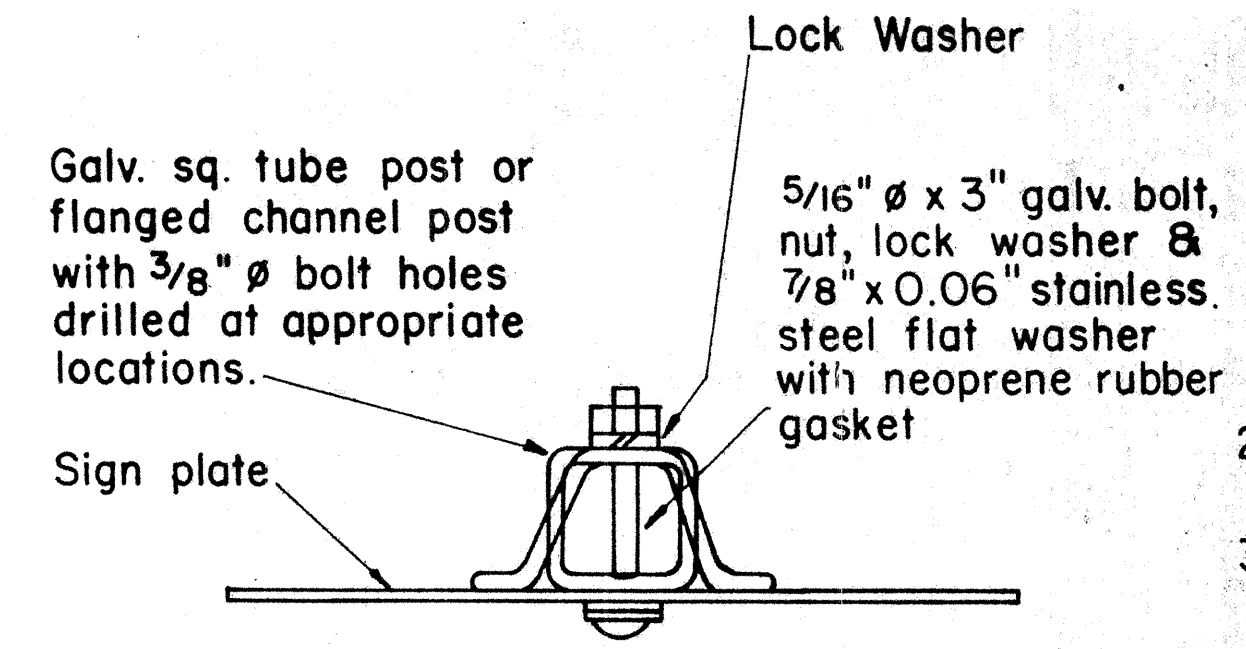


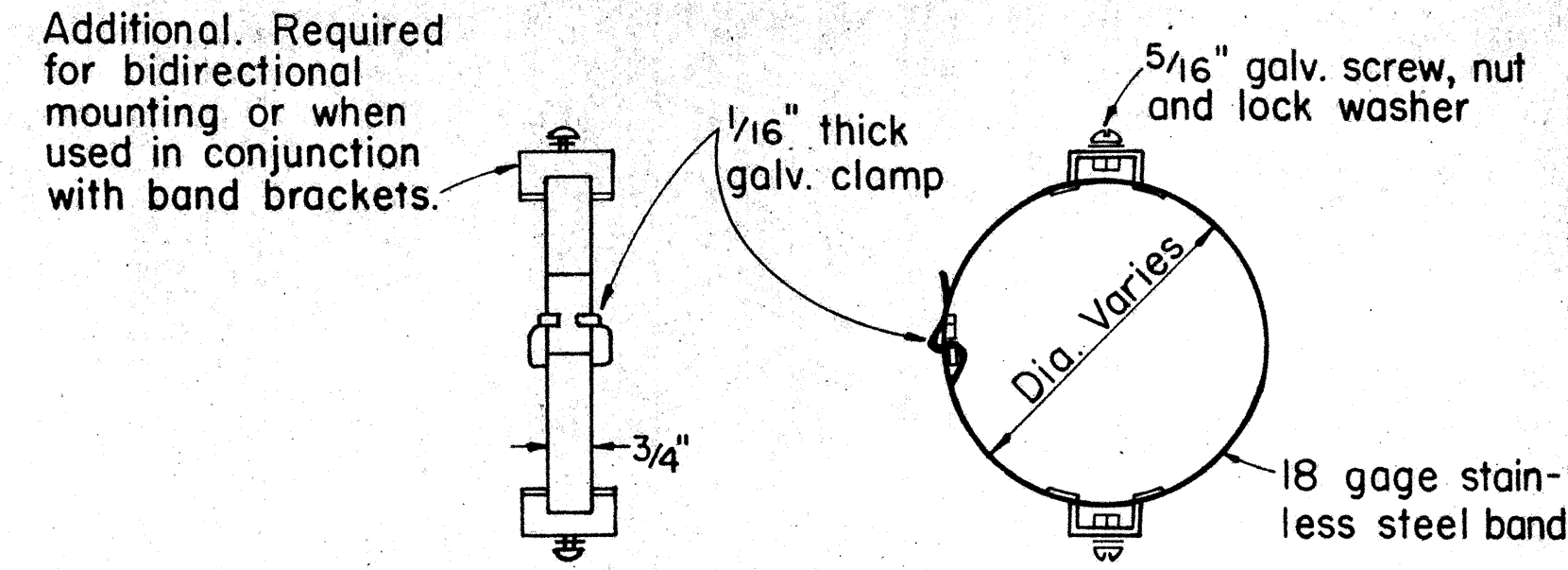
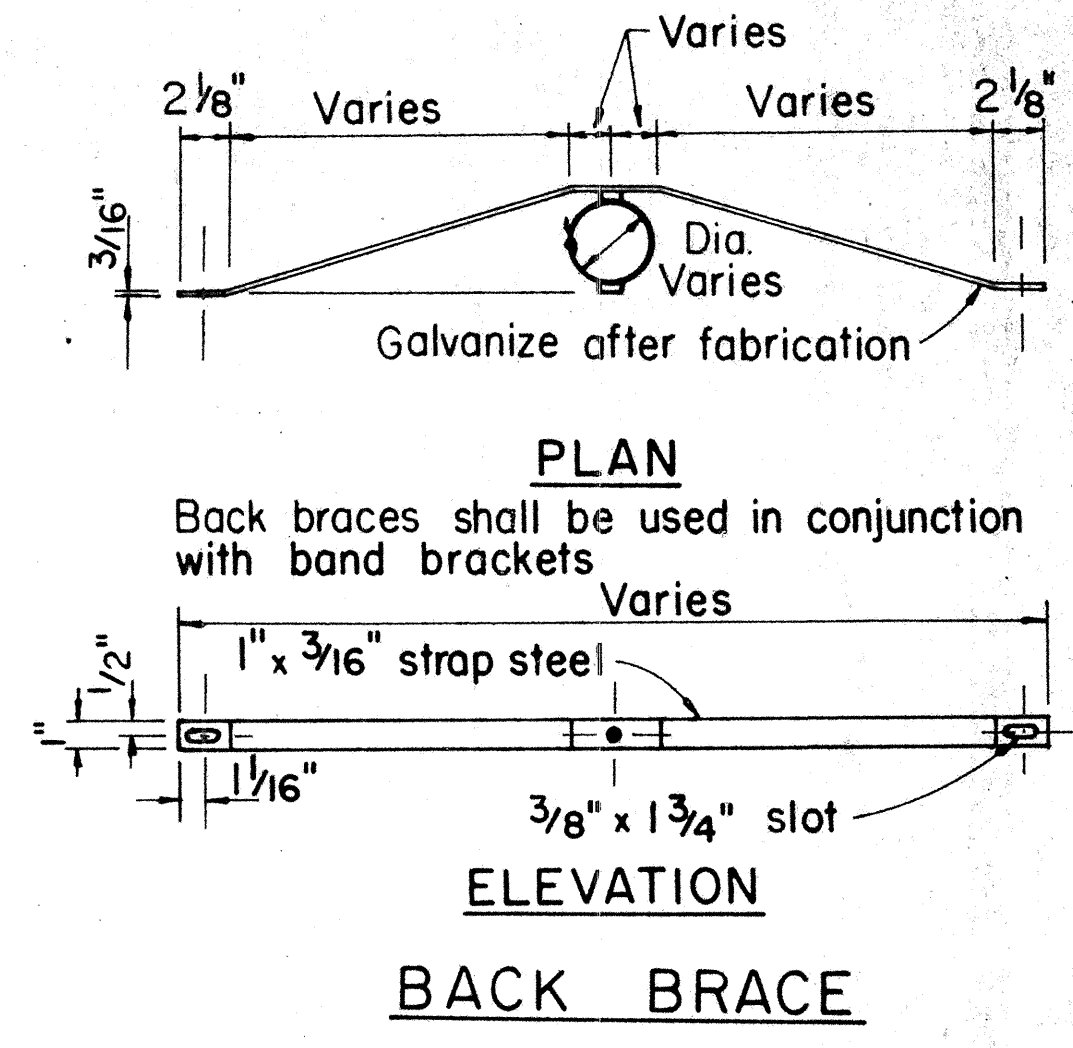
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-84	1984	7	16

GENERAL NOTES

- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Sign 48" and wider or larger than 10 sq. ft. in area shall be mounted on two or more sign posts except as noted below.
- Signs 48" and wider or larger than 10 sq. ft. in area may be mounted on objects other than sign posts (i.e. on highway lighting poles) as follows:
 - Signs 48" and wider but less than 10 sq. ft. in area shall be mounted with a minimum of two sets of band bracket and back braces.
 - Signs larger than 10 sq. ft. and less than 28 sq. ft. in area shall be mounted with a minimum of two sets of band brackets and back braces.
 - Signs larger than 28 sq. ft. in area shall be mounted with a minimum of three sets of band bracket and back braces.
- All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
- Sign posts shall extend 3 1/2" above each sign, where required, for attachment of City and County street name signs.
- (R) or (L) indicates right or left and shown on the plans.
- See plans for special details of signs along bikeways.
- The minimum lateral distances shown are guidelines and shall be exceeded whenever possible. The Contractor shall place signs at the maximum practical lateral distance from the edge of the traveled way up to 30 feet and shall utilize protected locations whenever possible. Final locations of all signs shall be approved by the Engineer.
- Signs in medians shall be placed at midpoint of median up to a maximum distance of 30 feet from the edge of traveled way. When appropriate, signs for opposing directions shall be placed back to back.
- Anchor bases shall be installed for all signpost installations, unless otherwise shown or directed. See sheets DT 100A and DT 100B.



GALVANIZED SQUARE TUBE OR FLANGED CHANNEL POST



BAND BRACKET

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

APPROVED:
Shujiyama 10-18-83
 ASSISTANT CHIEF, ENGINEERING DATE

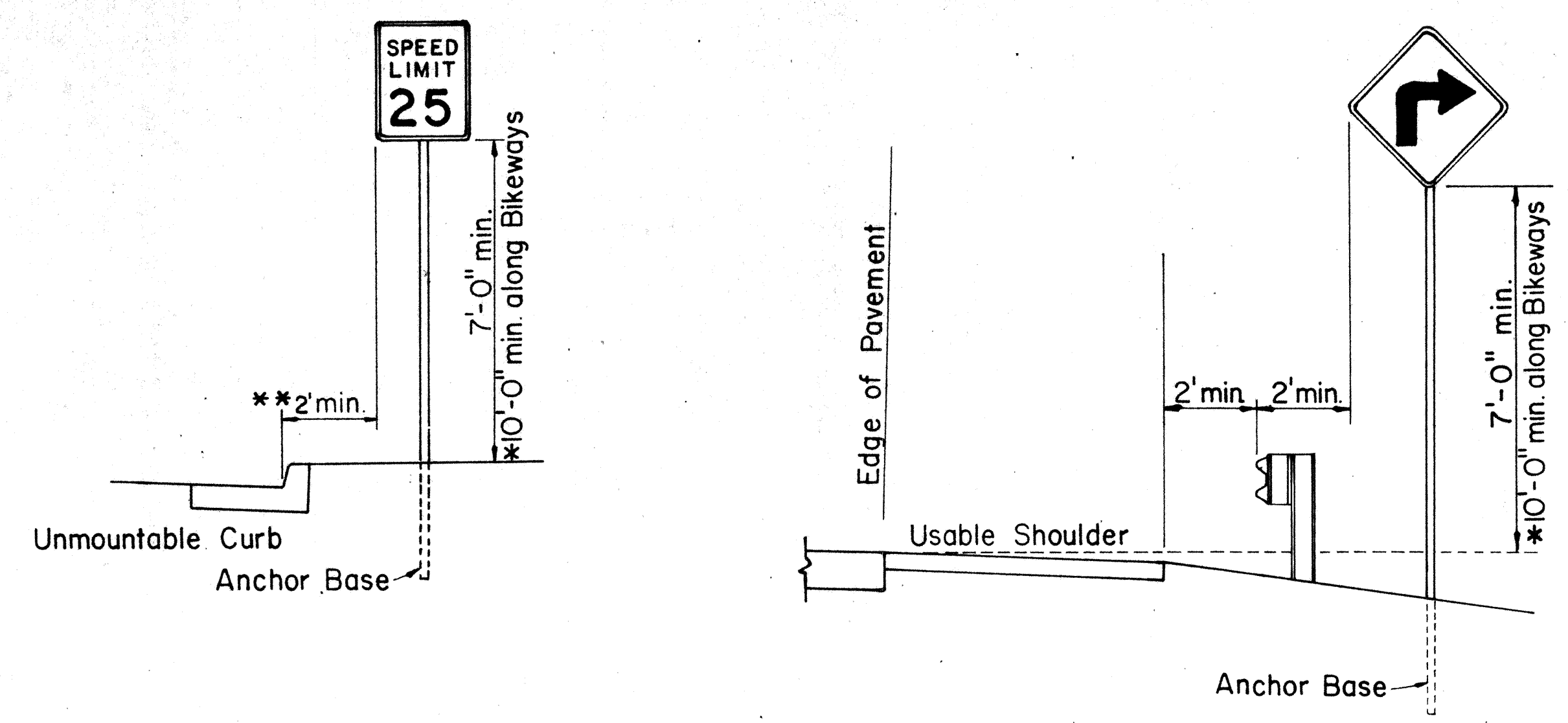
TYPICAL MOUNTING DETAILS

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 100 approved 11/15/77	<i>Shujiyama</i>	10-18-83

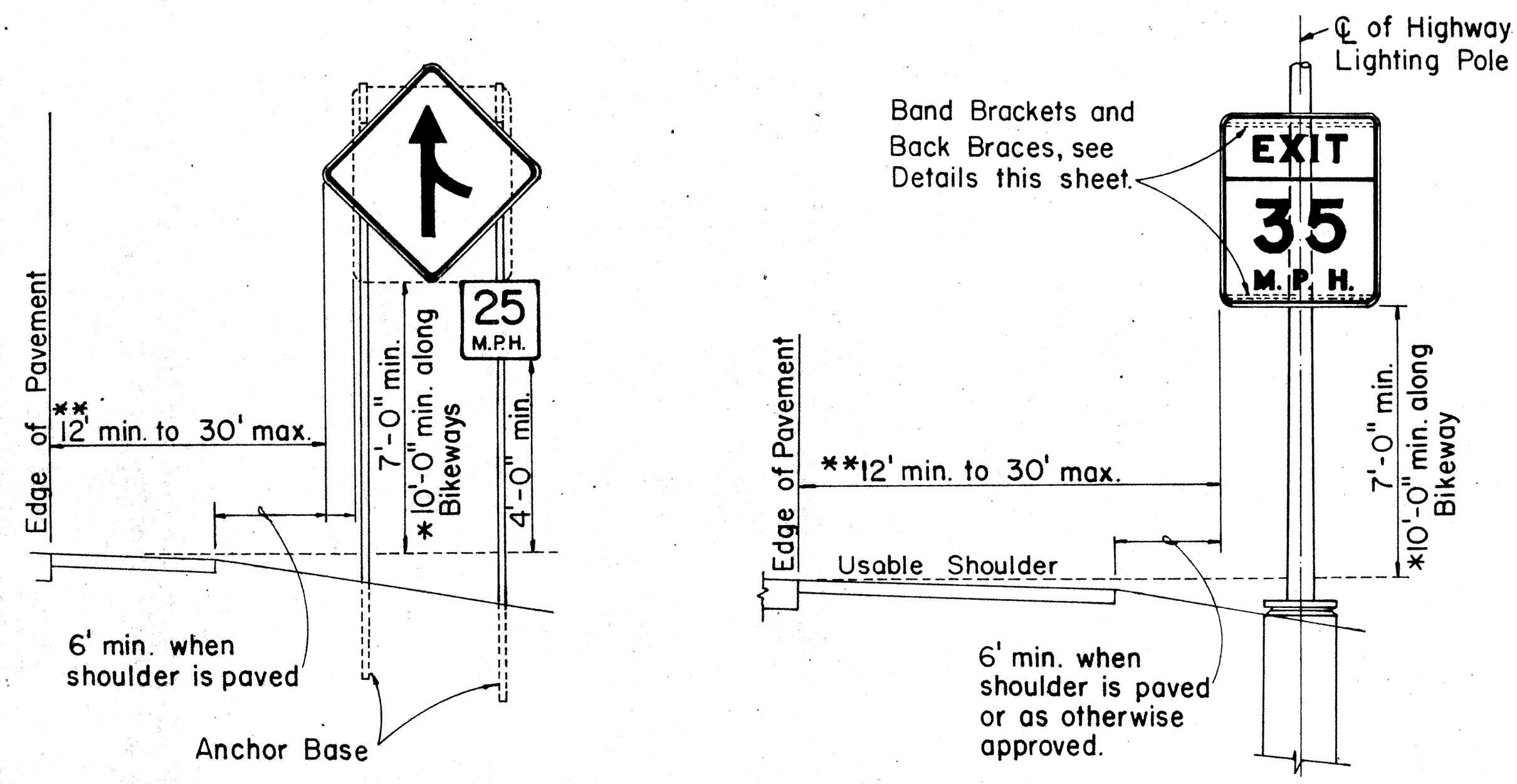
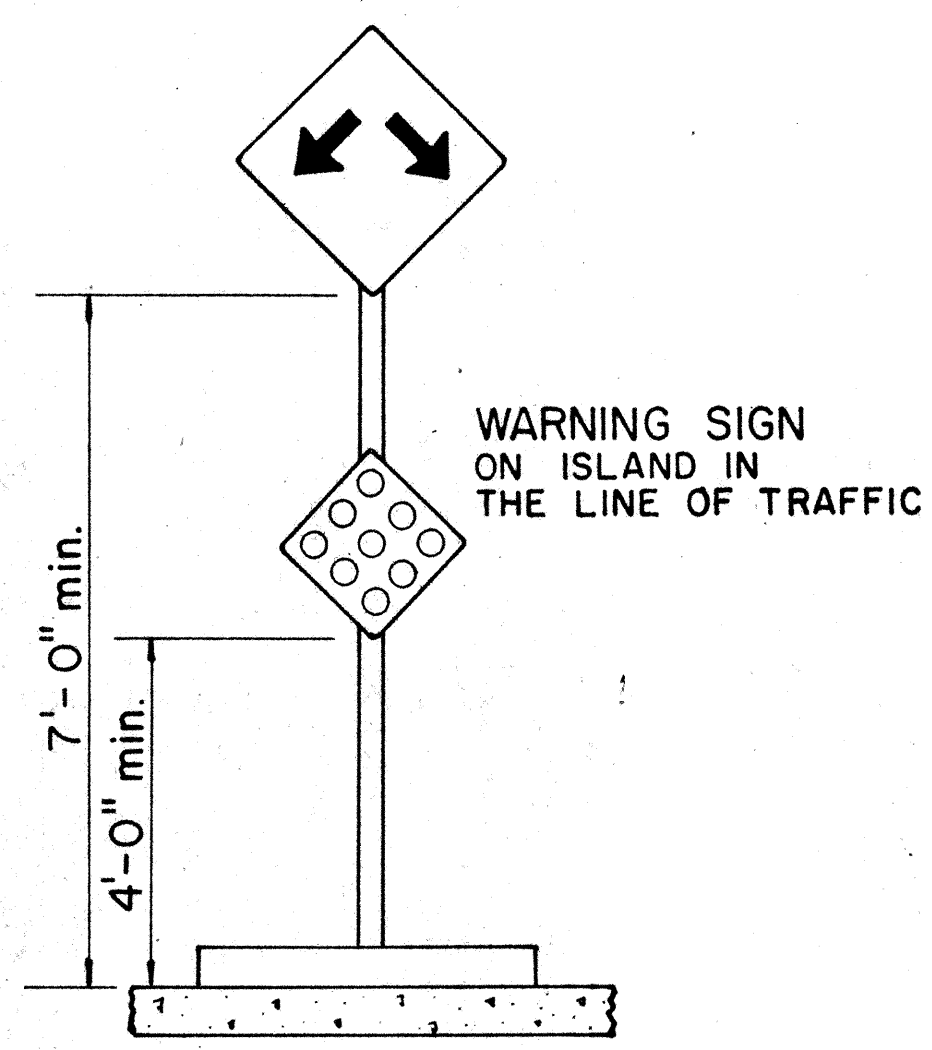
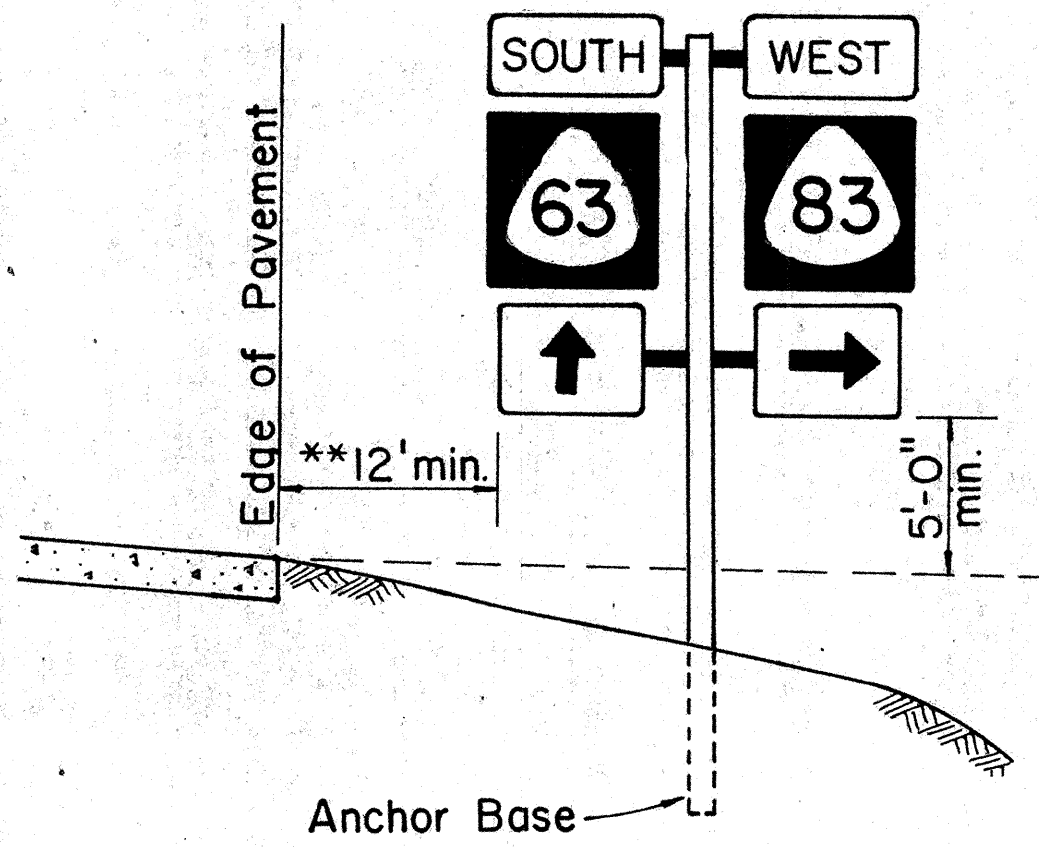
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 MISCELLANEOUS SIGN DETAILS

Not to Scale: Oct. 1983
 SHEET NO. 1 OF 10 SHEETS DT 100



ROADSIDE ASSEMBLY RURAL DISTRICT



HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

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

GENERAL NOTES

- APPROVAL RECOMMENDED:

APPROVED:

NO.	REVISION	APPROVED BY	DATE

STANDARD DETAILS
GALVANIZED SQUARE TUBE
SIGN POST MOUNTING

Scale: As Shown Date: Sept. 1982

SHEET No. 2 OF 10 SHEETS DT100B



ANCHOR BASE DETAIL

Scale: 3" = 1' - 0"



Not to Scale

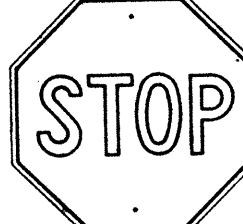
SQUARE TUBE: 2 - POST INSTALLATION

SQUARE TUBE: 3 - POST INSTALLATION

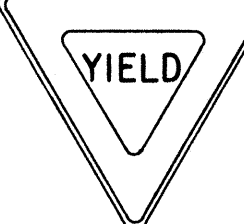
WINDLOAD CHARTS

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-84	1984	9	16



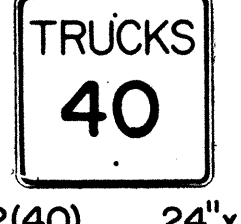
R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"



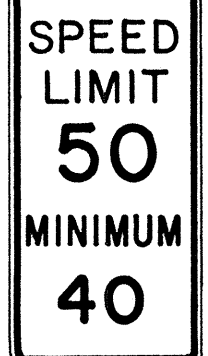
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



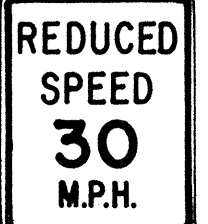
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



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



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



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



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



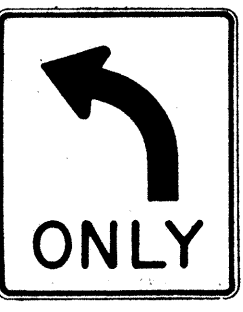
R3-2 24" x 24"
24" x 18"
R3-2-A 48" x 48"
48" x 36"



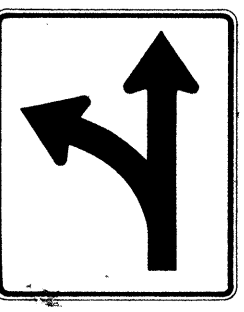
R3-3 24" x 24"
R3-3-A 48" x 48"



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



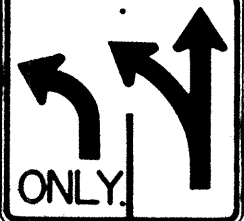
R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"



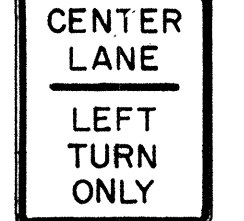
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



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



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



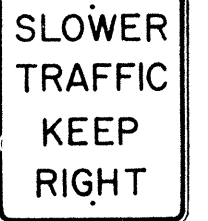
R3-9 24" x 30"



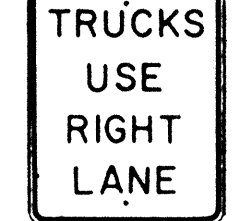
R4-1 24" x 30"



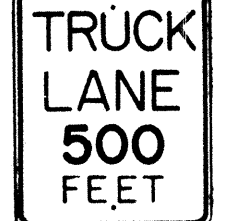
R4-2 24" x 30"



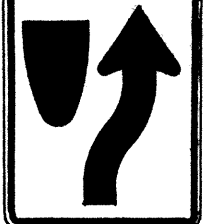
R4-3 24" x 30"
R4-3-A 48" x 60"



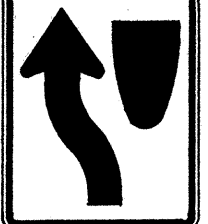
R4-5 24" x 30"



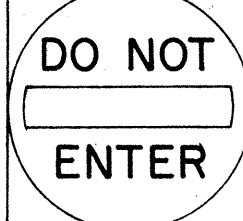
R4-6(500) 24" x 30"



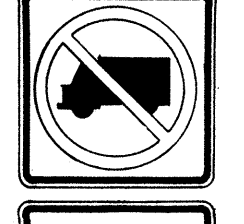
R4-7 24" x 30"
24" x 18"



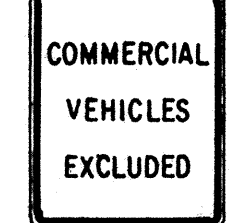
R4-8 24" x 30"
24" x 18"



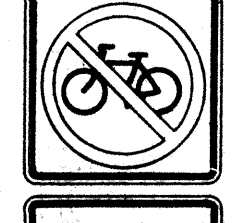
R5-1 30" x 30"
R5-1-A 48" x 48"



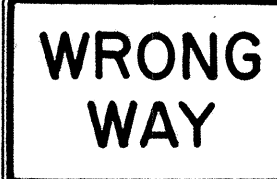
R5-2 24" x 24"
24" x 18"



R5-4 24" x 30"



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



R5-9 36" x 24"



R6-1(R) 36" x 12"



R6-2(R) 18" x 24"



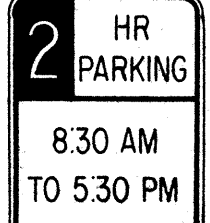
R7-1 12" x 18"
R7-1-A 24" x 30"



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



R7-1-7(R) 12" x 18"



R7-108 12" x 18"



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



R8-1 24" x 30"



R8-2 24" x 30"



R8-3 24" x 30"



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



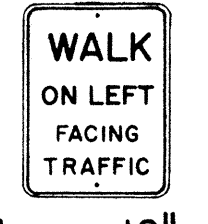
R8-5 24" x 30"



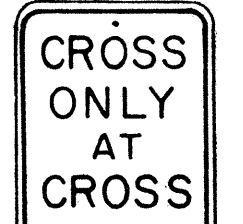
R8-6 24" x 30"



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



R9-1 18" x 24"



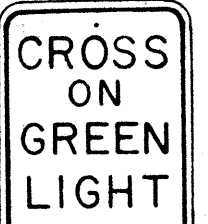
R9-2 12" x 18"



R9-3 12" x 18"



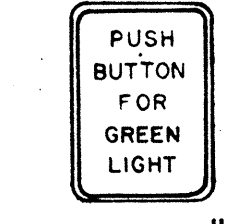
R9-4 18" x 24"



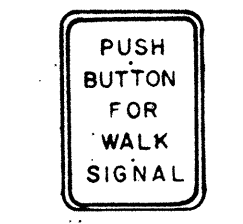
R10-1 12" x 18"



R10-2 12" x 18"



R10-3 9" x 12"



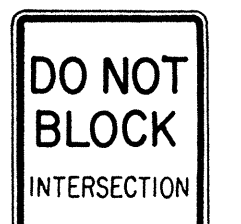
R10-4 9" x 12"



R10-5 24" x 30"



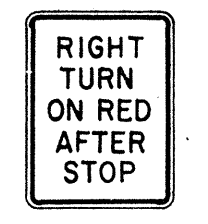
R10-6 24" x 36"



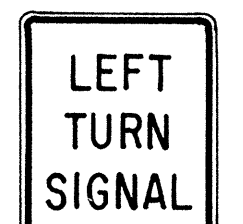
R10-7 24" x 30"



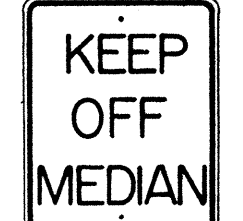
R10-8 24" x 30"



R10-9 24" x 30"



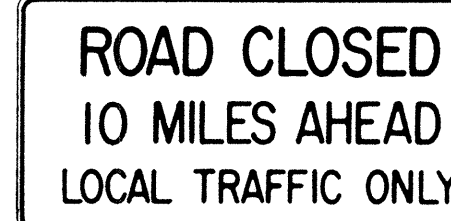
R10-10 24" x 30"



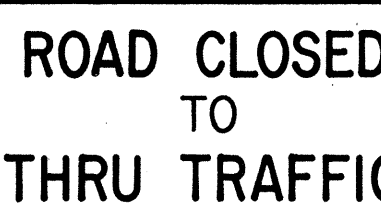
R11-1 24" x 30"



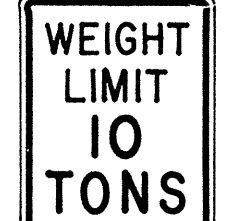
R11-2 48" x 30"



R11-3(10) 60" x 30"



R11-4 60" x 30"



R12-1(10) 24" x 30"

GENERAL NOTES

1. Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.
4. Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
5. All signs shall be erected without educational plaques unless called for in the plans.

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

APPROVED:
Robert Roberts 3-20-12
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.I.	3/20/12
2	Revised General Note 1.	H.I.	10/10/14
3	Added General Note 5	H.I.	6/2/17

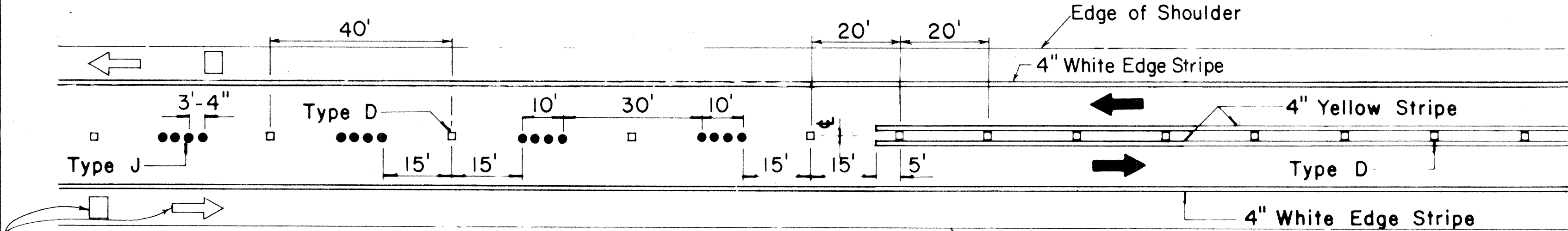
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE
SHEET No. 3 OF 10 SHEETS DT 101

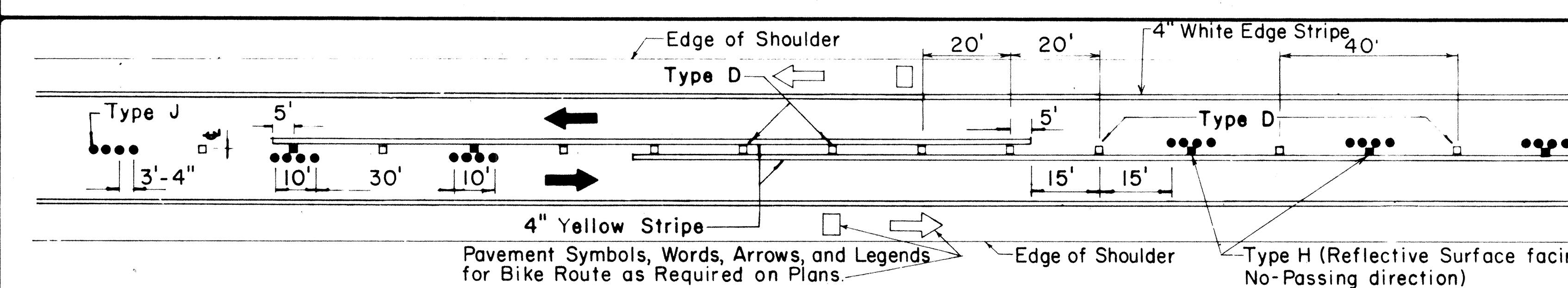
DATE	_____
DESIGNED BY	_____
TRACED BY	_____
NOTED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-84	1984	10	16



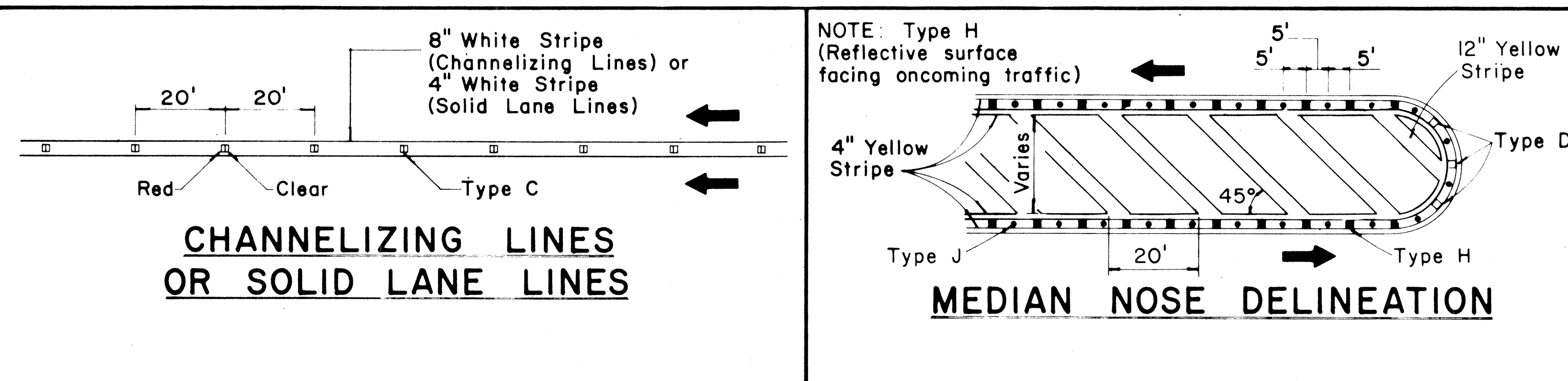
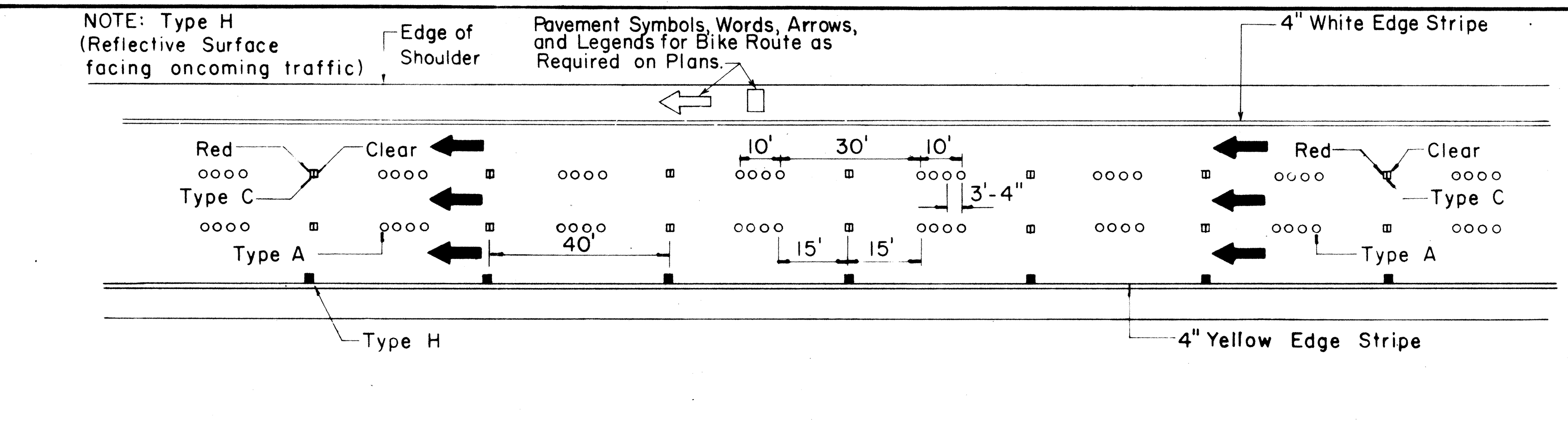
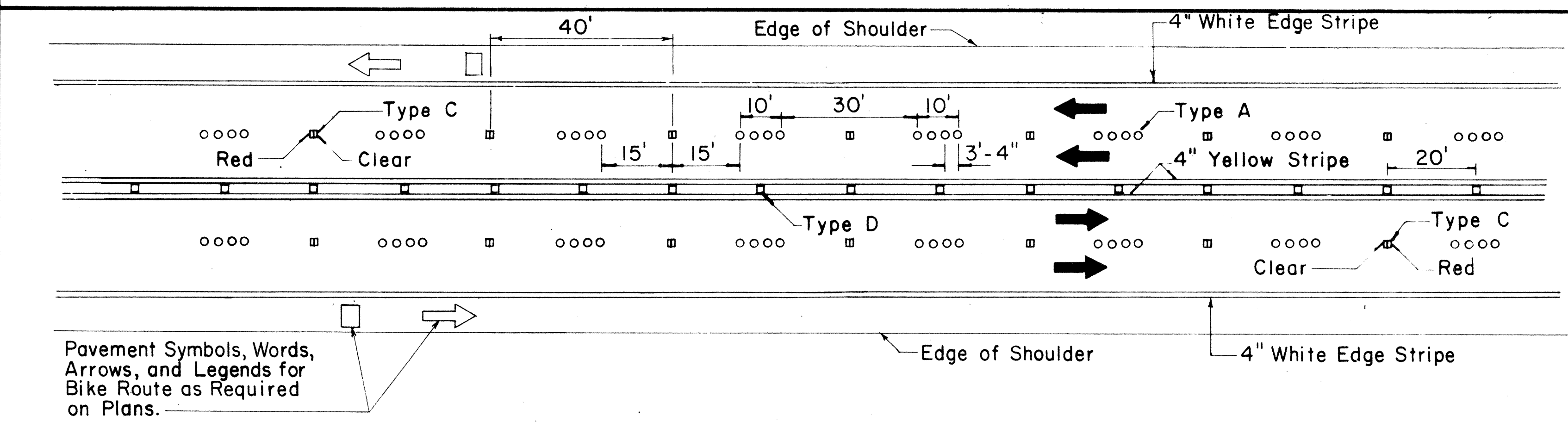
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PERMITTED AND PASSING PROHIBITED



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

PASSING PROHIBITED ZONES

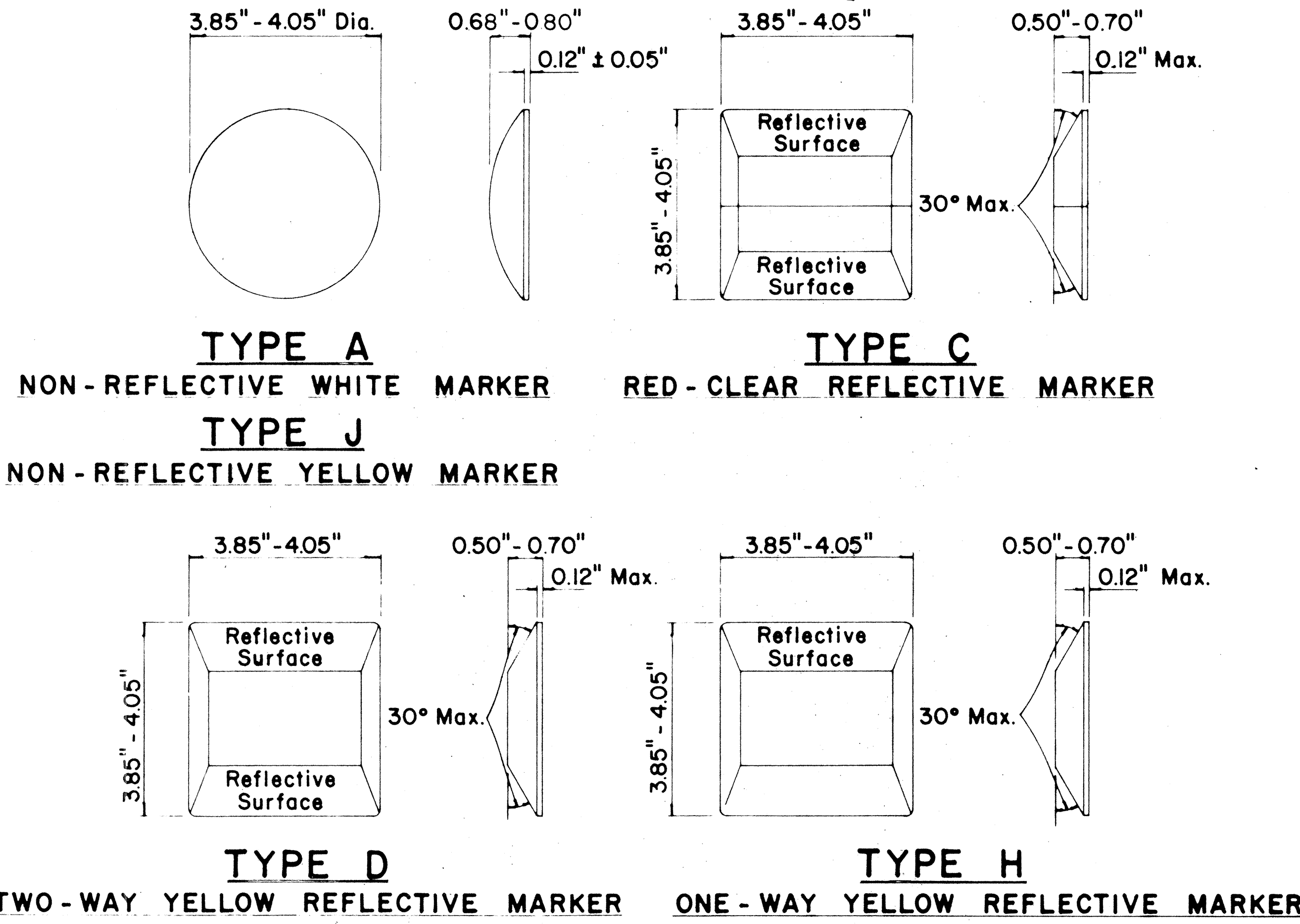


TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

MISCELLANEOUS



- GENERAL NOTES**
- Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
 - Layout and installation of pavement marking and striping shall be done by the Contractor. The Contractor shall check the layouts with the Engineer prior to performing work.
 - Edge lines shall not be continued through intersections and shall not be broken for driveways unless otherwise shown or directed.

- LEGEND**
- Type A
 - Type C
 - Type D
 - Type H
 - Type J

APPROVAL RECOMMENDED:
Erich Tanaka 7/21/78
 TRAFFIC ENGINEER DATE

APPROVED:
Herbert J. Zalewski 1/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

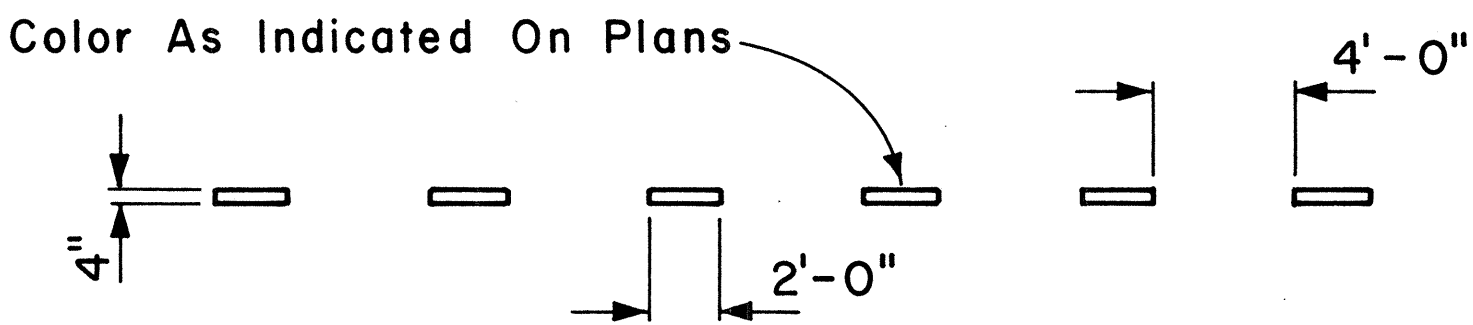
Not to Scale July 1978
 SHEET No. 4 OF 10 SHEETS DT 300

DATE	_____
SURVEY PLOTTED BY	_____
DESIGNED BY	_____
NOTED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____

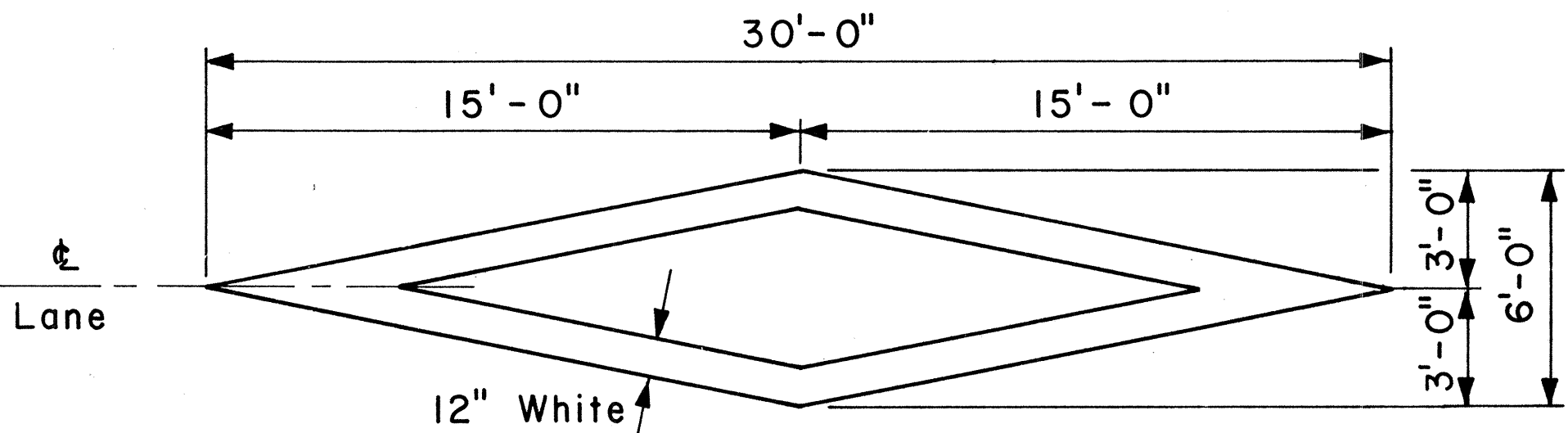
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-84	1984	11	16

GENERAL NOTES:

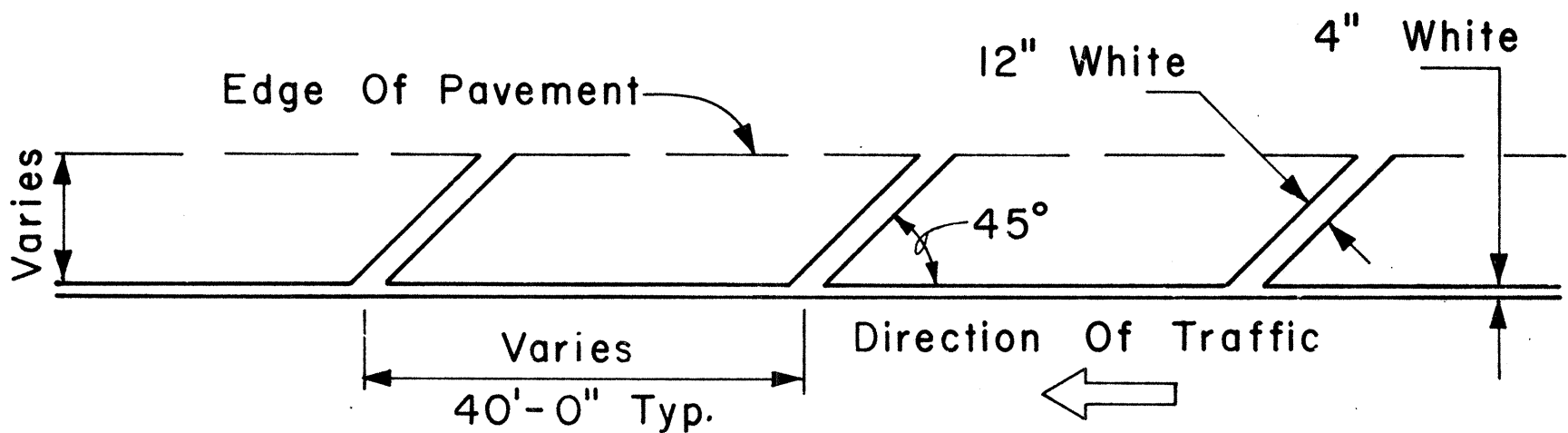
1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and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



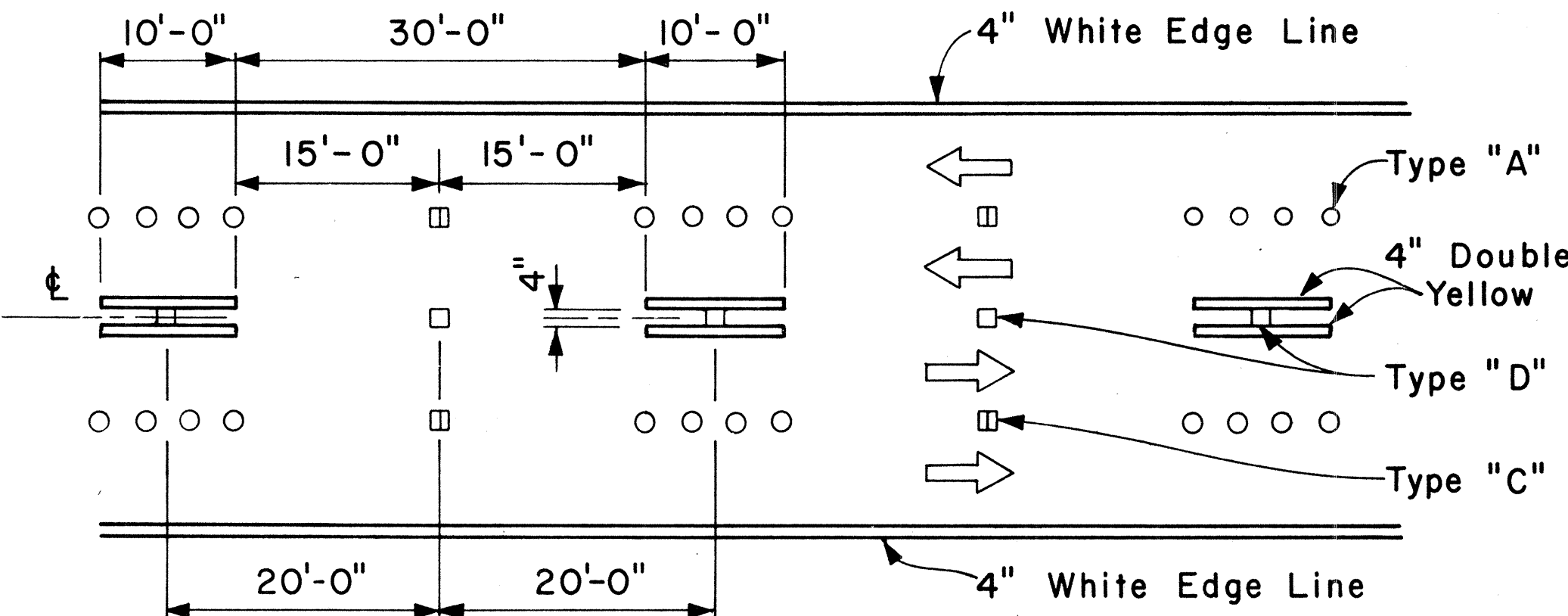
4" GUIDE LINE



PAVEMENT DIAMOND

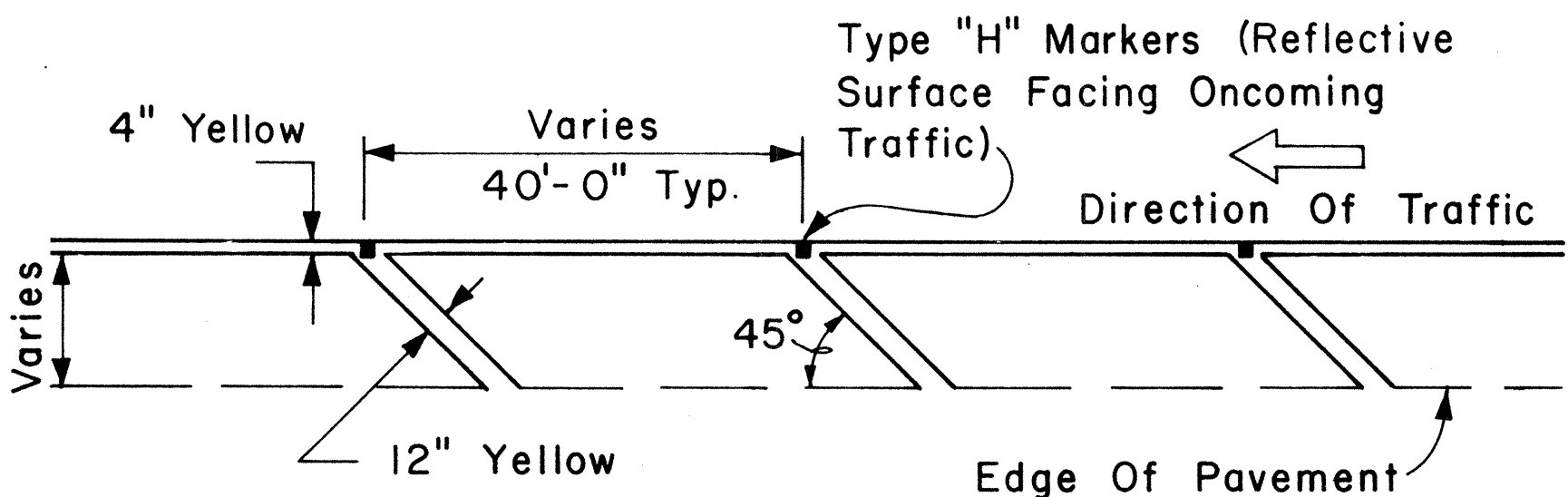


TRANSVERSE RIGHT SHOULDER MARKING

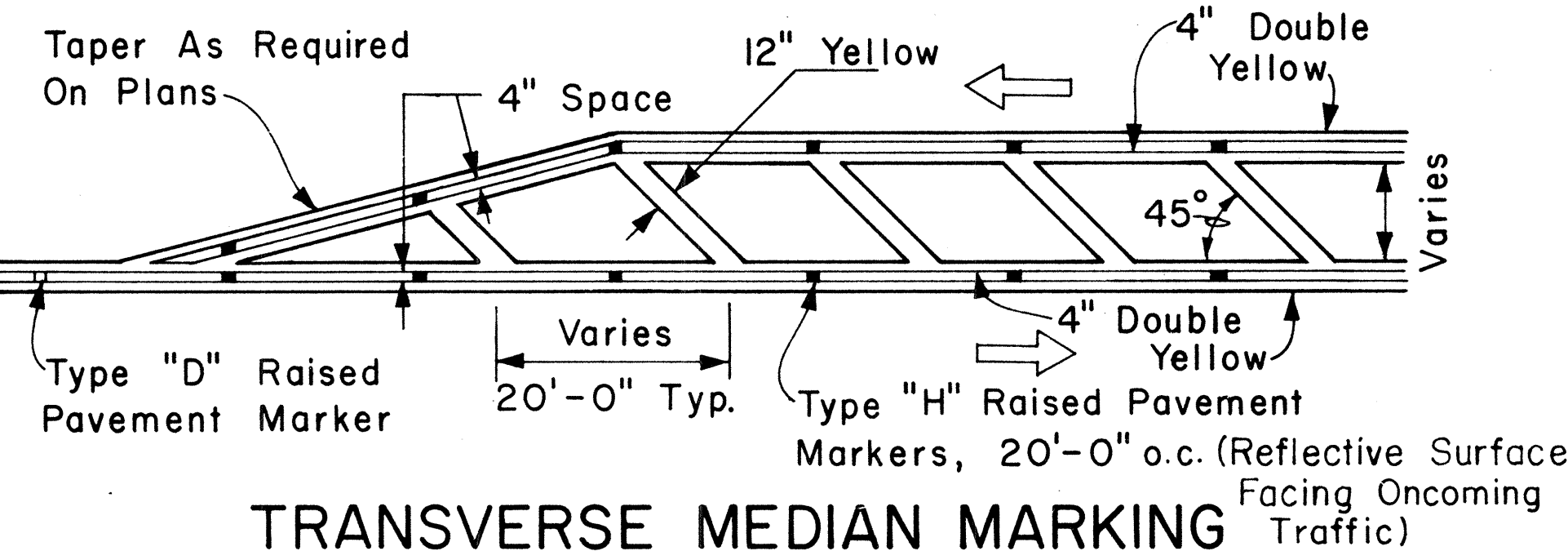


NOTE: Traffic Cone Usage Required.

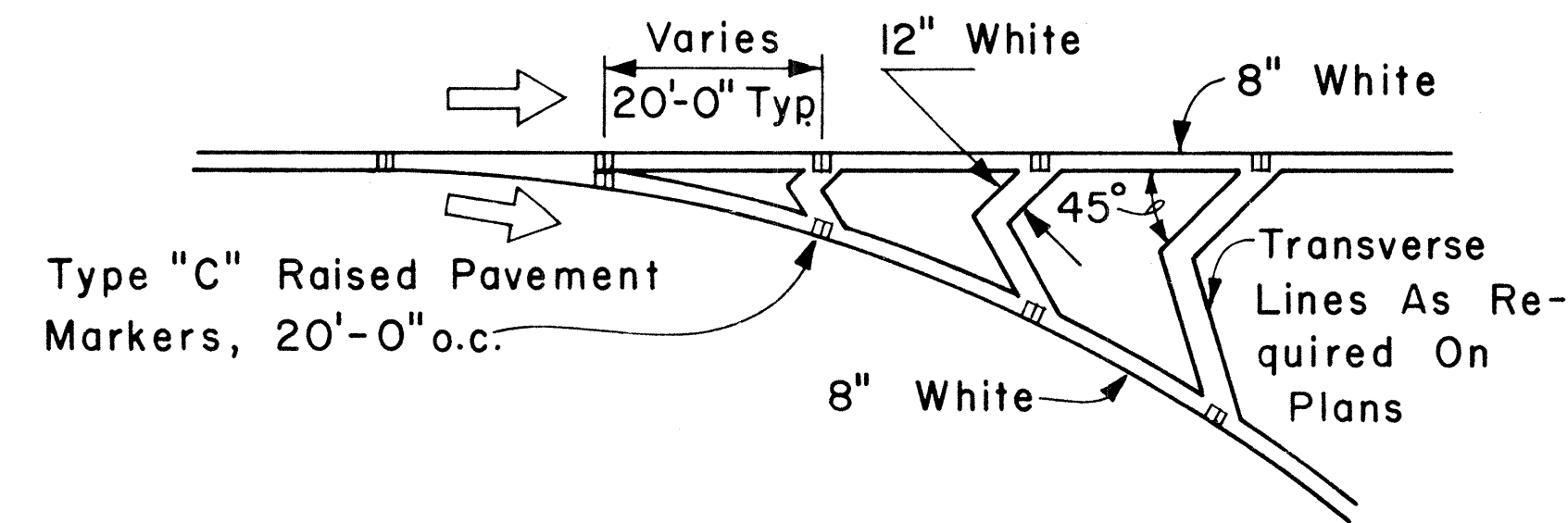
MULTI-LANE REVERSIBLE LANES



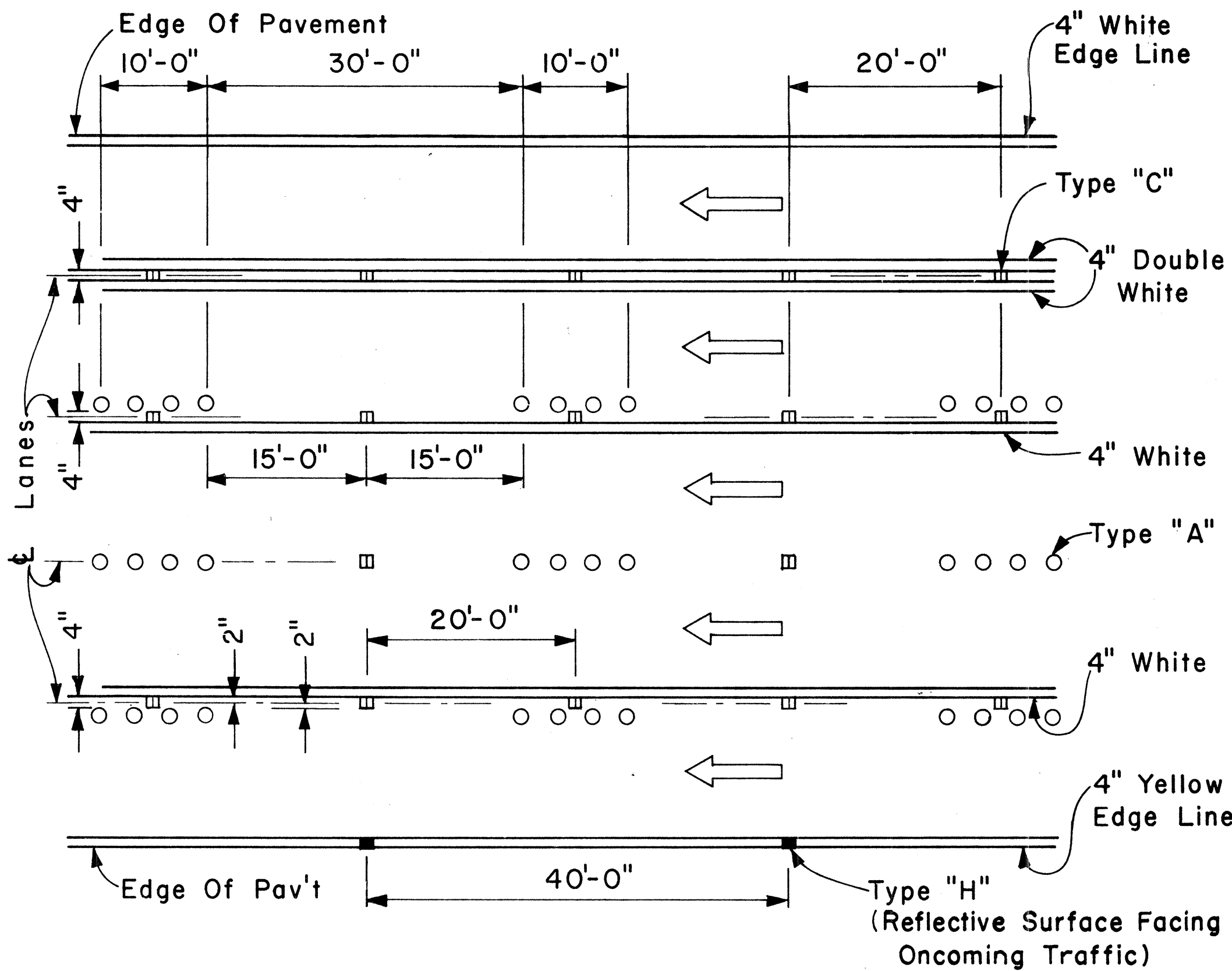
TRANSVERSE LEFT SHOULDER MARKING



TRANSVERSE MEDIAN MARKING



CHANNELIZING ISLAND



MULTI-LANE LANE CHANGE RESTRICTION ZONES

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

APPROVED:
Harbert B. Zakeich 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

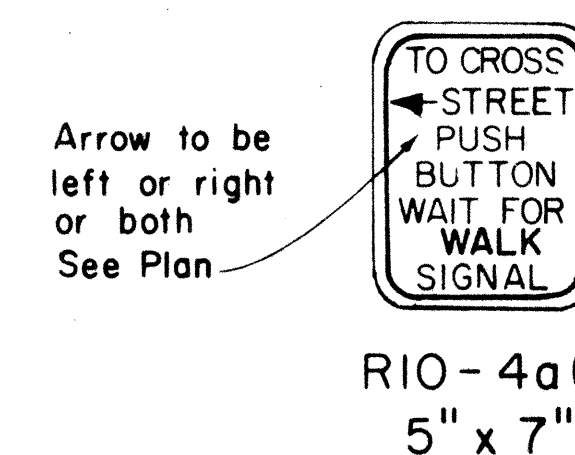
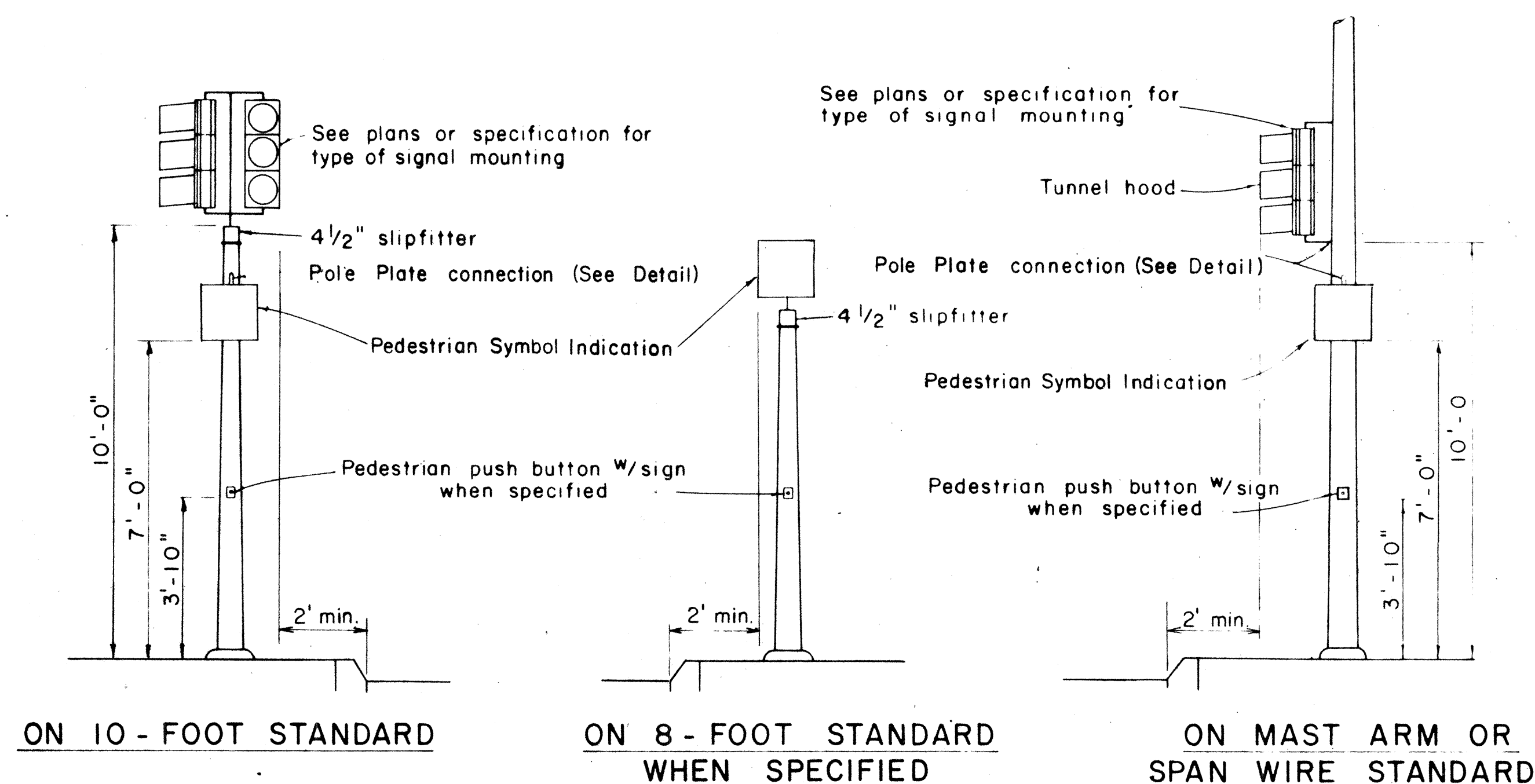
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

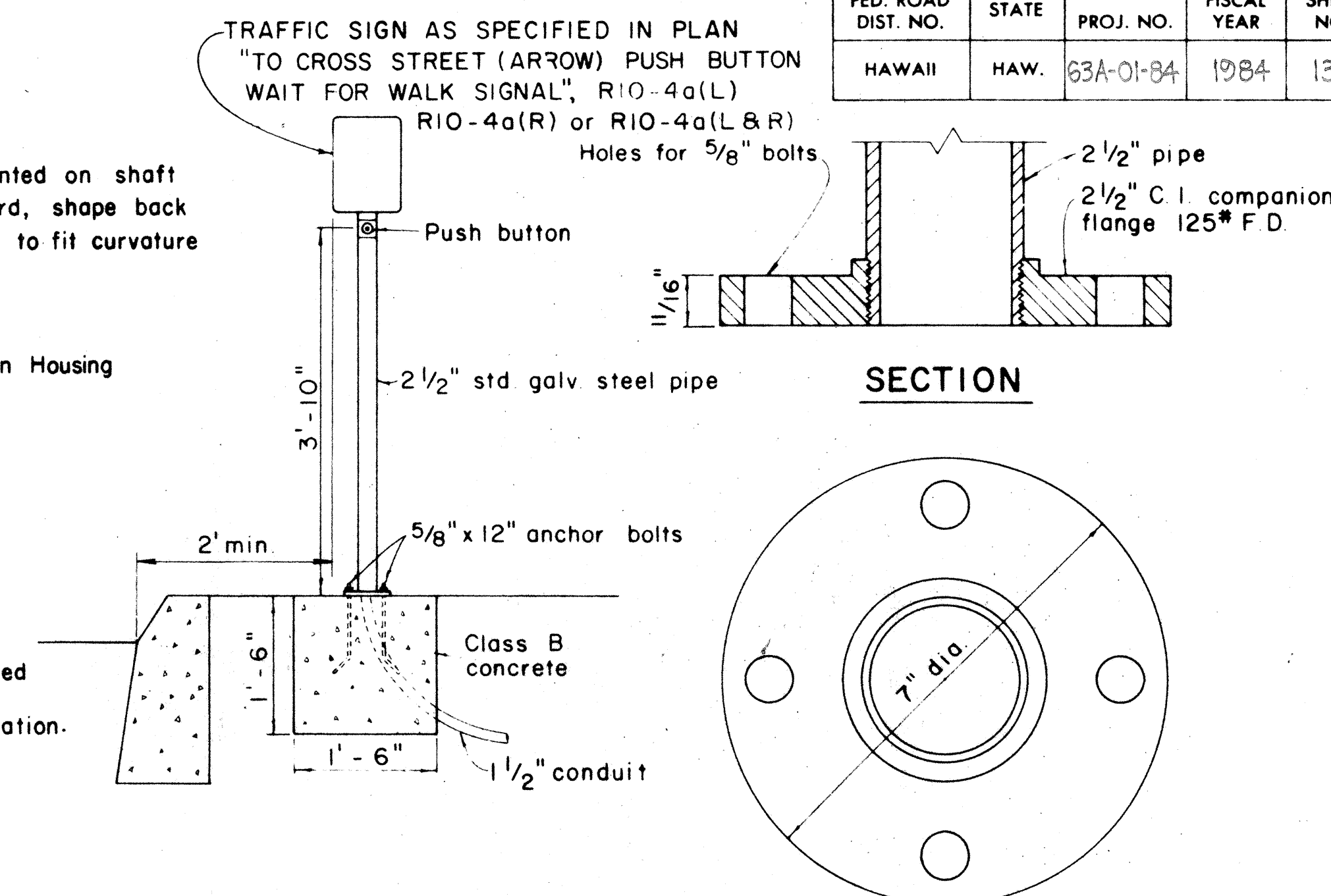
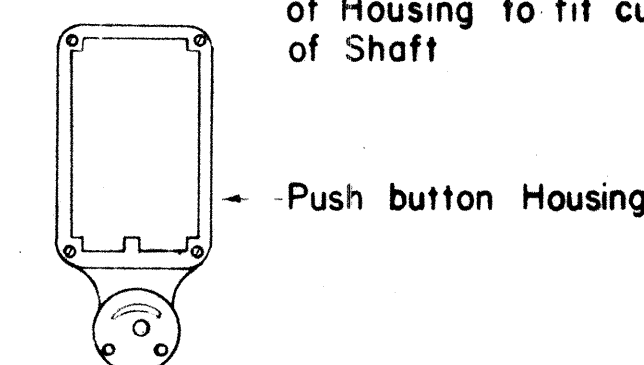
Scale: Not to Scale Date: April, 1978
SHEET NO. 5 OF 10 SHEETS DT 302

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-84	1984	13	16

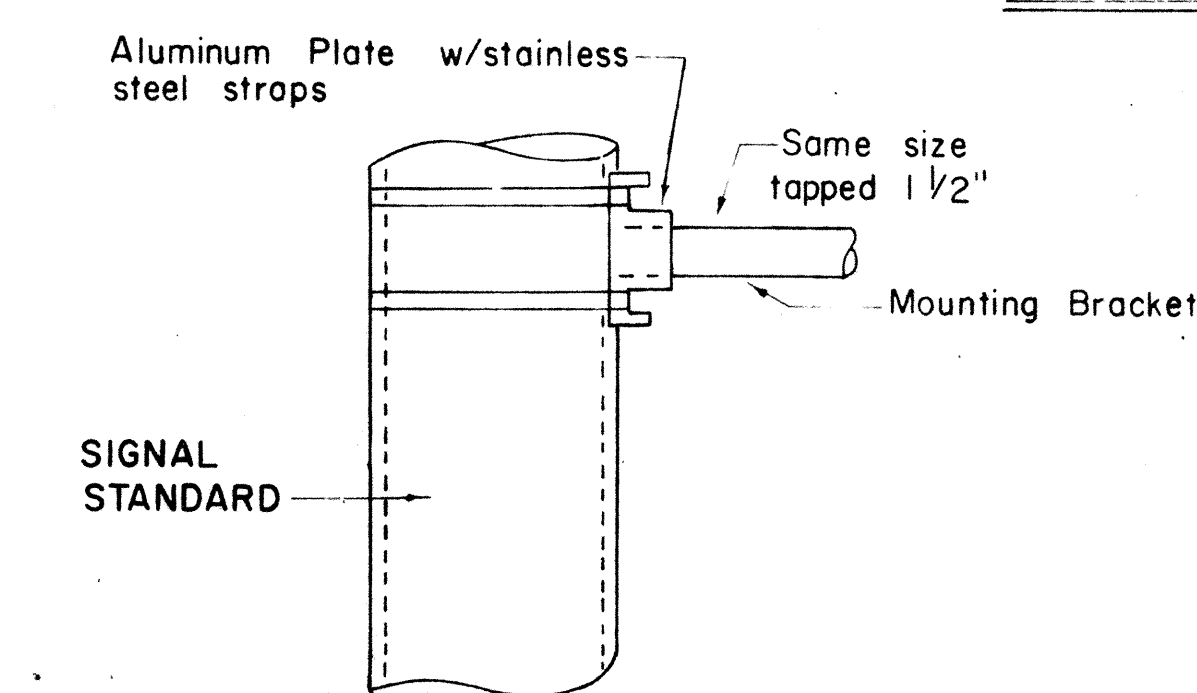


NOTE:

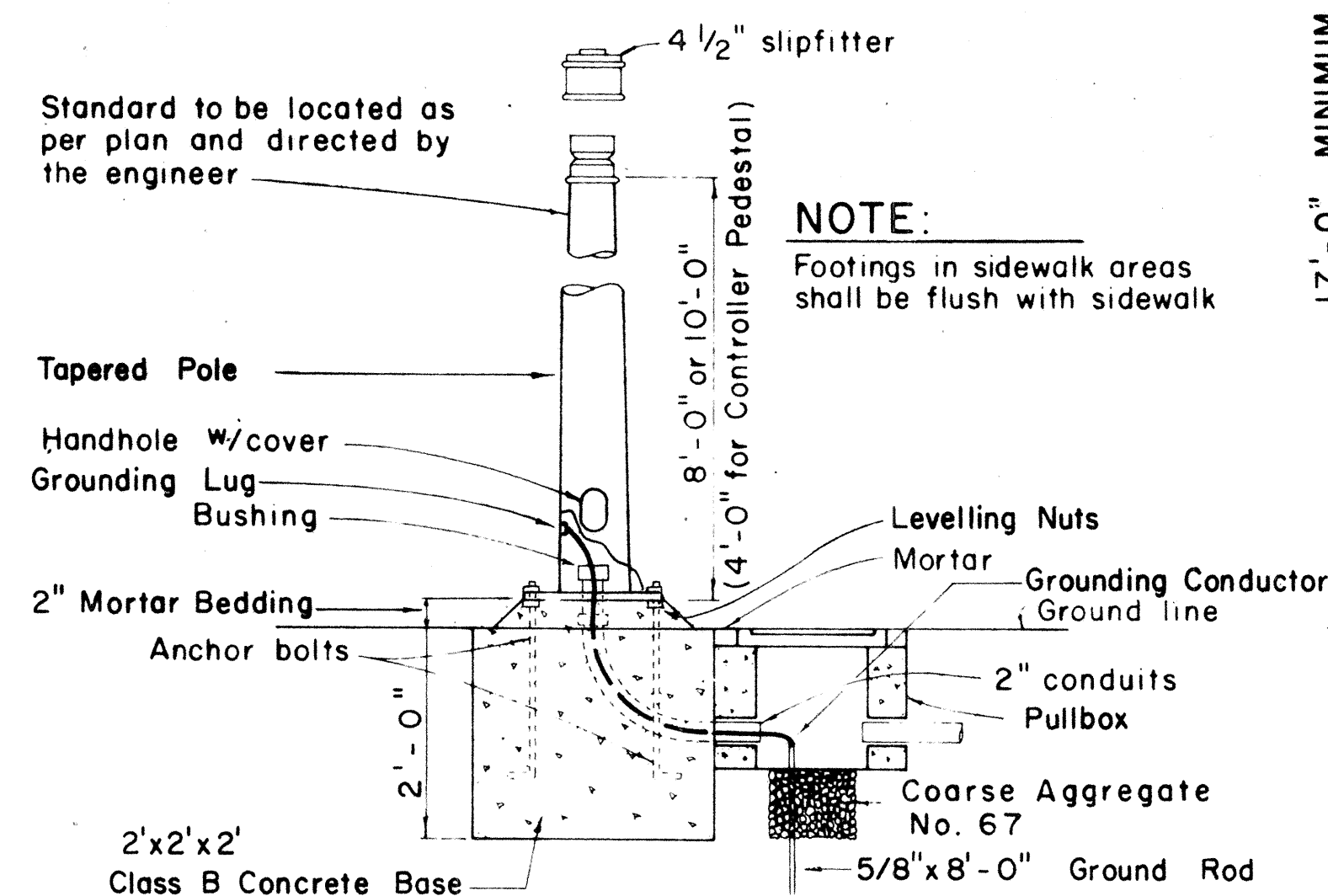
1. Conduits shall protrude 2" max. above finished surface of foundation.
2. Conduits shall slope away from pole foundation.



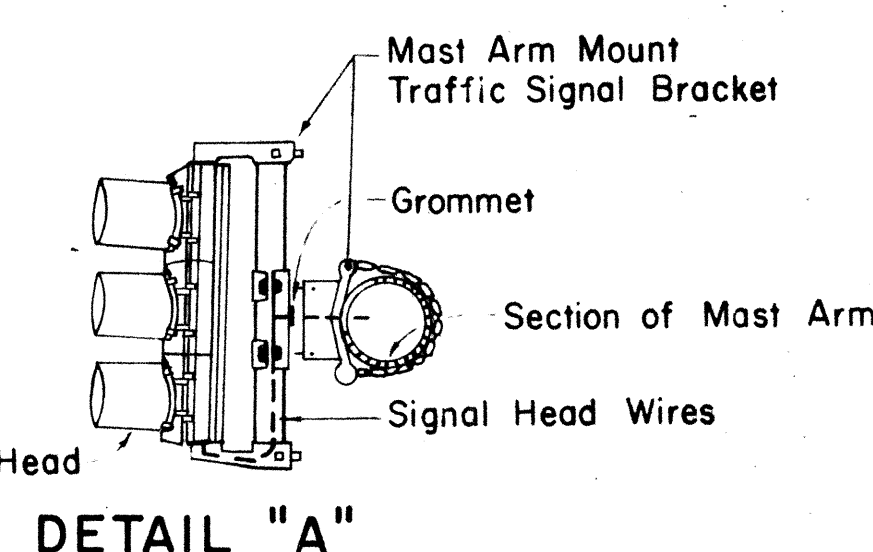
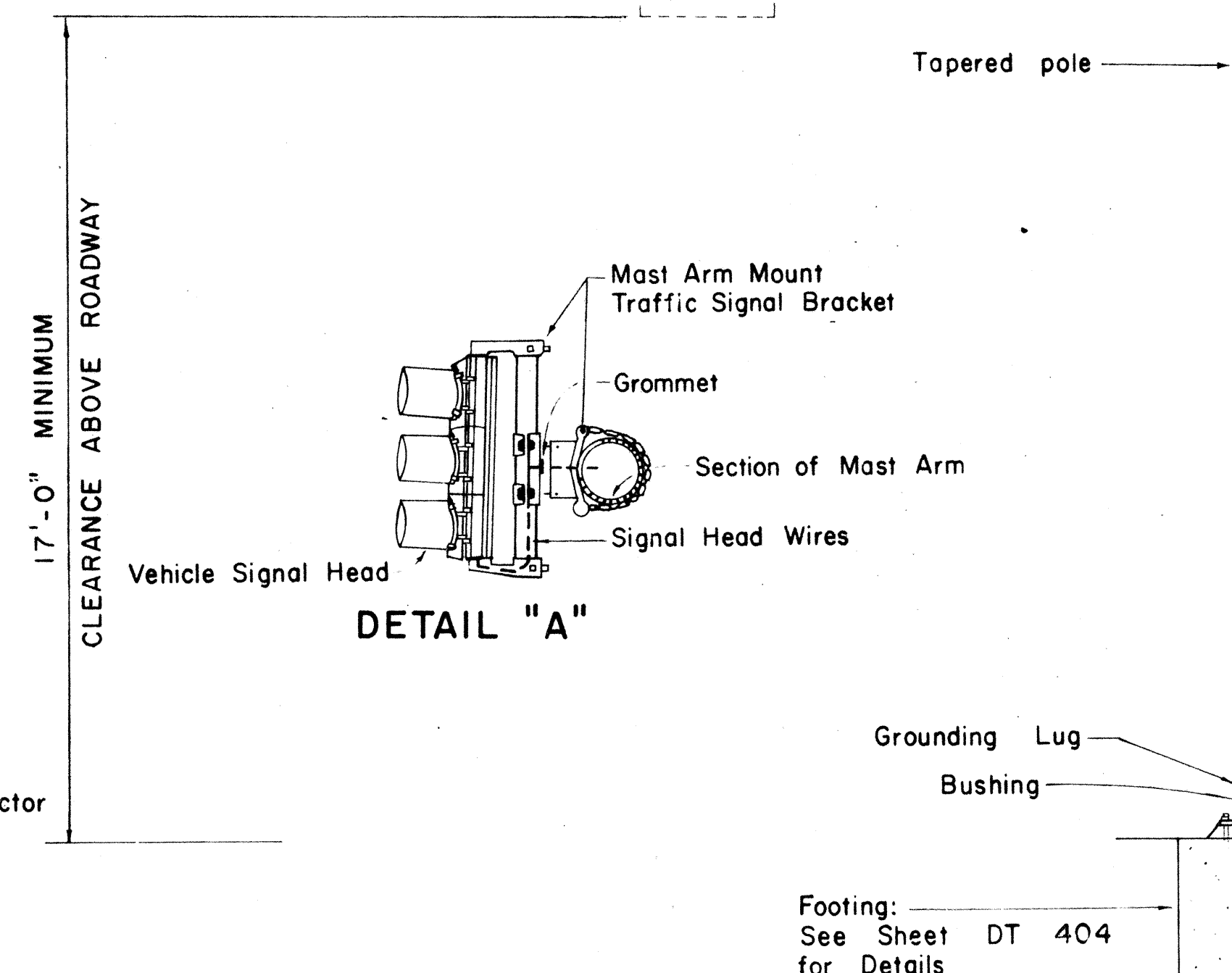
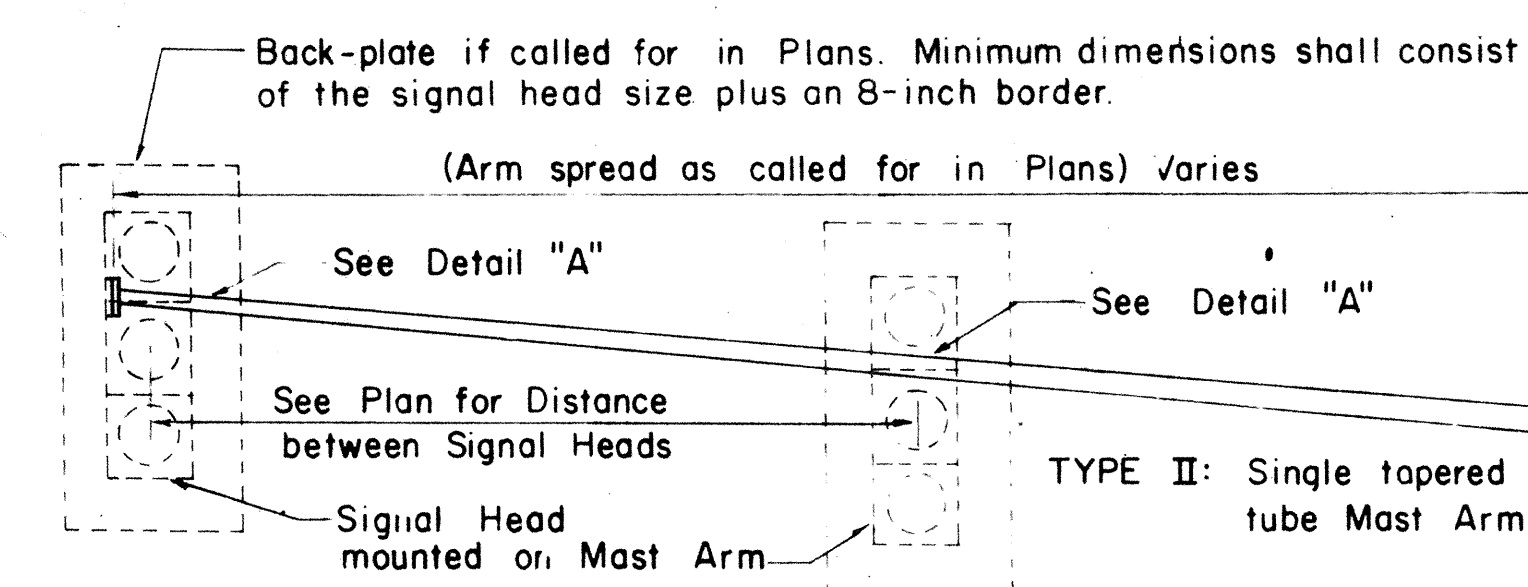
TYPICAL EQUIPMENT MOUNTINGS



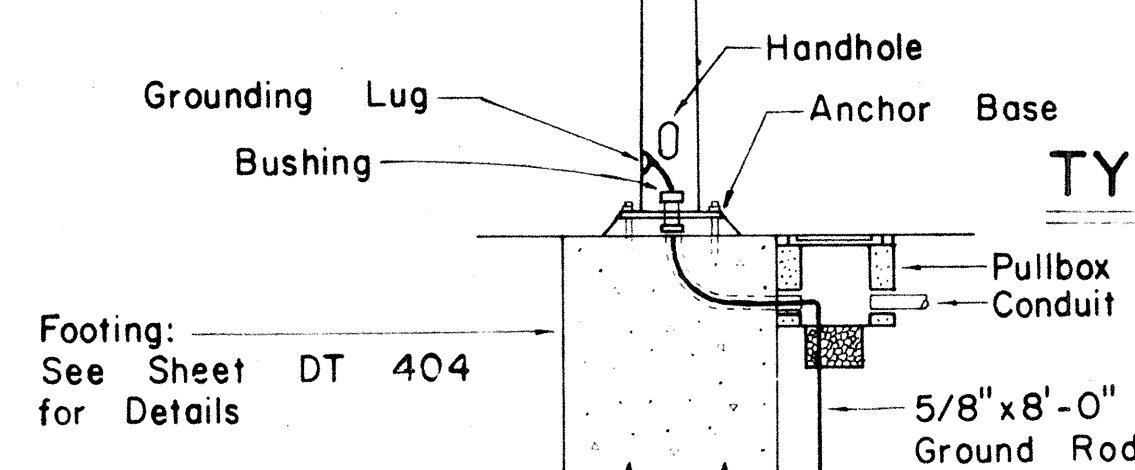
DETAIL OF POLE PLATE CONNECTIONS



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.	HT	3/23/11
2	Revise Details of Traffic and Pedestrian Signals, Standards and Pedestrian Push Button and Signs.	HT	3/5/11
3	Revise signal indications.	HT	4/22/11
4	Remove. Note No. 3 & Revise clearance and dimension.	HT	4/19/11
5	Revise Ped. Signal Indication	HT	8/6/11
6	Added note for back-plate dimensions.	PJO	9-28-11

APPROVAL RECOMMENDED
Erick Tana
TRAFFIC ENGINEER

Assistant Chief Engineering 12/30/69
DATE

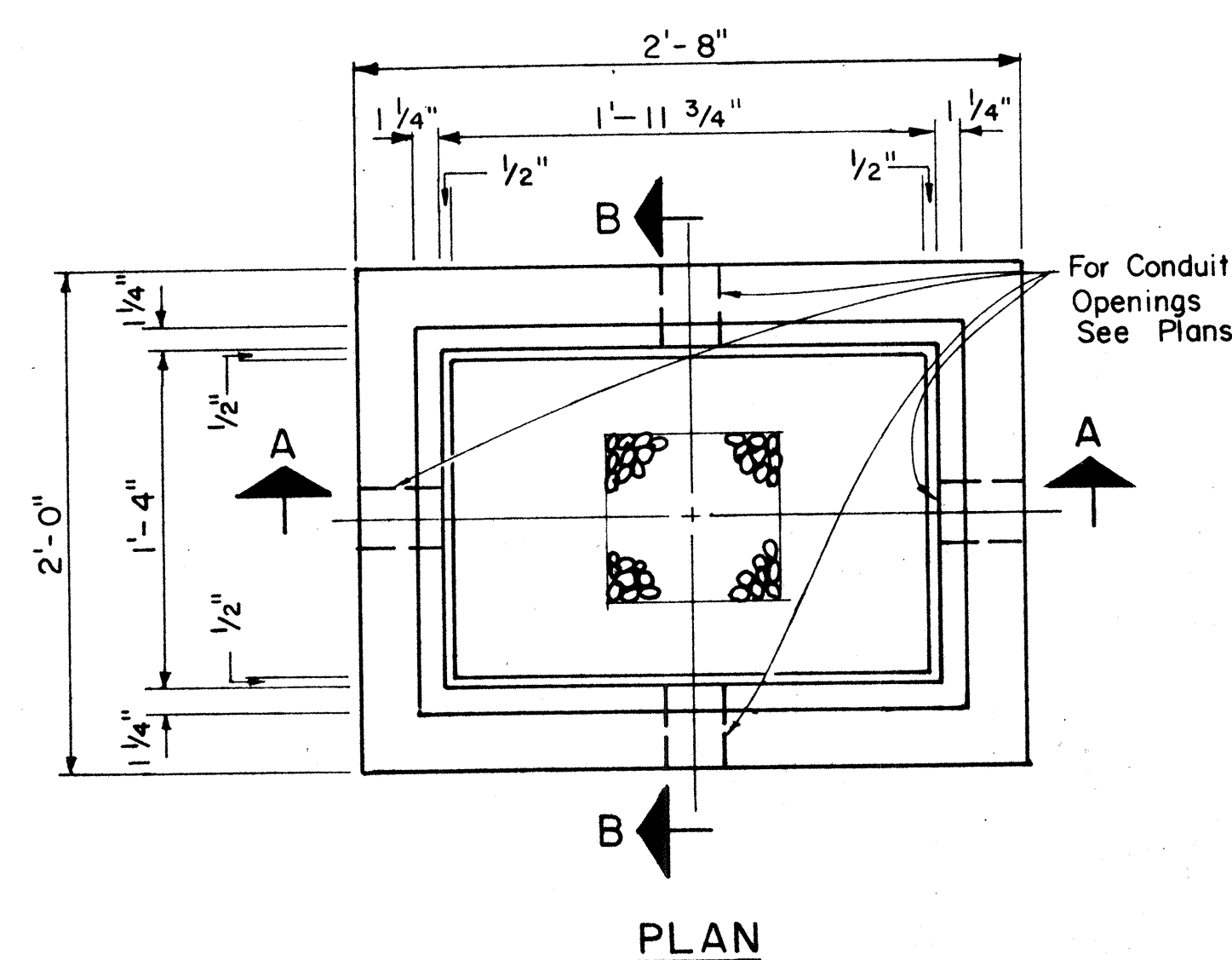
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL SYSTEM

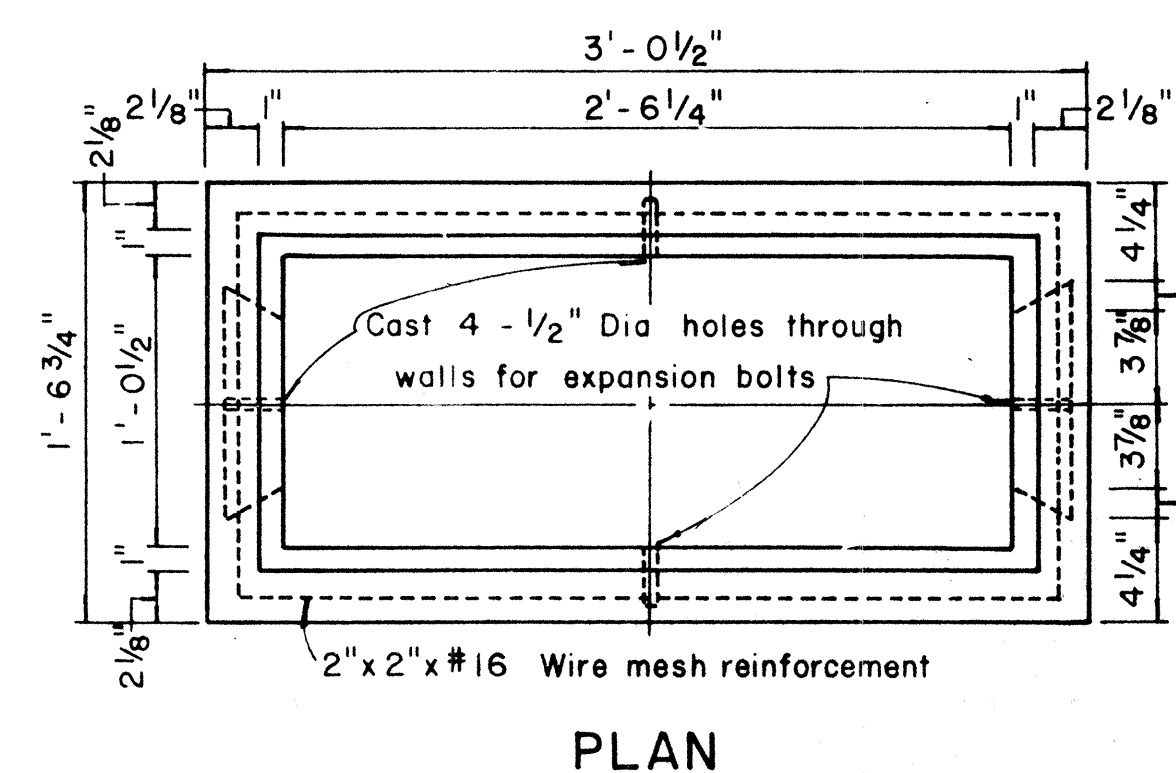
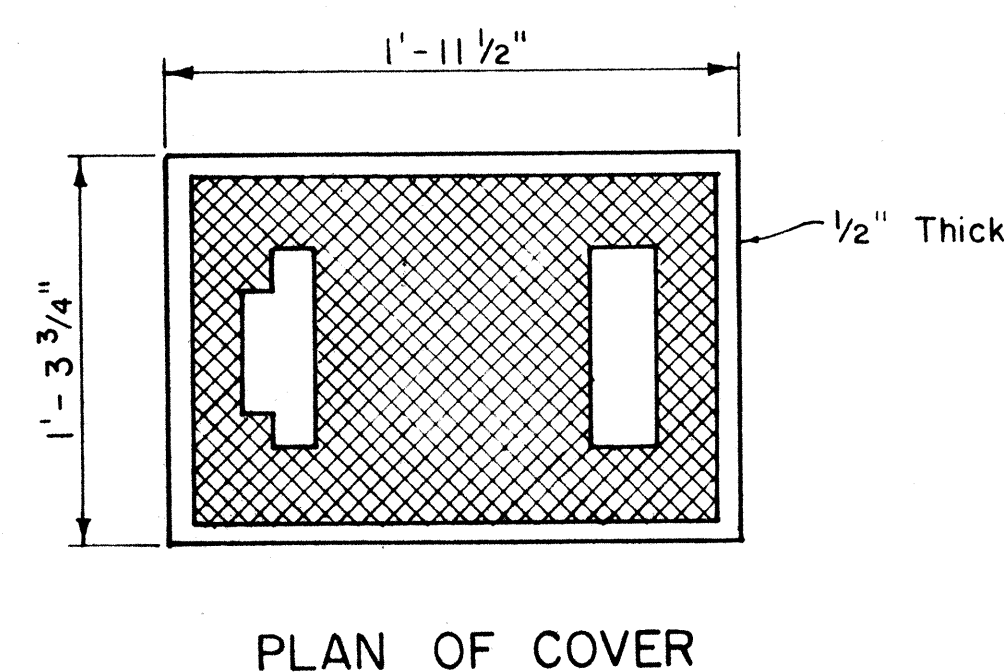
MISCELLANEOUS DETAILS

SHEET No. 7 OF 10 SHEETS DT 400

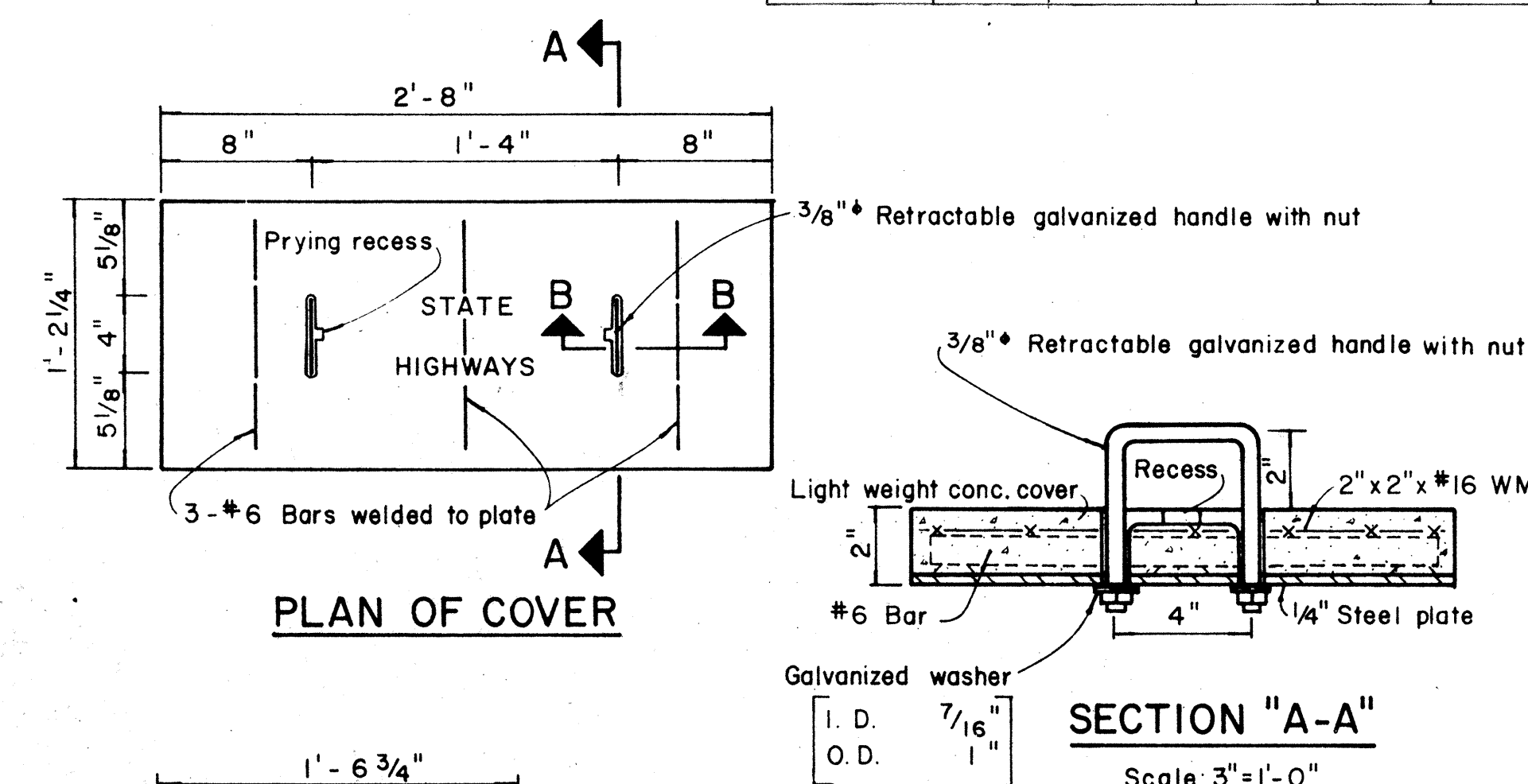
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-84	1984	14	16



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

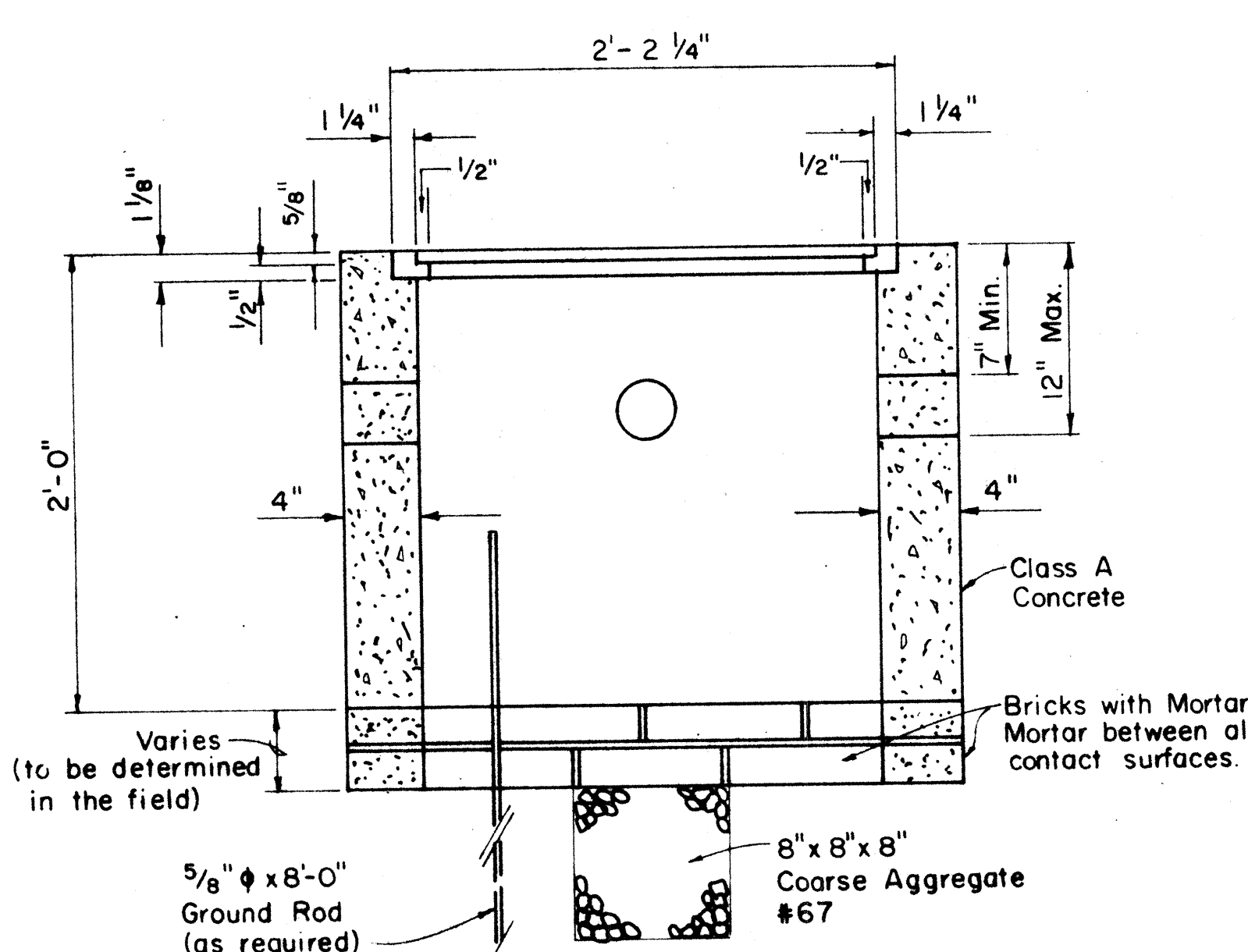


PLAN

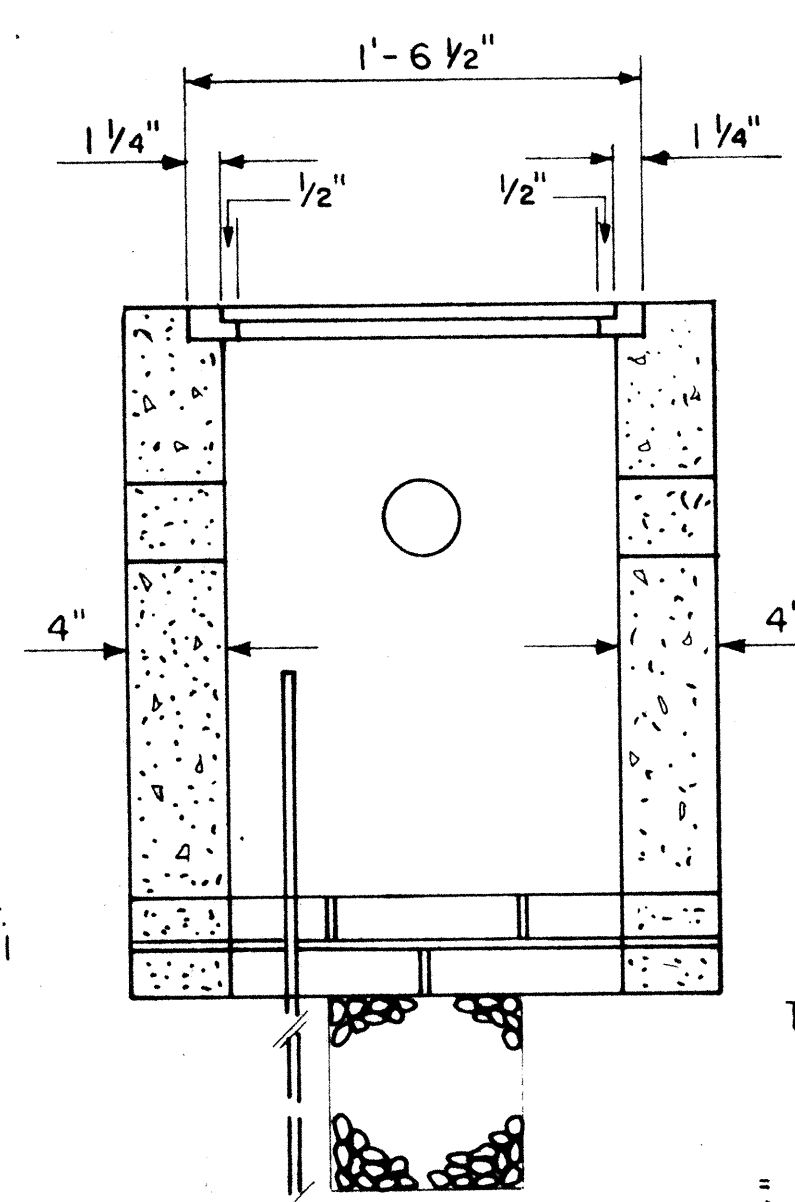


SECTION "A-A'"

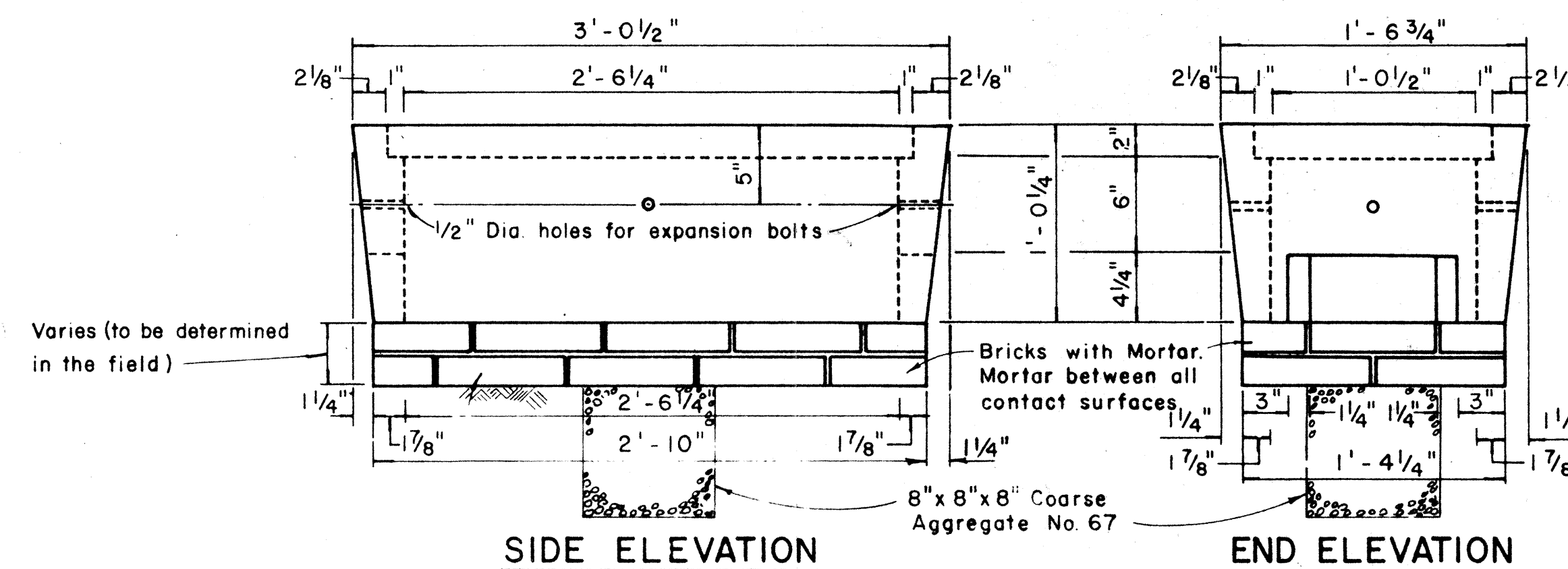
Scale: 3" = 1'-0"



SECTION A-A



SECTION B-B

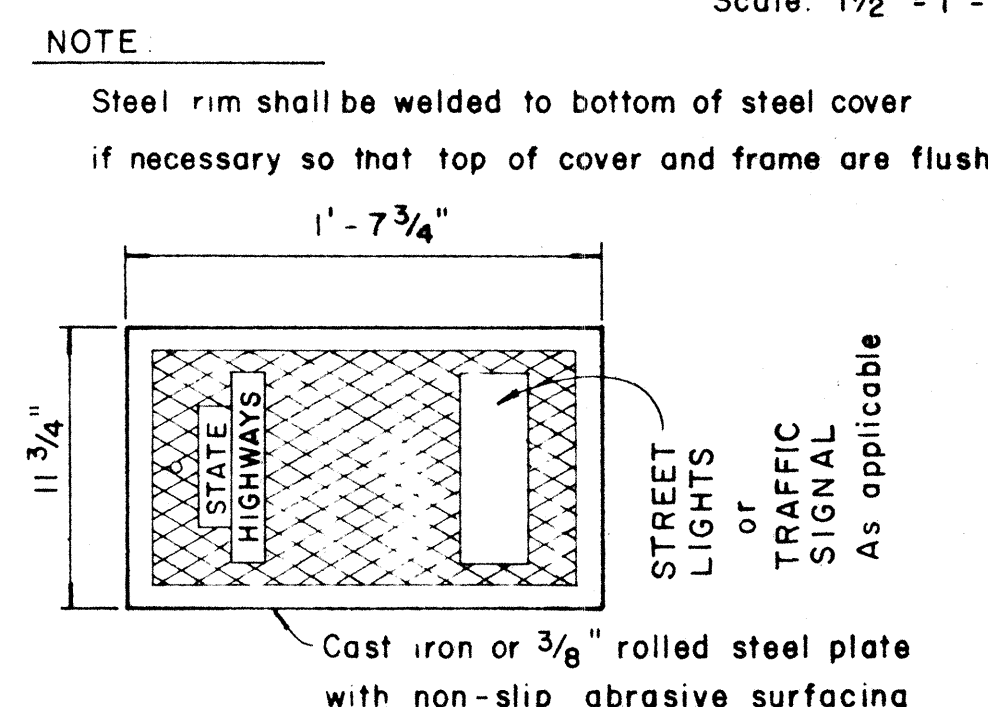


SIDE ELEVATION

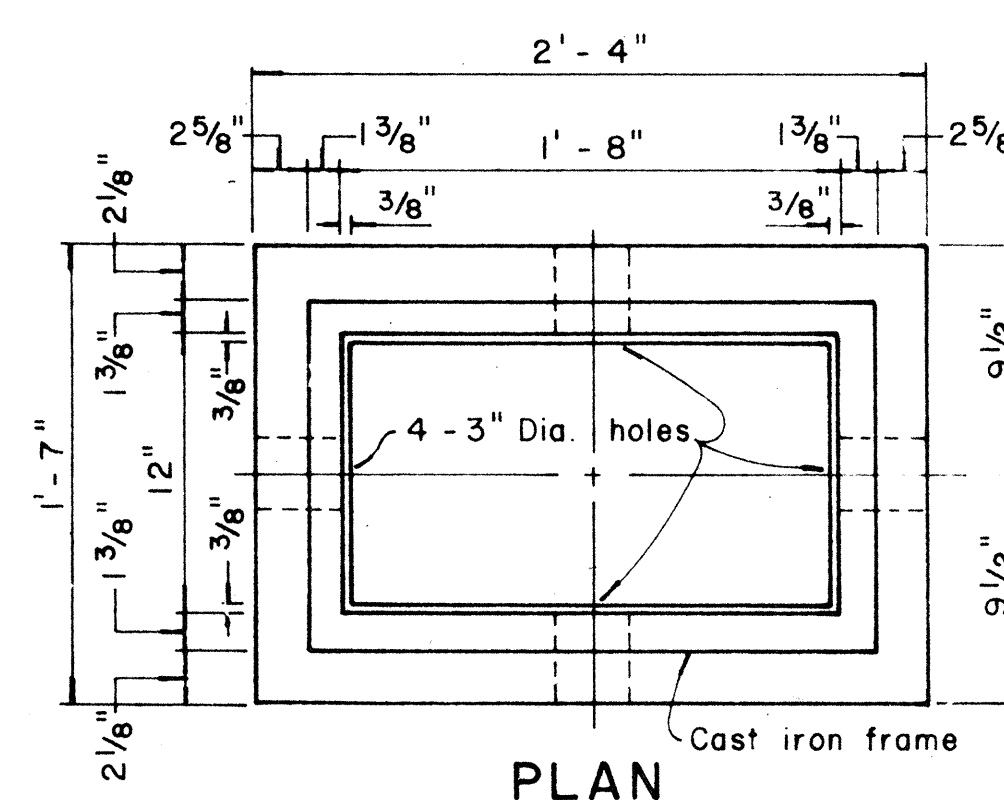
END ELEVATION

TYPE "C" PULLBOX

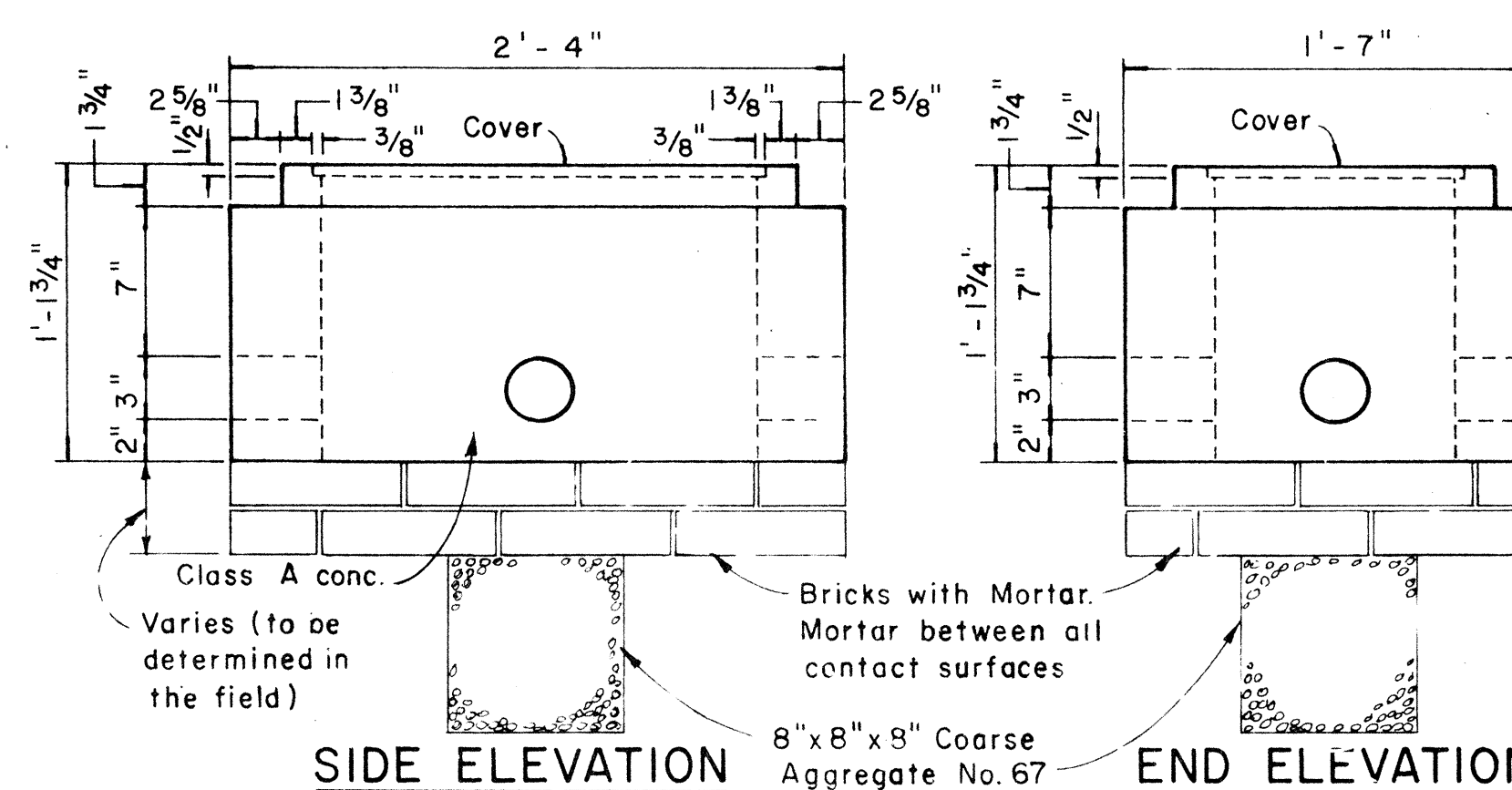
Scale: $1\frac{1}{2}" = 1' - 0"$



PLAN OF COVER



PLAN



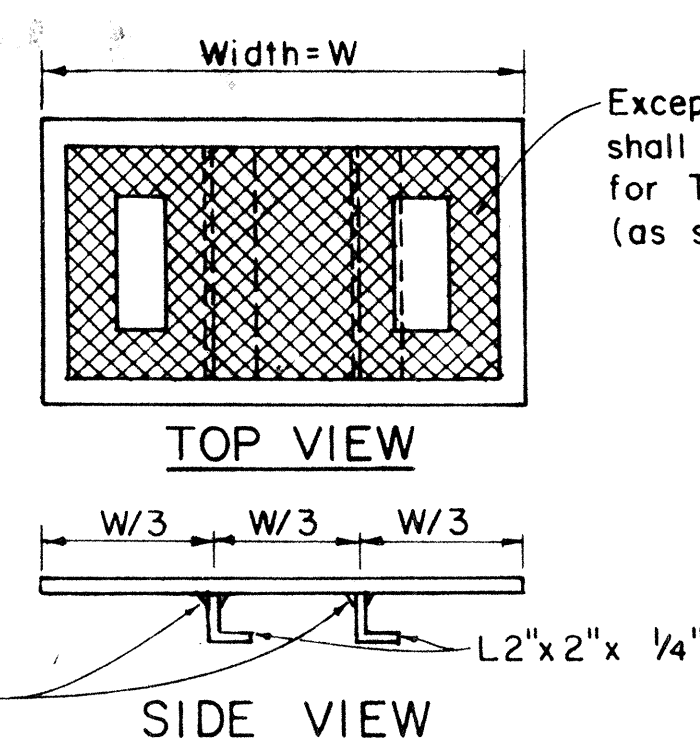
32386-42388

SIDE ELEVATION

END ELEVATION

TYPE "B" PULLBOX

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



TOP VIEW

SIDE VIEW

MODIFIED COVER DETAIL

Not to Scale

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

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

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

APPROVAL RECOMMENDED: *E. J. [Signature]* 12/29/60
TRAFFIC ENGINEER DATE

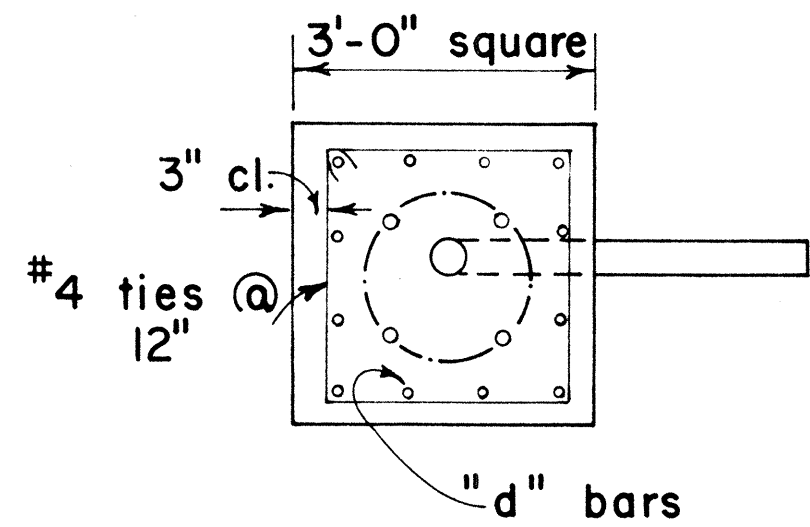
APPROVED: *[Signature]* 12-30-60
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
PULLBOXES

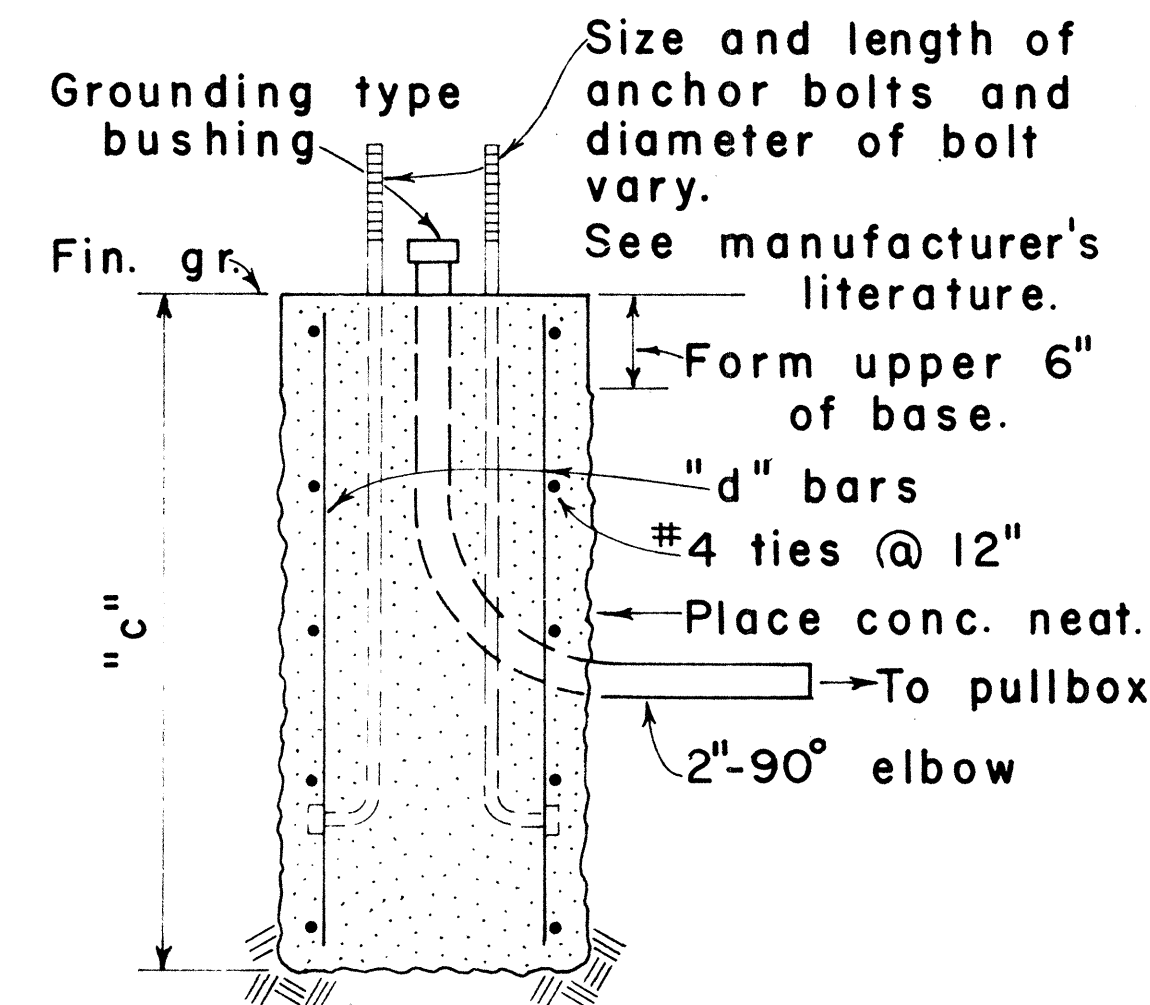
Scale as noted Date

SHEET No 8 OF 10 SHEETS DT 40

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-84	1984	15	16



PLAN - SECTION

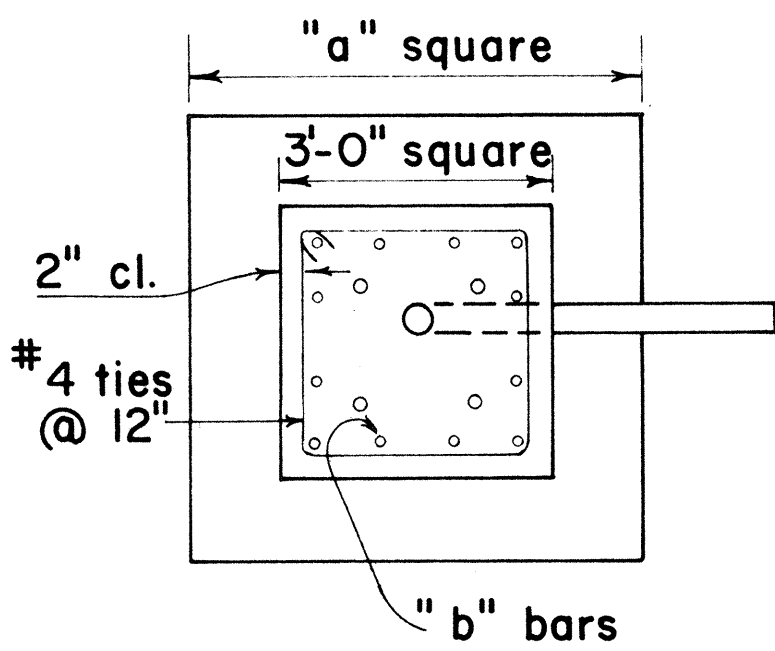


NOTE:
Concrete shall be Class B.

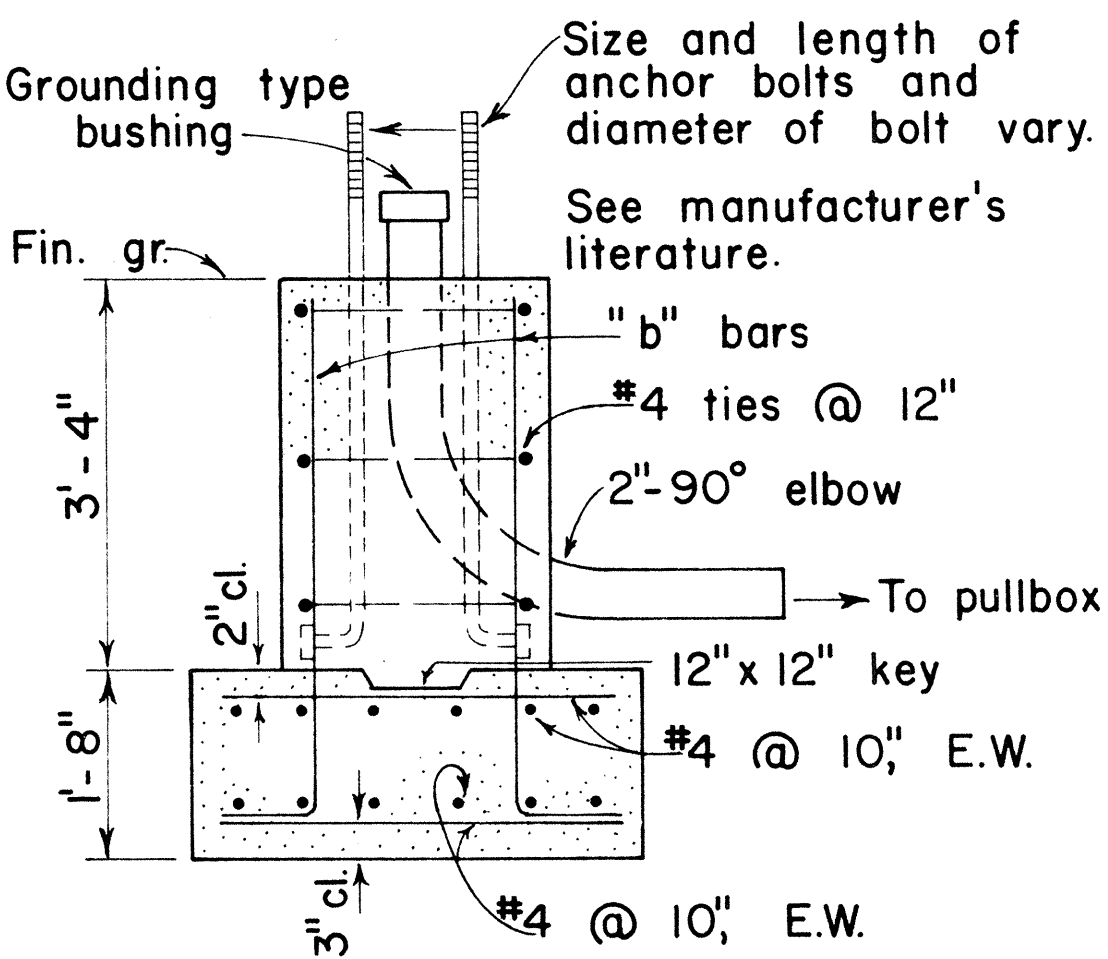
SECTION

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



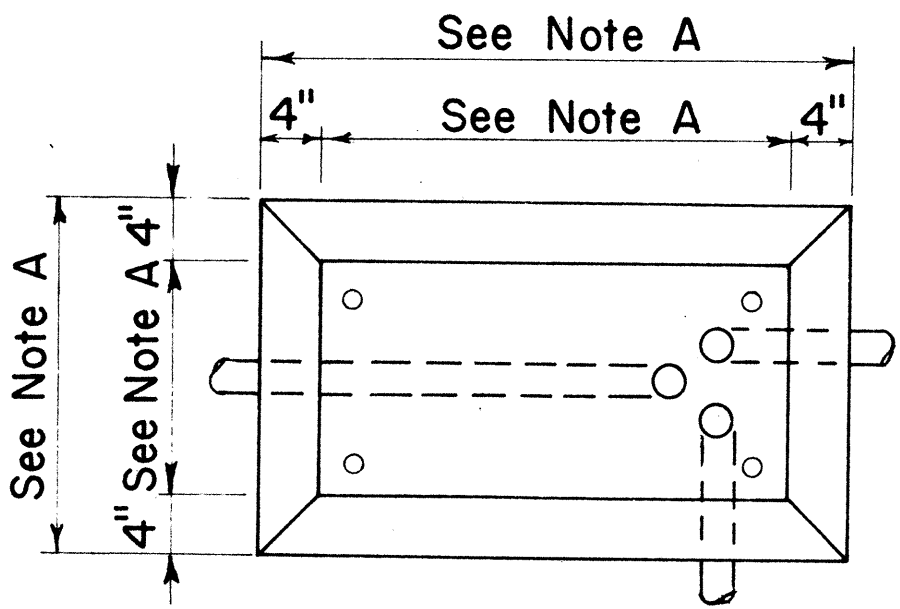
NOTE:
Concrete shall be Class B.

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

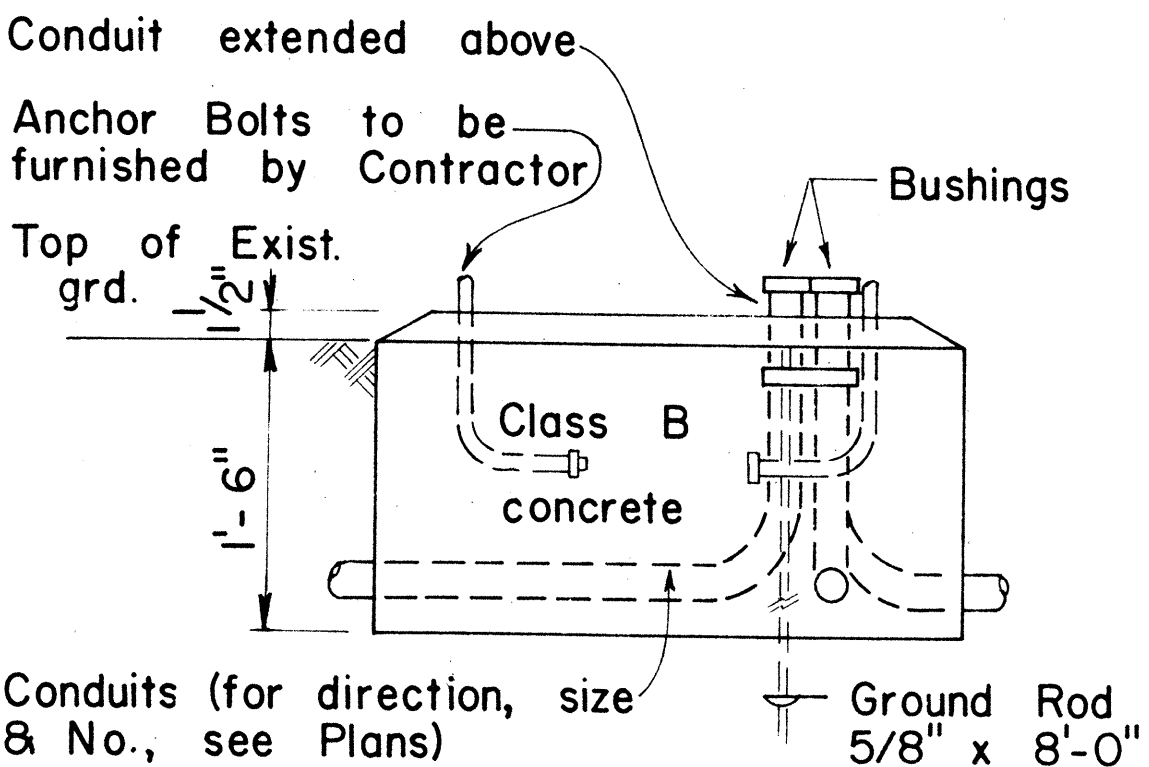
FOOTING FOR MAST ARM STANDARD



PLAN

CONCRETE BASE FOR CONTROLLER CABINET

- 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.



ELEVATION

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

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

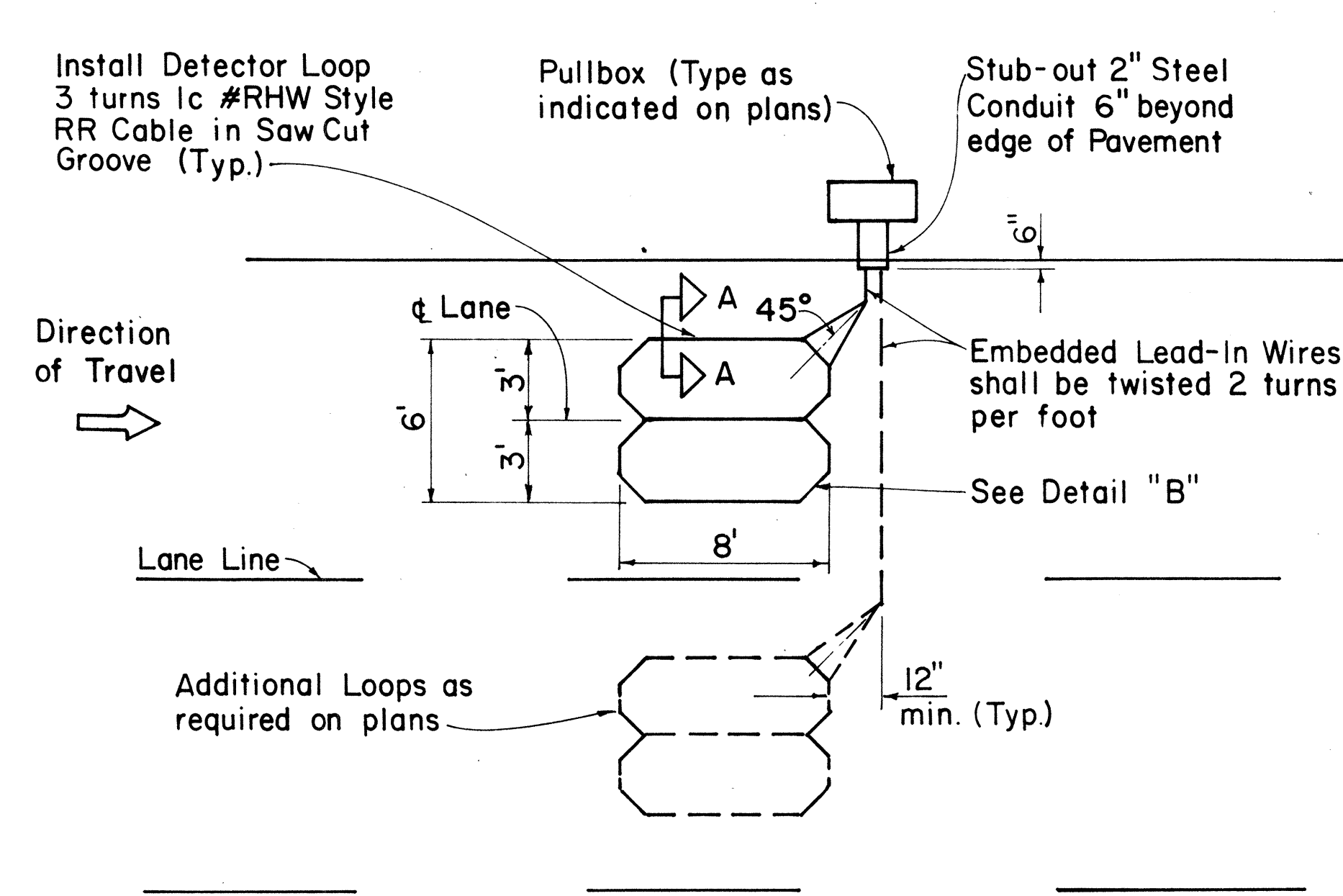
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

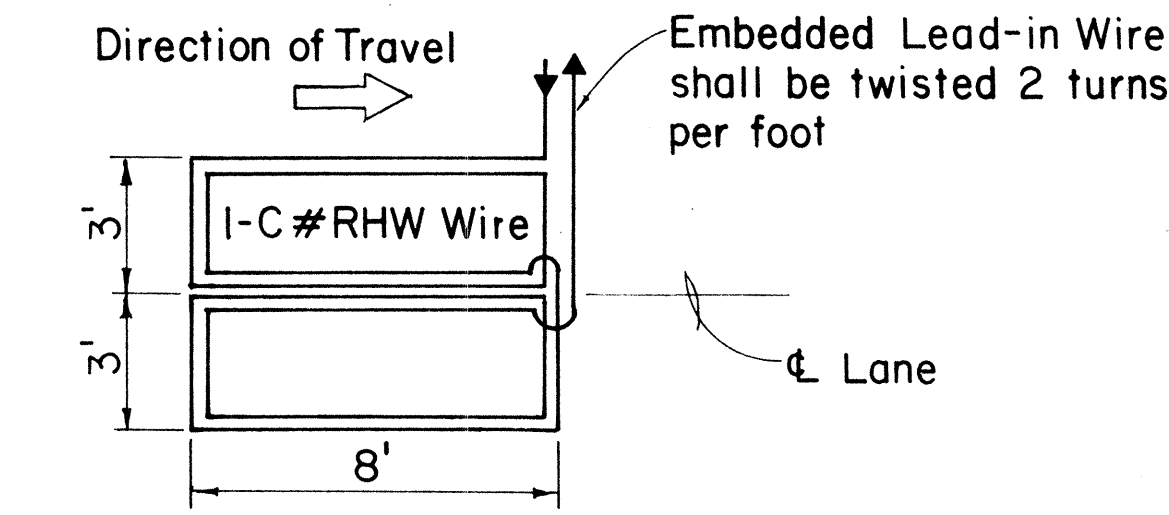
TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS

Not to Scale

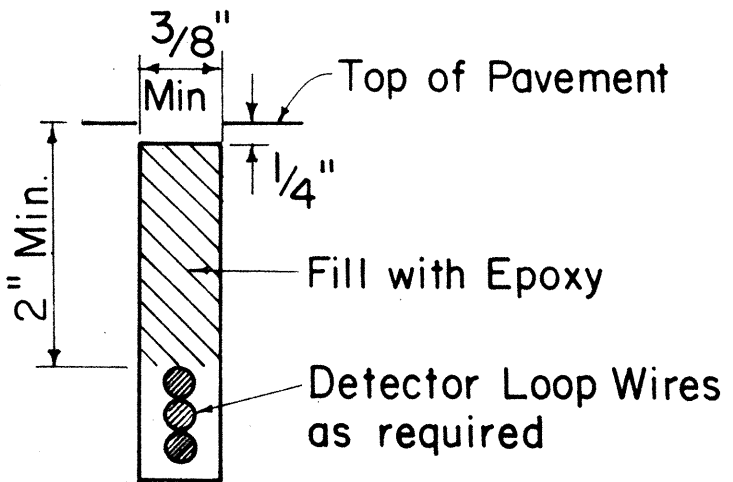
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-84	1984	16	16



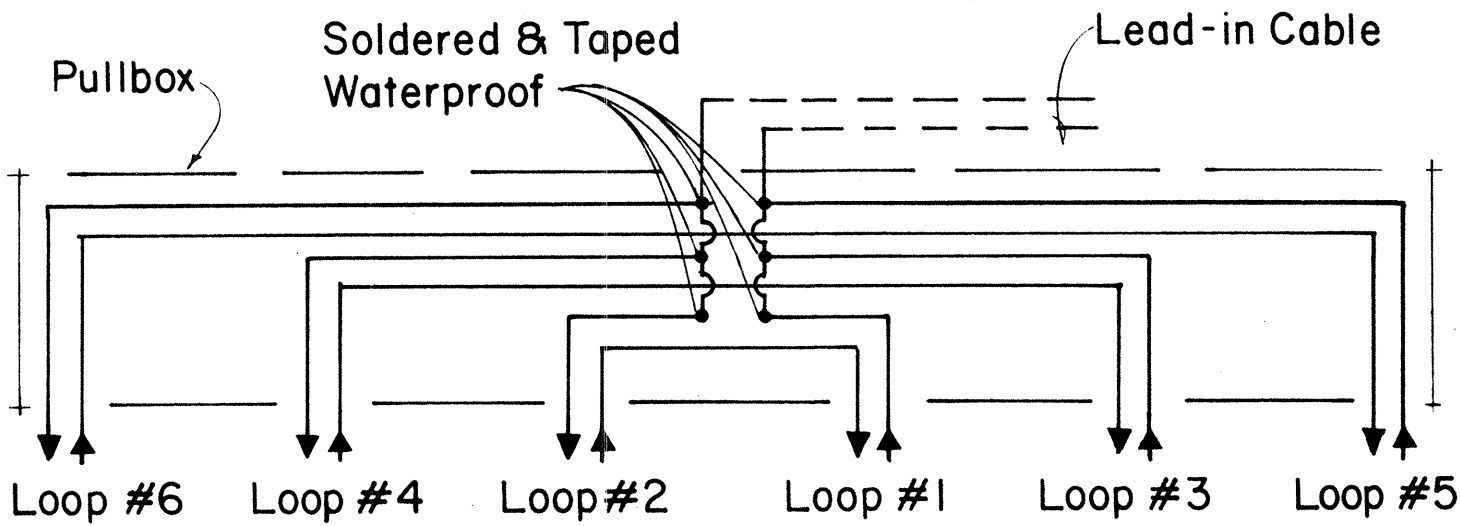
SINGLE LOOP LAYOUT



WIRING DIAGRAM



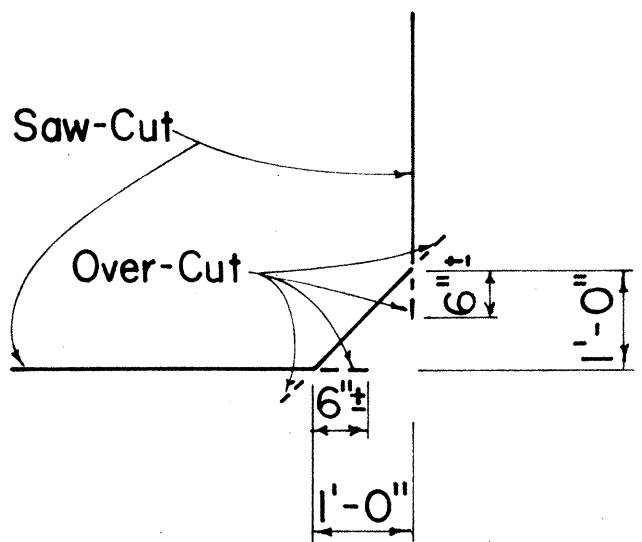
DETECTOR LOOP SAW-CUT SECTION A-A (TYPICAL)



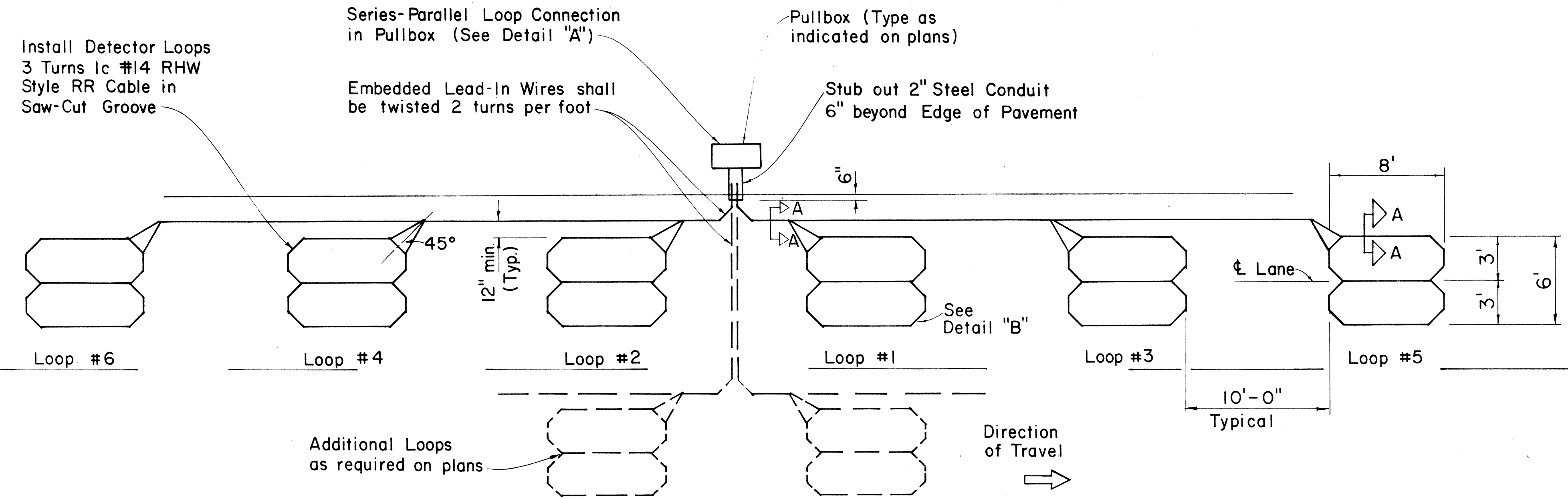
DETAIL "A"

TYPICAL SERIES-PARALLEL LOOP CONNECTION

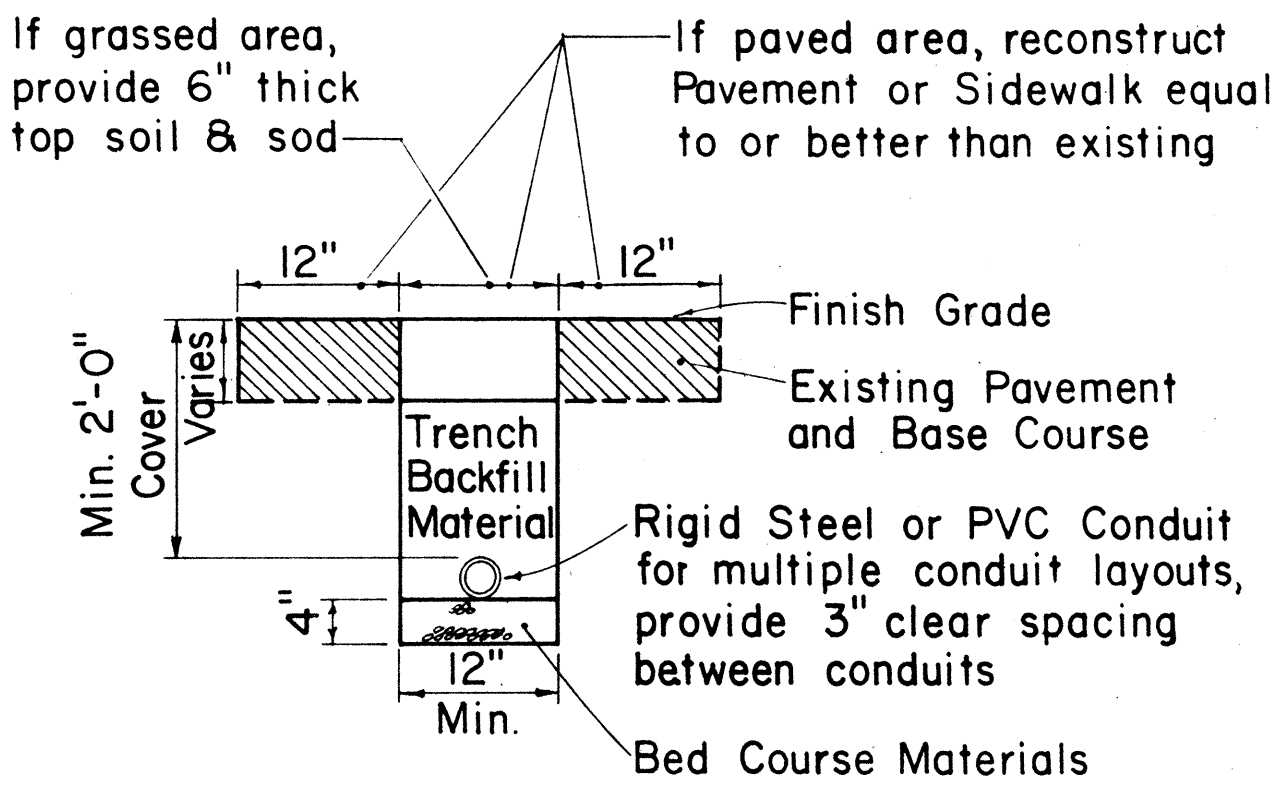
Note: Back-Fill Over-Cuts with Epoxy



DETAIL "B" SAW-CUT AT CORNERS



MULTIPLE LOOP LAYOUT



TYPICAL TRENCH SECTION FOR CONDUIT

NOTE:

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

APPROVAL RECOMMENDED:
Erich Tanaka 9/26/80
TRAFFIC ENGINEER DATE
APPROVED:
[Signature] 1/3/81
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Replaces Sht. DT 405 dated 3/5/76	H.T.	3/5/76
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. 10 OF 10 SHEETS DT 405

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