

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

GUARD RAIL SUMMARY					ITEM 606.3110 5'-9" POSTS		ITEM 606.3111 8'-0" POSTS
(APPROXIMATE) STATION TO STATION	REMOVE WOOD RAILS W/ CONC. POSTS (L.F.)	REMOVE CONC. GUARD POSTS (EACH)	INSTALL TYPE 3 SINGLE G.R. (L.F.)		ANCHOR BLOCKS (TYPE)		REMARKS
			8'-0" POSTS	5'-9" POSTS	APPR.	TRAILING	
214+75-217+60 Lt.	387	-	-	487 1/2	B	E	-
217+00-217+35 Rt.	170	3	-	237 1/2	A	E	-
217+00-225+14 Rt.		24	-				-
225+10-234+10 Rt.	782	-	-	900	A	F	
226+00-228+00 Lt.	80			200	A	D	
233+02.25 Lt.							Reconstruct exist. conc. box, 3'x3' inside dimension, install grating
236+20-240+25 Rt.	431			475	C	F	
240+35 Lt.							Reconstruct exist. conc. box, 5'-6"x 6'-0" inside dimen., install grating
365+30±-371+42.5± Rt.	314	-	-	612 1/2	C	D	Includes one 25 L.F. R=15', 5'-9" posts
366+10±-367+72.5± Lt.	73	-	-	162 1/2	C	F	
371+85±-110+20± Rt.	380	-	-	525	A	F	Includes one 25 L.F. R=15', 5'-9" posts
372+70±-110+15± Lt.	323	-	-	500	B	F	
105+62.5-108+00 Lt.	55	-	-	237 1/2	C	E	
107+13 Rt.	-	-	-	-	-	-	Construct conc. drop intake w/ frame and grate
97+65±-103+65± Lt.	388	-	100	500	C	F	
99+00-103+50± Rt.	391	-	100	350	C	F	
92+52.5±-93+65± Lt.	-	-	-	112 1/2	C	G	Includes one 25 L.F. R=15', 5'-9" posts
84+35±-92+30± Lt.	244	18	200	625	G	F	Includes one 25 L.F. R=15', 5'-9" posts
86+40±-92+40 Rt.	201	17	250	350	C	F	
81+15±-83+65± Lt.	202	-	-	250	C	F	
81+20±-83+20± Rt.	100	-	-	200	C	F	
72+50±-79+75± Lt.	673	-	350	375	C	BCT	
79+17 Rt.	-	-	-	-	-	-	Reconstruct CRM box, 2 1/2'x2' inside dimension, install grating
76+20±-78+07.5± Rt.	-	-	25	162 1/2	C	F	Construct Headwall
64+97.5±-72+10± Lt.	660	-	300	412 1/2	A	F	Includes one 25' R=15', 5'-9" posts
69+65±-71+27.5± Rt.	-	-	-	162 1/2	C	F	Reconstruct headwall
65+90±-67+15± Rt.	-	-	-	125	C	F	Construct Headwall
59+65±-63+30± Lt.	-	16	200	187 1/2	G	F	Includes one 25 L.F. R=15', 5'-9" posts
60+15±-63+65± Rt.	-	16	175	175	C	F	
55+35 Lt.	-	-	-	-	-	-	Reconstruct headwall
55+35 Rt.	-	-	-	-	-	-	Const. D.I. w/ frame & grate
48+70±-52+70± Lt.	-	11	150	250	A	BCT	Includes one 25 L.F., R=15', 5'-9" posts
49+10±-50+85± Rt.	-	-	100	75	B	F	
46+40±-48+27.5± Lt.	-	-	-	187 1/2	BCT	F	
44+45±-46+07.5 Lt.	55	-	-	162 1/2	B	D	Includes one 25 L.F., R=15', 5'-9" posts
44+00±-45+25± Rt.	-	-	-	125	C	F	
37+25±-40+80± Lt.	241	-	-	412 1/2	B	G	End at conc. bridge rail
38+40 Rt.	-	-	-	-	-	-	Const. D.I. w/ frame and grate
36+30±-37+72.5± Rt.	-	-	-	162 1/2	C	E	
36+50±-37+65± Lt.	-	-	33	120	G	E	Includes one 20 L.F., R=15', 5'-9" posts End at Bridge rail
TOTALS	6,150	105	1,983	9,820	NOTE: For Guard Rail and Anchor changes, see Plan Sht. Nos. 5, 6, 7, 8 & 9.		

GENERAL NOTES:

- Contractor's attention is directed to shrubbery and plants affecting the project. This work is described by Section 201-Clearing and Grubbing of the Standard Specifications for Road and Bridge Construction, 1976.
- Guard Rail installation shall be done in accordance with the Standard Details and Special Provisions unless otherwise shown or noted on the Plans.
- All existing RM-3 Reflector Markers to be replaced shall be removed and disposed of by the Contractor.
- Existing Concrete Posts, Wooden & Metal Guard Rails shall be dismantled and removed in a neat and workmanlike manner. All materials removed, including hardware shall be disposed of by the Contractor.
- Any irregularities in the shoulder where Guard Rail Posts are to be installed shall be dressed with the existing shoulder and payment for this work shall be considered incidental to item 203.0100
- Widen top of slope as required to set anchor block at Sta. 214+75Lt. This work shall be considered incidental to item 606.6020
- The Contractor shall keep one lane open to traffic at all times. See also Section 107.13 of the Special Provisions.
- Contractor shall verify all Utilities prior to commencement of any construction activity. See also Section 107.21 of the Special Provisions.
- Contractor shall verify curved radius Guard Rail Sections and lengths.
- Reconstruction of CRM boxes or concrete boxes shall require dowels of minimum 12" into existing box surfaces, in contact with new concrete, 12" apart and as directed by the Engineer.
- Excavation, demolition of portion of existing concrete or CRM boxes, back-filling and slope to drain for reconstruction of drop intakes, construction of new Drop Intakes, reconstruction of headwalls shall be considered incidental to the respective item number for each drop intake or headwall.
- Contractor shall relocate signs affected by the Project and shall be incidental to Item 203.0100. Contractor shall pay for all damages to signs by Contractor's work.
- Lateral distances of guard rail installation shall be determined in the field by the Engineer.
- Water valves at Sta. 40+00± Lt., 2 valves shall be raised to finished shoulder grade in accordance with Detail 'A' on sheet No. 2. This work shall be incidental to shoulder Excavation.
- Constructed headwall at Sta. 77+00± Rt., 70+50± Rt., 66+50± Rt. and 55+35± Lt. shall be either constructed of concrete or cement rubble masonry and shall be in accordance with Section 503 or Section 508 and shall meet the requirements of Section 601 or Subsection 508.02. Dowels shall be used where the new constructed headwalls meet the existing headwalls. Dowels shall be incidental to item 503.0000
- All culverts shall be cleaned and such work shall be incidental to item no. 203.0100.
- Smooth riding connections shall be constructed at all side roads. This work shall be incidental to items 203.0100 and 304.1110.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ROS-030-1 (14)	1978	3	33

STATE OF HAWAII	
DEPARTMENT OF TRANSPORTATION	
HIGHWAYS DIVISION	
GUARD RAIL SUMMARY AND GENERAL NOTES	
HONOAPIILANI HIGHWAY	
F.A. PROJ. NO ROS-030-1(14)	
DEC. 1976	
SHEET NO. 1 OF 1 SHEETS	