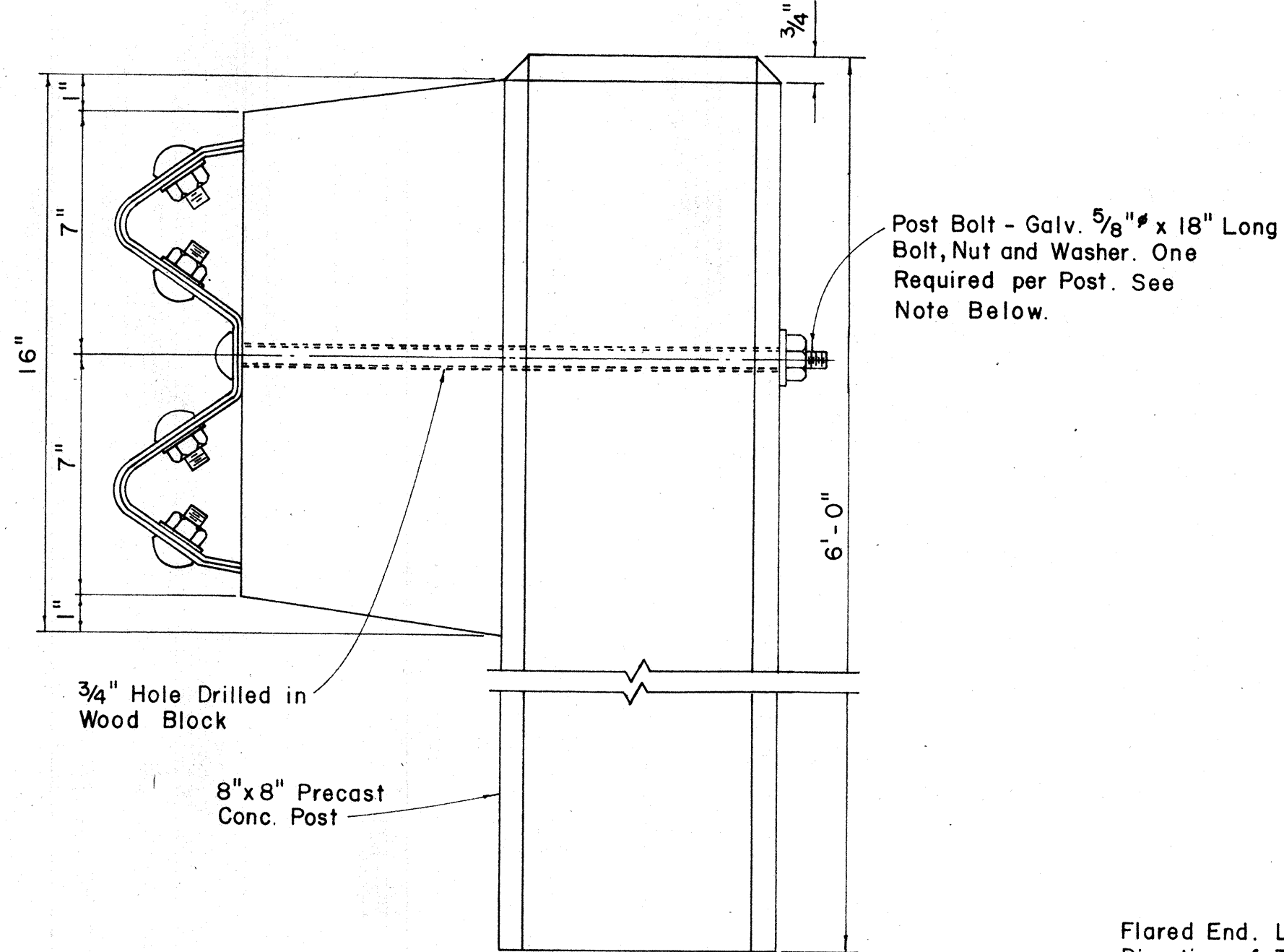
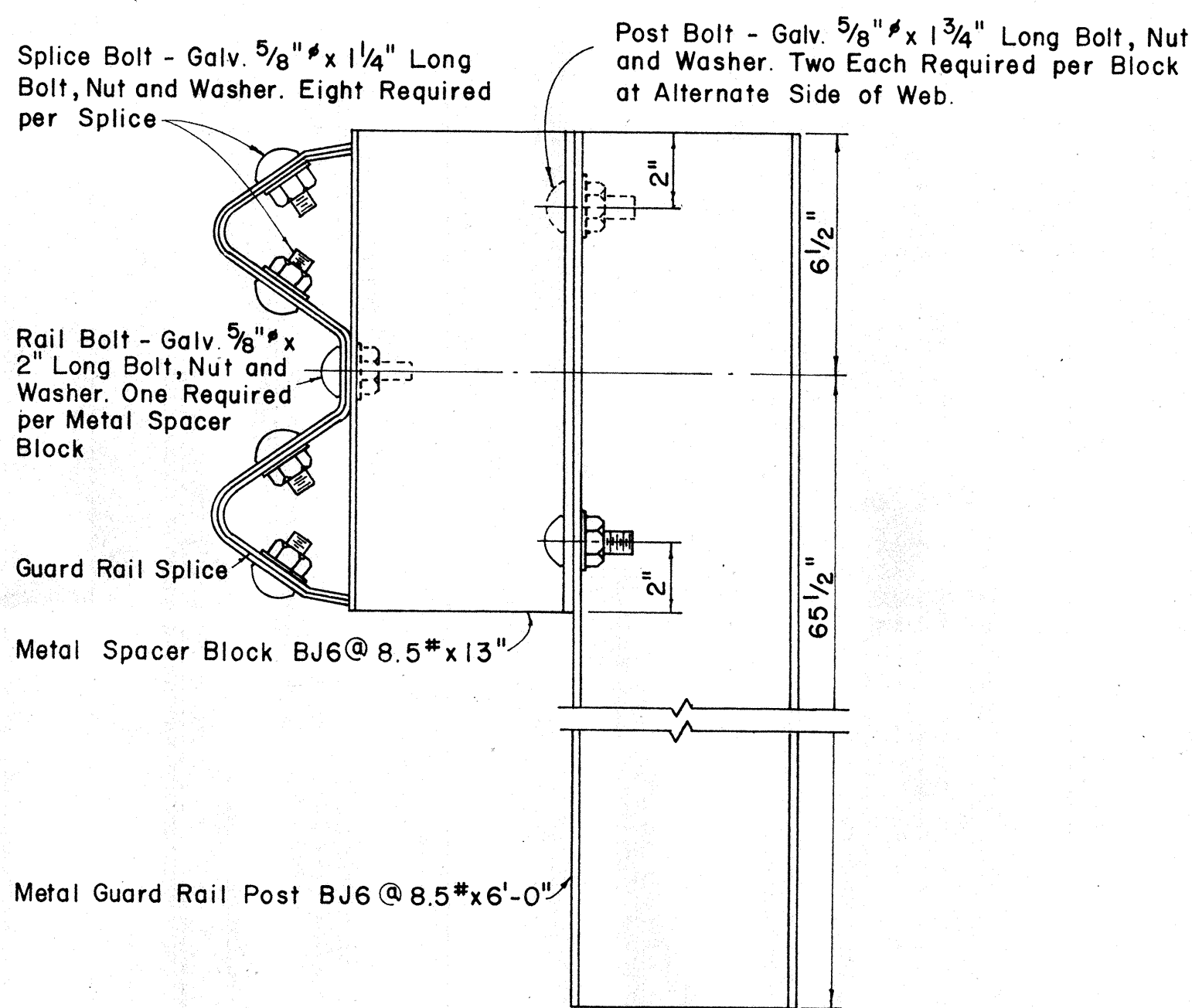
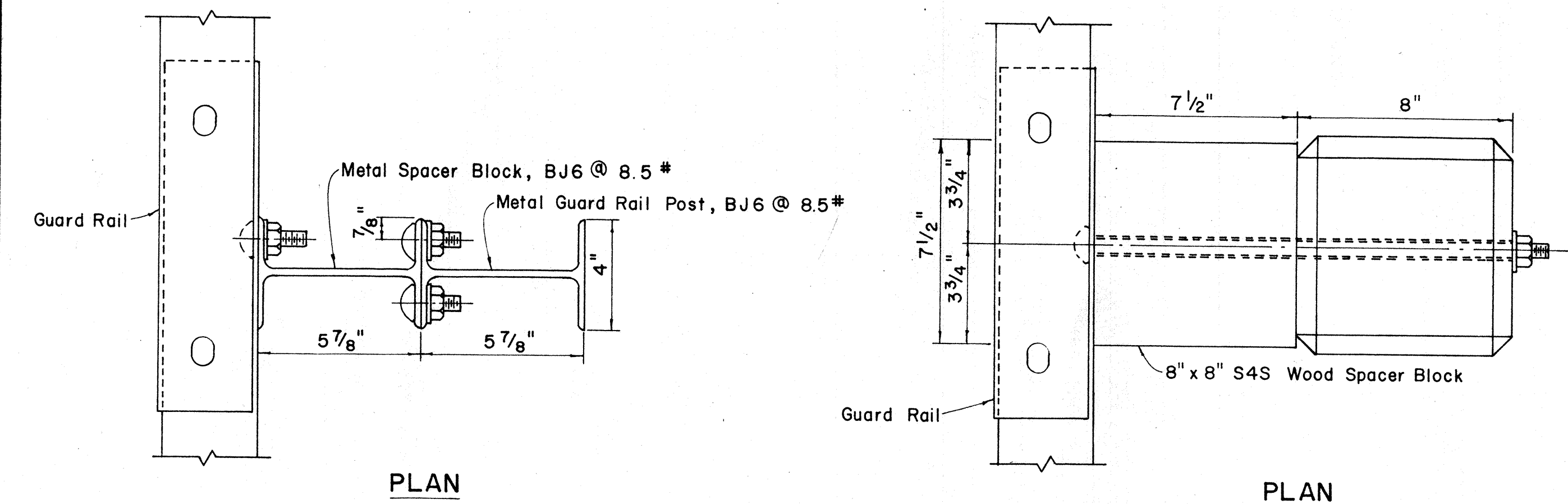


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	C-160-01-63	1966	7	18

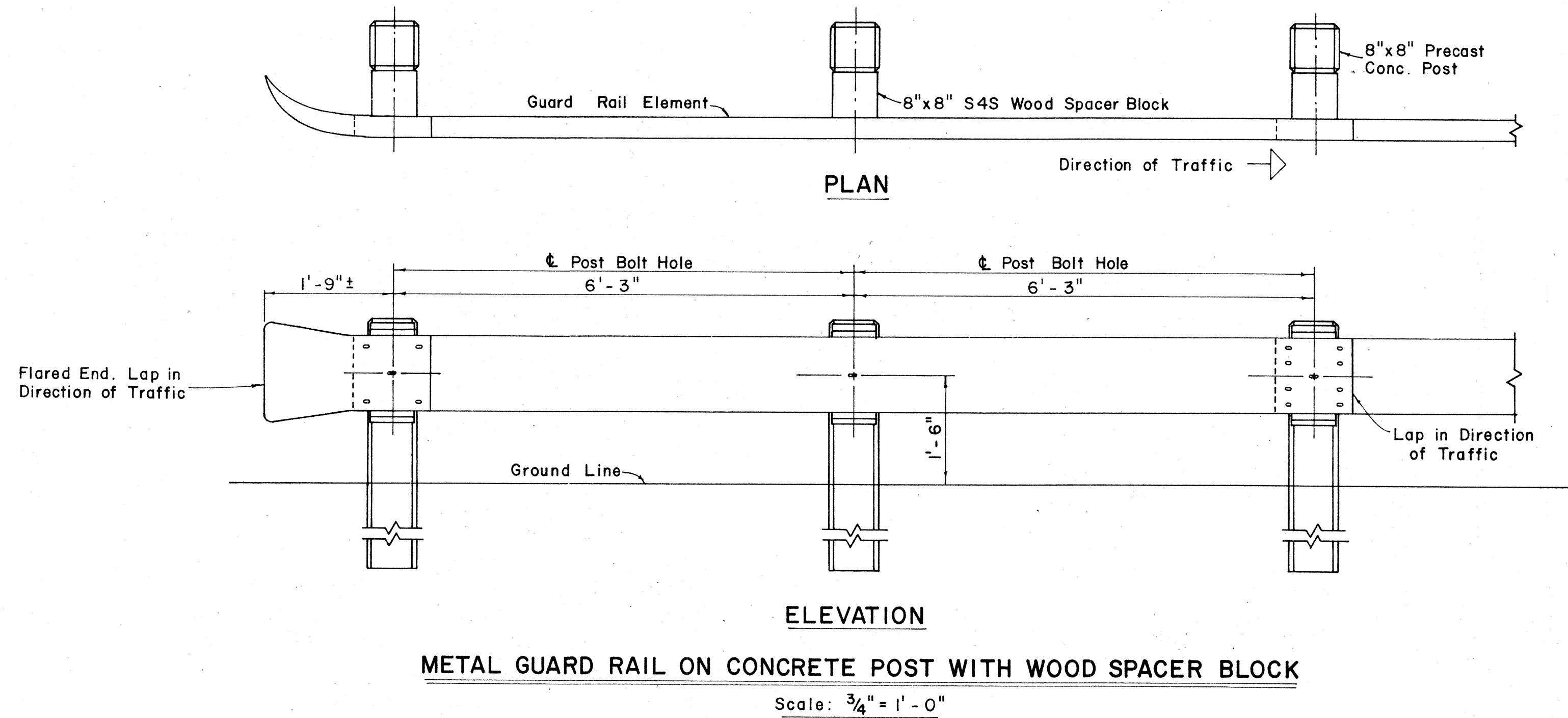
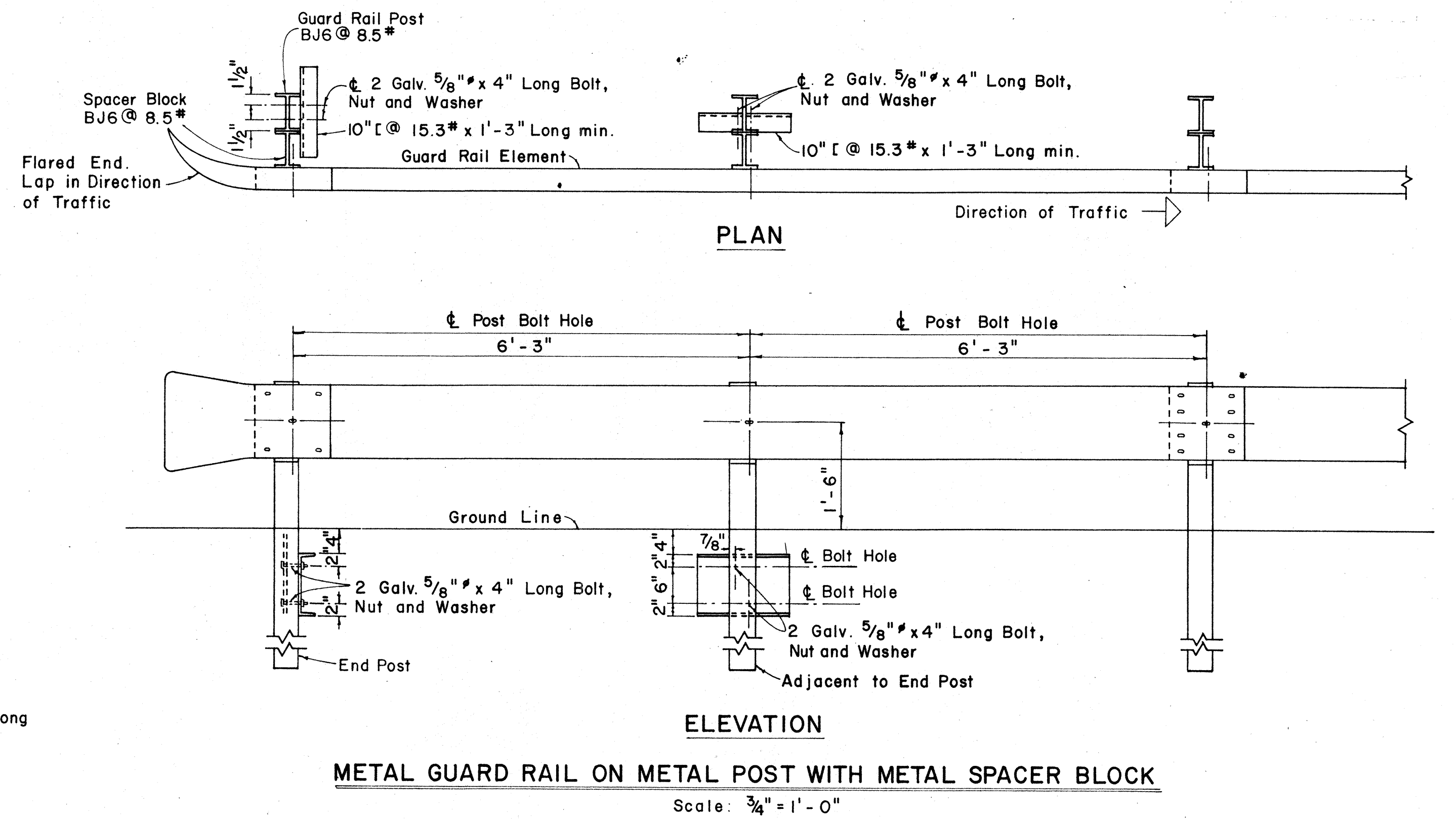


Wood Blocks shall be Douglas Fir, "Construction Grade - Posts and Timbers," 1200c Painted with Creosote Conforming to the Requirements of AASHO Designation: M-133

SINGLE GUARD RAIL ON METAL POST
WITH METAL SPACER BLOCK
Scale: $\frac{3}{4}$ " = 1' - 0"

SINGLE GUARD RAIL ON PRECAST
CONCRETE POST WITH WOOD SPACER BLOCK
Scale: $\frac{3}{4}$ " = 1' - 0"

NOTE:
Single Guard Rails Shown. For Double Guard Rails Additional Spacer Blocks and Rail Elements Required on Opposite Side of Posts. See Bolt Schedule for Required Bolt Lengths.



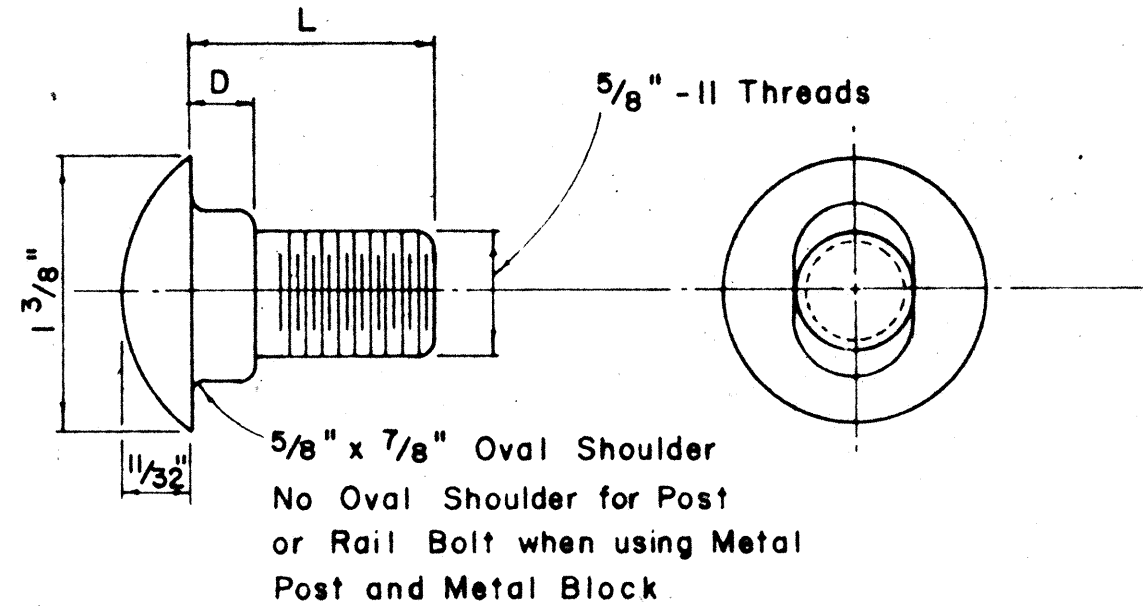
DETAILS FOR SINGLE GUARD RAIL
Scale: As Shown

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARD RAIL

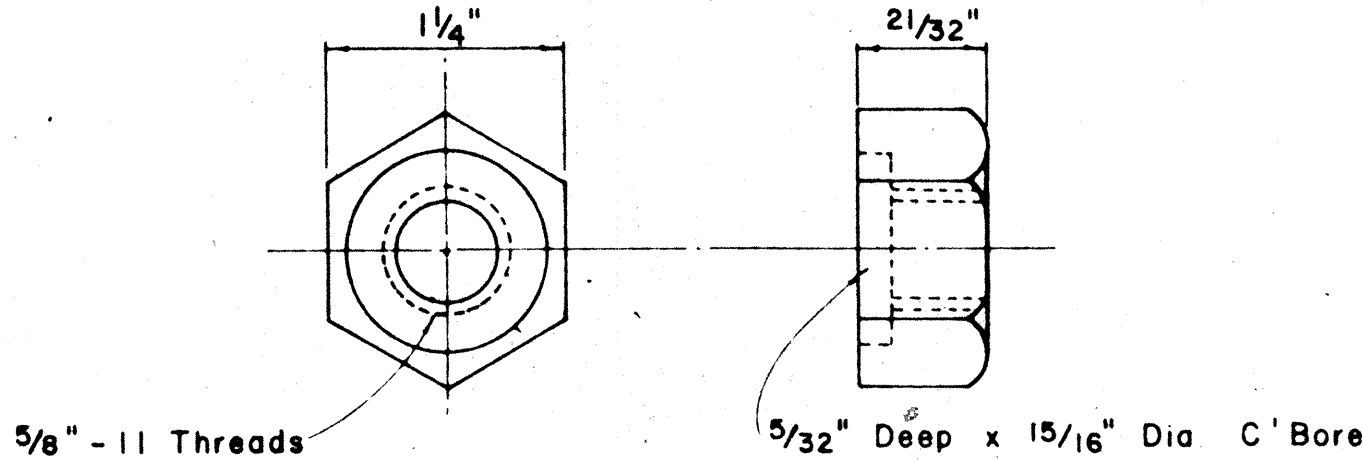
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	C-360-01-63	1966	5	18

BOLT DIMENSIONS		
TYPE BOLT	D	L
Splice Bolt	5/16"	1 1/4"
Post Bolt for Conc. Post w/ Double Wood Blocks	3/32"	25"
Rail Bolt for Metal Block	3/32"	2"
Post Bolt for Metal Post w/ Metal Block	0"	1 3/4"
Post Bolt for Conc. Post w/ Single Wood Block	3/32"	18"



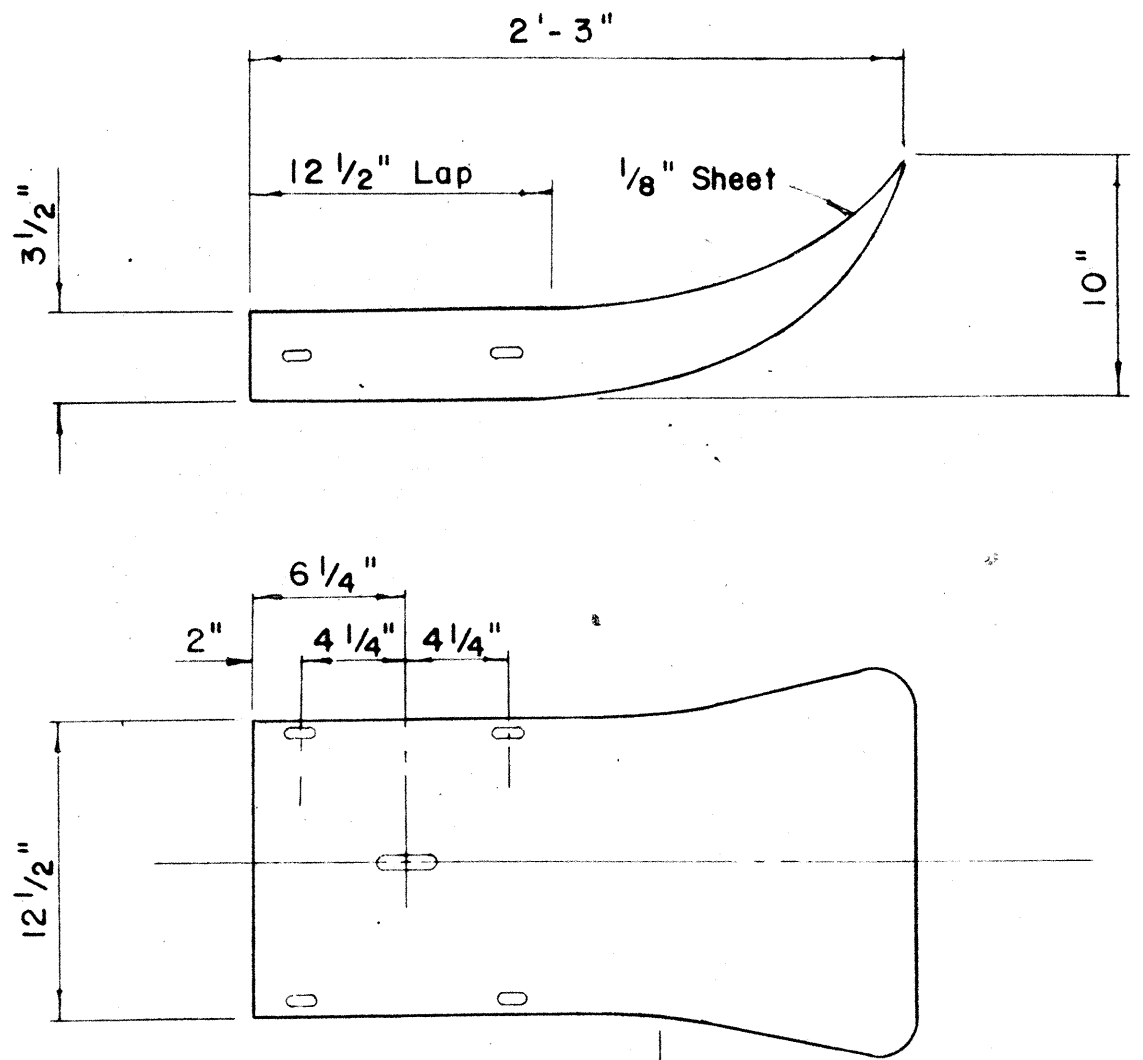
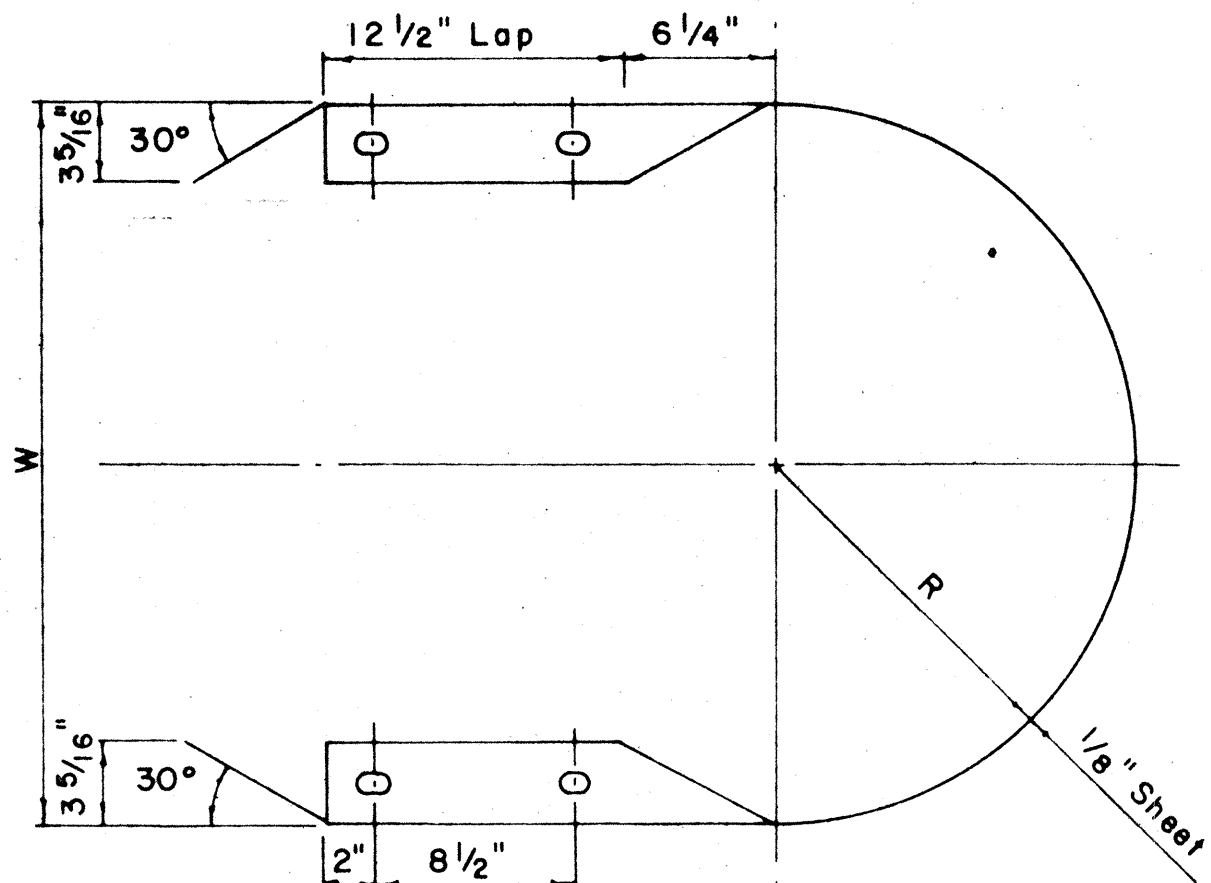
SPLICE RAIL AND POST BOLTS

Scale: Full Size



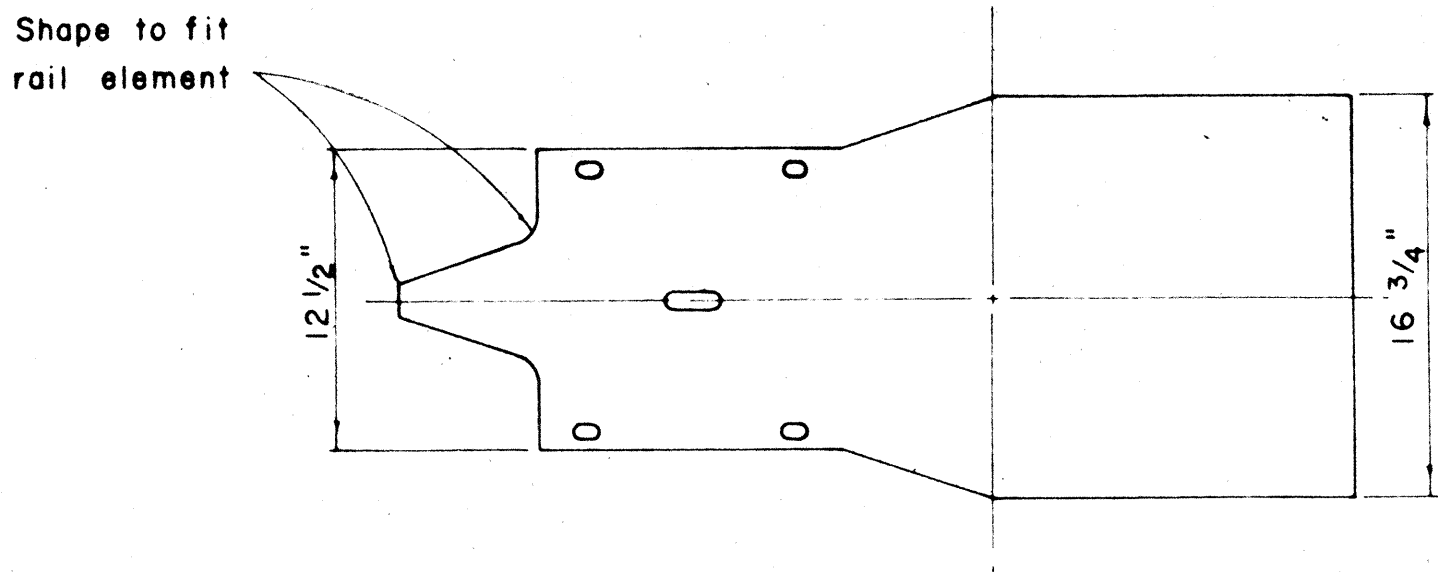
HEXAGON NUT

Scale: Full Size



FLARED END

Scale: 1/2" = 1'-0"

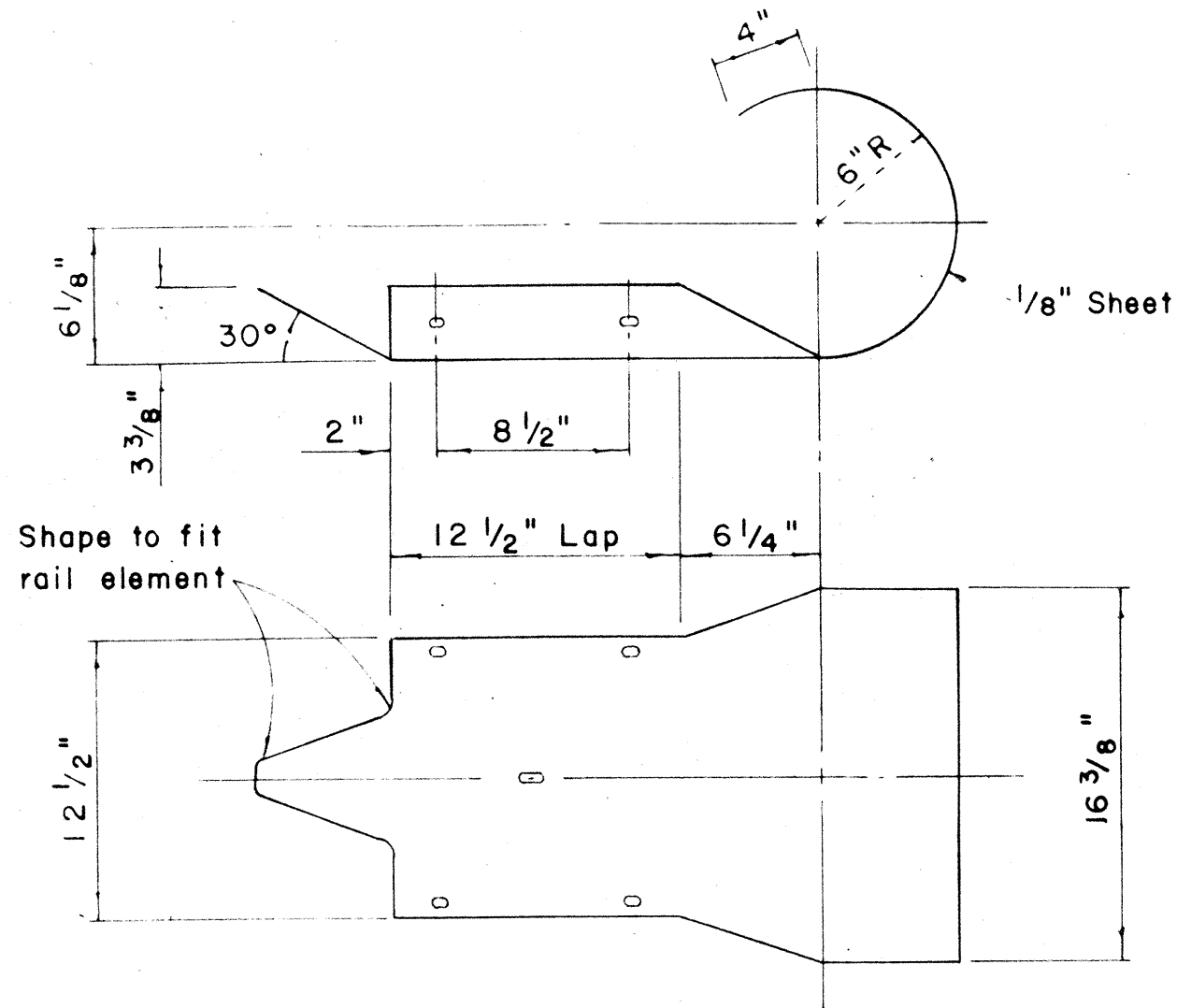


MEDIAN END

Scale: 1/2" = 1'-0"

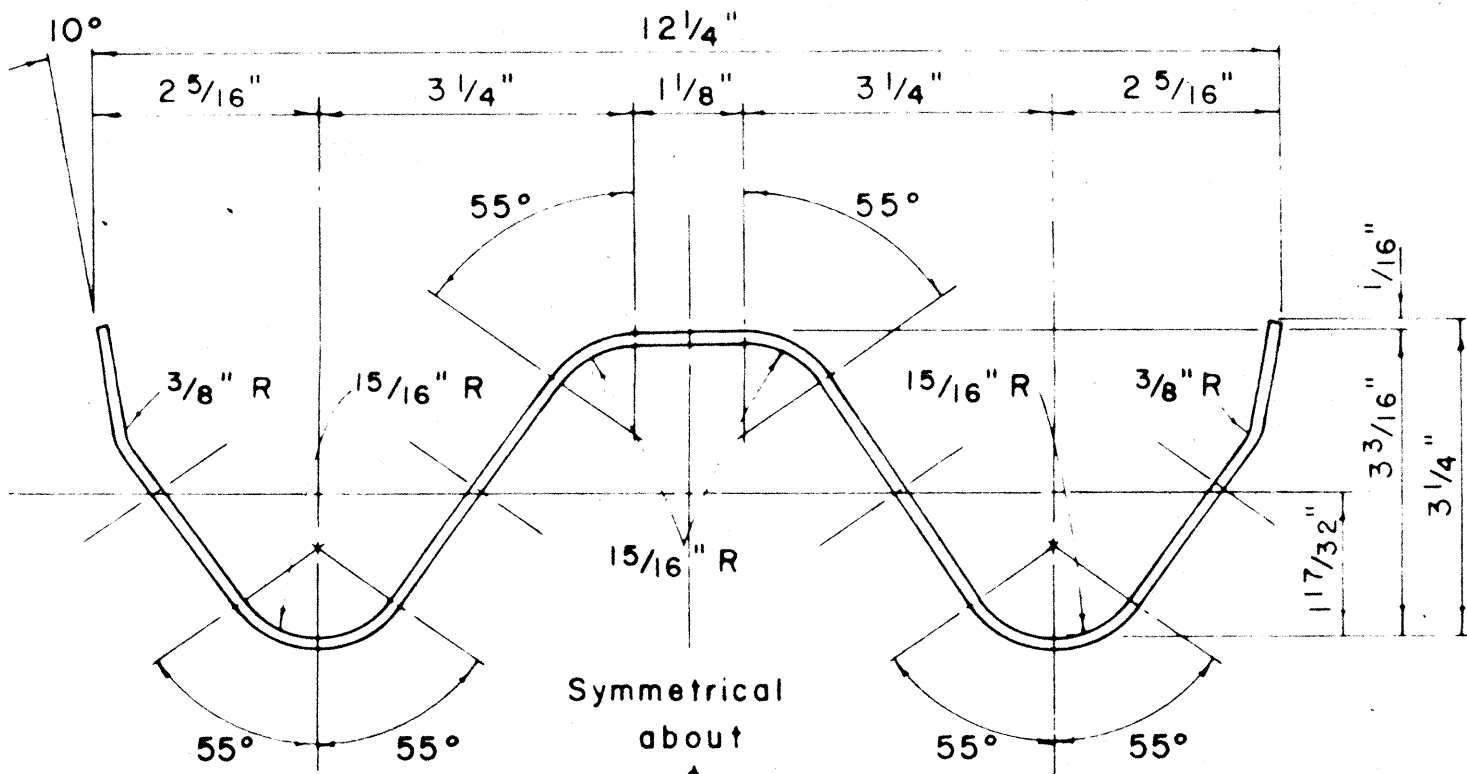
MEDIAN END DIMENSIONS

TYPE OF POST AND BLOCK	W	R
Double Metal Guard Rail on Concrete Post with Wood Blocks	29 3/4"	14 7/8"
Double Metal Guard Rail on Metal Post with Metal Blocks (B J 6)	24 3/4"	12 3/8"



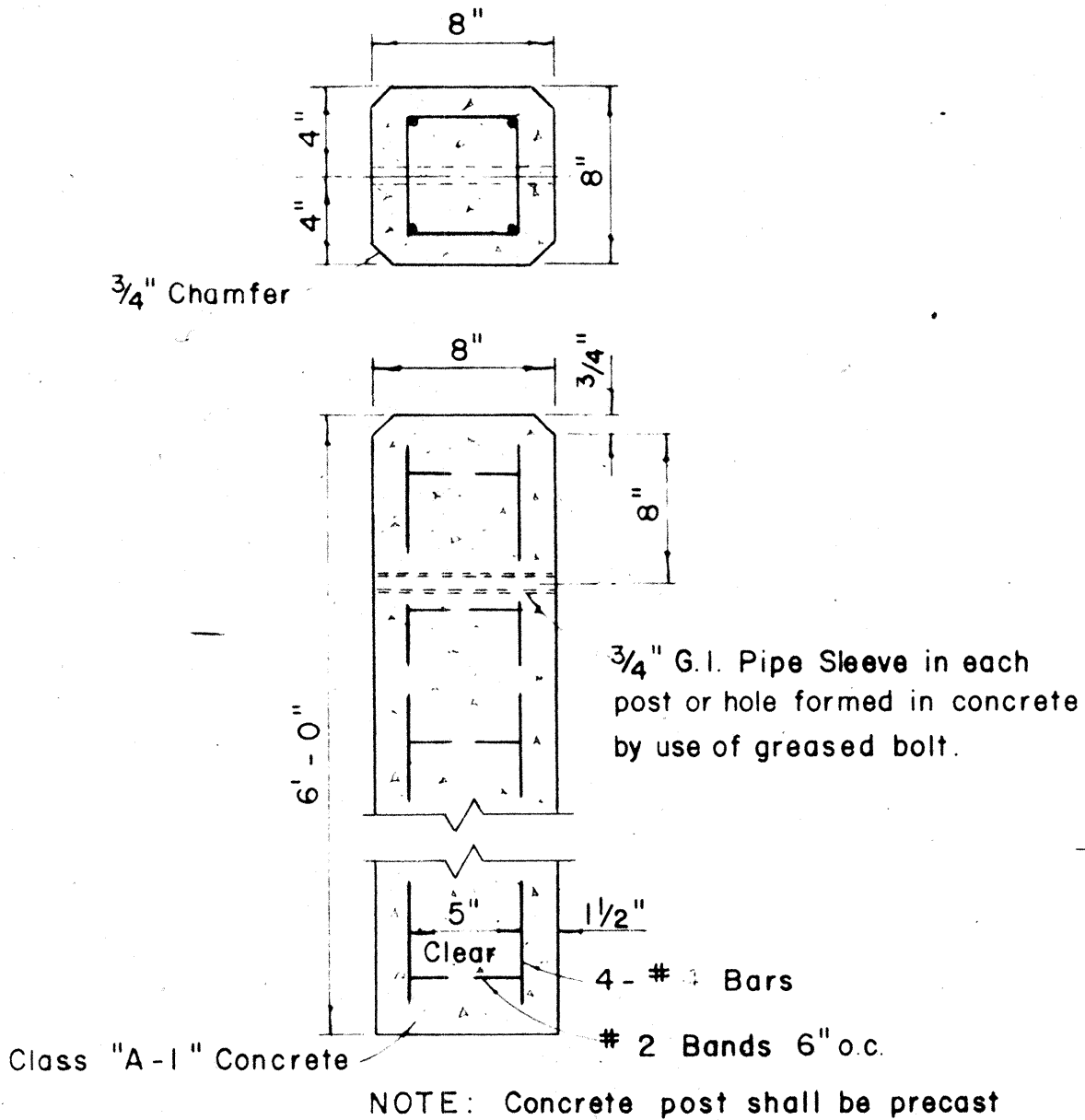
CURVED END

Scale: 1/2" = 1'-0"



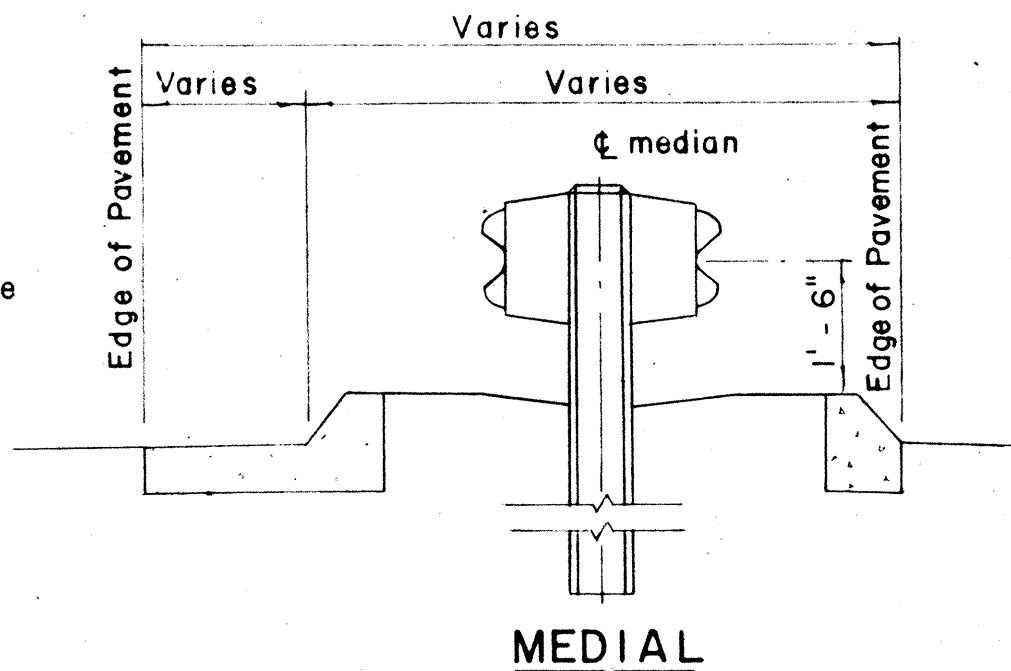
RAIL ELEMENT SECTION

Scale: 6" = 1'-0"

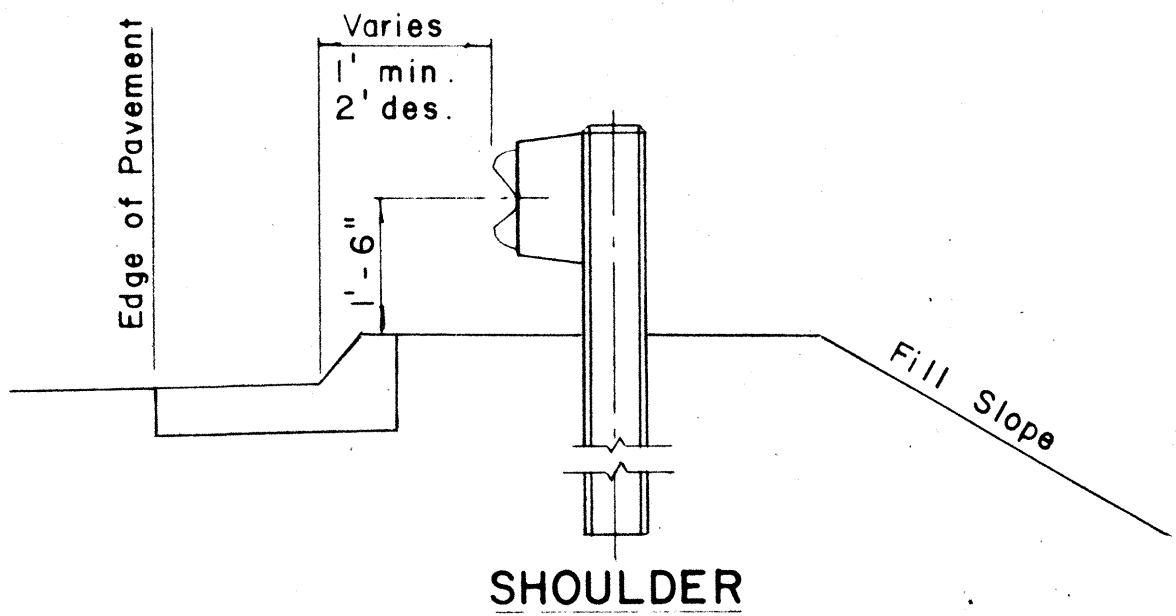


DETAIL OF CONCRETE POST

Scale: 1/2" = 1'-0"



MEDIAL



SHOULDER

TYPICAL GUARD RAIL DETAIL

Scale: 1/2" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARD RAIL

SHEET No. OF SHEETS