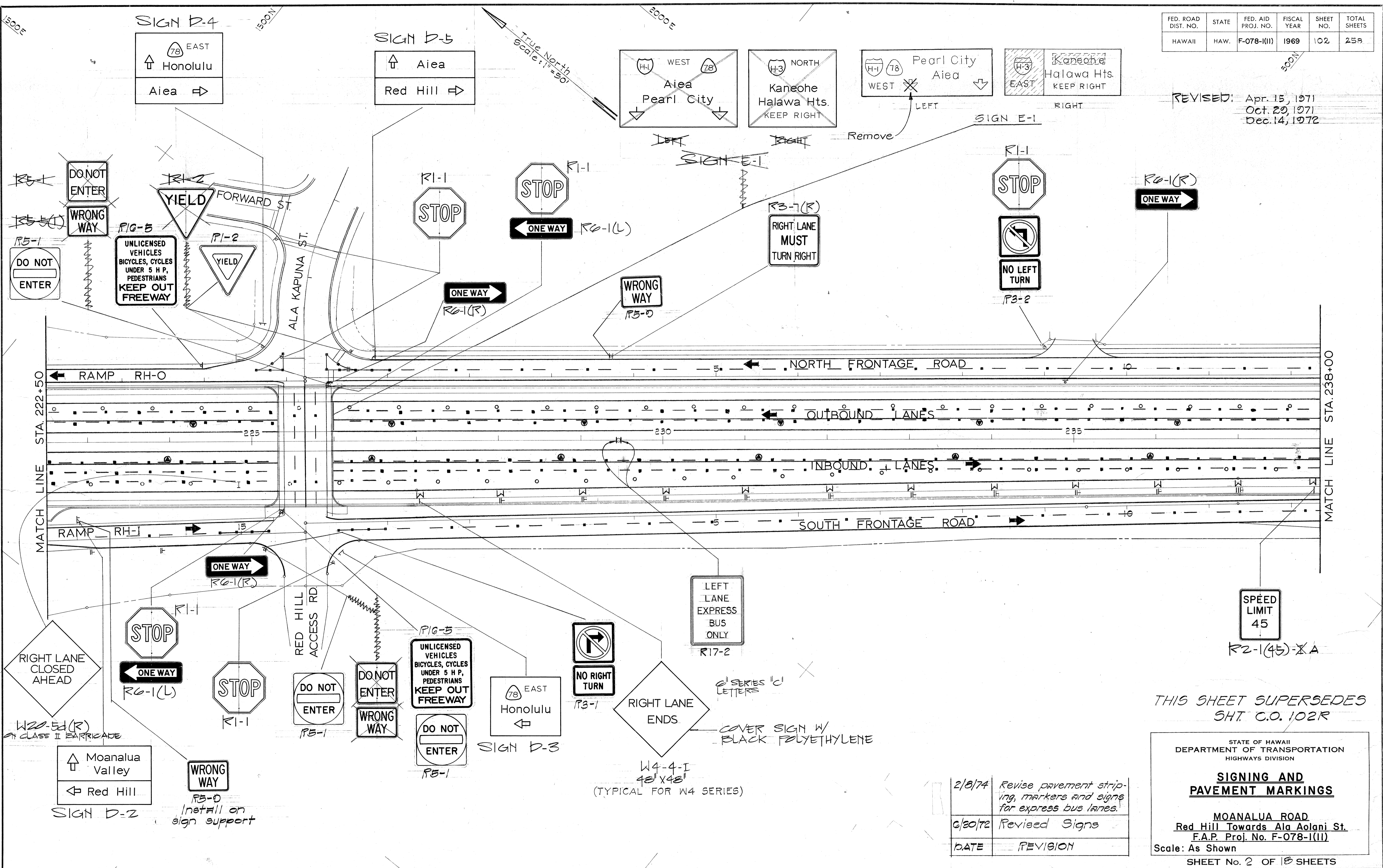


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-(111)	1969	102	258

REVISED: Apr. 15, 1971
 Oct. 29, 1971
 Dec. 14, 1972



DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 NOTE BOOK: _____
 QUANTITIES BY: _____
 CHECKED BY: _____

THIS SHEET SUPERSEDES
 SHT. C.O. 102R

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

SIGNING AND PAVEMENT MARKINGS

MOANALUA ROAD
 Red Hill Towards Ala Aolani St.
 F.A.P. Proj. No. F-078-1(11)

Scale: As Shown

SHEET No. 2 OF 18 SHEETS

DATE	REVISION
2/8/74	Revise pavement striping, markers and signs for express bus lanes.
6/30/72	Revised Signs

W4-4-I
 42" x 48"
 (TYPICAL FOR W4 SERIES)

COVER SIGN W/
 BLACK POLYETHYLENE

R2-1(45)-XA

R5-0
 install on sign support

W20-5d(R)
 CLASS II BARRICADE

SIGN D-3

SIGN D-2

UNLICENSED VEHICLES, BICYCLES, CYCLES UNDER 5 H.P., PEDESTRIANS KEEP OUT FREEWAY

UNLICENSED VEHICLES, BICYCLES, CYCLES UNDER 5 H.P., PEDESTRIANS KEEP OUT FREEWAY

LEFT LANE EXPRESS BUS ONLY

SPEED LIMIT 45

RIGHT LANE ENDS

78 EAST Honolulu

STOP

STOP

DO NOT ENTER

DO NOT ENTER

DO NOT ENTER

NO RIGHT TURN

STOP

STOP

STOP

YIELD

YIELD

DO NOT ENTER

DO NOT ENTER

ONE WAY

ONE WAY

ONE WAY

WRONG WAY

RIGHT LANE MUST TURN RIGHT

NO LEFT TURN

RAMP RH-0

RAMP RH-1

ONE WAY

ONE WAY

ONE WAY

DO NOT ENTER

DO NOT ENTER

DO NOT ENTER

NO RIGHT TURN

STOP

STOP

STOP

YIELD

YIELD

DO NOT ENTER

DO NOT ENTER

ONE WAY

ONE WAY

ONE WAY

WRONG WAY

RIGHT LANE MUST TURN RIGHT

NO LEFT TURN

RAMP RH-0

RAMP RH-1

ONE WAY

ONE WAY

ONE WAY

DO NOT ENTER

DO NOT ENTER

DO NOT ENTER

NO RIGHT TURN

STOP

STOP

STOP

YIELD

YIELD

DO NOT ENTER

DO NOT ENTER

ONE WAY

ONE WAY

ONE WAY

WRONG WAY

RIGHT LANE MUST TURN RIGHT

NO LEFT TURN

RAMP RH-0

RAMP RH-1

ONE WAY

ONE WAY

ONE WAY

DO NOT ENTER

DO NOT ENTER

DO NOT ENTER

NO RIGHT TURN

STOP

STOP

STOP

YIELD

YIELD

DO NOT ENTER

DO NOT ENTER

ONE WAY

ONE WAY

ONE WAY

WRONG WAY

RIGHT LANE MUST TURN RIGHT

NO LEFT TURN

RAMP RH-0

RAMP RH-1

ONE WAY

ONE WAY

ONE WAY

DO NOT ENTER

DO NOT ENTER

DO NOT ENTER

NO RIGHT TURN

STOP

STOP

STOP

YIELD

YIELD

DO NOT ENTER

DO NOT ENTER

ONE WAY

ONE WAY

ONE WAY

WRONG WAY

RIGHT LANE MUST TURN RIGHT

NO LEFT TURN

RAMP RH-0

RAMP RH-1

ONE WAY

ONE WAY

ONE WAY

DO NOT ENTER

DO NOT ENTER

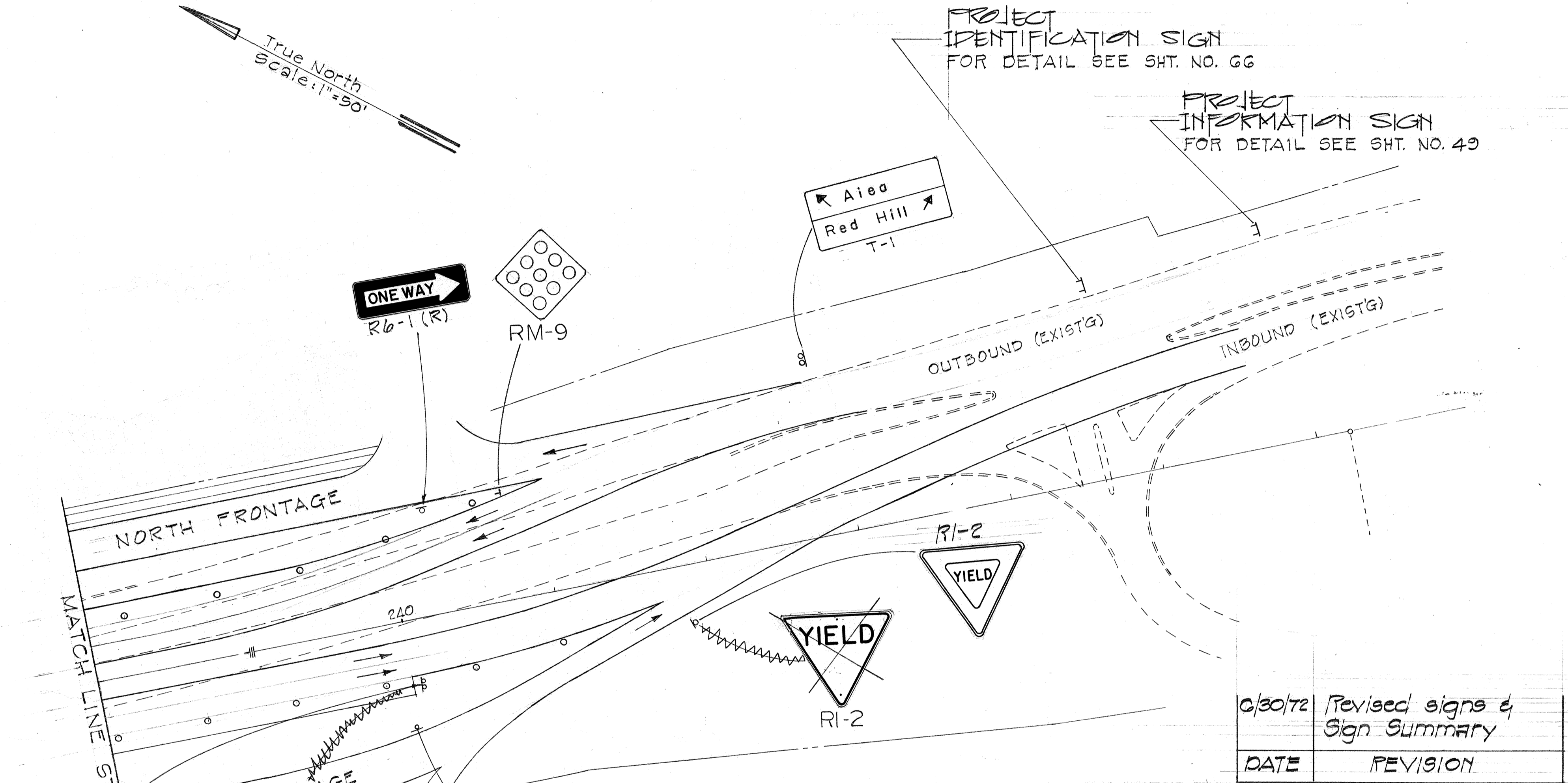
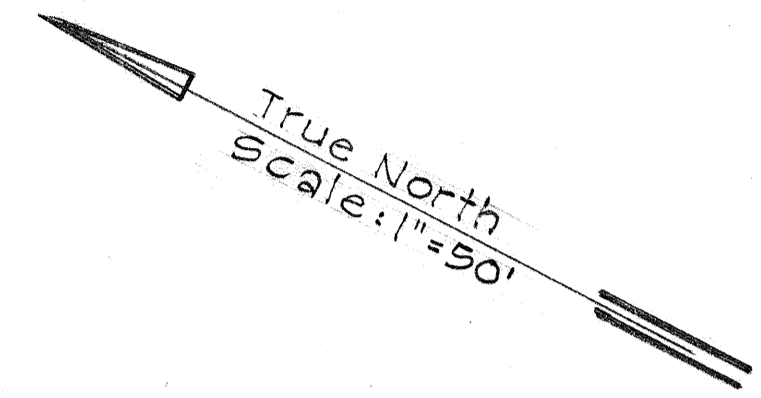
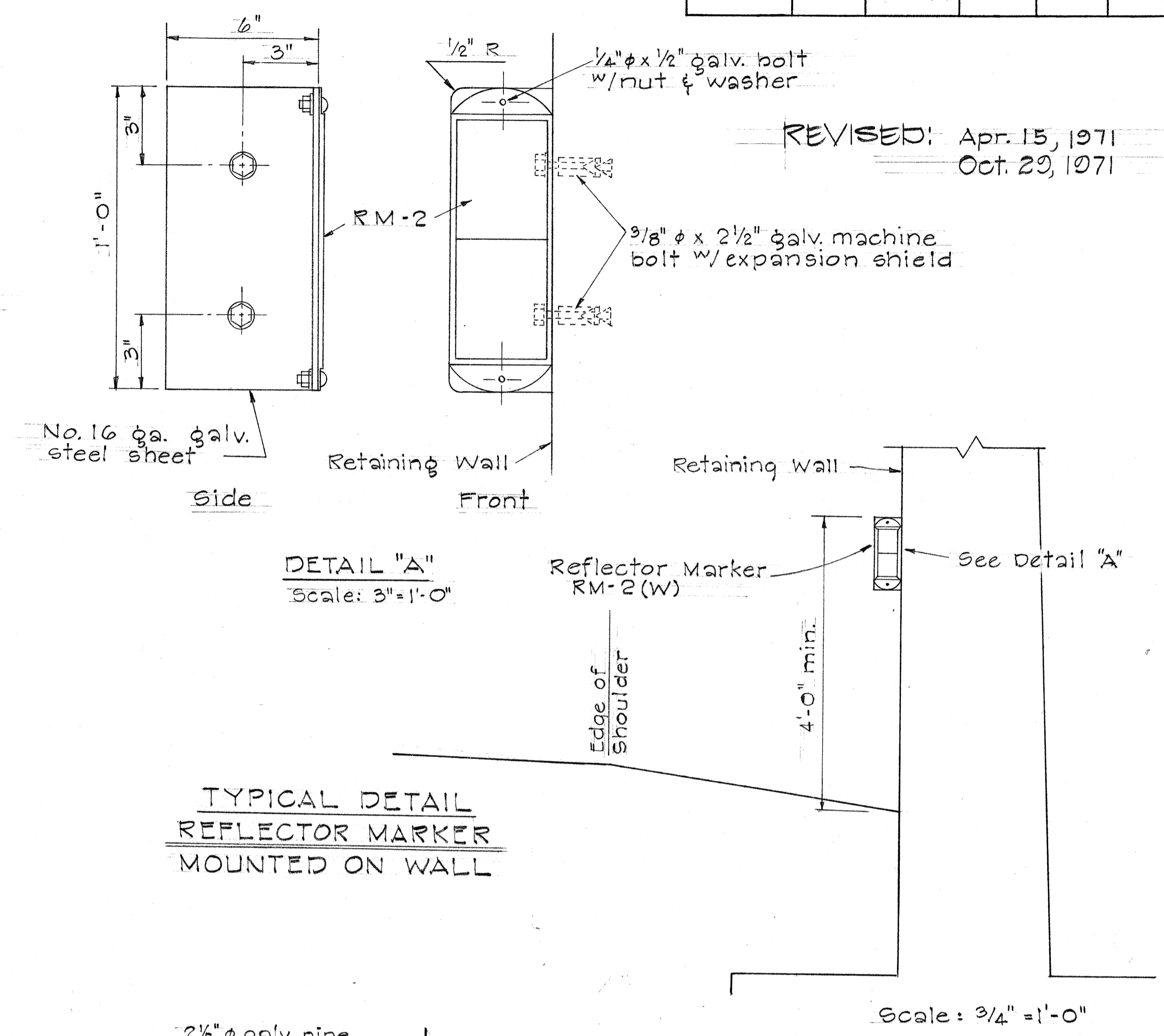
DO NOT ENTER

NO RIGHT TURN

C.O. 102R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-I(II)	1969	103	258

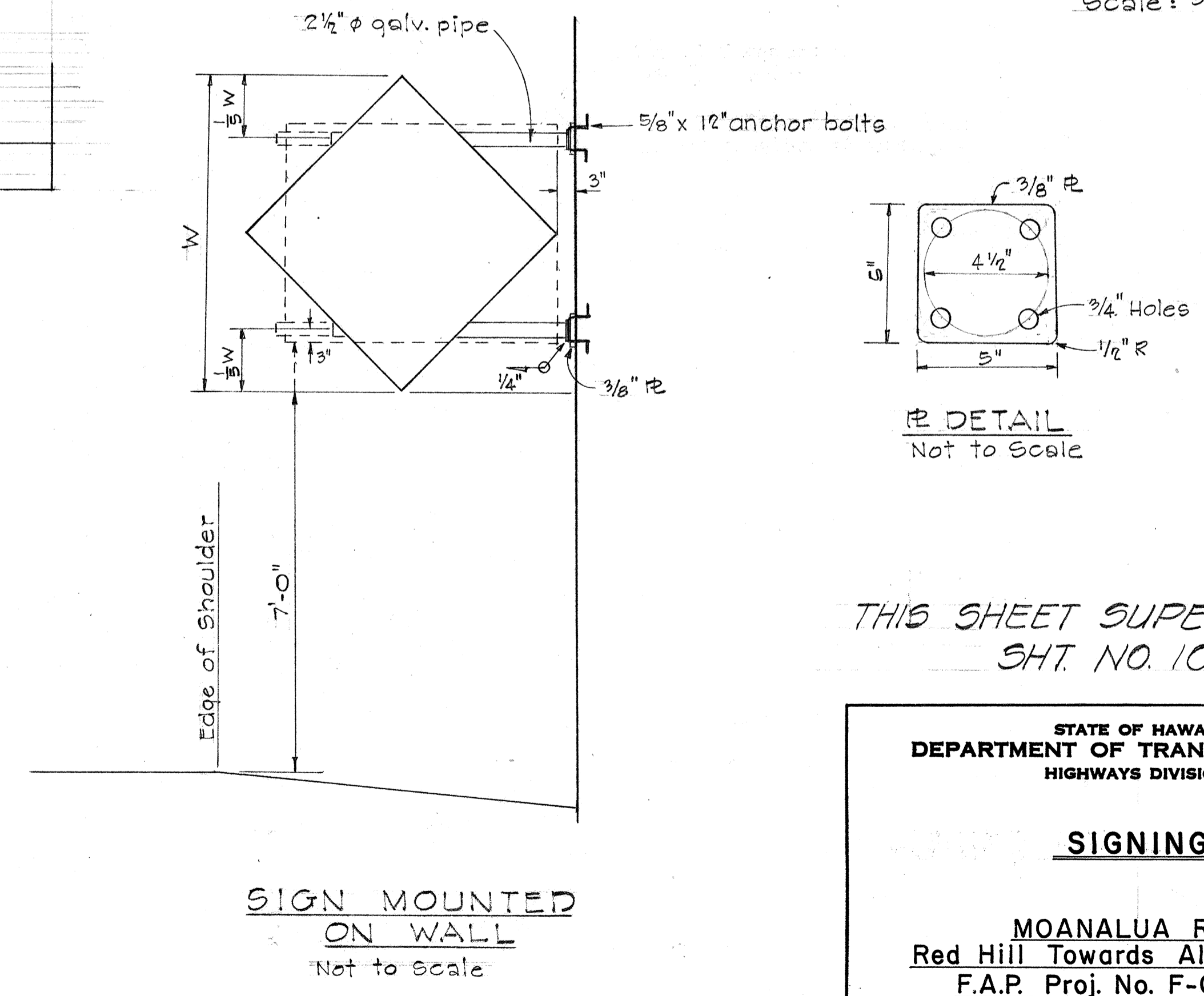
REVISED: Apr. 13, 1971
Oct. 29, 1971



0/30/72	Revised signs & Sign Summary
DATE	REVISION

SUMMARY OF TRAFFIC SIGNS

TYPE	DESCRIPTION	W/POST	W/O POST	ON WALL
R1-1	STOP	X	0	
R1-2	YIELD	3		
R2-1(45)	SPEED LIMIT 45			1
R3-7(R)	RIGHT LANE MUST TURN RIGHT	1		
R5-1	DO NOT ENTER	X	X	3
R5-2	WRONG WAY		X	2
R6-1(L)	ONE WAY		2	
R6-1(R)	ONE WAY	3	2	
W4-1-I	MERGING TRAFFIC MERGE	2		
W4-4-I	RIGHT LANE ENDS			1
W4-4b-I	RIGHT LANE ENDS 1000 FT.	1		
W4-4c-I	RIGHT LANE ENDS 500 FT.	1		
W13-3(35)	EXIT 35 MPH	1		
W20-5a(R)	RIGHT LANE CLOSED AHEAD		1	
W20-5b(R)	RIGHT LANE CLOSED 1000 FT.		1	
W20-5c(R)	RIGHT LANE CLOSED 500 FT.		1	
R3-1	NO RIGHT TURN	1		
R3-2	NO LEFT TURN		1	
RM-1		1		
RM-3		3		1
RM-2		14	11	2
R10-5	KEEP OUT FREEWAY	1	1	
	TRAFFIC DRUM — 130 EA.			
	CLASS II BARRICADE — 3 EA.			



NOTE:
THE W20 "RIGHT LANE CLOSED" SERIES SIGNS SHALL BE PAID BY ITEM No. 621.04, "REGULATORY AND WARNING SIGN (CONSTRUCTION)."

THIS SHEET SUPERSEDES
SHT. NO. 103

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

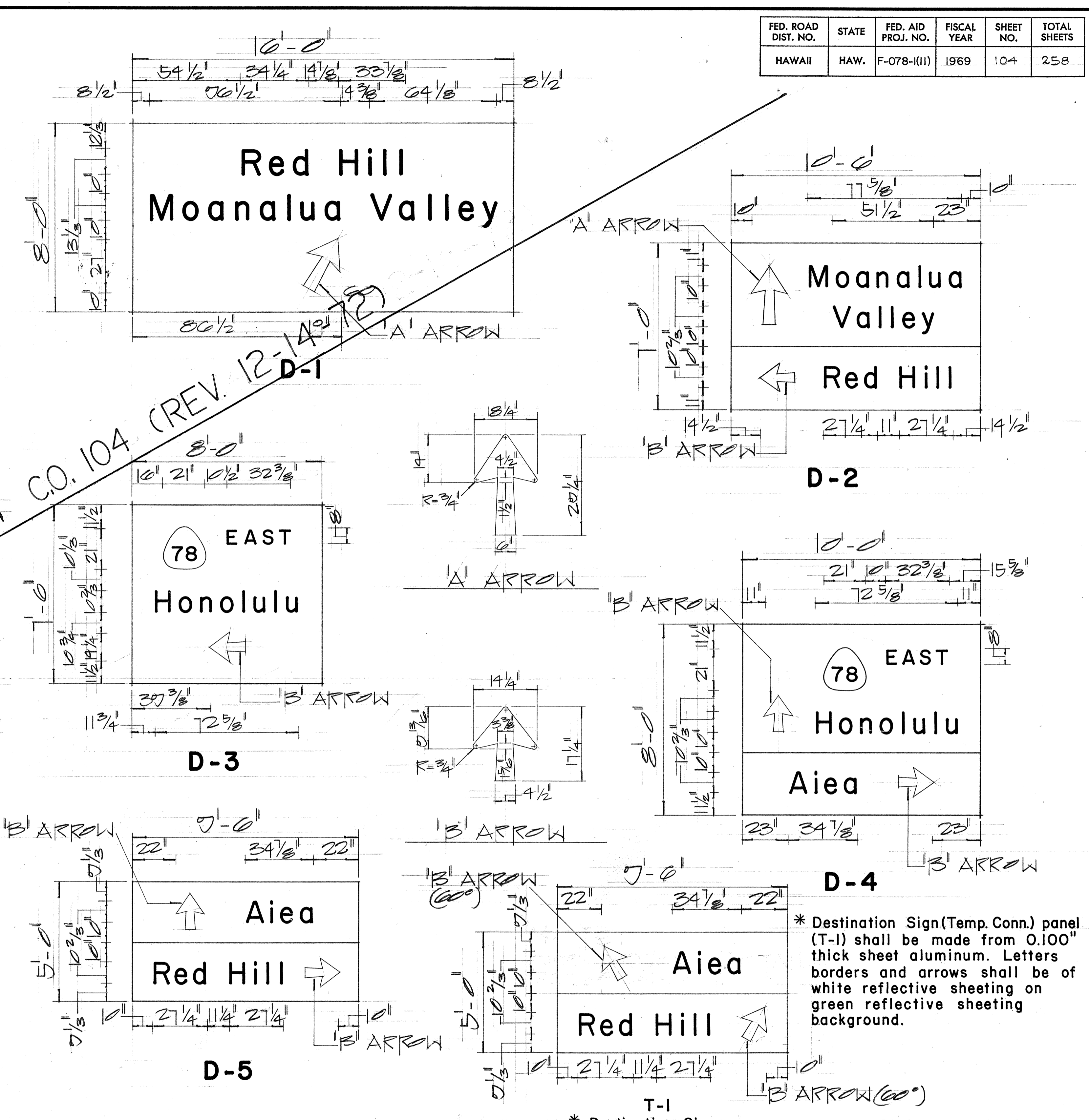
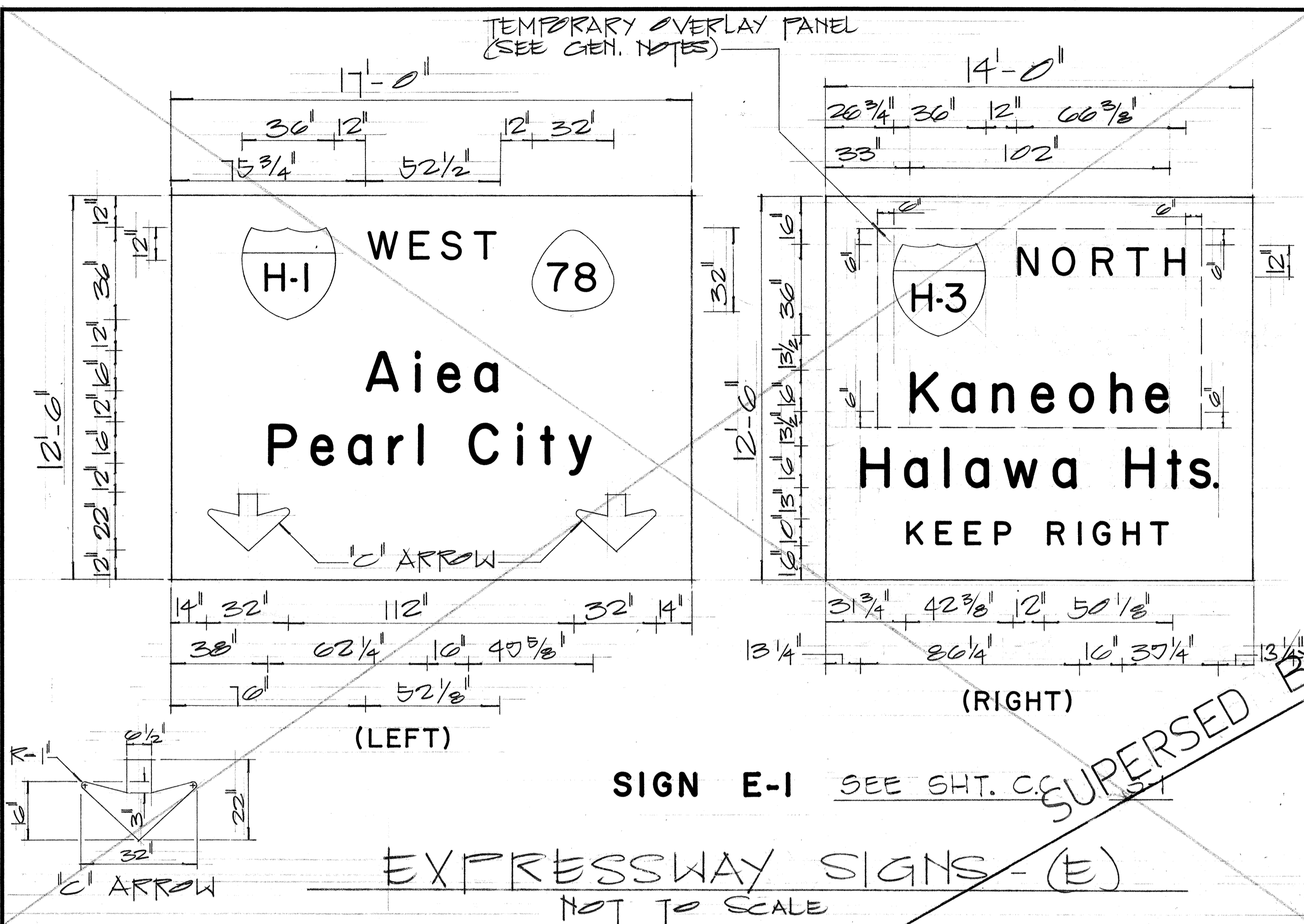
SIGNING

MOANALUA ROAD
Red Hill Towards Ala Aolani St.
F.A.P. Proj. No. F-078-I(II)
Scale: As Shown

SHEET No. 3 OF 18 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-(11)	1969	104	258



NOTES:

EXPRESSWAY SIGNS (E)

- Letters, numerals, borders and arrows shall be demountable aluminum cut-outs with white reflective sheeting or clear reflex reflectors set in white porcelain enameled aluminum cut-outs.
- Background shall be green porcelain enamel.

DESTINATION SIGNS (D)

- Letters, numerals, borders and arrows shall have white reflective sheeting on aluminum cut-outs on green reflective sheeting background.

GENERAL

- Sign message shall conform to the modified Series "E" upper and lower case letters as shown in the "Standard Alphabets for Highway Signs", Bureau of Public Roads, 1966.
- Route markers and borders shall conform with details as show on the plans.
- Cut-outs shall be fastened to sign panel with aluminum blind rivets.
- Temporary overlay panel for Sign E-1(R) shall be 0.025" thick aluminum Alloy 6061 green porcelain enamel and fastened with aluminum blind rivets. The cost for the temporary overlay panel shall be incidental to Item 621.01 "Panel for Expressway Sign."

EXPRESSWAY SIGN SUMMARY		
SIGN No.	DESCRIPTION	Sq. Ft.
E-1(L)	Aiea, Pearl City	212.50
(R)	Kaneohe Halawa Hts.	175.00
TOTAL		387.50

DESTINATION SIGN SUMMARY		
SIGN No.	DESCRIPTION	Sq. Ft.
D-1	Red Hill Moanalua Valley	128.00
D-2	Moanalua Valley Red Hill	73.50
D-3	Honolulu	60.00
D-4	Honolulu, Aiea	80.00
D-5	Aiea, Red Hill	47.50
TOTAL		389.00

DESTINATION SIGNS - (D)

NOT TO SCALE

T-1
* Destination Sign (Temporary Connection)

12/14/72 Revised Signs

DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PANEL LAYOUT

MOANALUA ROAD
Red Hill Towards Ala Aolani St.
F.A.P. Proj. No. F-078-1(11)

Scale: As Shown

SHEET No. 4 OF 8 SHEETS

DATE _____

SURVEY PLOTTED BY _____

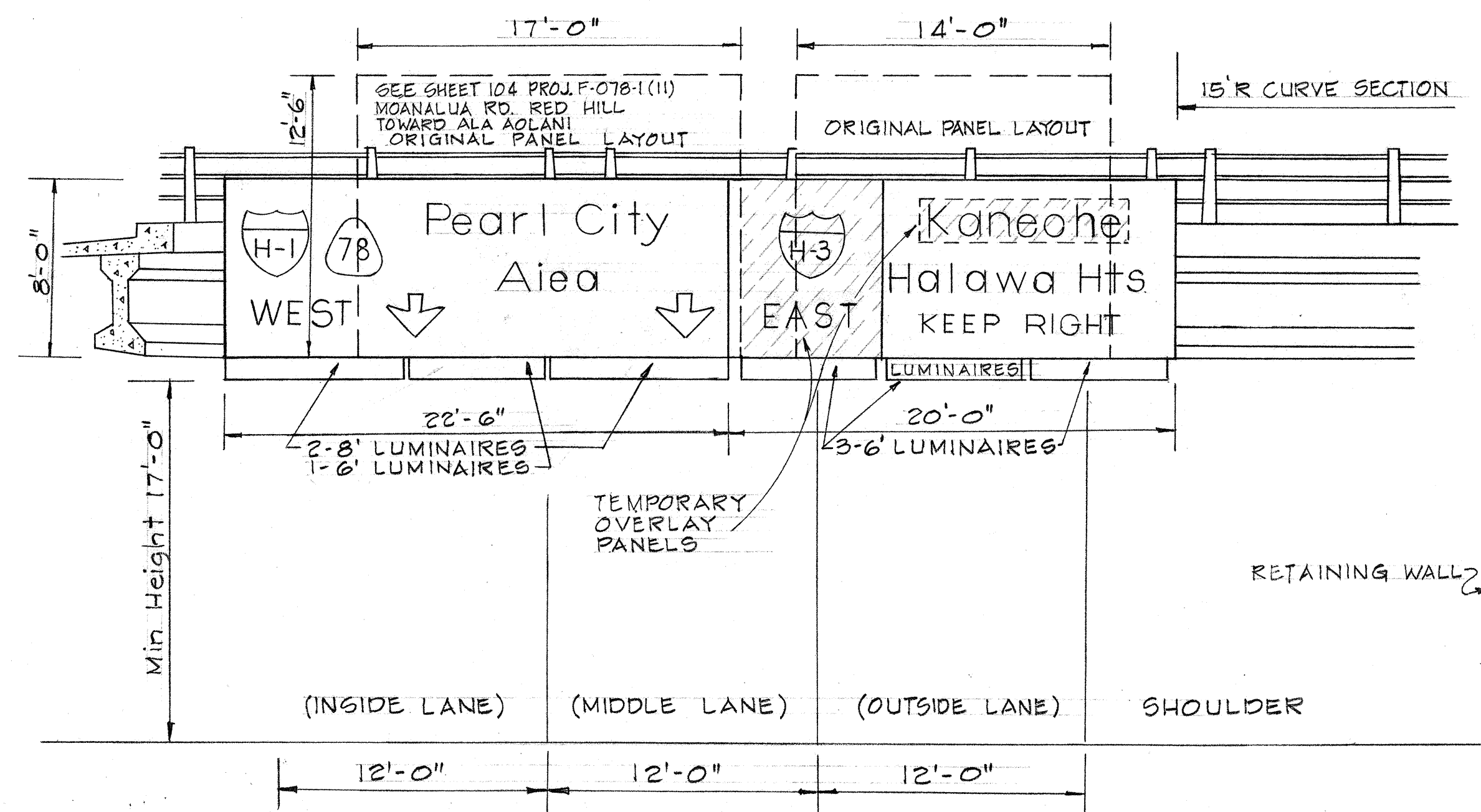
DRAWN BY _____

DESIGNED BY _____

CHECKED BY _____

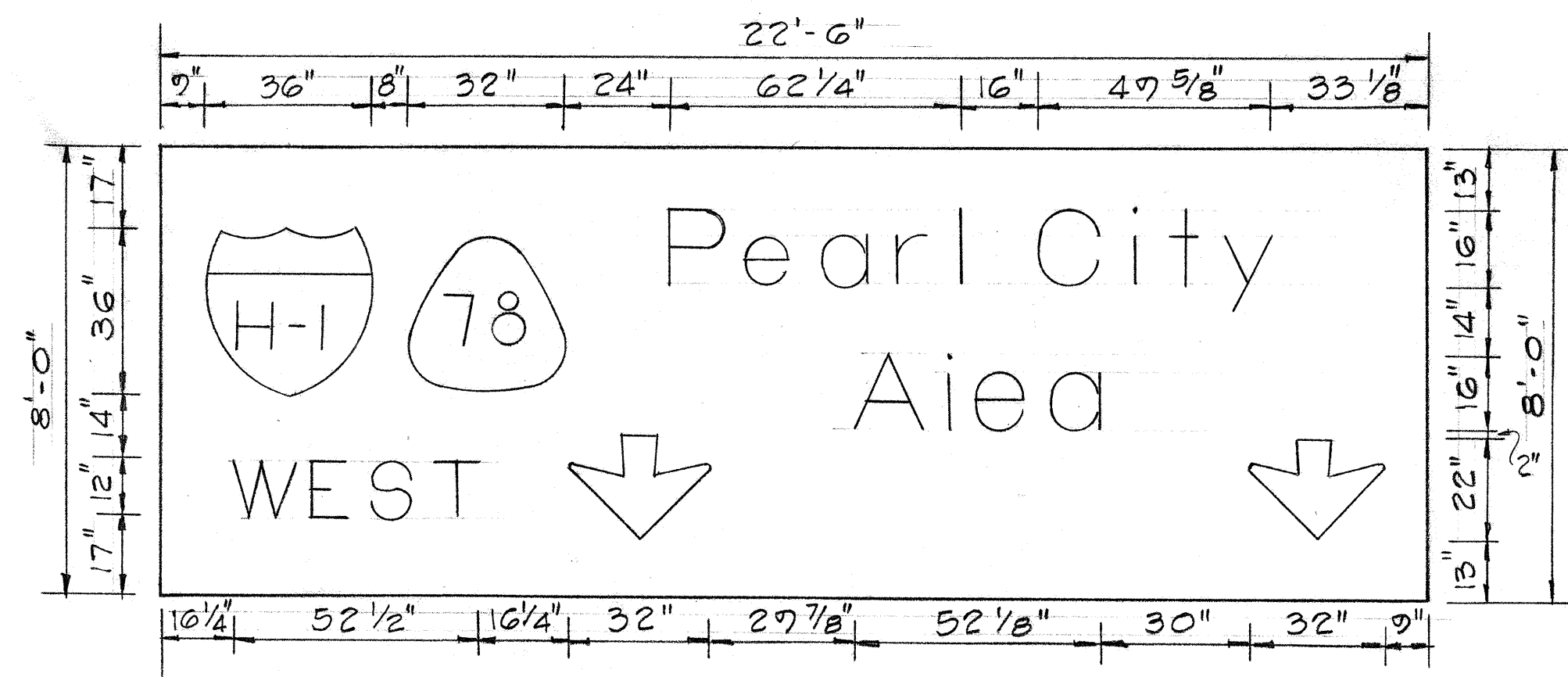
NO. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-1(11)	1967	CO 1045-1	258

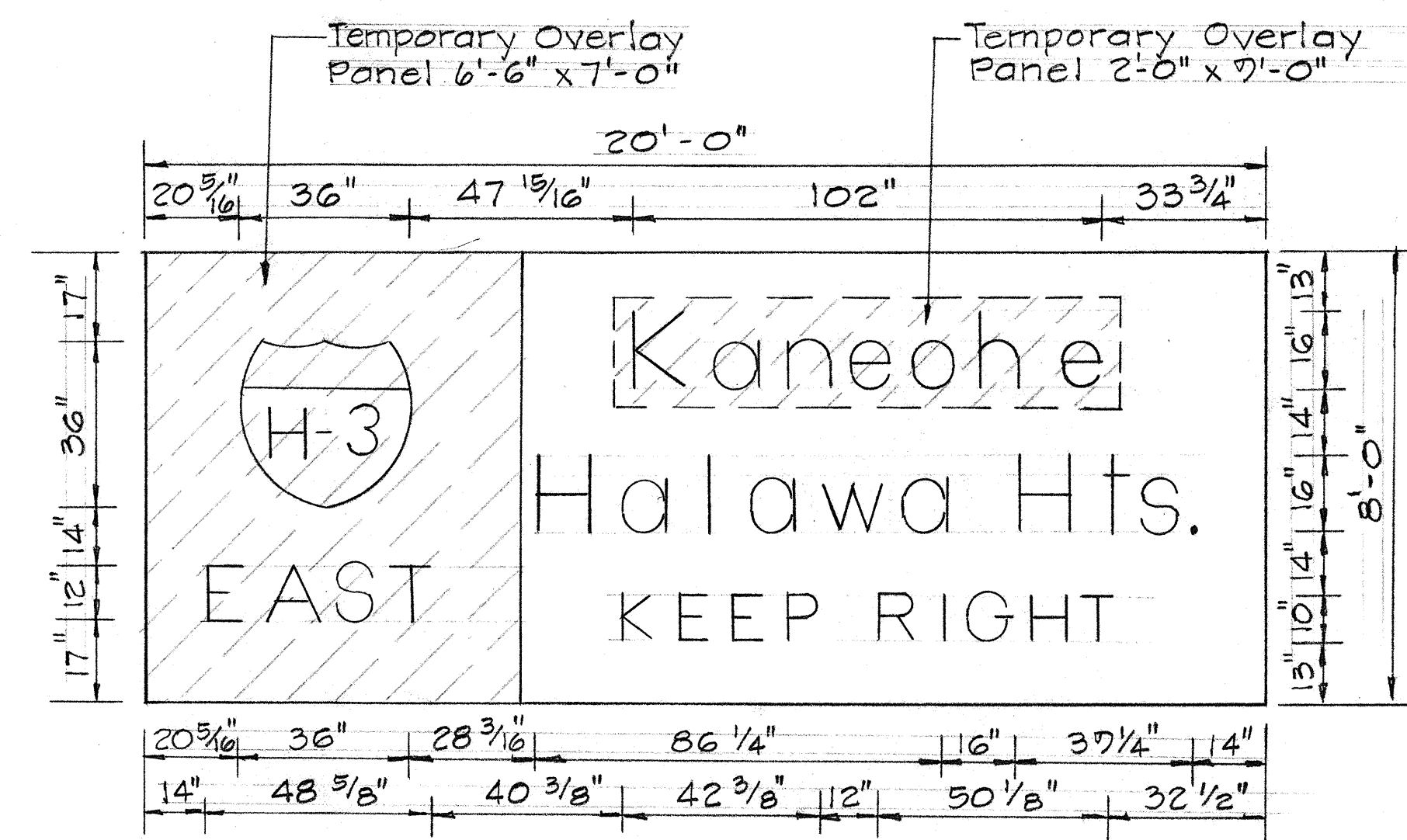


REVISED PANEL LAYOUT
ON RED HILL STRUCTURE
3/16" = 1'-0"

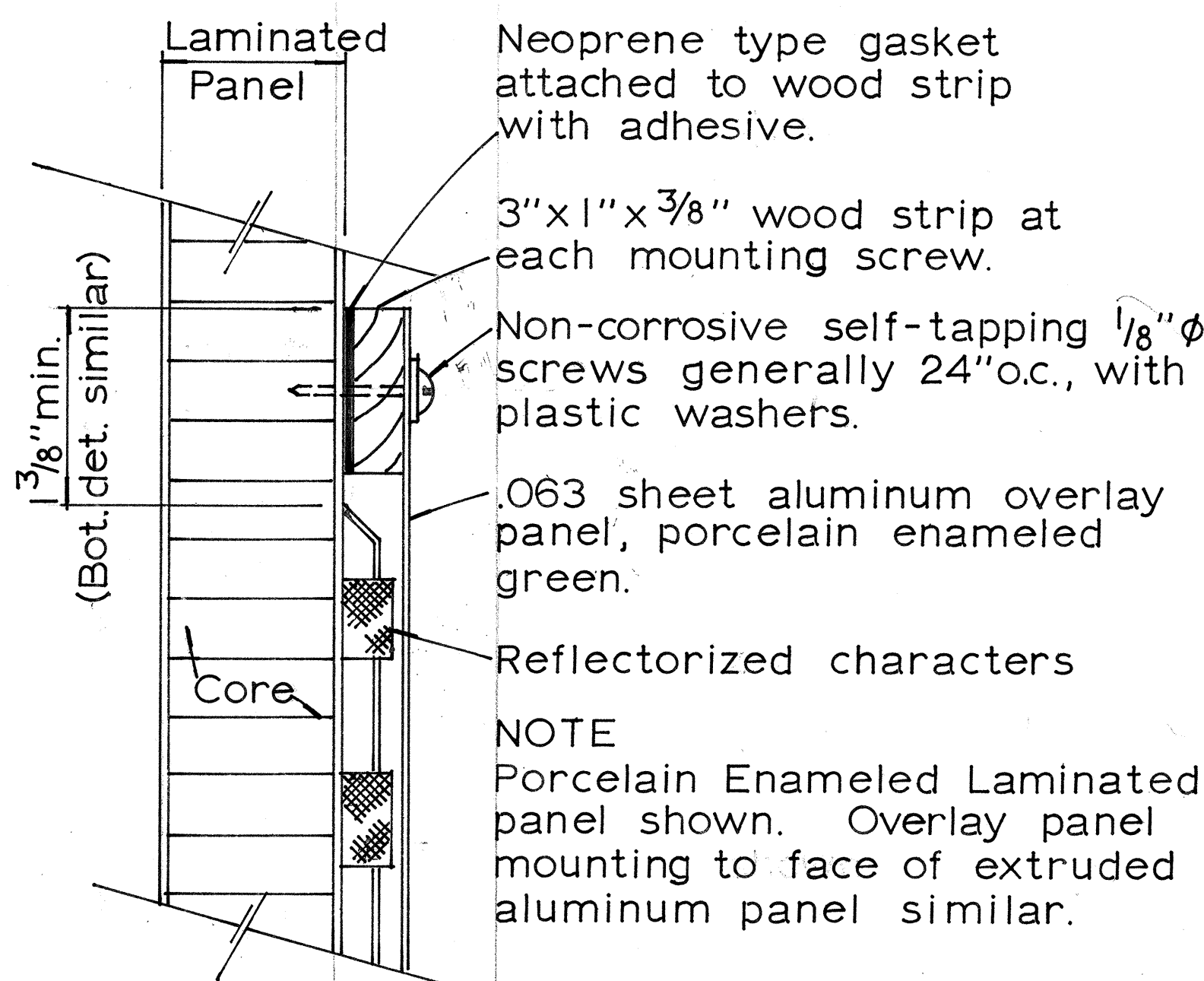
NOTE
CENTER ARROWS OF PEARL CITY, AIEA EXPRESSWAY SIGNS OVER THE INSIDE & MIDDLE LANES.



REVISED PANEL LAYOUT
SIGN E-1 (L)



REVISED PANEL LAYOUT
SIGN E-1 (R)



EXPRESSWAY SIGN SUMMARY		
SIGN No.	DESCRIPTION	Sq. Ft.
E-1(L)	Aiea, Pearl City	180.00
(R)	Kaneohe Halawa Hts	160.00
TOTAL		340.00

TEMPORARY BLANK OVERLAY PANELS	
DESCRIPTION	Sq. Ft.
6'-6" x 7'-0"	45.50
2'-0" x 7'-0"	18.00
TOTAL	63.50

Note: Place both overlay panels on Sign E-1(R) as shown.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PANEL LAYOUT

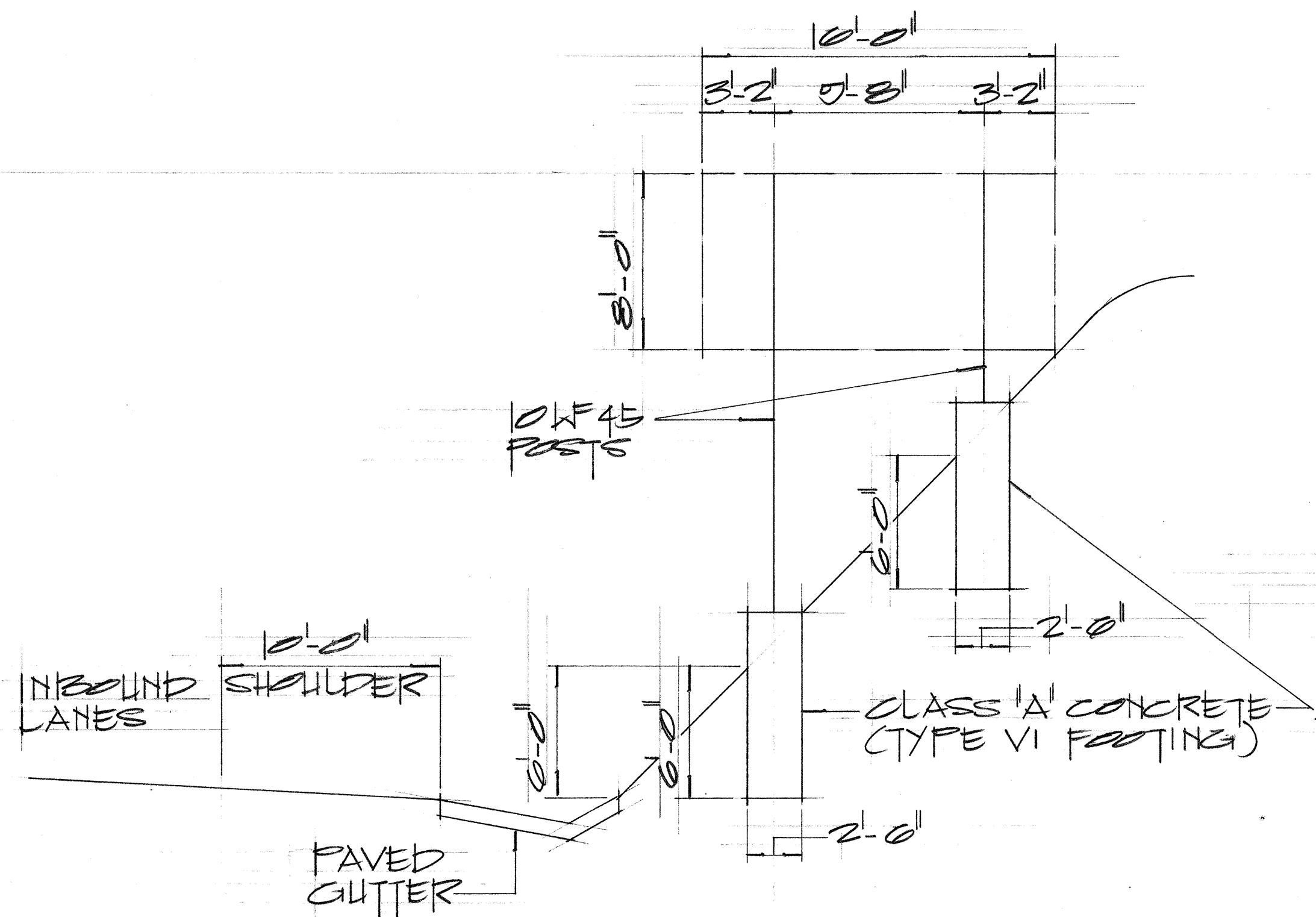
MOANALUA ROAD
Red Hill Towards Ala Aolani St.
F.A.P. Proj. No. F-078-1(11)

SHEET No. OF SHEETS

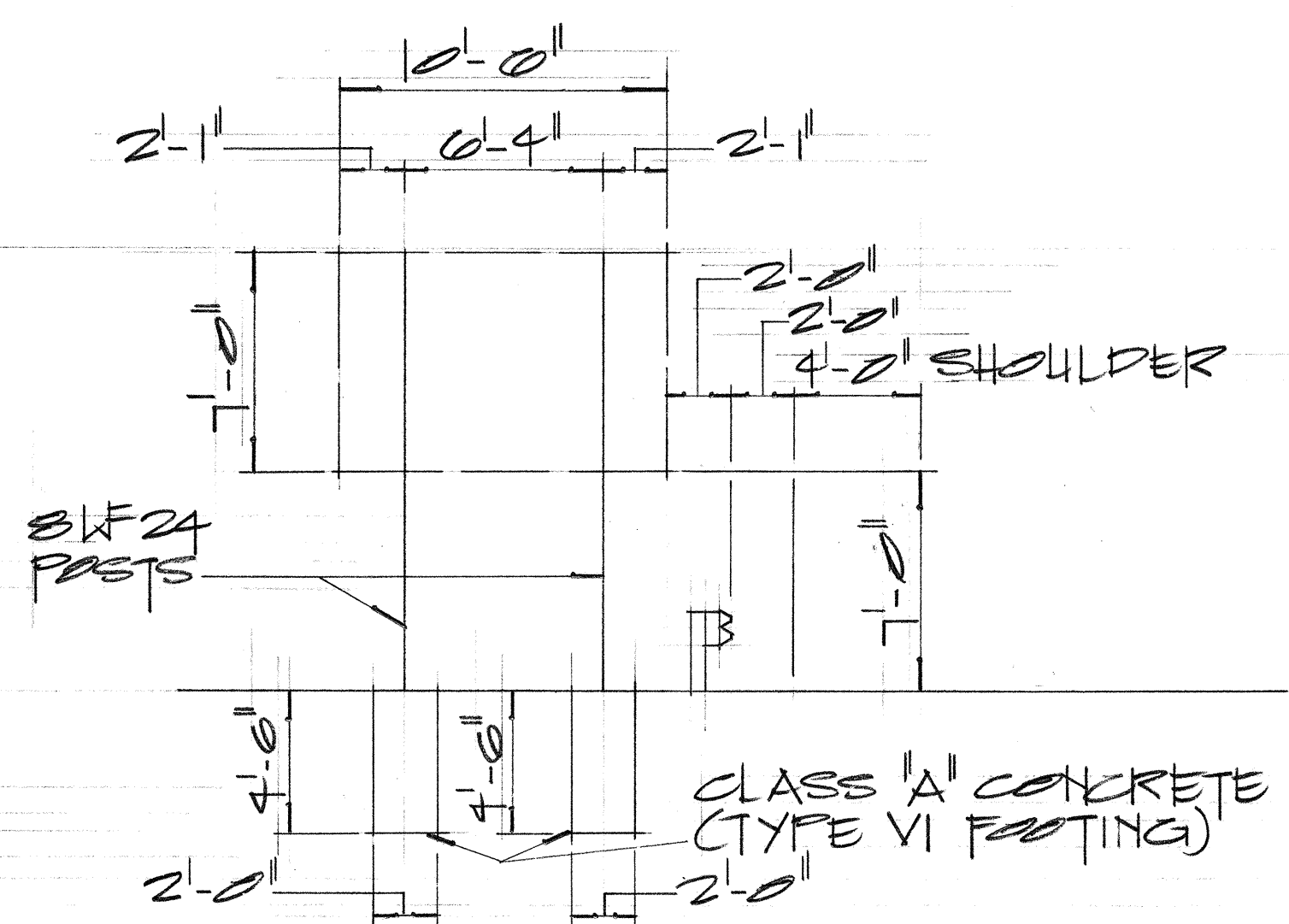
C.O. 1045-1

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

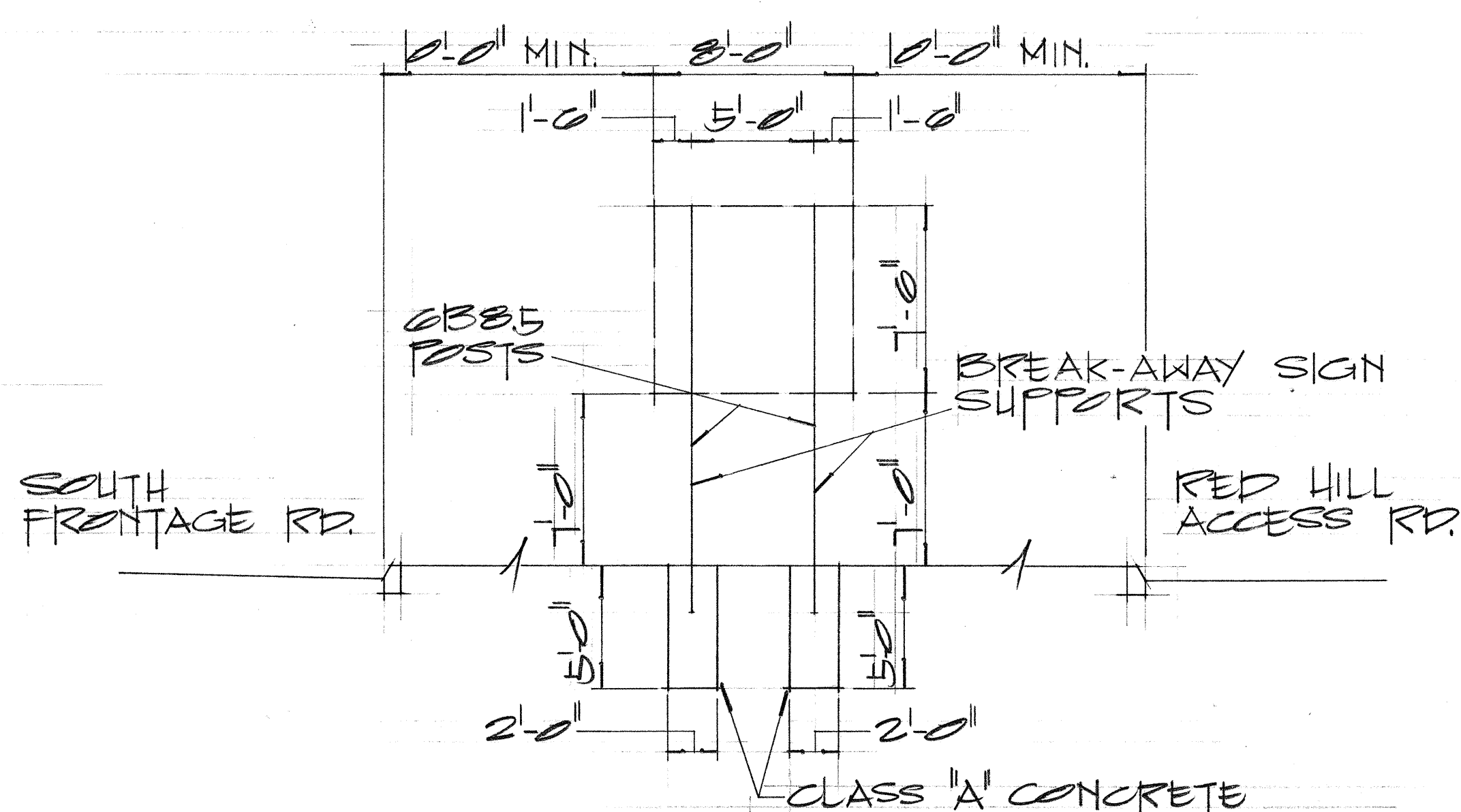
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-I(11)	1969	105	258



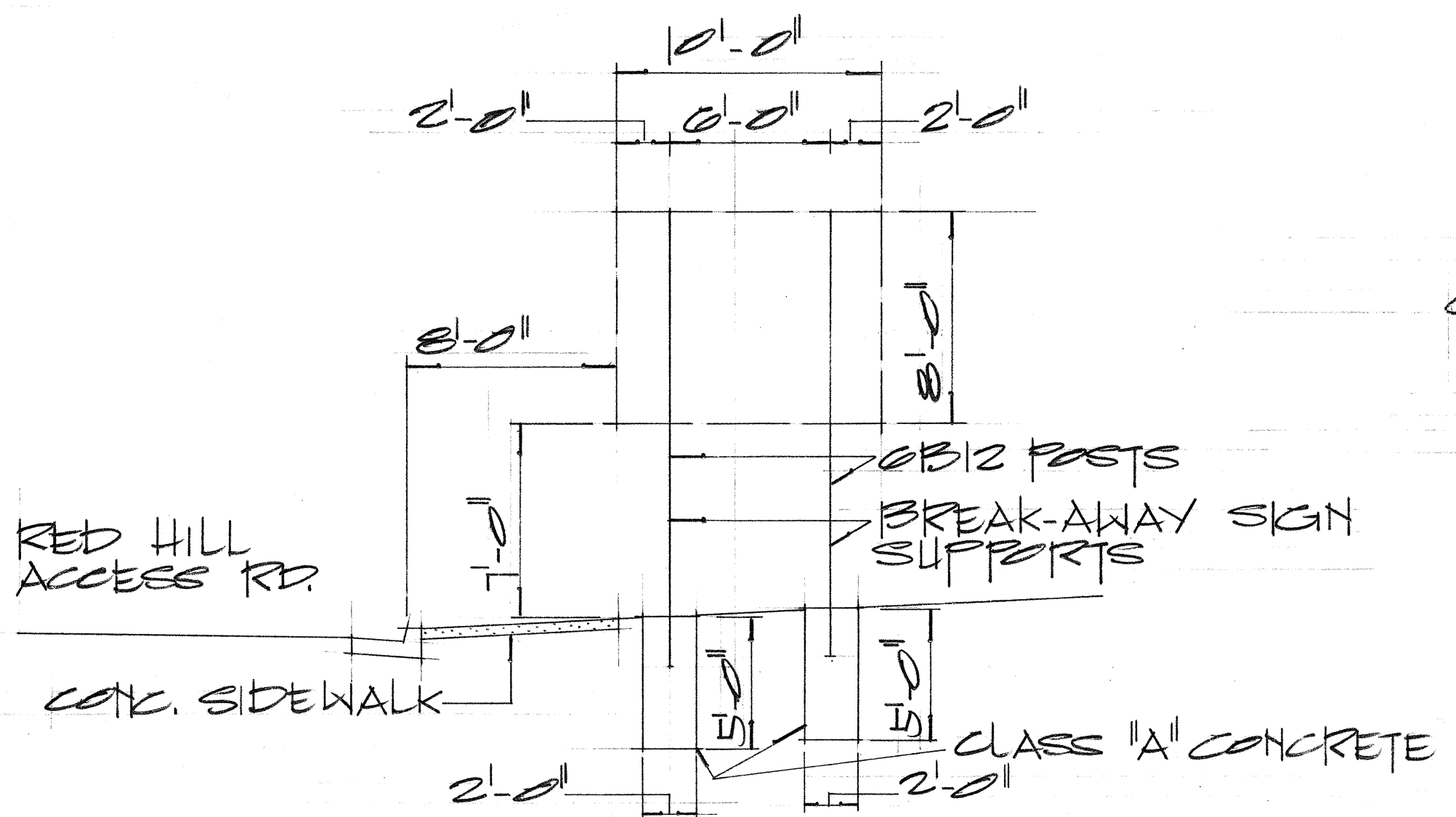
SIGN D-1
MOANALUA ROAD
STA. 207+95



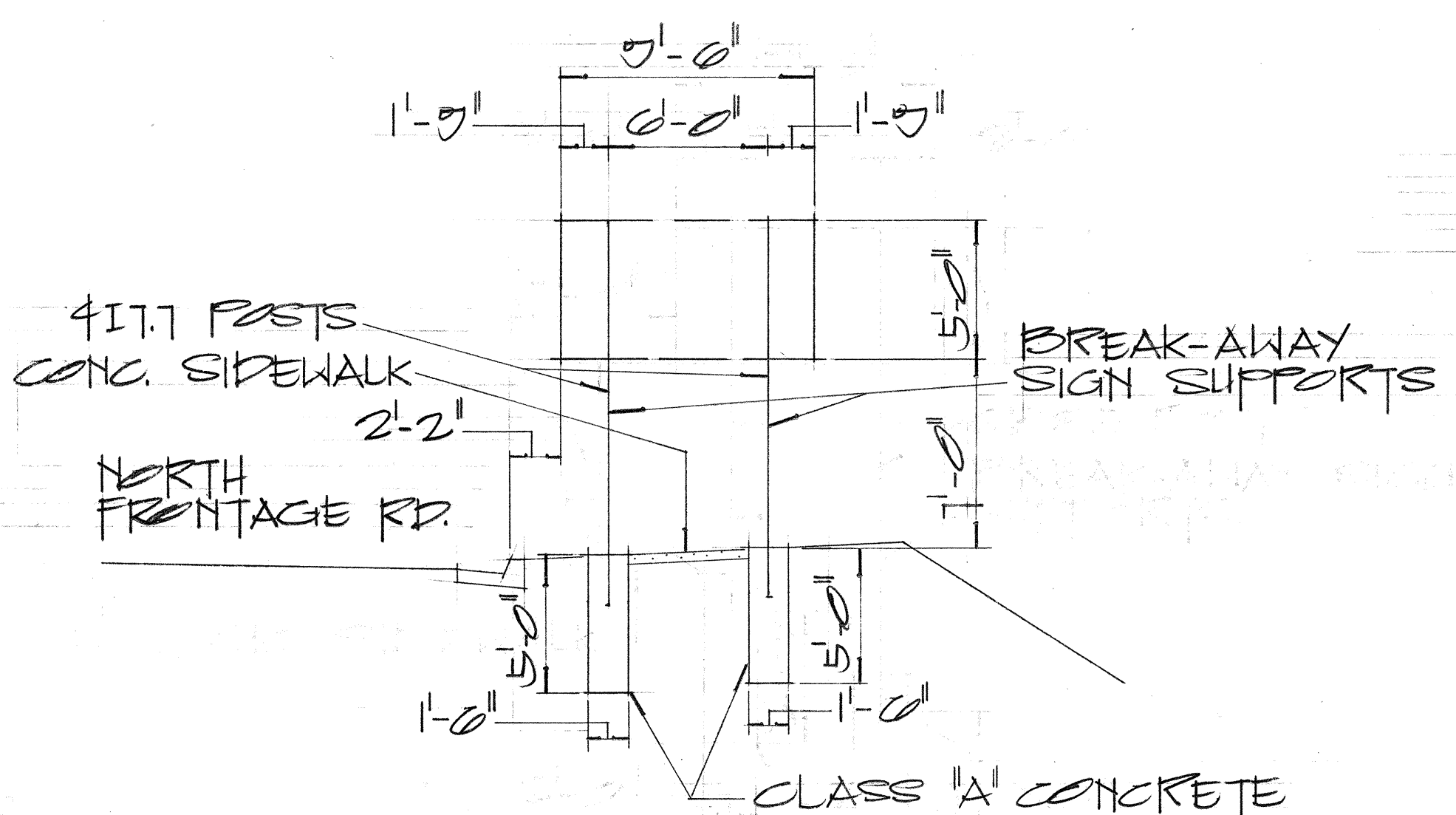
SIGN D-2
RAMP RH-1
STA. 13+00



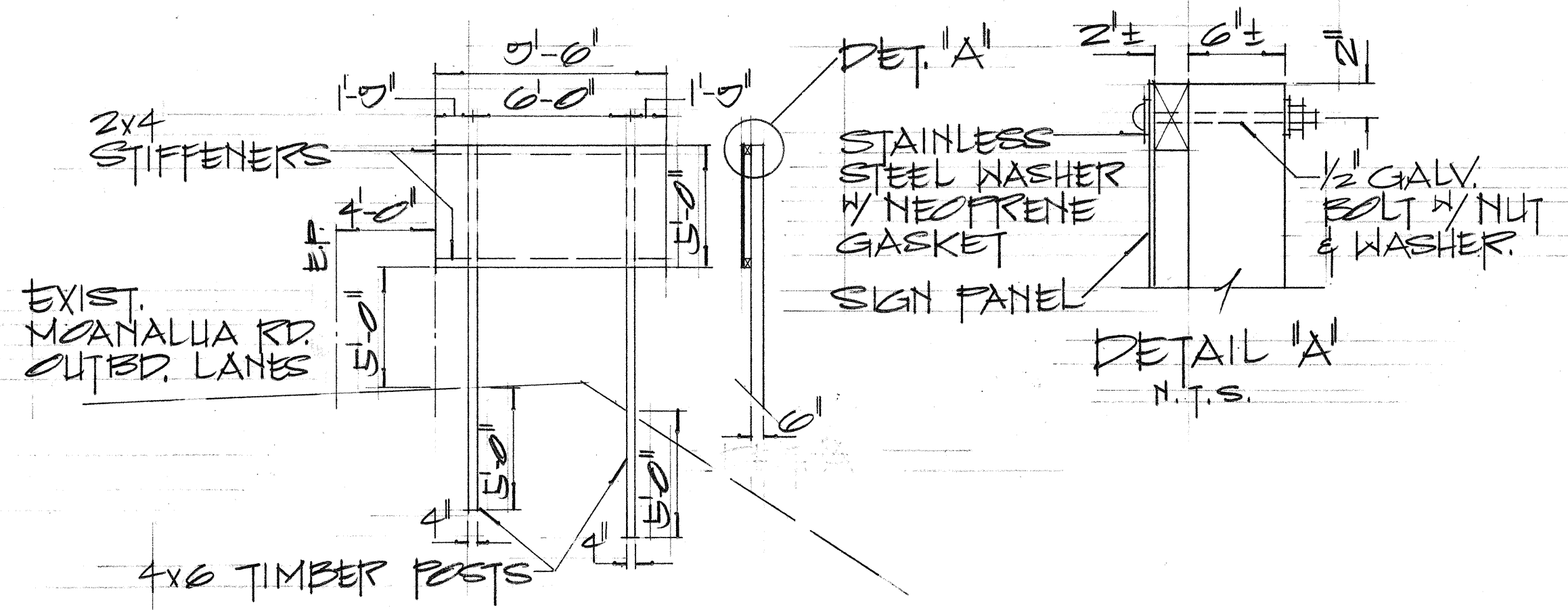
SIGN D-3
SOUTH FRONTAGE RD.
STA. 0+40±



SIGN D-4
RED HILL ACCESS RD.
STA. 3+50



SIGN D-5
NORTH FRONTAGE RD.
STA. 0+85



SIGN T-1
MOANALUA RD.
STA. 243+00

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

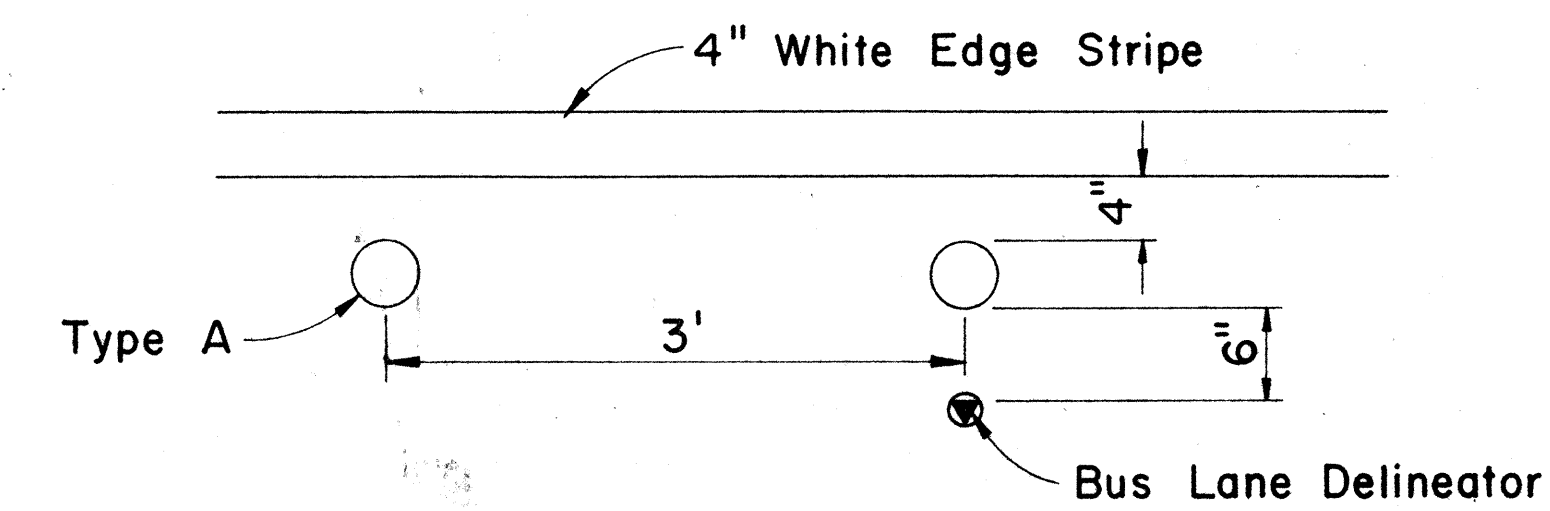
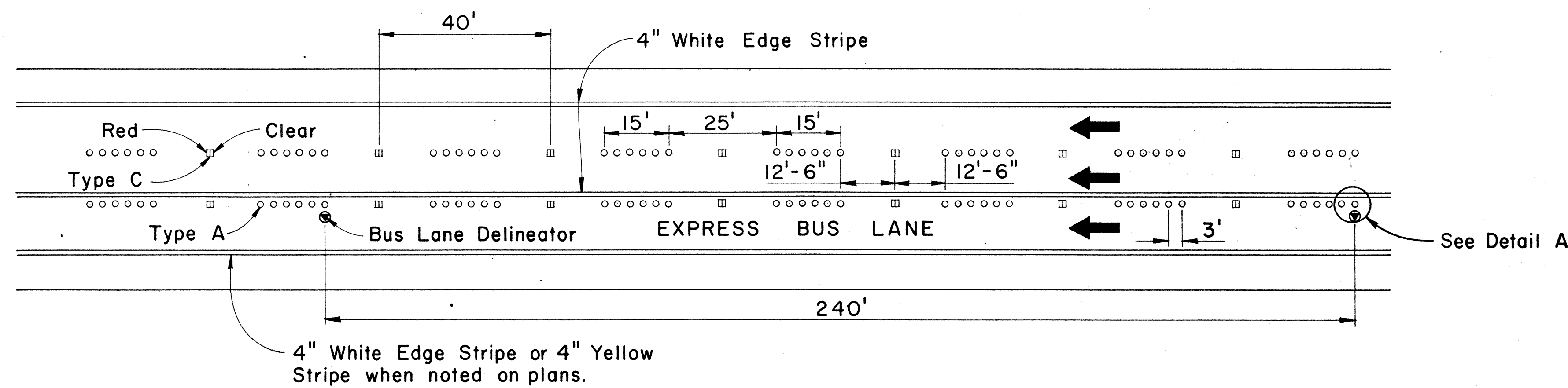
FRAME LAYOUT

MOANALUA ROAD
Red Hill Towards Ala Aolani St.
F.A.P. Proj. No. F-078-I(11)
Scale: As Shown

SHEET No. 5 OF 8 SHEETS

DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
CHECKED BY: _____
NO. _____

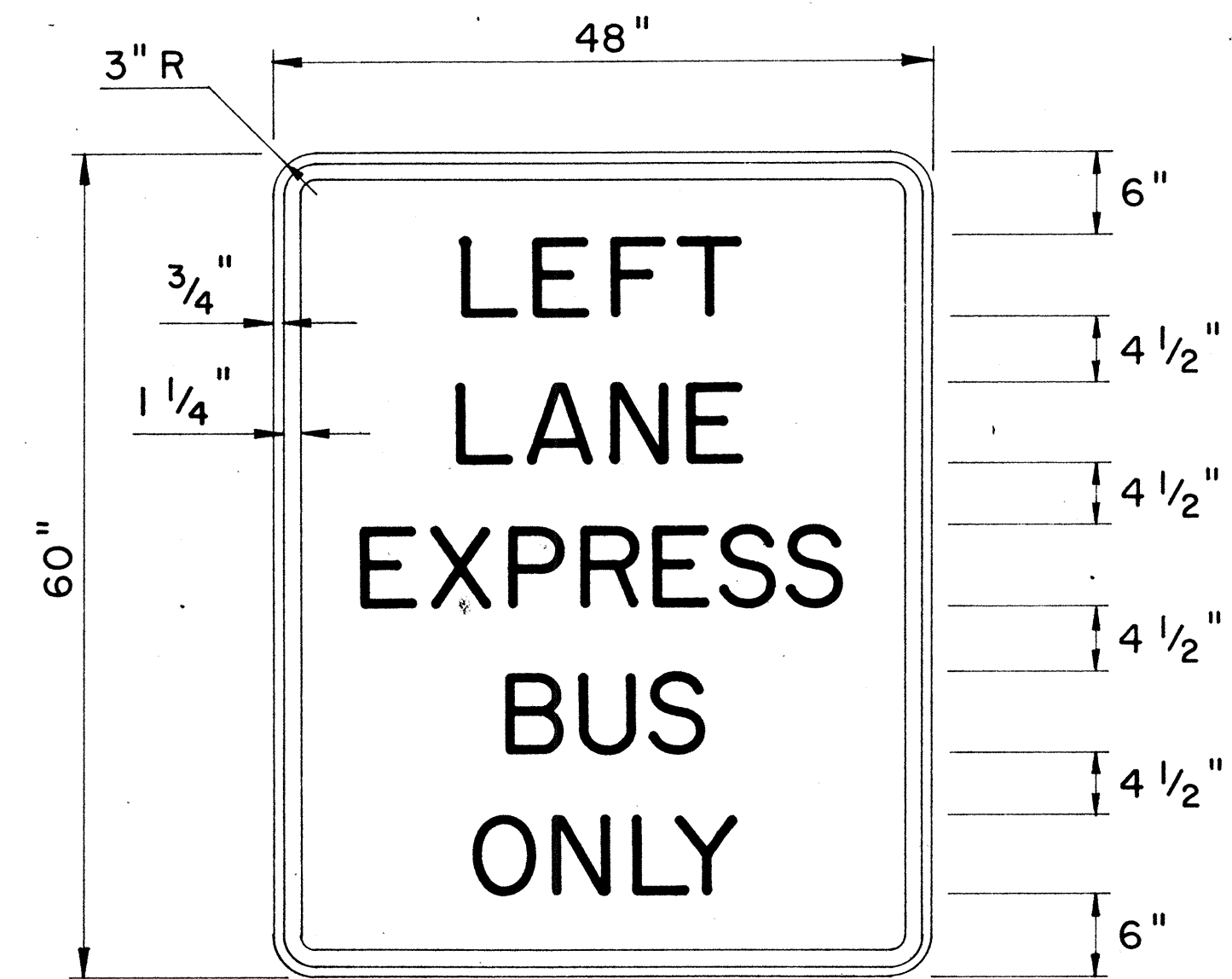
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				



DETAIL A
Scale: 1" = 1'-0"

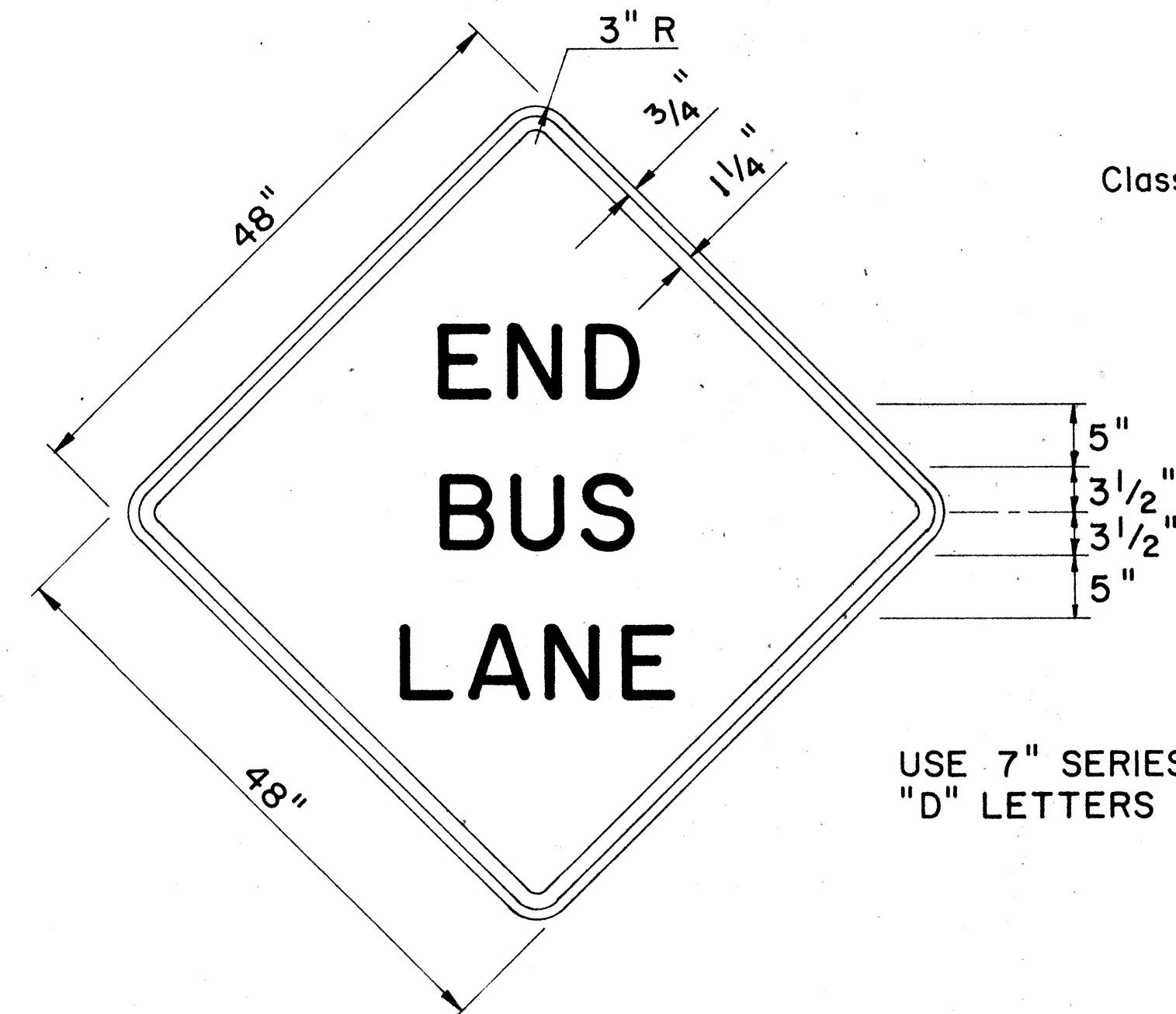
FREWAY LANE LINES WITH EXPRESS BUS LANE

Not To Scale



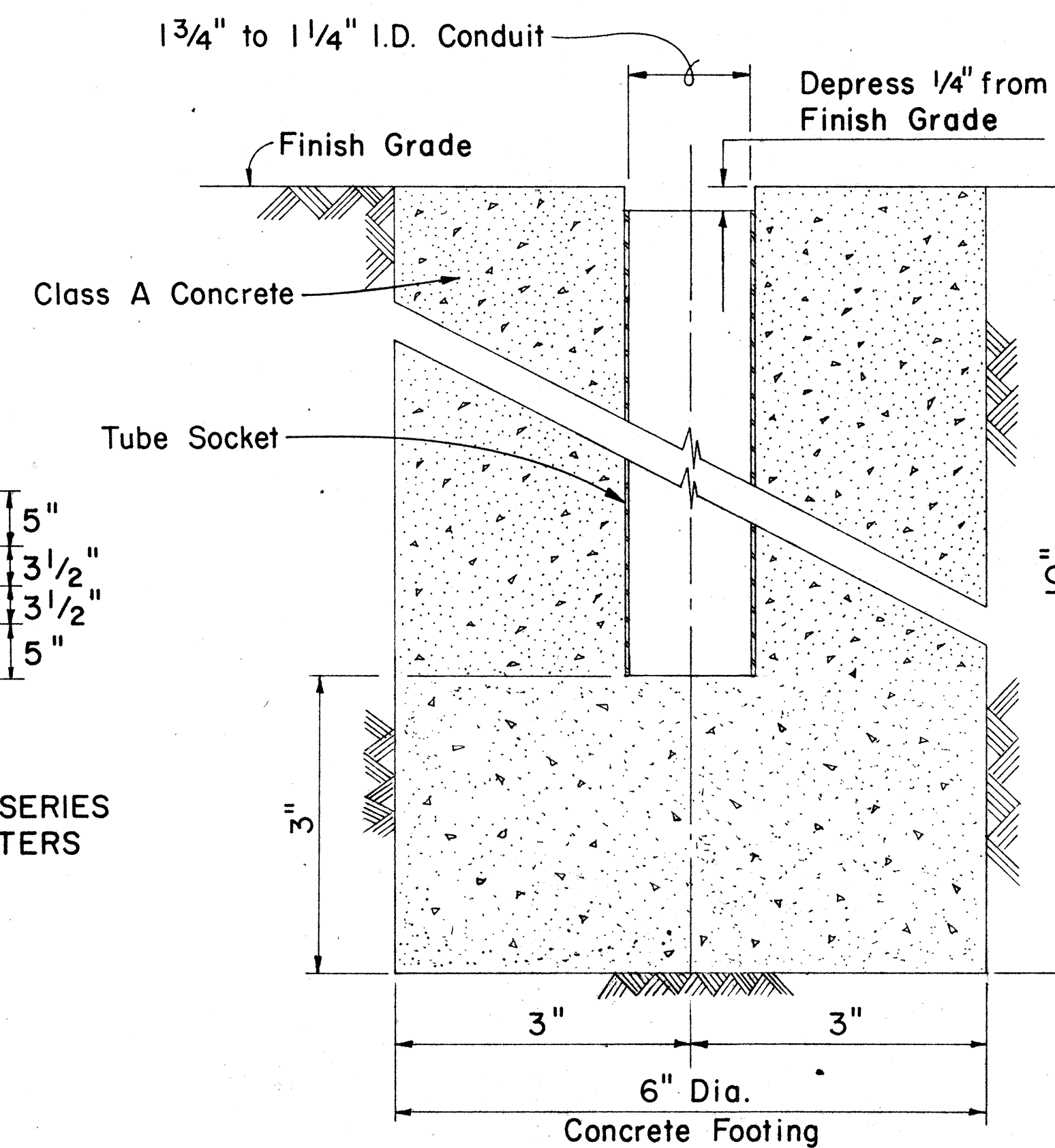
R17-2

USE 6" SERIES "D" LETTERS



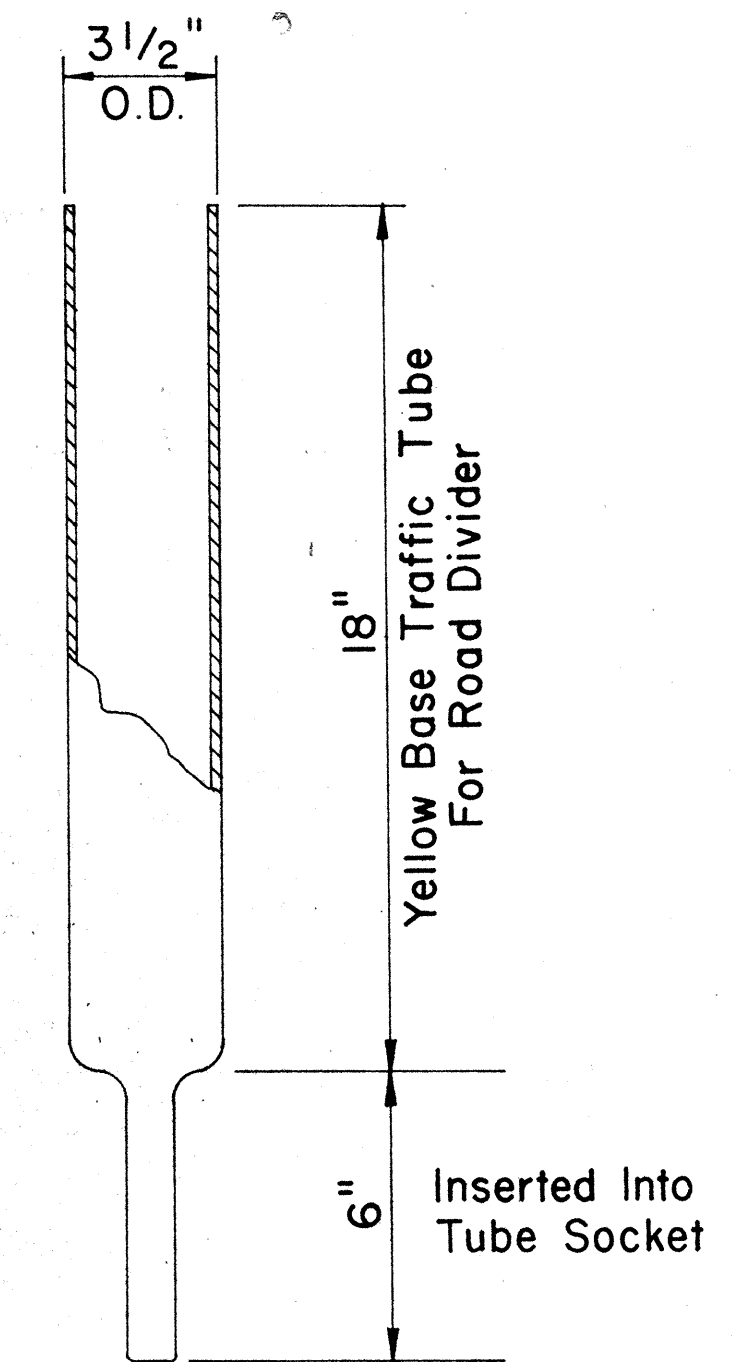
W15-3

USE 7" SERIES "D" LETTERS



TUBE SOCKET

Scale: 3/4" = 1"



DETACHABLE BUS LANE DELINEATOR

Scale: 1/4" = 1"

MISCELLANEOUS REGULATORY & WARNING SIGNS

GENERAL NOTES:

1. Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs."
2. Regulatory Sign (R17-2) and Warning Sign (W15-3) shall be reflectorized unless otherwise specified and shall have 3/8" bolt holes drilled at appropriate locations.
3. For Mounting Details see Standard Detail Sheet (DT-100) and Detail on sheet no. C0.105 S-2
4. Contractor to check for snug fit of Bus Lane Delineator in Tube Socket prior to installation.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISC. PAVEMENT MARKING AND SIGNING DETAILS

MOANALUA ROAD
(Red Hill Towards Ala Aolani)
FAP PROJ. No. F-078-1(11)

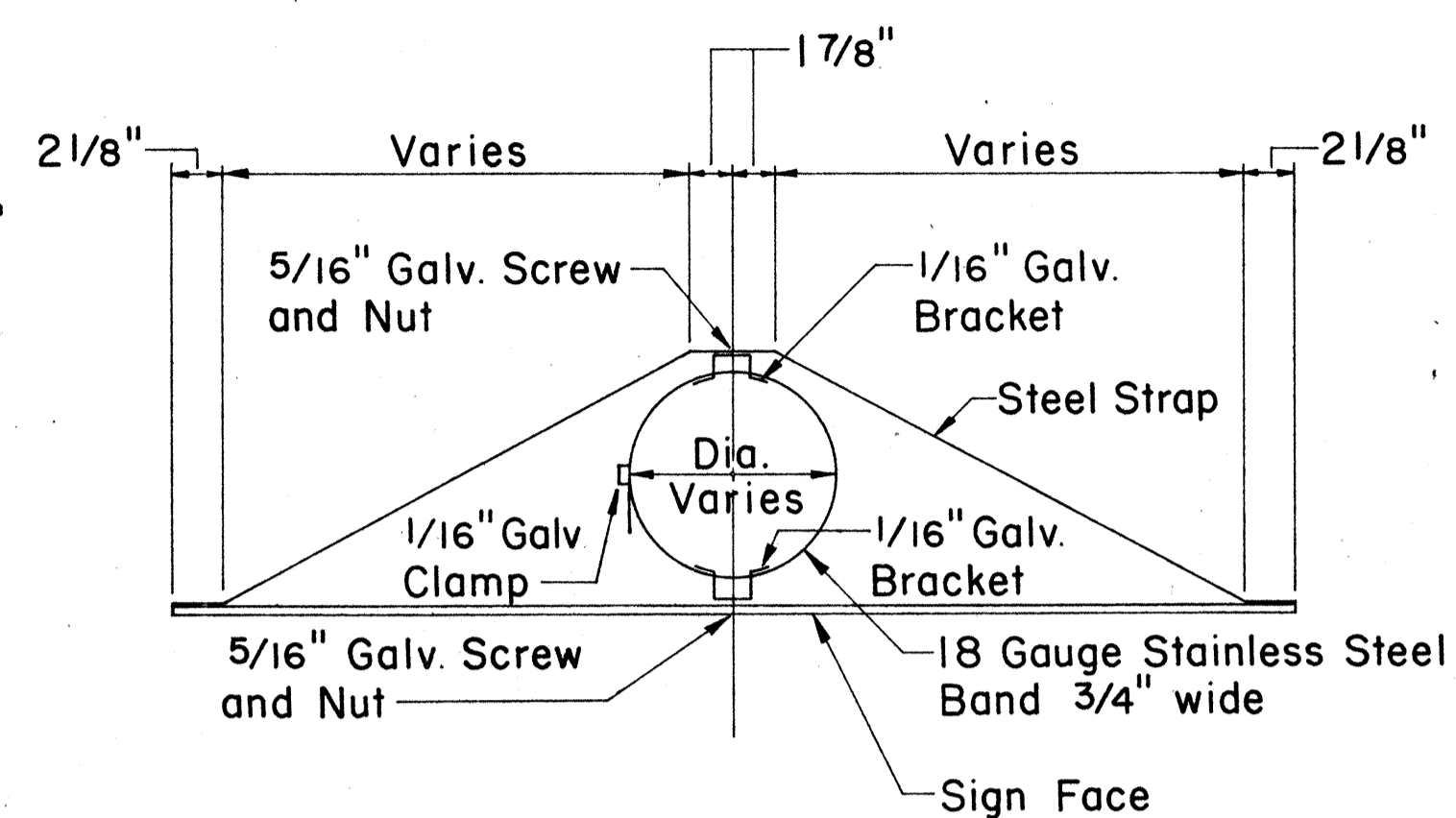
Scale: As Noted

SHEET No. 5A OF 18 SHEETS

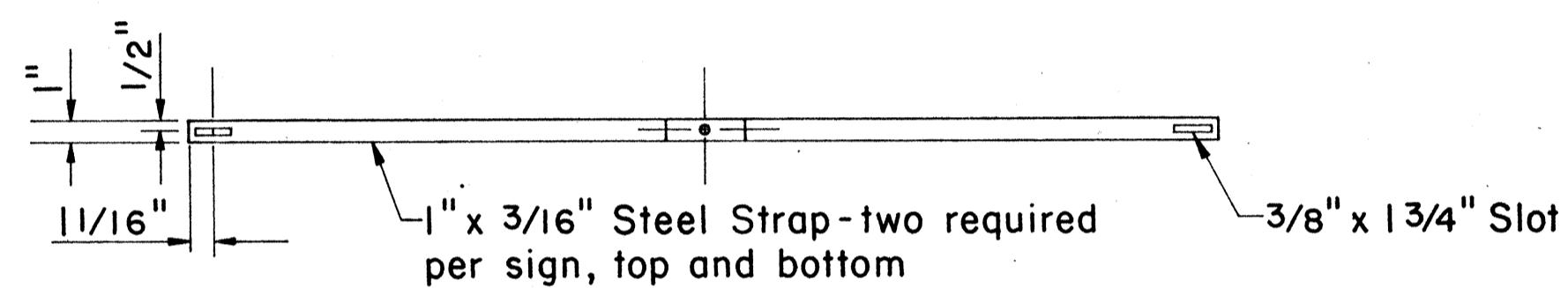
C0.105 S-1

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				



TOP



FRONT

MOUNTING DETAIL FOR SIGNS R17-2 AND W15-3

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

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

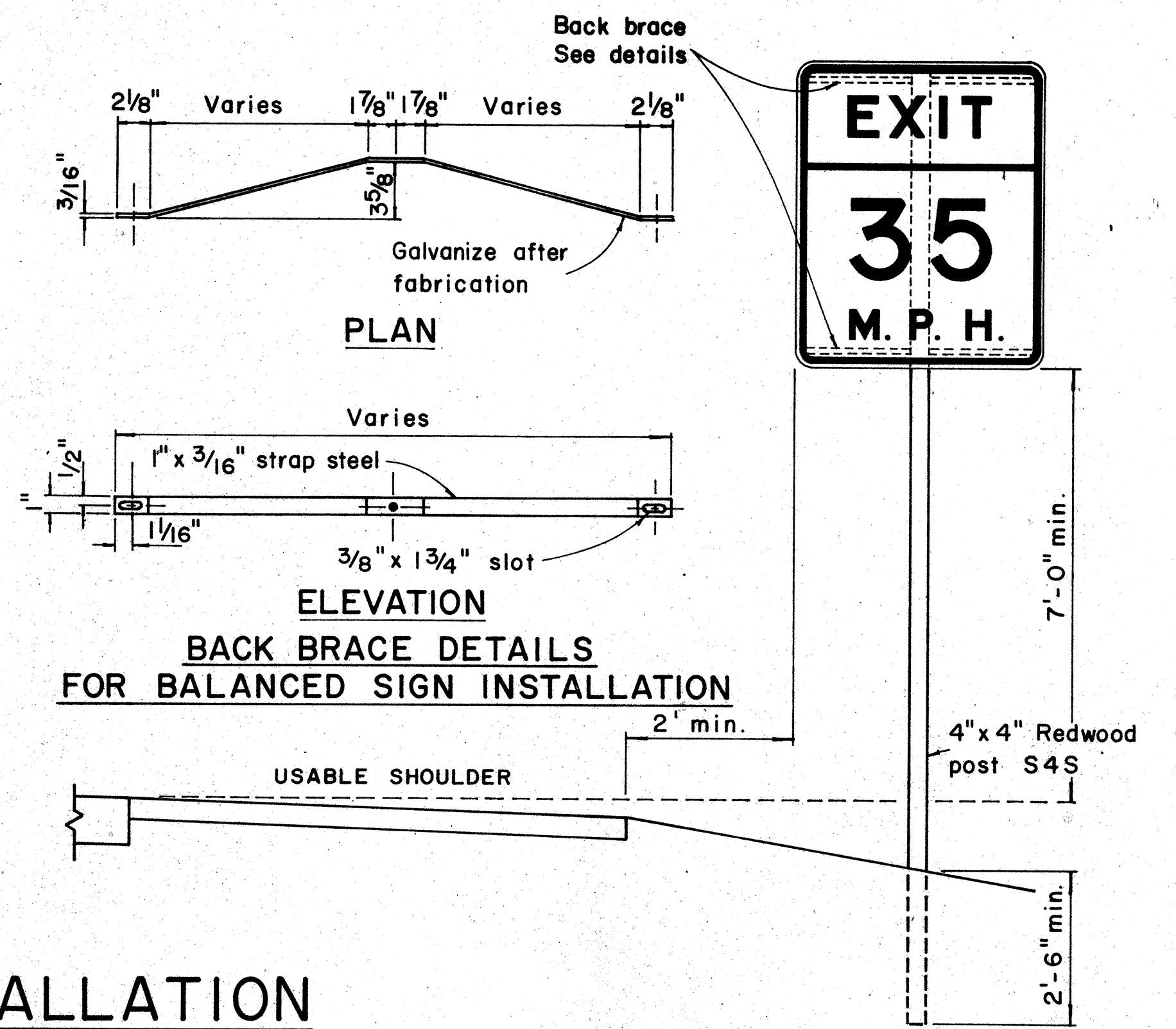
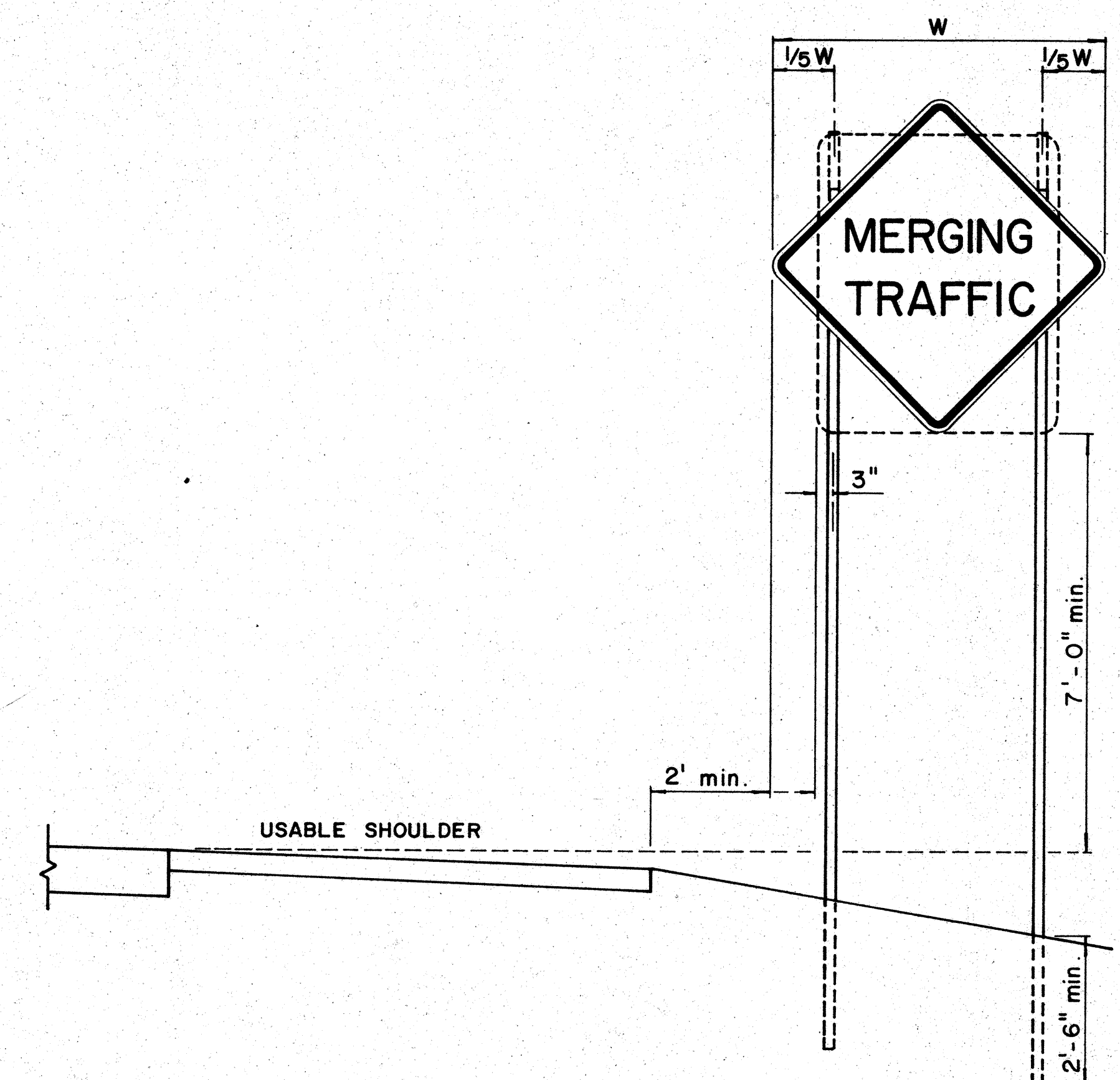
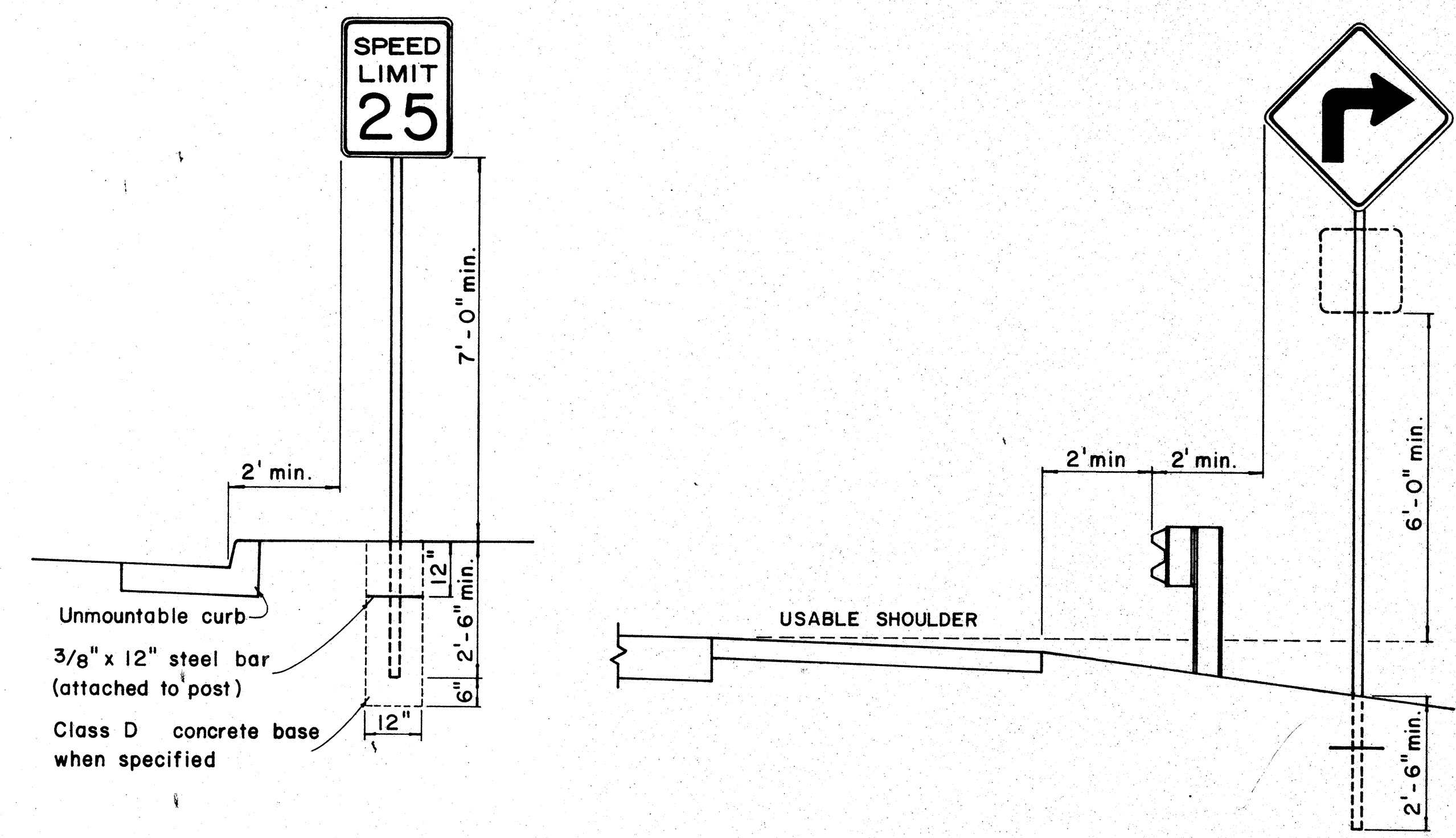
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS
SIGNING DETAIL

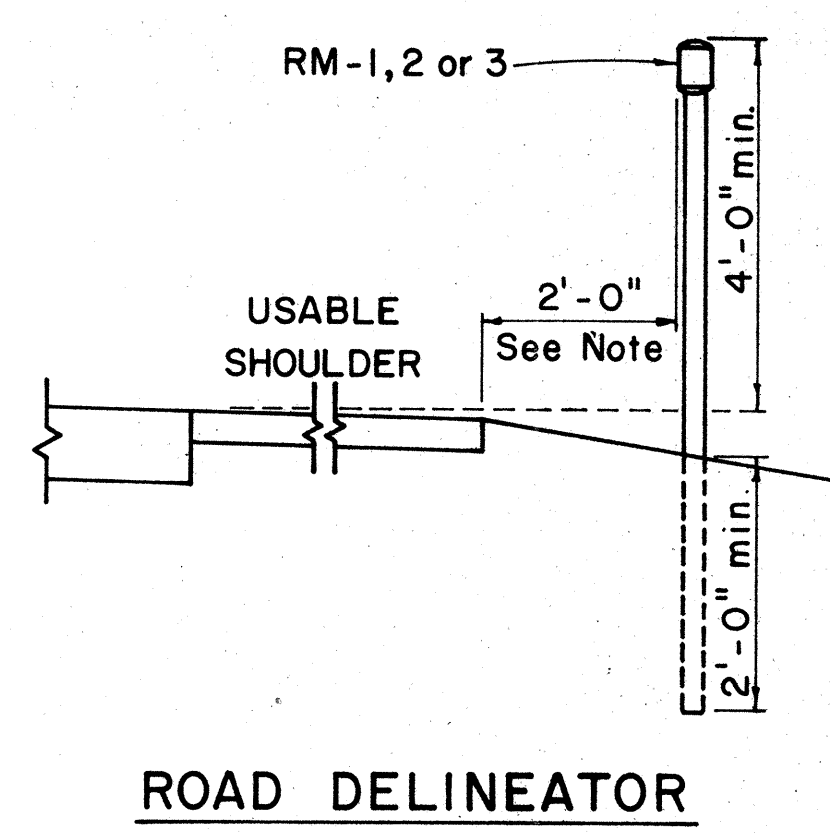
MOANALUA ROAD
(RED HILL TOWARDS AIE AOLENI)
FAP PROJ. No. F-078-1(11)
SCALE: AS NOTED

SHEET No. 58 OF 18 SHEETS

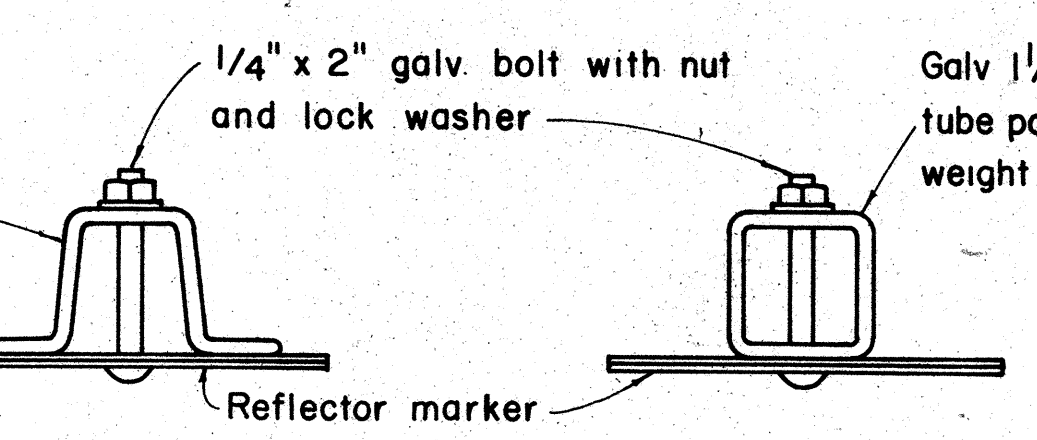
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-(11)	1969	106	258



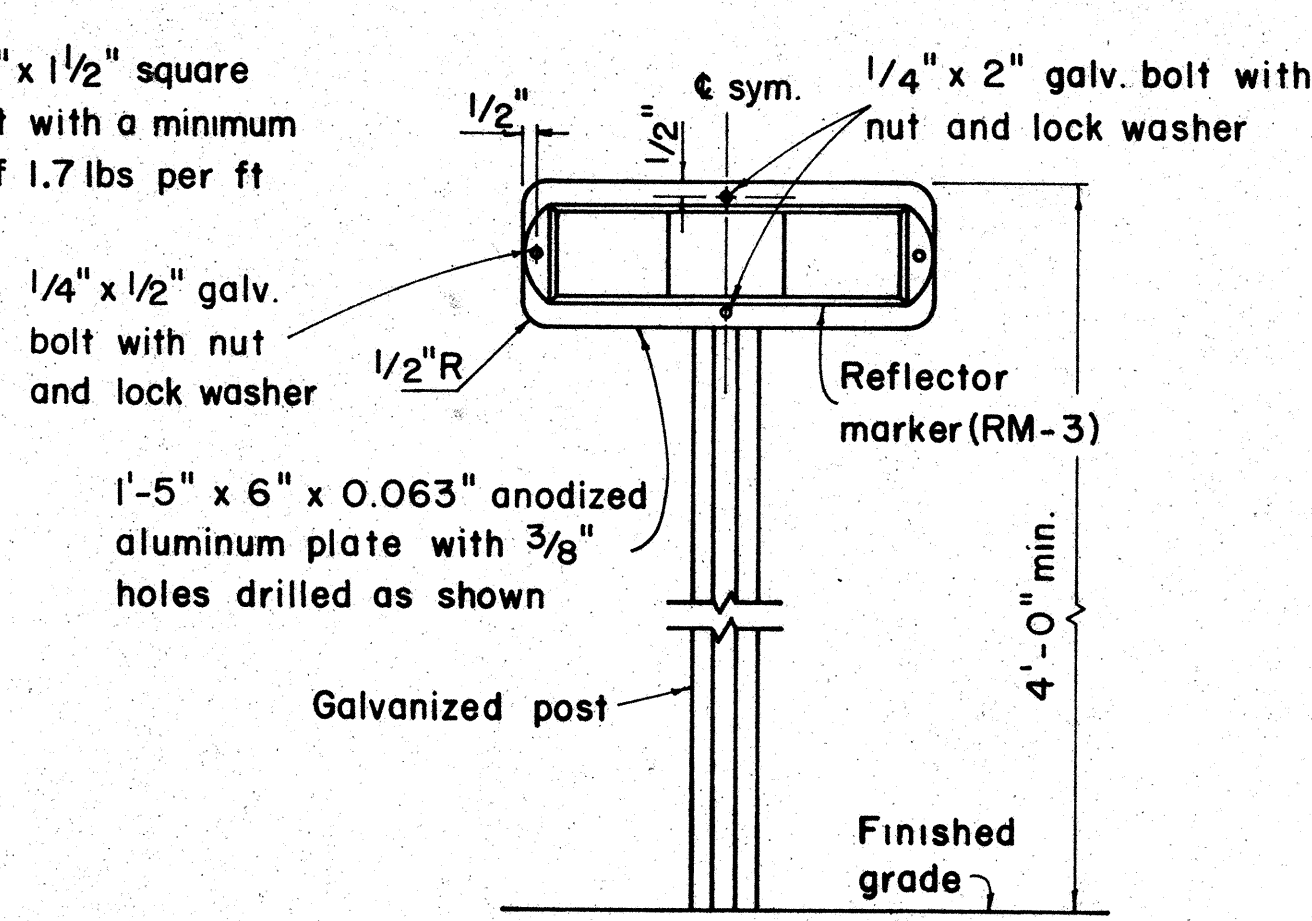
HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATION



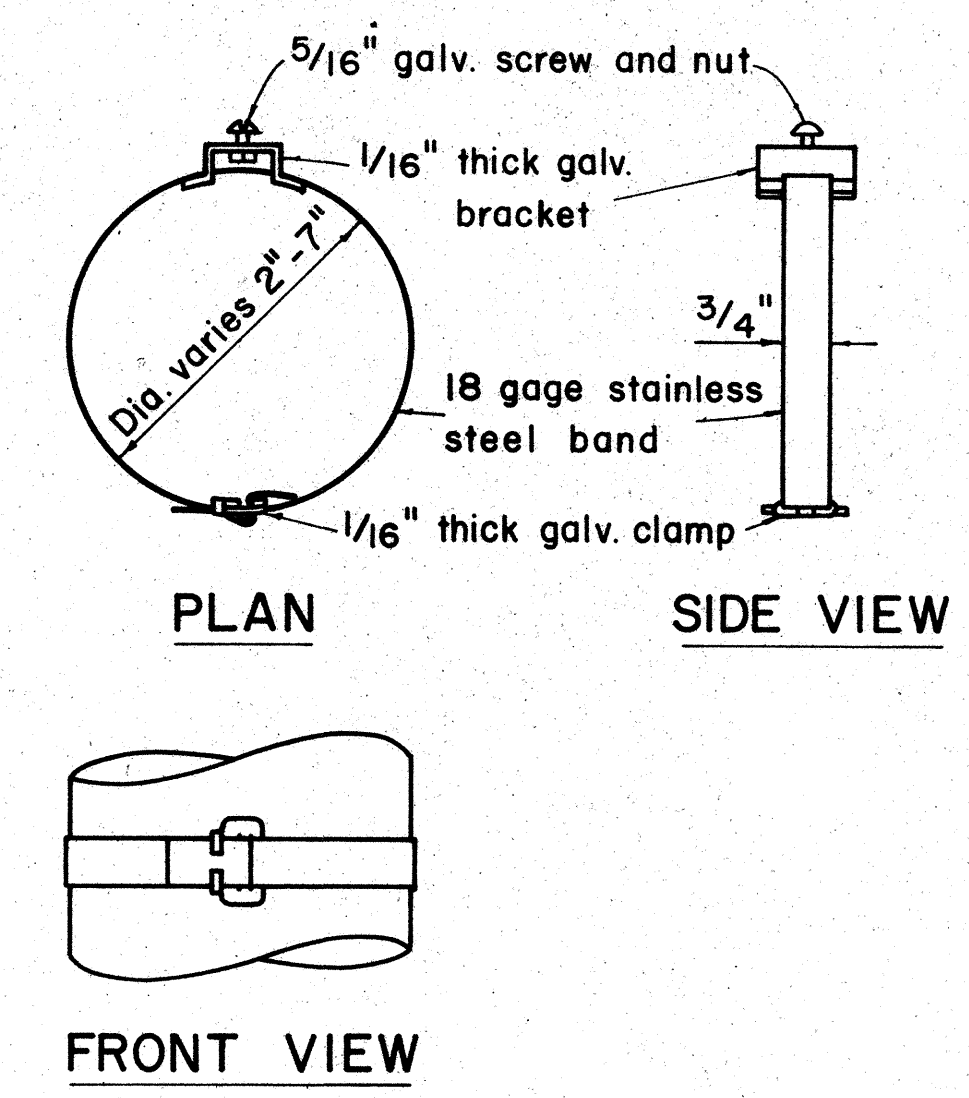
Galv. flanged channel 1/8" x 3 1/16" rolled section post with a minimum weight of 2 lbs. per ft. Upper 2 ft. shall have a single row of 3/8" holes centered in the web at 1" o.c.



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 0.063 stainless steel washers with neoprene rubber gasket.
 - Sign posts shall extend 3/2" 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.

APPROVAL RECOMMENDED:
Eishi Tanaka 12/29/69
 TRAFFIC ENGINEER DATE

APPROVED:
Arthur S. S. S. 12-30-69
 ASSISTANT CHIEF, ENGINEERING DATE

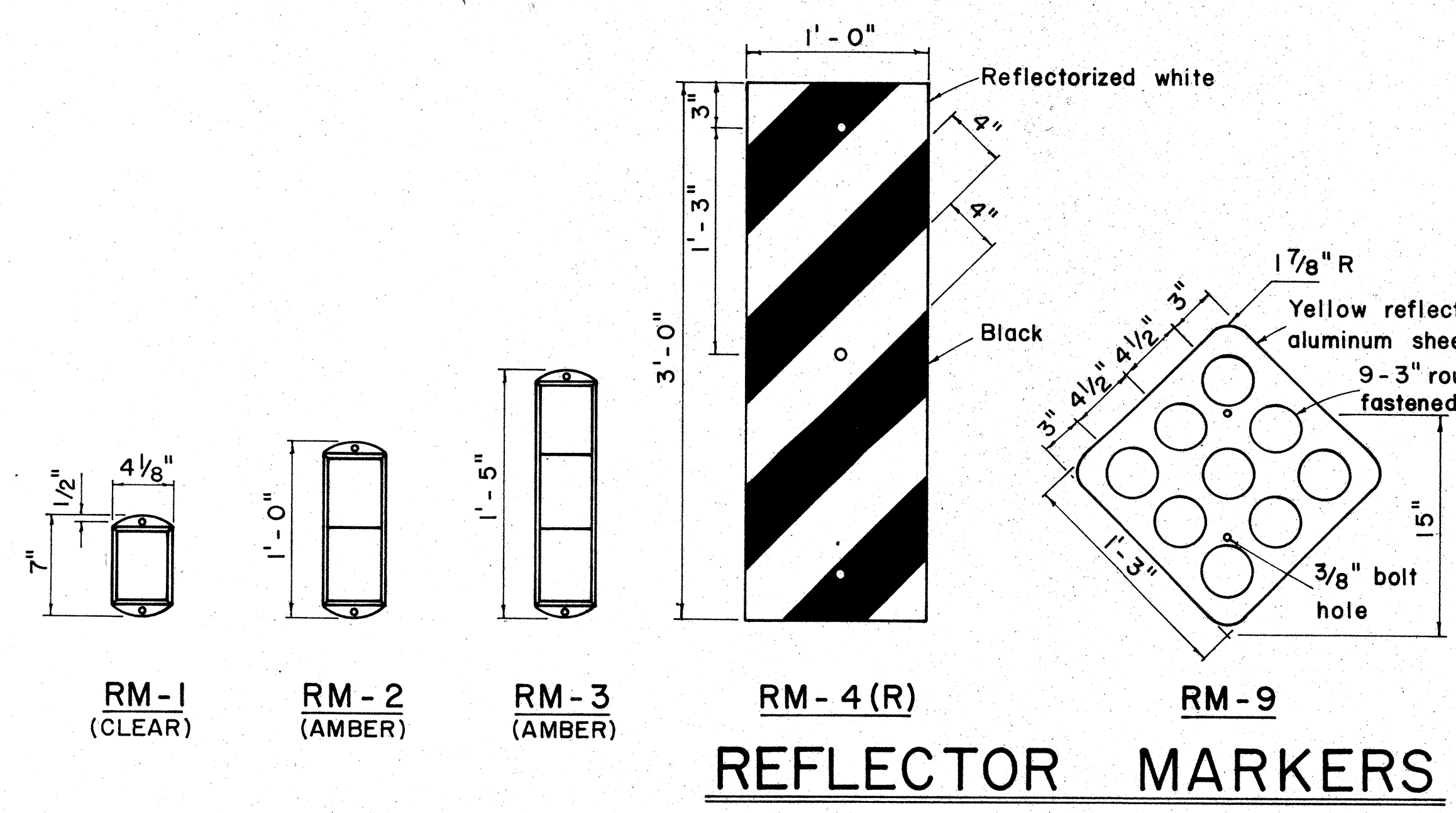
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 MISCELLANEOUS SIGN DETAILS

Not to scale March, 1968
 SHEET No. 6 OF 18 SHEETS DT 100

SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN NO. _____
 NOTE BOOK NO. _____



REFLECTOR MARKERS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-I(II)	1972	C.O.107	258

R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"

R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"

R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"

R2-2(40) 24" x 24"
R2-2(40)-A 48" x 48"

R2-4a(50/40) 24" x 48"
R2-4a(50/40)-A 48" x 96"

R2-5b(30) 24" x 30"
R2-5b(30)-A 48" x 60"

R3-1 24" x 24"
24" x 18"
R3-1-A 48" x 48"
48" x 36"

R3-2 24" x 24"
24" x 18"
R3-2-A 48" x 48"
48" x 36"

R3-3 24" x 24"
R3-3-A 48" x 48"

R3-4 24" x 24"
24" x 18"
R3-4-A 48" x 48"
48" x 36"

R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"

R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"

R3-7(R) 30" x 30"
R3-7(R)-A 48" x 48"

R3-8(L) 30" x 30"
R3-8(L)-A 36" x 36"
R3-8(L)-B 48" x 48"

R3-9 24" x 30"

R4-1 24" x 30"

R4-2 24" x 30"

R4-3 24" x 30"
R4-3-A 48" x 60"

R4-5 24" x 30"

R4-6(500) 24" x 30"

R4-7 24" x 30"
24" x 18"

R4-8 24" x 30"
24" x 18"

R5-1 30" x 30"
R5-1-A 48" x 48"

R5-2 24" x 24"
24" x 18"

R5-4 24" x 30"

R5-6 24" x 24"
24" x 18"

R5-9 36" x 24"

R6-1(R) 36" x 12"

R6-2(R) 18" x 24"

R7-1 12" x 18"
R7-1-A 24" x 30"

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

R7-107(R) 12" x 18"

R7-108 12" x 18"

R7-201 12" x 6"
R7-201-A 24" x 12"

R8-1 24" x 30"

R8-2 24" x 30"

R8-3 24" x 30"

R8-4 30" x 24"
R8-4-A 48" x 36"

R8-5 24" x 30"

R8-6 24" x 30"

R8-7 30" x 24"
R8-7-A 48" x 36"

R9-1 18" x 24"

R9-2 12" x 18"

R9-3 12" x 18"

R9-4 18" x 24"

R10-1 12" x 18"

R10-2 12" x 18"

R10-3 9" x 12"

R10-4 9" x 12"

R10-5 24" x 30"

R10-6 24" x 36"

R10-7 24" x 30"

R10-8 24" x 30"

R10-9 24" x 30"

R10-10 24" x 30"

R11-1 24" x 30"

R11-2 48" x 30"

R11-3(10) 60" x 30"

R11-4 60" x 30"

R12-1(10) 24" x 30"

GENERAL NOTES

1. Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs."
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory 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.

APPROVAL RECOMMENDED:
Eishi Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
Robert Robinson 3-20-72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.C.	3/20/72

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
REGULATORY SIGNS

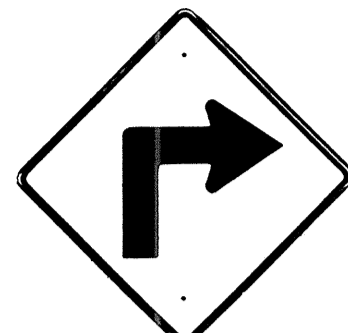

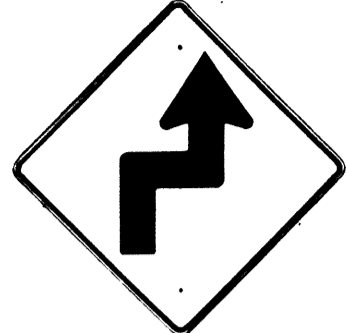
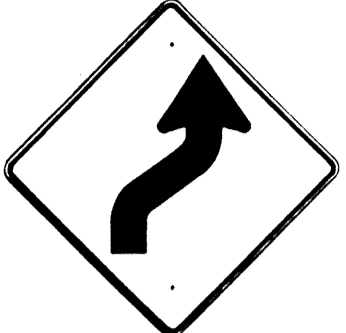

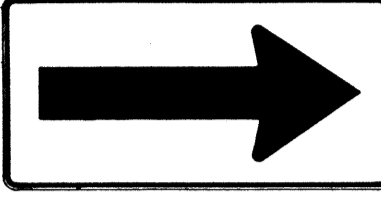
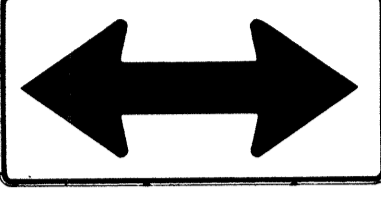
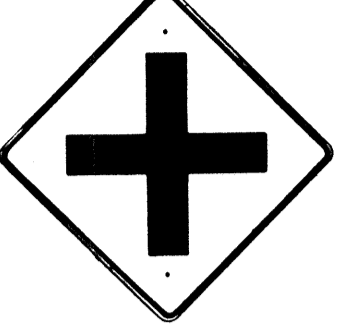
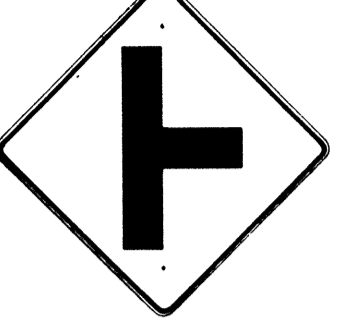
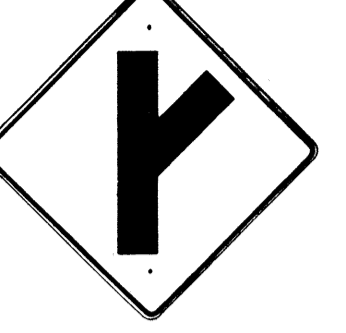
NOT TO SCALE

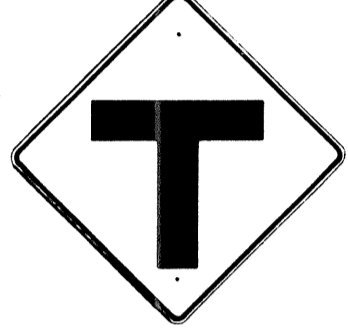



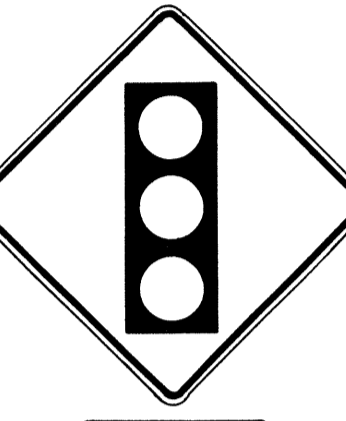

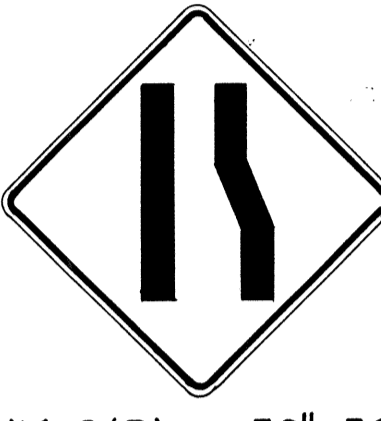



SHEET No. OF SHEETS DT 101











THIS SHEET SUPERSEDES SHEET NO. 107



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

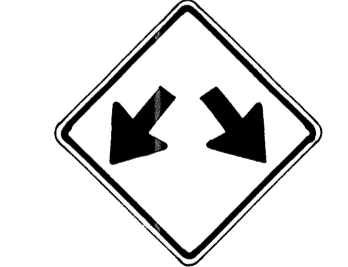


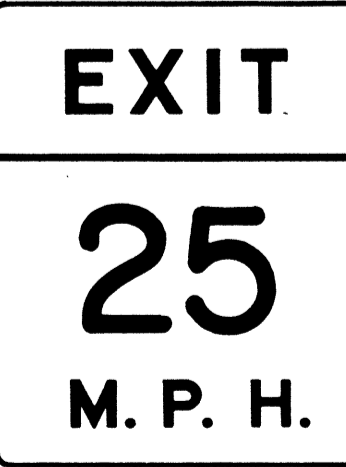
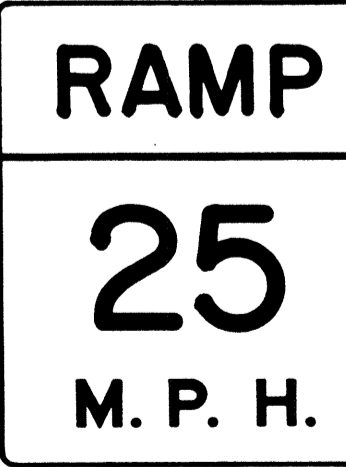


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-I(11)	1972	CO.108	258

 W1-1(R) 30"x30" W1-1(R)-A 48"x48"	 W1-2(R) 30"x30" W1-2(R)-A 48"x48"	 W1-3(R) 30"x30" W1-3(R)-A 48"x48"	 W1-4(R) 30"x30" W1-4(R)-A 48"x48"	 W1-5(R) 30"x30" W1-5(R)-A 48"x48"	 W1-6 48"x24"	 W1-7 48"x24"	 W2-1 30"x30" W2-1-A 48"x48"	 W2-2 30"x30" W2-2-A 48"x48"	 W2-3(R) 30"x30" W2-3(R)-A 48"x48"
---	---	---	---	---	---	---	---	---	---

 W2-4 30"x30" W2-4-A 48"x48"	 W2-5 30"x30" W2-5-A 48"x48"	 W3-1 30"x30" W3-1-A 36"x36"	 W3-2 30"x30" W3-2-A 36"x36"	 W3-3 36"x36" 24"x18"	 W4-1(R) 30"x30" 24"x18" W4-1(R)-A 48"x48" 24"x18"	 W4-2(R) 36"x36" W4-2(R)-A 48"x48"	 W5-1 36"x36"	 W5-2 30"x30" W5-2-A 36"x36"	 W5-3 36"x36"
---	---	---	---	--	---	---	---	---	---

 W6-1 36"x36" 24"x18"	 W6-2 36"x36" 24"x18"	 W6-3 30"x30" 24"x18" W6-3-A 36"x36" 24"x18" W6-3-B 48"x48" 24"x18"	 W7-1 30"x30" 24"x18" W7-1-A 36"x36" 24"x18"	 W7-2 24"x18"	 W8-1 30"x30" W8-1-A 36"x36"	 W8-2 30"x30" W8-2-A 36"x36"	 W8-3 30"x30" W8-3-A 36"x36"	 W8-4 30"x30" W8-4-A 36"x36"	 W8-5 30"x30" 24"x18" W8-5-A 36"x36" 24"x18"
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 W9-1(R) 30"x30" W9-1(R)-A 36"x36" W9-1(R)-B 48"x48"	 W9-2(L) 36"x36" W9-2(L)-A 48"x48"	 W10-1 36" Diameter	 W11-1 30"x30" 24"x18" W11-1-A 36"x36" 24"x18"	 W11-2 30"x30" 24"x18" W11-2-A 36"x36" 24"x18"	 W11-4 30"x30" 24"x18" W11-4-A 36"x36" 24"x18"	 W11-5 30"x30" 24"x18" W11-5-A 36"x36" 24"x18"
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 W12-1 24"x24" W12-1-A 36"x36" W12-1-B 48"x48"	 W12-2(12'-6") 36"x36" 24"x18"	 W13-1(25) 18"x18" W13-1(25)-A 24"x24"	 W13-2(25) 48"x60"	 W13-3(25) 48"x60"	 W14-1 30"x30"	 W14-3 36"x48"x48"
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GENERAL NOTES

1. Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs."
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.

APPROVAL RECOMMENDED:
Evelyn Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
Arthur Palsin 3-20-72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/72

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
WARNING SIGNS

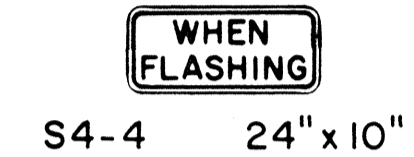
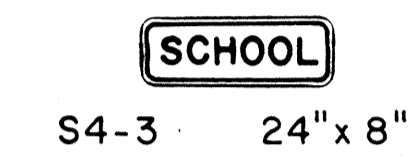
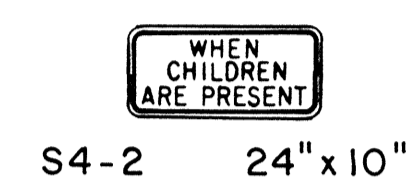
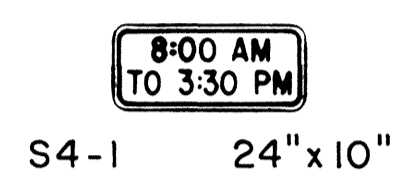
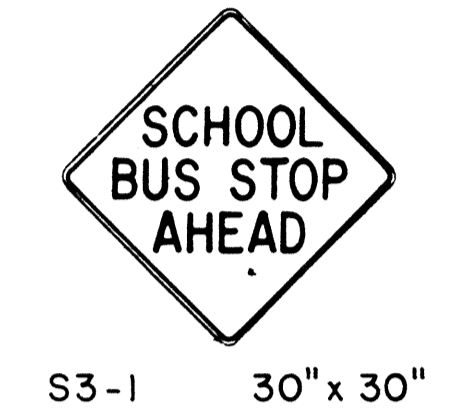
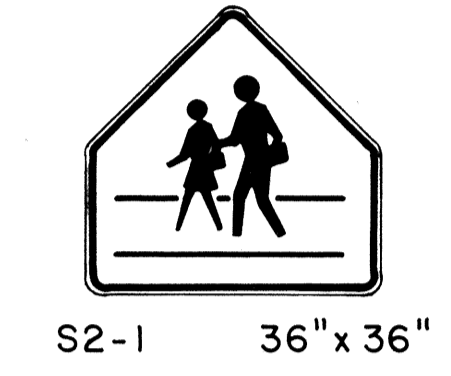
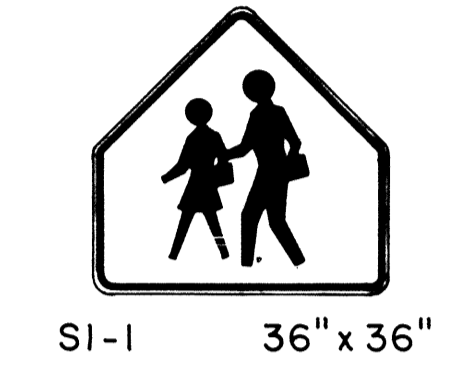
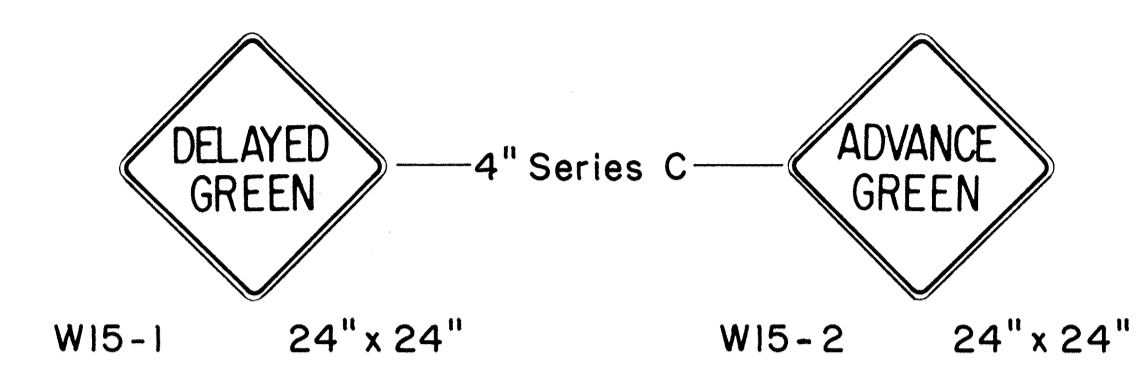
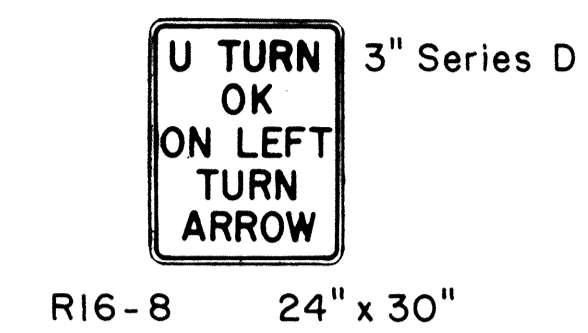
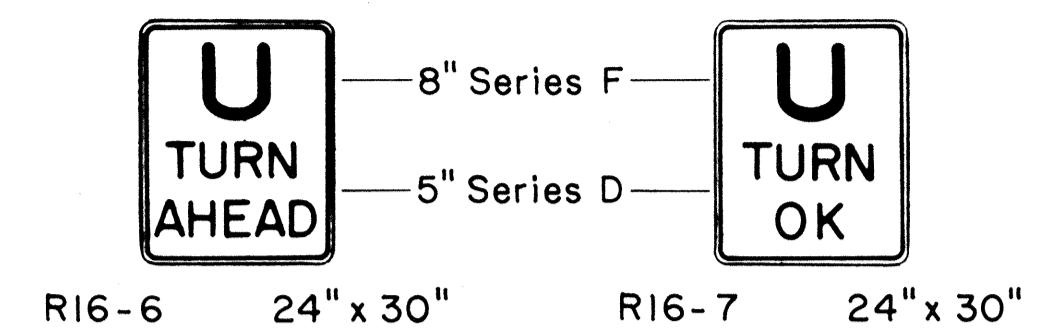
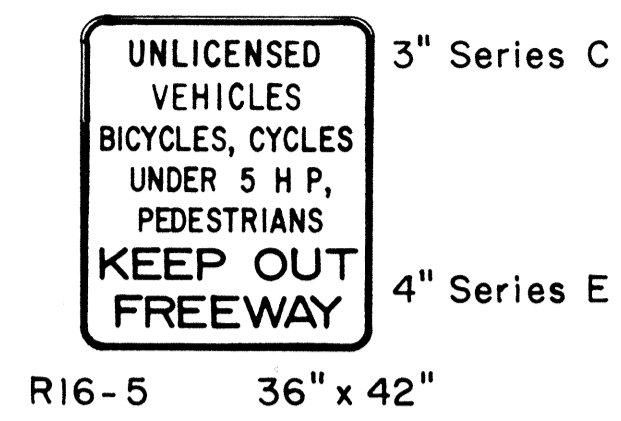
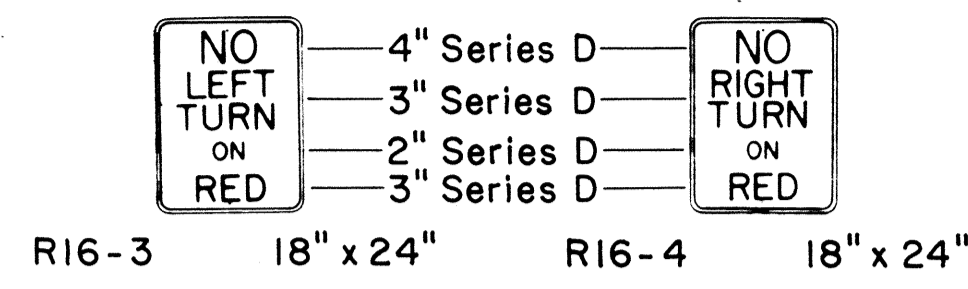
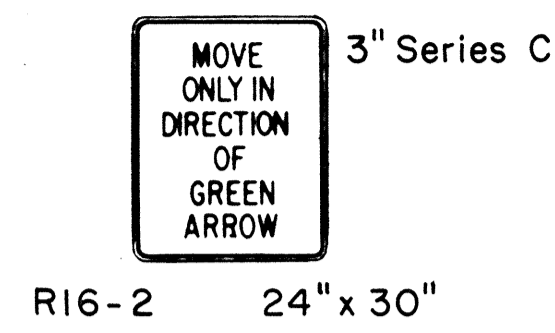
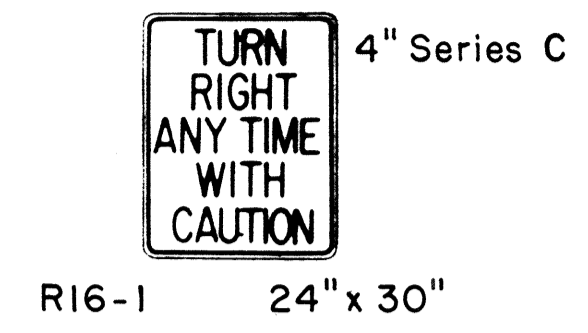
NOT TO SCALE

SHEET No. OF SHEETS DT 102

THIS SHEET SUPERSEDES SHEET NO. 108

DATE
DRAWN BY
CHECKED BY
QUANTITIES BY
CHECKED BY
No.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-I(II)	1972	C.O. 109	258



GENERAL NOTES

1. Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs."
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.
4. Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.

APPROVAL RECOMMENDED:
Eishi Tanaka 3/17/72
 TRAFFIC ENGINEER DATE

APPROVED:
Shigeru Zatsich 3-20-72
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 103 Approved 12-30-69	H.C.	3/20/72

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
MISCELLANEOUS
REGULATORY & WARNING SIGNS

NOT TO SCALE
 SHEET No. OF SHEETS DT 103

THIS SHEET SUPERSEDES SHEET NO. 109

SURVEY PLOTTED BY _____ DATE _____
 DRAWN BY _____
 DESIGNED BY _____
 NOTE BOOK _____
 QUANTITIES BY _____
 CHECKED BY _____
 No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-II(I)	1969	110	258



W 7-2 48" x 48"



W8-7 30" x 30"



W14-1 30" x 30"



W20-la 48" x 48"



W20-2d 48" x 48"



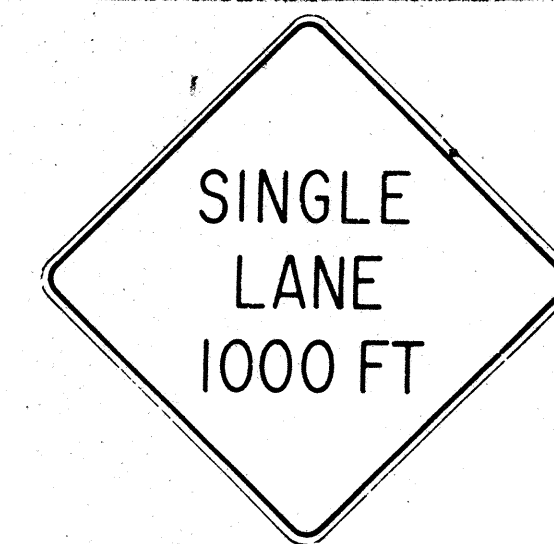
W20-3b 48" x 48"



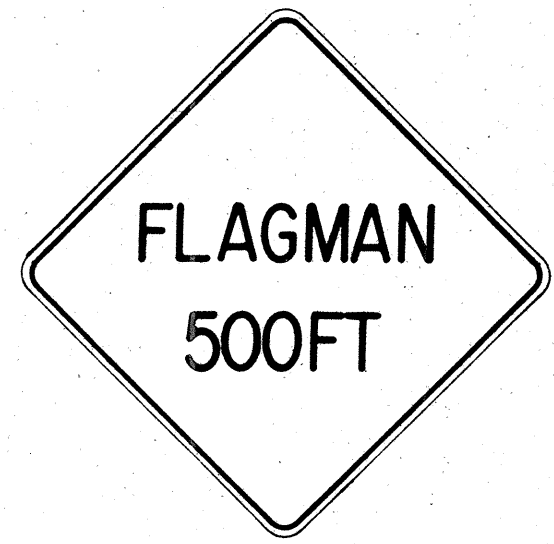
W20-4d 48" x 48"



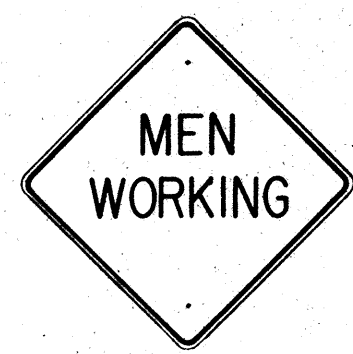
W20-5d(L) 48" x 48"



W20-6b 48" x 48"



W20-7c 48" x 48"



W21-1 30" x 30"



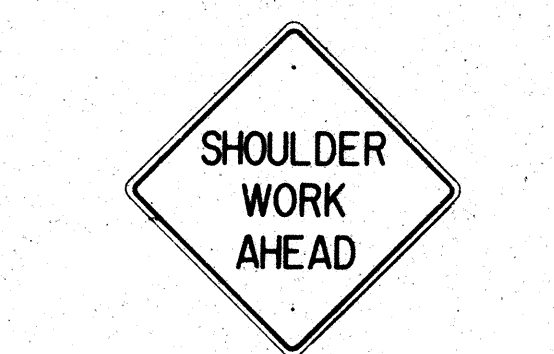
W21-2 24" x 24"



W21-3 36" x 36"



W21-4 30" x 30"



W21-5 30" x 30"



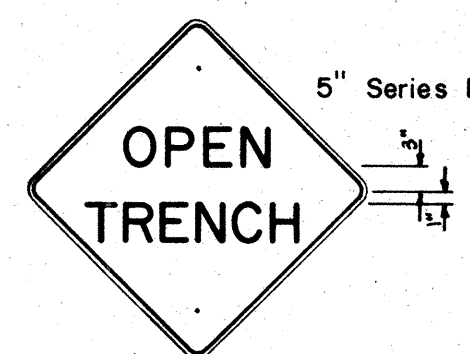
W21-6 30" x 30"



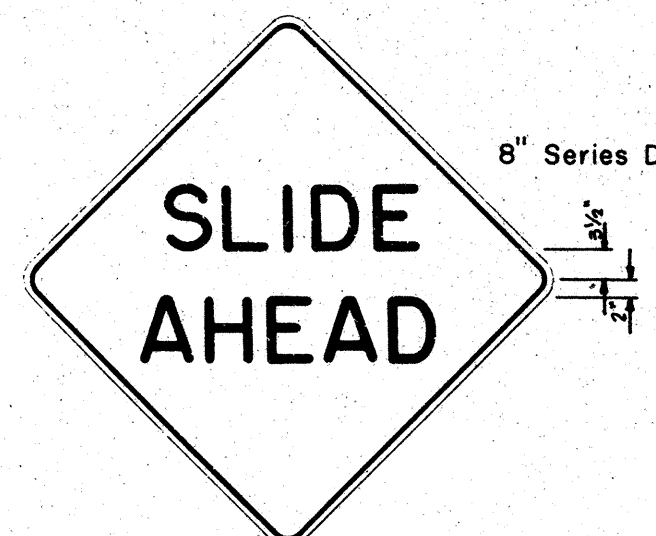
W22-1 30" x 30"



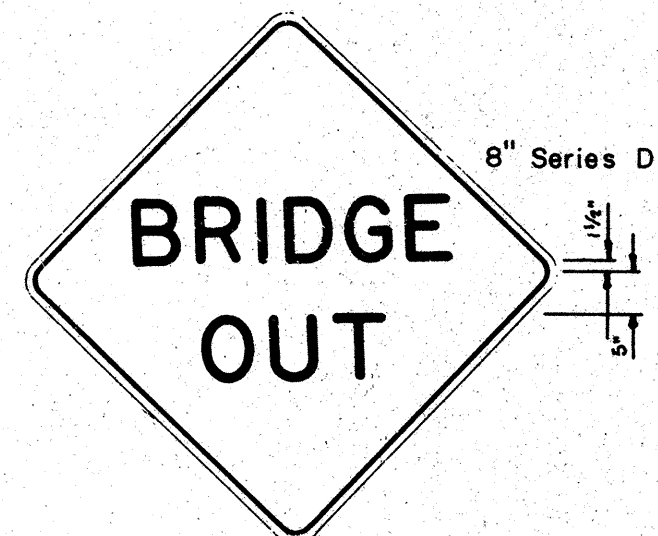
W22-2 30" x 30"



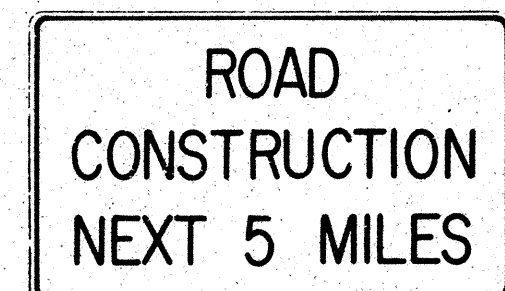
W22-3 30" x 30"



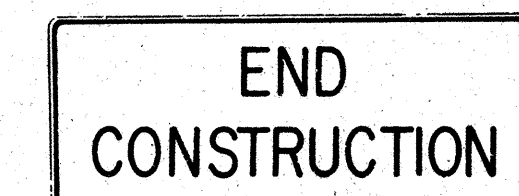
W22-4 48" x 48"



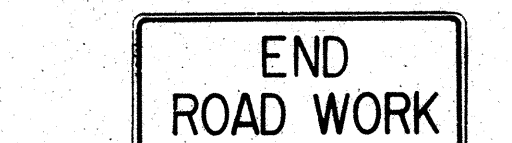
W22-5 48" x 48"



G20-1(5) 60" x 36"



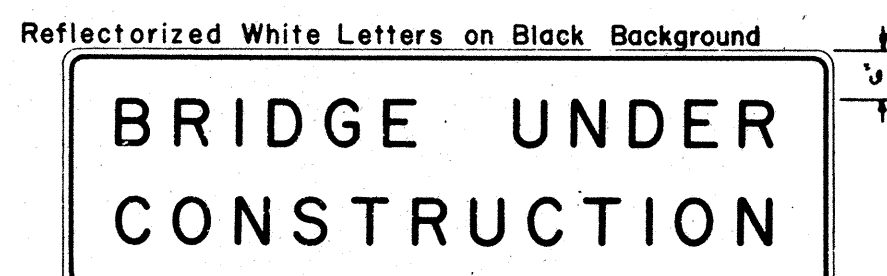
G20-2 60" x 24"



G20-3 42" x 18"



M5-7(L) 48" x 18"



CW-1 96" x 30"

- 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 specified.
 - All signs shall be reflectorized unless otherwise specified.
 - All signs shall have 3/8" bolt holes drilled at appropriate locations unless otherwise noted.
 - For W20 series signs, suffixes a,b,c and d are as follows a 1500 FT, b 1000 FT, c 500 FT and d AHEAD
 - (R) or (L) indicates right or left and shall be as shown on the plans.
 - Number in () indicates miles and shall be as shown on the plans.

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

APPROVAL RECOMMENDED:
Eiichi Tanaka
 TRAFFIC ENGINEER 12/29/69
 DATE

APPROVED:
Shunzo Sato
 ASSISTANT CHIEF, ENGINEERING 12-30-69
 DATE

NO.	REVISION	APPROVED BY	DATE

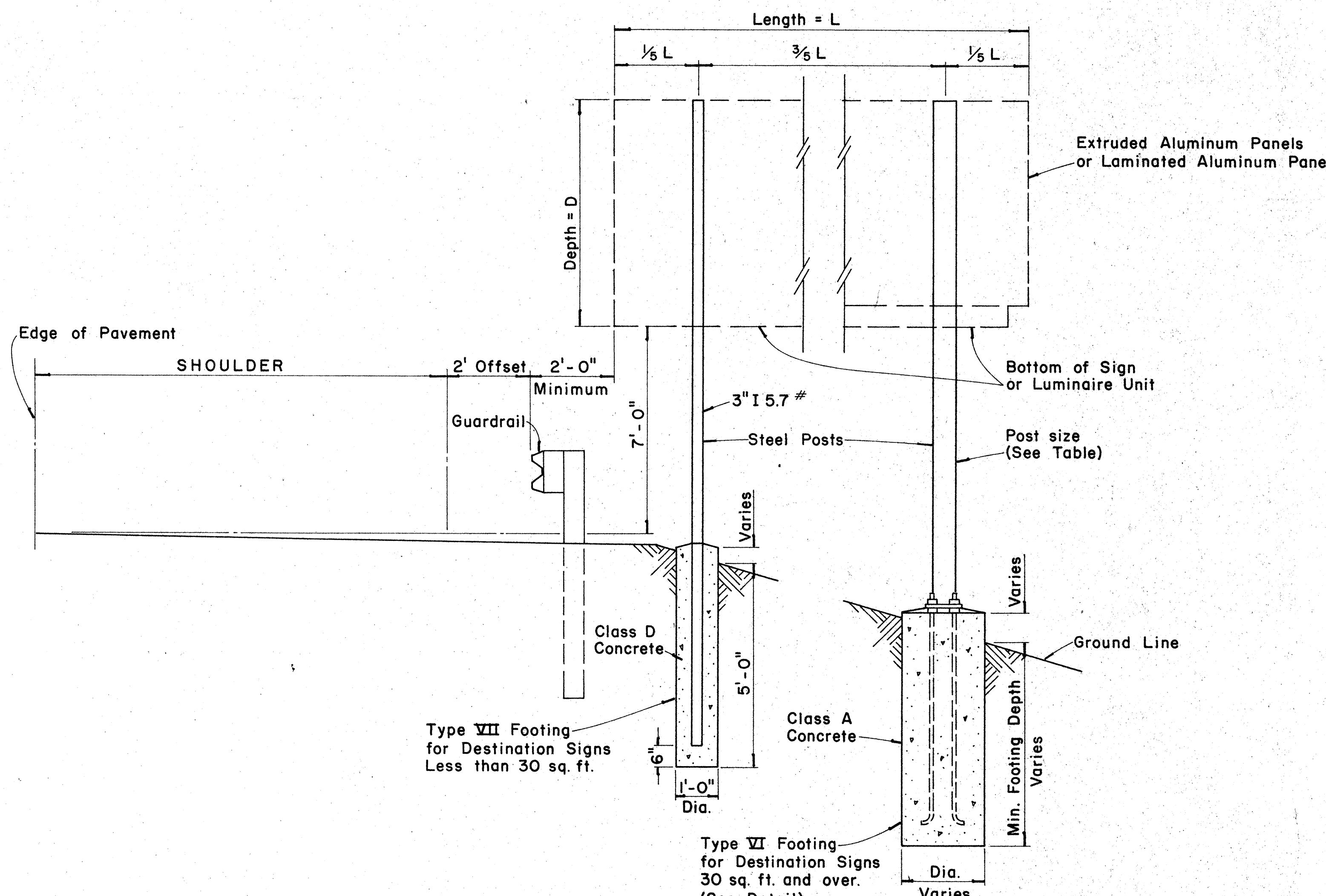
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
CONSTRUCTION SIGNS

NOT TO SCALE

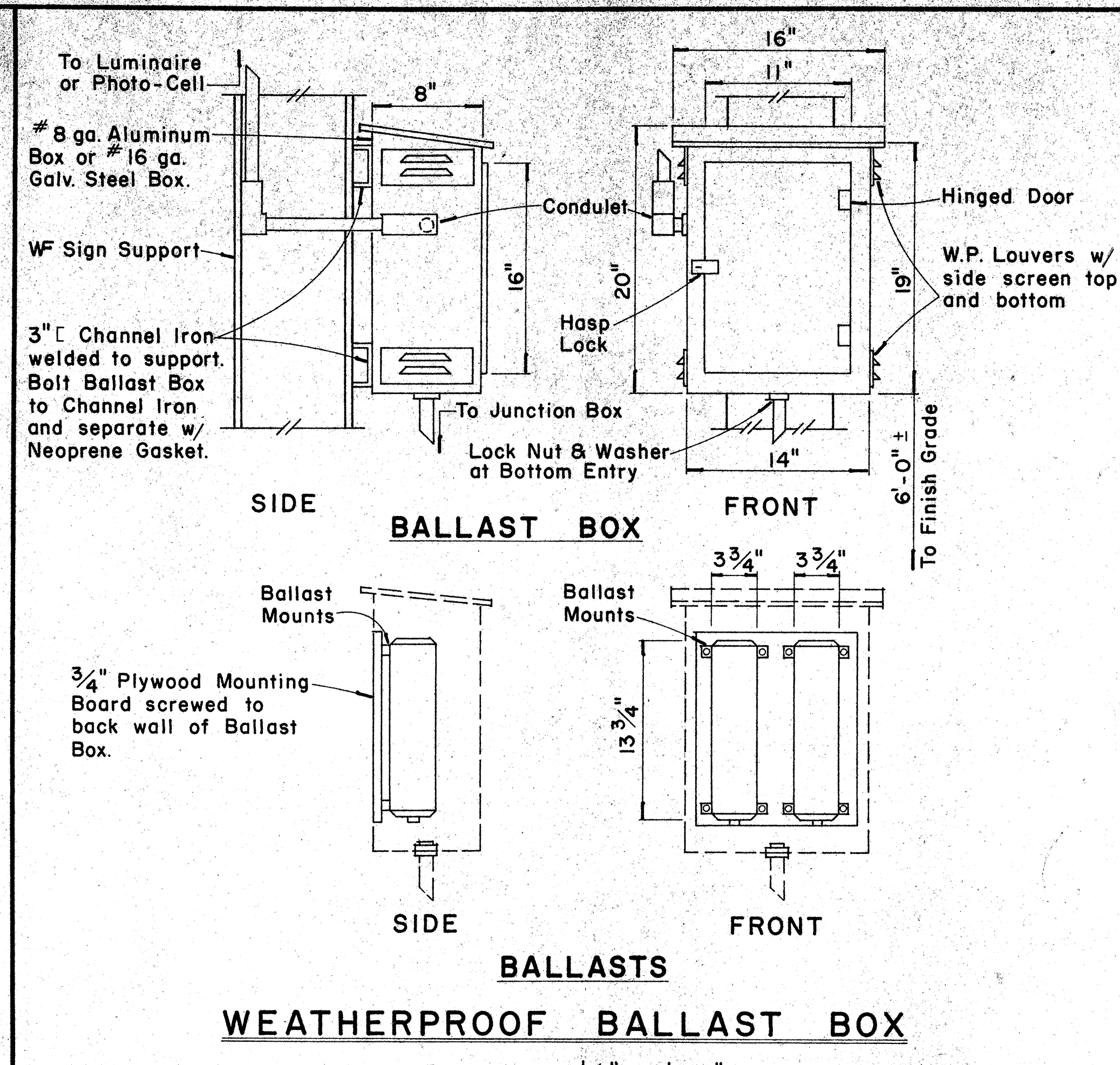
* For moment calculations only. Post shall be from top of foundation to top of sign.
 ** For fills with side slopes flatter than 4:1, Minimum Footing Depth shall be 4½ feet.

DATA TABLE FOR TYPE VI FOOTING																	
POST SIZE	MAXIMUM SIGN AREA	POST HEIGHT TOP OF FOUNDATION TO CENTER OF SIGN *	DIMENSIONS											ANCHOR BOLT DIA.	MINIMUM FOOTING DEPTH		
			H	J	K	M	N	O	P	S	T	U	V		W	CUT	FILL**
8 J 10	50 sq. ft.	14'	14"	5"	24"	17½"	15½"	6"	1¼"	9"	6"	10"	2"	1"	1½"Ø	4½'	4½'
8 WF 24	90 sq. ft.	21'															5'
8 WF 35	190 sq. ft.	15'	16½"	6¾"	30"	20"	13¼"	6"	1¾"	11¾"	6½"	10"	1¾"	1"	1¼"Ø	6'	7'
10 WF 45	190 sq. ft.	25'															
10 WF 45	200 sq. ft.	25'															
12 WF 50	230 sq. ft.	25'															
12 WF 50	250 sq. ft.	23'															



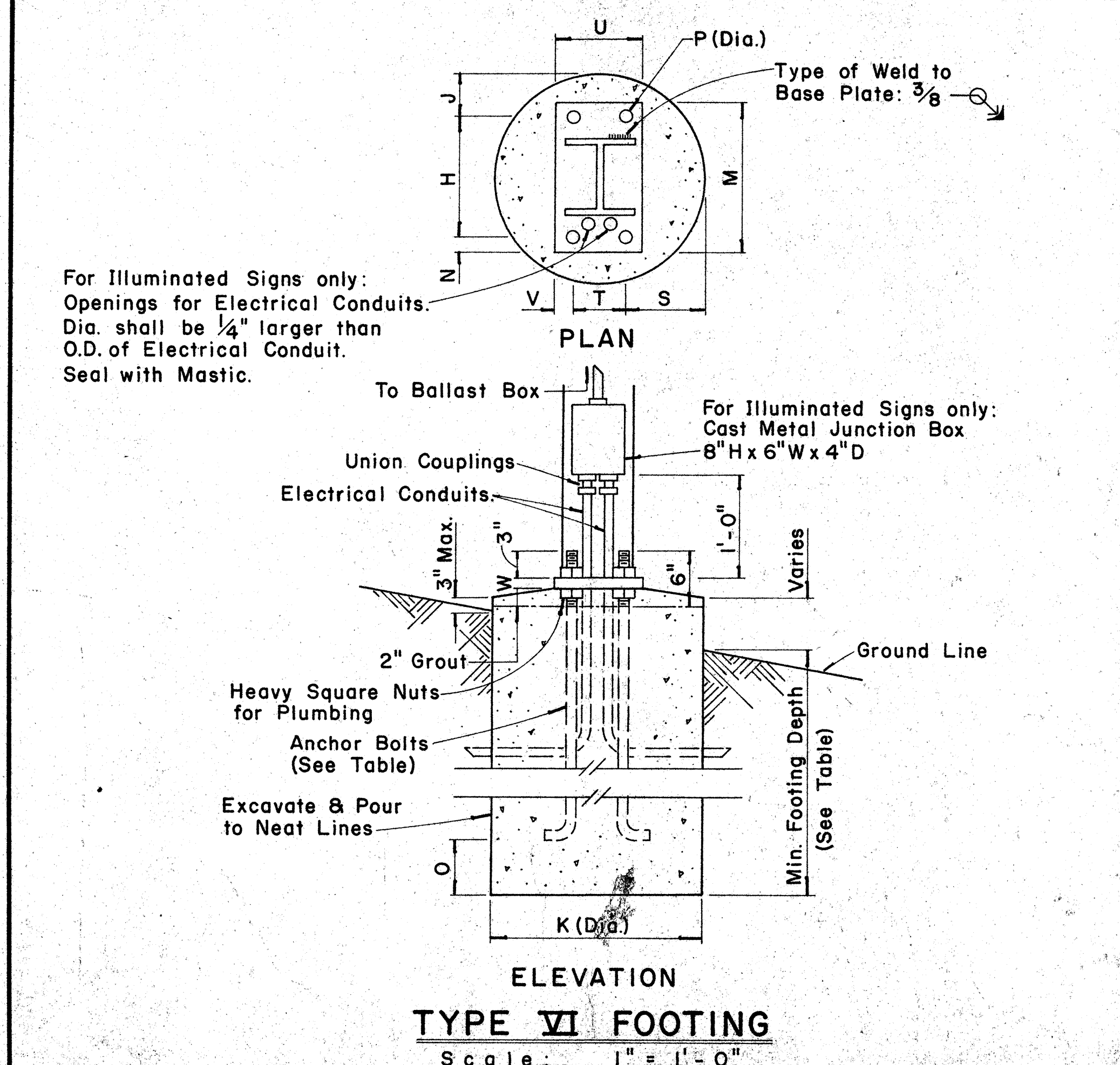
TYPICAL DESTINATION & GROUND MOUNTED EXPRESSWAY SIGN

Not to Scale



WEATHERPROOF BALLAST BOX

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



TYPE VI FOOTING

Scale: 1" = 1'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-I(II)	1969	111	258

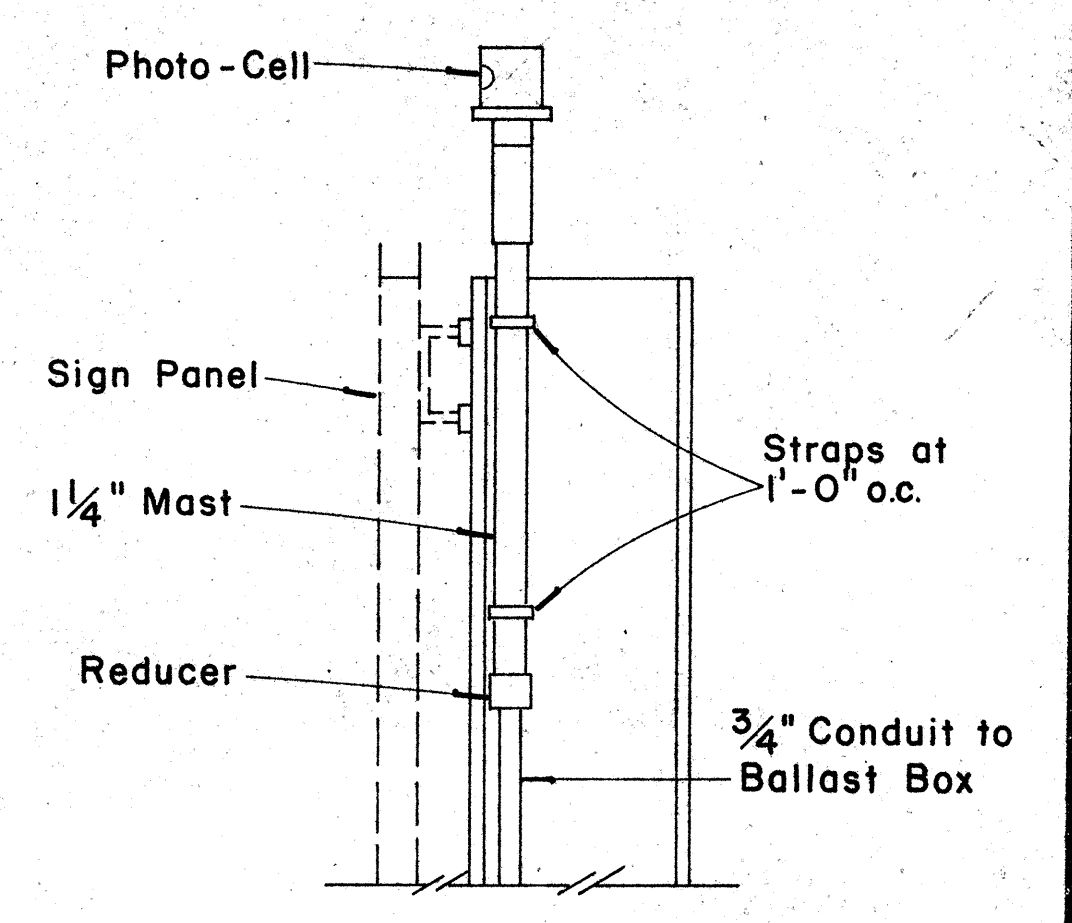


PHOTO-CELL DETAIL

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

APPROVAL RECOMMENDED:
Eishi Tanaka 12/29/69
 TRAFFIC ENGINEER DATE

APPROVED:
John J. ... 12-30-69
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

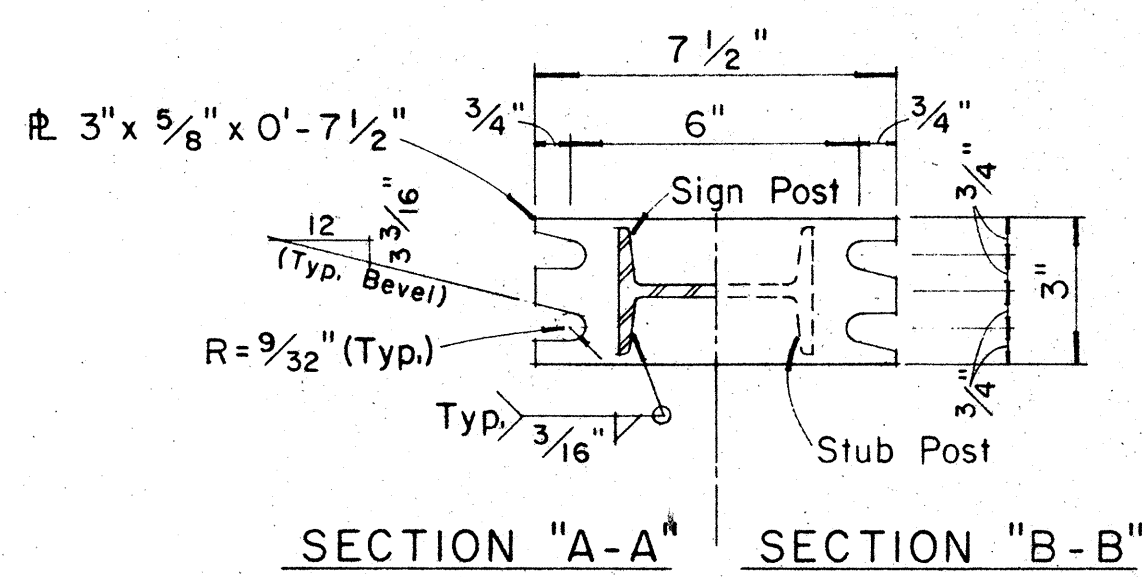
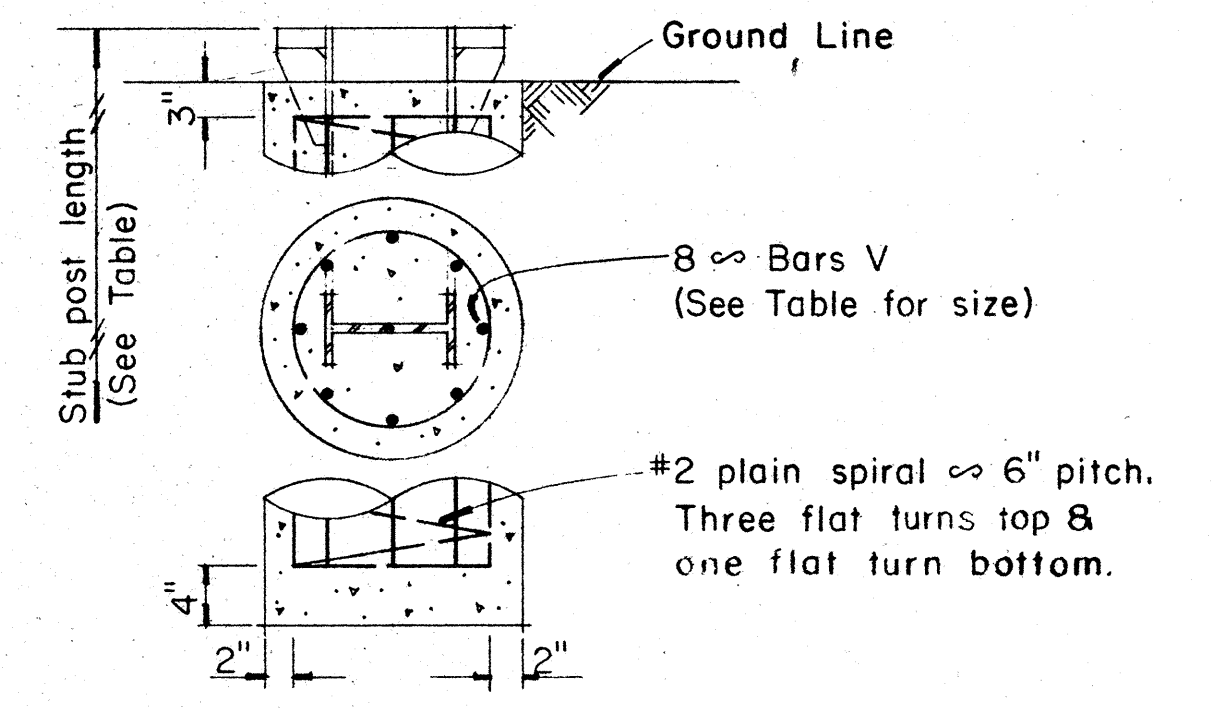
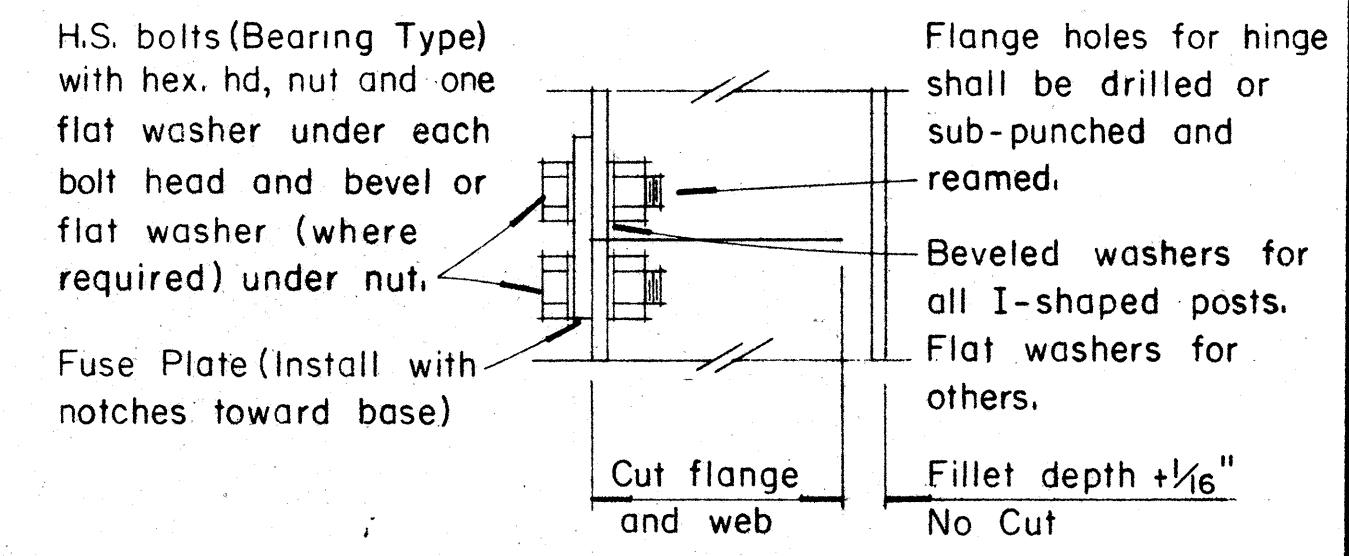
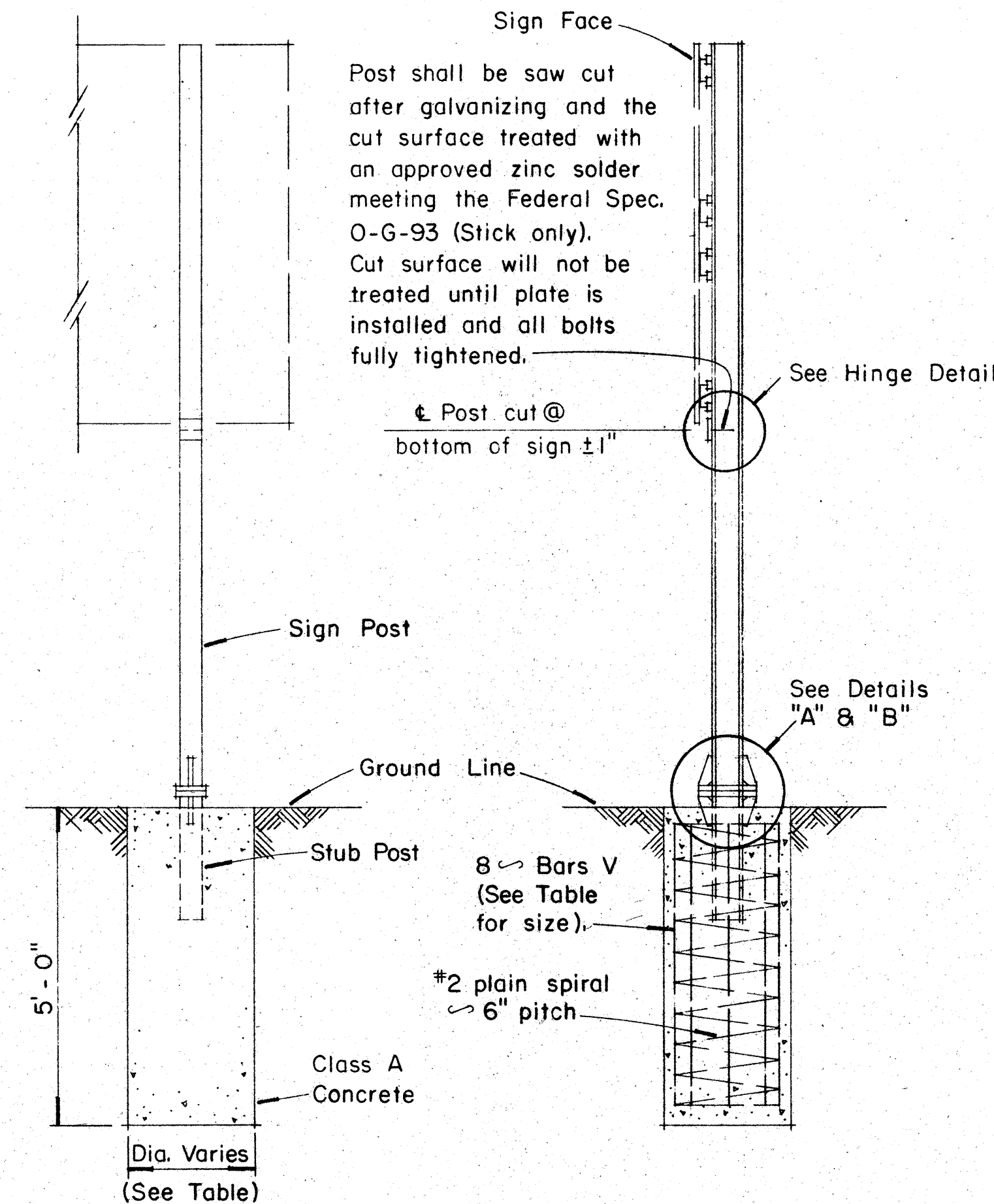
STANDARD DETAILS
 DESTINATION & GROUND MOUNTED
 EXPRESSWAY SIGNS

Scale: As Shown
 SHEET No. 11 OF 13 SHEETS DT 203

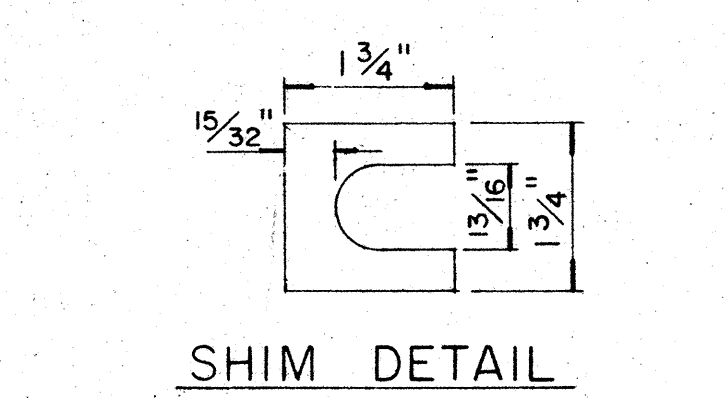
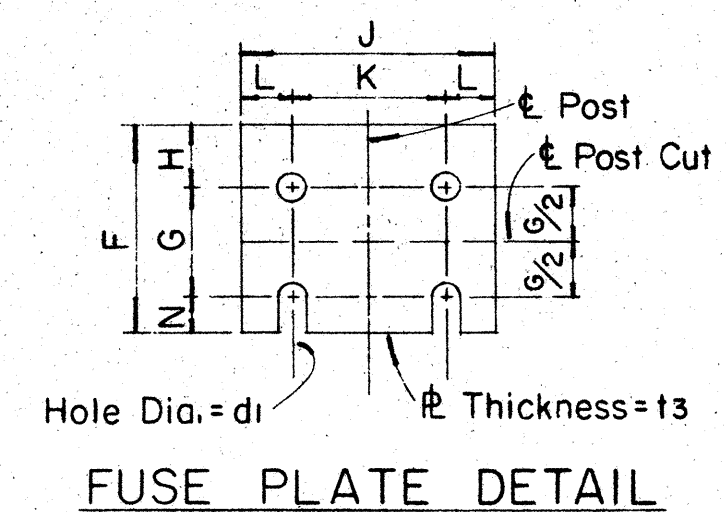
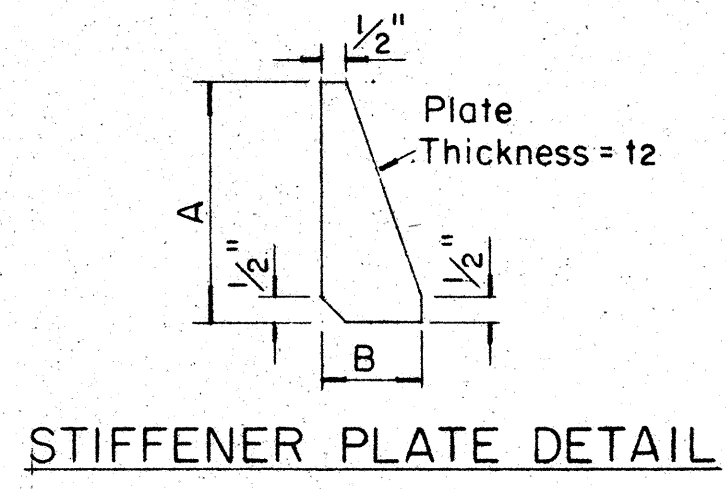
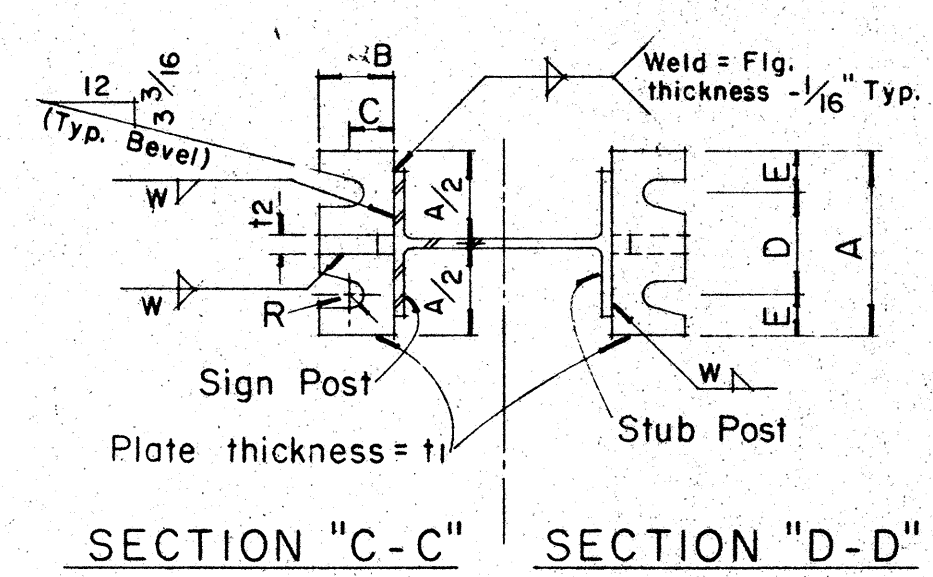
SURVEY PLOTTED BY: _____ DATE: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-1(11)	1969	112	258

Post Size	Bolt Size & Torque	BASE CONNECTION DATA TABLE										FUSE PLATE DATA TABLE										FOUNDATION DATA											
		A	B	C	D	E	t ₁	t ₂	W	R	F	G	H	J	K	L	N	d ₁	t ₃	Bolt Dia.	Wt. of each Fuse lb	Stub Length	Stub Projection	Footing Diameter	Bars V Size								
6 B 8.5																			3 5/8"	2"	1 1/8"	4"	2 1/4"	7/8"	1/2"	9/16"	1/4"	1/2" ϕ	1.09#	2'-0"	3"	2'-0"	#5
6 B 12	5/8" ϕ x 2 3/4" Torque = 450"*	5"	2"	1 1/4"	2 3/4"	1 1/8"	3/4"	1/2"	1/4"	1 1/32"								3 3/4"	2"	1 1/8"	4"	2 1/4"	7/8"	5/8"	1 1/16"	3/8"	5/8" ϕ	1.60#	2'-0"	3"	2'-0"	#5	
6 B 15.5																		4 1/2"	2 1/2"	1 1/4"	6"	3 1/2"	1 1/4"	3/4"	13/16"	1/2"	3/4" ϕ	3.75#	2'-6"	3"	2'-0"	#6	
8 WF 17																		4 1/2"	2 1/2"	1 1/4"	5 1/4"	2 3/4"	1 1/4"	3/4"	13/16"	1/2"	3/4" ϕ	3.27#	2'-6"	3"	2'-0"	#7	
8 WF 20																		4 7/8"	2 1/2"	1 1/2"	5 1/4"	2 3/4"	1 1/4"	7/8"	15/16"	9/16"	7/8" ϕ	3.93#	3'-0"	2 1/2"	2'-0"	#8	
10 WF 21	3/4" ϕ x 3 1/2" Torque = 750"*	6"	2 1/4"	1 3/8"	3 1/2"	1 1/4"	1"	3/4"	5/16"	13/32"								5 3/8"	3"	1 1/2"	5 3/4"	2 3/4"	1 1/2"	7/8"	15/16"	9/16"	7/8" ϕ	4.75#	3'-0"	2 1/2"	2'-0"	#9	
10 WF 25																		5 3/8"	3"	1 1/2"	5 3/4"	2 3/4"	1 1/2"	7/8"	15/16"	9/16"	7/8" ϕ	4.79#	3'-0"	2 1/2"	2'-0"	#10	
12 WF 27																		5 3/8"	3"	1 1/2"	6 1/2"	3 1/2"	1 1/2"	7/8"	15/16"	9/16"	7/8" ϕ	5.42#	3'-0"	2 1/2"	2'-0"	#11	
3 I 5.7	1/2" ϕ x 2 1/2" Torque = 200"*	SEE DETAIL "A"										3 1/8"	1 1/2"	1 1/8"	2 5/8"	1 1/2"	9/16"	1/2"	9/16"	1/4"	1/2" ϕ	0.64#	1'-6"	3 1/2"	1'-6"	#5							
4 I 7.7		SEE DETAIL "A"										3 1/8"	1 1/2"	1 1/8"	2 5/8"	1 1/2"	9/16"	1/2"	9/16"	1/4"	1/2" ϕ	0.64#	1'-6"	3 1/2"	1'-6"	#5							



NOTE: Sections shown are for installations on right shoulder and in gore. Reverse plate slot bevels for installations on left shoulder.



GENERAL NOTES

- Design conforms with AASHTO Specifications for the design and Construction of Structural Supports for Highway Signs.
- Materials and Fabrication shall conform to the requirements of the Standard Specifications and Special Provisions.
- All holes shall be drilled. All plate cuts shall preferably be saw cuts, however; flame cutting will be permitted provided all edges are ground. Metal projecting beyond the plane of the plate face will not be tolerated.
- Tighten the high strength bolts in the base connection only to the torque shown, do not overtighten. All bolts other than high strength bolts shall conform to ASTM A 307, Class A.
- All structural steel, bolts, nuts and washers shall be galvanized as per the Standard Specifications and Special Provisions. Structural steel to be galvanized after fabrication except as noted.
- Structural steel shall conform with with the requirements of ASTM A 441
- Galvanizing of all posts shall be projection above concrete plus 6" minimum.
- All friction fuse bolts shall be tightened in the shop following a method approved by the Engineer. Tightening shall be to such a degree as to obtain the following minimum residual tension in each bolt:

Bolt Size	Min. Tension	Bolt Size	Min. Tension
1/2" ϕ	12050 Lbs.	3/4" ϕ	28400 Lbs.
5/8" ϕ	19200 Lbs.	7/8" ϕ	36050 Lbs.

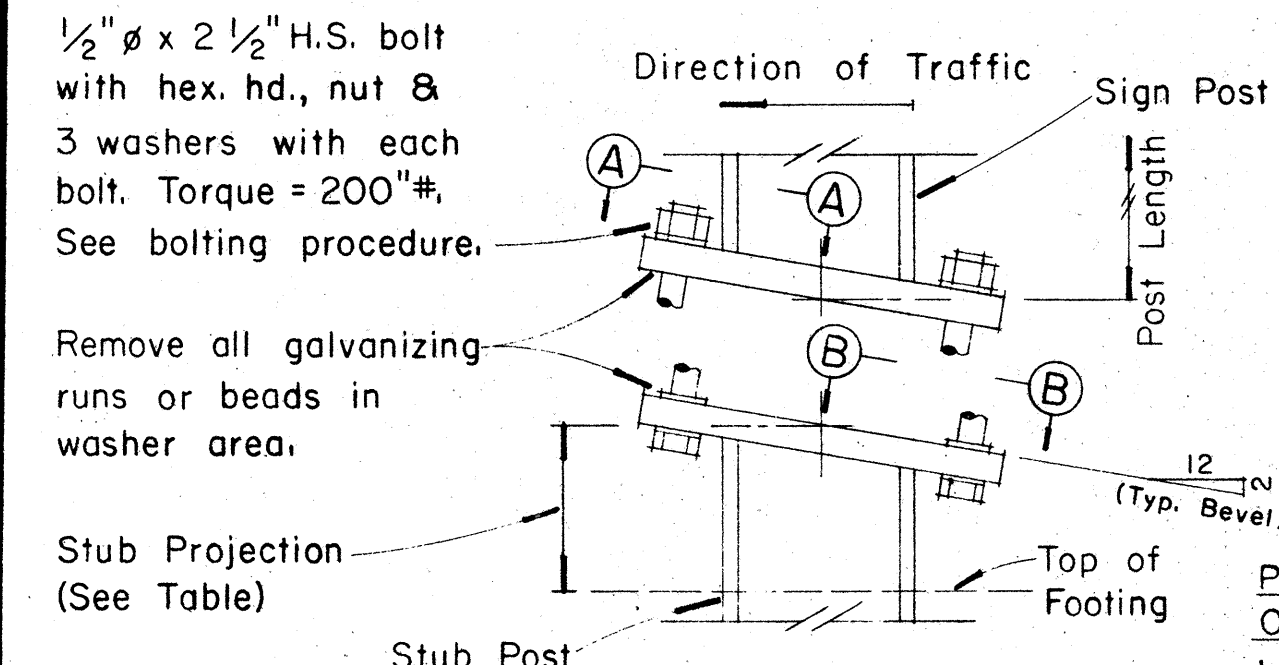
Furnish 2ϕ .012" ± thick and 2ϕ .032" ± thick shims per post. Shims shall be fabricated from brass shim stock or strip conforming to A.S.T.M. - B 36.

APPROVAL RECOMMENDED:
Erich Tanaka 12/23/69
 TRAFFIC ENGINEER DATE
 APPROVED:
John J. [Signature] 12-30-69
 ASSISTANT CHIEF, ENGINEERING DATE

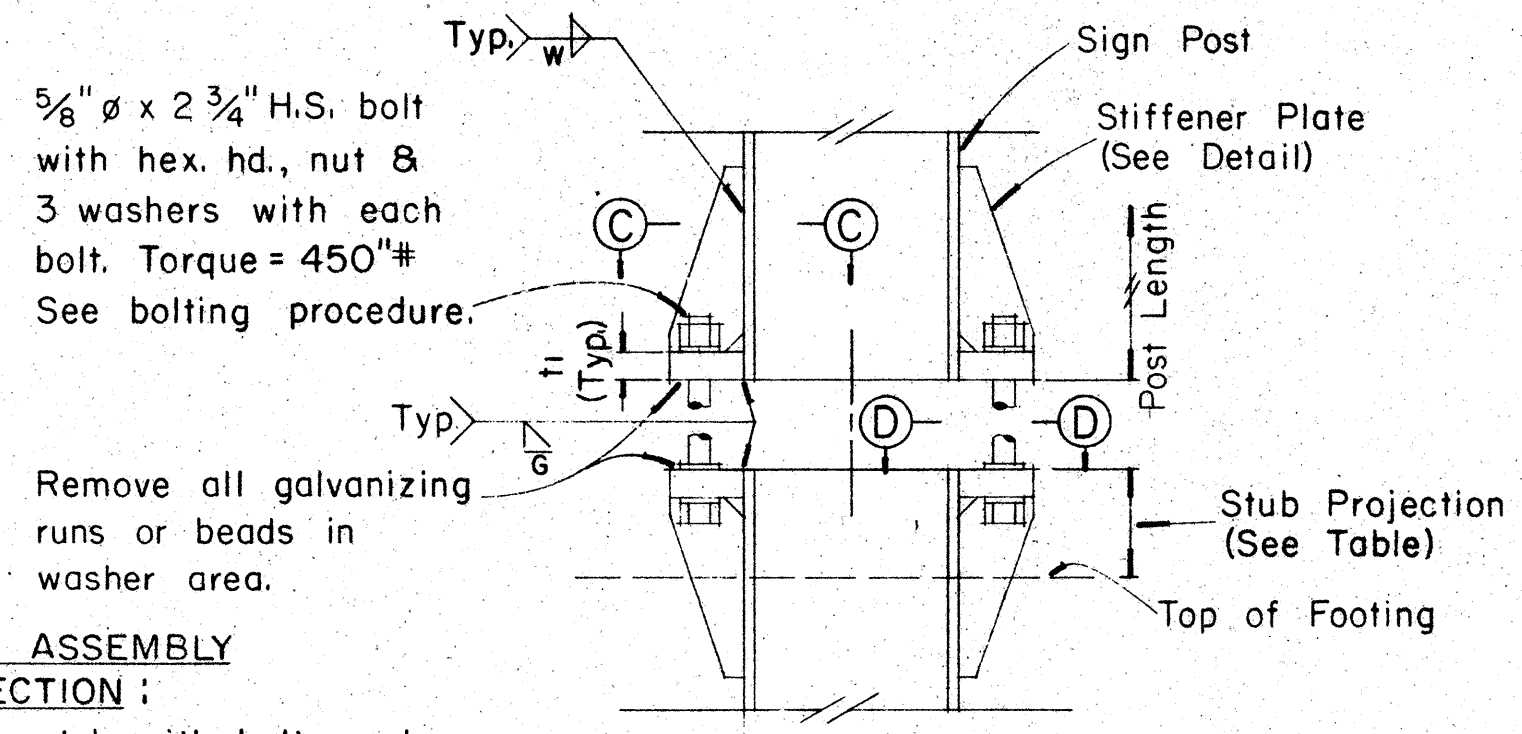
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
STANDARD DETAILS
BREAK-AWAY SIGN SUPPORTS
FOR
GROUND MOUNTED GUIDE SIGNS
 Not to Scale

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



- PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:
- Assemble post to stub with bolts and with one flat washer on each bolt between plates.
 - Shim as required to plumb post.
 - Tighten all bolts the max. possible with 12" to 15" wrench to bed washers & shims and to clean bolt threads then loosen each bolt in turn & retighten bolts in systematic order to prescribed torque. (See Table)
 - Burr threads at junction with nut using a center punch to prevent nut loosening.



DETAIL "B"
 SIGN POST & STUB POST
 (For WF and B Shapes)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-1(1)	1969	113	256

(OVERHEAD SIGNS)
SUPPORT SPACING TABLE

PANEL THICK.	LENGTH OF SIGN A	NO. OF SUPPORTS	OVERHANG B	SUPPORT SPACING C or C ₁
1"	6'-0"	2	12"	48"
1"	6'-6"	2	15"	48"
1"	7'-0"	2	15"	54"
1"	7'-6"	2	18"	54"
1"	8'-0"	2	18"	60"
1"	8'-6"	2	20"	62"
1"	9'-0"	2	22"	64"
1"	9'-6"	2	23"	68"
1"	10'-0"	2	24"	72"
1"	10'-6"	2	24"	78"
1"	11'-0"	2	24"	84"
1"	11'-6"	2	27"	84"
1"	12'-0"	2	30"	84"
1"	12'-6"	2	30"	90"
1"	13'-0"	2	30"	96"
1"	13'-6"	2	30"	102"
1"	14'-0"	2	30"	108"
1"	14'-6"	2	36"	102"
1"	15'-0"	2	36"	108"
1"	15'-6"	3	24"	69"
1"	16'-0"	3	24"	72"
1"	16'-6"	3	24"	75"
1"	17'-0"	3	24"	78"
1"	17'-6"	3	24"	81"
1"	18'-0"	3	24"	84"
1"	18'-6"	3	27"	84"
1"	19'-0"	3	27"	87"
1"	19'-6"	3	27"	90"
1"	20'-0"	3	30"	90"
1"	20'-6"	3	30"	93"
1"	21'-0"	3	30"	96"
1"	21'-6"	3	33"	96"
1"	22'-0"	3	36"	96"
1"	22'-6"	3	36"	99"
1"	23'-0"	3	36"	102"
1"	23'-6"	3	36"	105"
1"	24'-0"	3	36"	108"

APPROVAL RECOMMENDED:
Eishi Tanaka 12/23/69
TRAFFIC ENGINEER DATE

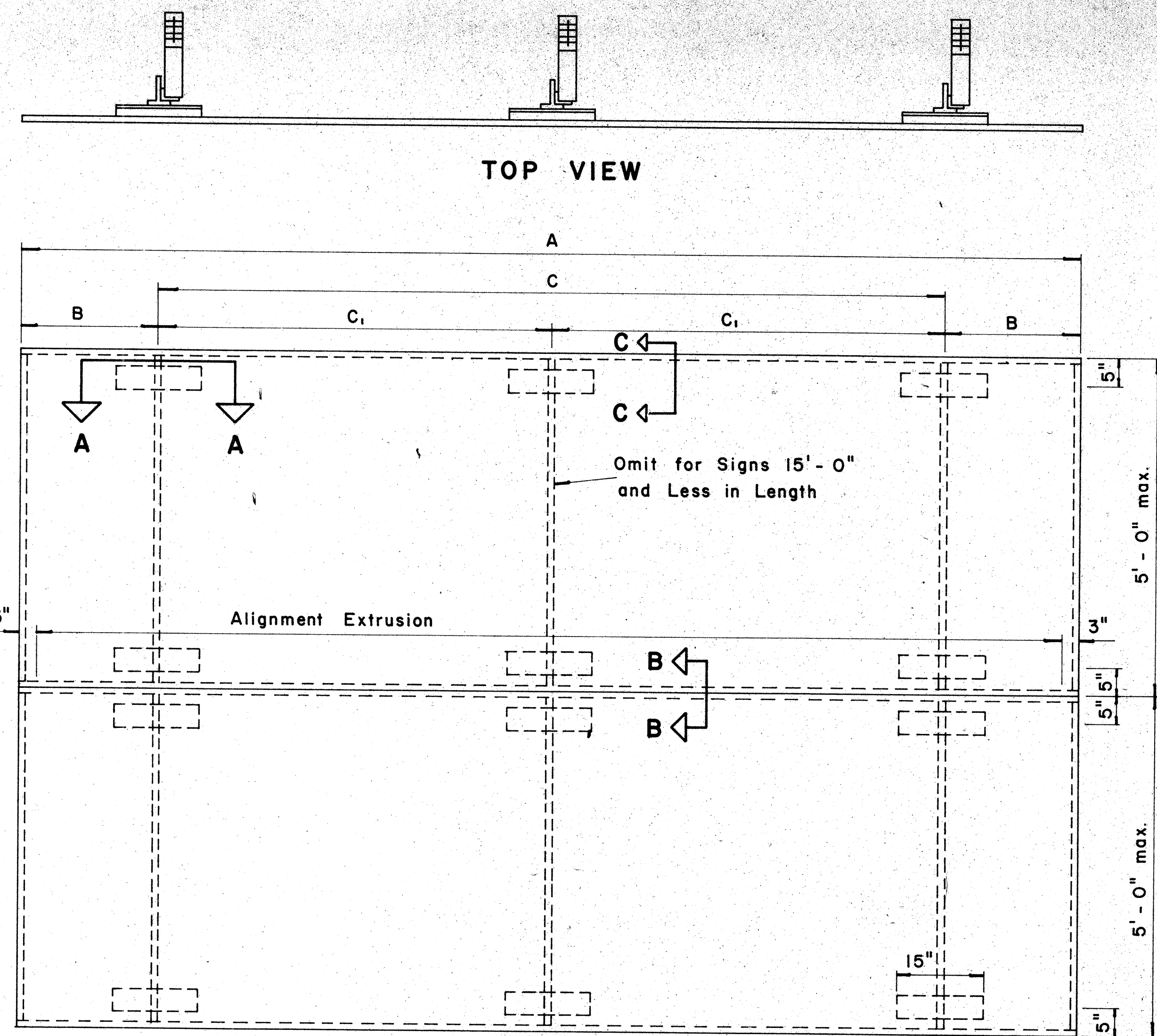
APPROVED:
John S. ... 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

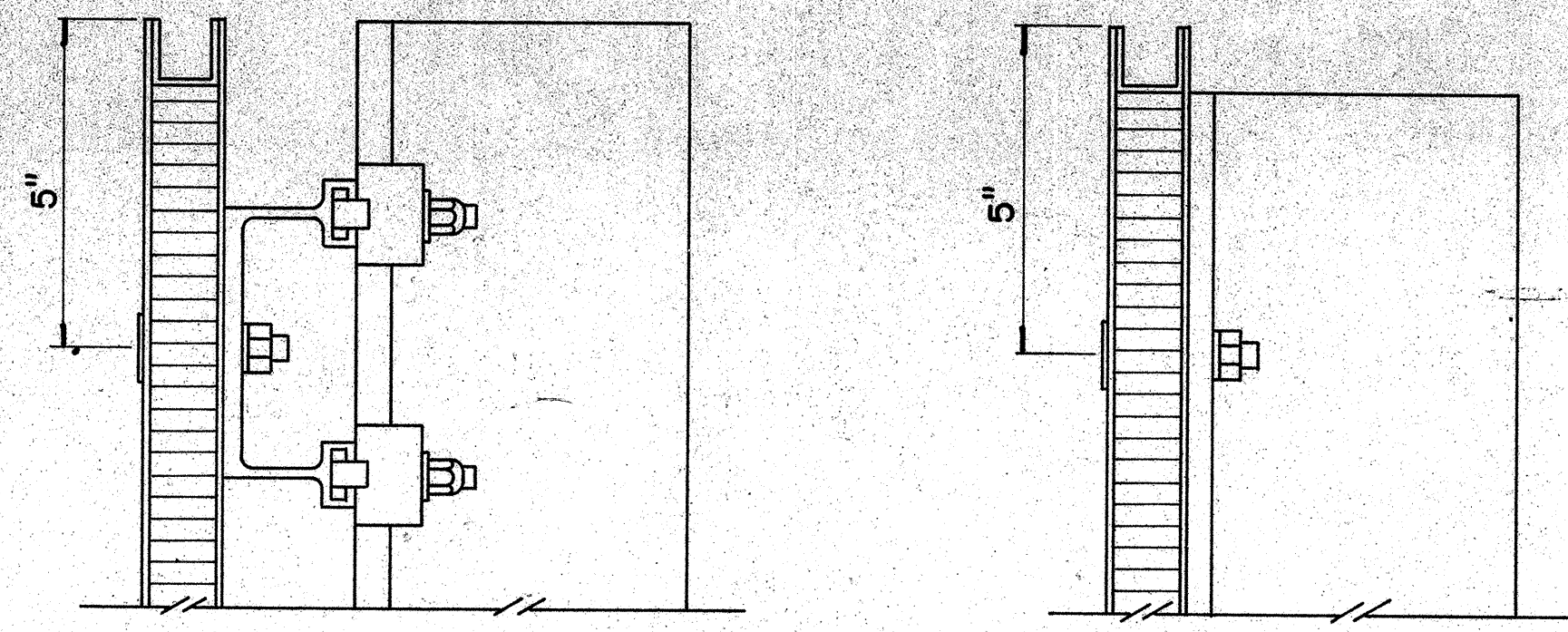
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
LAMINATED ALUMINUM
SIGN PANELS
(OVERHEAD)

Scale: As Shown

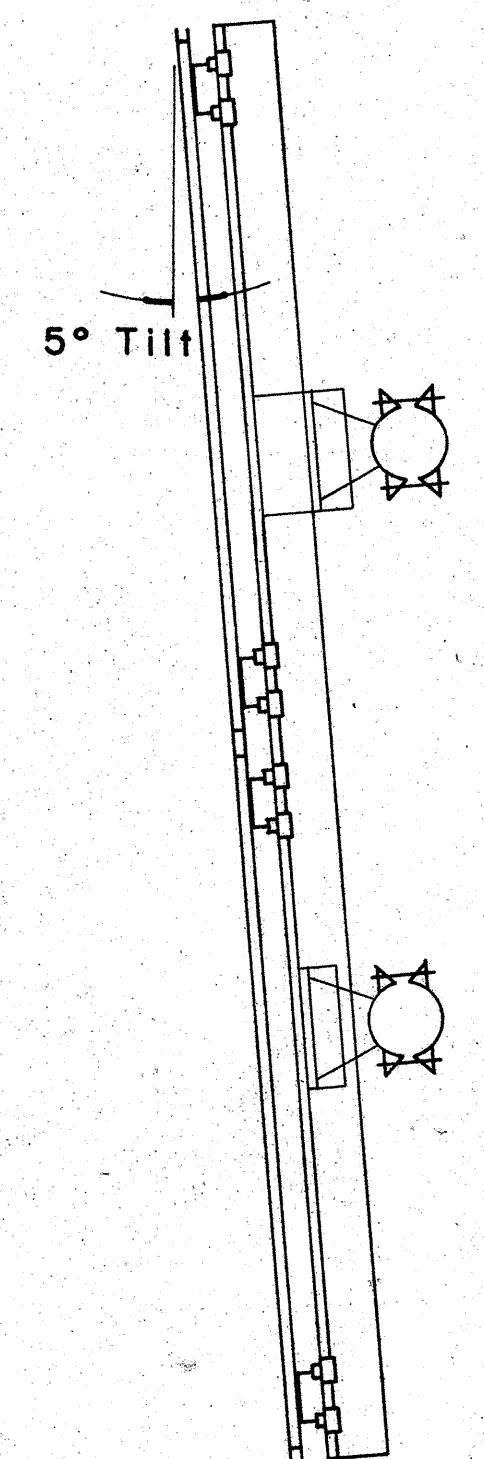


TYPICAL SIGN ASSEMBLY
Scale: $\frac{3}{4}$ " = 1'-0"

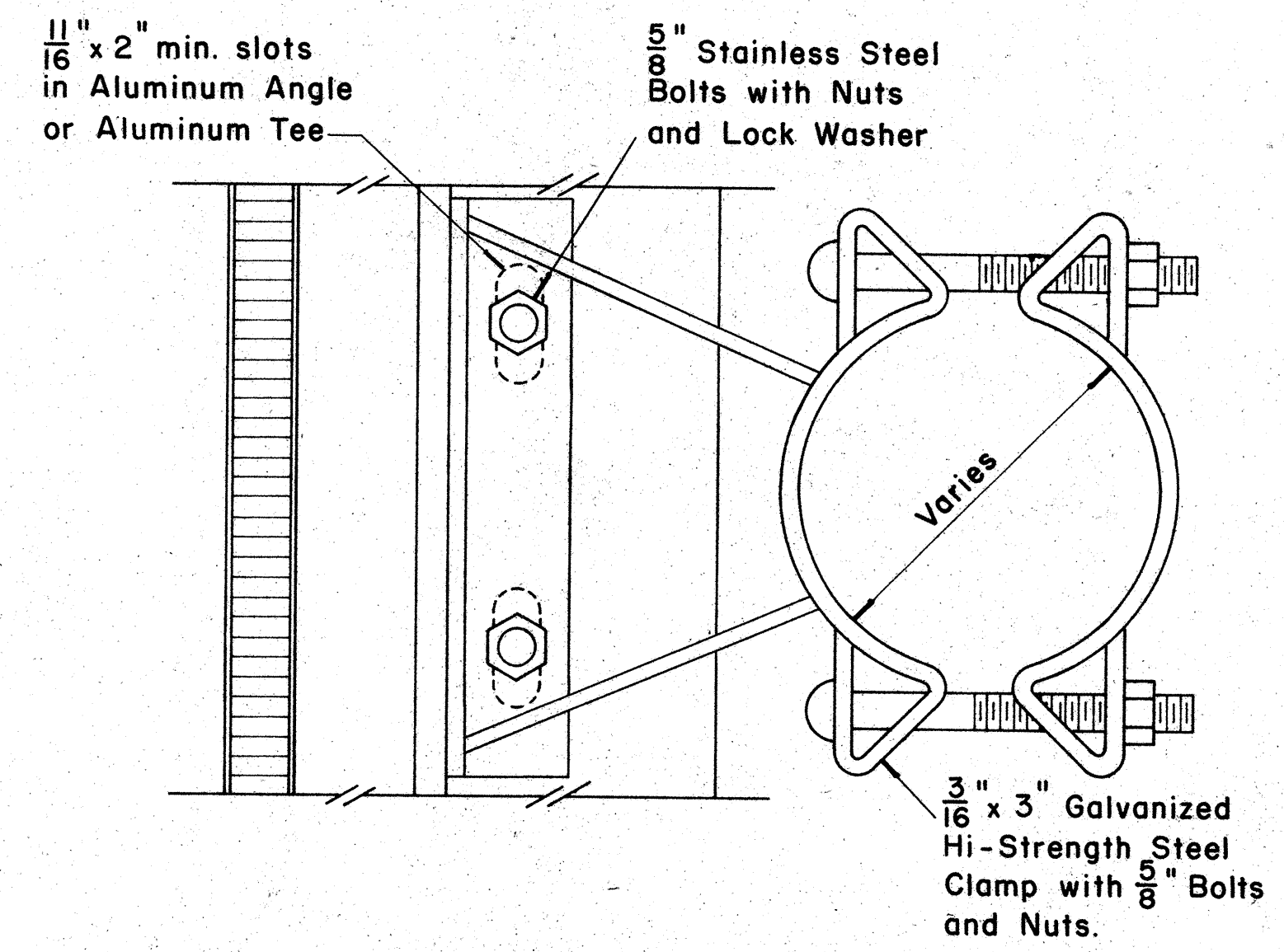


SECTION "C-C"
Scale: $\frac{3}{8}$ " = 1"

SECTION "C-C" (Alternate)
Scale: $\frac{3}{8}$ " = 1"

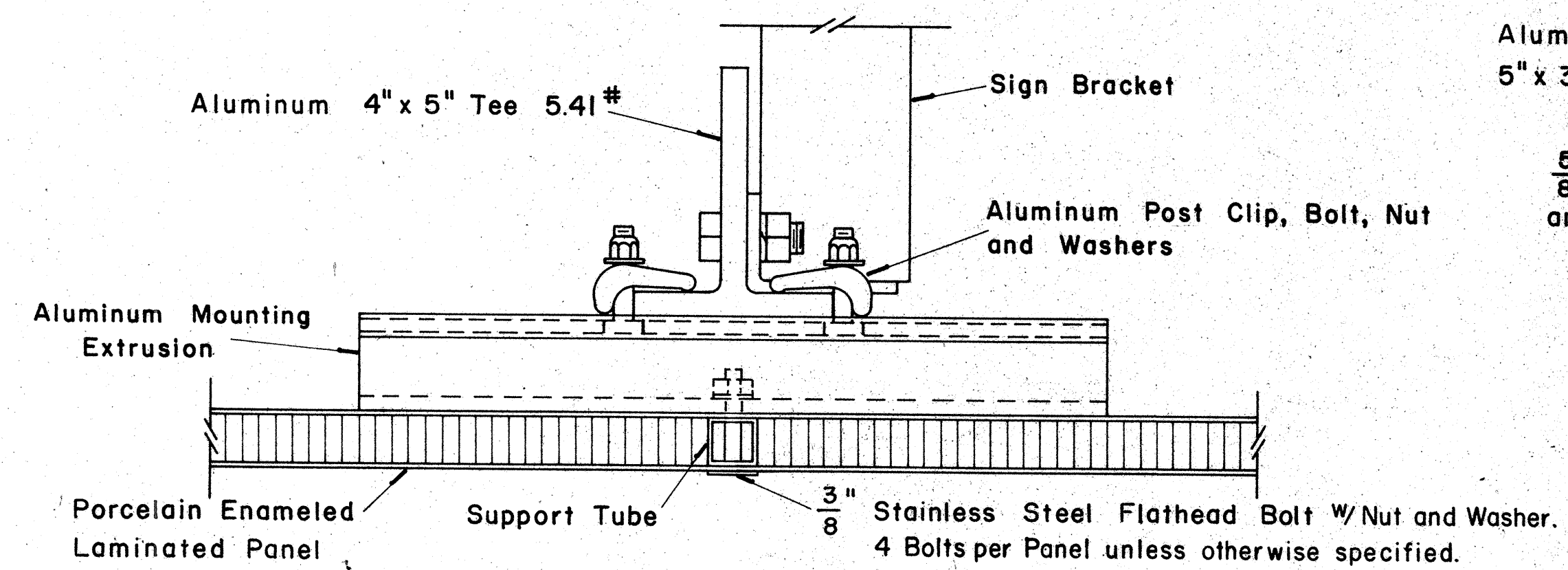


SIDE VIEW

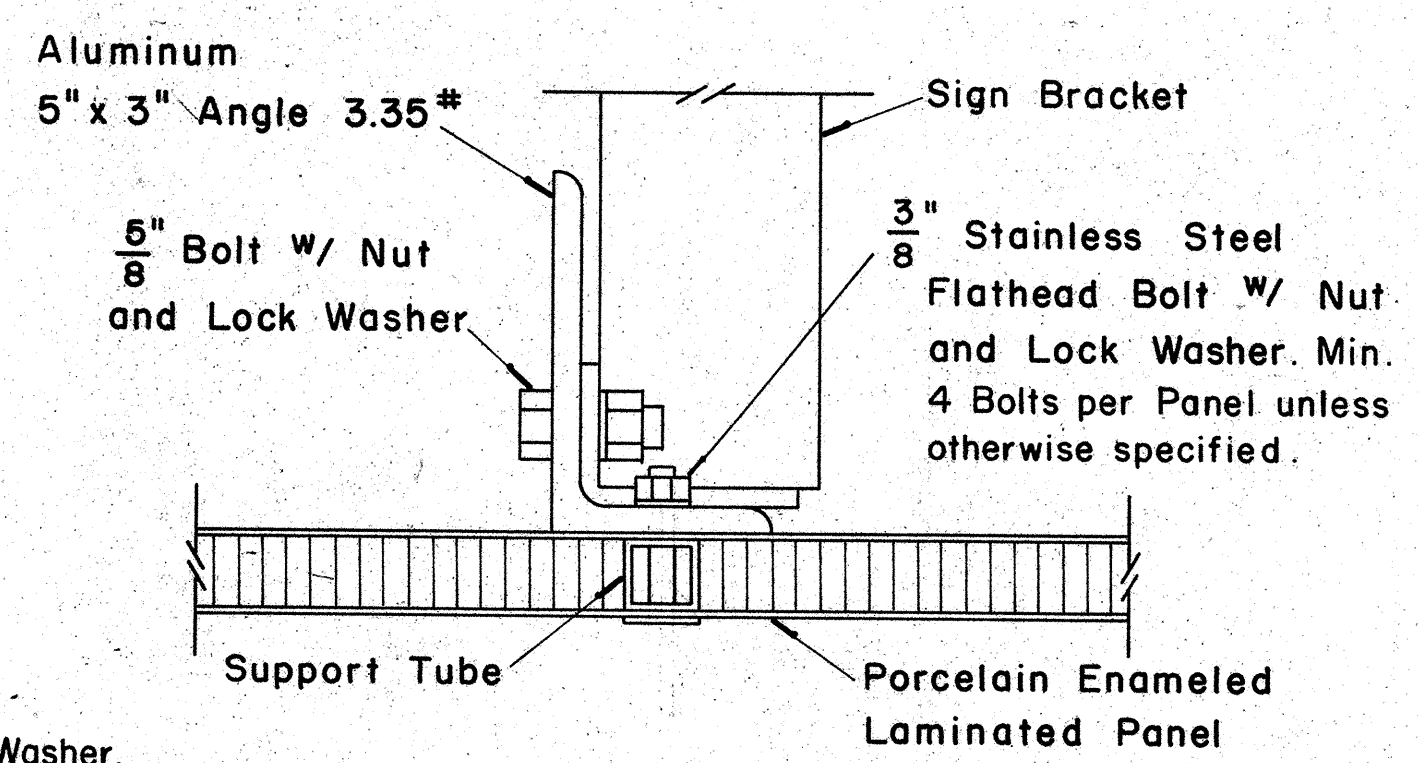


SIGN BRACKET ASSEMBLY
Scale: $\frac{3}{8}$ " = 1"

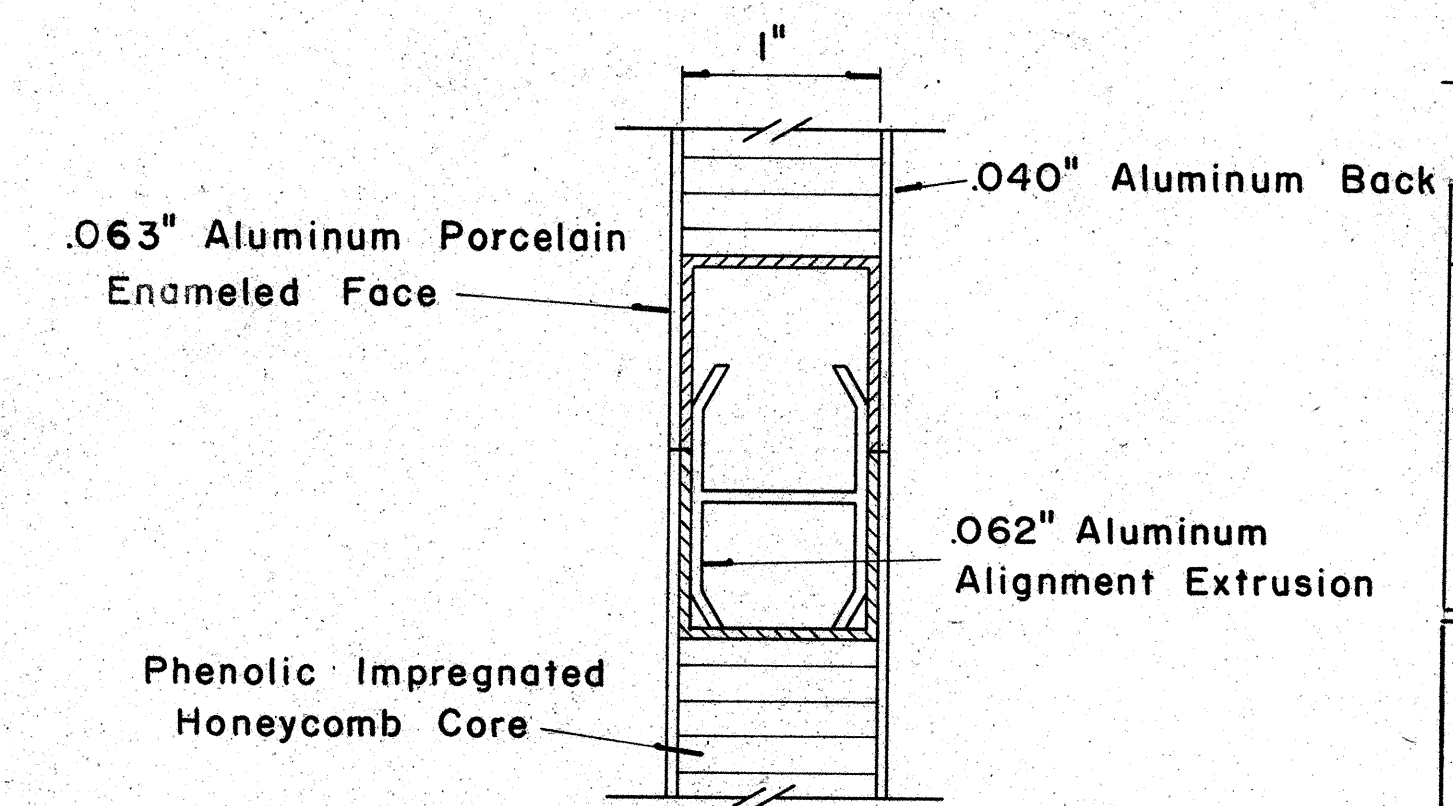
NOTE: For additional details of Sign Bracket Assembly, see Standard Detail Sheet "Overhead Sign Supports."



SECTION "A-A"
Scale: $\frac{3}{8}$ " = 1"



SECTION "A-A" (Alternate)
Scale: $\frac{3}{8}$ " = 1"



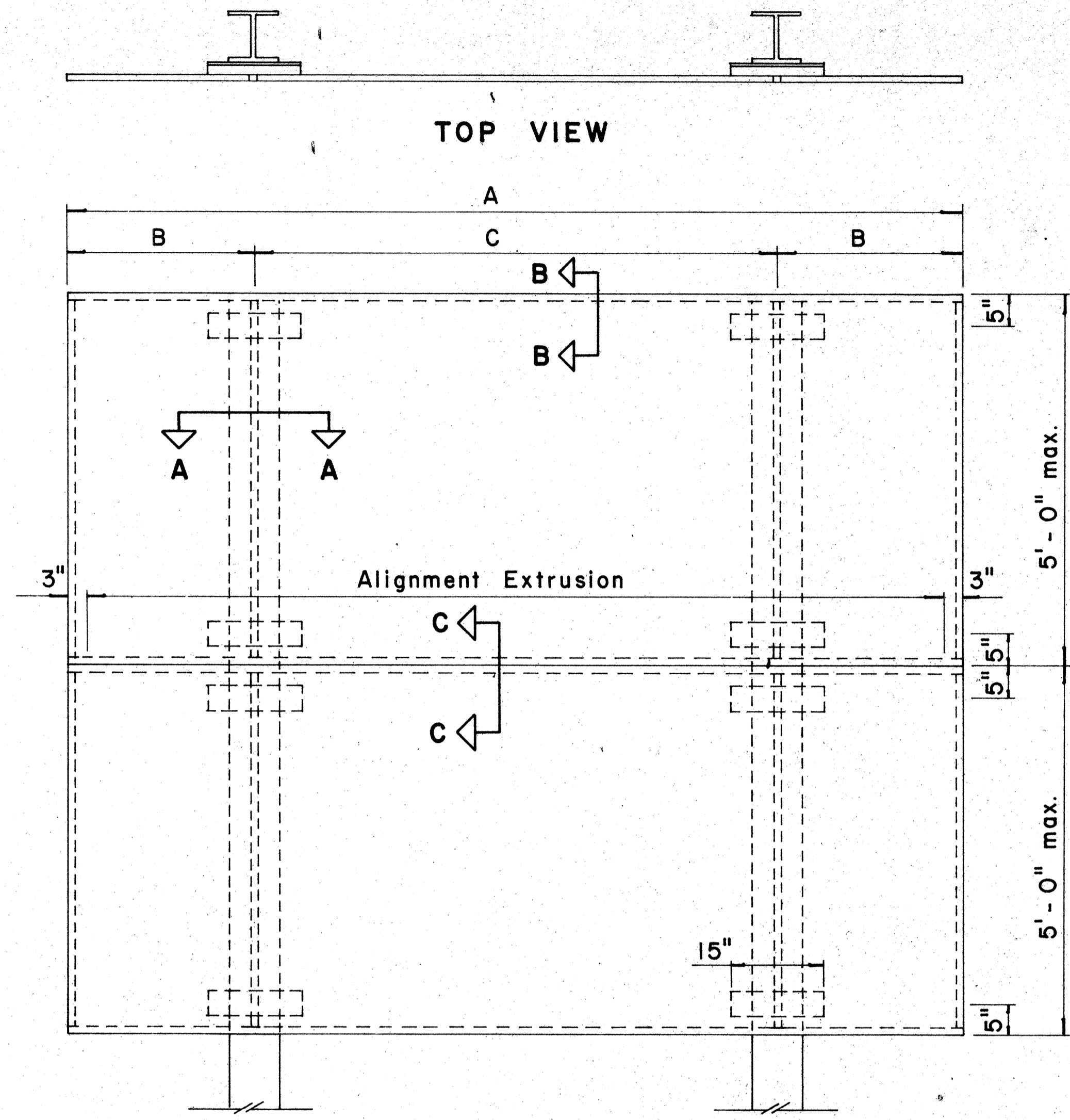
CLOSURE DETAIL SECTION "B-B"
FULL SCALE

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-1(11)	1969	114	258

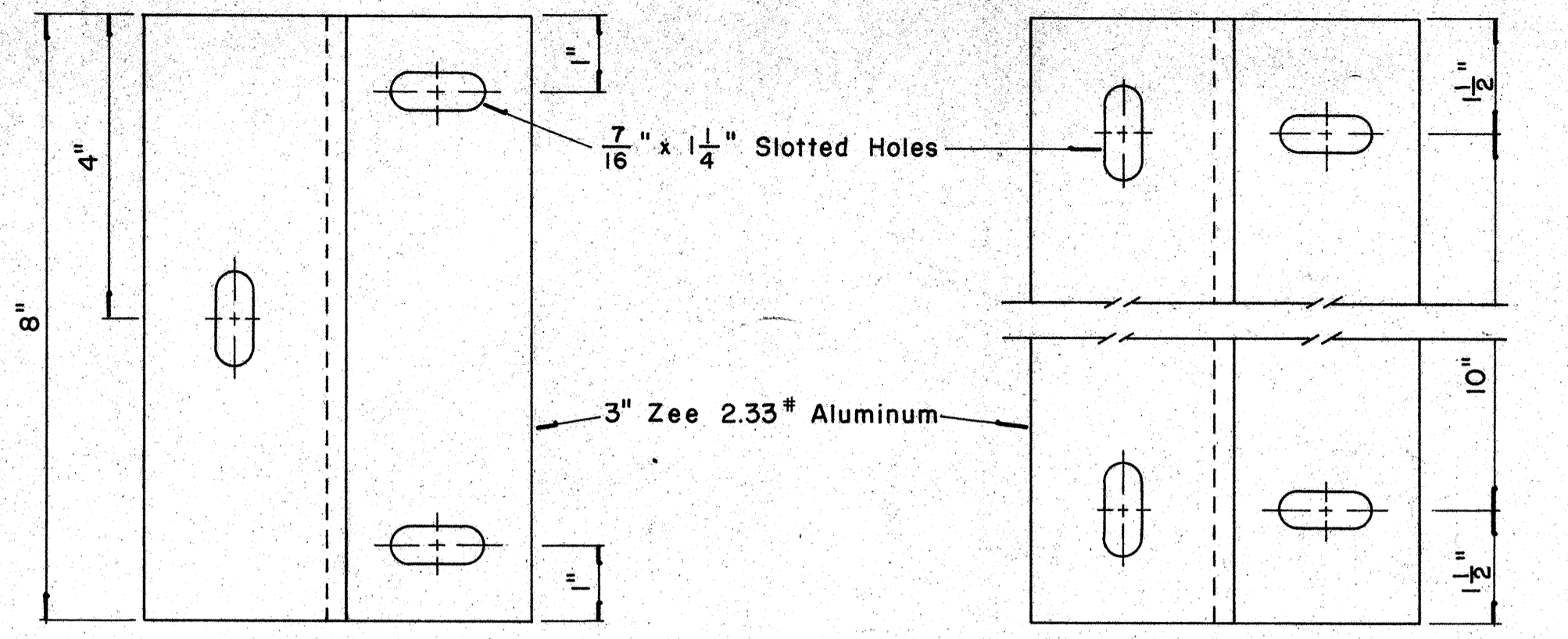
(GROUND MOUNTED SIGNS)
SUPPORT SPACING TABLE

PANEL THICK.	LENGTH OF SIGN	NO. OF SUPPORTS	OVERHANG		SUPPORT SPACING
			A	B	
1"	6'-0"	2	12"	48"	
1"	6'-6"	2	15"	48"	
1"	7'-0"	2	15"	54"	
1"	7'-6"	2	18"	54"	
1"	8'-0"	2	18"	60"	
1"	8'-6"	2	20"	62"	
1"	9'-0"	2	22"	64"	
1"	9'-6"	2	23"	68"	
1"	10'-0"	2	24"	72"	
1"	10'-6"	2	24"	78"	
1"	11'-0"	2	24"	84"	
1"	11'-6"	2	27"	84"	
1"	12'-0"	2	30"	84"	
1"	12'-6"	2	30"	90"	
1"	13'-0"	2	30"	96"	
1"	13'-6"	2	30"	102"	
1"	14'-0"	2	30"	108"	
1"	14'-6"	2	36"	102"	
1"	15'-0"	2	36"	108"	
2.5"	15'-6"	2	36"	114"	
2.5"	16'-0"	2	39"	114"	
2.5"	16'-6"	2	39"	120"	
2.5"	17'-0"	2	39"	126"	
2.5"	17'-6"	2	42"	126"	
2.5"	18'-0"	2	42"	132"	
2.5"	18'-6"	2	45"	132"	
2.5"	19'-0"	2	45"	138"	
2.5"	19'-6"	2	45"	144"	
2.5"	20'-0"	2	48"	144"	
2.5"	20'-6"	2	48"	150"	
2.5"	21'-0"	2	51"	150"	
2.5"	21'-6"	2	51"	156"	
2.5"	22'-0"	2	51"	162"	
2.5"	22'-6"	2	54"	162"	
2.5"	23'-0"	2	54"	168"	
2.5"	23'-6"	2	54"	174"	
2.5"	24'-0"	2	57"	174"	



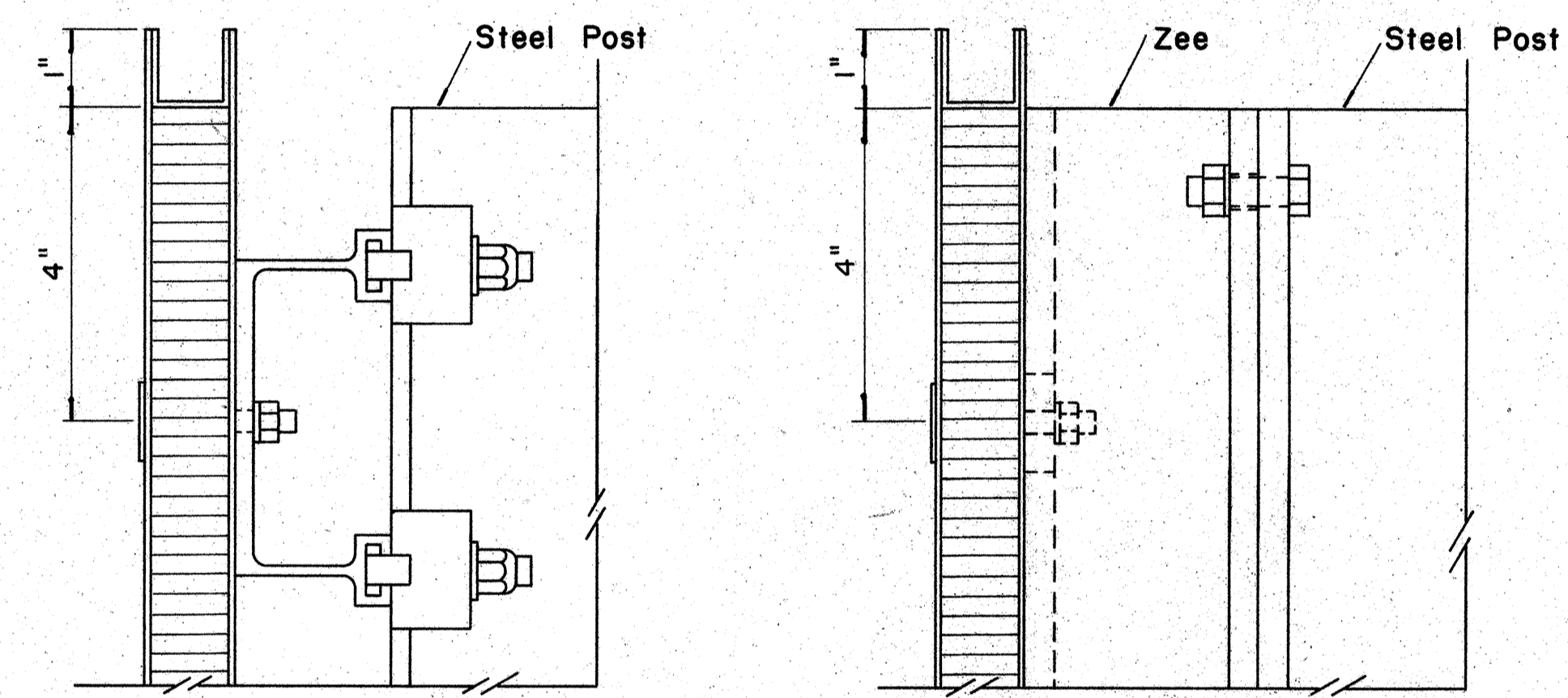
TYPICAL SIGN ASSEMBLY

Scale: $\frac{3}{4}$ " = 1'-0"



ZEE MOUNTING DETAILS

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

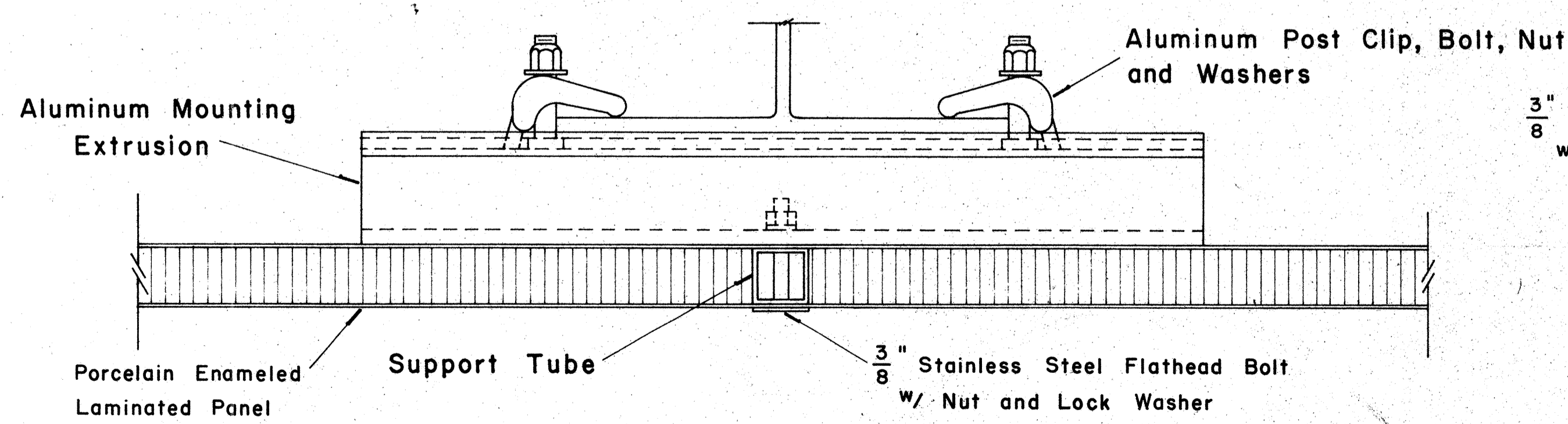


SECTION "B-B"

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

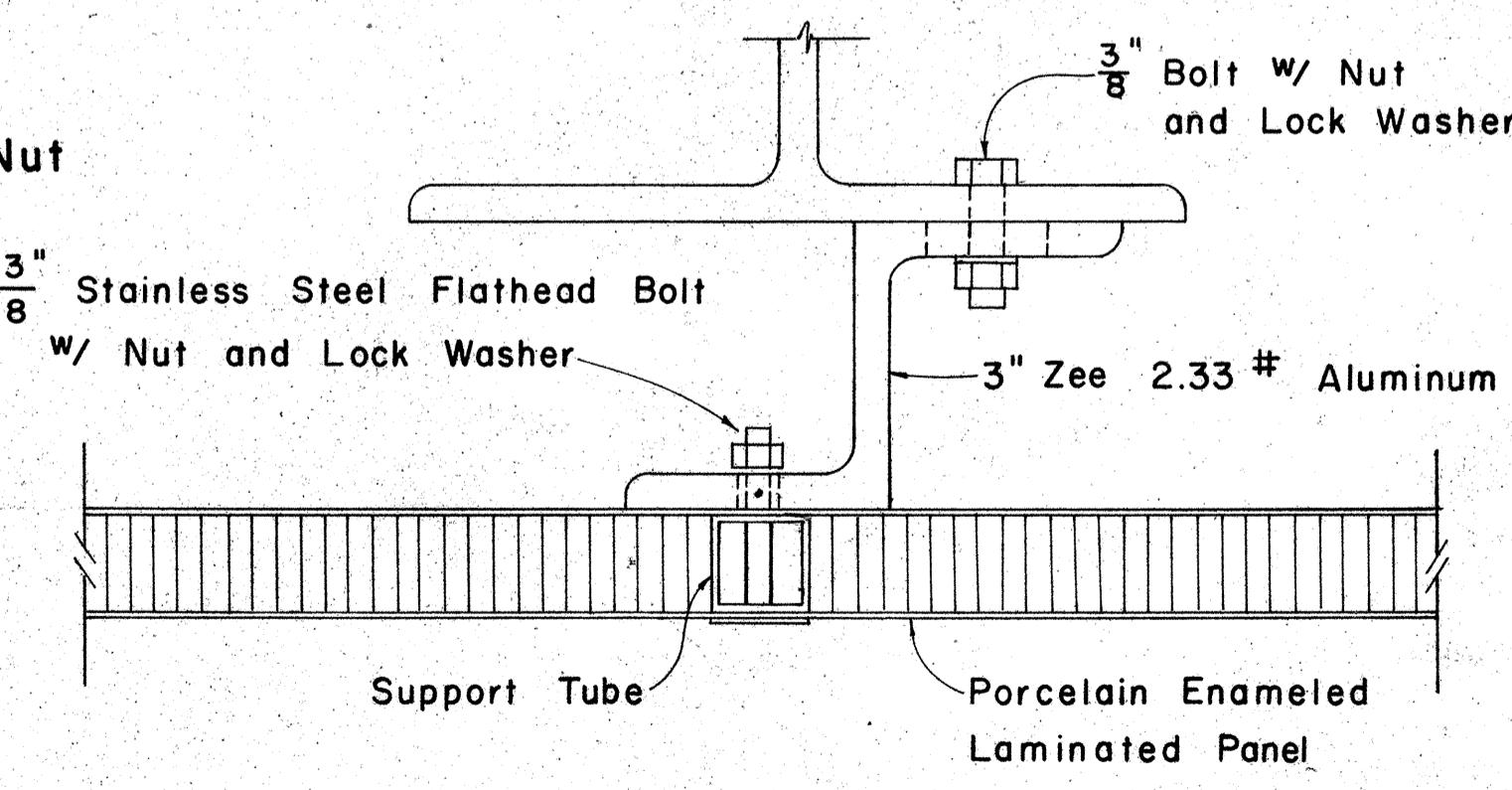
SECTION "B-B" (Alternate)

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



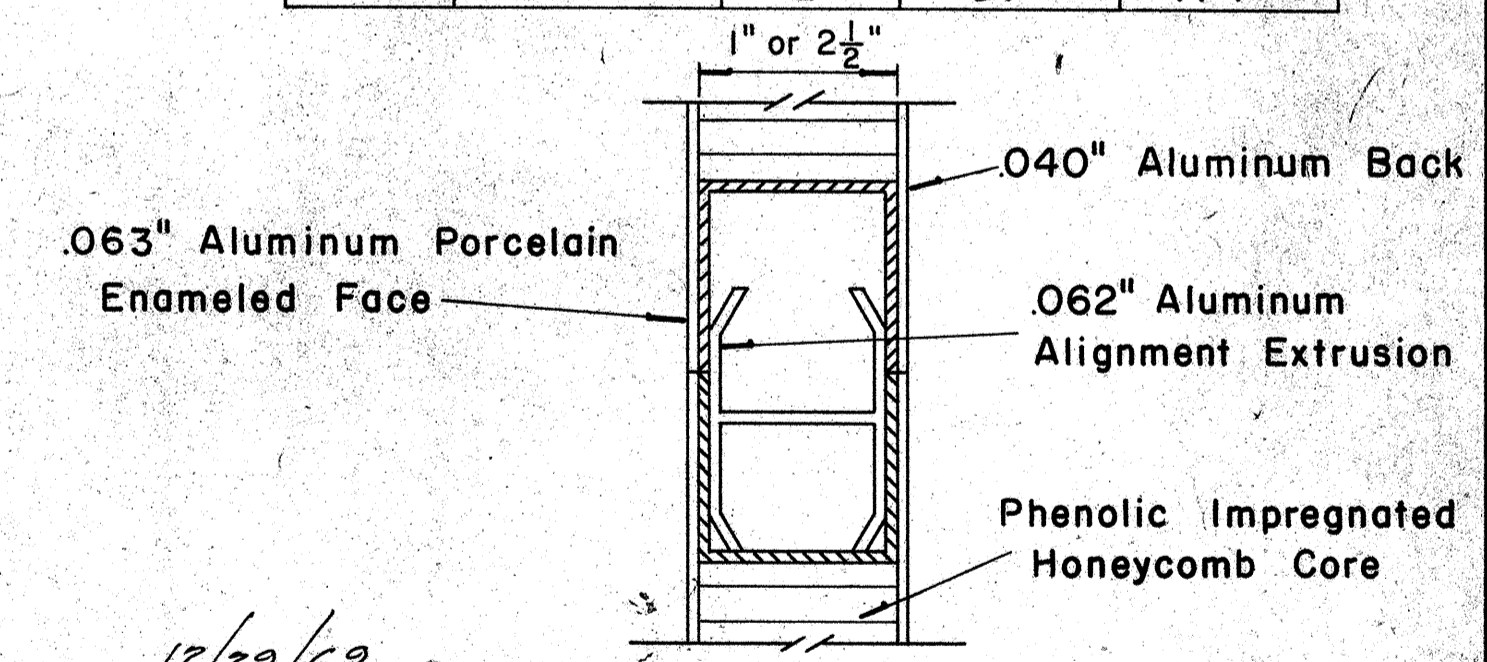
SECTION "A-A"

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



SECTION "A-A" (Alternate)

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



CLOSURE DETAIL SECTION "C-C"

FULL SCALE

APPROVAL RECOMMENDED:
Eischi Tanaka 12/29/69
TRAFFIC ENGINEER DATE

APPROVED:
Andy S. S. S. 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

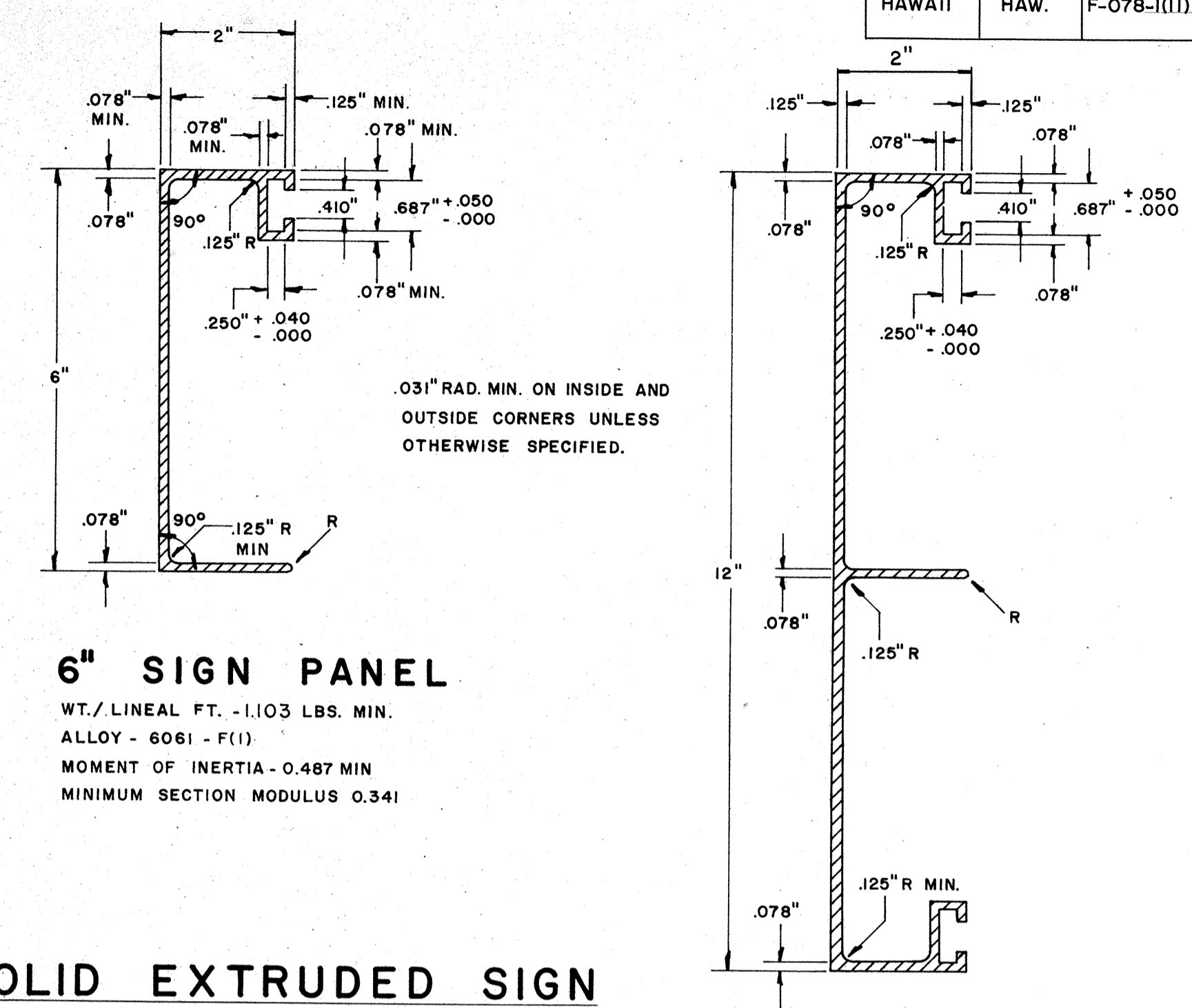
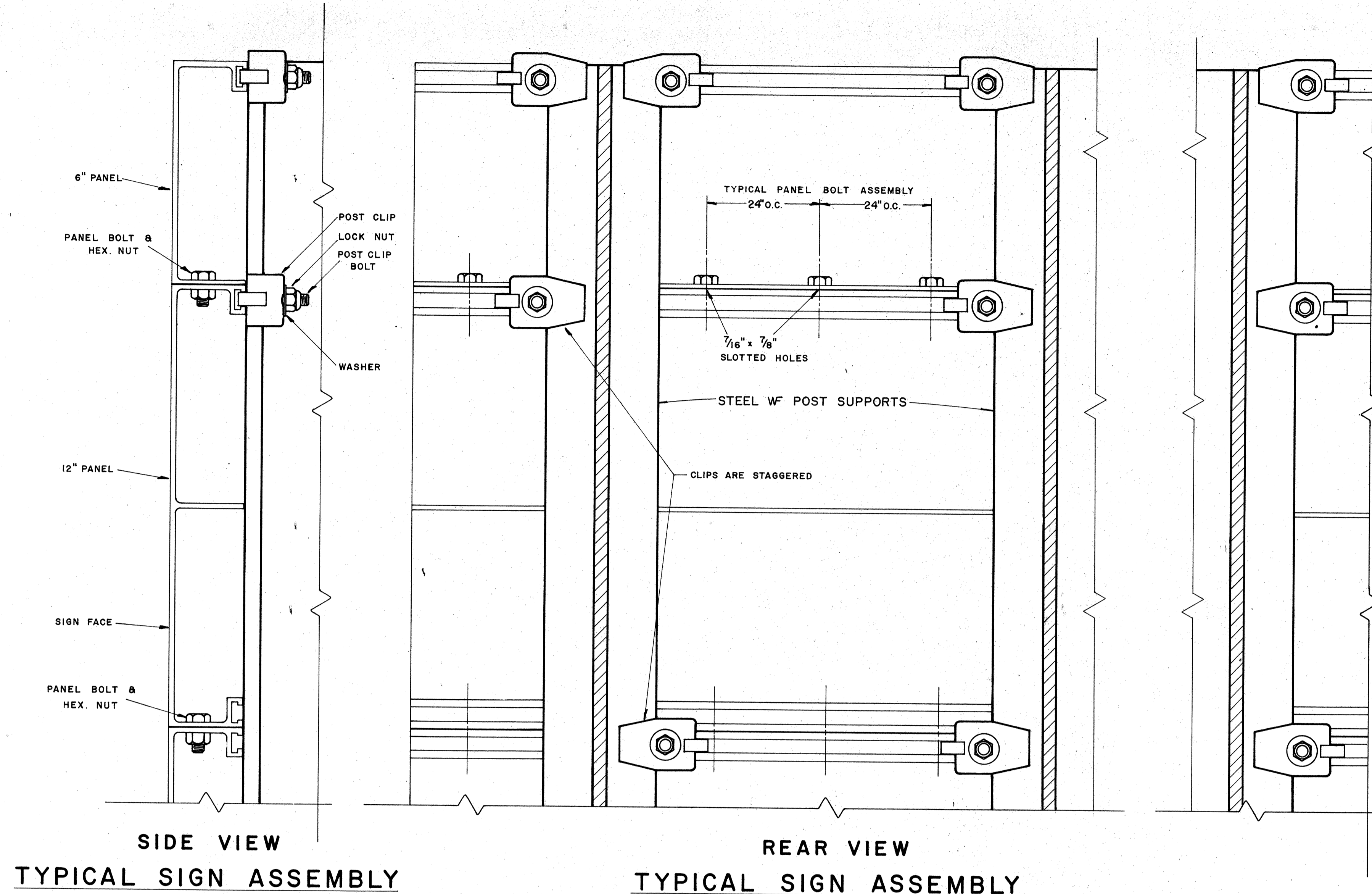
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
LAMINATED ALUMINUM
SIGN PANELS
(GROUND MOUNTED)

Scale: As Shown

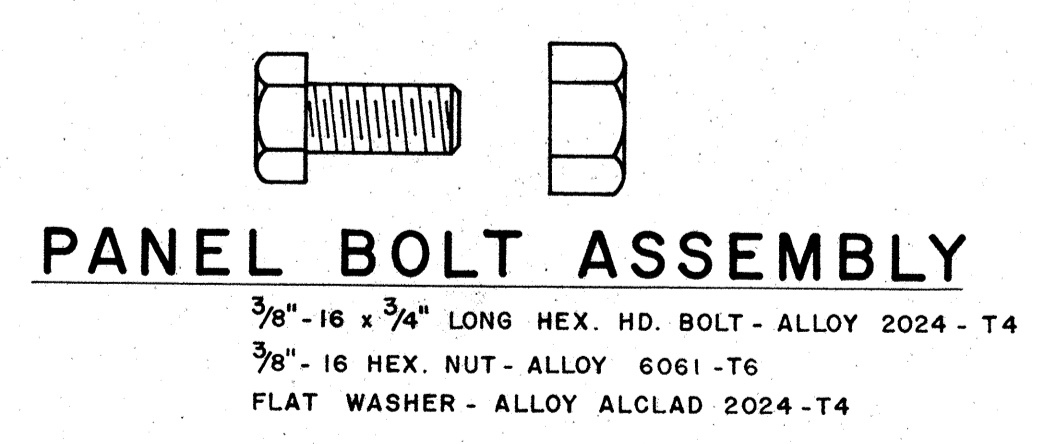
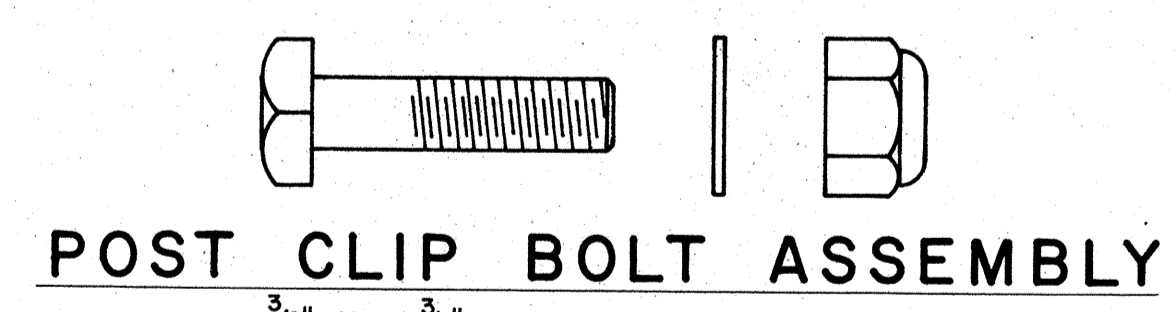
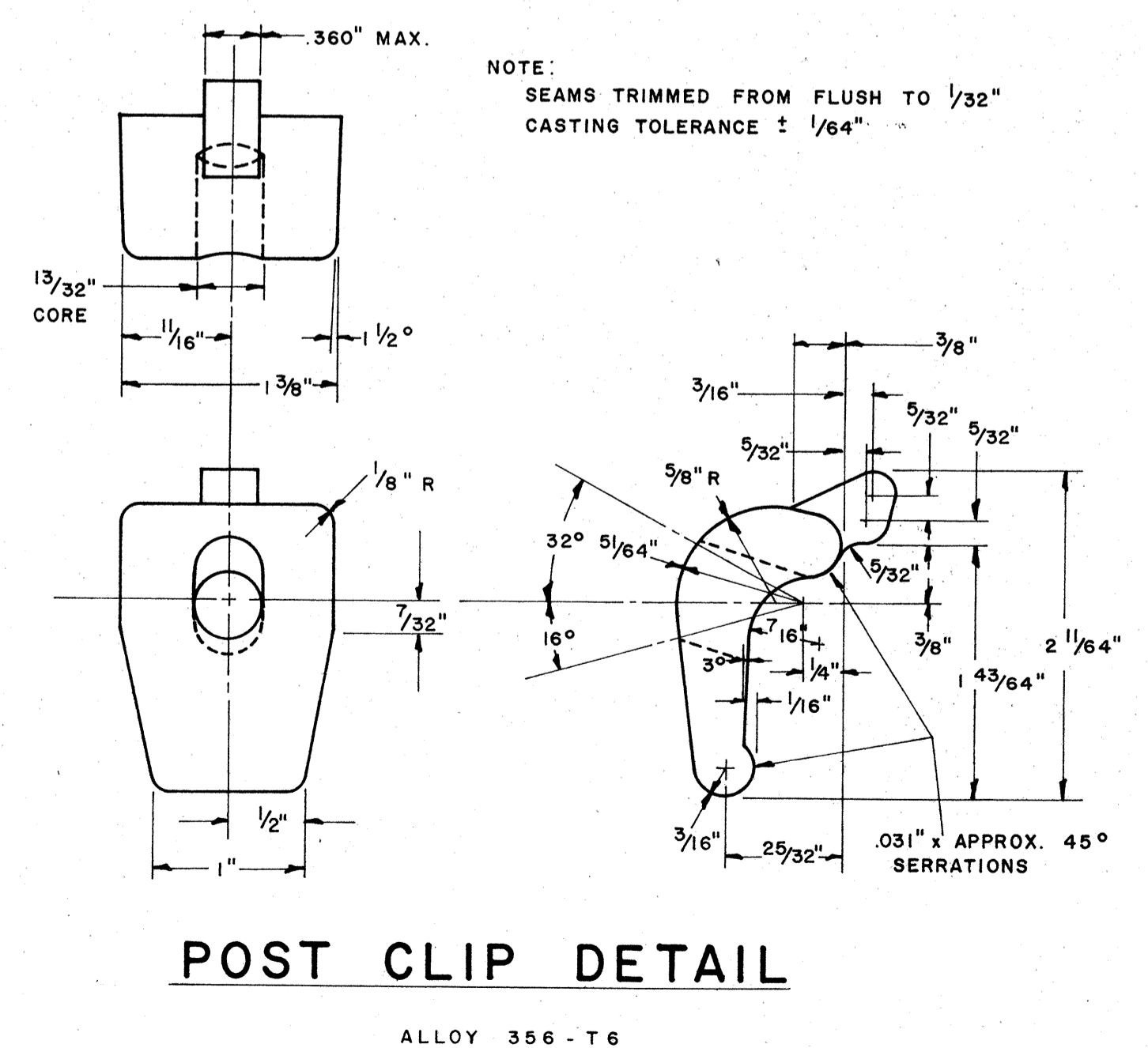
SURVEY PLOTTED BY _____
 DATE _____
 DRAWN BY _____
 DESIGNED BY _____
 QUANTITIES BY _____
 CHECKED BY _____
 ORIGINAL PLAN _____
 NOTE BOOK _____
 No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-1(11)	1969	115	258



SOLID EXTRUDED SIGN PANEL DETAILS

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
QUANTITIES CHECKED BY	
NO.	



NOTE:
Extruded Aluminum Panels to be used for Destination Signs with Reflective Sheeting Background

APPROVAL RECOMMENDED:
Eichi Tanaka 12/29/69
TRAFFIC ENGINEER DATE

APPROVED:
[Signature] 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

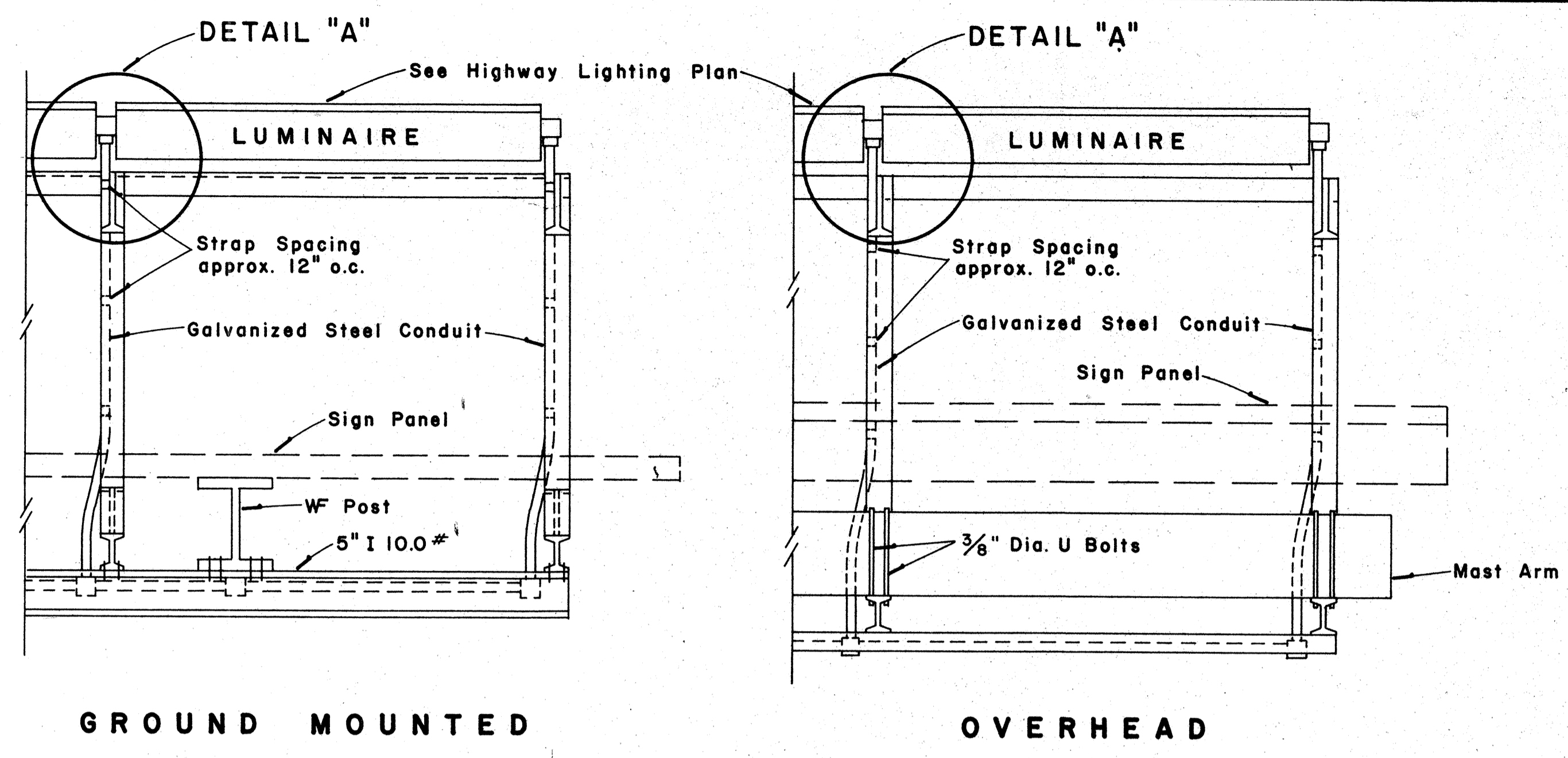
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
SOLID ALUMINUM
EXTRUDED SIGN PANEL
AND
ACCESSORY DETAILS
SCALE:

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-(II)	1969	116	258

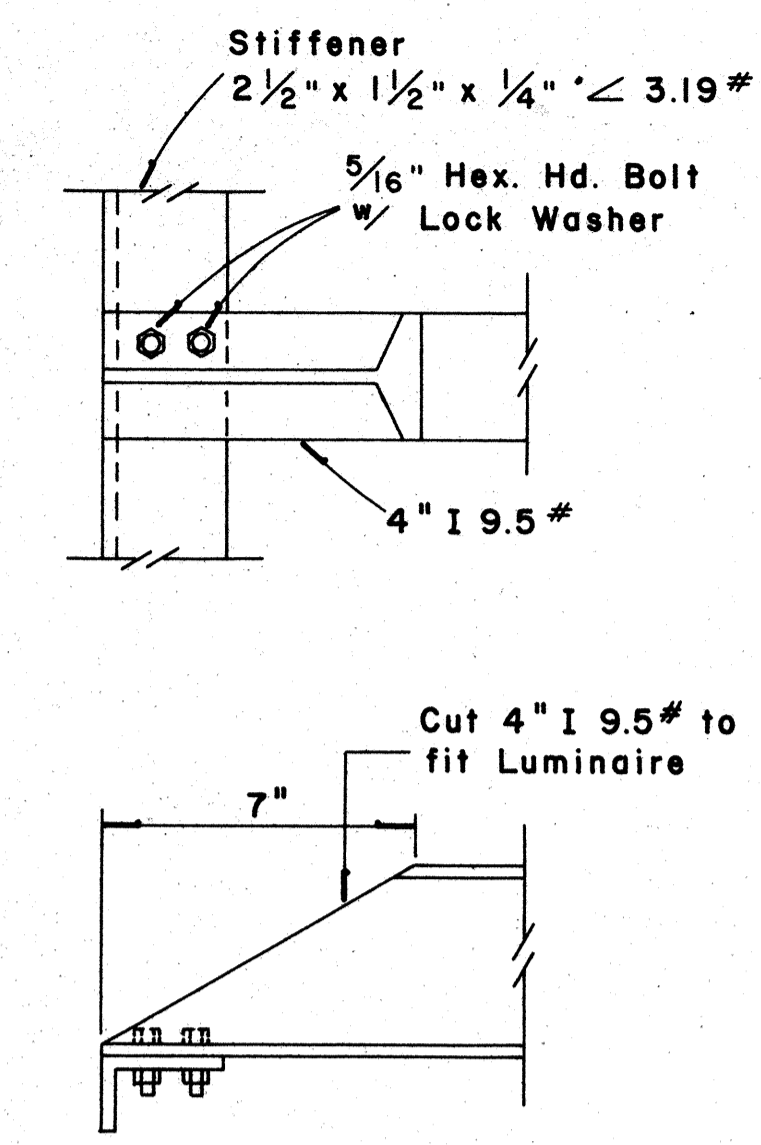
GENERAL NOTES

1. Conduit sizes: $\frac{3}{4}$ " diameter for one or two Luminaire Units, 1" diameter for three or more Luminaire Units.
2. Fluorescent Fixtures shall be installed as recommended by the manufacturer.
3. Luminaire brackets shall be spaced to fit 4'-0" to 6'-0" luminaires with fittings. Eight feet (8'-0") luminaires shall have an additional bracket at midpoint.
4. All parts of the bracket shall be hot-dip galvanized, prime coated with a suitable primer and painted with three coats of dark green enamel.



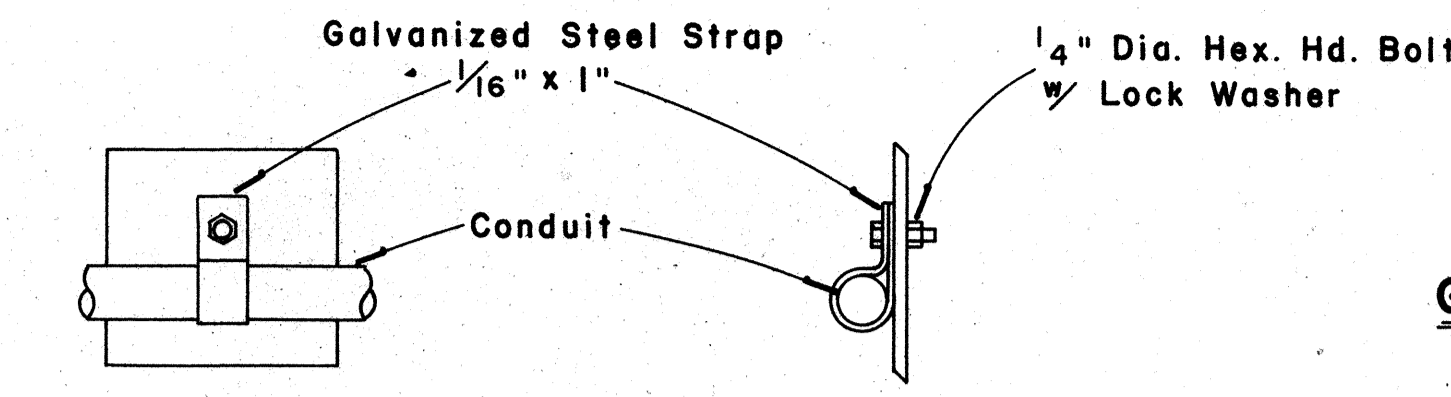
**TOP VIEW
LUMINAIRE MOUNTING**

Scale: 1" = 1'-0"



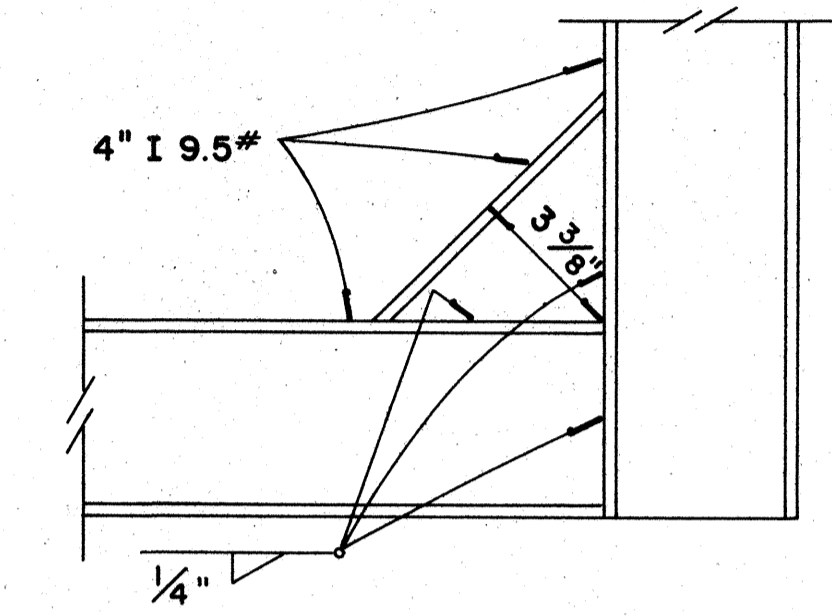
DETAIL "A"

Scale: 3" = 1'-0"



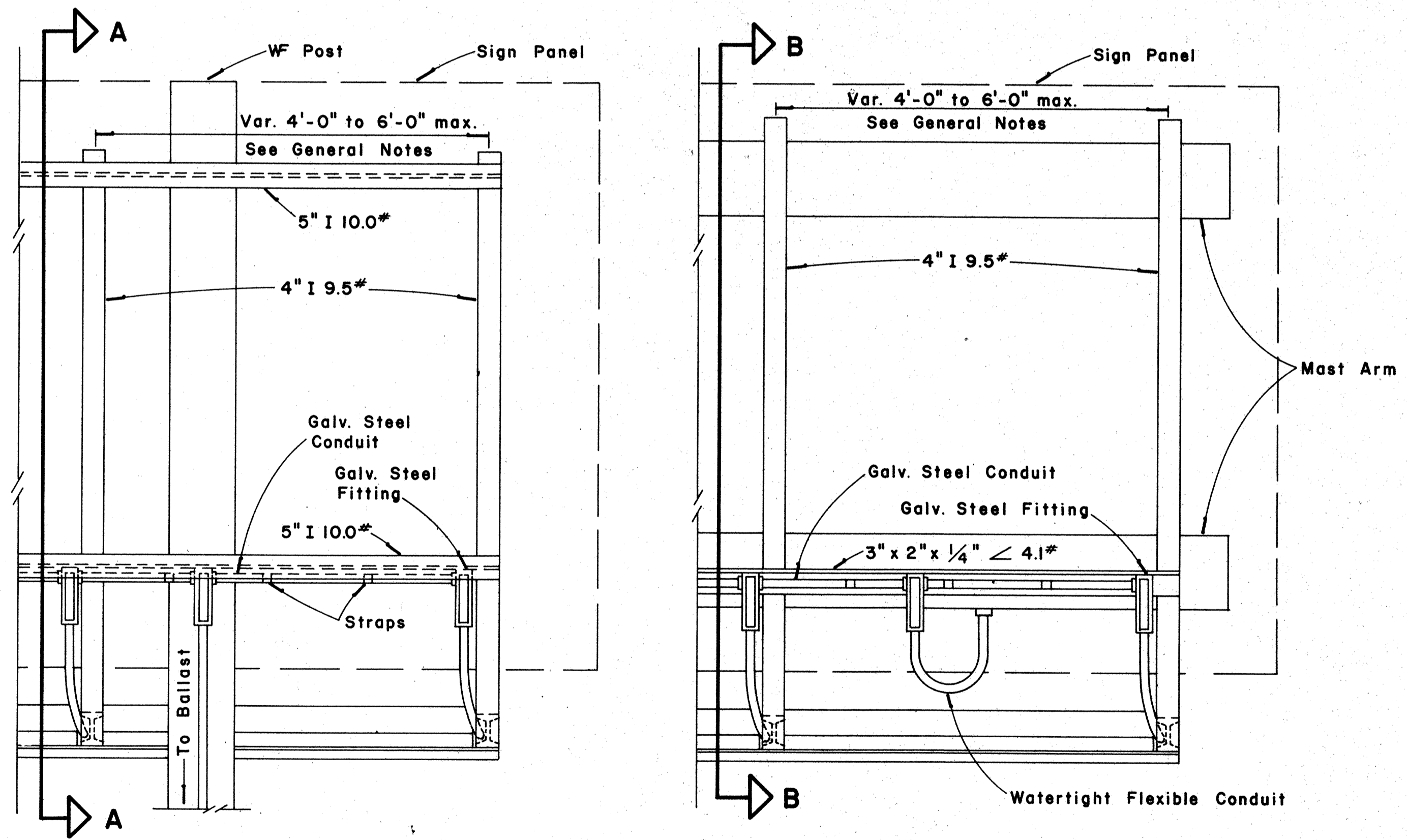
CONDUIT STRAP DETAIL

Scale: 3" = 1'-0"



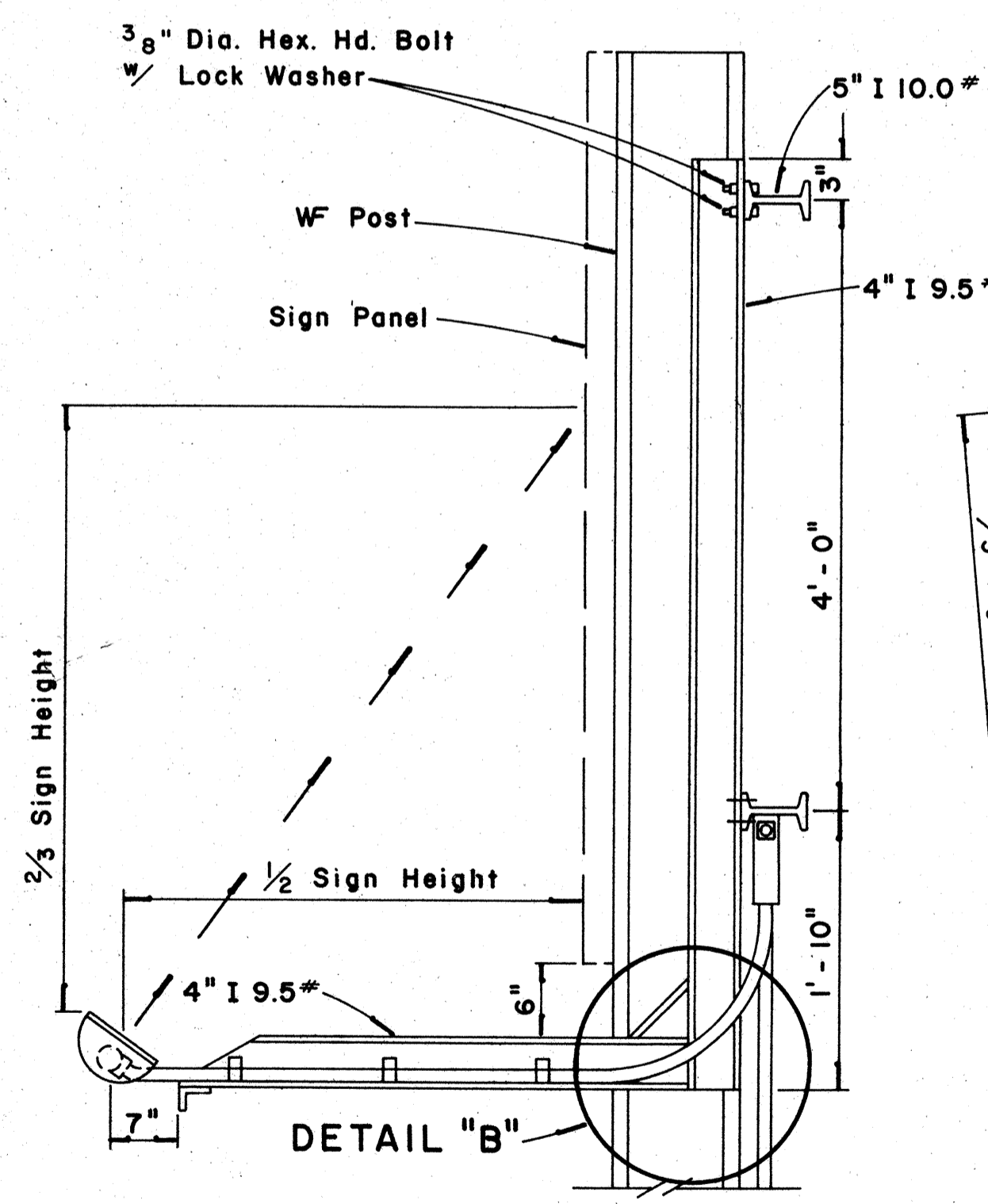
DETAIL "B"

Scale: 3" = 1'-0"



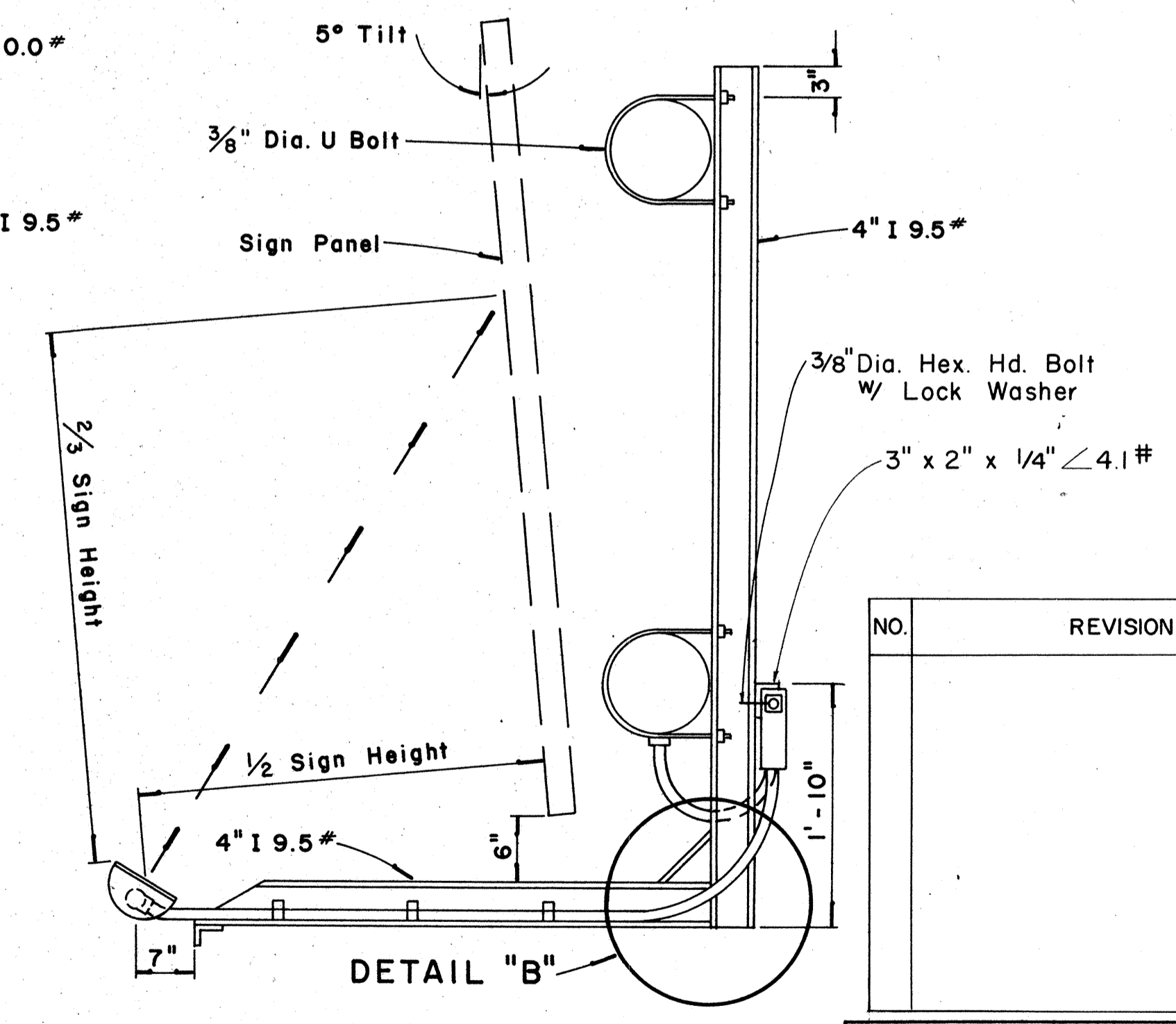
**REAR VIEW
LUMINAIRE MOUNTING**

Scale: 1" = 1'-0"



SECTION "A-A"

Scale: 1" = 1'-0"



SECTION "B-B"

Scale: 1" = 1'-0"

APPROVAL RECOMMENDED:
Eishi Tanaka 12/29/69
TRAFFIC ENGINEER DATE

APPROVED:
Walter J. Zedel 12/30/69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

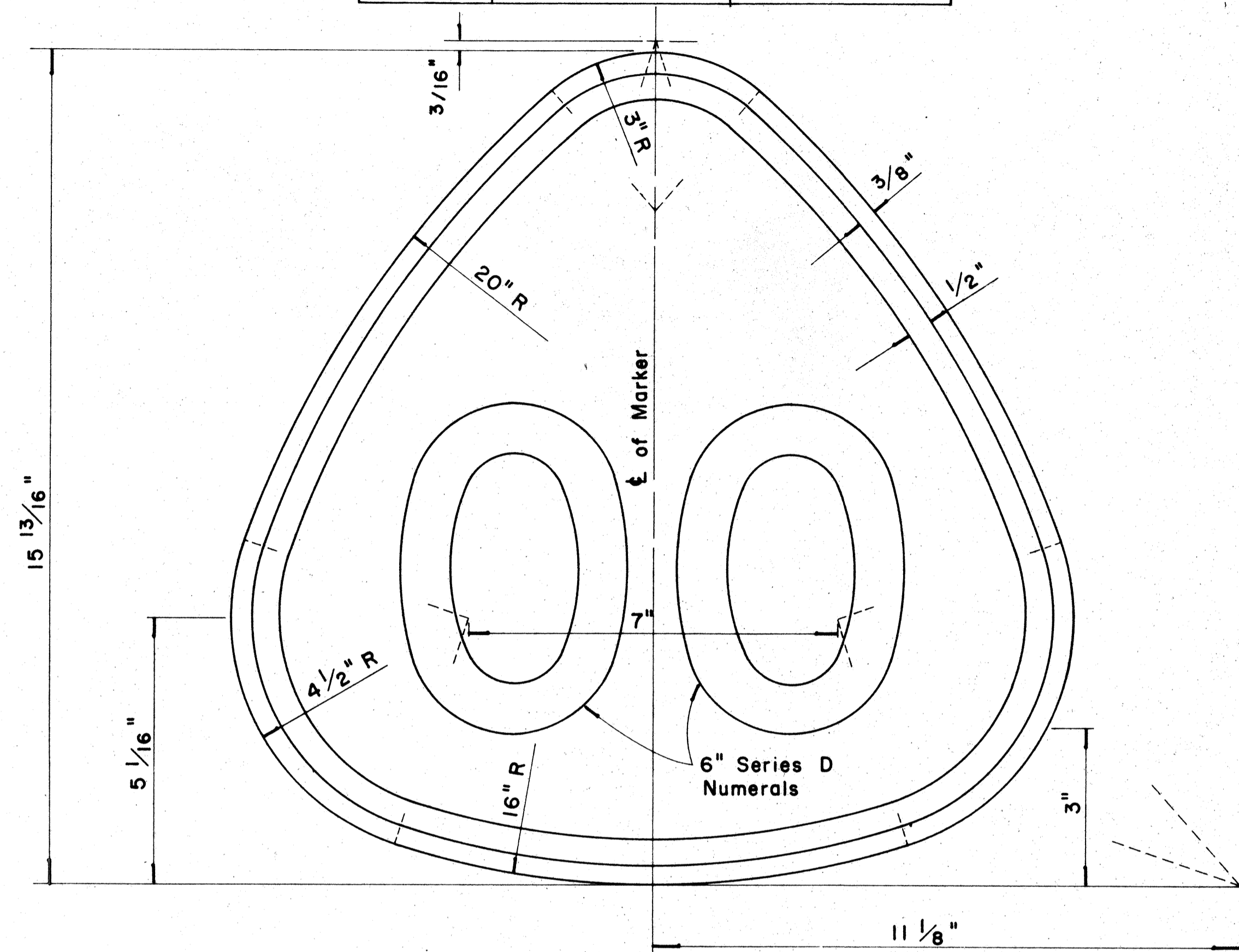
**EXPRESSWAY SIGNS
LUMINAIRE MOUNTINGS**

Scale: As Shown

DATE: _____
DRAWN BY: _____
DESIGNED BY: _____
CHECKED BY: _____
ORIGINAL PLAN _____
NOTE BOOK _____
No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-(11)	1969	117	258

Shield Size	Multiply Dimensions by	Numeral Size
16"	1	6" Series D
21"	1.3	8" Series D
32"	2.0	12" Series D
42"	2.63	15" Series D
48"	3	18" Series D



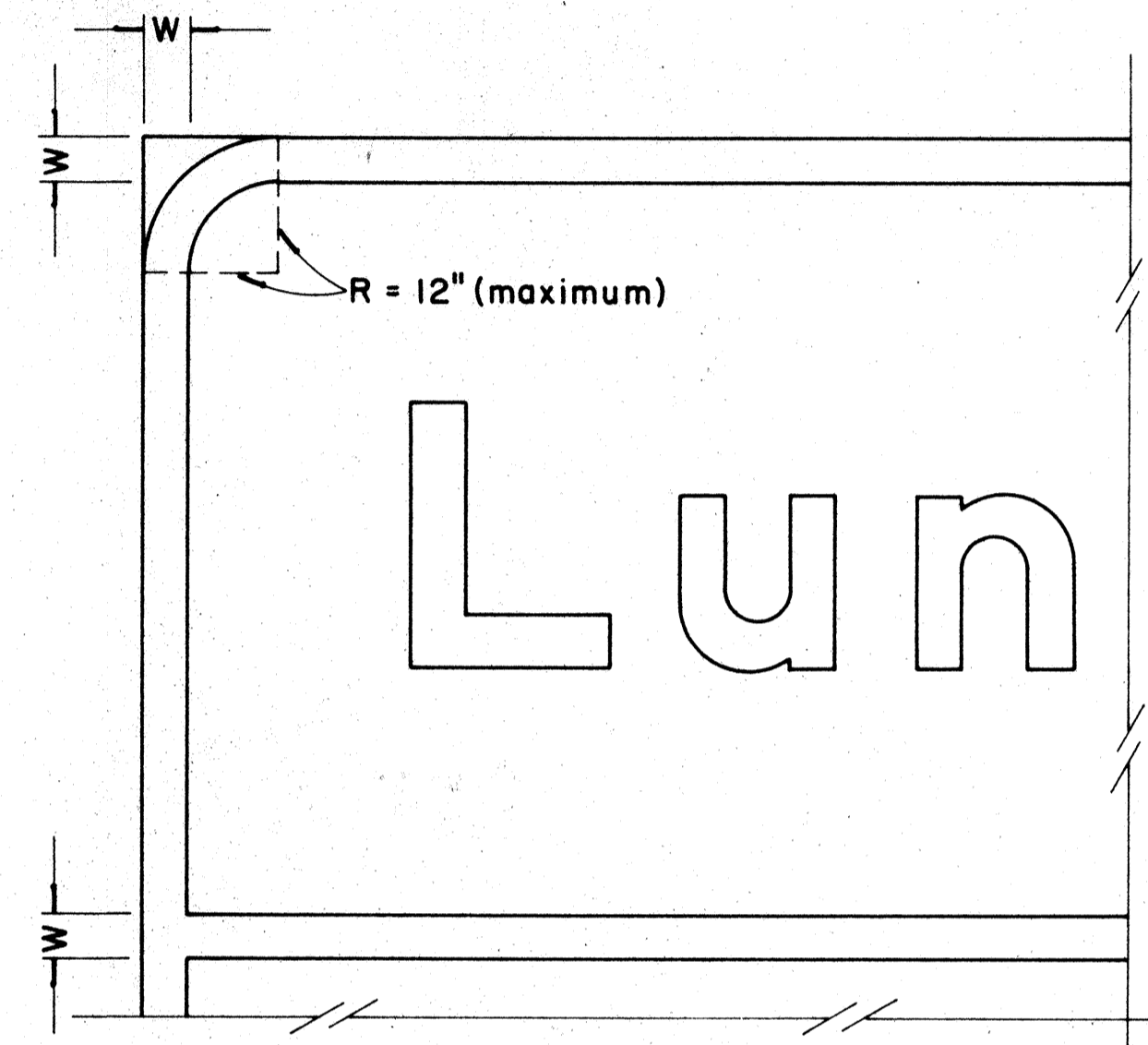
**STATE ROUTE MARKER
FOR
DESTINATION & EXPRESSWAY SIGNS**

Scale: Half Size

NOTE:

1. State Route Markers on Destination and Expressway signs shall have black numerals and borders on a white reflectorized background mounted on a flat aluminum cut-out.
2. All numerals shall be Series "D" from the "Standard Alphabets for Highway Signs," Bureau of Public Roads, 1966.
3. All Cut-outs shall be fastened on sign panel with Aluminum blind rivets. See Standard Specification.

RADI FOR SIGNS		
Least Dimension of Sign	W	R
2'-0" to 4'-6"	2"	3"
4'-9" to 5'-6"	2"	6"
5'-9" to 7'-6"	2"	9"
7'-9" and greater	2"	12"



**BORDER DETAIL
FOR
DESTINATION & EXPRESSWAY SIGNS**

No Scale

NOTE:

1. Area outside corner radius need not be trimmed.
2. All borders shall be embossed cut-outs, white and reflectorized.
3. All signs shall have borders.

APPROVAL RECOMMENDED:
Etschi Tanaka 12/29/69
 TRAFFIC ENGINEER DATE

APPROVED:
John J. S. S. 12/30/69
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

DESTINATION & EXPRESSWAY SIGNS

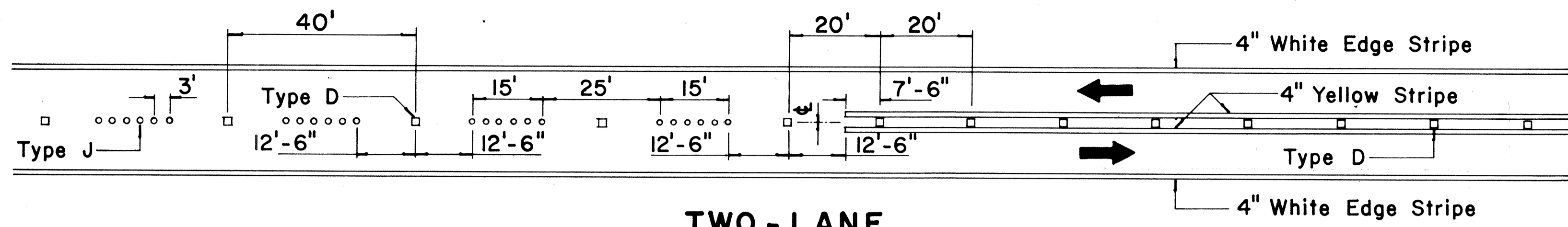
**STATE ROUTE MARKER
AND
BORDER DETAIL**

Scale: As Shown

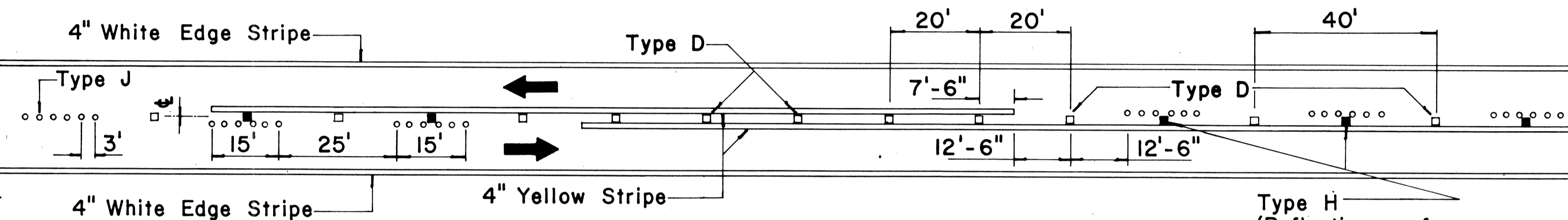
SHEET No. 17 OF 18 SHEETS DT 209

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

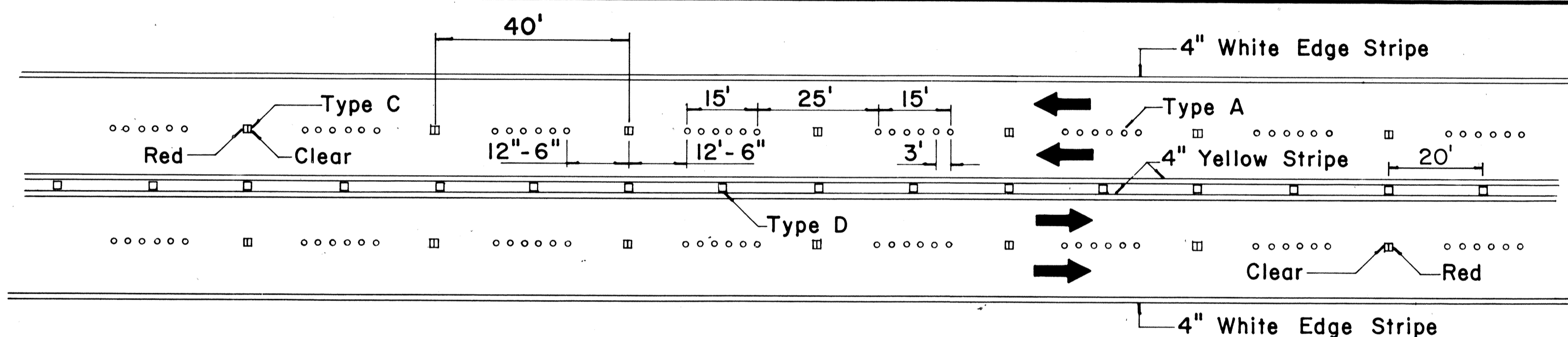
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-078-1(11)	1977	C.O. 118	258



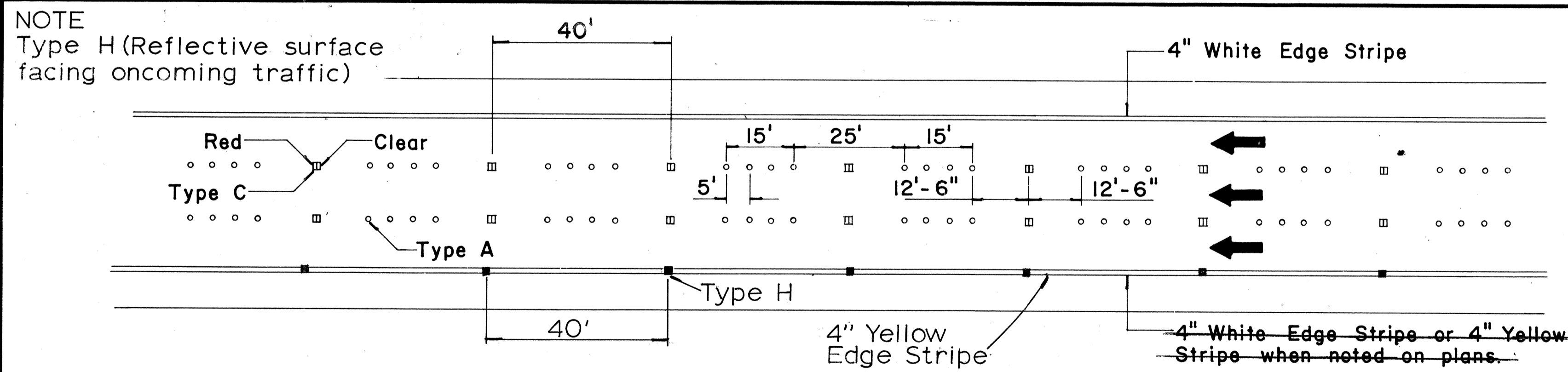
**TWO-LANE
PASSING PERMITTED AND PASSING PROHIBITED**



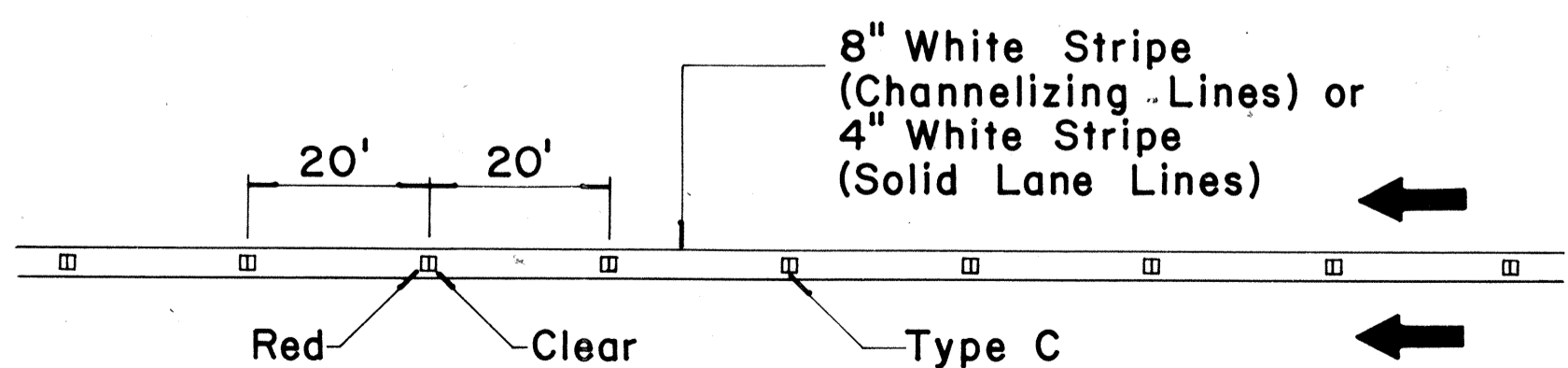
**TWO-LANE
PASSING PROHIBITED ZONES**



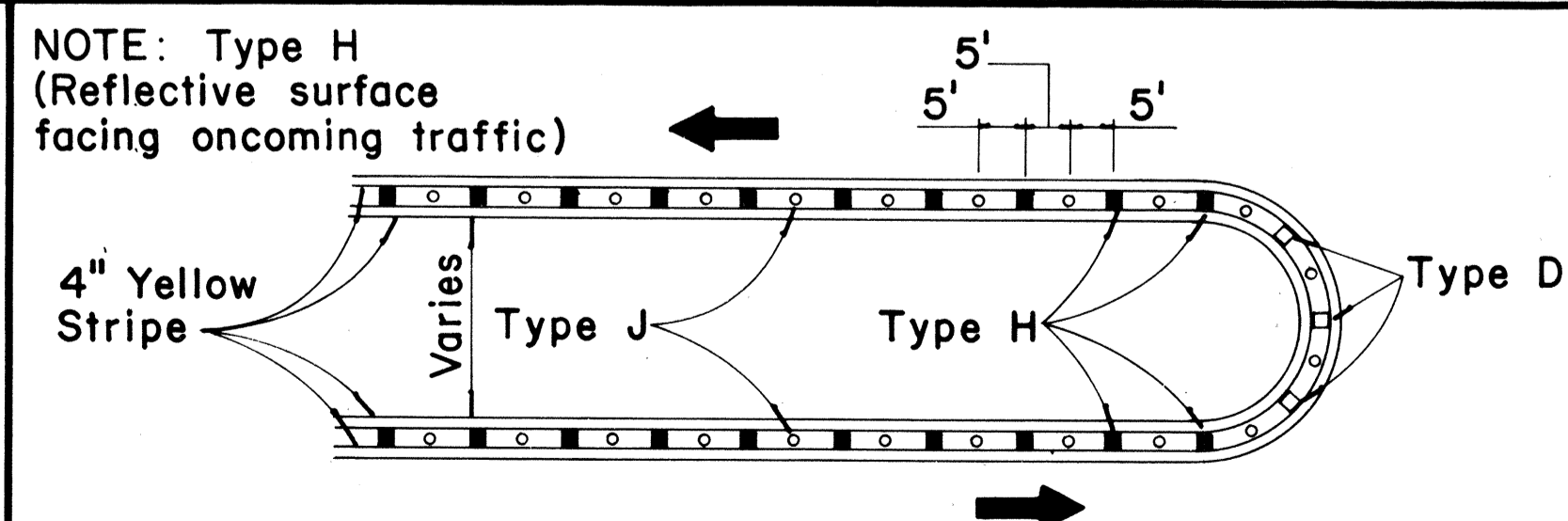
**MULTI-LANE
LANE LINES AND CENTER LINE**



FREEWAY LANE LINES



**CHANNELIZING LINES
OR SOLID LANE LINES**



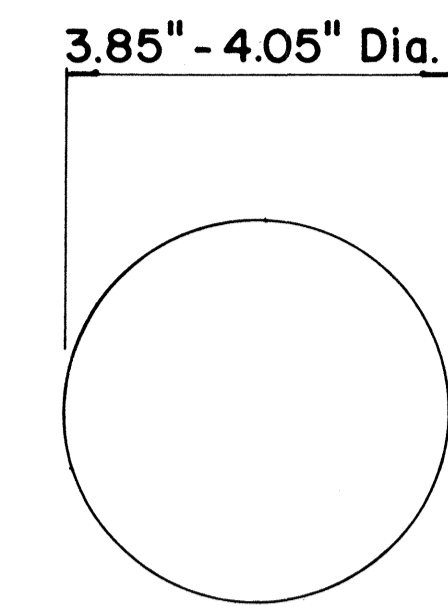
MEDIAN NOSE DELINEATION

TWO - LANE

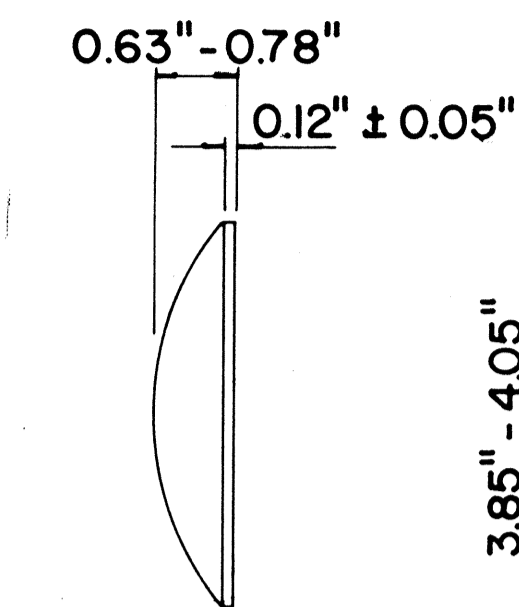
MULTI - LANE

FREEWAY

MISCELLANEOUS



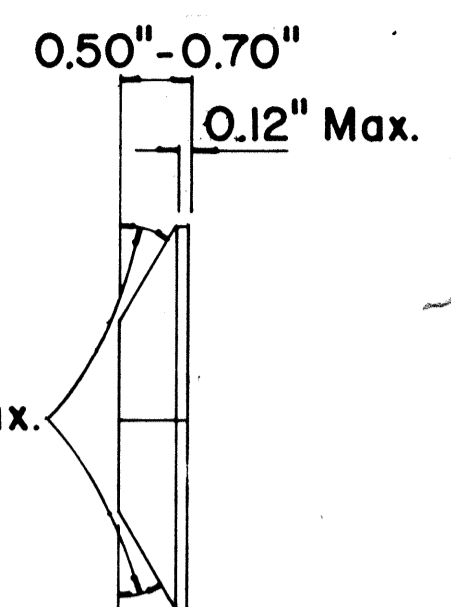
**TYPE A
NON-REFLECTIVE WHITE MARKER**



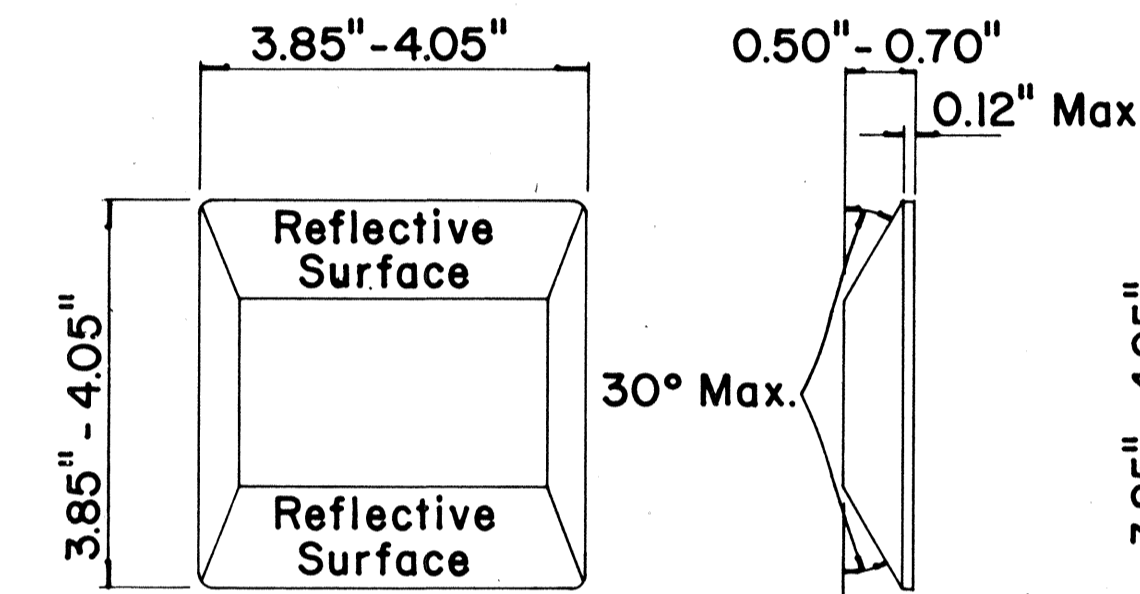
**TYPE J
NON-REFLECTIVE YELLOW MARKER**



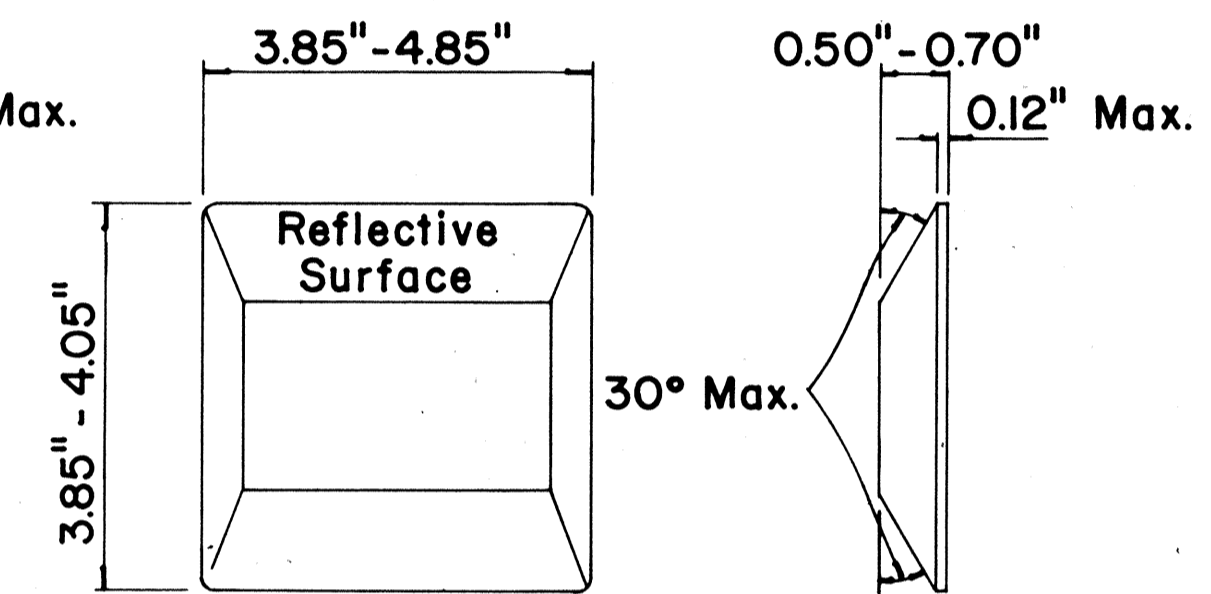
**TYPE C
RED-CLEAR REFLECTIVE MARKER**



**TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER**



**TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER**



**TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER**

GENERAL NOTES

1. Painted stripes to be done by State forces unless otherwise specified.

APPROVAL RECOMMENDED:
E. Ichikawa 11/18/71
TRAFFIC ENGINEER DATE

APPROVED:
Shelton Z. Kato 11/18/71
ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Add reflector marker in each line gap.	H.C.	10-21-72
2	Revised General Notes.	H.C.	10-21-72

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**STANDARD DETAILS
RAISED PAVEMENT MARKERS**

Not to Scale October 1971

SHEET No. 18 OF 18 SHEETS DT 300

C.O. 118

NOTED BY: _____
DESIGNED BY: _____
CHECKED BY: _____
DATE: _____