

CONSTRUCTION PROJECT NO.	REMOVE EXISTING GUARDRAIL STATION LOCATIONS		INSTALL NEW GUARDRAIL STATION LOCATIONS		RESET EXISTING GUARDRAIL STATION LOCATIONS		LEFT / RIGHT	GUARDRAIL REMOVAL LENGTH (FT.)	NEW GUARDRAIL LENGTH (FT.)	NESTED GUARDRAIL LENGTH (FT.)	INSTALL GUARDRAIL AT OBSTRUCTION (FT.)	INSTALL 8-FT. POST (EACH)	RESET POST AND REPLACE SPACER BLOCK (EACH)	GUARDRAIL END TREATMENTS														END TREATMENT REMOVAL	REMARKS		
														TO EXISTING		RUBRAIL (LIN. FT.)	MODIFIED TYPE "A-1"		MODIFIED TYPE "G"		FLEAT 350		ET 2000		SKT 350		BRIDGE RAILING UPGRADE			BRIDGE NAME	
	FROM	TO	FROM	TO	FROM	TO								LEAD	TRAIL			LEAD	TRAIL	LEAD	TRAIL	LEAD	TRAIL	LEAD	TRAIL	LEAD	TRAIL	LEAD			TRAIL
FAP 11-B	143+75.50	144+11.50	143+78.00	144+11.50	144+11.50	154+46.00	R	37.5	25.0				167	1				1											BCT		
	154+46.00	155+98.00	154+46.00	156+27.00			R	150.0	125.0				0	1				1											F		
	145+07.00	145+33.00	144+98.50	145+33.00	145+33.00	147+12.50	L	25.0	25.0				29	1					1										G		
	147+12.50	149+87.50	147+12.50	149+91.00			L	275.0	237.5				0	1						1									G	At Fire Hydrant	
	150+02.00	150+77.00	150+02.00	150+77.00	150+77.00	153+11.00	L	75.0	37.5				39	1						1									G	At Fire Hydrant	
	153+11.00	156+00.50	153+11.00	157+23.61			L	300.0	412.5				0	1															C		
	158+12.50	158+90.00	156+21.91	163+07.00			L	75.0	637.5				0				1												C & F		
	165+52.00	166+02.50	165+16.00	166+02.50	166+02.50	167+86.00	L	50.0	37.5				31	1				1											F		
	167+86.00	170+34.50	167+86.00	170+34.50	170+34.50	173+81.50	L	250.0	250.0				57	1	1																
	173+81.50	174+17.50	173+81.50	186+98.00			L	37.5	1262.5				0	1				1											C		
	177+05.00	186+75.00					L	962.5	0.0				0																C & F		
	192+93.50	193+86.00	192+30.50	193+86.00	193+86.00	196+70.50	L	87.5	100.0				45	1				1											G		
	196+70.50	197+09.00	196+70.50	197+09.00	197+09.00	200+21.50	L	37.5	37.5				53	1	1																
	200+21.50	203+14.00	200+21.50	203+14.00	203+14.00	205+51.00	L	300.0	300.0				41	1	1																
	205+51.00	205+94.50	205+51.00	205+94.50			L	62.5	37.5				0	1					1										G		
	169+74.00	172+35.00	169+71.00	172+93.00			R	262.5	275.0				0						1			1							BCT & G		
	179+43.50	181+93.00	179+47.50	183+79.00			R	250.0	425.0				0	1					1										G & F		
	183+55.50	183+79.00			183+79.00	186+58.00	R	25.0	0.0				47																BCT		
	186+58.00	186+94.00	186+58.00	187+43.00			R	37.5	37.5				0	1					1											F	
	193+71.50	194+01.00	192+20.00	194+01.00	194+01.00	196+80.50	R	25.0	150.0				47		1						1									BCT	
	196+80.50	197+35.00	196+80.50	197+54.50			R	50.0	25.0				0	1					1											F	
	199+75.50	203+97.00	199+59.50	207+18.62			R	412.5	695.0				0						1											C & F	
			206+98.81	208+20.00			R	0.0	67.5				0						1												
	227+52.00	227+88.00	226+28.00	227+88.00	227+88.00	229+37.00	L	37.5	112.5				25	1					1											BCT	
	229+37.00	230+12.50	229+37.00	235+00.00			L	75.0	550.0				0	1						1										C	
	227+71.00	227+96.00	227+62.00	227+96.00	227+96.00	229+96.00	R	25.0	25.0				33	1						1										BCT	
	229+96.00	234+16.00	229+96.00	234+16.00	234+16.00	236+08.00	R	425.0	425.0				31	1	1																

(Continued)

GUARDRAIL SCHEDULE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	32	68

CONSTRUCTION PROJECT NO.	REMOVE EXISTING GUARDRAIL STATION LOCATIONS		INSTALL NEW GUARDRAIL STATION LOCATIONS		RESET EXISTING GUARDRAIL STATION LOCATIONS		LEFT / RIGHT	GUARDRAIL REMOVAL LENGTH (FT.)	NEW GUARDRAIL LENGTH (FT.)	NESTED GUARDRAIL LENGTH (FT.)	INSTALL GUARDRAIL AT OBSTRUCTION (FT.)	INSTALL 8-FT. POST (EACH)	RESET POST AND REPLACE SPACER BLOCK (EACH)	GUARDRAIL END TREATMENTS														END TREATMENT REMOVAL	REMARKS		
														TO EXISTING		RUBRAIL (LIN. FT.)	MODIFIED TYPE "A-1"		MODIFIED TYPE "G"		FLEAT 350		ET 2000		SKT 350		BRIDGE RAILING UPGRADE			BRIDGE NAME	
	FROM	TO	FROM	TO	FROM	TO								LEAD	TRAIL		LEAD	TRAIL	LEAD	TRAIL	LEAD	TRAIL	LEAD	TRAIL	LEAD	TRAIL					
FAP 11-B	236+08.00	237+48.50	236+08.00	237+48.50	237+48.50	241+91.50	R	137.5	137.5				75	1	1																
	241+91.50	249+51.50	241+91.50	249+95.50			R	762.5	750.0				0	1				1										G			
	235+42.50	237+24.50	235+33.00	237+37.00			L	187.5	150.0				0					1		1								G # C			
	242+81.00	245+30.00	241+71.00	249+27.00			L	250.0	700.0				0					1	1									BCT # C			
	250+83.00	263+54.50	249+76.50	263+82.50			L	1275.0	1350.0				0					1		1								C # BCT			
			257+43.00	263+94.00			R	0.0	550.0				0					1	1												
			280+97.50	284+71.00			R	0.0	287.5			18	0					1			1										
			282+03.00	283+89.00			L	0.0	137.5			6	0						1			1									
NRH 11C			306+63.50	310+68.00			L	0.0	387.5	50.0		6	0					1	1											Eliminate Two Posts At Culvert	
			307+16.00	310+49.50			R	0.0	287.5	50.0		14	0					1			1									Eliminate One Post At Culvert	
			315+21.50	318+71.50			R	0.0	275.0	25.0		24	0							1	1									Eliminate One Post At Culvert	
			316+71.50	322+41.00			L	0.0	550.0			6	0					1	1												
	325+99.00	326+37.50	323+10.50	326+37.50	326+37.50	327+53.00	L	37.5	312.5				19	1					1								BCT	6-Ft o/s From E.P.			
	327+53.00	329+46.00	327+53.00	329+46.00	329+46.00	333+90.50	L	187.5	187.5				71																		
	333+90.50	335+24.50	333+90.50	335+36.00			L	137.5	137.5				0		1			1									C				
	335+62.00	338+30.00	335+64.00	338+30.00	338+30.00	341+36.00	L	275.0	262.5				51	1					1								G				
	341+36.00	346+18.50	341+36.00	347+70.00			L	487.5	600.0				0		1						1						BCT				
	327+05.50	331+89.50	326+90.00	343+23.50			R	500.0	1612.5				0					1	1								BCT # F				
			373+20.00	378+85.00			R	0.0	462.5				0					1	1												
			373+73.00	382+06.50			L	0.0	787.5			20	0					1			1										
			382+27.00	393+26.00			L	0.0	1062.5				0					1	1												
	382+77.50	383+26.50	382+78.50	383+26.50	383+26.50	386+98.50	R	50.0	37.5				61		1			1									BCT				
	386+98.50	388+17.50	386+98.50	388+17.50			R	125.0	112.5				0	1					1								G				
	389+00.50	389+48.50	388+54.00	389+48.50	389+48.50	392+58.00	R	50.0	87.5				51		1			1									BCT				
	392+58.00	393+07.00	392+58.00	393+18.50			R	50.0	50.0				0	1					1								G				
	412+48.50	413+86.00	410+36.00	413+86.00	413+86.00	428+50.00	R	137.5	300.0				221		1			1									BCT	Reuse 14 Posts bolted to headwall			
	428+50.00	429+21.00	428+50.00	429+50.00			R	72.5	50.0				0	1				1									F				

(Continued)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL SCHEDULE

KAWAIIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS

F.A. PROJ. NO. NH-019-1(34)

Scale: None Date: June, 2003

SHEET No. 2 OF 3 SHEETS

ORIGINAL PLAN

DATE

SURVEY PLOTTED BY

DRAWN BY

DESIGNED BY

QUANTITIES BY

CHECKED BY

ORIGINAL PLAN

SURVEY DICTATED BY

DRAWN BY

DATE

DATE

DESIGNED BY

QUANTITIES BY

CHECKED BY

4/20/03

4/20/03

4/20/03

CONSTRUCTION PROJECT NO.	REMOVE EXISTING GUARDRAIL STATION LOCATIONS		INSTALL NEW GUARDRAIL STATION LOCATIONS		RESET EXISTING GUARDRAIL STATION LOCATIONS		LEFT / RIGHT	GUARDRAIL REMOVAL LENGTH (FT.)	NEW GUARDRAIL LENGTH (FT.)	NESTED GUARDRAIL LENGTH (FT.)	INSTALL GUARDRAIL AT OBSTRUCTION (FT.)	INSTALL 8-FT. POST (EACH)	RESET POST AND REPLACE SPACER BLOCK (EACH)	GUARDRAIL END TREATMENTS														END TREATMENT REMOVAL	REMARKS		
														TO EXISTING		RUBRAIL (LIN. FT.)	MODIFIED TYPE "A-1"		MODIFIED TYPE "G"		FLEAT 350		ET 2000		SKT 350		BRIDGE RAILING UPGRADE			BRIDGE NAME	
	FROM	TO	FROM	TO	FROM	TO								LEAD	TRAIL		LEAD	TRAIL	LEAD	TRAIL	LEAD	TRAIL	LEAD	TRAIL	LEAD	TRAIL					
NRH 11C	413+91.50	416+00.00	413+46.50	416+03.00			L	212.5	200.0				0					1	1										F # G	Reuse 5 Posts bolted to headwall	
	416+32.00	417+88.50	416+31.50	420+11.50			L	162.5	325.0				0					1		1									G # C	Reuse 2 Posts bolted to headwall	
	439+86.50	440+73.50	439+70.50	442+79.00			R	87.5	262.5				0						1			1							BCT # BCT		
	440+08.50	440+95.50	439+17.00	442+04.50			L	87.5	200.0				0					1				1							BCT # BCT		
	476+03.00	479+77.00	474+20.50	479+93.50			R	375.0	525.0			11	0							1	1								BCT # BCT		
	478+00.00	480+00.00	478+27.00	481+31.50			L	187.5	287.5				6	0						1	1								BCT # BCT		
TOTALS									10,185	19,740	125		111	1,200	19	19	0	10	14	20	14	6	8	0	0	0	0	0	0		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	33S-1	68

PLAN SHEET NO.	Install New Guardrail Station Locations		LIN. FT.	Left or Right		RM-5's
	LEAD	TRAIL				
	From	To				
13	149+91.00	144+98.50	492.50	Lt.		17
13	163+07.00	150+02.00	1305.00	Lt.		54
14	186+98.00	165+16.00	2182.00	Lt.		86
15-16	205+96.00	192+30.00	1366.00	Lt.		54
17-18	230+30.00	226+28.00	402.00	Lt.		13
18	237+37.00	235+33.00	204.00	Lt.		6
18-19	245+60.00	241+71.00	389.00	Lt.		12
19	263+85.00	249+76.50	1408.50	Lt.		24
	EXTRA WORK					
19	273+52.00	265+70.00	782.00	Lt.		30
20	283+85.00	282+00.00	185.00	Lt.		6
21	310+64.00	306+57.00	407.00	Lt.		15
22	322+51.00	316+71.00	580.00	Lt.		23
22	335+36.00	323+10.00	1226.00	Lt.		49
22-24	347+70.00	335+64.00	1206.00	Lt.		47
24	380+68.00	368+95.00	1173.00	Lt.		44
26	416+03.00	413+46.50	256.50	Lt.		9
26	420+11.50	416+31.50	380.00	Lt.		13
27	441+90.00	439+17.00	273.00	Lt.		8
29	481+31.50	478+27.00	304.50	Lt.		10
						520

PLAN SHEET NO.	Install New Guardrail Station Locations		LIN. FT.	Left or Right		RM-5's
	LEAD From	TRAIL To				
13	143+78.00	156+27.00	1249.00	Rt.		50
14	169+71.00	173+43.00	372.00	Rt.		13
14	179+47.00	187+143.00	796.00	Rt.		31
15	193+71.50	197+54.00	382.50	Rt.		15
16	199+59.00	207+00.00	741.00	Rt.		26
17	227+62.00	249+95.00	2233.00	Rt.		88
EXTRA WORK						
19	267+57.00	273+20.00	563.00	Rt.		23
20	275+45.00	284+38.00	893.00	Rt.		33
21	307+00.00	310+59.00	359.00	Rt.		13
21-22	315+12.00	318+90.00	378.00	Rt.		13
22	326+90.00	333+81.00	691.00	Rt.		27
24	373+35.00	378+85.00	550.00	Rt.		19
24	382+78.00	388+17.50	539.50	Rt.		23
25	388+54.00	393+18.50	464.50	Rt.		19
26	410+36.00	429+50.00	1914.00	Rt.		75
27-28	439+70.00	442+79.00	309.00	Rt.		11
29	474+20.50	479+93.00	572.50	Rt.		23
						502

TYPE II OBJECT MARKER WITH FLEX POST

<u>Station</u>				<u>Each</u>
289+95.00	Rt.	pole	#95	1
297+92.00	Rt.	pole	#92	1
299+81.00	Rt.	pole		1
302+29.00	Rt.	pole		1
304+82.00	Rt.	pole	#89	1
312+34.00	Rt.	pole		1
315+11.00	Rt.	pole	#85	1
320+10.00	Rt.	pole	#08	1
322+70.00	Rt.	pole	#82	1
325+30.00	Rt.	pole		1
349+02.00	Rt.	pole		1
351+26.00	Rt.	pole	#70	1
395+00.00	Rt.	pole	#05	1
402+29.00	Rt.	pole	#49	1
404+25.00	Rt.	pole	#48	1
447+99.00	Rt.	pole	#30	1
449+99.00	Rt.	pole	#29	1
452+94.00	Rt. & Lt.	pole	#28	2
455+30.00	Rt. & Lt.	pole	#27	2
457+53.00	Rt. & Lt.	pole	#26	2
460+60.00	Rt.	pole	#25	1
462+57.00	Rt.	pole	#24	1
465+10.00	Rt.	pole	#23	1
467+67.00	Rt.	pole	#22	1
470+00.00	Rt.	pole	#21	1
471+82.00	Rt.	pole	#20	1
474+00.00	Rt.	pole	#19	1
484+25.00	Rt.	pole	#13	1
490+05.00	Rt.	pole	#09	1
TOTAL				32 Each

TOTAL 32 *Each*

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL SCHEDULE

KAWAIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS

F.A. PROJ. NO. NH-019-1(34)

Date: June, 2003

SHEET No. OF SHEETS

Date: June, 2003

SHEET No. OF SHEETS

TOTAL INSTALLED

1022 *total RM 5's*

Note: This tracing prepared during "As-Built" posting.

"AS-BUILT"

33 S-1

LEGEND FOR AS-BUILT POSTINGS

 Squiggly line for as-built deletion

100.00	Double line for as-built deletion
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Roadway	Text for as-built posting
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ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____
NOTE BOOK	DRAWN BY <u>X</u> _____
<u>4kawayi 3351</u>	TRACED BY _____
N. <u>dgn</u>	DESIGNED BY <u>X</u> _____
	QUANTITIES BY _____
	CHECKED BY _____

asbuilt2008 4kawagr3s-1.dgn