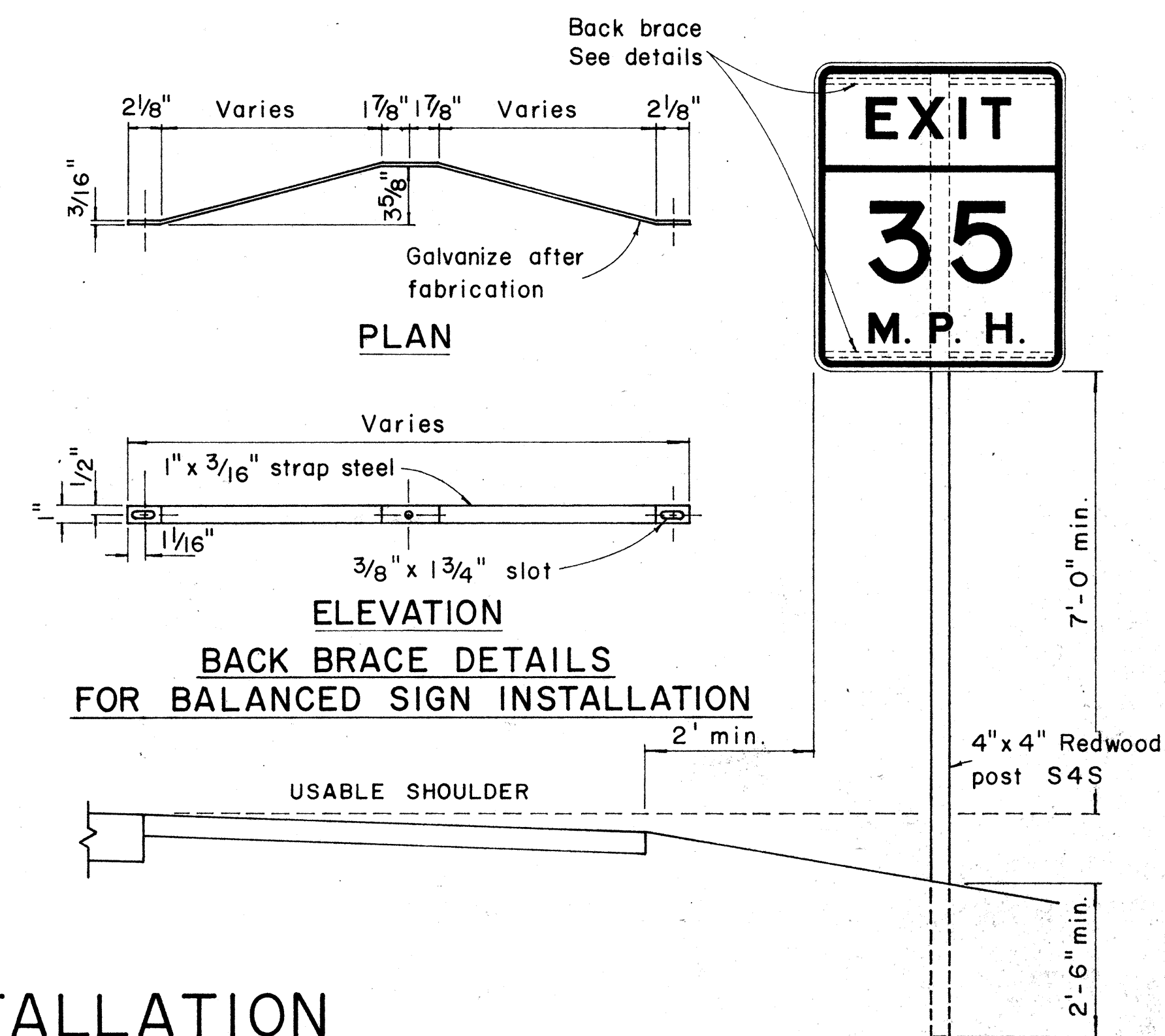
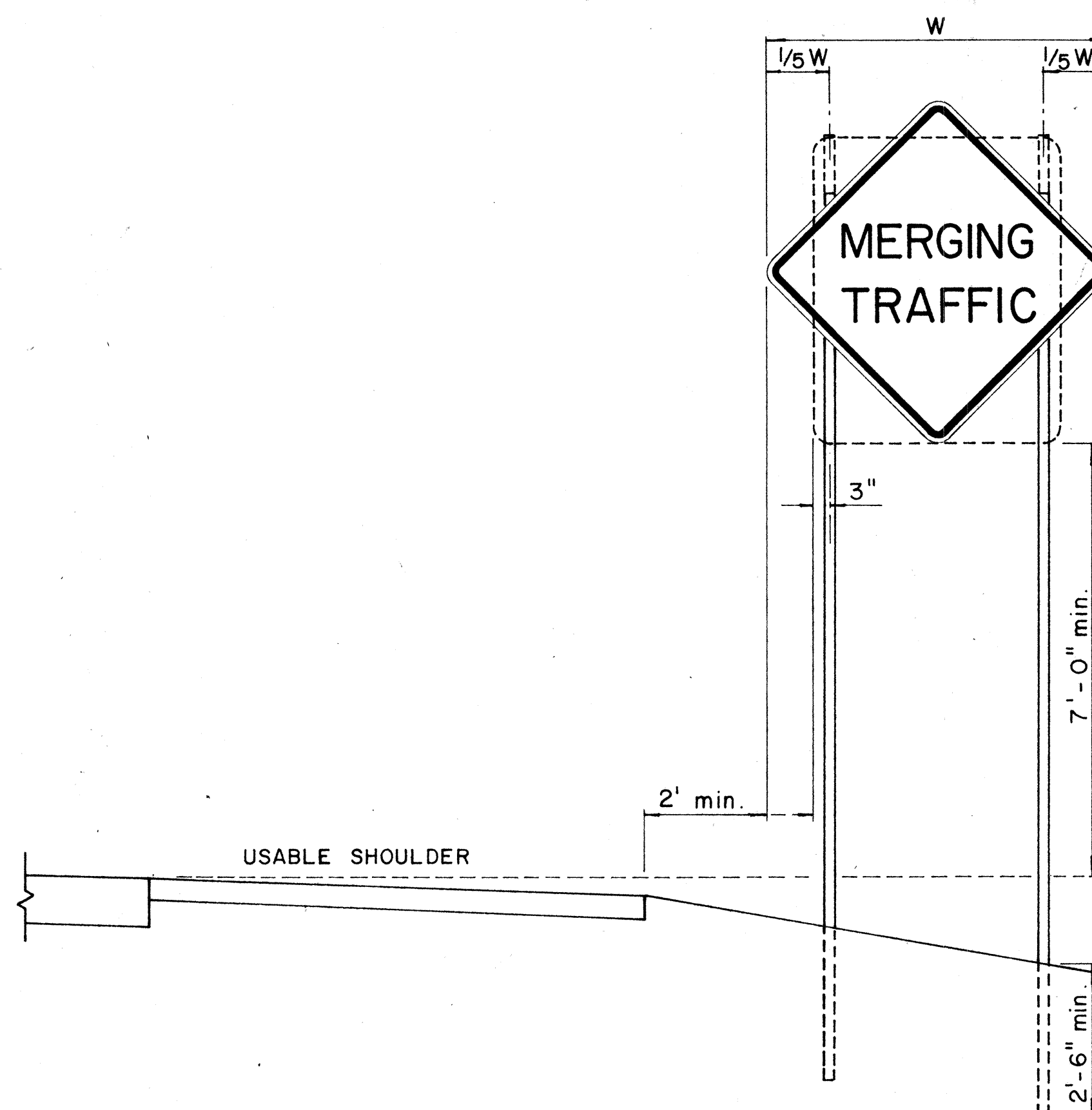
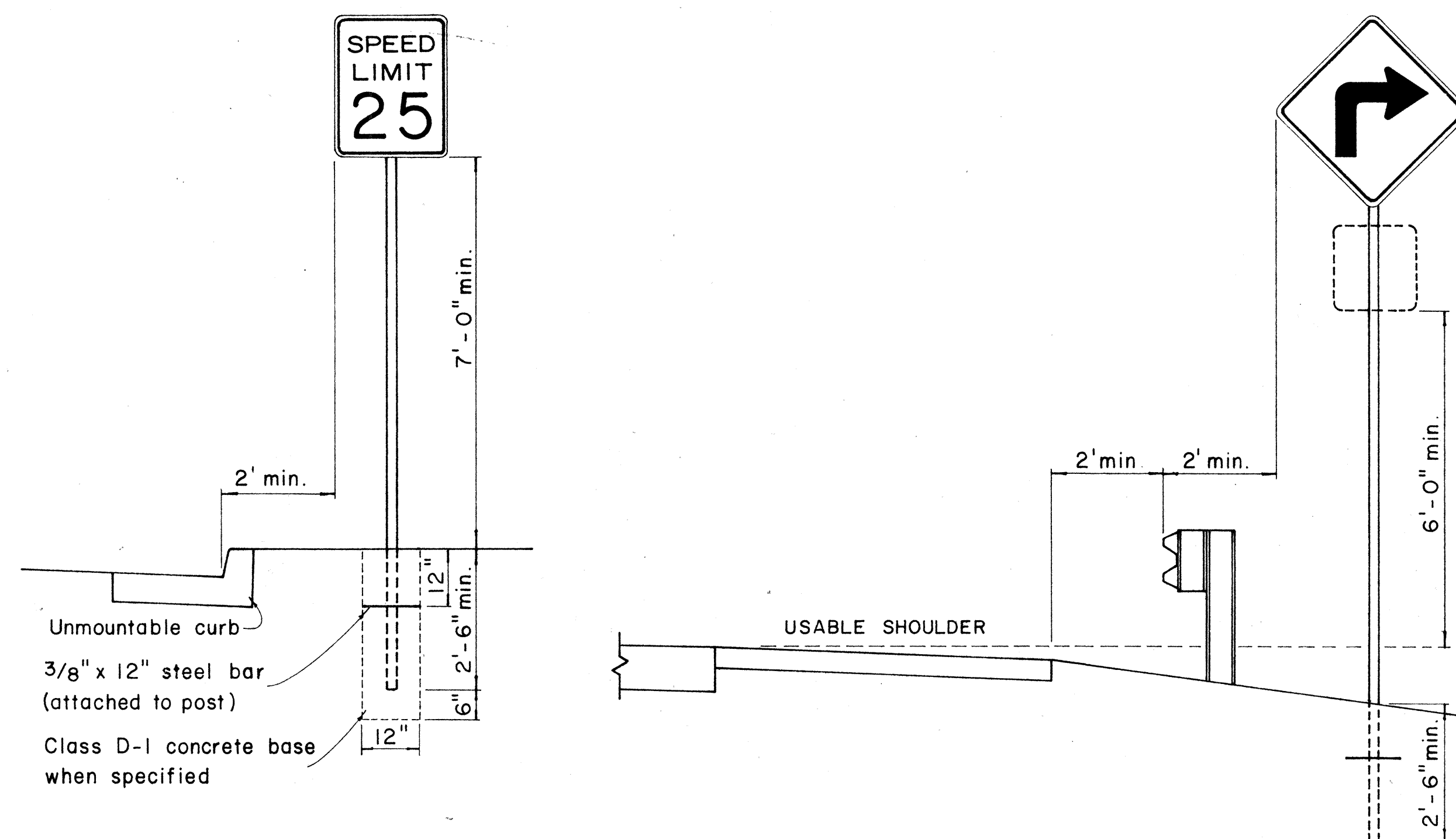
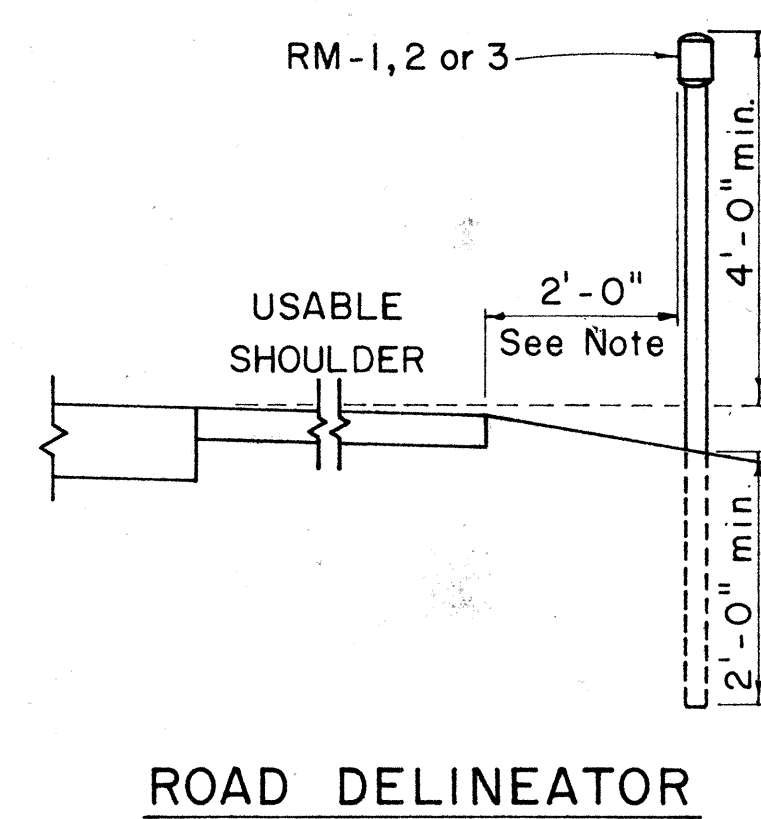


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	U-000-1(15)	1960	4	40

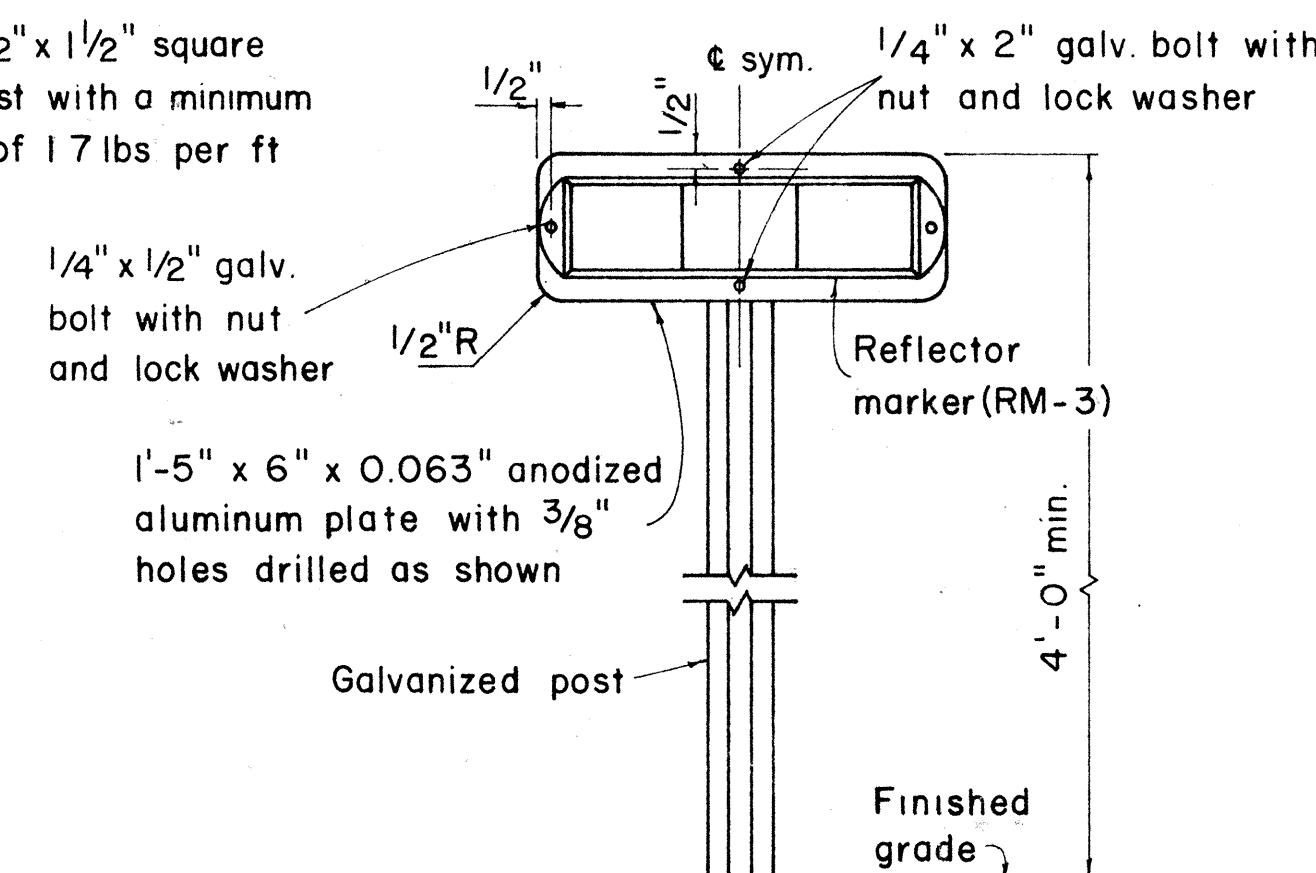
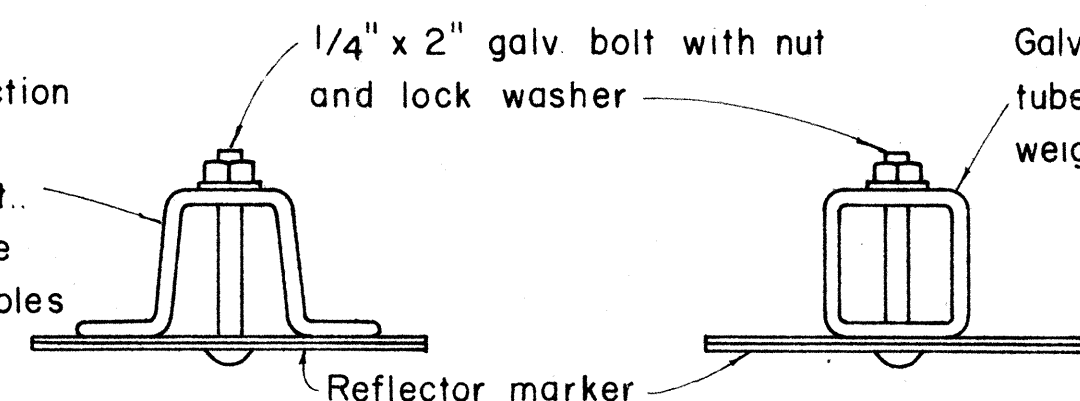


HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATION

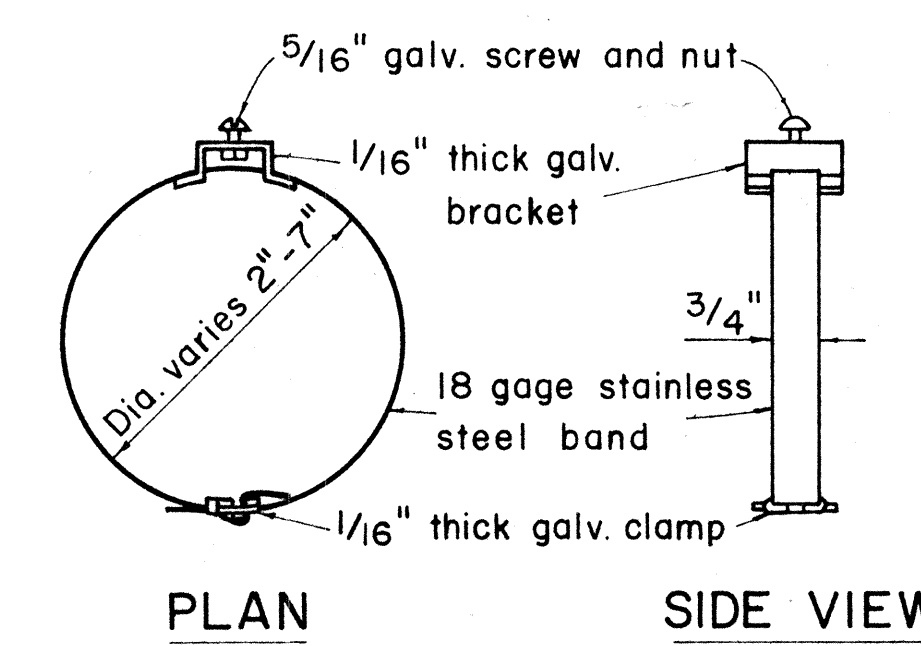


Galv. flanged channel
1/8" x 3/16" rolled section
post with a minimum
weight of 2 lbs. per ft..
Upper 2 ft. shall have
a single row of 3/8" holes
centered in the web at
1" o.c.

TYPICAL SECTION OF ROAD DELINEATOR



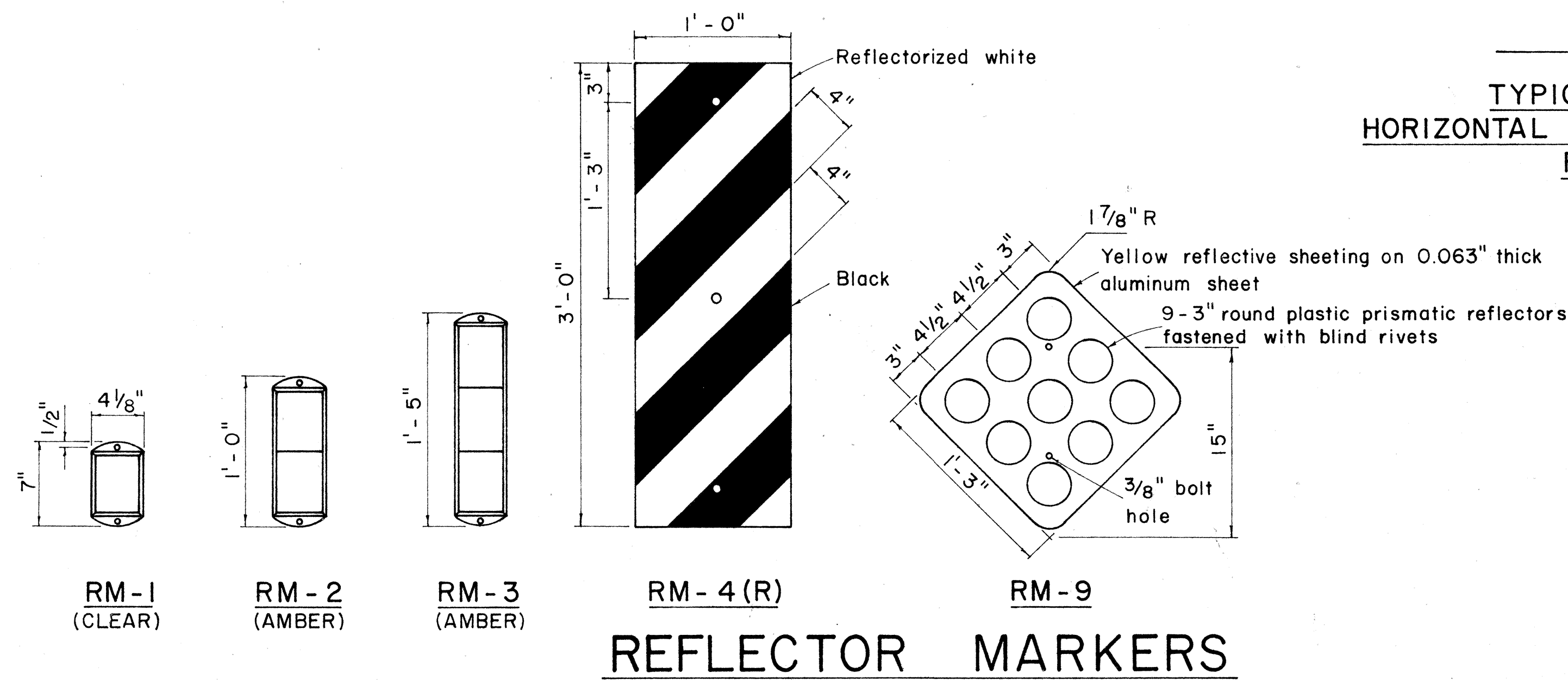
TYPICAL DETAIL
HORIZONTAL REFLECTOR MARKER
RM-3H



TYPICAL BAND BRACKET FOR
MOUNTING TRAFFIC SIGNS

GENERAL NOTES:

- Sign posts shall be 2" galv. standard pipe or 2" x 2" galv. sq. tube post.
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two 2" galv. standard pipe or two 2" x 2" galv. sq. tube post or 4" x 4" redwood post S4S.
- Signs shall be attached to post with 5/16" galv. bolts with nuts and 7/8" x 0.06 stainless steel washers with neoprene rubber gasket.
- Sign posts shall extend 3 1/2" above sign where required for City and County street name signs.
- Reflector markers RM-1, 2, 3 shall be glass sphere reflector markers with 4" x 5" reflector units (as shown) or plastic prismatic reflector markers with 3" diameter reflector units.
- Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
- (R) or (L) indicates right or left and shall be as shown on the plans.



REFLECTOR MARKERS

ORIGINAL	DATE
PLAN	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

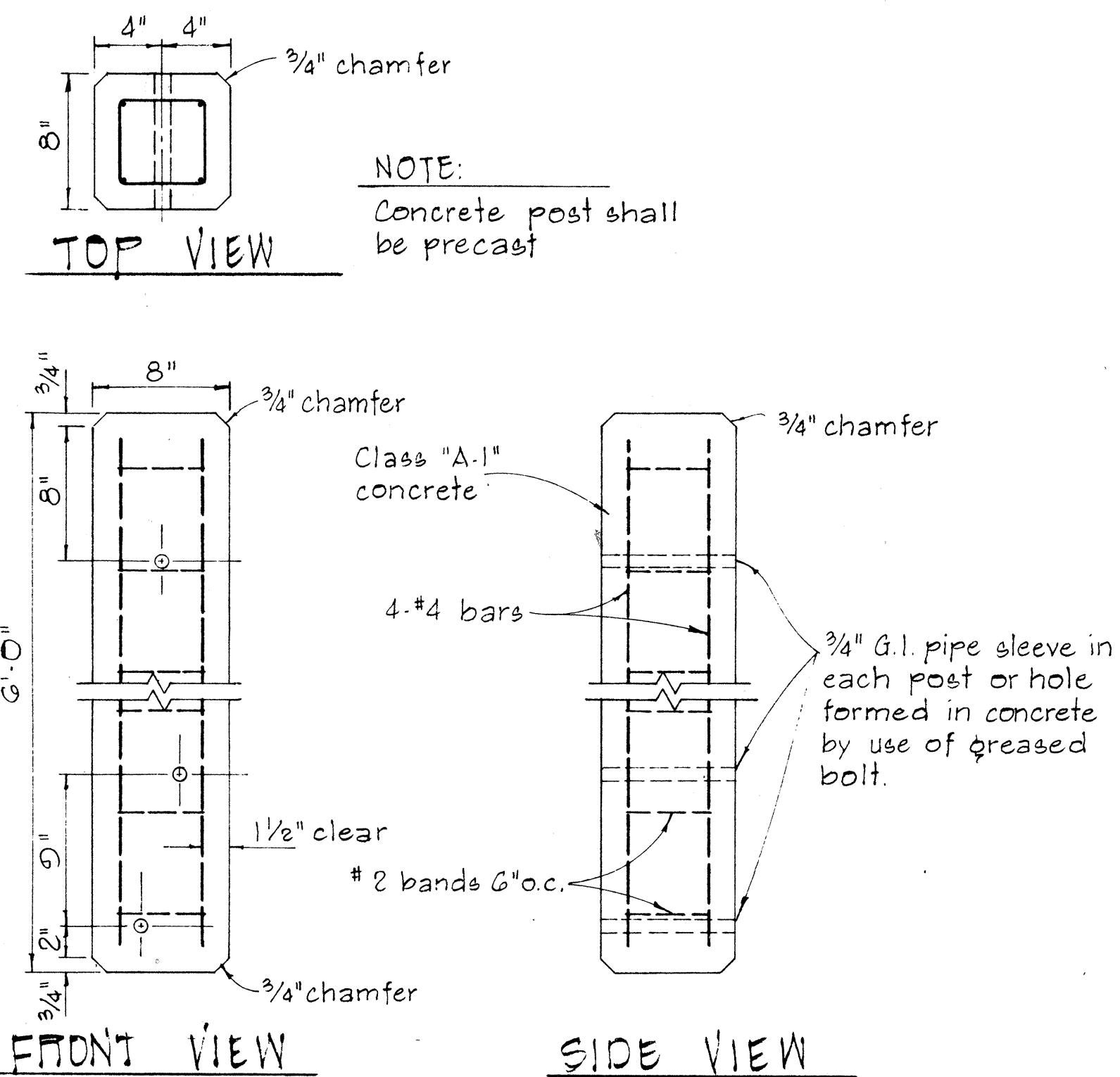
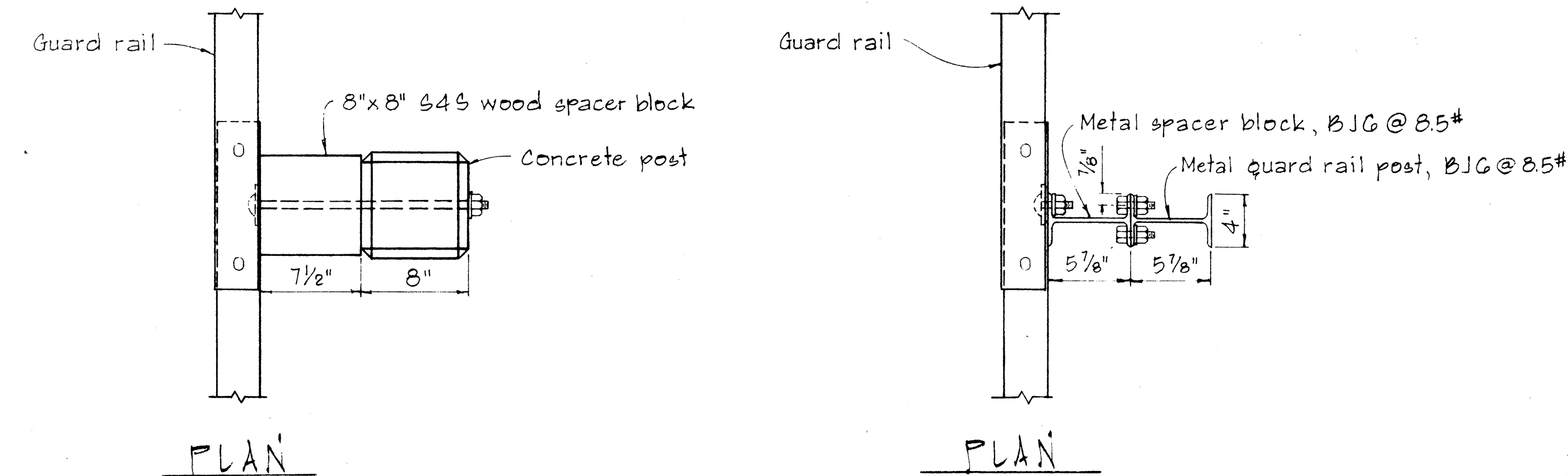
STANDARD DETAILS
MISCELLANEOUS SIGN DETAILS

Not to scale
March, 1968

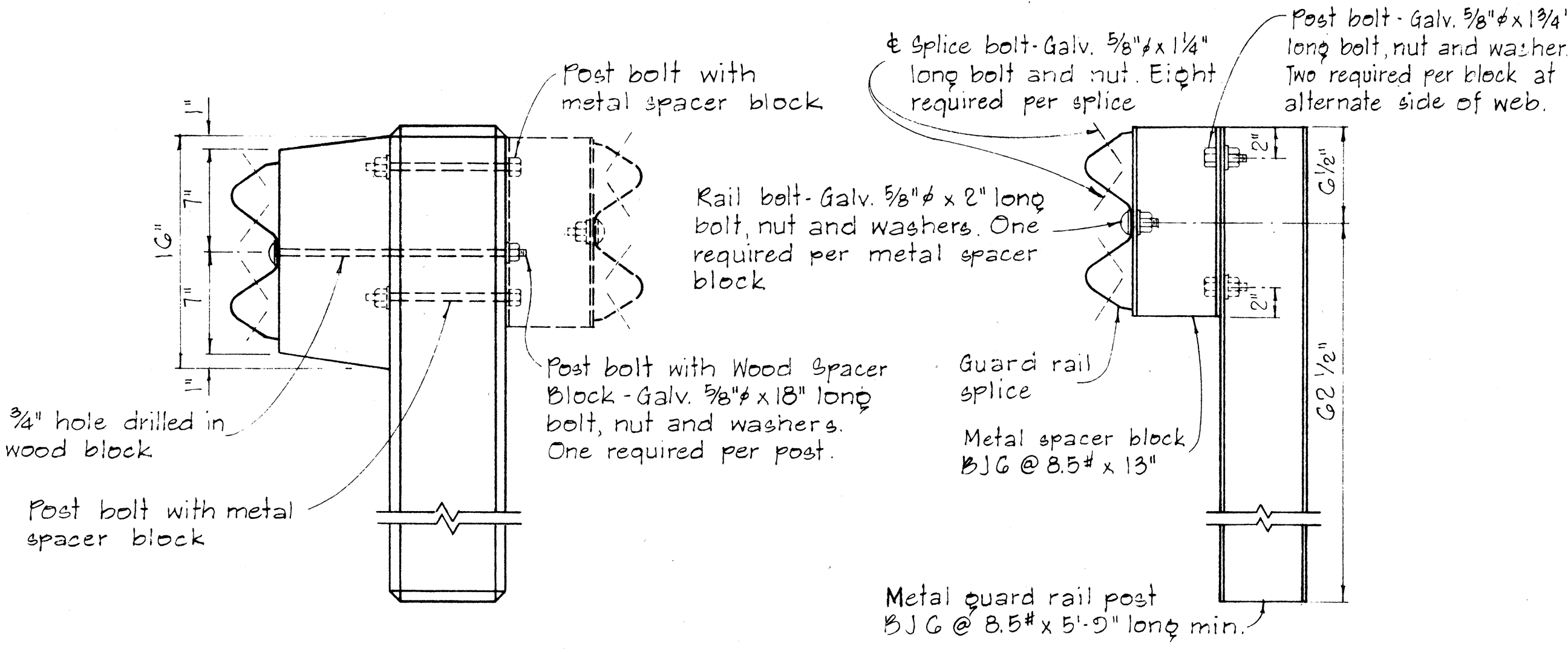
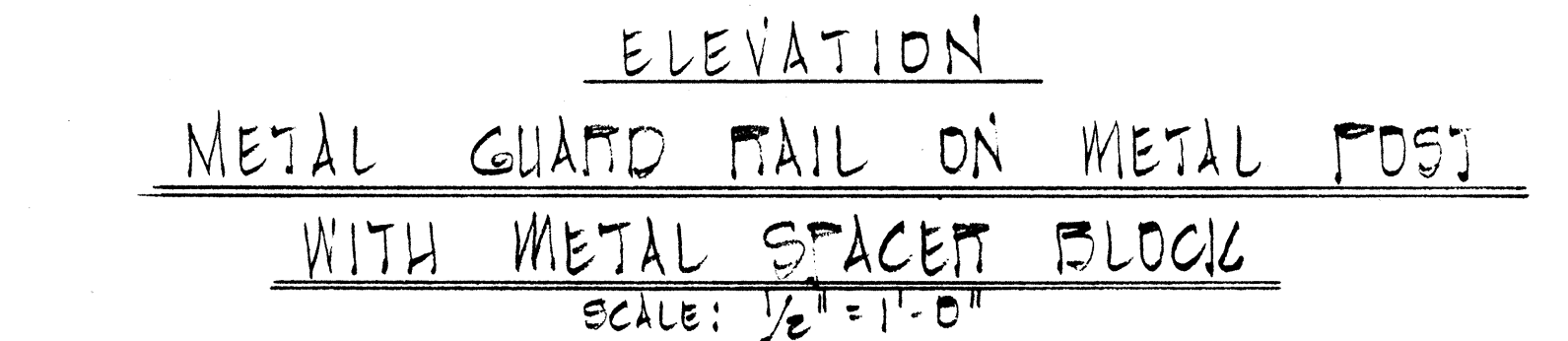
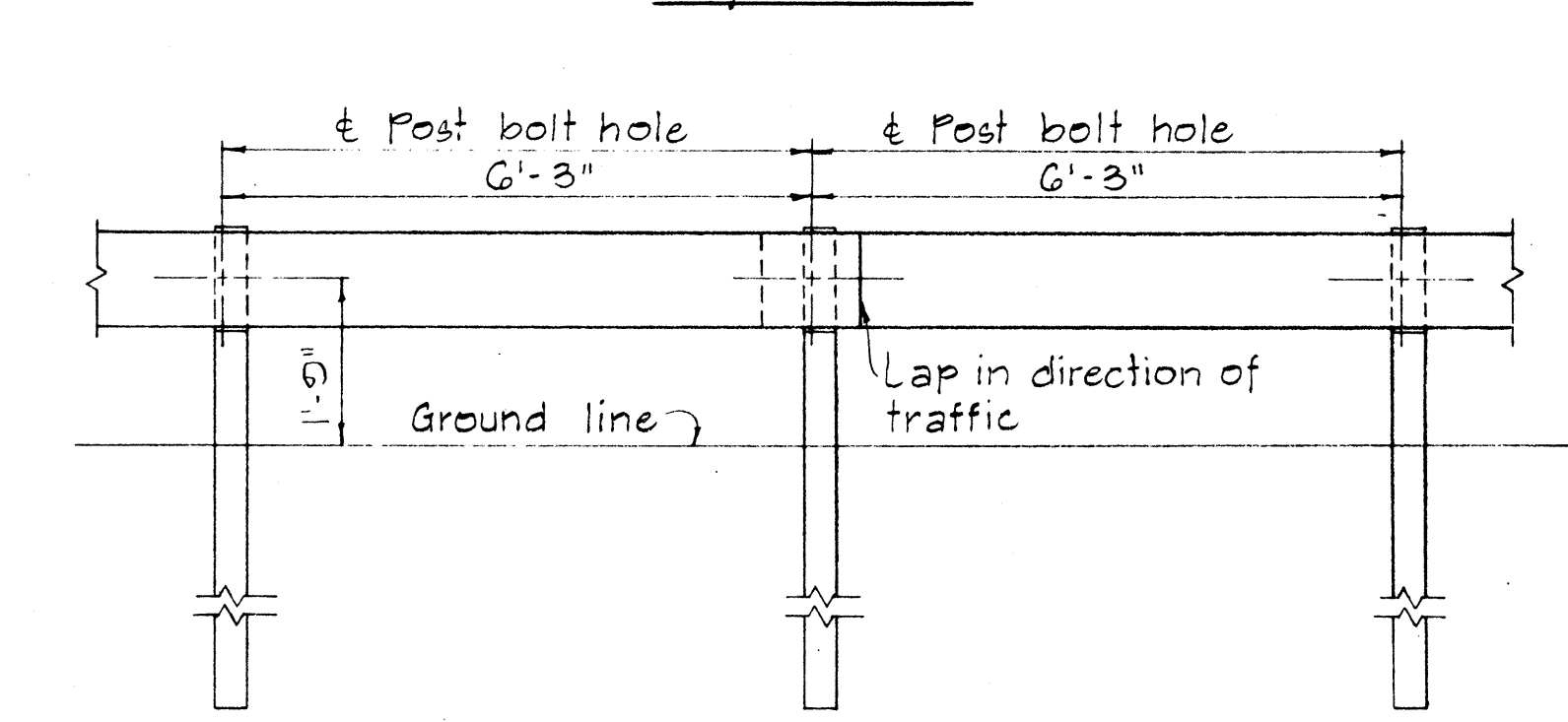
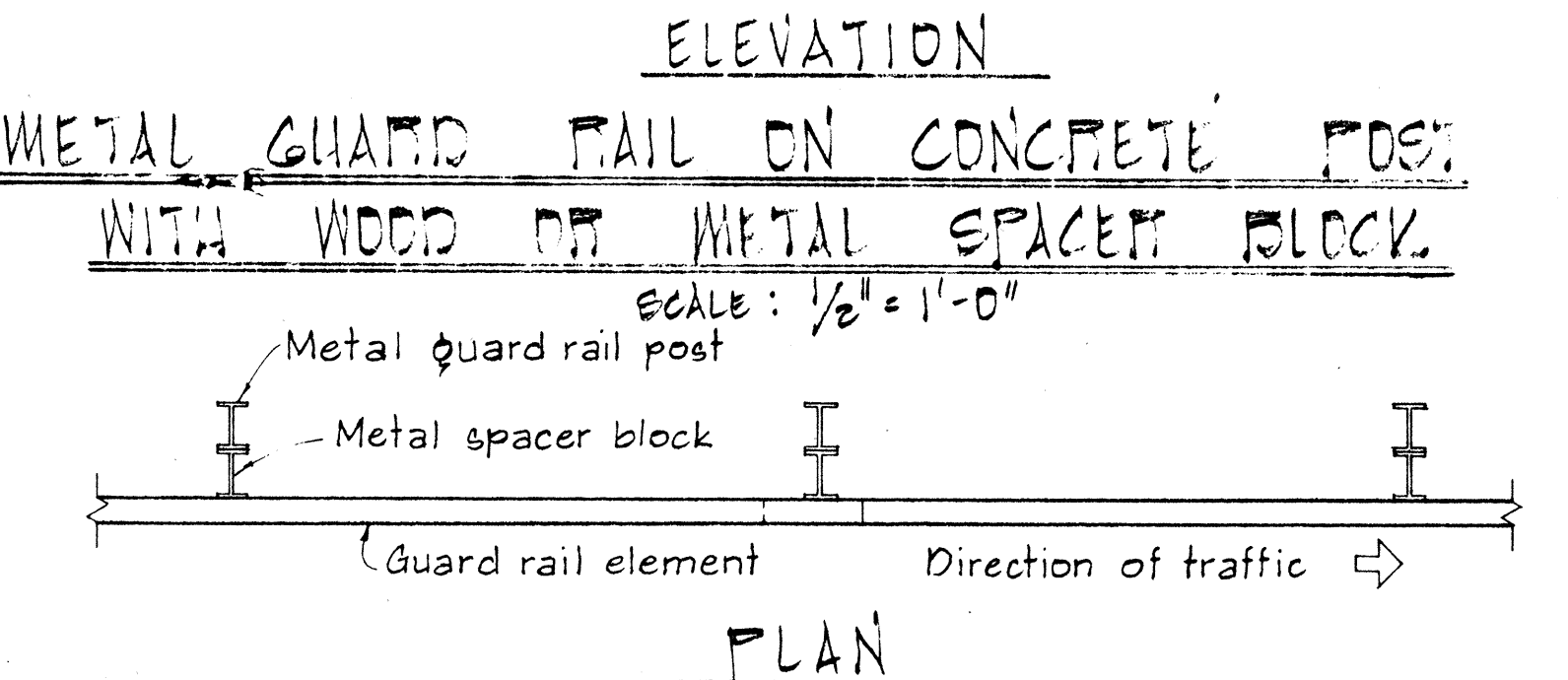
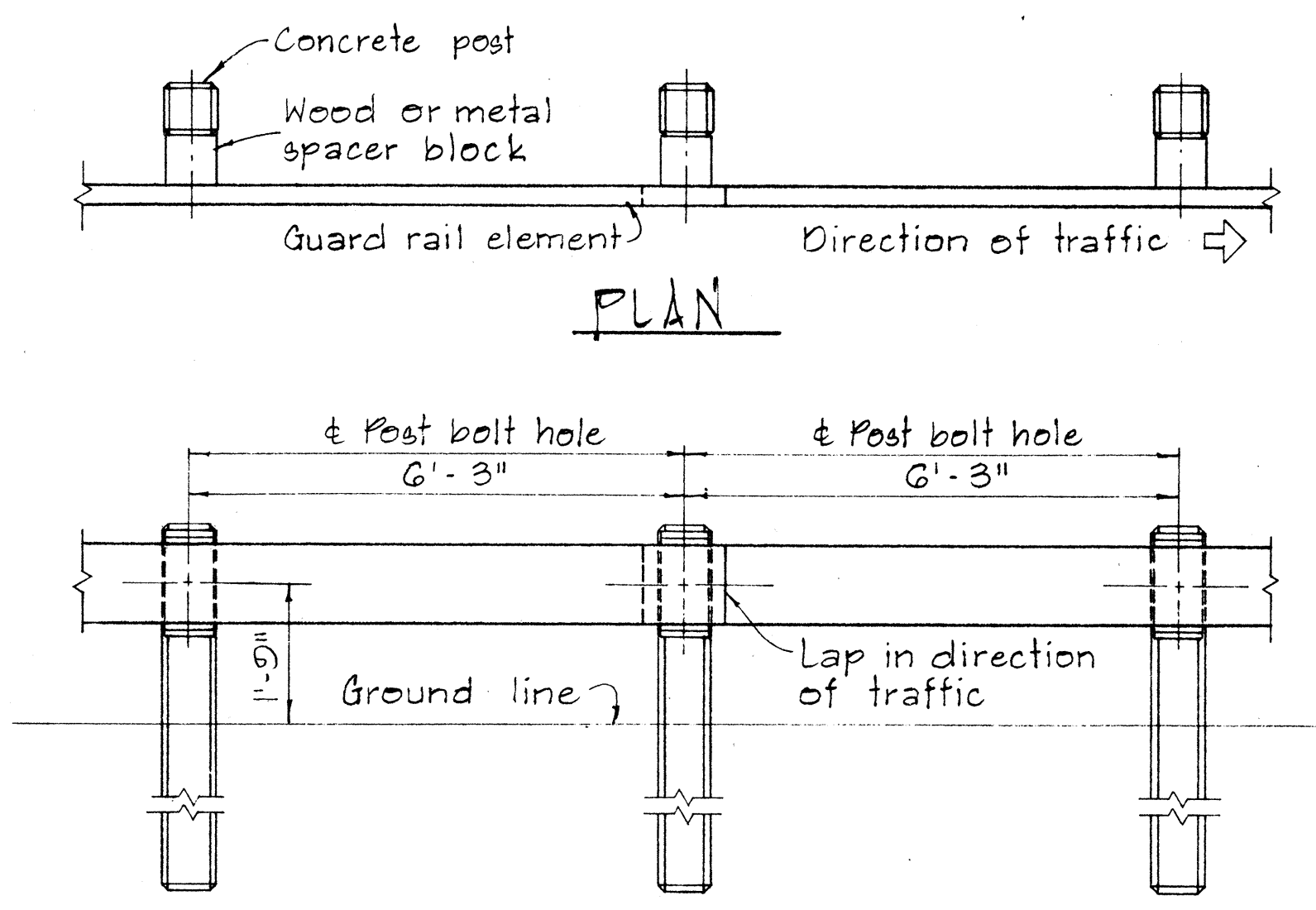
SHEET NO. 2 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	U-090-1(15)	1968	6	40

REVISED: 12-11-68
REVISED: 2-26-69

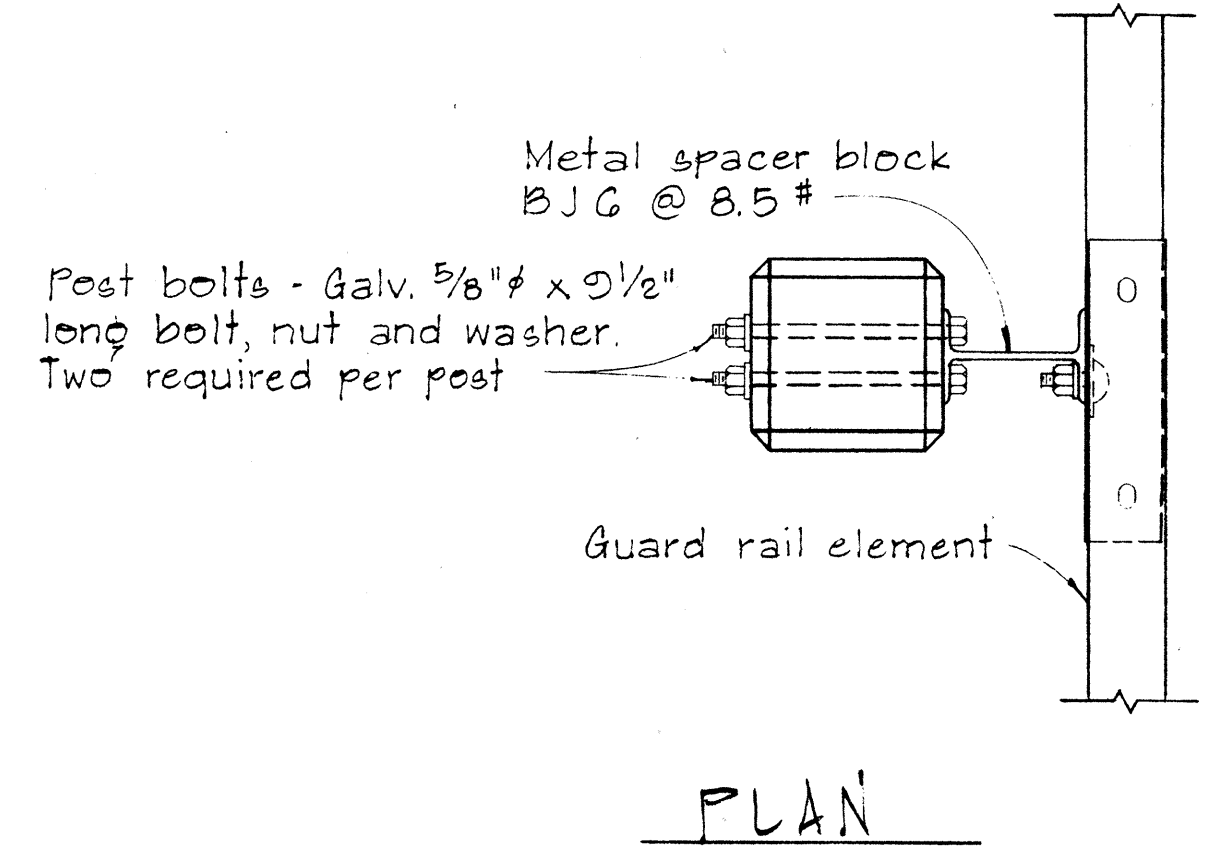


NOTE:
Concrete post shall be precast

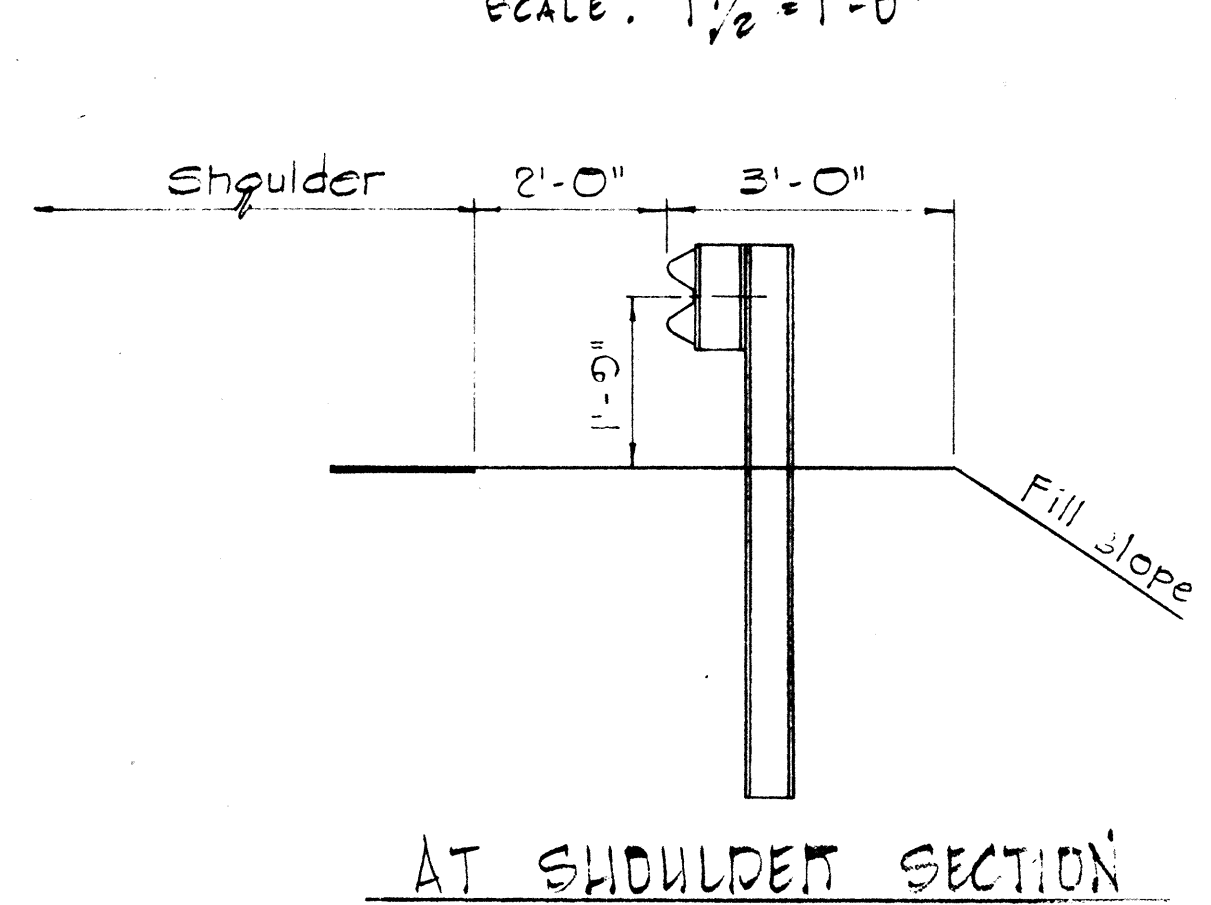


SINGLE METAL GUARD RAIL ON METAL POST
WITH METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"

DETAIL OF CONCRETE POST
SCALE: 1 1/2" = 1'-0"



SINGLE METAL GUARD RAIL ON PRECAST
CONCRETE POST WITH WOOD OR METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"



TYPICAL METAL GUARD RAIL DETAIL
SCALE: 1/2" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARD RAIL

SCALE: AS SHOWN
NOV. 1968

SHEET No. 4 OF 8 SHEETS
DT 500

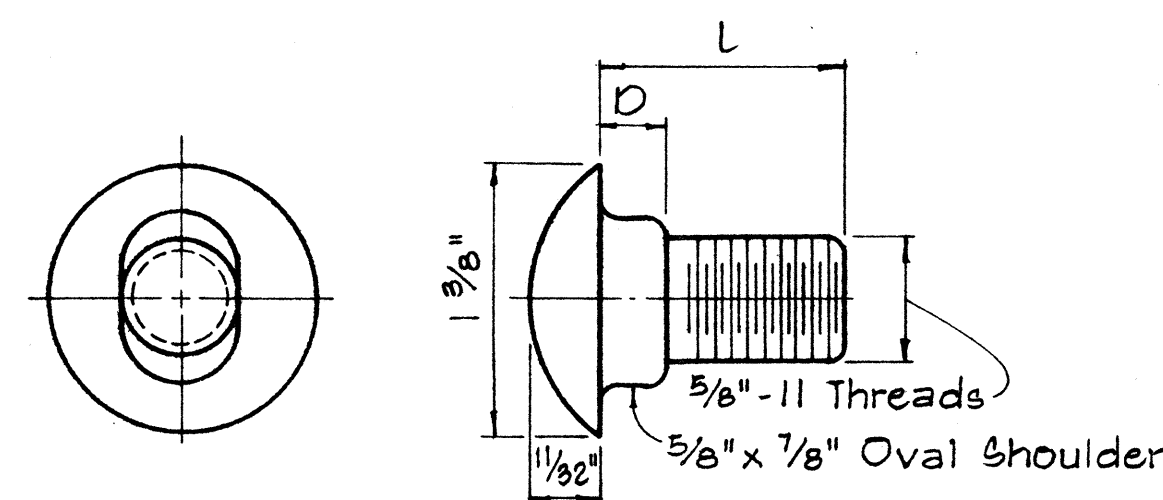
DATE	.....
SURVEY PLOTTED BY	.....
DRAWN BY	.....
REVIEWED BY	.....
NOTED BY	.....
CHECKED BY	.....
NO.	.....

BOLT DIMENSIONS		
TYPE A BOLT		
Splice Bolt	D	L
Post Bolt for Conc. Post w/ Double Wood Blocks	5/16"	1 1/4"
Post Bolt for Conc. Post w/ Single Wood Block	3/32"	24"
Rail Bolt for Metal Block	3/32"	18"
	3/32"	2"

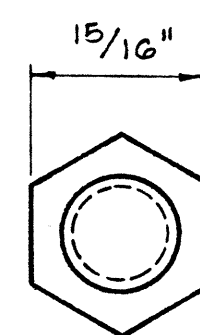
BOLT DIMENSIONS	
TYPE B BOLT	
Post Bolt for Conc. Post w/ Metal Blocks	5/16"
Post Bolt for Metal Post w/ Metal Block	1 3/4"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	U-090-1(15)	1968	7	40

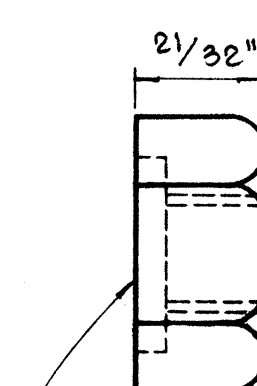
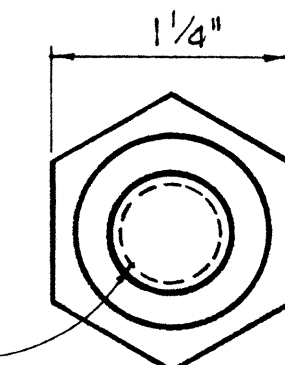
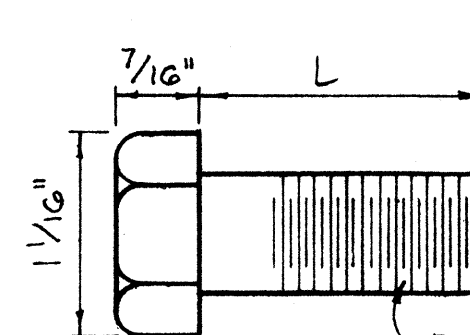
Revised: Dec. 11, 1968



TYPE A BOLT

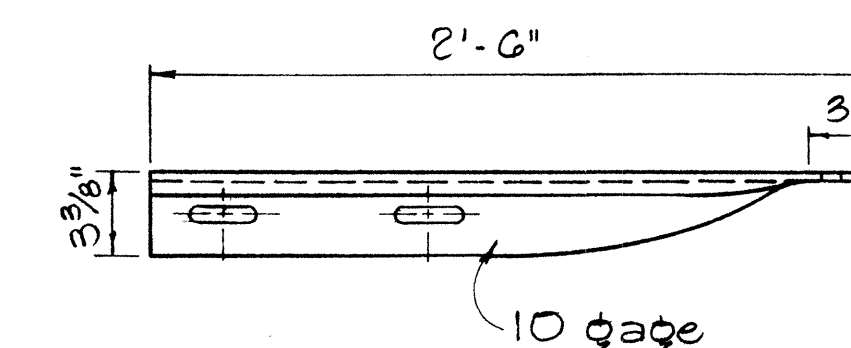


TYPE B BOLT



5/32" Deep x 15/16" Dia. C' Bore for Type A Bolt only. Plain nut for Type B Bolt.

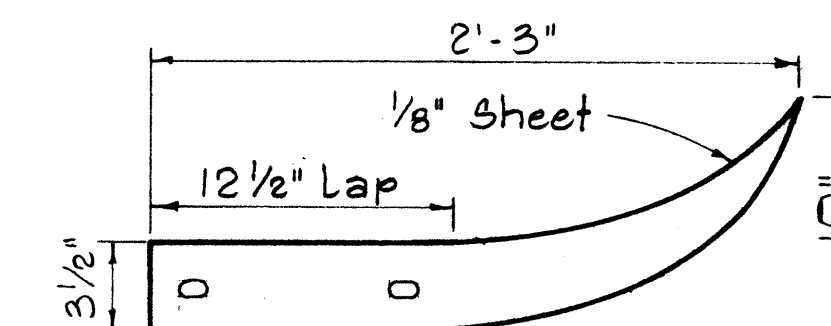
HEXAGON NUT



3/4" x 2 1/2" Post bolt slot As Required) 3" 4 1/4" 4 1/4" 2" 4" 4" 2" 4-1" dia holes for 7/8" dia x 7 1/4" long H.S. Anchor bolts (length under head) H.S. nut and washer.

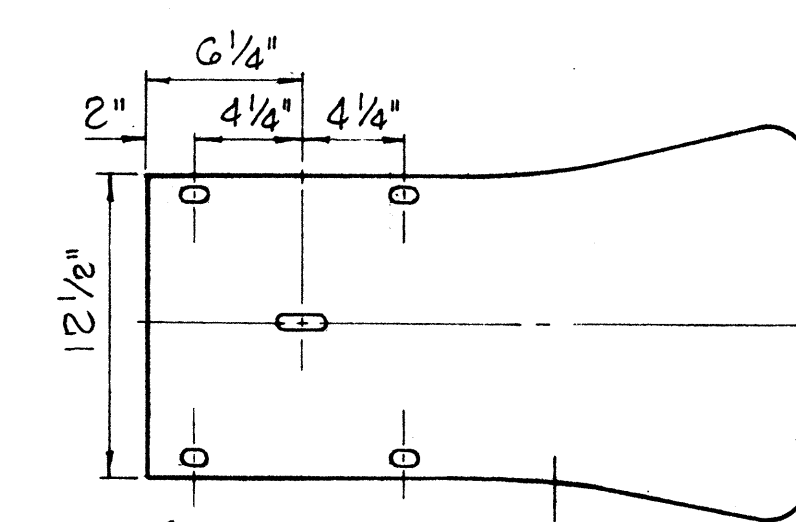
SPECIAL END SHOE

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

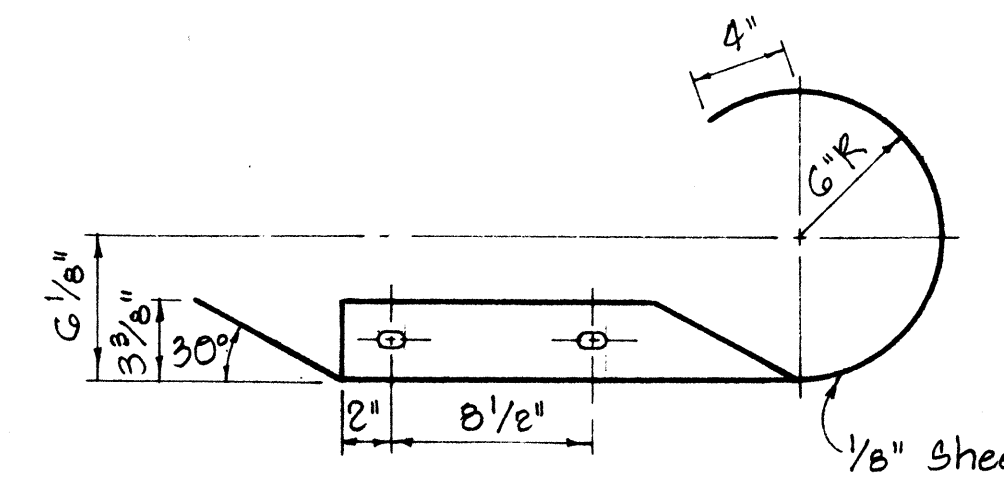


FLARED END

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

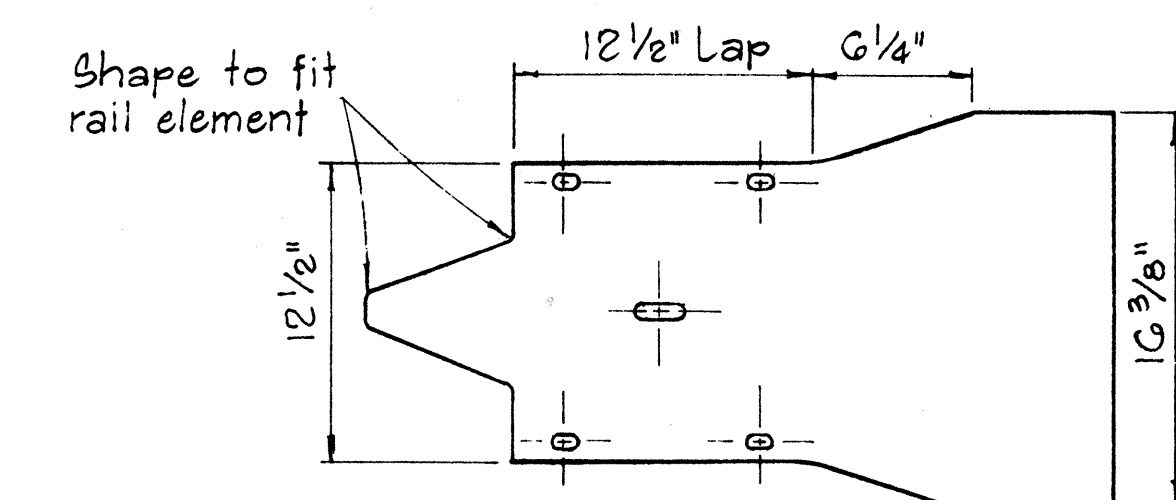


Same as rail element section

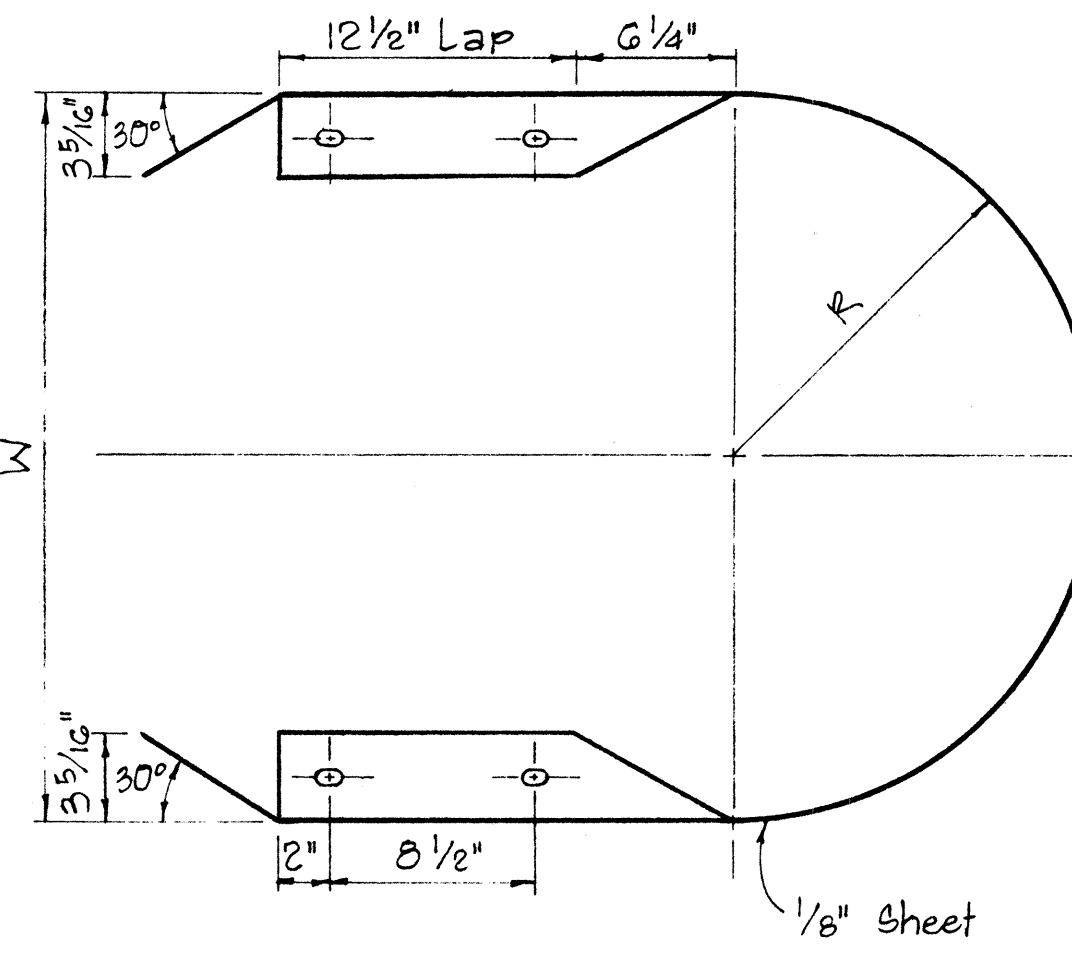


CURVED END

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



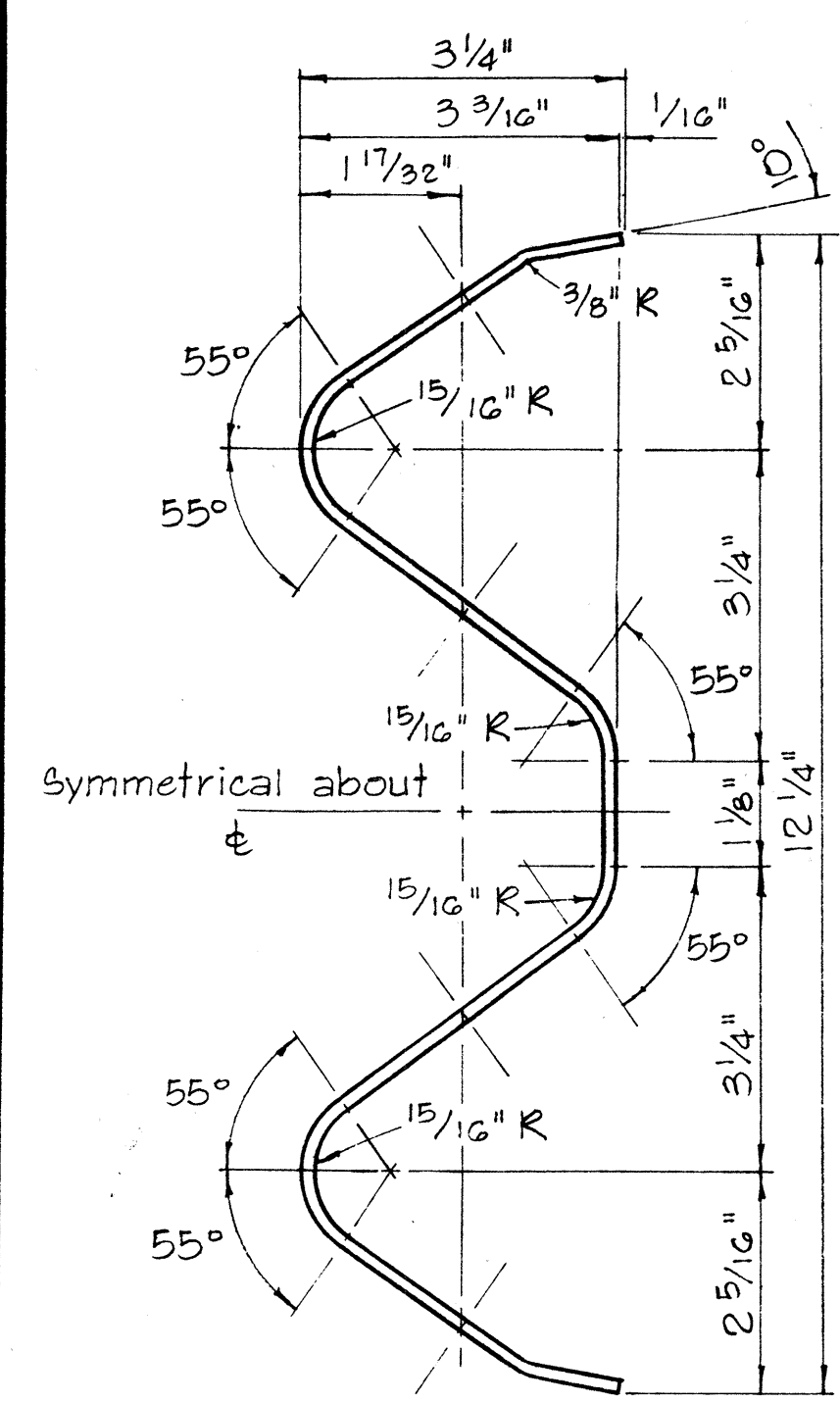
Shape to fit rail element



MEDIAN END

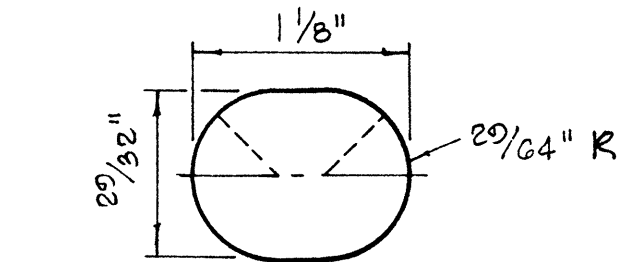
Scale: 1 1/2" = 1'-0"

MEDIAN END DIMENSIONS		
TYPE OF POST AND BLOCK	W	R
Double Metal Guard Rail on Concrete Post with Wood Blocks	29 3/4"	14 1/8"
Double Metal Guard Rail on Concrete Post with Metal Blocks (BJG)	26 1/2"	13 1/4"
Double Metal Guard Rail on Metal Post with Metal Blocks (BJG)	24 3/8"	12 3/16"



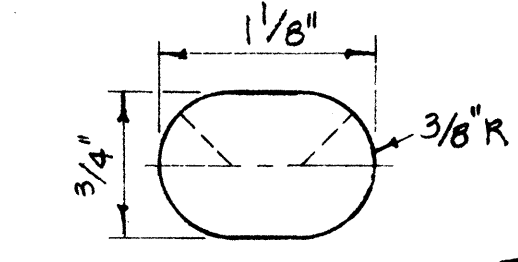
RAIL ELEMENT SECTION

Scale: 6" = 1'-0"

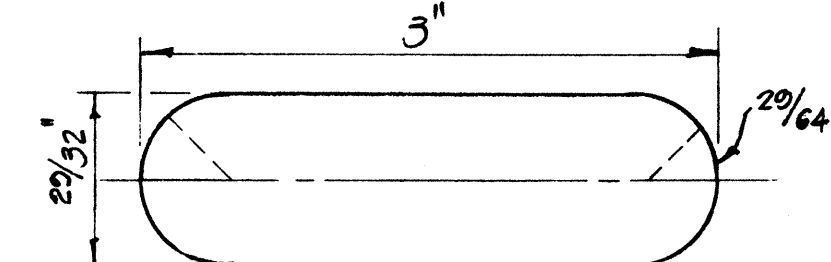


SPICE BOLT SLOT

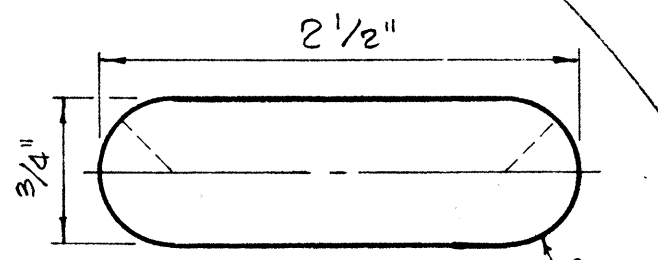
Scale: Full Size



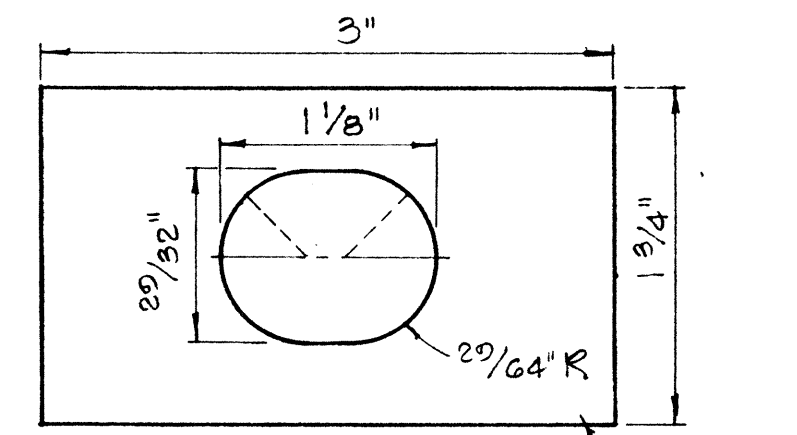
SPICE BOLT SLOT FOR ALL ENDS



SPICE BOLT SLOT FOR SPECIAL END SHOE



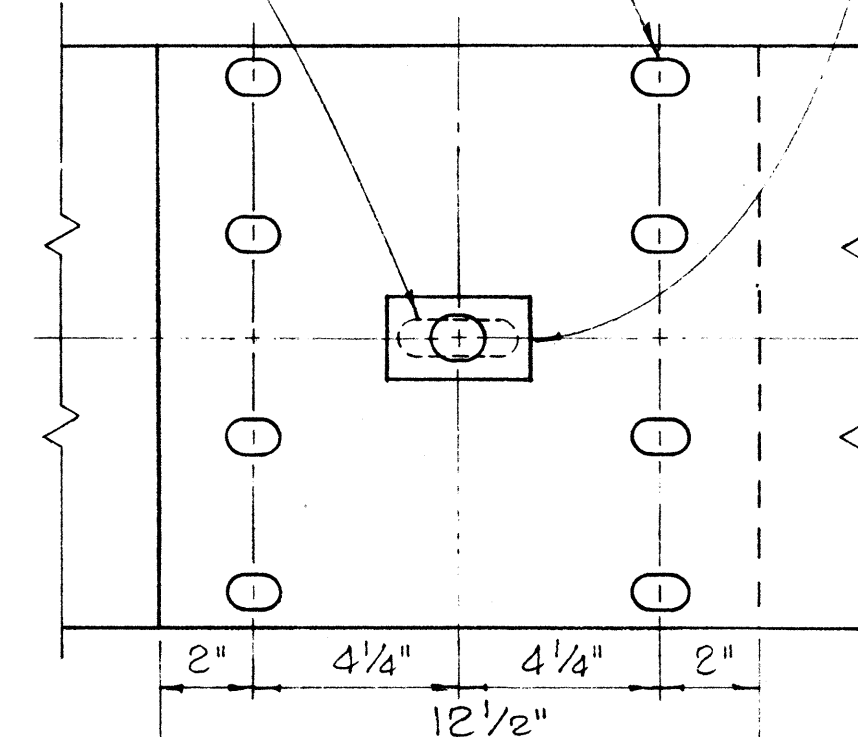
POST BOLT SLOT



RAIL WASHER

NOTES:

1. H.S. Bolts shall conform to the requirements of ASTM A-325.
2. Special End Shoe shall be fabricated from 10 Gage steel conforming to the requirements of AASHTO 180.



RAIL SPLICE

Scale: 3" = 1'-0"

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

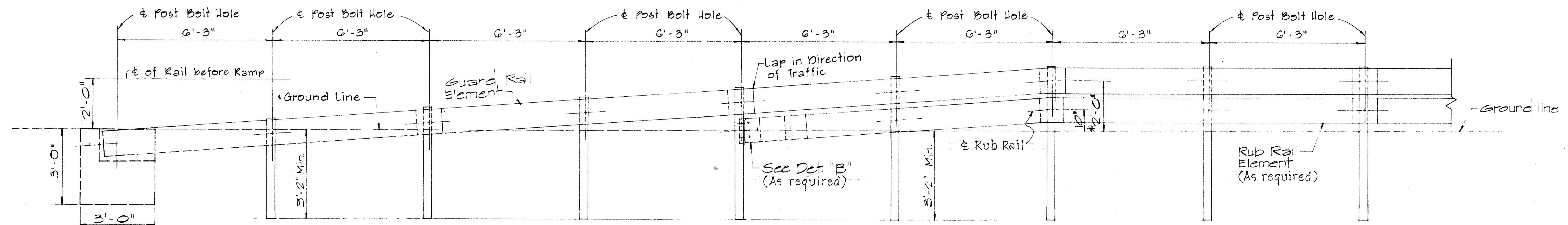
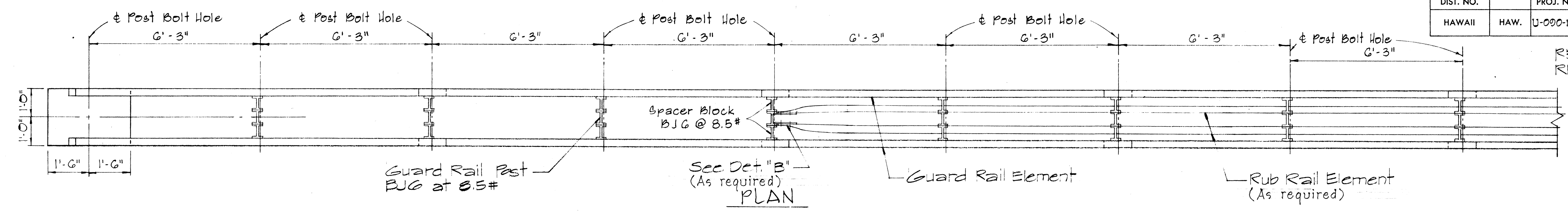
STANDARD DETAILS
METAL GUARD RAIL

Scale: As Noted August, 1968

SHEET No. 5 OF 8 SHEETS DT 501

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	U-090-1(15)	1969	8	40

REVISED: 12-11-68
REVISED: 2-24-69

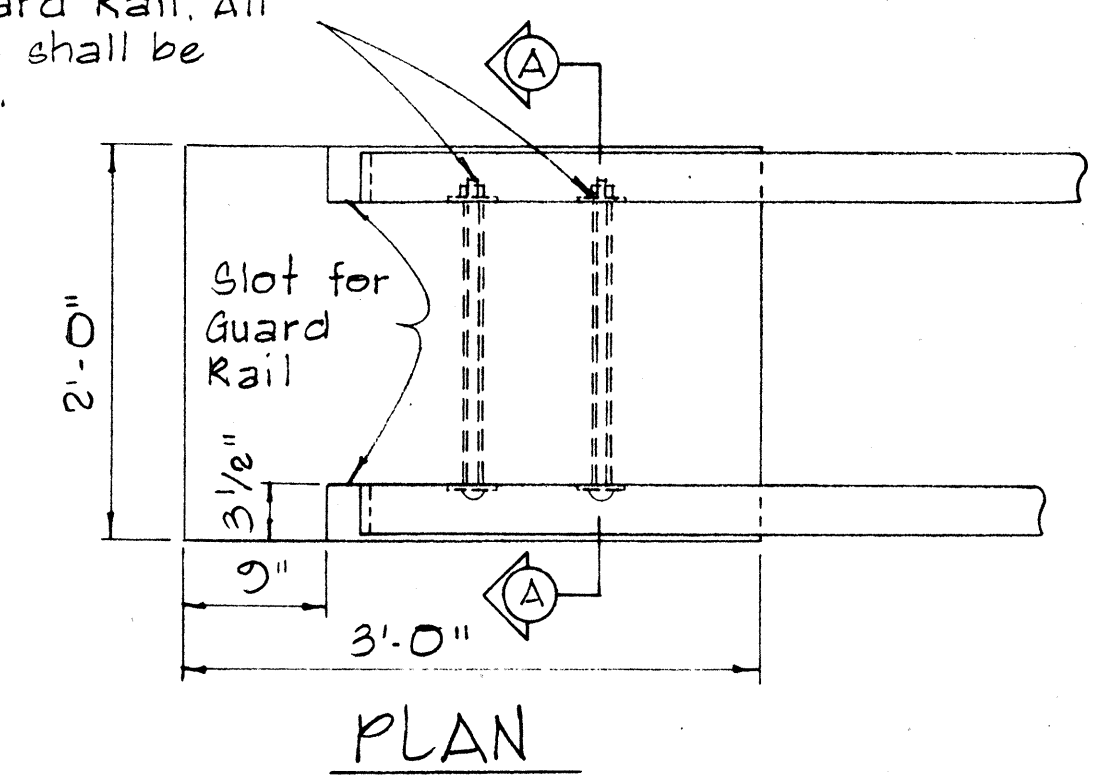


*Notes 1'-9" when installed without Rub Rail.

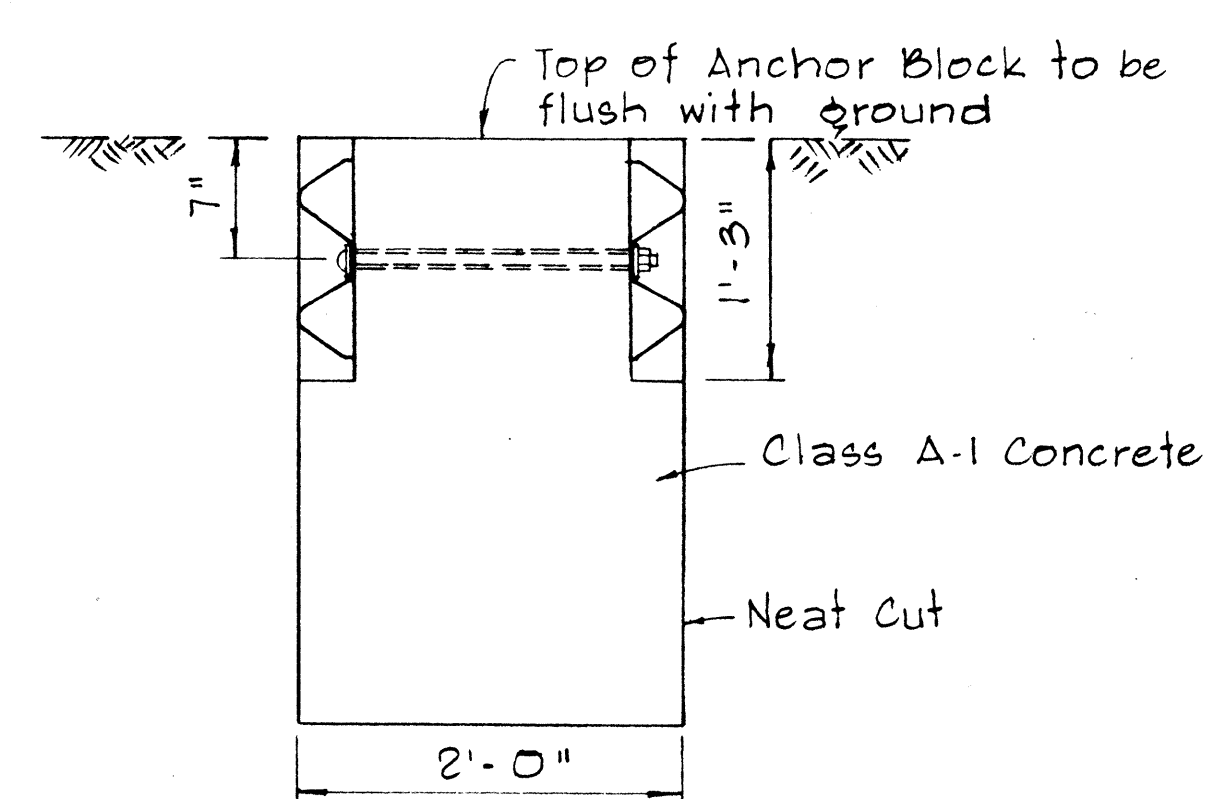
ELEVATION STRAIGHT APPROACH - RAMP END ANCHORAGE (MEDIAN)

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

5/8" Bolts with 3/4" G.I. Pipe Sleeve in each hole. Incidental to Metal Guard Rail. All Metal Pieces shall be Galvanized.

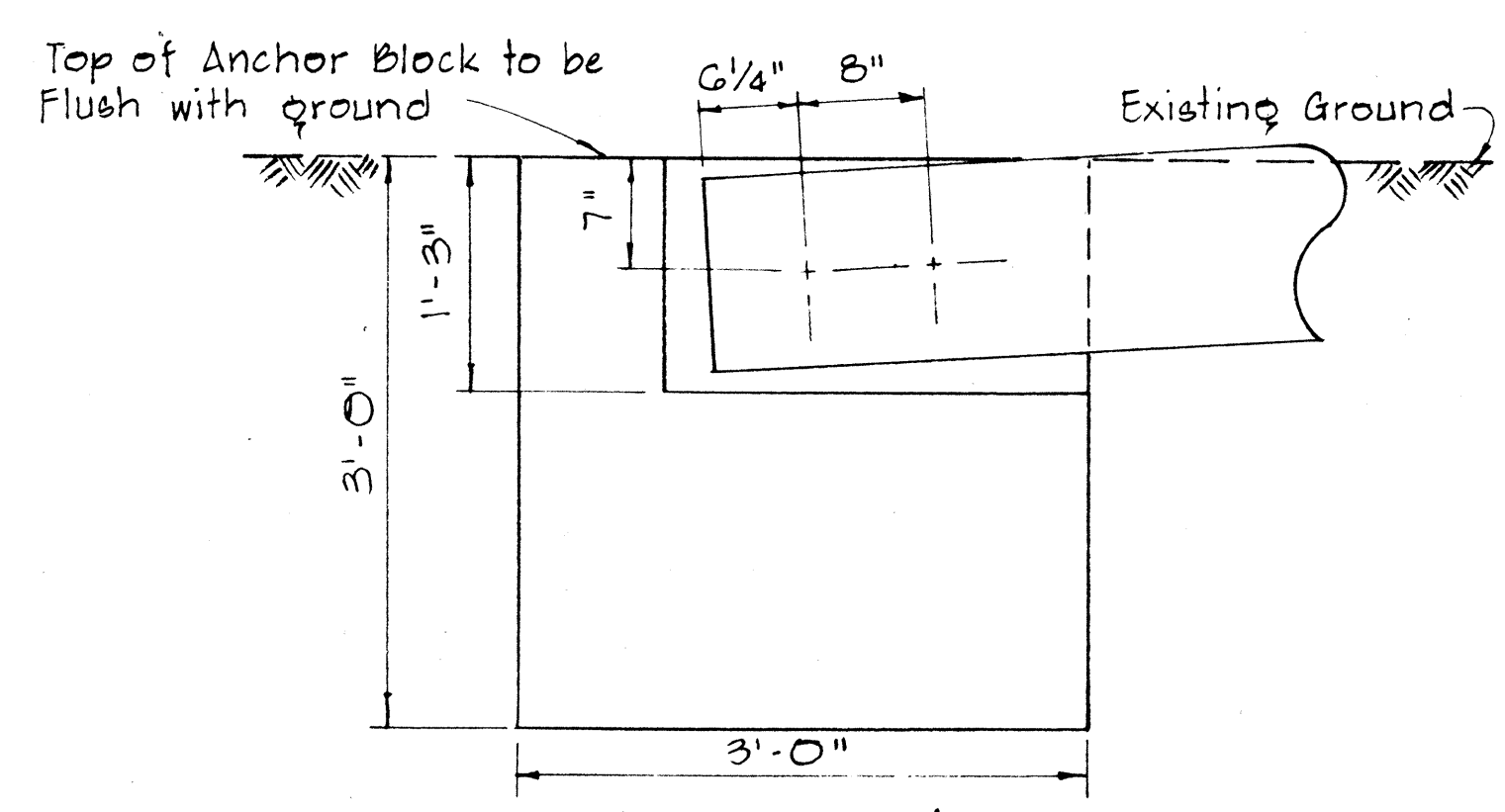


PLAN



SECTION A-A

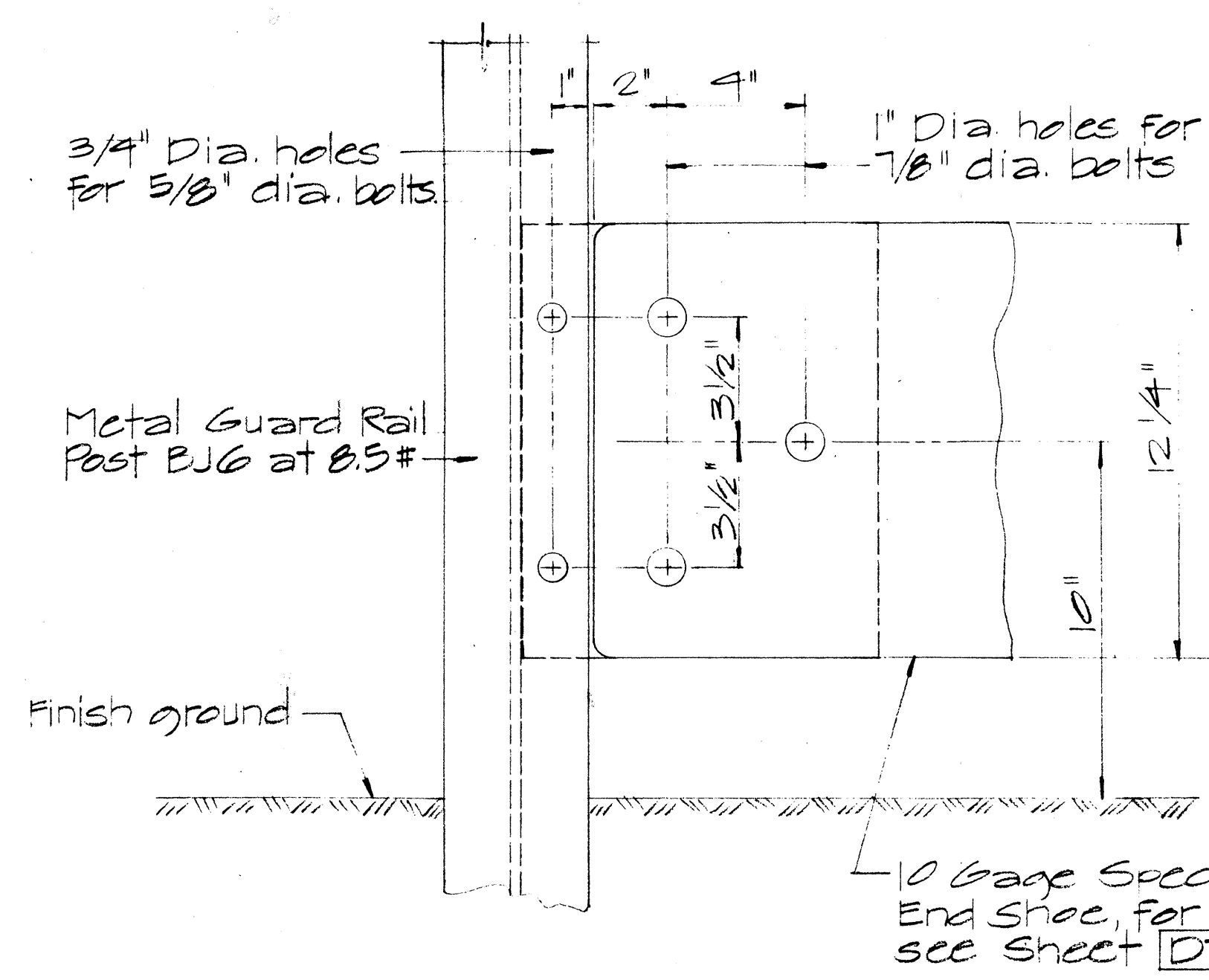
NOTE: Concrete, Excavation, and Miscellaneous Appurtenances necessary to anchor the Guard Rail Ends, shall be incidental to the Metal Guard Rail.



ELEVATION

CONCRETE ANCHOR BLOCK FOR RAMP END

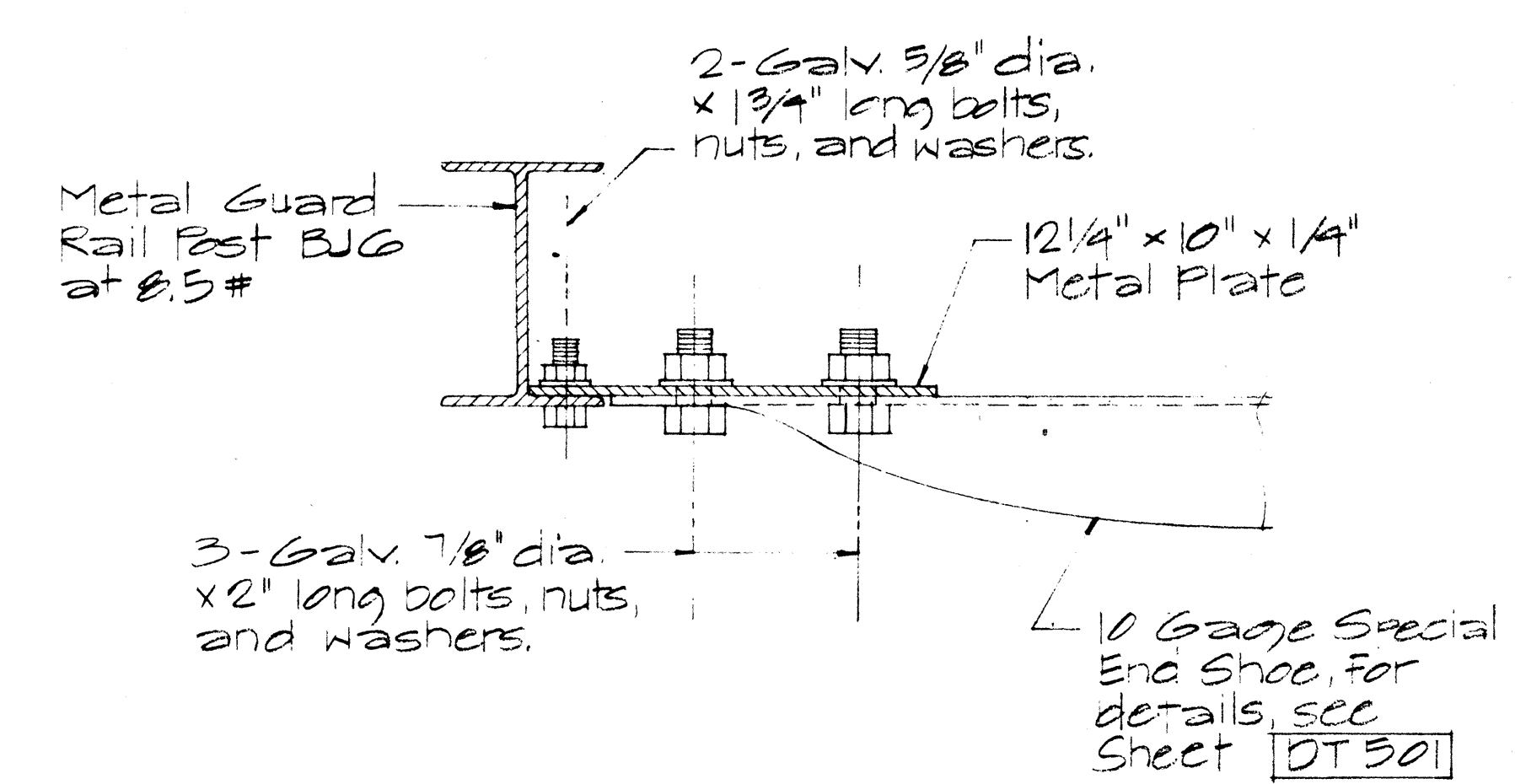
Scale: 1" = 1'-0"



ELEVATION

DETAIL "B"

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



PLAN

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAIL
GUARD RAIL
RAMP END ANCHORAGE

Scale: as Noted

August, 1968

SHEET No. 6 OF 8 SHEETS DT 502

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

The diagram shows a rectangular sign with a black border. The overall dimensions are 8'-0" wide by 4'-0" high. The sign is divided into three main sections. The top section contains the text "YOUR HIGHWAY TAXES AT WORK" in large, bold, black capital letters. The bottom left section contains the text "FEDERAL HIGHWAY TRUST FUNDS" in bold, black capital letters, followed by "\$ 0,000,000" in a smaller font, and then "U.S. DEPT. OF TRANSPORTATION" in a smaller font. The bottom right section contains the text "HAWAII STATE FEDERAL HIGHWAY ADMIN. DEPT. OF TRANSPORTATION" in bold, black capital letters, followed by "HIGHWAYS DIVISION" in a smaller font. A small, triangular "HAWAII" logo is located in the top right corner of the sign. The logo is a black triangle with a white border, containing the word "HAWAII" in black capital letters above two white circles. Dimensions are indicated by arrows and text: the top section is 2'-1/2" high, the bottom left section is 3'-1/2" high, the bottom right section is 5" high, the sign is 12" wide, and the sign is 4'-0" high. The sign is mounted on a post with a 2" diameter. The sign is shown against a background of a road with a dashed white line and a solid white line.

Diagram of a highway tax sign with dimensions and a warning triangle.

Sign Dimensions:

- Overall width: 6'-0"
- Overall height: 4'-0"
- Top section height: 2'-1/2"
- Middle section height: 3'-1/2"
- Bottom section height: 5'-4"
- Right side section height: 5'-5"
- Right side section width: 2'-0"

Sign Text:

YOUR HIGHWAY TAXES
AT WORK

STATE HIGHWAY
FUNDS
\$ 0,000,000
HAWAII STATE
DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION

Warning Triangle:

HAWAII
OO

Warning Triangle Dimensions:

- Base: 12'-0"
- Height: 6'-0"

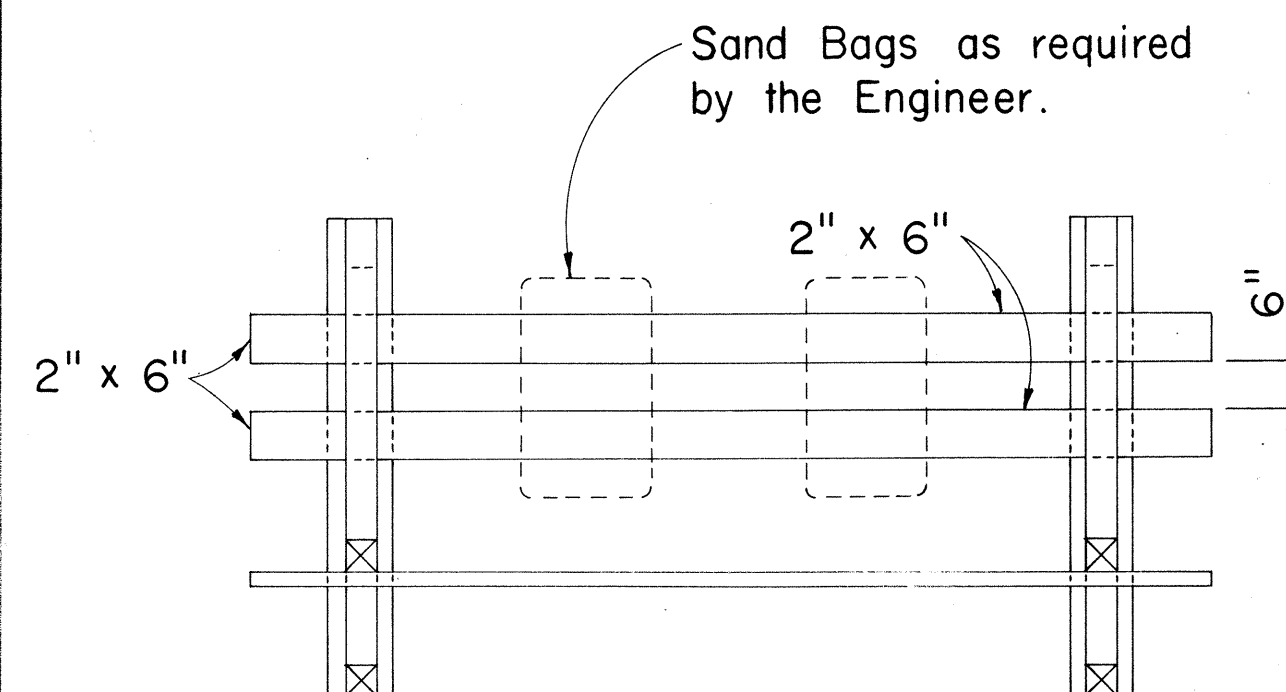
GENERAL NOTES

1. The sign legend shall be black on white background.
2. The Contractor shall construct, install and maintain the project signs at the locations shown on the plans and as ordered by the Engineer.
3. Letters shall be Series "C" of the sizes shown on the plan and shall conform with the "Standard Alphabet for Highway Signs", Bureau of Public Roads, 1966
4. The Contractor shall fill in the proper numerals in place of ciphers as ordered by the Engineer.

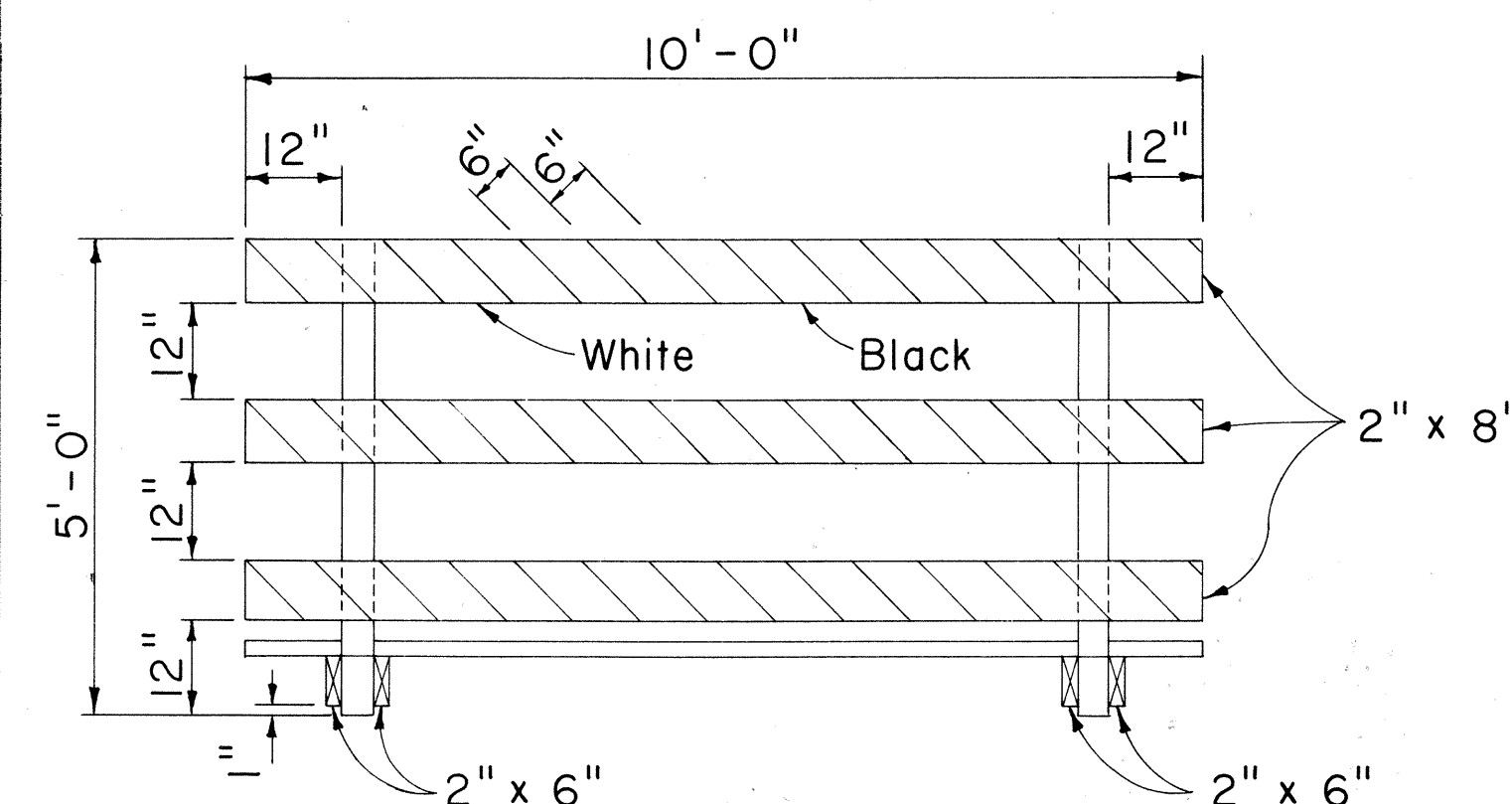
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Scale: As Shown Date: Aug. 1969
SHEET No. 8 OF 8 SHEETS DT

1. The Contractor shall construct, install and maintain the wood barricades at the locations shown on the Plans.
2. The permanent wood barricades shall be left in place or relocated upon completion of the project as ordered by the Engineer and are to become State property.



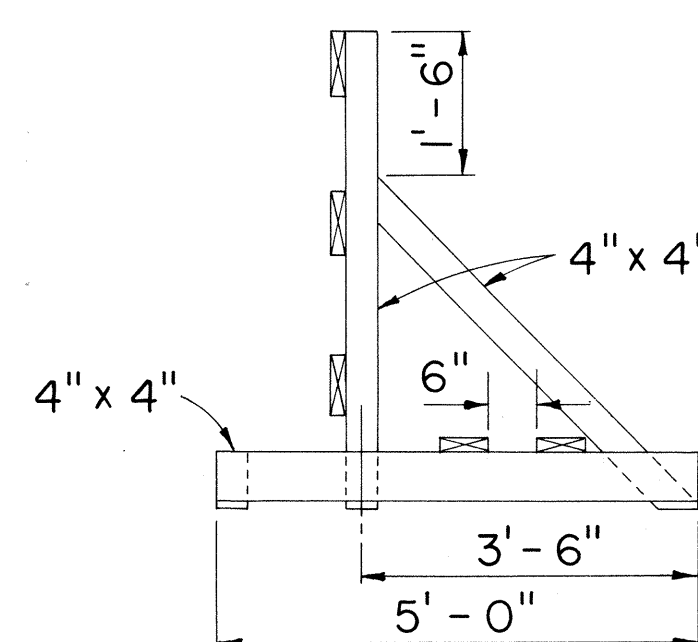
PLAN VIEW



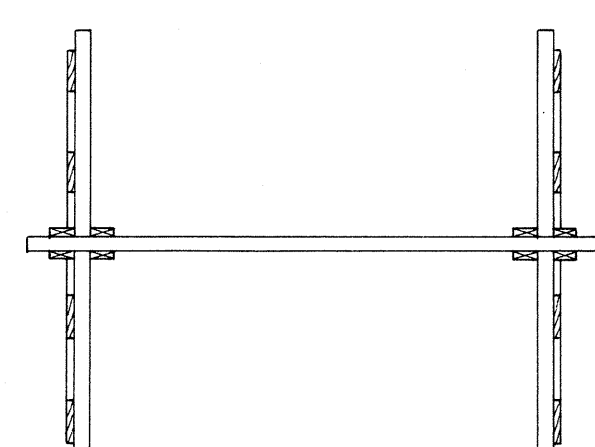
FRONT VIEW

CLASS I BARRICADE

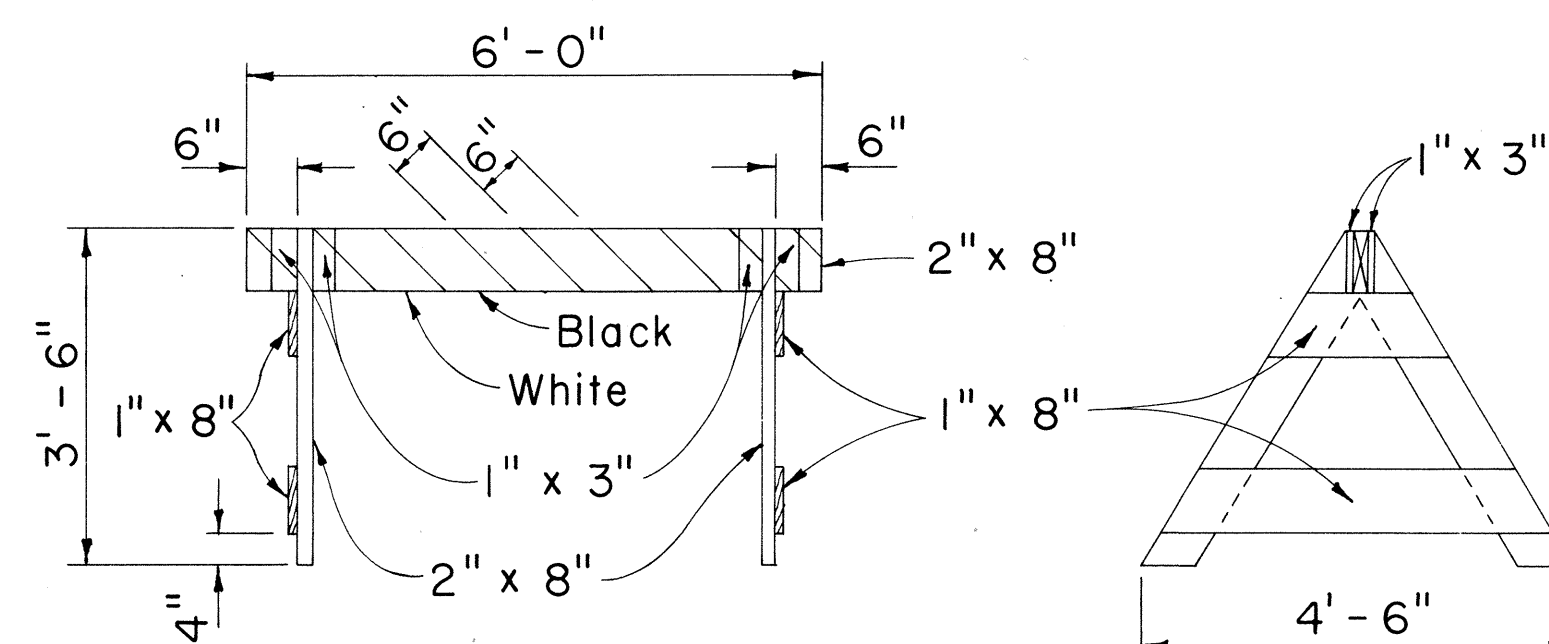
Scale: $1/2" = 1'-0"$



END VIEW



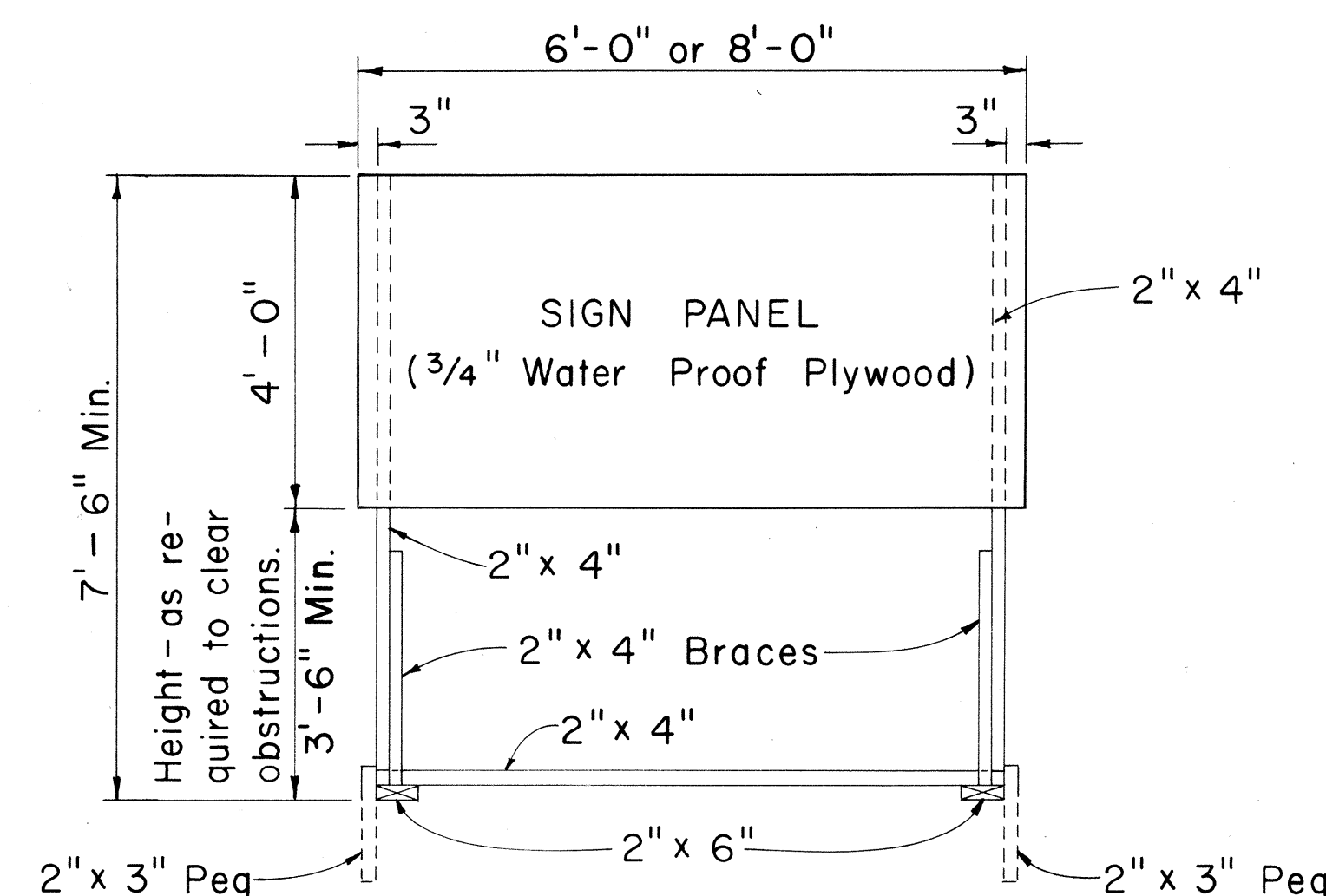
PLAN VIEW



FRONT VIEW

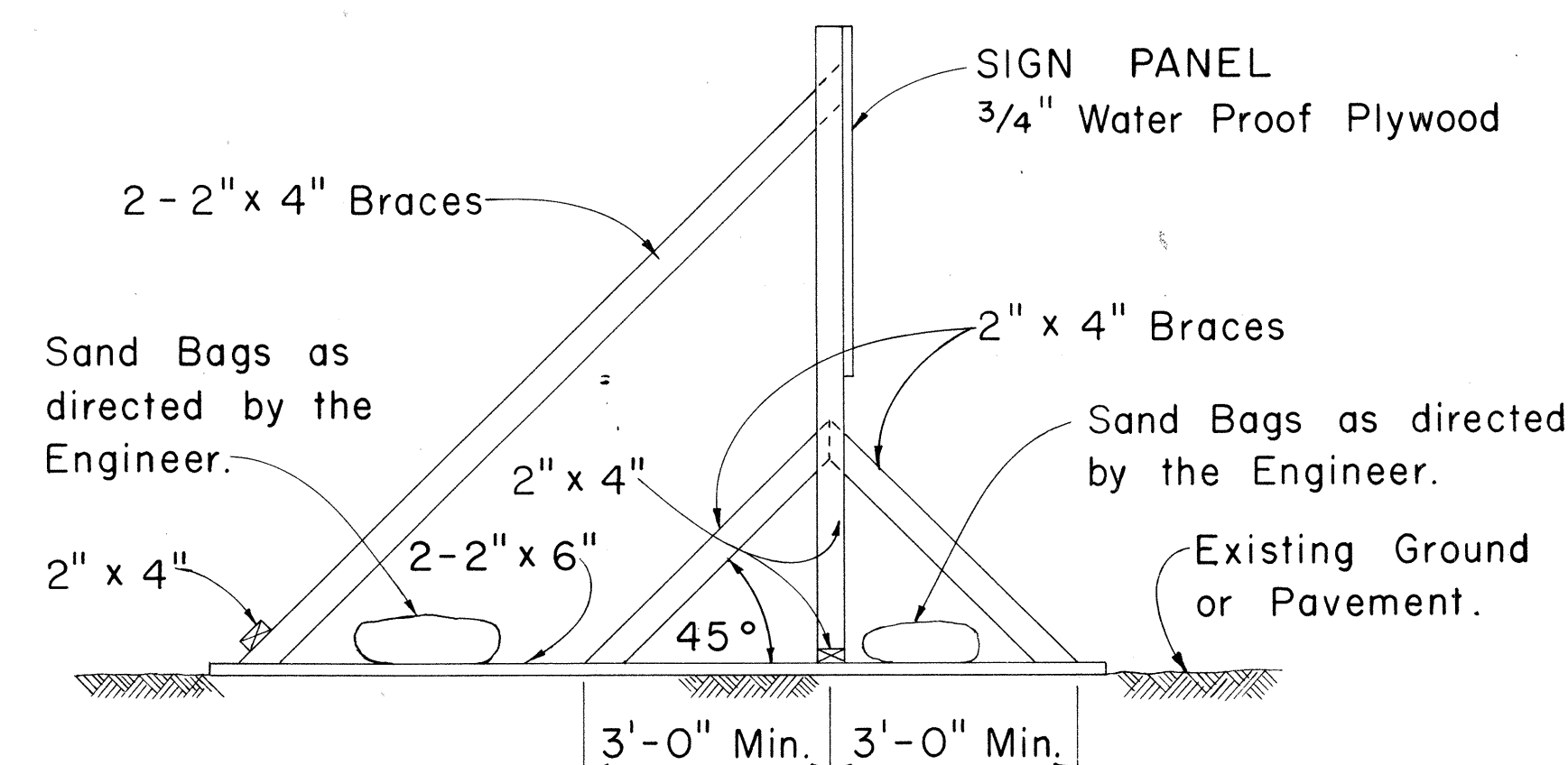
CLASS II BARRICADE

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



FRONT VIEW

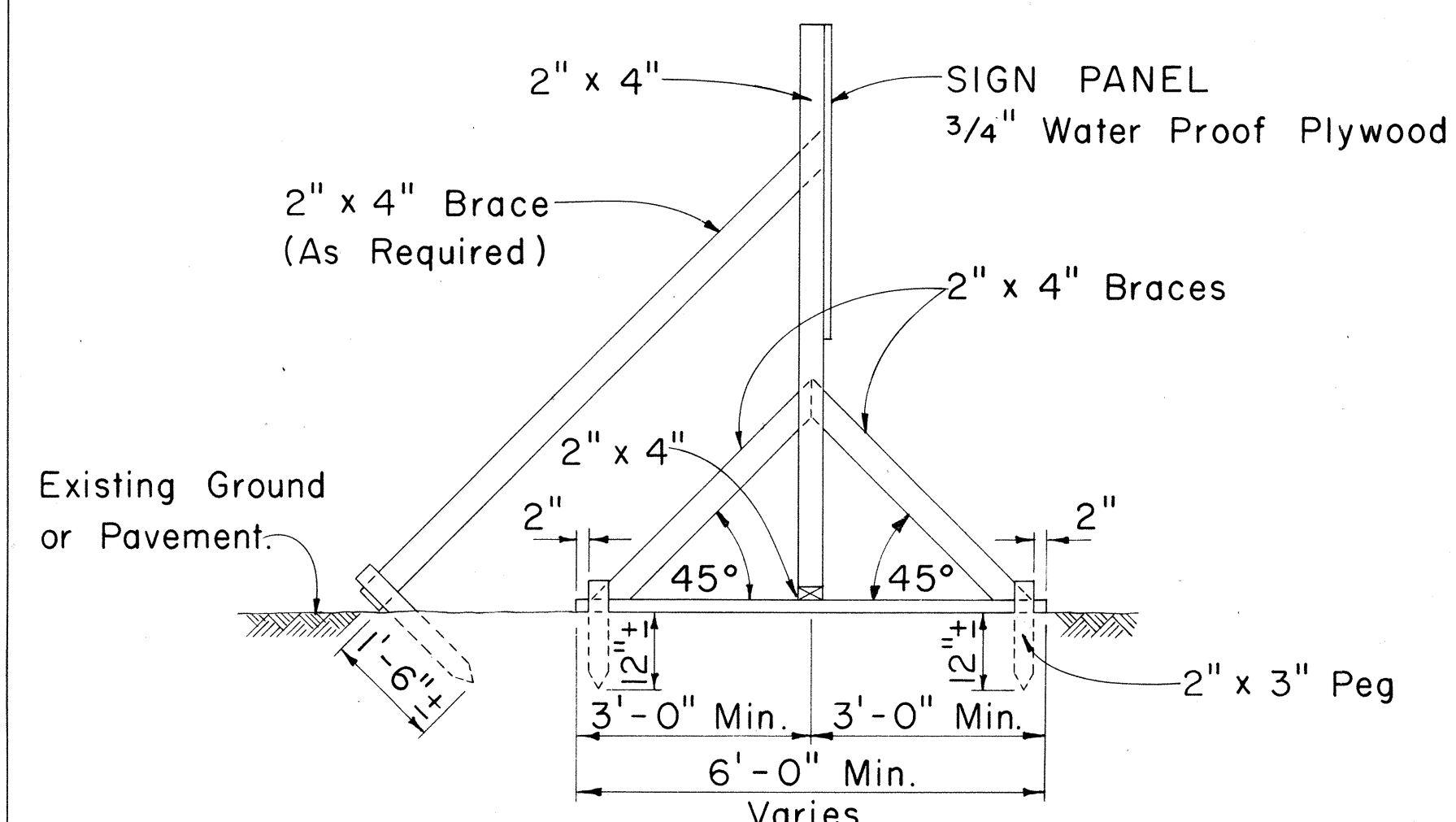
Scale: $1/2'' = 1'-0''$



SIDE VIEW

(SIGN FRAME WEIGHTED DOWN)

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



SIDE VIEW

(SIGN FRAME ANCHORED IN GROUND)

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

CONSTRUCTION IDENTIFICATION SIGN

Scale: As Shown

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