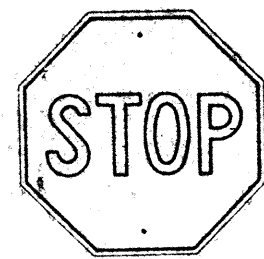
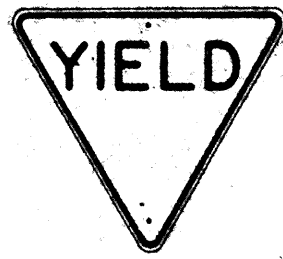


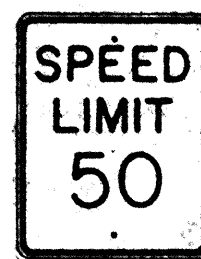
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	A520-016 UNIT 2	1966	8	12



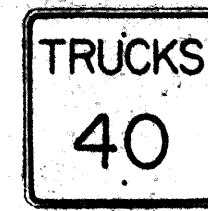
R1-1 30"x 30"



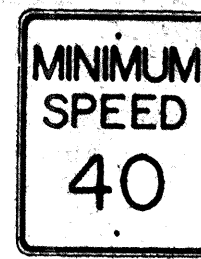
R1-2 36"x 36"x 36"
R1-2-E 48"x 48"x 48"
R1-2-I 60"x 60"x 60"



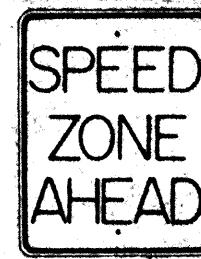
R2-1(50) 24"x 30"
R2-1(50)-E 36"x 48"
R2-1(50)-I 48"x 60"



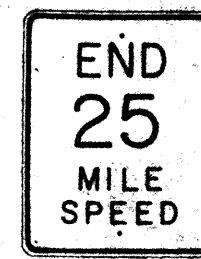
R2-2(40) 24"x 24"
R2-2(40)-E 36"x 36"
R2-2(40)-I 48"x 48"



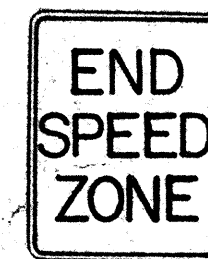
R2-4(40) 24"x 30"
R2-4(40)-E 36"x 48"
R2-4(40)-I 48"x 60"



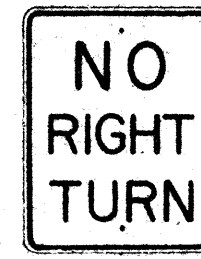
R2-5 24"x 30"
R2-5-E 36"x 48"
R2-5-I 48"x 60"



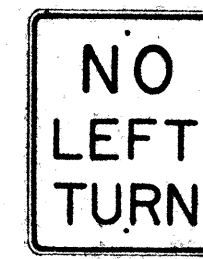
R2-6(25) 24"x 30"
R2-6(25)-E 36"x 48"
R2-6(25)-I 48"x 60"



R2-7 24"x 30"
R2-7-E 36"x 48"
R2-7-I 48"x 60"



R3-1 24"x 30"
R3-1-E 36"x 48"



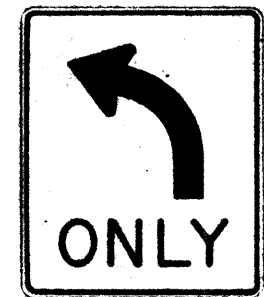
R3-2 24"x 30"
R3-2-E 36"x 48"



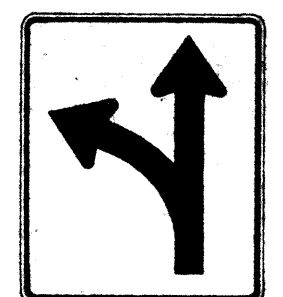
R3-3 24"x 24"



R3-4 24"x 30"
R3-4-E 36"x 48"
R3-4-I 48"x 60"



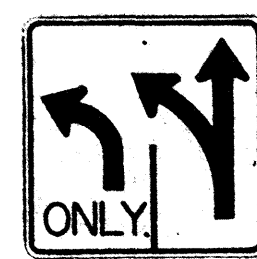
R3-5(L) 30"x 36"



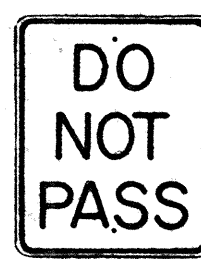
R3-6(L) 30"x 36"



R3-7(R) 30"x 30"



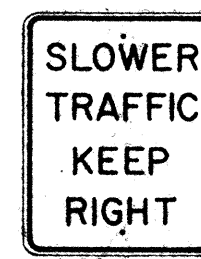
R3-8(L) 30"x 30"



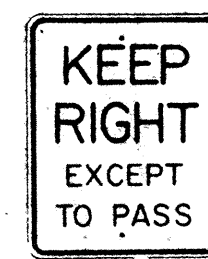
R4-1 24"x 30"



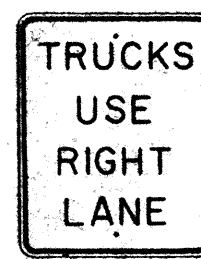
R4-2 24"x 30"



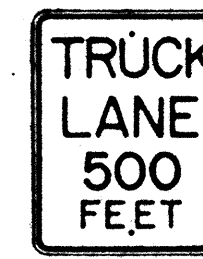
R4-3 24"x 30"
R4-3-E 36"x 48"
R4-3-I 48"x 60"



R4-4 24"x 30"
R4-4-E 36"x 48"
R4-4-I 48"x 60"



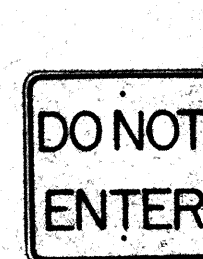
R4-5 24"x 30"
R4-5-E 36"x 48"



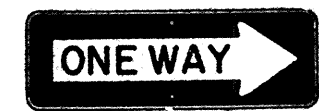
R4-6 24"x 30"
R4-6-E 36"x 48"



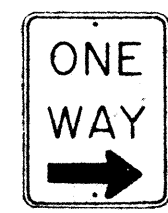
R4-7(R) 24"x 30"
R4-7(R)-E 36"x 48"



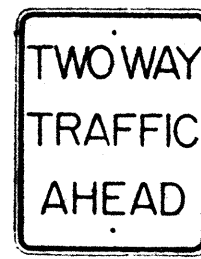
R5-1 24"x 24"



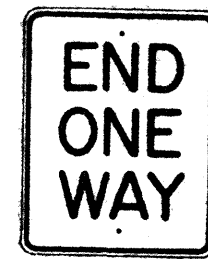
R6-1(R) 36"x 12"



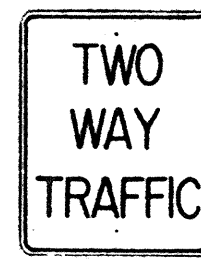
R6-2(R) 18"x 24"



R6-3 24"x 30"



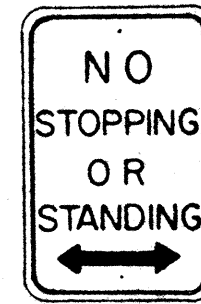
R6-4 24"x 30"



R6-5 24"x 30"



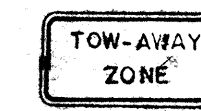
R7-1 12"x 18"



R7-4 12"x 18"
R7-4-E 24"x 30"



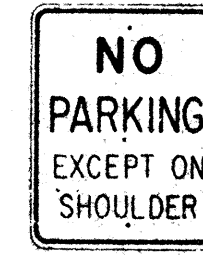
R7-107(R) 12"x 18"



R7-201 12"x 6"



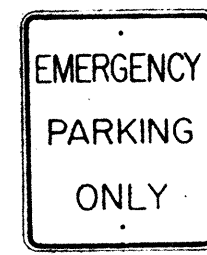
R8-1 24"x 30"
R8-1-E 36"x 48"
R8-1-I 48"x 60"



R8-2 24"x 30"
R8-2-E 36"x 48"



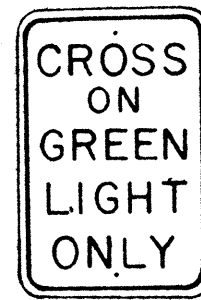
R8-3 24"x 30"
R8-3-E 36"x 48"



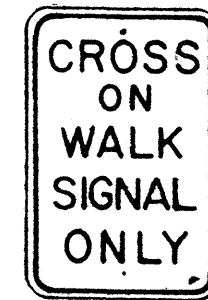
R8-4 24"x 30"
R8-4-E 36"x 48"
R8-4-I 48"x 36"



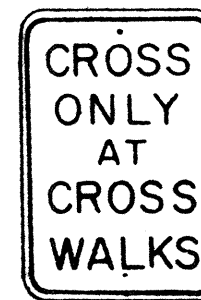
R9-1 18"x 24"



R9-2 12"x 18"



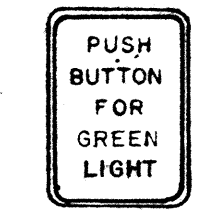
R9-3 12"x 18"



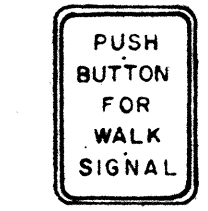
R9-4 12"x 18"



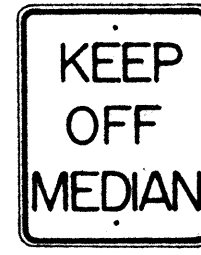
R9-5 12"x 18"



R9-6 9"x 12"



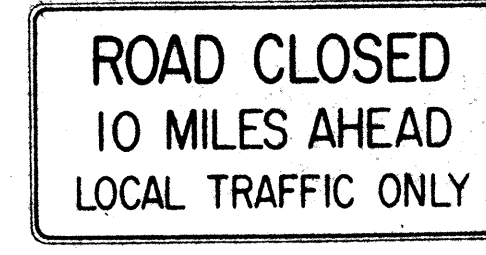
R9-7 9"x 12"



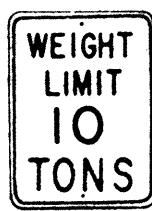
R10-1 24"x 30"
R10-1-E 36"x 48"
R10-1-I 48"x 60"



R10-2 48"x 30"



R10-3(10) 60"x 30"



R10-4(10) 18"x 24"

NOTE:

1. 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 specified.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs shall have $\frac{3}{8}$ " bolt holes drilled at appropriate locations unless otherwise noted.
4. The suffix "E" denotes Expressway signs and "I" denotes Interstate signs.
5. For R2 signs, number in () indicates speed and shall be as shown on the plans.
6. (R) or (L) indicates right or left and shall be as shown on the plans.
7. For R10-4 sign, number in () indicates weight and shall be as shown on the plan.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

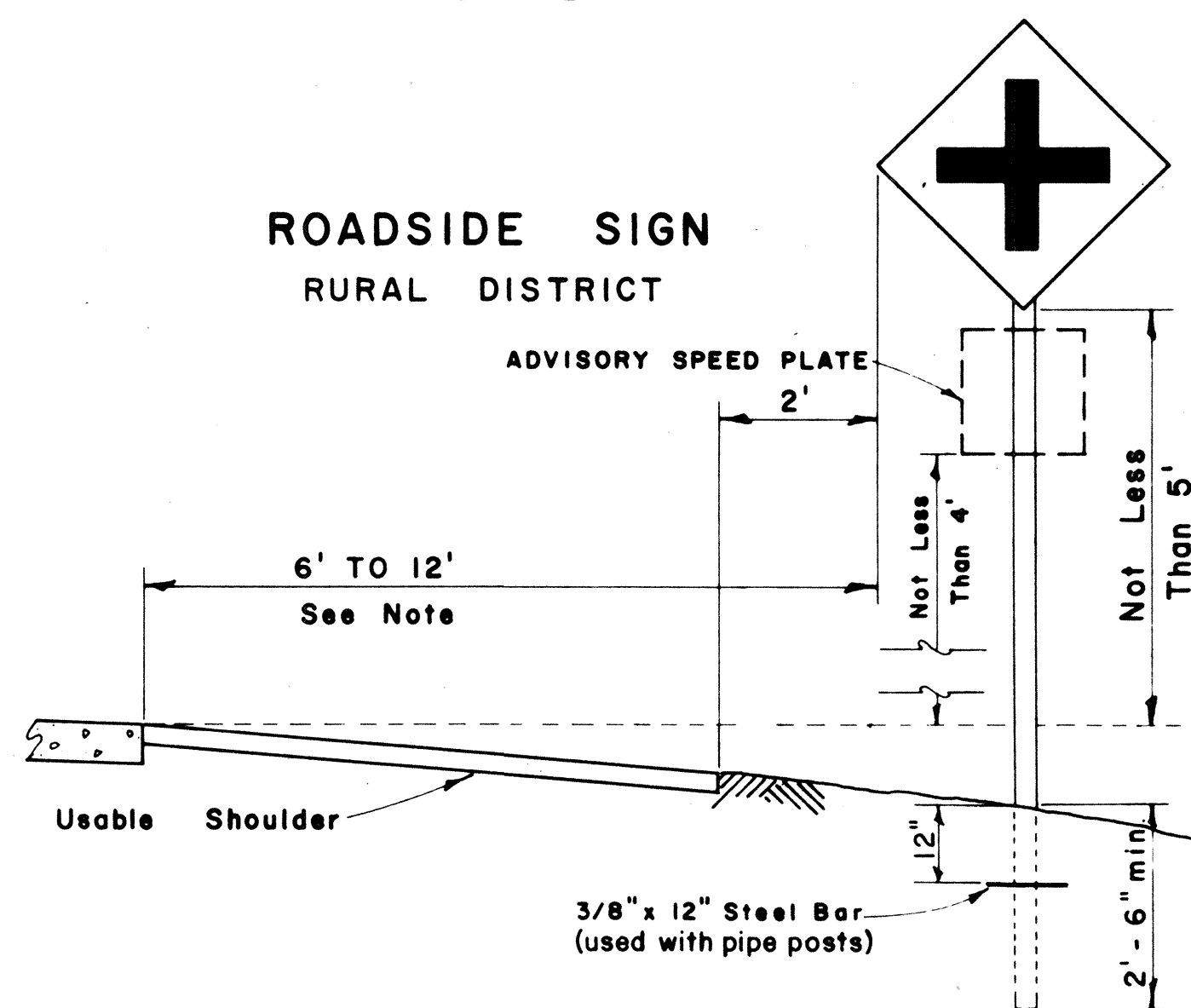
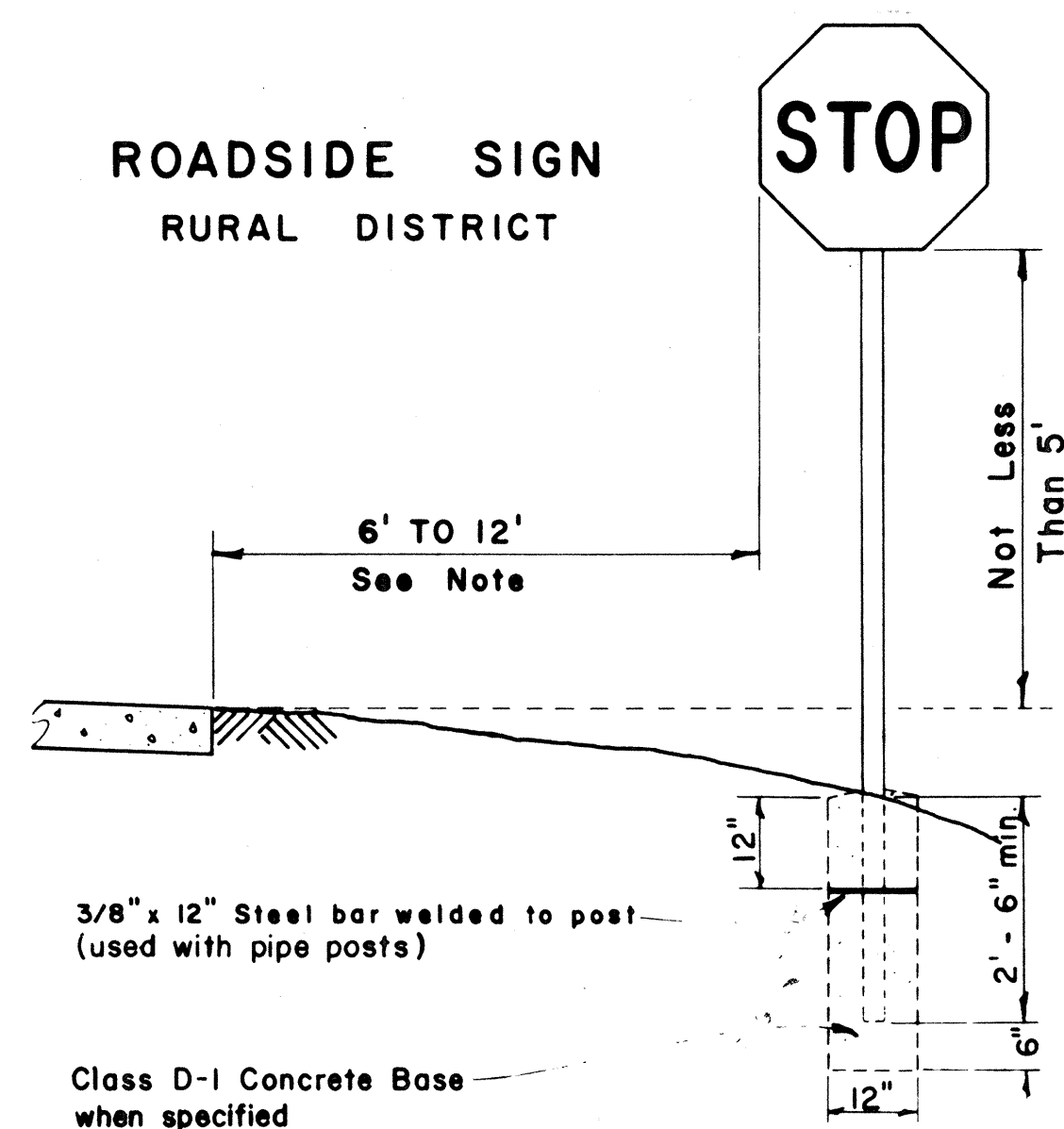
STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE

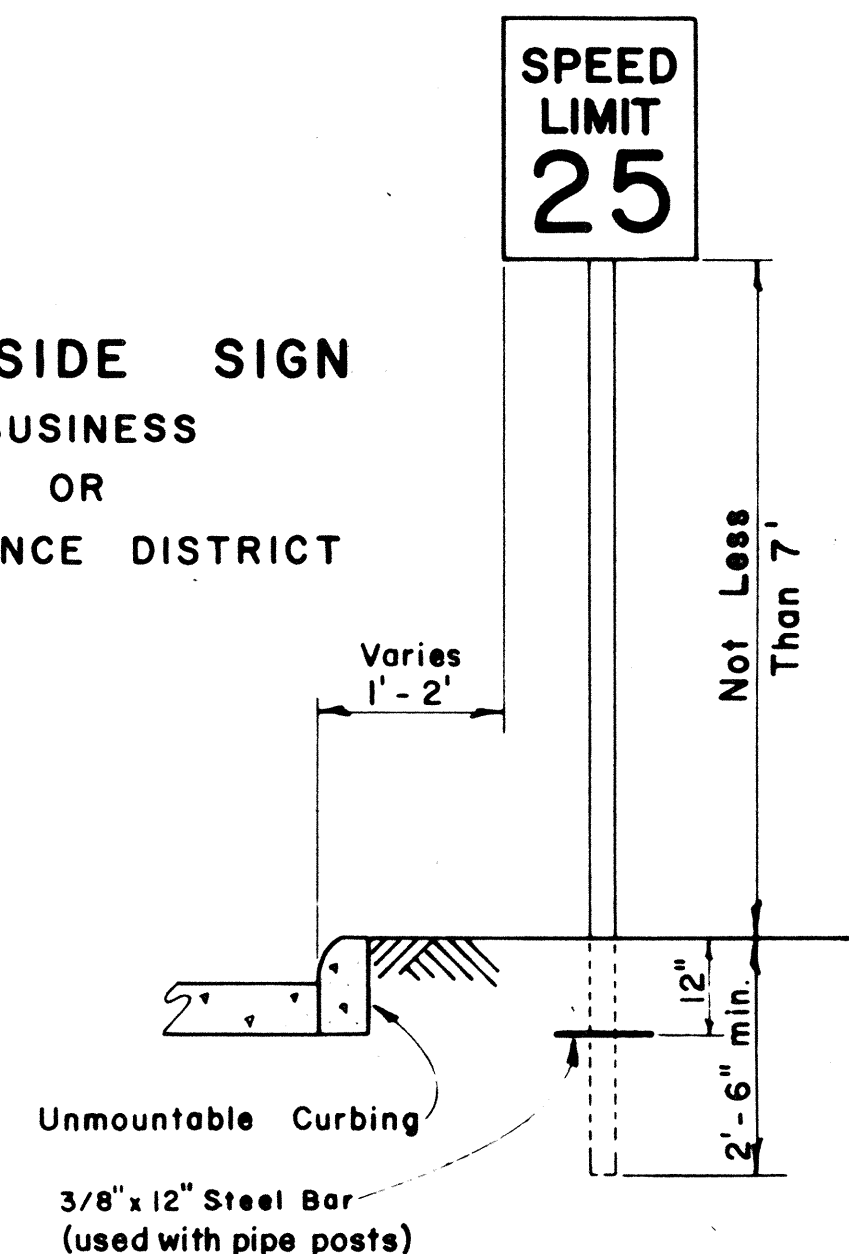
SHEET No. 2 OF 6 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
	CHECKED BY	

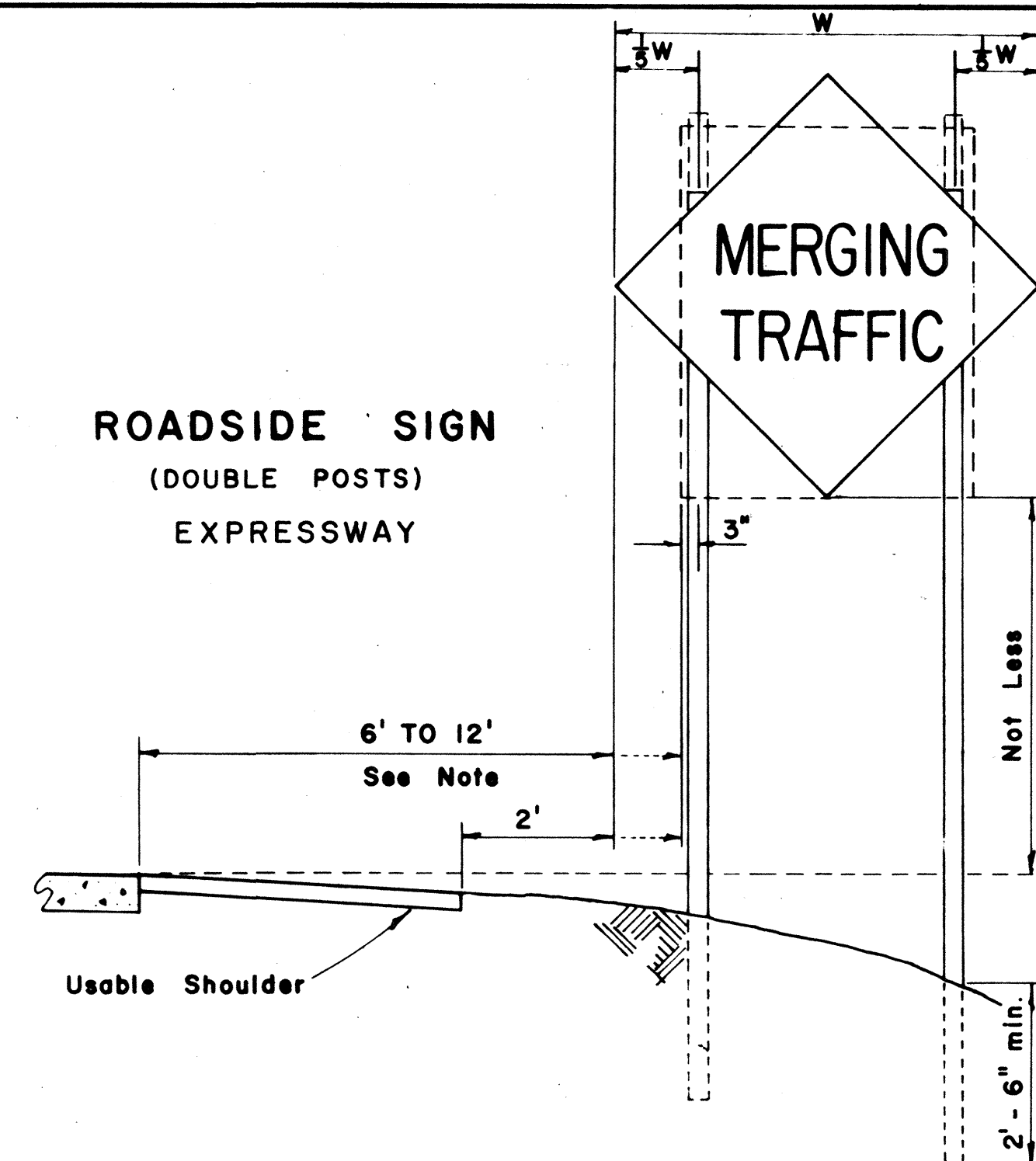
- NOTE:
- All signs and road delineators shall be placed 2' outside the usable roadway shoulder or 1' outside unmountable curbing present and within the limits shown below.
 - Except as noted below, sign posts shall be either 3" galv. std. pipe or 2 1/2" x 2 1/2" galv. square tube posts for signs larger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



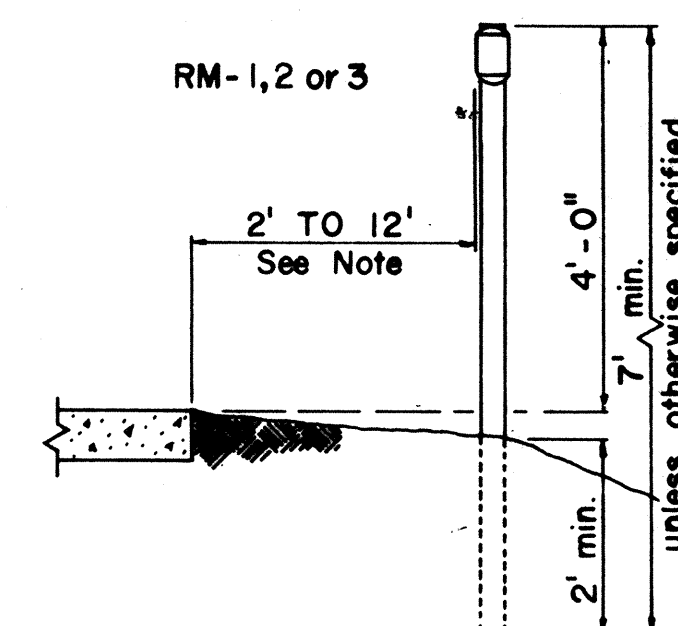
ROADSIDE SIGN
BUSINESS
OR
RESIDENCE DISTRICT



ROADSIDE SIGN
(DOUBLE POSTS)
EXPRESSWAY

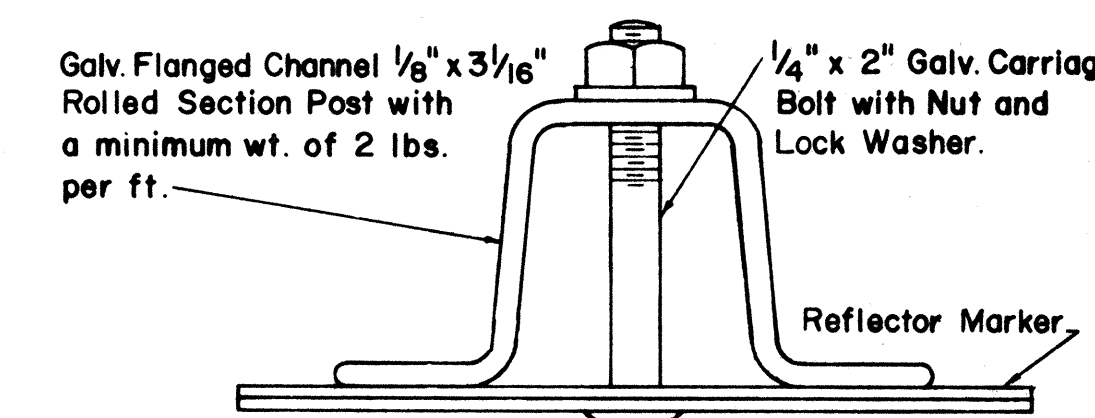


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	AS20-01-66 Unit 3	1966	7	12



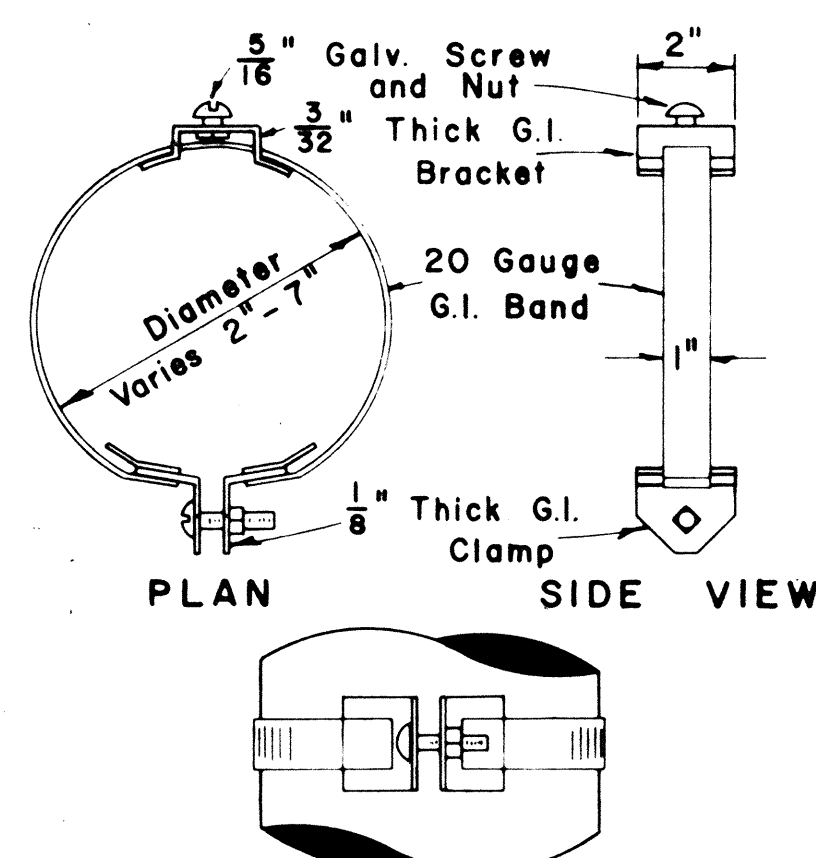
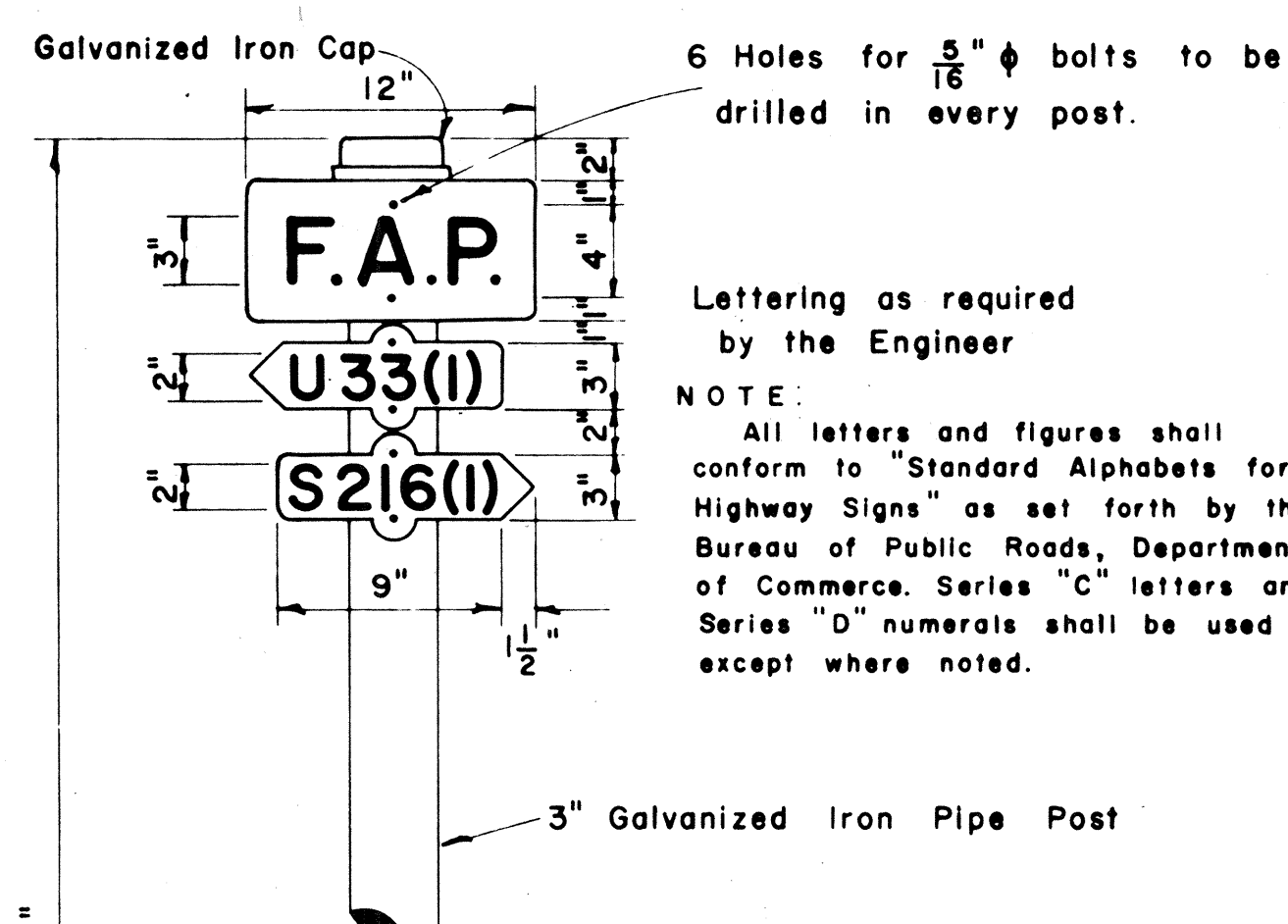
ROAD DELINEATOR

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



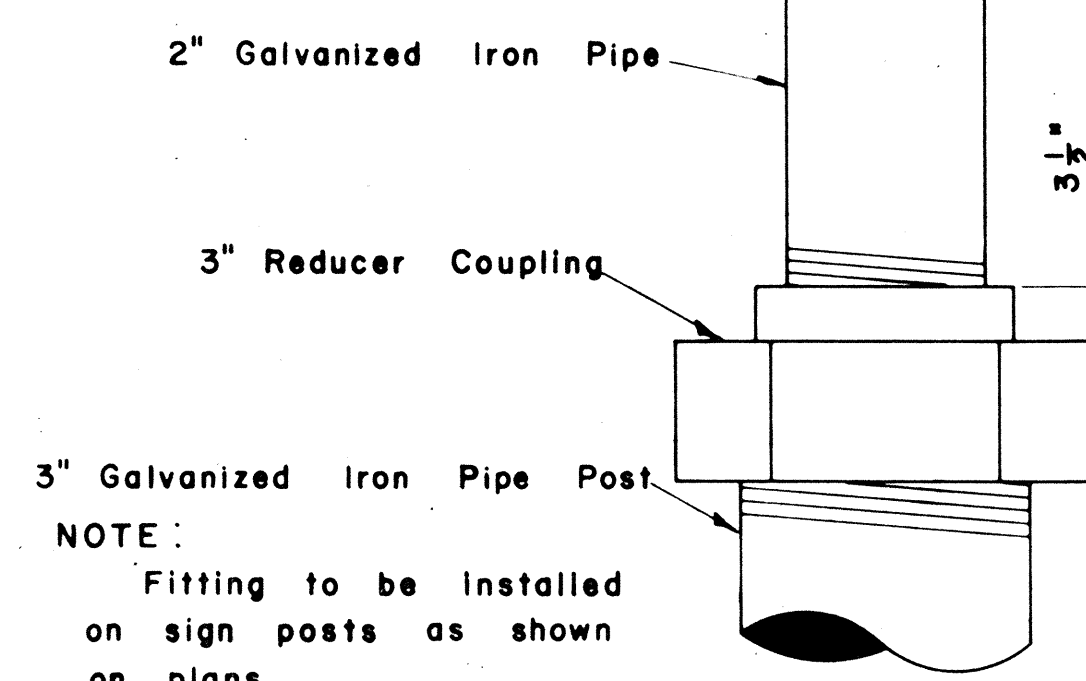
HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATIONS

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



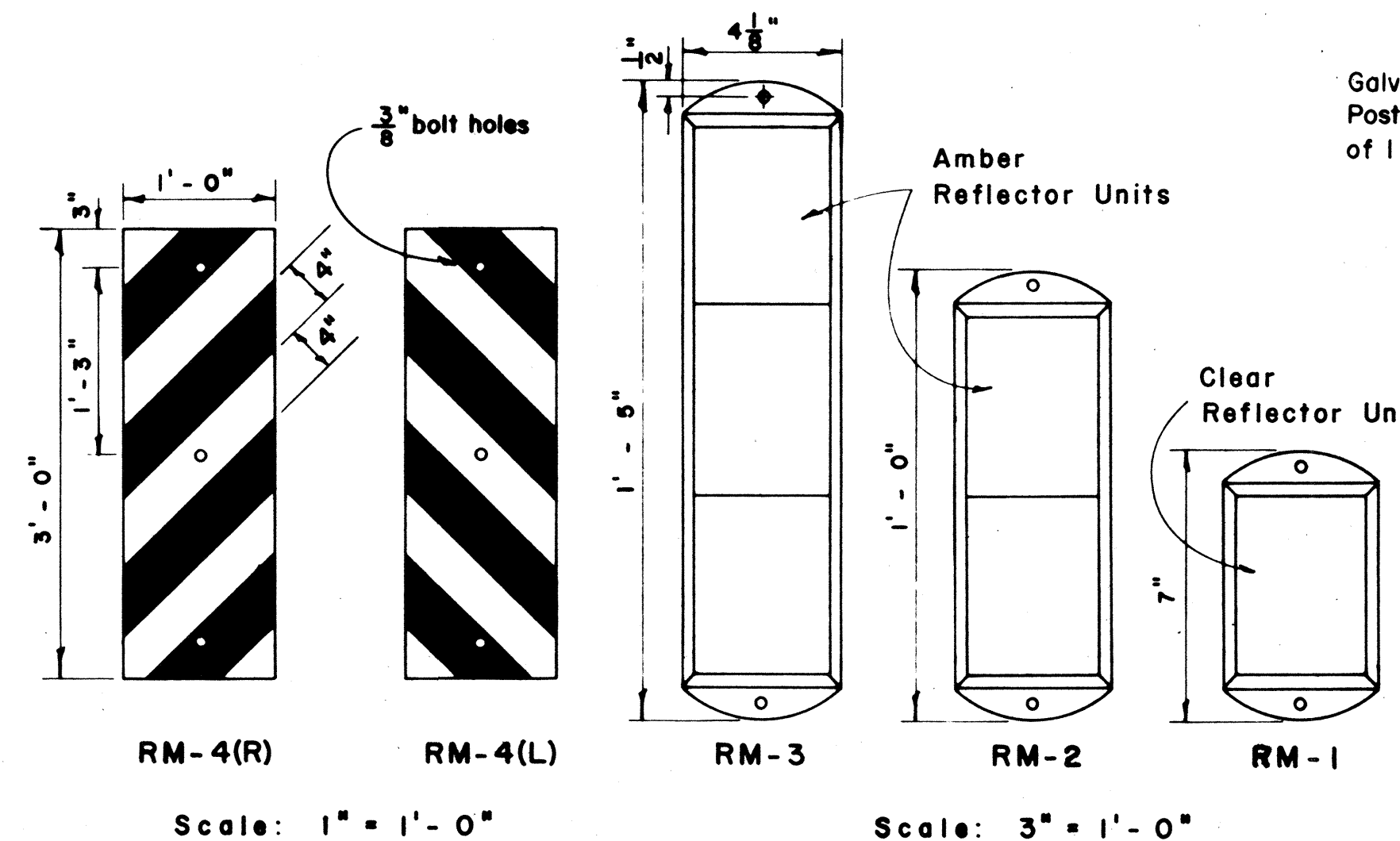
TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS

Scale: 3" = 1' - 0"



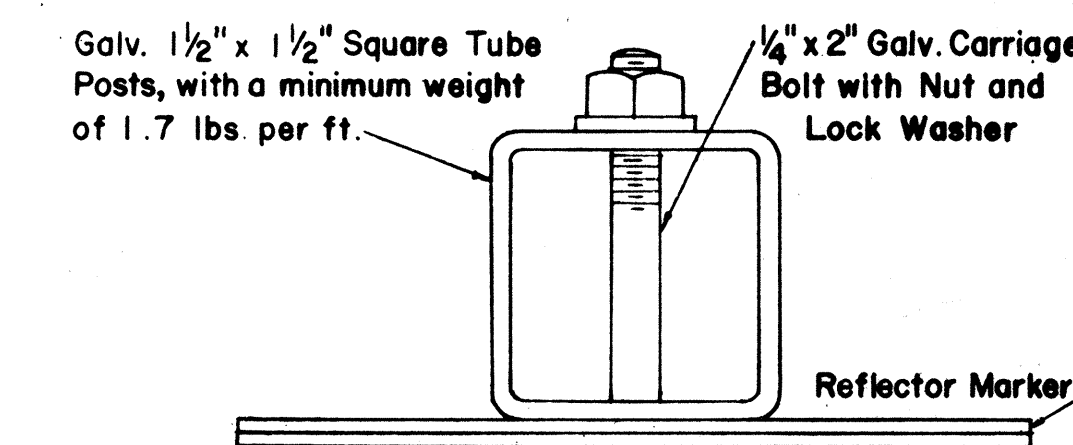
DETAIL OF SIGN POST FITTING FOR CITY & COUNTY STREET NAME SIGNS

Scale: 1/2" = 1'



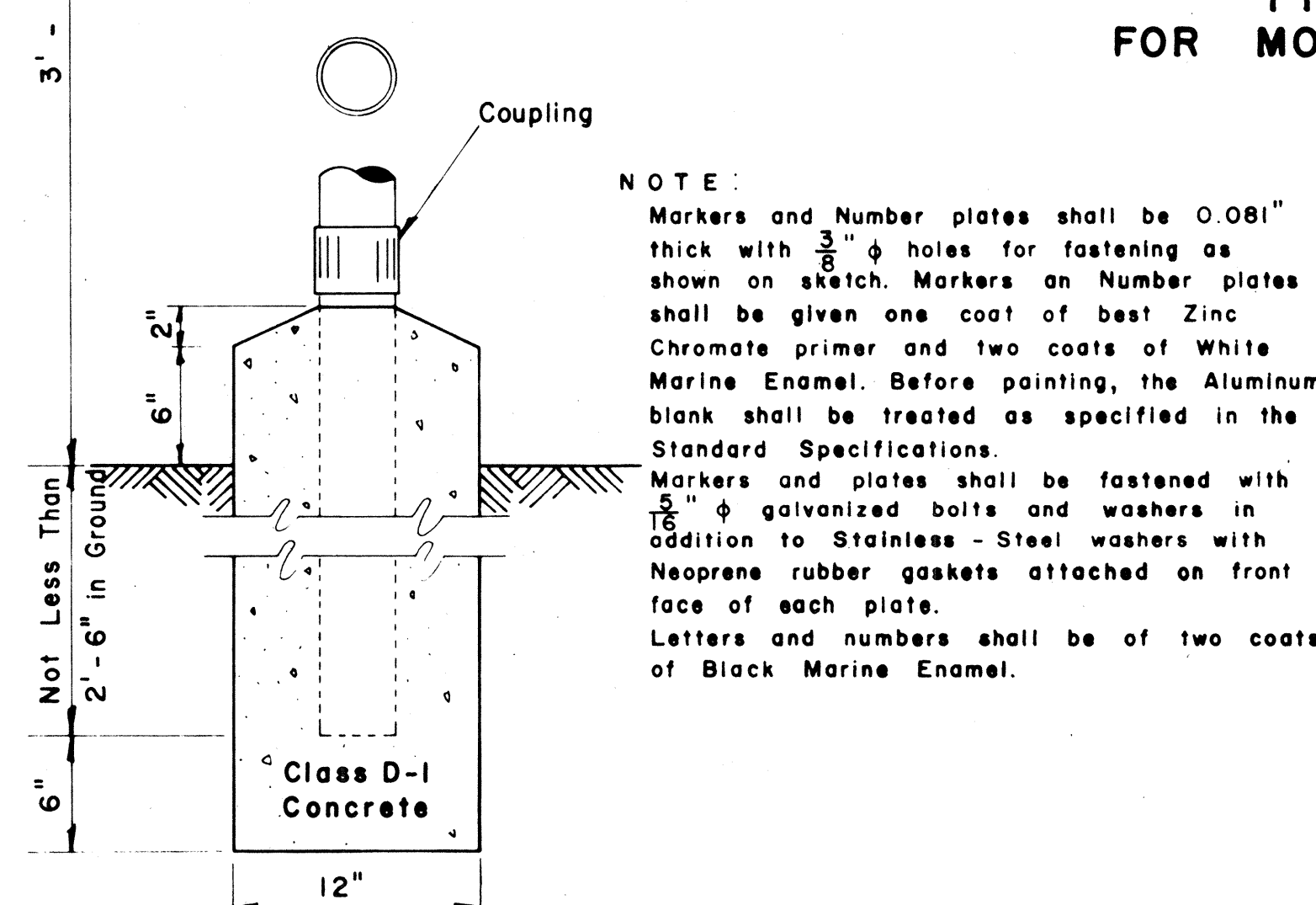
REFLECTOR MARKERS

Scale: As Shown



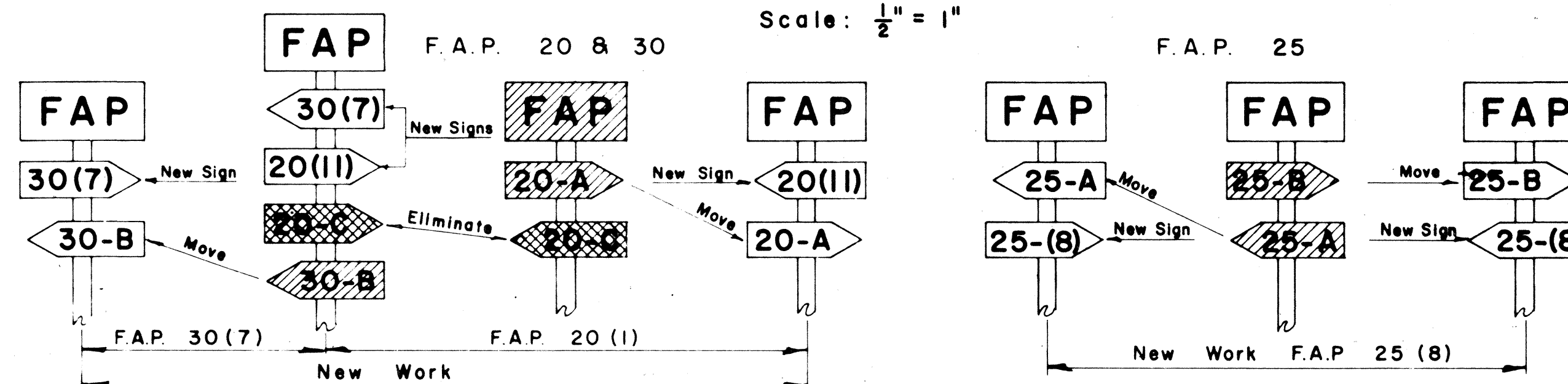
TYPICAL SECTION OF ROAD DELINEATOR
Full Size

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)

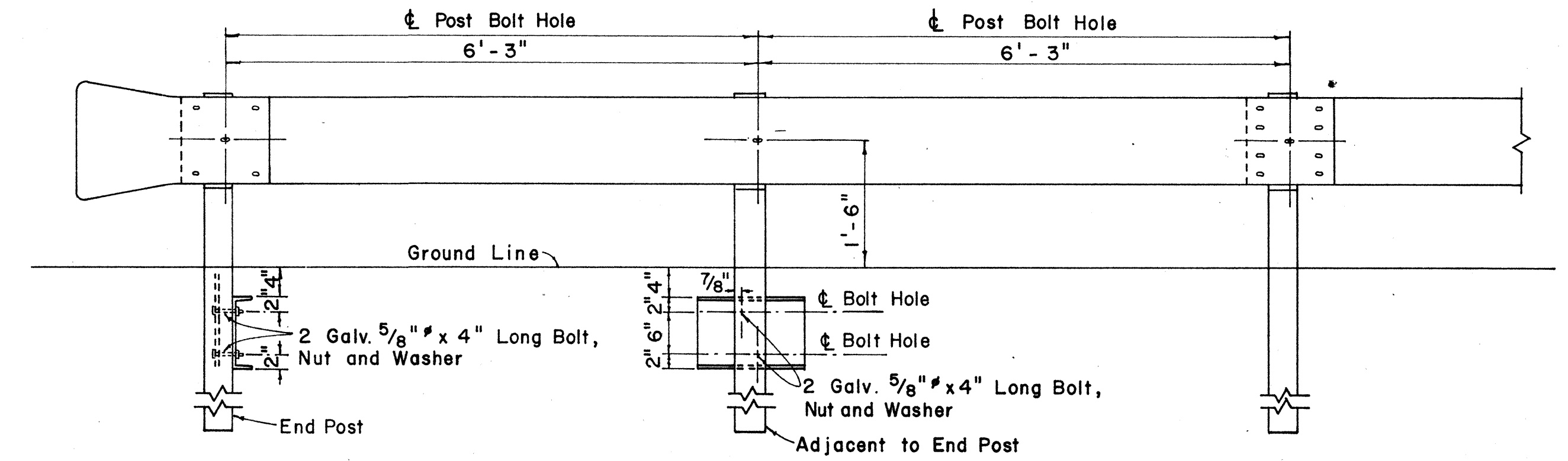
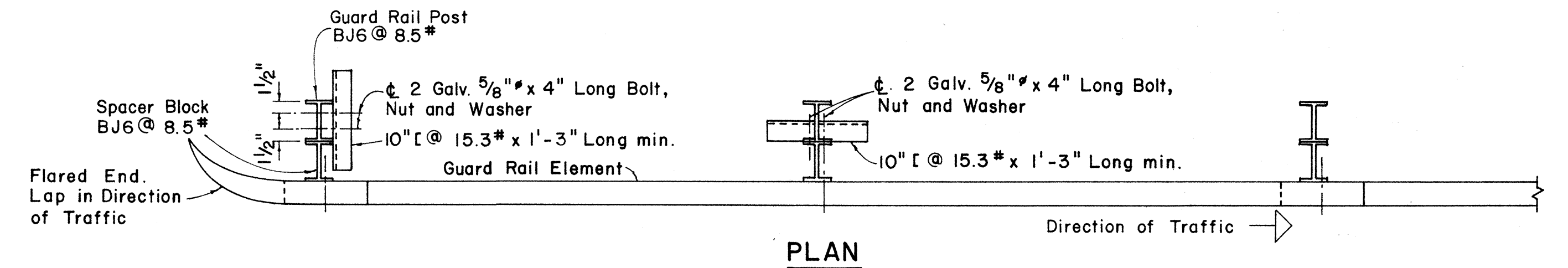
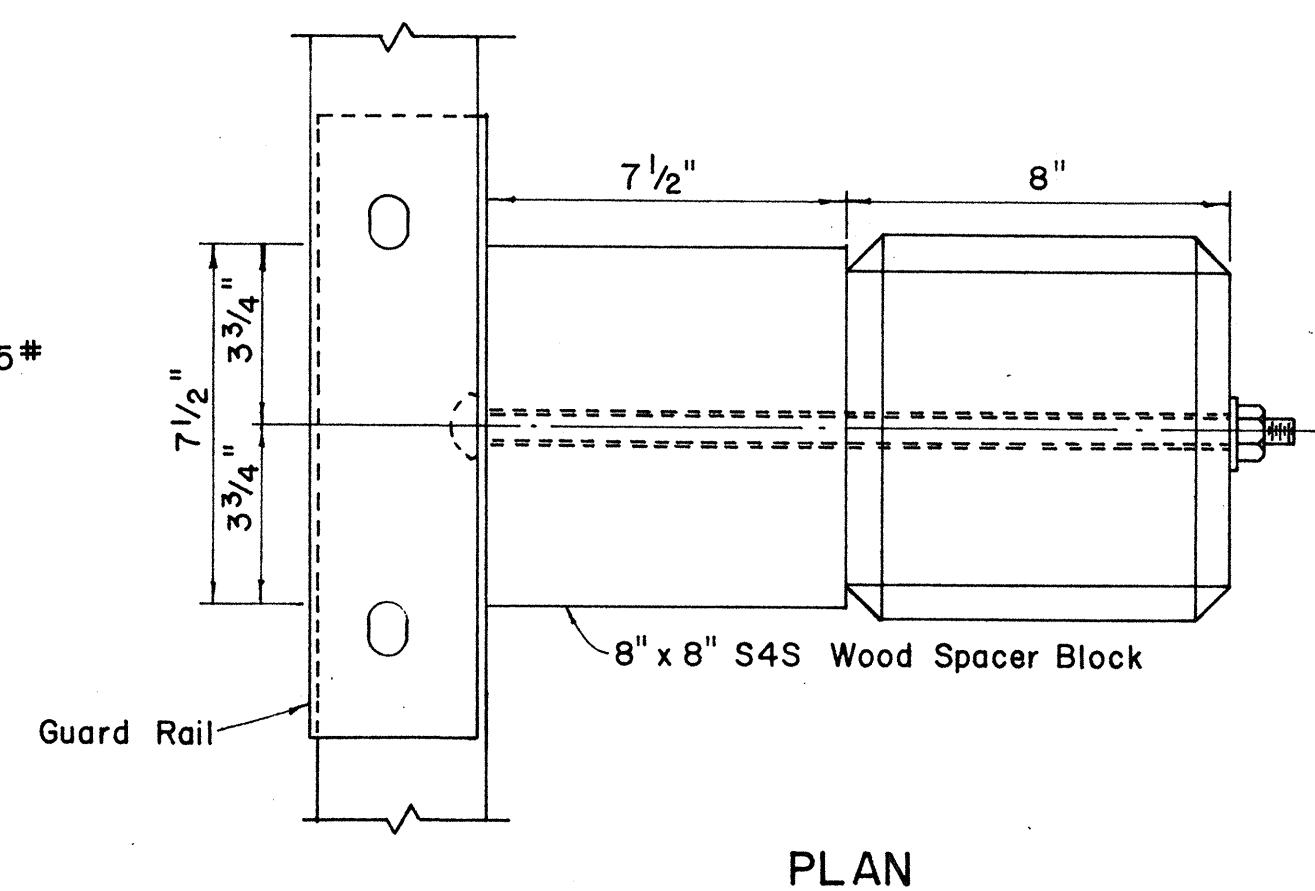
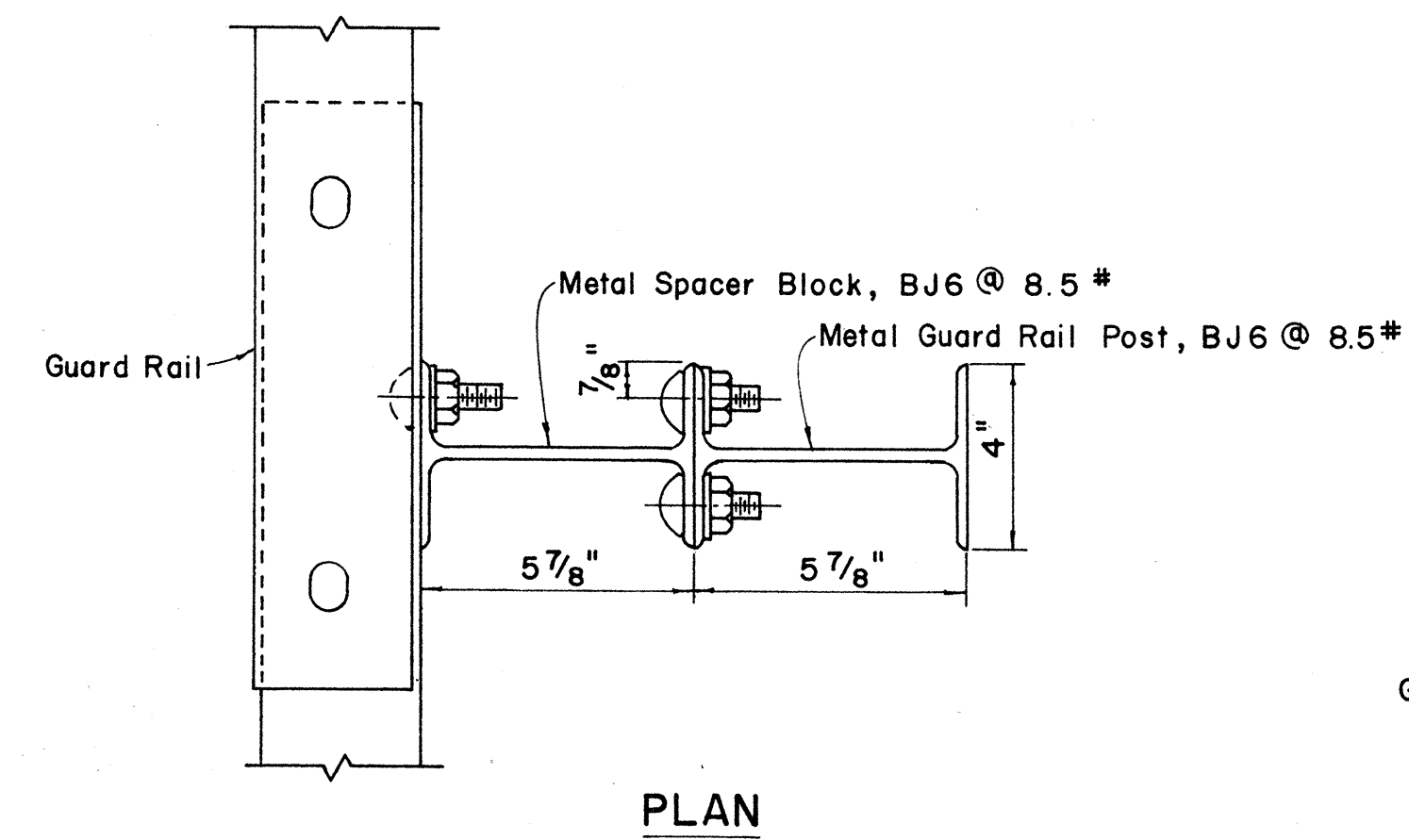
APPROVED: _____ DATE: 1/10/67
DIRECTOR OF TRANSPORTATION

DECEMBER 8, 1964
REVISED: FEBRUARY 25, 1964

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

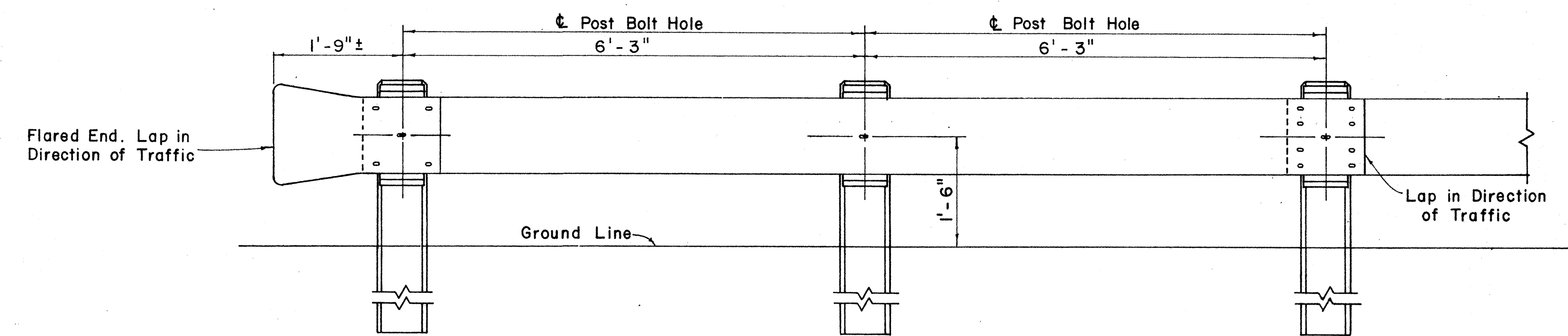
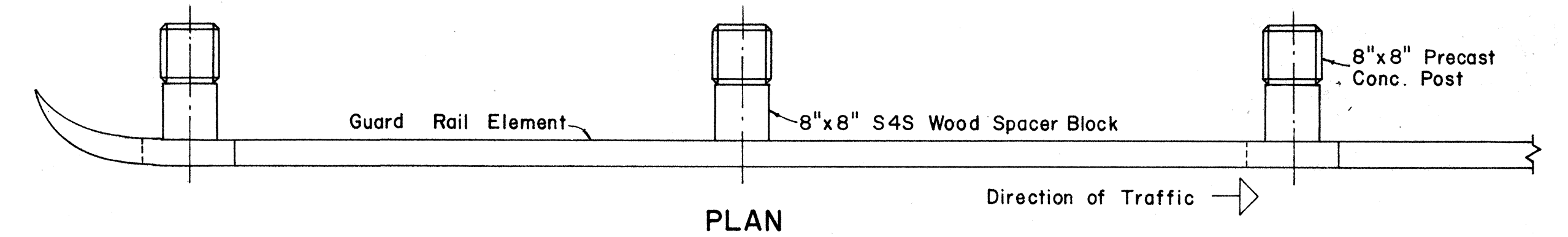
Scale: As Shown

SHEET No. 3 OF 6 SHEETS



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"

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:

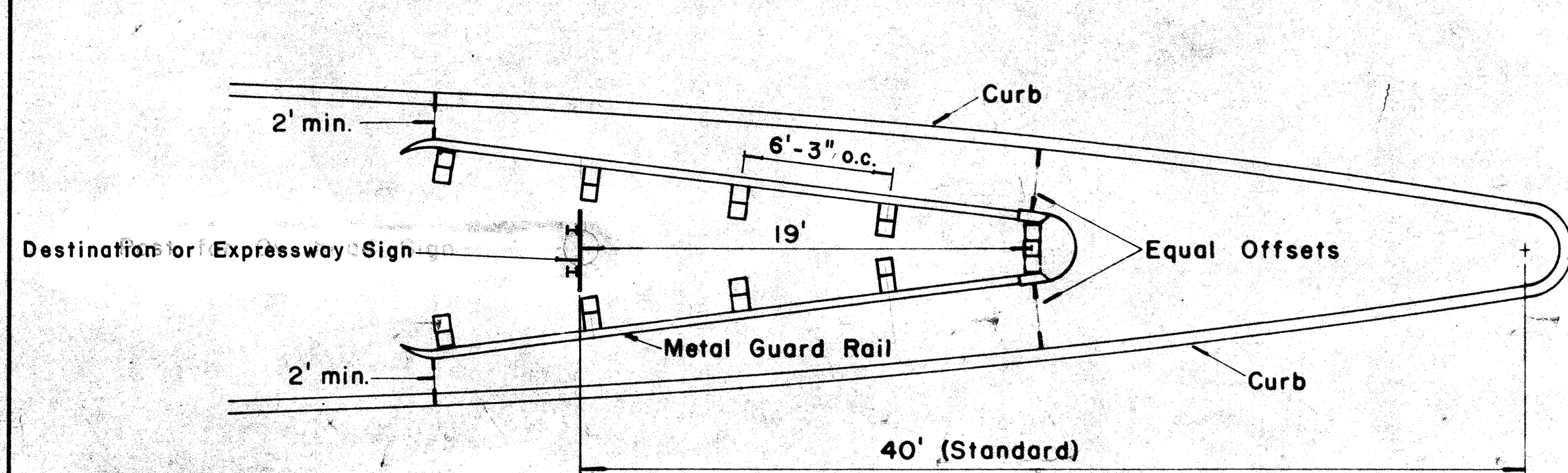
Single Guard Rails Shown. For Double Guard Rails Additional Spacer Blocks and Rail Elements Required on Opposite Side of Posts. See Bolt Schedule for Required Bolt Lengths.

DETAILS FOR SINGLE GUARD RAIL

Scale: As Shown

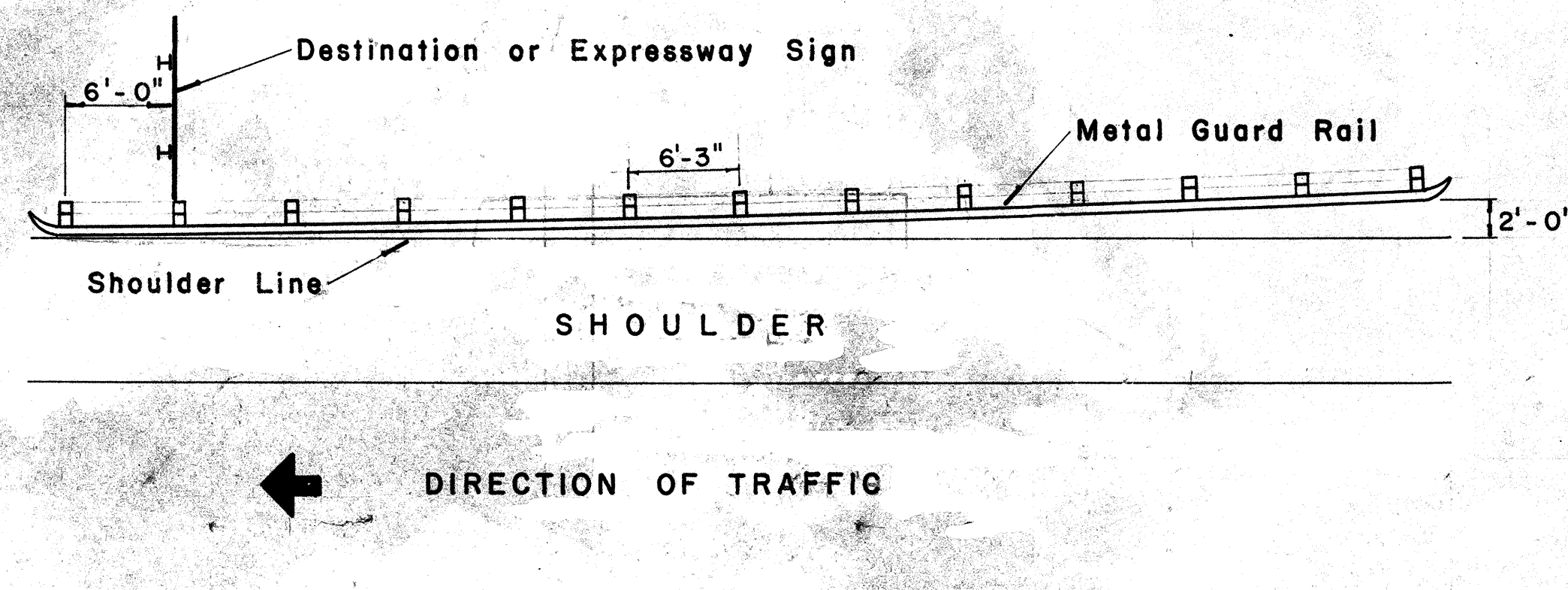
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARD RAIL



GORE MOUNTED SIGN

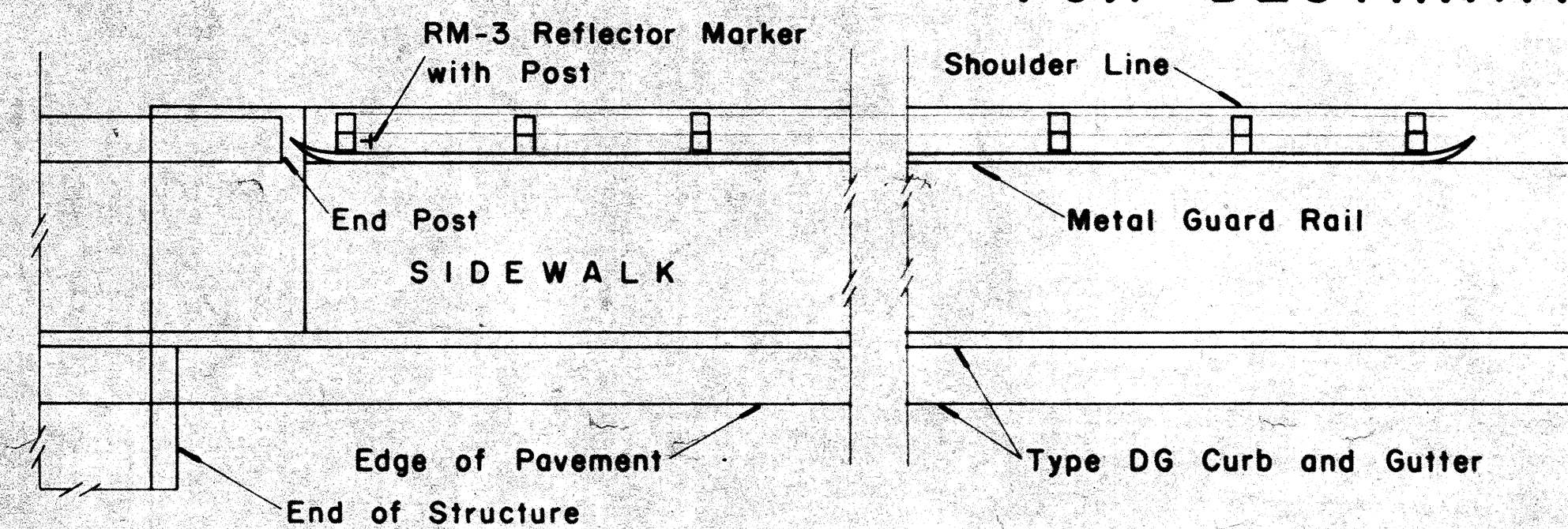
Scale: $\frac{3}{16}$ " = 1' - 0"



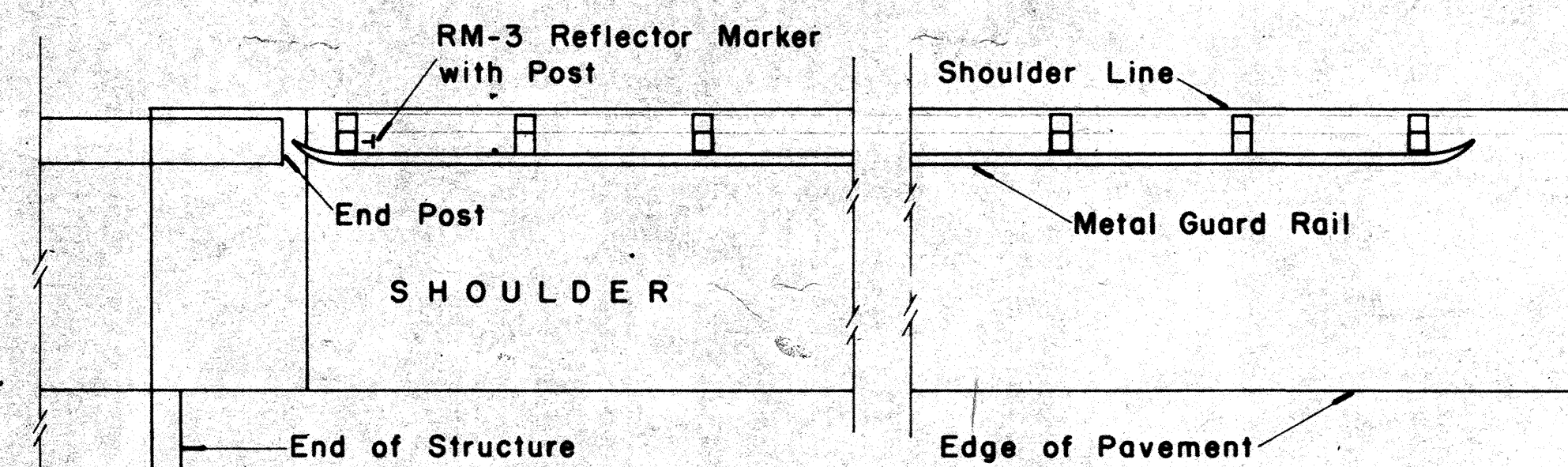
SHOULDER MOUNTED SIGN

Scale: $\frac{1}{8}$ " = 1' - 0"

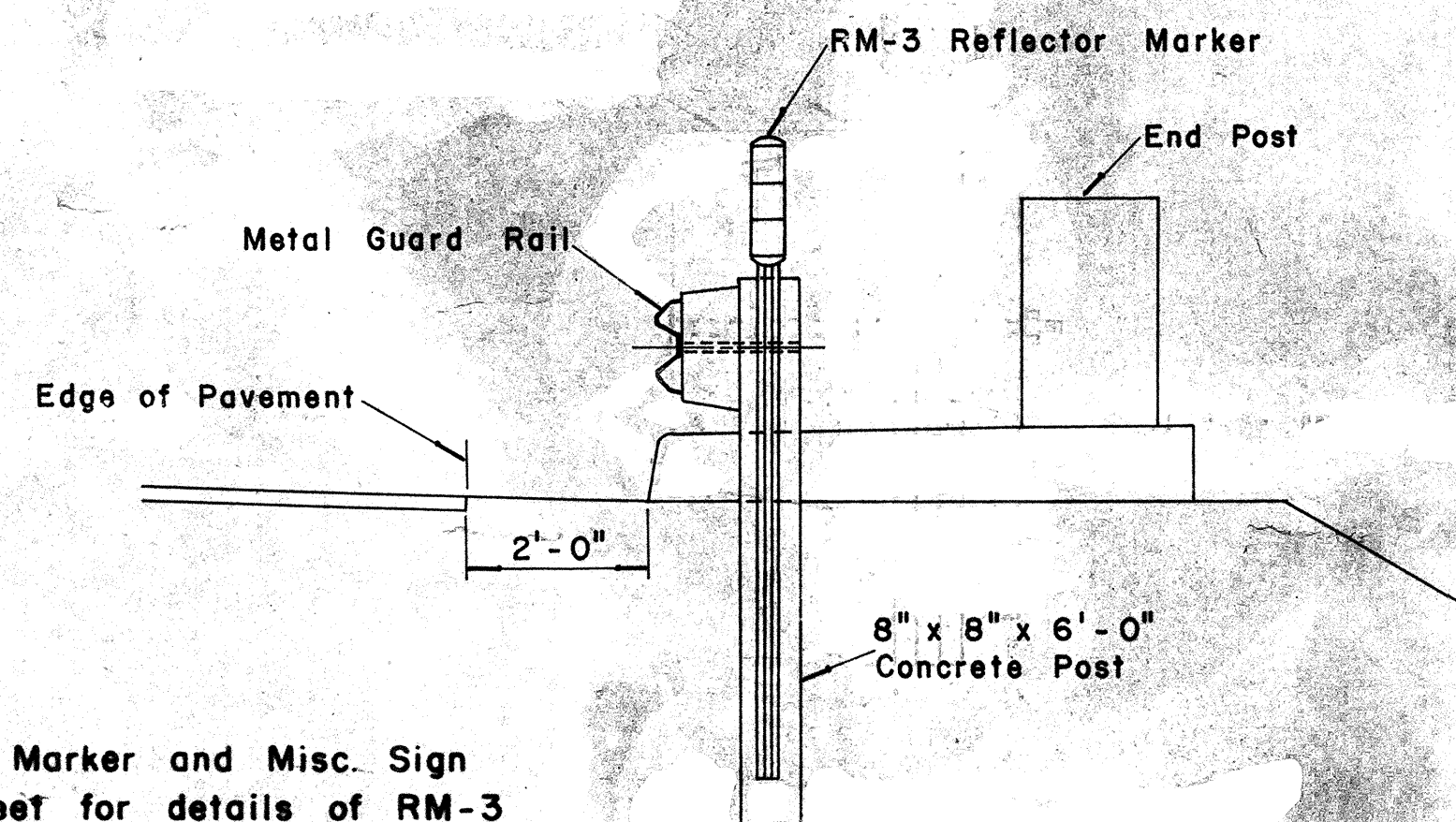
INSTALLATION OF METAL GUARD RAIL FOR DESTINATION AND EXPRESSWAY SIGNS



SIDEWALK CARRIED THROUGH STRUCTURE



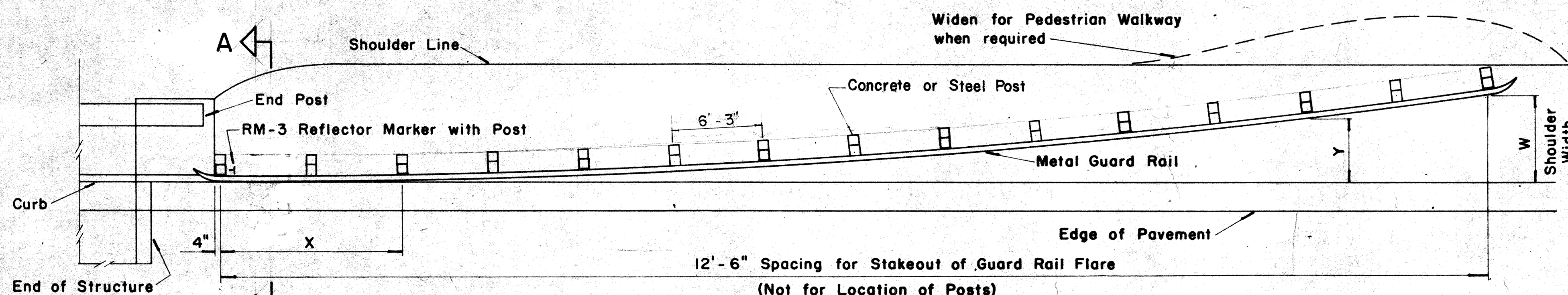
SHOULDER CARRIED THROUGH STRUCTURE



SECTION "A-A"

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

NOTE:
See F.A. Marker and Misc. Sign
Detail sheet for details of RM-3
Reflector Marker with Post.



SHOULDER NOT CARRIED THROUGH STRUCTURE

INSTALLATION OF METAL GUARD RAIL FLARE AT STRUCTURES

Scale: $\frac{3}{16}$ " = 1' - 0"

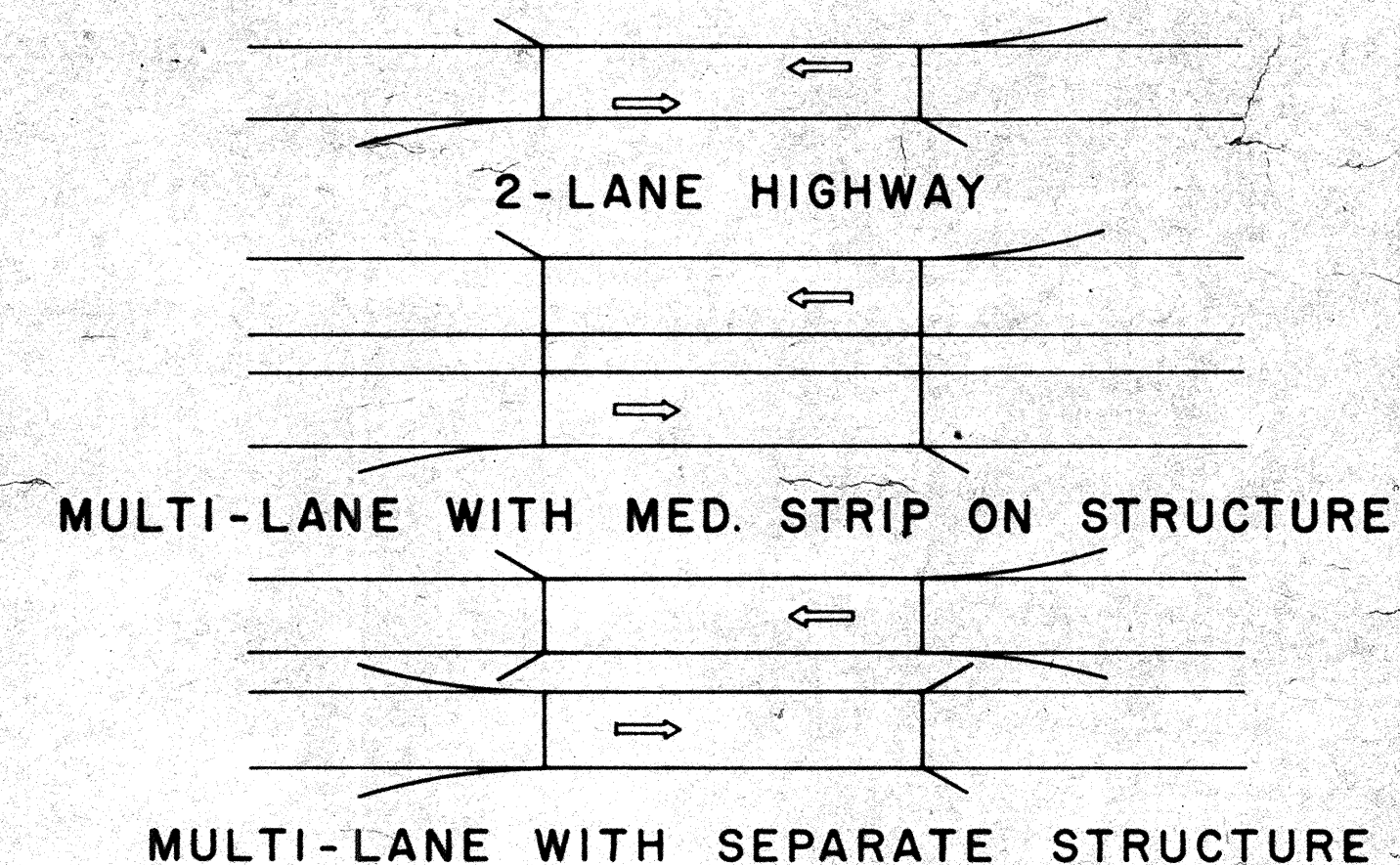
X	Y					
	W=3'	W=4'	W=5'	W=6'	W=7'	W=8'
12.5	0.19	0.16	0.14	0.12	0.09	0.08
25.0	0.75	0.64	0.55	0.49	0.35	0.32
37.5	1.69	1.44	1.25	1.10	0.78	0.72
50.0	3.00	2.56	2.22	1.96	1.38	1.28
62.5		4.00	3.47	3.06	2.16	2.00
75.0			5.00	4.41	3.11	2.85
87.5				6.00	4.23	3.92
100.0					5.53	5.12
112.5					7.00	6.48
125.0						8.00

W = GUARD RAIL FLARE

X = DISTANCE FROM POST AT
BRIDGE TO OFFSET POINTS

Y = GUARD RAIL FLARE OFFSET

GUARD RAIL OFFSET



TYPICAL GUARD RAIL FLARES AT STRUCTURE APPROACHES

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS
METAL GUARD RAILS
AT
STRUCTURES & GUIDE SIGNS

Scale: As Noted

SHEET No. 6 OF 6 SHEETS

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