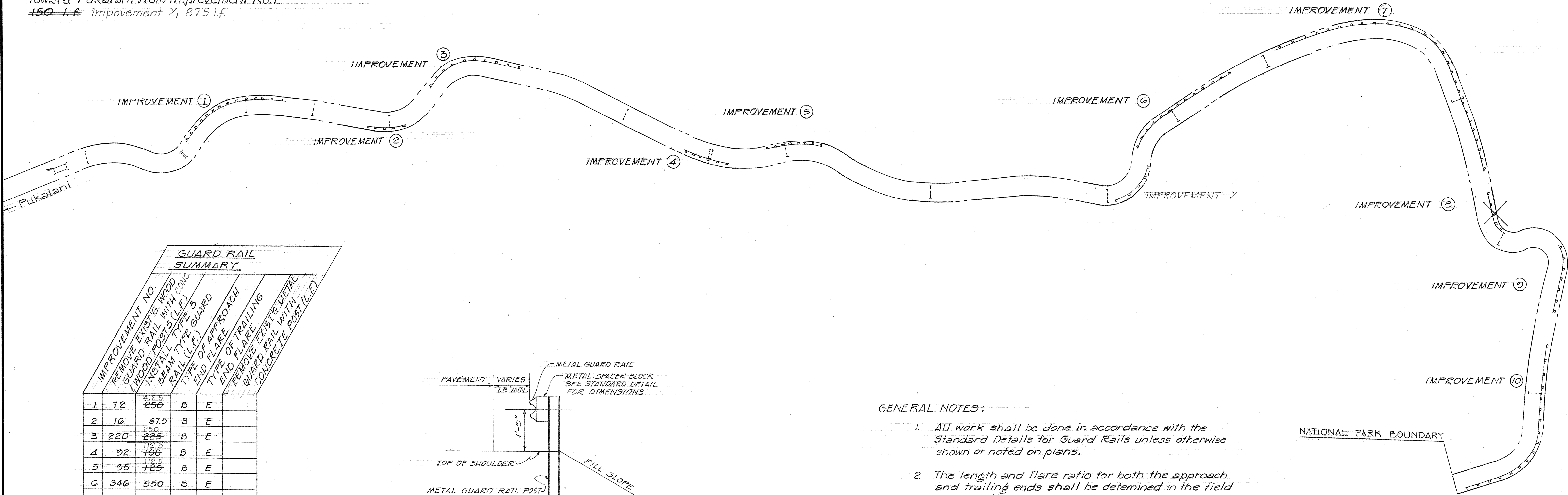


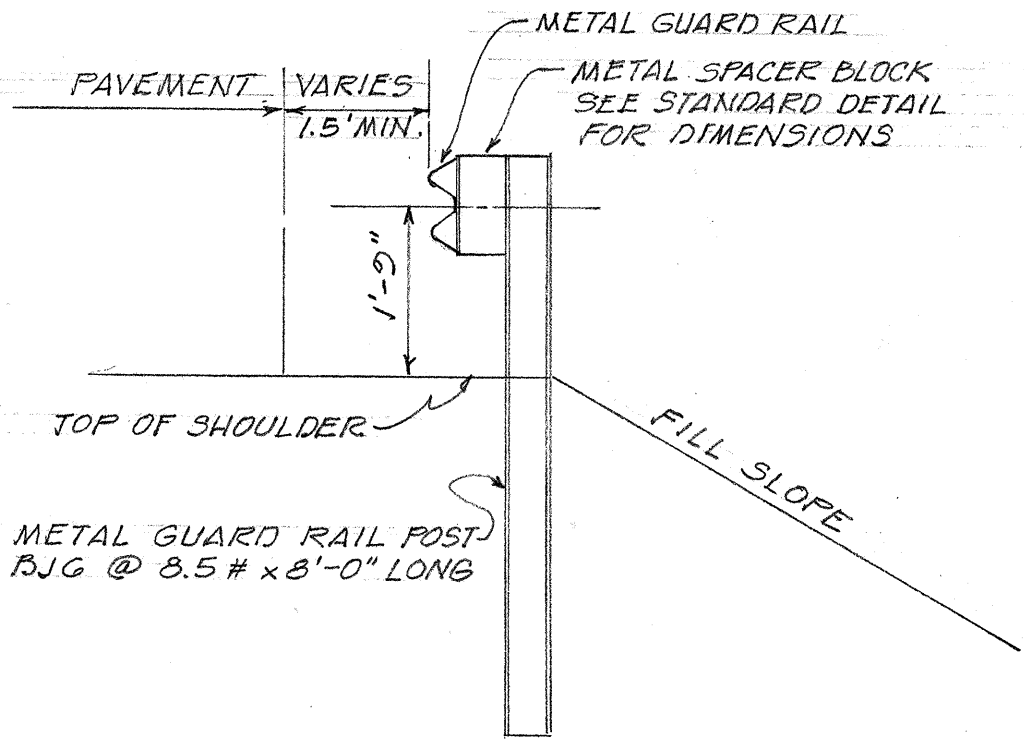
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-M-02-72	1972	2	12

NOTE

Install Type B Approach End Flares and Type E Trailing End Flares to existing guard rails located approximately 5000' toward Pukalani from Improvement No. 1
~~150~~ Improvement X, 87.5 l.f.



GUARD RAIL SUMMARY					
IMPROVEMENT NO.	REMOVE EXIST'G WOOD GUARD RAIL WITH CONG. POSTS (L.F.)	INSTALL TYPE 3 RAIL (L.F.)	TYPE OF APPROACH END FLARE	TYPE OF TRAILING END FLARE	GUARD RAIL WITH CONCRETE POST (L.F.)
1	72	412.5	B	E	
2	16	87.5	B	E	
3	220	225	B	E	
4	92	100	B	E	
5	95	125	B	E	
6	346	550	B	E	
7	638	650	B	E	
8	95	100	B	E	
9	145	150	B	E	
10	395	400	B	E	
11	112	125	B	E	
11A	145	150	B	F	
12	0	300	B	E	
13	208	225	B	F	
13A	192	212.5	C	E	
14	5416	437.5	B	F	
15	280	300	C	E	
15A	264	287.5	B	E	
16		125	C	F	125
16A	16	75	B	E	
17		75	C		50
17A		75	C		50
X	0	87.5	B	E	
X1	0	87.5	B	E	



AT SHOULDER SECTION
TYPICAL METAL GUARD RAIL DETAIL

Portion of #14 installed
Limit of Proposal

GENERAL NOTES:

- All work shall be done in accordance with the Standard Details for Guard Rails unless otherwise shown or noted on plans.
- The length and flare ratio for both the approach and trailing ends shall be determined in the field by the Engineer.
- Existing Metal Guard Rails and Concrete Posts that are removed, if any, shall be salvaged and stockpiled within the project area designated by the Engineer. Existing Wood Guard Rails and Wood Posts that are removed shall become the property of the Contractor.
- Unless noted otherwise, all existing guard rails are wood rails with wood posts.
- Removing and stock piling of existing guard rails and posts shall not be measured and paid for separately but shall be considered incidental to the contract Item No. GOG. 313, Guard Rail, Type 3 - Single with 8.0' posts.
- All existing reflector markers shall be removed and reinstalled at locations designated by the Engineer after the new guard rails are installed. They will not be measured and paid for separately, but shall be considered incidental to all items.
- Improvements Nos. 15A to 16A inclusive are possible additive alternates. Quantities for said alternates are not included in the Proposal.

NATIONAL PARK BOUNDARY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN
GUARD RAIL SUMMARY
TYPICAL M.G.R. DETAIL

GENERAL NOTES
HALEAKALA HIGHWAY
GUARD RAIL REPLACEMENT
Proj. No. HWY-M-02-72
SECTION A

SHEET No. 1 OF 3 SHEETS

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