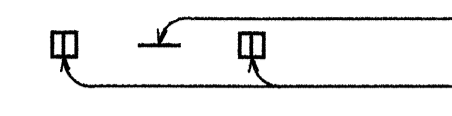
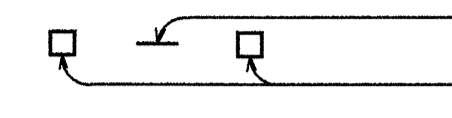
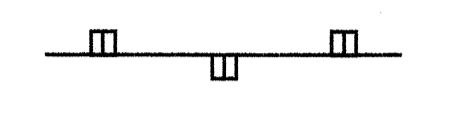
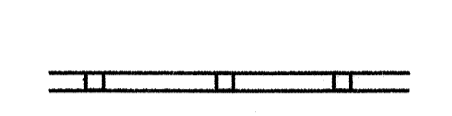





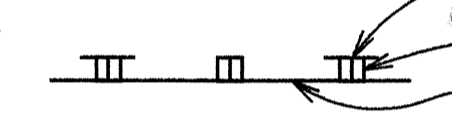



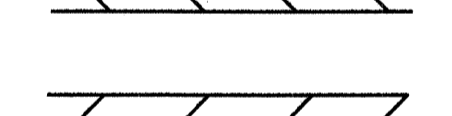






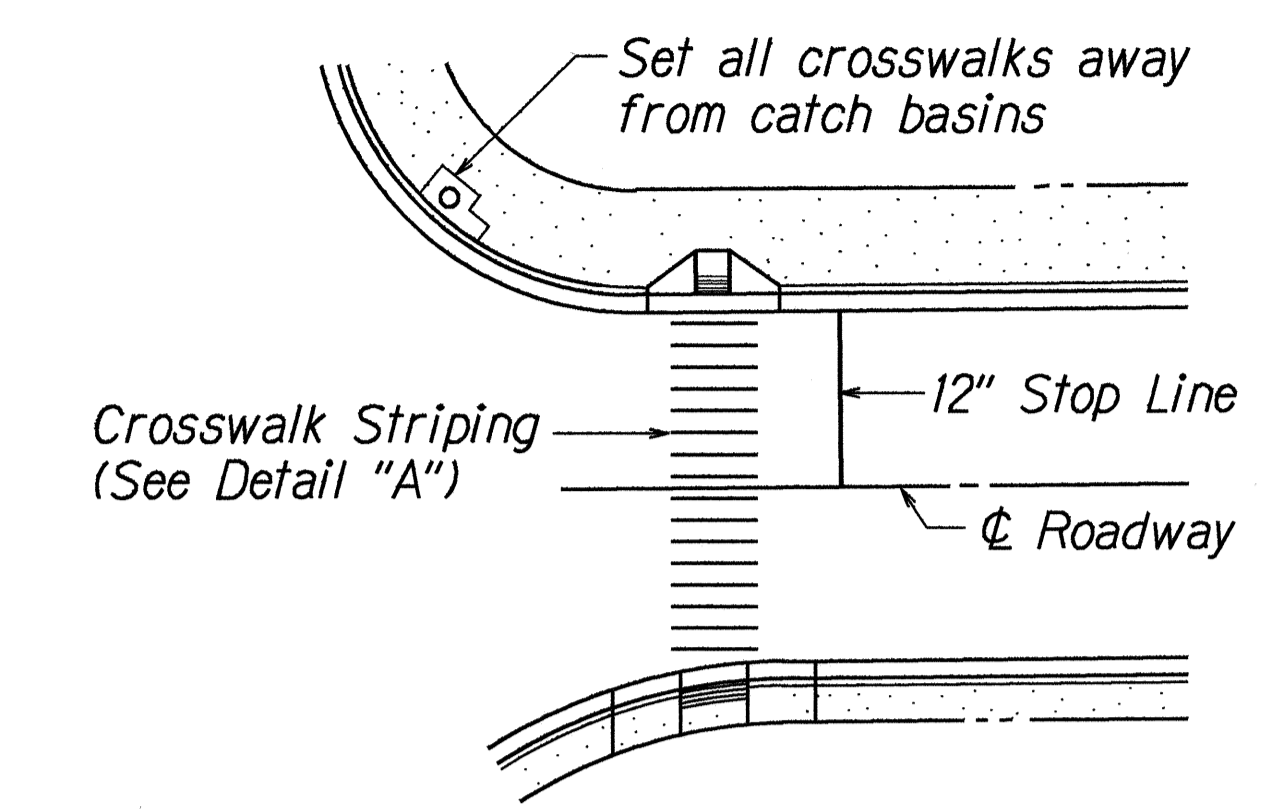
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-H20(3)	1998	43	51

LEGEND

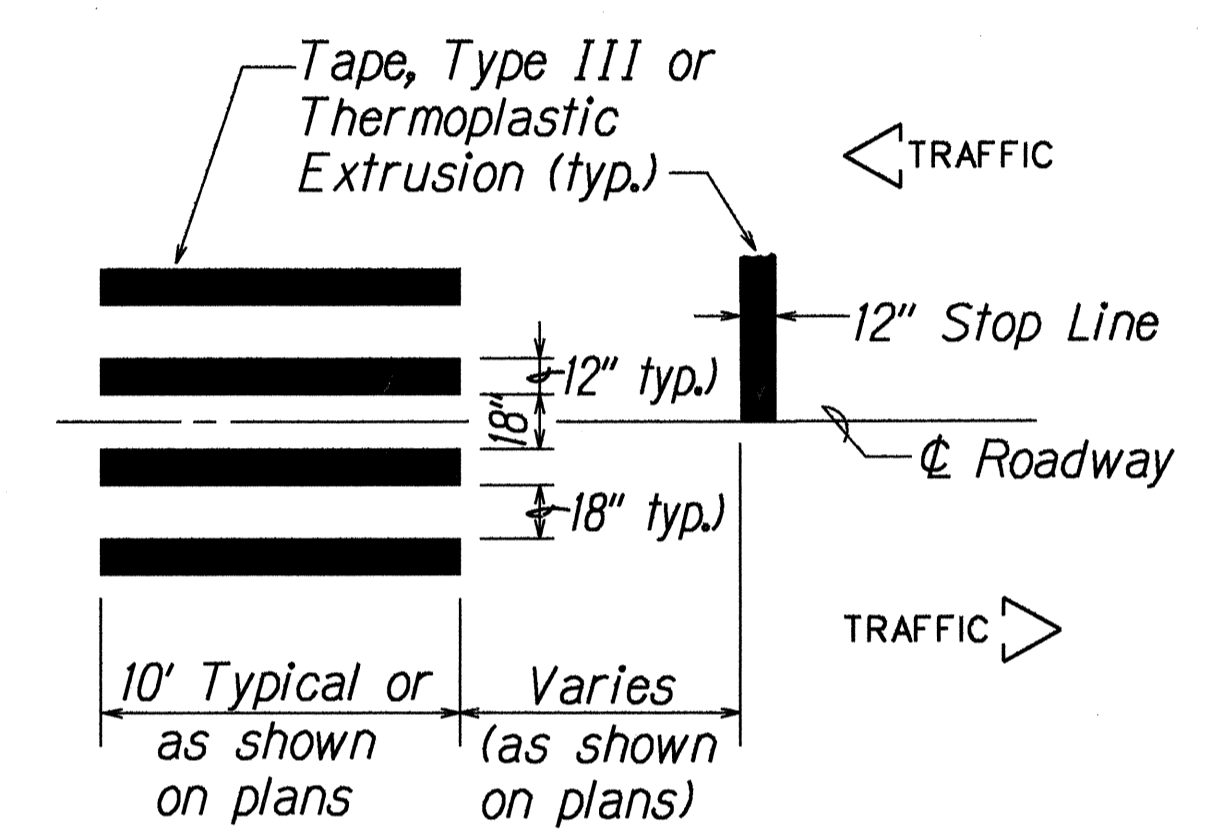
-  4 each Type A Raised Pavement Markers
Type C Raised Pavement Markers @ 40'-0" o.c.
-  4 each Type J Raised Pavement Markers
Type D Raised Pavement Markers @ 40'-0" o.c.
-  8" White Stripe with Type C Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
-  4" Double Solid Yellow with Type D Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
-  4" Double Solid Yellow Stripes with Type H Raised Pavement Markers @ 20'-0" o.c. (Tape, Type II or Thermoplastic Extrusion)
-  4" Yellow Edge Stripe with Type H Raised Pavement Markers @ 40'-0" o.c. (Tape, Type II or Thermoplastic Extrusion)
-  4" Double Solid White Stripes with Type C 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 C Raised Pavement Markers @ 20'-0" o.c.
4" White Stripe (Tape, Type I or Thermoplastic Extrusion)
-  4" or 8" White Edge Stripe with Type C Raised Pavement Markers @ 40'-0" o.c. (Tape, Type II or Thermoplastic Extrusion)
-  4" White Guide Lines (Tape, Type III or Thermoplastic Extrusion except for bus bays)
-  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 (Tape, Type III or Thermoplastic Extrusion)
-  Pavement Arrow (Tape, Type III or Thermoplastic Extrusion)
-  Pavement Word (Tape, Type III or Thermoplastic Extrusion)
-  4 Each Type J Raised Pavement Markers
Type D Raised Pavement Markers @ 40'-0" o.c.
Type H 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 C Markers @ 40'-0" o.c. (Tape, Type III or 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. Final locations of all signs shall be approved by the Engineer prior to any installation work.
5. 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.
6. Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
7. All pavement striping shall be as noted on the legend or plans.
8. 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.
9. The Contractor shall erect at the beginning of the project and at the end of the project advance construction warning signs placed as indicated on the plans or as directed by the Engineer for the duration of the highway project and shall be maintained by the Contractor. These signs shall be placed in addition to the required traffic control signs called for in Section 645 - Traffic Control. The advance construction warning signs shall be new and become the property of the State. The Contractor shall remove, clean, and deliver the signs and posts to the District Baseyard, or as directed by the Engineer, upon the completion of the project.
10. Curb marking shall include top of curb and both sides.
11. Backing for all new Regulatory and Warning Signs shall not be spliced.
12. All sign panels shall conform to Section 621 of Special Provisions and the latest editions and amendments of the following FHWA publications:
 - a. "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD)
 - b. "Standard Highway Signs"
 - c. "Standard Alphabets for Highway Signs"
13. Border, messages, arrows, symbols and shields shall conform to details as shown on the plans and as specified in the MUTCD.
14. Sign messages shall be as indicated on the plan.
15. All panels shall be reflectorized in accordance with Section 712.20 of the Standard Specifications. Minimum width of panels shall be 2 feet, abutting edges of panels shall be in only one direction if vertical abutting edges are used, no horizontal abutting edges shall be allowed and vice versa.
16. All new and relocated signs and markers installed on pipe posts, light standard or expressway sign post are to be mounted with band brackets and steel braces.
17. Final location of all sign post installed within the sidewalk areas shall maintain a minimum clearance width of 36 inches from sidewalk edge to provide for wheelchair accessibility.
18. Removing existing signs and reinstalling on new post shall not be paid for separately, but shall be considered incidental to the various signing items.
19. Signs placed along bikeways shall have a minimum height clearance of 8'-0".
20. All existing sign post(s) to remain within the sidewalk area shall meet the minimum clear width of 36 inches from the sidewalk edge. Where necessary, the existing sign post(s) shall be relocated to meet the minimum clear width. This work shall not be paid for separately but shall be considered incidental to the various signing items.



PLAN

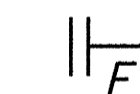
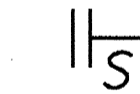


DETAIL "A"

CROSSWALK STRIPING DETAIL

Not to Scale

LEGEND:

-  Reflector Marker (RM-2) with Flexible Post
-  Reflector Marker (RM-2) with Steel Post

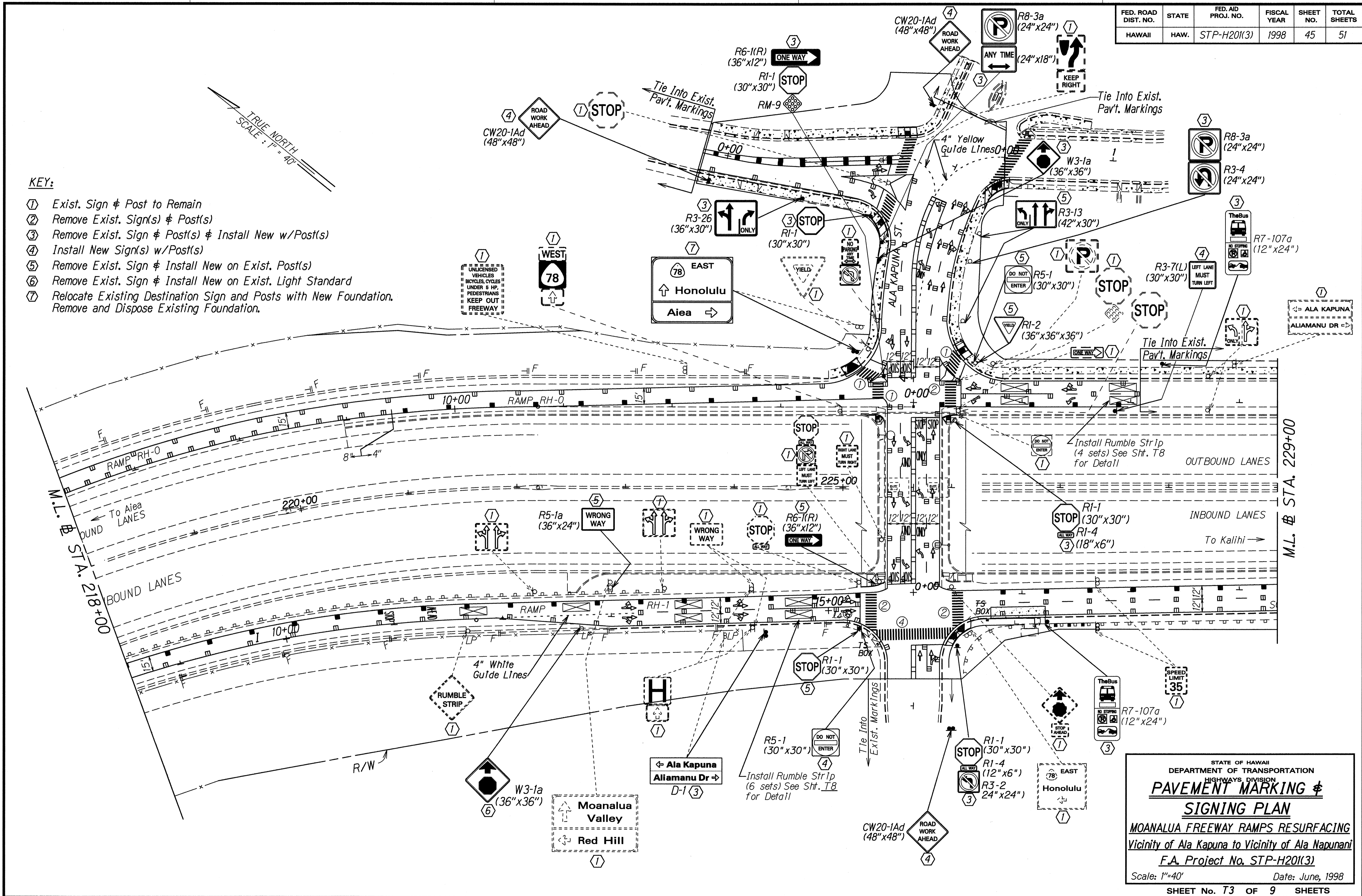
SURVEY PLOTTED BY: _____ DATE: _____
 DRAWN BY: AL. ERABUJILI
 TRACED BY: _____
 DESIGNED BY: GUY K. KUBIKI
 IN CHARGE: _____
 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 TO BE: _____
 NO. _____

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING
LEGEND, DETAIL & NOTES
 MOANALUA FREEWAY RAMPS RESURFACING
 Vicinity of Ala Kapuna to Vicinity of Ala Napunani
 Fed. Aid Project No. STP-H20(3)
 Scale: As Noted Date: June, 1998

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-H20I(3)	1998	45	51

KEY:

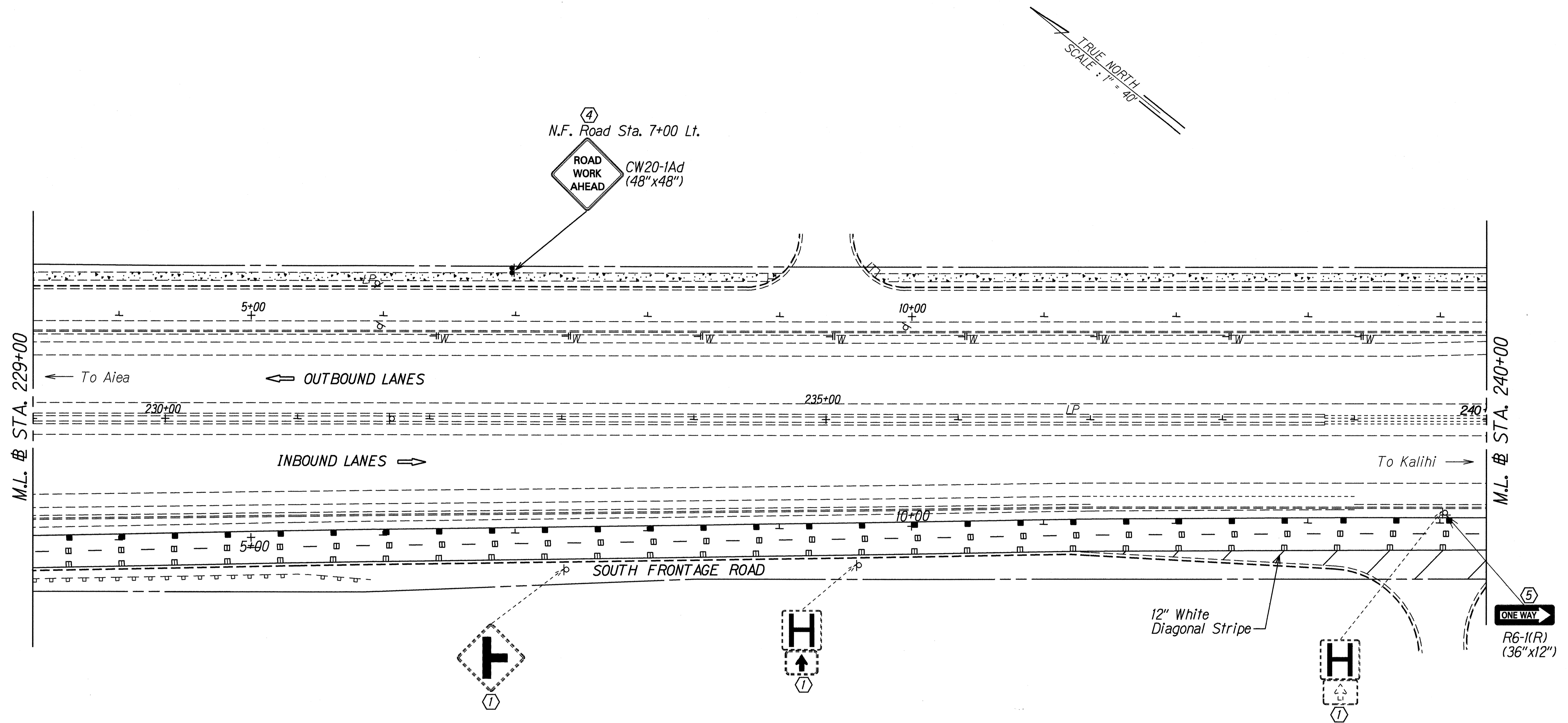
- ① Exist. Sign & Post to Remain
- ② Remove Exist. Sign(s) & Post(s)
- ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
- ④ Install New Sign(s) w/Post(s)
- ⑤ Install Exist. Sign & Install New on Exist. Post(s)
- ⑥ Remove Exist. Sign & Install New on Exist. Light Standard
- ⑦ Relocate Existing Destination Sign and Posts with New Foundation. Remove and Dispose Existing Foundation.



DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: M. L. KAHALUI
 DESIGNED BY: GUY K. KEBE
 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 TO: _____
 NO. 4/10/98

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**PAVEMENT MARKING &
 SIGNING PLAN**
 MOANALUA FREEWAY RAMPS RESURFACING
 Vicinity of Ala Kapuna to Vicinity of Ala Napunani
 F.A. Project No. STP-H20I(3)
 Scale: 1"=40' Date: June, 1998
 SHEET No. T3 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-H20(3)	1998	46	51



KEY:

- ① Exist. Sign & Post to Remain
- ② Remove Exist. Sign(s) & Post(s)
- ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
- ④ Install New Sign(s) w/Post(s)
- ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
- ⑥ Remove Exist. Sign & Install New on Exist. Light Standard
- ⑦ Relocate Existing Destination Sign and Posts with New Foundation. Remove and Dispose Existing Foundation.

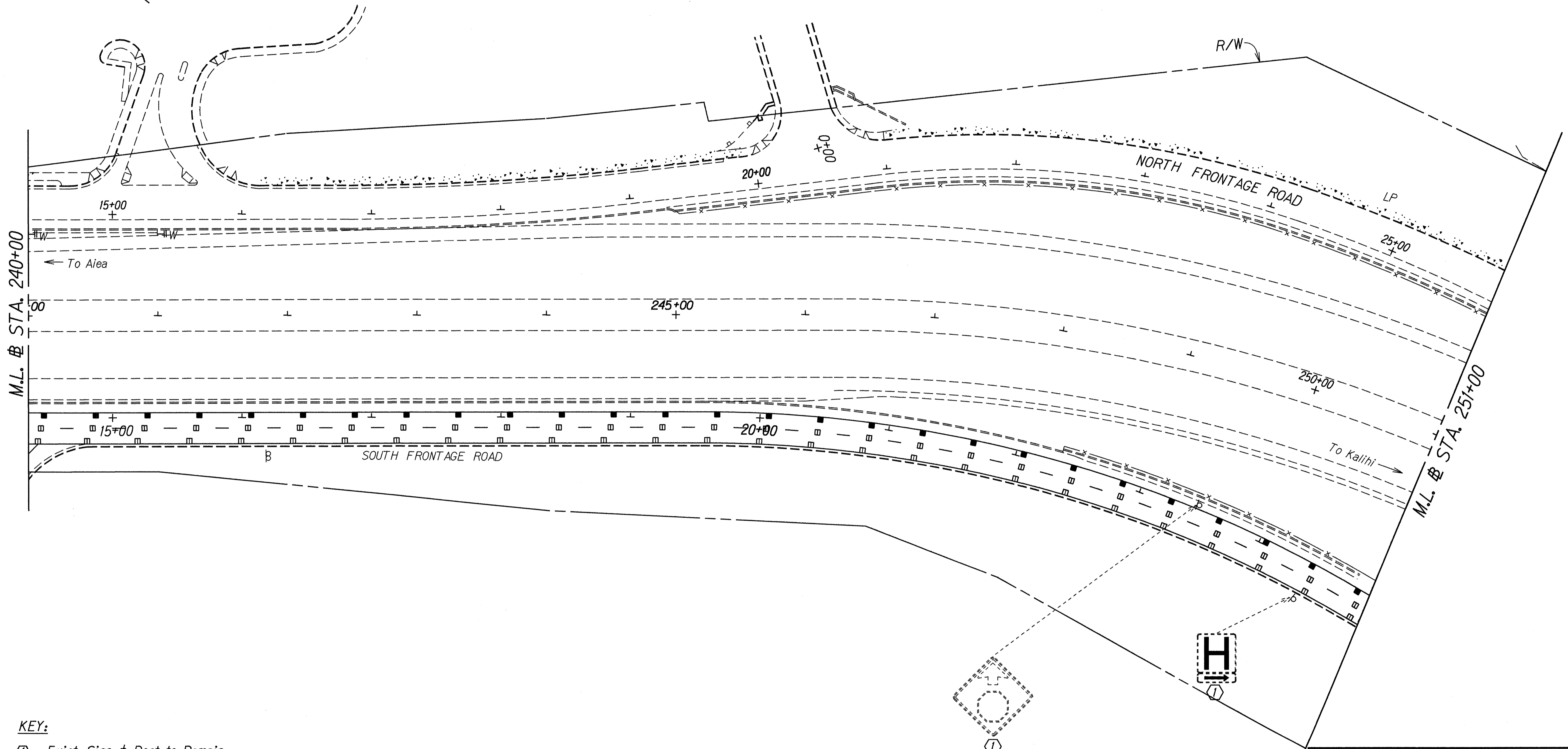
SURVEY PLOTTED BY: DATE: 12/15/98
 DRAWN BY: M. T. KAHALUI
 DESIGNED BY: GUY K. KAHALUI
 CHECKED BY: N. AMOS
 ORIGINAL PLAN: 12/15/98

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING & SIGNING PLAN
 MOANALUA FREEWAY RAMPS RESURFACING
 Vicinity of Ala Kapuna to Vicinity of Ala Napunani
 F.A. Project No. STP-H20(3)
 Scale: 1"=40' Date: June, 1998

SHEET No. T4 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-H20(3)	1998	47	51

TRUE NORTH
SCALE: 1" = 40'



ORIGINAL PLAN
DATE: 02/15/97
DESIGNED BY: GUY KUBIKI
CHECKED BY: N. Amalita

KEY:

- ① Exist. Sign & Post to Remain
- ② Remove Exist. Sign(s) & Post(s)
- ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
- ④ Install New Sign(s) w/Post(s)
- ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
- ⑥ Remove Exist. Sign & Install New on Exist. Light Standard
- ⑦ Relocate Existing Destination Sign and Posts with New Foundation. Remove and Dispose Existing Foundation.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKING &
SIGNING PLAN**

MOANALUA FREEWAY RAMPS RESURFACING
Vicinity of Ala Kapuna to Vicinity of Ala Napunani
F.A. Project No. STP-H20(3)

Scale: 1"=40' Date: June, 1998

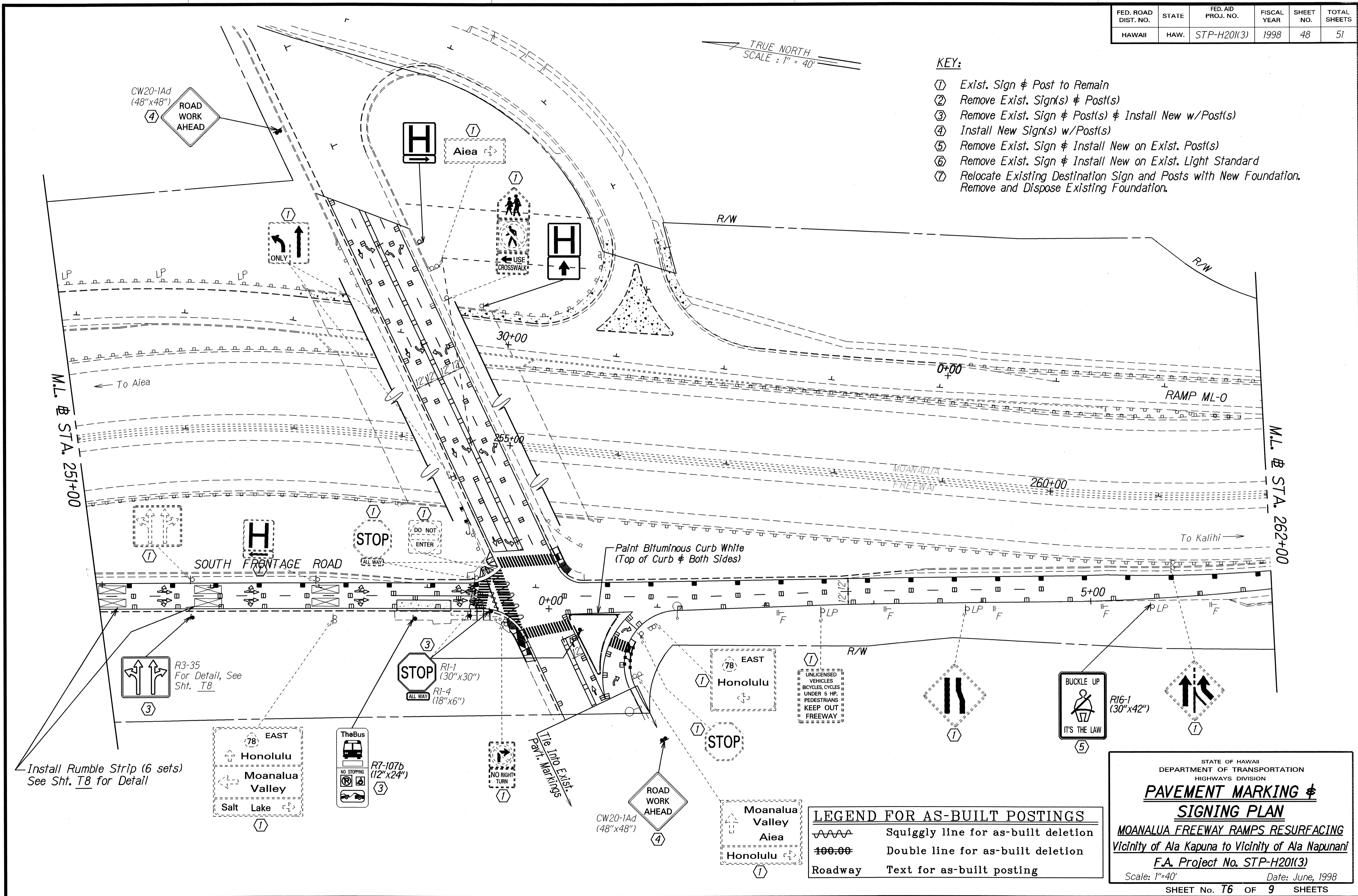
SHEET No. T5 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-H201(3)	1998	48	51

TRUE NORTH
SCALE: 1" = 40'

KEY:

- ① Exist. Sign & Post to Remain
- ② Remove Exist. Sign(s) & Post(s)
- ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
- ④ Install New Sign(s) w/Post(s)
- ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
- ⑥ Remove Exist. Sign & Install New on Exist. Light Standard
- ⑦ Relocate Existing Destination Sign and Posts with New Foundation. Remove and Dispose Existing Foundation.



Install Rumble Strip (6 sets)
See Sht. T8 for Detail

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

MOANALUA FREEWAY RAMPS RESURFACING
Vicinity of Ala Kapuna to Vicinity of Ala Napunani
F.A. Project No. STP-H201(3)

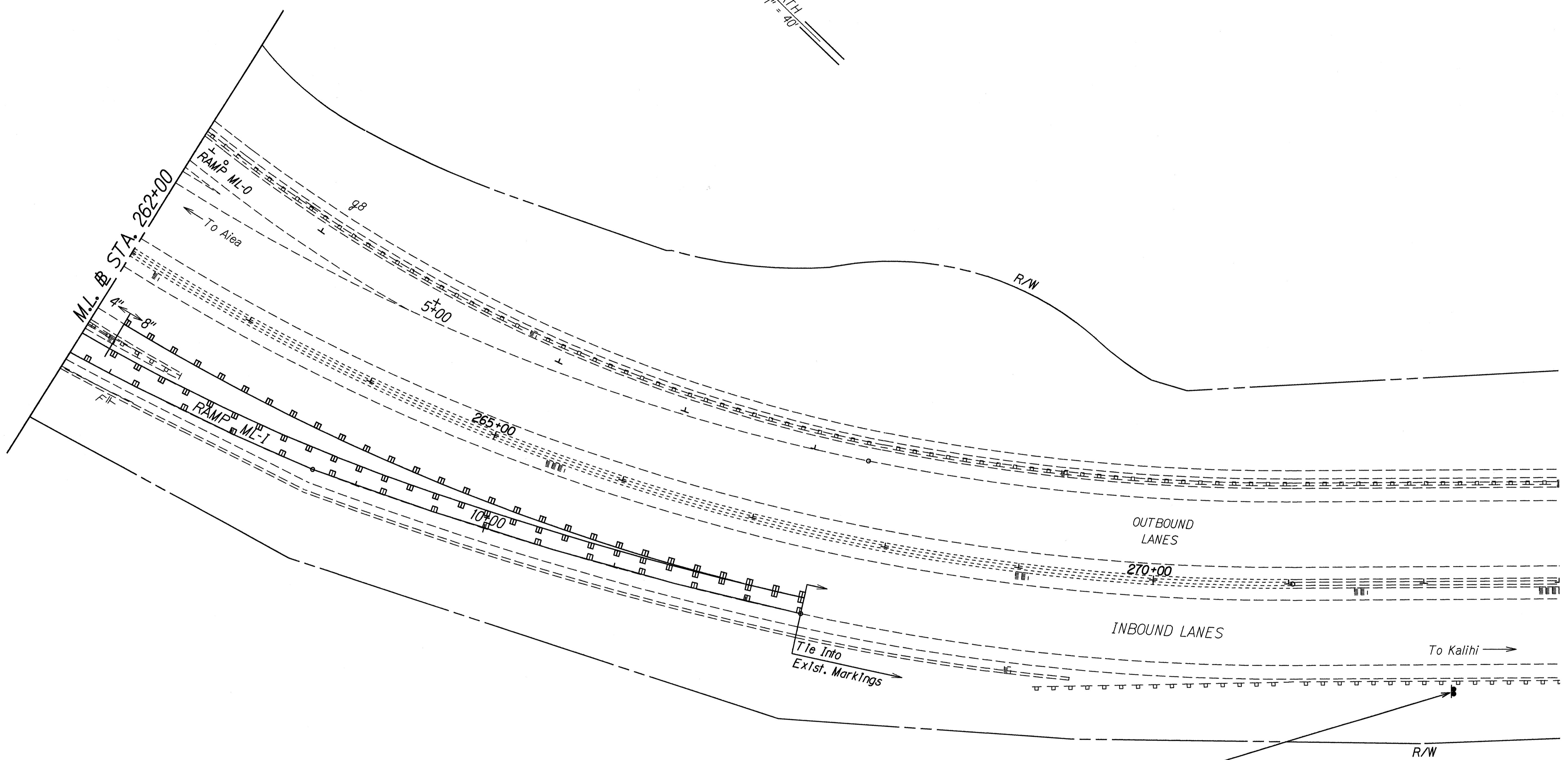
Scale: 1"=40' Date: June, 1998

SHEET No. T6 OF 9 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
TOLONG	
WISSE/2	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-H20(3)	1998	49	51

TRUE NORTH
SCALE: 1" = 40'



KEY:

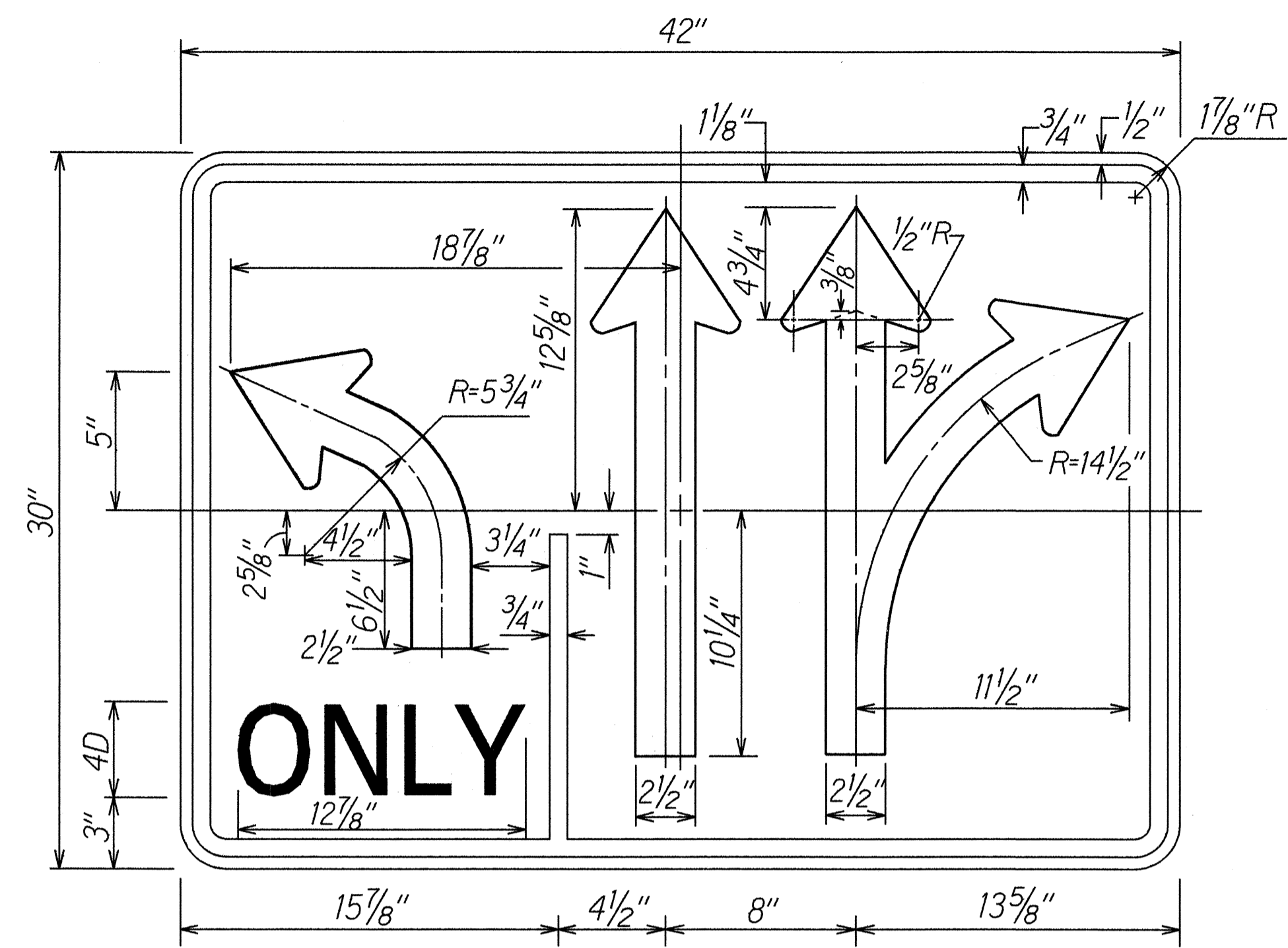
- ① Exist. Sign & Post to Remain
- ② Remove Exist. Sign(s) & Post(s)
- ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
- ④ Install New Sign(s) w/Post(s)
- ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
- ⑥ Remove Exist. Sign & Install New on Exist. Light Standard
- ⑦ Relocate Existing Destination Sign and Posts with New Foundation. Remove and Dispose Existing Foundation.

SURVEY PLOTTED BY: DATE: 12/15/98
 DRAWN BY: M. Takahashi
 CHECKED BY: G. K. K. K.
 NOTE BOOK: 10/10/98
 No. 4/10/1998

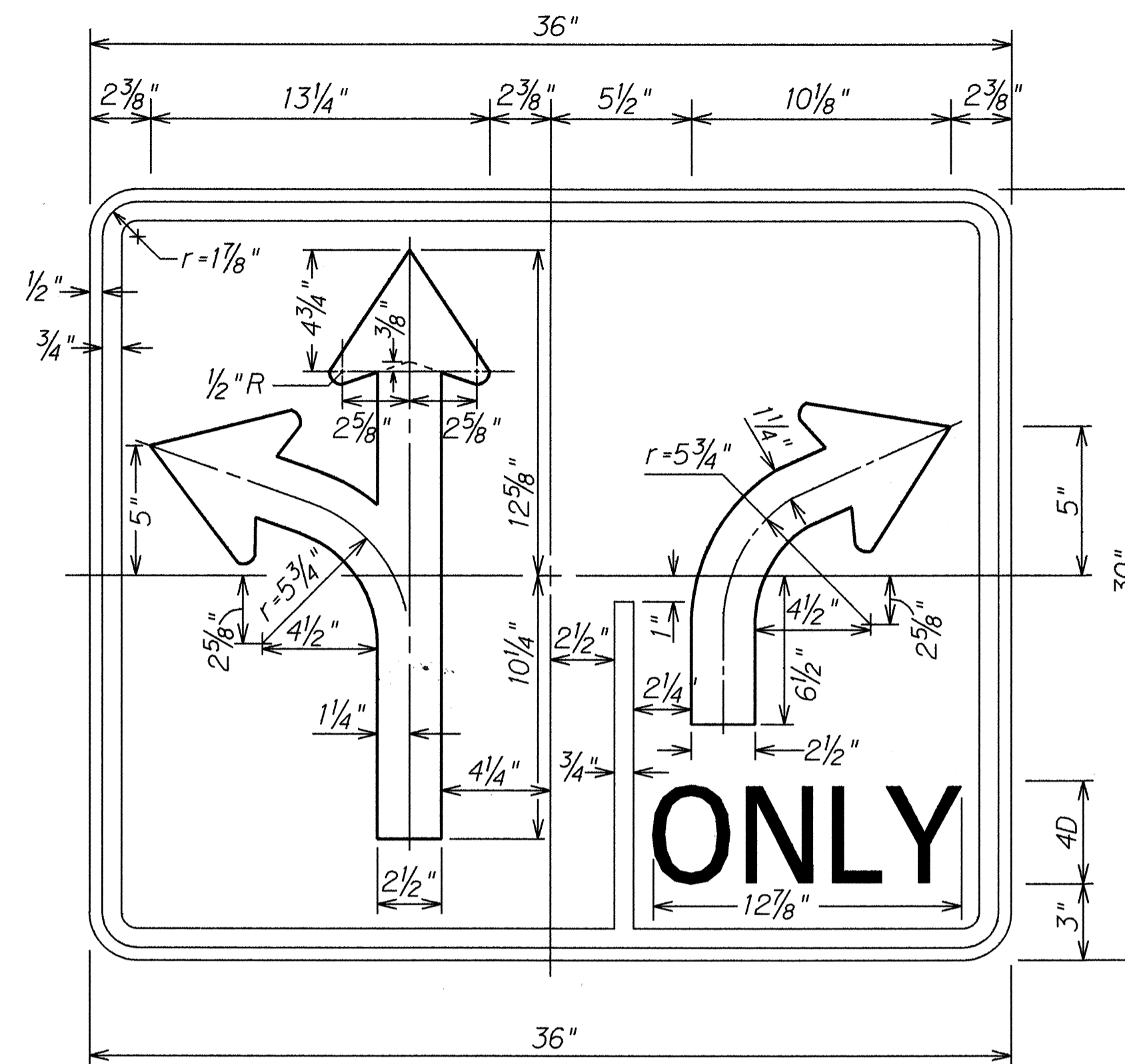
CG20-2A
(48" x 24")
END ROAD WORK
④
M.F. Sta. 272+20± Rt.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING & SIGNING PLAN
 MOANALUA FREEWAY RAMPS RESURFACING
 Vicinity of Ala Kapuna to Vicinity of Ala Napunani
 F.A. Project No. STP-H20(3)
 Scale: 1"=40' Date: June, 1998

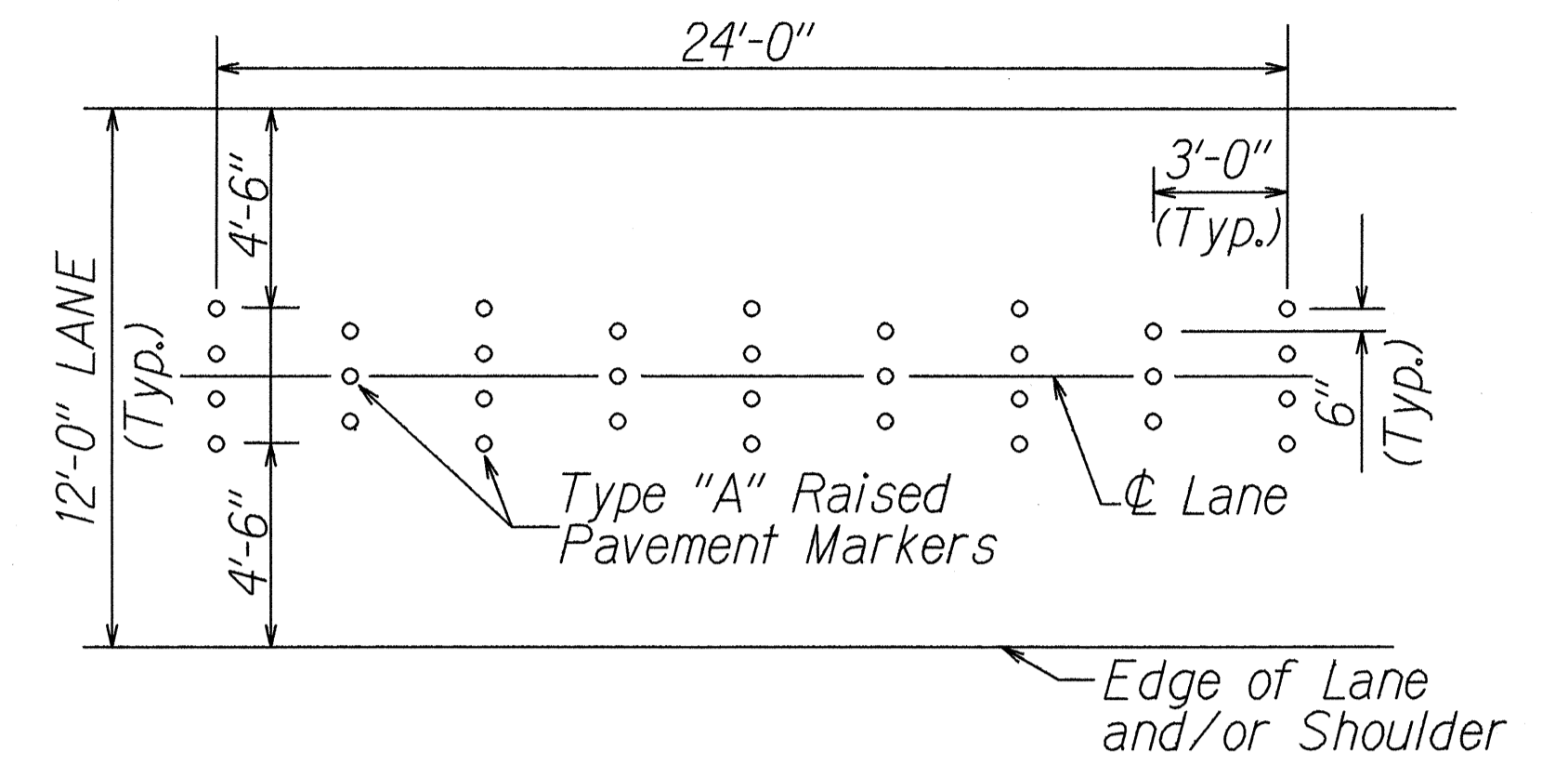
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-H201-(3)	1998	50	51



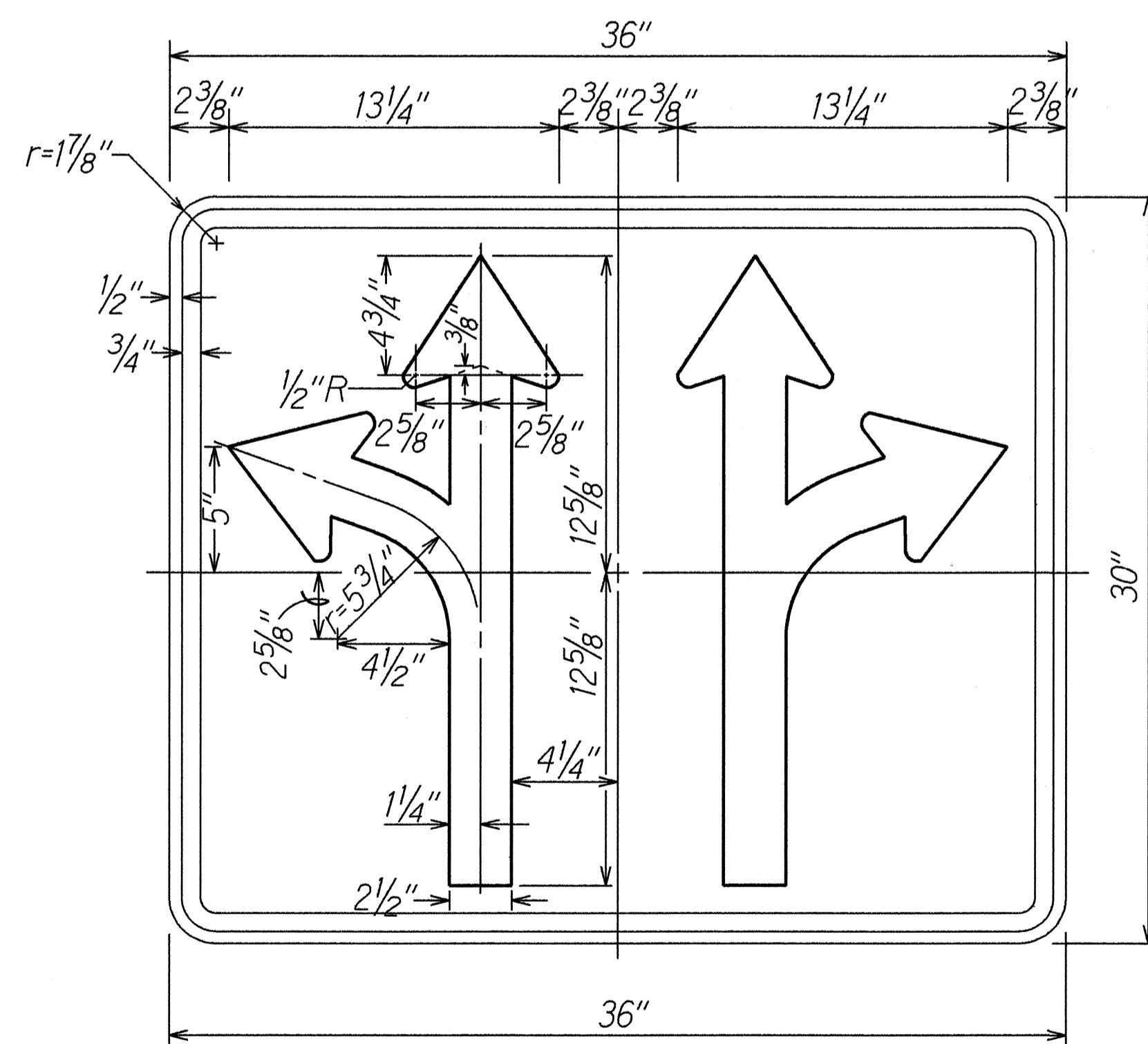
R3-13
Not to Scale



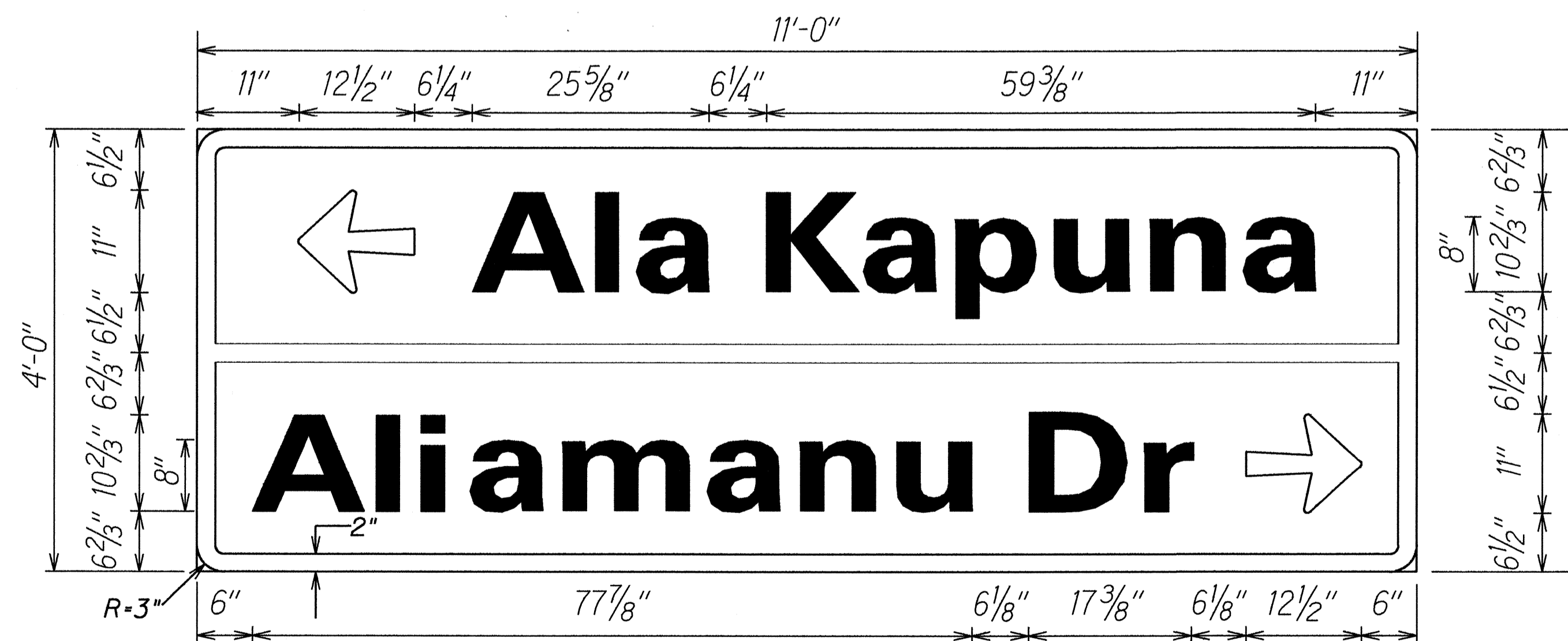
R3-26
Not to Scale



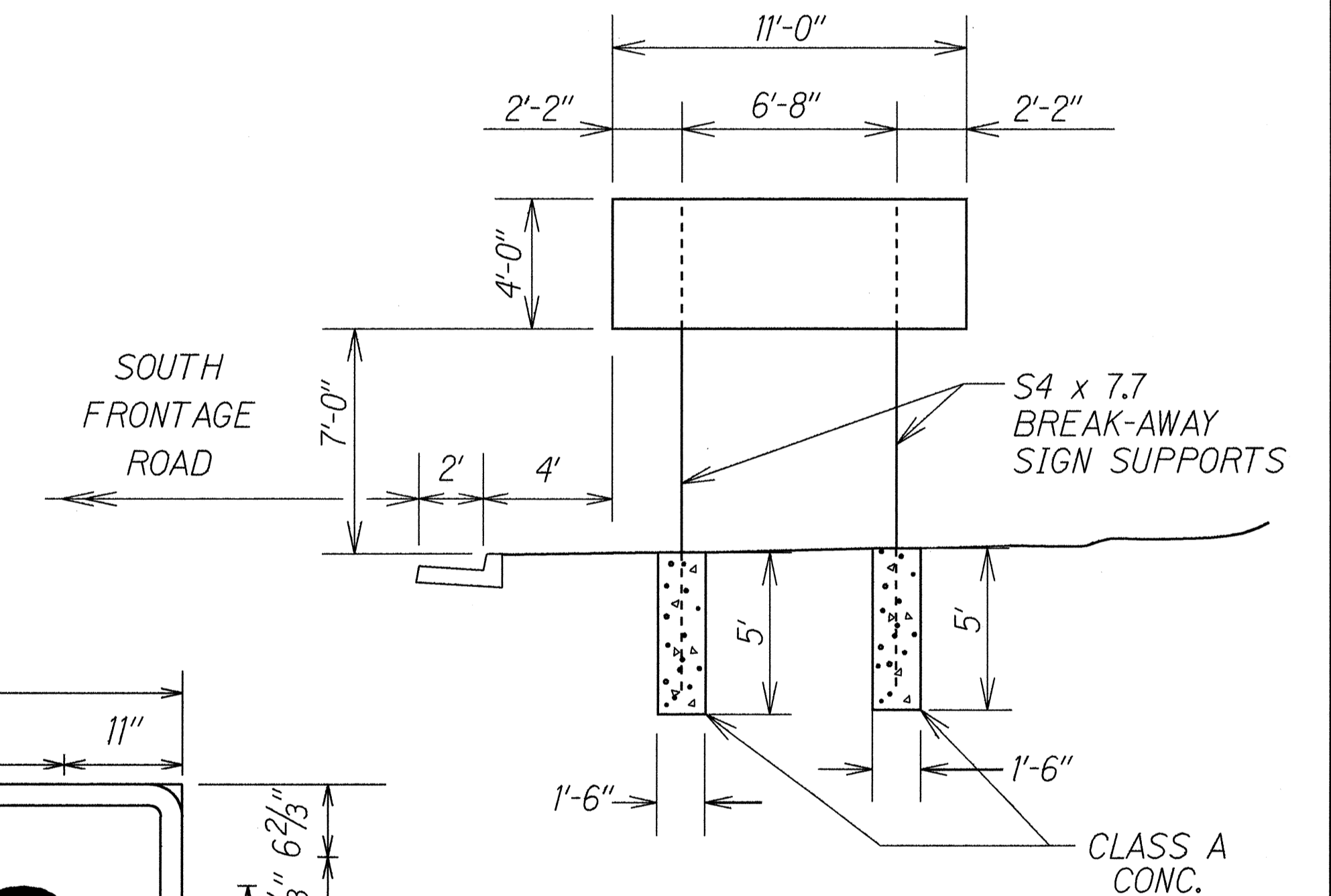
RUMBLE STRIP DETAIL
Scale: 1/4" = 1'-0"



R3-35
Not to Scale



SIGN D-1
Scale: 1" = 1'-0"



SIGN D-1 FRAME LAYOUT
RAMP RH-I, STA. 14+50± RT.
Scale: 1/4" = 1'-0"

DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: M. Takahashi
 DESIGNED BY: GUY K. KISHI
 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 FOR ANY: _____
 SA: _____

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
MISCELLANEOUS DETAILS
 MOANALUA FREEWAY RAMPS RESURFACING
 Vicinity of Ala Kapuna to Vicinity of Ala Napanani
 Fed. Aid Project No. STP-H201(3)
 Scale: As Shown Date: June, 1998
 SHEET No. T8 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-H20(3)	1998	51	51

PAVEMENT MARKING SUMMARY	
DESCRIPTION	QUANTITY
PAVEMENT MARKERS	
TYPE A _____	1,068 EA.
TYPE C _____	476 EA.
TYPE D _____	42 EA.
TYPE H _____	142 EA.
TAPE - TYPE I OR THERMOPLASTIC EXTRUSION	
8-INCH PAVEMENT STRIPE (WHITE) _____	450 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	770 L.F.
TAPE - TYPE II OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	8,580 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	4,980 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	2,490 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	150 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	360 L.F.
TAPE - TYPE III OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	190 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	130 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	450 L.F.
CROSSWALK MARKINGS _____	28 LANES
PAVEMENT ARROW _____	63 EA.
PAINT	
ASPHALT CONCRETE CURB (WHITE) _____	190 L.F.

REFLECTOR MARKER SUMMARY					
TYPE	QUANTITY				
	W/O POST		W/FLEXIBLE POST		W/STEEL POST
	YELLOW	WHITE	YELLOW	WHITE	YELLOW WHITE
RM-2				27	2
RM-9	1				

TRAFFIC SIGN SUMMARY					
SIGN NO.	MESSAGE	QUANTITY			
		10 SQ. FT. OR LESS		GREATER THAN 10 SQ. FT.	
		W/POST	W/O POST	W/POSTS	W/O POSTS
RI-1	STOP	6	1		
RI-2	YIELD		1		
RI-4	ALL WAY		4		
R3-2			1		
R3-4			1		
R3-7(L)	LEFT TURN MUST TURN LEFT	1			
R3-13			1		
R3-26		1			
R3-35		1			
R5-1	DO NOT ENTER	1	1		
R5-1a	WRONG WAY		1		
R6-1(R)	ONE WAY		3		
r7-107a	THE BUS SYMBOL	3			
R8-3A		2			
R8-3A(L&R)	ANY TIME \leftrightarrow	1			
RI6-1	BUCKLE UP SYMBOL		2		
W3-1a	STOP AHEAD SYMBOL	1	1		
TOTAL		17	17		

CONSTRUCTION SIGN SUMMARY				
SIGN NO.	LOCATION	MESSAGE	W/POSTS	W/O POST
CG20-2A	MOANALUA FRWY @ STA. 207+00 LT.	END ROAD WORK	1	
CW20-1Ad	MOANALUA FRWY @ STA. 208+00 RT.	ROAD WORK AHEAD	1	
CW20-1Ad	ALIAMANU DR. @ STA. 2+20± LT.	ROAD WORK AHEAD	1	
CW20-1Ad	FORWARD ST. @ STA 0+00± RT.	ROAD WORK AHEAD	1	
CW20-1Ad	ALA KAPUNA @ STA. 1+50± RT.	ROAD WORK AHEAD	1	
CW20-1Ad	NORTH FRONTAGE RD. @ STA. 7+00± LT.	ROAD WORK AHEAD	1	
CW20-1Ad	ALA KAPUNA @ STA. 2+70± RT.	ROAD WORK AHEAD	1	
CW20-1Ad	ALA KAPUNA @ STA. 8+50± LT.	ROAD WORK AHEAD	1	
CG20-2A	MOANALUA FRWAY @ STA. 267+80± RT.	END ROAD WORK	1	
TOTAL			9	

SURVEY PLOTTED BY _____ DATE _____
 DRAWN BY A. Takahashi
 TRACED BY _____
 DESIGNED BY GUY KIKUCHI
 CHECKED BY _____
 ORIGINAL PLAN _____
 NOTES BOOK _____
 TO BE _____
 BY _____

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
TRAFFIC SUMMARIES
 MOANALUA FREEWAY RAMP RESURFACING
 Vicinity of Ala Kapuna to Vicinity of Ala Napunani
 Fed. Aid Project No. STP-H20(3)
 Date: June, 1998