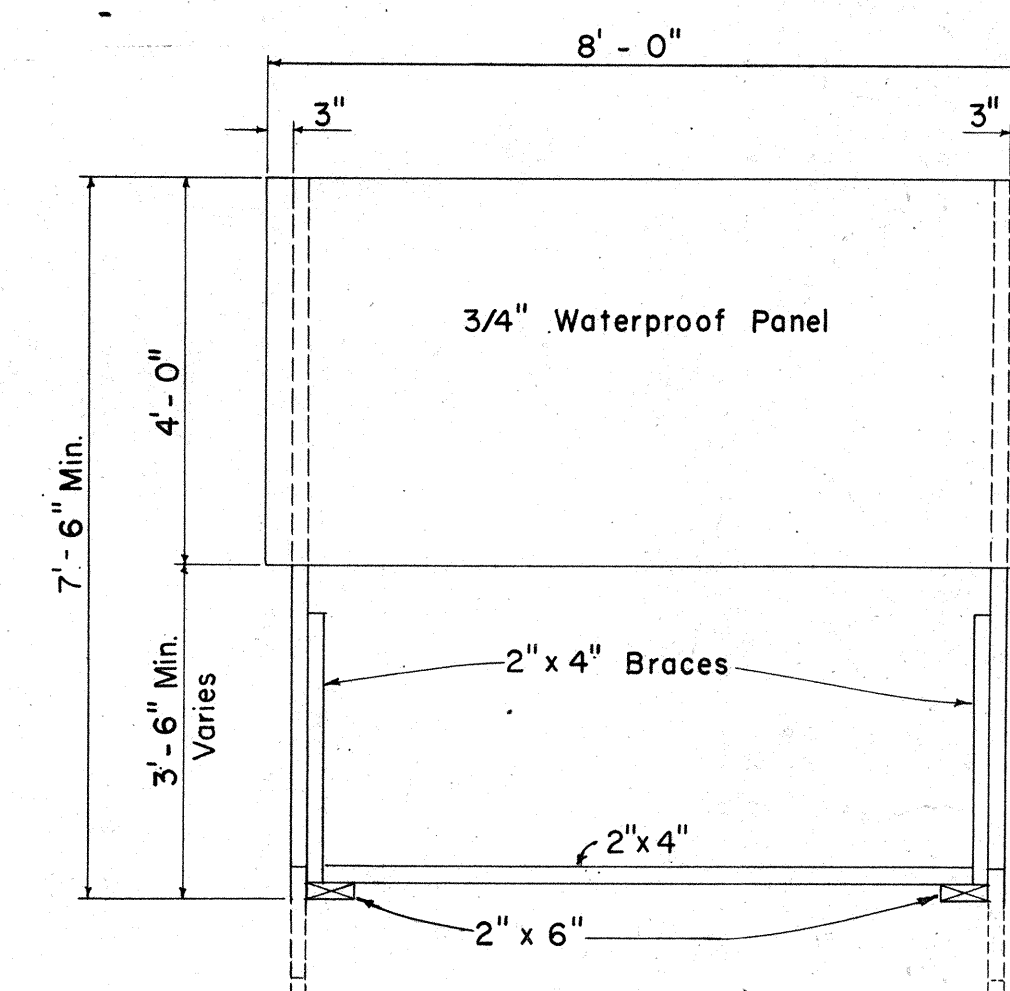
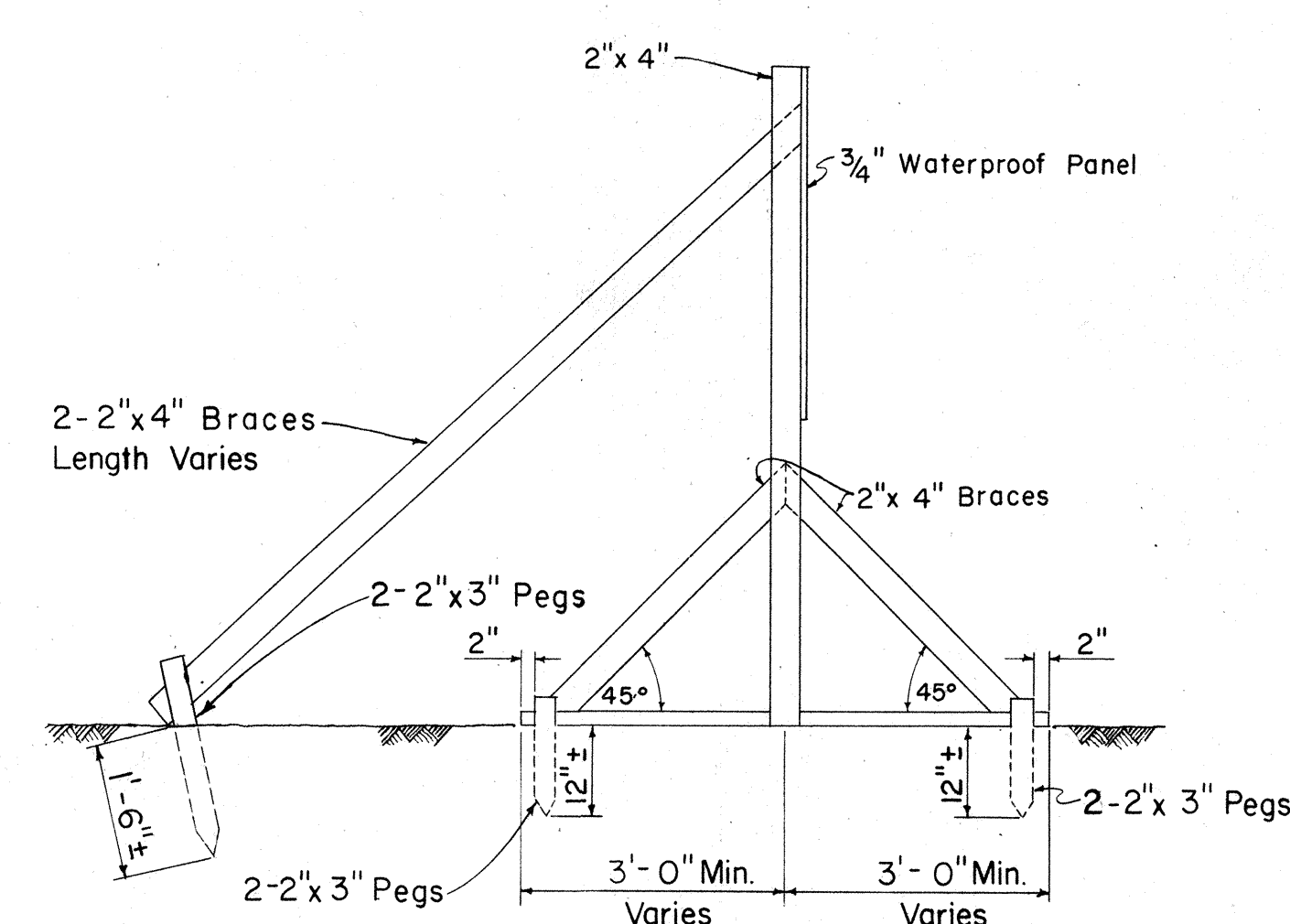
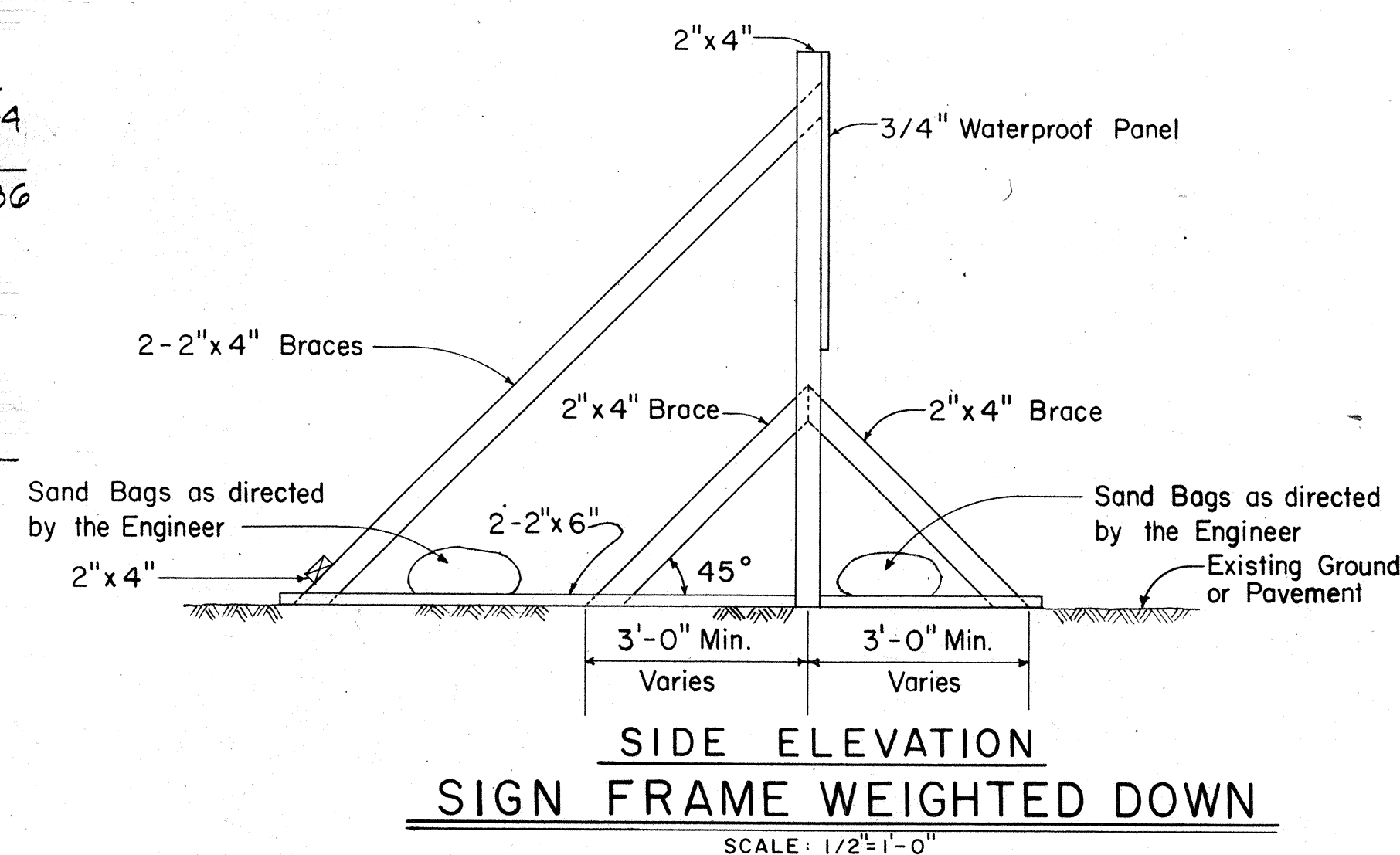


SUMMARY OF TRAFFIC SIGNS

TYPE	DESCRIPTION	QUANTITY
R1-1	STOP	3
W1-4(L)	PAVEMENT ENDS	2
W2-1	REFLECTOR MARKER (CLEAR)	2
W3-3	REFLECTOR MARKER (AMBER)	1
RM-1	REFLECTOR MARKER (CLEAR)	98-24
RM-3	REFLECTOR MARKER (AMBER)	5
TOTAL:		5+36

SUMMARY OF CONSTRUCTION SIGNS

TYPE	DESCRIPTION	QUANTITY
R10-2	ROAD CLOSED	3
W20-1C	ROAD CONSTRUCTION 1500 FT.	1
M5-7 (L)	DETOUR (LEFT ARROW)	2
M5-7 (R)	DETOUR (RIGHT ARROW)	1
TOTAL:		7

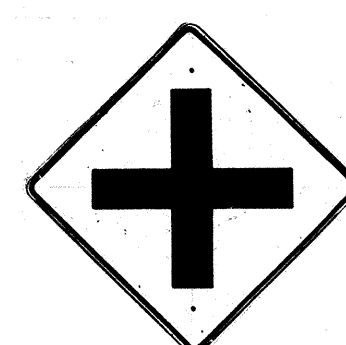
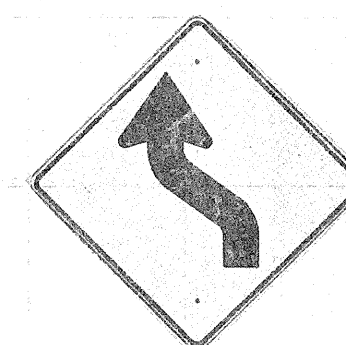
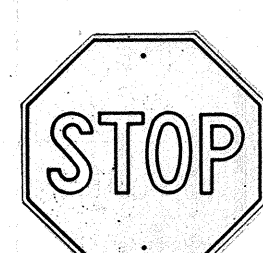
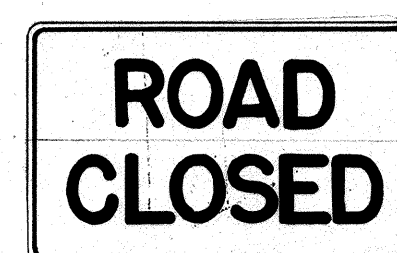


SIDE ELEVATION

FRONT ELEVATION

SIGN FRAME ANCHORED IN GROUND

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



R10-2
48" x 30"

M5-7 (L)
48" x 18"

R1-1 30" x 30"

W1-4(L) 30" x 30"

W2-1 30" x 30"

W3-3 30" x 30"

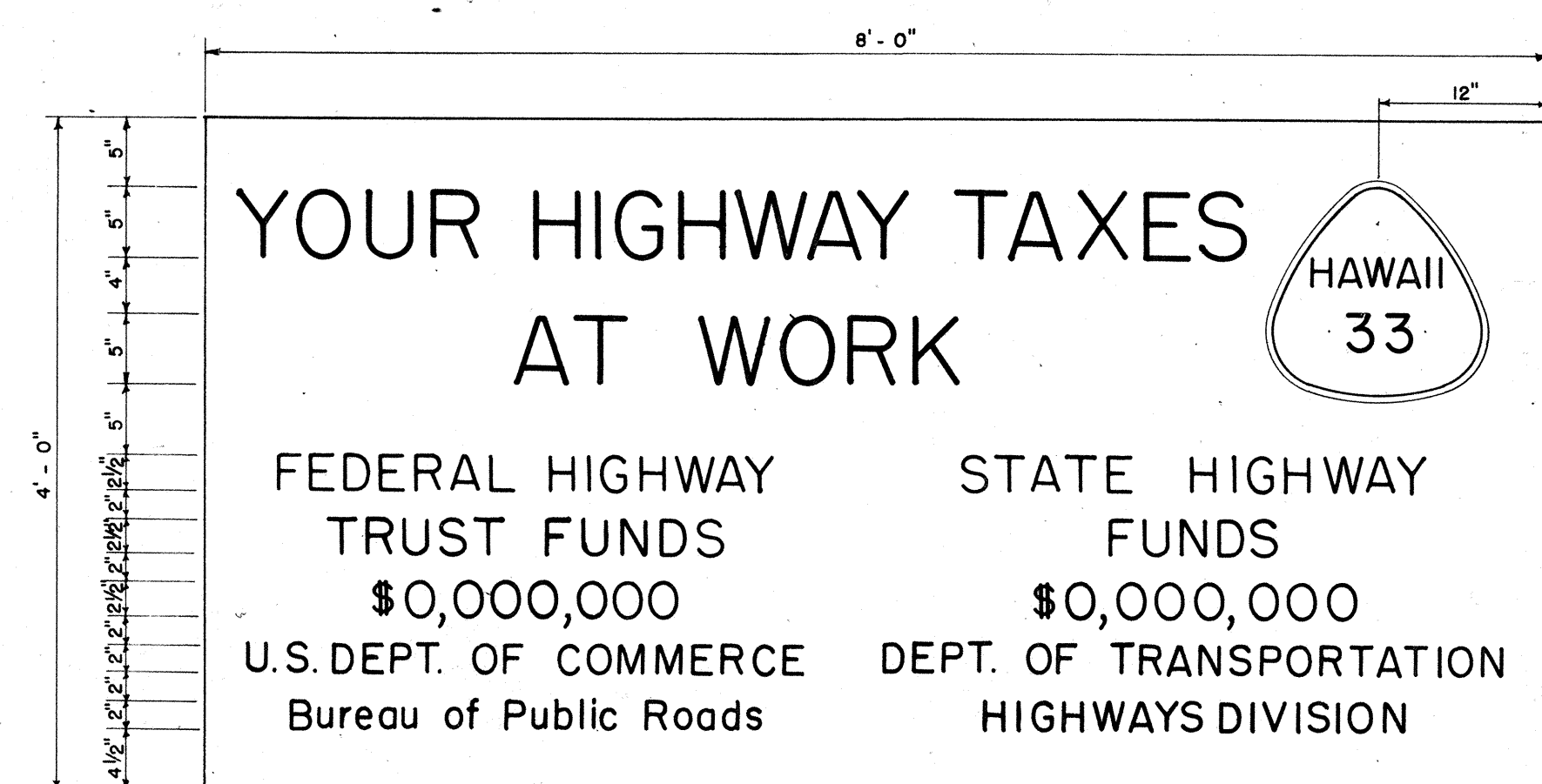


W20-1C
48" x 48"

M5-7 (R)
48" x 18"

NOTE:

- The shape, color, dimensions, symbols, wording, lettering, and reflectorization of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR Manual "Standard Highway Signs," dated September 1961 unless otherwise noted.
- All signs shall be reflectorized unless otherwise specified.
- All signs shall have 3/8" bolt holes drilled at appropriate locations unless otherwise noted.
- (R) or (L) indicates right or left and shall be as shown on the plans.

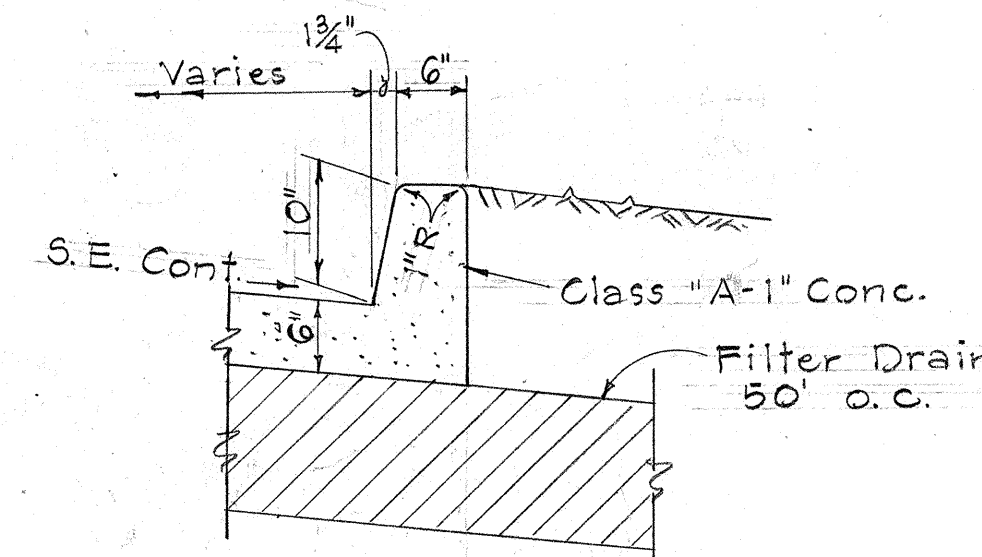


SIGN PANEL

Scale: 1" = 1'-0"

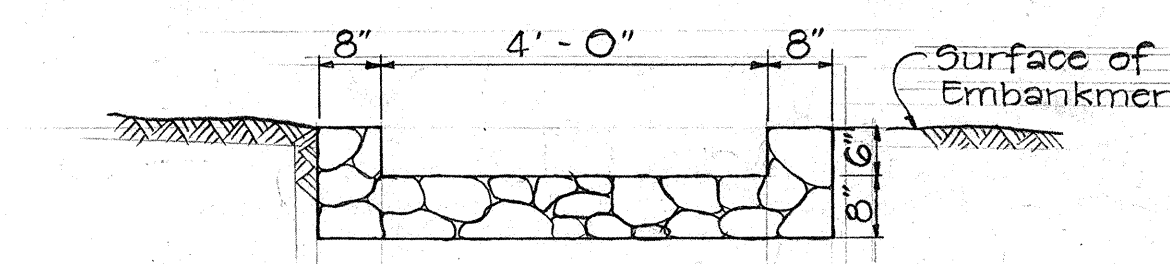
PRIMARY AND SECONDARY SYSTEMS CONSTRUCTION IDENTIFICATION SIGN

Scale: As Shown



SECTION "B-B"

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



TYPICAL SECTION
G.R.P. SPILLWAY AT STA. 3+17.17

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

CONSTRUCTION IDENTIFICATION SIGN NOTES

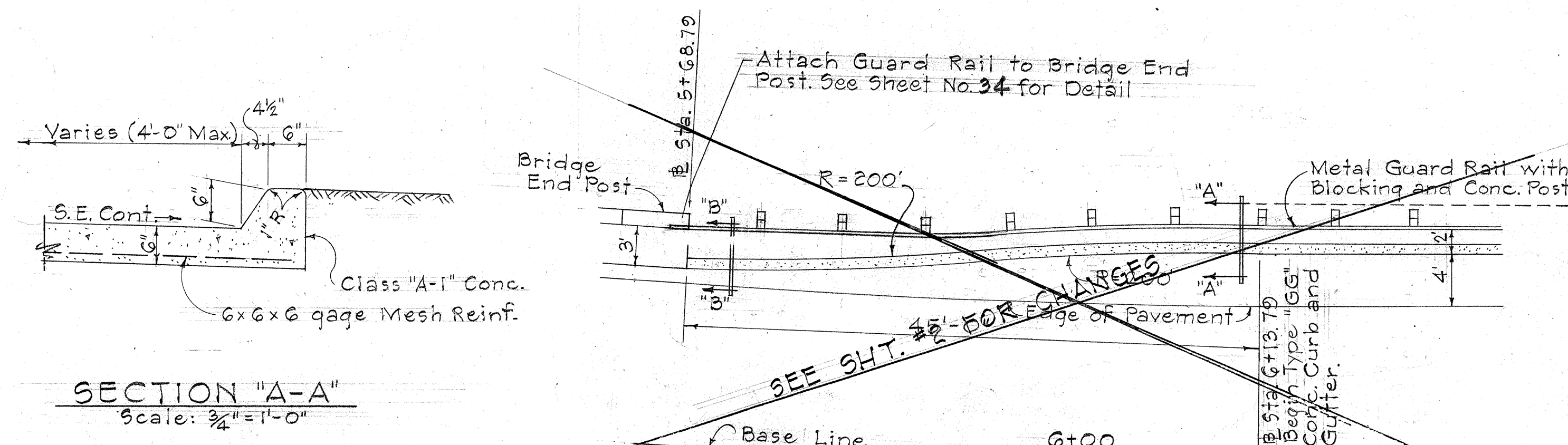
- The Contractor shall construct, install and maintain the Construction Identification Signs, at the locations shown on the plans and as ordered by the Engineer.
- All costs incurred in the construction, installation and maintenance of the Construction Identification Signs, will not be paid for separately, but shall be considered as included in the unit price paid for the various items in the proposal.
- The Construction Identification Signs shall be removed and stockpiled at the completion of the project as ordered by the Engineer and are to become State Property.
- The exact figures for the various funds involved will be furnished to the Contractor for the incorporation in the Construction Identification Signs.
- The legend shall be black on white background unless otherwise specified.
- Refer to Sheet No. 9 for details on the exact shape and size of the State route marker to be shown on these Construction Identification Signs.
- All letters shall be of size and design shown and shall conform with "Standard Alphabets for Highway Signs," Bureau of Public Roads, 1952. Use Series "C" letters unless otherwise noted.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS

KAHEKILI HIGHWAY
PROJ. NO. 5-0330(2)

Scale: As Noted Date: Oct. 1966
SHEET No. 1 OF 6 SHEETS



SECTION "A-A"

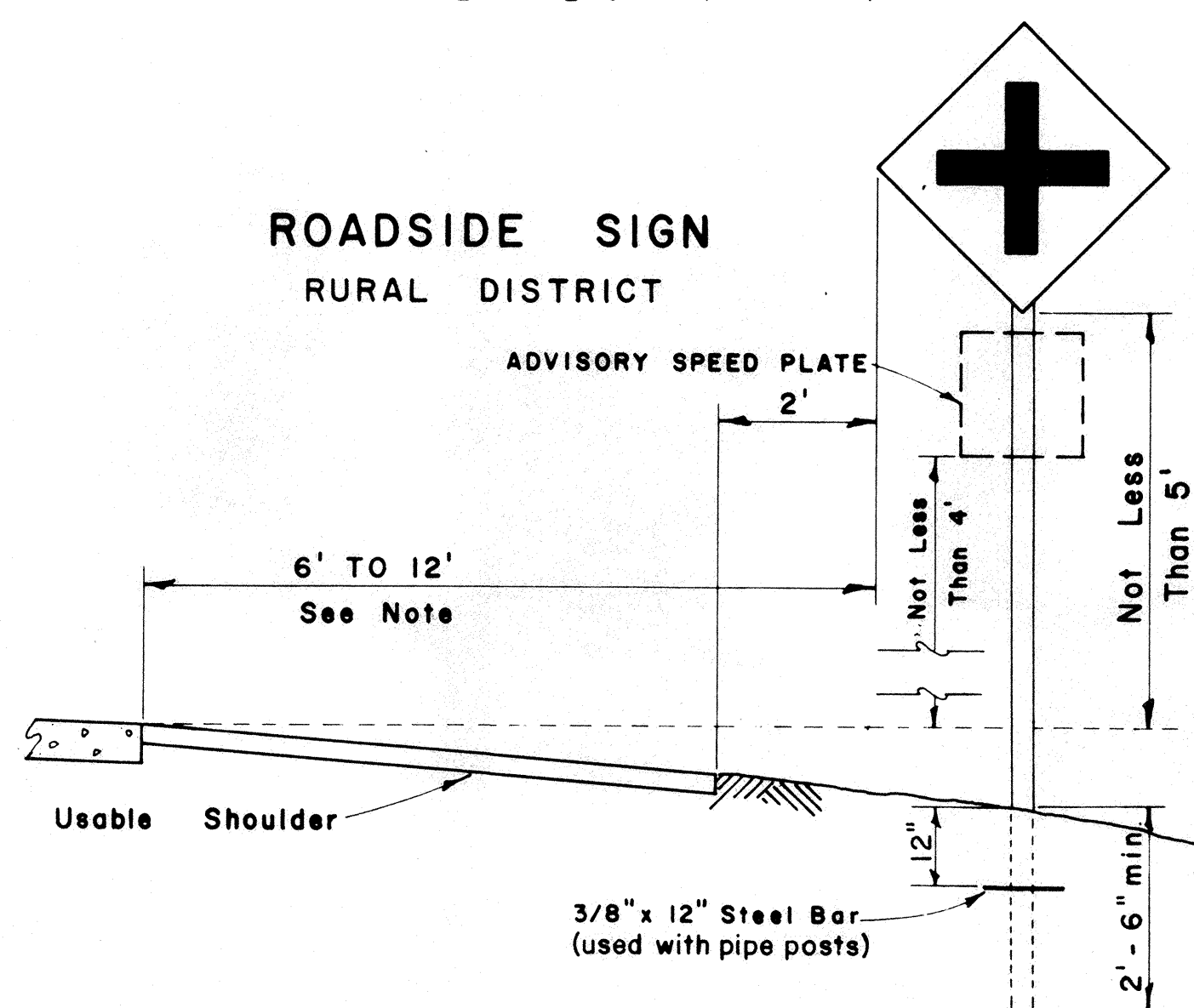
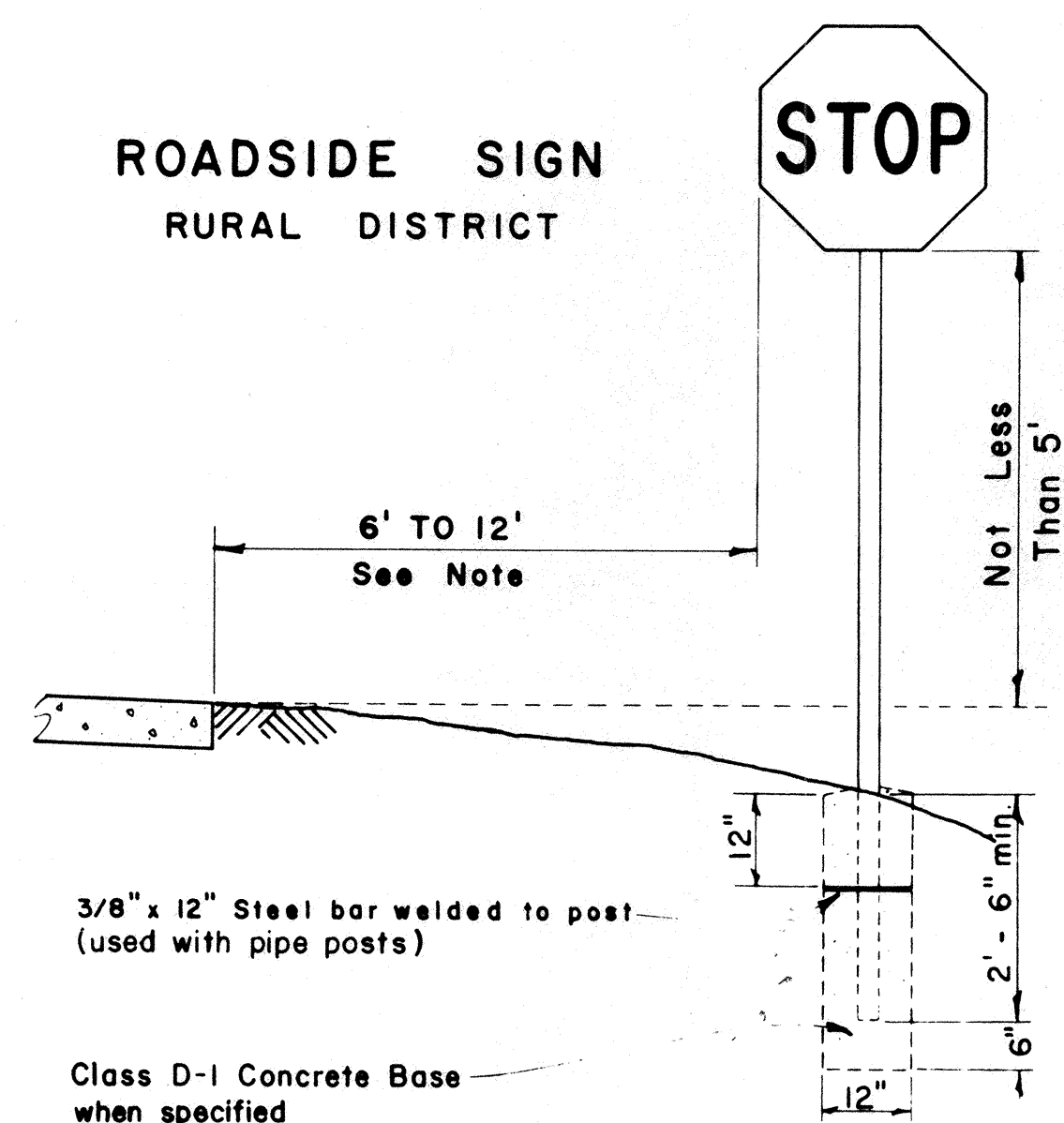
Scale: 3/4" = 1'-0"

DETAIL OF TYPE "GG" CONCRETE CURB AND GUTTER TRANSITION

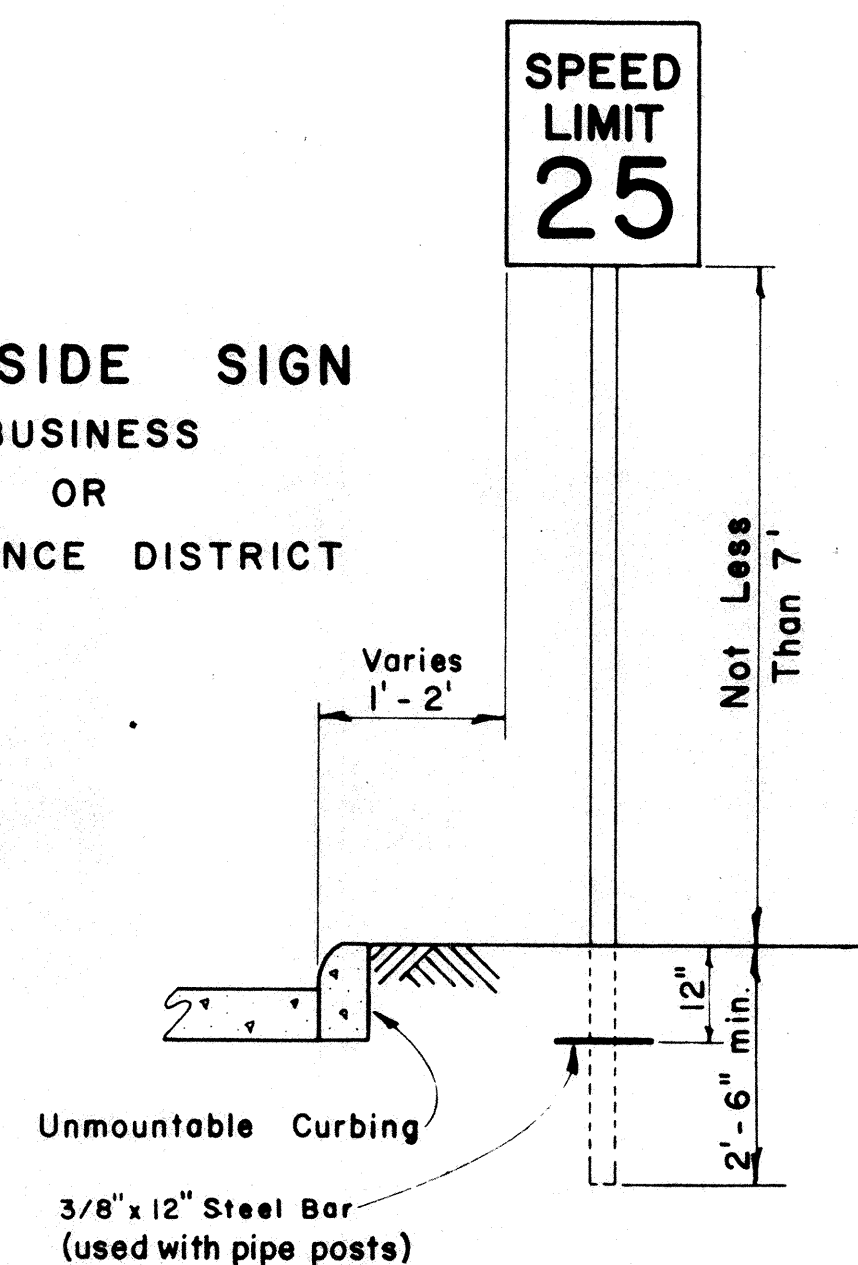
Sta. 5+08.79 to 6+13.79 (Left)

Scale: 1/8" = 1'-0"

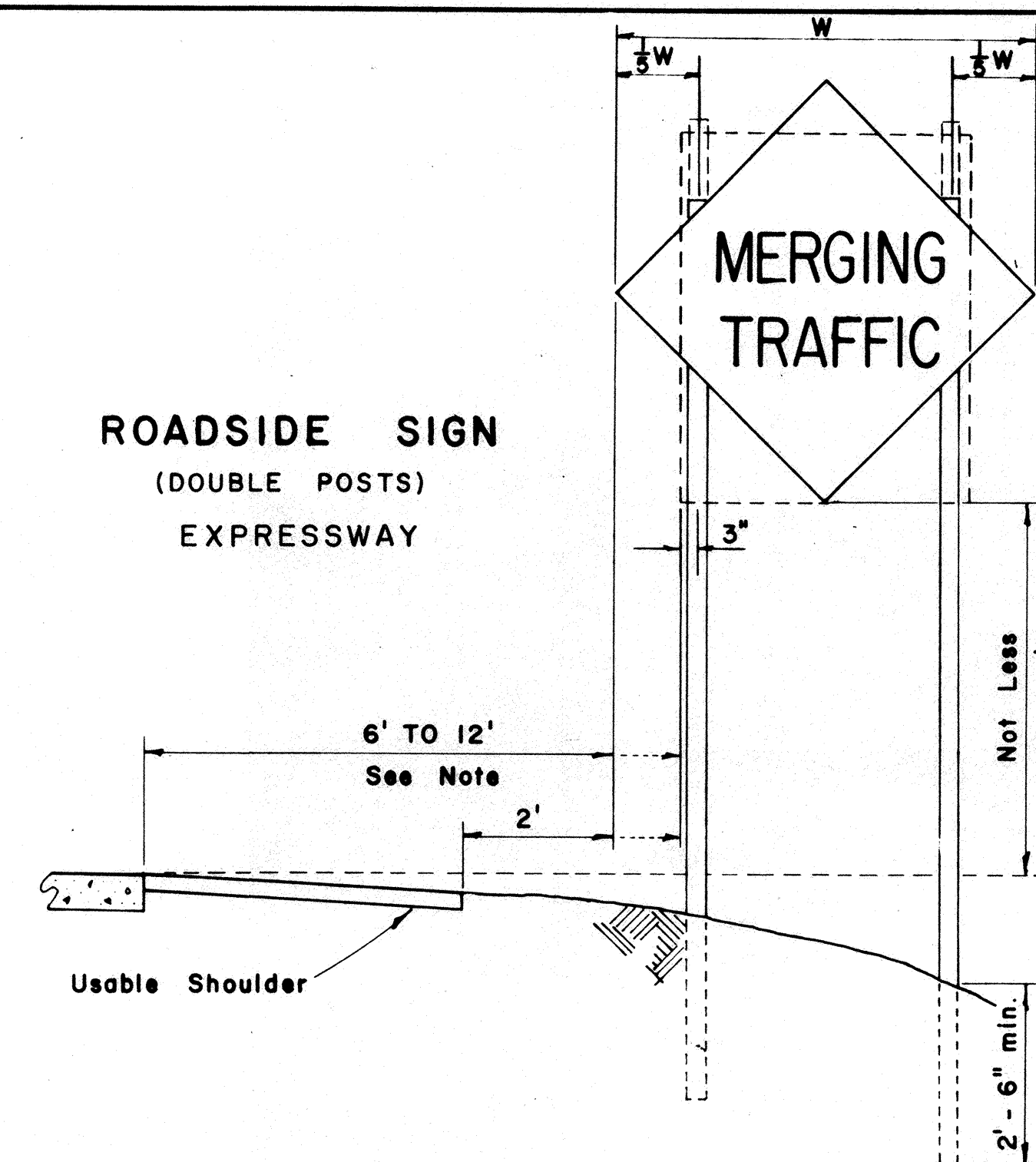
- NOTE:
- All signs and road delineators shall be placed 2' outside the usable roadway shoulder or 1' outside unmountable curbing present and within the limits shown below.
 - Except as noted below, sign posts shall be either 3" galv. std. pipe or 2 1/2" x 2 1/2" galv. square tube posts for signs larger than 24" in any dimension; 2" galv. std. pipe or 2" x 2" galv. square tube posts for signs 24" or less in any dimension.
 - Sign shall be attached to post with 5/16" galvanized bolts with nuts and 7/8" x 7/8" x .120" stainless-steel washers with neoprene rubber gasket.
 - Clearance Markers (RM-3, RM-4) shall be installed with the inside edge of the marker in line with the inner edge of the obstruction.
 - Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two 3" galv. std. pipe or two 2 1/2" x 2 1/2" galv. square tube posts.



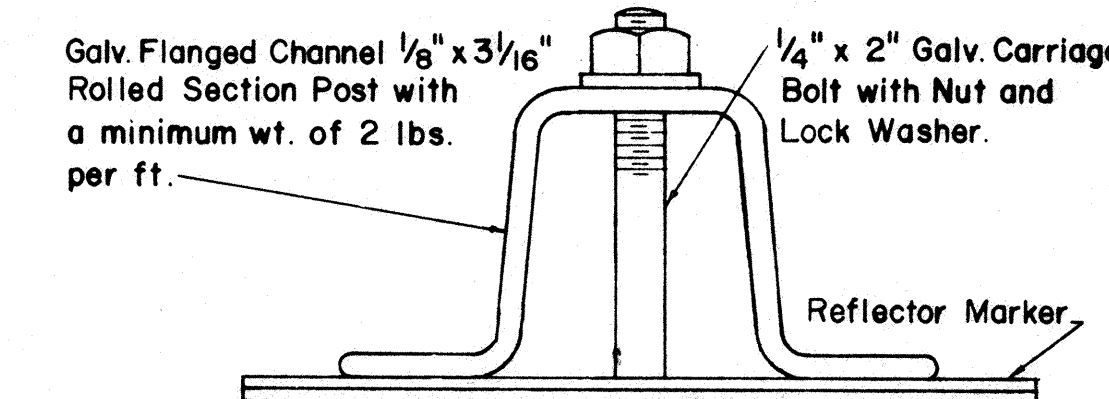
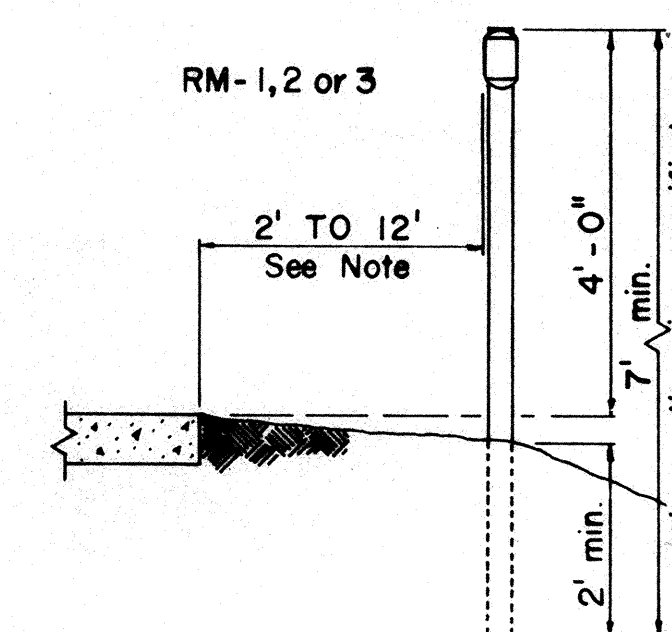
ROADSIDE SIGN
BUSINESS
OR
RESIDENCE DISTRICT



ROADSIDE SIGN
(DOUBLE POSTS)
EXPRESSWAY

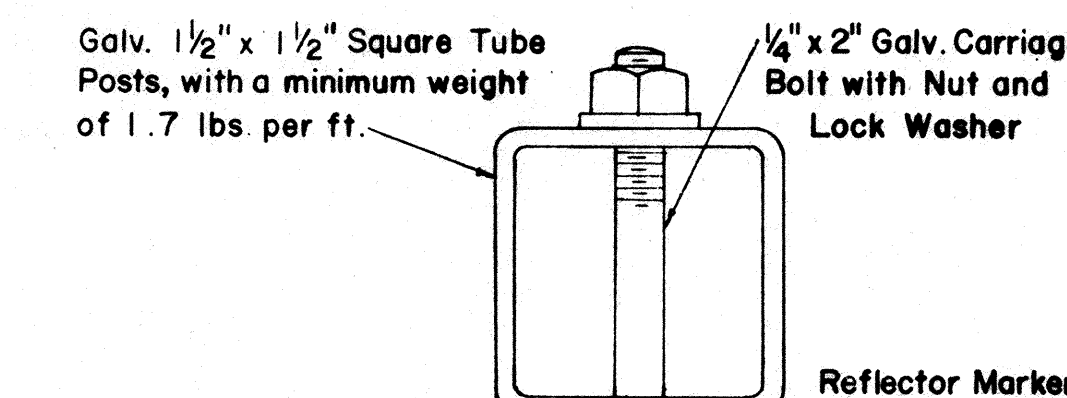
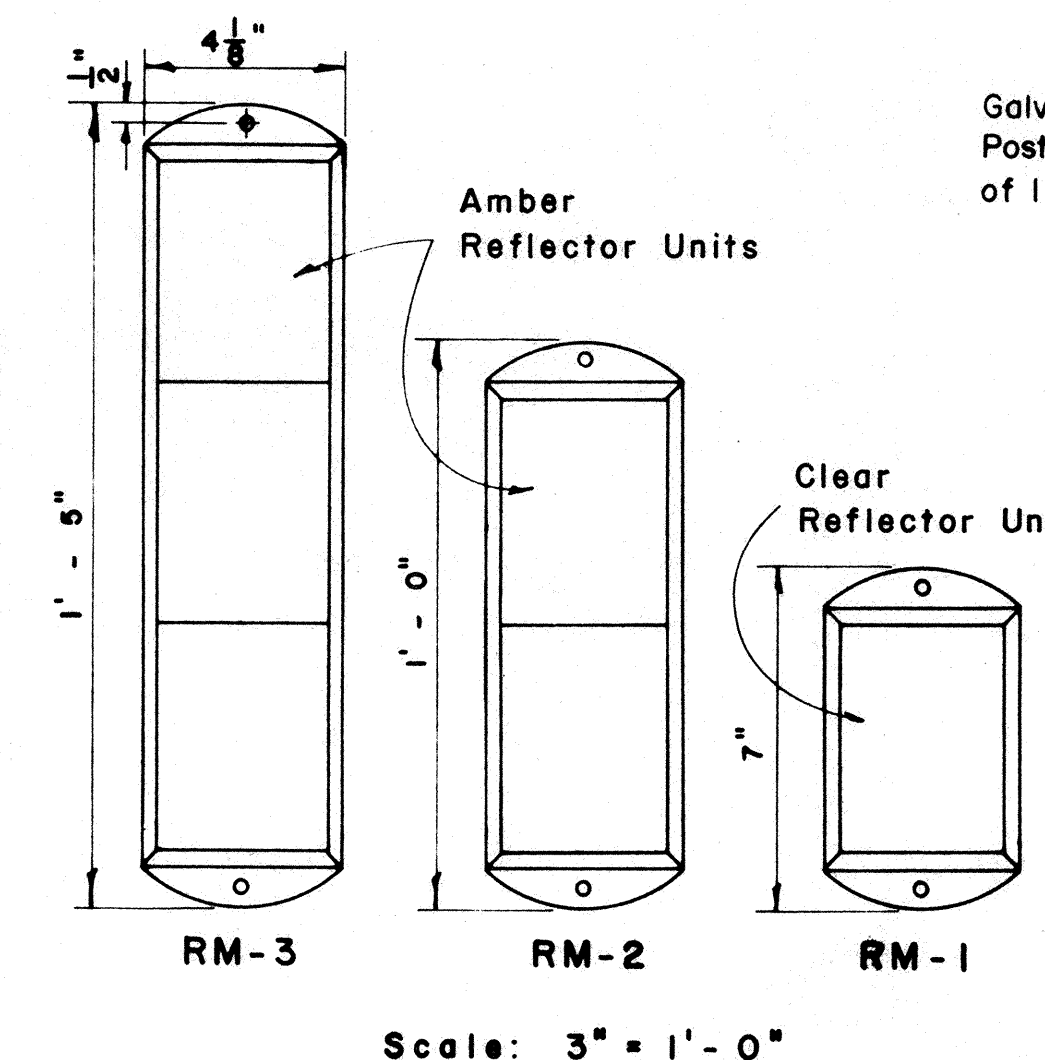
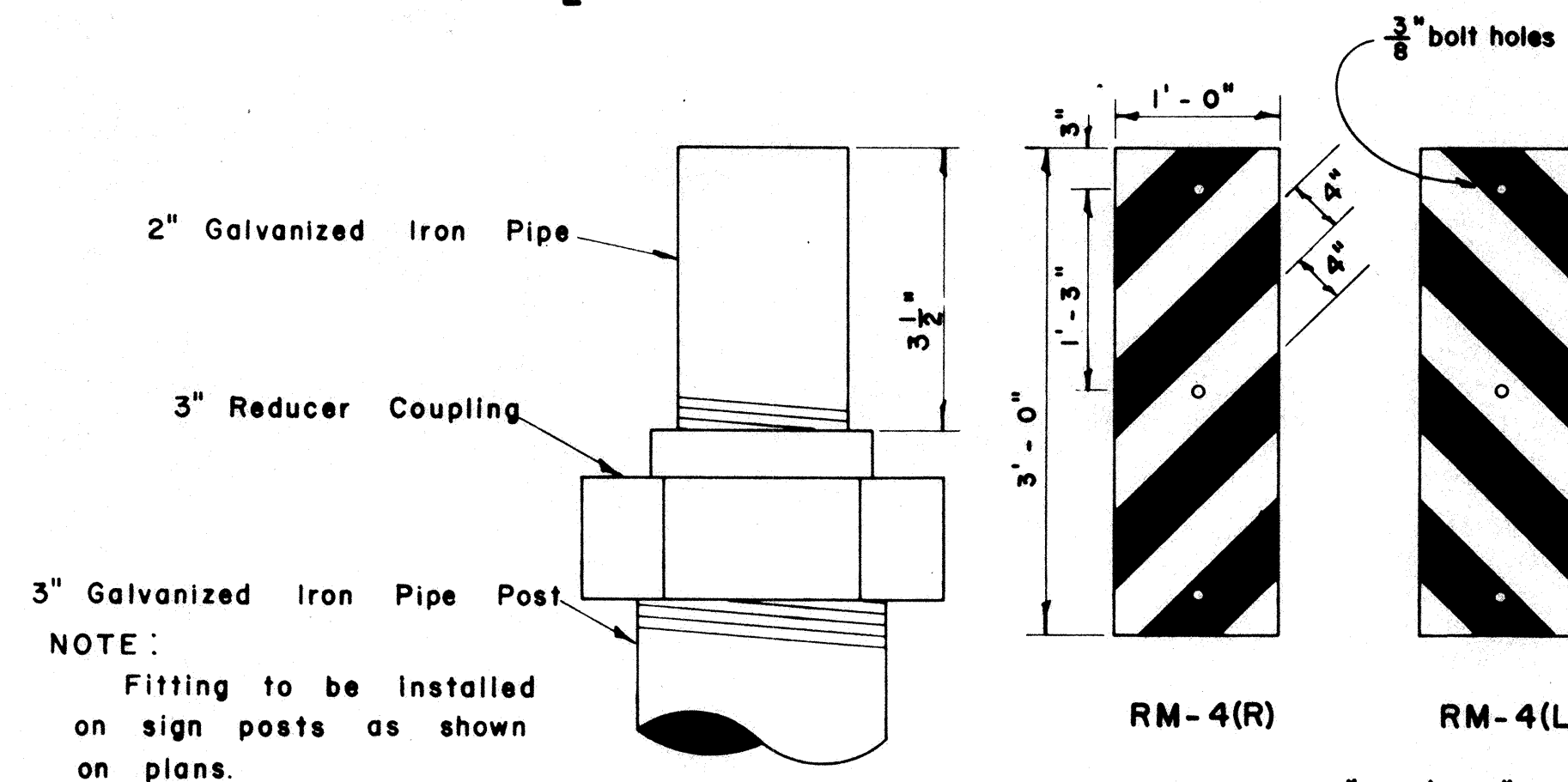
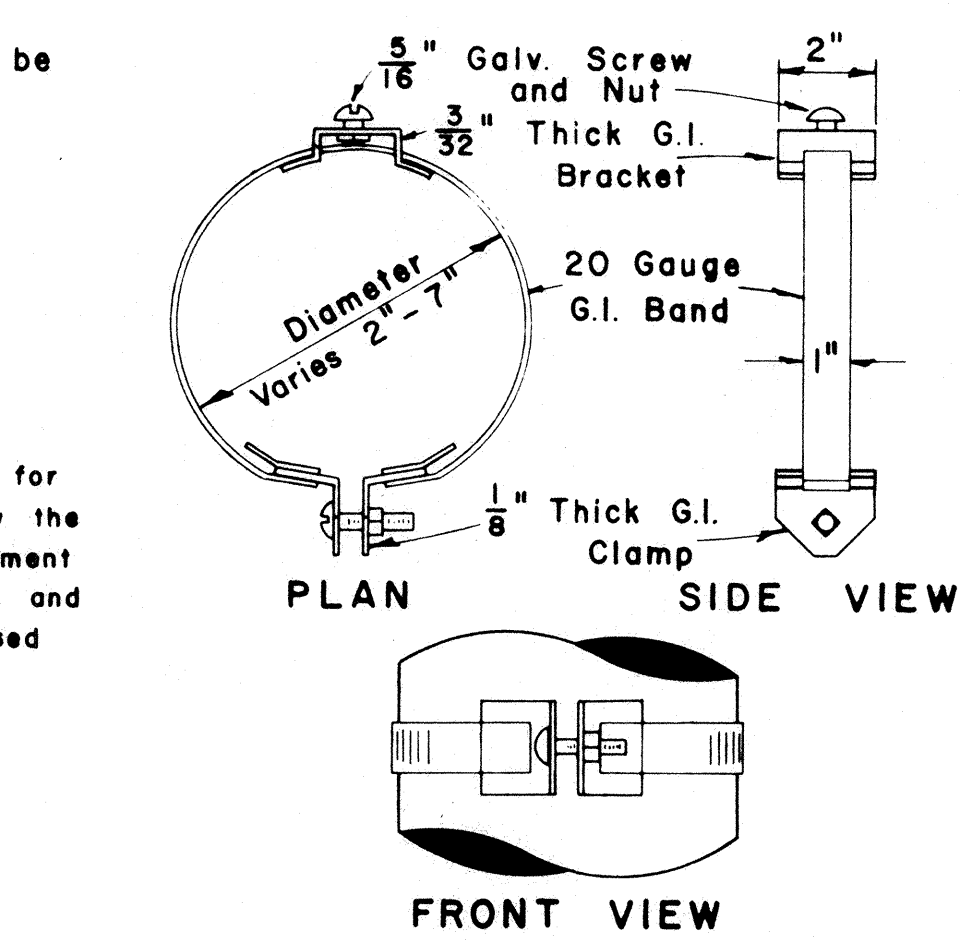
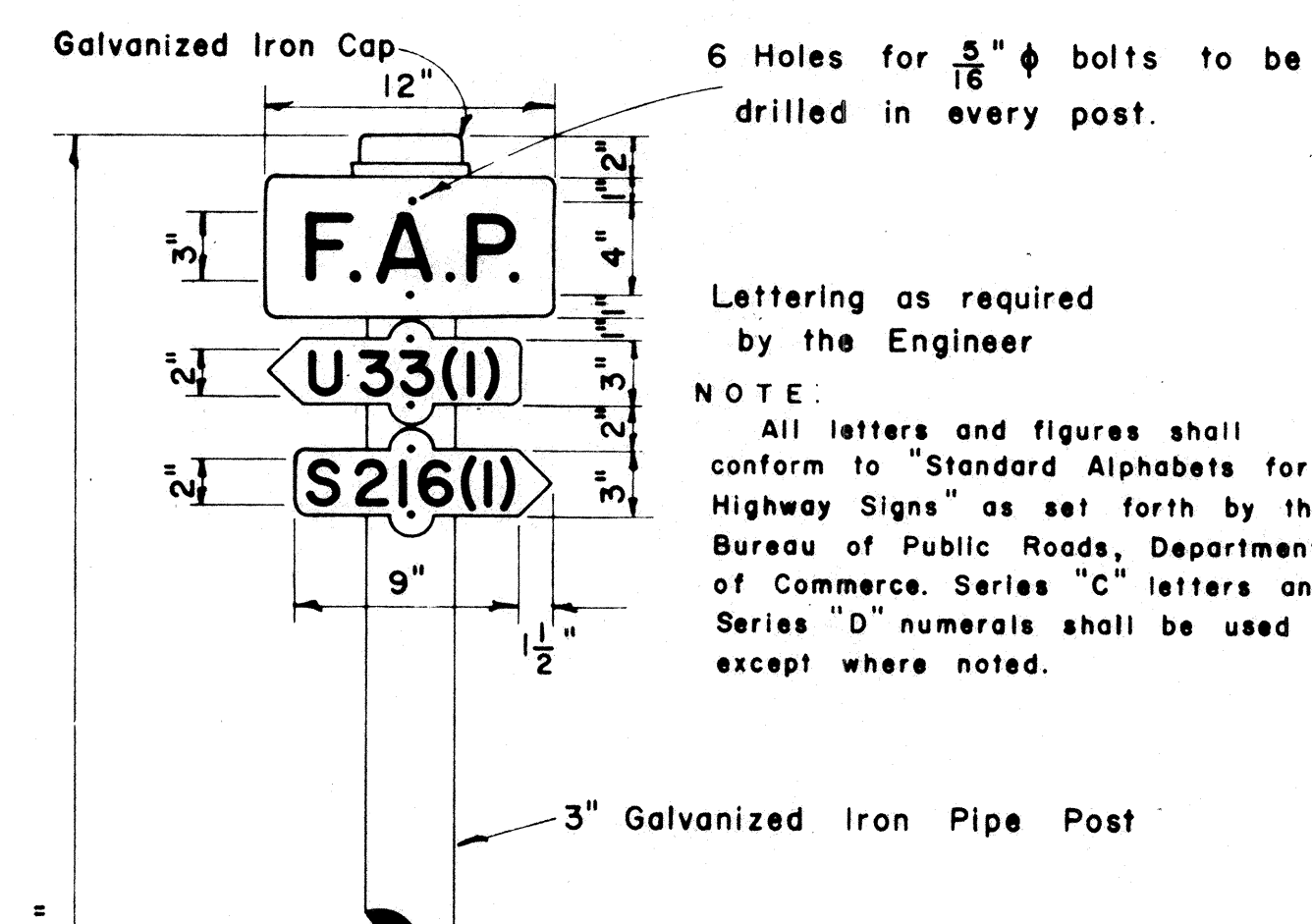


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-0330(2)	1967	8	47



HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATIONS

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



TYPICAL SECTION OF ROAD DELINEATOR

NOTE:

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.

REFLECTOR MARKERS

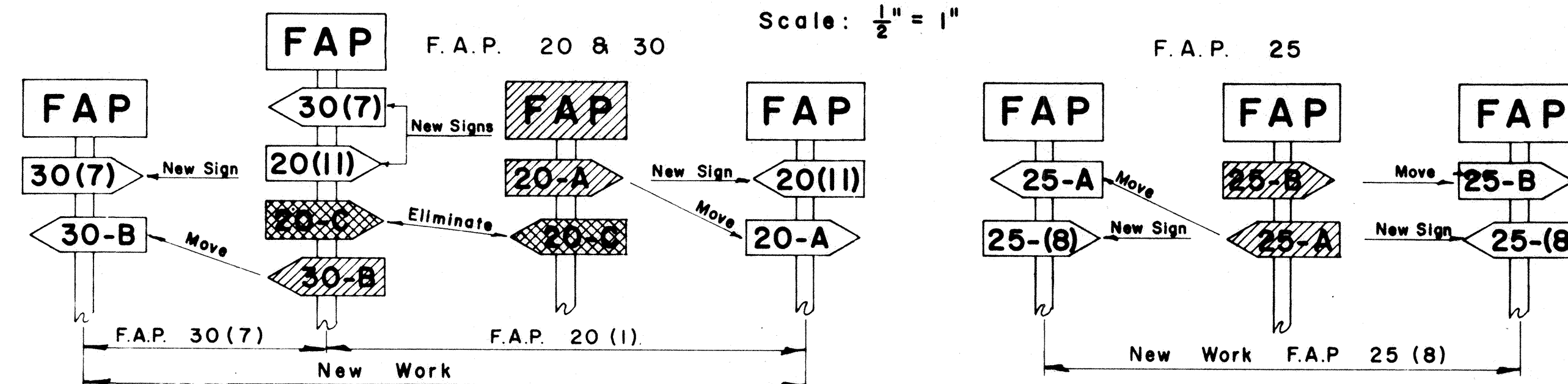
Scale: As Shown

NOTE:

Markers and Number plates shall be 0.081" thick with 3/8" holes for fastening as shown on sketch. Markers on Number plates shall be given one coat of best Zinc Chromate primer and two coats of White Marine Enamel. Before painting, the Aluminum blank shall be treated as specified in the Standard Specifications.

Markers and plates shall be fastened with 5/16" galvanized bolts and washers in addition to Stainless-Steel washers with Neoprene rubber gaskets attached on front face of each plate.

Letters and numbers shall be of two coats of Black Marine Enamel.



NOTE:

Federal Aid Markers should be placed at the terminus of suffix designated sections. Intermediate letter designated markers of adjacent sections located within the limits of new improvements should be moved to the terminus of the new work. The same procedure should be followed on each successive improvement until all markers for letter designated sections are eventually eliminated.

APPROVED: _____ DATE: 11/2/67

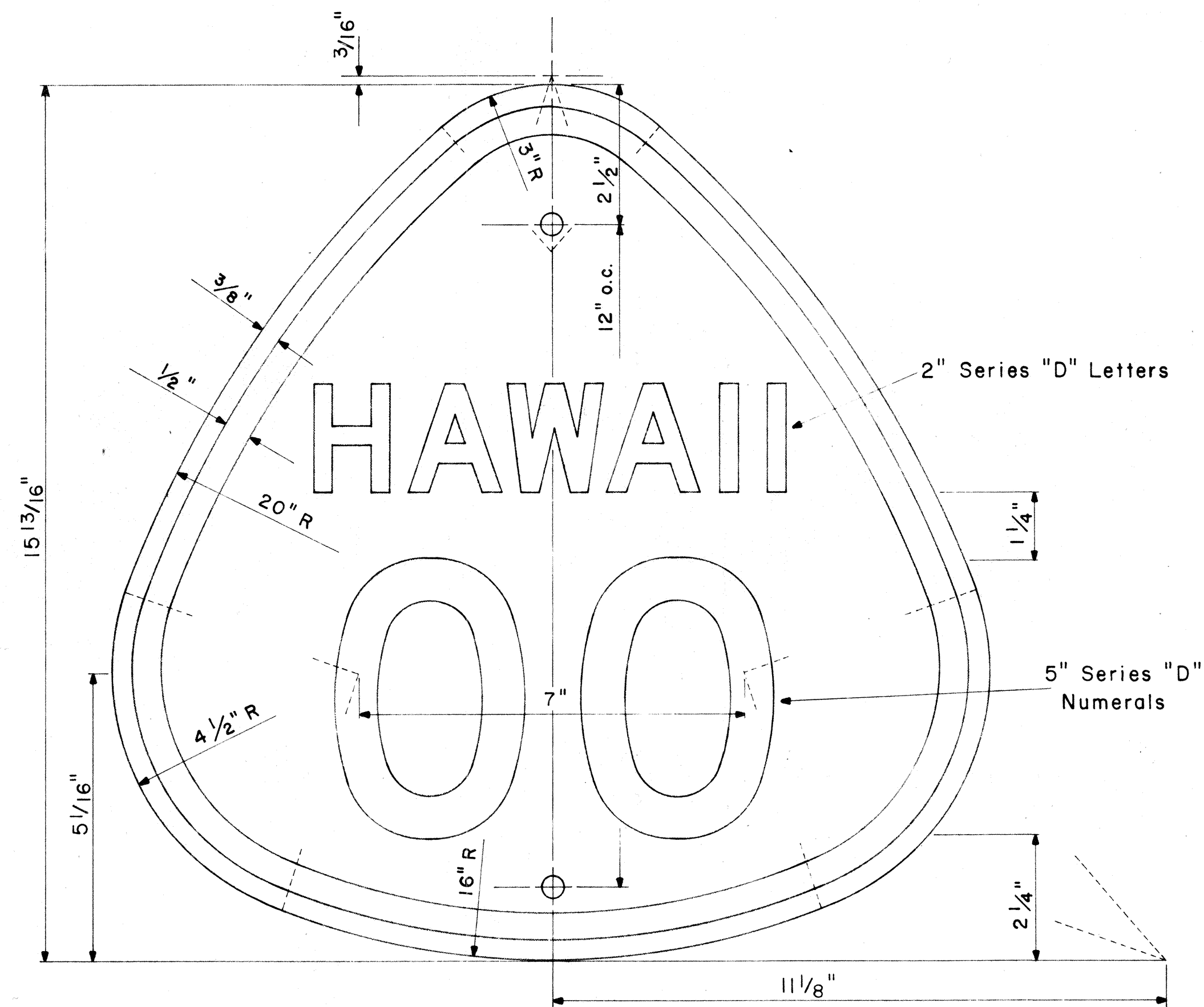
DIRECTOR OF TRANSPORTATION

DECEMBER 8, 1964
REVISED: FEBRUARY 25, 1964

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
F.A. MARKER
AND
MISCELLANEOUS SIGN
DETAILS

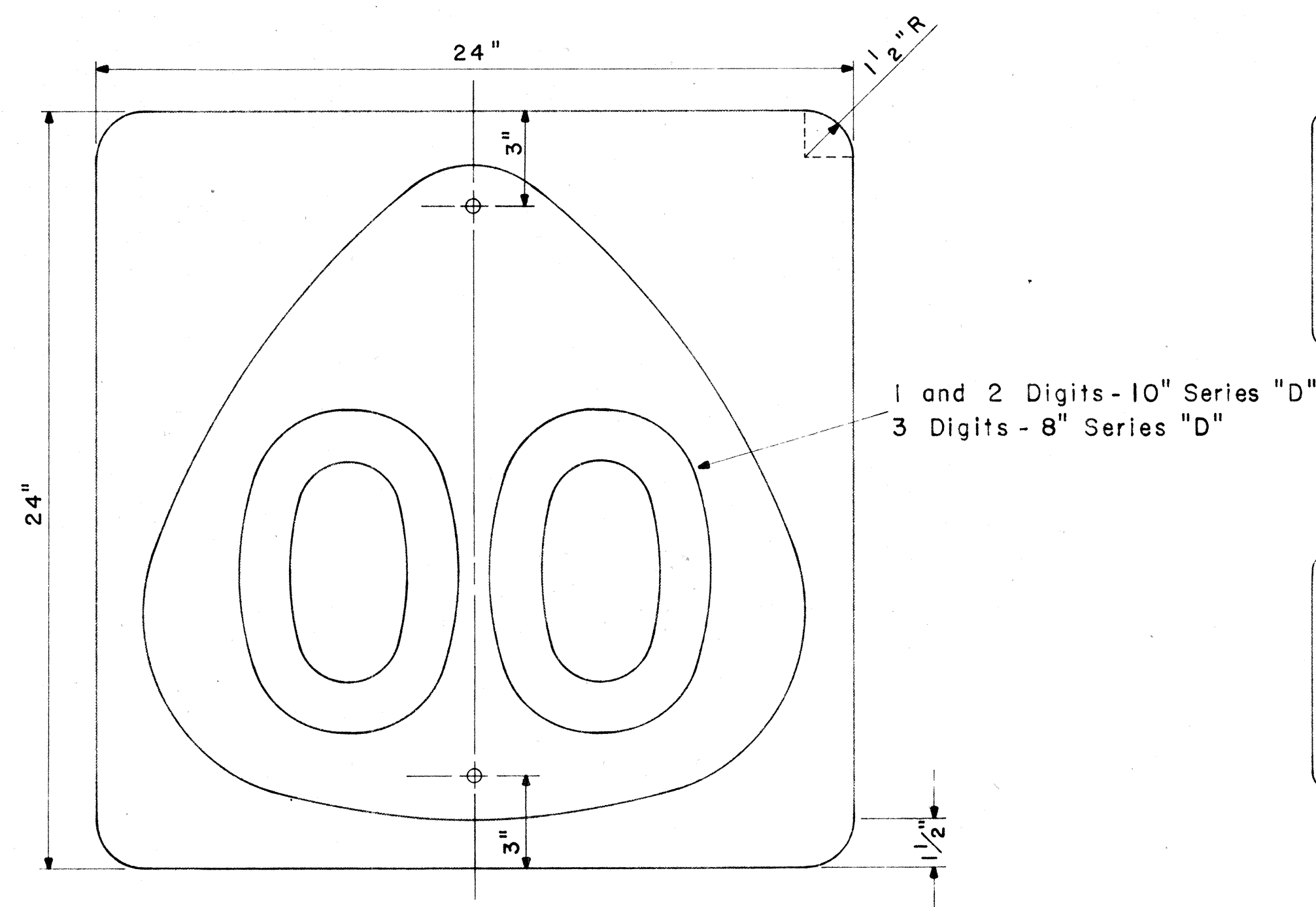
Scale: As Shown

SHEET No. 3 OF 6 SHEETS



**STATE ROUTE MARKER
M1-3(00)**

Scale: $\frac{1}{2}$ " = 1"

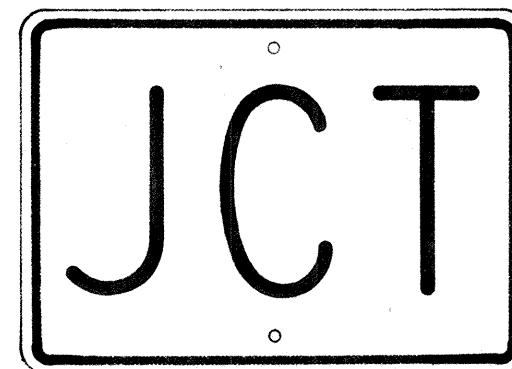


**STATE ROUTE MARKER
M1-4(00)**

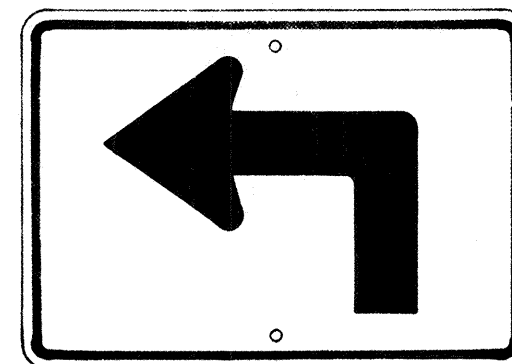
Scale: $\frac{1}{4}$ " = 1"

NOTE:

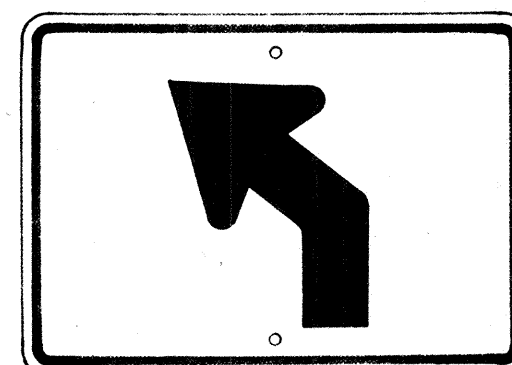
Multiply all dimensions of State Route Marker M1-3 by 1.3 for the dimensions of the shield for M1-4.



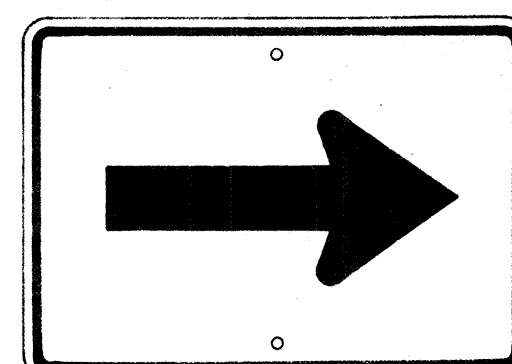
M2-1
21" x 15"



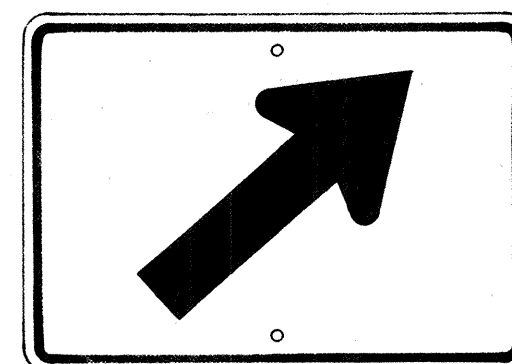
M3-1-L
* **M3-1-R**
21" x 15"



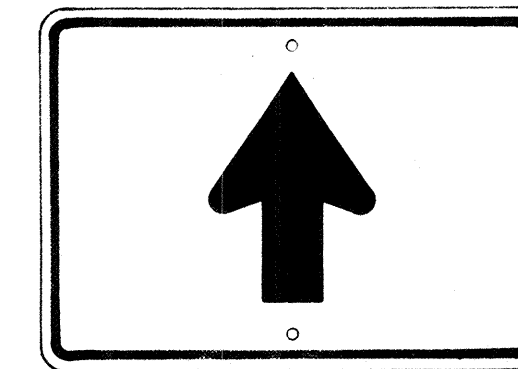
M3-2-L
* **M3-2-R**
21" x 15"



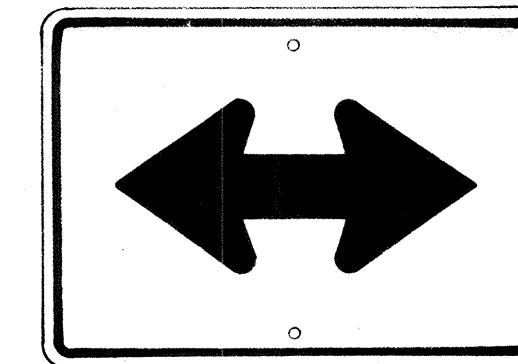
M4-1
21" x 15"



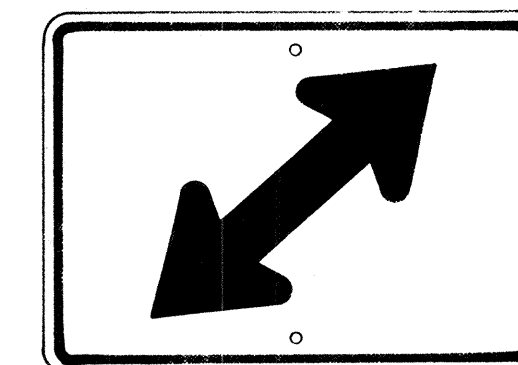
M4-2-R
* **M4-2-L**
21" x 15"



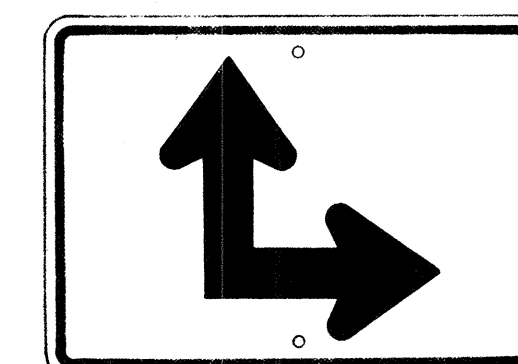
M4-3
21" x 15"



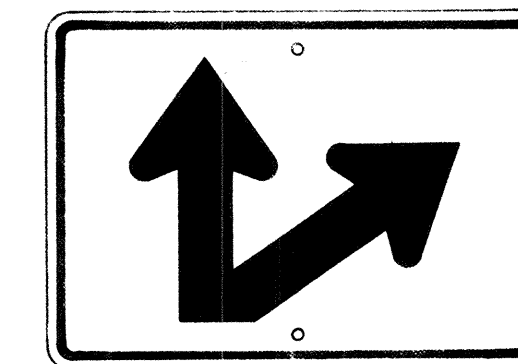
M4-4
21" x 15"



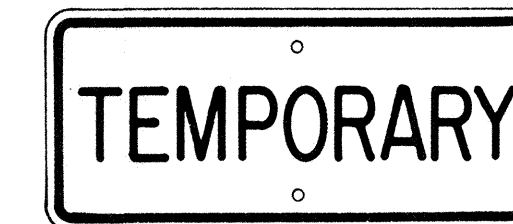
M4-5-R
* **M4-5-L**
21" x 15"



M4-6-R
* **M4-6-L**
21" x 15"



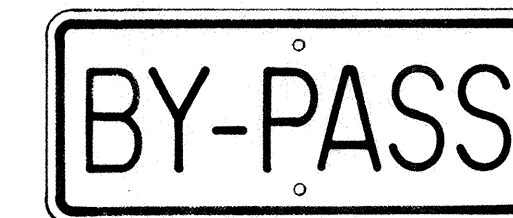
M4-7-R
* **M4-7-L**
21" x 15"



M5-1
21" x 9"



M5-2
21" x 9"



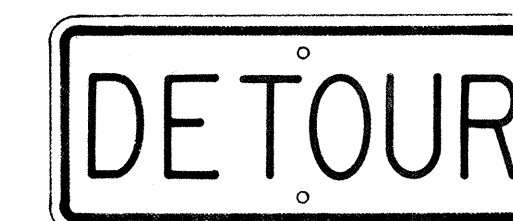
M5-3
21" x 9"



M5-4
21" x 9"



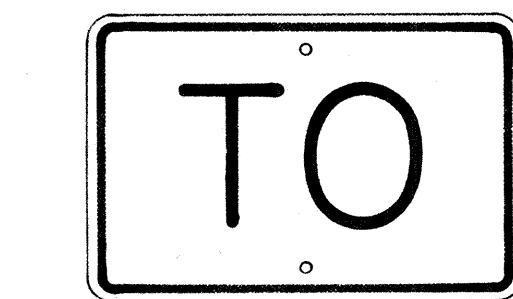
M5-5
21" x 9"



M5-6
21" x 9"



M6-1-N
21" x 9"
(See Note 6)



M7-1
18" x 12"

GENERAL NOTES

- The shape, color, dimensions, symbols, wording, lettering and reflectorizing of all signs shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," dated June 1961 and the BPR manual "Standard Highway Signs," dated September 1961, unless otherwise specified.
- All letters and figures shall conform to the manual "Standard Alphabets for Highway Signs," Dept. of Commerce, Bureau of Public Roads, 1952.
- All markers shall be reflectorized unless otherwise specified.
- All markers shall have $\frac{3}{8}$ " bolt holes drilled at appropriate locations unless otherwise specified.
- All markers shall have a black legend on a white background unless otherwise specified.
- Sign message of Cardinal Direction Marker (M6-1) shall be denoted by the following suffixes:
M6-1-N : NORTH
M6-1-E : EAST
M6-1-S : SOUTH
M6-1-W : WEST
- Auxiliary markers denoted with the suffix "I": (M4-1-I) shall have a white legend on a blue background.
- Cardinal Direction Marker (M6-1) with suffix I (3) shall have a white legend on a blue background and shall be 30" x 15" in size.
- For M1-3 and M1-4 signs, number in () indicates route number and shall be as shown on the plan.

AUXILIARY MARKERS

Scale: $\frac{1}{8}$ " = 1"

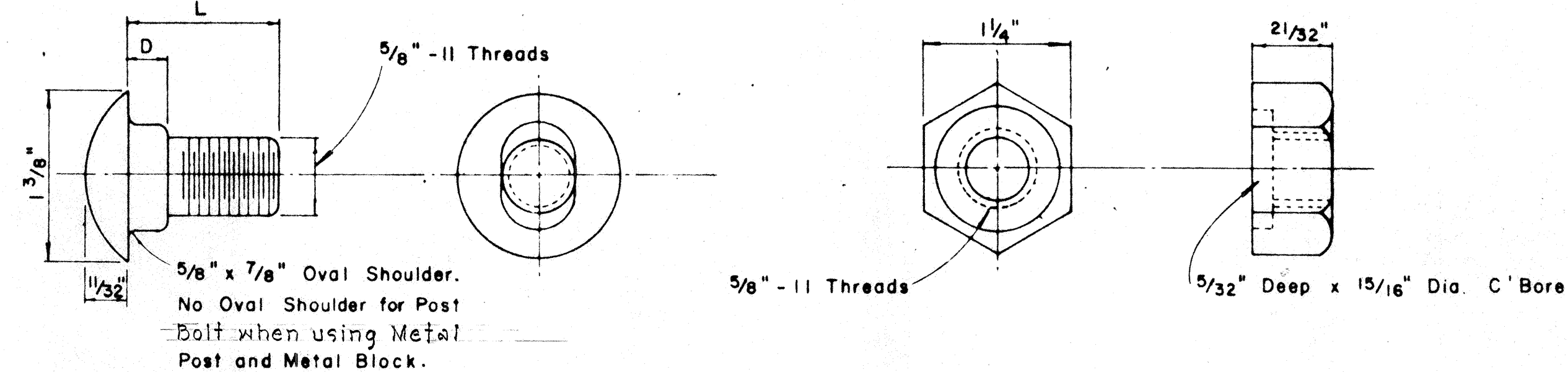
* NOTE:

Signs shall be similar but opposite in direction.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
STATE ROUTE MARKERS
AND
AUXILIARY MARKERS
Scale: As Noted
SHEET NO. 4 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5-0330(2)	1967	10	47

BOLT DIMENSIONS		
TYPE BOLT	D	L
Splice Bolt	5/16"	1 1/4"
Post Bolt for Conc. Post w/ Double Wood Blocks	3/32"	2 5"
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"	1 8"

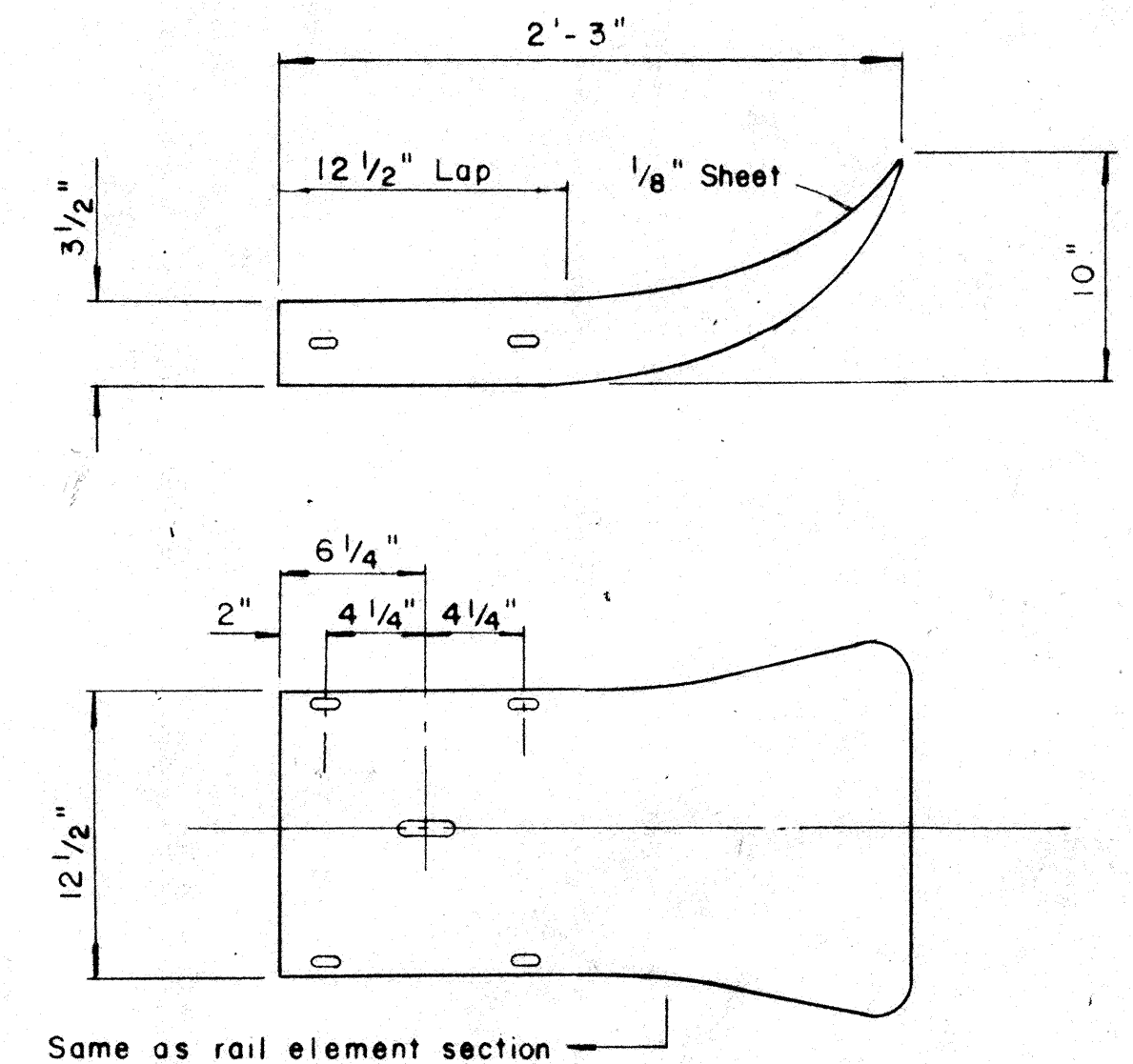
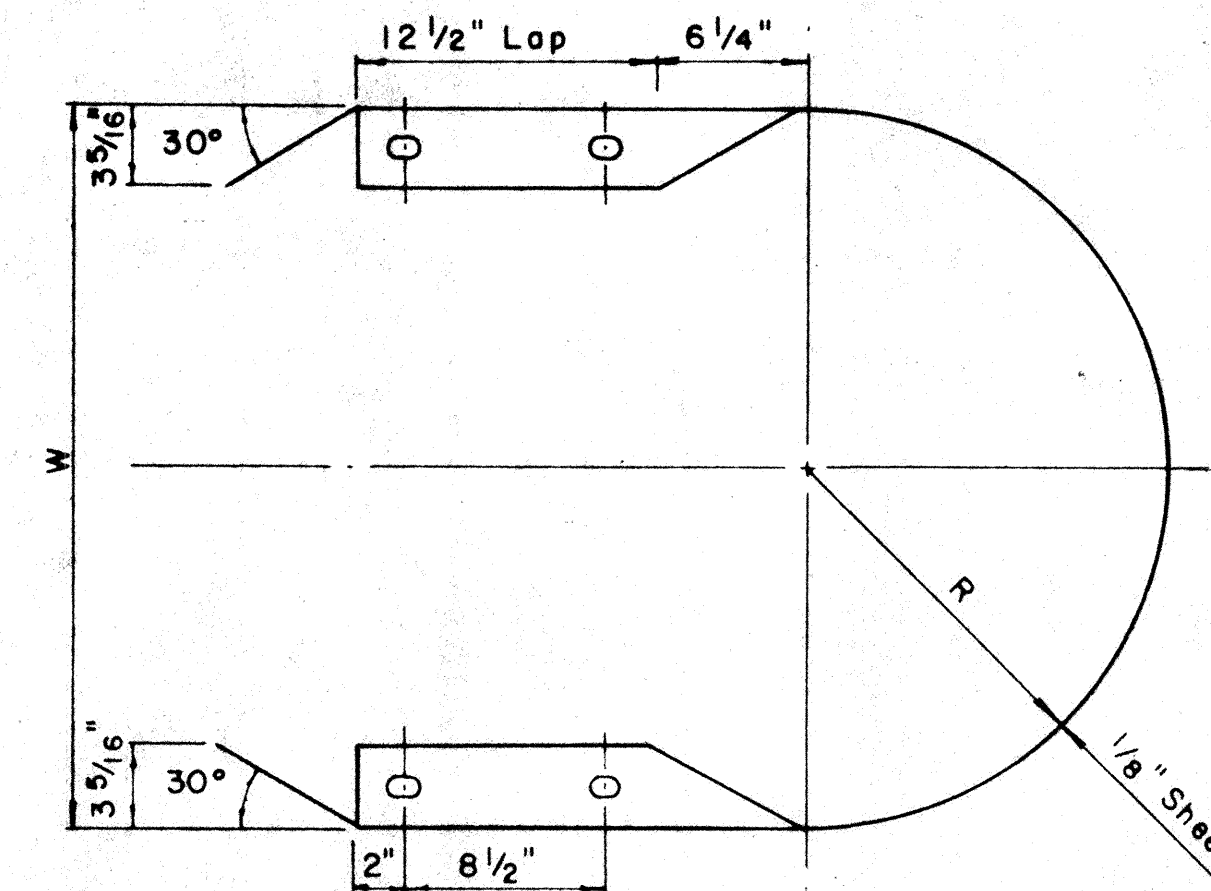


SPLICE RAIL AND POST BOLTS

Scale: Full Size

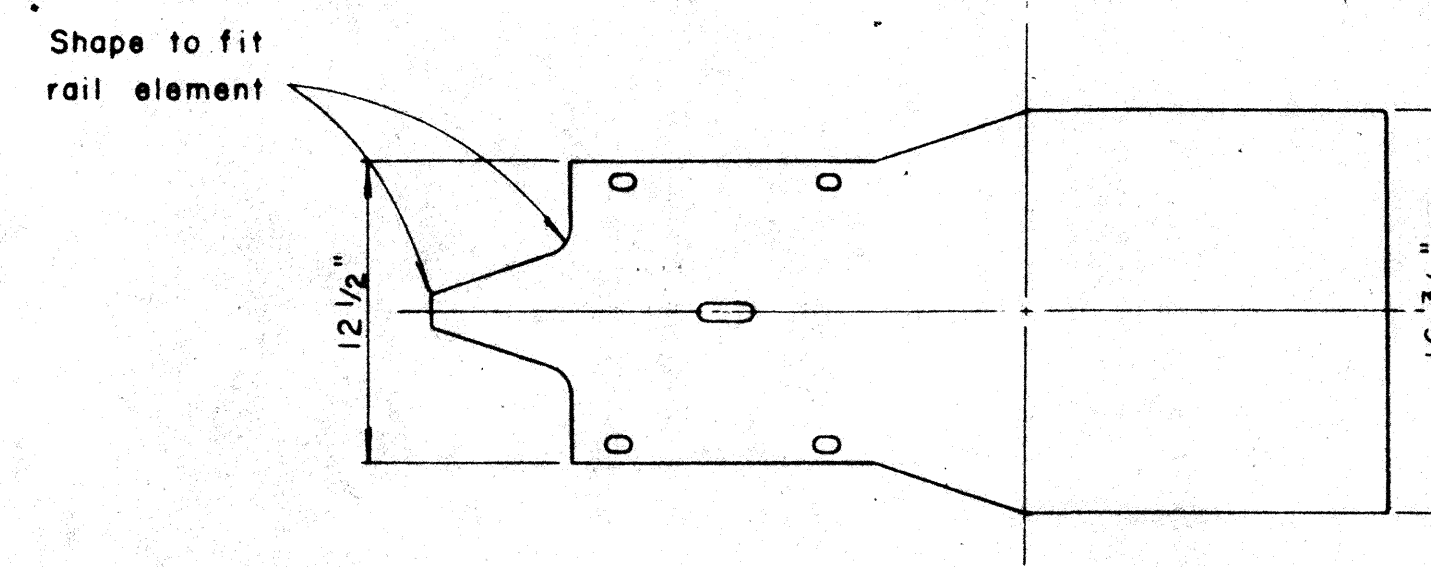
HEXAGON NUT

Scale: Full Size



FLARED END

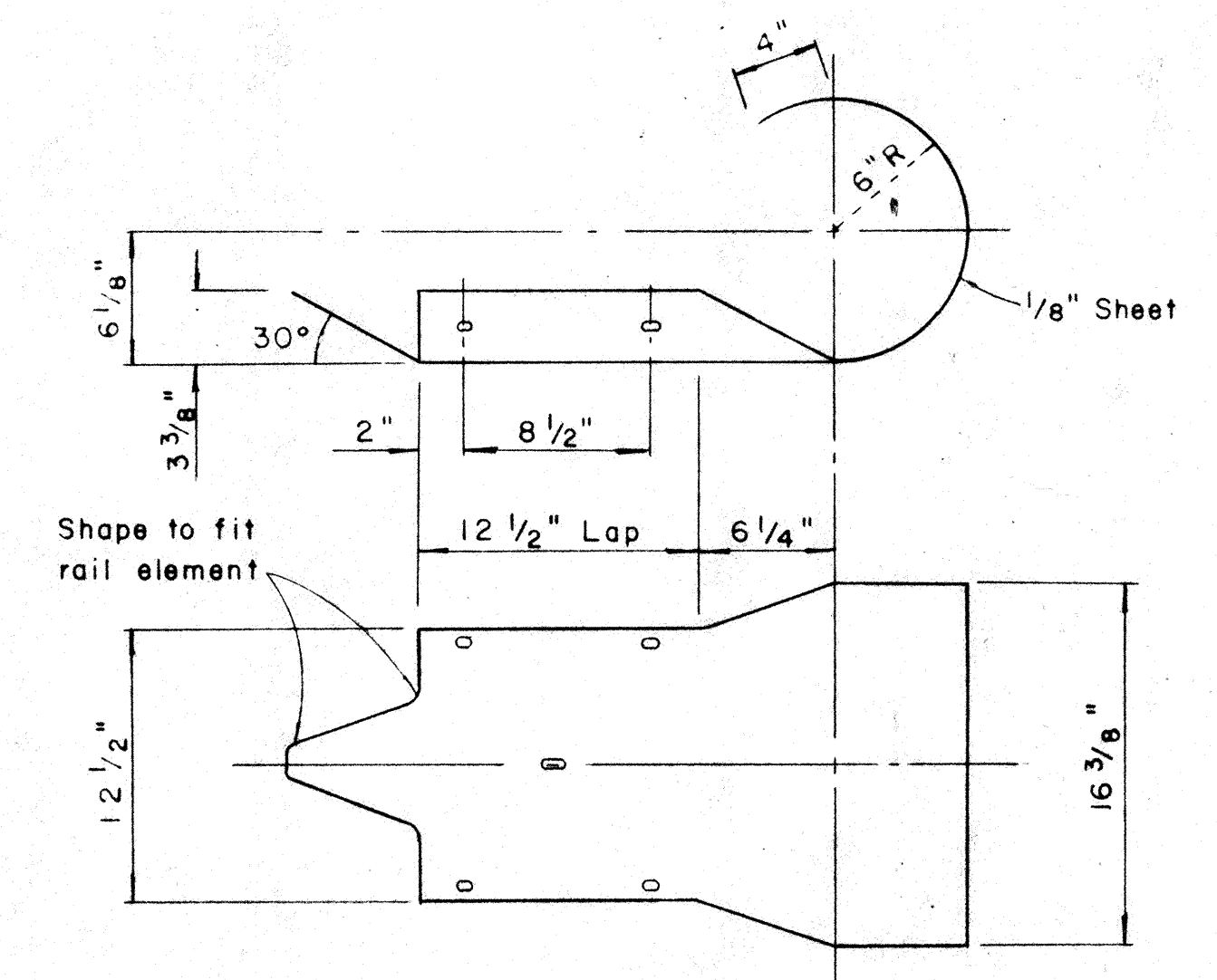
Scale: $1\frac{1}{2}'' = 1' - 0''$



MEDIAN END

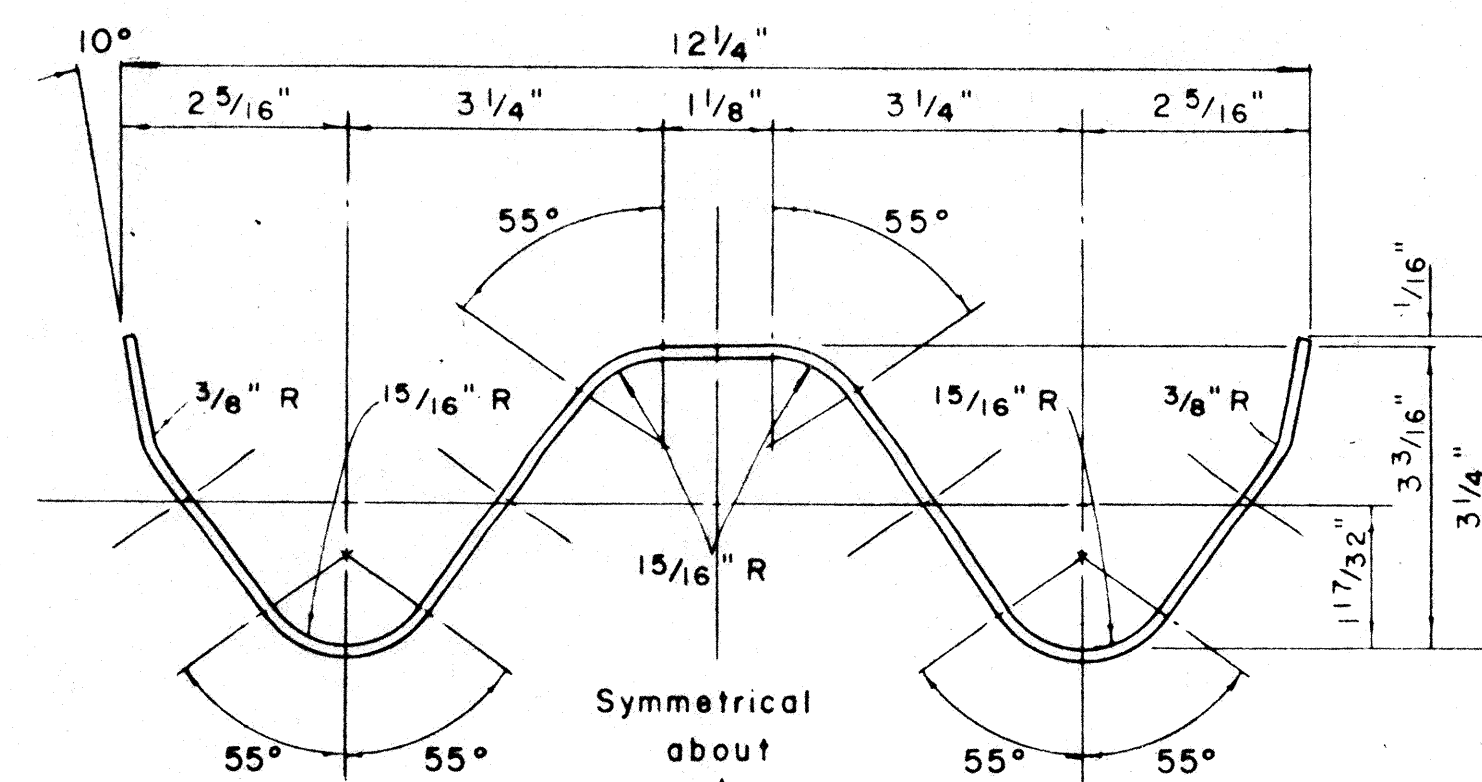
Scale: $1\frac{1}{2}" = 1' - 0"$

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"



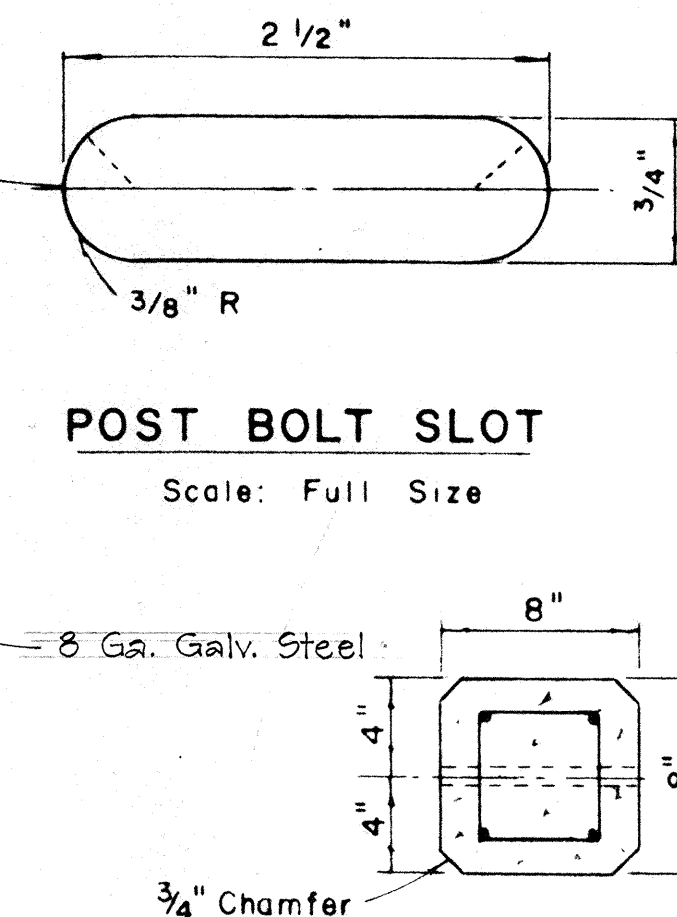
CURVED END

Scale: $1\frac{1}{2}'' = 1' - 0''$



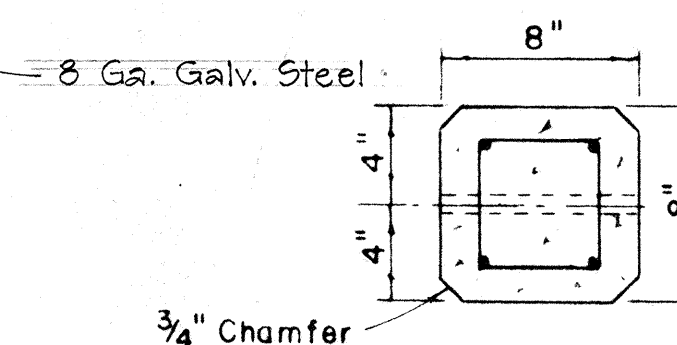
RAIL ELEMENT SECTION

Scale: 6" = 1'-0"



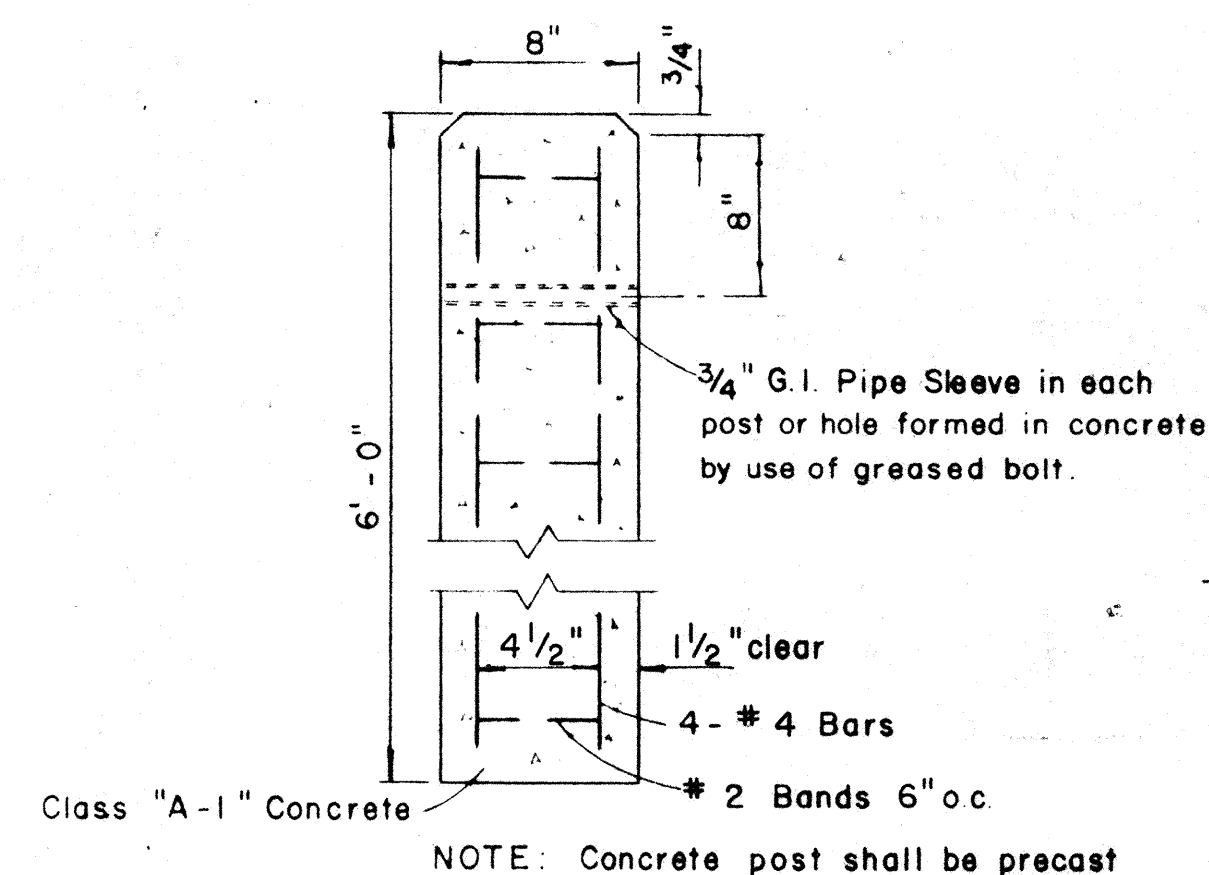
POST BOLT SLOT

Scale: Full Size



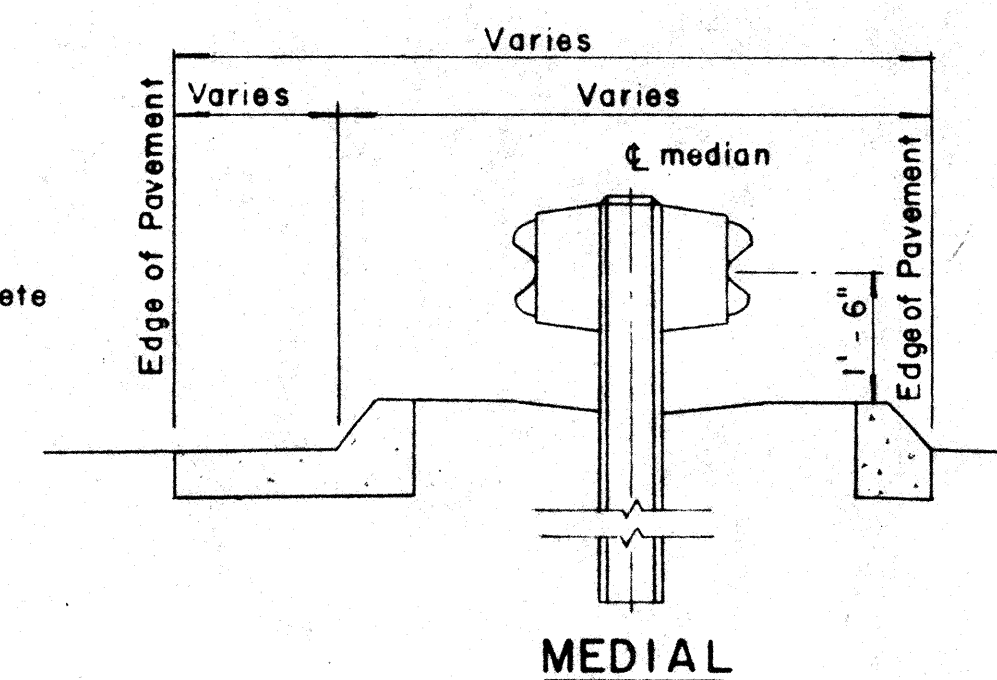
RAIL WASHER

Scale: Full Size

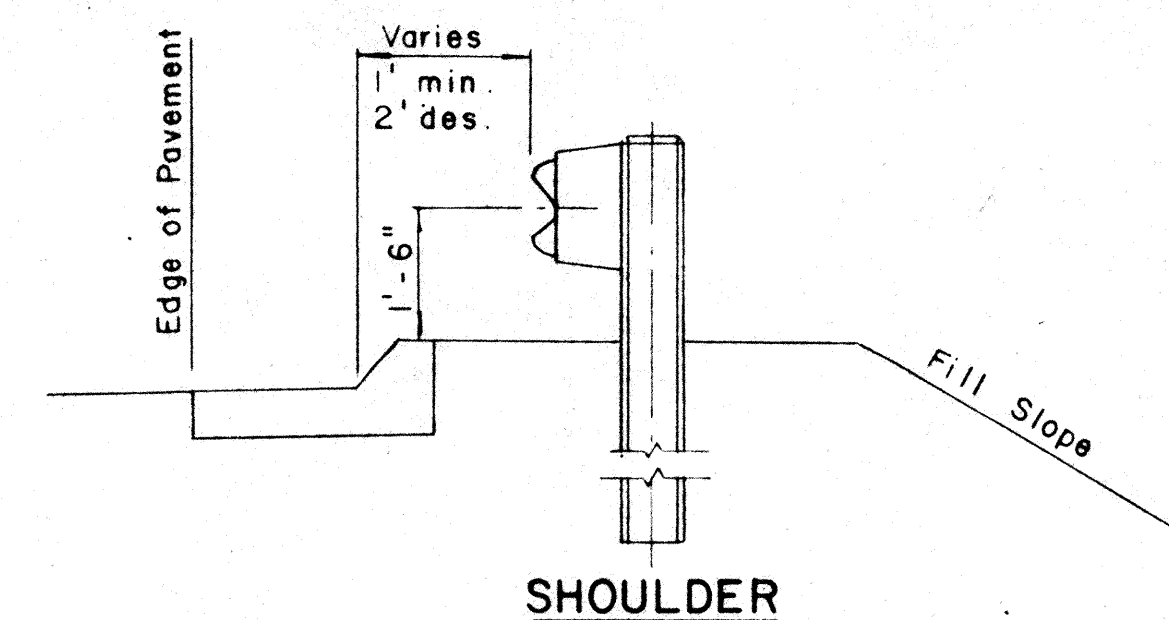


DETAIL OF CONCRETE POST

Scale: $1\frac{1}{2}" = 1' - 0"$



MEDIAL



SHOULDER

TYPICAL GUARD RAIL DETAIL

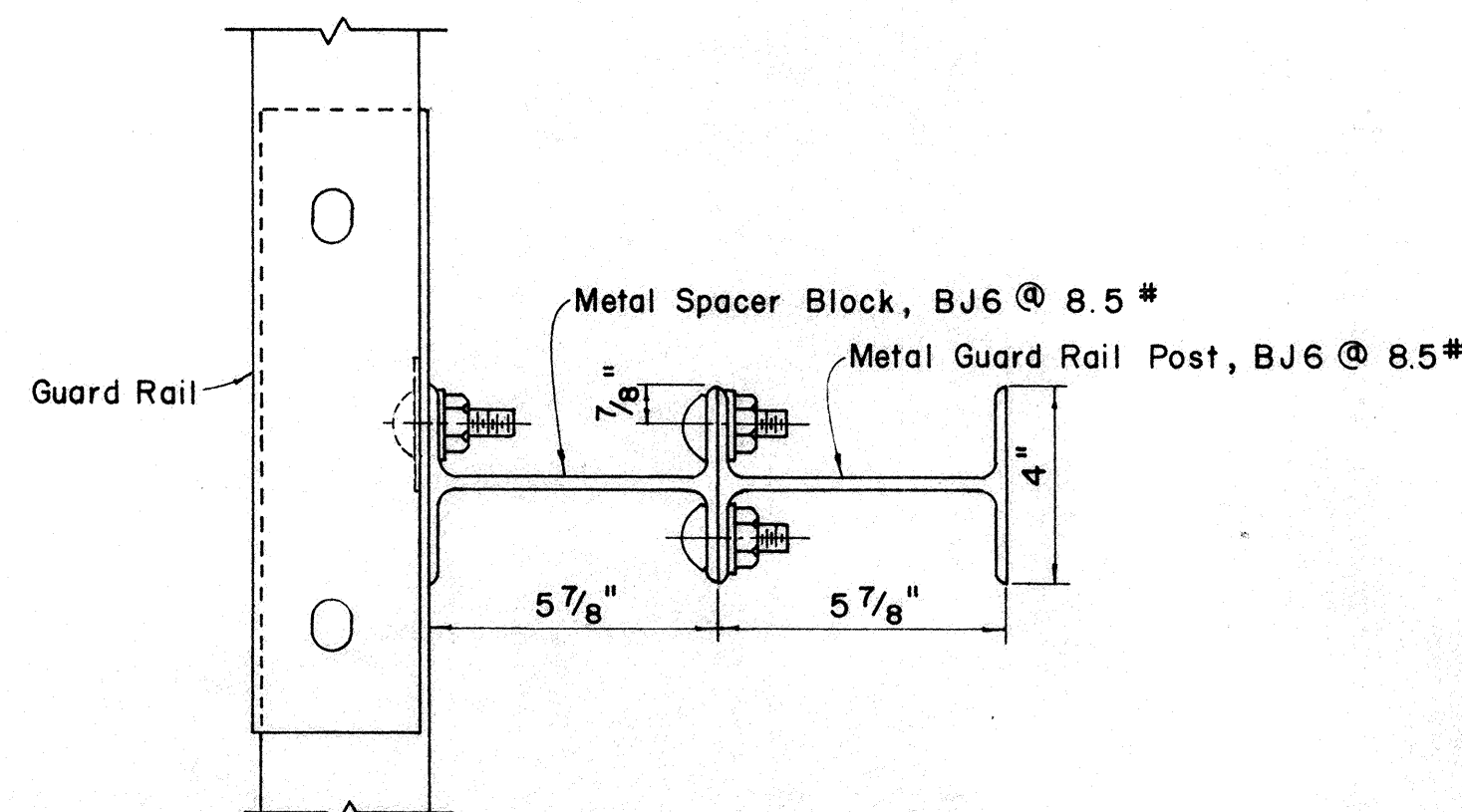
Scale: $\frac{1}{2}" = 1' - 0"$

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

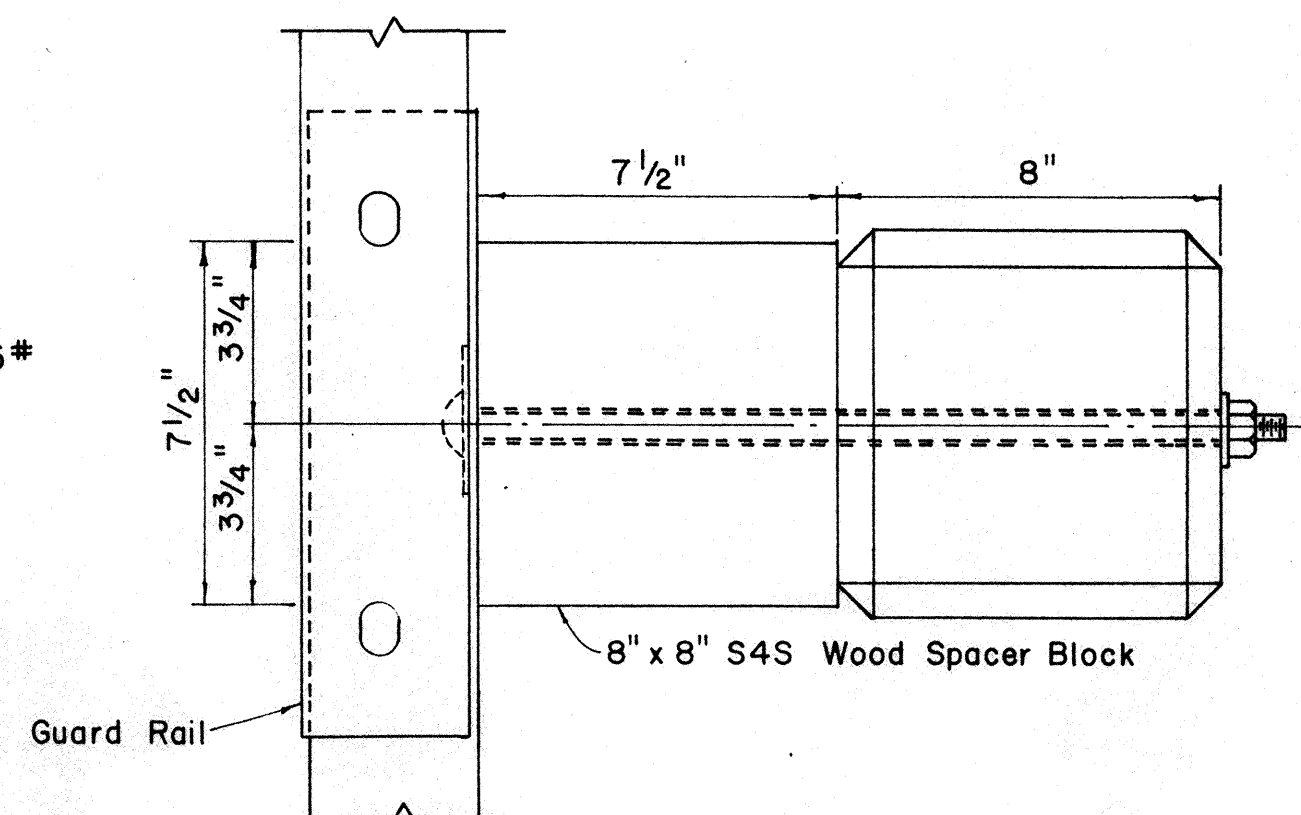
STANDARD DETAILS

METAL GUARD RAIL

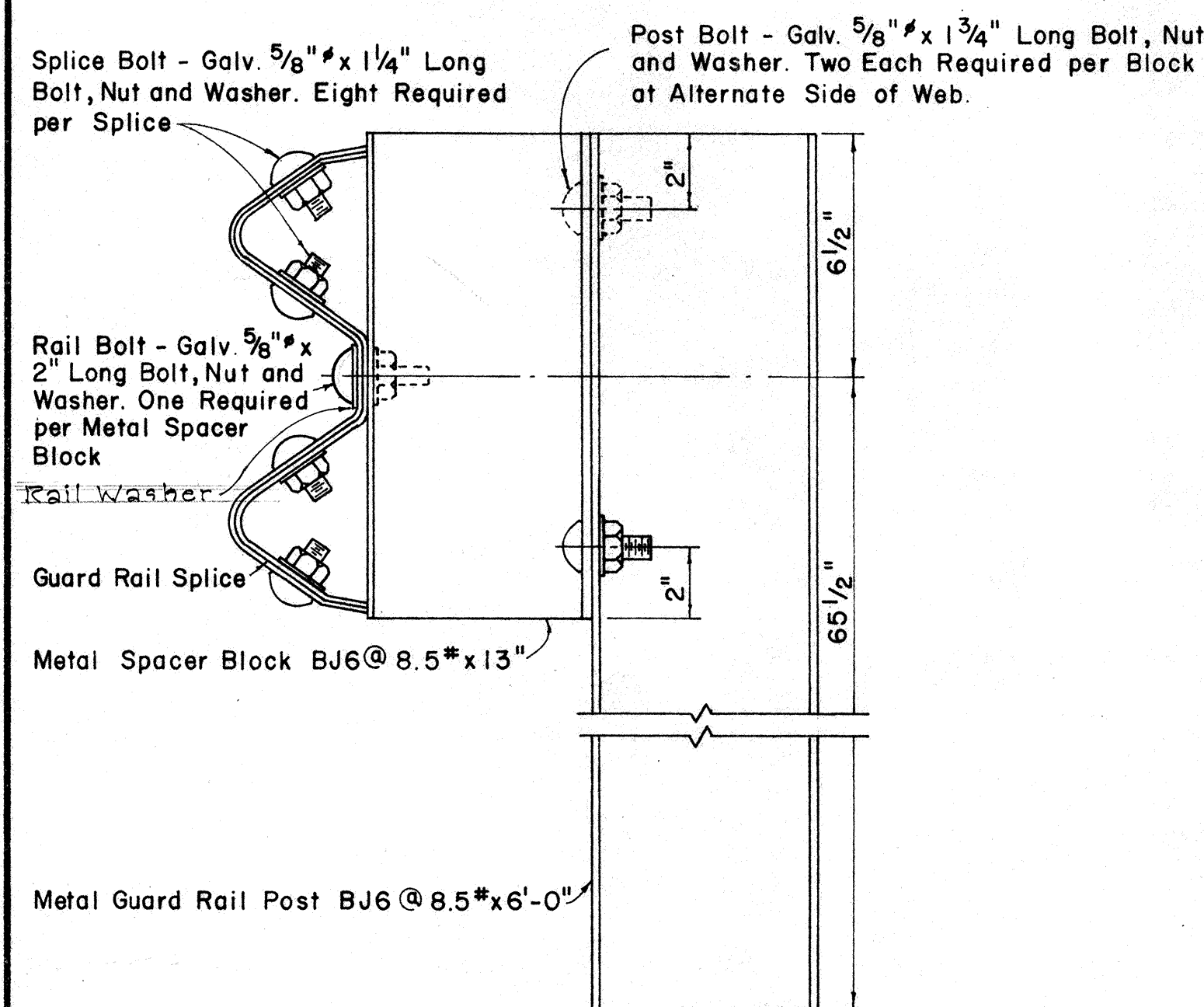
SHEET No. 5 OF 6 SHEETS



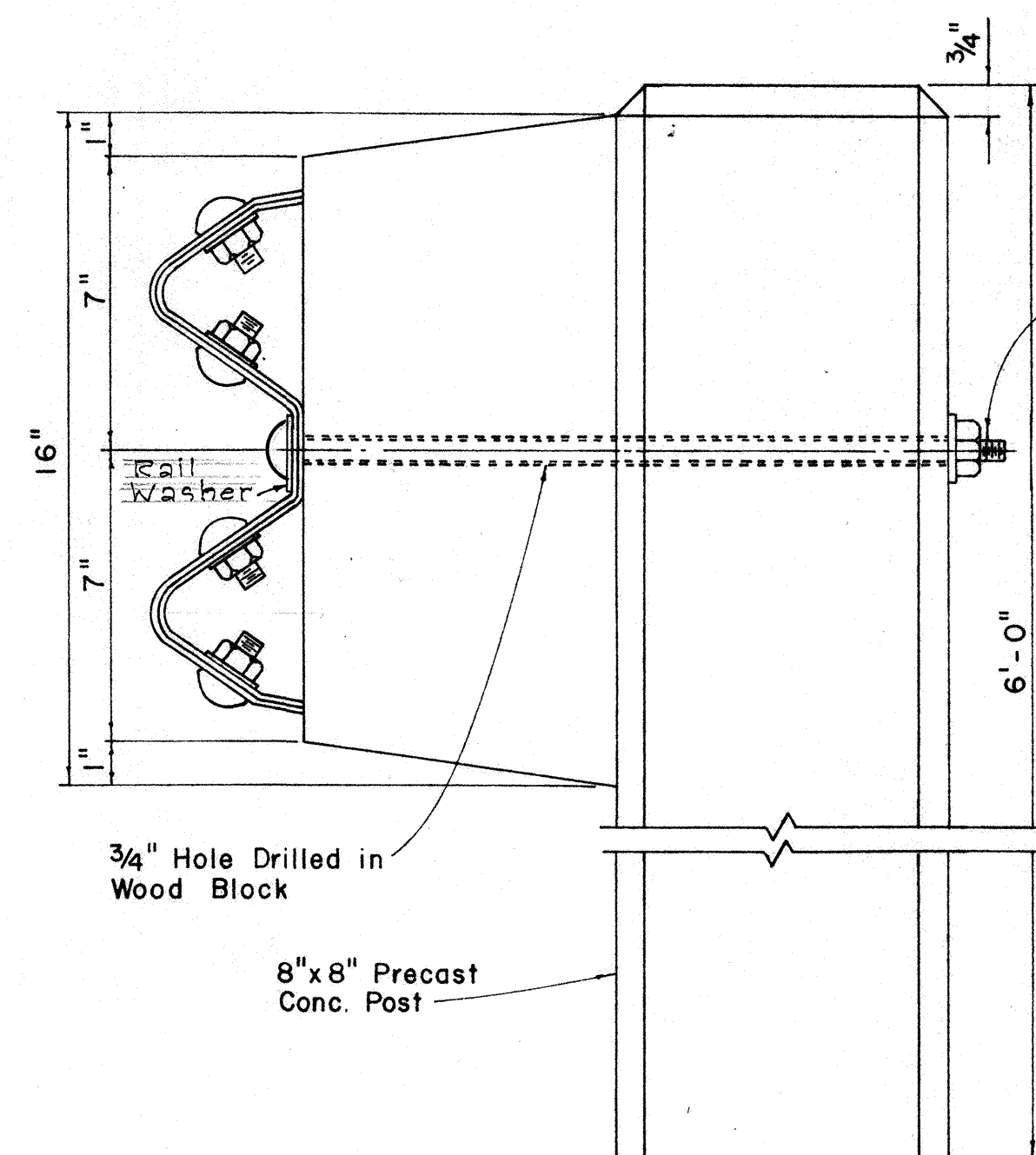
PLAN



PLAN



NOTE: Omit Rail Splice Bolt Washers



Post Bolt - Galv. 5/8" x 1 3/4" Long Bolt, Nut and Washer. One Required per Post. See Note Below.

SINGLE GUARD RAIL ON METAL POST
WITH METAL SPACER BLOCK

Scale: 3" = 1' - 0"

SINGLE GUARD RAIL ON PRECAST
CONCRETE POST WITH WOOD SPACER BLOCK

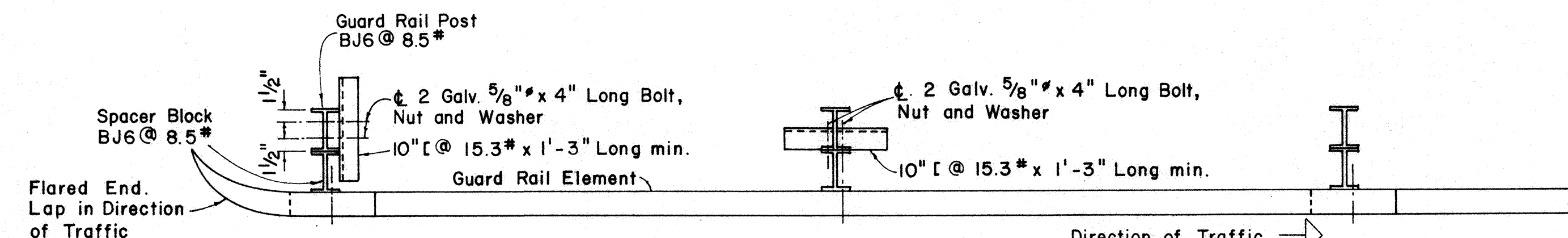
Scale: 3" = 1' - 0"

NOTE:

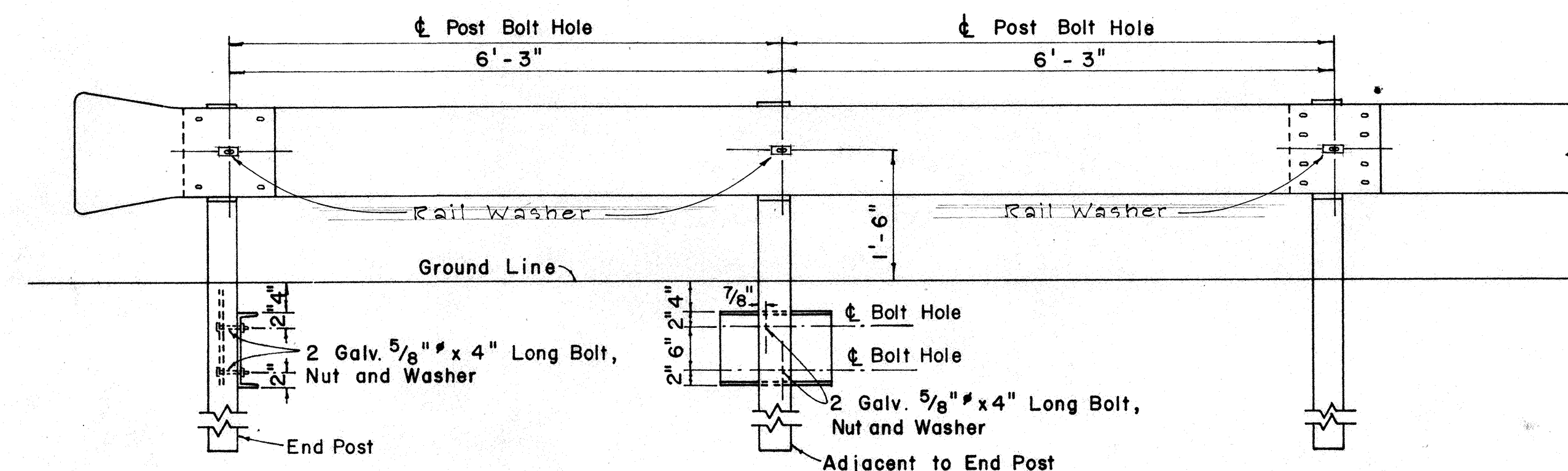
Single Guard Rails Shown. For Double Guard Rails Additional Spacer Blocks and Rail Elements Required on Opposite Side of Posts. See Bolt Schedule for Required Bolt Lengths.

DETAILS FOR SINGLE GUARD RAIL

Scale: As Shown



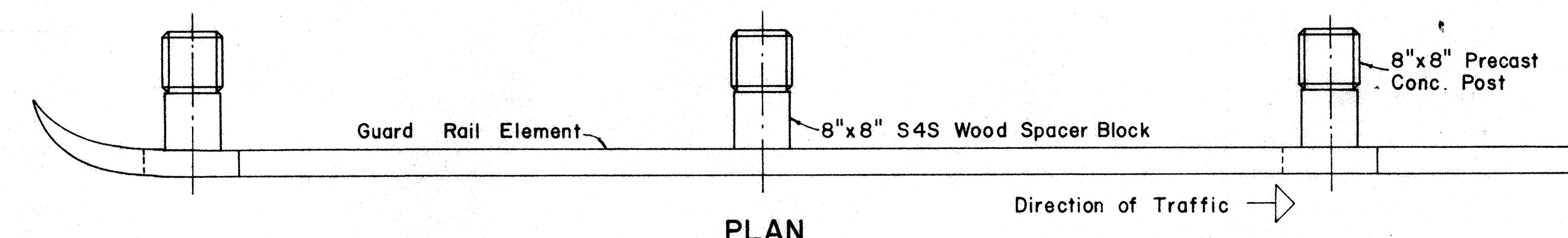
PLAN



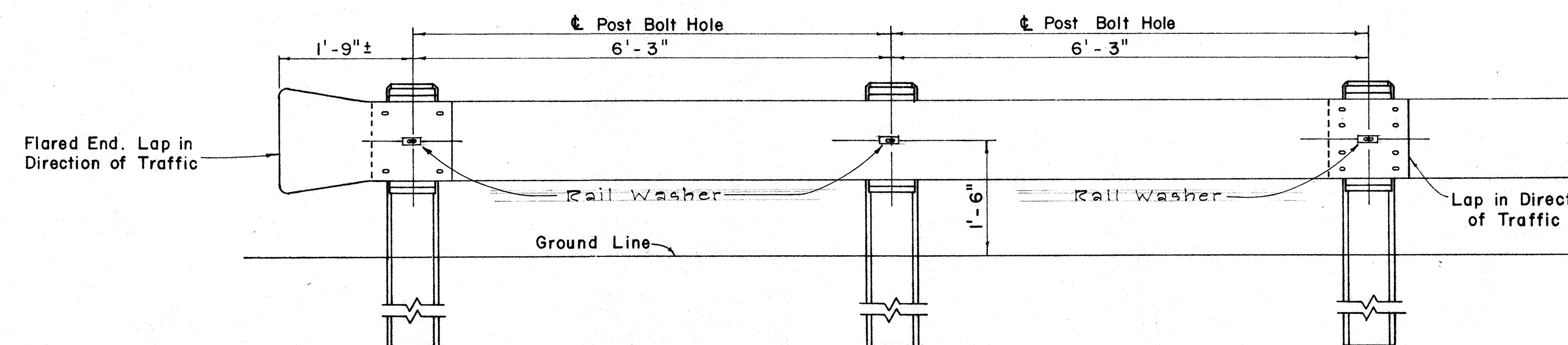
ELEVATION

METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK

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



PLAN



ELEVATION

METAL GUARD RAIL ON CONCRETE POST WITH WOOD SPACER BLOCK

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

METAL GUARD RAIL