

DRAINAGE SUMMARY

PROJECT : KEA'AU - PAHOA ROAD

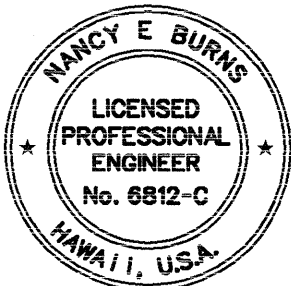
PROJECT NO. : 130B-01-92

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-98	1999	55	210

ITEM NO.																			
UNIT USED		C.Y.	C.Y.	C.Y.	LB.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	
STRUCTURE	STATION	Structure Excavation for Drainage System	Class A Concrete for Drainage System	Cement Rubble Masonary	Reinforcing Steel for Drainage System	Bed Course Material For Culvert	24 inch RCP, C.I. III	30 inch RCP, C.I. III	36 inch RCP, C.I. III	42 inch RCP, C.I. III	24 inch RCP, C.I. III or 24 inch ASRP Sht. "t"=0.105" or 24 inch HDPE, Type S	30 inch RCP, C.I. III or 30 inch ASRP Sht. "t"=0.105" or 30 inch HDPE, Type S	36 inch RCP, C.I. III or 36 inch ASRP Sht. "t"=0.105" or 36 inch HDPE, Type S	42 inch RCP, C.I. III or 42 inch ASRP Sht. "t"=0.105"	48 inch RCP, C.I. III or 48 inch ASRP Sht. "t"=0.105"	54 inch RCP, C.I. III or 3"x1" Corrugated 54 inch ASRP Sht. "t"=0.135" or 54 inch CSP, Sht. "t"=0.109"	60 inch RCP, C.I. III or 60 inch CAP, Sht. "t"=0.135" or 60 inch CSP, Sht. "t"=0.109"	72 inch RCP, C.I. III or 72 inch CAP, Sht. "t"=0.164" or 72 inch CSP, Sht. "t"=0.138"	42 inch x 29 inch Arch Aluminum Pipe, Sht. "t"=0.105"
ROUTE 11																			
County of Hawaii R-40 Drywell, Culvert, Std. Conc. Structure H-16, Type 61614 Double G.D.I., Type 61614 G.D.I., Type A-9B Double G.D.I., Type A-9B G.D.I., Type "C" SDMH, Std. Conc. Headwall H-16, Std. Conc. Structure H-17, Lined Swale	O.B.L. 11 1099+23.17																		
	to																		
	I.B.L. 11 1106+75.10	4,058	24.4		665	311	469	330	71	363									
	Drywell, Type 61614 Grate and Cover	I.B.L. 11 1079+86.10																	
	Culvert Extension, Std. Conc. Structure H-17	O.B.L. 11 1110+94.98	27	1.4	174	2.6	12												
Culvert Extension, Std. Conc. Structure H-16	O.B.L. 11 1116+30.88	11	1.9		45	2.6	12												
BYPASS ROAD																			
Type 61614 GDI, Culvert, Std. Conc. Structure H-16	6+50.00	199		3	15						71								
Type 61614 GDI,Culvert Std. Conc. Structure H-17, Std. Outlet Structure H-19	8+72.51	457	12.3		1,389	44										126			
Type 61614 GDI,Type 61214B G.D.I., Culvert, Std. CRM Structure H-16	11+50.00	181		3	27						125								
Type 61214B GDI, Culvert	13+25.00	63			15						70								
Type 61614 GDI,Type 61214B G.D.I., Culvert, Std. CRM Structure H-16	13+94.50	170		3	27						124								

- Notes:
- 1 All Corrugated Steel Pipes shall be Lined with Concrete. For Details See Sht. No. 79
 - 2 Quantities for multiple culvert installations include Shrinkage Steel.
 - 3 Contractor shall submit Shop Drawings to the Engineer for approval on all Double G.D.I. installations.
 - 4 All 61614 and 61214B grates on the Bypass Road shall be replaced with 61614P and 61214P grates. For details see sheets ADD. 74 and ADD. 75

Structures Continuation See Sht. 56



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Nancy E. Burns
DATE: 9/11/98

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**DRAINAGE
SUMMARY**
KEA'AU-PAHOA ROAD VIC. OF KEA'AU
TOWN (KEA'AU BYPASS ROAD), PH. 2
PROJECT NO. 130B-01-98
Scale: NTS Date: August, 1998
SHEET No. 1 OF 6 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
QUANTITIES BY		
CHECKED BY		

DRAINAGE SUMMARY

PROJECT : KEA'AU - PAHOA ROAD

PROJECT NO. : 130B-01-92

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-98	1999	56	210

Notes:

1 All Corrugated Steel Pipes shall be Lined with Concrete. For Details See Sht. No. 79

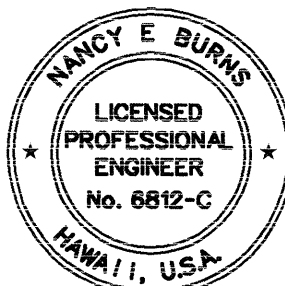
2 Quantities for multiple culvert installations include Shrinkage Steel.

3 Contractor shall submit Shop Drawings to the Engineer for approval on all Double G.D.I. installations.

4 All 61614 and 61214B grates on the Bypass Road shall be replaced with 61614P and 61214P grates. For details see sheets ADD. 74 and ADD. 75

ITEM NO.																													
UNIT USED		LF.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	LF.	E.A.	E.A.		C.Y.	C.Y.	C.Y.								
STRUCTURE	STATION	71 inch x 47 inch Arch Aluminum Pipe, Sht. "t"=0.164" or 71 inch x 47 inch Arch Steel Pipe, Sht "t"=0.138"	Type 61614 G.D.I. 4.00 ft. to 4.99 ft.	Type 61614 G.D.I. 6.00 ft. to 6.99 ft.	Type 61614 G.D.I. 7.00 ft. to 7.99 ft.	Type 61614 G.D.I. 8.00 ft. to 8.99 ft.	Type 61614 G.D.I. 10.00 ft. to 10.99 ft.	Type 61614 Double G.D.I. 9.00 ft. to 9.99 ft.	Type 61214B G.D.I. 4.00 ft. to 4.99 ft.	Type A-9B G.D.I. 5.00 ft. to 5.99 ft.	Type A-9B G.D.I. 6.00 ft. to 6.99 ft.	Type A-9B Double G.D.I. 4.00 ft. to 4.99 ft.	Type C SDMH 14.00 ft. TO 14.99 ft.		Structure Excavation for Drywell	County of Hawaii R-40 Drywell Cover	Drywell Structure with Type 61614 Grate		Grouted Rubble Paving Slope Protection	Dumped Riprap at Culvert	Dumped Riprap, Line Swale								
ROUTE 11																													
County of Hawaii R-40 Drywell, Culvert, Std. Conc. Structure H-16, Type 61614 Double G.D.I., Type 61614 G.D.I., Type A-9B Double G.D.I., Type A-9B G.D.I., Type "C" SDMH, Std. Conc. Headwall H-16, Std. Conc. Structure H-17, Lined Swale	O.B.L. 11 1099+23.17																												
	to																												
	I.B.L. 11 1106+75.10					1		1		1	1	1		1	72	3					551								
	I.B.L. 11 1079+86.10														24		1												
	O.B.L. 11 1110+94.98																												
Culvert Extension, Std. Conc. Structure H-17	O.B.L. 11 1116+30.88																												
BYPASS ROAD																													
Type 61614 GDI, Culvert, Std. Conc. Structure H-16	6+50.00		1																	10									
Type 61614 GDI, Culvert Std. Conc. Structure H-17, Std. Outlet Structure H-19	8+72.51						1												95	15									
Type 61614 GDI, Type 61214B G.D.I., Culvert, Std. CRM Structure H-16	11+50.00			1						1										8									
Type 61214B GDI, Culvert	13+25.00									1																			
Type 61614 GDI, Type 61214B G.D.I., Culvert, Std. CRM Structure H-16	13+94.50			1						1										8									

SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Nancy E. Burke
DATE: 9/11/98

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE SUMMARY
KEA'AU-PAHOA ROAD VIC. OF KEA'AU TOWN (KEA'AU BYPASS ROAD), PH. 2
PROJECT NO. 130B-01-98
Scale: NTS Date: August, 1998
SHEET No. 2 OF 6 SHEETS

DRAINAGE SUMMARY

PROJECT : KEA'AU - PAHOA ROAD

PROJECT NO. : 130B-01-92

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-98	1999	57	210

Notes:

- 1 All Corrugated Steel Pipes shall be Lined with Concrete. For Details See Sht. No. 79
- 2 Quantities for multiple culvert installations include Shrinkage Steel.
- 3 Contractor shall submit Shop Drawings to the Engineer for approval on all Double G.D.I. installations.
- 4 All 61614 and 61214B grates on the Bypass Road shall be replaced with 61614P and 61214P grates. For details see sheets ADD. 74 and ADD. 75

I T E M N O .																				
UNIT USED		C.Y.	C.Y.	C.Y.	LB.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	
STRUCTURE	STATION	Structure Excavation for Drainage System	Class A Concrete for Drainage System	Cement Rubble Masonary	Reinforcing Steel for Drainage System	Bed Course Material For Culvert	24 inch RCP, CI III	30 inch RCP, CI III	36 inch RCP, CI III	42 inch RCP, CI III	24 inch RCP, C.I. III or 24 inch ASRP Sht. "t"=0.105" or 24 inch HDPE, Type S	30 inch RCP, C.I. III or 30 inch ASRP Sht. "t"=0.105" or 30 inch HDPE, Type S	36 inch RCP, C.I. III or 36 inch ASRP Sht. "t"=0.105" or 36 inch HDPE, Type S	42 inch RCP, C.I. III or 42 inch ASRP Sht. "t"=0.105"	48 inch RCP, C.I. III or 48 inch ASRP Sht. "t"=0.105"	54 inch RCP, C.I. III or 3'-x1" Corrugated 54 inch ASRP Sht. "t"=0.135" or 54 inch CSP, Sht. "t"=0.109"	60 inch RCP, C.I. III or 60 inch CAP, Sht. "t"=0.135" or 60 inch CSP, Sht. "t"=0.109"	72 inch RCP, C.I. III or 72 inch CAP, Sht. "t"=0.164" or 72 inch CSP, Sht. "t"=0.138"	42 inch x 29 inch Arch Aluminum Pipe, Sht. "t"=0.105"	
BYPASS ROAD CON'T.																				
Type 61614 GDI, Culvert	14+64.00	63				15					70									
Type 61614 GDI,Type 61214B GDI, Culvert, Std. CRM Structure H-16	15+86.00	150		3		26					120									
Type 61614 GDI, Culvert, Std. CRM Structure H-16	18+00.00	108		3		16					74									
Std. Inlet Structure H-17, Culvert, Std. Outlet Structure H-19	18+94.87	1,990	36.8		3,526	258												432		
Type 61614 GDI, Culvert, Std. CRM Structure H-16	20+00.00	69		3		13					60									
Drywell, Type 61614 Grate and Cover	22+20.00																			
Std. CRM Structures H-16, Culvert	26+53.07	450		24.8		78													248	
Std. CRM Structures H-16, Culvert	39+69.61	579		13.1		71							306							
Type 61614 GDI, Culvert, Std. CRM Structure H-16	46+89.31	60		3		11					51									
Std. Inlet Structure H-17, Culvert, Std. Outlet Structure H-19	47+63.46	1,384	34.0		3,829	185											444			

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KEA'AU-PAHOA
TOWN (KEA'AU
PROJECT
Scale: N.T.S.

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

Structures Continuation See Sht. 58



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Nancy E. Burns
DATE: 9/11/98

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE SUMMARY
KEA'AU-PAHOA ROAD VIC. OF KEA'AU TOWN (KEA'AU BYPASS ROAD), PH. 2
PROJECT NO. 130B-01-98
Scale: NTS Date: August, 1998
SHEET No. 3 OF 6 SHEETS

DRAINAGE SUMMARY

PROJECT : KEA'AU - PAHOA ROAD

PROJECT NO. : 130B-01-92

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-98	1999	58	210

Notes:

1 All Corrugated Steel Pipes shall be Lined with Concrete. For Details See Sht. No. 79

2 Quantities for multiple culvert installations include Shrinkage Steel.

3 Contractor shall submit Shop Drawings to the Engineer for approval on all Double G.D.I. installations.

4 All 61614 and 61214B grates on the Bypass Road shall be replaced with 61614P and 61214P grates. For details see sheets ADD. 74 and ADD. 75

ITEM NO.																											
UNIT USED		LF.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.
STRUCTURE	STATION	71 inch x 47 inch Arch Aluminum Pipe, Sht. "t"=0.164" or 71 inch x 47 inch Arch Steel Pipe, Sht. "t"=0.138"	Type 61614 G.D.I. 4.00 ft. to 4.99 ft.	Type 61614 G.D.I. 6.00 ft. to 6.99 ft.	Type 61614 G.D.I. 7.00 ft. to 7.99 ft.	Type 61614 G.D.I. 8.00 ft. to 8.99 ft.	Type 61614 G.D.I. 10.00 ft. to 10.99 ft.	Type 61614 Double G.D.I. 9.00 ft. to 9.99 ft.	Type 61214B G.D.I. 4.00 ft. to 4.99 ft.	Type A-9B G.D.I. 5.00 ft. to 5.99 ft.	Type A-9B G.D.I. 6.00 ft. to 6.99 ft.	Type A-9B Double G.D.I. 4.00 ft. to 4.99 ft.	Type C SDMH 14.00 ft. TO 14.99 ft.		Structure Excavation for Drywell	County of Hawaii R-40 Drywell Cover	Drywell Structure with Type 61614 Grate		Grouted Rubble Paving Slope Protection	Dumped Riprap at Culvert	Dumped Riprap, Line Swale						
BYPASS ROAD CON'T.																											
Type 61614 GDI, Culvert	14+64.00								1																		
Type 61614 GDI, Type 61214B GDI, Culvert, Std. CRM Structure H-16	15+86.00				1				1											8							
Type 61614 GDI, Culvert, Std. CRM Structure H-16	18+00.00		1																	8							
Std. Inlet Structure H-17, Culvert, Std. Outlet Structure H-19	18+94.87																		24	44							
Type 61614 GDI, Culvert, Std. CRM Structure H-16	20+00.00		1																	12							
Drywell, Type 61614 Grate and Cover	22+20.00														24	1											
Std. CRM Structures H-16, Culvert	26+53.07																		42	30							
Std. CRM Structures H-16, Culvert	39+69.61																		39	37							
Type 61614 GDI, Culvert, Std. CRM Structure H-16	46+89.31		1																	12							
Std. Inlet Structure H-17, Culvert, Std. Outlet Structure H-19	47+63.46																			21							

ORIGINAL PLAN	DATE
NOTED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Nancy E Burns
DATE: 9/11/98

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE SUMMARY
KEA'AU-PAHOA ROAD VIC. OF KEA'AU TOWN (KEA'AU BYPASS ROAD), PH. 2
PROJECT NO. 130B-01-98
Scale: NTS Date: August, 1998

DRAINAGE SUMMARY

PROJECT : KEA'AU - PAHOA ROAD

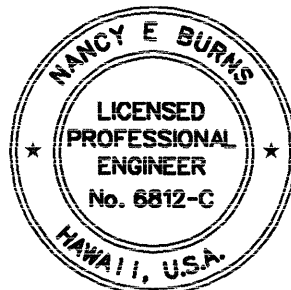
PROJECT NO. : 130B-01-92

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-98	1999	59	210

Notes:

- 1 All Corrugated Steel Pipes shall be Lined with Concrete. For Details See Sht. No. 79
- 2 Quantities for multiple culvert installations include Shrinkage Steel.
- 3 Contractor shall submit Shop Drawings to the Engineer for approval on all Double G.D.I. installations.
- 4 All 61614 and 61214B grates on the Bypass Road shall be replaced with 61614P and 61214P grates. For details see sheets ADD. 74 and ADD. 75

Structures Continuation See Sht. 60



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Nancy E. Burns
DATE: 9/11/98

ORIGINAL PLAN	DATE
DESIGNED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

ITEM NO.	UNIT USED	C.Y.	C.Y.	C.Y.	LB.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.
STRUCTURE	STATION	Structure Excavation for Drainage System	Class A Concrete for Drainage System	Cement Rubble Masonary	Reinforcing Steel for Drainage System	Bed Course Material For Culvert	24 inch RCP, CI III	30 inch RCP, CI III	36 inch RCP, CI III	42 inch RCP, CI III	24 inch RCP, C.I. III or 24 inch ASRP Sht. "t"=0.105" or 24 inch HDPE, Type S	30 inch RCP, C.I. III or 30 inch ASRP Sht. "t"=0.105" or 30 inch HDPE, Type S	36 inch RCP, C.I. III or 36 inch ASRP Sht. "t"=0.105" or 36 inch HDPE, Type S	42 inch RCP, C.I. III or 42 inch ASRP Sht. "t"=0.105"	48 inch RCP, C.I. III or 48 inch ASRP Sht. "t"=0.105"	54 inch RCP, C.I. III or 3"x1" Corrugated 54 inch ASRP Sht. "t"=0.135" or 54 inch CSP, Sht. "t"=0.109"	60 inch RCP, C.I. III or 60 inch CAP, Sht. "t"=0.135" or 60 inch CSP, Sht. "t"=0.109"	72 inch RCP, C.I. III or 72 inch CAP, Sht. "t"=0.164" or 72 inch CSP, Sht. "t"=0.138"	42 inch x 29 inch Arch Aluminum Pipe, Sht. "t"=0.105"
BYPASS ROAD CON'T.																			
Type 61614 GDI, Culvert, Std. CRM Structure H-16	54+00.00	49		3		12					55								
Std. Inlet Structure H-17, Culvert, Std. Outlet Structure H-19	57+23.94	1,325	31.2		2,816	218													
Type 61614 GDI, Culvert, Std. CRM Structure H-16	58+00.00	56		3		13					58								
Std. Inlet Structure H-17, Culvert, Std. Outlet Structure H-19	64+25.66	363	7.5		900	48							160						
Type 61614 GDI, Culvert, Std. CRM Structure H-16	64+45.00	40		3		12					55								
ROAD "C"																			
Std. CRM Structure H-16, Culvert	1+75.00	146		9		14					53								
ROAD "D"																			
Std. CRM Structure H-16, Culvert	3+50	190		9		12					47								
Std. Inlet Structure H-17, Culvert, Std. Outlet Structure H-19	7+31.96	318	15.2		1,593	30							100						
TOTALS		12,506	164.7	85.9	14,937	1,476.2	493	330	71	363	933	100	306	160	100	126	444	432	248

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE SUMMARY
KEA'AU-PAHOA ROAD VIC. OF KEA'AU TOWN (KEA'AU BYPASS ROAD), PH. 2
PROJECT NO. 130B-01-98
Scale: NTS Date: August, 1998
SHEET No. 5 OF 6 SHEETS

DRAINAGE SUMMARY

PROJECT : KEA'AU - PAHOA ROAD

PROJECT NO. : 130B-01-92

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-98	1999	60	210

Notes:

1 All Corrugated Steel Pipes shall be Lined with Concrete. For Details See Sht. No. 79

2 Quantities for multiple culvert installations include Shrinkage Steel.

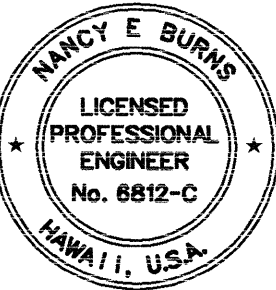
3 Contractor shall submit Shop Drawings to the Engineer for approval on all Double G.D.I. installations.

4 All 61614 and 61214B grates on the Bypass Road shall be replaced with 61614P and 61214P grates. For details see sheets ADD. 74 and ADD. 75

ITEM NO.																									
UNIT USED		L.F.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	E.A.	L.F.	E.A.	E.A.		C.Y.	C.Y.	C.Y.				
STRUCTURE	STATION	71 inch x 47 inch Arch Aluminum Pipe, Sht. "I"-0164" or 71 inch x 47 inch Arch Steel Pipe, Sht. "I"-0138"	Type 61614 G.D.I. 4.00 ft. to 4.99 ft.	Type 61614 G.D.I. 6.00 ft. to 6.99 ft.	Type 61614 G.D.I. 7.00 ft. to 7.99 ft.	Type 61614 G.D.I. 8.00 ft. to 8.99 ft.	Type 61614 G.D.I. 10.00 ft. to 10.99 ft.	Type 61614 Double G.D.I. 9.00 ft. to 9.99 ft.	Type 61214B G.D.I. 4.00 ft. to 4.99 ft.	Type A-9B G.D.I. 5.00 ft. to 5.99 ft.	Type A-9B G.D.I. 6.00 ft. to 6.99 ft.	Type A-9B Double G.D.I. 4.00 ft. to 4.99 ft.		Type C SDMH 14.00 ft. TO 14.99 ft.		Structure Excavation for Drywell	County of Hawaii R-40 Drywell Cover	Drywell Structure with Type 61614 Grate		Grouted Rubble Paving Slope Protection	Dumped Riprap at Culvert	Dumped Riprap, Line Swale			
BYPASS ROAD CON'T.																									
Type 61614 GDI, Culvert, Std. CRM Structure H-16	54+00.00		1																	11					
Std. Inlet Structure H-17, Culvert, Std. Outlet Structure H-19	57+23.94	460																		31					
Type 61614 GDI, Culvert, Std. CRM Structure H-16	58+00.00		1																	12					
Std. Inlet Structure H-17, Culvert, Std. Outlet Structure H-19	64+25.66																			11					
Type 61614 GDI, Culvert, Std. CRM Structure H-16	64+45.00		1																	11					
ROAD "C"																									
Std. CRM Structure H-16, Culvert	1+75.00																			15					
ROAD "D"																									
Std. CRM Structure H-16, Culvert	3+50																			35					
Std. Inlet Structure H-17, Culvert, Std. Outlet Structure H-19	7+31.96																			20					
TOTALS		460	7	2	1	1	1	1	5	1	1	1		1		120	3	2		200	359	551			

SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

ORIGINAL PLAN	DATE
NOTE BOOK	
discuss	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Nancy E. Burns
DATE: 9/11/98

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE
SUMMARY

KEA'AU-PAHOA ROAD VIC. OF KEA'AU
TOWN (KEA'AU BYPASS ROAD), PH. 2
PROJECT NO. 130B-01-98

Scale: NTS Date: August, 1998

SHEET NO. 6 OF 6 SHEETS

ADD. 60