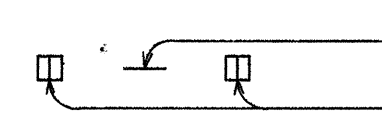
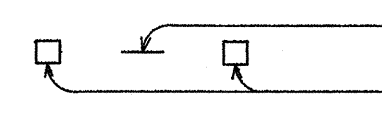
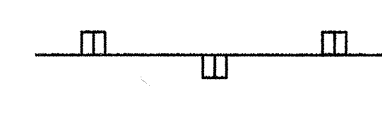
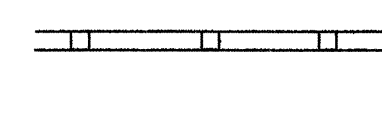



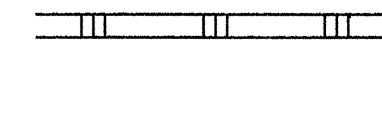




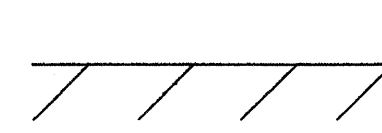
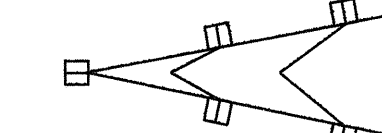
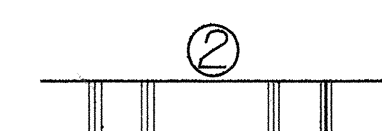

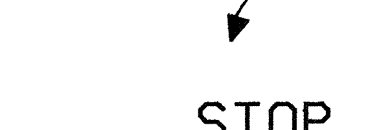

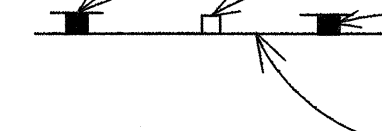


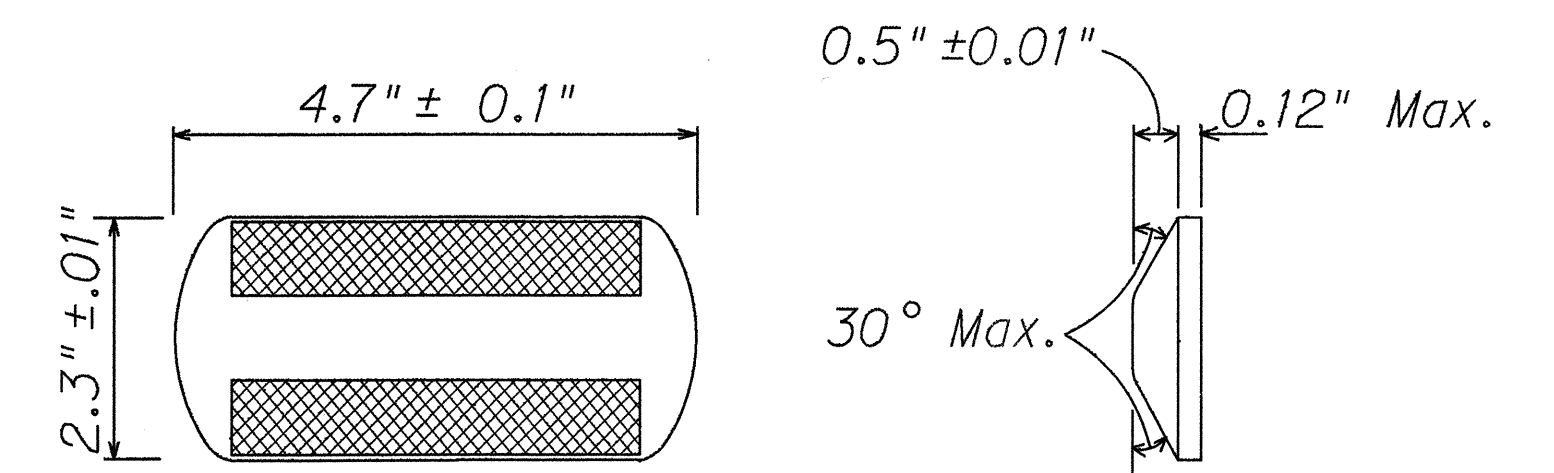
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	17	29

LEGEND

-  4 each Type A Raised Pavement Markers
Type CL Raised Pavement Markers @ 40' - 0" o.c.
-  4 each Type J Raised Pavement Markers
Type DL Raised Pavement Markers @ 40' - 0" o.c.
-  8" White Stripe with Type CL Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
-  4" Double Solid Yellow with Type DL Raised Pavement Markers @ 20' - 0" o.c. (Tape, Type I or Thermoplastic Extrusion)
-  4" Double Solid Yellow Stripes with Type HL Raised Pavement Markers @ 20' - 0" o.c. (Tape, Type II or Thermoplastic Extrusion)
-  4" Yellow Edge Stripe with Type HL Raised Pavement Markers @ 40' - 0" o.c. (Tape, Type II or Thermoplastic Extrusion)
-  4" Double Solid White Stripes with Type CL Raised Pavement Markers @ 20' - 0" o.c. (Tape, Type I or Thermoplastic Extrusion)
-  Lane Change Restriction Marking
4 each Type A Raised Pavement Markers
Type CL Raised Pavement Markers @ 20' - 0" o.c.
4" White Stripe (Tape, Type I or Thermoplastic Extrusion)
-  4" or 8" White Edge Stripe with Type CL Raised Pavement Markers @ 40' - 0" o.c. (Tape, Type II or Thermoplastic Extrusion)
-  4" White Guide Lines (Thermoplastic Extrusion)
-  Transverse Median Marking (Tape, Type II or Thermoplastic Extrusion)
-  Transverse Shoulder Marking (Tape, Type II or Thermoplastic Extrusion)
-  Channelizing Island or Deceleration Lane Gore (Tape, Type II or Thermoplastic Extrusion)
-  Crosswalk and Stop Line. All Stop Lines shall be 10' - 0" from Crosswalk unless otherwise noted. The circled number indicates the number of lanes for payment. (Thermoplastic Extrusion)
-  Pavement Arrow (Tape, Type I or Thermoplastic Extrusion)
-  Pavement Word (Tape, Type I or Thermoplastic Extrusion)
-  4 Each Type J Raised Pavement Markers
Type DL Raised Pavement Markers @ 40' - 0" o.c.
Type HL Raised Pavement Markers (Reflective Surface facing no-passing direction)
-  4" Single Solid Yellow Stripe (Tape, Type I or Thermoplastic Extrusion)
-  Extension of Edge Line, 4" Wide x 2'-0" Long White Stripe @ 10' - 0" o.c. w/Type CL Markers @ 40' - 0" o.c. (Thermoplastic Extrusion)

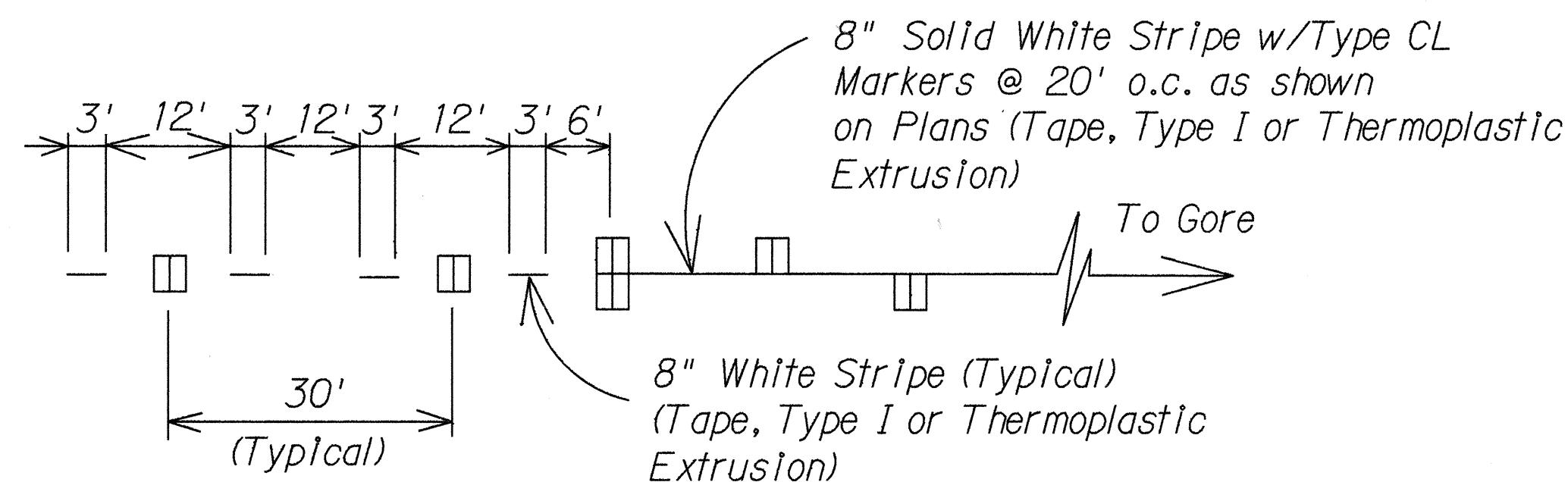
NOTES

1. Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
2. Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. Costs shall be incidental to the various pavement marking items.
3. Raised pavement markers shall not be installed within crosswalks.
4. Details of Type C, Type D and Type H Markers on Standard Plan Nos. TE-30, TE-31 and TE-32 shall be deleted and replaced with details of Type CL, Type DL and Type HL Markers as shown on this sheet. All references to Type C, Type D and Type H Markers in the plans shall mean Type CL, Type DL and Type HL Markers.
5. Final locations of all signs shall be approved by the Engineer prior to any installation work.
6. Existing signs not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans shall be incidental to the various signing items.
7. Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
8. All pavement striping shall be as noted on the Legend or plans.
9. All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as approved by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.



TYPE CL
 Red-Clear Reflective Marker
 or
TYPE DL
 Two-Way Yellow Reflective Marker
 or
TYPE HL
 One-Way Yellow Reflective Marker
RAISED PAVEMENT MARKER DETAILS

Not to Scale



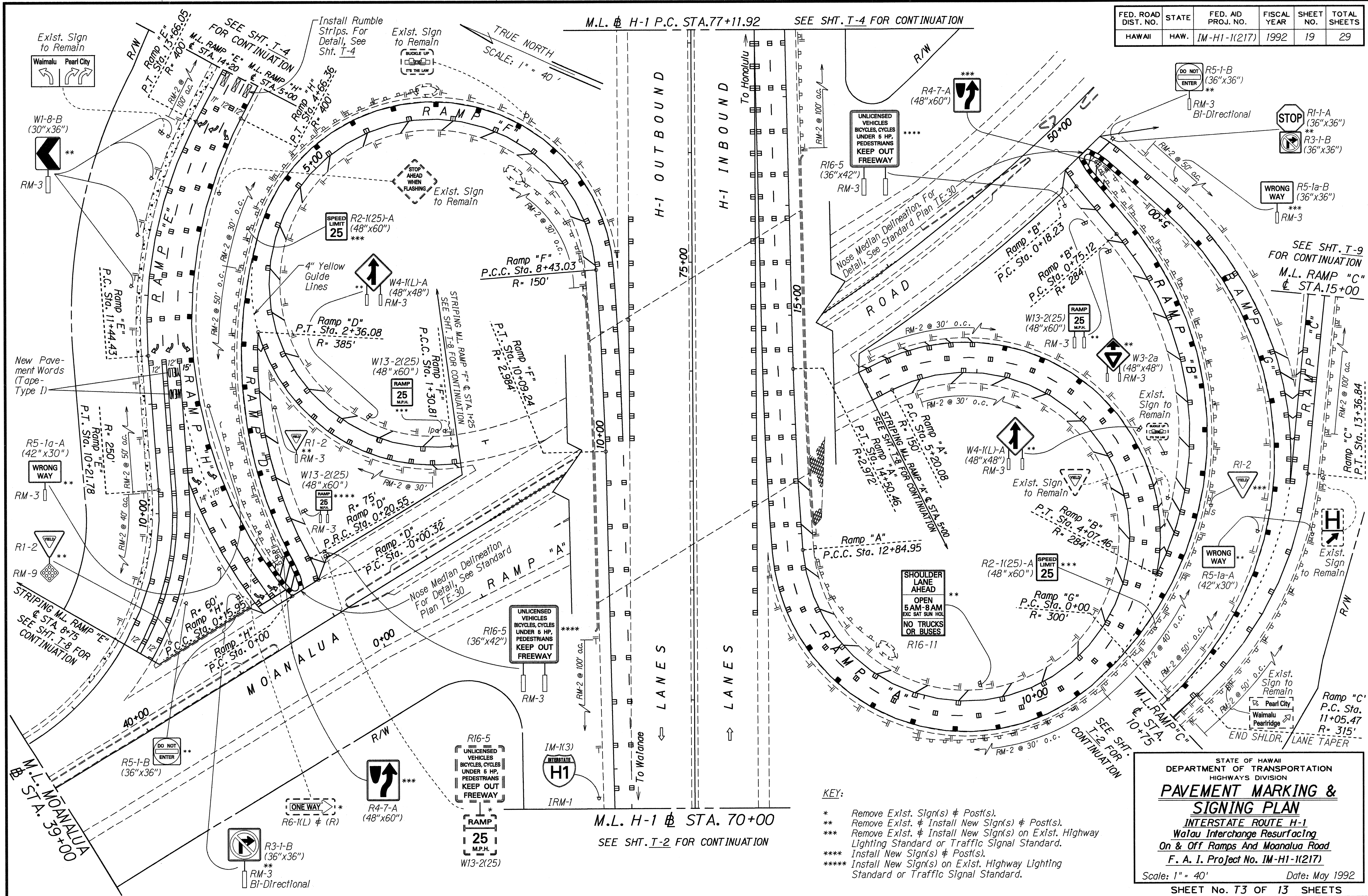
LANE DROP MARKING

Not to Scale

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
DATE	
NO. OF SHEETS	
SHEET NO.	

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING LEGEND
DETAILS & NOTES
 INTERSTATE ROUTE H-1
 Waialua Interchange Resurfacing
 On & Off Ramps And Moanalua Road
 F. A. I. Project No. IM-H1-1(217)
 Not to Scale Date: May 1992

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	19	29

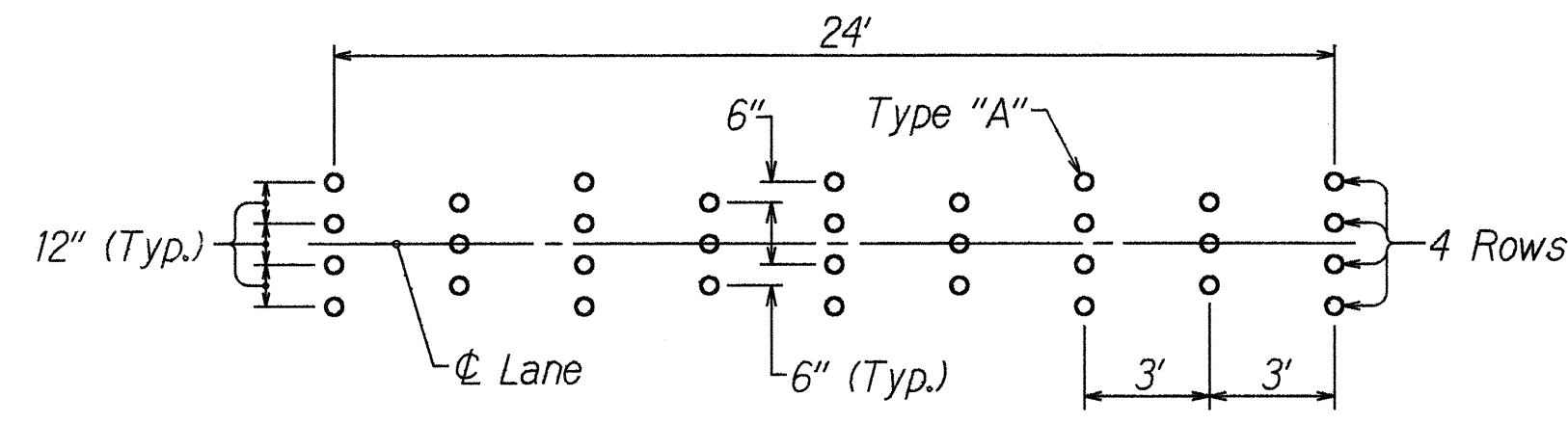
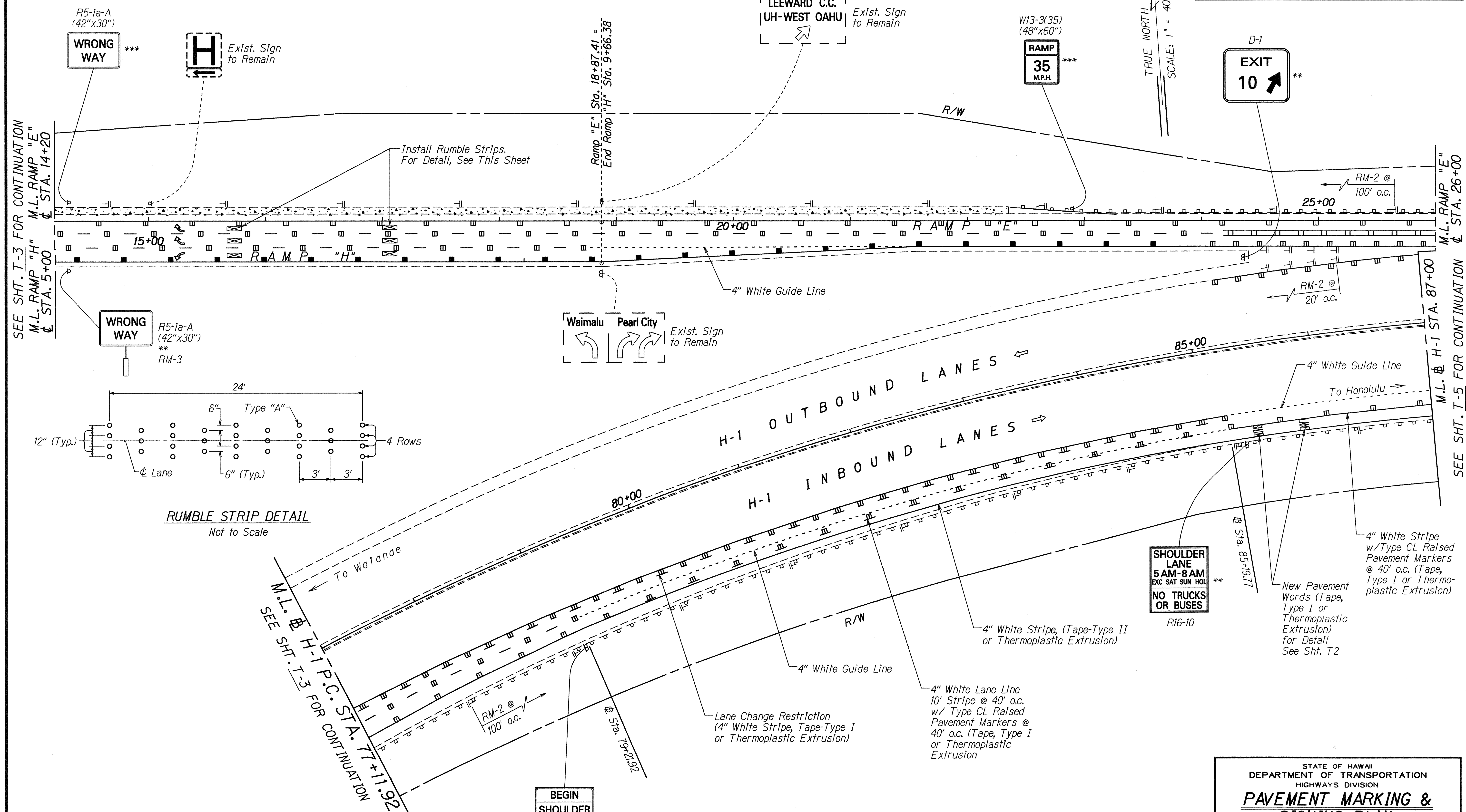


DATE	BY
DESIGNED BY	Michael H. ...
TRACED BY	...
QUANTITIES BY	...
CHECKED BY	...

- KEY:**
- * Remove Exst. Sign(s) & Post(s).
 - ** Remove Exst. & Install New Sign(s) & Post(s).
 - *** Remove Exst. & Install New Sign(s) on Exst. Highway Lighting Standard or Traffic Signal Standard.
 - **** Install New Sign(s) & Post(s).
 - ***** Install New Sign(s) on Exst. Highway Lighting Standard or Traffic Signal Standard.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING & SIGNING PLAN
 INTERSTATE ROUTE H-1
 Waiau Interchange Resurfacing
 On & Off Ramps And Moanalua Road
 F. A. I. Project No. IM-H1-1(217)
 Scale: 1" = 40' Date: May 1992
 SHEET No. T3 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	20	29



RUMBLE STRIP DETAIL
Not to Scale

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN

INTERSTATE ROUTE H-1
Waialua Interchange Resurfacing
On & Off Ramps And Moanalua Road
F. A. I. Project No. IM-H1-1(217)

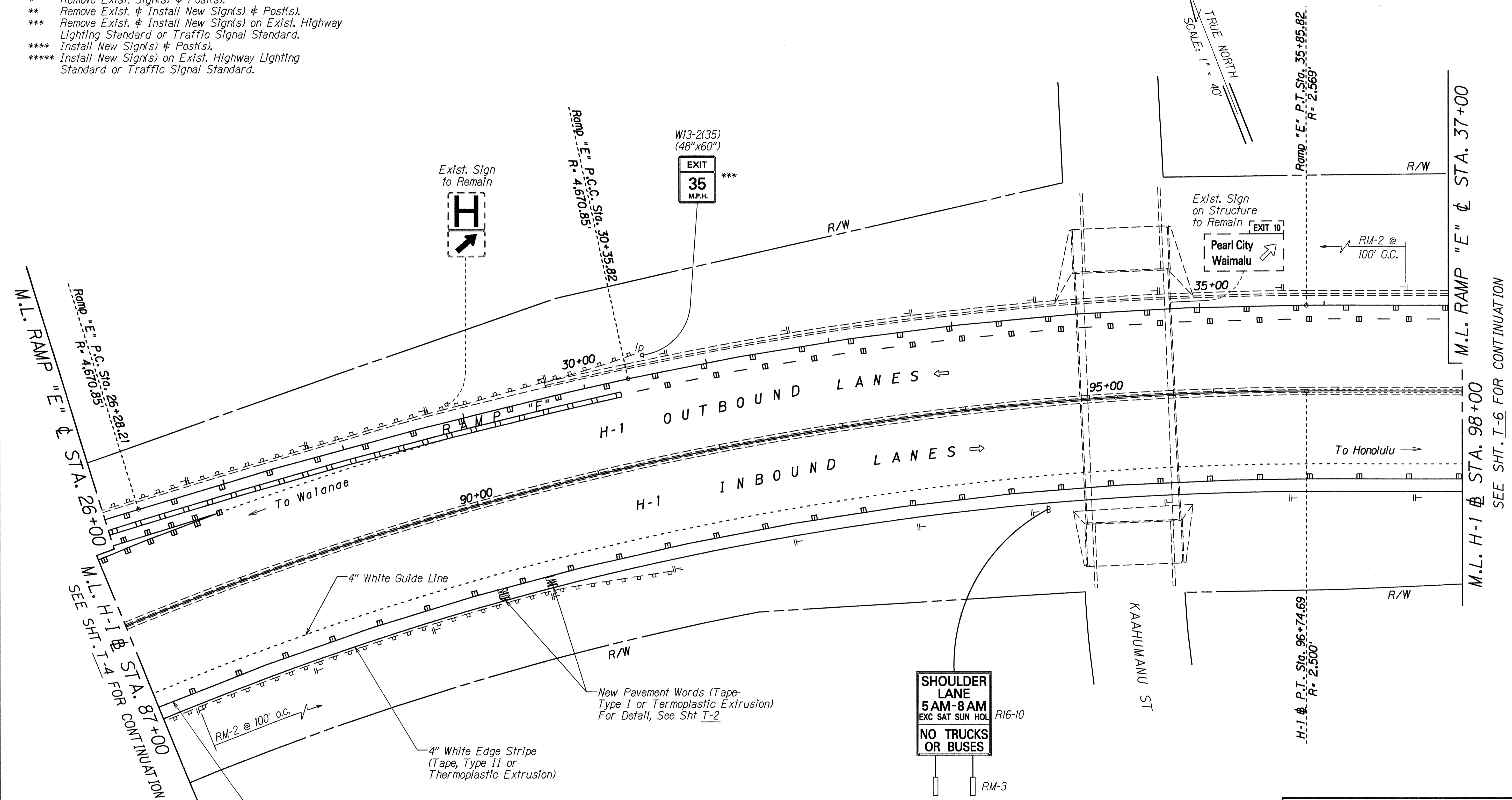
Scale: 1" = 40' Date: MAY 1992

SHEET No. T4 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	21	29

KEY:

- * Remove Exist. Sign(s) & Post(s).
- ** Remove Exist. & Install New Sign(s) & Post(s).
- *** Remove Exist. & Install New Sign(s) on Exist. Highway Lighting Standard or Traffic Signal Standard.
- **** Install New Sign(s) & Post(s).
- ***** Install New Sign(s) on Exist. Highway Lighting Standard or Traffic Signal Standard.



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

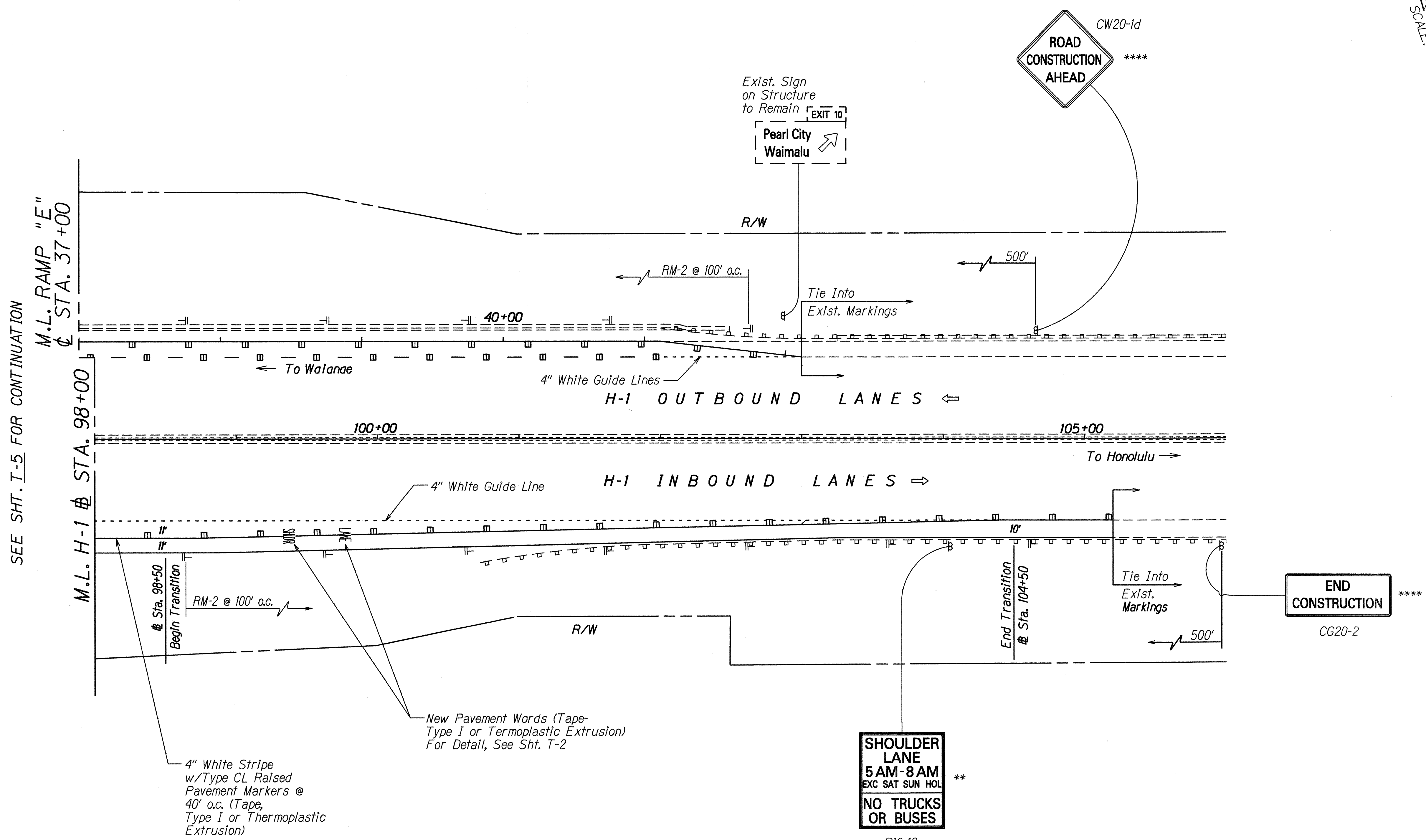
PAVEMENT MARKING & SIGNING PLAN

INTERSTATE ROUTE H-1
Waianae Interchange Resurfacing
On & Off Ramps And Moanalua Road
F. A. I. Project No. IM-H1-1(217)

Scale: 1" = 40' Date: MAY 1992
SHEET No. T5 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	22	29

TRUE NORTH
SCALE: 1" = 40'



SEE SHT. T-5 FOR CONTINUATION

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

- KEY:
- * Remove Exist. Sign(s) & Post(s).
 - ** Remove Exist. & Install New Sign(s) & Post(s).
 - *** Remove Exist. & Install New Sign(s) on Exist. Highway Lighting Standard or Traffic Signal Standard.
 - **** Install New Sign(s) & Post(s).
 - ***** Install New Sign(s) on Exist. Highway Lighting Standard or Traffic Signal Standard.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

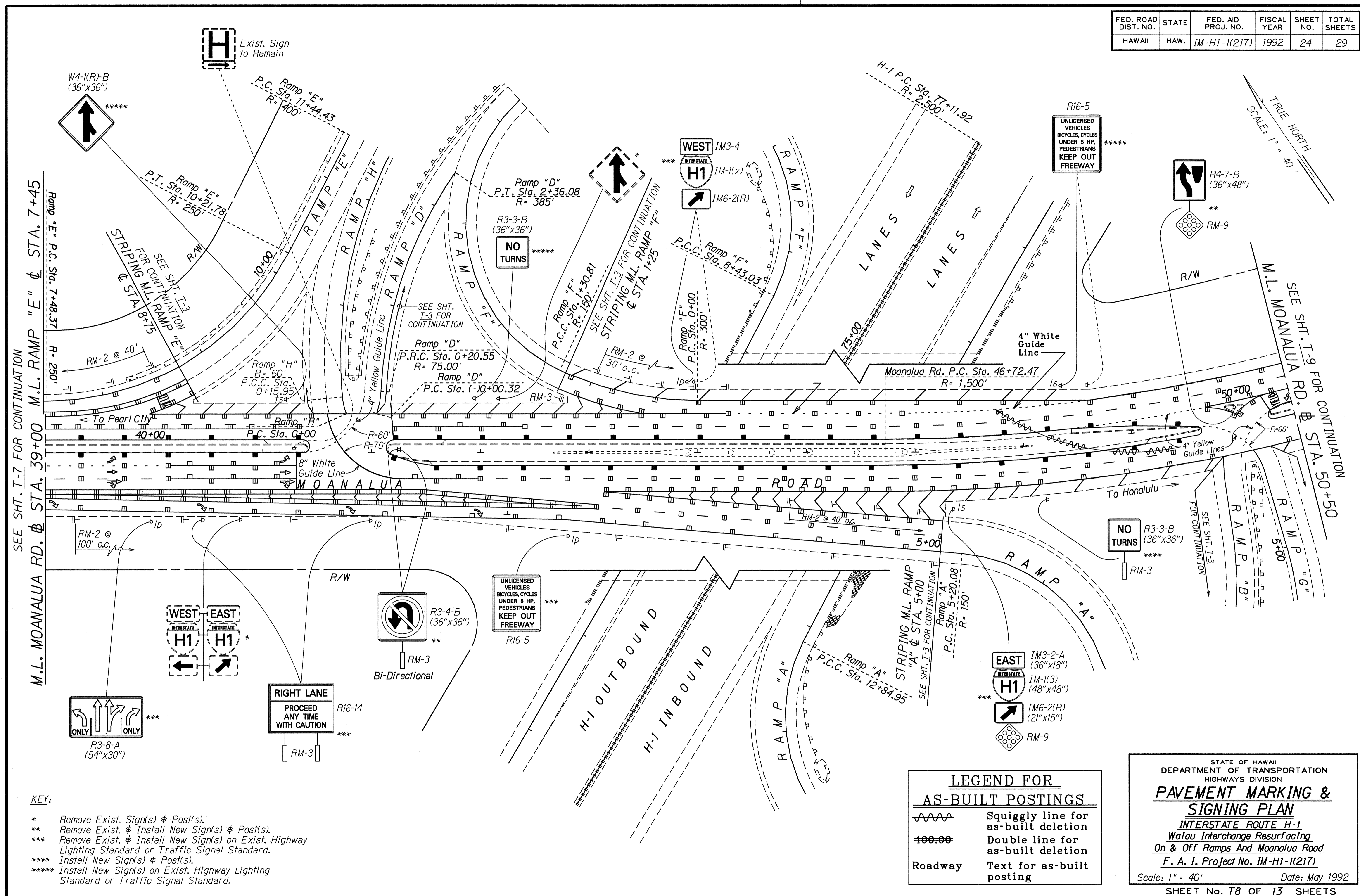
PAVEMENT MARKING & SIGNING PLAN

INTERSTATE ROUTE H-1
Waiau Interchange Resurfacing
On & Off Ramps And Moanalua Road
F. A. I. Project No. IM-H1-1(217)

Scale: 1" = 40' Date: MAY 1992

SHEET No. T6 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	24	29



SEE SHT. T-7 FOR CONTINUATION

TRUE NORTH
SCALE: 1" = 40'

M.L. MOANALUA RD. STA. 39+00
M.L. RAMP "E" STA. 7+45

SEE SHT. T-9 FOR CONTINUATION
M.L. MOANALUA RD. STA. 50+50

DATE	_____
DESIGNED BY	_____
DRAWN BY	_____
CHECKED BY	_____
IN CHARGE	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
QUANTITY BY	_____
CONTROL BY	_____

- KEY:**
- * Remove Exist. Sign(s) & Post(s).
 - ** Remove Exist. & Install New Sign(s) & Post(s).
 - *** Remove Exist. & Install New Sign(s) on Exist. Highway Lighting Standard or Traffic Signal Standard.
 - **** Install New Sign(s) & Post(s).
 - ***** Install New Sign(s) on Exist. Highway Lighting Standard or Traffic Signal Standard.

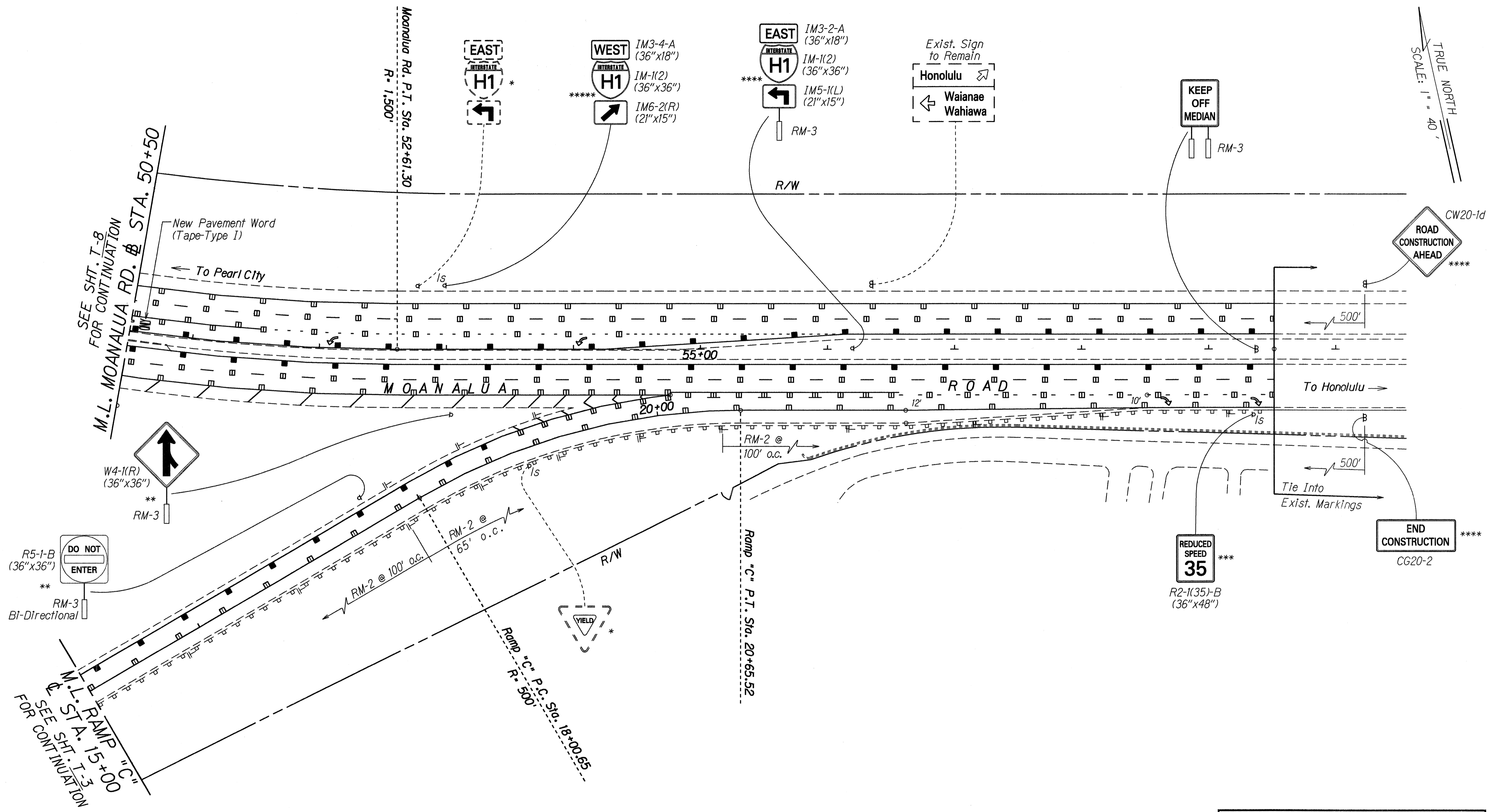
LEGEND FOR AS-BUILT POSTINGS

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PAVEMENT MARKING & SIGNING PLAN
INTERSTATE ROUTE H-1
Waiau Interchange Resurfacing
On & Off Ramps And Moanalua Road
F. A. I. Project No. IM-H1-1(217)
Scale: 1" = 40' Date: May 1992
SHEET No. 78 OF 13 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	25	29



KEY:

- * Remove Exist. Sign(s) & Post(s).
- ** Remove Exist. & Install New Sign(s) & Post(s).
- *** Remove Exist. & Install New Sign(s) on Exist. Highway Lighting Standard or Traffic Signal Standard.
- **** Install New Sign(s) & Post(s).
- ***** Install New Sign(s) on Exist. Highway Lighting Standard or Traffic Signal Standard.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

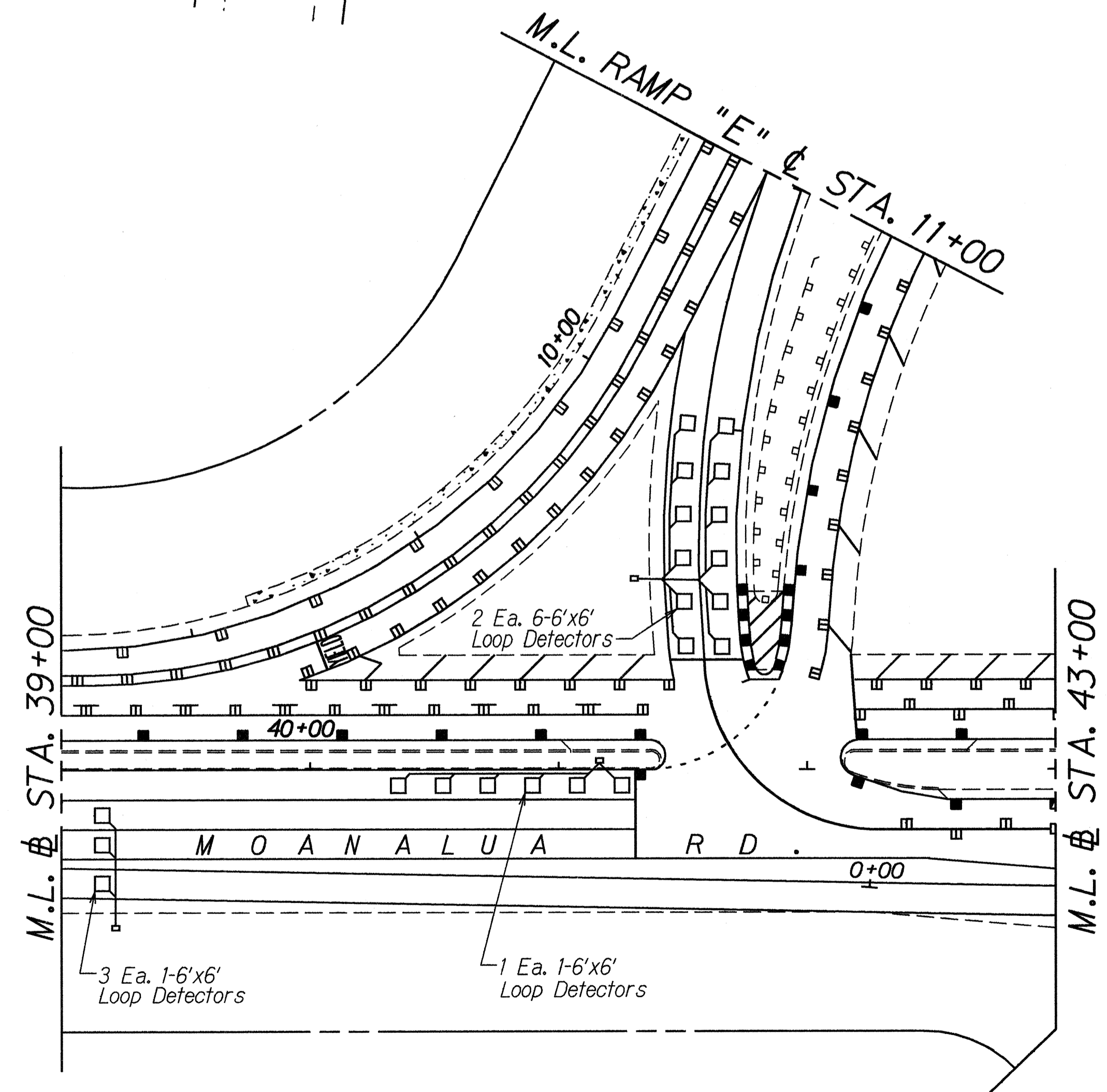
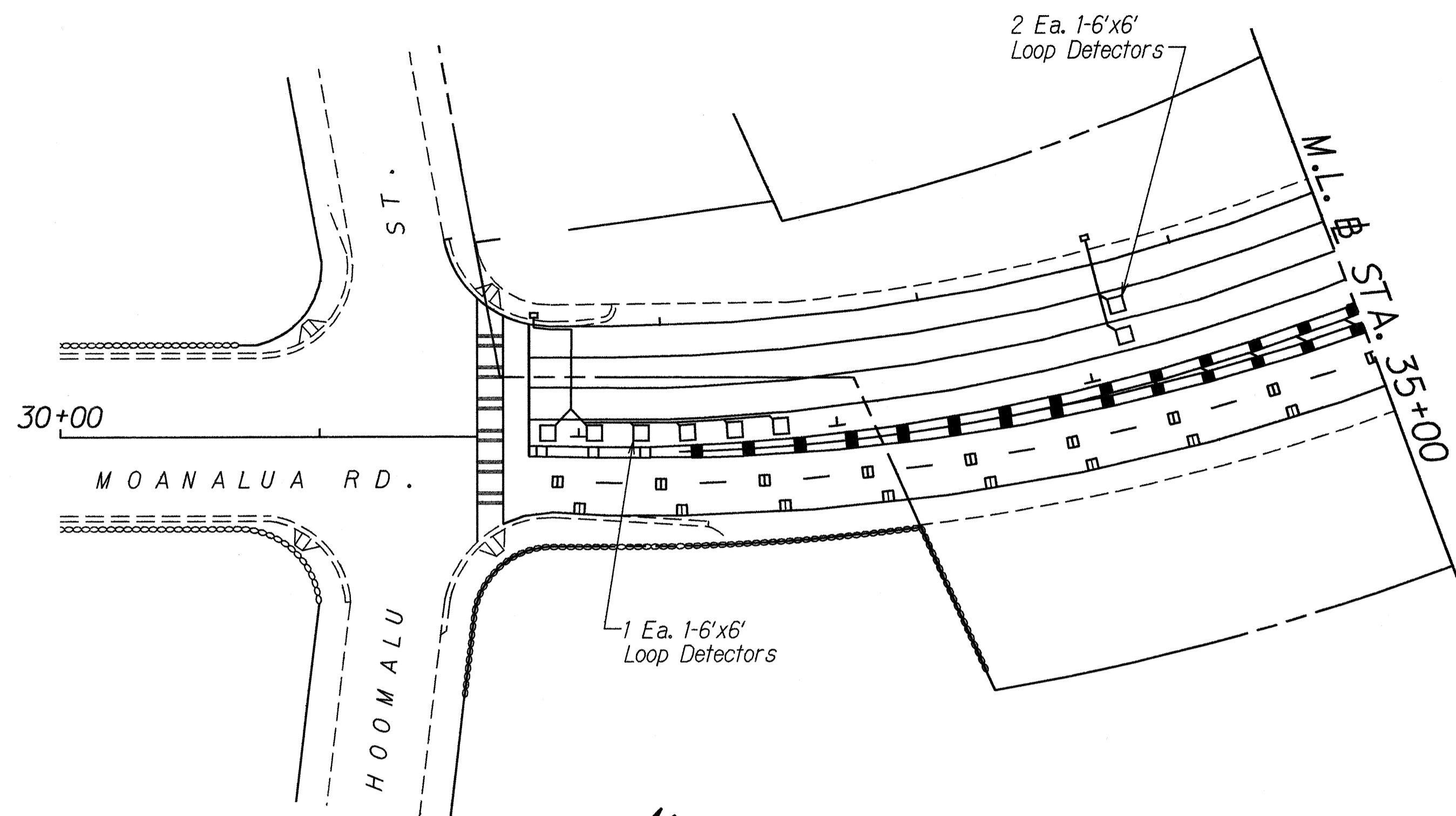
PAVEMENT MARKING & SIGNING PLAN

INTERSTATE ROUTE H-1
Waiau Interchange Resurfacing
On & Off Ramps And Moanalua Road
F. A. I. Project No. IM-H1-1(217)

Scale: 1" = 40' Date: May 1992

SHEET No. T9 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	26	29



DESIGNED BY	DATE
DRAWN BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS

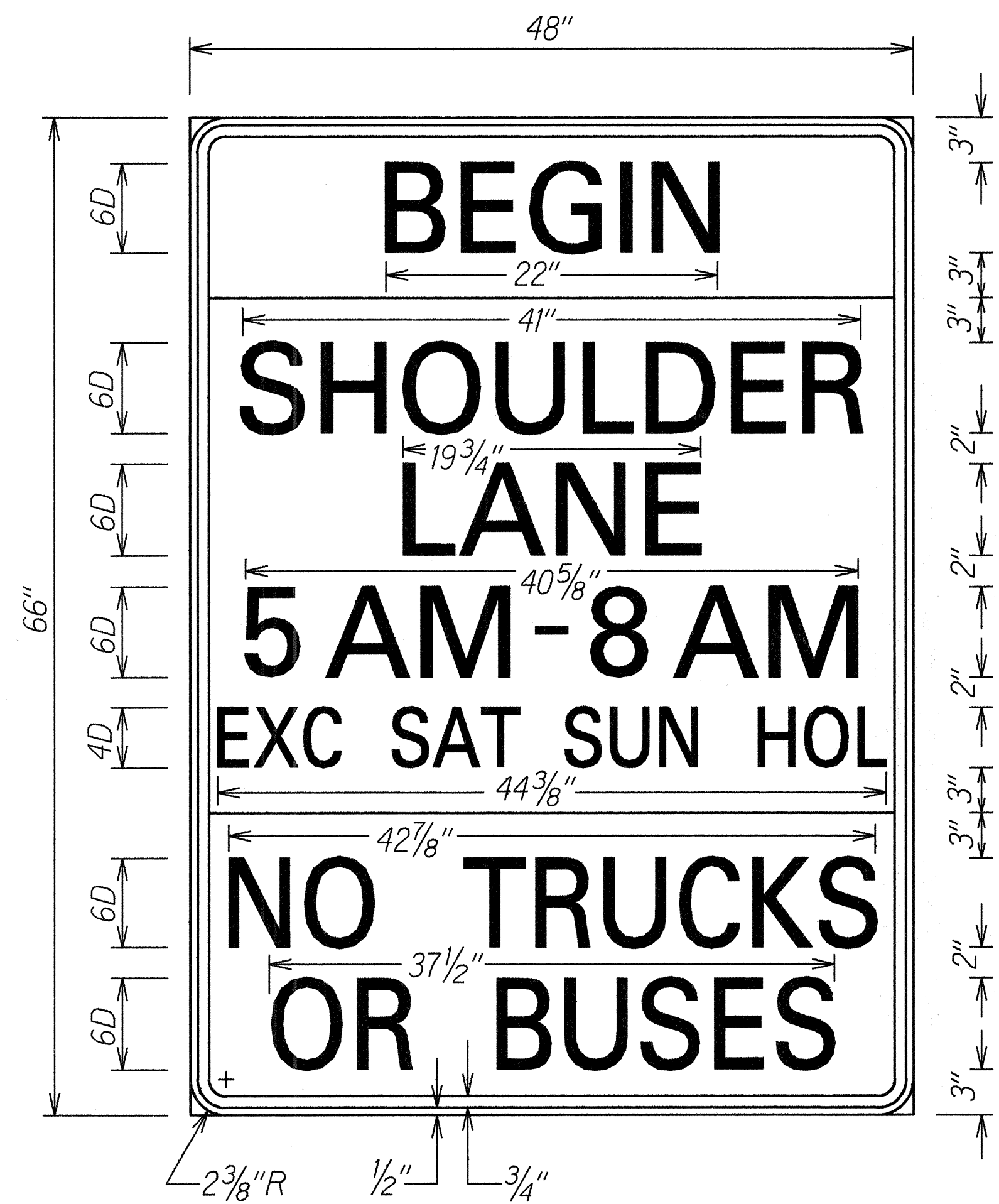
*INTERSTATE ROUTE H-1
Wai'au Interchange Resurfacing
On & Off Ramps And Moanalua Road*

F. A. I. Project No. IM-H1-1(217)

Scale: 1" = 40' - 0" Date: May 1992

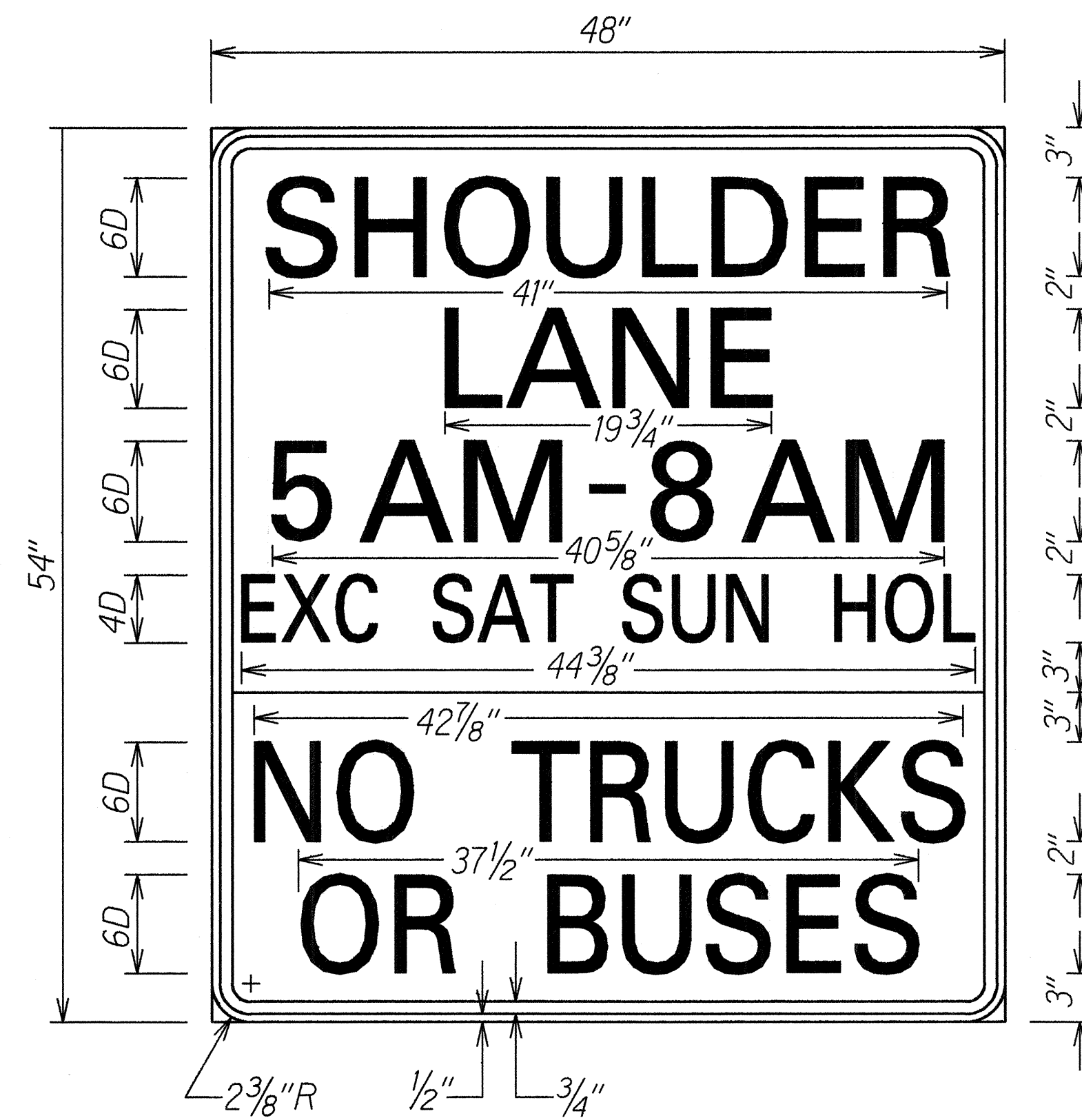
SHEET No. 110 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	27	29



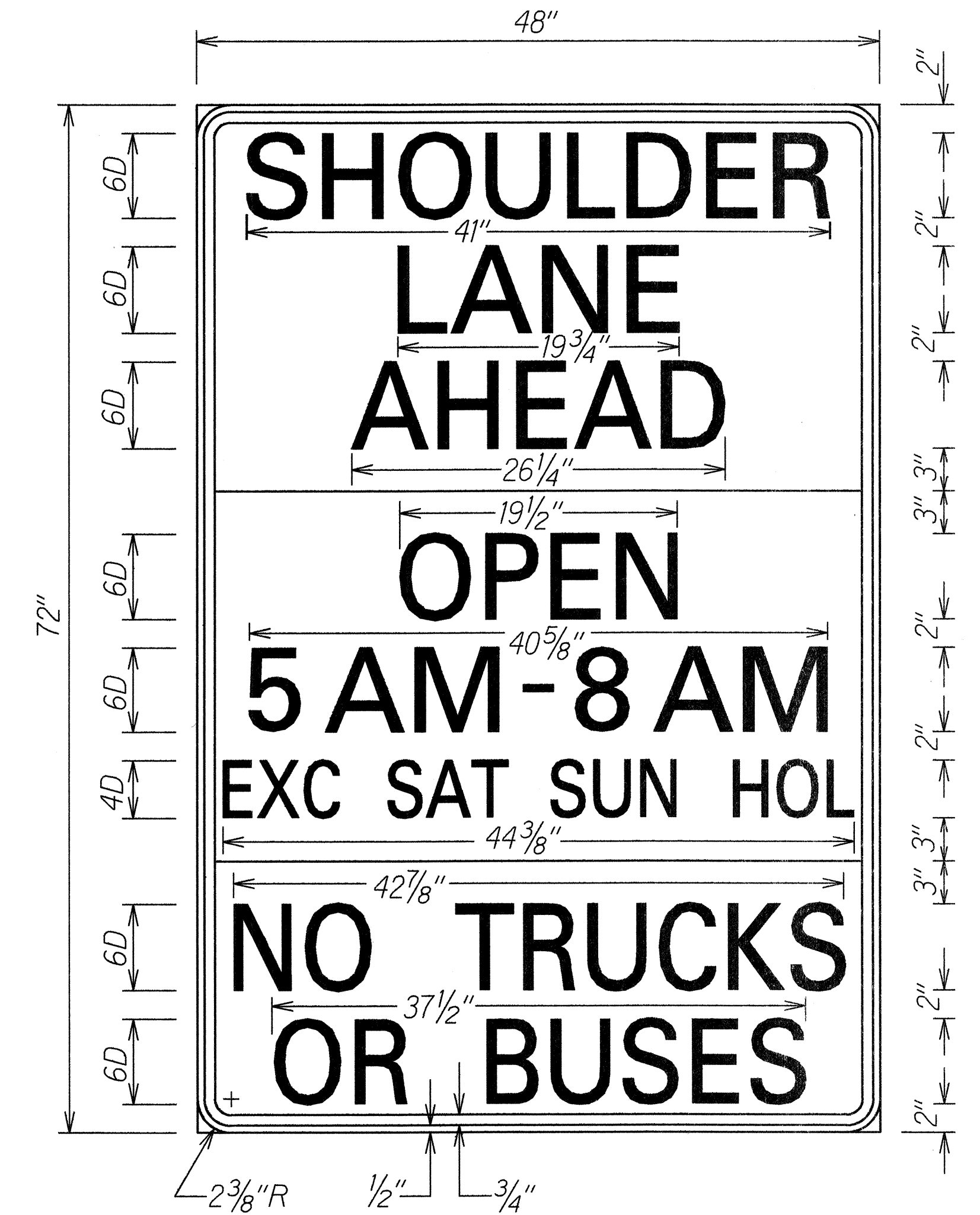
Use 2-Post Flanged Channel
Installation 4.00 Lbs/Ft.

R16-9



Use 2-Post Flanged Channel
Installation 4.00 Lbs/Ft.

R16-10

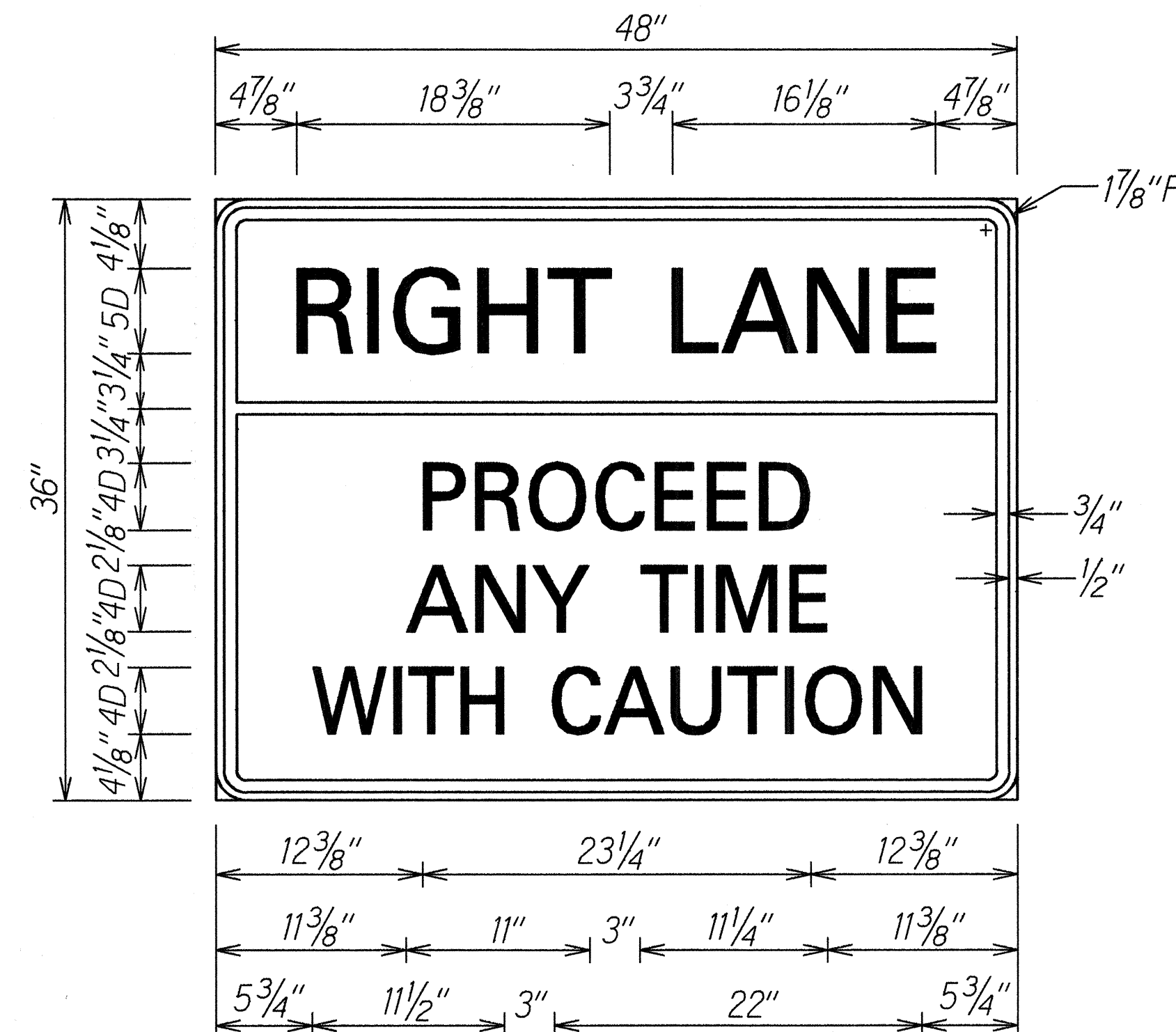


Use 2-Post Flanged Channel
Installation 4.00 Lbs/Ft.

R16-11



R16-13



R16-14

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
DATE	
BY	
DATE	
BY	
DATE	
BY	
DATE	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGN DETAILS

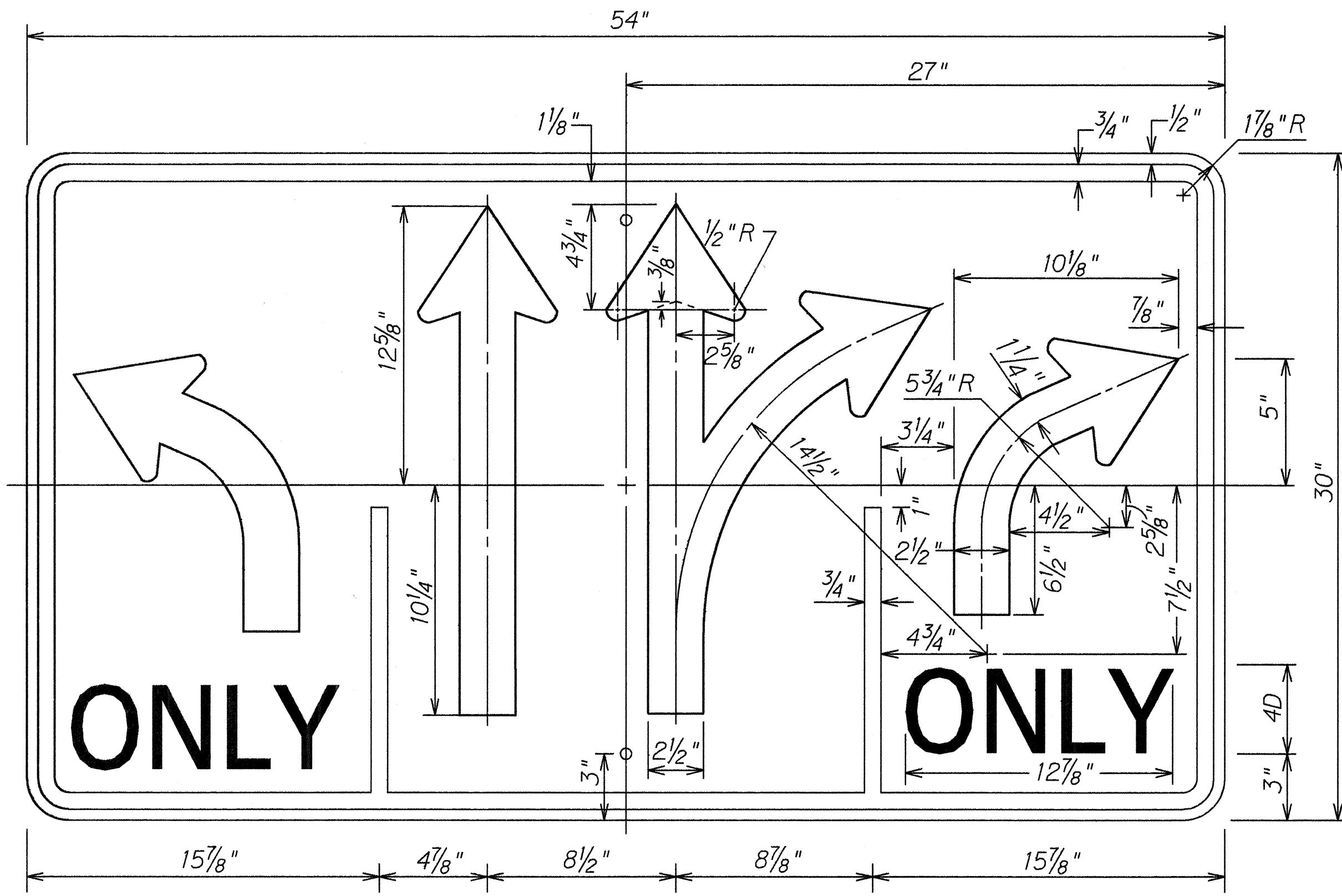
INTERSTATE ROUTE H-1
Waialae Interchange Resurfacing
On & Off Ramps And Moanalua Road

F. A. I. Project No. IM-H1-1(217)

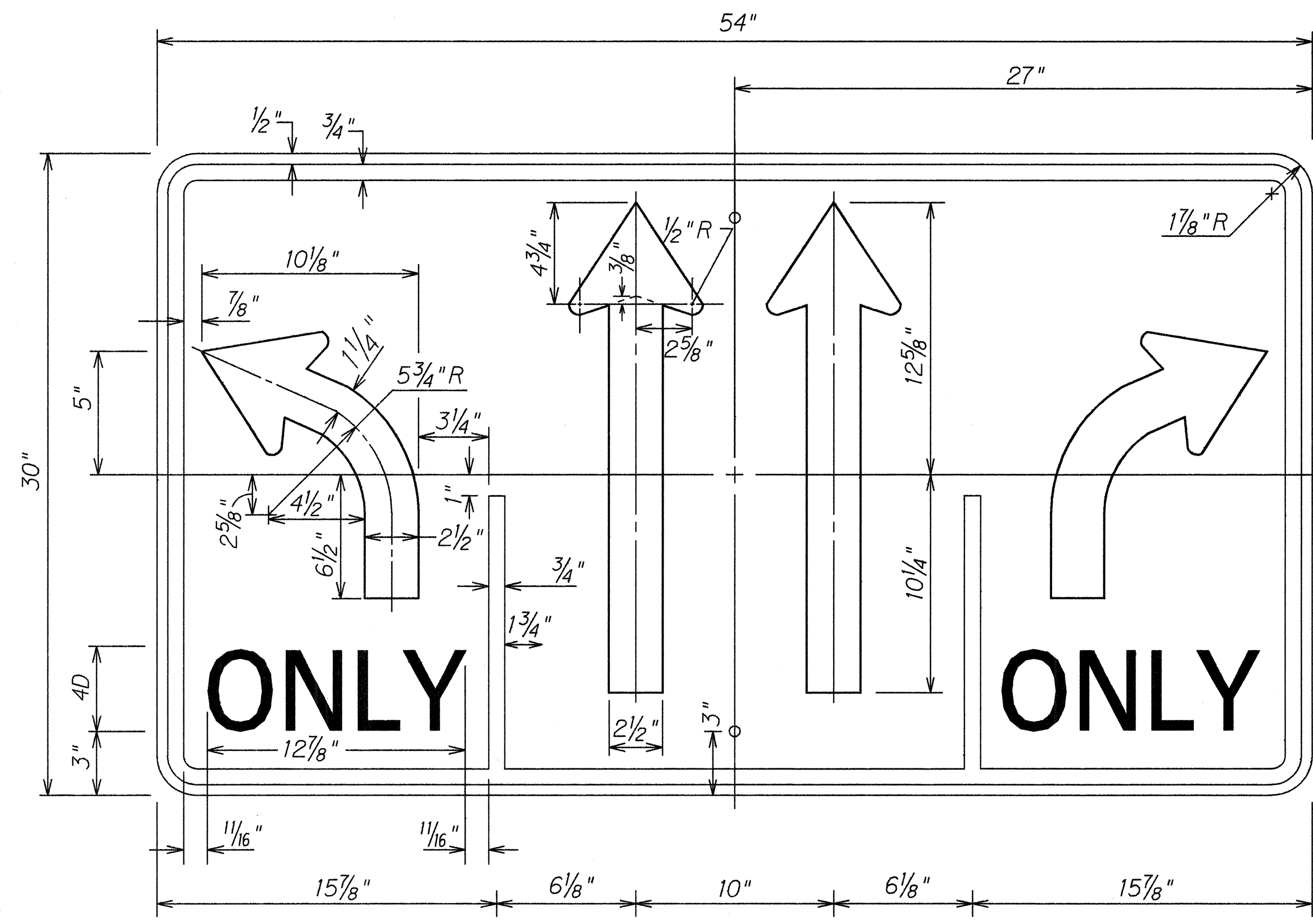
Scale: 1 1/2" = 1'-0" Date: May 1992

SHEET No. 111 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	28	29



R3-8-A



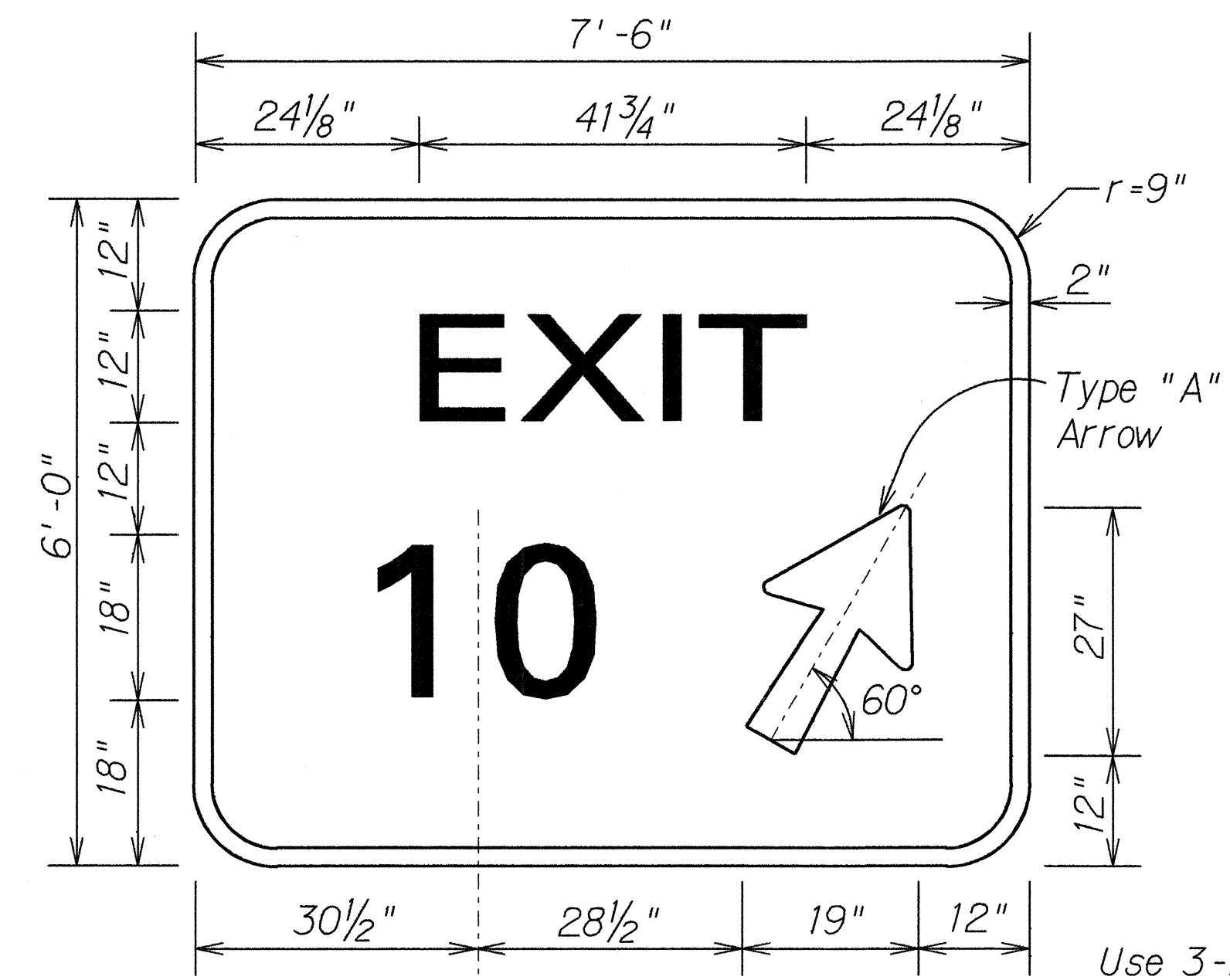
R3-38

ROUTE MARKER SUMMARY

SIGN ASSEMBLY	LOCATION	SIGN NO. AND MESSAGE	TYPE A ASSEMBLY	
			W/POST	W/O POST
IRM-1	H-1 Sta. 70+10 Lt.	IM-1(3) H-1	1	
IRM-2	Moanalua Sta. 33+60 Rt.	IM2-1 IM-1(2) JCT H-1		1
IRM-3	Moanalua Sta. 36+90 Median	IM3-4-A IM-1(2) IM5-1(L) WEST H-1	1	
IRM-4	Moanalua Sta. 38+60 Rt.	IM3-2-A IM-1(2) IM6-2(R) EAST H-1	1	
IRM-5	Ramp "A" Sta. 3+90 Lt.	IM3-2-A IM-1(3) IM6-2(R) EAST H-1		1
IRM-6	Moanalua Sta. 53+00 Lt.	IM3-4-A IM-1(2) IM6-2(R) WEST H-1	1	
IRM-7	Moanalua Sta. 56+20 Median	IM3-2-A IM-1(2) IM5-1(L) EAST H-1	1	
TOTAL			5	2

DESTINATION SIGN SUMMARY

SIGN NO.	LOCATION	MESSAGE	SIZE	NEW PANEL AREA (SQ. FT.)	
				W/O POST	W/POST
D-1	Sta. 64+90± Rt.	EXIT 10 ↗	7'-6" x 6'-0"		45
D-1	Sta. 85+55± Lt.	EXIT 10 ↗	7'-6" x 6'-0"		45
TOTAL				0	90



D-1

Use 3-Post Flanged Channel Installation 4.00 Lbs./Ft. 8'-Ground Level to Midpoint of Sign

DESIGNED BY	DATE
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION



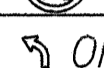
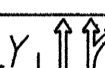

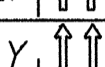
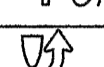



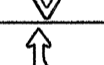
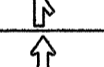
TRAFFIC SIGN DETAILS & SUMMARIES

INTERSTATE ROUTE H-1
Waiala Interchange Resurfacing
On & Off Ramps And Moanalua Road
F. A. I. Project No. IM-H1-1(217)

Not to Scale Date: May 1992

SHEET No. T12 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-1(217)	1992	29	29

TRAFFIC SIGN SUMMARY					
SIGN NO. *	MESSAGE	QUANTITY			
		10 SQ. FT. OR LESS		GREATER THAN 10 SQ. FT.	
		W/POST	W/O POST	W/POST	W/O POST
R1-1-A	1 STOP		1		
R1-2	YIELD	3			
R2-1(25)-A	2 SPEED LIMIT 25				2
R2-1(35)-B	3 SPEED LIMIT 35				1
R3-1-B	1 		2		
R3-4-B	1 	1	1		
R3-8-A	4  ONLY,  ONLY				2
R3-38	5  ONLY,  ONLY			1	3
R4-7-B	3 			1	
R4-7-A	2 			1	1
R5-1-B	1 DO NOT ENTER	3	1		
R5-1a-A	6 WRONG WAY	5	1		
R11-1-B	3 KEEP OFF MEDIAN			1	
R16-5	7 UNLICENSED VEHICLES BICYCLES CYCLES UNDER 5 H.P. PEDESTRIANS KEEP OUT FREEWAY			2	2
R16-9	8 BEGIN SHOULDER LANE 5AM-8AM EXC SAT SUN HOL NO TRUCKS OR BUSES			1	
R16-10	9 SHOULDER LANE 5AM-8AM EXC. SAT SUN HOL NO TRUCKS OR BUSES			1	1
R16-11	10 SHOULDER LANE AHEAD OPEN 5AM-8AM EXC SAT SUN HOL NO TRUCKS OR BUSES			1	
R16-13	5 RIGHT LANE NO TRUCKS OR BUSES			2	
R16-14	11 RIGHT LANE PROCEED ANYTIME WITH CAUTION			1	1
W1-8(L)-B	12 	3	1		
W3-2a	13 			1	
W4-1(R)-B	1 	1	1		
W4-1(L)-A	13 			2	
W13-2(35)	2 EXIT 35 M.P.H.			2	
W13-3(25)	2 RAMP 25 M.P.H.			2	1
W13-3(35)	2 RAMP 35 M.P.H.				1
TOTAL		16	8	19	15

* KEY: 1=(36"x36"), 2=(48"x60"), 3=(36"x48"), 4=(54"x30"), 5=(54"x36"), 6=(42"x30"), 7=(36"x42"), 8=(48"x66"), 9=(48"x54"), 10=(48"x72"), 11=(48"x36"), 12=(30"x36"), 13=(48"x48")

REFLECTOR MARKER SUMMARY								
TYPE	QUANTITY							
	W/O POST		W/FLEXIBLE POST		W/STEEL POST		W/FLEXIBLE POST, TYPE A	
	YELLOW	WHITE	YELLOW	WHITE	YELLOW	WHITE	YELLOW	WHITE
RM-2			79	118	31	62	5	
RM-3	32		1					
RM-9	2							

PAVEMENT MARKING SUMMARY	
DESCRIPTION	QUANTITY
PAVEMENT MARKERS	
TYPE A _____	1,230 Ea.
TYPE CL _____	1,380 Ea.
TYPE DL _____	3 Ea.
TYPE HL _____	270 Ea.
TAPE - TYPE I	
4-INCH PAVEMENT STRIPE (WHITE) _____	5,380 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	960 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (WHITE) _____	2,470 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	70 L.F.
PAVEMENT ARROW _____	33 EA.
PAVEMENT WORD _____	17 EA.
TAPE - TYPE II OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	17,100 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	9,250 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	4,850 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	1,150 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	320 L.F.
12-INCH PAVEMENT STRIPE (YELLOW) _____	1,900 L.F.
THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	5,210 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	760 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	120 L.F.
CROSSWALK MARKINGS _____	6 LANES

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

CONSTRUCTION SIGN SUMMARY				
SIGN NO.	LOCATION	MESSAGE	W/POSTS	W/O POST
CW20-1d	H-1 @ Sta. 56+26±	ROAD CONSTRUCTION AHEAD	1	
CG20-2	H-1 @ Sta. 57+98±	END CONSTRUCTION	1	
CW20-1d	H-1 @ Sta. 108+00±	ROAD CONSTRUCTION AHEAD	1	
CG20-2	H-1 @ Sta. 110+20±	END CONSTRUCTION	1	
CG20-2	Moanalua Rd. @ Sta. 26+60± Lt.	END CONSTRUCTION	1	
CW20-1d	Moanalua Rd. @ Sta. 26+60± Rt.	ROAD CONSTRUCTION AHEAD	1	
CW20-1d	Moanalua Rd. @ Sta. 64+50± Lt.	ROAD CONSTRUCTION AHEAD	1	
CG20-2	Moanalua Rd. @ Sta. 64+50± Rt.	END CONSTRUCTION	1	
TOTAL			8	0

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
MISCELLANEOUS TRAFFIC
SUMMARIES
 INTERSTATE ROUTE H-1
 Wai'au Interchange Resurfacing
 On & Off Ramps And Moanalua Road
 F. A. I. Project No. IM-H1-1(217)
 Date: May 1992
 SHEET No. T13 OF 13 SHEETS