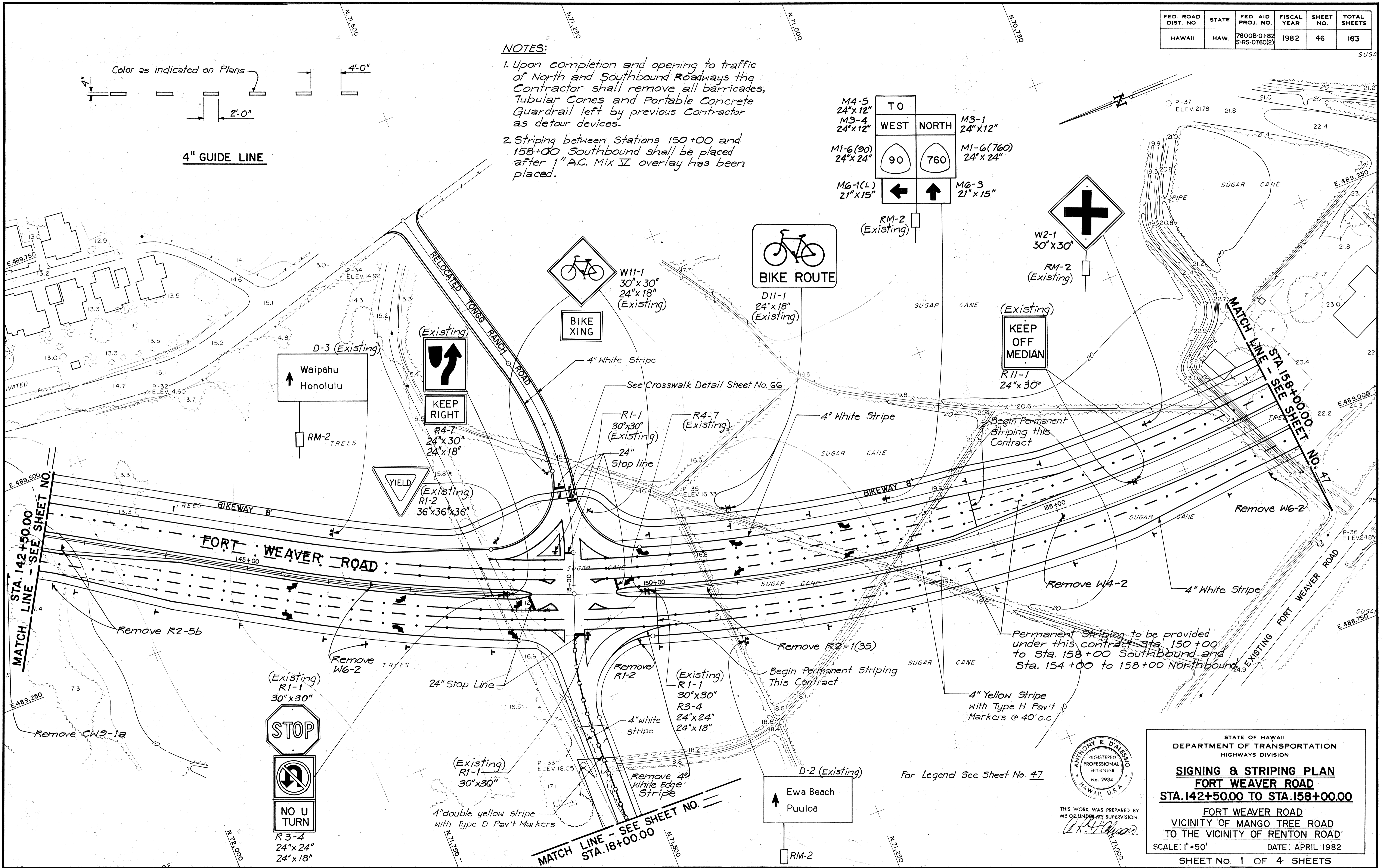
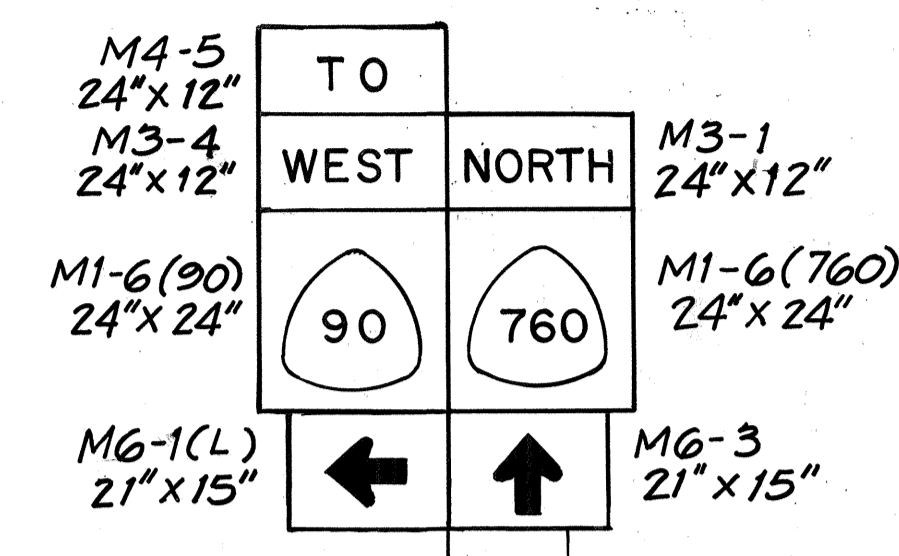
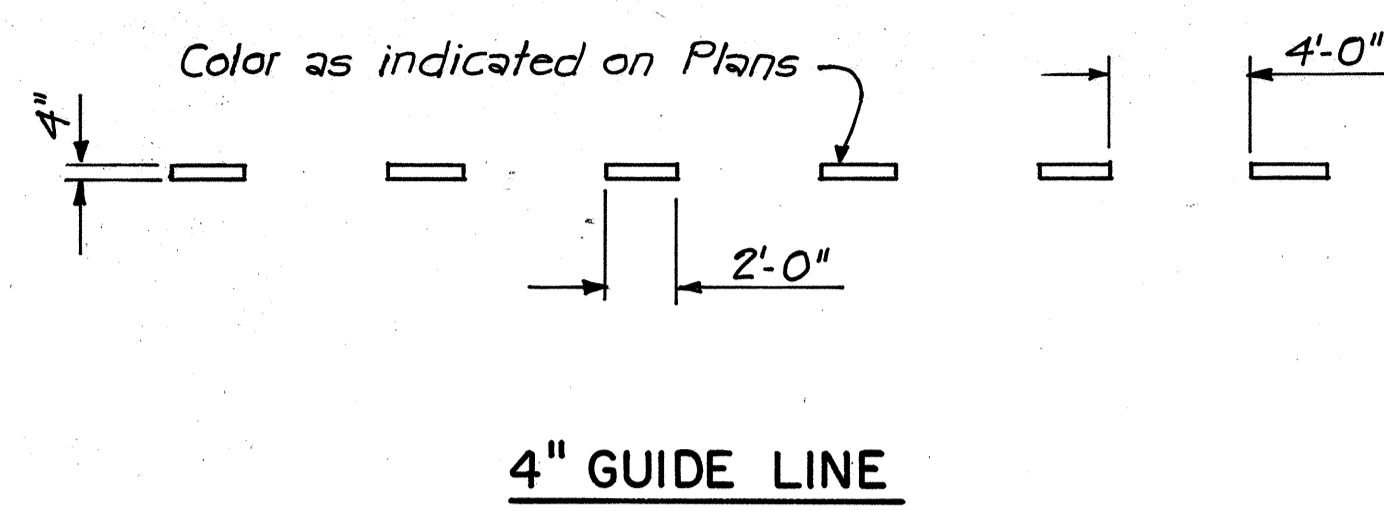


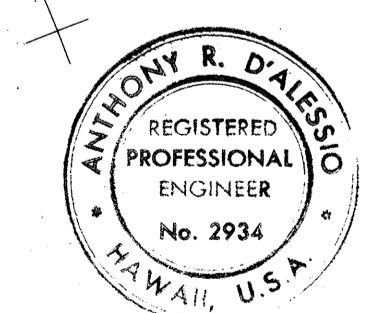
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	76008-01-82 S-RS-0760(2)	1982	46	163

SUGA

- NOTES:**
- Upon completion and opening to traffic of North and Southbound Roadways the Contractor shall remove all barricades, Tubular Cones and Portable Concrete Guardrail left by previous Contractor as detour devices.
  - Striping between Stations 150+00 and 158+00 Southbound shall be placed after 1" A.C. Mix V overlay has been placed.



DATE \_\_\_\_\_  
 SURVEY PLOTTED BY \_\_\_\_\_  
 DRAWN BY \_\_\_\_\_  
 TRACED BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 ORIGINAL PLAN \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
 A.R. Dalessio

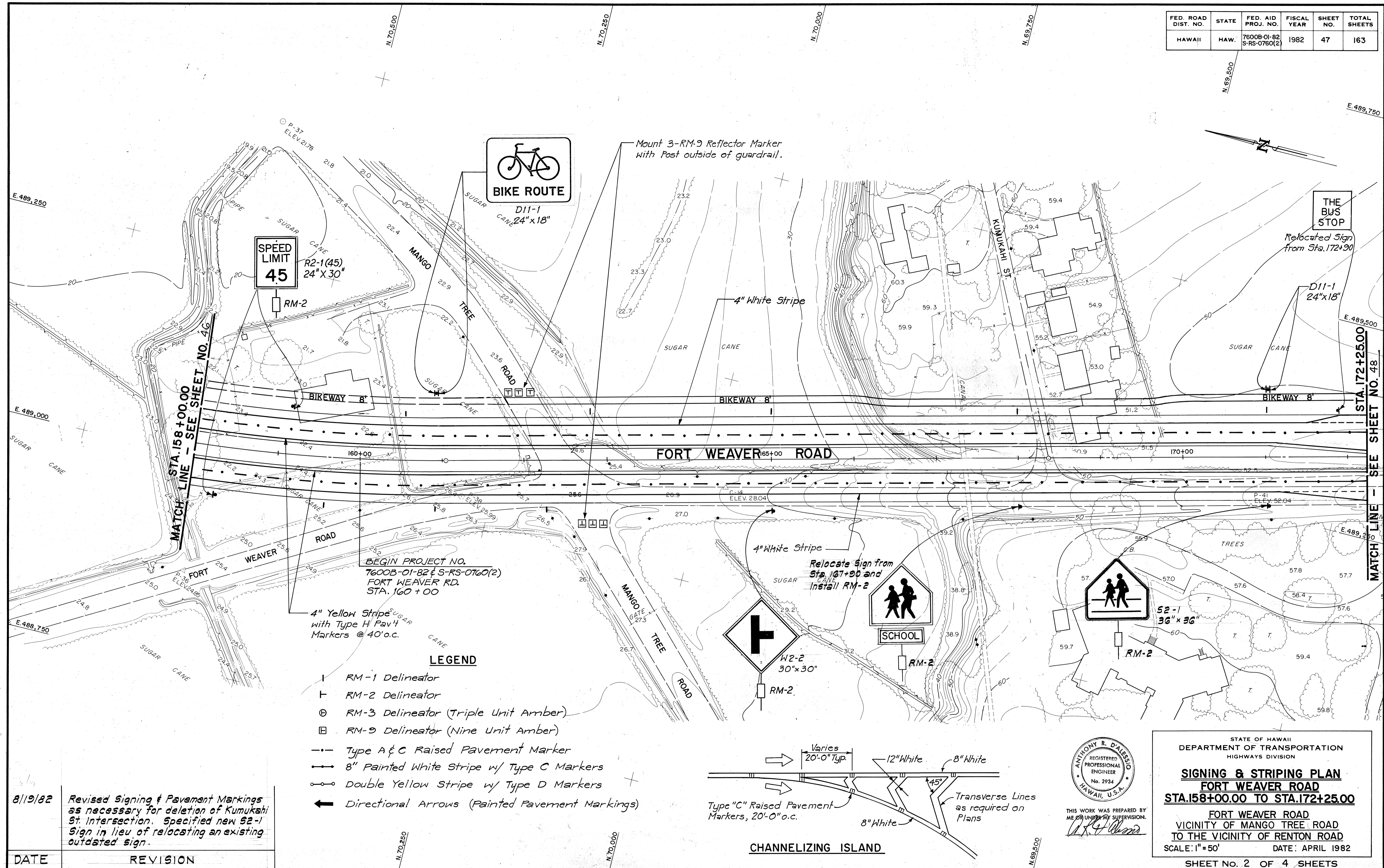
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**SIGNING & STRIPING PLAN**  
**FORT WEAVER ROAD**  
**STA. 142+50.00 TO STA. 158+00.00**

FORT WEAVER ROAD  
 VICINITY OF MANGO TREE ROAD  
 TO THE VICINITY OF RENTON ROAD

SCALE: 1"=50' DATE: APRIL 1982  
 SHEET No. 1 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	47	163

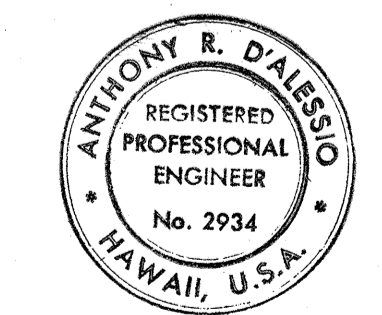
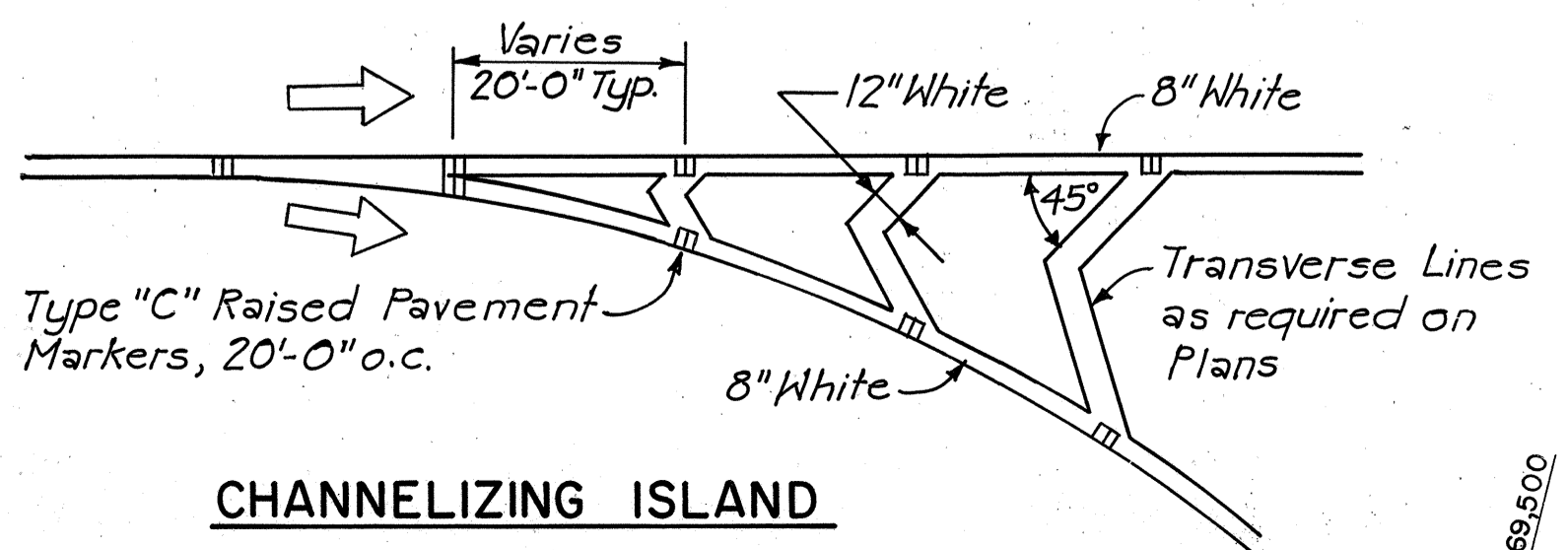


DATE	REVISION
8/19/82	Revised Signing & Pavement Markings as necessary for deletion of Kumukahi St. Intersection. Specified new 52-1 Sign in lieu of relocating an existing outdated sign.

BEGIN PROJECT NO. 7600B-01-82 & S-RS-0760(2) FORT WEAVER RD. STA. 160+00

4" Yellow Stripe with Type H Pav't Markers @ 40'o.c.

- LEGEND**
- | RM-1 Delineator
  - ⊥ RM-2 Delineator
  - ⊕ RM-3 Delineator (Triple Unit Amber)
  - ⊞ RM-9 Delineator (Nine Unit Amber)
  - - - Type A & C Raised Pavement Marker
  - 8" Painted White Stripe w/ Type C Markers
  - ⊖ Double Yellow Stripe w/ Type D Markers
  - ← Directional Arrows (Painted Pavement Markings)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

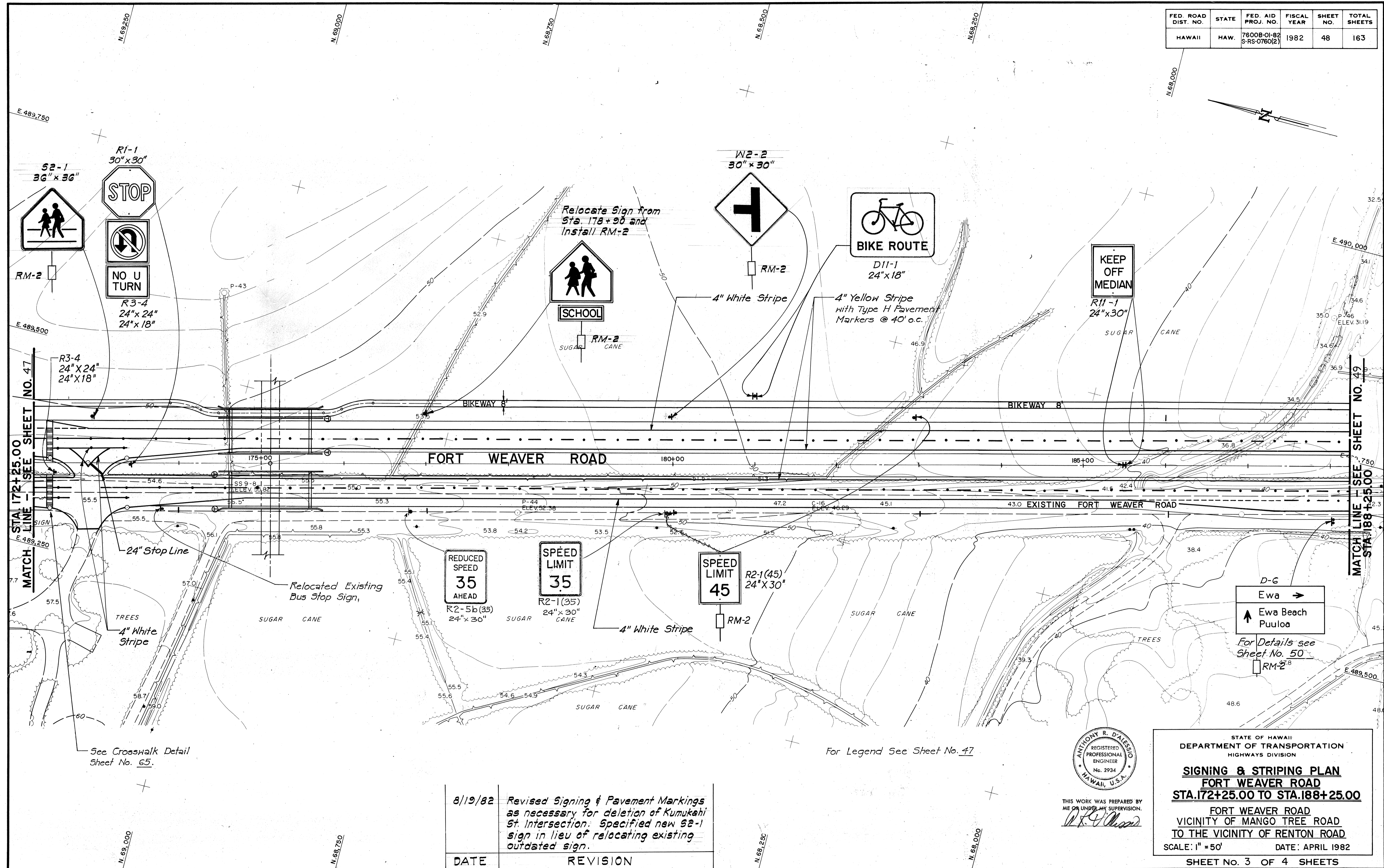
**SIGNING & STRIPING PLAN**  
**FORT WEAVER ROAD**  
**STA. 158+00.00 TO STA. 172+25.00**

FORT WEAVER ROAD  
VICINITY OF MANGO TREE ROAD  
TO THE VICINITY OF RENTON ROAD  
SCALE: 1" = 50' DATE: APRIL 1982

SHEET NO. 2 OF 4 SHEETS

C047

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	48	163

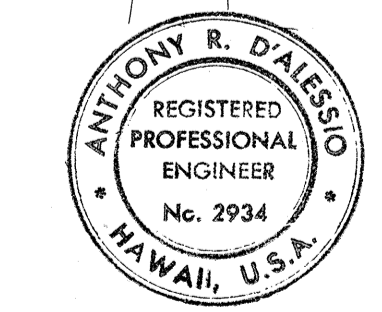


DATE	.....
SURVEY PLOTTED BY	207/TM
DRAWN BY	PMS
DESIGNED BY	PMS
QUANTITIES BY	AEQ
CHECKED BY	AEQ
NO.	.....

See Crosswalk Detail Sheet No. 65.

For Legend See Sheet No. 47

DATE	REVISION
8/19/82	Revised Signing & Pavement Markings as necessary for deletion of Kumukahi St. Intersection. Specified new S2-1 sign in lieu of relocating existing outdated sign.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Anthony R. DiAlessio*

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGNING & STRIPING PLAN**  
**FORT WEAVER ROAD**  
**STA. 172+25.00 TO STA. 188+25.00**

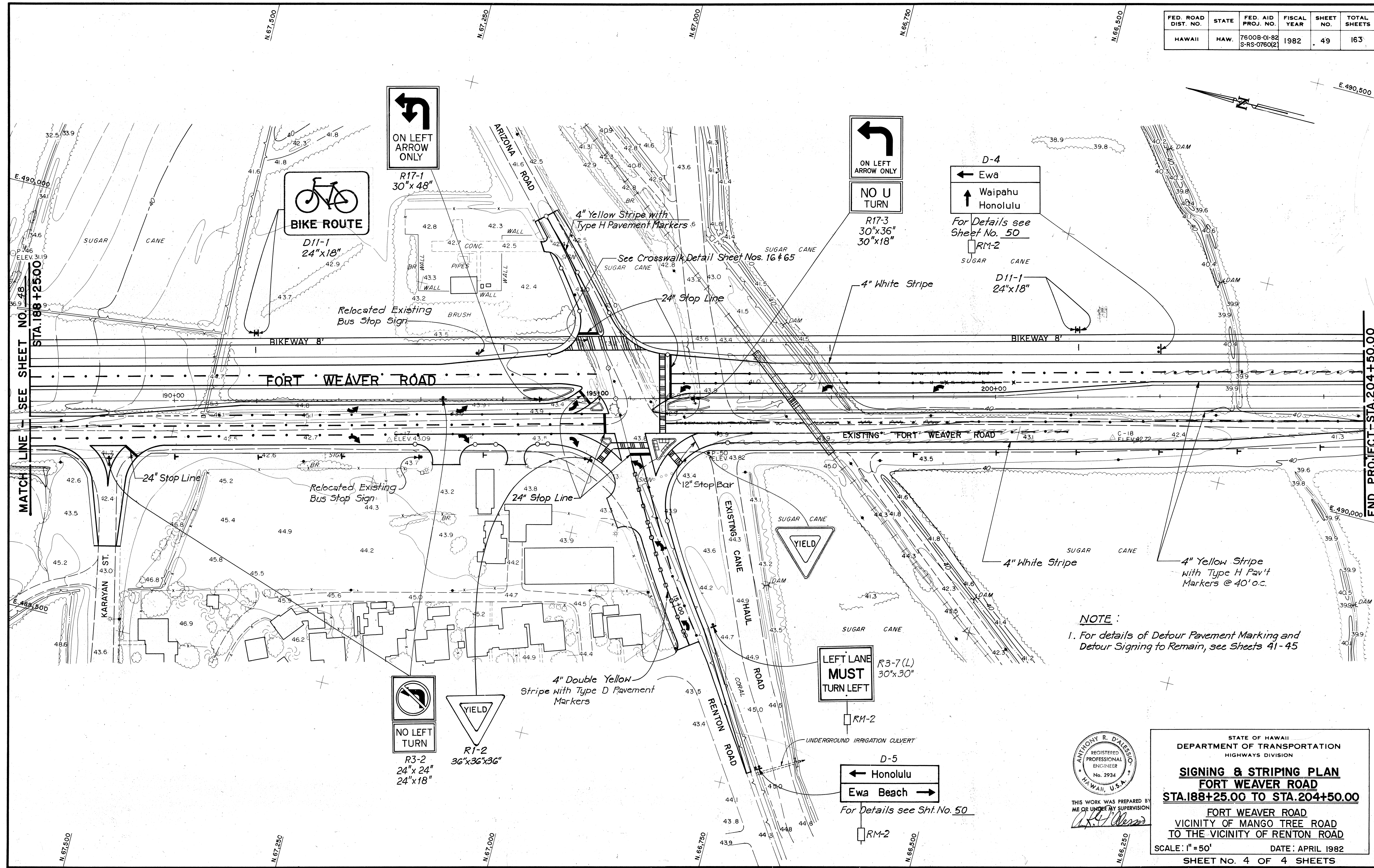
FORT WEAVER ROAD  
VICINITY OF MANGO TREE ROAD  
TO THE VICINITY OF RENTON ROAD

SCALE: 1" = 50'  
DATE: APRIL 1982

SHEET No. 3 OF 4 SHEETS

C.0.48

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	76008-01-82 S-RS-0760(2)	1982	49	163



**NOTE:**  
 1. For details of Detour Pavement Marking and Detour Signing to Remain, see Sheets 41-45

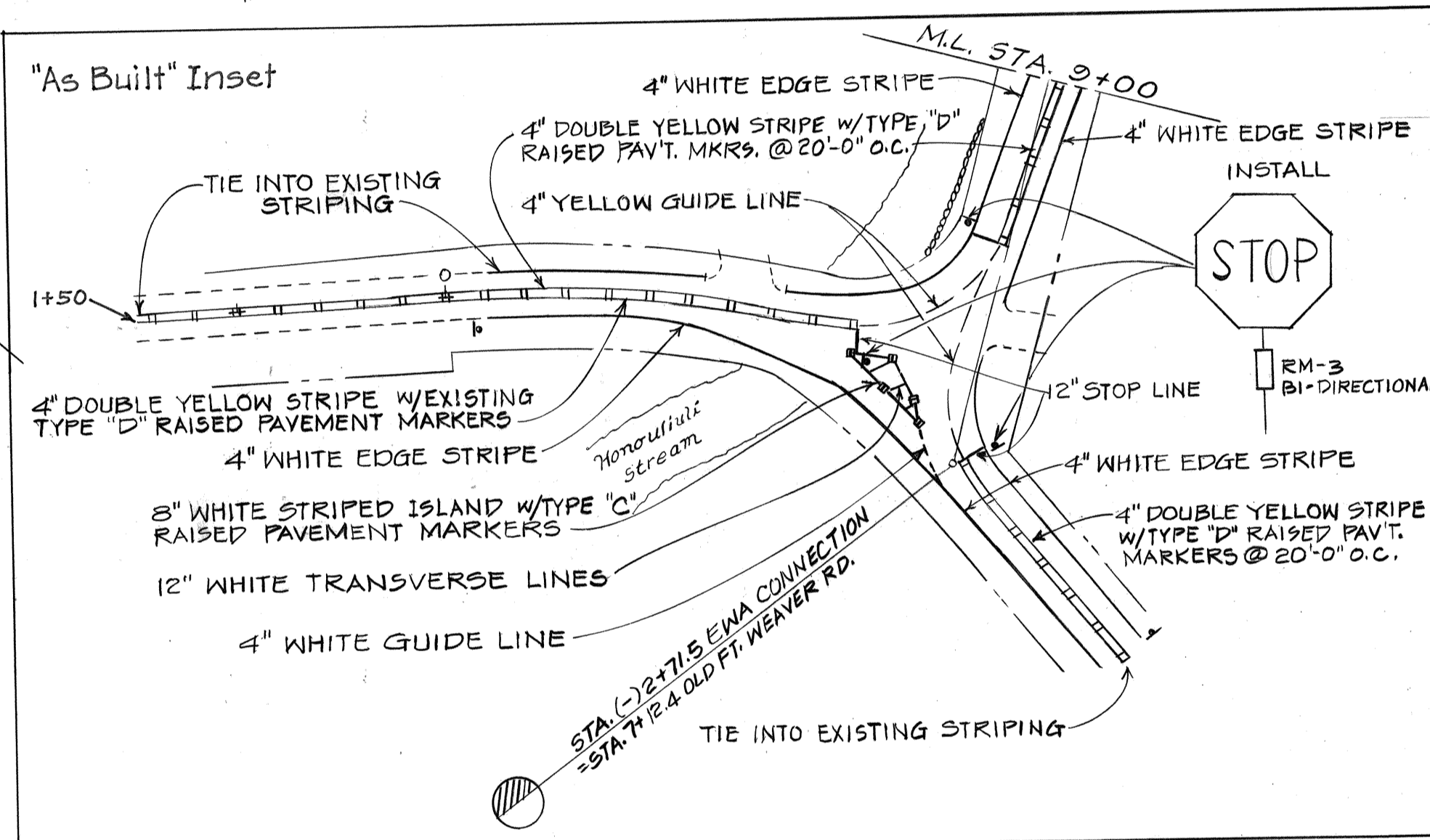
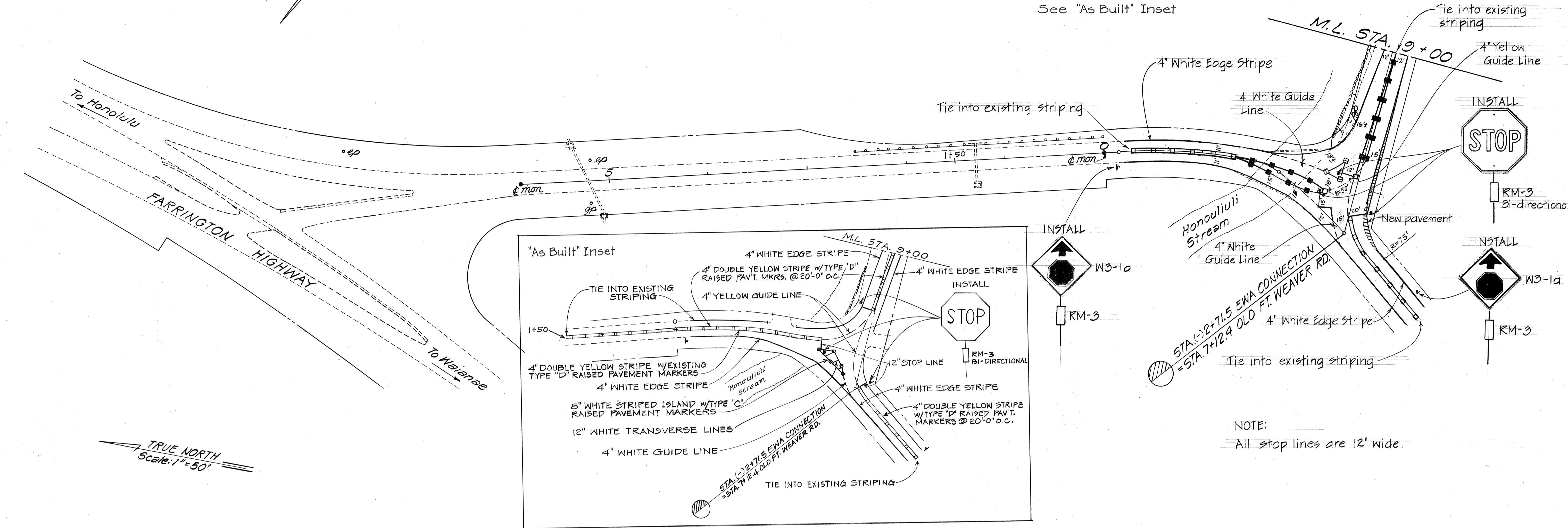
DATE: \_\_\_\_\_  
 SURVEY PLOTTED BY: \_\_\_\_\_  
 DRAWN BY: GDT/TM  
 DESIGNED BY: PMS  
 QUANTITIES BY: ARD  
 CHECKED BY: \_\_\_\_\_  
 ORIGINAL PLAN NO. \_\_\_\_\_  
 NOTE BOOK NO. \_\_\_\_\_

ANTHONY R. DALESIO  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 2934  
 HAWAII, U.S.A.  
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION  
*(Signature)*

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**SIGNING & STRIPING PLAN**  
**FORT WEAVER ROAD**  
**STA.188+25.00 TO STA.204+50.00**  
 FORT WEAVER ROAD  
 VICINITY OF MANGO TREE ROAD  
 TO THE VICINITY OF RENTON ROAD  
 SCALE: 1" = 50'  
 DATE: APRIL 1982  
 SHEET No. 4 OF 4 SHEETS

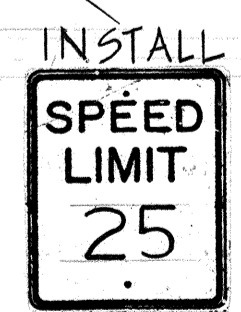
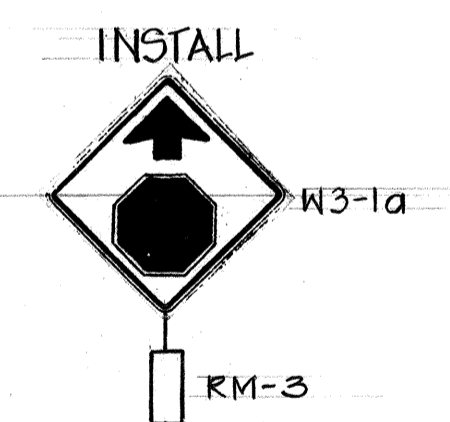
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1600B-01-82 S-RS-0760(2)	1982	C.O. 495-1	163

TRUE NORTH  
Scale: 1"=50'



TRUE NORTH  
Scale: 1"=50'

NOTE:  
All stop lines are 12" wide.



LEGEND

- 4" Double Yellow Stripe with Type "D" Raised Pavement Markers @ 20'-0" o.c.
- 4" Double Yellow Stripe with Type "H" Raised Pavement Markers @ 20'-0" o.c.
- 8" White Striped Island with Type "C" Raised Pavement Markers
- 4" Yellow Guide Line

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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGNING & STRIPING PLAN**  
**FORT WEAVER ROAD**  
PARR. HWY. TO RELOCATED TONGG RANCH RD.

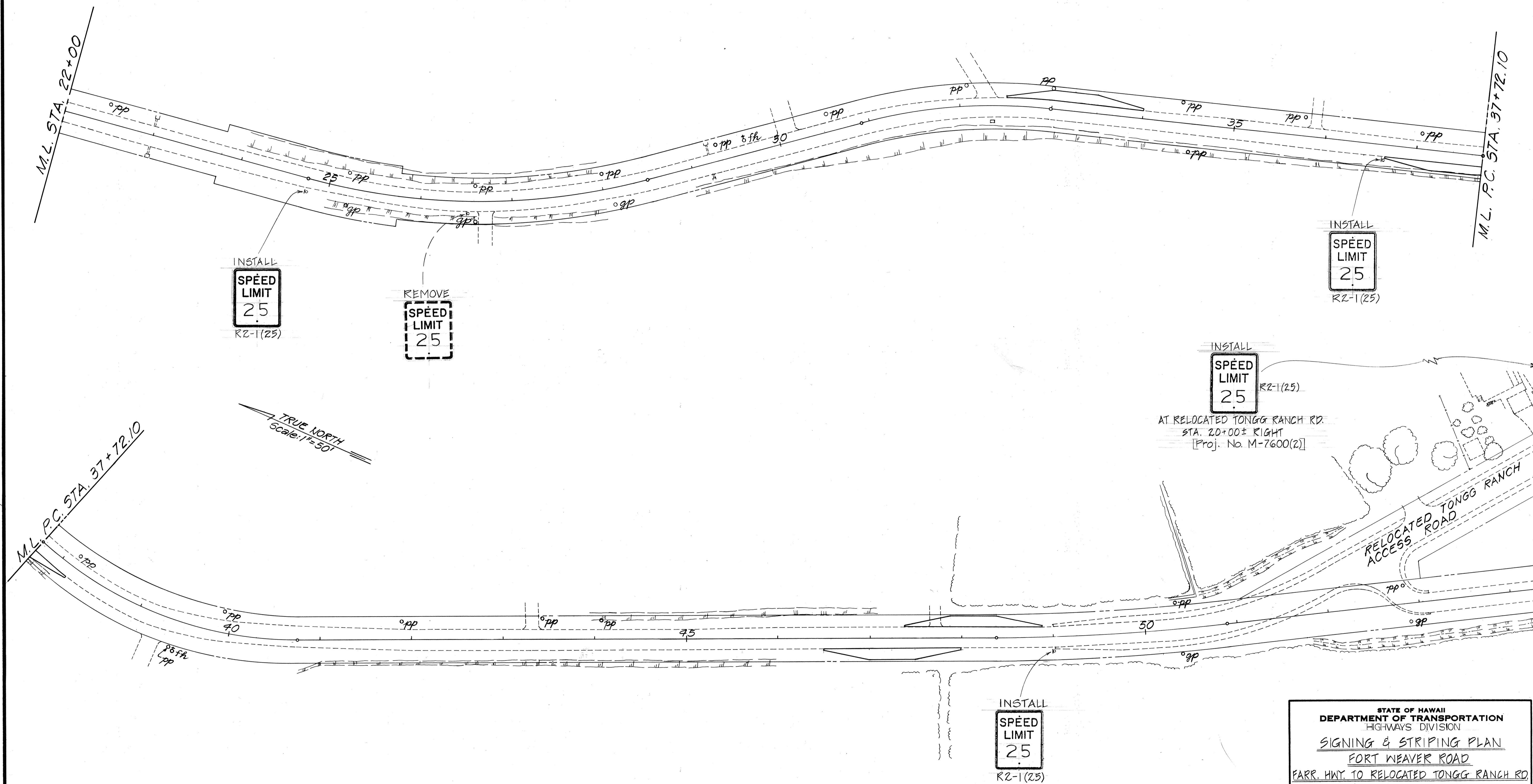
FORT WEAVER ROAD  
VICINITY OF MANGO TREE ROAD  
TO THE VICINITY OF RENTON ROAD

SCALE: 1"=50'      DATE: JAN. 1984

**SHEET No. 4a OF 4 SHEETS**

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 5-R2-0760(2)	1982	C.O. 495-1	163

TRUE NORTH  
Scale: 1" = 50'



INSTALL  
SPEED  
LIMIT  
25  
R2-1(25)

REMOVE  
SPEED  
LIMIT  
25

INSTALL  
SPEED  
LIMIT  
25  
R2-1(25)

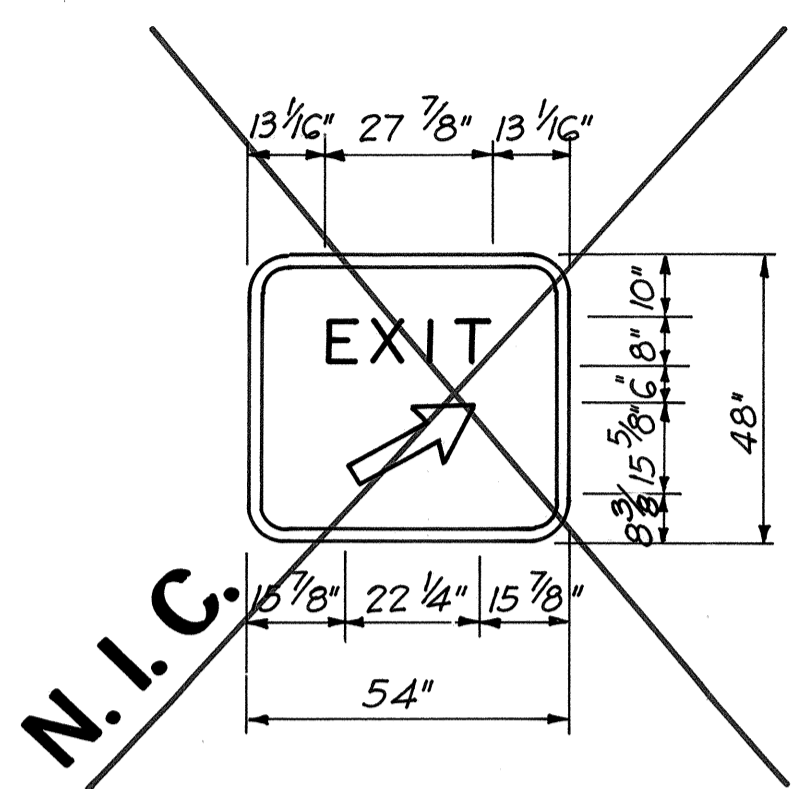
INSTALL  
SPEED  
LIMIT  
25  
R2-1(25)  
AT RELOCATED TONGG RANCH RD.  
STA. 20+00± RIGHT  
[Proj. No. M-7600(2)]

INSTALL  
SPEED  
LIMIT  
25  
R2-1(25)

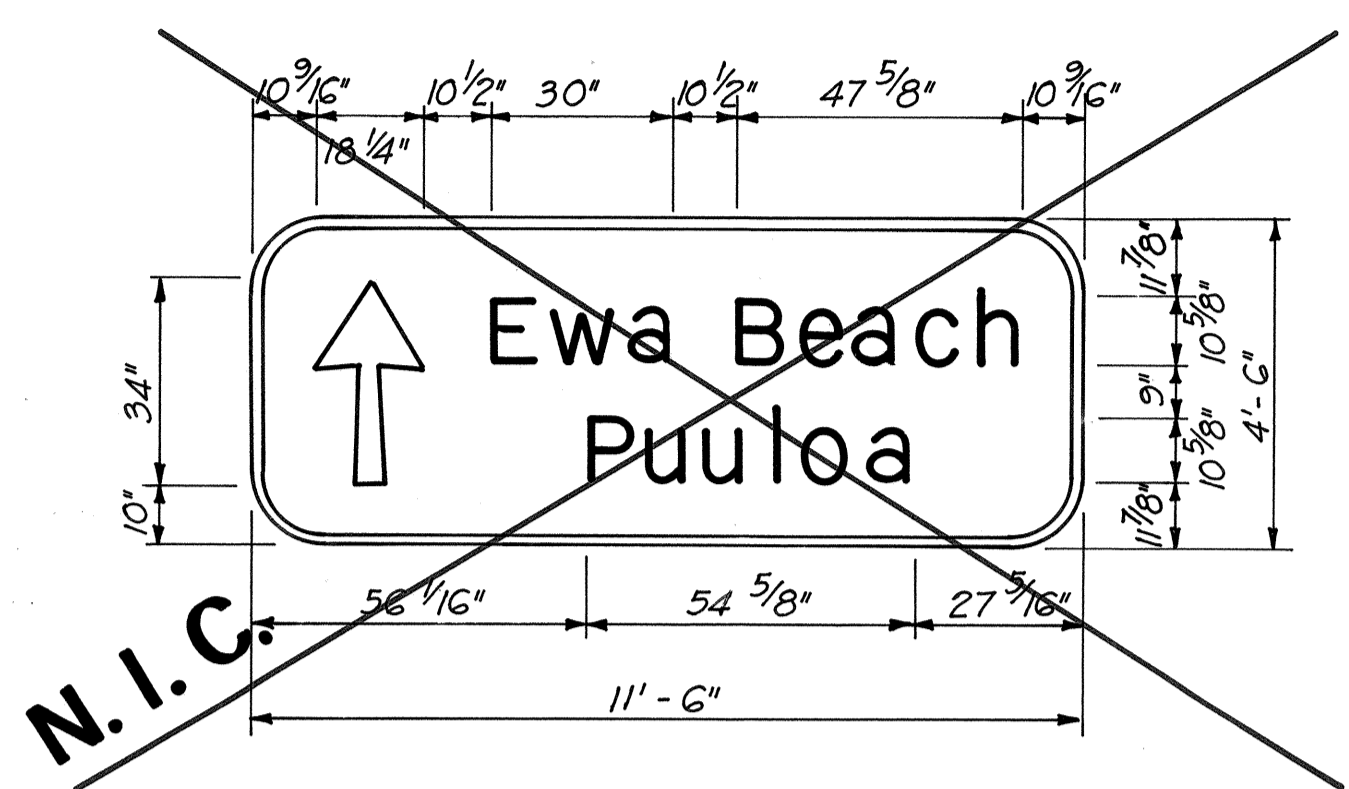
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
CHECKED BY	_____
NOTE BOOK	_____
No.	_____

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**SIGNING & STRIPING PLAN**  
FORT WEAVER ROAD  
FARR. HWY. TO RELOCATED TONGG RANCH RD.  
FORT WEAVER ROAD  
VICINITY OF MANGO TREE ROAD  
TO THE VICINITY OF RENTON ROAD  
SCALE: 1" = 50' DATE: JAN. 1984  
SHEET No. 4b OF 4 SHEETS

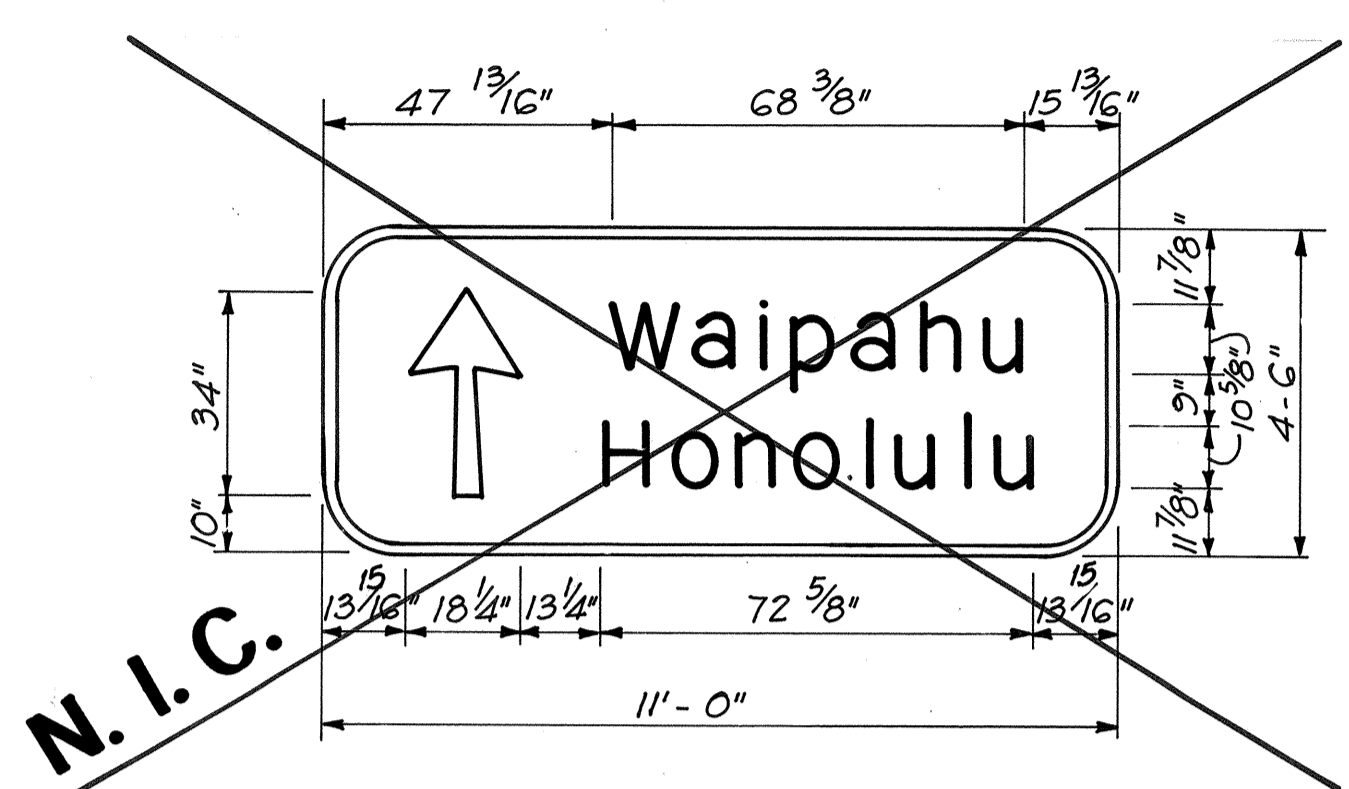
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-0182 S-RS-0760(2)	1982	50	163



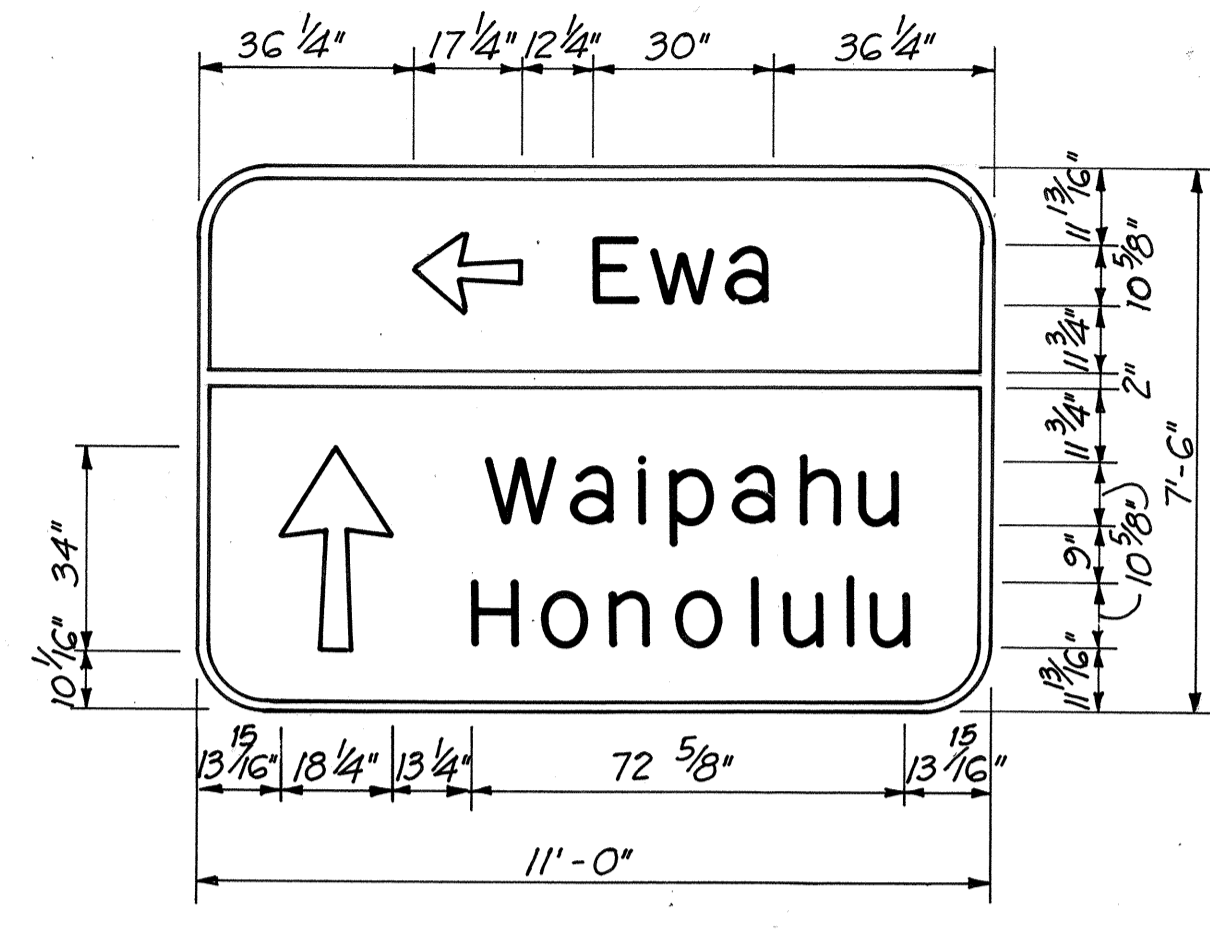
**D-1**



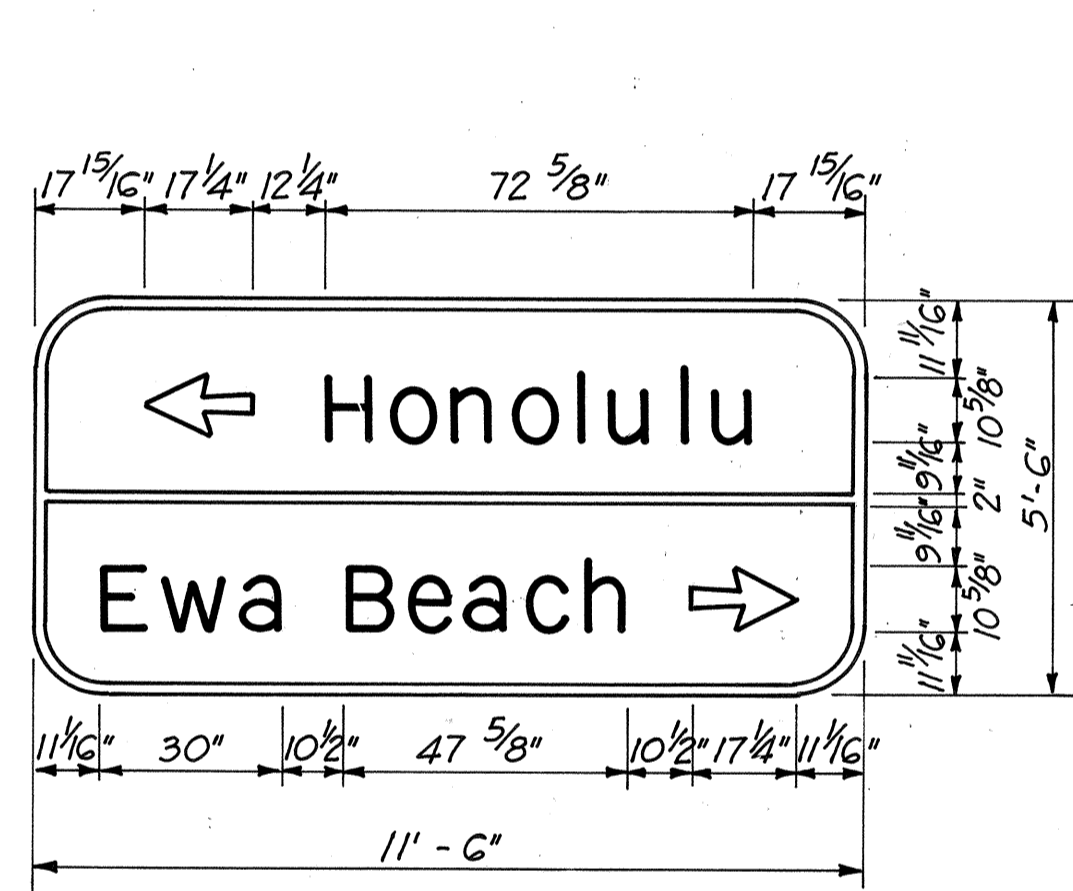
**D-2**



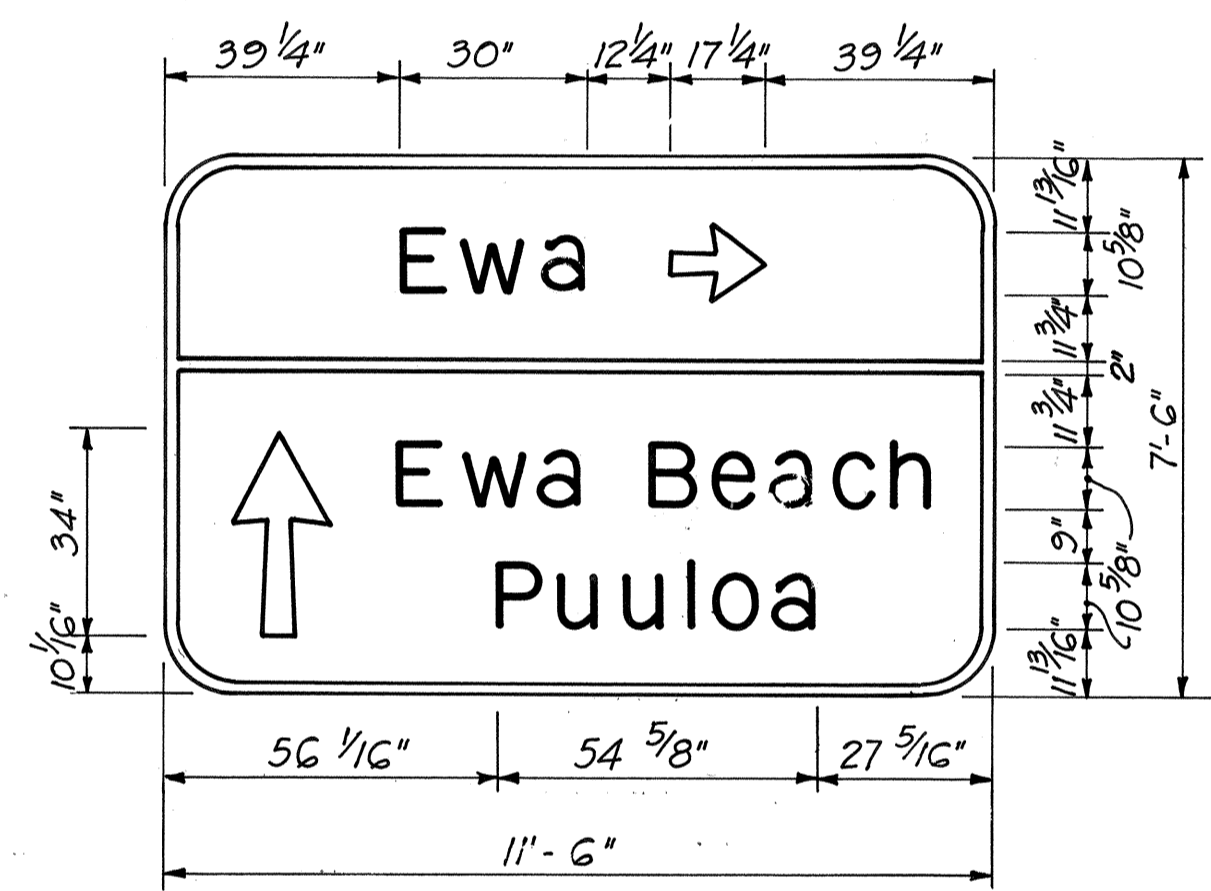
**D-3**



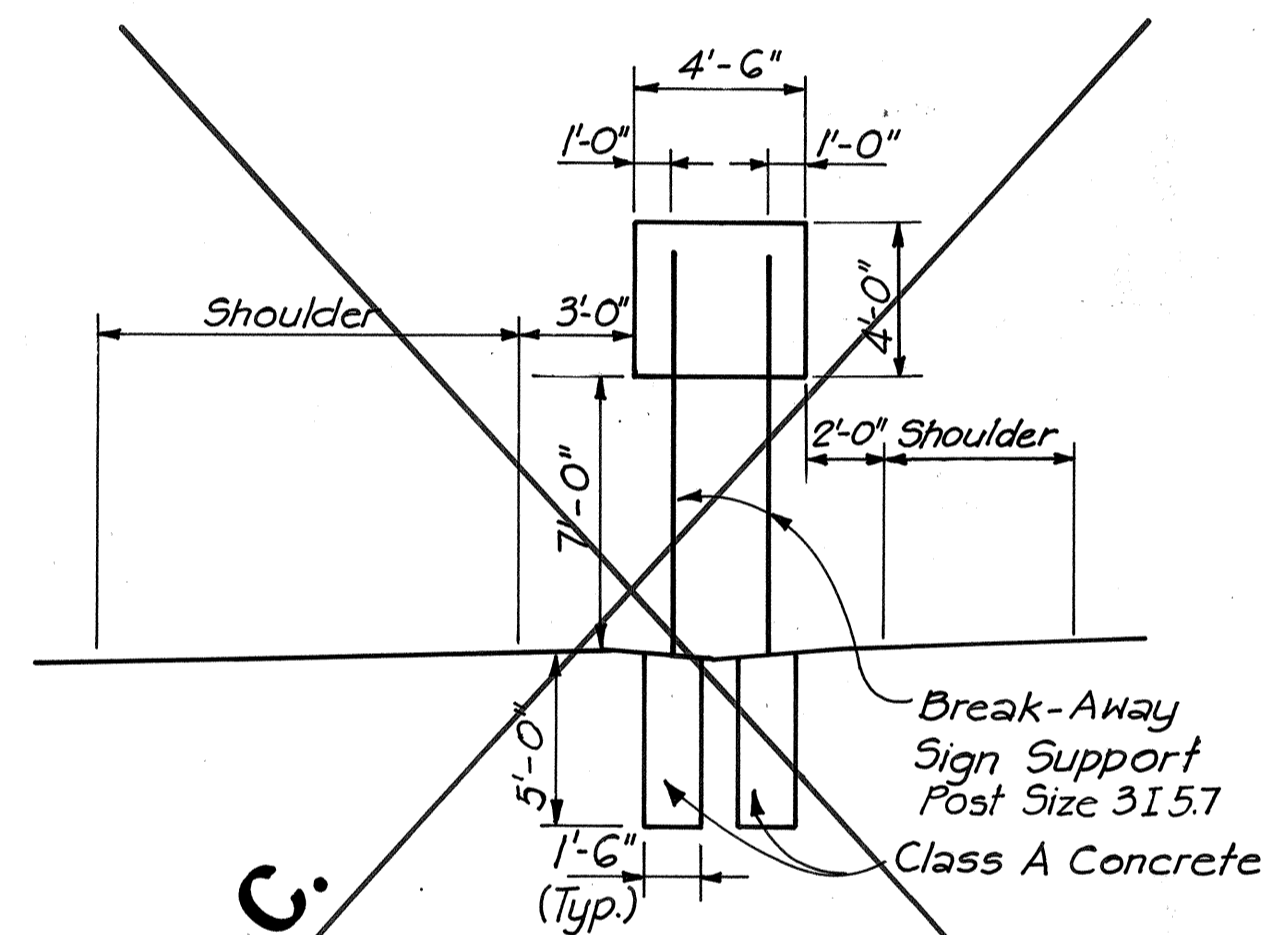
**D-4**



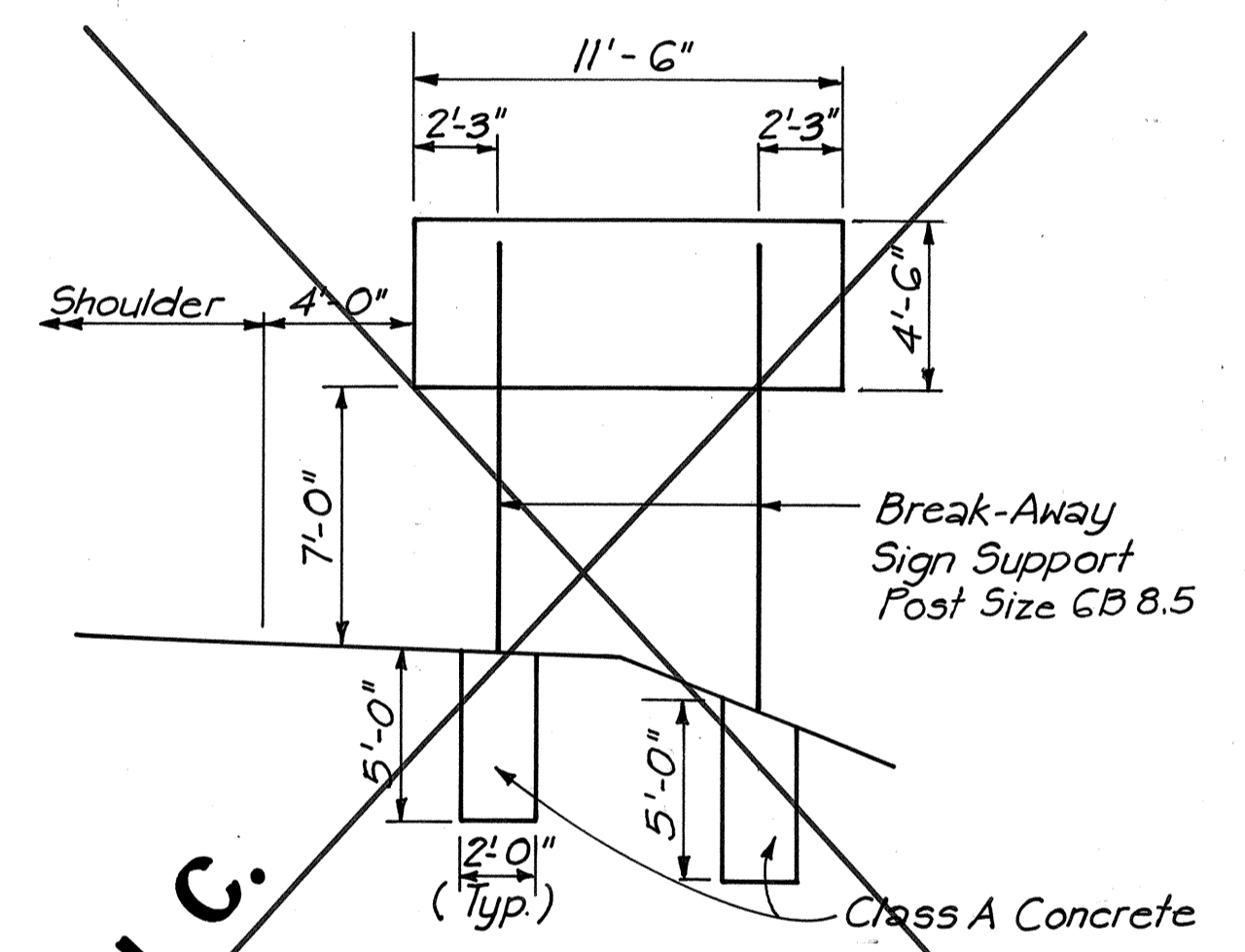
**D-5**



**D-6**

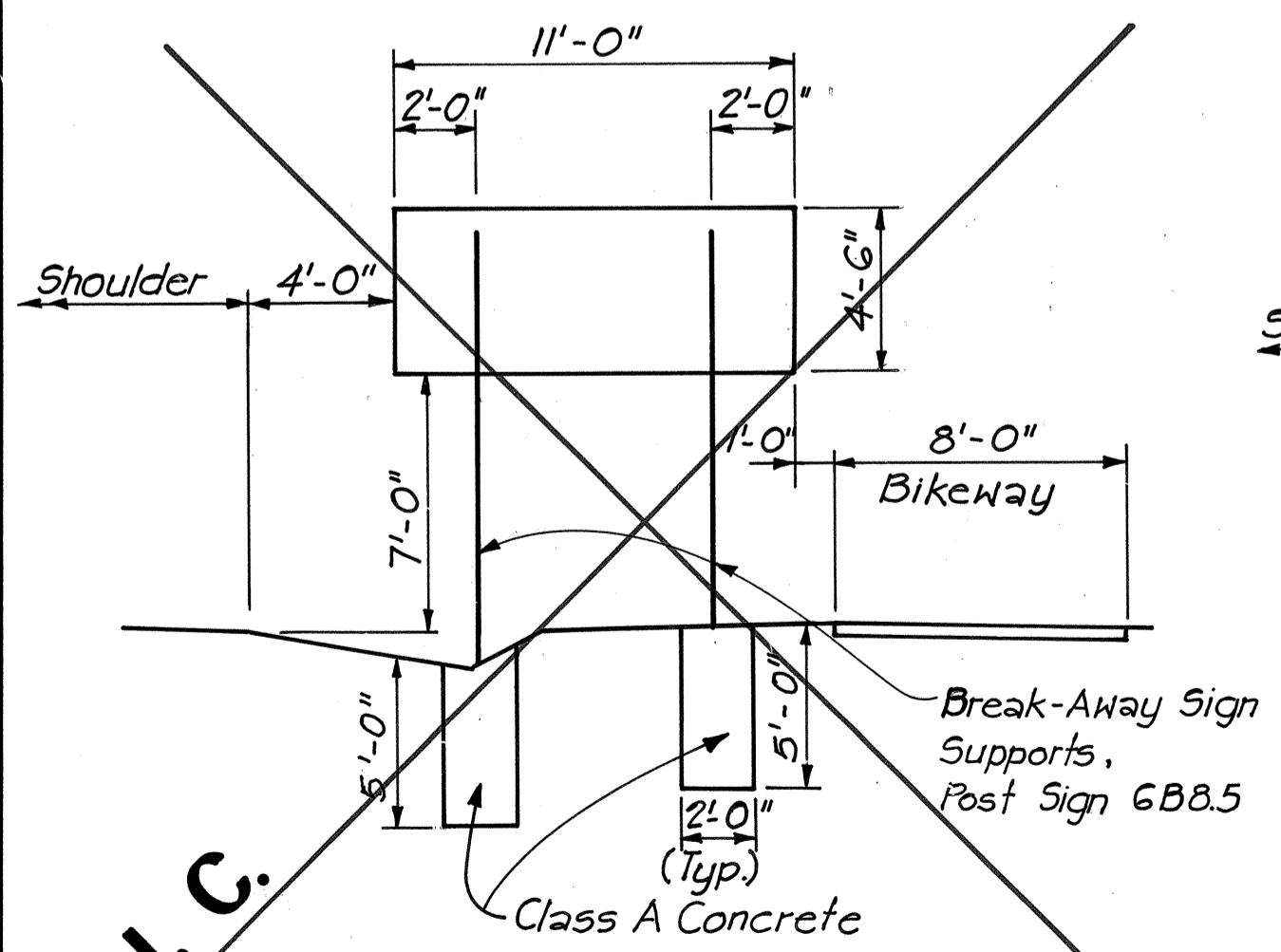


**ELEVATION D-1**  
Fort Weaver Road Sta. 98+85 N.B.  
Scale: 1" = 5'

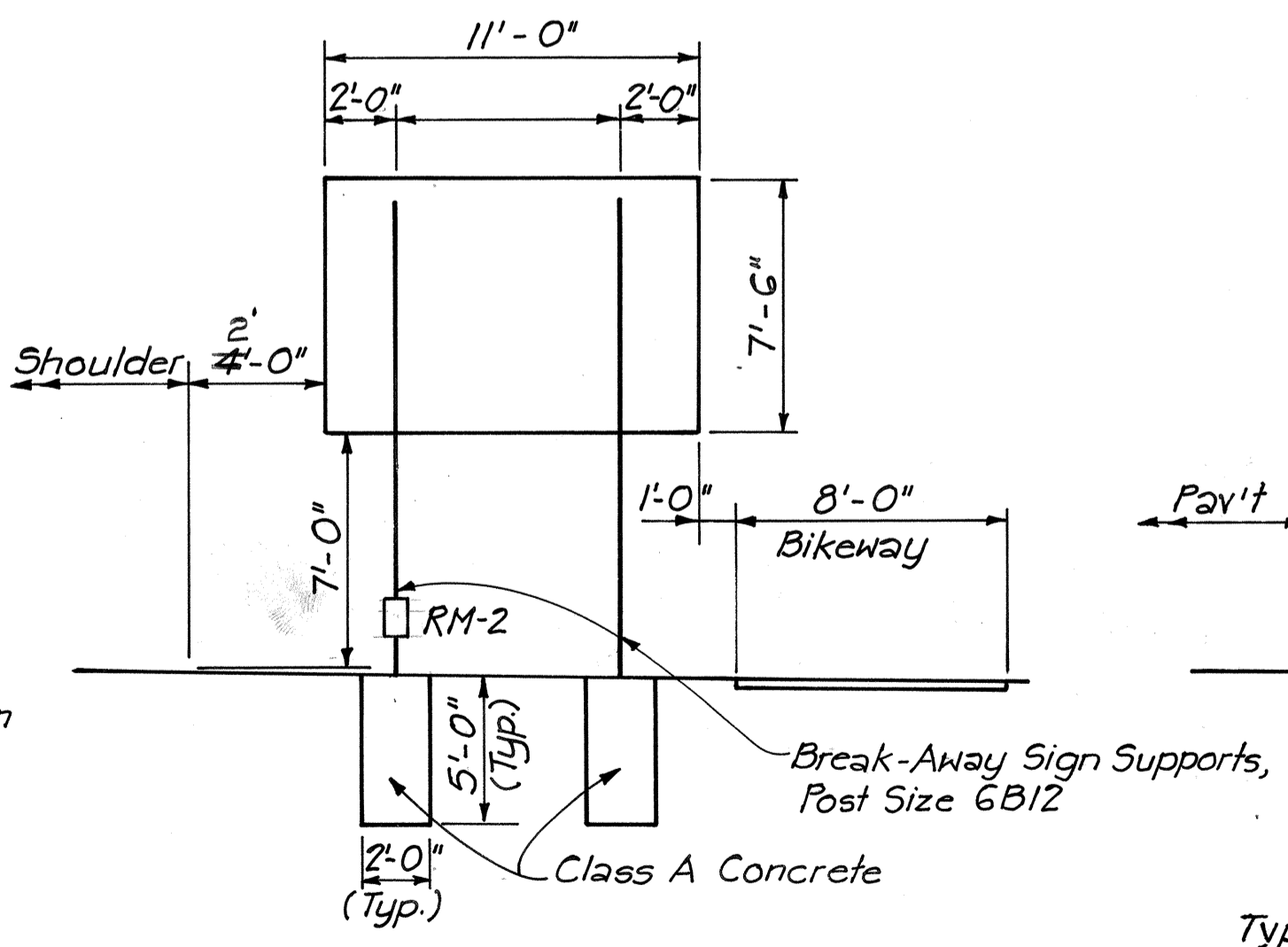


**ELEVATION D-2**  
Fort Weaver Road Sta. 151+00 S.B.  
Scale: 1" = 5'

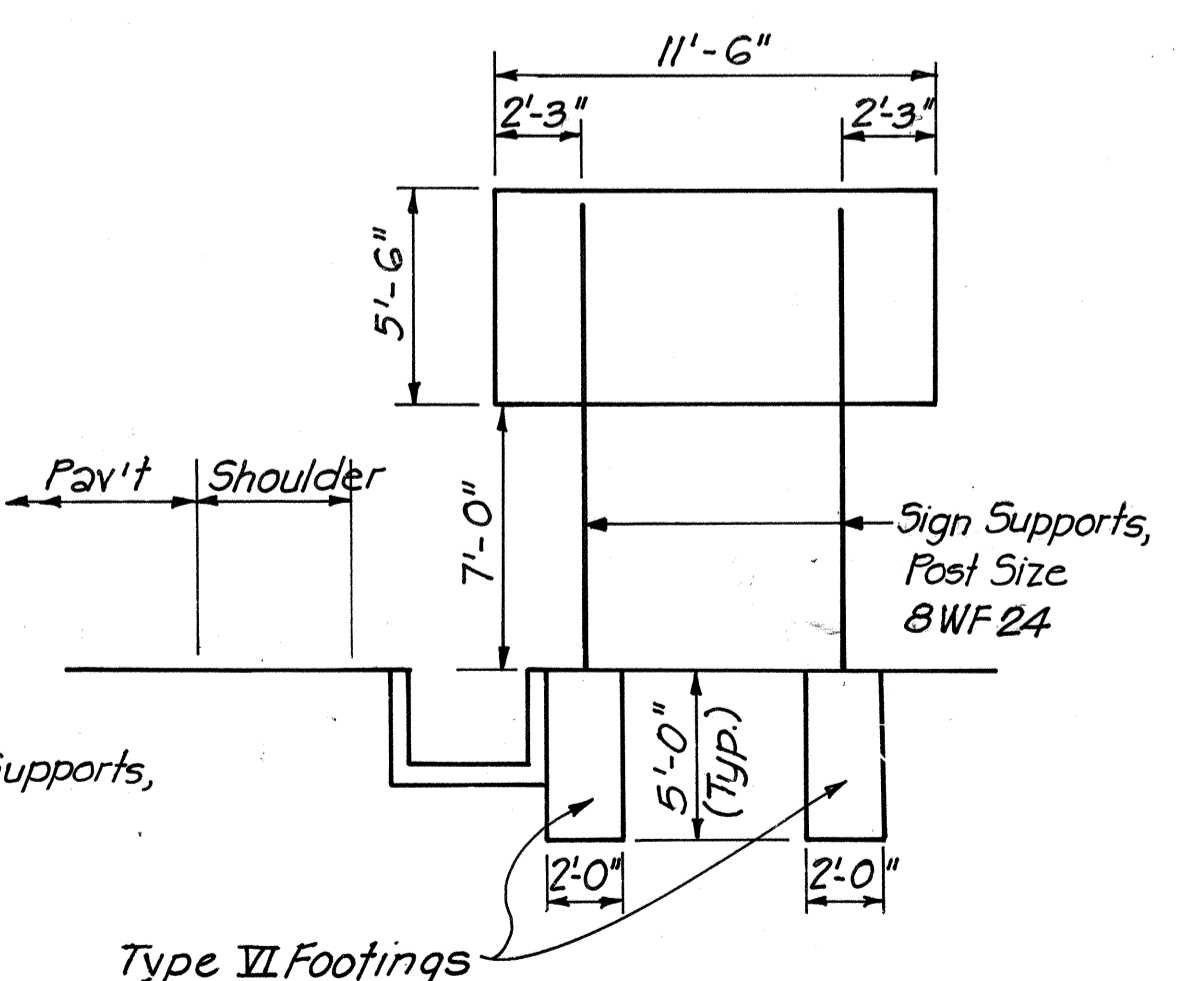
- NOTES**
- DESTINATION SIGNS (D)**
- Letters, numerals, borders & arrows shall have white reflective sheeting on aluminum cut-outs on green reflective sheeting.
  - For additional Notes pertaining to Destination Signs, See Sheet No. 51.
  - Summary Tables for all Destination Signs are located on Sheet No. 51.
  - For Sign Support Details see Sheet No. 60.



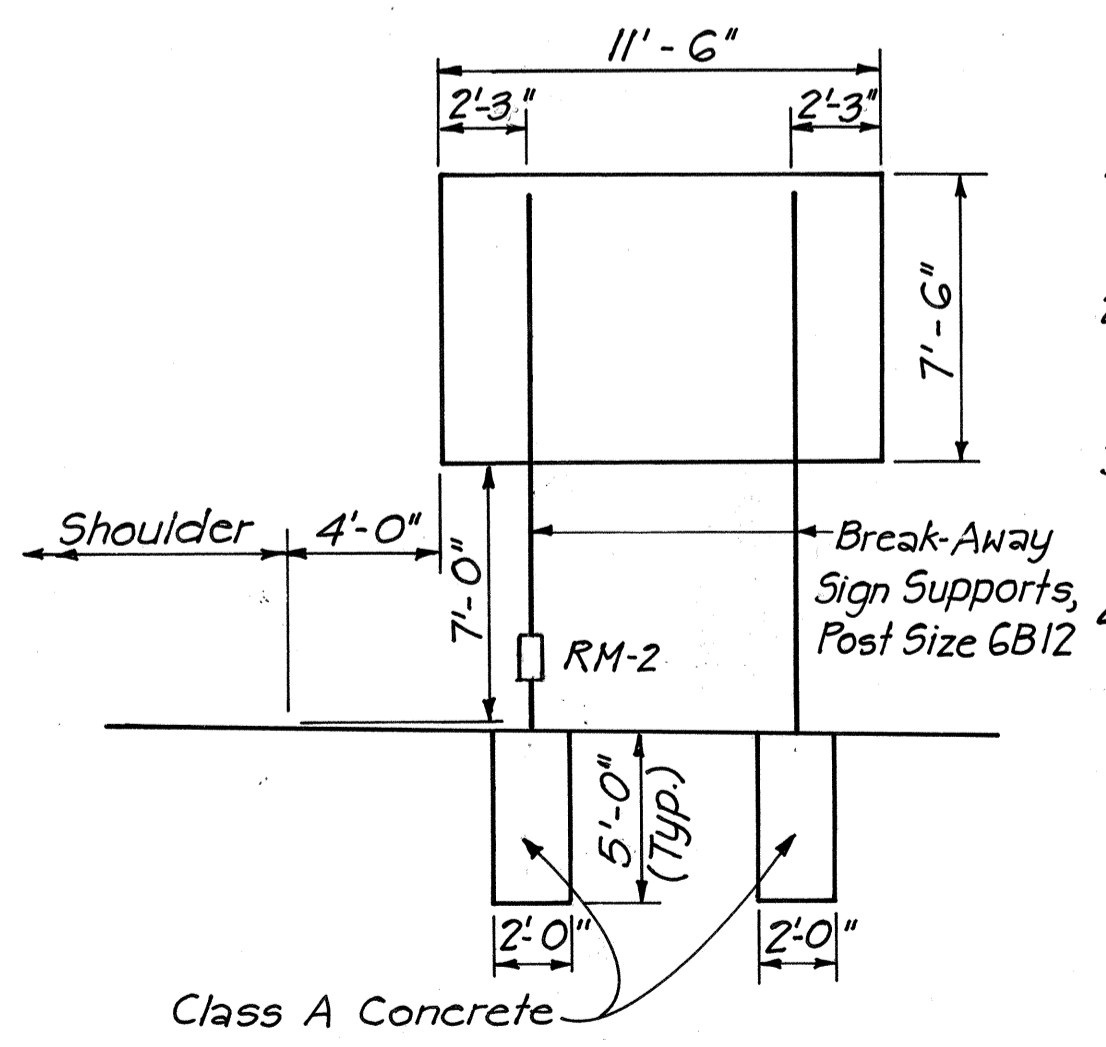
**ELEVATION D-3**  
Fort Weaver Road Sta. 146+00 N.B.  
Scale: 1" = 5'



**ELEVATION D-4**  
Fort Weaver Road Sta. 202+00 N.B.  
Scale: 1" = 5'

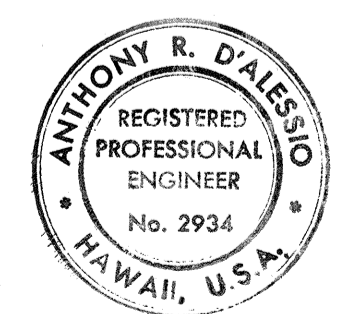


**ELEVATION D-5**  
Renton Road Sta. 17+20  
Scale: 1" = 5'



**ELEVATION D-6**  
Fort Weaver Road Sta. 188+00 S.B.  
Scale: 1" = 5'

DATE	_____
SURVEY PLOTTED BY	_____
PLAN	_____
DESIGNED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGN FACE AND MOUNTING DETAILS**

FORT WEAVER ROAD  
VICINITY OF MANGO TREE ROAD  
TO THE VICINITY OF RENTON ROAD

SCALE: AS SHOWN DATE: APRIL 1982  
SHEET NO. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	51	163

SUMMARY OF DESTINATION SIGNS		
SIGN NO.	MESSAGE	AREA (SQ. FT.)
D-4	EWA, WAIPAHAU, HONOLULU	82.50
D-5	HONOLULU, EWA BEACH	63.25
D-6	EWA, EWA BEACH, PUULOA	86.25
TOTAL		232.00

SUMMARY OF REFLECTOR MARKERS								
SHEET NO.	RM-1 CLEAR		RM-2 AMBER		RM-3 AMBER		RM-9 AMBER	
	W/POST	W/O POST	W/POST	W/O POST	W/POST	W/O POST	W/POST	W/O POST
2	8	-	-	4	-	-	6	-
3	6	-	-	6	4	-	-	-
4	4	-	10	2	-	-	-	-
TOTAL		18	-	10	12	4	6	-

SUMMARY OF WARNING SIGNS			
TYPE	MESSAGE	QUANTITY	
		W/POST	W/O POST
W2-1	INTERSECTION (GRAPHIC)	-	-
W2-2	INTERSECTION (GRAPHIC)	2	-
W2-1	CROSSWALK (GRAPHIC)	2	-
TOTAL		4	0

SUMMARY OF RAISED PAVEMENT MARKERS					
SHEET NO.	QUANTITY				
	TYPE A	TYPE C	TYPE D	TYPE H	
1	132	39	-	30	
2	264	69	-	70	
3	272	86	-	80	
4	364	122	11	70	
TOTAL		1032	316	11	250

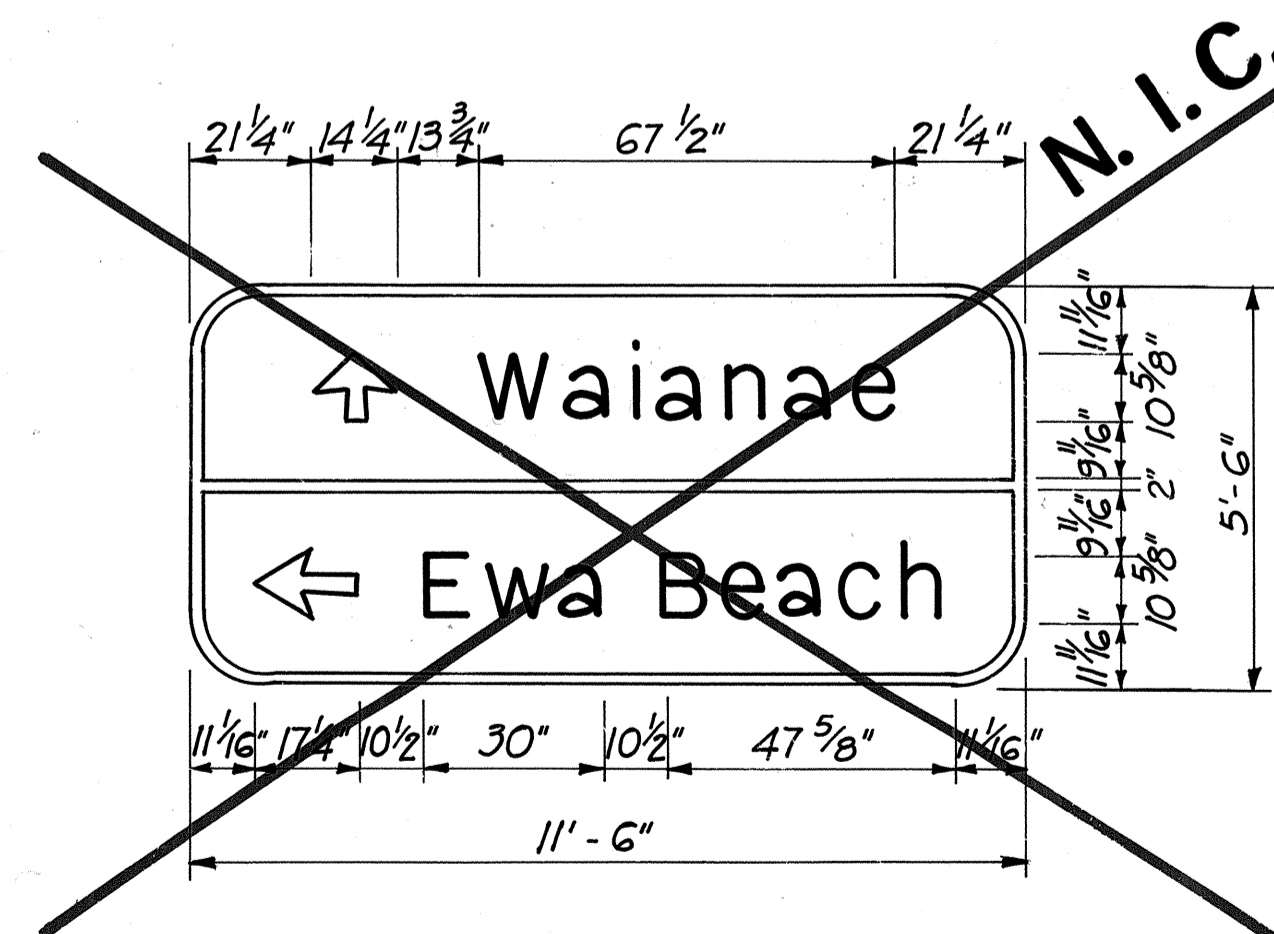
**BARRICADE NOTES**

- The Contractor shall construct, install and maintain the barricades at the locations shown on the plans.
- 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.
- The orange and white stripes shall slant downward toward the side on which traffic is to pass and shall be reflectorized with reflective sheeting.
- Both faces of the barricade rails shall be striped. See Standard Detail DT 800.
- Contractor may submit alternate designs for approval.
- Barricade details shall conform to the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, by the Federal Highway Administration and as amended.
- If wooden rails are used, 26 gauge galvanized steel sheet shall be first tacked on to the rails and then over laid with reflective sheeting.

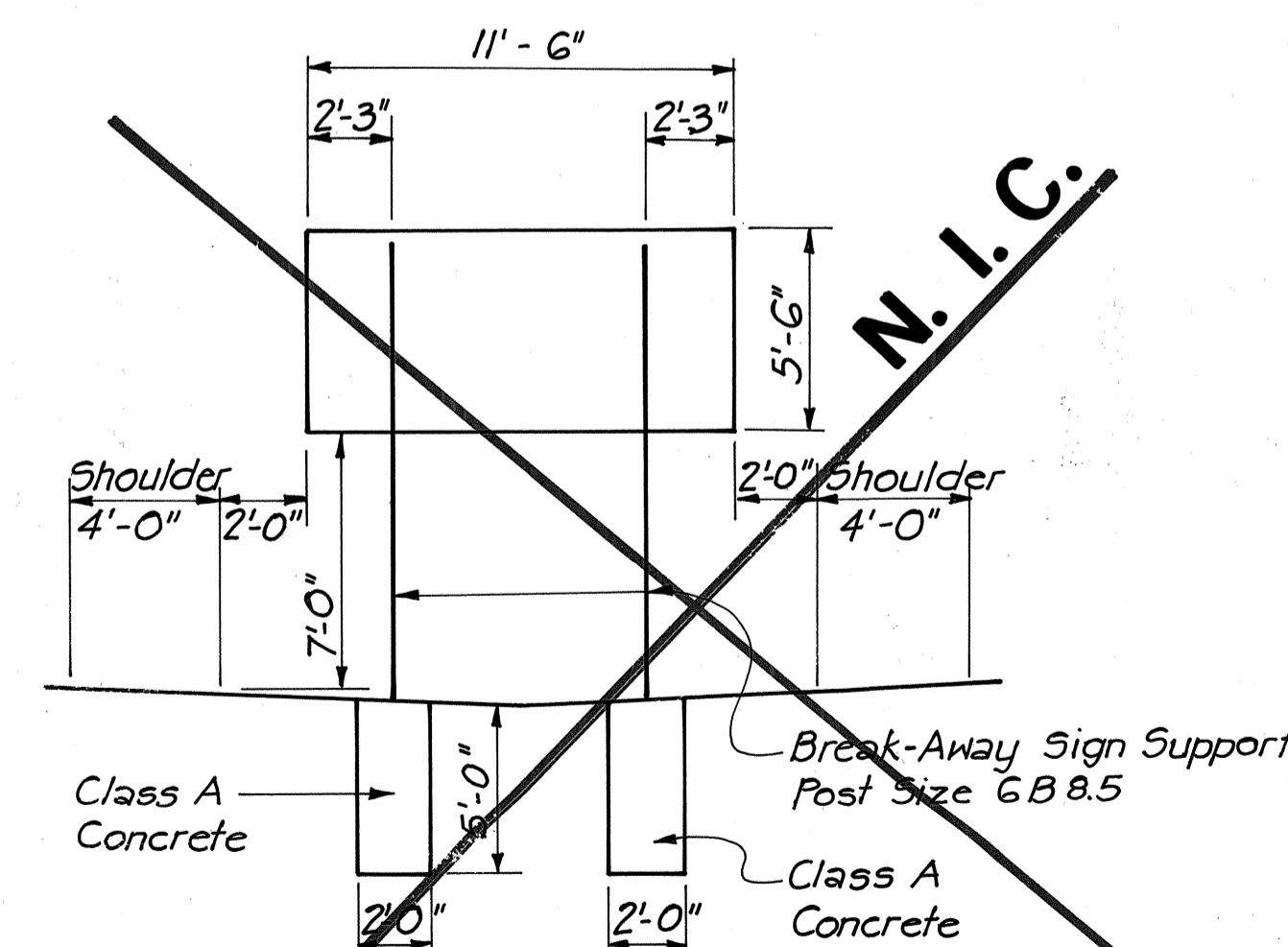
**NOTES**

- 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 shown on the Plans.
- Cut-outs shall be fastened to sign panel with aluminum blind rivets.
- All sign footings to be type VI, except where noted otherwise.
- See Standard Details for Spacing Layout of Raised Pavement Markers.
- Refer to respective Standard Detail Sheets for all Data pertaining to Regulatory and Warning Standard Signs.
- Unless noted otherwise, exact location of traffic signs shall be determined in the field by the Engineer.
- Additional Sign Face Details of Destination Signs are shown on Sheet No. 50.
- Contractor shall maintain all signs in good condition until Completion of Project.
- Construction warning and speed reduction signs on Ft. Weaver Road placed under previous Contract are to be relocated upon completion of previous Contract as directed by the Engineer. Such relocations are to be considered incidental to construction.
- All signs to be covered with polyethylene sheeting until completion of construction or until the applicable segment of roadway has been opened to traffic. Furnishing and maintaining sign covers shall be incidental to the signs.

SUMMARY OF REGULATORY SIGNS			
TYPE	MESSAGE	QUANTITY	
		W/POST	W/O POST
R11-1	KEEP OFF MEDIAN	1	1
R2-1(45)	SPEED LIMIT 45 MPH	4	-
R3-4	NO U TURN	1	1
R1-1	STOP	1	-
R3-2	NO LEFT TURN	2	-
R3-7(L)	LEFT LANE MUST TURN LEFT	1	-
R1-2	YIELD	1	-
R17-1	ON LEFT ARROW ONLY	1	-
R17-3	ON LEFT ARROW ONLY	1	-
TOTAL		13	2



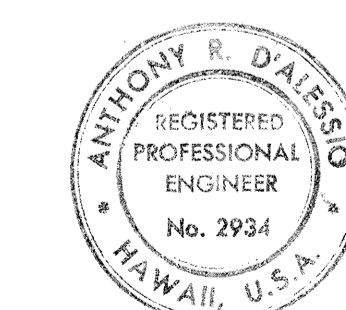
**D-7**



**ELEVATION D-7**

Farrington Hwy. Sta. 39+08 E  
Scale: 1" = 5'

NOTE: For Reinforcing Steel in Sign Footing, See Sheet No. \_\_\_\_\_



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Anthony R. D'Alessio*

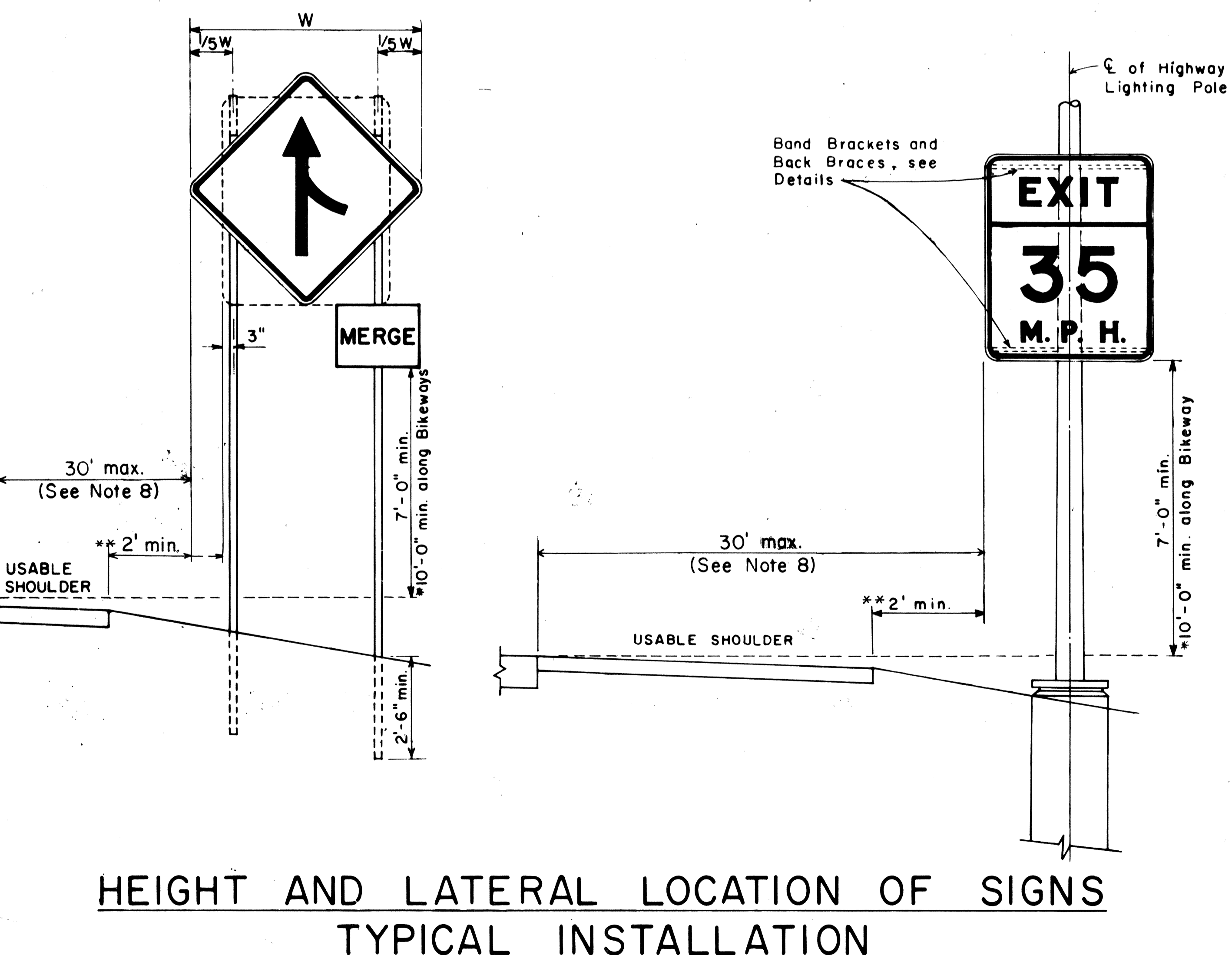
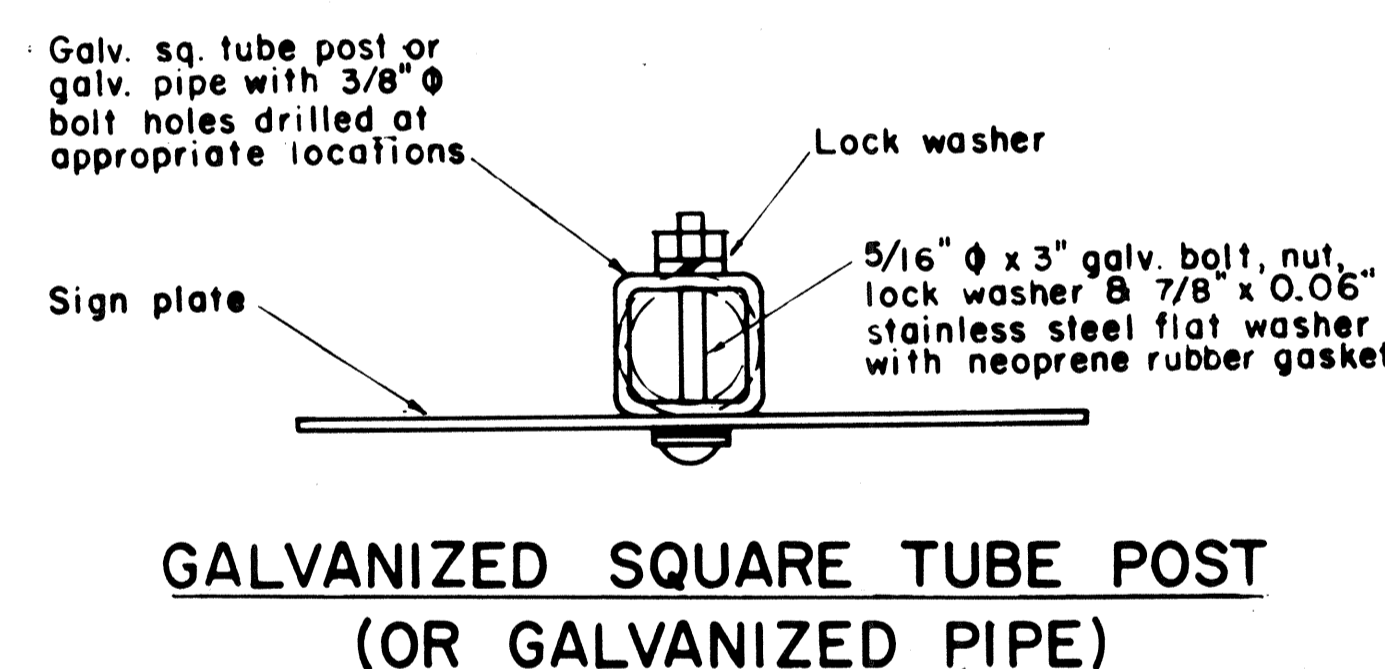
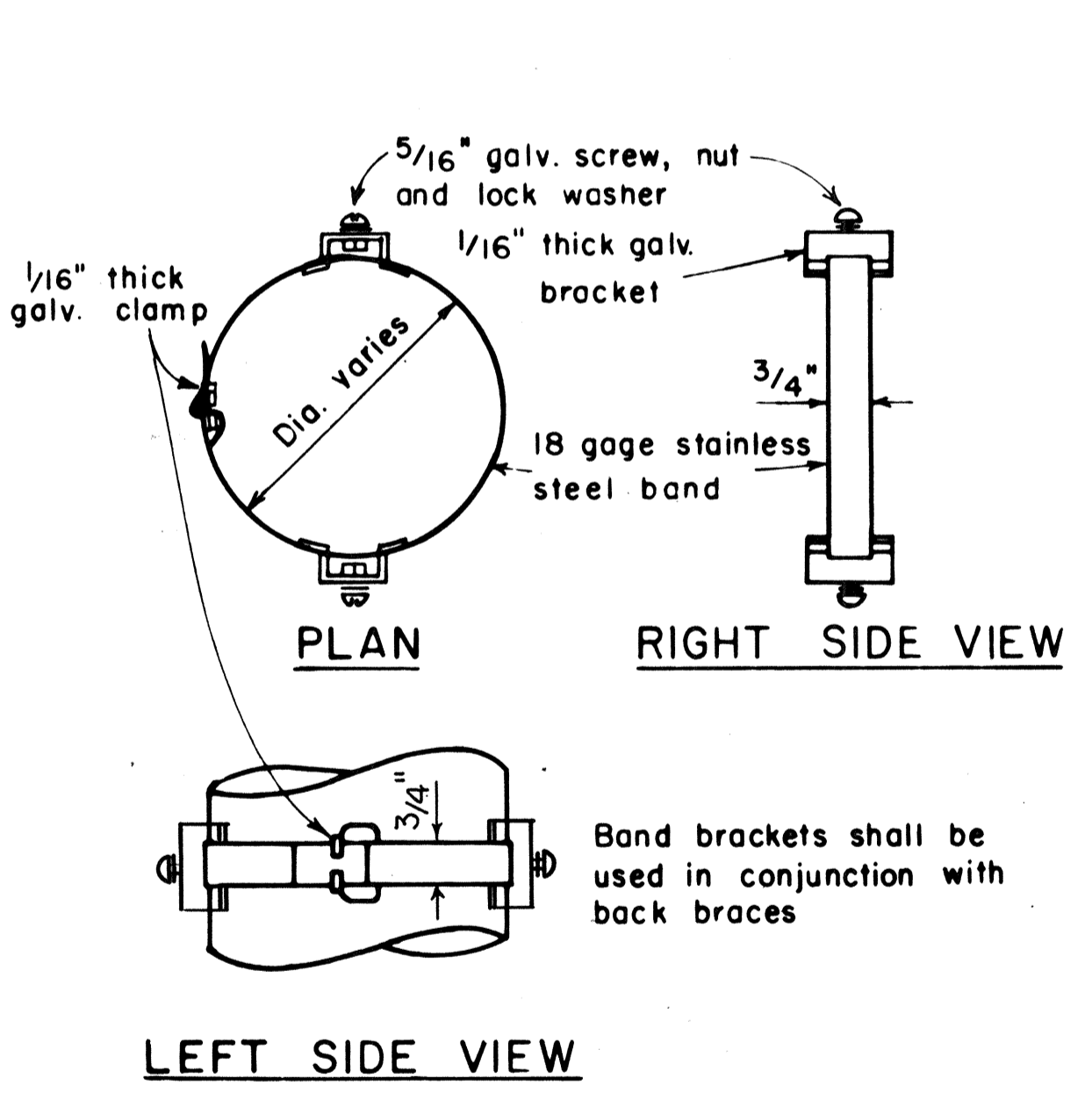
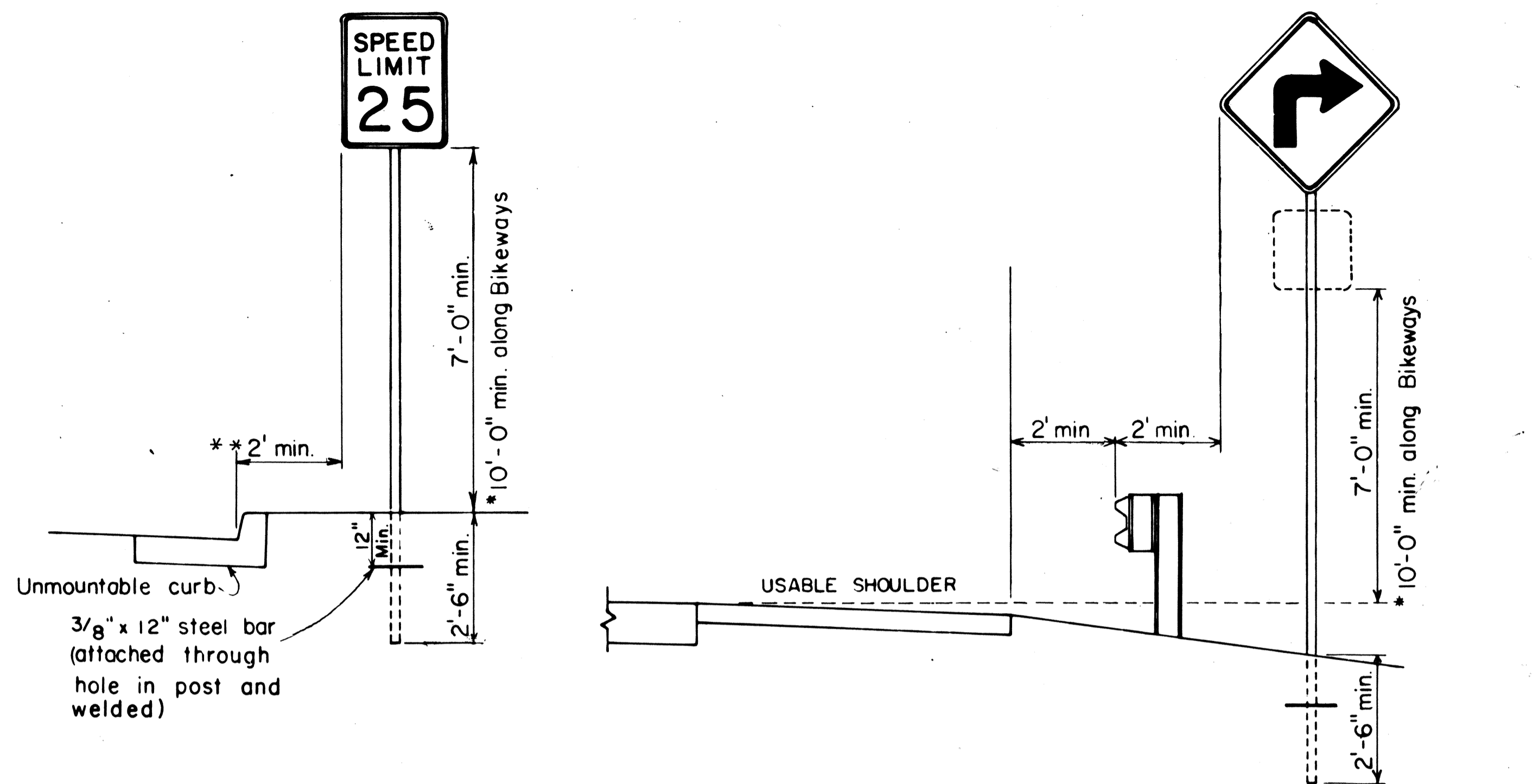
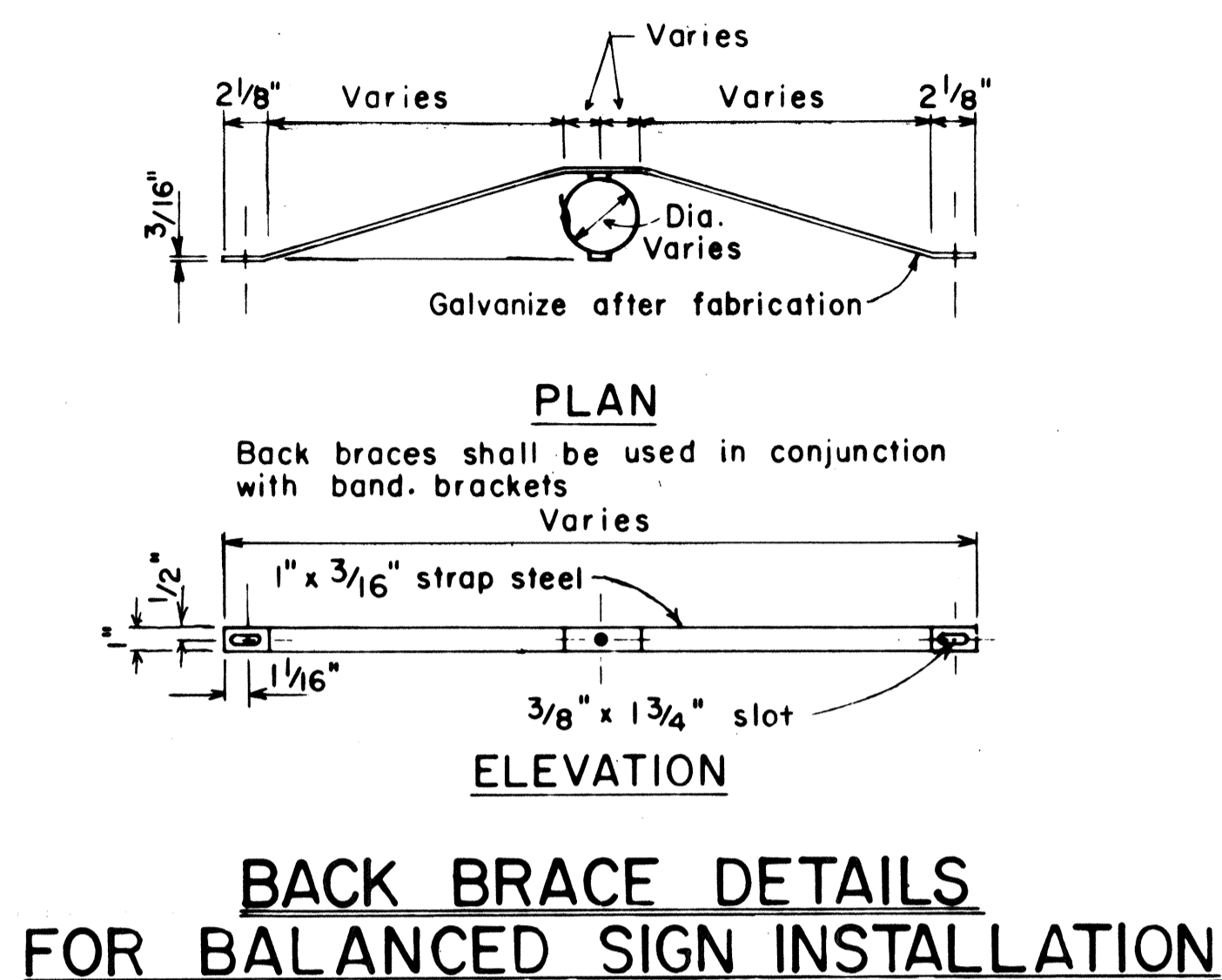
8/19/82	Revised quantities of Regulatory & Warning Signs, Reflector Markers & Raised Pavement Markers.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>SIGN FACE AND MOUNTING DETAILS</b> <b>SIGNING SUMMARIES</b>	
FORT WEAVER ROAD VICINITY OF MANGO TREE ROAD TO THE VICINITY OF RENTON ROAD	
SCALE:	DATE: APRIL 1982
SHEET NO. 2 OF 2 SHEETS	

SURVEY PLOTTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 ORIGINAL PLAN: \_\_\_\_\_  
 TRACED BY: \_\_\_\_\_  
 DESIGNED BY: TMS  
 QUANTITIES BY: AREO  
 CHECKED BY: AREO  
 NO. \_\_\_\_\_

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	76008-01-82 S-RS-0760(2)	1982	52	163

**GENERAL NOTES**

- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts except as noted below.
- Signs 48" and wider or larger than 10 sq. ft. in area may be mounted on other than two sign posts (i.e. on highway lighting poles)
  - Signs larger than 10 sq. ft. and less than 28 sq. ft. in area shall be mounted with a minimum of two sets of band brackets and back braces.
  - Signs larger than 28 sq. ft. in area shall be mounted with a minimum of three sets of band brackets and back braces.
- All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
- Sign posts shall extend 3 1/2" above each sign, where required, for attachment of City and County street name signs.
- (R) or (L) indicates right or left and shall be shown on the plans.
- See plans for special details.
- The minimum lateral distances shown are guidelines and shall be exceeded whenever possible. The Contractor shall place signs at the maximum practical lateral distance from the edge of the traveled way up to 30 feet and shall utilize protected locations whenever possible. Final locations of all signs shall be approved by the Engineer.
- 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 appropriate, signs for opposing directions shall be placed back to back.



**TYPICAL MOUNTING DETAILS**  
NOT TO SCALE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT-100 approved 12/30/69	H.T.	11/15/77
2	Revised depth of signpost	H.T.	5/8/79
3	Added Notes No. 8 & No. 9	H.T.	5/12/79
4	Revised Gen. Note #4 & Mounting Details	H.T.	4/23/80
5	Revised General Notes, Lateral Sign Locations and Mounting Details	H.T.	3/15/81

APPROVAL RECOMMENDED:  
*Etsuki Tanaka* 11/10/77  
TRAFFIC ENGINEER DATE

APPROVED:  
*Robert S. Gabeis* 11/15/77  
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**  
MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977

ORIGINAL PLAN  
DRAWN BY  
CHECKED BY

DATE

NOTE BOOK

QUANTITIES BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-QI-82 S-RS-0760(2)	1982	53	163

**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," 1972, and as amended.
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.
5. All signs shall be erected without educational plaques unless called for in the plans.

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

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

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1.	H.T.	10/10/74
3	Added General Note 5	H.T.	8/3/79

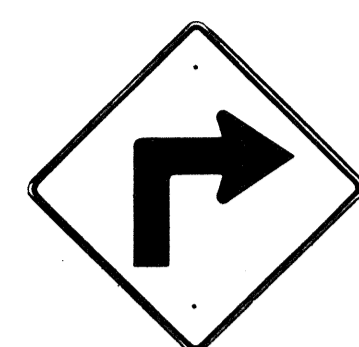
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS**  
**REGULATORY SIGNS**

NOT TO SCALE  
 SHEET No. 2 OF 15 SHEETS DT 101

DATE: \_\_\_\_\_  
 SURVEY PLOTTED BY: \_\_\_\_\_  
 PLAN DESIGNED BY: \_\_\_\_\_  
 TRACED BY: \_\_\_\_\_  
 NOTE BOOK DESIGNED BY: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 No. \_\_\_\_\_

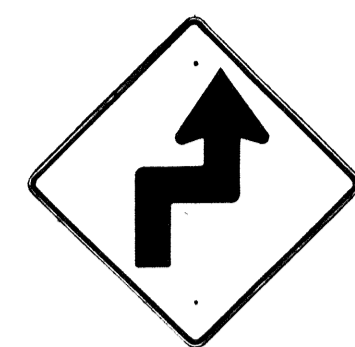
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII*	HAW.	7600B-01-82 S-RS-0760(2)	1982	54	163



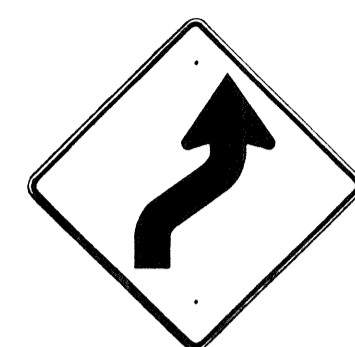
W1-1(R) 30"x30"  
W1-1(R)-A 48"x48"



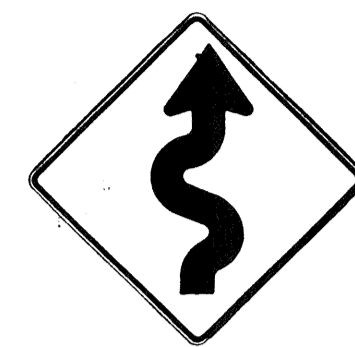
W1-2(R) 30"x30"  
W1-2(R)-A 48"x48"



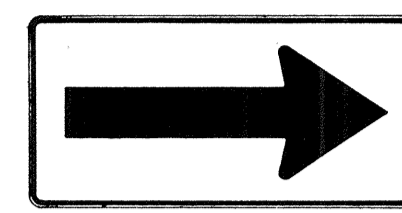
W1-3(R) 30"x30"  
W1-3(R)-A 48"x48"



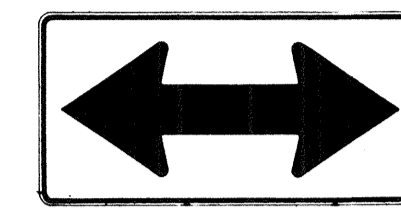
W1-4(R) 30"x30"  
W1-4(R)-A 48"x48"



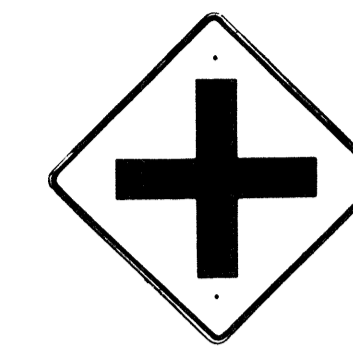
W1-5(R) 30"x30"  
W1-5(R)-A 48"x48"



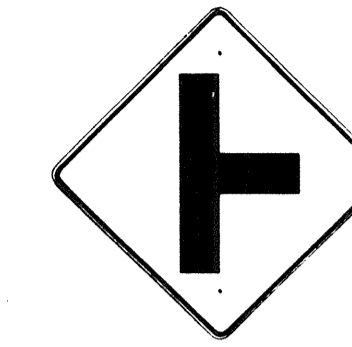
W1-6 48"x24"



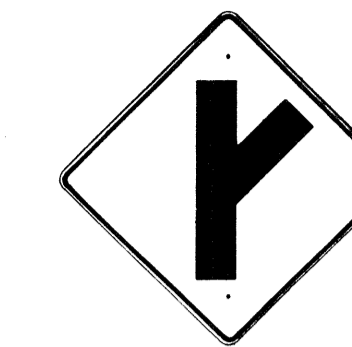
W1-7 48"x24"



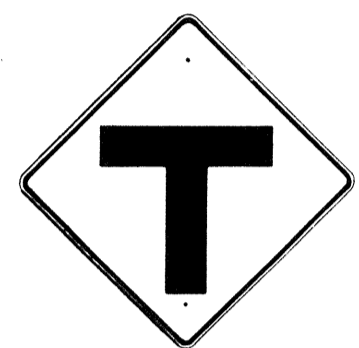
W2-1 30"x30"  
W2-1-A 48"x48"



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"



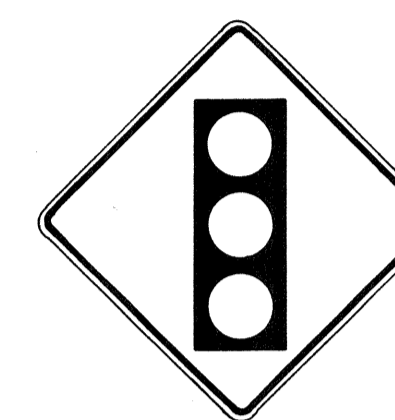
W2-5 30"x30"  
W2-5-A 48"x48"



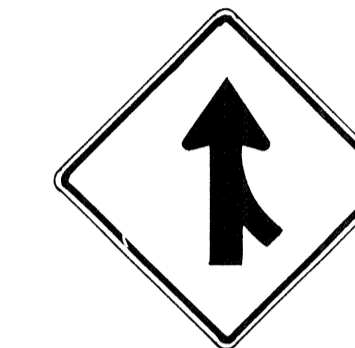
W3-1 30"x30"  
W3-1-A 36"x36"



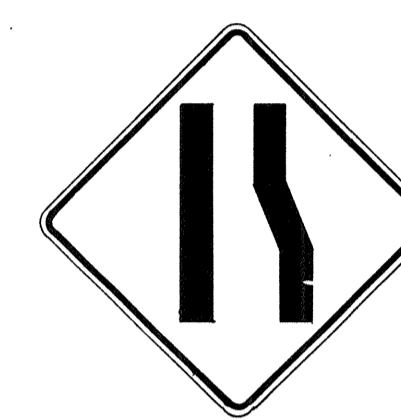
W3-2 30"x30"  
W3-2-A 36"x36"



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"



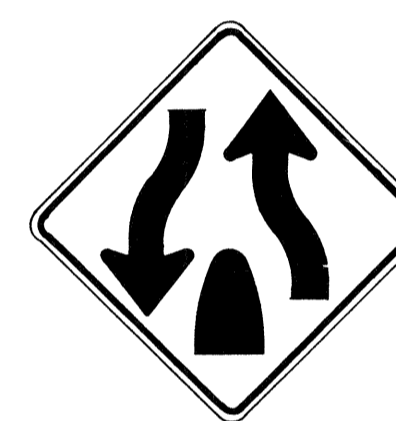
W5-2 30"x30"  
W5-2-A 36"x36"



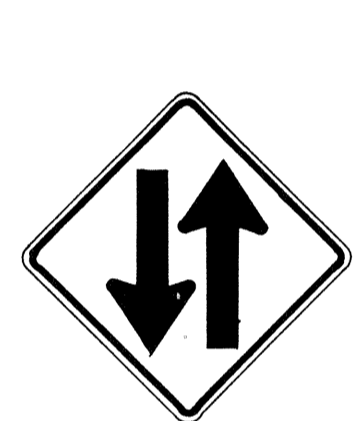
W5-3 36"x36"



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"



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"



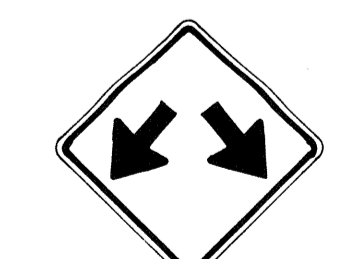
W11-2 30"x30"  
24"x18"  
W11-2-A 36"x36"  
24"x18"



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"



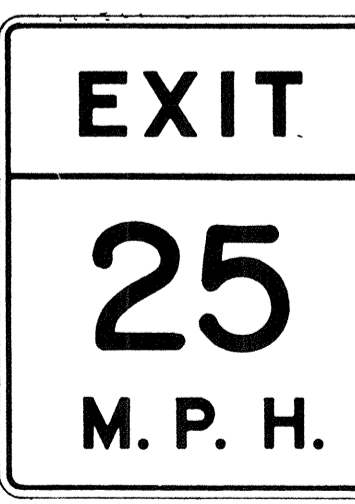
W12-1 24"x24"  
W12-1-A 36"x36"  
W12-1-B 48"x48"



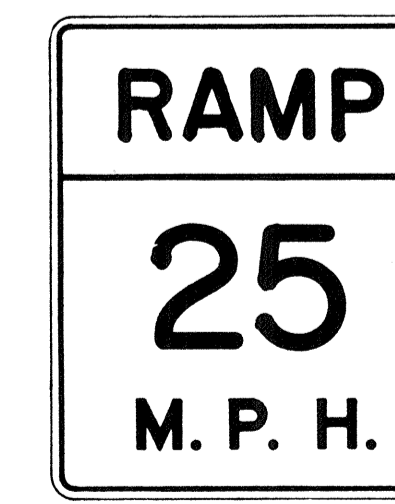
W12-2(12'-6") 36"x36"  
24"x18"



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"

### GENERAL NOTES

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

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

APPROVED:  
*Walter Belsick* 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
2	Revised General Note 1	H.T.	10/16/72
3	Revised General Note 5	MT	9-16-75
4	Revised General Note 5	H.T.	9-14-76
5	Added Note 1	H.T.	11-7-77

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**  
**WARNING SIGNS**

NOT TO SCALE

SHEET No. 3 OF 15 SHEETS DT 102

DATE: \_\_\_\_\_  
SURVEY PLOTTED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
QUANTITIES BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
No. \_\_\_\_\_

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	76008-01-82 S-RS-0760(2)	1982	55	163

General Notes

- Sign details shall conform to the latest editions of the following FHWA publications:
  - "Standard Alphabets for Highway Signs," and as amended.
  - "Standard Highway Signs," and as amended.
  - "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- All signs shall be reflectorized with reflective sheeting, unless otherwise specified.
- All signs shall have  $\frac{3}{8}$ " bolt holes drilled at appropriate locations.
- Numerals in ( ) indicate numerals to be inserted for sign message. (R) or (L) indicates right or left.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized with reflective sheeting.
- All signs shall be erected without educational plaques unless called for in the plans.

ALL WAY  
R1-4 18"x 6"

REDUCED SPEED  
35  
AHEAD  
R2-5d(35) 24"x 30"  
R2-5d(35)-A 48"x 60"

SPEED LIMIT ENFORCED BY VASCAR  
4" Series D  
4" Series C  
3" Series D  
5" Series C  
R2-10 24"x 30"

CENTER LANE ONLY  
R3-9b 24"x 36"

BUS STOP  
R7-107(R) 12"x 24"

RESERVED PARKING  
R7-8 12"x 18"  
R7-8-A 24"x 30"

NO PARKING ANY TIME  
4" Series C  
1 1/2"  
R8-3a 24"x 24"  
24"x 18"  
R8-3a-A 48"x 48"

NO PED XING  
R9-3a 18"x 18"  
18"x 12"  
R9-3a-A 24"x 24"  
24"x 18"

USE CROSSWALK  
R9-3b(R) 18"x 12"

USE CROSSWALK  
R9-3b(L) 18"x 12"

NO TURN ON RED  
R10-11a 24"x 30"

TURN RIGHT ANY TIME WITH CAUTION  
4" Series C  
R16-1 24"x 30"

NO LEFT TURN ON RED  
4" Series D -  
3" Series D -  
2" Series D -  
3" Series D -  
R16-3 18"x 24"

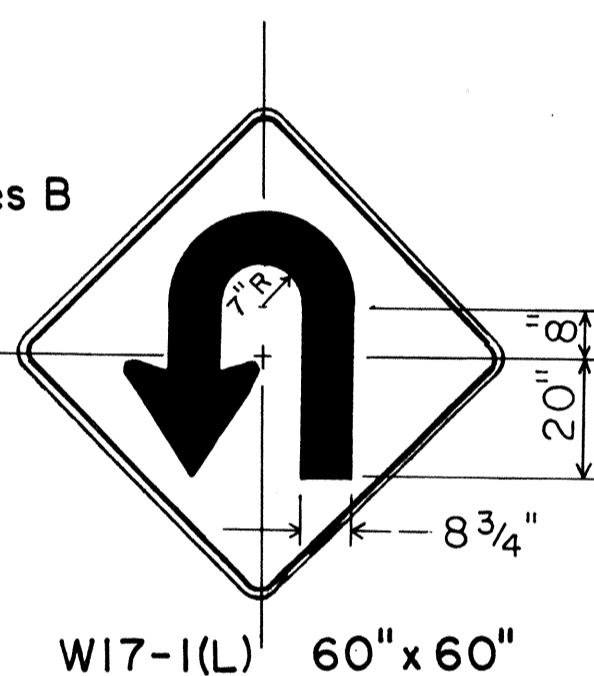
NO RIGHT TURN ON RED  
R16-4 18"x 24"

UNLICENSED VEHICLES BICYCLES, CYCLES UNDER 5 H P, PEDESTRIANS KEEP OUT FREEWAY  
3" Series C  
4" Series E  
R16-5 36"x 42"

TURN AHEAD  
8" Series F  
5" Series D  
R16-6 24"x 30"

TURN OK  
8" Series F  
5" Series D  
R16-7 24"x 30"

MOTOR-DRIVEN CYCLES PROHIBITED  
4" Series B  
R5-8 30"x 24"



STOP AHEAD  
W3-1a 36"x 36"  
24"x 18"  
W3-1a-A 48"x 48"  
24"x 18"

YIELD AHEAD  
W3-2a 36"x 36"  
24"x 18"  
W3-2a-A 48"x 48"  
24"x 18"

STOP AHEAD WHEN FLASHING  
6" Series C  
W3-4 48"x 48"

TRUCK CROSSING  
W8-6 30"x 30"  
W8-6-A 36"x 36"

THRU TRAFFIC MERGE LEFT  
6" Series E  
W9-3(L) 48"x 48"

EQUESTRIAN XING  
W11-7 36"x 36"  
24"x 18"  
W11-7-A 48"x 48"  
24"x 18"

FIRE STATION  
W11-8 36"x 36"  
24"x 18"  
W11-8-A 48"x 48"  
24"x 18"

W11-9 36"x 36"  
W11-9-A 48"x 48"

LIMITED SIGHT DISTANCE  
W14-4 36"x 36"  
W14-4-A 48"x 48"

DELAYED GREEN  
4" Series C  
W15-1 24"x 24"

ADVANCE GREEN  
W15-2 24"x 24"

END FREEWAY 1/2 MI  
8" Series E  
CW16-1(1/2) 60"x 60"

RIGHT LANE EXIT ONLY  
8" Series E  
W18-1 48"x 60"

SCHOOL BUS STOP AHEAD  
S1-1 36"x 36"

S2-1 36"x 36"

S3-1 30"x 30"

8:00 AM TO 3:30 PM  
S4-1 24"x 10"

WHEN CHILDREN ARE PRESENT  
S4-2 24"x 10"

SCHOOL  
S4-3 24"x 8"

WHEN FLASHING  
S4-4 24"x 10"

SIDEWALK CLOSED  
7" Series D  
CW23-4 48"x 48"

USE SIDEWALK  
4" Series C  
R18-1 24"x 18"

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

APPROVAL RECOMMENDED:  
*Eishi Tanaka* 5/2/78  
TRAFFIC ENGINEER DATE

APPROVED:  
*Andrew Z. Zakechis* 5/3/78  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT103 approved 3/20/72	H.T.	5/3/78
2	Added General Note 6	H.T.	11/4/78

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**

MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978  
SHEET No. 4 OF 15 SHEETS. DT 103

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	56	163



CW20-1a 48" x 48"



CW20-2d 48" x 48"



CW20-3b 48" x 48"



CW20-4d 48" x 48"



CW20-5d(L) 48" x 48"



CW20-7c 48" x 48"



CW21-1 30" x 30"



CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



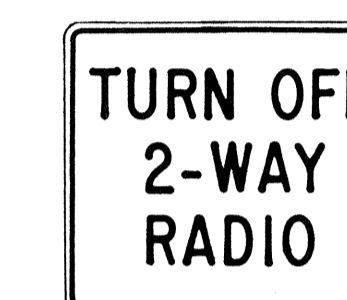
CW21-5 30" x 30"



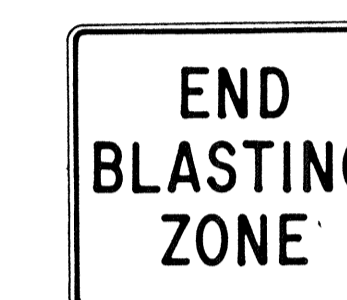
CW21-6 30" x 30"



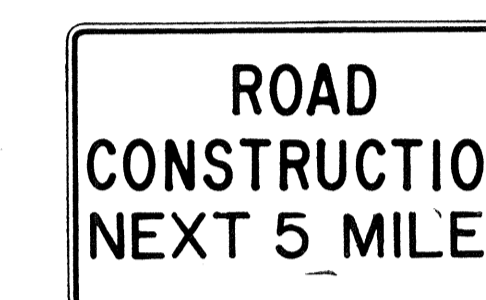
CW22-1b 48" x 48"



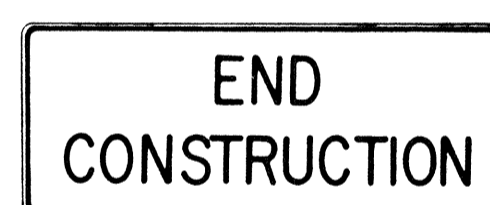
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



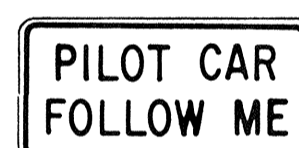
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



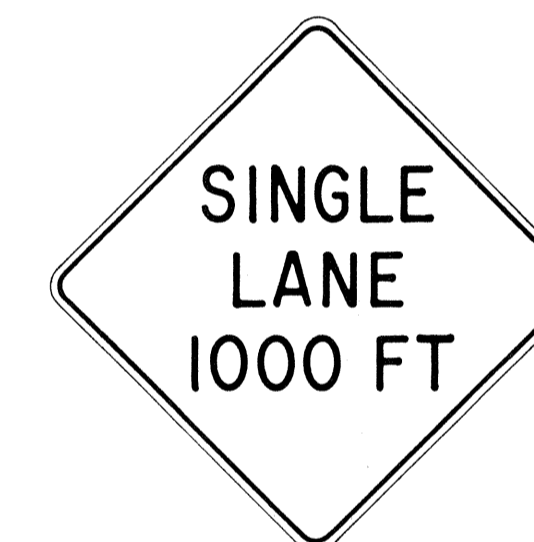
CM4-10(R) 48" x 18"



CG20-4 36" x 18"



CW23-1 36" x 36"



CW23-2b 48" x 48"



CW23-3(R) 48" x 48"

**GENERAL NOTES**

- 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.
- All construction signs shall be reflectorized.
- All construction signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in ( ) indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- 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.

APPROVAL RECOMMENDED:  
*Etsuko Tanaka* 3/21/12  
TRAFFIC ENGINEER DATE

APPROVED:  
*Walter Salsich* 2/23/12  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 104 Approved 12-30-69	HT	3/23/12
2	Revised General Note 1	HT	10/16/14
3	Revised General Note 2	HT	9-16-15
4	Revised General Note 2 and sign CG20-1(5)	HT	9-14-16

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**  
**CONSTRUCTION SIGNS**

NOT TO SCALE

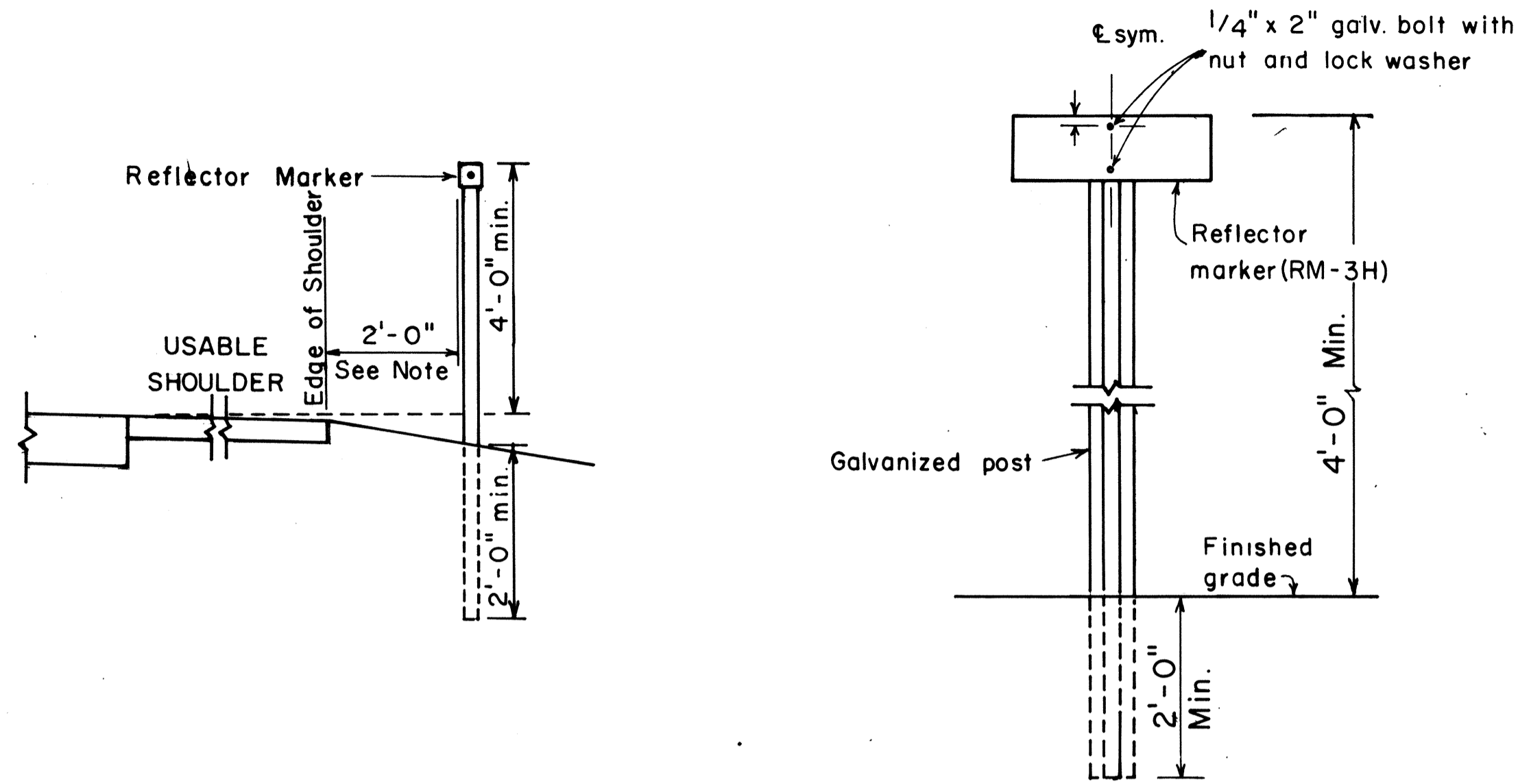
SHEET No. 5 OF 15 SHEETS DT 104

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

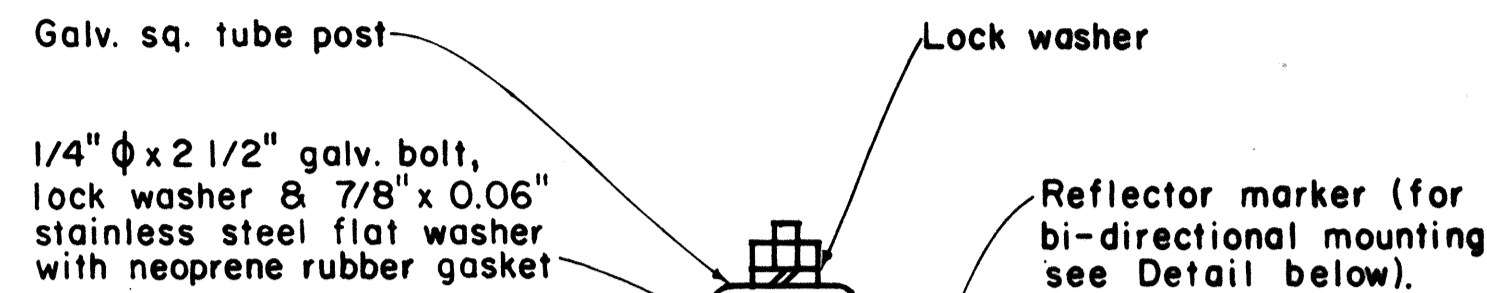
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	76008-31-62 S-RS-0750(2)	1982	57	163

**GENERAL NOTES:**

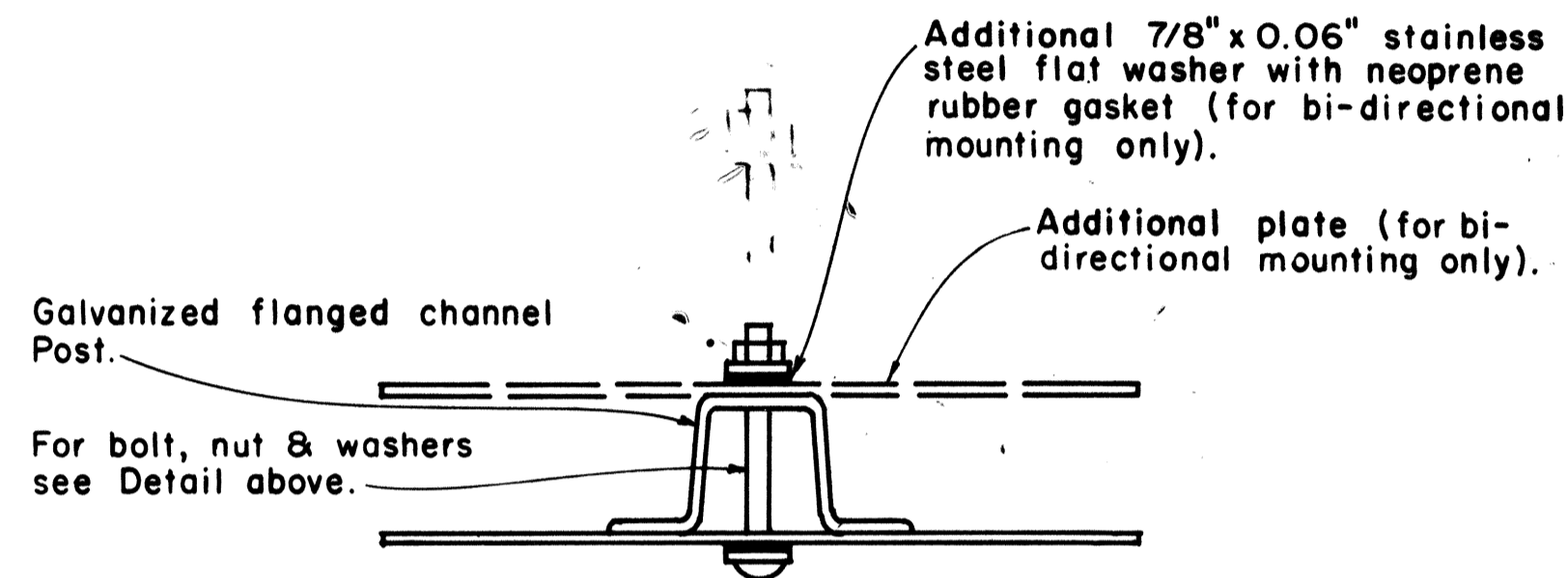
1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
2. (R) or (L) indicates right or left and shall be as shown on the plans.
3. Reflector markers RM-1 and RM-2 shall be:
  - a) Yellow if placed along the left edge of divided 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.



**REFLECTOR MARKER MOUNTING DETAIL**

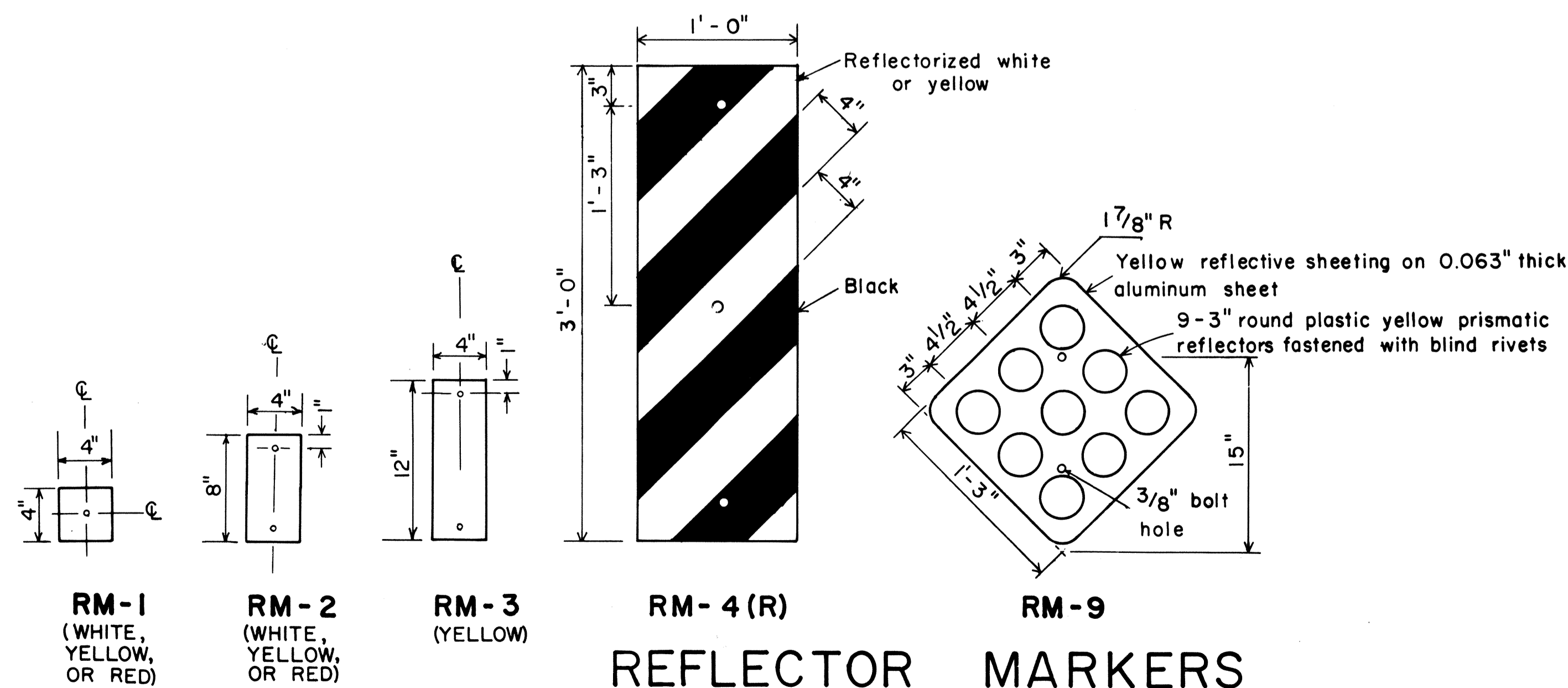


**GALVANIZED SQUARE TUBE POST**



**GALVANIZED FLANGED CHANNEL POST**

**TYPICAL MOUNTING DETAILS**



**REFLECTOR MARKERS**

APPROVAL RECOMMENDED:  
*Erich Tanaka* 11/17/77  
 TRAFFIC ENGINEER DATE

APPROVED:  
*Herbert R. Sakai* 11/15/77  
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised Mounting Details	H.T.	4/25/80

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

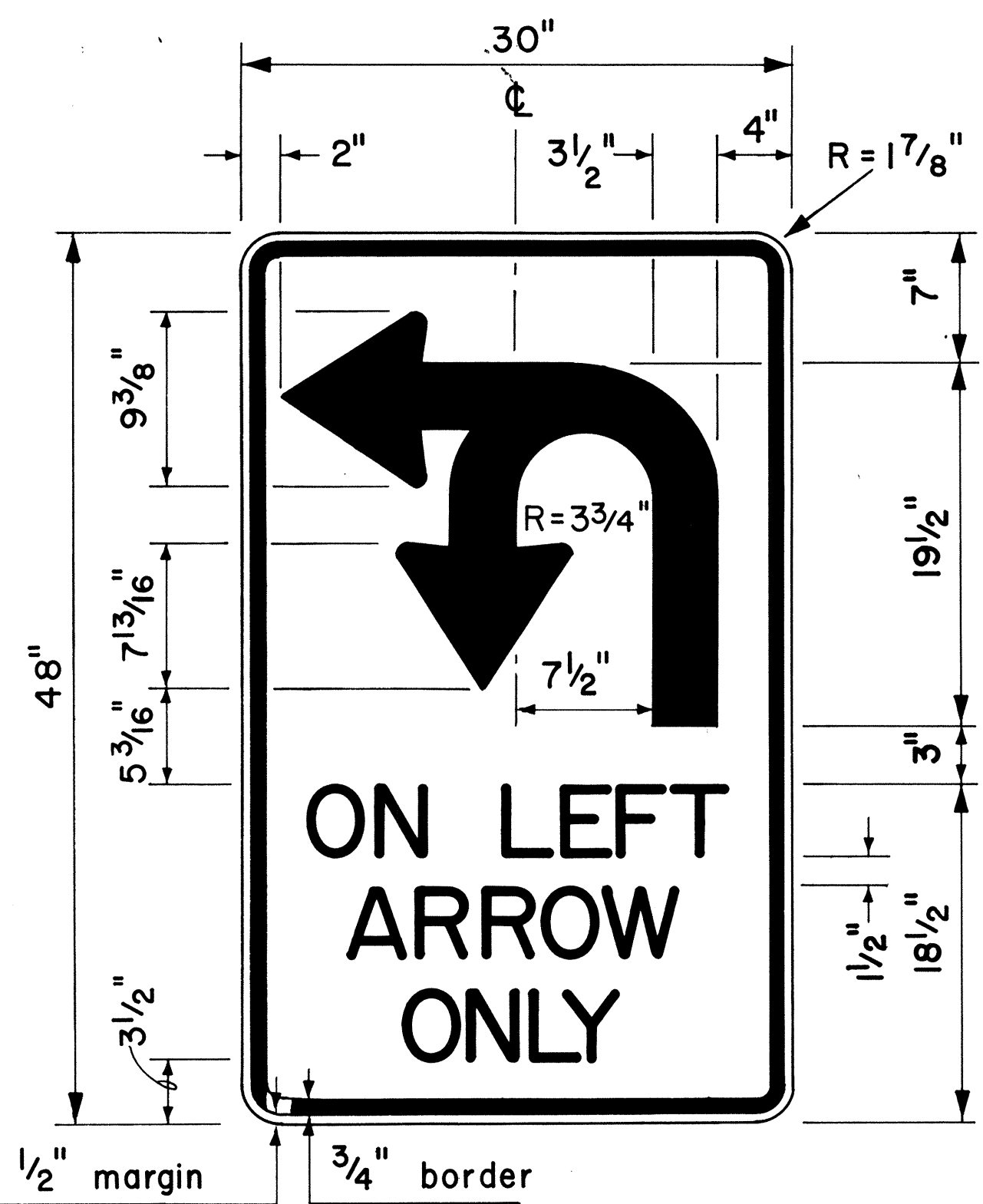
**STANDARD DETAILS**  
 MISCELLANEOUS REFLECTOR MARKERS

Not to scale June, 1977

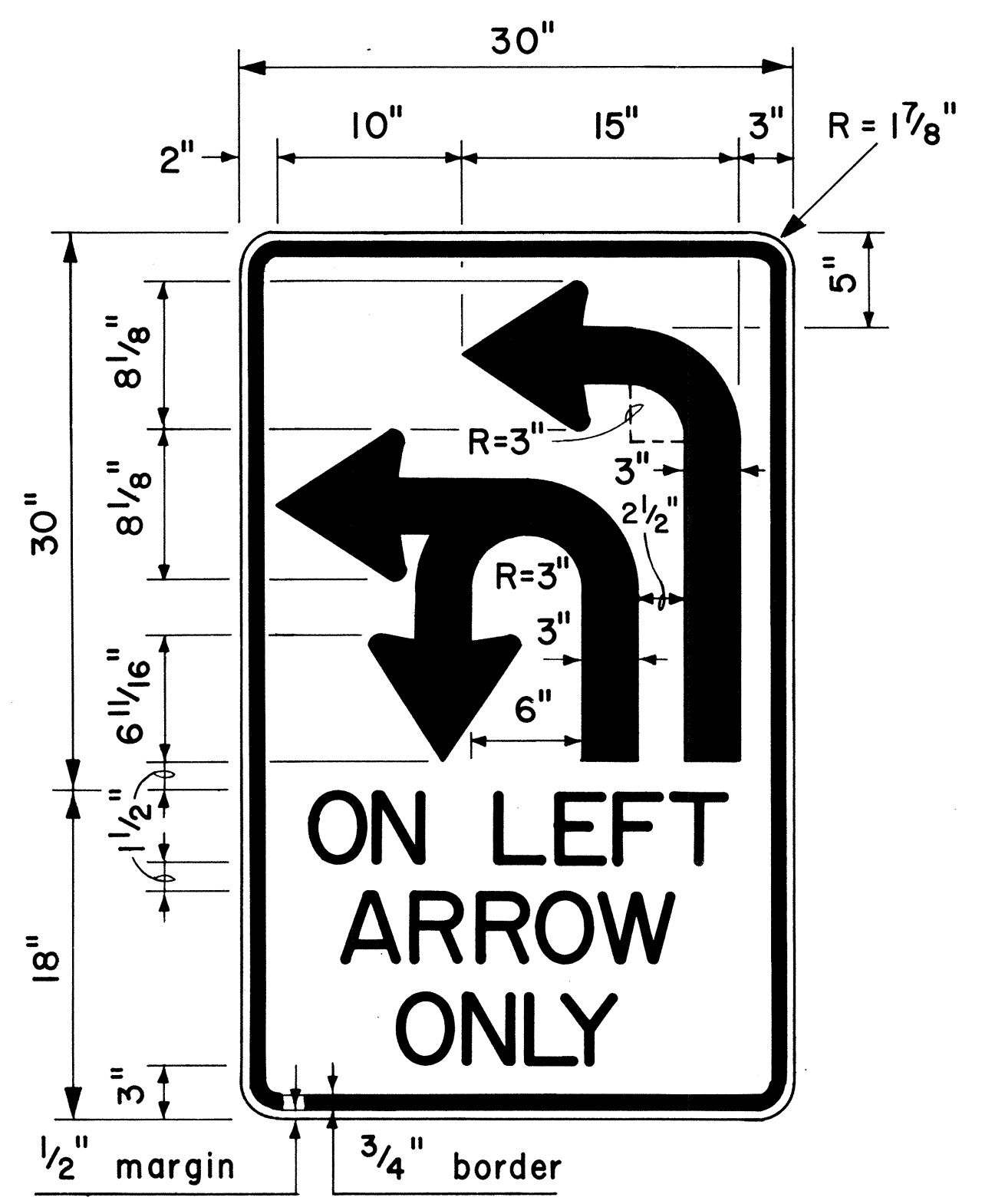
SHEET NO. 6 OF 15 SHEETS DT 110

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

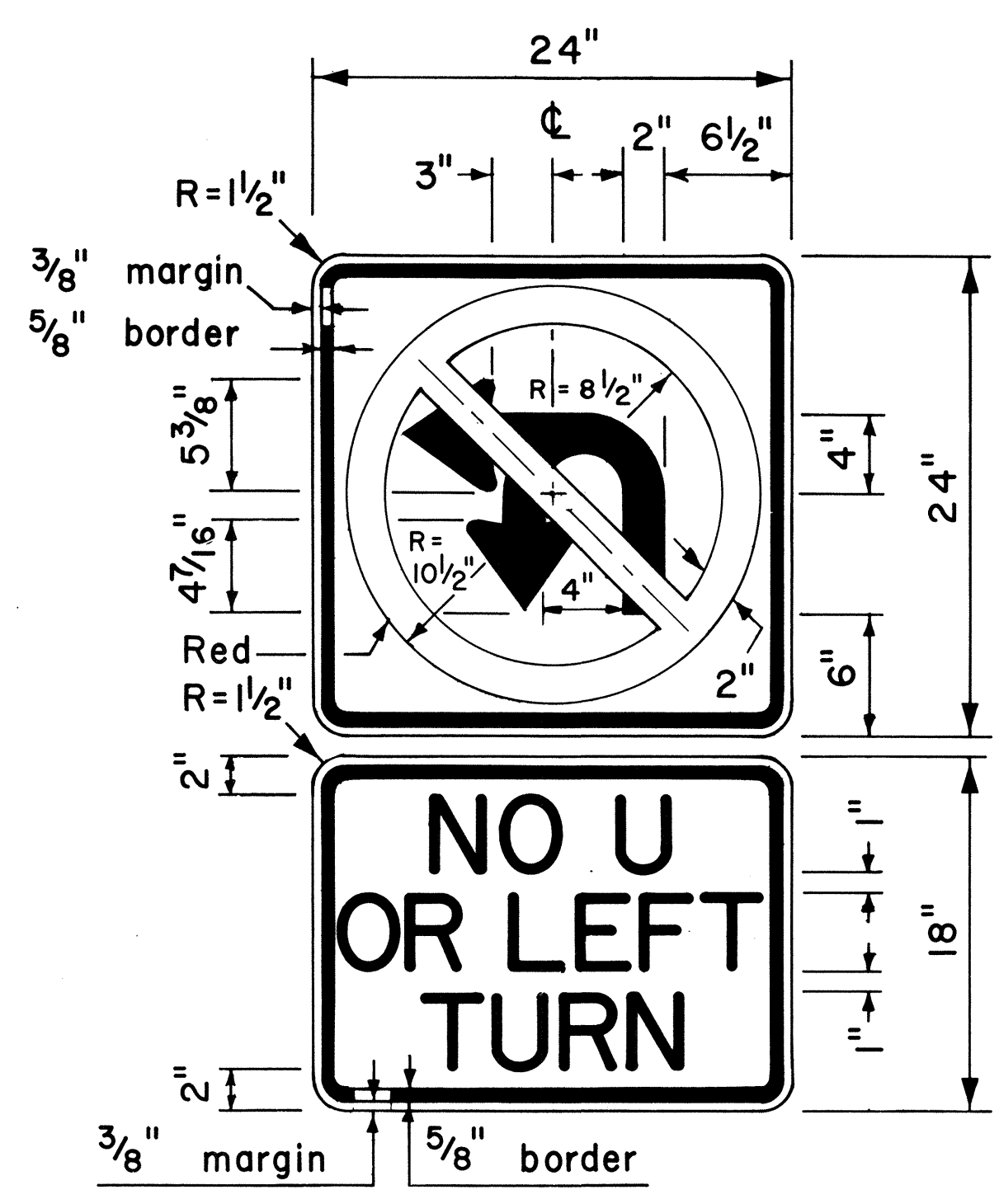
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	58	163



4" Series D Letters  
**R17-1**



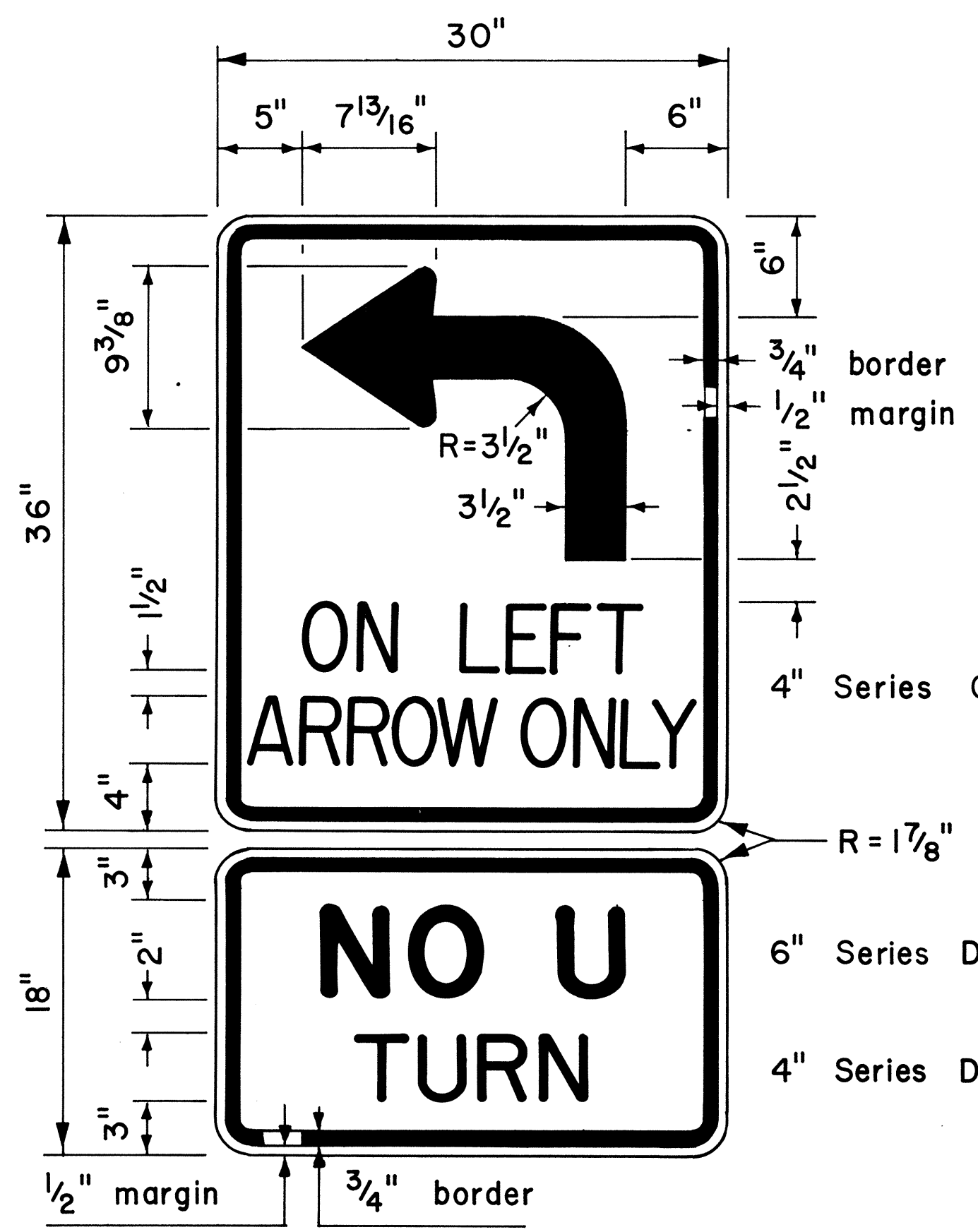
4" Series D Letters  
**R17-2**



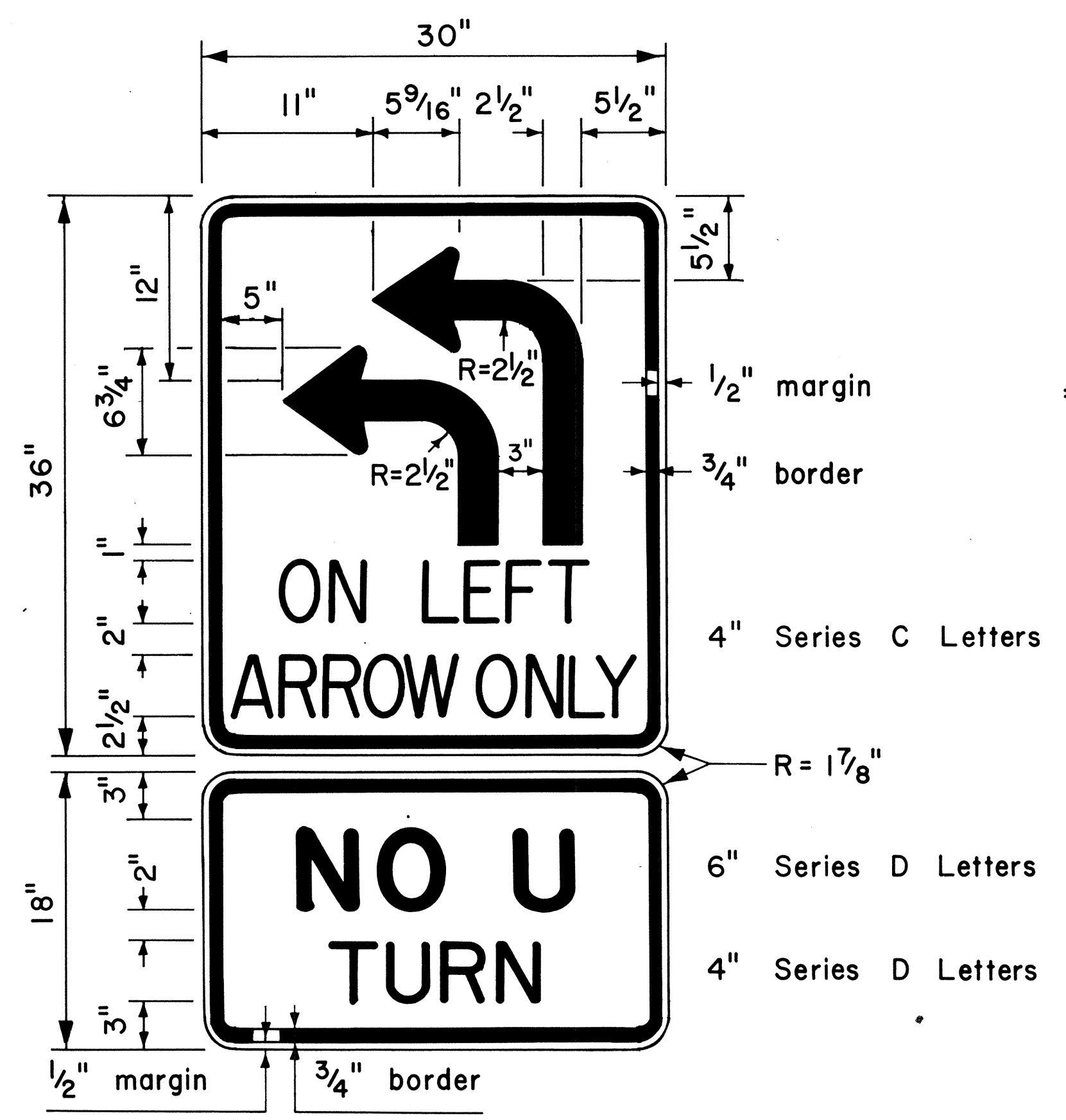
4" Series D Letters  
**R3-4b**

**GENERAL NOTES**

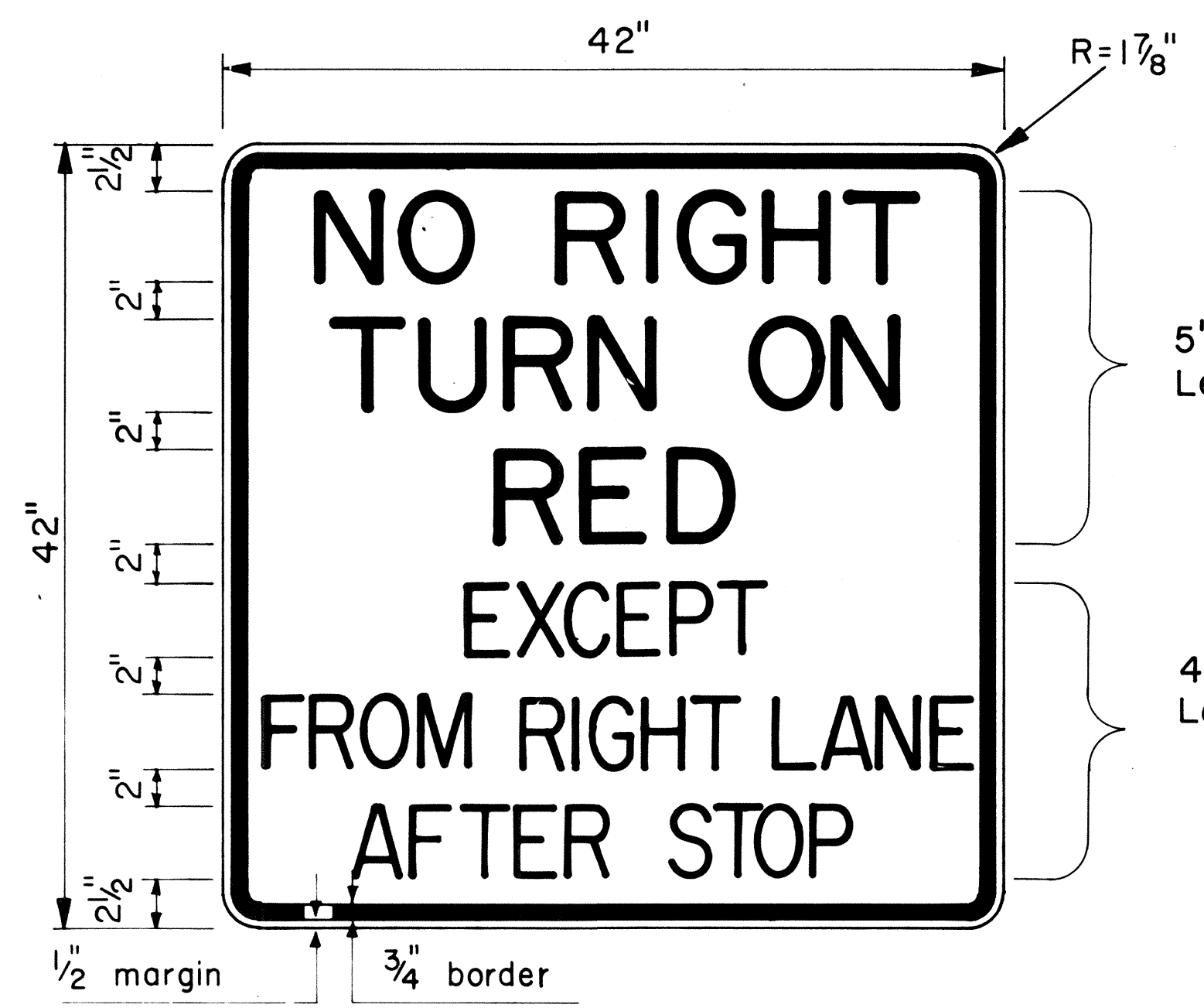
1. Sign details shall conform to the latest editions of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and "Standard Highway Signs," and as amended.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.



**R17-3**



**R17-4**



**R10-11d**

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:  
*Eishi Tanaka* 8/1/77  
 TRAFFIC ENGINEER DATE

APPROVED:  
*Harbert Zafsch* 8/16/77  
 ASSISTANT CHIEF, ENGINEERING DATE

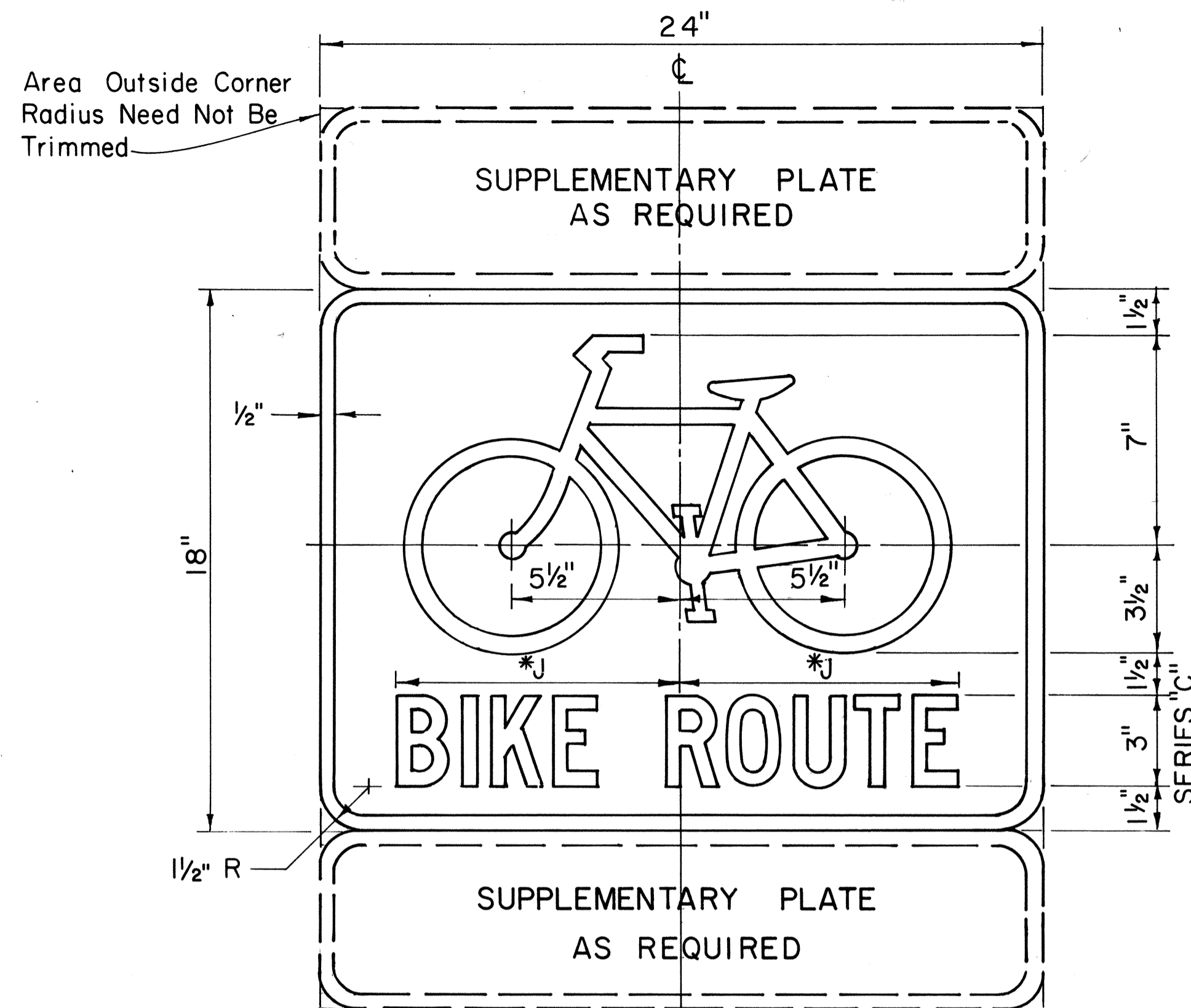
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 LAND TRANSPORTATION FACILITIES DIVISION

**STANDARD DETAILS**  
 MISCELLANEOUS  
 INTERSECTION SIGNS

Scale: 1/2" = 1'-0" Date: Aug., 1977  
 SHEET No. 7 OF 15 SHEETS DT 112

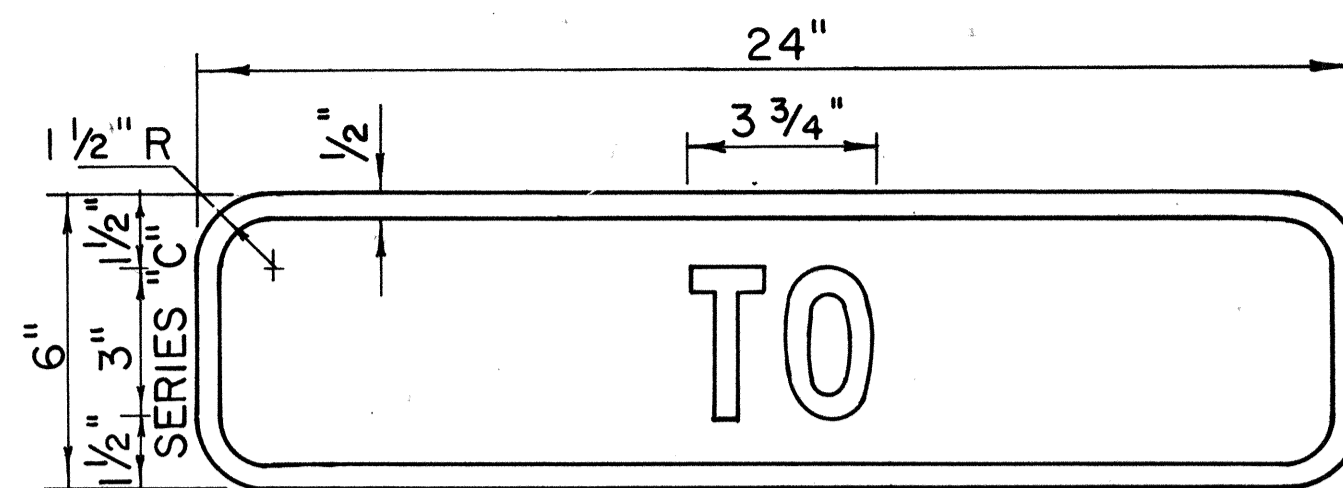
ORIGINAL PLAN	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7500B-01-82 S-RS-0760(2)	1982	59	163

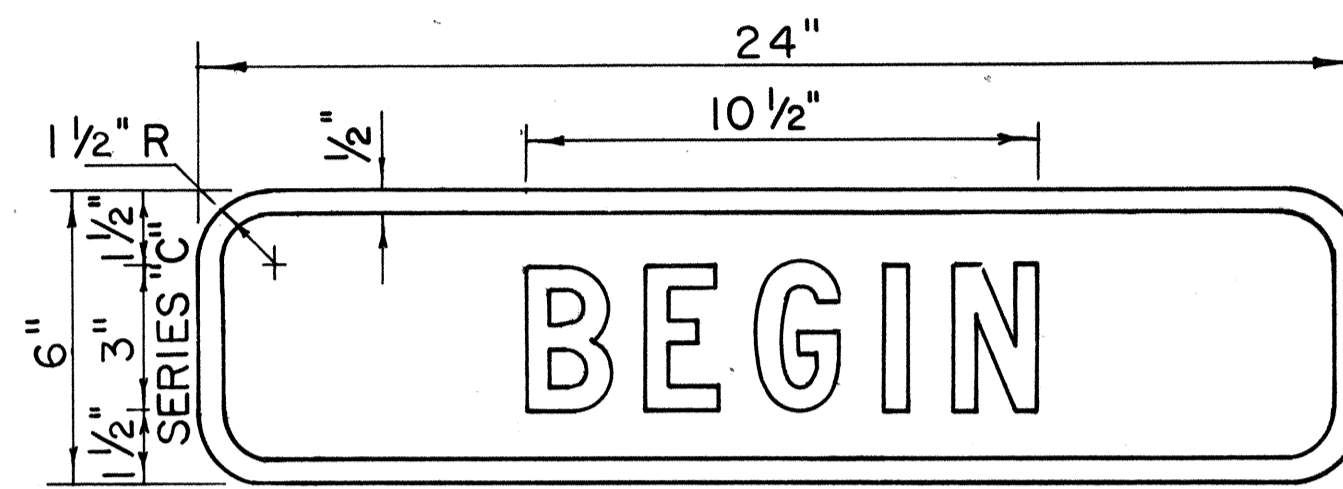


DII-1  
**BIKE ROUTE SIGN**

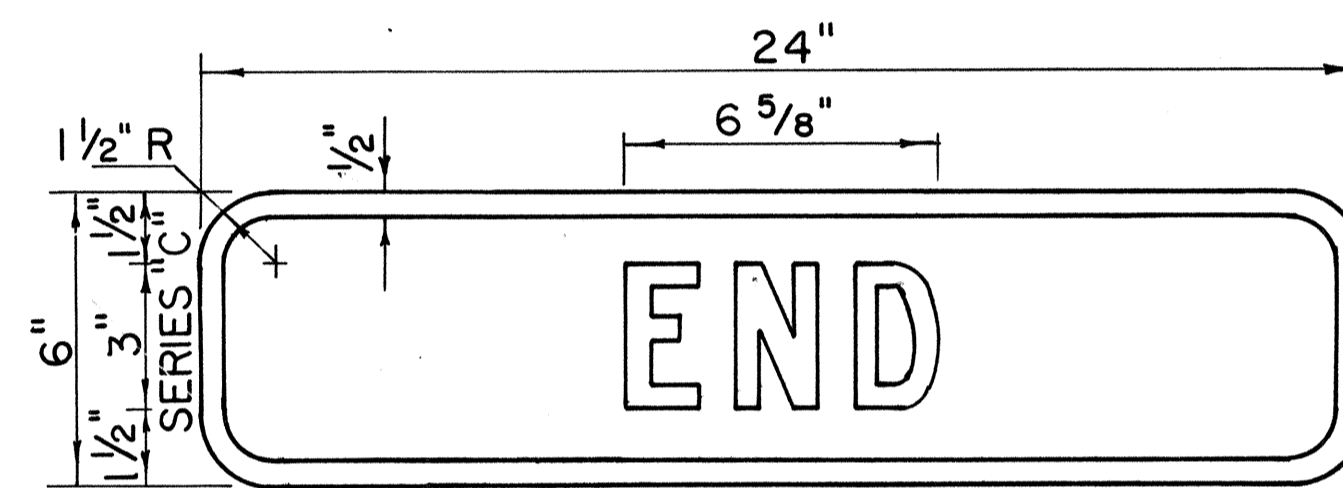
Scale: 3" = 1'-0"



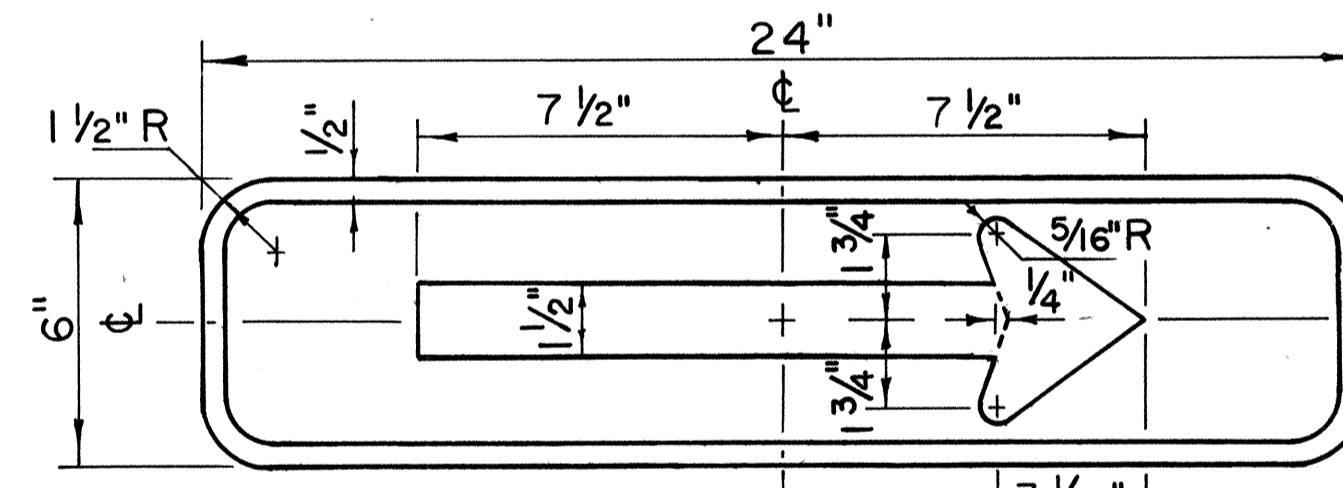
DII-2



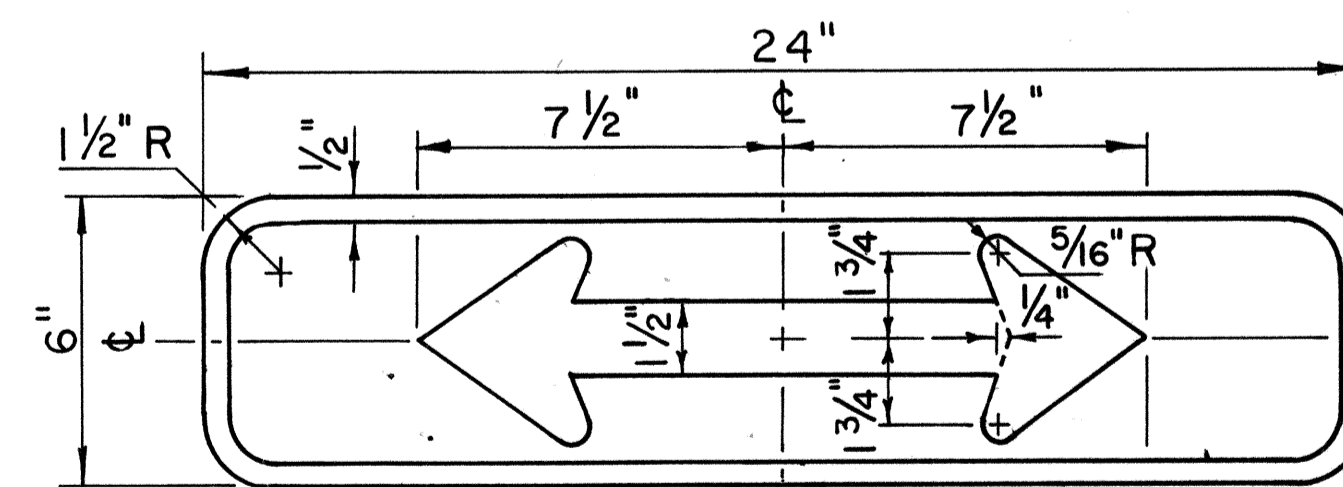
DII-3



DII-4



DII-5(R)



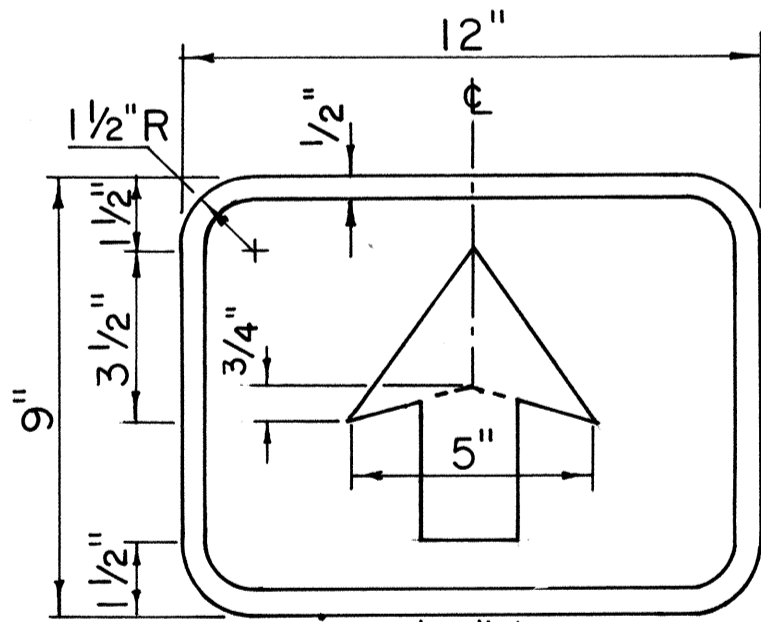
DII-6

**SUPPLEMENTARY PLATES**

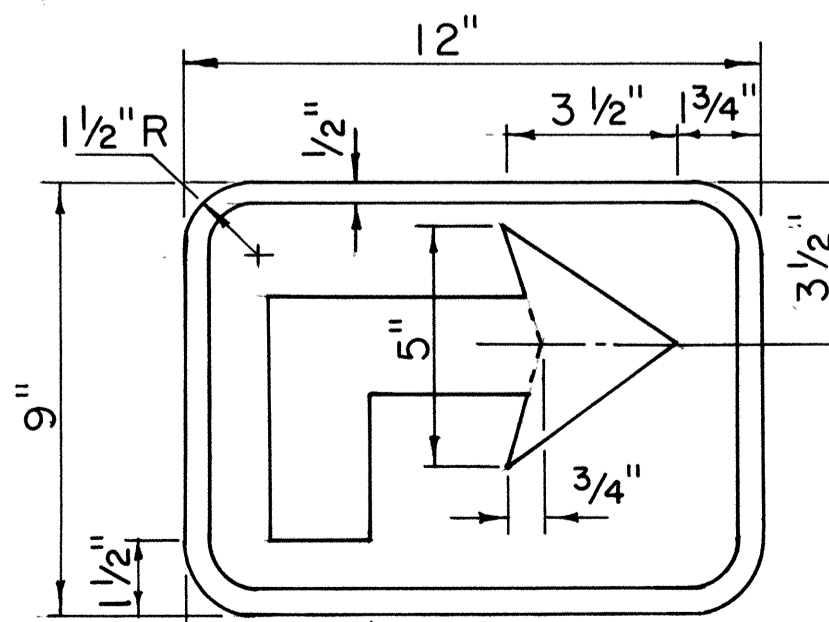
Scale: 3" = 1'-0"

**GENERAL NOTES**  
**BIKE ROUTE SIGN & SUPPLEMENTARY PLATES**

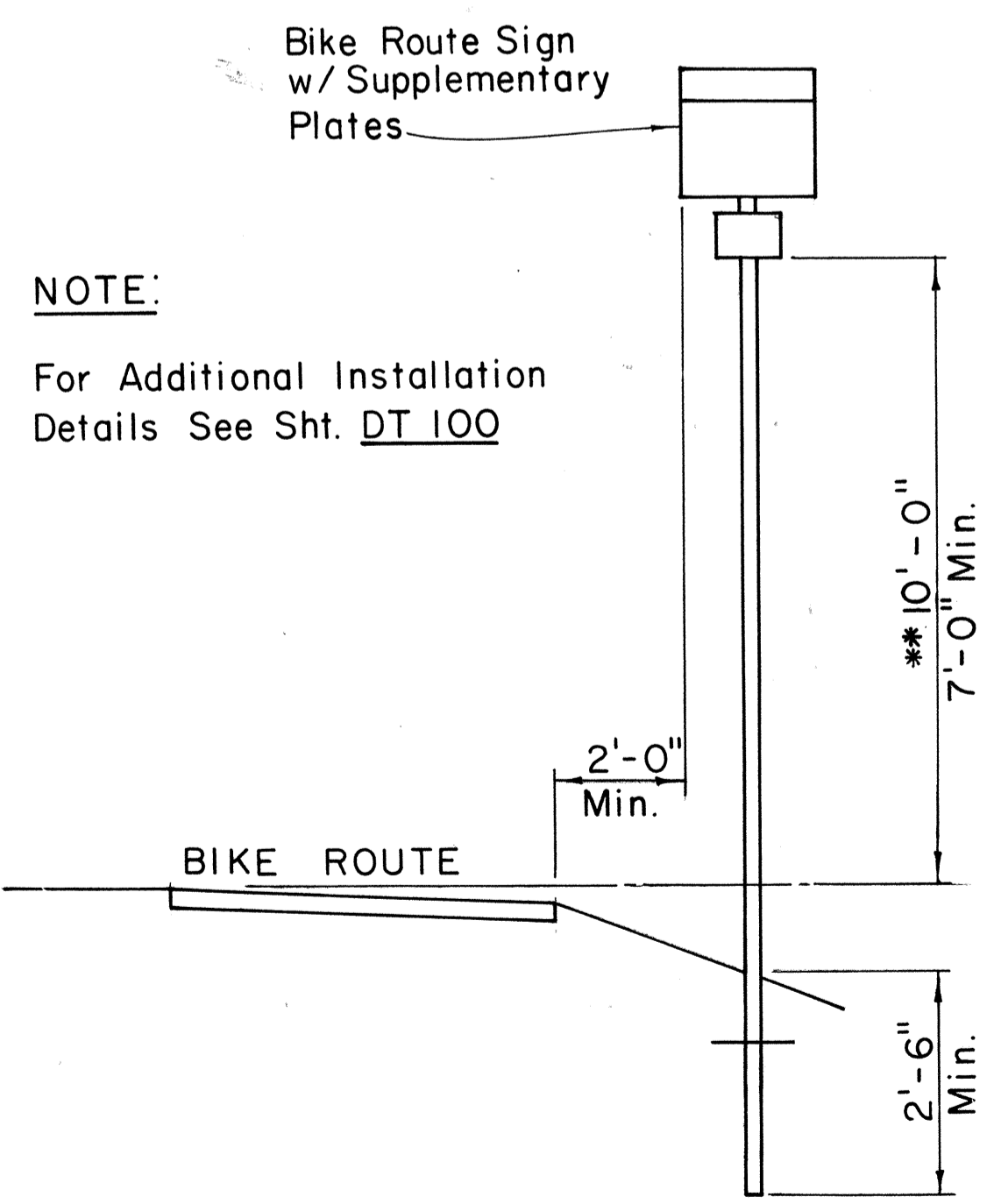
- Sign details shall conform to the latest edition of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways", "Standard Highway Signs" and "Standard Alphabets for Highway Signs" and as amended.
  - Legend and borders shall be white (reflectORIZED) on a green (reflectORIZED) background.
  - Drill 3/8"  $\phi$  bolt holes (for mounting) at appropriate locations.
  - When Supplementary Plates (DII-2 to DII-6 only) are required with Bike Route Sign (DII-1 or Alternate), the Sign Assembly shall be mounted on a single metal plate (24" x 24" or 24" x 30") and shall be arranged as shown on the plans.
- \*5. Alternate sign messages shall be denoted by the following:  
DII-1a: Bike Lane  
DII-1b: Bike Path  
DII-1c: Bikeway
- Dimension "J" varies. Visually center Alternate message.
- \*\*6. See Plans for special details.



DII-7



DII-8(R)



**TYPICAL INSTALLATION**

Scale: Not to Scale

NOTE:  
For Additional Installation Details See Sht. DT 100

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
NO.	

APPROVAL RECOMMENDED:  
*Erich Tanaka* 11/7/77  
TRAFFIC ENGINEER DATE

APPROVED:  
*Herbert Saleishi* 11/7/77  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised depth of Sign Post	H.T.	5/8/79

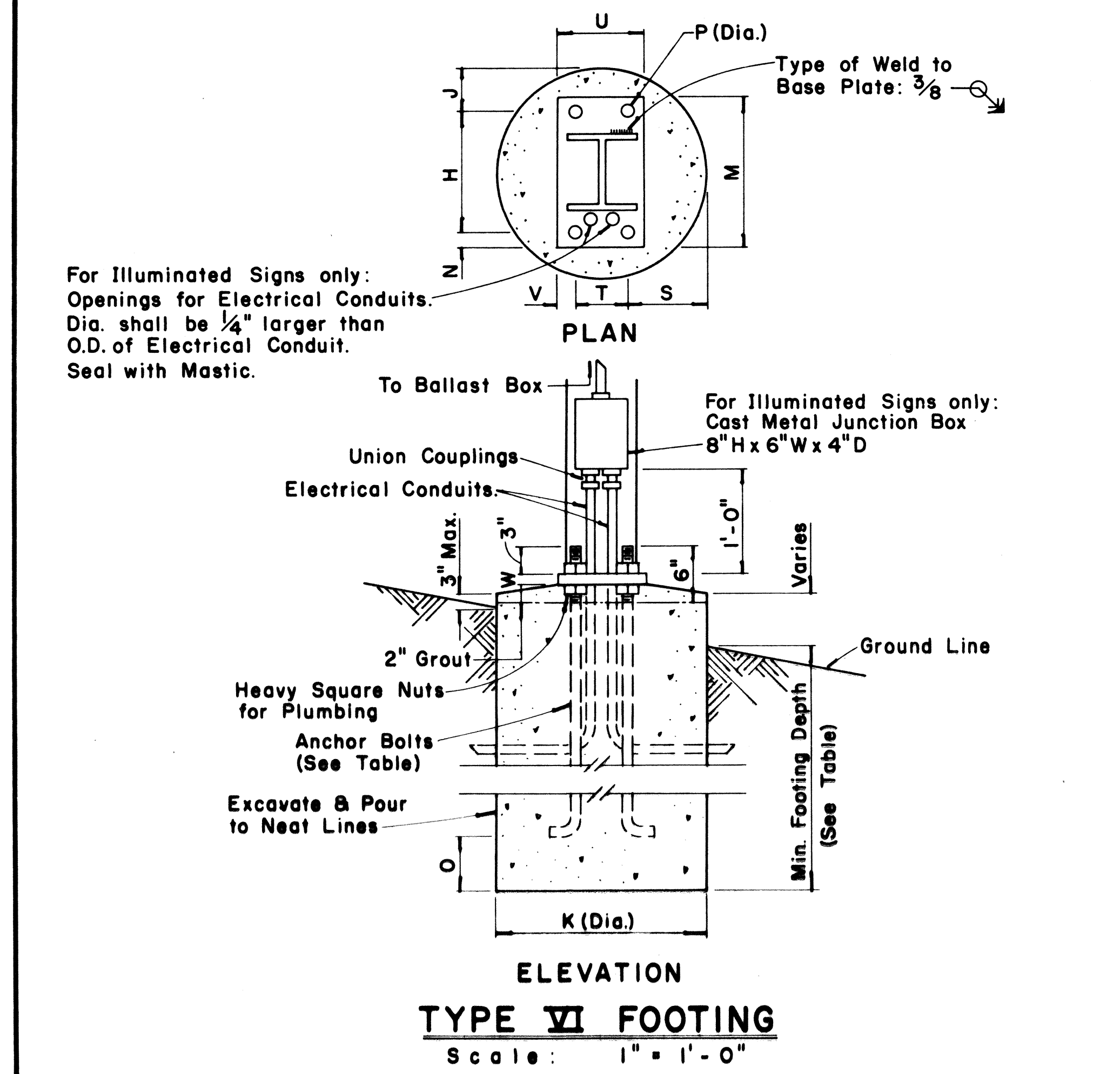
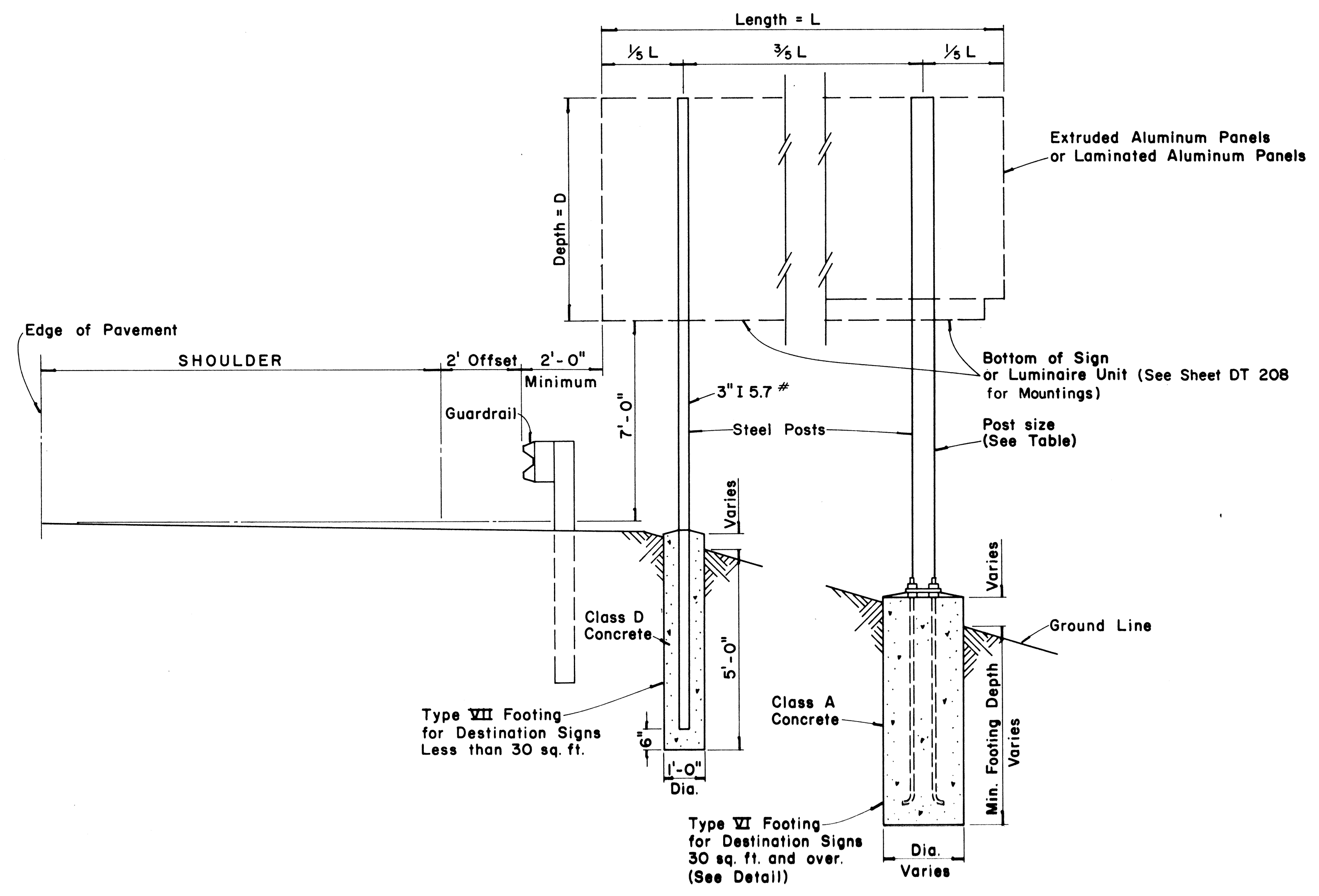
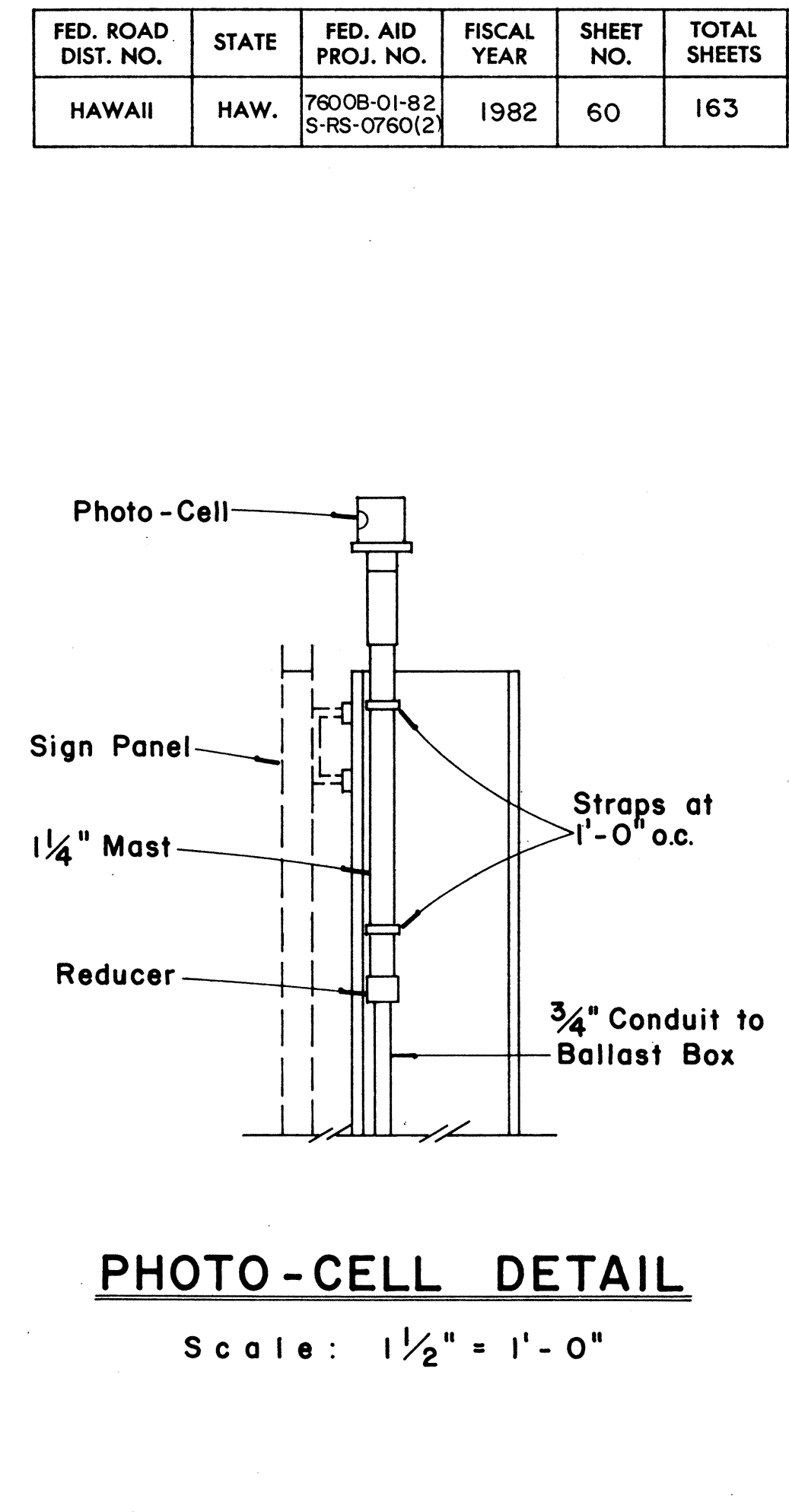
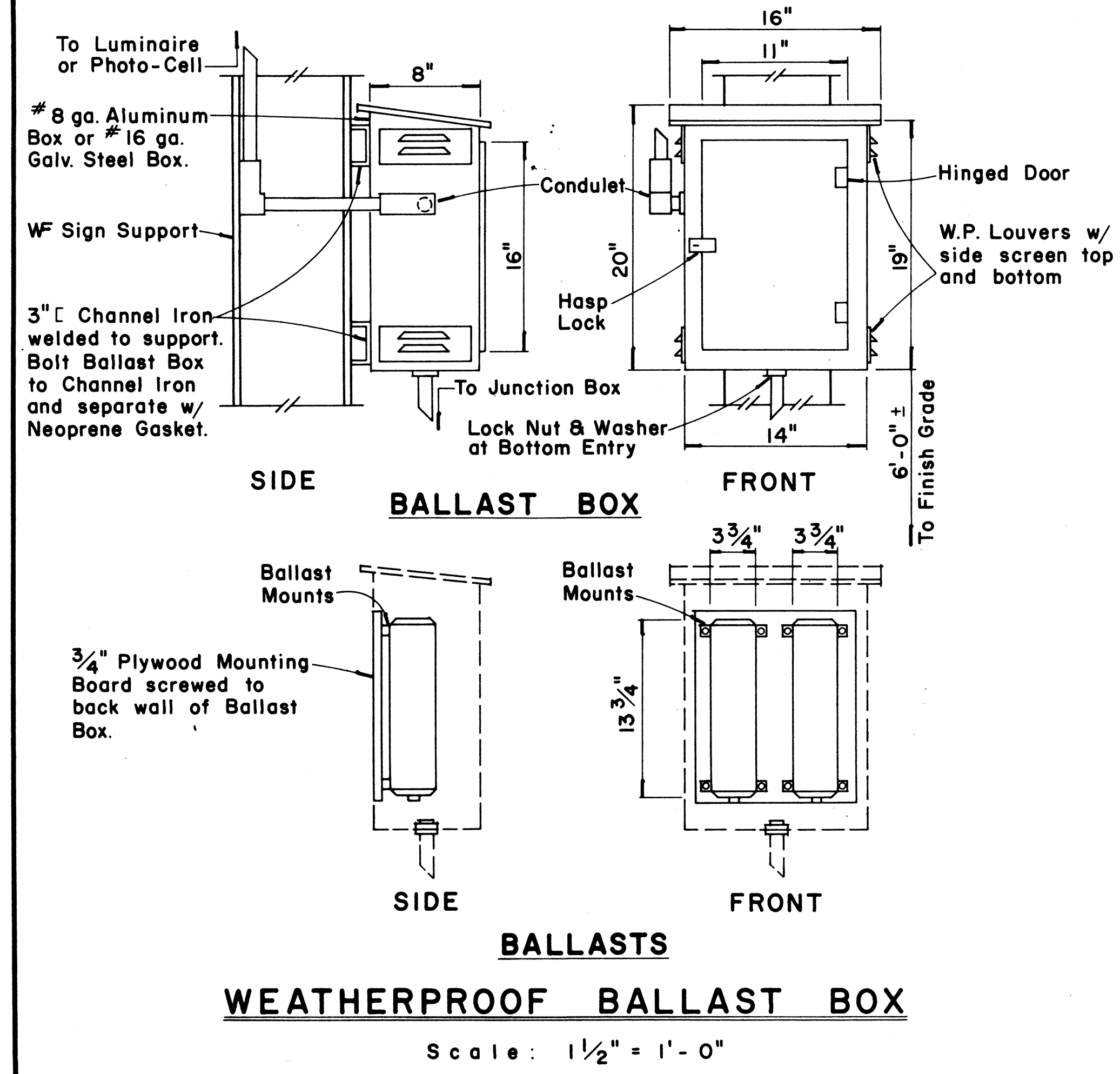
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION

**STANDARD DETAILS**  
**BIKE ROUTE SIGN**  
**& SUPPLEMENTARY PLATES**

Scale: As Shown June 1977

\* 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 4 1/2 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"	17 1/4"	15 5/8"	6"	1 1/4"	9"	6"	10"	2"	1"	1 1/8" ø	4 1/2'	4 1/2'
8 WF 24	90 sq. ft.	21'															5'
8 WF 35	190 sq. ft.	15'	16 1/2"	6 3/4"	30"	20"	1 3/4"	6"	1 3/8"	11 3/4"	6 1/2"	10"	1 3/4"	1"	1 1/4" 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'															



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

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

NO.	REVISION	APPROVED BY	DATE
1	Add note for luminaire mounting.	H.T.	6/3/80

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 LAND TRANSPORTATION FACILITIES DIVISION  
**STANDARD DETAILS**  
 DESTINATION & GROUND MOUNTED EXPRESSWAY SIGNS  
 Scale: As Shown  
 SHEET No. 9 OF 15 SHEETS DT 203

SHEET PLotted BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 ORIGINAL PLAN DRAWN BY: \_\_\_\_\_  
 NOTE BOOK DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 No. \_\_\_\_\_

TYPICAL DESTINATION & GROUND MOUNTED EXPRESSWAY SIGN

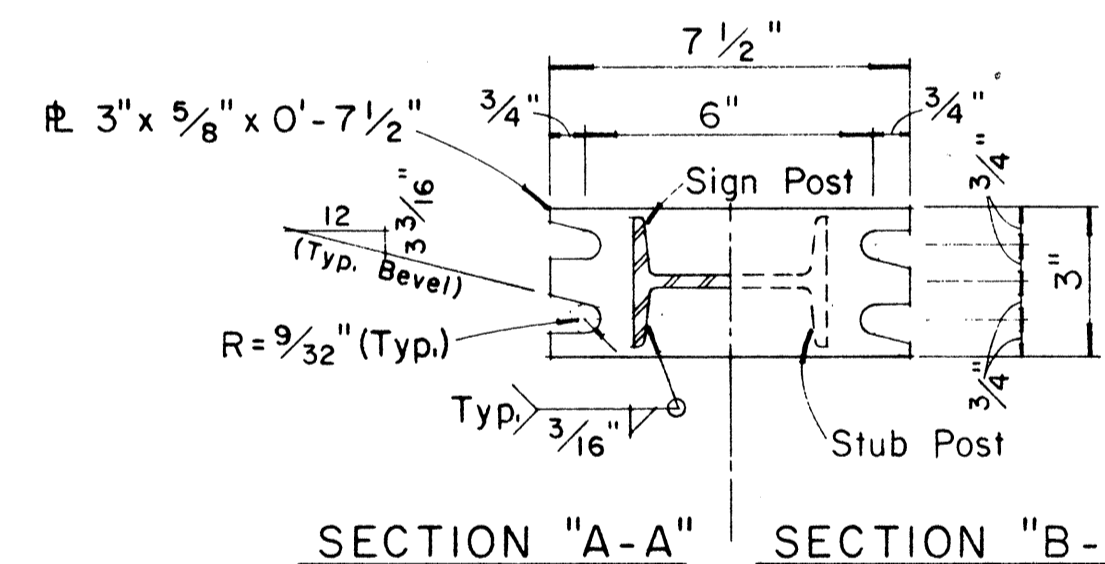
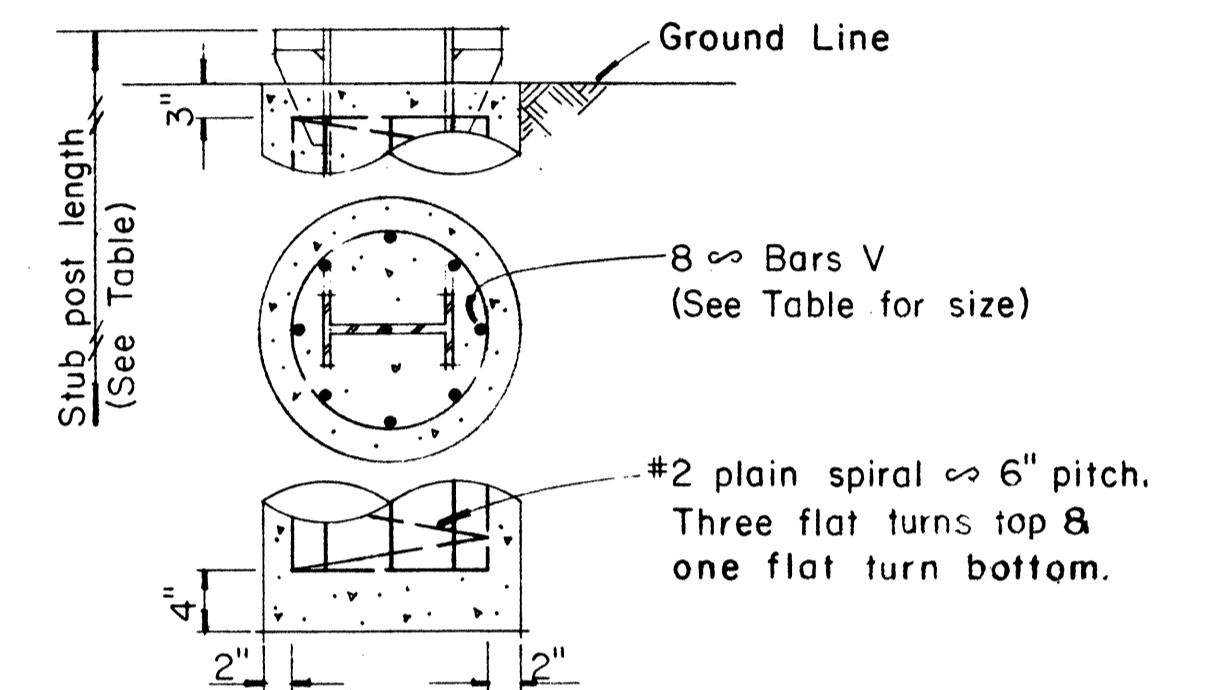
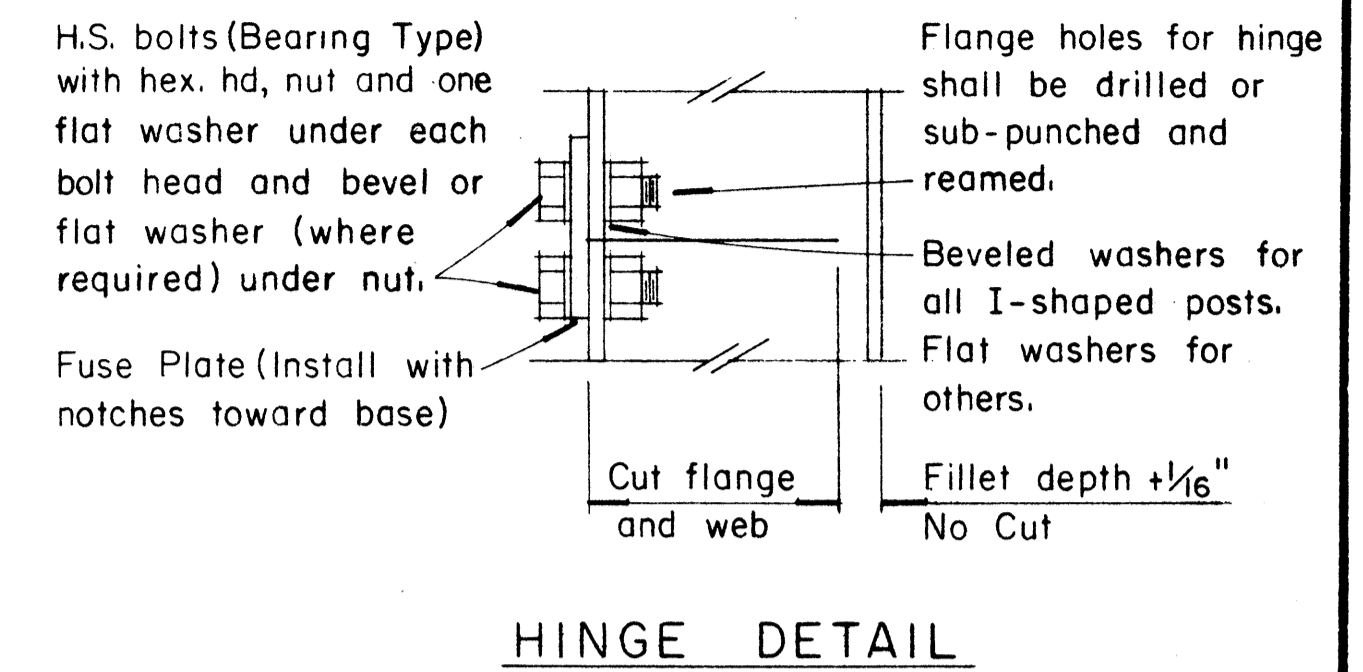
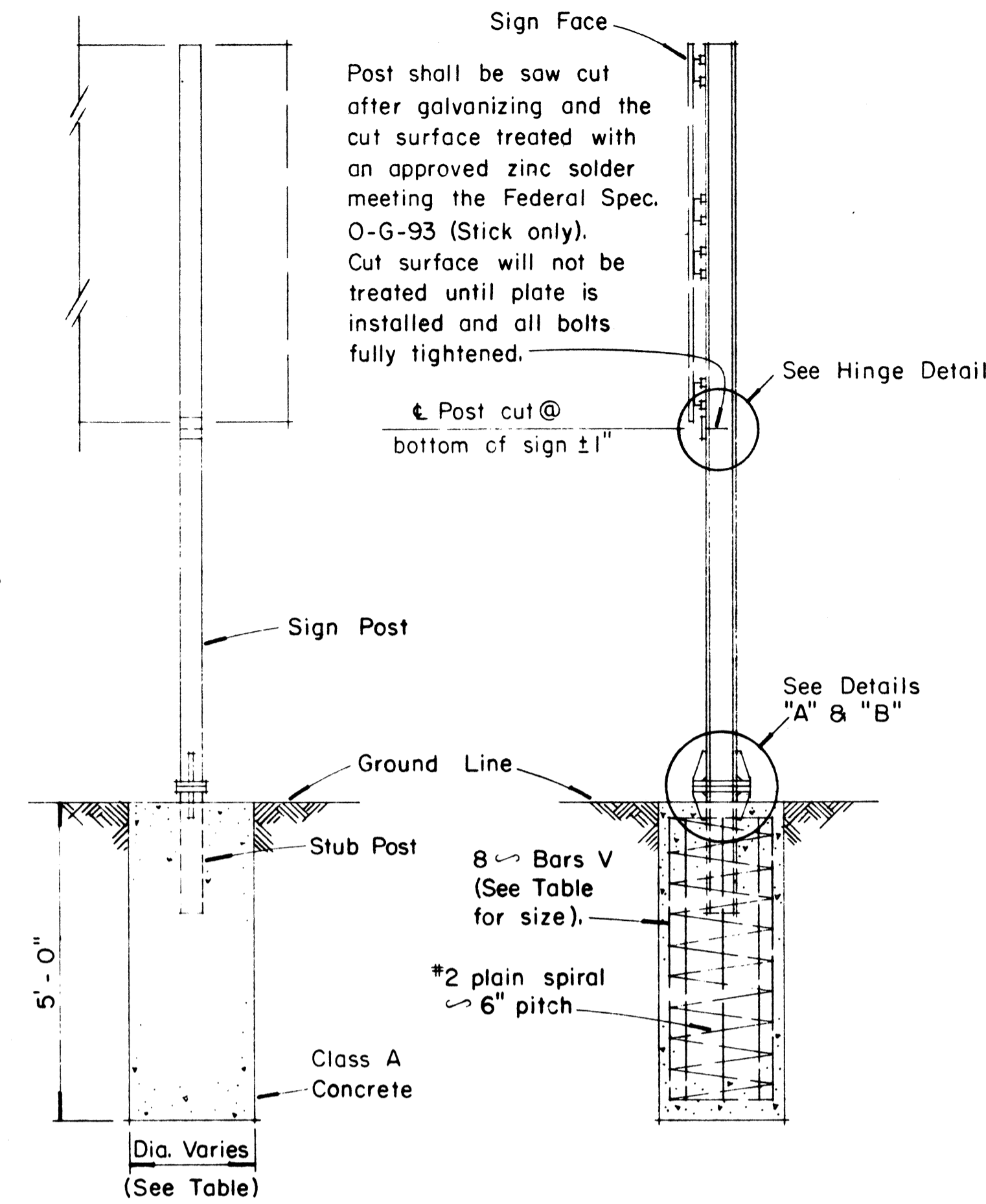
Not to Scale

TYPE VI FOOTING

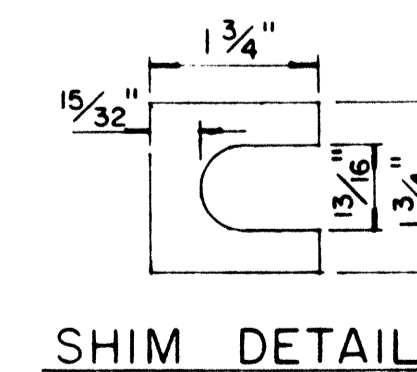
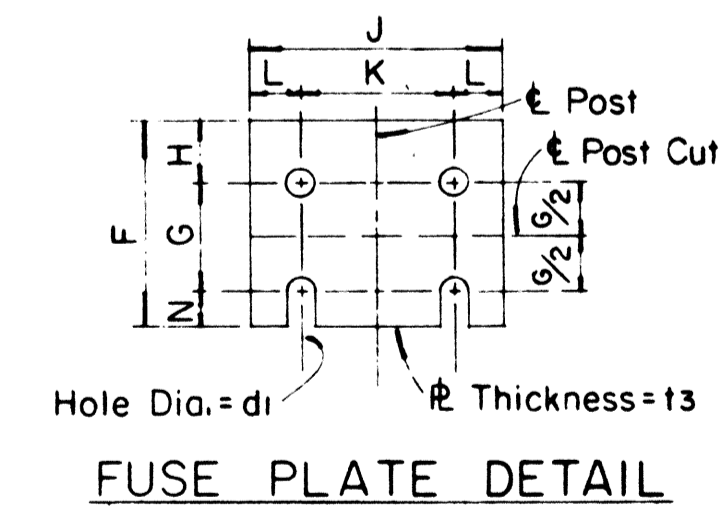
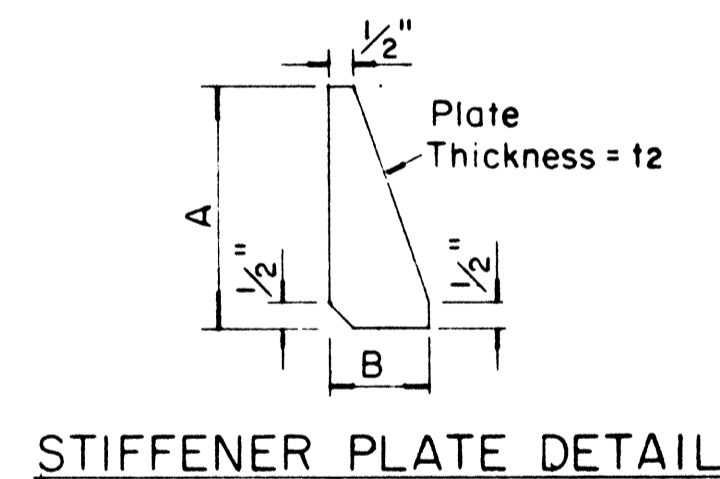
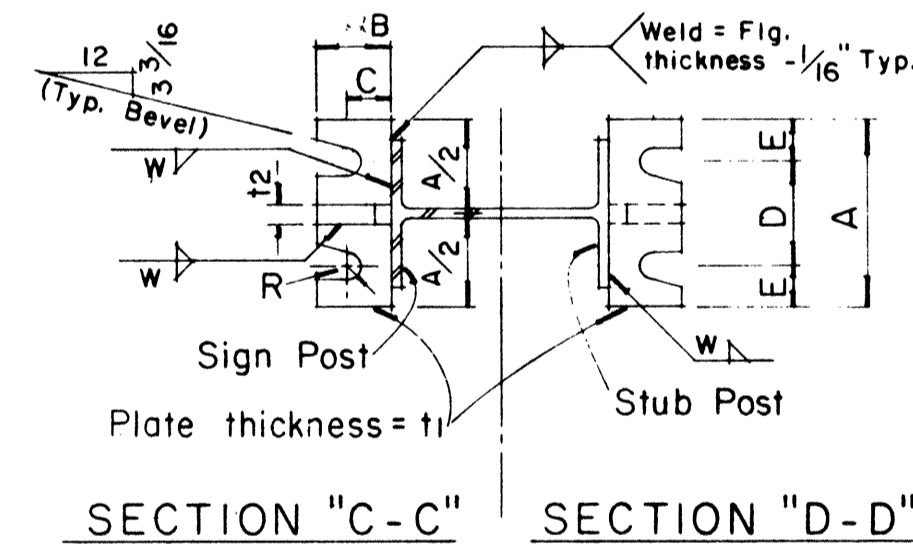
Scale: 1" = 1'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 SRS-0760(2)	1982	61	163

BASE CONNECTION DATA TABLE											FUSE PLATE DATA TABLE										FOUNDATION DATA				
Post Size	Bolt Size & Torque	A	B	C	D	E	t1	t2	W	R	F	G	H	J	K	L	N	d1	t3	Bolt Dia.	Wt. of each Fuse Pl.	Stub Length	Stub Projection	Footing Diameter	Bars V Size
6 B 8.5	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"	11/32"	3 3/8"	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											3 3/4"	2"	1 1/8"	4"	2 1/4"	7/8"	5/8"	11/16"	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	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"	4 7/8"	2 1/2"	1 1/2"	5 1/4"	2 3/4"	1 1/2"	7/8"	15/16"	9/16"	7/8" ϕ	3.93*	3'-0"	2 1/2"	2'-0"	#8
10 WF 21											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 3/8"	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	1/2" ϕ x 2 1/2" Torque = 200*#	SEE DETAIL "A"									3 3/8"	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.



Furnish 2-.0012" ± thick and 2-.0032" ± thick shims per post. Shims shall be fabricated from brass shim stock or strip conforming to ASTM - B 36.

### GENERAL NOTES

- Design shall conform 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 to the requirements of ASTM A 441.
- Galvanize all of the post projecting above the concrete plus 6 inches 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.
- Supplemental Sign shall not be installed below the Breakaway Hinges.

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

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

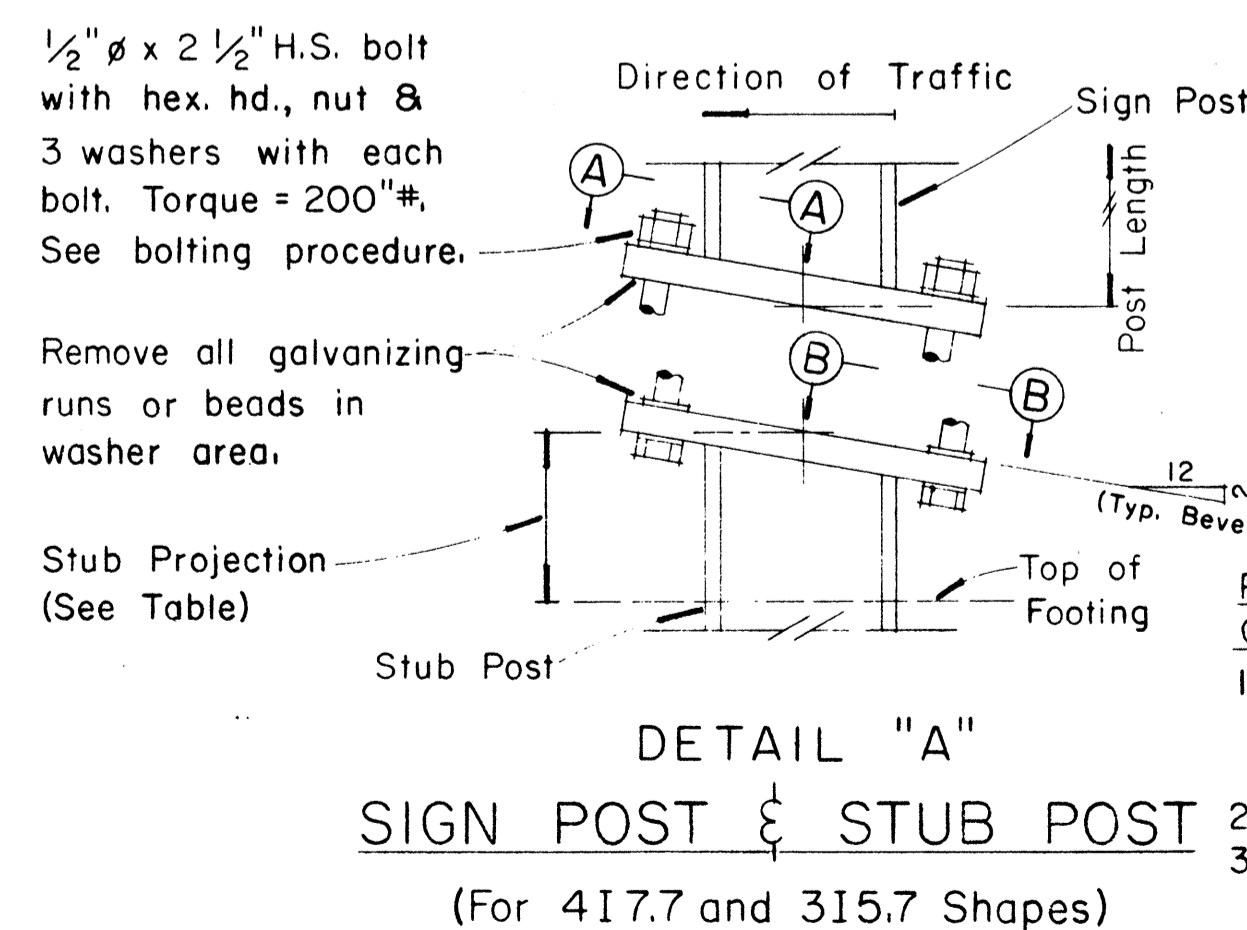
NO.	REVISION	APPROVED BY	DATE
1	Added General Note No. 9	H.T.	6/3/80

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

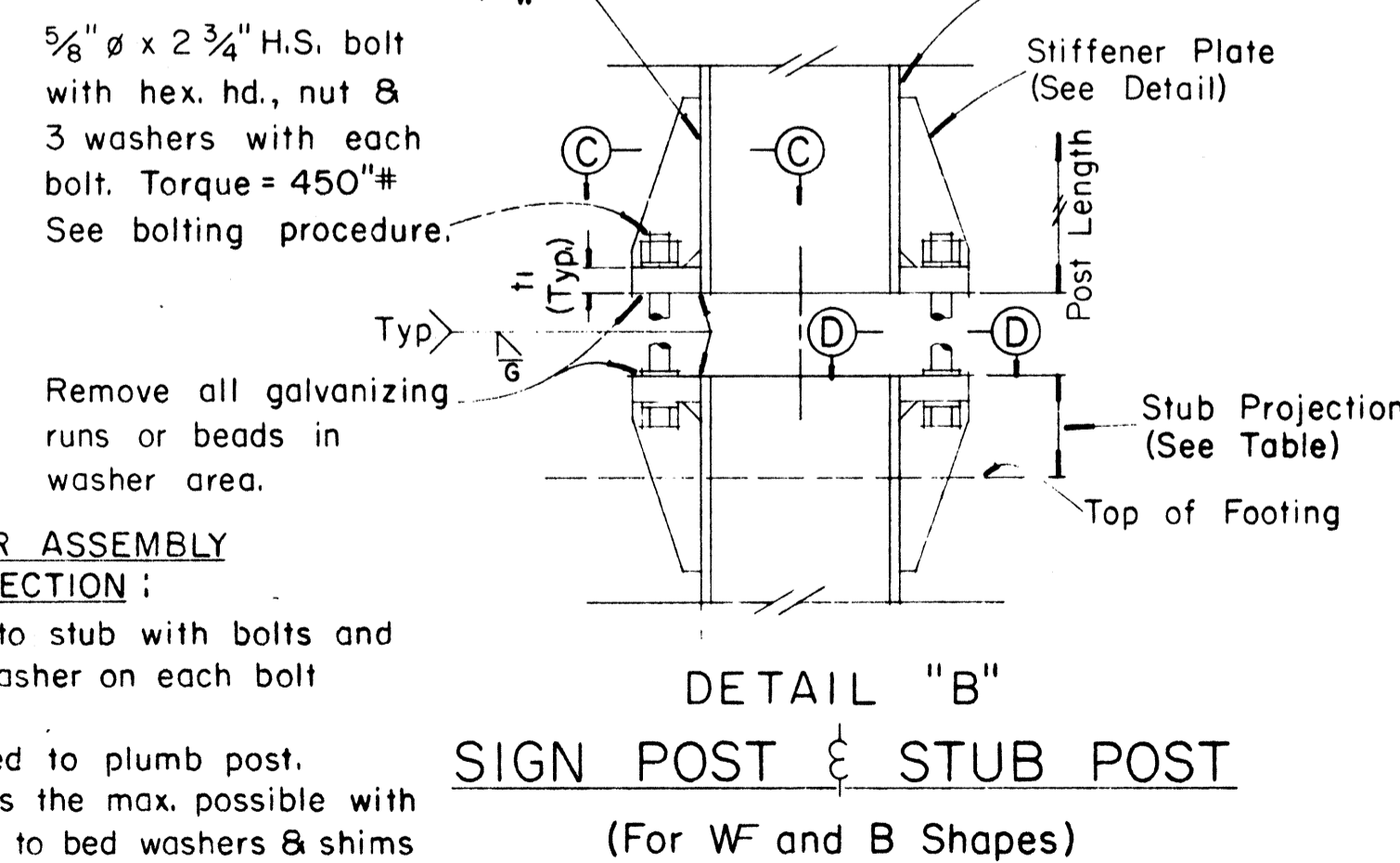
**STANDARD DETAILS**  
**BREAK-AWAY SIGN SUPPORTS**  
**FOR**  
**GROUND MOUNTED GUIDE SIGNS**

Not to Scale

DATE: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
NOTED BY: \_\_\_\_\_



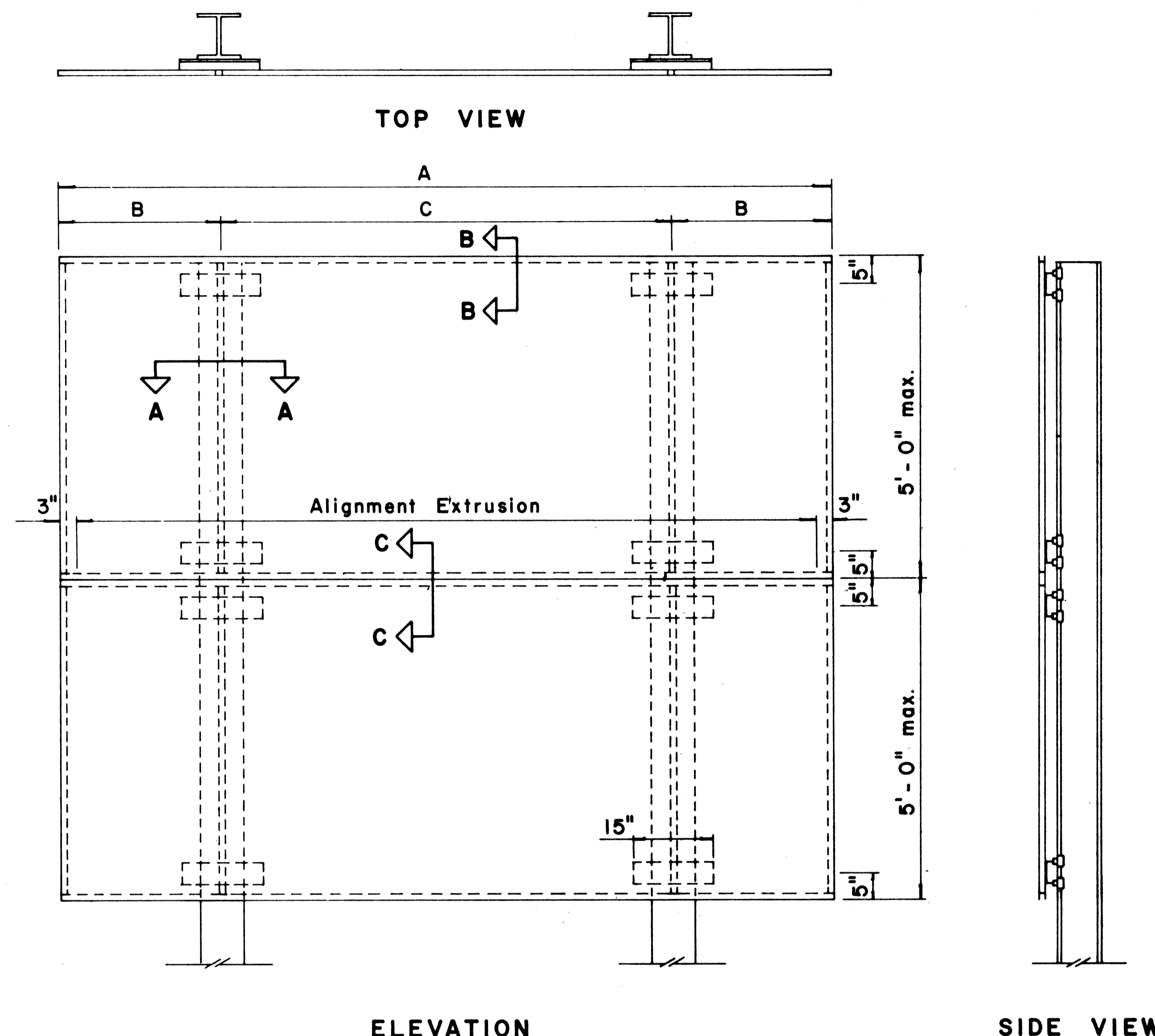
- PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:
- Assemble post to stub with bolts and with one flat washer on each bolt between plates.
  - Shim as required to plumb post.
  - Tighten all bolts the max. possible with 12" to 15" wrench to bed washers & shims and to clean bolt threads then loosen each bolt 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.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	76008-01-82 S-RS-0760(2)	1982	62	163

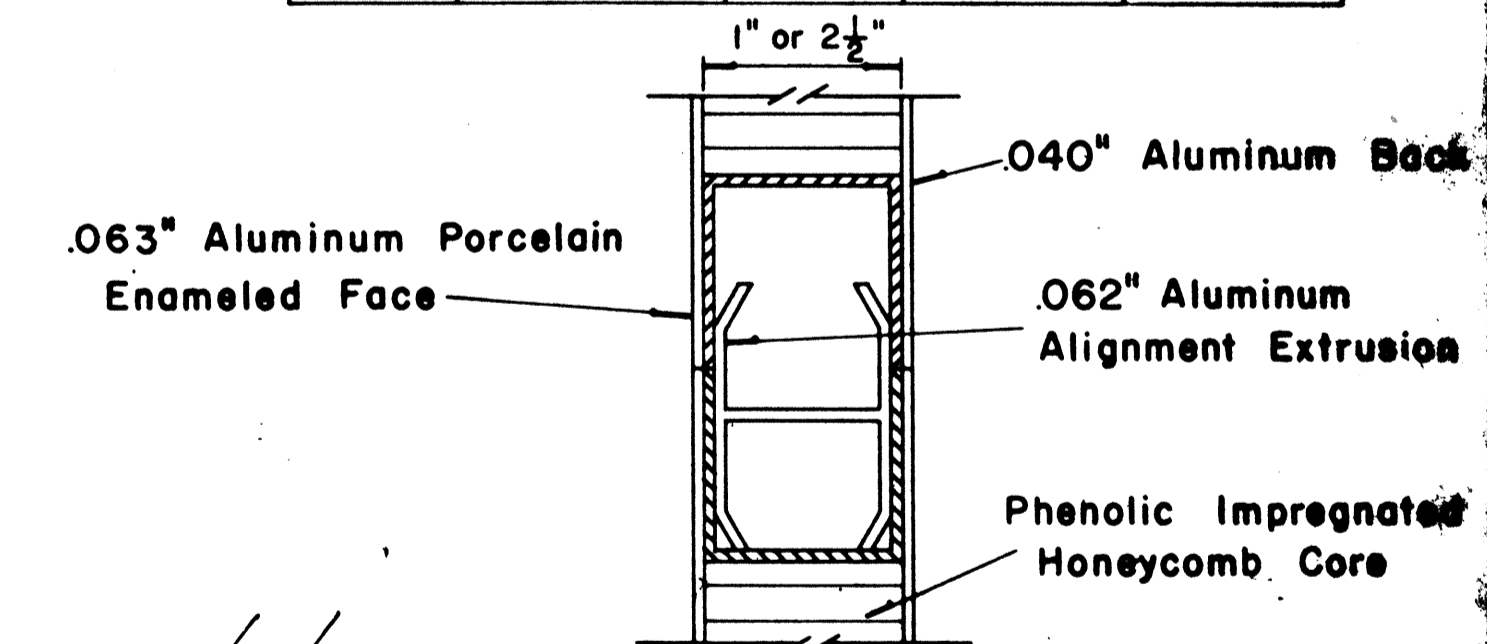
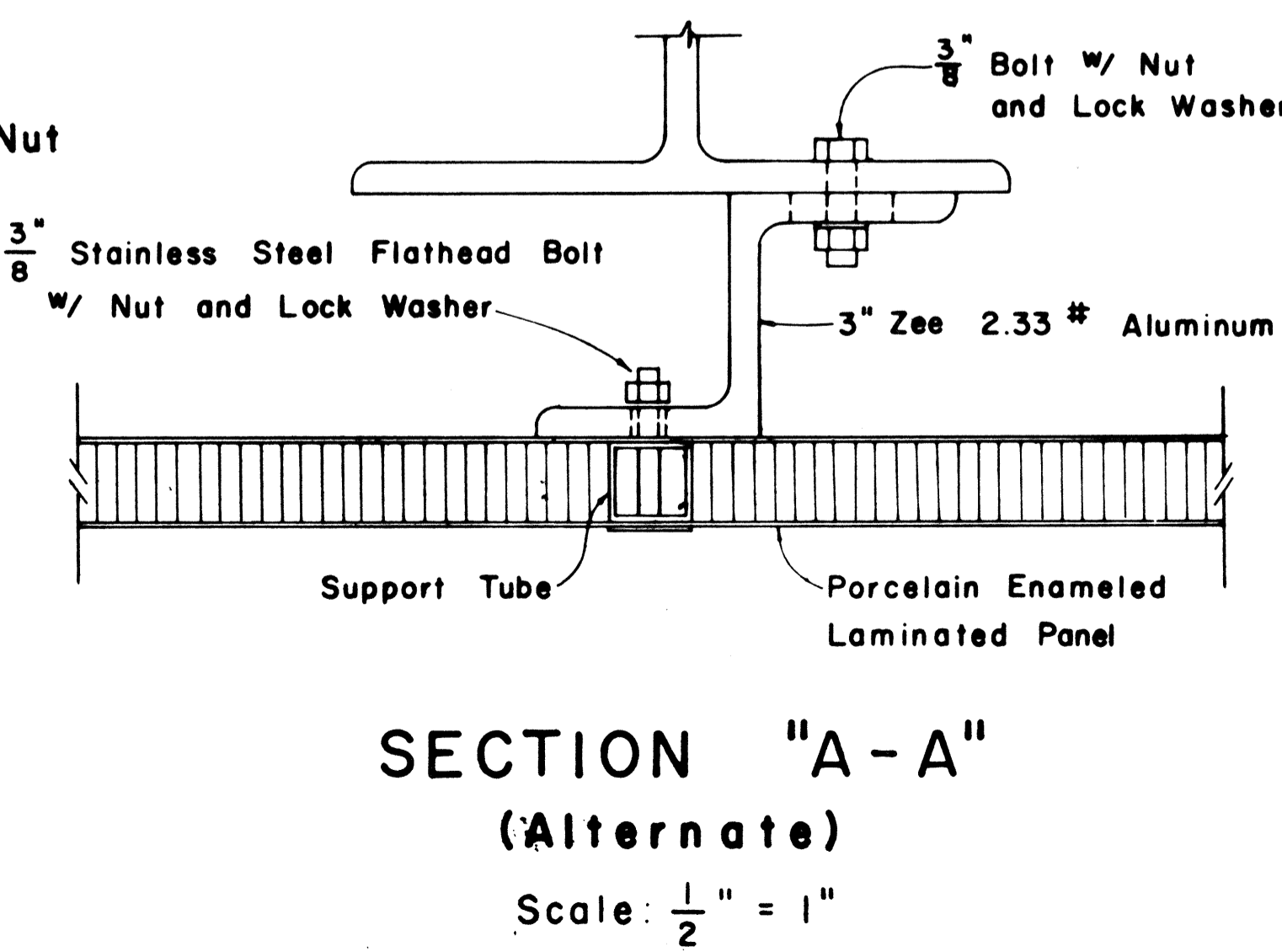
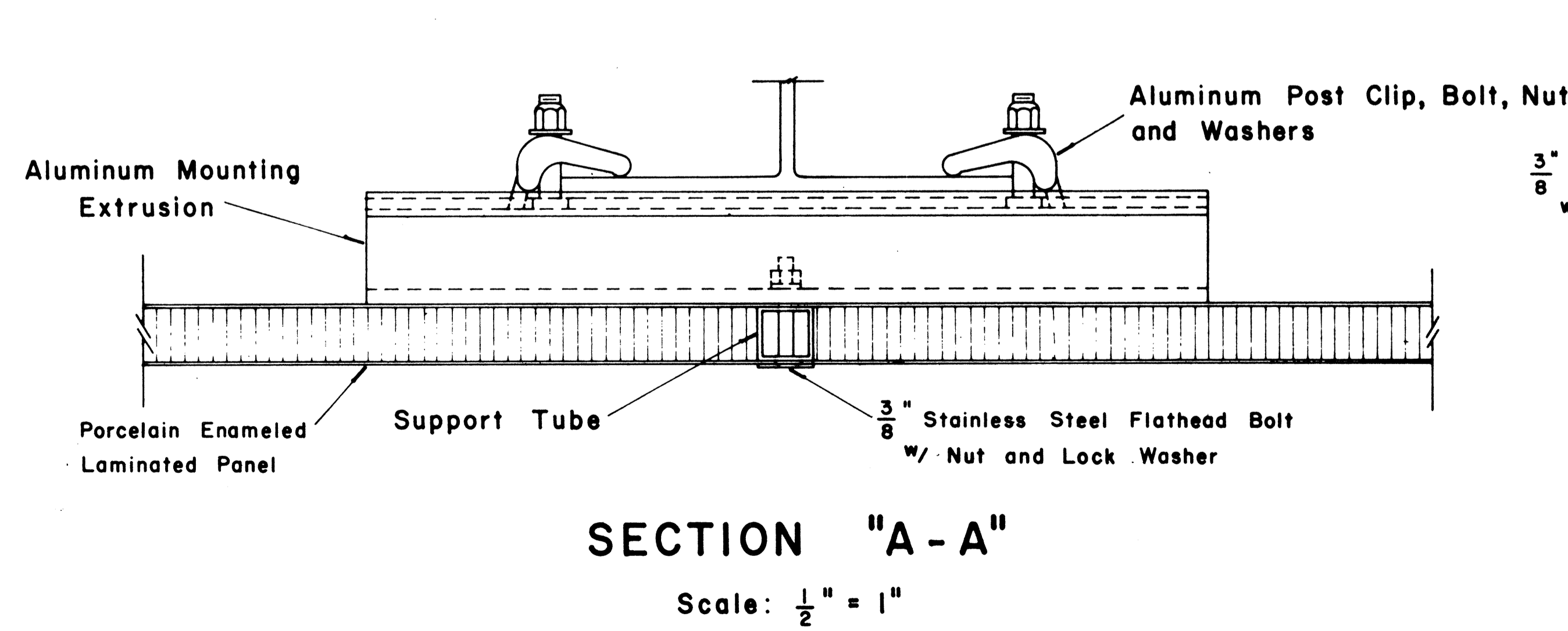
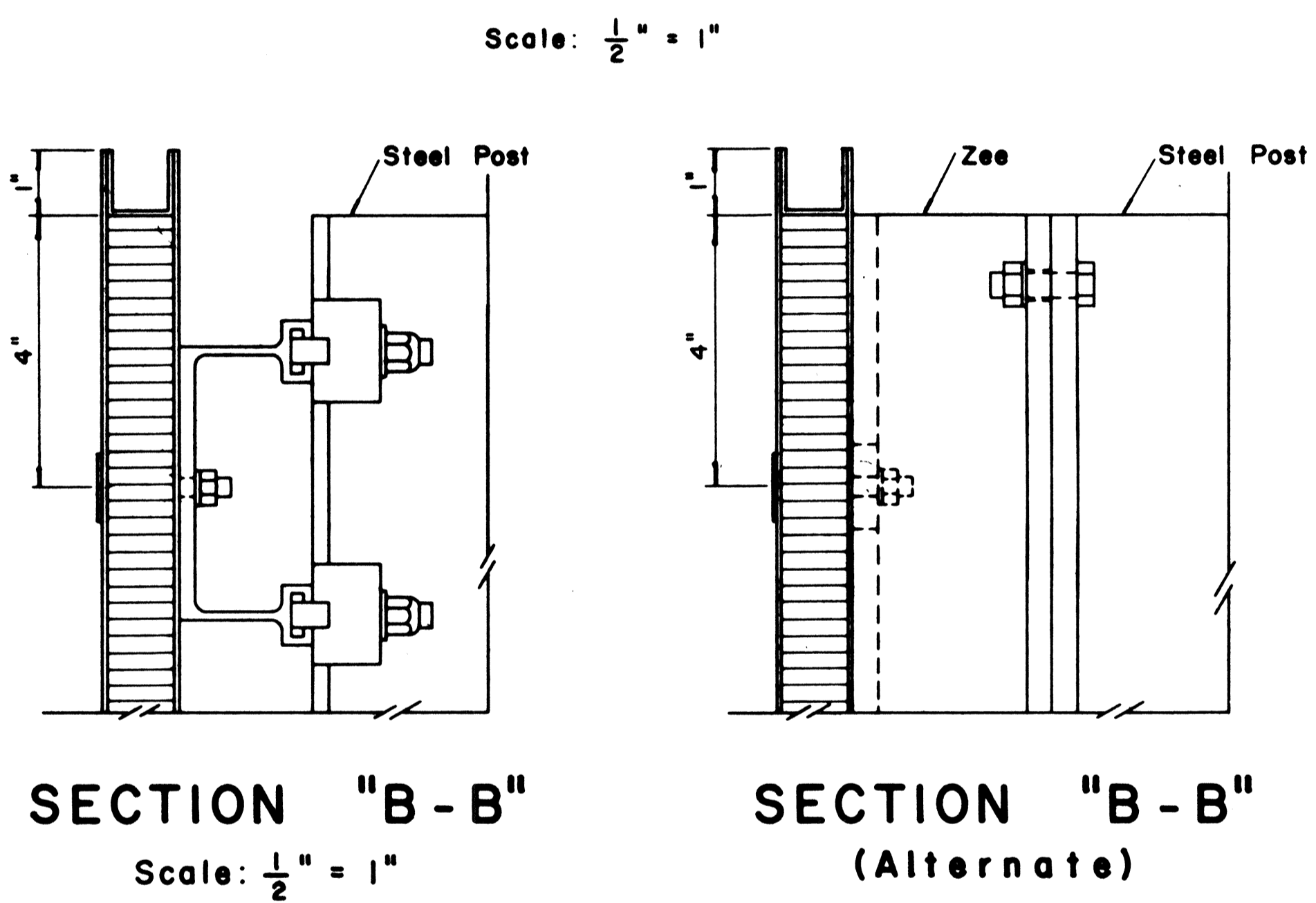
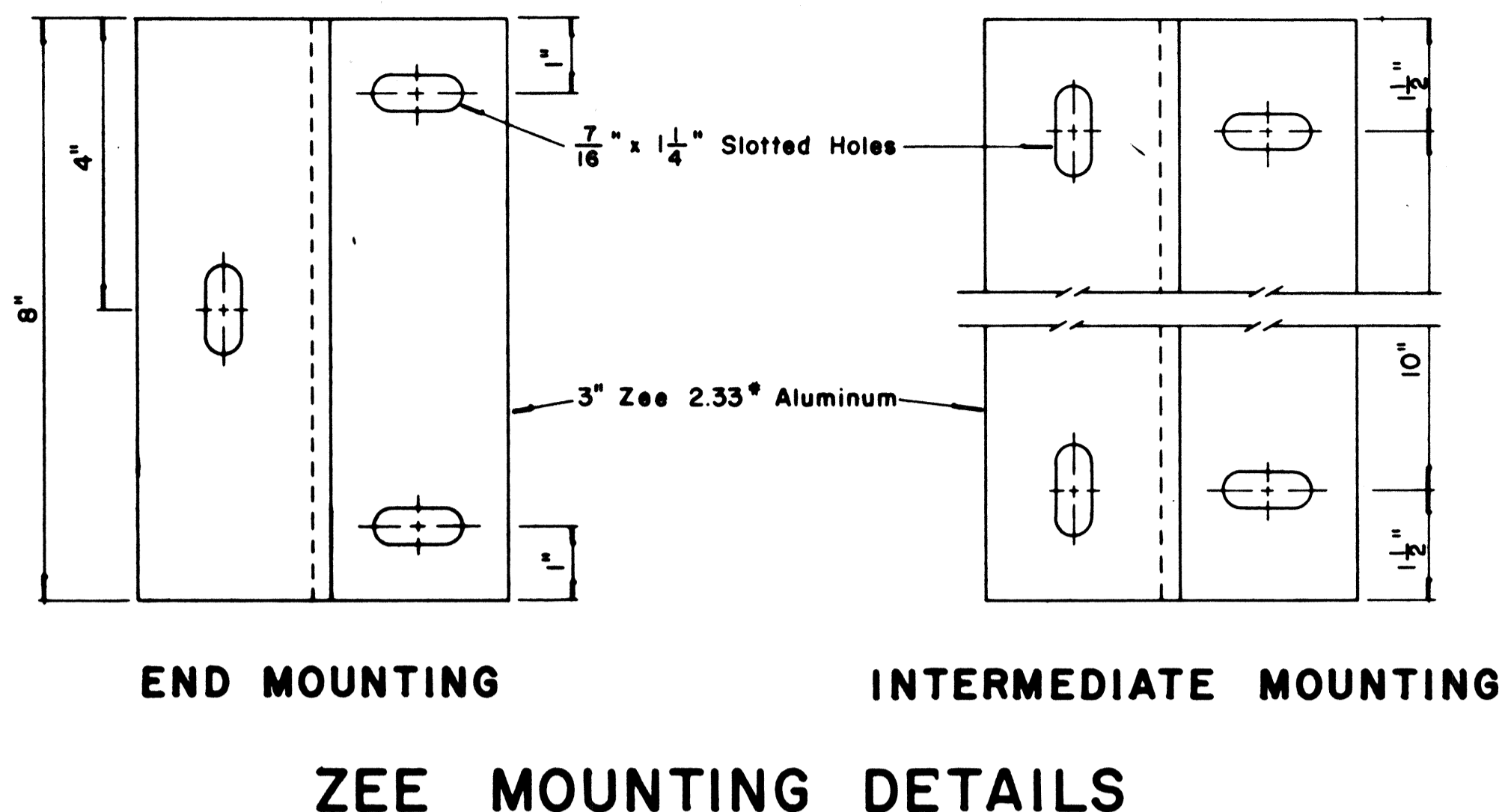
(GROUND MOUNTED SIGNS)  
SUPPORT SPACING TABLE

PANEL THICK.	LENGTH OF SIGN	NO. OF SUPPORTS	OVERHANG		SUPPORT SPACING
			B	C	
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"



APPROVAL RECOMMENDED:  
*Eisaki Tanaka* 12/29/69  
TRAFFIC ENGINEER DATE

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

NO.	REVISION	APPROVED BY	DATE

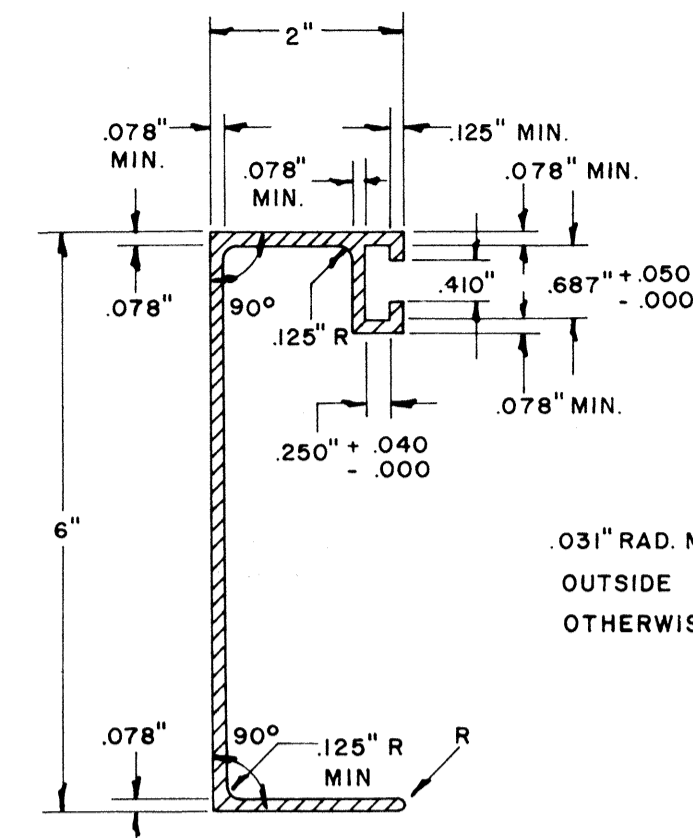
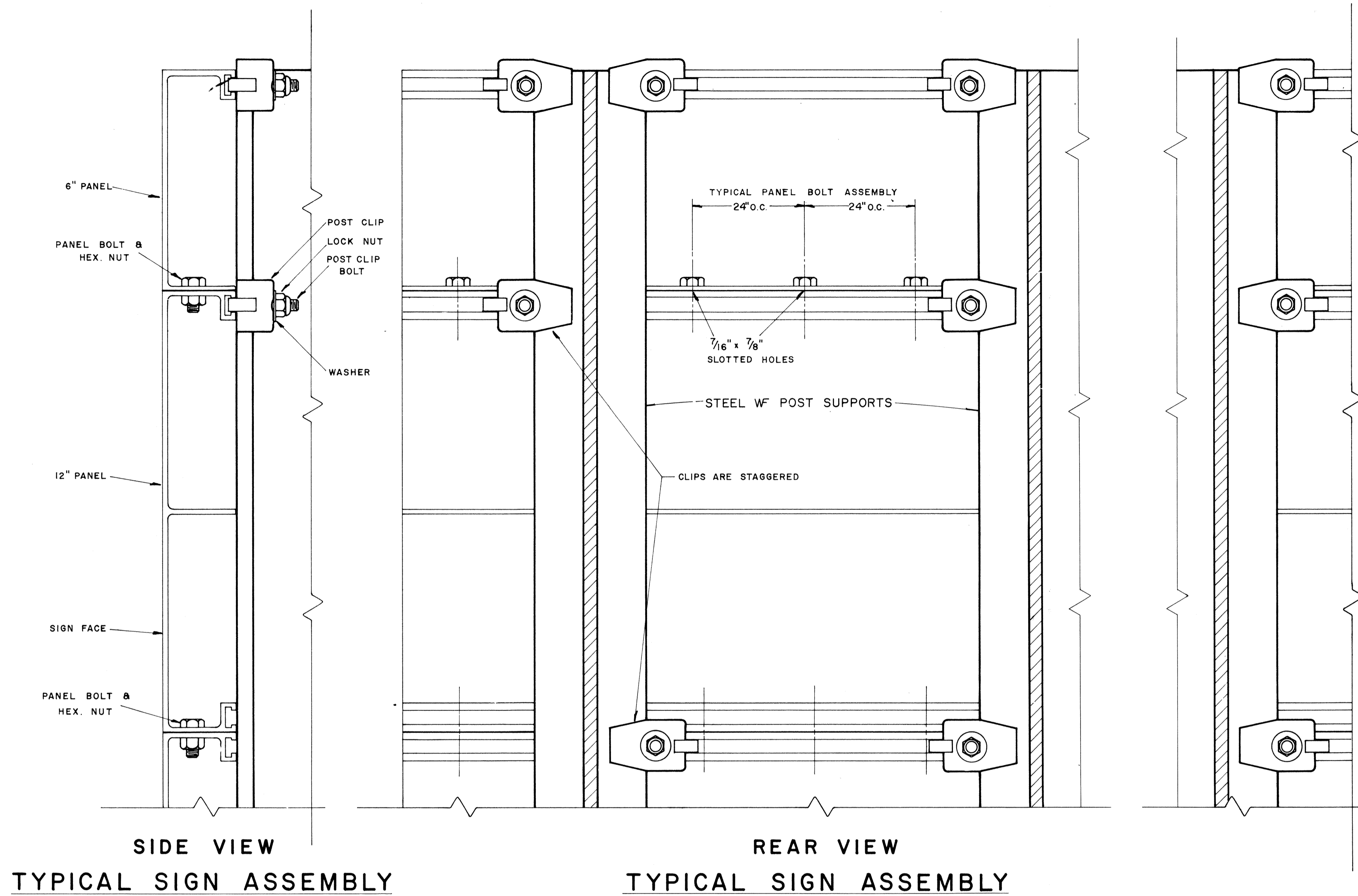
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION

**STANDARD DETAILS**  
LAMINATED ALUMINUM  
SIGN PANELS  
(GROUND MOUNTED)

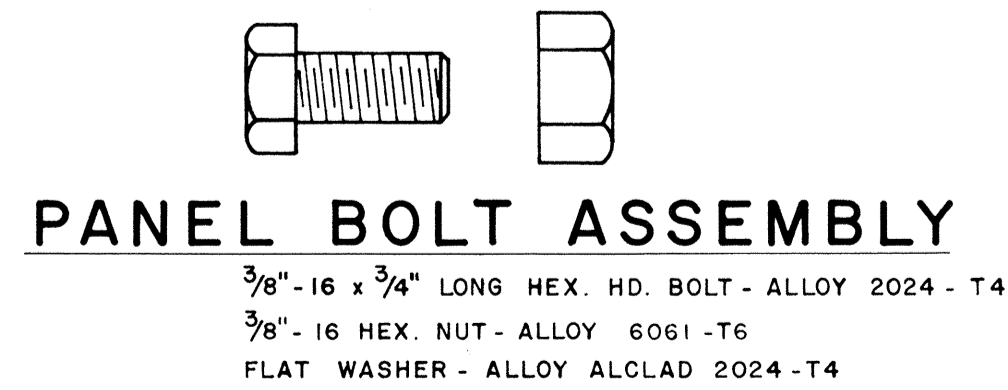
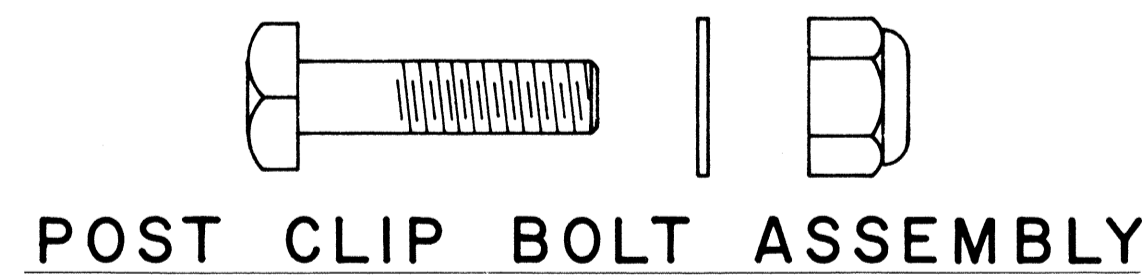
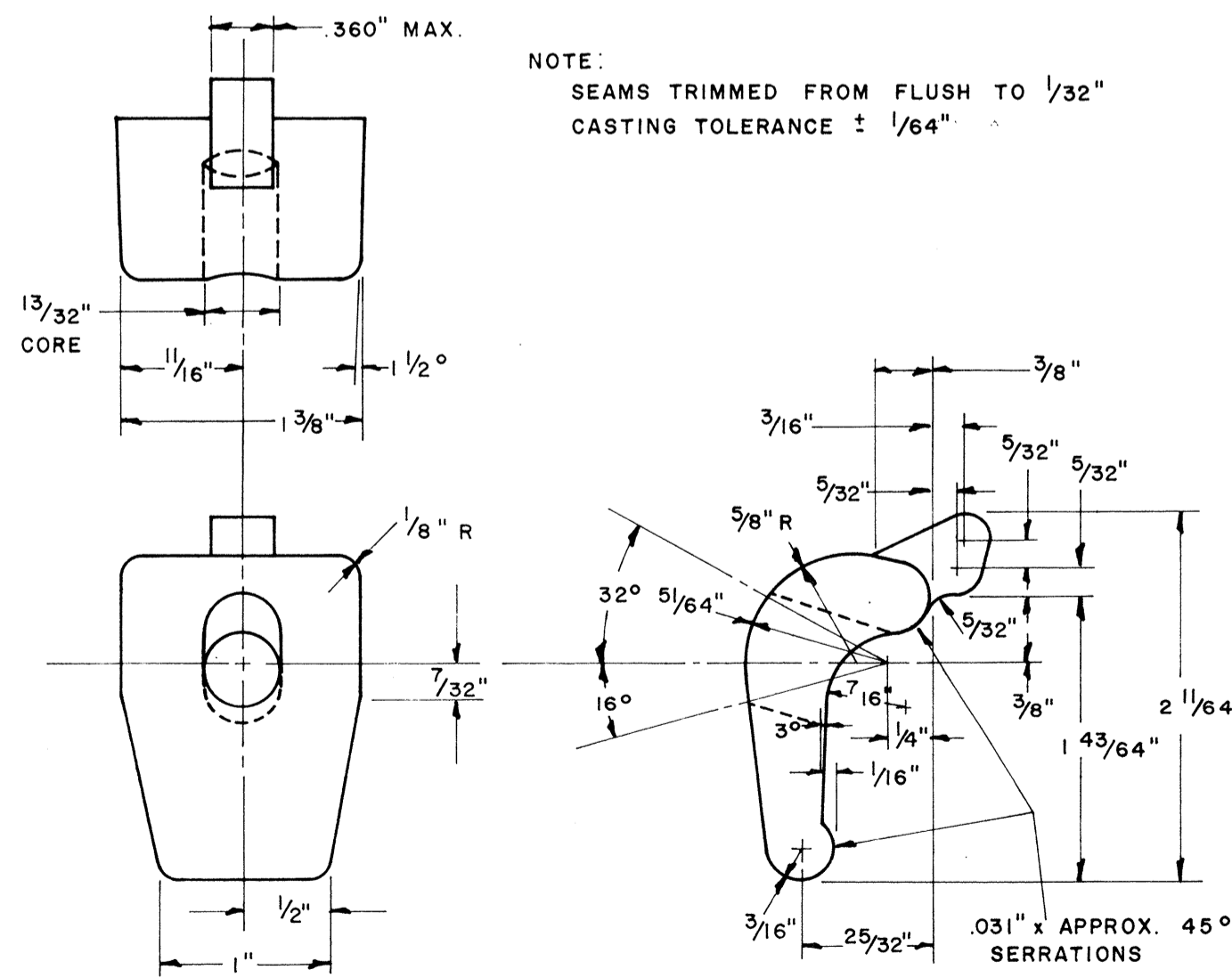
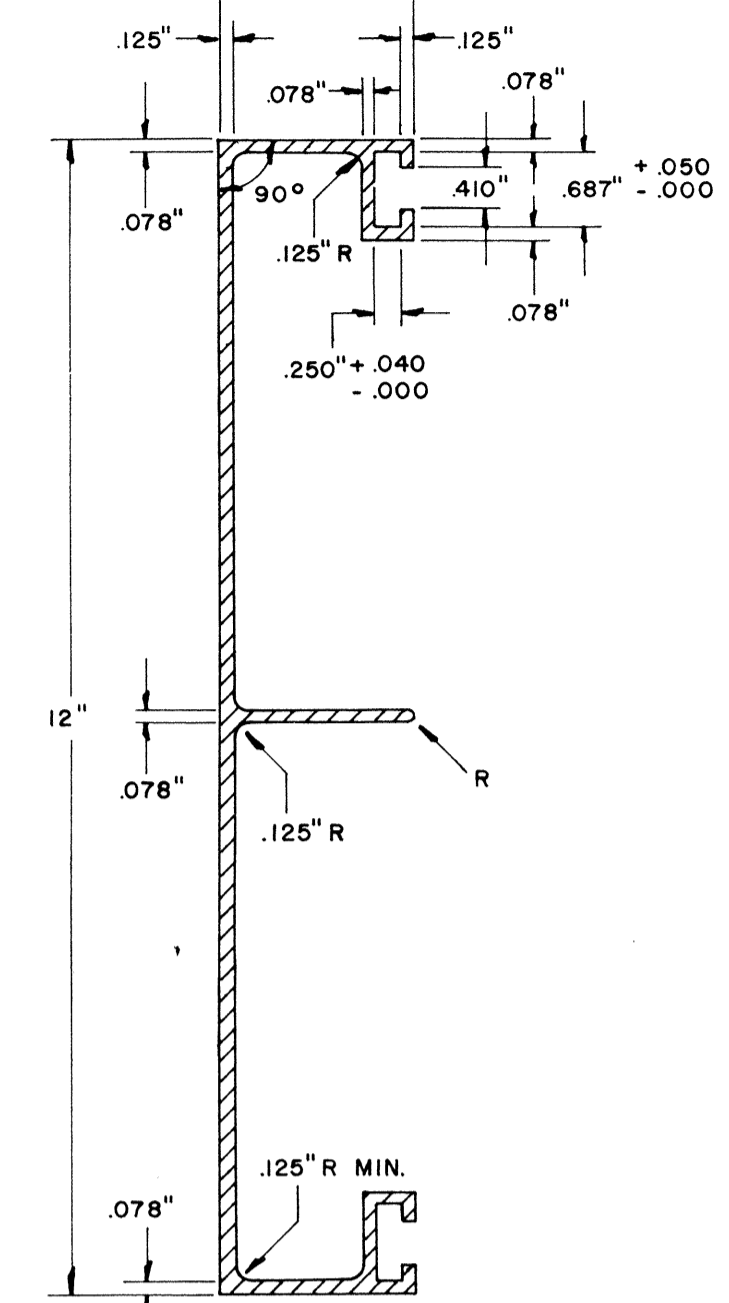
Scale: As Shown

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	63	163



**SOLID EXTRUDED SIGN  
PANEL DETAILS**



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

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

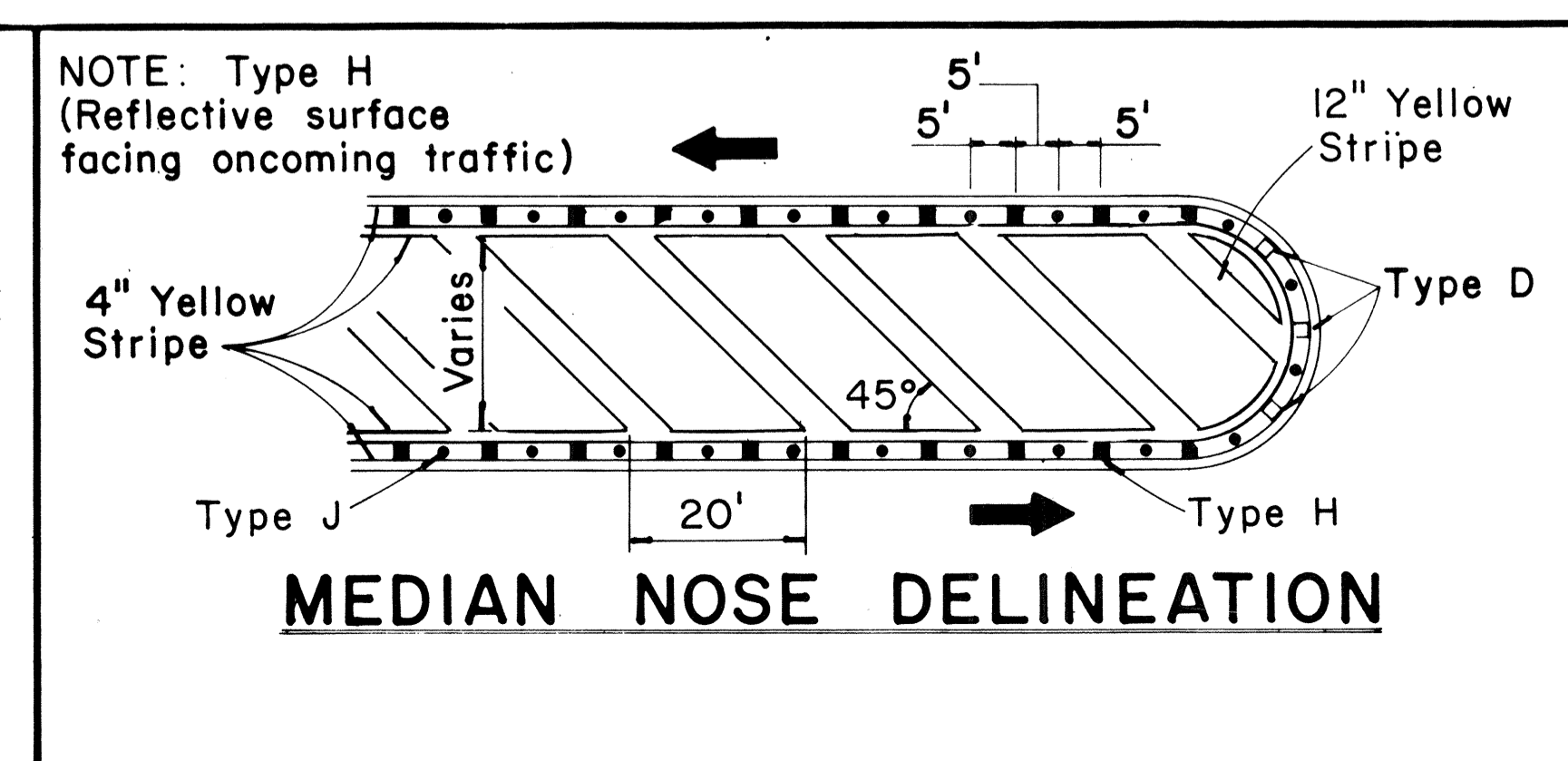
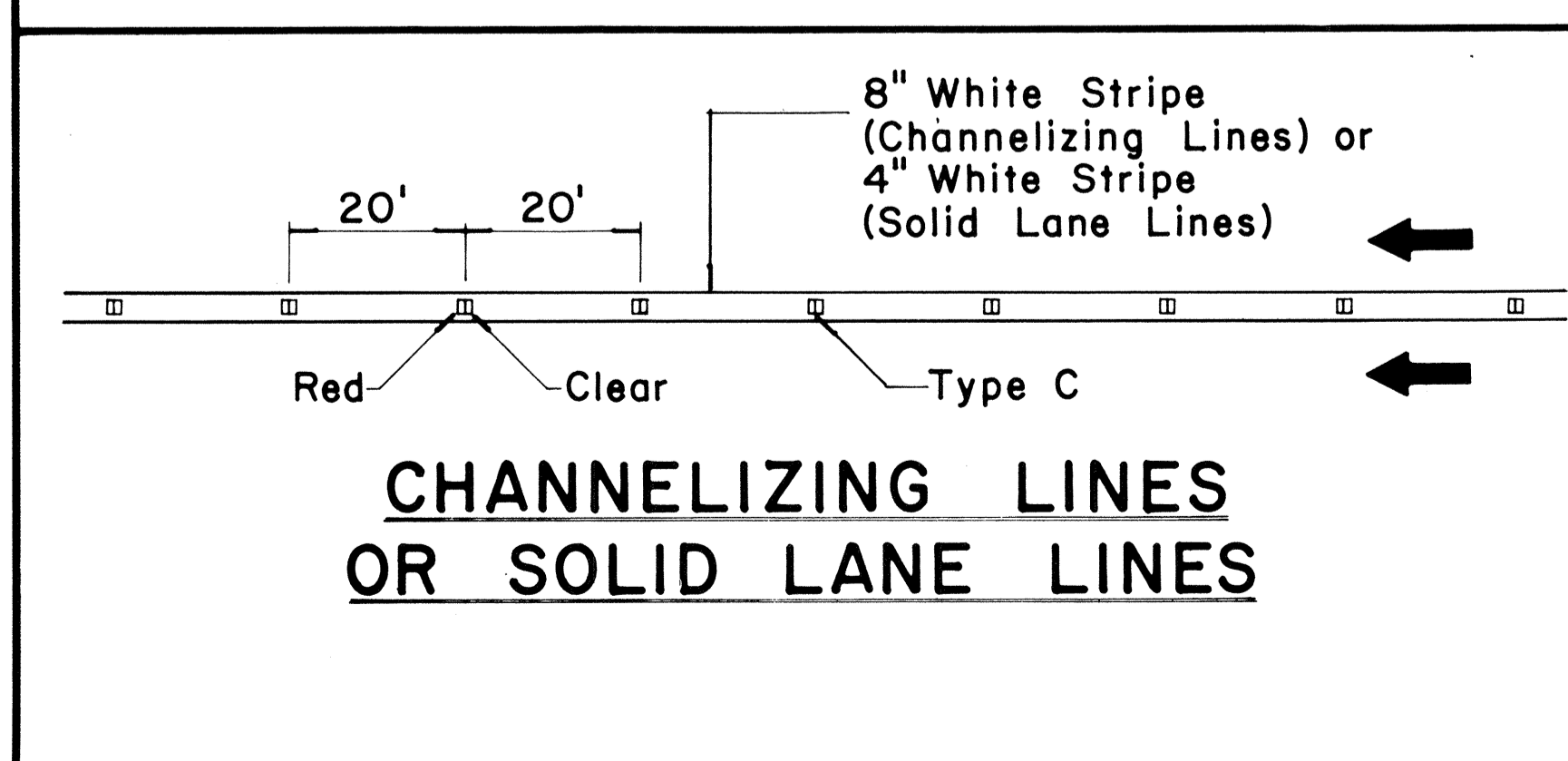
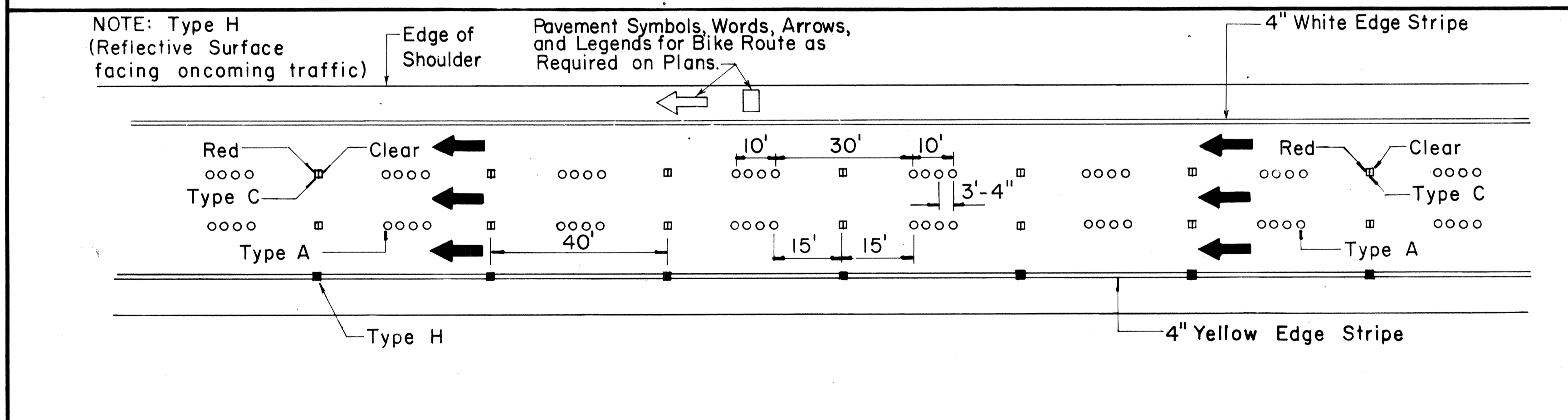
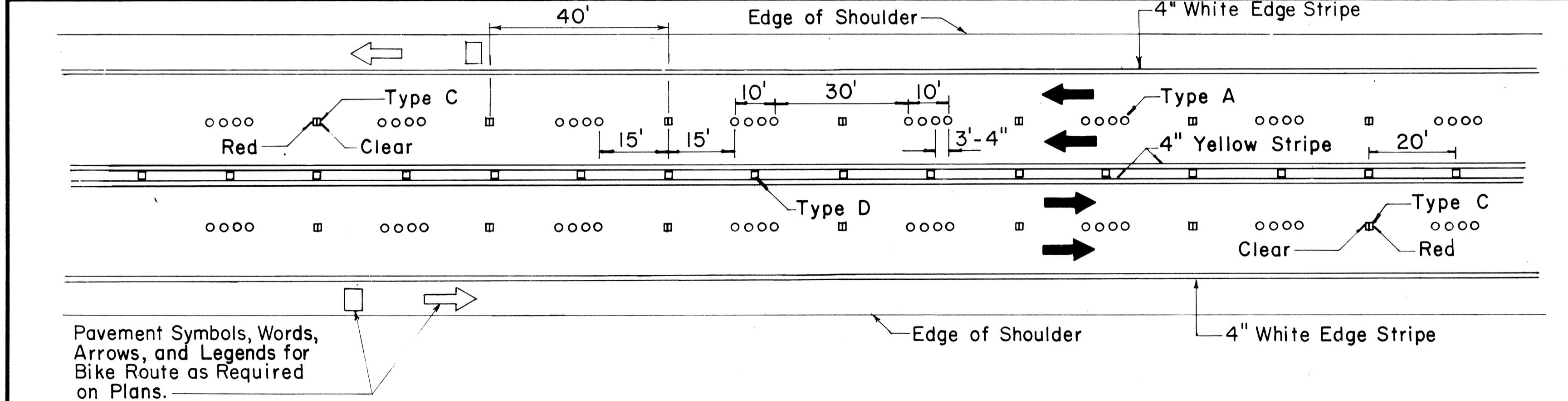
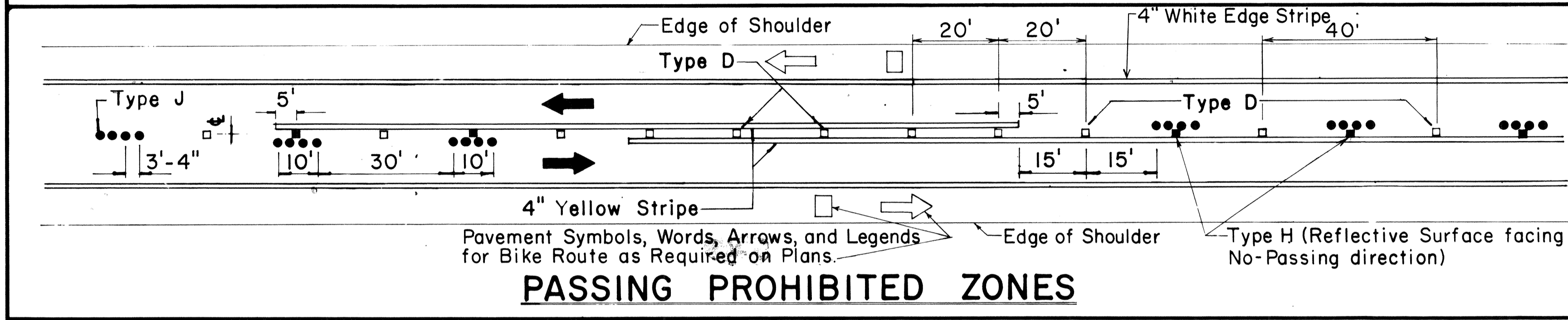
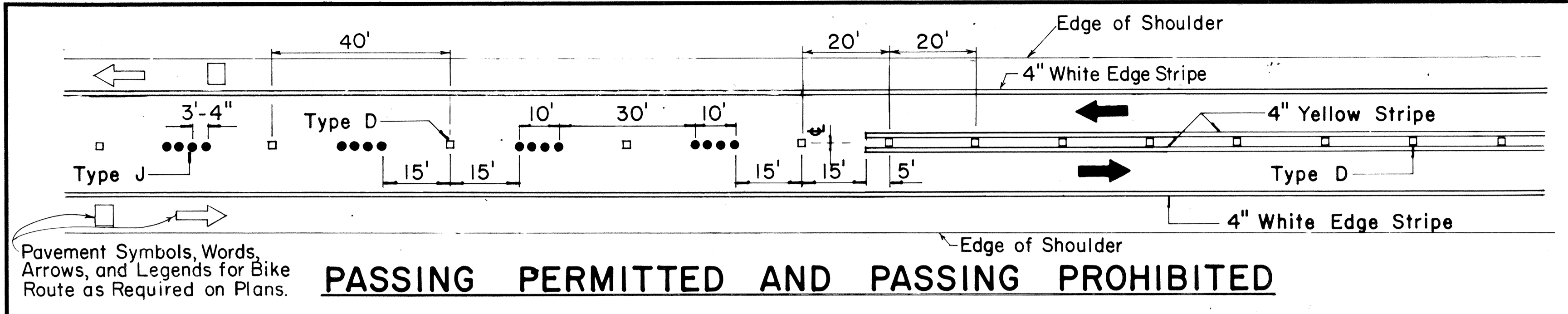
APPROVED:  
*Walter S. [Signature]* 12-30-69  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

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

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	64	163

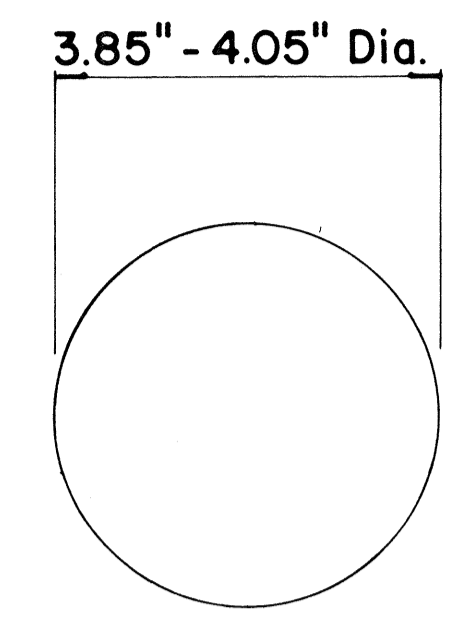


TWO - LANE

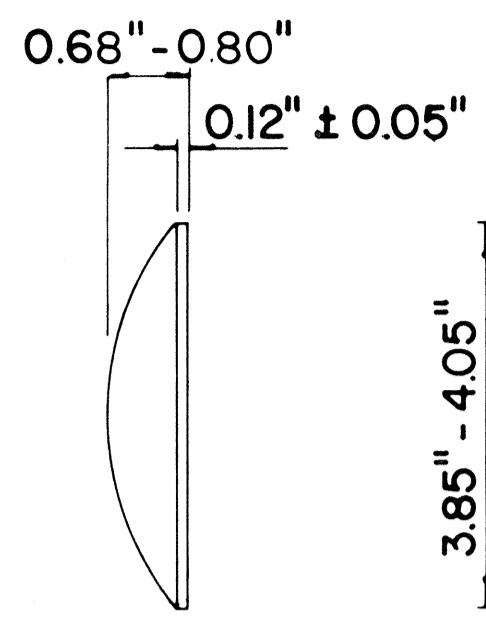
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

MISCELLANEOUS

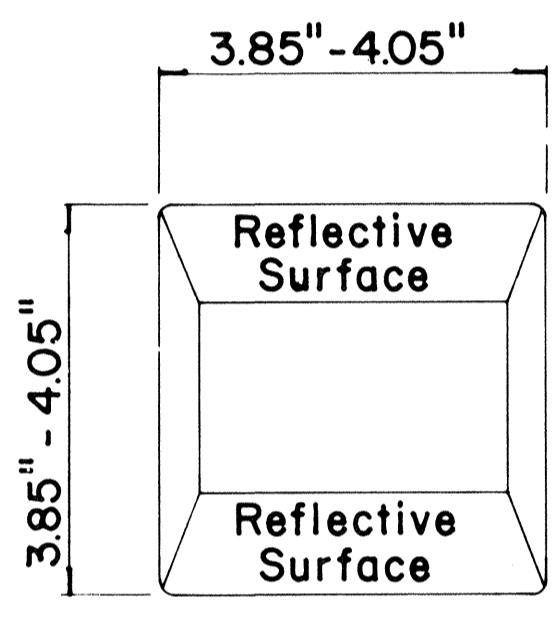


**TYPE A**  
NON-REFLECTIVE WHITE MARKER

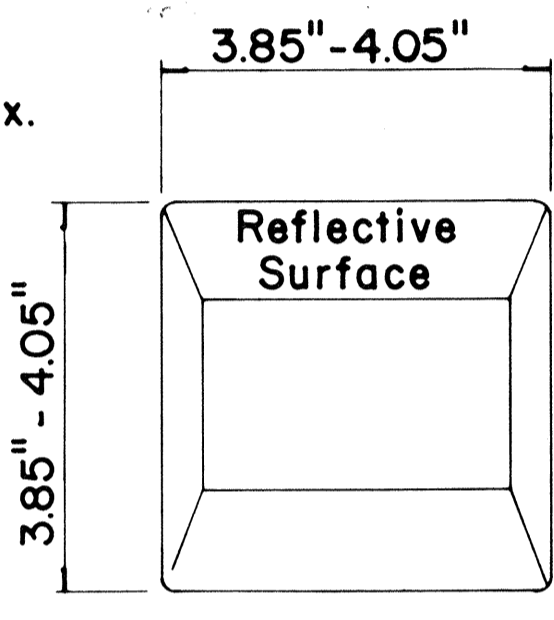


**TYPE C**  
RED-CLEAR REFLECTIVE MARKER

**TYPE J**  
NON-REFLECTIVE YELLOW MARKER



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



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

**GENERAL NOTES**

- Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- Layout and installation of pavement marking and striping shall be done by the Contractor. The Contractor shall check the layouts with the Engineer prior to performing work.

**LEGEND**

- Type A
- Type C
- Type D
- ▣ Type H
- Type J

APPROVAL RECOMMENDED:  
*Eiichi Tanaka* 7/21/78  
 TRAFFIC ENGINEER DATE

APPROVED:  
*Robert Z. Zakechis* 7/24/78  
 ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.f.	7/24/78
2	Delete Type A Markers from Bike Route Delineation.	H.f.	10/15/77

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

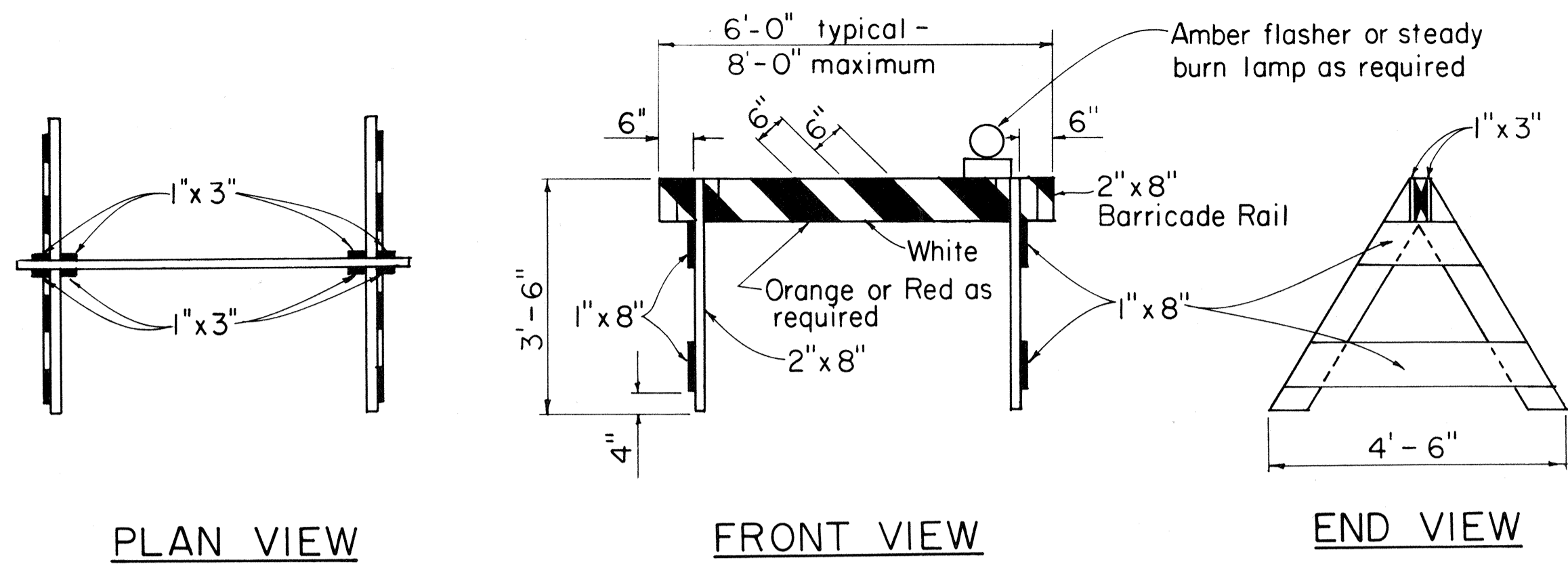
**STANDARD DETAILS**  
**RAISED PAVEMENT MARKERS**  
**AND STRIPING**

Not to Scale July 1978  
 SHEET No. 13 OF 15 SHEETS DT 300

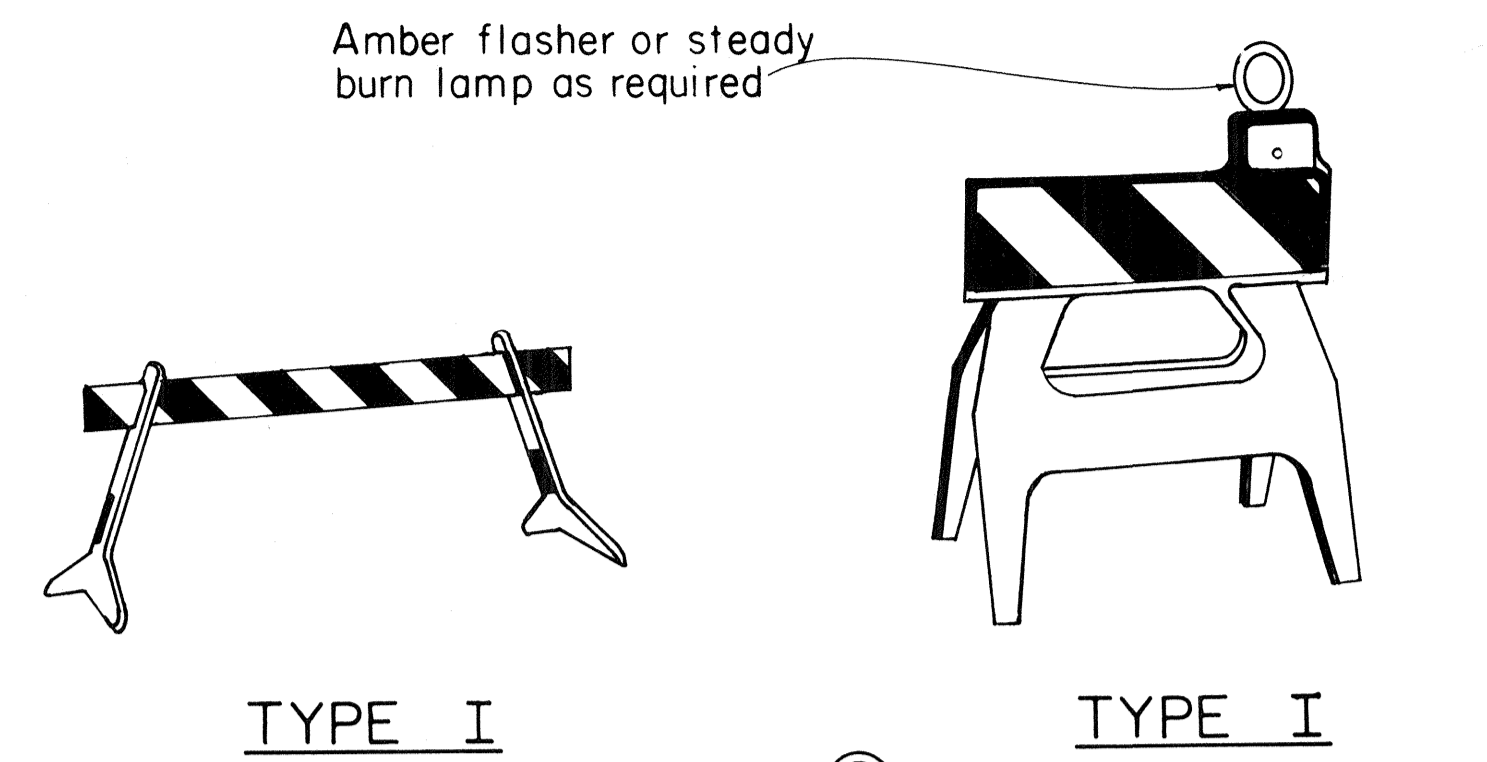
SURVEY PLOTTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 ORIGINAL PLAN TRACED BY: \_\_\_\_\_  
 NOTE BOOK DESIGNED BY: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_



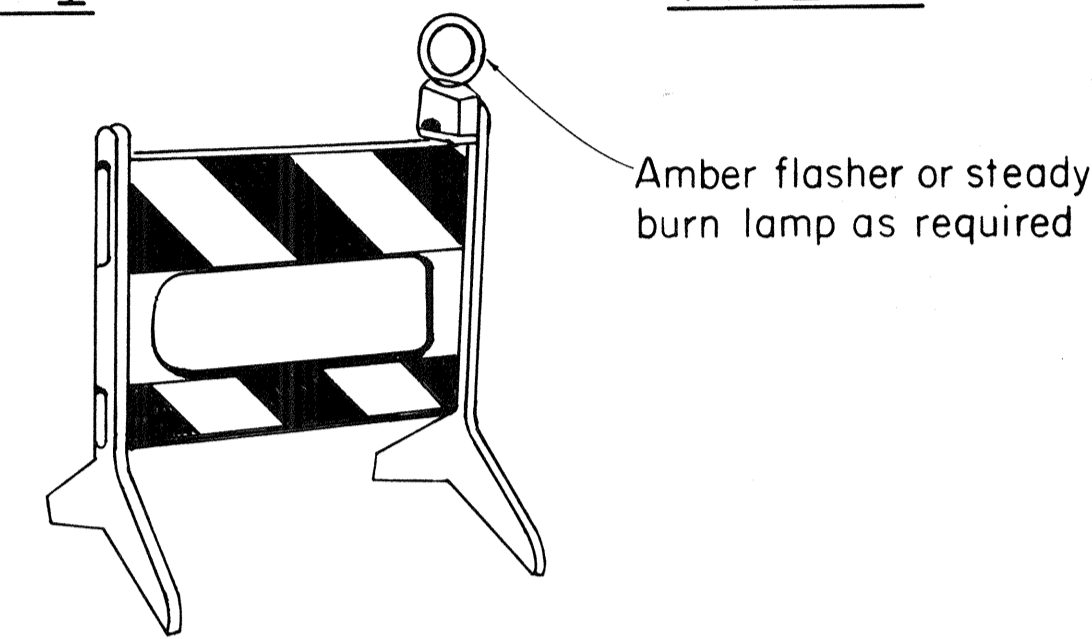
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	76008-0-82 SRS-0760(2)	1982	66	163



**TYPE I BARRICADE**  
Scale: 1/2" = 1'-0"



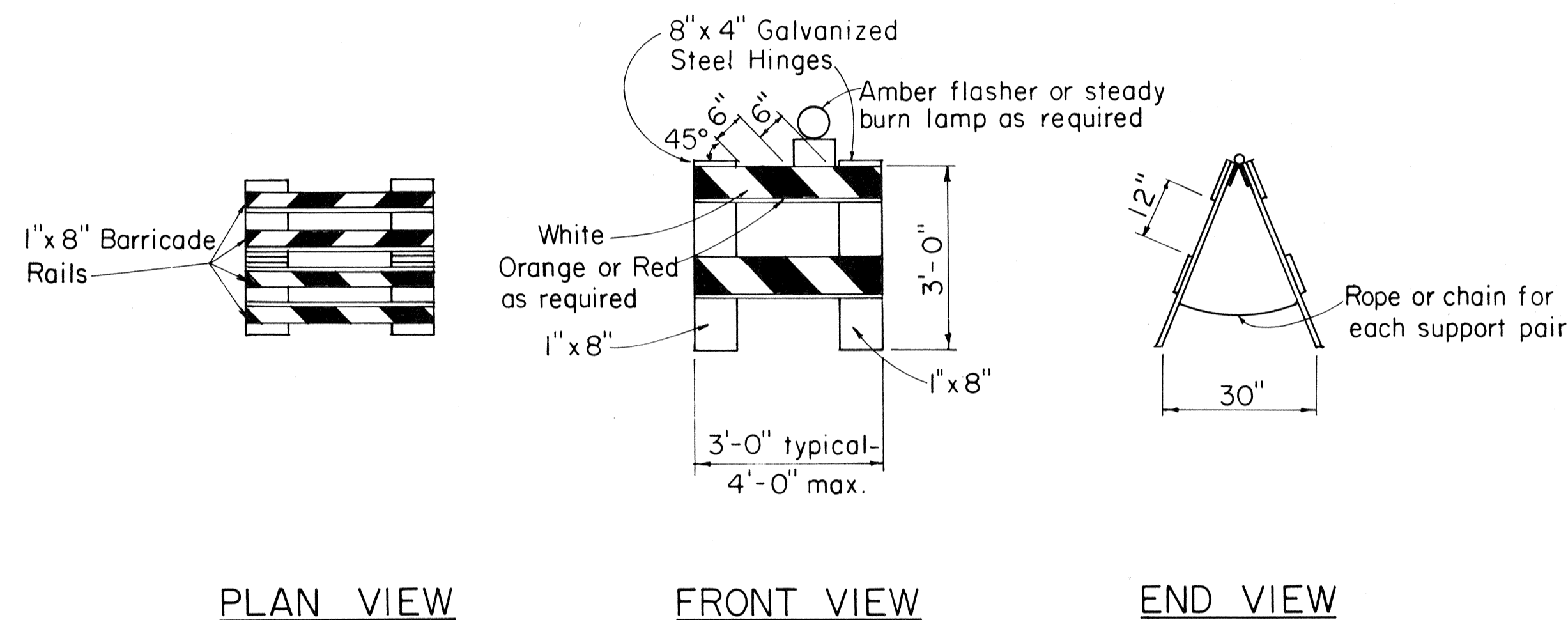
TYPE I



TYPE II

**GENERAL NOTES**

1. The front and back faces of each barricade rail shall be reflectorized with stripes sloping downward toward the same side (traveled way) of each barricade.
2. Contractor may submit alternate barricade designs for approval.
3. Sandbags or other approved weights shall not be placed on top of any striped rail.
4. The Contractor is directed to Section 626.

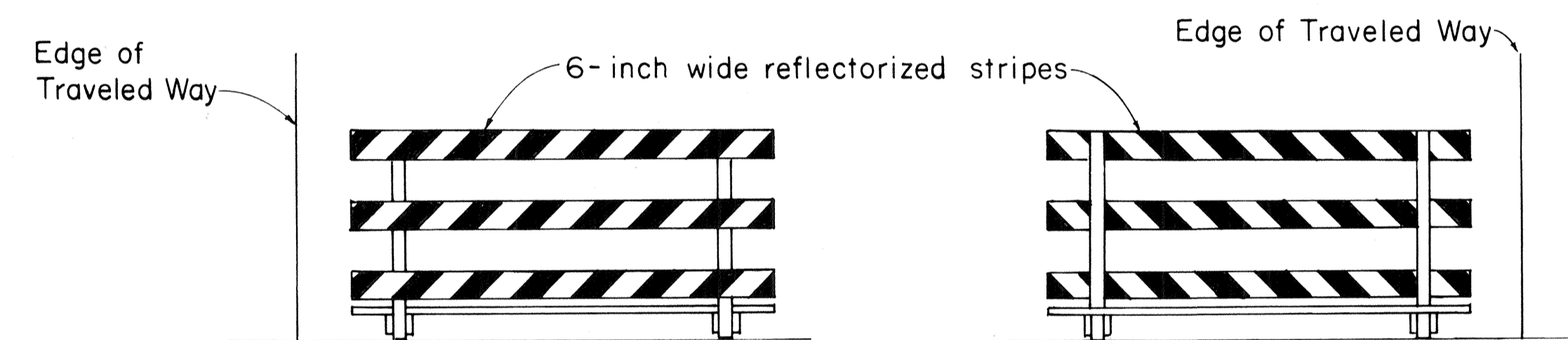


**TYPE II BARRICADE**  
Scale: 1/2" = 1'-0"

**PLASTIC MOLDED BARRICADE OPTIONS\***

Not to Scale

\* Shop Drawings must be submitted for approval.



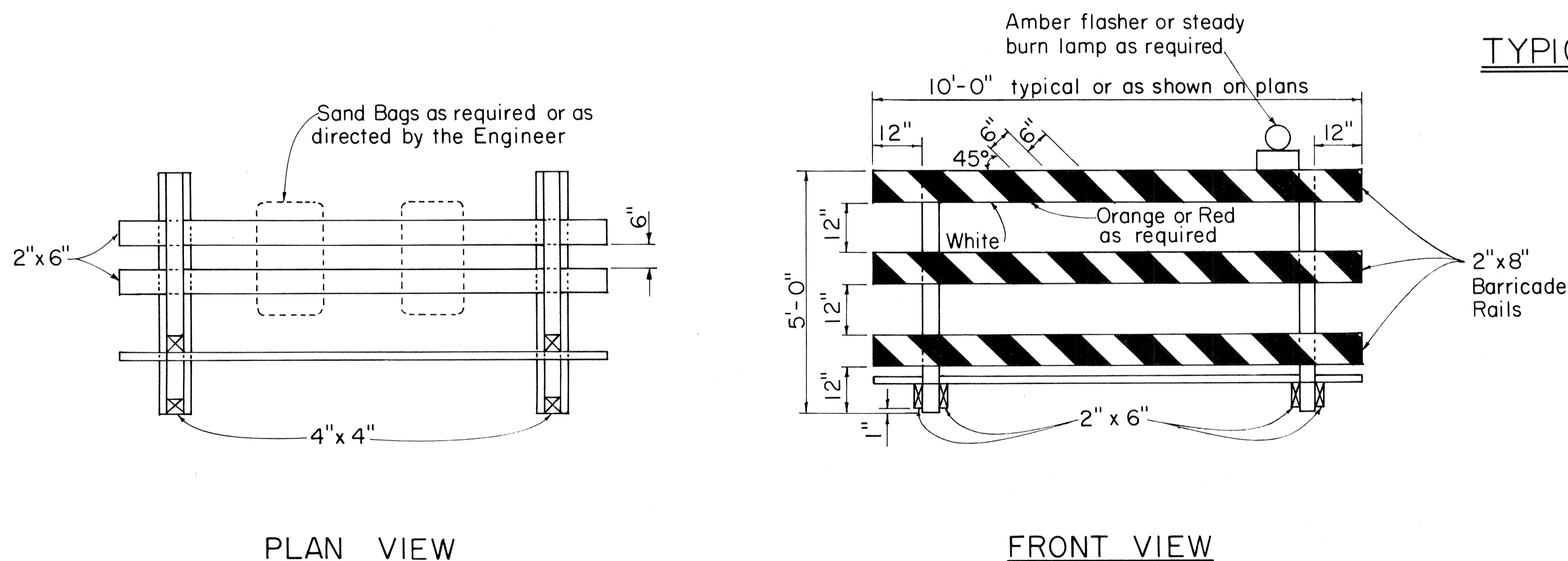
FRONT FACE

BACK FACE

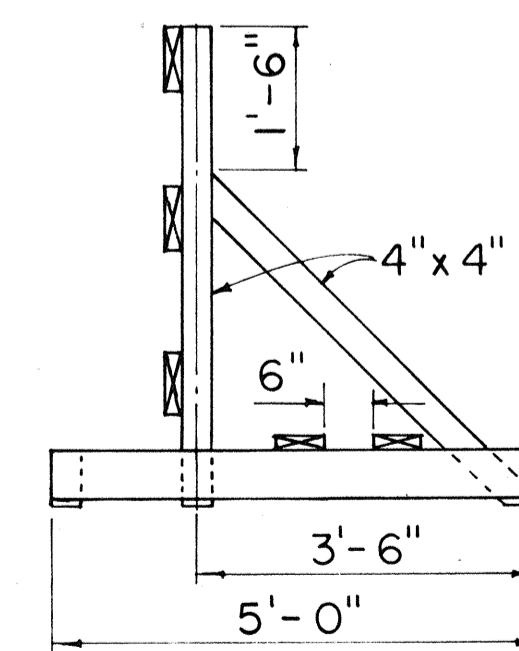
**TYPICAL BARRICADE STRIPING DETAILS\*\***

Not to Scale

\*\* Similar for Types I & II



**TYPE III BARRICADE**  
Scale: 1/2" = 1'-0"



END VIEW

APPROVAL RECOMMENDED:  
*Eiichi Tanaka* 10/21/81  
TRAFFIC ENGINEER DATE

APPROVED:  
*Shubert S. S. S. S.* 10/21/81  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supercedes DT 800 Approved 12/30/69	H.L.	10/23/81

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**

**BARRICADES**

SCALE: As Shown  
SHEET NO. 15 OF 15 SHEETS DT 800

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