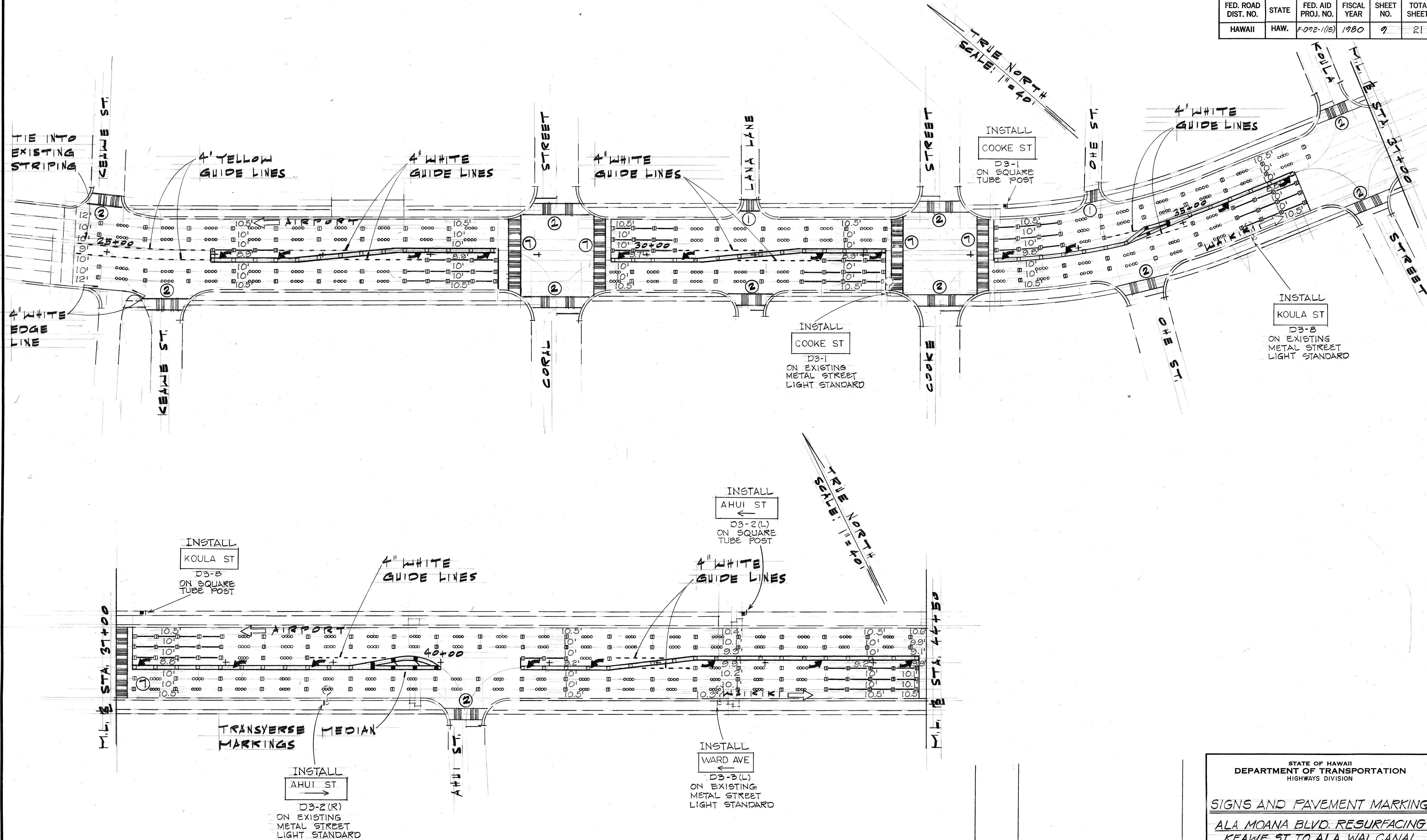


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-092-1(15)	1980	9	21



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

6/9/80	Added Advance Street Name Signs.
Date	Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNS AND PAVEMENT MARKING

ALA MOANA BLVD. RESURFACING
KEAWE ST. TO ALA WAI CANAL

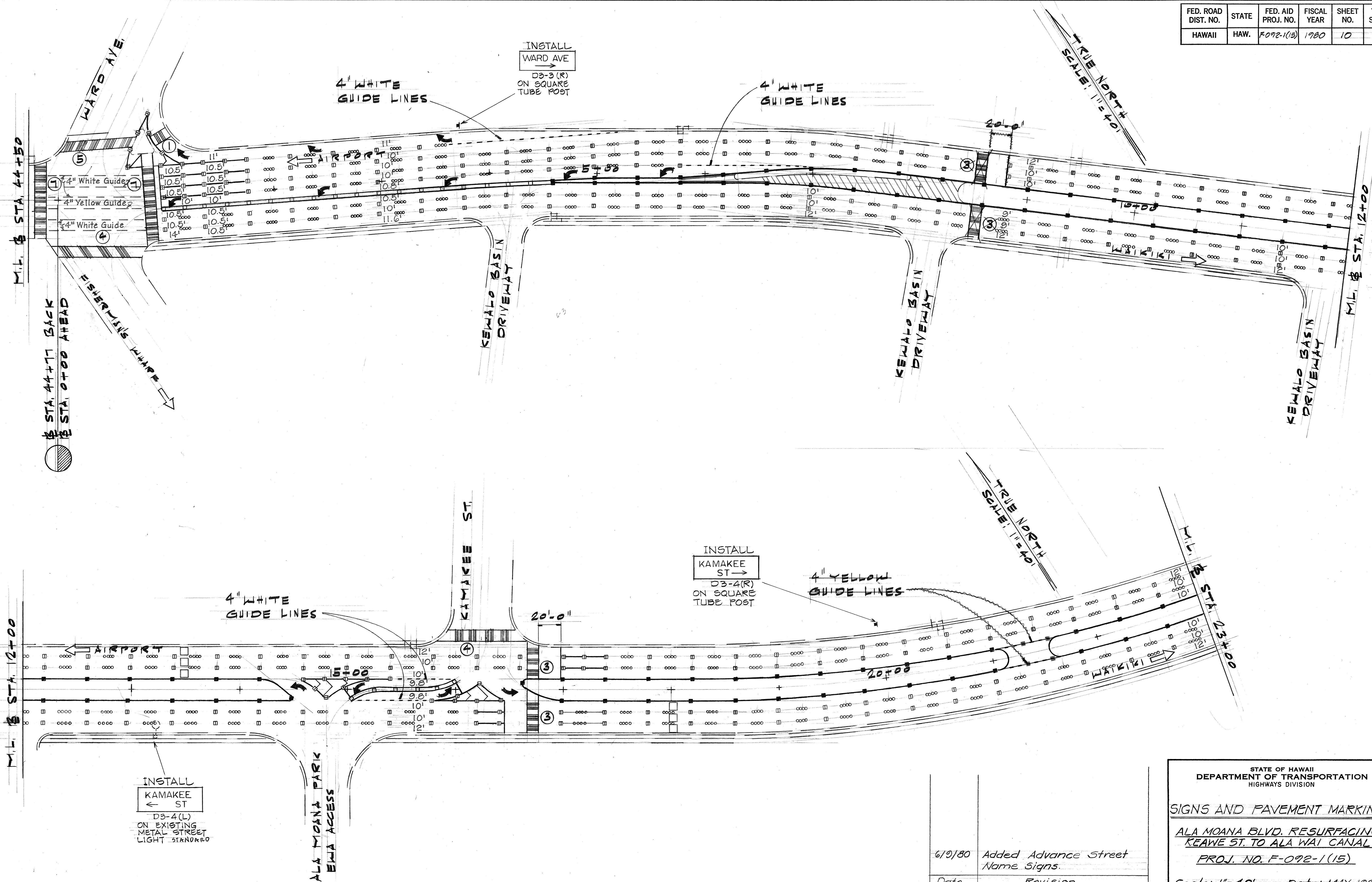
PROJ. NO. F-092-1(15)
Scale: 1"=40' Date: MAY 1980

SHEET No. 1 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-092-1(15)	1980	10	21

D-4-7

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	



6/9/80	Added Advance Street Name Signs
Date	Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNS AND PAVEMENT MARKINGS

ALA MOANA BLVD. RESURFACING
KEAWE ST. TO ALA WAI CANAL

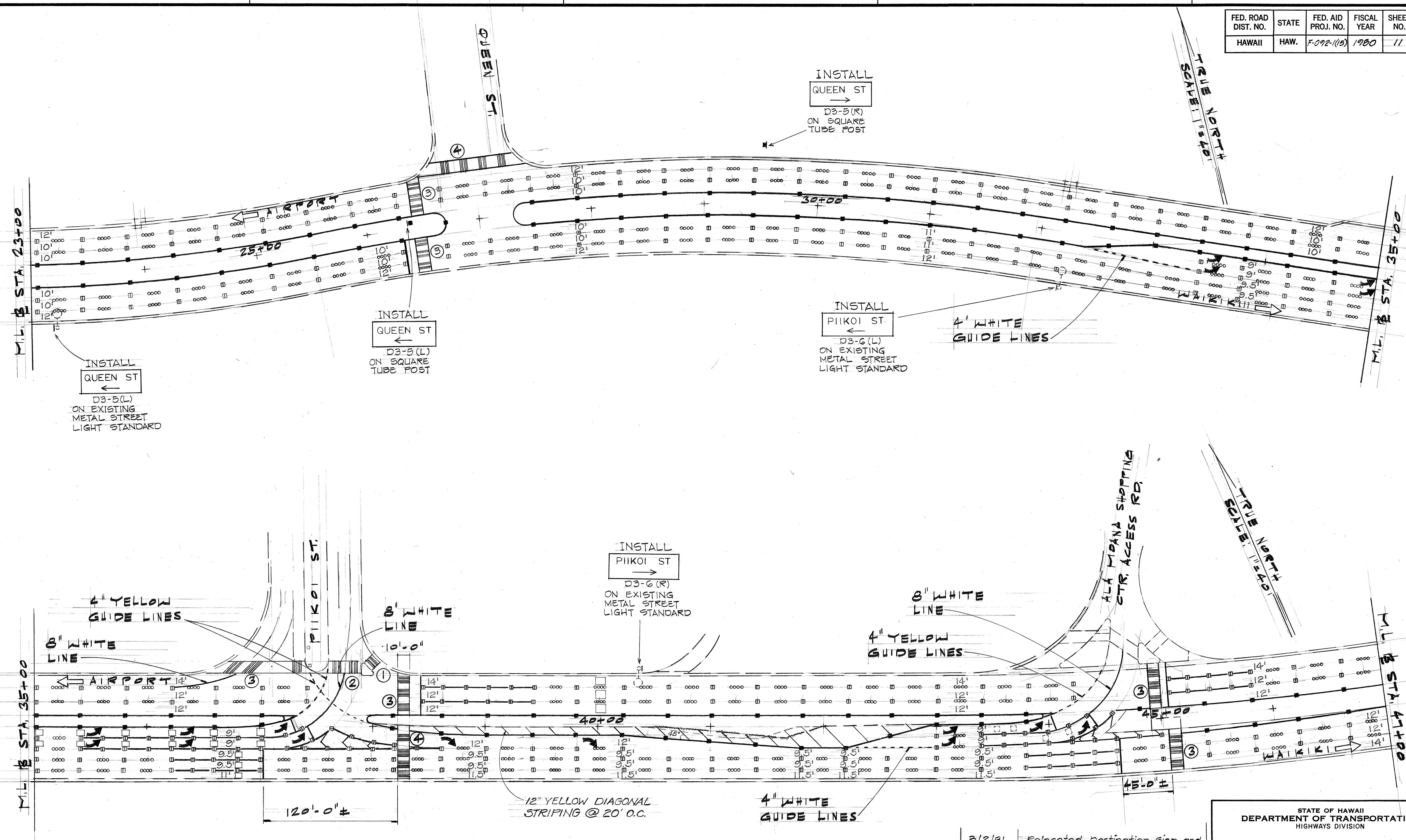
PROJ. NO. F-092-1(15)

Scale: 1"=40' Date: MAY 1980

SHEET NO. 2 OF 11 SHEETS

ADD 10

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-092-1(15)	1980	11	21



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

3/2/81	Relocated Destination sign and Added Crosswalk and Stop Line
6/9/80	Added 12" Yellow Diagonal Striping
6/9/80	Added Advance Street Name Signs.
Date	Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNS AND PAVEMENT MARKING

ALA MOANA BLVD. RESURFACING
KEAWE ST. TO ALA WAI CANAL

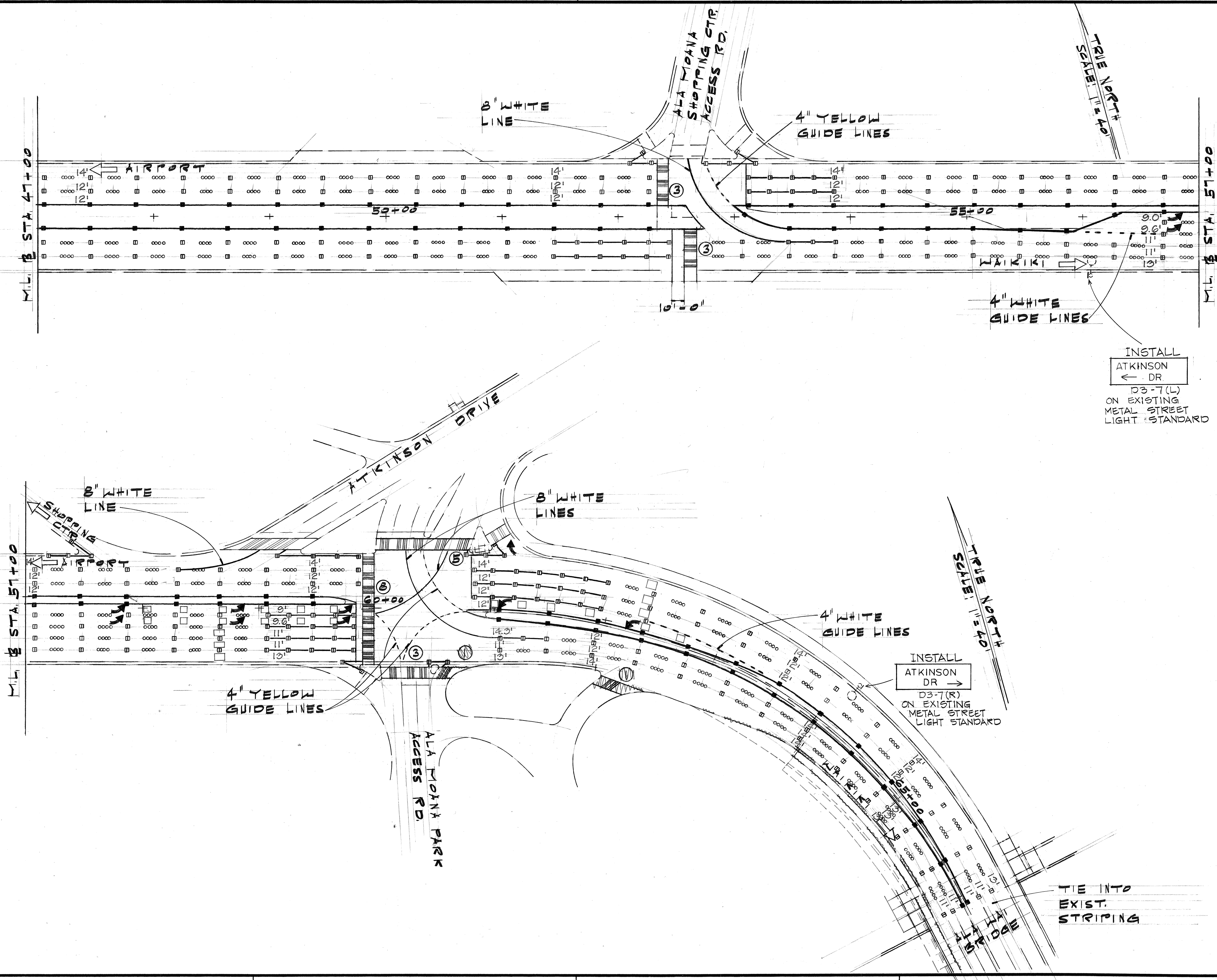
PROJ. NO. F-092-1(15)

Scale: 1"=40' Date: MAY 1980

SHEET NO. 3 OF 11 SHEETS

C.O. ADD 11

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-092-1(15)	1980	12	21



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

6/9/80	Added Advance Street Name Signs.
Date	Revision

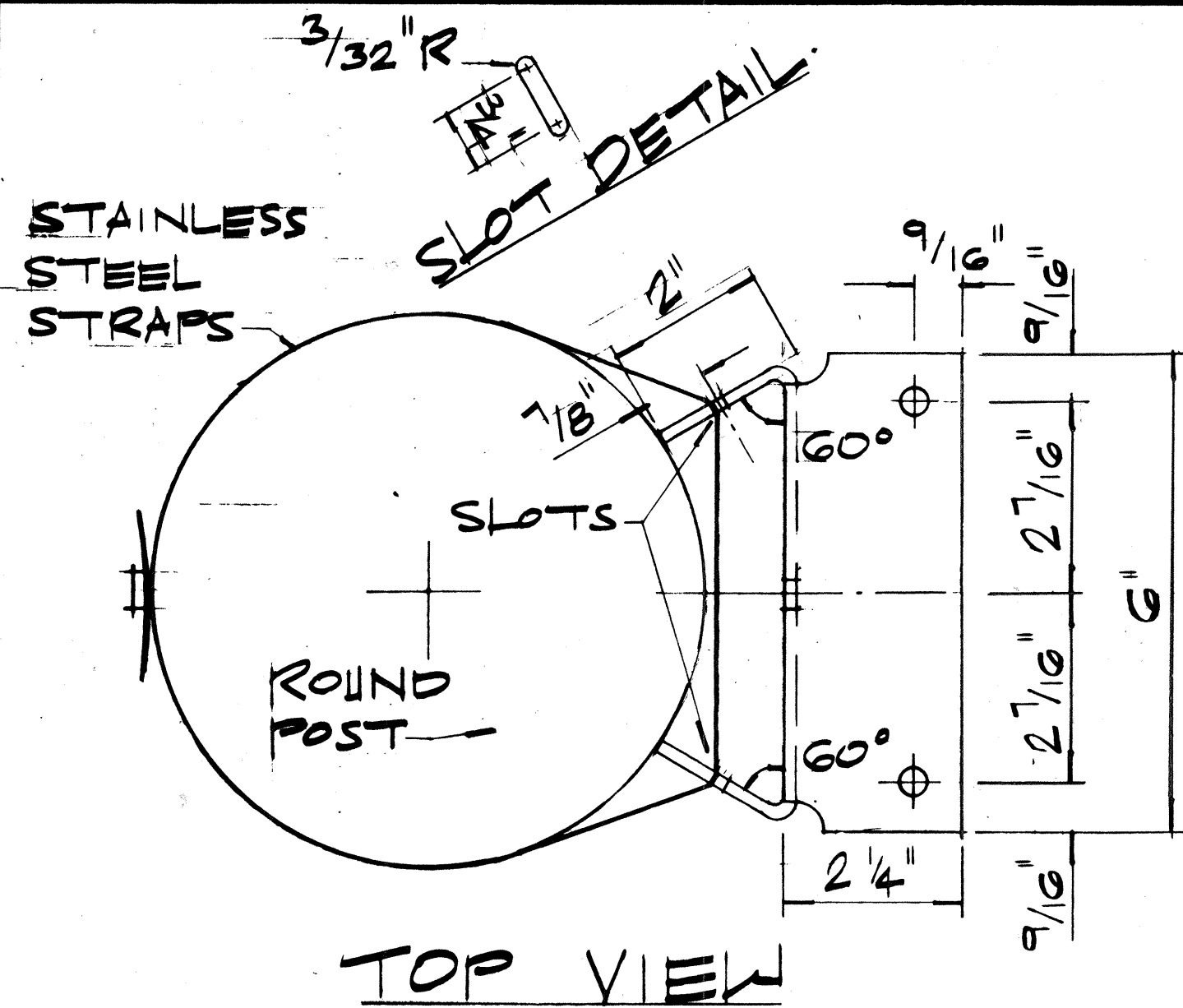
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNS AND PAVEMENT MARKINGS

ALA MOANA BLVD. RESURFACING
KEAWE ST. TO ALA WAI CANAL
PROJ. NO. F-092-1(15)

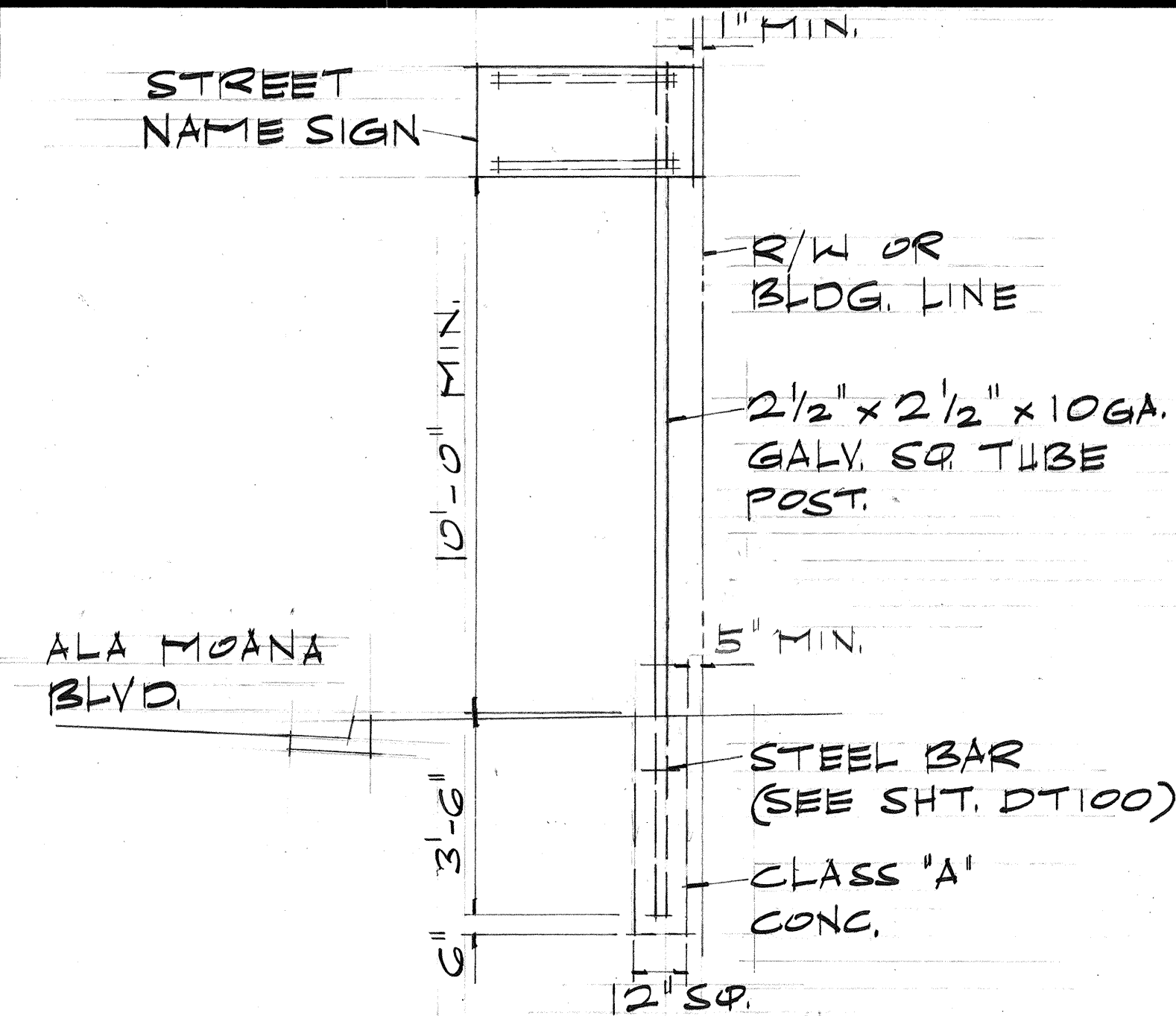
Scale: 1"=40' Date: MAY 1980
SHEET NO. 4 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-092-1(15)	1980	ADD. 13 S-2	21



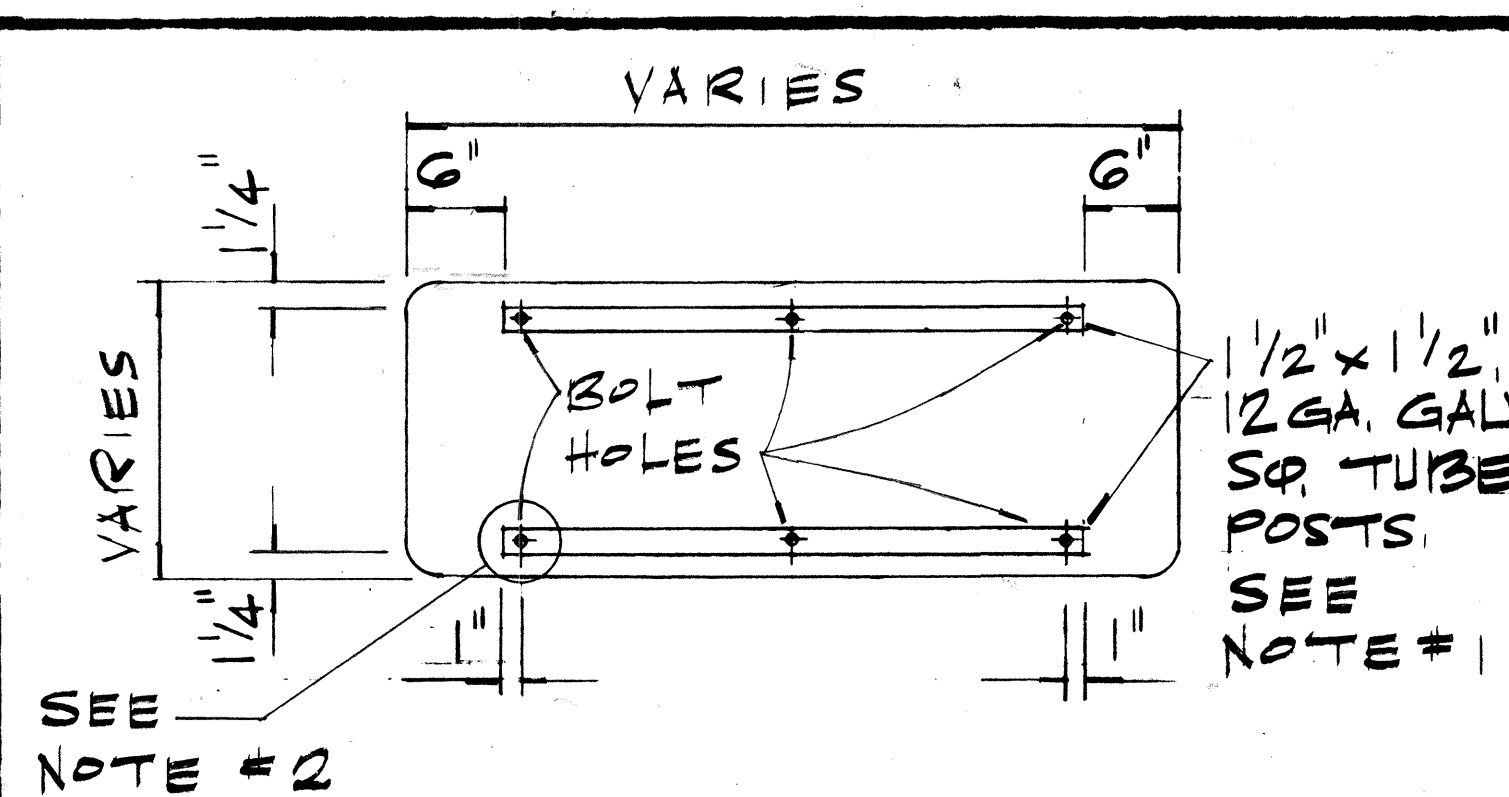
NOTE:

1. MATERIAL TO BE 12 GA. HOT ROLLED STEEL SHEET, LOW CARBON, COMMERCIAL QUALITY, SPECIFICATIONS QPS-636, GRADE 1010.
2. BRACKET TO BE HOT DIPPED GALV. AFTER FABRICATION PER SPECIFICATION ASTM-A-123-68.
3. ALL BEND RADIUS TO BE 1/8\"
4. DEBURR ALL SHARP EDGES
5. TOLERANCES: DIMENSIONS, $\pm 1/32$ \"



TYPICAL UNBALANCED SIGN
INSTALLATION ON SQ TUBE POST

SCALE: 3/8\" = 1'-0"

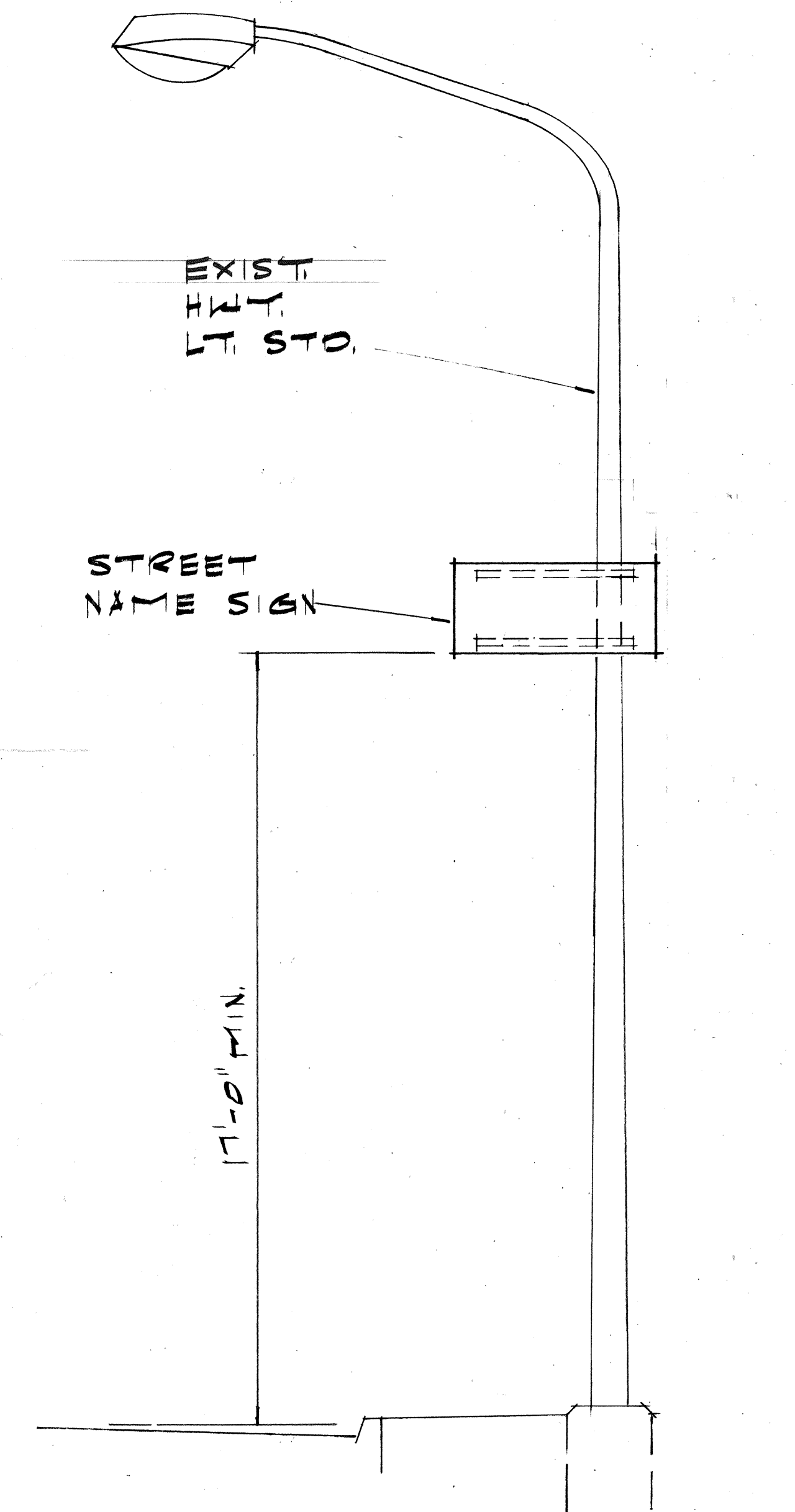


TYPICAL FRAME LAYOUT

SCALE: 1\" = 1'-0"

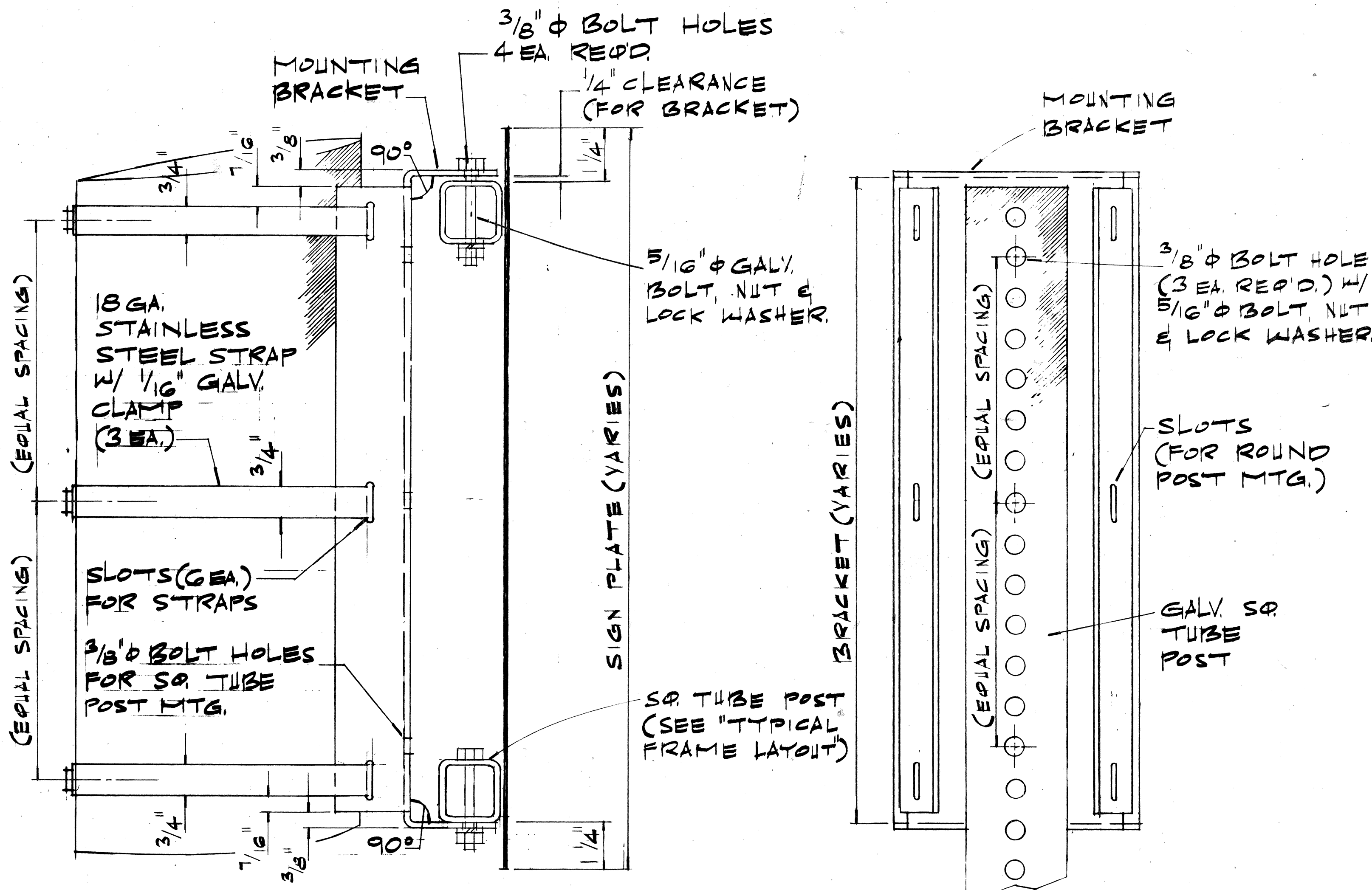
NOTE:

1. SQ. TUBE POSTS SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.
2. SIGN PANEL SHALL BE ATTACHED TO SQ. TUBE POST WITH 5/16\"



TYPICAL UNBALANCED SIGN
INSTALLATION ON HWY. LT. STD.

SCALE: 3/8\" = 1'-0"



SIDE VIEW

(ROUND POST MOUNTING)

BACK VIEW

(SQ TUBE POST MOUNTING)

MOUNTING BRACKET FOR UNBALANCED SIGN INSTALLATION

HALF SCALE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UNBALANCED SIGN INSTALLATION

ALA MOANA BLVD. RESURFACING
KEAWE ST. TO ALA WAI CANAL
PROJ. NO. F-092-1(15)

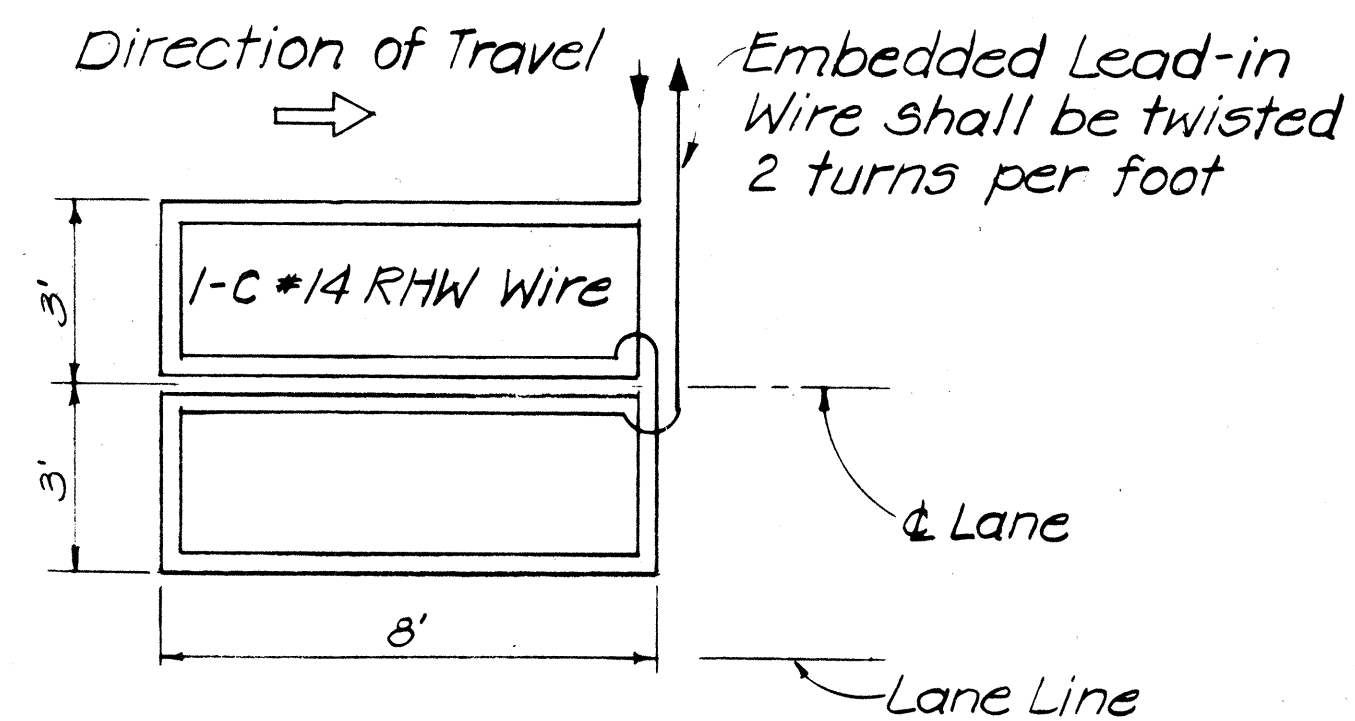
SCALE: AS SHOWN

JUNE 9, 1980

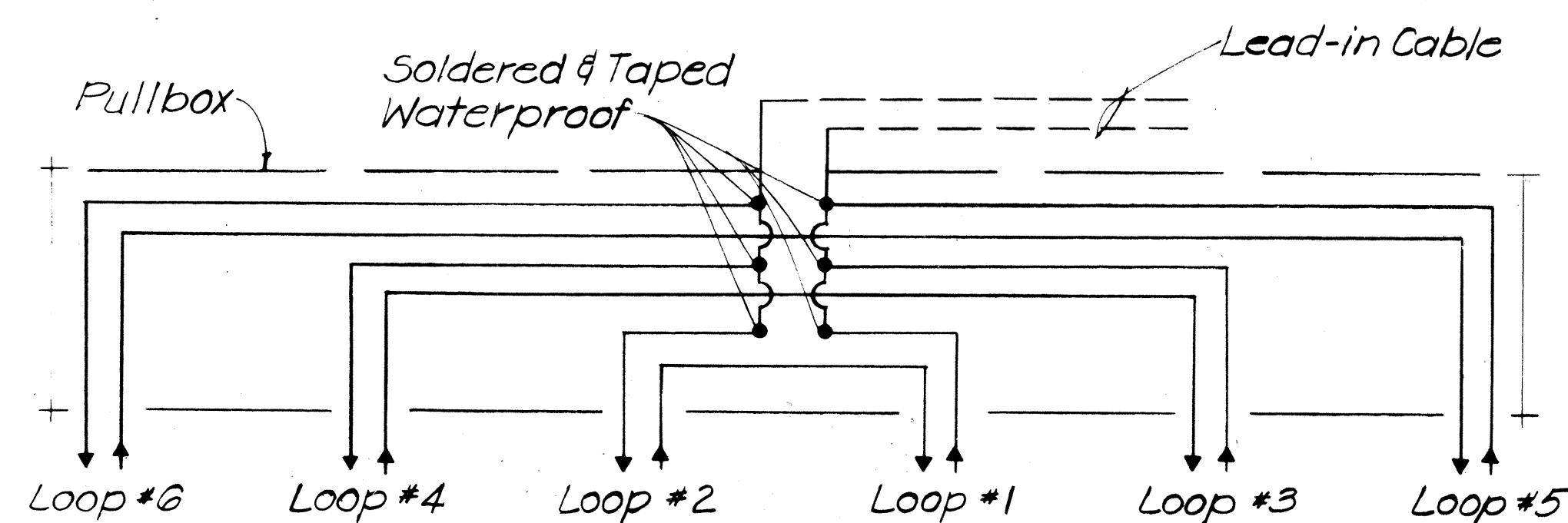
SHEET NO. 53 OF 11 SHEETS

ADD. 13 S-2

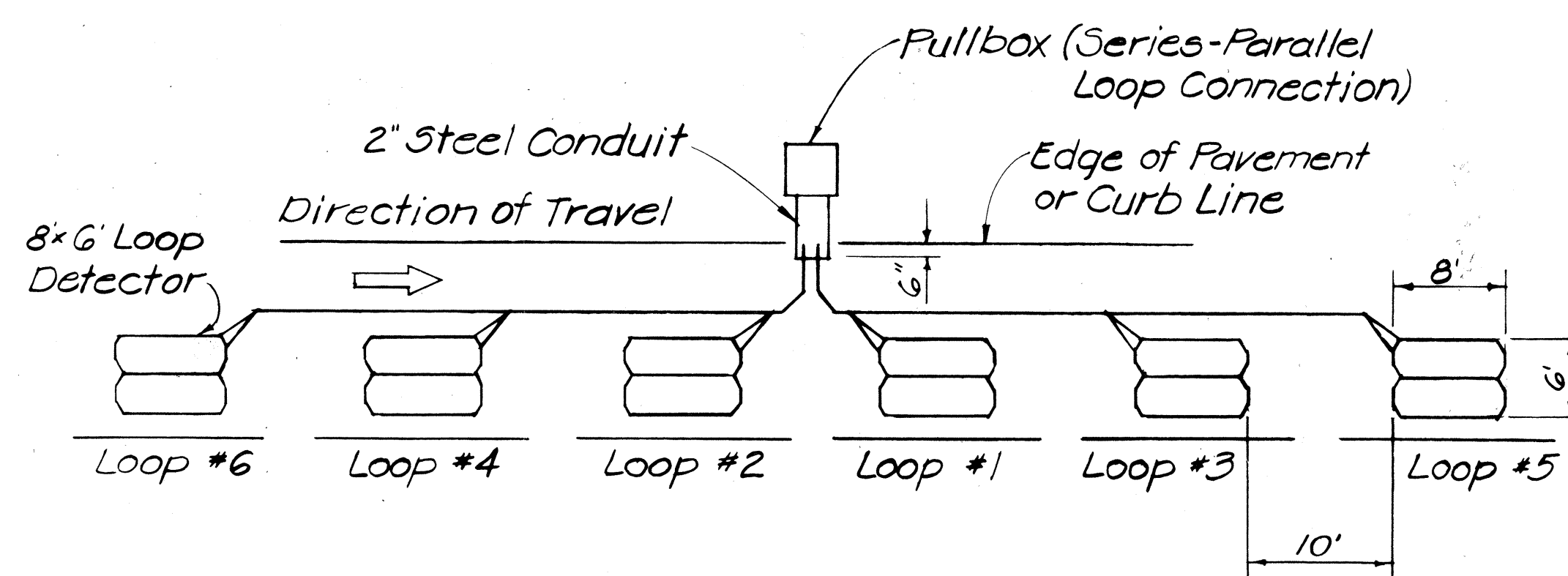
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F092-1(15)	1980	15	21



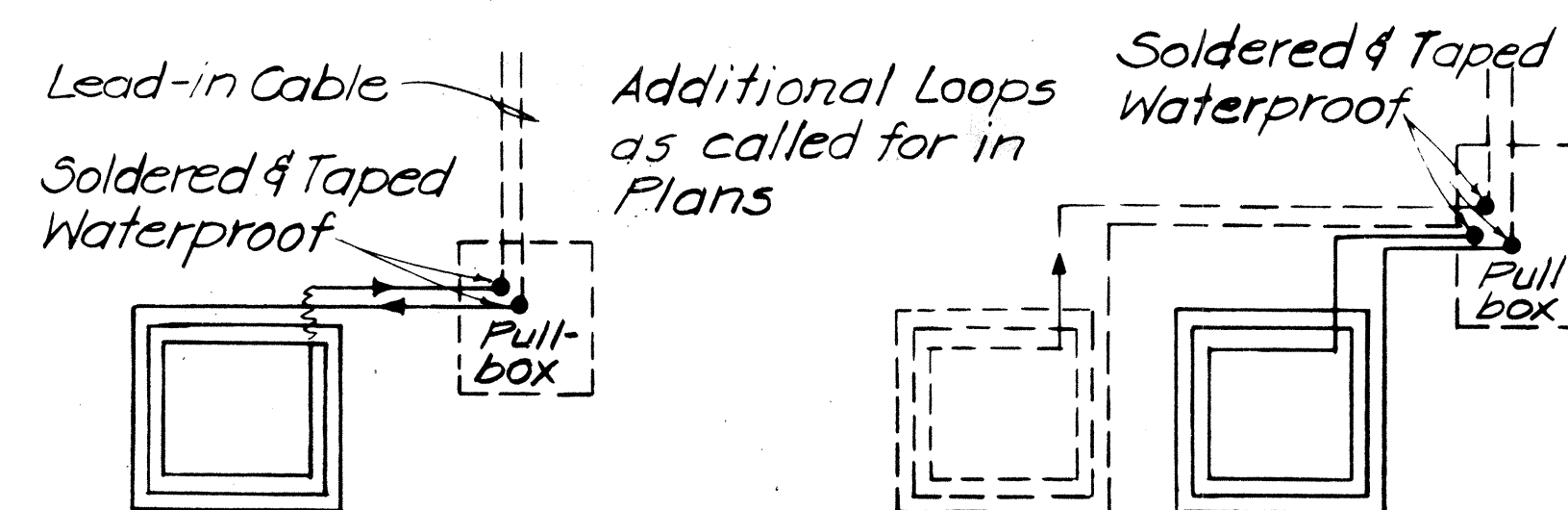
WIRING DIAGRAM



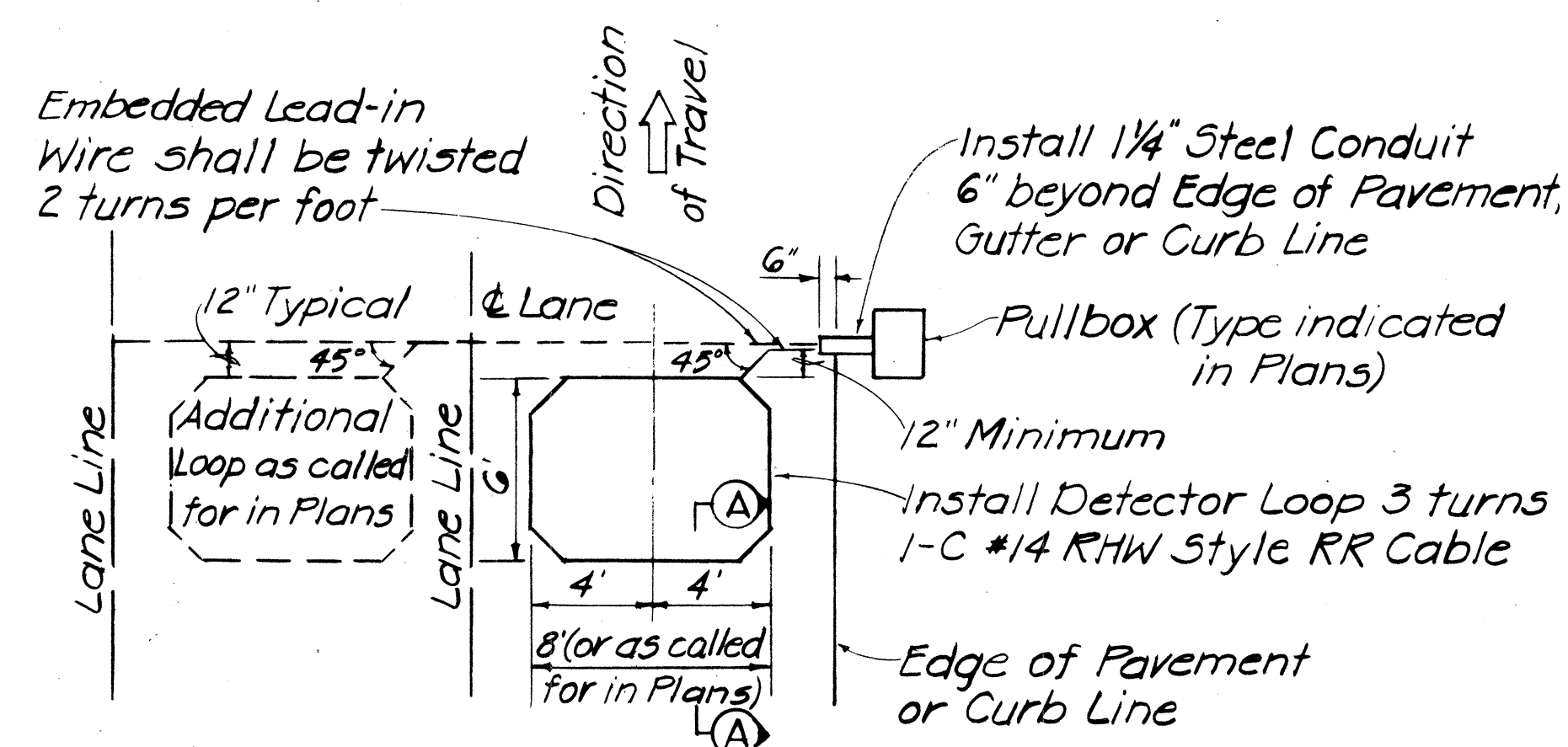
SERIES-PARALLEL LOOP CONNECTION



PLAN
TYPICAL DETAILS
LOOP DETECTORS - TYPE II
NOT TO SCALE



WIRING DIAGRAMS



PLAN
TYPICAL DETAILS
LOOP DETECTORS - TYPE I
NOT TO SCALE

NOTE:

1. The Contractor shall notify Mr. Carl Hagihara of the City & County of Honolulu, Department of Transportation Services at least 7 days prior to doing any work on the Loop Detector Layout.
2. Exact locations of Preformed Inductive Vehicle Loop Detectors shall be staked out in the field by the Contractor and approved by the Engineer prior to installation.
3. Preformed Inductive Vehicle Loop Detectors shall conform with implementation package UDOT-IMP-77-1, "Preformed Inductive Loops."

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

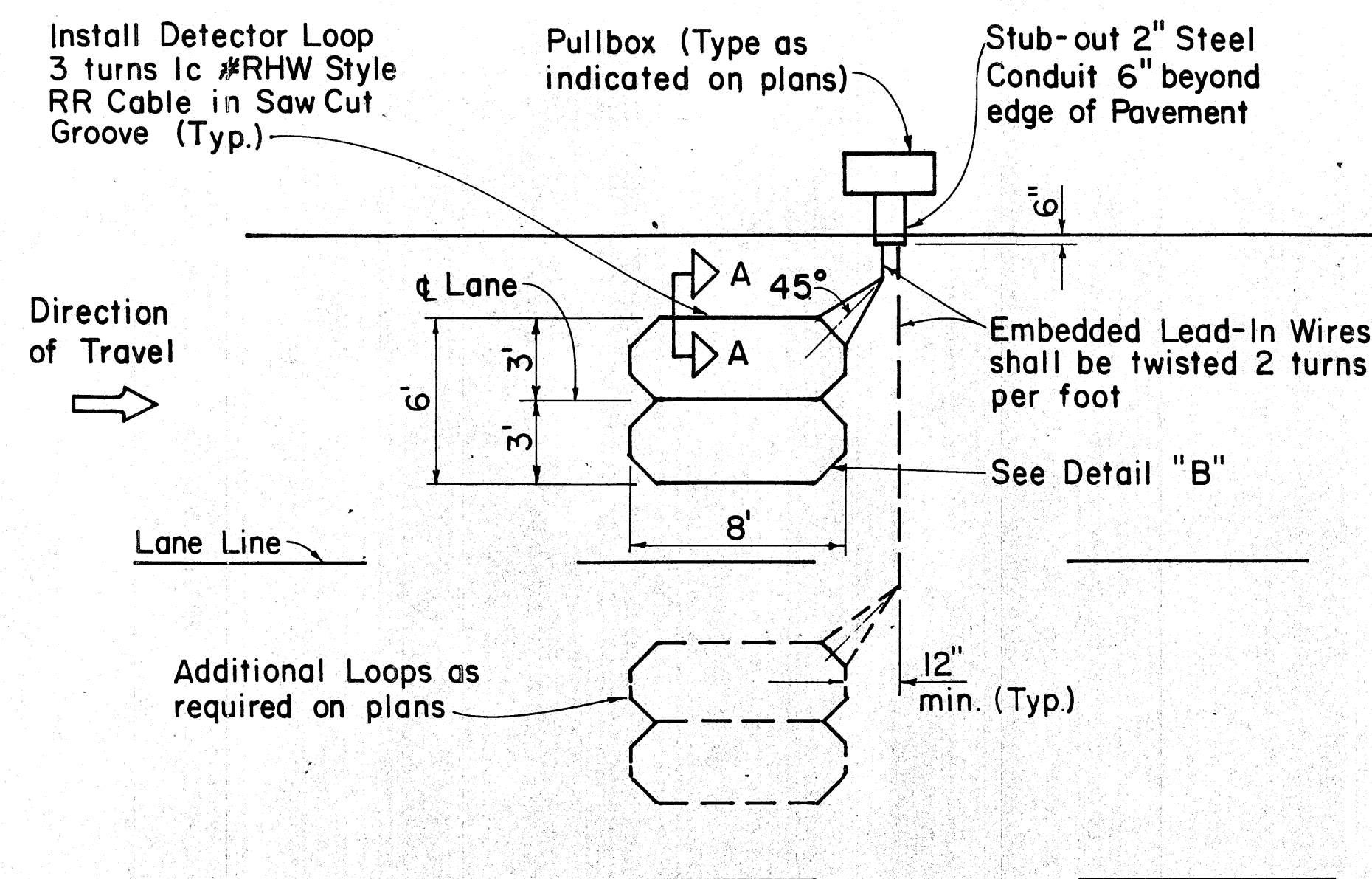
TYPICAL DETAILS
VEHICLE LOOP DETECTORS

Scale: As Noted

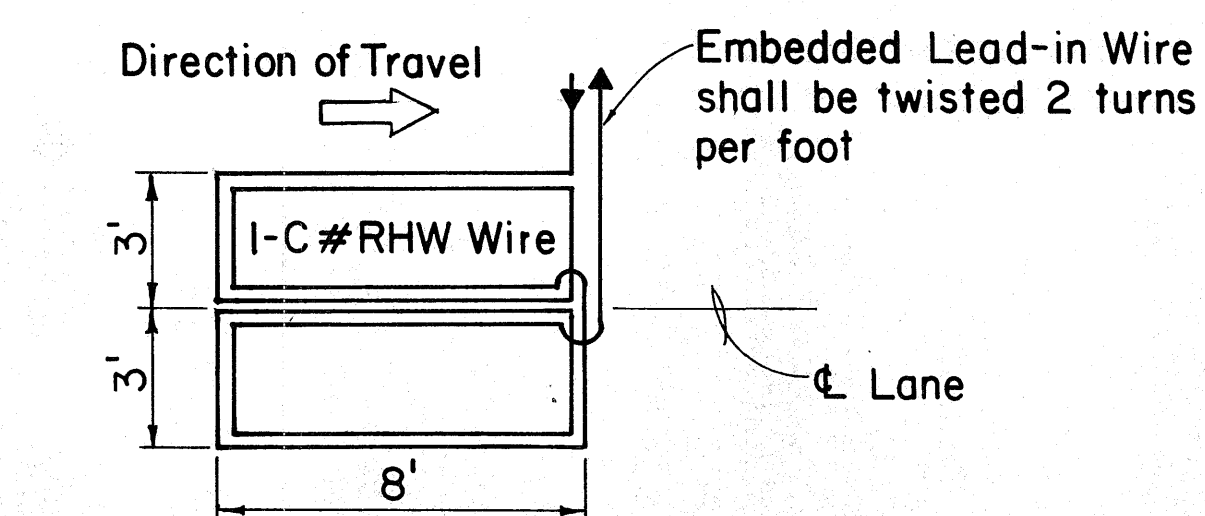
SHEET NO. 7 OF 11 SHEETS

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

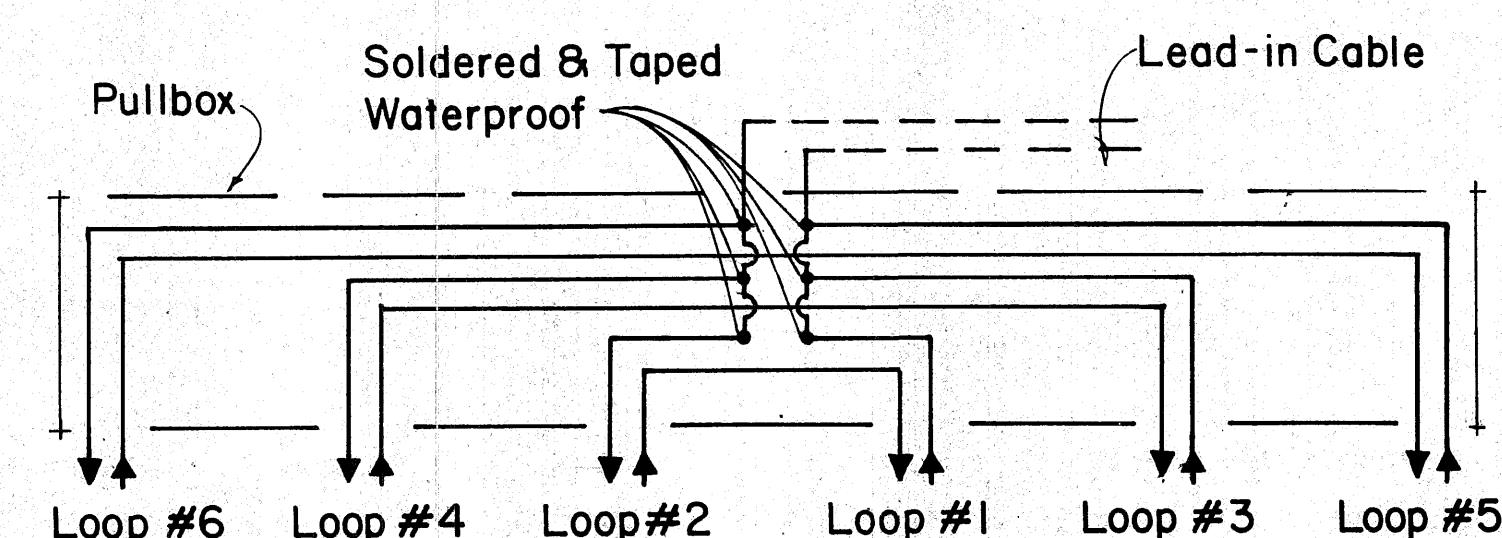
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-002-1(15)	1980	C.O.155-1	21



SINGLE LOOP LAYOUT

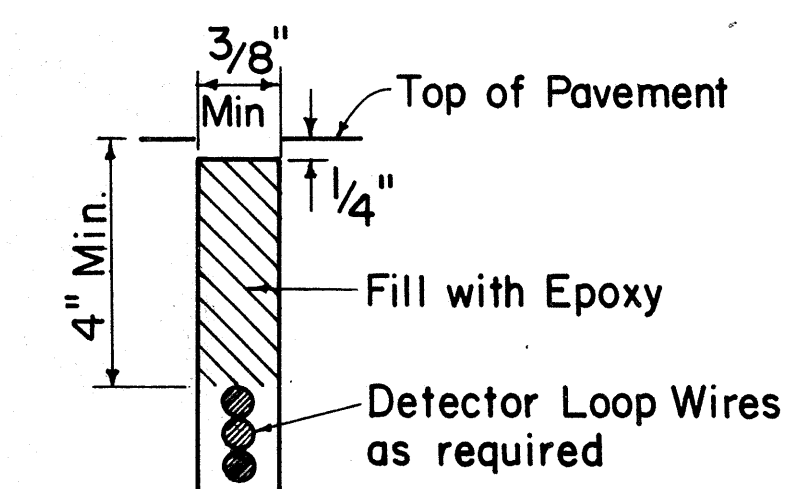


WIRING DIAGRAM



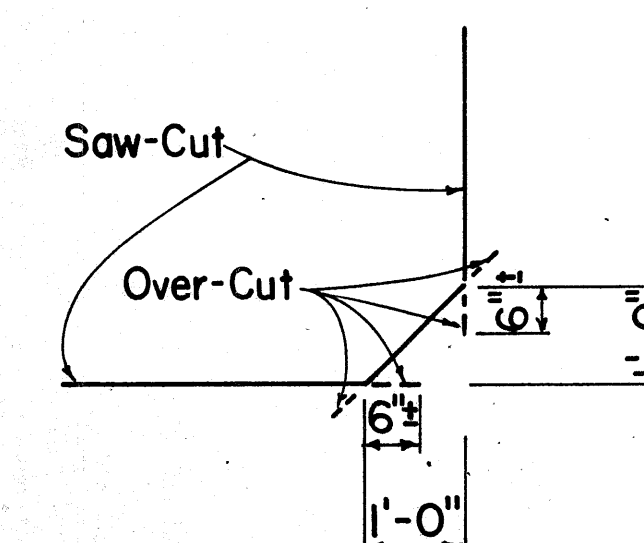
DETAIL "A"

TYPICAL SERIES-PARALLEL LOOP CONNECTION

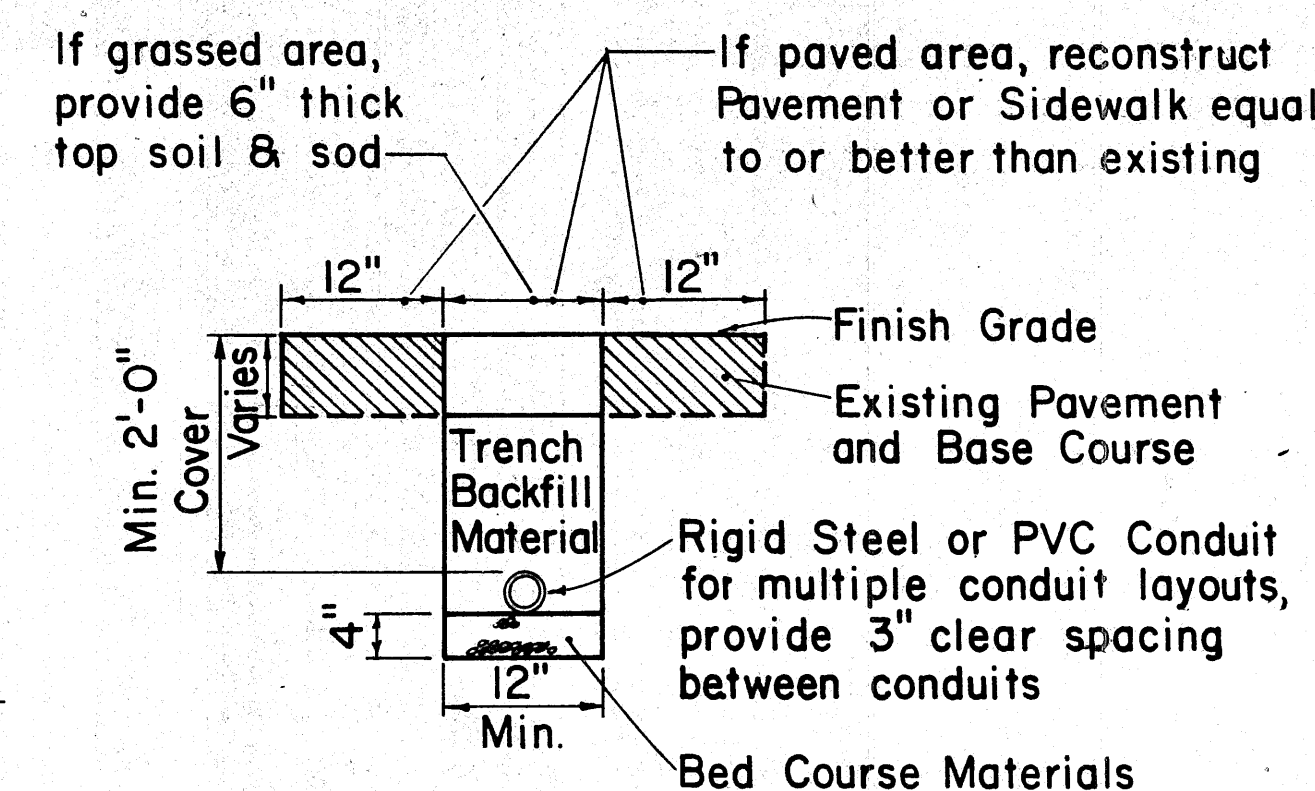


DETECTOR LOOP SAW-CUT SECTION A-A (TYPICAL)

Note: Back-Fill Over-Cuts with Epoxy



DETAIL "B" SAW-CUT AT CORNERS



TYPICAL TRENCH SECTION FOR CONDUIT

NOTE:

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

APPROVAL RECOMMENDED:

Erich Tanaka 9/26/80
TRAFFIC ENGINEER DATE

APPROVED:

Shelton Zafreshi 9/30/80
ASSISTANT CHIEF, ENGINEERING DATE

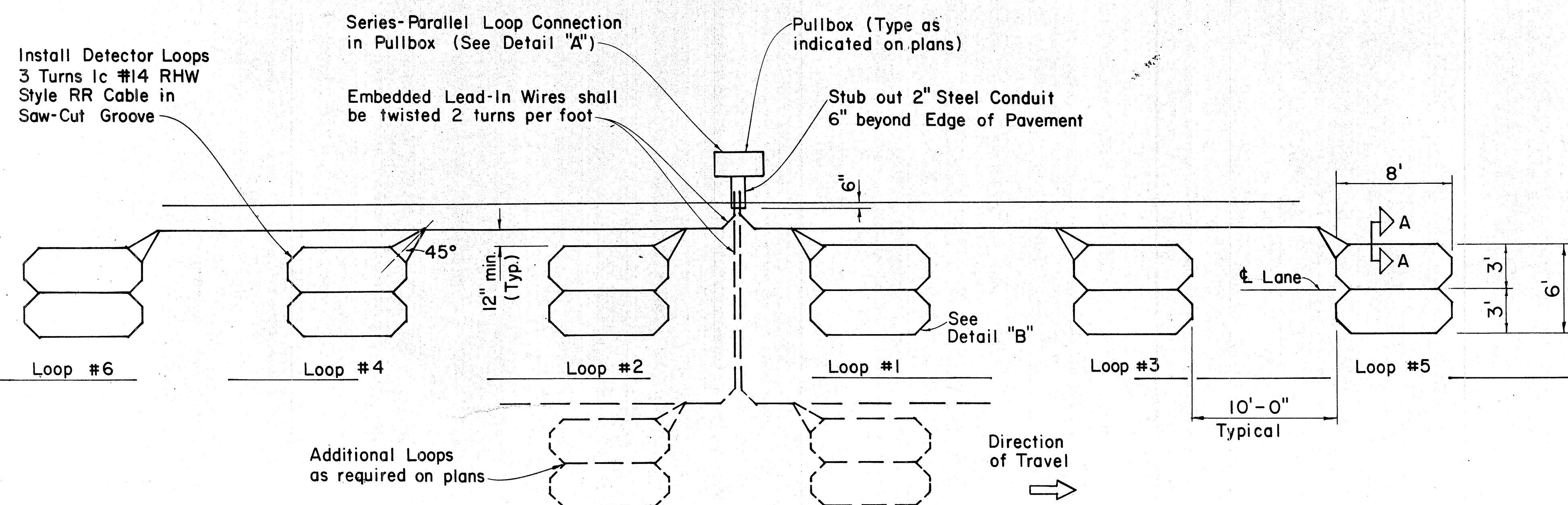
NO.	REVISION	APPROVED BY	DATE
1	Replaces Sht. DT 405 dated 3/5/76	H.T.	9/30/80

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS
LOOP DETECTORS
Not to Scale

SHEET No. OF. SHEETS DT 405

THIS SHEET SUPERSEDES SHT. NO. 15 1/23/81

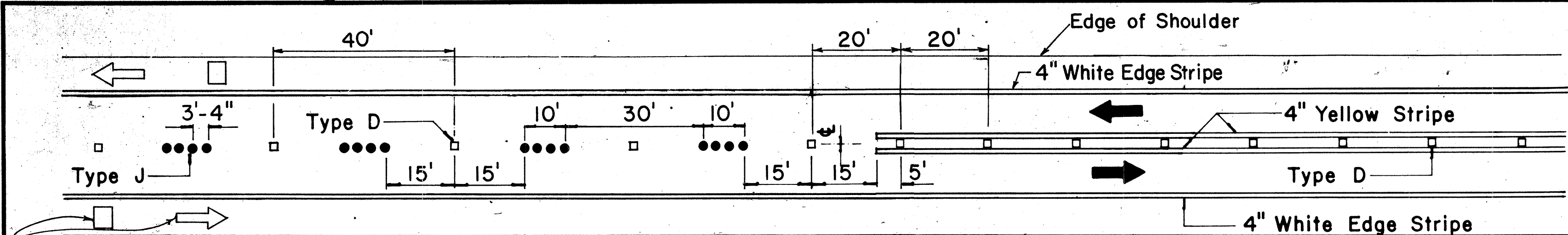
C.O.15 S-1



MULTIPLE LOOP LAYOUT

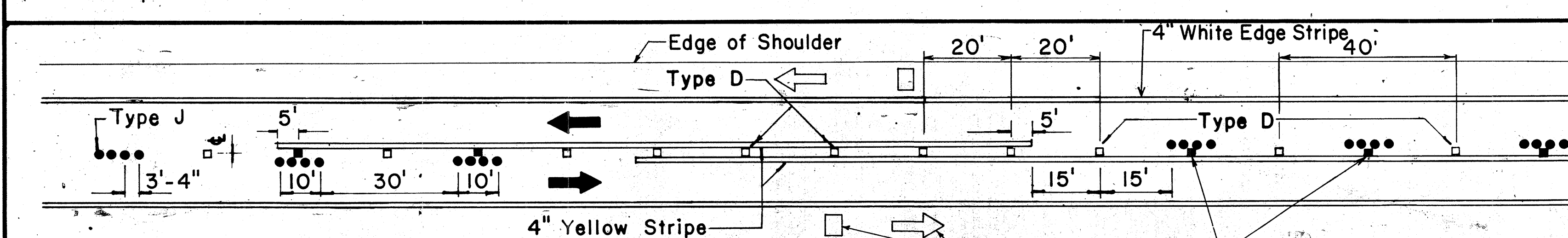
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F092-1(15)	1980	16	21



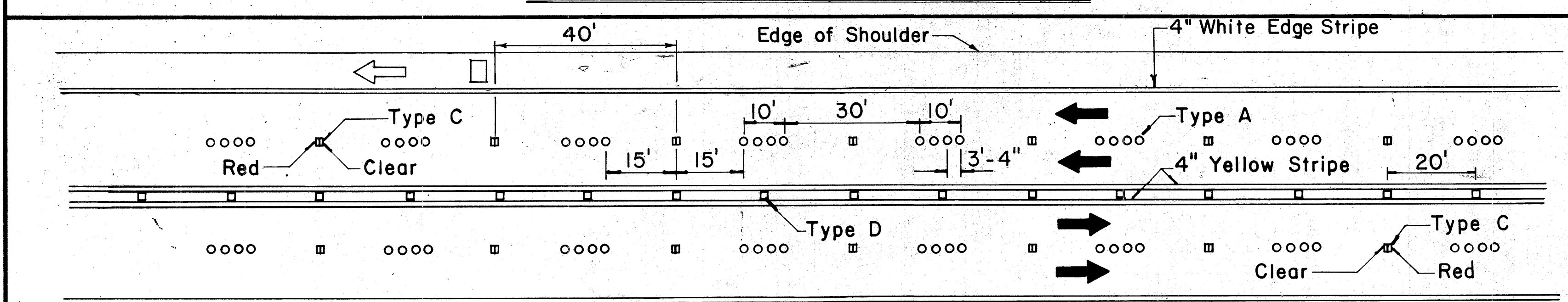
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PERMITTED AND PASSING PROHIBITED



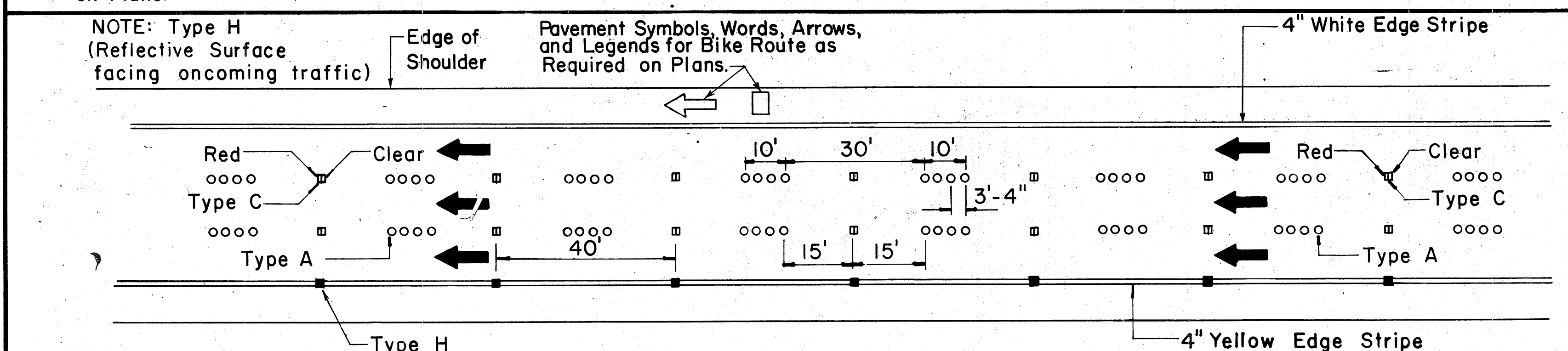
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PROHIBITED ZONES



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

Edge of Shoulder 4" White Edge Stripe

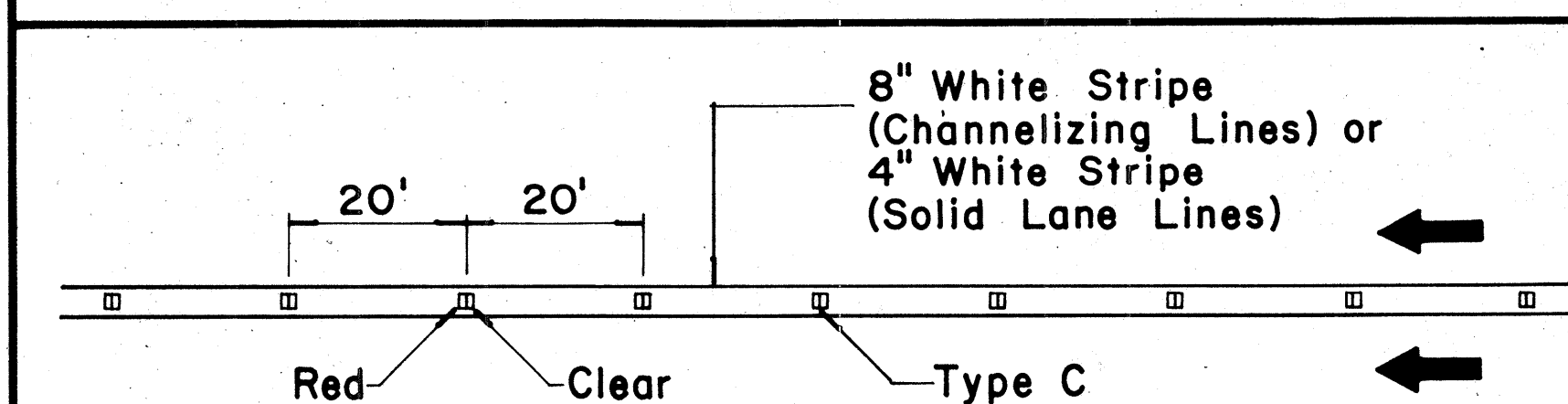


NOTE: Type H (Reflective Surface facing oncoming traffic)

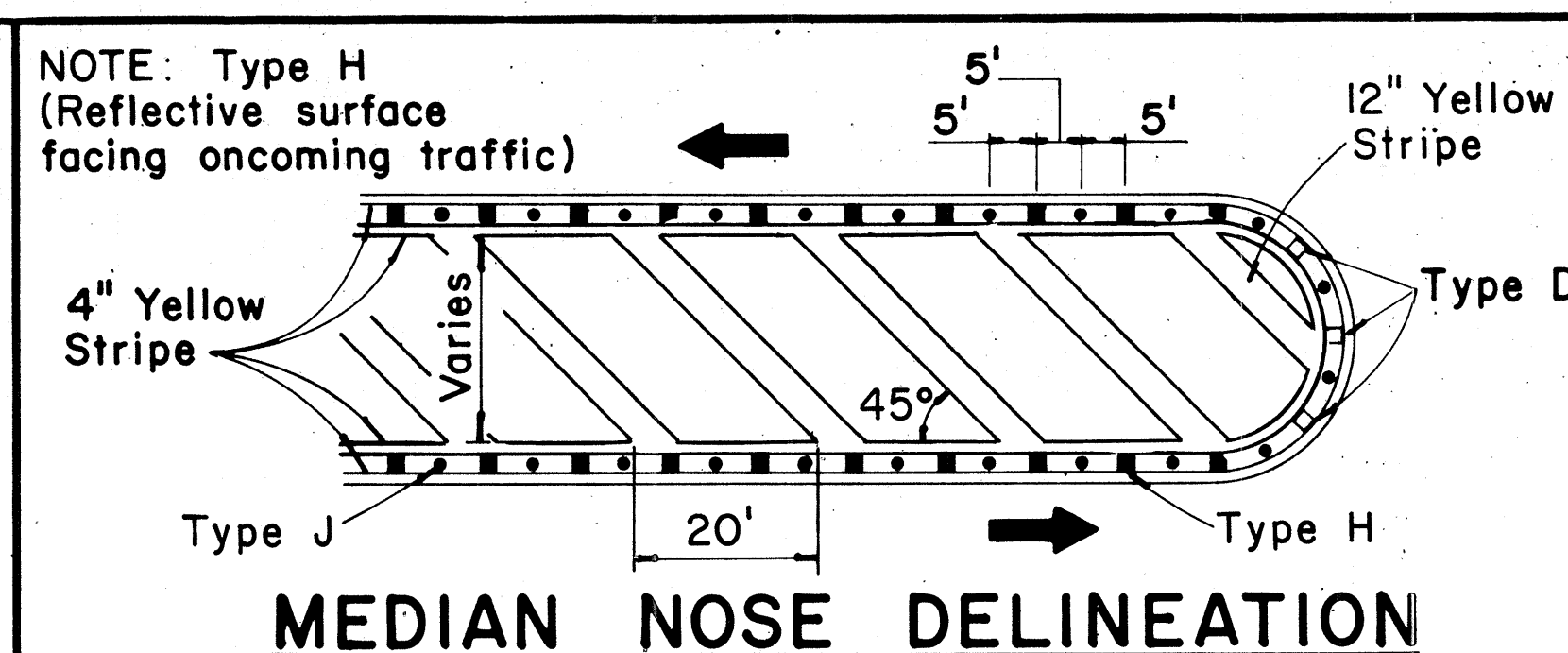
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

4" White Edge Stripe

4" Yellow Edge Stripe



CHANNELIZING LINES OR SOLID LANE LINES



NOTE: Type H (Reflective surface facing oncoming traffic)

MEDIAN NOSE DELINEATION

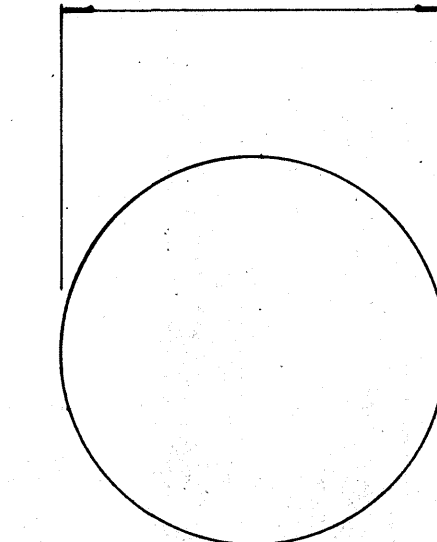
TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

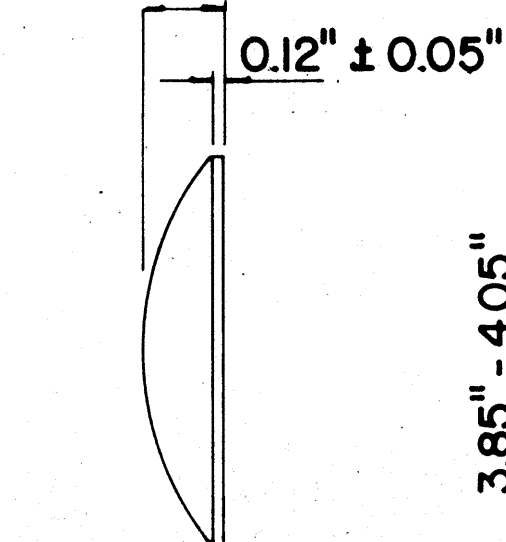
MISCELLANEOUS

3.85" - 4.05" Dia.



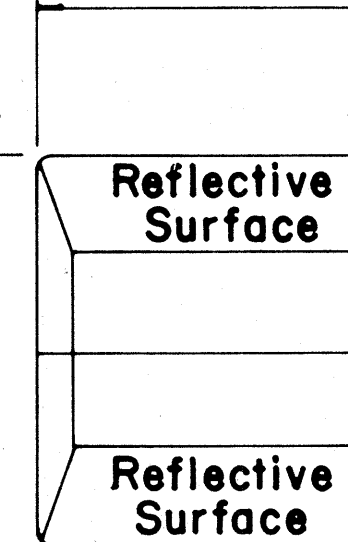
TYPE A
NON-REFLECTIVE WHITE MARKER

0.68" - 0.80"



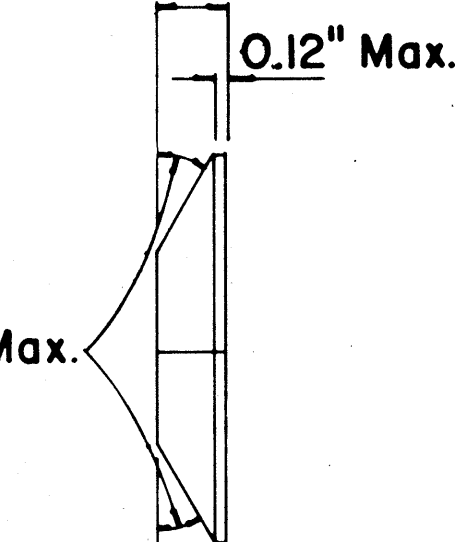
TYPE J
NON-REFLECTIVE YELLOW MARKER

3.85" - 4.05"



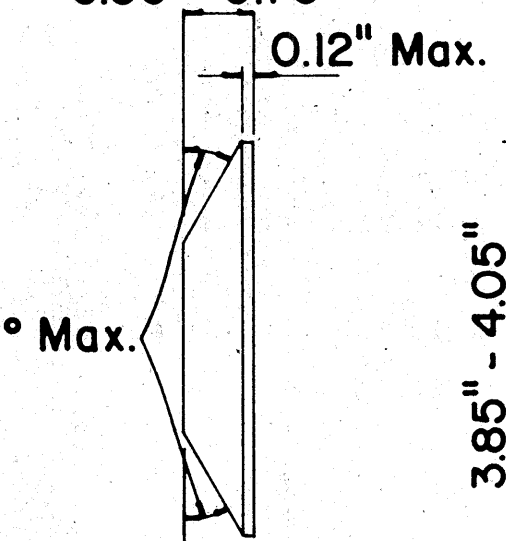
TYPE C
RED-CLEAR REFLECTIVE MARKER

0.50" - 0.70"



TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER

0.50" - 0.70"



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:

Robert J. Zalewski
ASSISTANT CHIEF, ENGINEERING

1/24/78
DATE

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

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

Not to Scale July 1978

SHEET No. 8 OF 11 SHEETS DT 300

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-002-1(15)	1980	17	21

GENERAL NOTES:

- 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.
- 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.
- For additional pavement marking details, see sheet DT 300.

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

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

NO.	REVISION	APPROVED BY	DATE

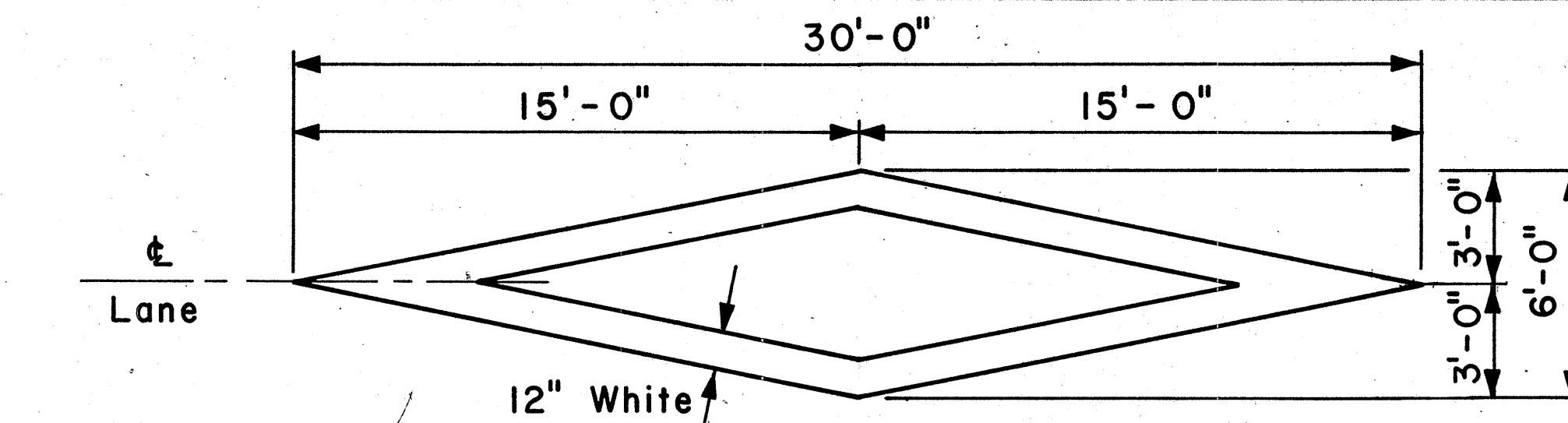
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

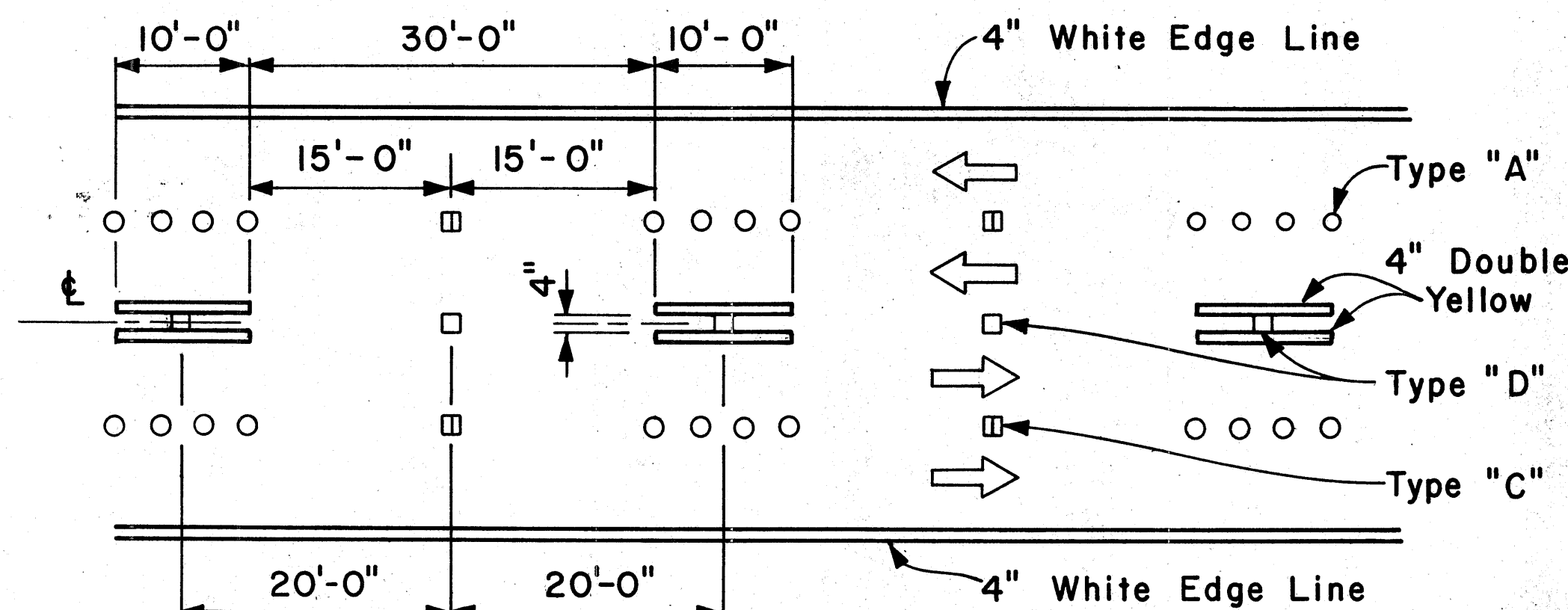
MISCELLANEOUS PAVEMENT MARKINGS

Scale: Not to Scale Date: April, 1978

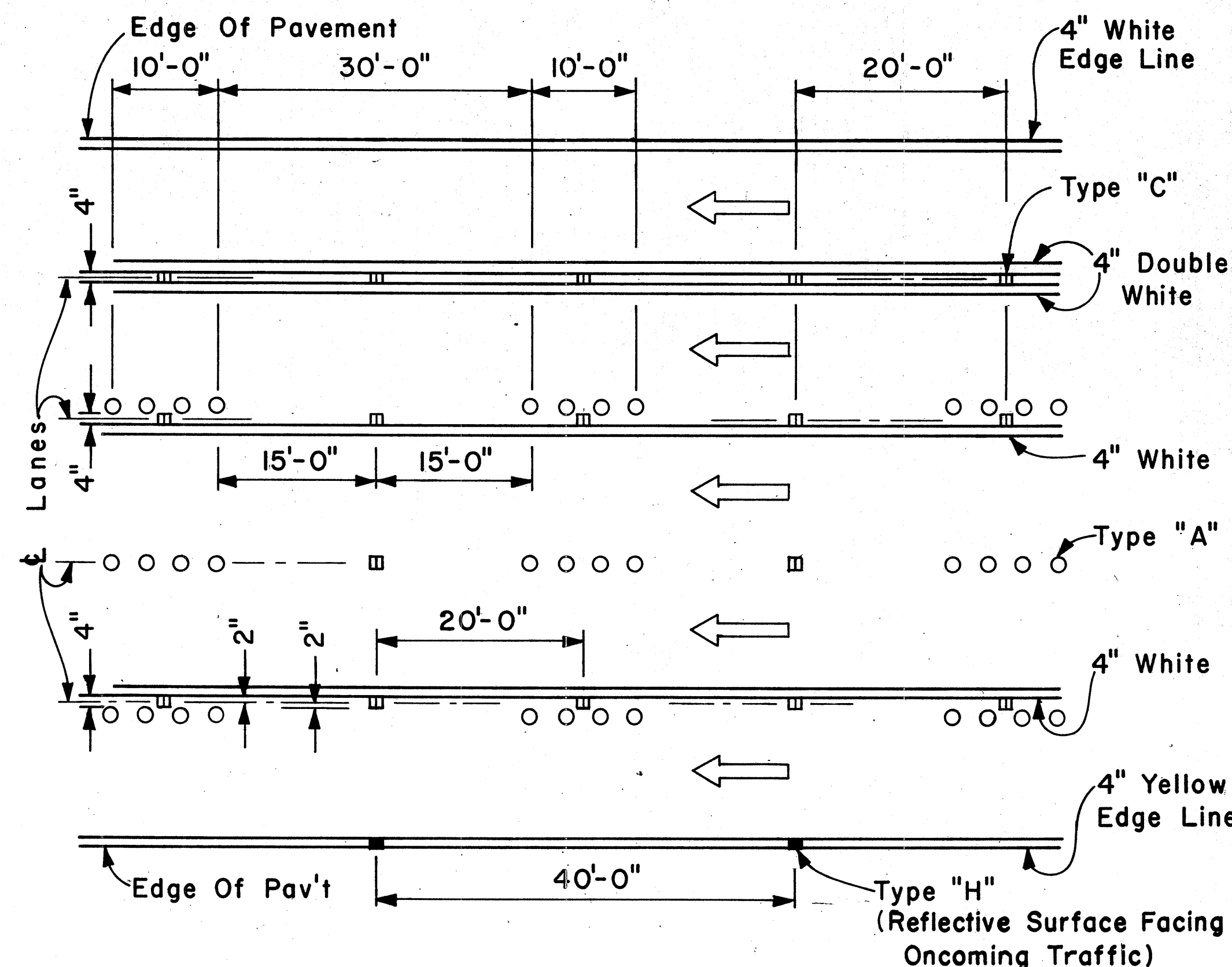
SHEET NO. 17 OF 21 SHEETS DT 302



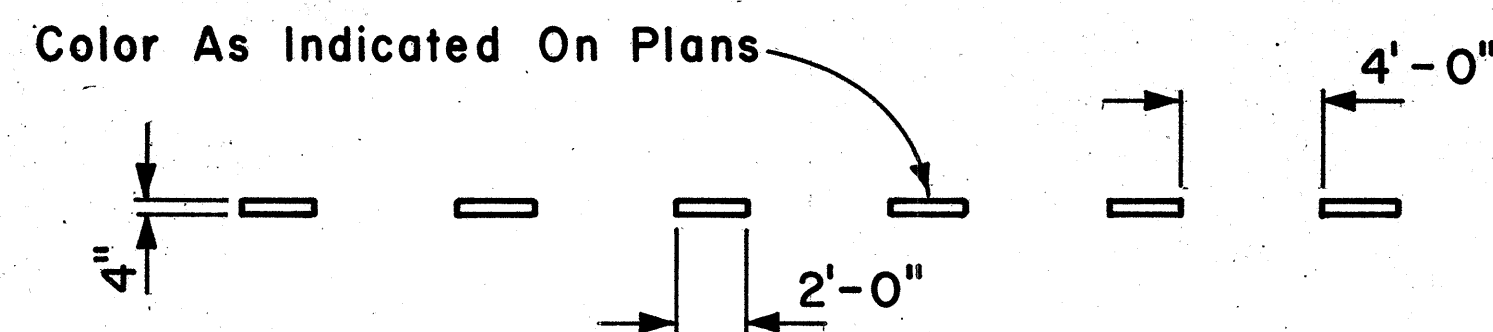
PAVEMENT DIAMOND



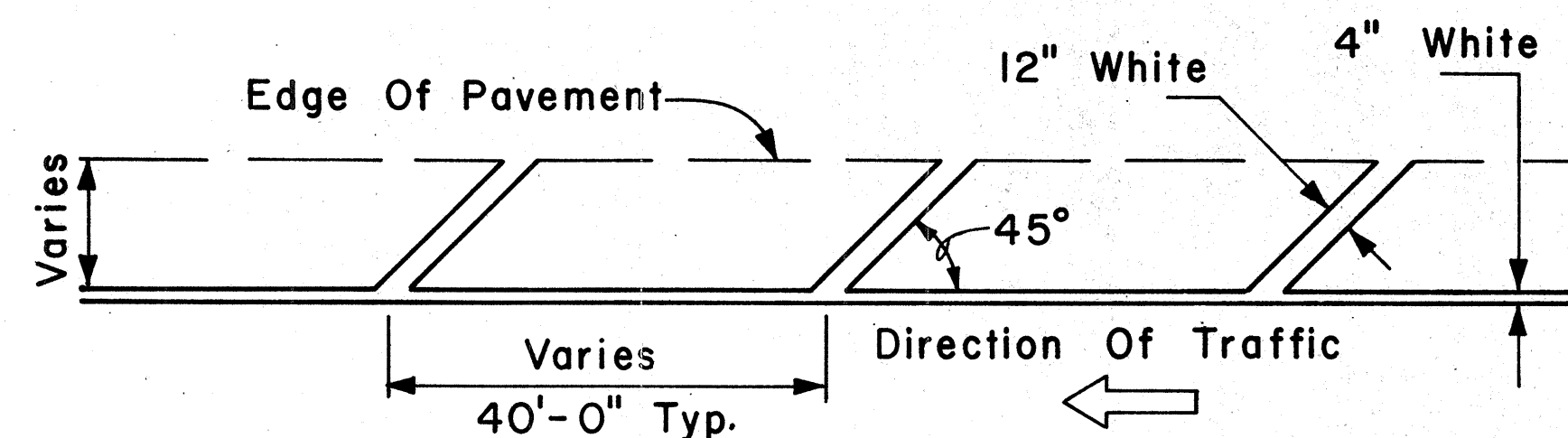
MULTI-LANE REVERSIBLE LANES



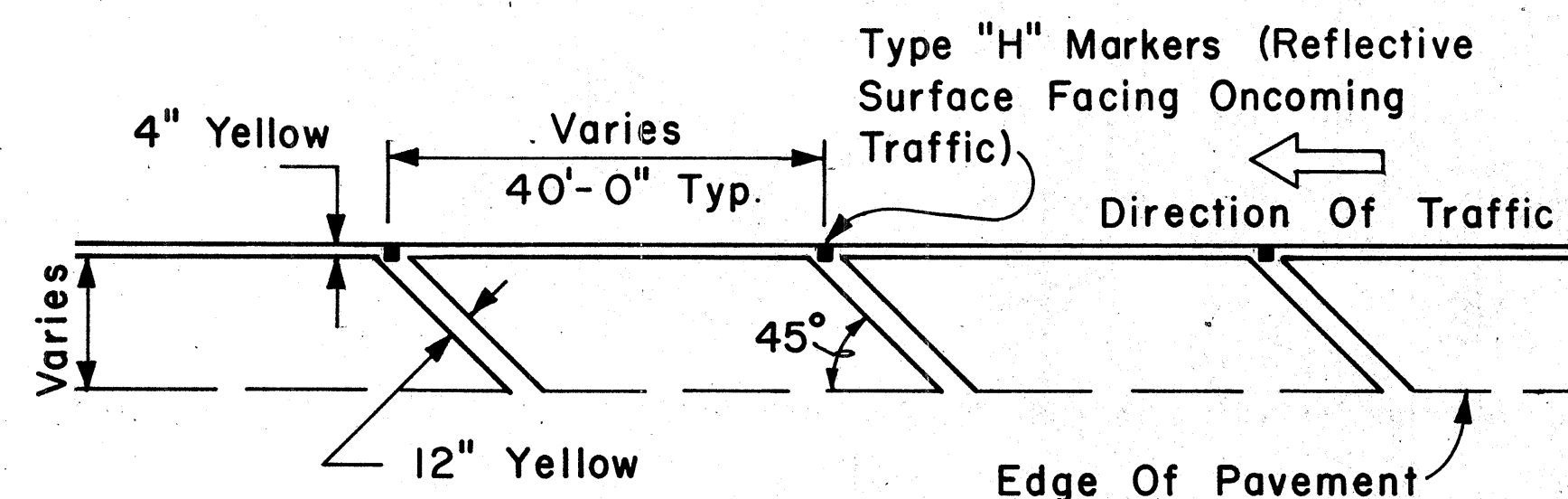
MULTI-LANE LANE CHANGE RESTRICTION ZONES



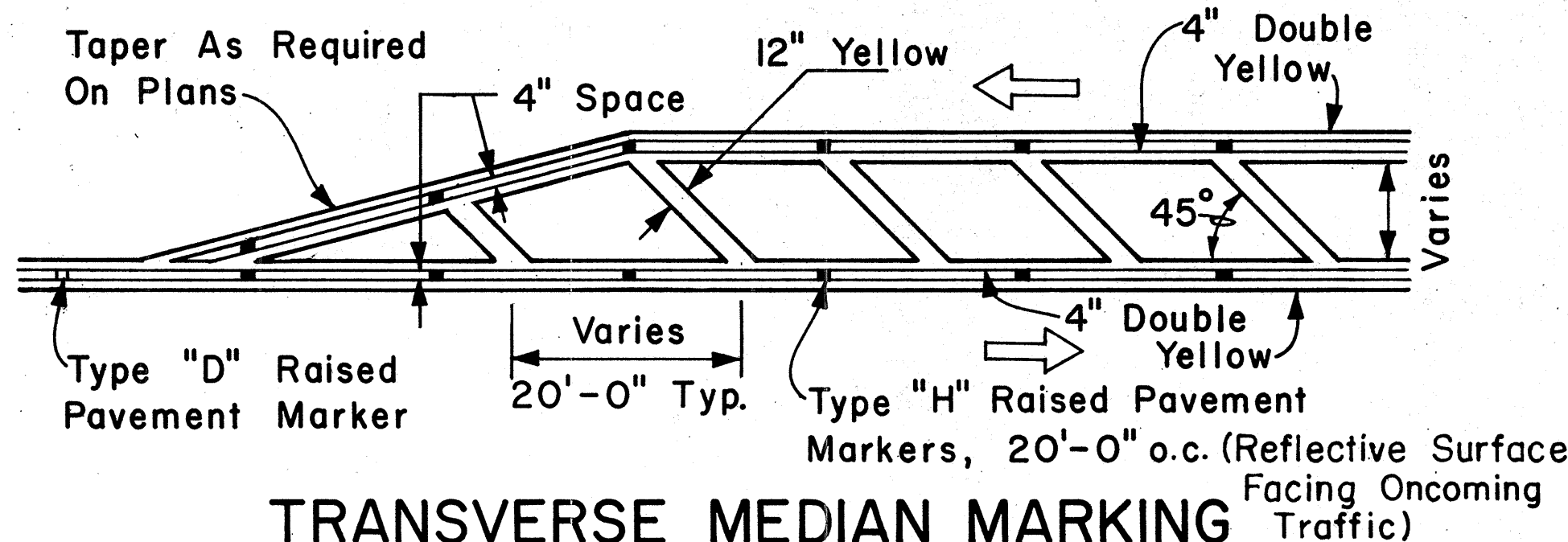
4" GUIDE LINE



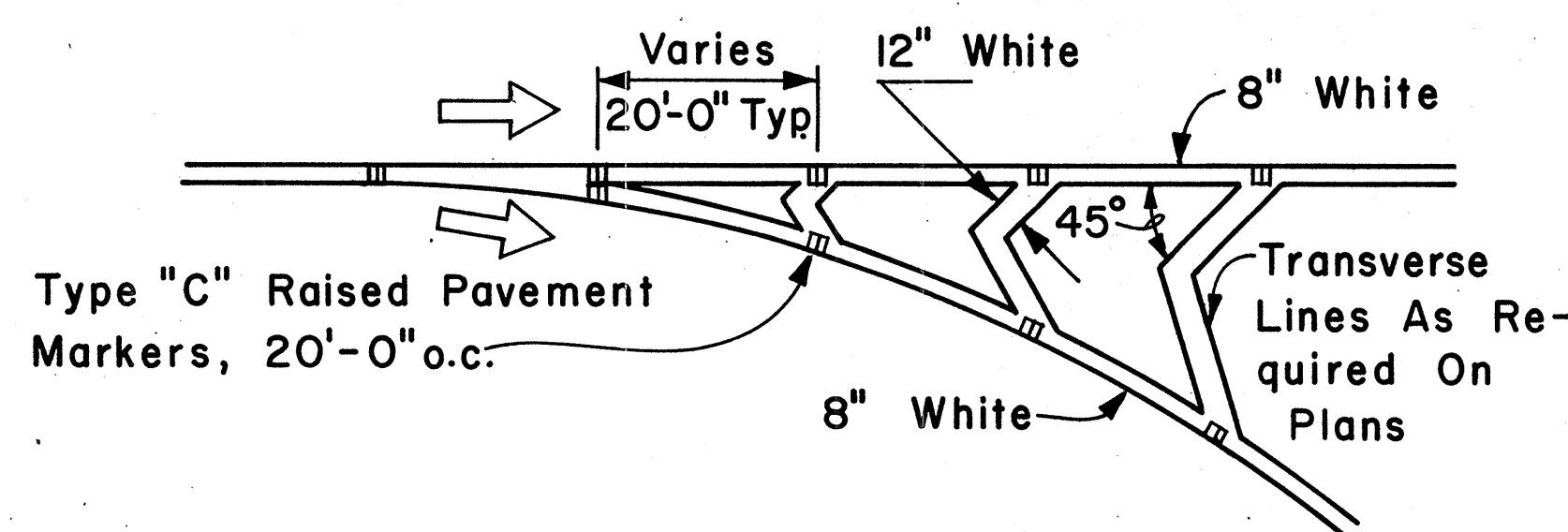
TRANSVERSE RIGHT SHOULDER MARKING



TRANSVERSE LEFT SHOULDER MARKING



TRANSVERSE MEDIAN MARKING



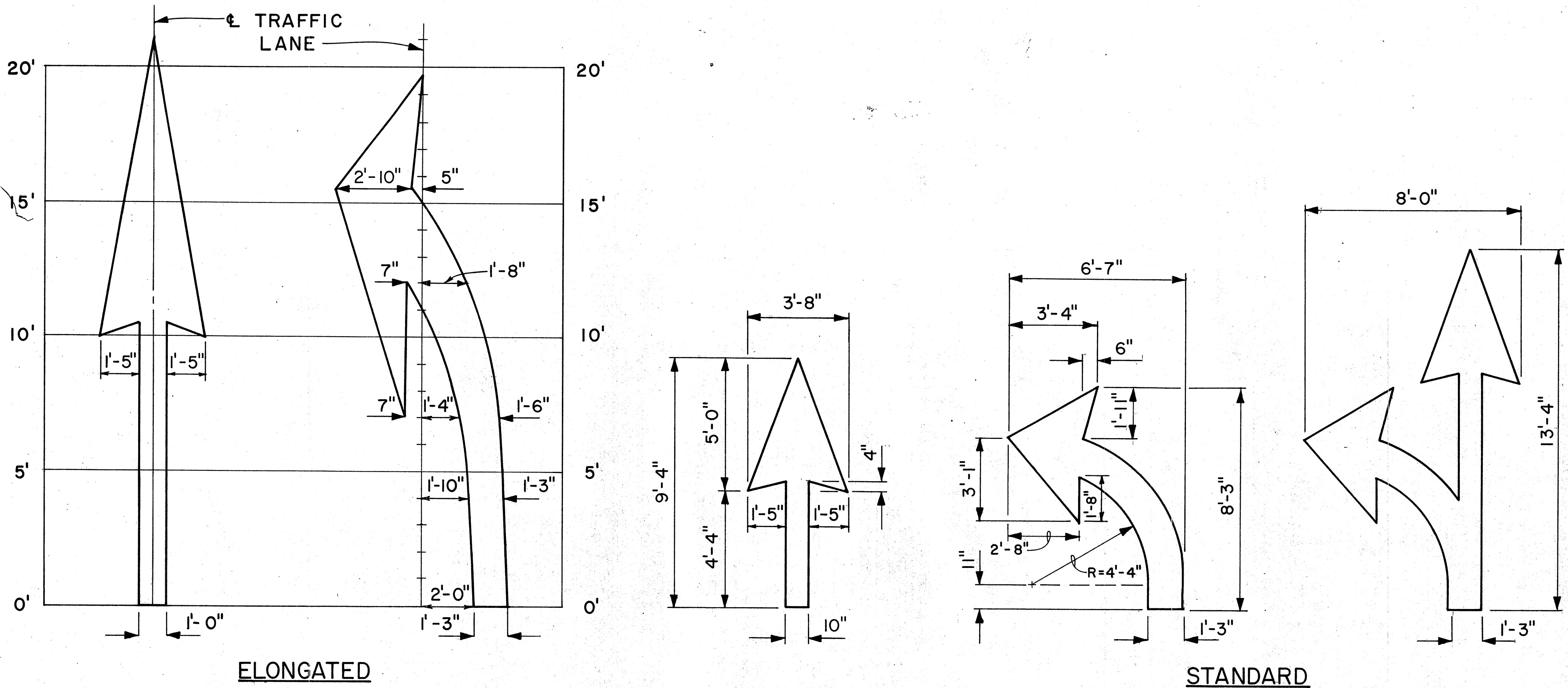
CHANNELIZING ISLAND

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

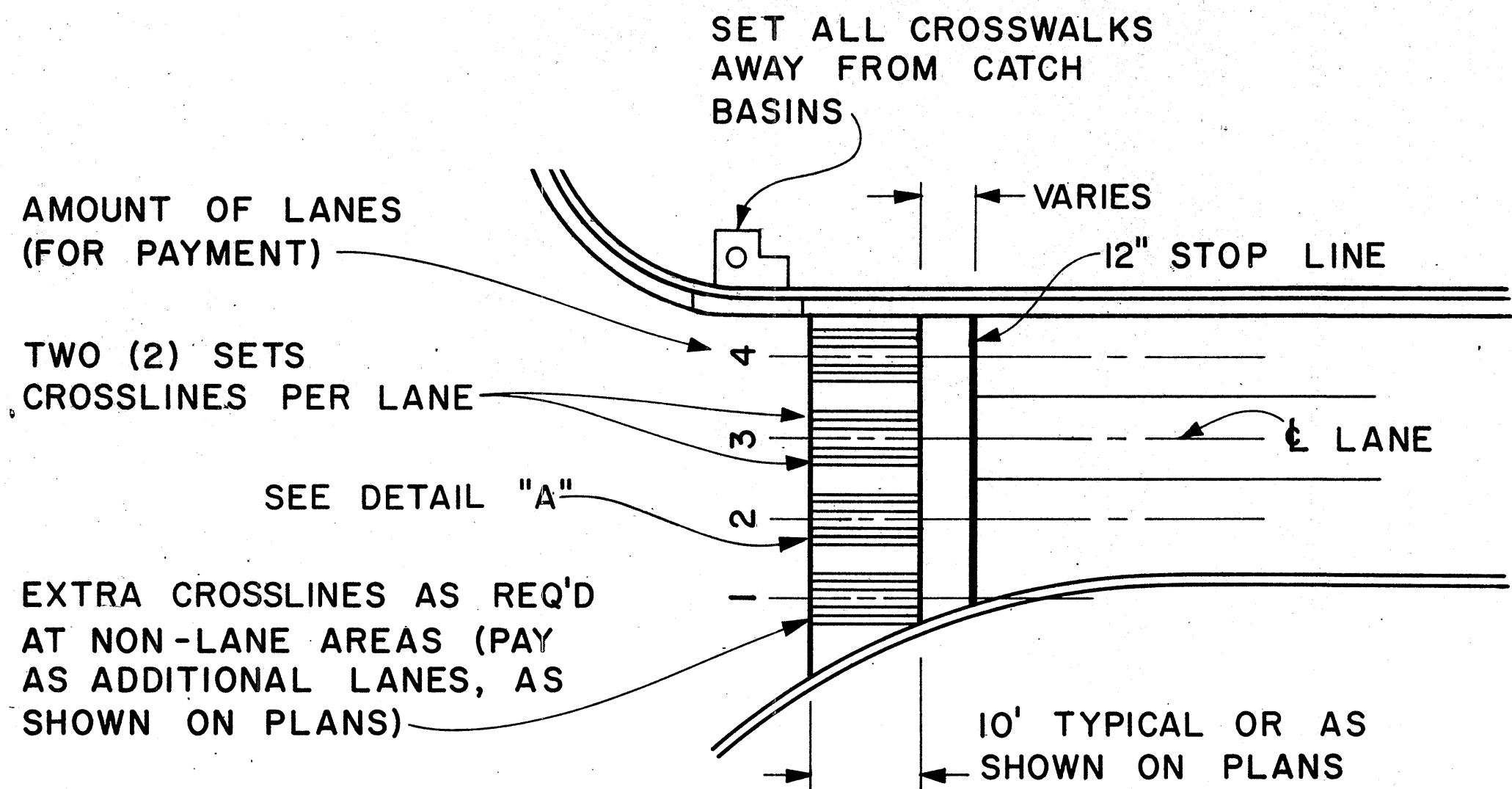
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-092-1(15)	1980	10	21

GENERAL NOTES:

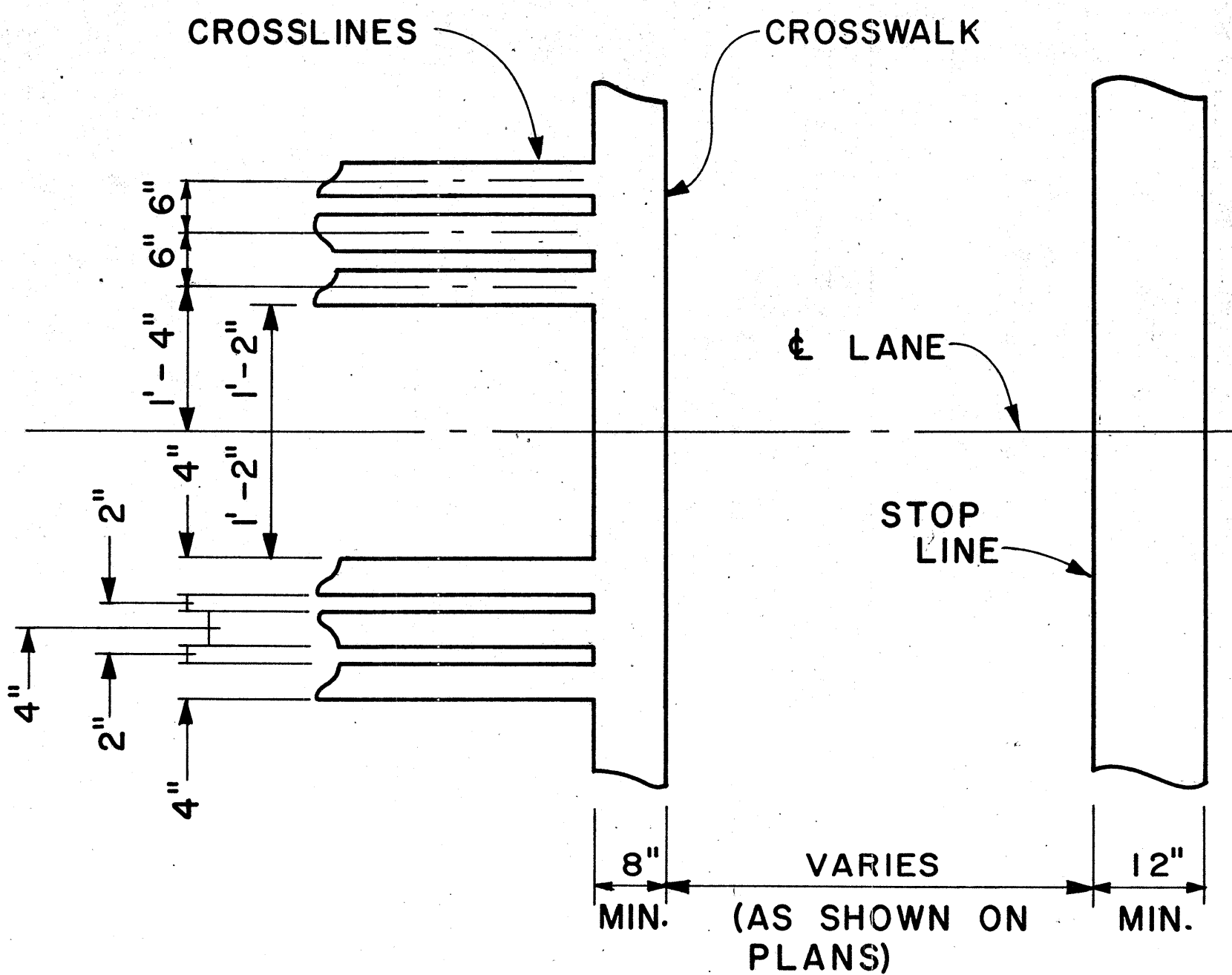
1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and 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



DETAIL "A"

CROSSWALK & STOP LINE
Scale: Not to Scale

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

APPROVED:
Harbert S. Sakai 5/2/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

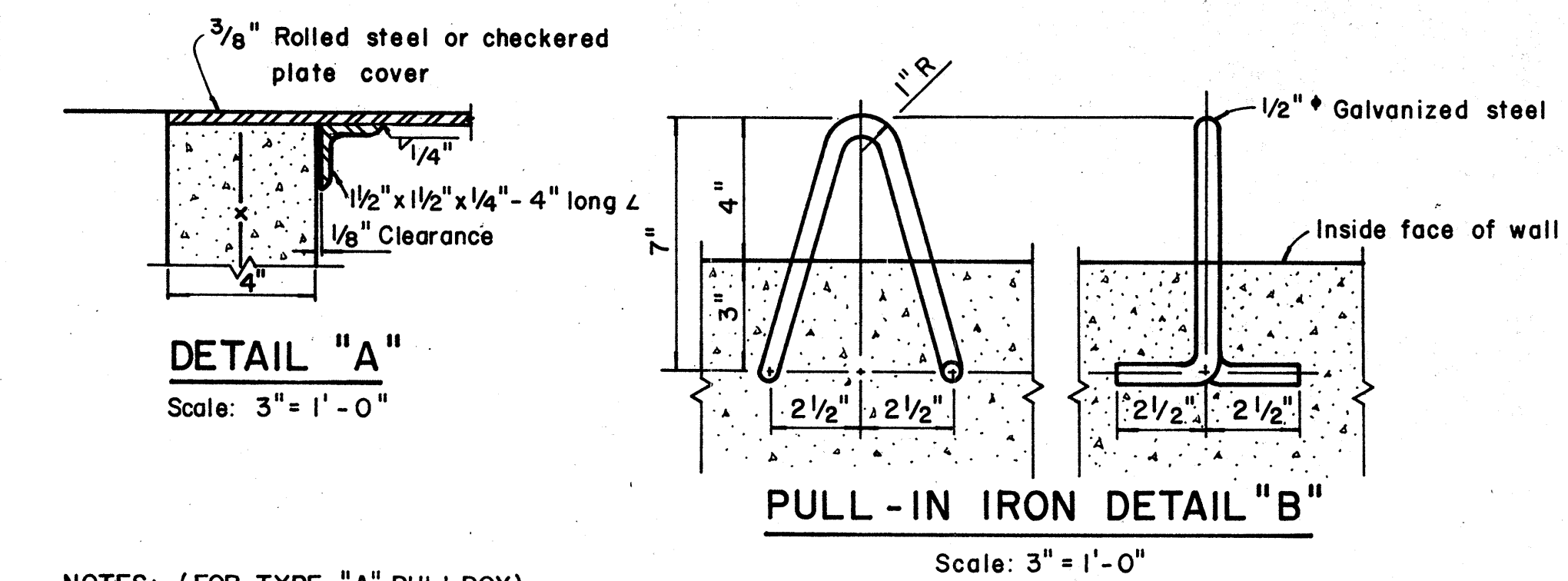
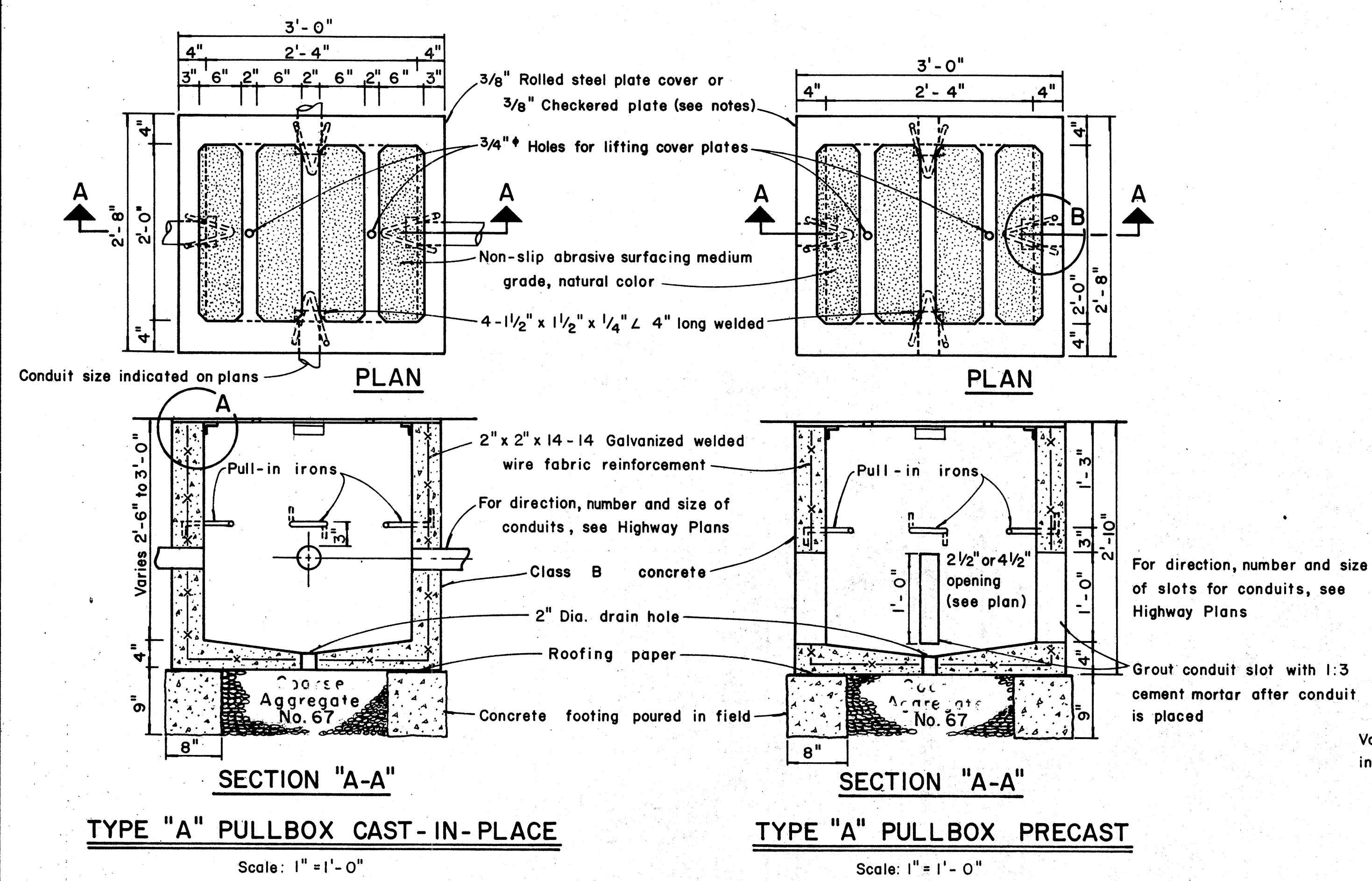
STANDARD DETAILS

MISCELLANEOUS PAVEMENT MARKINGS

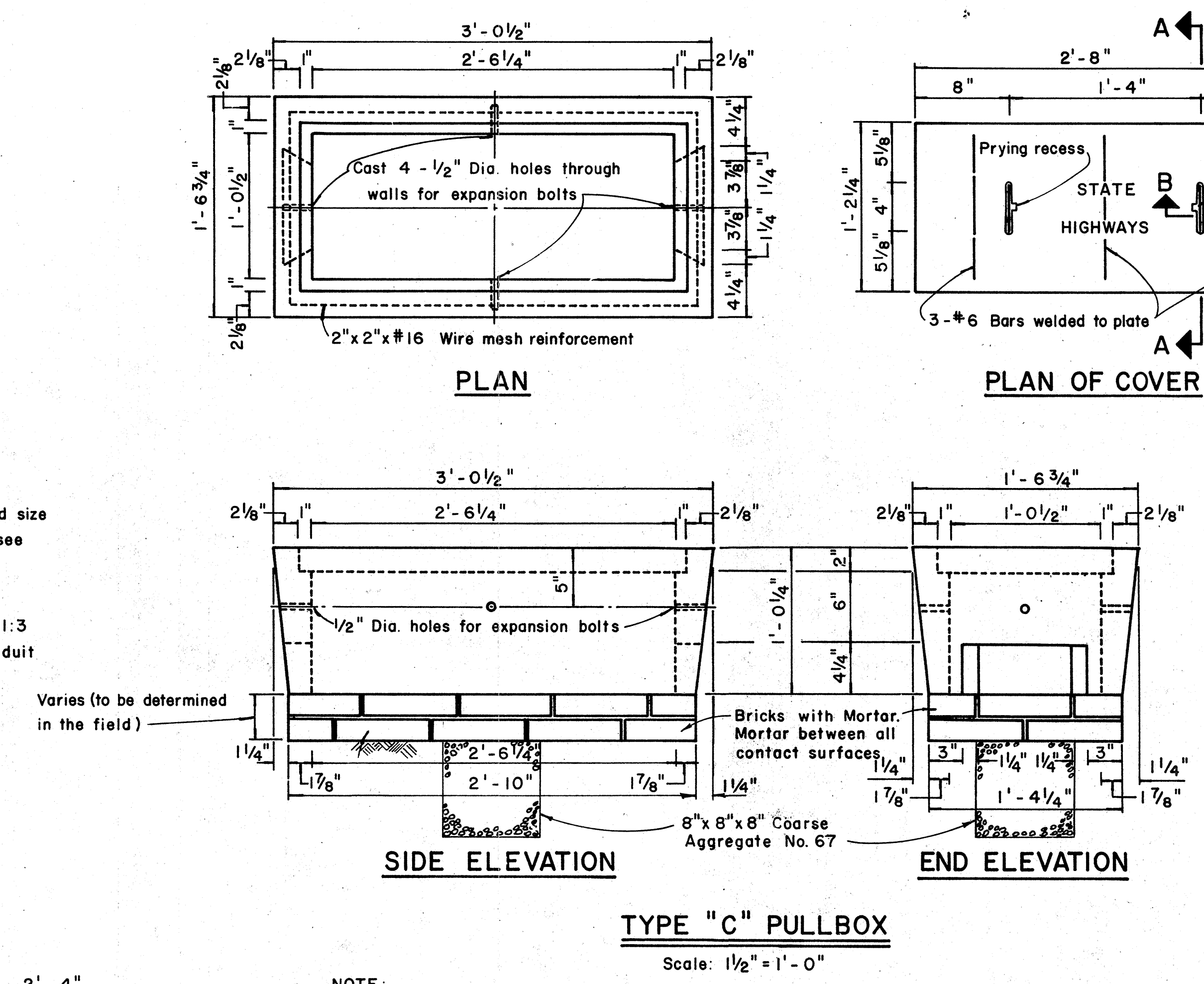
Scale: As Shown Date: March, 1978
SHEET NO. 10 OF 11 SHEETS DT 306

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

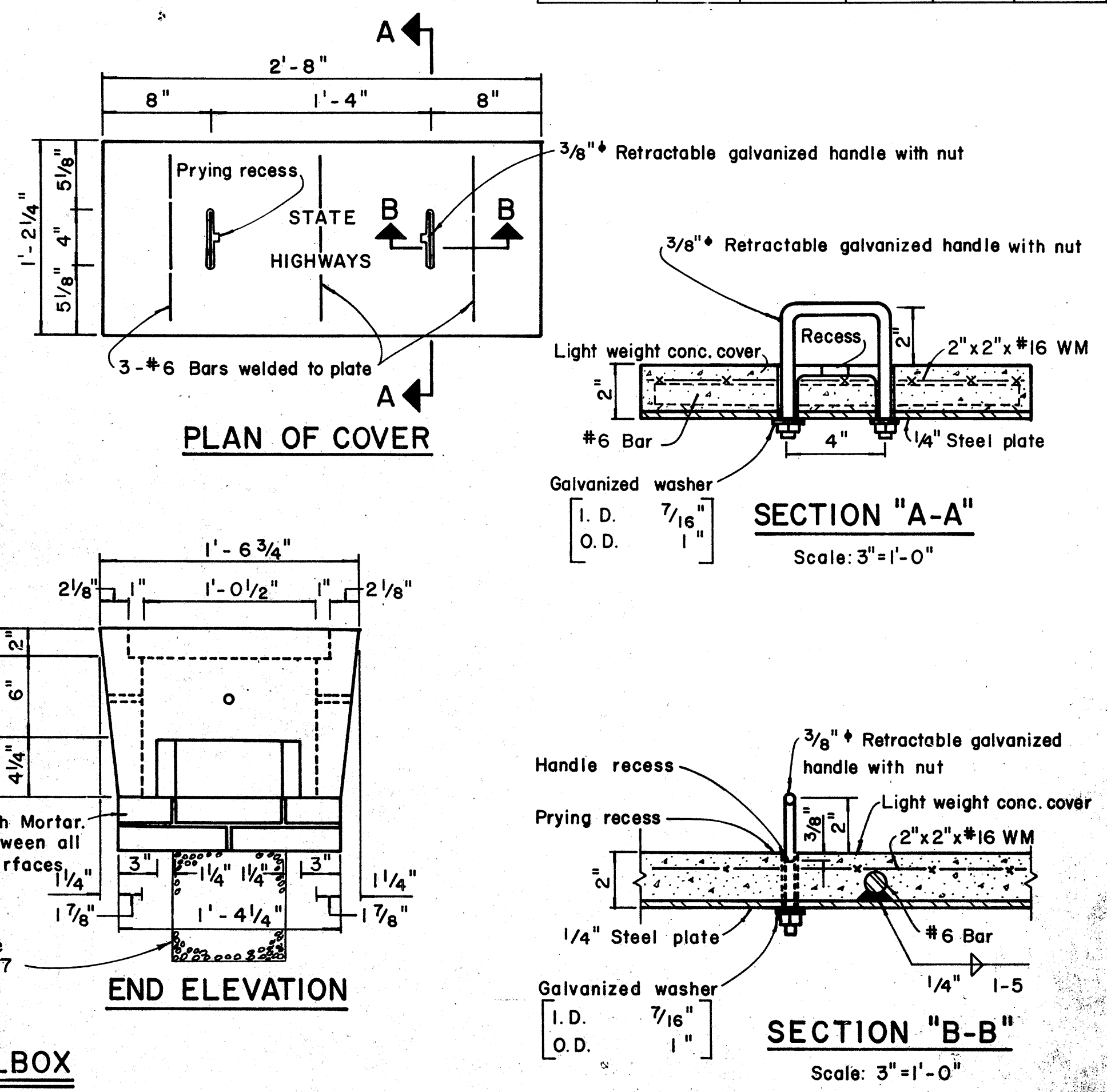
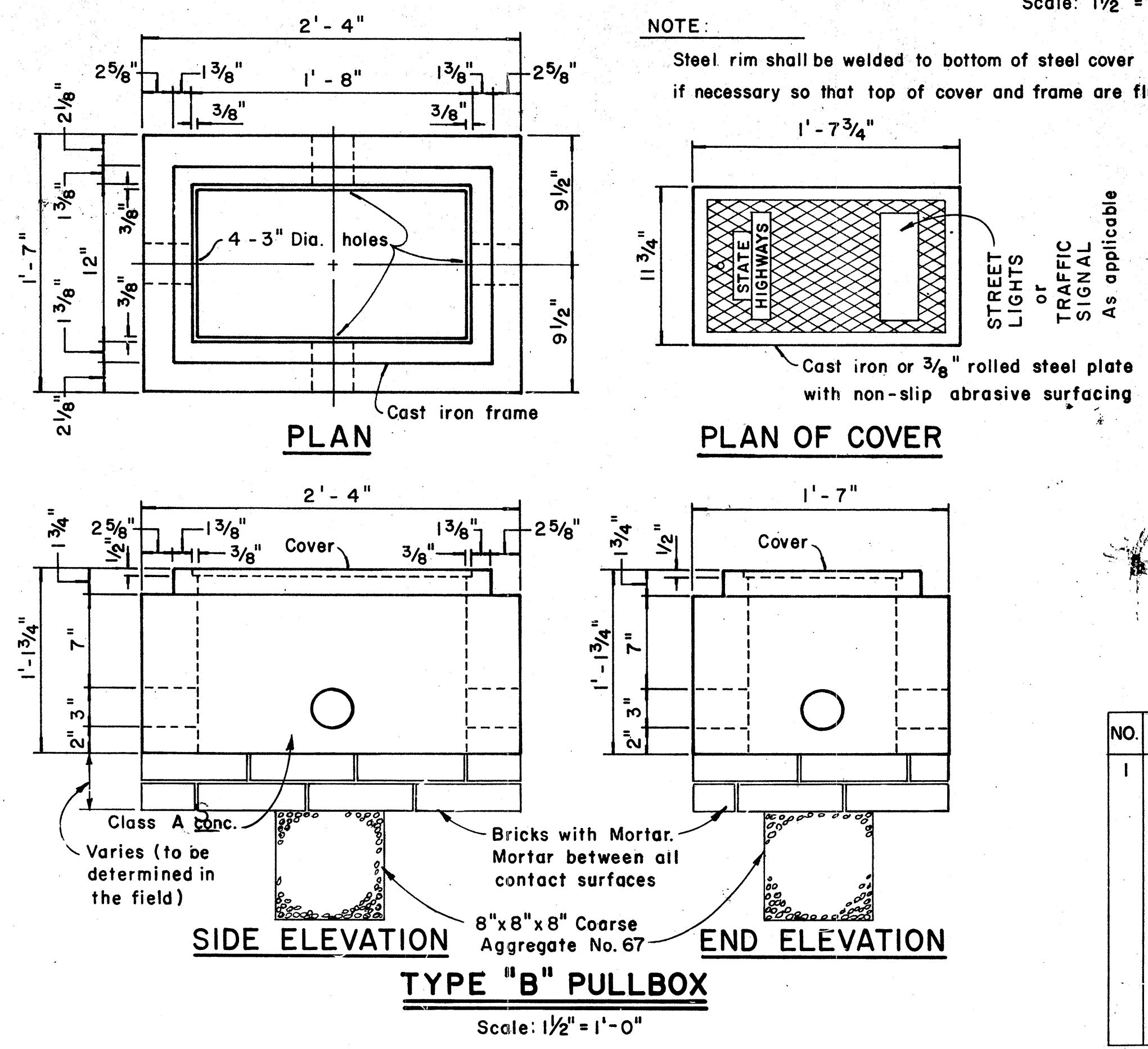
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.092-1(15)	1980	19	21



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



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



APPROVAL RECOMMENDED:
E. Tanaka
TRAFFIC ENGINEER
DATE: 12-1-82

APPROVED:
[Signature]
ASSISTANT CHIEF, ENGINEERING
DATE: 12-30-89

NO.	REVISION	APPROVED BY	DATE
1	Revised Type B & C Pullbox details	H.T.	3-5-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
PULLBOXES

Scale as noted Date

SHEET No. 11 OF 11 SHEETS DT 40

DATE	DESIGNED BY	CHECKED BY
PLAN	DESIGNED BY	CHECKED BY
NOTE BOOK	DESIGNED BY	CHECKED BY
NO.	DESIGNED BY	CHECKED BY