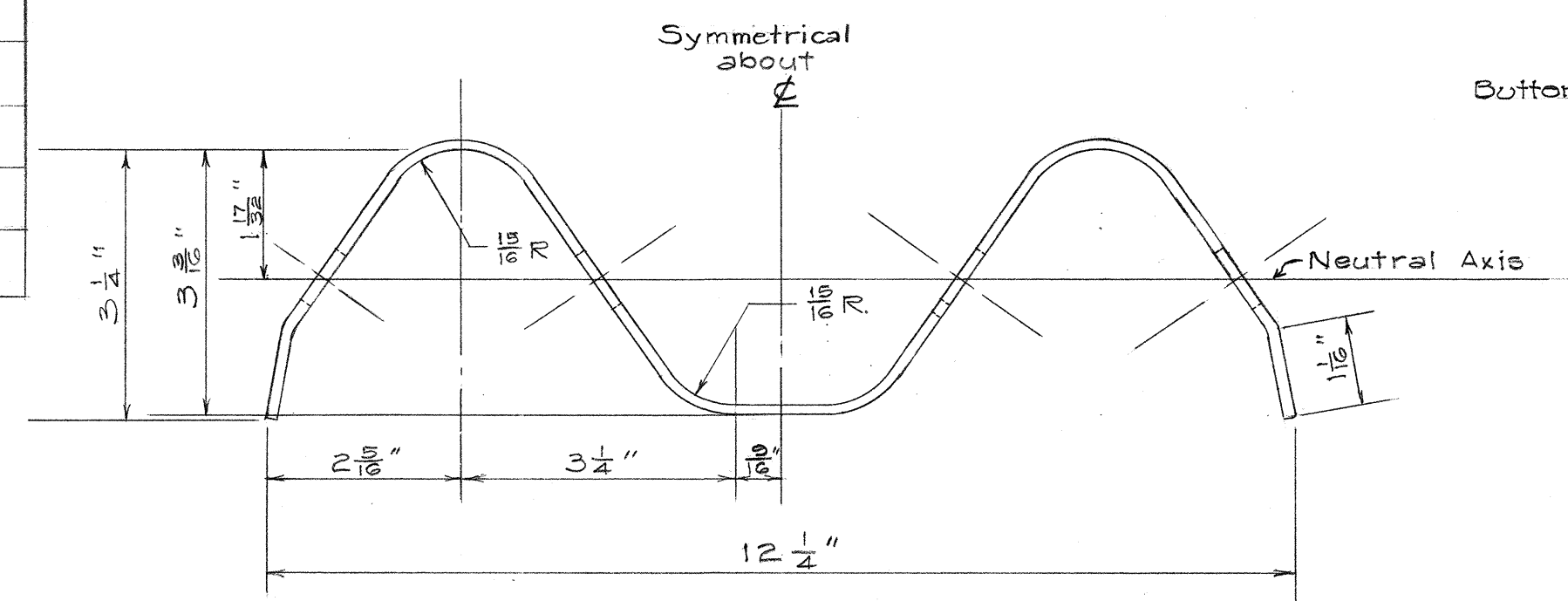
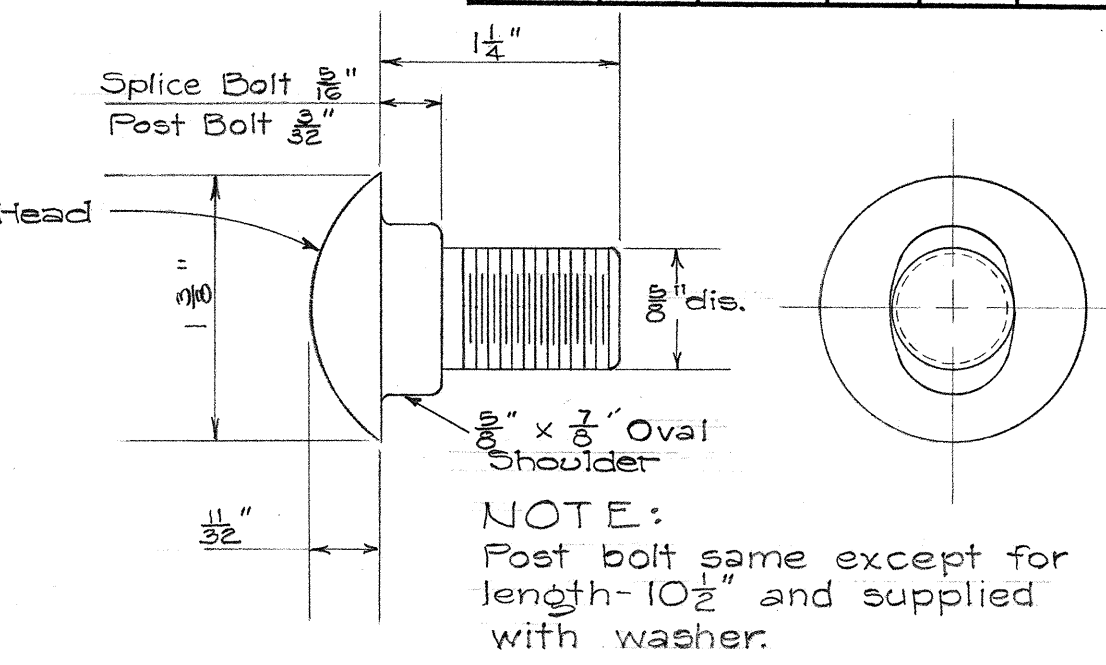


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	BF06H(1)	1960	11	24

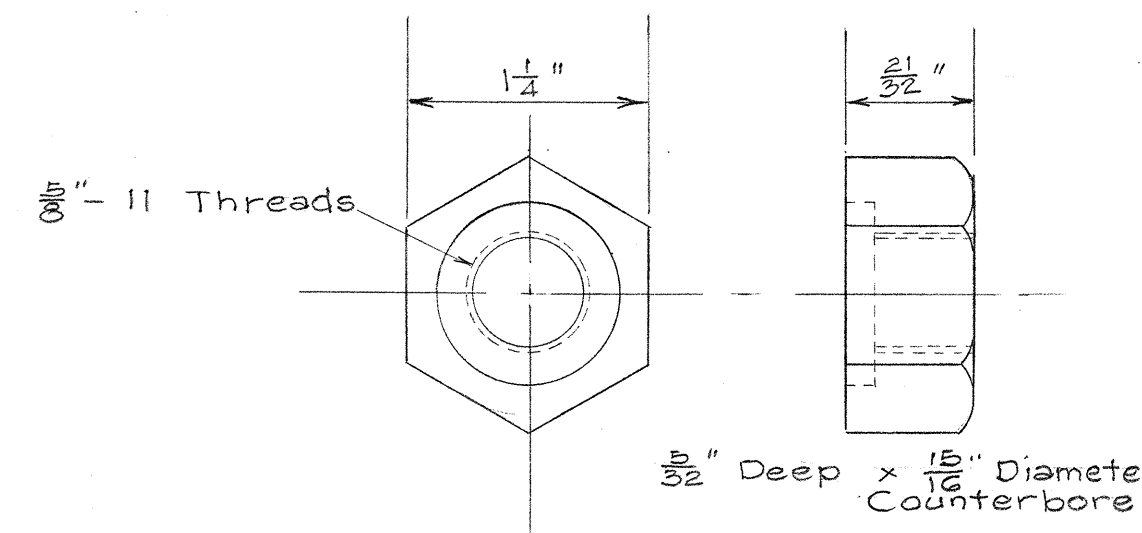
SUMMARY OF METAL GUARD RAIL		
LOCATION APPROX. STA.	WITH I BEAM APPROX. LENGTH	20' RADIUS APPROX. LENGTH
Sta. 46+20 L	25'-7"	
Sta. 48+80 R	26'-7"	
Sta. 64+50 L		13'-2"
Sta. 69+40 L		13'-2"
Sta. 72+30 L		13'-2"
TOTAL	52'-2"	39'-6"



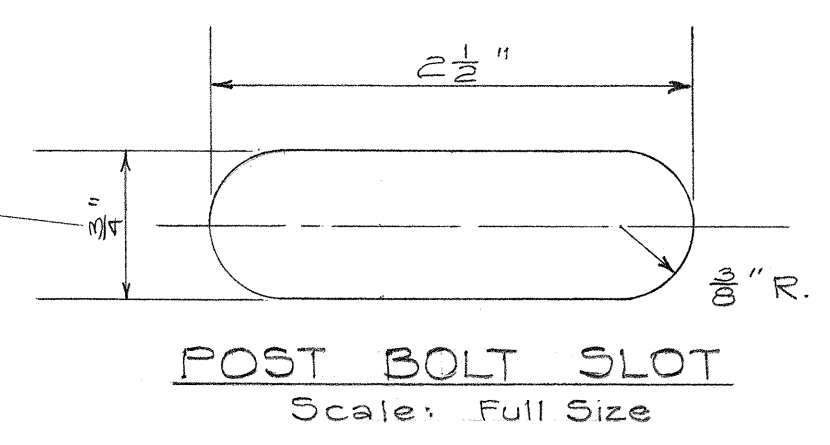
RAIL ELEMENT SECTION
Scale: Half Size



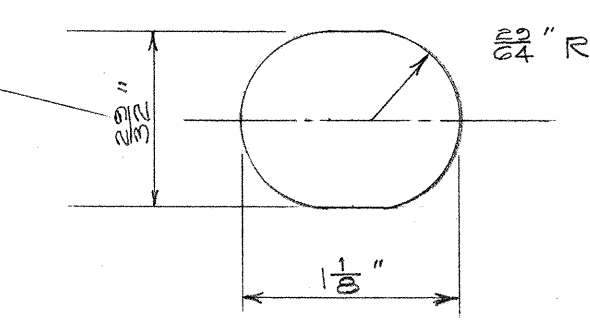
SPLICE BOLT
POST BOLT
Scale: Full Size



HEXAGON NUT
Scale: Full Size

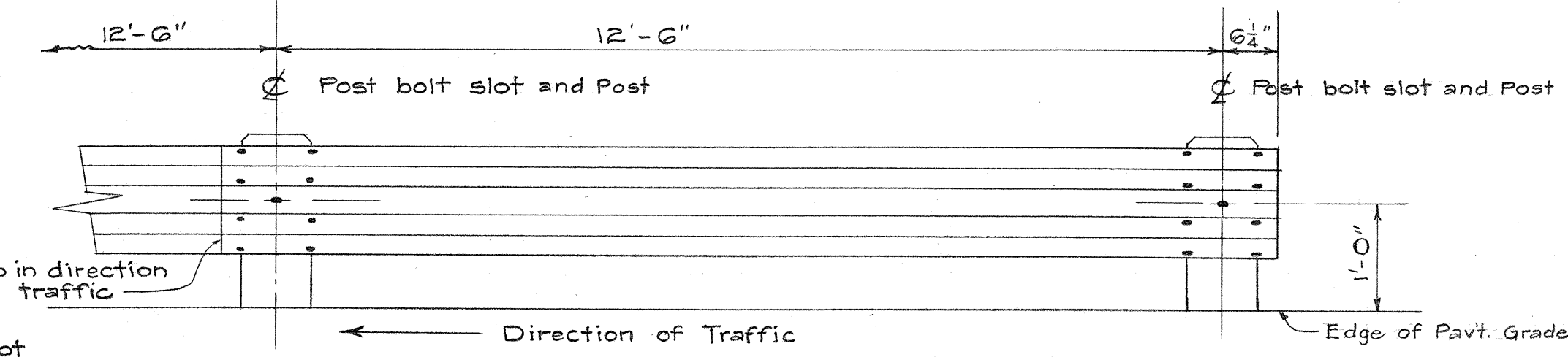


POST BOLT SLOT
Scale: Full Size

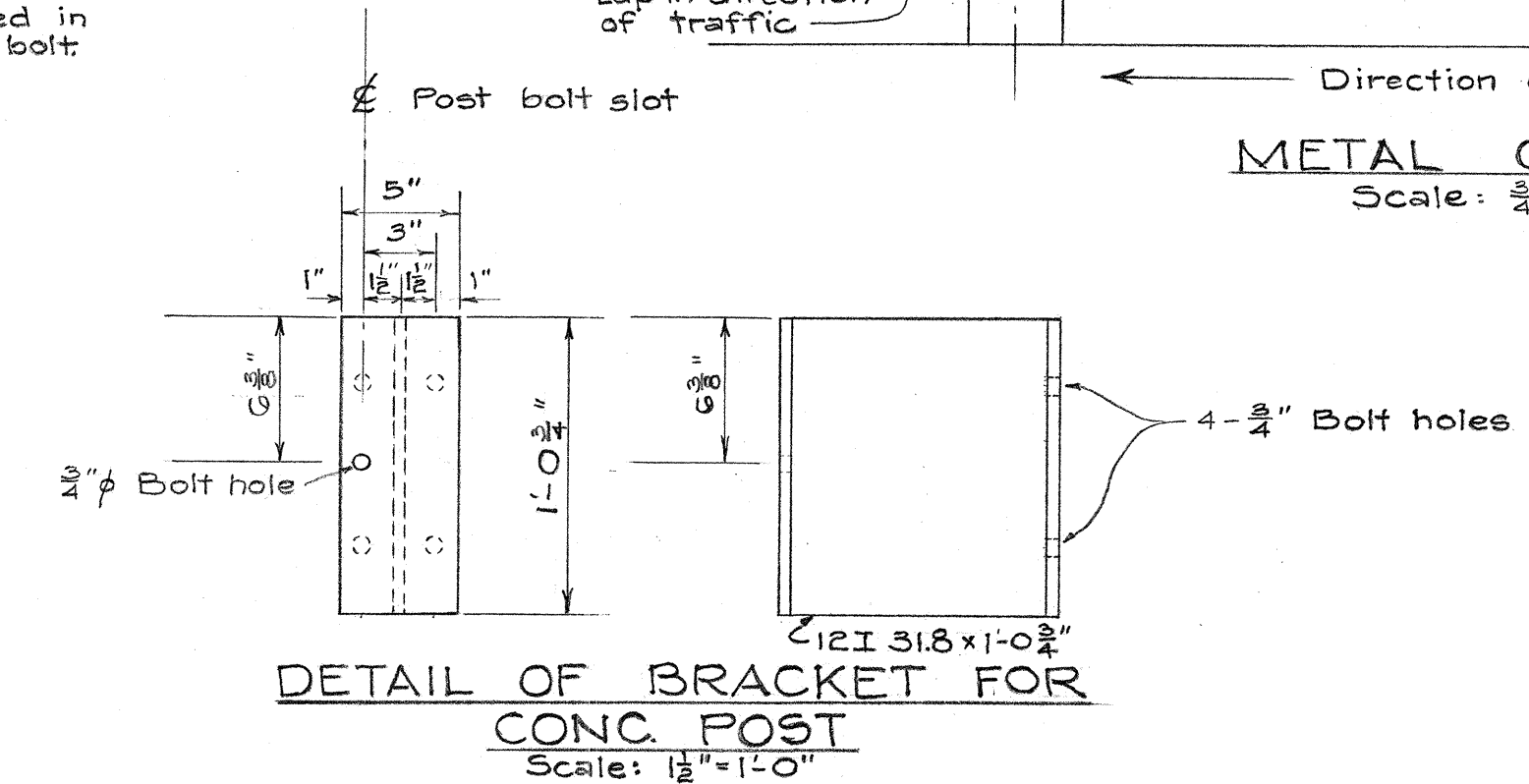


SPLICE BOLT SLOT
Scale: Full Size

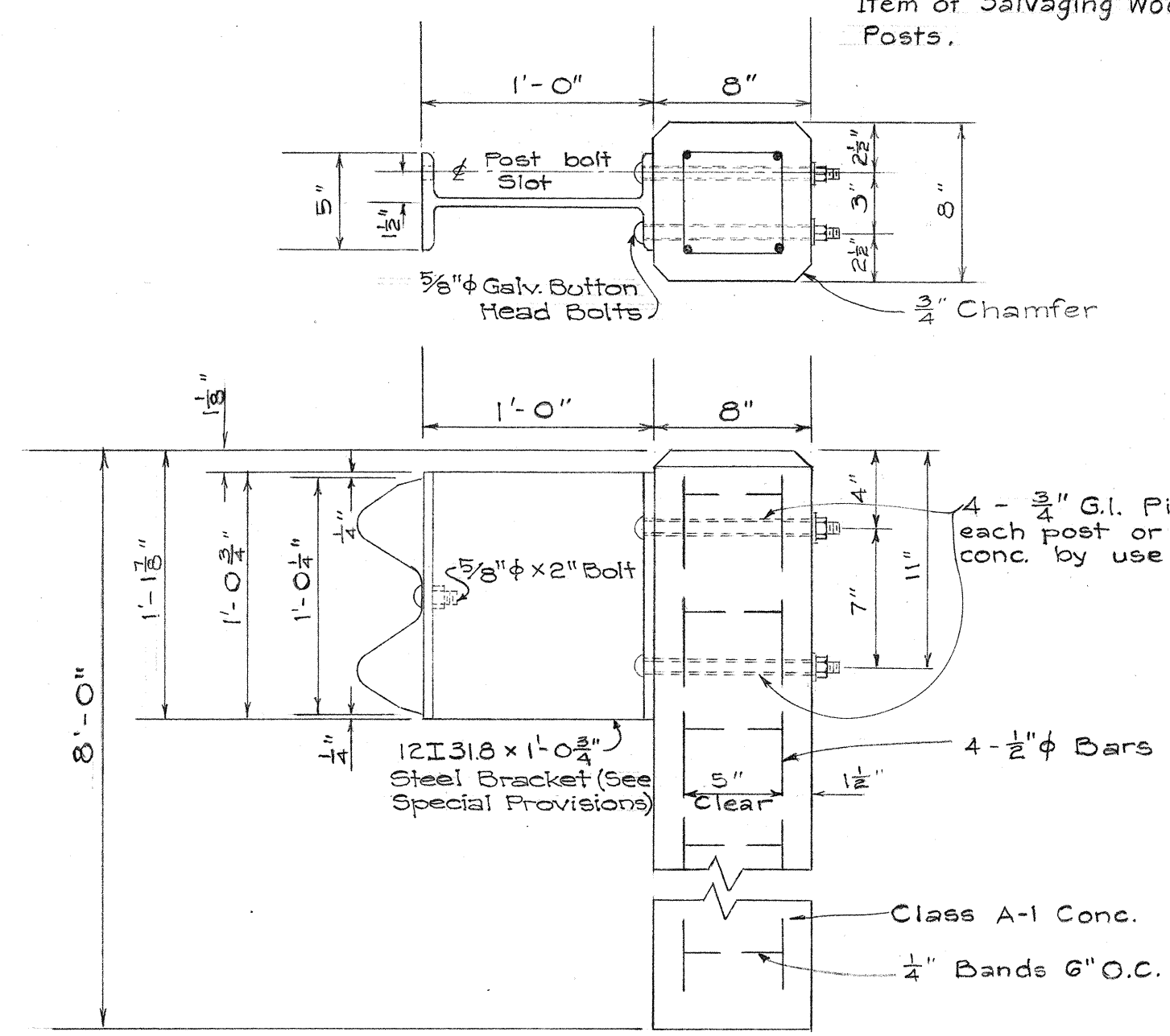
RAIL SPLICE
Scale: 3" = 1'-0"



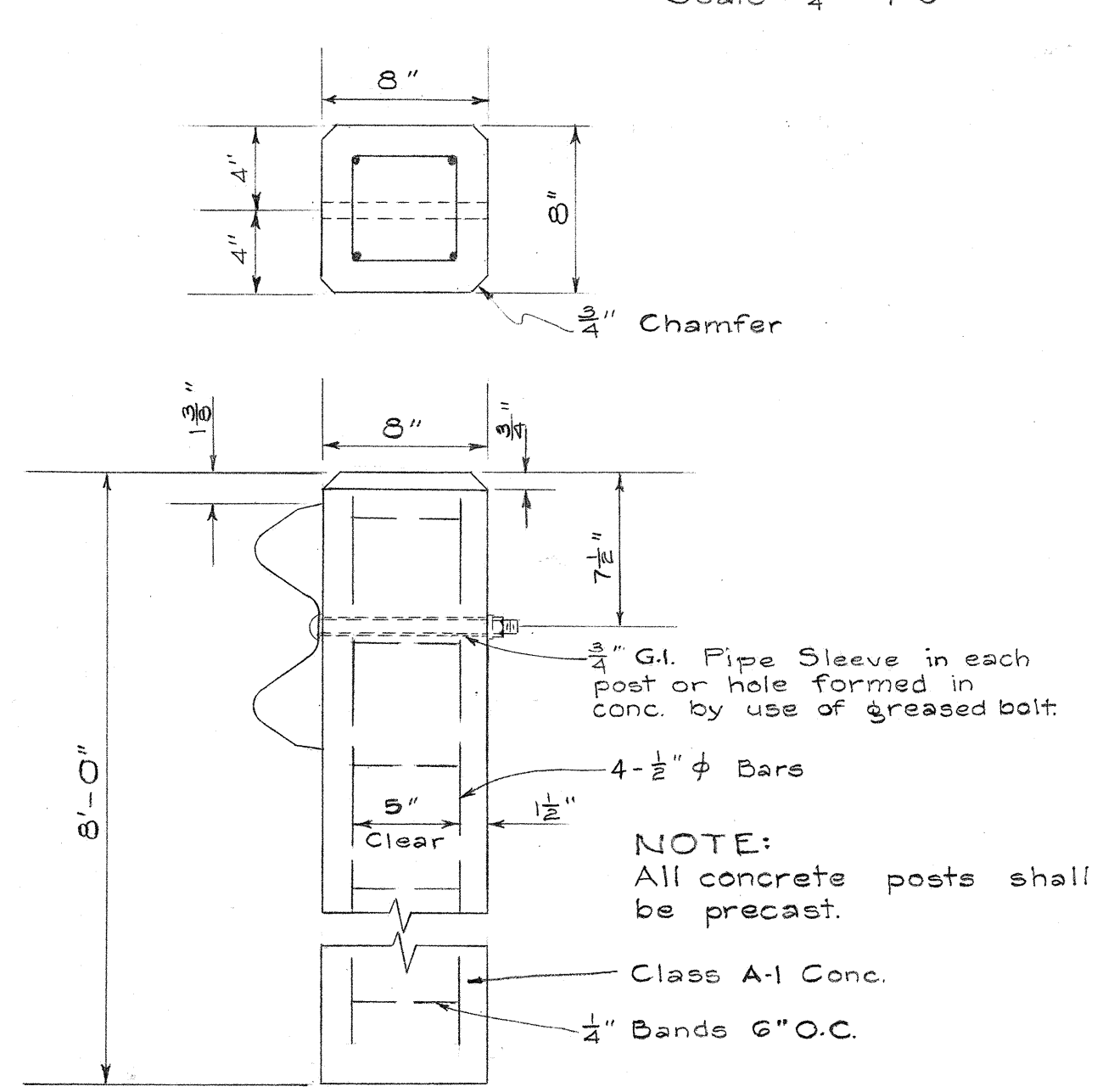
METAL GUARDRAIL
Scale: 3/4" = 1'-0"



DETAIL OF BRACKET FOR
CONC. POST
Scale: 1 1/2" = 1'-0"



DETAIL OF CONC. POST
WITH I-BEAM BRACKET
Scale: 1 1/2" = 1'-0"

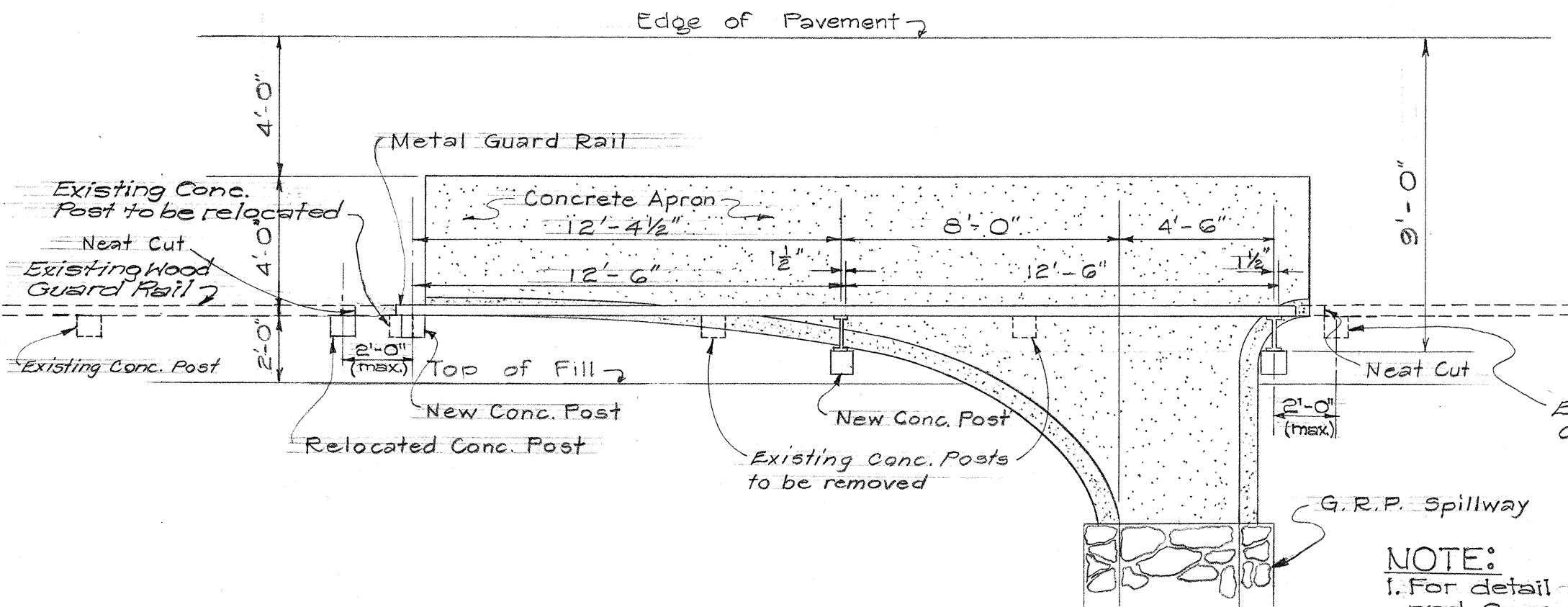


DETAIL OF
CONC. POST
Scale: 1 1/2" = 1'-0"

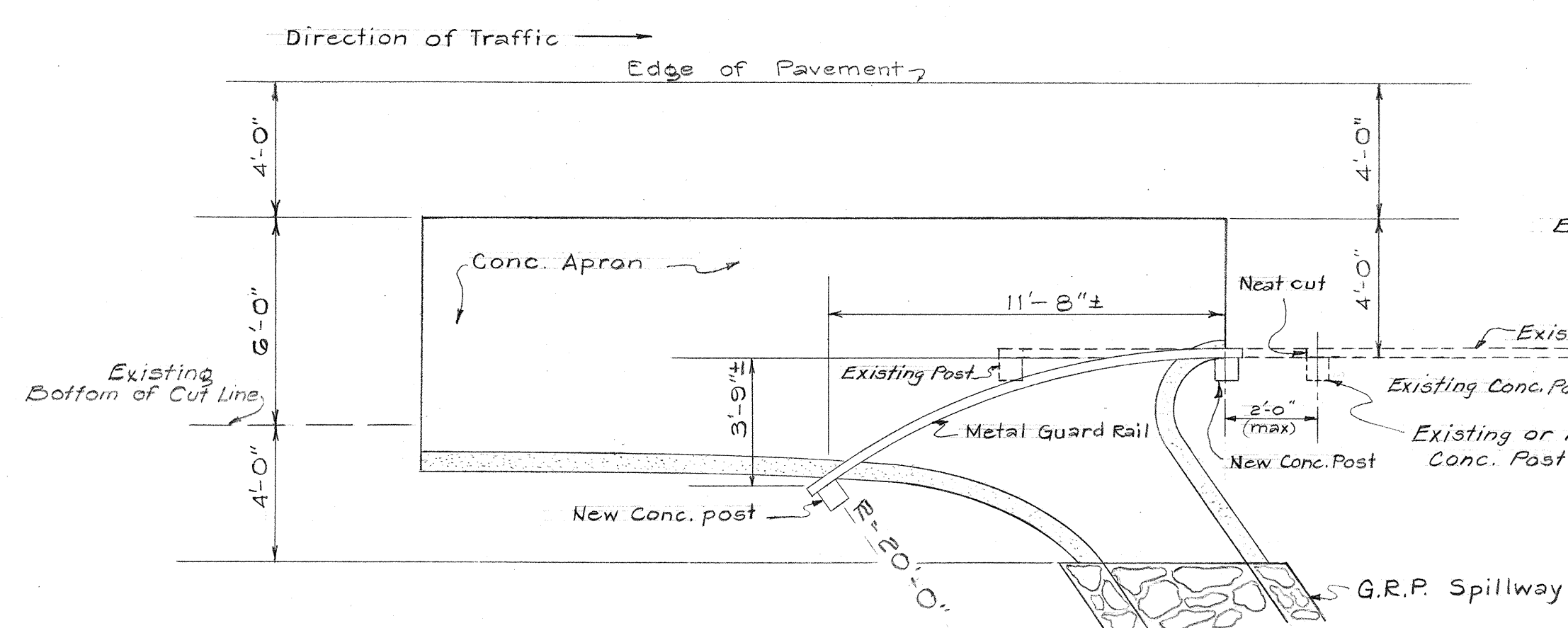
NOTE:
1. For detail of Conc. Spillway and Conc. Spillway Apron, see Sheet No. 10.
2. The locations of existing concrete posts for Guardrails are arbitrarily shown on these plans and in the Typical Sections. The Contractor shall verify the exact locations on the field.

NOTE:
(1) All labor, tools, equipment and doing all the work involved in the relocation of the existing concrete Post, cutting, boring bolt holes, painting of the exposed area due to the cutting, and re-installing of the Wood Guard Rail shall be considered as incidental to the item of Metal Guard Rail with Concrete Post and no additional payment will be made therefor.
(2) All wood Guard Rails and Concrete Posts replaced with the Metal Guard Rails with Concrete Post and not incorporated in (1) above shall be salvaged and neatly stockpiled within the project site as directed by the Engineer. The above work will be paid for under the Item of Salvaging Wood Guard Rails with Concrete Posts.

TYPICAL METAL GUARDRAIL OVER CONC. SPILLWAY APRON
AT FILL SECTION
Scale: 1/4" = 1'-0"



TYPICAL METAL GUARDRAIL OVER CONC. SPILLWAY APRON
AT CUT SECTION
Scale: 1/4" = 1'-0"



ORIGINAL PLAN	DATE
DRAWN BY	DESIGNED BY
CHECKED BY	NOTED BY
QUANTITIES CHECKED BY	
NO.	

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STATE OF HAWAII
DETAILS OF METAL GUARD
RAIL WITH CONC. POSTS
PALI HIGHWAY
PROJ. NO. BF-OGI-1(1)
Scale: As Noted
Sept, 1960