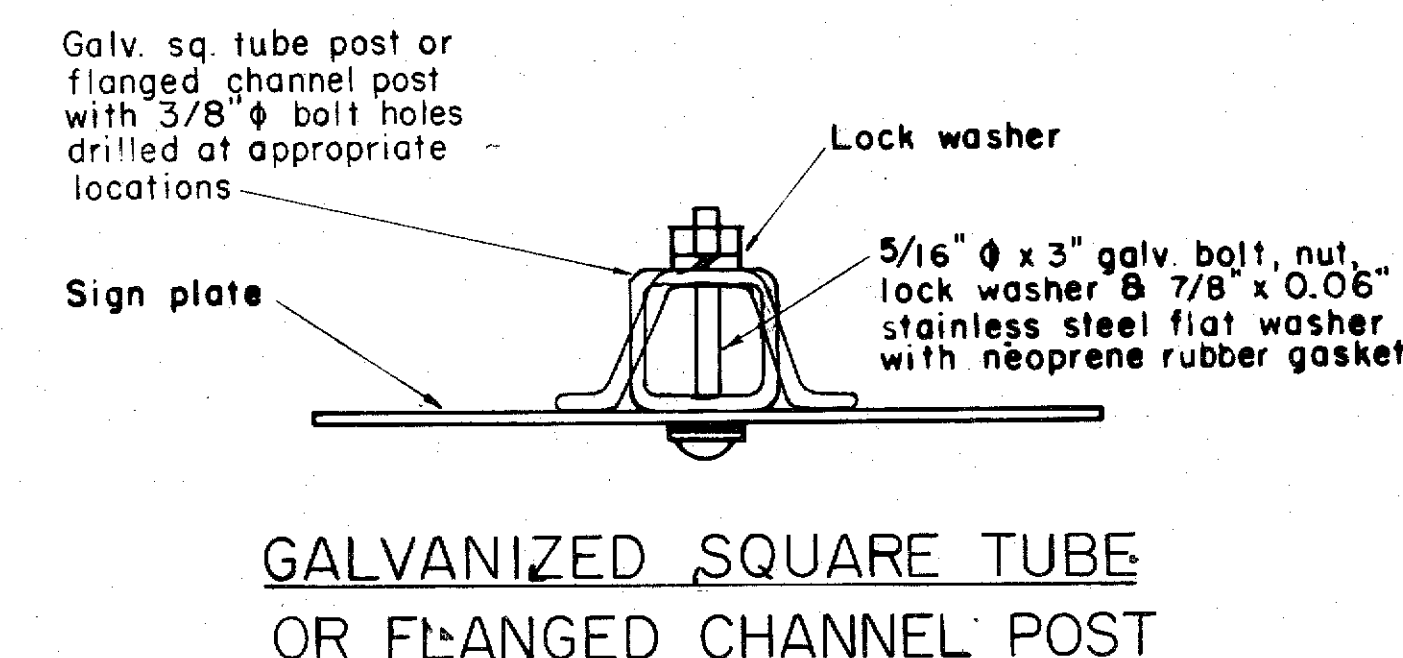
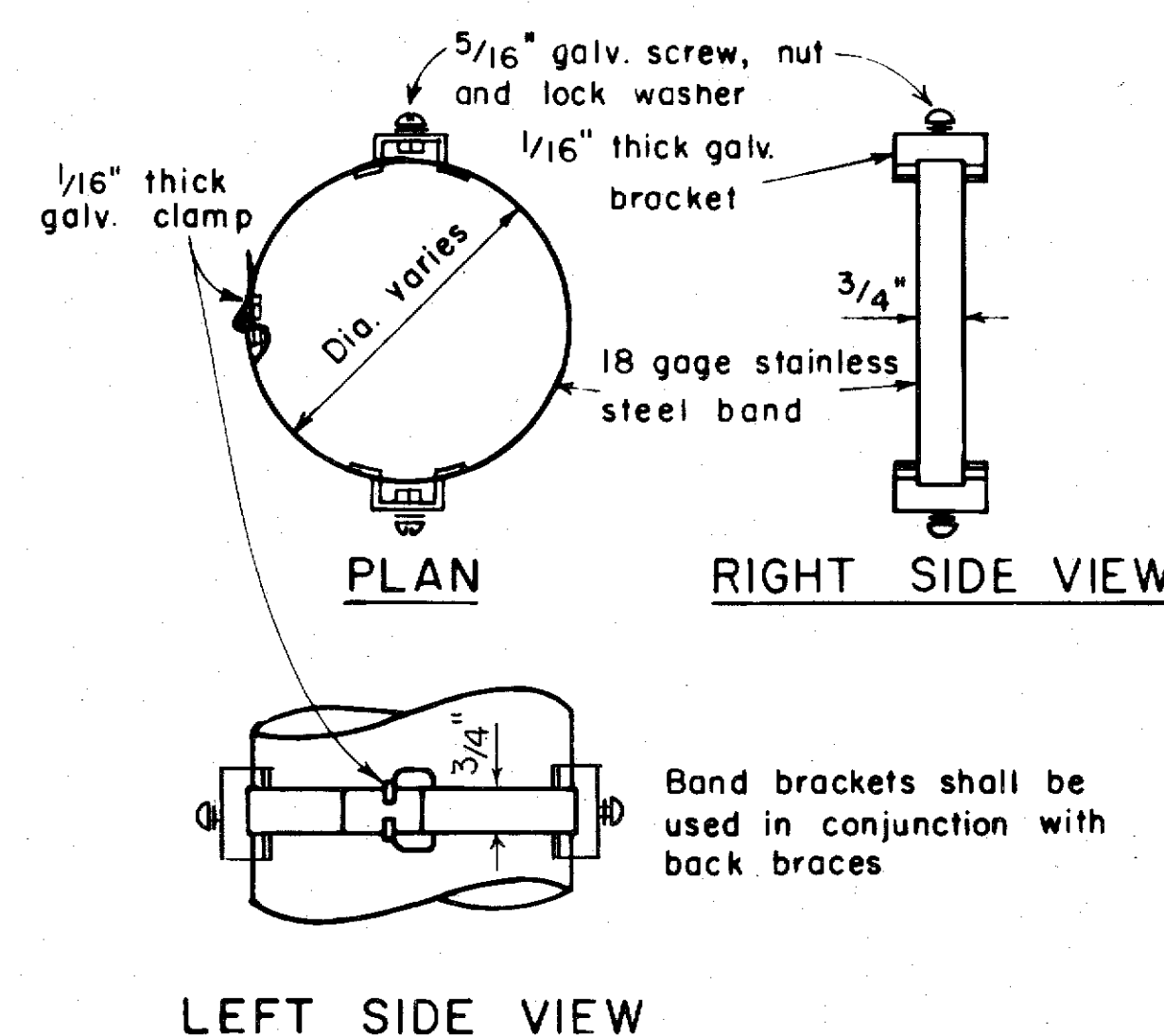
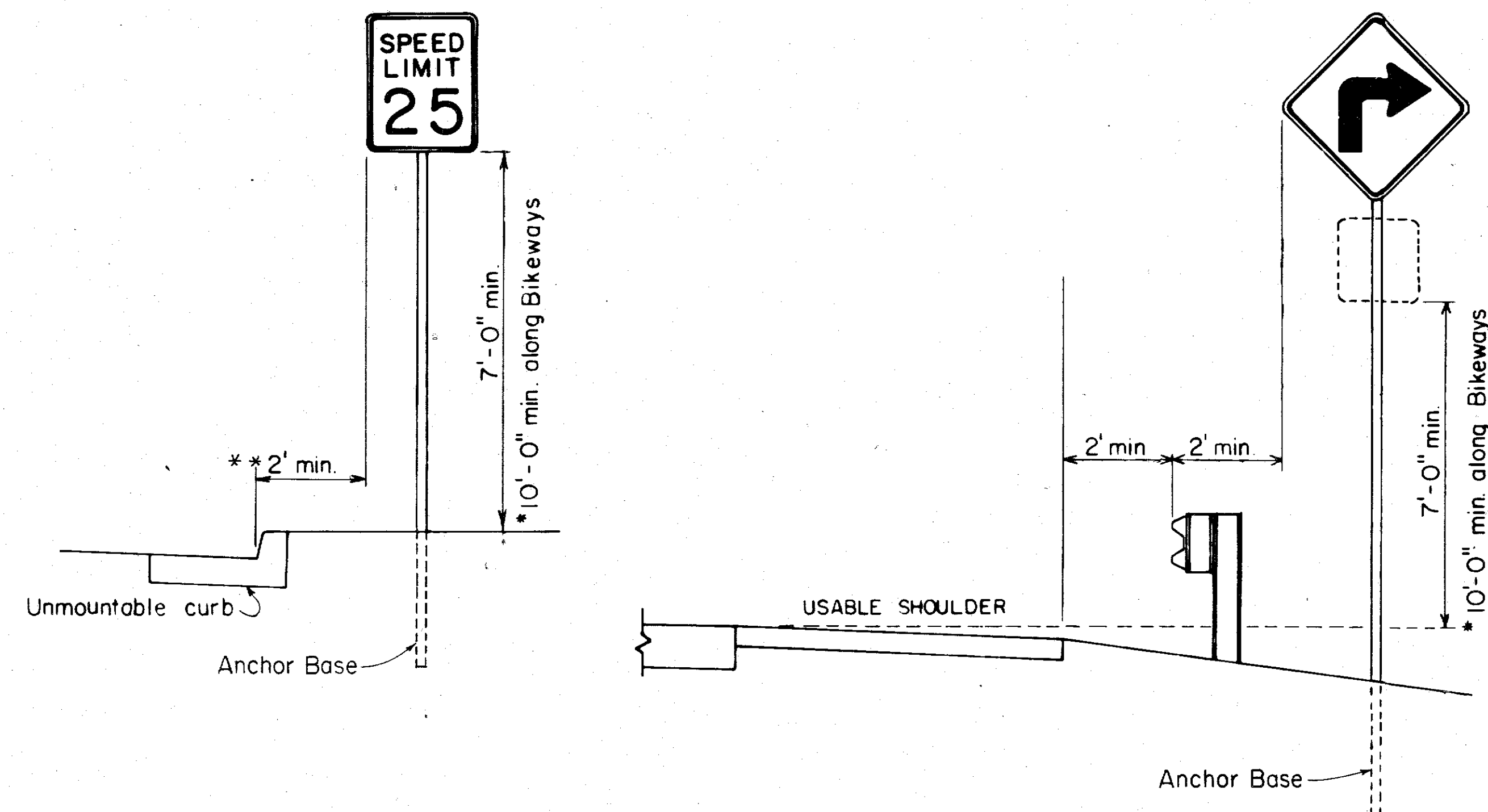
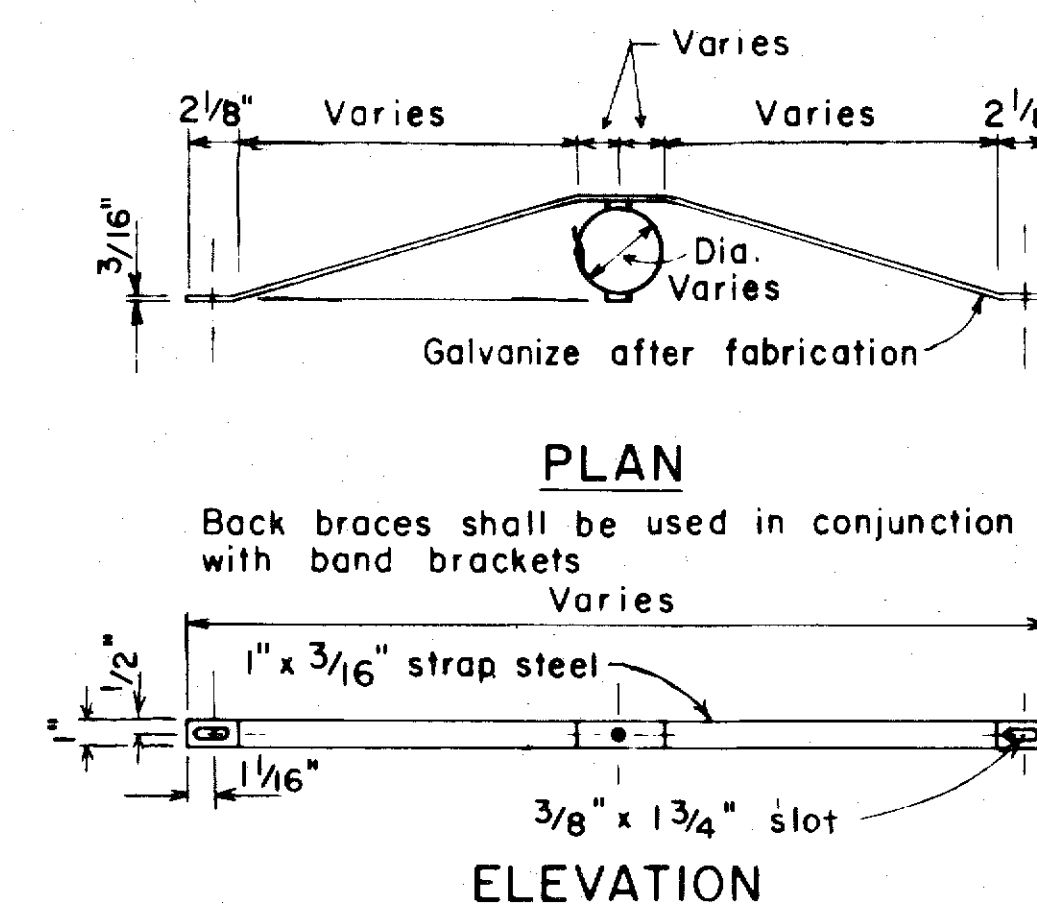


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-11-83	1983	7	20

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



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.	1/22/82

APPROVAL RECOMMENDED:
Erich Tanaka 11/10/77
 TRAFFIC ENGINEER DATE

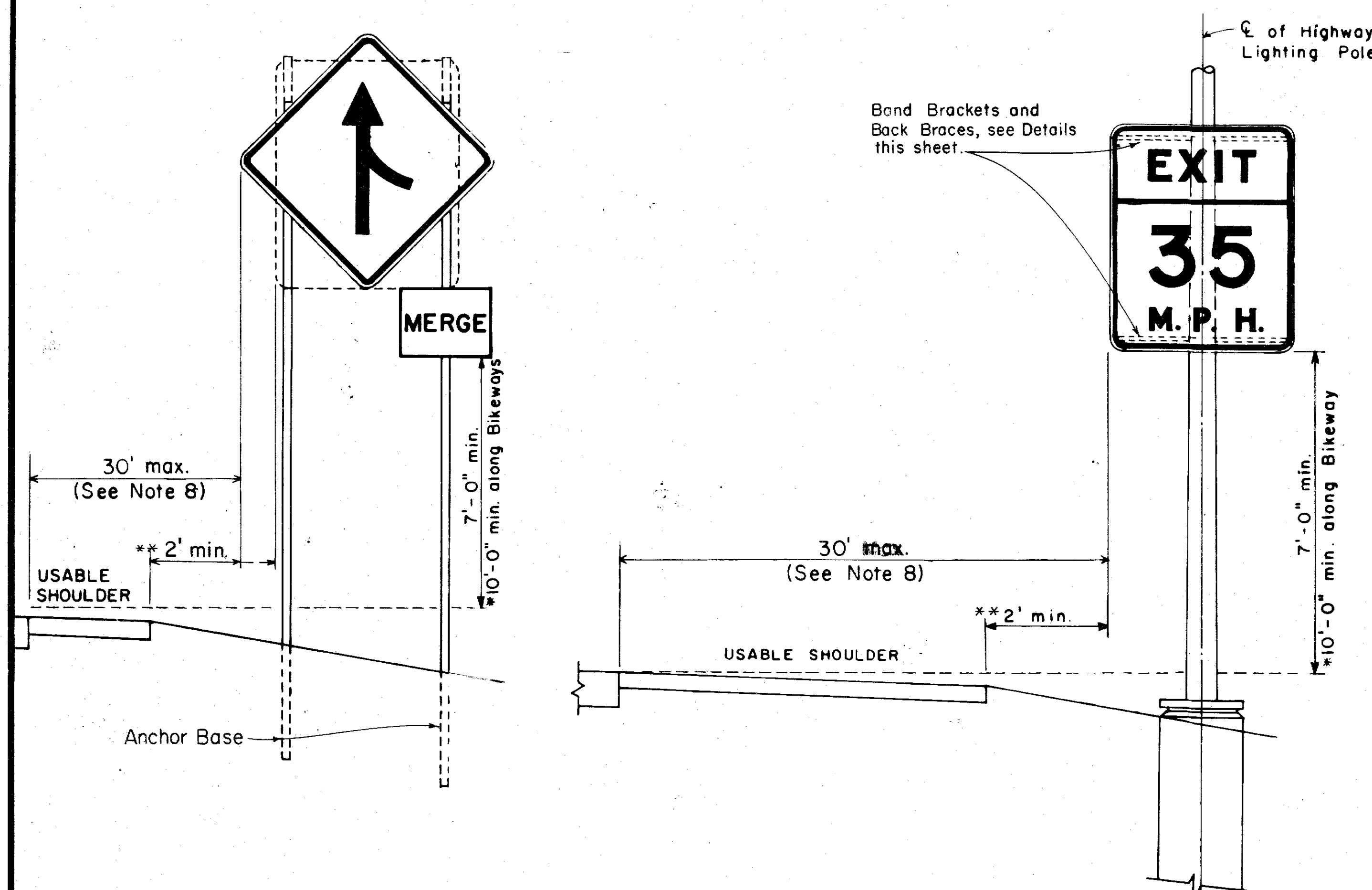
APPROVED:
Harbert S. Galois 11/15/77
 ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 MISCELLANEOUS SIGN DETAILS

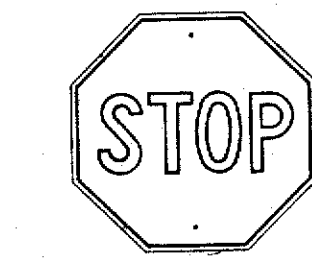
Not to scale June, 1977

HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

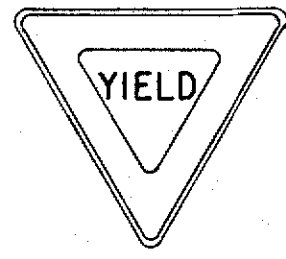


DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
NOTED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

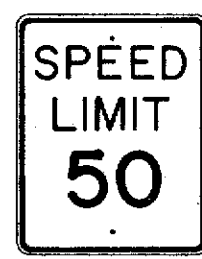
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	22C-11-83	1983	8	20



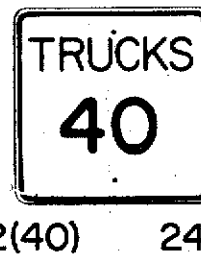
R1-1 30"x30"
R1-1-A 36"x36"
4-WAY
R1-3 12"x6"
R1-3-A 18"x9"



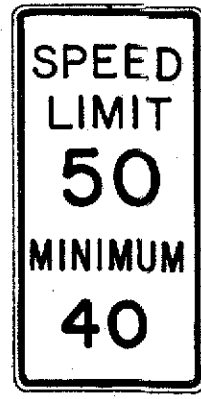
R1-2 36"x36"x36"
R1-2-A 48"x48"x48"



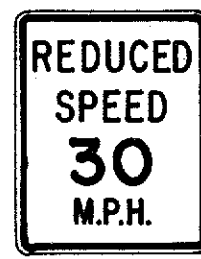
R2-1(50) 24"x30"
R2-1(50)-A 48"x60"



R2-2(40) 24"x24"
R2-2(40)-A 48"x48"



R2-4a(50/40) 24"x48"
R2-4a(50/40)-A 48"x96"



R2-5b(30) 24"x30"
R2-5b(30)-A 48"x60"



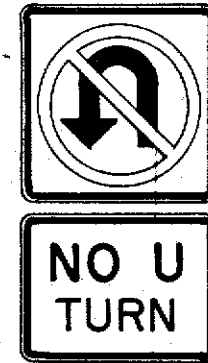
R3-1 24"x24"
24"x18"
R3-1-A 48"x48"
48"x36"



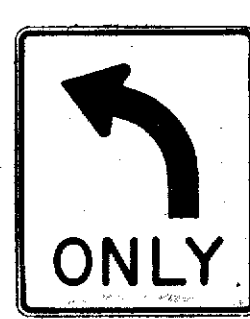
R3-2 24"x24"
24"x18"
R3-2-A 48"x48"
48"x36"



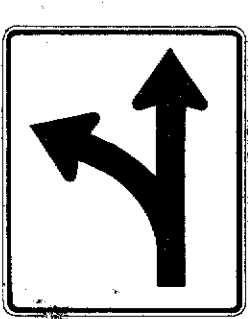
R3-3 24"x24"
R3-3-A 48"x48"



R3-4 24"x24"
24"x18"
R3-4-A 48"x48"
48"x36"



R3-5(L) 30"x36"
R3-5(L)-A 48"x60"



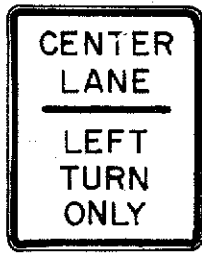
R3-6(L) 30"x36"
R3-6(L)-A 48"x60"



R3-7(R) 30"x30"
R3-7(R)-A 48"x48"



R3-8(L) 30"x30"
R3-8(L)-A 36"x36"
R3-8(L)-B 48"x48"



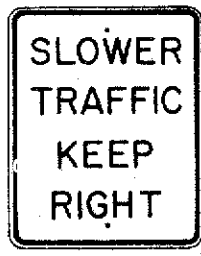
R3-9 24"x30"



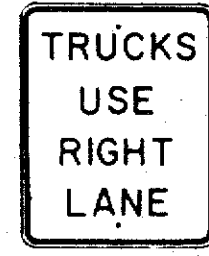
R4-1 24"x30"



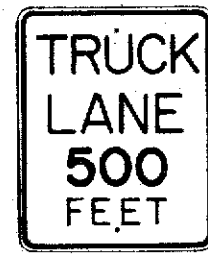
R4-2 24"x30"



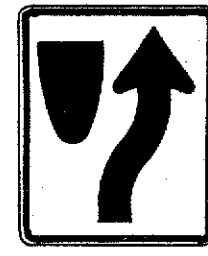
R4-3 24"x30"
R4-3-A 48"x60"



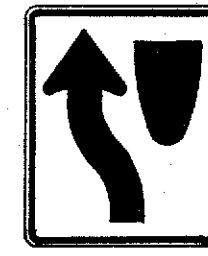
R4-5 24"x30"



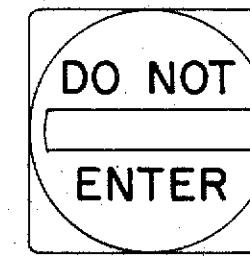
R4-6(500) 24"x30"



R4-7 24"x30"
24"x18"



R4-8 24"x30"
24"x18"



R5-1 30"x30"
R5-1-A 48"x48"



R5-2 24"x24"
24"x18"



R5-4 24"x30"



R5-6 24"x24"
24"x18"



R5-9 36"x24"



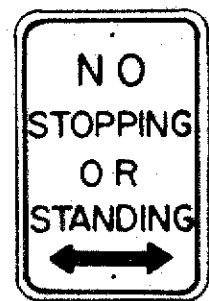
R6-1(R) 36"x12"



R6-2(R) 18"x24"



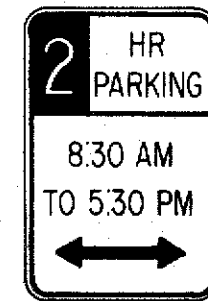
R7-1 12"x18"
R7-1-A 24"x30"



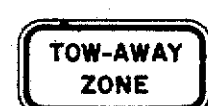
R7-4 12"x18"
R7-4-A 24"x30"



R7-1,7(R) 12"x18"



R7-108 12"x18"



R7-201 12"x6"
R7-201-A 24"x12"



R8-1 24"x30"



R8-2 24"x30"



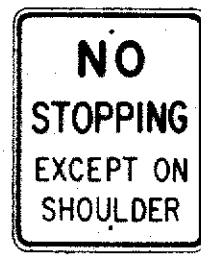
R8-3 24"x30"



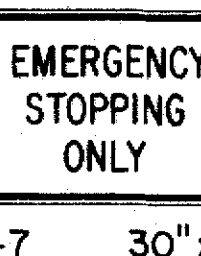
R8-4 30"x24"
R8-4-A 48"x36"



R8-5 24"x30"



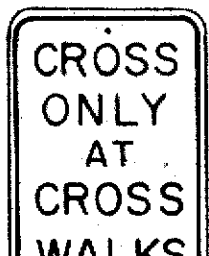
R8-6 24"x30"



R8-7 30"x24"
R8-7-A 48"x36"



R9-1 18"x24"



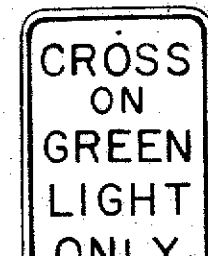
R9-2 12"x18"



R9-3 12"x18"



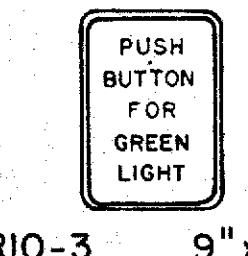
R9-4 18"x24"



R10-1 12"x18"



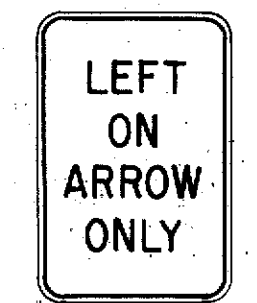
R10-2 12"x18"



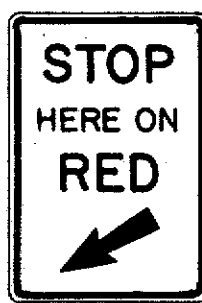
R10-3 9"x12"



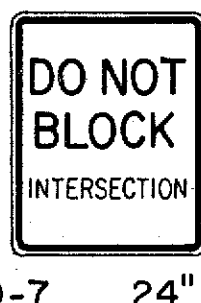
R10-4 9"x12"



R10-5 24"x30"



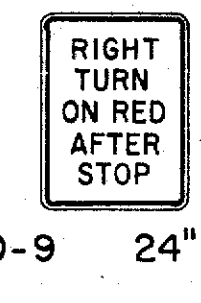
R10-6 24"x36"



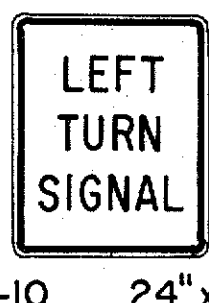
R10-7 24"x30"



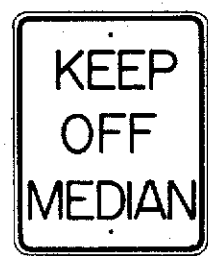
R10-8 24"x30"



R10-9 24"x30"



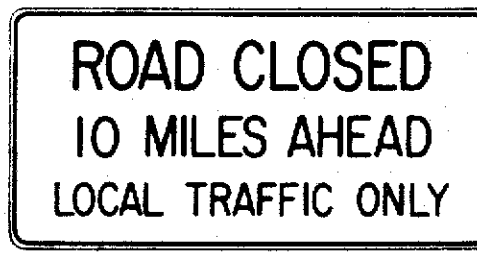
R10-10 24"x30"



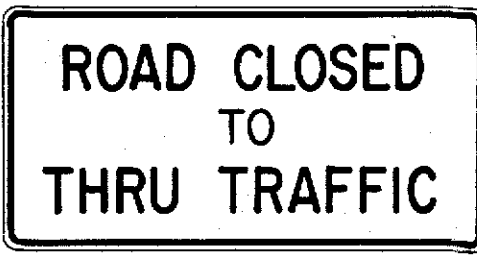
R11-1 24"x30"



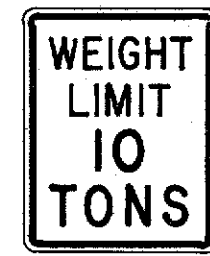
R11-2 48"x30"



R11-3(10) 60"x30"



R11-4 60"x30"



R12-1(10) 24"x30"

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:
TRAFFIC ENGINEER

3/17/72
DATE

APPROVED:
ASSISTANT CHIEF, ENGINEERING

3-20-72
DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.	3/20/72
2	Revised General Note 1.	H.	10/10/74
3	Added General Note 5	H.	6/9/75

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

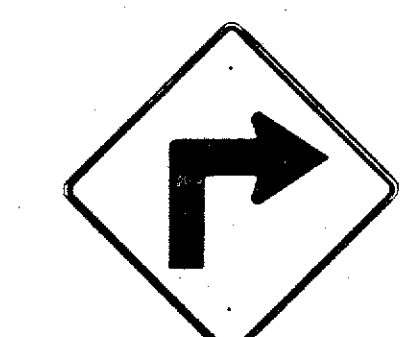
STANDARD DETAILS REGULATORY SIGNS

NOT TO SCALE

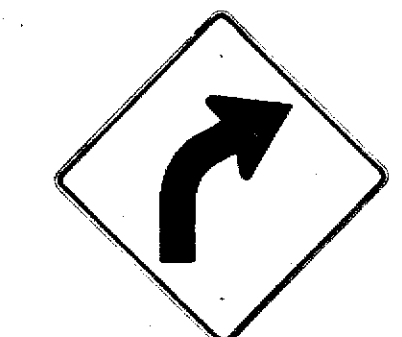
SHEET No. 8 OF 20 SHEETS DT 101

ORIGINAL PLAN	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

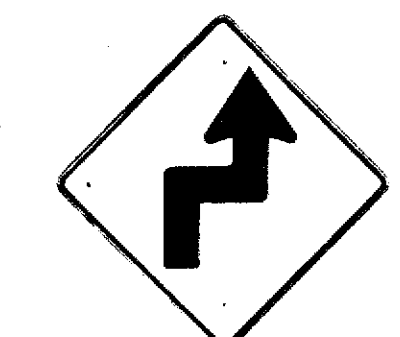
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	20011-51	1983	9	20



W1-1(R) 30"x 30"
W1-1(R)-A 48"x 48"



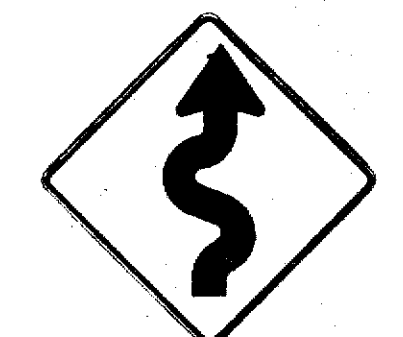
W1-2(R) 30"x 30"
W1-2(R)-A 48"x 48"



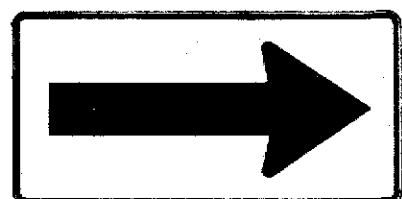
W1-3(R) 30"x 30"
W1-3(R)-A 48"x 48"



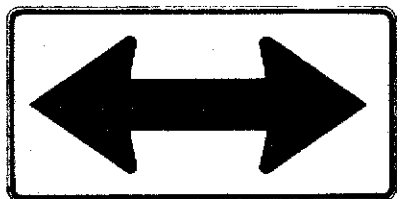
W1-4(R) 30"x 30"
W1-4(R)-A 48"x 48"



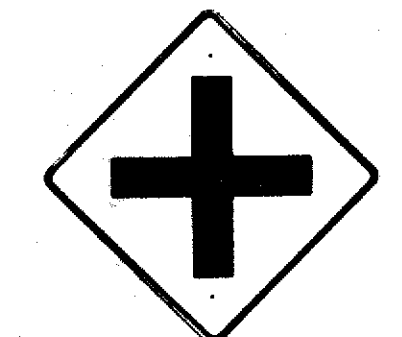
W1-5(R) 30"x 30"
W1-5(R)-A 48"x 48"



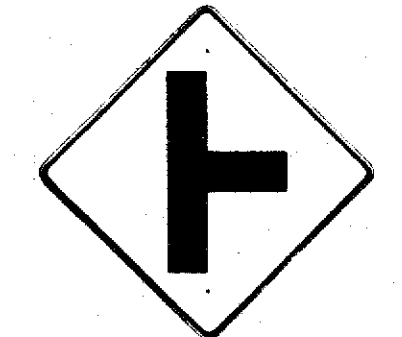
W1-6 48"x 24"



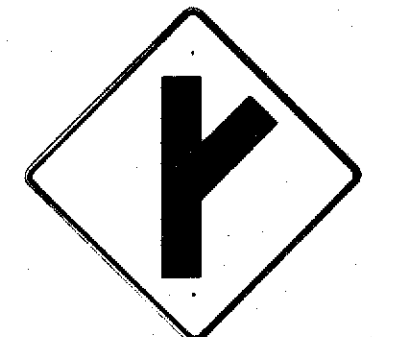
W1-7 48"x 24"



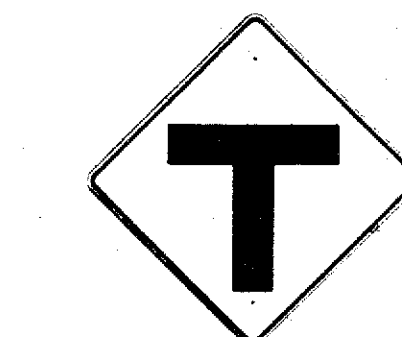
W2-1 30"x 30"
W2-1-A 48"x 48"



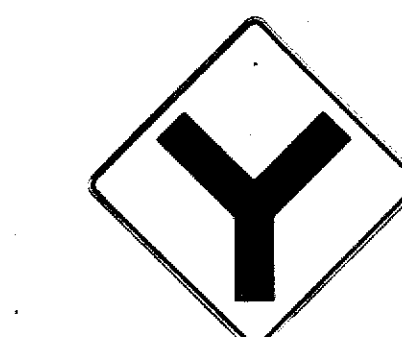
W2-2 30"x 30"
W2-2-A 48"x 48"



W2-3(R) 30"x 30"
W2-3(R)-A 48"x 48"



W2-4 30"x 30"
W2-4-A 48"x 48"



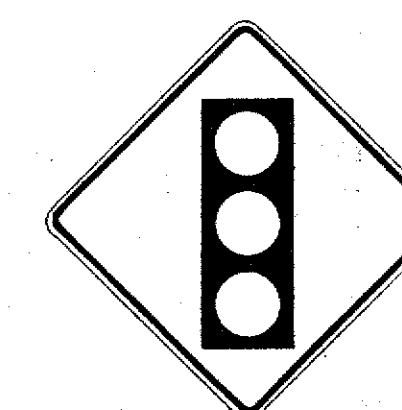
W2-5 30"x 30"
W2-5-A 48"x 48"



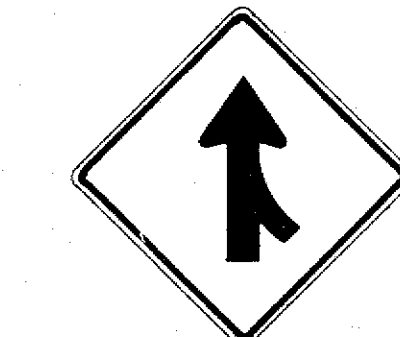
W3-1 30"x 30"
W3-1-A 36"x 36"



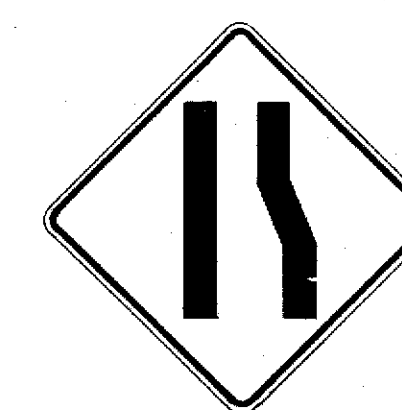
W3-2 30"x 30"
W3-2-A 36"x 36"



W3-3 36"x 36"
24"x 18"



W4-1(R) 30"x 30"
24"x 18"
W4-1(R)-A 48"x 48"
24"x 18"



W4-2(R) 36"x 36"
W4-2(R)-A 48"x 48"



W5-1 36"x 36"



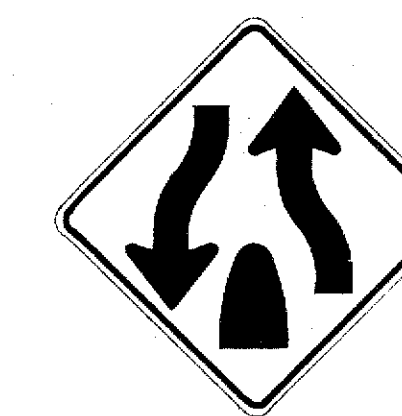
W5-2 30"x 30"
W5-2-A 36"x 36"



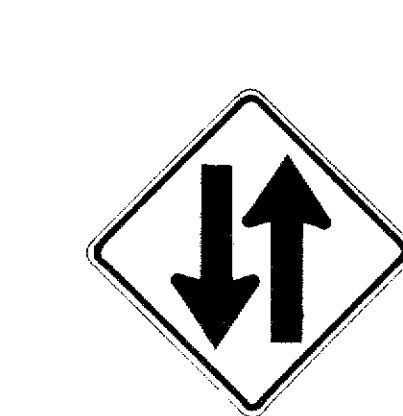
W5-3 36"x 36"



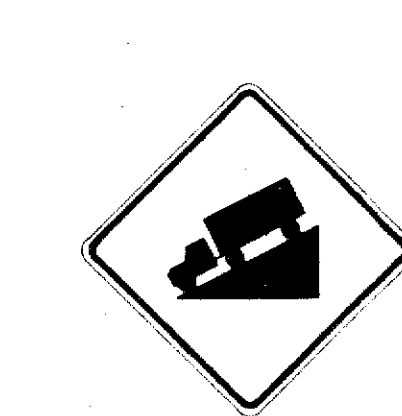
W6-1 36"x 36"
24"x 18"



W6-2 36"x 36"
24"x 18"



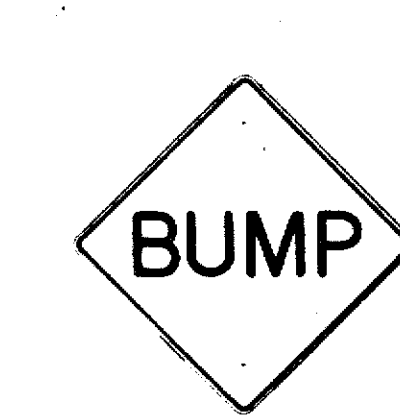
W6-3 30"x 30"
24"x 18"
W6-3-A 36"x 36"
24"x 18"
W6-3-B 48"x 48"
24"x 18"



W7-1 30"x 30"
24"x 18"
W7-1-A 36"x 36"
24"x 18"



W7-2 24"x 18"



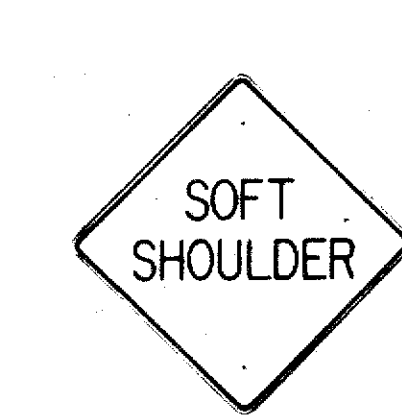
W8-1 30"x 30"
W8-1-A 36"x 36"



W8-2 30"x 30"
W8-2-A 36"x 36"



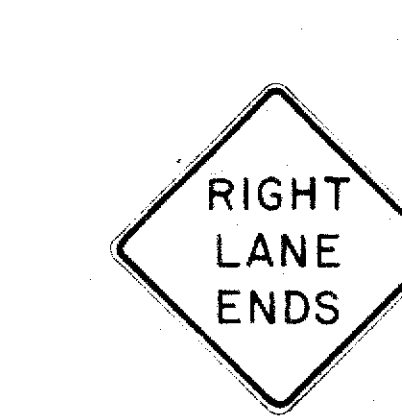
W8-3 30"x 30"
W8-3-A 36"x 36"



W8-4 30"x 30"
W8-4-A 36"x 36"



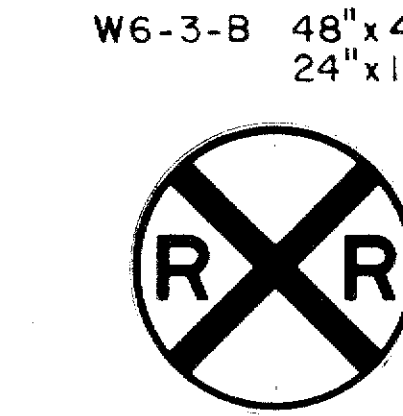
W8-5 30"x 30"
24"x 18"
W8-5-A 36"x 36"
24"x 18"



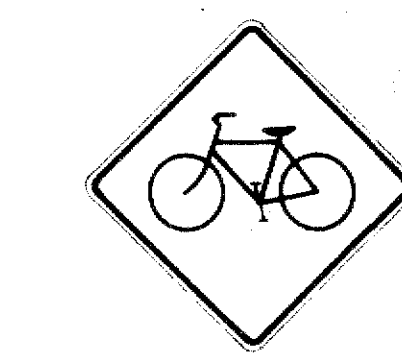
W9-1(R) 30"x 30"
W9-1(R)-A 36"x 36"
W9-1(R)-B 48"x 48"



W9-2(L) 36"x 36"
W9-2(L)-A 48"x 48"



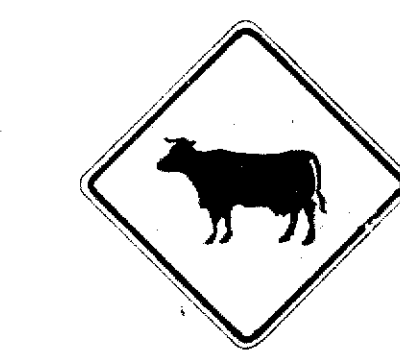
W10-1 36" Diameter



W11-1 30"x 30"
24"x 18"
W11-1-A 36"x 36"
24"x 18"



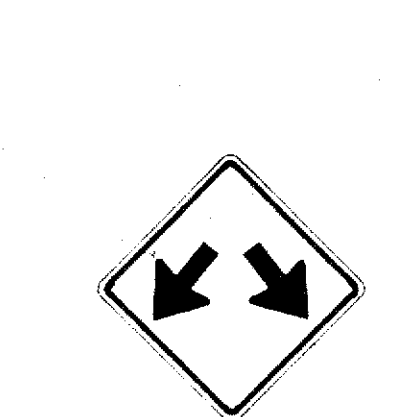
W11-2 30"x 30"
24"x 18"
W11-2-A 36"x 36"
24"x 18"



W11-4 30"x 30"
24"x 18"
W11-4-A 36"x 36"
24"x 18"



W11-5 30"x 30"
24"x 18"
W11-5-A 36"x 36"
24"x 18"



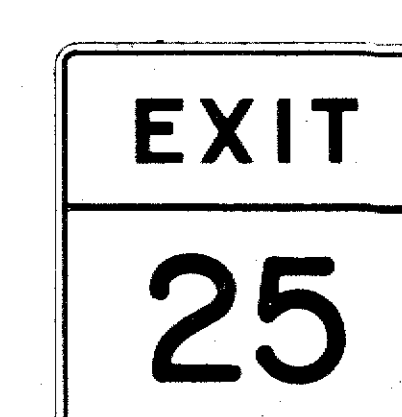
W12-1 24"x 24"
W12-1-A 36"x 36"
W12-1-B 48"x 48"



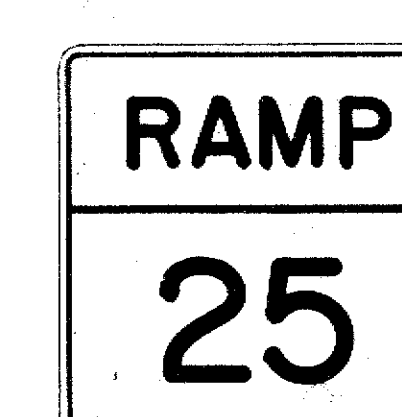
W12-2 (12'-6") 36"x 36"
24"x 18"



W13-1(25) 18"x 18"
W13-1(25)-A 24"x 24"



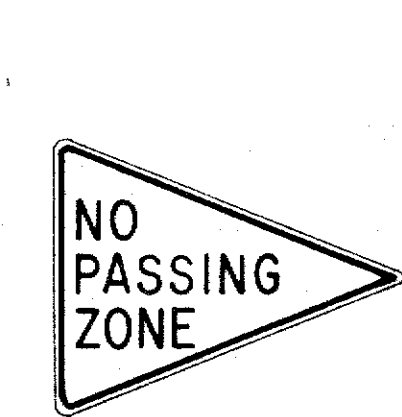
W13-2(25) 48"x 60"



W13-3(25) 48"x 60"



W14-1 30"x 30"



W14-3 36"x 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 warning signs shall be reflectorized unless otherwise specified.
- All warning signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized.

APPROVAL RECOMMENDED:
Enish Tanaka 3/17/12
 TRAFFIC ENGINEER DATE

APPROVED:
John P. Sisk 3-20-12
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/12
2	Revised General Note 1	H.T.	10/16/74
3	Revised General Note 5	MT	9-16-75
4	Revised General Note 5	H.T.	9-14-76
5	Added Note 1	H.T.	11-7-77

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE

SHEET No. 9 OF 20 SHEETS DT 102

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-11-83	1983	10	20

General Notes

1. Sign details shall conform to the latest editions of the following FHWA publications:
- a. "Standard Alphabets for Highway Signs," and as amended.
 - b. "Standard Highway Signs," and as amended.
 - c. "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
2. All signs shall be reflectorized with reflective sheeting, unless otherwise specified.
3. All signs shall have $\frac{3}{8}$ " bolt holes drilled at appropriate locations.
4. Numerals in () indicate 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 with reflective sheeting.
6. All signs shall be erected without educational plaques unless called for in the plans.

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

APPROVED:
Arthur J. Dakeishi 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 103 approved 3/20/72	H.T.	5/3/78
2	Added General Note 6	H.T.	11/9/78

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
MISCELLANEOUS SIGNS

NOT TO SCALE
DATE: MAY, 1978

SHEET No. 10 OF 20 SHEETS.DT 103

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTE BOOK	
NO.	

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

1 1/2"

4" Series C

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"

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

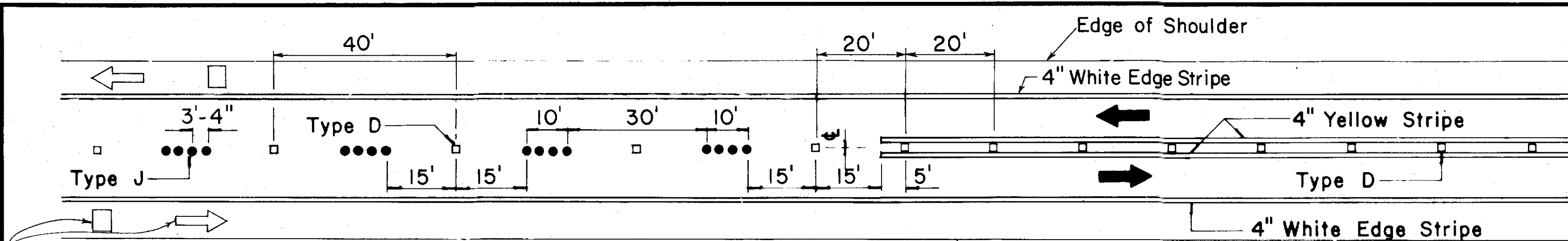
CW23-4 48" x 48"

USE SIDEWALK

4" Series C

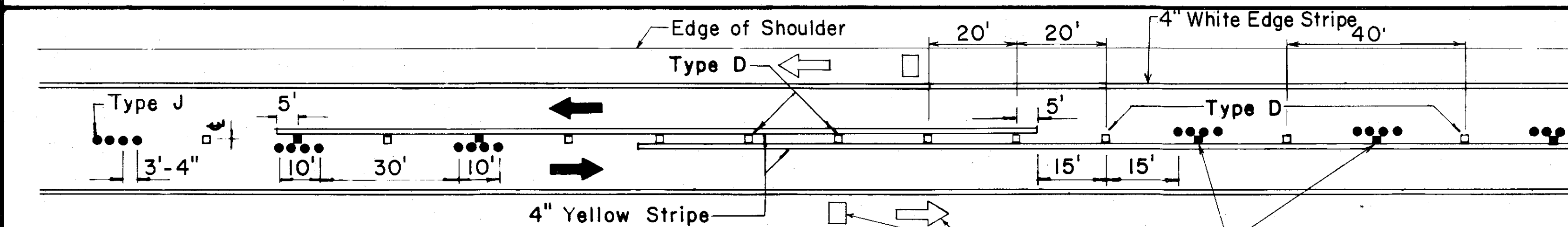
R18-1 24" x 18"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	200-11-83	1983	11	20



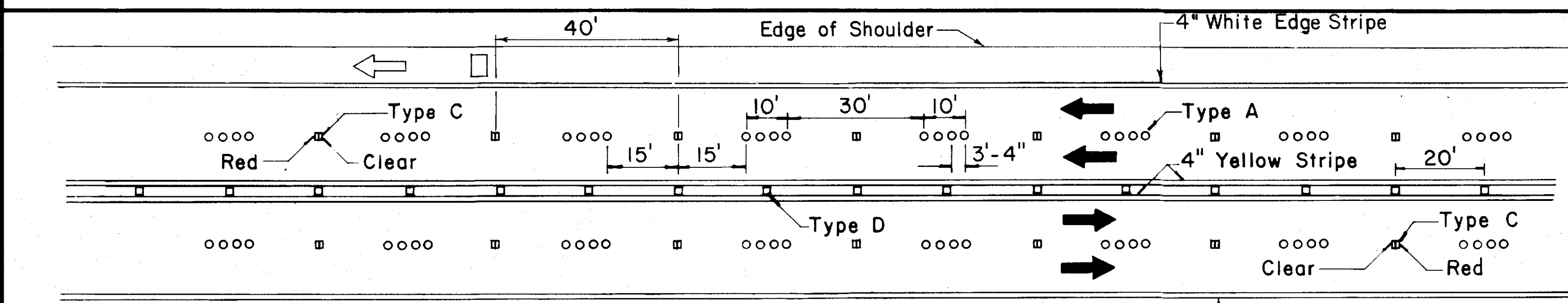
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PERMITTED AND PASSING PROHIBITED

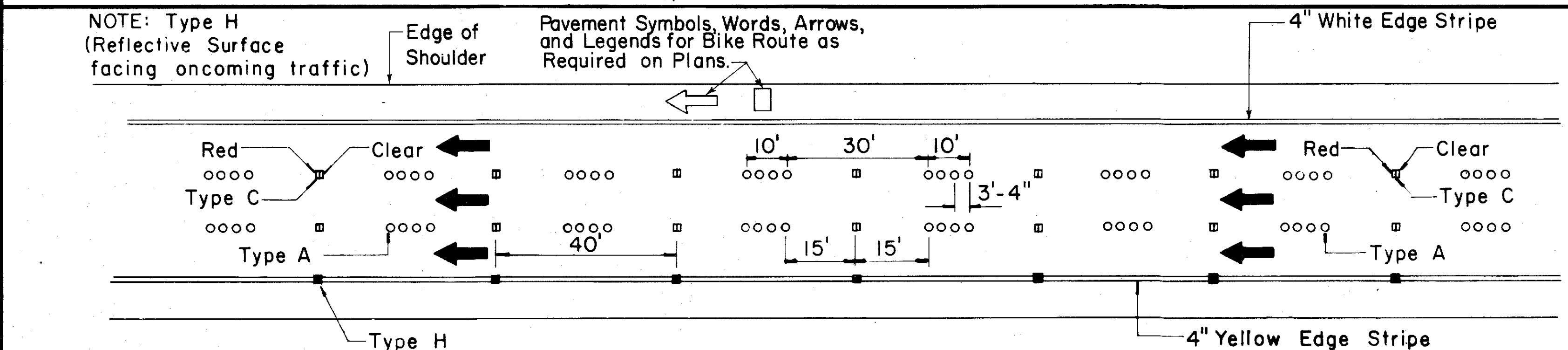


Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PROHIBITED ZONES

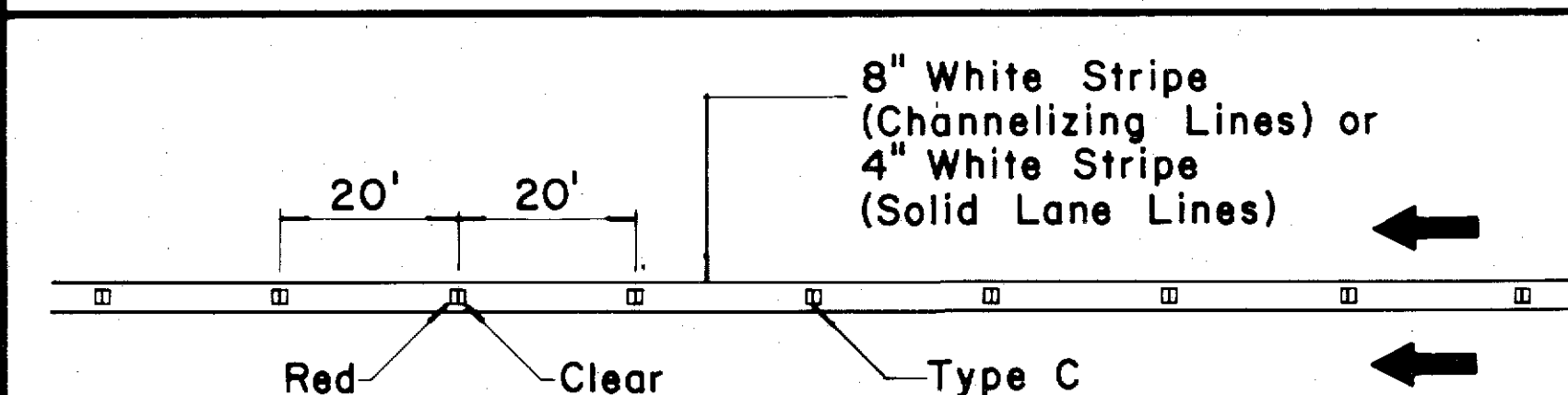


Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

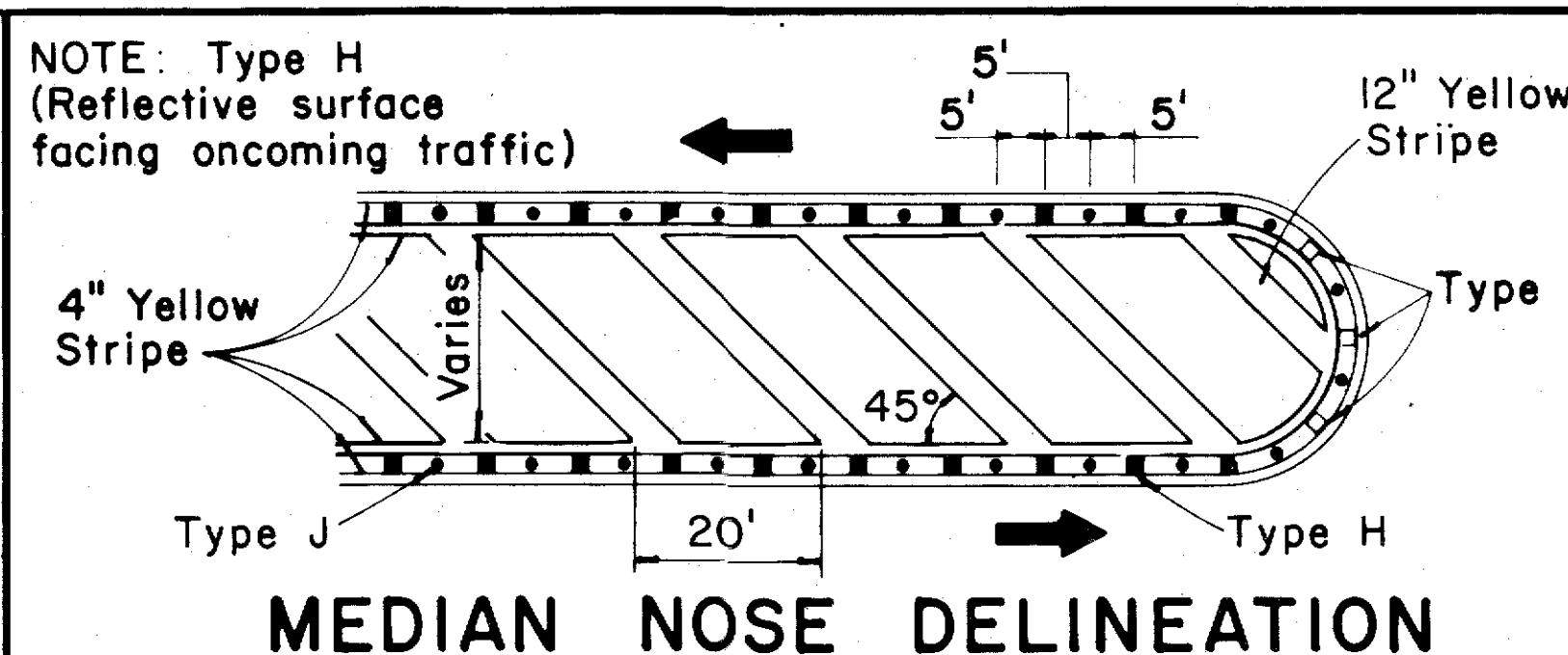


NOTE: Type H (Reflective Surface facing oncoming traffic)

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



CHANNELIZING LINES OR SOLID LANE LINES



NOTE: Type H (Reflective surface facing oncoming traffic)

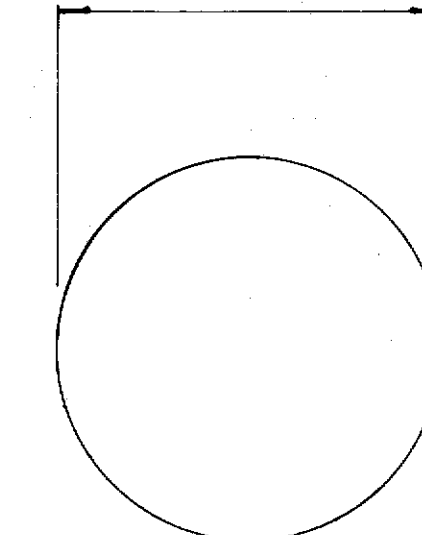
TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

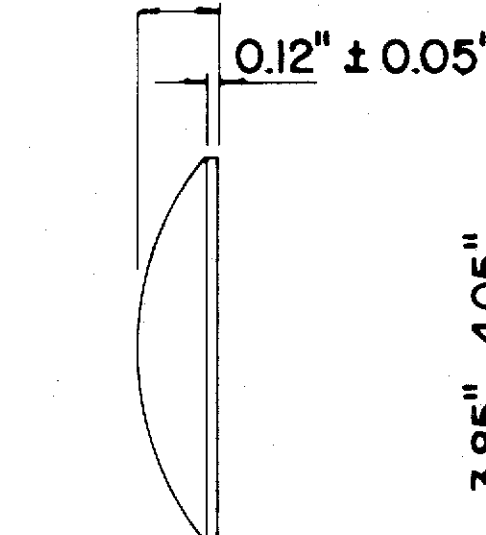
MISCELLANEOUS

3.85" - 4.05" Dia.



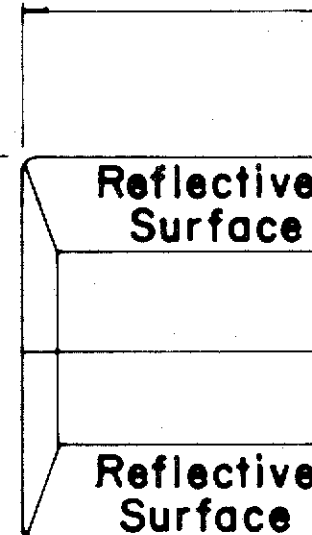
TYPE A
NON - REFLECTIVE WHITE MARKER

0.68" - 0.80"



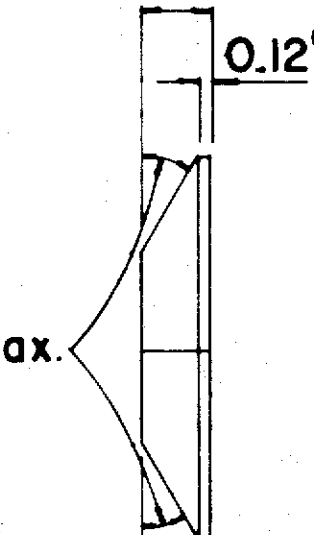
TYPE J
NON - REFLECTIVE YELLOW MARKER

3.85" - 4.05"



TYPE C
RED - CLEAR REFLECTIVE MARKER

0.50" - 0.70"



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
TRAFFIC ENGINEER

7/21/78
DATE

APPROVED:

Harbert A. Zalewski
ASSISTANT CHIEF, ENGINEERING

1/24/78
DATE

No.	REVISION	APPROVED BY	DATE
1	Supercedes 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

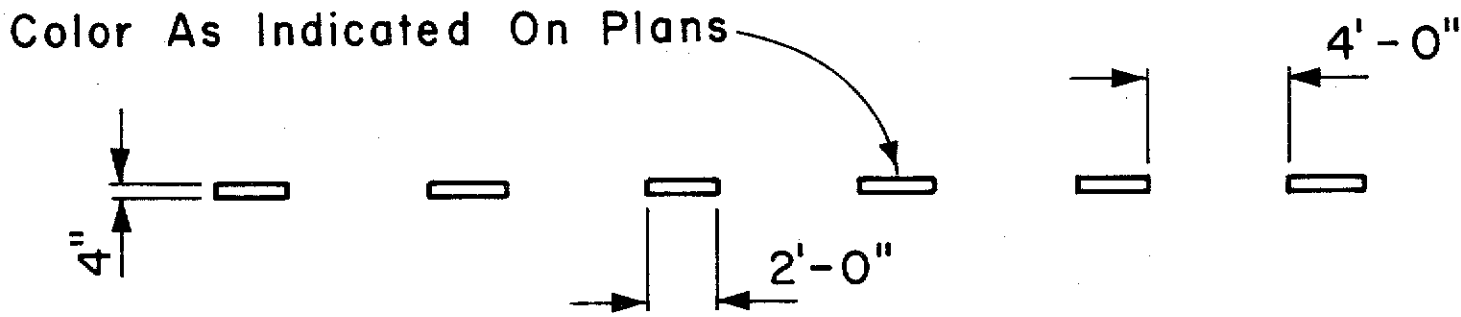
SHEET No. 11 OF 20 SHEETS DT 300

DATE	DESIGNED BY	CHECKED BY
PLANNED BY	NOTED BY	QUANTITIES BY
ORIGINAL PLAN	NOTE BOOK	

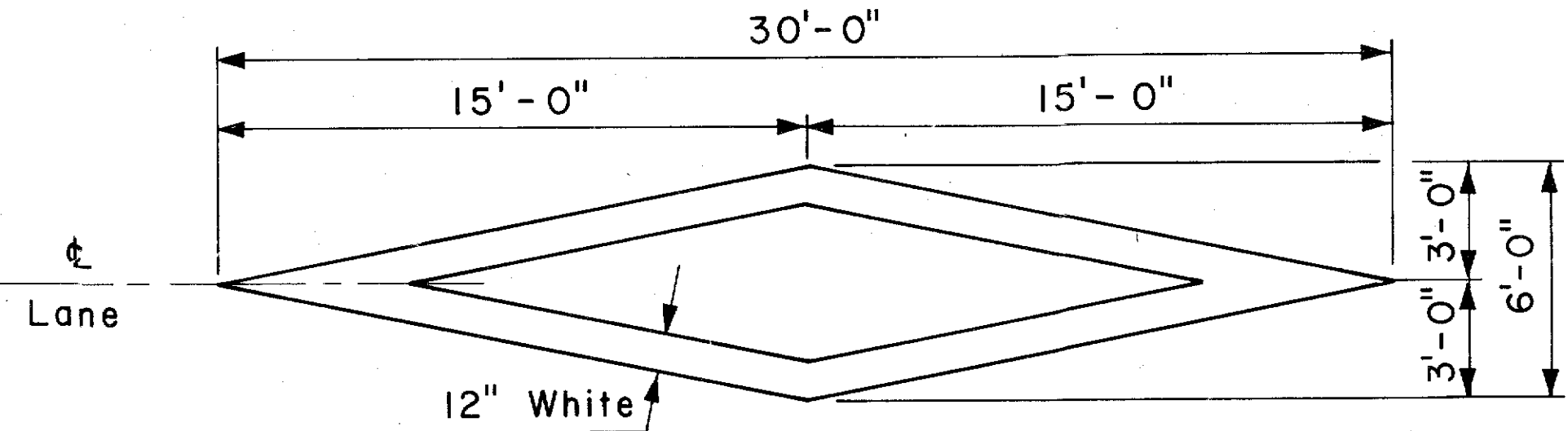
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	29C-11-83	1983	12	20

GENERAL NOTES:

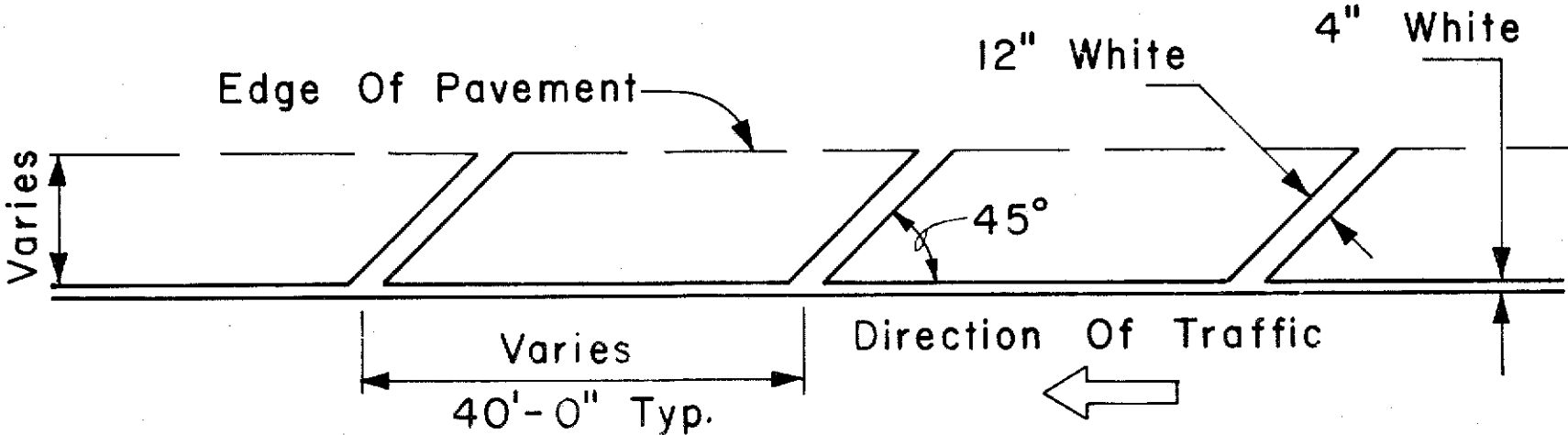
1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and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



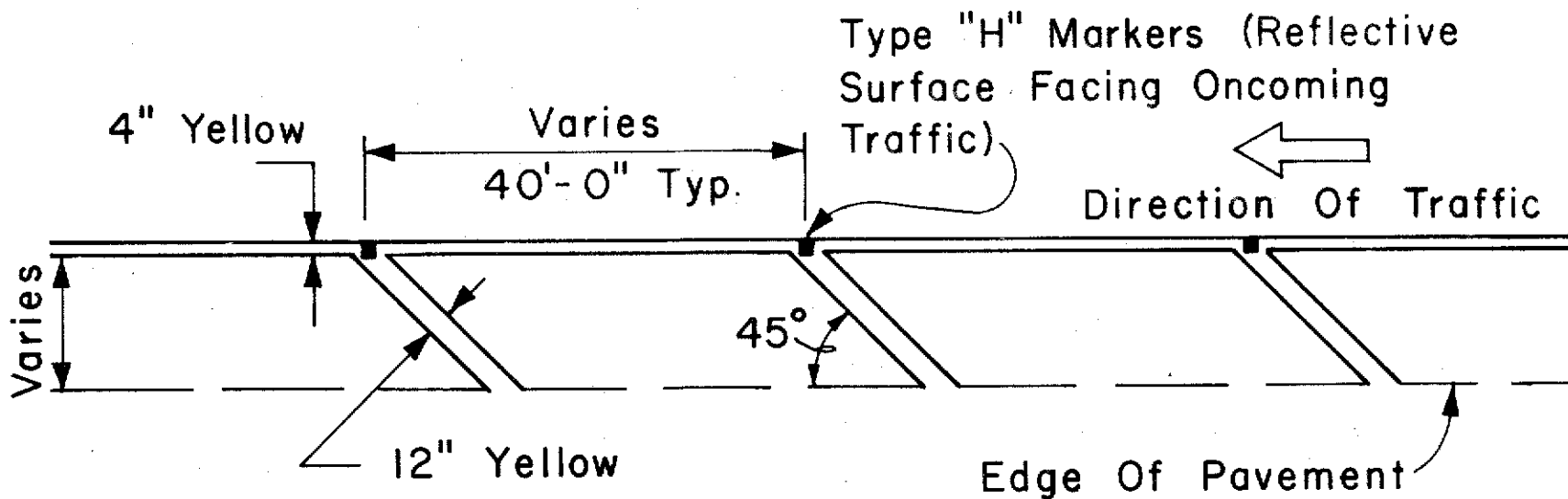
4" GUIDE LINE



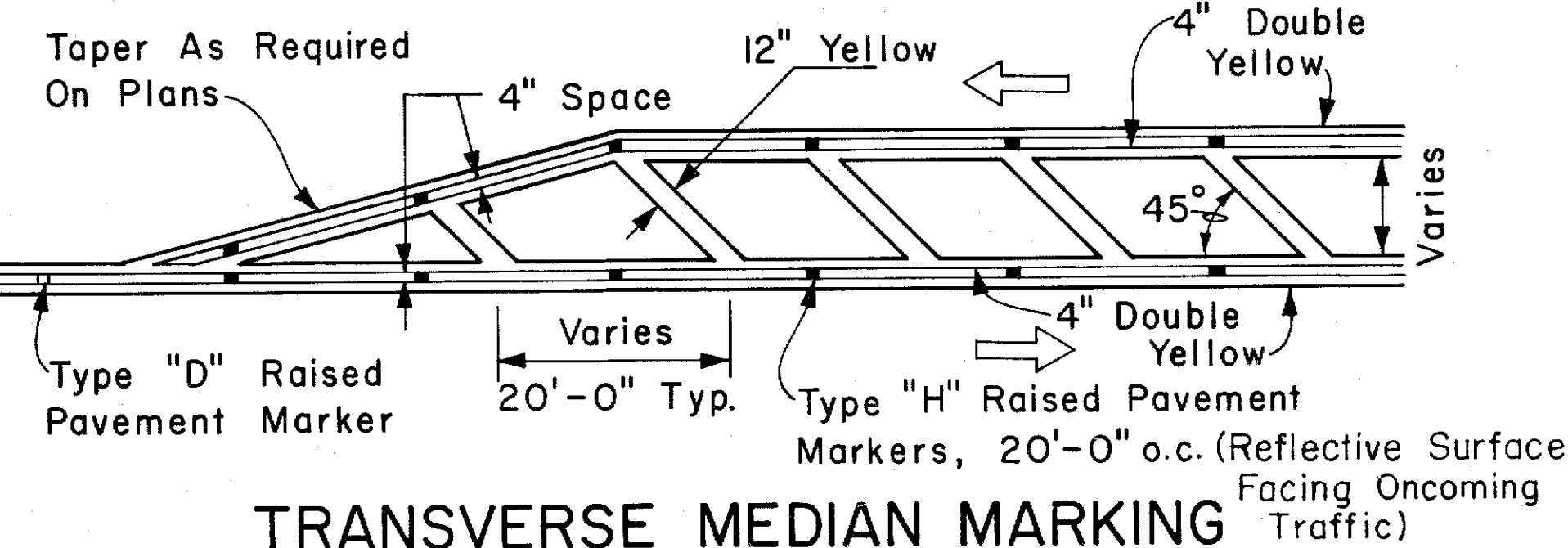
PAVEMENT DIAMOND



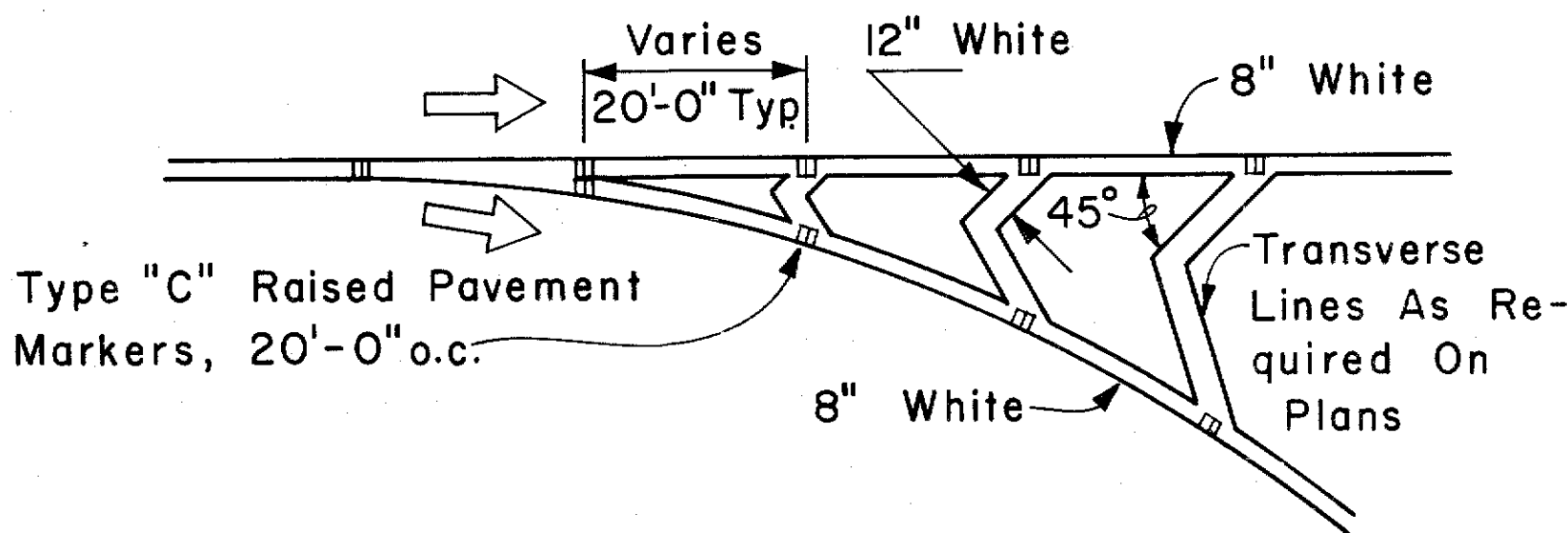
TRANSVERSE RIGHT SHOULDER MARKING



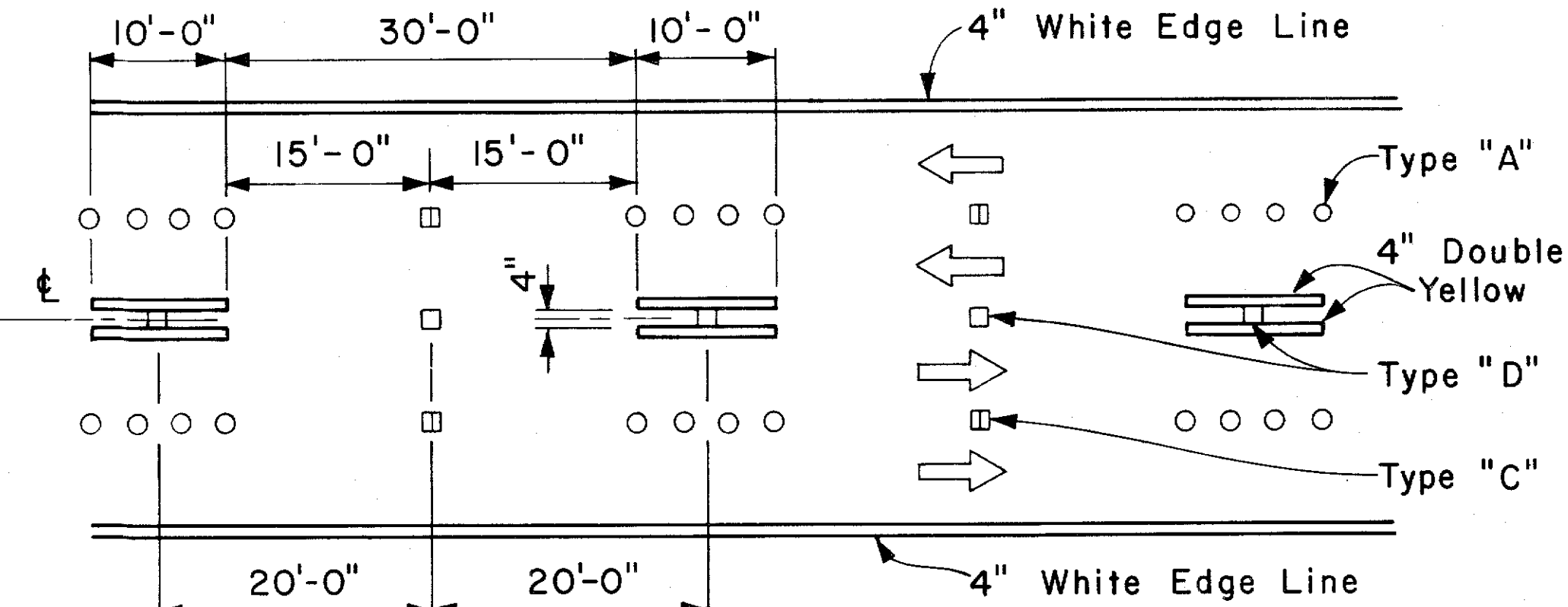
TRANSVERSE LEFT SHOULDER MARKING



TRANSVERSE MEDIAN MARKING

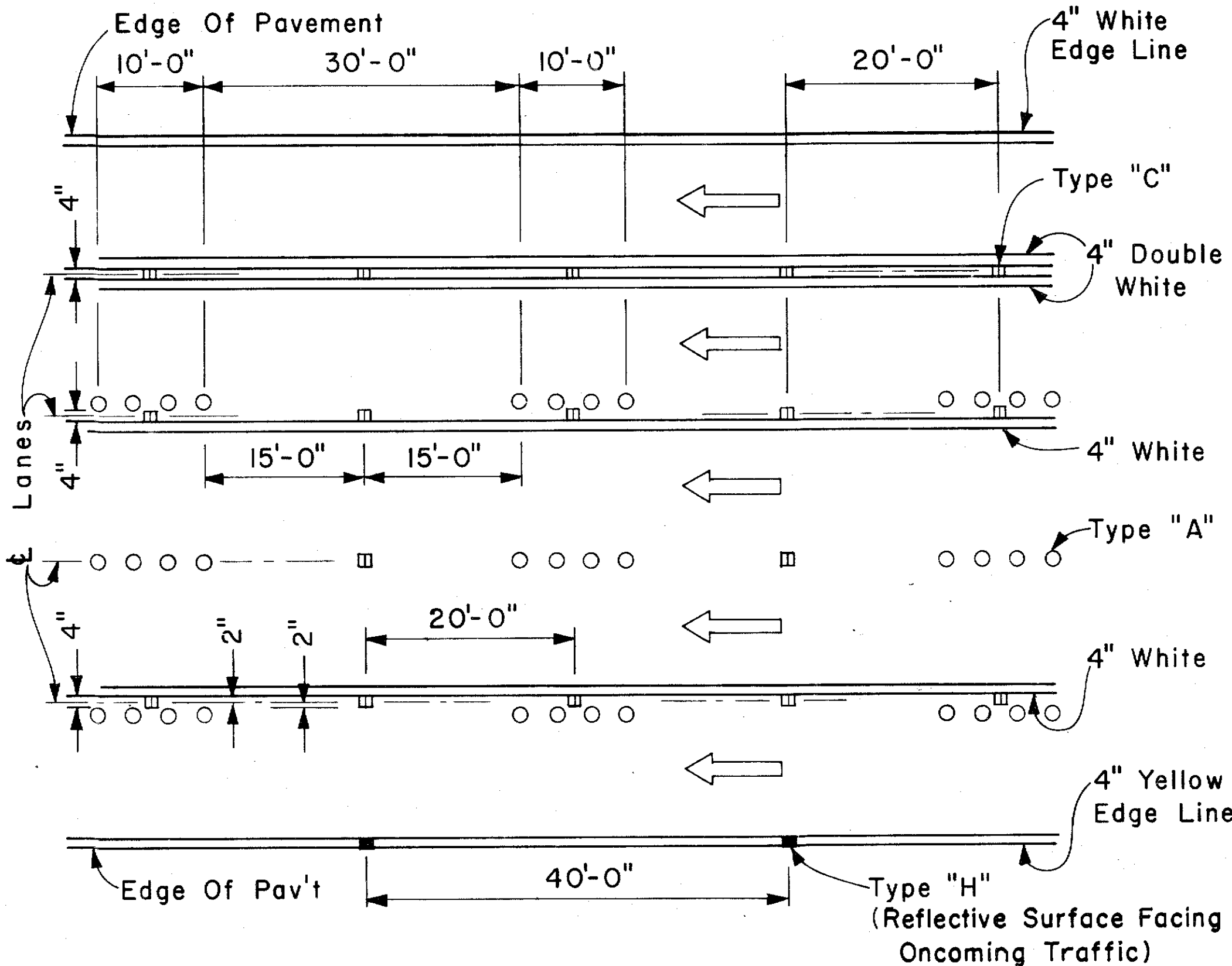


CHANNELIZING ISLAND



NOTE: Traffic Cone Usage Required.

MULTI-LANE REVERSIBLE LANES



MULTI-LANE LANE CHANGE RESTRICTION ZONES

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

APPROVED: *Harbor 2. Zafra* 5/2/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

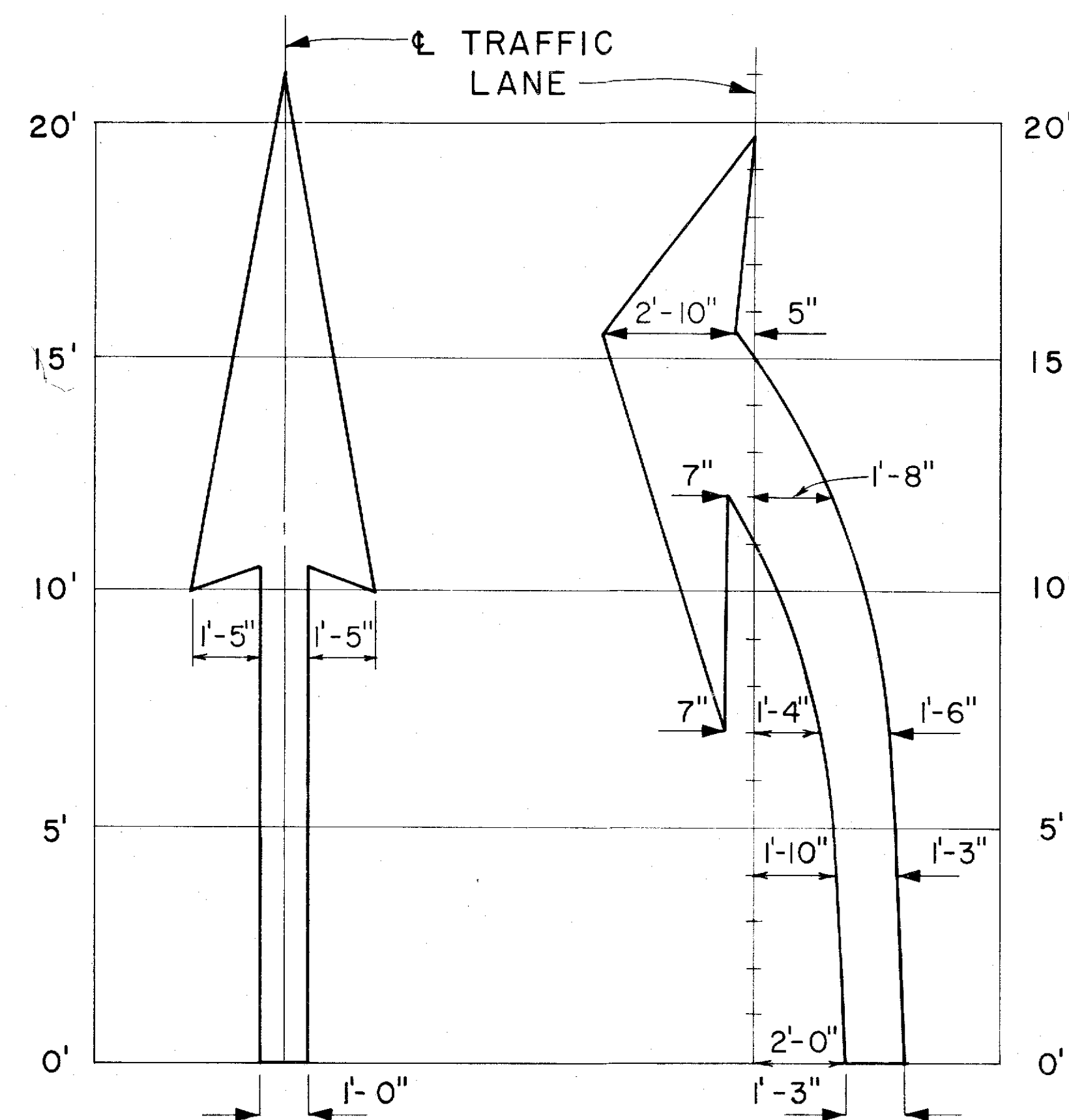
Scale: Not to Scale Date: April, 1978
SHEET NO. 12 OF 20 SHEETS DT 302

ORIGINAL PLAN	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	

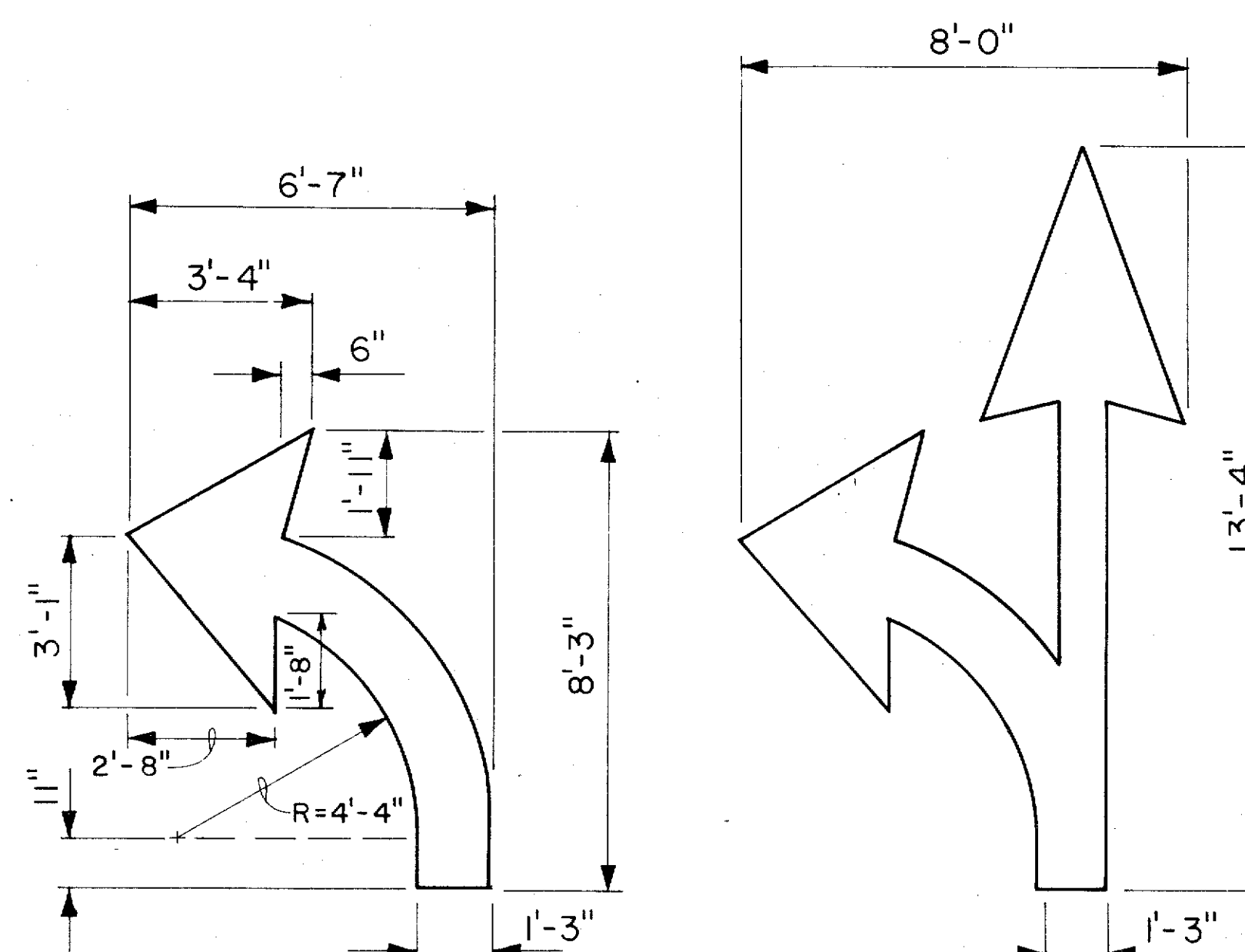
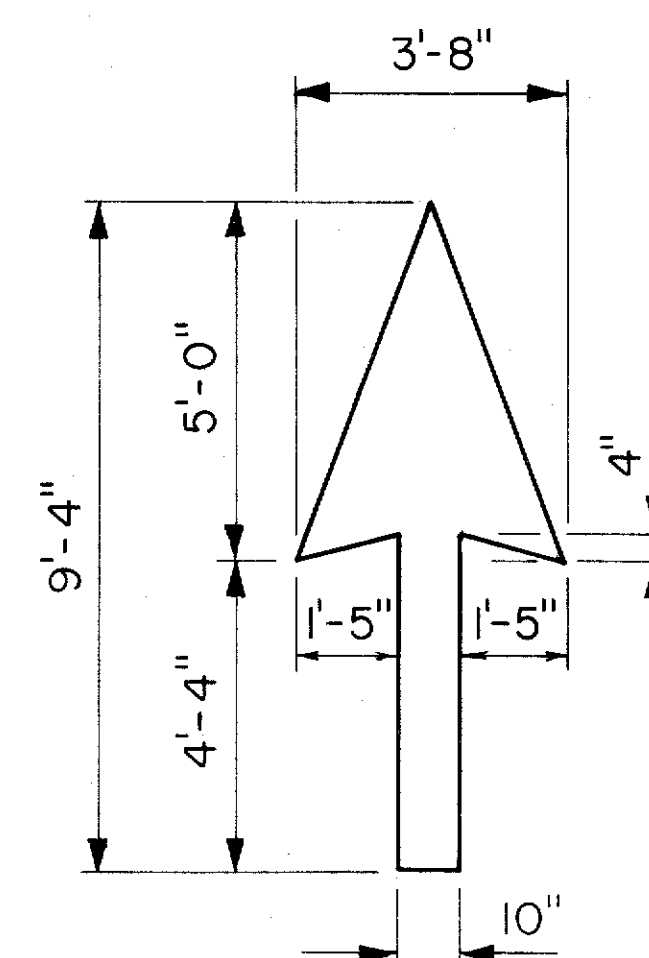
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	99C-11-83	1983	13	20

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.



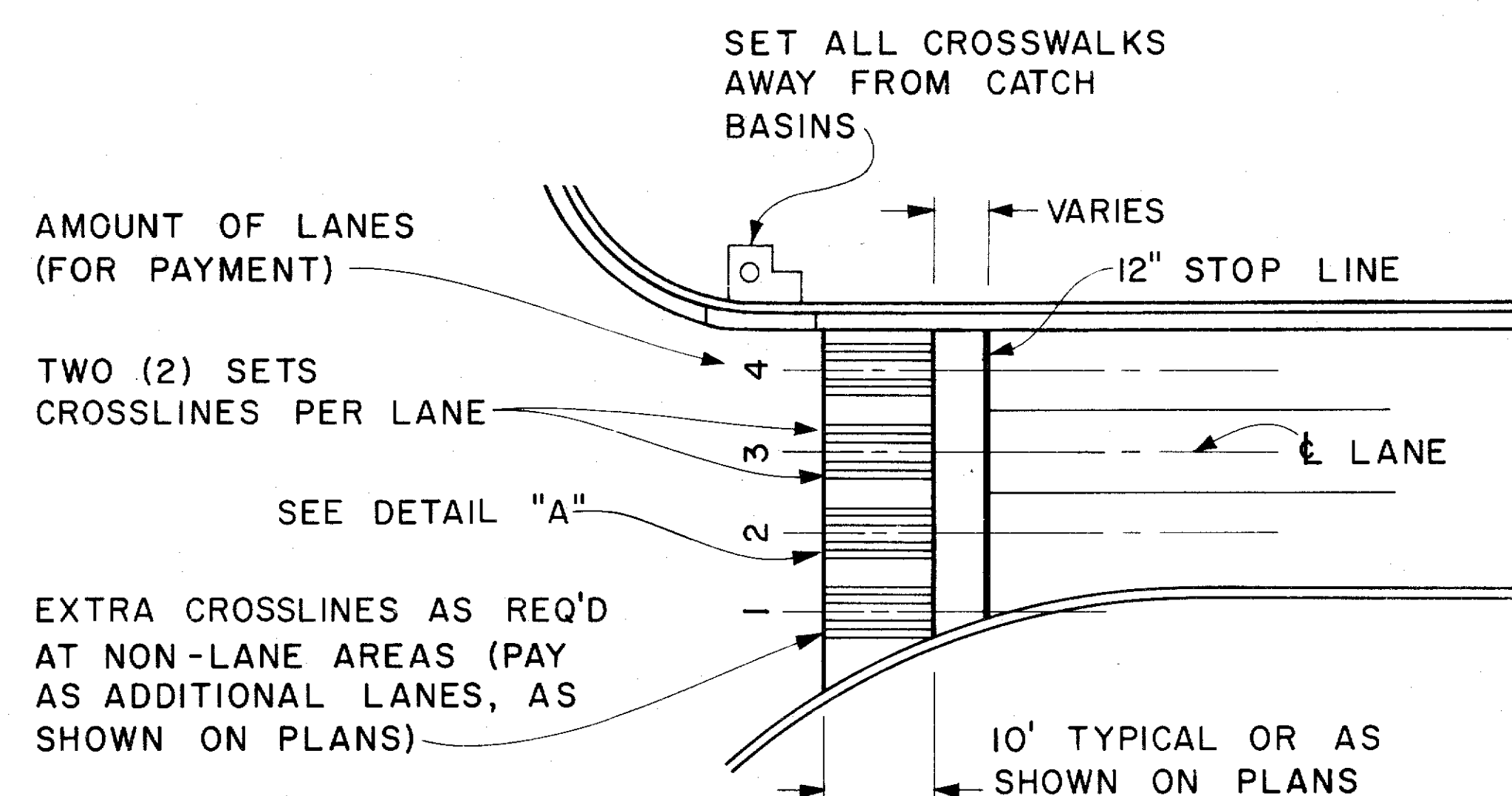
ELONGATED



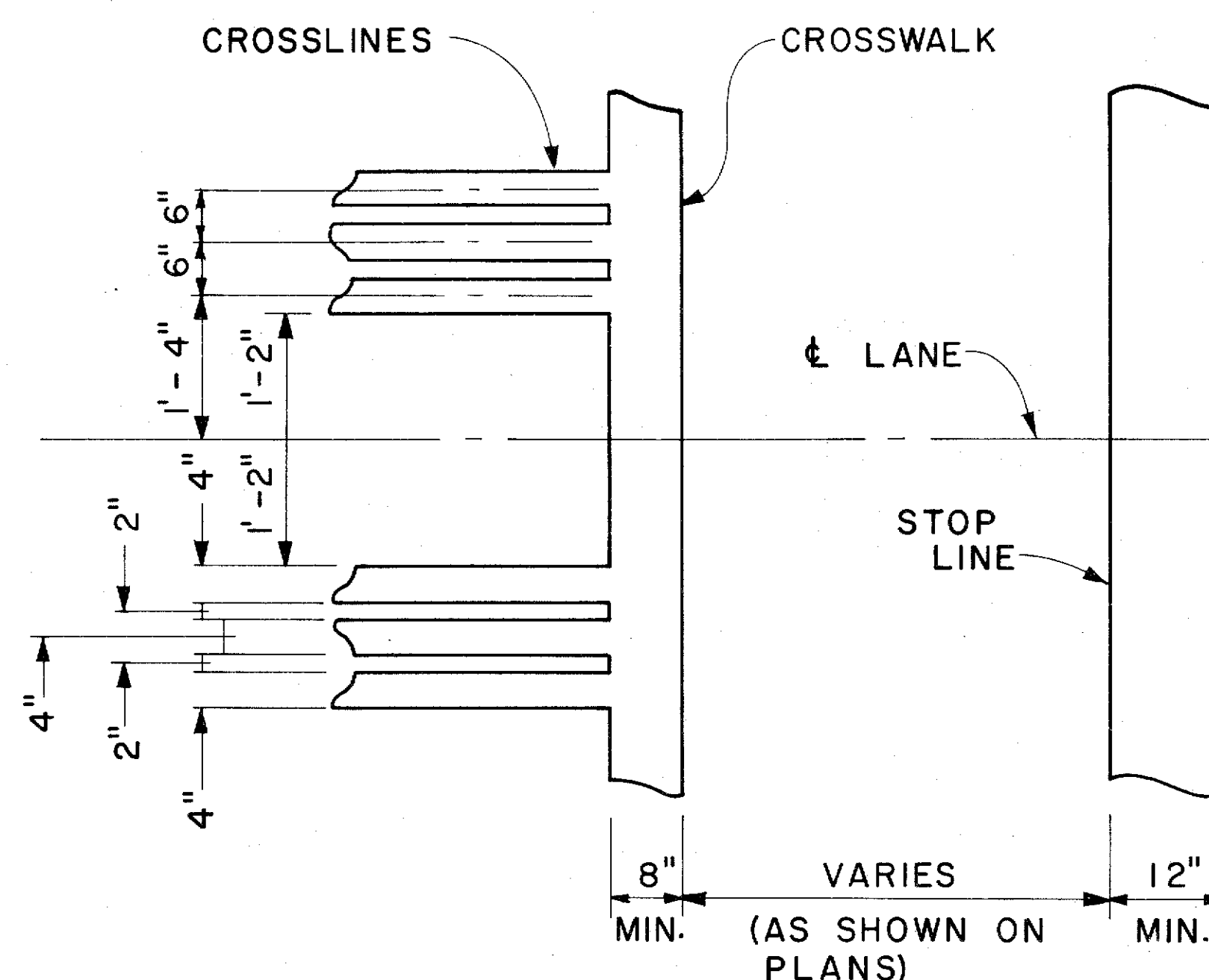
STANDARD

PAVEMENT ARROWS

Scale: $3/8" = 1'$



PLAN



DETAIL "A"

CROSSWALK & STOP LINE

Scale: Not to Scale

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

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

APPROVED:
Harbert L. Zakrisch 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

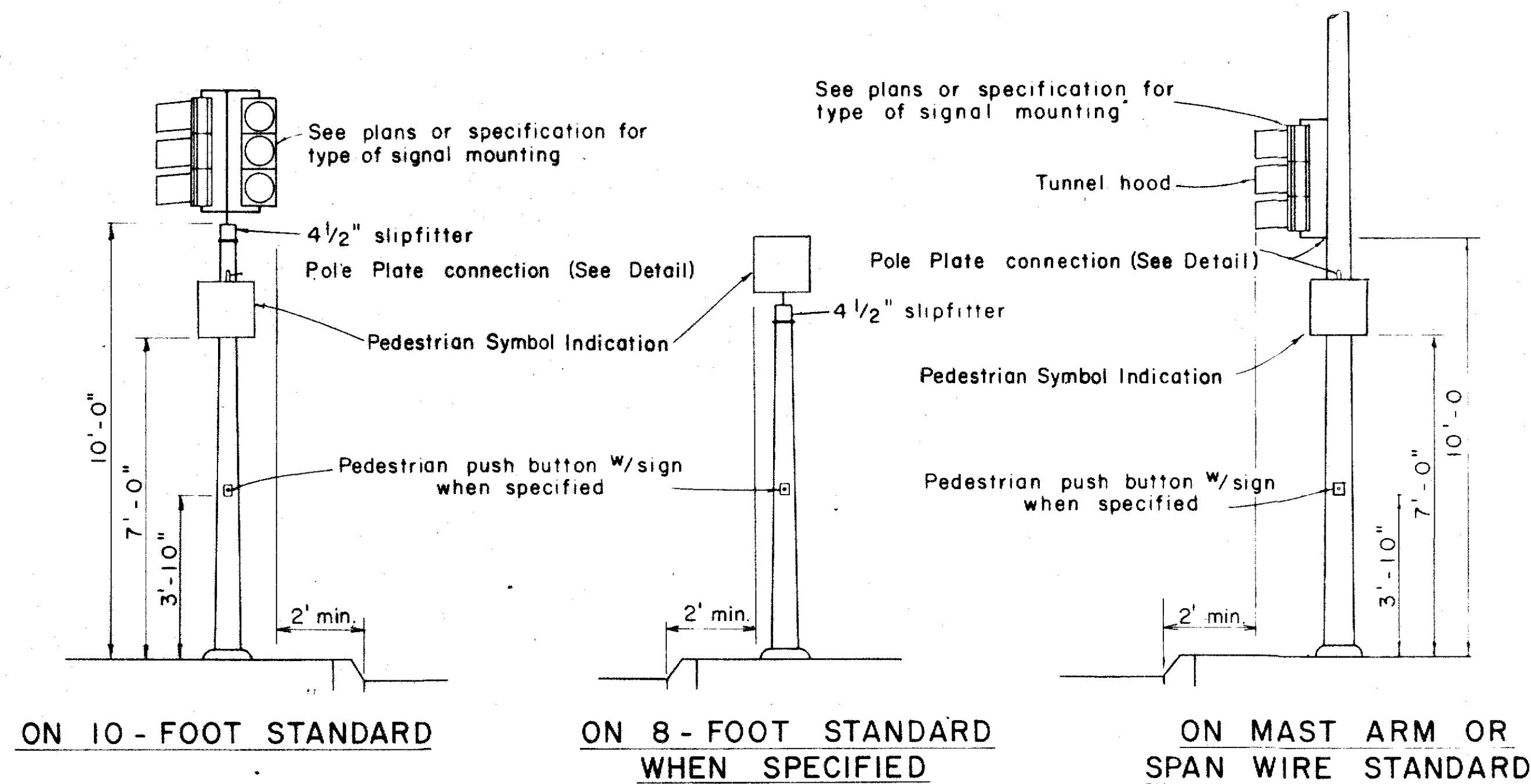
STANDARD DETAILS

MISCELLANEOUS
PAVEMENT MARKINGS

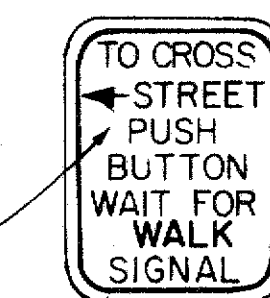
Scale: As Shown Date: March, 1978

SHEET No. 13 OF 20 SHEETS DT 306

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	200-11-23	1983	14	20



Arrow to be left or right or both See Plan



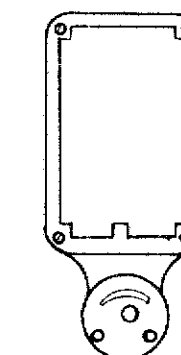
RIO-4a(L)
5" x 7"

PEDESTRIAN
PUSH BUTTON

NOTE:

1. Conduits shall protrude 2" max. above finished surface of foundation.
2. Conduits shall slope away from pole foundation.

When mounted on shaft of Standard, shape back of Housing to fit curvature of Shaft



Push button Housing

TRAFFIC SIGN AS SPECIFIED IN PLAN
"TO CROSS STREET (ARROW) PUSH BUTTON
WAIT FOR WALK SIGNAL", RIO-4a(L)
RIO-4a(R) or RIO-4a(L & R)

Holes for 5/8" bolts

Push button

2 1/2" pipe

2 1/2" C.I. companion flange 125* F.D.

11/16"

2 1/2" std galv steel pipe

3'-10"

2' min.

5/8" x 12" anchor bolts

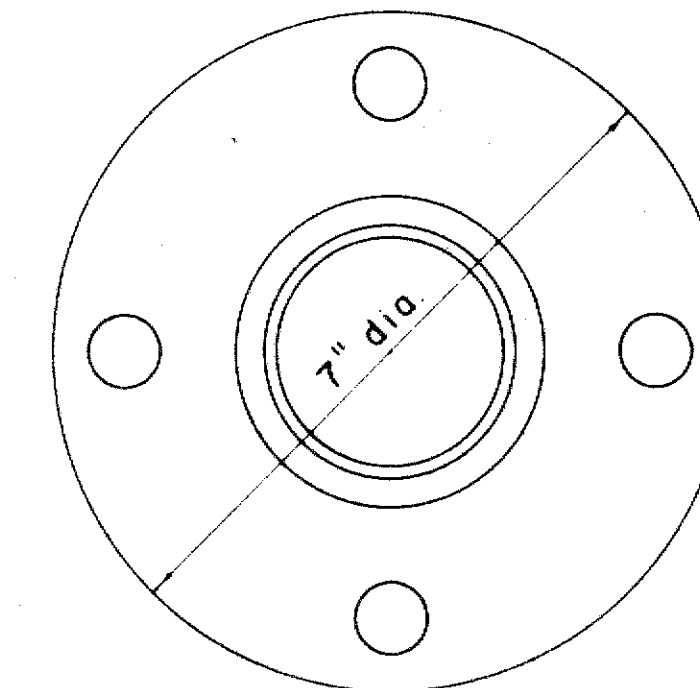
Class B concrete

1'-6"

1'-6"

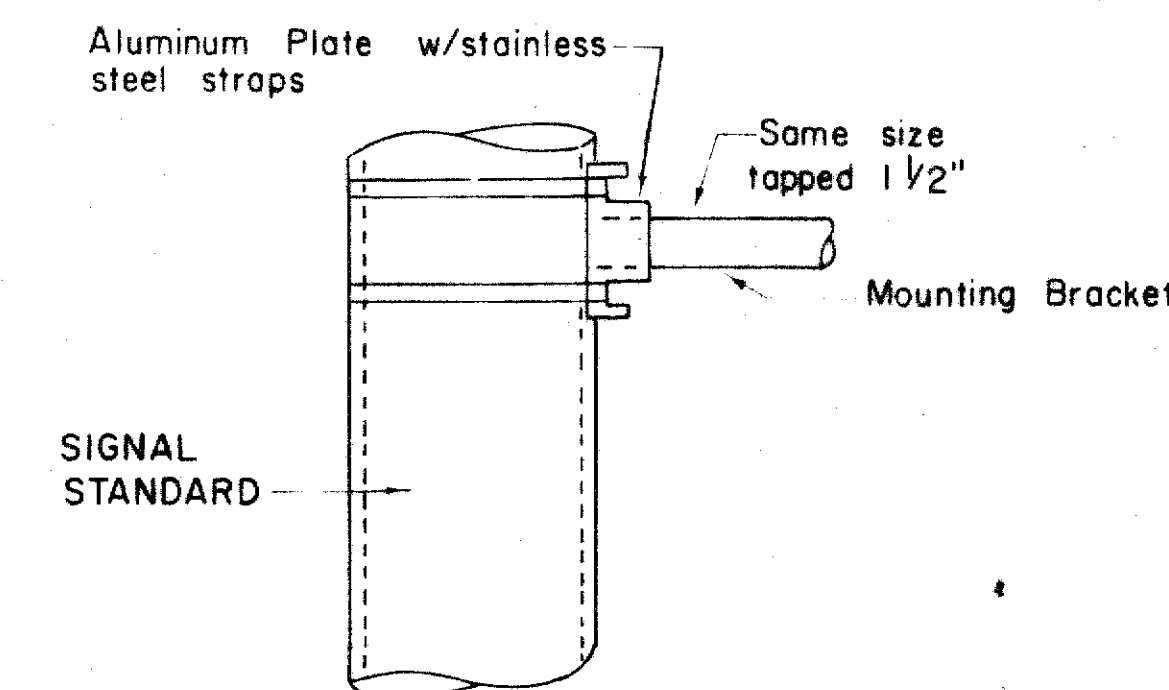
1 1/2" conduit

SECTION

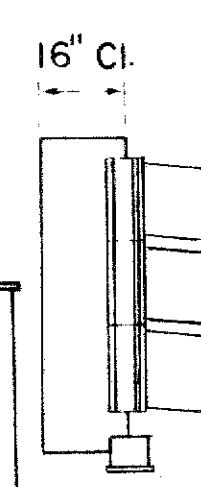
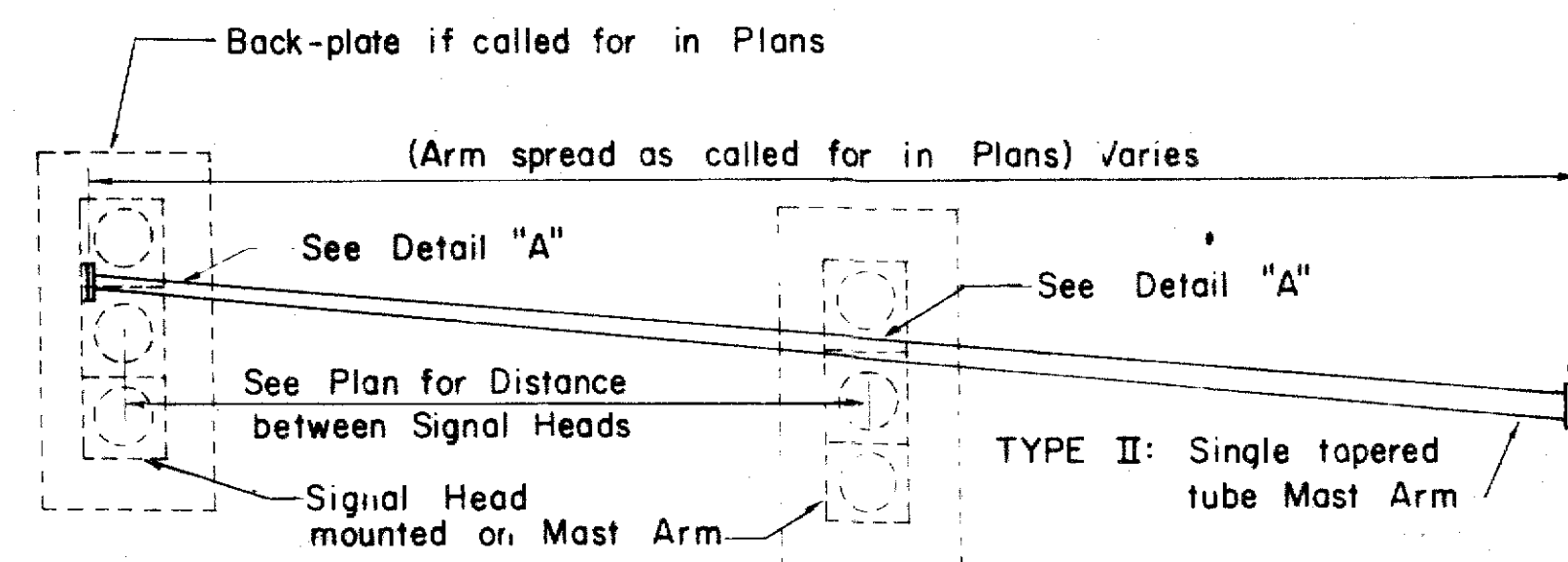


BASE DETAIL

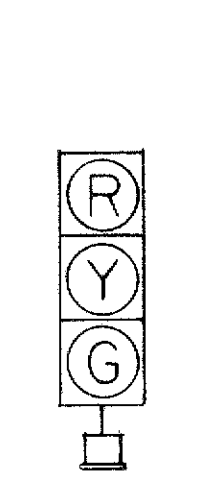
TYPICAL EQUIPMENT MOUNTINGS



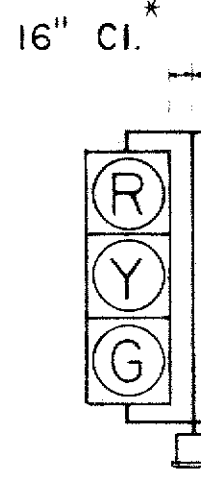
DETAIL OF POLE PLATE CONNECTIONS



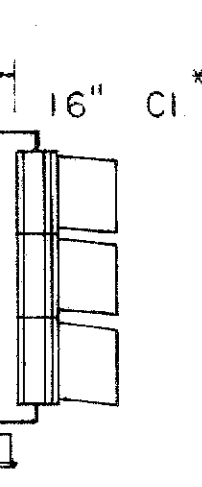
1 way
(1 vert.)
* I A



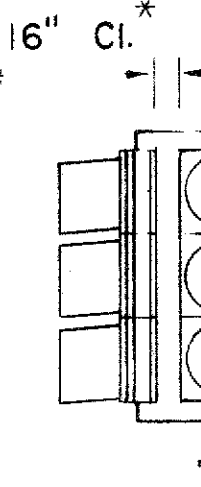
1 way
(1 vert.)
I



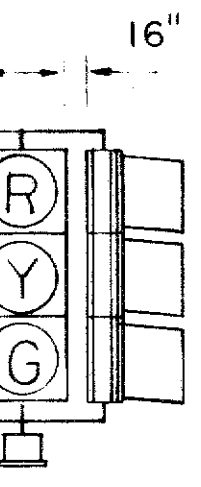
2 way
(2 vert.)
II



3 way
(3 vert.)
III



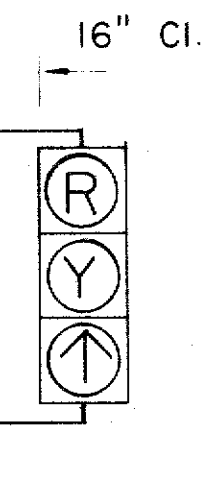
1 way
(1 vert.)
IV



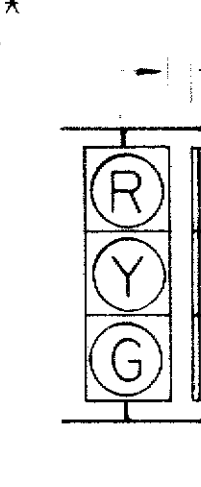
2 way
(2 vert.)
V



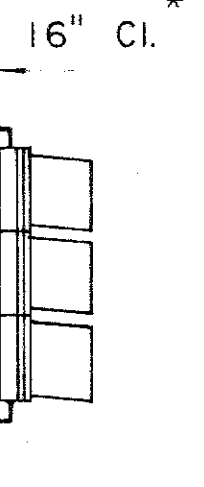
1 way
(1 vert.)
VI



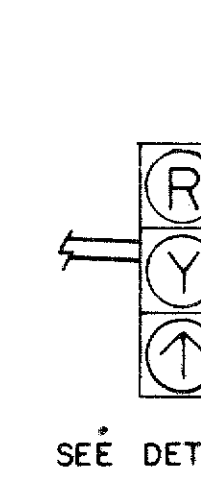
2 way
(2 vert.)
VII



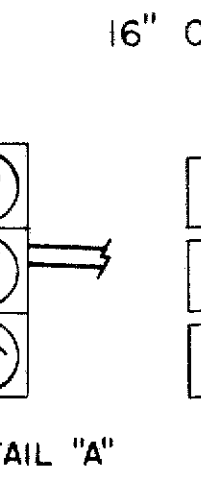
1 way
(1 vert.)
VIII



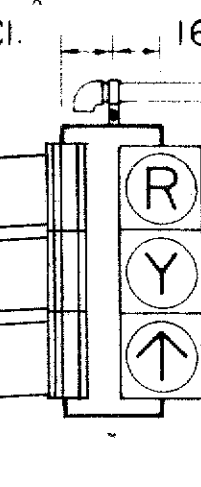
2 way
(2 vert.)
IX



1 way
(1 vert.)
X



2 way
(2 vert.)
XI



1 way
(1 vert.)
XII



2 way
(2 vert.)
XIII

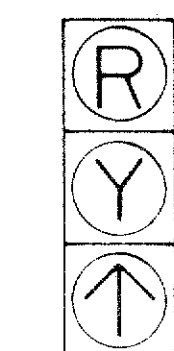
SLIPFITTER MOUNTINGS

BRACKET MOUNTINGS

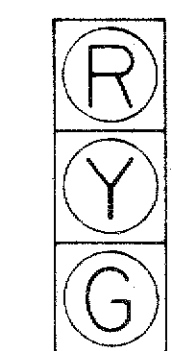
MASTARM MOUNTINGS

* Use with Programmed Visibility Signal

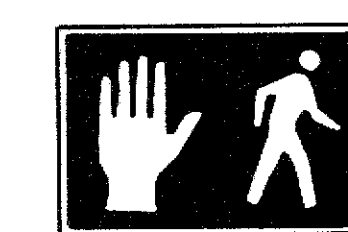
TYPICAL VEHICULAR AND PEDESTRIAN SIGNAL MOUNTINGS



1 - Vertical
3 - Section

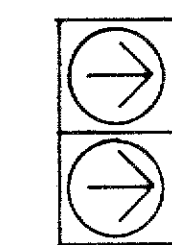


1 - Vertical
3 - Section



SYMBOL (Hand)
Portland Orange
BACKGROUND
Opaque

SYMBOL (Man)
Lunar White
BACKGROUND
Opaque



1 - Vertical
2 - Section

APPROVAL RECOMMENDED
Eichi Tanaka
TRAFFIC ENGINEER

12/29/69
DATE

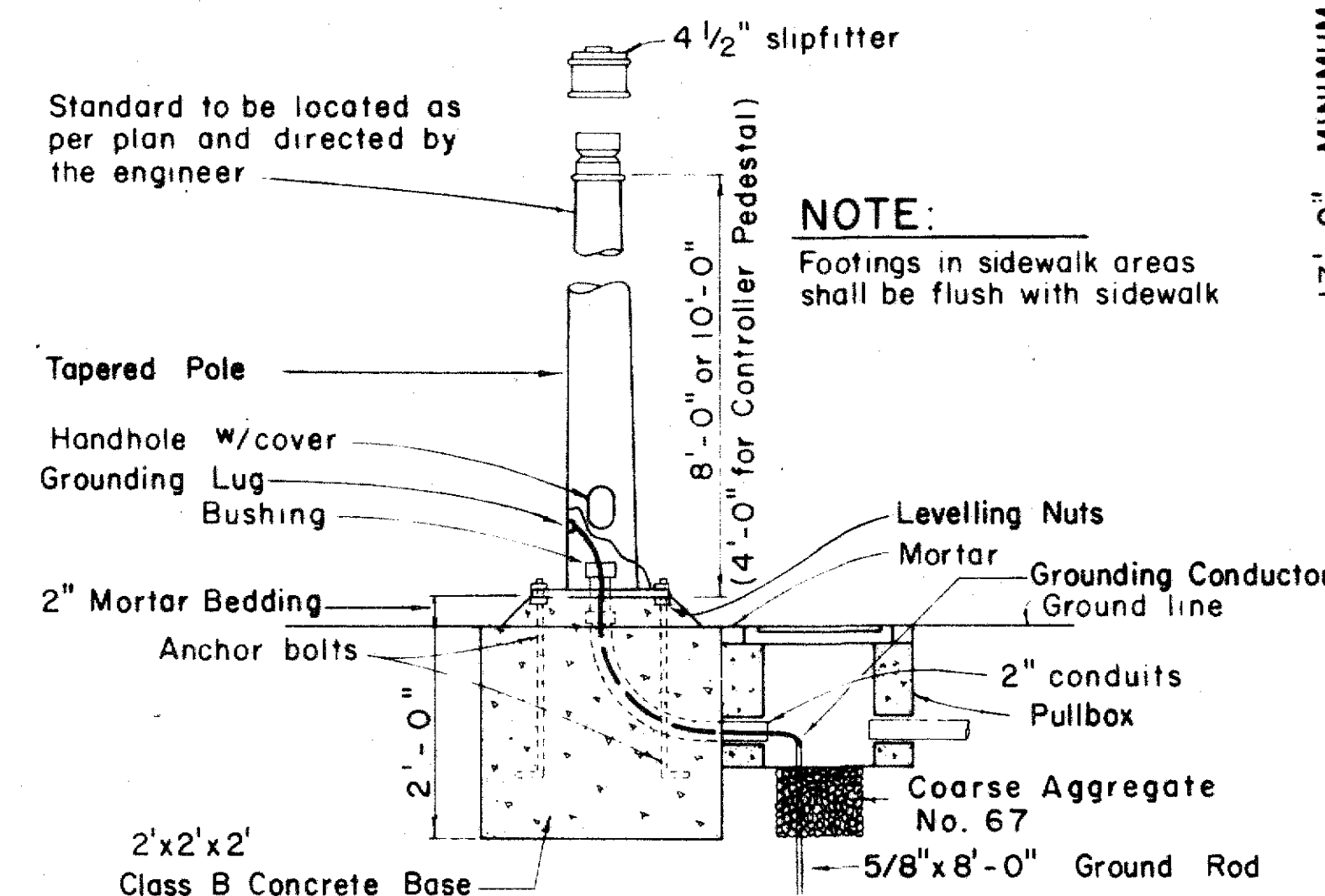
12/29/69
DATE

TYPICAL SIGNAL ARRANGEMENTS

NO	REVISION	APPROVED BY	DATE
1	Revise code nos. for Pedestrian Push Button signs.	H.T.	3/23/72
2	Revise Details of Traffic and Pedestrian Signals, Standards and Pedestrian Push Button and Signs.	H.T.	3/5/72
3	Revise signal indications.	H.T.	9/22/70
4	Remove Note No. 3 & Revise clearance and dimension.	H.T.	9/19/71
5	Revise Ped. Signal Indication	H.T.	8/6/80

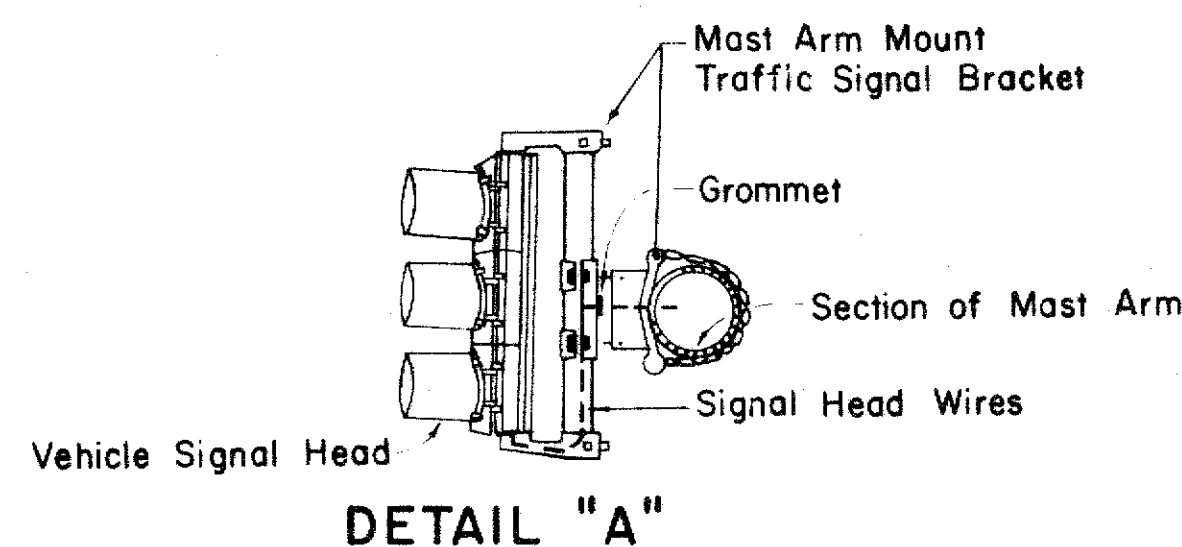
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS
Not to Scale
SHEET No. 14 OF 20 SHEETS DT 400

DATE
SURVEY PLOTTED BY
DESIGNED BY
CHECKED BY
NOTED BY

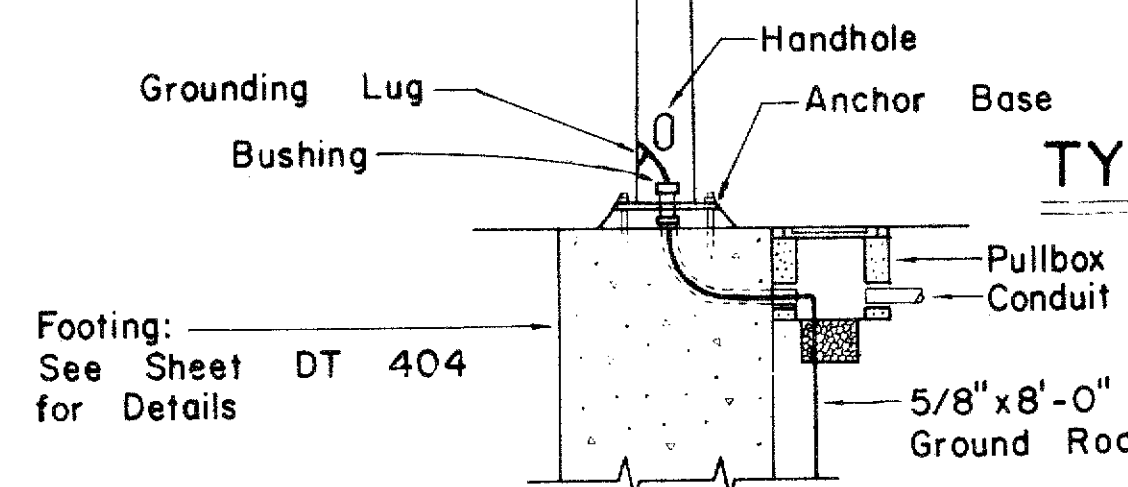


TYPE I SIGNAL STANDARD OR CONTROLLER PEDESTAL AND FOOTING

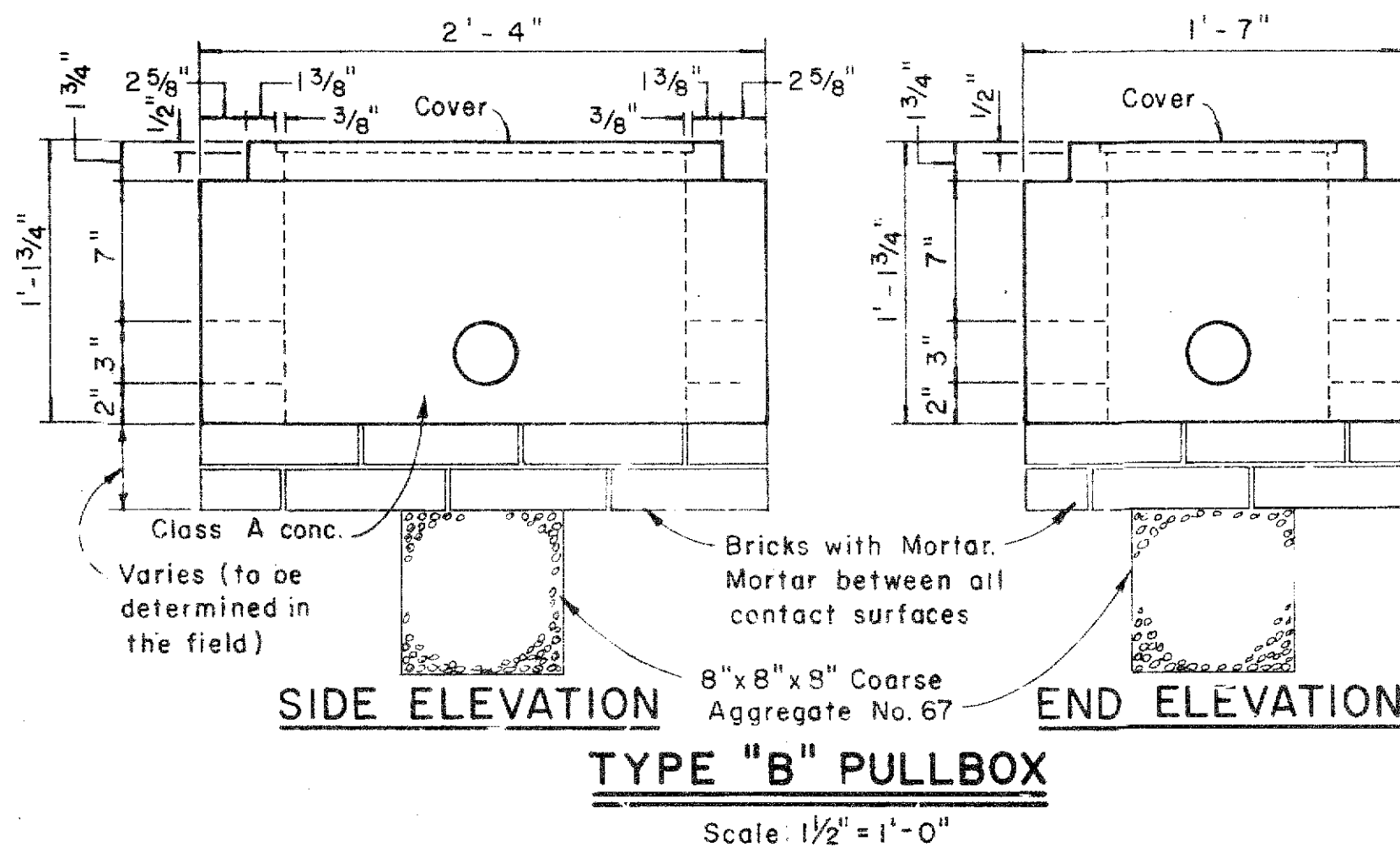
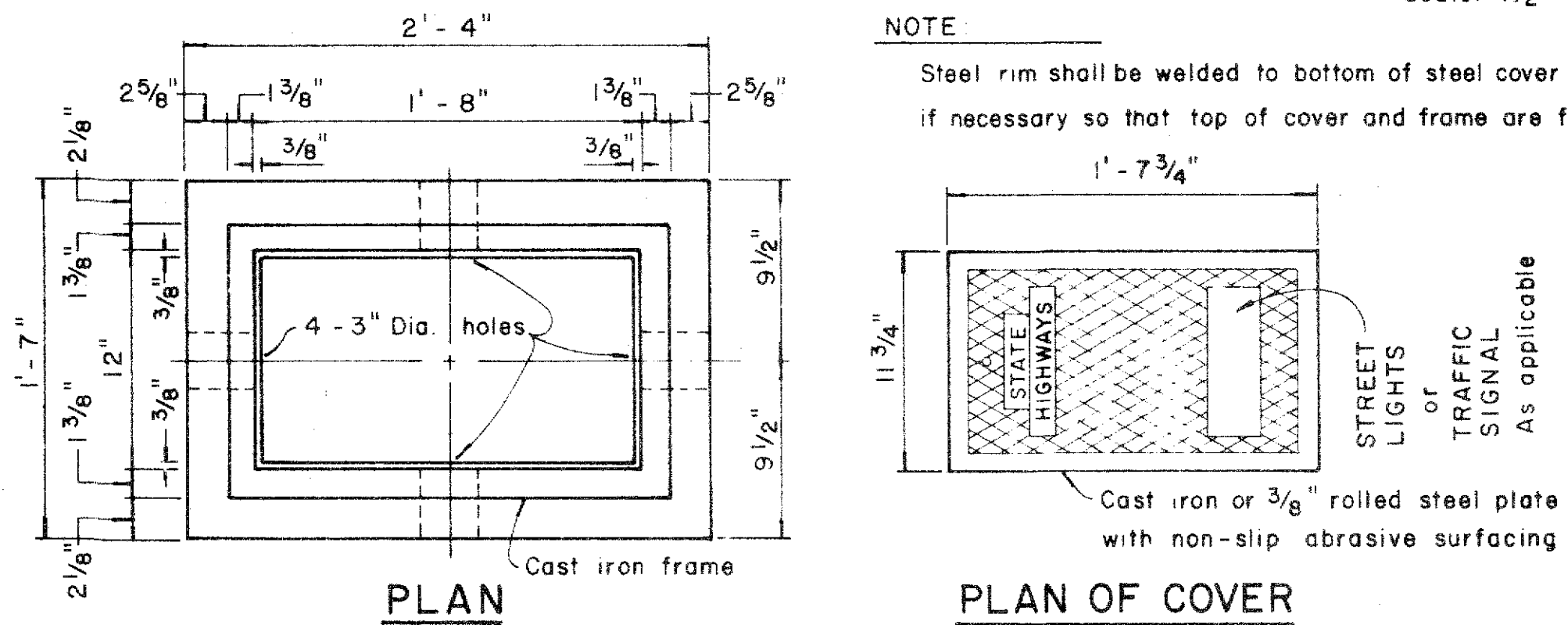
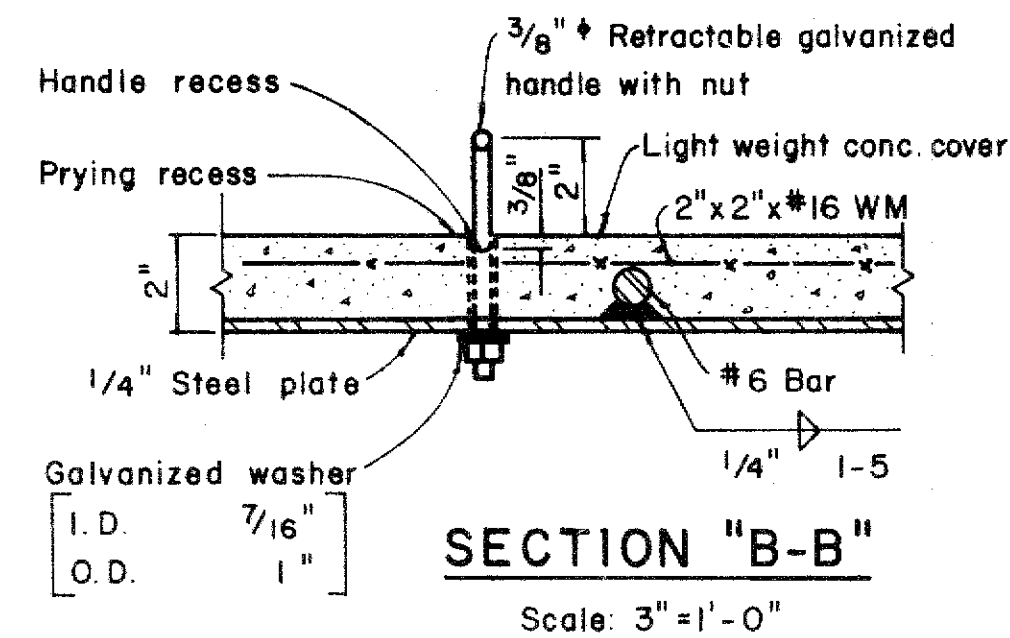
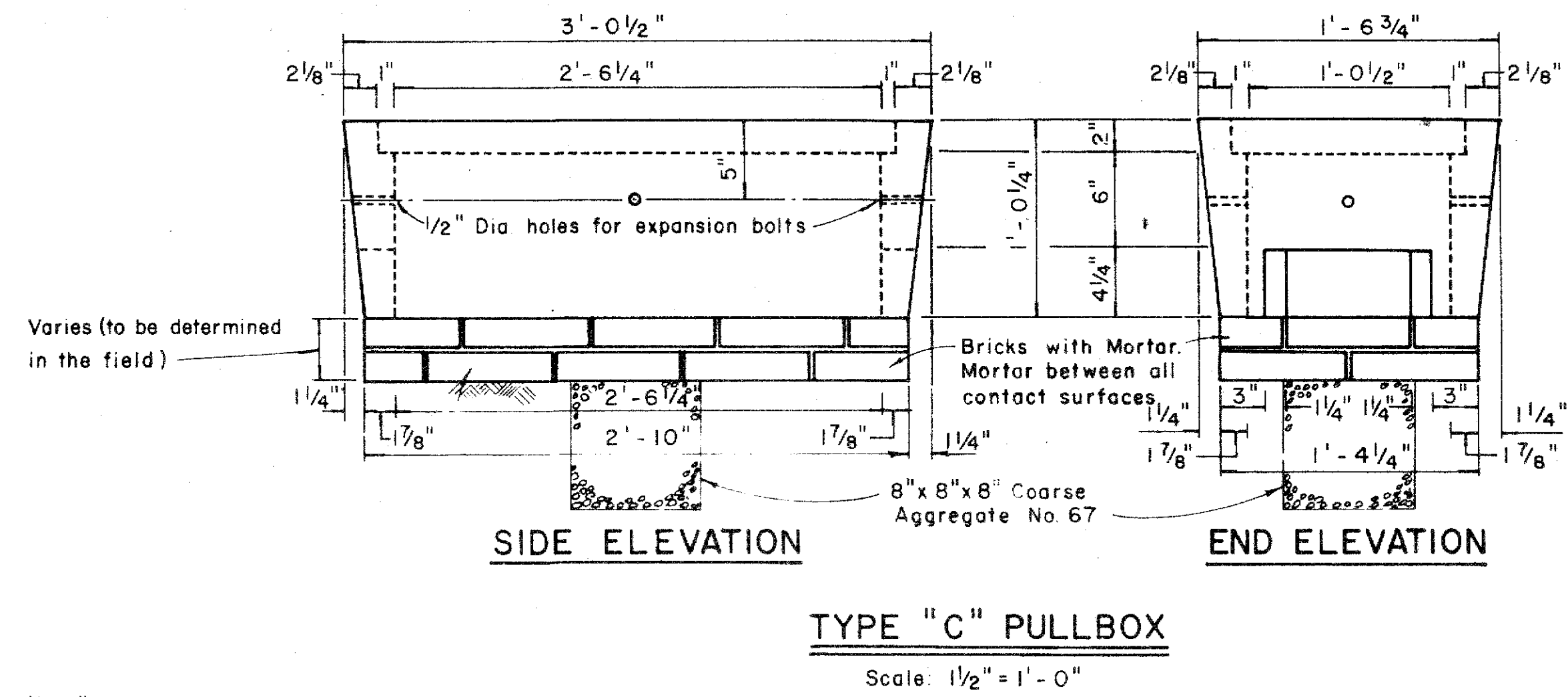
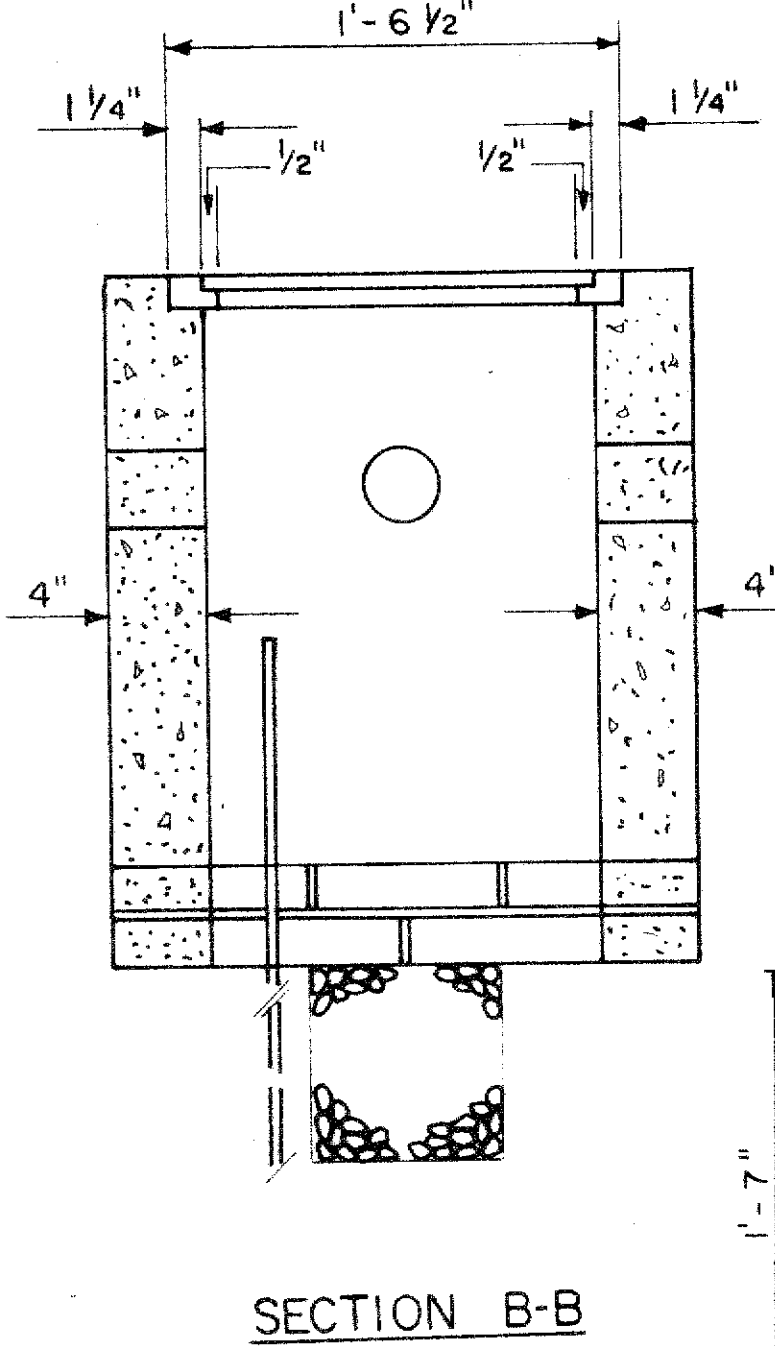
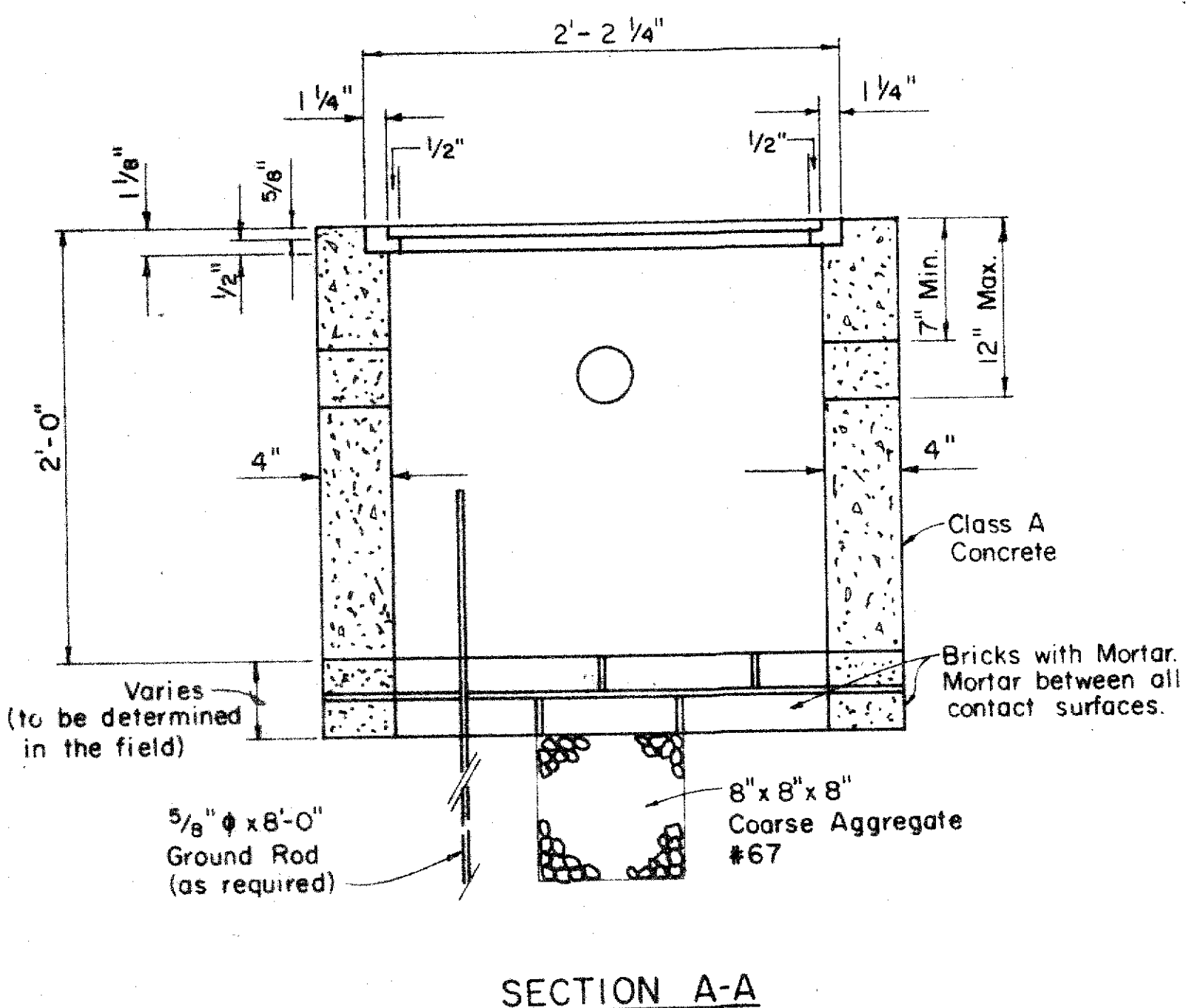
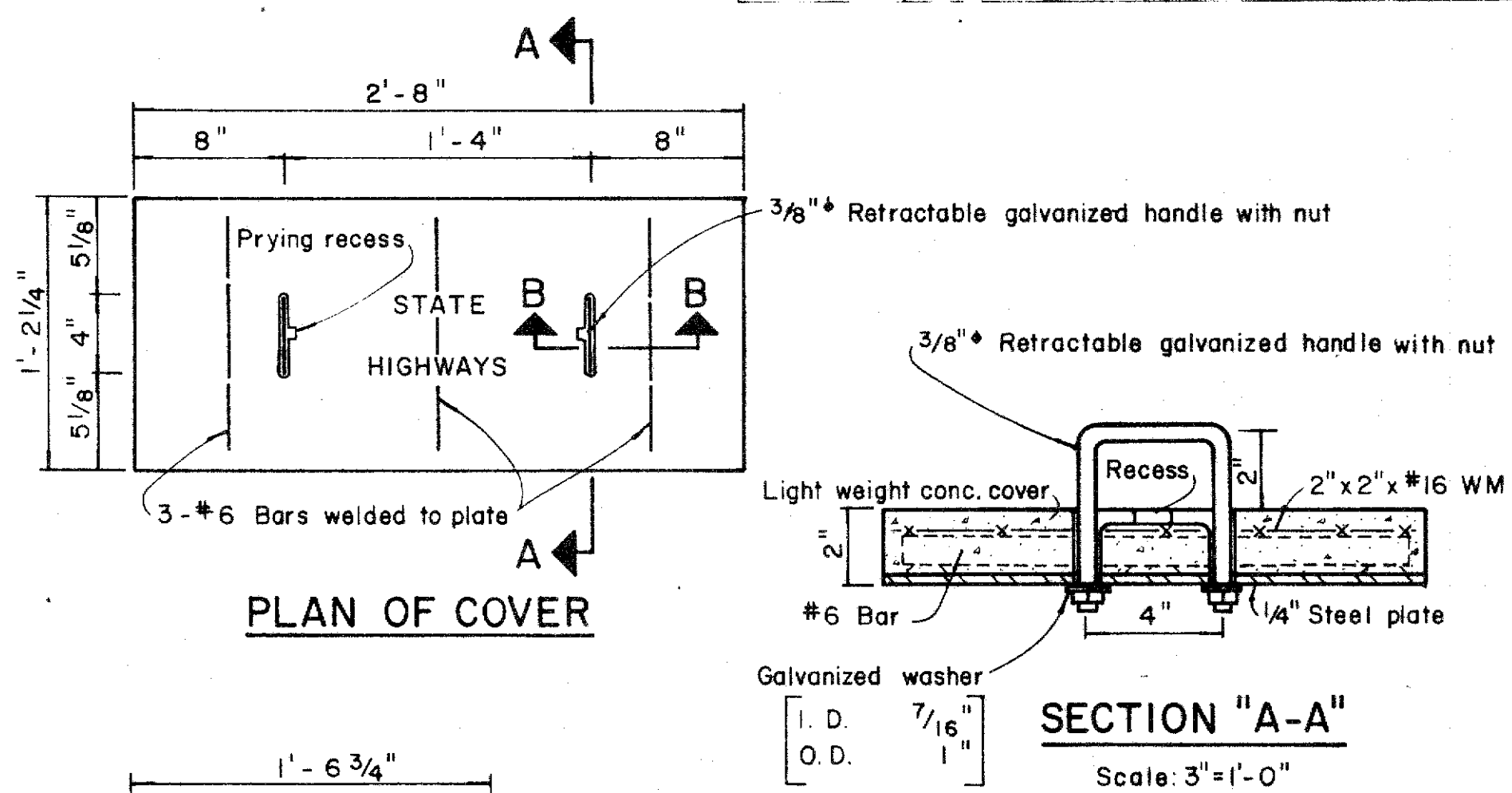
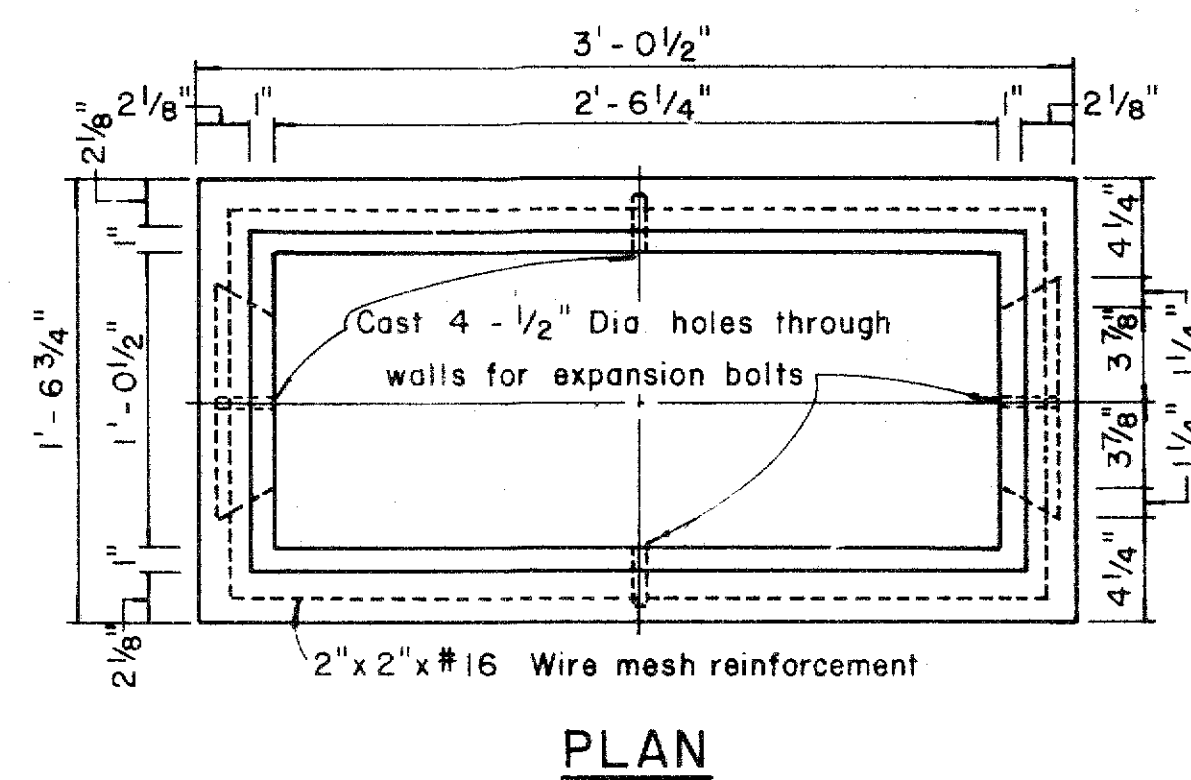
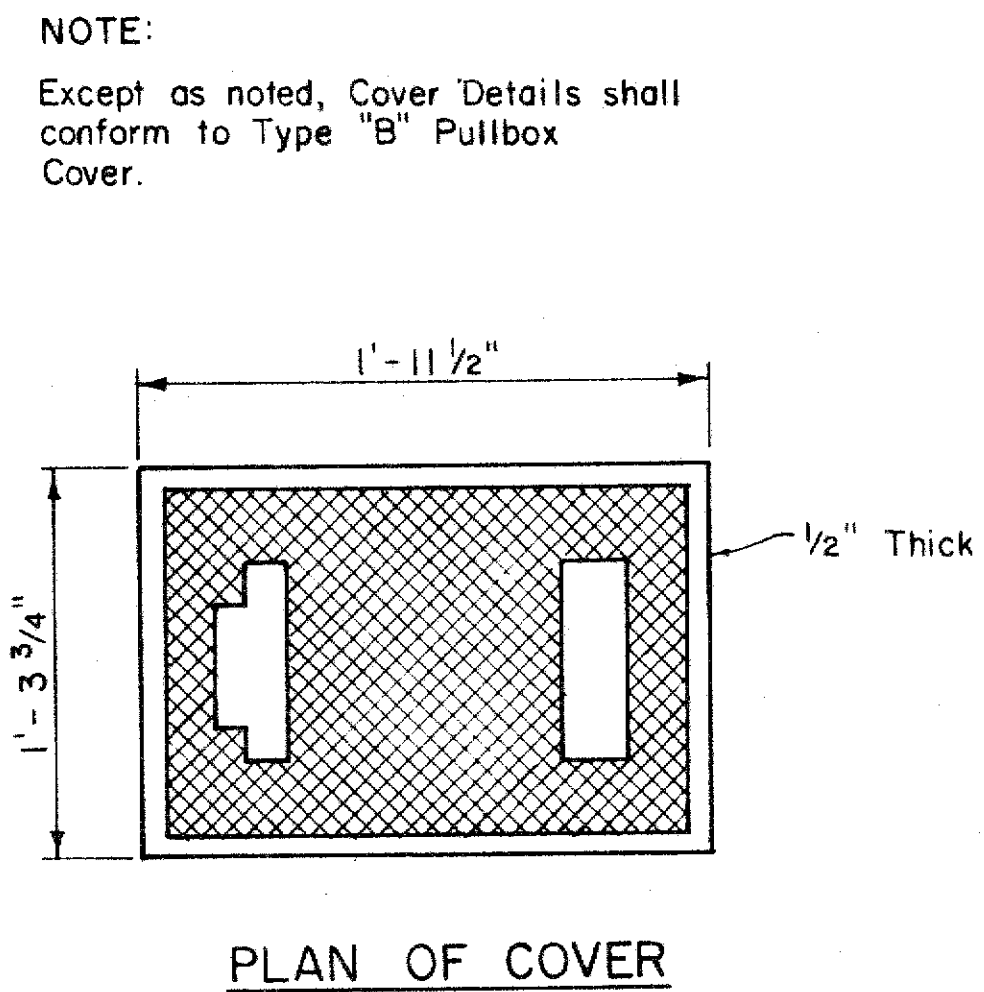
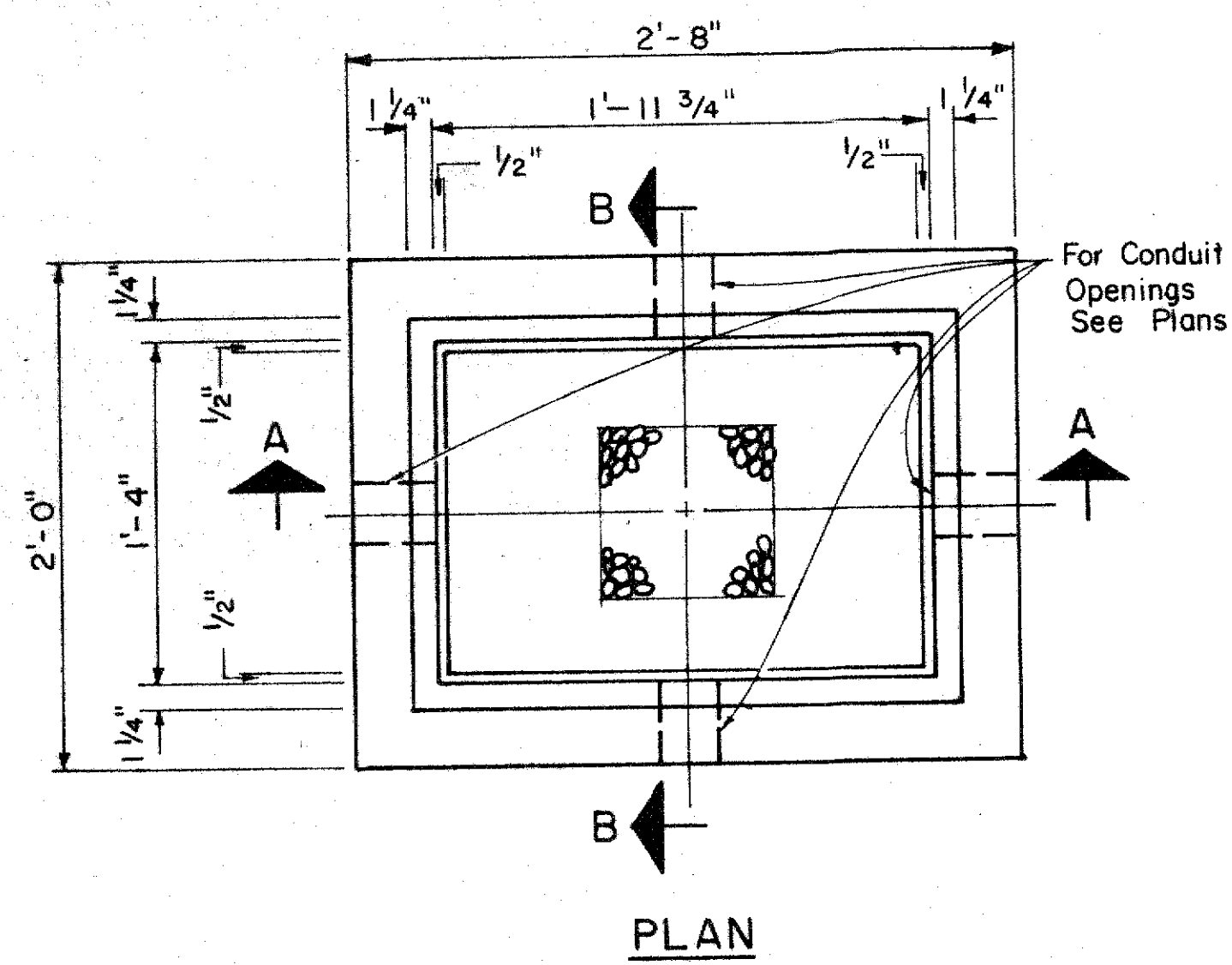
17'-0" MINIMUM
CLEARANCE ABOVE ROADWAY



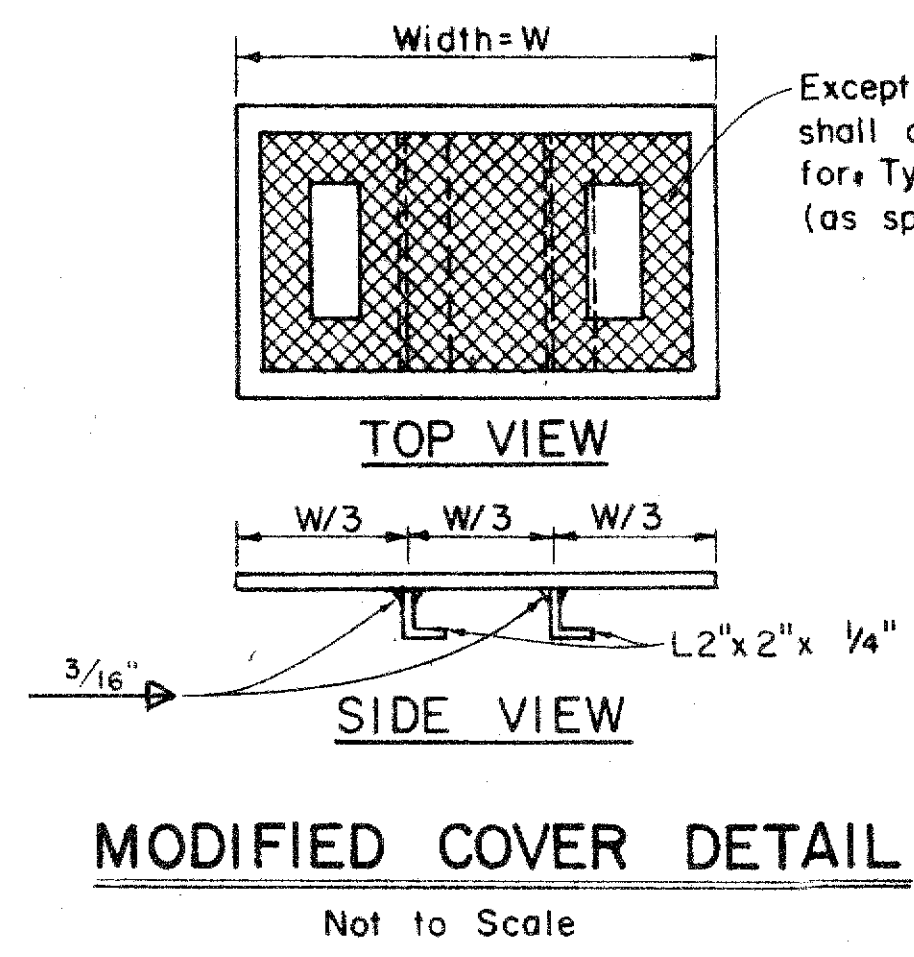
TYPE II MAST ARM AND STANDARD



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	200-1-83	1983	15	20



DATE	DESIGNED BY	CHECKED BY
PLAN	DESIGNED BY	CHECKED BY
NOTES	DESIGNED BY	CHECKED BY
QUANTITIES	DESIGNED BY	CHECKED BY
BY	DESIGNED BY	CHECKED BY



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

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

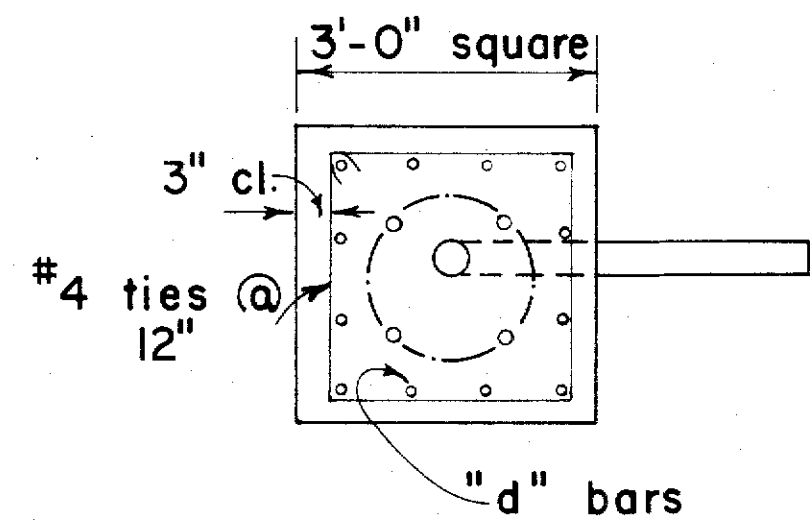
NO.	REVISION	APPROVED BY	DATE
1	Revised Type B & C Pullbox details	H.T.	3-5-76
2	Revised Type "A" Pullbox & Added Modified Cover.	H.T.	1-31-80

APPROVAL RECOMMENDED:
TRAFFIC ENGINEER
DATE: 12/29/62

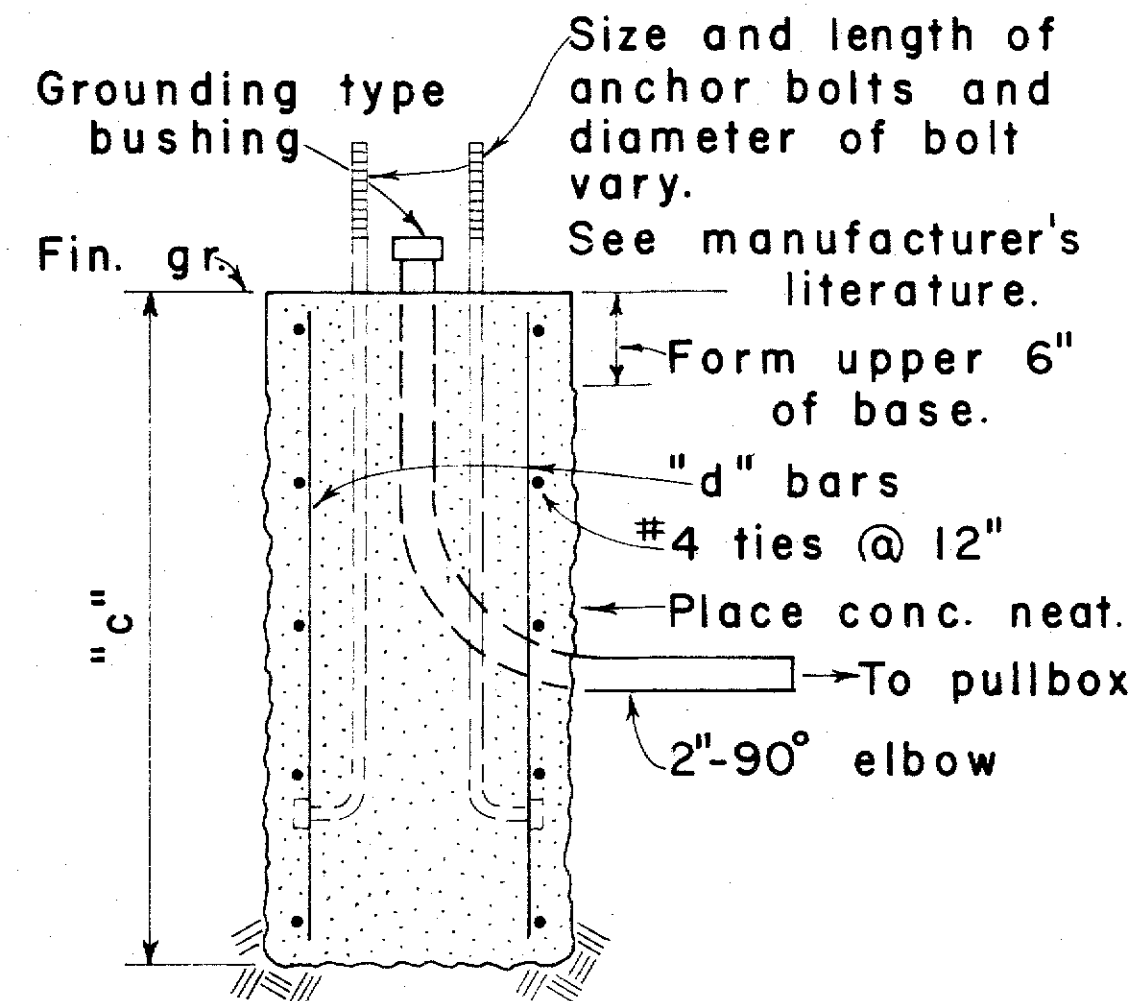
APPROVED:
ASSISTANT CHIEF, ENGINEERING
DATE: 12-30-69

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
PULLBOXES
Scale as noted Date
SHEET No. 15 OF 20 SHEETS DT 401

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-11-83	1983	16	20



PLAN - SECTION

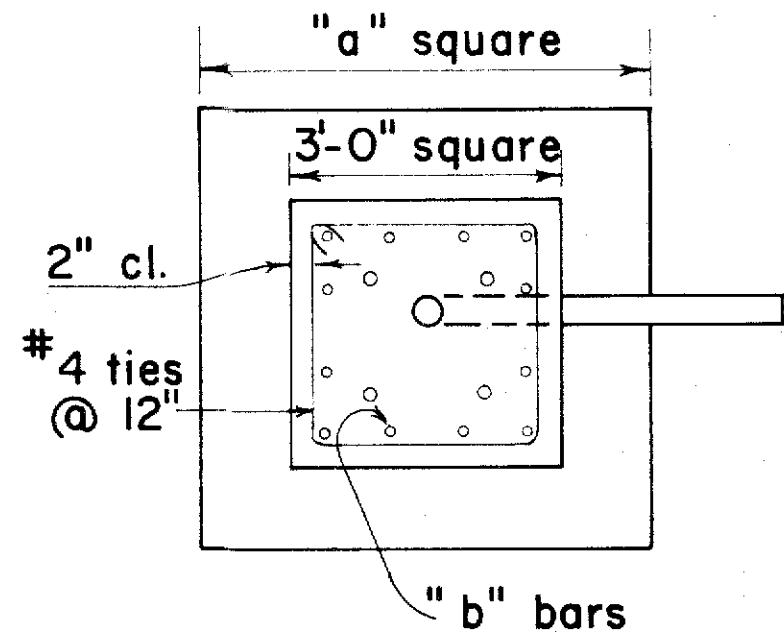


NOTE:
Concrete shall be Class B.

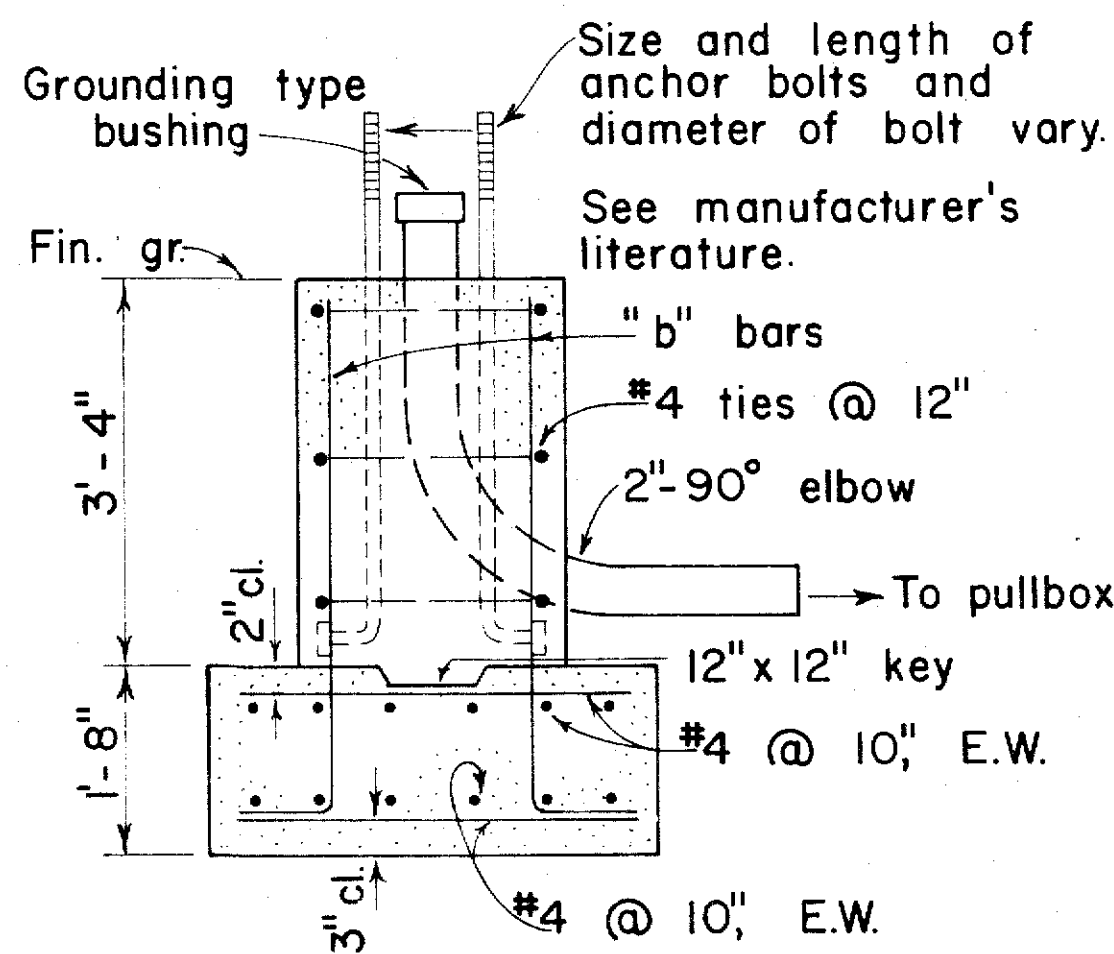
SECTION

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



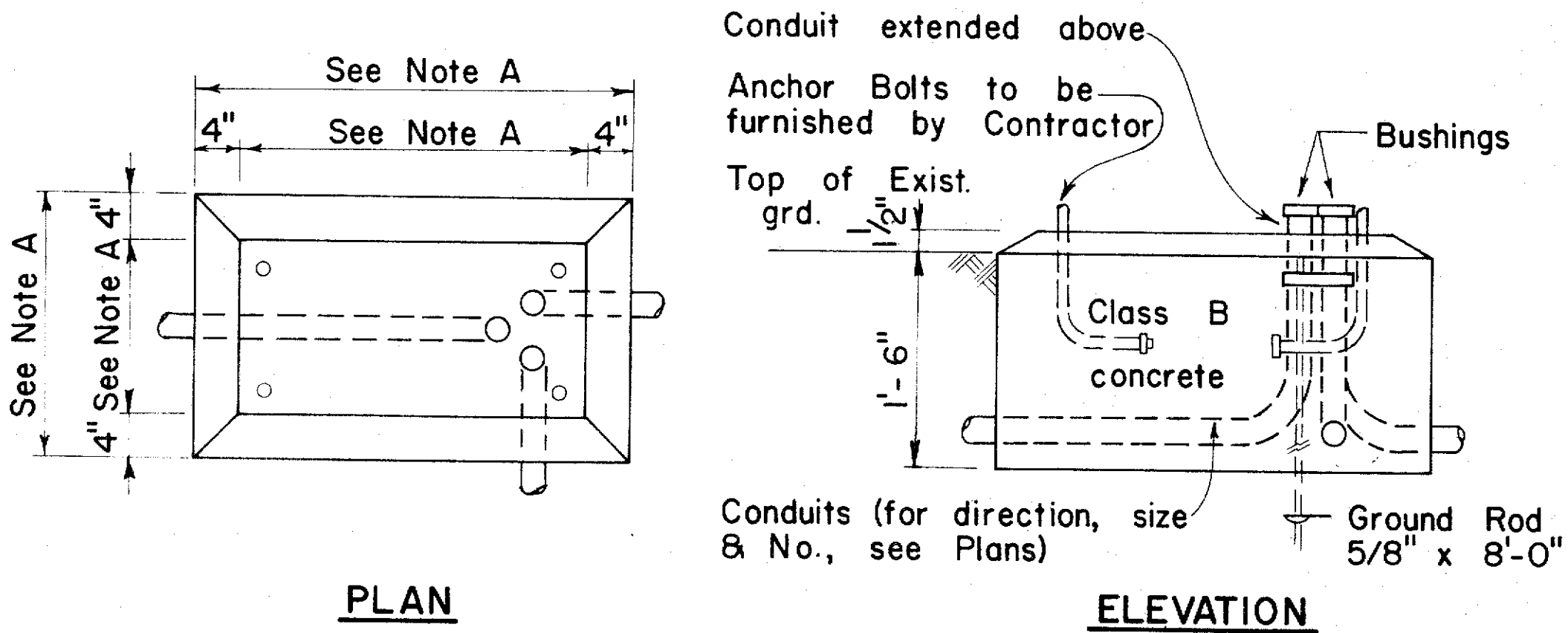
NOTE:
Concrete shall be Class B.

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
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:
E.ichi Tanaka 3/4/76
TRAFFIC ENGINEER DATE

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

NO.	REVISION	APPROVED BY	DATE

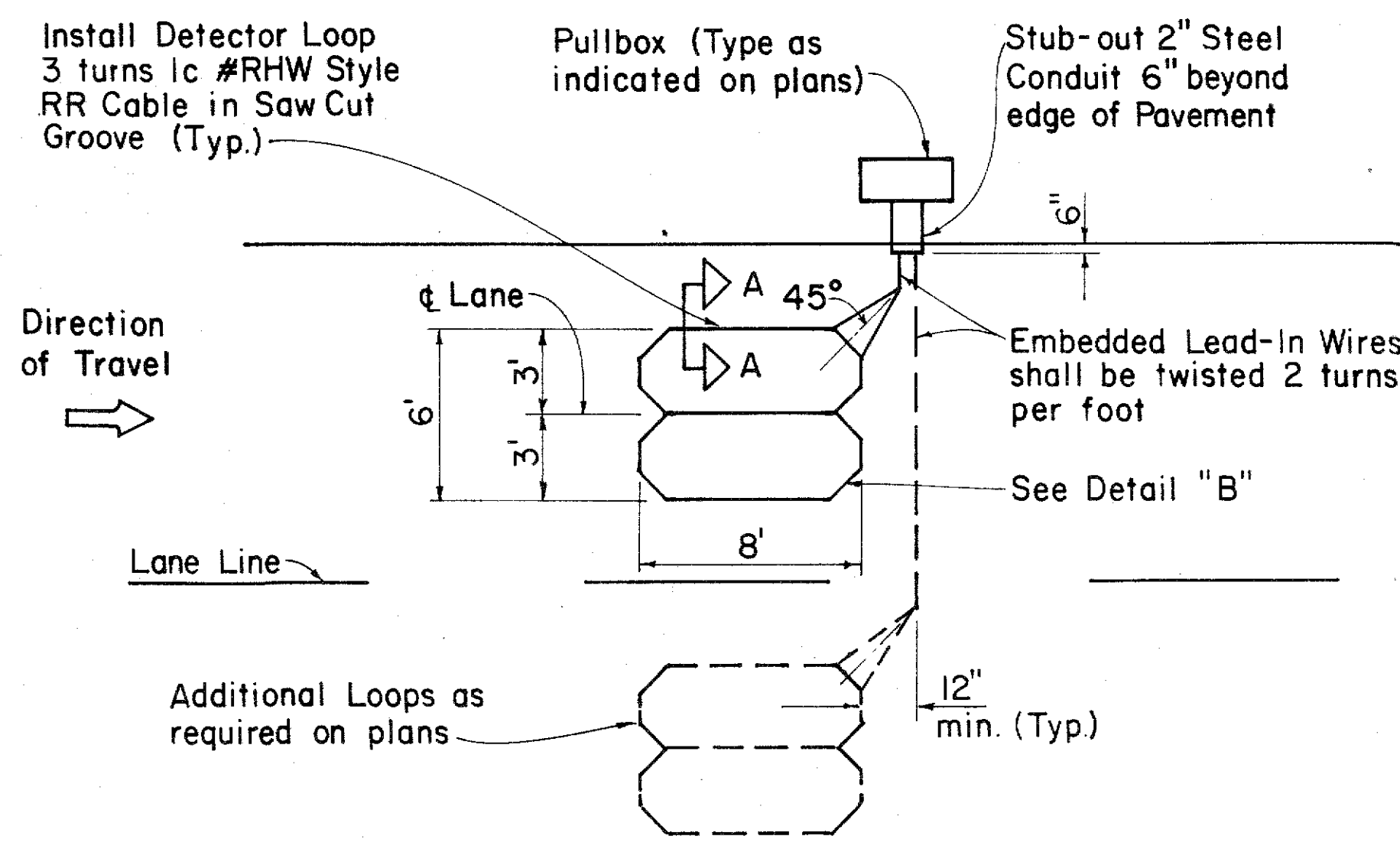
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS

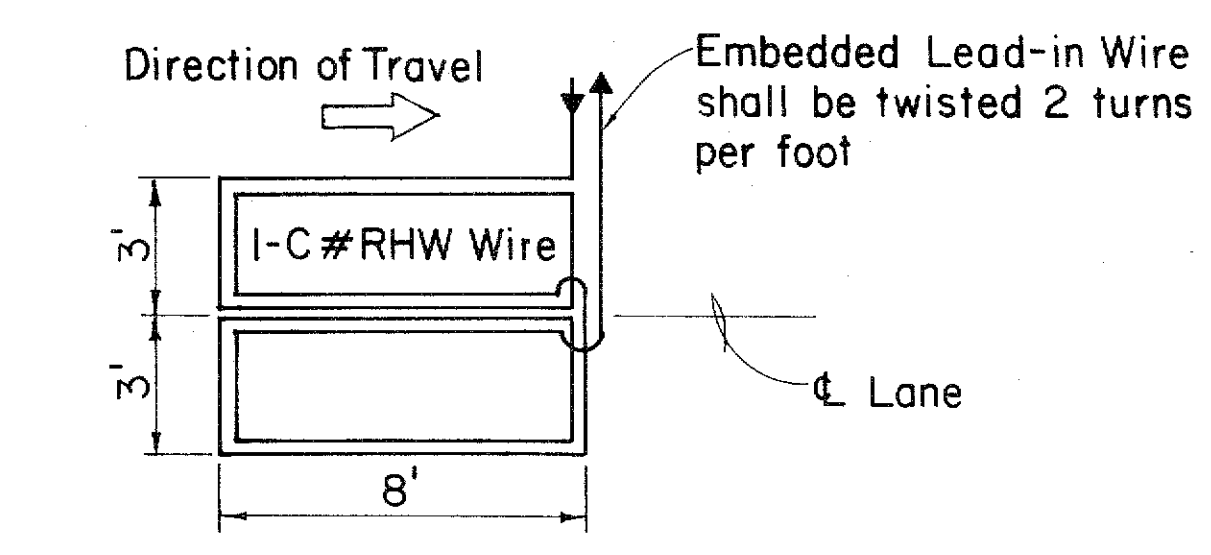
Not to Scale
SHEET NO. 16 OF 20 SHEETS DT404

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	30041-83	1983	17	20

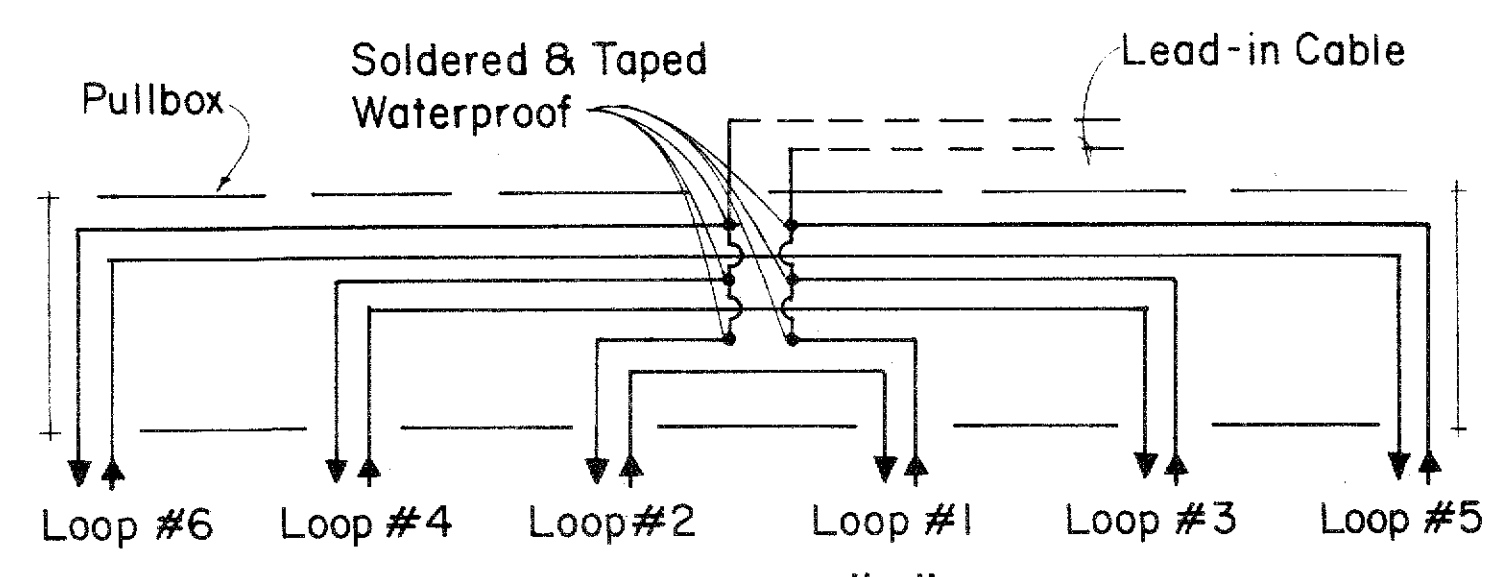
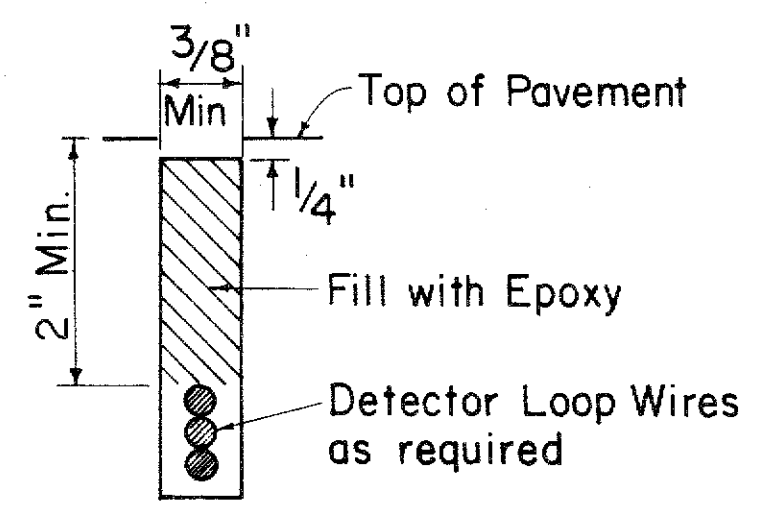


SINGLE LOOP LAYOUT

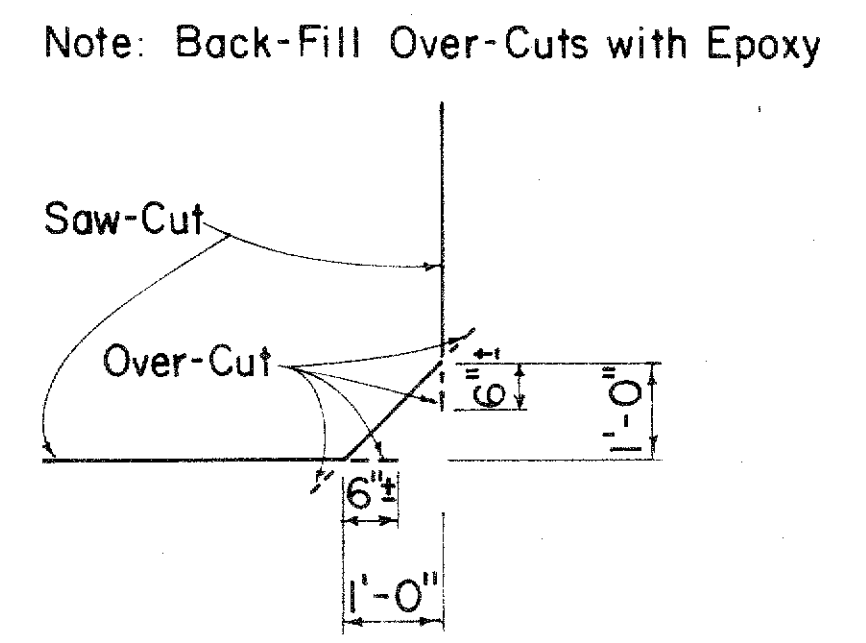


WIRING DIAGRAM

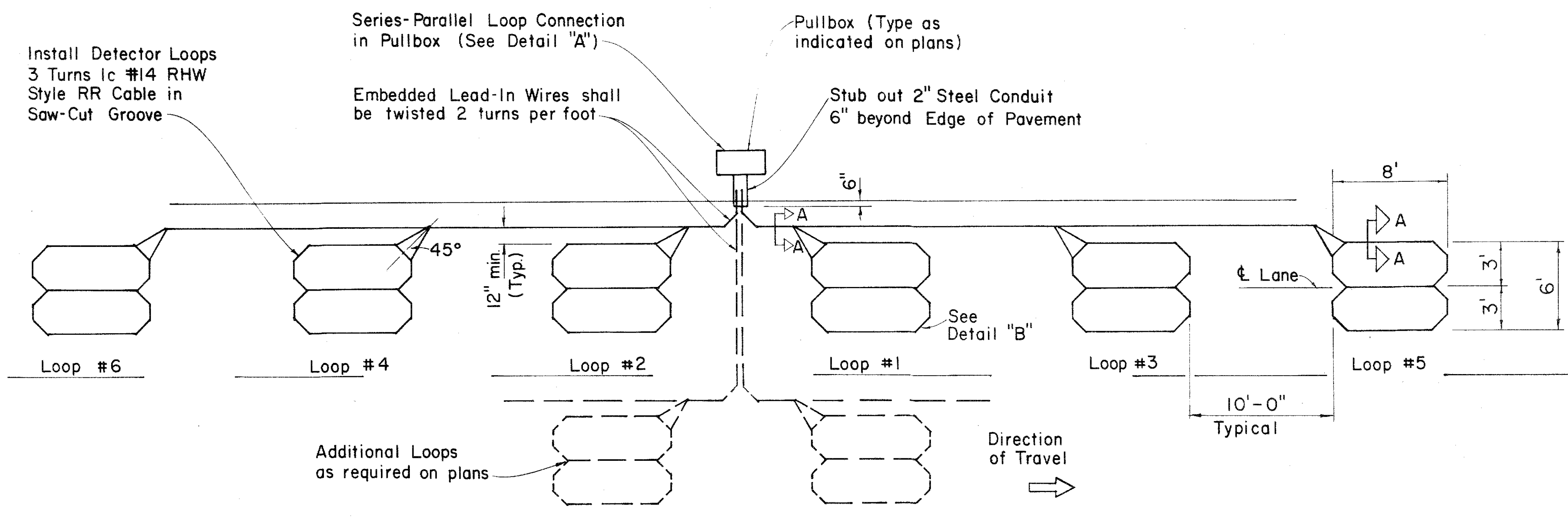
DETECTOR LOOP SAW-CUT SECTION A-A (TYPICAL)



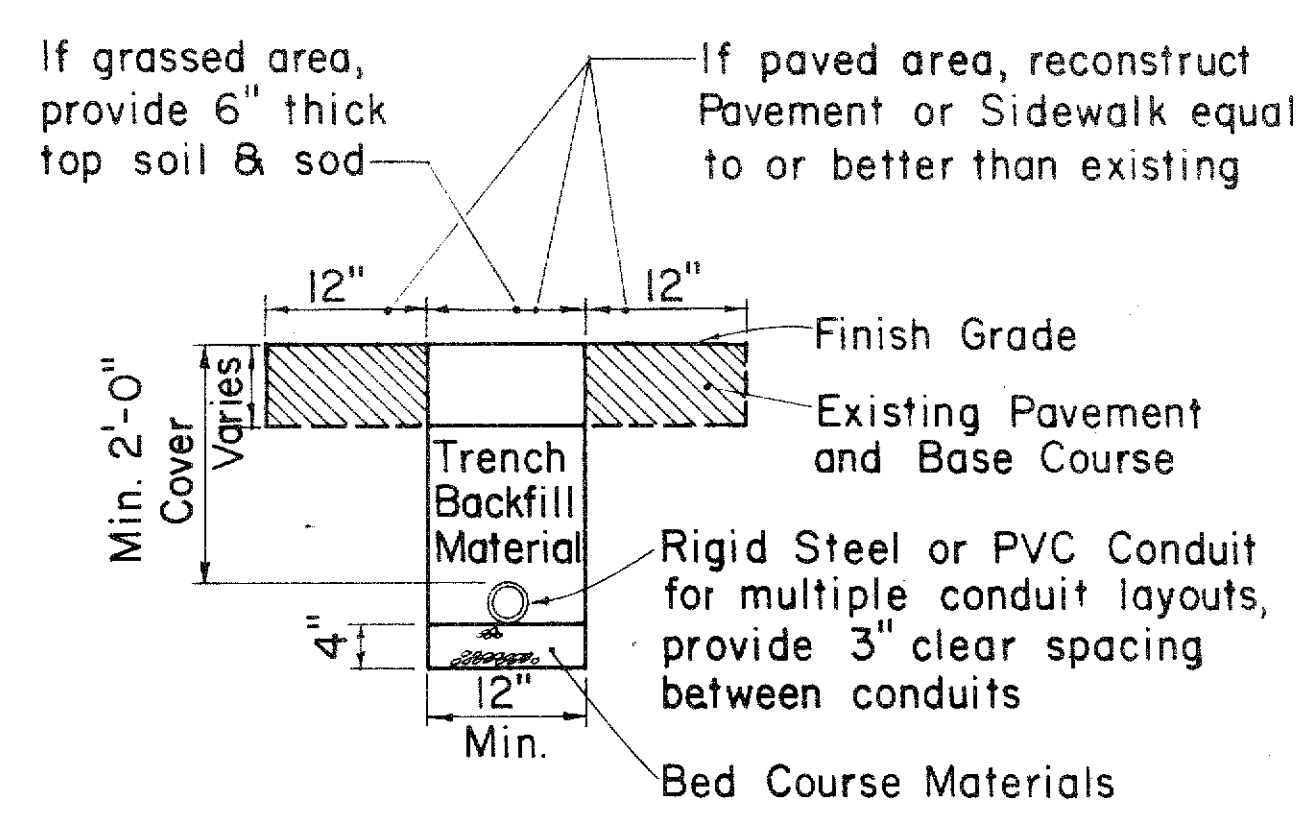
TYPICAL SERIES-PARALLEL LOOP CONNECTION



DETAIL "B" SAW-CUT AT CORNERS



MULTIPLE LOOP LAYOUT



TYPICAL TRENCH SECTION FOR CONDUIT

NOTE:
1. All conduits under roadways shall be steel or PVC schedule 80. All other conduits shall be steel or PVC schedule 40.

APPROVAL RECOMMENDED:
Erick Tanaka 9/26/80
TRAFFIC ENGINEER DATE

APPROVED:
John J. Fickel 1/8/81
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Replaces Sht. DT 405 dated 3/5/76	H.T.	7/30/80
2	Revised Section A-A	H.T.	5/15/81

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
LOOP DETECTORS

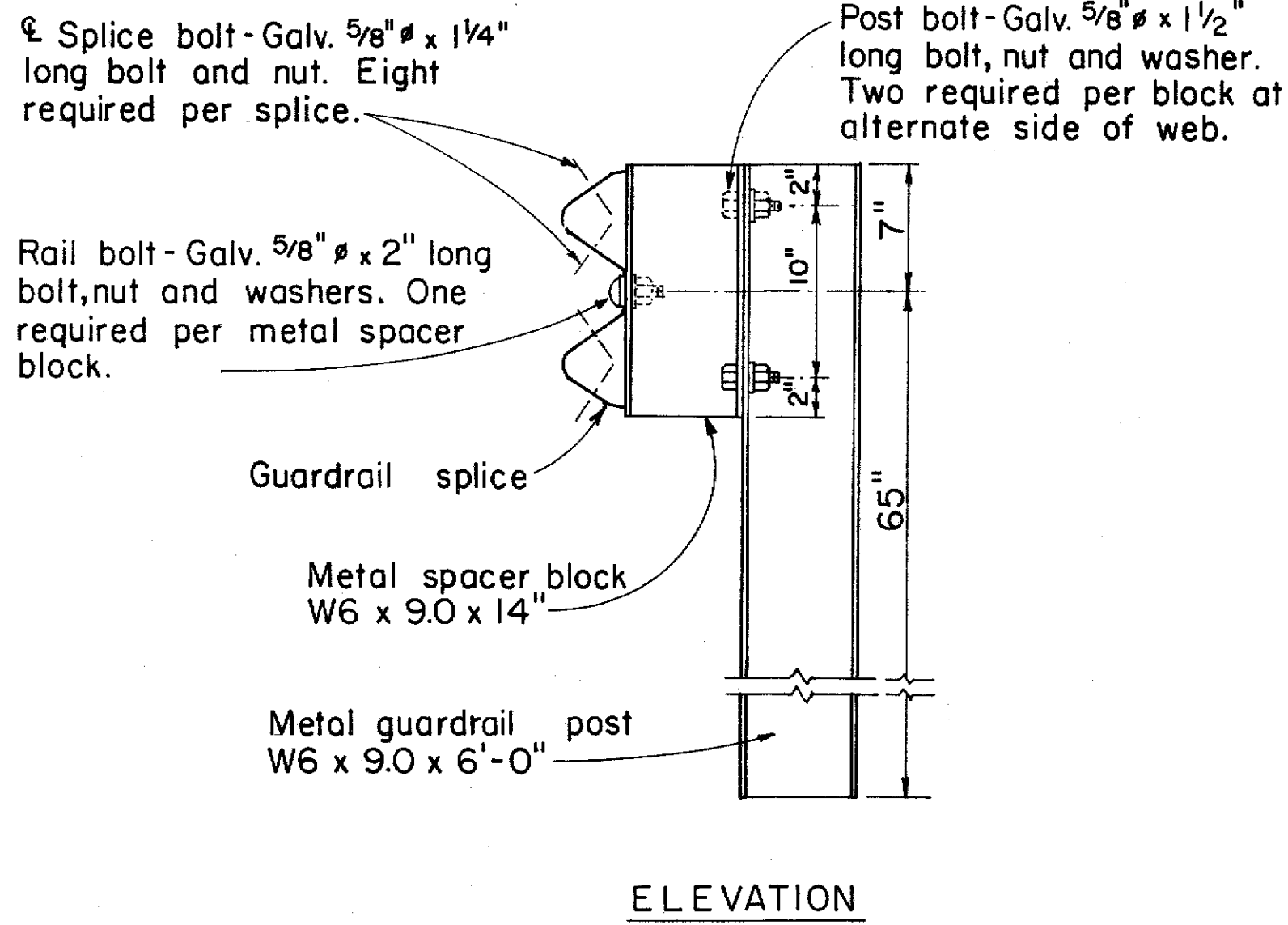
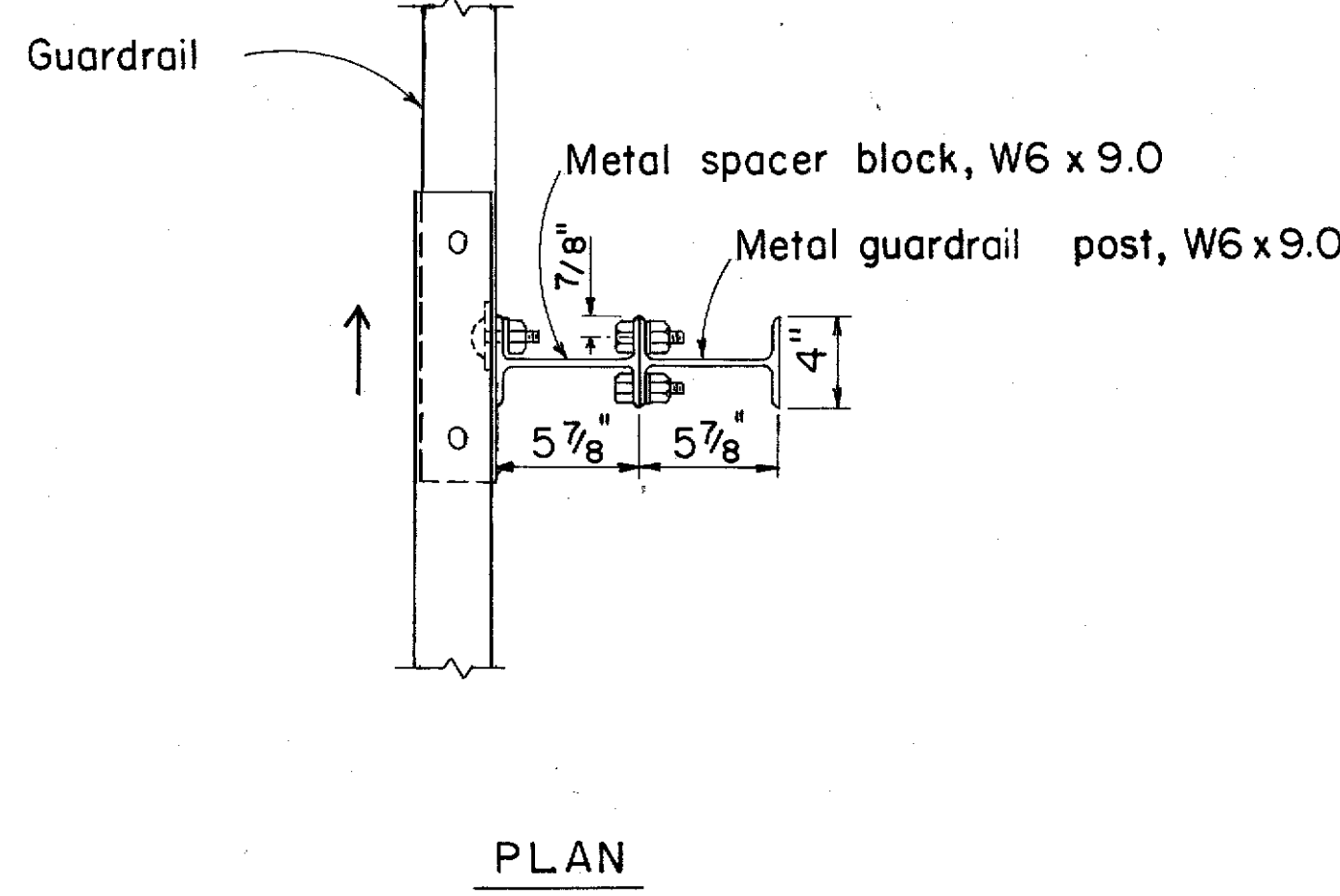
Not to Scale
SHEET NO. 17 OF 20 SHEETS DT 405

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

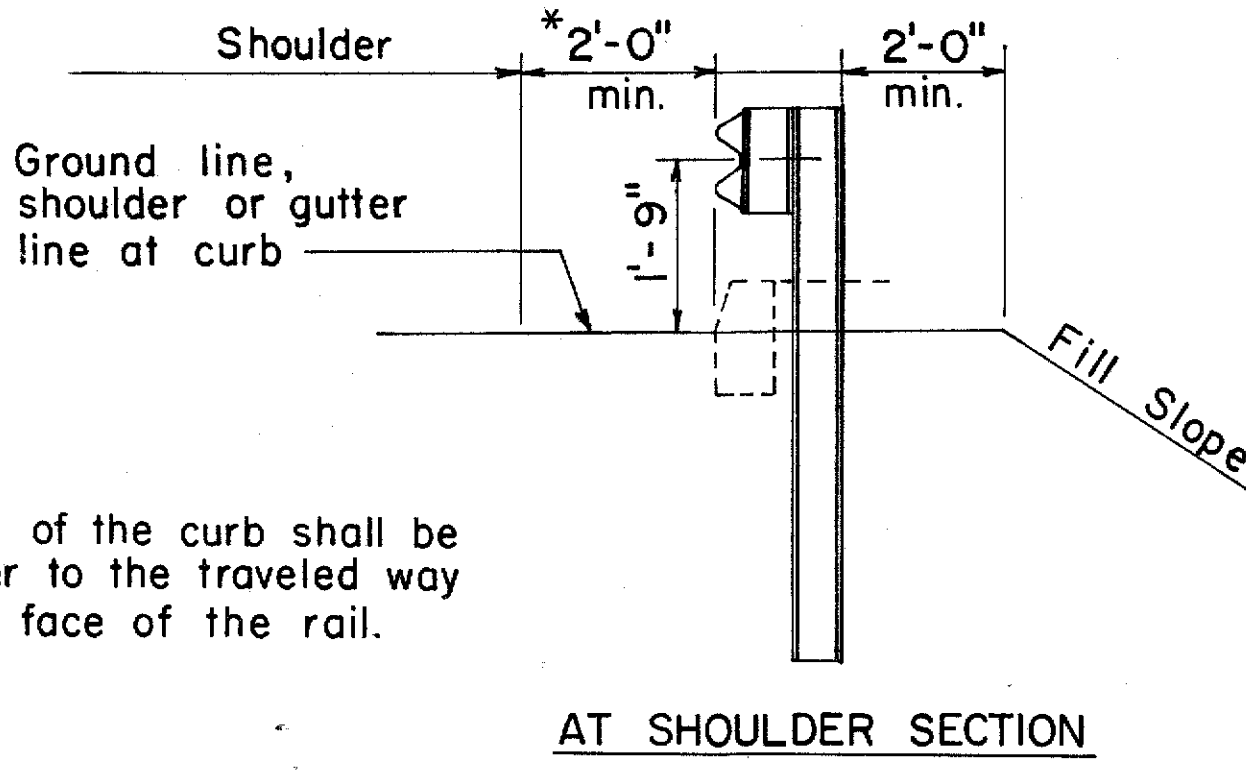
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	220-11-83	1983	18	20

GENERAL NOTES

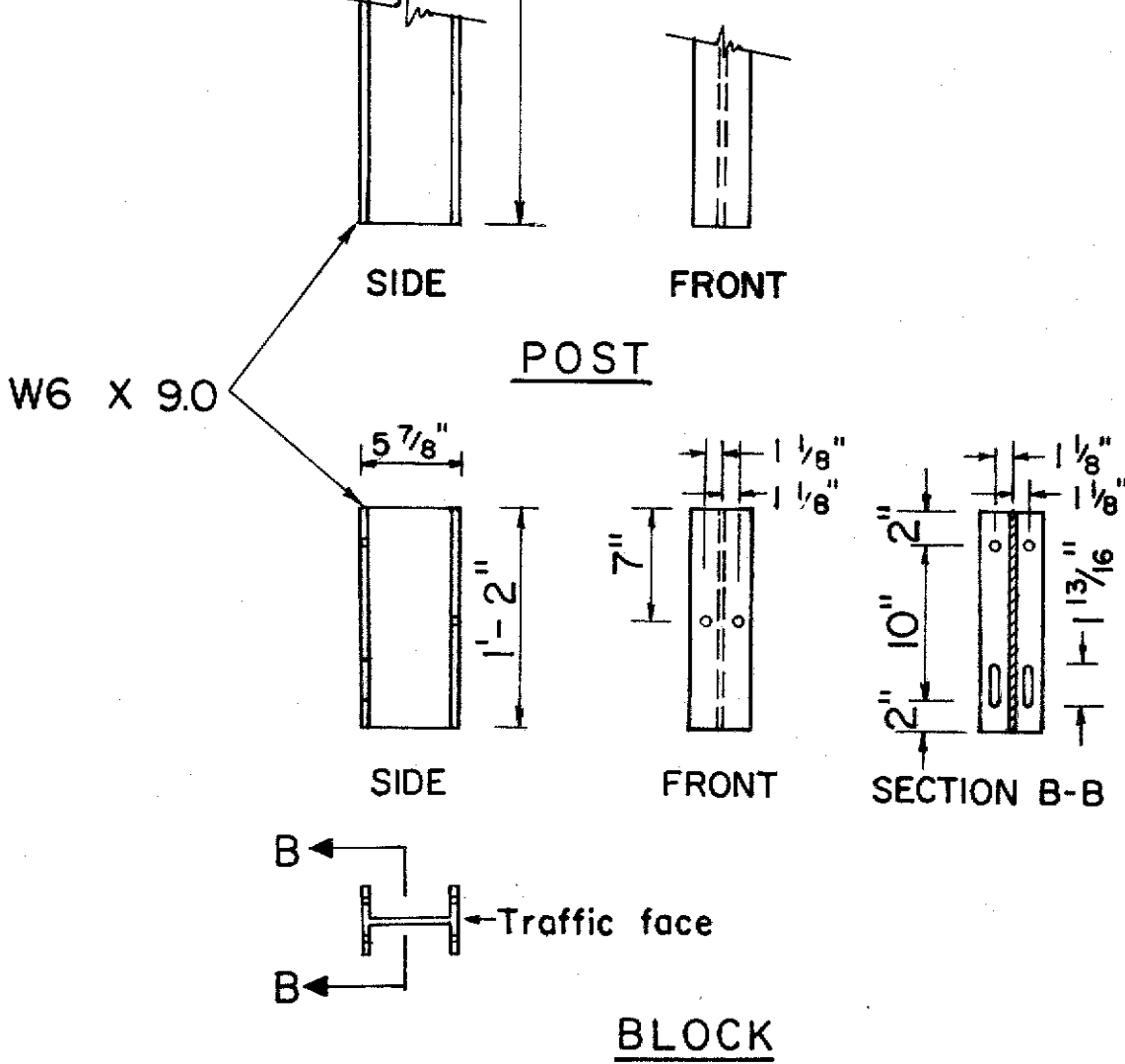
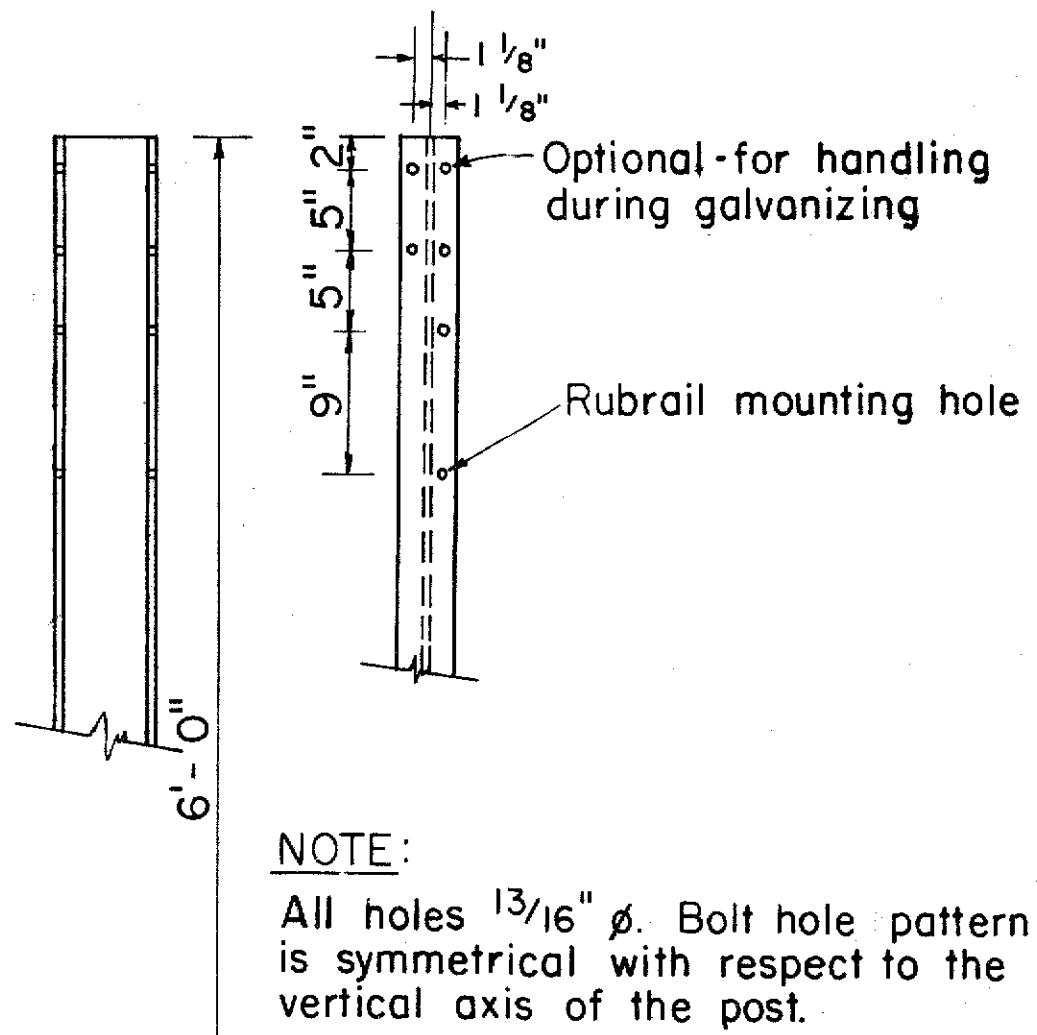
- Both of the alternate type posts may be used on any one project however, only one type of post shall be used in any single run of guardrail.
- All hardware, posts and blocks shall be galvanized. No punching, drilling or cutting will be permitted after galvanizing.
- Connection details for bent plate post and block shall be similar to the details shown for structural shape post, and block.
- Where conditions require, special post lengths in increments of 6 inches may be specified.
- For details of rail elements, bolts and nuts, see sheet DT 501.



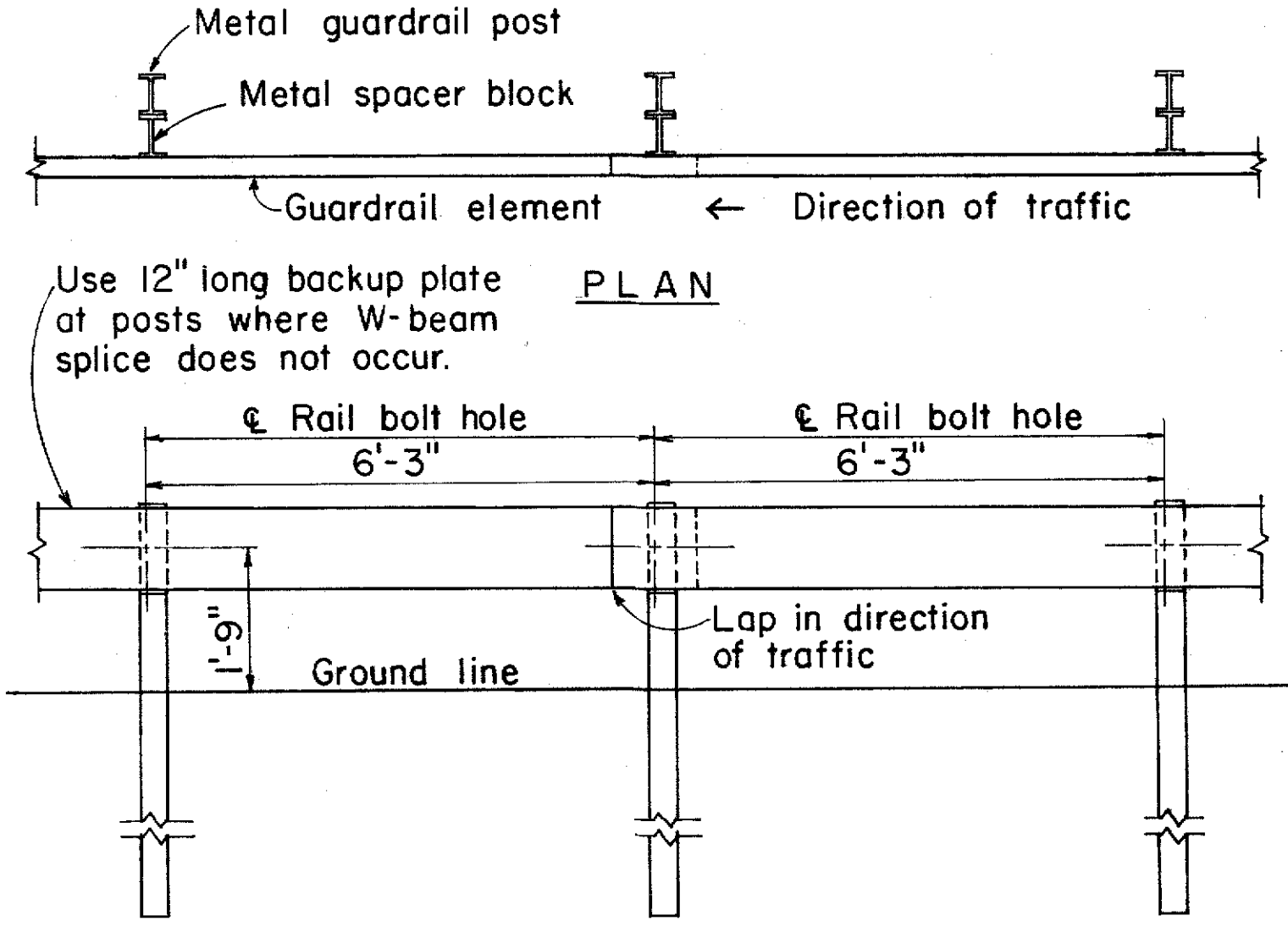
SINGLE METAL GUARDRAIL ON METAL POST WITH METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"



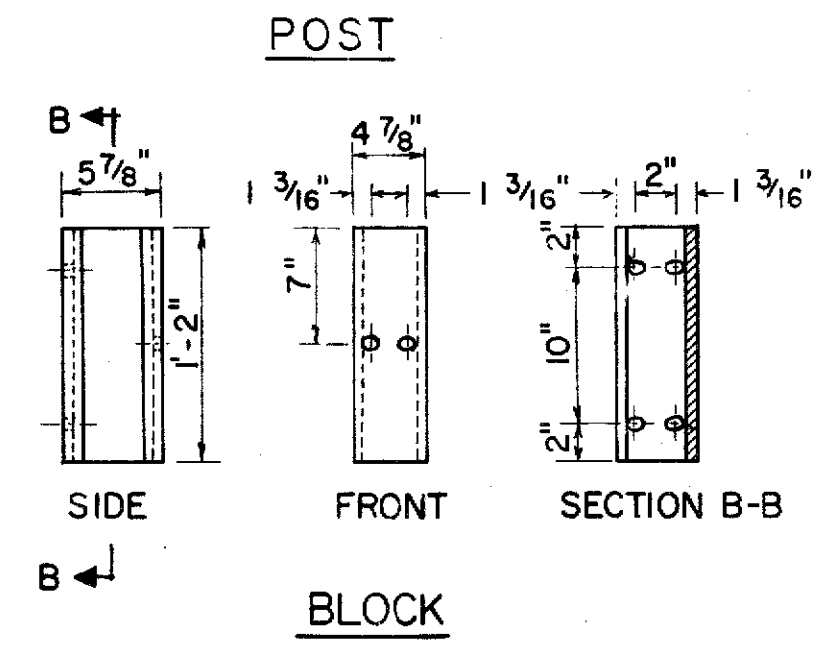
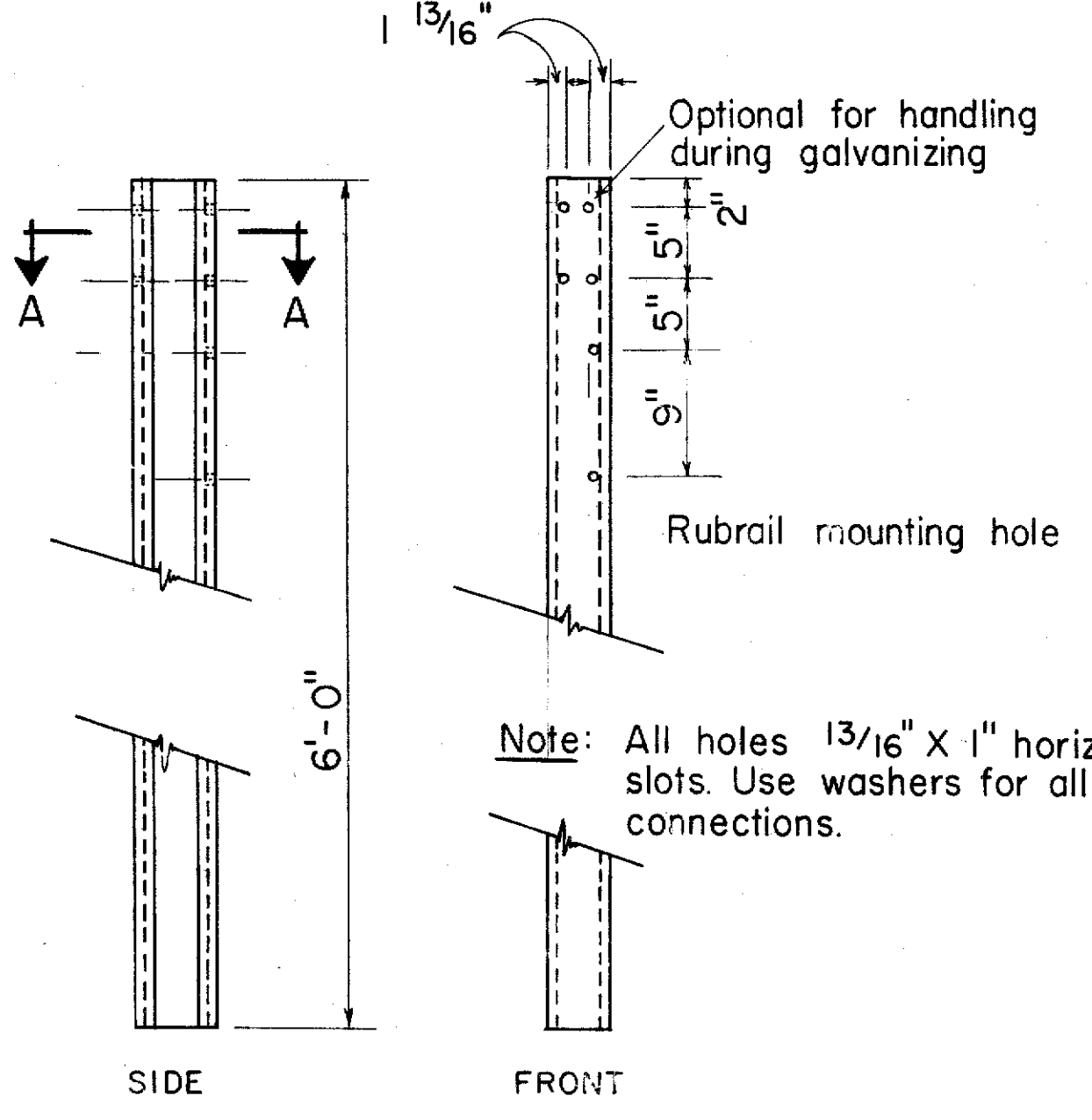
TYPICAL METAL GUARDRAIL DETAIL
SCALE: 1/2" = 1'-0"



STRUCTURAL SHAPE POST AND BLOCK
SCALE: 1" = 1'-0"



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



BENT PLATE POST AND BLOCK
SCALE: 1" = 1'-0"

NO.	REVISION	APPROVED BY	DATE
1	Supersedes sht. DT 500 approved 12/30/69.	H.F.	9/22/82

APPROVAL RECOMMENDED:
Evelyn Tanaka 9/1/82
TRAFFIC ENGINEER DATE

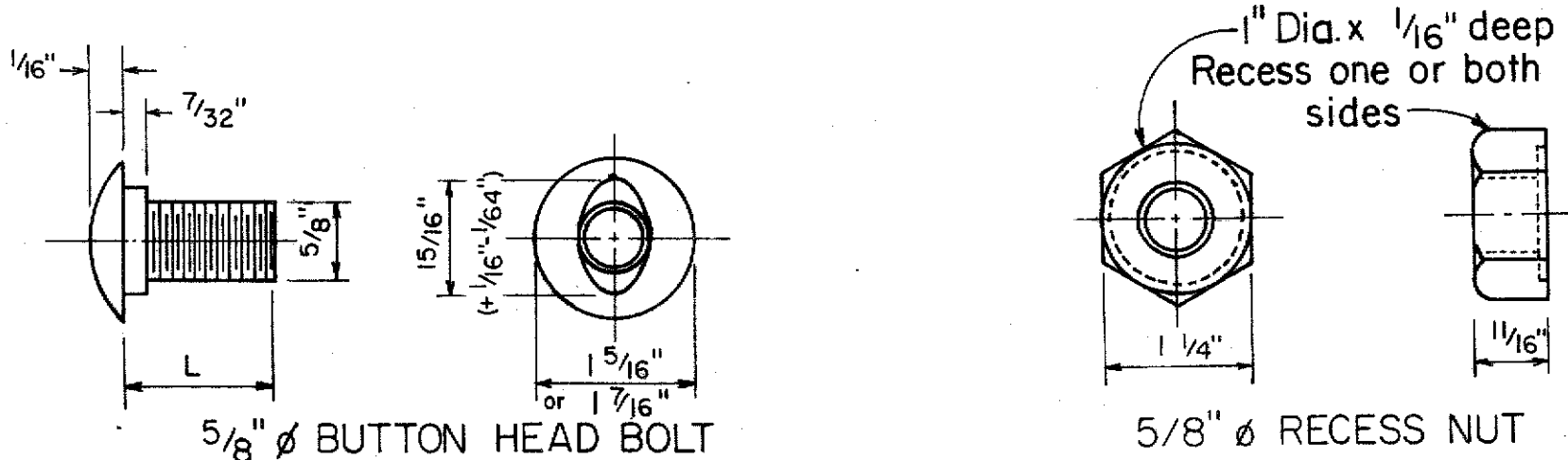
APPROVED:
Robert Salschi 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARDRAIL

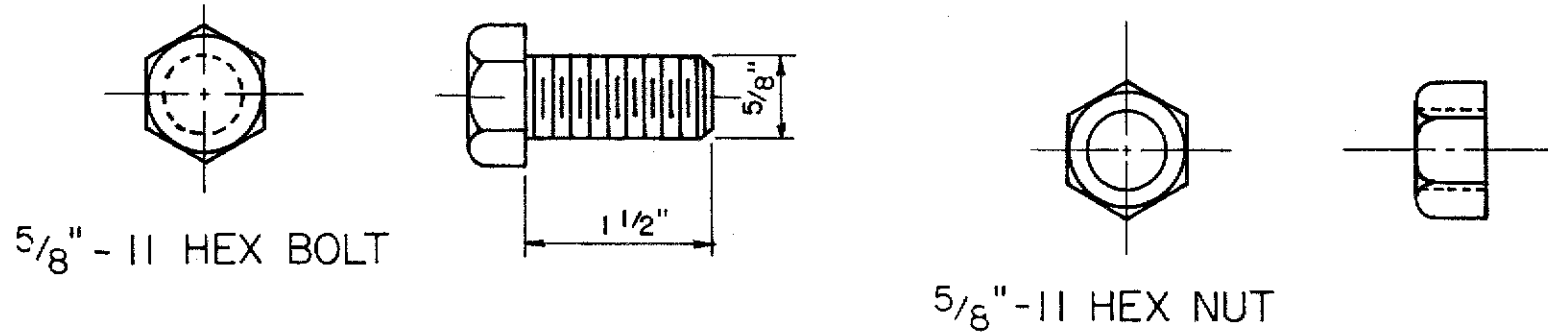
Scale: As Shown
July, 1982
SHEET NO. 18 OF 20 SHEETS DT 500

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	29C-11-83	1983	19	20

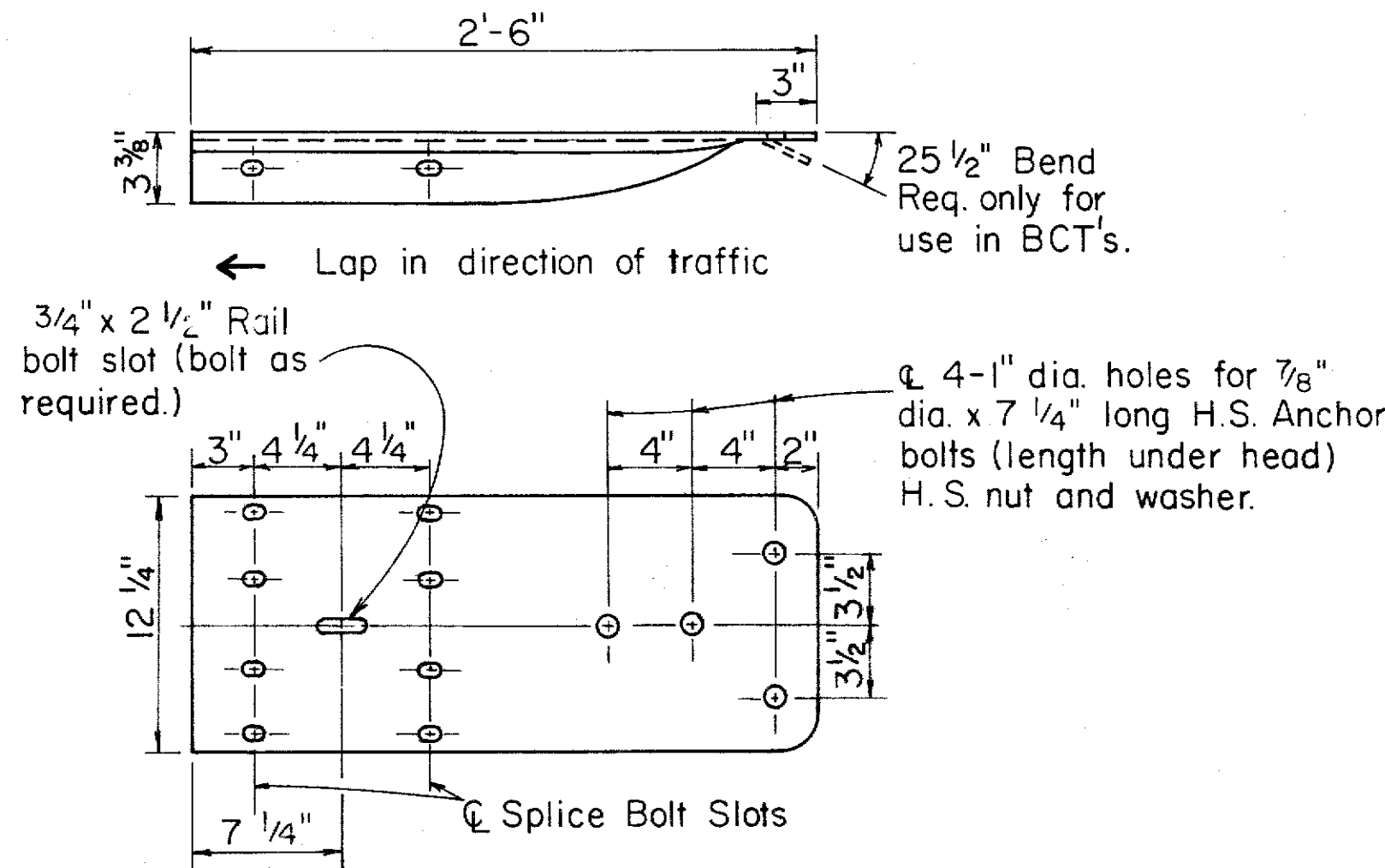


L	Thread Length	Intended Use
1 1/4"	Full length thread	Splice rail elements
2"	1 1/2" min. thread len.	Fasten rails to posts

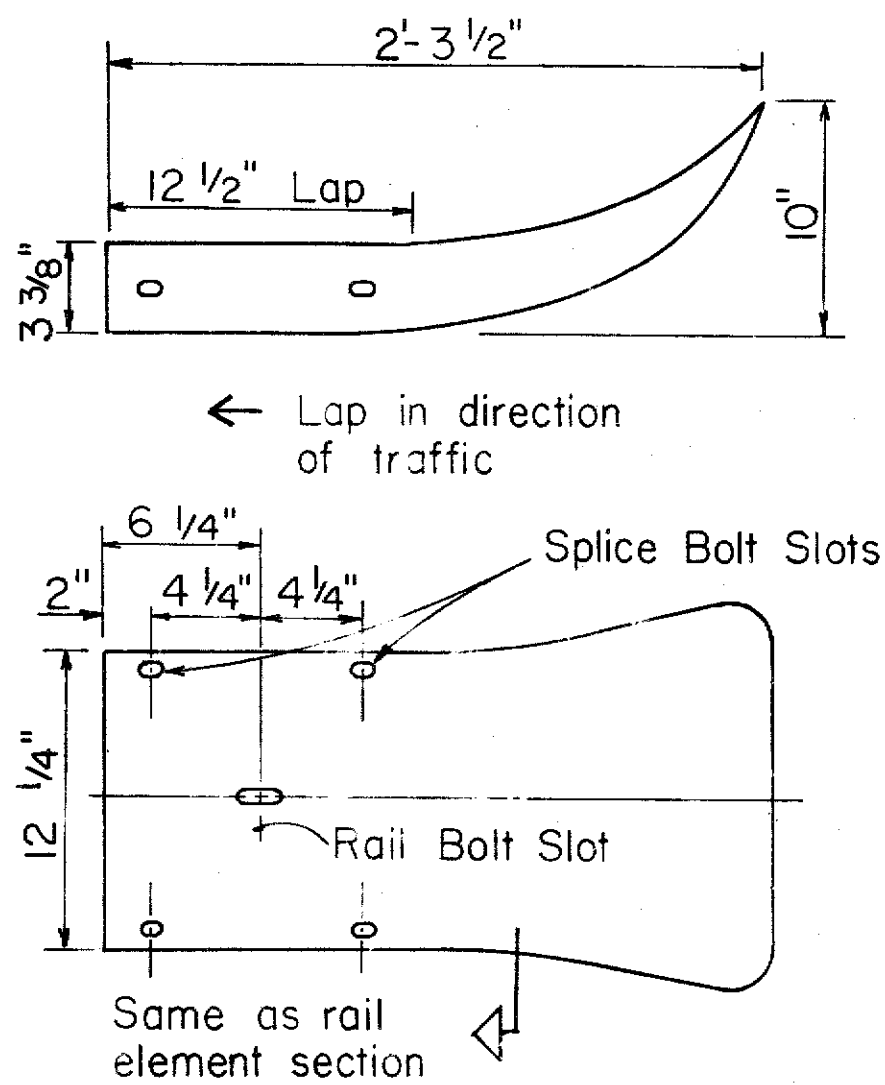
**5/8" BUTTON HEAD BOLT
AND RECESS NUT**
Scale: NTS



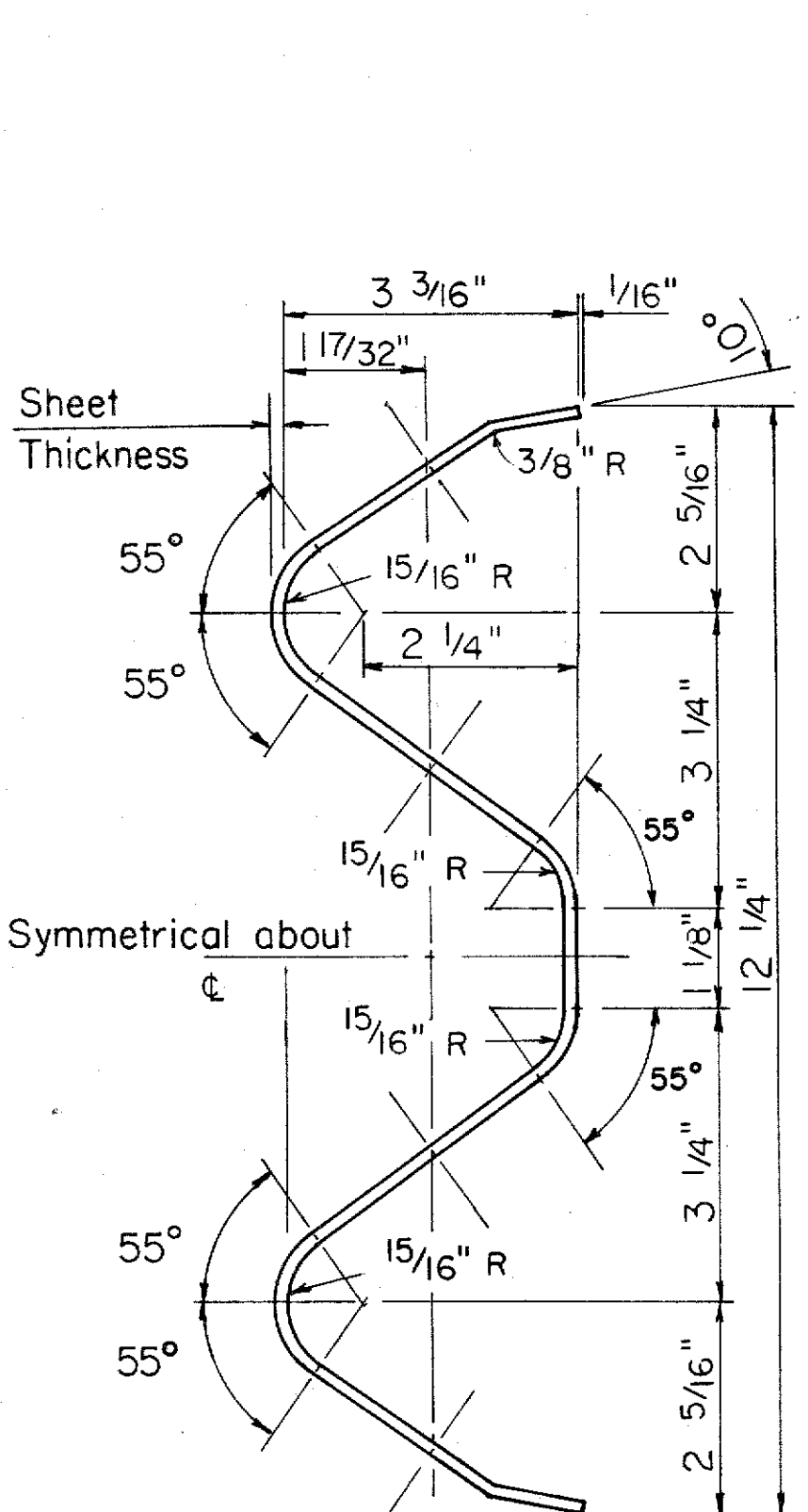
5/8" HEX POST BOLT AND NUT
Scale: N.T.S.



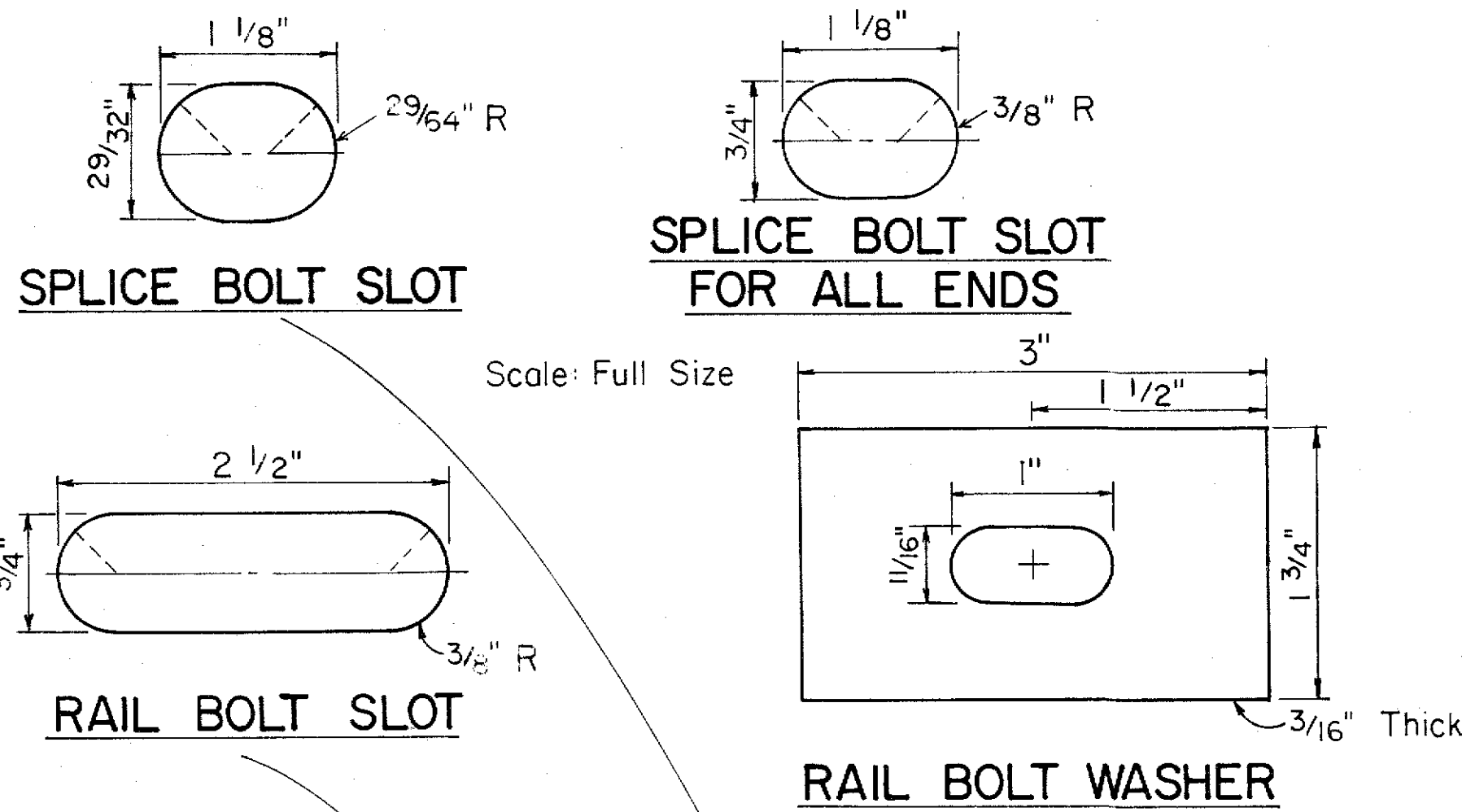
W BEAM TERMINAL CONNECTOR
Scale: 1 1/2" = 1'-0"



W BEAM END SECTION (FLARED)
Scale: 1 1/2" = 1'-0"



RAIL ELEMENT SECTION
Scale: 6" = 1'-0"

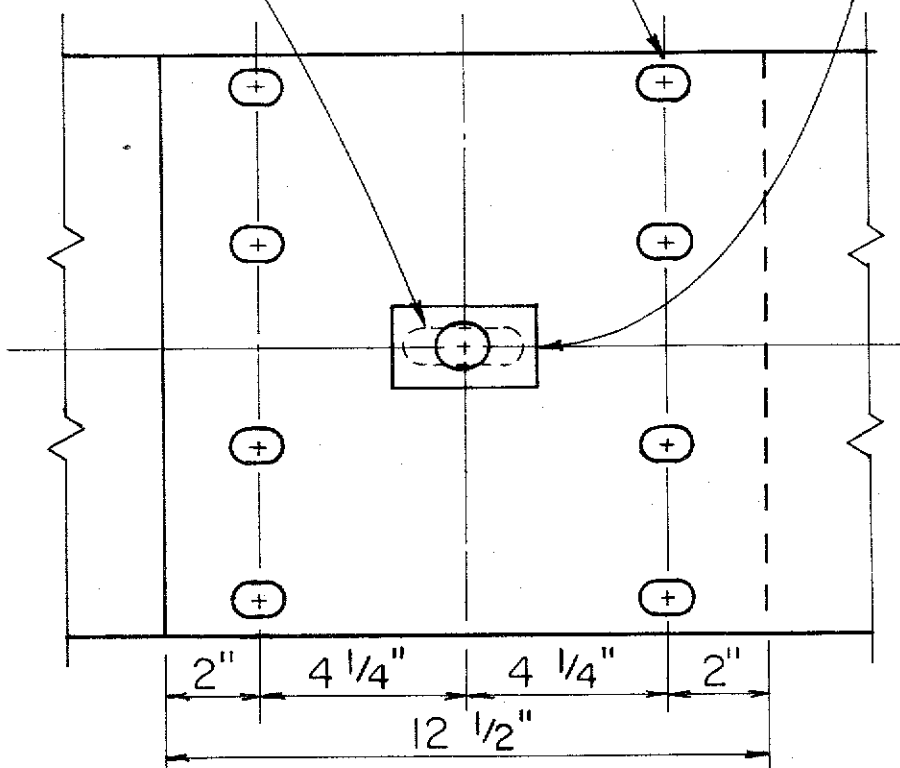


SPLICE BOLT SLOT

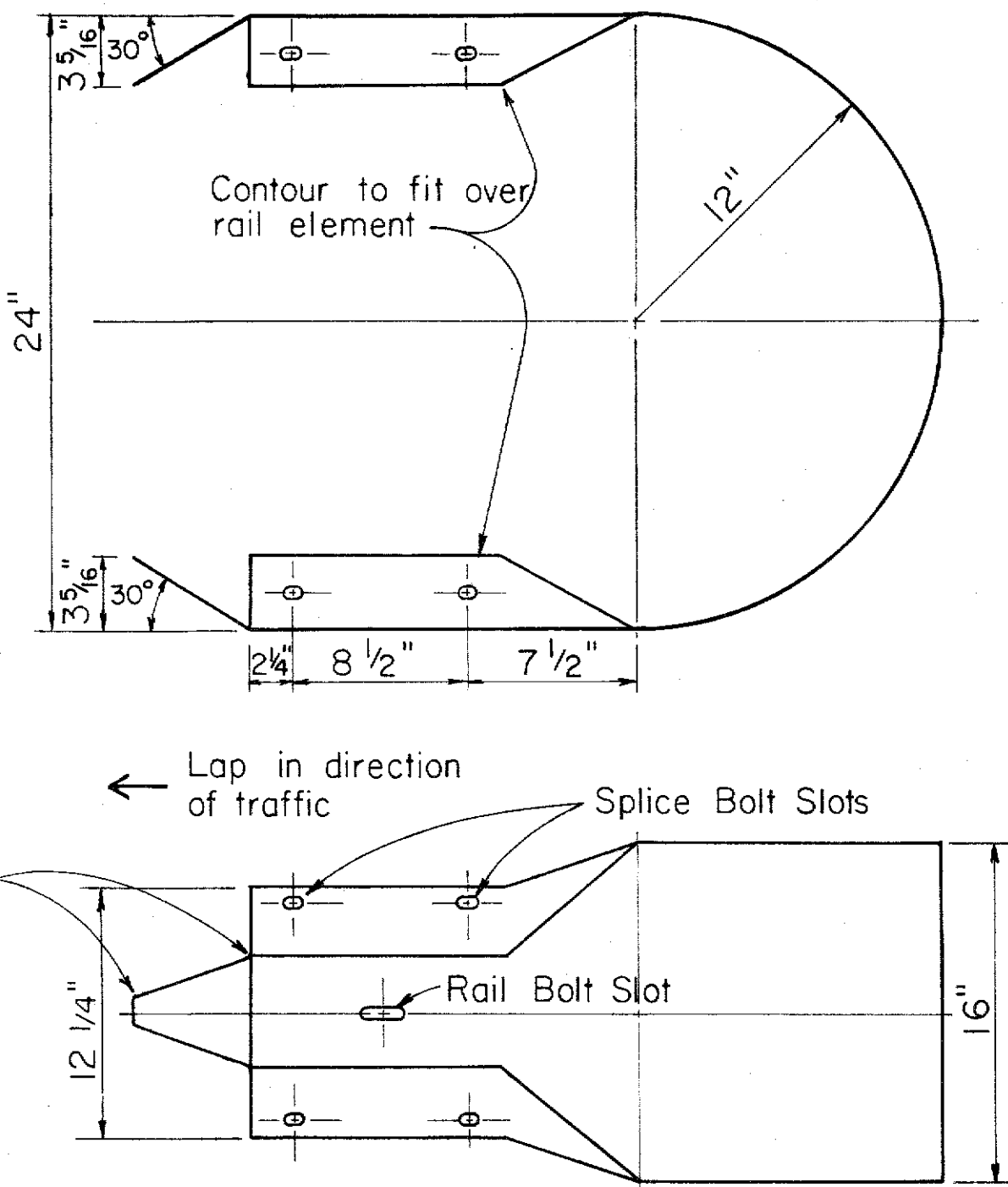
**SPLICE BOLT SLOT
FOR ALL ENDS**

RAIL BOLT SLOT

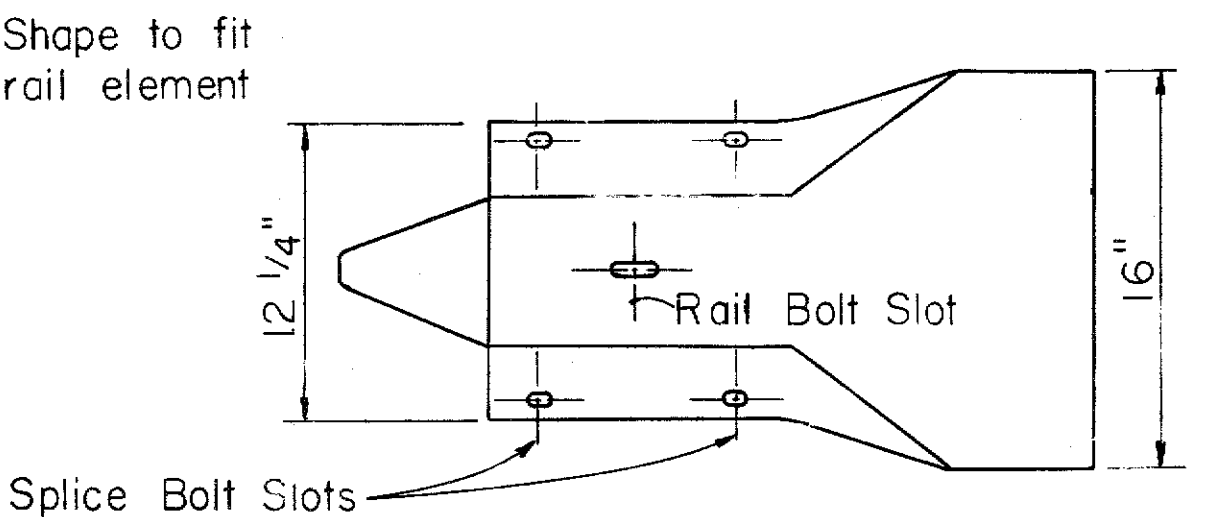
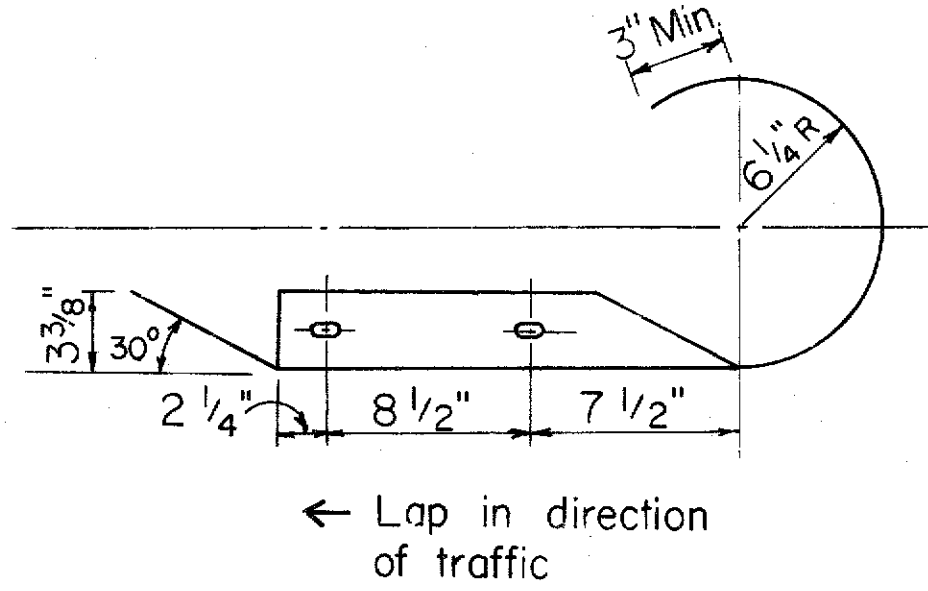
RAIL BOLT WASHER



RAIL SPLICE
Scale: 3" = 1'-0"



W BEAM END SECTION (BUFFER)
Scale: 1 1/2" = 1'-0"



W BEAM END SECTION (ROUNDED)
Scale: 1 1/2" = 1'-0"

APPROVAL RECOMMENDED:
Eishi Tanaka 9/20/82
TRAFFIC ENGINEER DATE

APPROVED:
Shunichi Saito 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes sht. DT 501 approved 12/30/69	H.f.	9/22/82

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
METAL GUARDRAIL

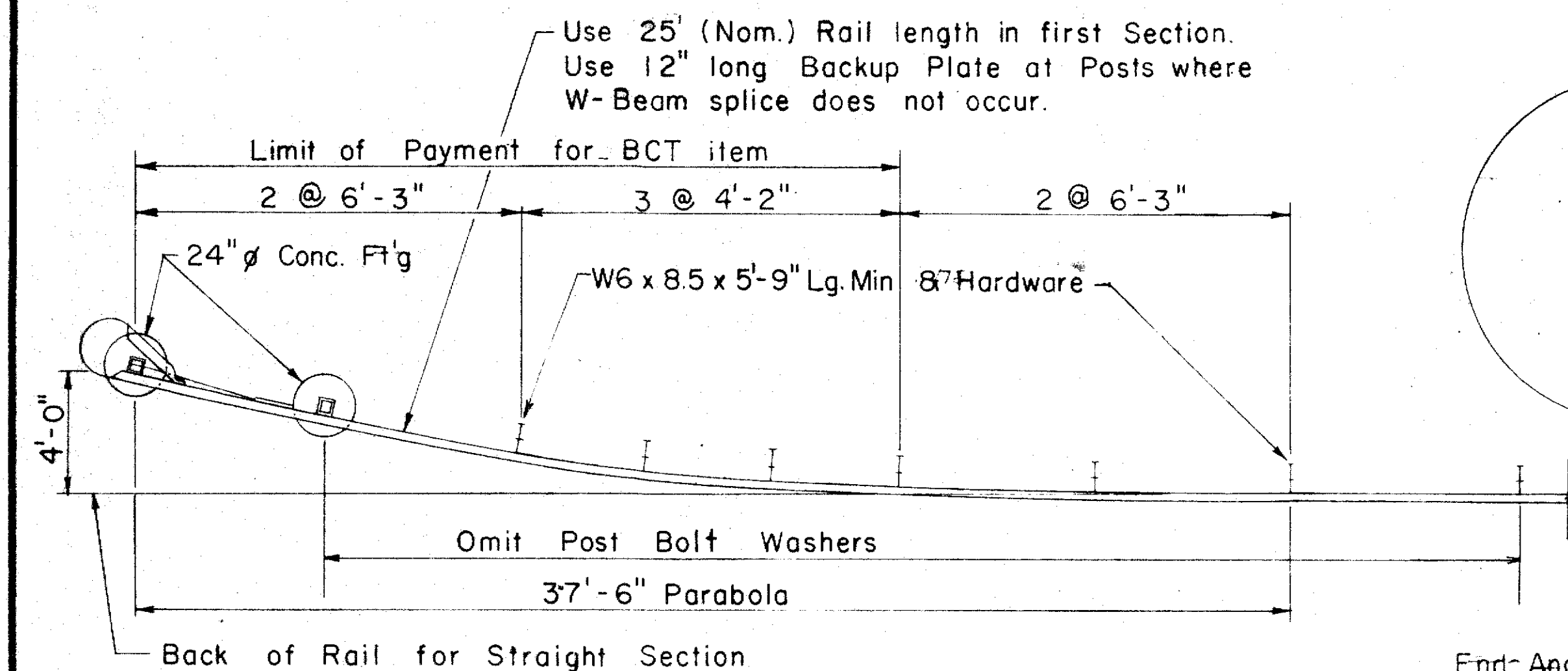
Scale: As Noted July, 1982
SHEET NO. 19 OF 20 SHEETS DT 501

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

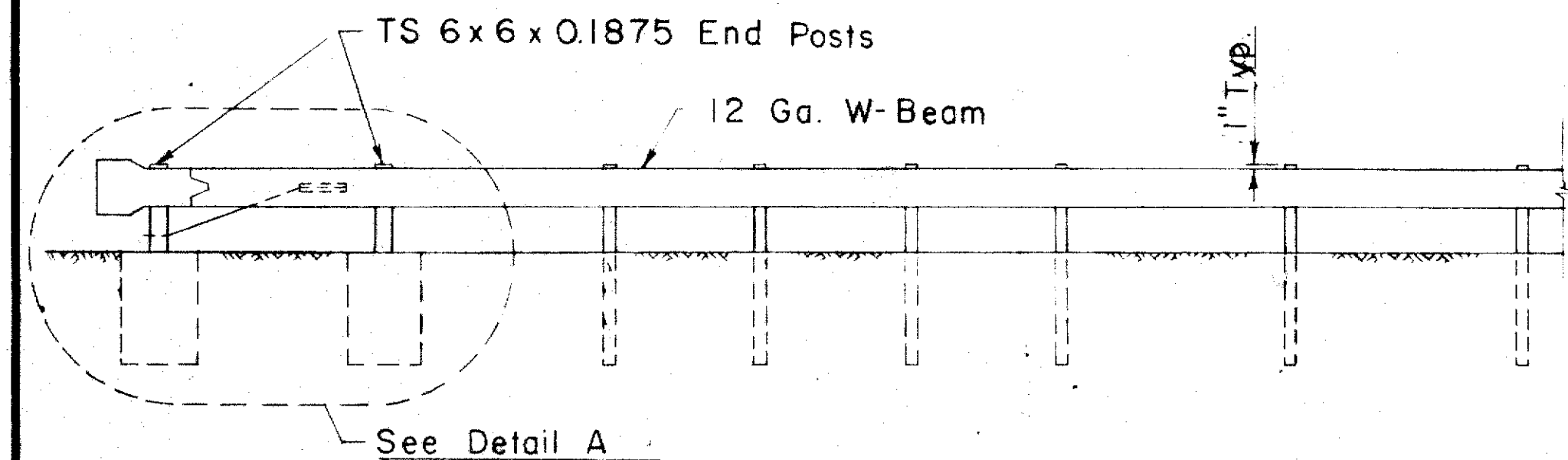
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	995-11-05	1983	20	20

NOTES:

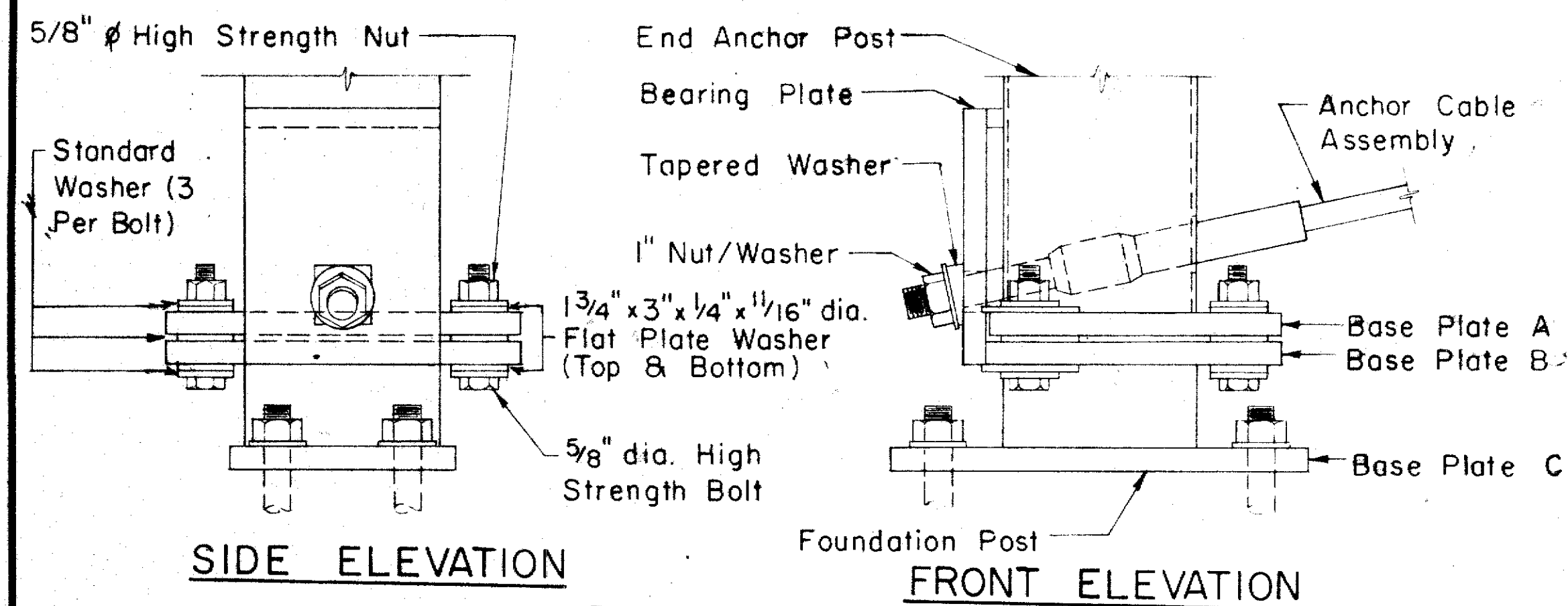
1. Anchor Plate and Anchor Cable Assembly (Standard Swaged Fitting and Stud). See Standard Detail Sheet No. DT 520.
2. Other Anchor Cable Assemblies may be used. Minimum breaking strength of assembly should be 40,000 lbs.
3. Second Terminal Post does not require holes to accomodate Anchor Cable.
4. Slip Base Load shall be controlled with a Calibrated Torque Wrench - Torque 155 - 170 ft. lbs.
5. Concrete shall be Class A.
6. B.C.T Hardware has been superceded by "A Guide Standardized Highway Barrier Rail Hardware," A report prepared and approved by the AASHTO-AGC-ARTBA joint cooperation committee. All hardware shall conform to above mentioned publication and as revised from time to time.



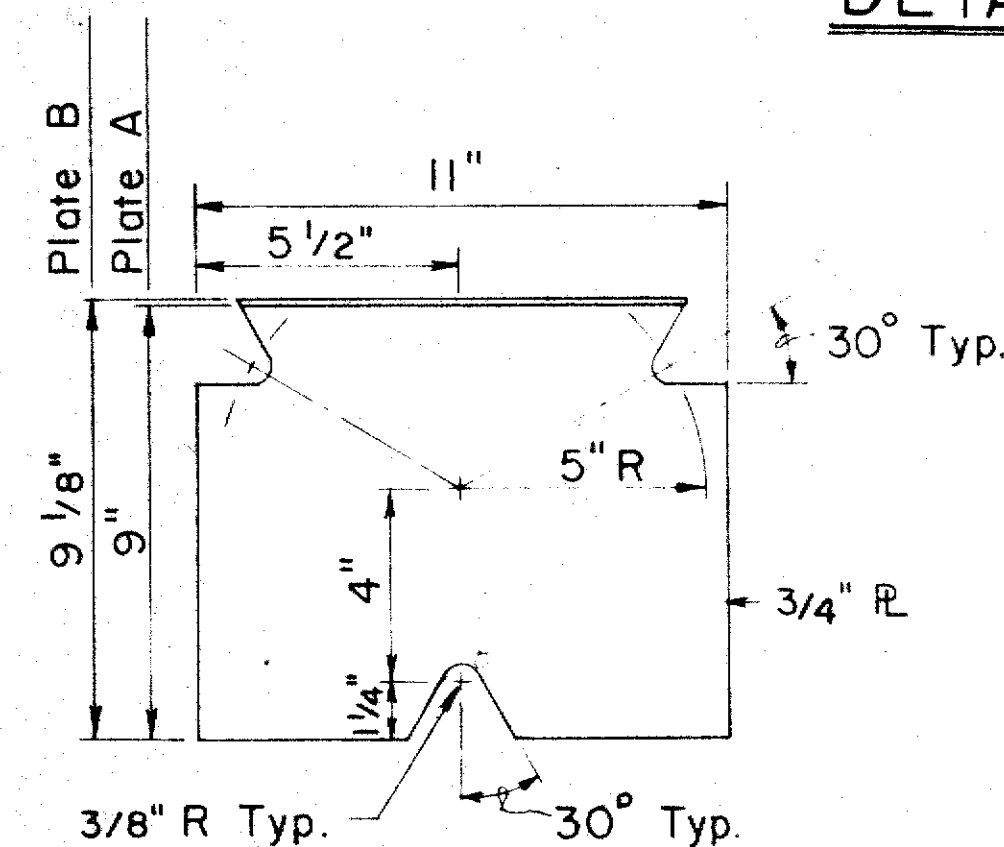
PLAN
Scale: 1/4" = 1'-0"



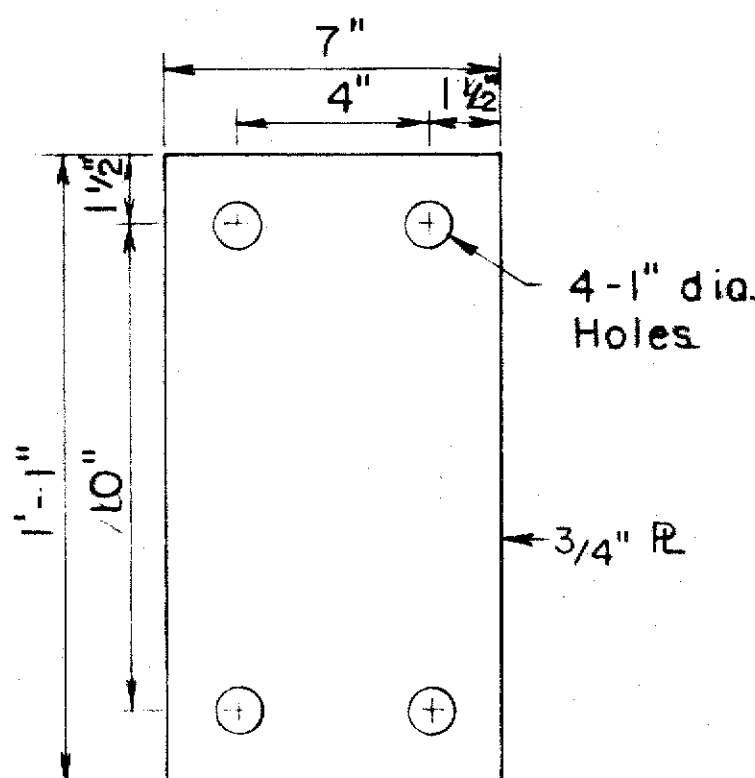
ELEVATION
Scale: 1/4" = 1'-0"



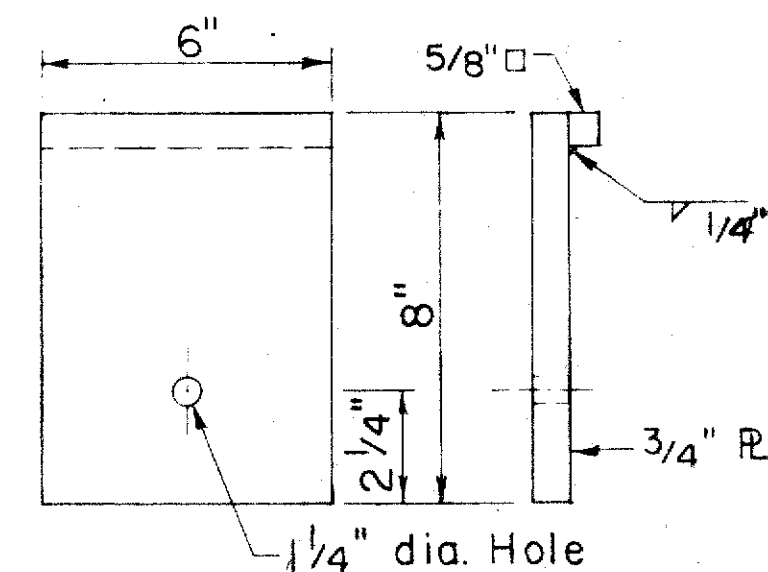
DETAIL B



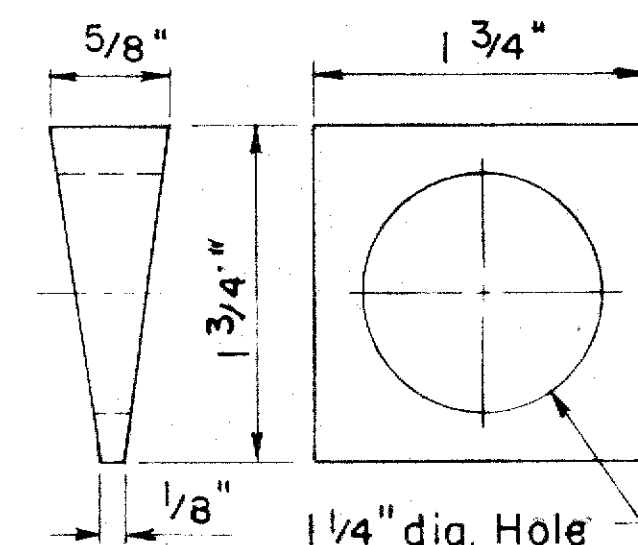
BASE PLATES A & B
Scale: 3" = 1'-0"



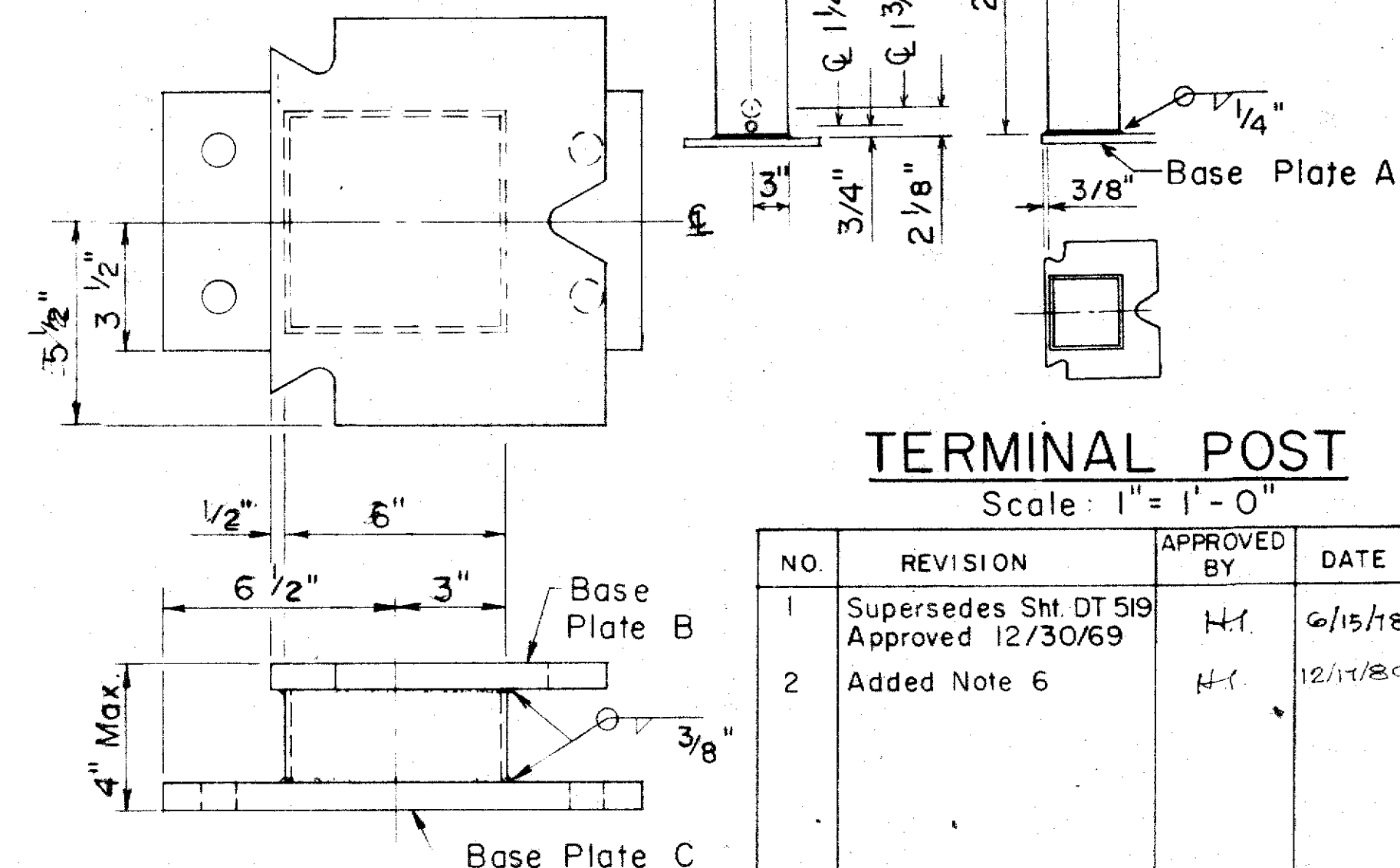
BASE PLATE C
Scale: 3" = 1'-0"



BEARING PLATE
Scale: 3" = 1'-0"

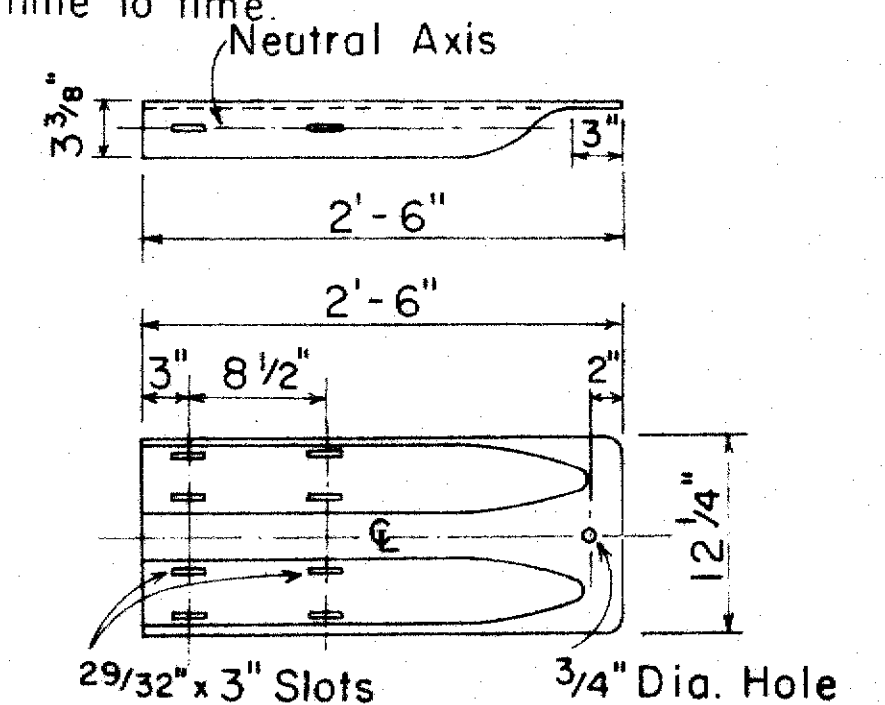


TAPERED WASHER
Scale: Full Size



TERMINAL POST
Scale: 1" = 1' - 0"

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht.DT 519 Approved 12/30/69	H-1	6/15/71
2	Added Note 6	H-1	12/17/8



TERMINAL CONNECTOR
Scale: 1" = 1'-0"

APPROVAL RECOMMENDED:

 Eiichi Tanaka
TRAFFIC ENGINEER

6/14/78
DATE

APPROVED:

Herbert Zaleski
ASSISTANT CHIEF, ENGINEERING

6/15/18
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

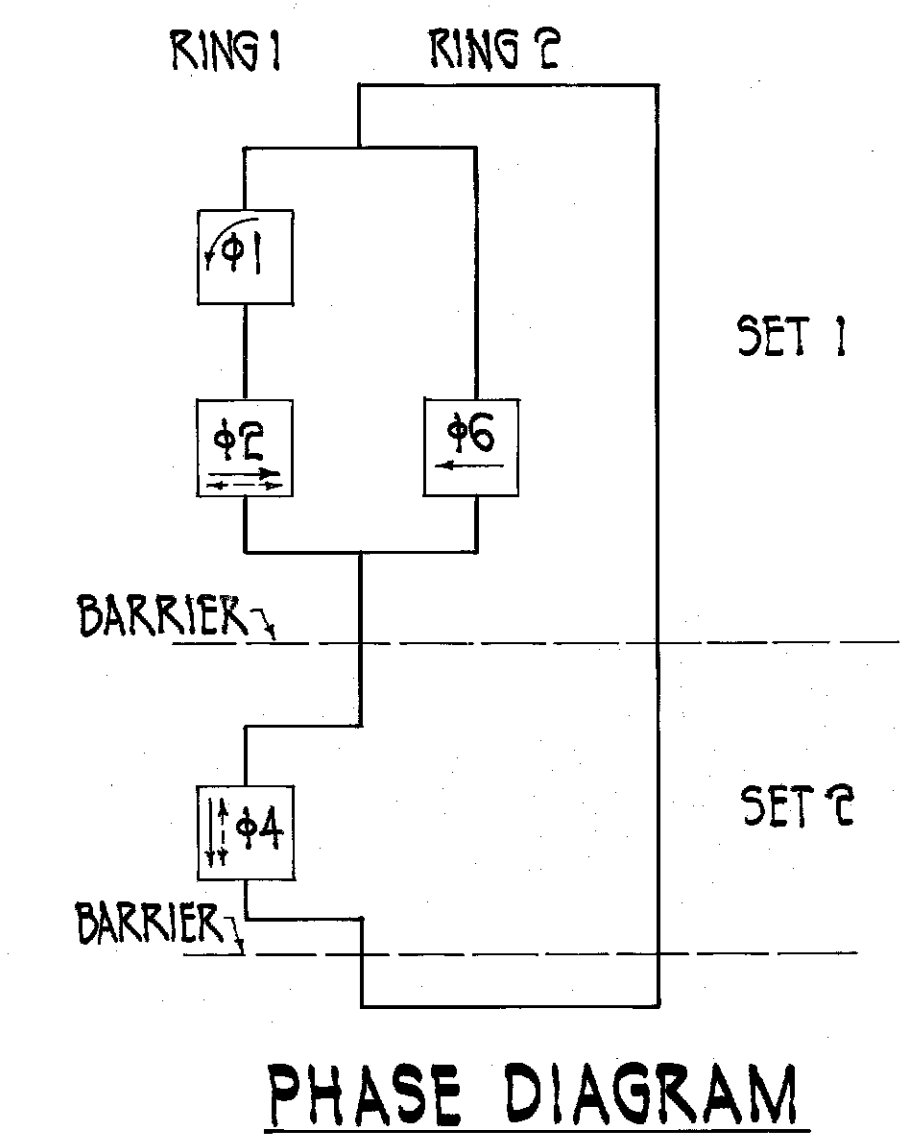
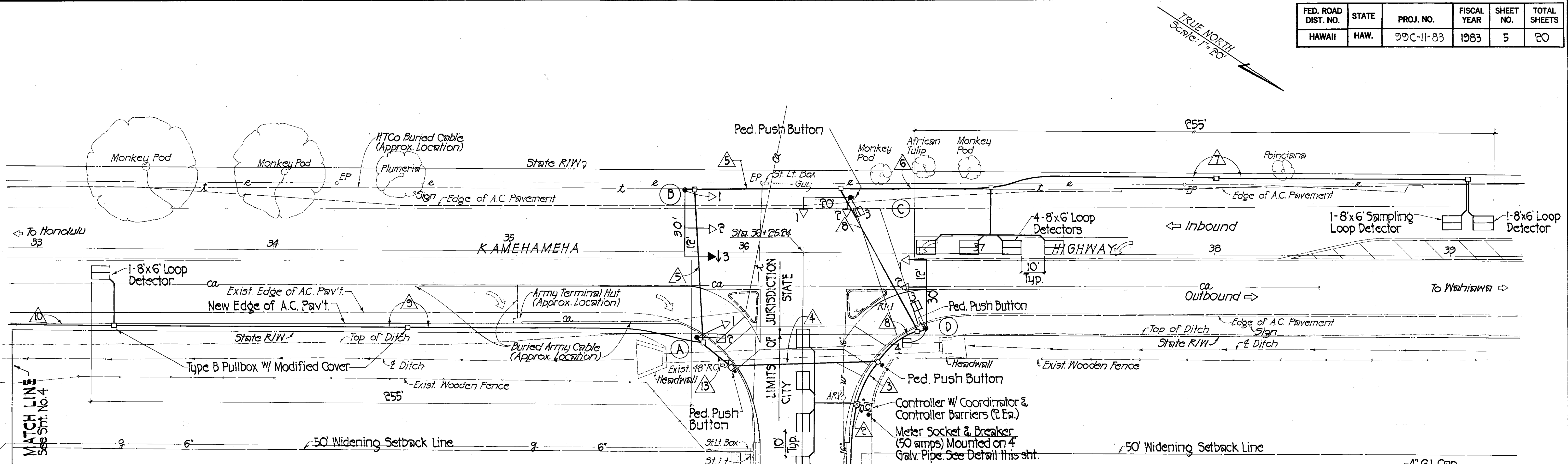
STANDARD DETAIL

BREAKAWAY CABLE TERMINAL (BCT)

Scale: As Shown Date: June 1978

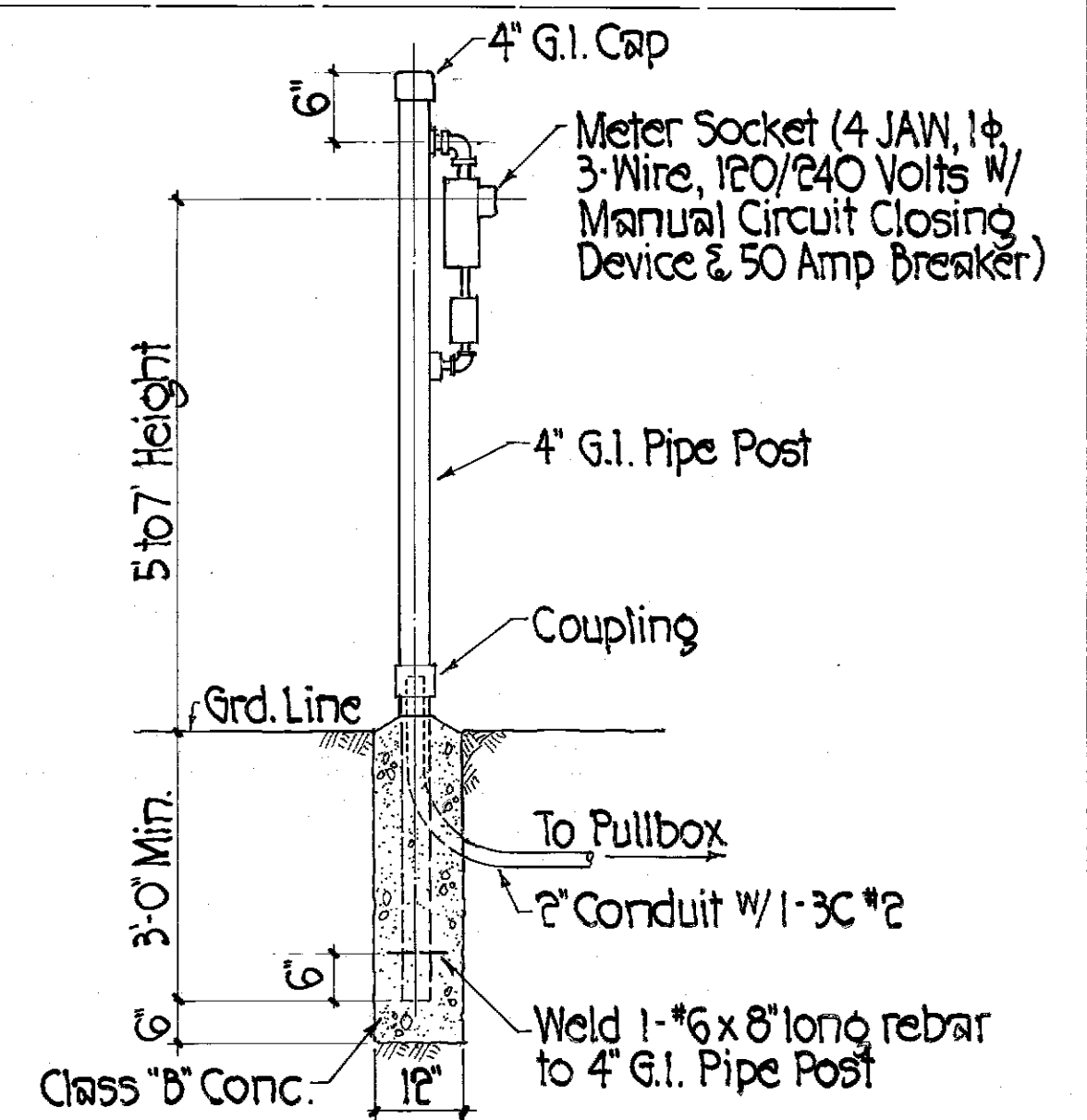
SHEET No. 20 OF 20 SHEETS DT 519

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-11-83	1983	5	20

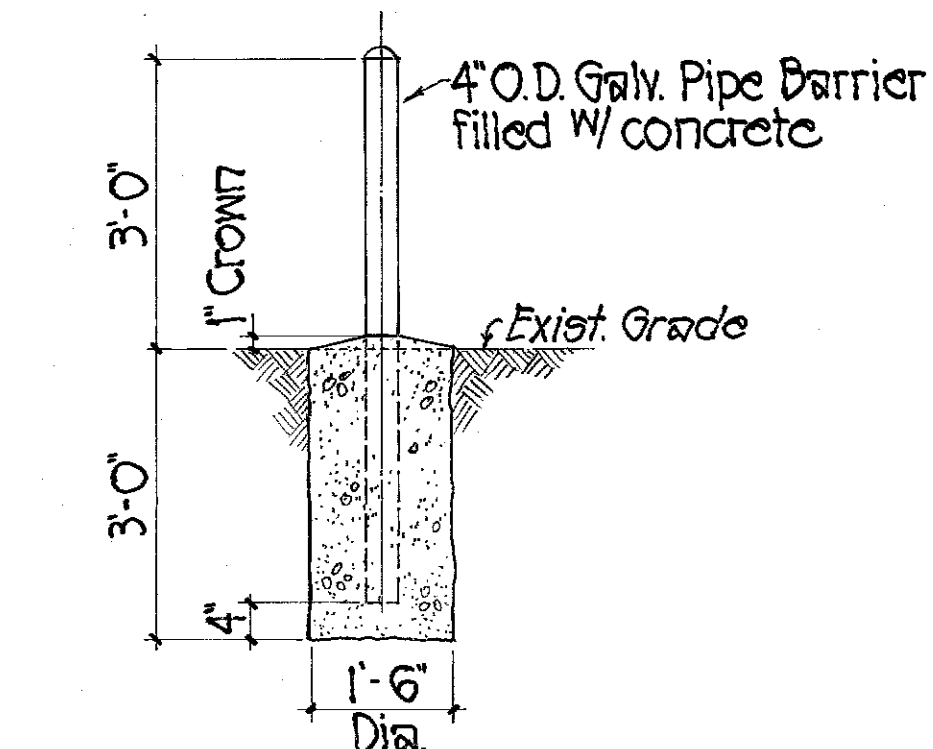
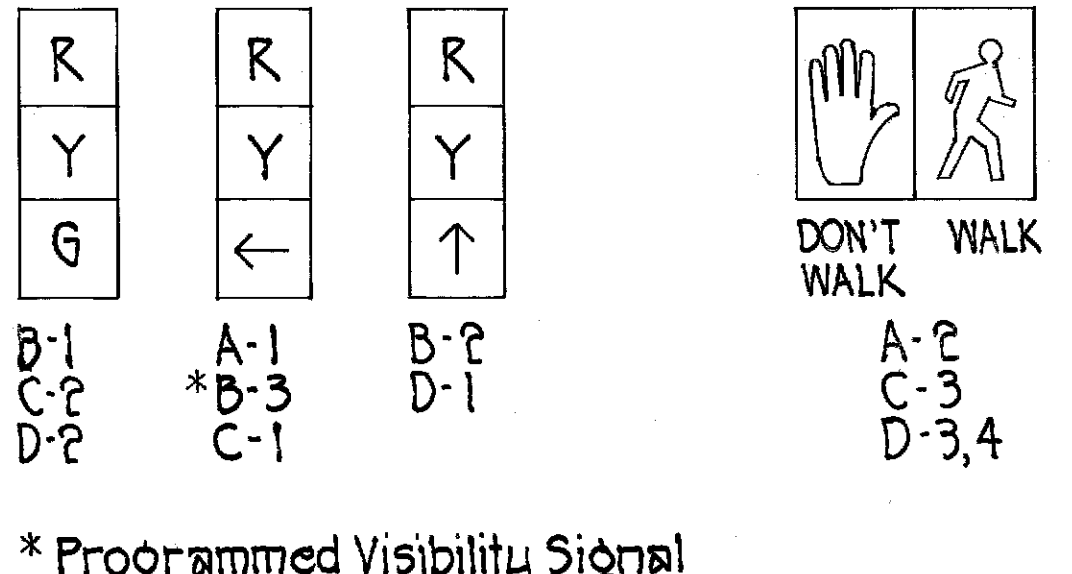


CONDUIT & CABLE SCHEDULE		
△	CONDUIT	CABLE
1	1-2" Sch. 80	1-3C #2
2	5-2" Sch. 80	2-26C #14, 1-24C #20, 1-3C #2, 8-2C #14
3	4-2" Sch. 80	2-26C #14, 7-2C #14, 1-24C #20
4	3-2" Sch. 80	1-26C #14, 3-2C #14, 1-24C #20
5	1-2" Sch. 80	1-26C #14
6	1-2" Sch. 80	3-2C #14
7	1-2" Sch. 80	2-2C #14
8	2-2" Sch. 80	1-26C #14, 4-2C #14
9	2-2" Sch. 80	1-24C #20, 1-2C #14
10	1-2" Sch. 80	1-24C #20
11	Exist. 2" Conduit	Install 1-24C #20
12	1-2" Sch. 80 (Add)	1-24C #20
13	3-2" Sch. 80	1-26C #14, 1-24C #20, 2-2C #14

- ### HECO NOTES
1. A Utility Co. standby man is required to be at the site at the time any non-Utility Co. personnel will be breaking into or entering any facilities that contain energized Utility Co. Equipment or cables.
 2. Three working days advance notice is required by the Utility Co. for any inspection service or standby man. Call HECO - Ph. 548-6846.



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



APPROVED: _____
 CHIEF, DIVISION OF ENGINEERING, DPW
 (APPROVED FOR CONSTRUCTION W/IN CITY R/W ONLY)
 DATE: 4/25/83
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 DATE: 4-19-83
 SHEET NO. 5 OF 20 SHEETS

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 TRAFFIC SIGNALS ON
 KAMEHAMEHA HIGHWAY AT LUMIAUAU STREET
 PLAN - TRAFFIC SIGNAL SYSTEM
 PROJECT NO. 99C-11-83
 SCALE: AS SHOWN
 DATE: JUNE 30, 1983
 SHEET NO. 5 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-11-83	1983	6	20

Remove

PED XING
W11-2 & Post

Remove

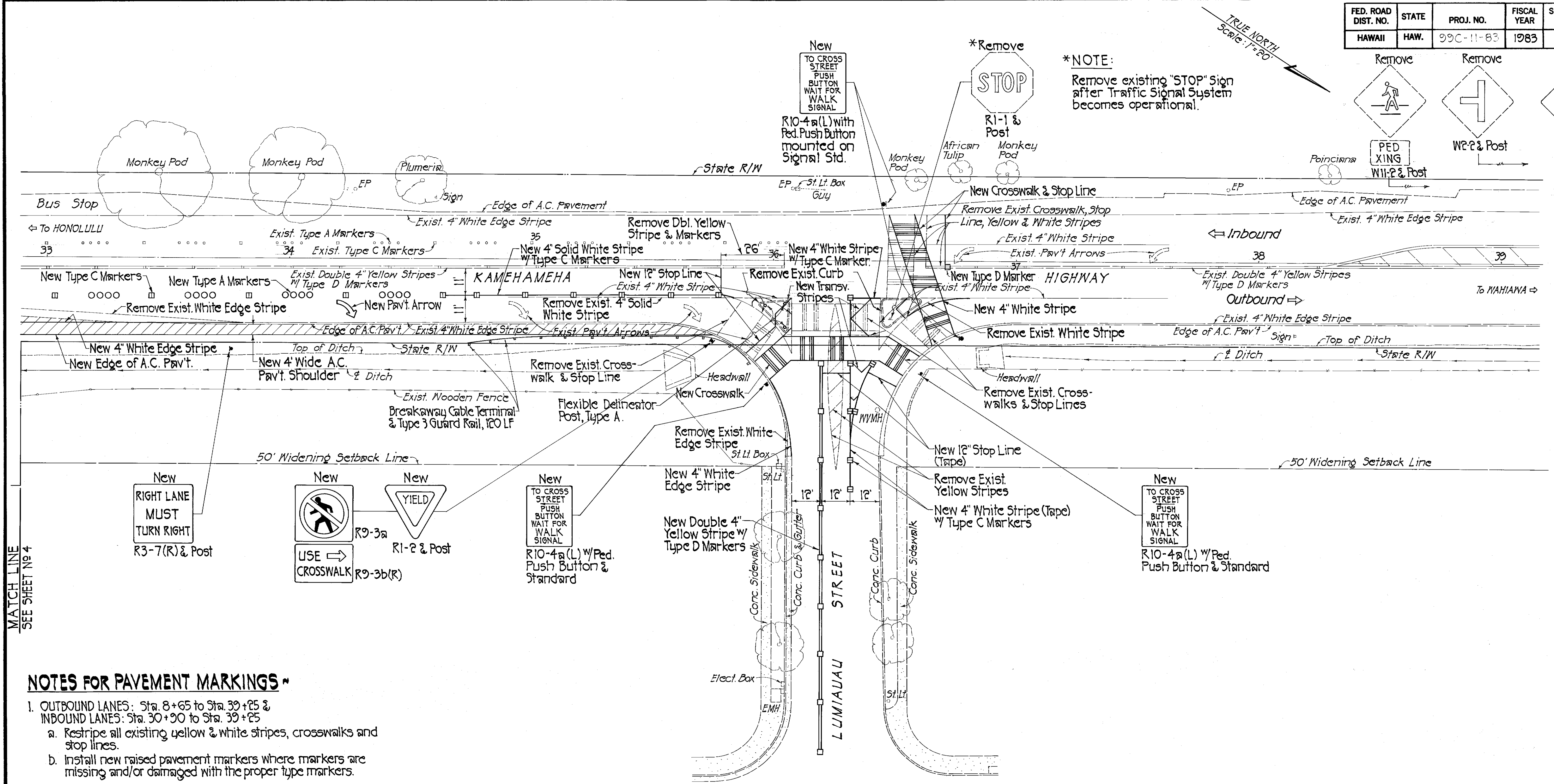
W2-2 & Post

New

SIGNAL AHEAD
W3-3 & Post @ Sta. 42+25 ±

***NOTE:**
Remove existing "STOP" sign after Traffic Signal System becomes operational.

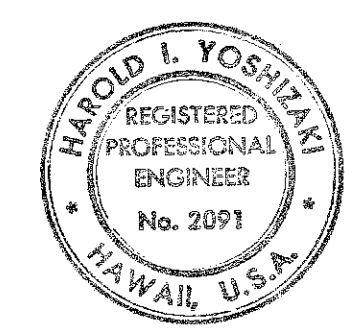
TRUE NORTH
Scale: 1"=20'



NOTES FOR PAVEMENT MARKINGS ~

- OUTBOUND LANES: Sta. 8+65 to Sta. 39+25 &
INBOUND LANES: Sta. 30+90 to Sta. 39+25
 - Restripe all existing yellow & white stripes, crosswalks and stop lines.
 - Install new raised pavement markers where markers are missing and/or damaged with the proper type markers.
- The following striping shall be traffic paint:
 - White edge stripes & transverse stripes.
 - Yellow edge stripes
- The following striping shall be tape:
 - Yellow center lines
 - Crosswalks
 - Stop Lines
 - Pavement directional arrows
 - Lane Line

PLAN
Scale: 1"=20'



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
Harold I. Yoshizaki

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

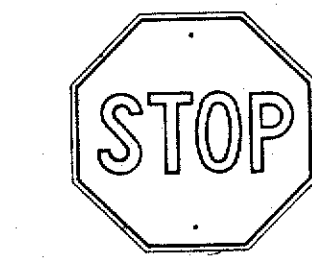
TRAFFIC SIGNALS ON
KAMEHAMEHA HIGHWAY AT LUMIAUW STREET

SIGNS & PAVEMENT MARKINGS

PROJECT NO. 99C-11-83
SCALE: 1"=20' DATE: JUNE 30, 1983
SHEET NO. 6 OF 20 SHEETS

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

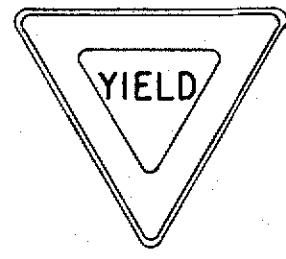
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	22C-11-83	1983	8	20



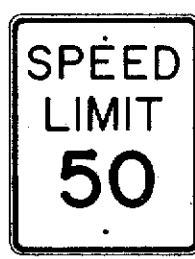
R1-1 30"x30"
R1-1-A 36"x36"

4-WAY

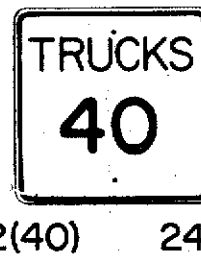
R1-3 12"x6"
R1-3-A 18"x9"



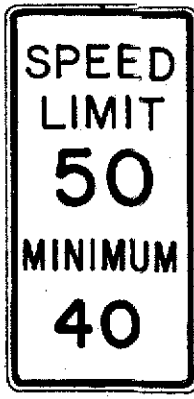
R1-2 36"x36"x36"
R1-2-A 48"x48"x48"



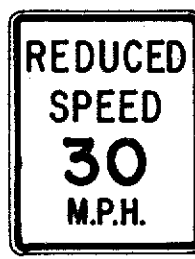
R2-1(50) 24"x30"
R2-1(50)-A 48"x60"



R2-2(40) 24"x24"
R2-2(40)-A 48"x48"



R2-4a(50/40) 24"x48"
R2-4a(50/40)-A 48"x96"



R2-5b(30) 24"x30"
R2-5b(30)-A 48"x60"



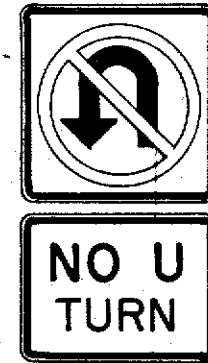
R3-1 24"x24"
24"x18"
R3-1-A 48"x48"
48"x36"



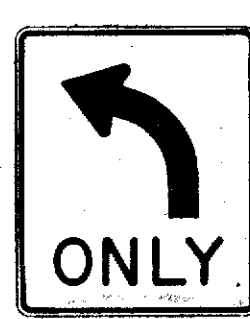
R3-2 24"x24"
24"x18"
R3-2-A 48"x48"
48"x36"



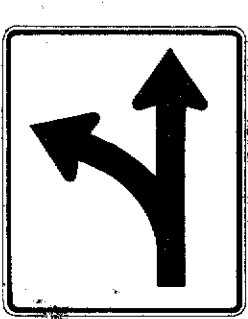
R3-3 24"x24"
R3-3-A 48"x48"



R3-4 24"x24"
24"x18"
R3-4-A 48"x48"
48"x36"



R3-5(L) 30"x36"
R3-5(L)-A 48"x60"



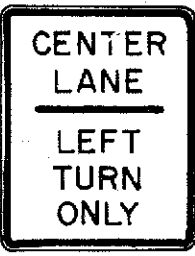
R3-6(L) 30"x36"
R3-6(L)-A 48"x60"



R3-7(R) 30"x30"
R3-7(R)-A 48"x48"



R3-8(L) 30"x30"
R3-8(L)-A 36"x36"
R3-8(L)-B 48"x48"



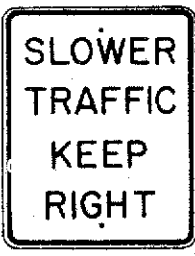
R3-9 24"x30"



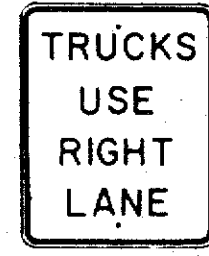
R4-1 24"x30"



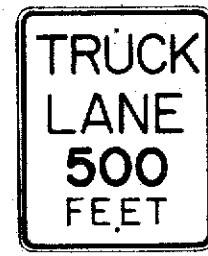
R4-2 24"x30"



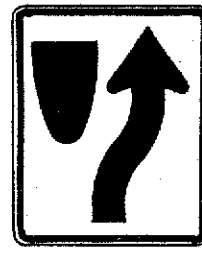
R4-3 24"x30"
R4-3-A 48"x60"



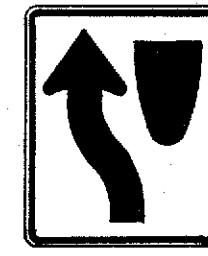
R4-5 24"x30"



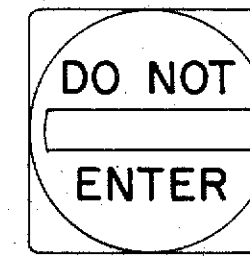
R4-6(500) 24"x30"



R4-7 24"x30"
24"x18"



R4-8 24"x30"
24"x18"



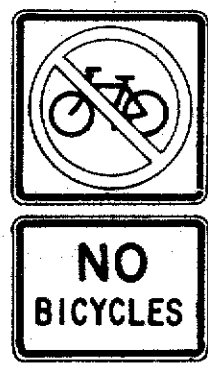
R5-1 30"x30"
R5-1-A 48"x48"



R5-2 24"x24"
24"x18"



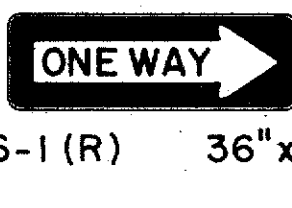
R5-4 24"x30"



R5-6 24"x24"
24"x18"



R5-9 36"x24"



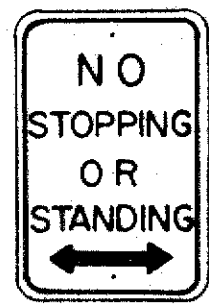
R6-1(R) 36"x12"



R6-2(R) 18"x24"



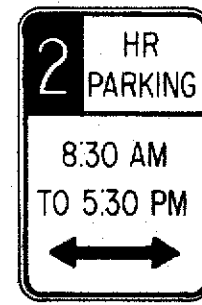
R7-1 12"x18"
R7-1-A 24"x30"



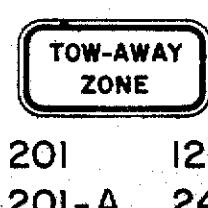
R7-4 12"x18"
R7-4-A 24"x30"



R7-107(R) 12"x18"



R7-108 12"x18"



R7-201 12"x6"
R7-201-A 24"x12"



R8-1 24"x30"



R8-2 24"x30"



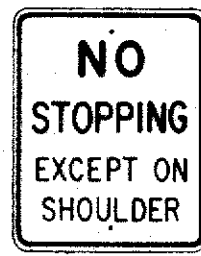
R8-3 24"x30"



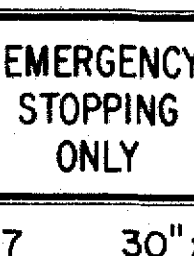
R8-4 30"x24"
R8-4-A 48"x36"



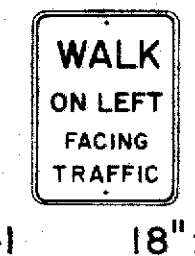
R8-5 24"x30"



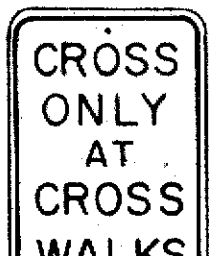
R8-6 24"x30"



R8-7 30"x24"
R8-7-A 48"x36"



R9-1 18"x24"



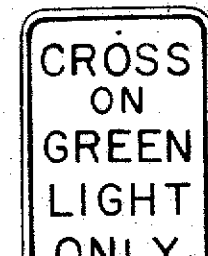
R9-2 12"x18"



R9-3 12"x18"



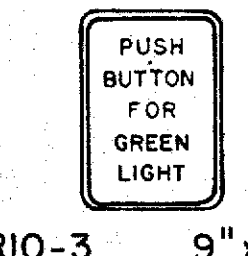
R9-4 18"x24"



R10-1 12"x18"



R10-2 12"x18"



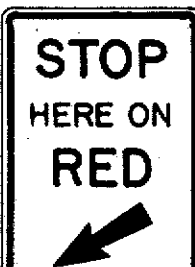
R10-3 9"x12"



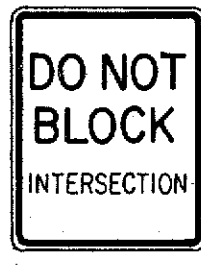
R10-4 9"x12"



R10-5 24"x30"



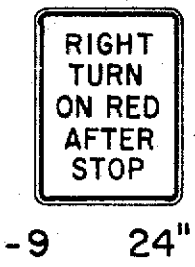
R10-6 24"x36"



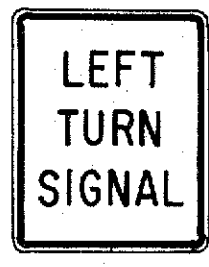
R10-7 24"x30"



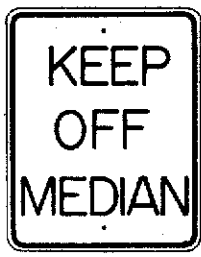
R10-8 24"x30"



R10-9 24"x30"



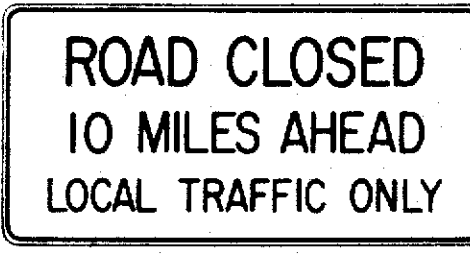
R10-10 24"x30"



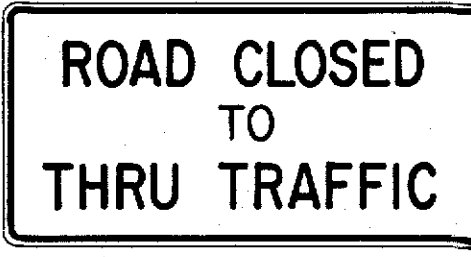
R11-1 24"x30"



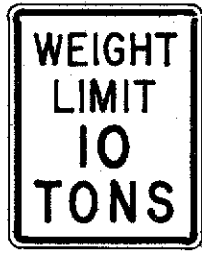
R11-2 48"x30"



R11-3(10) 60"x30"



R11-4 60"x30"



R12-1(10) 24"x30"

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:

Eisuke Tanaka
TRAFFIC ENGINEER

3/17/72
DATE

APPROVED:

Robert J. ...
ASSISTANT CHIEF, ENGINEERING

3-20-72
DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.	3/20/72
2	Revised General Note 1.	H.	10/10/74
3	Added General Note 5	H.	6/9/75

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

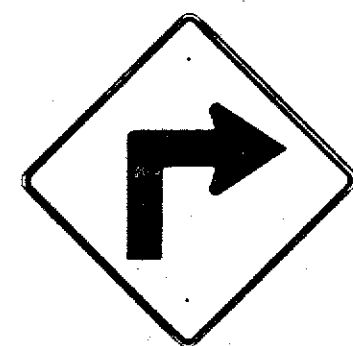
STANDARD DETAILS REGULATORY SIGNS

NOT TO SCALE

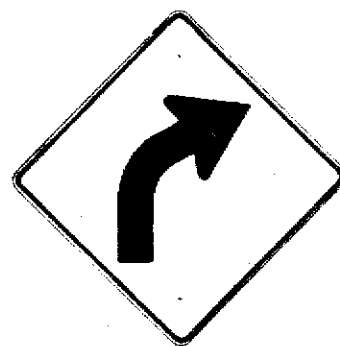
SHEET No. 8 OF 20 SHEETS DT 101

ORIGINAL PLAN	DATE
SURVEYED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

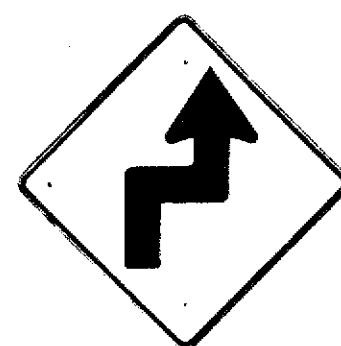
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	20011-01	1983	9	20



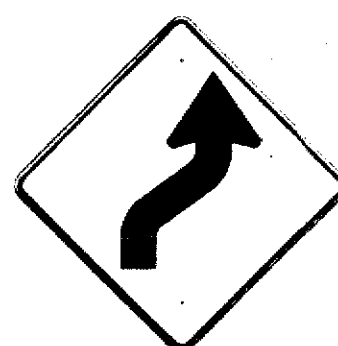
W1-1(R) 30"x30"
W1-1(R)-A 48"x48"



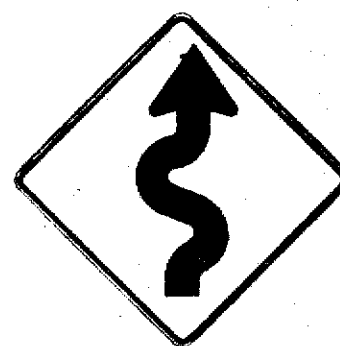
W1-2(R) 30"x30"
W1-2(R)-A 48"x48"



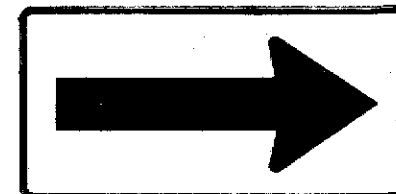
W1-3(R) 30"x30"
W1-3(R)-A 48"x48"



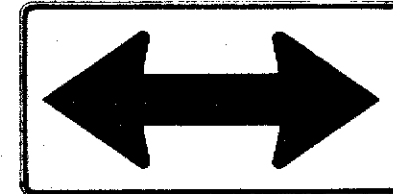
W1-4(R) 30"x30"
W1-4(R)-A 48"x48"



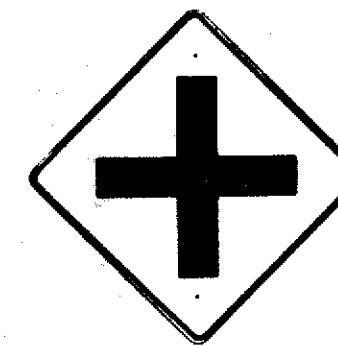
W1-5(R) 30"x30"
W1-5(R)-A 48"x48"



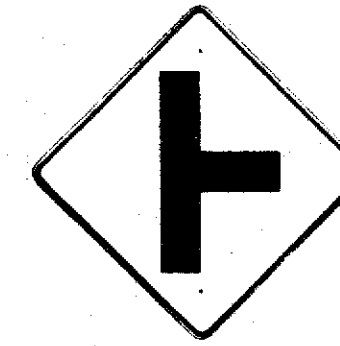
W1-6 48"x24"



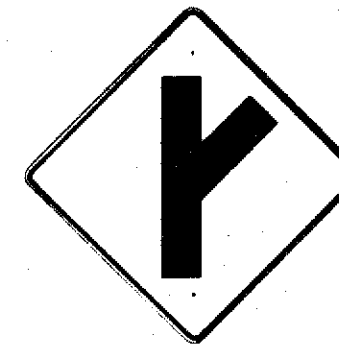
W1-7 48"x24"



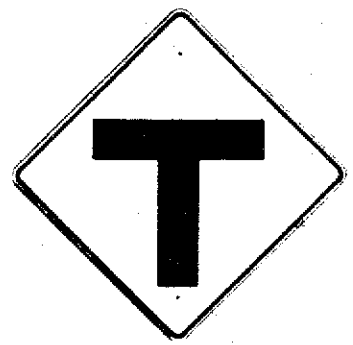
W2-1 30"x30"
W2-1-A 48"x48"



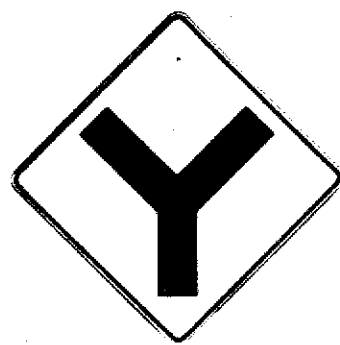
W2-2 30"x30"
W2-2-A 48"x48"



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



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



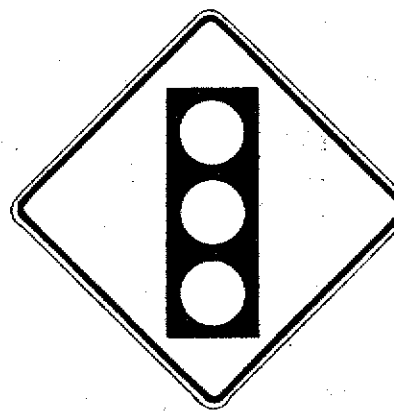
W2-5 30"x30"
W2-5-A 48"x48"



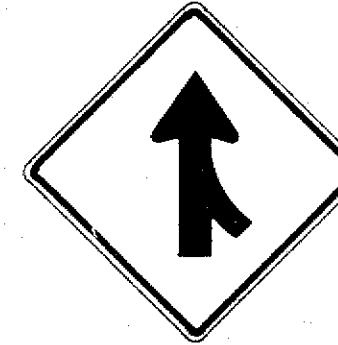
W3-1 30"x30"
W3-1-A 36"x36"



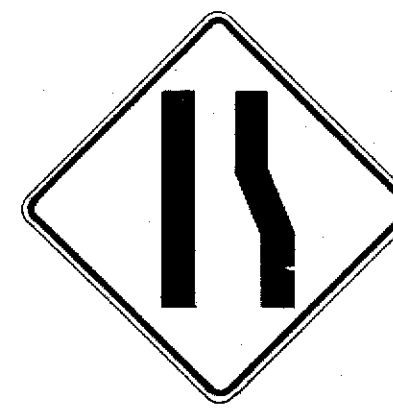
W3-2 30"x30"
W3-2-A 36"x36"



W3-3 36"x36"
24"x18"



W4-1(R) 30"x30"
24"x18"
W4-1(R)-A 48"x48"
24"x18"



W4-2(R) 36"x36"
W4-2(R)-A 48"x48"



W5-1 36"x36"



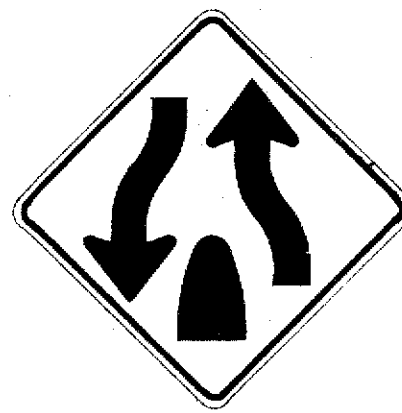
W5-2 30"x30"
W5-2-A 36"x36"



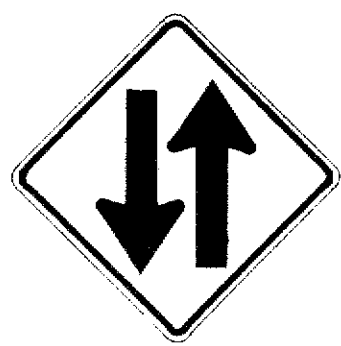
W5-3 36"x36"



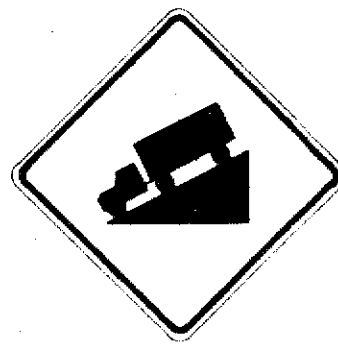
W6-1 36"x36"
24"x18"



W6-2 36"x36"
24"x18"



W6-3 30"x30"
24"x18"
W6-3-A 36"x36"
24"x18"
W6-3-B 48"x48"
24"x18"



W7-1 30"x30"
24"x18"
W7-1-A 36"x36"
24"x18"



W7-2 24"x18"



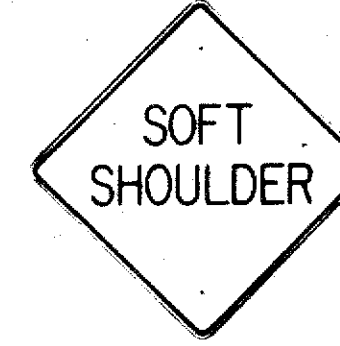
W8-1 30"x30"
W8-1-A 36"x36"



W8-2 30"x30"
W8-2-A 36"x36"



W8-3 30"x30"
W8-3-A 36"x36"



W8-4 30"x30"
W8-4-A 36"x36"



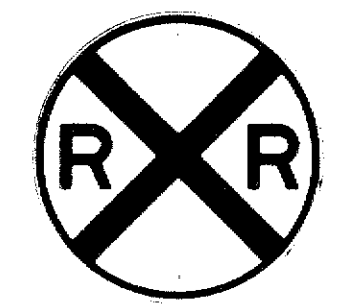
W8-5 30"x30"
24"x18"
W8-5-A 36"x36"
24"x18"



W9-1(R) 30"x30"
W9-1(R)-A 36"x36"
W9-1(R)-B 48"x48"



W9-2(L) 36"x36"
W9-2(L)-A 48"x48"



W10-1 36" Diameter



W11-1 30"x30"
24"x18"
W11-1-A 36"x36"
24"x18"



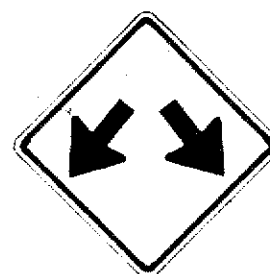
W11-2 30"x30"
24"x18"
W11-2-A 36"x36"
24"x18"



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



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



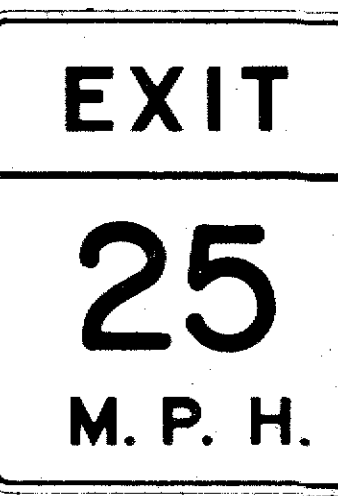
W12-1 24"x24"
W12-1-A 36"x36"
W12-1-B 48"x48"



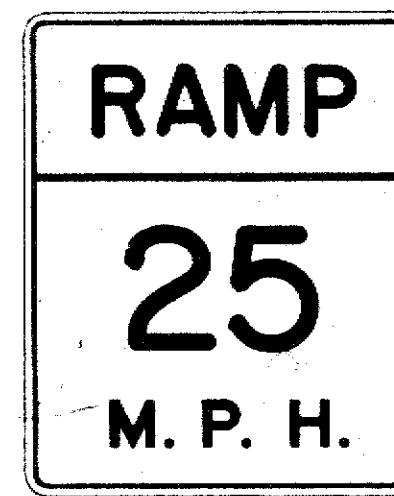
W12-2(12'-6") 36"x36"
24"x18"



W13-1(25) 18"x18"
W13-1(25)-A 24"x24"



W13-2(25) 48"x60"



W13-3(25) 48"x60"



W14-1 30"x30"



W14-3 36"x48"x48"

GENERAL NOTES

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:

Enik Tanaka
TRAFFIC ENGINEER

3/17/12
DATE

APPROVED:

John P. Sisk
ASSISTANT CHIEF, ENGINEERING

3-20-12
DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/12
2	Revised General Note 1	H.T.	10/16/74
3	Revised General Note 5	MT	9-16-75
4	Revised General Note 5	H.T.	9-14-76
5	Added Note 1	H.T.	11-7-77

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS WARNING SIGNS

NOT TO SCALE

SHEET No. 9 OF 20 SHEETS DT 102

DATE	3/17/12
ORIGINAL PLAN	DT 102
DRAWN BY	H.T.
CHECKED BY	H.T.
NOTED BY	H.T.
QUANTITIES BY	H.T.
CHECKED BY	H.T.
NO.	9

NOTE

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-11-83	1983	10	20

General Notes

1. Sign details shall conform to the latest editions of the following FHWA publications:
- a. "Standard Alphabets for Highway Signs," and as amended.
 - b. "Standard Highway Signs," and as amended.
 - c. "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
2. All signs shall be reflectorized with reflective sheeting, unless otherwise specified.
3. All signs shall have $\frac{3}{8}$ " bolt holes drilled at appropriate locations.
4. Numerals in () indicate 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 with reflective sheeting.
6. All signs shall be erected without educational plaques unless called for in the plans.

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

APPROVED:
Arthur J. Dakeishi 2/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 103 approved 3/20/72	H.T.	5/3/78
2	Added General Note 6	H.T.	11/9/78

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGNS

NOT TO SCALE
DATE: MAY, 1978

SHEET No. 10 OF 20 SHEETS DT 103

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTE BOOK	
NO.	

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

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
1 1/2" Series C
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" 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
4" Series D -
- 3" Series D -
- 2" Series D -
- 3" Series D -
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"

U
TURN
AHEAD
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"

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

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

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

ADVANCE
GREEN
W15-2 24" x 24"

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

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

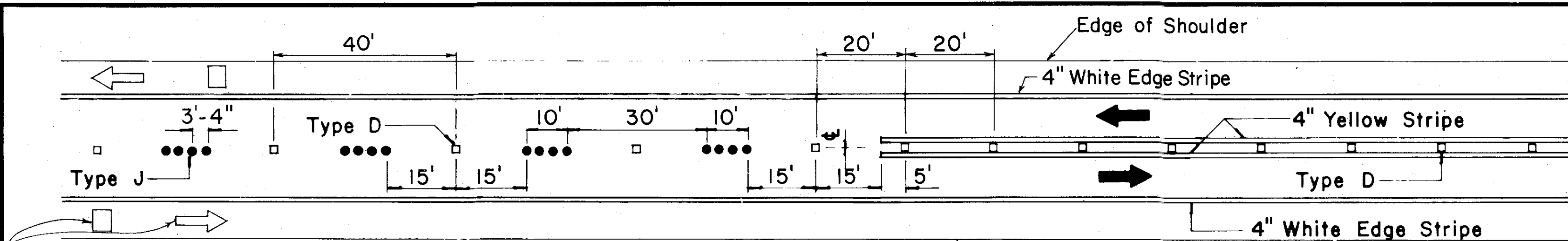
SCHOOL
BUS STOP
AHEAD
8:00 AM
TO 3:30 PM
S4-1 24" x 10"
WHEN
CHILDREN
ARE PRESENT
S4-2 24" x 10"

SCHOOL
S4-3 24" x 8"
WHEN
FLASHING
S4-4 24" x 10"

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

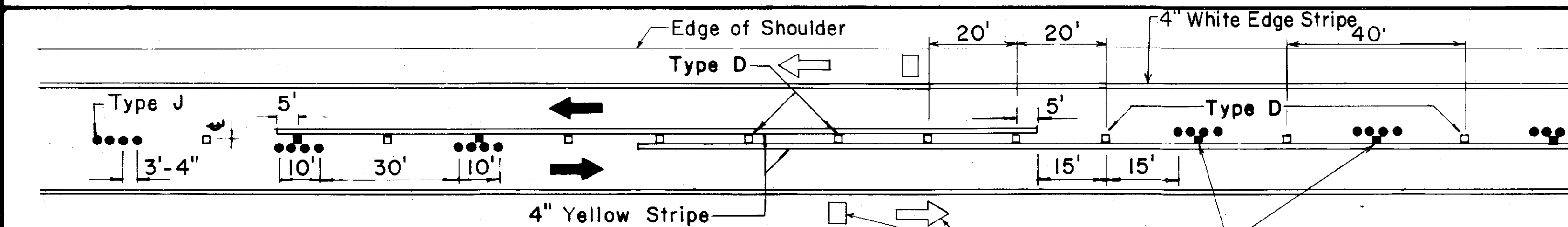
USE
SIDEWALK
4" Series C
R18-1 24" x 18"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	200-11-83	1983	11	20



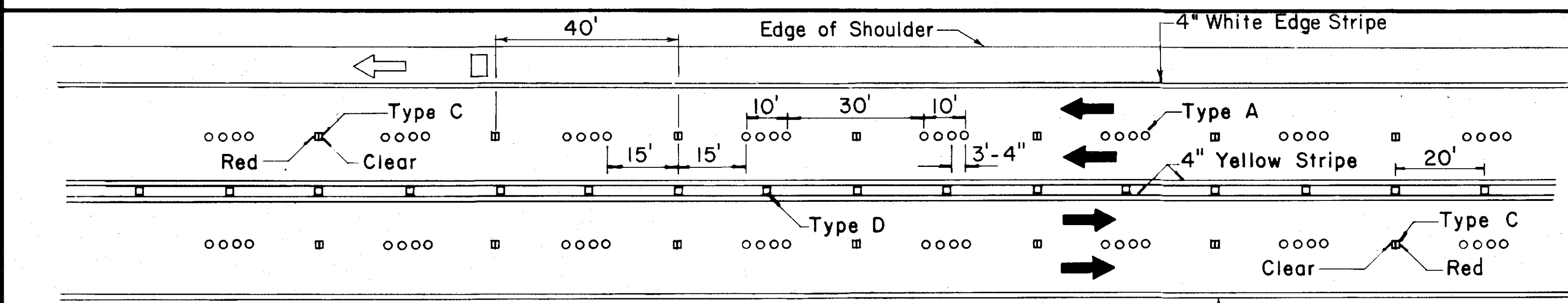
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PERMITTED AND PASSING PROHIBITED

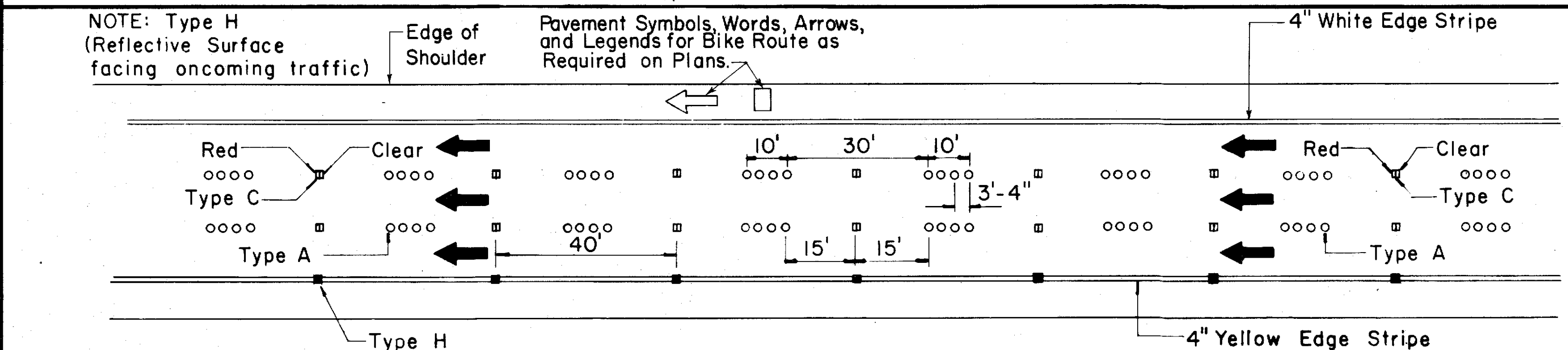


Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PROHIBITED ZONES

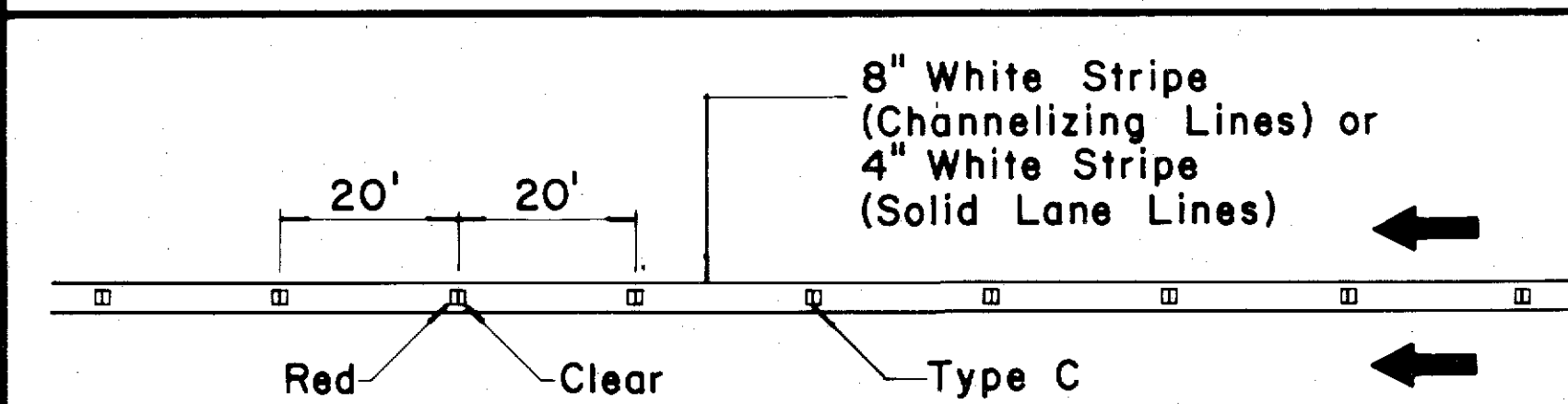


Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

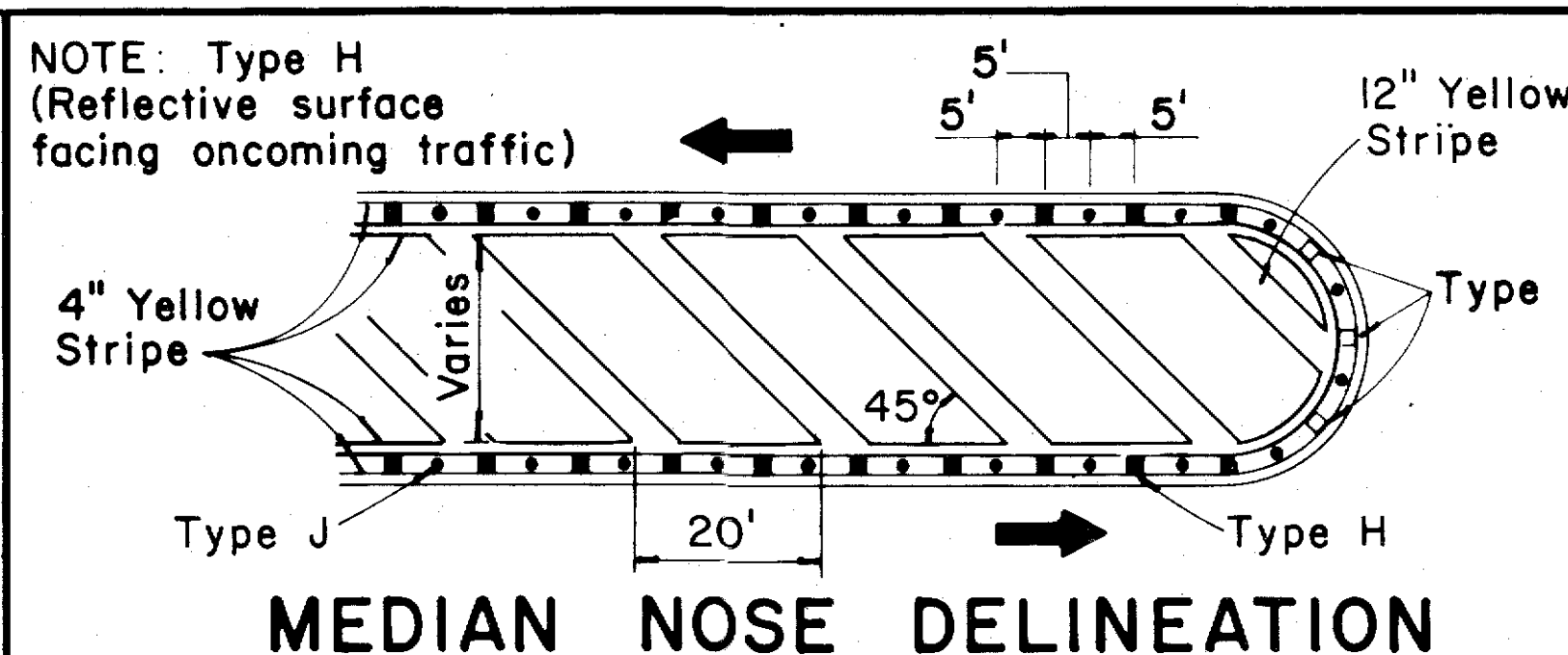


NOTE: Type H (Reflective Surface facing oncoming traffic)

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



CHANNELIZING LINES OR SOLID LANE LINES



NOTE: Type H (Reflective surface facing oncoming traffic)

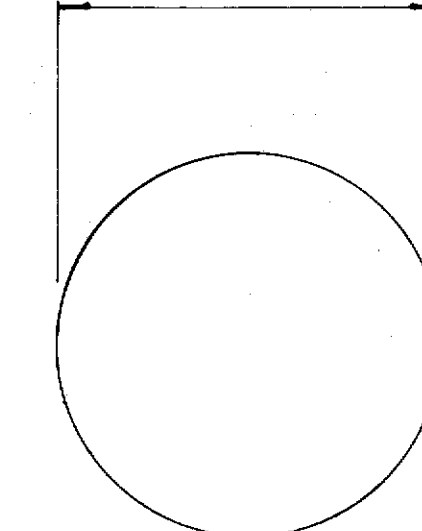
TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

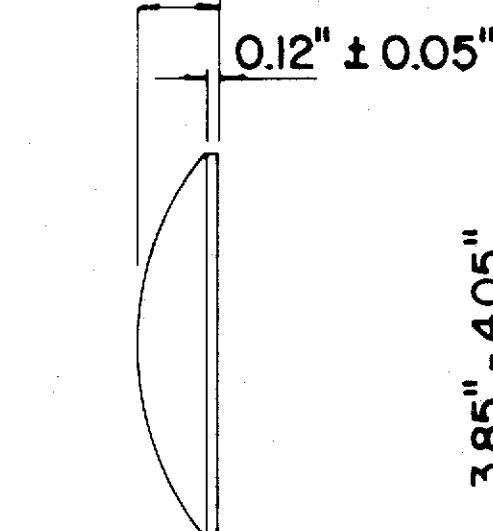
MISCELLANEOUS

3.85" - 4.05" Dia.



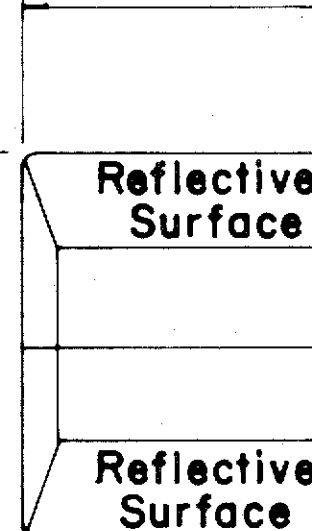
TYPE A
NON - REFLECTIVE WHITE MARKER

0.68" - 0.80"



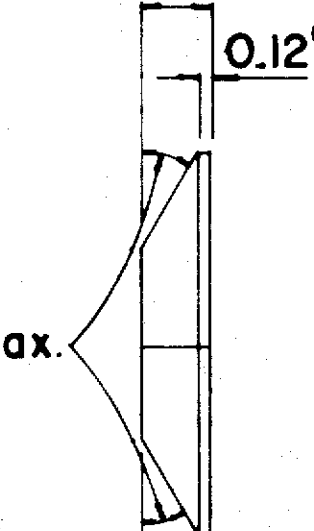
TYPE J
NON - REFLECTIVE YELLOW MARKER

3.85" - 4.05"



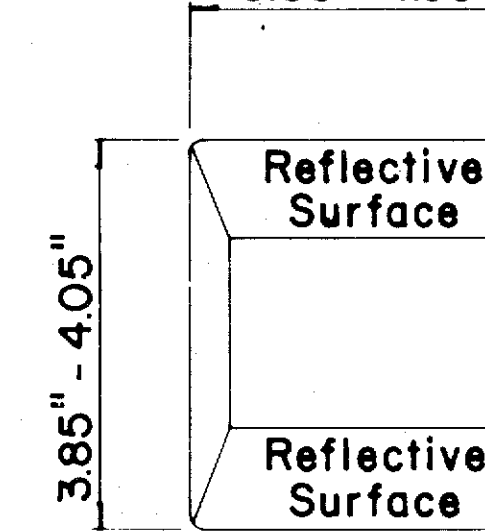
TYPE C
RED - CLEAR REFLECTIVE MARKER

0.50" - 0.70"



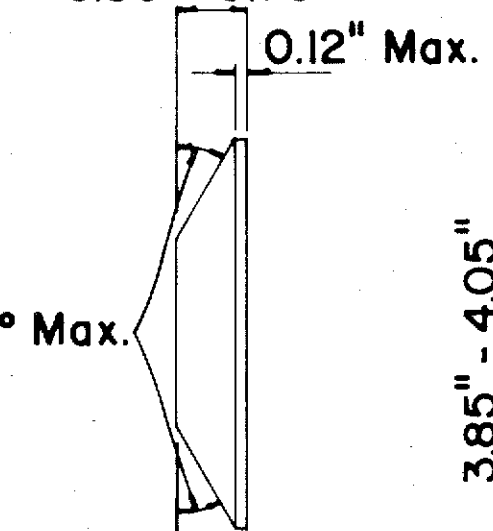
TYPE H
ONE - WAY YELLOW REFLECTIVE MARKER

3.85" - 4.05"

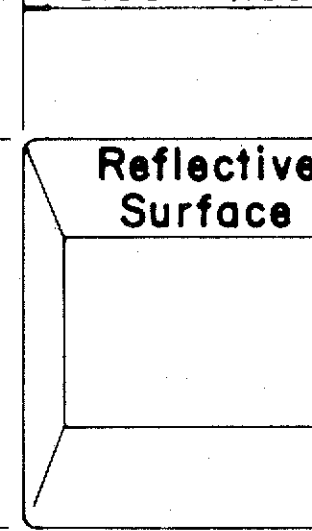


TYPE D
TWO - WAY YELLOW REFLECTIVE MARKER

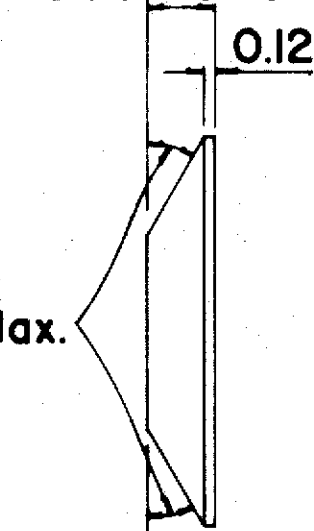
0.50" - 0.70"



3.85" - 4.05"



0.50" - 0.70"



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
TRAFFIC ENGINEER

7/21/78
DATE

APPROVED:

Harbert A. Zalewski
ASSISTANT CHIEF, ENGINEERING

1/24/78
DATE

No.	REVISION	APPROVED BY	DATE
1	Supercedes 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

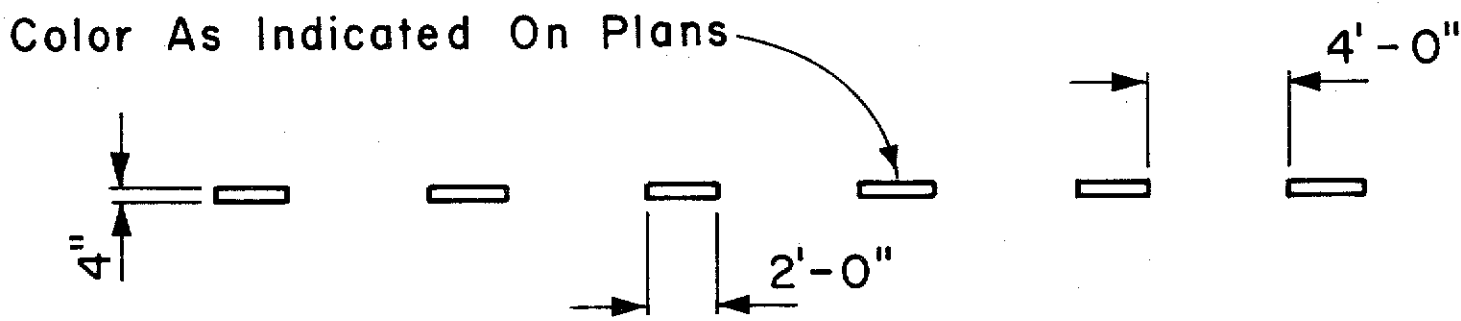
SHEET No. 11 OF 20 SHEETS DT 300

SURVEYED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	

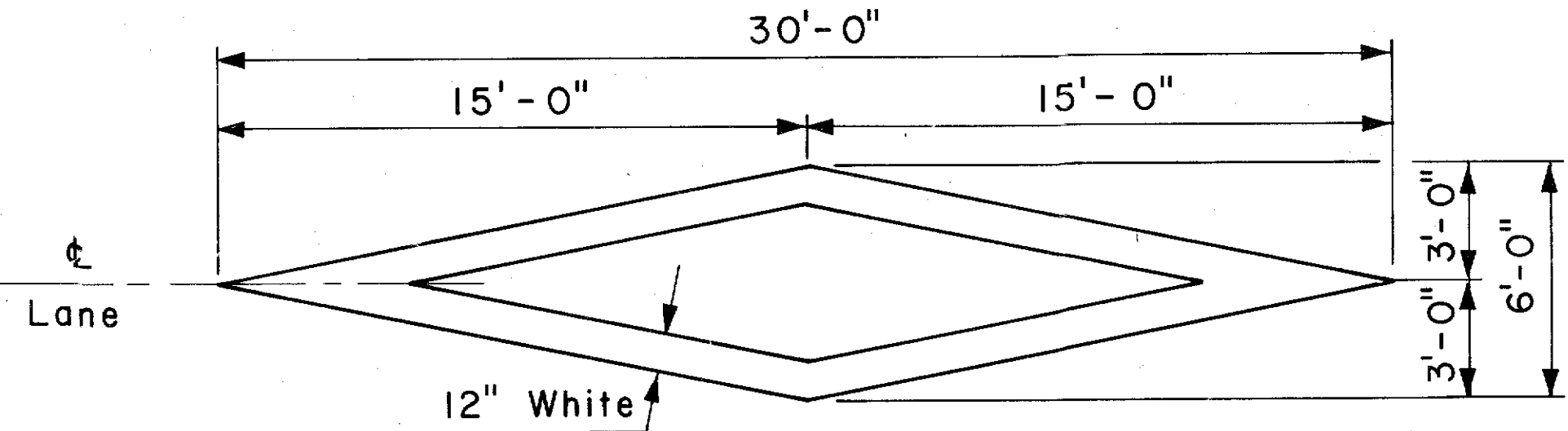
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	29C-11-83	1983	12	20

GENERAL NOTES:

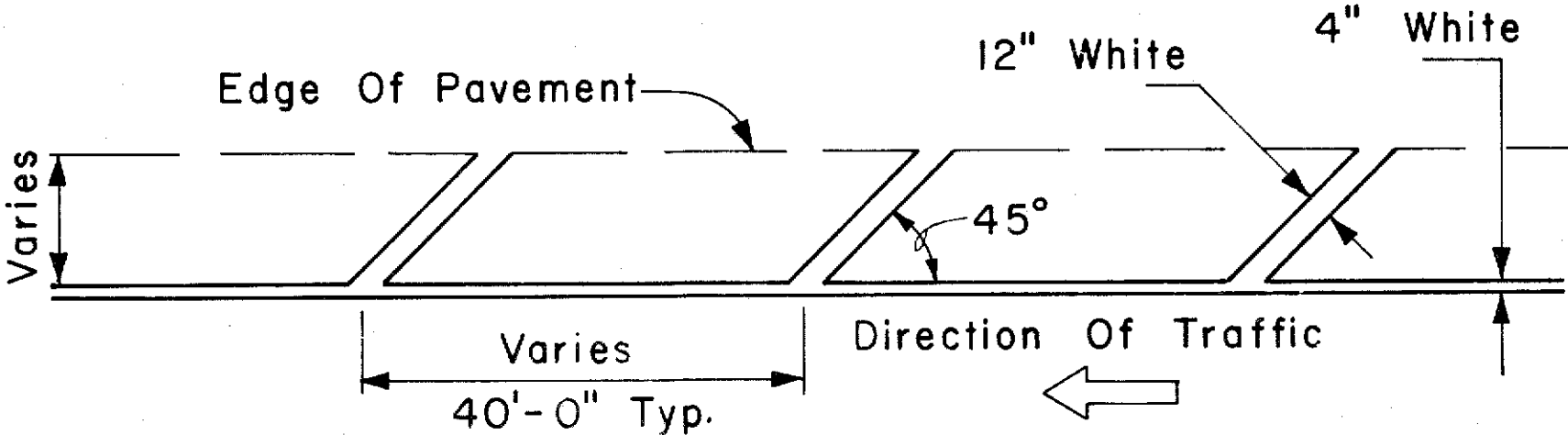
1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and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



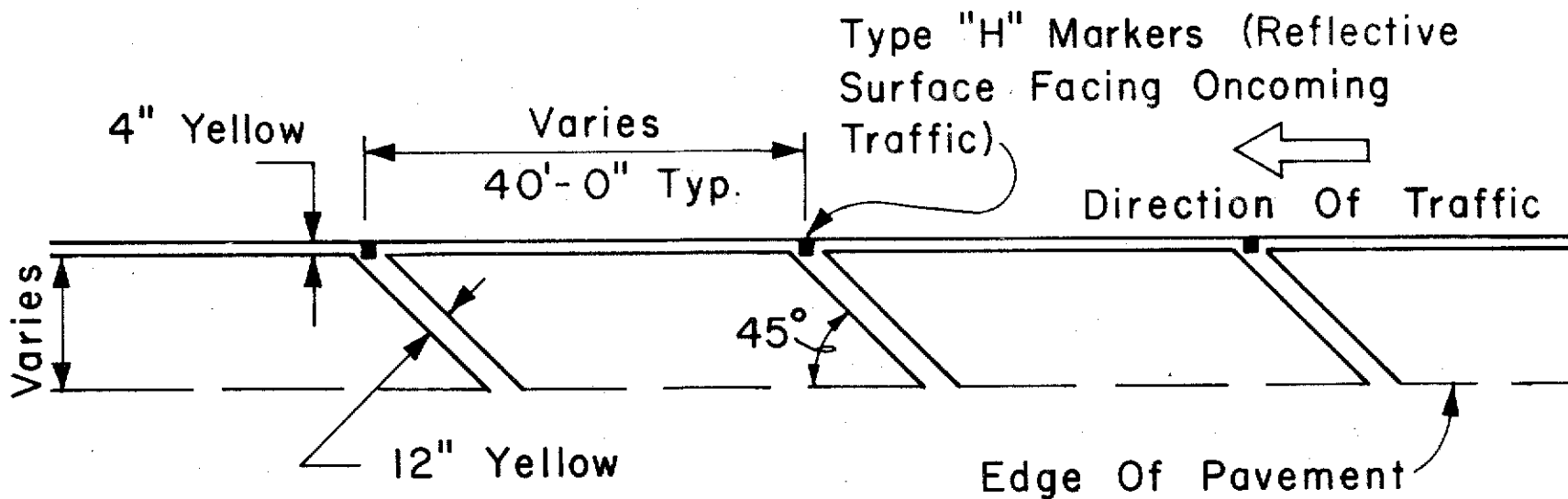
4" GUIDE LINE



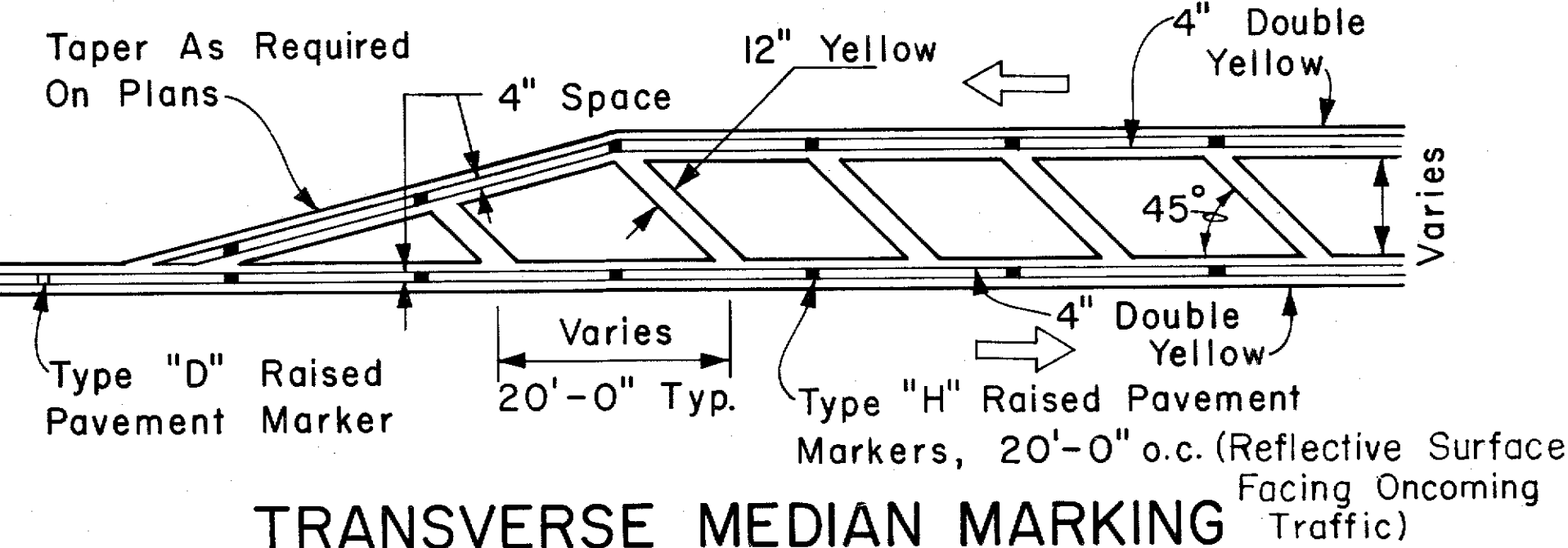
PAVEMENT DIAMOND



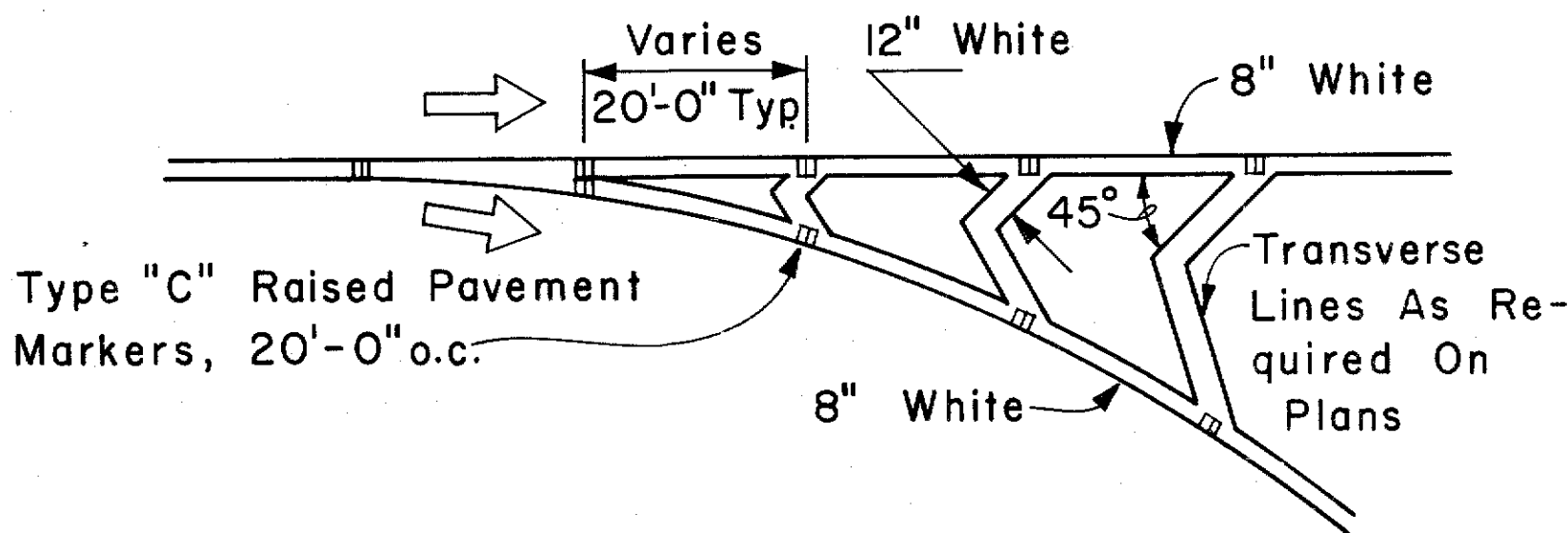
TRANSVERSE RIGHT SHOULDER MARKING



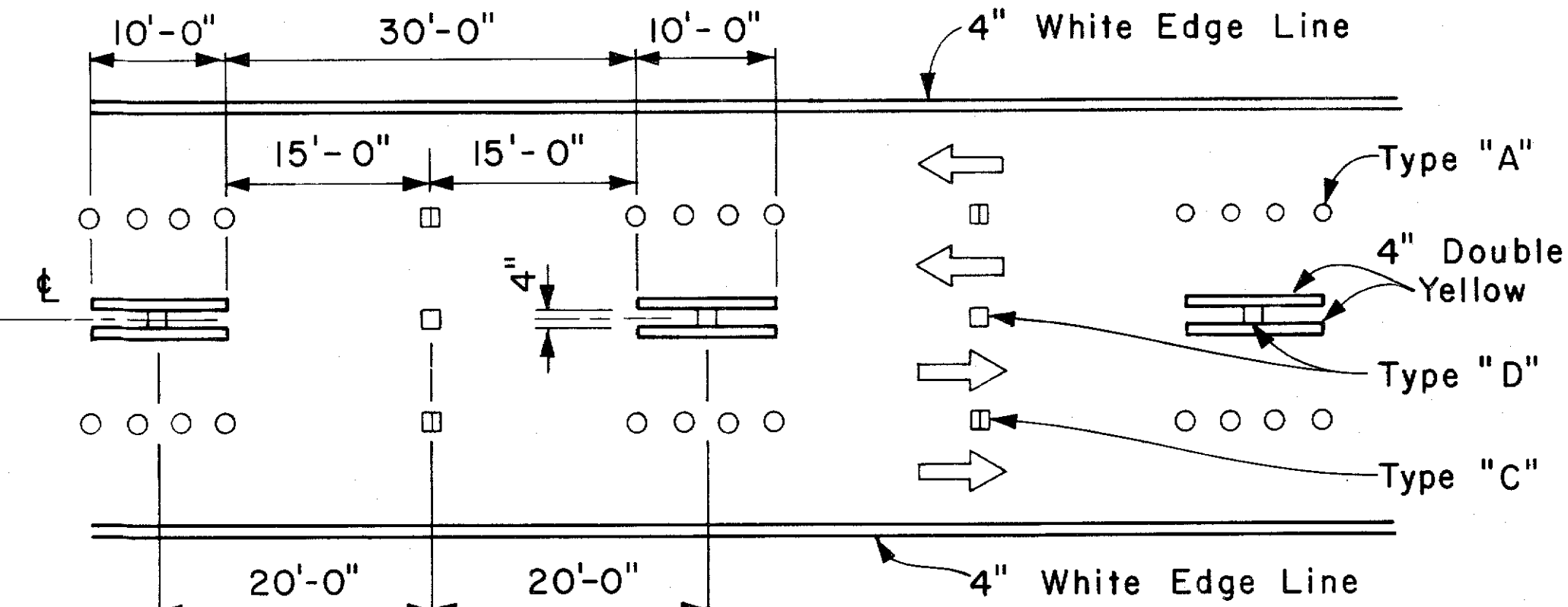
TRANSVERSE LEFT SHOULDER MARKING



TRANSVERSE MEDIAN MARKING

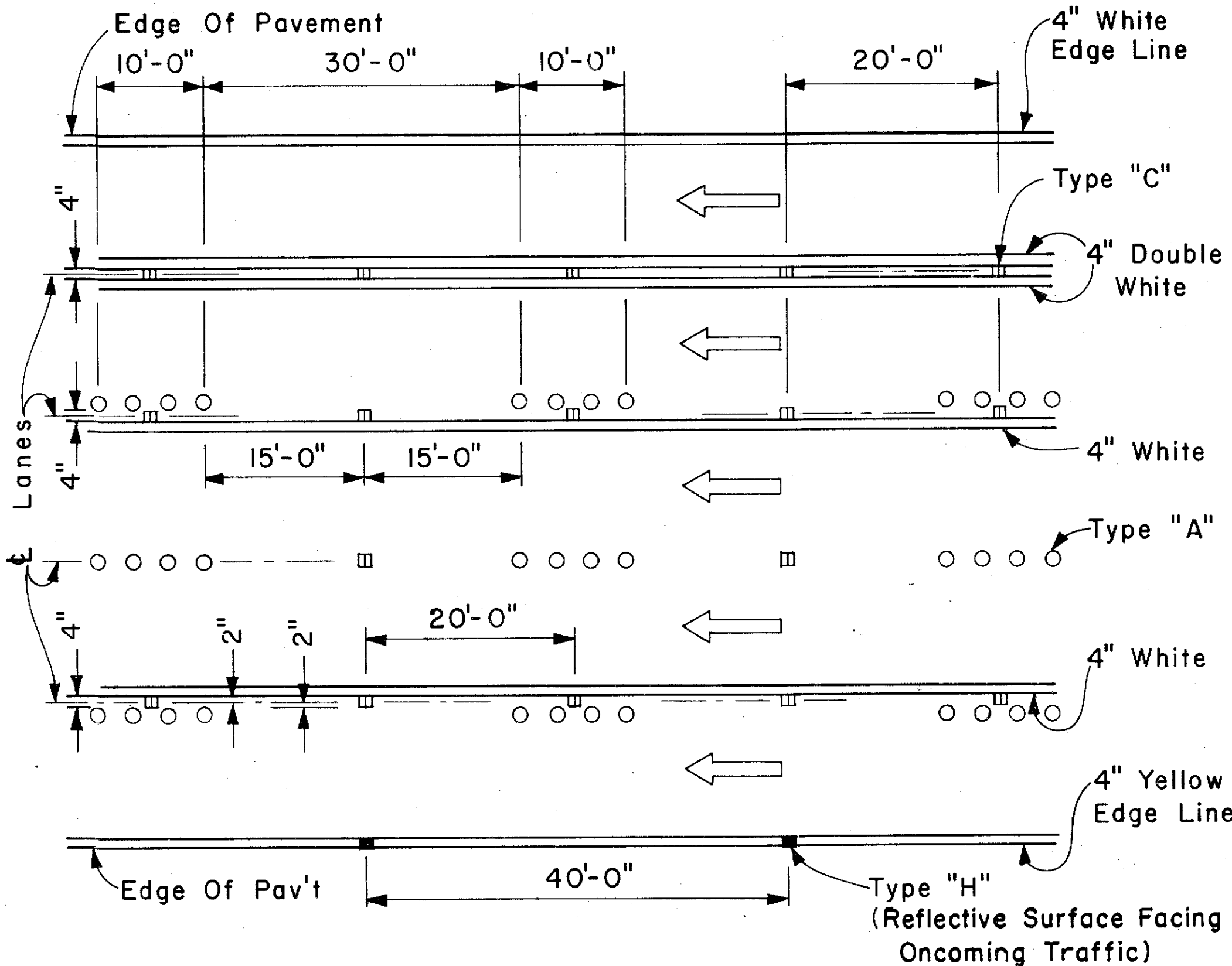


CHANNELIZING ISLAND



NOTE: Traffic Cone Usage Required.

MULTI-LANE REVERSIBLE LANES



MULTI-LANE LANE CHANGE RESTRICTION ZONES

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

APPROVED: *Harbor 2. Zafra* 5/2/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

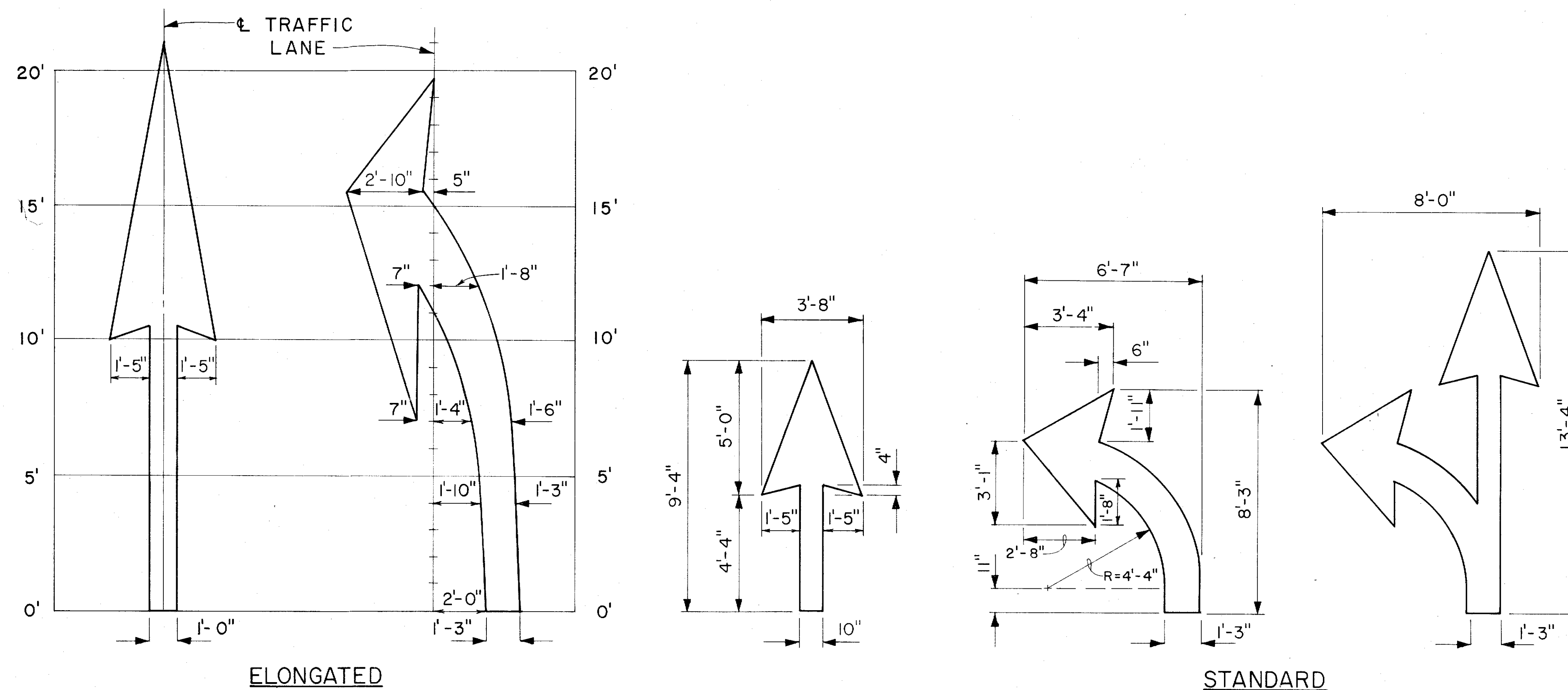
Scale: Not to Scale Date: April, 1978
SHEET NO. 12 OF 20 SHEETS DT 302

ORIGINAL PLAN	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-11-83	1983	13	20

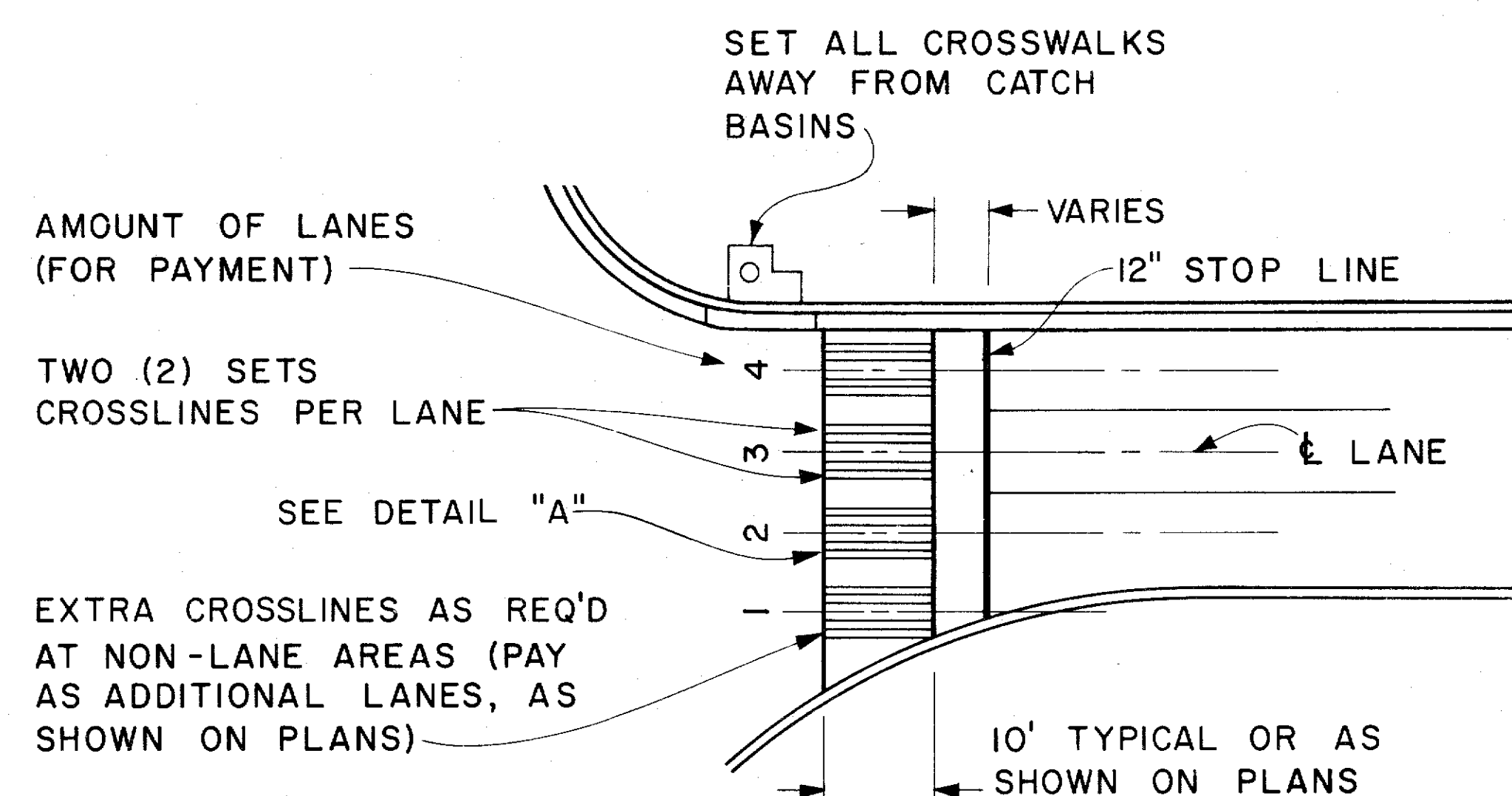
GENERAL NOTES:

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.

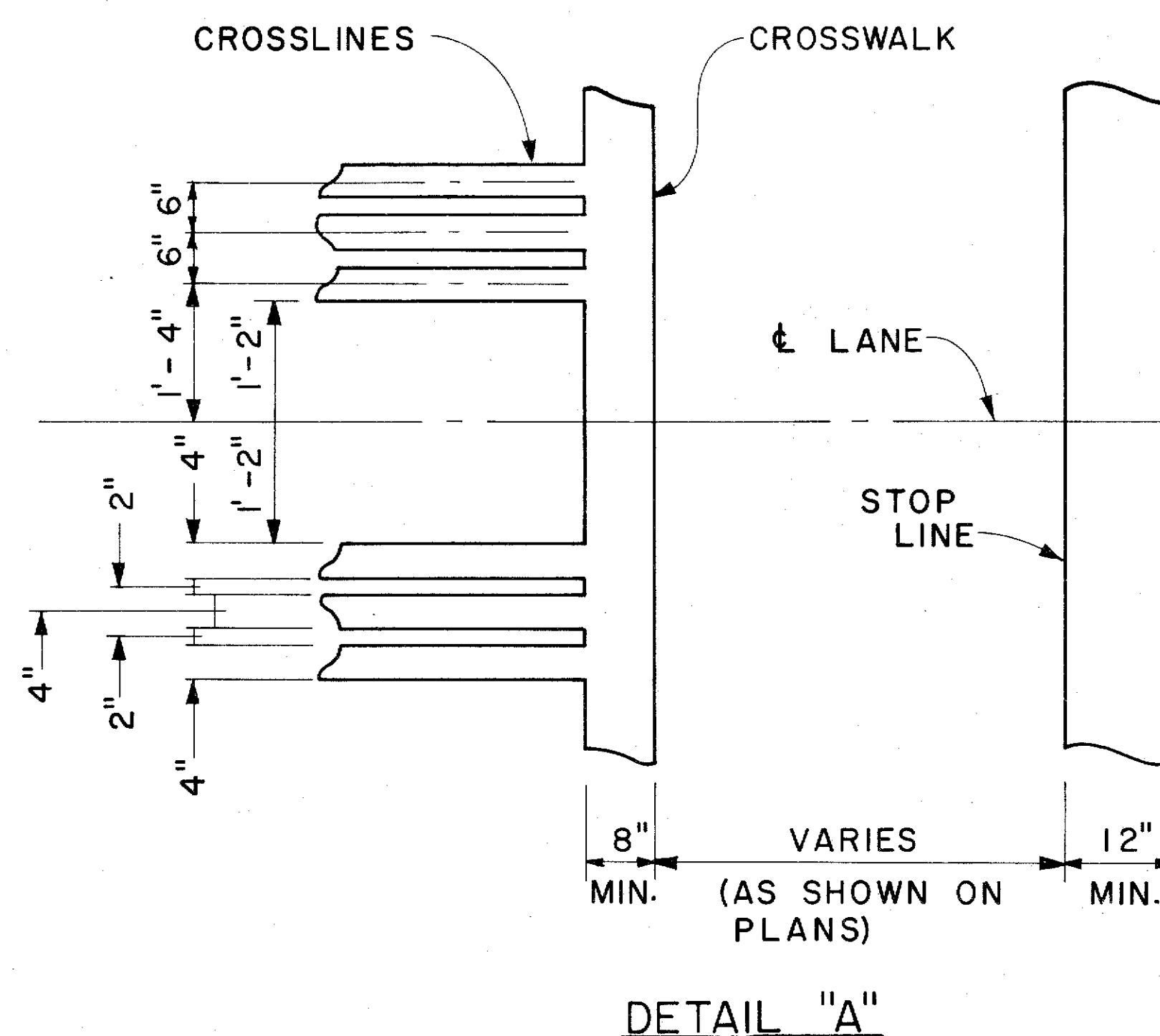


PAVEMENT ARROWS

Scale: $3/8" = 1'$



PLAN



CROSSWALK & STOP LINE

Scale: Not to Scale

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

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

APPROVED: Herbert Z. Zakisch 5/3/18
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

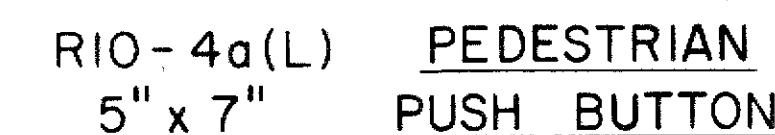
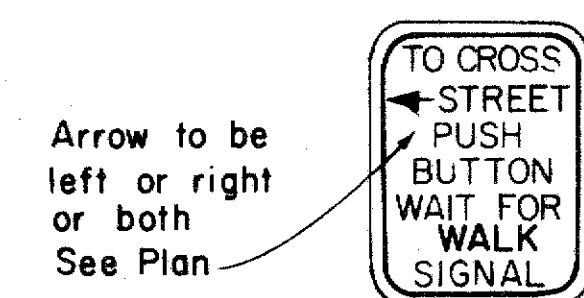
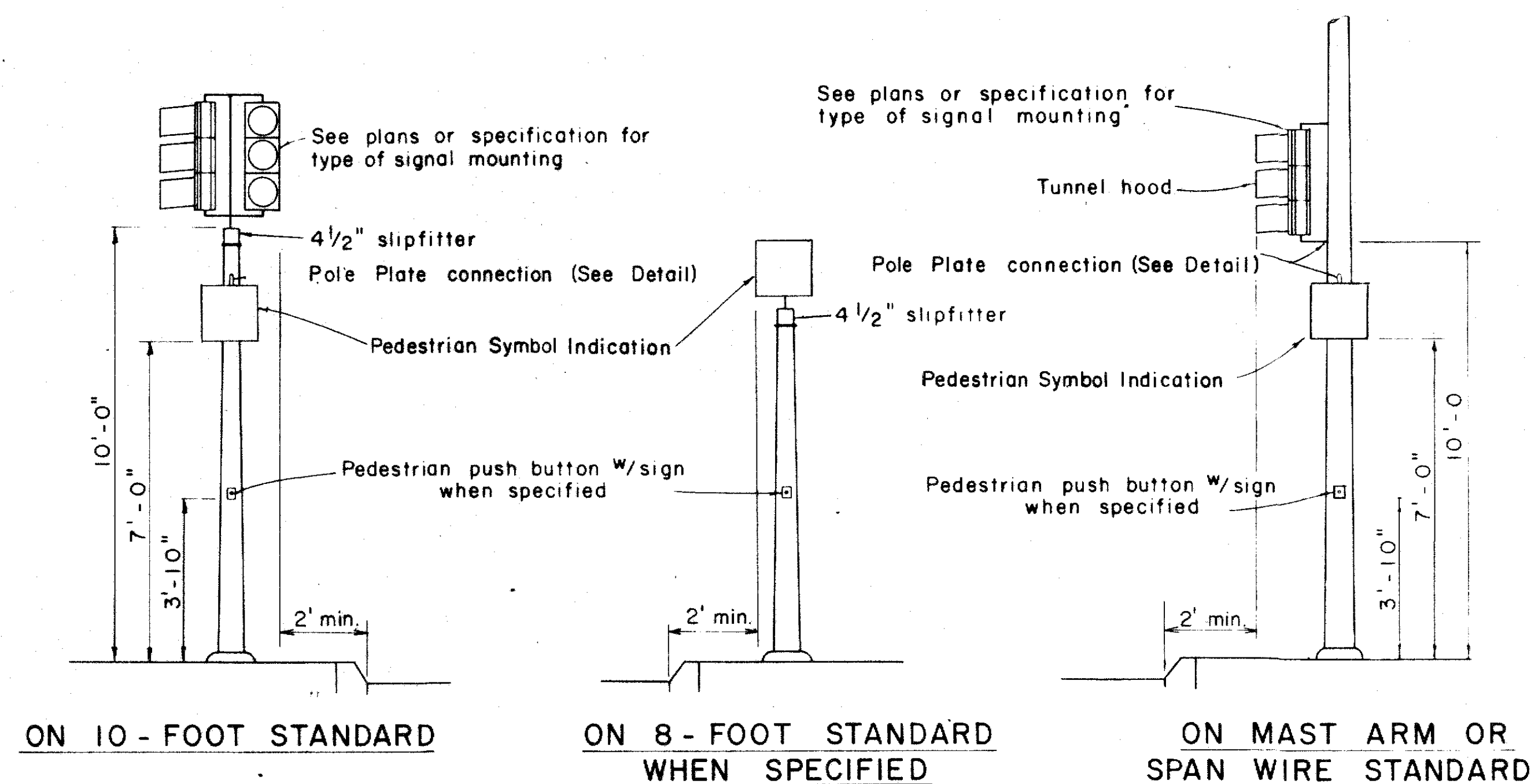
STANDARD DETAILS

MISCELLANEOUS
PAVEMENT MARKINGS

Scale: As Shown Date: March, 1978

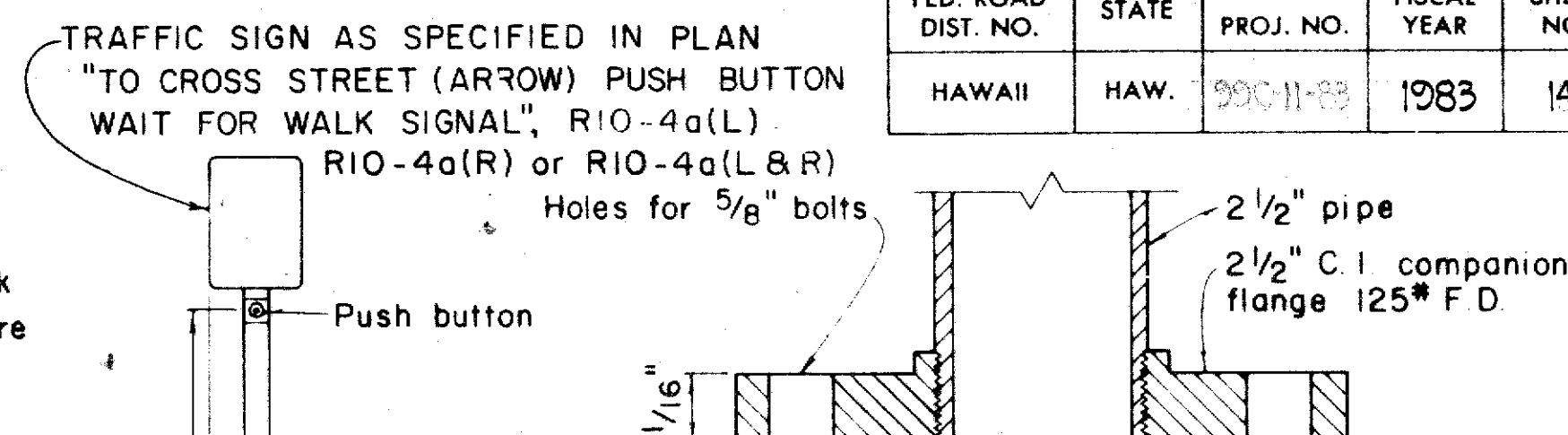
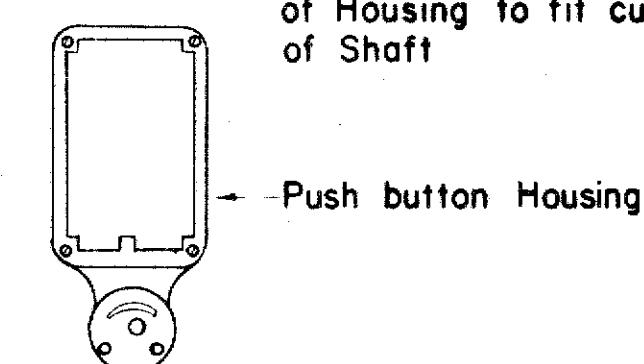
SHEET No. 13 OF 20 SHEETS DT 306

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	200-11-88	1983	14	20

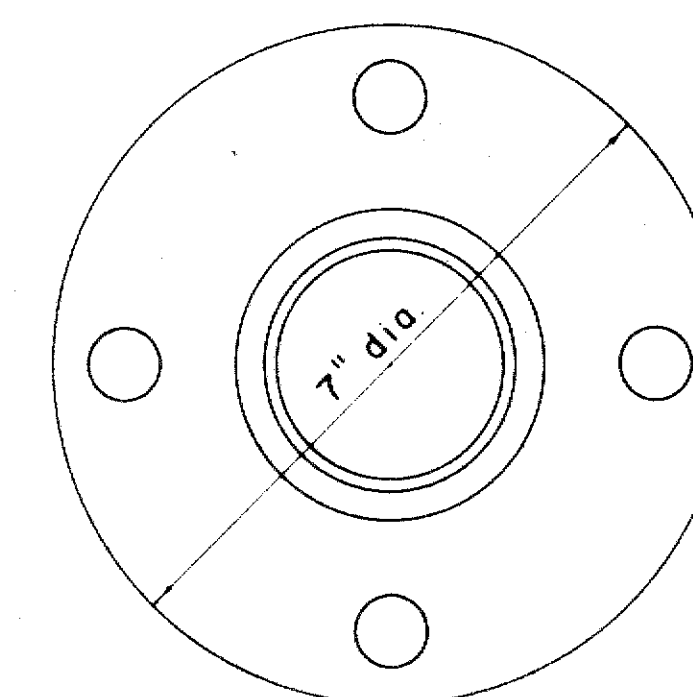


NOTE:

- NOTE:
1. Conduits shall protrude 2" max. above finished surface of foundation.
 2. Conduits shall slope away from pole foundation.

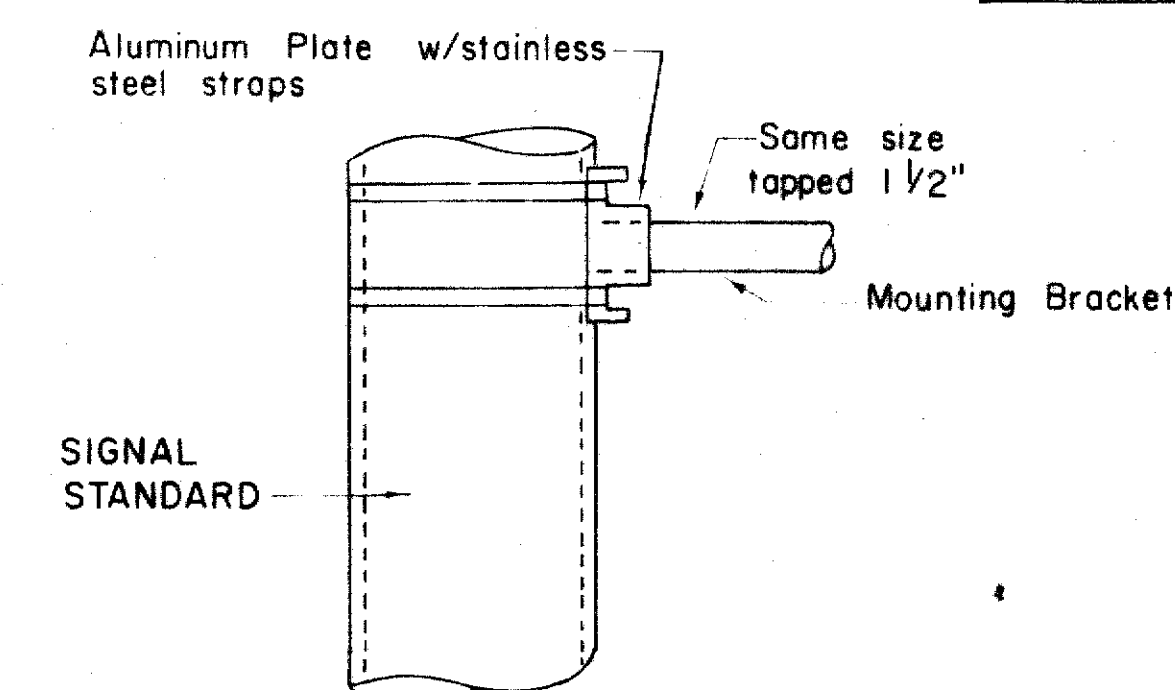


SECTION

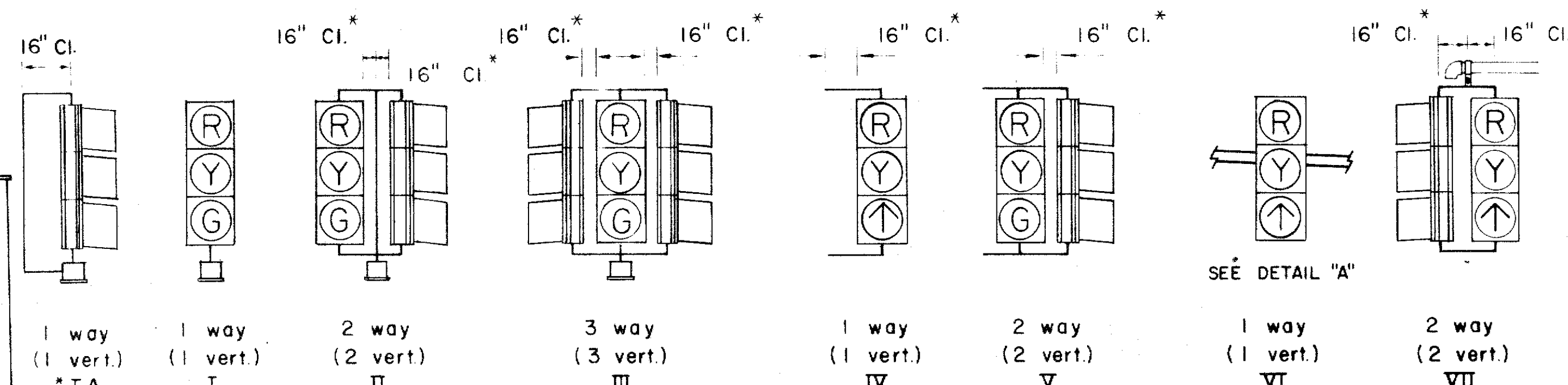
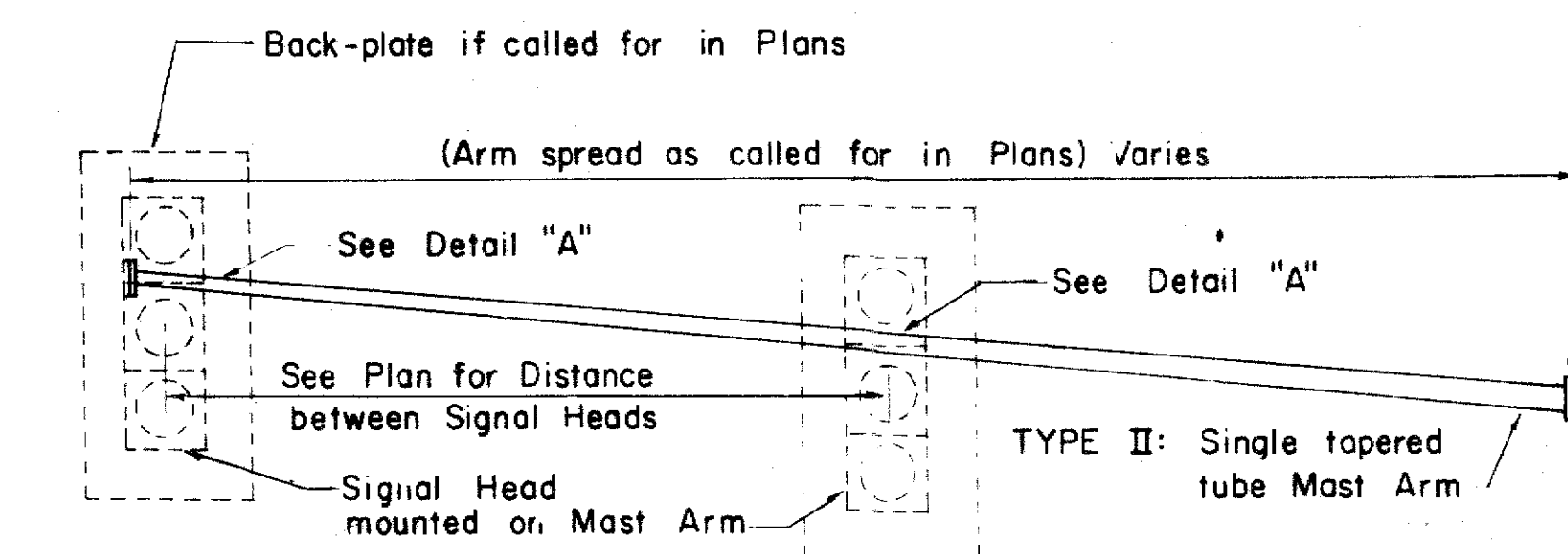


BASE DETAIL:

TYPICAL EQUIPMENT MOUNTINGS



DETAIL OF POLE PLATE CONNECTIONS



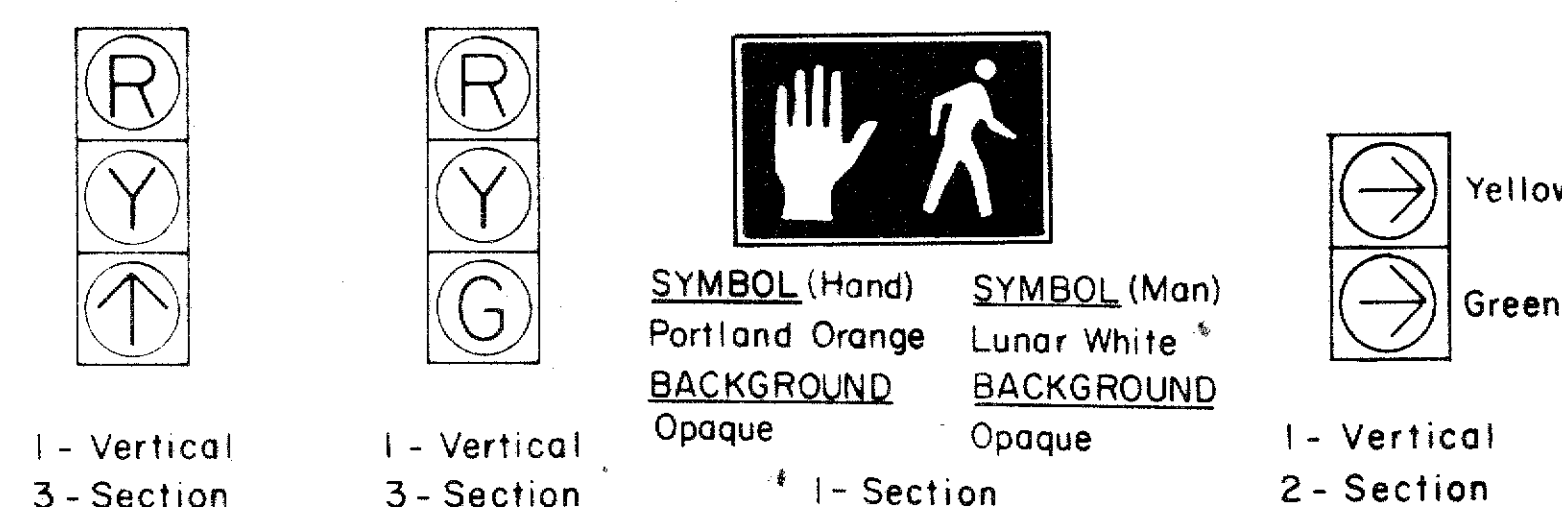
SLIPFITTER MOUNTINGS

BRACKET MOUNTINGS

MASTARM MOUNTINGS

* Use with Programmed Visibility Signal

TYPICAL VEHICULAR AND PEDESTRIAN SIGNAL MOUNTINGS



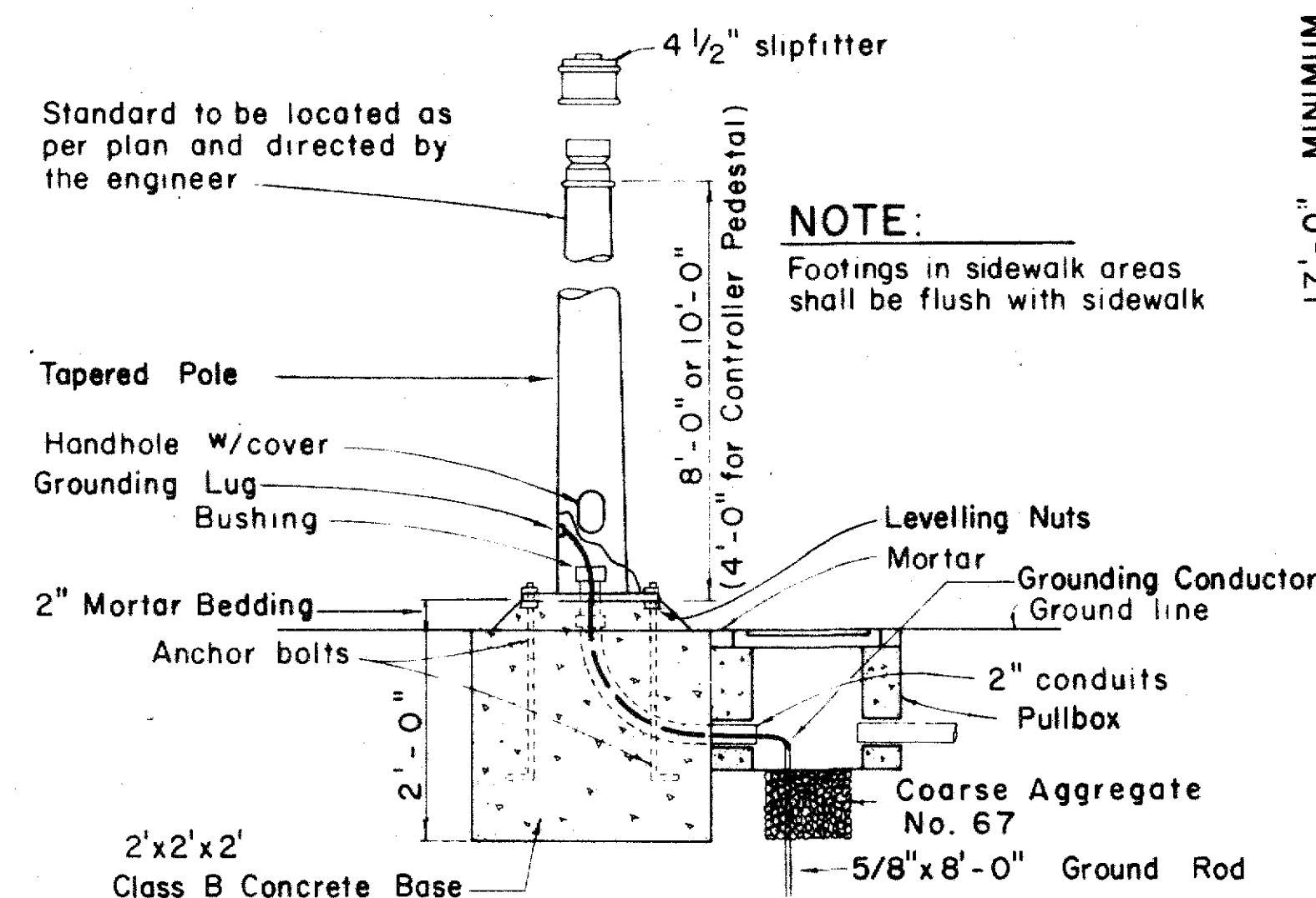
<u>SYMBOL</u> (Hand)	<u>SYMBOL</u> (Man)
Portland Orange	Lunar White *
<u>BACKGROUND</u>	<u>BACKGROUND</u>
Opaque	Opaque

* - Section

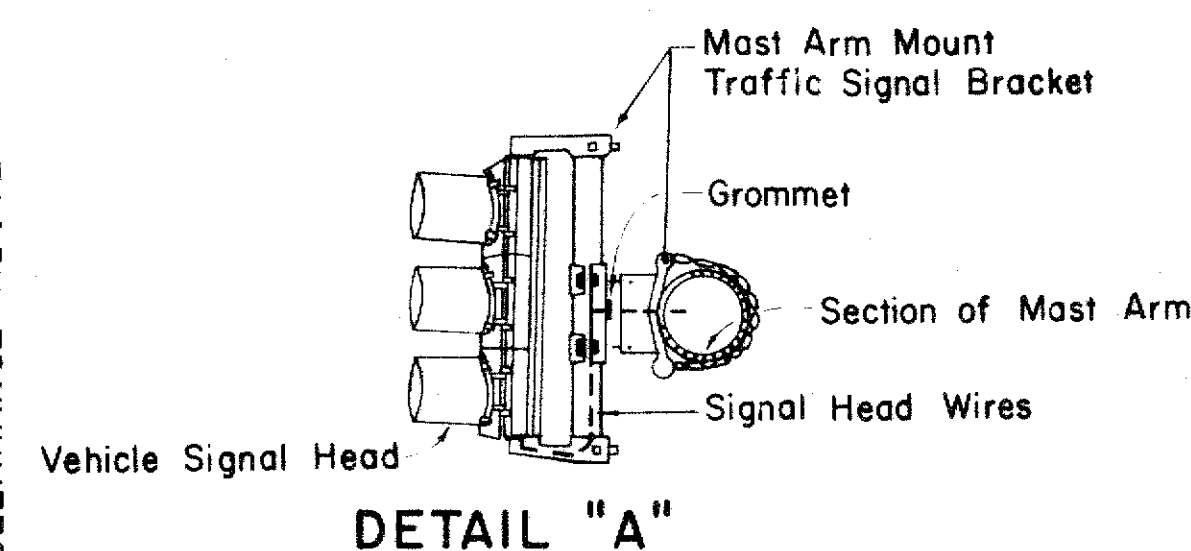
APPROVAL RECOMMENDED
Euchi Tana
TRAFFIC ENGINEER

12/29/69
DATE

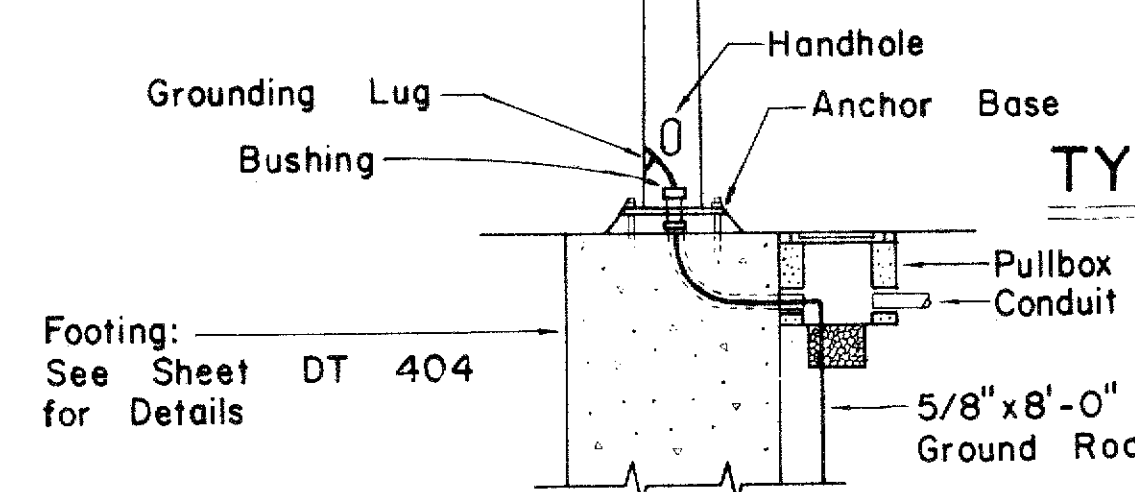
Shulm 222222
ASSISTANT CHIEF ENGINEERING



TYPE I SIGNAL STANDARD
OR CONTROLLER PEDESTAL
AND FOOTING



TYPE II MAST ARM AND STANDARD



TYPICAL SIGNAL ARRANGEMENTS

NO	REVISION	APPROVED BY	DATE
1	Revise code nos. for Pedestrian Push Button signs.	H.T.	3/12
2	Revise Details of Traffic and Pedestrian Signals, Standards and Pedestrian Push Button and Signs.	H.T.	3/5
3	Revise signal indications.	H.T.	1/22
4	Remove Note No. 3 & Revise clearance and dimension.	H.T.	9/19
5	Revise Ped. Signal indication	H.T.	8/6

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

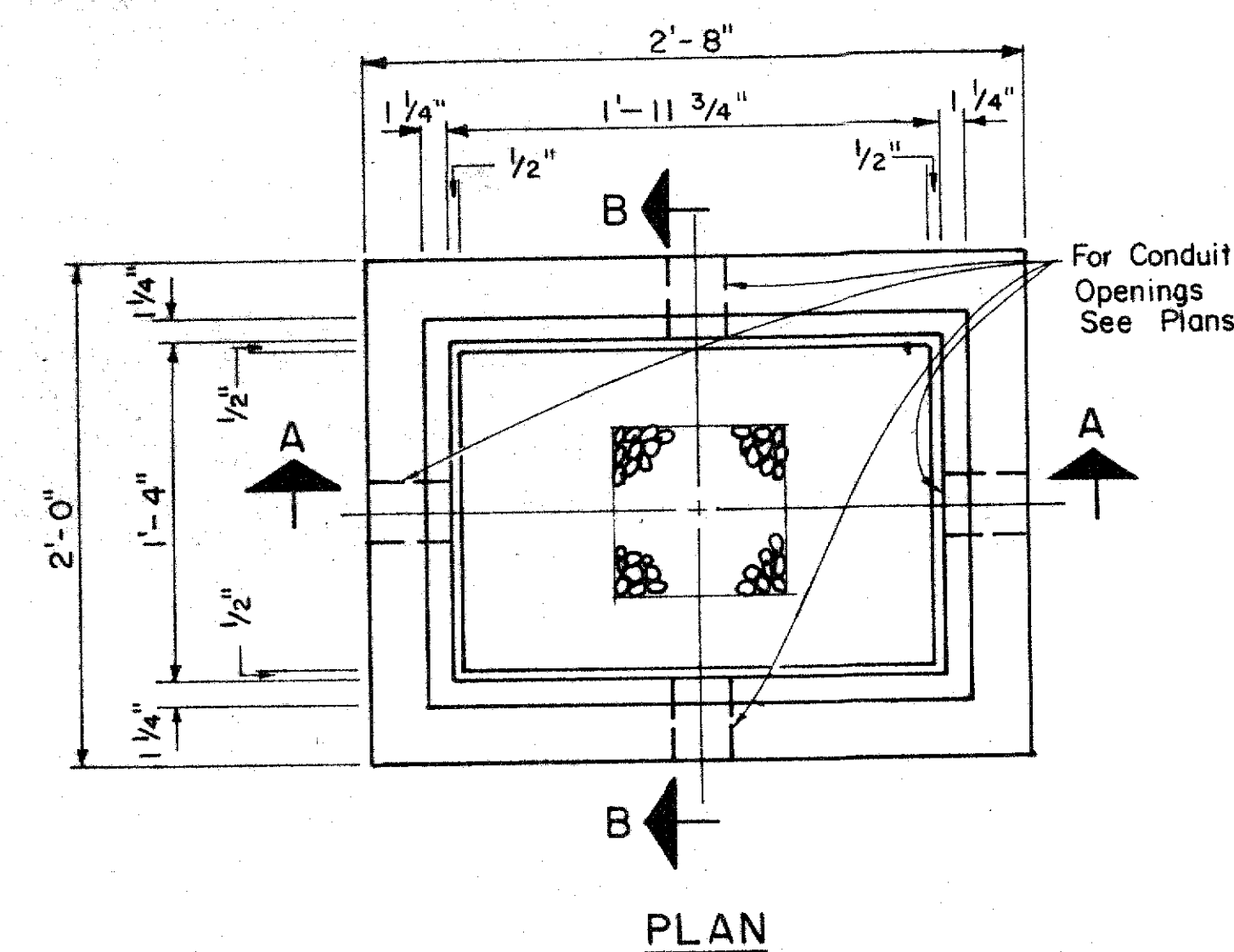
TRAFFIC SIGNAL SYSTEM

MISCELLANEOUS DETAILS

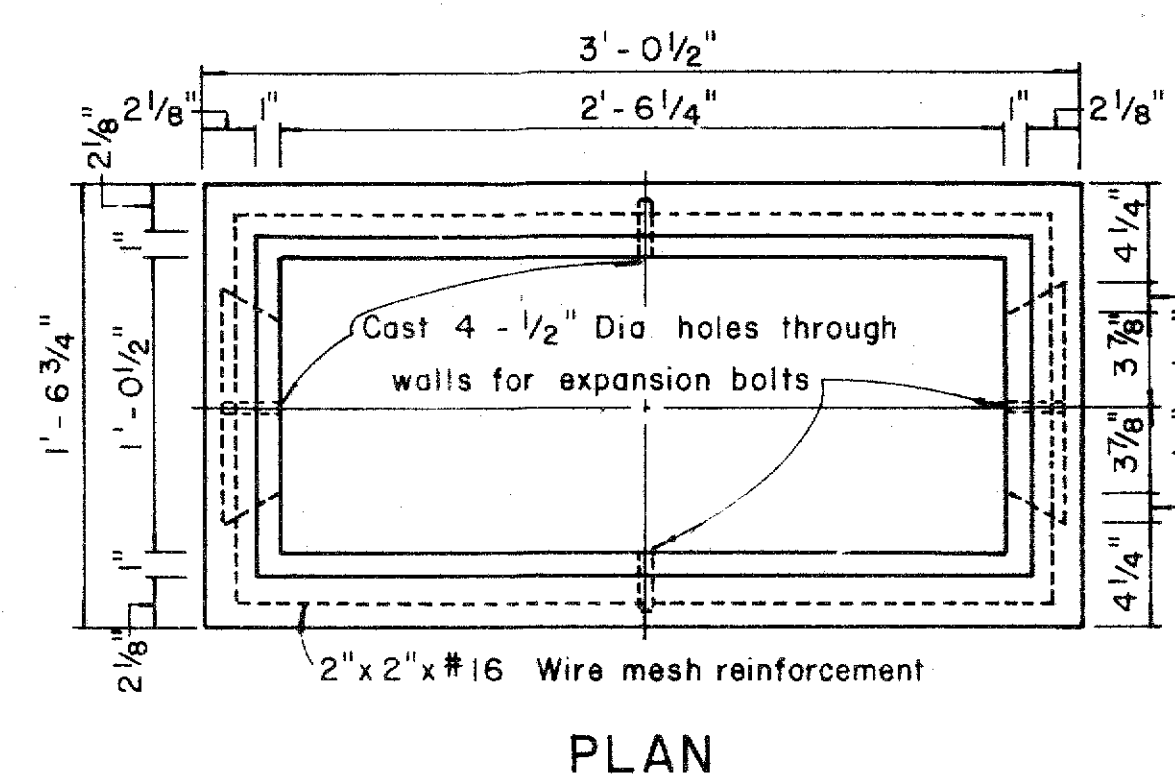
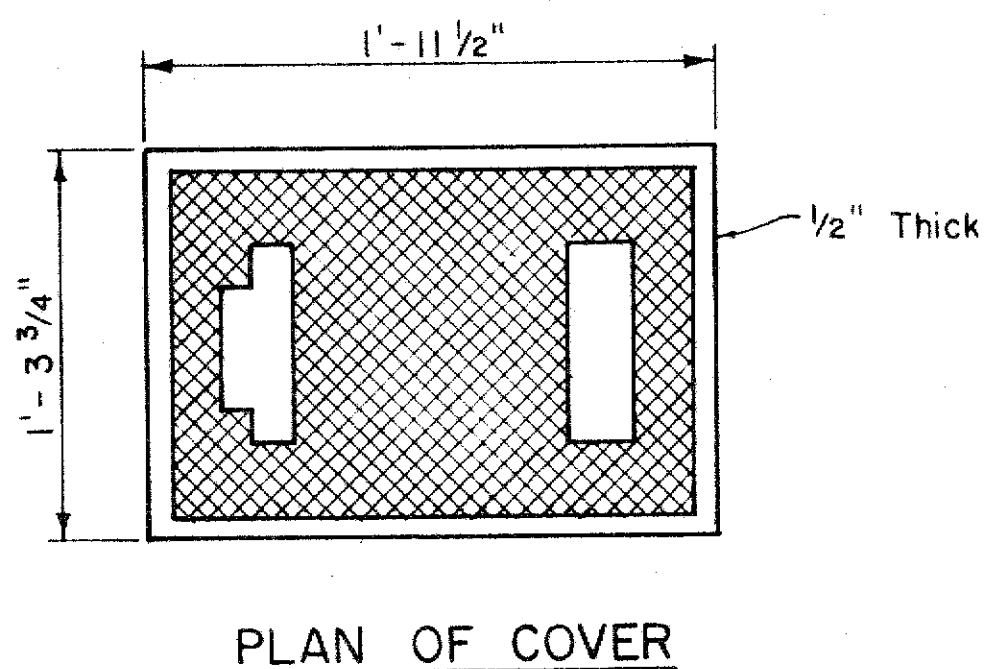
Not to Scale

SHEET No. 14 OF 20 SHEETS DT 400

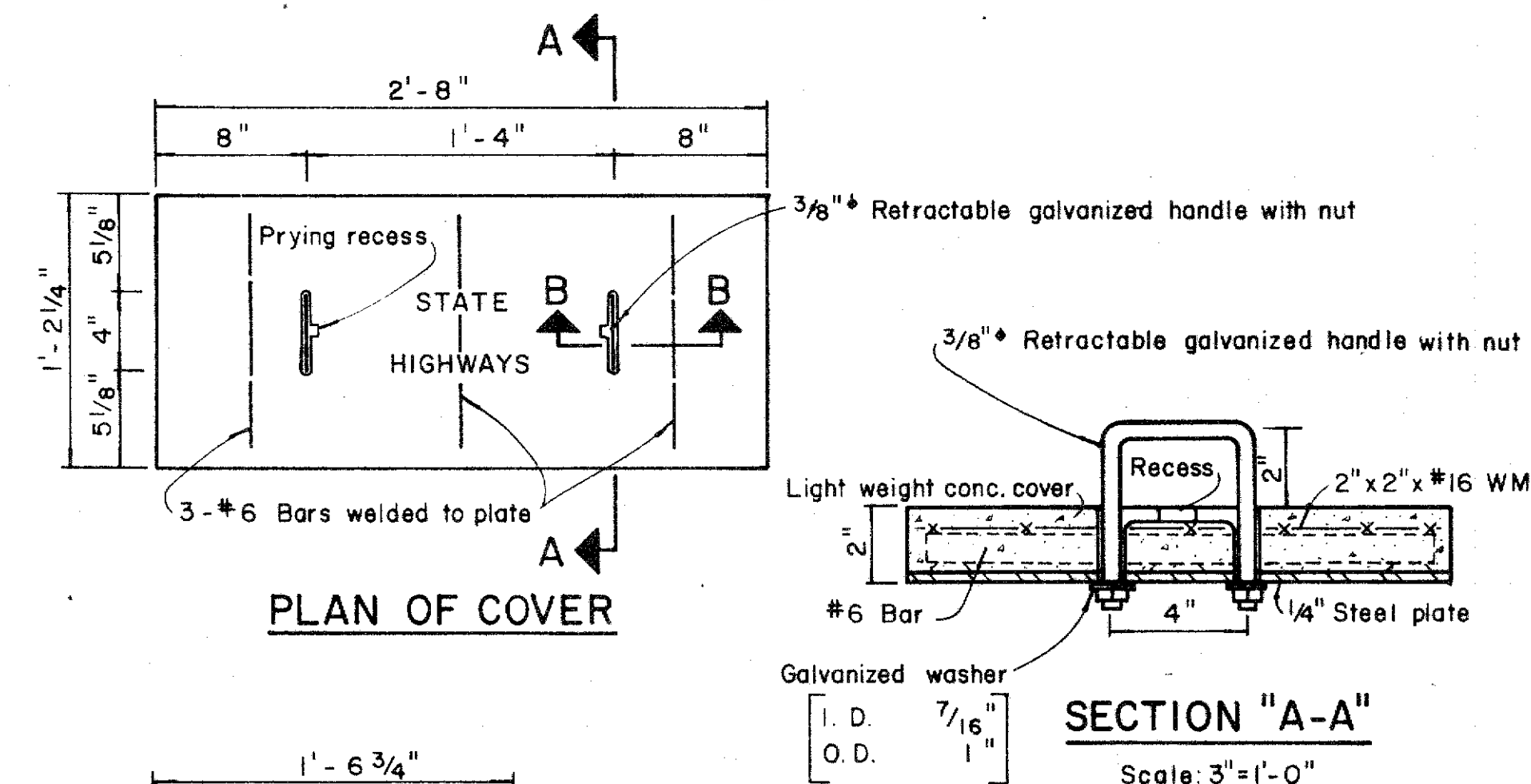
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	200-11-83	1983	15	20



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

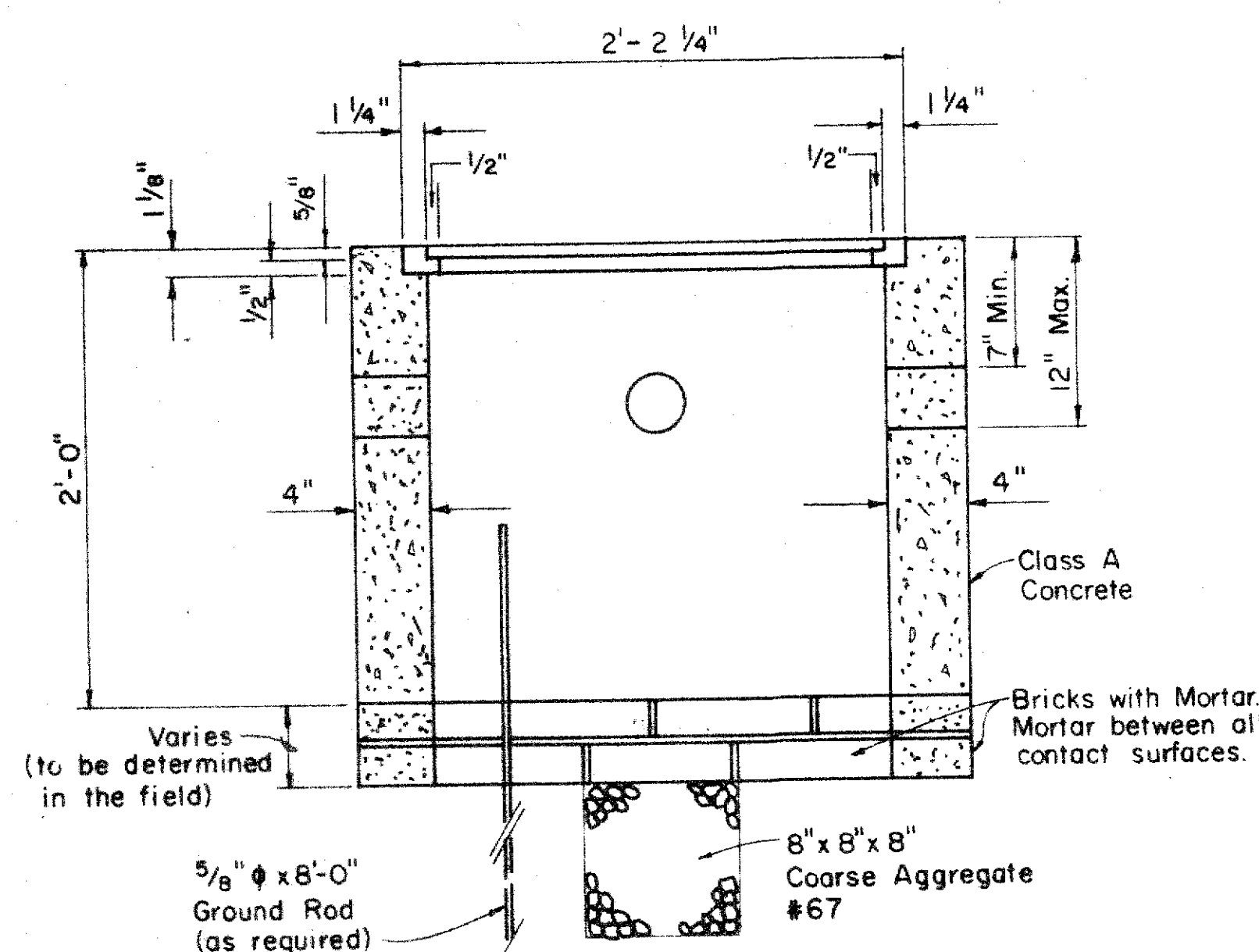


PLAN

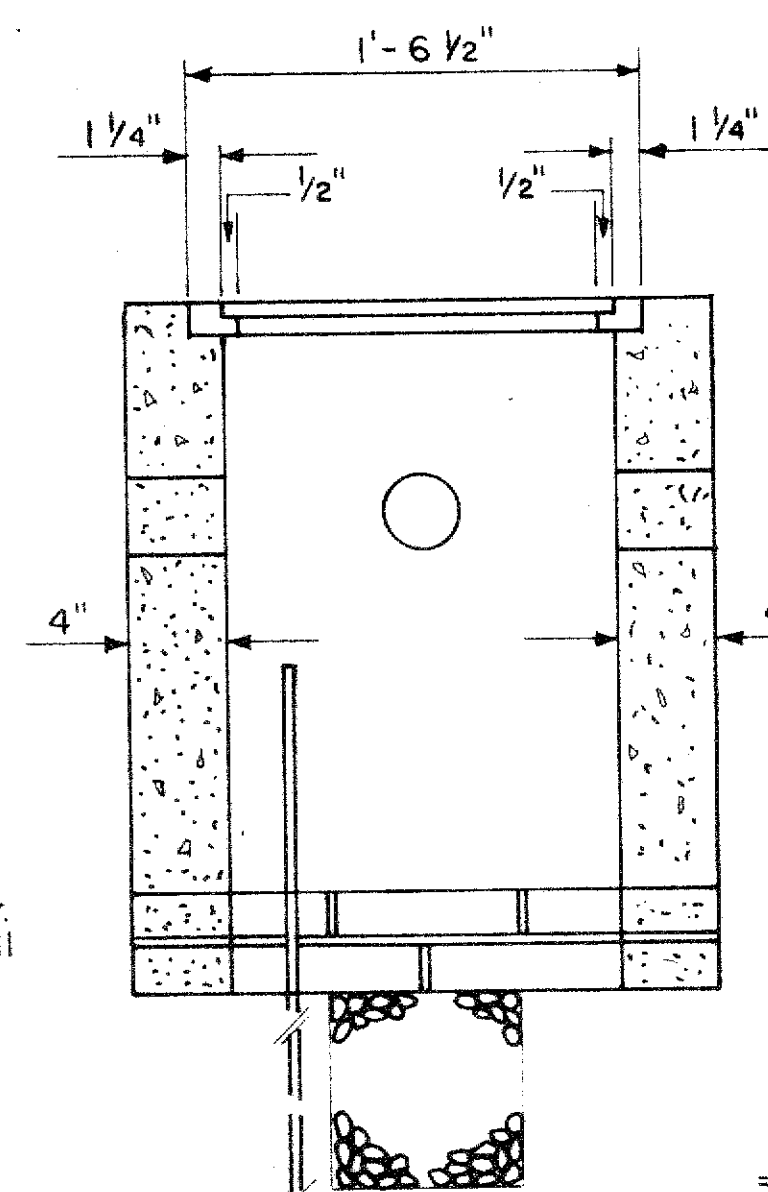


SECTION "A-A"

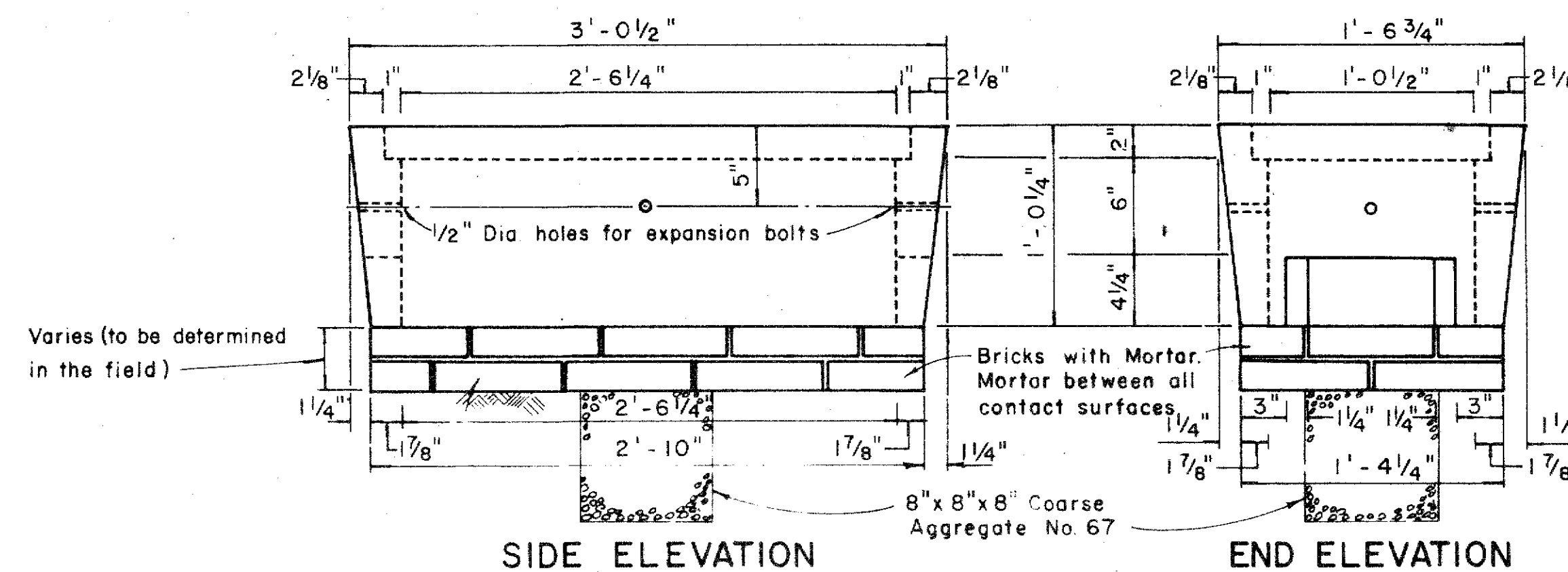
Scg|e: $3'' = (1 - 0)$



SECTION A-A



SECTION B-B

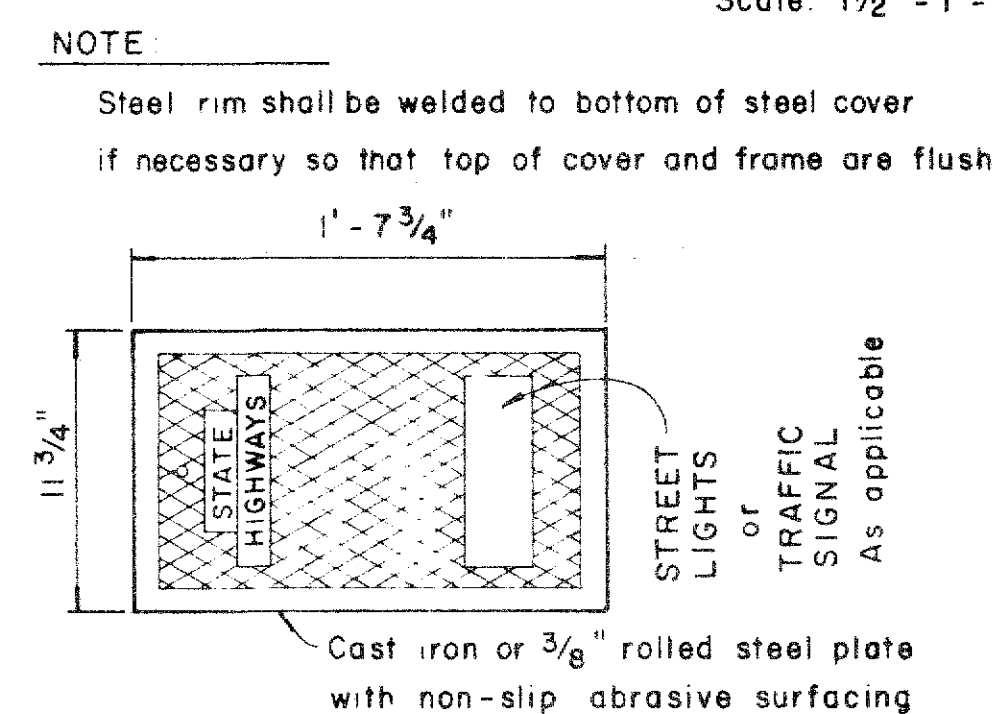


SIDE ELEVATION

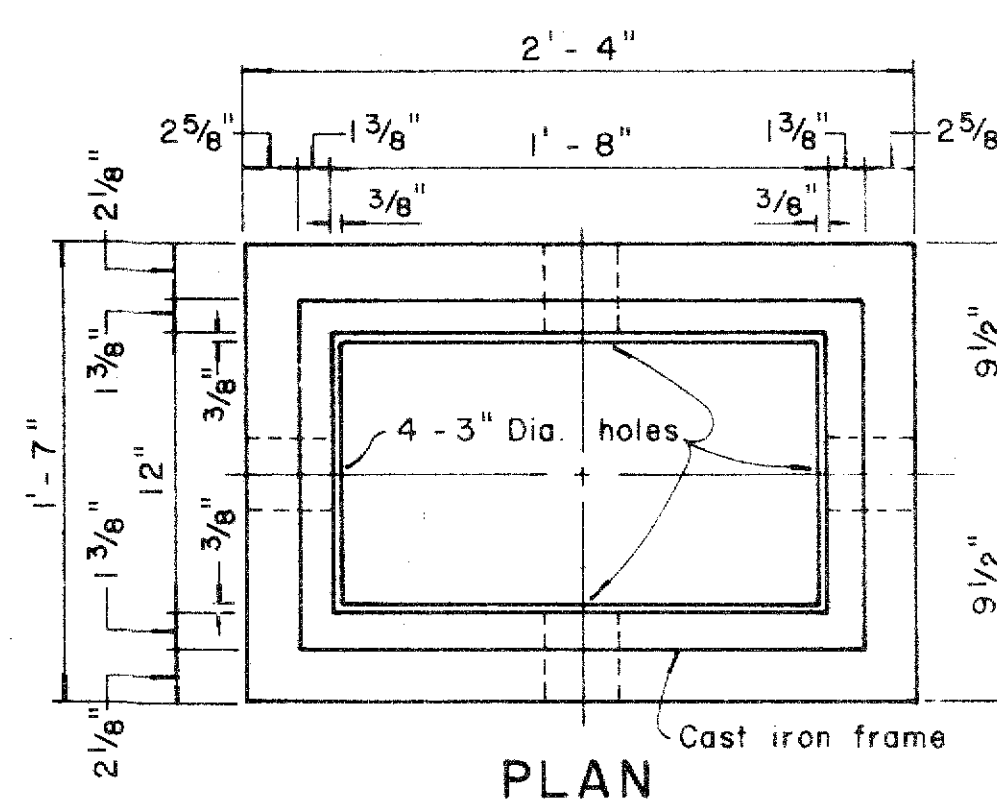
END ELEVATION

TYPE "C" PULLBOX

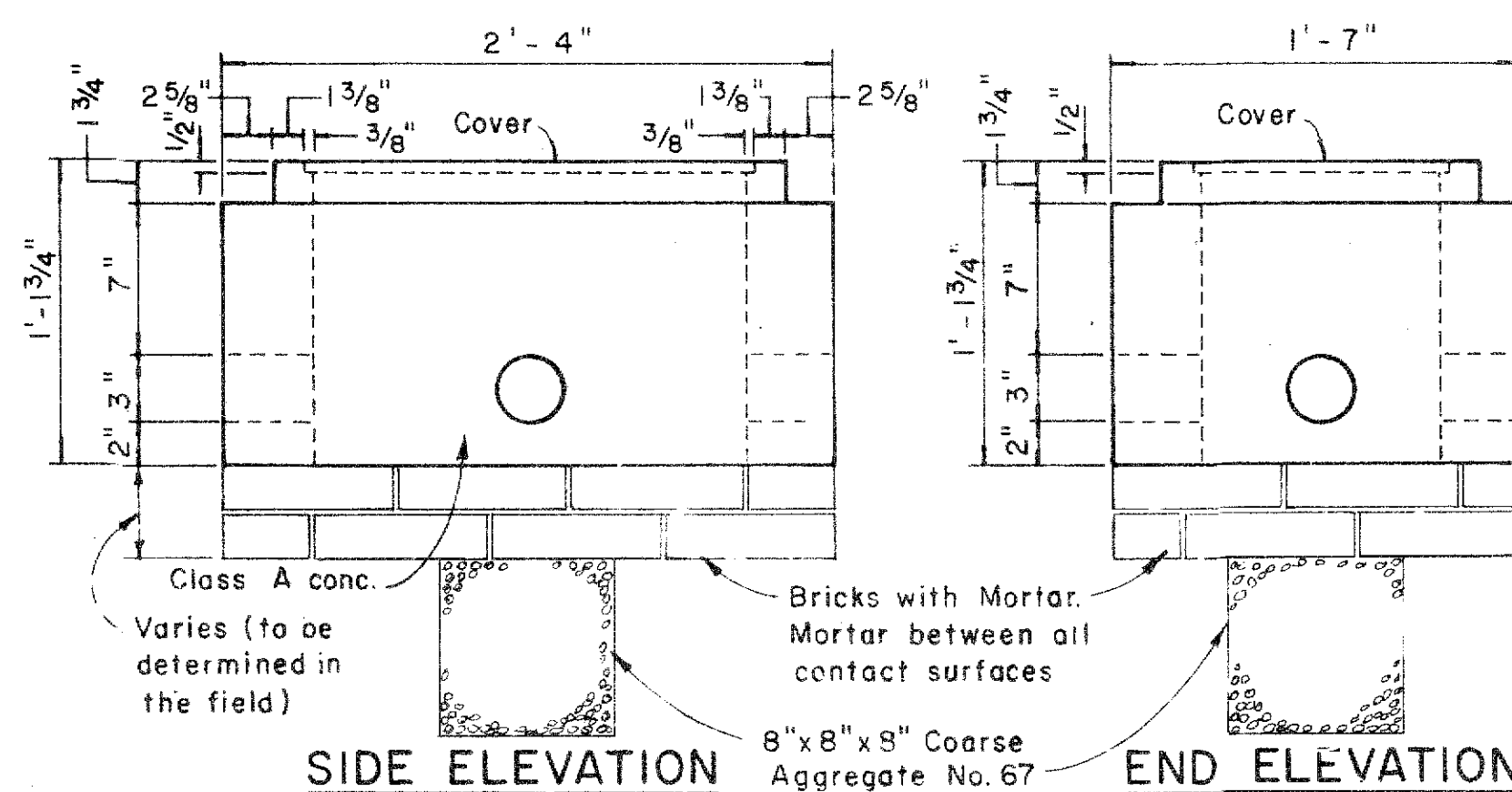
Scale: $1\frac{1}{2}'' = 1' - 0''$



PLAN OF COVER



PLAN

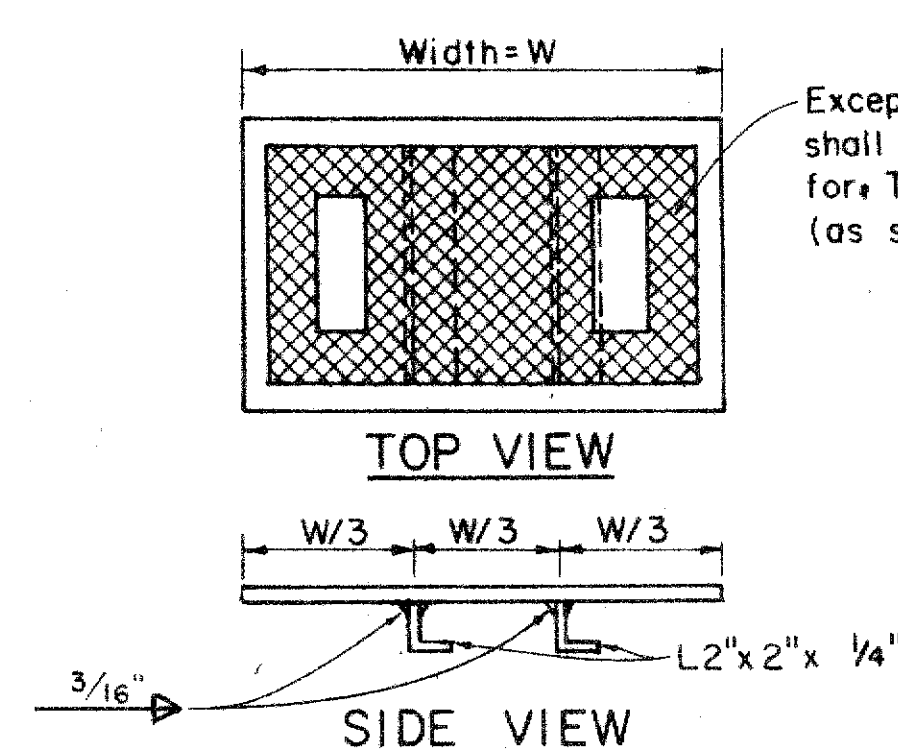


10-20-2020
SIDE ELEVATION

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.F.	3-5-
2	Revised Type "A" Pullbox & Added Modified Cover.	H.F.	1-31-

APPROVAL RECOMMENDED: *Edward J. [Signature]* 12/29/69
TRAFFIC ENGINEER DATE

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

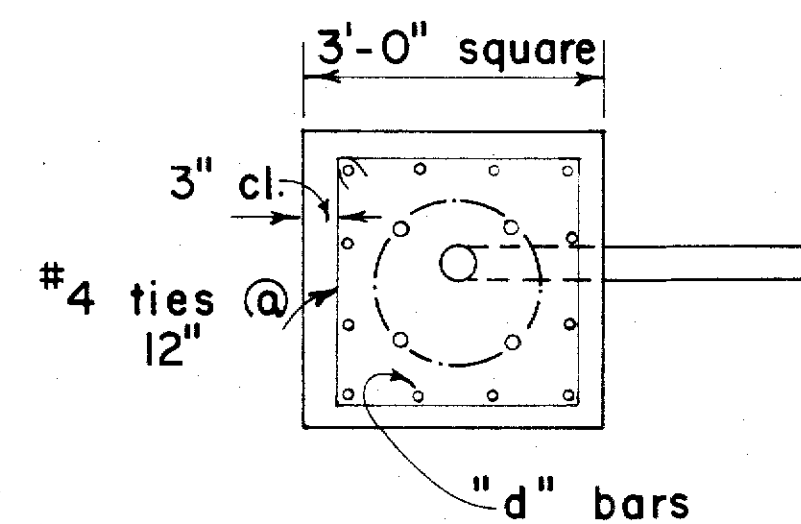
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

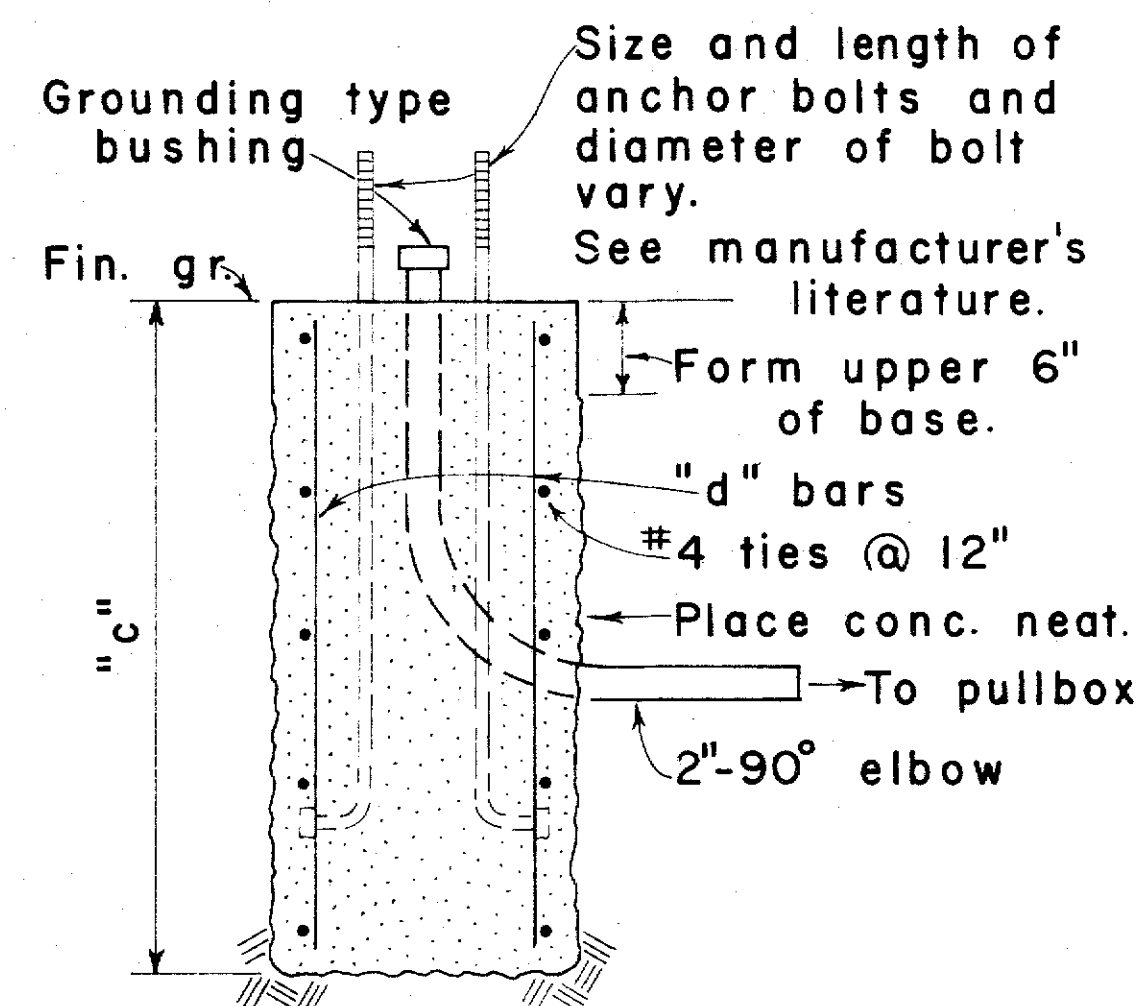
PULLBOXES

Scale as noted Date

SHEET No. 15 OF 20 SHEETS DT 40



PLAN - SECTION



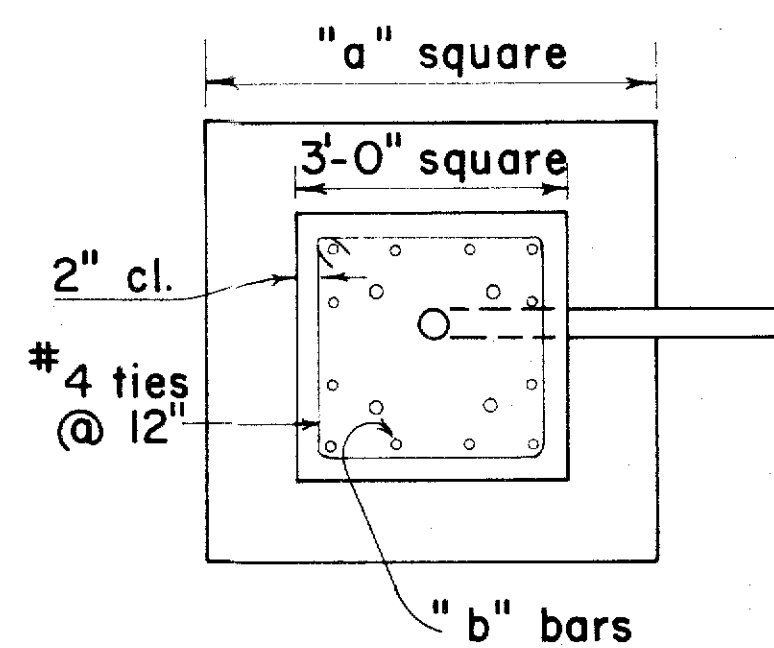
NOTE:

Concrete shall be Class B.

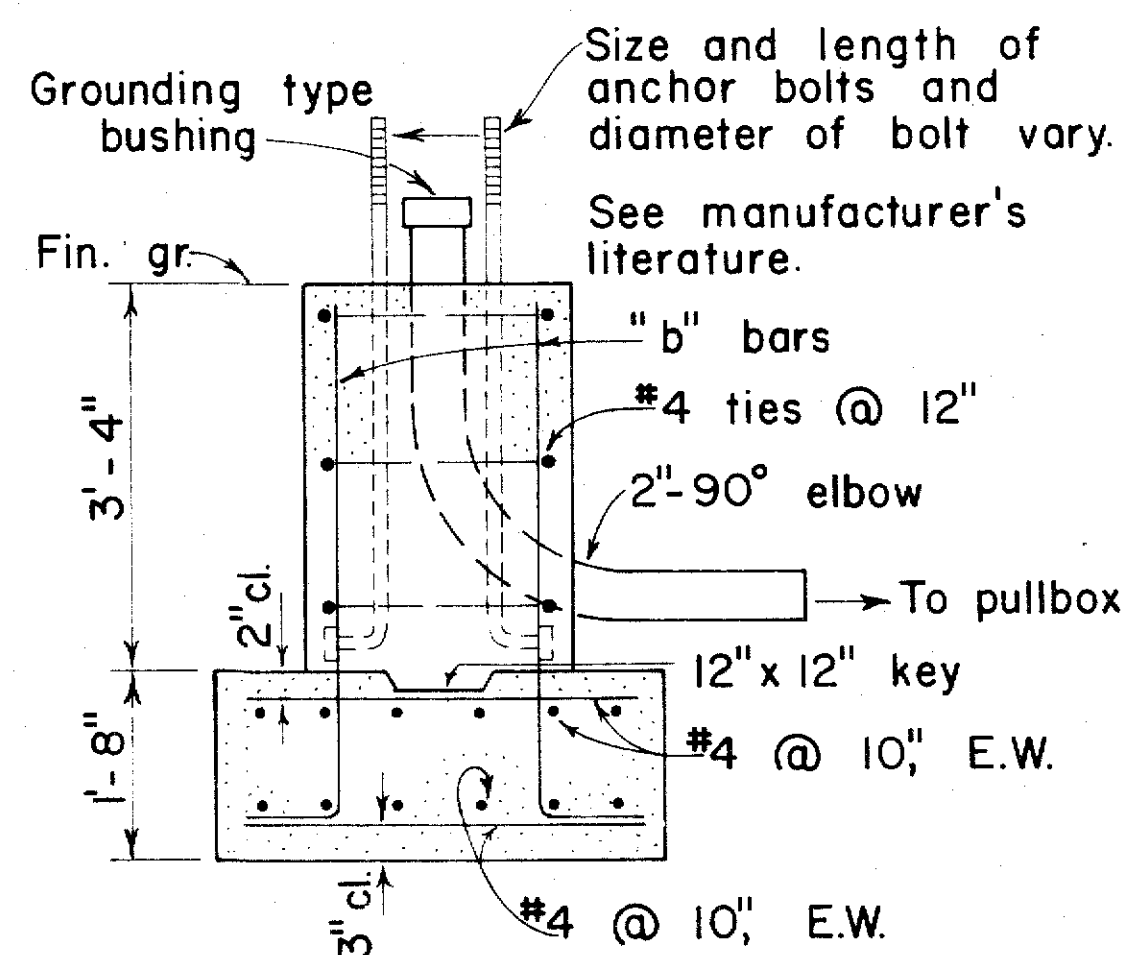
SECTION

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:

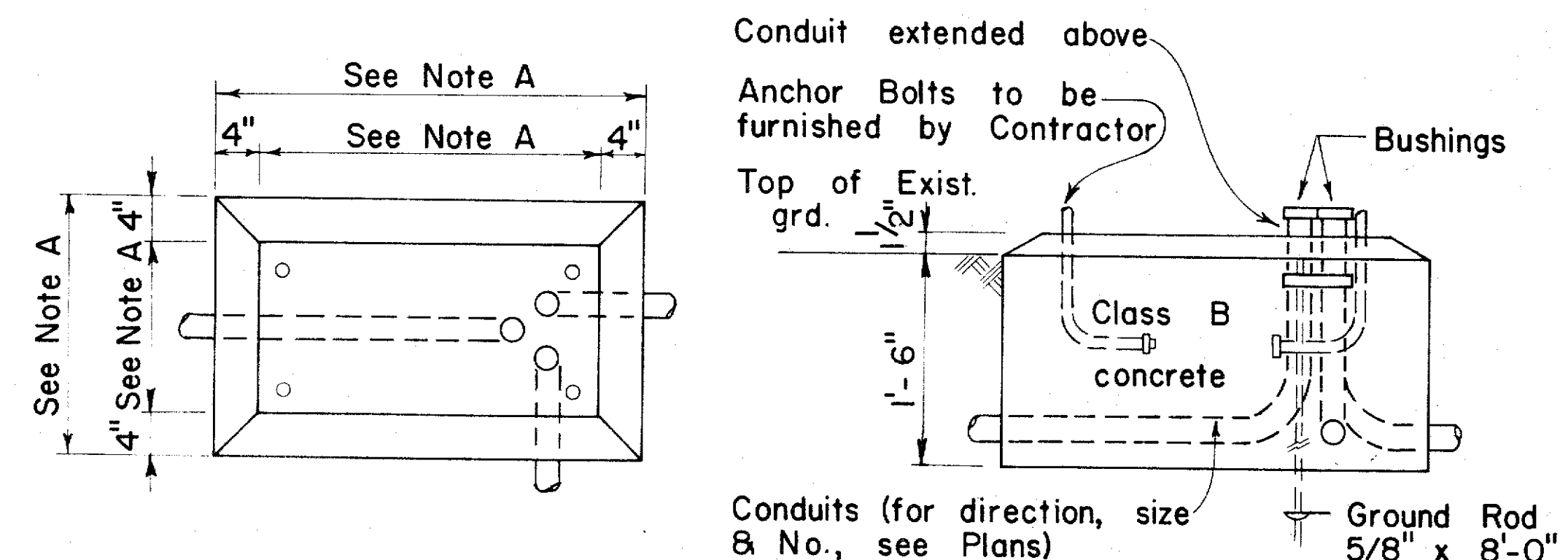
Concrete shall be Class B.

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

ELEVATION

CONCRETE BASE FOR CONTROLLER CABINET

NOTES:

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

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

NO.	REVISION	APPROVED BY	DATE

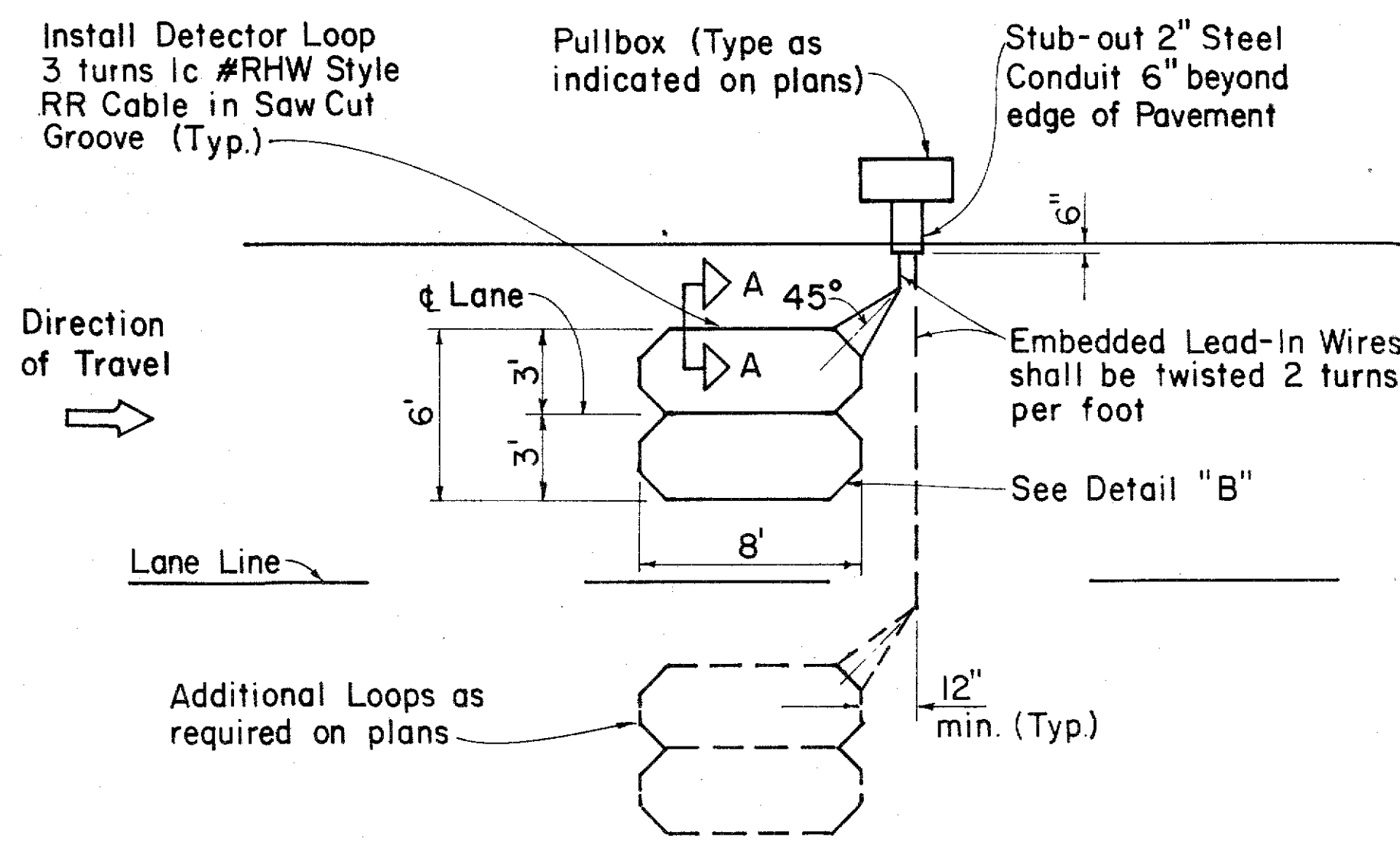
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS

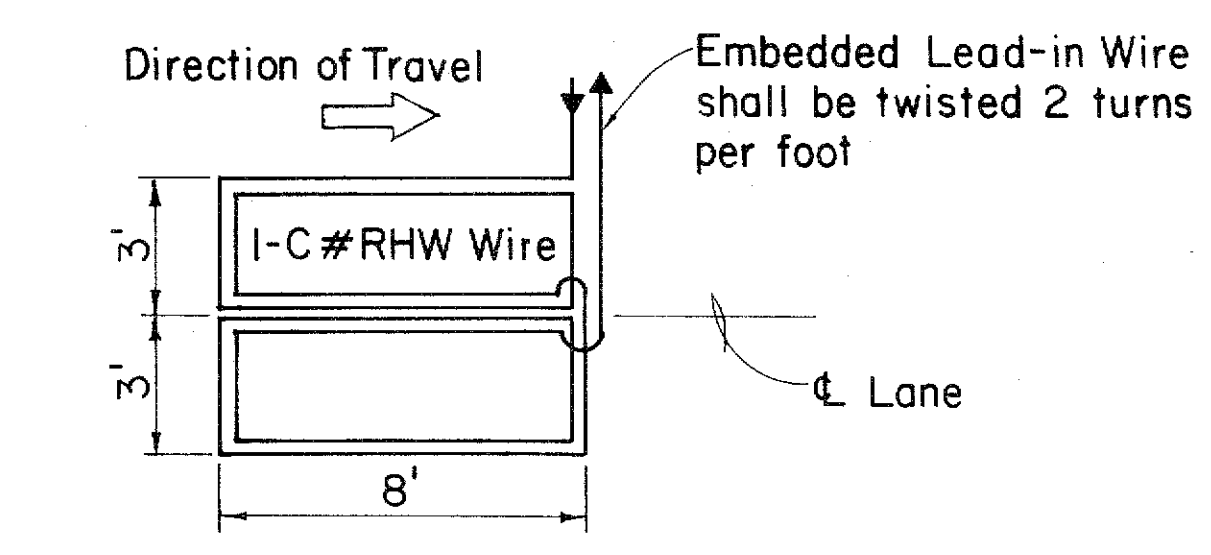
Not to Scale

SHEET No. 16 OF 20 SHEETS DT 404

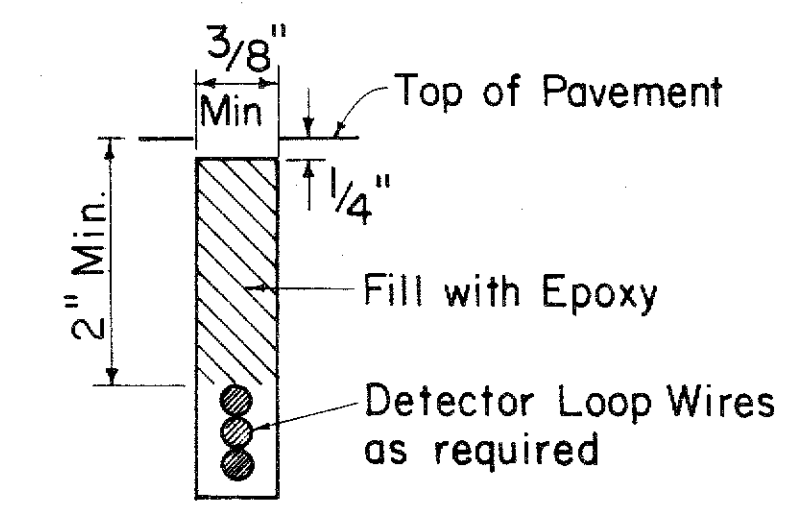
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	30041-83	1983	17	20



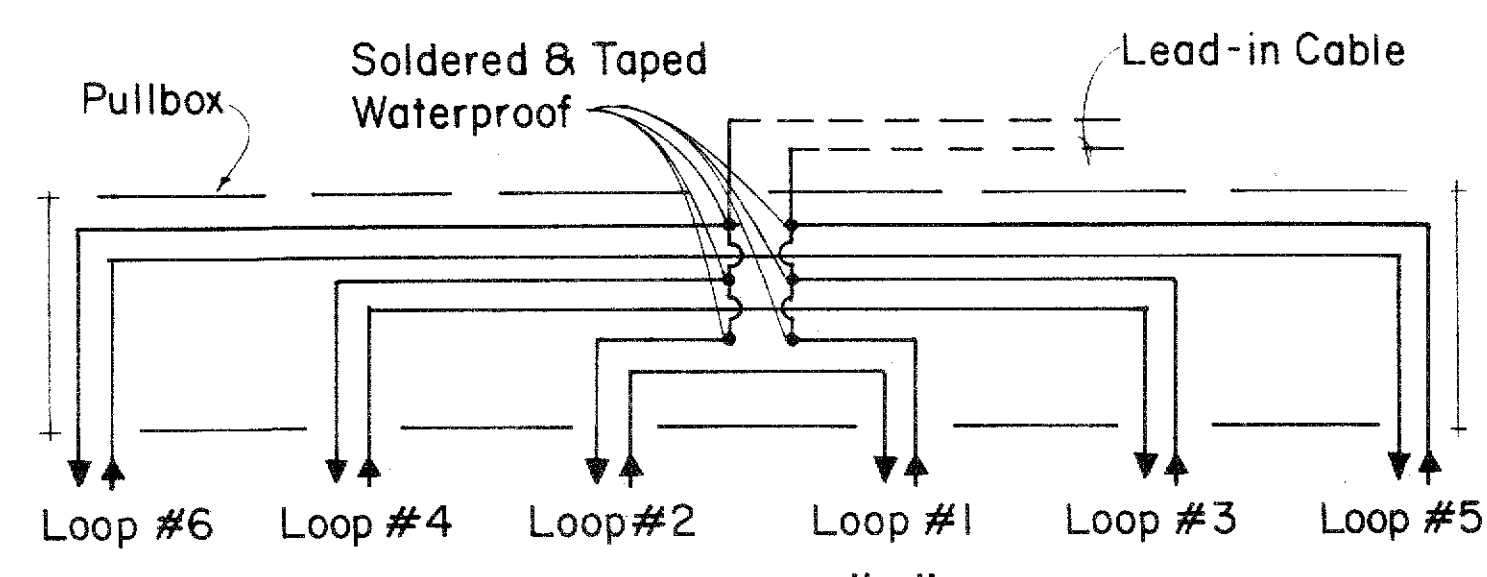
SINGLE LOOP LAYOUT



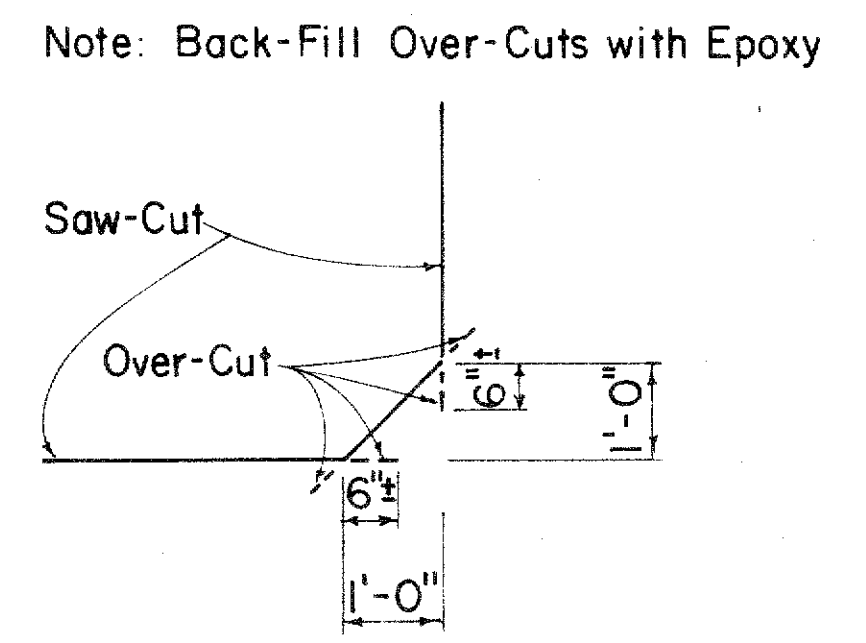
WIRING DIAGRAM



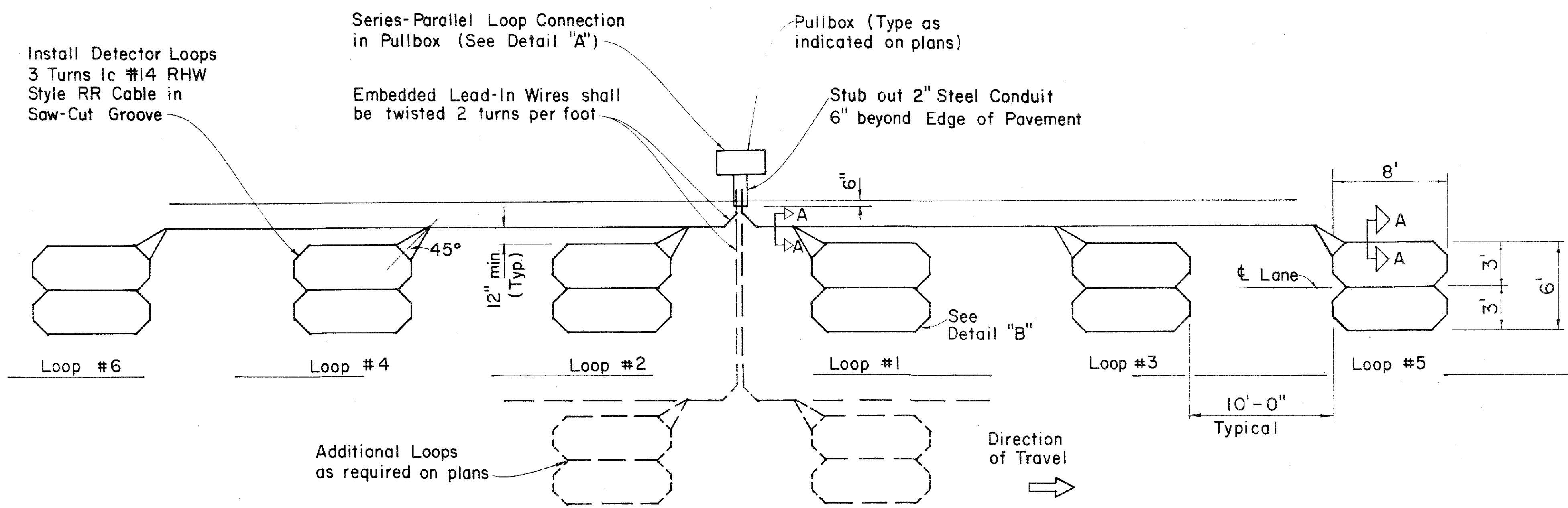
DETECTOR LOOP SAW-CUT SECTION A-A (TYPICAL)



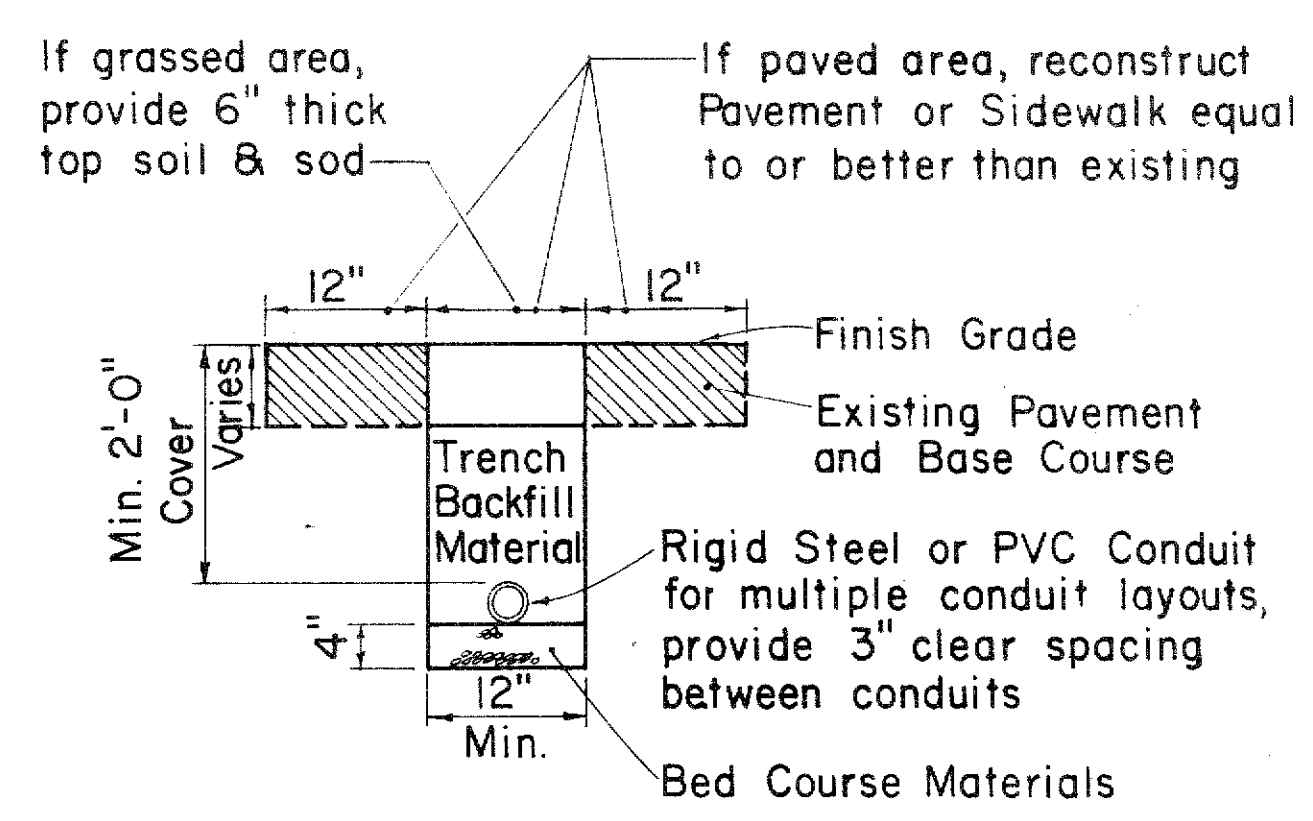
TYPICAL SERIES-PARALLEL LOOP CONNECTION



DETAIL "B" SAW-CUT AT CORNERS



MULTIPLE LOOP LAYOUT



TYPICAL TRENCH SECTION FOR CONDUIT

NOTE:
1. 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:
John J. Fickel 1/8/81
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Replaces Sht. DT 405 dated 3/5/76	H.T.	7/30/80
2	Revised Section A-A	H.T.	5/15/81

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
LOOP DETECTORS

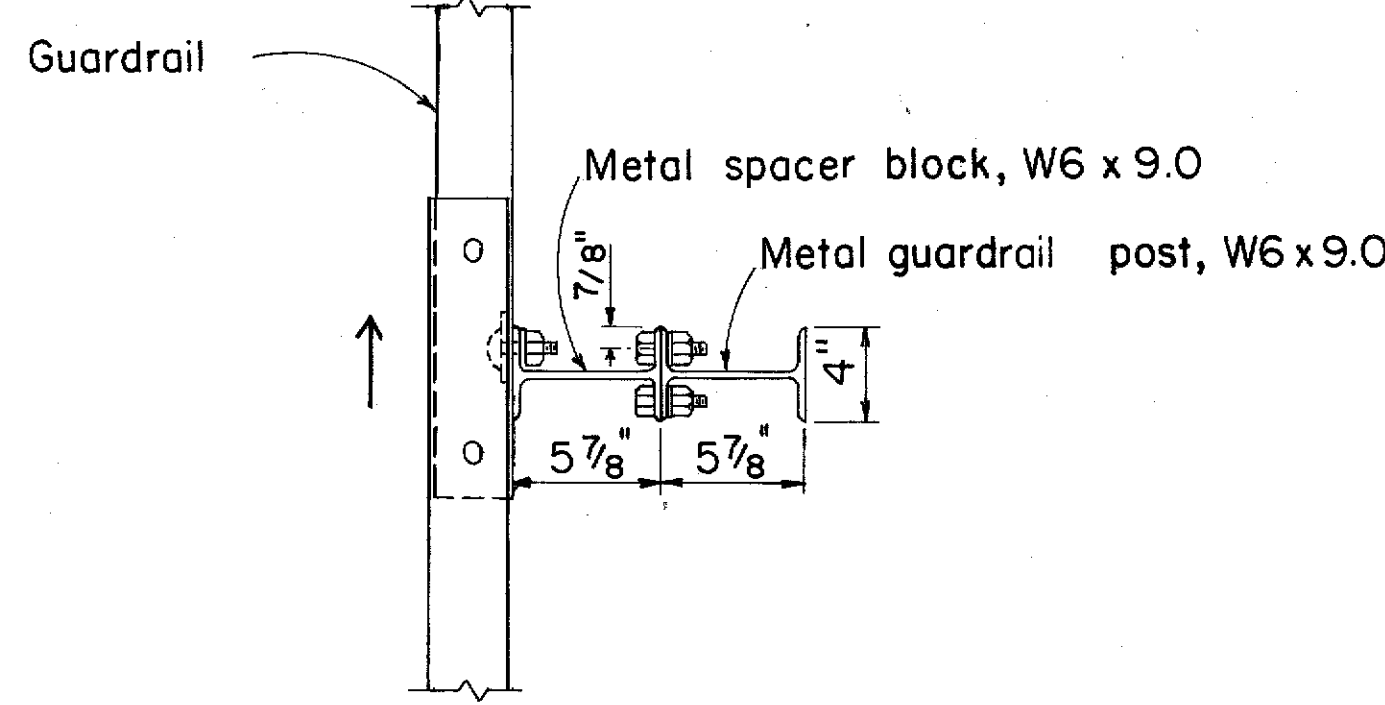
Not to Scale
SHEET NO. 17 OF 20 SHEETS DT 405

ORIGINAL PLAN
DATE
DRAWN BY
CHECKED BY
NOTE BOOK
No.

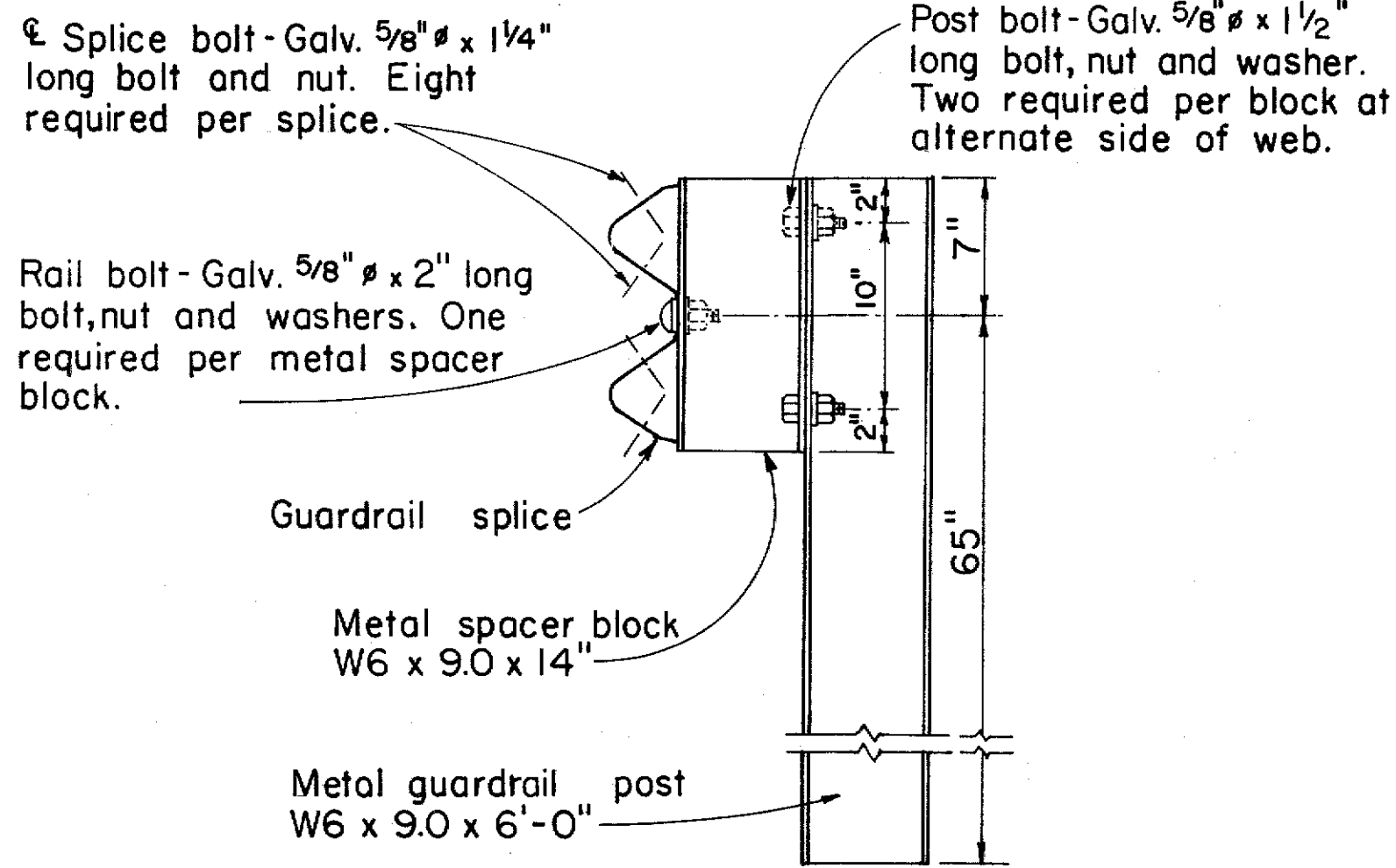
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	220-11-83	1983	18	20

GENERAL NOTES

- Both of the alternate type posts may be used on any one project however, only one type of post shall be used in any single run of guardrail.
- All hardware, posts and blocks shall be galvanized. No punching, drilling or cutting will be permitted after galvanizing.
- Connection details for bent plate post and block shall be similar to the details shown for structural shape post, and block.
- Where conditions require, special post lengths in increments of 6 inches may be specified.
- For details of rail elements, bolts and nuts, see sheet DT 501.



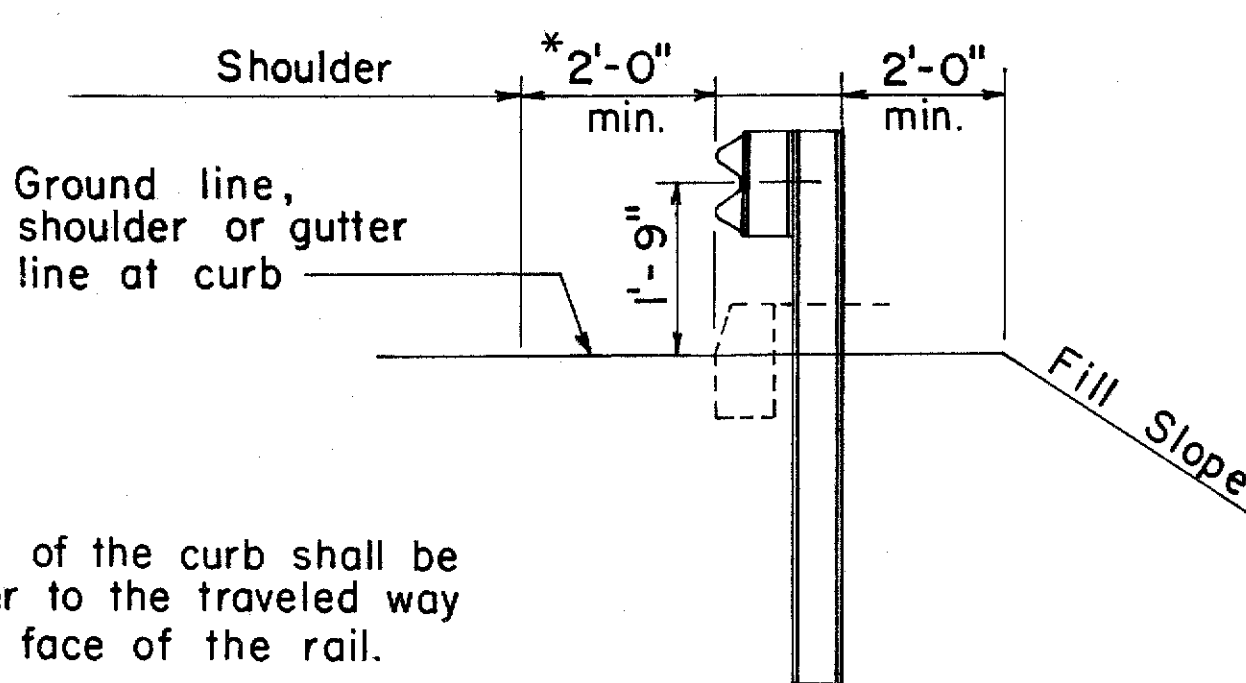
PLAN



ELEVATION

SINGLE METAL GUARDRAIL ON METAL POST WITH METAL SPACER BLOCK

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

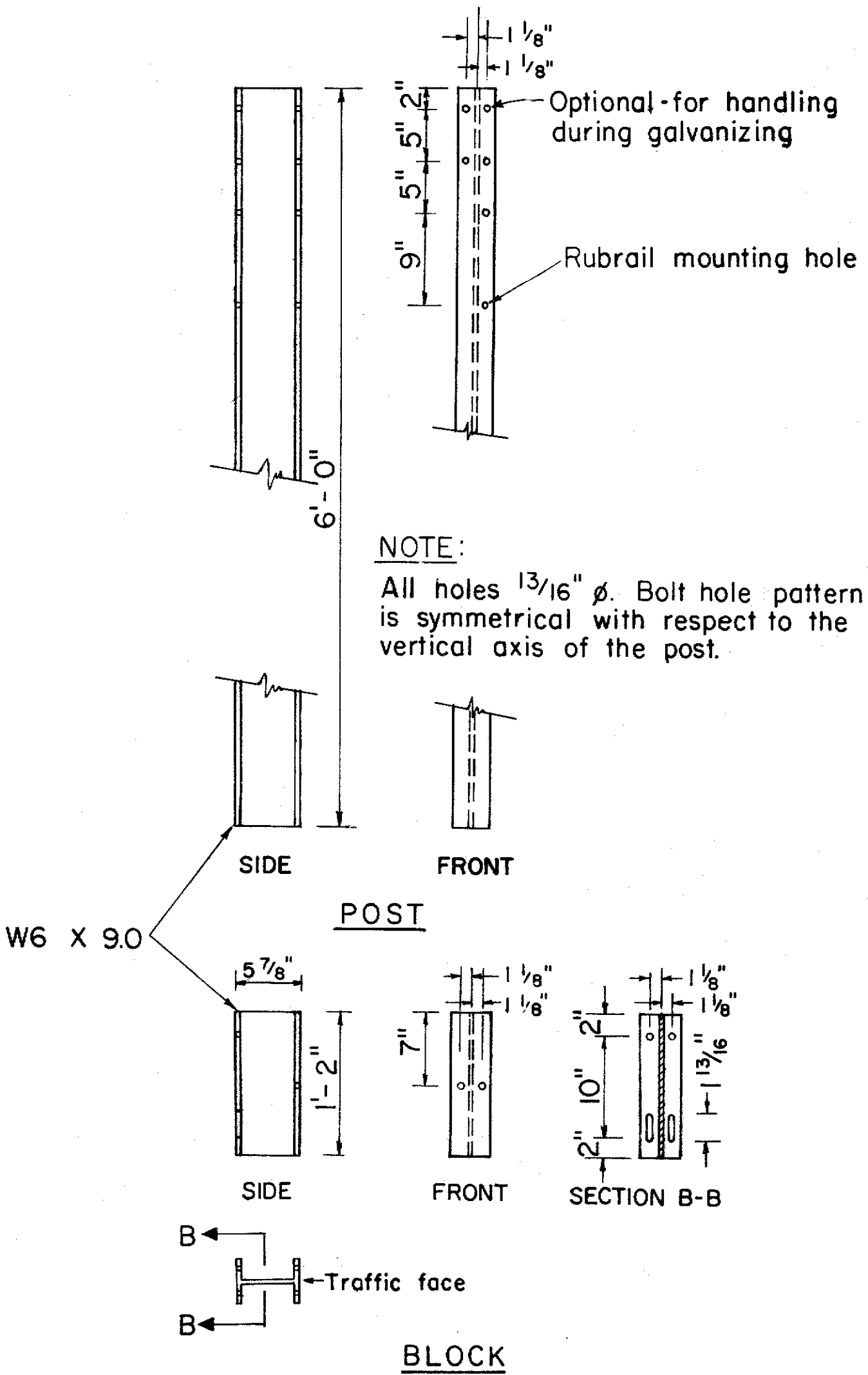


AT SHOULDER SECTION

TYPICAL METAL GUARDRAIL DETAIL

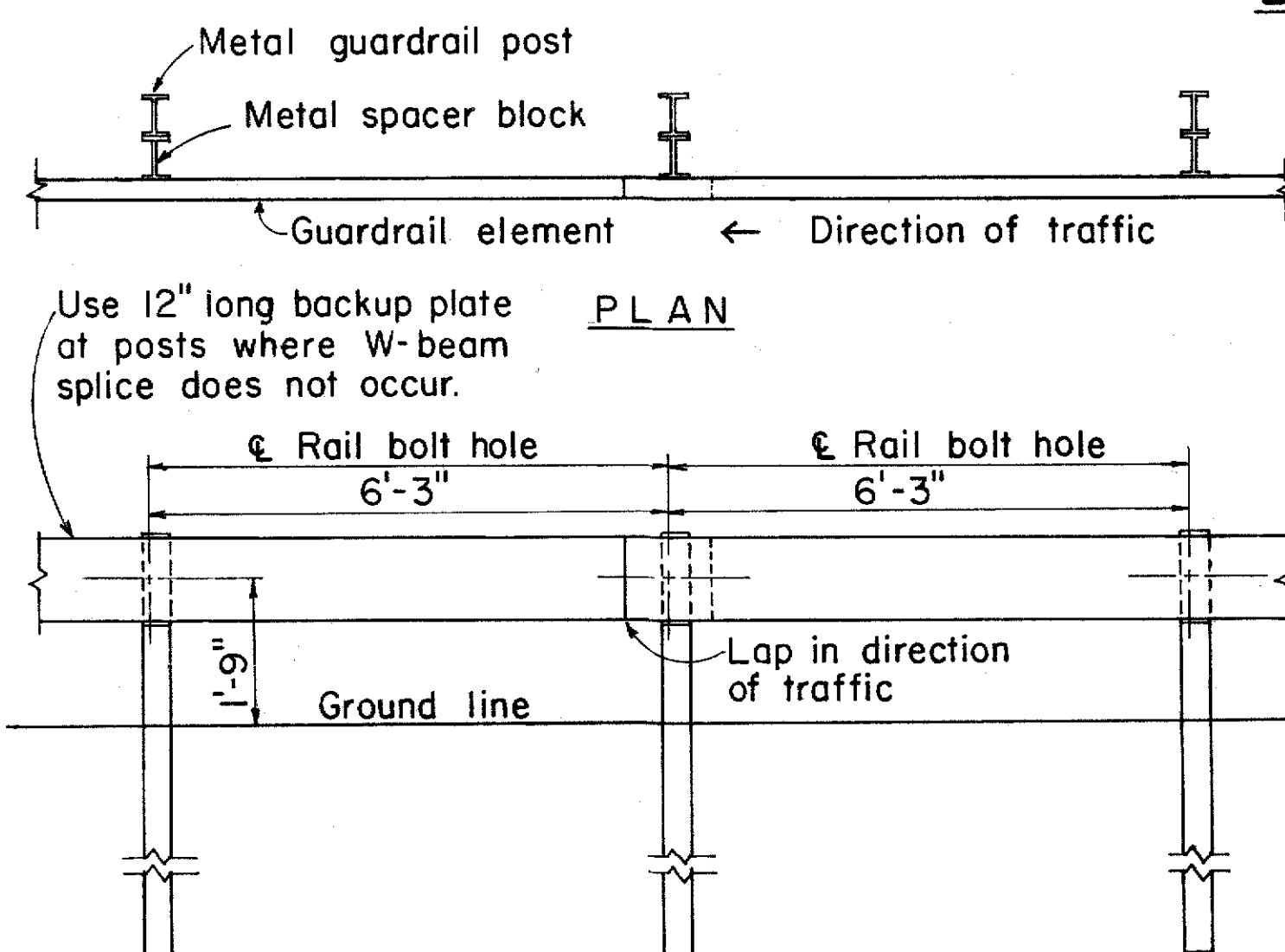
SCALE: 1/2" = 1'-0"

Note:
The face of the curb shall be no closer to the traveled way than the face of the rail.



STRUCTURAL SHAPE POST AND BLOCK

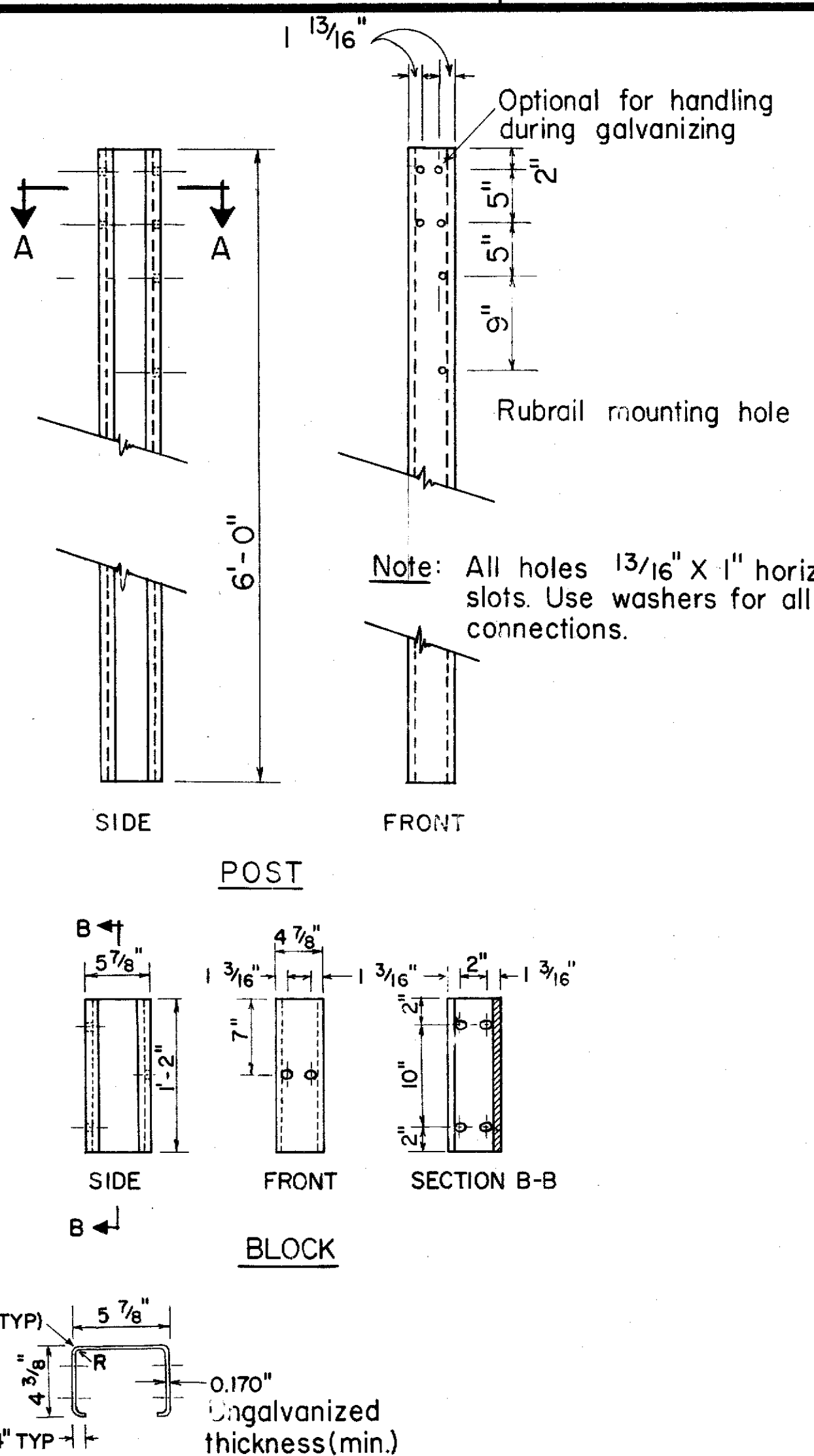
SCALE: 1" = 1'-0"



ELEVATION

METAL GUARDRAIL ON METAL POST WITH METAL SPACER BLOCK

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



BENT PLATE POST AND BLOCK

SCALE: 1" = 1'-0"

BENT PLATE POST AND BLOCK

SCALE: 1" = 1'-0"

NO.	REVISION	APPROVED BY	DATE
1	Supersedes sht. DT 500 approved 12/30/69.	H.F.	9/22/82

APPROVAL RECOMMENDED:
Evelyn Tanaka 9/1/82
TRAFFIC ENGINEER DATE

APPROVED:
Robert Salschi 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

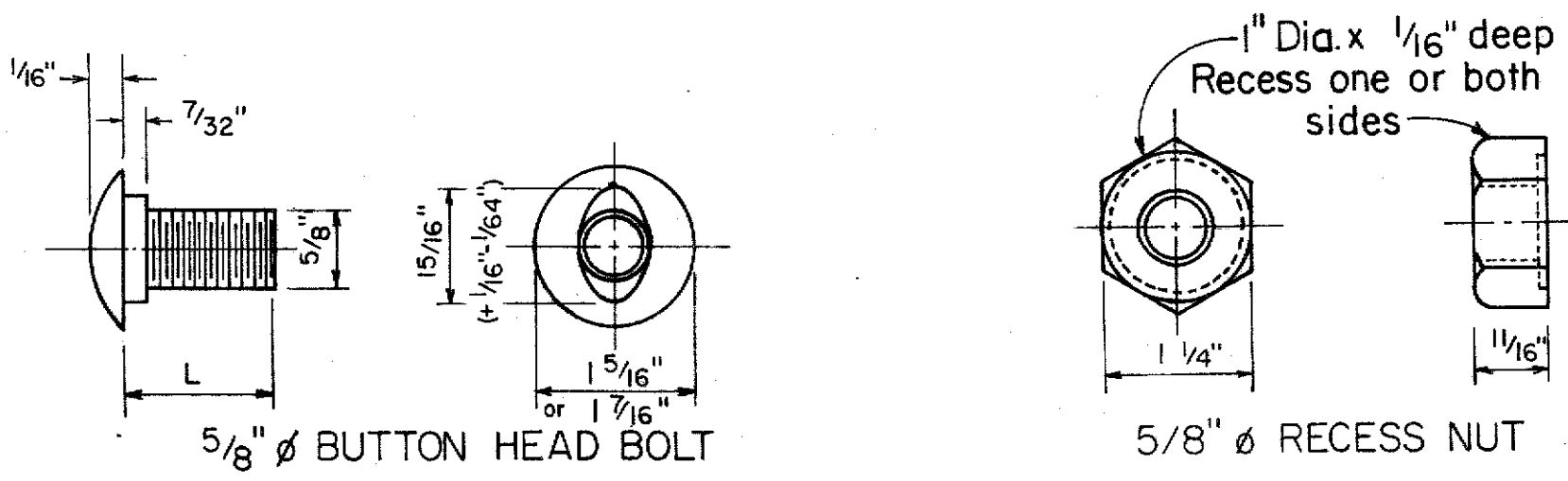
STANDARD DETAILS
METAL GUARDRAIL

Scale: As Shown
July, 1982

SHEET NO. 18 OF 20 SHEETS DT 500

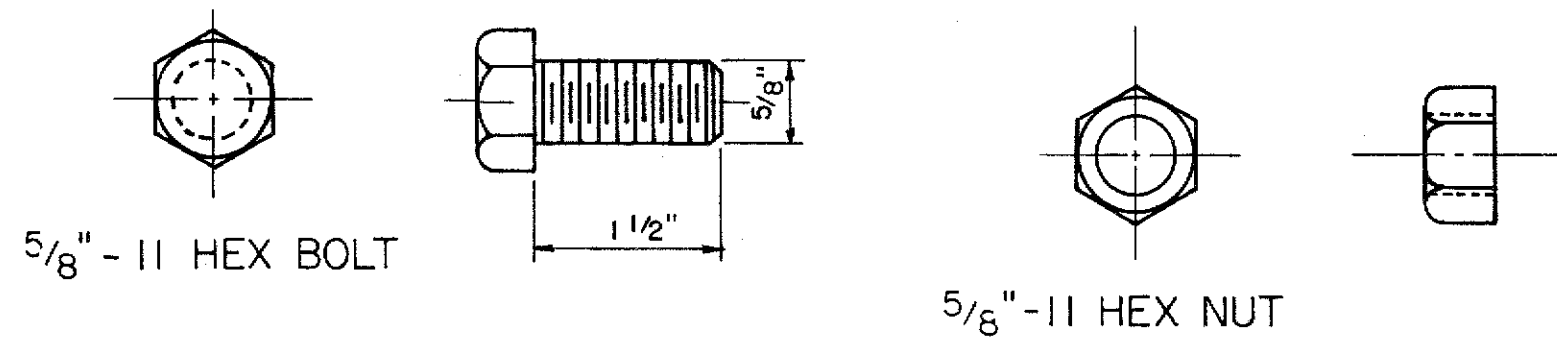
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	29C-11-83	1983	19	20

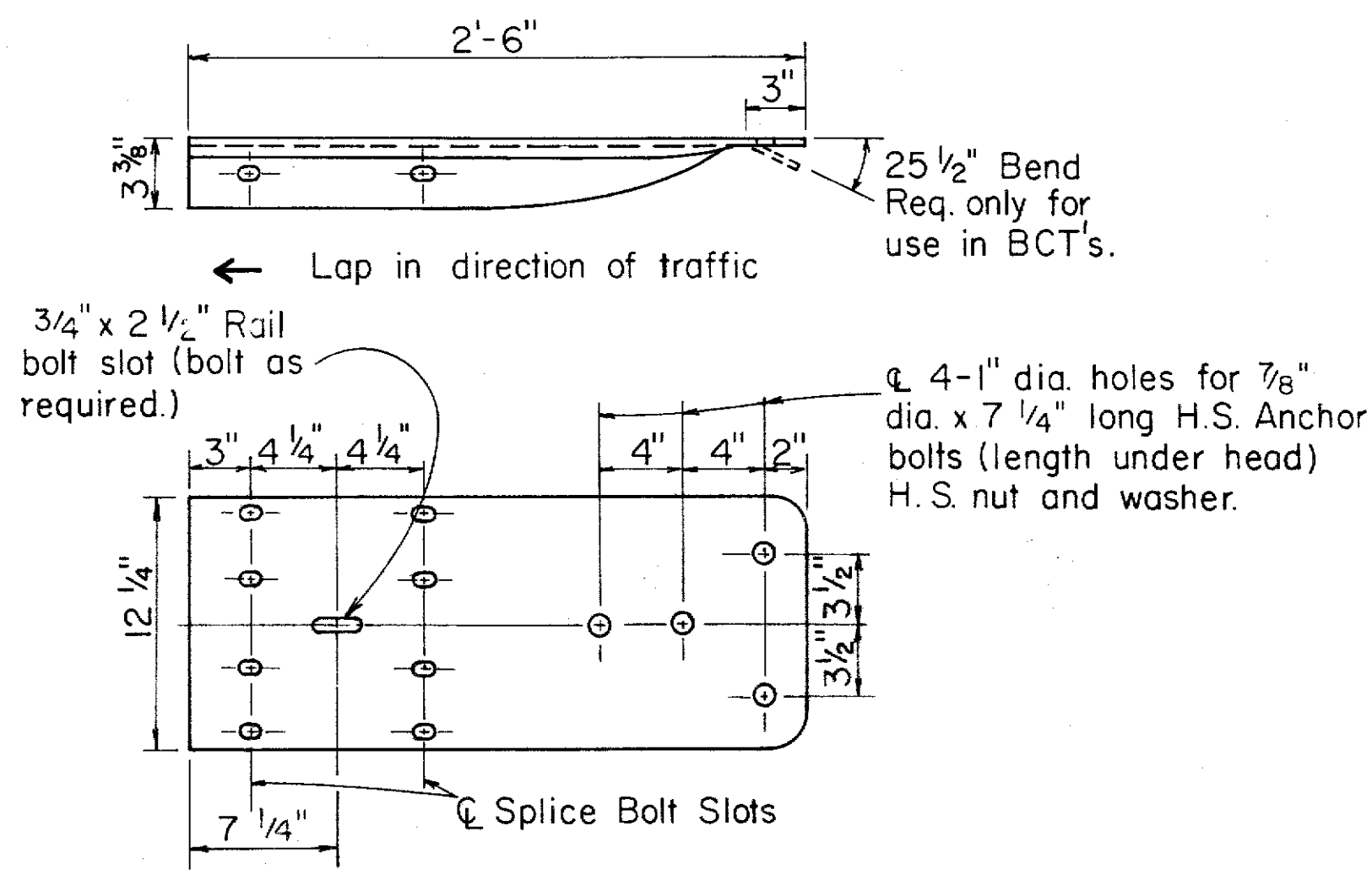


L	Thread Length	Intended Use
1 1/4"	Full length thread	Splice rail elements
2"	1 1/2" min. thread len.	Fasten rails to posts

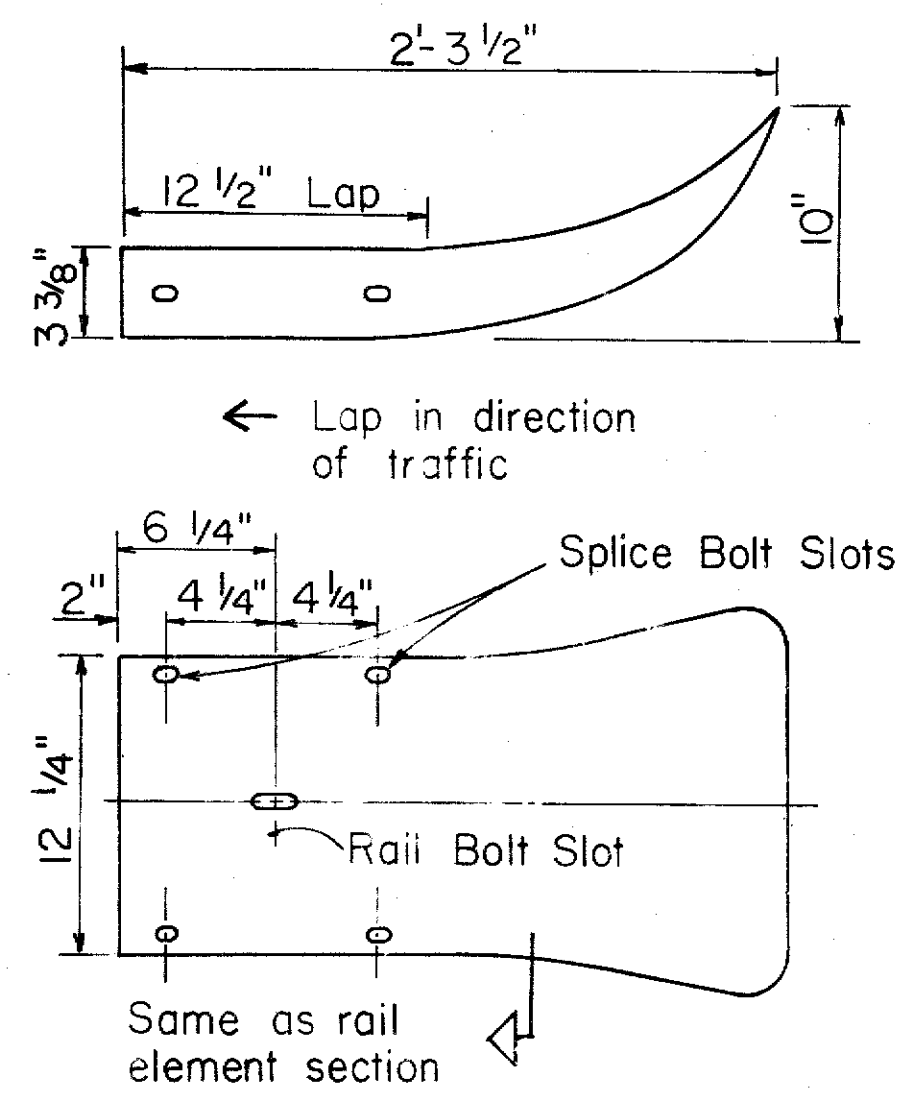
**5/8" BUTTON HEAD BOLT
AND RECESS NUT**
Scale: NTS



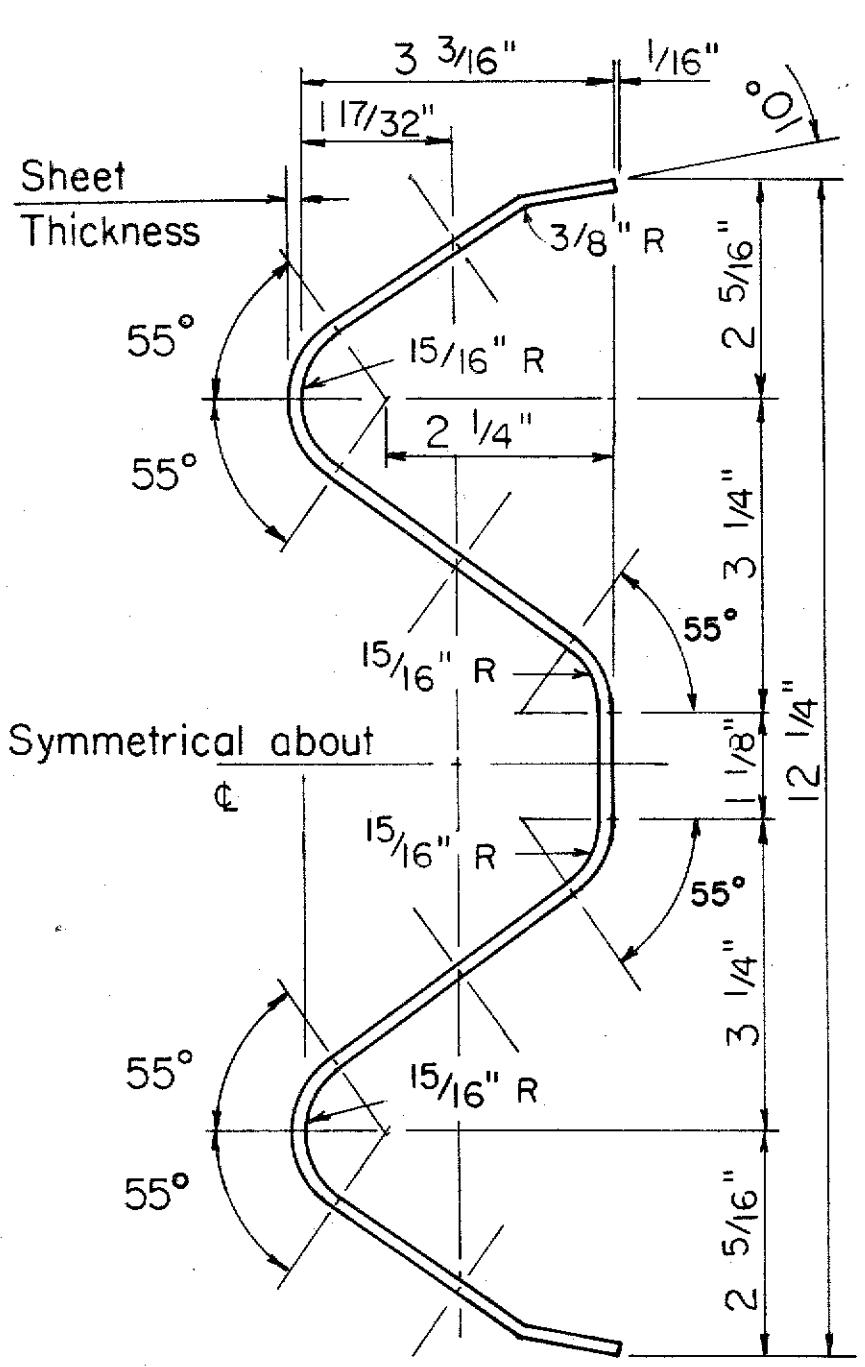
5/8" HEX POST BOLT AND NUT
Scale: N.T.S.



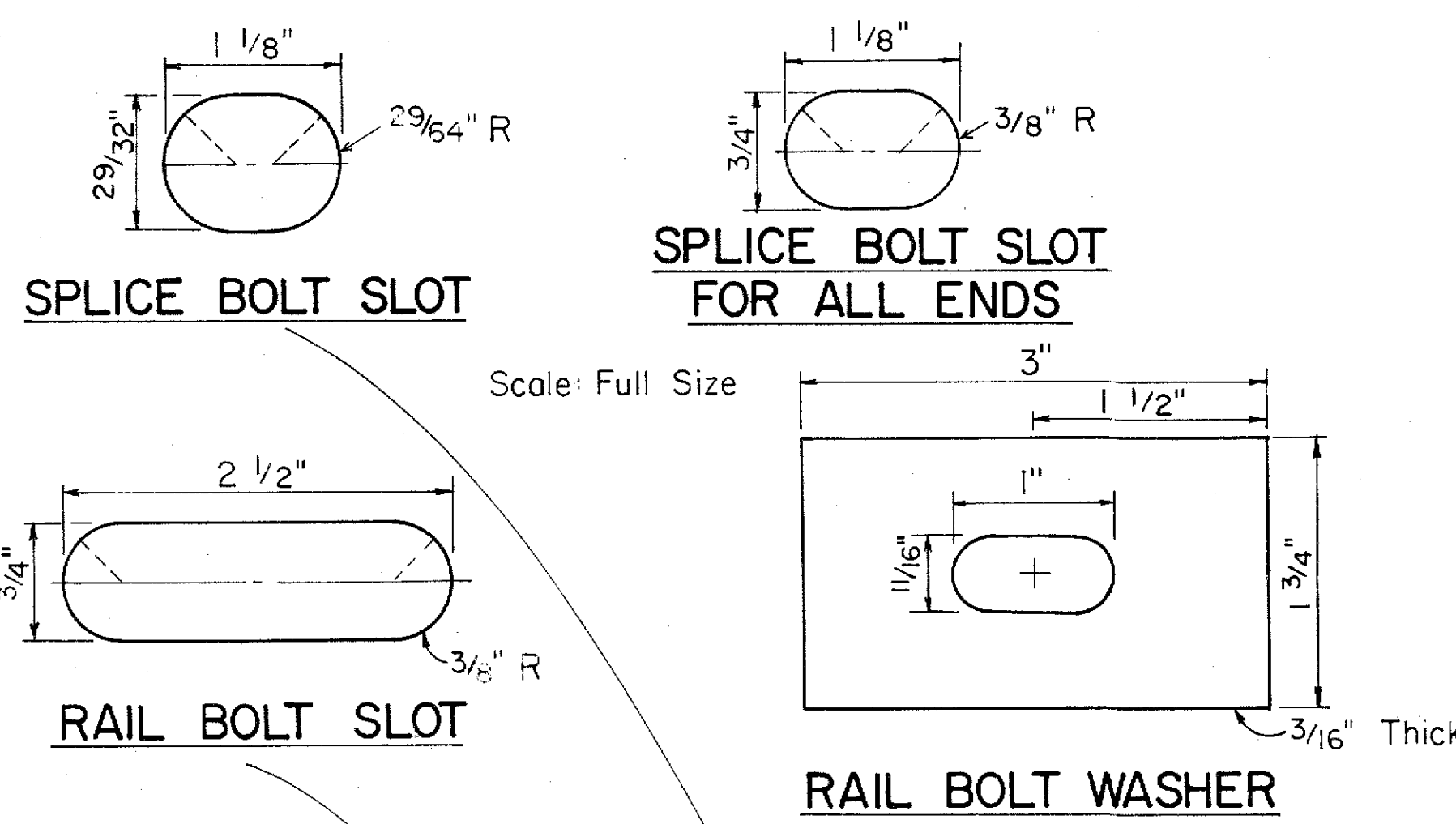
W BEAM TERMINAL CONNECTOR
Scale: 1 1/2" = 1'-0"
Lap in direction of traffic



W BEAM END SECTION (FLARED)
Scale: 1 1/2" = 1'-0"



RAIL ELEMENT SECTION
Scale: 6" = 1'-0"

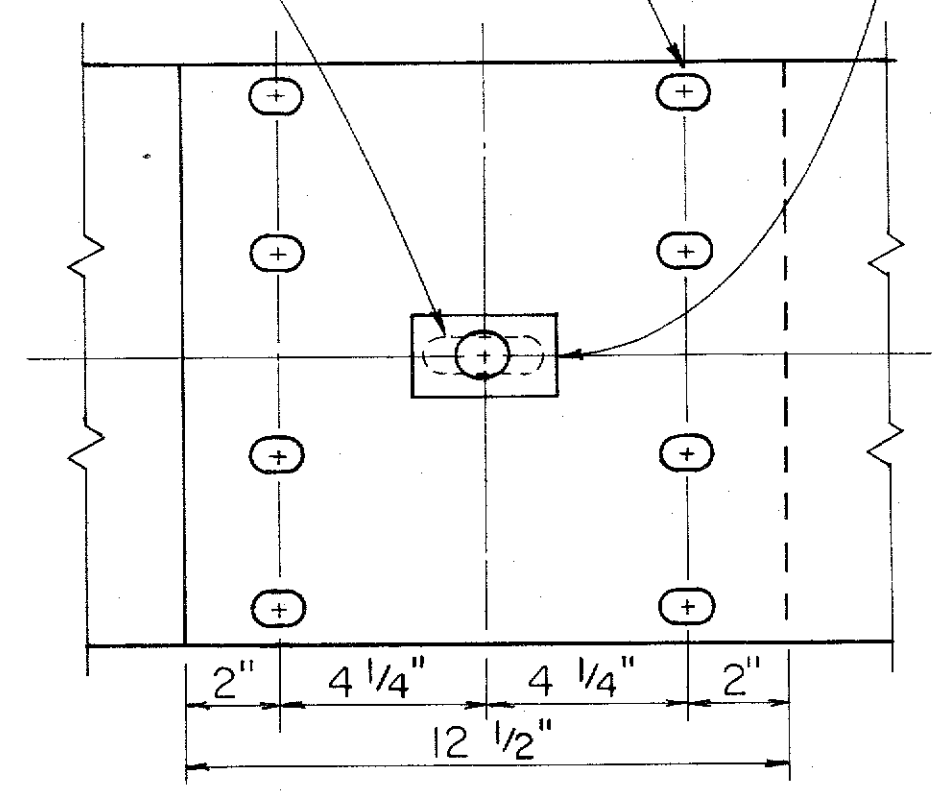


SPLICE BOLT SLOT

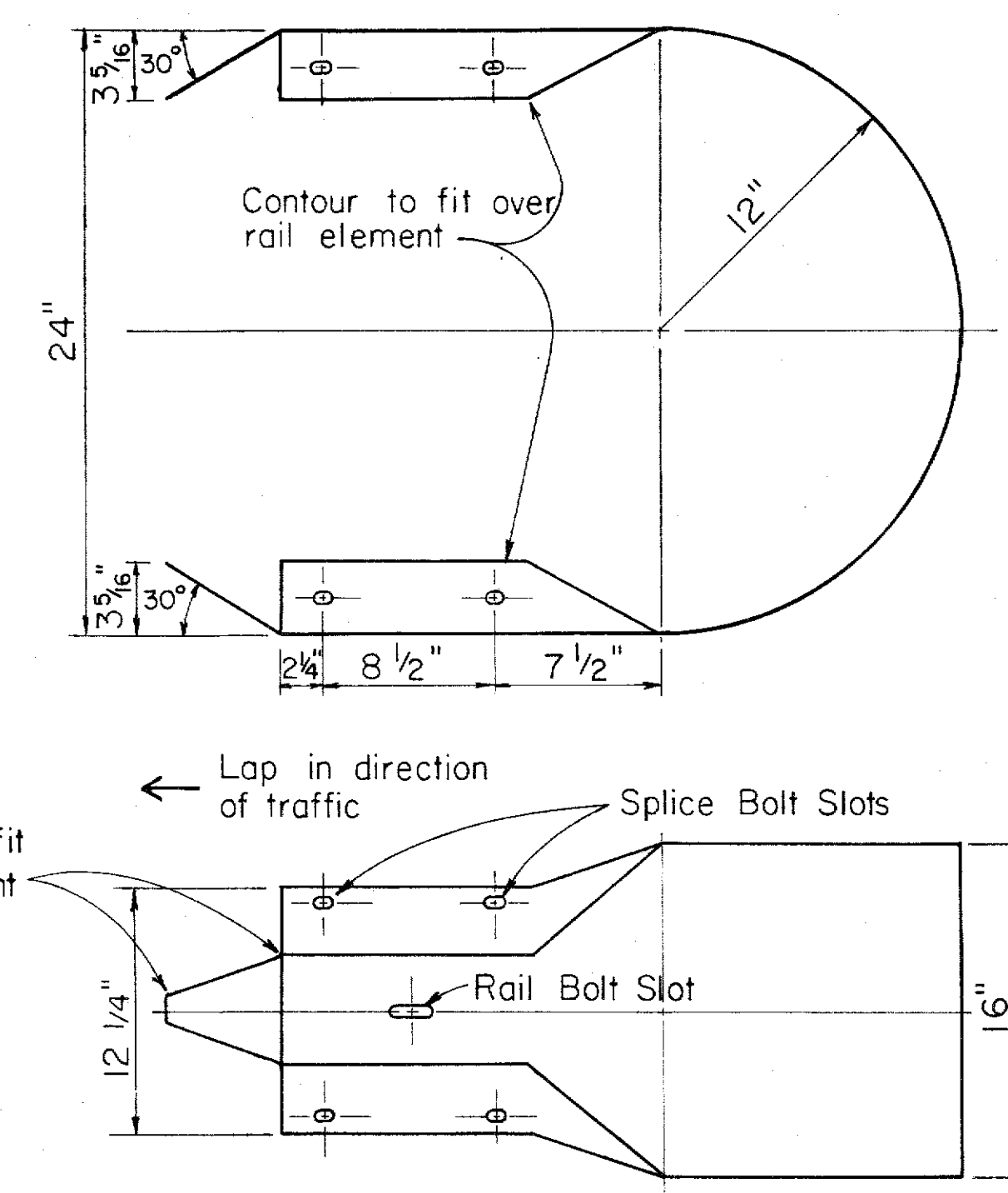
**SPLICE BOLT SLOT
FOR ALL ENDS**

RAIL BOLT SLOT

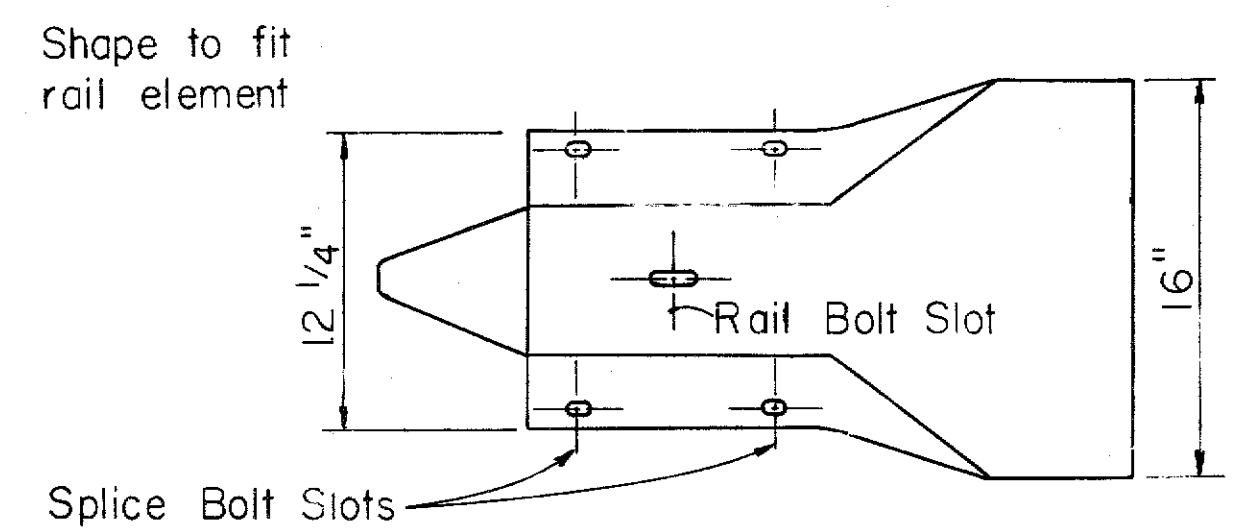
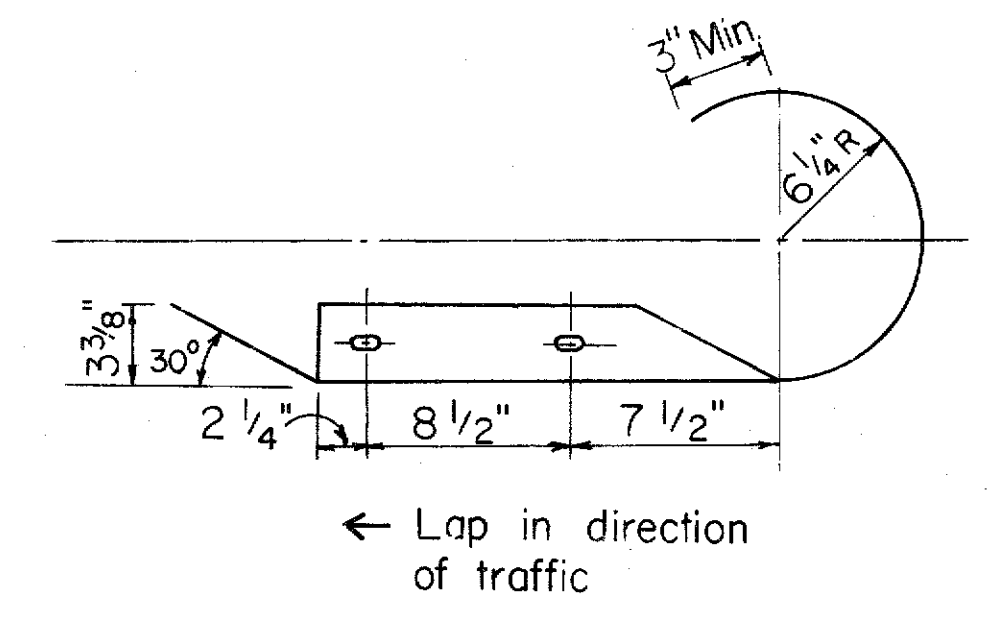
RAIL BOLT WASHER



RAIL SPLICE
Scale: 3" = 1'-0"



W BEAM END SECTION (BUFFER)
Scale: 1 1/2" = 1'-0"



W BEAM END SECTION (ROUNDED)
Scale: 1 1/2" = 1'-0"

APPROVAL RECOMMENDED:
Eishi Tanaka 9/20/82
TRAFFIC ENGINEER DATE

APPROVED:
Shunichi Saito 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes sht. DT 501 approved 12/30/69	H.f.	9/22/82

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARDRAIL

Scale: As Noted July, 1982
SHEET No. 19 OF 20 SHEETS DT 501

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

