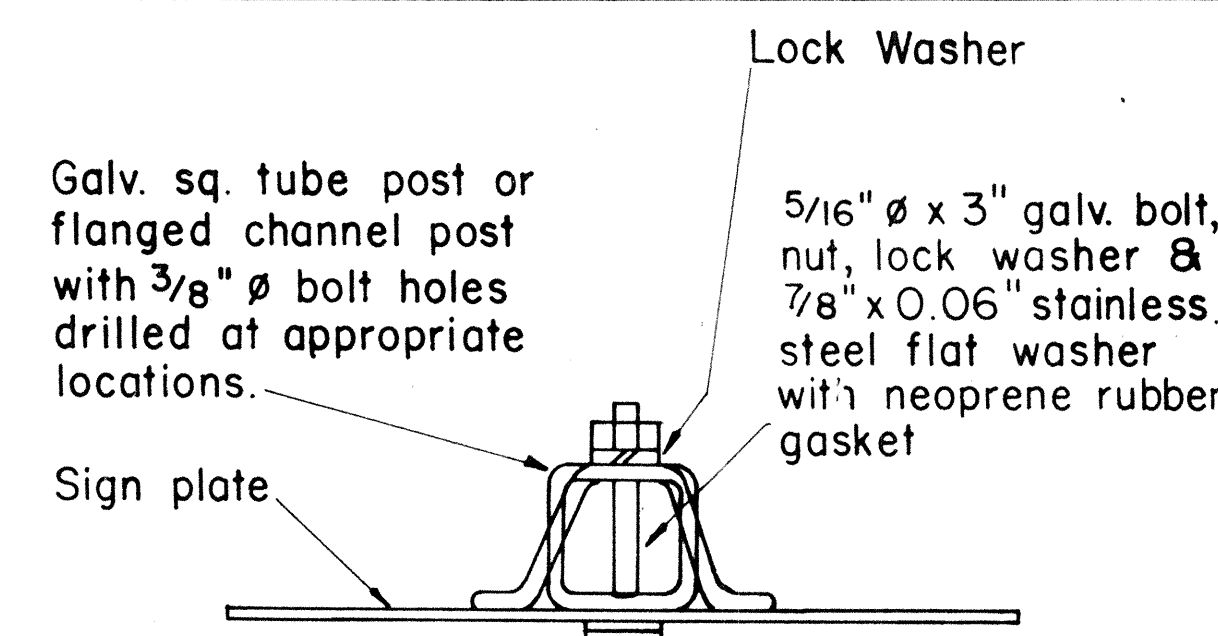


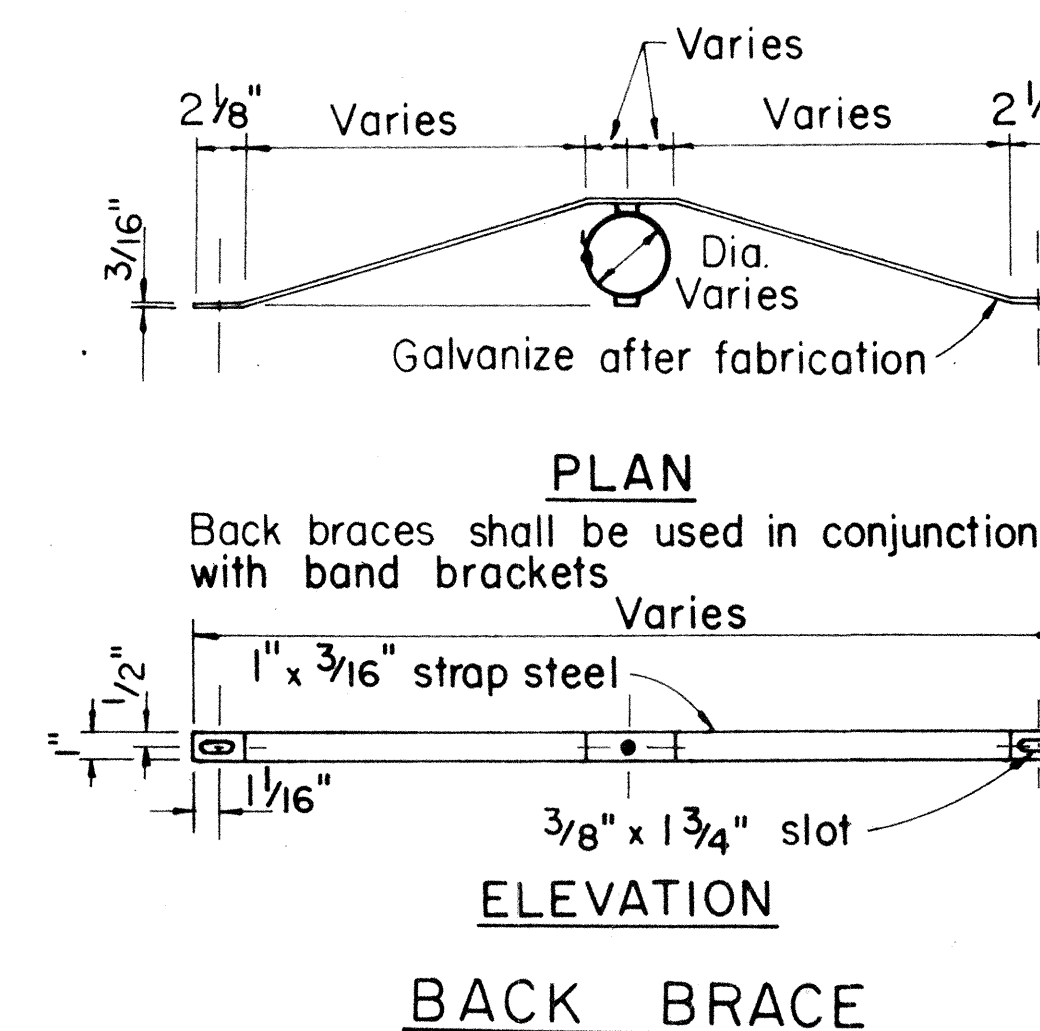
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-01-84	1984	7	18

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.
- Sign 48" and wider or larger than 10 sq. ft. in area shall be mounted on two or more sign posts except as noted below.
- Signs 48" and wider or larger than 10 sq. ft. in area may be mounted on objects other than sign posts (i.e. on highway lighting poles) as follows:
 - Signs 48" and wider but less than 10 sq. ft. in area shall be mounted with a minimum of two sets of band bracket and back braces.
 - 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 bracket 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 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.

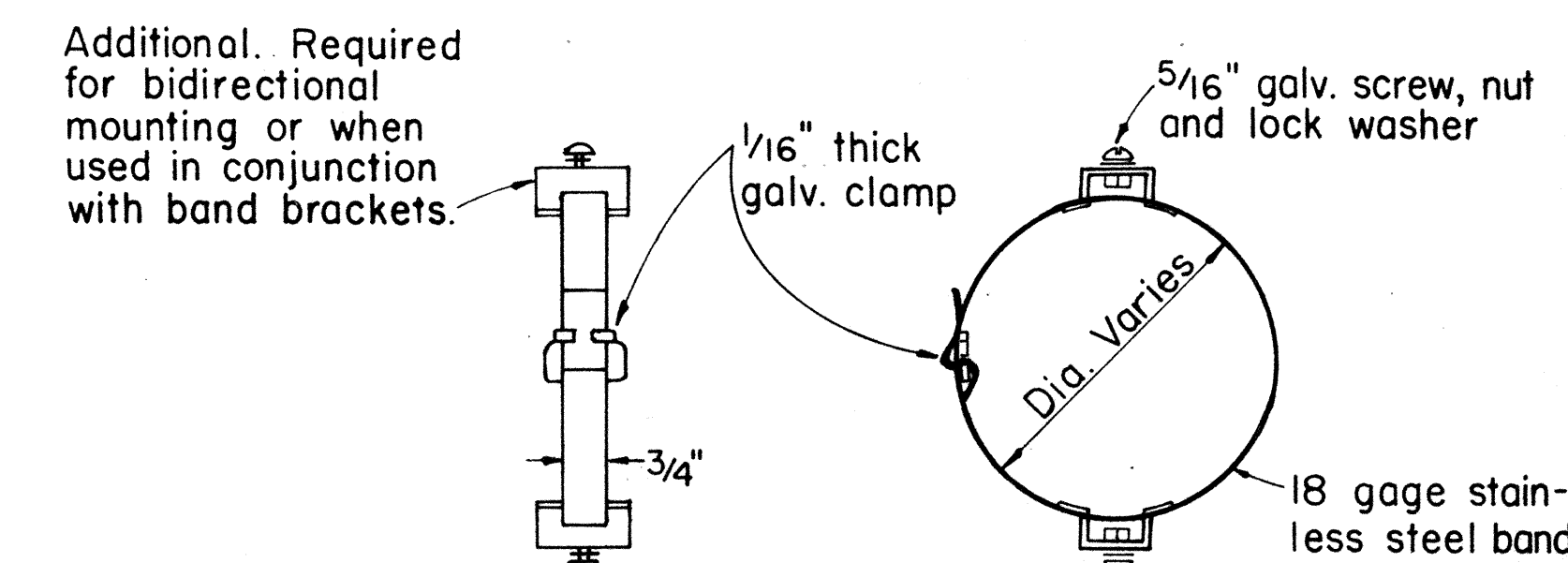


GALVANIZED SQUARE TUBE OR FLANGED CHANNEL POST



TYPICAL MOUNTING DETAILS

NO.	REVISION	APPROVED BY	DATE
1	Supercedes Sht. DT 100 approved 11/15/77	<i>[Signature]</i>	10-18-83



BAND BRACKET

APPROVAL RECOMMENDED:
Eishi Tanaka 10/14/83
 TRAFFIC ENGINEER DATE

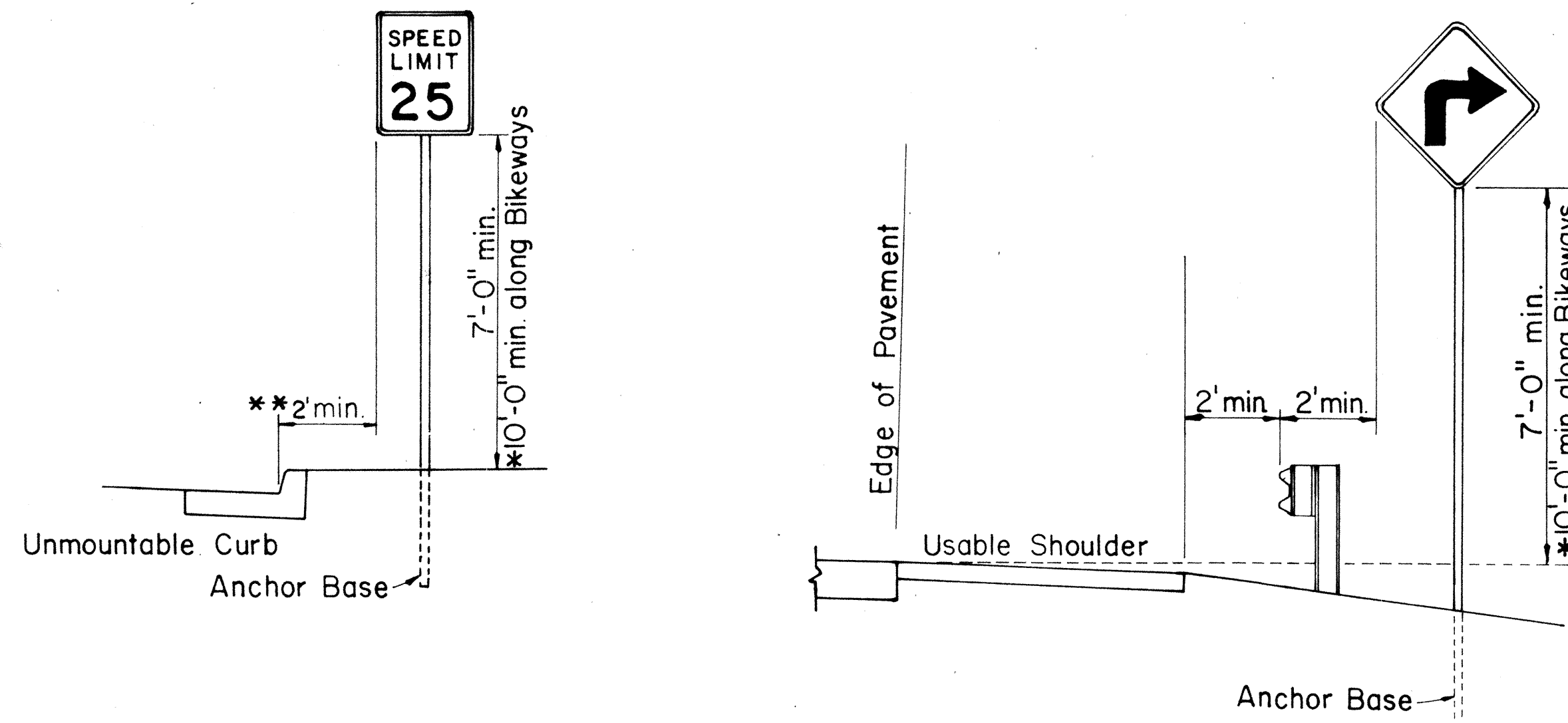
APPROVED:
[Signature] 10-18-83
 ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

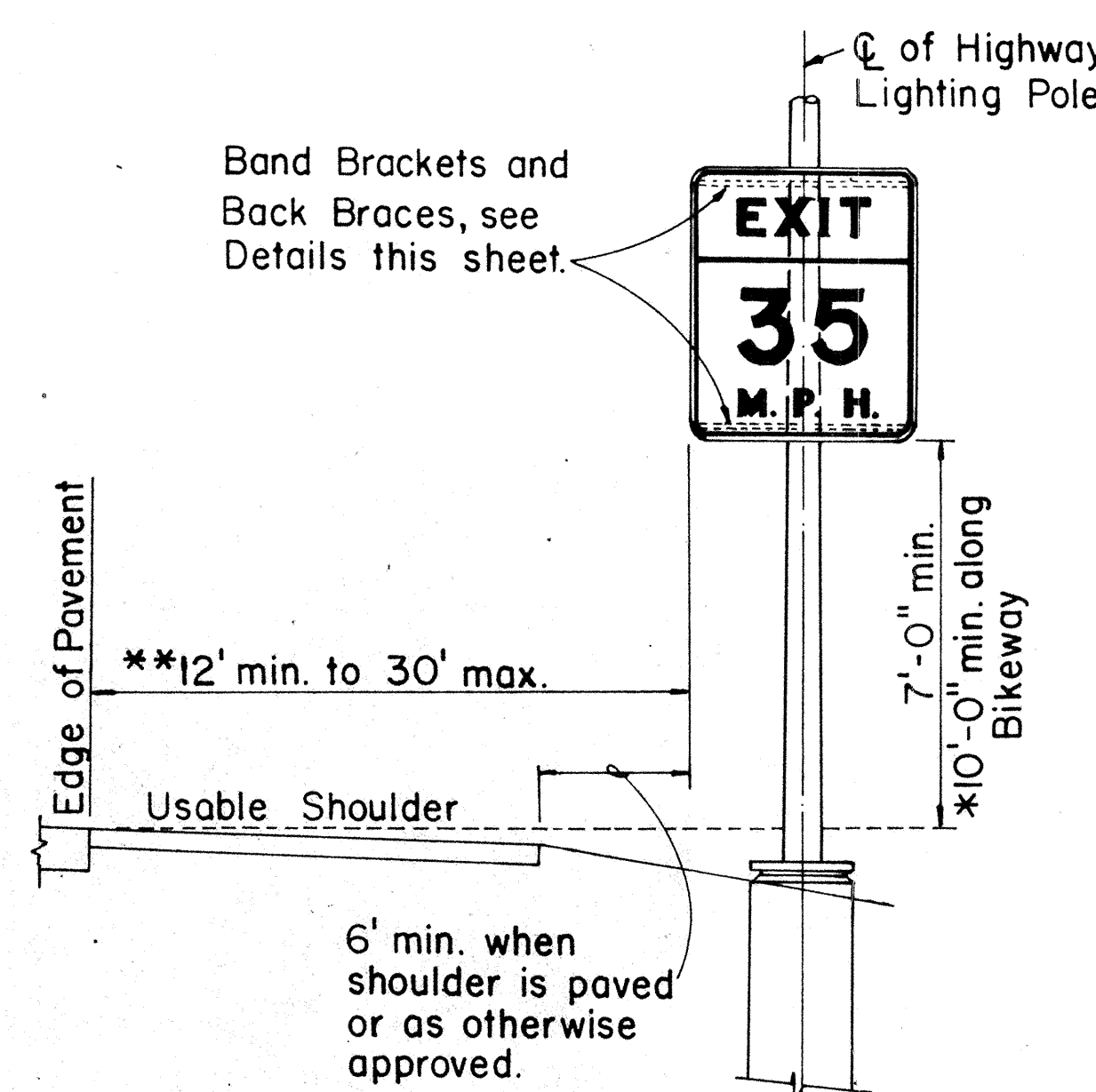
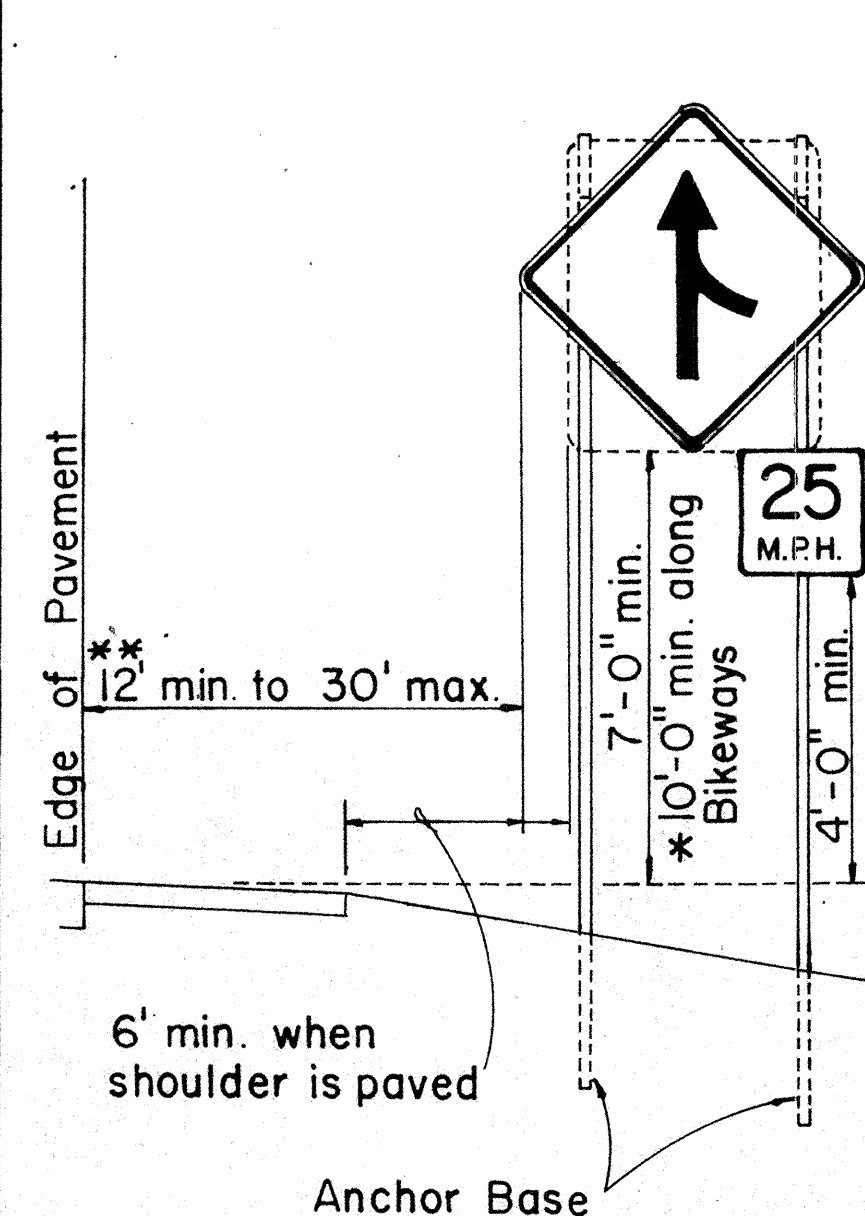
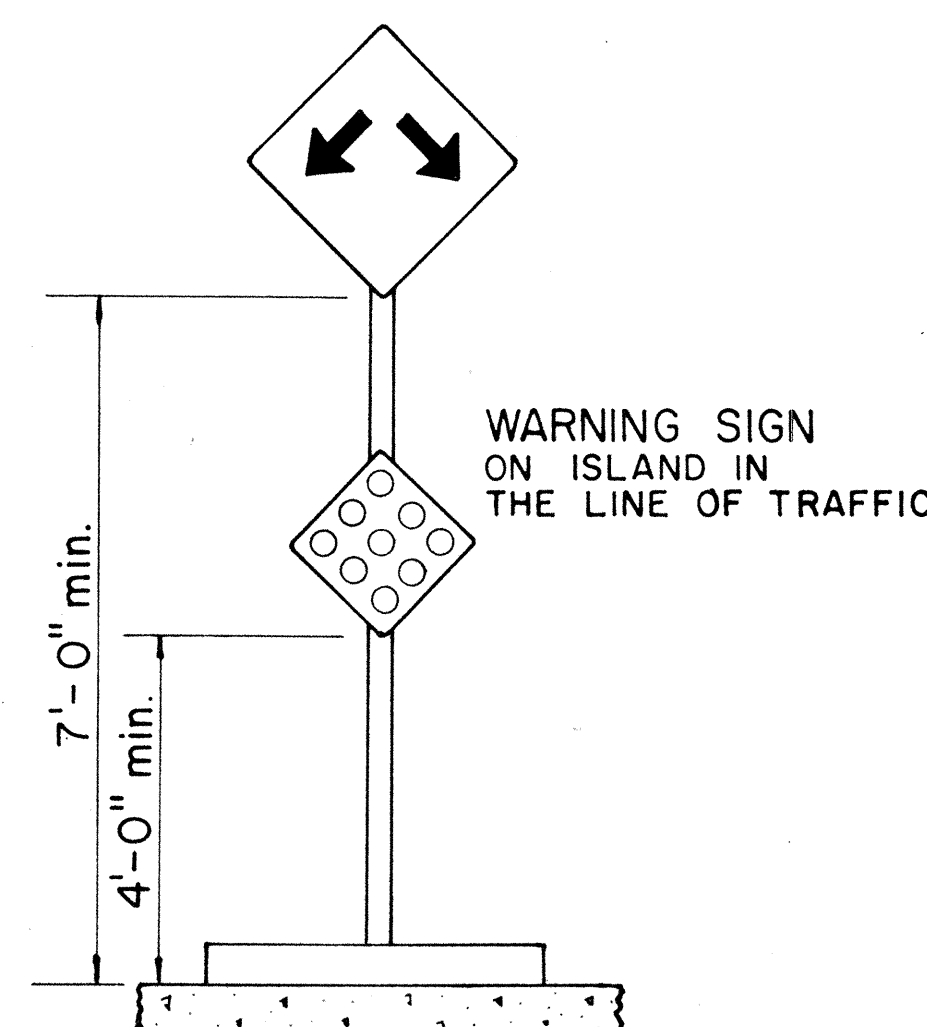
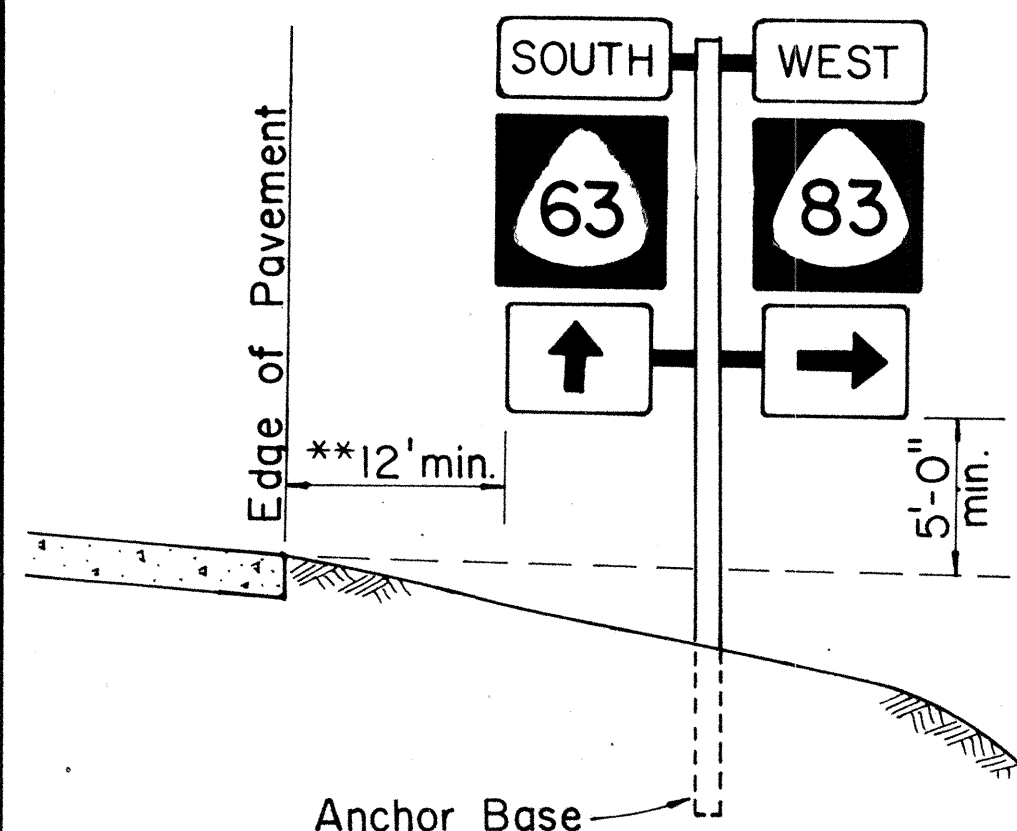
STANDARD DETAILS MISCELLANEOUS SIGN DETAILS

Not to Scale: Oct. 1983

SHEET NO. 1 OF 12 SHEETS DT 100



ROADSIDE ASSEMBLY RURAL DISTRICT

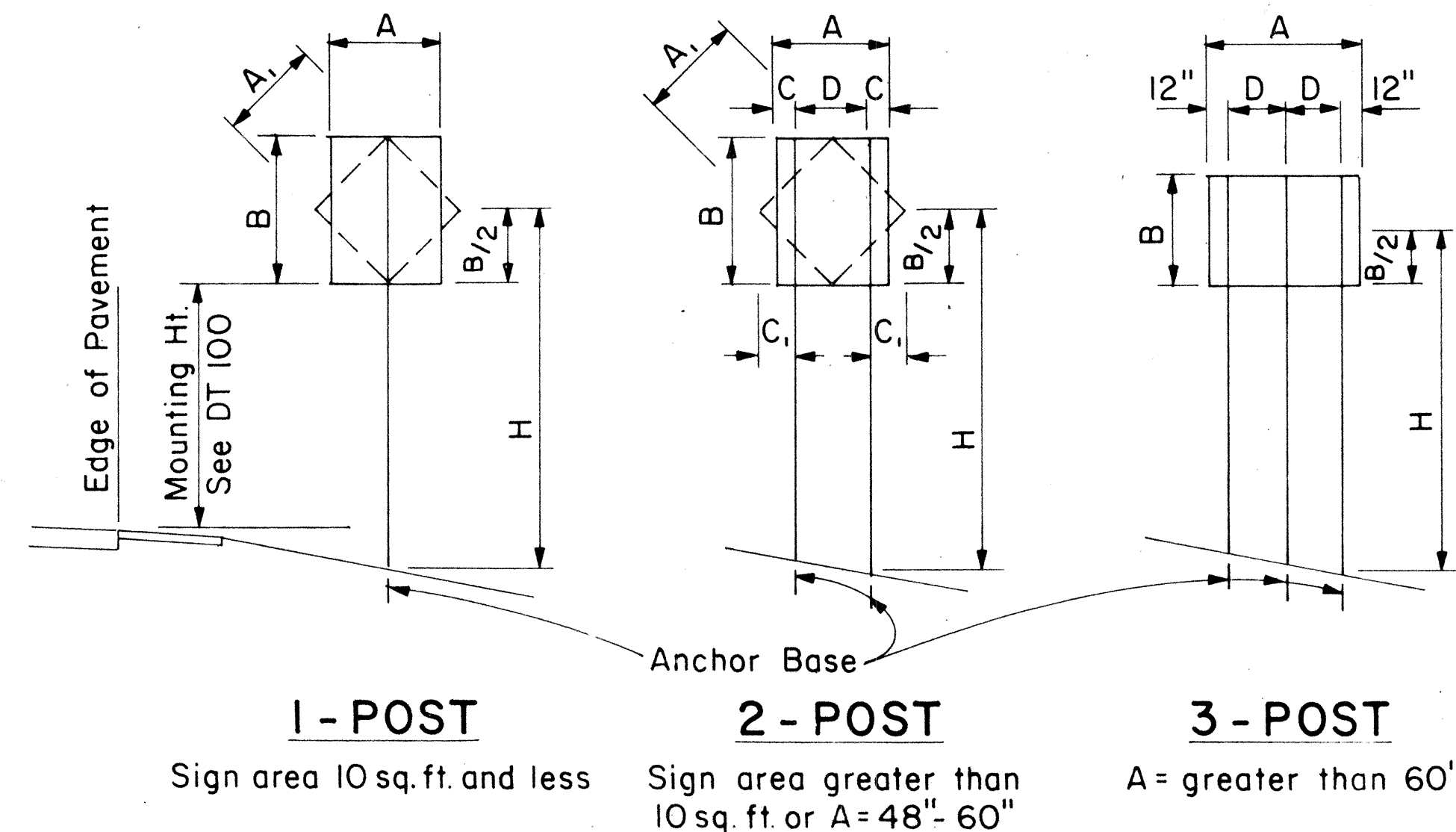
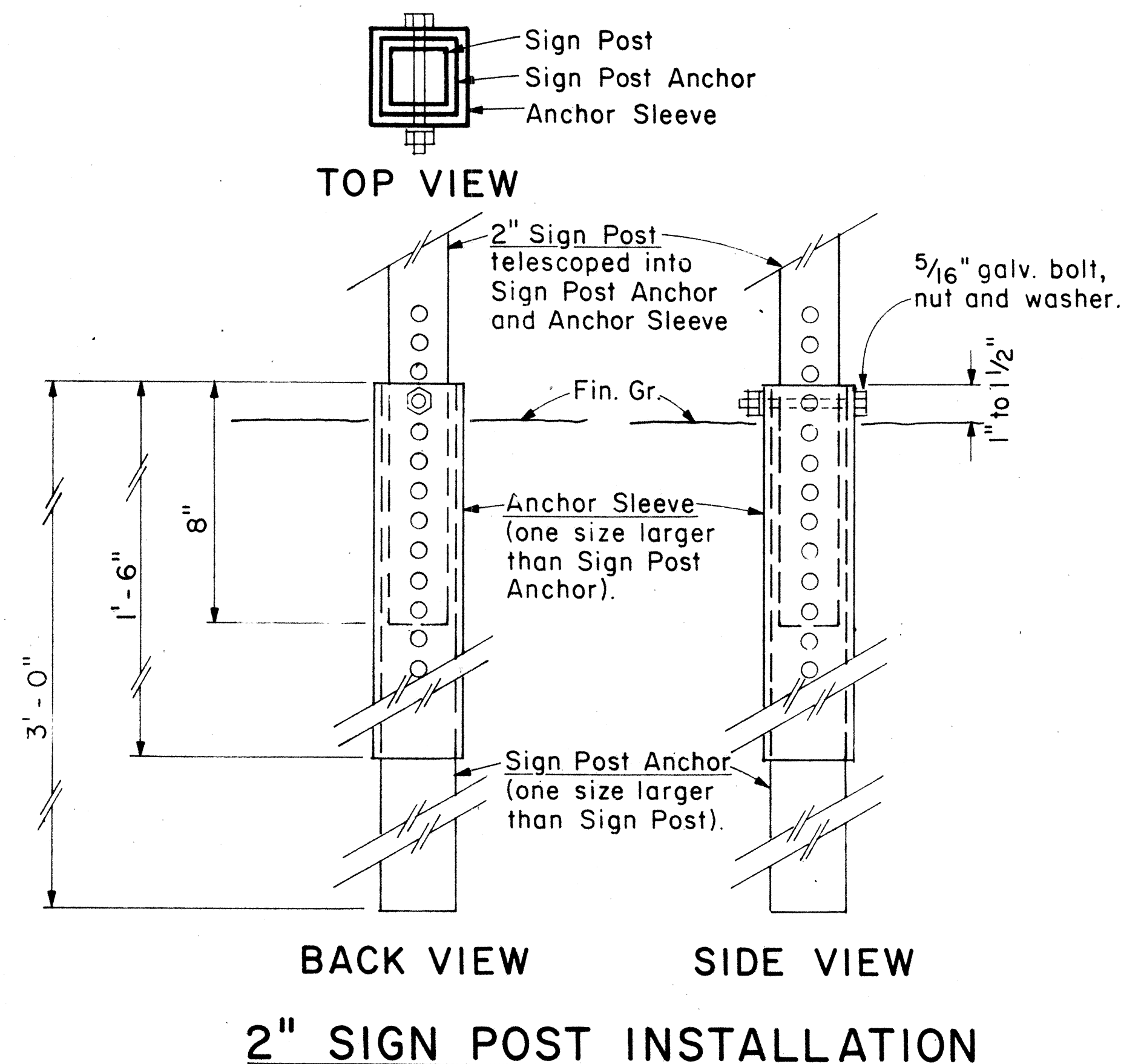


HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-01-84	1984	8	18

GENERAL NOTES

- Square tube sign posts shall conform to Subsection 713.11(C) Square Tube Posts of the Specifications.
- All accessories, fittings and stiffener details (as required) shall be submitted to Engineer for approval 20 days prior to installation.
- Square tube posts shall be perforated with $\frac{7}{16}$ " ϕ holes, 1" o.c., 4 sides, along entire length of post.
- All posts shall be 12 gage unless otherwise specified or shown on the plans.
- For additional details see sht. DT 100.
- Basic formulas for use with the windload charts:
Factor = $A \times B \times H$
Therefore, if sign area ($A \times B$) is known,
Maximum $H = \frac{\text{Factor}}{\text{sign area}(A \times B)}$
and if H is known,
Maximum sign area ($A \times B$) = $\frac{\text{Factor}}{H}$



TYPICAL INSTALLATION

Not to Scale

SQUARE TUBE: 1- POST INSTALLATION							
Post Size	AxBxH (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2"	62	8.8	7.7	6.8	6.1	5.6	4.8
2 1/2"	107	-	-	-	-	9.6	8.8

SQUARE TUBE: 2- POST INSTALLATION							
Post Size	AxBxH (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2"	122	17.4	15.2	13.5	12.2	11.0	10.1
2 1/2"	212	30.2	26.5	23.5	21.1	19.2	17.6
2 1/2", 10 ga.	260	37.0	32.0	28.6	26.0	23.5	21.5

SQUARE TUBE: 3- POST INSTALLATION							
Post Size	AxBxH (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2"	183	26.0	22.8	20.3	18.2	16.6	15.2
2 1/2"	318	45.4	39.5	35.2	31.5	28.8	26.5
2 1/2", 10 ga.	388	55.0	48.5	43.0	38.5	35.0	32.0

WINDLOAD CHARTS

APPROVAL RECOMMENDED:

Erich Tanaka 9/2/82
TRAFFIC ENGINEER DATE

APPROVED:

Robert J. Fisher 9/2/82
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

STANDARD DETAILS

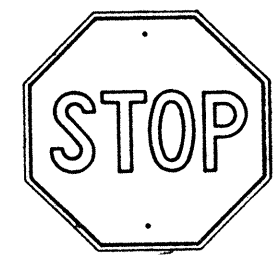
GALVANIZED SQUARE TUBE

SIGN POST MOUNTING

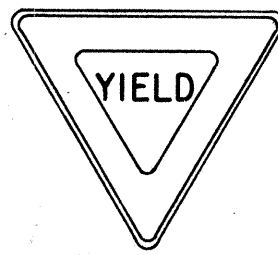
Scale: As Shown

Date: Sept. 1982

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-01-84	1984	9	18



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



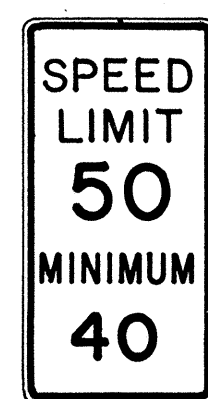
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



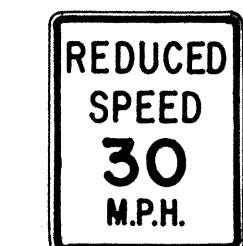
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



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



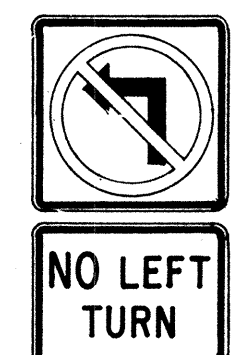
R2-4a(50/40) 24" x 48"
R2-4a(50/40)-A 48" x 96"



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



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



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



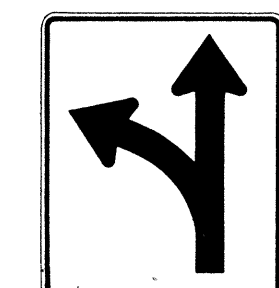
R3-3 24" x 24"
R3-3-A 48" x 48"



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



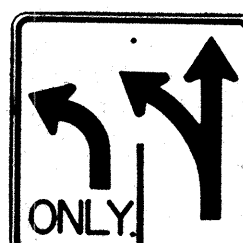
R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"



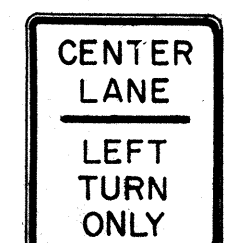
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



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



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



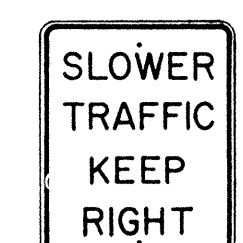
R3-9 24" x 30"



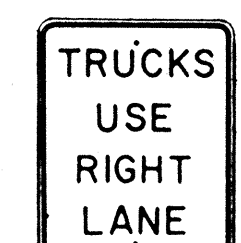
R4-1 24" x 30"



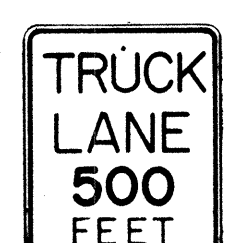
R4-2 24" x 30"



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



R4-5 24" x 30"



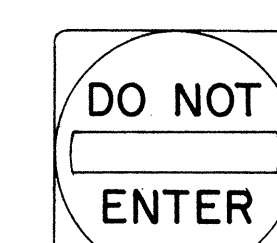
R4-6(500) 24" x 30"



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



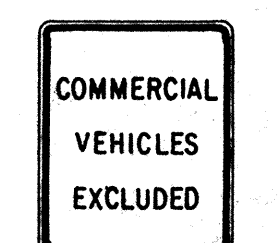
R4-8 24" x 30"
24" x 18"



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



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



R5-4 24" x 30"



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



R5-9 36" x 24"



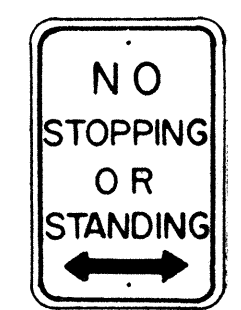
R6-1(R) 36" x 12"



R6-2(R) 18" x 24"



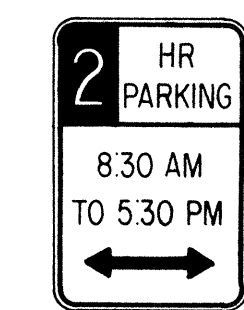
R7-1 12" x 18"
R7-1-A 24" x 30"



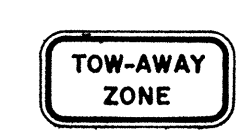
R7-4 12" x 18"
R7-4-A 24" x 30"



R7-107(R) 12" x 18"



R7-108 12" x 18"



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



R8-1 24" x 30"



R8-2 24" x 30"



R8-3 24" x 30"



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



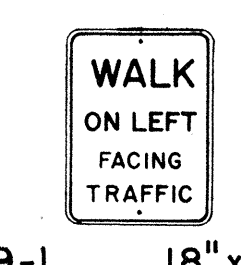
R8-5 24" x 30"



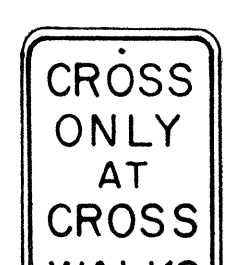
R8-6 24" x 30"



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



R9-1 18" x 24"



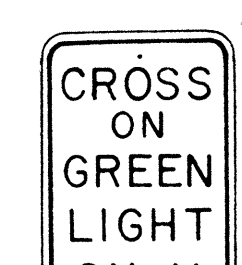
R9-2 12" x 18"



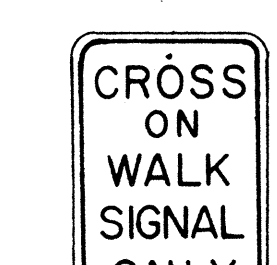
R9-3 12" x 18"



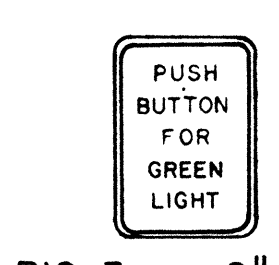
R9-4 18" x 24"



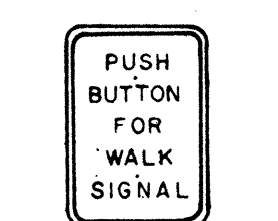
R10-1 12" x 18"



R10-2 12" x 18"



R10-3 9" x 12"



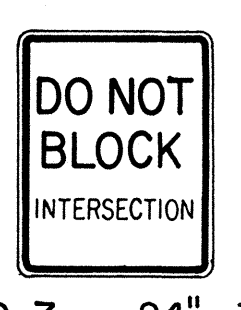
R10-4 9" x 12"



R10-5 24" x 30"



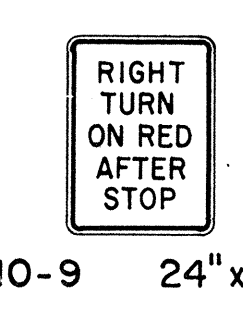
R10-6 24" x 36"



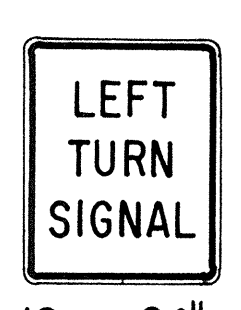
R10-7 24" x 30"



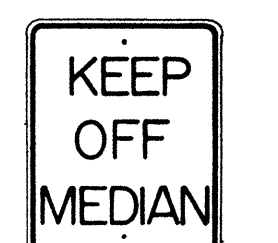
R10-8 24" x 30"



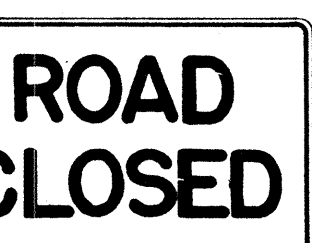
R10-9 24" x 30"



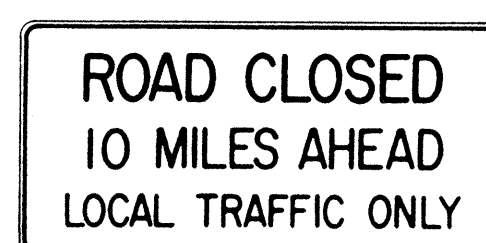
R10-10 24" x 30"



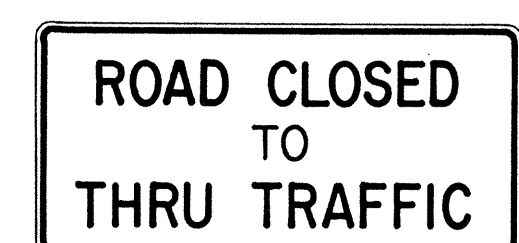
R11-1 24" x 30"



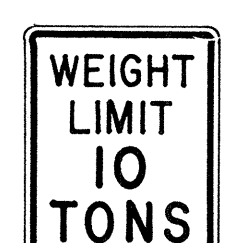
R11-2 48" x 30"



R11-3(10) 60" x 30"



R11-4 60" x 30"



R12-1(10) 24" x 30"

GENERAL NOTES

- 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 regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory 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.
- All signs shall be erected without educational plaques unless called for in the plans.

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

APPROVED:
Robert J. Roberts 3-20-72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.I.	9/20/72
2	Revised General Note 1.	H.I.	10/14/74
3	Added General Note 5	H.I.	11/1/77

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE

SHEET No. 3 OF 12 SHEETS DT 101

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRAINED 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.	7EC-01-84	1984	10	18

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 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"x36"

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

RESERVED
PARKING
R7-8 12"x18"
R7-8-A 24"x30"

ANY TIME
R8-3a 24"x 24"
24"x 18"
R8-3a-A 48"x 48"

NO PED
XING
R9-3a 18"x18"
18"x12"
R9-3a-A 24"x24"
24"x18"

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"x30"

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"x30"

U
TURN
OK
8" Series F
5" Series D
R16-7 24"x30"

MOTOR-DRIVEN
CYCLES
PROHIBITED
4" Series B
R5-8 30"x24"

W17-1(L) 60"x60"

STOP
AHEAD
W3-1a 36"x36"
24"x18"
W3-1a-A 48"x48"
24"x18"

YIELD
AHEAD
W3-2a 36"x36"
24"x18"
W3-2a-A 48"x48"
24"x18"

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

TRUCK
CROSSING
W8-6 30"x30"
W8-6-A 36"x 36"

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

EQUESTRIAN
XING
W11-7 36"x36"
24"x18"
W11-7-A 48"x48"
24"x18"

FIRE
STATION
W11-8 36"x36"
24"x18"
W11-8-A 48"x48"
24"x18"

W11-9 36"x36"
W11-9-A 48"x48"

LIMITED
SIGHT
DISTANCE
W14-4 36"x36"
W14-4-A 48"x48"

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"

S1-1 36"x36"

S2-1 36"x36"

SCHOOL
BUS STOP
AHEAD
S3-1 30"x30"

8:00 AM
TO 3:30 PM
S4-1 24"x10"

SCHOOL
S4-3 24"x8"

WHEN
FLASHING
S4-4 24"x10"

7" Series D
SIDEWALK
CLOSED
CW23-4 48"x48"

USE
SIDEWALK
4" Series C
R18-1 24"x18"

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:
Eischi Tanaka 5/2/78
TRAFFIC ENGINEER DATE

APPROVED:
Robert Z. Dakeish 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

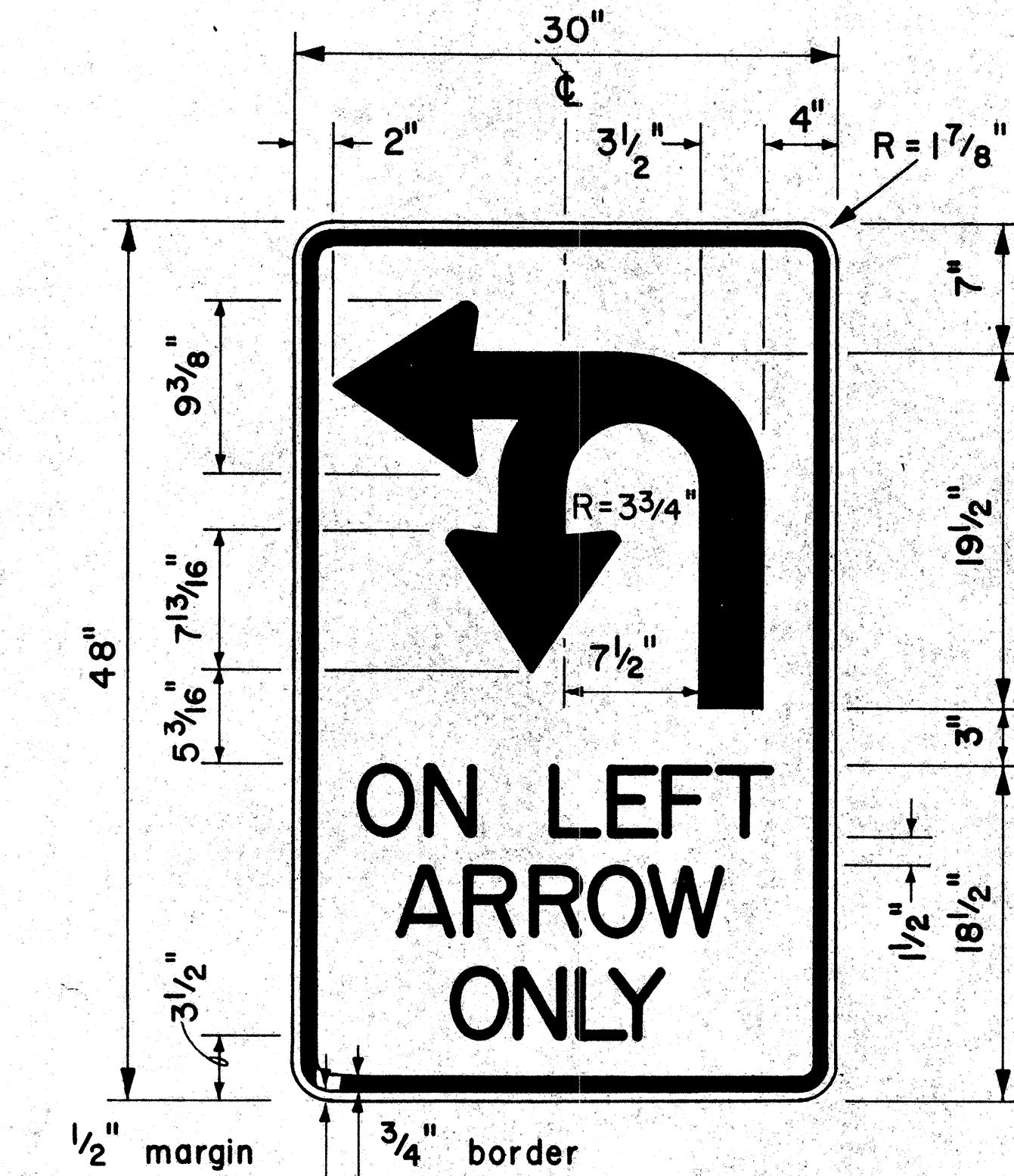
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
MISCELLANEOUS SIGNS
NOT TO SCALE DATE: MAY, 1978
SHEET NO. 4 OF 12 SHEETS DT 103

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

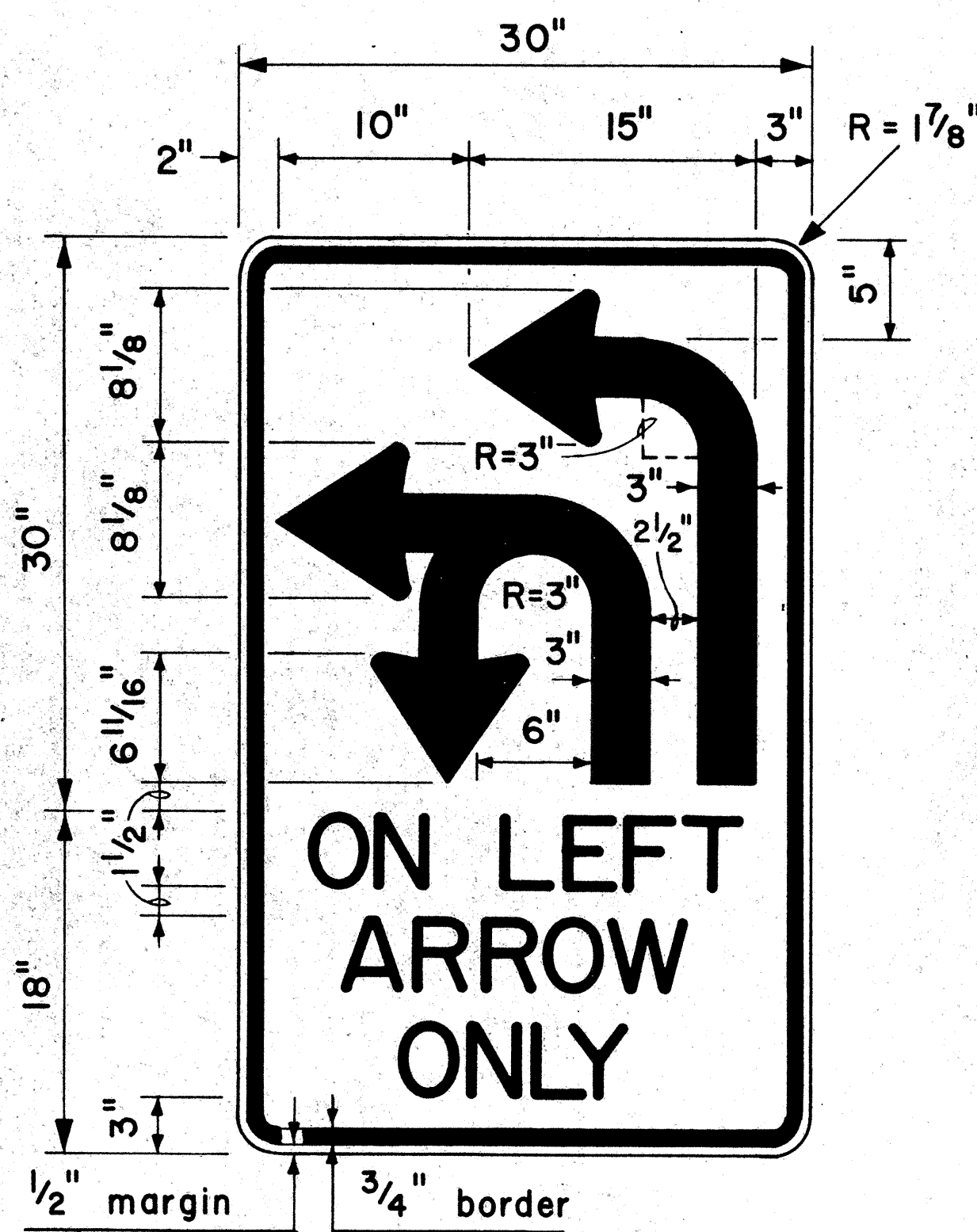
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-01-84	1984	11	18

GENERAL NOTES

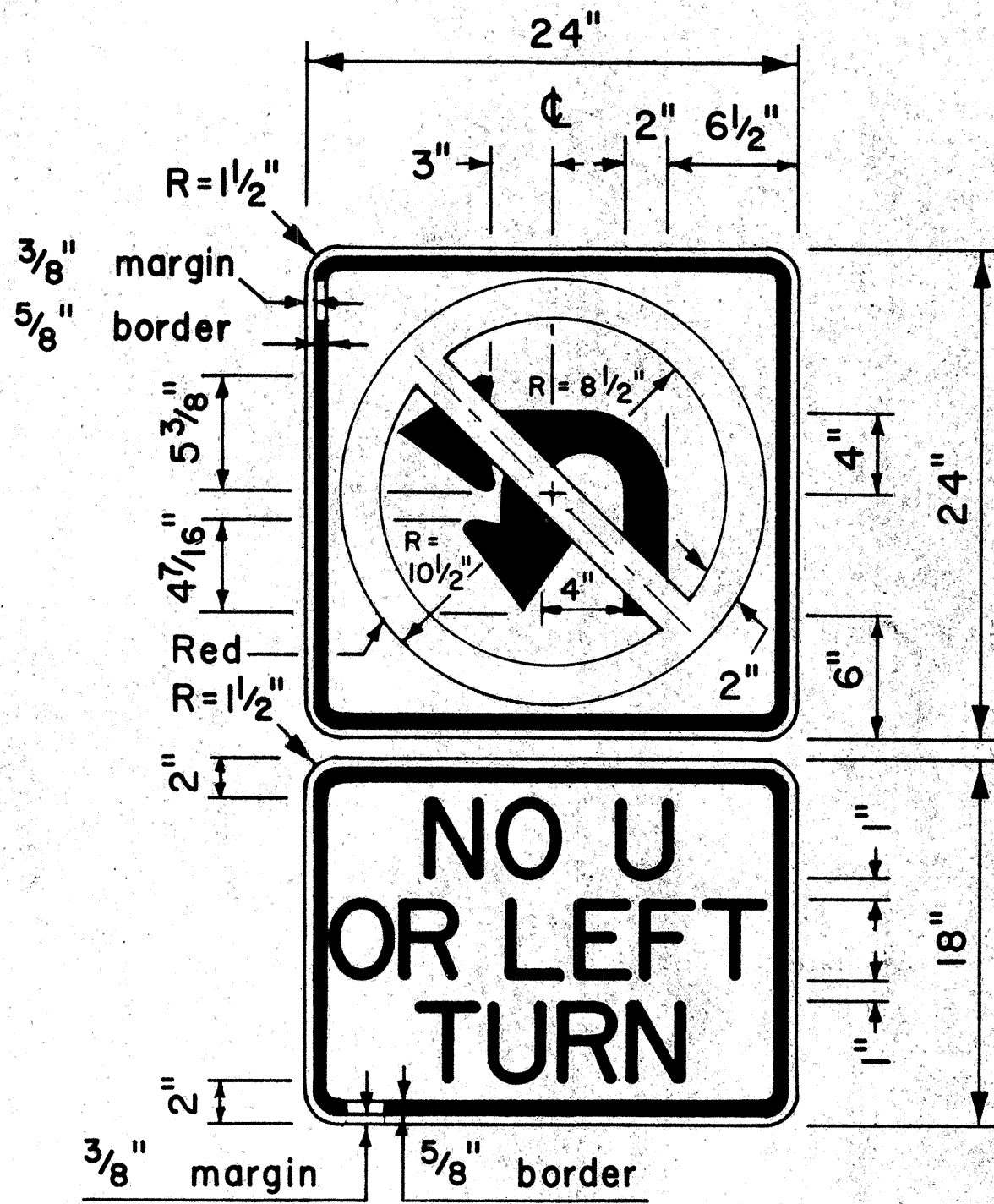
- Sign details shall conform to the latest editions of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and "Standard Highway Signs," and as amended.
- All regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory signs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



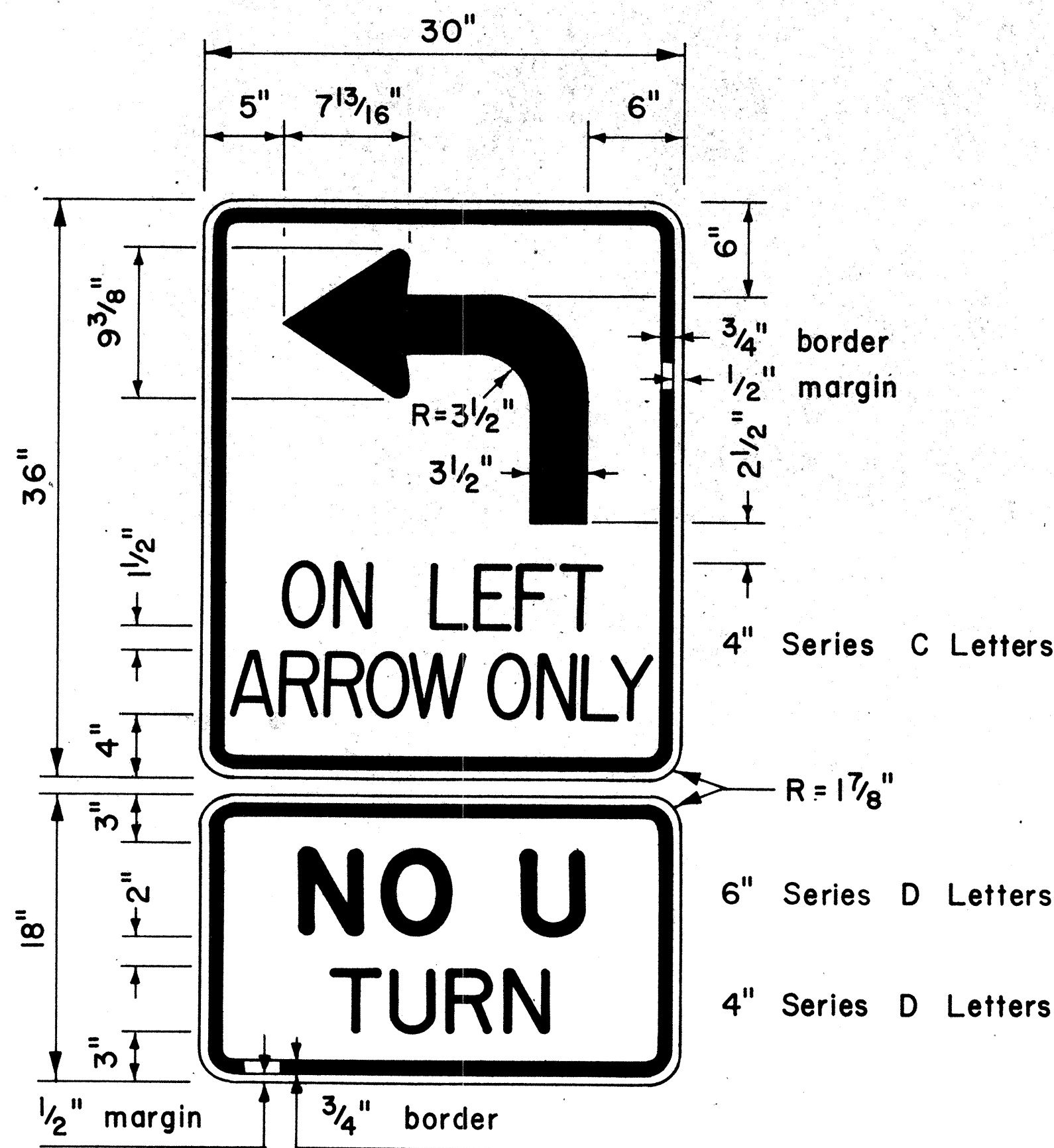
4" Series D Letters
RI7-1



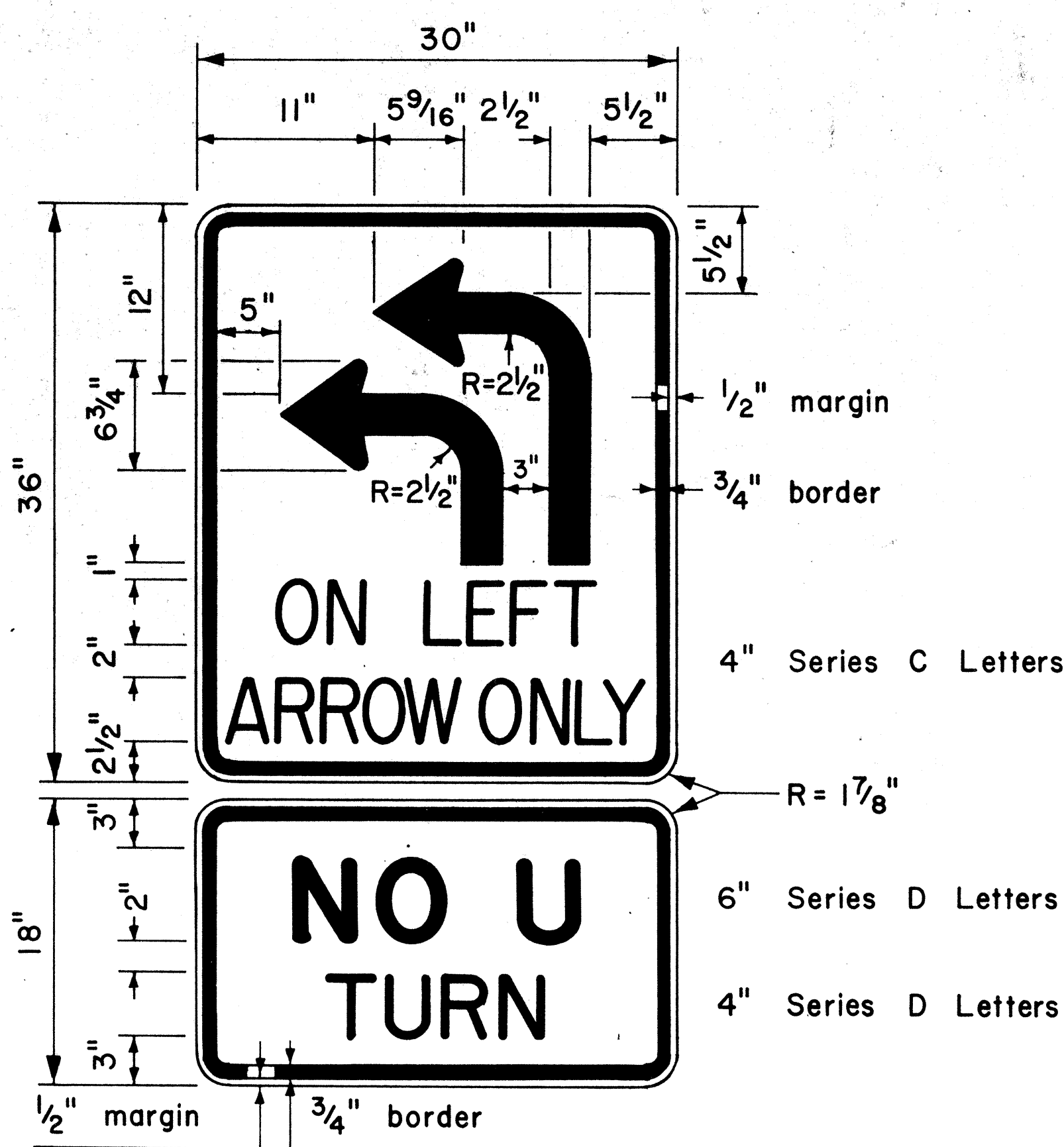
4" Series D Letters
RI7-2



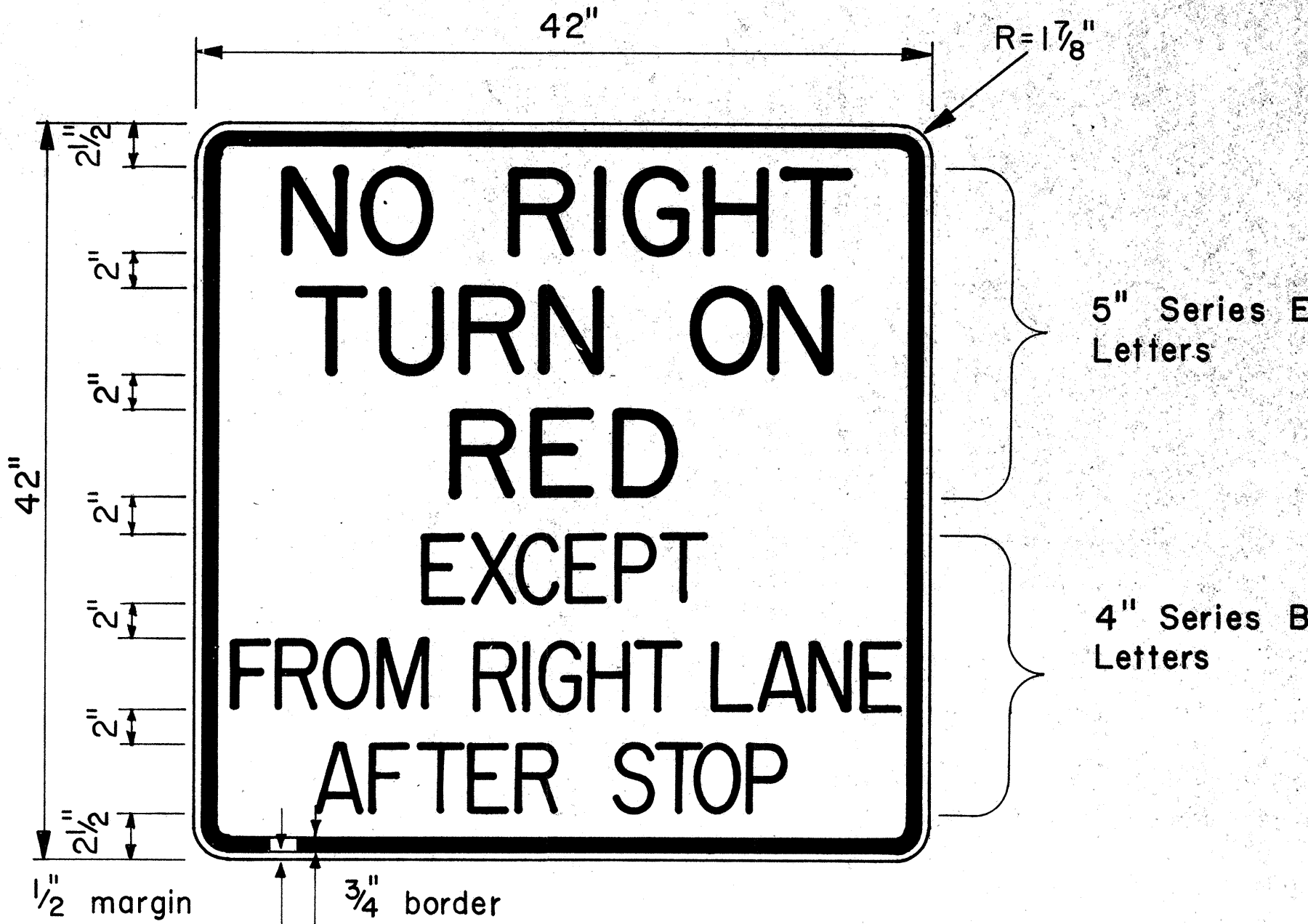
4" Series D Letters
R3-4b



RI7-3



RI7-4



RIO-11d

NO.	REVISION	APPROVED BY	DATE

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

APPROVED:
Harbor Zafschis 8/16/77
 ASSISTANT CHIEF, ENGINEERING DATE

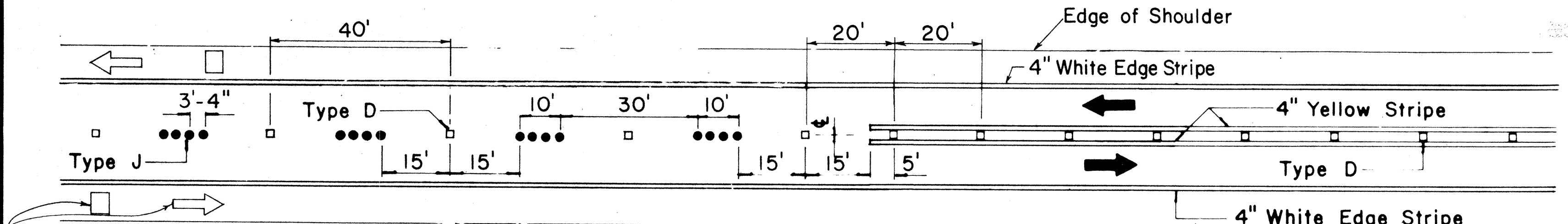
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
 MISCELLANEOUS
 INTERSECTION SIGNS

Scale: 1 1/2" = 1'-0" Date: Aug., 1977

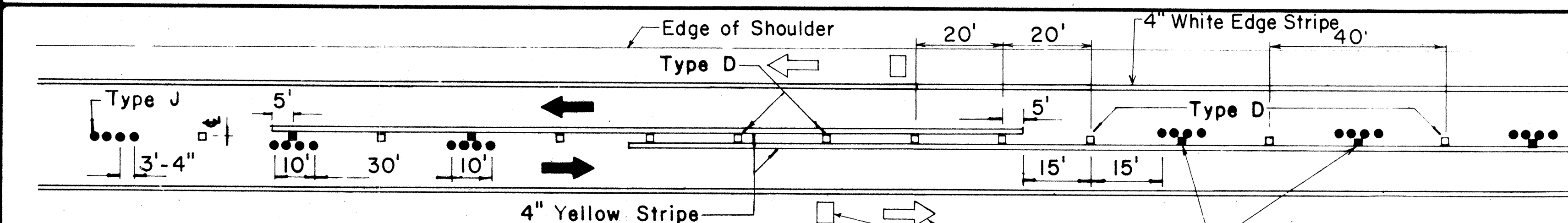
SHEET NO. 5 OF 12 SHEETS DT 112

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-01-84	1984	12	18



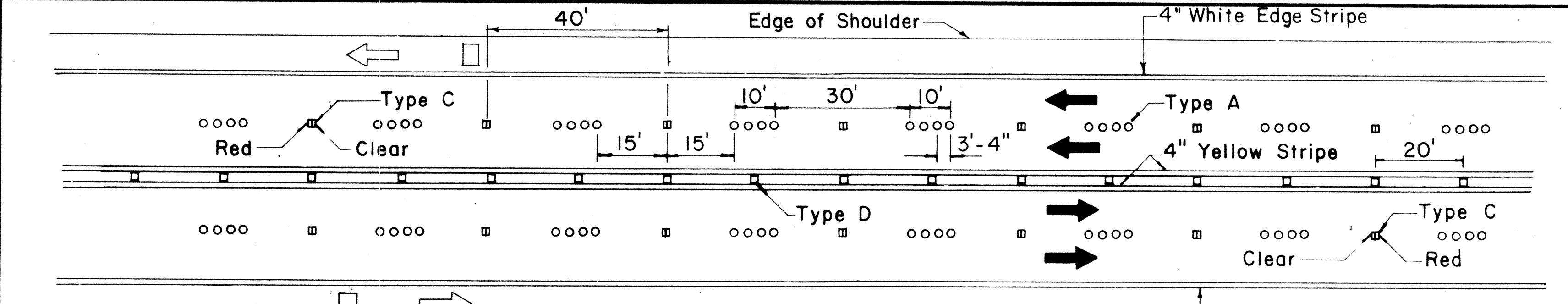
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PERMITTED AND PASSING PROHIBITED

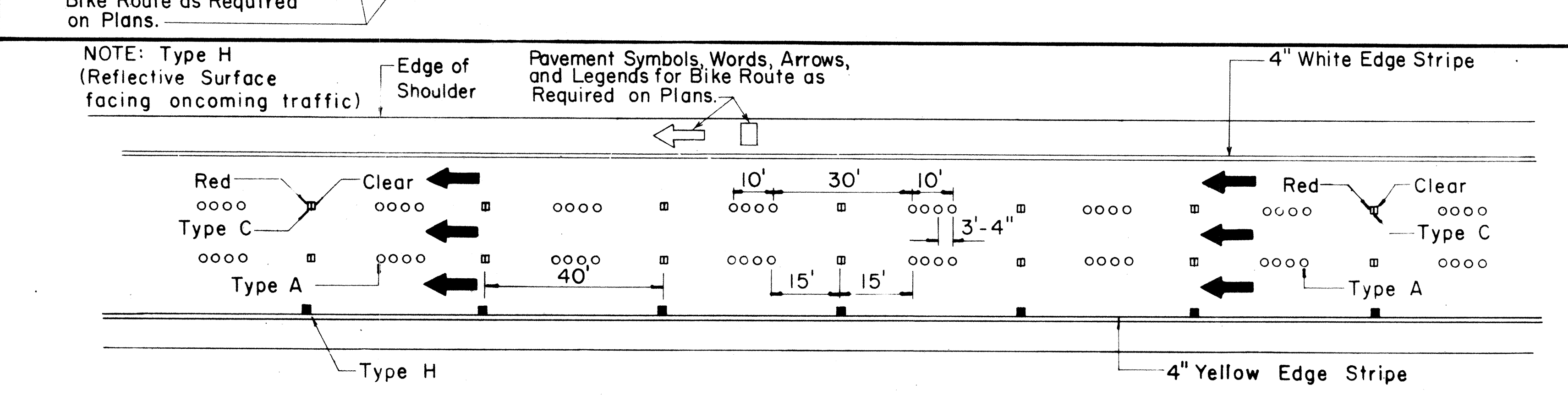


Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

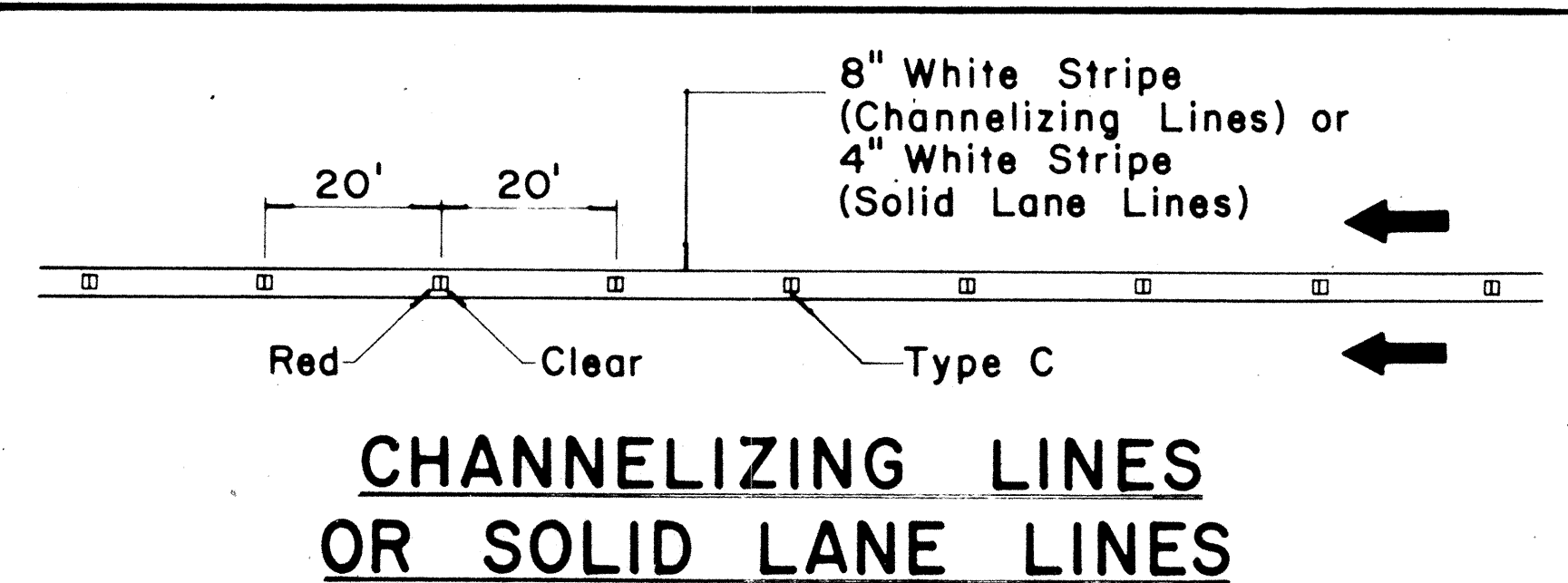
PASSING PROHIBITED ZONES



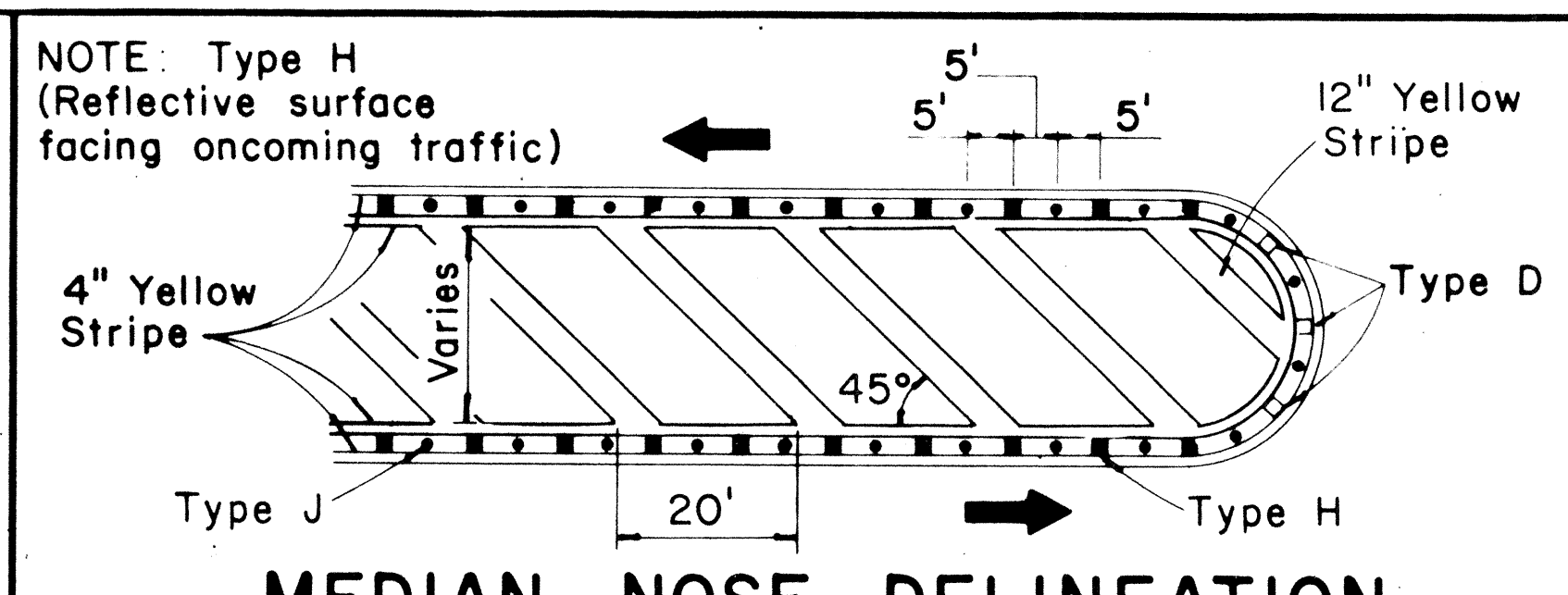
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.



NOTE: Type H (Reflective Surface facing oncoming traffic)



CHANNELIZING LINES OR SOLID LANE LINES



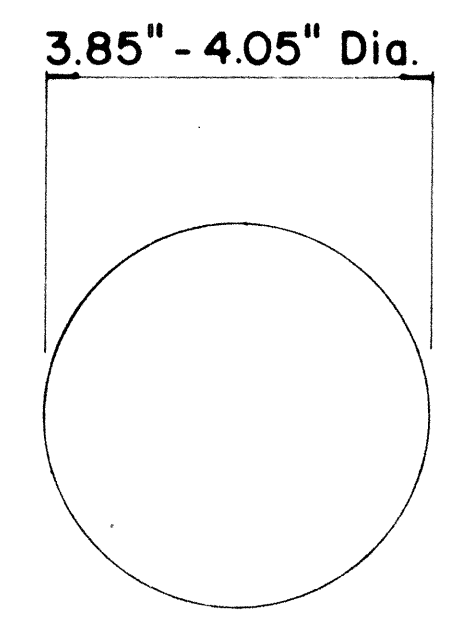
MEDIAN NOSE DELINEATION

TWO - LANE

MULTI - LANE

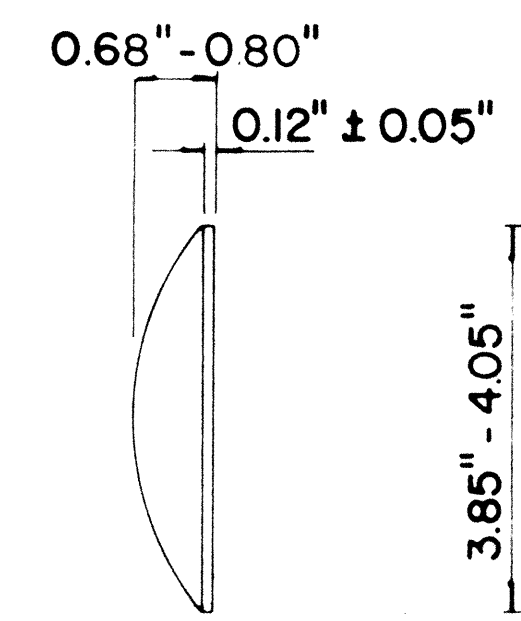
DIVIDED HIGHWAY AND FREEWAY

MISCELLANEOUS



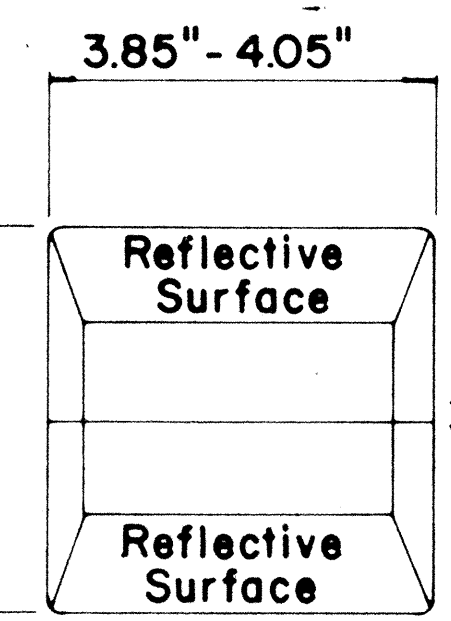
TYPE A

NON-REFLECTIVE WHITE MARKER



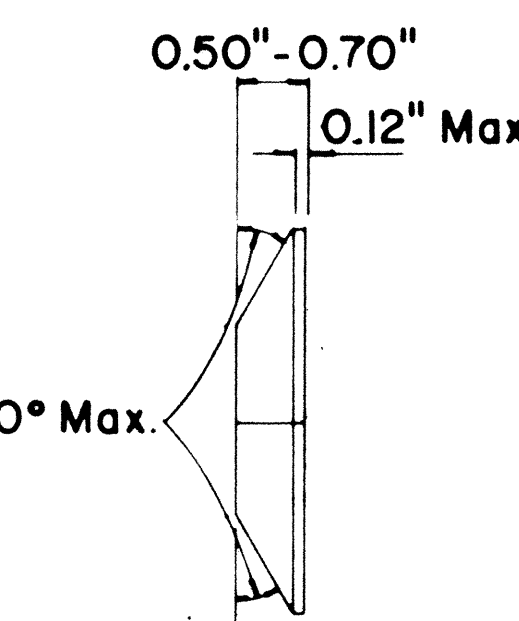
TYPE J

NON-REFLECTIVE YELLOW MARKER



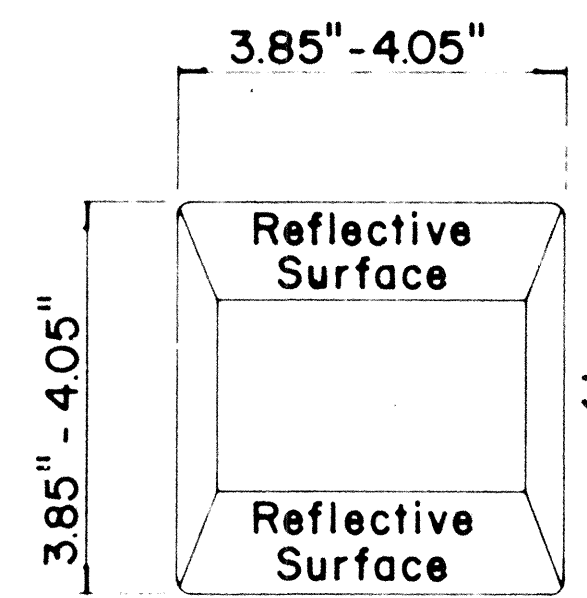
TYPE C

RED-CLEAR REFLECTIVE MARKER



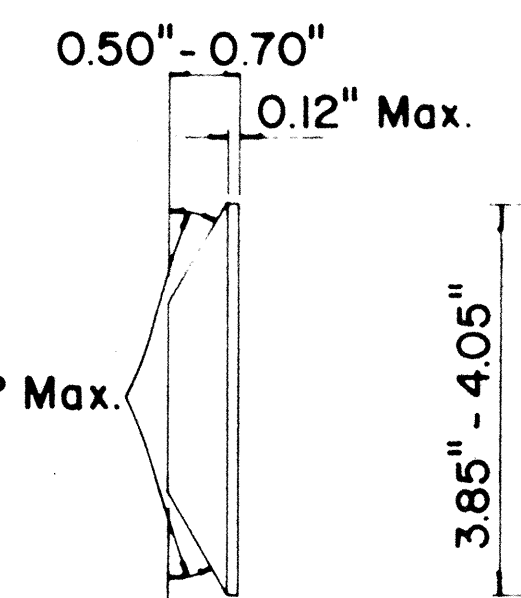
TYPE H

ONE-WAY YELLOW REFLECTIVE MARKER



TYPE D

TWO-WAY YELLOW REFLECTIVE MARKER



TYPE H

ONE-WAY YELLOW REFLECTIVE MARKER

GENERAL NOTES

1. Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
2. 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.
3. Edge lines shall not be continued through intersections and shall not be broken for driveways unless otherwise shown or directed.

LEGEND

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

APPROVAL RECOMMENDED:

Eiichi Tanaka
TRAFFIC ENGINEER

7/21/78
DATE

APPROVED:

Harbert J. Zerkow
ASSISTANT CHIEF, ENGINEERING

1/24/78
DATE

No	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.C.	1/24/78
2	Delete Type A Markers from Bike Route Delineation.	H.C.	10/15/79
3	Added General Note 3. Revised left edge stripe.	H.C.	9-28-83

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

Not to Scale July 1978

SHEET No. 6 OF 12 SHEETS DT 300

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-01-84	1984	13	18

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:
Herbert S. Zaksch 5/2/78
ASSISTANT CHIEF, ENGINEERING DATE

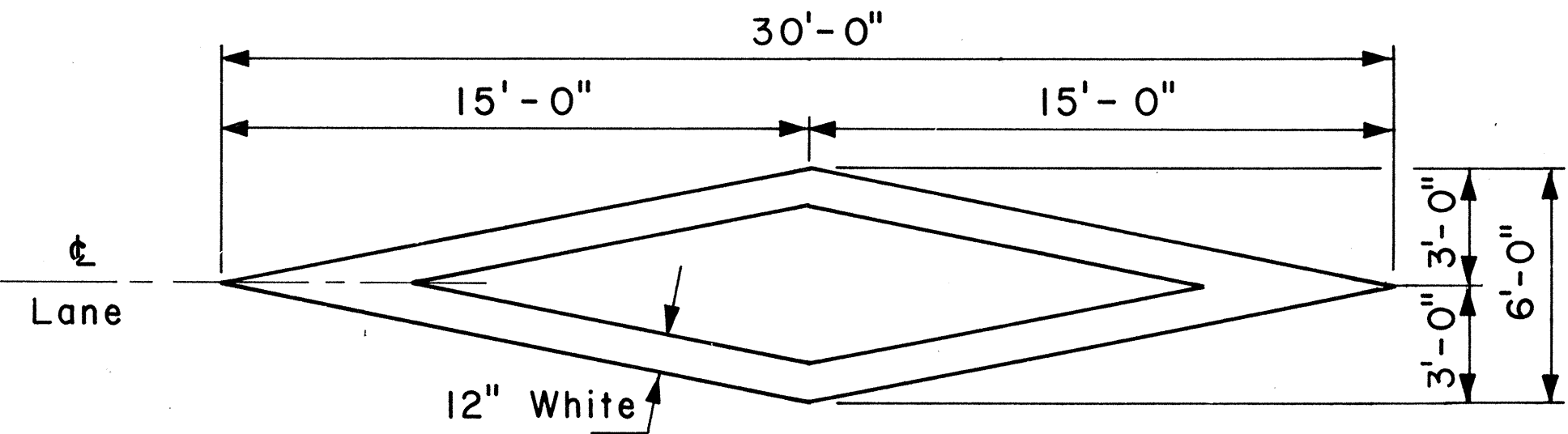
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

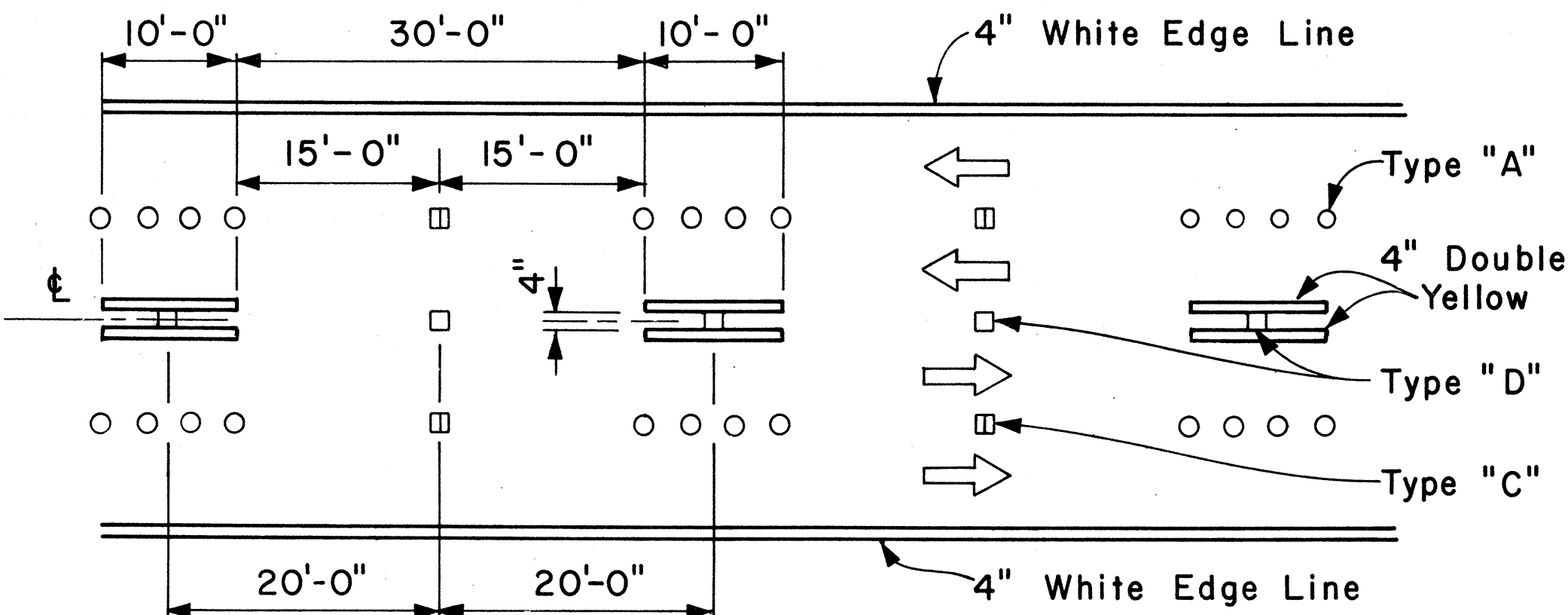
MISCELLANEOUS
PAVEMENT MARKINGS

Scale: Not to Scale Date: April, 1978

SHEET NO. 7 OF 12 SHEETS DT 302

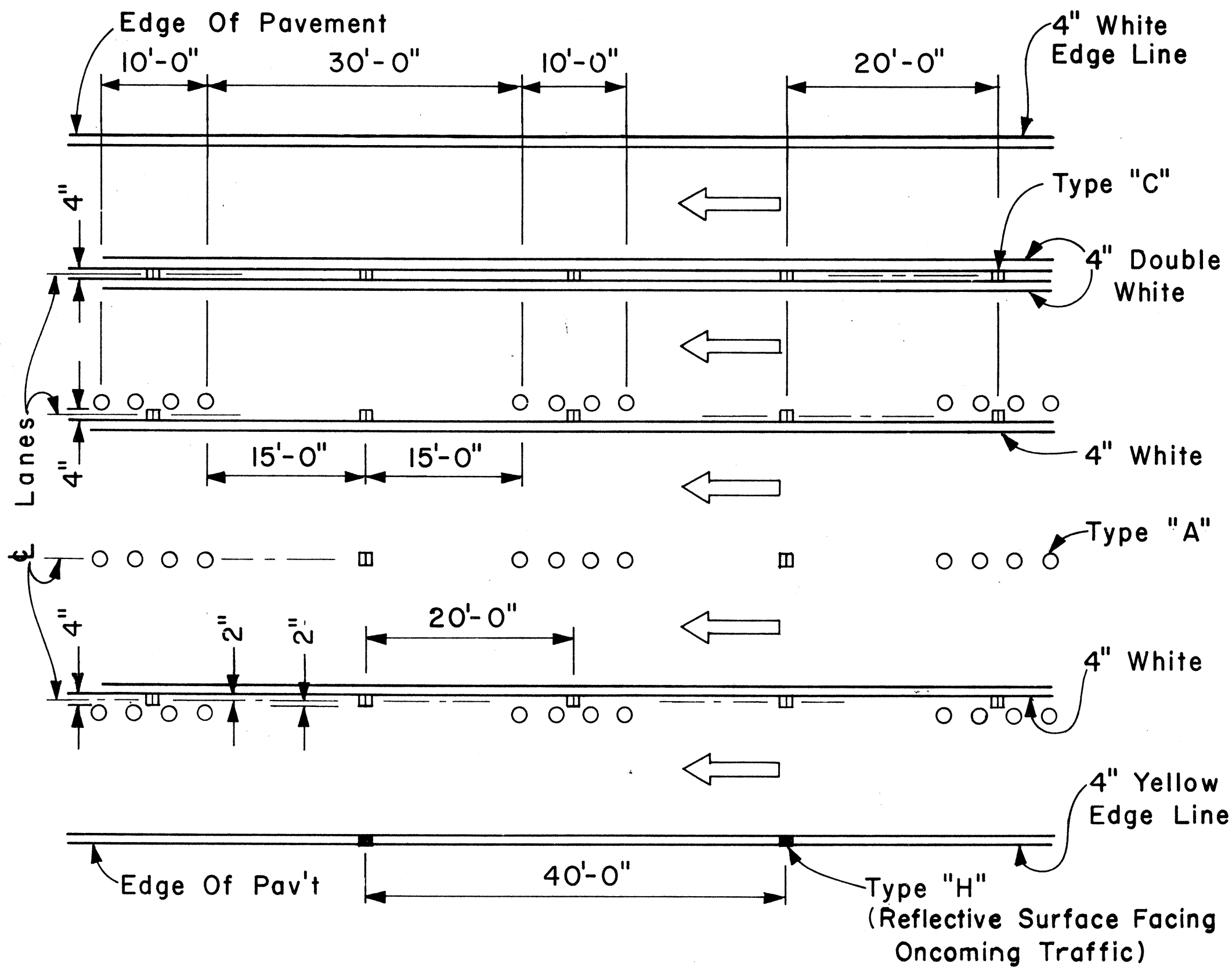


PAVEMENT DIAMOND

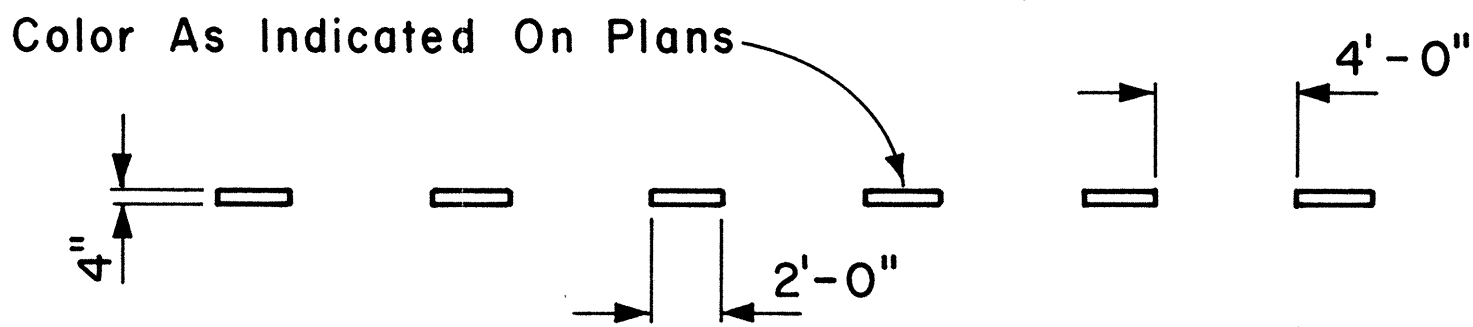


NOTE: Traffic Cone Usage Required.

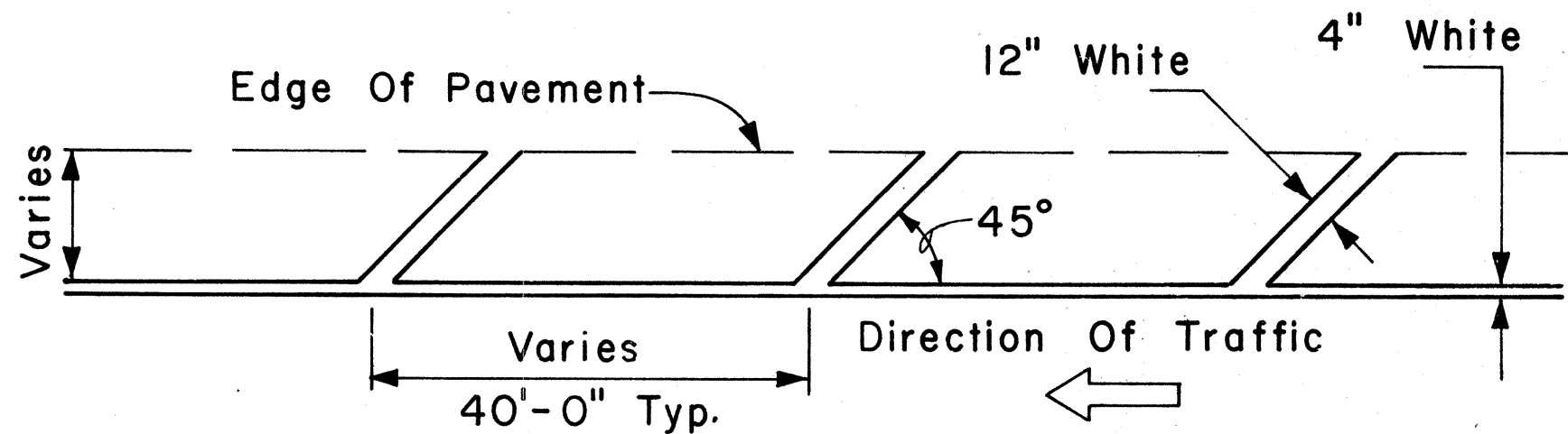
MULTI-LANE
REVERSIBLE LANES



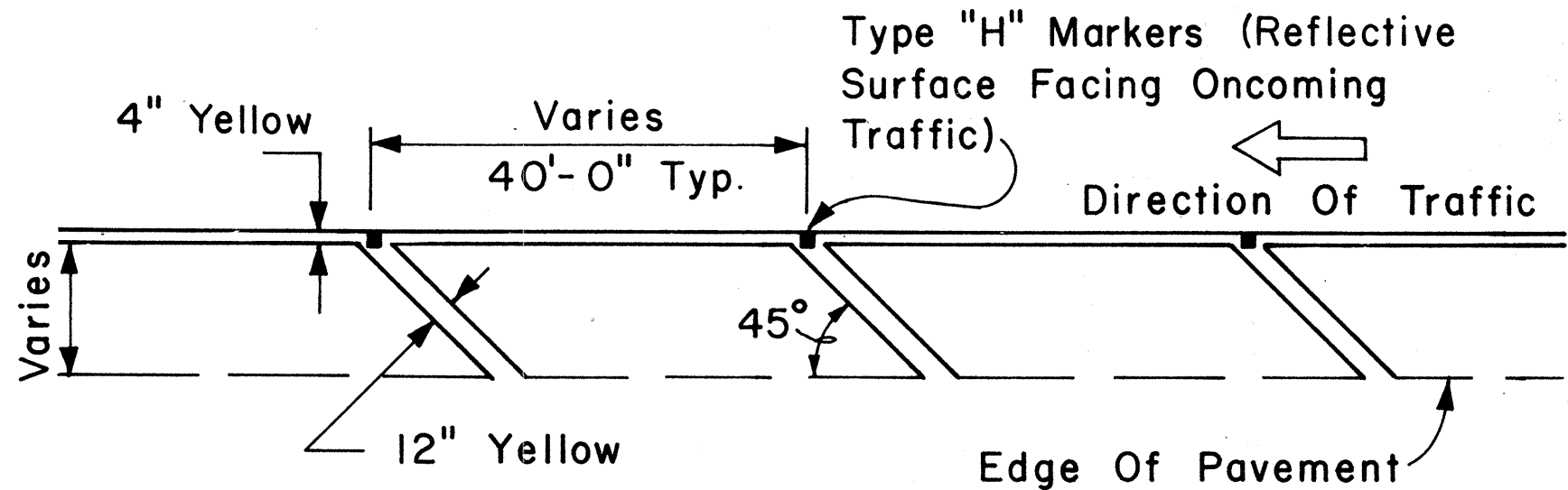
MULTI-LANE
LANE CHANGE RESTRICTION ZONES



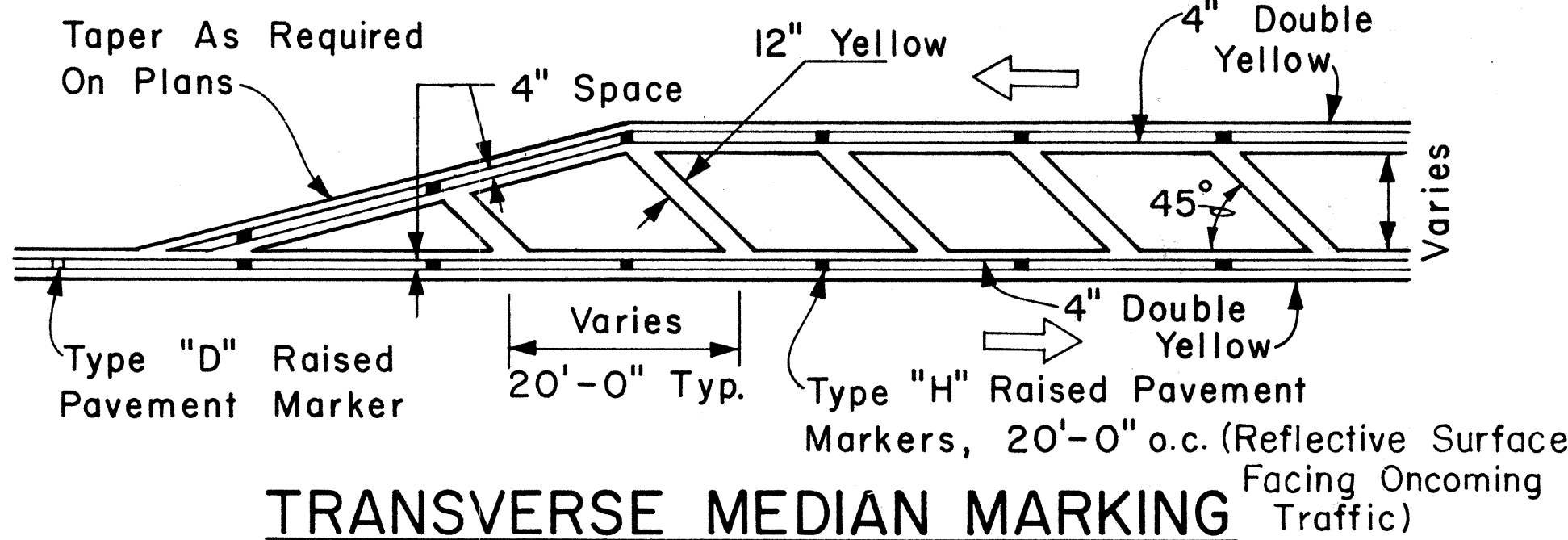
4" GUIDE LINE



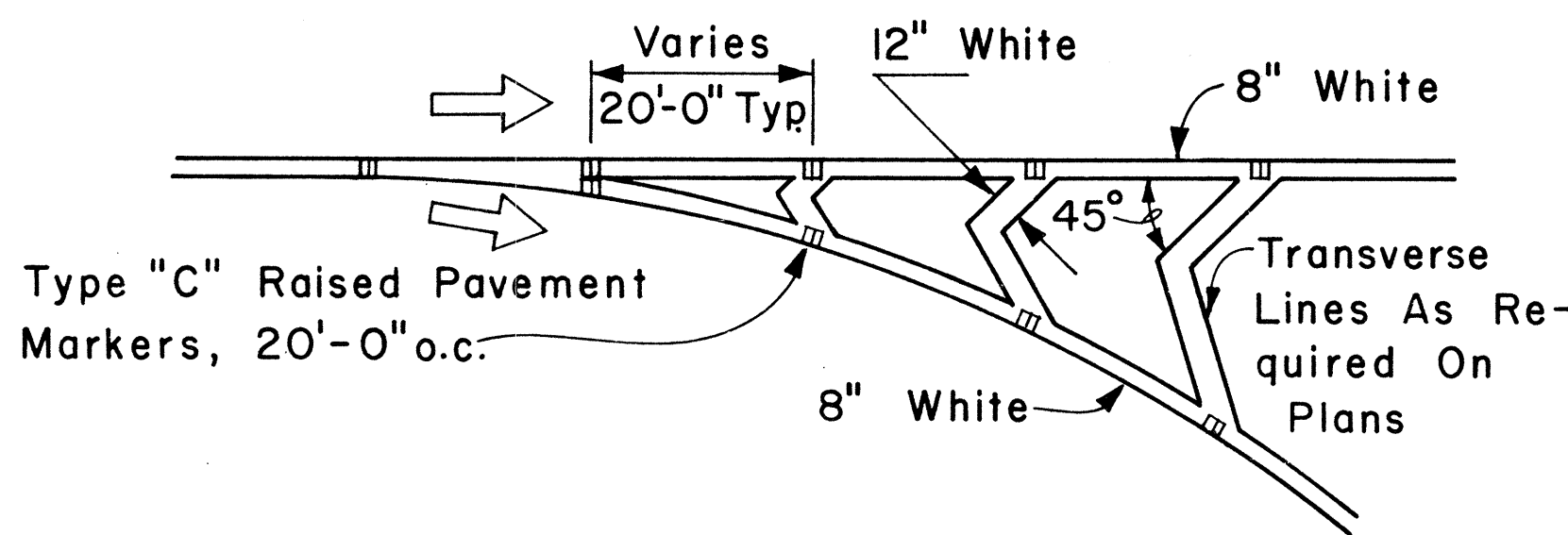
TRANSVERSE RIGHT SHOULDER MARKING



TRANSVERSE LEFT SHOULDER MARKING



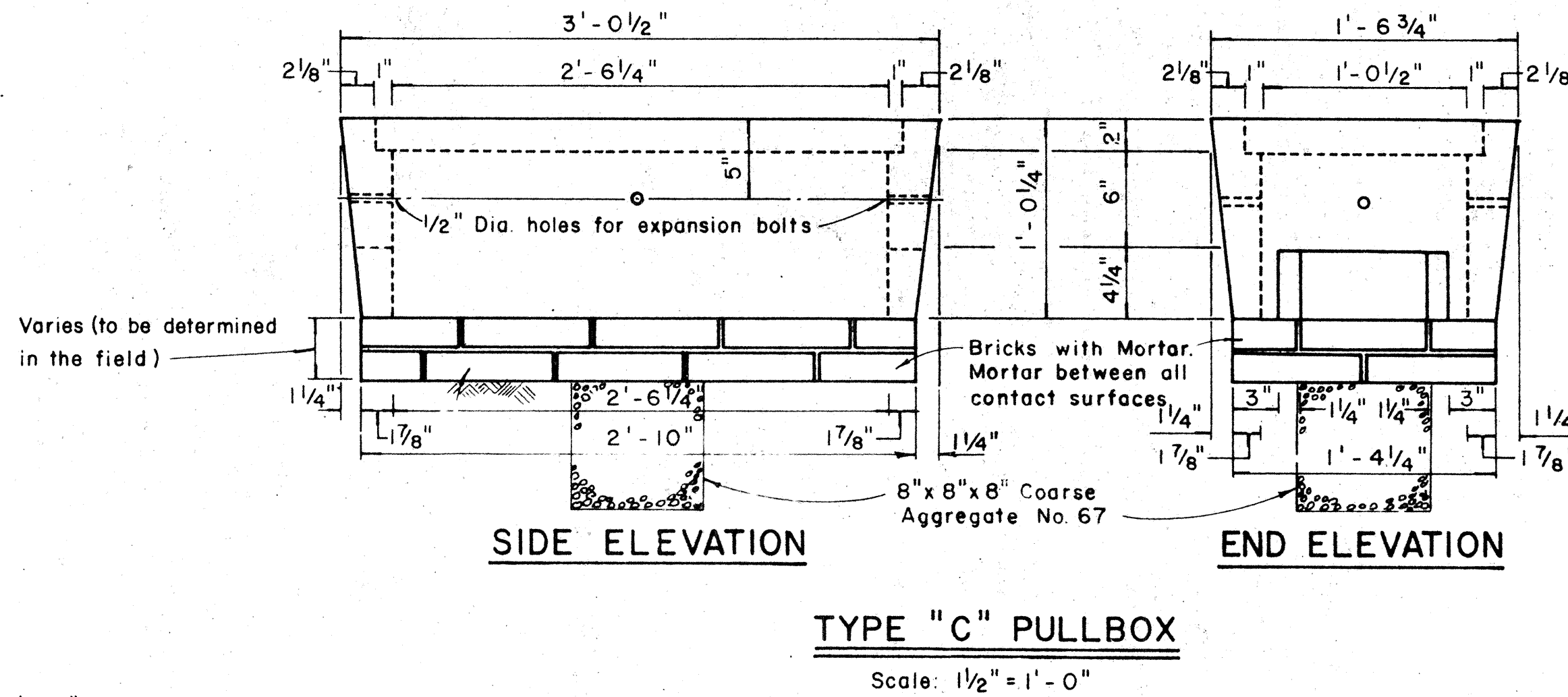
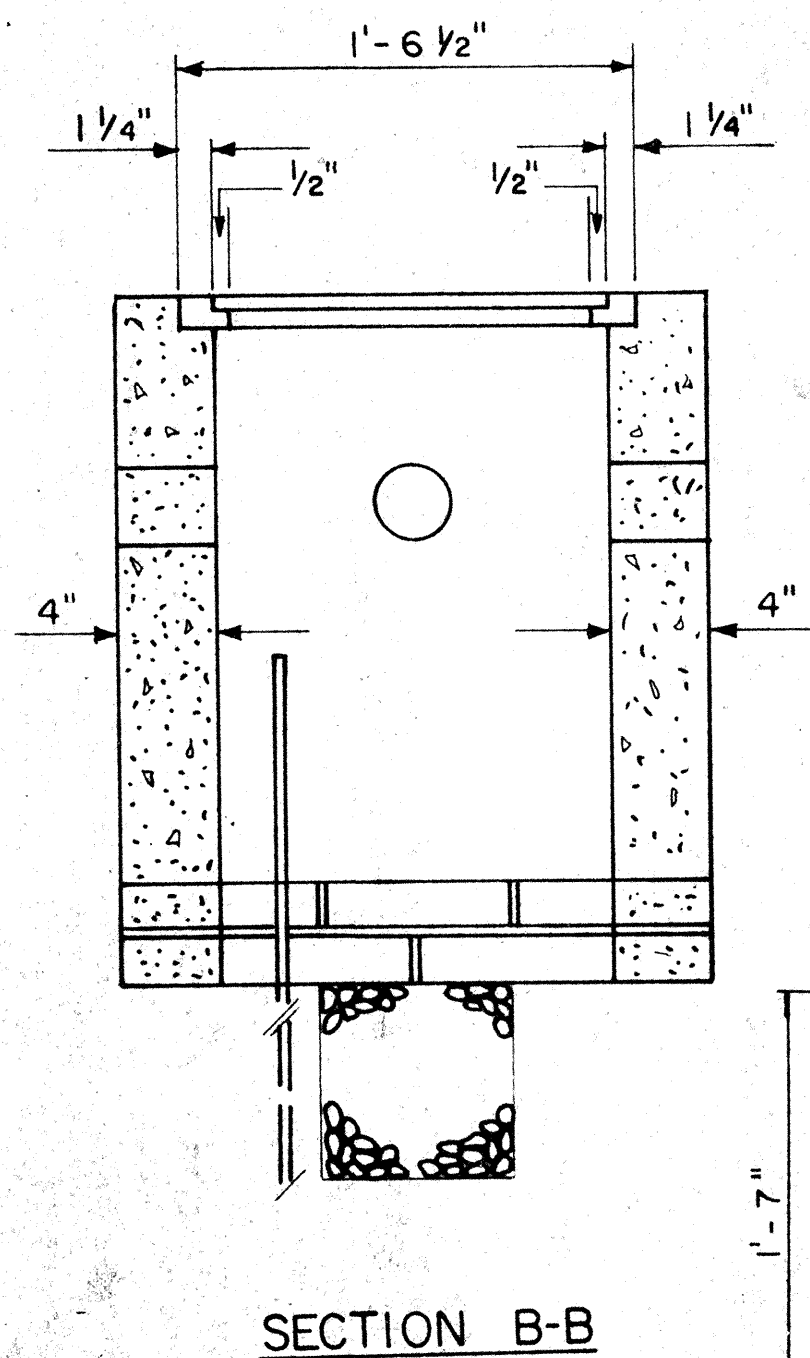
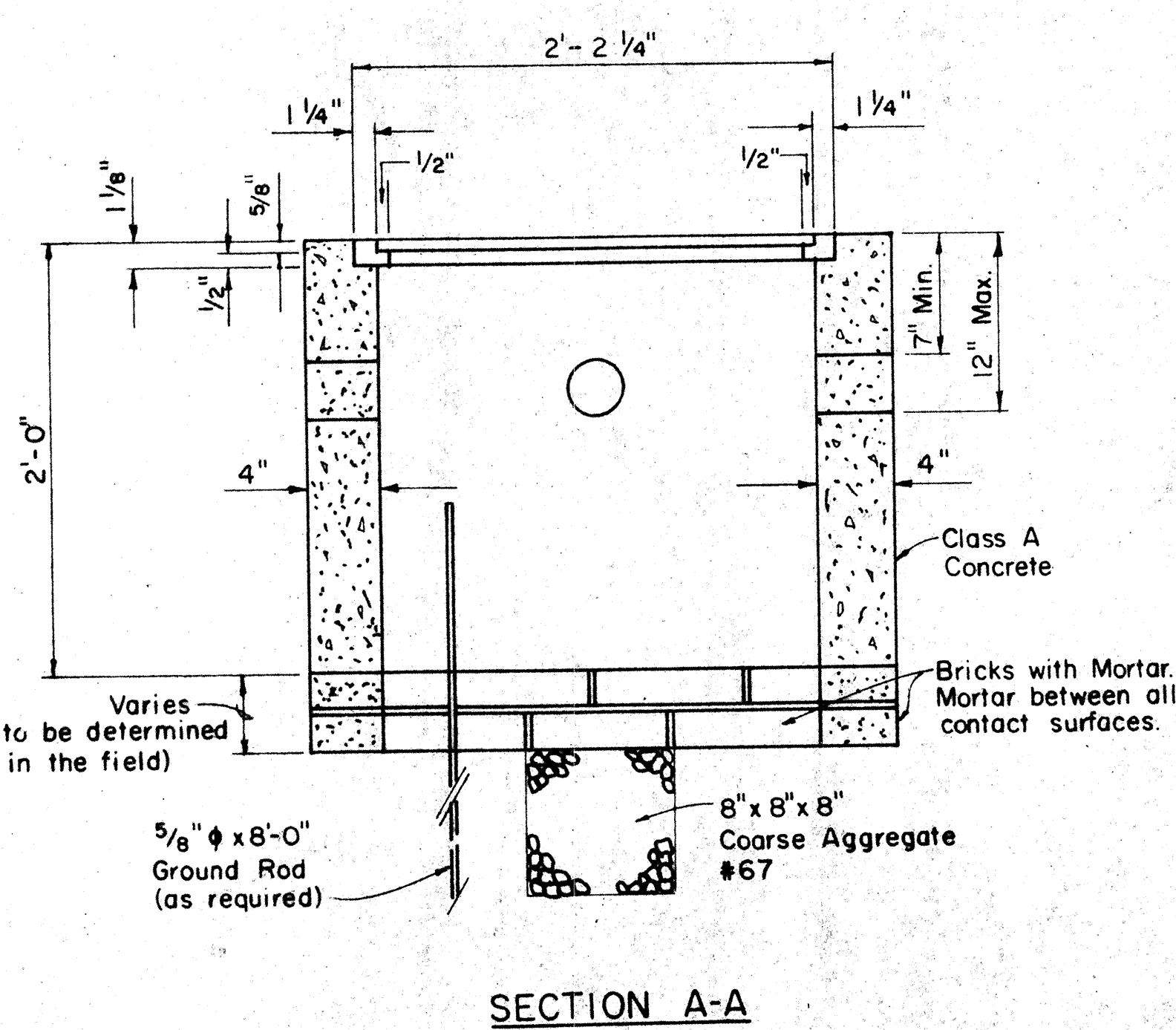
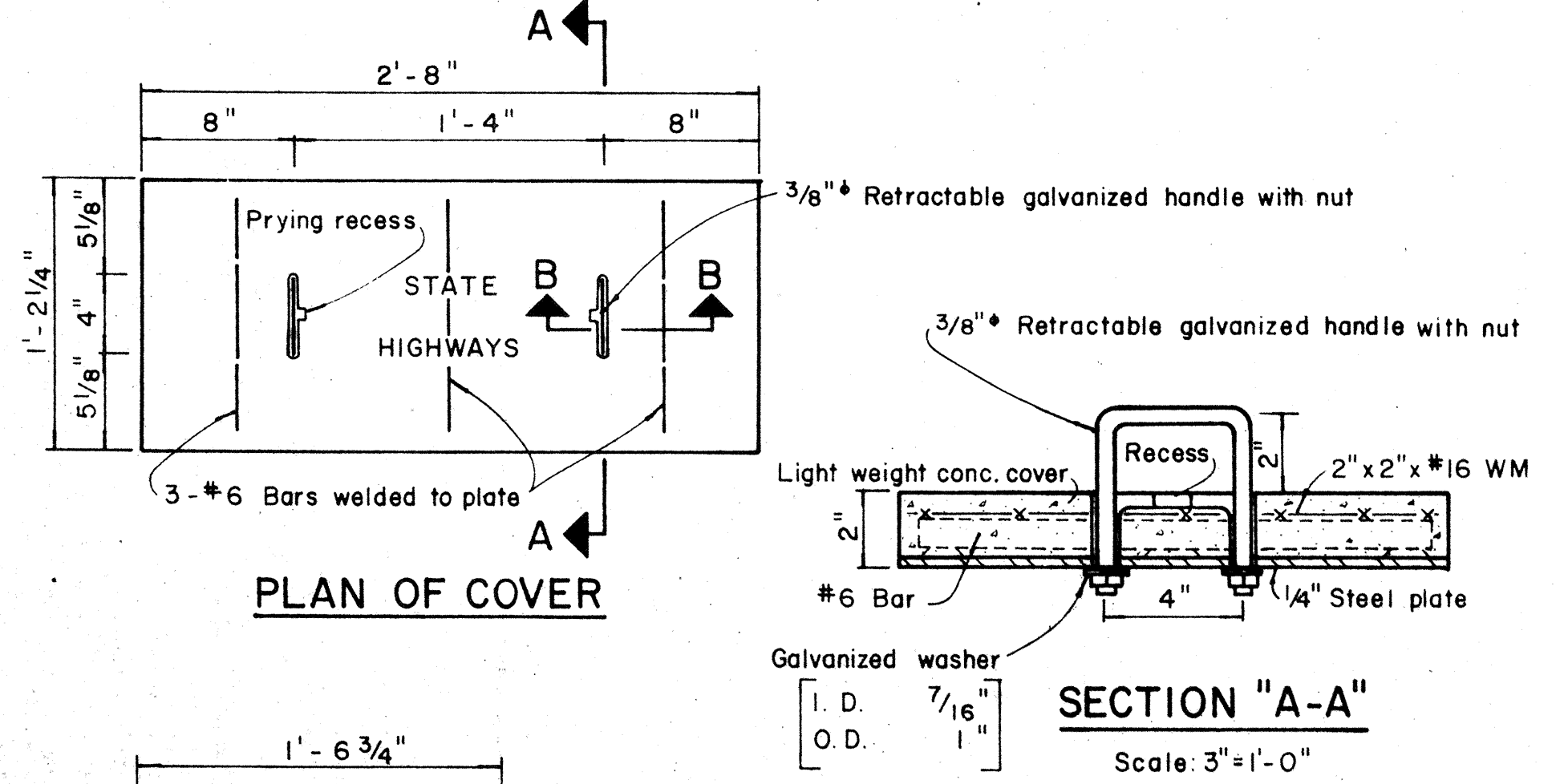
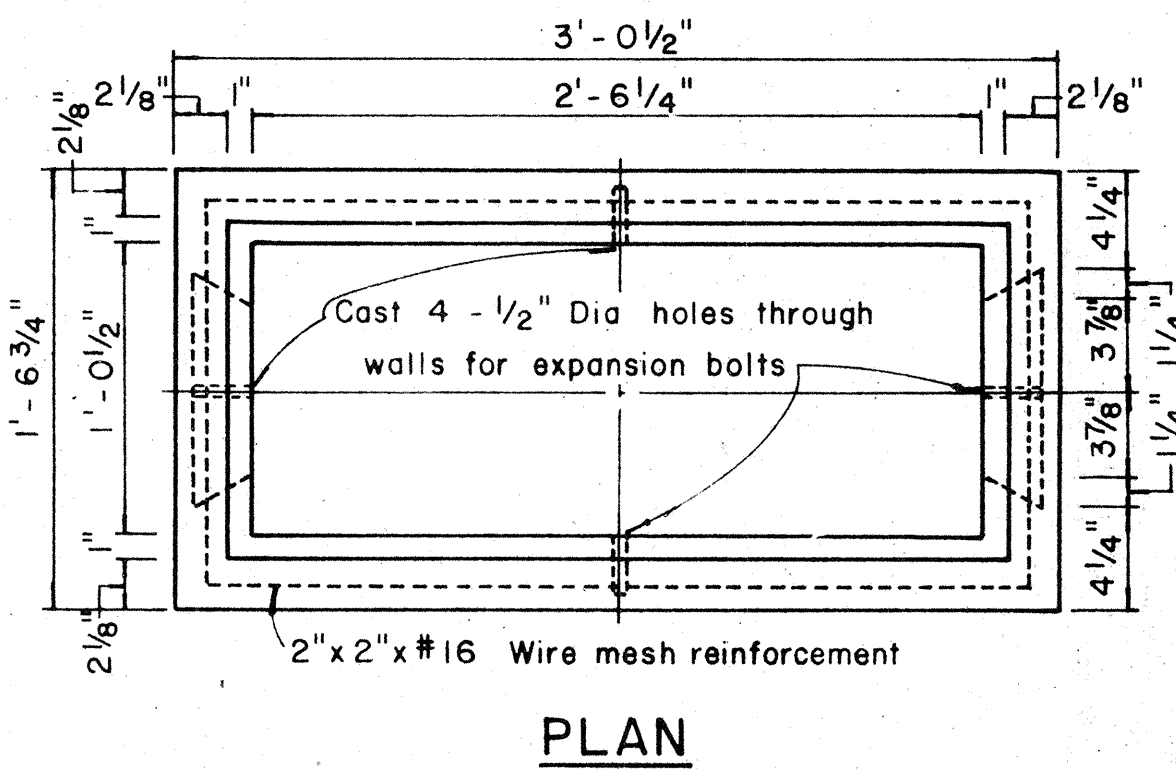
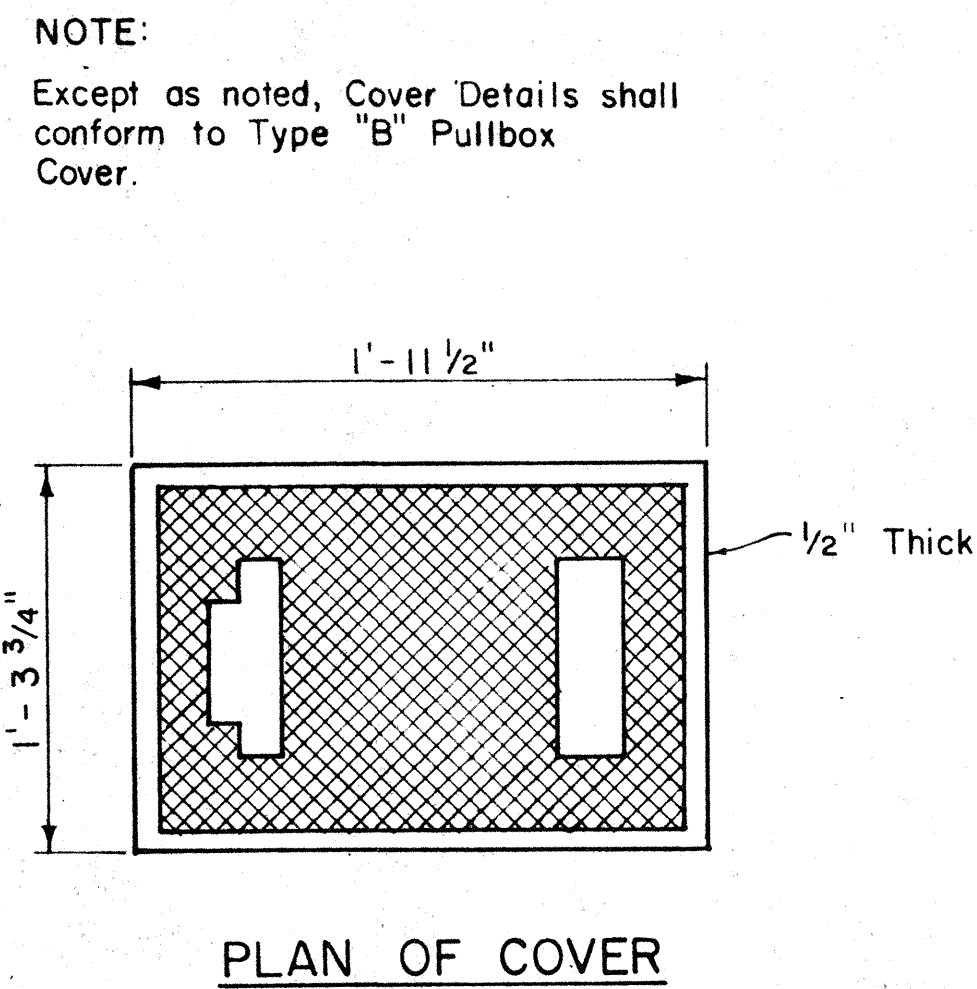
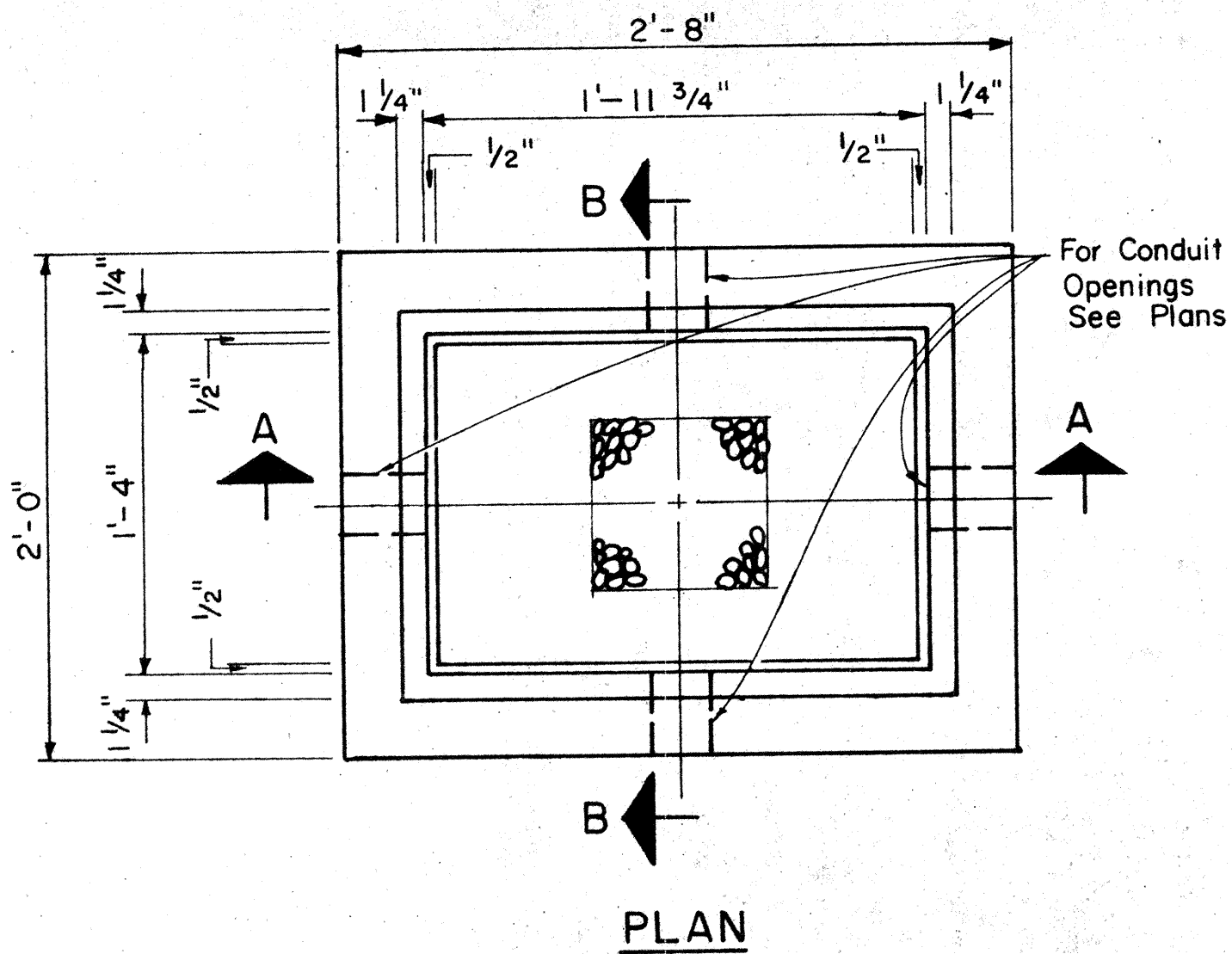
TRANSVERSE MEDIAN MARKING



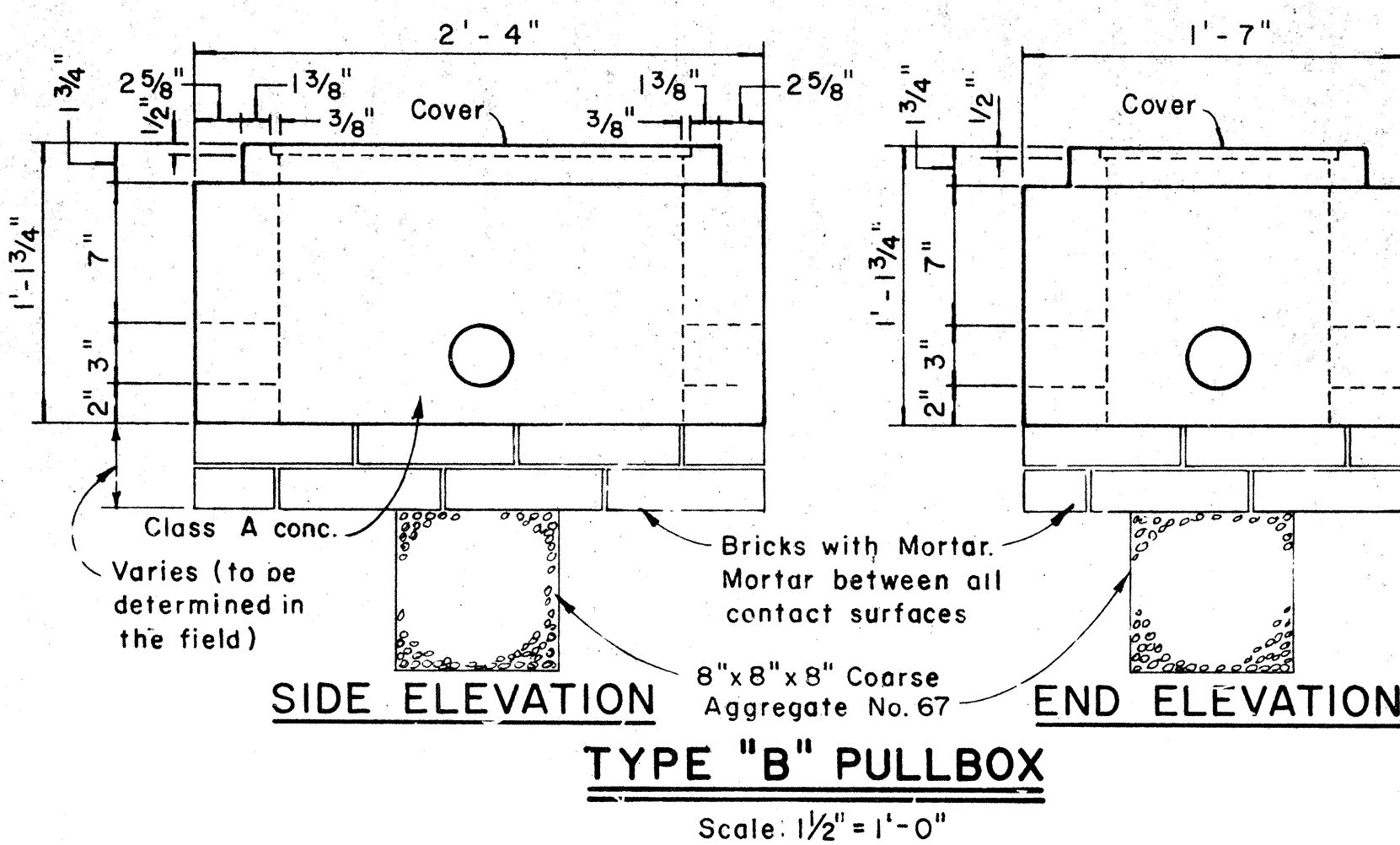
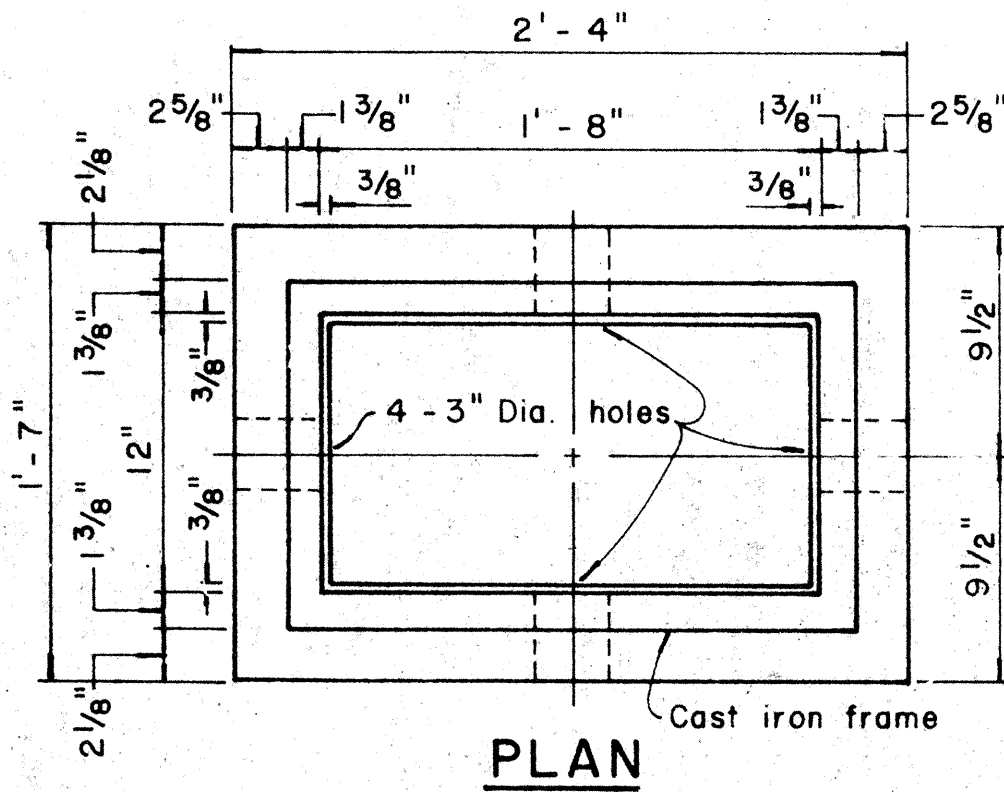
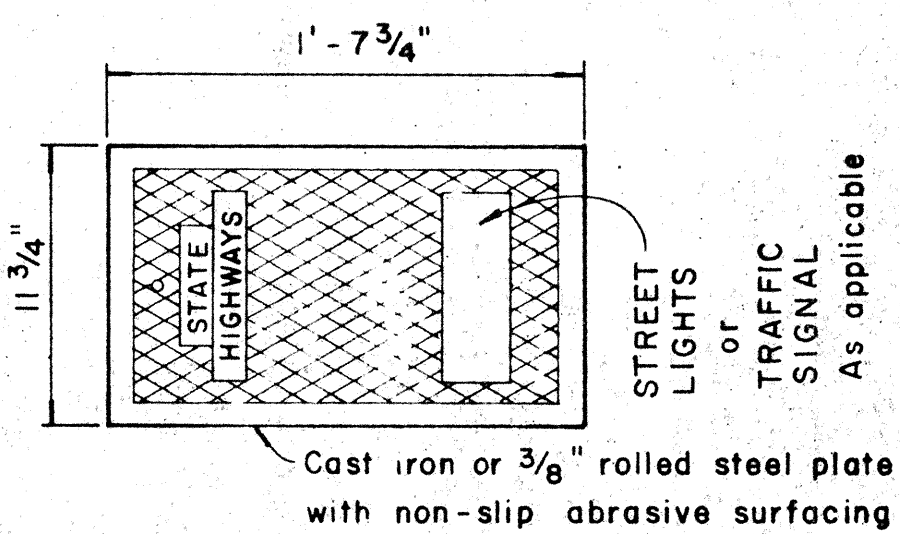
CHANNELIZING ISLAND

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

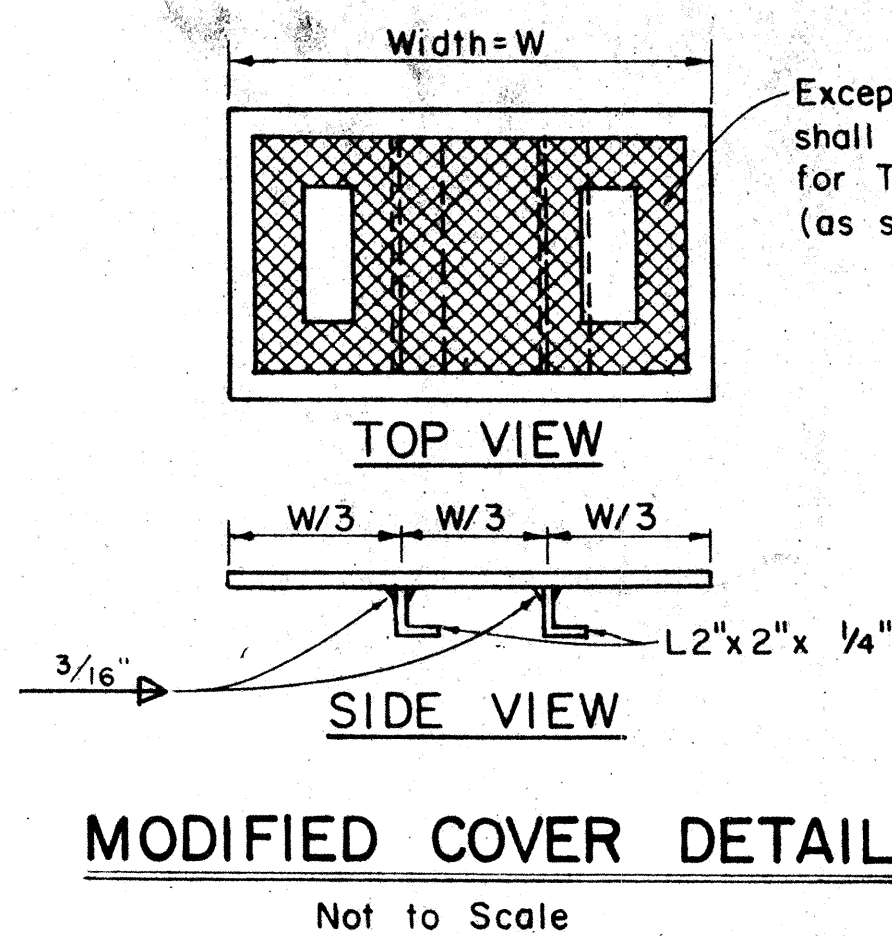
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-01-84	1984	16	18



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



DATE	BY
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
ORIGINAL PLAN	



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

APPROVAL RECOMMENDED:
TRAFFIC ENGINEER
12/29/69
DATE

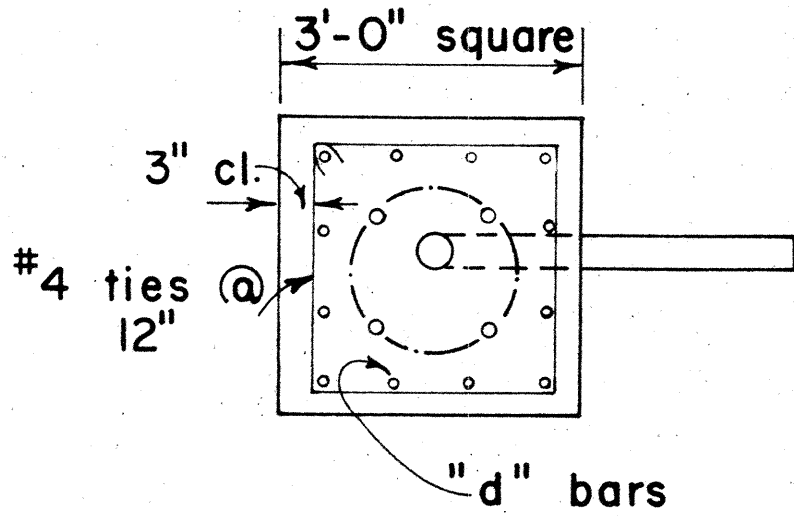
APPROVED:
ASSISTANT CHIEF, ENGINEERING
12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised Type B & C Pullbox details	H.T.	8-5-70
2	Revised Type "A" Pullbox & Added Modified Cover.	H.T.	1-31-80

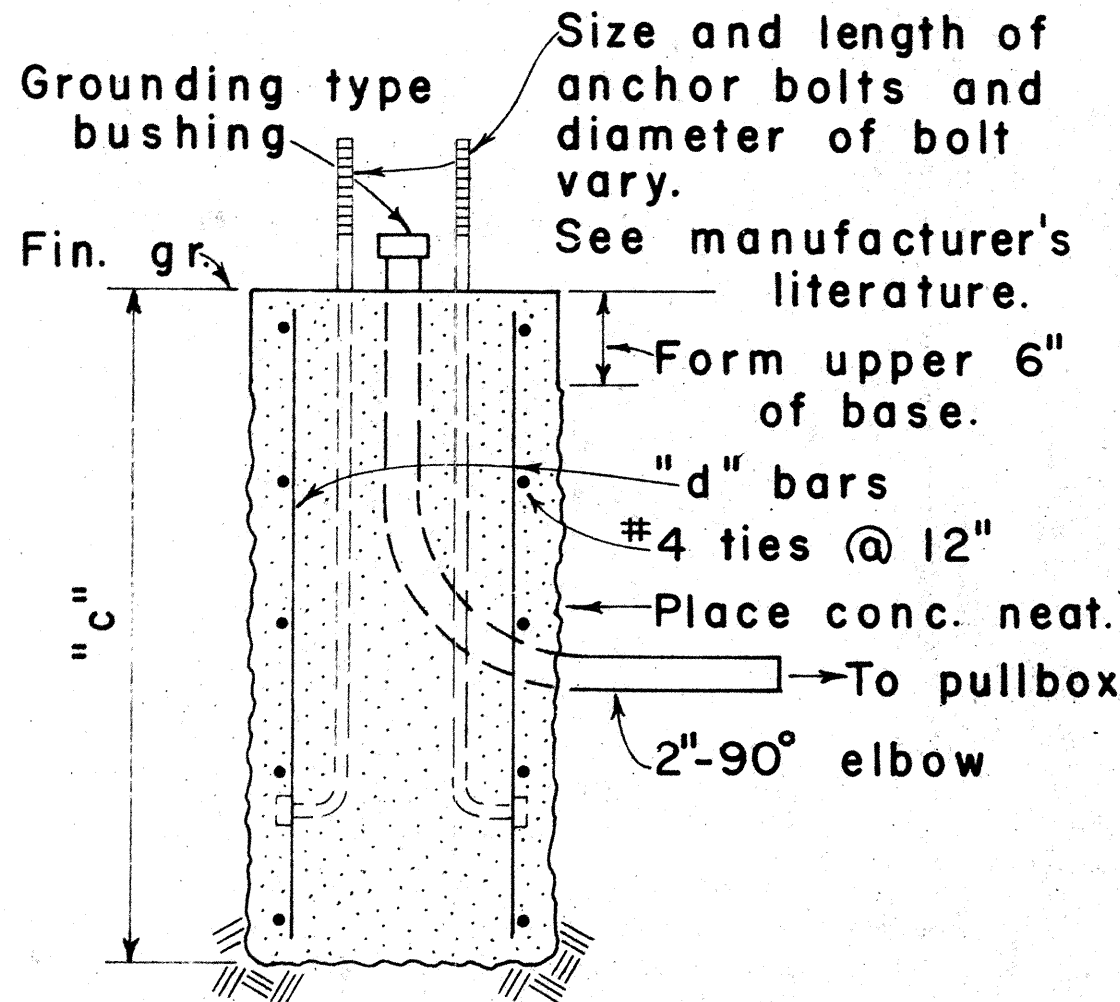
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STANDARD DETAILS PULLBOXES Scale as noted Date

SHEET No. 10 OF 12 SHEETS DT 401

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-01-84	1984	17	18



PLAN - SECTION

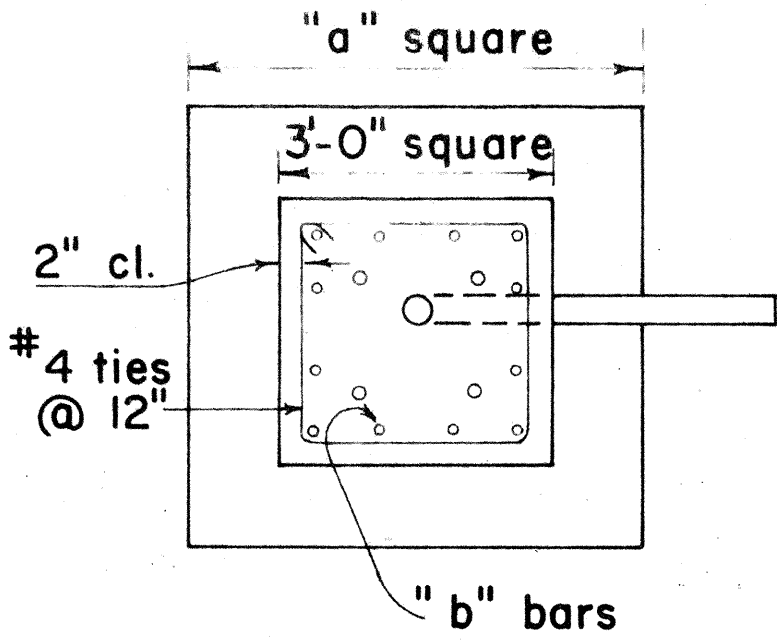


NOTE:
Concrete shall be Class B.

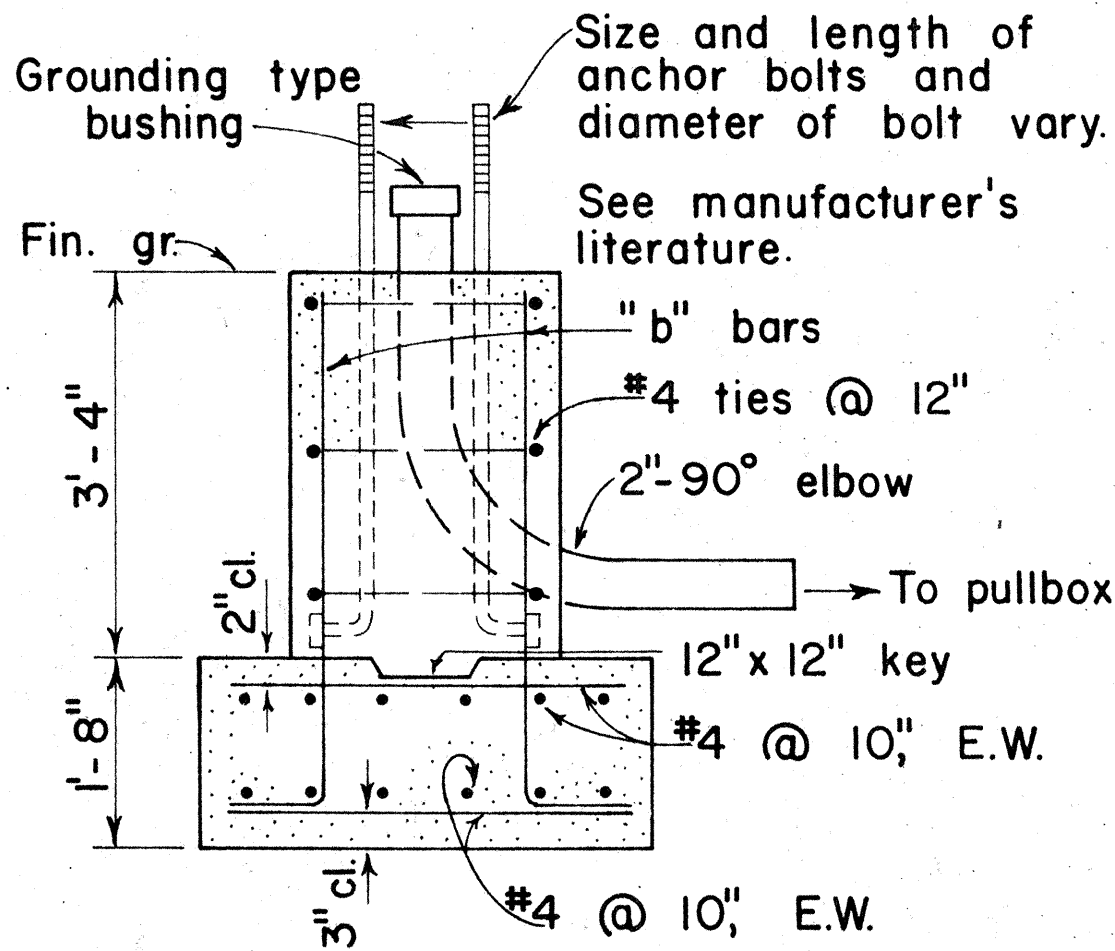
SECTION

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



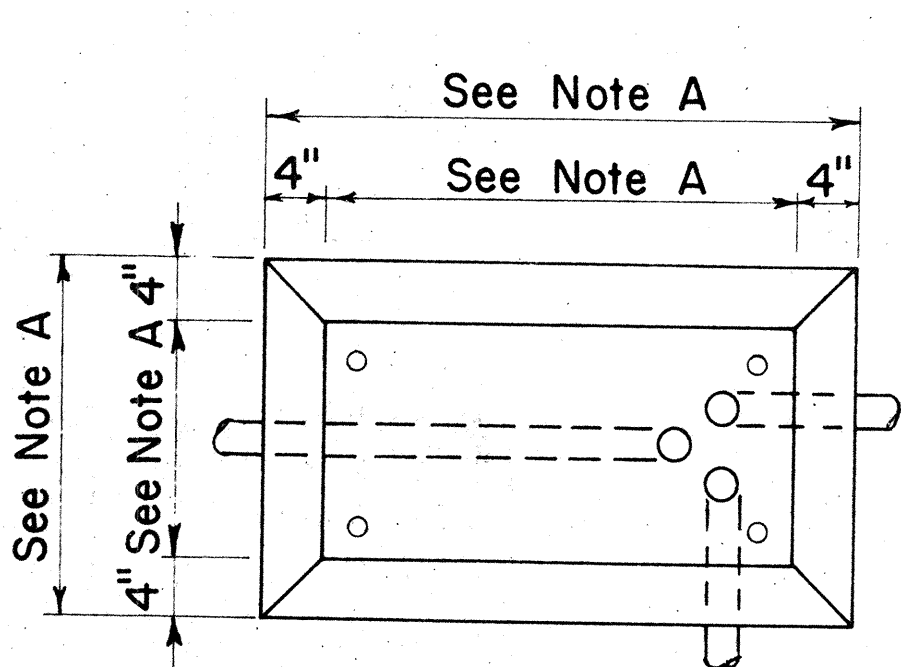
NOTE:
Concrete shall be Class B.

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

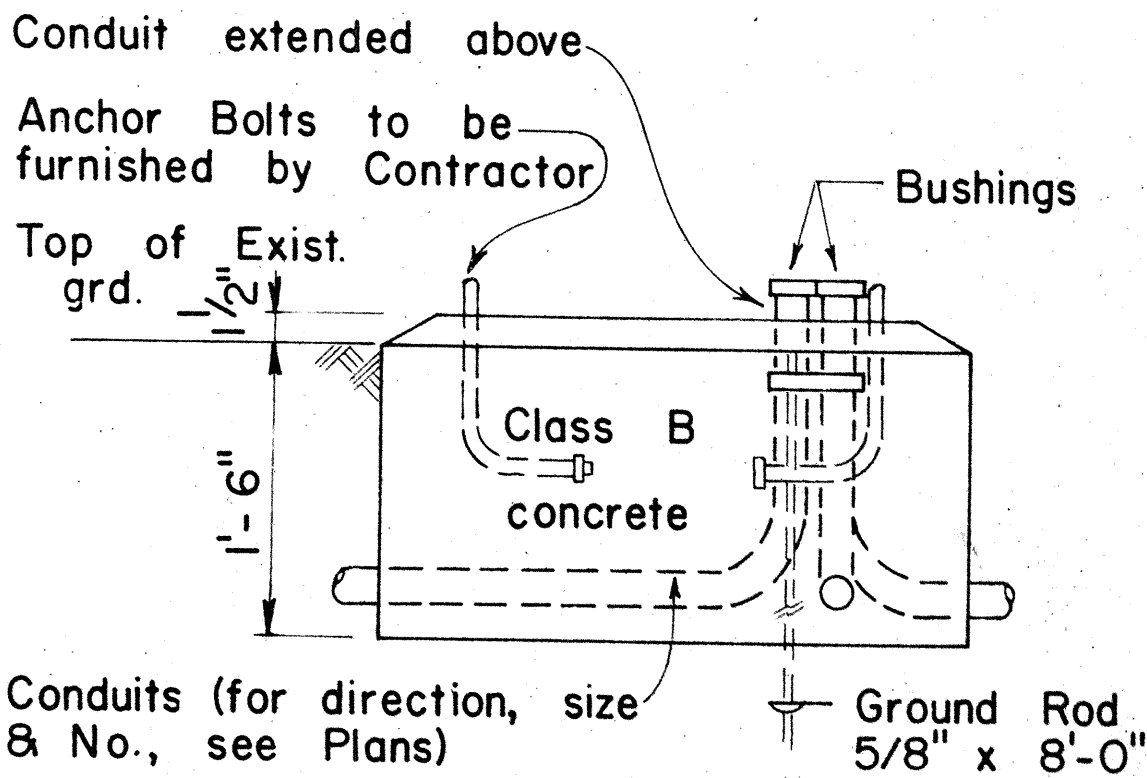
TYPE II A

FOOTING FOR MAST ARM STANDARD



PLAN

CONCRETE BASE FOR CONTROLLER CABINET



ELEVATION

- 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. R. R. 2-5-76
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

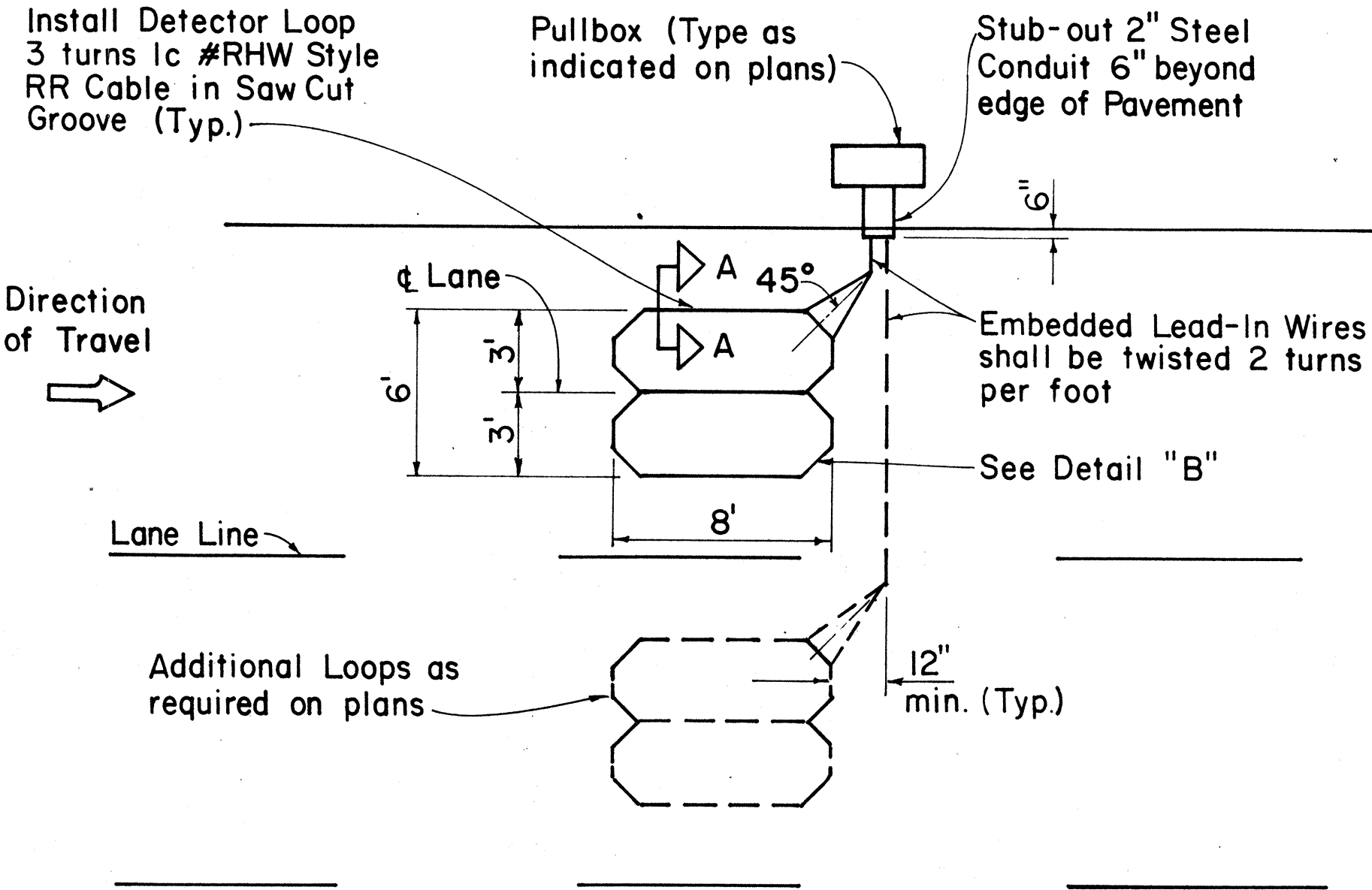
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS

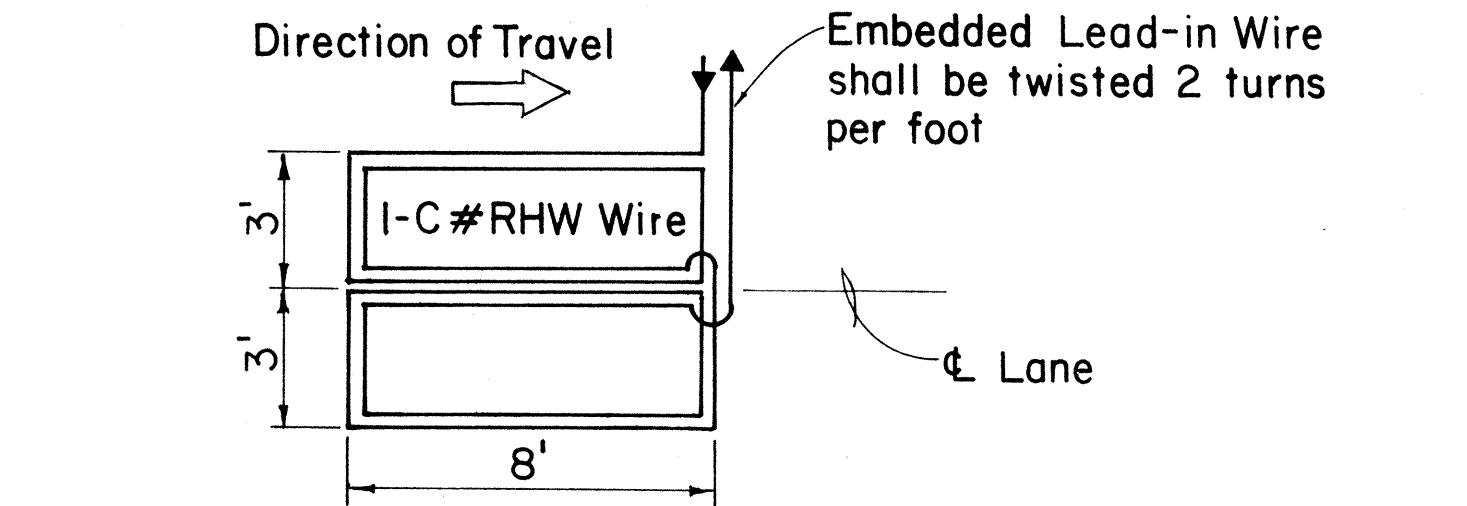
Not to Scale

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

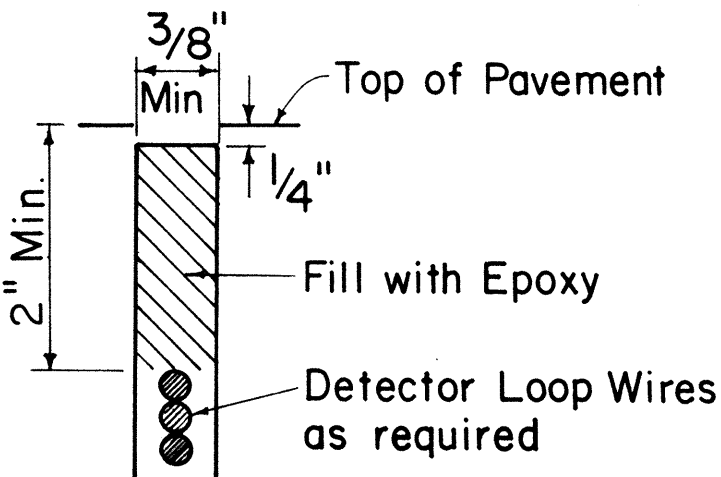
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-01-84	1984	18	18



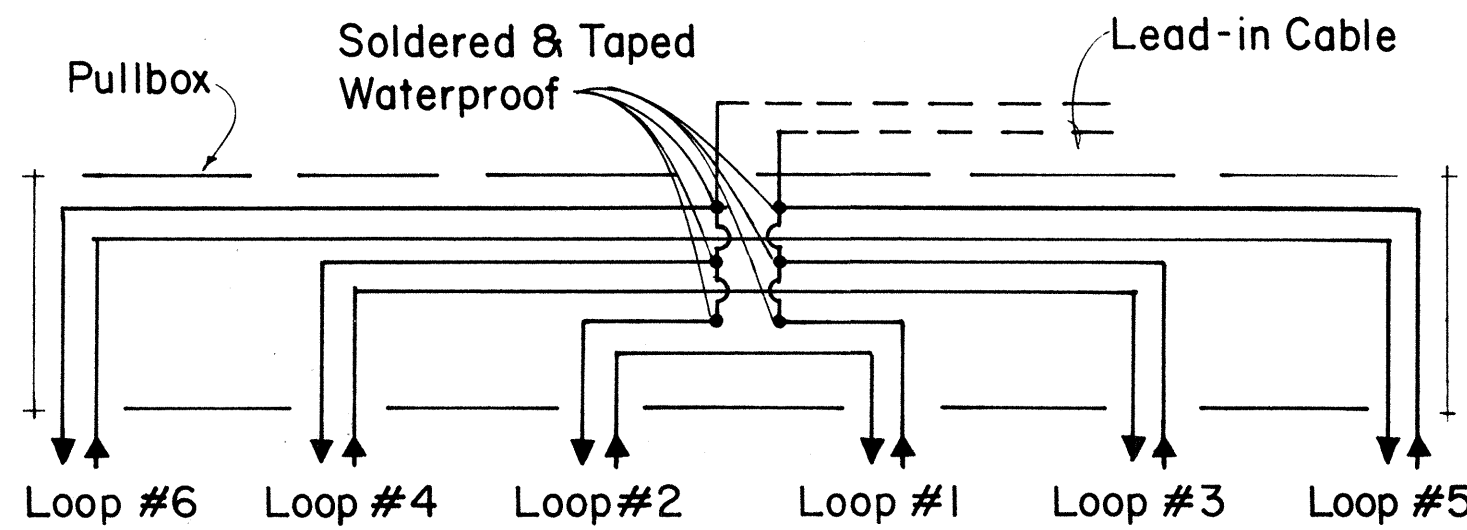
SINGLE LOOP LAYOUT



WIRING DIAGRAM



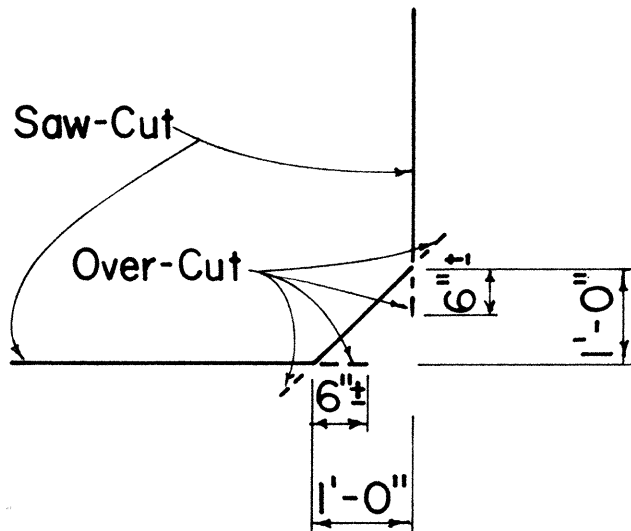
DETECTOR LOOP SAW-CUT SECTION A-A (TYPICAL)



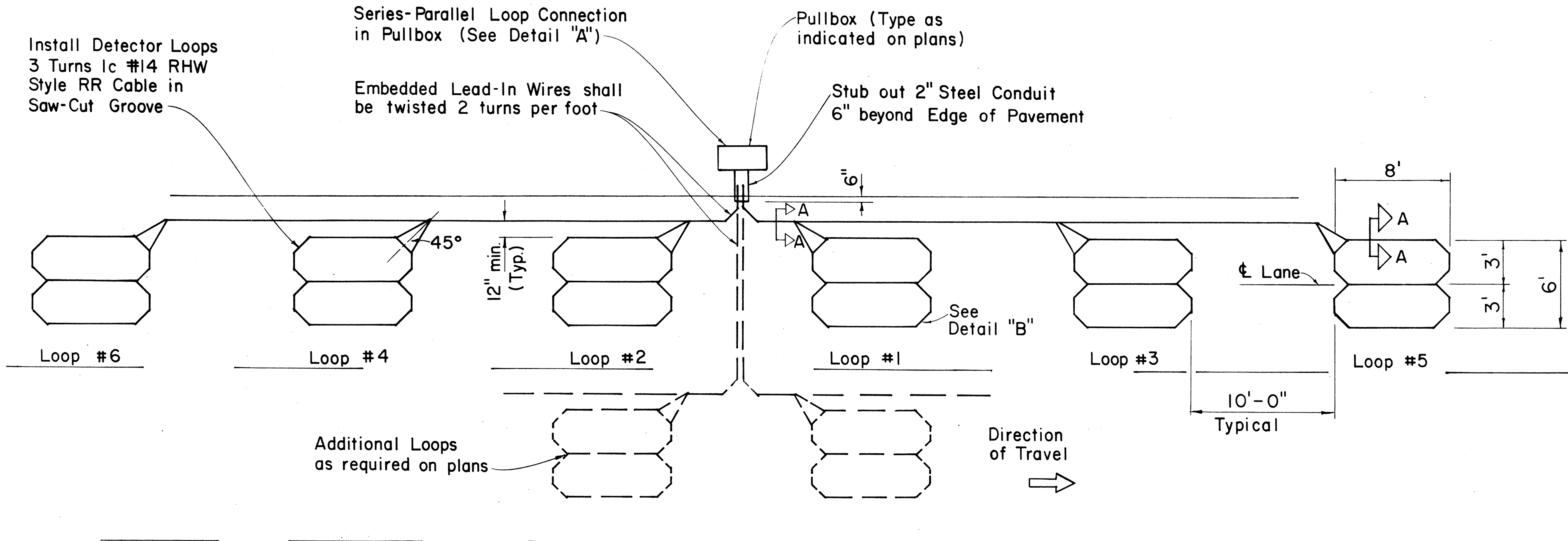
DETAIL "A"

TYPICAL SERIES-PARALLEL LOOP CONNECTION

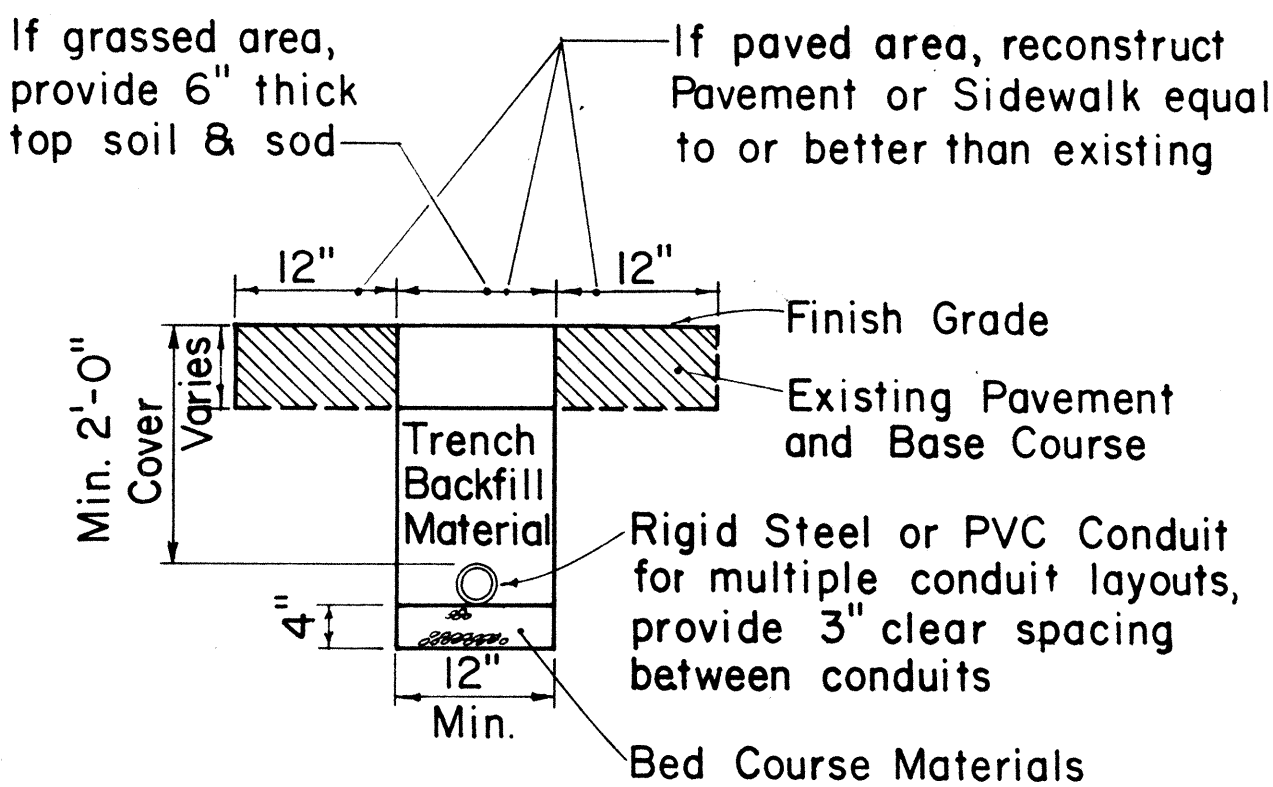
Note: Back-Fill Over-Cuts with Epoxy



DETAIL "B" SAW-CUT AT CORNERS



MULTIPLE LOOP LAYOUT



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:

Salvador S. Garcia 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

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
NO.	