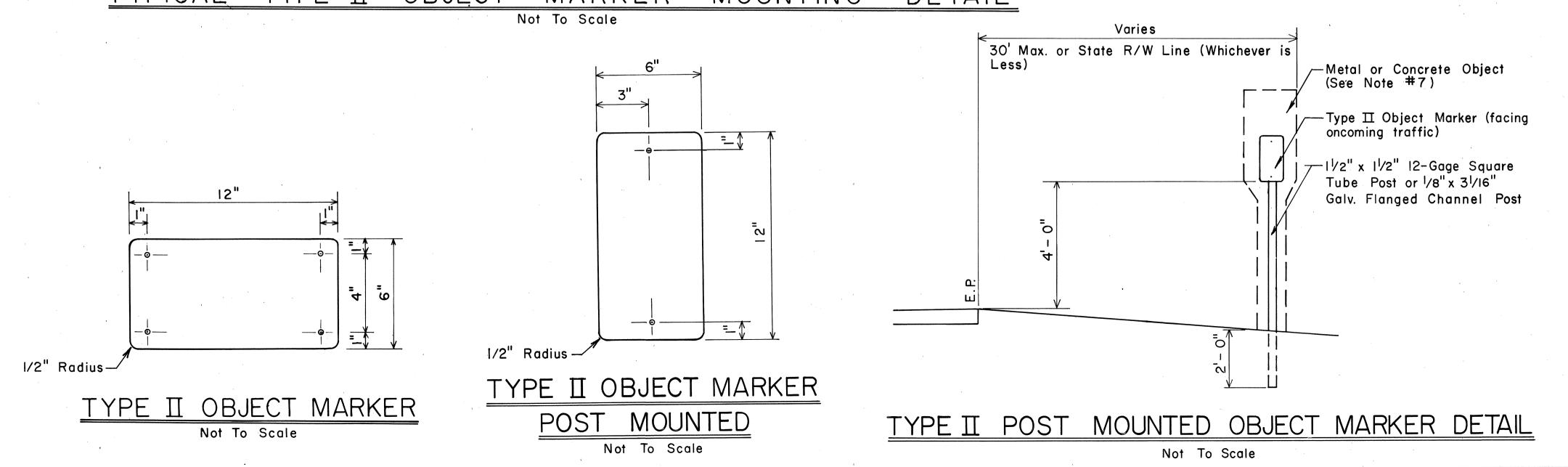


FED. ROAD DIST. NO. STATE PROJ NO FISCAL SHEET TOTAL SHEETS

HAWAII HAW. 360B-01-80 1980 20 28

GENERAL NOTES

- I. Type Π Object Markers shall be of amber reflective sheeting material overlayed on 0.020" aluminum sheeting.
- 2. Type II Object Markers shall be mounted on utility poles and trees, as shown on the plans, with 4d nails (4 ea.).
- 3. The Contractor shall prepare the surface (of the utility pole or the tree etc.), on which the Type Π Object Marker is to be placed to provide the most optimum reflecting surface to the motorist.
- 4. Branches of trees which will obscure the object markers shall be trimmed. (Payment shall be incidental to Contract Item No. 621.4800 Type II Object Markers.)
- 5. All objects (utility poles or trees) that are within the State highway right of way and within 30 feet of the roadway edge of pavement shall be marked.
- 6. All objects to be marked will be determined in the field by the Engineer.
- 7. Objects such as concrete posts, concrete or rock walls and boxes, metal posts (greater than 2 inches in diameter), or metal boxes shall be marked with post mounted object markers. Post mounted Type II Object Markers shall conform to the following requirements:
 - a. It shall consist of amber reflective sheeting material overlayed on 0.063 inch thick sheet aluminum backing of the dimensions shown on the plans.
 - b. It shall be mounted on 1½"x 1½", 12-gage square tube posts with ¼"x 2" galv. bolts, nuts, and washers. Galvanized flanged ½"x 3½6" channel posts, 2 lbs. per ft., may be used as an option.



DEPARTMENT OF TRANSPORTATION

LAND TRANSPORTATION FACILITIES DIVISION

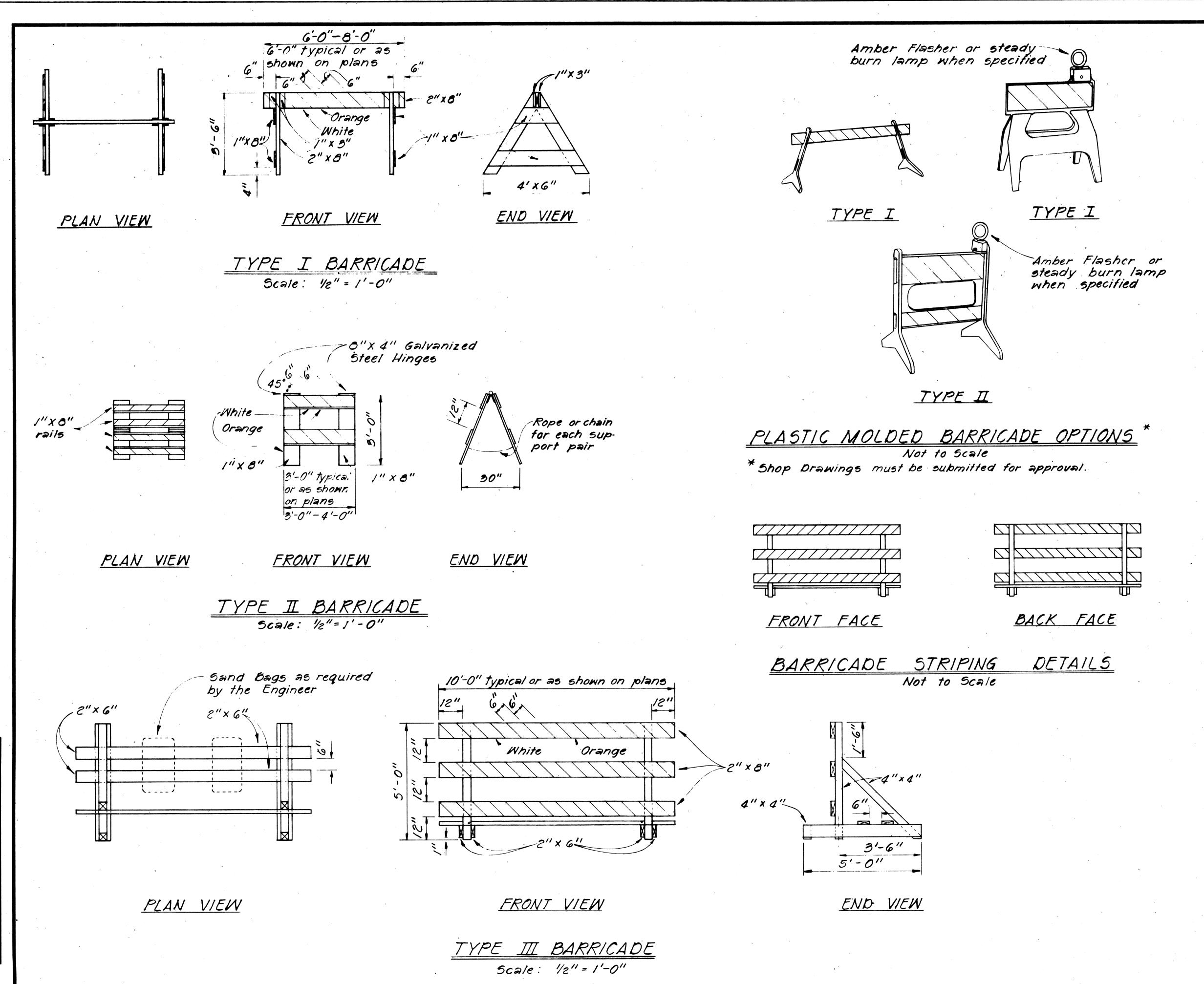
TYPICAL DETAILS

TYPE II OBJECT MARKERS

SCALE: AS SHOWN DATE: JUNE, 1980

SHEET NO. 3 OF || SHEETS

<u>20</u>



H-E

FED. ROAD DIST. NO. STATE PROJ. NO. FISCAL YEAR NO. SHEETS

HAWAII HAW. 360B-01-80 1980 21 28

GENERAL NOTES

- 1. The Contractor shall construct, install and maintain the barricades at the locations shown on the Plans.
- 2. The barricades shall be left in place or relocated upon completion of the project as ordered by the Engineer and are to become State property, unless otherwise specified.
- 3. The orange and white stripes shall slant downward toward the side on which traffic is to pass and shall be reflectorized with reflective sheeting.
- 4. Both faces of the barricade rails shall be striped. See Striping Detail Arrangement.
- 5. Contractor may submit alternate designs for approval.
- 6. Barricade details shall conform to the "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, by the Federal Highway Administration and as amended.
- 7. If wooden rails are used, 26 ga. galv. steel sheet shall be first tacked on to the rails and then overlayed with reflective sheeting.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

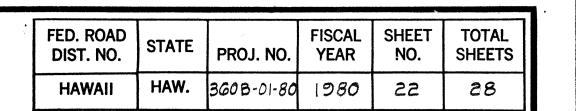
TYPICAL DETAILS

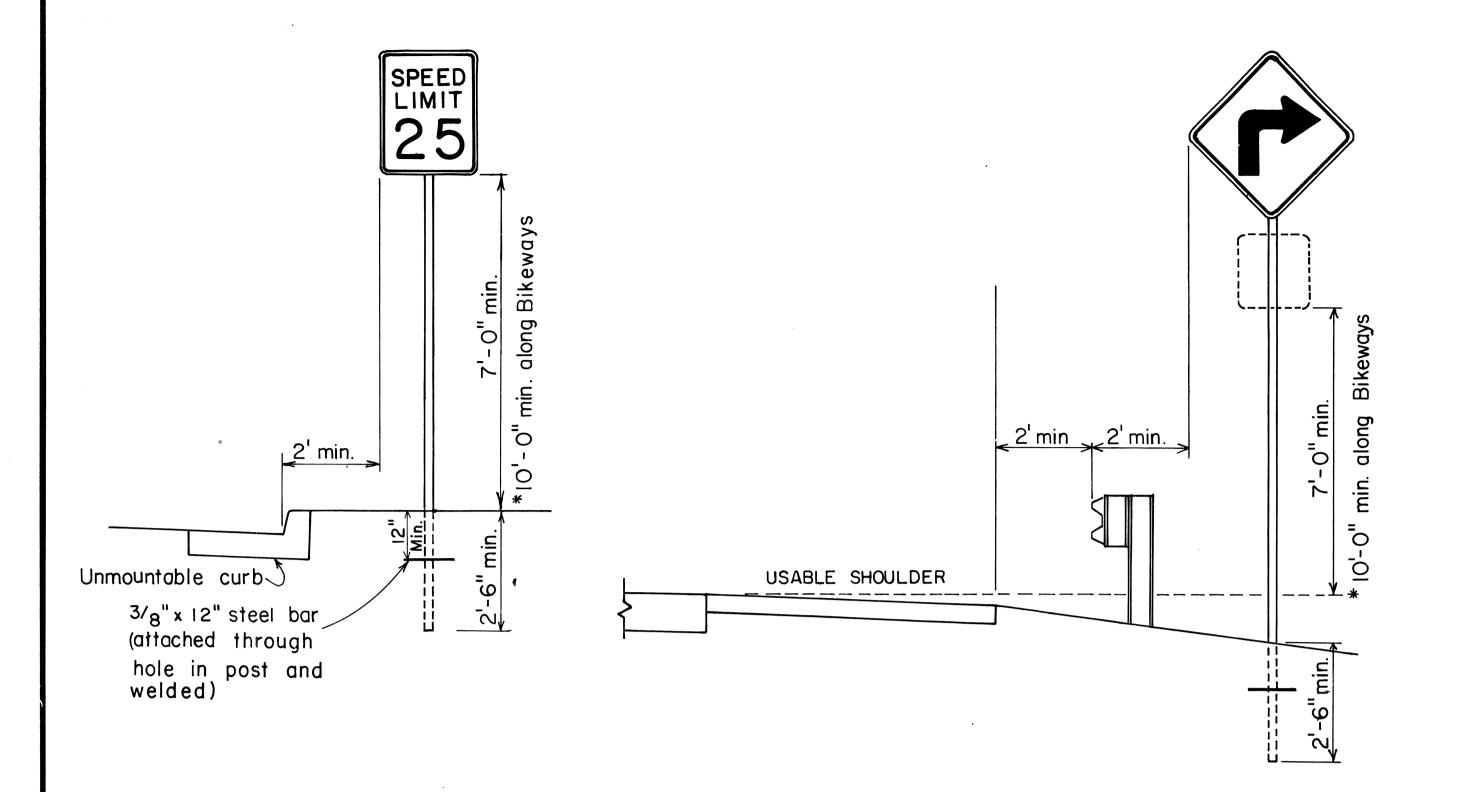
BARRICADES

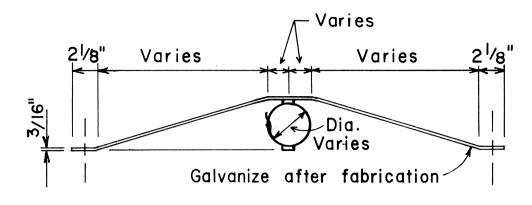
SCALE: As Shown

SHEET NO. 4 OF 11 SHEETS

2







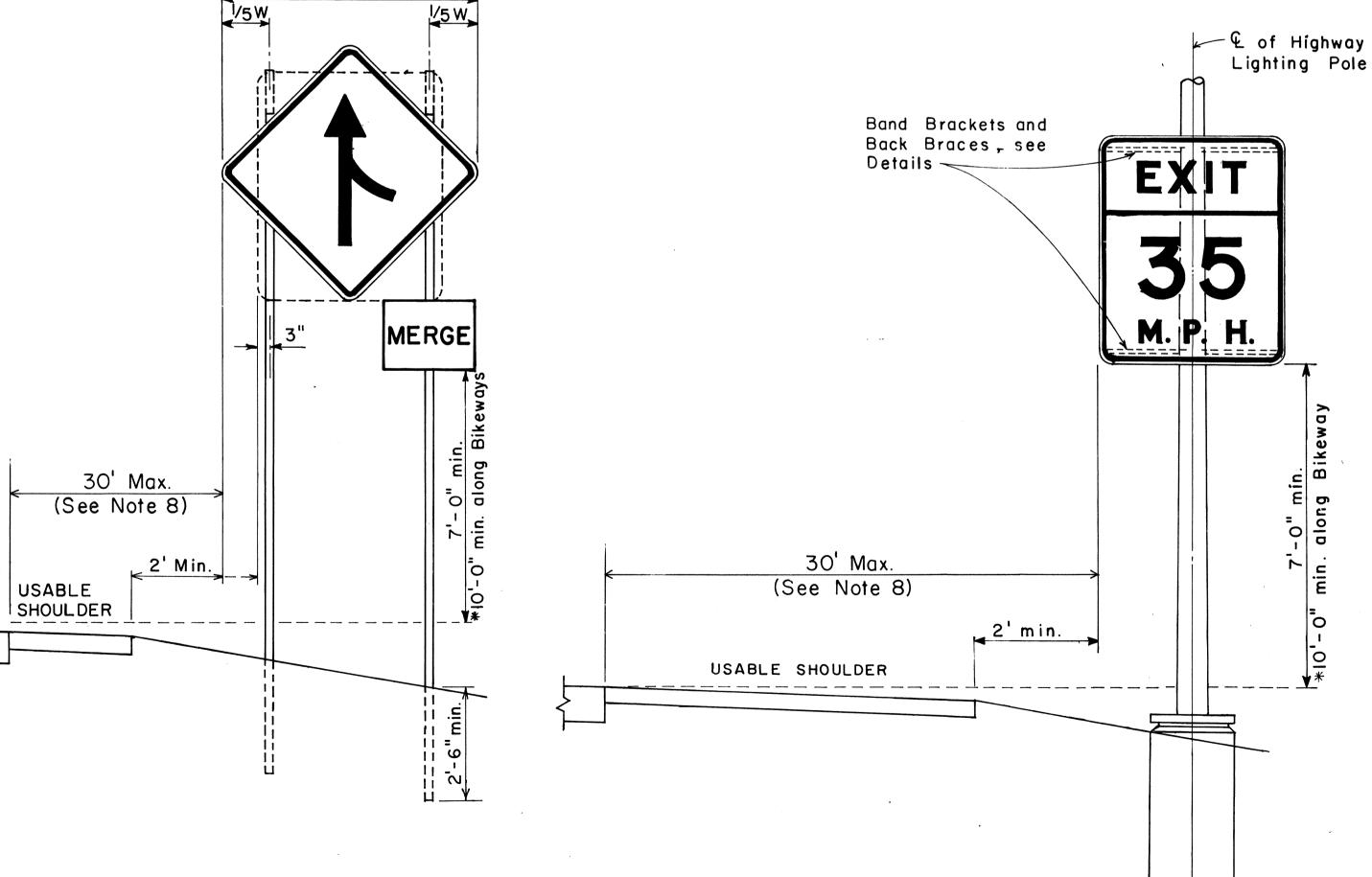
PLAN Back braces shall be used in conjunction with band brackets Varies 1" x 3/16" strap steel-3/8" x 13/4" slot

BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION

ELEVATION

GENERAL NOTES

- I. Signs 48" and wider or larger than IO sq. ft in area shall be mounted on two sign posts.
- 2. All signs larger than 10 sq. ft. in area or 48" inches and wider, and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least two sets of band brackets and back braces.
- 3. All signs 28 sq. ft. in area or larger and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least three sets of band brackets and back braces.
- 4. All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
- 5. Sign posts shall extend 31/2" above sign where required for City and County street name signs.
- 6. (R) or (L) indicates right or left and shall be as shown on the plans.
- *7. See plans for special details.
- 8. When clear roadside recovery areas are provided, Signs shall be placed as far from the edge of traveled way as possible up to a maximum of 30 feet. When possible they shall be placed in protected locations.
- 9. Signs in medians shall be placed at midpoint of median up to a maximum distance of 30 feet from the edge of traveled way. When appropiate, signs for opposing directions shall be placed back to back.



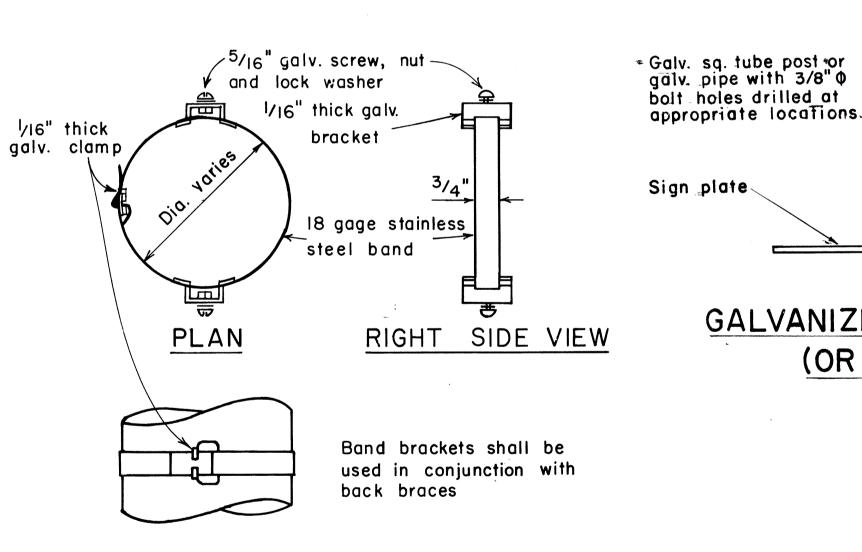
AND LATERAL LOCATION OF

TYPICAL INSTALLATION

SIGNS

HEIGHT

K-E B TRACING PAPER



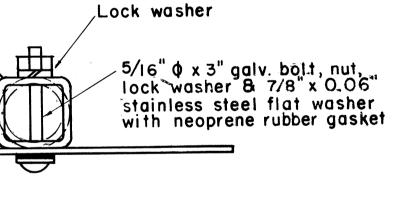
LEFT SIDE VIEW

BAND BRACKET

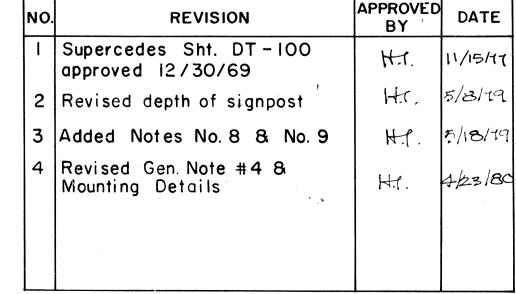
TYPICAL MOUNTING DETAILS

NOT TO SCALE

NO.	REVISION	APPROVED BY	DATE
_	Supercedes Sht. DT-100 approved 12/30/69	H.T.	11/15/17
2	Revised depth of signpost	H.T.	5/8/19
3	Added Notes No. 8 & No. 9	H.P.	5/18/79
4	Revised Gen Note #48 Mounting Details	H.f.	4/23/80



GALVANIZED SQUARE TUBE POST (OR GALVANIZED PIPE)



APPROVAL RECOMMENDED: TRAFFIC ENGINEER

APPROVED: Hurbert 2. Dal Ei shi 11/15/77 ASSISTANT CHIEF, ENGINEERING DATE

11/10/77 DATE

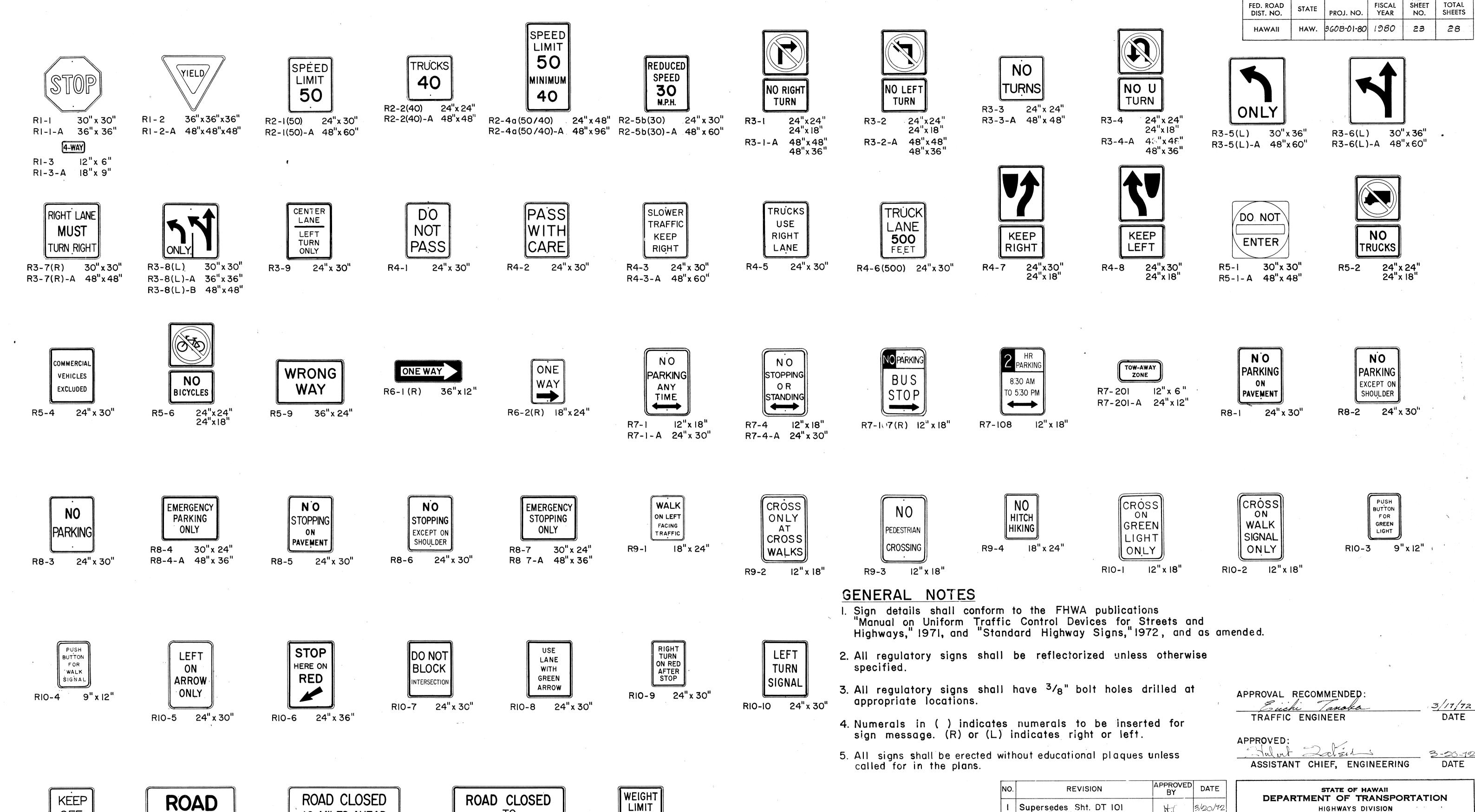
June, 1977

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

STANDARD DETAILS MISCELLANEOUS SIGN DETAILS

Not to scale

SHEET NO. 5 OF || SHEETS DT |O



Supersedes Sht. DT 101
Approved 12-30-69
2 Revised General Note 1.
3 Added General Note 5

HT. 10/10/14
HT. 10/10/14
PT. 10/10/14
STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE
SHEET No. 6 OF 11 SHEETS DT 101

23

TONS

RI2-1(10) 24" x 30"

A = = = =

SURVEY PLOTTEI
DRAWN BY_____
TRACED BY____
QUANTITIES BY___
CHECKED BY____

OFF

MEDIAN

24" x 30"

CLOSED

RII-2

48"x 30"

10 MILES AHEAD

LOCAL TRAFFIC ONLY

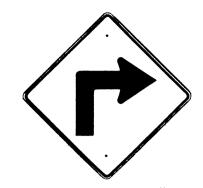
60" x 30"

RII-3(10)

THRU TRAFFIC

RII-4

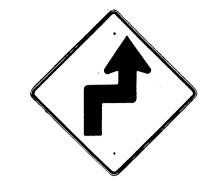
60" x 30"



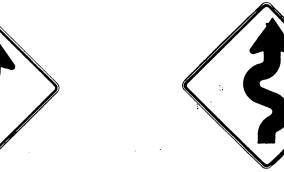
WI-I(R) 30"x30" WI-I(R)-A 48"x48"



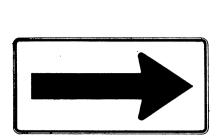
WI-2(R) 30"x 30" WI-2(R)-A 48"x 48"



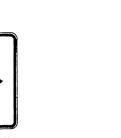
WI-3(R) 30"x30" WI-3(R)-A 48"x48" WI-4(R) 30"x30" WI-4(R)-A 48"x48"

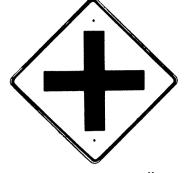


WI-5(R) 30"x30" WI-5(R)-A 48"x48"

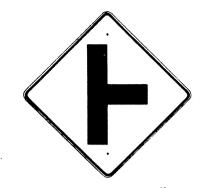


48"x 24"

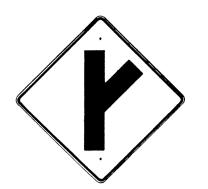




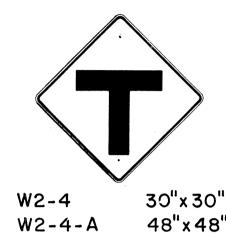
30"x 30" 48"x 48"

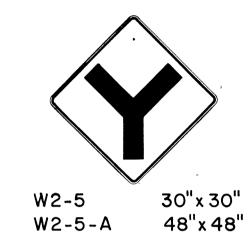


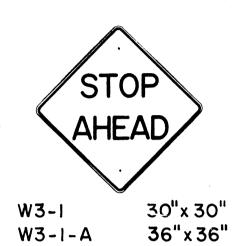
W2-2 W2-2-A 30" x 30"

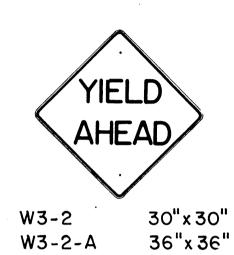


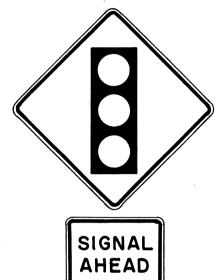
W2-3(R) 30"x 30" W2-3(R)-A 48"x48"



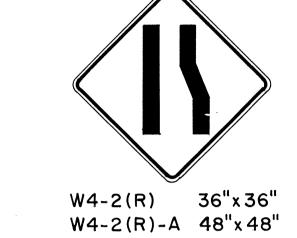














PAVEMENT







DIVIDED HIGHWAY

24"x 18"

DIVIDED HIGHWAY ENDS 36"x 36" 24"x 18"





30"x 30" 24"x 18"

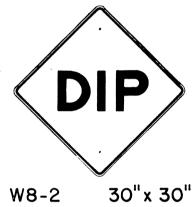


W8-I-A 36"x 36"

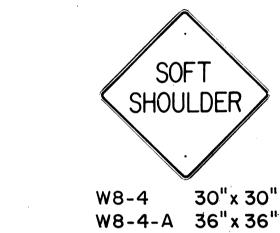
BUMP

W4-I(R)-A 48"x 48" 24"x 18"

30" x 30" 24" x 18"



30" x 30" 30"x 30" W8-3 W8-2-A 36"x36" W8-3-A 36"x 36"



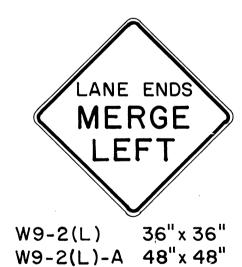


SLIPPERY WHEN WET

24"x 18" W8-5-A 36"x 36" 24"x 18"



W9-I(R) 30"x 30" W9-I(R)-A 36"x 36" W9-I(R)-B 48"x48"





24"x 18" W6-3-A 36"x 36" 24"x 18" W6-3-B 48"x 48" 24"x 18"

WIO-I 36" Diameter



W7-1-A 36"x 36" 24"x 18"

BIKE

XING

WII-I-A 36"x36" 24"x18"

W11-1

30"x 30'

24" x 18"



USE LOW GEAR



WII-2 30"x 30" 24"x 18"

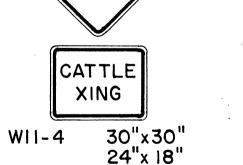
WII-2-A 36"x36" 24"x18"



WII-4-A 36"x36" 24"x18"

DEAD

END

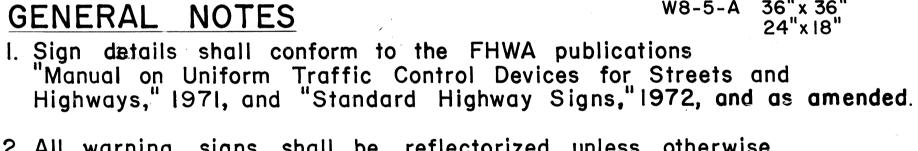




PASSING



WII-5 30"x30" 24"x 18" WII-5-A 36"x36' 24"x18"



- 2. All warning signs shall be reflectorized unless otherwise specified.
- 3. All warning signs shall have 3/8" bolt holes drilled at appropriate locations.
- 4. Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- 5. Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized.



ASSISTANT CHIEF, ENGINEERING





WARNING SIGNS

NOT TO SCALE

SHEET No. 7 OF || SHEETS DT 102

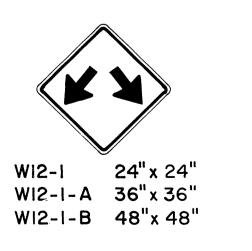
3/17/12 DATE

3-20-12

DATE

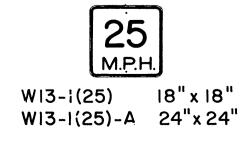
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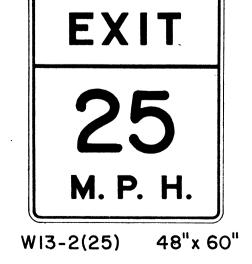
IMPERIAL" LA 3207





W12-2(12'-6") 36" x 36" 24" x 18"





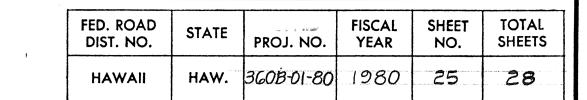
RAMP 25 M. P. H.

W13-3(25) 48"x 60"

30"x 30" W14-1 NOTE

I. All signs shall be erected without educational plaques unless called for in the plans.

NO.	REVISION	APPROVED BY	DATE
l	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/12
2	Revised General Note I	H1.	10/16/14
3	Revised General Note 5	Mt	9-16-75
4	Revised General Note 5	1-1-1.	9-14-76
5	Added Note I	H.I.	11-9-79
		t _e m - '	

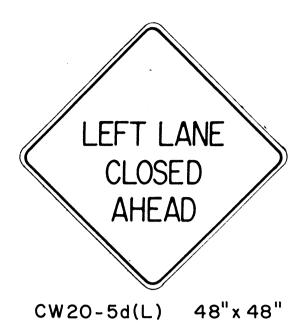




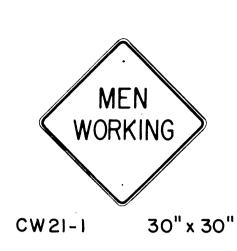








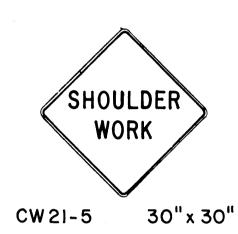


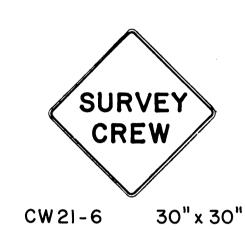




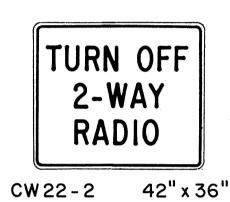


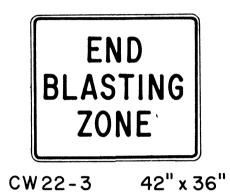








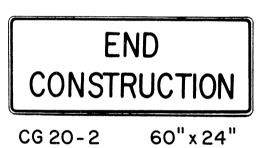




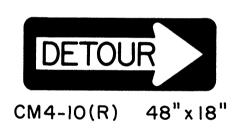


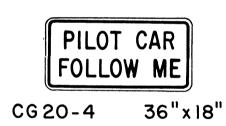
CG 20-I(5) 60" x 36"

CW22-1b 48" x 48"















GENERAL NOTES

- I. Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
- 2. All construction signs shall be reflectorized.
- 3. All construction signs shall have 3/8" bolt holes drilled at appropriate locations.
- 4. Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- 5. For "CW" series signs, suffixes a,b,c and d are as follows: a-1500 FT, b-1000 FT, c-500 FT and d-AHEAD.

REVISION	APPROVED BY	DATE
Supersedes Sht. DT 104 Approved 12-30-69	H.7.	3/23/72
Revised General Note I	14.1.	10/16/12
Revised General Note 2 Revised General Note 2 and sign CG20-1(5)	Mt H.P.	9-16-75 9-14-76
	Supersedes Sht. DT 104 Approved 12-30-69 Revised General Note 1 Revised General Note 2 Revised General Note 2	Supersedes Sht. DT 104 Approved 12-30-69 Revised General Note 1 Revised General Note 2 Revised General Note 2

	*
APPROVAL	RECOMMENDED:
Euch	ii Janaka
TRAFFIC	FNGINEER

3/21/72 DATE TRAFFIC ENGINEER

3/23/12

ASSISTANT CHIEF, ENGINEERING

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

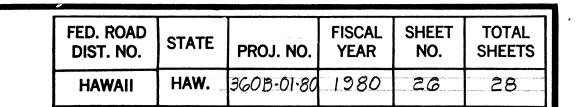
LAND TRANSPORTATION FACILITIES DIVISION

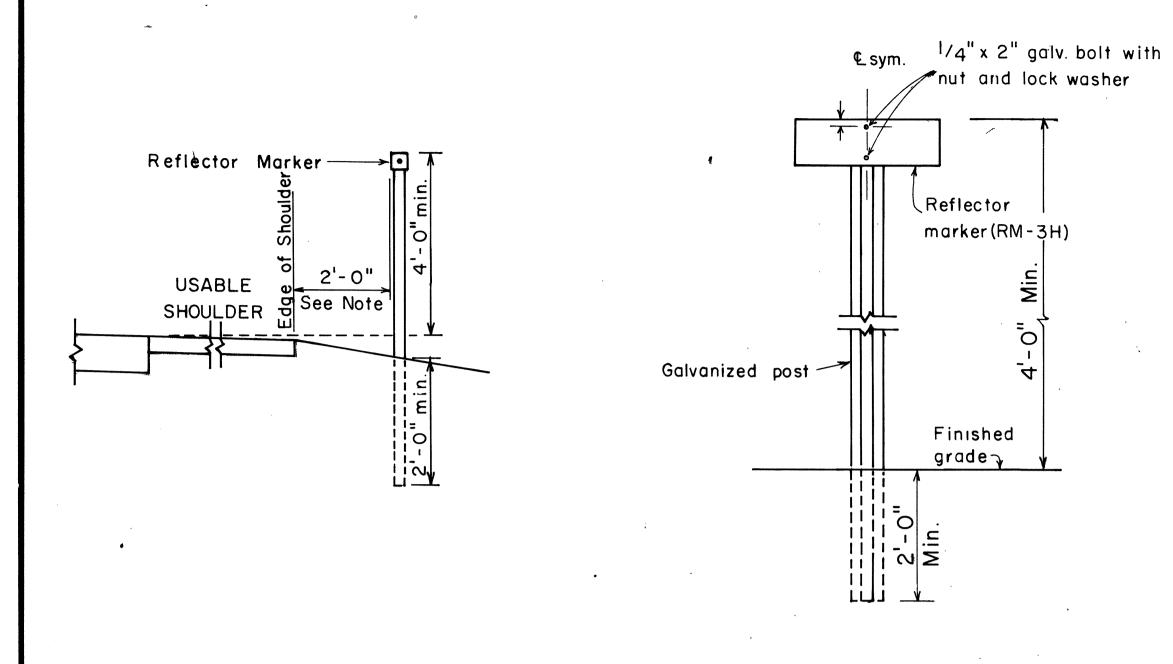
STANDARD DETAILS CONSTRUCTION SIGNS

NOT TO SCALE

SHEET No. 8 OF 11 SHEETS DT 104

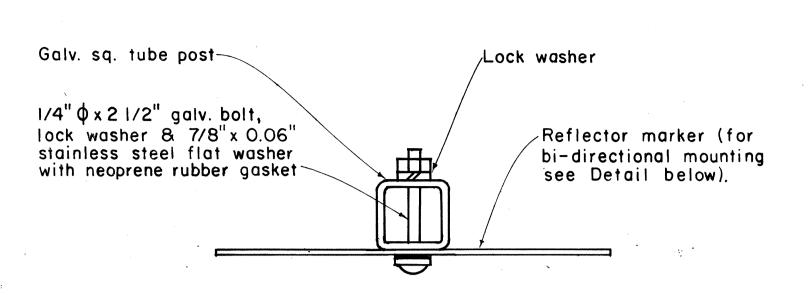
HE IMPERIAL* LA 3207



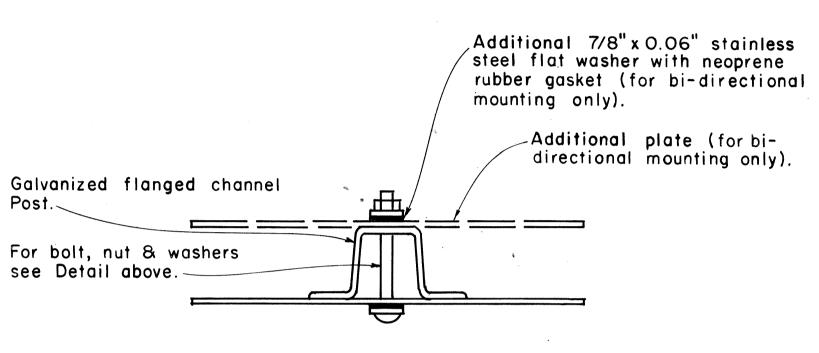


MARKER MOUNTING DETAIL

REFLECTOR



GALVANIZED SQUARE TUBE POST

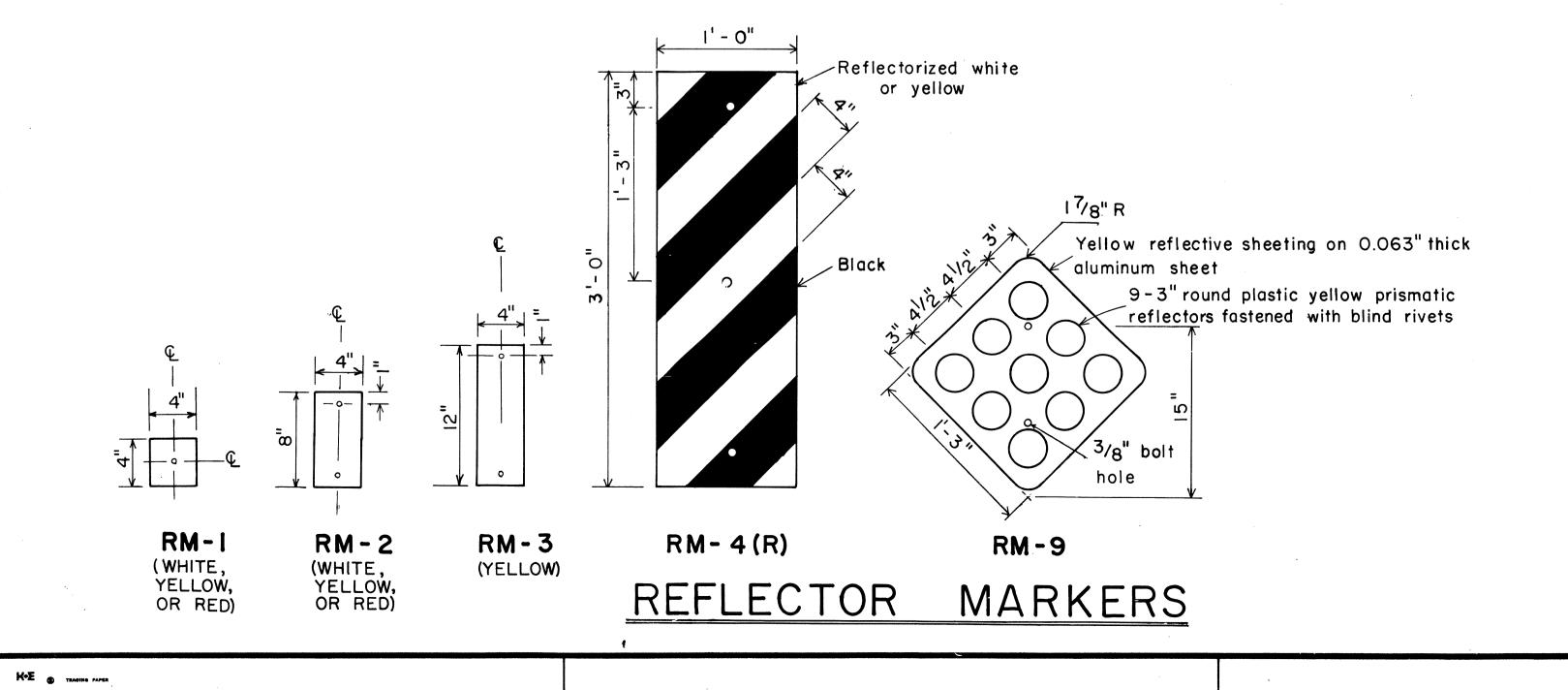


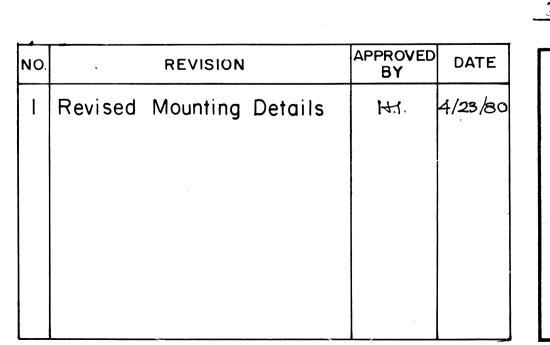
GALVANIZED FLANGED CHANNEL POST

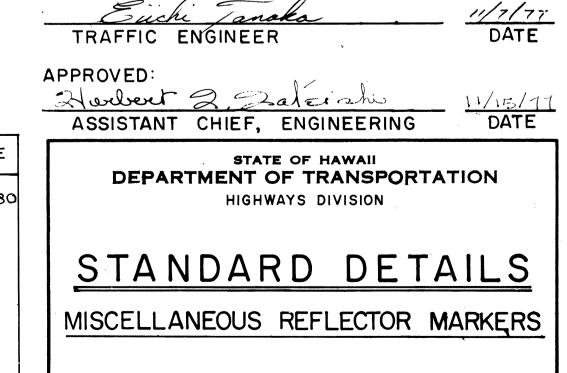
TYPICAL MOUNTING DETAILS

GENERAL NOTES:

- 1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
- 2. (R) or (L) indicates right or left and shall be as shown on the plans.
- 3. Reflector markers RM-I and RM-2 shall be:
- a) Yellow if placed along the left edge of divided roadways, one-way roadways, and ramps in the direction of travel.
- b) White if placed along the right edge of divided roadways, one-way roadways, and ramps in the direction of travel.
- 4. For reflector marker RM-9, reflective sheeting material may be used as an alternate.
- 5. For RM-4, the stripes shall slope downward at an angle of 45° in the direction of traffic.



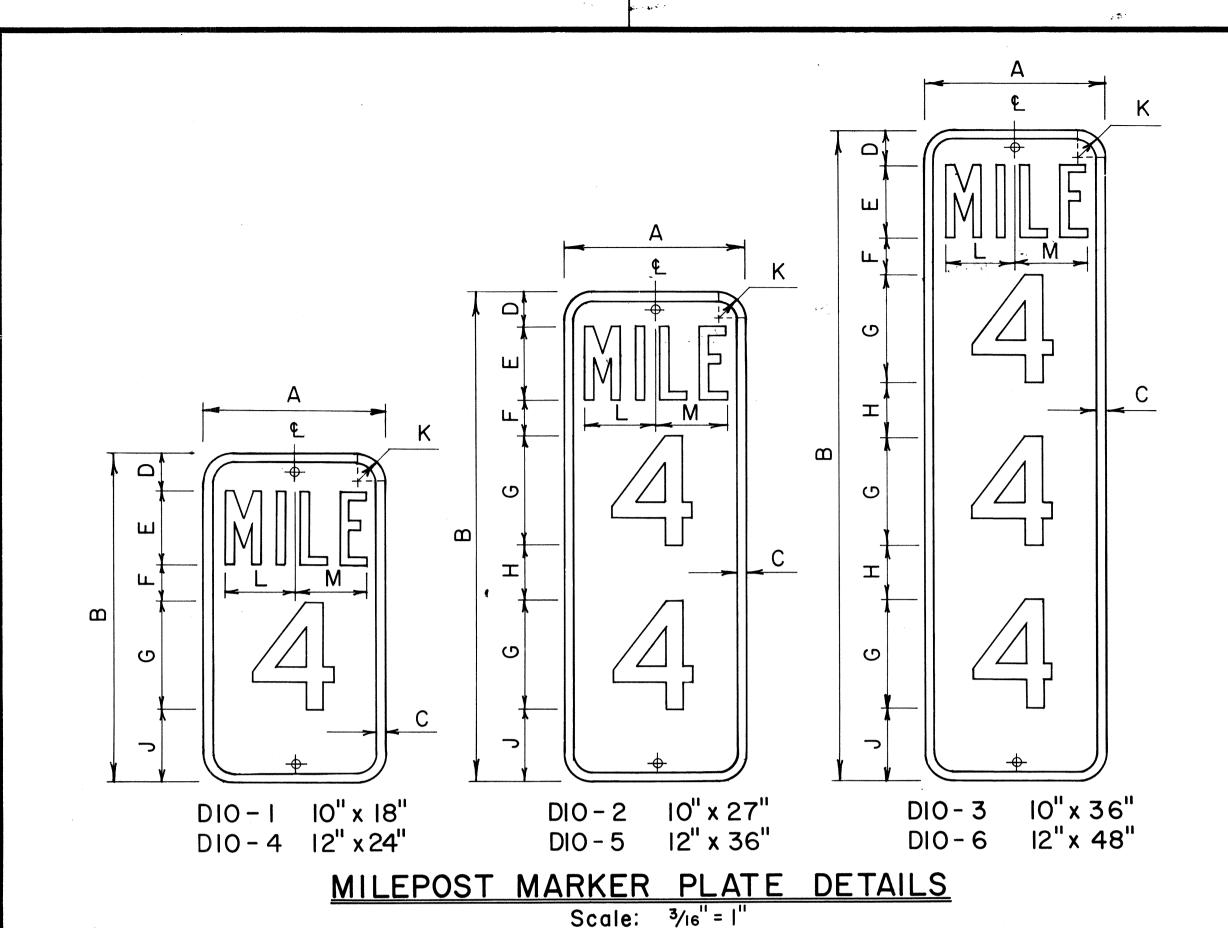




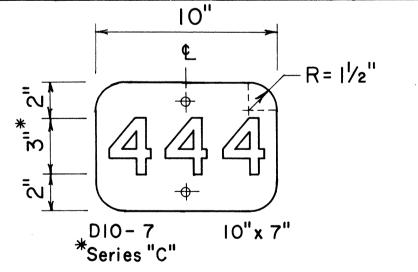
SHEET NO. 9 OF || SHEETS DT ||

June, 1977

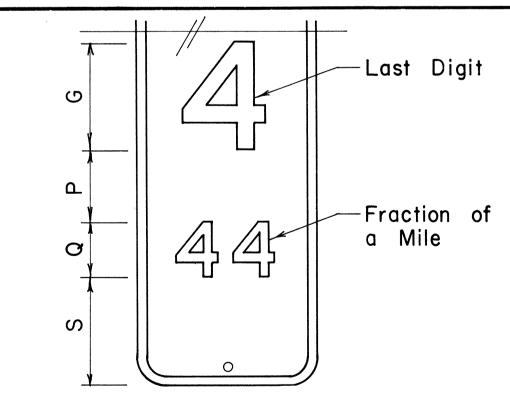
26



						,		•							
,	MILEPOST PLATE SCHEDULE (INCHES)														
NAME	SIZE	А	В	С	D	Ε	F	G	Н	J	K	L	М	LETTER SERIES	NUMERAL SERIES
DIO-1 DIO-4	10 x 18 12 x 24	10 12	18 24	1/2 1/2	2	4	2	6 10		4	1/2	3 ⁵ / ₈ 4 ⁵ / ₈	3% 4%	B C	CC
DIO -2 DIO -5	10 x 27 12 x 36	10 12	27 36	1/2 1/2	2 3	4	2	6 10	3 3	4 3	1/2	3 ⁵ / ₈ 4 ⁵ / ₈		B C	CC
DIO-3 DIO-6	IO x 36 I2 x 48	10 12	36 48	1/2	2	4	2 3	6 10	3 2½	4 3	1/2	3 ⁵ / ₈ 4 ⁵ / ₈	3 ⁷ / ₈ 4 ⁷ / ₈	B C	CC



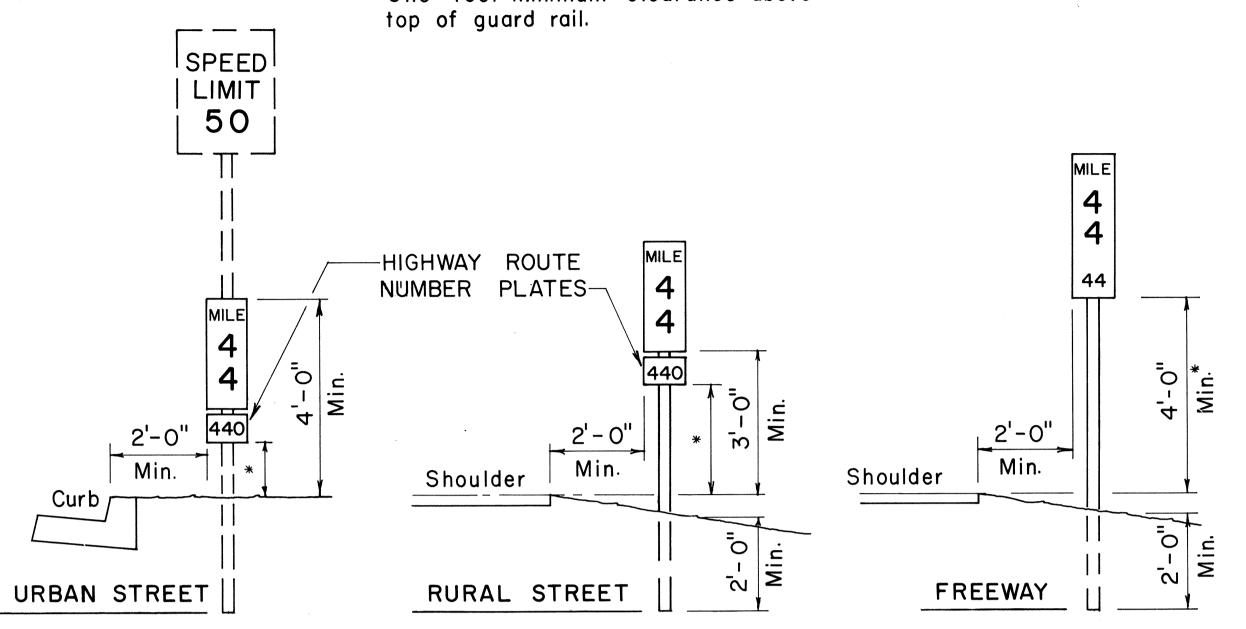
HIGHWAY ROUTE NUMBER PLATE DETAIL Scale: 3/16" = 1"



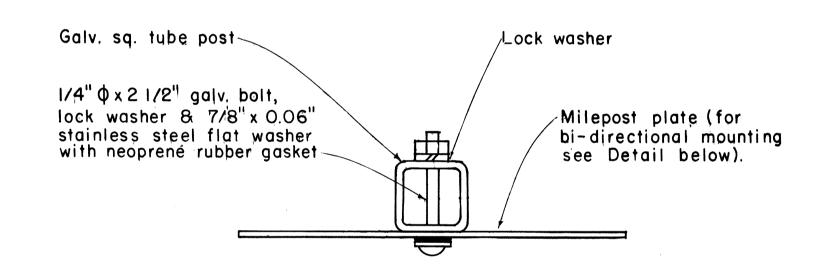
MILEPOST MARKER FRACTION DETAIL Scale: 3/16" = 1"

	MILEPOST PLATE SCHEDULE WITH FRACTION OF A MILE									
NAME	SIZE	G	Р	Q	S	NUMERAL SERIES				
D10-1a	10" x 2 7"	6"	4"	3"	6"	С				
D10-4a	12" x 3 6"	10"	4"	5"	7"	С				
D10-2a	10" x 36"	6" 6"	4" 4"	3" 5"	.6° 6	C				
D10-5a	12" x 48"			_		С				
D10-3a	10" x 45"	6"	4"	3"	6"	C				
D 10-6a	12" x 6 0"	10"	4"	5"	6"	С				

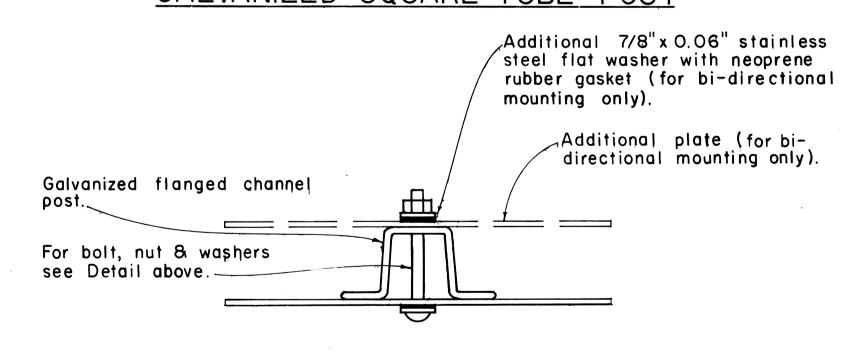
*One-foot minimum clearance above



TYPICAL ROADSIDE INSTALLATION Scale: 1/2" = 1' - 0"



GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS Scale: 1/2" = 1"

NΟ		REVISION		APPROVED BY	DATE
	Revised	Mounting	Detalls	H.	4/23/80
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
HAWAII	HAW.	360B-01-80	1980	27	28	

GENERAL NOTES:

- 1. Milepost marker and highway route number plates shall conform to the latest editions of the following FHWA publications:
 - a. "Standard Alphabets for Highway Signs," and as amended.
 - b. "Standard Highway Signs," and as amended
 - c. "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amendėd.
- 2. Milepost markers and highway route numbers shall be completely reflectorized with reflective sheeting as follows:
 - a. Milepost markers shall have white legends and border on a green background.
 - b. Highway route numbers shall have black numerals on a white background.
- 3. The plate backings for milepost markers and highway route numbers shall conform to the requirements for standard highway signs. The plates shall have 3/8" bolt holes drilled at appropriate locations.
- 4. Highway route number plates shall be used in conjunction with milepost marker plates on all roadways, except Interstate freeways. Fabrication and installation costs of highway route number plates shall be considered incidental to the milepost marker assembly.
- 5. Milepost markers shall be installed on all roadways as follows:
 - a. One milepost on each side of multi-lane roadways.
 - b. Back-to-back mileposts on one side of 2-lane roadways. (Right side of roadway in direction of increasing mileage.)

APPROVAL RECOMMENDED: TRAFFIC ENGINEER

1/17/78 DATE

1/18/18

DATE

APPROVED:

Herbert D. Daleishi ASSISTANT CHIEF, ENGINEERING

> STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

MILEPOSTS

SCALE: As Shown

DATE: December, 1977

SHEET NO. 10 OF 11 SHEETS DT 116

