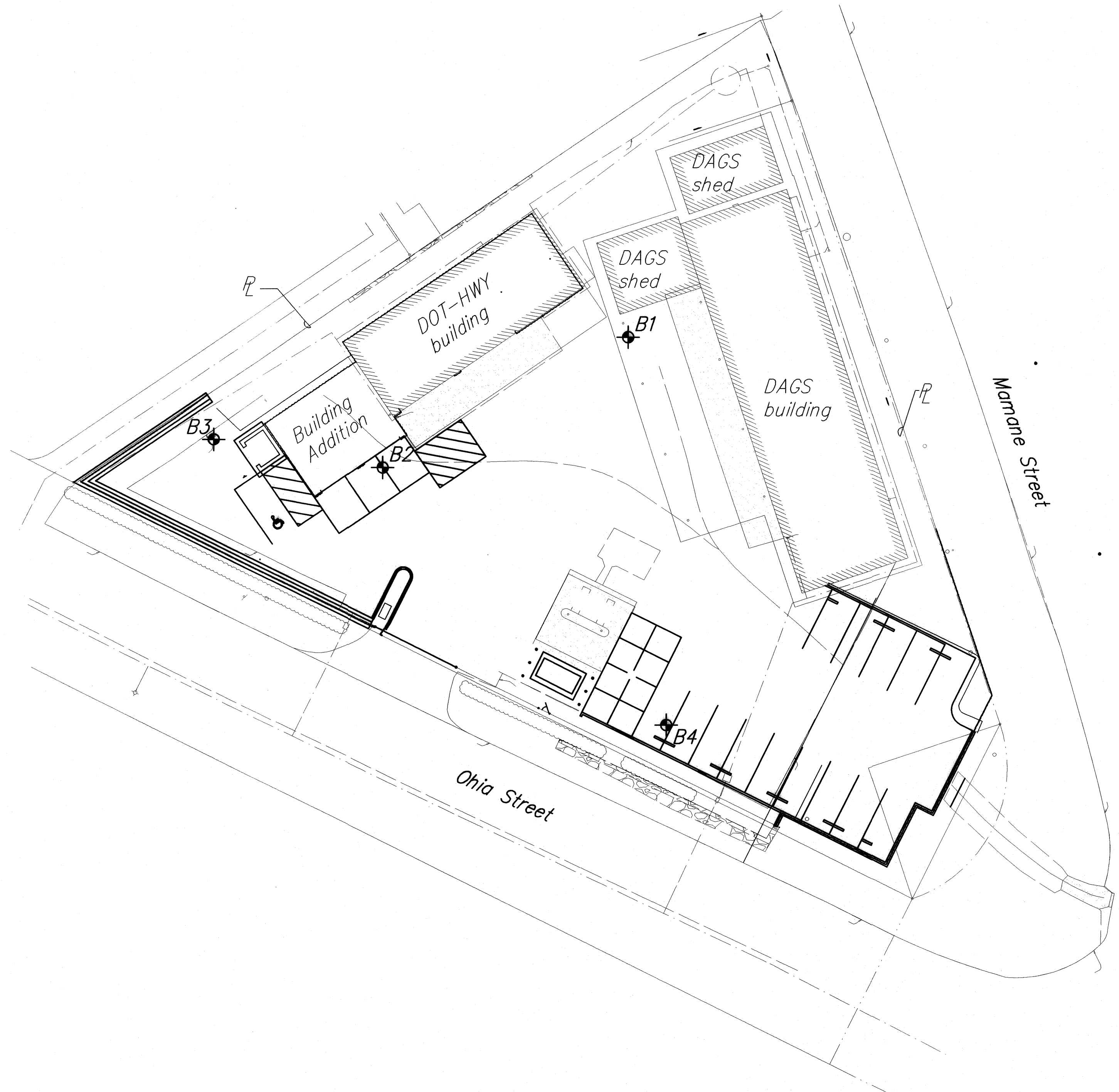
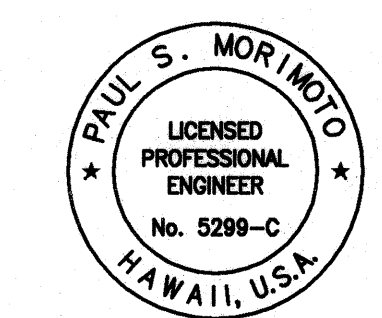
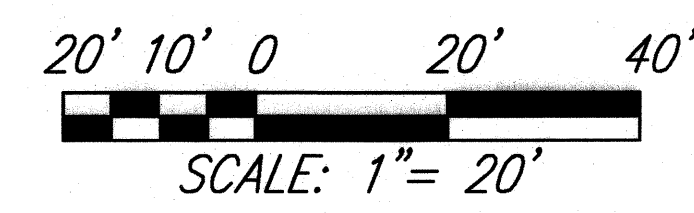


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-05-06	2008	61	64



ORIGINAL PLAN No.	DATE
SURVEY PLOTTED BY	5/08
DESIGNED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

BORING LOCATIONS
Scale: 1"=20'-0"



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HIRATA & ASSOCIATES

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOCATIONS

HONOKAA BASEYARD IMPROVEMENTS
Project No. HWY-H-05-06

Scale: As Noted Date: May 2008

SHEET No. B-1 OF B-4 SHEETS

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HIRATA & ASSOCIATES, INC.

BORING LOG

W.O. 07-4430

BORING NO. B1 DRIVING WT. 140 lb. START DATE 4/24/07
 SURFACE ELEV. 1109±* DROP 30 in. END DATE 4/24/07

DEPTH	GRAPEL	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						
			19	32	142	Clayey SILT (MH) - Brown, moist, medium stiff. (Volcanic Ash) Covered by 2 inches of asphaltic concrete over 5 inches of base course.
5			15	36	112	
10			15	64	67	Completely weathered rock fragments at 9 feet.
15			32/6" 50/1"	88	41	WEATHERED ROCK (WH-WC) - Mottled brown, moist, dense to medium hard, highly to completely weathered.
20			10/No Penetration			End boring at 19 feet.
25						Neither groundwater nor seepage water encountered.
30						* Elevations based on Topographic Survey Map prepared by M&E Pacific, Inc.

MAJOR DIVISIONS	GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of the material is LARGER than No. 200 sieve size.)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size.)	CLEAN GRAVELS (Little or no fines.)
		GRAVELS WITH FINES (Appreciable amt. of fines.)
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size.)	CLEAN SANDS (Little or no fines.)
		SANDS WITH FINES (Appreciable amt. of fines.)
		SANDS WITH FINES (Appreciable amt. of fines.)
		SANDS WITH FINES (Appreciable amt. of fines.)
FINE GRAINED SOILS (More than 50% of the material is SMALLER than No. 200 sieve size.)	SILTS AND CLAYS (Liquid limit LESS than 50.)	
	SILTS AND CLAYS (Liquid limit GREATER than 50.)	
	HIGHLY ORGANIC SOILS	
	FRESH TO MODERATELY WEATHERED BASALT	
	VOLCANIC TUFF / HIGHLY TO COMPLETELY WEATHERED BASALT	
	CORAL	

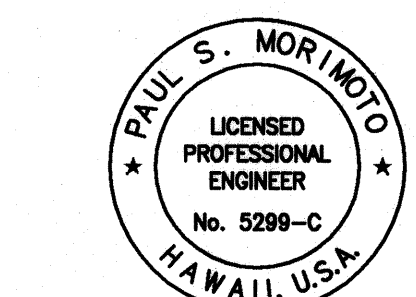
SAMPLE DEFINITION

<input checked="" type="checkbox"/> 2" O.D. Standard Split Spoon Sampler	<input checked="" type="checkbox"/> Shelby Tube	RQD Rock Quality Designation
<input type="checkbox"/> 3" O.D. Split Tube Sampler	<input type="checkbox"/> NX / 4" Coring	<input type="checkbox"/> Water Level

W.O. 07-4430 Honokaa Baseyard Improvements

Hirata & Associates, Inc. **BORING LOG LEGEND** Plate A3.1

ORIGINAL PLAN	DATE
NOTE BOOK	5/08
QUANTITIES BY	5/08
CHECKED BY	5/08



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HIRATA & ASSOCIATES

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BORING LOGS

HONOKAA BASEYARD IMPROVEMENTS
Project No. HWY-H-05-06

Scale: As Noted Date: May 2008

SHEET No. B-2 OF B-4 SHEETS

BORING LOG

W.O. 07-4430

BORING NO. B2 DRIVING WT. 140 lb. START DATE 4/24/07
 SURFACE ELEV. 1111± DROP 30 in. END DATE 4/24/07

DEPTH	GRAPEL	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0	█	█	32	74	38	Silty GRAVEL (GM) - Gray, moist, medium dense to dense, with sand. Covered by 2 inches of asphaltic concrete over 6 inches of base course.
5	█	█	66	72	30	WEATHERED ROCK (WH-WC) - Mottled brown, moist, medium dense to dense, highly to completely weathered. Dense to medium hard from 4 feet.
10	█	█	72	91	36	
15	█	█	10/No Penetration			Hard from 13 feet.
20						End boring at 15 feet.
25						Neither groundwater nor seepage water encountered.
30						

Plate A4.2

BORING LOG

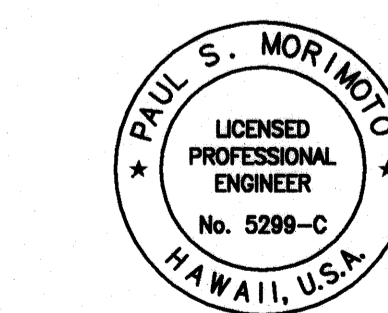
W.O. 07-4430

BORING NO. B3 DRIVING WT. 140 lb. START DATE 4/24/07
 SURFACE ELEV. 1113.5± DROP 30 in. END DATE 4/24/07

DEPTH	GRAPEL	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0	█	█	18	80	17	Silty GRAVEL (GM) - Gray, slightly moist, medium dense, with sand. Covered by 2 inches of asphaltic concrete over 3.5 inches of base course.
5	█	█	16	67	25	
10	█	█	8	37	113	Clayey SILT (MH) - Brown, moist, medium stiff. (Volcanic Ash)
15	█	█	12	75	41	WEATHERED ROCK (WH-WC) - Mottled brown, moist, medium dense, highly to completely weathered. Dense to medium hard from 11 feet.
20	█	█	10/No Penetration			
25	█	█	50/4"	102	12	
30						End boring at 18.5 feet.
						Neither groundwater nor seepage water encountered.

Plate A4.3

SURVEY PLOTTED BY	DATE
DRAWN BY	5/08
TRACED BY	
QUANTITIES BY	5/08
CHECKED BY	5/08
ORIGINAL PLAN	
NOTE BOOK	
No.	



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BORING LOGS

HONOKAA BASEYARD IMPROVEMENTS
 Project No. HWY-H-05-06

Scale: As Noted Date: May 2008

SHEET No. B-3 OF B-4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-05-06	2008	64	64

HIRATA & ASSOCIATES, INC.

BORING LOG

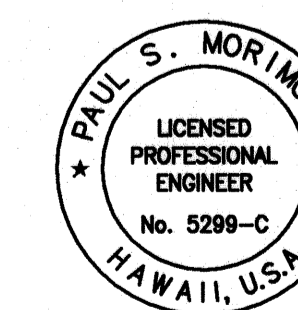
W.O. 07-4430

BORING NO. B4 DRIVING WT. 140 lb. START DATE 4/23/07
 SURFACE ELEV. 1111.5± DROP 30 in. END DATE 4/23/07

DEPTH	GRAVEL	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						Silty GRAVEL (GM) - Gray, slightly moist, medium dense to dense, with sand. Covered by 1 inch of asphaltic concrete over 12 inches of base course.
5			20	60	58	WEATHERED ROCK (WH-WC) - Mottled brown, moist, medium dense, highly to completely weathered. Dense to medium hard from 7 feet.
			42	79	30	
10			27/6" 50/No Penetration	107	13	
15			31/6" 50/No Penetration	109	20	
20						End boring at 15 feet.
25						Neither groundwater nor seepage water encountered.
30						

Plate A4.4

SURVEY PLOTTED BY	DATE
DRAWN BY	5/08
TRACED BY	
DESIGNED BY	5/08
CHECKED BY	5/08
ORIGINAL PLAN	
NOTE BOOK	
No.	



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

BORING LOGS

HONOKAA BASEYARD IMPROVEMENTS

Project No. HWY-H-05-06

Scale: As Noted Date: May 2008

SHEET No. B-4 OF B-4 SHEETS

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