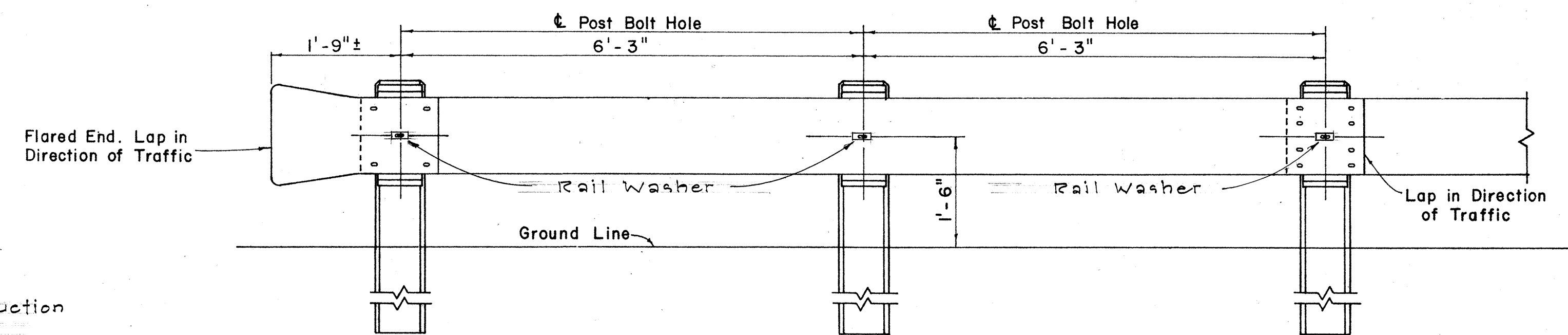
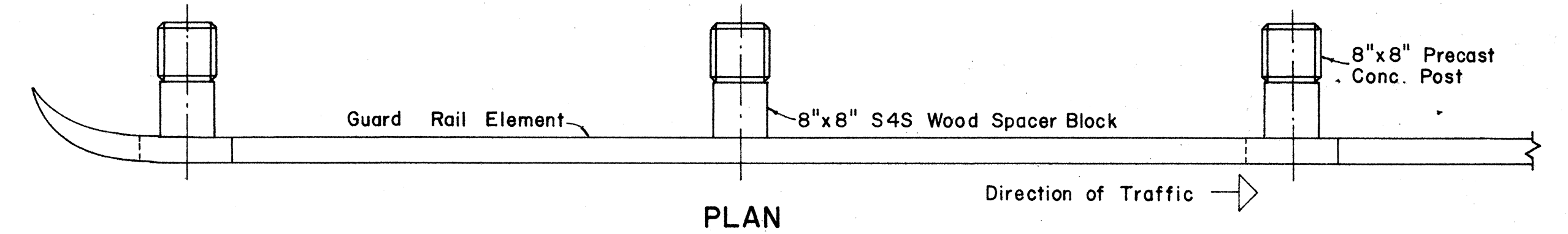


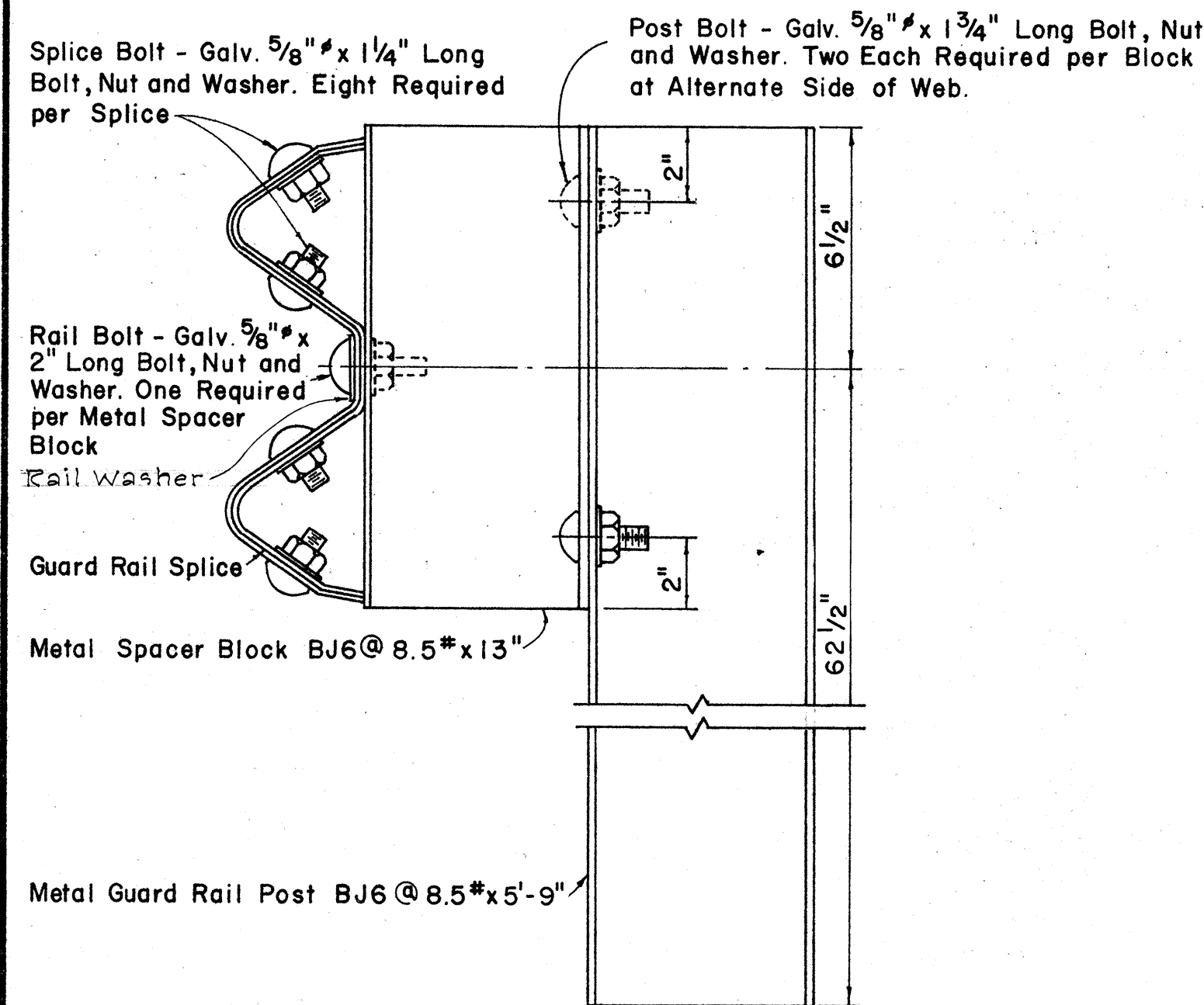
METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK

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

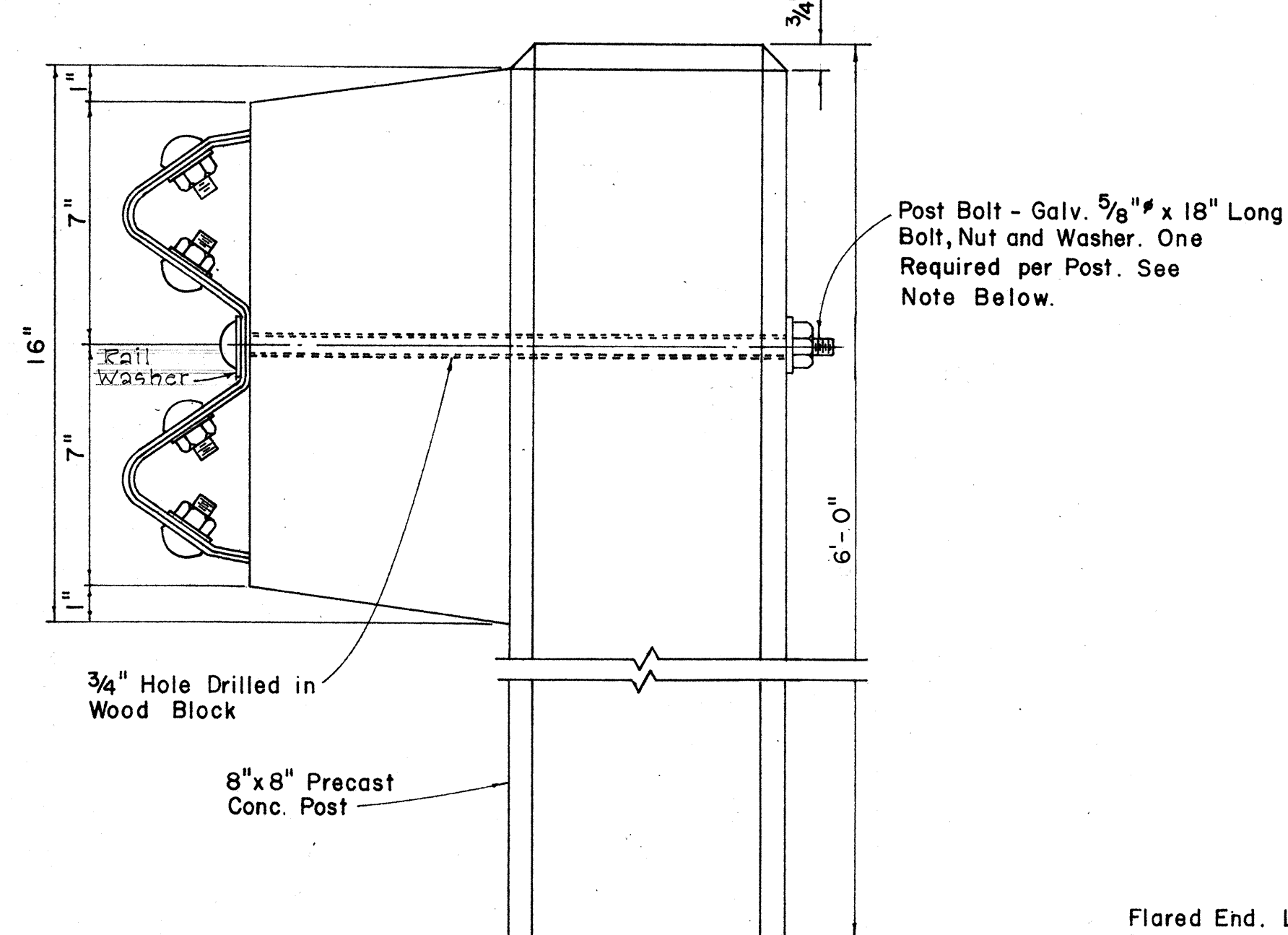


METAL GUARD RAIL ON CONCRETE POST WITH WOOD SPACER BLOCK

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



NOTE: Omit Rail Splice Bolt Washers.



Wood Blocks shall be Laminated Douglas Fir, "Construction Grade Joists and Planks", 1250 c, or "Dense Structural Redwood - Posts and Timbers", 1450 c, pressure treated with preservative as specified in the Standard Specifications.

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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

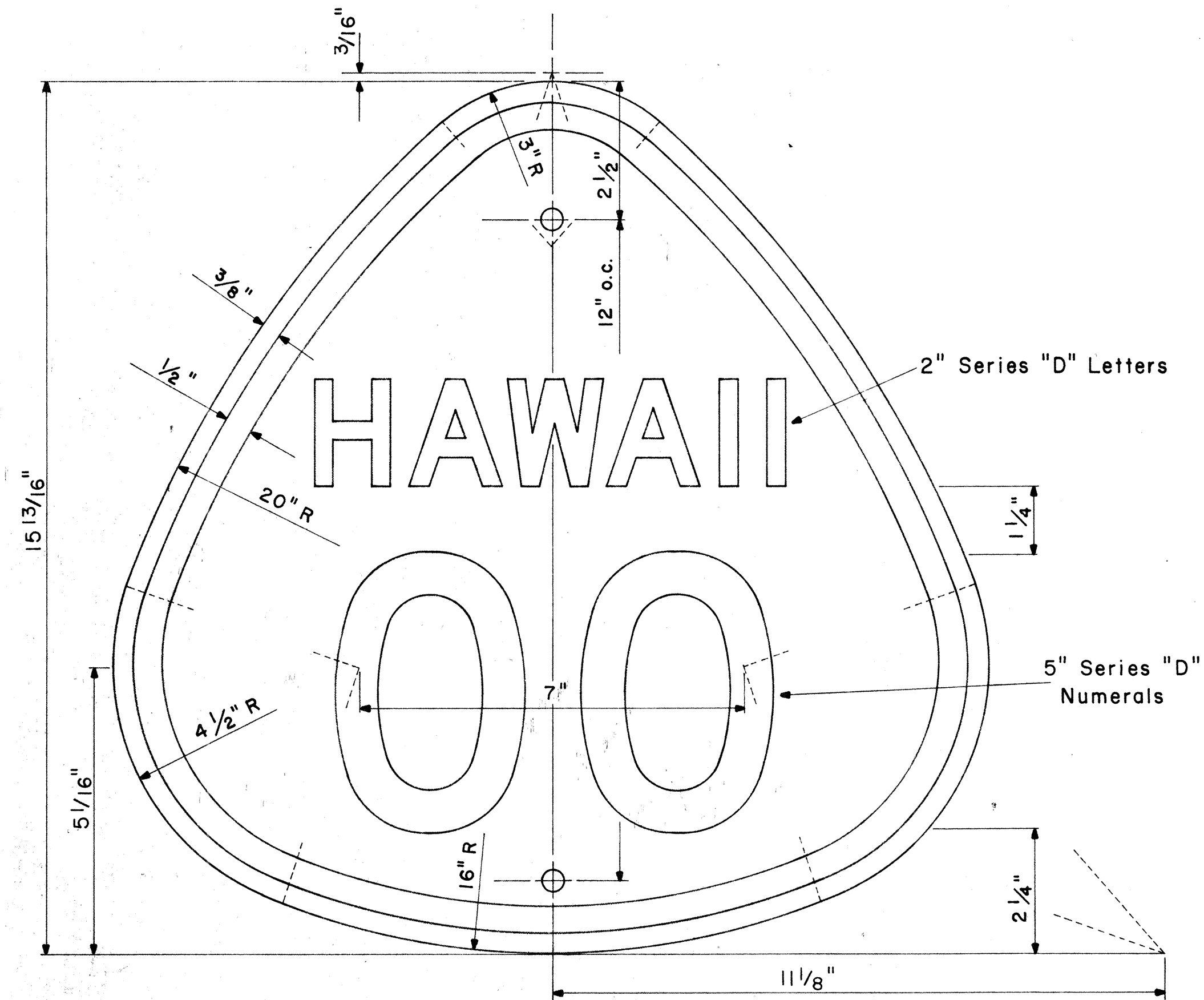
## STANDARD DETAILS METAL GUARD RAIL

MOANALUA RD-TRUCK CLIMBING LANE  
PROJ. NO. U-072-1(21)

Scale: As Noted January 1967

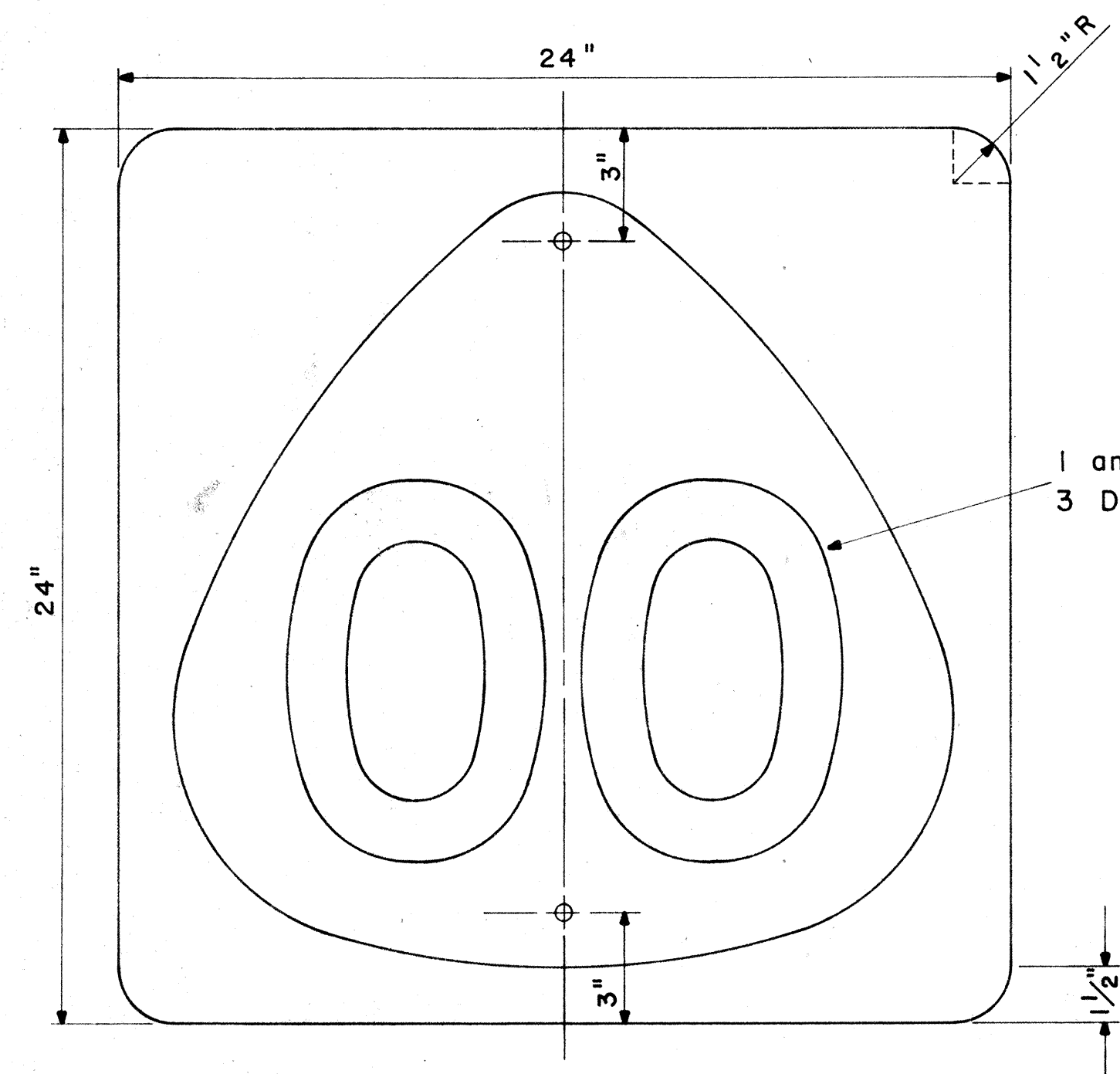
SHEET No. 2 OF 5 SHEETS





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

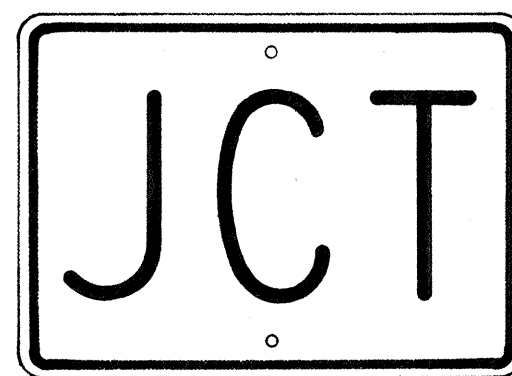
Scale:  $\frac{1}{2}$ " = 1"



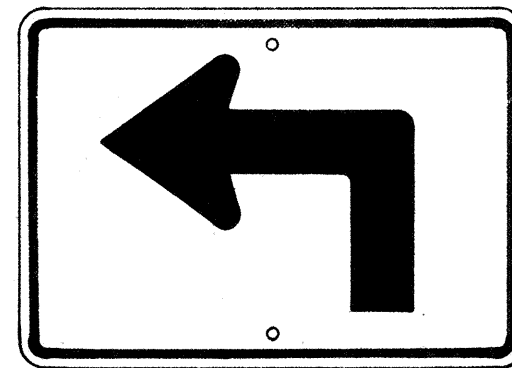
**STATE ROUTE MARKER  
M1-4(OO)**

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

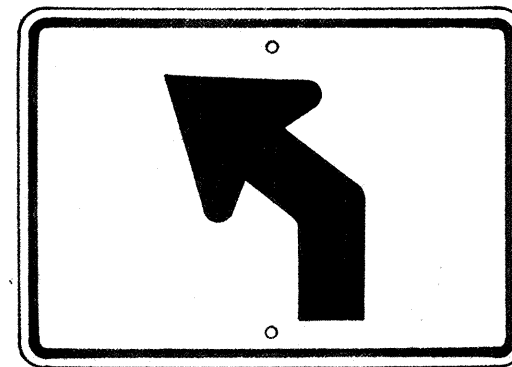
NOTE:  
Multiply all dimensions of State Route Marker M1-3 by 1.3 for the dimensions of the shield for M1-4.



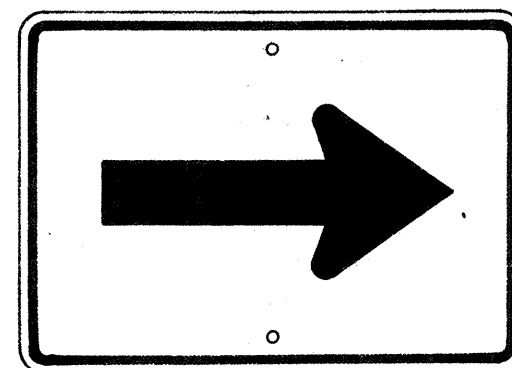
**M2-1**  
21" x 15"



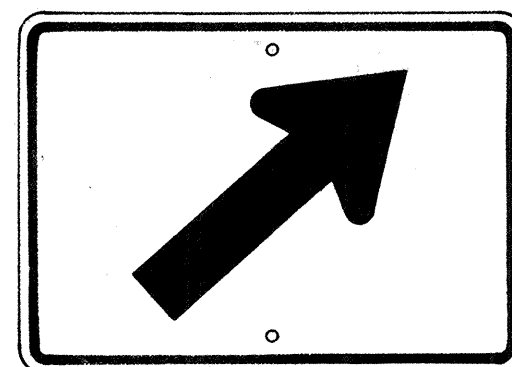
**M3-1-L**  
\* **M3-1-R** ↗  
21" x 15"



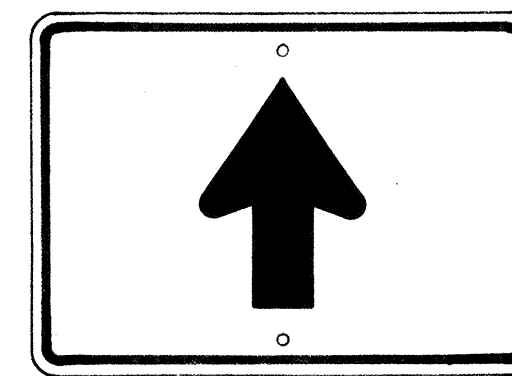
**M3-2-L**  
\* **M3-2-R** ↖  
21" x 15"



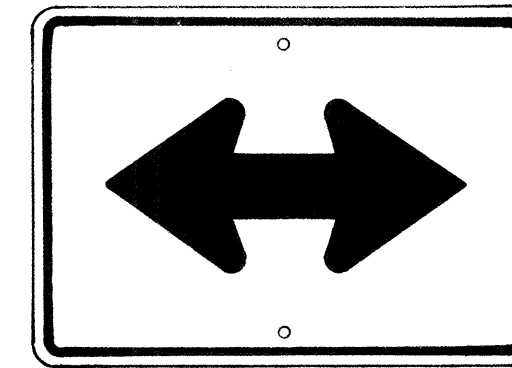
**M4-1**  
21" x 15"



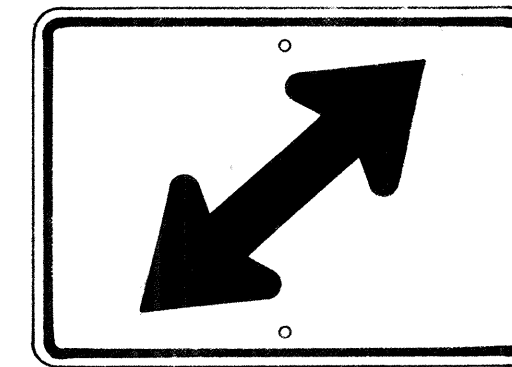
**M4-2-R**  
\* **M4-2-L** ↙  
21" x 15"



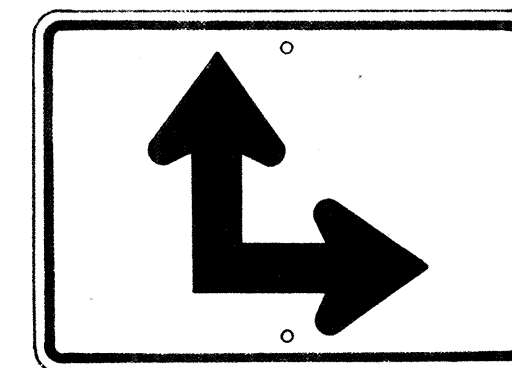
**M4-3**  
21" x 15"



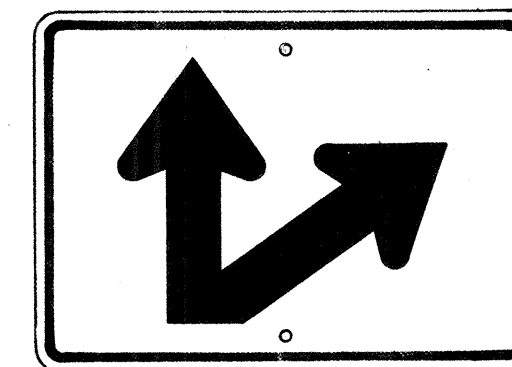
**M4-4**  
21" x 15"



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



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

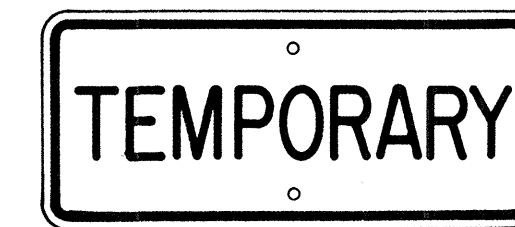


**M4-7-R**  
\* **M4-7-L** ↙  
21" x 15"

**AUXILIARY MARKERS**

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

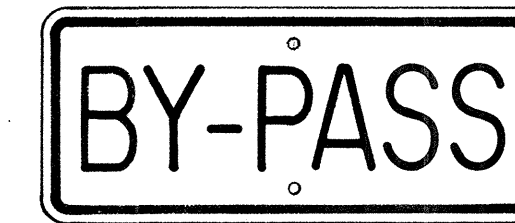
\* NOTE:  
Signs shall be similar but opposite in direction.



**M5-1**  
21" x 9"



**M5-2**  
21" x 9"



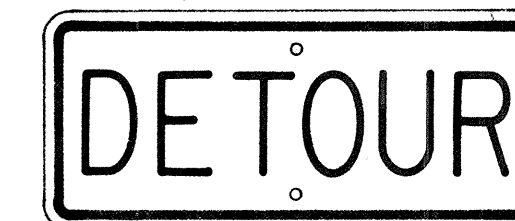
**M5-3**  
21" x 9"



**M5-4**  
21" x 9"



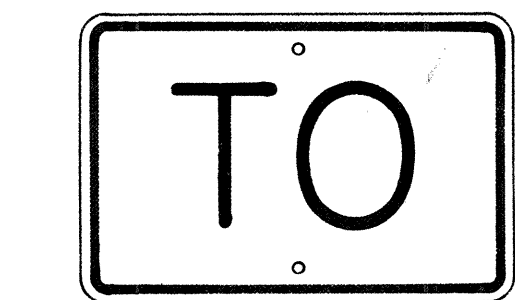
**M5-5**  
21" x 9"



**M5-6**  
21" x 9"



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

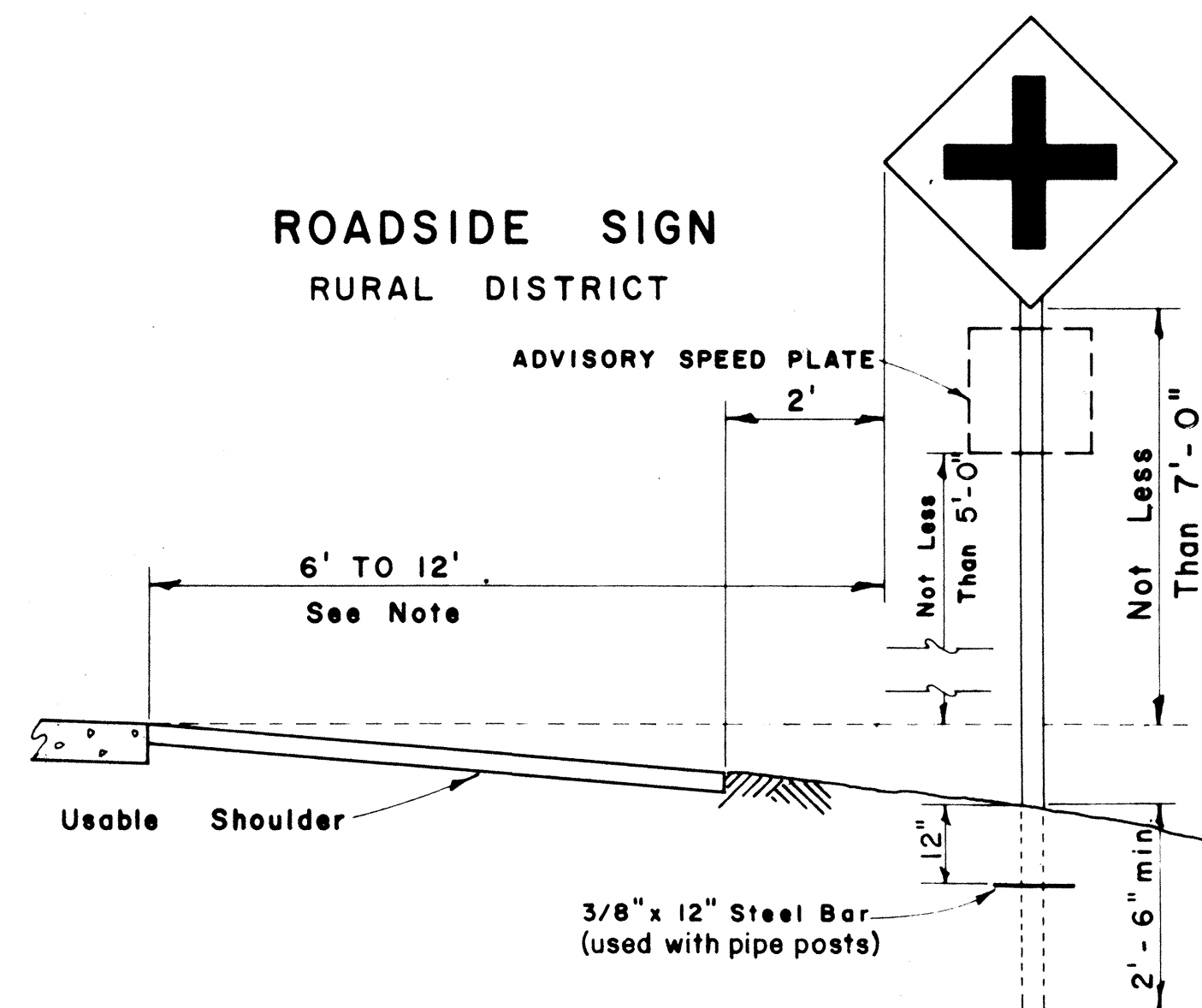
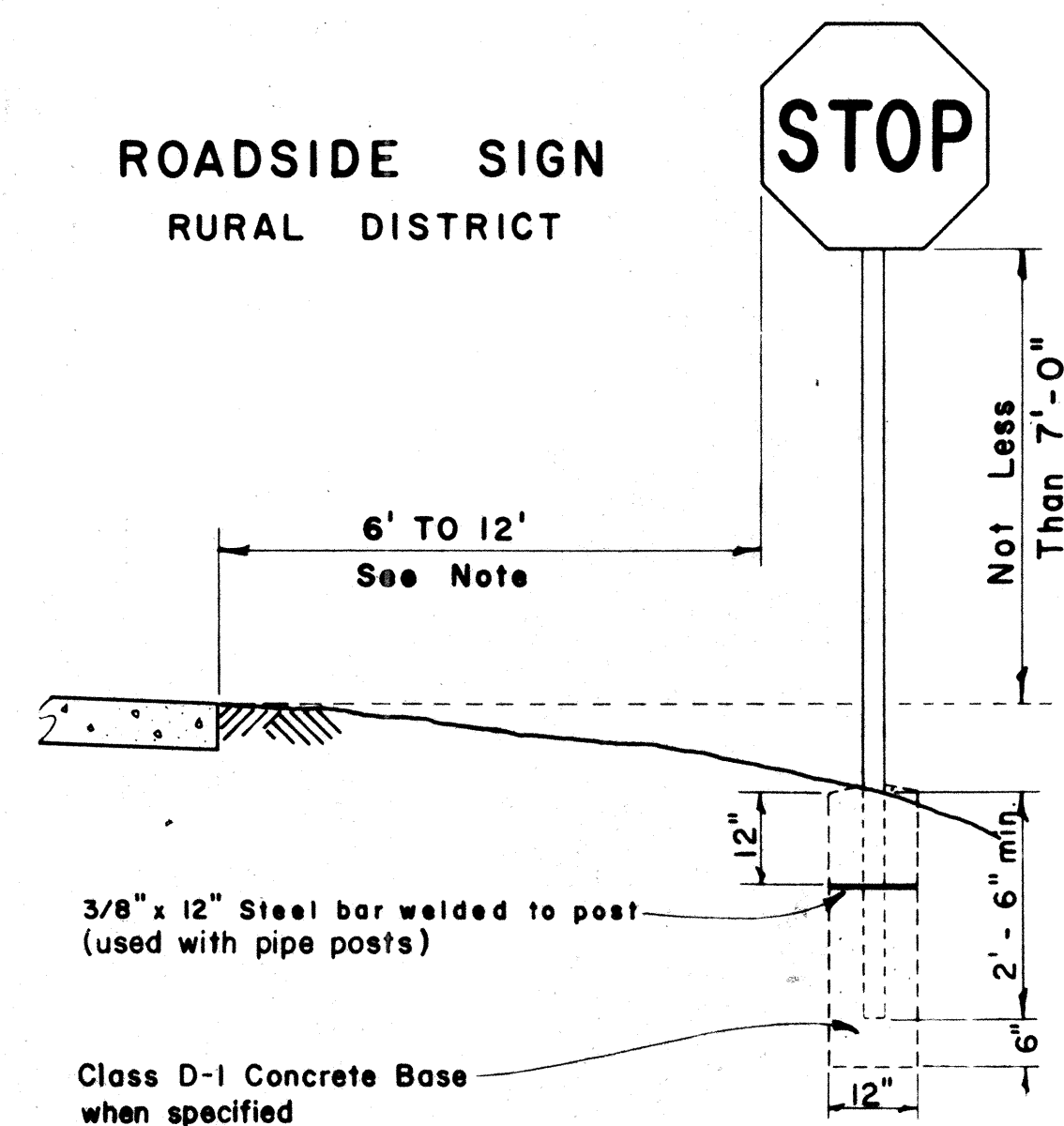


**M7-1**  
18" x 12"

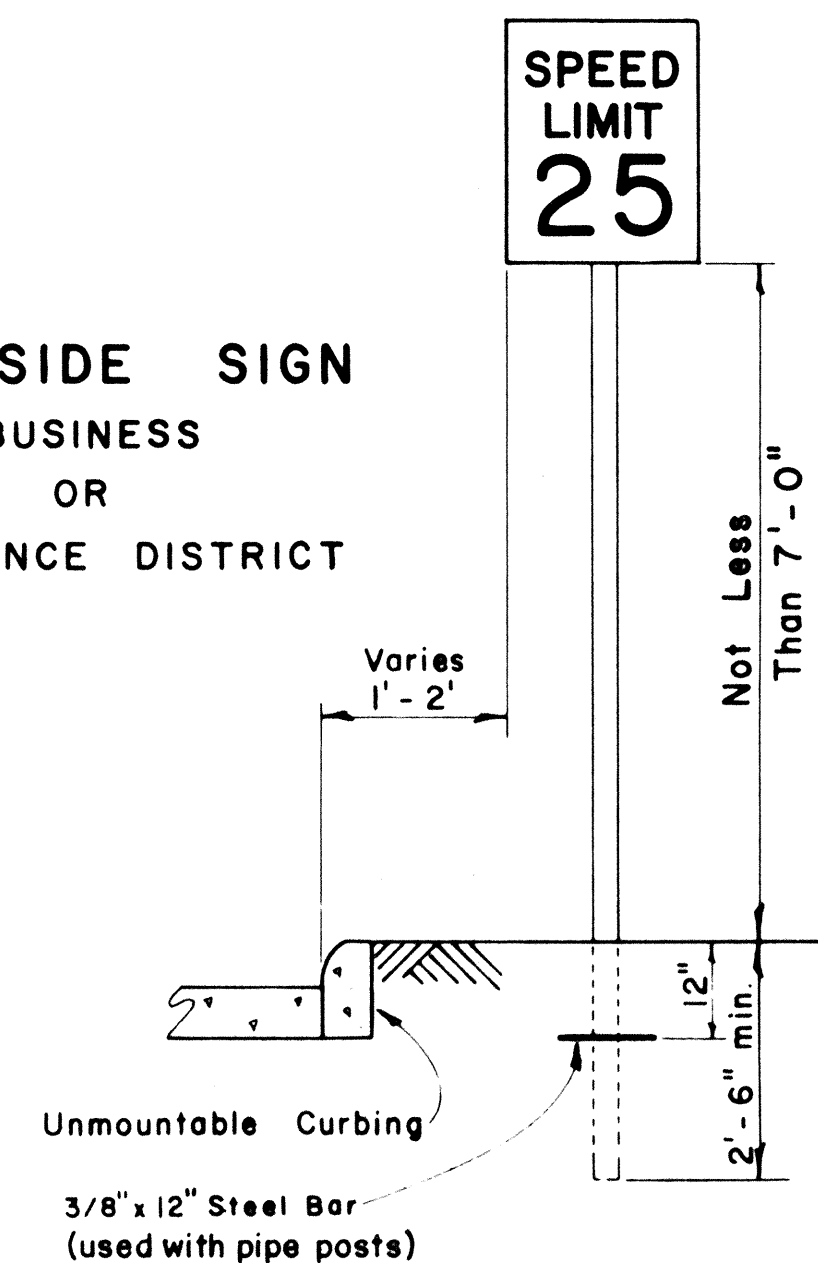
**GENERAL NOTES**

- 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.

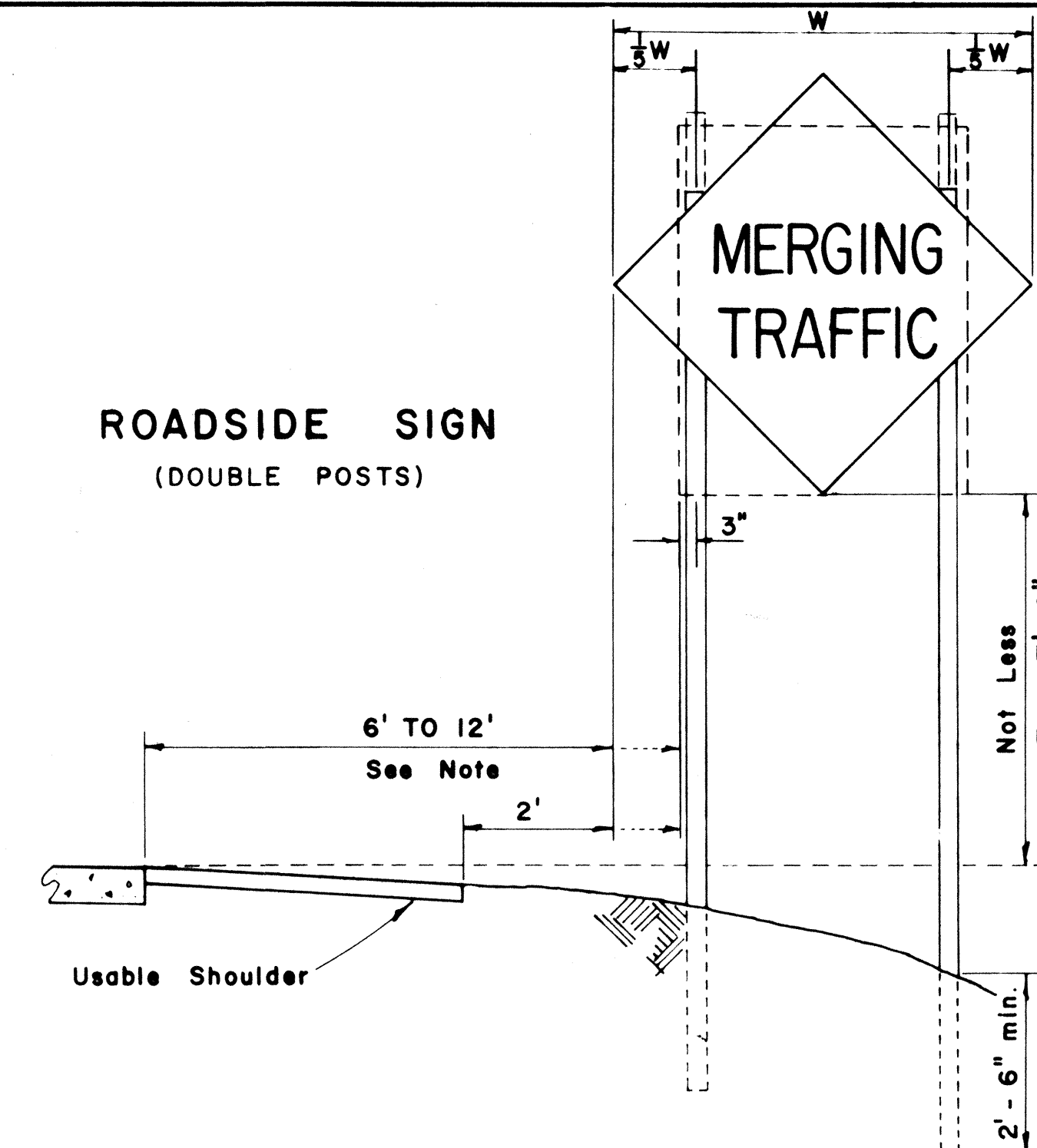
- NOTE:
- All signs and road delineators shall be placed 2' outside the usable roadway shoulder or 1' outside unmountable curbing present and within the limits shown below.
  - Except as noted below, sign posts shall be either 3" galv. std. pipe or 2 1/2" x 2 1/2" galv. square tube posts for signs larger 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.



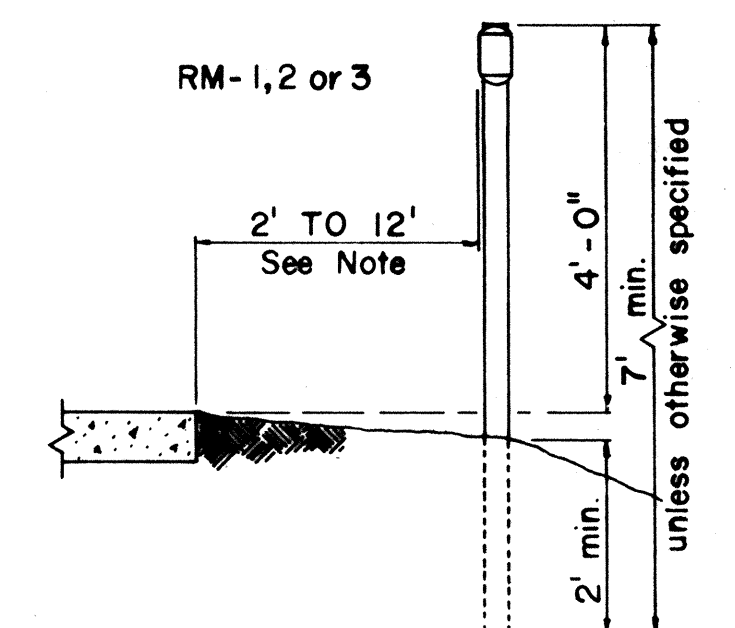
**ROADSIDE SIGN**  
BUSINESS  
OR  
RESIDENCE DISTRICT



**ROADSIDE SIGN**  
(DOUBLE POSTS)

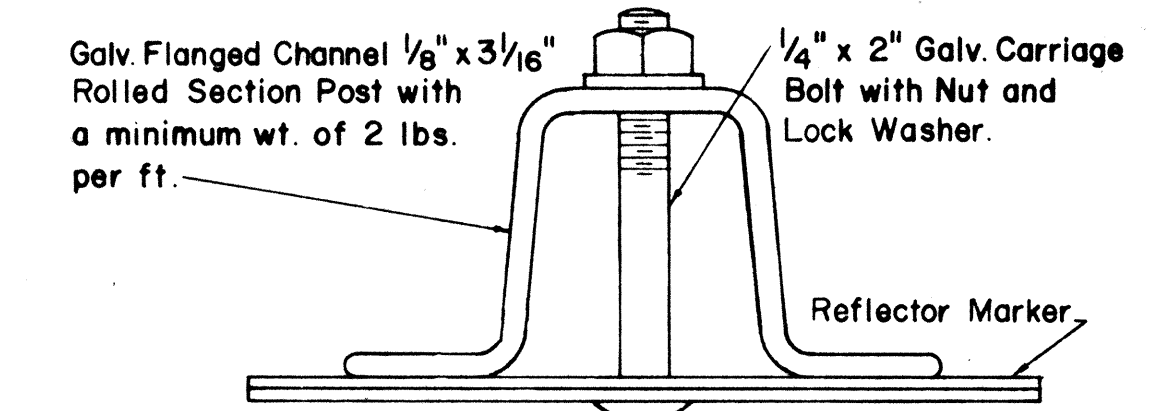


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	U-072-1(2)	1967	13	35

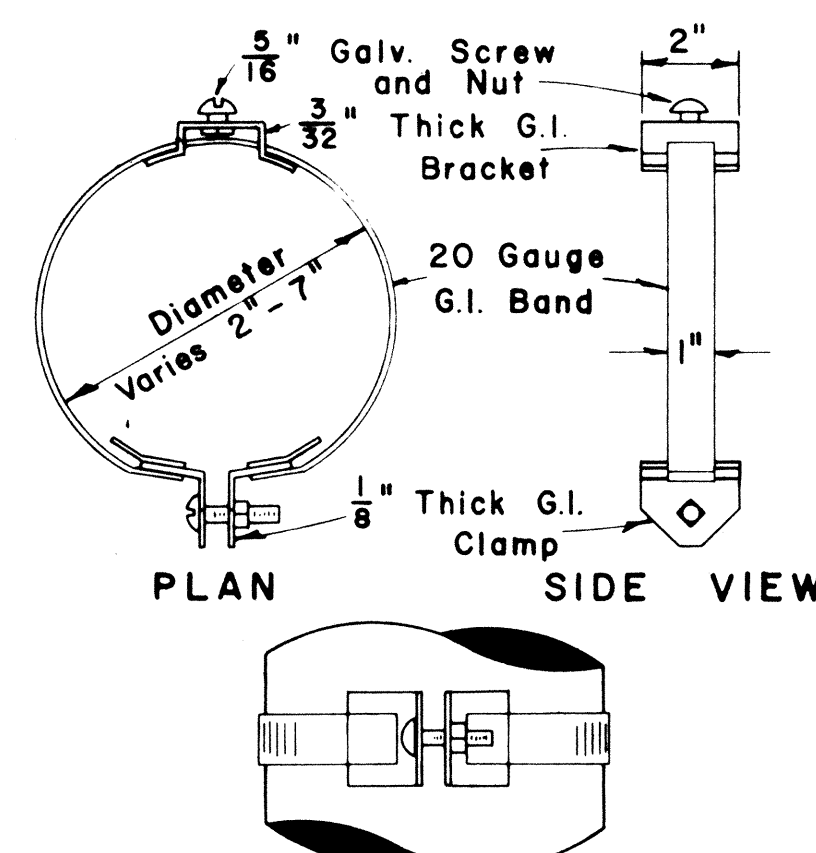
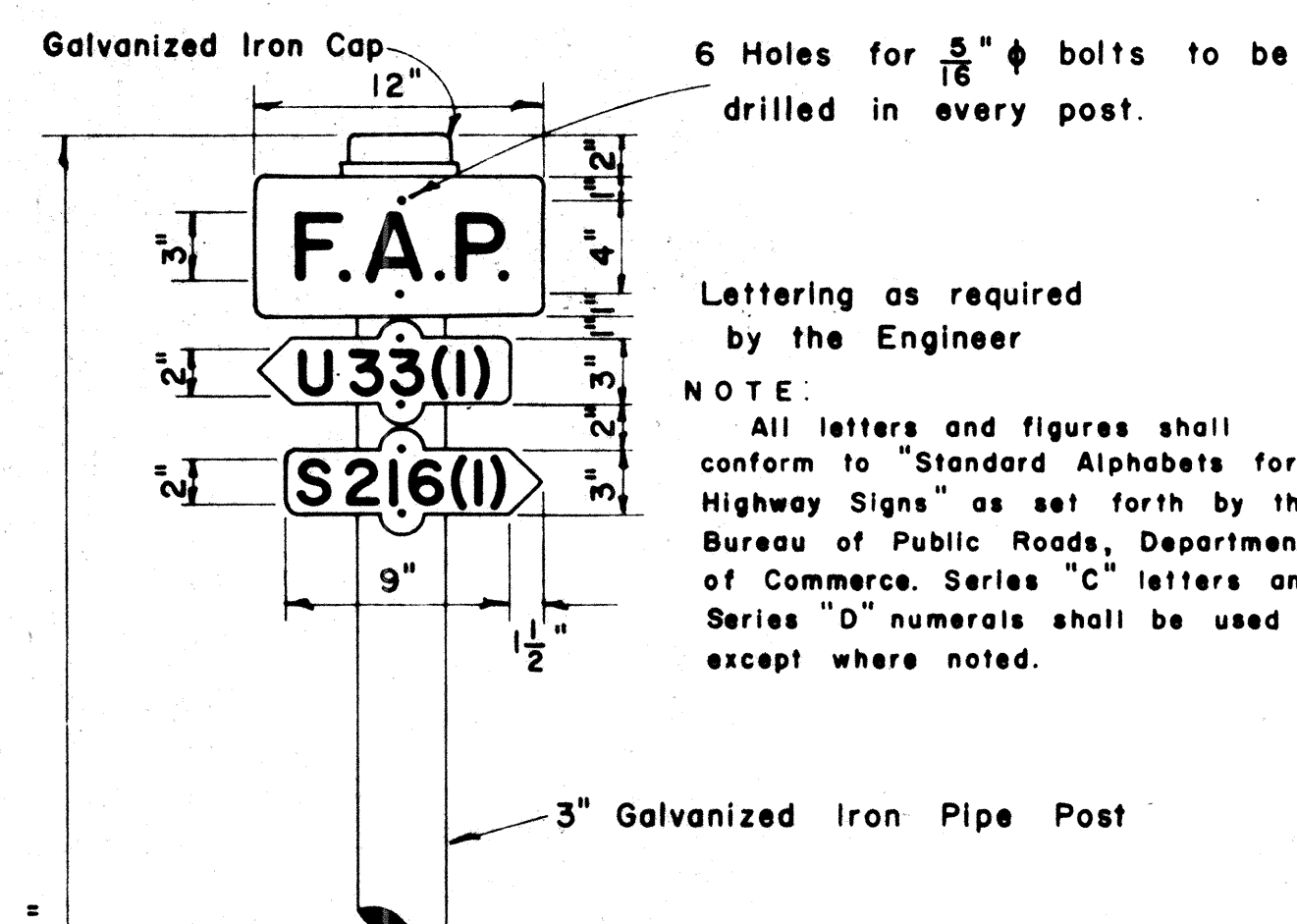


**ROAD DELINEATOR**

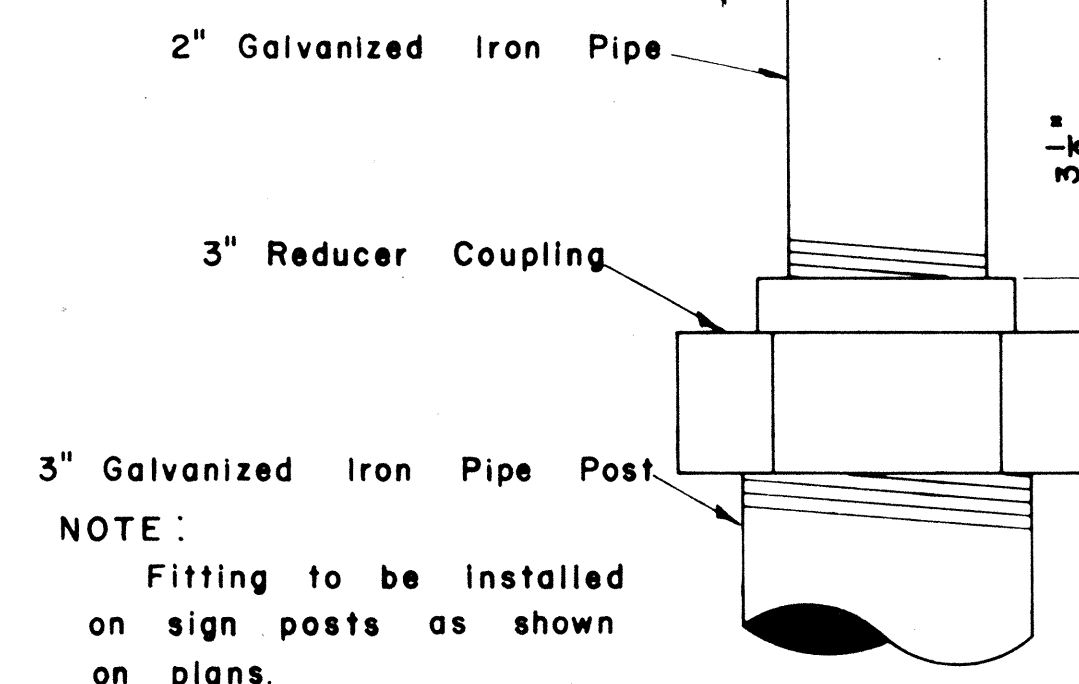
Scale: 1/2" = 1'-0"



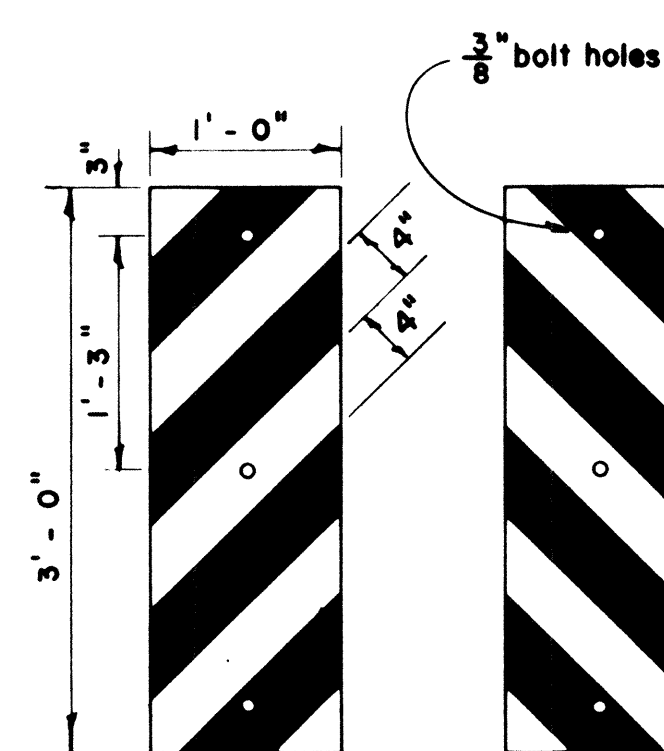
## HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATIONS



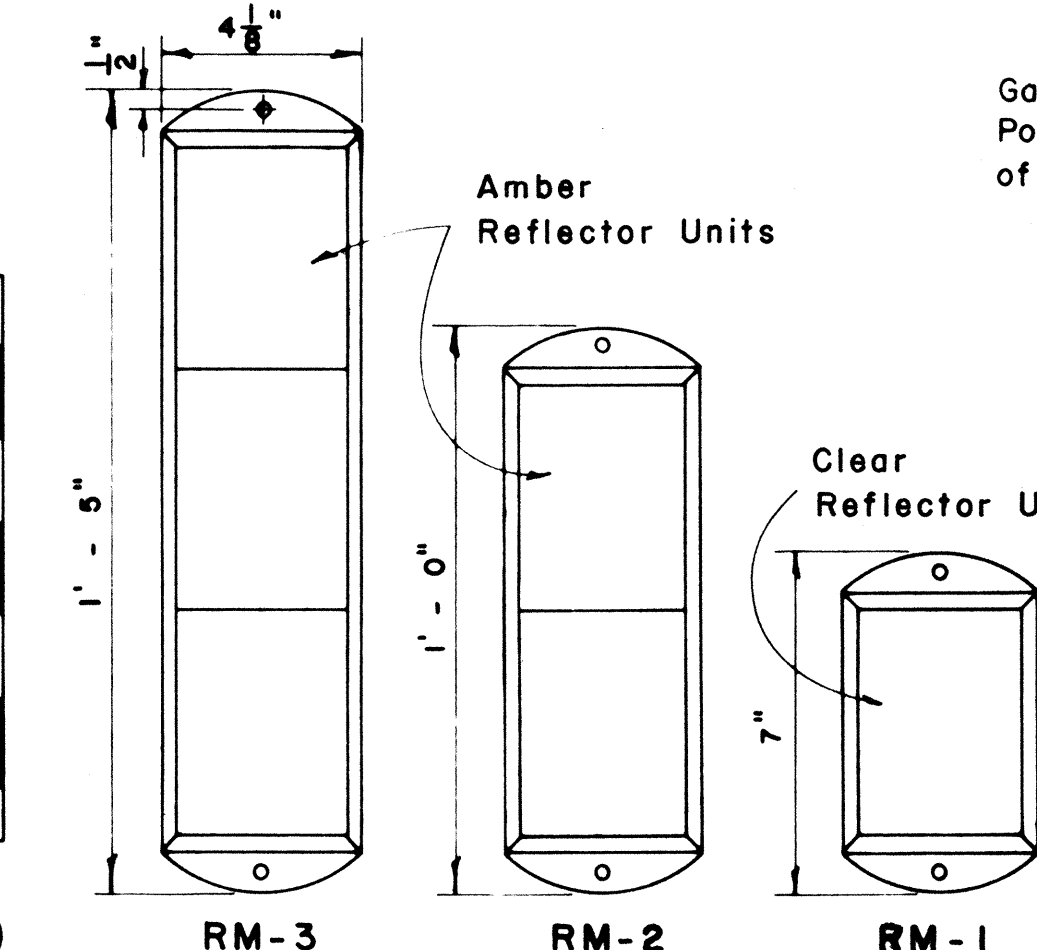
**TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS**  
Scale: 3" = 1'-0"



**DETAIL OF SIGN POST FITTING FOR CITY & COUNTY STREET NAME SIGNS**  
Scale: 1/2" = 1'

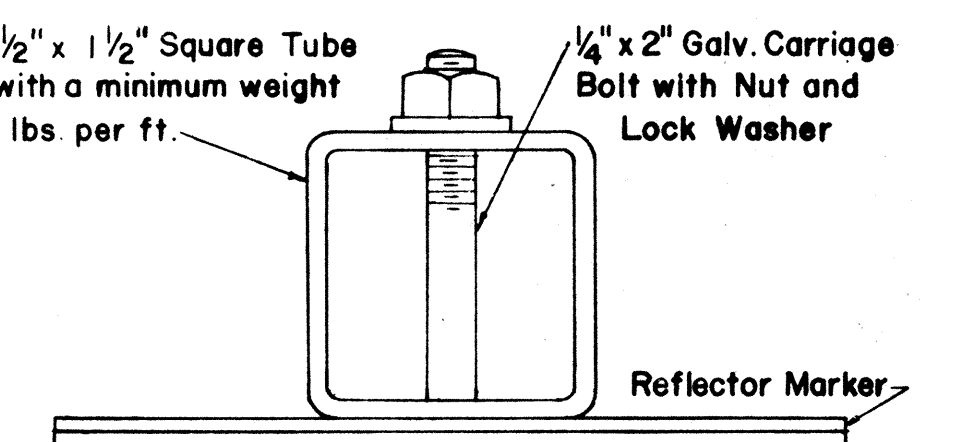


Scale: 1" = 1'-0"



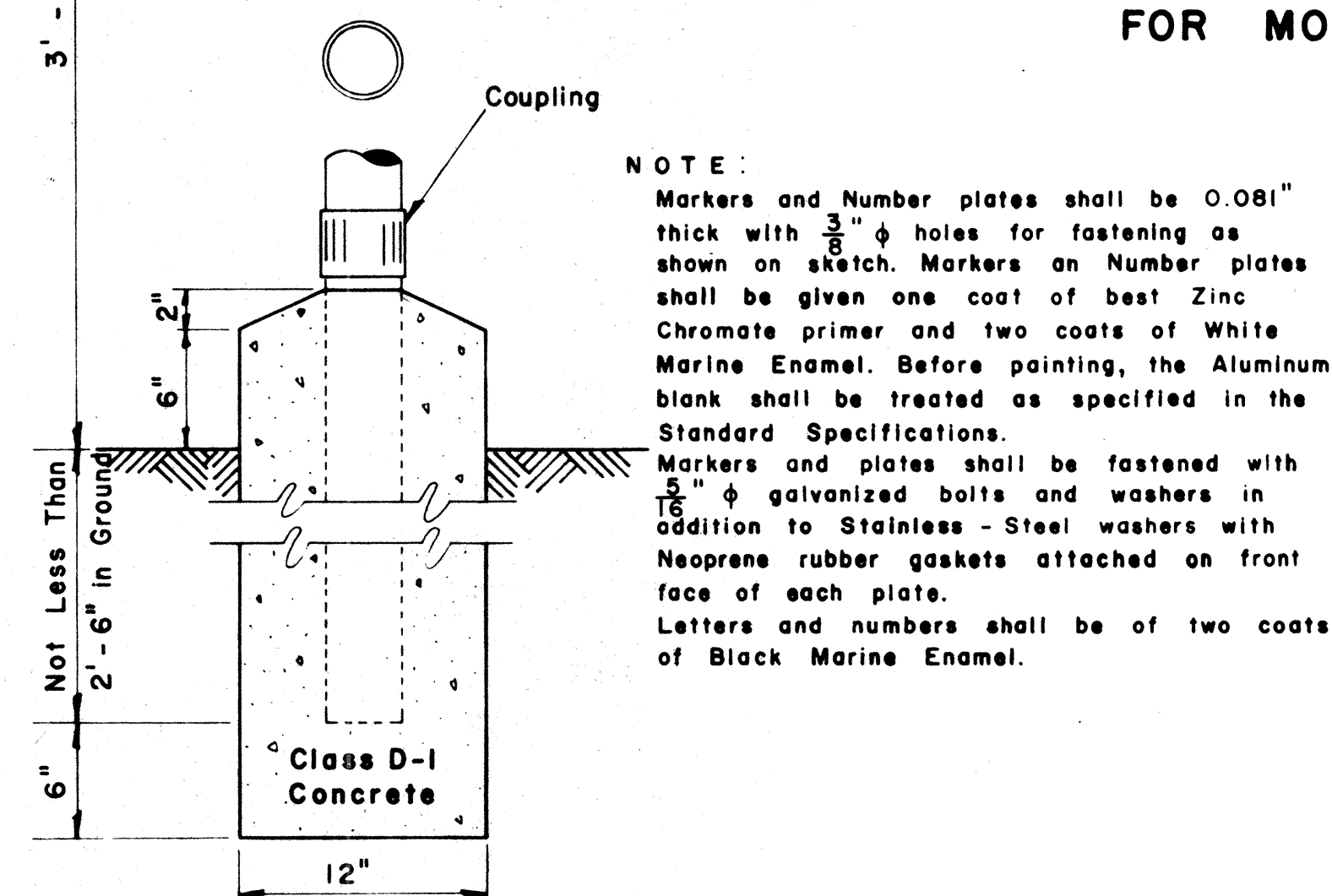
Scale: 3" = 1'-0"

**REFLECTOR MARKERS**  
Scale: As Shown

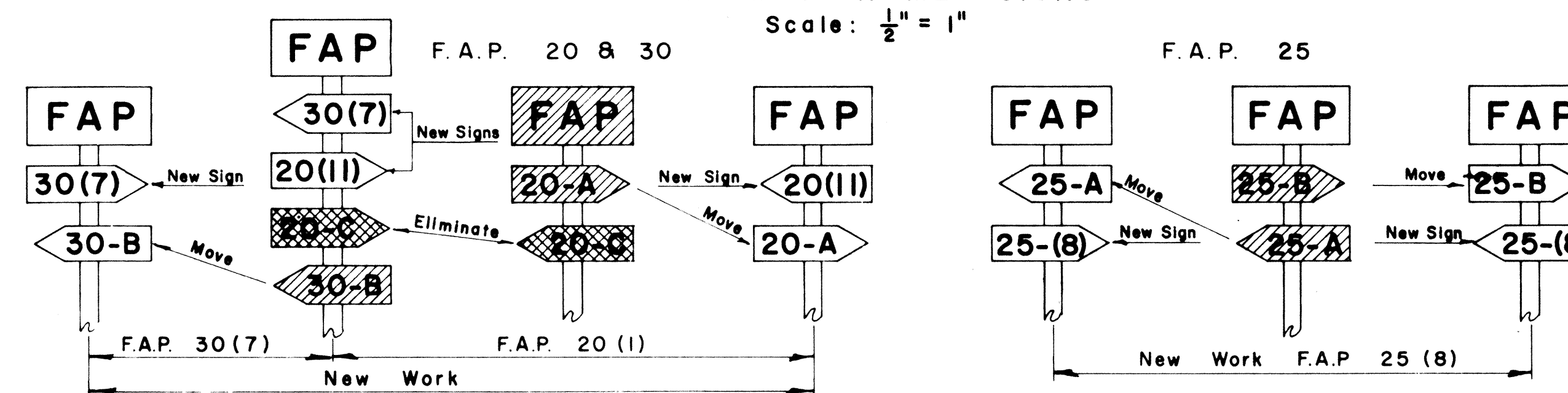


**TYPICAL SECTION OF ROAD DELINEATOR**  
Full Size

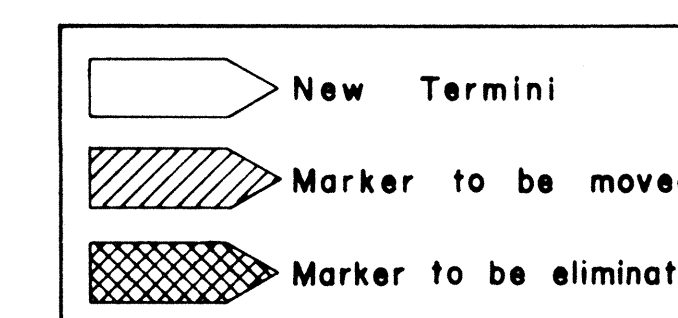
NOTE: Reflector Markers RM-1, 2, 3 shall be glass sphere reflector markers with 4" x 5" reflector units (as shown) or plastic prismatic reflector markers with 3" diameter reflector units.



**FEDERAL AID MARKER**  
Scale: 1/2" = 1'-0"



**METHOD OF MARKING F.A. PROJECTS AT OVERLAPS**  
(USING NUMBER SUFFIX ON NEW WORK)



APPROVED: \_\_\_\_\_ DATE: 1/10/67  
DIRECTOR OF TRANSPORTATION

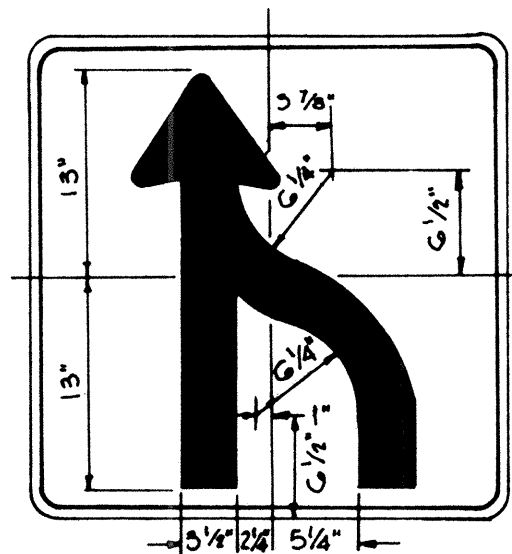
JANUARY 27, 1967  
DECEMBER 8, 1964  
REVISED: FEBRUARY 25, 1964

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STANDARD DETAILS**  
F.A. MARKER  
AND  
MISCELLANEOUS SIGN  
DETAILS  
Scale: As Shown

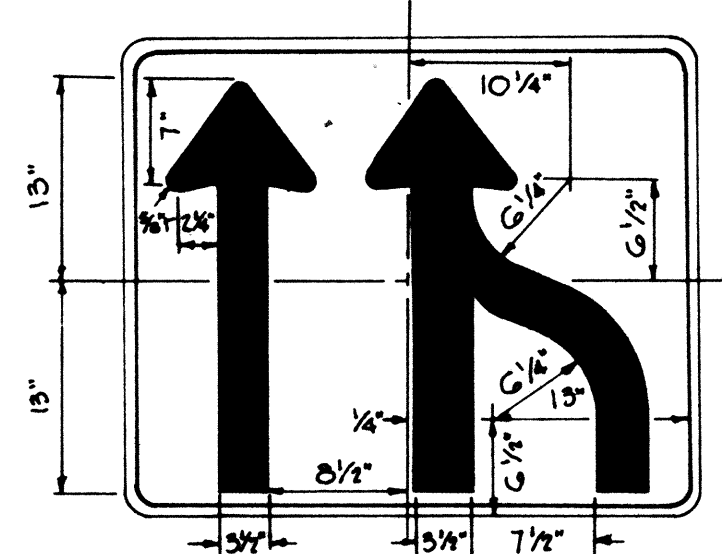
SHEET No. 4 OF 5 SHEETS



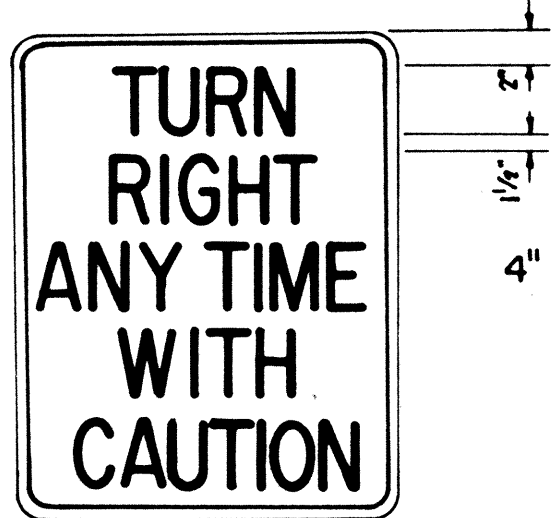
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	13-072-1(2)	1967	14	35



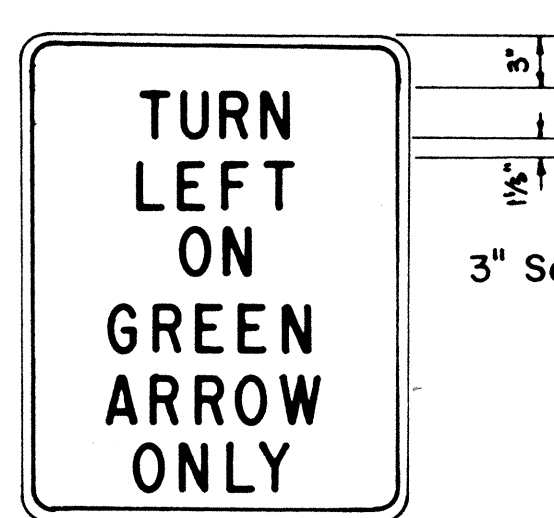
R3 - 9 30" x 30"



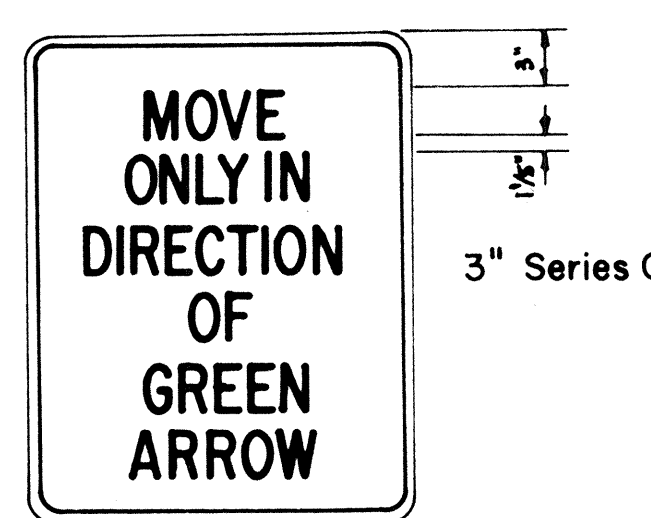
R3 - 10 36" x 30"



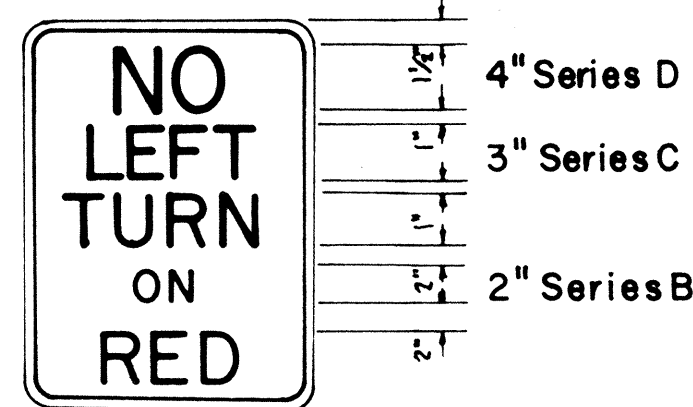
R15 - 1 24" x 30"



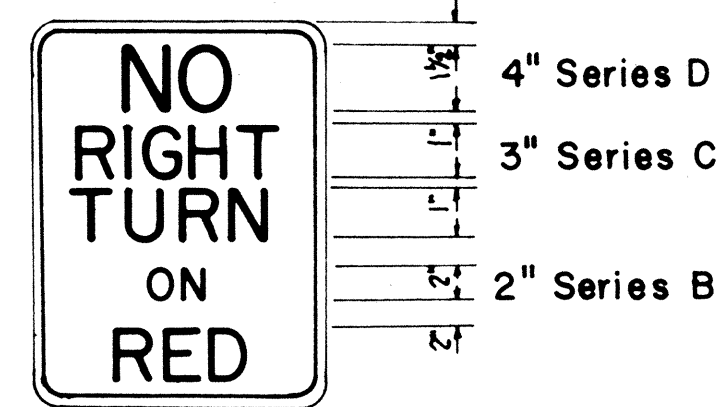
R16 - 1 24" x 30"



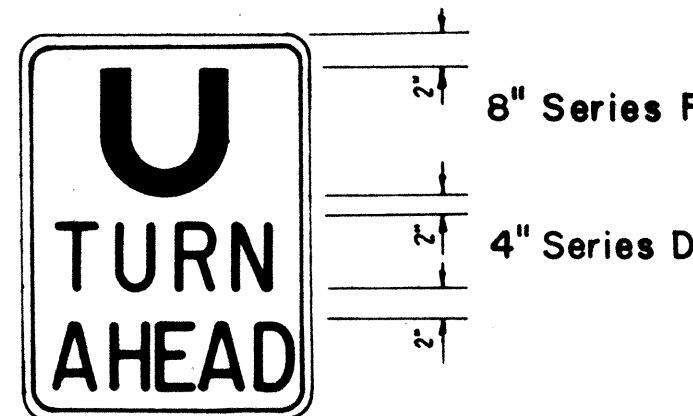
R16 - 2 24" x 30"



R17 - 1 18" x 24"



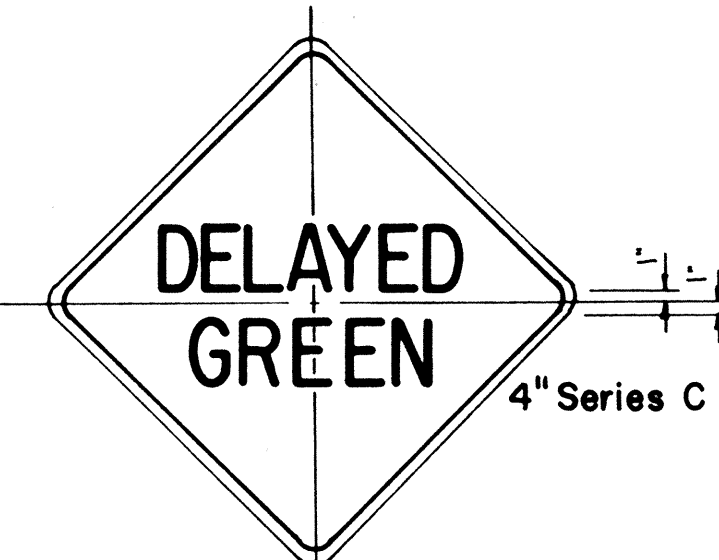
R17 - 2 18" x 24"



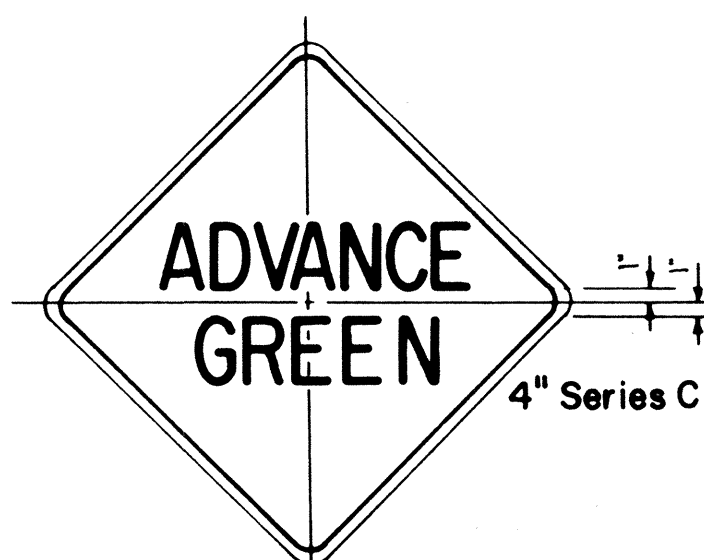
R19 - 1 18" x 24"



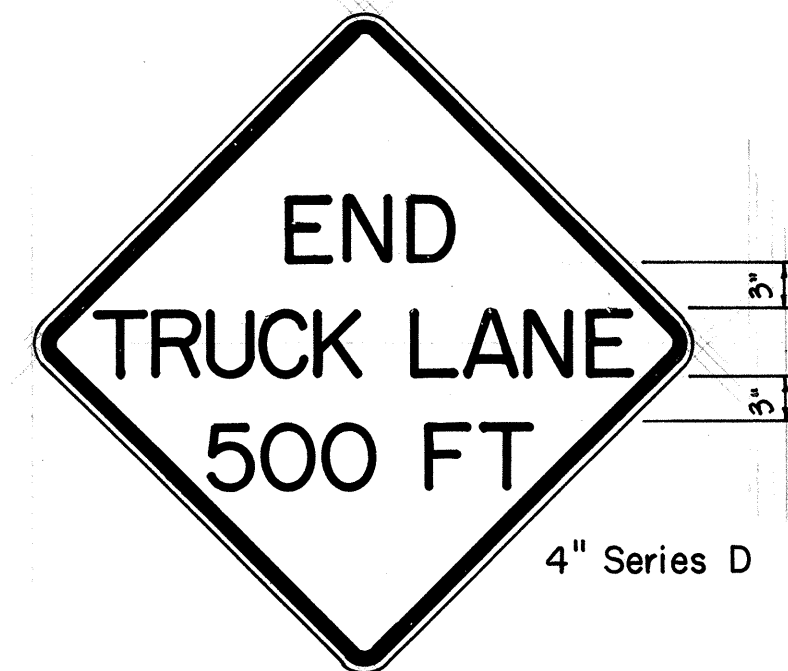
W13 - 4 24" x 24"



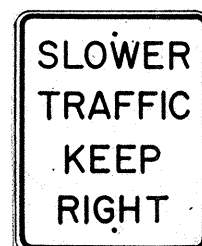
W15 - 1 24" x 24"



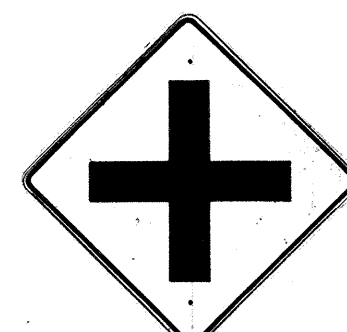
W15 - 2 24" x 24"



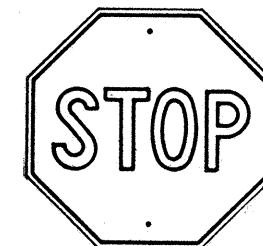
W6 - 3 30" x 30"



R4 - 3 24" x 30"



W2 - 1 30" x 30"



R1 - 1 30" x 30"

- NOTE:
1. The shape, color, plate details, lettering and reflectorization of Regulatory signs (Prefix R) and Warning signs (Prefix W) 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.
  2. All regulatory and warning signs shall be reflectorized unless otherwise specified.
  3. All regulatory and warning signs shall have 3/8" bolt holes drilled at appropriate locations unless otherwise noted.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STANDARD DETAILS  
MISCELLANEOUS  
REGULATORY & WARNING SIGNS

SHEET No. 5 OF 5 SHEETS

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