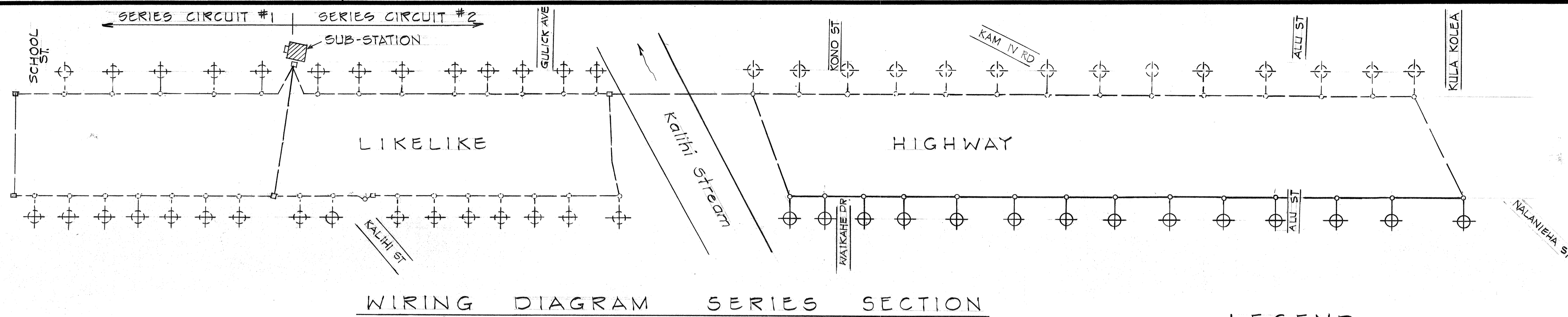


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-79	1980	29	45



WIRING DIAGRAM SERIES SECTION

N.T.S.

GENERAL NOTES

- All existing utilities whether or not shown on plans shall be protected at all times during construction and any damages to them shall be repaired and paid for by the Contractor.
- The existing HECO and HICO facilities shown on these plans are to the best information that are available on our records.
- Contractor shall notify State Highway Department of Transportation maintenance office 72 hours before commencing installation of highway lighting system, phone 548-2576.
- Start installation of new or relocated highway lighting system at the terminal end of the series circuit so as to minimize disruption of the existing highway lights.
- All mercury-vapor lamps affected by pole re-installation shall be replaced with new lamps and will be considered incidental to the contract.
- Highway lighting systems parts, hardware, and components damaged shall be replaced with new and considered incidental to the contract.
- All abandoned highway lighting concrete foundation shall be removed unless otherwise directed by Engineer. Payment for this work will be considered incidental to the contract.
- Conduits shall be galvanized steel or R.V.C. conduit except riser into bases and exposed conduits shall be galvanized steel.
- The existing street lighting systems shall remain operational during hours of darkness. The contractor shall arrange his work accordingly and provide temporary wiring if necessary to keep project area illuminated during the hours of darkness.
- Exact location of roadside traffic signs shall be approved by the Engineer.
- At existing cut increase round section depth by 12 inch per 12 inch difference from foundation top to finished grade.

LEGEND

- Existing direct burial cable to remain
- x-x- Existing direct burial cable to be abandoned.
- Existing highway lighting standard
- Existing highway lighting standard back of guardrail with new foundation.
- Existing highway lighting standard with new foundation and breakaway support couplings.
- Existing highway lighting standard to be installed with breakaway support couplings.
- 1c- New 1#6 Cable in 1-2" Conduit
- New Type "B" Pullbox
- sc- Existing Signal Corp Cable
- ≡1c≡ New 1#6 Cable in 1-2" Conduit encased in concrete jacket.

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

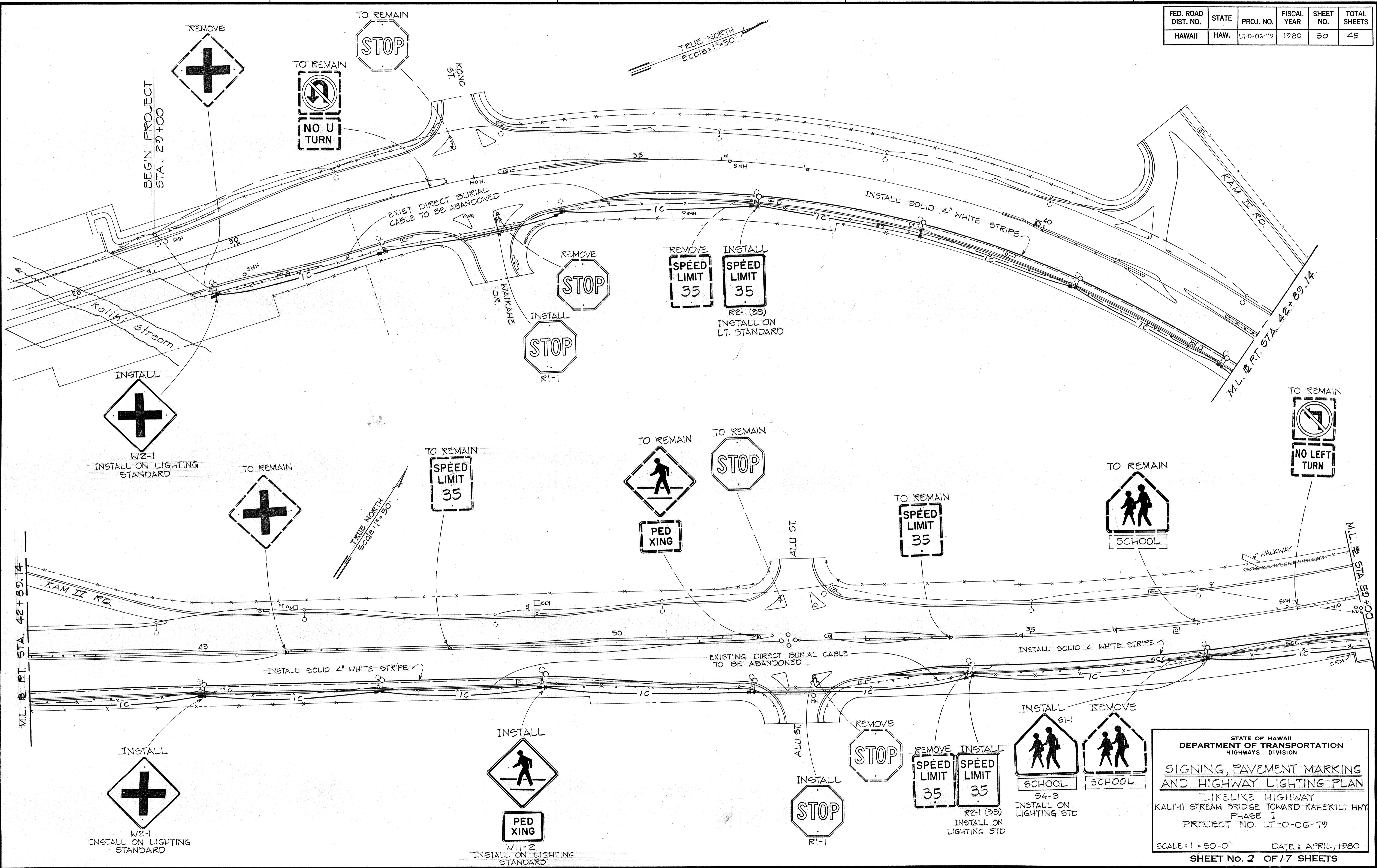
**SIGNING, PAVEMENT MARKING  
AND HIGHWAY LIGHTING PLAN**

LIKELIKE HIGHWAY  
KALIHĪ STREAM BRIDGE TOWARD KAHEKILI HWY  
PHASE I  
PROJECT NO. LT-0-06-79

SCALE: \_\_\_\_\_ DATE: APRIL, 1980

SHEET No. 1 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-79	1980	30	45



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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

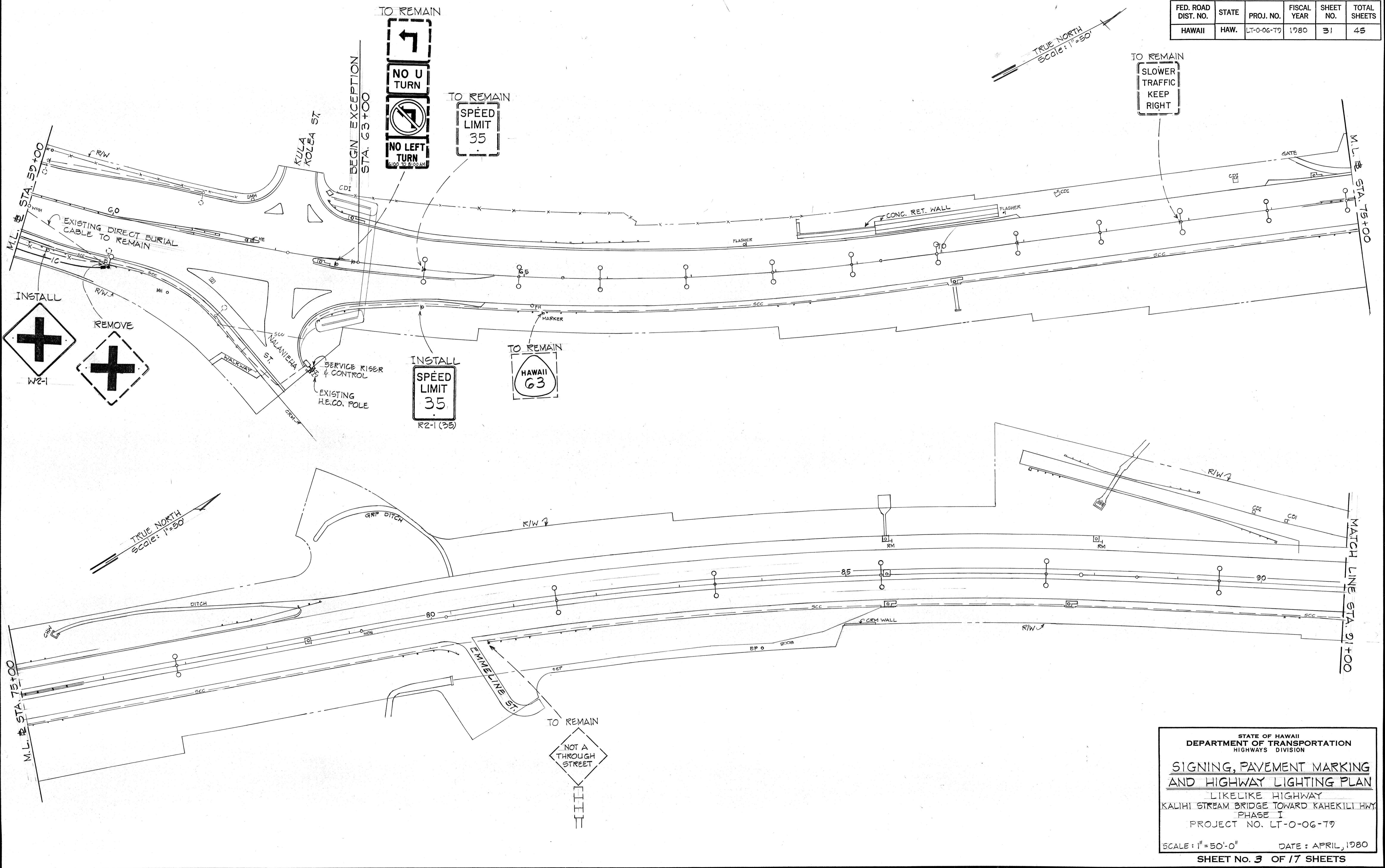
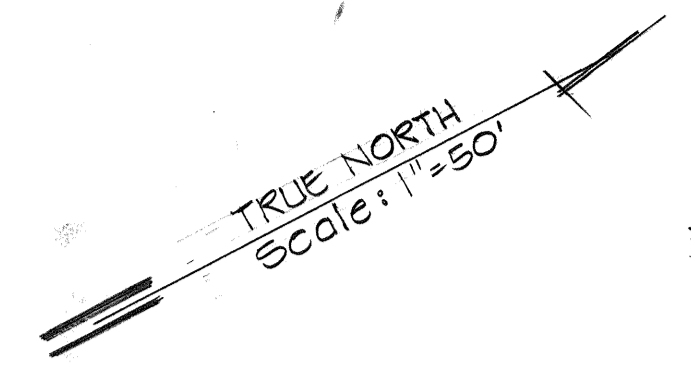
**SIGNING, PAVEMENT MARKING  
AND HIGHWAY LIGHTING PLAN**

LIKELIKE HIGHWAY  
KALIHĪ STREAM BRIDGE TOWARD KAHEKILI HWY  
PHASE I  
PROJECT NO. LT-0-06-79

SCALE: 1"=50'-0" DATE: APRIL, 1980

**SHEET No. 2 OF 7 SHEETS**

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-79	1980	31	45



ORIGINAL PLAN	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
NO.	

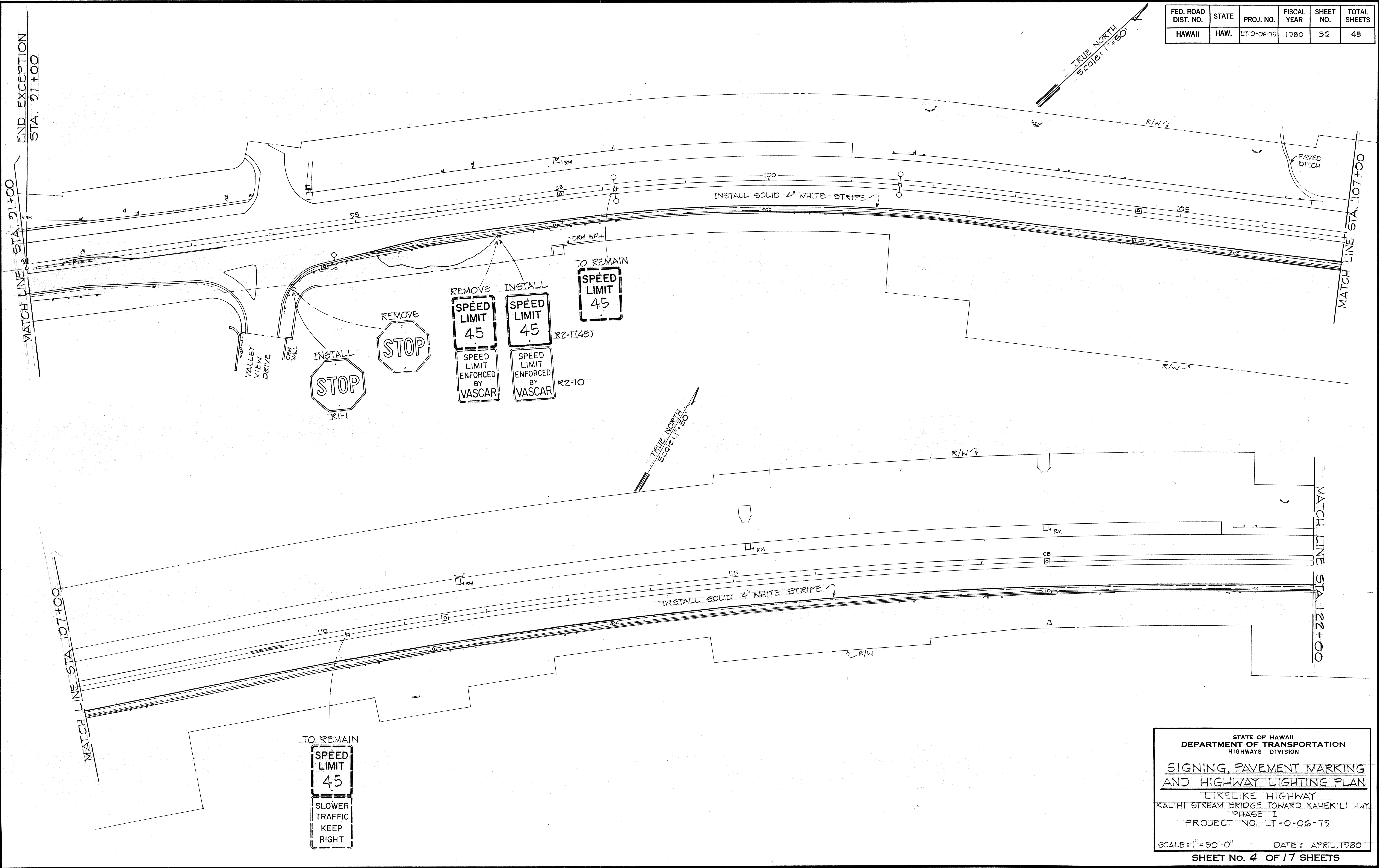
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGNING, PAVEMENT MARKING  
AND HIGHWAY LIGHTING PLAN**

LIKELIKE HIGHWAY  
KALIHI STREAM BRIDGE TOWARD KAHEKILIHU  
PHASE I  
PROJECT NO. LT-0-06-79

SCALE: 1"=50'-0"      DATE: APRIL, 1980  
SHEET No. 3 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-79	1980	32	45



ORIGINAL PLAN	DATE
DESIGNED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	
No.	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGNING, PAVEMENT MARKING  
AND HIGHWAY LIGHTING PLAN**

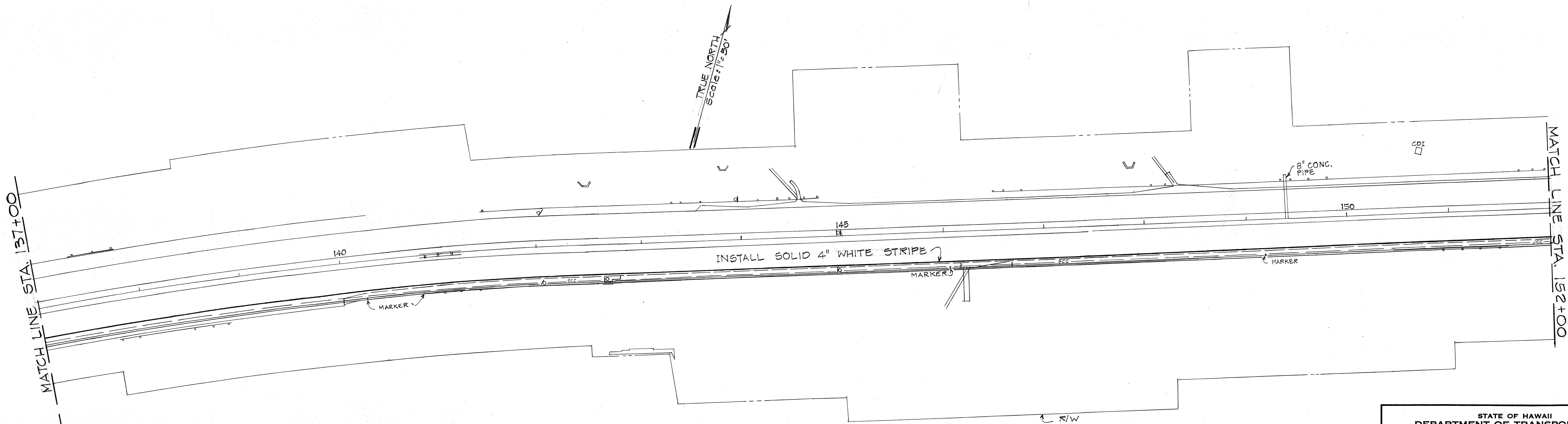
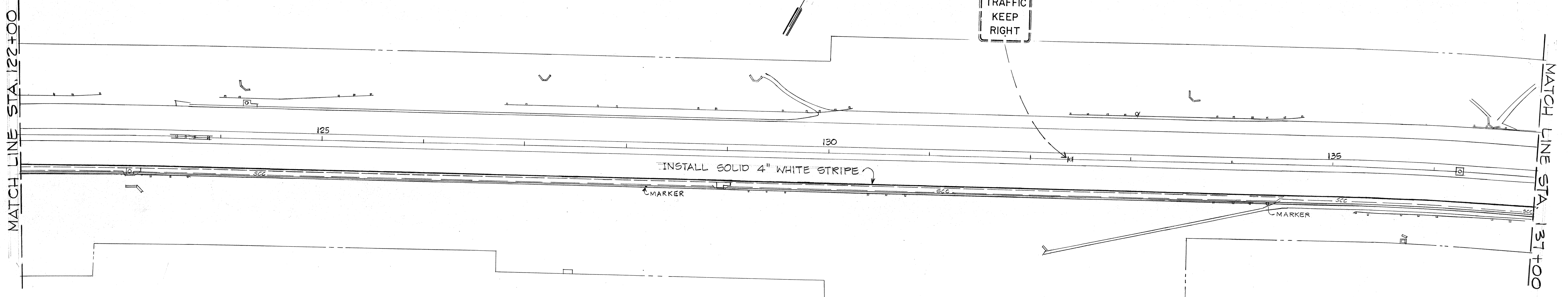
LIKELIKE HIGHWAY  
KALIHI STREAM BRIDGE TOWARD KAHEKILI HWY.  
PHASE I  
PROJECT NO. LT-0-06-79

SCALE: 1" = 50'-0"      DATE: APRIL, 1980  
**SHEET No. 4 OF 17 SHEETS**

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-79	1980	33	45

SPEED LIMIT  
45  
SLOWER TRAFFIC  
KEEP RIGHT

TRUE NORTH  
SCALE: 1" = 50'



ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	

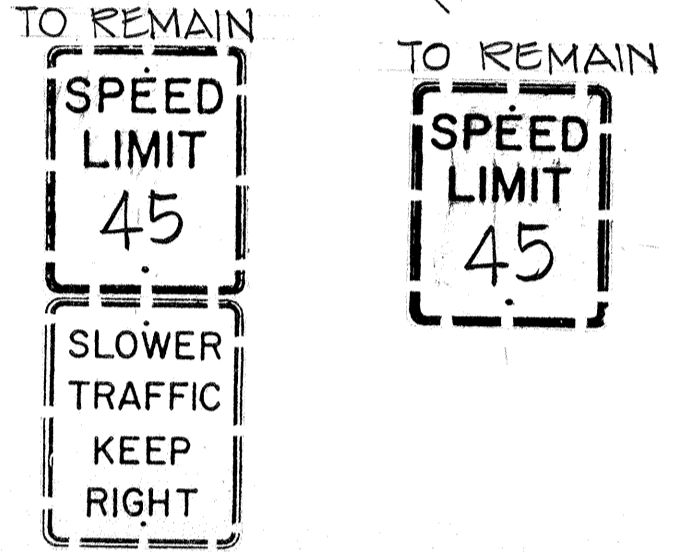
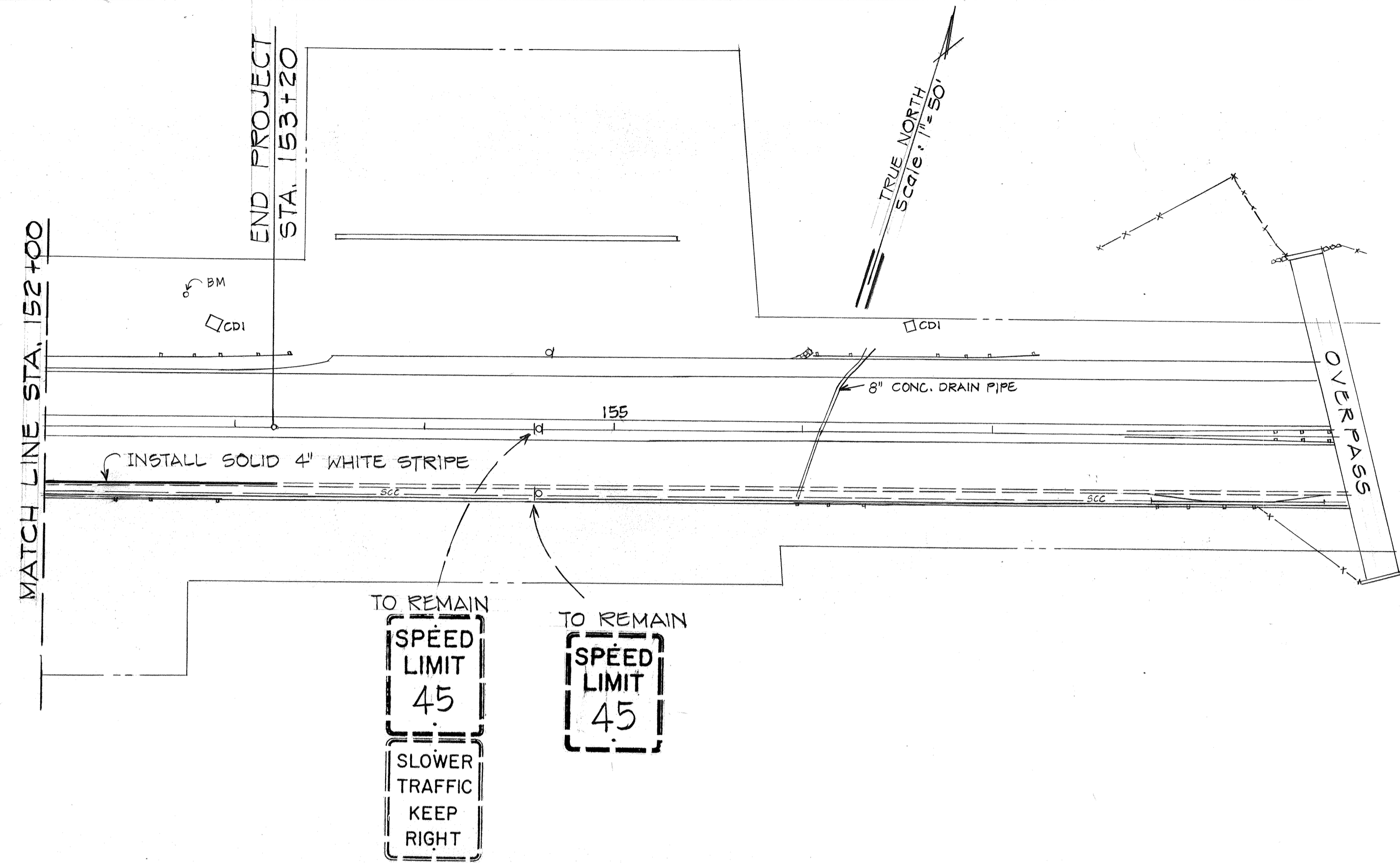
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGNING, PAVEMENT MARKING  
AND HIGHWAY LIGHTING PLAN**

LIKELIKE HIGHWAY  
KALIHI STREAM BRIDGE TOWARD KAHEKILI HWY.  
PHASE I  
PROJECT NO. LT-0-06-79

SCALE: 1" = 50'-0"      DATE: APRIL, 1980  
SHEET No. 5 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-79	1980	34	45



ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

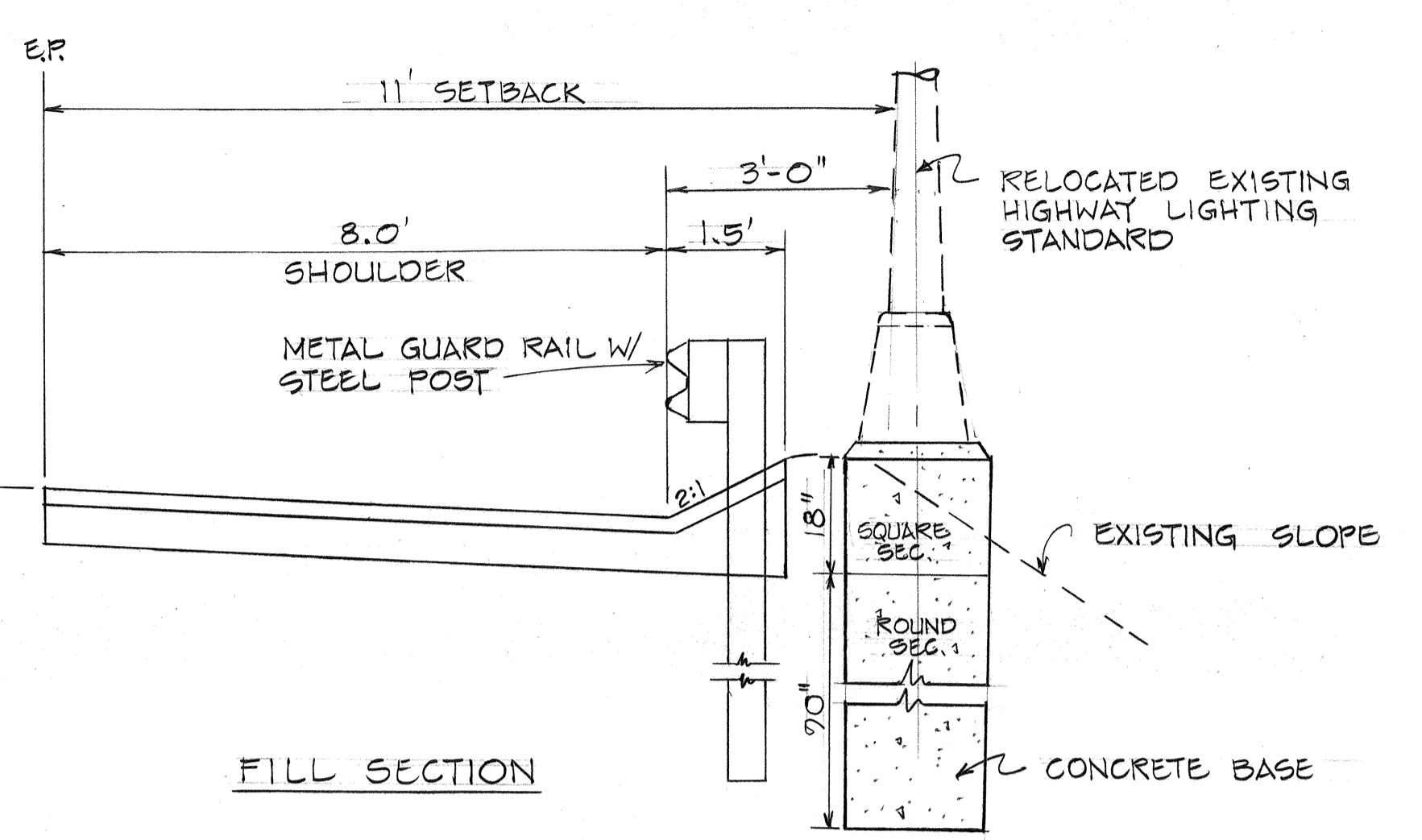
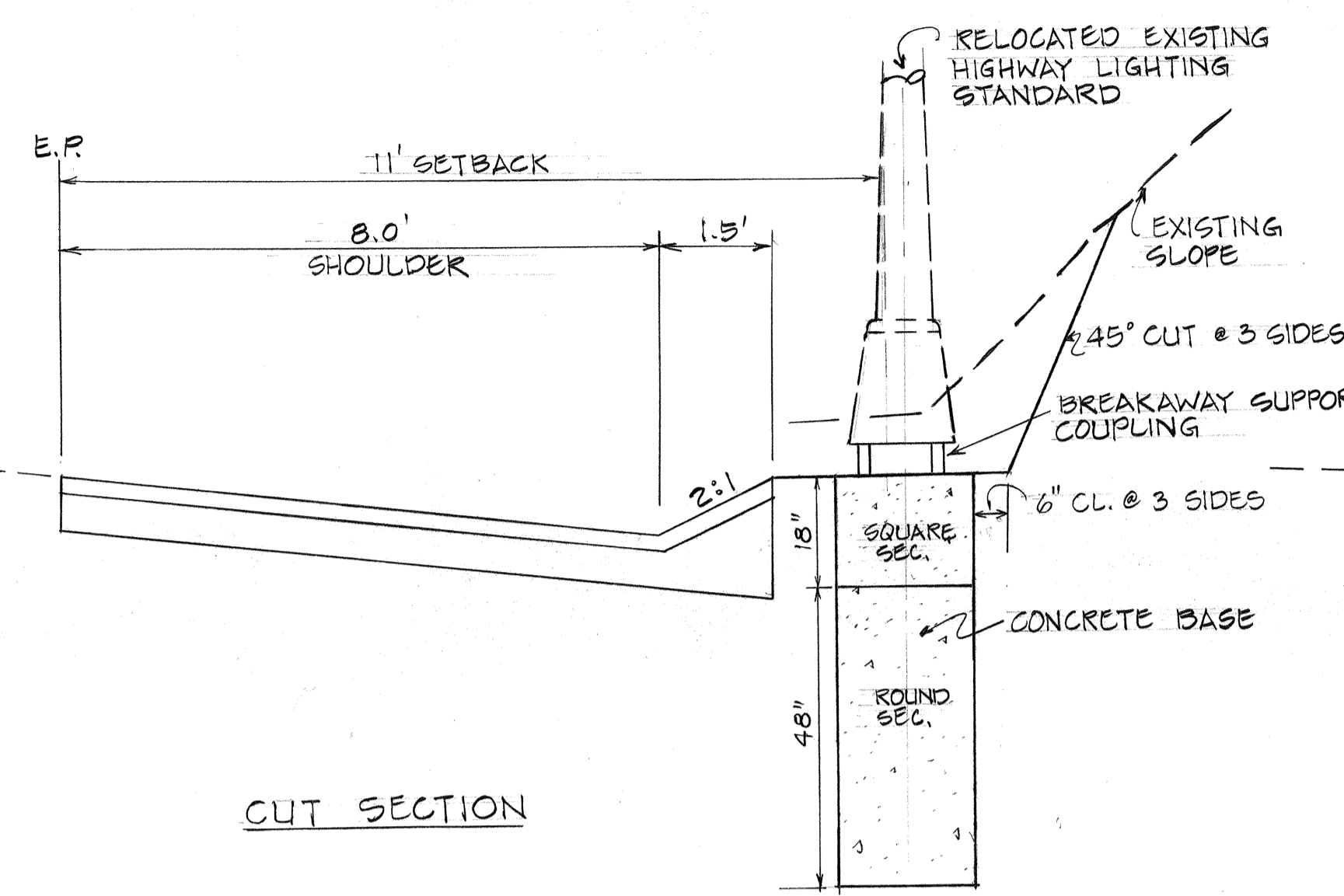
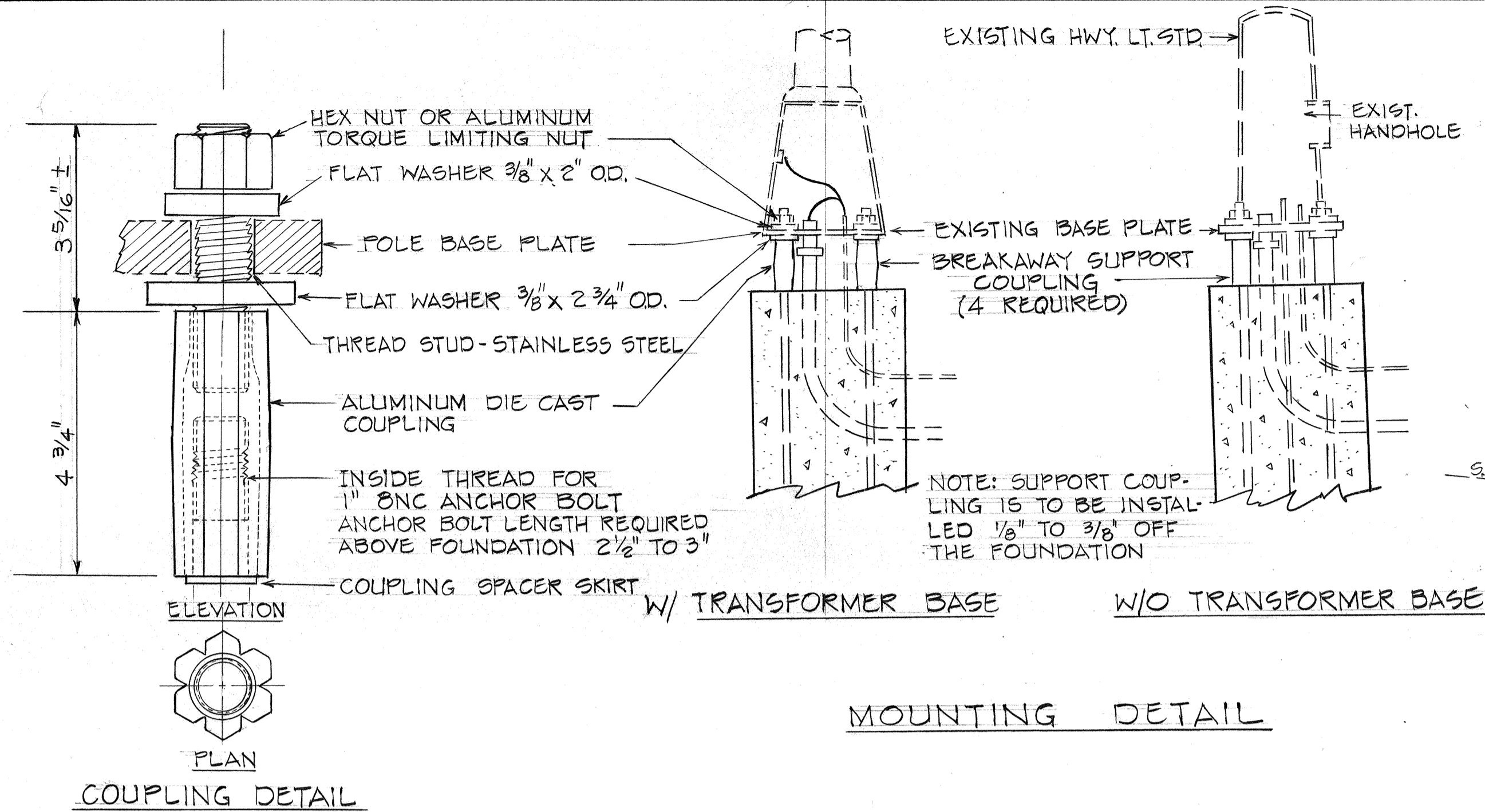
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGNING PAVEMENT MARKING  
AND HIGHWAY LIGHTING PLAN**

LIKELIKE HIGHWAY  
KALIHI STREAM BRIDGE TOWARD KAHEKILI HWY.  
PHASE I  
PROJECT NO. LT-0-06-79

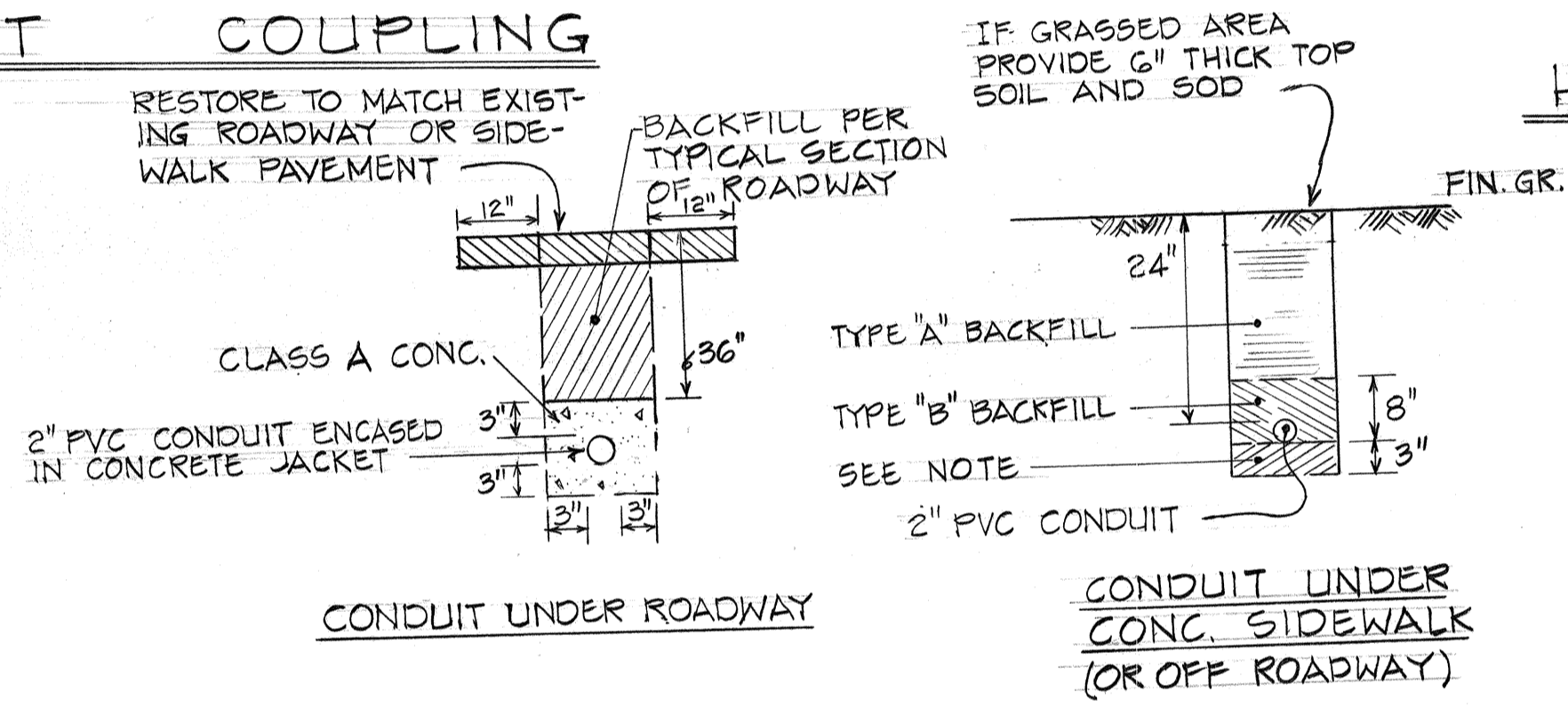
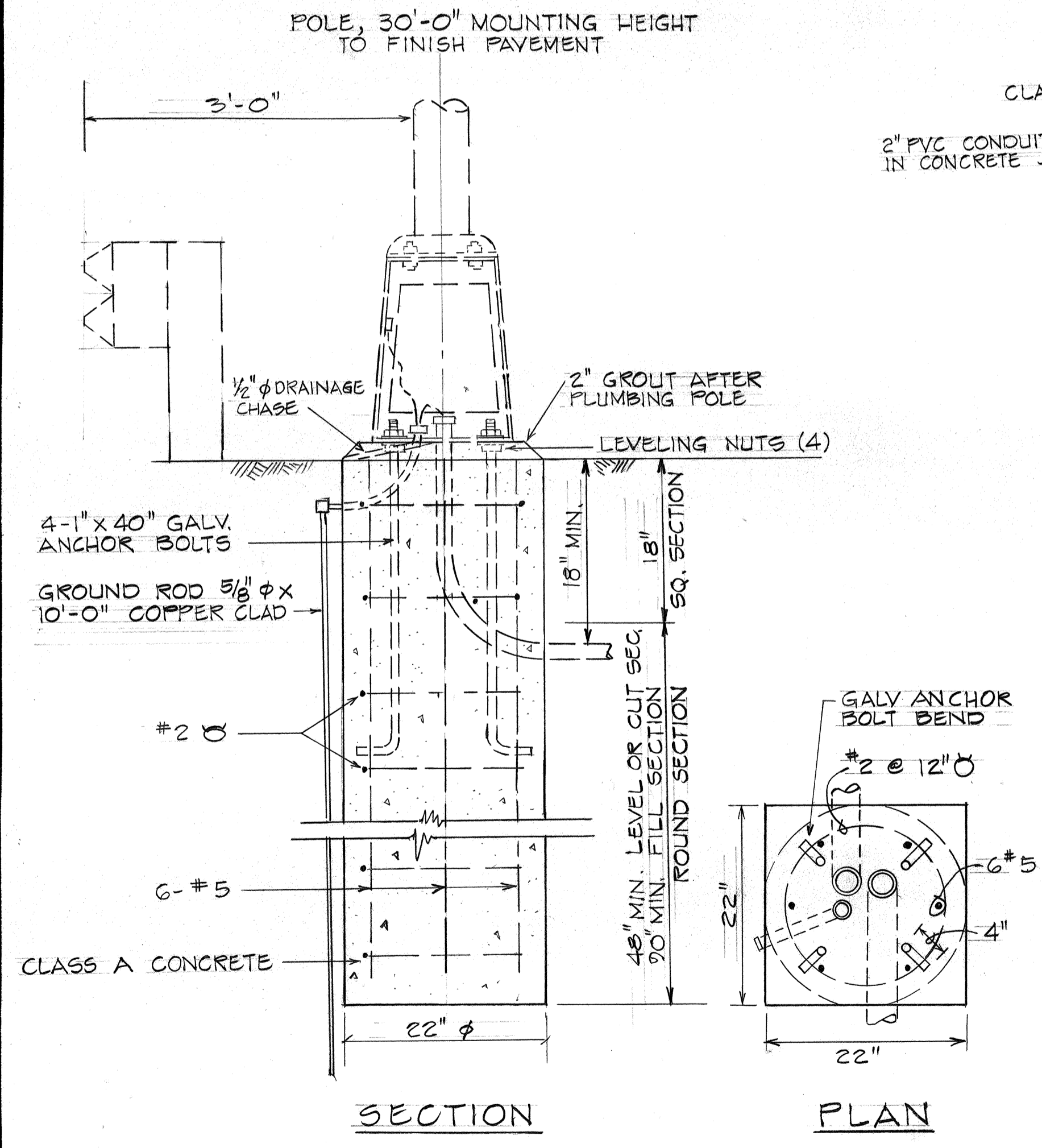
SCALE: 1" = 50'-0"      DATE: APRIL, 1980  
**SHEET No. 6 OF 7 SHEETS**

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-79	1980	35	45



**BREAKAWAY SUPPORT COUPLING**  
NOT TO SCALE

**HIGHWAY LIGHTING STANDARD FOUNDATION**  
Scale: 1/2" = 1'-0"



**BACKFILL DATA**

TYPE "A" BEACH SAND, EARTH OR EARTH AND GRAVEL. IF EARTH AND GRAVEL USED MAX. ROCK SIZE SHALL BE 1" AND THE MIX SHALL NOT CONTAIN NOT MORE THAN 50% BY VOLUME OF ROCK PARTICLES.

TYPE "B" SAME AS TYPE "A" EXCEPT THAT IF EARTH AND GRAVEL USED, THE MIXTURE SHALL PASS A 1/2" MESH SCREEN & CONTAIN NO MORE THAN 20% BY VOLUME OF ROCK PARTICLES.

NOTE: IF THE NORMAL MATERIAL IN THE BOTTOM OF THE TRENCH IS NOT TYPE "B" AN ADDITIONAL 3" SHALL BE EXCAVATED AND TYPE "B" BACKFILL SHALL BE PROVIDED.

**TYPICAL DUCT SECTION**  
NOT TO SCALE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGNING, PAVEMENT MARKING  
AND HIGHWAY LIGHTING PLAN**

LIKELIKE HIGHWAY  
KALIHI STREAM BRIDGE TOWARD KAHEKILI HWY.  
PHASE I  
PROJECT NO. LT-0-06-79

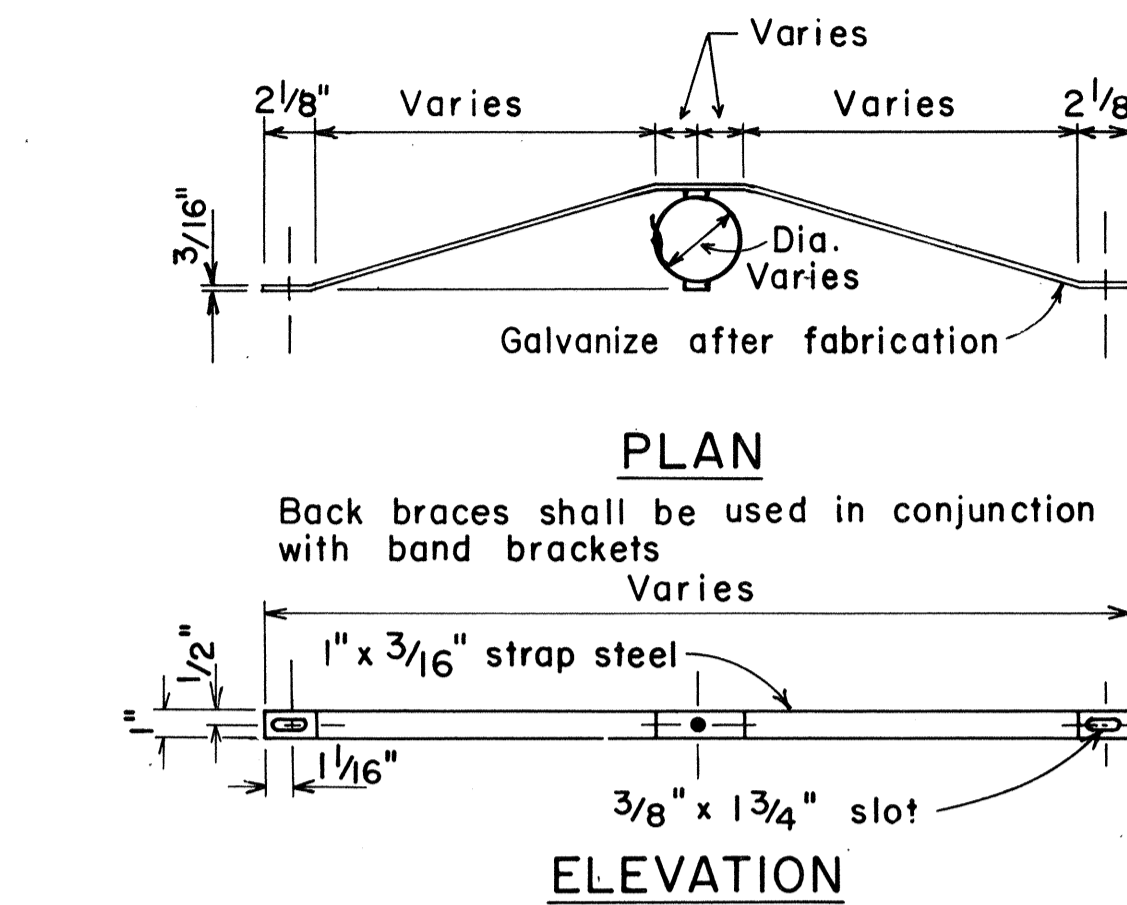
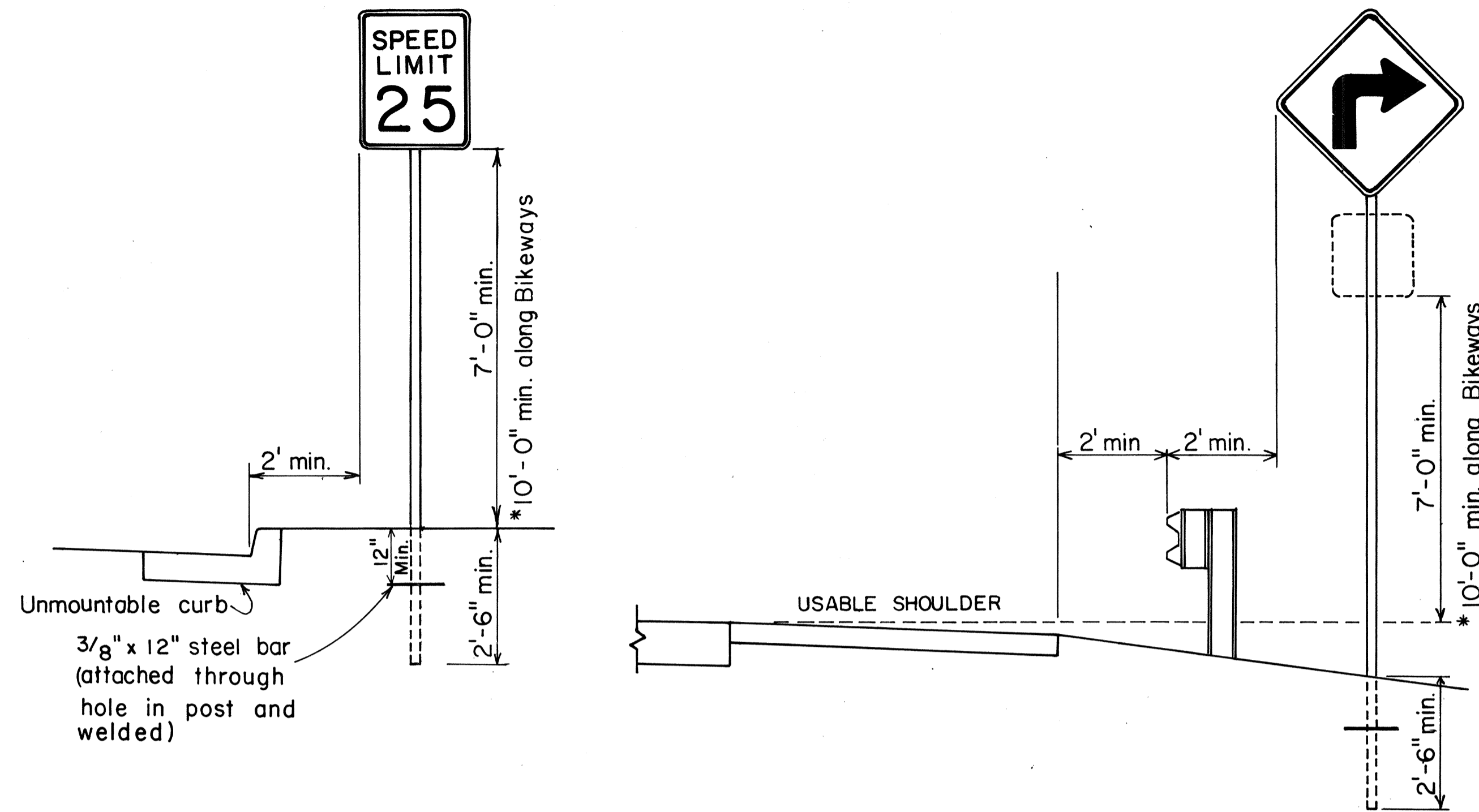
SCALE: AS SHOWN DATE: APRIL, 1980  
SHEET No. 7 OF 17 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

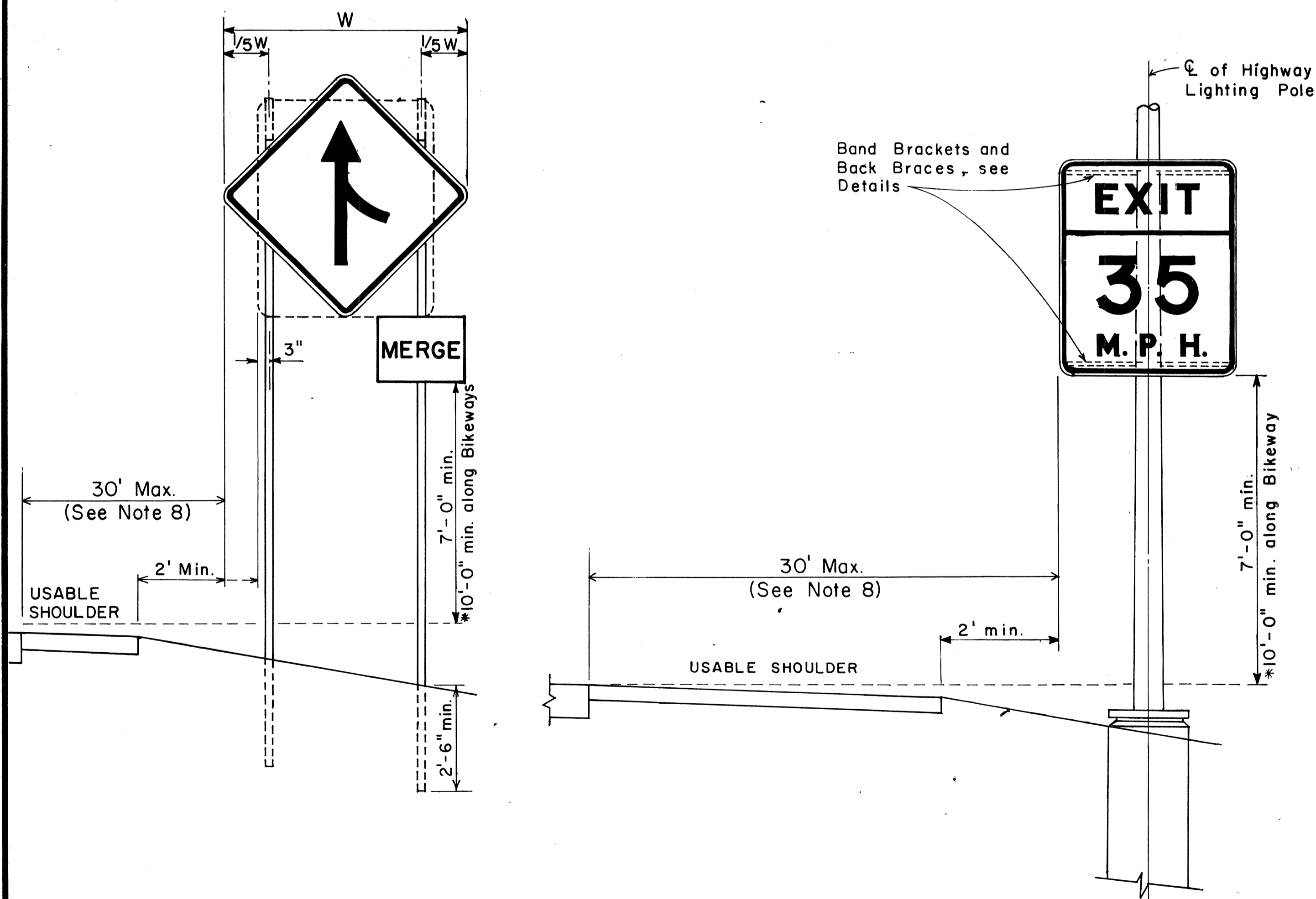
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT00679	1980	36	45

### GENERAL NOTES

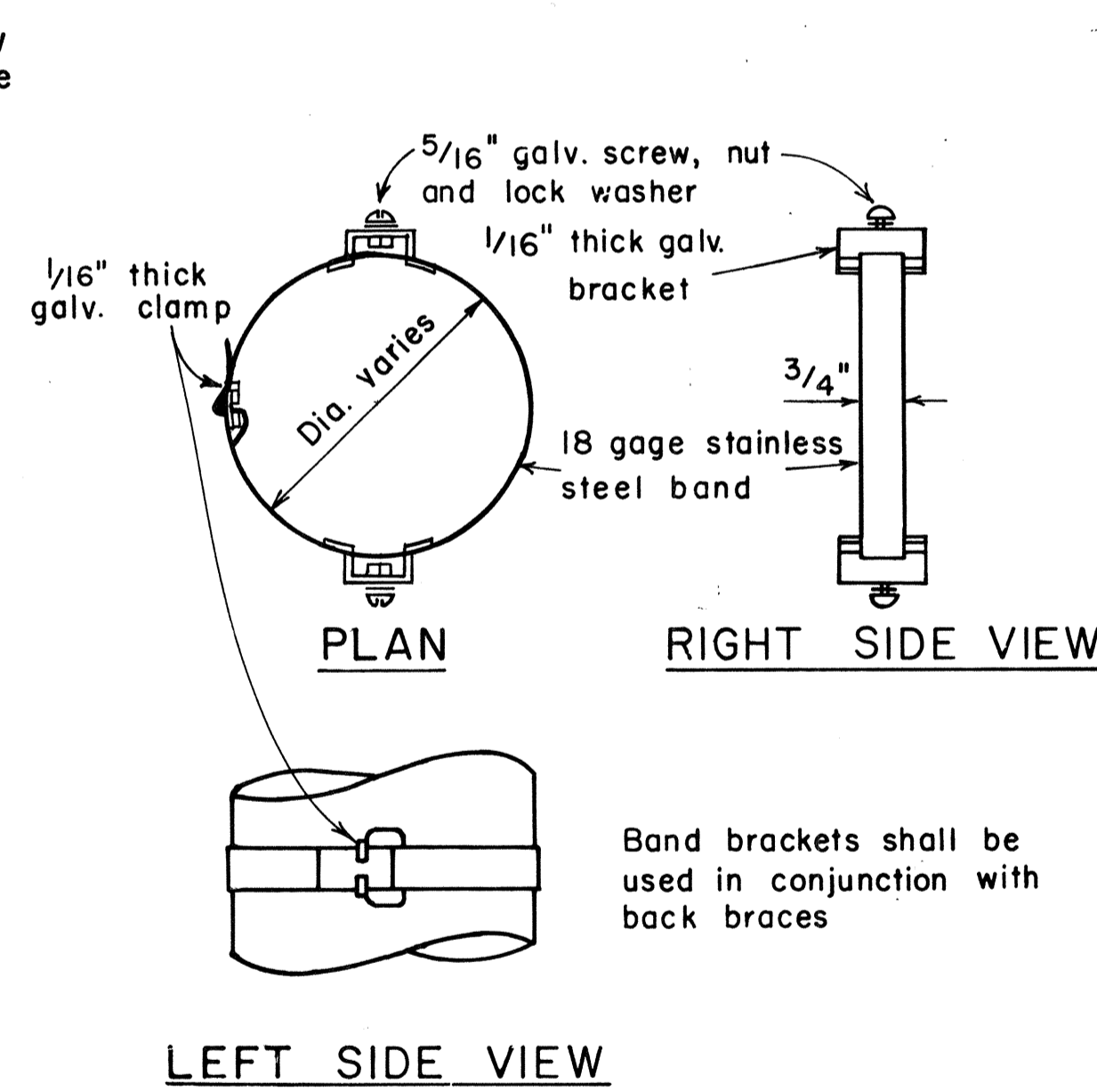
1. Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts.
2. All signs larger than 10 sq. ft. in area or 48" inches and wider, and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least two sets of band brackets and back braces.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



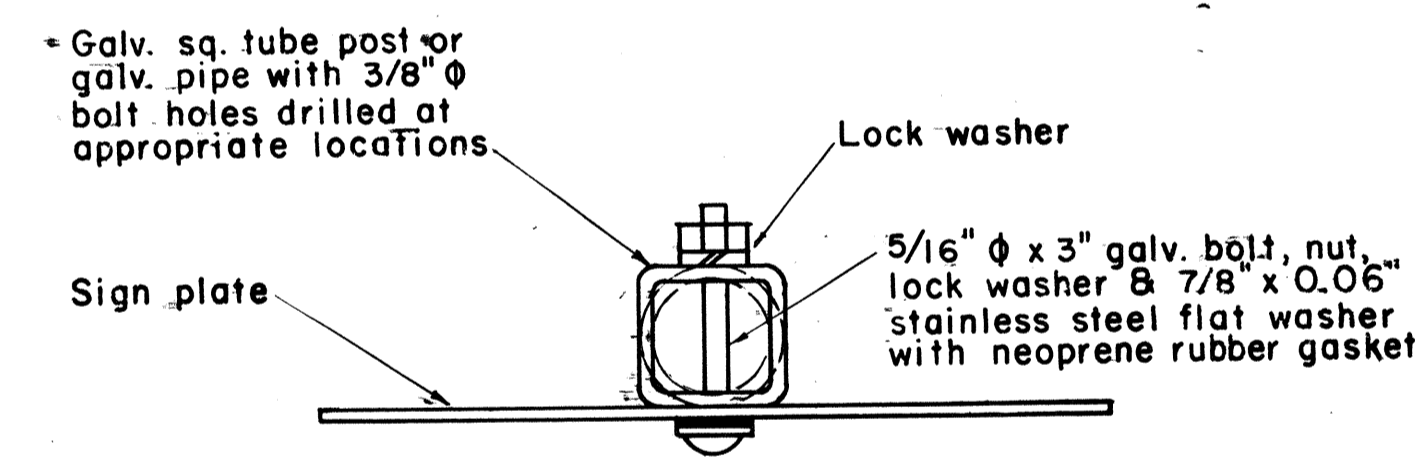
### BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



### HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION



### BAND BRACKET



### GALVANIZED SQUARE TUBE POST (OR GALVANIZED PIPE)

### TYPICAL MOUNTING DETAILS

NOT TO SCALE

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

APPROVED:  
*Harbert S. Sakai* 11/15/77  
 ASSISTANT CHIEF, ENGINEERING DATE

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.	5/23/79
3	Added Notes No. 8 & No. 9	H.T.	5/18/79
4	Revised Gen. Note #4 & Mounting Details	H.T.	4/23/80

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

## STANDARD DETAILS

### MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	L7-0-06-79	1980	37	45

**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:  
*Erich Tanaka* 3/11/72  
 TRAFFIC ENGINEER DATE

APPROVED:  
*Robert Zetser* 3-20-72  
 ASSISTANT CHIEF, ENGINEERING 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.	10/16/74
3	Added General Note 5	H.T.	8/9/79

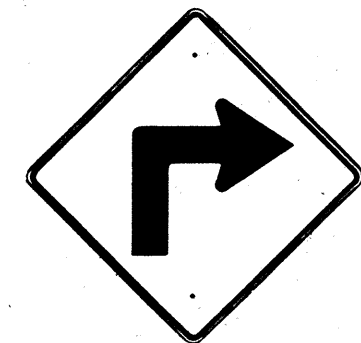
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 LAND TRANSPORTATION FACILITIES DIVISION

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

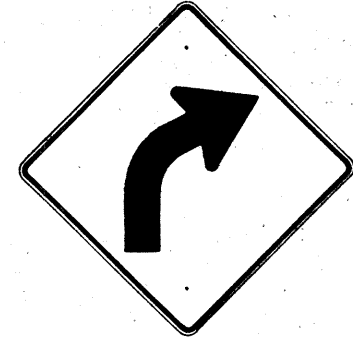
NOT TO SCALE  
 SHEET No. 9 OF 17 SHEETS DT 101

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

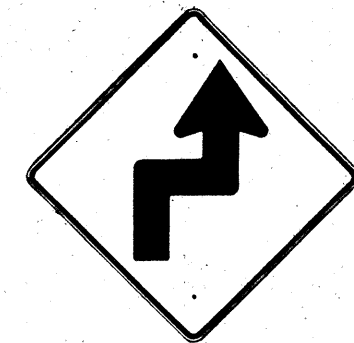
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-79	1980	38	45



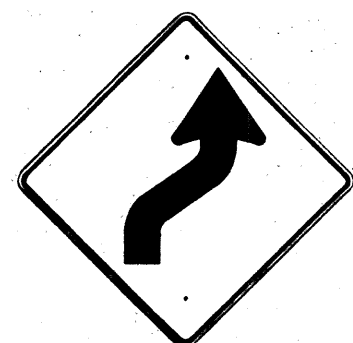
W1-1(R) 30"x30"  
W1-1(R)-A 48"x48"



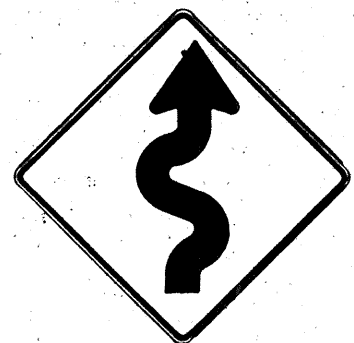
W1-2(R) 30"x30"  
W1-2(R)-A 48"x48"



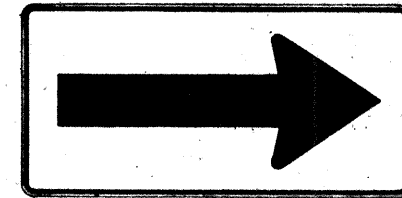
W1-3(R) 30"x30"  
W1-3(R)-A 48"x48"



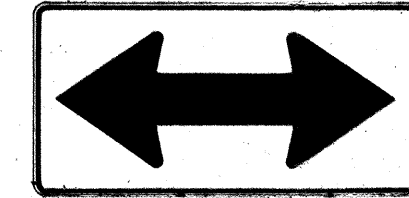
W1-4(R) 30"x30"  
W1-4(R)-A 48"x48"



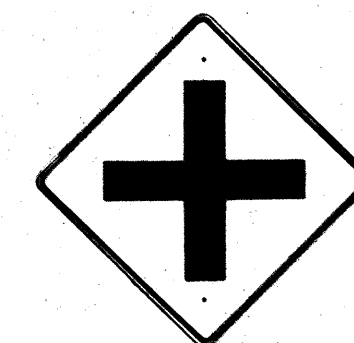
W1-5(R) 30"x30"  
W1-5(R)-A 48"x48"



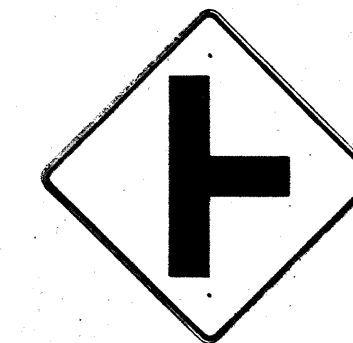
W1-6 48"x24"



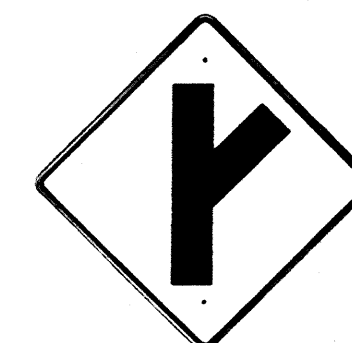
W1-7 48"x24"



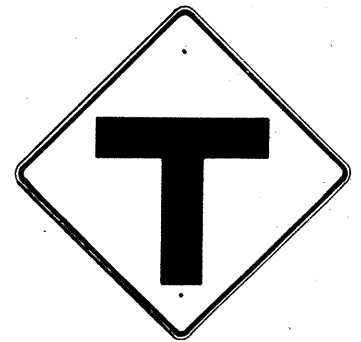
W2-1 30"x30"  
W2-1-A 48"x48"



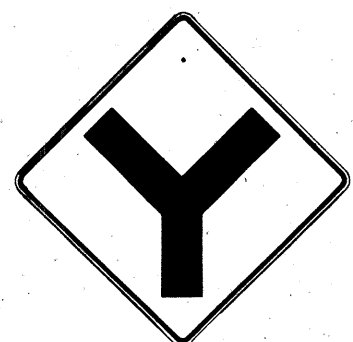
W2-2 30"x30"  
W2-2-A 48"x48"



W2-3(R) 30"x30"  
W2-3(R)-A 48"x48"



W2-4 30"x30"  
W2-4-A 48"x48"



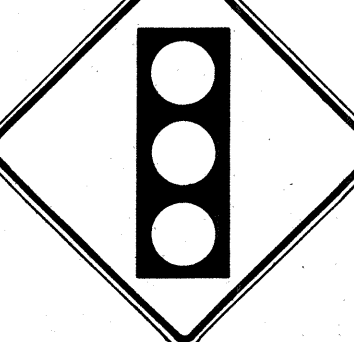
W2-5 30"x30"  
W2-5-A 48"x48"



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



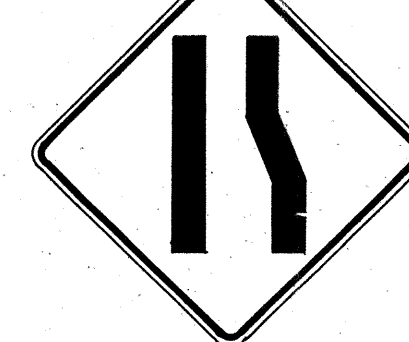
W3-2 30"x30"  
W3-2-A 36"x36"



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"



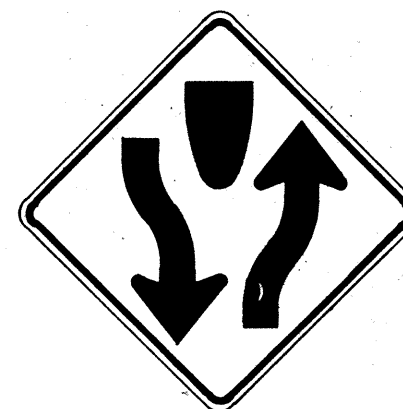
W5-1 36"x36"



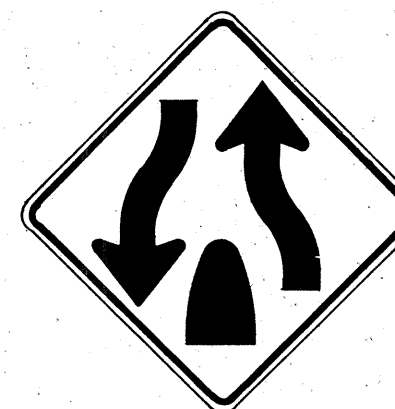
W5-2 30"x30"  
W5-2-A 36"x36"



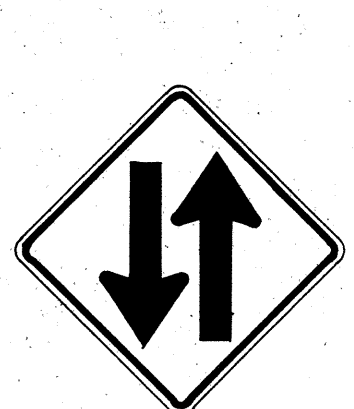
W5-3 36"x36"



W6-1 36"x36"  
24"x18"



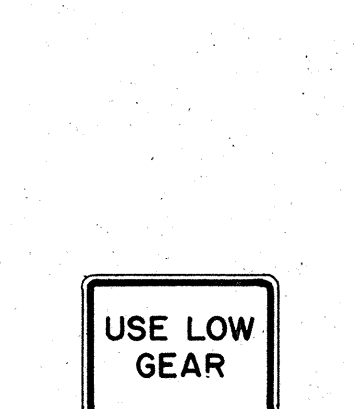
W6-2 36"x36"  
24"x18"



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"



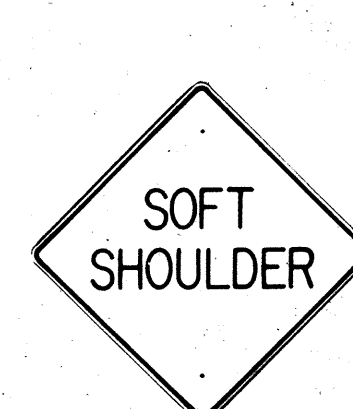
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W8-1-A 36"x36"



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"



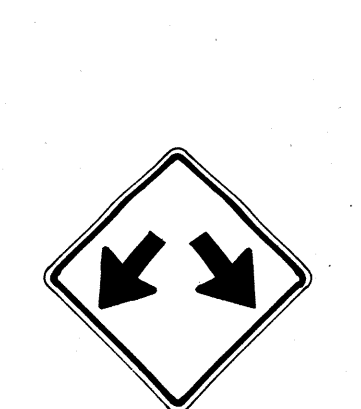
W11-2 30"x30"  
24"x18"  
W11-2-A 36"x36"  
24"x18"



W11-4 30"x30"  
24"x18"  
W11-4-A 36"x36"  
24"x18"



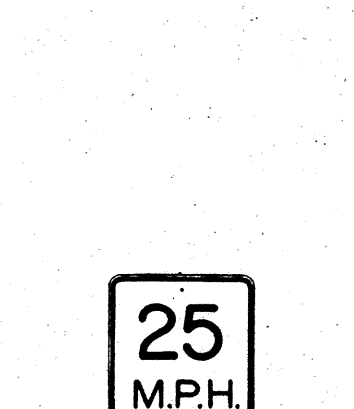
W11-5 30"x30"  
24"x18"  
W11-5-A 36"x36"  
24"x18"



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



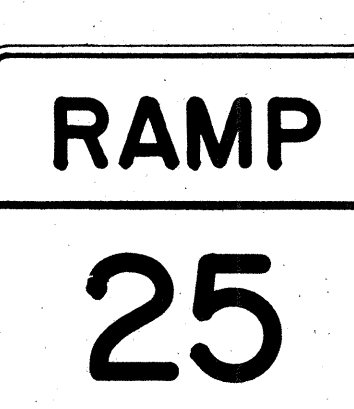
W12-2(12'-6") 36"x36"  
24"x18"



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

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

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

APPROVED:  
*Walter Ralsin* 3-20-72  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	HT	3/20/72
2	Revised General Note 1	HT	10/16/74
3	Revised General Note 5	MF	9-16-75
4	Revised General Note 5	HT	9-14-76
5	Added Note 1	HT	11-9-79

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION

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

NOT TO SCALE

SHEET No. 10 OF 17 SHEETS DT 102

DATE  
DESIGNED BY  
CHECKED BY  
QUANTITIES BY  
FRANK BY  
TRACED BY  
DRAWN BY  
SUPERVISED BY  
ORIGINAL PLAN  
NOTE BOOK  
No.

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



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-79	1980	40	45



CW20-1a 48" x 48"



CW20-2d 48" x 48"



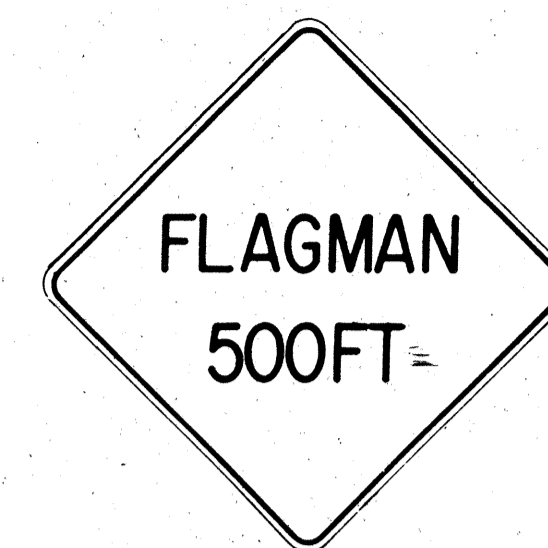
CW20-3b 48" x 48"



CW20-4d 48" x 48"



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



CW20-7c 48" x 48"



CW21-1 30" x 30"



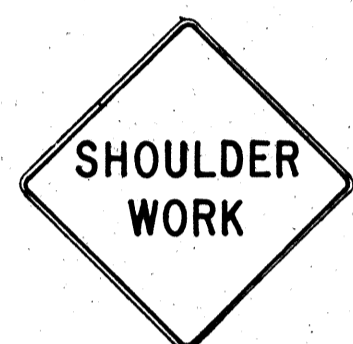
CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



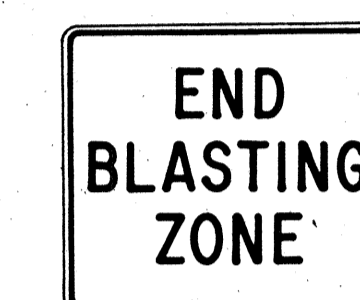
CW21-6 30" x 30"



CW22-1b 48" x 48"



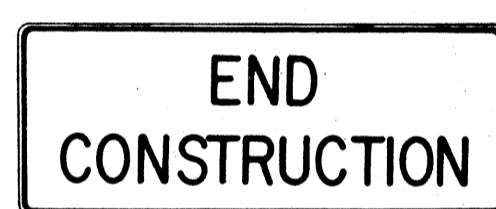
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



CG20-2 60" x 24"



CM4-9(R) 30" x 24"



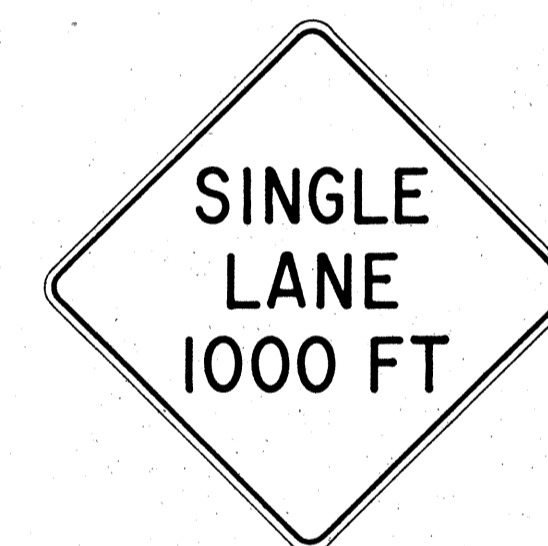
CM4-10(R) 48" x 18"



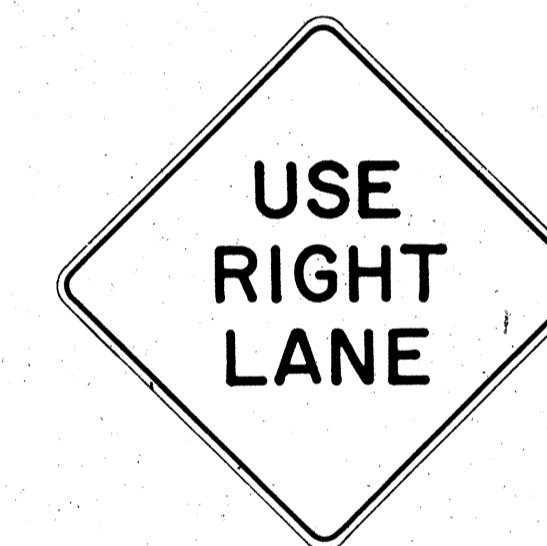
CG20-4 36" x 18"



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:  
*Erich Tanaka* 3/21/72  
TRAFFIC ENGINEER DATE

APPROVED:  
*Julius Salas* 3/22/72  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 104 Approved 12-30-69	H.T.	3/22/72
2	Revised General Note 1	H.T.	10/10/74
3	Revised General Note 2	M	9-16-75
4	Revised General Note 2 and sign CG20-1(5)	H.T.	9-14-76

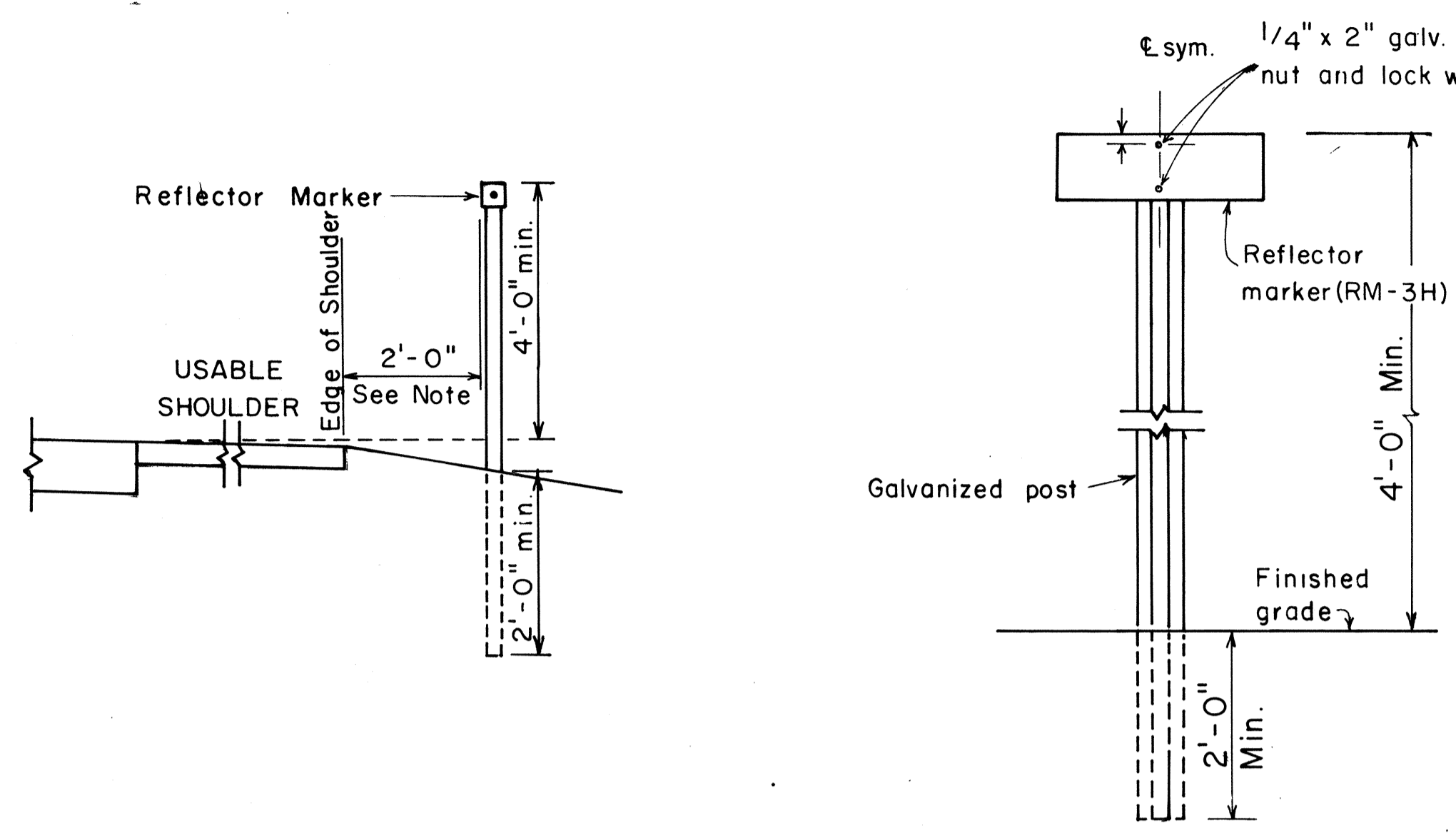
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION

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

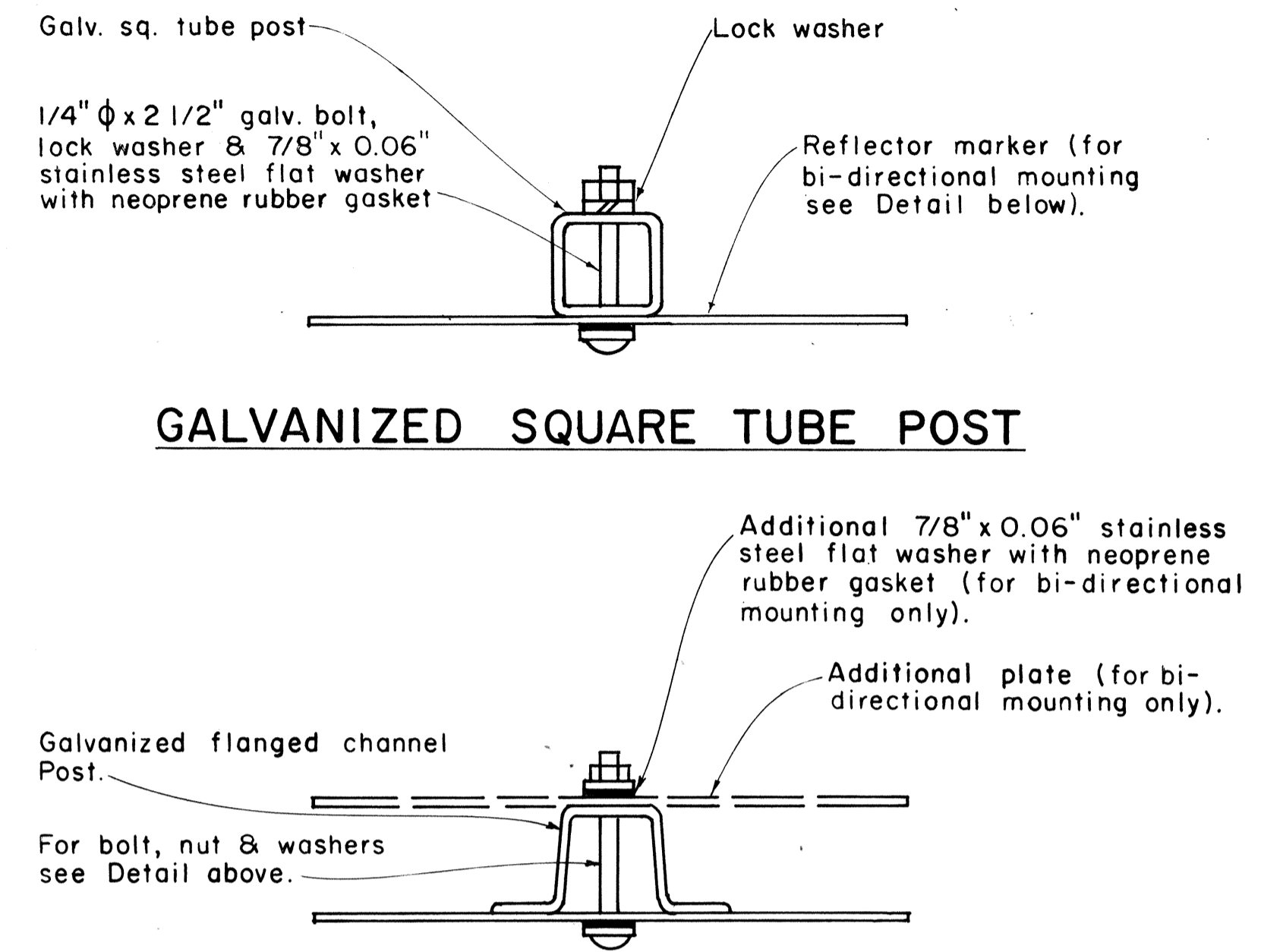
NOT TO SCALE

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-79	1980	41	45



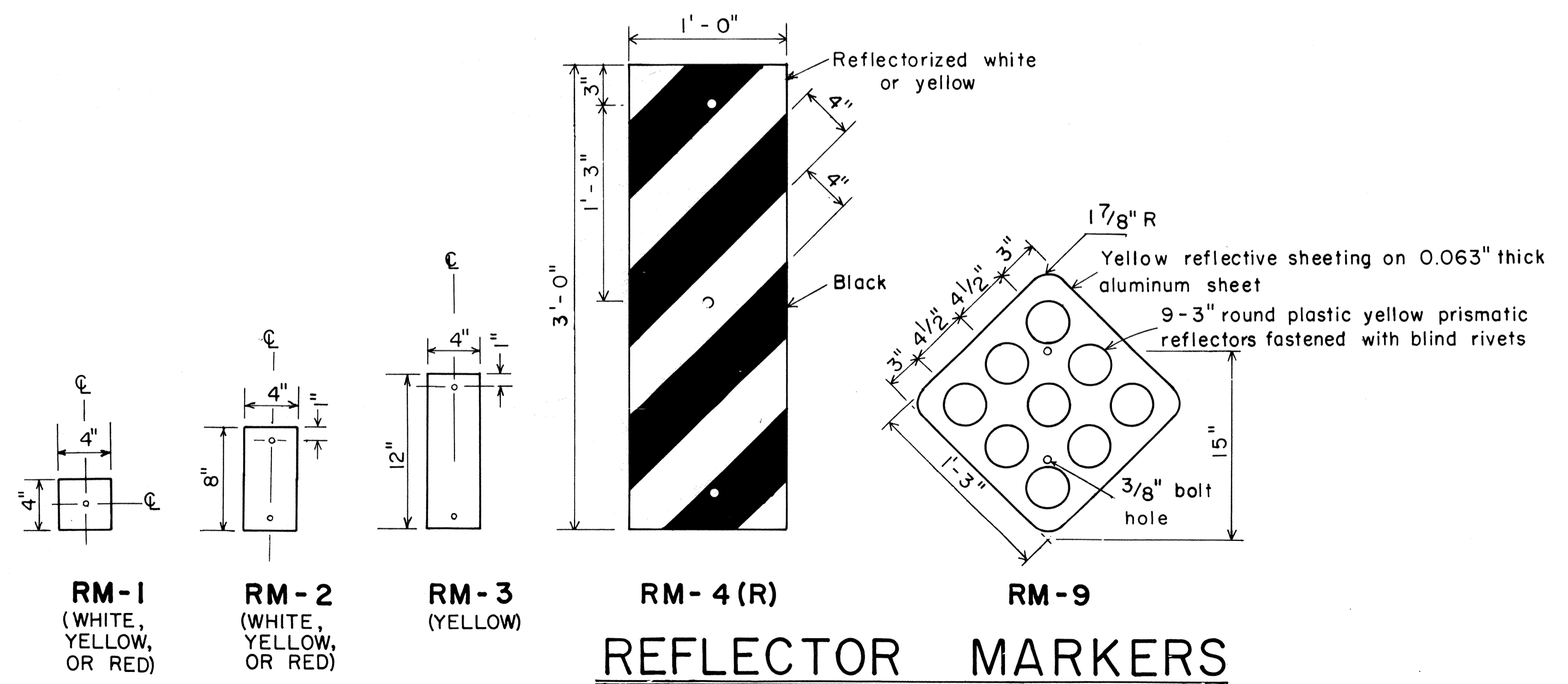
**REFLECTOR MARKER MOUNTING DETAIL**



**TYPICAL MOUNTING DETAILS**

**GENERAL NOTES:**

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

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

APPROVAL RECOMMENDED:  
*Eishi Tanaka* 11/21/79  
 TRAFFIC ENGINEER DATE

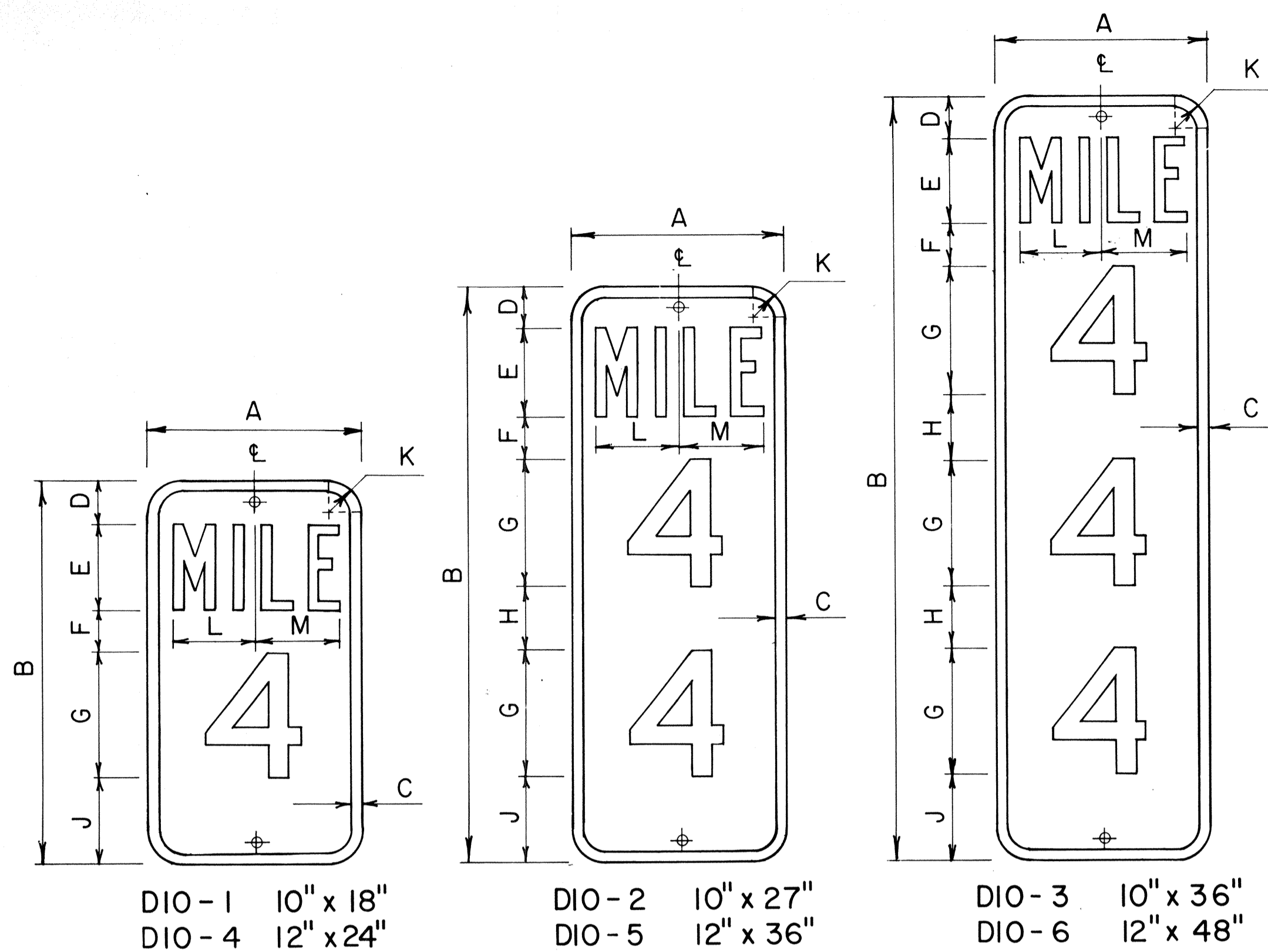
APPROVED:  
*Herbert S. Sakimura*  
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised Mounting Details	H.T.	4/23/80

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS**  
 MISCELLANEOUS REFLECTOR MARKERS

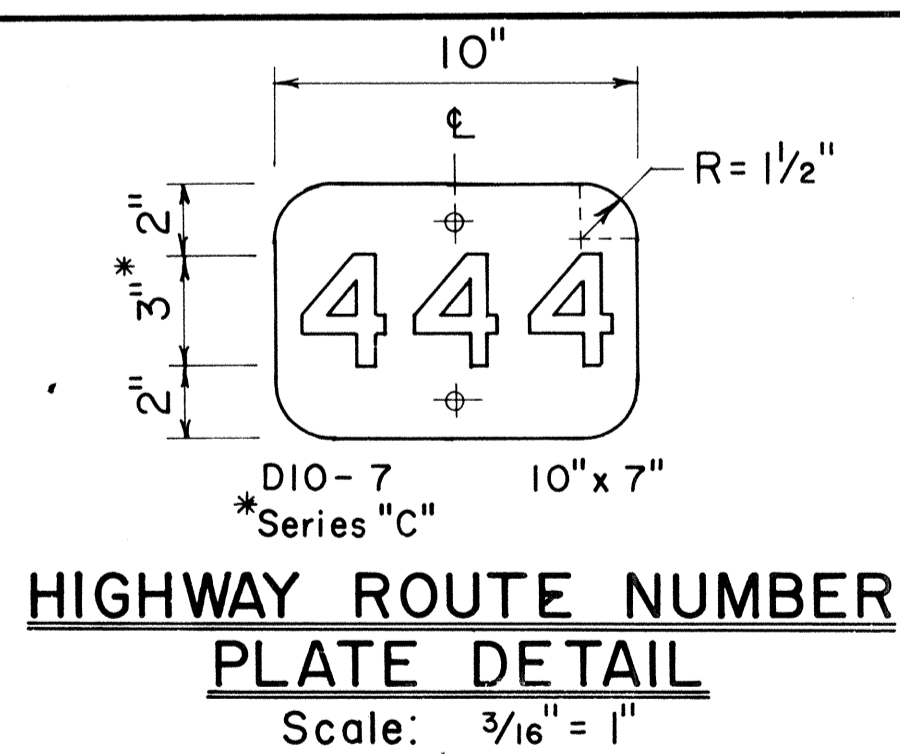
Not to scale June, 1977  
 SHEET No. 13 OF 17 SHEETS DT 110



**MILEPOST MARKER PLATE DETAILS**

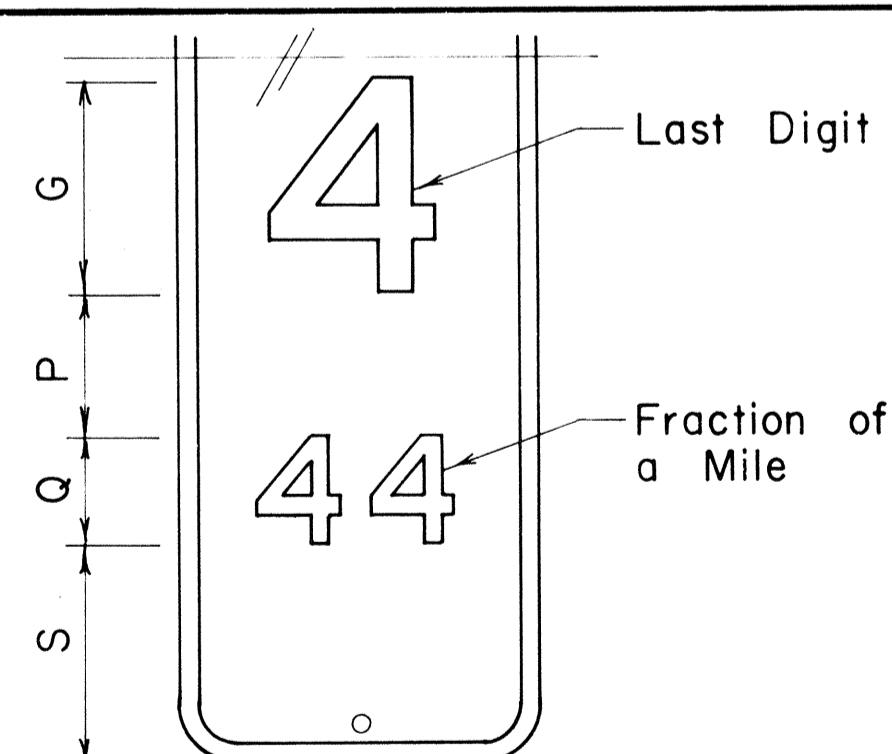
Scale: 3/16" = 1"

MILEPOST PLATE SCHEDULE (INCHES)															
NAME	SIZE	A	B	C	D	E	F	G	H	J	K	L	M	LETTER SERIES	NUMERAL SERIES
DIO-1	10 x 18	10	18	1/2	2	4	2	6		4	1 1/2	3 3/8	3 3/8	B	C
DIO-4	12 x 24	12	24	1/2	3	4	3	10		4	1 1/2	4 5/8	4 7/8	C	C
DIO-2	10 x 27	10	27	1/2	2	4	2	6	3	4	1 1/2	3 3/8	3 3/8	B	C
DIO-5	12 x 36	12	36	1/2	3	4	3	10	3	3	1 1/2	4 5/8	4 7/8	C	C
DIO-3	10 x 36	10	36	1/2	2	4	2	6	3	4	1 1/2	3 3/8	3 3/8	B	C
DIO-6	12 x 48	12	48	1/2	3	4	3	10	2 1/2	3	1 1/2	4 5/8	4 7/8	C	C



**HIGHWAY ROUTE NUMBER PLATE DETAIL**

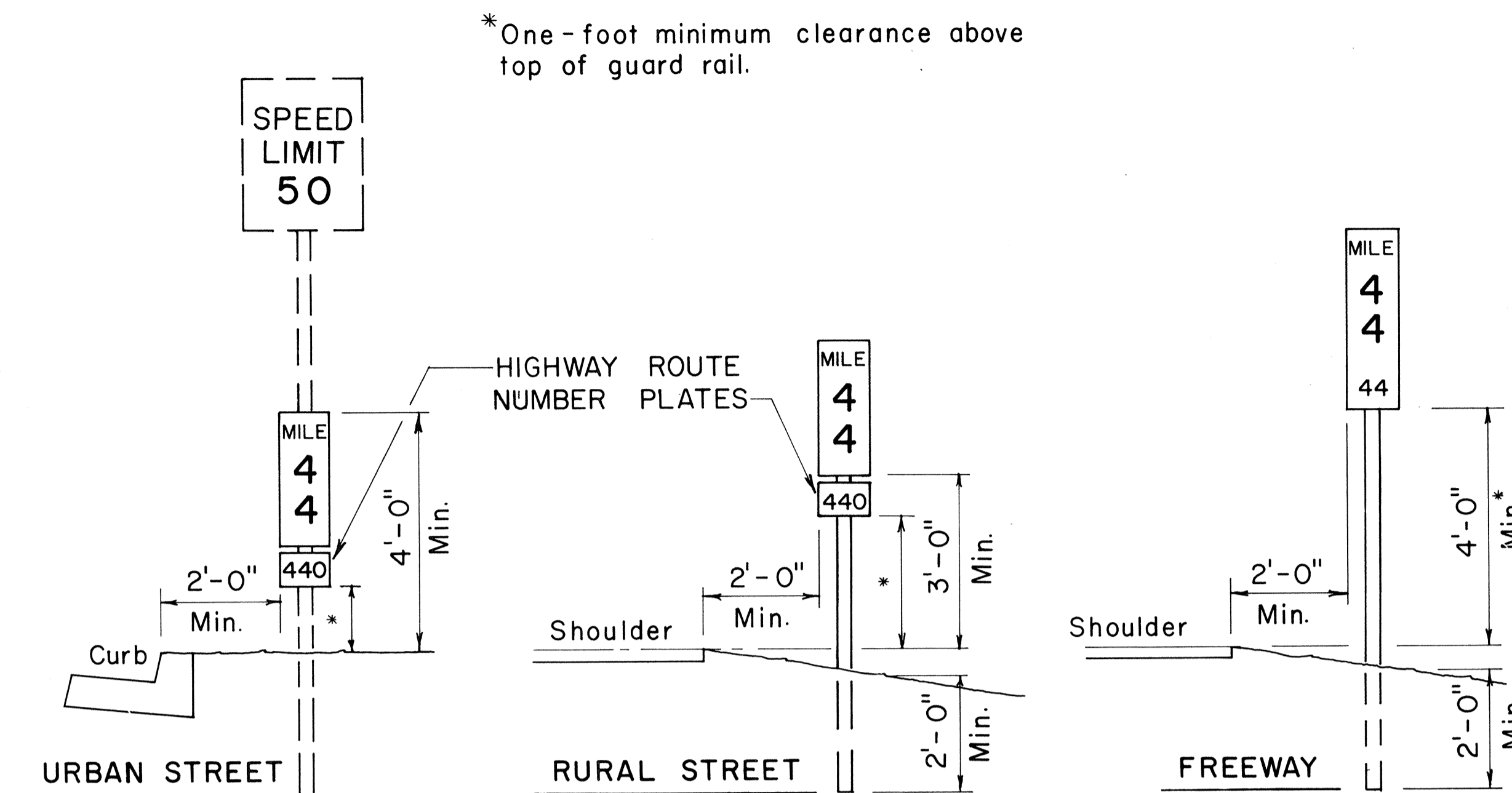
Scale: 3/16" = 1"



**MILEPOST MARKER FRACTION DETAIL**

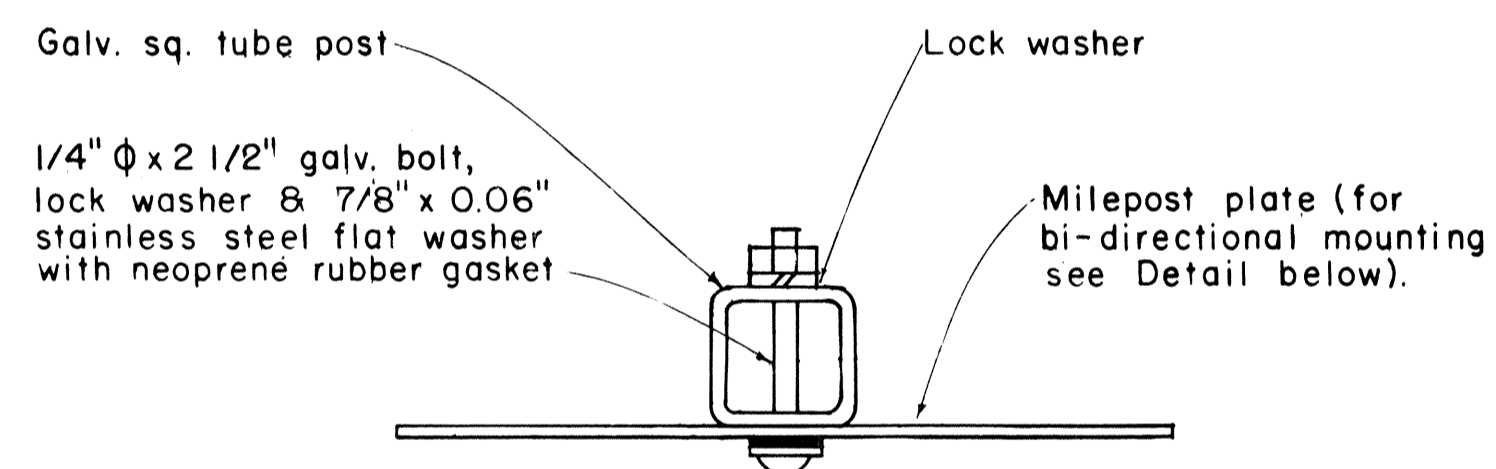
Scale: 3/16" = 1"

MILEPOST PLATE SCHEDULE WITH FRACTION OF A MILE						
NAME	SIZE	G	P	Q	S	NUMERAL SERIES
D10-1a	10" x 27"	6"	4"	3"	6"	C
D10-4a	12" x 36"	10"	4"	5"	7"	C
D10-2a	10" x 36"	6"	4"	3"	6"	C
D10-5a	12" x 48"	10"	4"	5"	6"	C
D10-3a	10" x 45"	6"	4"	3"	6"	C
D10-6a	12" x 60"	10"	4"	5"	6"	C

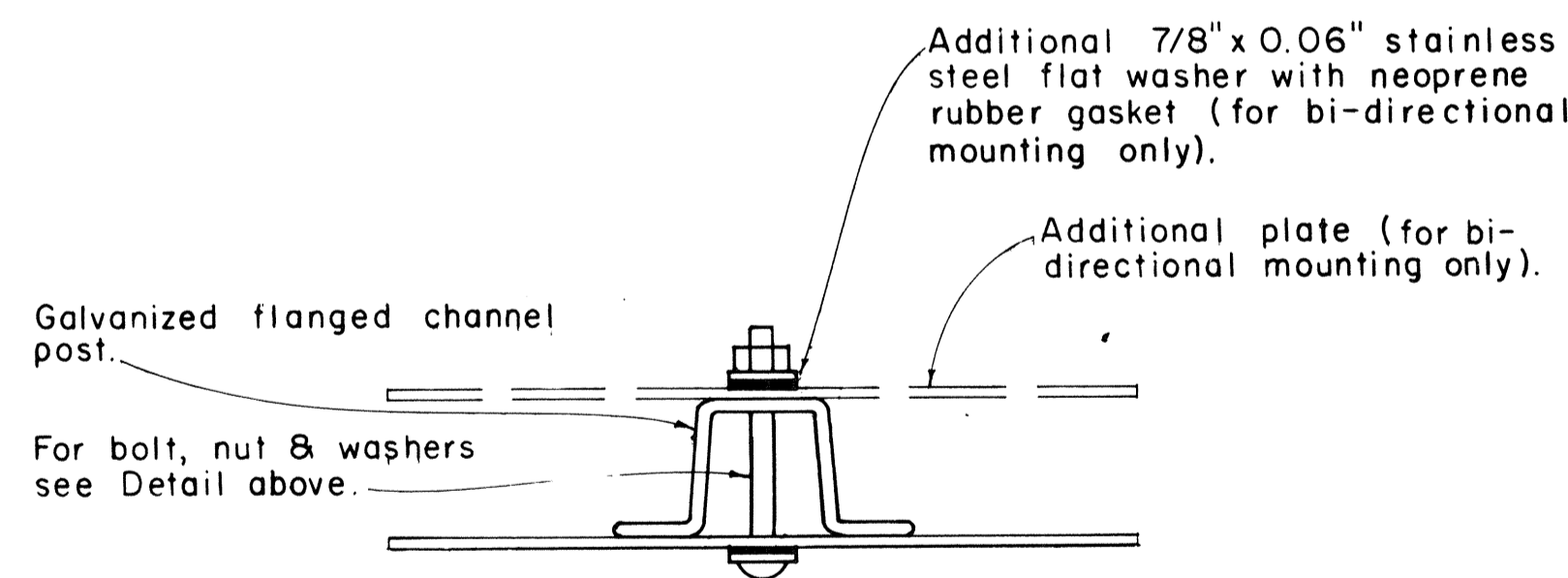


**TYPICAL ROADSIDE INSTALLATION**

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



**GALVANIZED SQUARE TUBE POST**



**GALVANIZED FLANGED CHANNEL POST**

**TYPICAL MOUNTING DETAILS**

Scale: 1/2" = 1'

**GENERAL NOTES:**

- Milepost marker and highway route number plates 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.
- Milepost markers and highway route numbers shall be completely reflectorized with reflective sheeting as follows:
  - Milepost markers shall have white legends and border on a green background.
  - Highway route numbers shall have black numerals on a white background.
- The plate backings for milepost markers and highway route numbers shall conform to the requirements for standard highway signs. The plates shall have 3/8" bolt holes drilled at appropriate locations.
- Highway route number plates shall be used in conjunction with milepost marker plates on all roadways, except Interstate freeways. Fabrication and installation costs of highway route number plates shall be considered incidental to the milepost marker assembly.
- Milepost markers shall be installed on all roadways as follows:
  - One milepost on each side of multi-lane roadways.
  - Back-to-back mileposts on one side of 2-lane roadways. (Right side of roadway in direction of increasing mileage.)

APPROVAL RECOMMENDED:  
*Eishi Tanaka*  
 TRAFFIC ENGINEER  
 DATE: 1/17/78

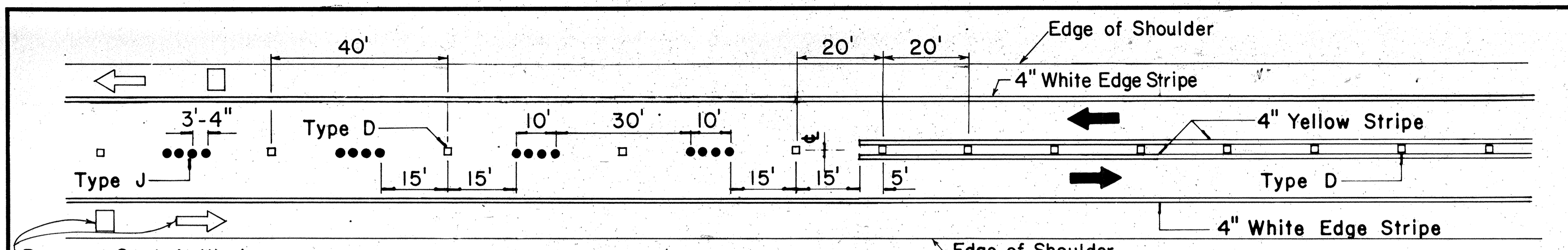
APPROVED:  
*Robert S. Sakishi*  
 ASSISTANT CHIEF, ENGINEERING  
 DATE: 1/12/78

NO.	REVISION	APPROVED BY	DATE
1	Revised Mounting Details	H.I.	4/23/80

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 LAND TRANSPORTATION FACILITIES DIVISION  
**STANDARD DETAILS**  
**MILEPOSTS**  
 SCALE: As Shown DATE: December, 1977  
 SHEET No. 14 OF 17 SHEETS DT 116

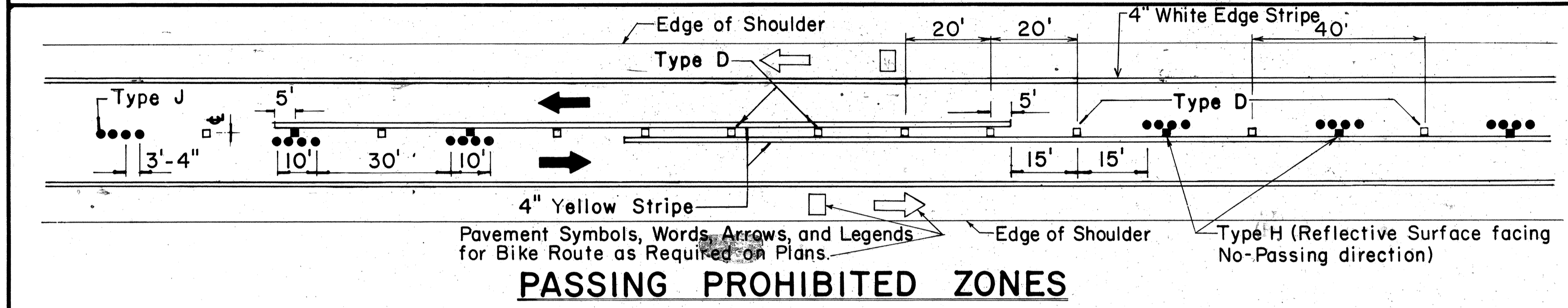
DATE: \_\_\_\_\_  
 SURVEY PLOTTED BY: \_\_\_\_\_  
 ORIGINAL PLAN: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 No. \_\_\_\_\_

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	L70-06-79	1980	43	45



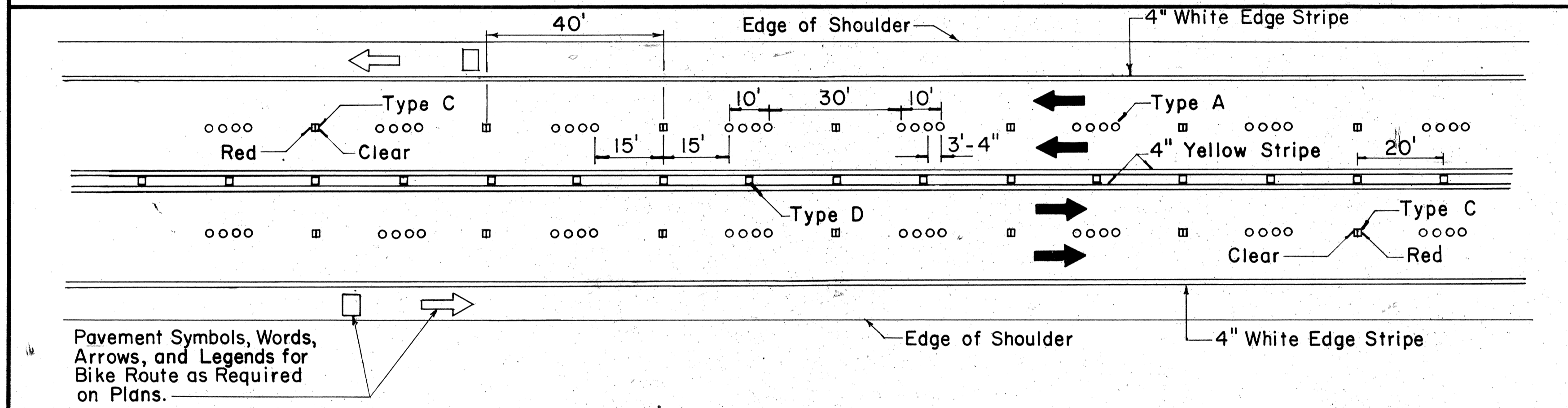
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

**PASSING PERMITTED AND PASSING PROHIBITED**

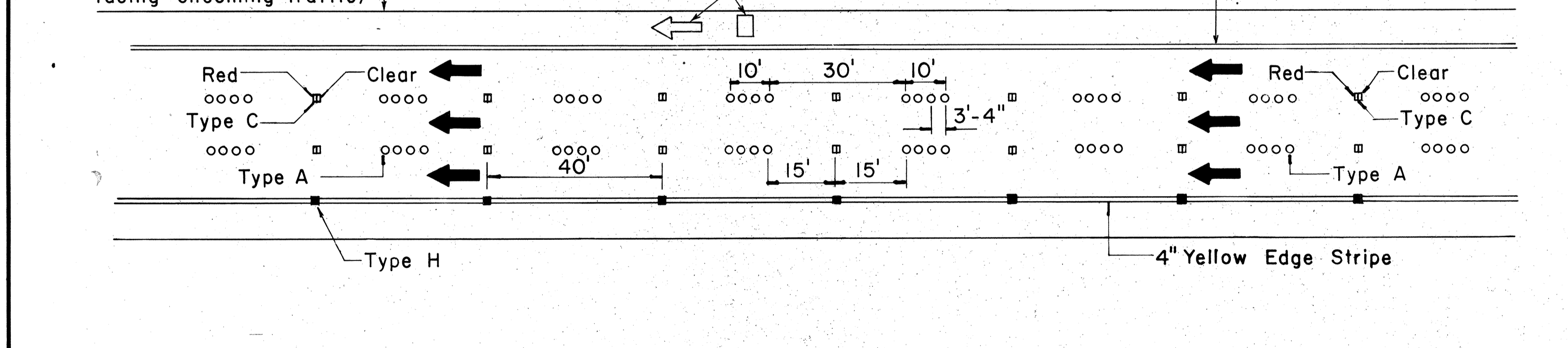


Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

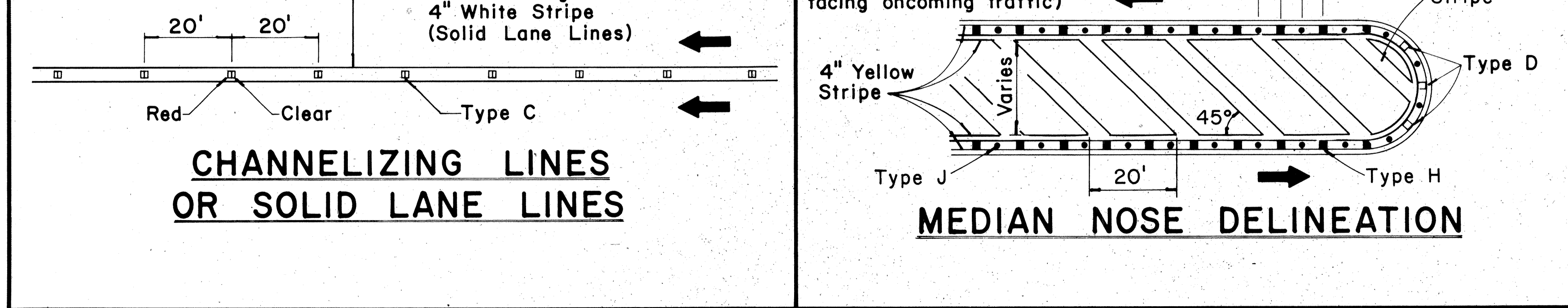
**PASSING PROHIBITED ZONES**



Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.



NOTE: Type H (Reflective Surface facing oncoming traffic)



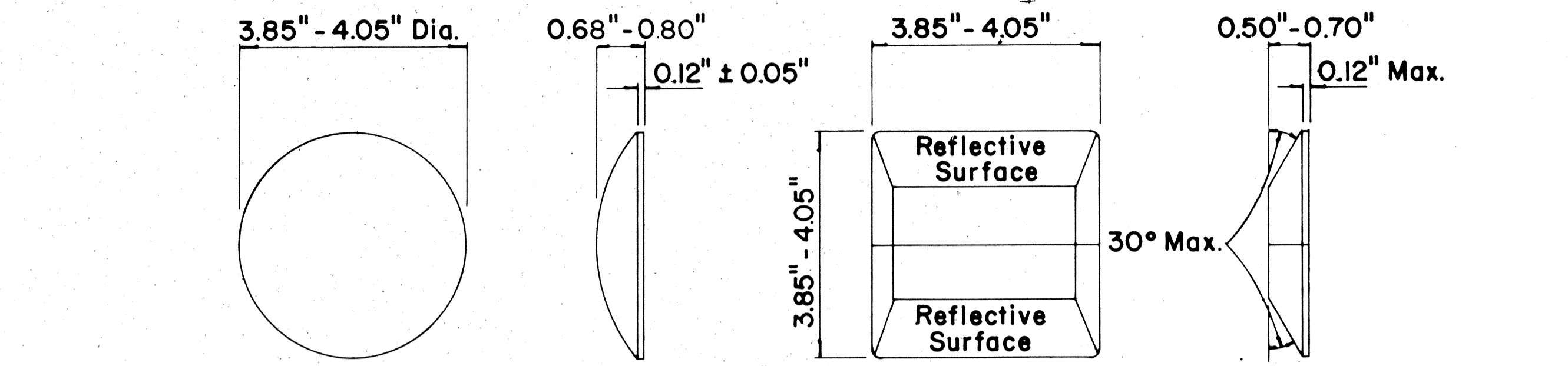
NOTE: Type H (Reflective surface facing oncoming traffic)

TWO - LANE

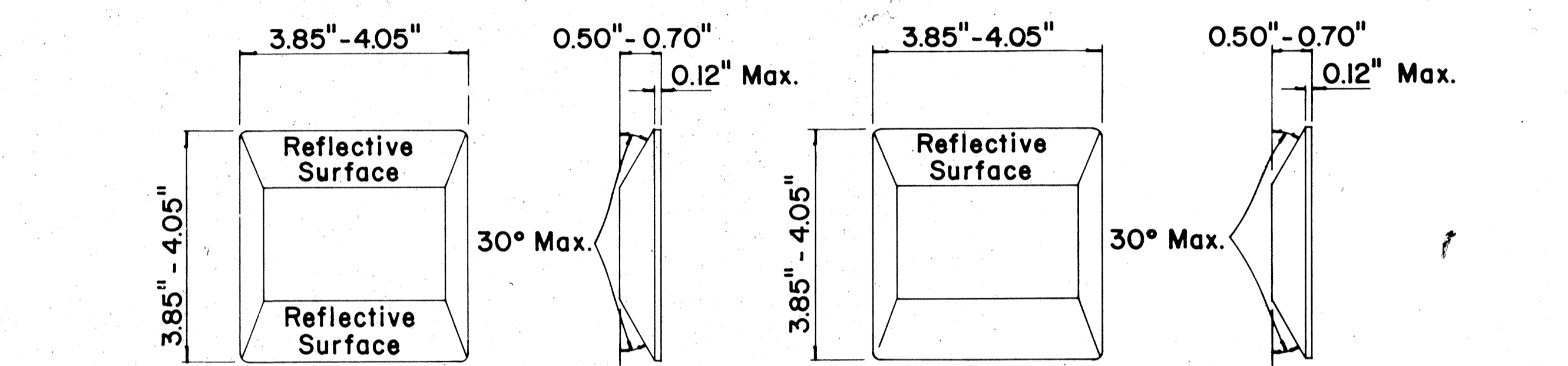
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

MISCELLANEOUS



**TYPE A**  
NON-REFLECTIVE WHITE MARKER  
**TYPE J**  
NON-REFLECTIVE YELLOW MARKER  
**TYPE C**  
RED-CLEAR REFLECTIVE 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:  
*Erich Tanaka* 7/21/78  
TRAFFIC ENGINEER DATE

APPROVED:  
*Robert J. Zaleski* 1/24/78  
ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.T.	1/24/78
2	Delete Type A Markers from Bike Route Delineation.	H.T.	10/15/79

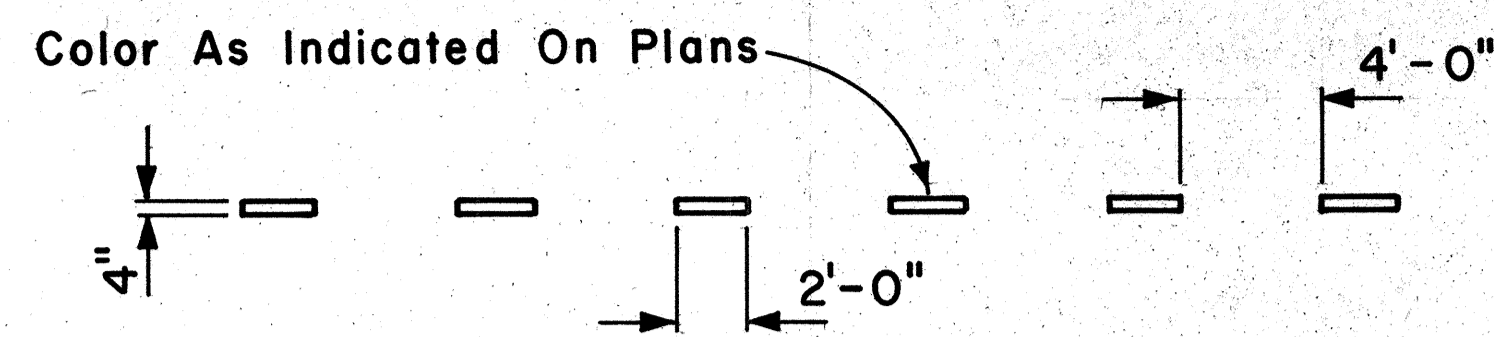
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

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

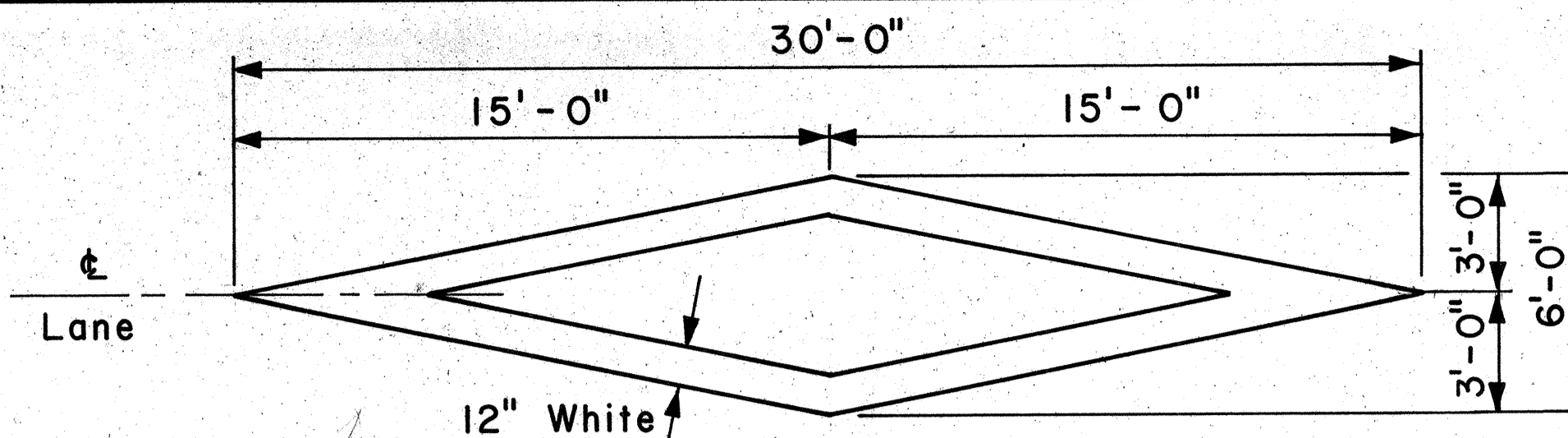
Not to Scale July 1978  
SHEET No. 15 OF 17 SHEETS DT 300

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	L70-0679	1980	44	45



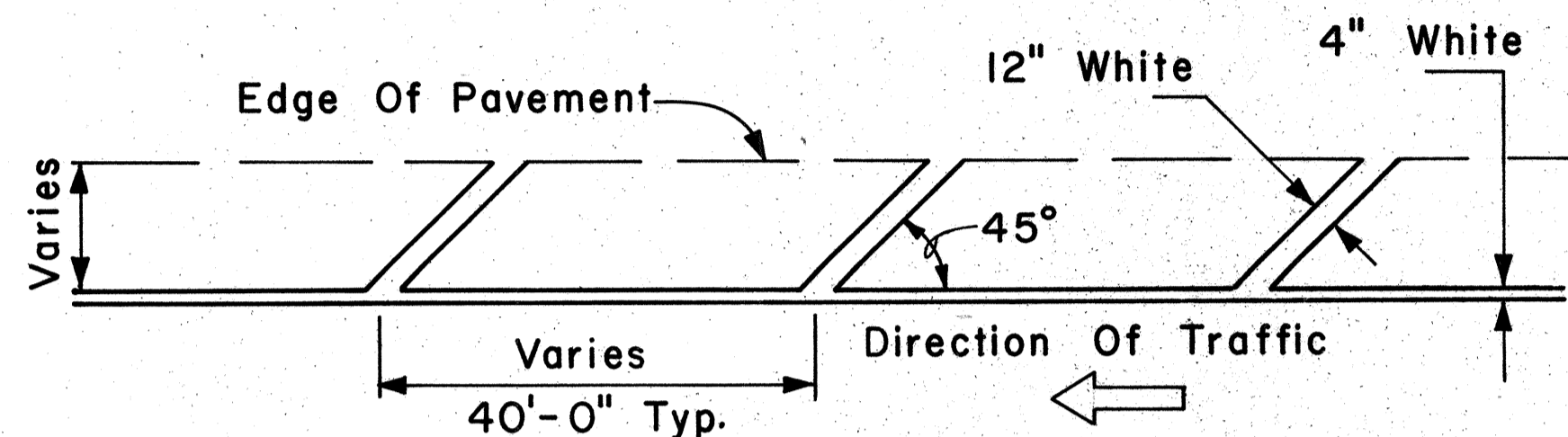
**4" GUIDE LINE**



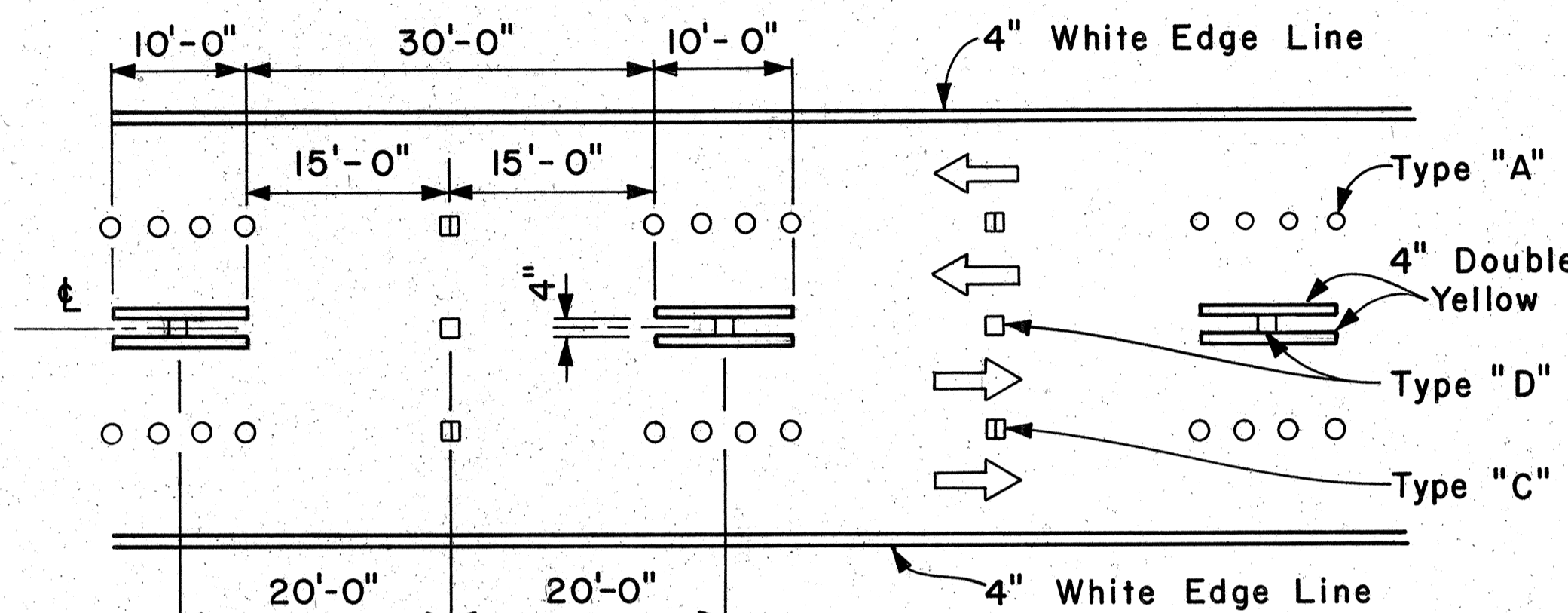
**PAVEMENT DIAMOND**

**GENERAL NOTES:**

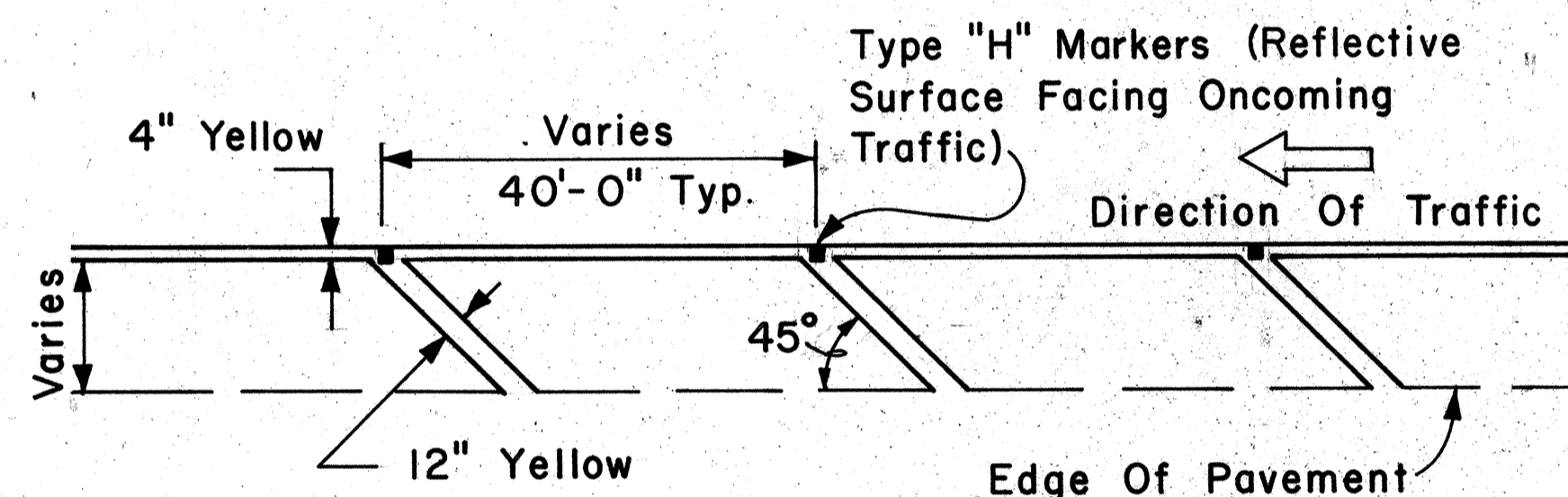
1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and striping with the Engineer prior to performing work.
3. For additional pavement marking details, see sheet DT 300.



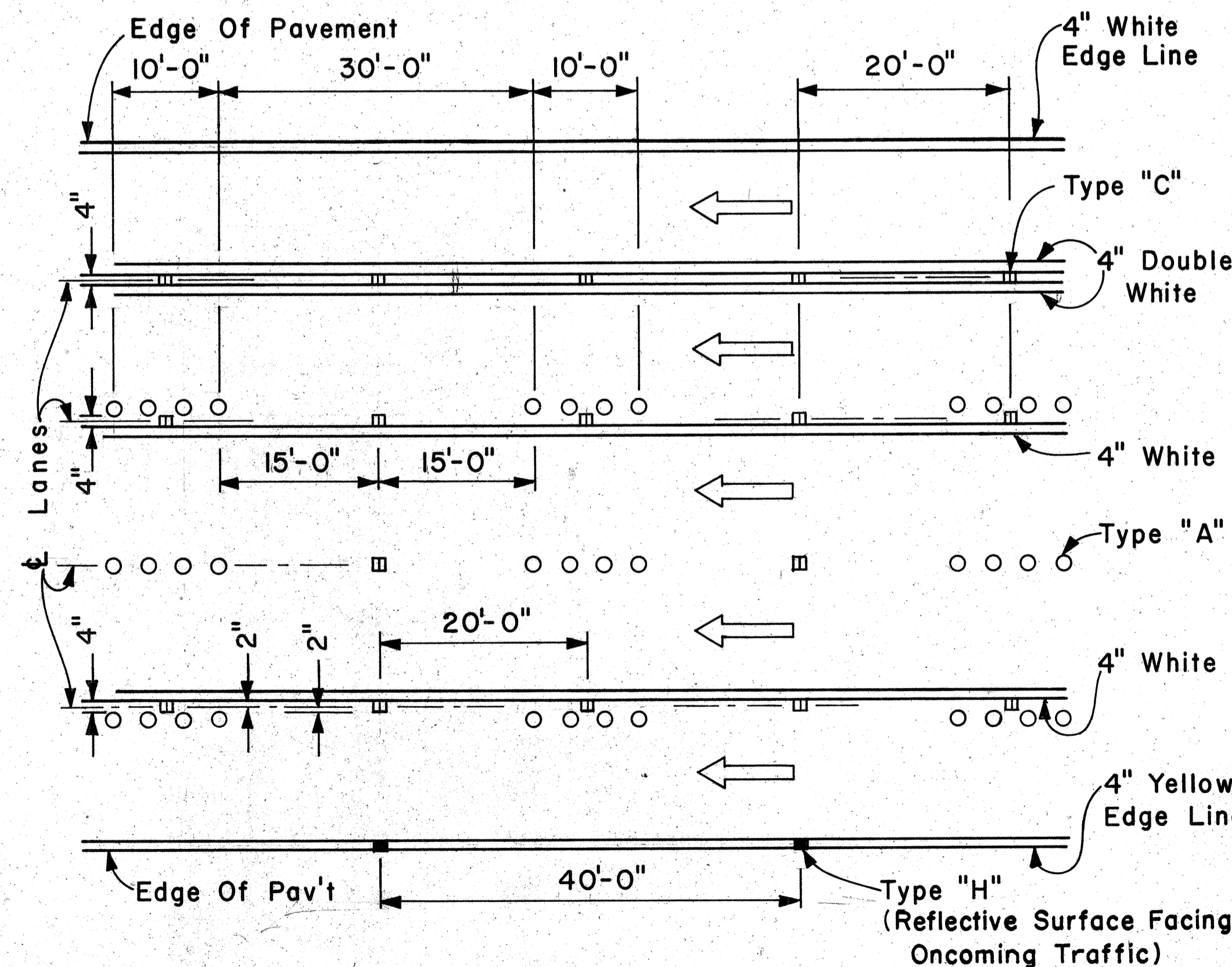
**TRANSVERSE RIGHT SHOULDER MARKING**



**MULTI-LANE REVERSIBLE LANES**



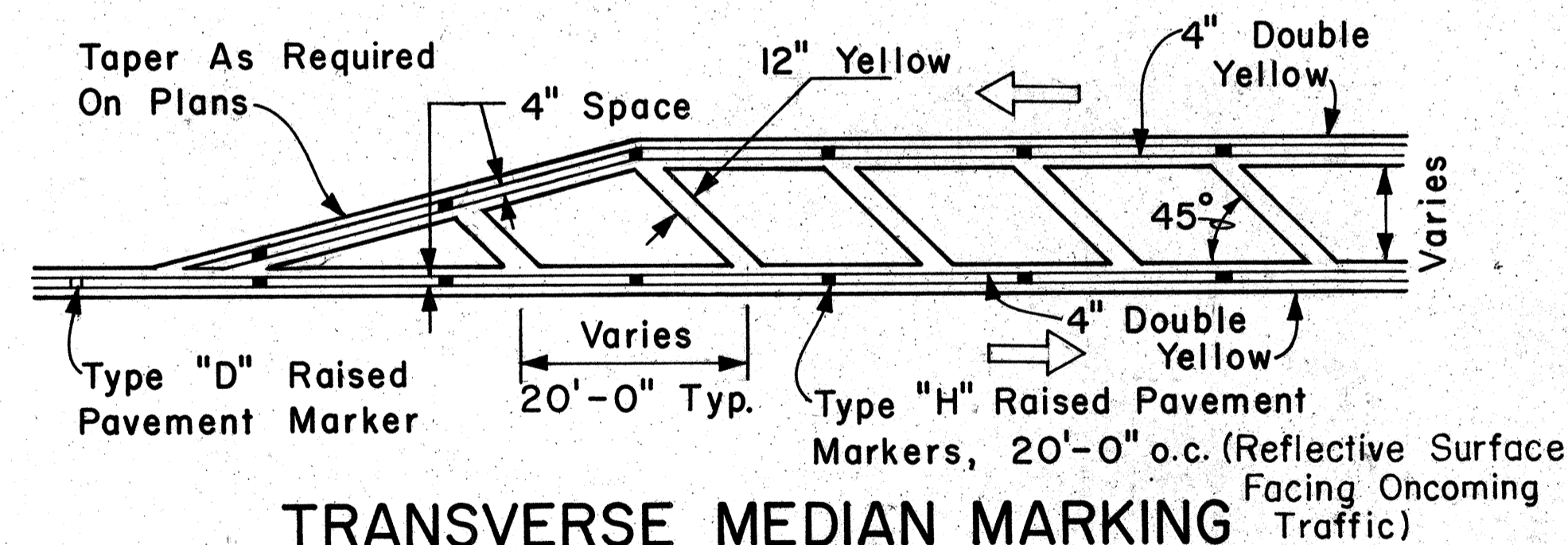
**TRANSVERSE LEFT SHOULDER MARKING**



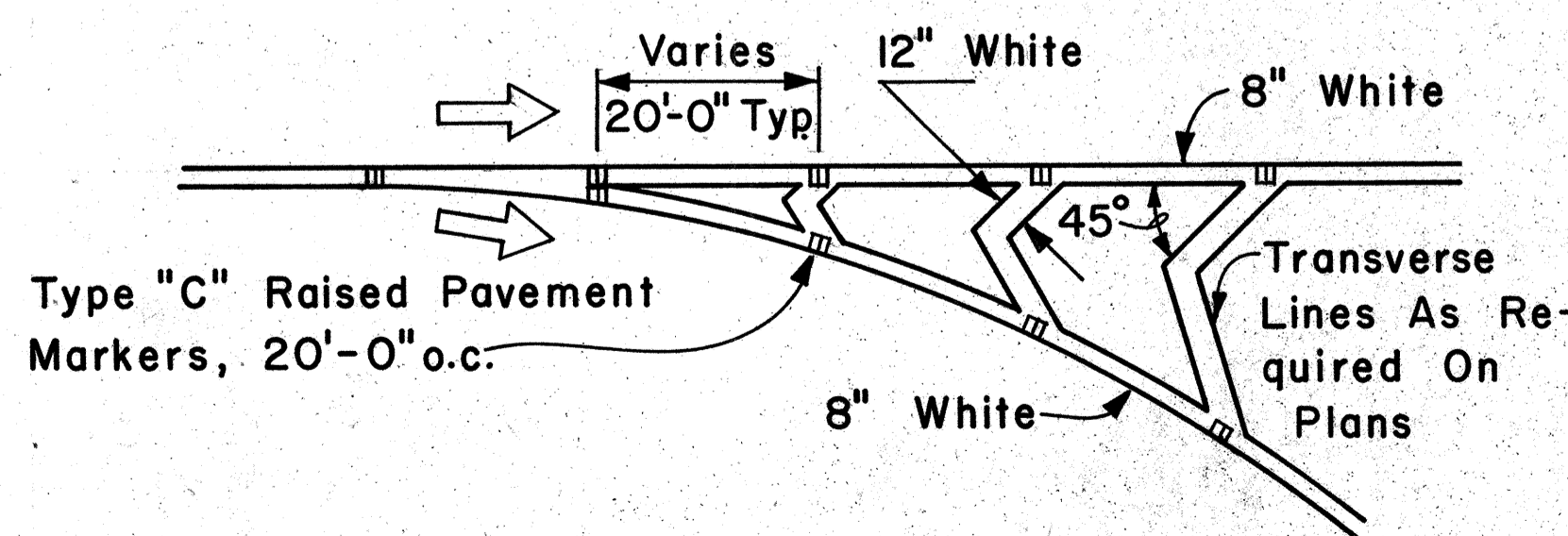
**MULTI-LANE LANE CHANGE RESTRICTION ZONES**

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

APPROVED:  
*Herbert S. Zaleski* 5/3/78  
 ASSISTANT CHIEF, ENGINEERING DATE



**TRANSVERSE MEDIAN MARKING**



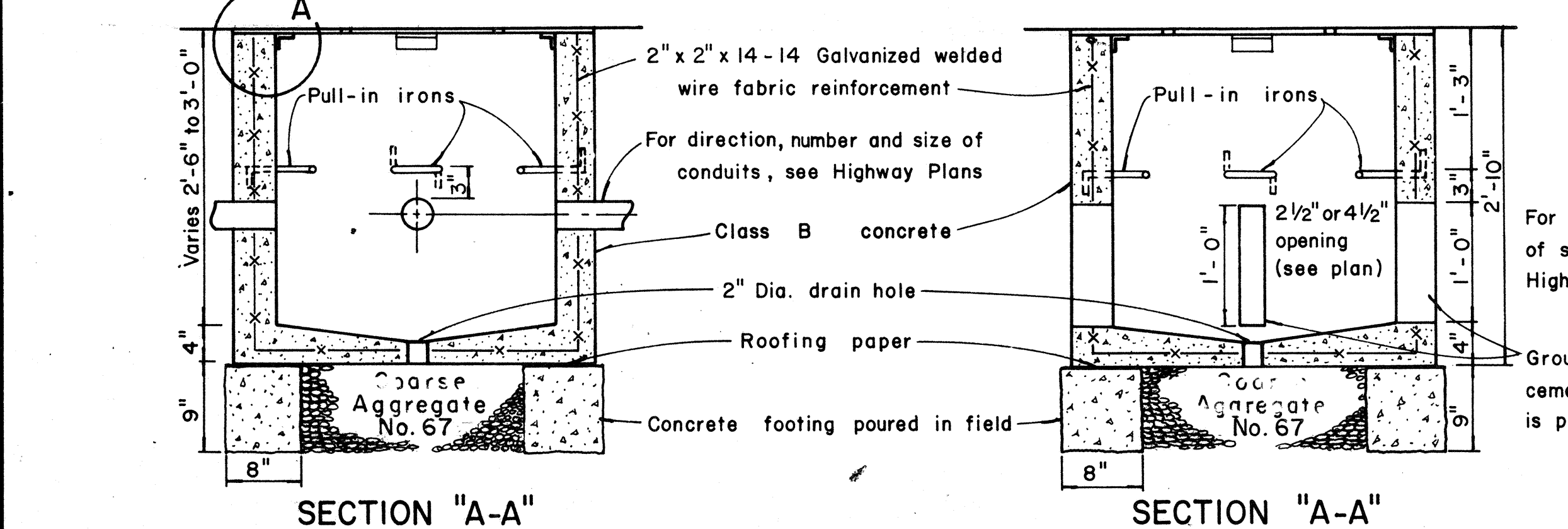
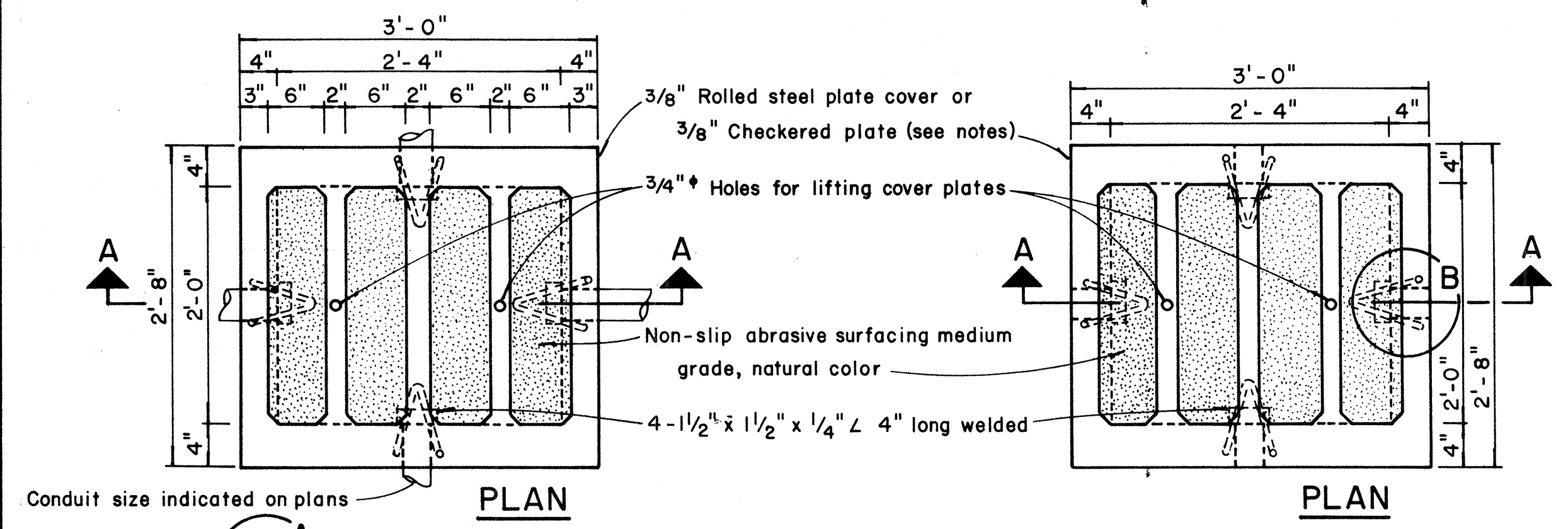
**CHANNELIZING ISLAND**

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

NO.	REVISION	APPROVED BY	DATE

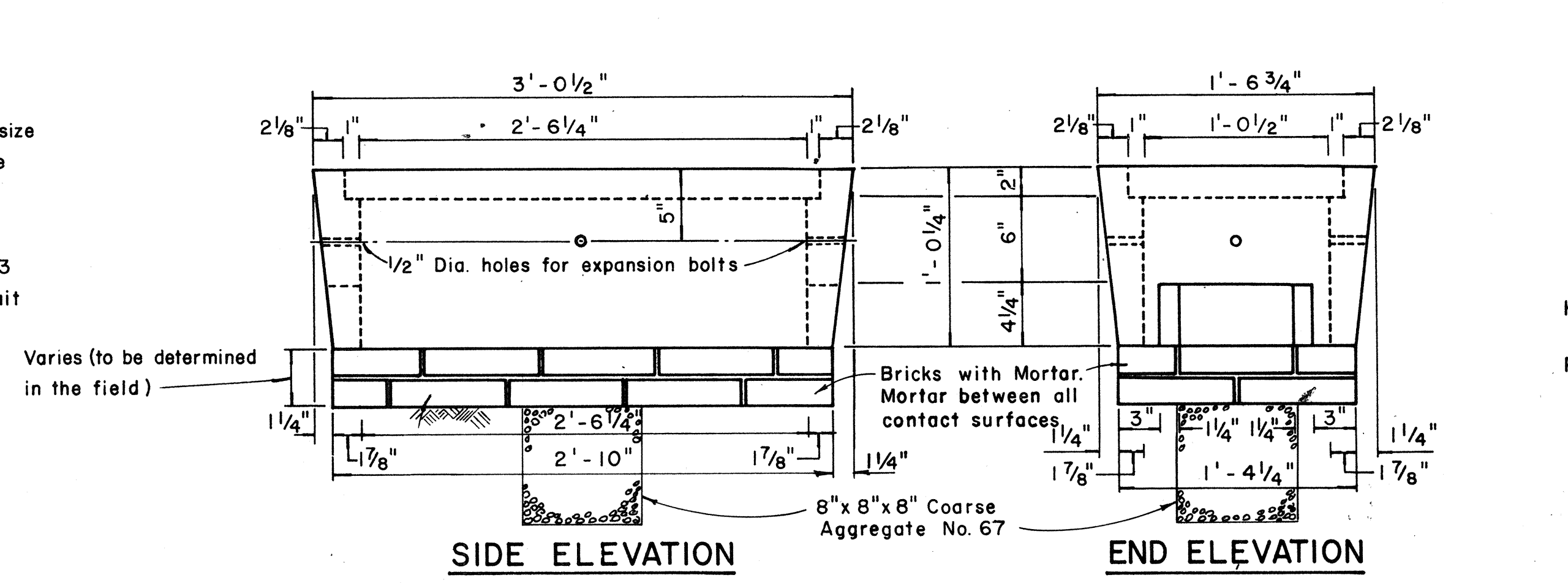
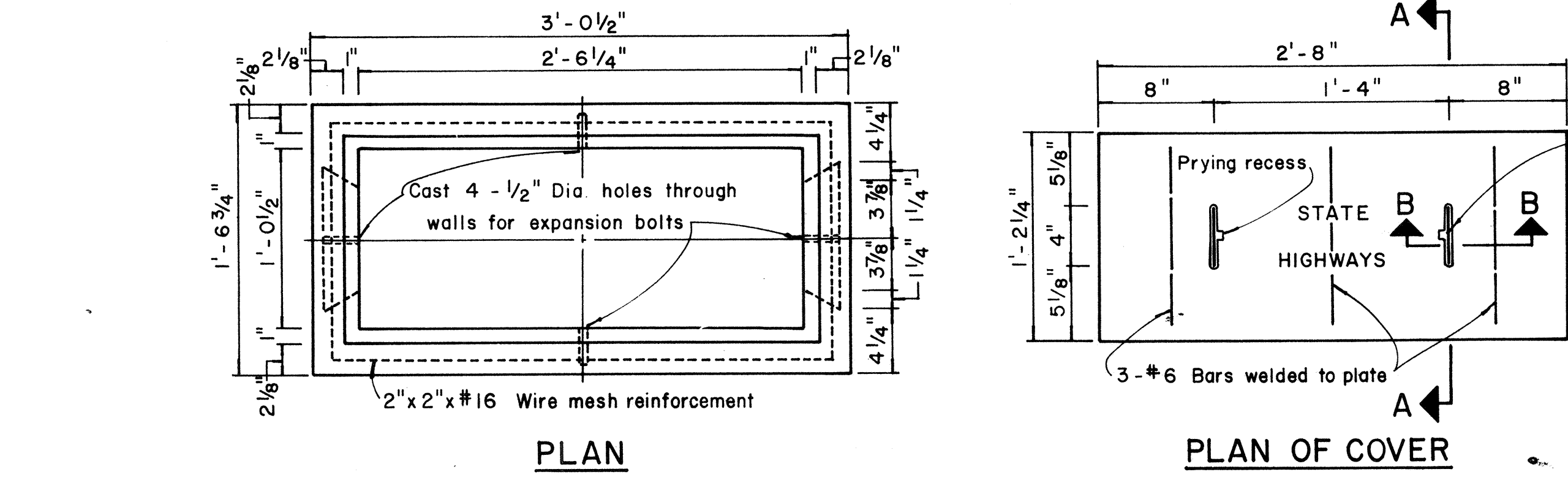
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 LAND TRANSPORTATION FACILITIES DIVISION  
**STANDARD DETAILS**  
 MISCELLANEOUS  
 PAVEMENT MARKINGS  
 Scale: Not to Scale Date: April, 1978  
 SHEET No. 16 OF 17 SHEETS DT 302

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	LT-0-06-70	1980	45	45

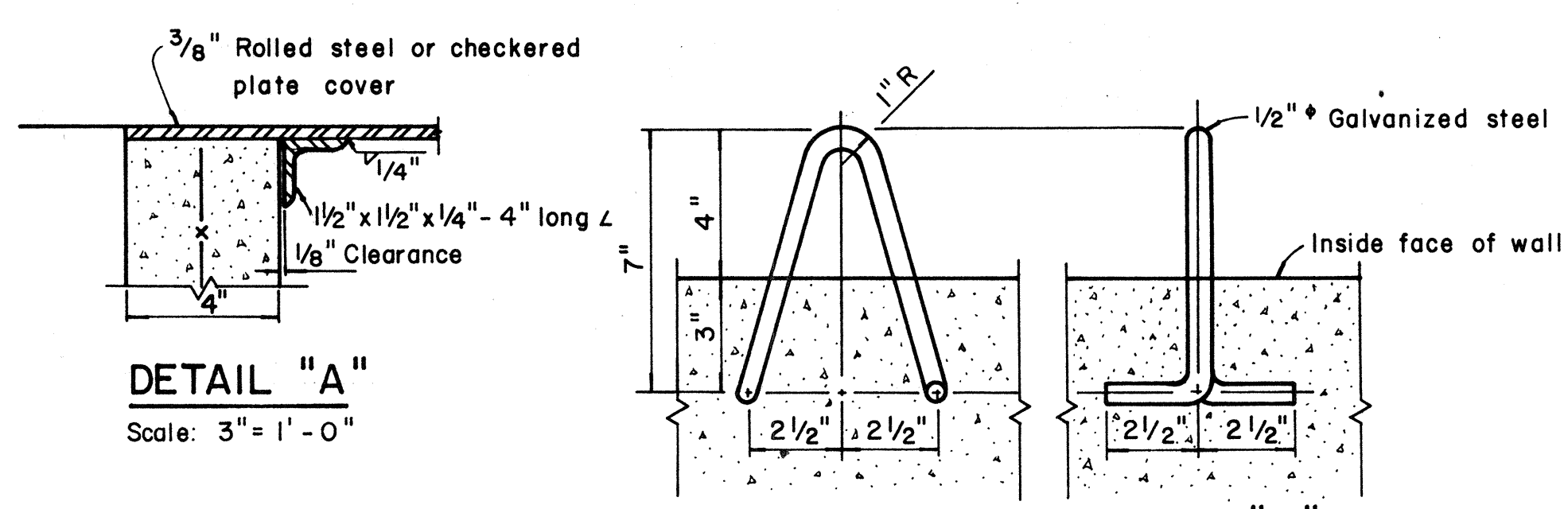
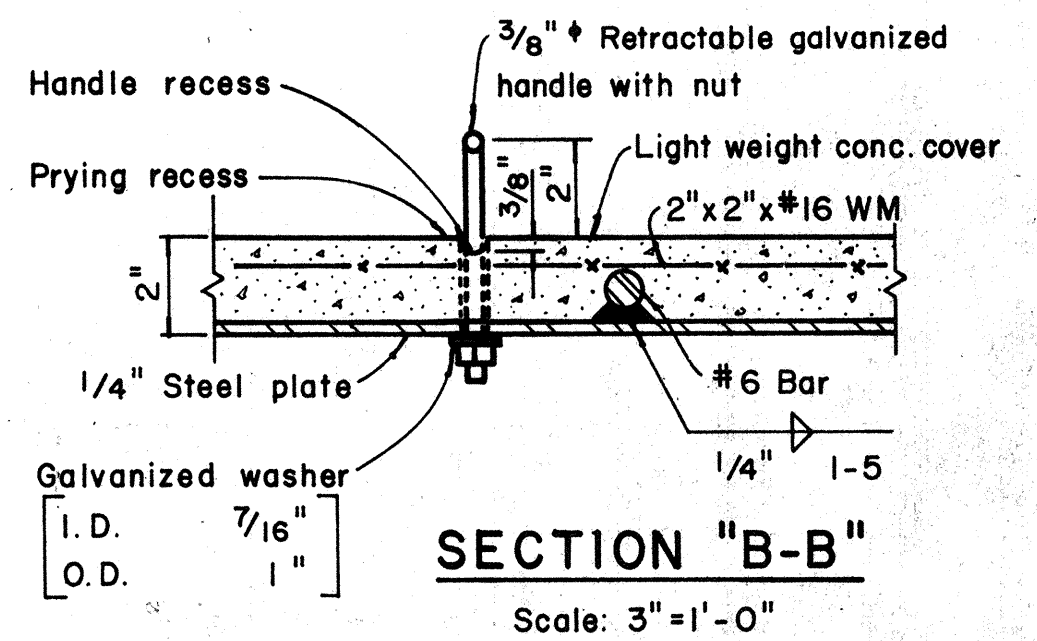
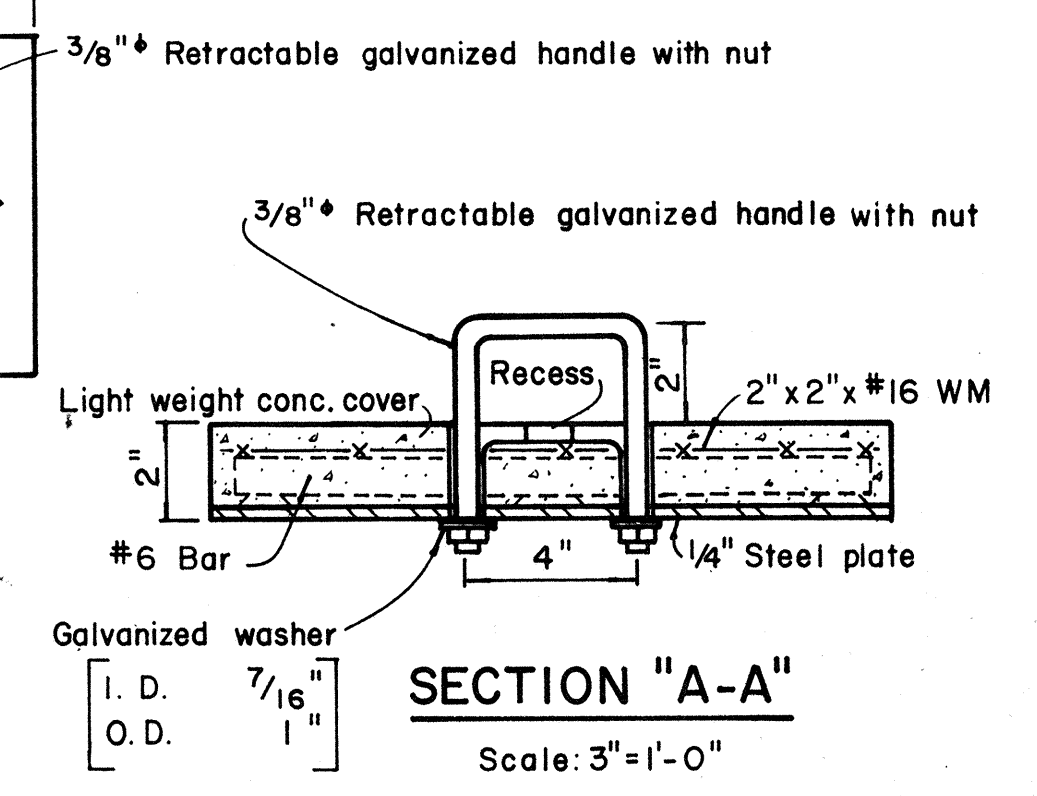


**TYPE "A" PULLBOX CAST-IN-PLACE**  
Scale: 1" = 1'-0"

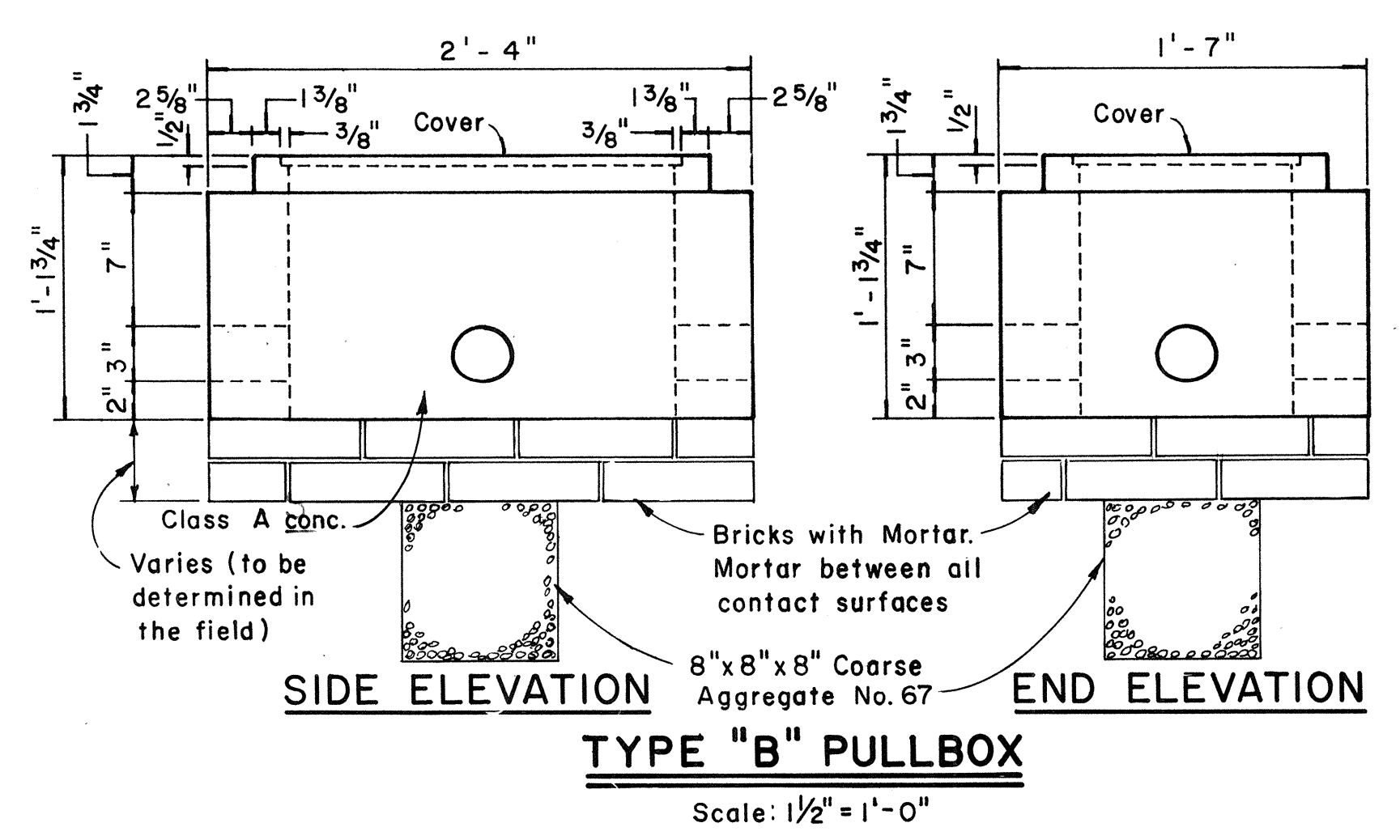
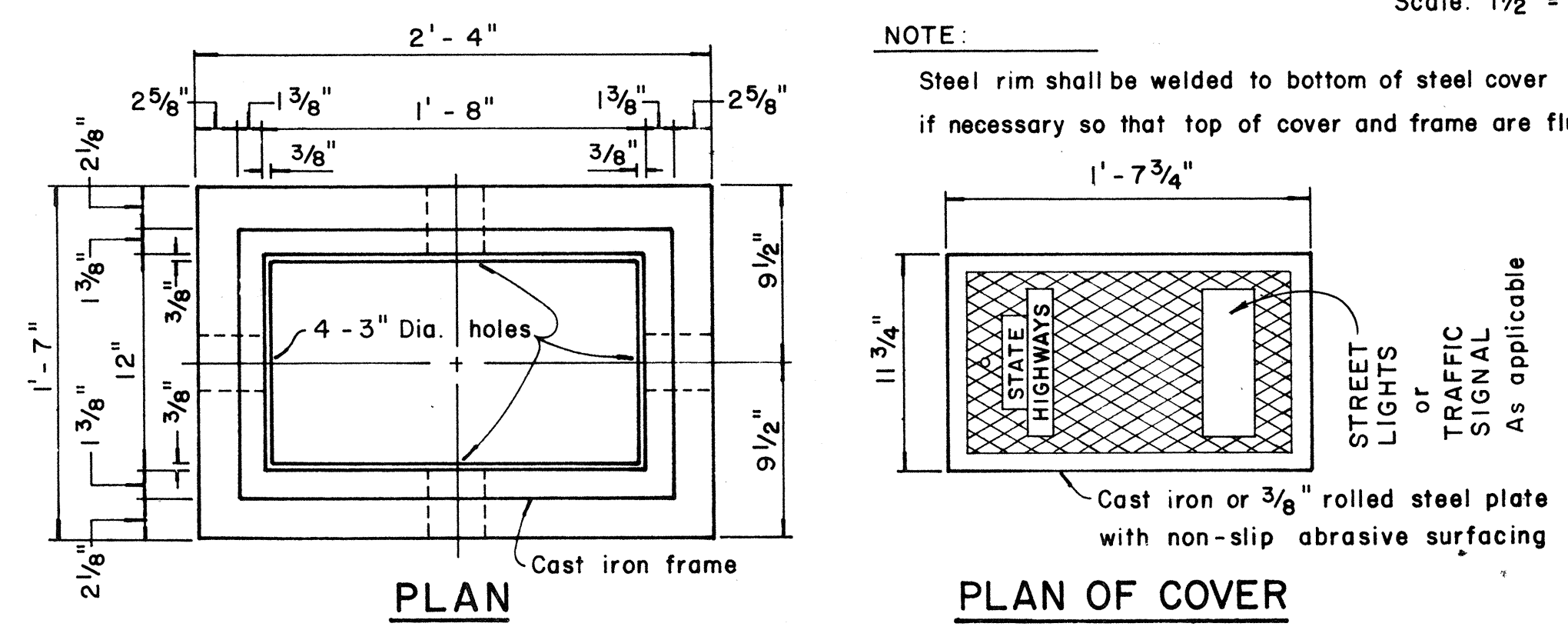
**TYPE "A" PULLBOX PRECAST**  
Scale: 1" = 1'-0"



**TYPE "C" PULLBOX**  
Scale: 1/2" = 1'-0"



- NOTES: (FOR TYPE "A" PULLBOX)**
- 3/8" Rolled steel plate cover with non-slip abrasive surfacing medium grade, natural color shall be used on all pullboxes located on sidewalk areas where pedestrians are walking.
  - 3/8" Checkered plate cover shall be used on all pullboxes located in median areas and other locations where there are no pedestrians walking.
  - Pull irons shall be placed opposite each conduit slot.
  - Covers on all pullboxes located in sidewalk areas shall be set flush with the concrete sidewalk.
  - Each pullbox shall have a pair of pull irons opposite each other for lifting purposes.



**TYPE "B" PULLBOX**  
Scale: 1/2" = 1'-0"

**NOTE:**  
Steel rim shall be welded to bottom of steel cover if necessary so that top of cover and frame are flush

APPROVAL RECOMMENDED:  
*Erich Tanaka*  
TRAFFIC ENGINEER  
12/20/69  
DATE

APPROVED:  
*[Signature]*  
ASSISTANT CHIEF, ENGINEERING  
12-20-69  
DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised Type B & C Pullbox details	H.T.	3-5-70

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION  
**STANDARD DETAILS**  
**PULLBOXES**  
Scale as noted Date  
SHEET No. 17 OF 17 SHEETS DT 401

DATE  
SURVEY PLOTTED BY  
DRAWN BY  
DESIGNED BY  
NOTES BOOK  
QUANTITIES BY  
CHECKED BY