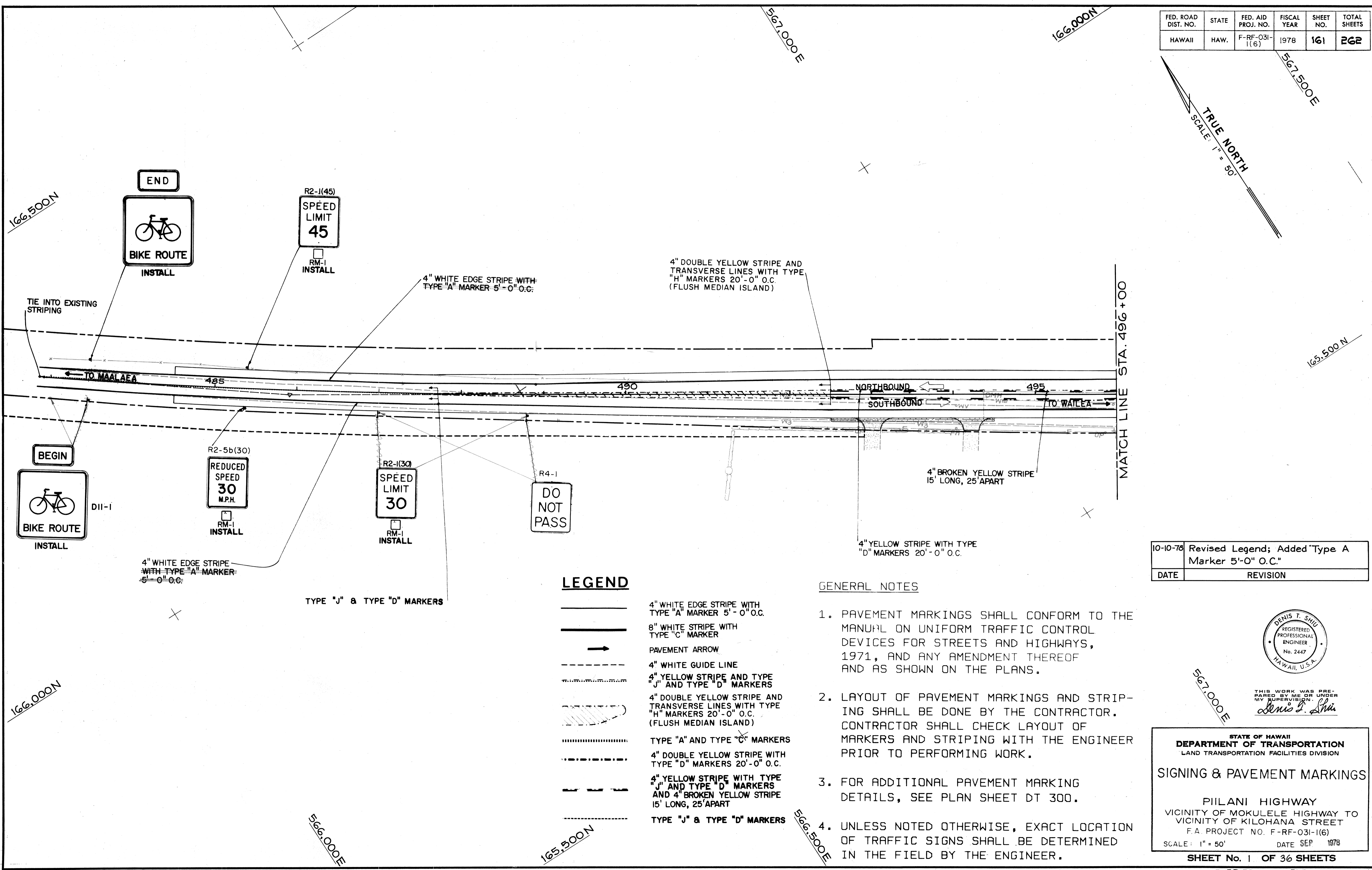


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	161	262

TRUE NORTH
SCALE: 1" = 50'



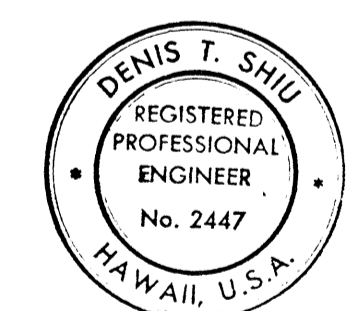
DATE	REVISION
10-10-78	Revised Legend; Added "Type A Marker 5'-0" O.C."

LEGEND

- 4" WHITE EDGE STRIPE WITH TYPE "A" MARKER 5'-0" O.C.
- 8" WHITE STRIPE WITH TYPE "C" MARKER
- PAVEMENT ARROW
- 4" WHITE GUIDE LINE
- 4" YELLOW STRIPE AND TYPE "J" AND TYPE "D" MARKERS
- 4" DOUBLE YELLOW STRIPE AND TRANSVERSE LINES WITH TYPE "H" MARKERS 20'-0" O.C. (FLUSH MEDIAN ISLAND)
- TYPE "A" AND TYPE "C" MARKERS
- 4" DOUBLE YELLOW STRIPE WITH TYPE "D" MARKERS 20'-0" O.C.
- 4" YELLOW STRIPE WITH TYPE "J" AND TYPE "D" MARKERS AND 4" BROKEN YELLOW STRIPE 15' LONG, 25' APART
- TYPE "J" & TYPE "D" MARKERS

GENERAL NOTES

1. PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, 1971, AND ANY AMENDMENT THEREOF AND AS SHOWN ON THE PLANS.
2. LAYOUT OF PAVEMENT MARKINGS AND STRIPING SHALL BE DONE BY THE CONTRACTOR. CONTRACTOR SHALL CHECK LAYOUT OF MARKERS AND STRIPING WITH THE ENGINEER PRIOR TO PERFORMING WORK.
3. FOR ADDITIONAL PAVEMENT MARKING DETAILS, SEE PLAN SHEET DT 300.
4. UNLESS NOTED OTHERWISE, EXACT LOCATION OF TRAFFIC SIGNS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

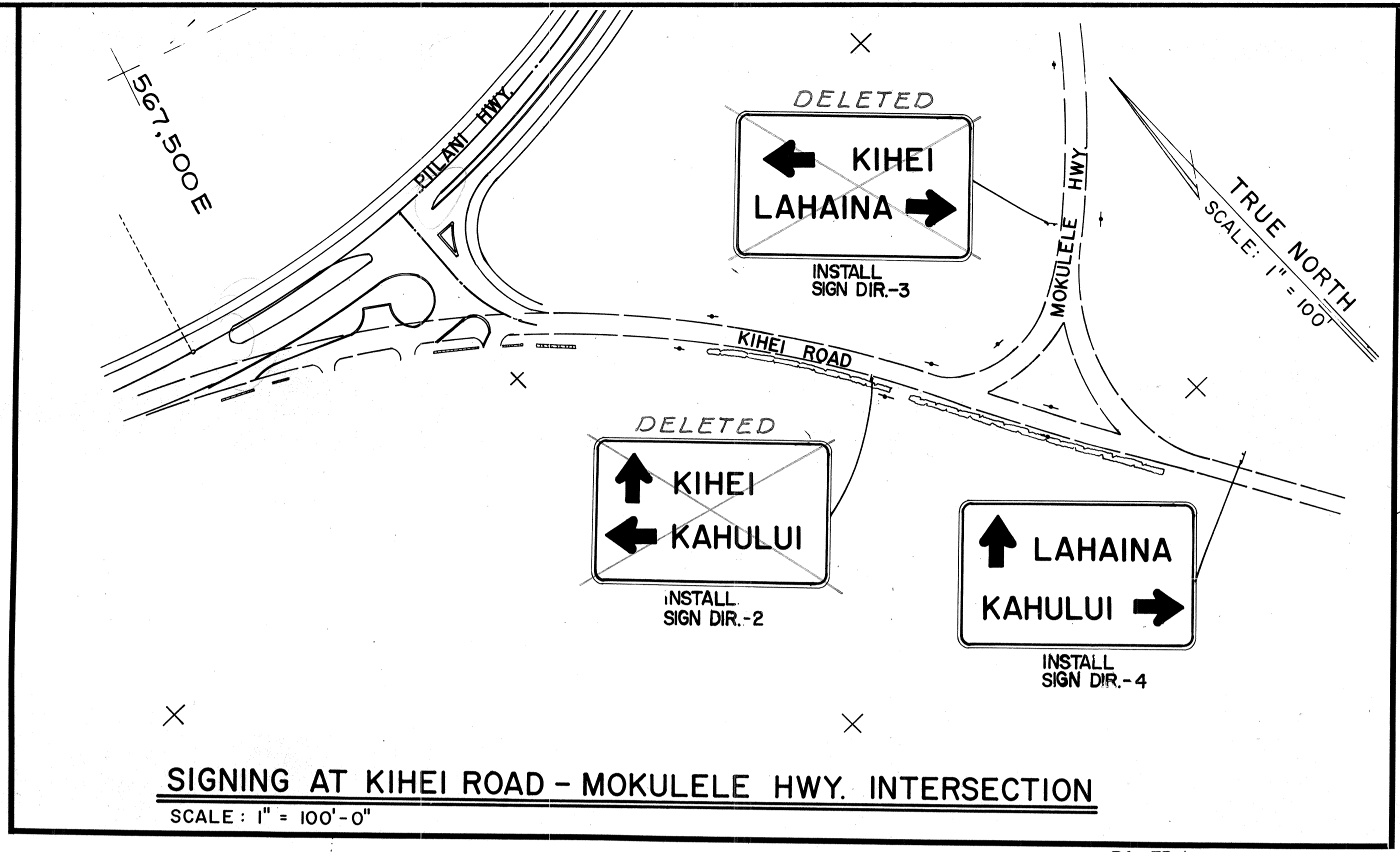
SIGNING & PAVEMENT MARKINGS

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978

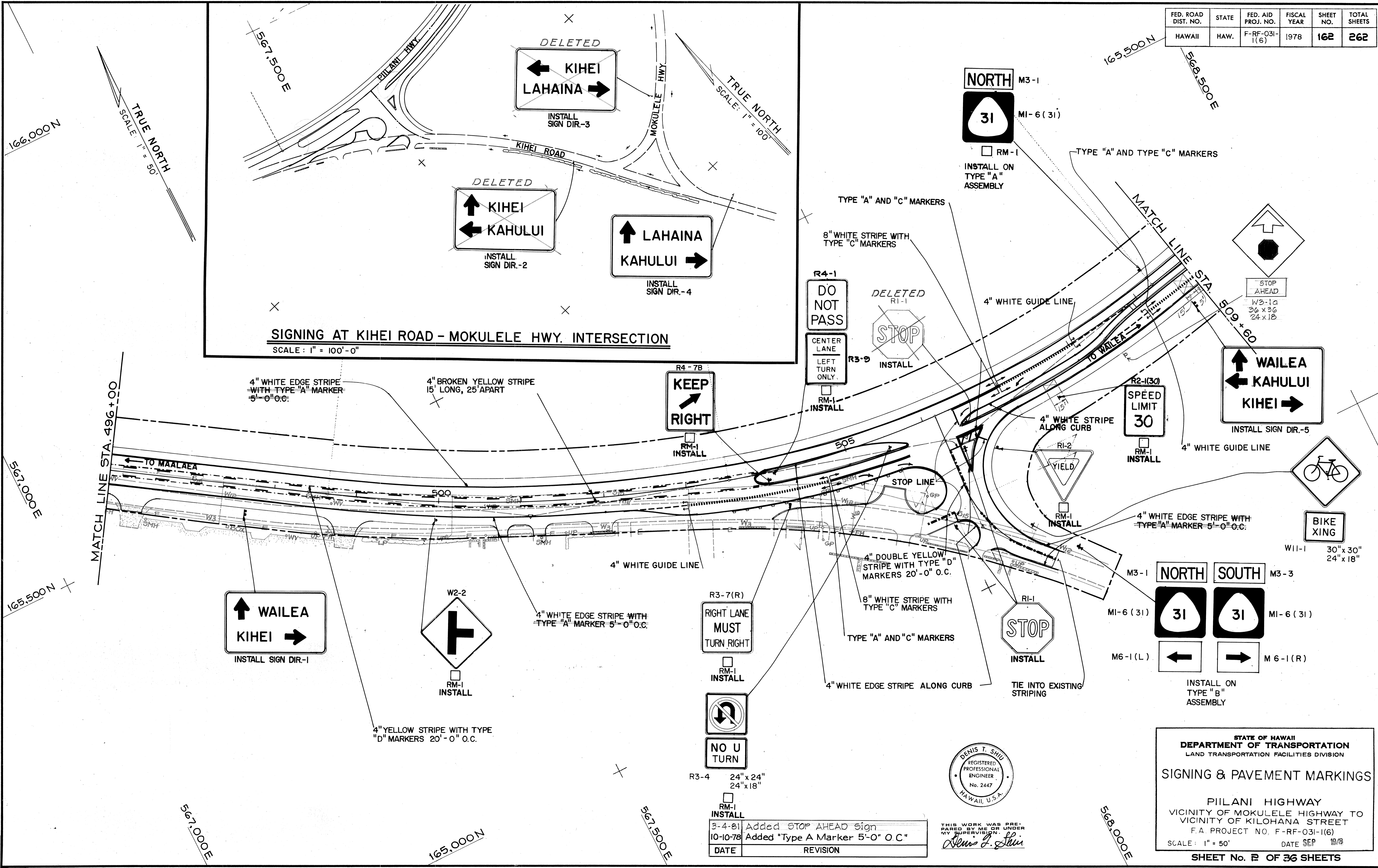
SHEET No. 1 OF 36 SHEETS

DATE	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NOTE BOOK	

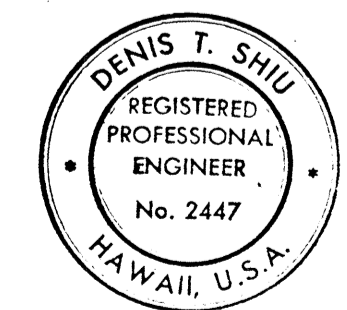
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	162	262



SIGNING AT KIHEI ROAD - MOKULELE HWY. INTERSECTION
SCALE: 1" = 100'-0"



DATE	
ORIGINAL PLAN	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	
NO. 11	
NO. 12	
NO. 13	
NO. 14	
NO. 15	
NO. 16	
NO. 17	
NO. 18	
NO. 19	
NO. 20	



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DATE	REVISION
3-4-81	Added STOP AHEAD Sign
10-10-78	Added "Type A Marker 5'-0" O.C."

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS

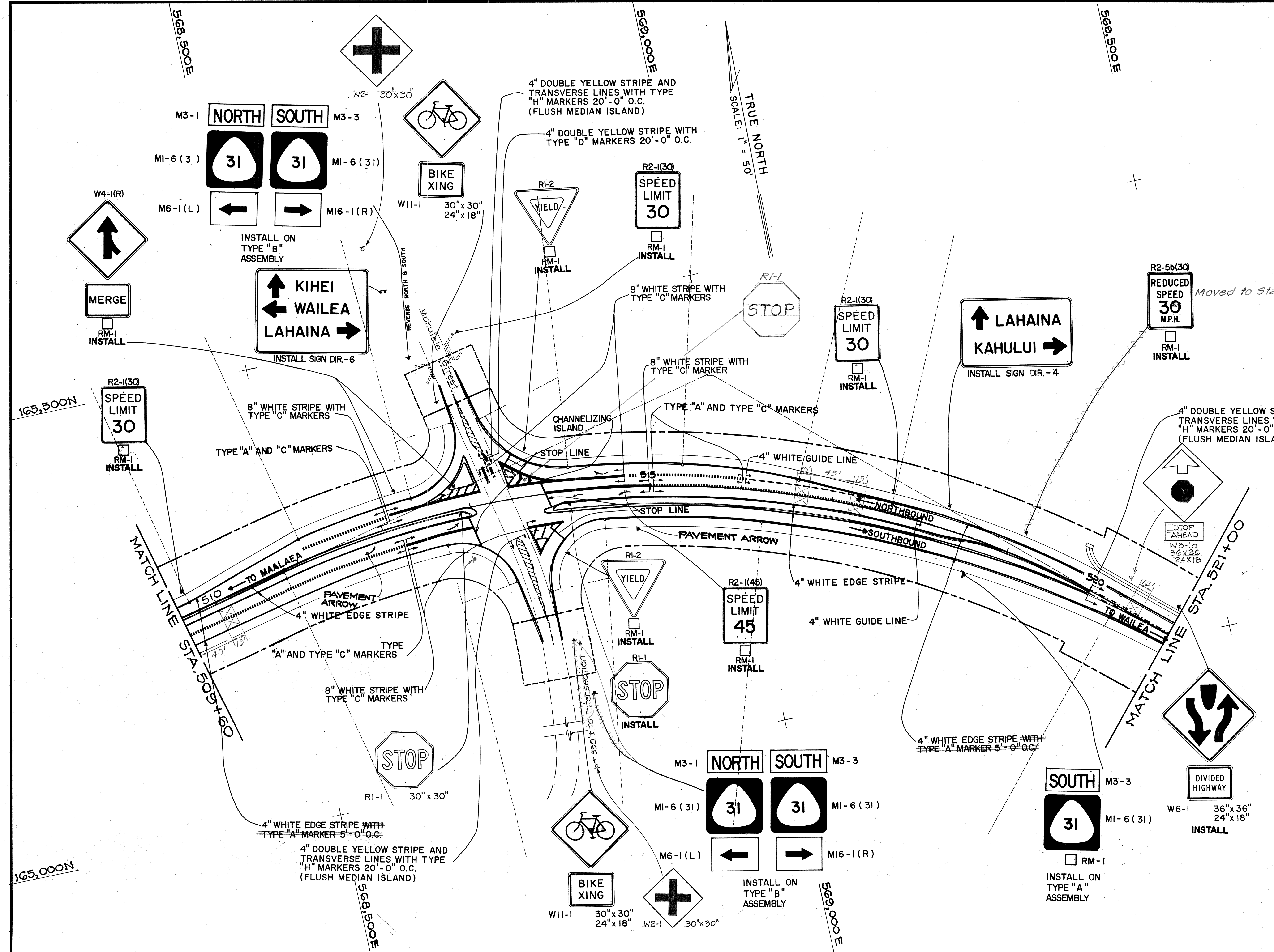
PILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978

SHEET No. 162 OF 36 SHEETS

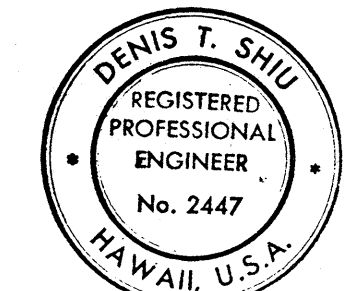
C.O. ADD. 162

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	163	262

165,500N



DATE	REVISION
3-4-81	Delete STOP Movement on Mokulele St and revised STOP LINE on Pilihi Hwy and added STOP AHEAD Sign
10-10-78	Added "Type A Marker 5'-0" O.C."



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

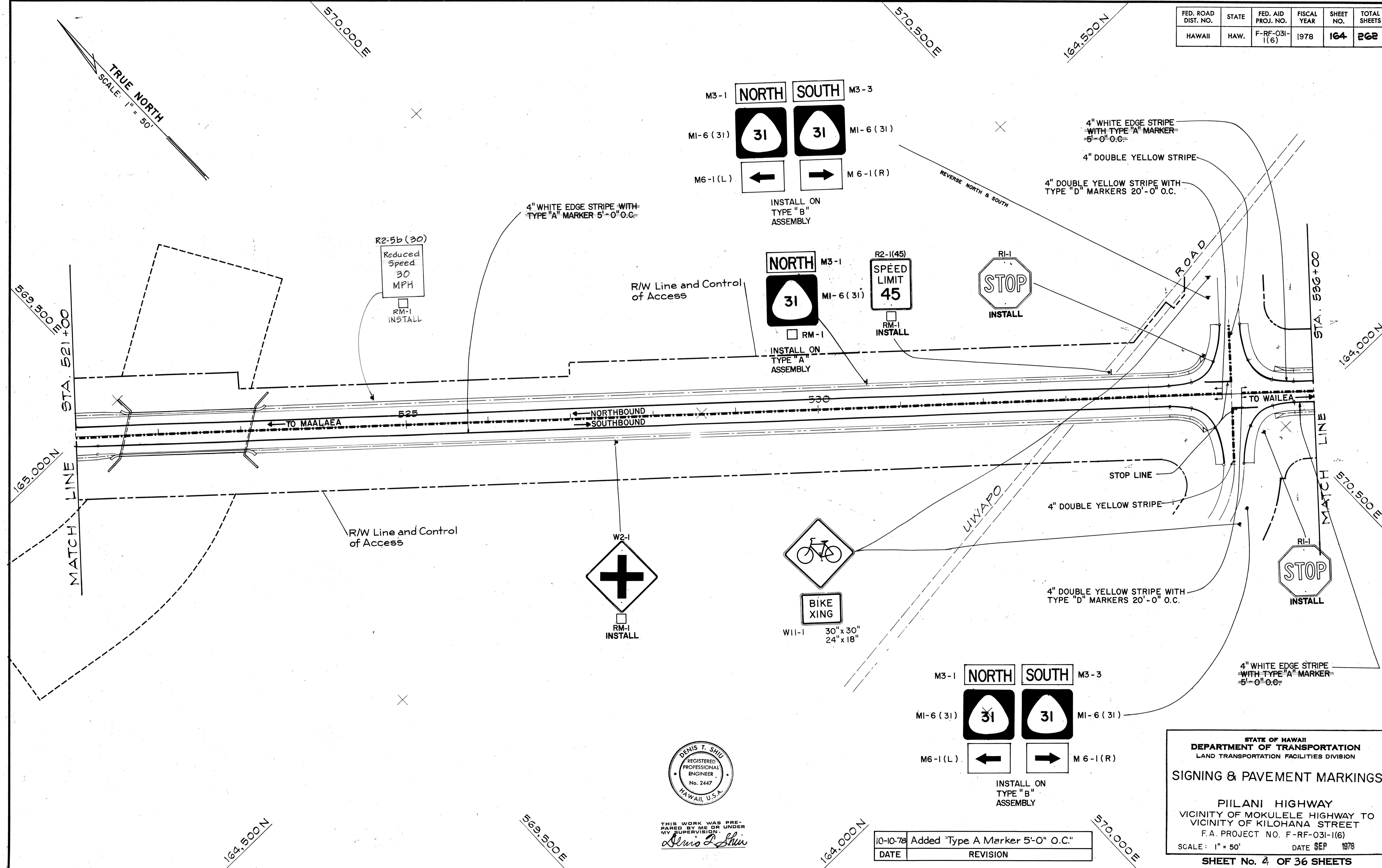
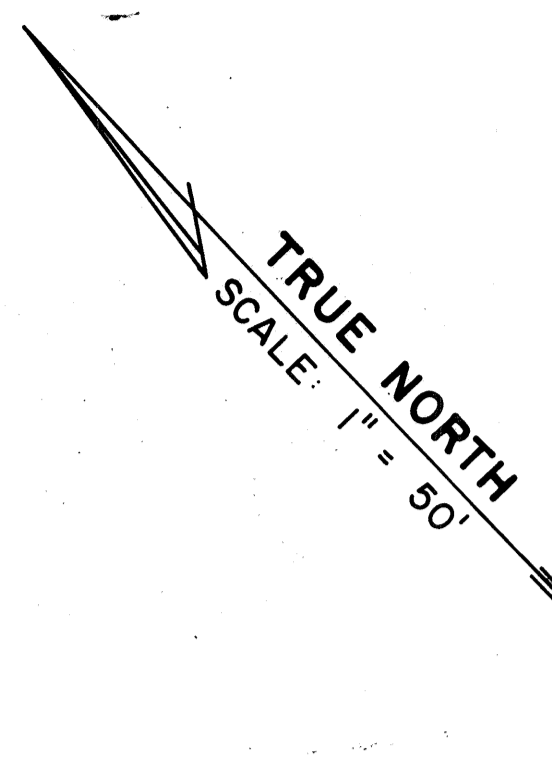
SIGNING & PAVEMENT MARKINGS

PILIHI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: 1" = 50' DATE SEP 1978

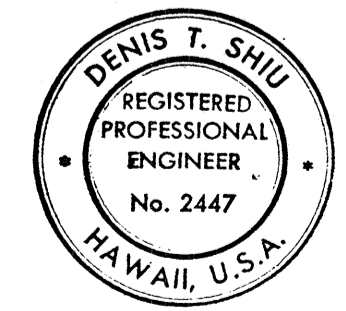
SHEET No. 3 OF 36 SHEETS

DATE	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	164	262



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



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10-10-78	Added "Type A Marker 5'-0" O.C."
DATE	REVISION

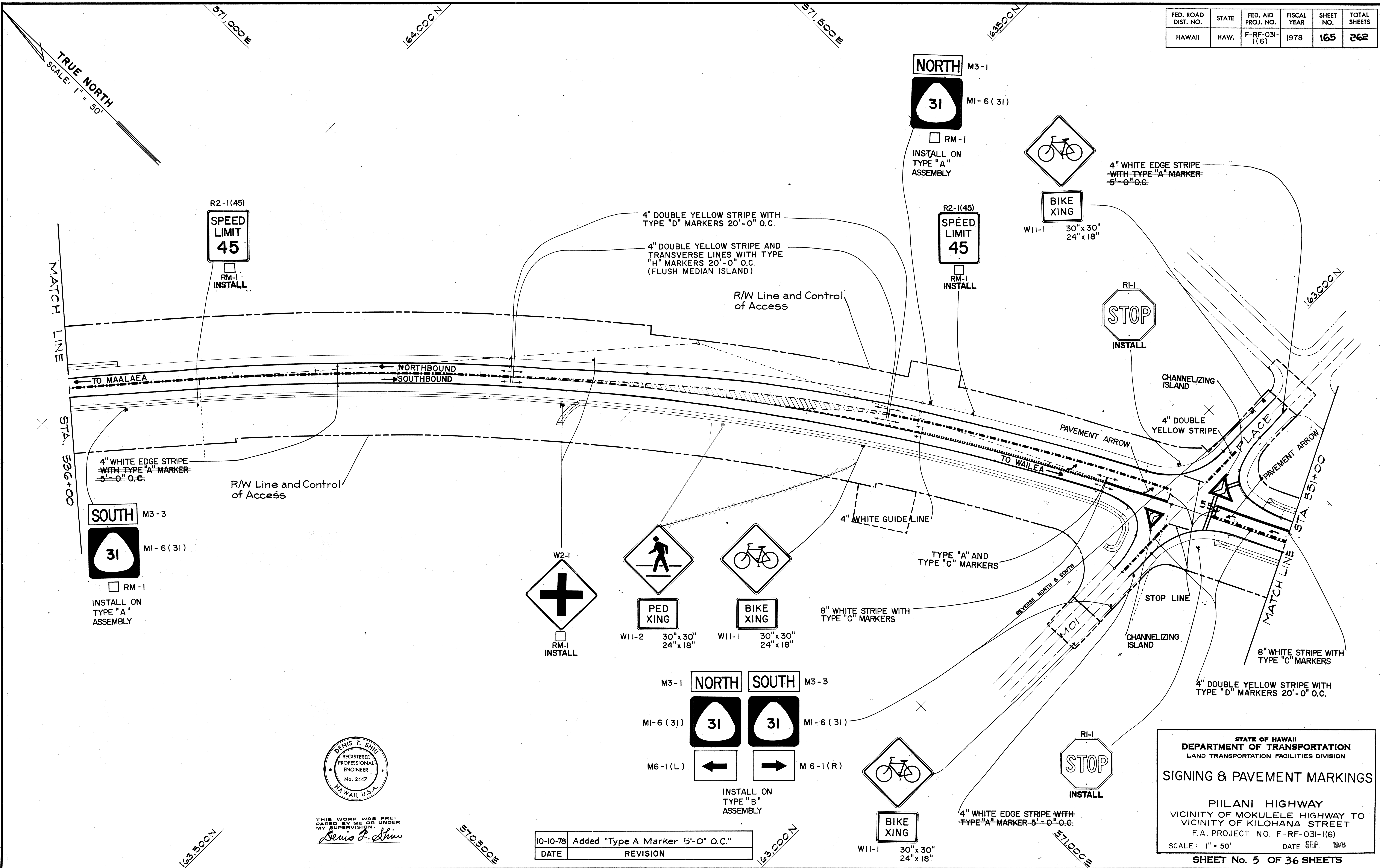
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS

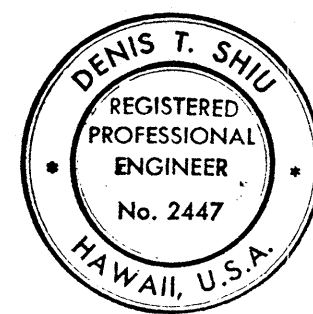
PIILANI HIGHWAY
VICINITY OF MOKULEHA HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978

SHEET No. 4 OF 36 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	165	262



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



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10-10-78	Added "Type A Marker 5'-0" O.C."
DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS

PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO
 VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: 1" = 50' DATE SEP 1978

SHEET No. 5 OF 36 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	166	262

TRUE NORTH
SCALE: 1" = 50'

572,000 E

162,500 N

162,000 N

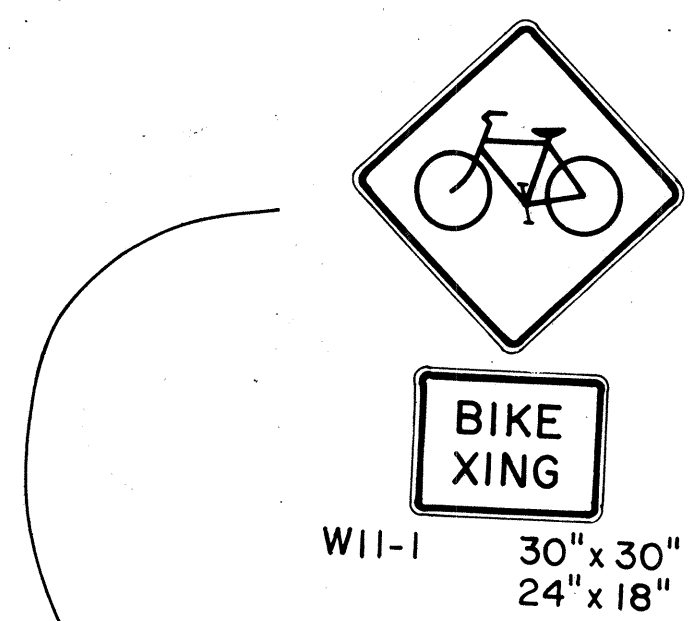
161,500 N

163,000 N

571,500 E

572,000 E

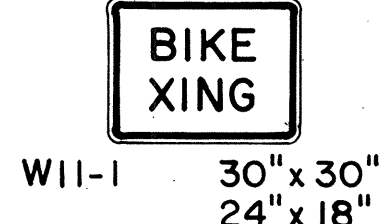
571,500 E



4" DOUBLE YELLOW STRIPE AND TRANSVERSE LINES WITH TYPE "H" MARKERS 20'-0" O.C. (FLUSH MEDIAN ISLAND)

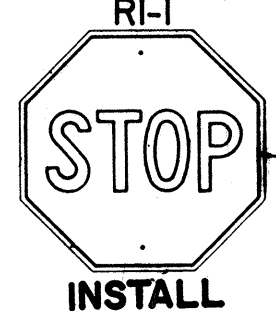
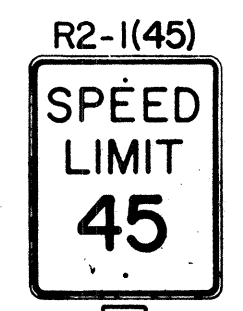
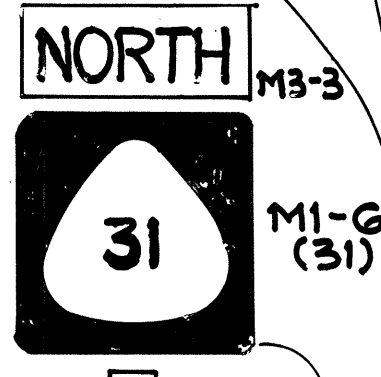
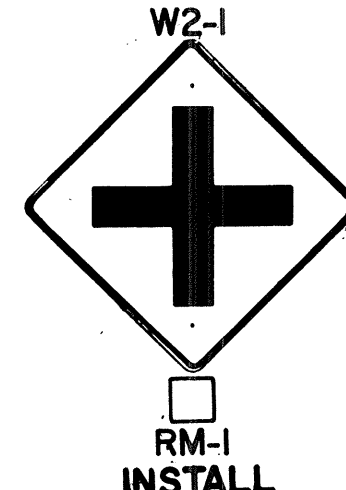
8" WHITE STRIPE WITH TYPE "C" MARKERS

4" DOUBLE YELLOW STRIPE WITH TYPE "D" MARKERS 20'-0" O.C.



8" WHITE STRIPE WITH TYPE "C" MARKERS

TYPE "A" AND "C" MARKERS



CHANNELIZING ISLAND

TYPE "A" AND TYPE "C" MARKERS

4" WHITE GUIDE LINE

TYPE "A" AND "C" MARKERS

STOP LINE

R/W Line and Control of Access

NORTHBOUND

SOUTHBOUND

4" WHITE GUIDE LINE

PAVEMENT ARROW

PAVEMENT ARROW

4" WHITE EDGE STRIPE WITH TYPE "A" MARKER 5'-0" O.C.

MATCH LINE
STA. 551+00

TO MAALAEA

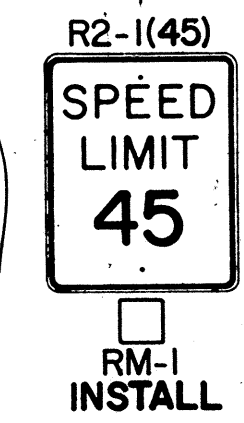
TO WAILEA

MATCH LINE
STA. 565+00

CHANNELIZING ISLAND

4" DOUBLE YELLOW STRIPE

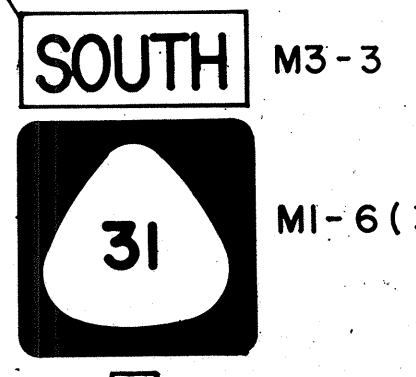
4" DOUBLE YELLOW STRIPE WITH TYPE "D" MARKERS 20'-0" O.C.



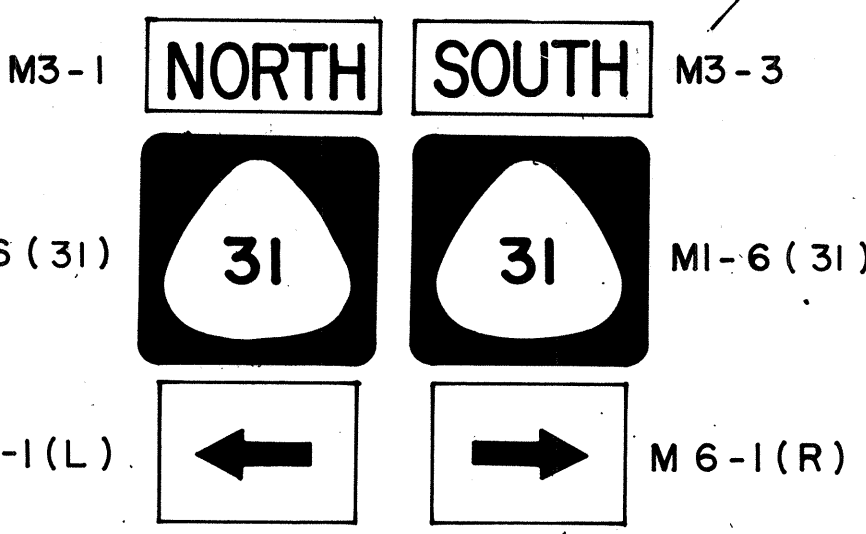
R/W Line and Control of Access



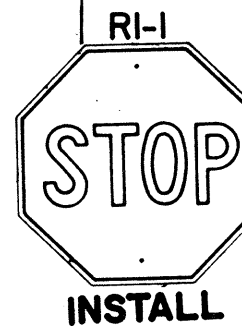
4" DOUBLE YELLOW STRIPE WITH TYPE "D" MARKERS 20'-0" O.C.



4" WHITE EDGE STRIPE WITH TYPE MARKER 5'-0" O.C.



INSTALL ON TYPE "B" ASSEMBLY

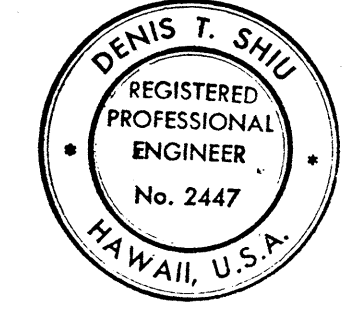


KAIOLA PLACE

OHUKAI

161,500 N

DATE	BY



DATE	REVISION
10-10-78	Added "Type A Marker 5'-0" O.C."

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DENIS T. SHU

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS

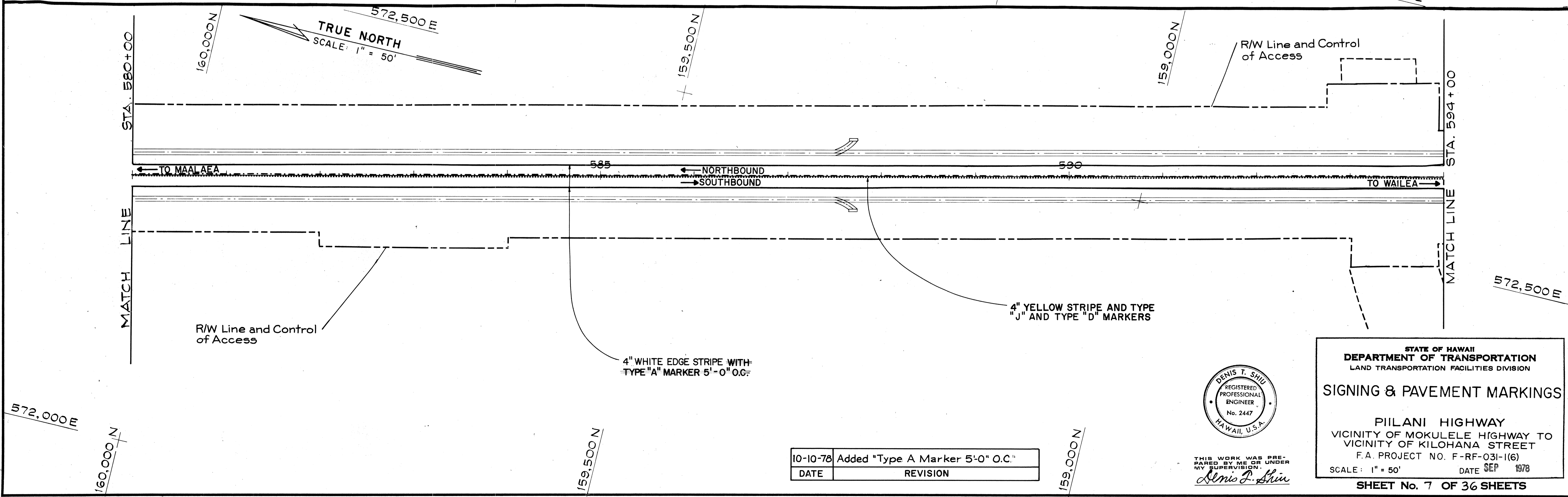
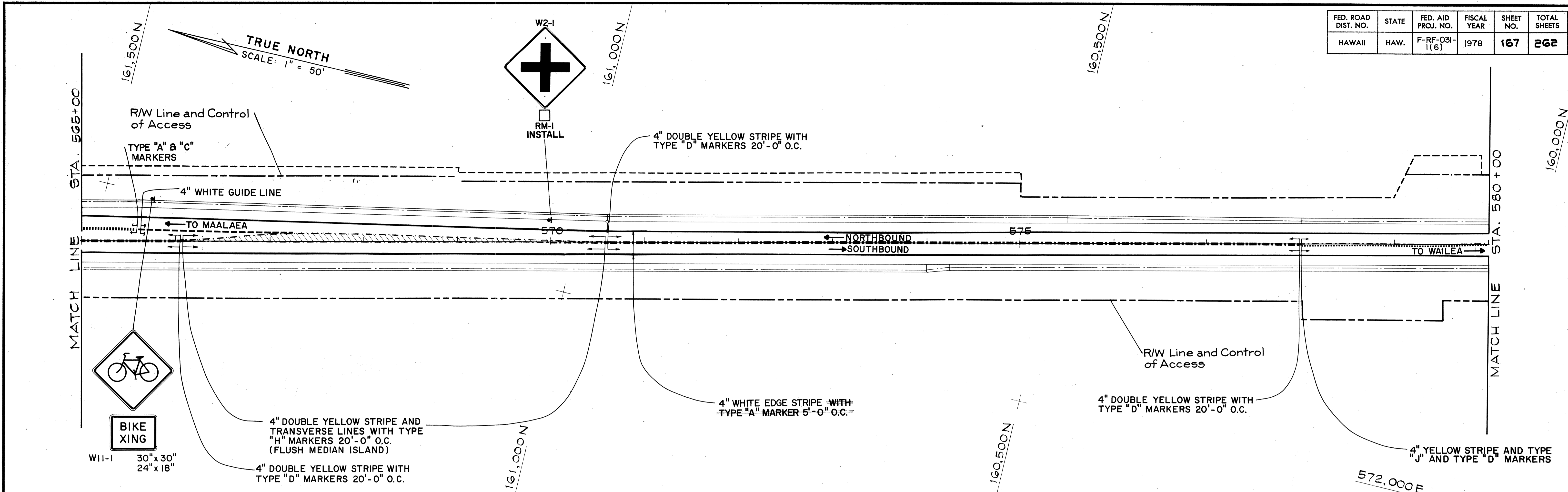
PILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)

SCALE: 1" = 50' DATE SEP 1978

SHEET No. 6 OF 36 SHEETS

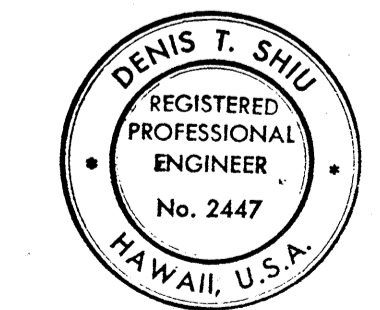
ADD. 166

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	167	262



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
NO.	

10-10-78	Added "Type A Marker 5'-0" O.C."
DATE	REVISION



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

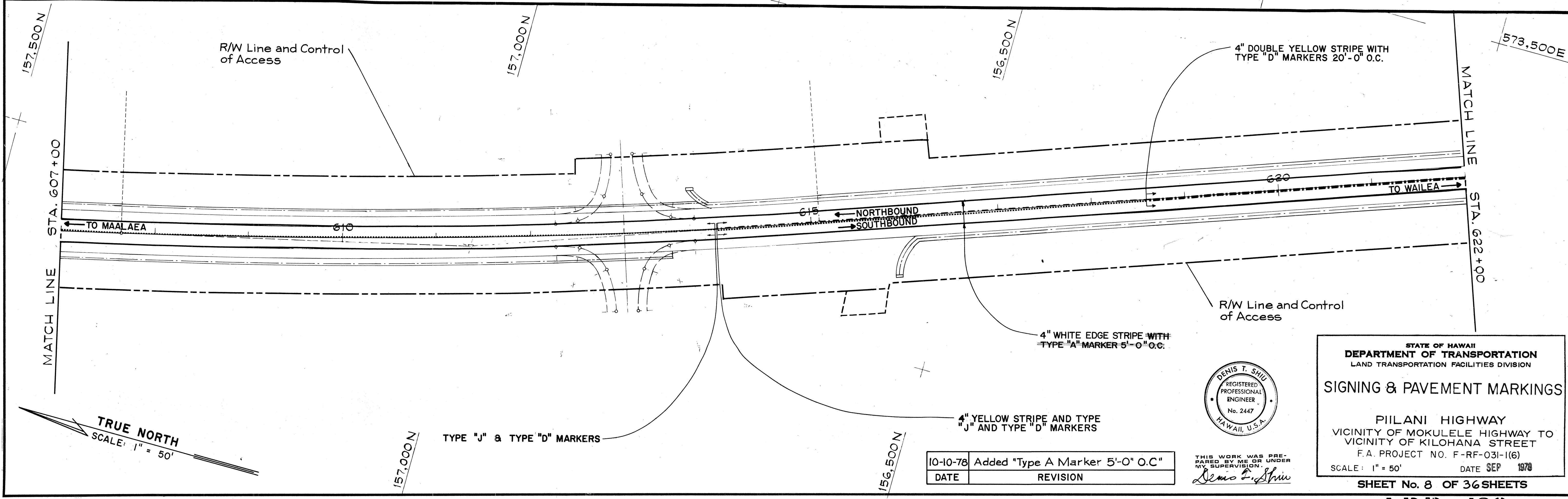
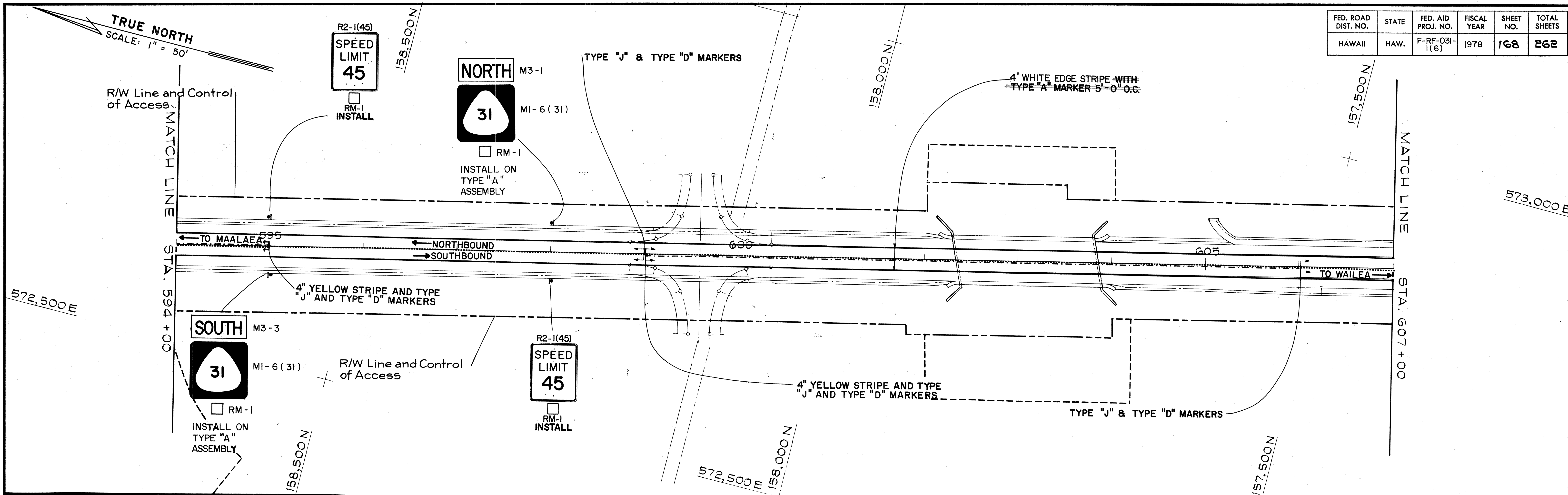
SIGNING & PAVEMENT MARKINGS

PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: 1" = 50' DATE SEP 1978

SHEET No. 7 OF 36 SHEETS

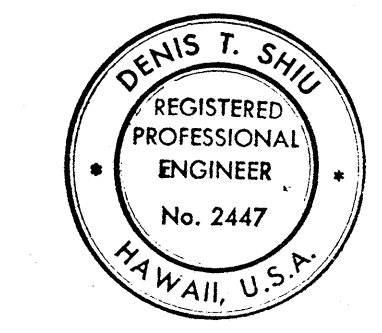
ADD. 167

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	168	262



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
DATE	

10-10-78	Added "Type A Marker 5'-0" O.C"
DATE	REVISION



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Denis T. Shiu

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

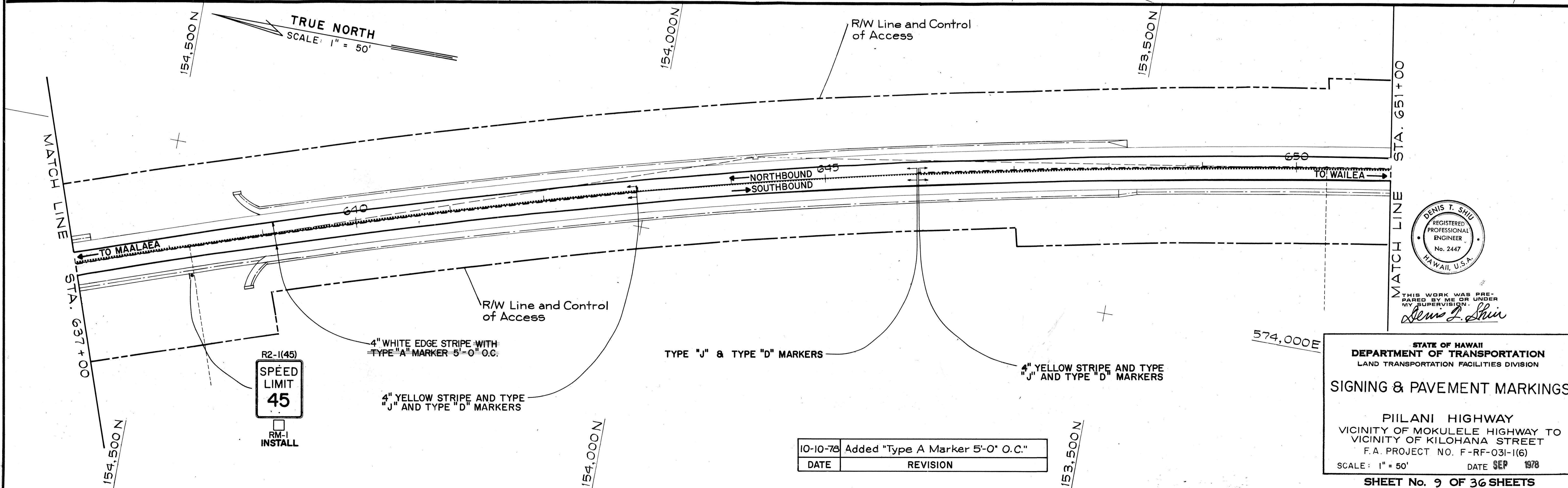
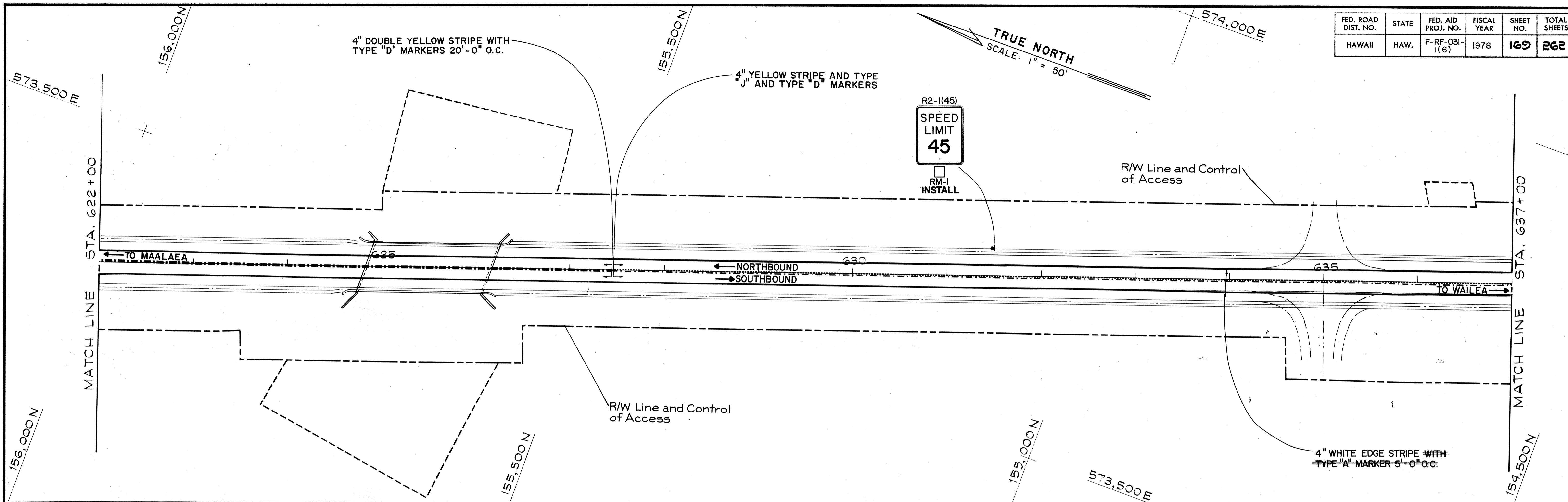
SIGNING & PAVEMENT MARKINGS

PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: 1" = 50' DATE SEP 1978

SHEET No. 8 OF 36 SHEETS

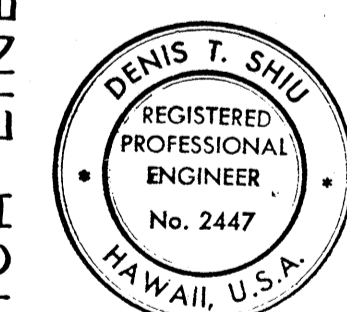
ADD. 168

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	169	262



DATE	BY
DATE	BY
DATE	BY

10-10-78	Added "Type A Marker 5'-0" O.C."
DATE	REVISION

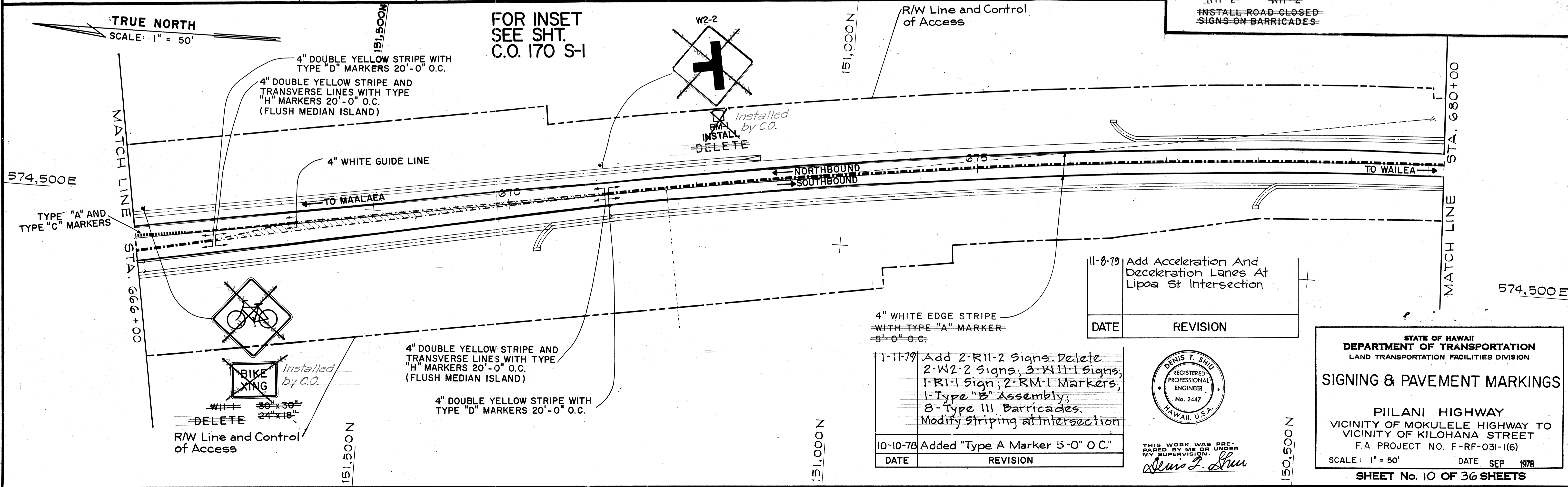
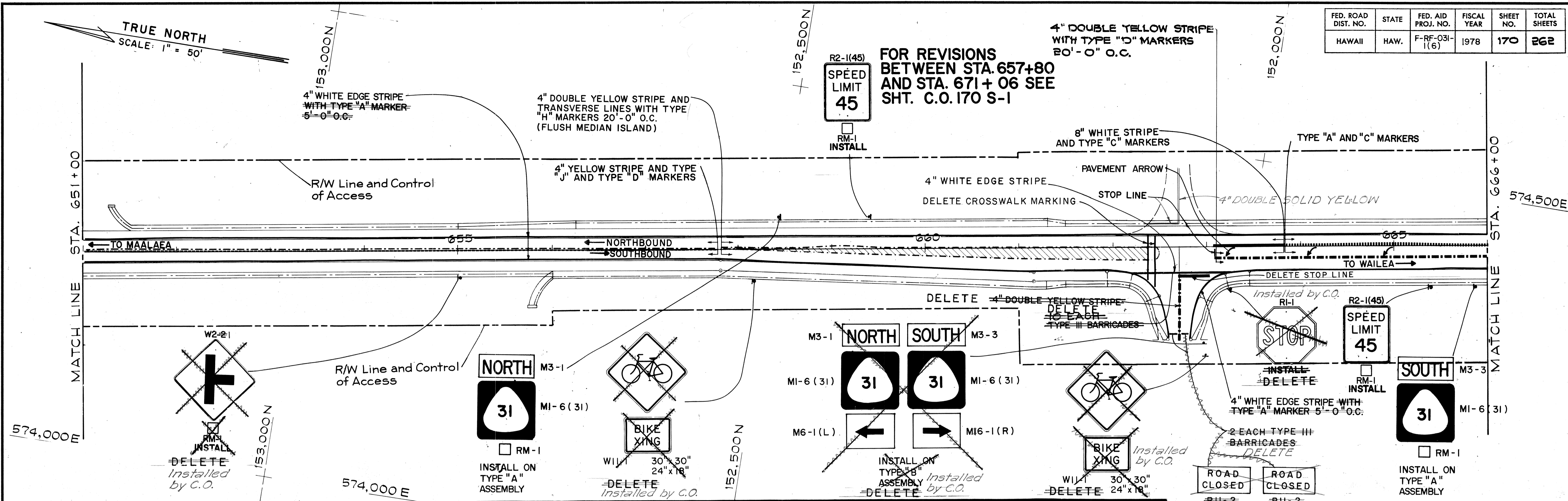


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Denis T. Shin

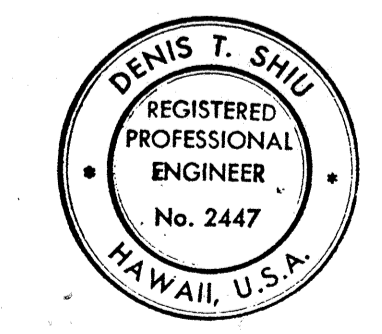
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
SIGNING & PAVEMENT MARKINGS
 PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO
 VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: 1" = 50' DATE SEP 1978
 SHEET No. 9 OF 36 SHEETS

ADD. 169

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	170	262



DATE	REVISION
1-11-79	Add 2-R11-2 Signs. Delete 2-W2-2 Signs, 3-W11-1 Signs, 1-R1-1 Sign, 2-RM-1 Markers, 1-Type "B" Assembly, 8-Type III Barricades. Modify Striping at Intersection.
10-10-78	Added "Type A Marker 5'-0" O.C."
11-8-79	Add Acceleration And Deceleration Lanes At Lipa St Intersection



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS

PILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO
 VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)

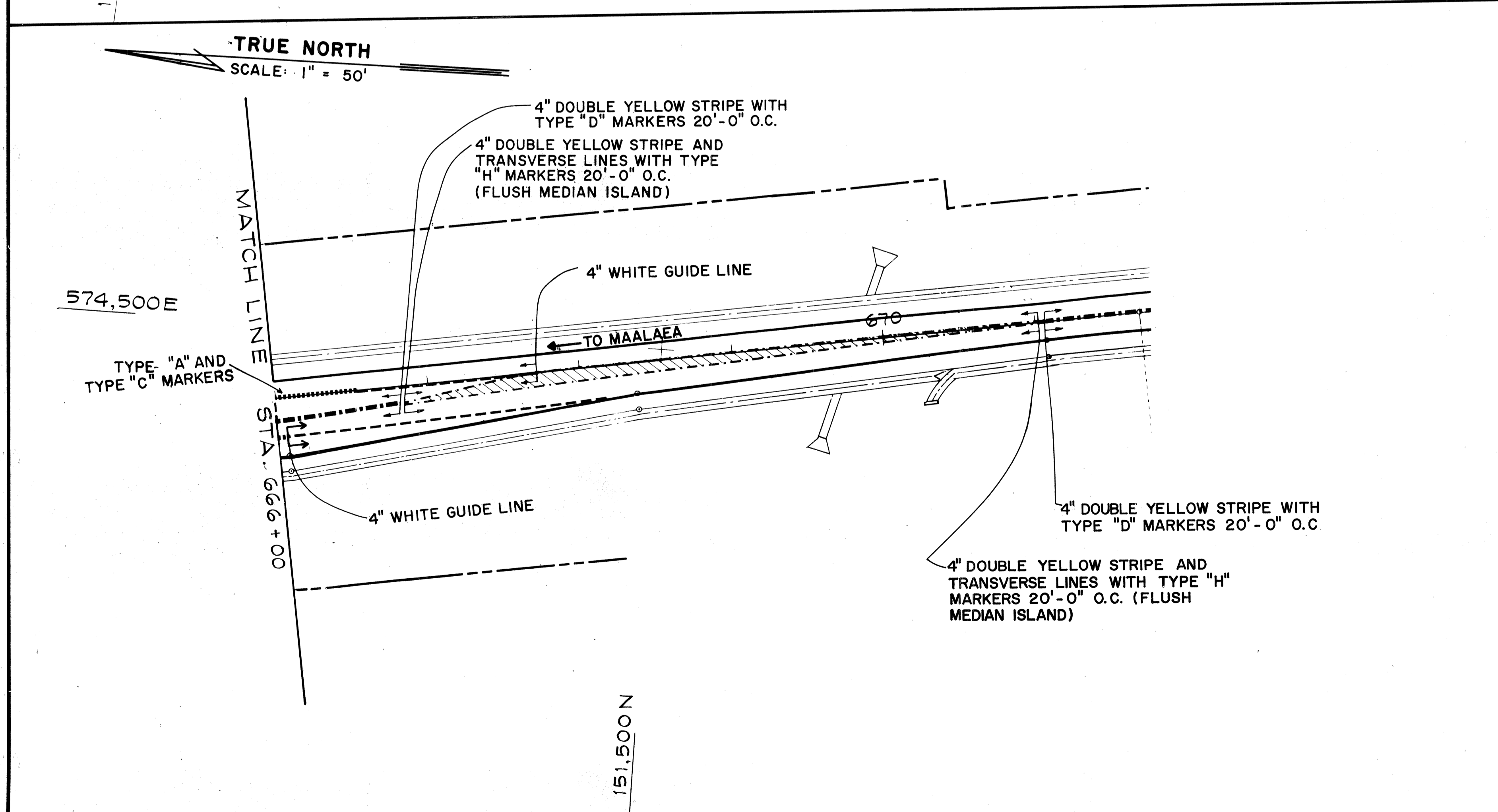
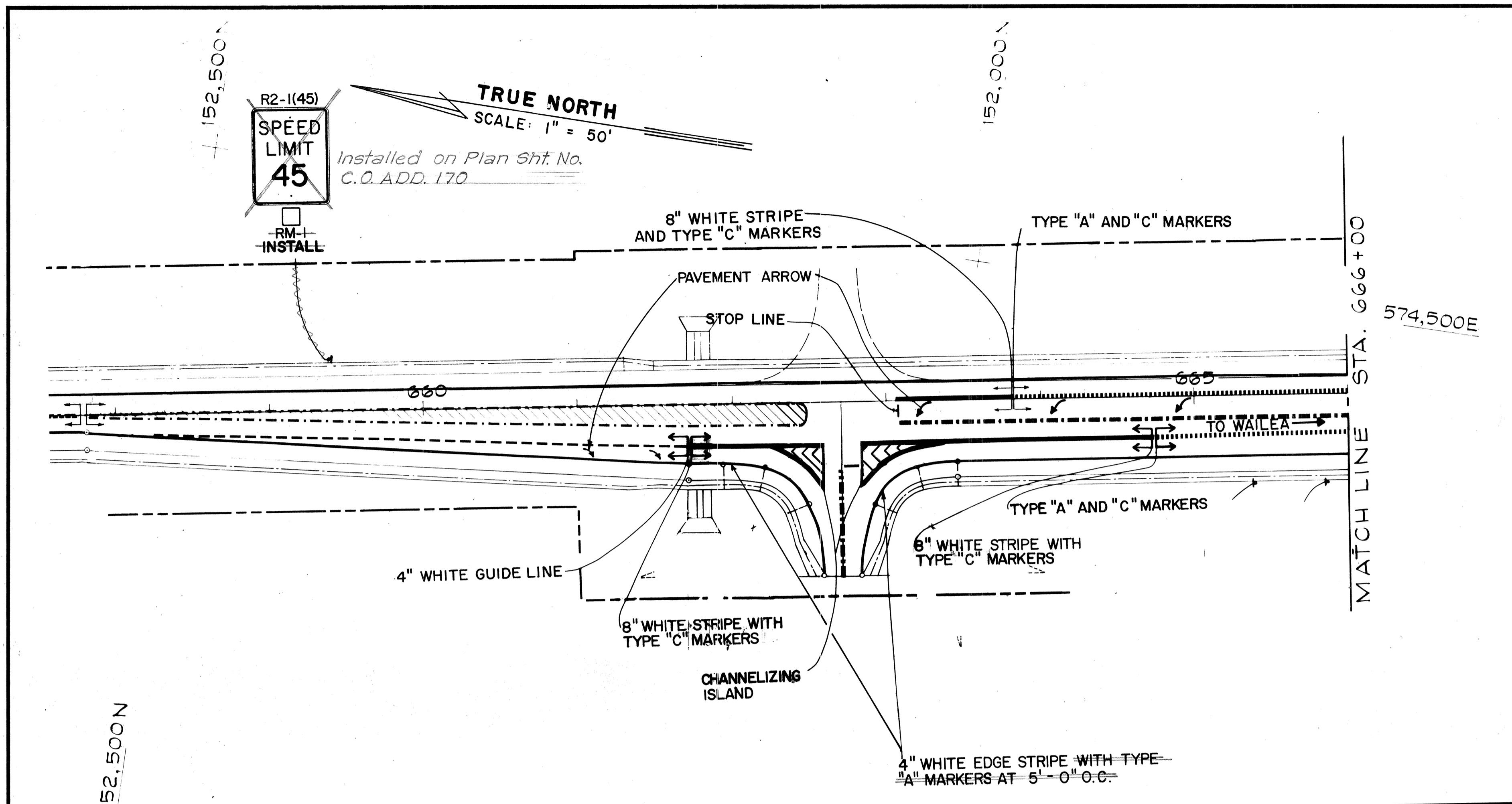
SCALE: 1" = 50' DATE SEP 1978

SHEET No. 10 OF 36 SHEETS

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

C.O. A 170. 170

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	170A	262



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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Denis T. Shiu

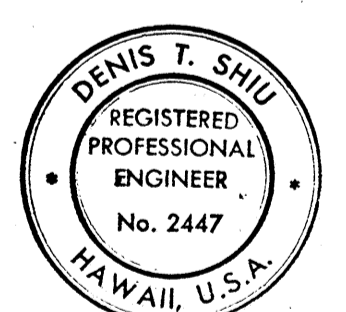
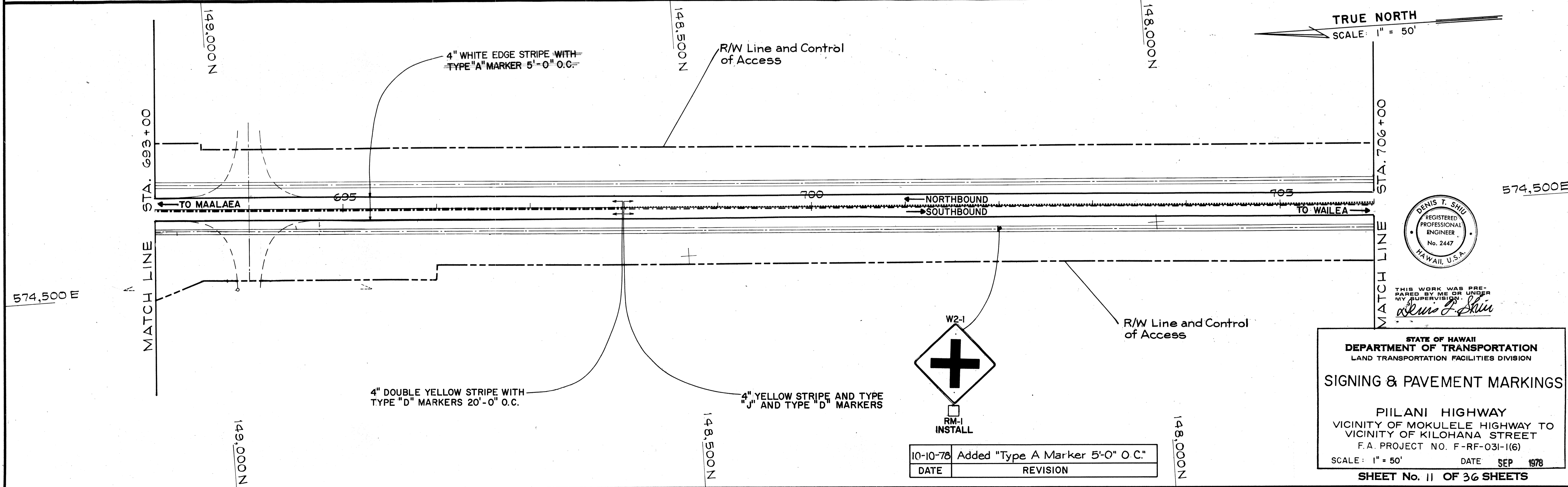
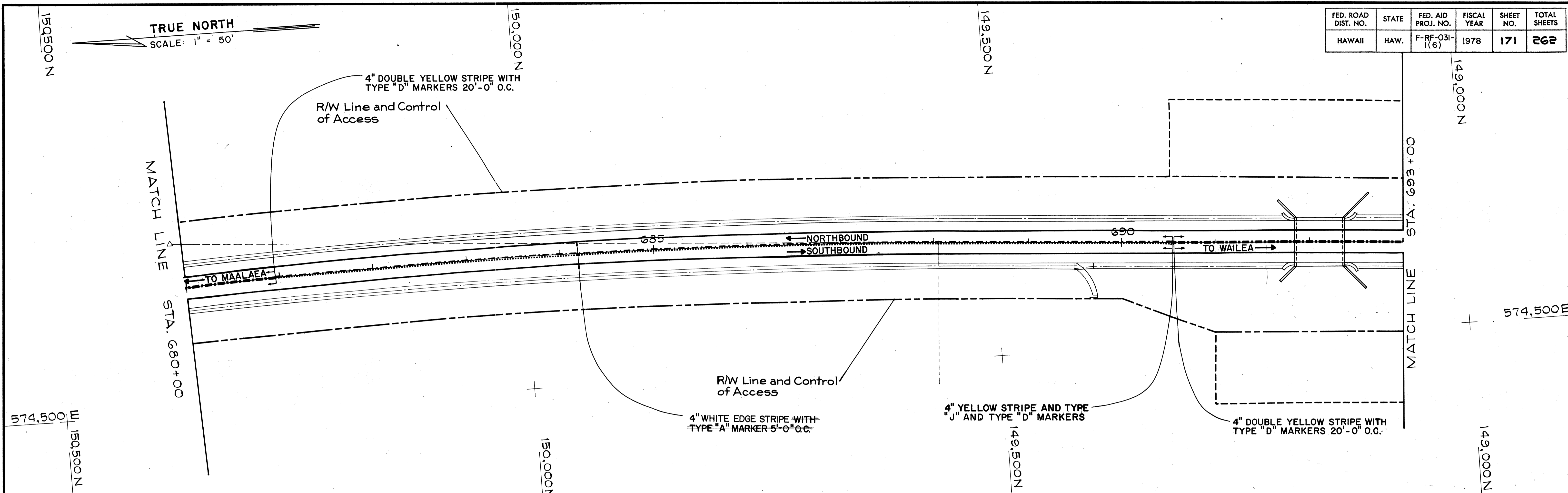
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & PAVEMENT MARKINGS
PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-031-1(6)
SCALE: AS SHOWN DATE NOV. 1979

SHEET No. 10A OF 36 SHEETS

C.O. 170 S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	171	262



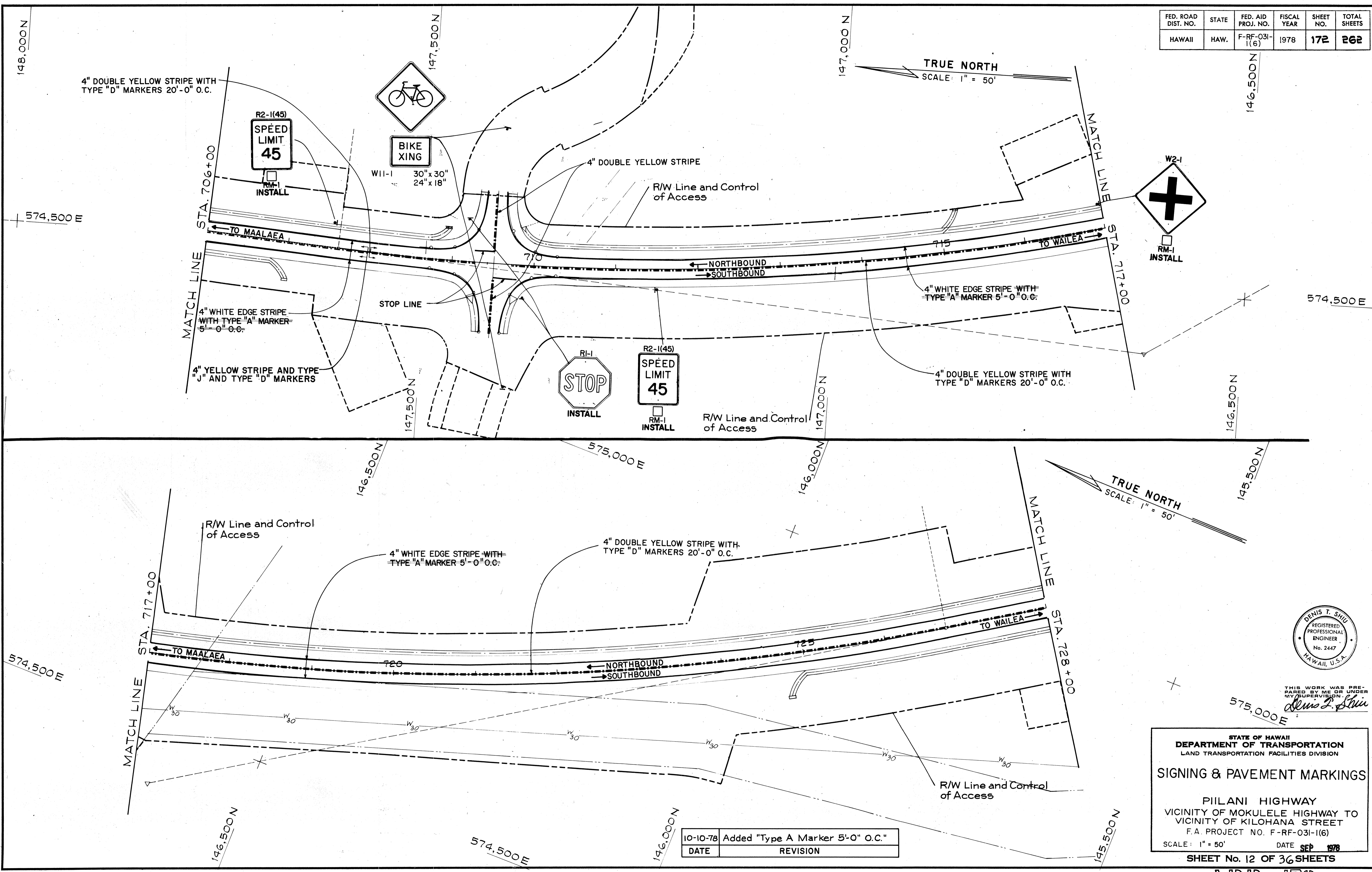
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Denis T. Shiu

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
SIGNING & PAVEMENT MARKINGS
 PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO
 VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: 1" = 50' DATE SEP 1978
 SHEET No. 11 OF 36 SHEETS

DATE	REVISION
10-10-78	Added "Type A Marker 5'-0" O.C."

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

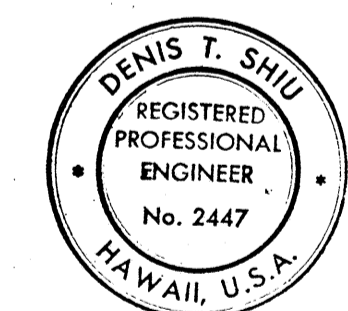
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	172	262



TRUE NORTH
SCALE: 1" = 50'

TRUE NORTH
SCALE: 1" = 50'

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Denis T. Shiu

DATE	REVISION
10-10-78	Added "Type A Marker 5'-0" O.C."

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)

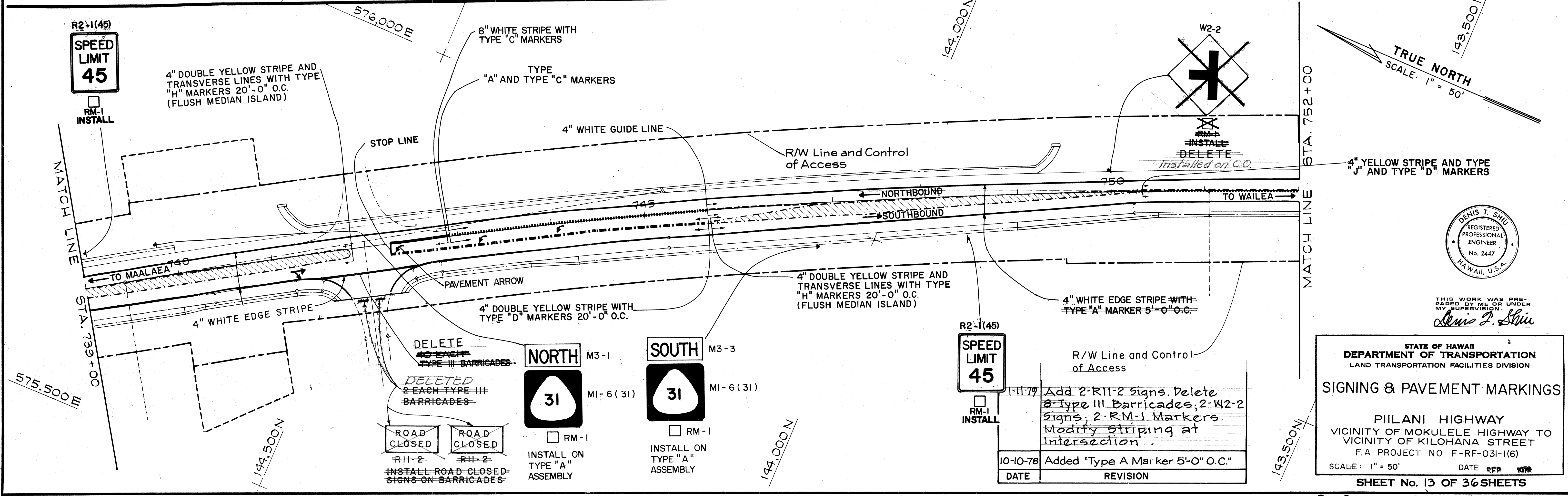
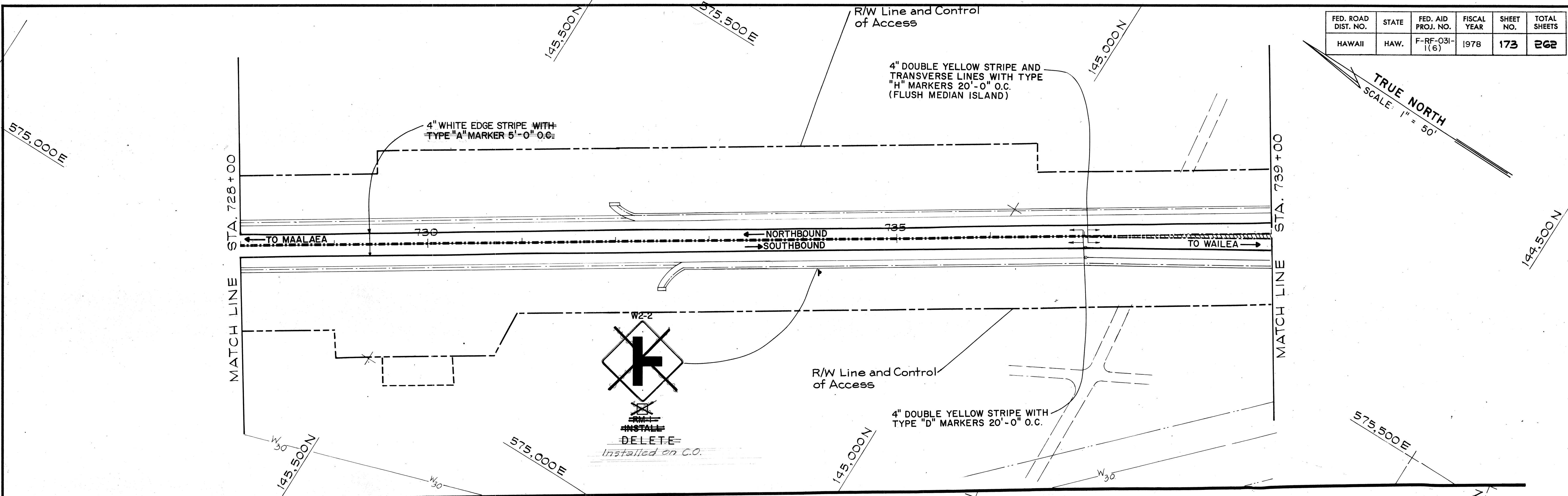
SCALE: 1" = 50' DATE **SEP 1978**

SHEET No. 12 OF 36 SHEETS

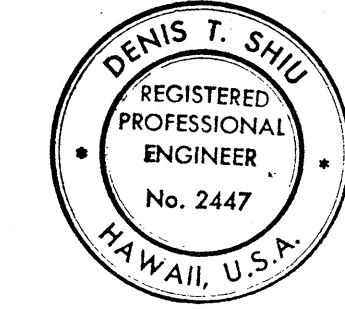
ADD. 172

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	173	262

TRUE NORTH
SCALE: 1" = 50'



TRUE NORTH
SCALE: 1" = 50'



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Denis T. Shui

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978

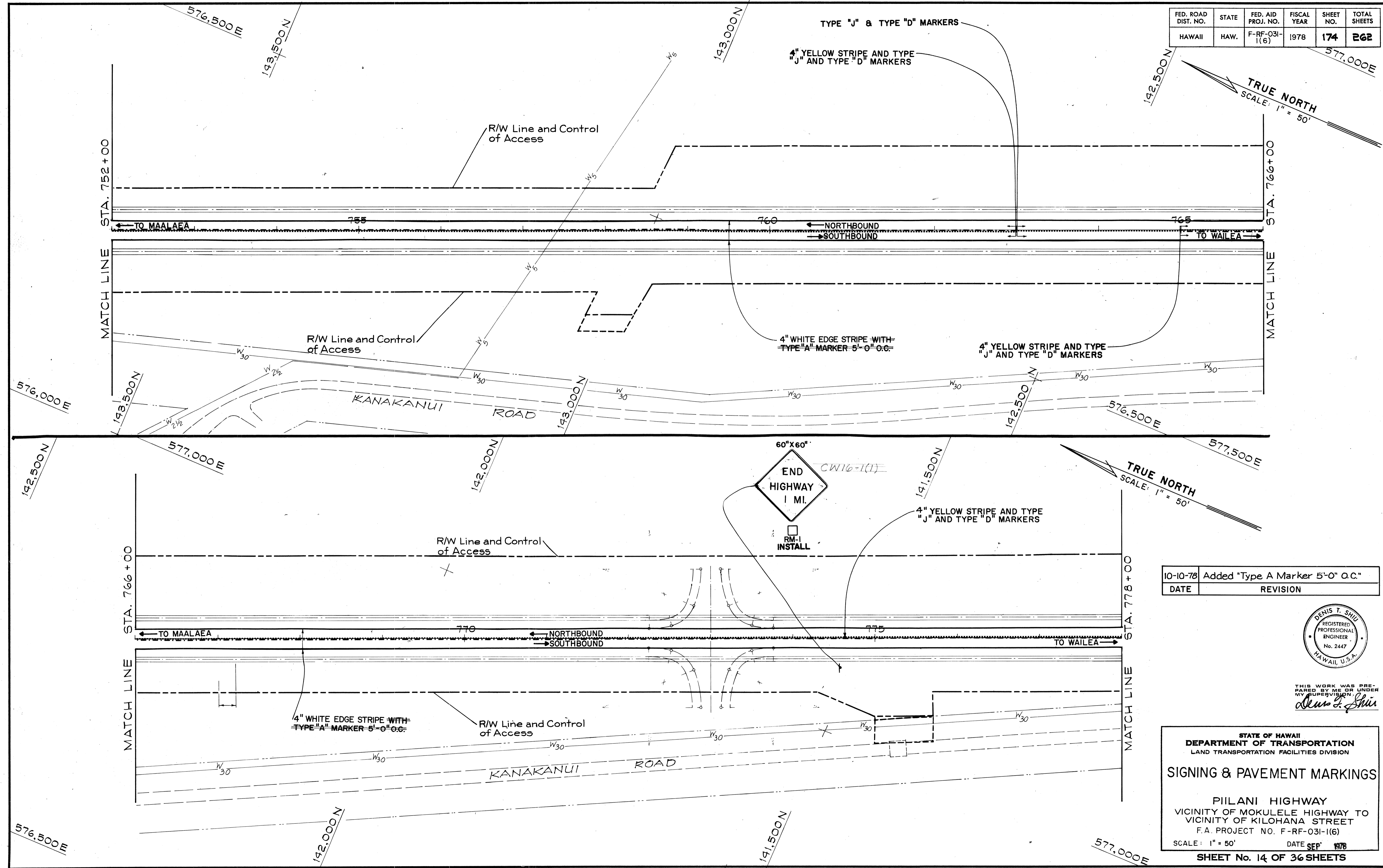
SHEET No. 13 OF 36 SHEETS

DATE	REVISION
1-11-79	Add 2-R11-2 Signs. Delete 3-Type III Barricades, 2-W2-2 Signs, 2-RM-1 Markers. Modify Striping at Intersection.
10-10-78	Added "Type A Marker 5'-0" O.C."

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

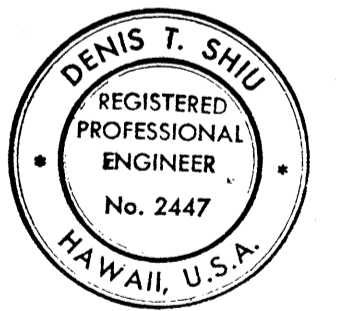
C.O. ADD. 173

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	174	262



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

10-10-78	Added "Type A Marker 5'-0" O.C."
DATE	REVISION



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Denis T. Shiu

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

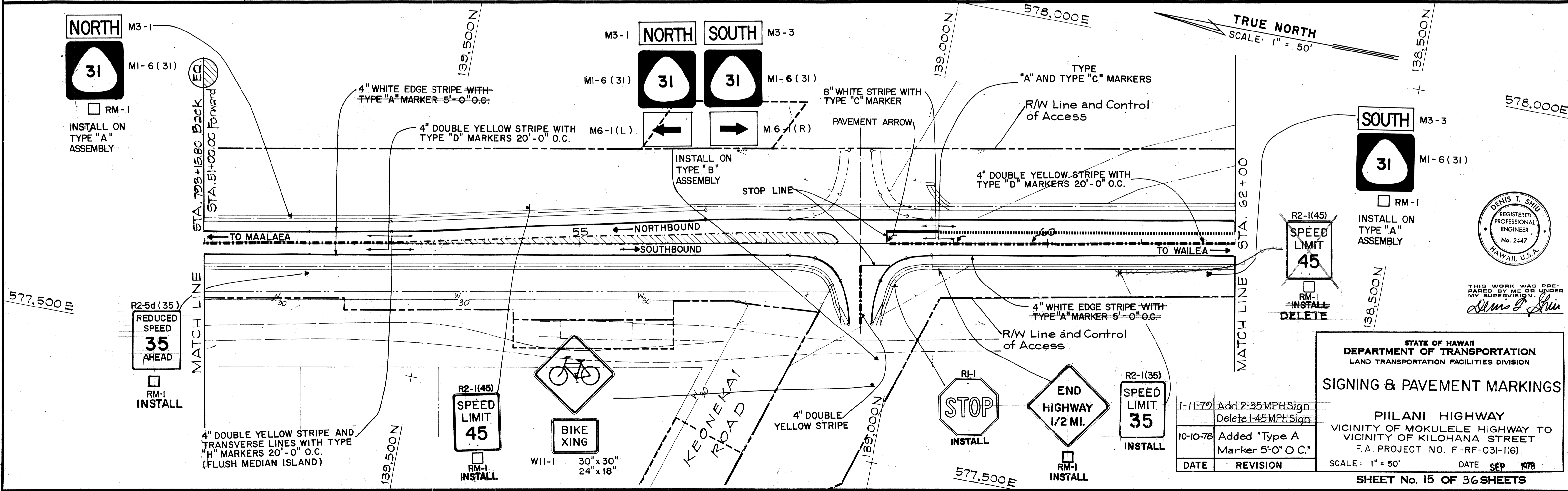
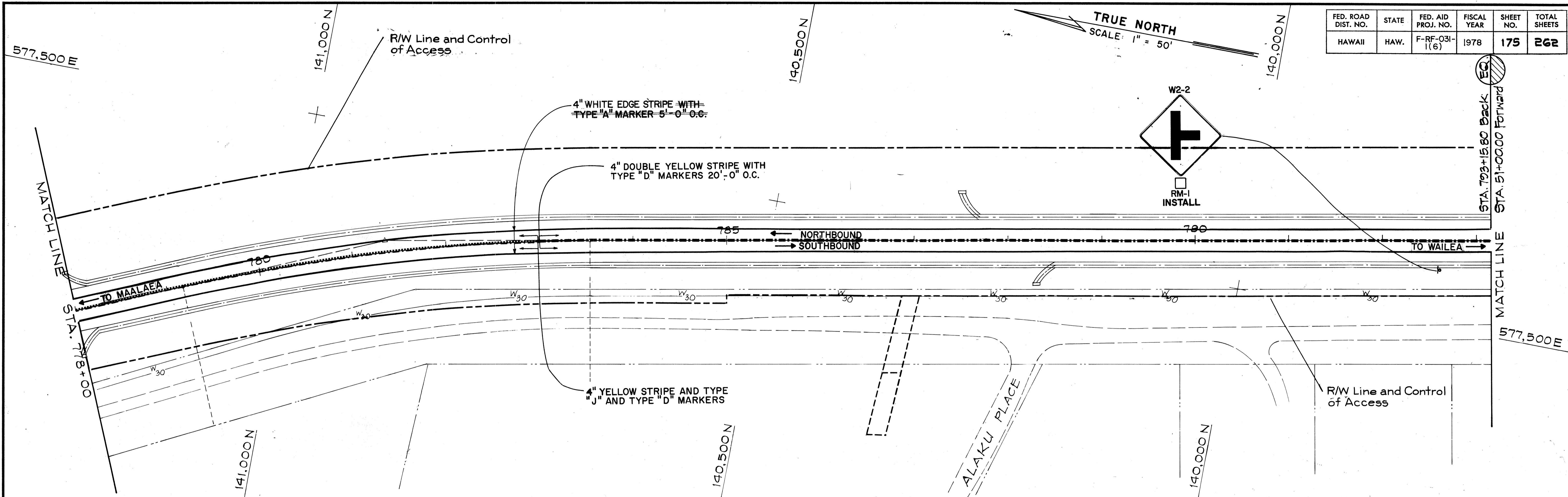
SIGNING & PAVEMENT MARKINGS

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978

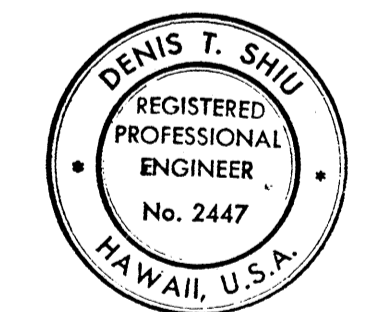
SHEET No. 14 OF 36 SHEETS

ADD. 174

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	175	262



DATE	_____
DESIGNED BY	_____
DRAWN BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
NO.	_____



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Denis T. Shui

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS

PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)

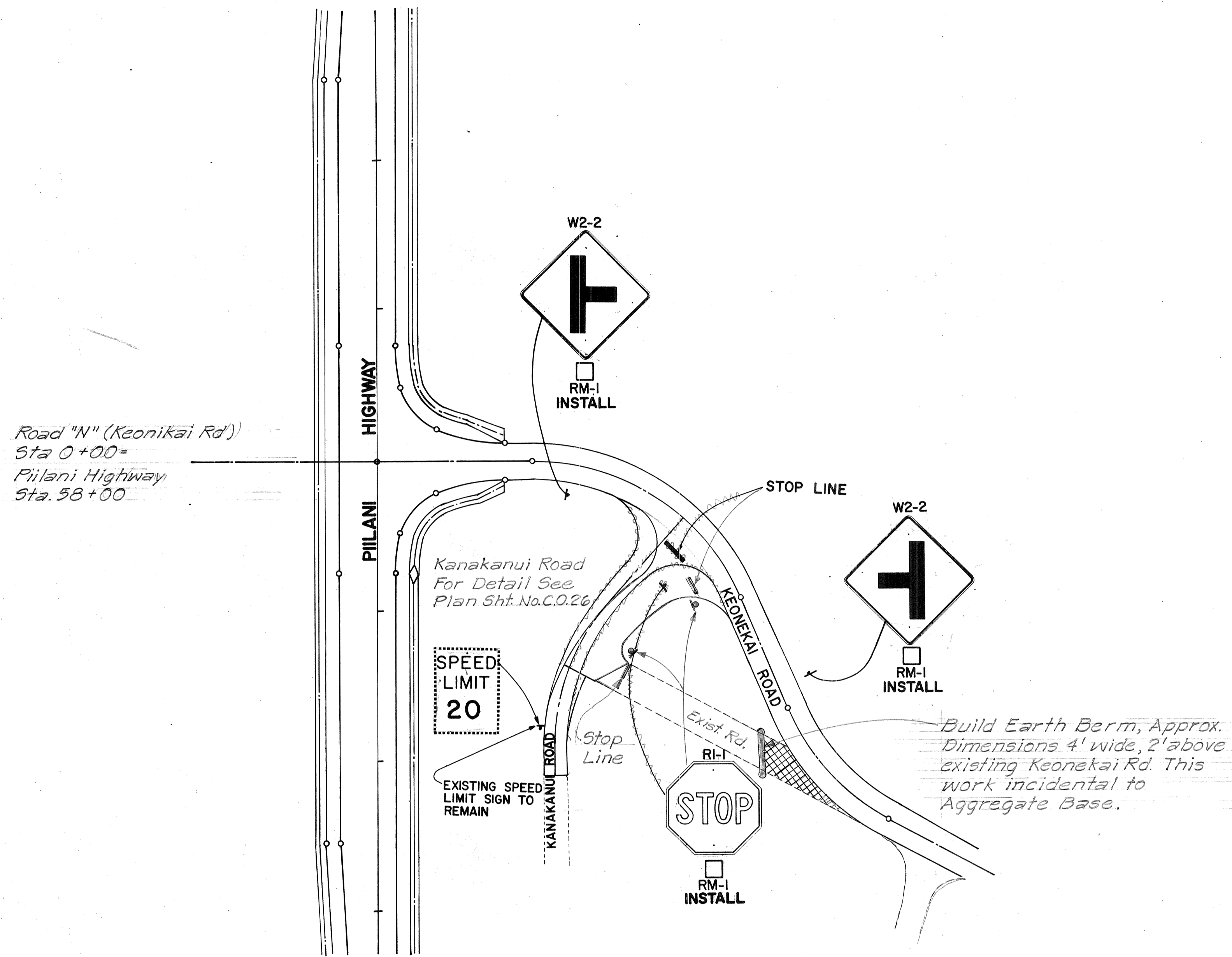
SCALE: 1" = 50' DATE SEP 1978

SHEET No. 15 OF 36 SHEETS

DATE	REVISION
11-11-79	Add 2-35 MPH Sign Delete 1-45 MPH Sign
10-10-78	Added "Type A" Marker 5'-0" O.C.

C.O. ADD. 175

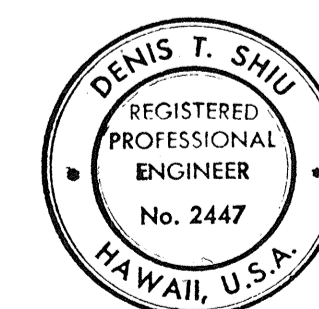
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	175-A	262



**KAKANUI-KEONEKAI ROAD
SIGNING**

SCALE: 1"=50'

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



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Denis T. Shiu

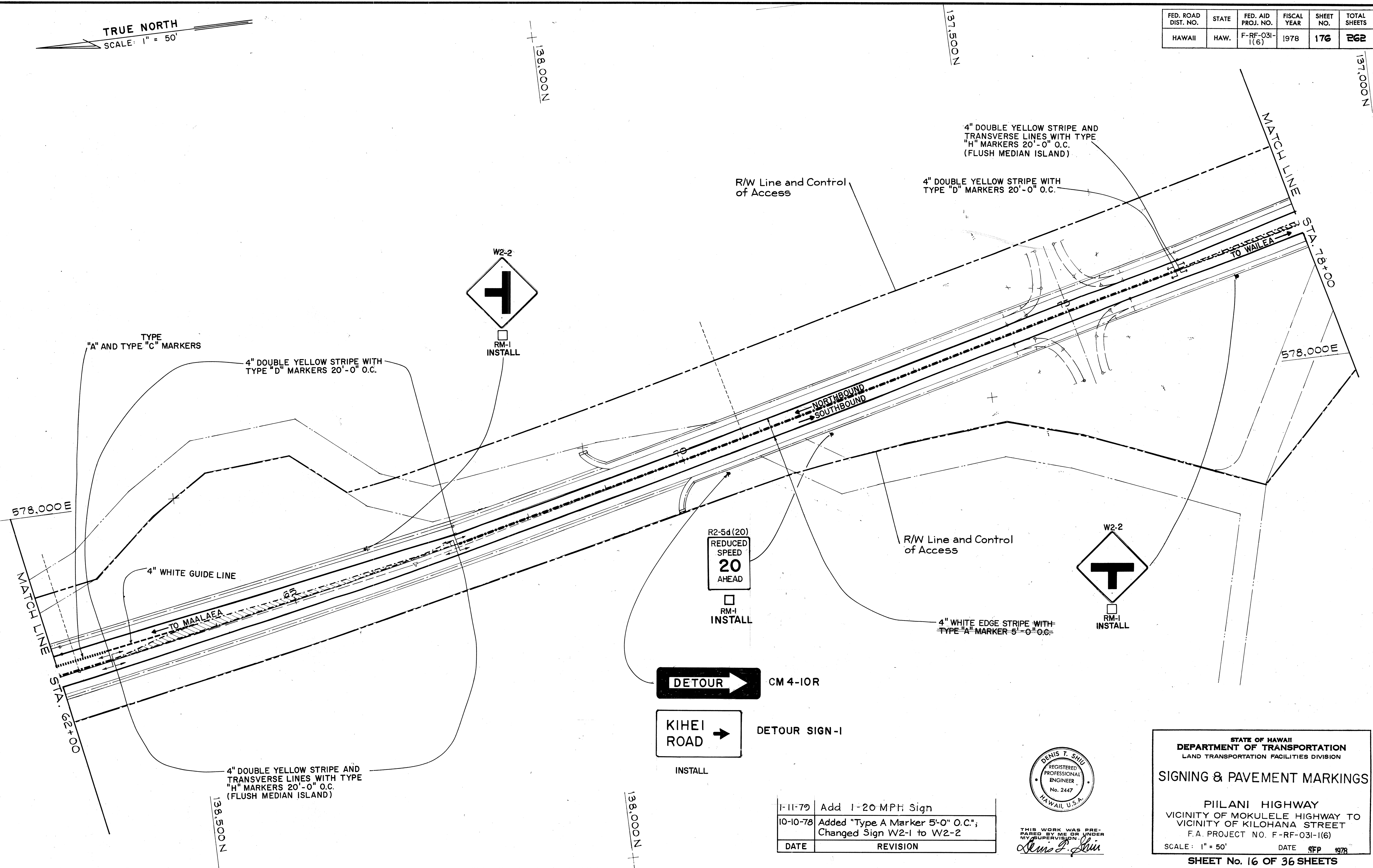
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
SIGNING & PAVEMENT MARKINGS
 PILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: AS SHOWN DATE JAN. 1980

SHEET No. 15A OF 36 SHEETS

C.O. 175 S-1

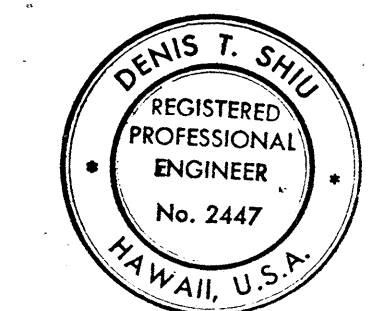
TRUE NORTH
SCALE: 1" = 50'

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	176	262



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

DATE	REVISION
1-11-79	Add 1-20 MPH Sign
10-10-78	Added "Type A Marker 5'-0" O.C."; Changed Sign W2-1 to W2-2



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Denis T. Shiu

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS

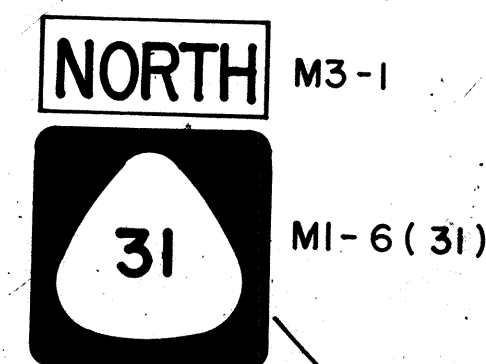
PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)

SCALE: 1" = 50' DATE: SEP 1978

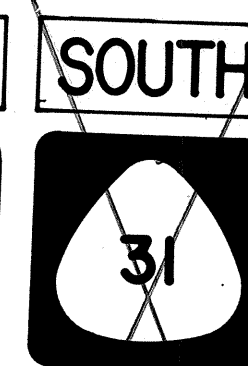
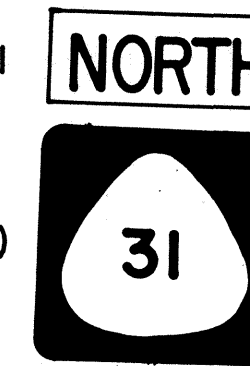
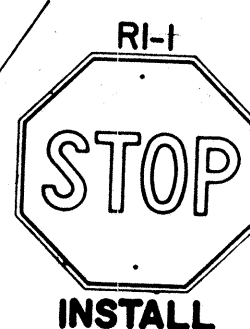
SHEET No. 16 OF 36 SHEETS

C.O. AID 176

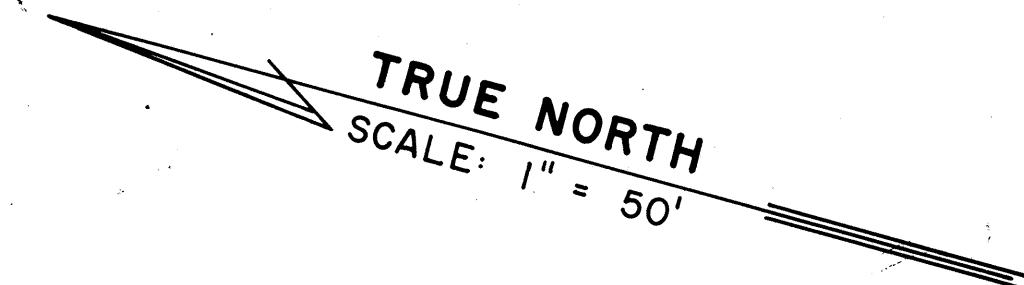
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	177	262



RM-1
INSTALL ON TYPE "A" ASSEMBLY

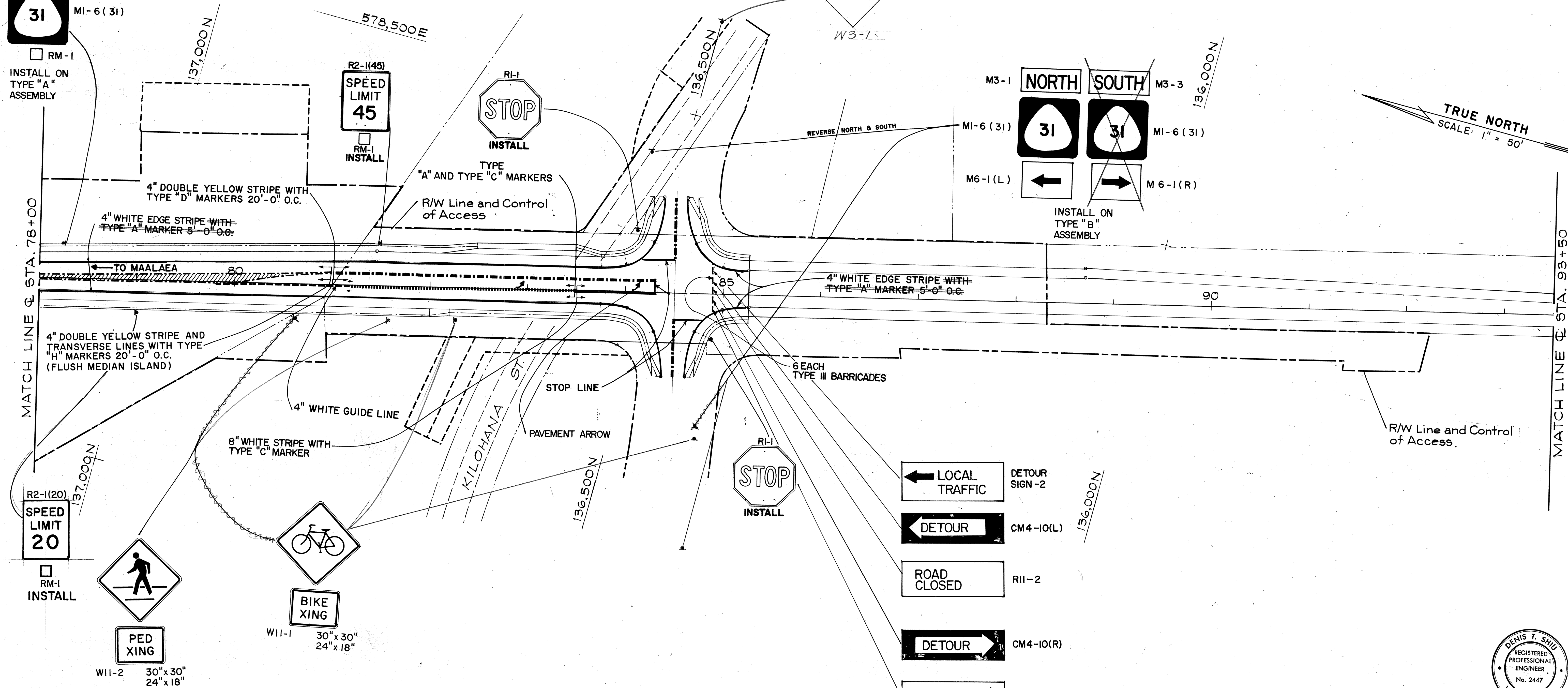


INSTALL ON TYPE "B" ASSEMBLY



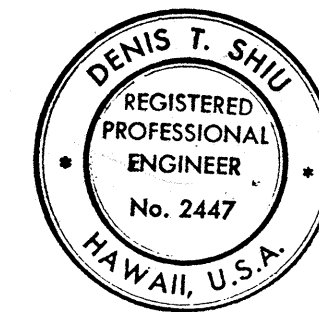
MATCH LINE @ STA. 78+00

MATCH LINE @ STA. 93+50



- DETOUR SIGN-2
- CM4-10(L)
- R11-2
- CM4-10(R)
- DETOUR SIGN-1

INSTALL DETOUR SIGNS AND ROAD CLOSED SIGN ON TYPE III BARRICADES



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Denis T. Shin

DATE	BY

DATE	REVISION
1-11-79	Add 1-20 MPH Sign
10-10-78	Added "Type A Marker 5'-0" O.C."; Deleted Two (2) W11 Signs

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS

PILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)

SCALE: 1" = 50' DATE SEP 1978

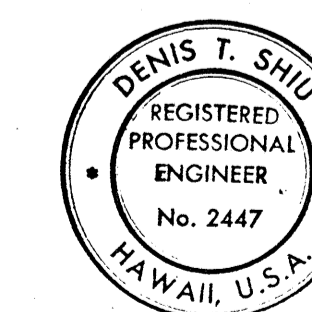
SHEET No. 17 OF 36 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	178	262

SIGNS, REFLECTOR MARKERS, AND ROUTE MARKER ASSEMBLIES SUMMARY				
TYPE	DESCRIPTION	QUANTITY		
		w/ Post	w/o Post	
R1-1	Stop	19		
R1-2	Yield	3		
R2-1(30)	Speed Limit	5		
R2-1(45)	" "	21		
R2-5B(30)	Reduced Speed	2		
R3-4	No U Turn	1		
R3-7(R)	Right Lane Must Turn Right	1		
R3-9	Center Lane Left Turn Only	1		
R4-1	Do Not Pass	1	1	
R4-7	Keep Right	1		
W2-1	+	11		
W2-2	┌	7		
W4-1(R)	Merge	2		
W6-1	Divided Highway	1		
W11-1	Bike X-ing	21		
W11-2	Ped. X-ing	1	1	
D11-1	Bike Route Sign	2		
D11-3	Begin Bike Route Suppl. Plate	1		
D11-4	End Bike Route Suppl. Plate	1		
RM-1	Reflector Marker	58		
B	Route Marker Assy. (North 31 → South 31 ←)	12		
A	Route Marker Assy. (North 31)	8		
A	" " " (South 31)	6		
DIR.1	Direction Sign	1		
DIR.2	" "	1		
DIR.3	" "	1		
DIR.4	" "	2		
DIR.5	" "	1		
DIR.6	" "	1		
DET-1	Detour Sign -1	1	1	
DET-2	" " -2		1	
R11-2	Road Closed		1	
CM4-10L	DETOUR		1	
CM4-10R	DETOUR		2	

PAVEMENT STRIPING, MARKING, TYPE III BARRICADE AND MARKERS SUMMARY		
DESCRIPTION	UNIT	QUANTITY
Pavement Striping	L.F.	119,830
Type A Pavement Markers	Ea.	420
Type C " "	Ea.	170
Type D " "	Ea.	1140
Type H " "	Ea.	560
Type J " "	Ea.	1330
Pavement Arrow	Ea.	31
Type III Barricade	Ea.	26
Crosswalk Marking	Ea.	3

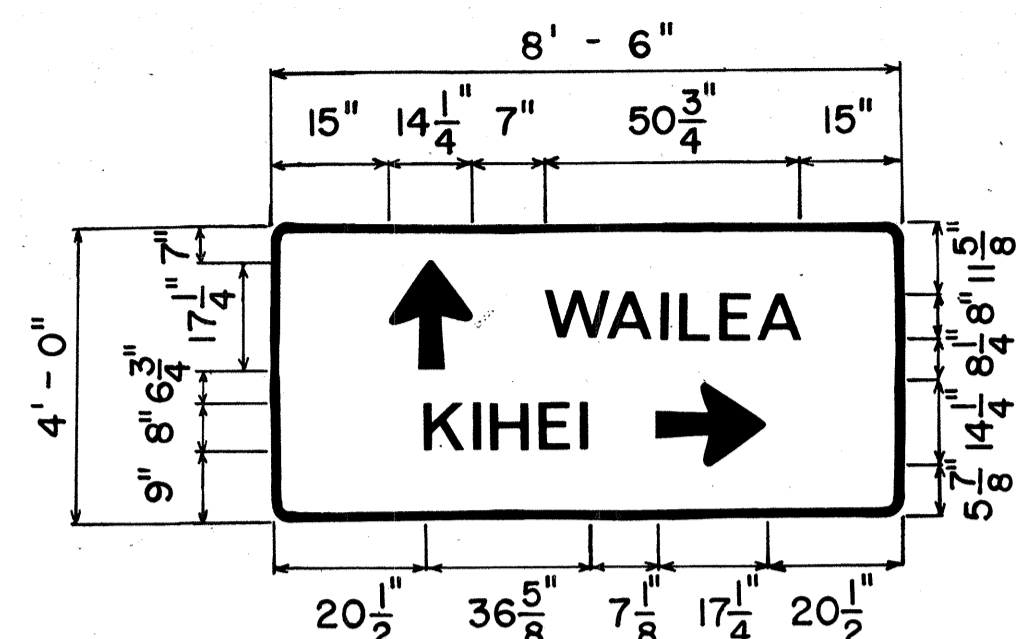
DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 No. _____



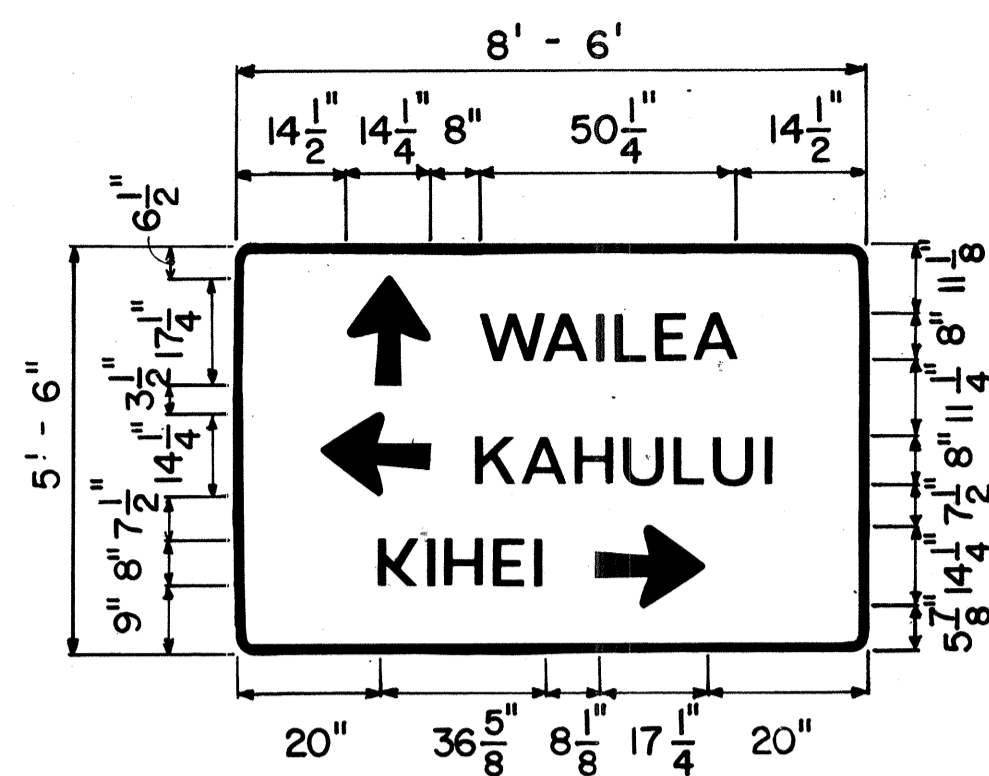
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Denis T. Shiu

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
SIGNING & PAVEMENT MARKINGS
 PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO
 VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: _____ DATE SEP 1978
 SHEET No. 18 OF 36 SHEETS

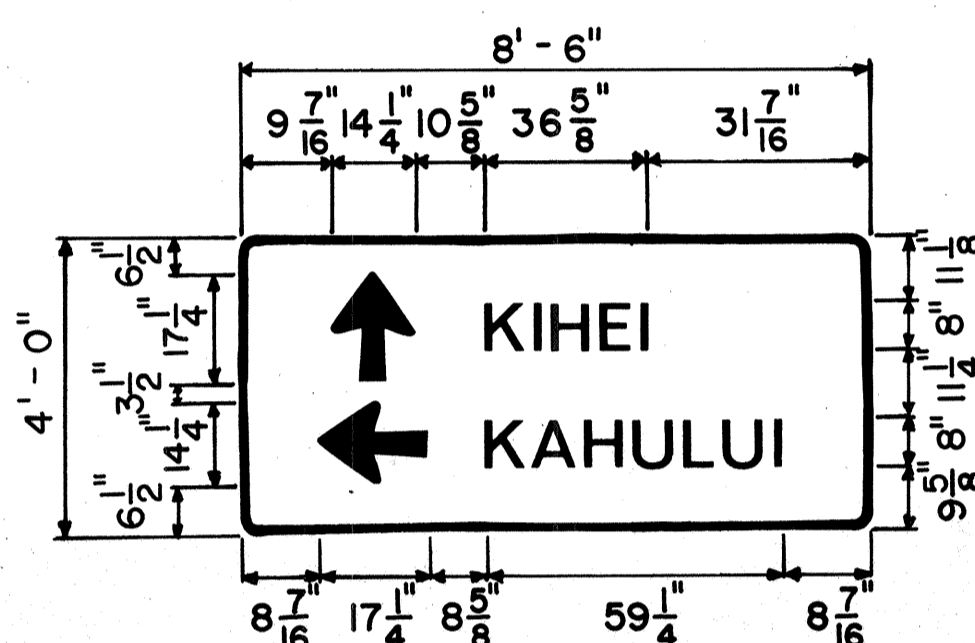
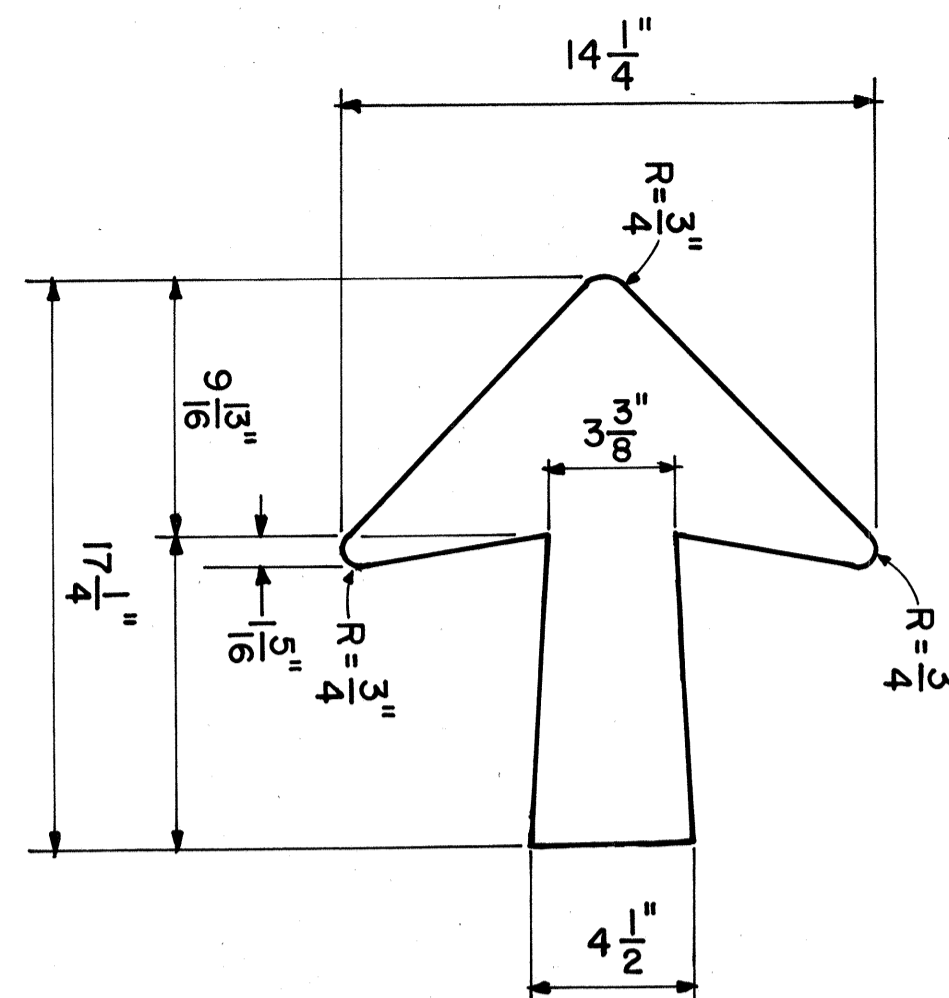
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	179	262



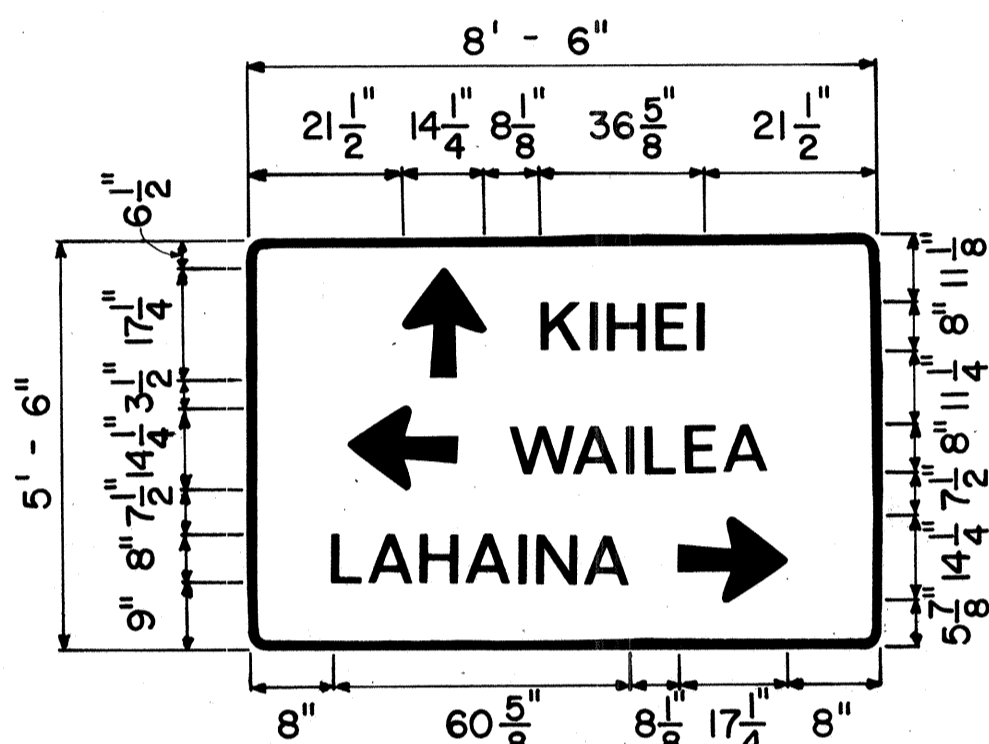
SIGN DIR.-1
N.T.S.



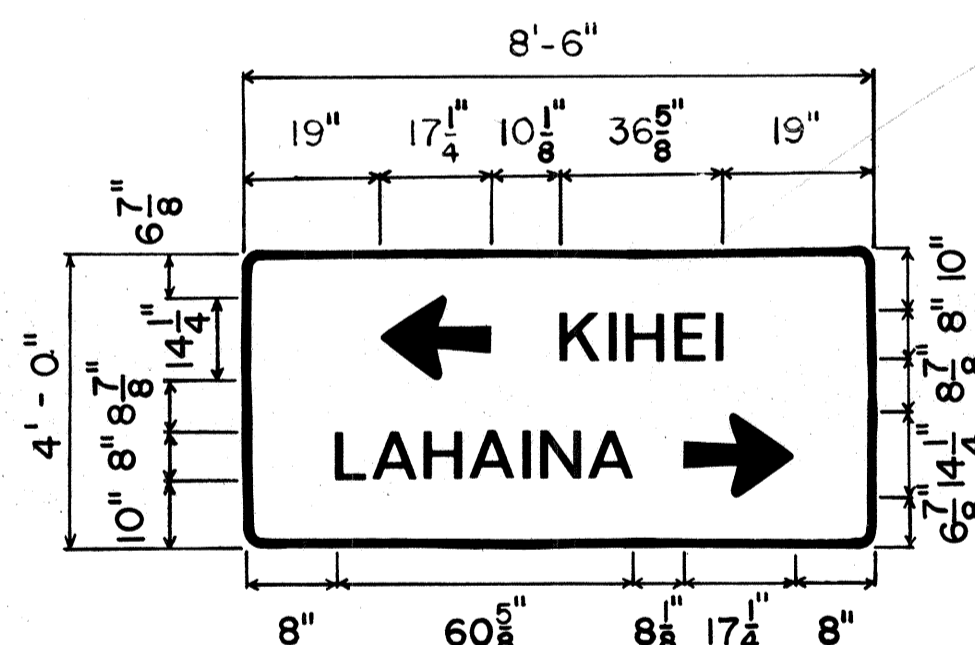
SIGN DIR.-5
N.T.S.



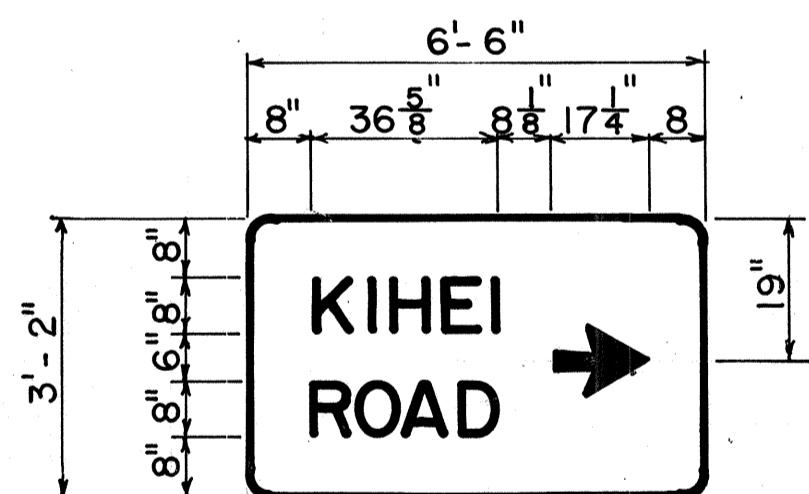
SIGN DIR.-2
N.T.S.



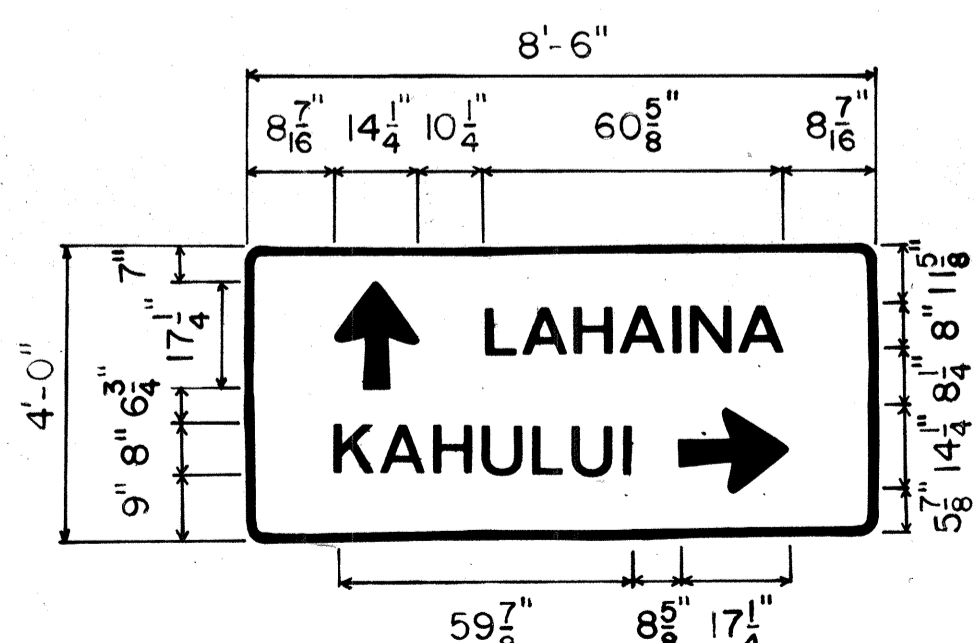
SIGN DIR.-6
N.T.S.



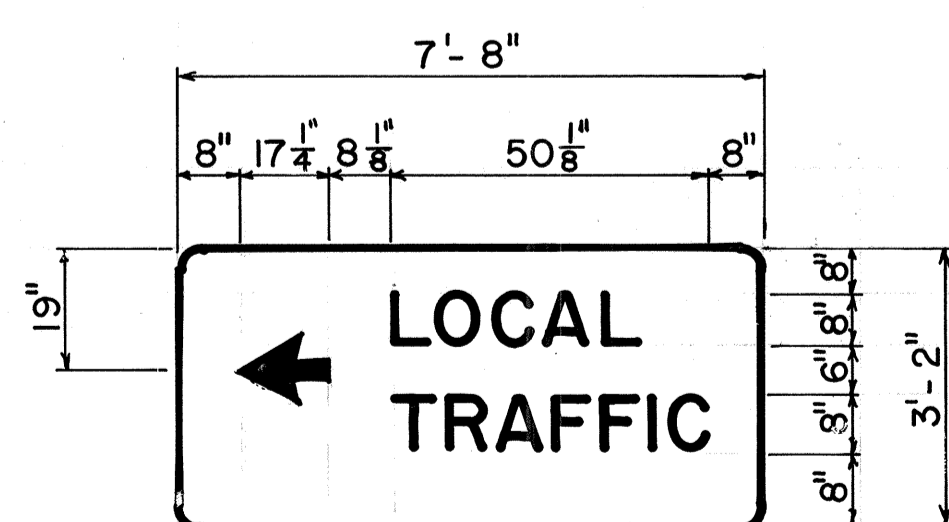
SIGN DIR.-3
N.T.S.



DETOUR SIGN-1
N.T.S.



SIGN DIR.-4
N.T.S.

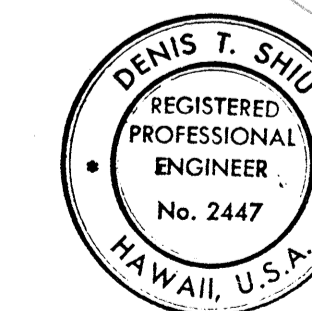


DETOUR SIGN-2
N.T.S.

NOTES:

- SIGNS SHALL CONFORM TO SERIES "E" LETTERS SHOWN IN THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS," BUREAU OF PUBLIC ROADS 1966.
- ARROWS, LEGENDS, AND BORDERS SHALL CONFORM WITH DETAILS SHOWN ON THE PLANS AND SHALL BE DEMOUNTABLE ALUMINUM CUTOUTS WITH WHITE REFLECTIVE SHEETING ON A GREEN REFLECTIVE SHEETING BACKGROUND.
- SIGN BORDERS AND CORNER RADII FOR SIGN FACES DETAILED HEREIN SHALL BE 1/4 INCHES WIDE, AND 6 INCHES, RESPECTIVELY.
- SIGN PANELS SHALL BE 0.100" SHEET ALUMINUM, SINGLE PLATE.
- SEE MISCELLANEOUS SIGN DETAIL SHEET FOR MOUNTING DETAILS. USE 2-1/2"x2-1/2", 10-GAGE GALVANIZED STEEL SQUARE TUBE POST SUPPORT FOR EACH SIGN EXCEPT DETOUR SIGN-1 AND DETOUR SIGN-2 AT VICINITY OF STA. 85+00.

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



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Denis T. Shui

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

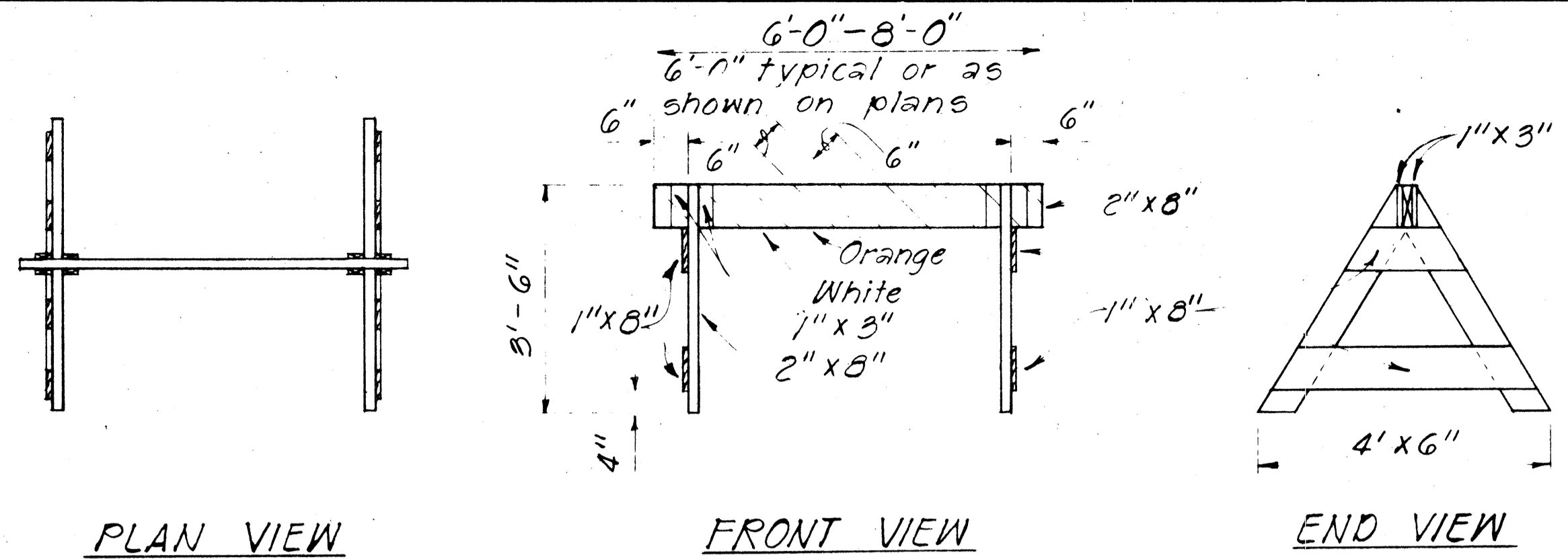
SIGNING & PAVEMENT MARKINGS

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)

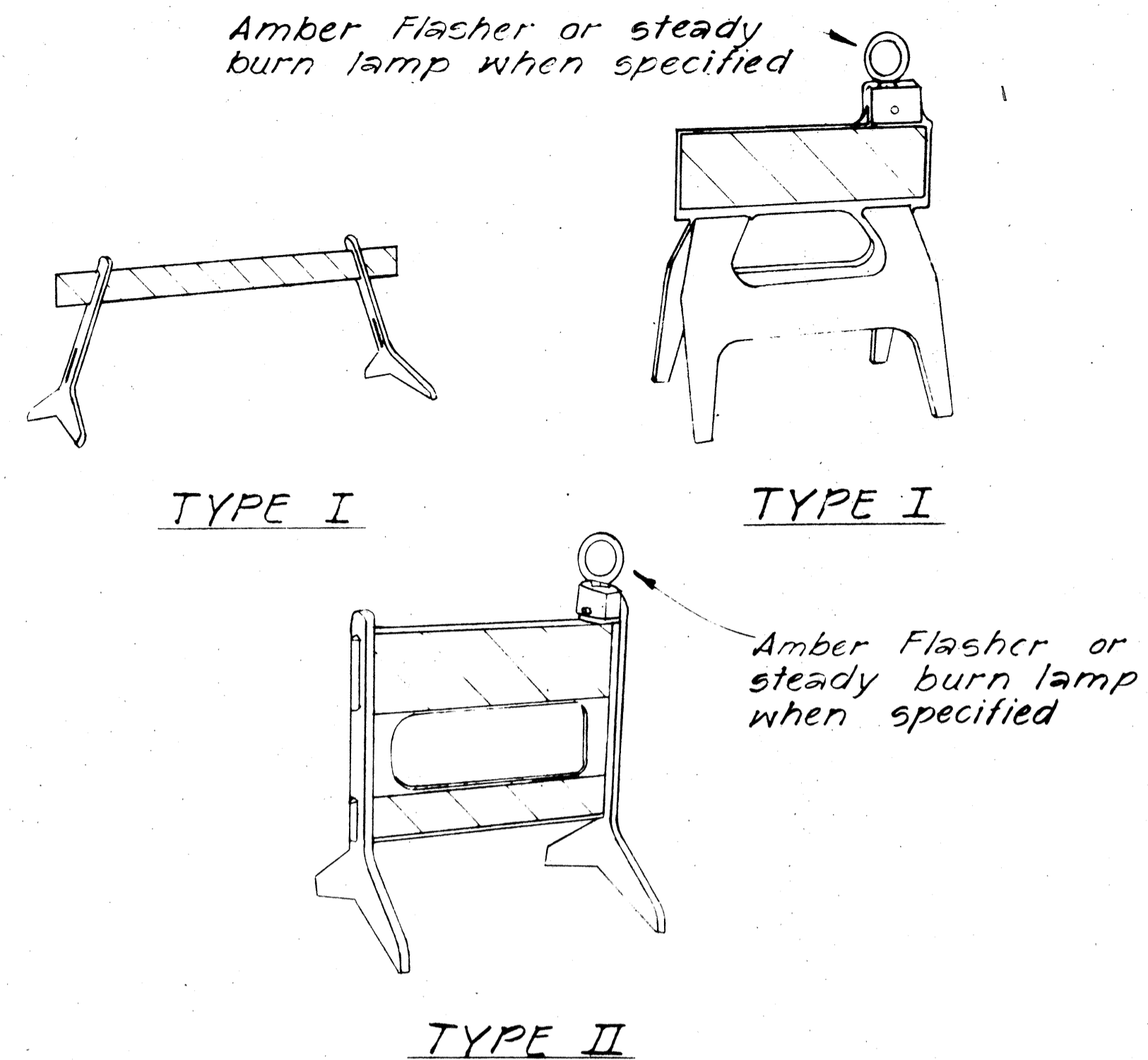
SCALE: _____ DATE **SEP 1978**

SHEET No. 19 OF 36 SHEETS

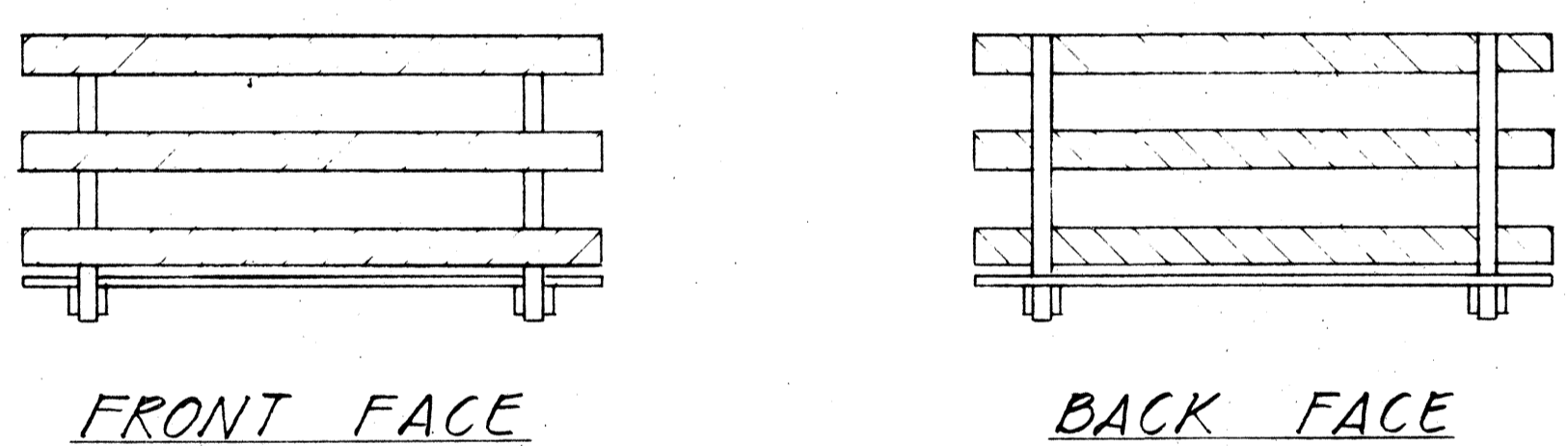
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	180	262



TYPE I BARRICADE
Scale: 1/2" = 1'-0"

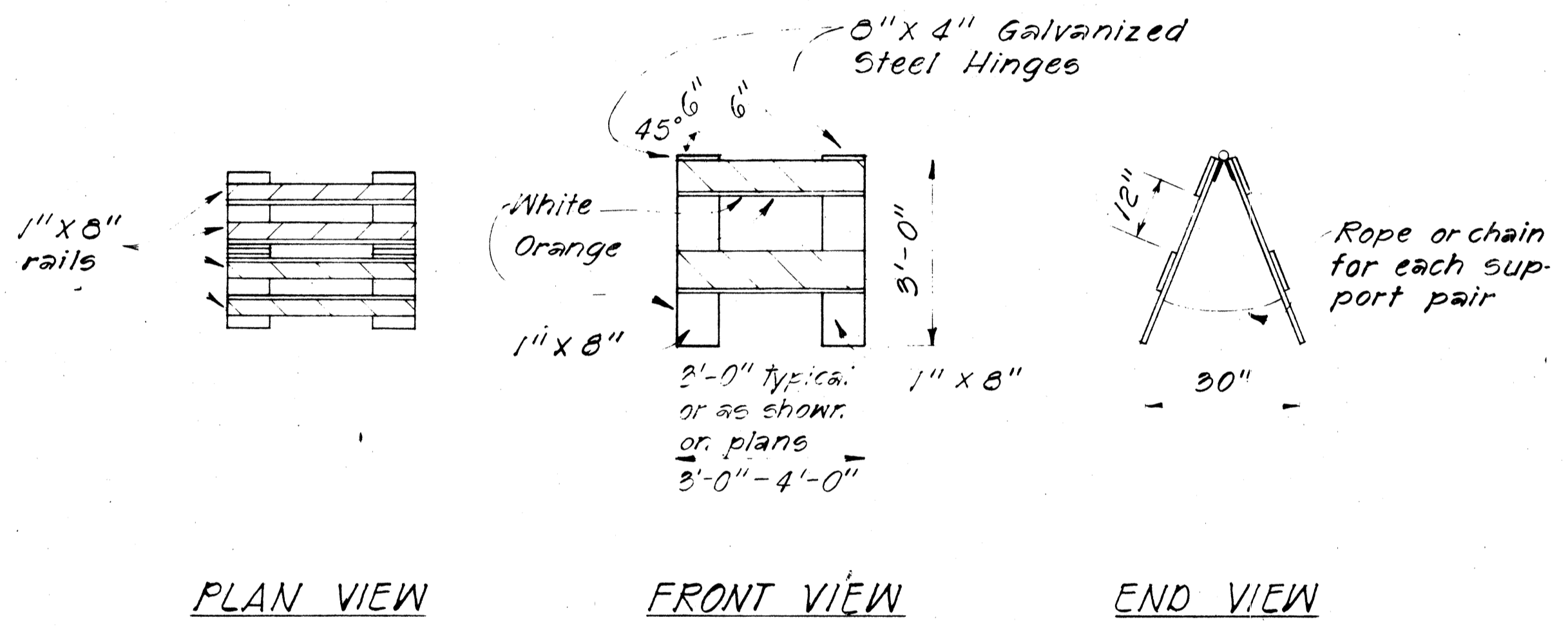


PLASTIC MOLDED BARRICADE OPTIONS*
Not to Scale
* Shop Drawings must be submitted for approval.

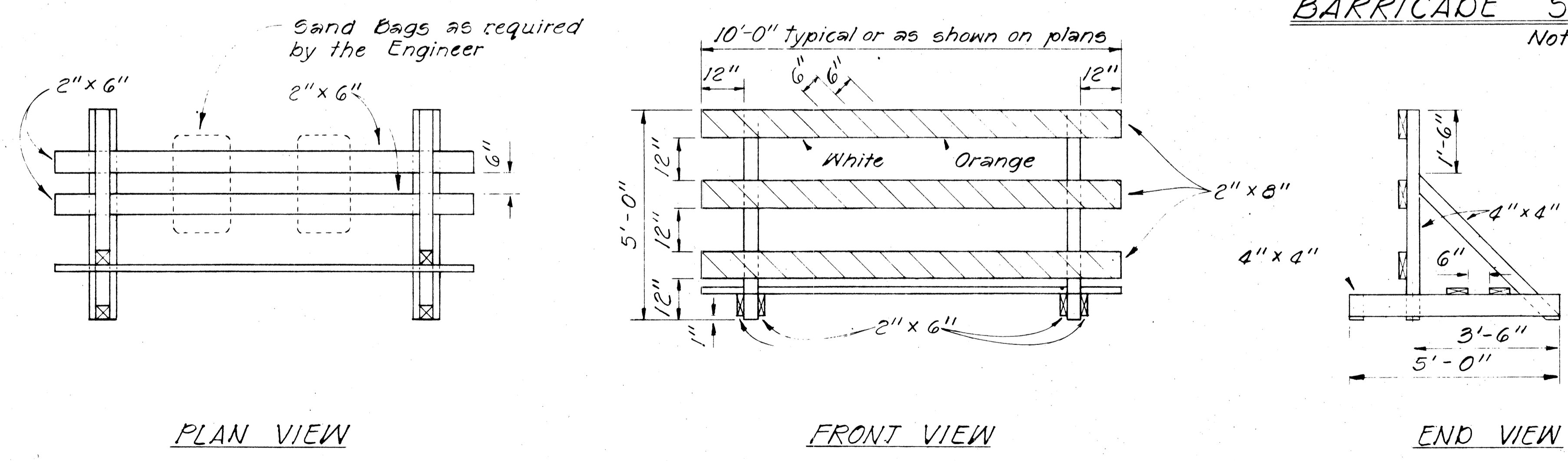


BARRICADE STRIPING DETAILS
Not to Scale

- GENERAL NOTES
- The Contractor shall construct, install and maintain the barricades at the locations shown on the Plans.
 - The barricades shall be left in place or relocated upon completion of the project as ordered by the Engineer and are to become State property, unless otherwise specified.
 - The orange and white stripes shall slant downward toward the side on which traffic is to pass and shall be reflectorized with reflective sheeting.
 - Both faces of the barricade rails shall be striped. See Striping Detail Arrangement.
 - Contractor may submit alternate designs for approval.
 - Barricade details shall conform to the "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, by the Federal Highway Administration and as amended.
 - If wooden rails are used, 26 ga. galv. steel sheet shall be first tacked on to the rails and then overlaid with reflective sheeting.



TYPE II BARRICADE
Scale: 1/2" = 1'-0"



TYPE III BARRICADE
Scale: 1/2" = 1'-0"

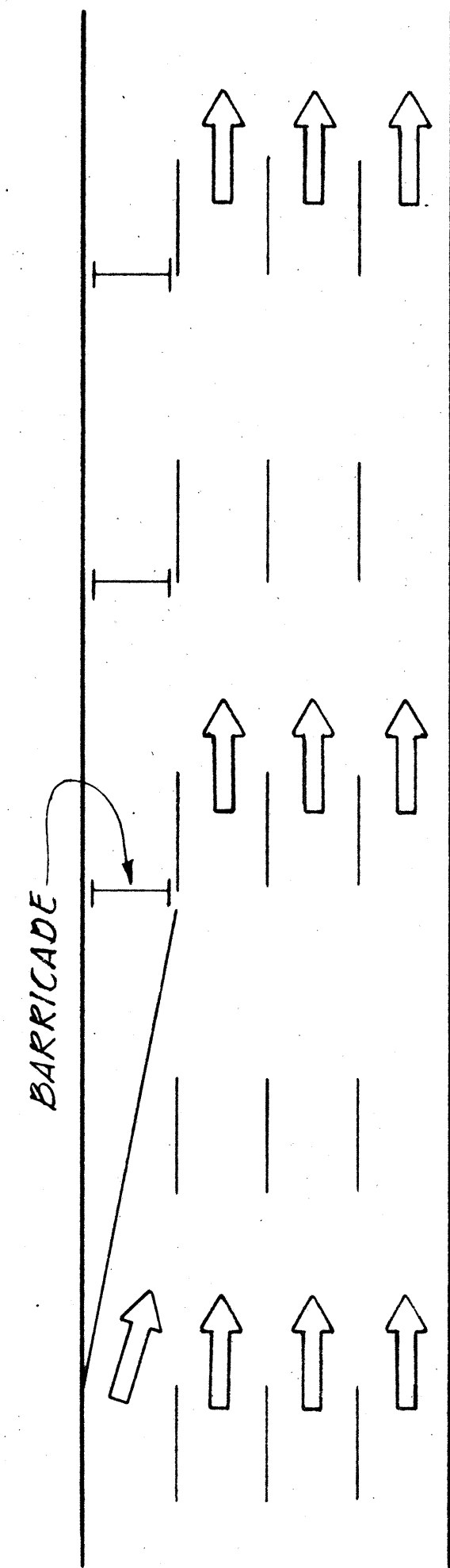
DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL DETAILS
BARRICADES
SCALE: As Shown
SHEET No. 20 OF 36 SHEETS

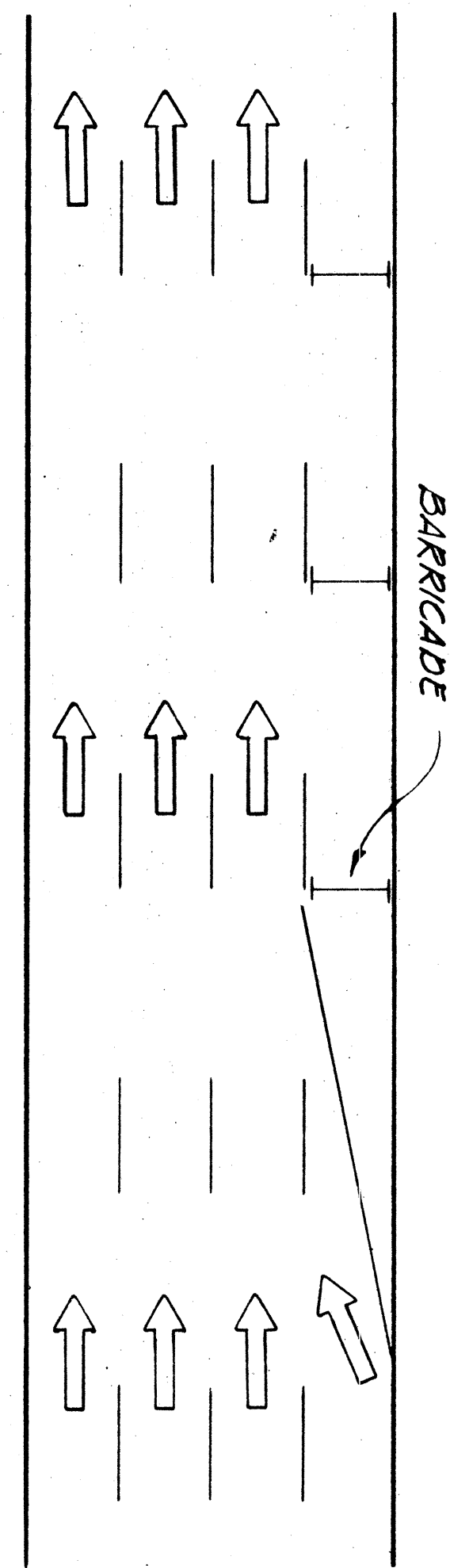
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(c)	1978	181	262

GENERAL NOTES

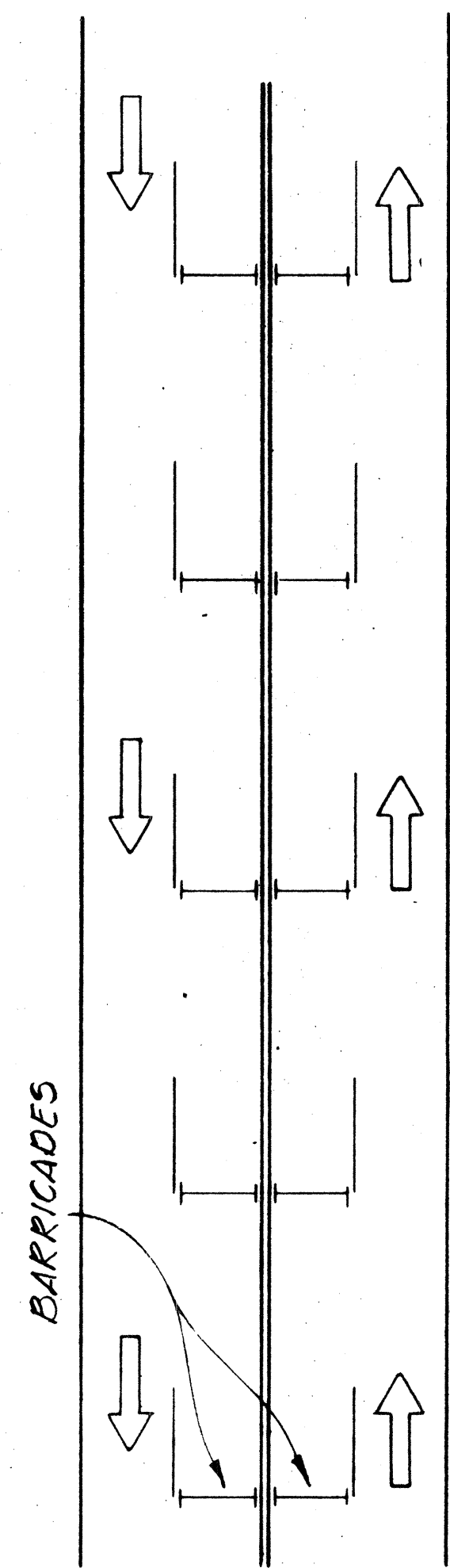
1. Barricade Type, Placement, and Arrangement shall be as shown on the Construction Plans.



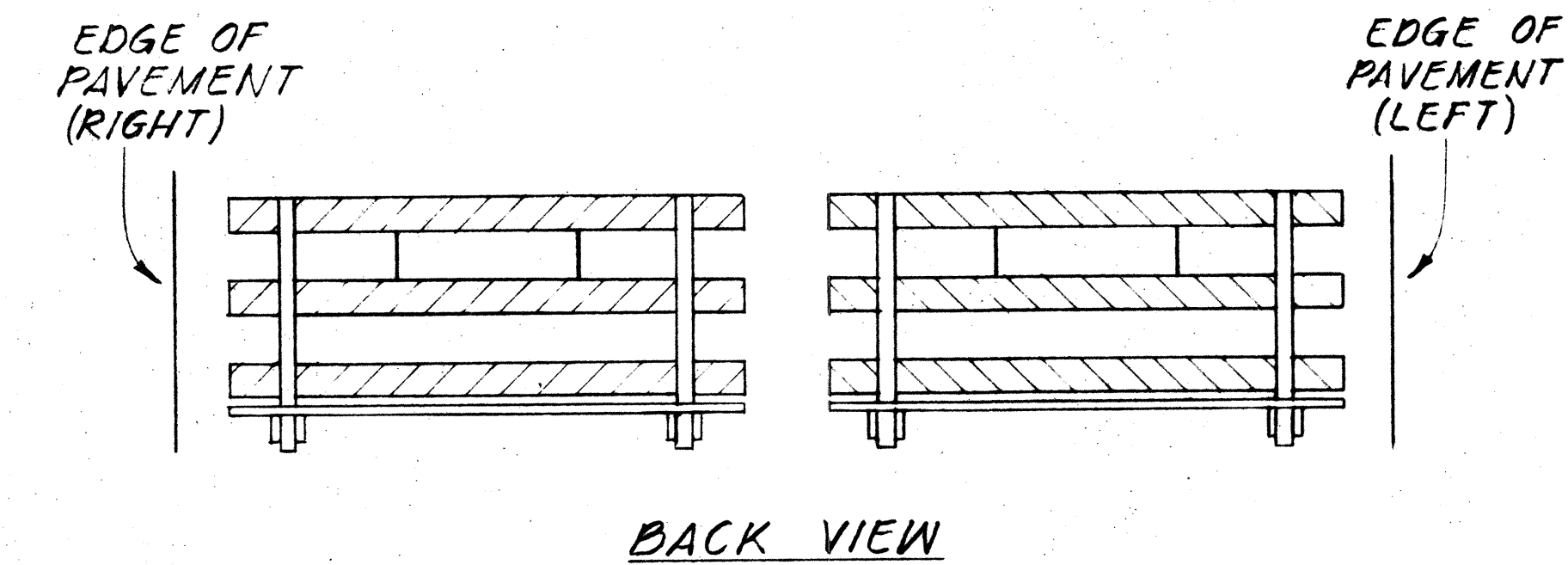
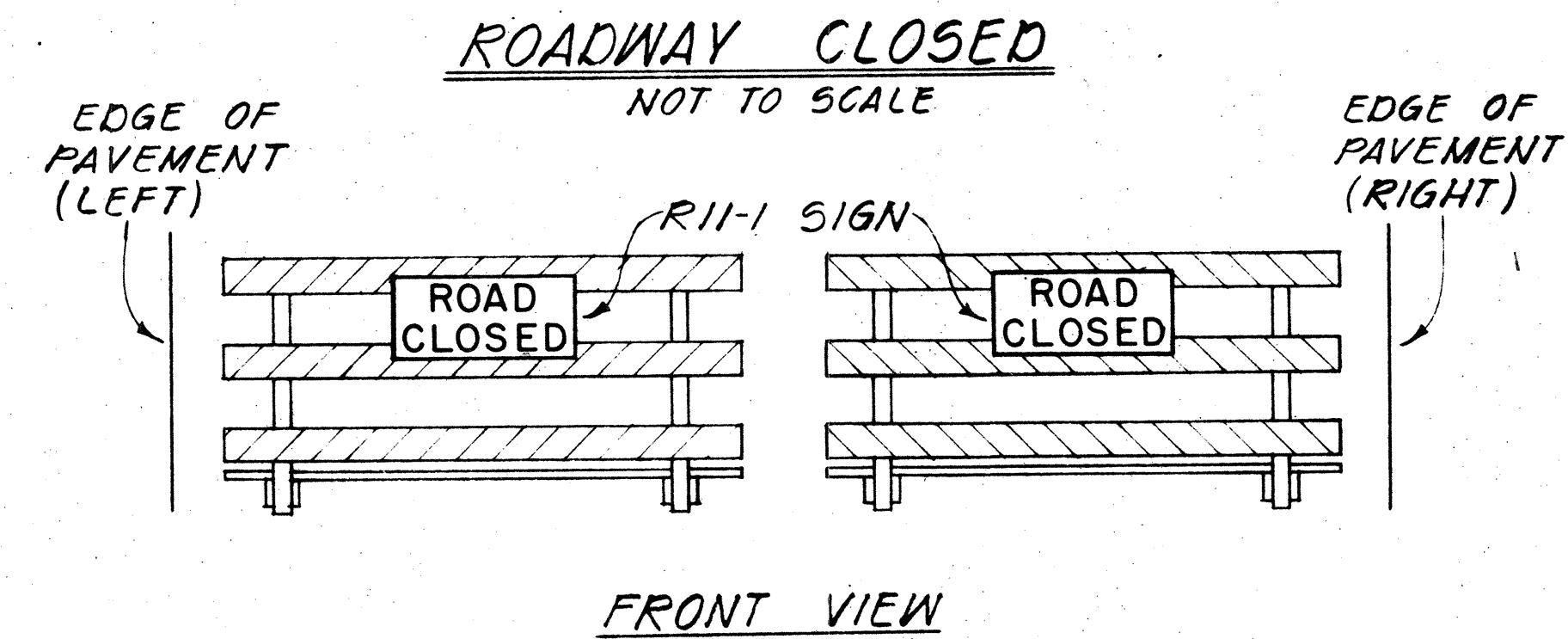
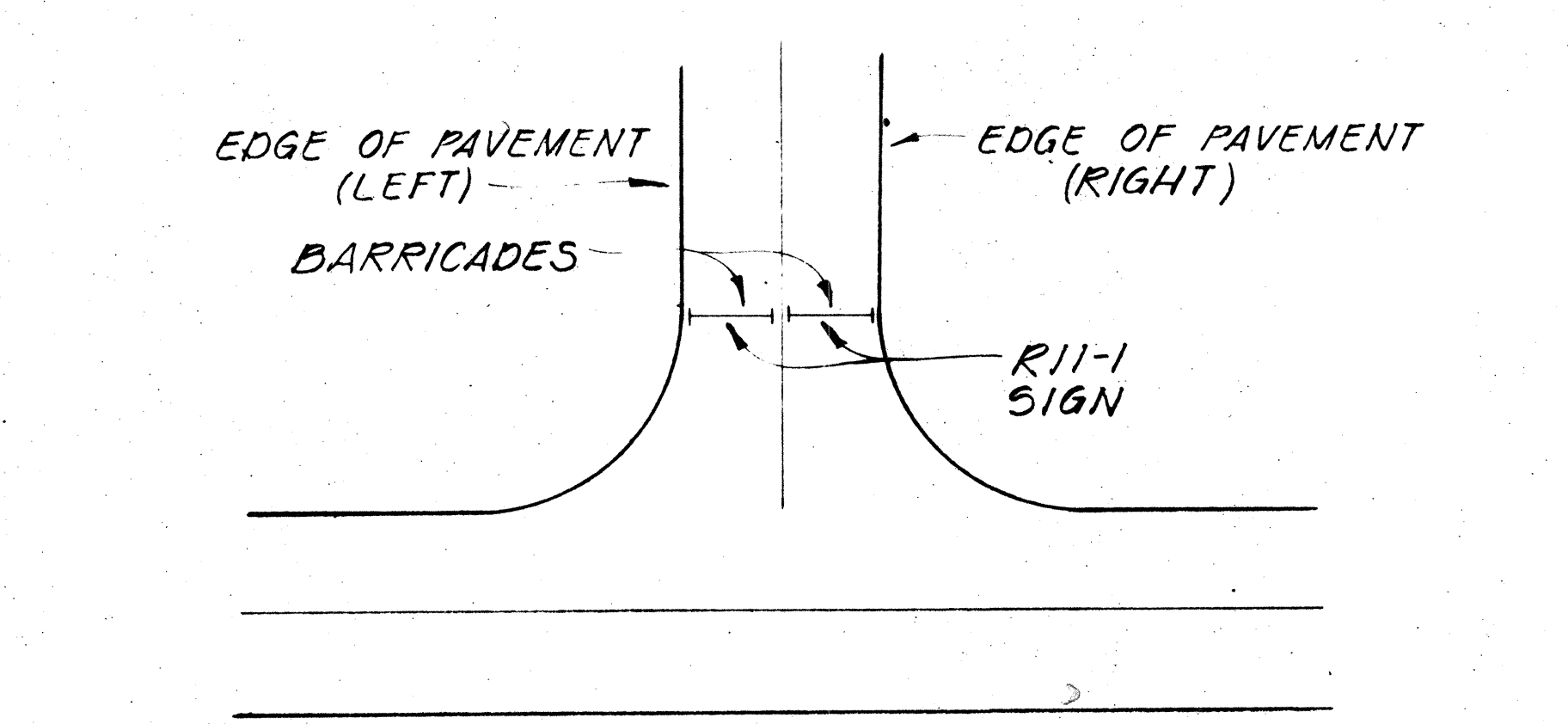
ROADWAY DELINEATION TO THE RIGHT
NOT TO SCALE



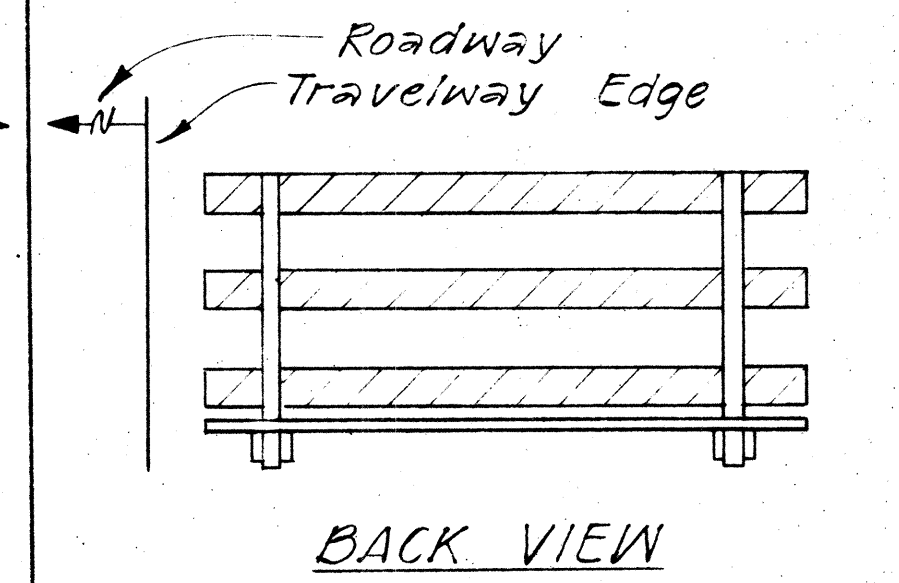
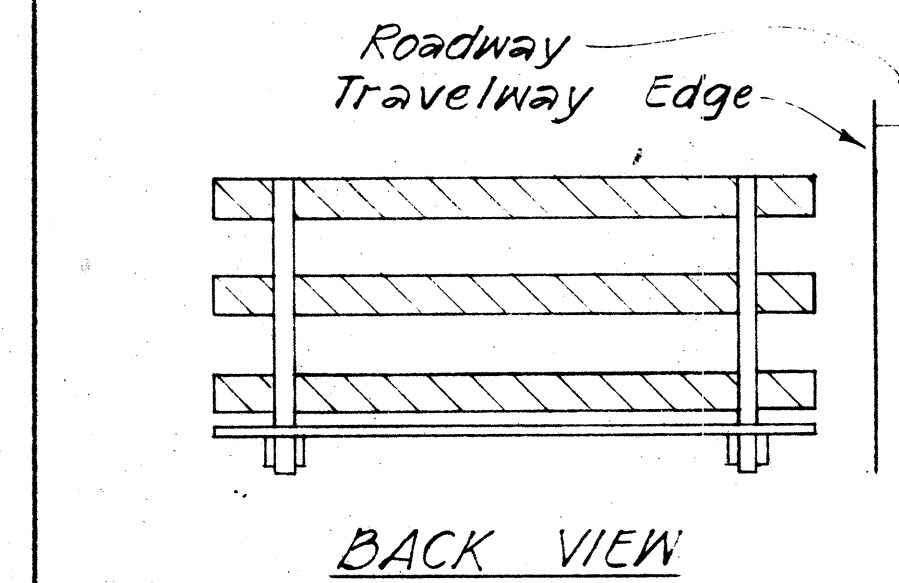
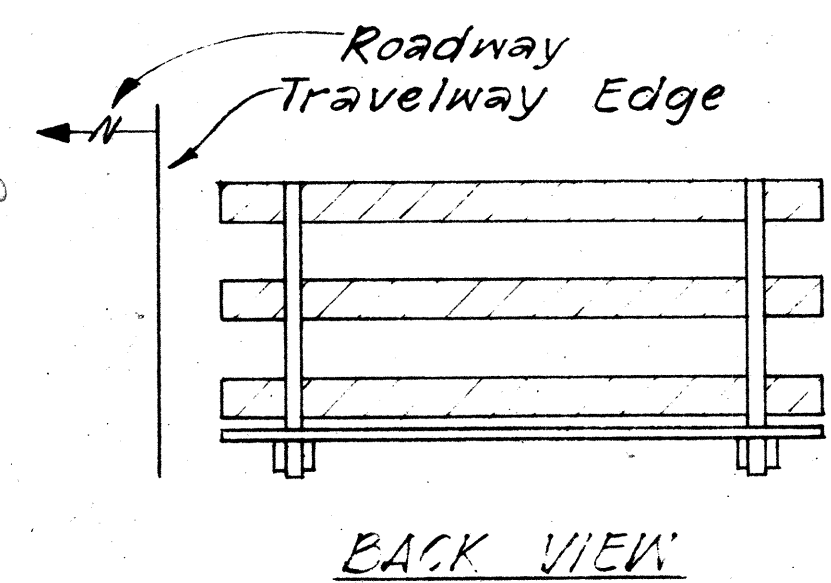
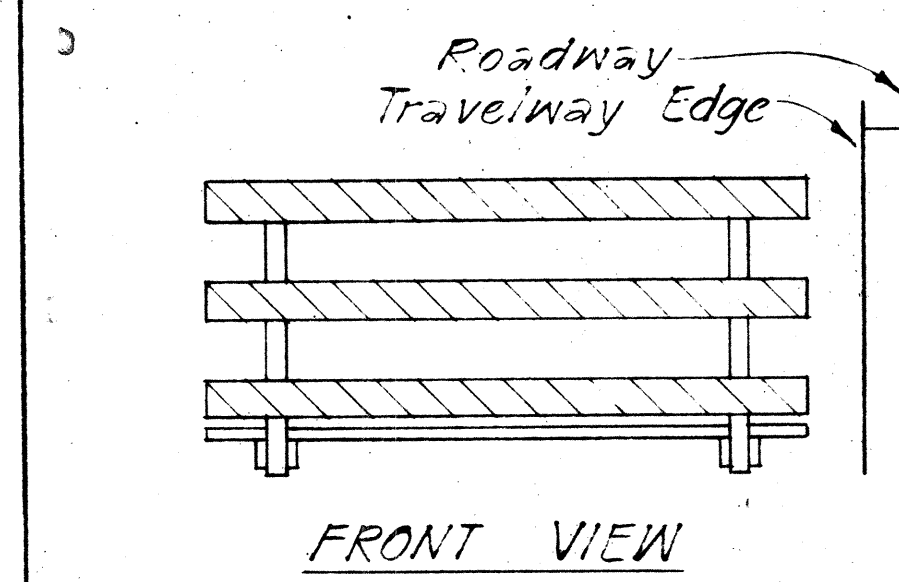
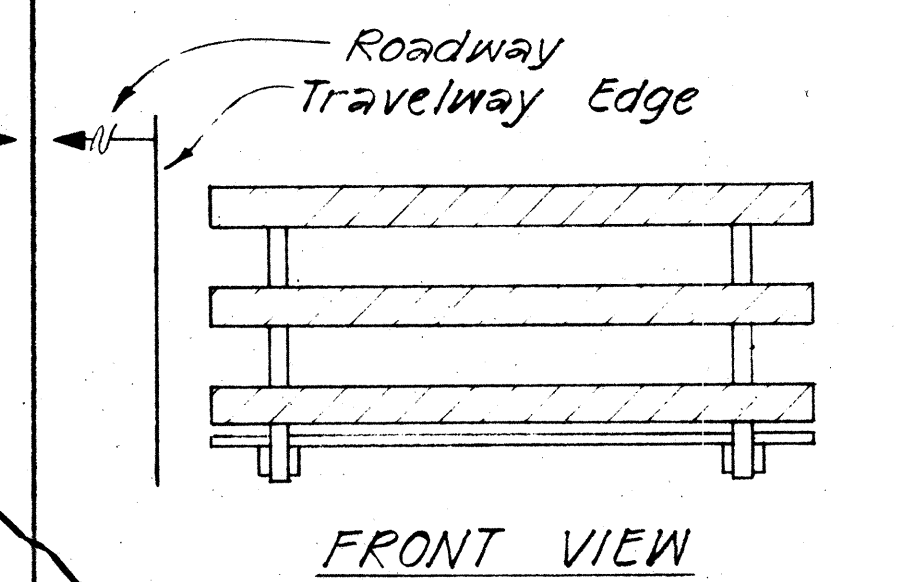
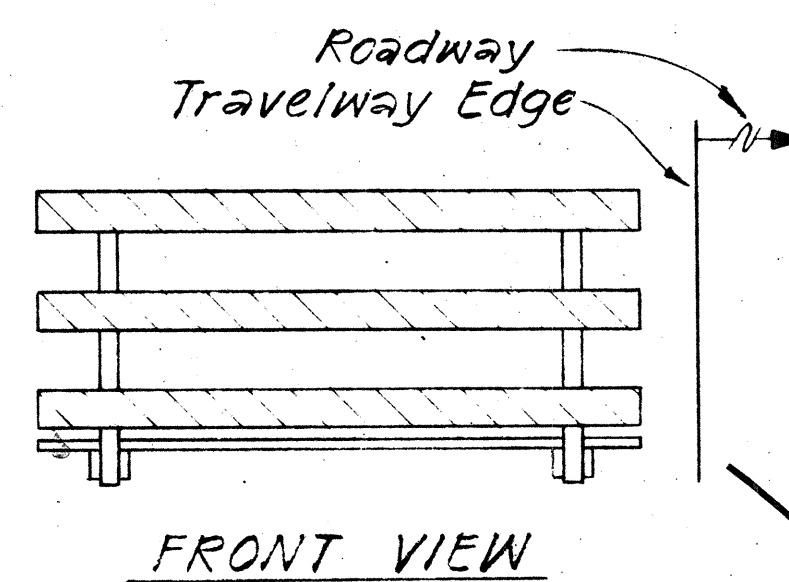
ROADWAY DELINEATION TO THE LEFT
NOT TO SCALE



ROADWAY DELINEATION FOR 2-WAY TRAFFIC
NOT TO SCALE



BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE



BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE

BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE

BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE

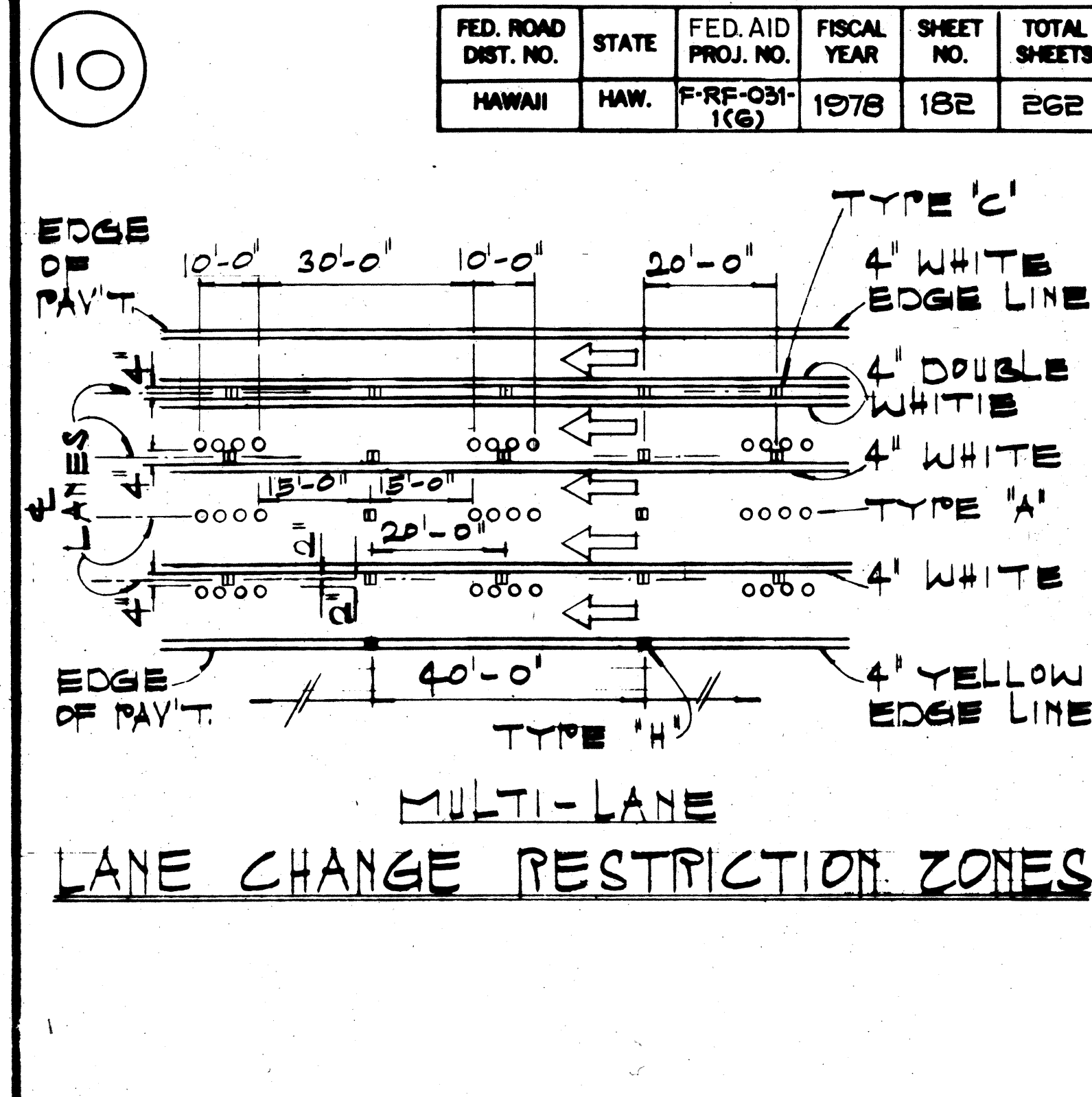
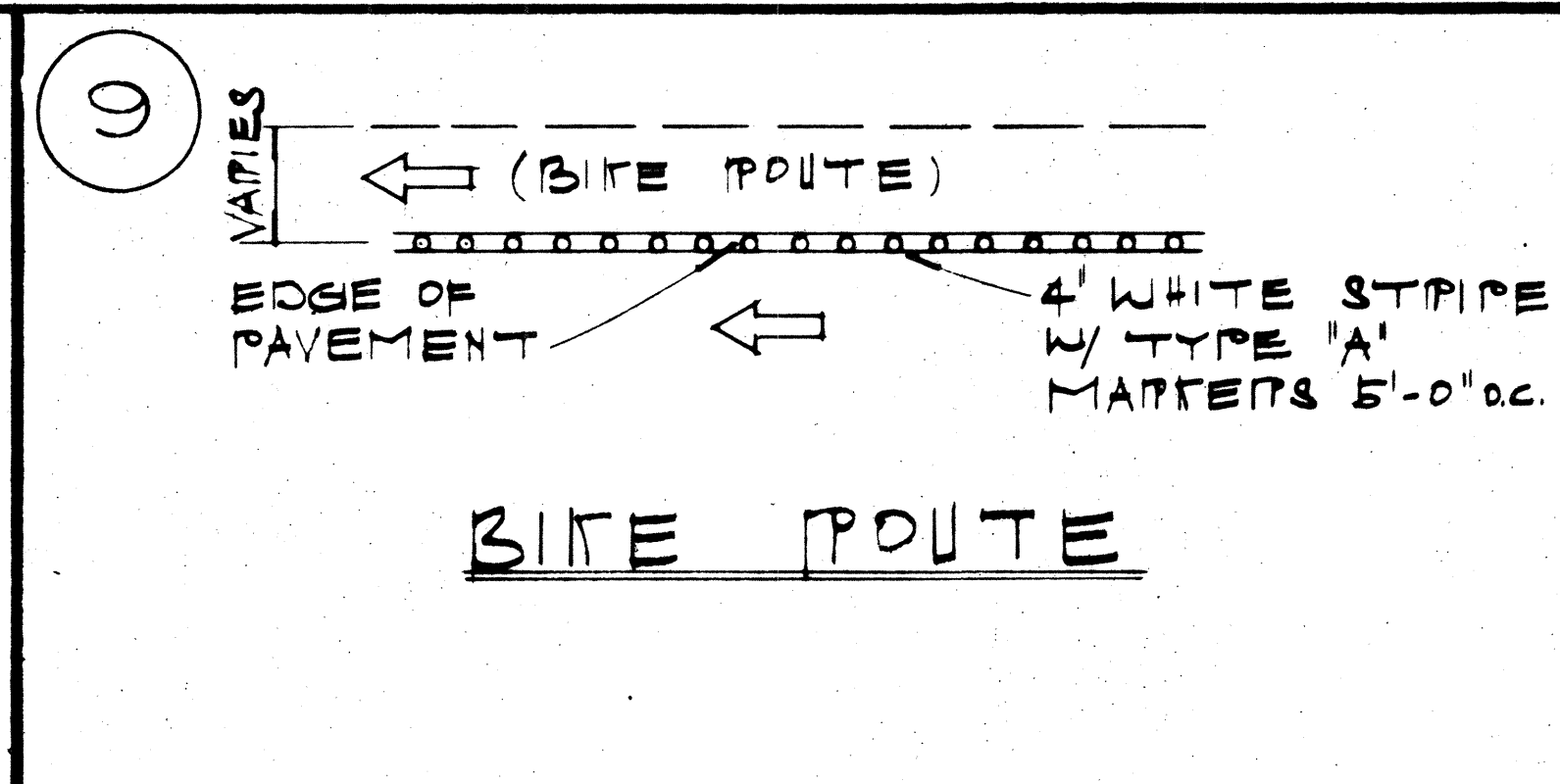
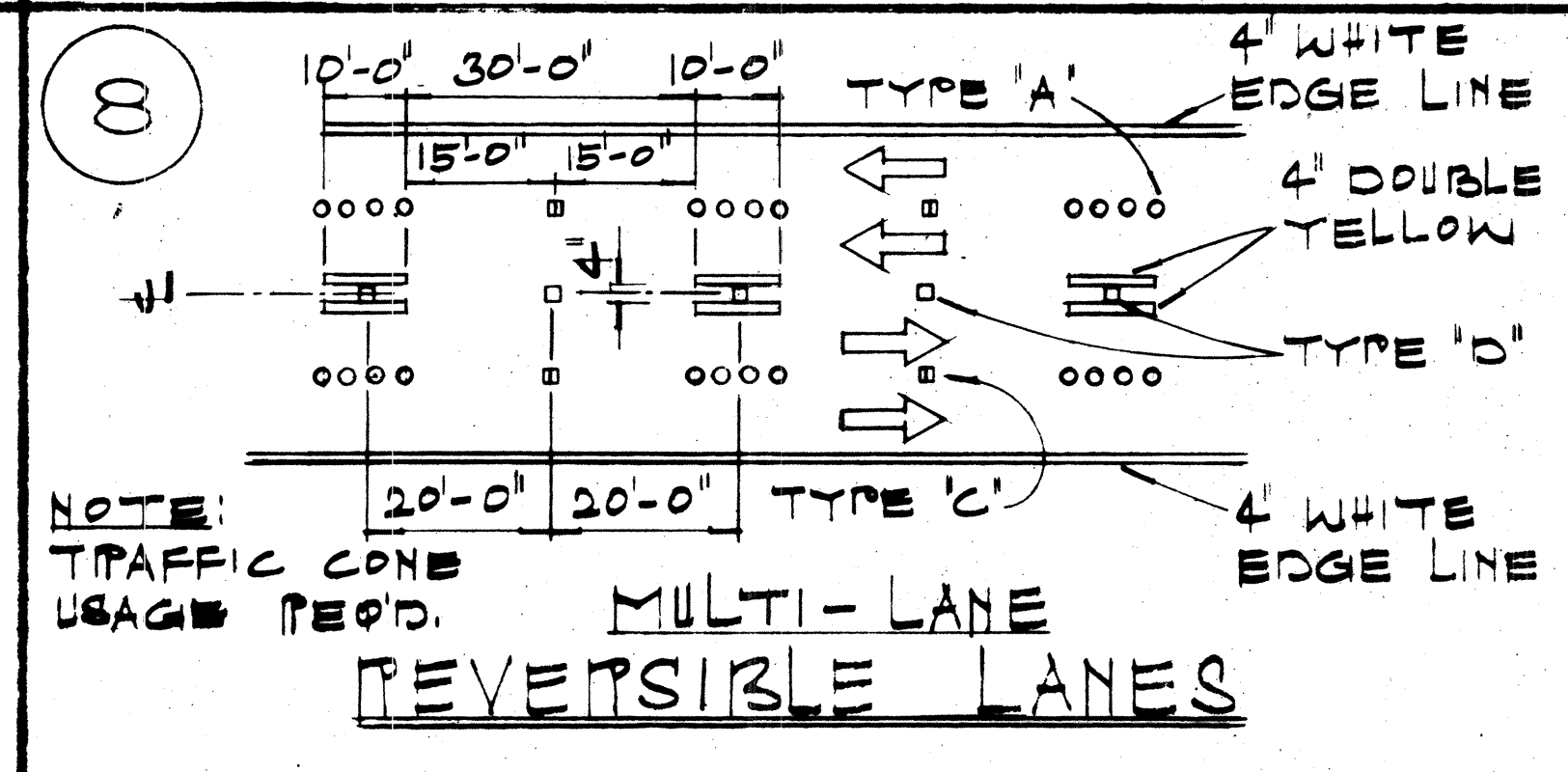
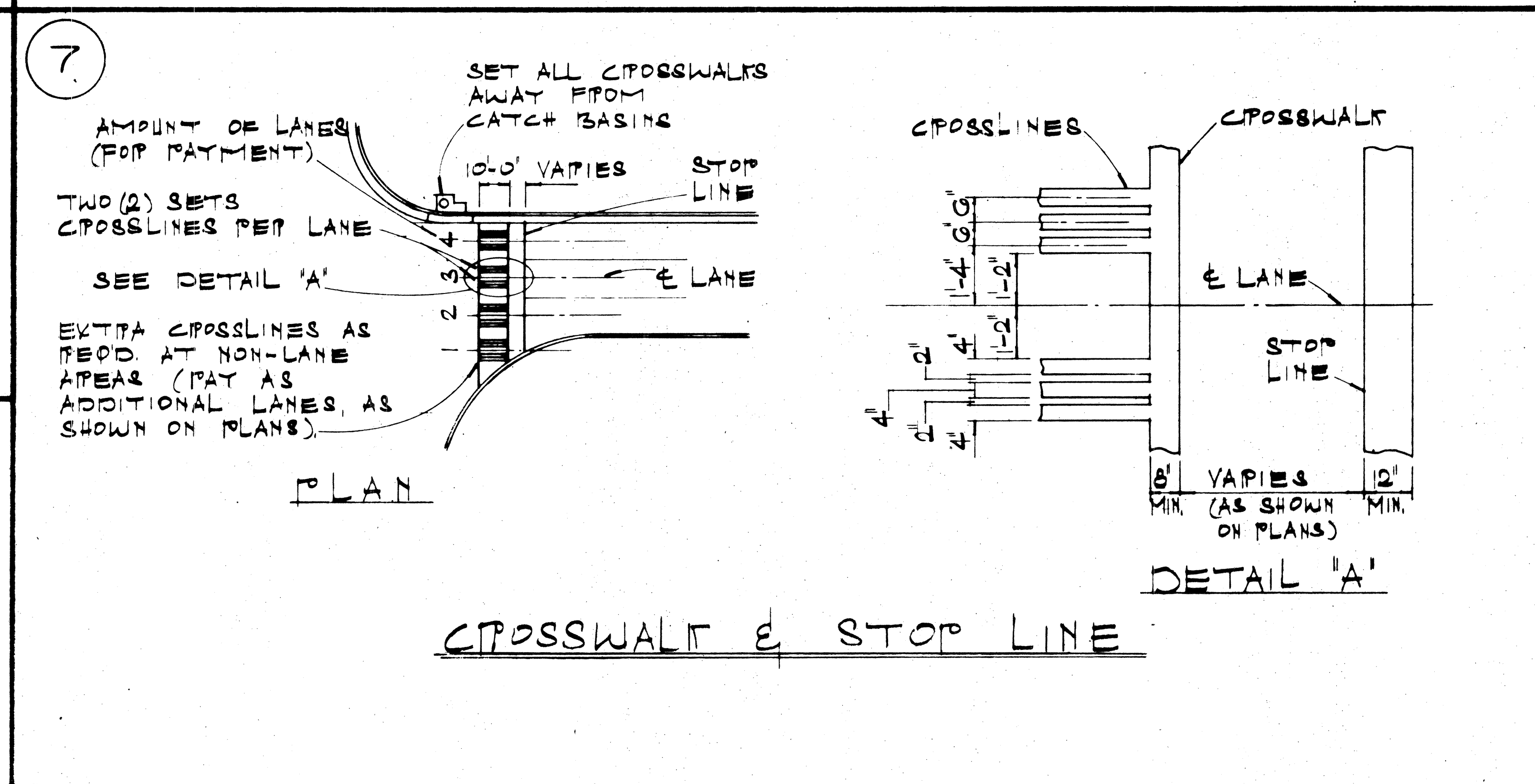
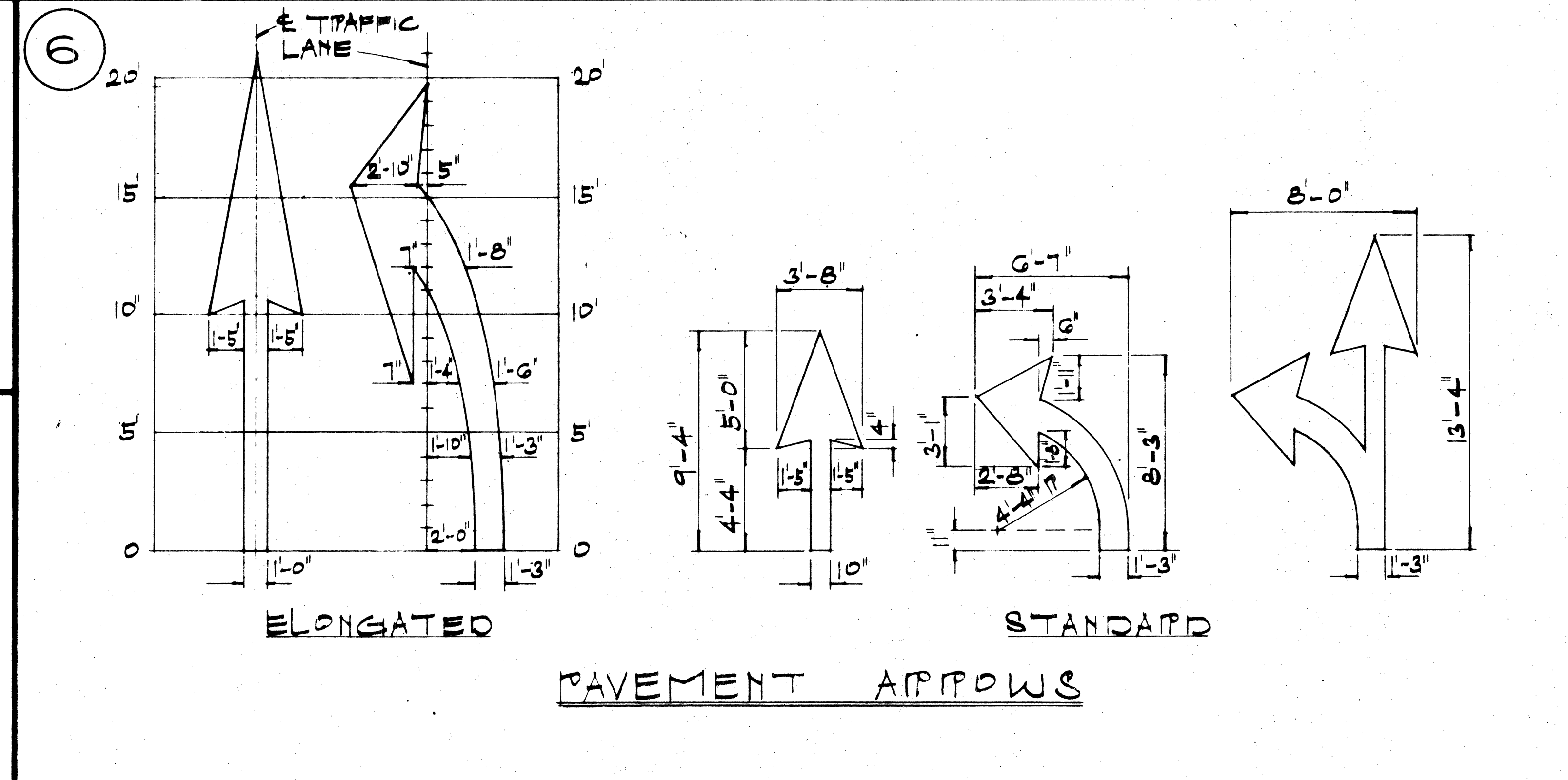
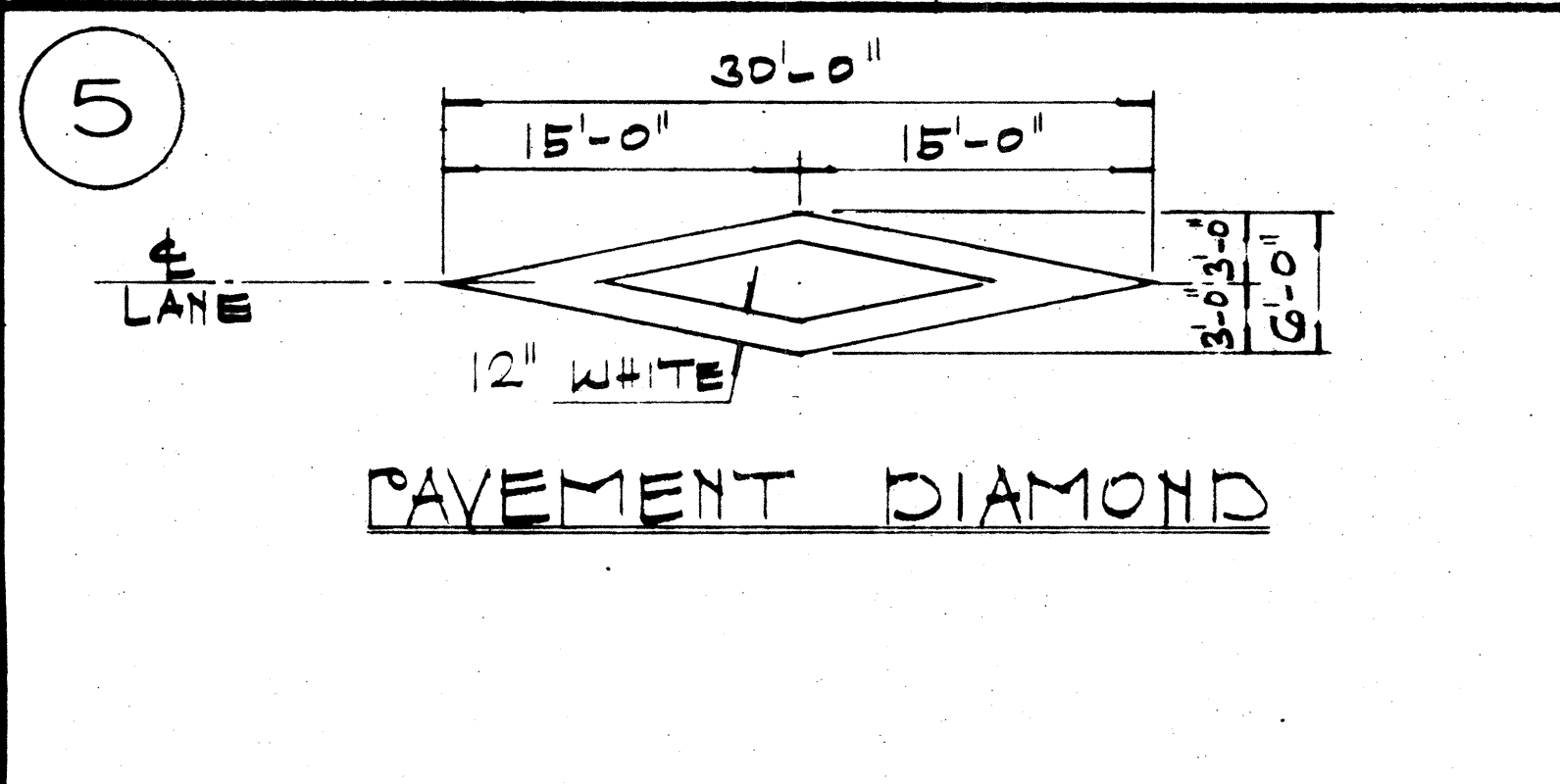
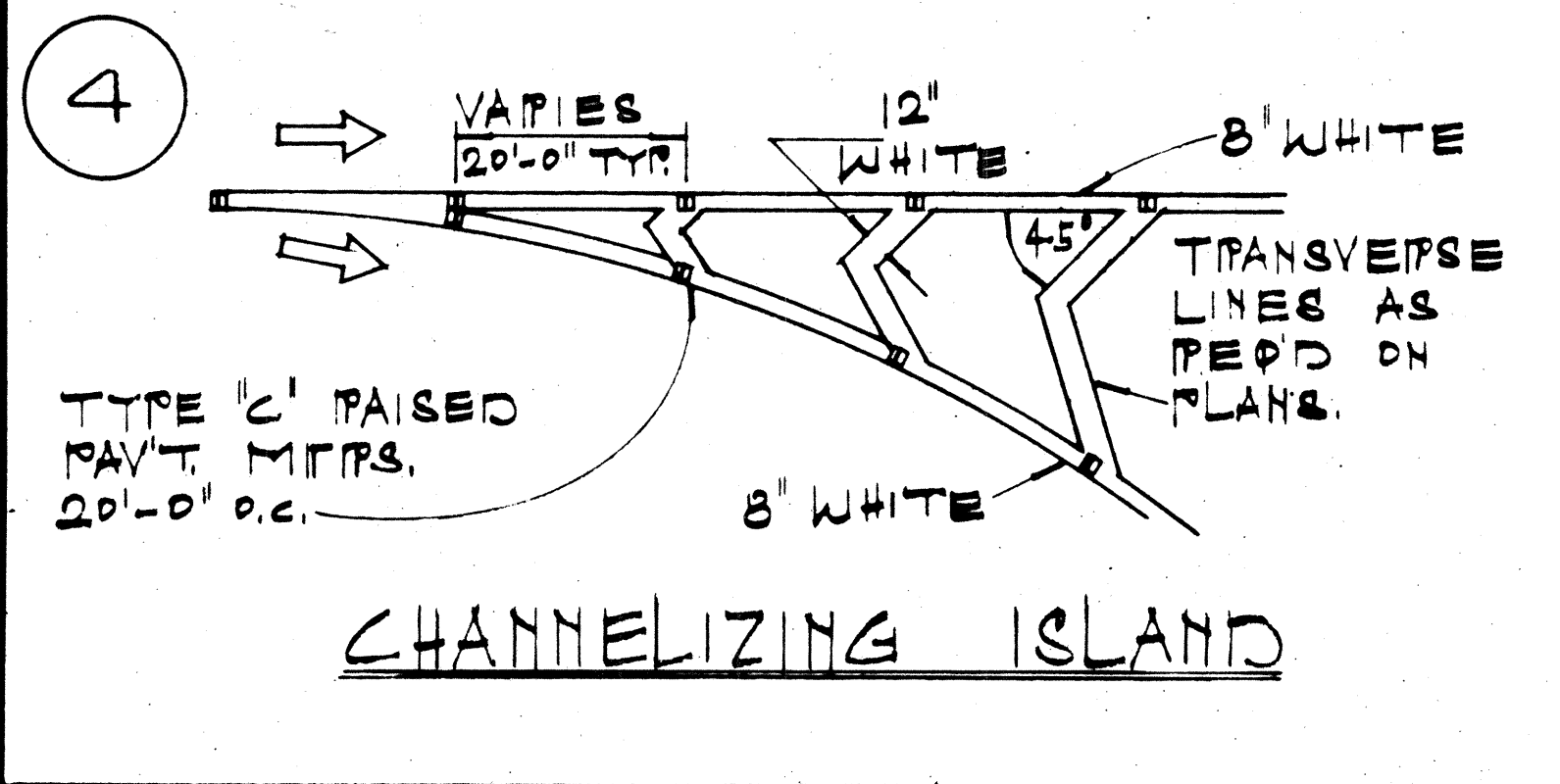
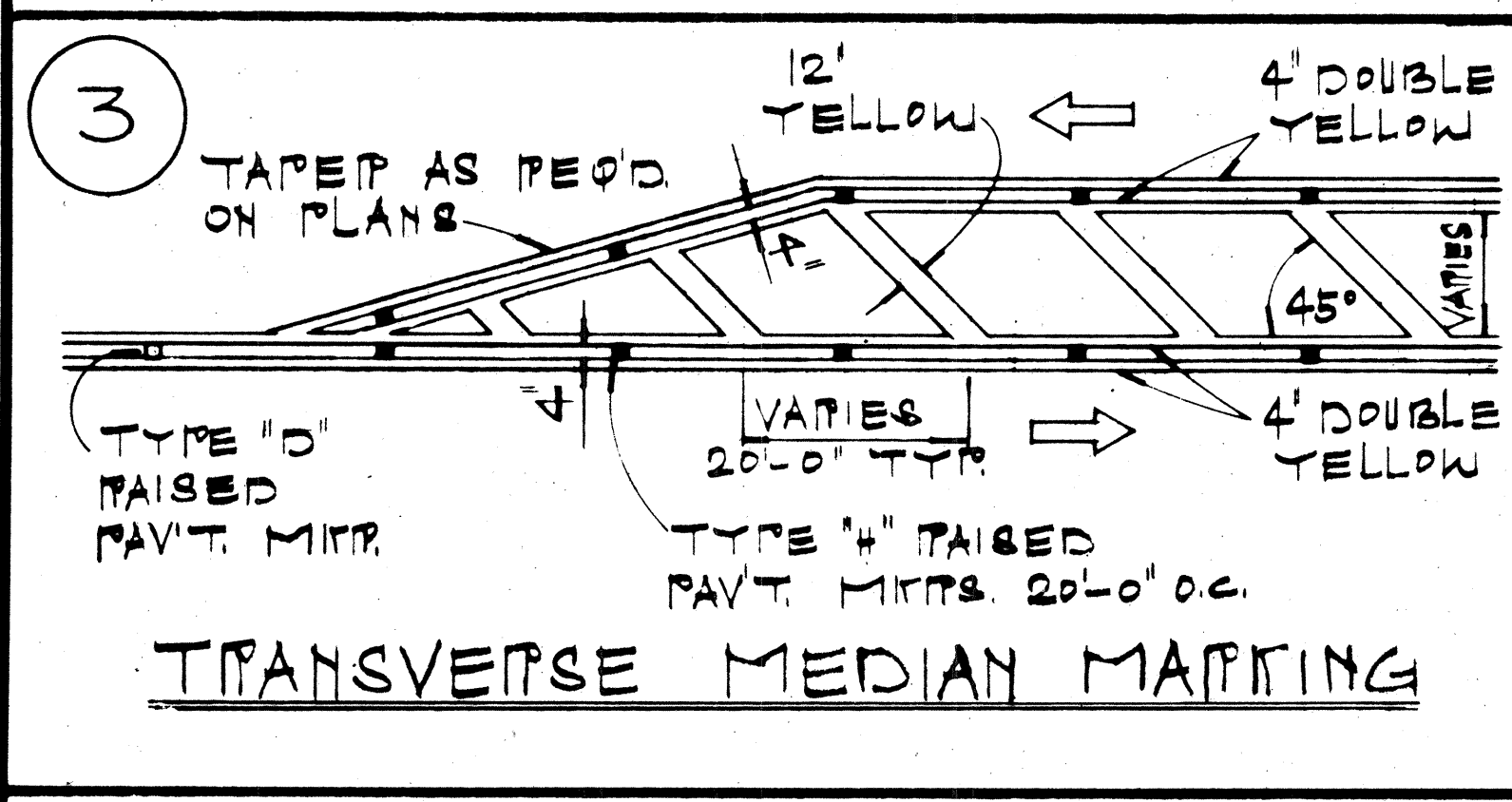
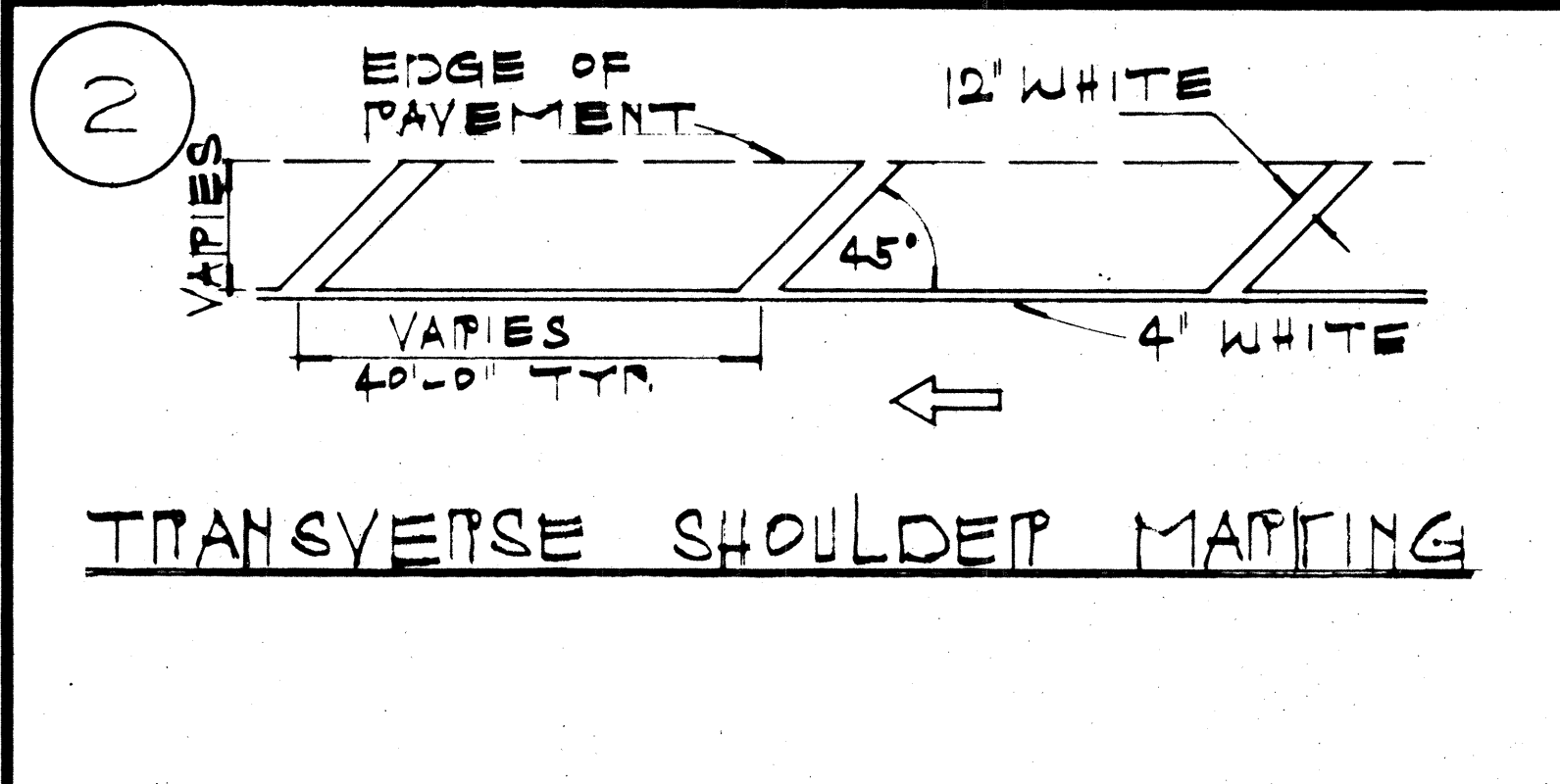
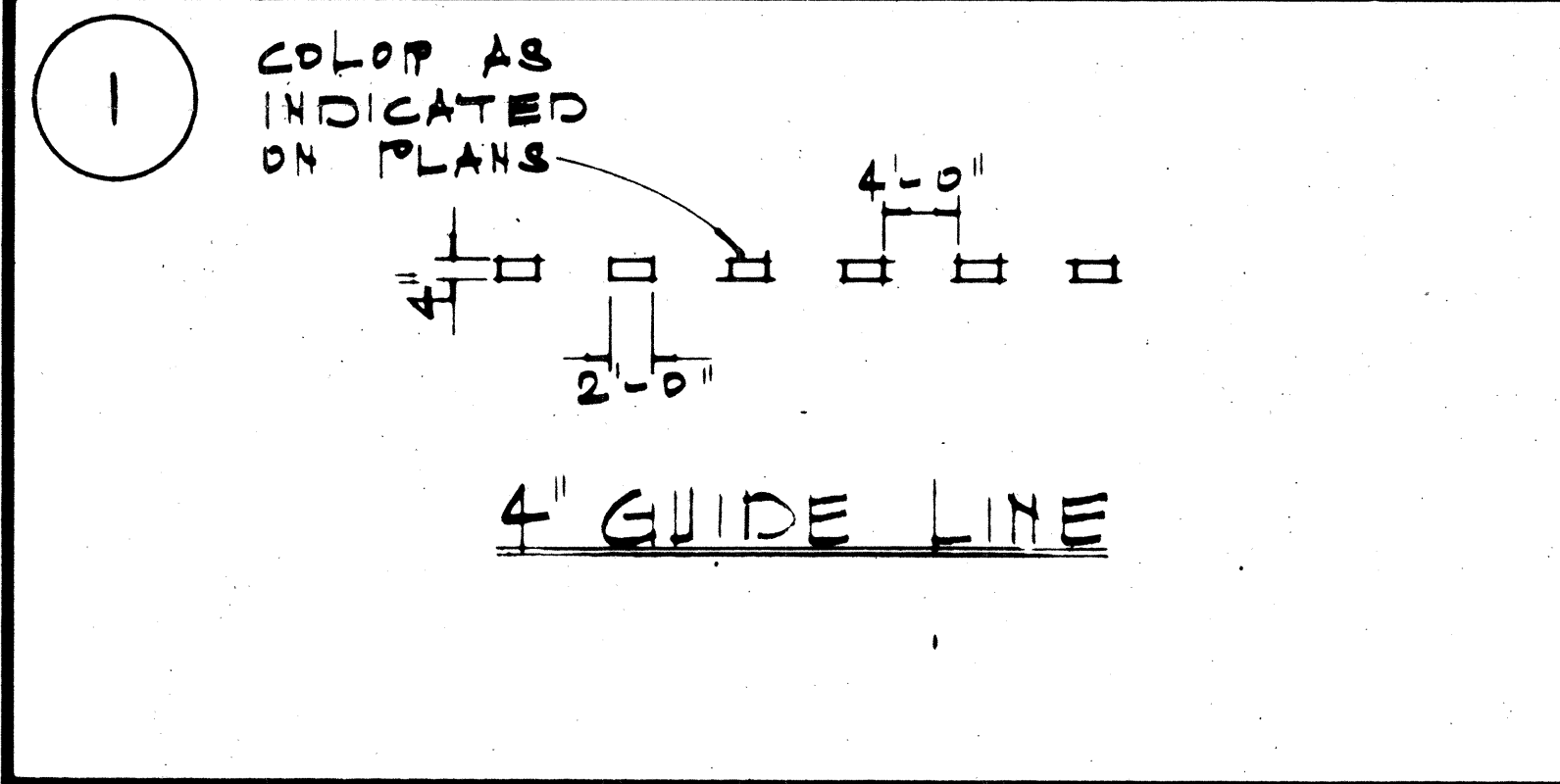
DATE _____
 SURVEY PLOTTED BY _____
 DRAWN BY _____
 DESIGNED BY _____
 NOTE BOOK _____
 QUANTITIES BY _____
 CHECKED BY _____
 No. _____

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

TYPICAL DETAILS

BARRICADE STRIPING DETAILS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(G)	1978	182	262



GENERAL NOTES:

- PAVEMENT MARKINGS SHALL CONFORM TO THE 'MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS', 1971, (MUTCD), SUBSEQUENT REVISIONS TO THE MUTCD & AS SHOWN ON THE PLANS.
- LAYOUT OF PAVEMENT MARKINGS & STRIPING SHALL BE DONE BY THE CONTRACTOR. THE CONTRACTOR SHALL CHECK LAYOUT OF MARKERS & STRIPING WITH THE ENGINEER PRIOR TO PERFORMING WORK.
- FOR ADDITIONAL PAVEMENT MARKING DETAILS SEE SHT. DT 300.

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

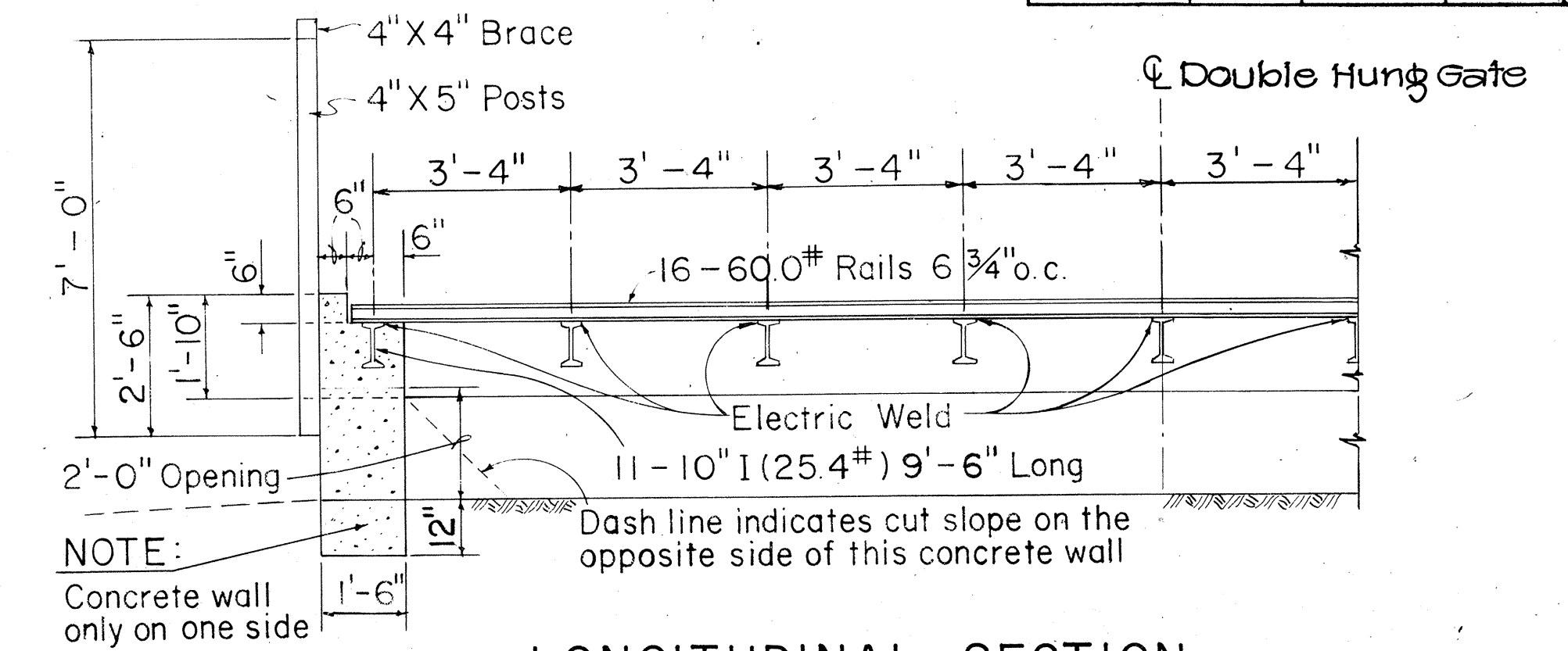
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TYPICAL DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS**

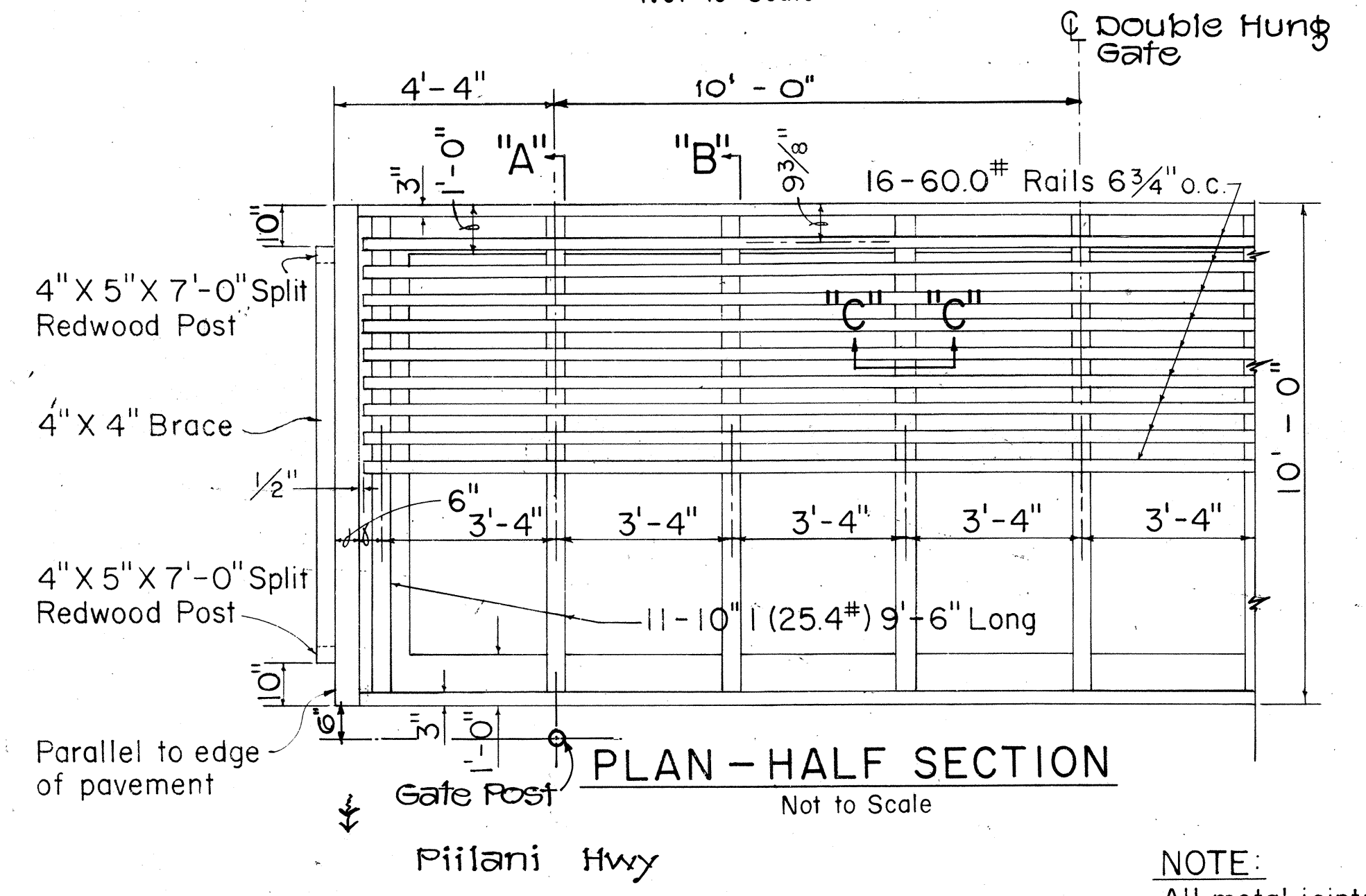
NOT TO SCALE

SHEET No. 22 OF 36 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	183	262

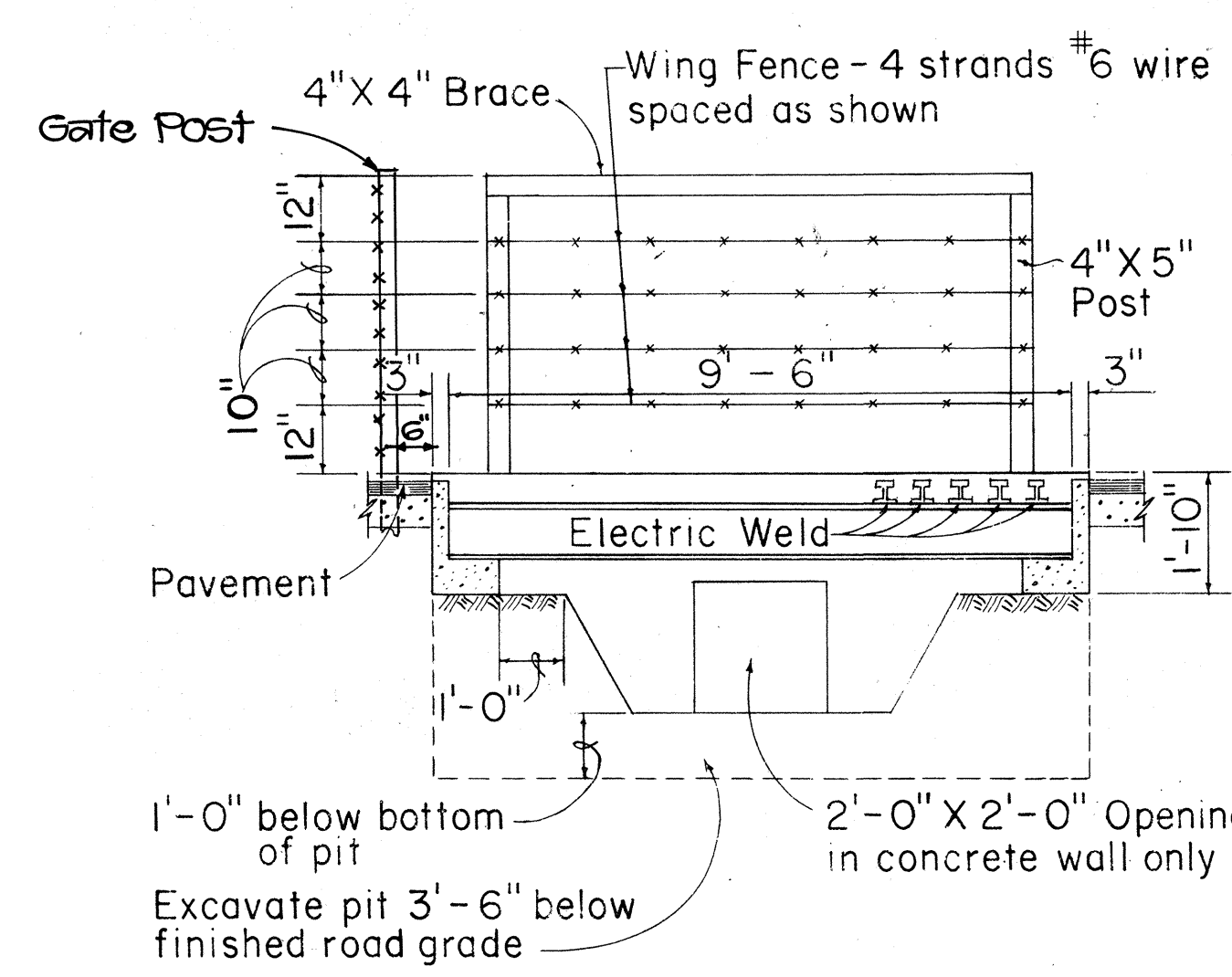


LONGITUDINAL SECTION
Not to Scale

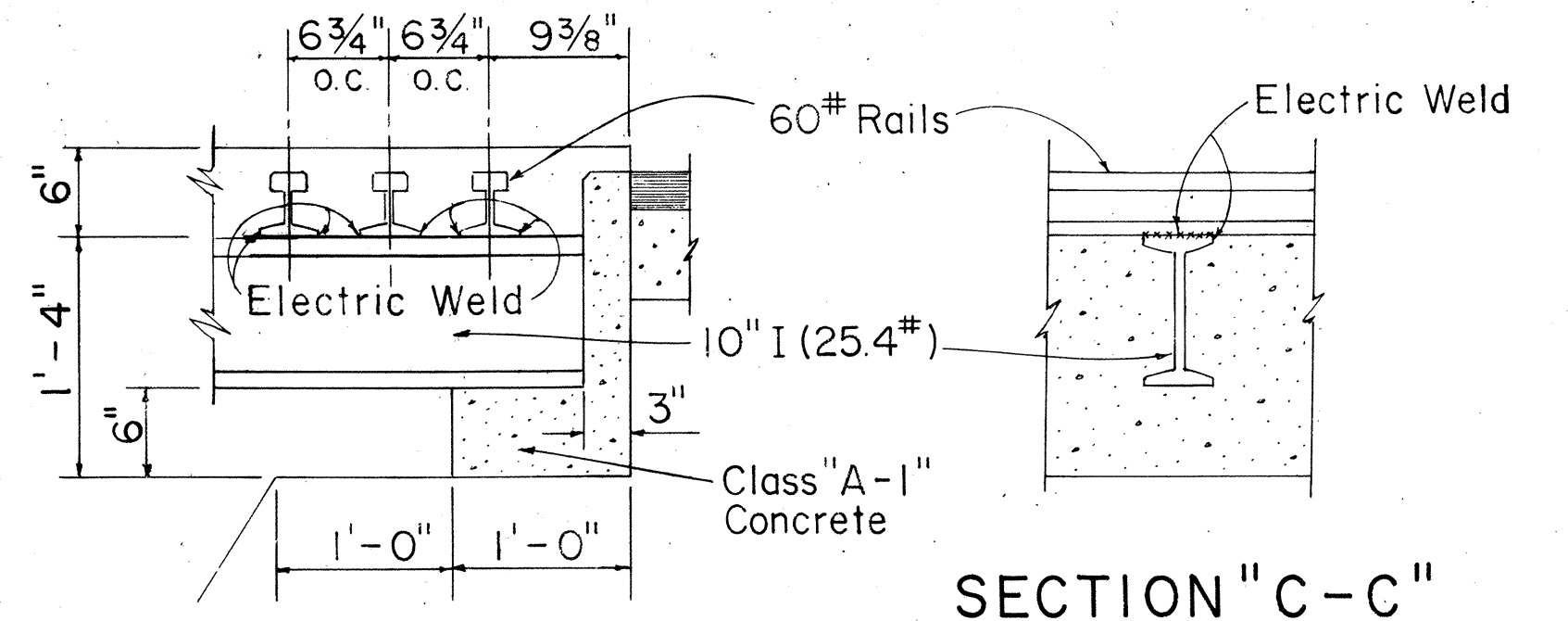


PLAN - HALF SECTION
Not to Scale

NOTE:
All metal joints shall be welded continuously with 3/8" fillets.



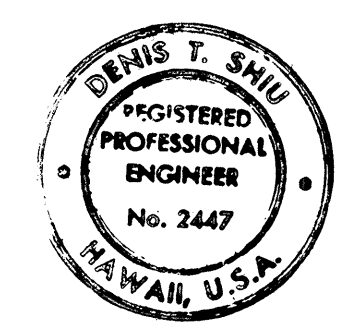
SECTION "A-A"
Scale 3/8" = 1'-0"



SECTION "B-B"
Scale: 1" = 1'-0"

SECTION "C-C"
Scale: 1" = 1'-0"

CATTLE GUARD DETAILS
Scales: As Noted



THIS WORK WAS PREPARED BY
UNDER MY SUPERVISION
Denis T. Shue

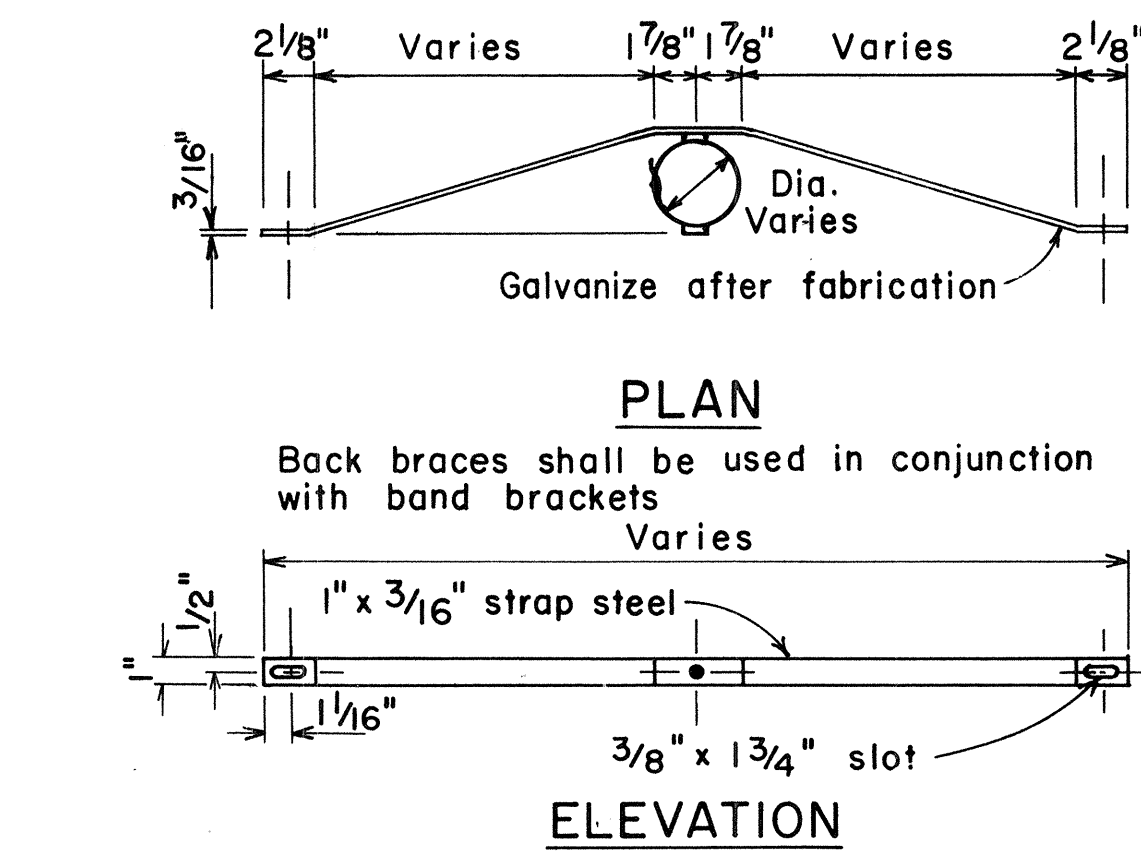
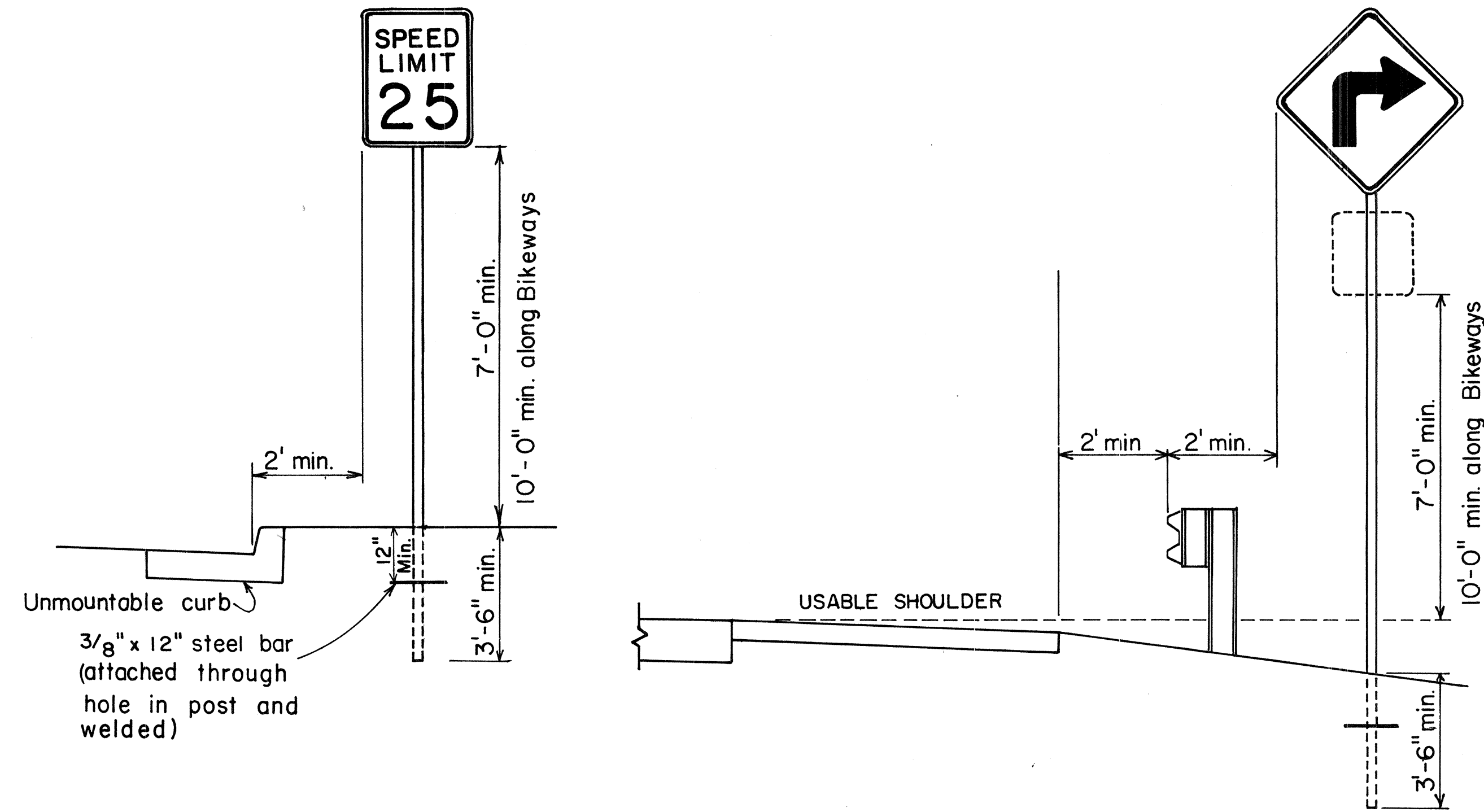
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
CATTLE GUARD DETAILS
PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: AS SHOWN DATE SEP 1978
SHEET No. 23 OF 36 SHEETS

DATE	_____
DESIGNED BY	_____
DRAWN BY	_____
CHECKED BY	_____
NOTE BOOK	_____

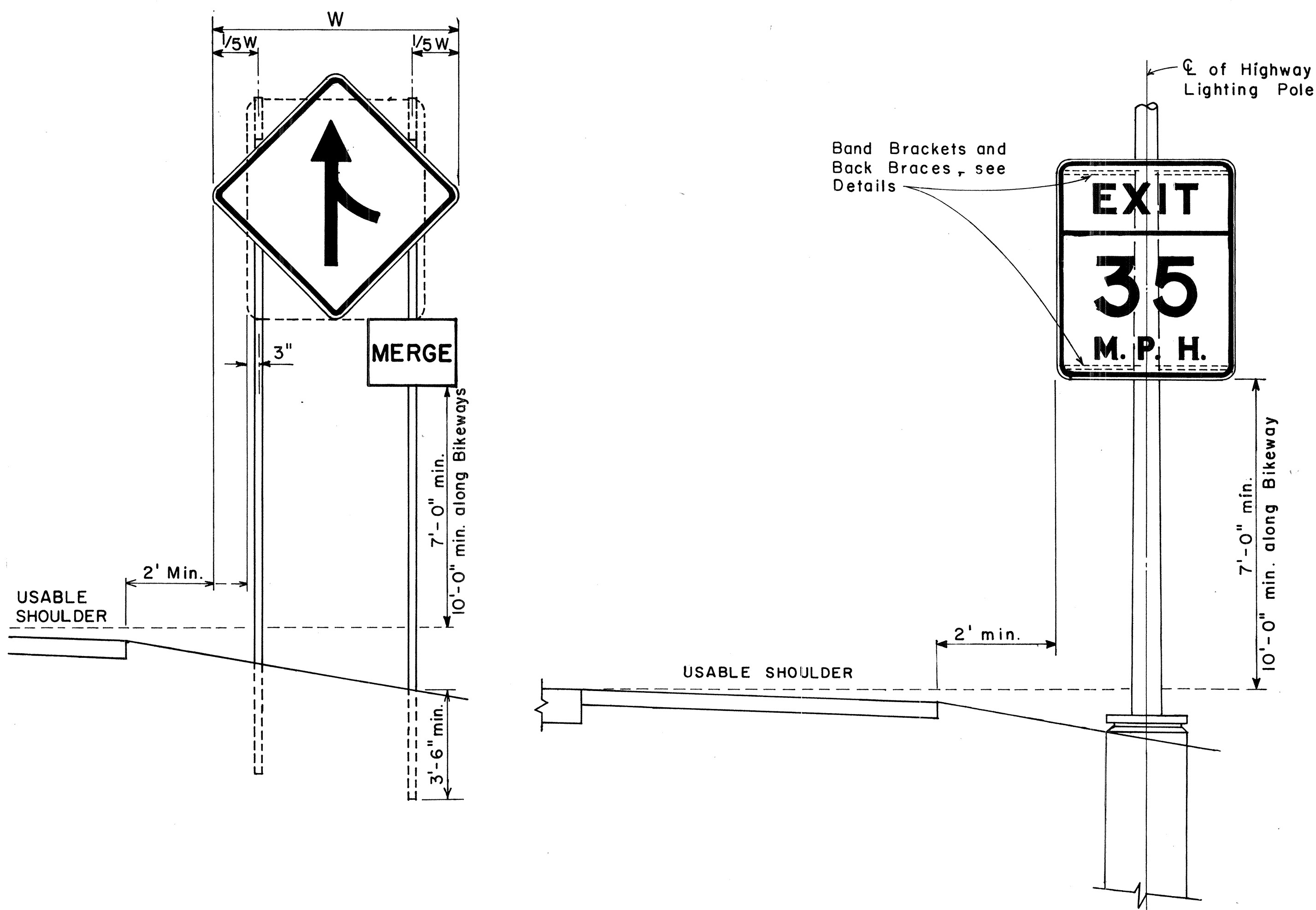
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	P-RF-031-1(6)	1978	184	262

GENERAL NOTES

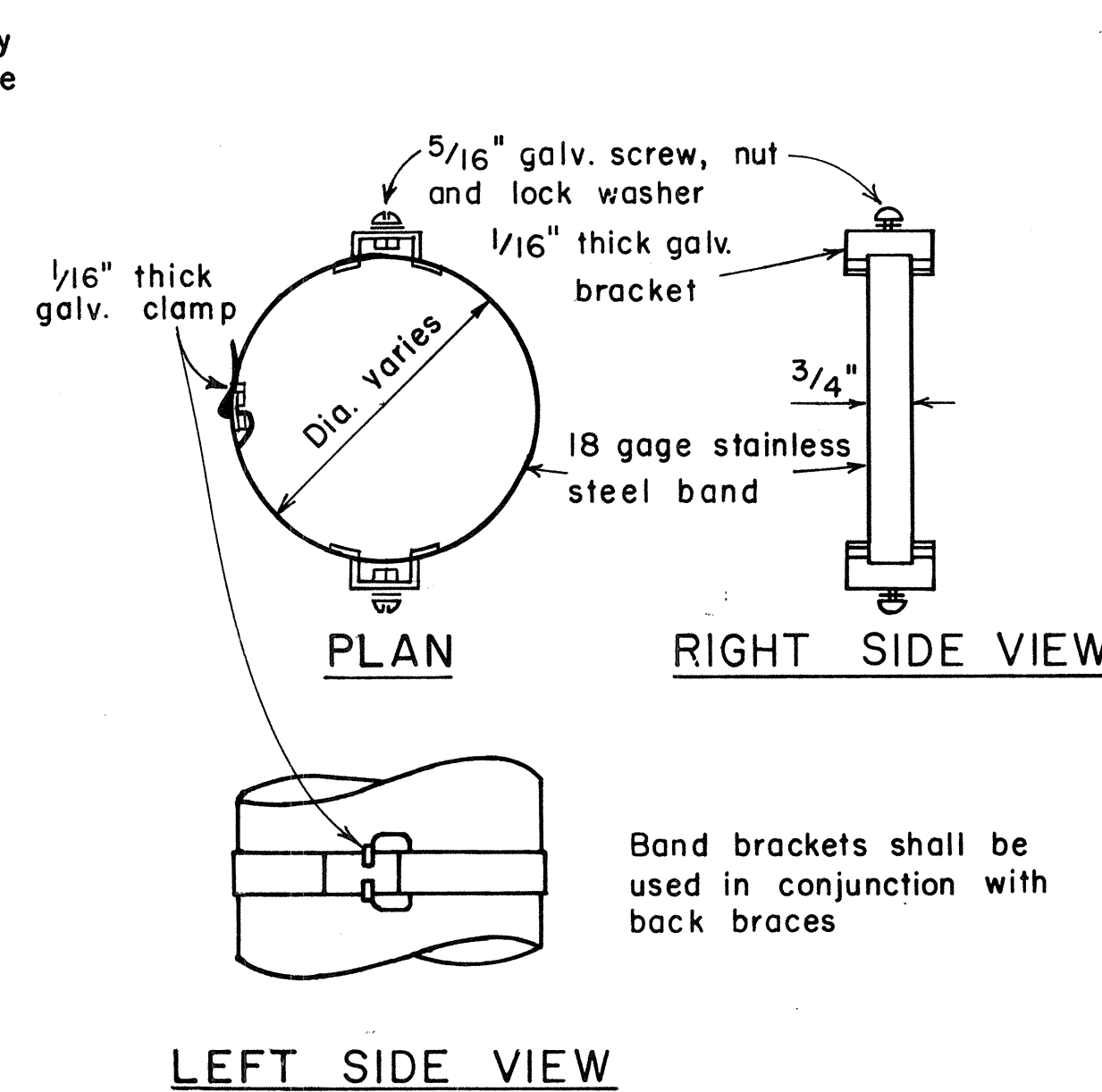
1. Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts.
2. All signs larger than 10 sq. ft. in area or 48" inches and wider, and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least two sets of band brackets and back braces.
3. All signs 28 sq. ft. in area or larger and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least three sets of band brackets and back braces.
4. Signs shall be attached to post with 5/16" galv. bolts with nuts and 7/8" x 0.06" stainless steel washers with neoprene rubber gasket.
5. Sign posts shall extend 3 1/2" above sign where required for City and County street name signs.
6. (R) or (L) indicates right or left and shall be as shown on the plans.



BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION



TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS

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

APPROVED:
Herbert S. Sakai 11/15/77
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supercedes Sht. DT-100 approved 12/30/69	H.T.	11/15/77

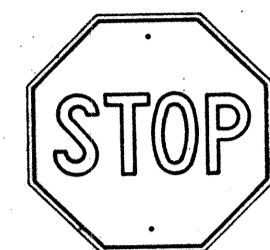
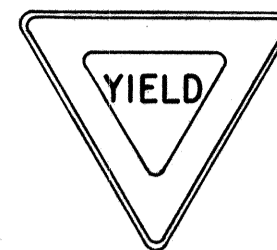
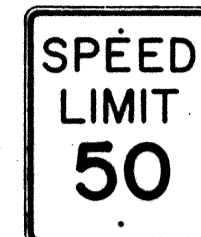
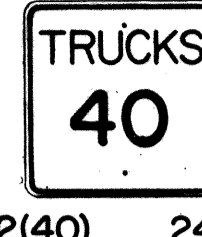
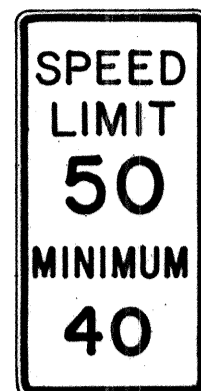
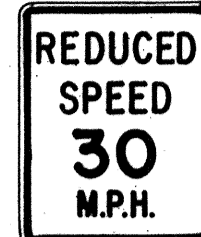
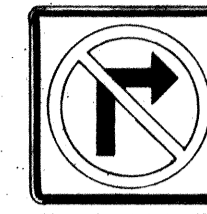
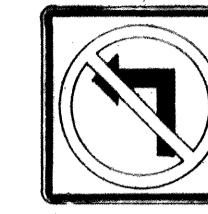
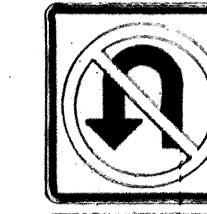
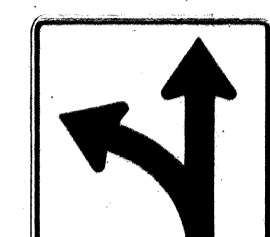
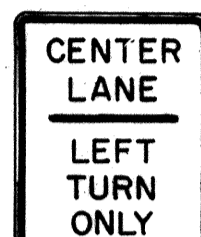
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
 MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977
 SHEET No. 24 OF 36 SHEETS DT 100

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	165	262

R1-1 30"x30"
R1-1-A 36"x36"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"
R3-1-A 48"x48"
48"x36"R3-2 24"x24"
R3-2-A 48"x48"
48"x36"R3-3 24"x24"
R3-3-A 48"x48"R3-4 24"x24"
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"R1-3 12"x6"
R1-3-A 18"x9"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"

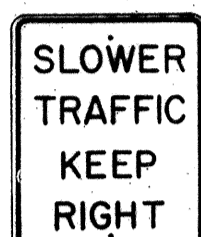
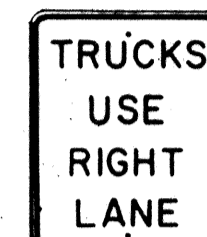
R3-9 24"x30"



R4-1 24"x30"



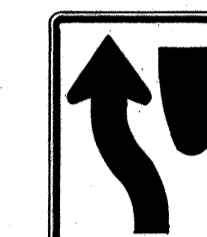
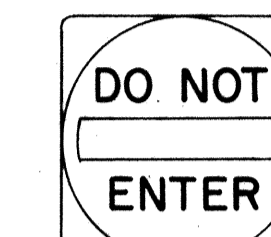
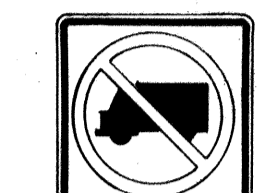
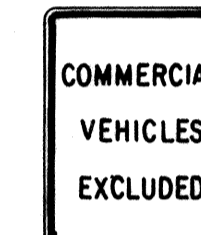
R4-2 24"x30"

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

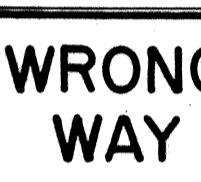
R4-5 24"x30"



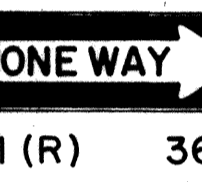
R4-6(500) 24"x30"

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"



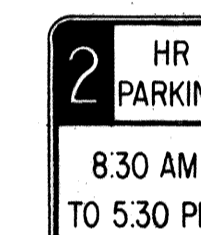
R6-1(R) 36"x12"



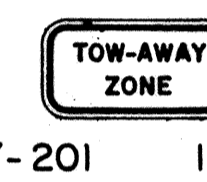
R6-2(R) 18"x24"

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"



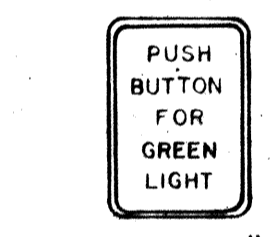
R9-4 18"x24"



R10-1 12"x18"



R10-2 12"x18"



R10-3 9"x12"



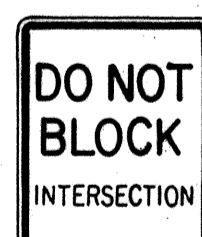
R10-4 9"x12"



R10-5 24"x30"



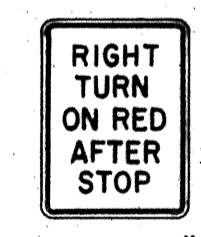
R10-6 24"x36"



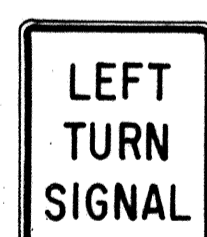
R10-7 24"x30"



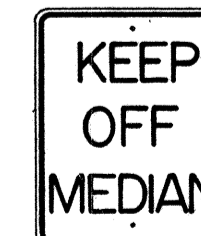
R10-8 24"x30"



R10-9 24"x30"



R10-10 24"x30"



R11-1 24"x30"



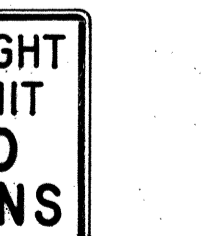
R11-2 48"x30"



R11-3(10) 60"x30"



R11-4 60"x30"



R12-1(10) 24"x30"

GENERAL NOTES

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.

APPROVAL RECOMMENDED:
Etsuko Tanaka
TRAFFIC ENGINEER

3/11/72
DATE

APPROVED:

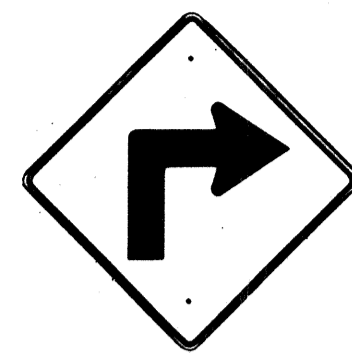
Robert L. ...
ASSISTANT CHIEF, ENGINEERING

2/20/72
DATE

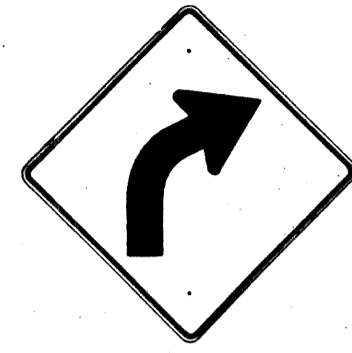
NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.K.	3/20/72
2	Revised General Note 1.	H.K.	10/16/74

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
REGULATORY SIGNS
NOT TO SCALE
SHEET No.25 OF 36 SHEETS DT 101

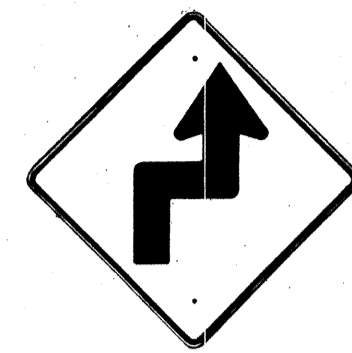
DATE
SURVEY PLOTTED BY
DRAWN BY
RECALCULATED BY
NOTES BY
QUANTITIES BY
CHECKED BY



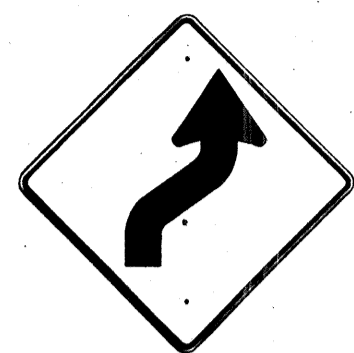
W1-1(R) 30"x30"
W1-1(R)-A 48"x48"



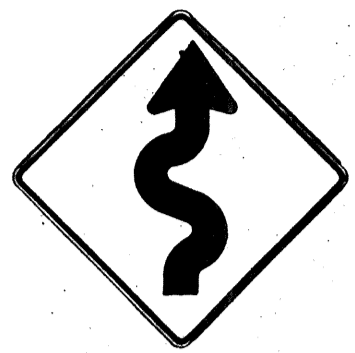
W1-2(R) 30"x30"
W1-2(R)-A 48"x48"



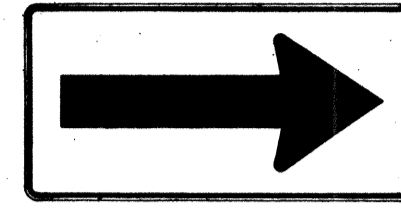
W1-3(R) 30"x30"
W1-3(R)-A 48"x48"



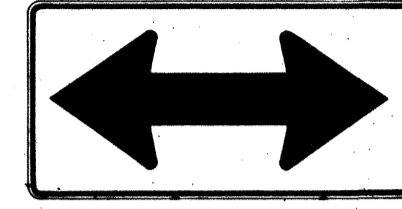
W1-4(R) 30"x30"
W1-4(R)-A 48"x48"



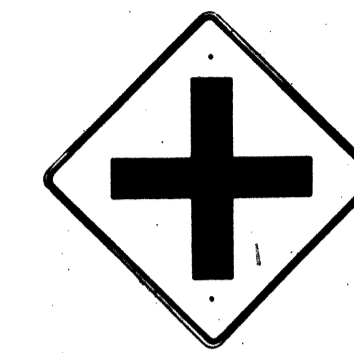
W1-5(R) 30"x30"
W1-5(R)-A 48"x48"



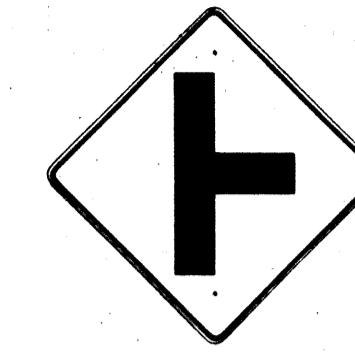
W1-6 48"x24"



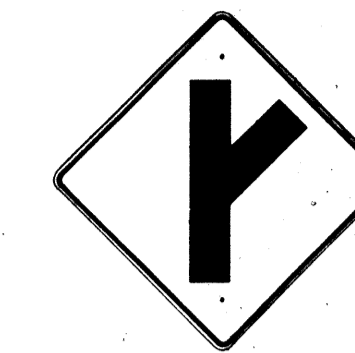
W1-7 48"x24"



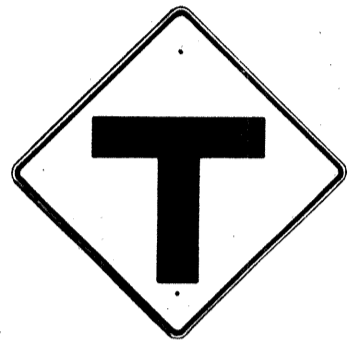
W2-1 30"x30"
W2-1-A 48"x48"



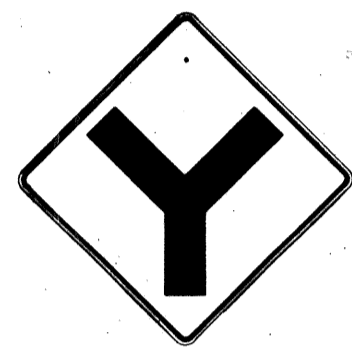
W2-2 30"x30"
W2-2-A 48"x48"



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



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



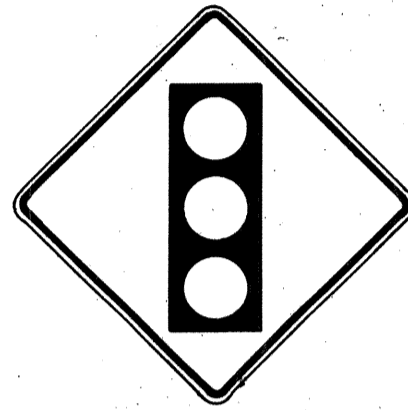
W2-5 30"x30"
W2-5-A 48"x48"



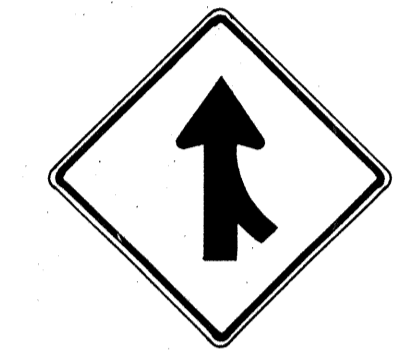
W3-1 30"x30"
W3-1-A 36"x36"



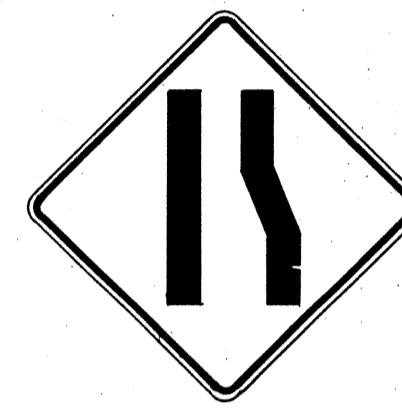
W3-2 30"x30"
W3-2-A 36"x36"



SIGNAL AHEAD
W3-3 36"x36"
24"x18"



MERGE
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"



DIVIDED HIGHWAY
W6-1 36"x36"
24"x18"



DIVIDED HIGHWAY ENDS
W6-2 36"x36"
24"x18"



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



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



USE LOW GEAR
W7-2 24"x18"



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



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



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



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



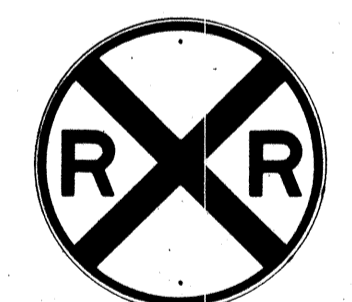
SLIPPERY WHEN WET
W8-5 30"x30"
24"x18"
W8-5-A 36"x36"
24"x18"



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



LANE ENDS MERGE LEFT
W9-2(L) 36"x36"
W9-2(L)-A 48"x48"



W10-1 36" Diameter



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



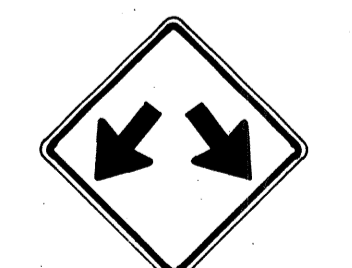
PED XING
W11-2 30"x30"
24"x18"
W11-2-A 36"x36"
24"x18"



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



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



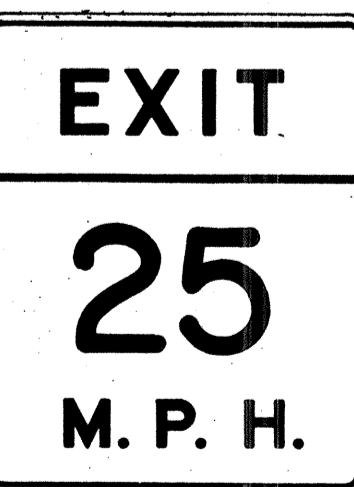
W12-1 24"x24"
W12-1-A 36"x36"
W12-1-B 48"x48"



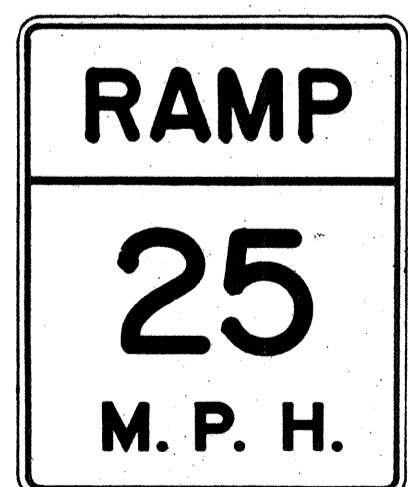
LOW CLEARANCE
W12-2(12'-6") 36"x36"
24"x18"



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:

Eiaki Tanaka
TRAFFIC ENGINEER

3/17/78
DATE

APPROVED:

Richard Davis
ASSISTANT CHIEF, ENGINEERING

3-20-78
DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1	H.T.	10/16/74
3	Revised General Note 5	M.H.	9-16-75
4	Revised General Note 5	H.T.	9-14-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS WARNING SIGNS

NOT TO SCALE

DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
CHECKED BY: _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	187	262

General Notes

- Sign details shall conform to the latest editions of the following FHWA publications:
 - "Standard Alphabets for Highway Signs," and as amended.
 - "Standard Highway Signs," and as amended.
 - "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- All signs shall be reflectorized with reflective sheeting, unless otherwise specified.
- All signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicate numerals to be inserted for sign message. (R) or (L) indicates right or left.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized with reflective sheeting.

Regulatory Signs:

- ALL WAY: R1-4 18"x 6"
- REDUCED SPEED AHEAD: R2-5d(35) 24"x 30", R2-5d(35)-A 48"x 60"
- SPEED LIMIT ENFORCED BY VASCAR: 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"
- NO PARKING ANY TIME: R8-3a 24"x 24", 24"x 18", R8-3a-A 48"x 48"
- NO PEDESTRIAN CROSSING: 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", R9-3b(L) 18"x 12"
- NO TURN ON RED: R10-11a 24"x 30"
- TURN RIGHT ANY TIME WITH CAUTION: R16-1 24"x 30"
- NO LEFT TURN ON RED: 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: R16-5 36"x 42"
- U TURN AHEAD: R16-6 24"x 30"
- U TURN OK: R16-7 24"x 30"
- MOTOR-DRIVEN CYCLES PROHIBITED: R5-8 30"x 24"

Warning Signs:

- 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: W3-4 48"x 48"
- TRUCK CROSSING: W8-6 30"x 30", W8-6-A 36"x 36"
- THRU TRAFFIC MERGE LEFT: W9-3(L) 48"x 48"
- DELAYED GREEN: W15-1 24"x 24"
- ADVANCE GREEN: W15-2 24"x 24"
- RIGHT LANE EXIT ONLY: W18-1 48"x 60"

Construction Signs:

- STOP AHEAD: CW16-1(1/2) 60"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: CW23-4 48"x 48"
- USE SIDEWALK: R18-1 24"x 18"

Other Signs:

- 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"
- LIMITED SIGHT DISTANCE: W14-4 36"x 36", W14-4-A 48"x 48"
- END FREEWAY 1/2 MI: CW16-1(1/2) 60"x 60"

DATE	.....
SURVEY PLOTTED BY	.....
DRAWN BY	.....
TRACED BY	.....
DESIGNED BY	.....
CHECKED BY	.....
NO.	.....

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

APPROVED:
Harbert Z. Dakeishi 5/2/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
	Supersedes Sht. DT 103 approved 3/20/72	H.T.	5/2/78

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
 MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978
 SHEET No. 27 OF 36 SHEETS DT 103

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	188	262



CW20-1a 48" x 48"



CW20-2d 48" x 48"



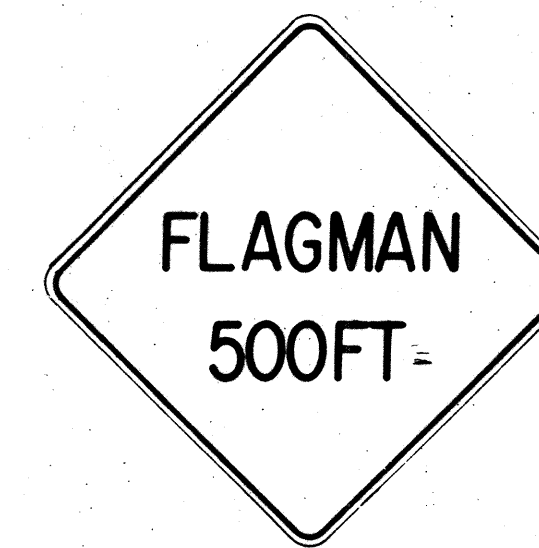
CW20-3b 48" x 48"



CW20-4d 48" x 48"



CW20-5d(L) 48" x 48"



CW20-7c 48" x 48"



CW21-1 30" x 30"



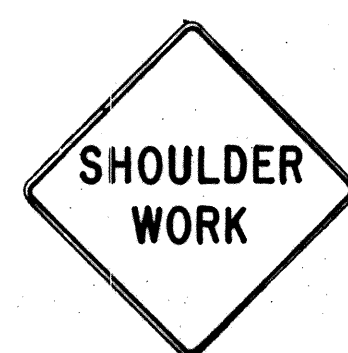
CW21-2 30" x 30"



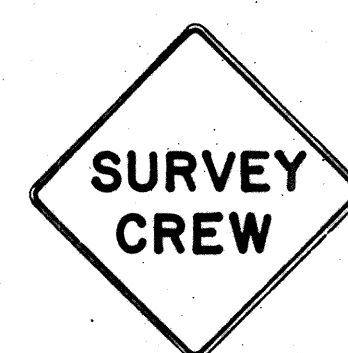
CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



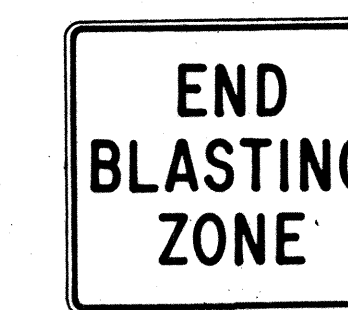
CW21-6 30" x 30"



CW22-1b 48" x 48"



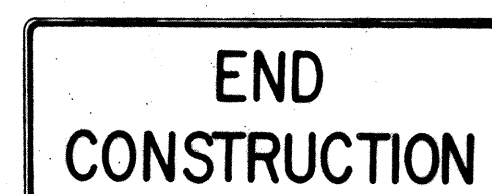
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



CG20-2 60" x 24"



CM4-9(R) 30" x 24"



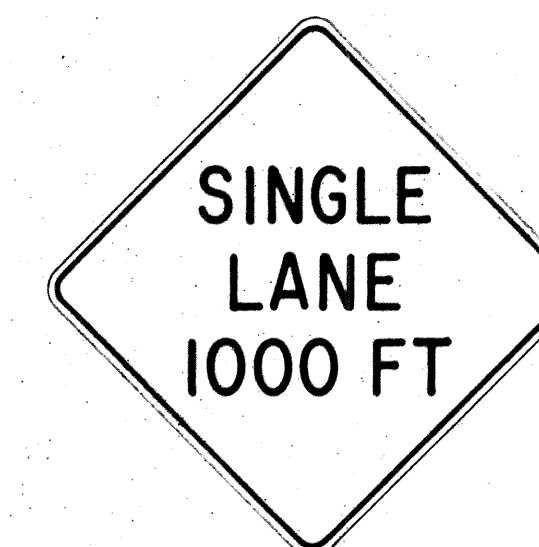
CM4-10(R) 48" x 18"



CG20-4 36" x 18"



CW23-1 36" x 36"



CW23-2b 48" x 48"



CW23-3(R) 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 construction signs shall be reflectorized.
- All construction signs shall have $\frac{3}{8}$ " bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- For "CW" series signs, suffixes a,b,c and d are as follows:
a-1500 FT, b-1000 FT,
c-500 FT and d-AHEAD.

APPROVAL RECOMMENDED:

Erich Tanaka 3/21/78
TRAFFIC ENGINEER DATE

APPROVED:

William Sakai 3/23/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 104 Approved 12-30-69	H.T.	3/23/78
2	Revised General Note 1	H.T.	10/10/74
3	Revised General Note 2	M.H.	9-16-75
4	Revised General Note 2 and sign CG20-1(5)	H.T.	9-14-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS CONSTRUCTION SIGNS

NOT TO SCALE

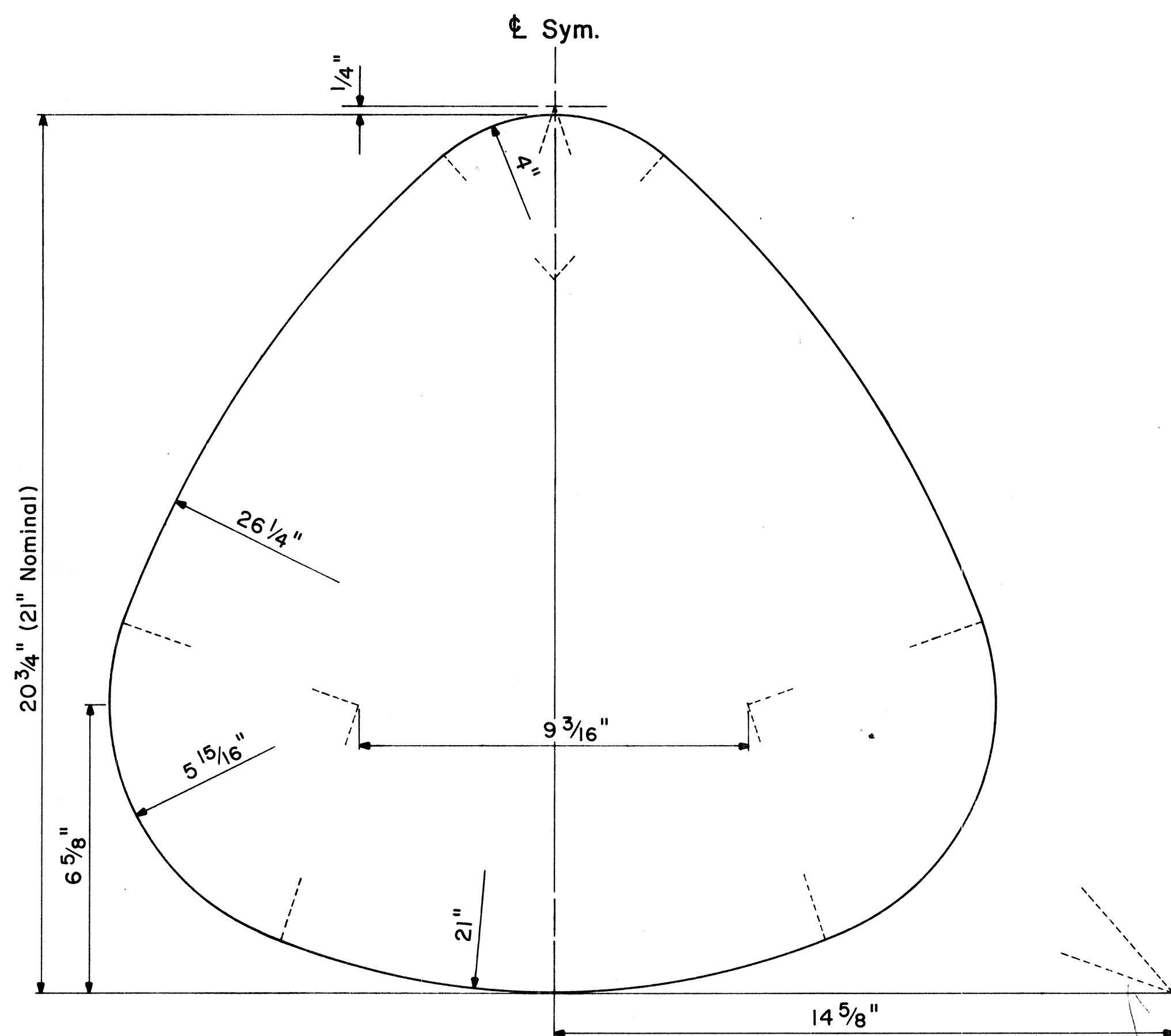
SHEET No.28 OF 36 SHEETS DT 104

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
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-RF-031-1(6)	1978	189	262

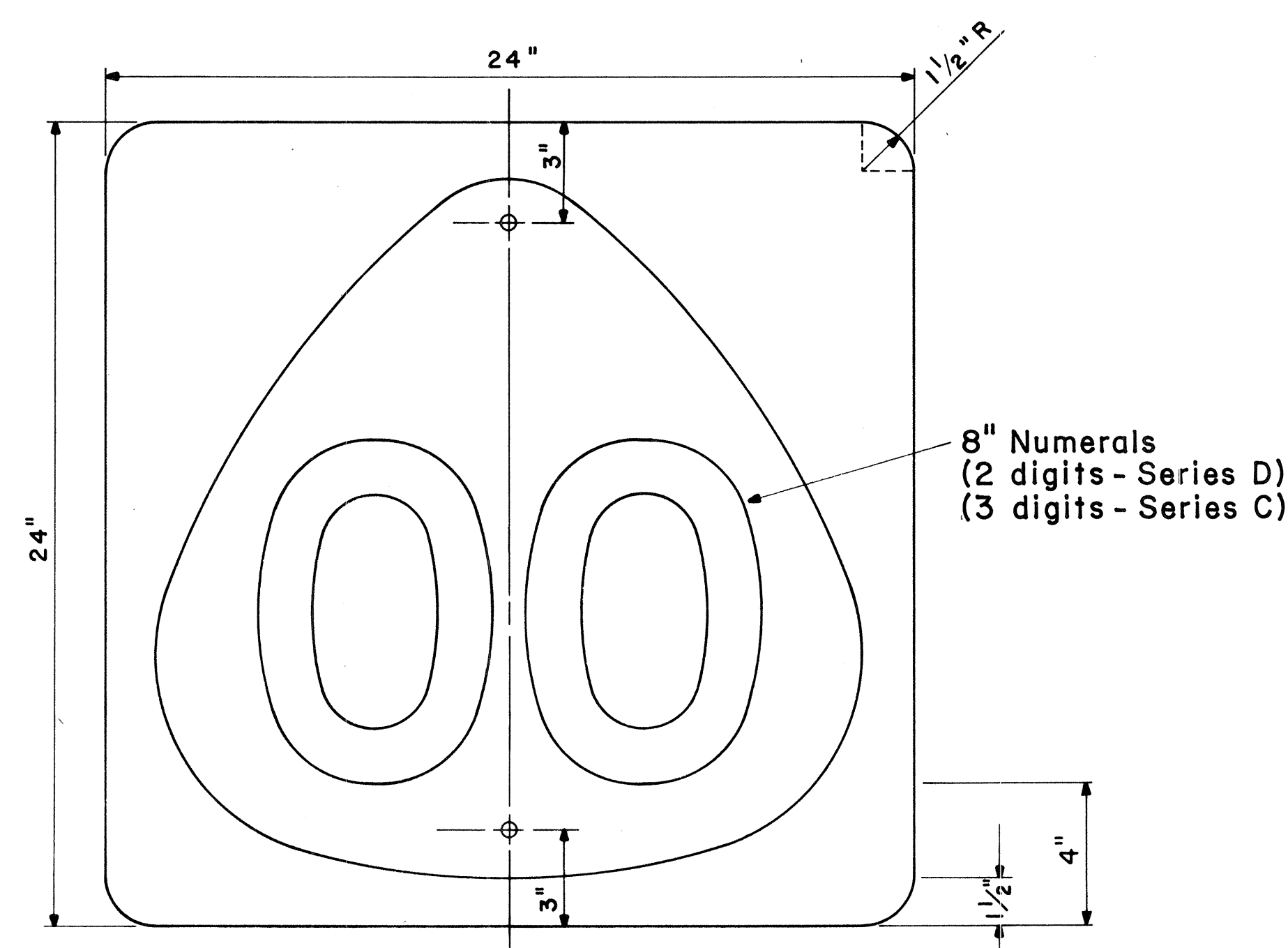
GENERAL NOTES

- Marker details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, "Standard Alphabets for Highway Signs," 1966, and "Standard Highway Signs," 1972, and as amended.
- All markers shall be reflectorized unless otherwise specified.
- All markers shall have $\frac{3}{8}$ " bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for marker message. (R) or (L) indicates right or left.
- Sign message of Cardinal Direction Marker (M3 series) shall be denoted by the following:
 - M3-1 : NORTH
 - M3-2 : EAST
 - M3-3 : SOUTH
 - M3-4 : WEST
- Markers prefixed with "IM" on the plans shall have a white legend on a blue background.



STATE ROUTE MARKER DETAIL

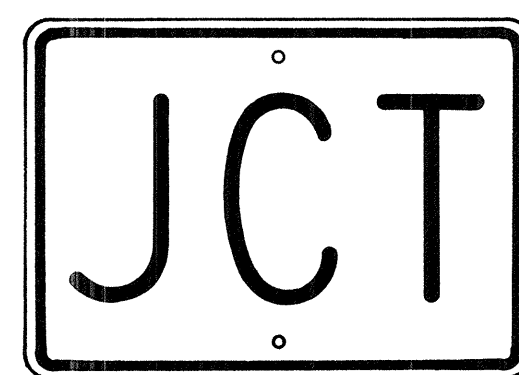
Not to Scale



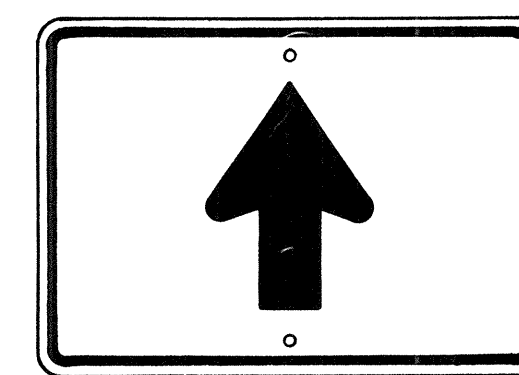
STATE ROUTE MARKER

MI-6 (00) 24" x 24"

Scale: $\frac{1}{4}$ " = 1"



M2-1 21" x 15"



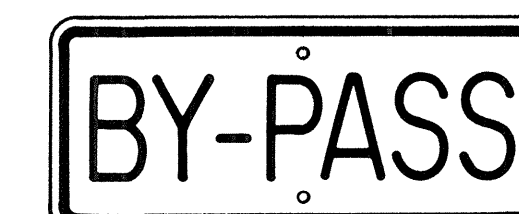
M6-3 21" x 15"



M3-1 24" x 12"
M3-1-A 36" x 18"



M4-1 24" x 12"



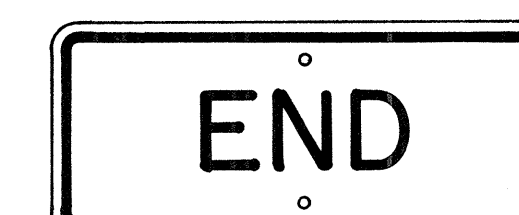
M4-2 24" x 12"



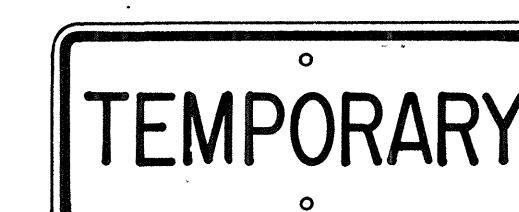
M4-3 24" x 12"



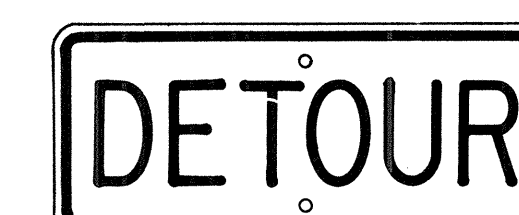
M4-5 24" x 12"



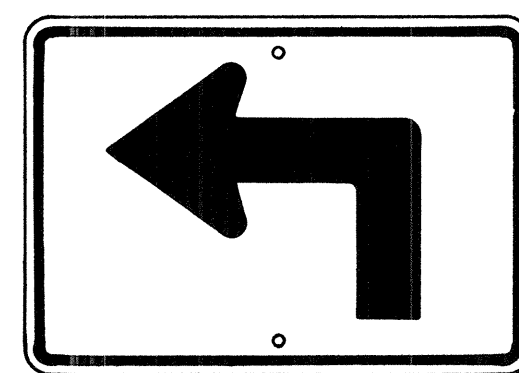
M4-6 24" x 12"



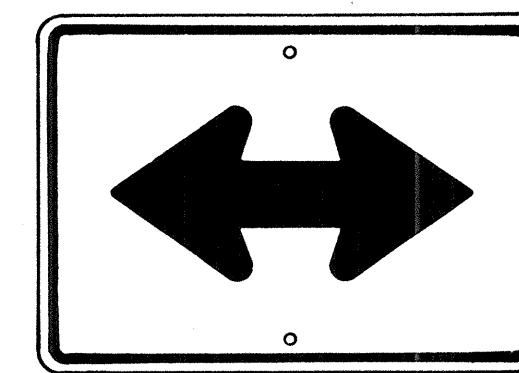
M4-7 24" x 12"



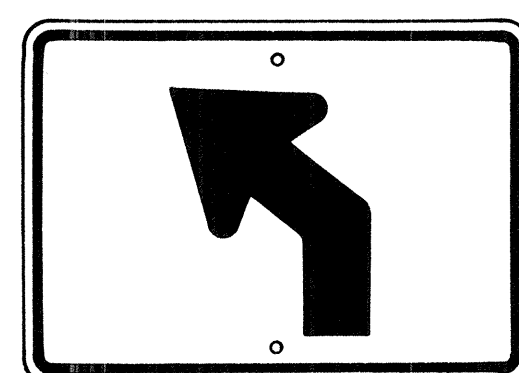
M4-8 24" x 12"



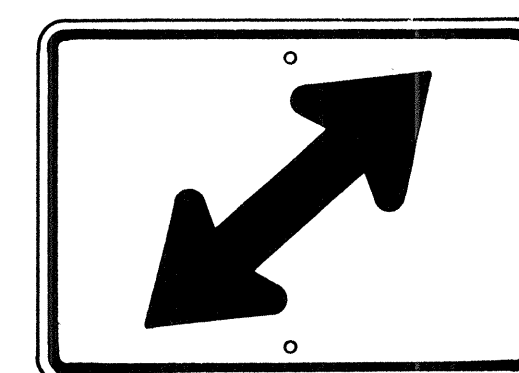
M5-1(L) 21" x 15"



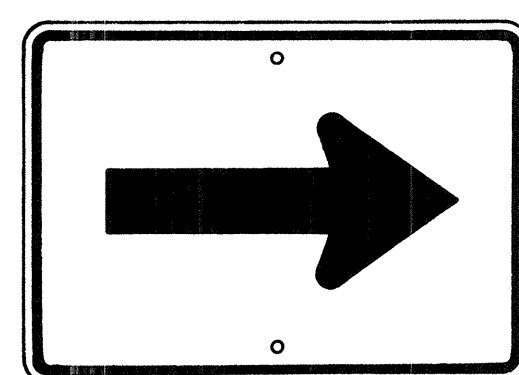
M6-4 21" x 15"



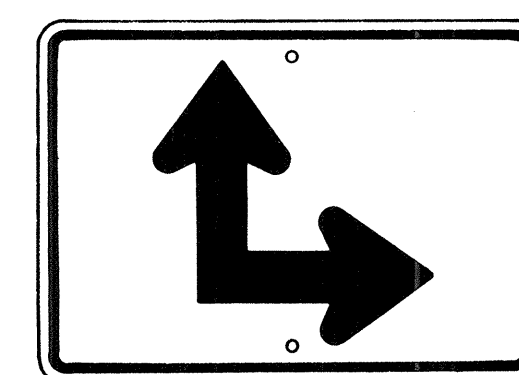
M5-2(L) 21" x 15"



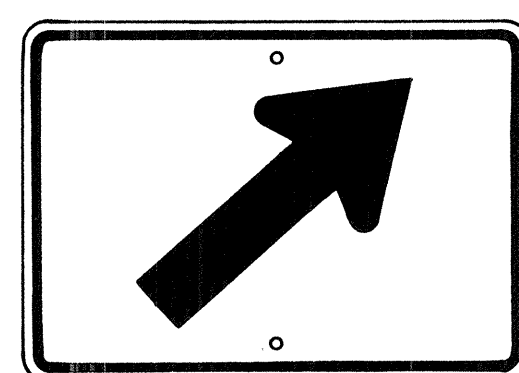
M6-5(R) 21" x 15"



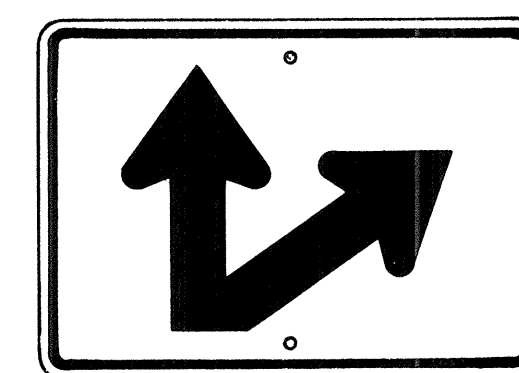
M6-1 21" x 15"



M6-6(R) 21" x 15"



M6-2(R) 21" x 15"



M6-7(R) 21" x 15"

AUXILIARY MARKERS

Not to Scale

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 105 Approved 12-30-69	H.T.	6/11/72
2	Revised General Note 1	H.T.	10/16/74

APPROVAL RECOMMENDED:
Erich Tanaka 6/6/72
TRAFFIC ENGINEER DATE

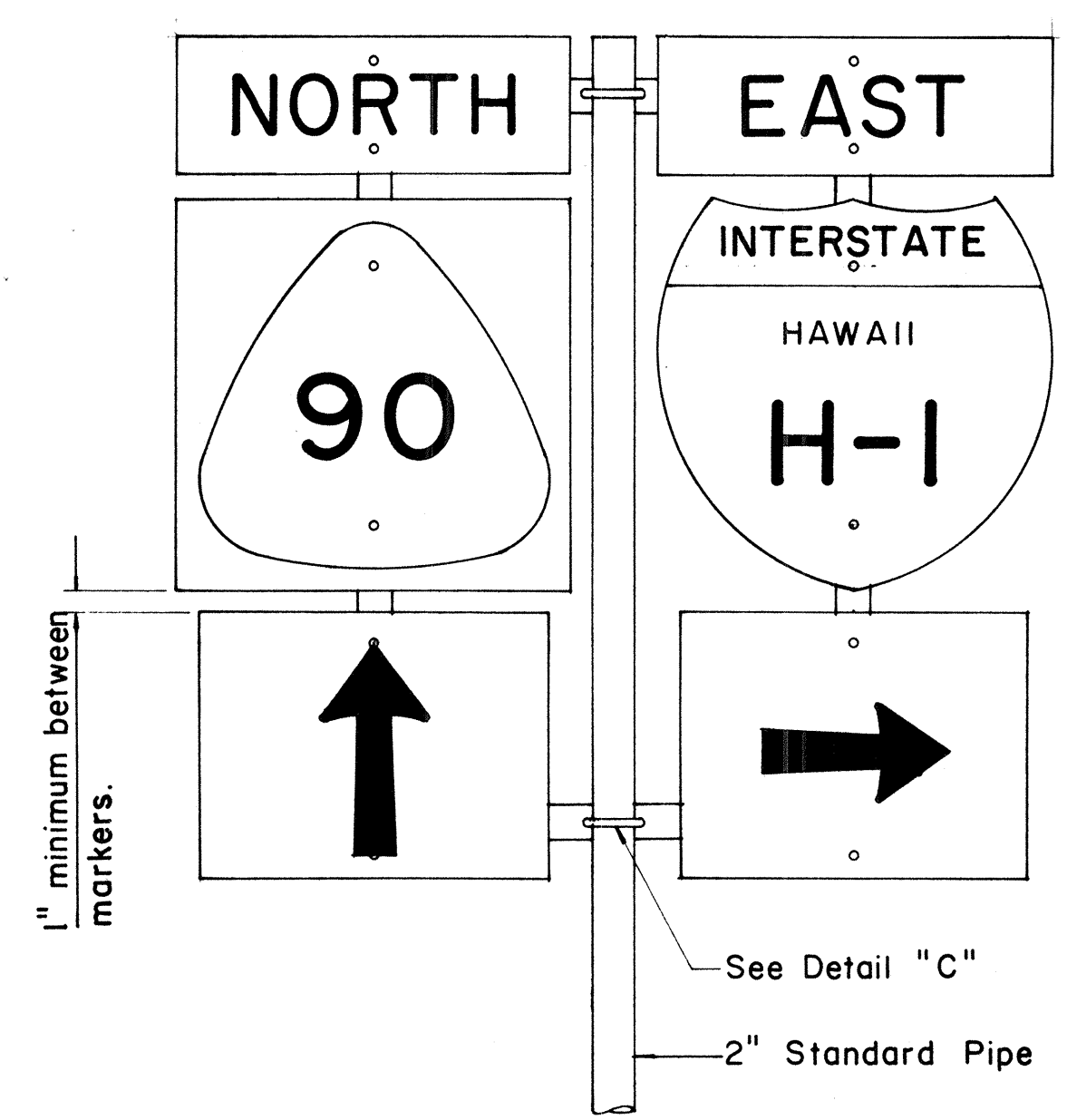
APPROVED:
Abdul Q. Saleh 6-1-72
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
STATE ROUTE MARKER
AND AUXILIARY MARKERS

Scale: As Shown
SHEET No 29 OF 36 SHEETS DT 105

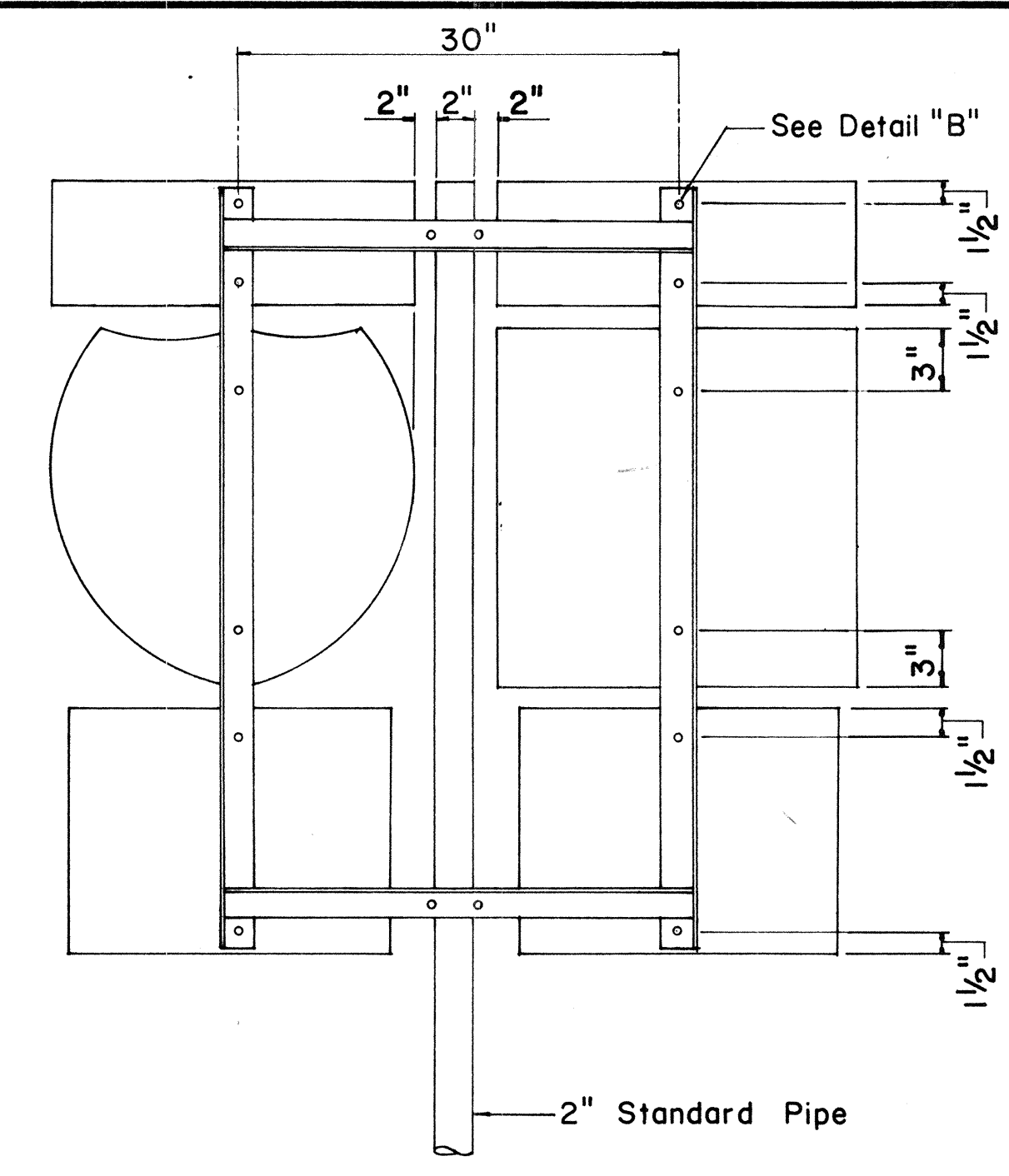
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RP-031-1(6)	1978	190	262



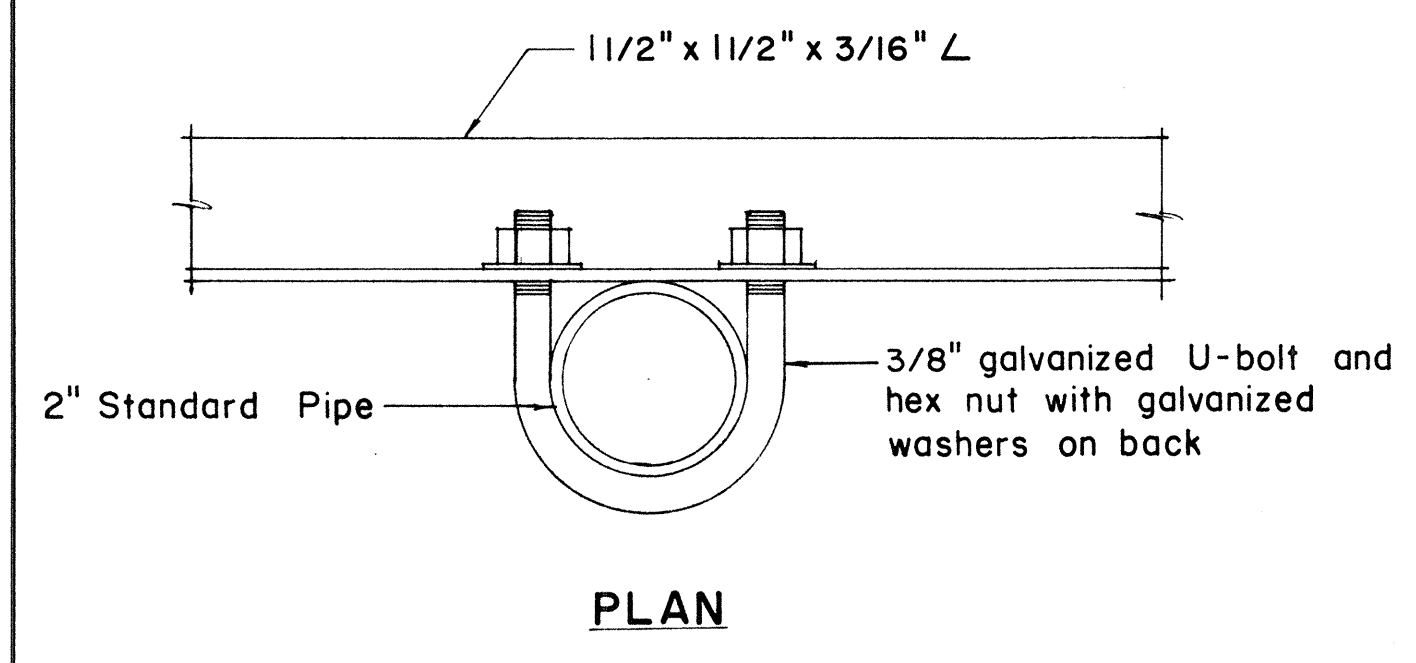
FRONT ELEVATION

TYPE "B" ASSEMBLY
Not to Scale

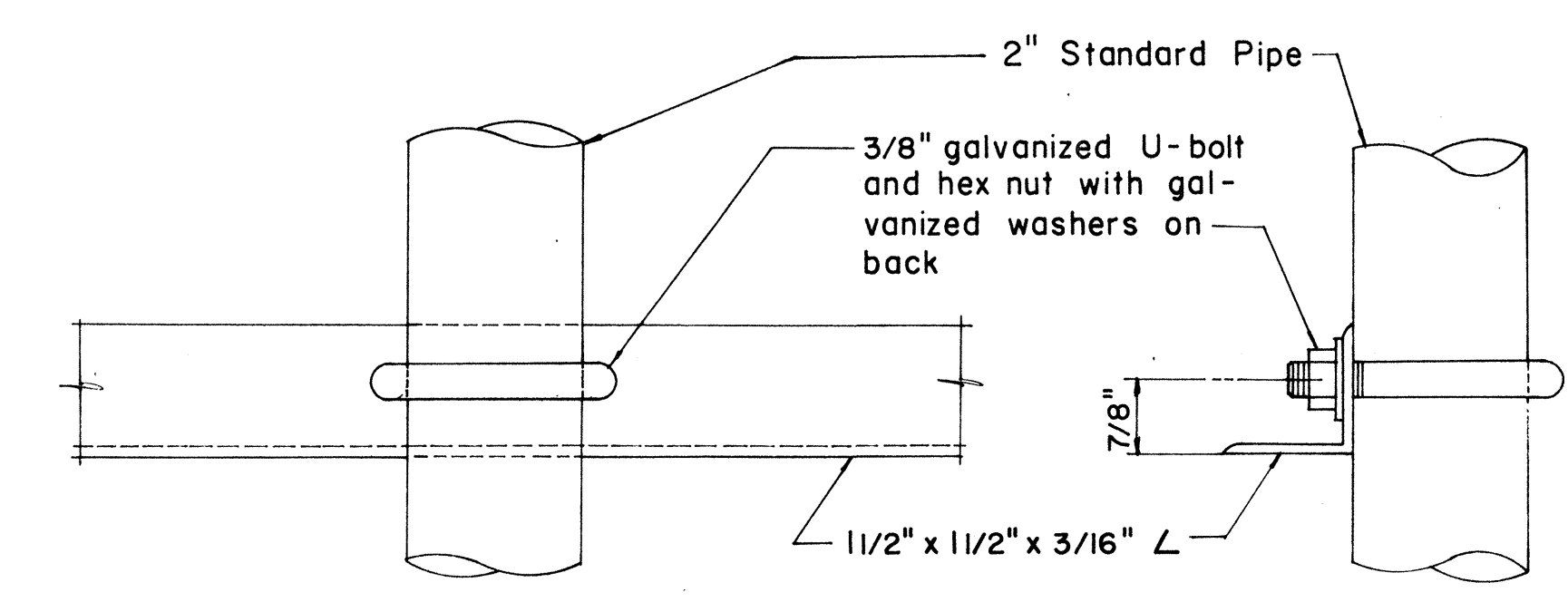


REAR ELEVATION

NOTE:
1. Minimum clearance between markers shall be one inch. (Larger clearances shall be in multiples of one inch.)
2. Pipe post for Type "A" & Type "B" Assembly shall be 2" Standard Pipe.



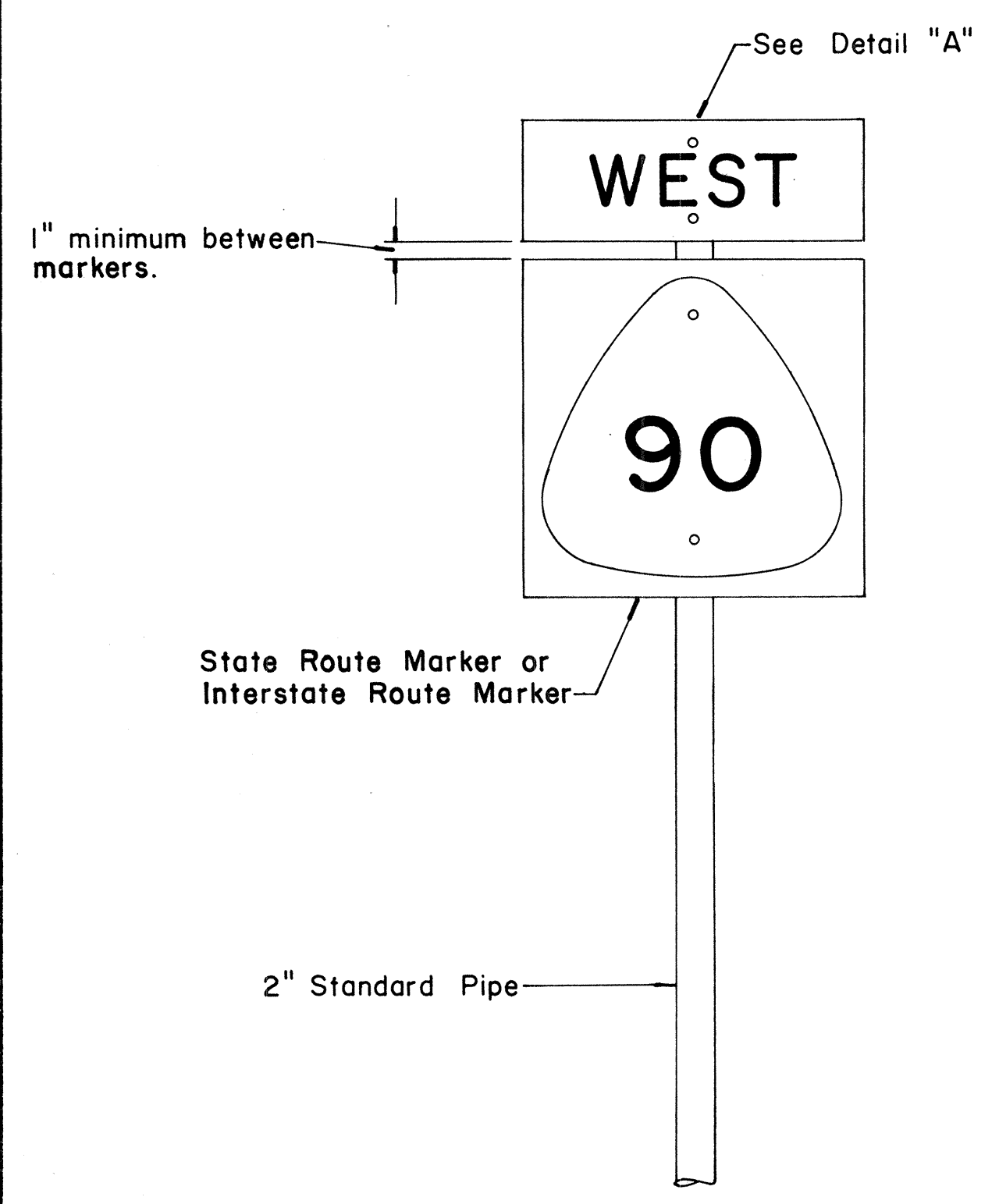
PLAN



FRONT ELEVATION

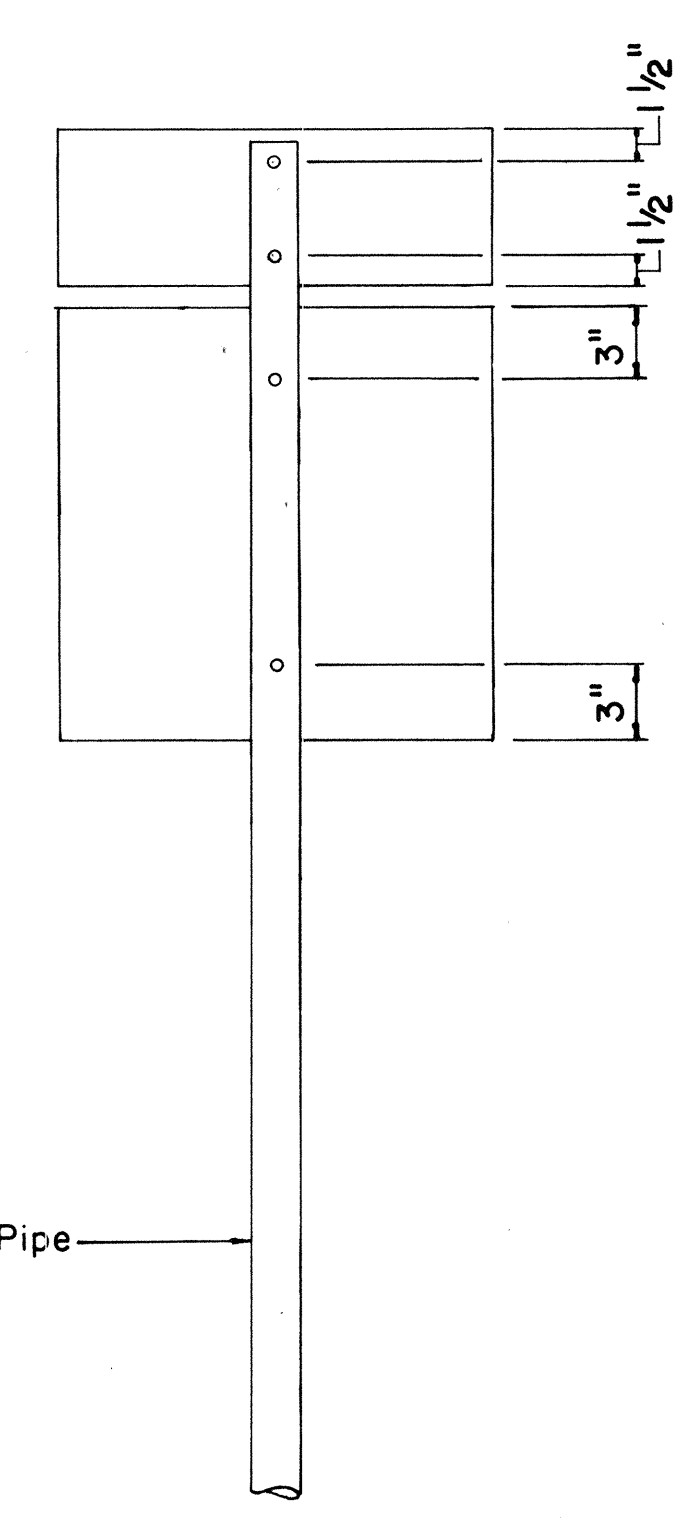
SIDE ELEVATION

DETAIL "C"



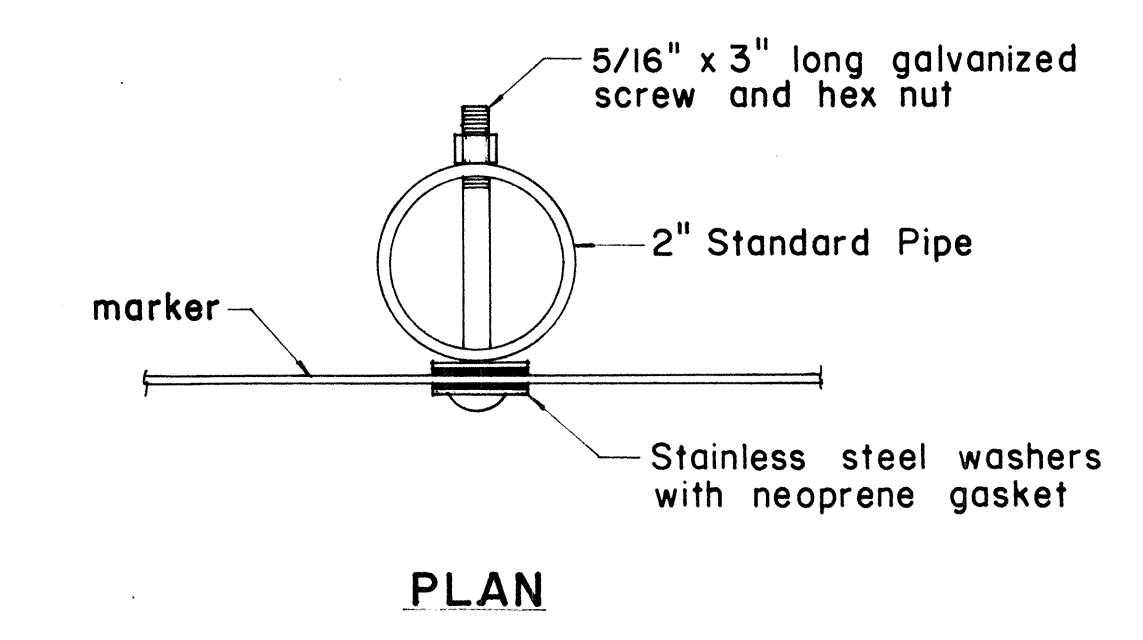
FRONT ELEVATION

TYPE "A" ASSEMBLY
Not to Scale

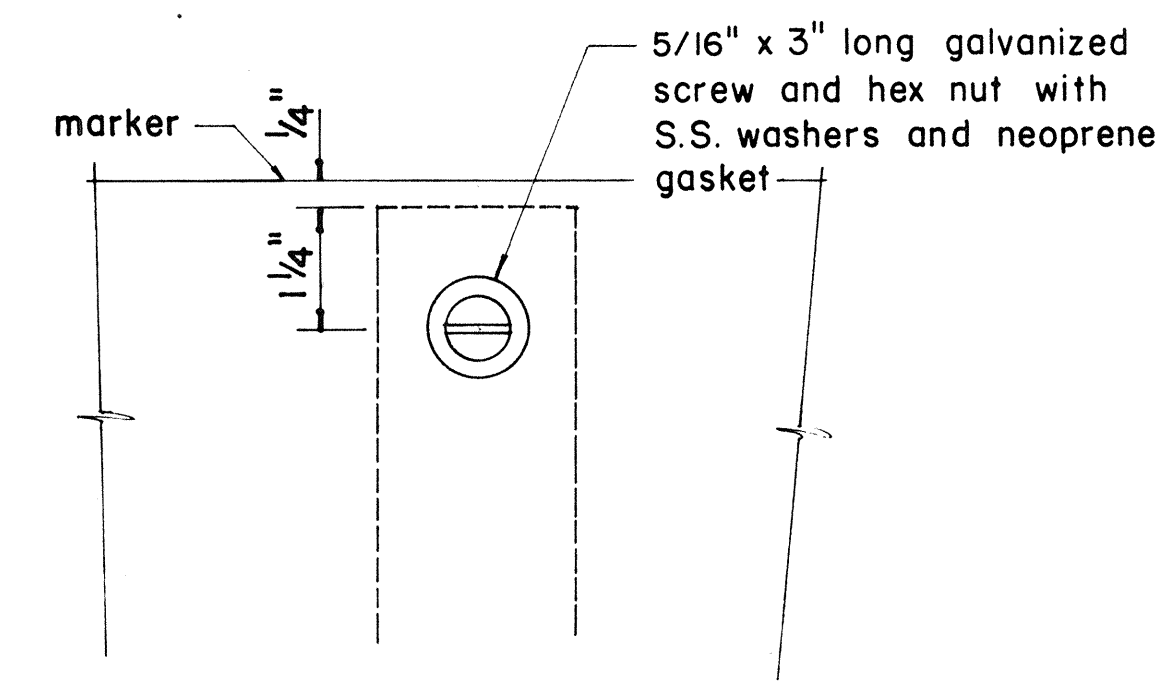


REAR ELEVATION

NOTE:
For height and lateral location of Route Marker Assembly, see plan sheet DT 100.

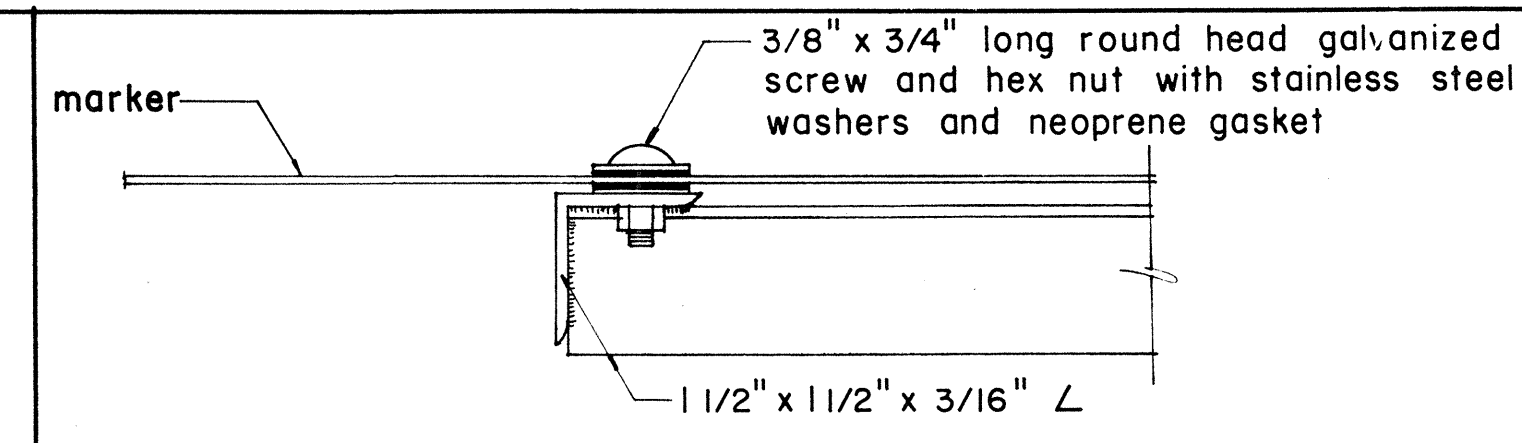


PLAN

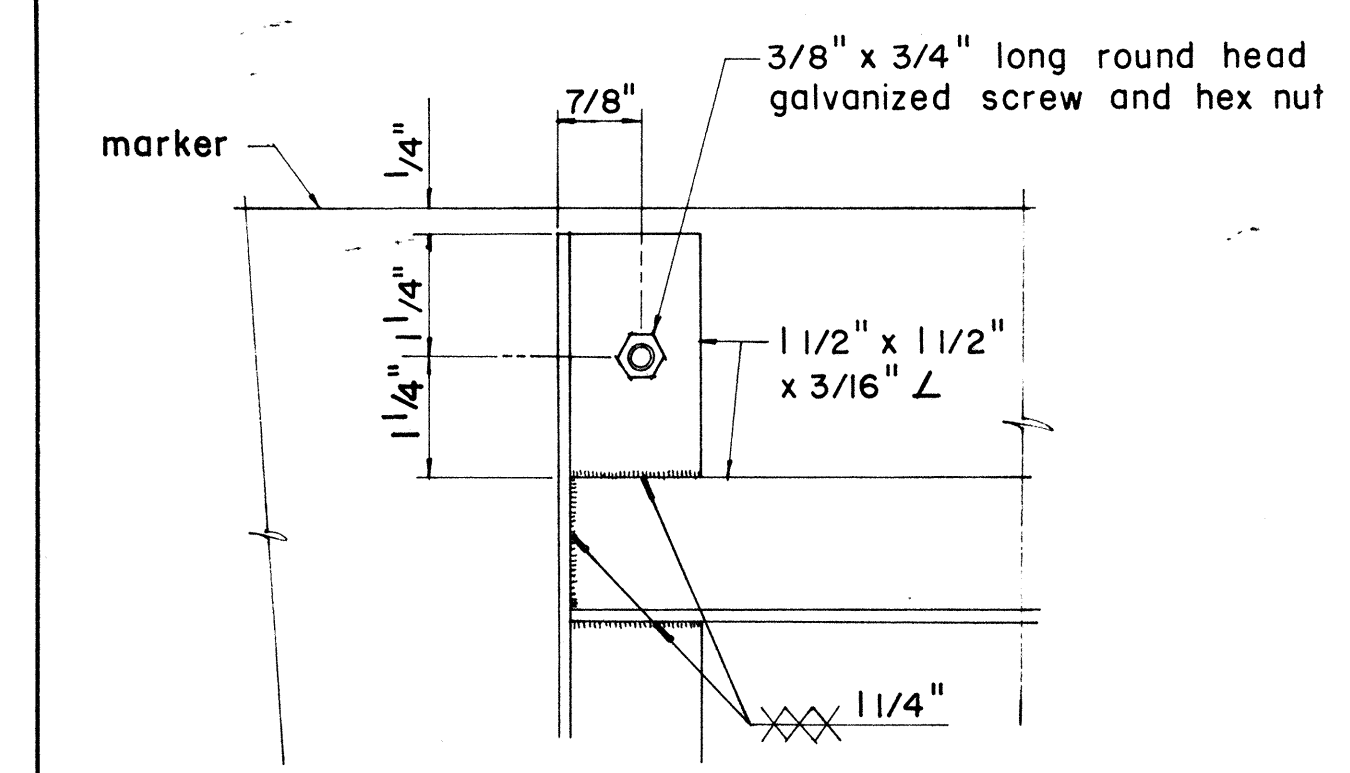


FRONT ELEVATION

DETAIL "A"

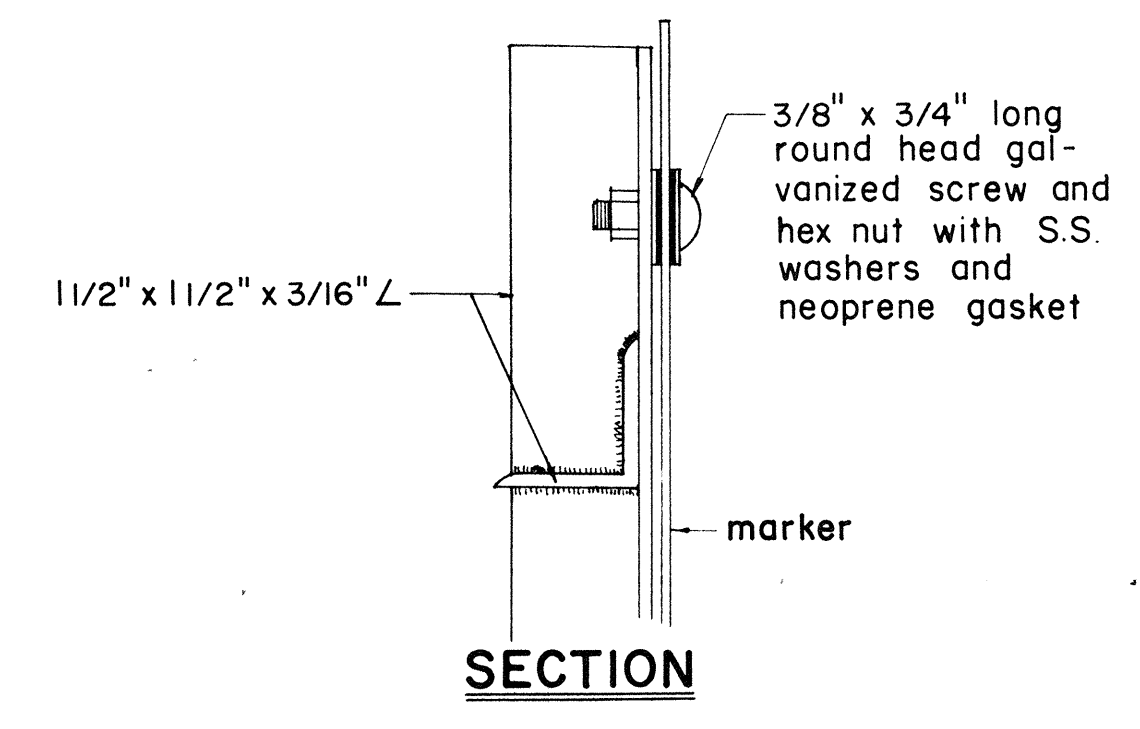


PLAN



ELEVATION

DETAIL "B"



SECTION

APPROVAL RECOMMENDED:
Erich Tanaka 12/29/69
TRAFFIC ENGINEER DATE

APPROVED:
John S. Sefel 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Revisions to Route Marker Assemblies.	H.T.	6/1/72

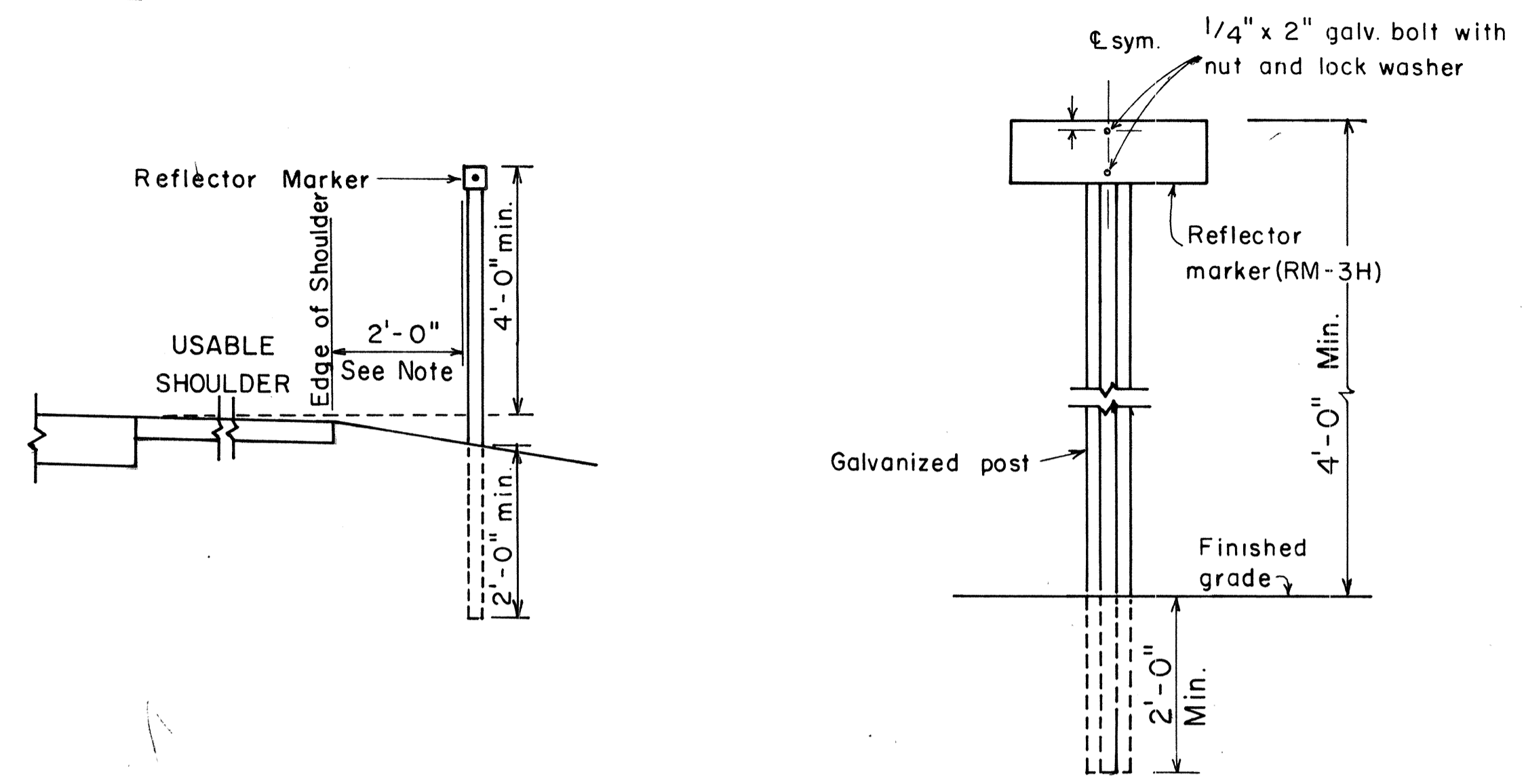
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
ROUTE MARKER ASSEMBLIES

Scale: As Shown
SHEET No. 30 OF 36 SHEETS DT 107

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

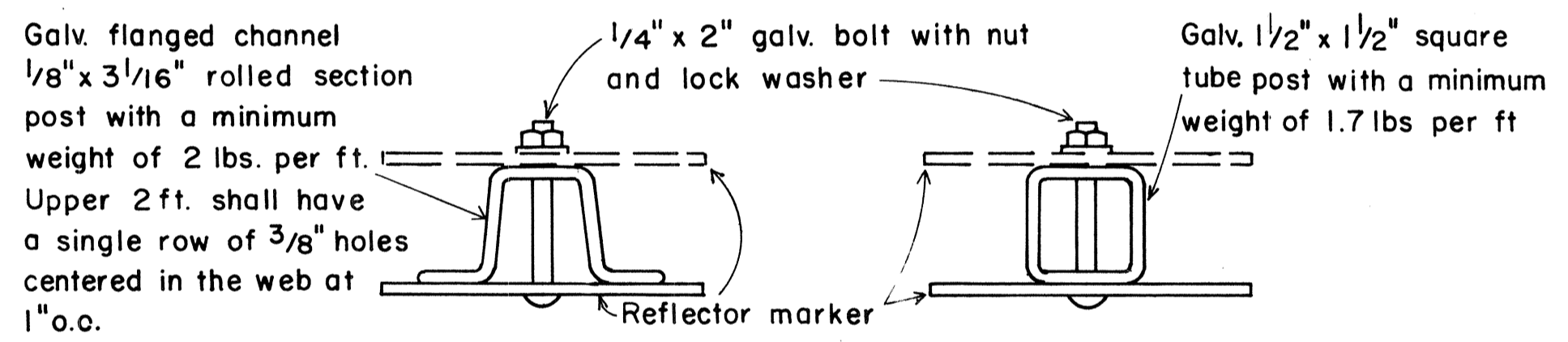
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	191	262



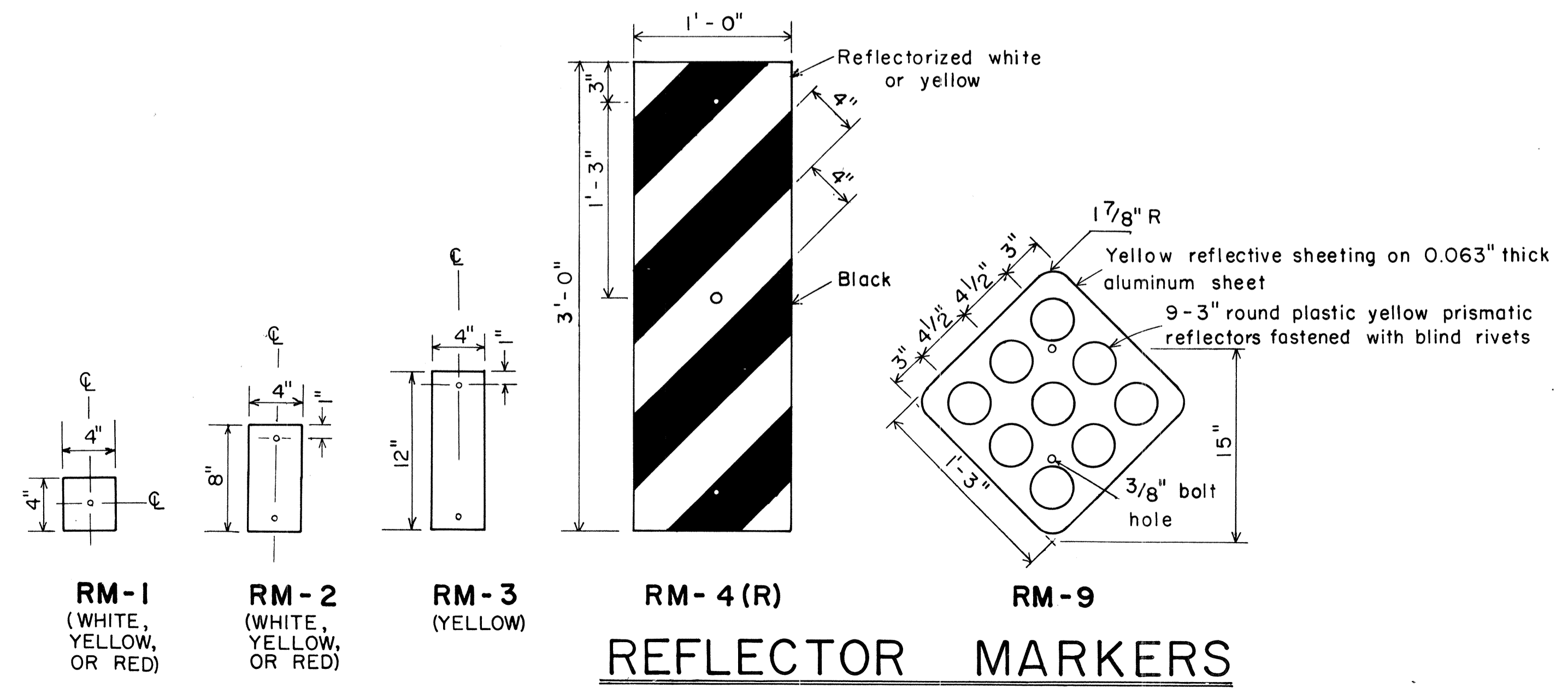
REFLECTOR MARKER MOUNTING DETAIL

GENERAL NOTES:

1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
2. (R) or (L) indicates right or left and shall be as shown on the plans.
3. Reflector markers RM-1 and RM-2 shall be:
 - a) Yellow if placed along the left edge of divided roadways, one-way roadways, and ramps in the direction of travel.
 - b) White if placed along the right edge of divided roadways, one-way roadways, and ramps in the direction of travel.
4. For reflector marker RM-9, reflective sheeting material may be used as an alternate.
5. For RM-4, the stripes shall slope downward at an angle of 45° in the direction of traffic.



TYPICAL SECTION OF ROAD DELINEATOR



REFLECTOR MARKERS

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

APPROVAL RECOMMENDED:
Herbert S. Baker
 TRAFFIC ENGINEER DATE

APPROVED:
Herbert S. Baker 11/16/77
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
 MISCELLANEOUS REFLECTOR MARKERS

Not to scale June, 1977

SHEET No. 31 OF 30 SHEETS DT 110

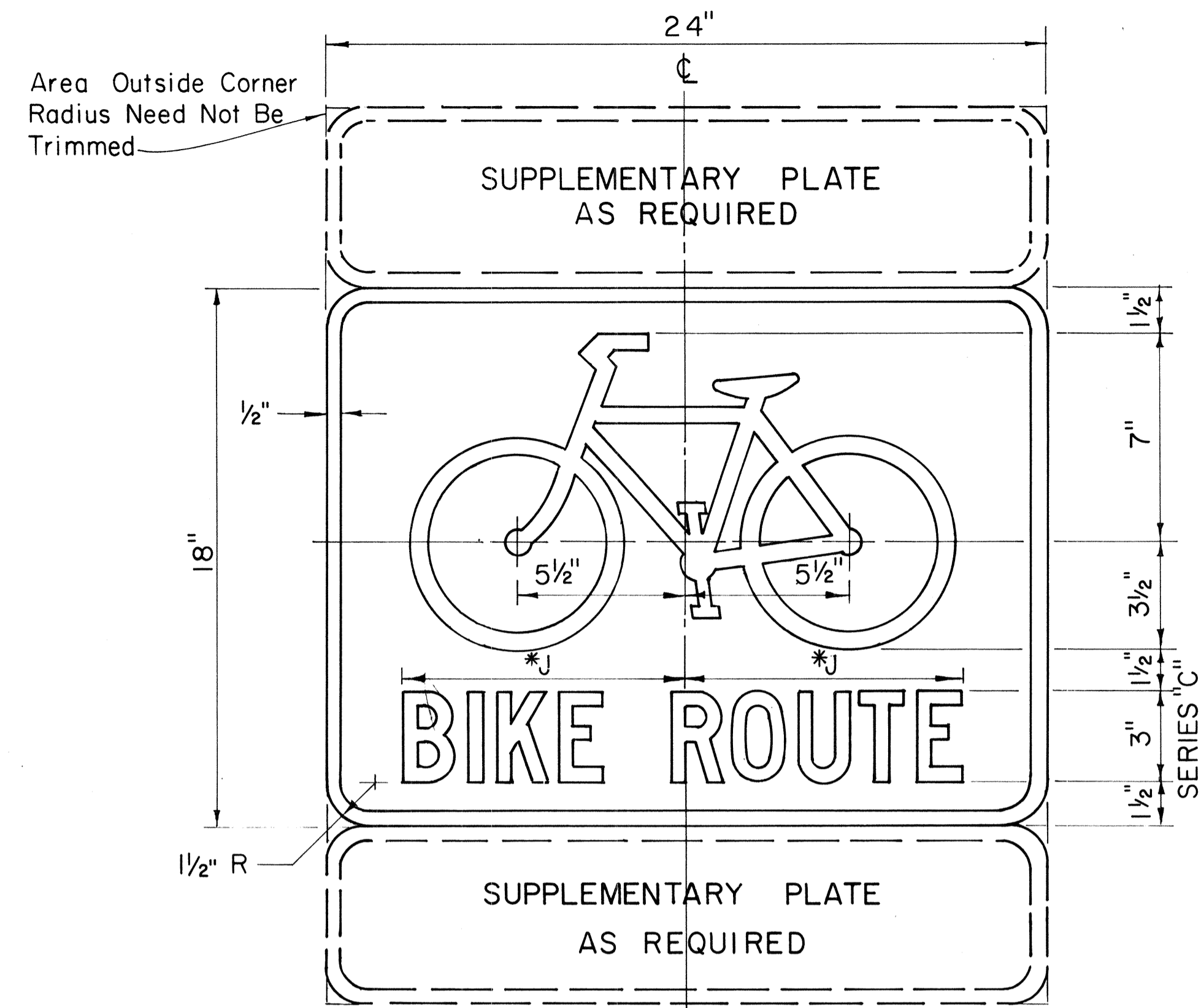
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RP-031-1(6)	1978	192	262

GENERAL NOTES BIKE ROUTE SIGN & SUPPLEMENTARY PLATES

- Sign details shall conform to the latest edition of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways", "Standard Highway Signs" and "Standard Alphabets for Highway Signs" and as amended.
- Legend and borders shall be white (reflectorized) on a green (reflectorized) background.
- Drill $\frac{3}{8}$ " ϕ bolt holes (for mounting) at appropriate locations.
- When Supplementary Plates (DII-2 to DII-6 only) are required with Bike Route Sign (DII-1 or Alternate), the Sign Assembly shall be mounted on a single metal plate (24" x 24" or 24" x 30") and shall be arranged as shown on the plans.
- Alternate sign messages shall be denoted by the following:

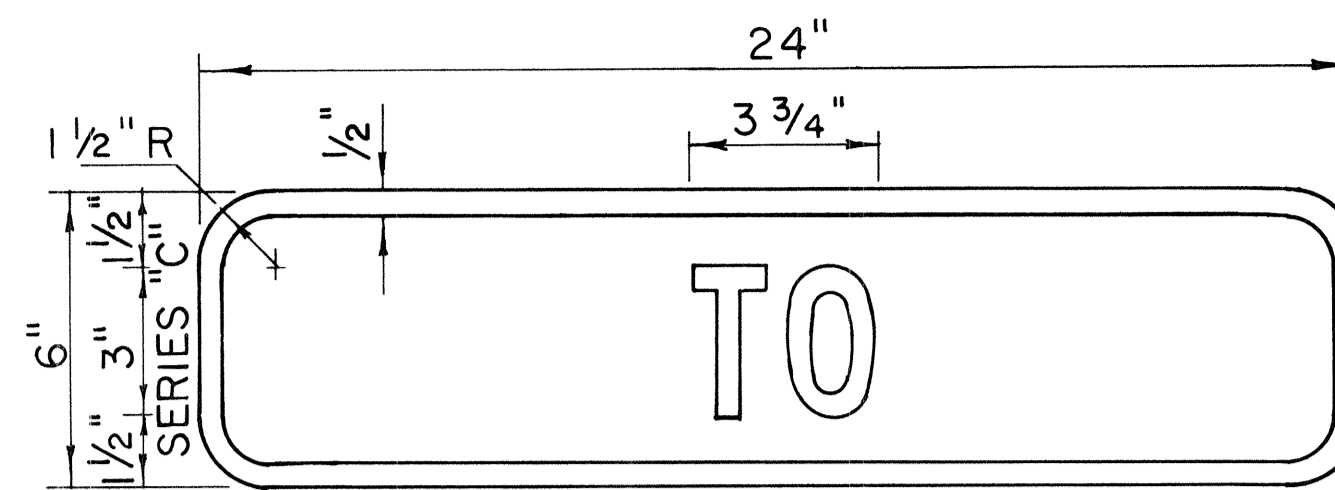
DII-1a: Bike Lane
DII-1b: Bike Path
DII-1c: Bikeway

Dimension "J" varies. Visually center Alternate message.

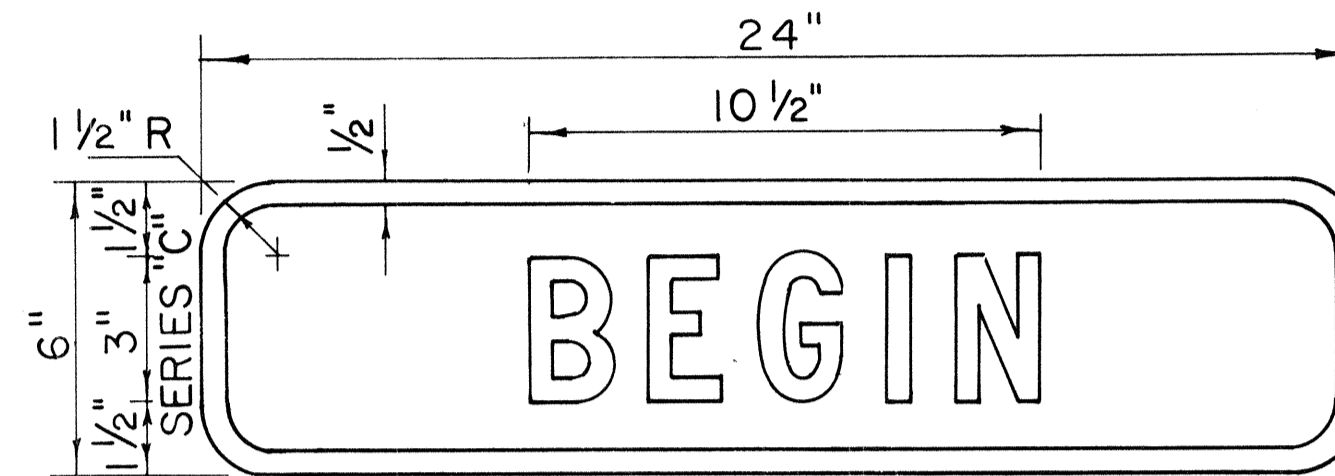


DII-1
BIKE ROUTE SIGN

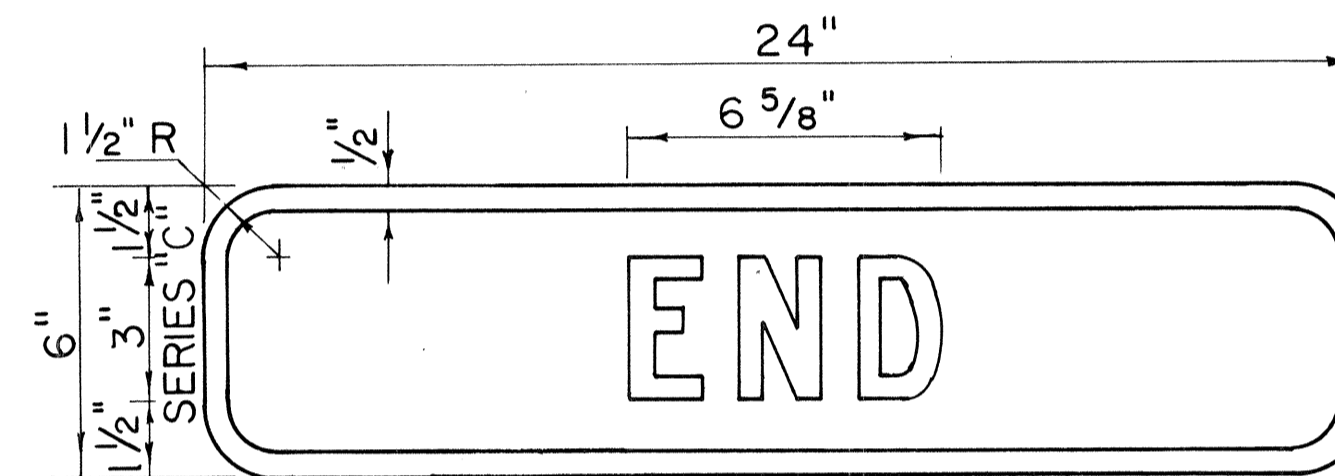
Scale: 3" = 1'-0"



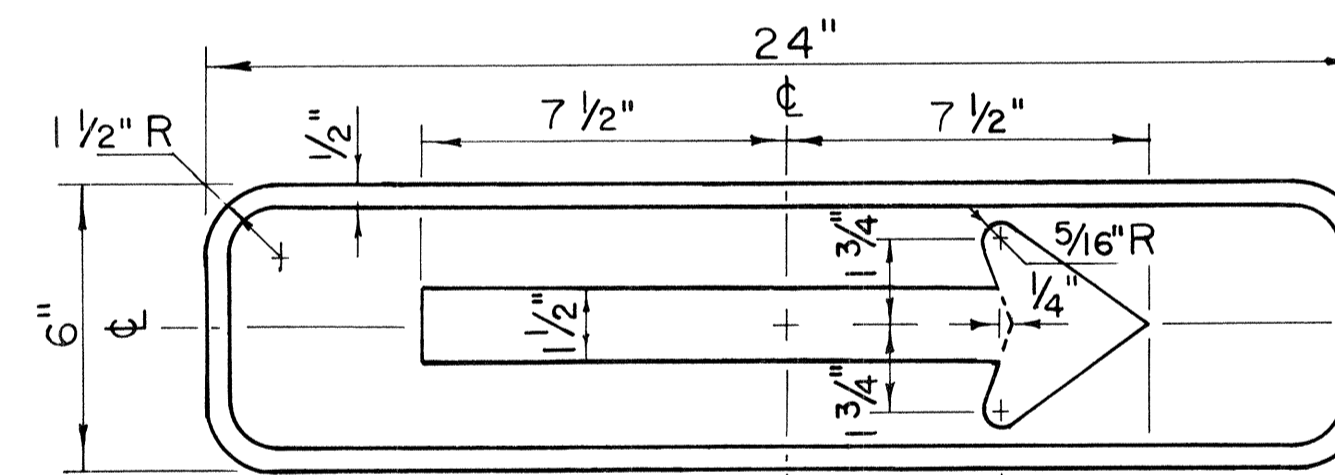
DII-2



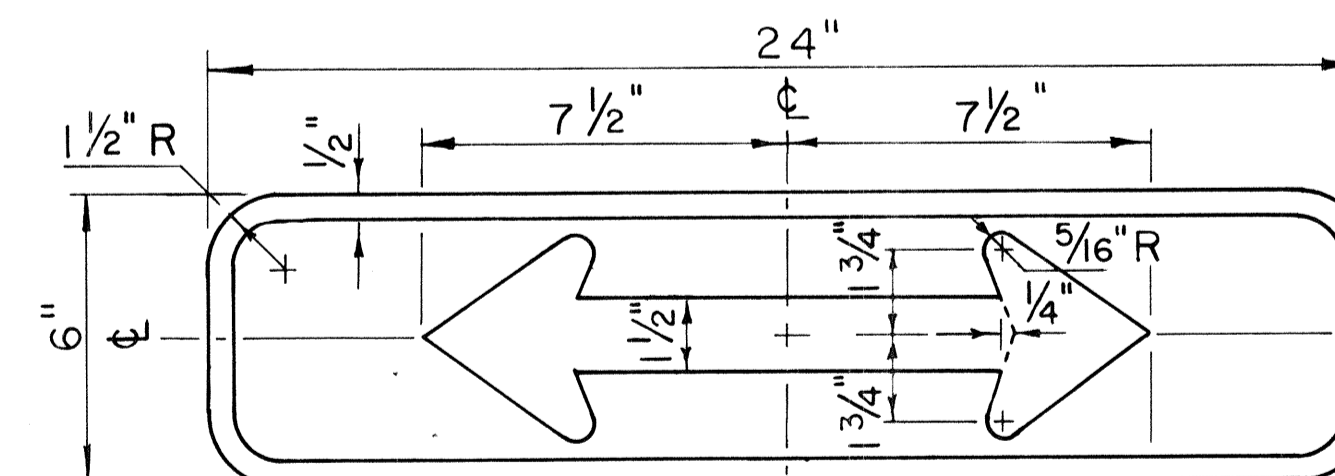
DII-3



DII-4



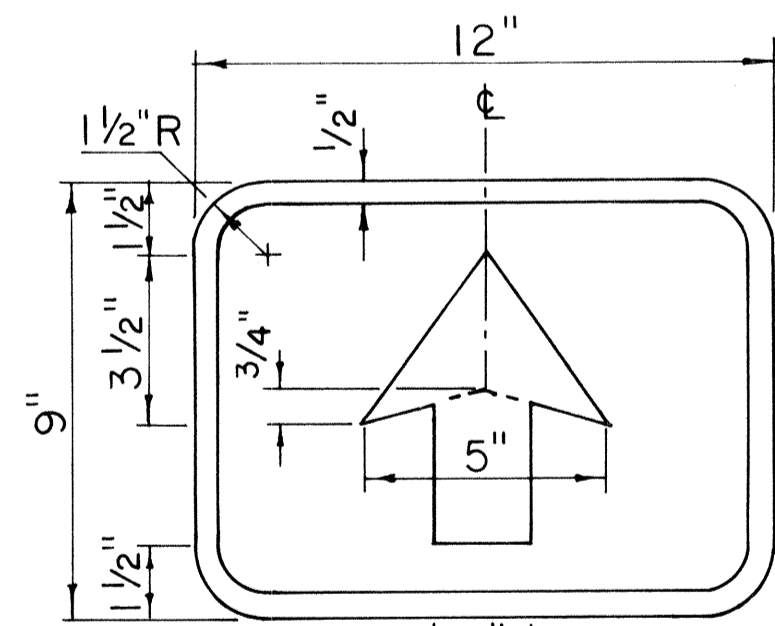
DII-5(R)



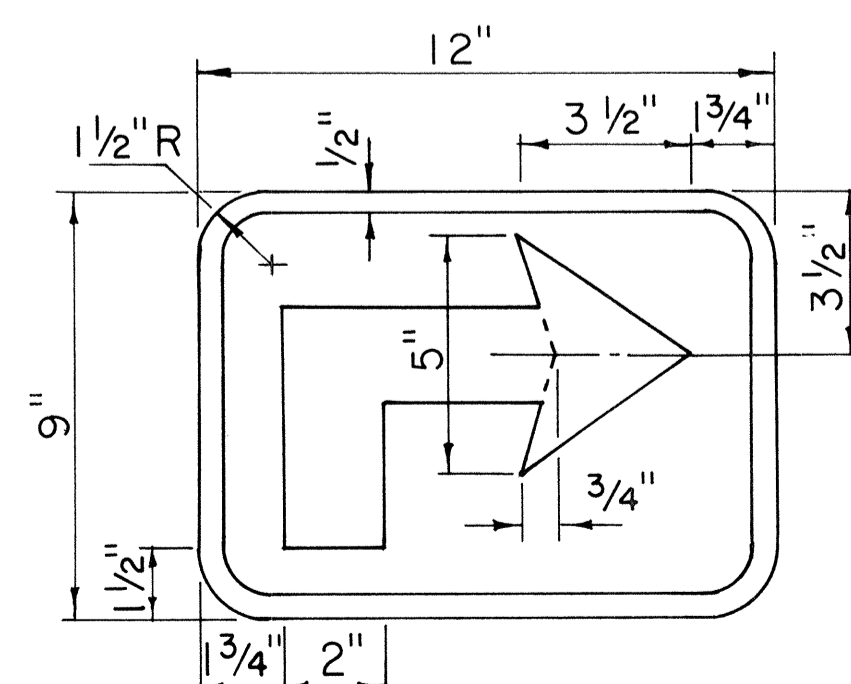
DII-6

SUPPLEMENTARY PLATES

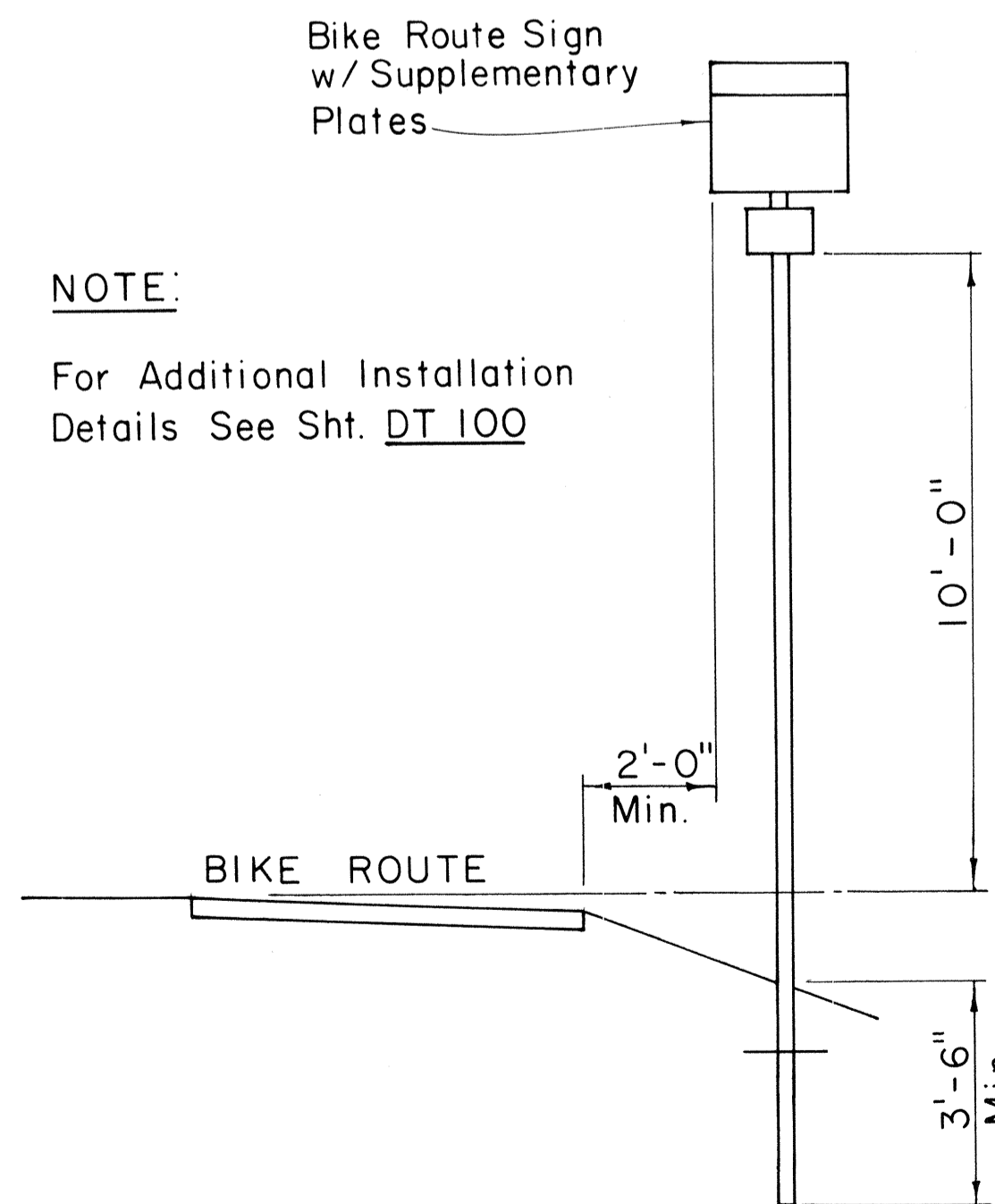
Scale: 3" = 1'-0"



DII-7



DII-8(R)



TYPICAL INSTALLATION

Scale: 3/8" = 1'-0"

NOTE:

For Additional Installation Details See Sht. DT 100

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

APPROVAL RECOMMENDED:
[Signature]
TRAFFIC ENGINEER DATE

APPROVED:
[Signature] 11/1/77
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
BIKE ROUTE SIGN
& SUPPLEMENTARY PLATES

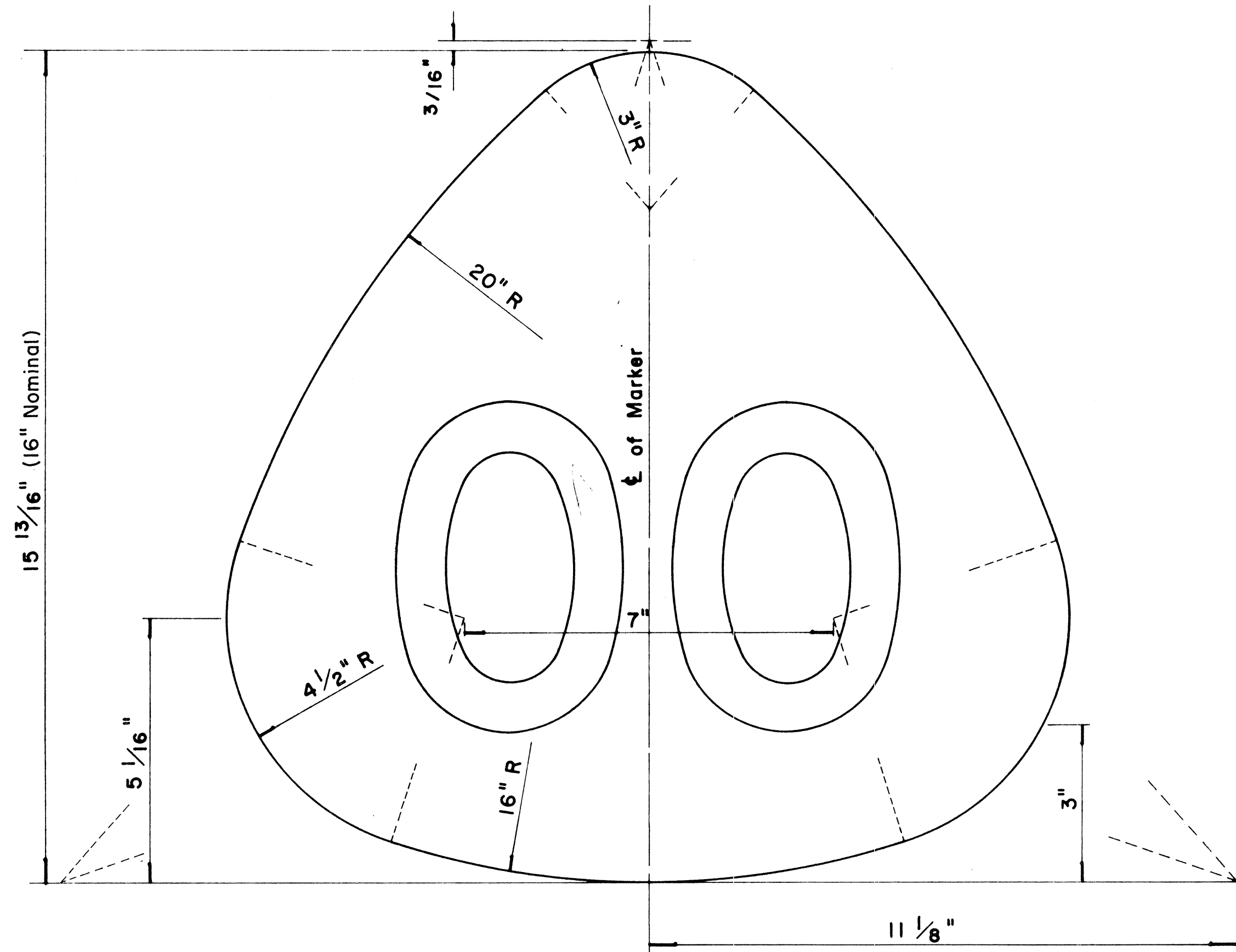
Scale: As Shown June 1977

SHEET No. 32 OF 36 SHEETS DT 114

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	193	262

MARKER SIZE	MULTIPLY DIMENSIONS BY	NUMERAL SIZE
21"	1.3	8"
32"	2.0	12"
42"	2.63	16"

RADII FOR SIGNS		
Least Dimension of Sign	W	R
2'-0" to 4'-6"	2"	3"
4'-9" to 5'-6"	2"	6"
5'-9" to 7'-6"	2"	9"
7'-9" and greater	2"	12"

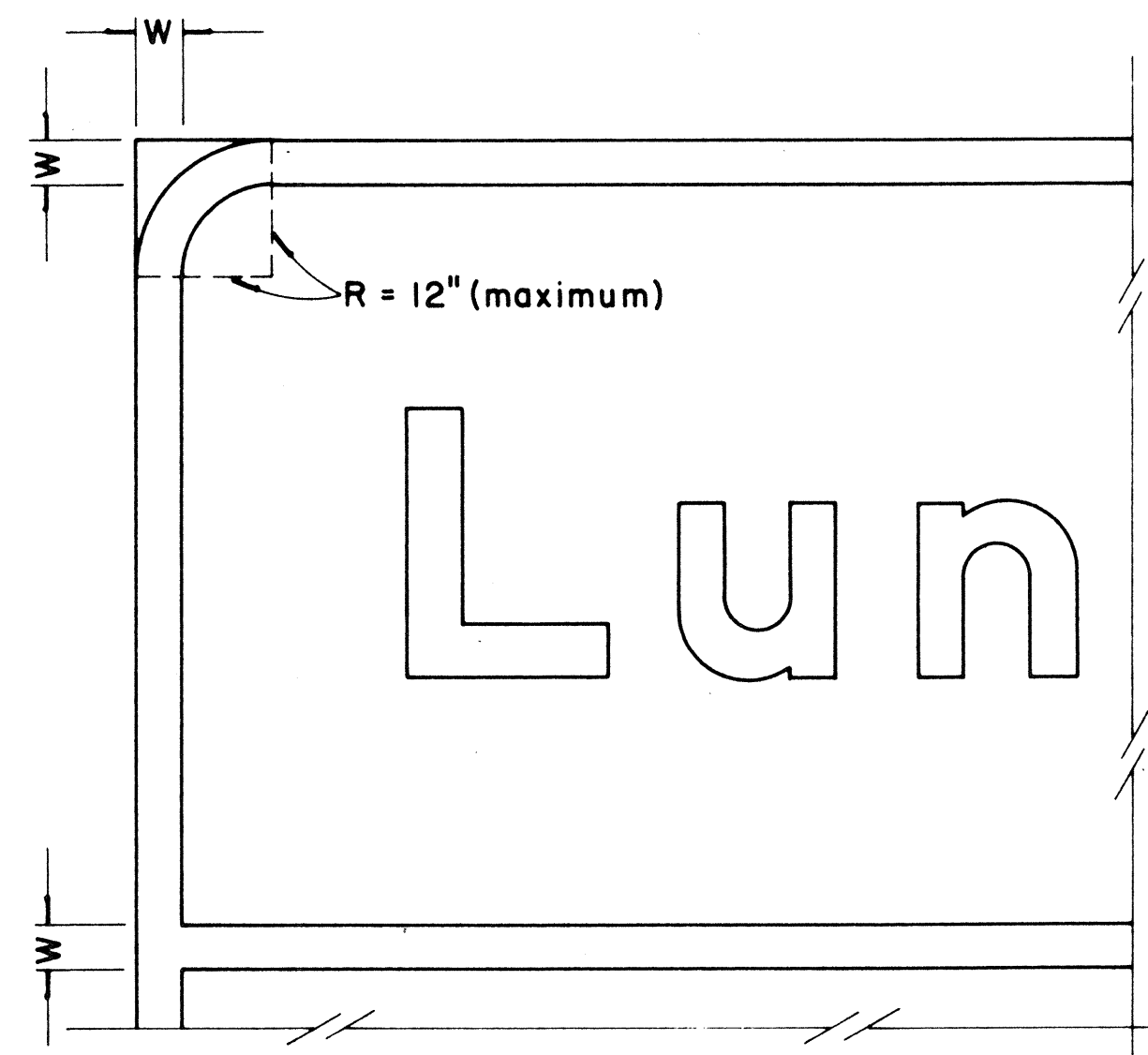


**STATE ROUTE MARKER
FOR GUIDE SIGNS**

Scale: Half Size

NOTE:

- State Route Markers on Guide signs shall have black numerals on a white reflectorized background mounted on a flat aluminum cut-out.
- Numerals shall conform to the FHWA publication "Standard Alphabets for Highway Signs," 1966.
- Cut-outs shall be fastened on sign panel with aluminum blind rivets. See Standard Specifications.



**BORDER DETAIL
FOR GUIDE SIGNS**

Not to Scale

NOTE:

- Area outside corner radius need not be trimmed.
- All borders shall be white reflectorized cut-outs.
- All Guide signs shall have borders.

APPROVAL RECOMMENDED:

Eishi Tanaka 4/11/72
TRAFFIC ENGINEER DATE

APPROVED:

Mulu S. Salehi 4/12/72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 209 Approved 12-30-69	H.C.	4/12/72
2	Revised Notes and Schedules	H.C.	9-14-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

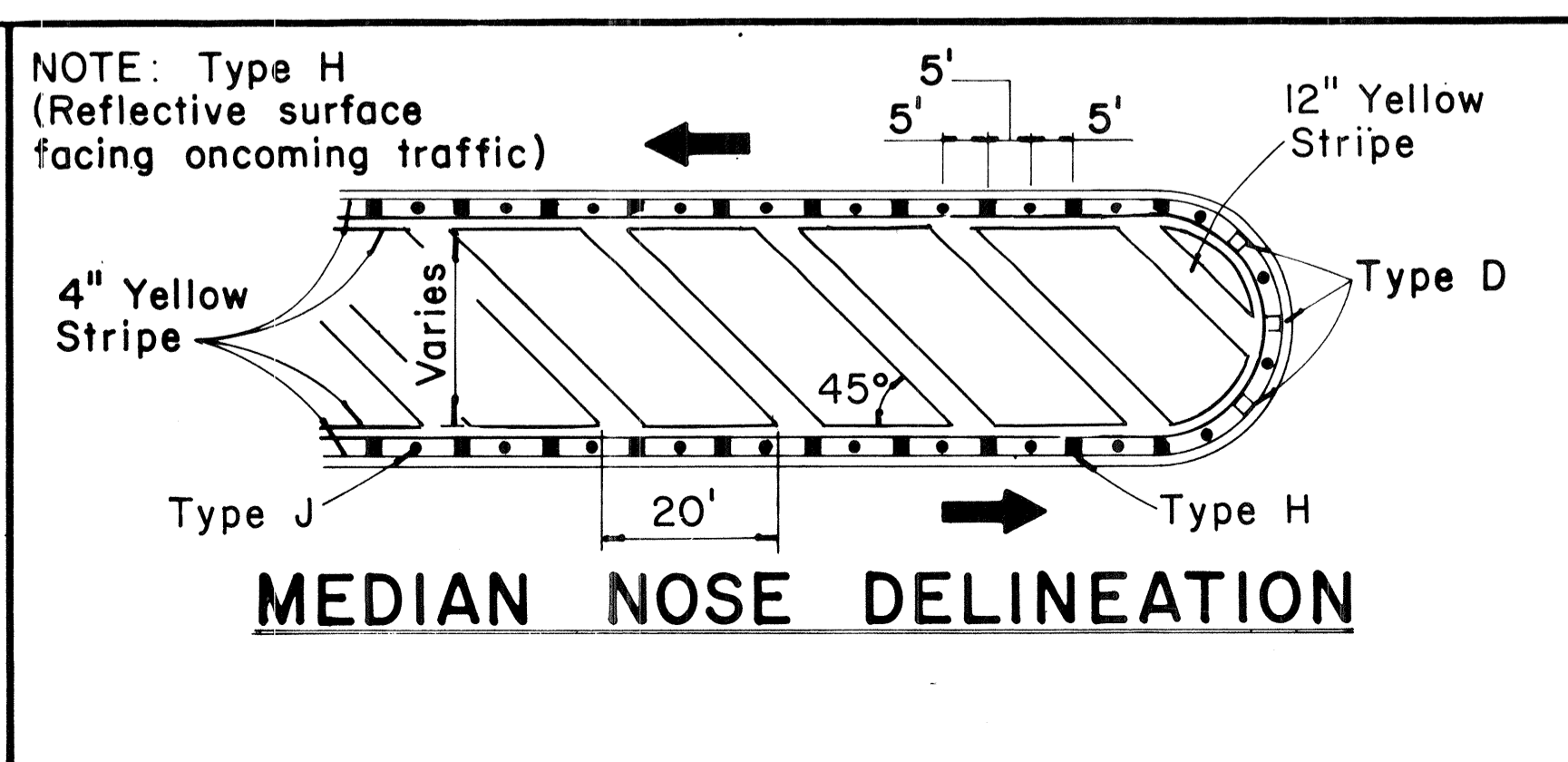
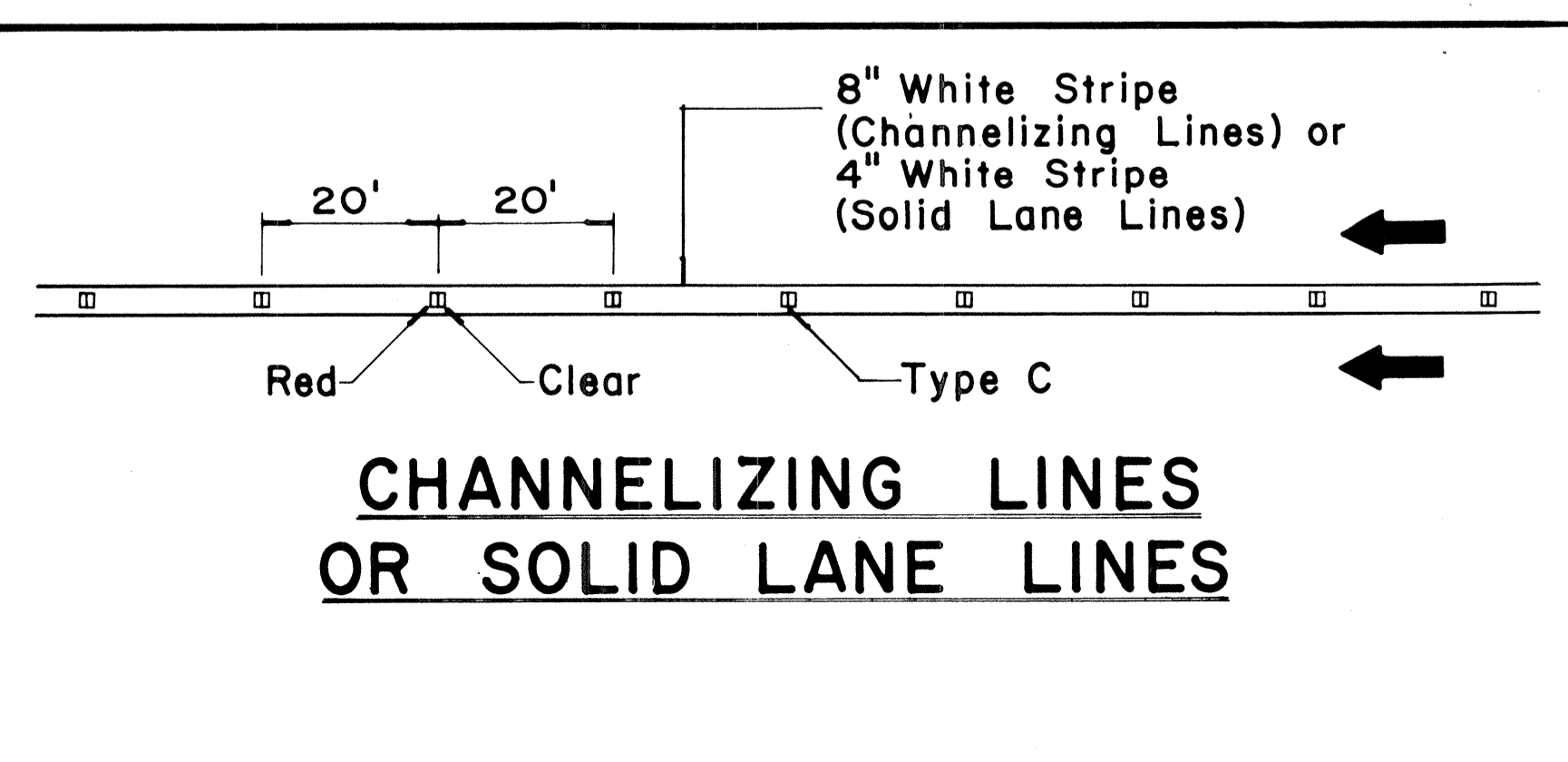
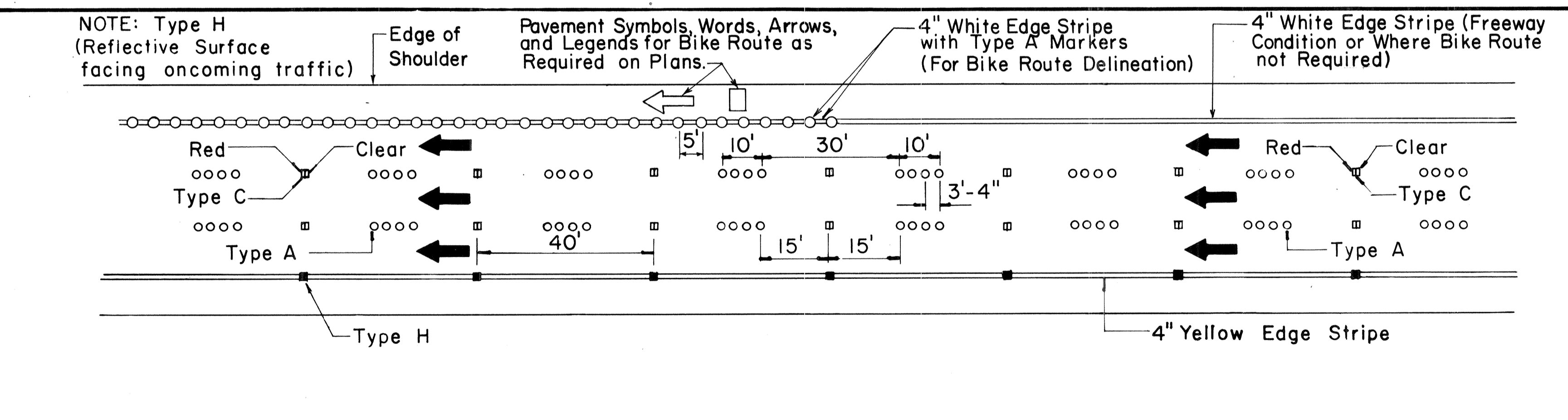
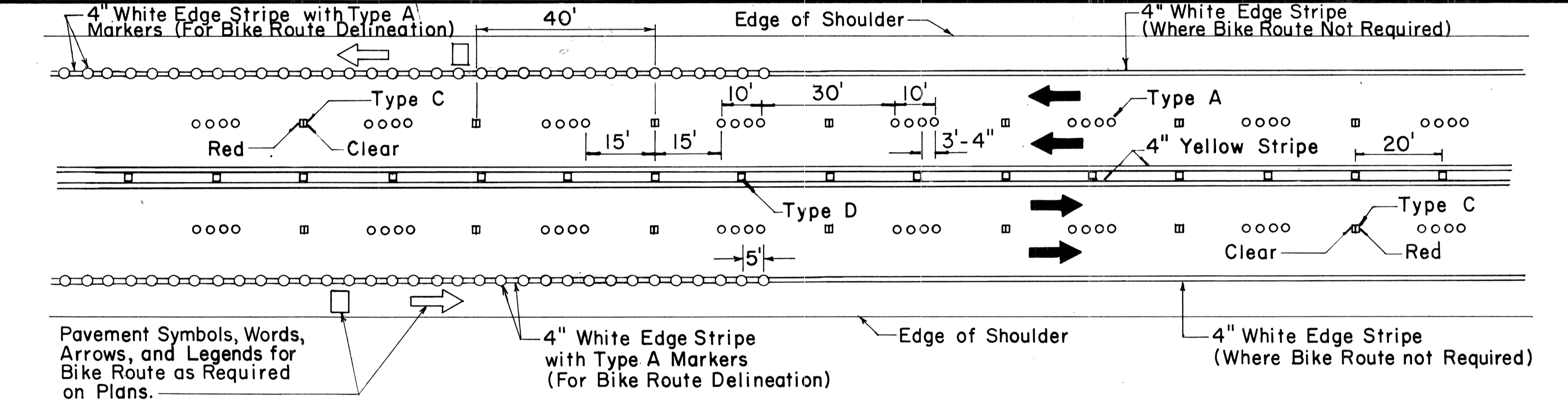
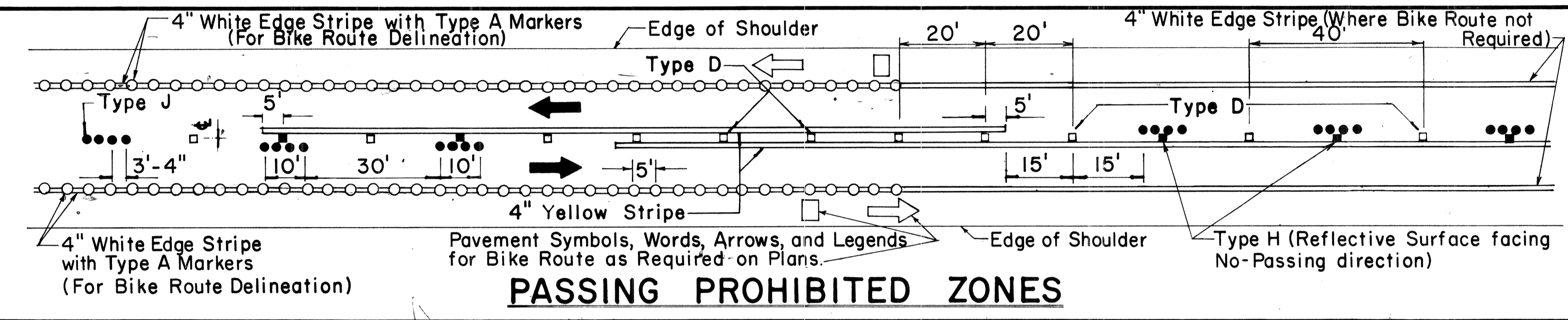
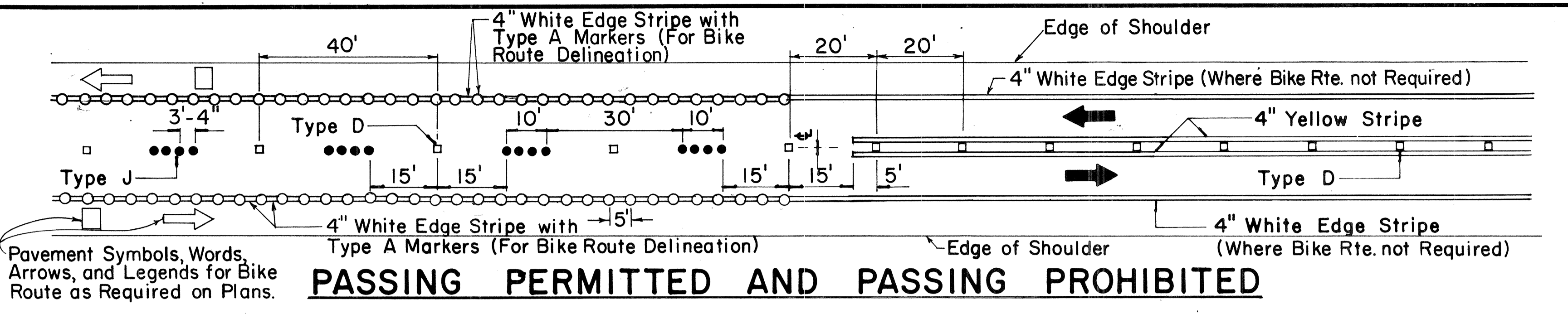
**STATE ROUTE MARKER
AND BORDER DETAIL
FOR GUIDE SIGNS**

Scale: As Shown

SHEET No. 33 OF 36 SHEETS DT 209

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RP-031-1(6)	1978	194	262

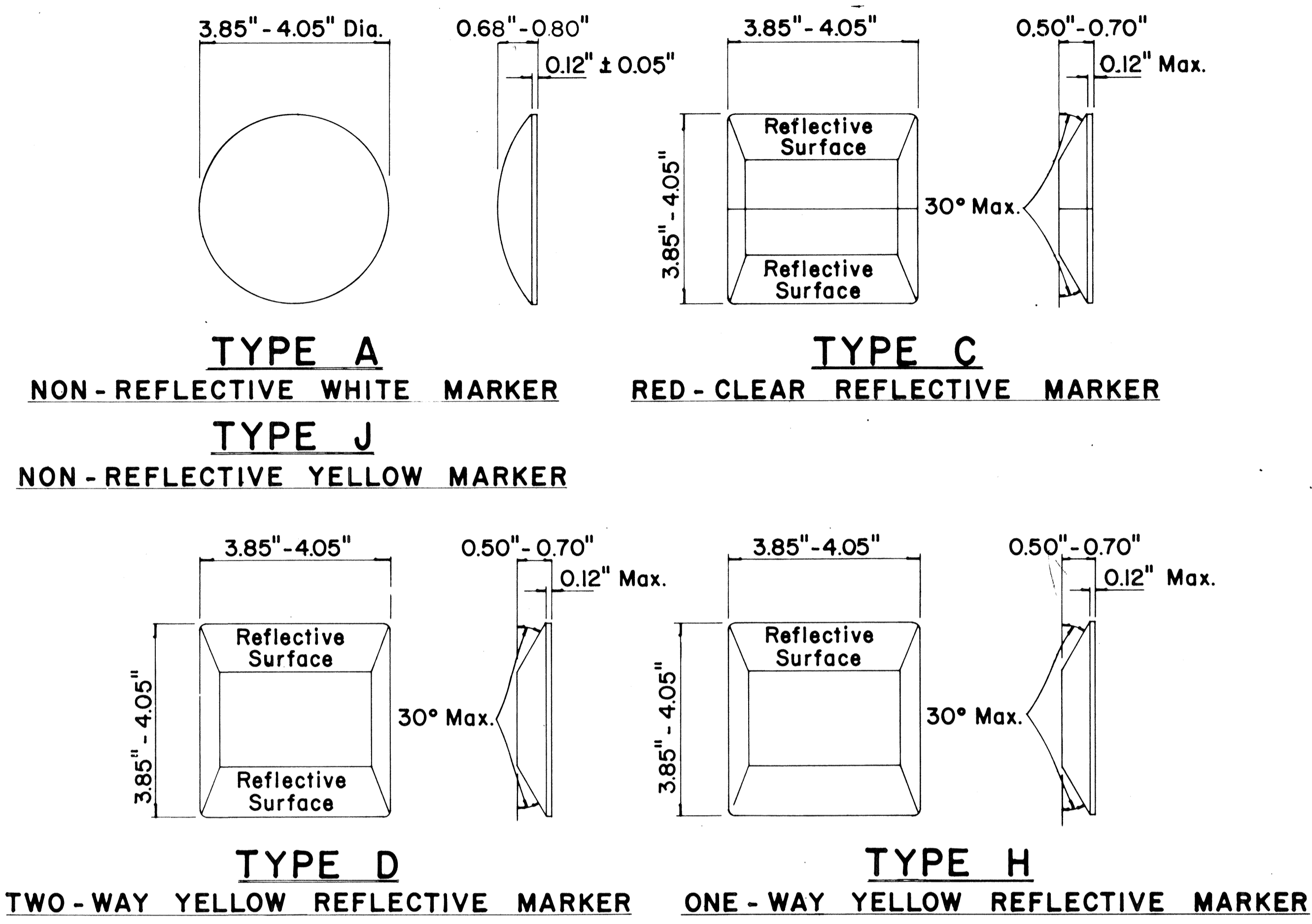


TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

MISCELLANEOUS



GENERAL NOTES

1. Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
2. Layout and installation of pavement marking and striping shall be done by the Contractor. The Contractor shall check the layouts with the Engineer prior to performing work.

LEGEND

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

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

APPROVED:
Robert J. Zelenko 1/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.T.	1/24/78

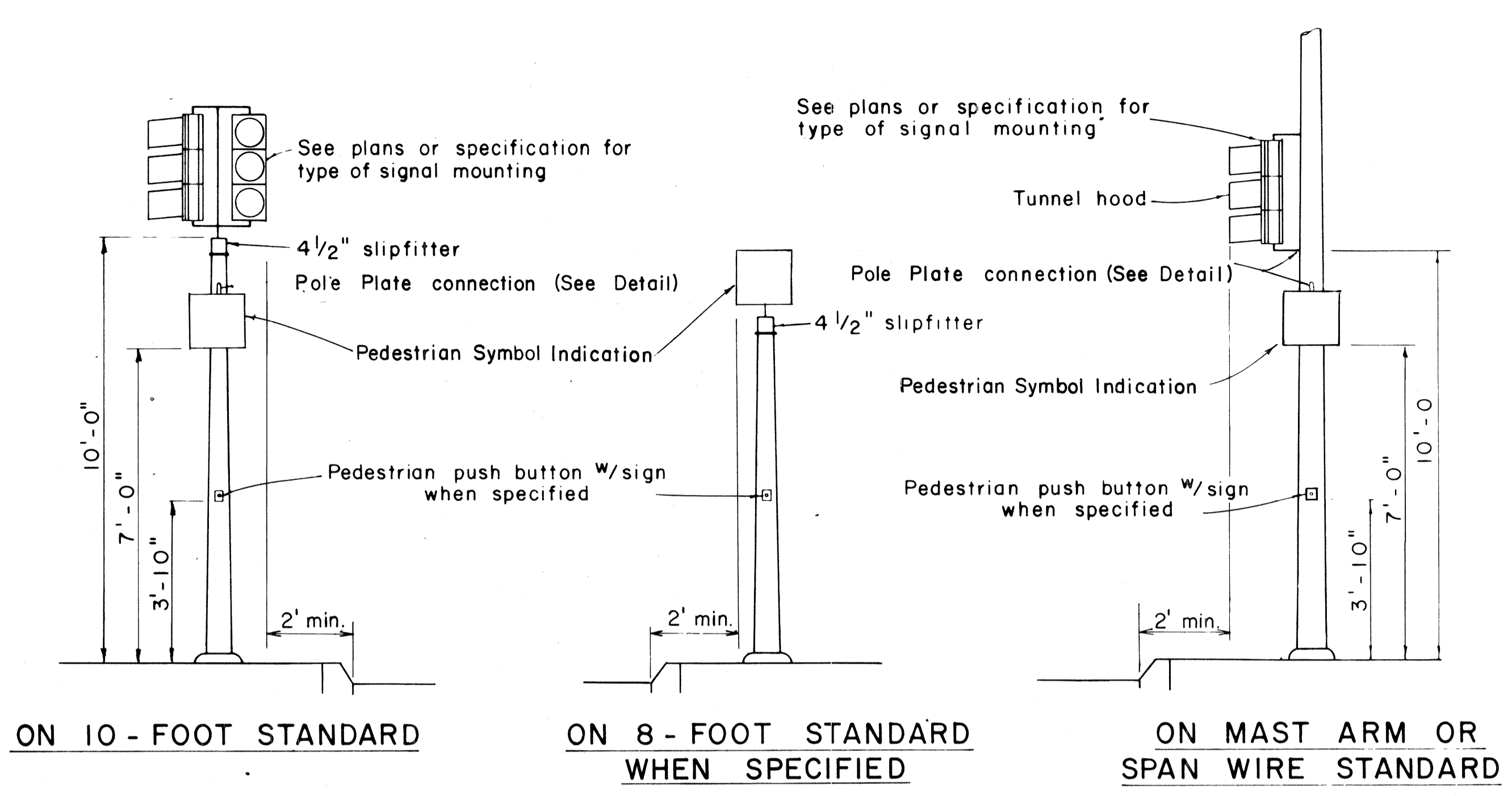
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

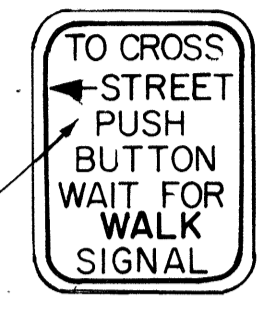
Not to Scale July 1978
 SHEET No. 34 OF 36 SHEETS DT 300

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

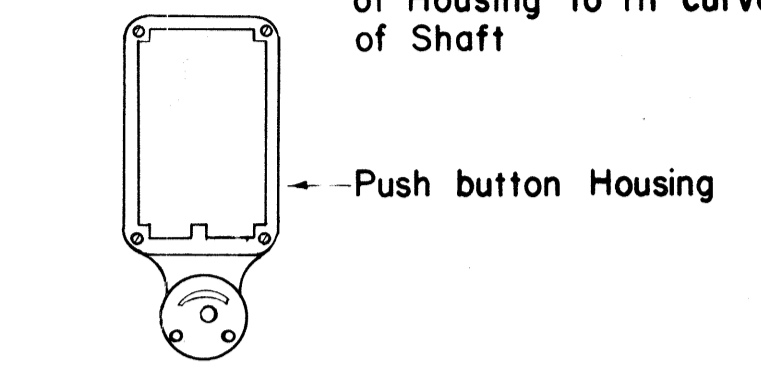
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1981		



Arrow to be left or right or both See Plan

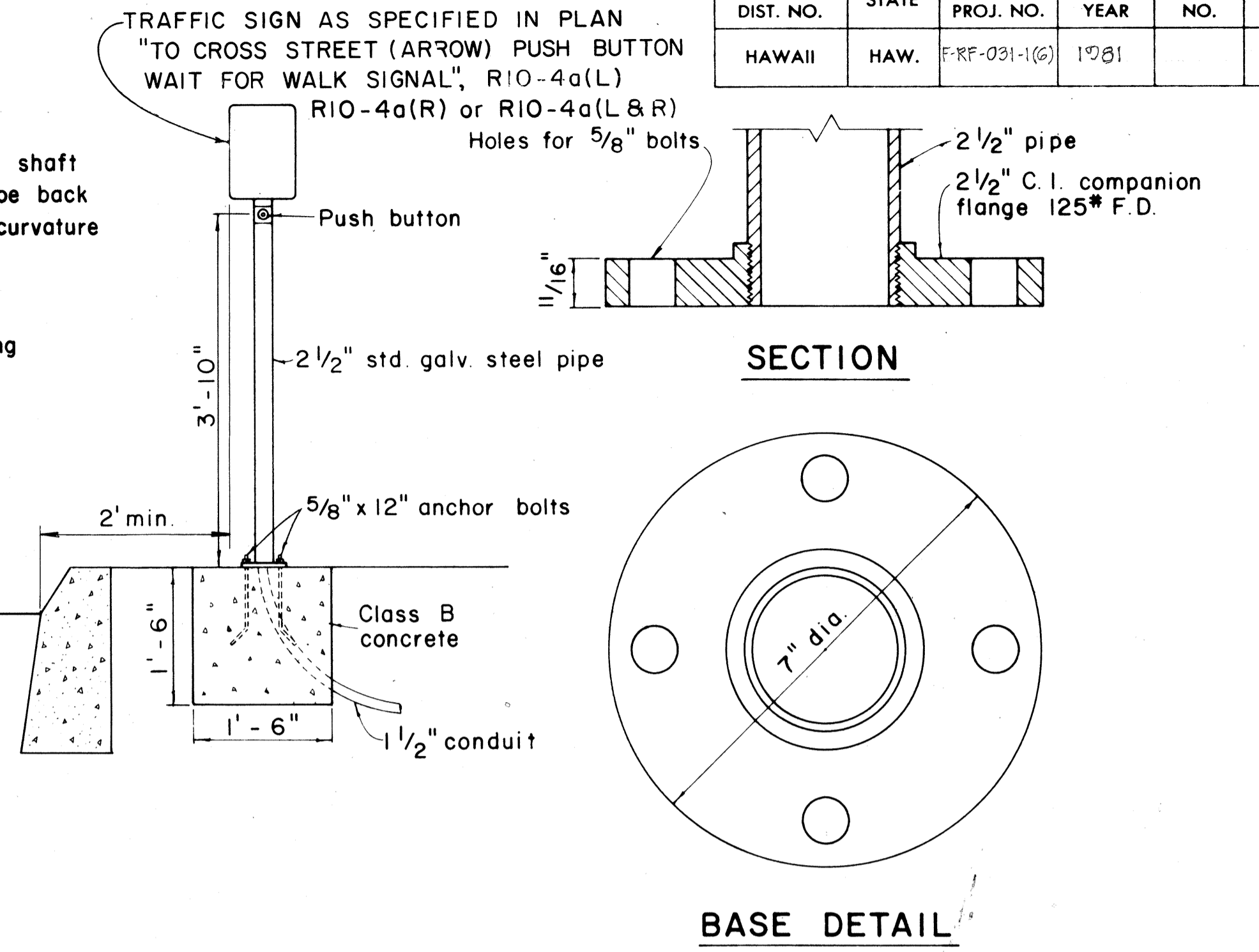


RIO-4a(L)
5" x 7"

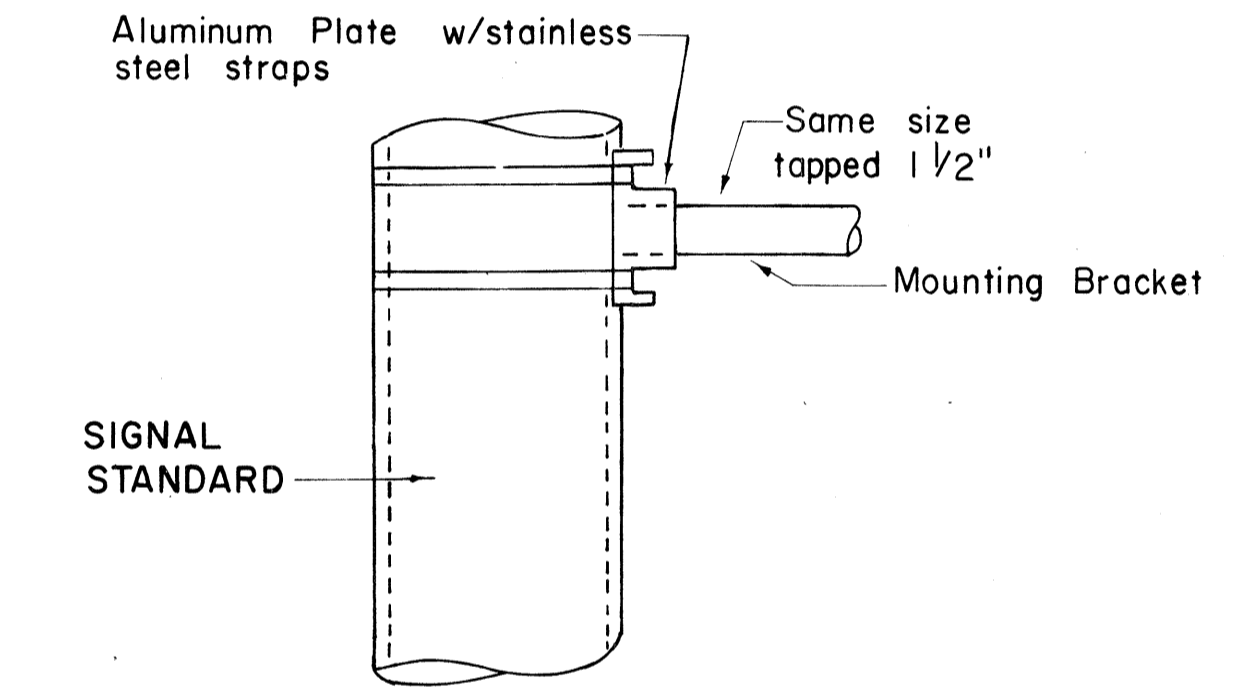


PEDESTRIAN PUSH BUTTON

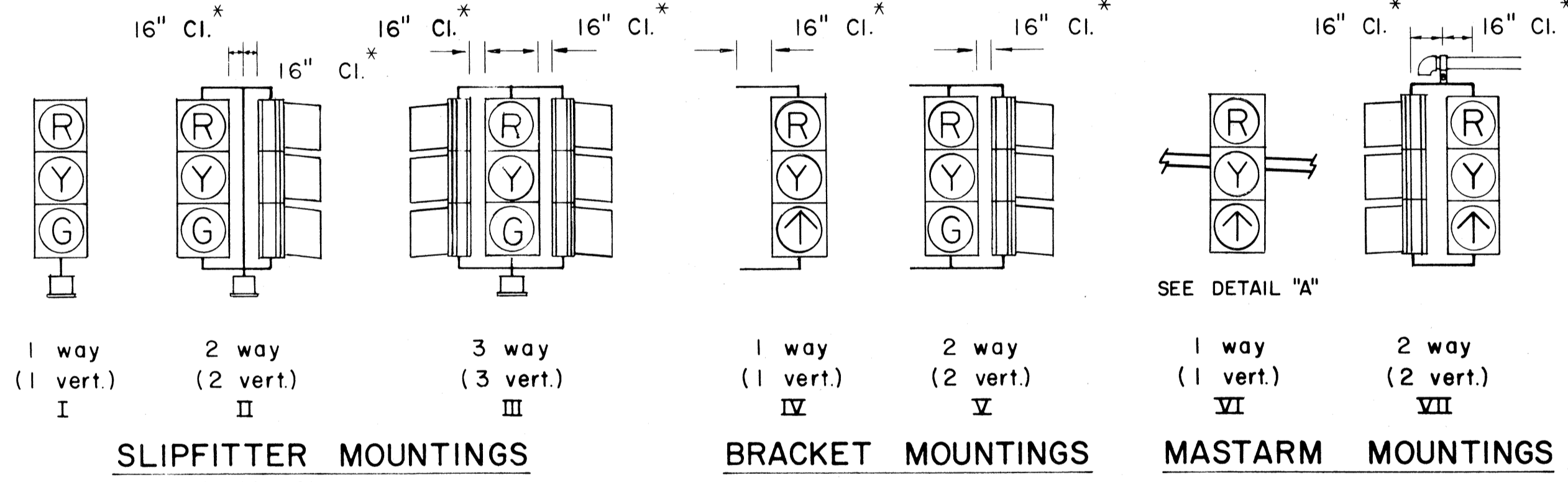
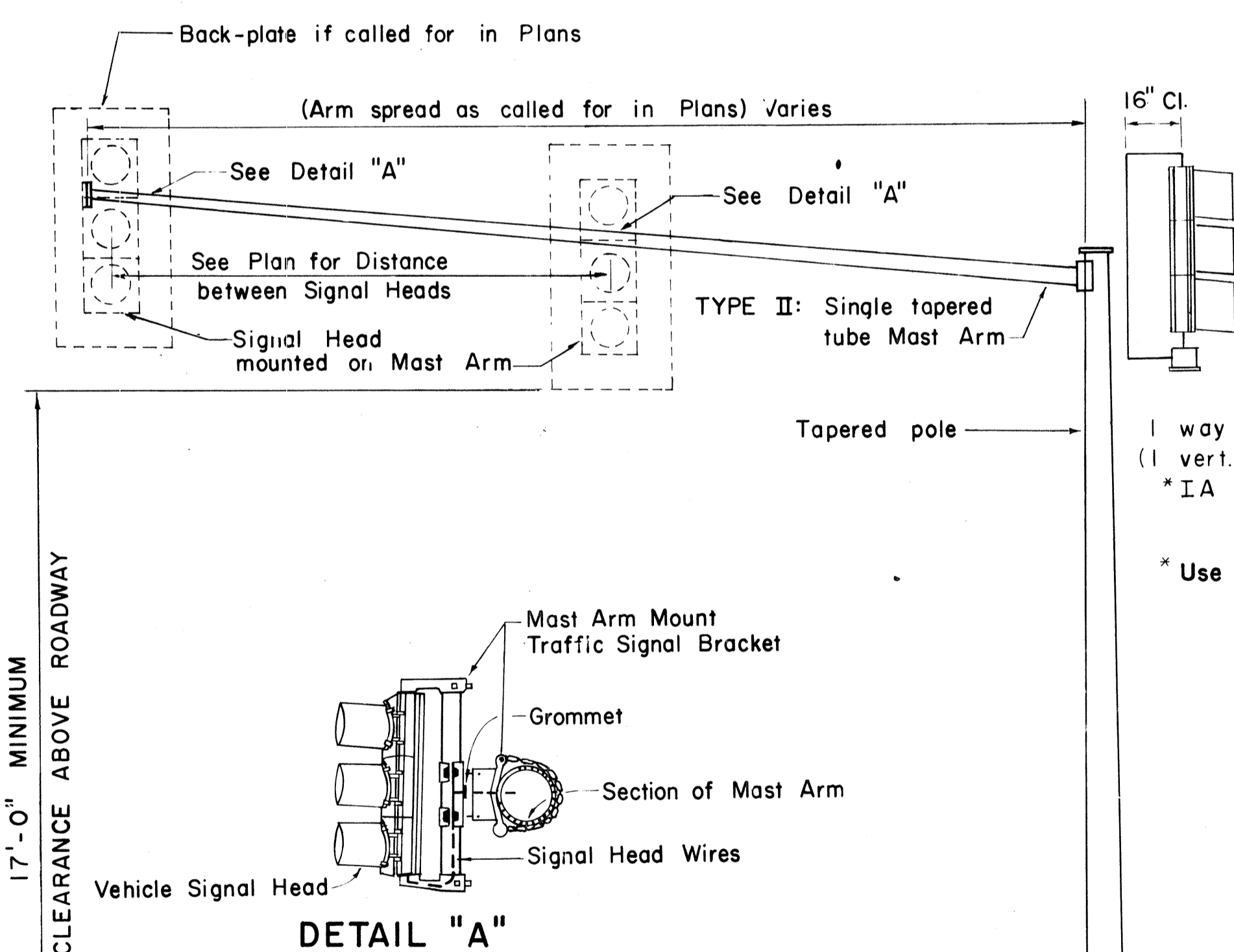
- NOTE:**
1. Conduits shall protrude 2" max. above finished surface of foundation.
 2. Conduits shall slope away from pole foundation.



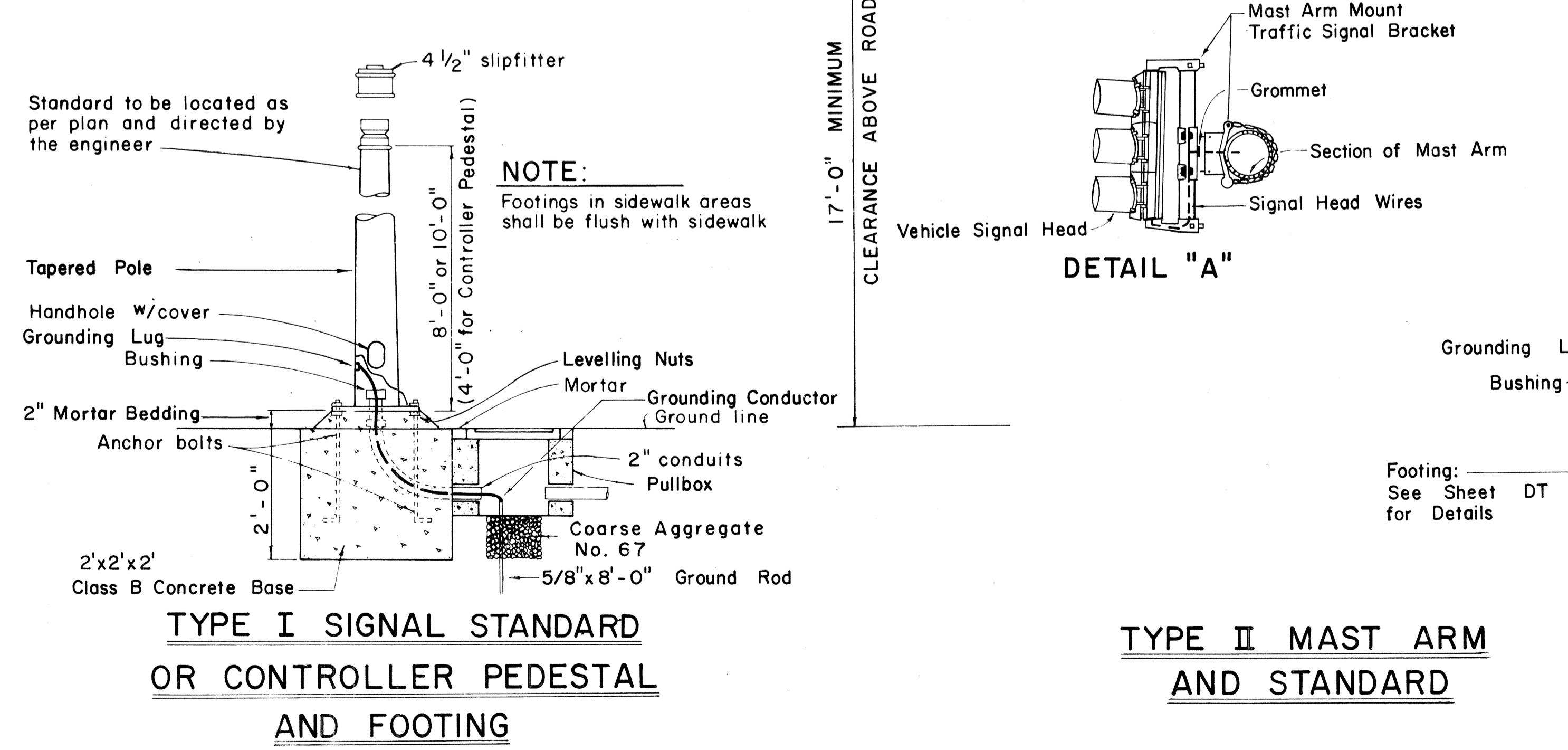
TYPICAL EQUIPMENT MOUNTINGS



DETAIL OF POLE PLATE CONNECTIONS



TYPICAL VEHICULAR AND PEDESTRIAN SIGNAL MOUNTINGS



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.	3/23/82
2	Revise Details of Traffic and Pedestrian Signals, Standards and Pedestrian Push Button and Signs.	H.T.	3/5/82
3	Revise signal indications.	H.T.	9/22/80
4	Remove Note No. 3 & Revise clearance and dimension.	H.T.	9/19/81
5	Revise Ped. Signal Indication	H.T.	8/6/80

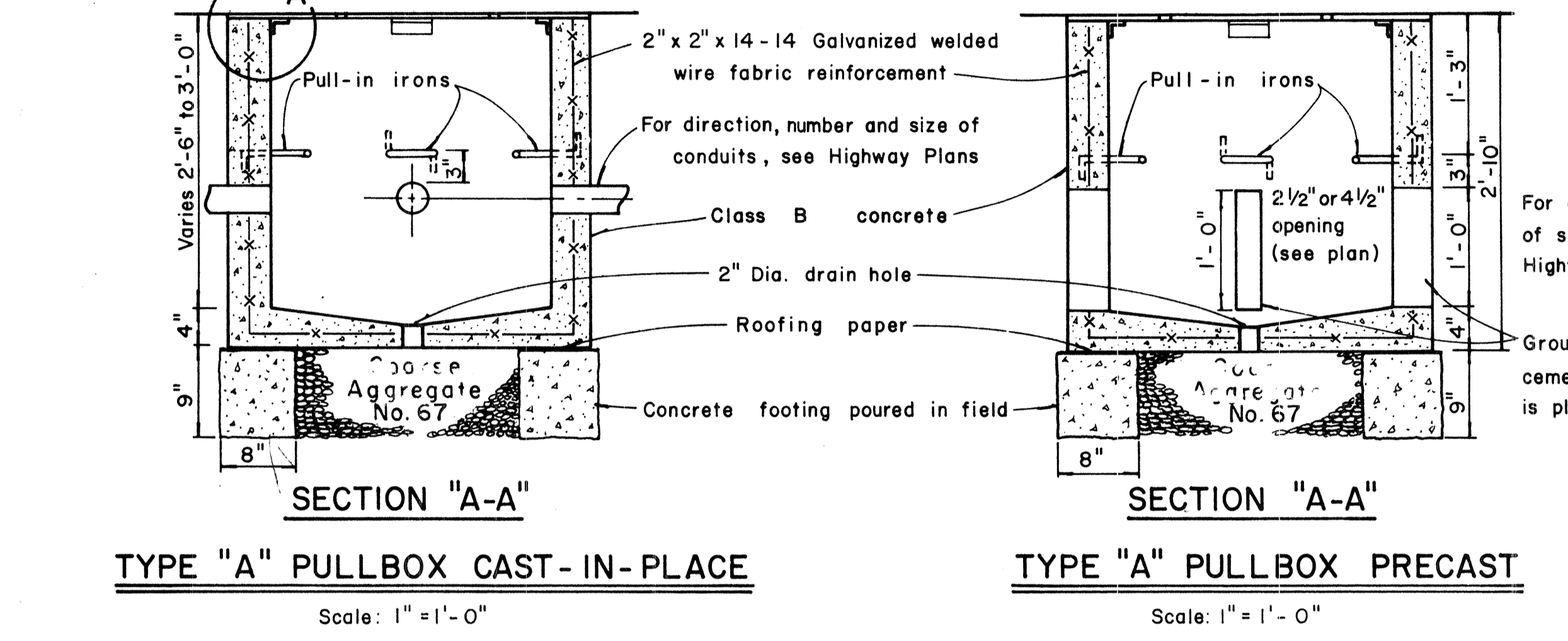
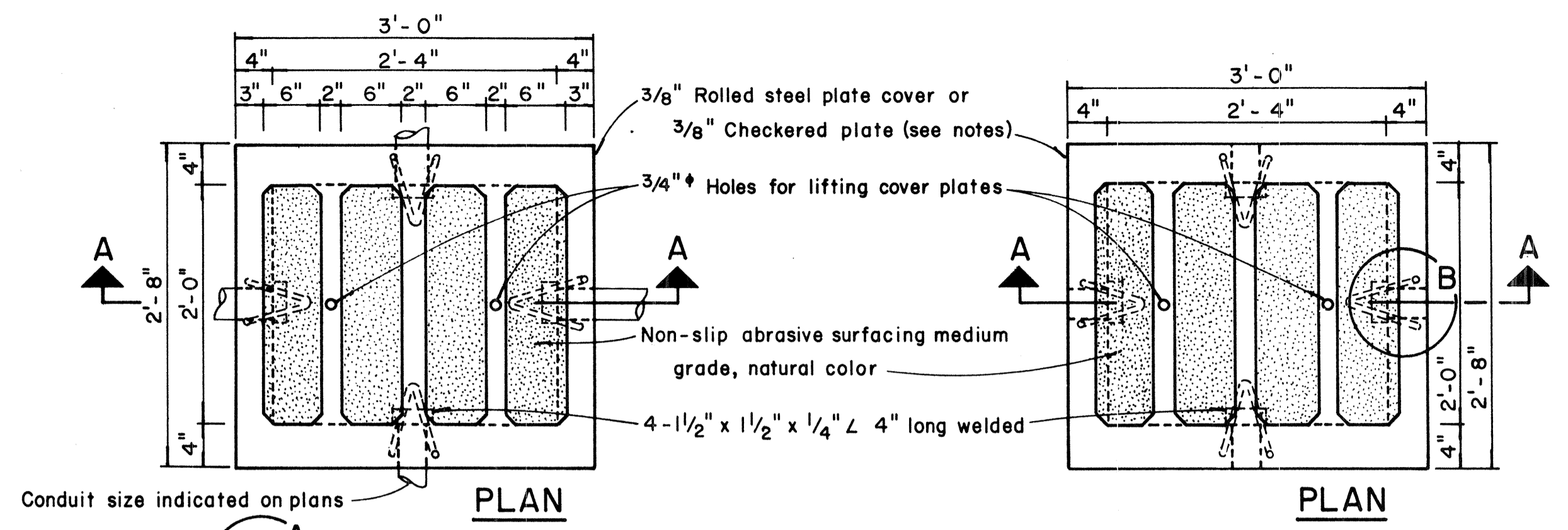
APPROVAL RECOMMENDED:
Eiichi Tanaka 12/29/89
TRAFFIC ENGINEER DATE

Shunji Saito 12/29/89
ASSISTANT CHIEF, ENGINEERING DATE

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

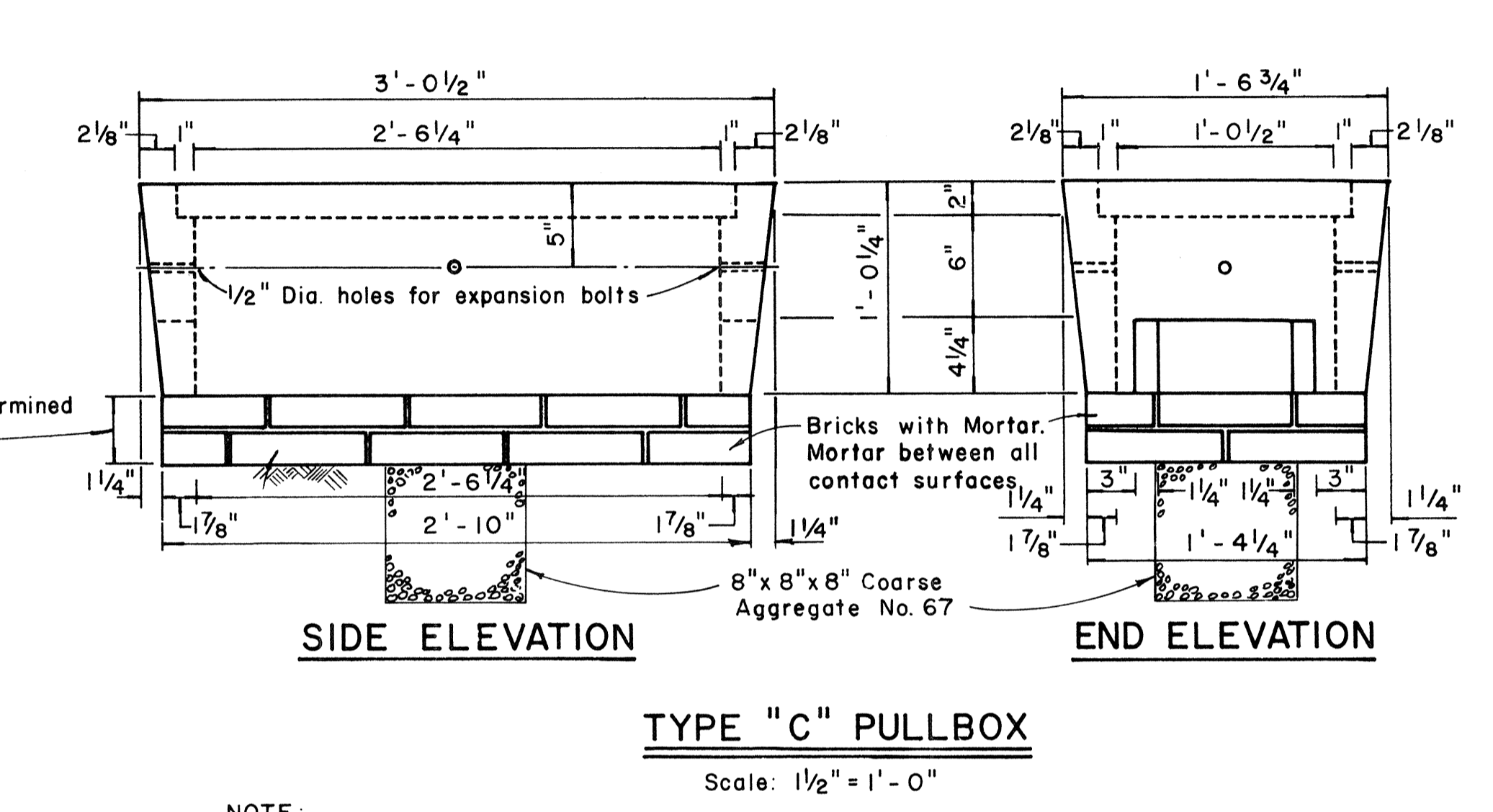
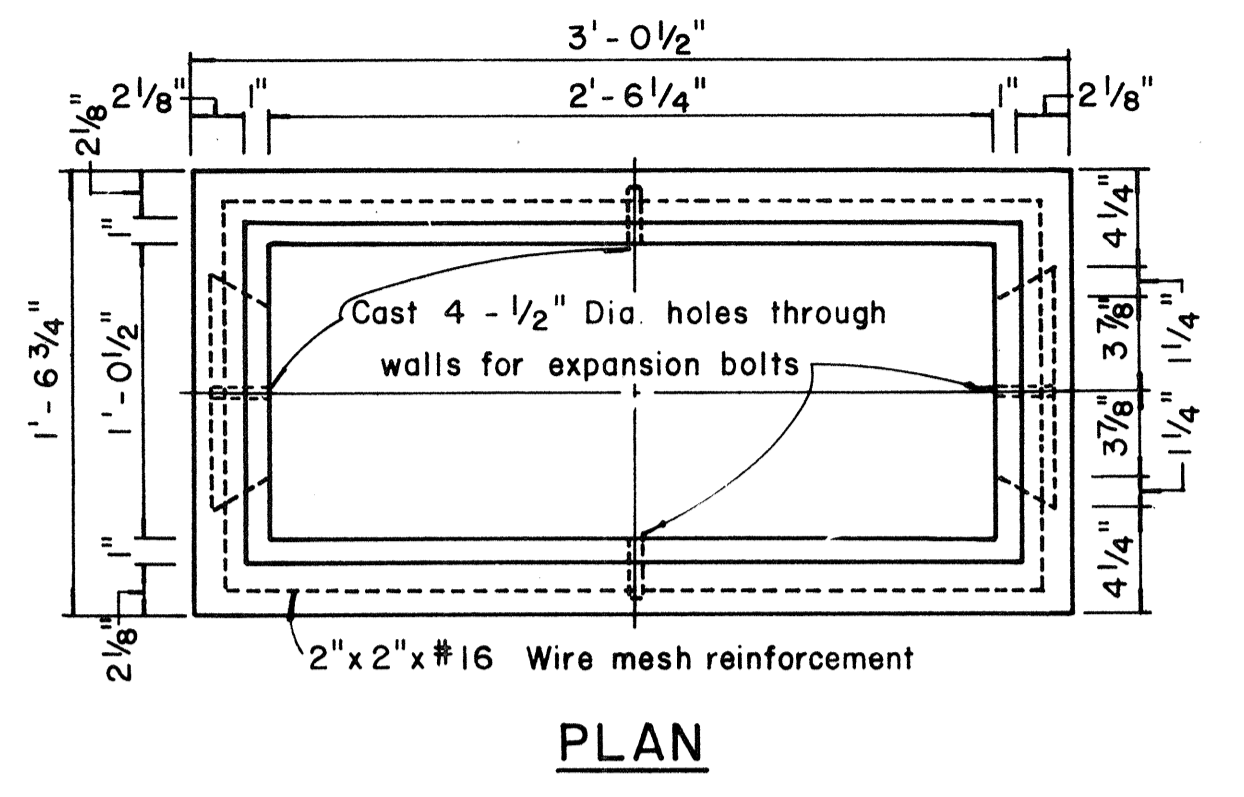
C.O. 194 S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	195	262

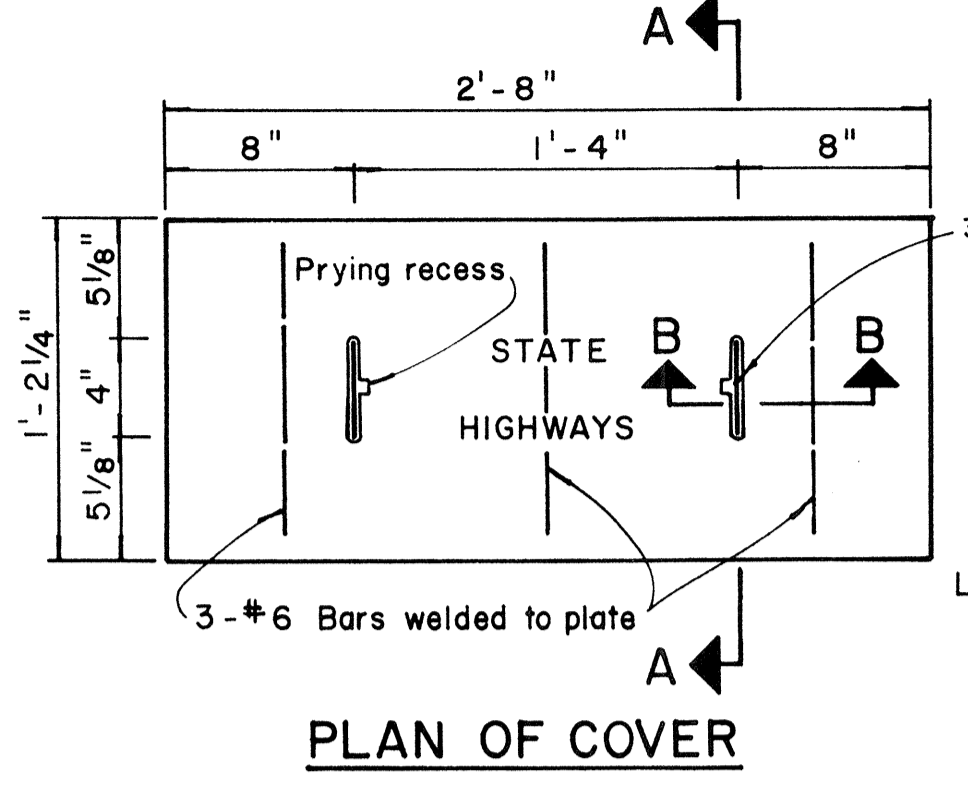


TYPE "A" PULLBOX CAST-IN-PLACE
Scale: 1" = 1'-0"

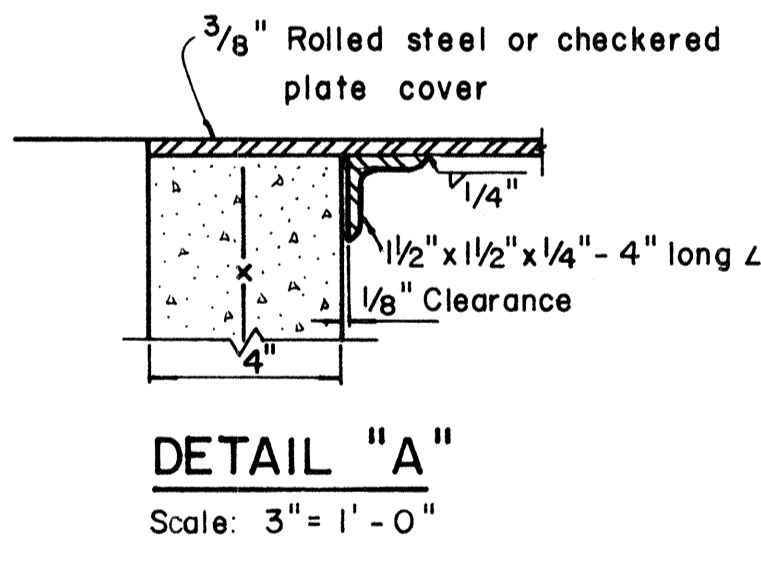
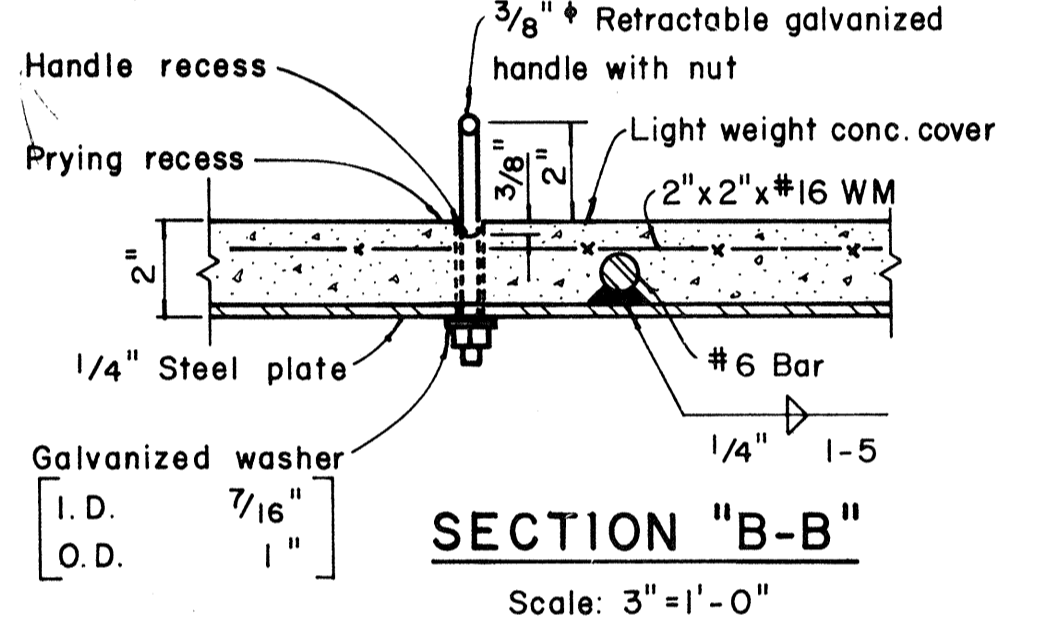
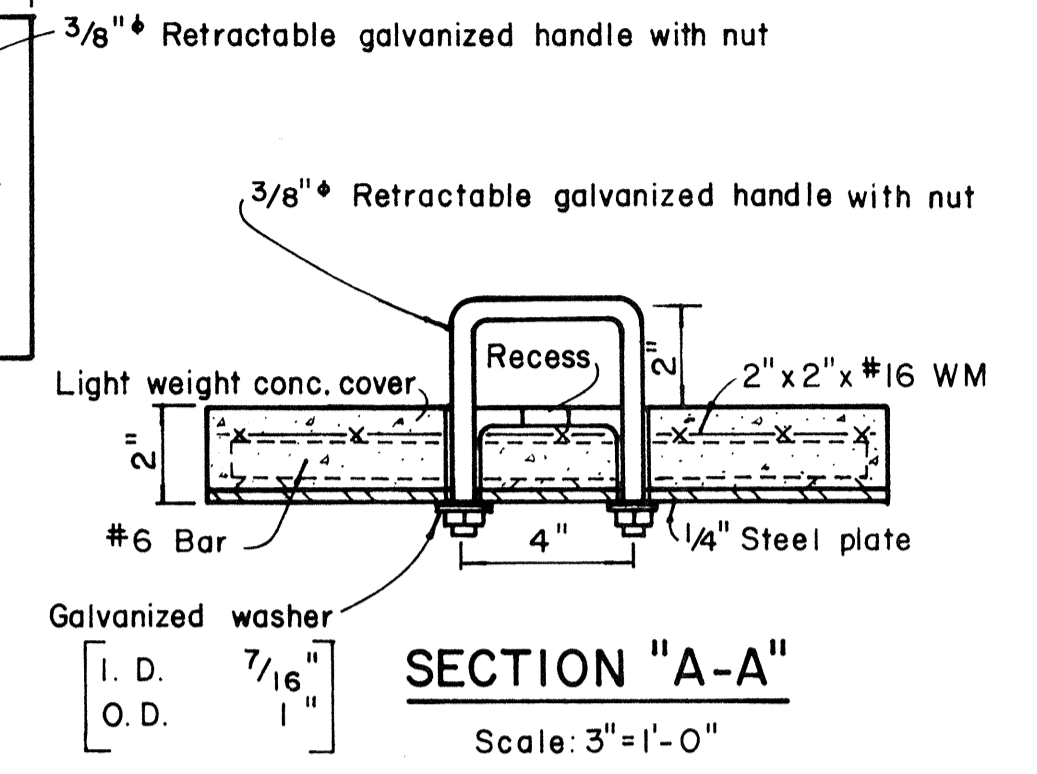
TYPE "A" PULLBOX PRECAST
Scale: 1" = 1'-0"



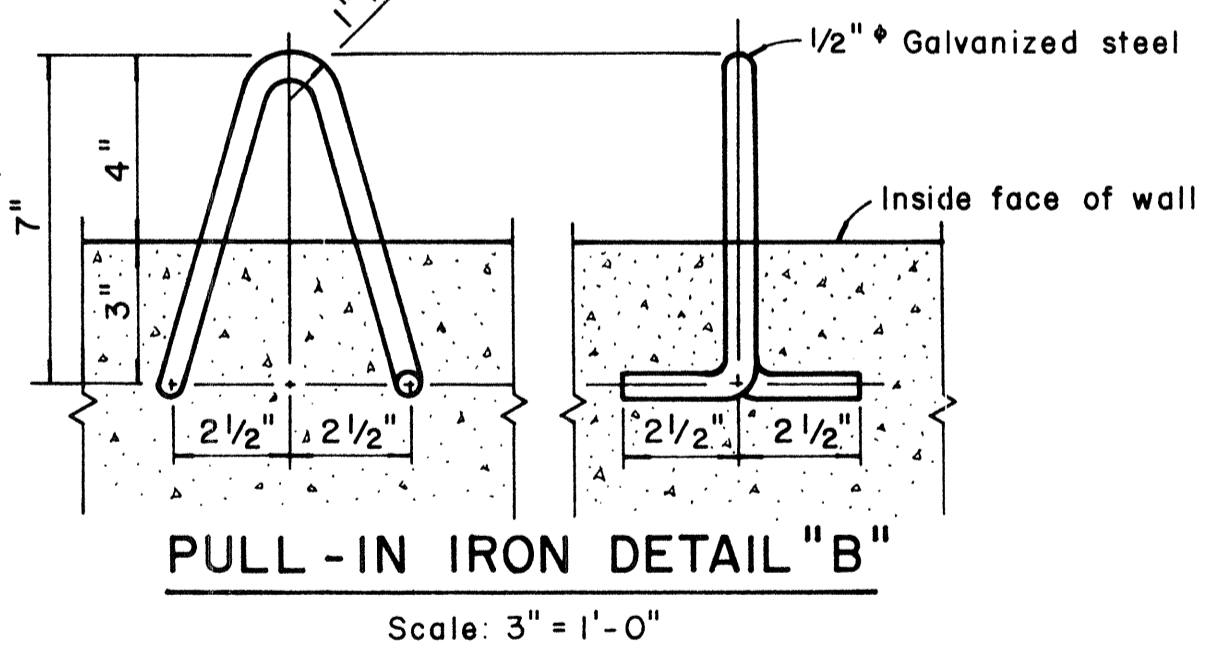
TYPE "C" PULLBOX
Scale: 1/2" = 1'-0"



PLAN OF COVER



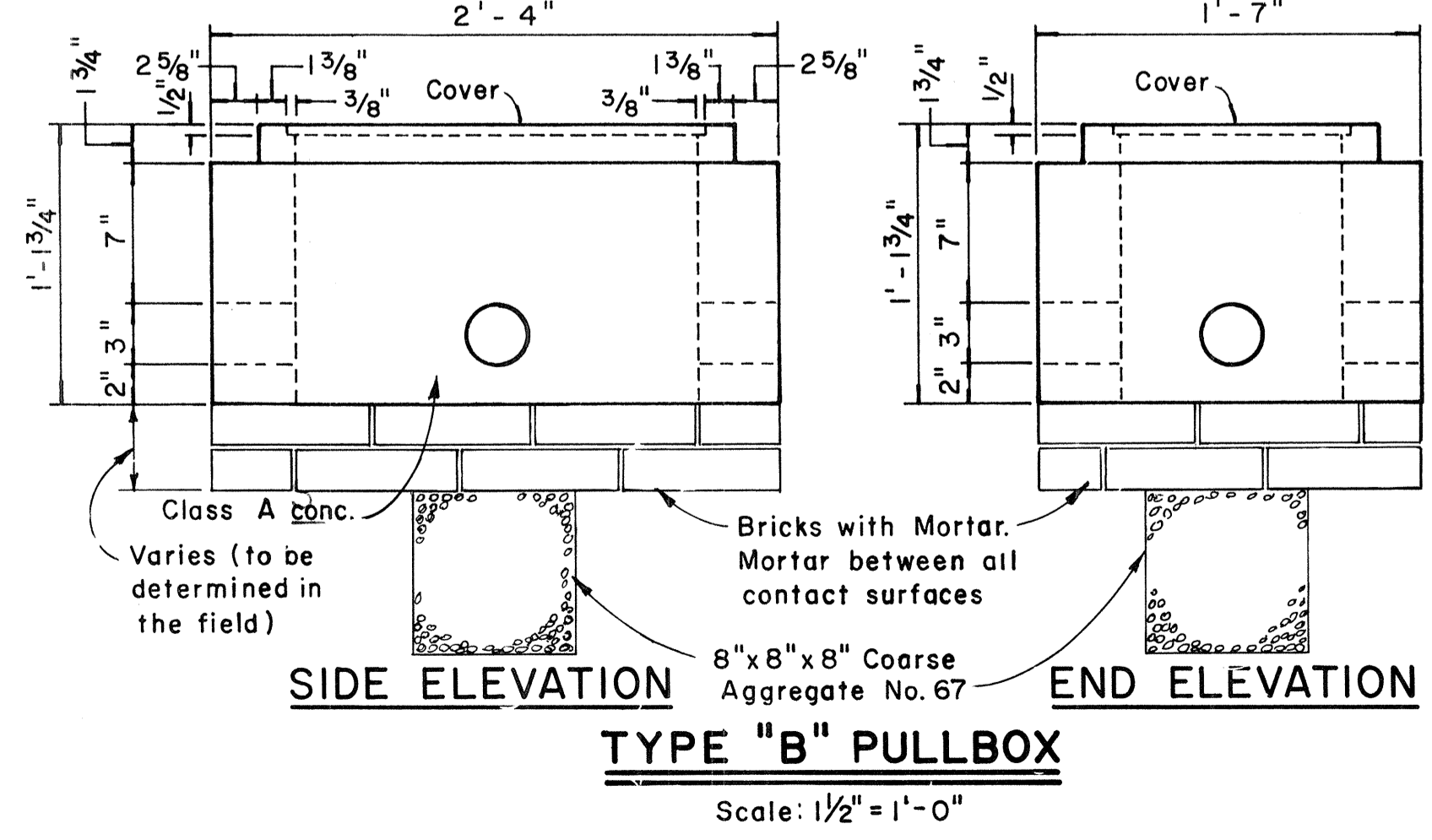
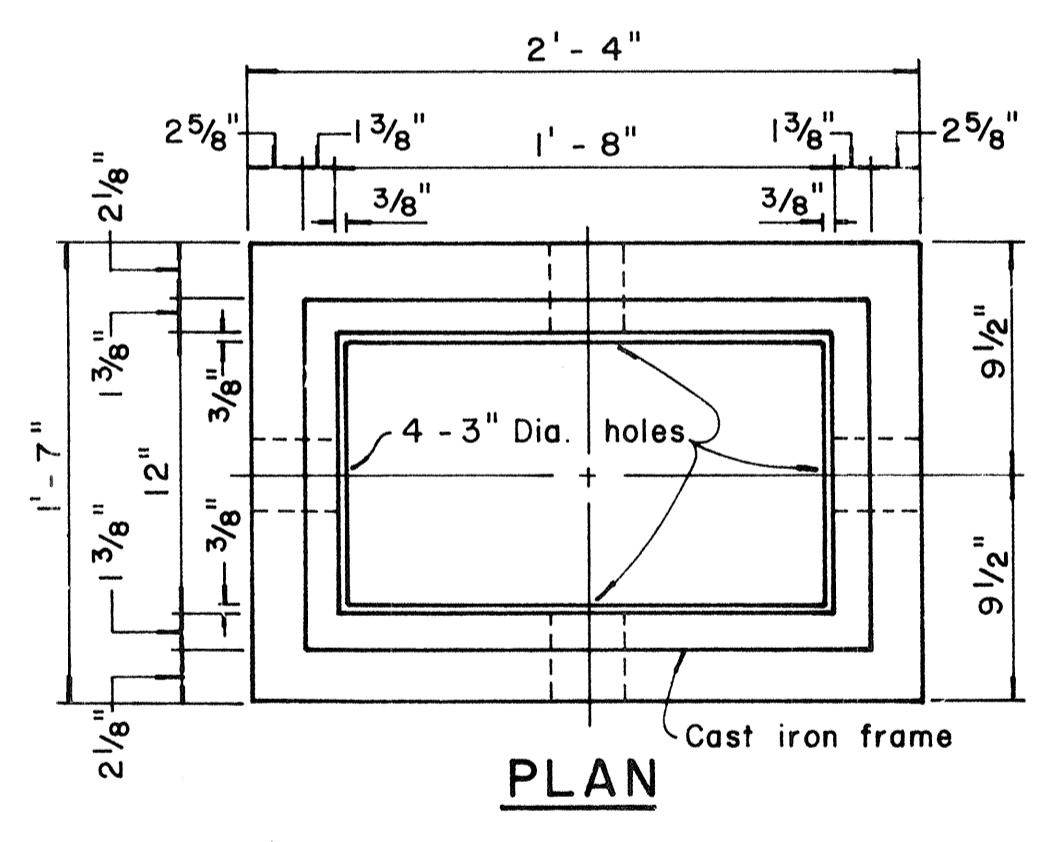
DETAIL "A"
Scale: 3" = 1'-0"



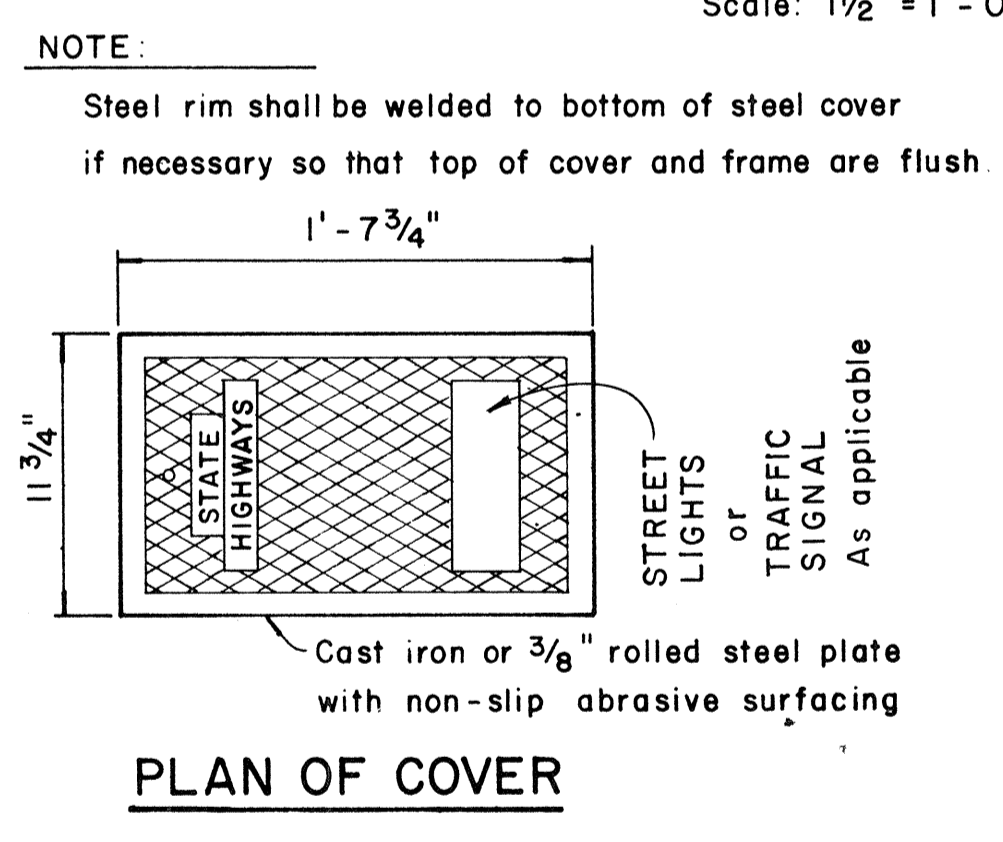
PULL-IN IRON DETAIL "B"
Scale: 3" = 1'-0"

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.



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



PLAN OF COVER

APPROVAL RECOMMENDED:
Erich Tunka 11/22/79
TRAFFIC ENGINEER DATE

APPROVED:
William J. ... 12-30-79
ASSISTANT CHIEF, ENGINEERING DATE

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

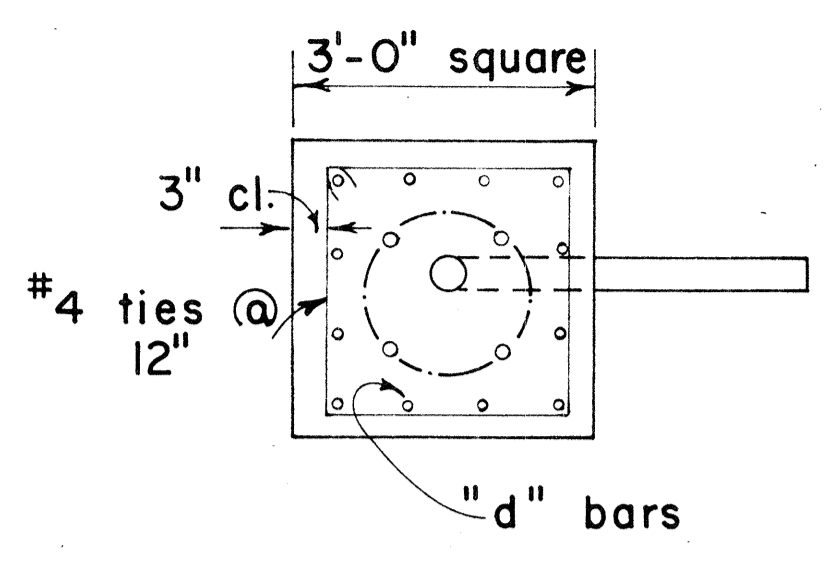
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
PULLBOXES

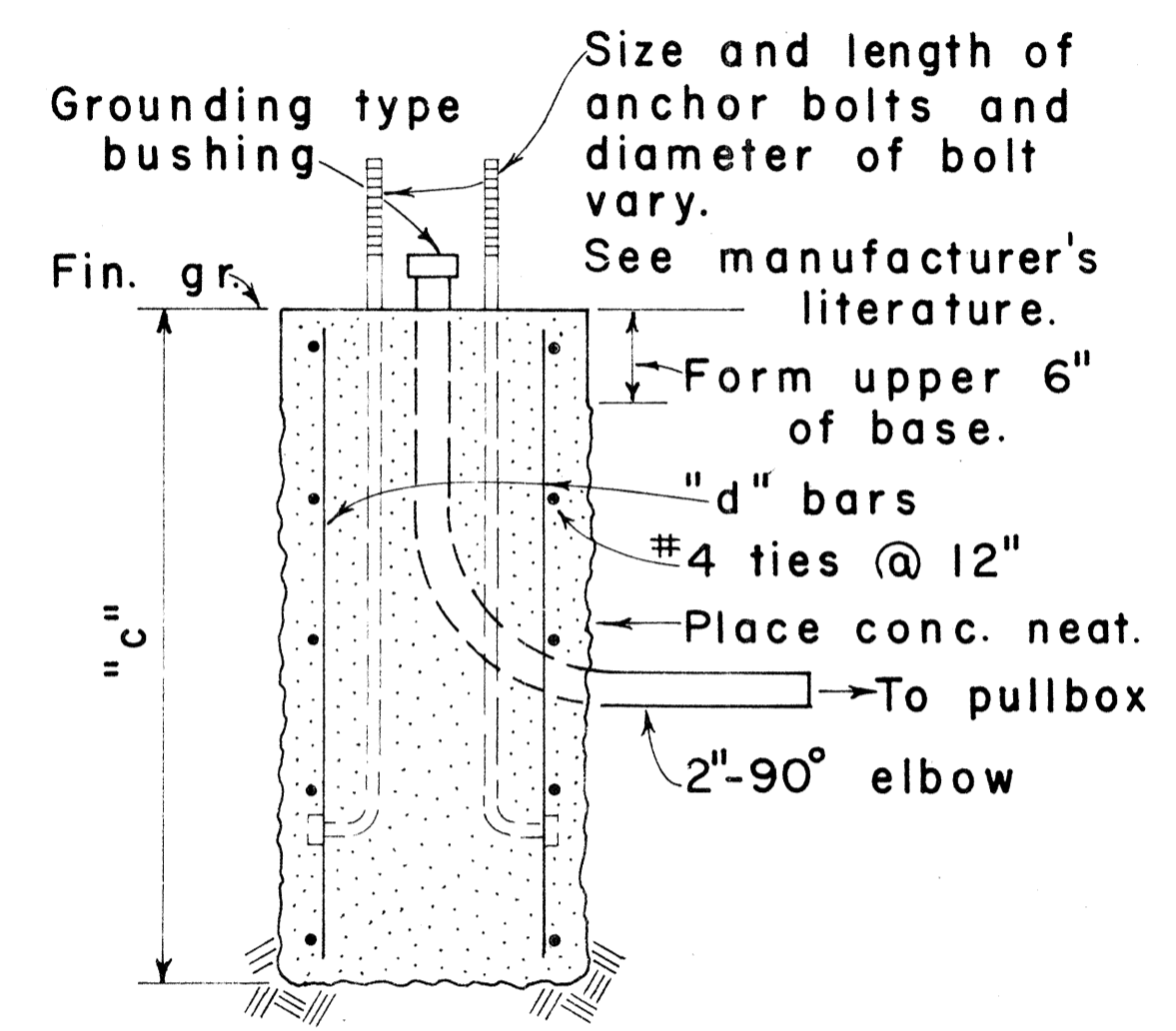
Scale as noted Date
SHEET No. 35 OF 36 SHEETS DT 401

DATE
SURVEY PLOTTED BY
DESIGNED BY
NOTE BOOK
QUANTITIES BY
CHECKED BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RT-031-K(2)	1981		



PLAN - SECTION

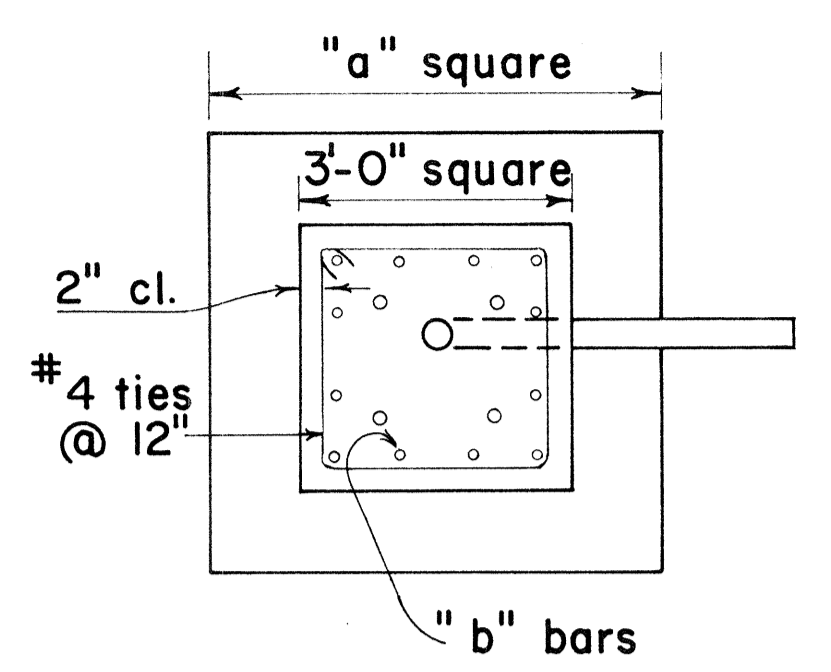


NOTE:
Concrete shall be Class B.

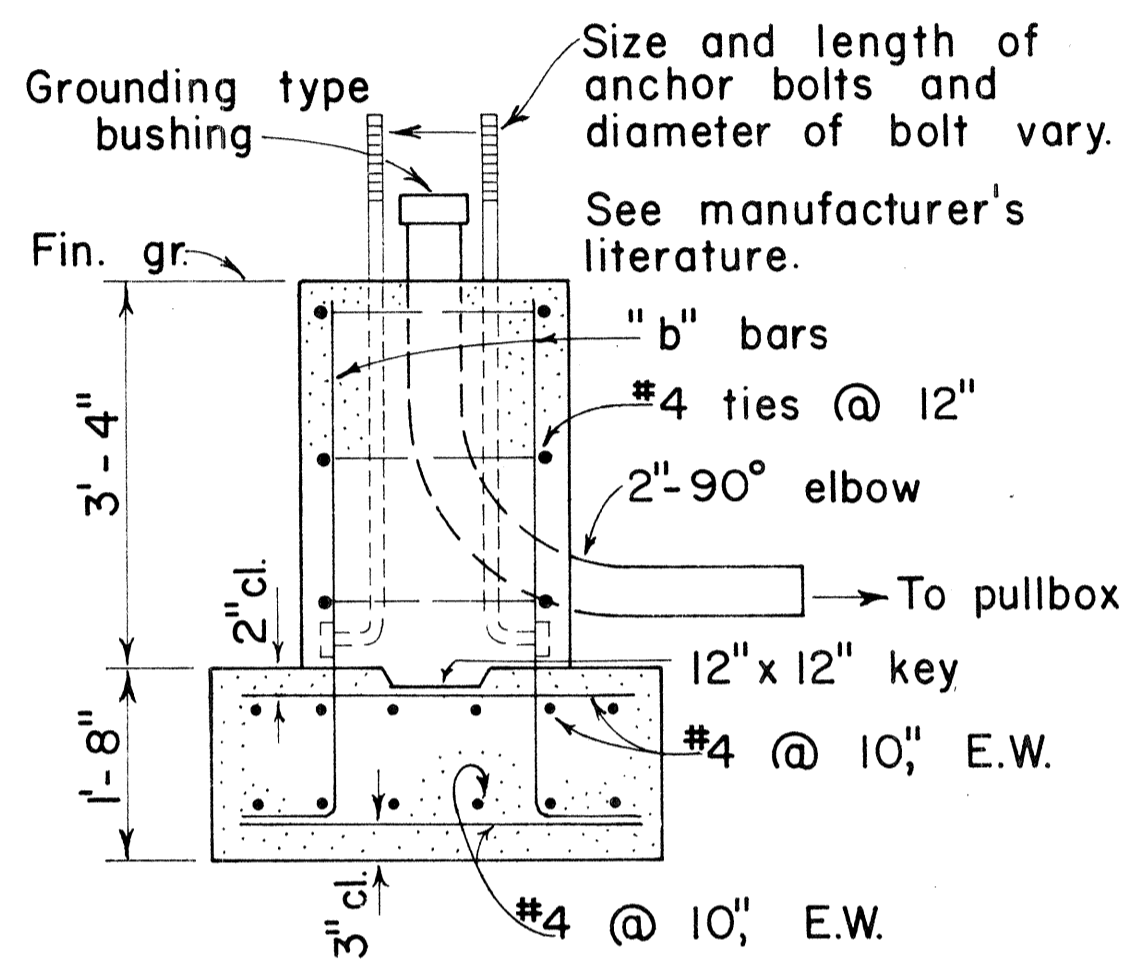
SECTION

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



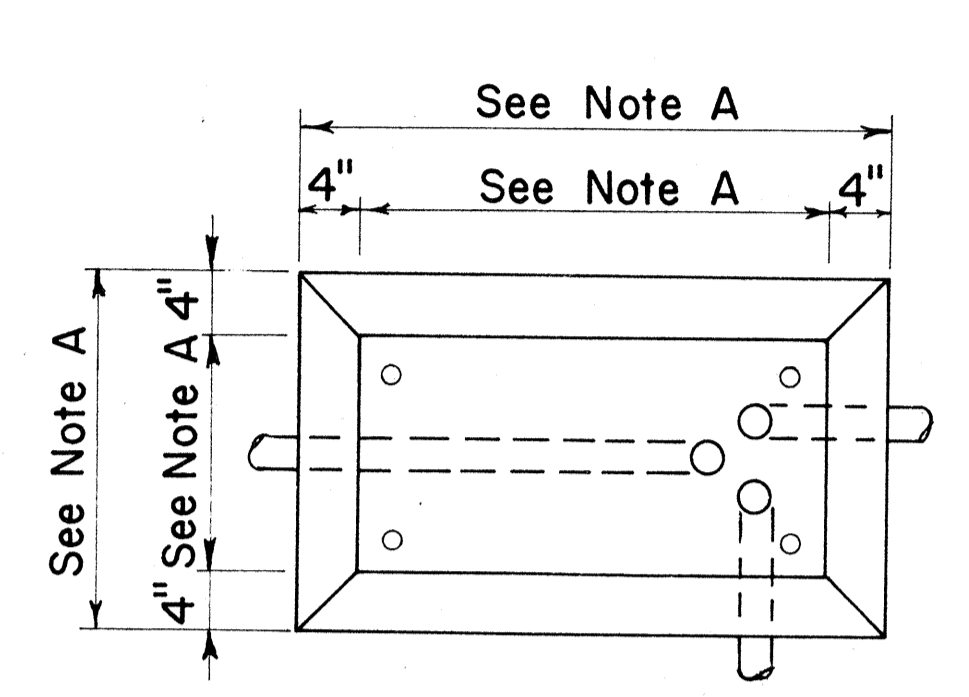
NOTE:
Concrete shall be Class B.

SECTION

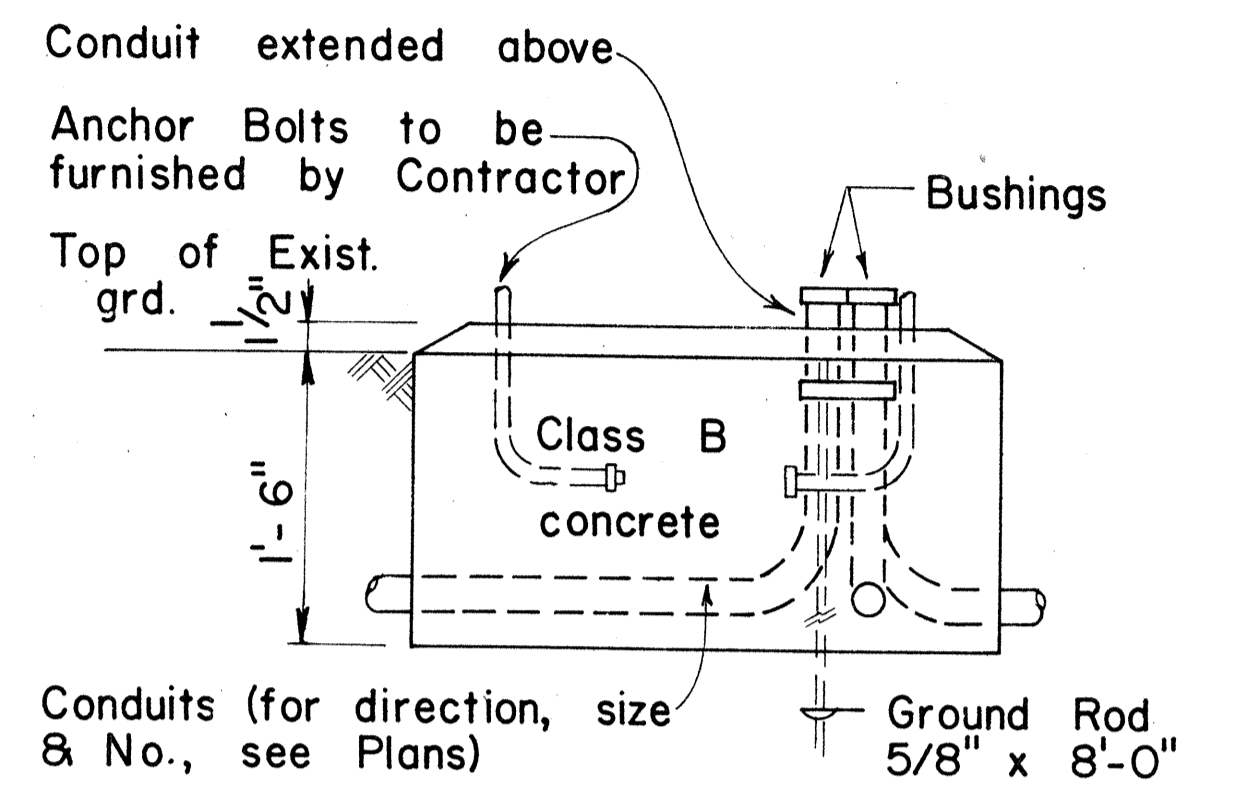
MAST ARM LENGTH	"a"	"b" BARS
16' - 18'	5' - 0"	12 - #6
20'	5' - 6"	12 - #6
25'	6' - 0"	12 - #6
30'	6' - 6"	12 - #8
35'	6' - 6"	12 - #8
40'	7' - 0"	12 - #8

TYPE II A

FOOTING FOR MAST ARM STANDARD



PLAN



ELEVATION

CONCRETE BASE FOR CONTROLLER CABINET

- NOTES:
- 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.

SURVEY PLATTED BY: _____ DATE: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 No. _____

NO.	REVISION	APPROVED BY	DATE

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

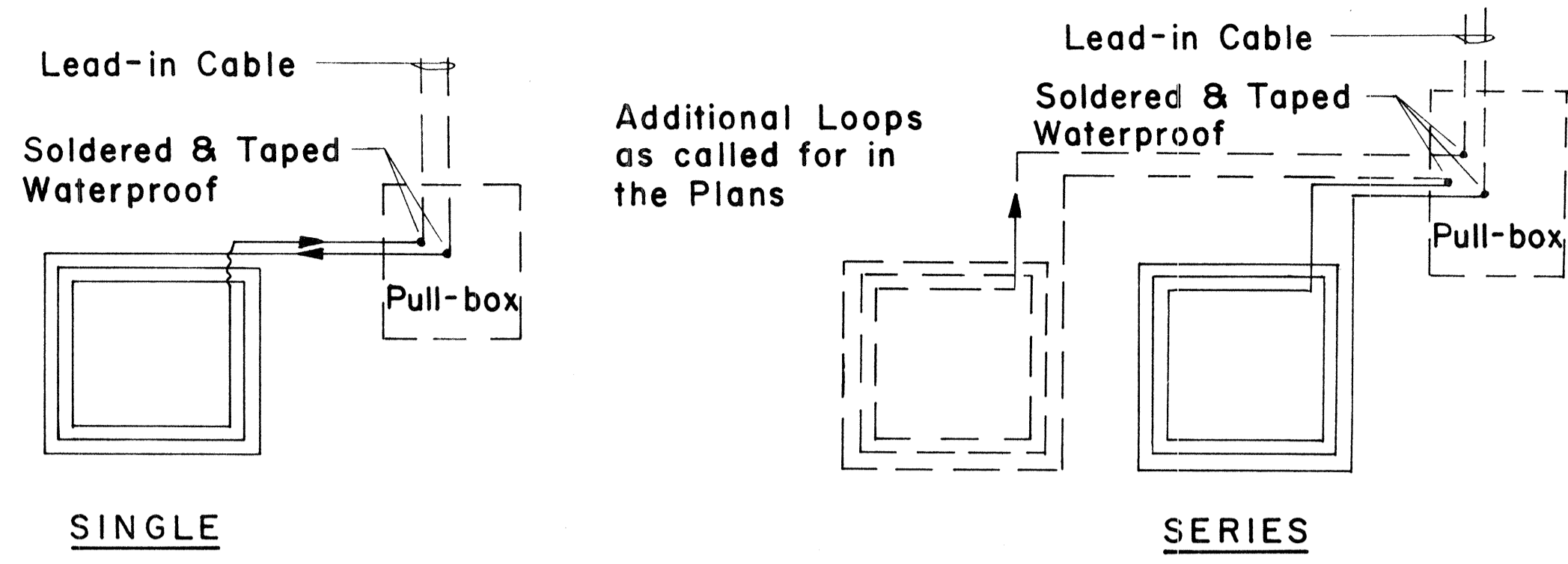
APPROVED:
Robert S. Sakashiki 2-5-76
 ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

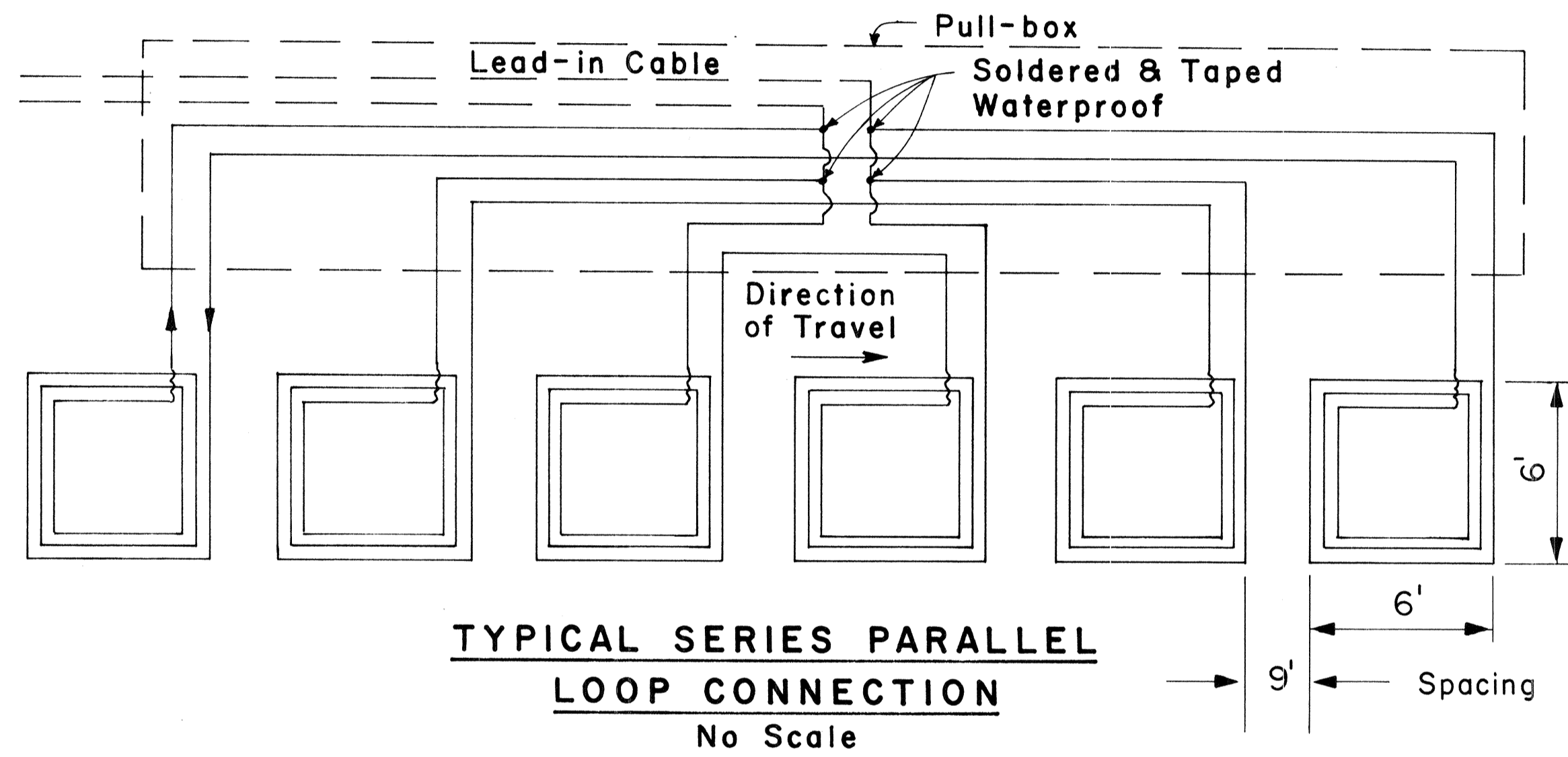
**TRAFFIC SIGNAL SYSTEM
 MISCELLANEOUS DETAILS**

Not to Scale

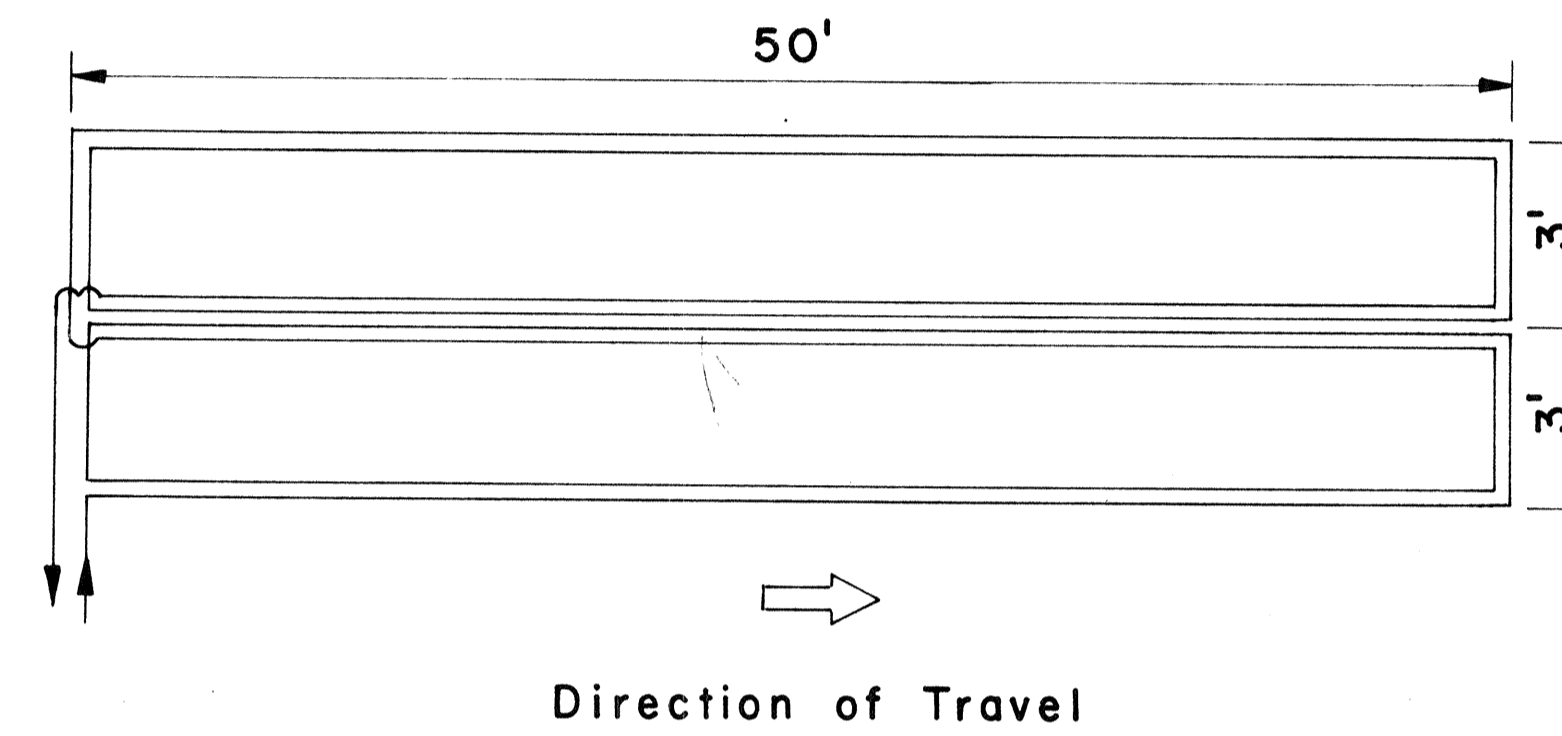
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1976	196	262



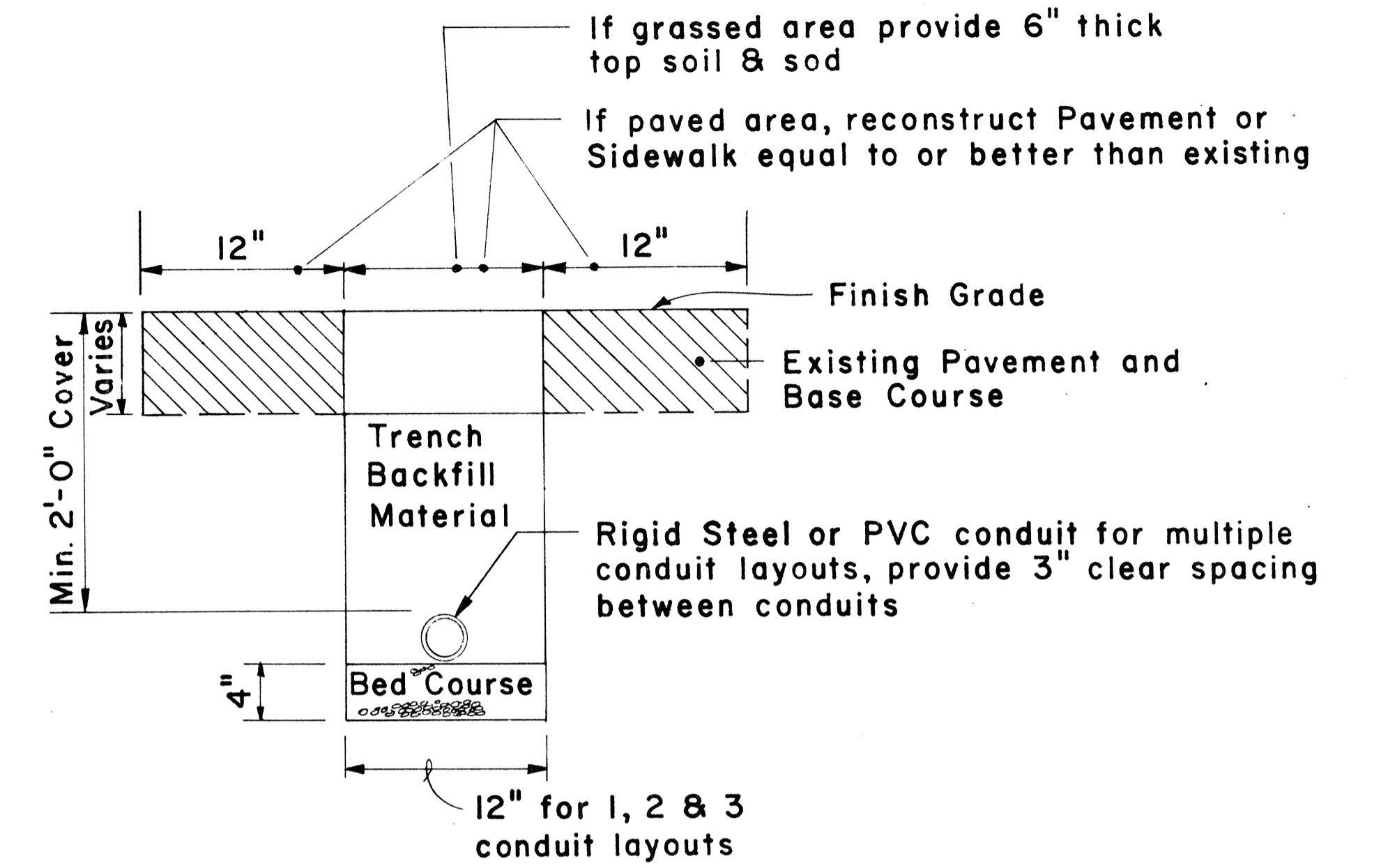
TYPICAL LOOP CONFIGURATIONS
No Scale



TYPICAL SERIES PARALLEL LOOP CONNECTION
No Scale



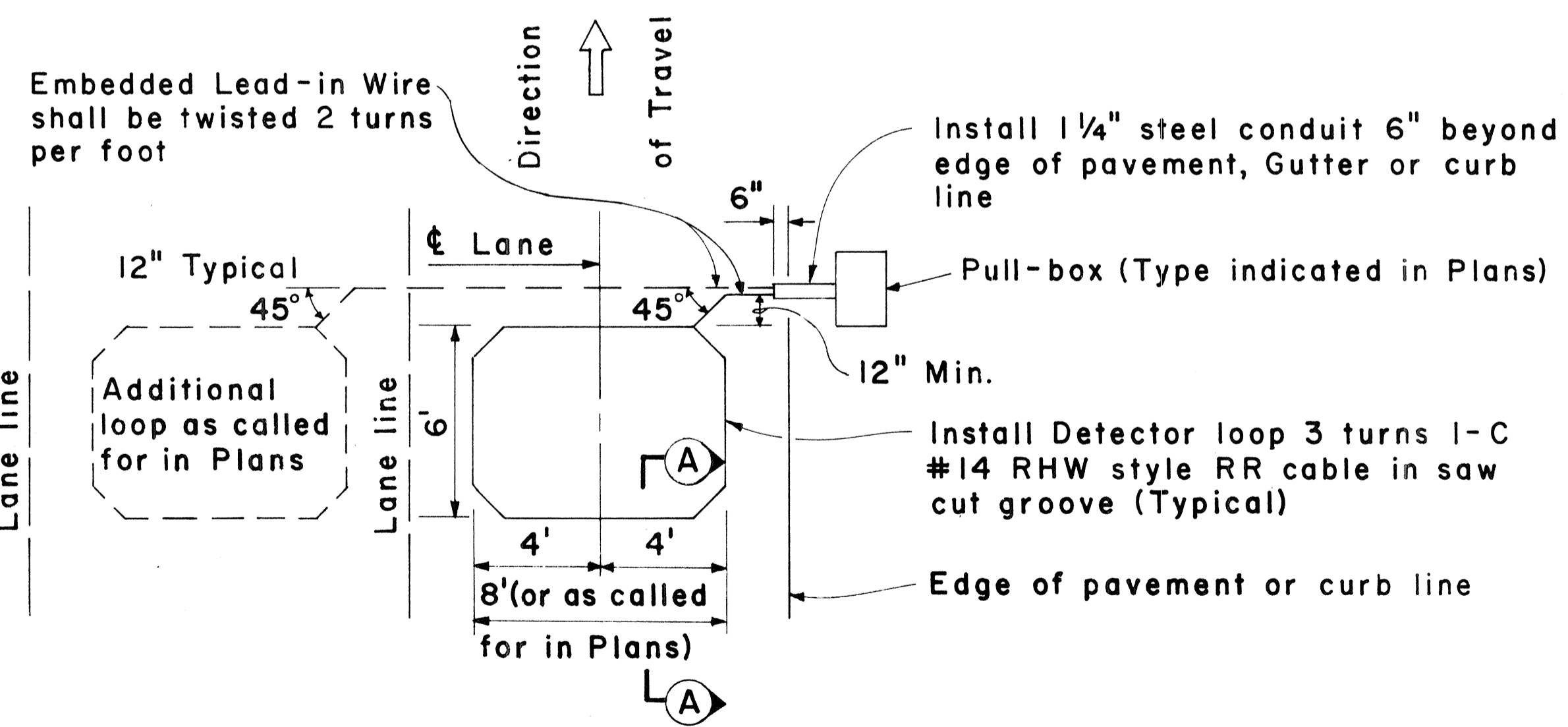
WIRING FOR 6' x 50' LOOP DETECTOR
No Scale



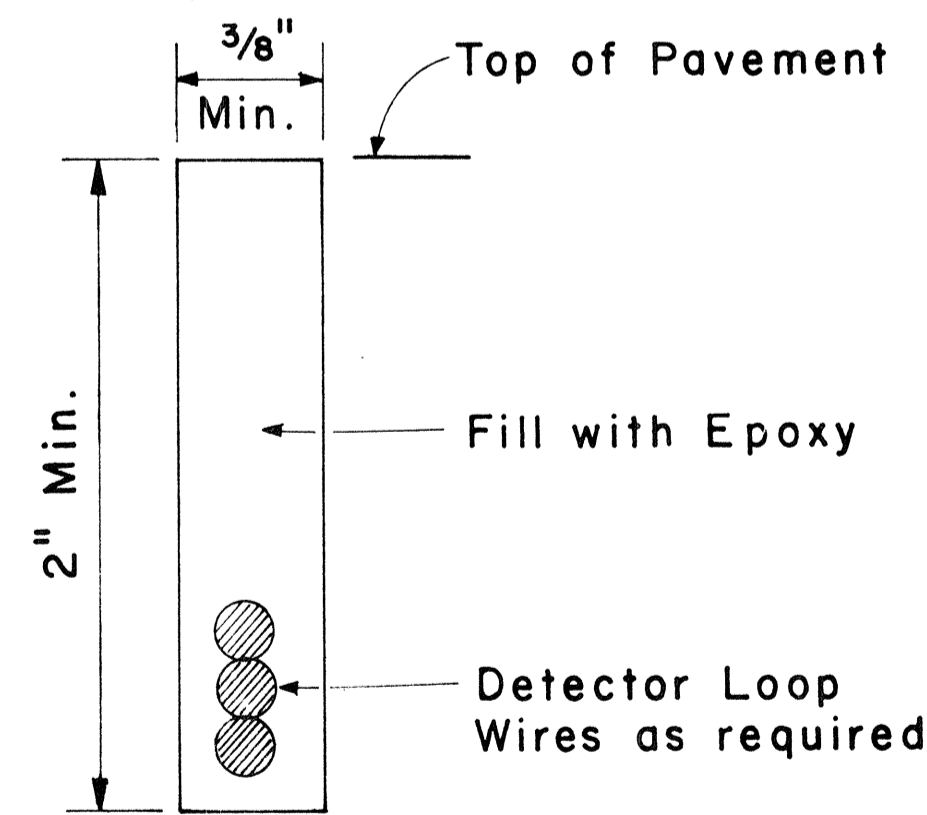
TYPICAL TRENCH SECTION FOR CONDUIT
Scale: 1/2" = 1' - 0"

NOTE:

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



PLAN - MULTIPLE LOOP LAYOUT
Scale: 1/4" = 1' - 0"



Detector Loop Saw-Cut SECTION A-A (TYPICAL)
No Scale

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

APPROVED:
Rubber B. Balendin 3-5-76
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Add dimensions to Loop Configurations	H.T.	9-22-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS

Scale: As Noted
SHEET NO. 36 OF 36 SHEETS DT 405

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