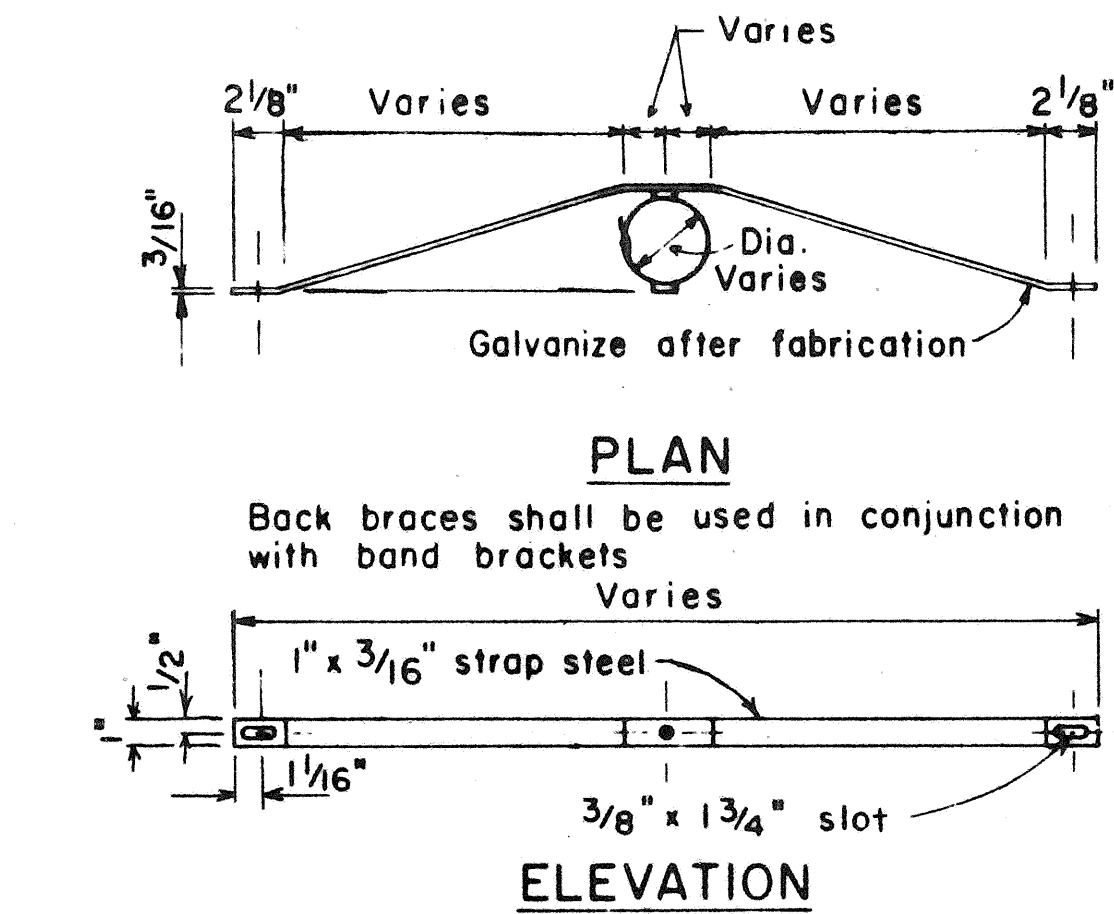


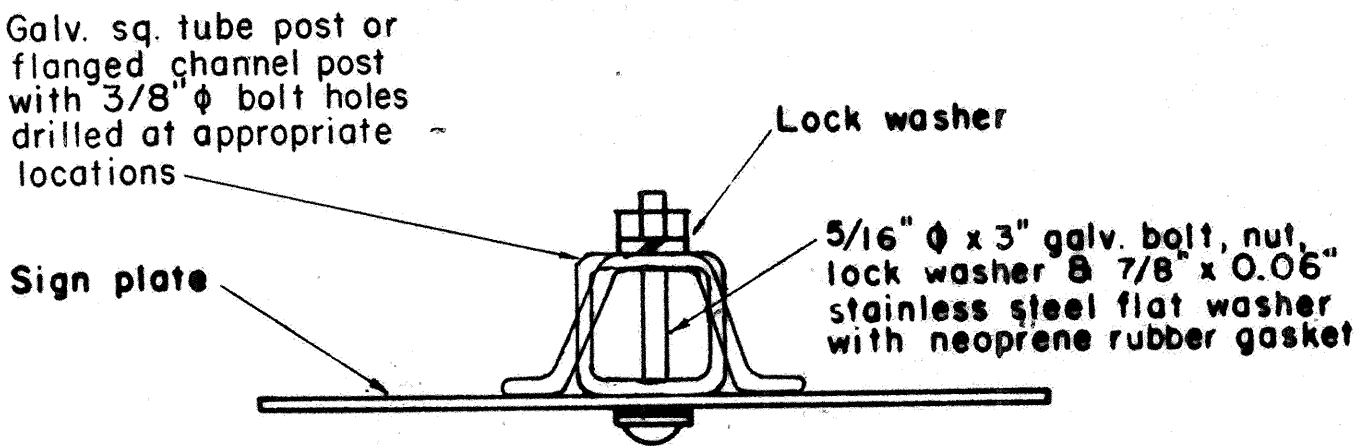
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-02-83	1983	6	19

GENERAL NOTES

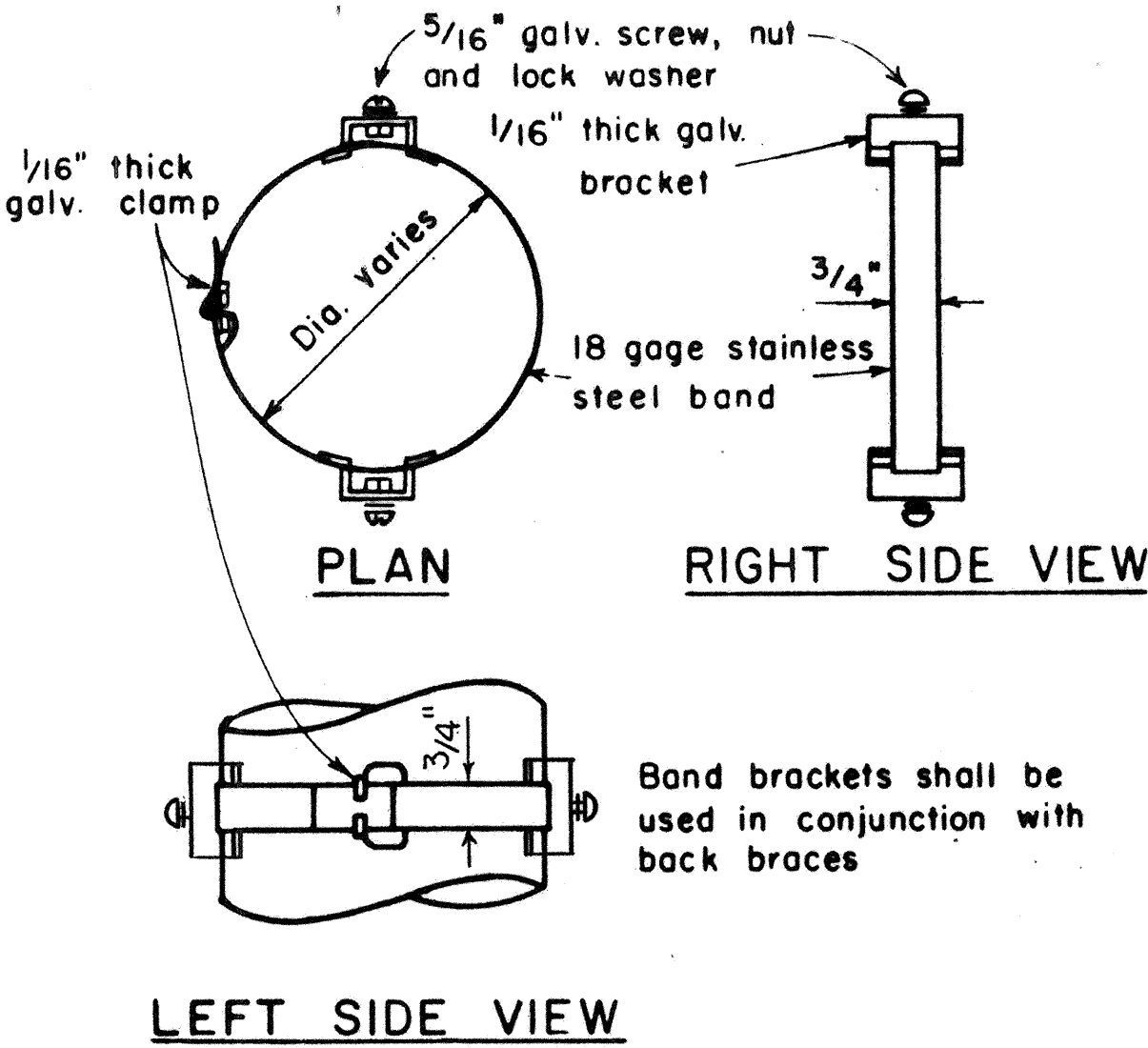
- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two 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) as follows:
 - 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 3/2" 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 of signs along bikeways.
- 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.
- Anchor bases shall be installed for all signpost installations, unless otherwise shown or directed. See sheets DT 100A and DT 100B.



BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



GALVANIZED SQUARE TUBE OR FLANGED CHANNEL POST



BAND BRACKET

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.	5/15/79
4	Revised Gen. Note #4 & Mounting Details	H.T.	4/23/80
5	Revised General Notes, Lateral Sign Locations and Mounting Details	H.T.	5/15/81
6	Added Note 10. Minor revisions to notes and details.	H.T.	9/22/82

APPROVAL RECOMMENDED:
Eishi Tanaka 11/15/77
TRAFFIC ENGINEER DATE

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

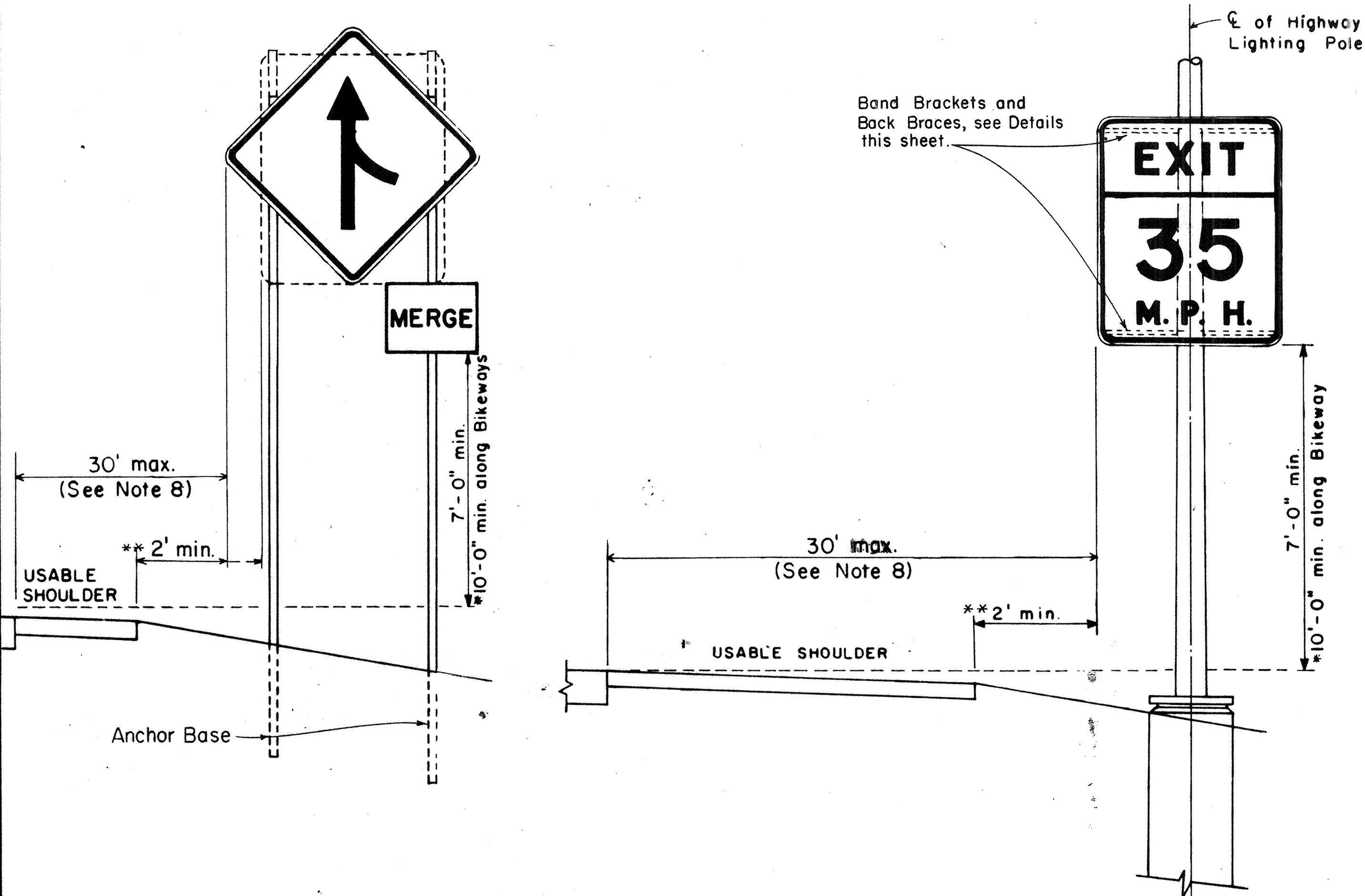
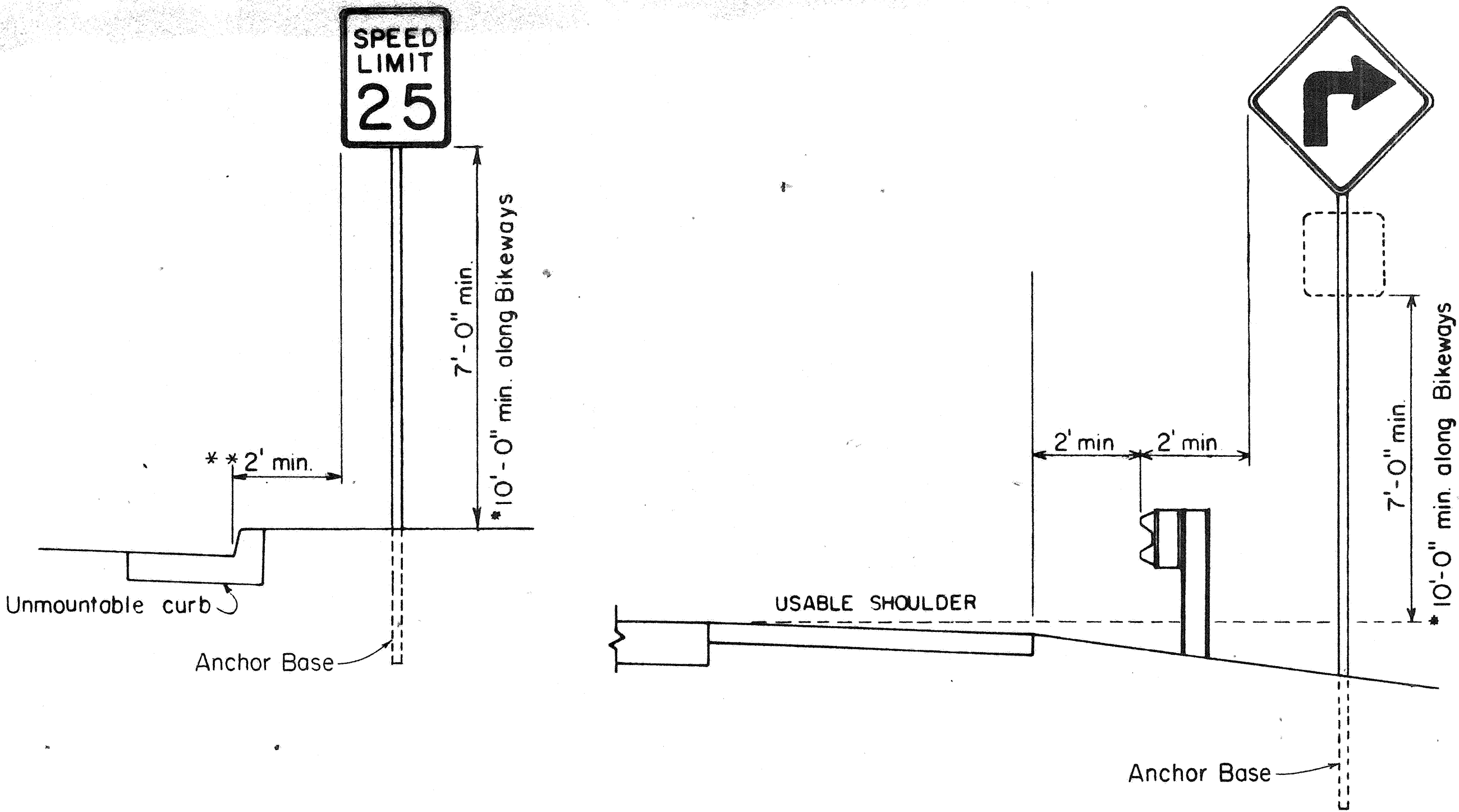
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGN DETAILS

Not to scale
June, 1977

SHEET NO. 1 OF 14 SHEETS DT 100



HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-02-83	1983	8	19

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"

ANY TIME
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"

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

U
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"

W17-1(L) 60"x 60"

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"

SI-1 36"x 36"

S2-1 36"x 36"

SCHOOL
BUS STOP
AHEAD
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"

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.	11/9/79

APPROVAL RECOMMENDED:
Eushi Tanaka 5/2/78
TRAFFIC ENGINEER DATE

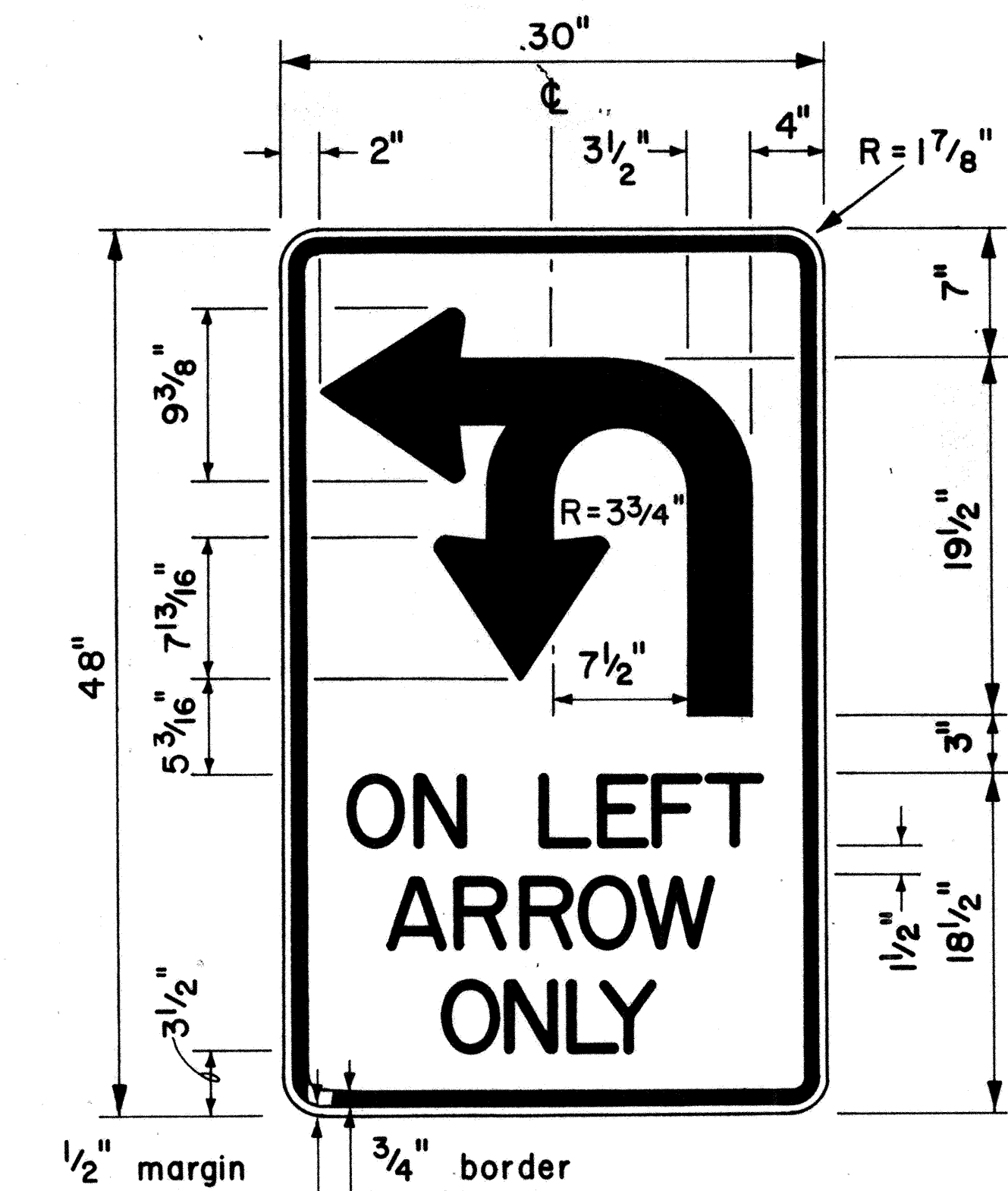
APPROVED:
Harbor 2. Zafrahu 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
MISCELLANEOUS SIGNS
NOT TO SCALE DATE: MAY, 1978
SHEET NO. 3 OF 14 SHEETS DT 103

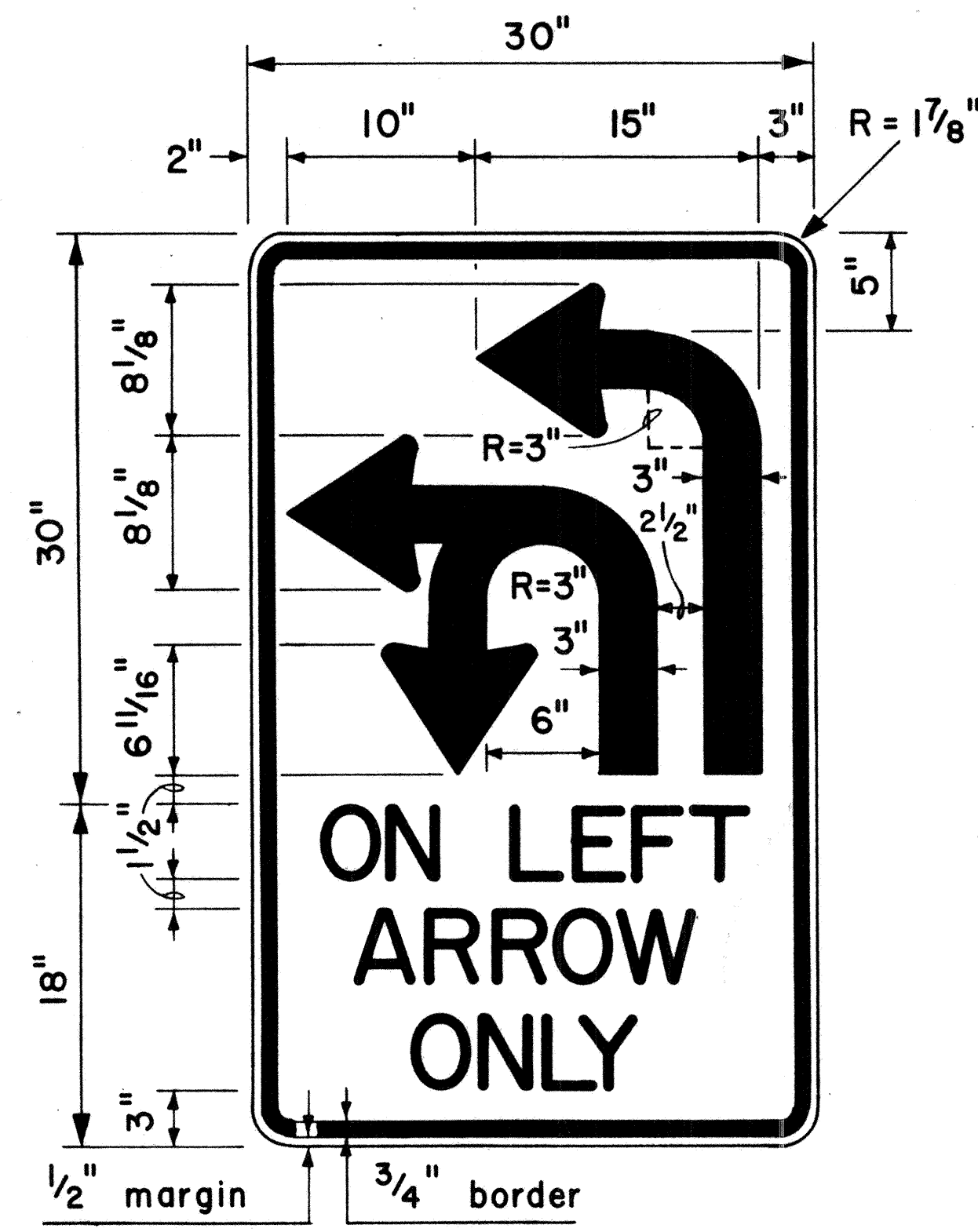
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-02-83	1983	9	19

GENERAL NOTES

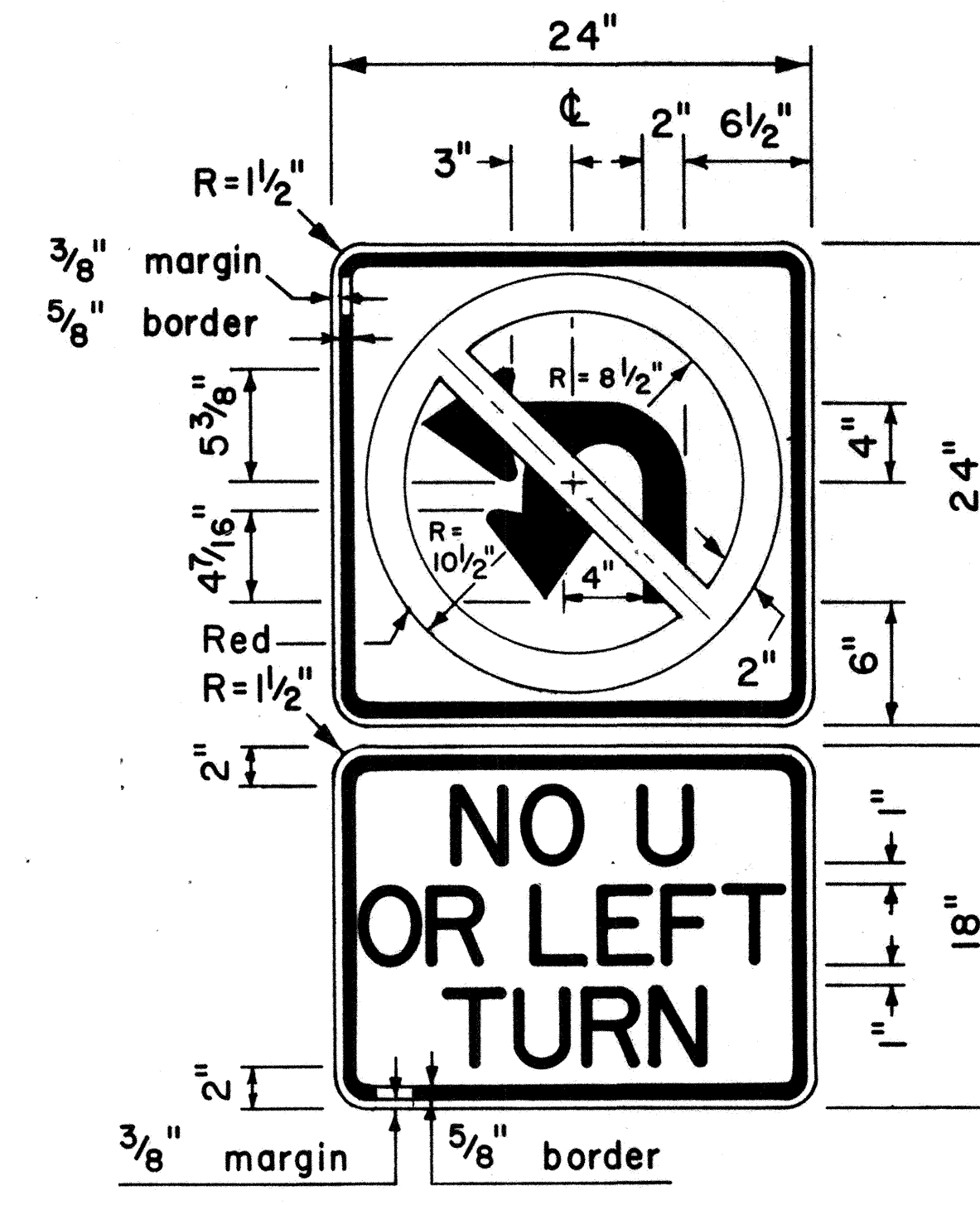
- Sign details shall conform to the latest editions of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and "Standard Highway Signs," and as amended.
- All regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory signs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



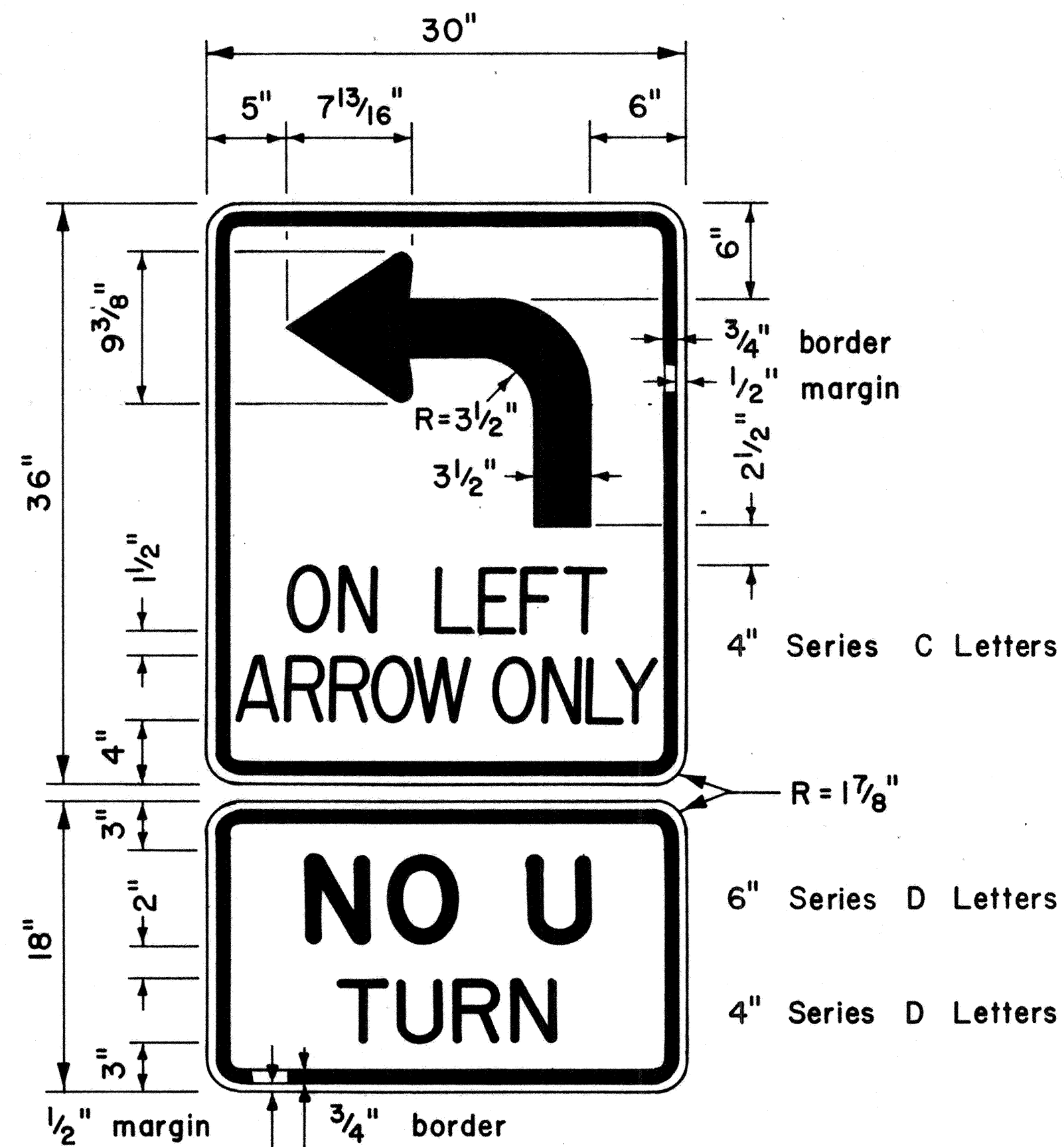
4" Series D Letters
RI7-1



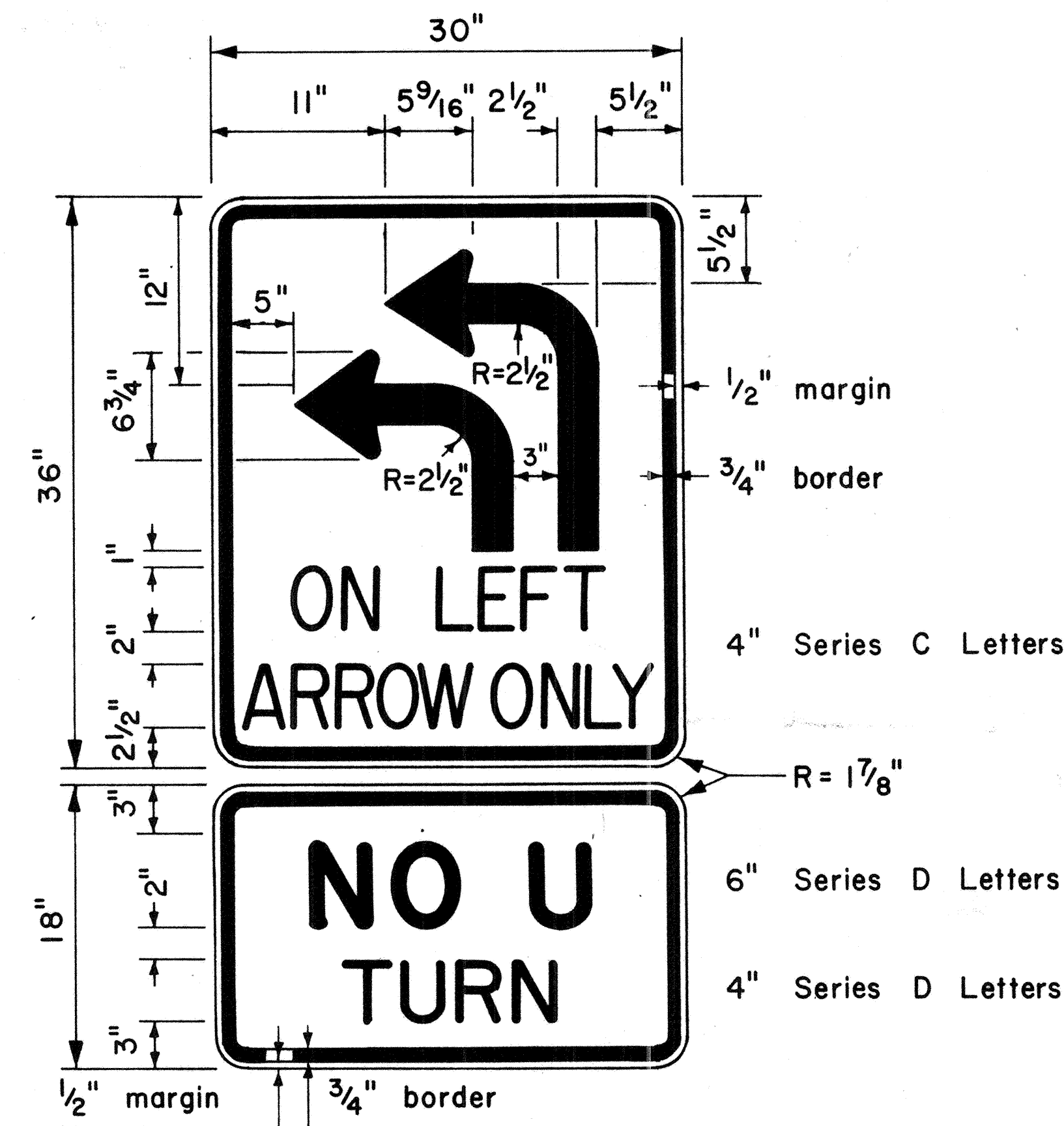
4" Series D Letters
RI7-2



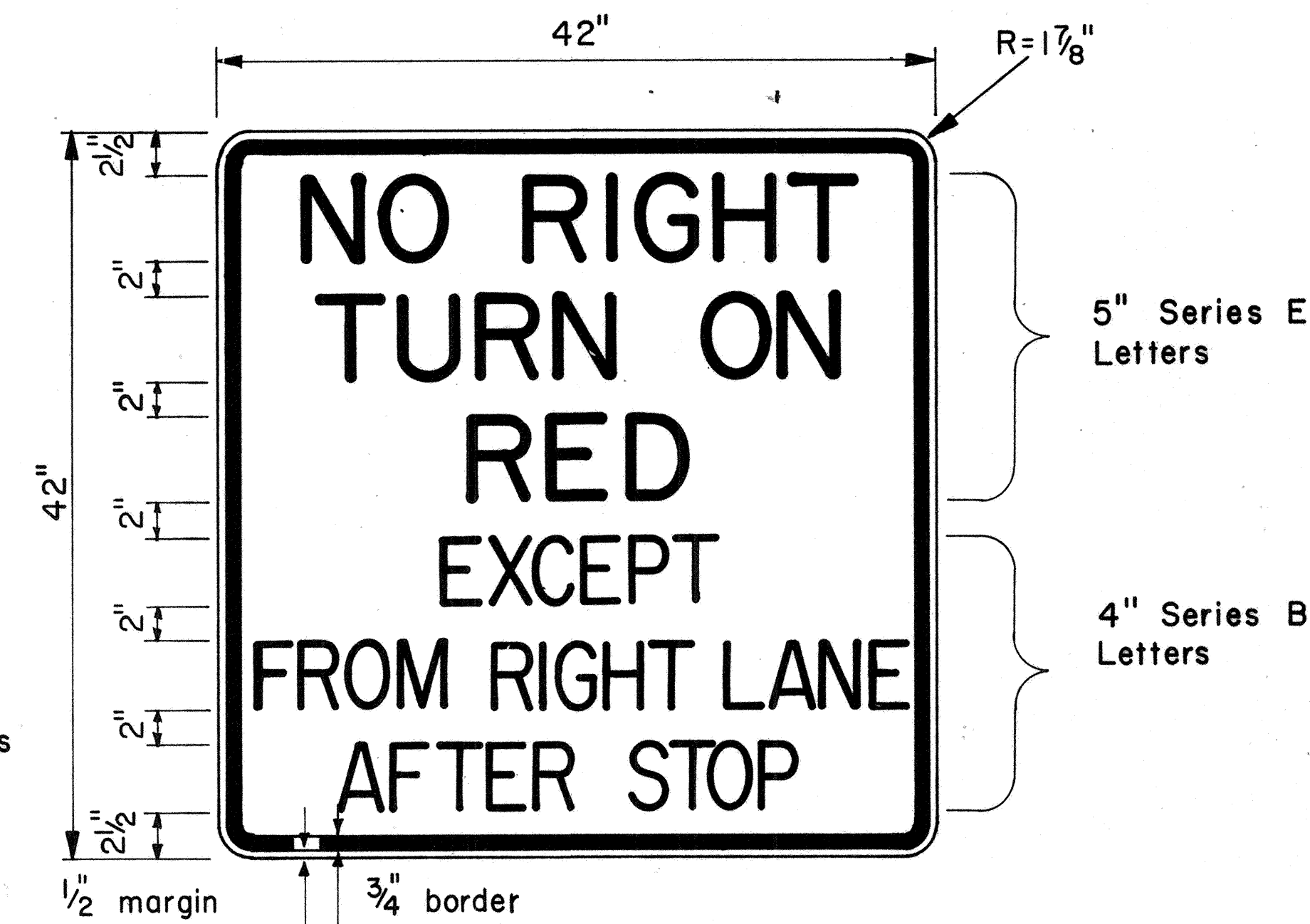
4" Series D Letters
R3-4b



RI7-3



RI7-4



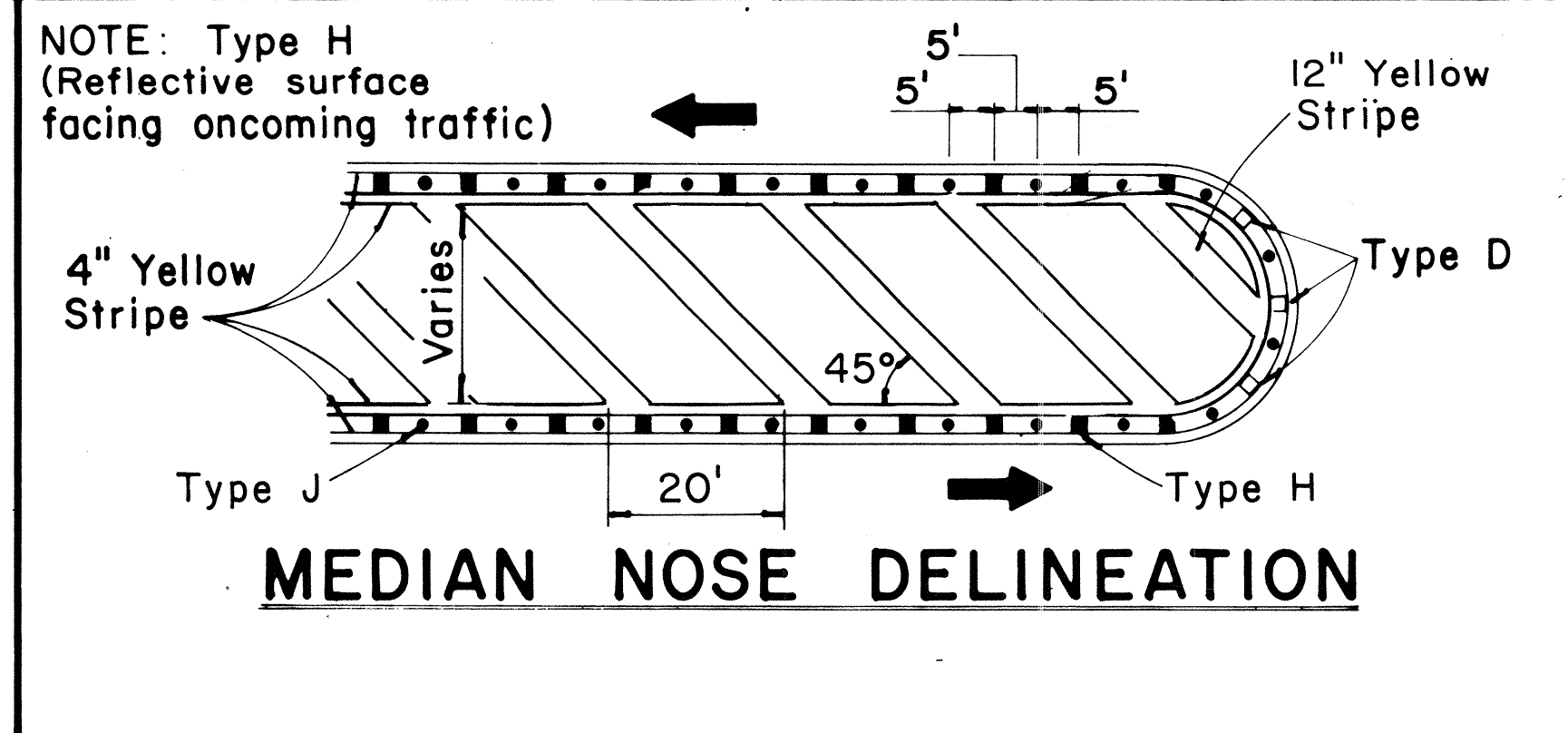
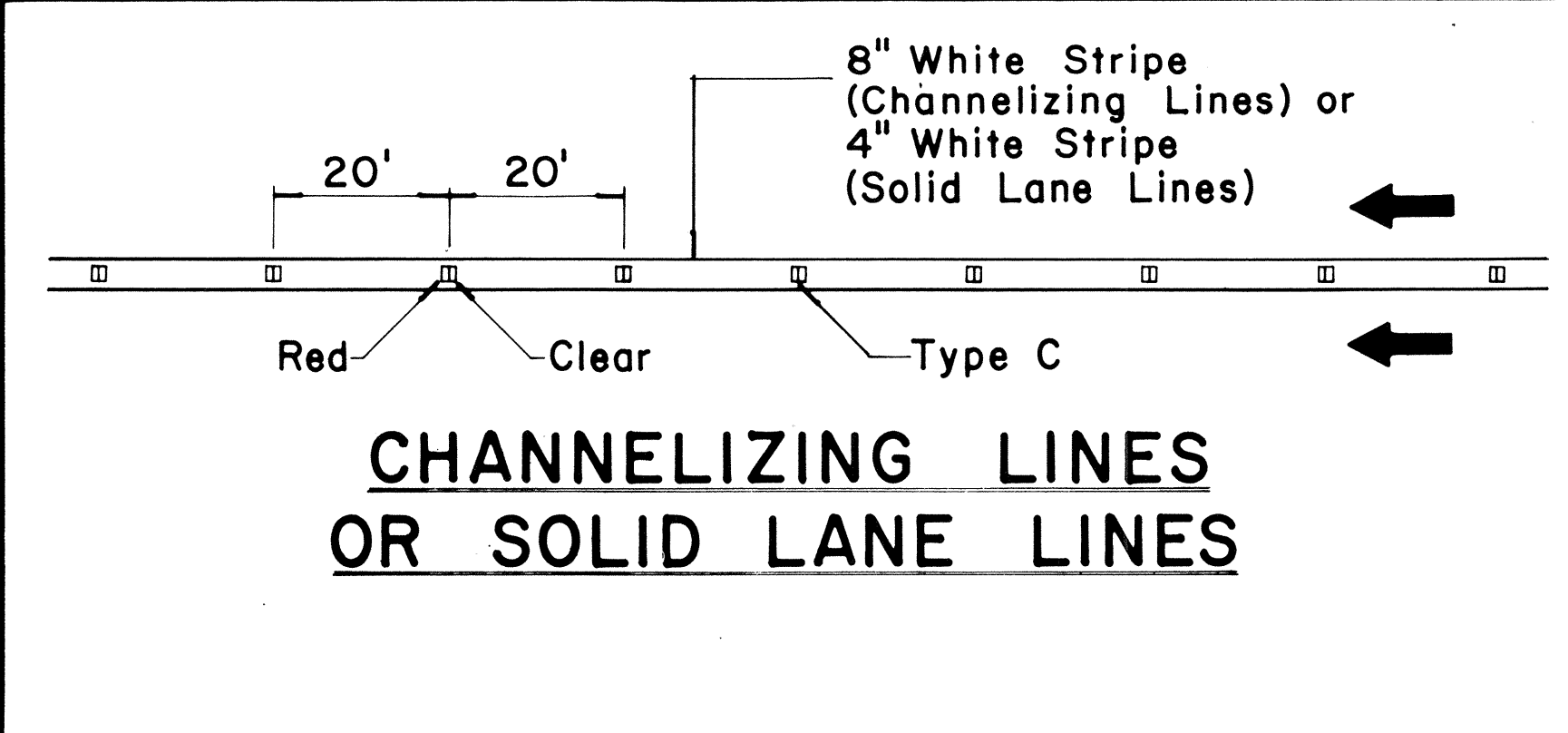
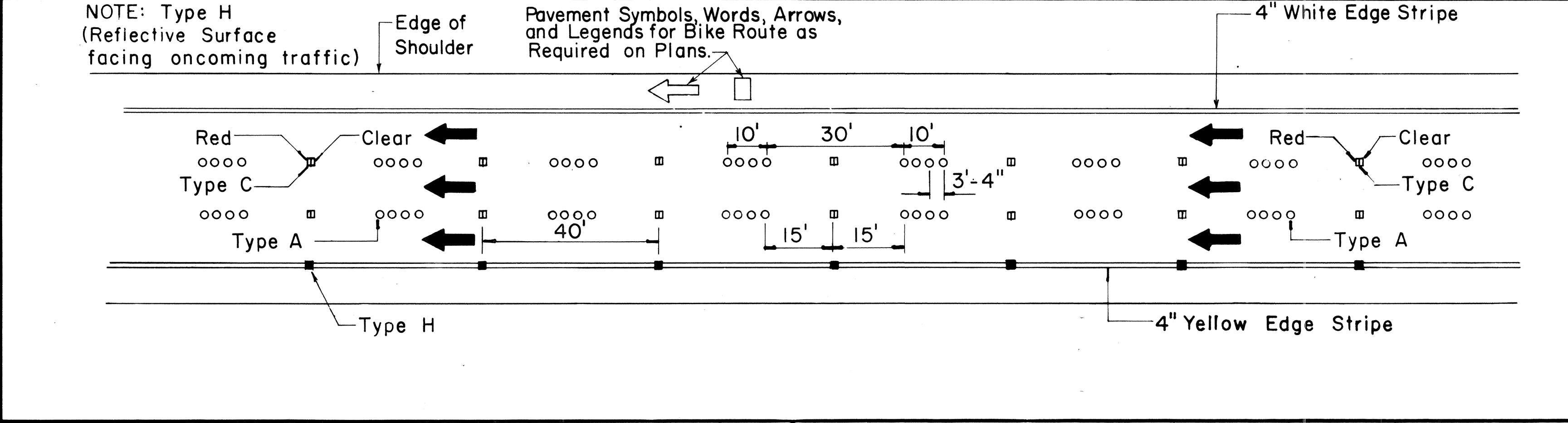
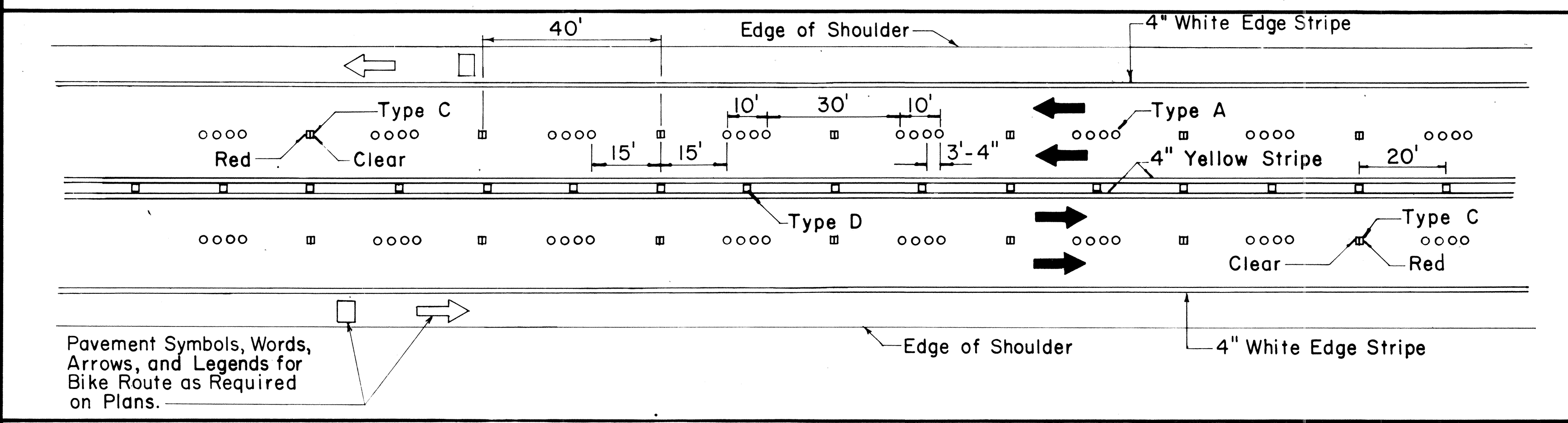
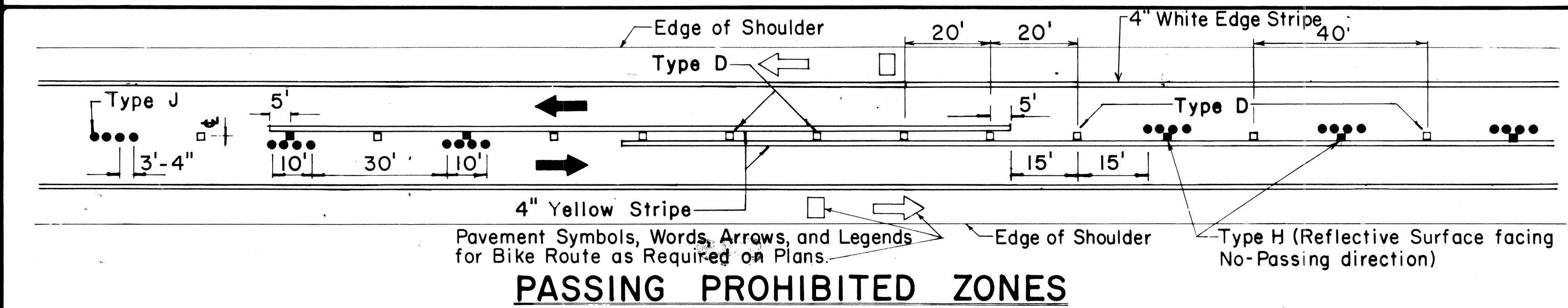
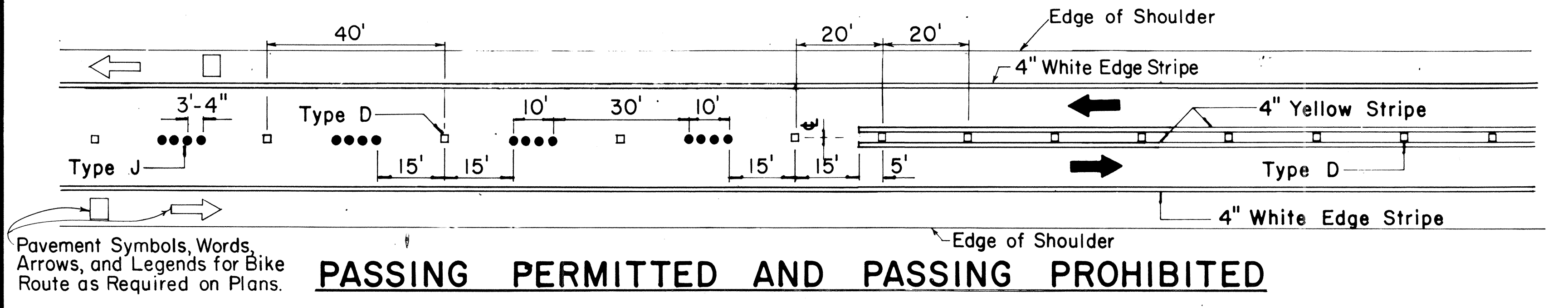
RIO-11d

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
Erich Tanaka 8/1/77
 TRAFFIC ENGINEER DATE
 APPROVED:
Harbor Zaleishu 8/1/77
 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. 4 OF 14 SHEETS DT 112

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-02-83	1983	10	12

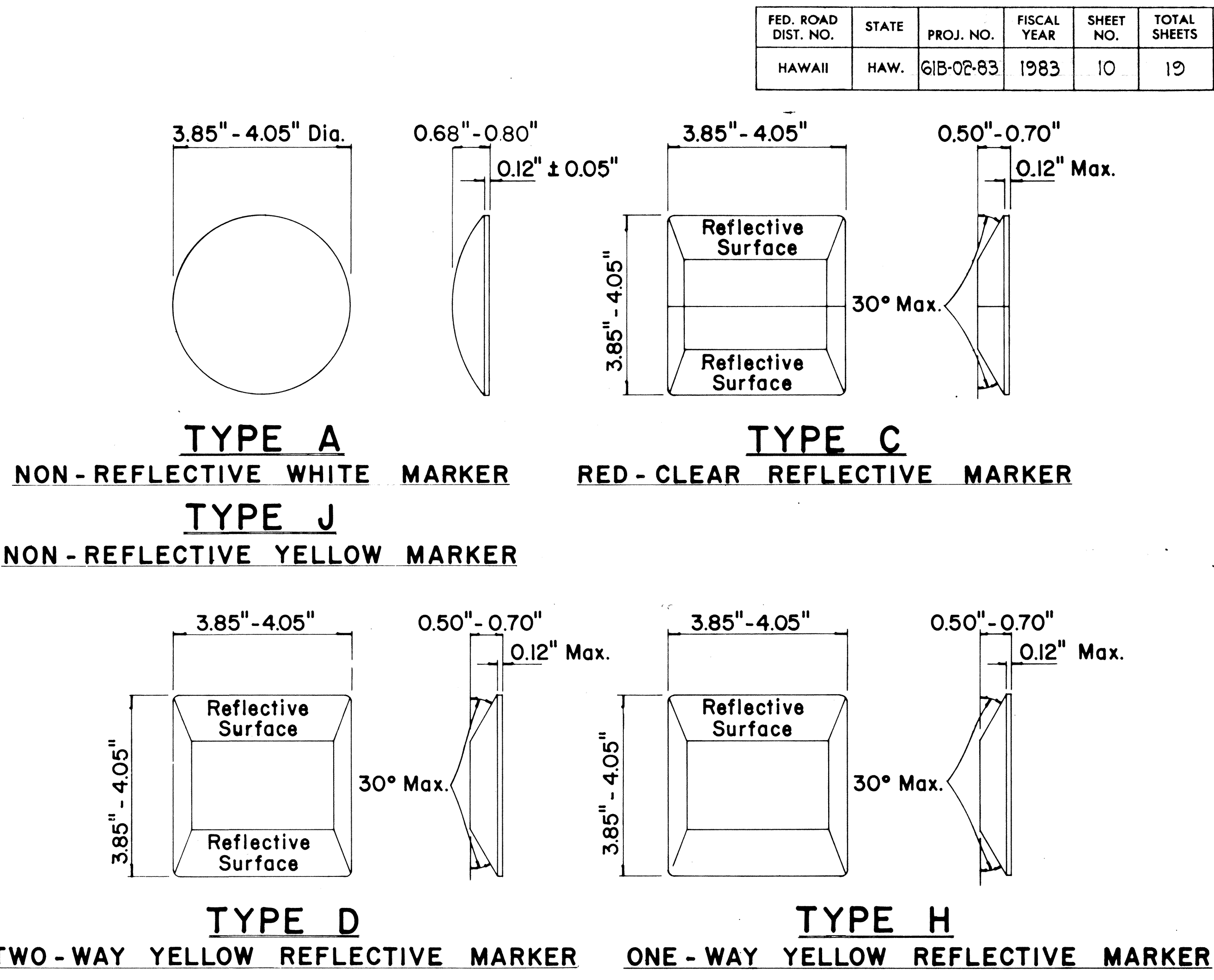


TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

MISCELLANEOUS



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

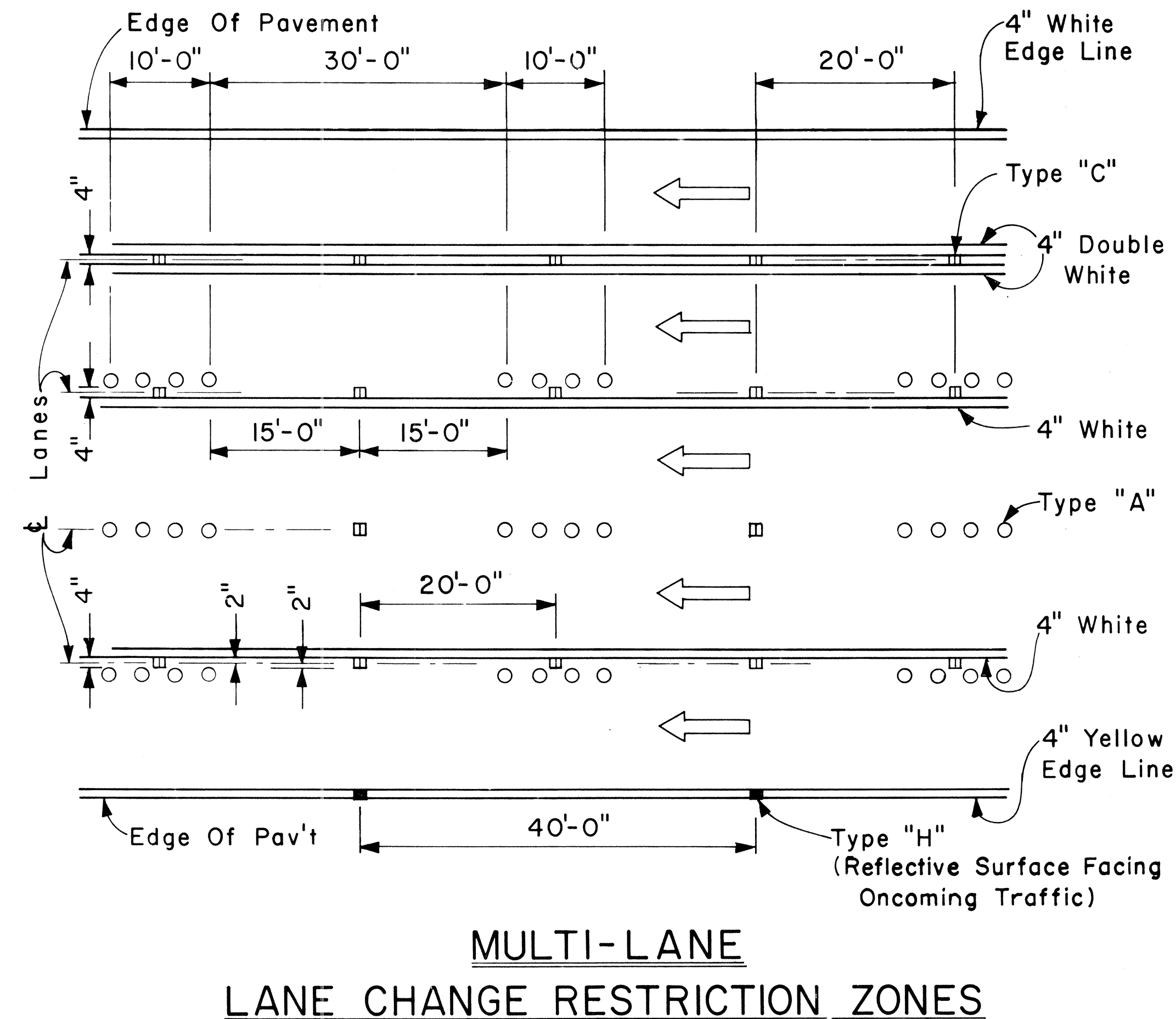
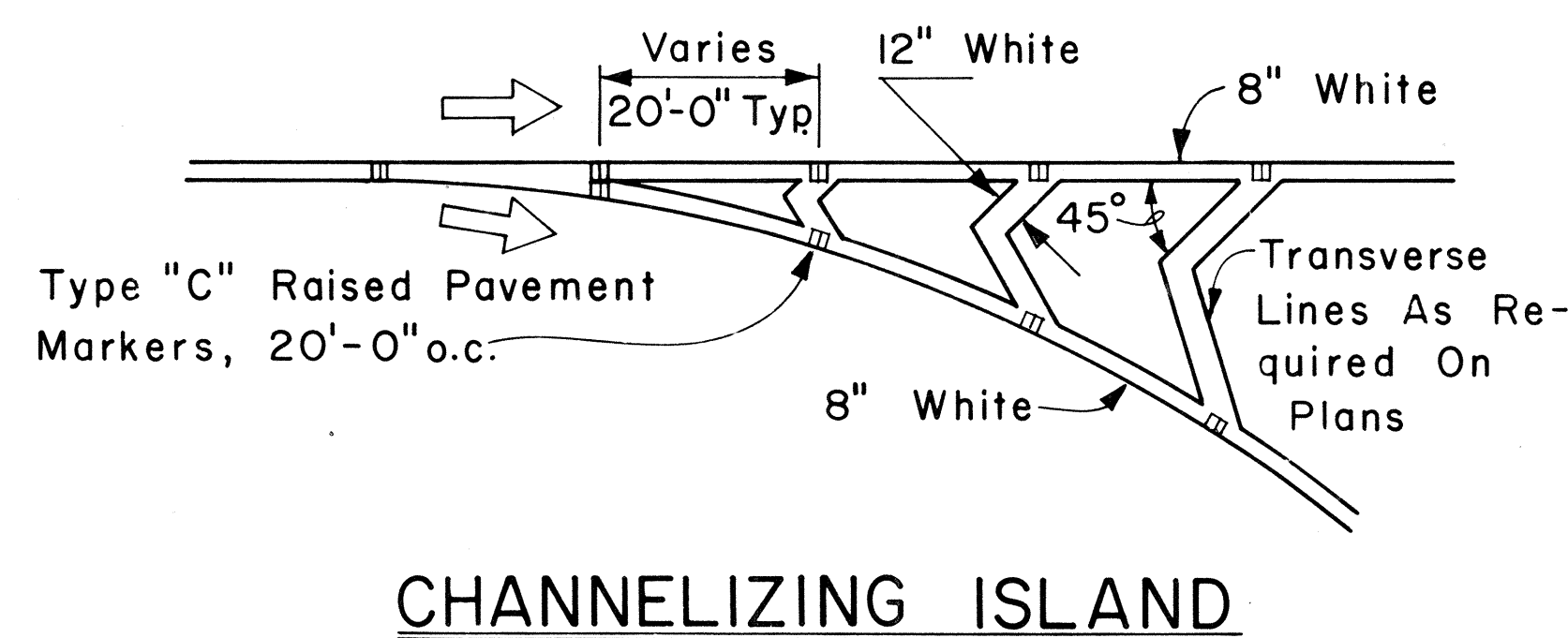
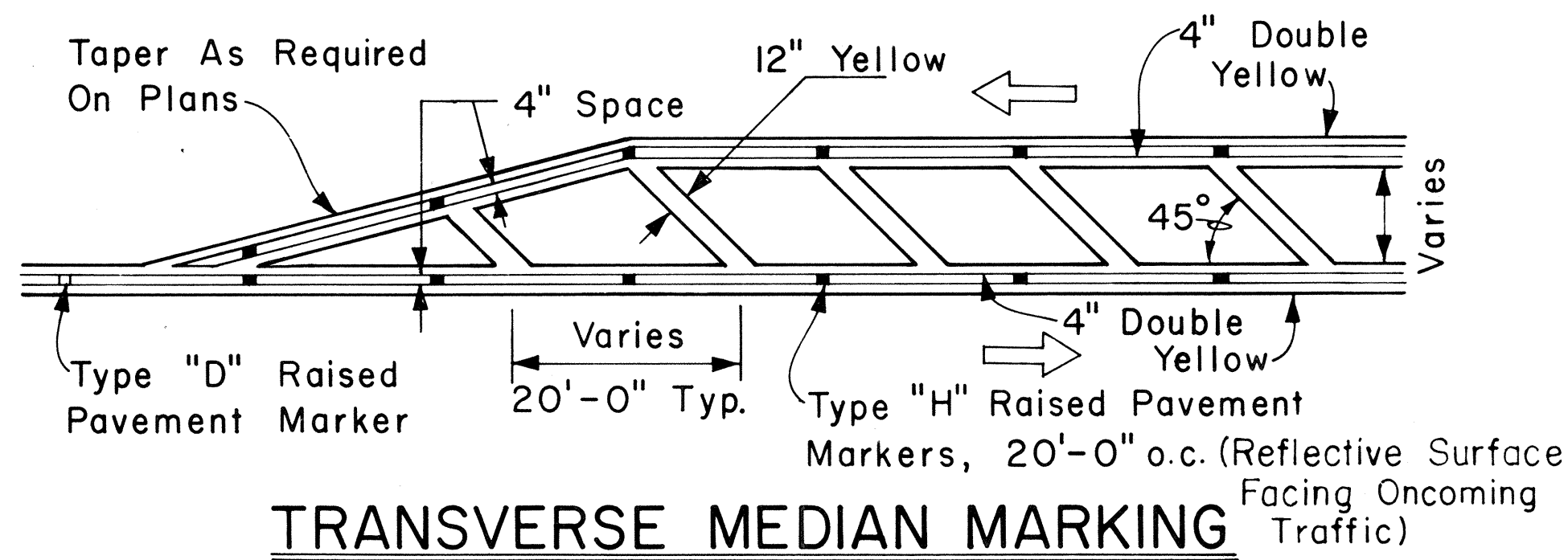
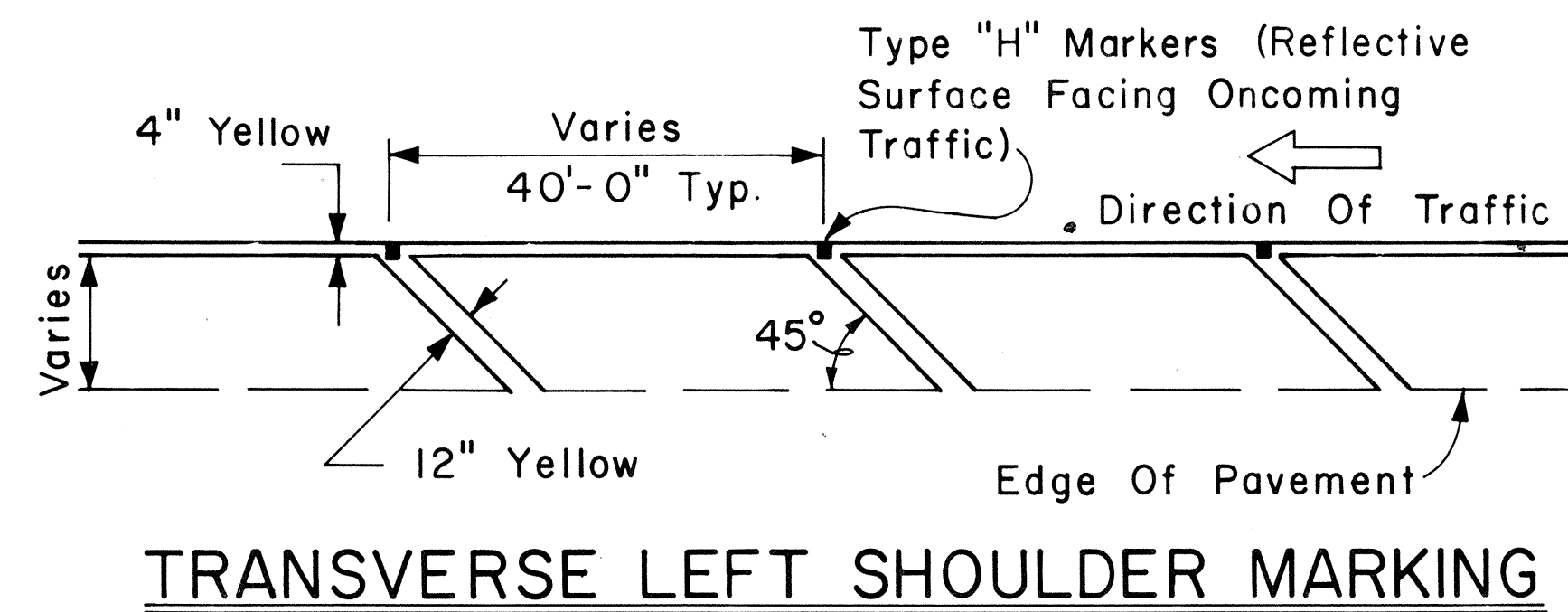
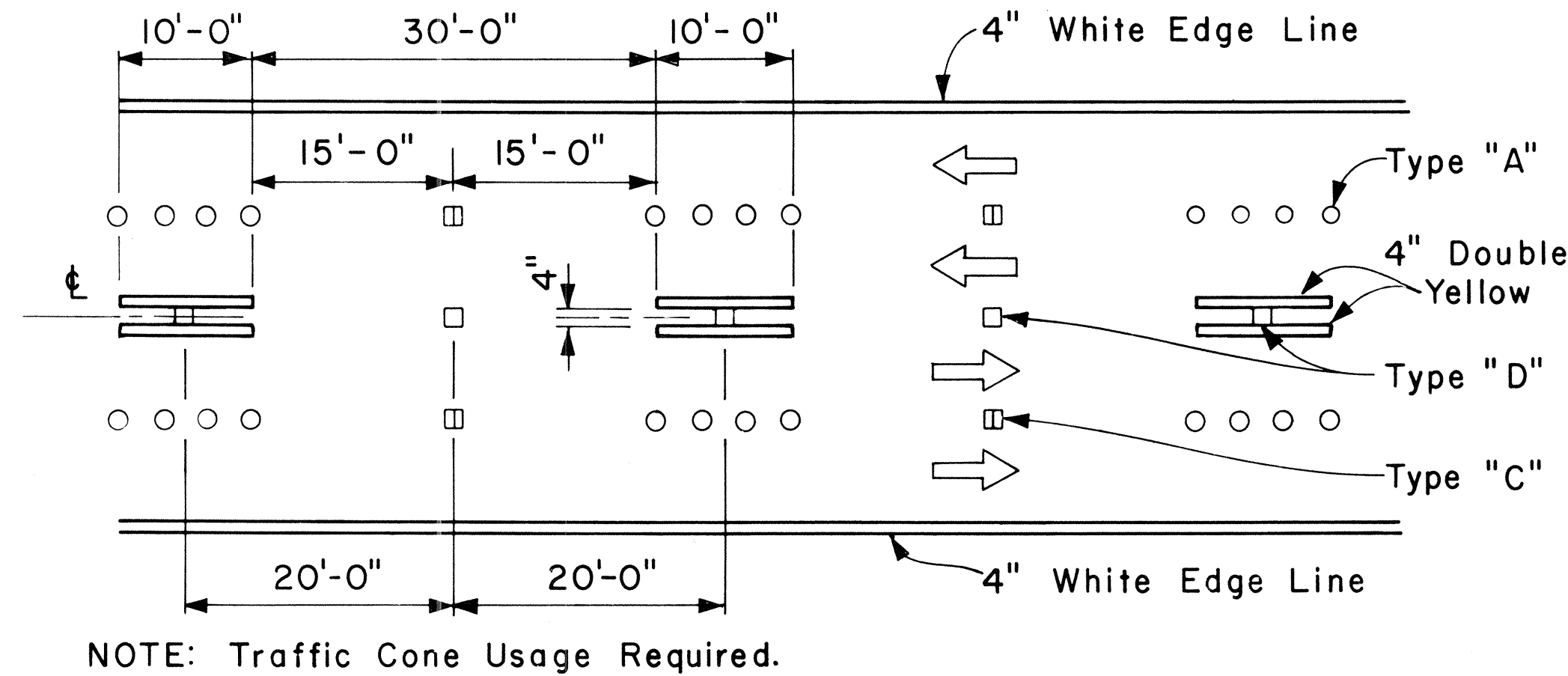
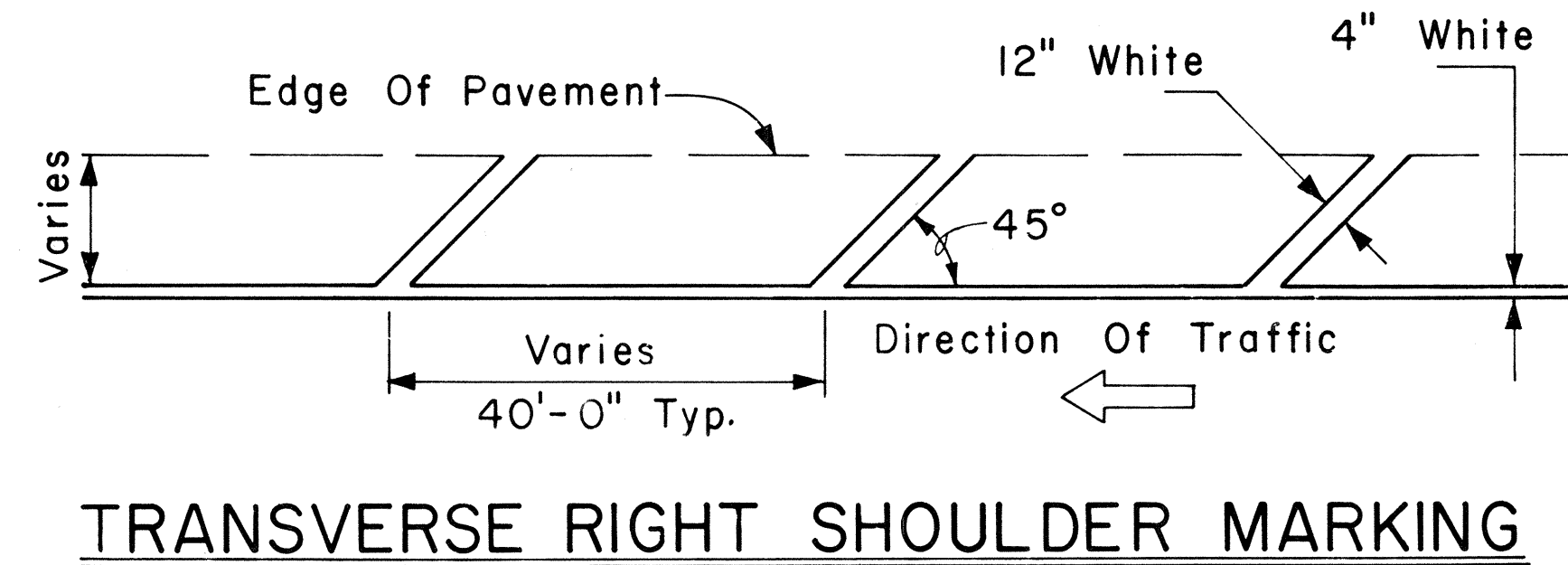
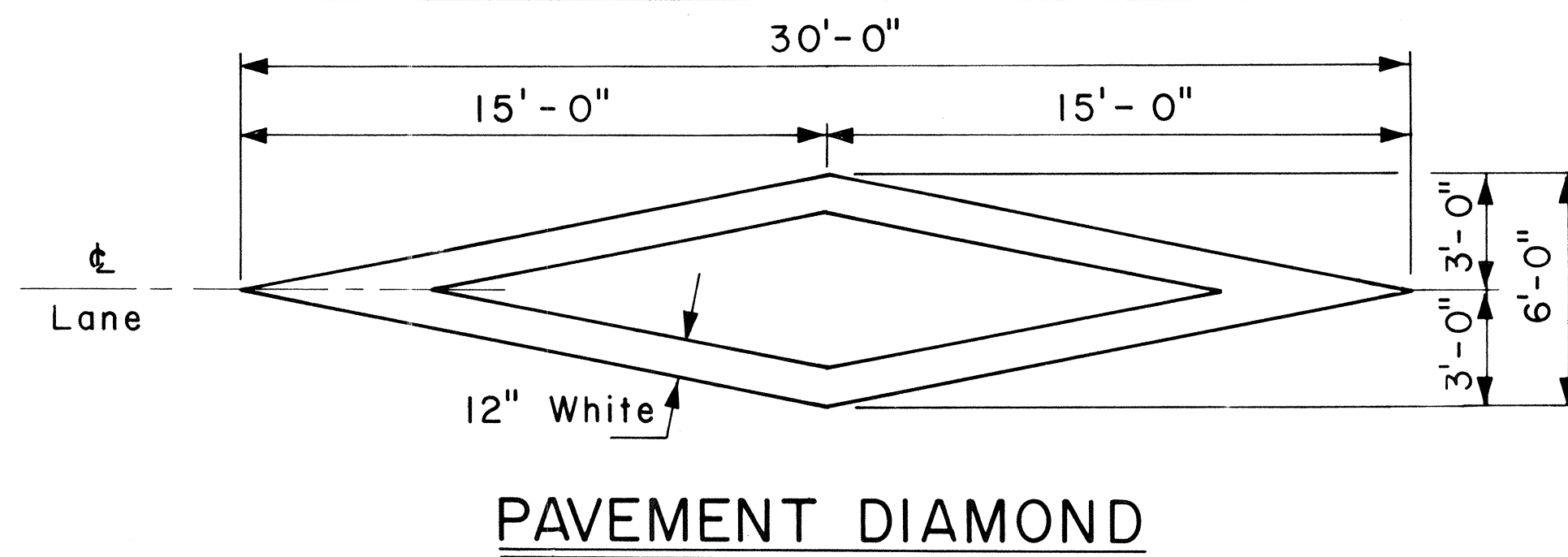
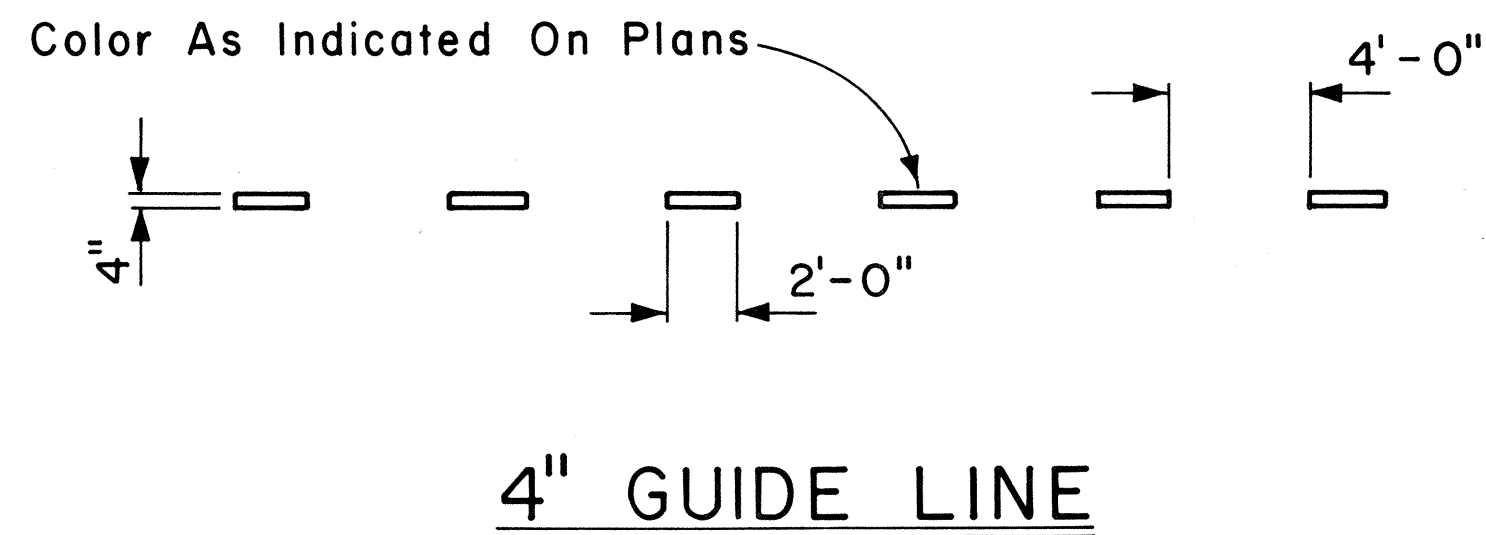
STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

Not to Scale July 1978
 SHEET No. 5 OF 14 SHEETS DT 300

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-02-83	1983	11	19

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.



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

APPROVED: *Robert J. Zaleski* 5/2/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

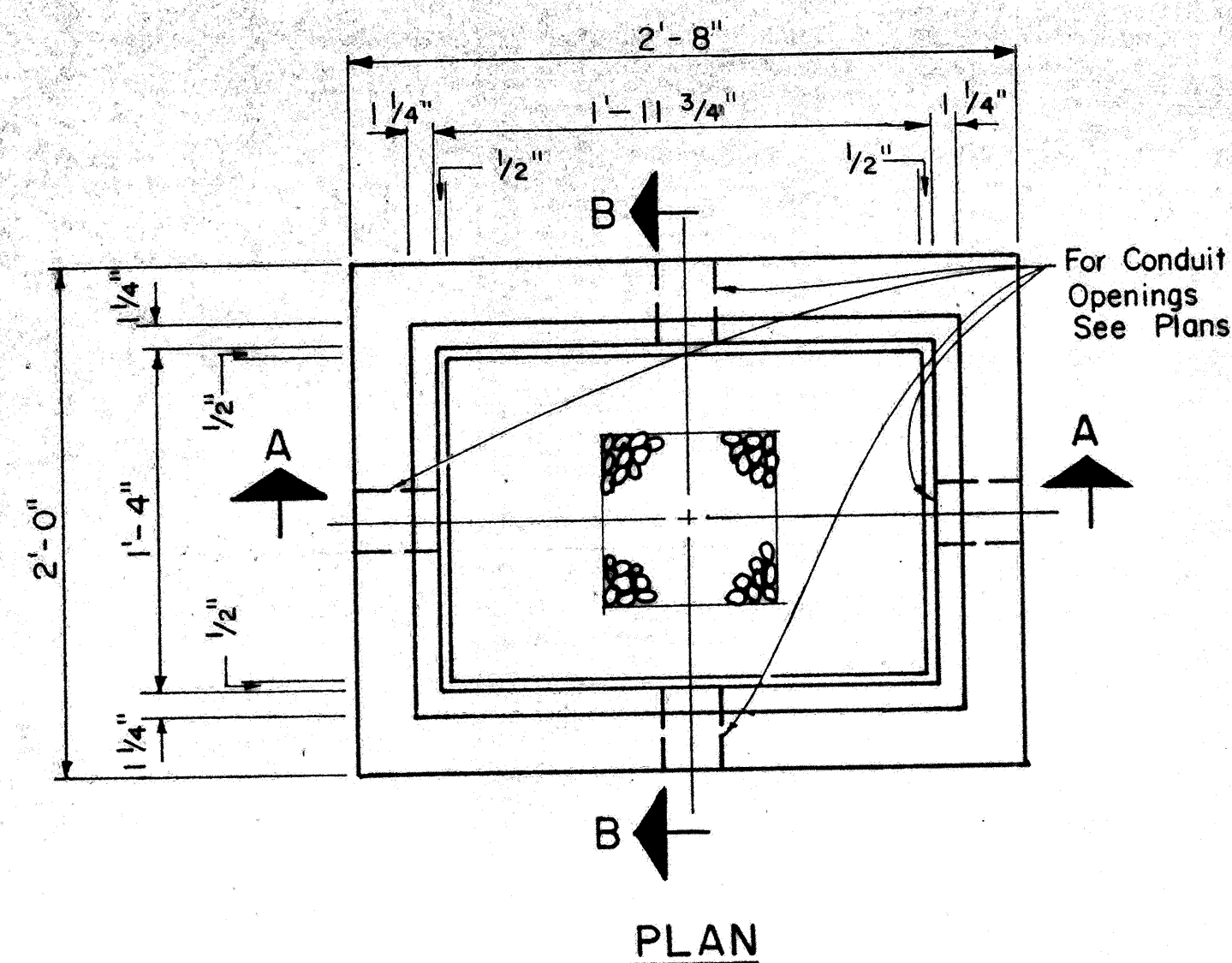
MISCELLANEOUS
PAVEMENT MARKINGS

Scale: Not to Scale Date: April, 1978

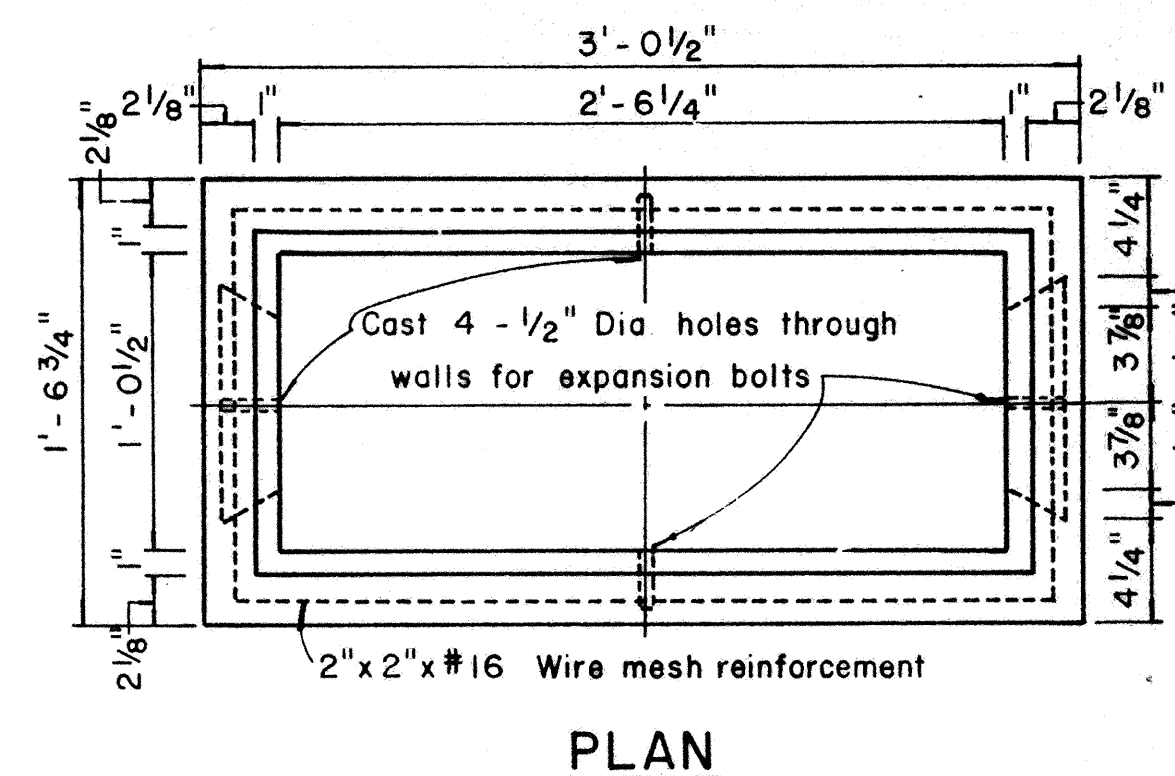
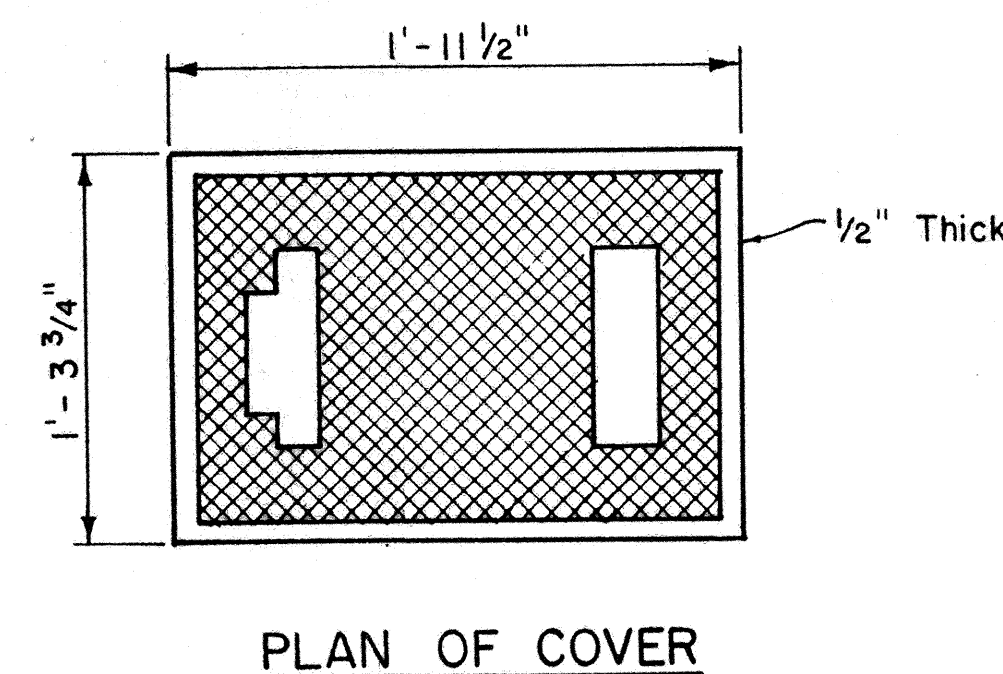
SHEET NO. 6 OF 14 SHEETS DT 302

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

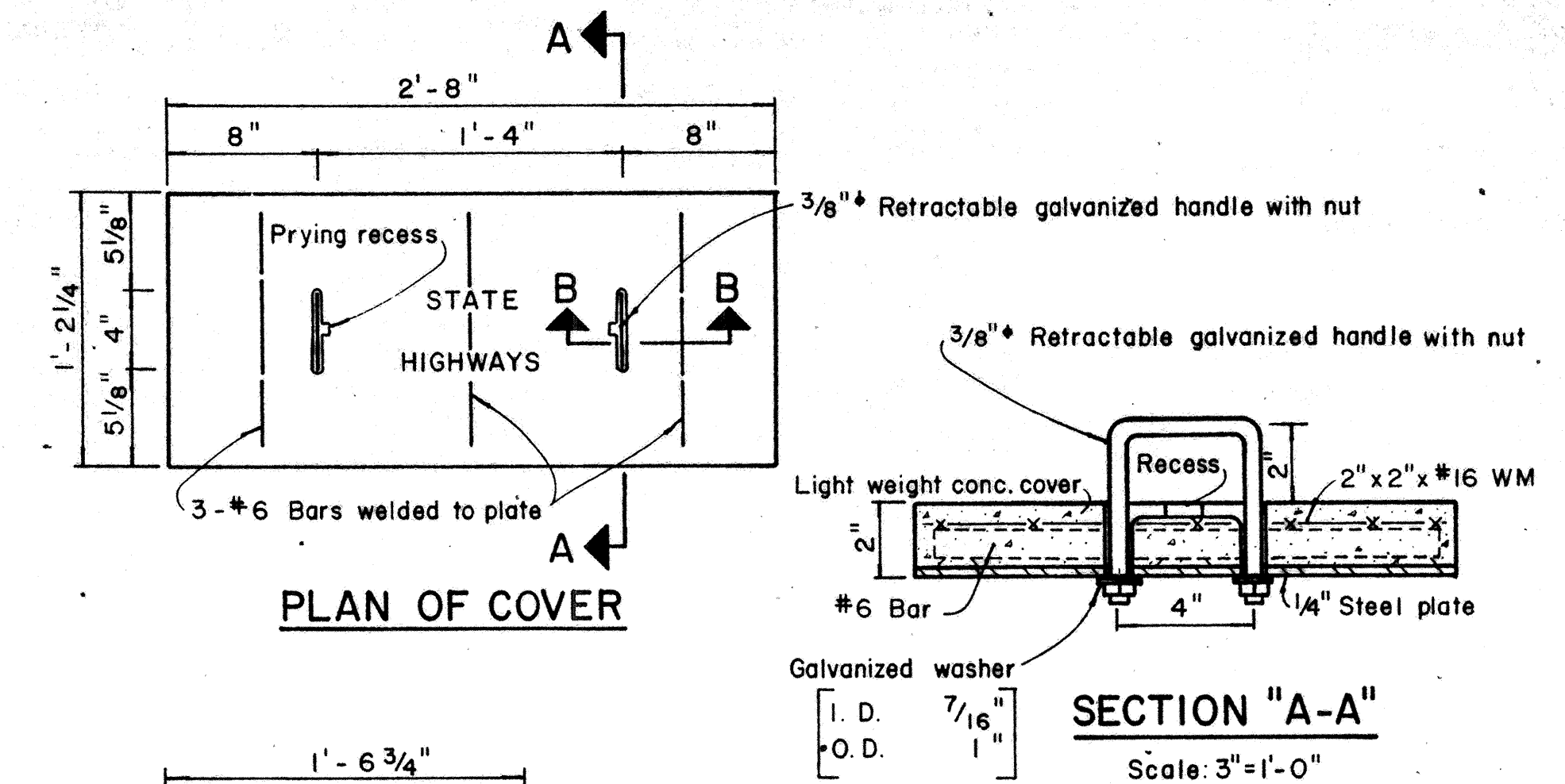
FED. ROAD DIST. NO.	STATE	FED. ROAD PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	618-02-83	1983	14	19



NOTE:
Except as noted, Cover Details shall conform to Type "B" Pullbox Cover.

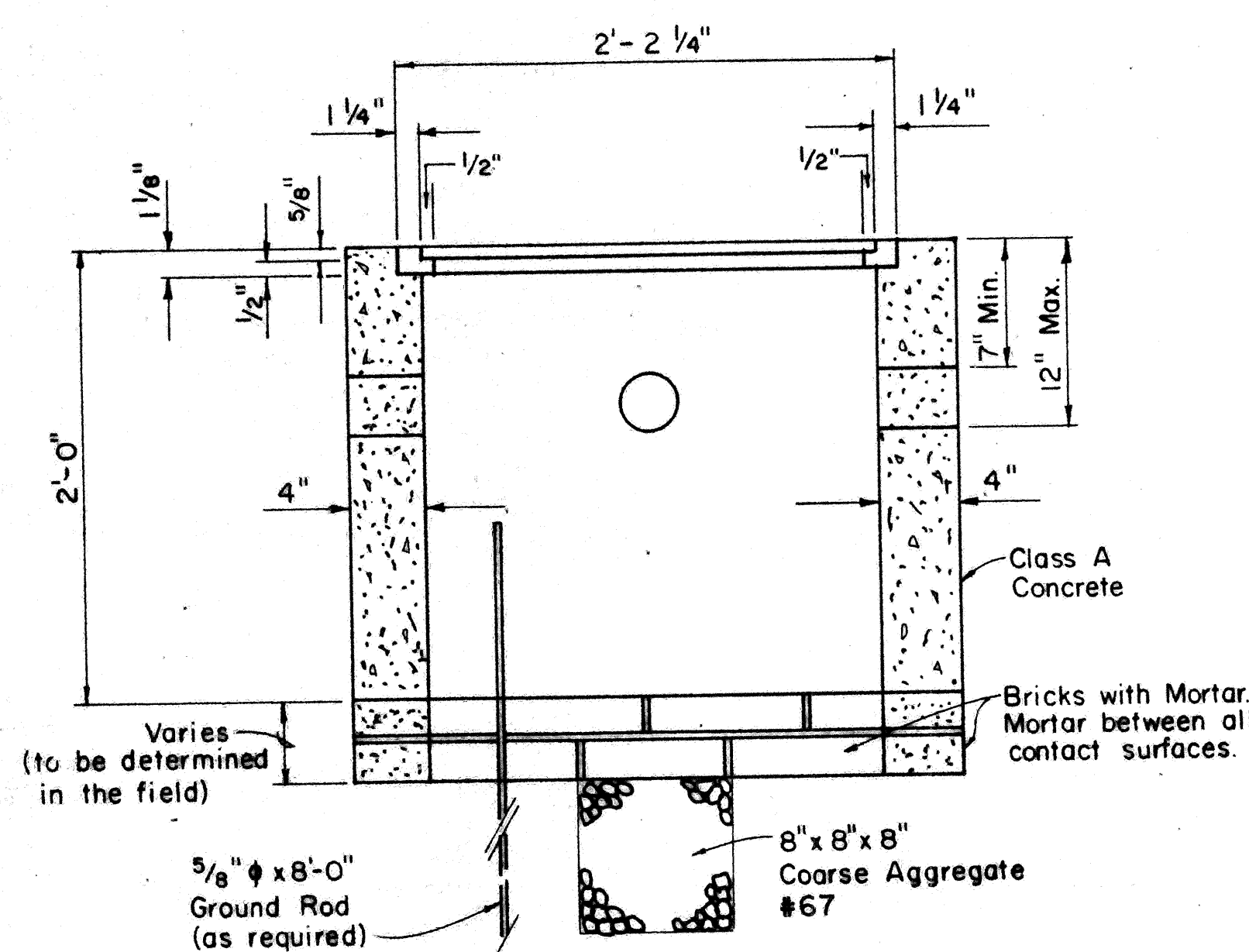


PLAN

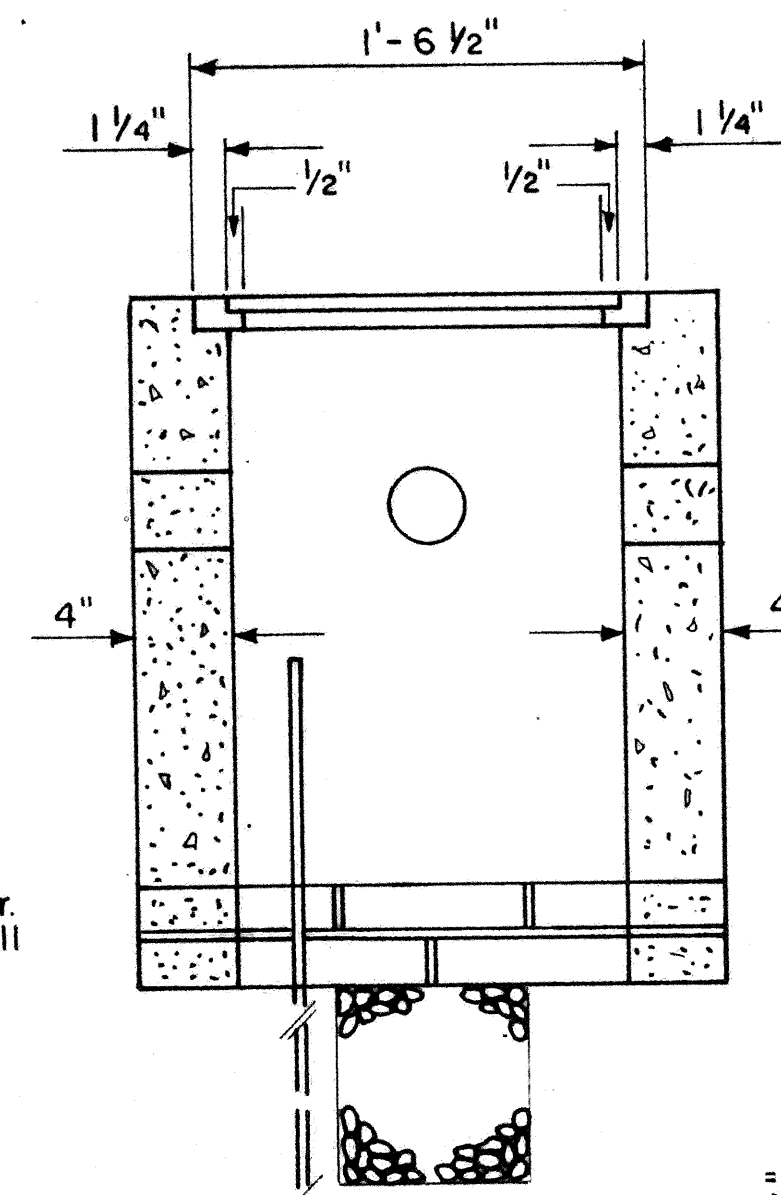


SECTION "A-A"

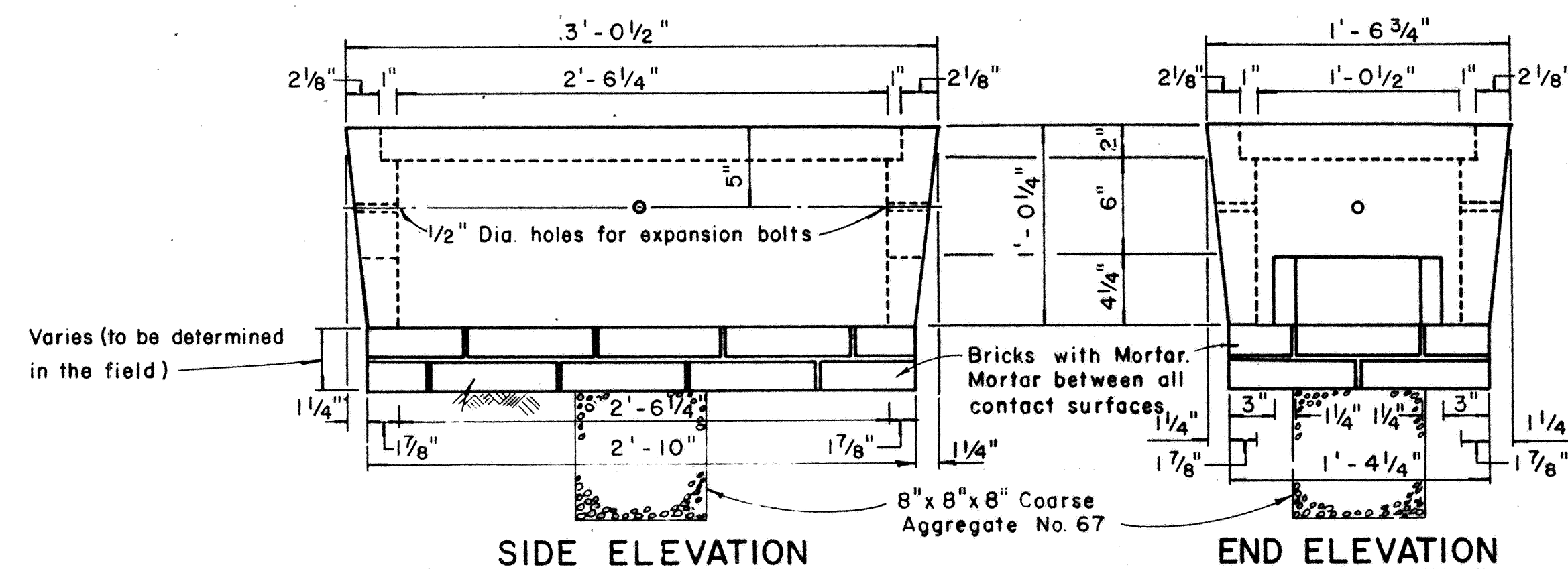
Scale: 3" = 1'-0"



SECTION A-A



SECTION B-B

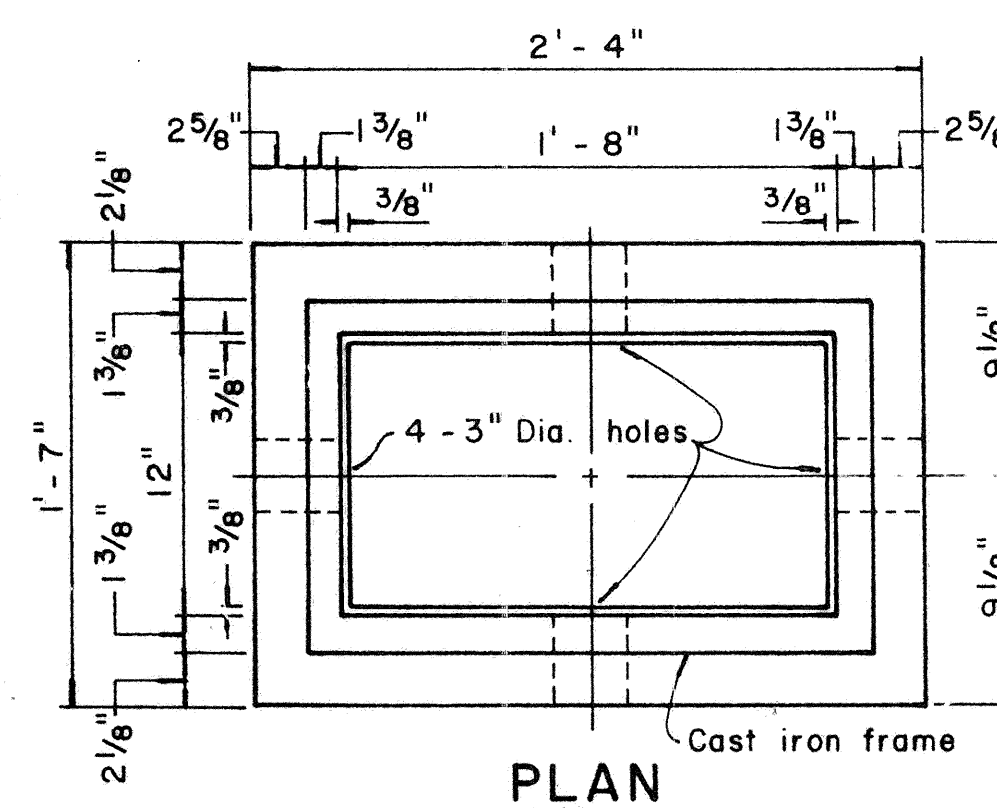


SIDE ELEVATION

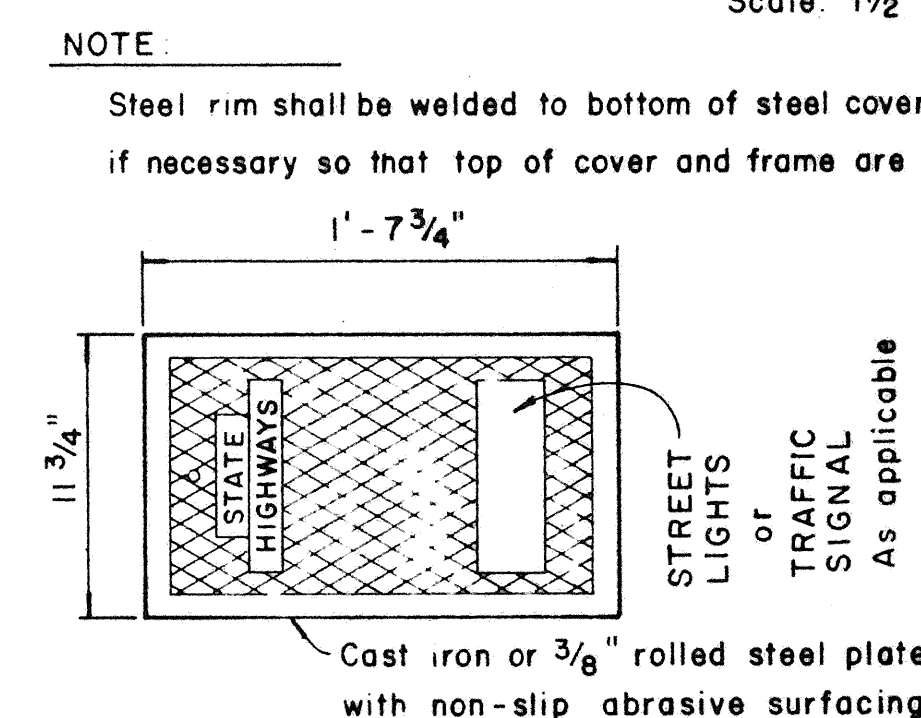
END ELEVATION

TYPE "C" PULLBOX

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



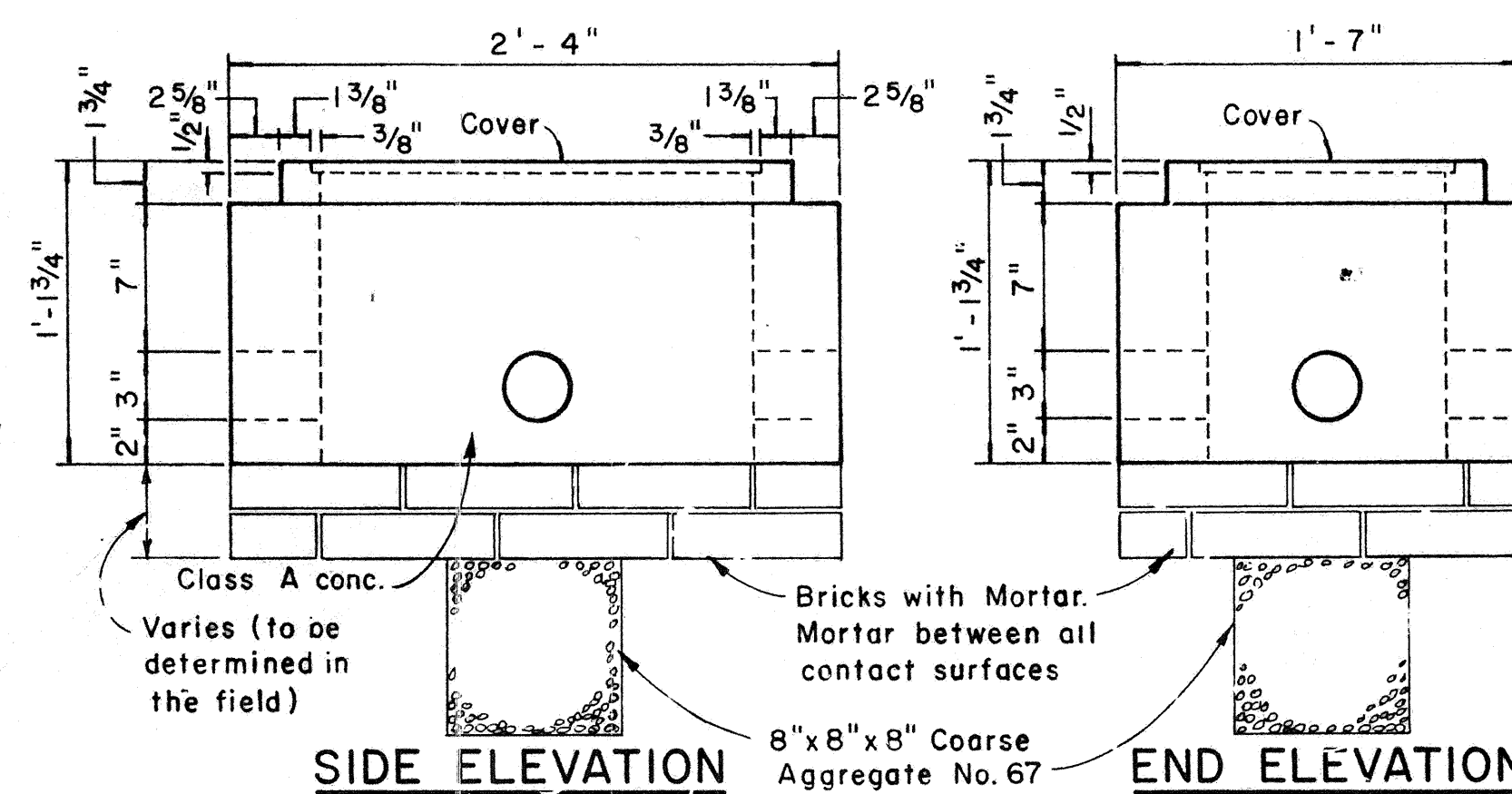
PLAN



PLAN OF COVER

NOTE

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

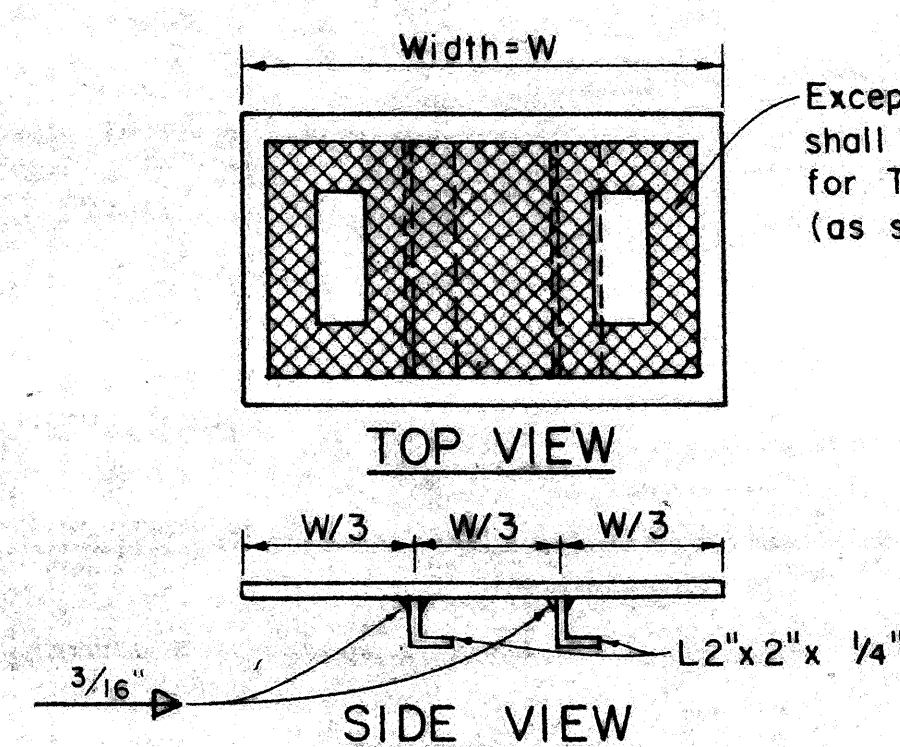


SIDE ELEVATION

END ELEVATION

TYPE "B" PULLBOX

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



MODIFIED COVER DETAIL

Not to Scale

Except where noted, details shall conform to cover details for Type "A" or Type "B" Pullbox (as specified on plans).

NOTE:

Hot dip galvanize after fabrication.
Modified cover shall be furnished
when called for on plans.

NO.	REVISION	APPROVED BY	DATE
1	Revised Type B & C Pullbox details	H.T.	3-5-78
2	Revised Type "A" Pullbox & Added Modified Cover.	H.T.	7-31-78

APPROVAL RECOMMENDED: *E. J. ...* 12/29/69
TRAFFIC ENGINEER DATE

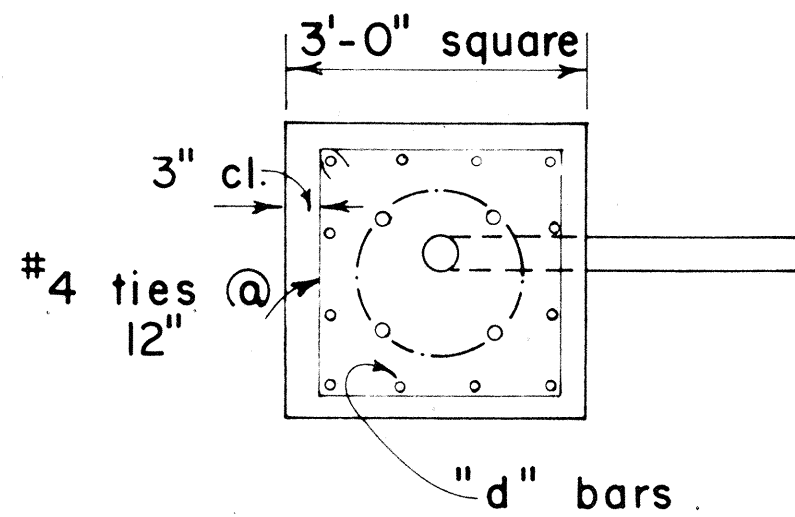
APPROVED: *[Signature]* 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
PULLBOXES

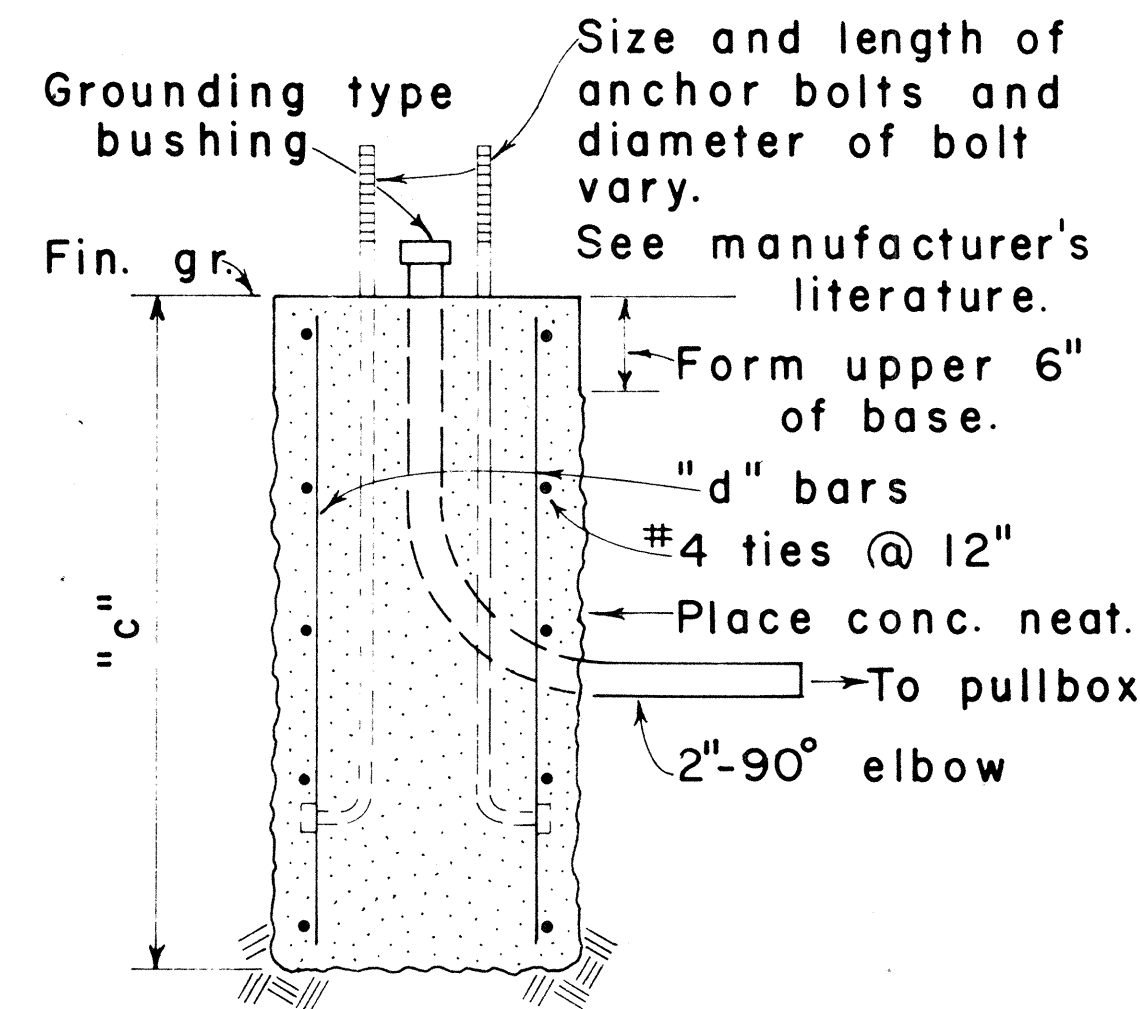
Scale as noted Date

SHEET No. 9 OF 14 SHEETS DT 401

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-02-83	1983	15	19



PLAN - SECTION

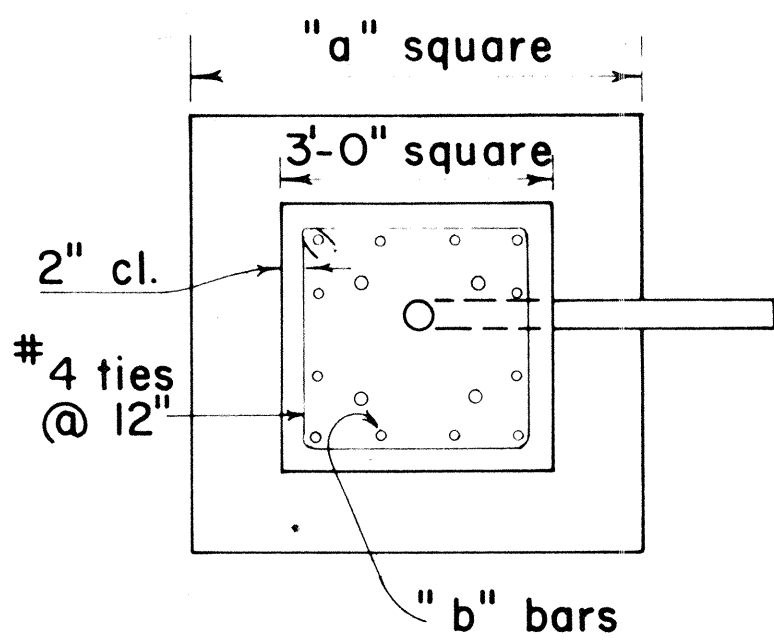


NOTE:
Concrete shall be Class B.

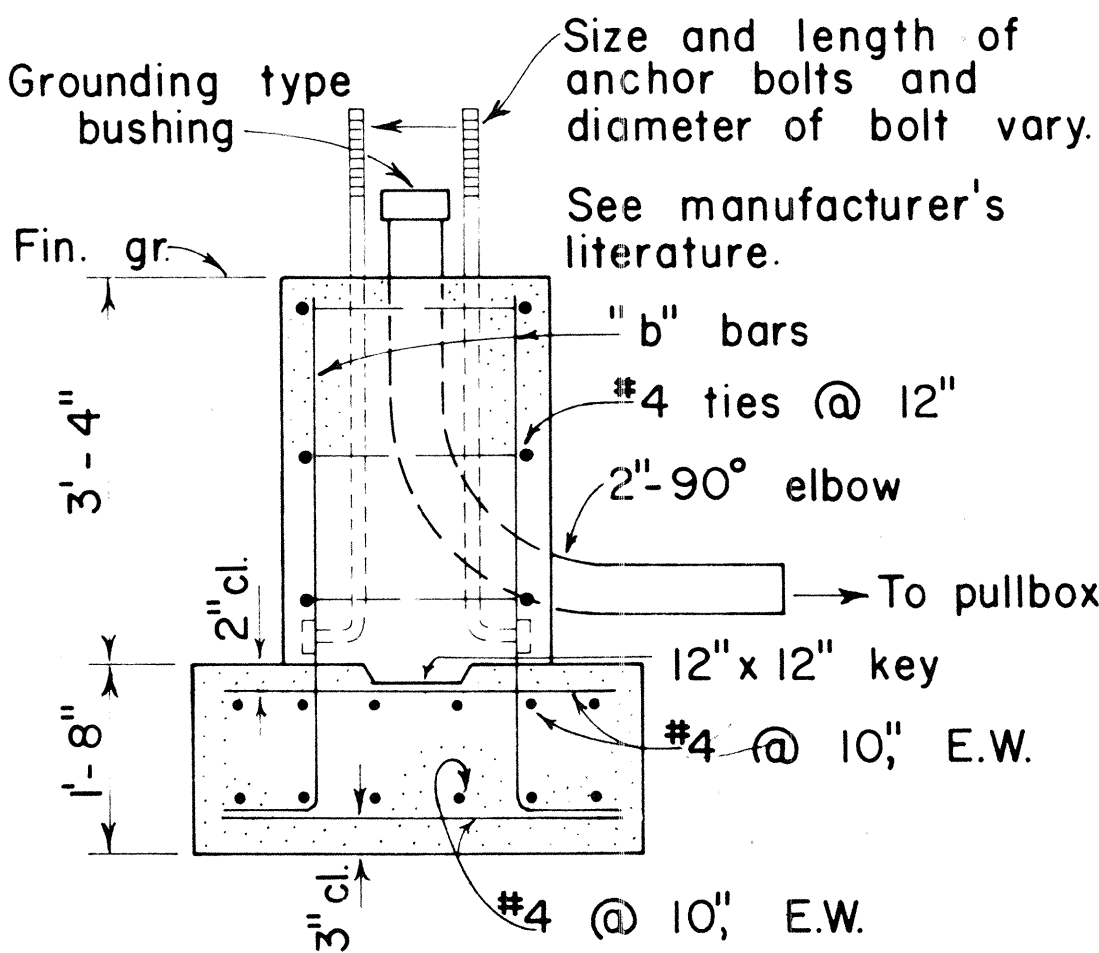
SECTION

MAST ARM LENGTH	"c"	"d" BARS
16' - 18'	5' - 0"	12 - #6
20'	5' - 6"	12 - #6
25'	6' - 0"	12 - #6
30'	6' - 6"	12 - #6
35'	7' - 0"	12 - #8
40'	8' - 0"	12 - #8

TYPE II



PLAN - SECTION



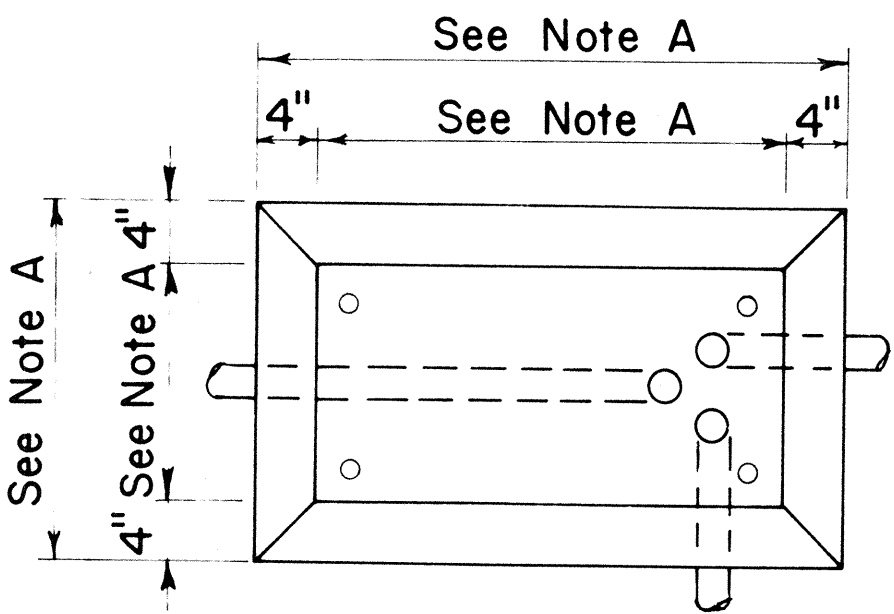
NOTE:
Concrete shall be Class B.

SECTION

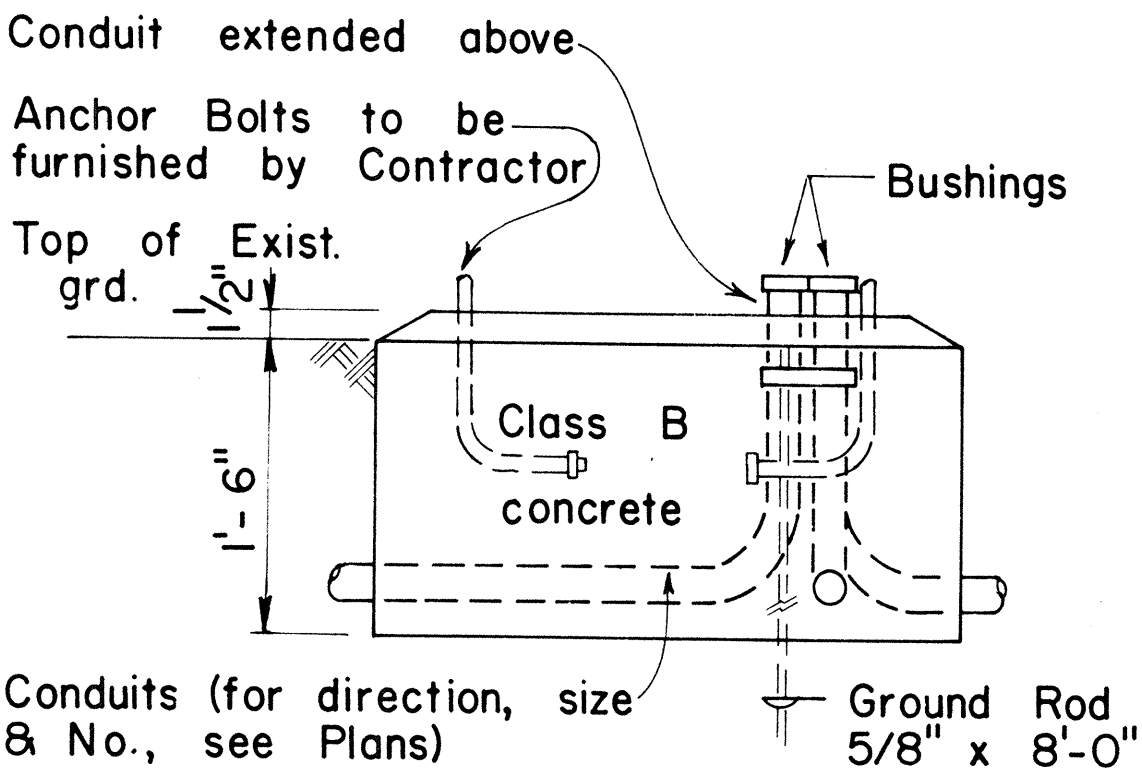
MAST ARM LENGTH	"a"	"b" BARS
16' - 18'	5' - 0"	12 - #6
20'	5' - 6"	12 - #6
25'	6' - 0"	12 - #6
30'	6' - 6"	12 - #8
35'	6' - 6"	12 - #8
40'	7' - 0"	12 - #8

TYPE IIA

FOOTING FOR MAST ARM STANDARD



PLAN



ELEVATION

CONCRETE BASE FOR CONTROLLER CABINET

- NOTES:
- Dimensions to be determined by the size of the Controller Cabinet to be furnished under this Contract.
 - Details of Conduits, Anchor Bolts, etc., are approximate only. Exact details shall be secured by the Contractor from Manufacturer.

APPROVAL RECOMMENDED:
Erich Tanaka 3/4/76
TRAFFIC ENGINEER DATE

APPROVED:
Robert R. Rasmussen 2-5-76
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

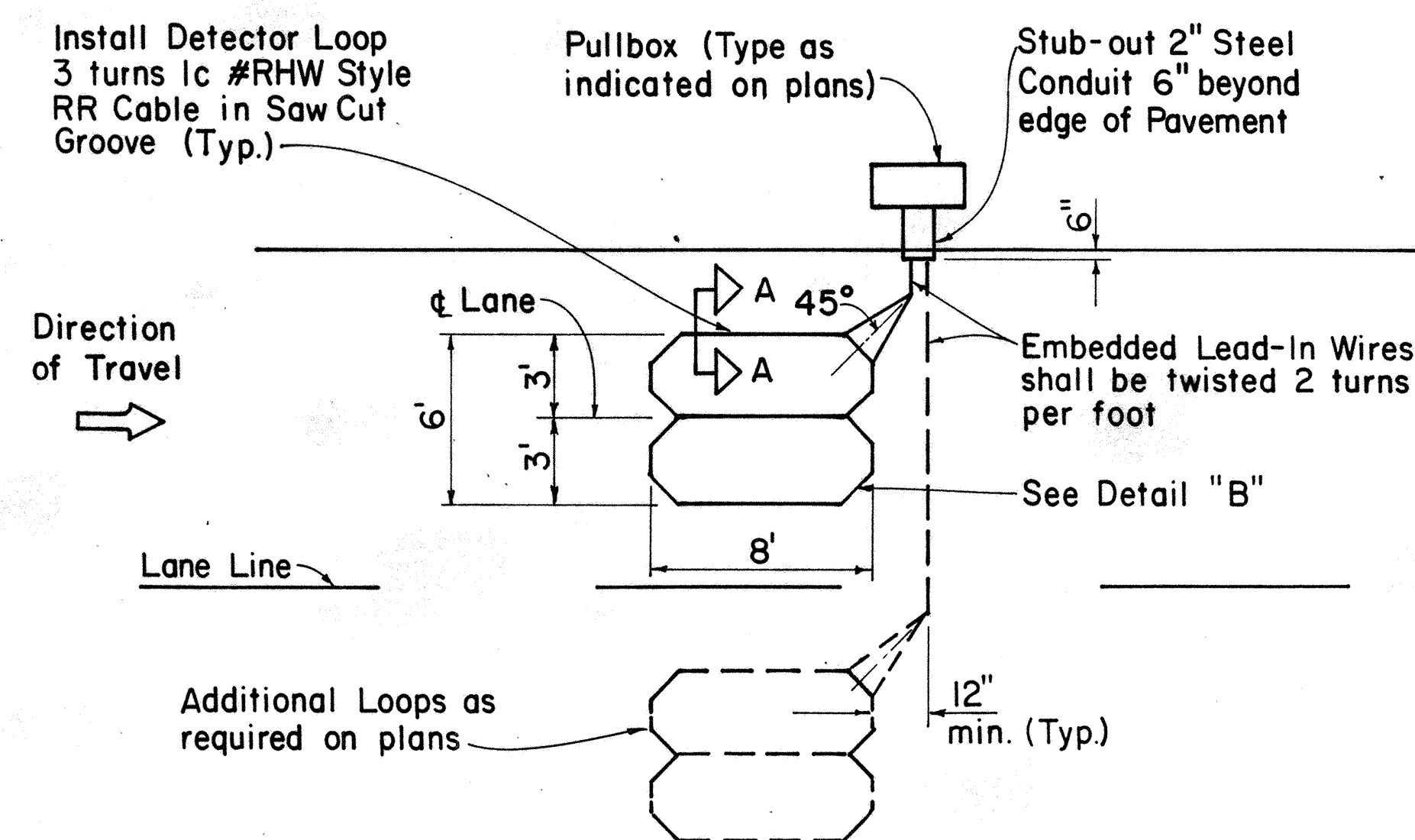
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS

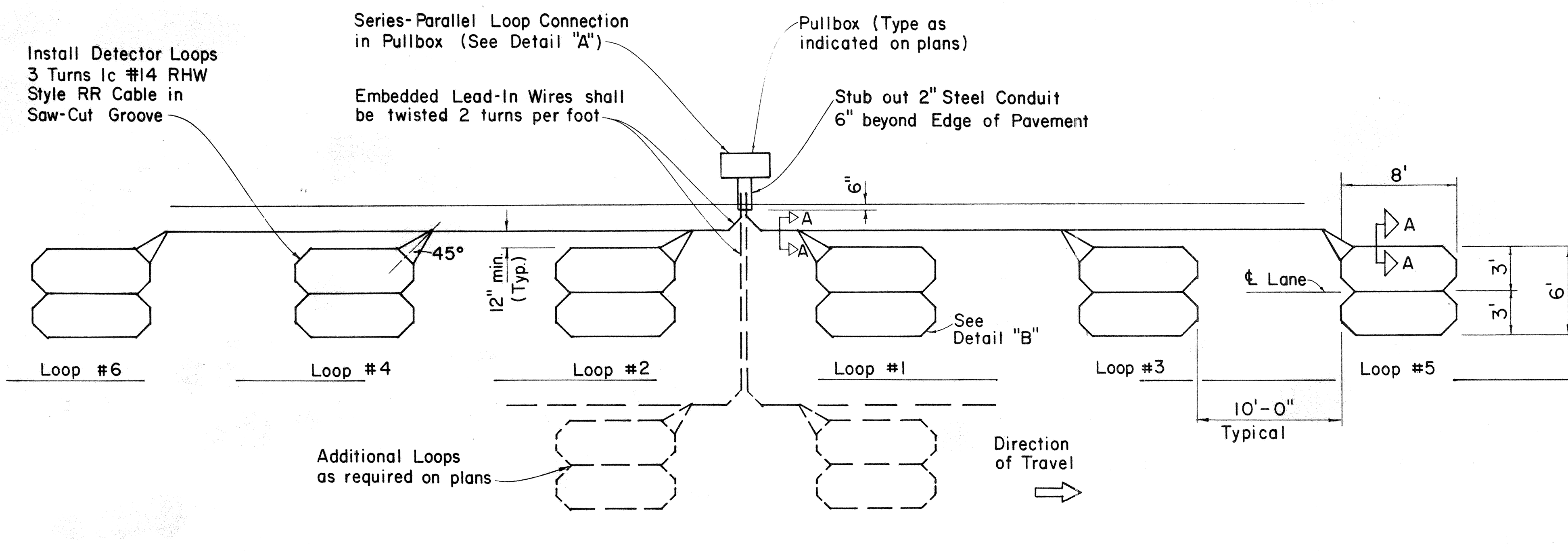
Not to Scale

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

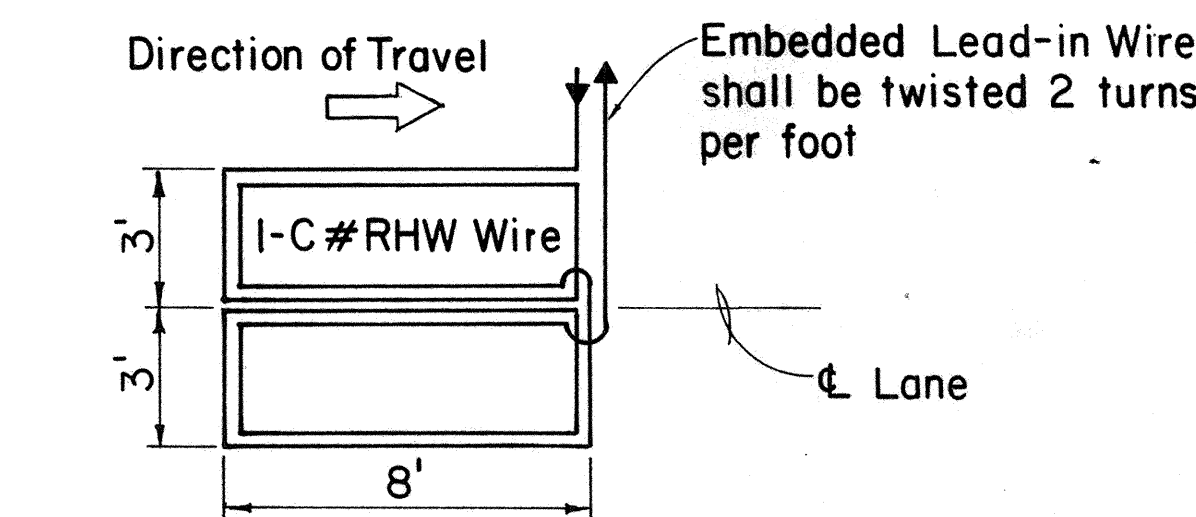
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	618-02-83	1983	16	19



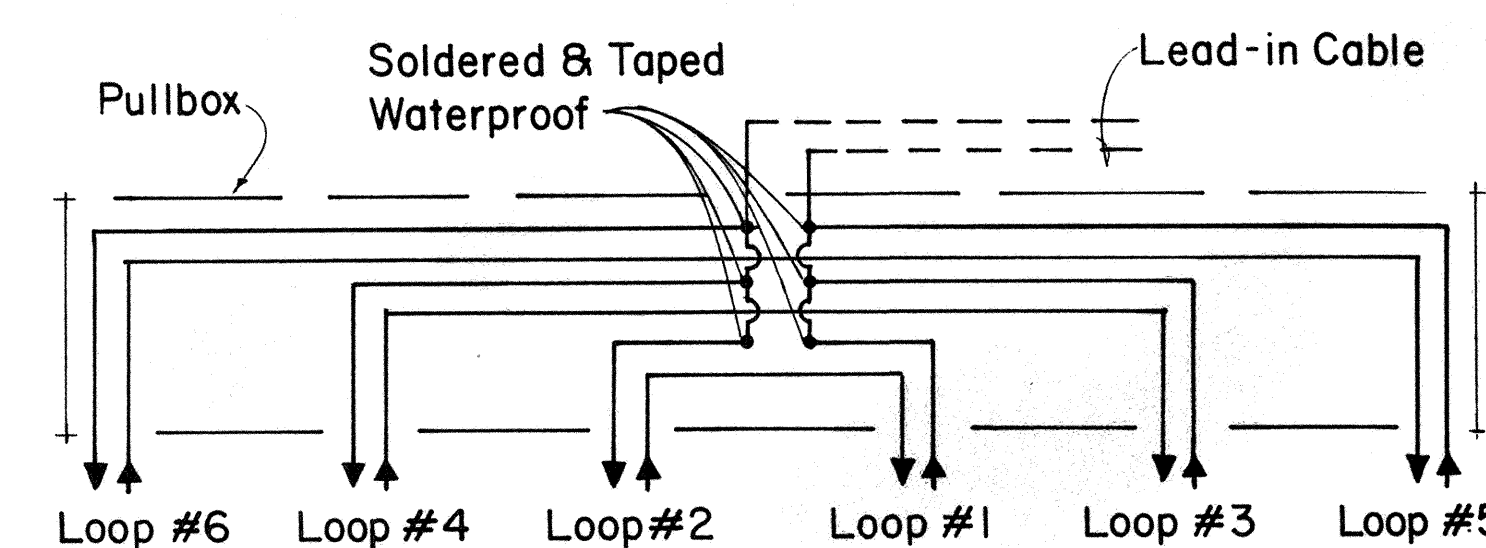
SINGLE LOOP LAYOUT



MULTIPLE LOOP LAYOUT

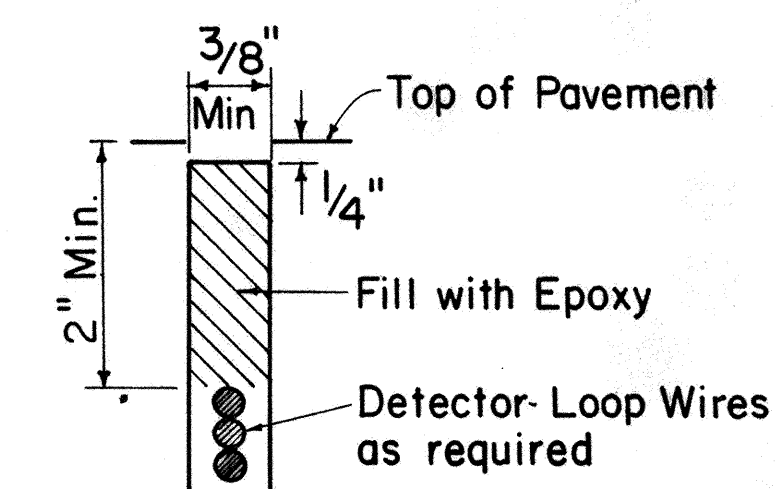


WIRING DIAGRAM



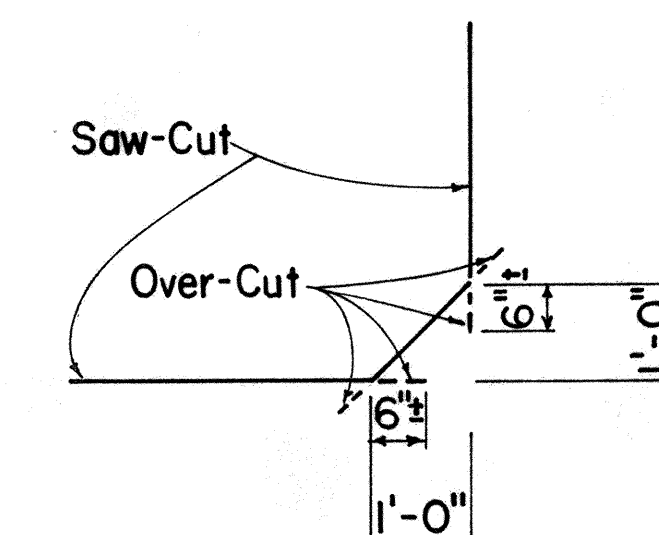
DETAIL "A"

TYPICAL SERIES-PARALLEL LOOP CONNECTION

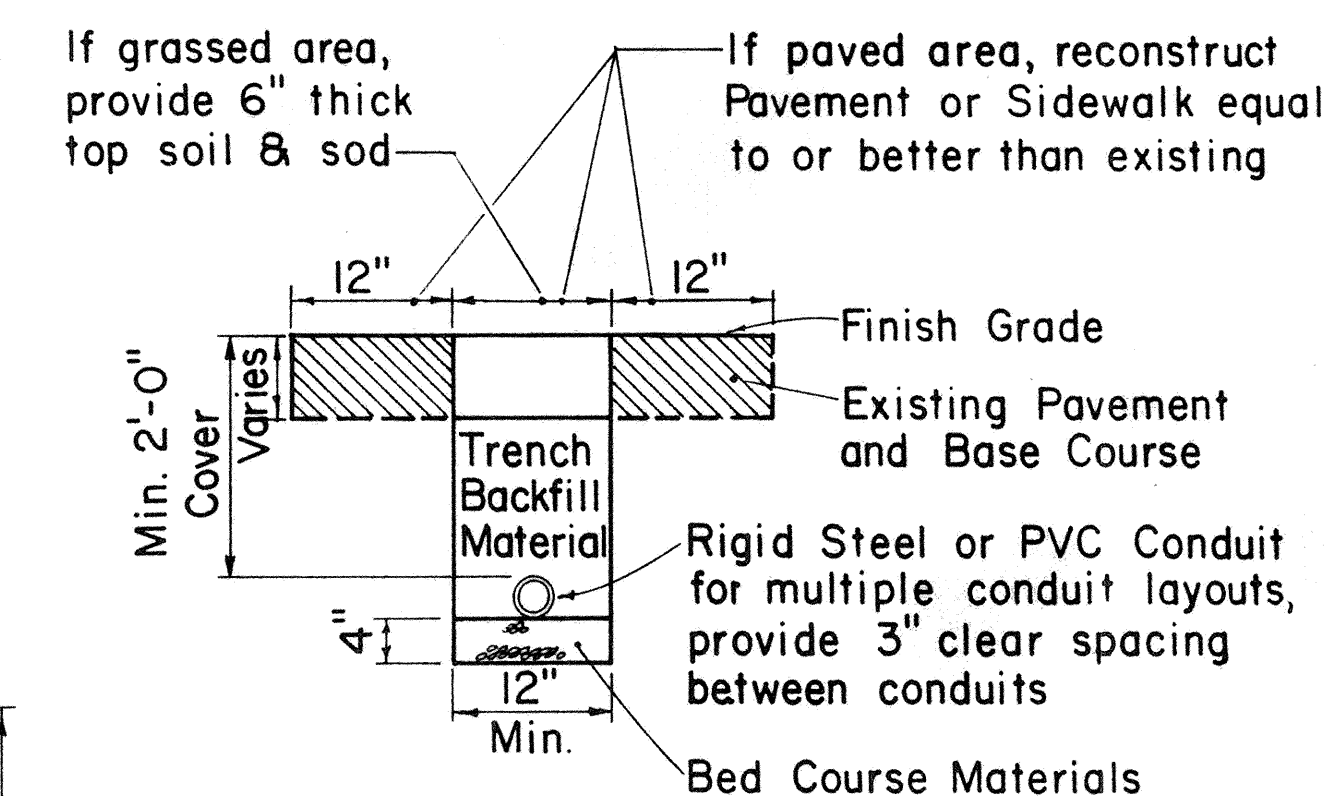


DETECTOR LOOP SAW-CUT SECTION A-A (TYPICAL)

Note: Back-Fill Over-Cuts with Epoxy



DETAIL "B" SAW-CUT AT CORNERS



TYPICAL TRENCH SECTION FOR CONDUIT

NOTE:

- All conduits under roadways shall be steel or PVC schedule 80. All other conduits shall be steel or PVC schedule 40.

APPROVAL RECOMMENDED:

Erich Tanaka 9/26/80
TRAFFIC ENGINEER DATE

APPROVED:

Robert S. S. S. 9/26/80
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Replaces Sht. DT 405 dated 3/5/76	H.T.	7/26/80
2	Revised Section A-A	H.T.	5/15/81

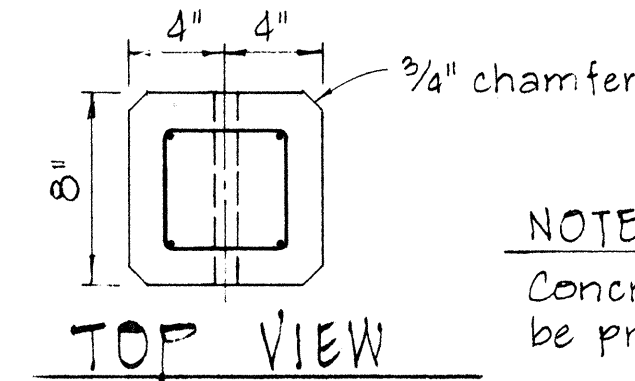
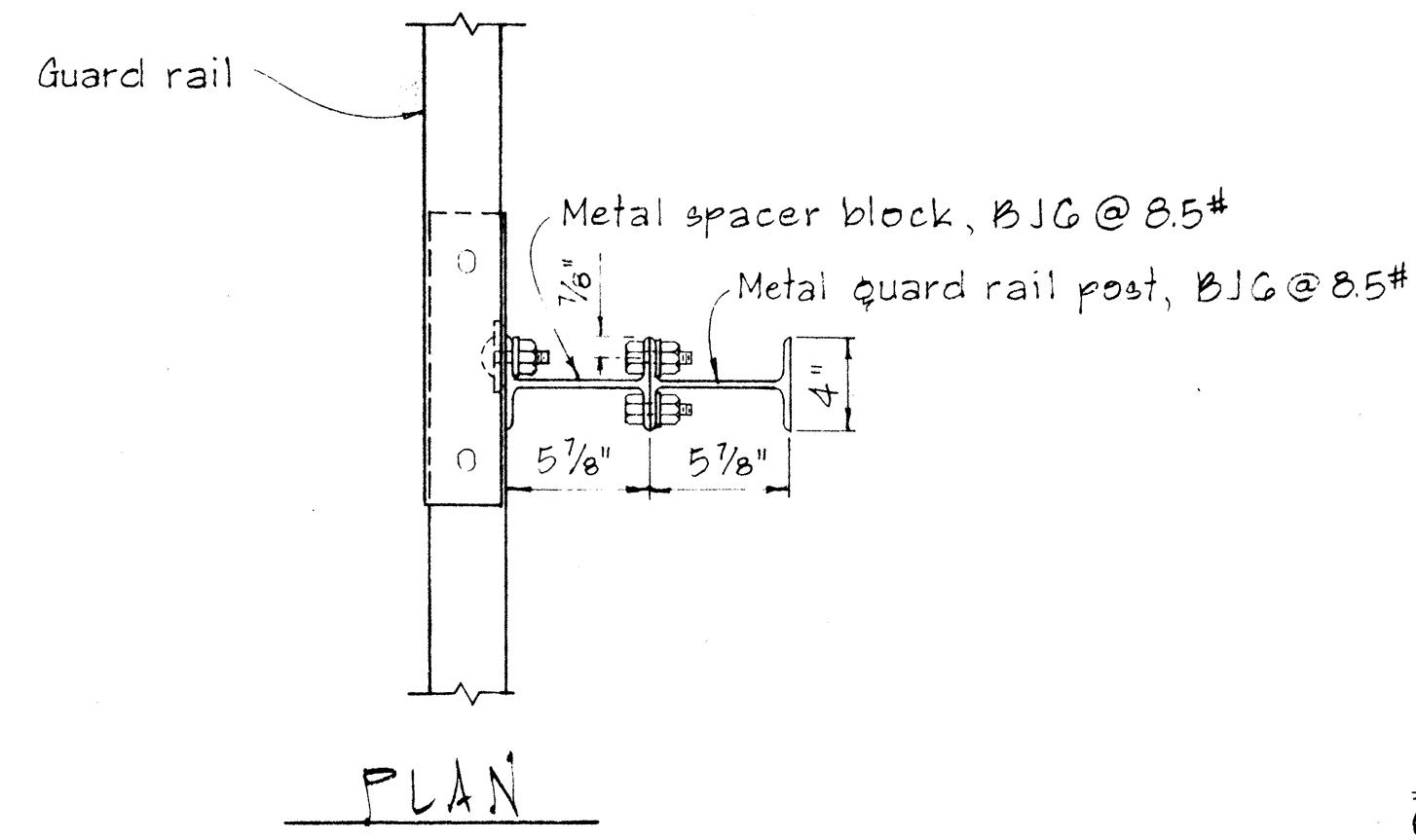
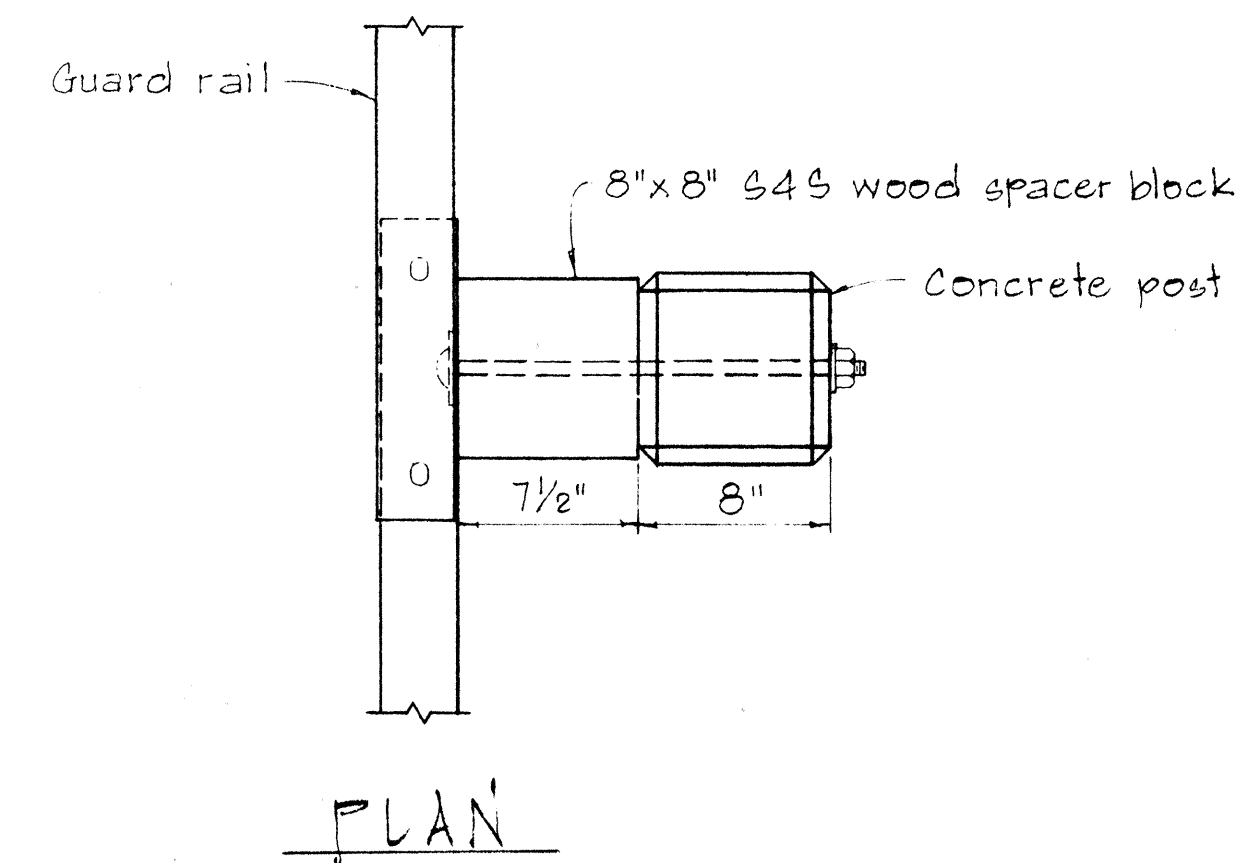
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

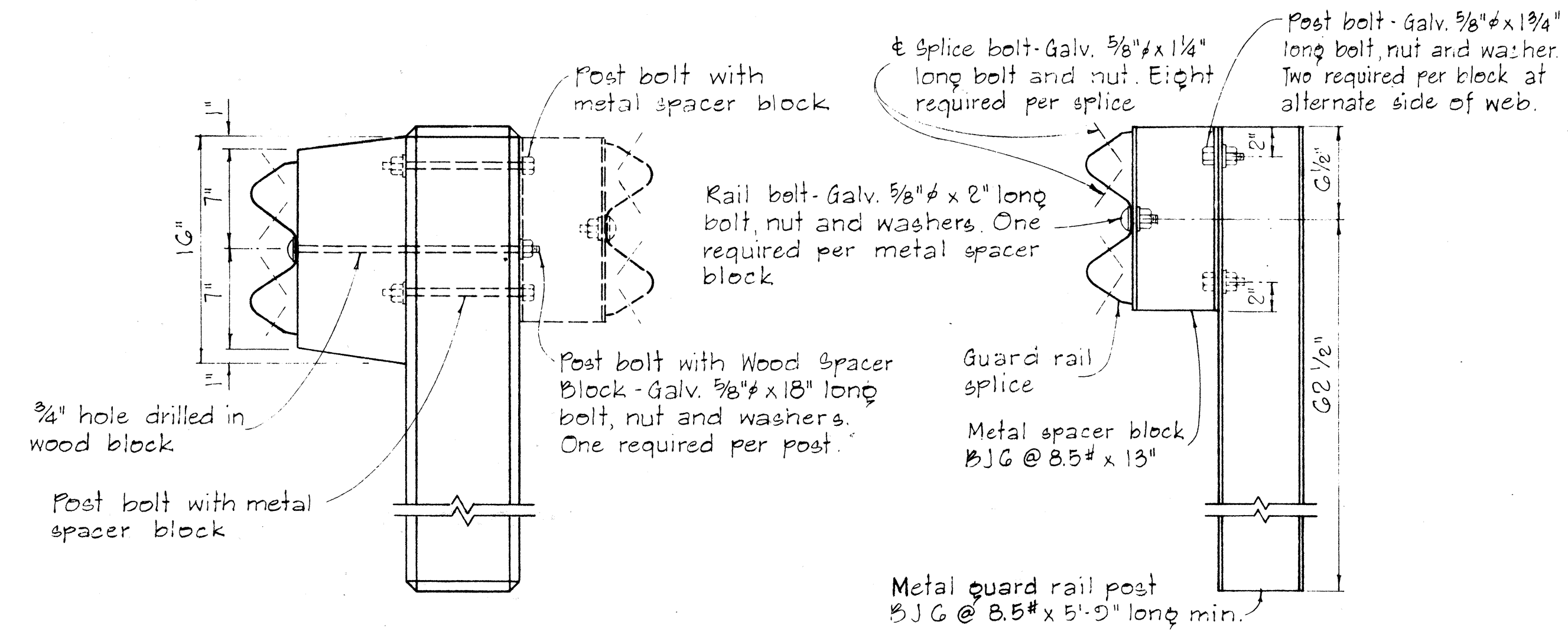
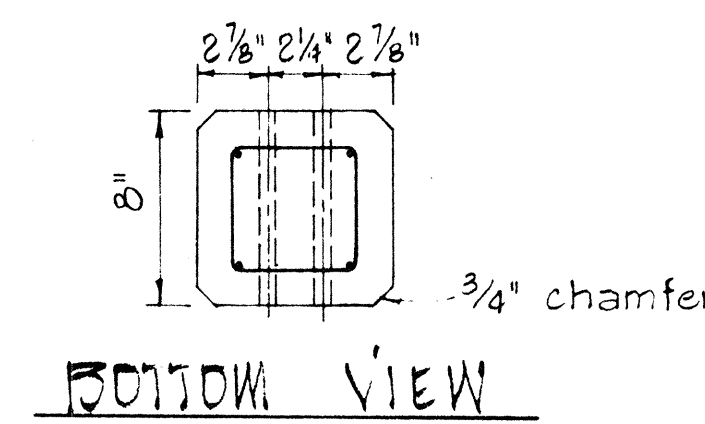
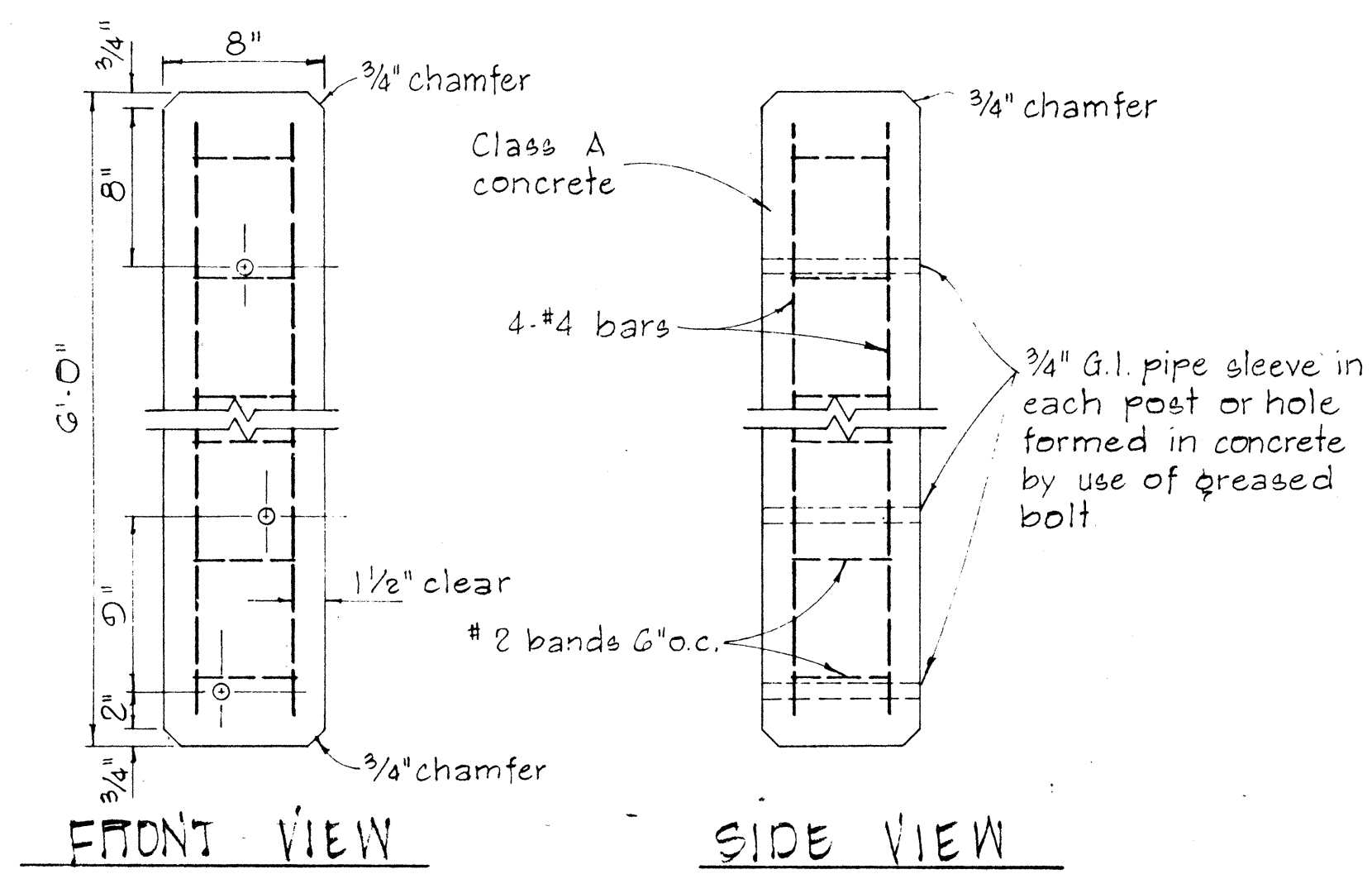
LOOP DETECTORS

Not to Scale

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-02-83	1983	17	19

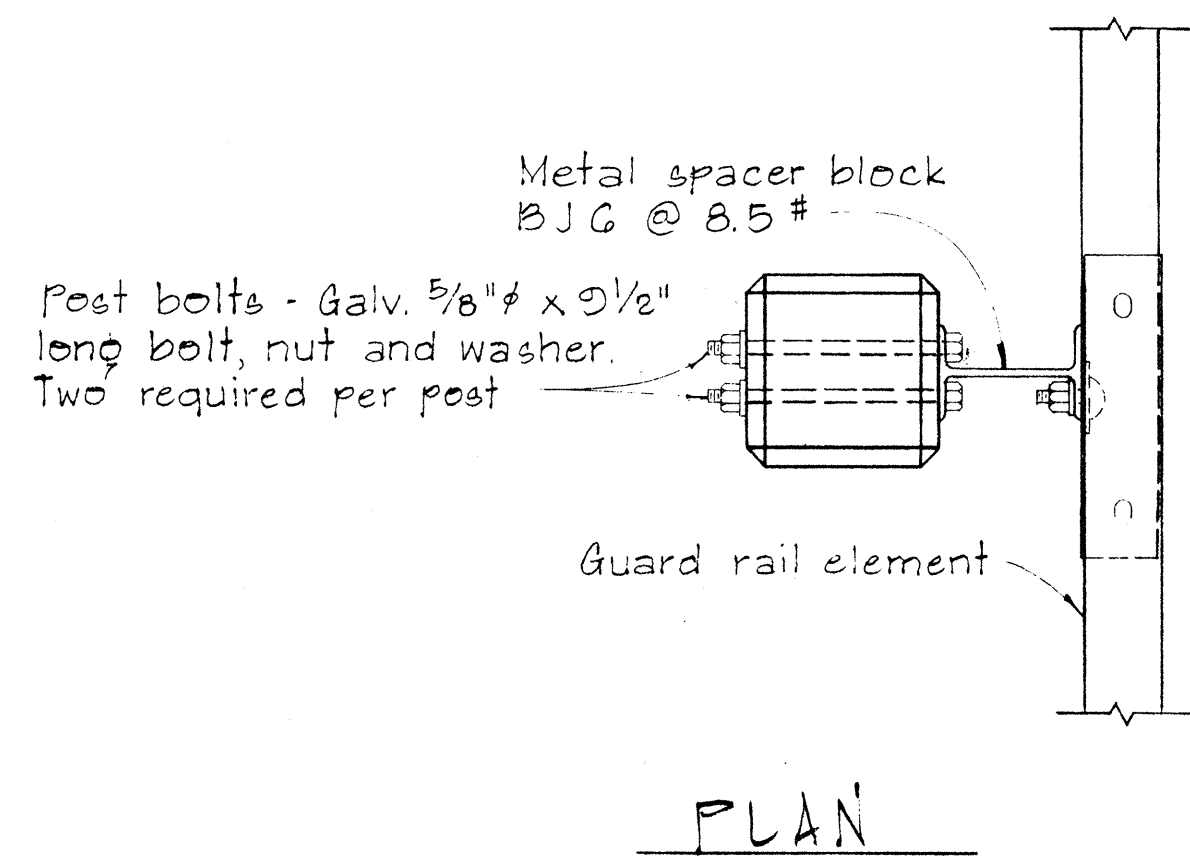


NOTE:
Concrete post shall be precast

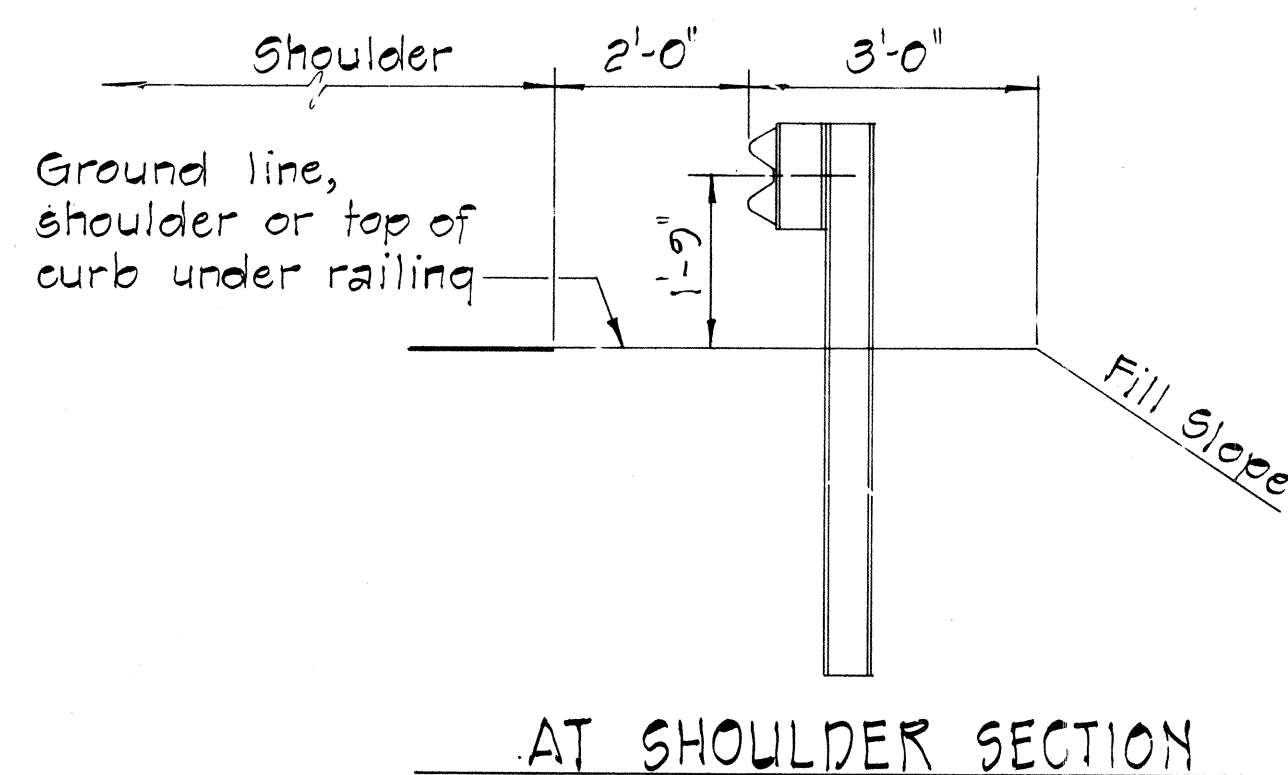


SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"

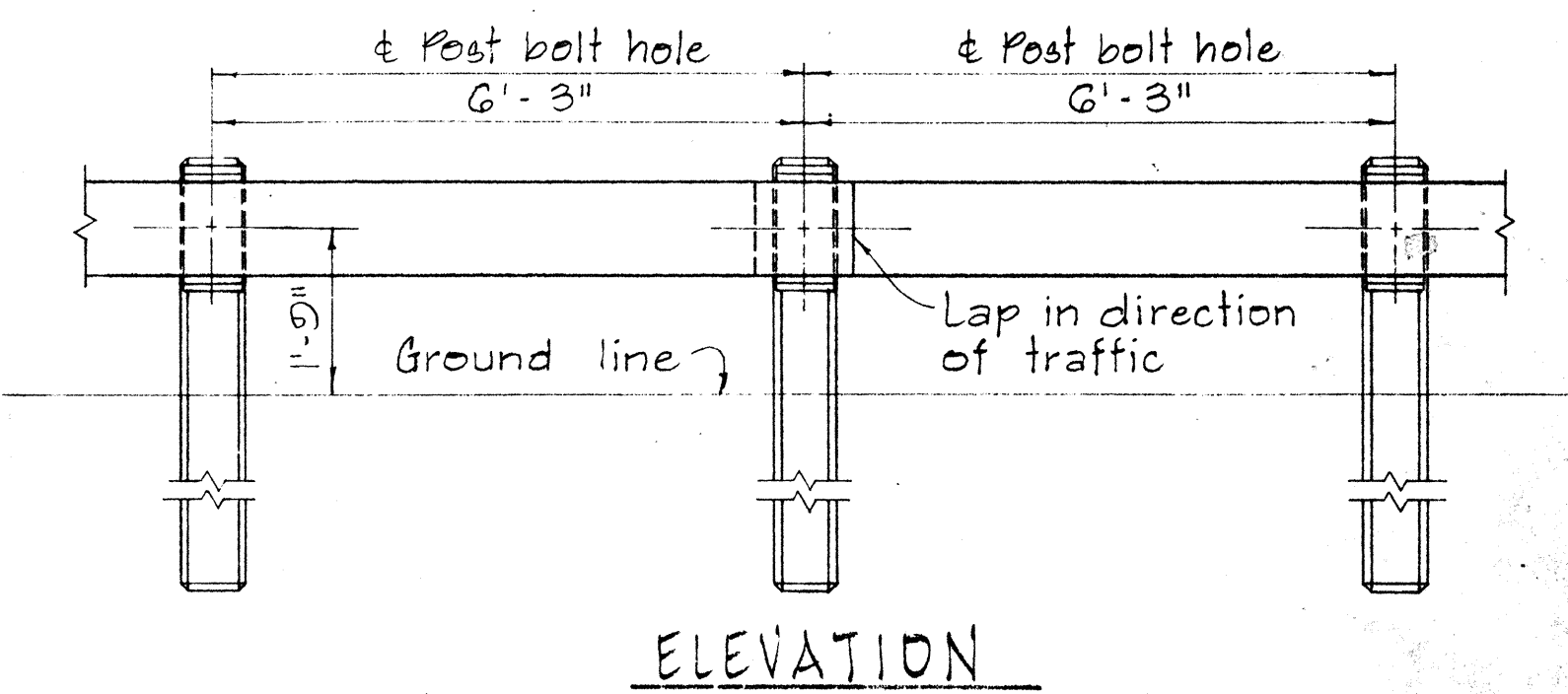
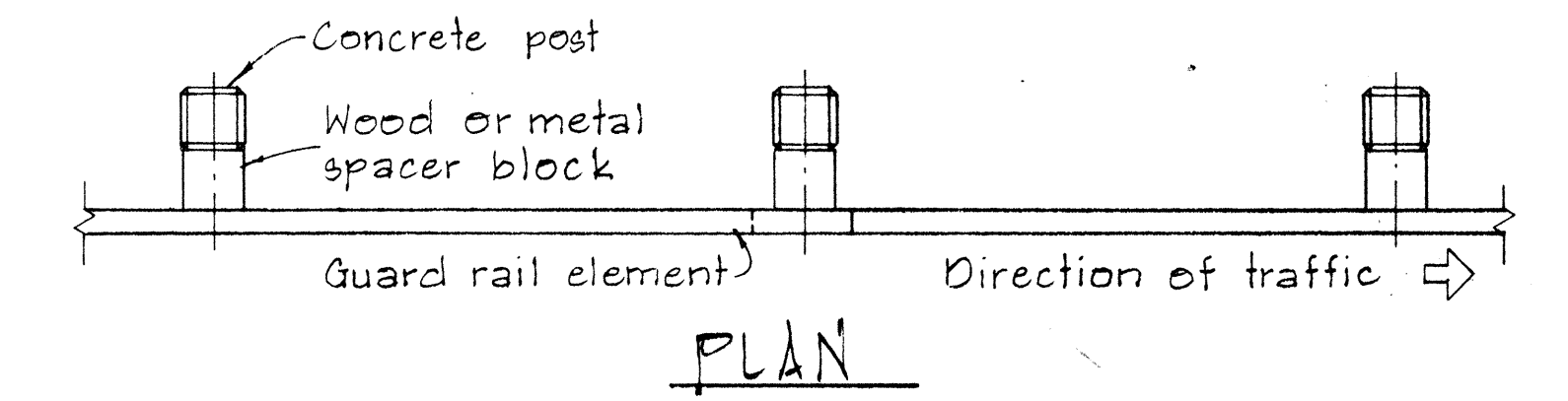
DETAIL OF CONCRETE POST
SCALE: 1 1/2" = 1'-0"



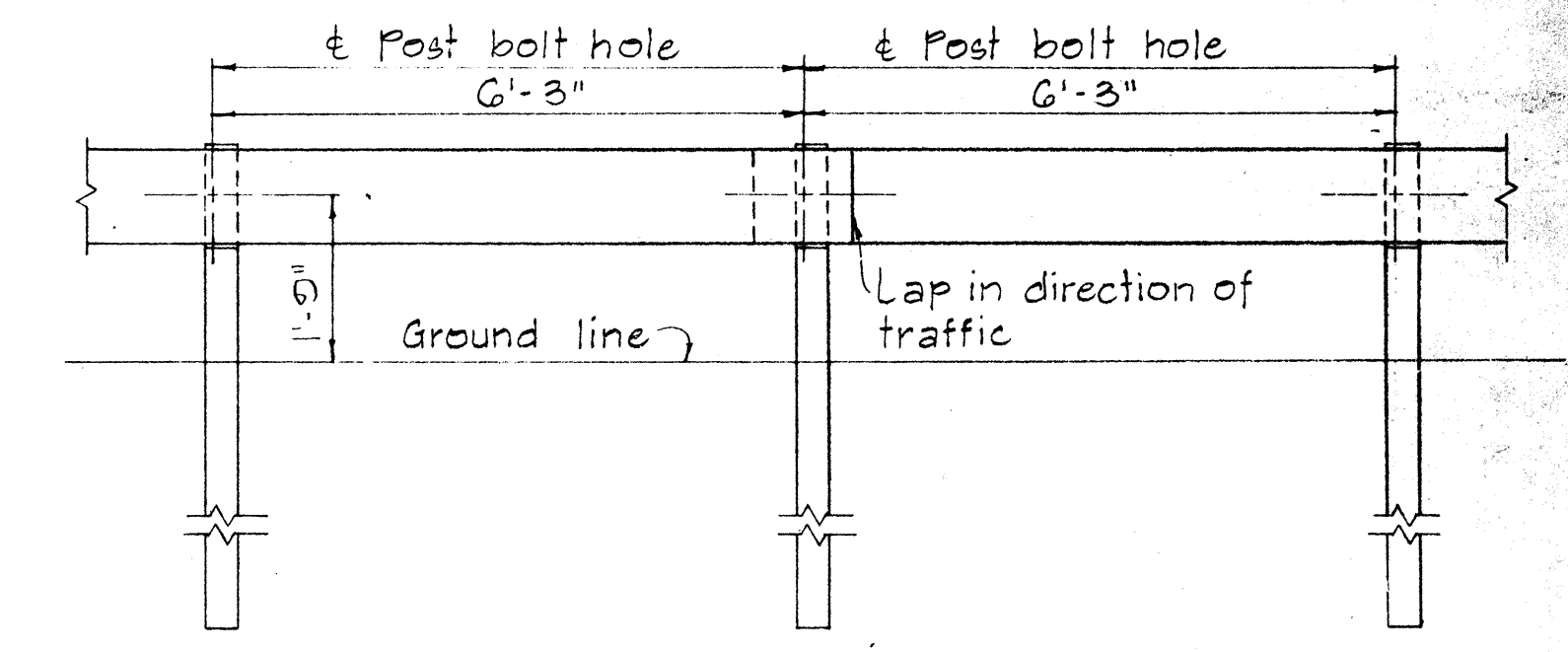
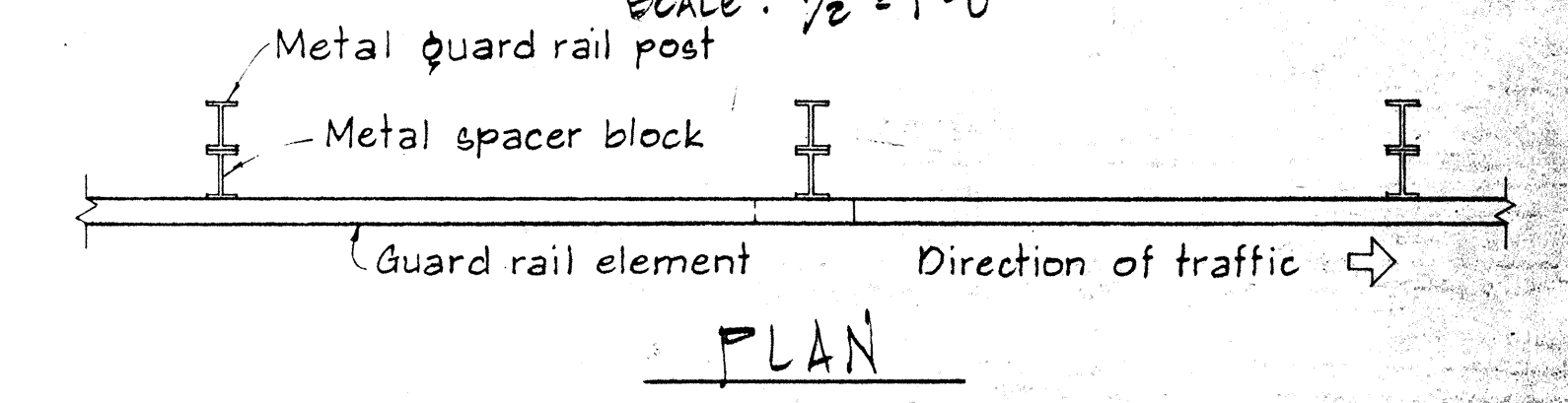
SINGLE METAL GUARD RAIL ON PRECAST CONCRETE POST WITH WOOD OR METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"



TYPICAL METAL GUARD RAIL DETAIL
SCALE: 1/2" = 1'-0"



METAL GUARD RAIL ON CONCRETE POST WITH WOOD OR METAL SPACER BLOCK
SCALE: 1/2" = 1'-0"



METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK
SCALE: 1/2" = 1'-0"

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
Erick Tanaka
TRAFFIC ENGINEER
12/29/82
DATE

APPROVED:
Richard J. Zelen
ASSISTANT CHIEF, ENGINEERING
12-30-89
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARD RAIL

SCALE: AS SHOWN
NOV. 1988

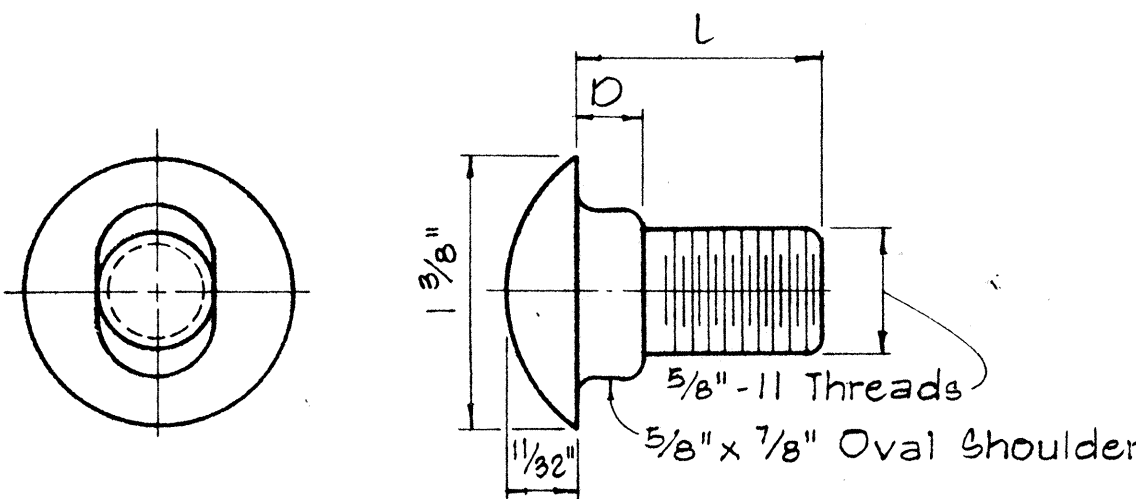
SHEET No. 12 OF 14 SHEETS DT 500

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	

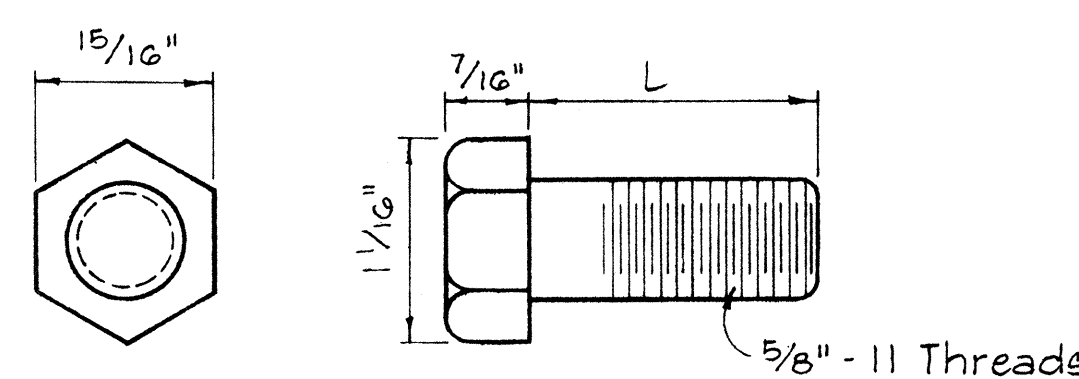
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-02-83	1983	18	19

BOLT DIMENSIONS		
TYPE A BOLT		
Splice Bolt	D	L
Post Bolt for Conc. Post w/ Double Wood Blocks	5/16"	1 1/4"
Post Bolt for Conc. Post w/ Single Wood Block	3/32"	24"
Rail Bolt for Metal Block	3/32"	18"
	3/32"	2"

BOLT DIMENSIONS		
TYPE B BOLT		
Post Bolt for Conc. Post w/ Metal Blocks		L
Post Bolt for Metal Post w/ Metal Block		5 1/2"
		1 3/4"



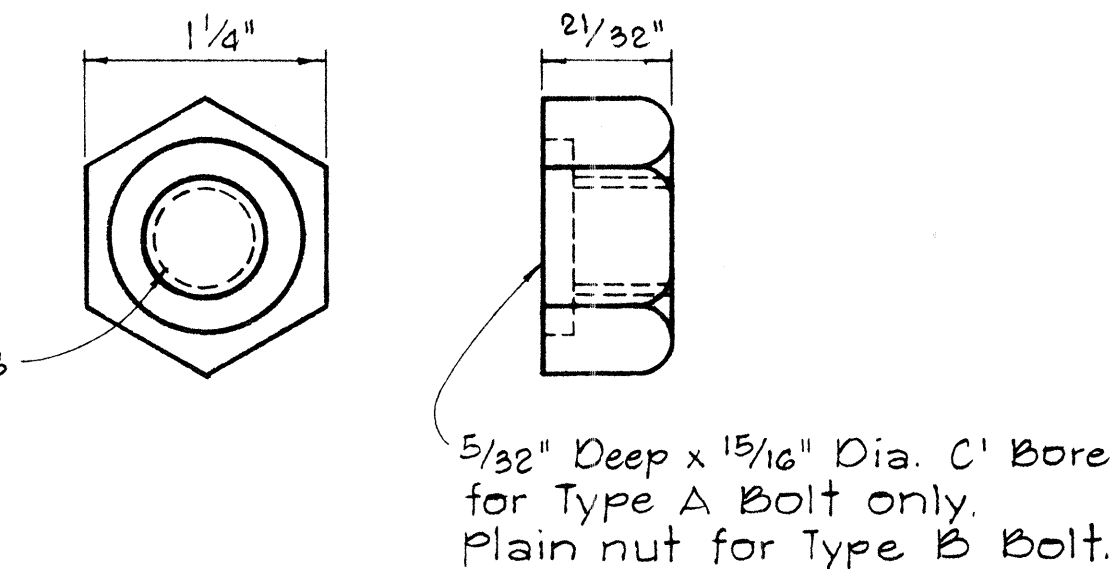
TYPE A BOLT



TYPE B BOLT

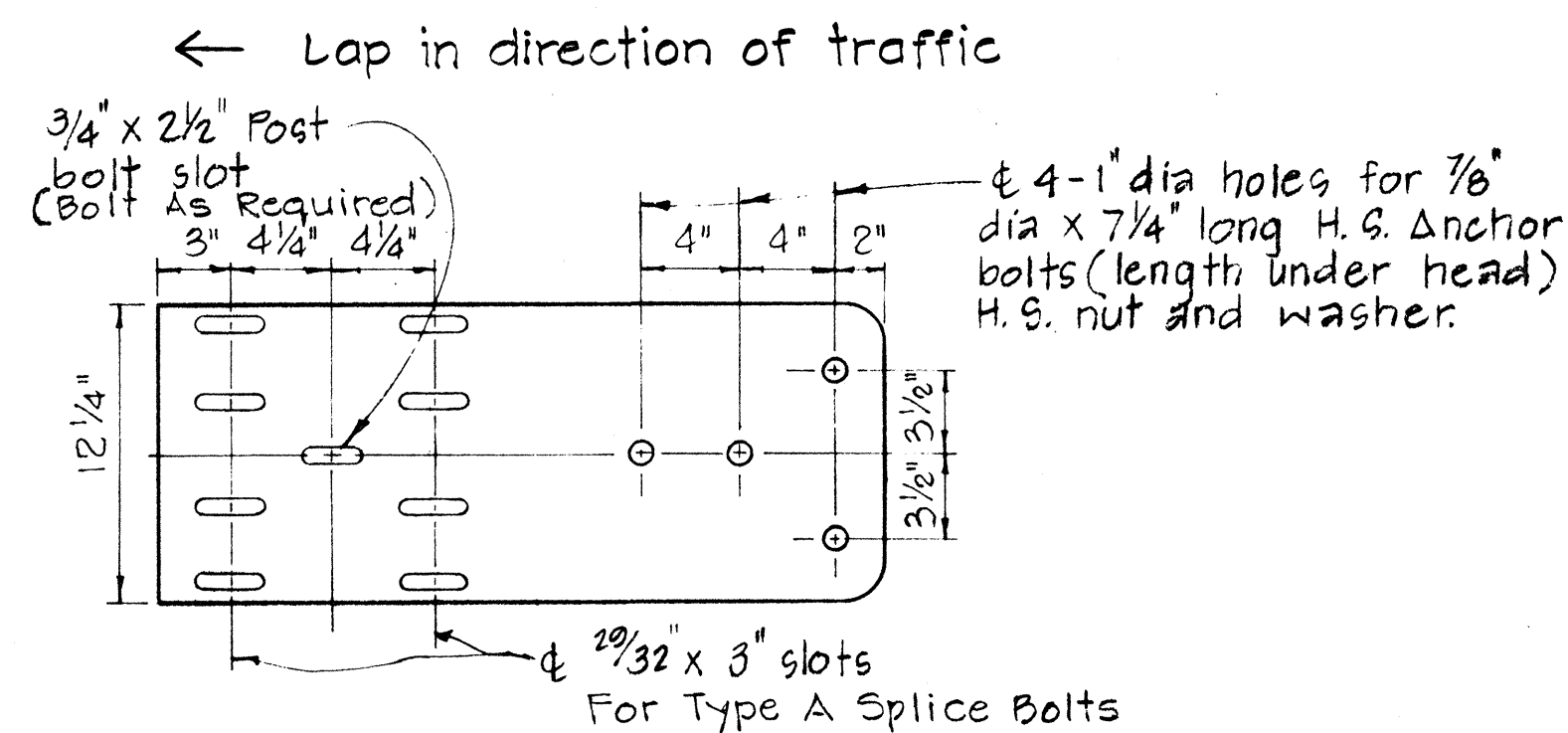
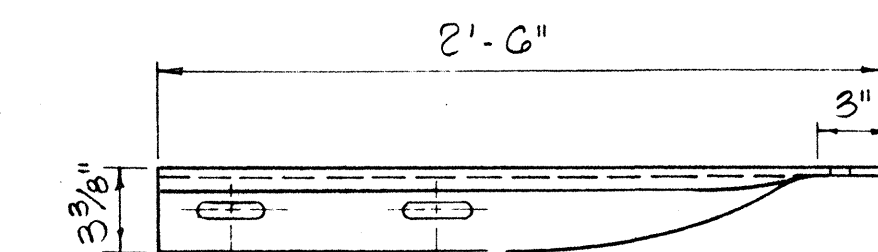
SPUCE RAIL AND POST BOLTS

Scale: Full Size



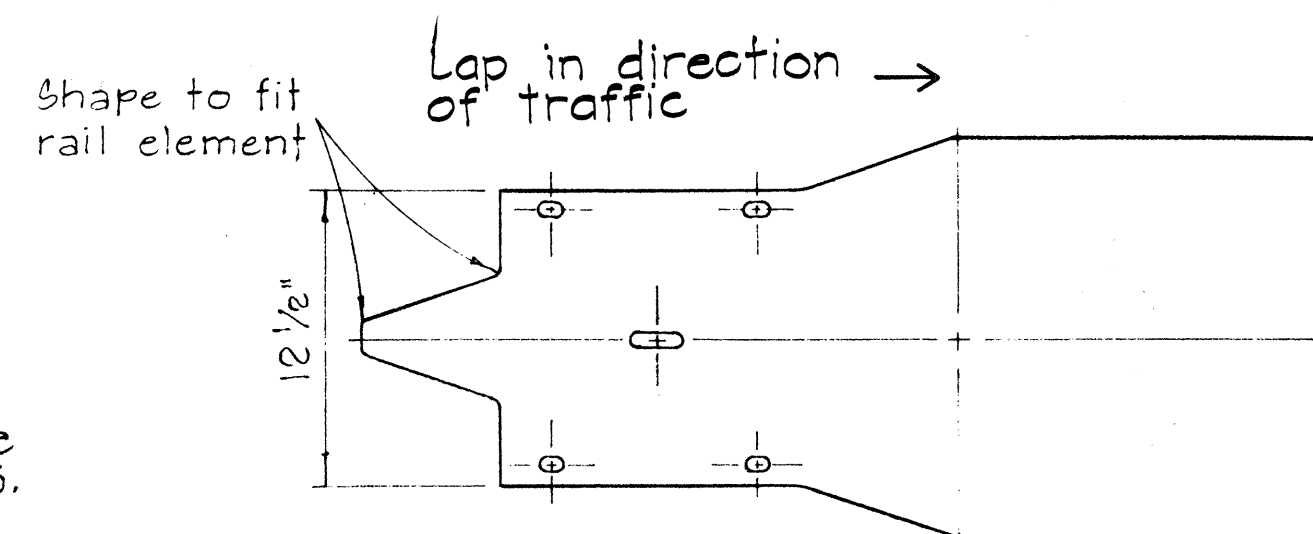
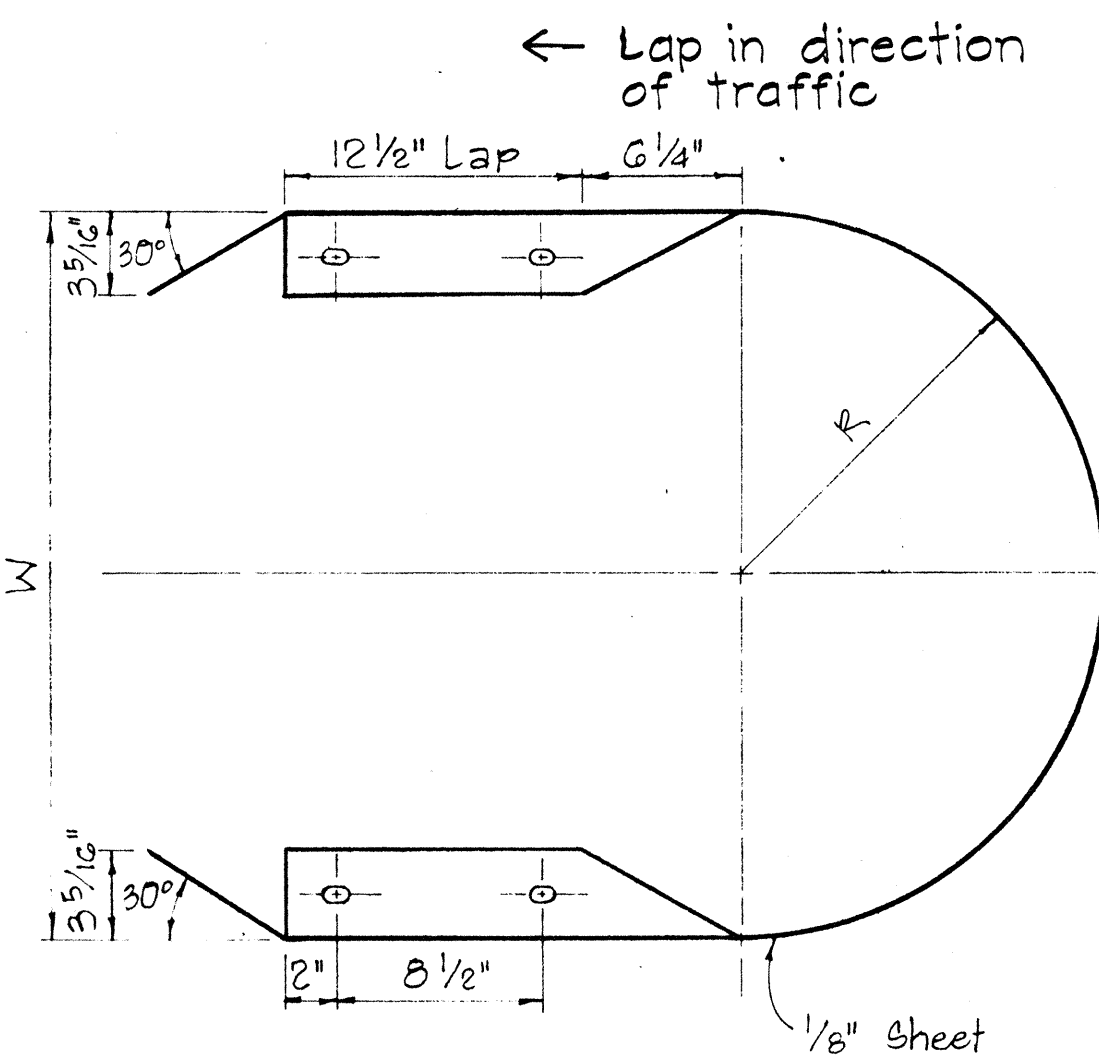
HEXAGON NUT

Scale: Full Size



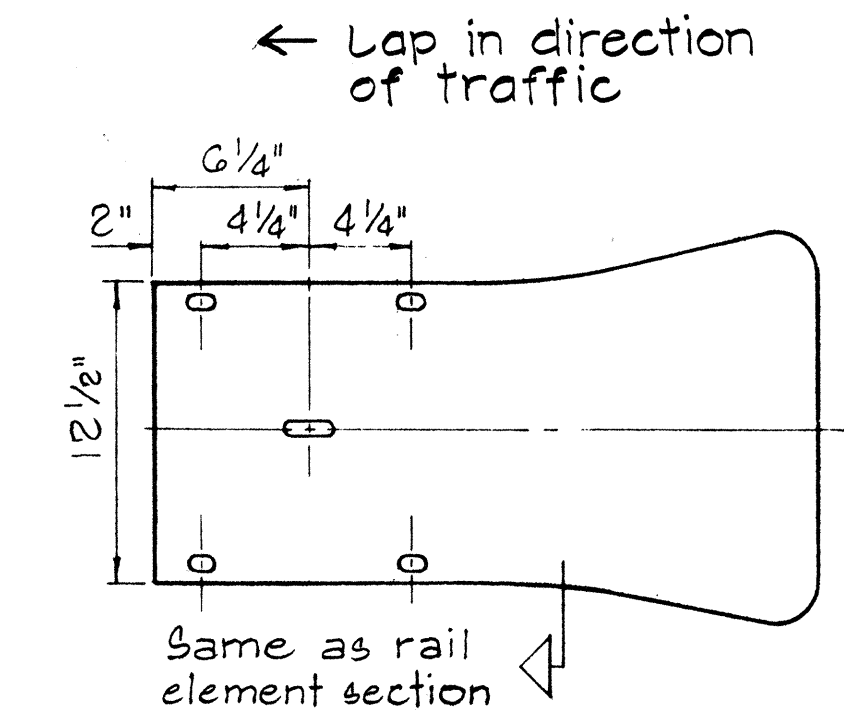
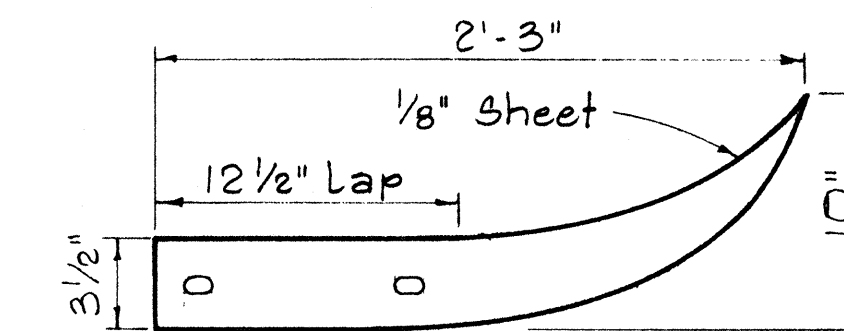
SPECIAL END SHOE

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



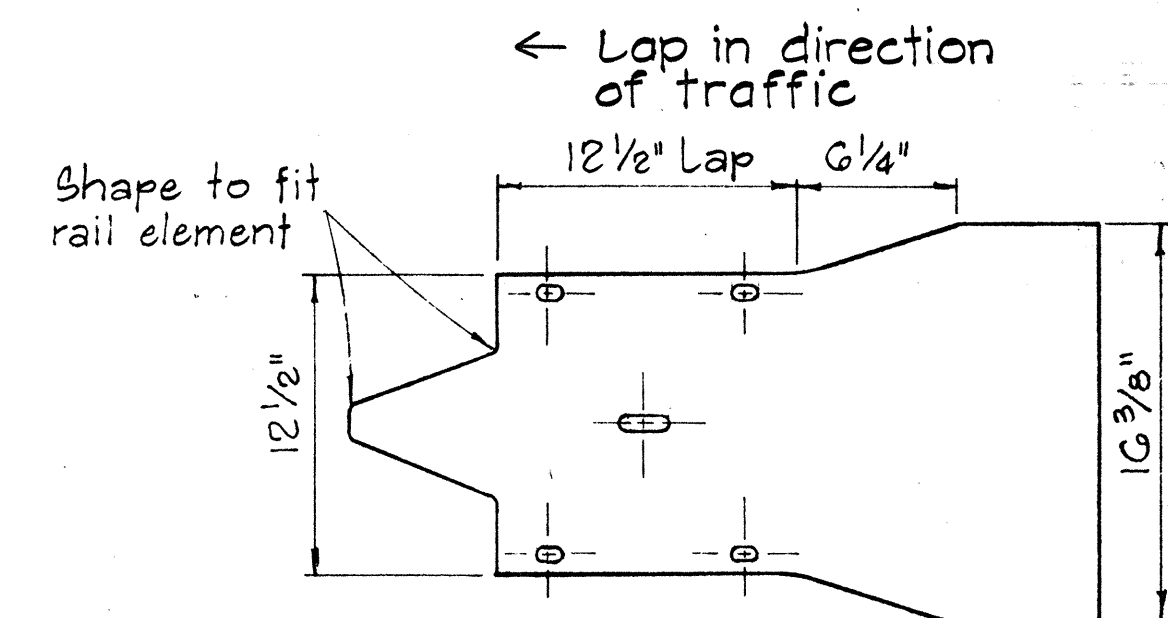
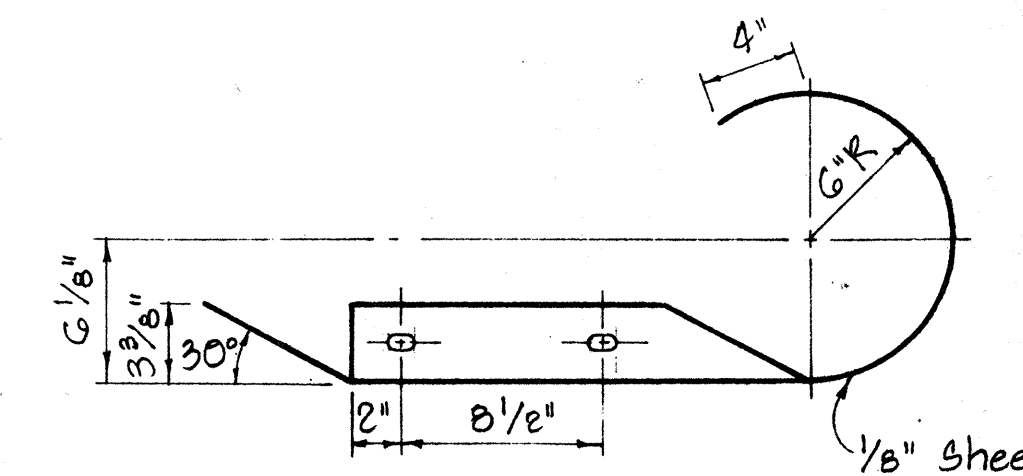
MEDIAN END

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



FLARED END

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

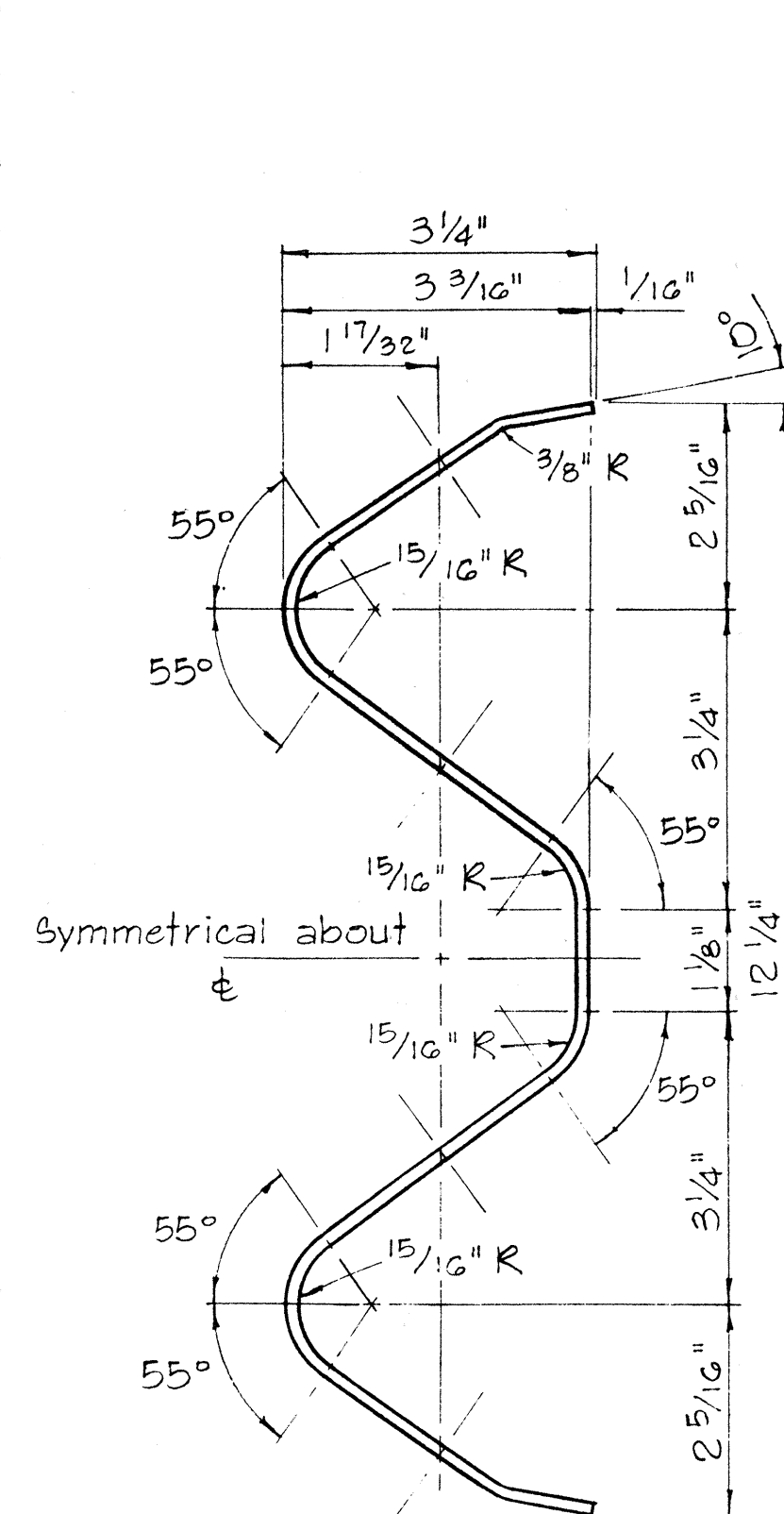


CURVED END

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

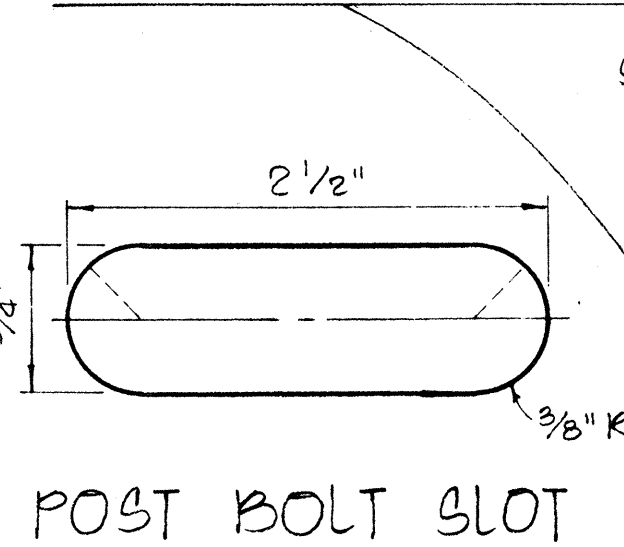
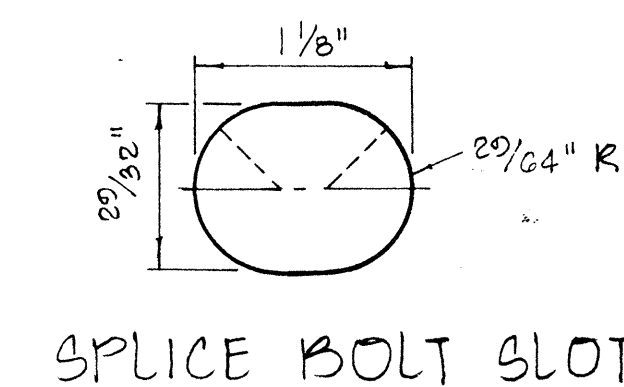
APPROVAL RECOMMENDED:	12/22/69
TRAFFIC ENGINEER	DATE
APPROVED:	12-20-69
ASSISTANT CHIEF, ENGINEERING	DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
STANDARD DETAILS METAL GUARD RAIL			
Scale: As Noted August, 1968			
SHEET No. 13 OF 14 SHEETS DT 501			

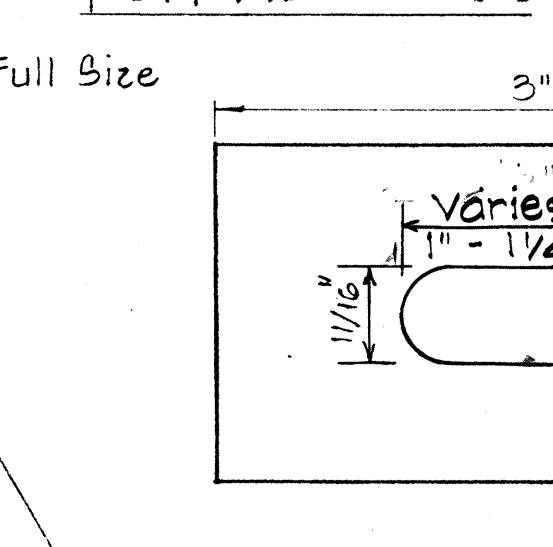
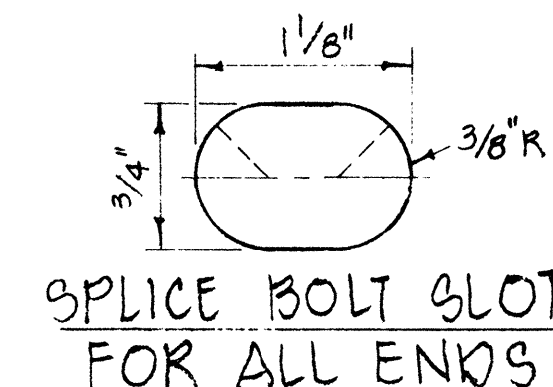


RAIL ELEMENT SECTION

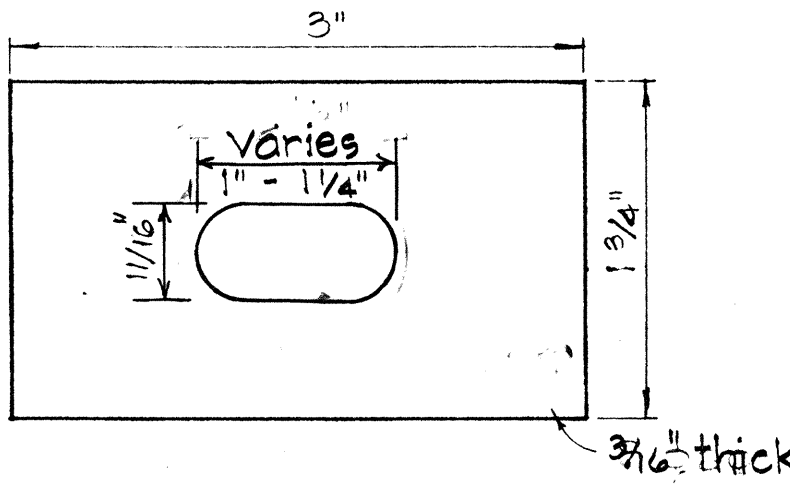
Scale: 6" = 1'-0"



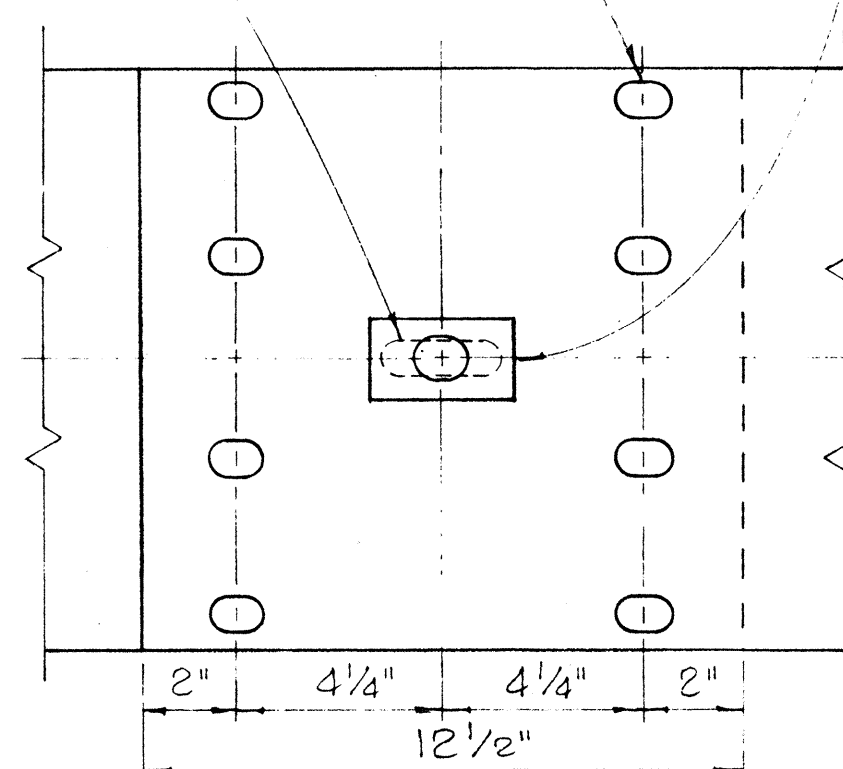
POST BOLT SLOT



SPUCE BOLT SLOT FOR SPECIAL END SHOE



RAIL WASHER



RAIL SPLICE

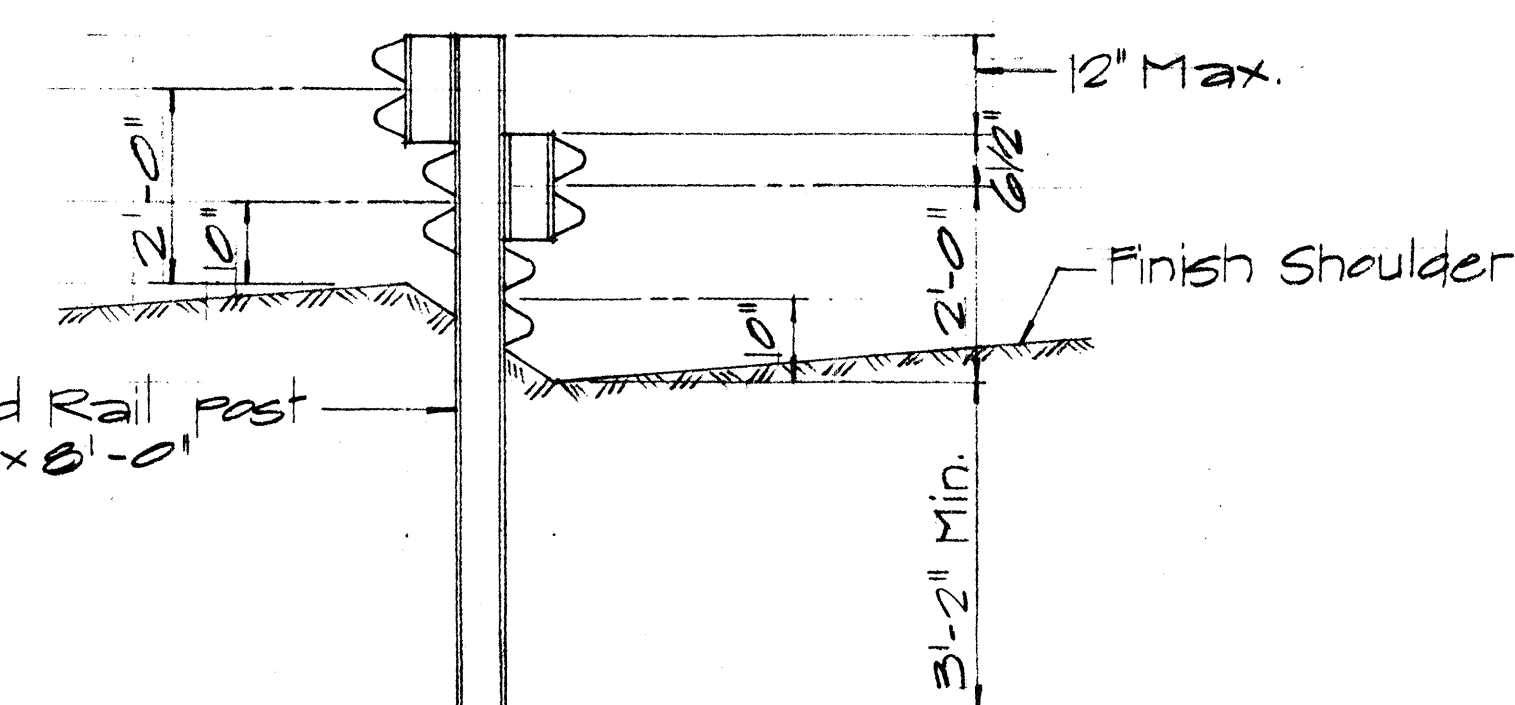
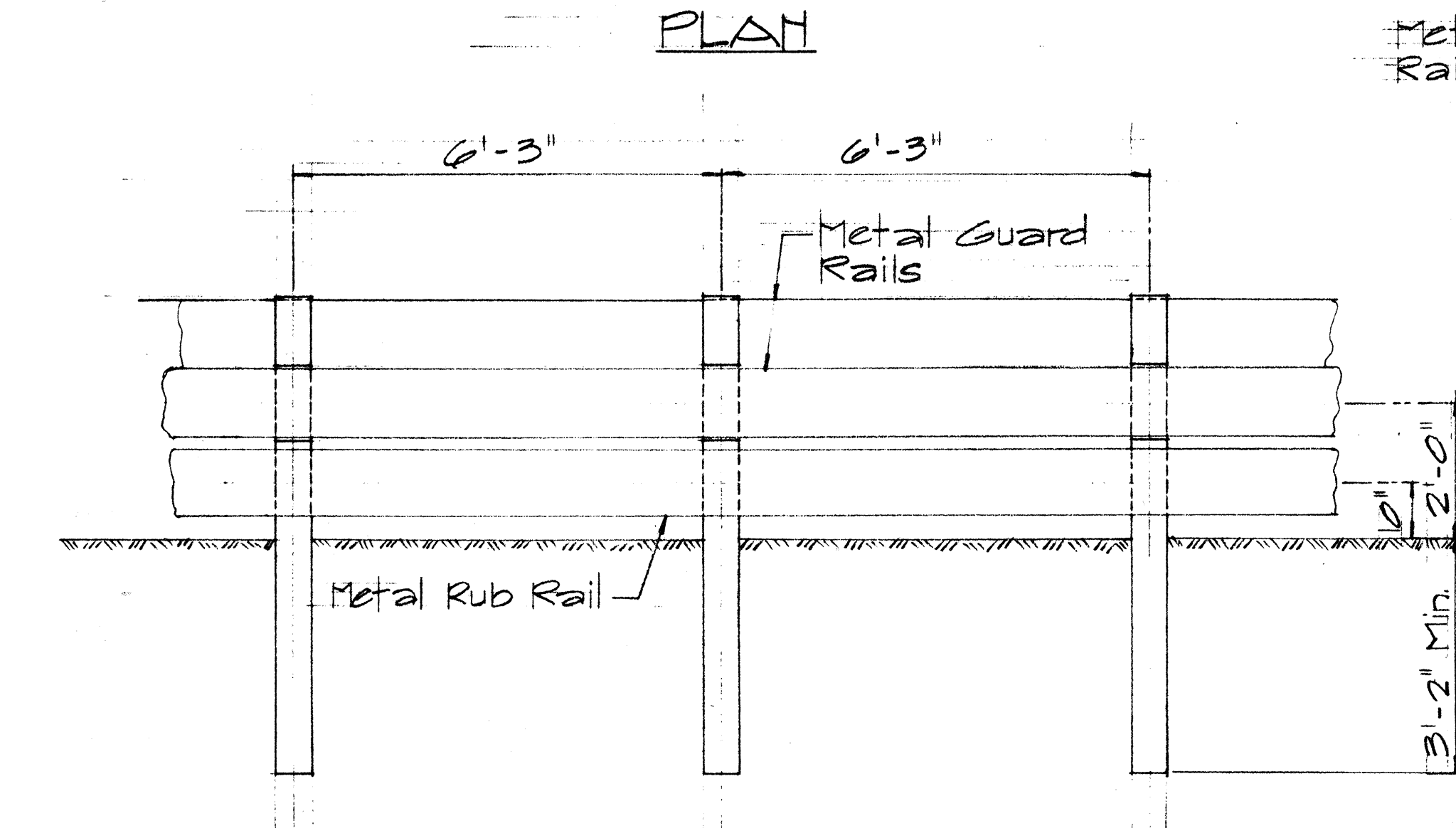
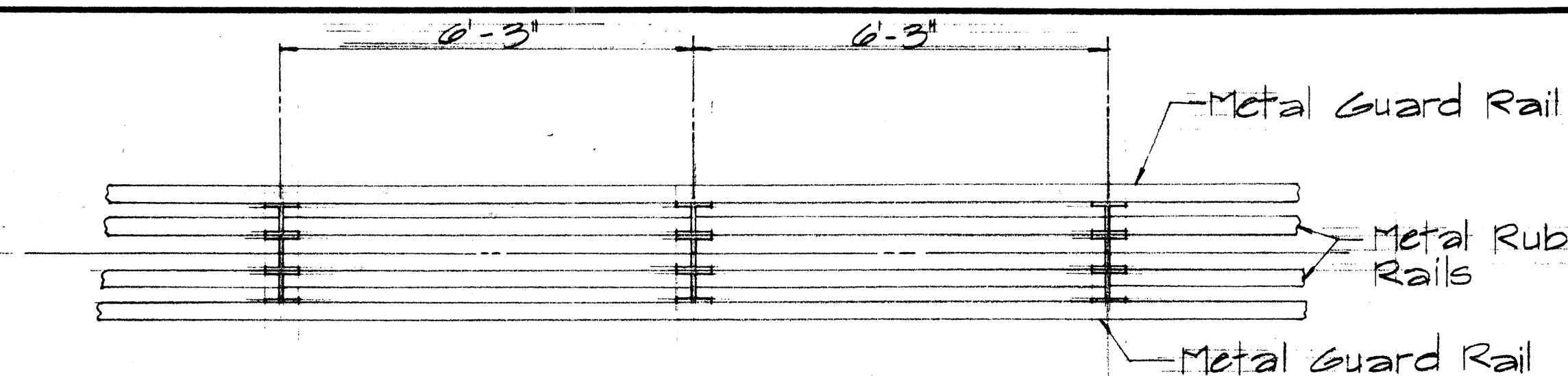
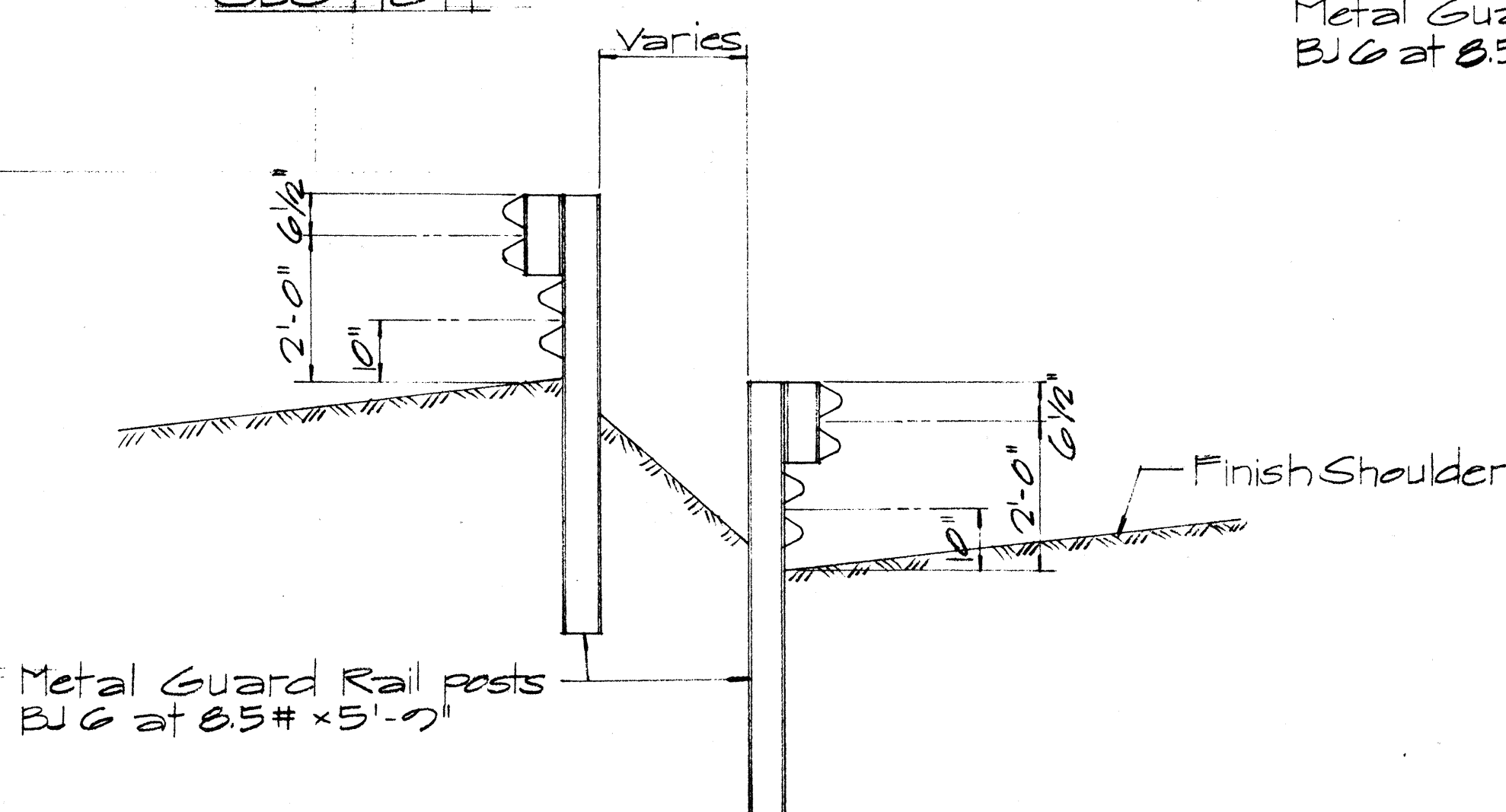
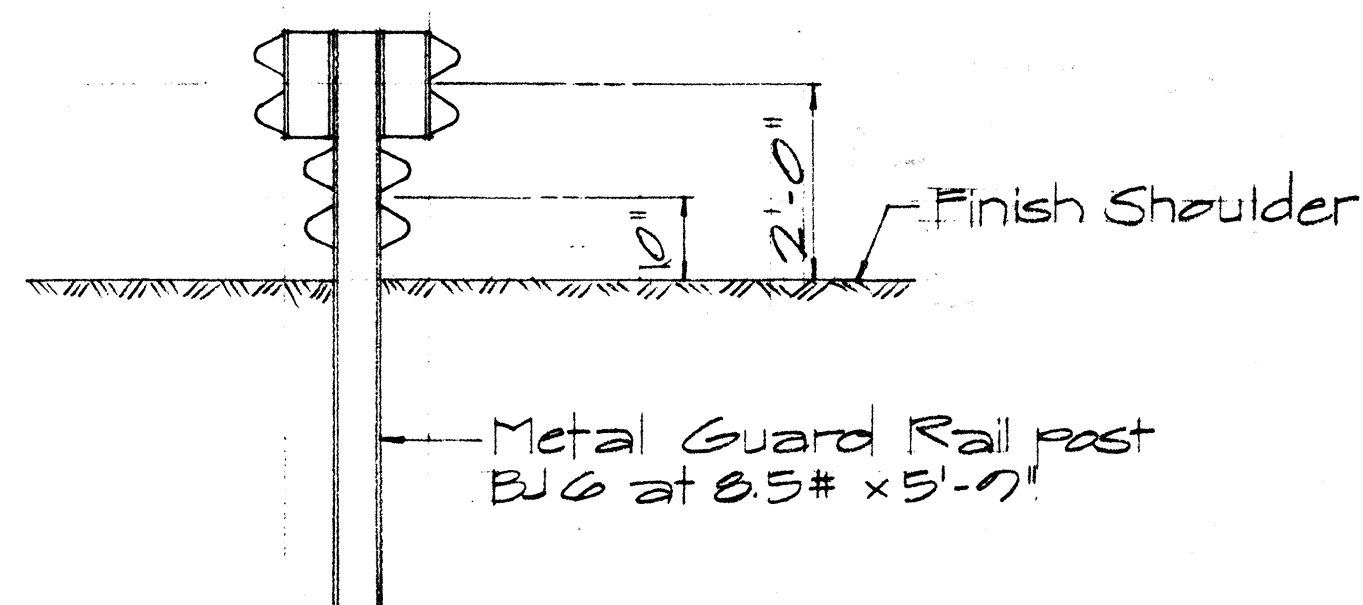
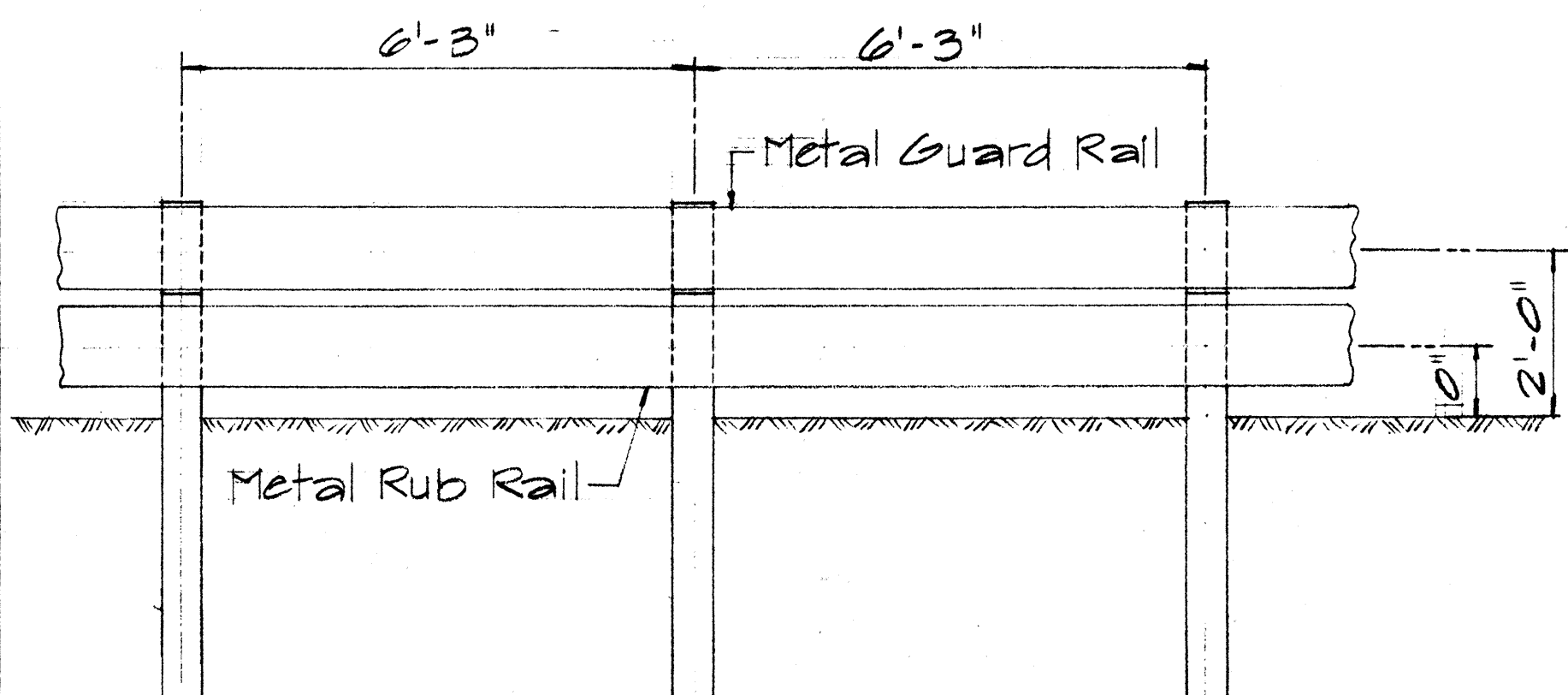
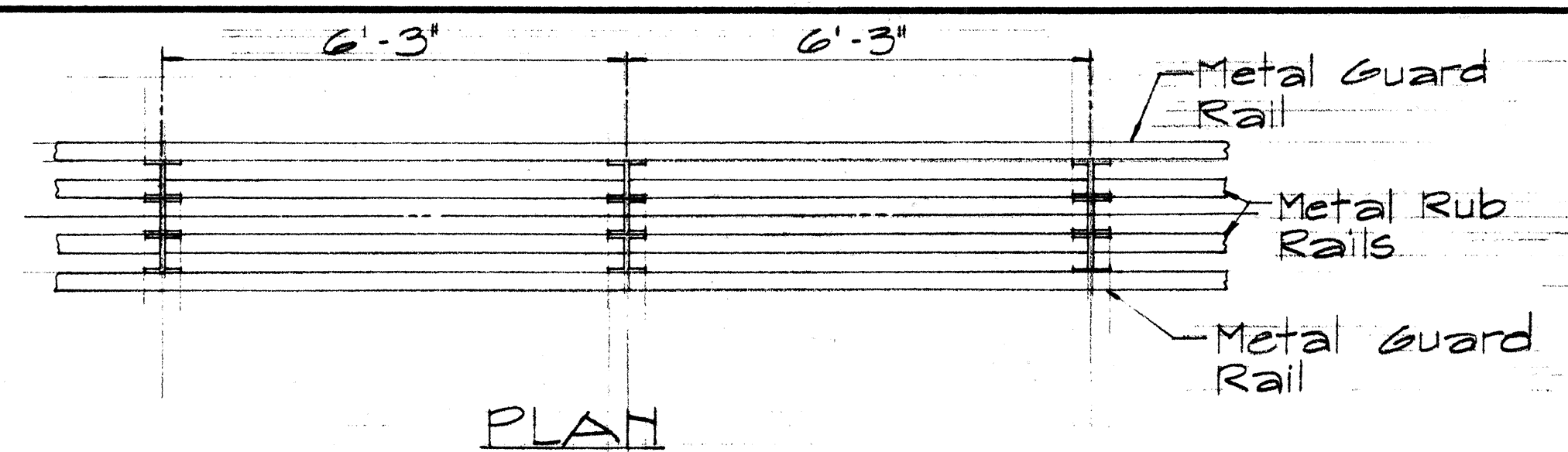
Scale: 3" = 1'-0"

- NOTES:
- H.S. Bolts shall conform to the requirements of ASTM A 325.
 - Special End Shoe shall be fabricated from 10 Gage steel conforming to the requirements of AASHO 180.

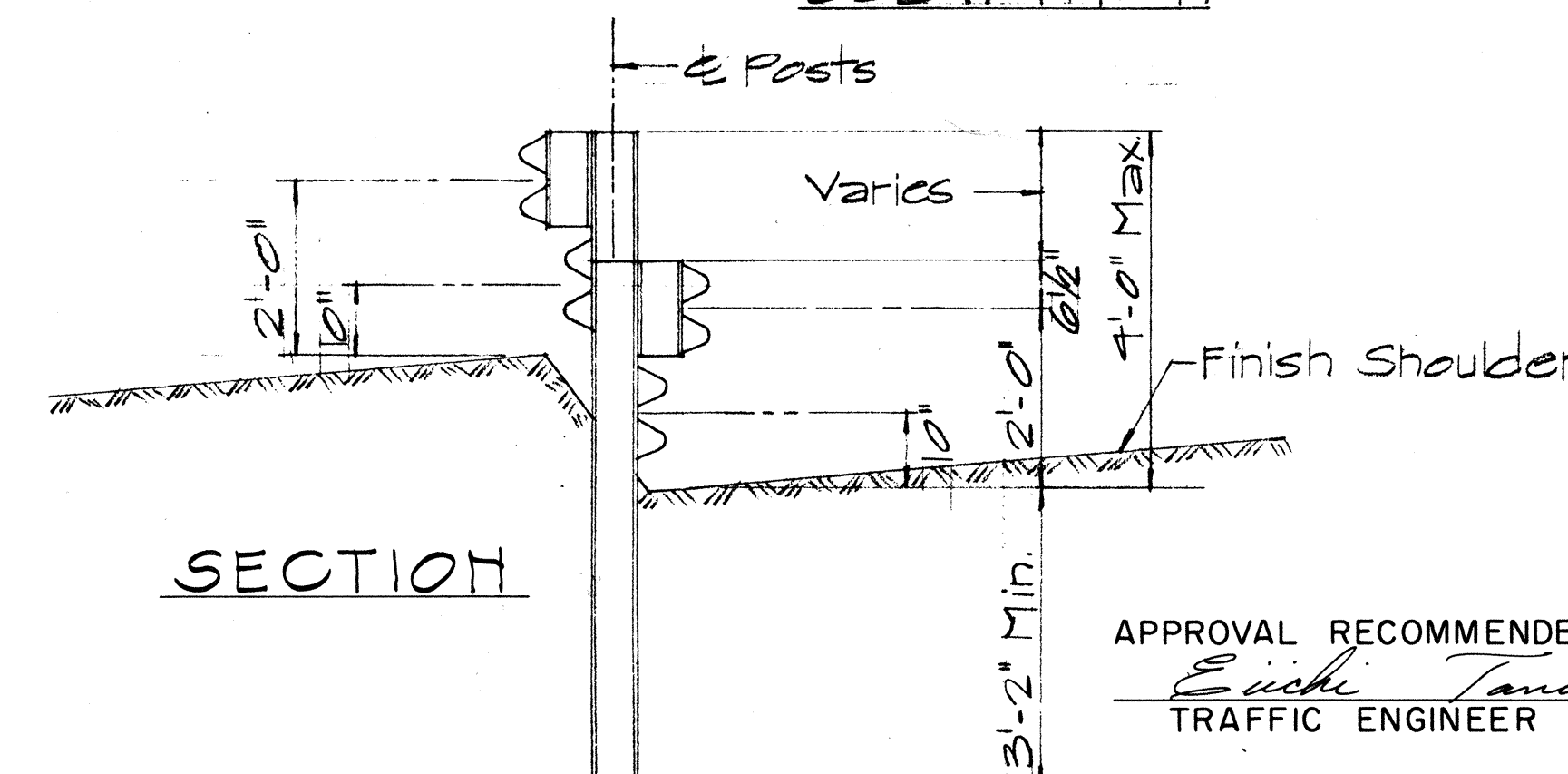
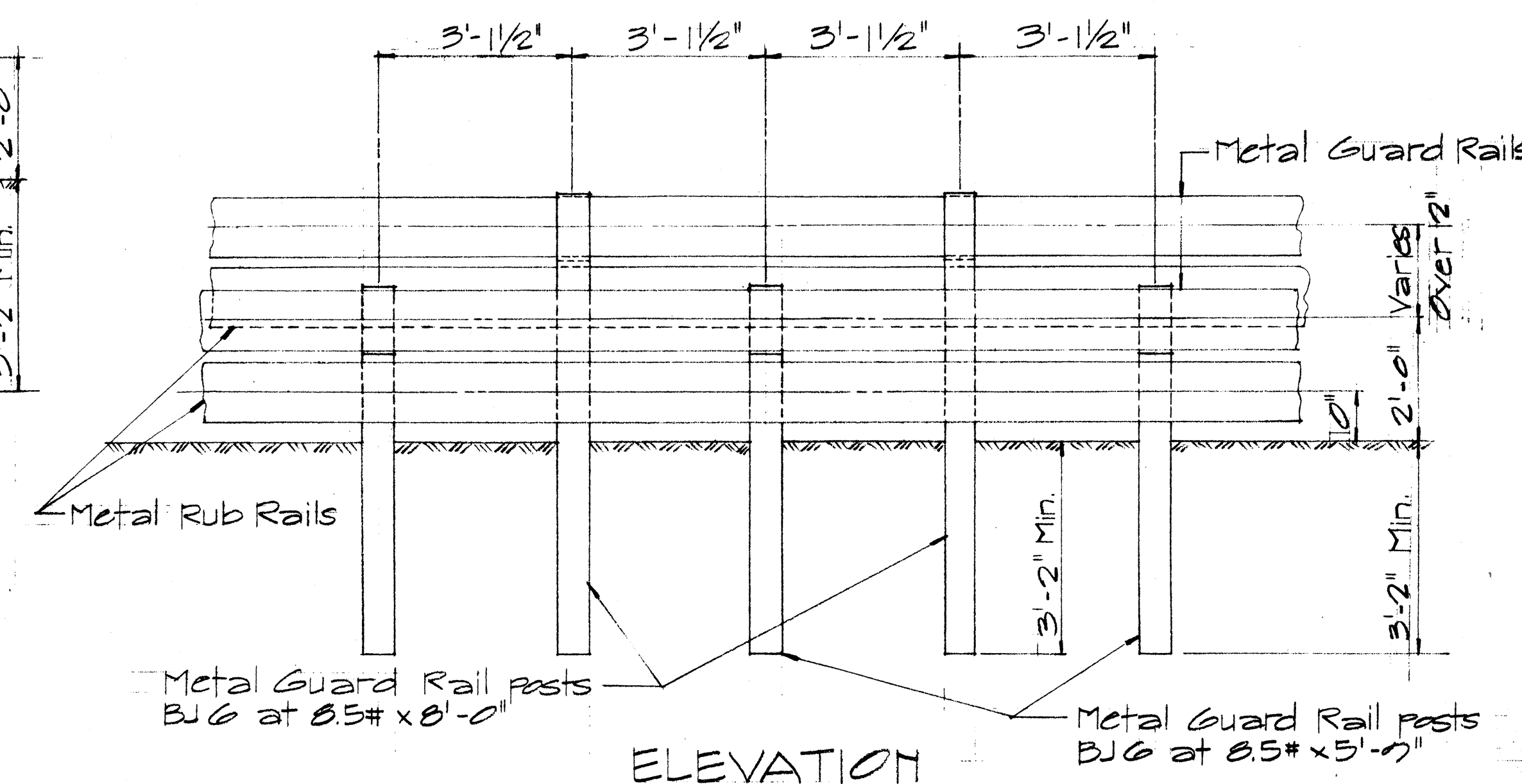
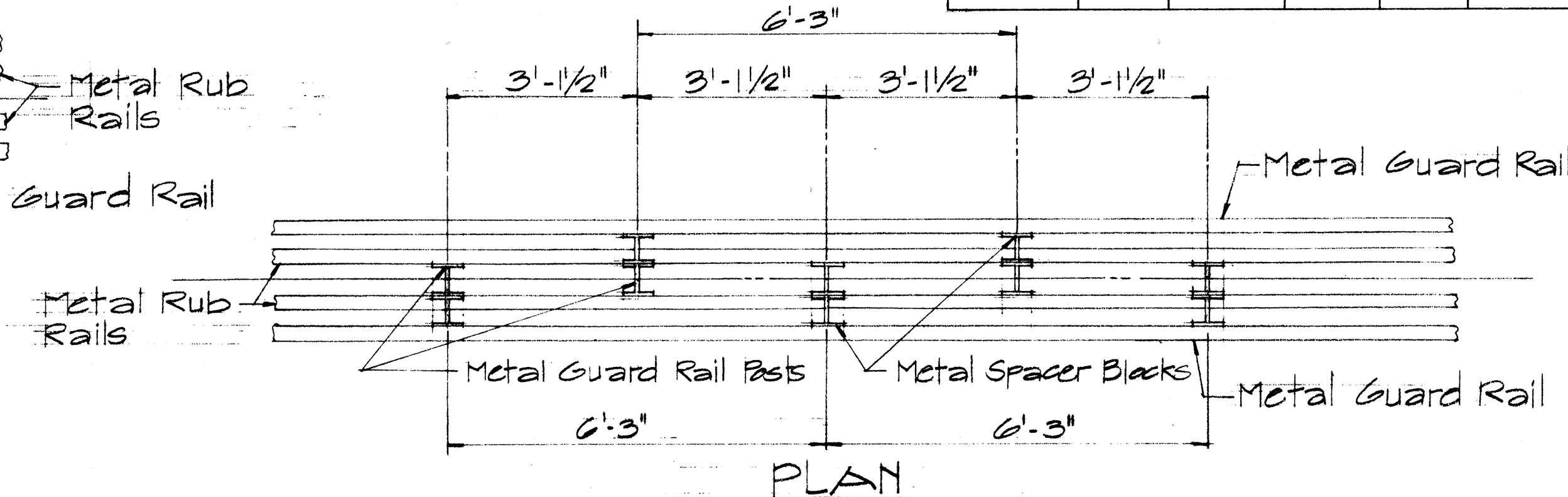
MEDIAN END DIMENSIONS			
TYPE OF POST AND BLOCK	W	R	
Double Metal Guard Rail on Concrete Post with Wood Blocks	29 3/4"	14 7/8"	
Double Metal Guard Rail on Concrete Post with Metal Blocks (BJG)	26 1/2"	13 1/4"	
Double Metal Guard Rail on Metal Post with Metal Blocks (BJG)	24 3/8"	12 3/16"	

NO	REVISION	APPROVED BY	DATE
1	Revised Hole Size for Rectangular Rail Washer	H.T.	8/10/71

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-02-83	1983	19	19



TYPICAL SAW TOOTH INSTALLATION
Sc. 1/2" = 1'-0"



TYPICAL STAGGERED INSTALLATION
Sc. 1/2" = 1'-0"

APPROVAL RECOMMENDED:
Euchi Tanaka
TRAFFIC ENGINEER
12/29/83
DATE

APPROVED:
William S. Sato
ASSISTANT CHIEF, ENGINEERING
12-30-83
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAIL
METAL GUARD RAIL
WITH RUB RAIL
Scale: 1/2" = 1'-0" Feb. 17, 1967