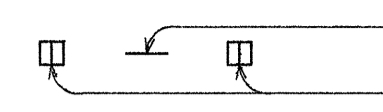
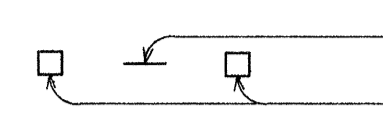
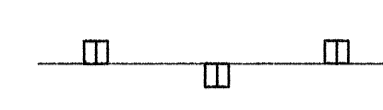




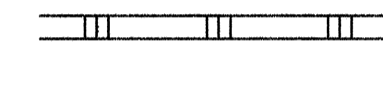



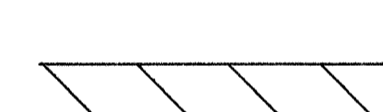
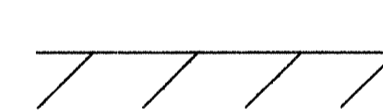
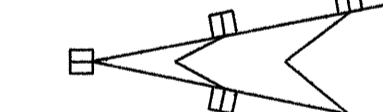




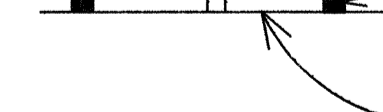
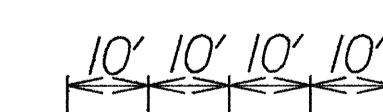


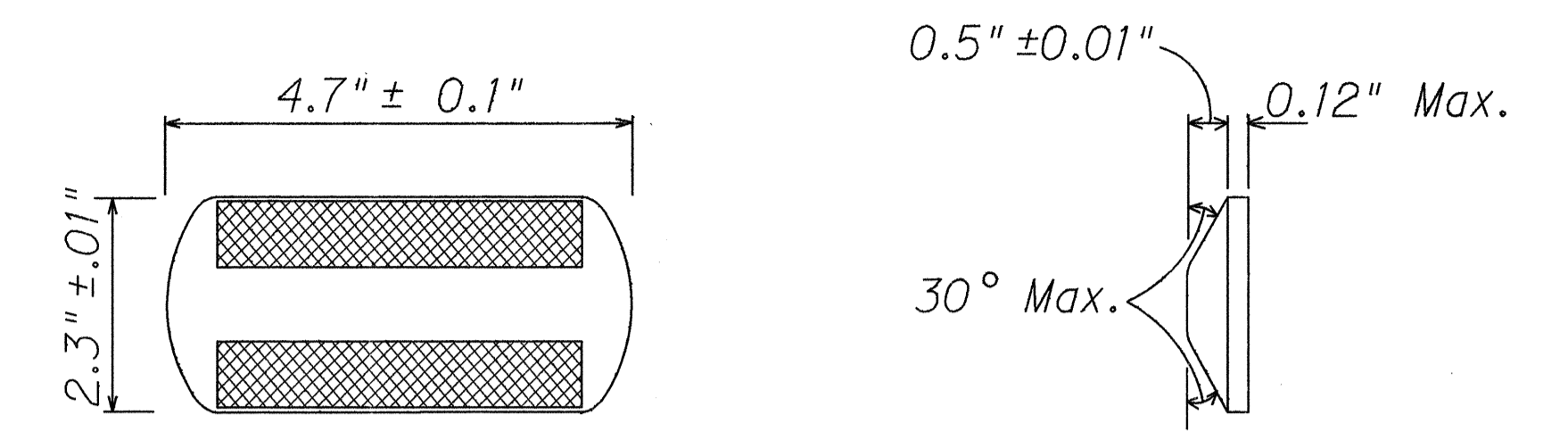
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	37C-02-90	1991	38	61

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. (Tape, Type I or Thermoplastic Extrusion)
-  Sleeve for Portable Sign

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 signs 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 and milepost markers shall be approved by the Engineer prior to any installation work.
6. All existing signs shall be removed and disposed of unless otherwise noted on plans. Removal and disposal of existing signs and/or posts 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.
10. Temporary Preformed Pavement Marking Tape.
 - a. The tape shall consist of a mixture of high quality polymeric materials and pigments and shall not contain metallic foil.
 - b. The tape shall be reinforced with a non-metallic medium and shall be precoated with a pressure sensitive adhesive.
 - c. The film without adhesive shall have a minimum thickness of 0.03 Inch (0.76 mm).

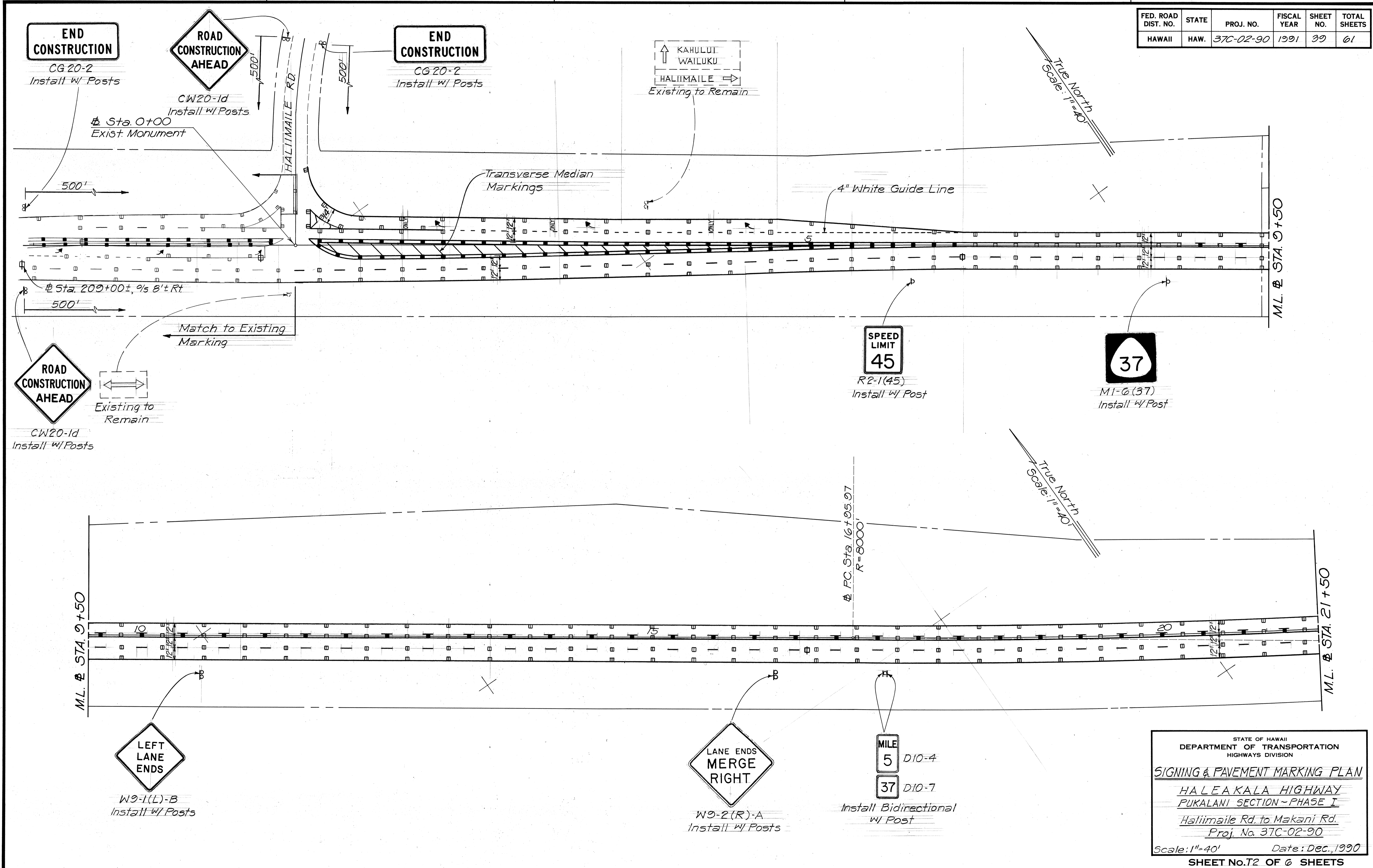


TYPE CL
 Red-Clear Reflective Marker
 or
TYPE DL
 Two-Way Yellow Reflective Marker
 or
TYPE HL
 One-Way Yellow Reflective Marker
RAISED PAVEMENT MARKER DETAILS
 Not to Scale

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING
LEGEND, DETAILS & NOTES
 HALEAKALA HIGHWAY
 PUKALANI SECTION-PHASE I
 Halimale Rd. to Makeni Rd.
 Project No. 37C-02-90
 Scale: As Shown Date: December, 1990
 SHEET No. 38 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	37C-02-90	1991	39	61



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & PAVEMENT MARKING PLAN

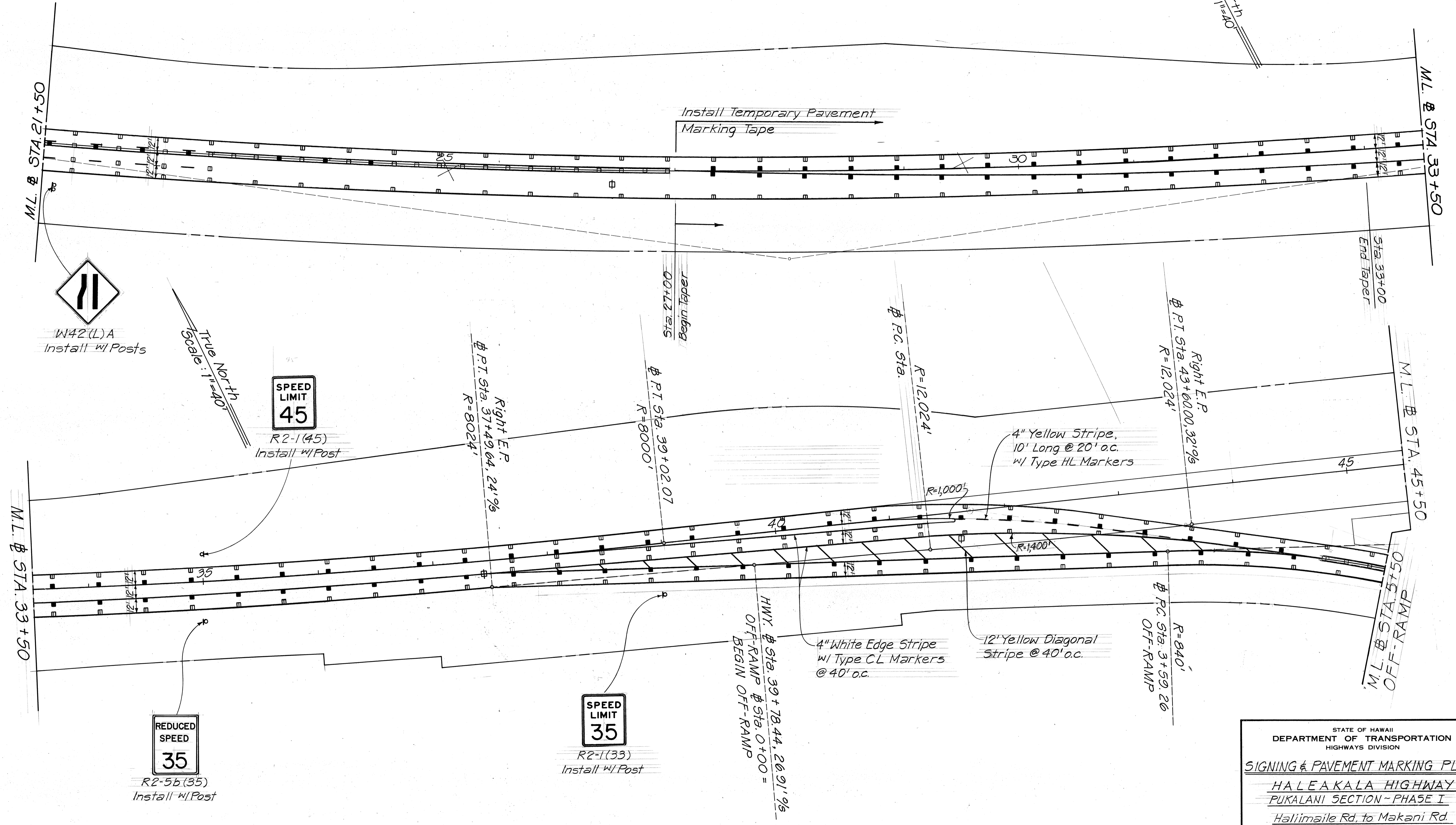
Haleakala Highway
Pukalani Section - Phase I
Haliimaile Rd. to Makani Rd.
Proj. No. 37C-02-90

Scale: 1"=40' Date: Dec., 1990

SHEET No. 22 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	37C-02-90	1991	40	61

True North
Scale: 1"=40'



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & PAVEMENT MARKING PLAN

HALEAKALA HIGHWAY
PUKALANI SECTION - PHASE I
Haliimaile Rd. to Makani Rd.
Proj. No. 37C-02-90

Scale: 1"=40' Date: Dec, 1990

SHEET No. 73 OF 6 SHEETS

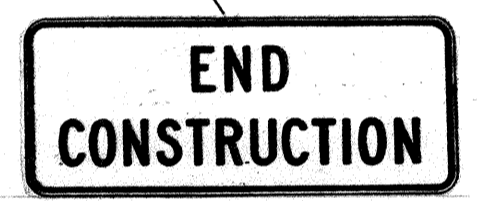
107888

True North
Scale: 1"=40'

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	37C-02-90	1991	41	61



CW20-1d
Install w/Posts



CG20-2
Install w/Posts



R2-1(35)
Install w/Post



R2-1(35)
Remove Exist. Sign & Post
and Install New Sign w/Post

Match to Existing
Markings

R=76450
P.C. Sta. 6+39.95

R=5123.70
P.C. Sta. 10+32.12

P.T. Sta. 8+89.51

P.T. Sta. 12+49.40

P.O.T. Sta. 5+17.88 - ON-RAMP
P.T. Sta. 11+37.75 - OFF-RAMP

Install 2-2" Conduit,
Schedule 80

Install Type B
Traffic Signal
Pullbox

Install
2-2" Conduit,
Schedule 80

M.L. @ STA. 45+50

M.L. @ STA. 5+50
OFF-RAMP

SURVEY PLOTTED 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

SIGNING & PAVEMENT MARKING PLAN

HALEAKALA HIGHWAY
PUKALANI SECTION - PHASE I

Haliimaile Rd. to Makani Rd.
Proj. No. 37C-02-90

Scale: 1"=40' Date: Dec., 1990

SHEET No. 74 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	37C-02-90	1991	43	61

PORTABLE SIGN SUMMARY

LOCATION	SIGN NO. AND MESSAGE	W/POST	W/O POST
Sta. 209+00	R3-40a ONLY ↑	1	
Sta. 214+25	R10-13 LEFT TURN HERE ↘ R3-20 2-LANES ↑↑ THRU TRAFFIC	1	
Sta. 6+50	R4-7a(R) KEEP → RIGHT R3-20 2-LANES ↑↑ THRU TRAFFIC	1	
Sta. 16+50	R4-7a(R) KEEP → RIGHT R3-20 2-LANES ↑↑ THRU TRAFFIC	1	
Sta. 26+50	R4-7a(R) KEEP → RIGHT R3-20 2-LANES ↑↑ THRU TRAFFIC	1	
Sta. 37+45	R4-7a(R) KEEP → RIGHT R3-20 2-LANES ↑↑ THRU TRAFFIC	1	
Sta. 41+60	R3-20 2-LANES ↑↑ THRU TRAFFIC	1	
TOTAL		7	

PAVEMENT MARKING SUMMARY

DESCRIPTION	QUANTITY
PAVEMENT MARKERS	
TYPE A _____	232 EACH
TYPE CL _____	380 EACH
TYPE DL _____	120 EACH
TYPE HL _____	190 EACH
TYPE J _____	144 EACH
TAPE - TYPE I OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	320 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	1450 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	190 L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	30 L.F.
12-INCH PAVEMENT STRIPE (YELLOW) _____	220 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	1,900 L.F.
PAVEMENT ARROW _____	3 EACH
PAVEMENT WORD _____	3 EACH
TAPE - TYPE II OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	4,400 L.F.
THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	190 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	
12-INCH PAVEMENT STRIPE (WHITE) _____	
CROSSWALK MARKINGS _____	
TAPE - TEMPORARY	
4-INCH PAVEMENT STRIPE (WHITE) _____	6,650 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	3,600 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	
12-INCH PAVEMENT STRIPE (WHITE) _____	
12-INCH PAVEMENT STRIPE (YELLOW) _____	280 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	1,020 L.F.

ROUTE MARKER SUMMARY

SIGN ASSEMBLY	LOCATION	SIGN NO. AND MESSAGE	TYPE A ASSEMBLY		TYPE B ASSEMBLY	
			W/POST	W/O POST	W/POST	W/O POST
	Sta. 8+50 Rt.	M1-6(37) 37	1			
TOTAL			1			

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
R2-1(35)	SPEED LIMIT 35	3			
R2-1(45)	SPEED LIMIT 45	2			
R2-5b(35)	REDUCED SPEED 35	1			
W4-2(L)-A				1	
W9-1(L)-B	LEFT LANE ENDS			1	
W9-2(R)-A	LANE ENDS MERGE RIGHT			1	
TOTAL		6		3	

CONSTRUCTION SIGN SUMMARY

SIGN NO.	LOCATION	MESSAGE	W/POST	W/O POST
CW20-1d	Haleakala Sta. 209+55 Rt.	ROAD CONSTRUCTION AHEAD	1	
CG20-2	Haleakala Sta. 209+55 Lt.	END CONSTRUCTION	1	
CW20-1d	Haliimalie Road - 500 Ft. Before Intersection	ROAD CONSTRUCTION AHEAD	1	
CG20-2	Haliimalie Road - 500 Ft. After Intersection	END CONSTRUCTION	1	
CG20-2	Haleakala Sta. 13+87 Rt.	END CONSTRUCTION	1	
CW20-1d	Haleakala Sta. 13+87 Lt.	ROAD CONSTRUCTION AHEAD	1	
TOTAL			6	

MILE POST SUMMARY

LOCATION	SIGN NO. AND MESSAGE	W/POST	W/O POST
Sta. 17+25 Rt.	D10-4 5	1	1
	D10-7 37		
TOTAL		1	1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MISCELLANEOUS SUMMARIES
HALEAKALA HIGHWAY
PUKALANI SECTION-PHASE I
Haliimalie Rd. to Makani Rd.
Project No. 37C-02-90

Date: December 1990

SHEET No. 76 OF 6 SHEETS

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