

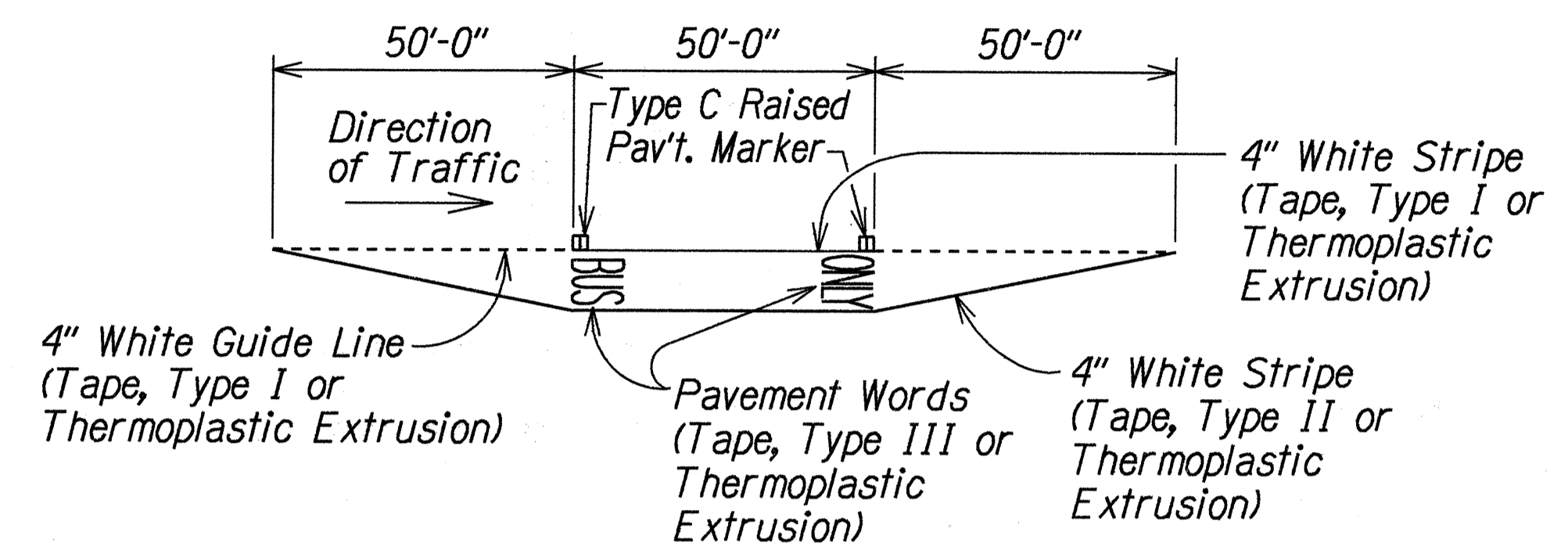
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-97M	1997	19	28

LEGEND

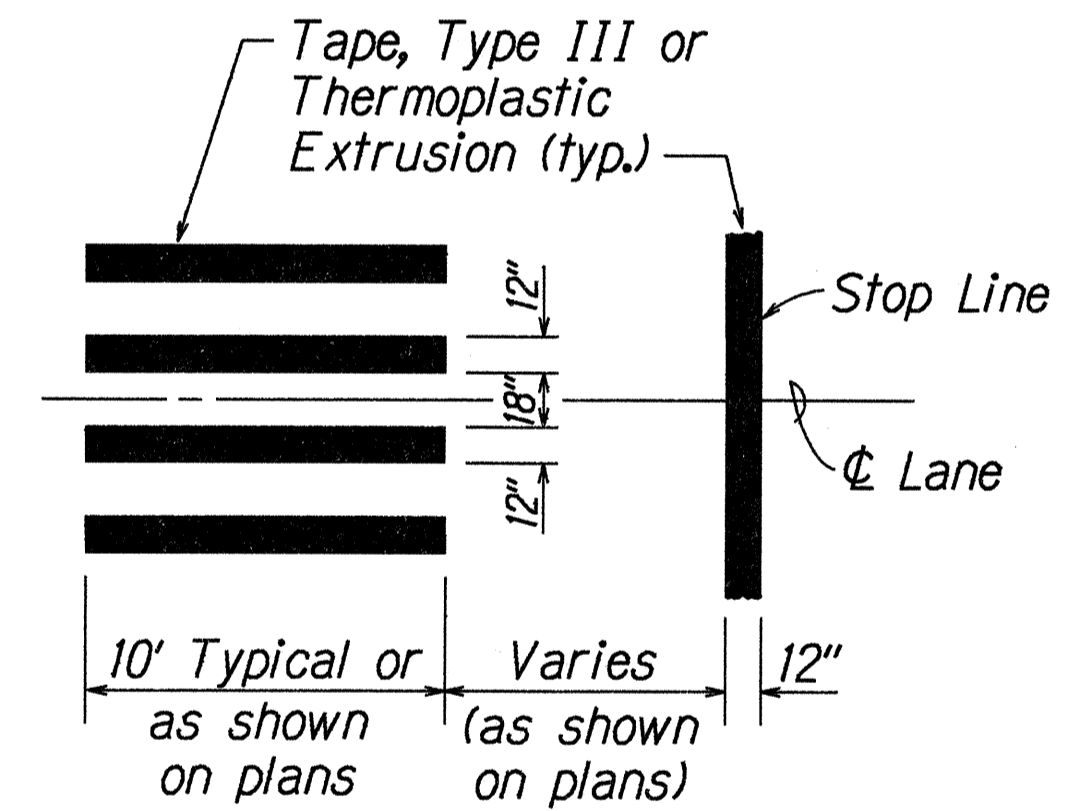
- 4 each Type A Raised Pavement Markers
Type C Raised Pavement Markers @ 40'-0" o.c.
- 4 each Type J Raised Pavement Markers
Type D Raised Pavement Markers @ 40'-0" o.c.
- 8" White Stripe with Type C Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
- 4" Double Solid Yellow 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)
- STOP 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 and striping not incorporated in the final traffic pattern shall be removed as directed by the Engineer. The removal of the existing pavement markings shall not be paid for separately but shall be considered 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 or directed by the Engineer shall not be paid for and shall be considered 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. Stop signs indicated to be removed shall be removed after the traffic signal system is operational.
10. Removal of Existing Delineators and Posts as directed by the Engineer shall be considered incidental to the various signing items.
11. Existing signs that are to be replaced shall not be removed until new signs are installed as replacements, or the messages are no longer necessary.
12. Backing for all new regulatory and warning signs shall not be spliced.
13. 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 Street and Highways" (MUTCD)
 - b. "Standard Highway Signs"
 - c. "Standard Alphabets for Highway Signs"
14. All new and relocated signs and markers installed on pipe post or light standard are to be mounted with band brackets and steel braces.
15. The Contractor shall erect at the beginning of the project and at the end of the project advance construction warning signs 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 Oahu District Baseyard or as directed by the Engineer at the end of the project. The advance construction warning signs shall be paid under Item No. 621.7110, Construction Sign with Two Posts.



TYPICAL BUS BAY STRIPING
Not to Scale



CROSSWALK STRIPING DETAIL
Not to Scale

LEGEND:

- Install RM-3 w/Steel Post
- Install RM-3 w/Flexible Delineator Post

DATE
SURVEY PLOTTED BY
DRAWN BY	J. Takahashi
TRACED BY
NOTED BY
DESIGNED BY
CHECKED BY
NO. 211110

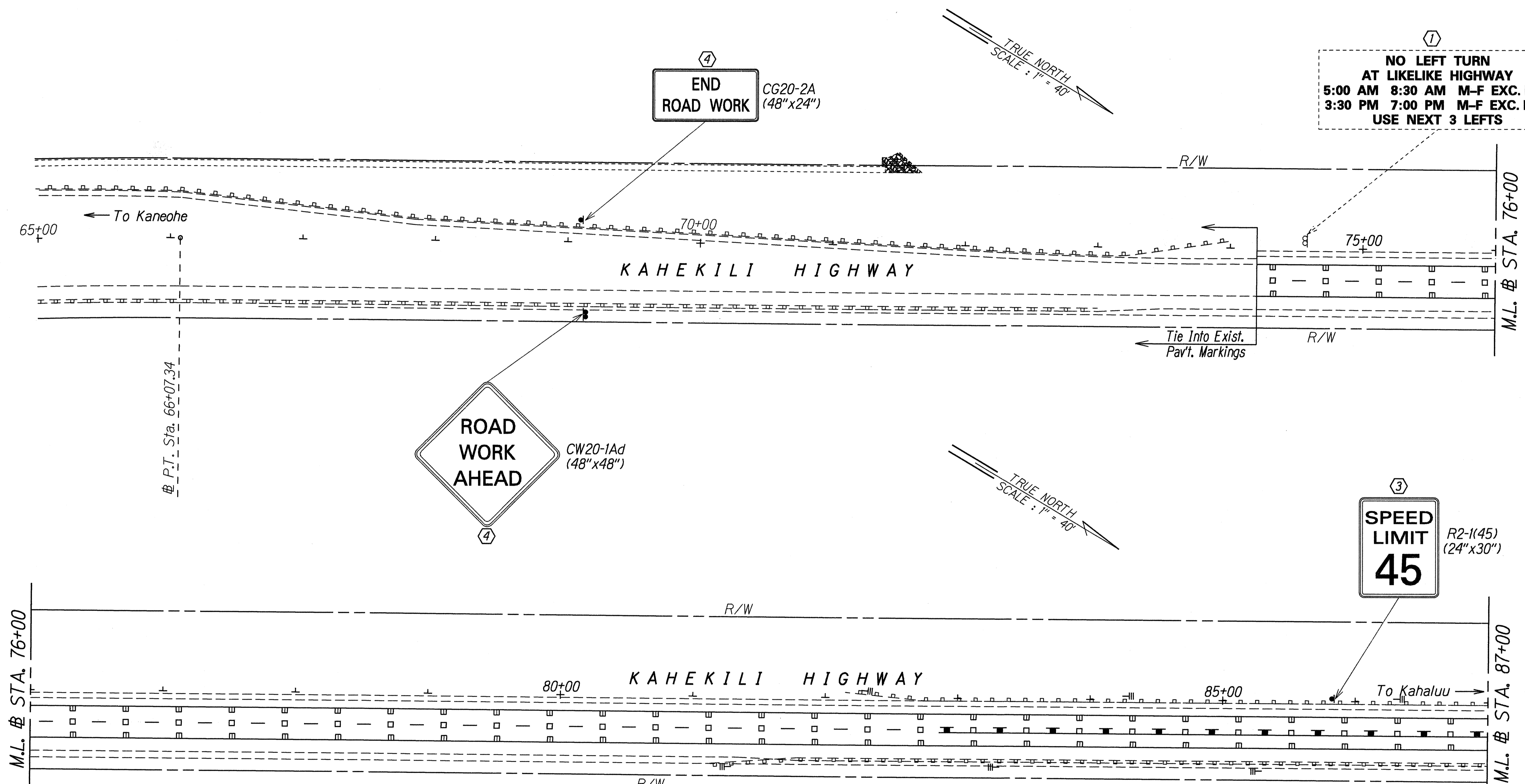
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING
LEGEND, DETAILS & NOTES

KAHEKILI HIGHWAY RESURFACING
Haiku Road to Kahaluu Bridge
Project No. 83F-01-97M

Not to Scale Date: May, 1997
SHEET No. 71 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-97M	1997	20	28



- KEY:**
- ① Exist. Sign to Remain
 - ② Remove Exist. Sign & Post(s)
 - ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
 - ④ Install New Sign w/Post(s)
 - ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
 - ⑥ Remove Exist. Sign & Install New on New Post(s)
 - ⑦ Remove & Install Exist. C&C Street Name Sign on New Post
 - ⑧ Remove Exist. & Install New C&C Water Safety Furnished Sign

ORIGINAL PLAN	DATE
NOTE BOOK	2/21/97
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

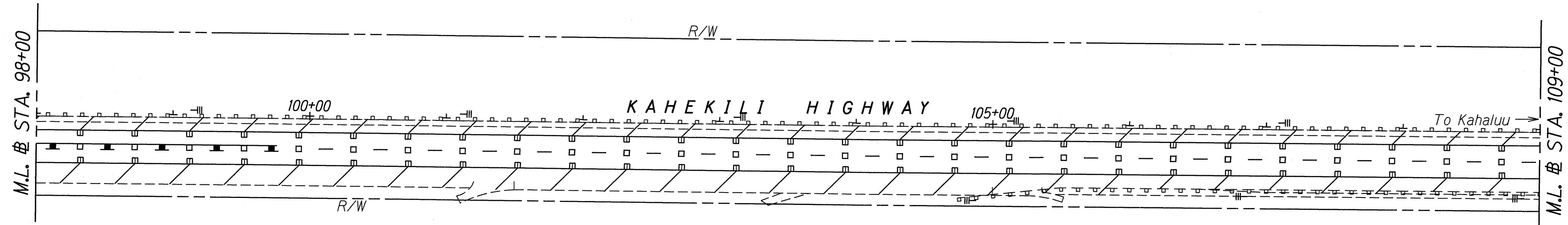
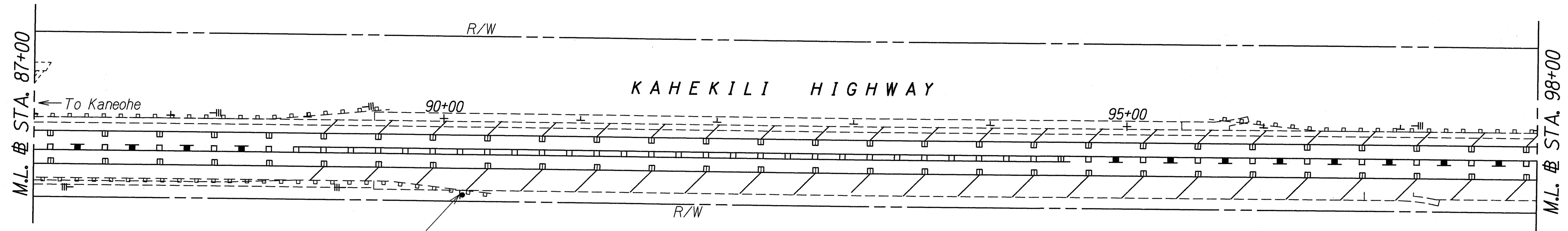
**PAVEMENT MARKING
AND SIGNING PLAN**

**KAHEKILI HIGHWAY RESURFACING
Haiku Rd. to Kahaluu Stream Bridge
Project No. 83F-01-97M**

Scale: 1" = 40' Date: May, 1997

SHEET No. T2 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-97M	1997	21	28

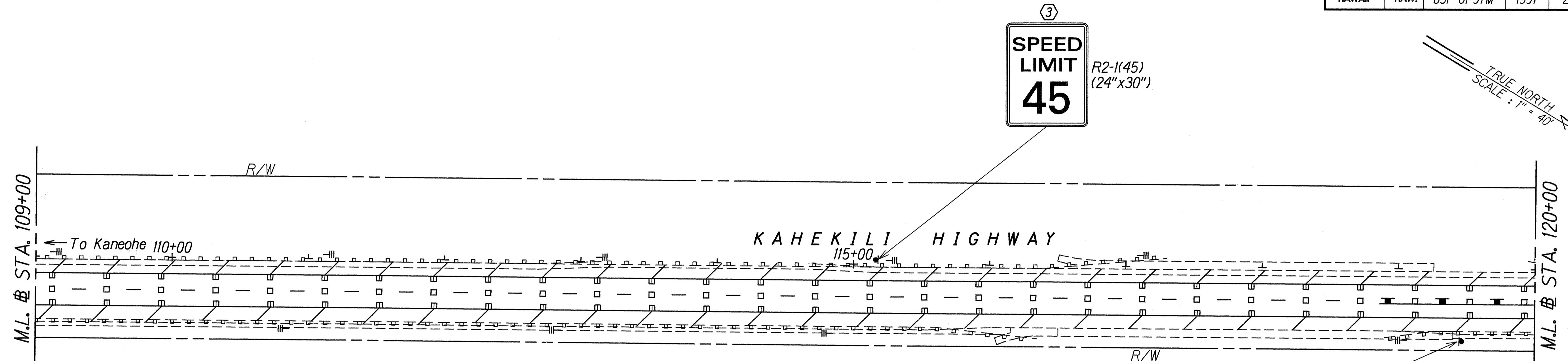


- KEY:**
- ① Exist. Sign to Remain
 - ② Remove Exist. Sign & Post(s)
 - ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
 - ④ Install New Sign w/Post(s)
 - ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
 - ⑥ Remove Exist. Sign & Install New on New Post(s)
 - ⑦ Remove & Install Exist. C&C Street Name Sign on New Post
 - ⑧ Remove Exist. & Install New C&C Water Safety Furnished Sign

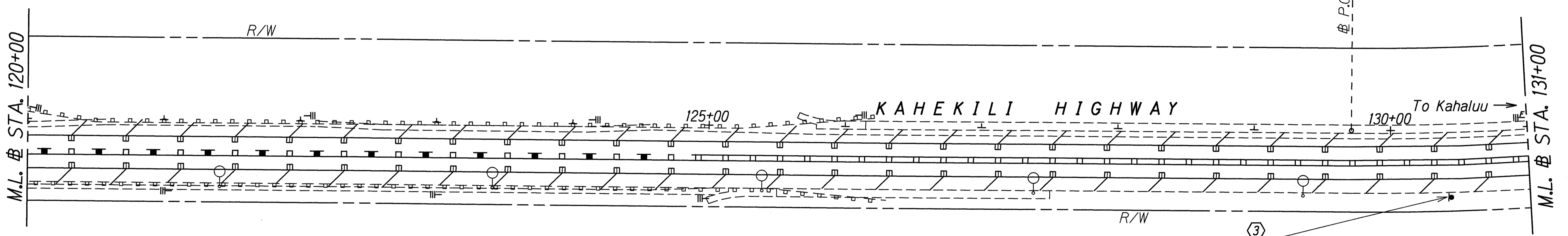
SURVEY PROVIDED BY: DATE: 2/12/97
 DRAWN BY: M. Takeda
 NOTE BOOK: DESIGNED BY: GUY KAGIHI
 162.may QUANTITIES BY:
 N. 2/11/97 CHECKED BY:

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**PAVEMENT MARKING
 AND SIGNING PLAN**
 KAHEKILI HIGHWAY RESURFACING
 Haiku Rd. to Kahaluu Stream Bridge
 Project No. 83F-01-97M
 Scale: 1" = 40' Date: May, 1997
 SHEET No. T3 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-97M	1997	22	28



- KEY:**
- ① Exist. Sign to Remain
 - ② Remove Exist. Sign & Post(s)
 - ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
 - ④ Install New Sign w/Post(s)
 - ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
 - ⑥ Remove Exist. Sign & Install New on New Post(s)
 - ⑦ Remove & Install Exist. C&C Street Name Sign on New Post
 - ⑧ Remove Exist. & Install New C&C Water Safety Furnished Sign



DATE: 2/12/97
 SURVEY PLANNED BY: M. Lehoucq
 DRAWN BY: M. Lehoucq
 DESIGNED BY: Gary Kakehi
 QUANTITIES BY: M. Lehoucq
 CHECKED BY: M. Lehoucq

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**PAVEMENT MARKING
 AND SIGNING PLAN**
 KAHEKILI HIGHWAY RESURFACING
 Haiku Rd. to Kahaluu Stream Bridge
 Project No. 83F-01-97M
 Scale: 1" = 40' Date: May, 1997
 SHEET No. T4 OF 10 SHEETS

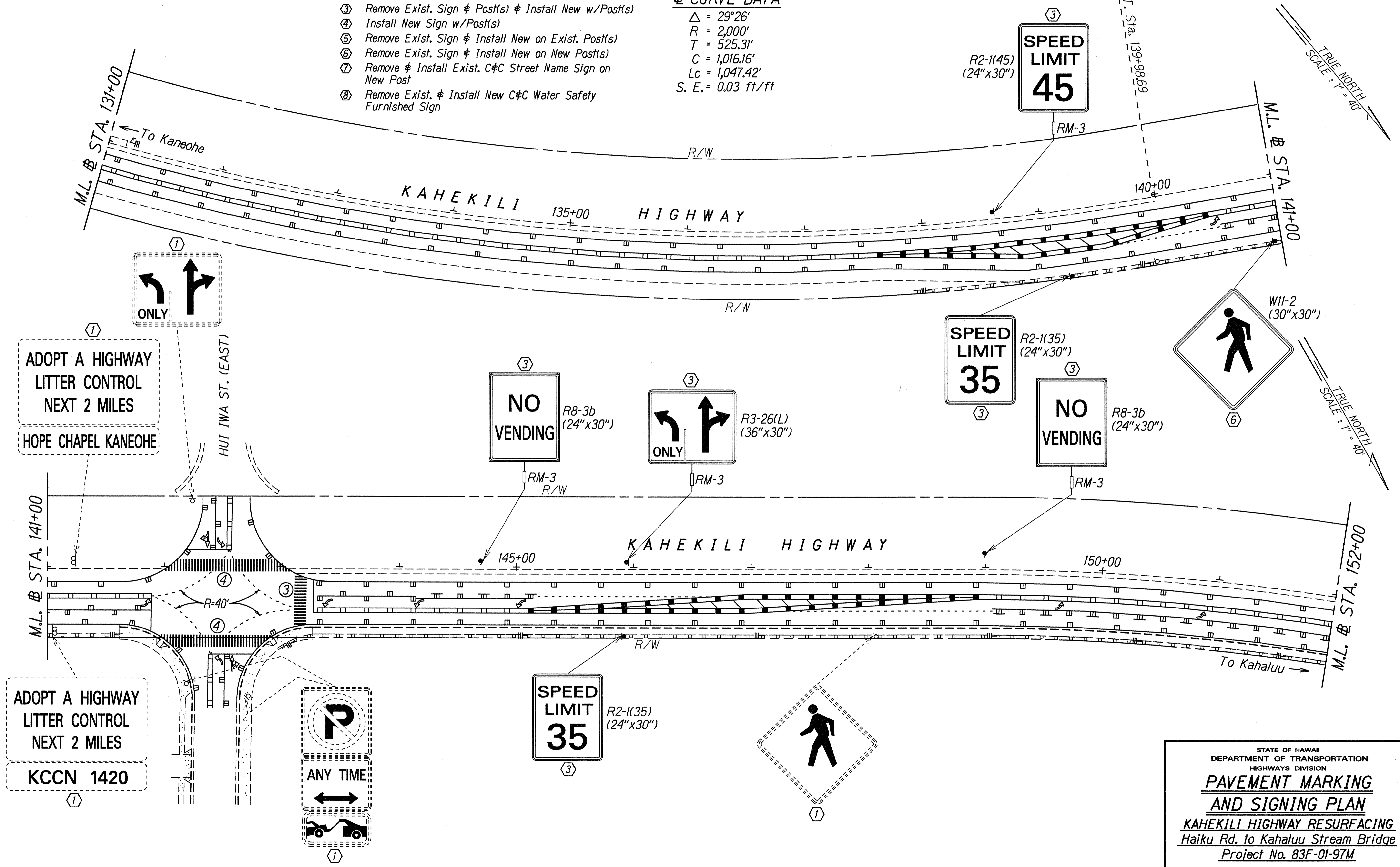
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-97M	1997	23	28

KEY:

- ① Exist. Sign to Remain
- ② Remove Exist. Sign & Post(s)
- ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
- ④ Install New Sign w/Post(s)
- ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
- ⑥ Remove Exist. Sign & Install New on New Post(s)
- ⑦ Remove & Install Exist. C&C Street Name Sign on New Post
- ⑧ Remove Exist. & Install New C&C Water Safety Furnished Sign

CURVE DATA

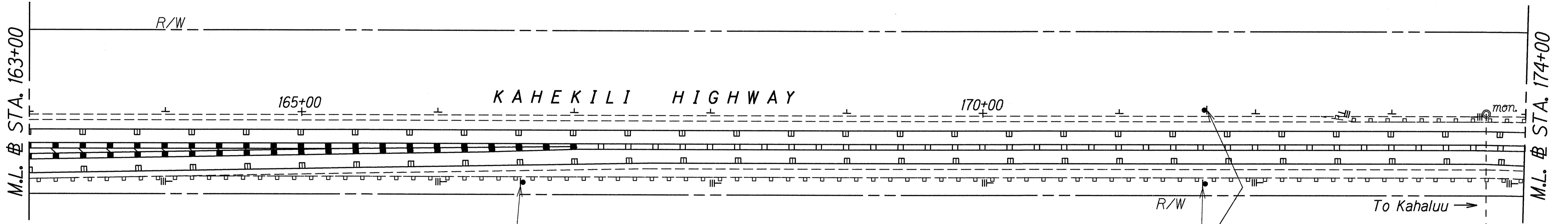
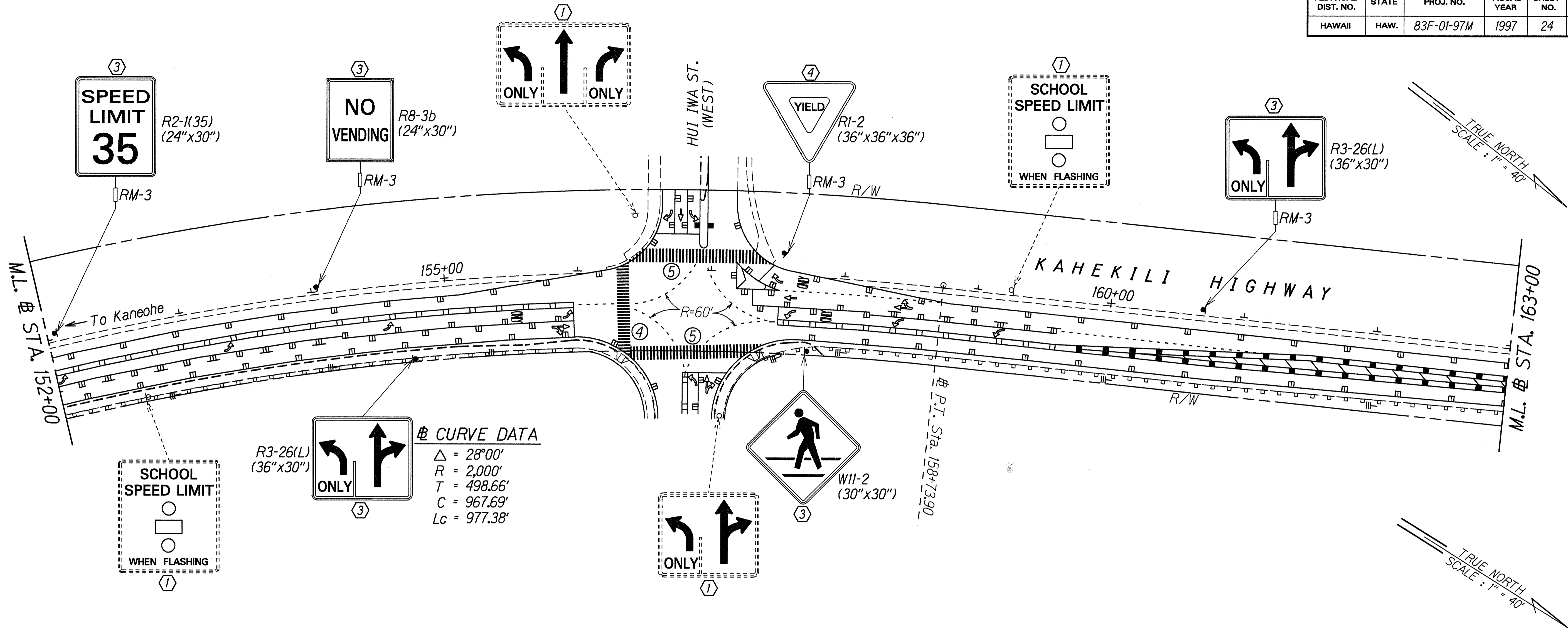
$\Delta = 29^{\circ}26'$
 $R = 2,000'$
 $T = 525.31'$
 $C = 1,016.16'$
 $Lc = 1,047.42'$
 $S. E. = 0.03 \text{ ft/ft}$



SURVEY PLATTED BY: DATE: 2/12/97
 DRAWN BY: M. Takeda
 CHECKED BY: G. Kelly
 ORIGINAL PLAN: 142.000
 QUANTITIES BY: 2/11/97
 CHECKED BY:

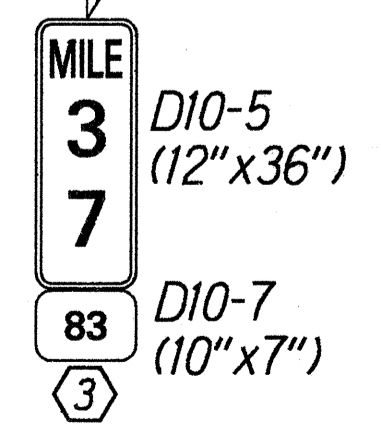
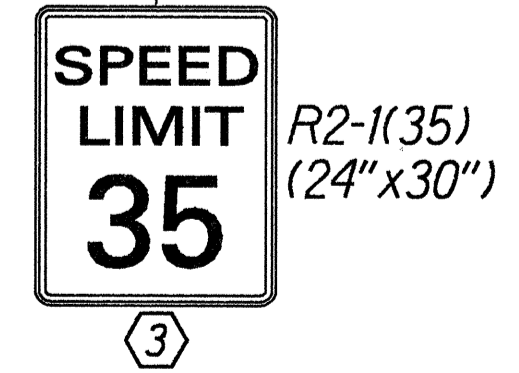
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**PAVEMENT MARKING
 AND SIGNING PLAN**
KAHEKILI HIGHWAY RESURFACING
 Haiku Rd. to Kahaluu Stream Bridge
 Project No. 83F-01-97M
 Scale: 1" = 40' Date: May, 1997
 SHEET No. 23 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-97M	1997	24	28



KEY:

- ① Exist. Sign to Remain
- ② Remove Exist. Sign & Post(s)
- ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
- ④ Install New Sign w/Post(s)
- ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
- ⑥ Remove Exist. Sign & Install New on New Post(s)
- ⑦ Remove & Install Exist. C&C Street Name Sign on New Post
- ⑧ Remove Exist. & Install New C&C Water Safety Furnished Sign



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

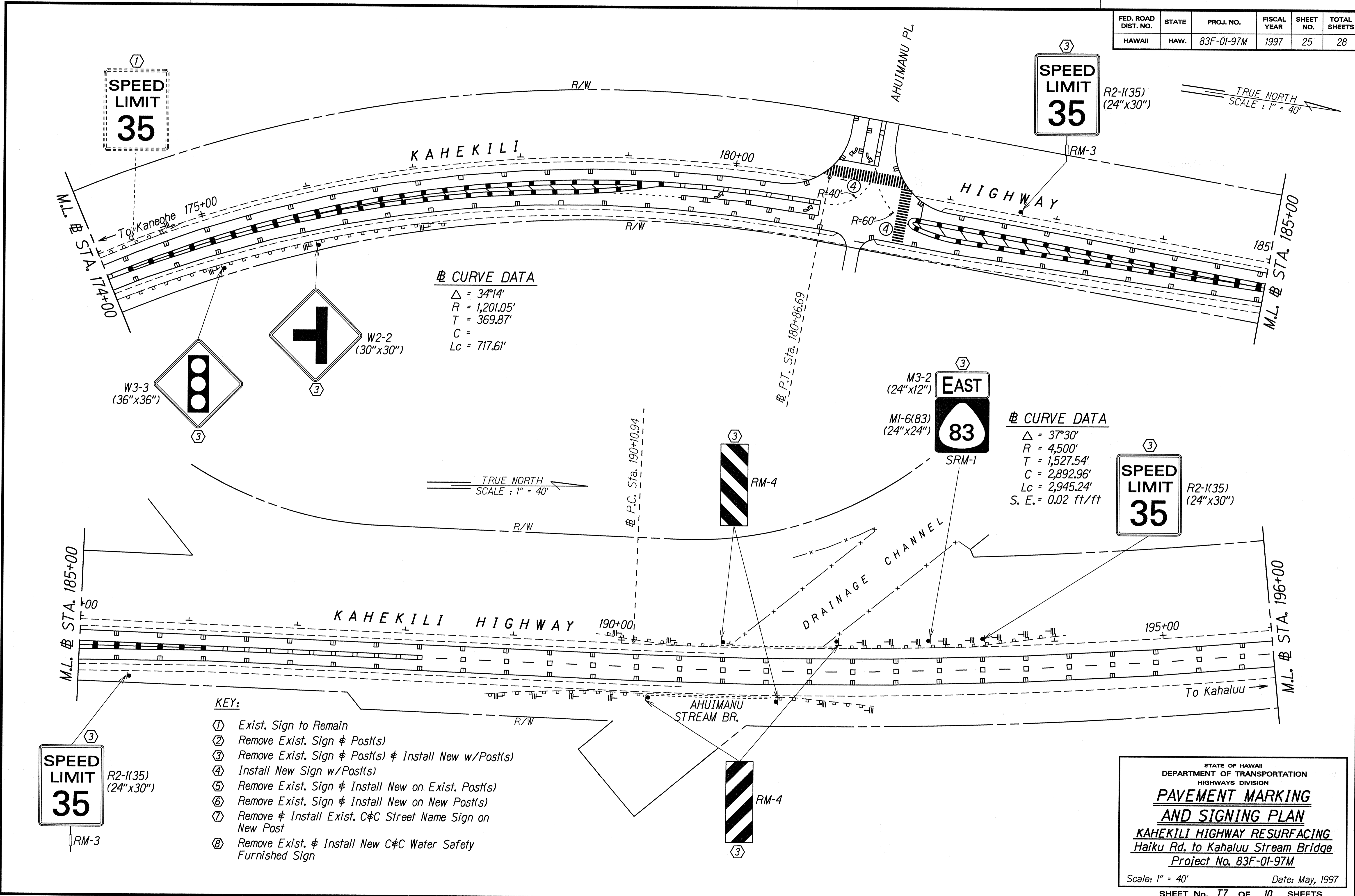
**PAVEMENT MARKING
 AND SIGNING PLAN**

KAHEKILI HIGHWAY RESURFACING
 Haiku Rd. to Kahaluu Stream Bridge
 Project No. 83F-01-97M

Scale: 1" = 40' Date: May, 1997
 SHEET No. T6 OF 10 SHEETS

DATE: 2/12/97
 SURVEY PLOTTED BY: M. Takahashi
 DRAWN BY: M. Takahashi
 DESIGNED BY: Gary Kikuchi
 CHECKED BY: M. Takahashi
 ORIGINAL PLAN
 NOTE BOOK
 162 May
 No. 24/11/95

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-97M	1997	25	28



①
SPEED LIMIT
35

③
SPEED LIMIT
35

② CURVE DATA
 $\Delta = 34^{\circ}14'$
 $R = 1,201.05'$
 $T = 369.87'$
 $C = 717.61'$

② CURVE DATA
 $\Delta = 37^{\circ}30'$
 $R = 4,500'$
 $T = 1,527.54'$
 $C = 2,892.96'$
 $Lc = 2,945.24'$
 $S. E. = 0.02 \text{ ft/ft}$

- KEY:
- ① Exist. Sign to Remain
 - ② Remove Exist. Sign & Post(s)
 - ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
 - ④ Install New Sign w/Post(s)
 - ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
 - ⑥ Remove Exist. Sign & Install New on New Post(s)
 - ⑦ Remove & Install Exist. C&C Street Name Sign on New Post
 - ⑧ Remove Exist. & Install New C&C Water Safety Furnished Sign

③
SPEED LIMIT
35

③
EAST
83

③
SPEED LIMIT
35

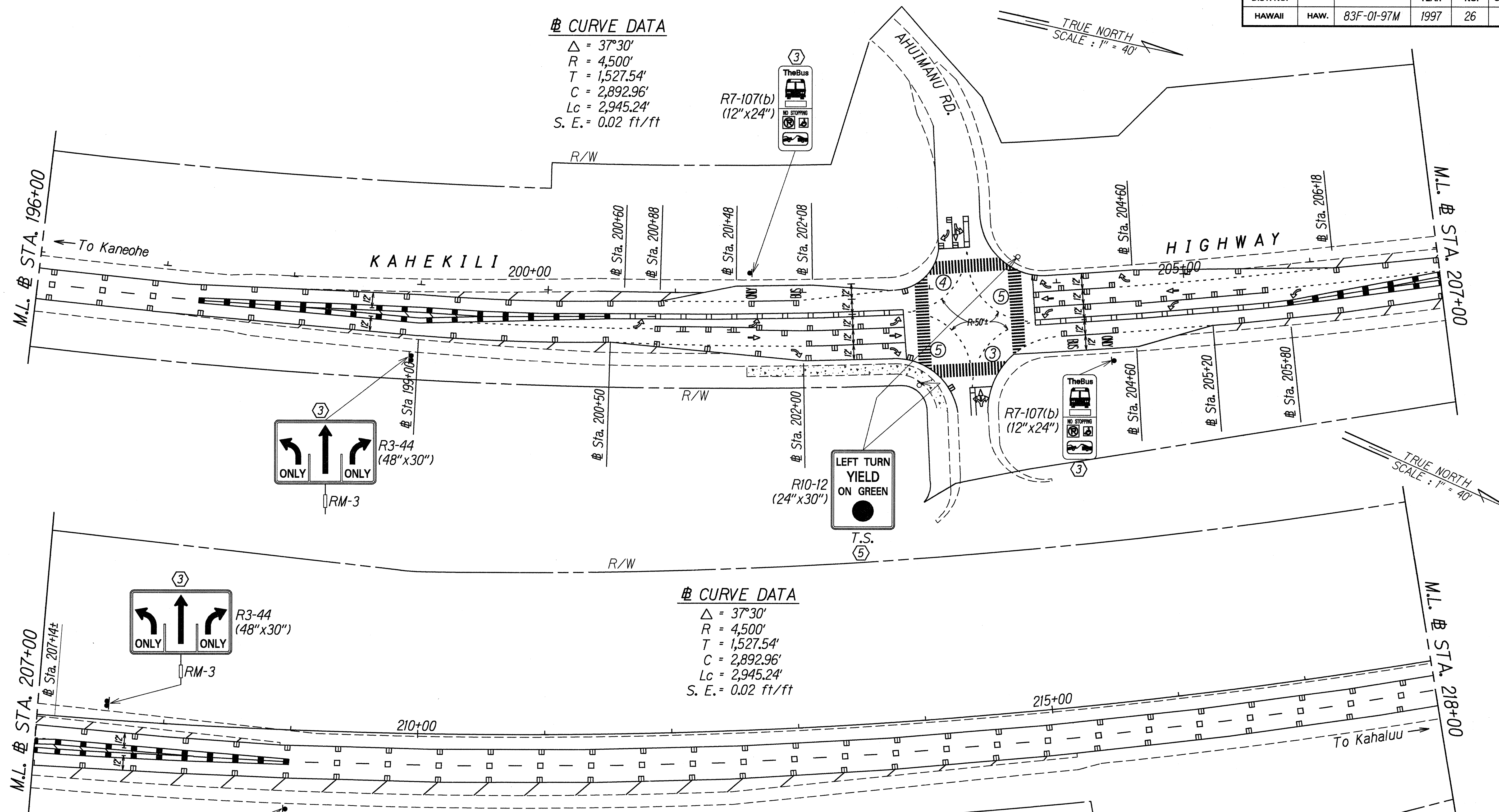
DATE: 2/12/97
 SURVEY PLOTTED BY: M. ZENGLI
 TRACED BY: S.D. KAKELI
 DESIGNED BY: S.D. KAKELI
 QUANTITIES BY: S.D. KAKELI
 CHECKED BY: S.D. KAKELI

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**PAVEMENT MARKING
 AND SIGNING PLAN**
 KAHEKILI HIGHWAY RESURFACING
 Haiku Rd. to Kahaluu Stream Bridge
 Project No. 83F-01-97M
 Scale: 1" = 40' Date: May, 1997
 SHEET No. 25 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-97M	1997	26	28

☉ CURVE DATA

$\Delta = 37^{\circ}30'$
 $R = 4,500'$
 $T = 1,527.54'$
 $C = 2,892.96'$
 $Lc = 2,945.24'$
 $S. E. = 0.02 \text{ ft/ft}$



☉ CURVE DATA

$\Delta = 37^{\circ}30'$
 $R = 4,500'$
 $T = 1,527.54'$
 $C = 2,892.96'$
 $Lc = 2,945.24'$
 $S. E. = 0.02 \text{ ft/ft}$

- KEY:**
- ① Exist. Sign to Remain
 - ② Remove Exist. Sign & Post(s)
 - ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
 - ④ Install New Sign w/Post(s)
 - ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
 - ⑥ Remove Exist. Sign & Install New on New Post(s)
 - ⑦ Remove & Install Exist. C&C Street Name Sign on New Post
 - ⑧ Remove Exist. & Install New C&C Water Safety Furnished Sign

SURVEY PLOTTED BY: DATE: 2/22/97
 DRAWN BY: M. Takahashi
 TRACED BY: Gary Kishida
 QUANTITIES BY:
 CHECKED BY: 2/11/97

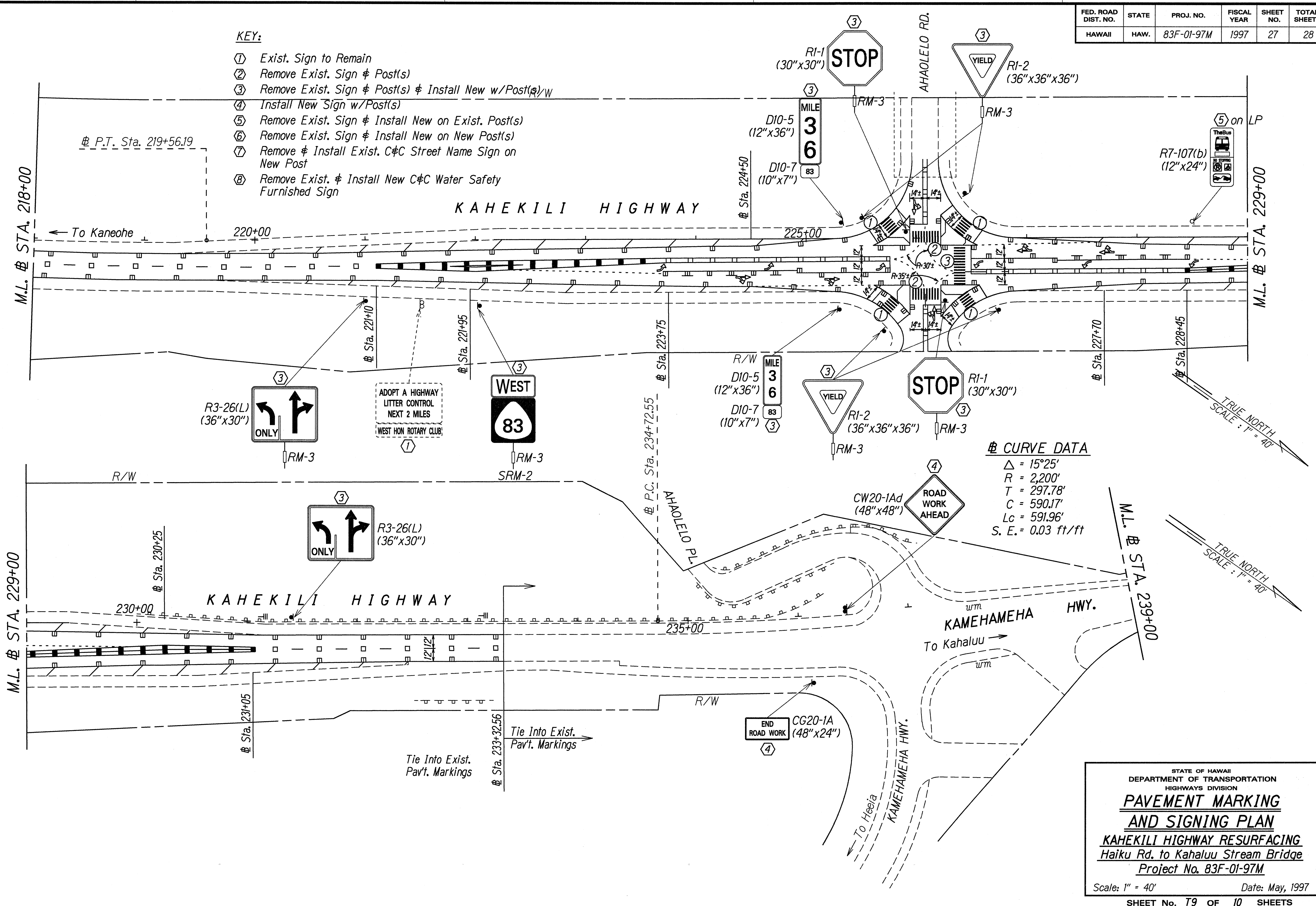
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**PAVEMENT MARKING
 AND SIGNING PLAN**
 KAHEKILI HIGHWAY RESURFACING
 Haiku Rd. to Kahaluu Stream Bridge
 Project No. 83F-01-97M

Scale: 1" = 40' Date: May, 1997
 SHEET No. 26 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-97M	1997	27	28

KEY:

- ① Exist. Sign to Remain
- ② Remove Exist. Sign & Post(s)
- ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)/W
- ④ Install New Sign w/Post(s)
- ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
- ⑥ Remove Exist. Sign & Install New on New Post(s)
- ⑦ Remove & Install Exist. C&C Street Name Sign on New Post
- ⑧ Remove Exist. & Install New C&C Water Safety Furnished Sign



④ CURVE DATA

$\Delta = 15^{\circ}25'$
 $R = 2,200'$
 $T = 297.78'$
 $C = 590.17'$
 $Lc = 591.96'$
 $S. E. = 0.03 \text{ ft/ft}$

SURVEY PLOTTED BY	DATE	2/22/97
DRAWN BY	M. J. Kishida	
DESIGNED BY	GARY KASHI	
QUANTITIES BY	GARY KASHI	
CHECKED BY	M. J. KISHIDA	

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**PAVEMENT MARKING
 AND SIGNING PLAN**
KAHEKILI HIGHWAY RESURFACING
 Haiku Rd. to Kahaluu Stream Bridge
 Project No. 83F-01-97M
 Scale: 1" = 40' Date: May, 1997
 SHEET No. 27 OF 28 SHEETS

PAVEMENT MARKING SUMMARY	
DESCRIPTION	QUANTITY
PAVEMENT MARKERS	
TYPE A _____	100 EA.
TYPE C _____	950 EA.
TYPE D _____	460 EA.
TYPE H _____	410 EA.
TYPE J _____	680 EA.
TAPE - TYPE I OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	1,340 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	1,740 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	1,270 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	5,360 L.F.
TAPE - TYPE II OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	32,570 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	100 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	530 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	3,700 L.F.
12-INCH PAVEMENT STRIPE (YELLOW) _____	600 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	7,100 L.F.
TAPE - TYPE III OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	1,830 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	1,340 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	620 L.F.
CROSSWALK MARKINGS _____	54 EA. LANES
PAVEMENT ARROW _____	56 EA.
PAVEMENT WORD _____	7 EA.

MILEPOST MARKER SUMMARY			
LOCATION	SIGN NO. AND MESSAGE	QUANTITY	
		W/POST	W/O POST
# STA. 171+60± LT. # RT.	D10-5 37 D10-7 83	2	
# STA. 225+30± LT. # RT.	D10-5 36 D10-7 83	2	
TOTAL		4	

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
R1-1	STOP	2			
R1-2	YIELD	5			
R2-1(35)	SPEED LIMIT 35	8			
R2-1(45)	SPEED LIMIT 45	5			
R2-5b(35)	REDUCED SPEED 35 M.P.H.	1			
R23-8b	NO VENDING	3			
R3-26(L)	⚡	5			
R3-44	⚡	2			≠
R7-107b	BUS STOP SYMBOL	2	≠		
R10-12	LEFT TURN YIELD ON GREEN •		2		
W2-2	+	1			
W3-3	SIGNAL AHEAD SYMBOL	1			
W11-2	ADVANCE CROSSING SYMBOL	≠ 2			
W11A-1	CROSSING SYMBOL	≠			
TOTAL		36 37	≠ 2		≠

CONSTRUCTION SIGN SUMMARY			
SIGN NO.	LOCATION	MESSAGE	W/POSTS
CG20-2A	# STA. 69+20± LT.	END ROAD WORK	1
CW20-1Ad	# STA. 69+20± RT.	ROAD WORK AHEAD	1
CW20-1Ad	# STA. 236+40± LT.	ROAD WORK AHEAD	1
CG20-2A	# STA. 236+40± RT.	END ROAD WORK	1
TOTAL			4

ROUTE MARKER SUMMARY				
SIGN ASSEMBLY	LOCATION	SIGN NO. AND MESSAGE	TYPE A ASSEMBLY	
			W/POST	W/O POST
SRM-1	# STA. 192+80± LT.	M3-2 EAST M1-6(83) 83	1	
SRM-2	# STA. 222+00± RT.	M3-4 WEST M1-6(83) 83	1	
TOTAL			2	

REFLECTOR MARKER SUMMARY						
TYPE	QUANTITY					
	W/O POST		W/FLEXIBLE POST		W/STEEL POST	
	YELLOW	WHITE	YELLOW	WHITE	YELLOW	WHITE
RM-3	23	24	2		77	80
RM-4					4	

SURVEY PLOTTED BY: DATE: 4/22/97
 DRAWN BY: J. Takahashi
 CHECKED BY: G. K. K. K.
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 No. 201750m

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
TRAFFIC SUMMARIES
KAHEKILI HIGHWAY RESURFACING
Haiku Road to Kahaluu Bridge
Project No.83F-01-97M
 Not to Scale Date: May, 1997
 SHEET No. T10 OF 10 SHEETS