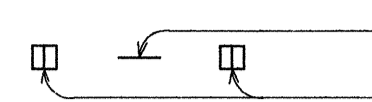
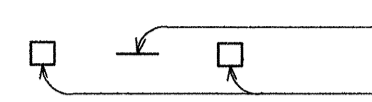
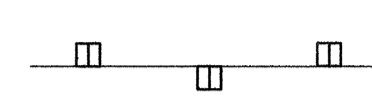
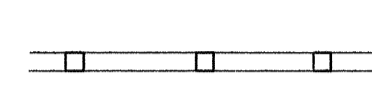



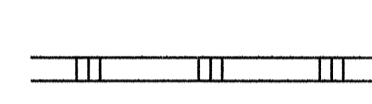

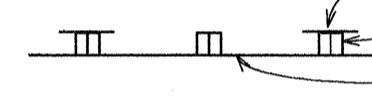

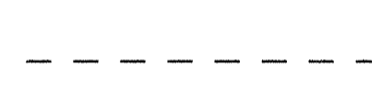
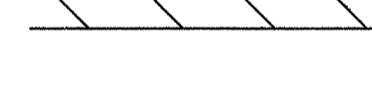
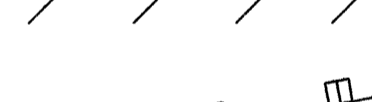



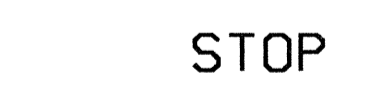


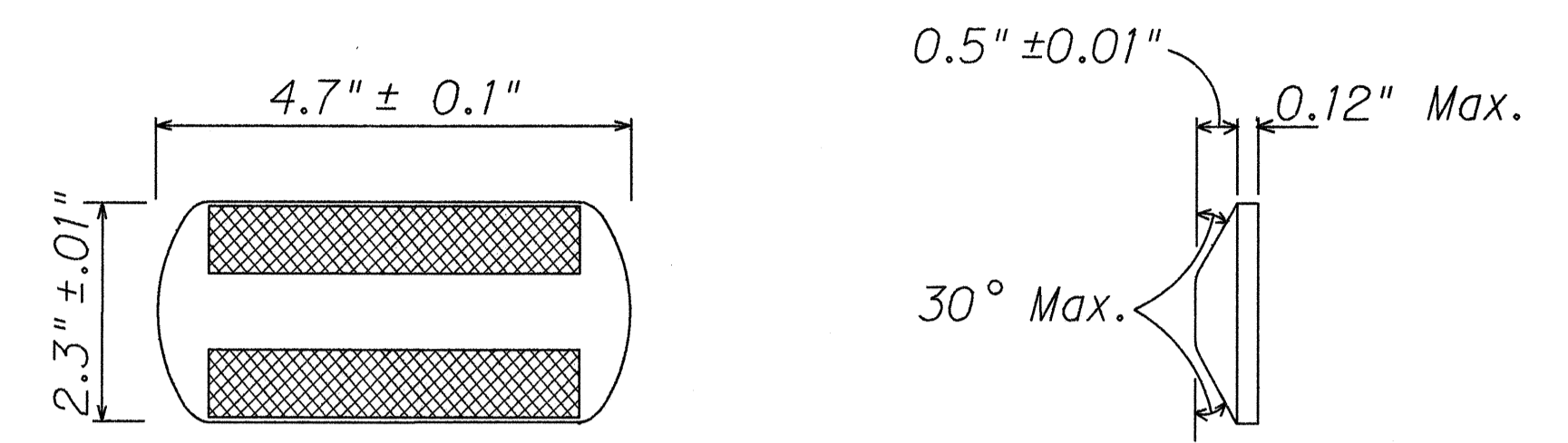




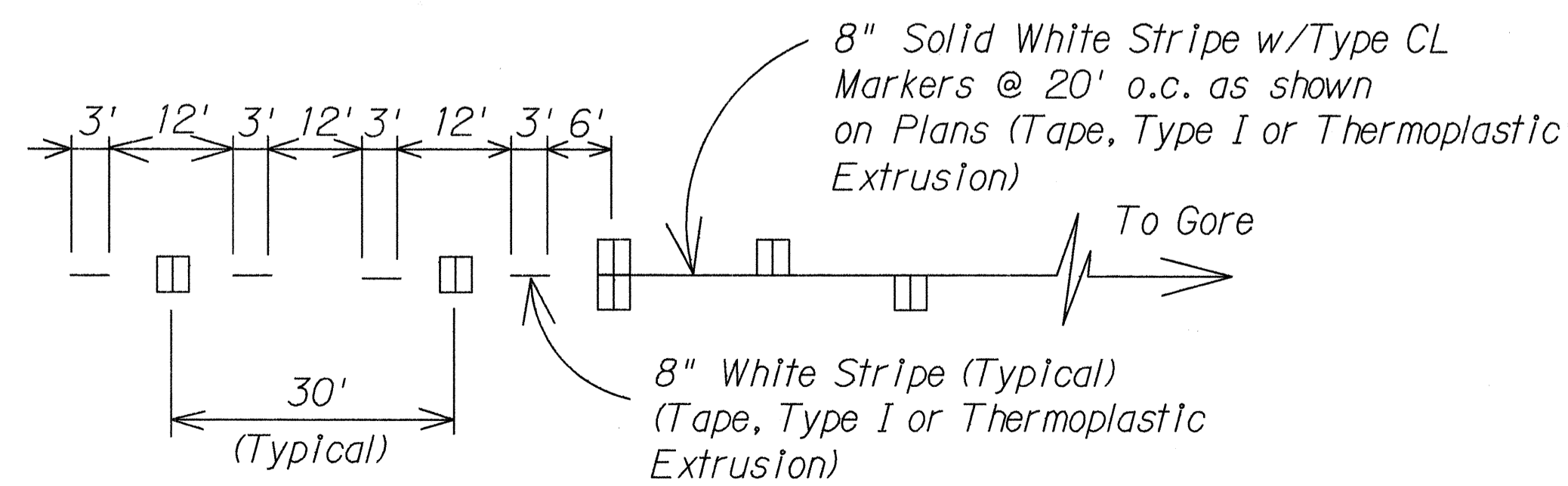
**LEGEND**

-  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)



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



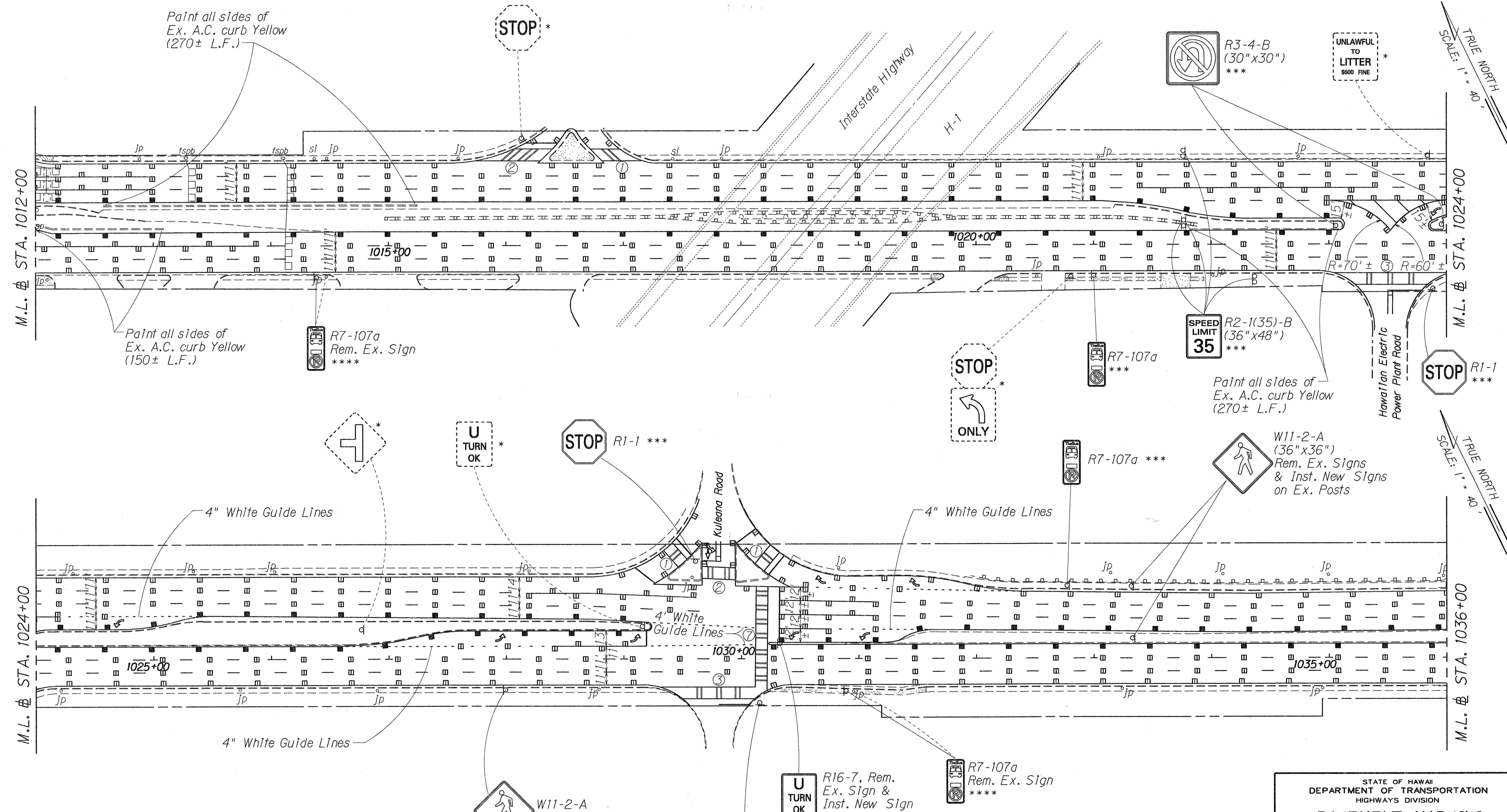
**LANE DROP MARKING**  
Not to Scale

SURVEY PLOTTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 ORIGINAL PLAN: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**PAVEMENT MARKING**  
**LEGEND, DETAILS & NOTES**  
 KAMEHAMEHA HIGHWAY RESURFACING  
 Lehua Ave to Vicinity of Honomanu St  
 Project No. 99E-01-91M  
 Scale: As Shown Date: May, 1991  
 SHEET No. T2 OF 22 SHEETS



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	15	33



KEY:

- \* Exist. Sign(s) & Post(s) to Remain
- \*\* Remove Exist. Sign(s) & Post(s)
- \*\*\* Remove Exist. Sign(s) & Post(s), & Install New Sign(s) w/Post(s)
- \*\*\*\* Install New Sign(s) w/Post(s)

DATE	REVISION
5/30/91	Revised Sign No. R16-7 Placement, Located at Sta. 1030+30±.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

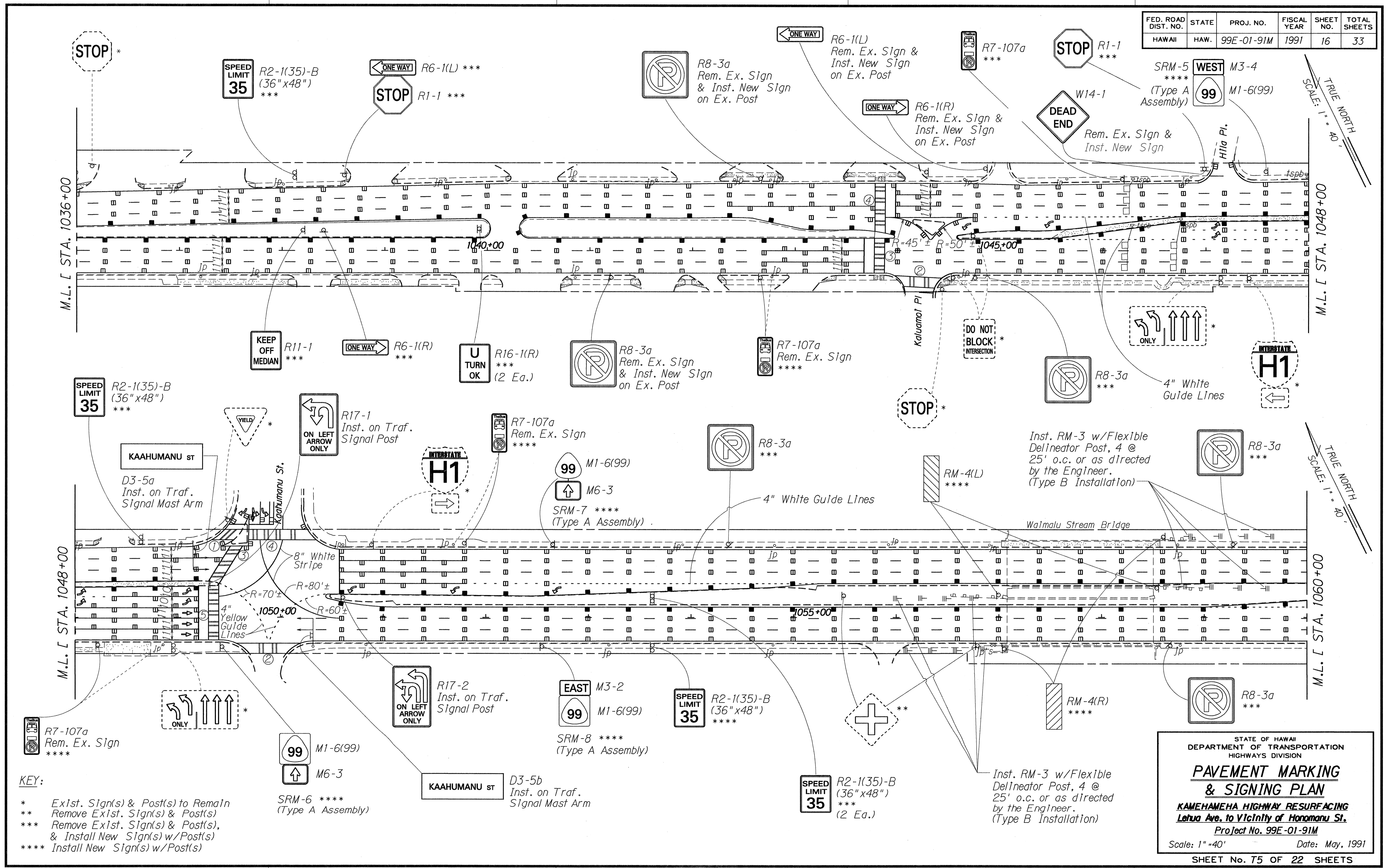
**PAVEMENT MARKING  
& SIGNING PLAN**

**KAMEHAMEHA HIGHWAY RESURFACING  
Lehua Ave. to Vicinity of Honomanu St.**

Project No. 99E-01-91M  
Scale: 1"=40' Date: May, 1991

SHEET No. 74 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	16	33



**KEY:**

- \* Exist. Sign(s) & Post(s) to Remain
- \*\* Remove Exist. Sign(s) & Post(s)
- \*\*\* Remove Exist. Sign(s) & Post(s), & Install New Sign(s) w/Post(s)
- \*\*\*\* Install New Sign(s) w/Post(s)

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**PAVEMENT MARKING  
& SIGNING PLAN**

**KAMEHAMEHA HIGHWAY RESURFACING  
Lehua Ave. to Vicinity of Honomanu St.**

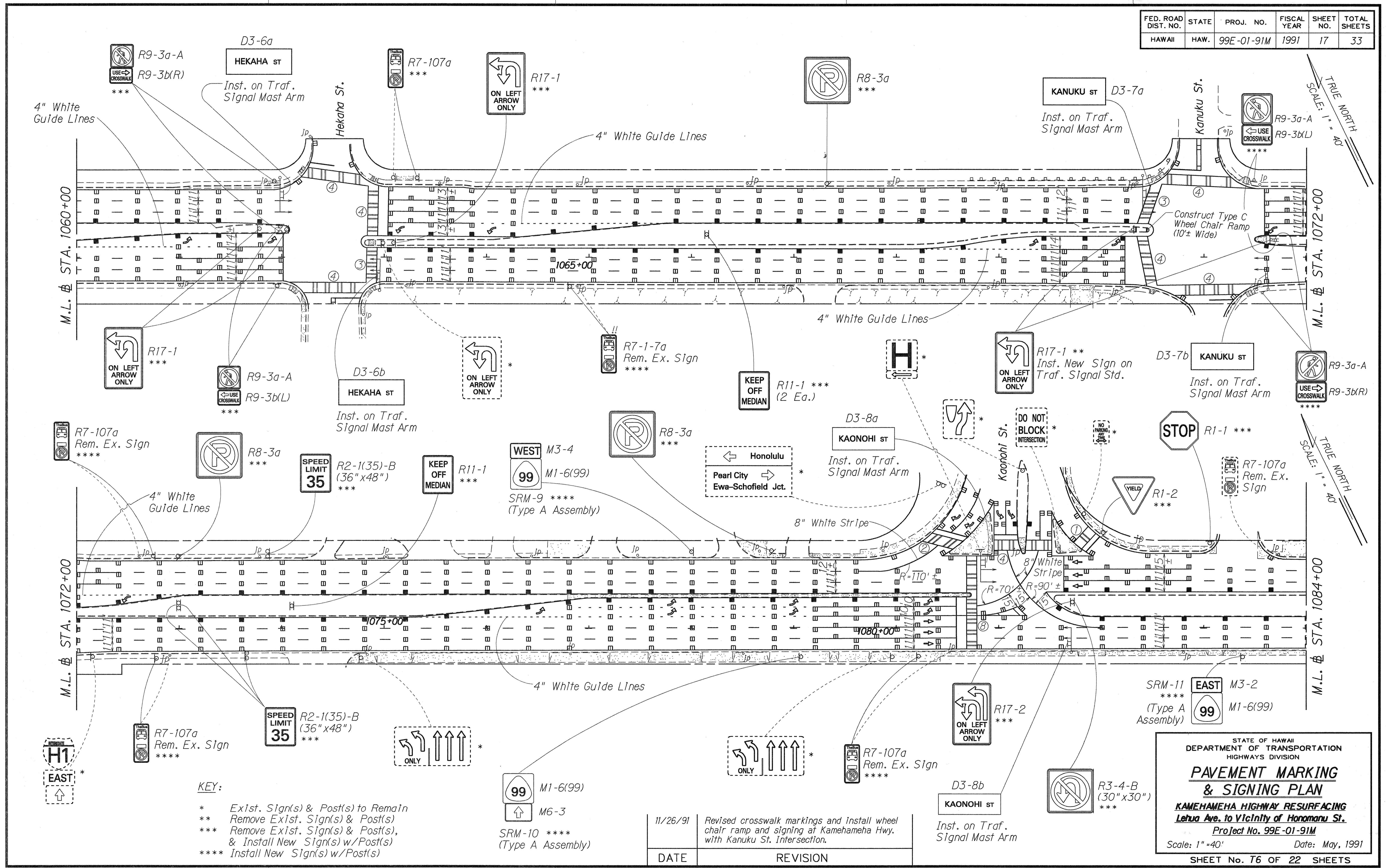
Project No. 99E-01-91M

Scale: 1" = 40'      Date: May, 1991

SHEET No. T5 OF 22 SHEETS

SURVEY PLOTTED BY  
 DATE  
 ORIGINAL PLAN  
 DESIGNED BY  
 QUANTITIES BY  
 CHECKED BY

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	17	33



**KEY:**

- \* Exist. Sign(s) & Post(s) to Remain
- \*\* Remove Exist. Sign(s) & Post(s)
- \*\*\* Remove Exist. Sign(s) & Post(s), & Install New Sign(s) w/Post(s)
- \*\*\*\* Install New Sign(s) w/Post(s)

SRM-10 \*\*\*\*  
 (Type A Assembly)

11/26/91 Revised crosswalk markings and install wheel chair ramp and signing at Kamehameha Hwy. with Kanuku St. Intersection.

DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**PAVEMENT MARKING  
& SIGNING PLAN**

**KAMEHAMEHA HIGHWAY RESURFACING  
Lehua Ave. to Vicinity of Honomanu St.**

Project No. 99E-01-91M

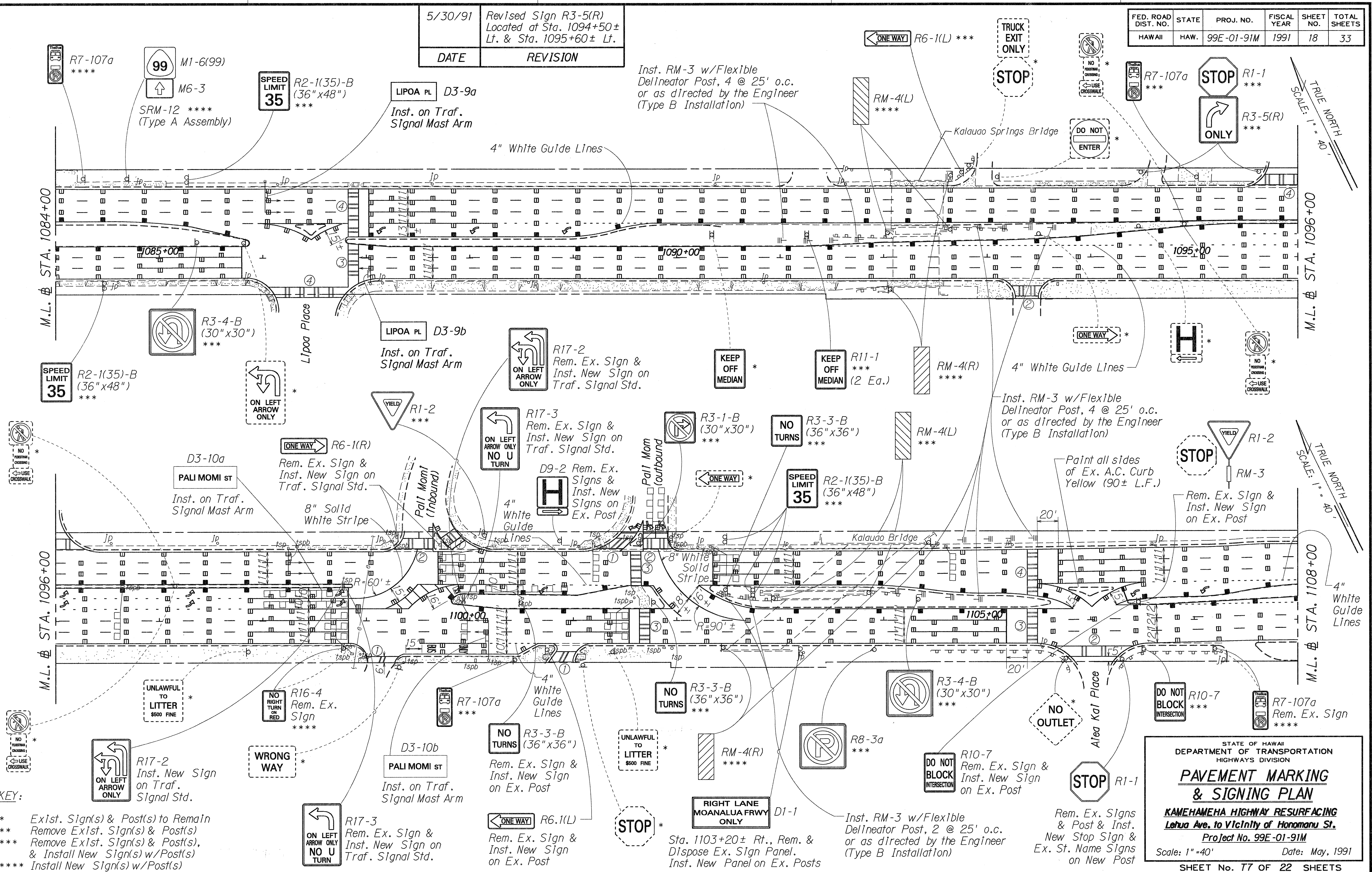
Scale: 1" = 40' Date: May, 1991

SHEET No. T6 OF 22 SHEETS

SURVEY PLOTTED BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_

DATE	REVISION
5/30/91	Revised Sign R3-5(R) Located at Sta. 1094+50± Lt. & Sta. 1095+60± Lt.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	18	33



**KEY:**

- \* Exist. Sign(s) & Post(s) to Remain
- \*\* Remove Exist. Sign(s) & Post(s)
- \*\*\* Remove Exist. Sign(s) & Post(s), & Install New Sign(s) w/Post(s)
- \*\*\*\* Install New Sign(s) w/Post(s)

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

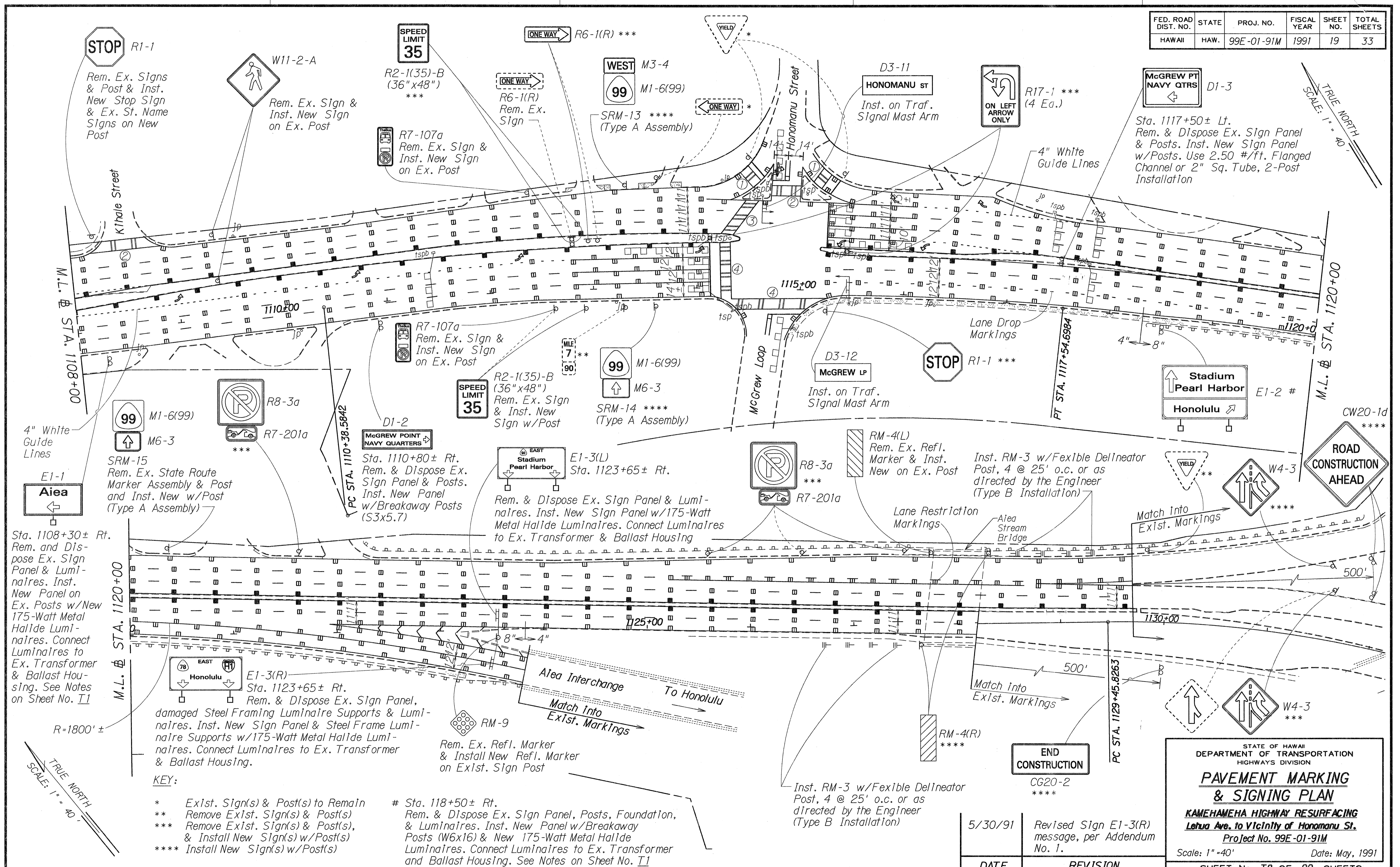
**PAVEMENT MARKING  
& SIGNING PLAN**

**KAMEHAMEHA HIGHWAY RESURFACING  
Lehua Ave. to Vicinity of Honomanu St.**

Project No. 99E-01-91M  
Scale: 1" = 40' Date: May, 1991

SHEET No. 17 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	19	33



**KEY:**

- \* Exist. Sign(s) & Post(s) to Remain
- \*\* Remove Exist. Sign(s) & Post(s)
- \*\*\* Remove Exist. Sign(s) & Post(s), & Install New Sign(s) w/Post(s)
- \*\*\*\* Install New Sign(s) w/Post(s)
- # Sta. 118+50± Rt. Rem. & Dispose Ex. Sign Panel, Posts, Foundation, & Luminaires. Inst. New Panel w/Breakaway Posts (W6x16) & New 175-Watt Metal Halide Luminaires. Connect Luminaires to Ex. Transformer and Ballast Housing. See Notes on Sheet No. T1

DATE	REVISION
5/30/91	Revised Sign E1-3(R) message, per Addendum No. 1.
	CG20-2 ****

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**PAVEMENT MARKING  
& SIGNING PLAN**

**KAMEHAMEHA HIGHWAY RESURFACING  
Lehua Ave. to Vicinity of Honomanu St.**

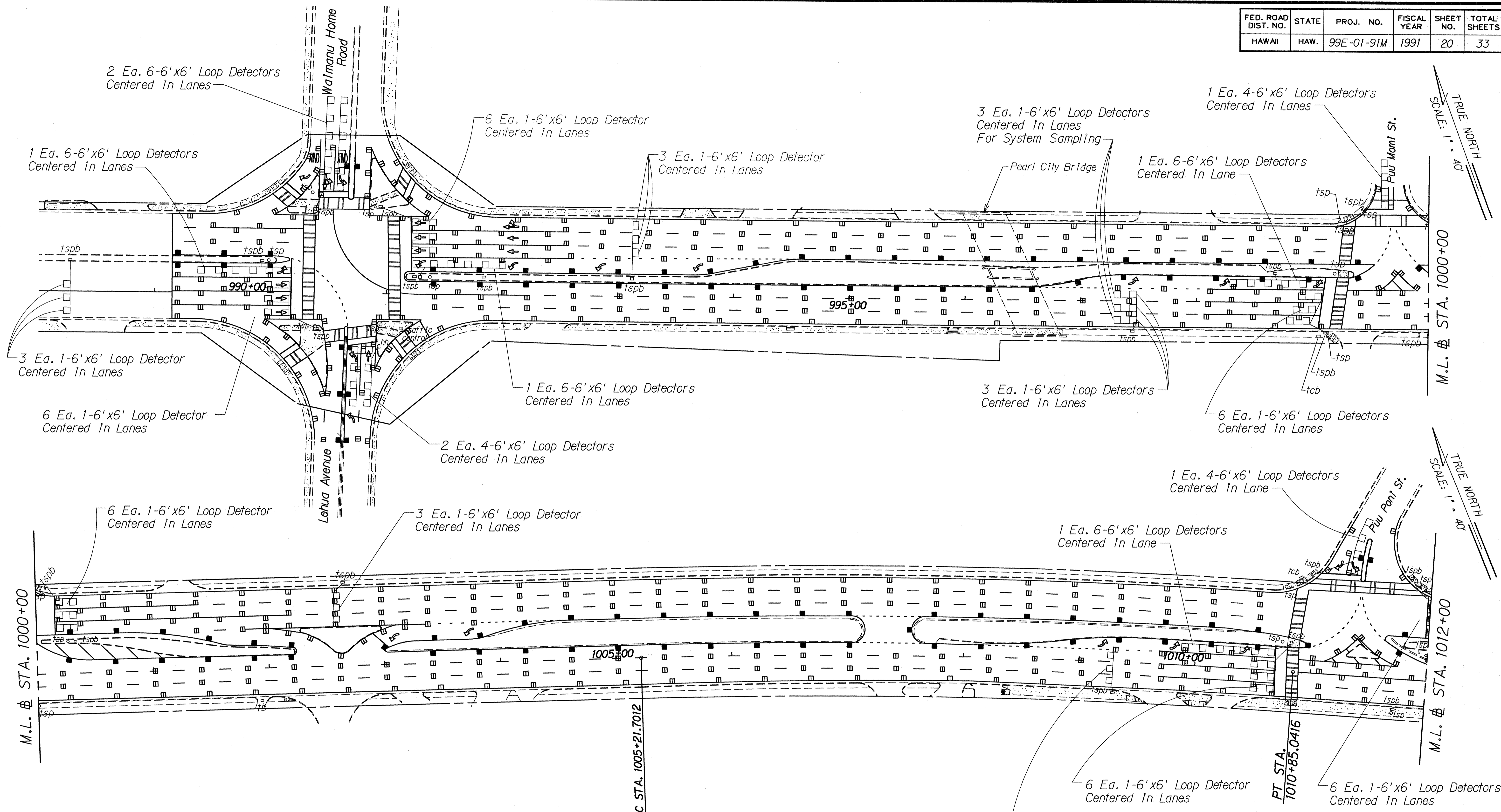
Project No. 99E-01-91M

Scale: 1"=40' Date: May, 1991

SHEET No. 19 OF 22 SHEETS

SURVEY PLOTTED BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	20	33



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**LOOP DETECTOR PLANS**

**Kamahameha Highway Resurfacing**  
**Lehua Ave. to Vicinity of Honomanu St.**  
Project No. 99E-01-91M

Scale: 1" = 40'      Date: May, 1991

SHEET No. T9 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	21	33

6 Each 1-6'x6' Loop Detector Centered In Lanes

3 Each 1-6'x6' Loop Detector Centered In Lanes

3 Each 1-6'x6' Loop Detector Centered In Lanes For System Sampling

TRUE NORTH  
SCALE: 1" = 40'

M.L. # STA. 1012+00

M.L. # STA. 1024+00

TRUE NORTH  
SCALE: 1" = 40'

M.L. # STA. 1036+00

M.L. # STA. 1024+00

3 Each 1-6'x6' Loop Detector Centered In Lanes For System Sampling

Hawaiian Electric Power Plant Road

Kuleana Road

Interstate Highway H-1

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**LOOP DETECTOR PLANS**

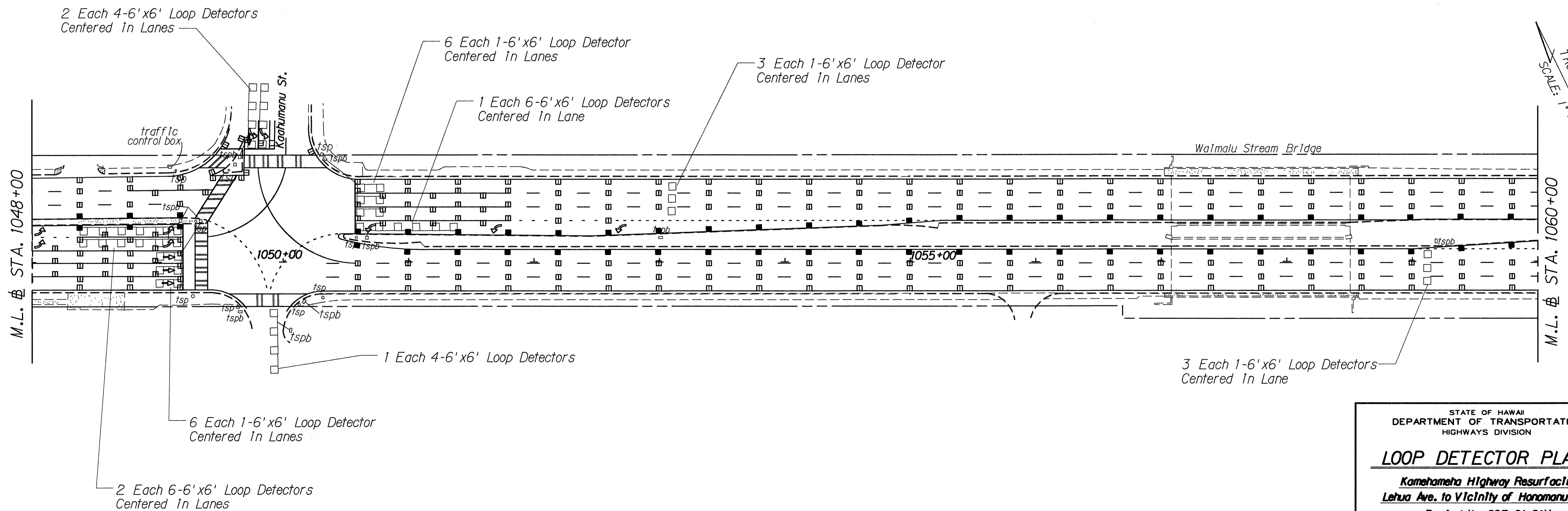
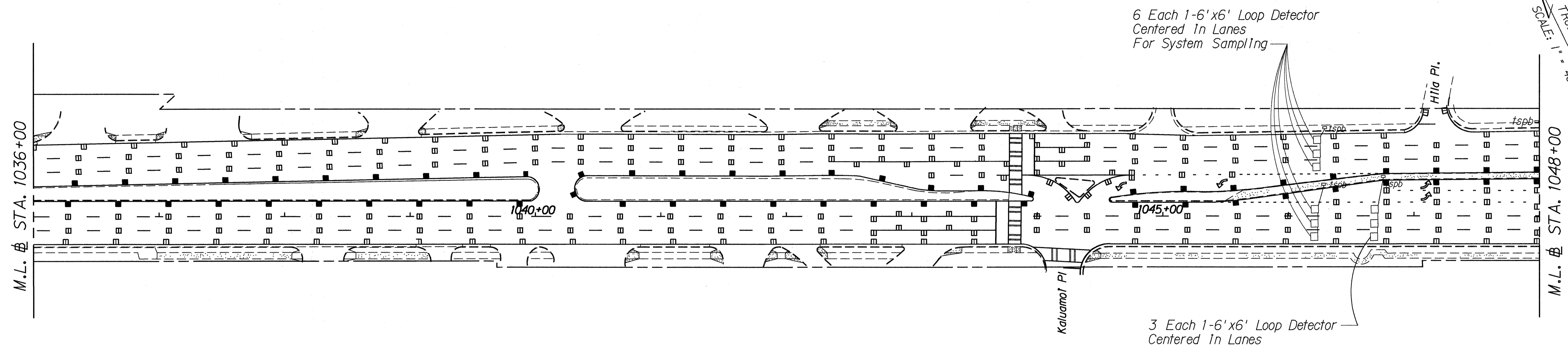
*Kamehameha Highway Resurfacing  
Lehua Ave. to Vicinity of Hanamanu St.  
Project No. 99E-01-91M*

Scale: 1" = 40'      Date: May, 1991

SHEET No. T10 OF 22 SHEETS

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	22	33



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

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**LOOP DETECTOR PLANS**

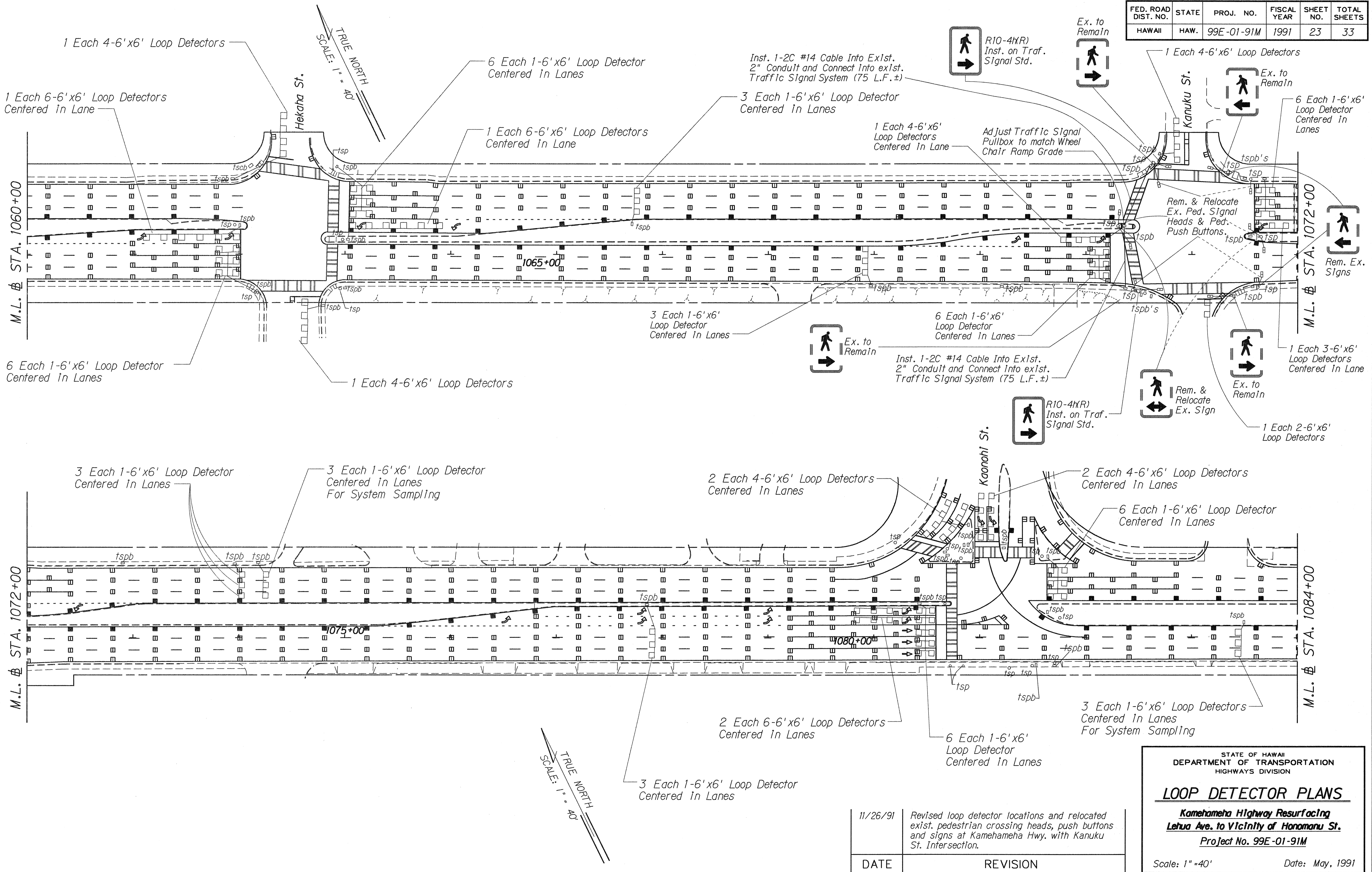
*Kamohaha Highway Resurfacing  
 Lehua Ave. to Vicinity of Honomanu St.*

Project No. 99E-01-91M

Scale: 1" = 40'      Date: May, 1991

SHEET No. 22 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	23	33



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

DATE	REVISION
11/26/91	Revised loop detector locations and relocated exist. pedestrian crossing heads, push buttons and signs at Kamehameha Hwy. with Kanuku St. Intersection.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

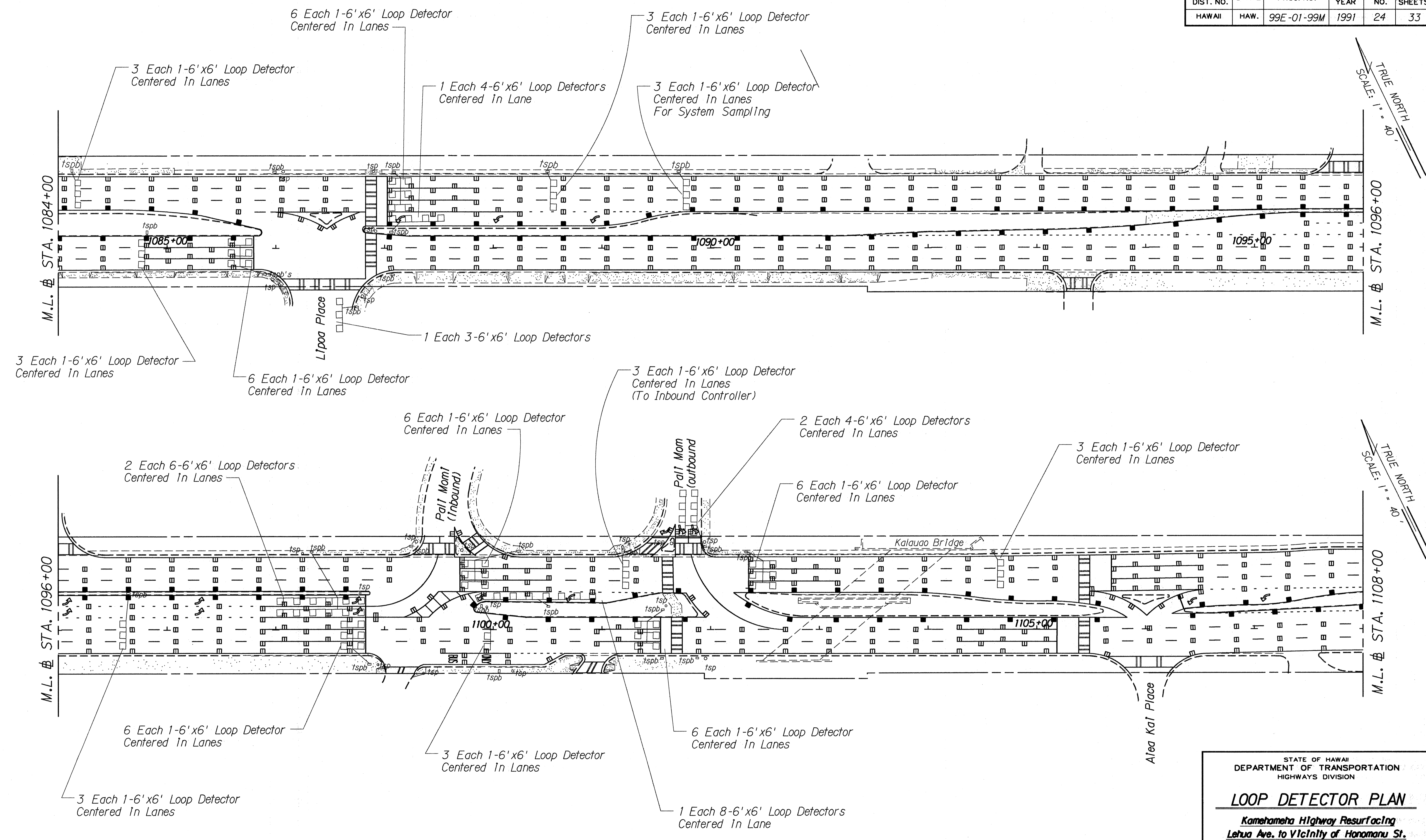
**LOOP DETECTOR PLANS**

***Kamehameha Highway Resurfacing***  
***Lehua Ave. to Vicinity of Hanamanu St.***  
**Project No. 99E-01-91M**

Scale: 1"=40'      Date: May, 1991

SHEET No. T12 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-99M	1991	24	33



DATE: \_\_\_\_\_  
 ORIGINAL DRAWING PLotted BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**LOOP DETECTOR PLAN**

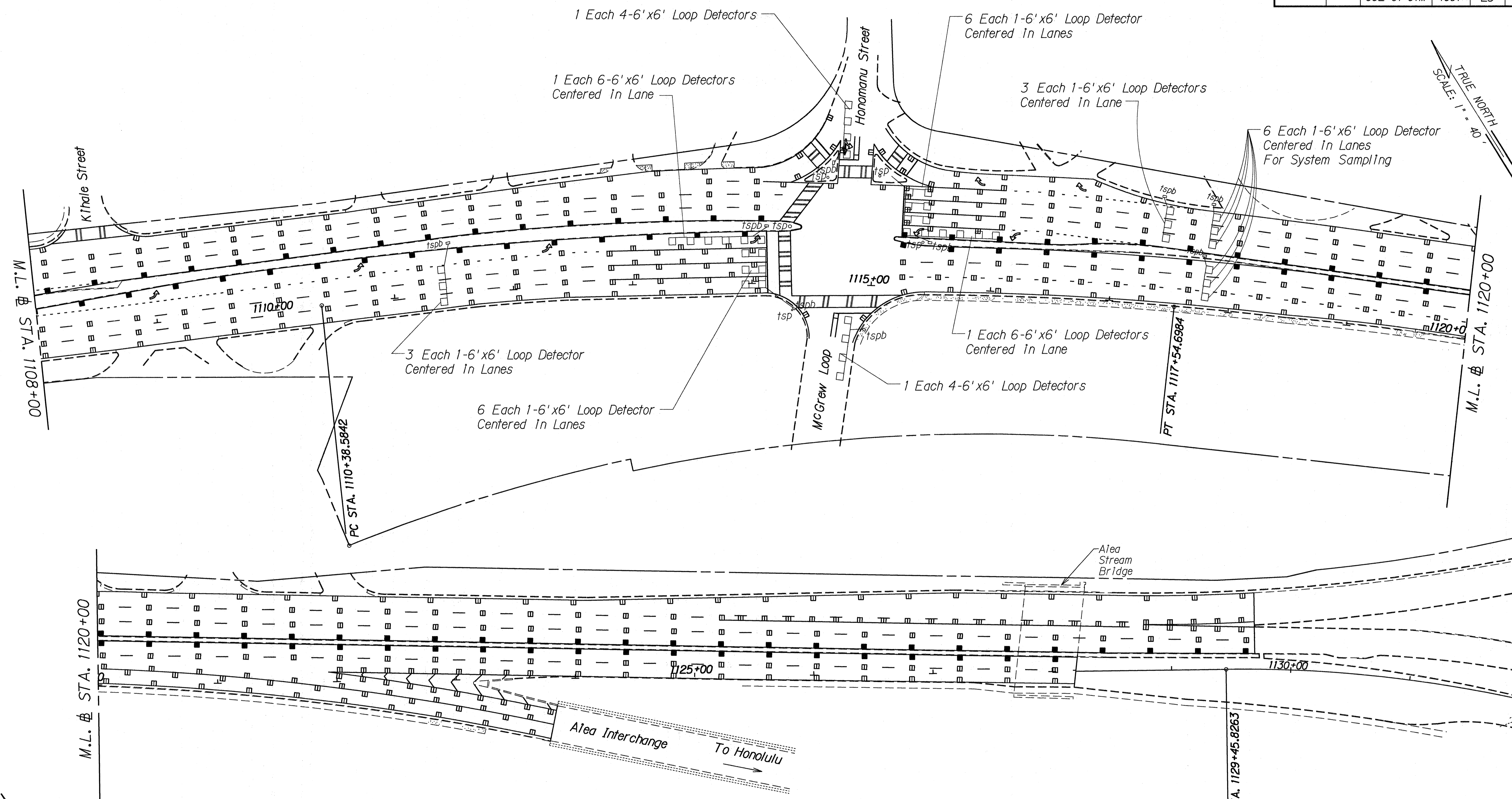
*Kamehameha Highway Resurfacing  
 Lehua Ave. to Vicinity of Honomanu St.*

Project No. 99E-01-91M

Scale: 1" = 40'      Date: May, 1991

SHEET No. 113 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	25	33



DATE	BY
DESIGNED BY	BY
TRACED BY	BY
QUANTITIES BY	BY
CHECKED BY	BY

TRUE NORTH  
SCALE: 1" = 40'

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**LOOP DETECTOR PLANS**

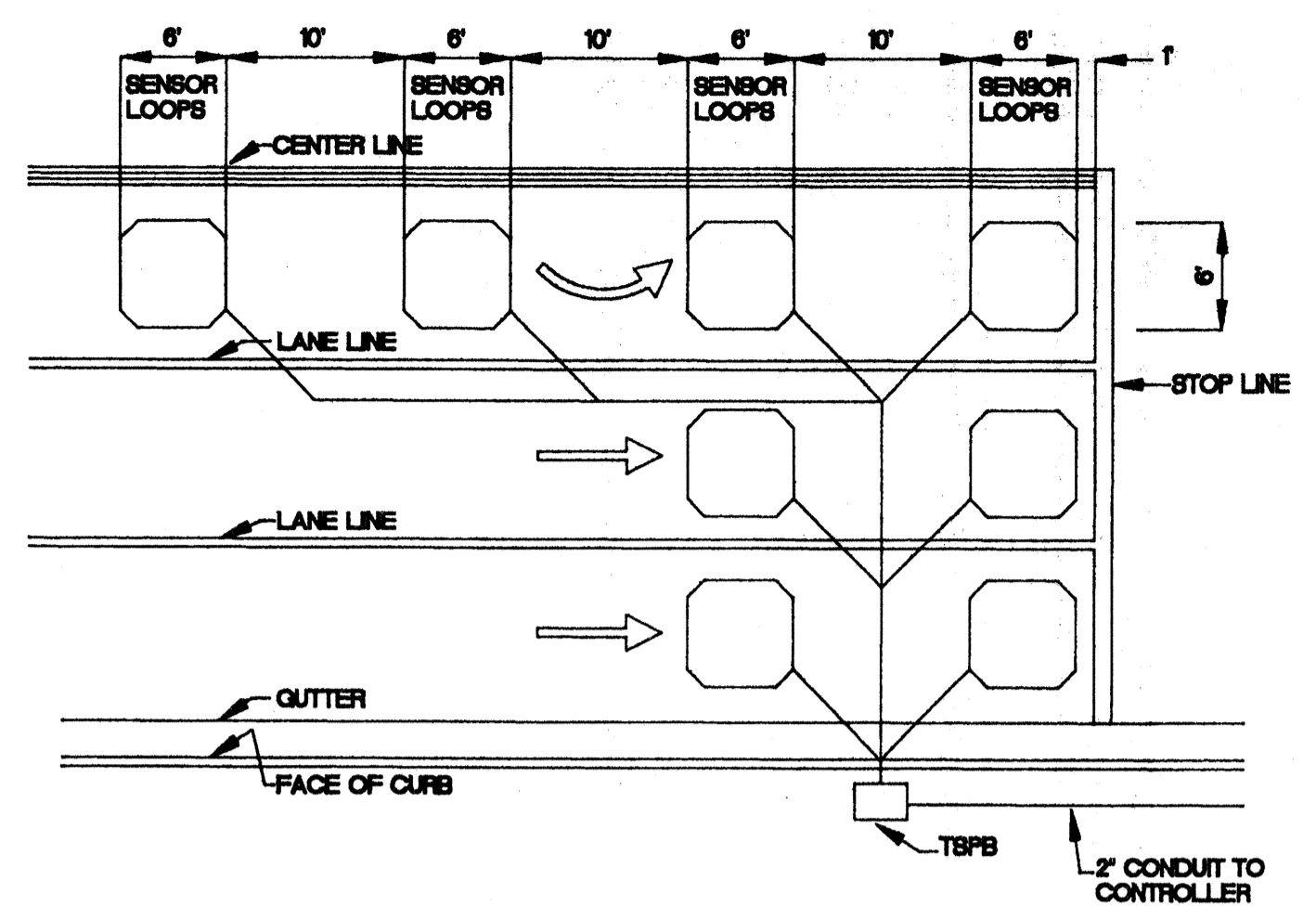
*Kamohamoha Highway Resurfacing  
Lehua Ave. to Vicinity of Honomanu St.*

Project No. 99E-01-91M

Scale: 1" = 40'      Date: May, 1991

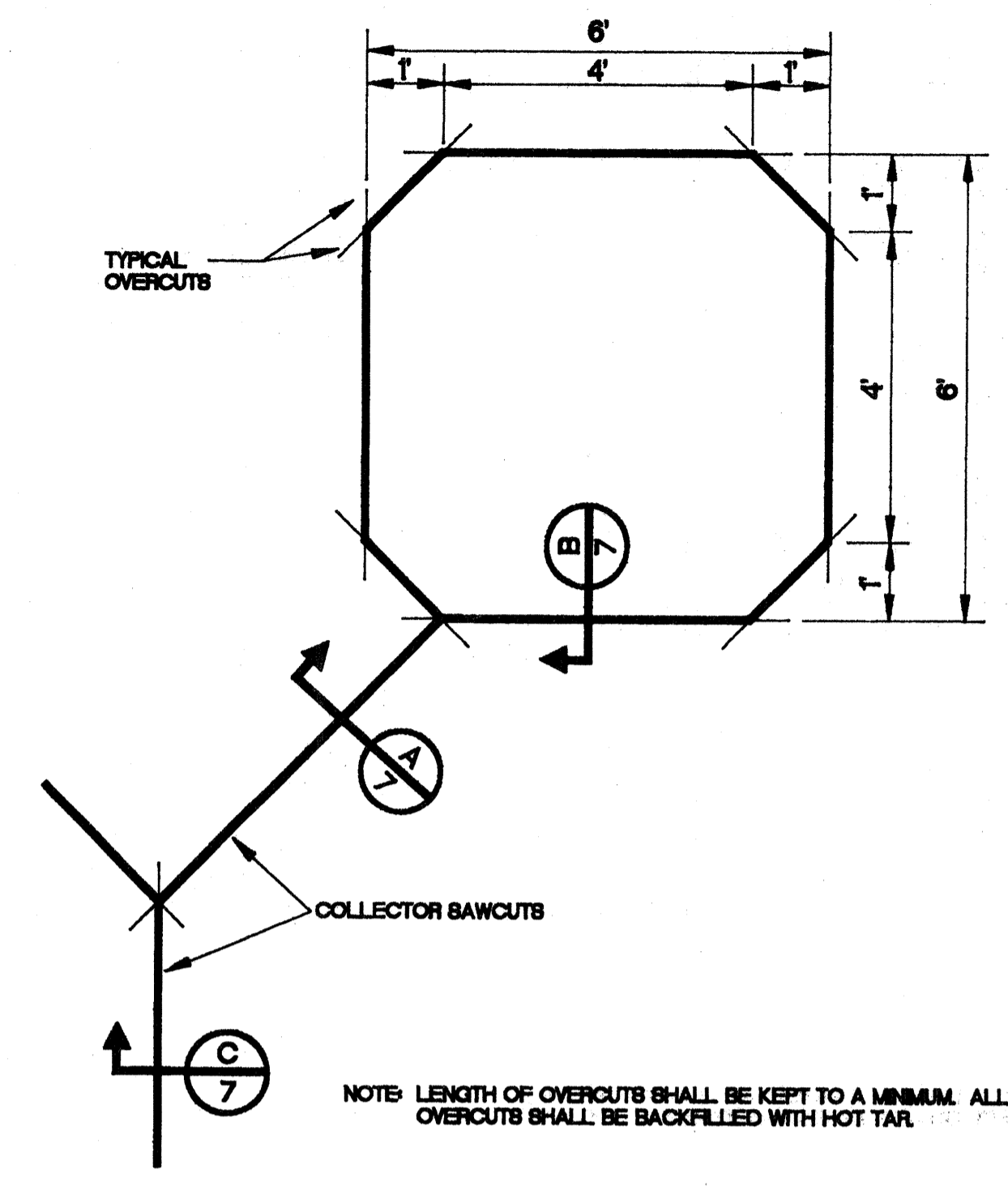
SHEET No. T14 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	26	33

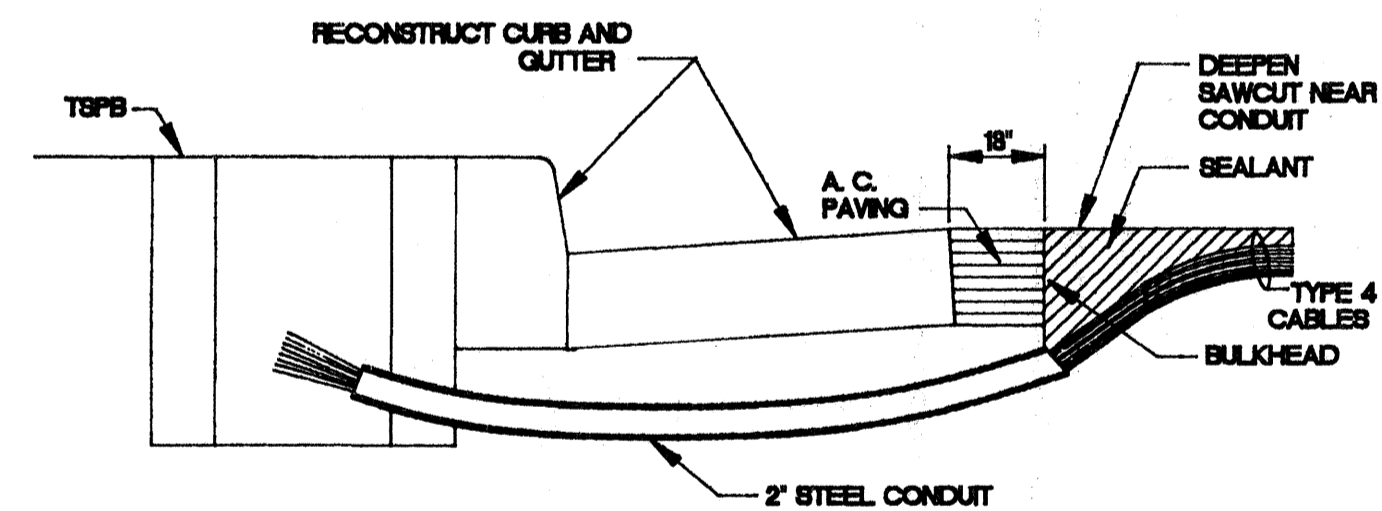
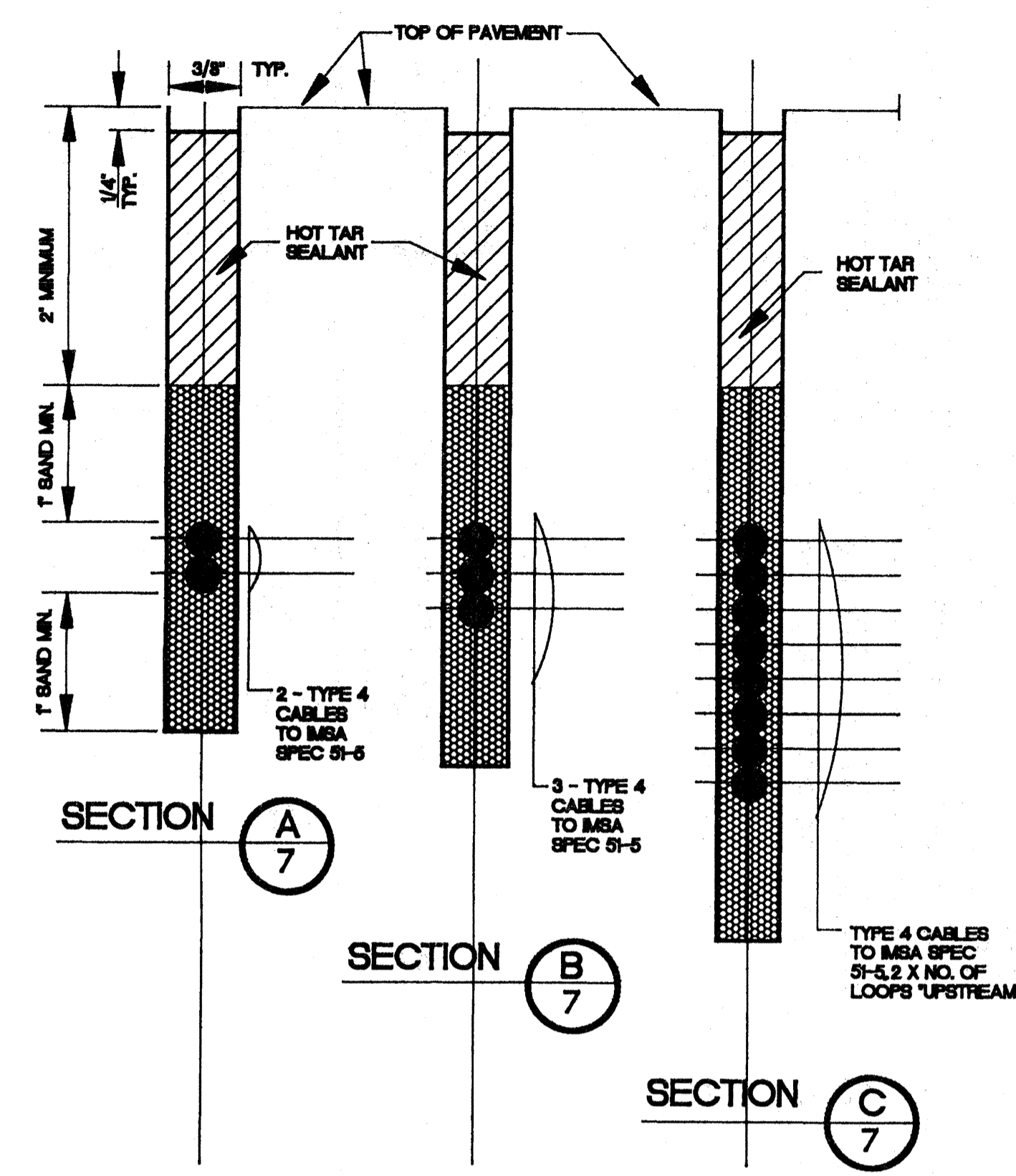


- NOTES
1. CENTER SENSOR LOOPS IN LANES.
  2. COLLECTOR CABLES SHALL BE TWISTED 2 TURNS PER FOOT.
  3. NUMBER OF LOOPS AND LOCATIONS VARY. SEE PROJECT PLANS.
  4. NUMBER AND LOCATIONS OF COLLECTOR SAWCUTS MAY BE VARIED IN THE FIELD TO SUIT.

TYPICAL SENSOR LOOP LAYOUT

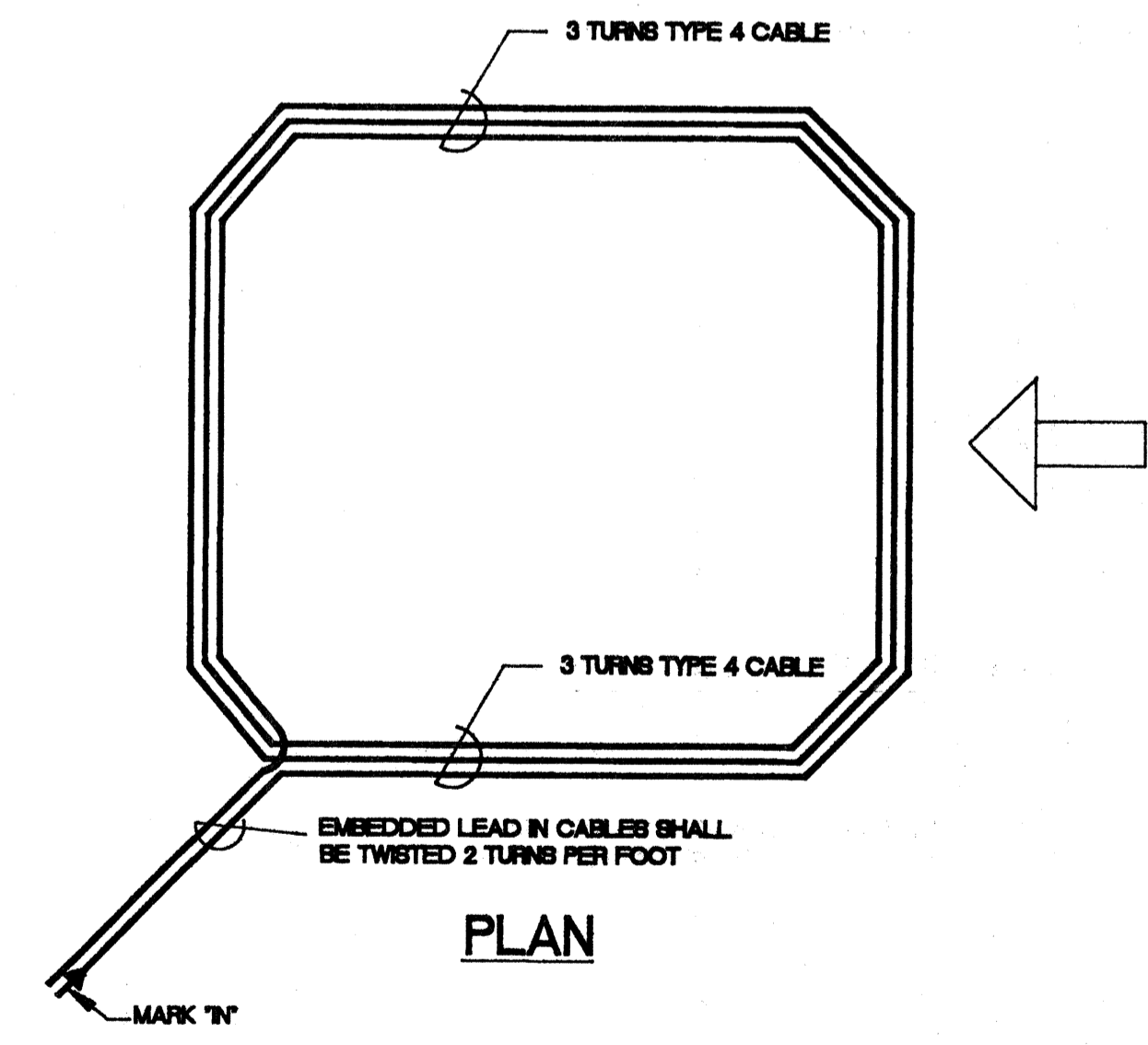


TYPICAL SENSOR LOOP SAWCUT DETAIL



- NOTES ON CONSTRUCTION AT END OF SAWCUT
1. SEAL ROADWAY END OF CONDUIT AFTER INSTALLATION OF CONDUCTORS
  2. INSTALL BULKHEAD ACROSS CONDUIT TRENCH
  3. PLACE HOT TAR IN SAWCUT.
  4. BACKFILL OVER CONDUIT WITH NEW A. C.
  5. RECONSTRUCT CURB AND GUTTER AS REQUIRED.

DETAIL OF SENSOR LOOP INSTALLATION AT EDGE OF ROADWAY



TYPICAL SENSOR LOOP WIRING DIAGRAM

**TYPES OF CABLES**

- TYPE 1 SIGNAL LOOP CABLE: STRANDED NO. 14, 26 CONDUCTORS
- TYPE 2 DETECTOR LEAD-IN CABLE AND PEDESTRIAN PUSH BUTTON CIRCUIT CABLE: STRANDED, NO. 14, 2 CONDUCTORS
- TYPE 3 INTERCONNECT CABLE: SOLID NO. 20, 12 PAIRS
- TYPE 4 LOOP SENSOR CABLE: SOLID NO. 12, SINGLE CONDUCTOR TO IMSA SPEC 51-5
- TYPE 5 CABLE FROM SIGNAL LOOP TO SIGNAL HEAD: STRANDED, NO. 14, SINGLE CONDUCTOR
- TYPE 6 SERVICE CABLE: SOLID, NO. 6, 3 CONDUCTORS

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

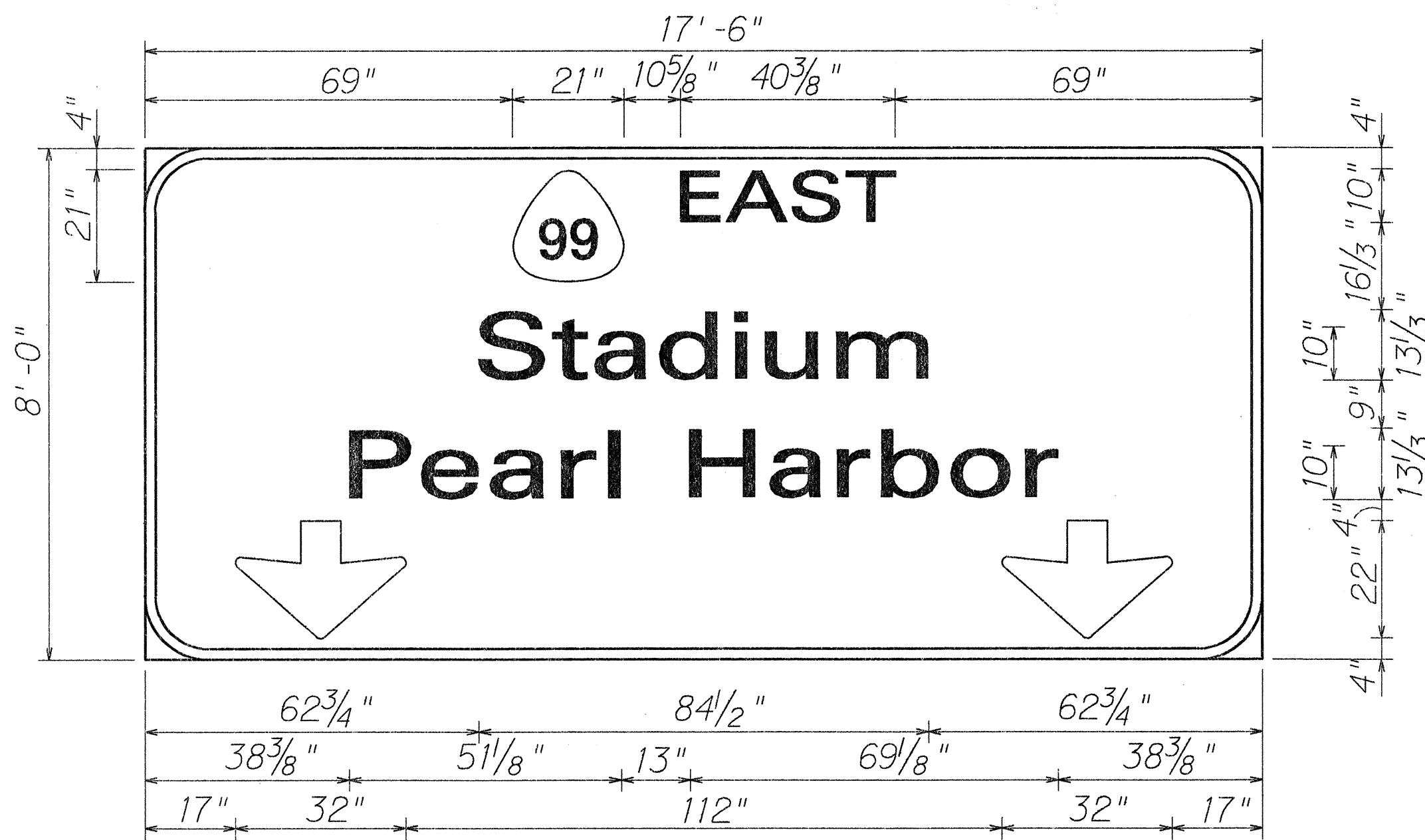
**LOOP DETECTOR DETAILS**

KAMEHAMEHA HIGHWAY RESURFACING  
Lehua Ave to Vicinity of Honomanu St  
Project No. 99E-01-91M

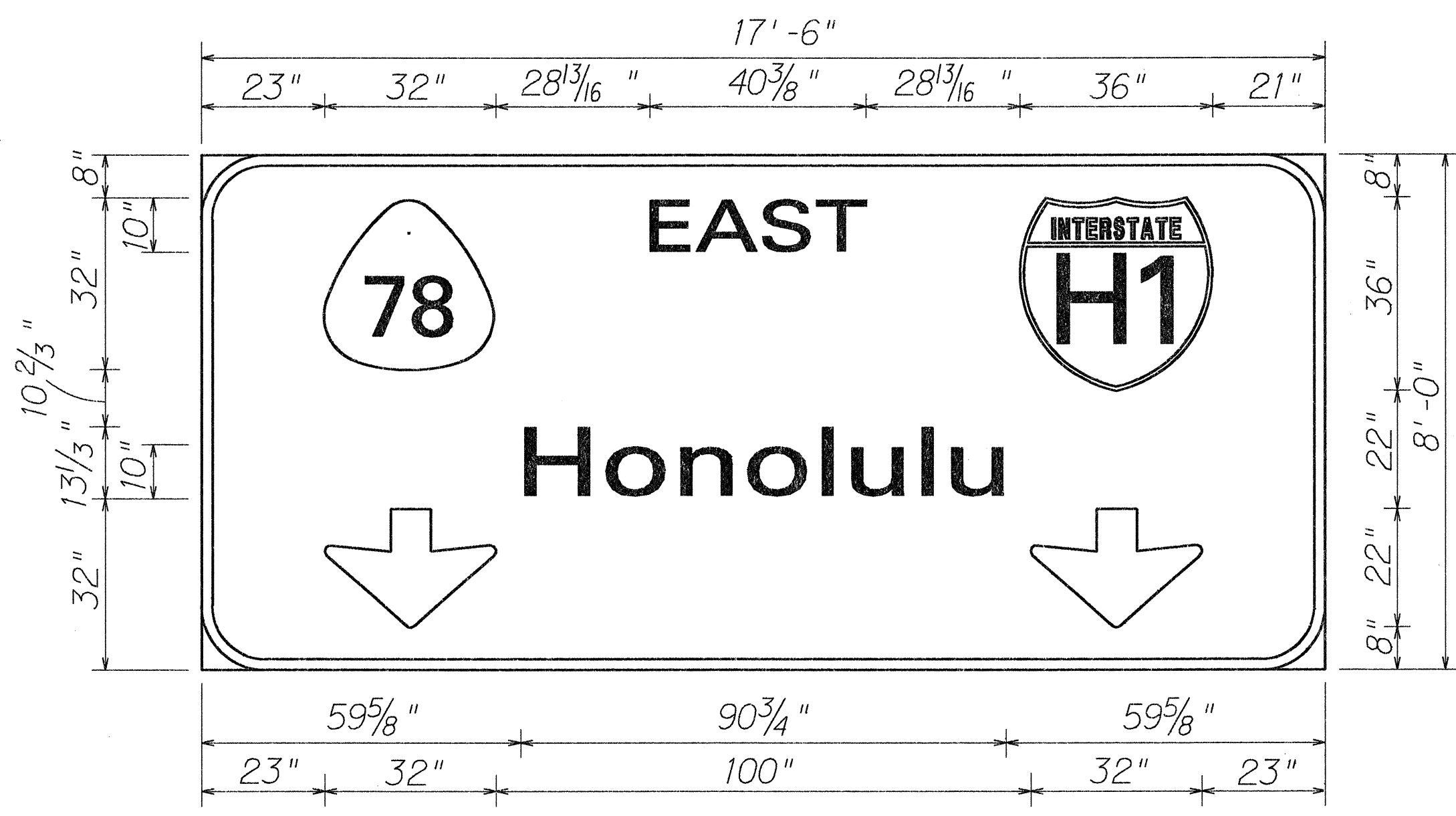
Not to Scale Date: May, 1991

SHEET No. T15 OF 22 SHEETS

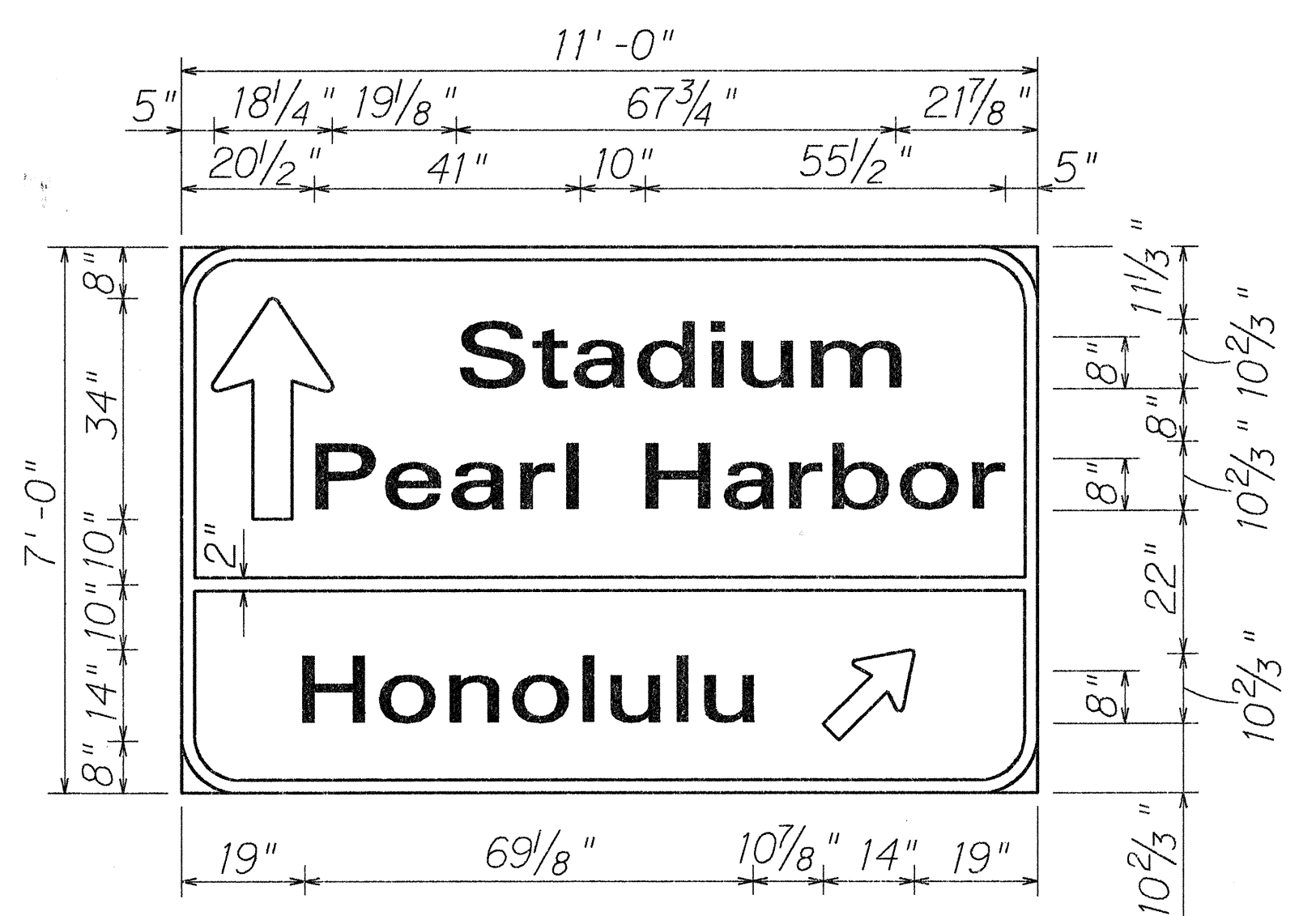
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	27	33



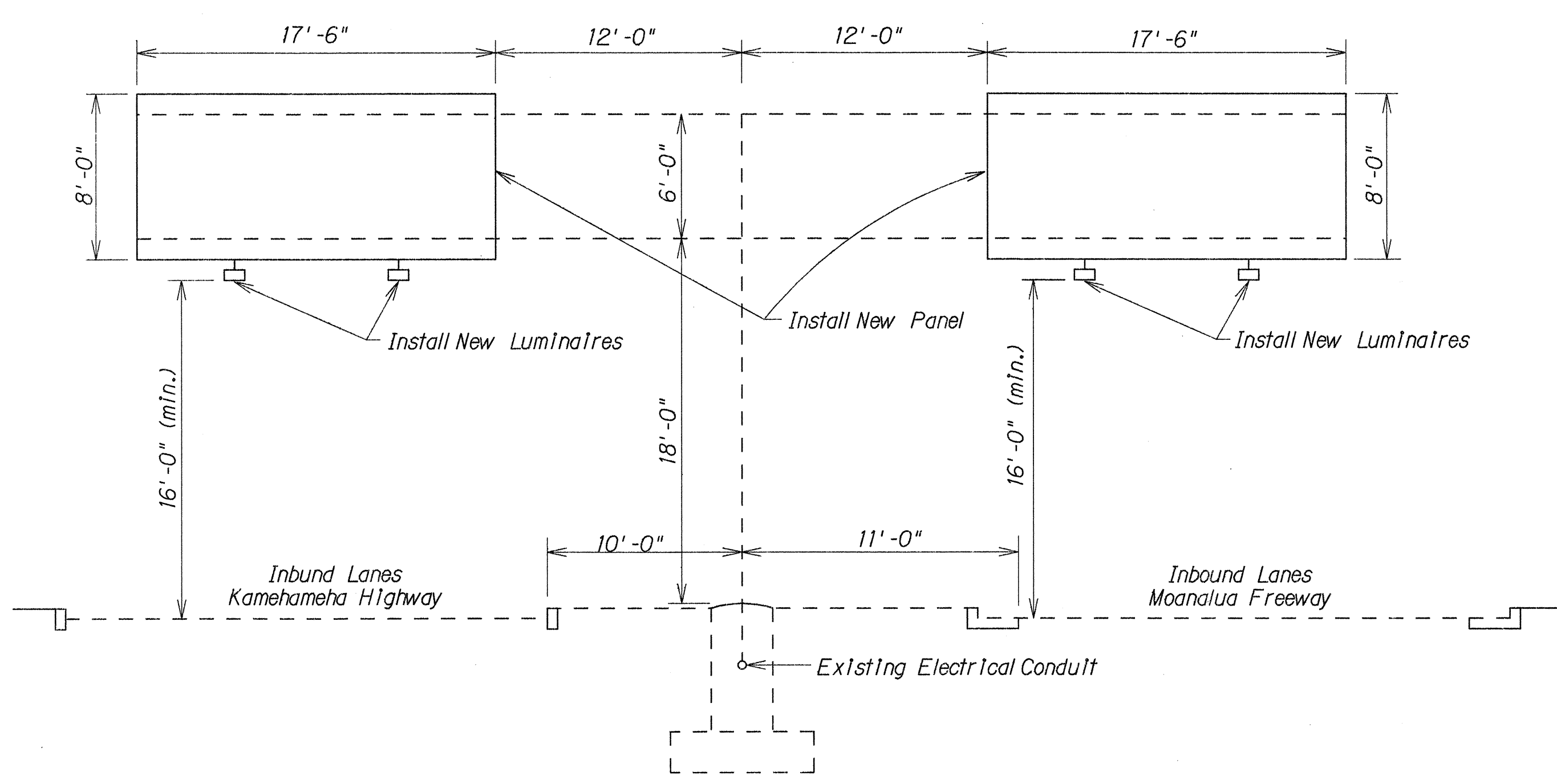
E1-3(L)  
Scale: 1/2" = 1'-0"



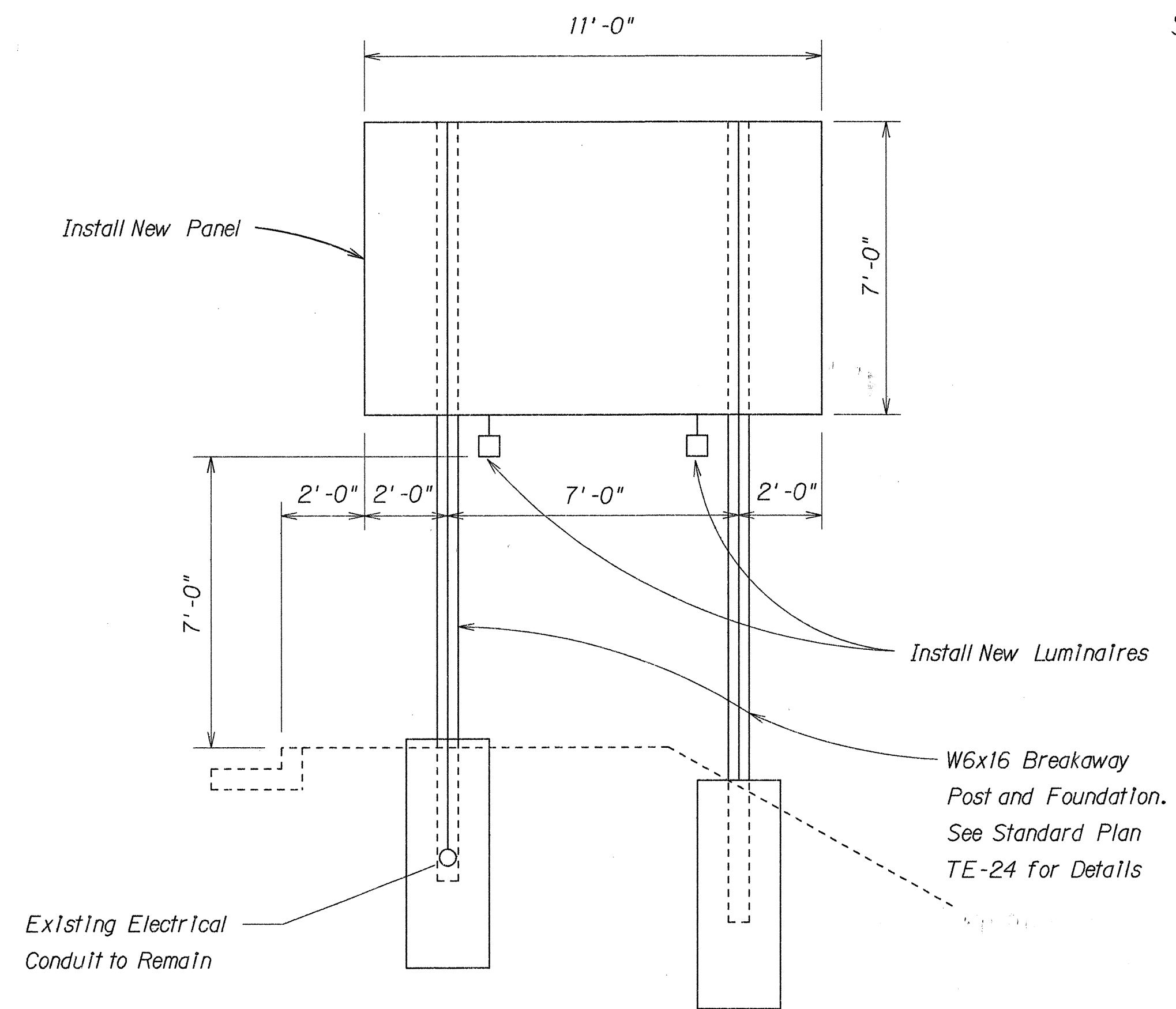
E1-3(R)  
Scale: 1/2" = 1'-0"



E1-2  
Scale: 1/2" = 1'-0"



SIGN E1-3(L & R)  
I.B. Sta. 1123+65 ± Rt.  
Scale: 3/16" = 1'-0"



SIGN E1-2  
I.B. Sta. 1118+50 ± Rt.  
Scale: 3/8" = 1'-0"

DATE	REVISION
5/30/91	Revised E1-3(R) Sign Panel layout, per addendum No. 1.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGN PANEL & FRAME LAYOUT**

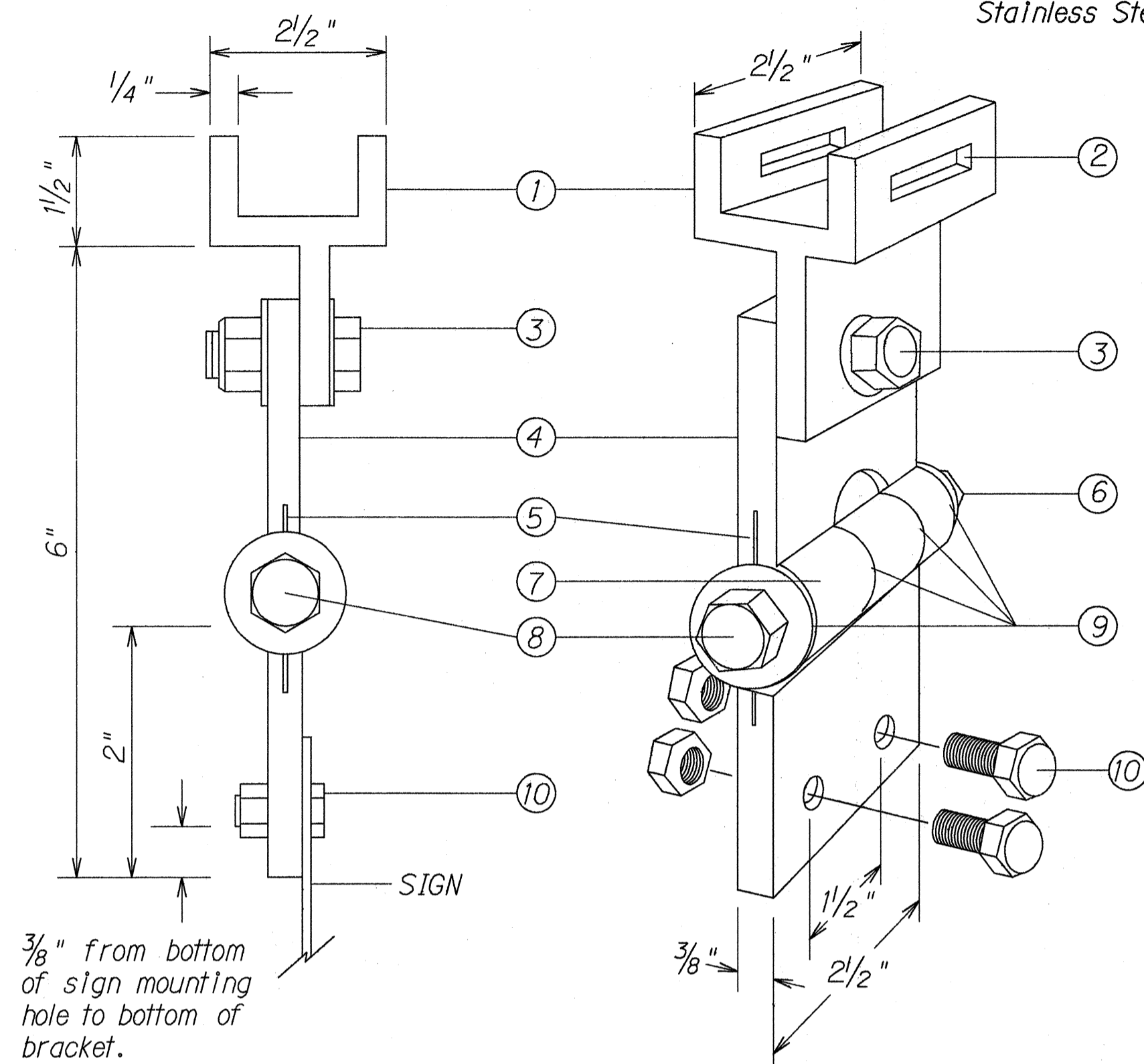
**KAMEHAMEHA HIGHWAY RESURFACING**  
Lehua Ave. to Vicinity of Honomanu St.  
Project No. 99E-01-91M

Scale: As Shown Date: May, 1991  
SHEET No. T16 OF 22 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	29	33

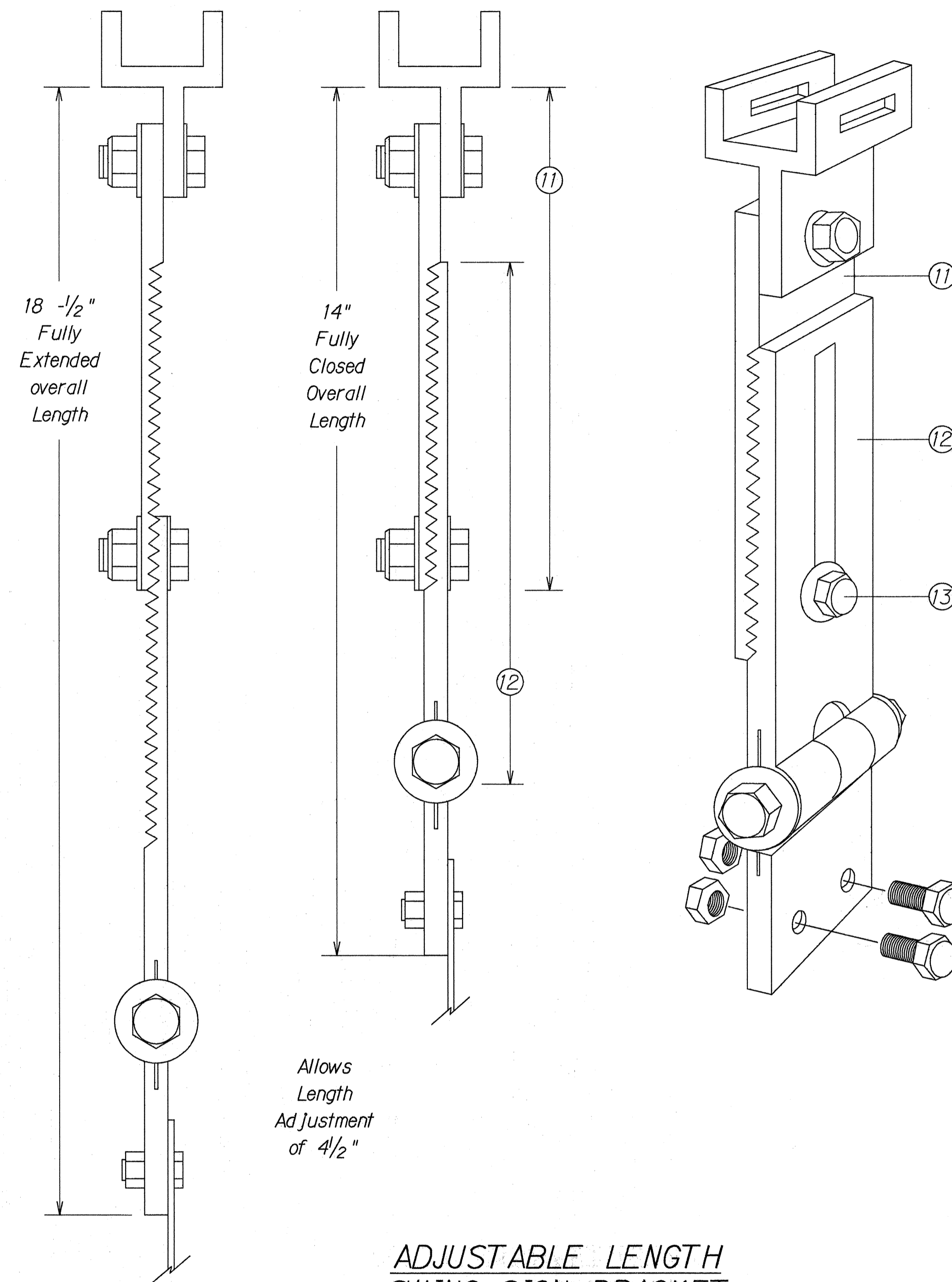
All Aluminum 6061T6 Alloy and Stainless Steel Components.



**FIXED LENGTH NON-ADJUSTABLE SWING SIGN BRACKET**

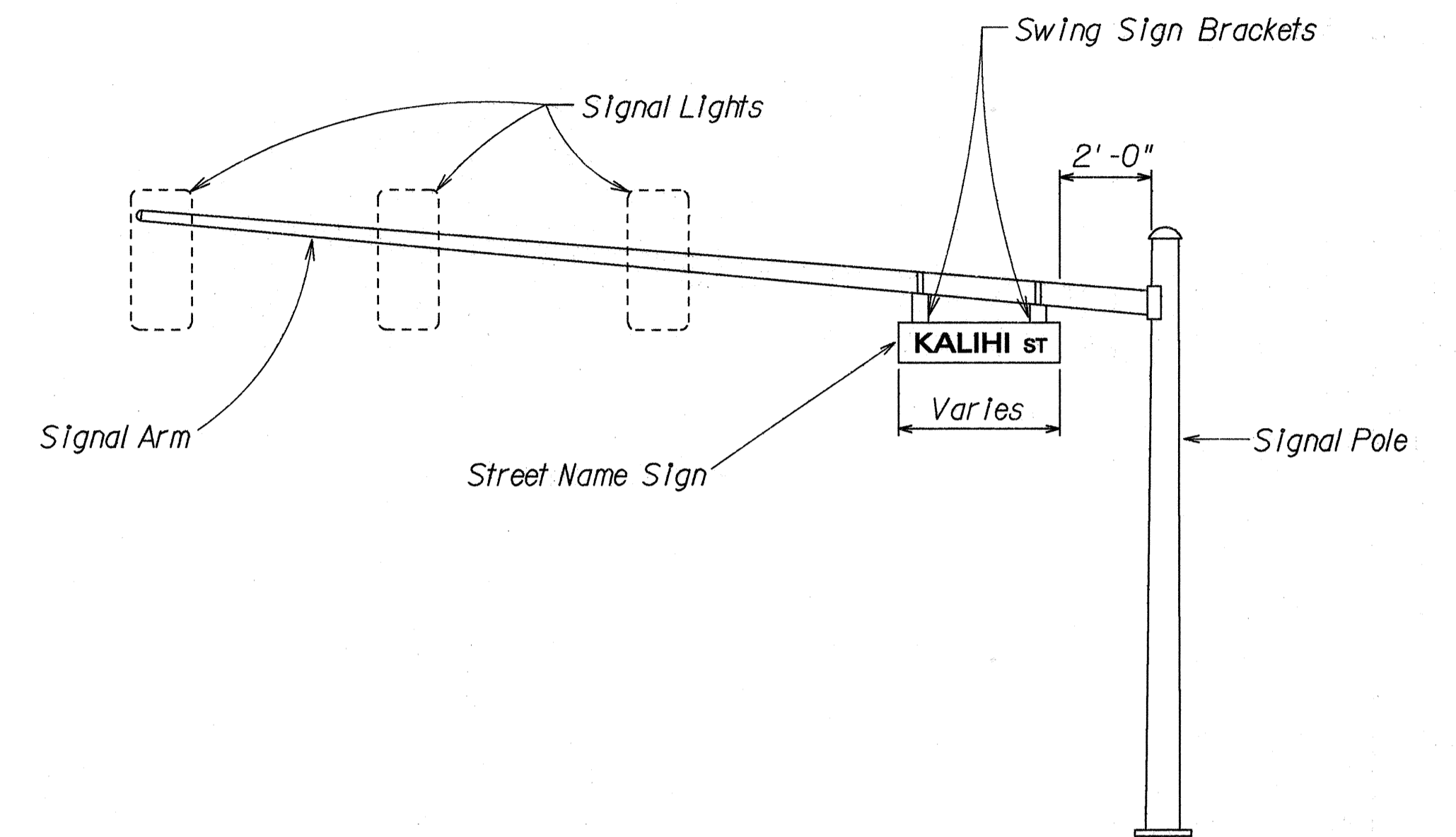
- ① Pivotal Upper Bracket
- ② 1 5/8" x 1/4" Slot for double strapping to electroliner mast arm. (M2G-34S(HD) .030" x 3/4" Heavy Duty Stainless Steel Strap with M2G-34B(HD) Buckle recommended.)
- ③ 1/2" - 13 x 1 1/2" Stainless Steel Hex Head Bolt with Stainless Steel Hex Lock Nut and 1/16" Stainless Steel Washer (both sides). Allows upper bracket to pivot and align with electroliner mast arm.
- ④ 6" Overall drop with Fixed Length Sign Bracket
- ⑤ Stainless Steel Dampener Spring (Removable)
- ⑥ Stainless Steel Hex Lock Nut with 1/16" Stainless Steel Washer
- ⑦ 1" O.D. Axle Housing
- ⑧ 1/2" - 13 x 4" Stainless Steel Hex Head Bolt with 1/16" Stainless Steel Washer
- ⑨ Oilite Bushing
- ⑩ Sign Mounting Sets, consisting of two each 5/16" - 18 x 1" Stainless Steel Hex Head Bolt with Stainless Steel Hex Lock Nut. Two holes on 1/2" centers provide positive lock sign mounting to bracket.

Dimensions may vary slightly.



**ADJUSTABLE LENGTH SWING SIGN BRACKET**

- ⑪ 8 1/4" overall length Upper Adjustable Sign Bracket section
- ⑫ 9" overall length Lower Adjustable Sign Bracket section, including Axle Housing (8" overall length to top of Axle Housing)
- ⑬ 1/2" - 13 x 1 1/2" Stainless Steel Hex Bolt with Stainless Steel Hex Lock Nut and 1/16" Stainless Steel Washers (both sides). Loosen lock nut, adjust bracket teeth to level sign.



**STREET NAME SIGN MOUNTING ON MAST ARM**

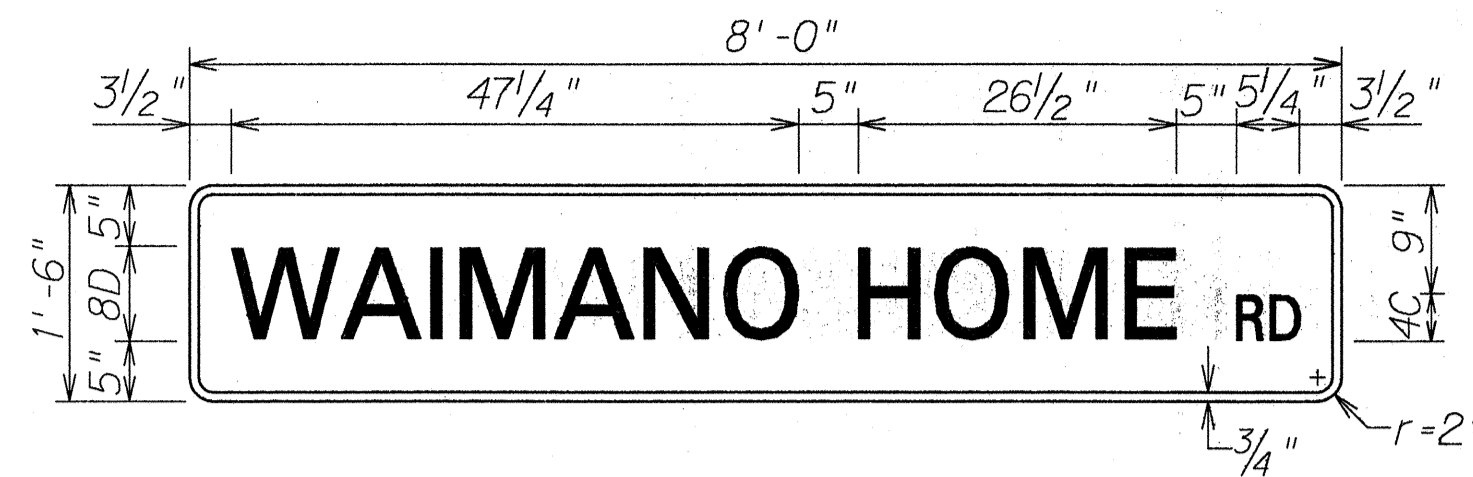
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STREET NAME SIGN MOUNTING DETAILS**

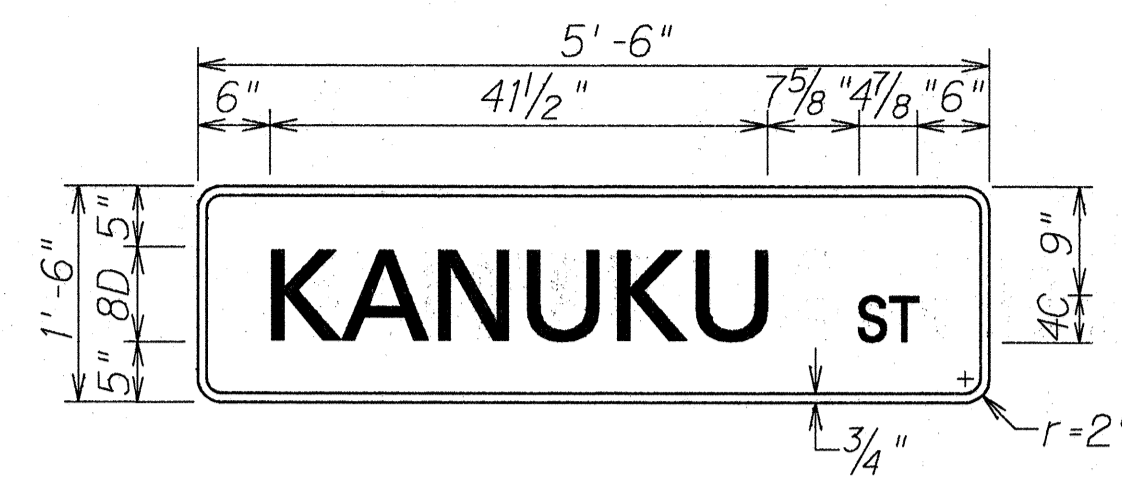
**KAMEHAMEHA HIGHWAY RESURFACING**  
**Lehua Ave. to Vicinity of Hanomani St.**  
Project No. 99E-01-91M

Not to Scale Date: May, 1991  
SHEET No. T18 OF 22 SHEETS

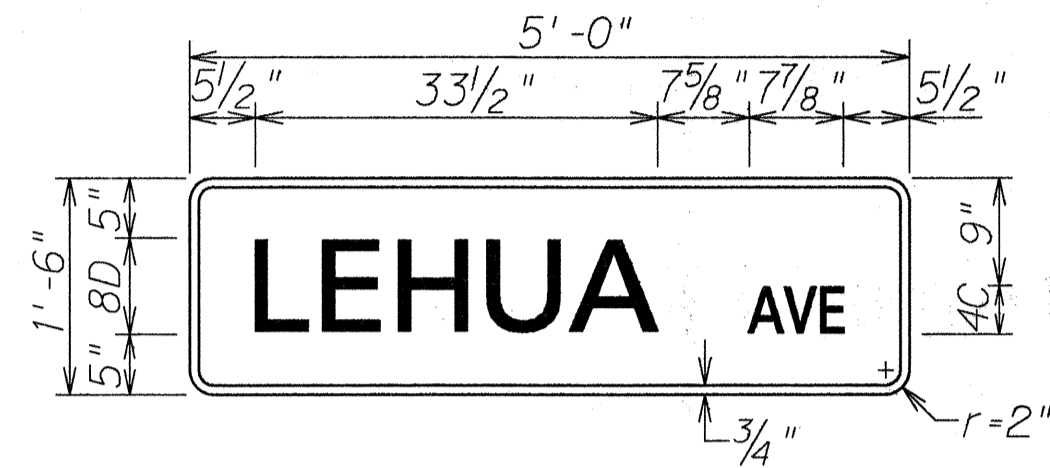
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	30	33



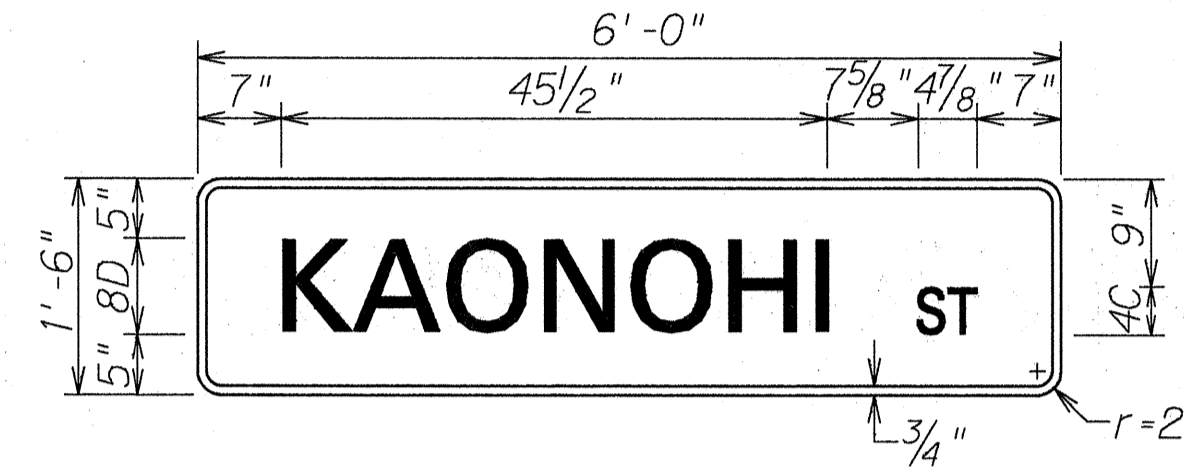
D3-1



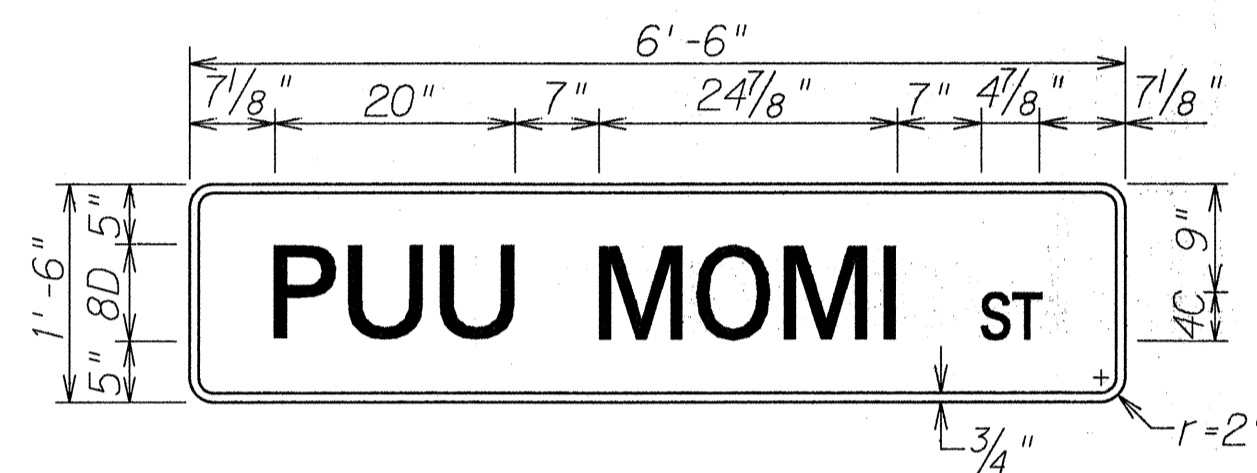
D3-7



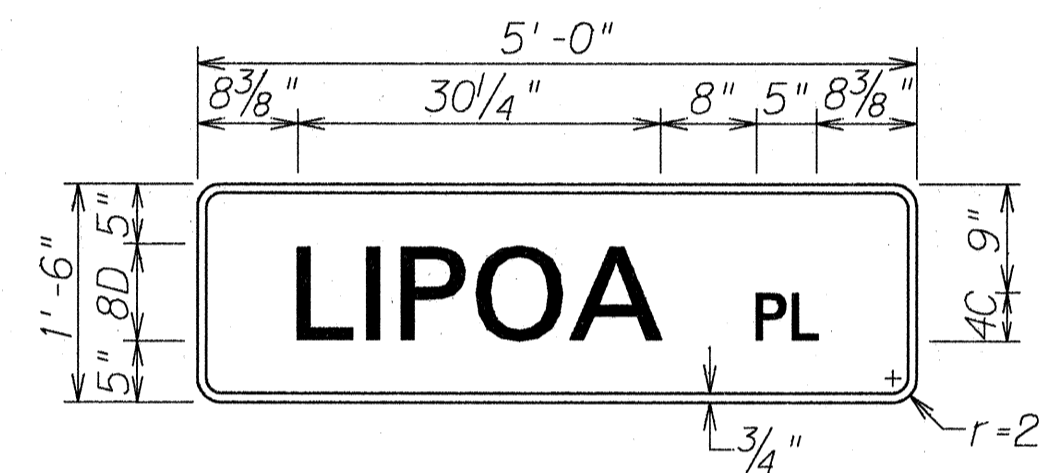
D3-2



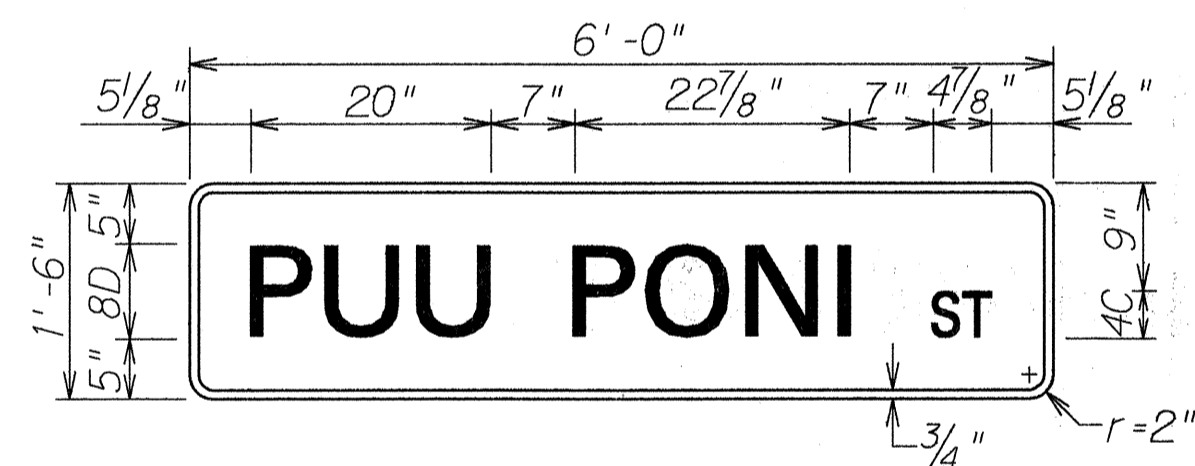
D3-8



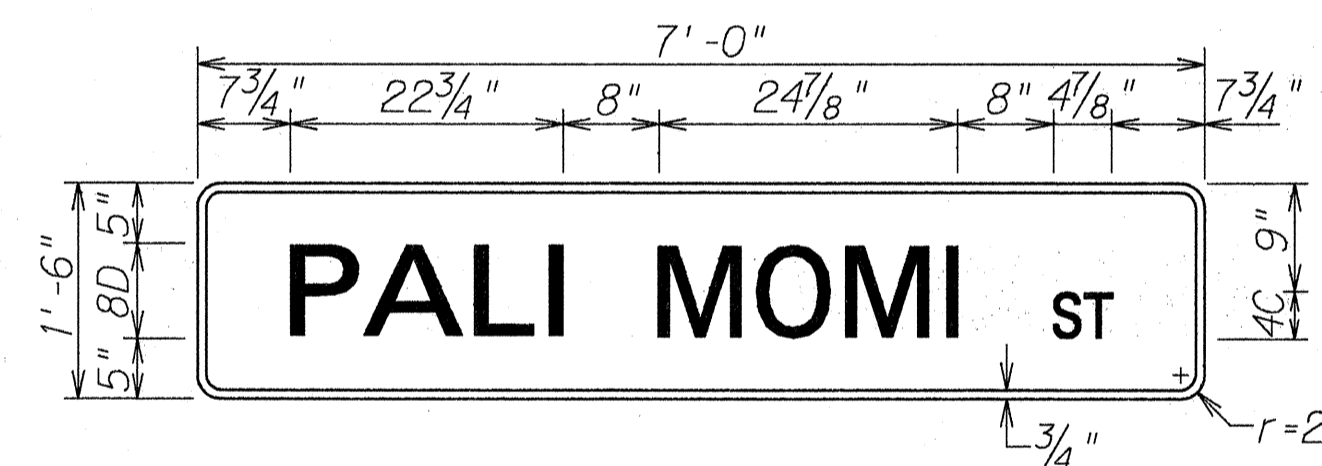
D3-3



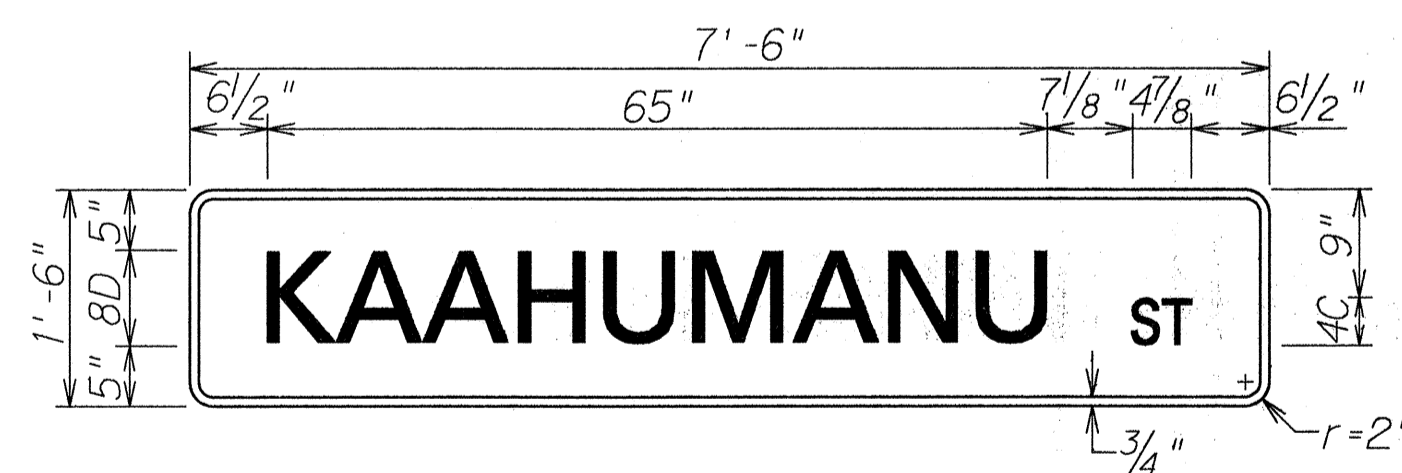
D3-9



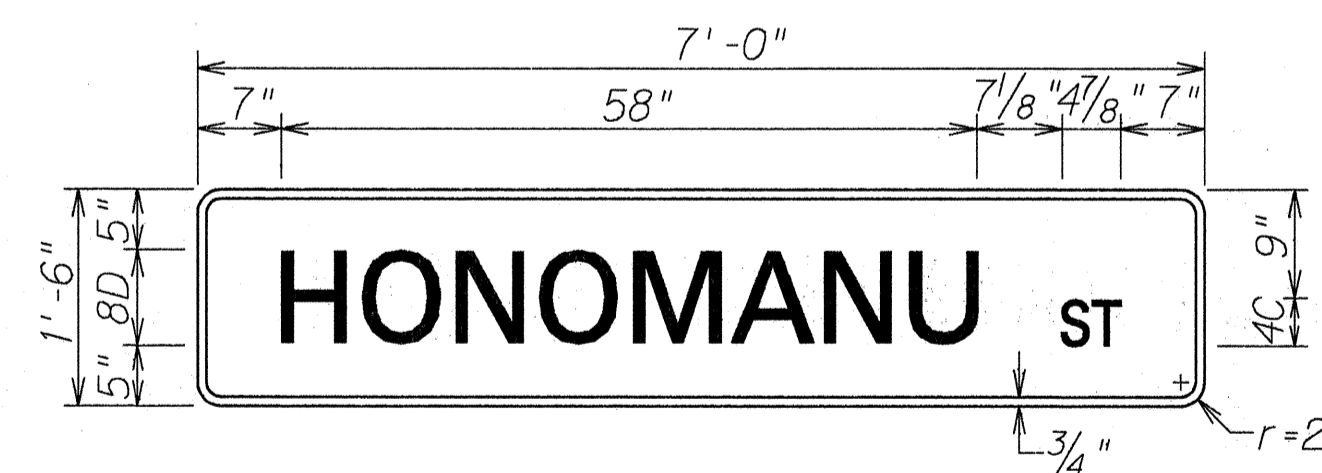
D3-4



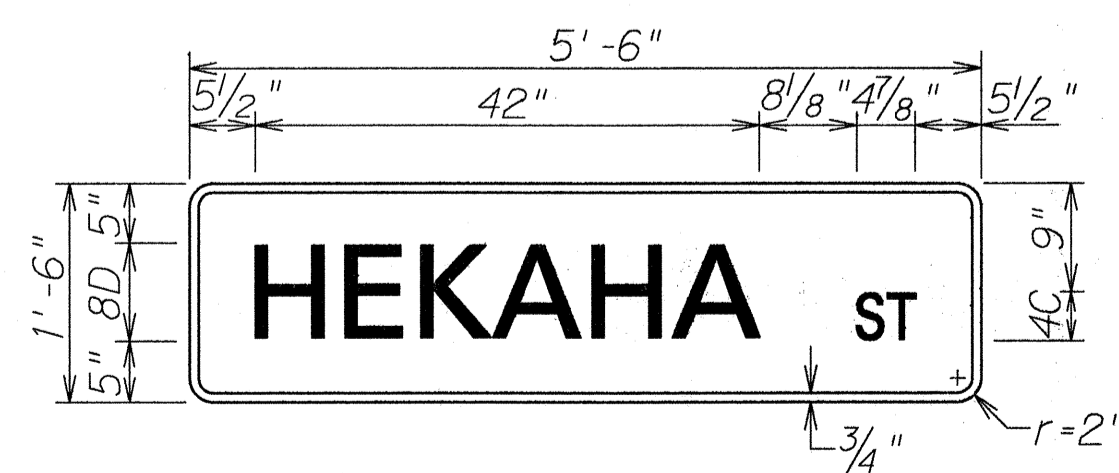
D3-10



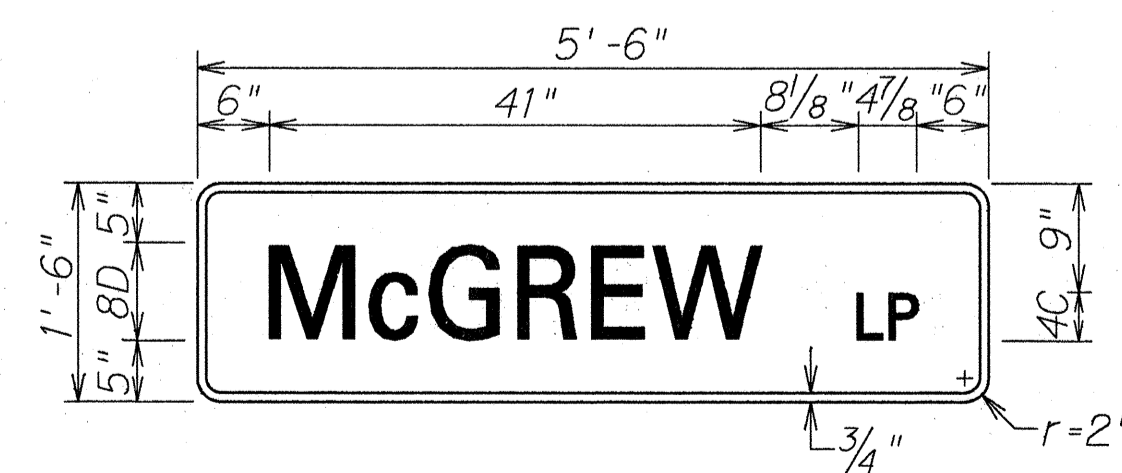
D3-5



D3-11



D3-6



D3-12

**NOTES:**

1. Provide the same message on the front and back side of the sign. Payment will not be made separately but shall be considered as one unit.
2. Colors:  
Legend - White (Reflectorized)  
Background - Green (Reflectorized)
3. All panels shall be reflectorized with Type B reflective sheeting in accordance with Section 712.20 of the Standard Specifications.
4. All signs shall conform to section 621 of the standard Specifications 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"
5. Borders and messages shall conform to details as shown on the plans and as specified in the MUTCD.
6. Sign mounting brackets, fixtures, fasteners, and all necessary hardware, and equipment, tools, labor, materials and other incidentals for installation, will not be paid for separately but shall be considered incidental to street name sign installation.
7. Install Street Name Signs on Traffic Signal Mast Arm.

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

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**STREET NAME SIGNS**  
**PANEL LAYOUT & NOTES**  
 KAMEHAMEHA HIGHWAY RESURFACING  
 Lehua Ave. to Vicinity of Honomanu St.  
 Project No. 99E-01-91M  
 Scale: 3/4" = 1'-0"      Date: May, 1991  
 SHEET No. 119 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-99M	1991	31	33

**EXPRESSWAY SIGN SUMMARY**

SIGN NO.	LOCATION	MESSAGE	SIZE	NEW PANEL AREA (SQ. FT.)	OVERLAY AREA (SQ. FT.)	SIGN LUMINAIRE
E1-1	STA. 1108+30± RT.	Aiea ←	7'-6" x 4'-0"	30.00		1
E1-2	STA. 1118+50± RT.	↑ Stadium Pearl Harbor Honolulu ↗	11'-0" x 7'-0"	77.00		2
E1-3(L)	STA. 1123+65± RT.	99 EAST Stadium Pearl Harbor ↓ ↓	17'-6" x 8'-0"	140.00		2
E1-3(R)	STA. 1123+65± RT.	78 EAST HI Honolulu ↓ ↓	17'-6" x 8'-0"	140.00		2
<b>TOTAL</b>				<b>387.00</b>		<b>7</b>

**STREET NAME SIGN SUMMARY**

SIGN NO.	MESSAGE	SIZE	NO. OF SIGNS
D3-1	WAIMANO HOME RD	8'-0" x 1'-6"	1
D3-2	LEHUA AVE	5'-0" x 1'-6"	1
D3-3	PUU MOMI ST	6'-6" x 1'-6"	2
D3-4	PUU PONI ST	6'-0" x 1'-6"	2
D3-5	KAHUMANU ST	7'-6" x 1'-6"	2
D3-6	HEKAHA ST	5'-6" x 1'-6"	2
D3-7	KANUKU ST	5'-6" x 1'-6"	2
D3-8	KAONOHI ST	6'-0" x 1'-6"	2
D3-9	LIPOA PL	5'-0" x 1'-6"	2
D3-10	PALI MOMI ST	7'-0" x 1'-6"	2
D3-11	HONOMANU ST	7'-0" x 1'-6"	1
D3-12	McGREW LP	5'-6" x 1'-6"	1
<b>TOTAL</b>			<b>20</b>

**DESTINATION SIGN SUMMARY**

SIGN NO.	LOCATION	MESSAGE	SIZE	OVERLAY AREA (SQ. FT.)	NEW PANEL AREA (SQ. FT.)	
					W/O POST	W/POST
D1-1	STA. 1103+20± RT.	RIGHT LANE MOANALUA FRWY ONLY	10'-0" x 4'-0"		40.00	
D1-2	STA. 1110+80± RT.	McGREW POINT NAVY QUARTERS →	9'-0" x 2'-6"			22.50
D1-3	STA. 1117+50± LT.	McGREW PT NAVY QTRS ←	3'-9" x 2'-6"			9.375
<b>TOTAL</b>					<b>40.00</b>	<b>31.875</b>

**REFLECTOR MARKER SUMMARY**

TYPE	QUANTITY							
	W/O POST		W/FLEXIBLE POST (TYPE A)		W/FLEXIBLE POST (TYPE B)		W/STEEL POST	
	YELLOW	WHITE	YELLOW	WHITE	YELLOW	WHITE	YELLOW	WHITE
RM-3	1			3	30	20		
RM-4	2						15	
RM-9	1							

5/30/91 Revised Expressway Sign E1-3(R) Message, per Addendum No. 1.

DATE	REVISION
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC SUMMARIES**

**KAMEHAMEHA HIGHWAY RESURFACING**  
**Lehua Ave to Vicinity of Honomanu St**  
**Project No. 99E-01-91M**

Date: May, 1991

SHEET No. T20 OF 22 SHEETS

SURVEY PLOTTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 ORIGINAL PLAN: \_\_\_\_\_

TRAFFIC SIGN SUMMARY

SIGN NO.	MESSAGE	QUANTITY			
		10 SQ. FT. OR LESS		GREATER THAN 10 SQ. FT.	
		W/POST	W/O POST	W/POST(S)	W/O POST
R1-1	STOP	11			
R1-2	YIELD	2	1		
R2-1(35)-B	SPEED LIMIT 35			14	5
R3-1-B	NO RIGHT TURN SYMBOL	1			
R3-3-B	NO TURNS	2	1		
R3-4b	NO TURN SYMBOL	2	1		
R3-4-B	NO U TURN SYMBOL	3	1		
R3-5(R)	↻ ONLY		1		
R4-7	KEEP RIGHT SYMBOL	1	1		
R6-1(L)	ONE WAY	1	3		
R6-1(R)	ONE WAY	2	1		
R7-107a	NO PARKING BUS STOP SYMBOL	22	2		
R7-201a	TOW AWAY ZONE SYMBOL		3		
R8-3a	NO PARKING SYMBOL	14	3		
R9-3a-A	NO PEDESTRIAN CROSSING SYMBOL	2			
R9-3b(R)	USE → CROSSWALK		1		
R9-3b(L)	← USE CROSSWALK		1		
R10-7	DO NOT BLOCK INTERSECTION	1	1		
R11-1	KEEP OFF MEDIAN	4	3		
R16-2	TURN RIGHT ANY TIME WITH CAUTION	1			
R16-4	NO RIGHT TURN ON RED	1			
R16-7	U TURN OK	1	4		
R17-1	↻ ON LEFT ARROW ONLY	5	8		
R17-2	↻ ON LEFT ARROW ONLY	2	2		
R17-3	↻ ON LEFT ARROW ONLY NO U TURN	2	2		
W4-3	ADDED LANE SYMBOL	2			
W11-2-A	ADVANCE CROSSING SYMBOL	1	4		
W14-1	DEAD END	1			
TOTAL		84	44	14	5

PAVEMENT MARKING SUMMARY

DESCRIPTION	QUANTITY
<b>PAVEMENT MARKERS</b>	
TYPE A .....	4,480 EA.
TYPE CL .....	2,600 EA.
TYPE DL .....	11 EA.
TYPE HL .....	660 EA.
TYPE J .....	—
<b>TAPE - TYPE I OR THERMOPLASTIC EXTRUSION</b>	
4-INCH PAVEMENT STRIPE (WHITE) .....	350 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) .....	—
8-INCH PAVEMENT STRIPE (WHITE) .....	10,700 L.F.
12-INCH PAVEMENT STRIPE (WHITE) .....	—
12-INCH PAVEMENT STRIPE (YELLOW) .....	—
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) .....	200 L.F.
PAVEMENT ARROW .....	118 EA.
PAVEMENT WORD .....	4 EA.
<b>TAPE - TYPE II OR THERMOPLASTIC EXTRUSION</b>	
4-INCH PAVEMENT STRIPE (WHITE) .....	27,600 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) .....	27,000 L.F.
8-INCH PAVEMENT STRIPE (WHITE) .....	4,700 L.F.
12-INCH PAVEMENT STRIPE (WHITE) .....	350 L.F.
12-INCH PAVEMENT STRIPE (YELLOW) .....	80 L.F.
<b>THERMOPLASTIC EXTRUSION</b>	
4-INCH PAVEMENT STRIPE (WHITE) .....	5,700 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) .....	750 L.F.
8-INCH PAVEMENT STRIPE (WHITE) .....	—
12-INCH PAVEMENT STRIPE (WHITE) .....	1,900 L.F.
CROSSWALK MARKINGS .....	190 LANE

CONSTRUCTION SIGN SUMMARY

SIGN NO.	LOCATION	MESSAGE	W/POST	W/O POST
CG20-2	STA. 984+00 (MEDIAN)	END CONSTRUCTION	1	
CW20-1d	STA. 984+00 (MEDIAN)	ROAD CONSTRUCTION AHEAD	1	
CG20-2	STA. 1130+00 RT	END CONSTRUCTION	1	
CW20-1d	STA. 1131+50 LT	ROAD CONSTRUCTION AHEAD	2	
TOTAL			5	

GUIDE SIGN SUMMARY

SIGN NO.	MESSAGE	QUANTITY			
		10 SQ. FT. OR LESS		GREATER THAN 10 SQ. FT.	
		W/POST	W/O POST	W/POST(S)	W/O POST
D9-2	H →		1		
D9-14(R)	POLICE →		1		
TOTAL			2		

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC SUMMARIES**

KAMEHAMEHA HIGHWAY RESURFACING  
Lehua Ave to Vicinity of Honomanu St  
Project No. 99E-01-99M

Date: May, 1991

SHEET No. T21 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-91M	1991	33	33

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
SRM-1	STA. 986+50± RT	M1-6(99) M6-3	99 ↑	1			
SRM-2	STA. 987+00± LT	M3-4 M1-6(99)	WEST 99	1			
SRM-3	STA. 995+80± LT	M1-6(99) M6-3	99 ↑	1			
SRM-4	STA. 997+50± RT	M3-2 M1-6(99)	EAST 99	1			
SRM-5	STA. 1047+65± LT	M3-4 M1-6(99)	WEST 99	1			
SRM-6	STA. 1049+40± RT	M1-6(99) M6-3	99 ↑	1			
SRM-7	STA. 1052+55± LT	M1-6(99) M6-3	99 ↑	1			
SRM-8	STA. 1052+55± RT	M3-2 M1-6(99)	EAST 99	1			
SRM-9	STA. 1078+00± LT	M3-4 M1-6(99)	WEST 99	1			
SRM-10	STA. 1079+10± RT	M1-6(99) M6-3	99 ↑	1			
SRM-11	STA. 1083+40± RT	M3-2 M1-6(99)	EAST 99	1			
SRM-12	STA. 1084+70± RT	M1-6(99) M6-3	99 ↑	1			
SRM-13	STA. 1113+30± LT	M3-4 M1-6(99)	WEST 99	1			
SRM-14	STA. 1113+65± RT	M1-6(99) M6-3	99 ↑	1			
SRM-15	STA. 1120+35± LT	M1-6(99) M6-3	99 ↑	1			
TOTAL				15			

LOOP DETECTOR SUMMARY

LOCATION	623.7041	623.7042	623.7043	623.7044	623.7046	623.7048
	ONE LOOP	TWO LOOPS	THREE LOOPS	FOUR LOOPS	SIX LOOPS	EIGHT LOOPS
WAIMANO HOME RD/LEHUA AVE	18			2	4	
PUU MOMI ST	21			1	1	
PUU PONI ST	24			1	1	
KAAHUMANU ST	24			3	3	
HEKAHA ST	18			2	2	
KANUKU ST	21	1	1	2		
KAONOHI ST	18			4	2	
LIPOA PL	24		1	1		
PALI MOMI ST	36			2	2	1
HONOMANU ST/McGREW LP	24			2	2	
TOTAL	228	1	2	20	17	1

BITUMINOUS CURB, TYPE 6 MARKING (PAINT)

LOCATION	APPROXIMATE QUANTITY (L.F.)
LEHUA AVE	400
STA. 991+30 TO 995+50 I.B.	420
STA. 1003+05 TO 1006+75 I.B.	370
STA. 1007+65 TO 1010+35 O.B.	270
STA. 1011+70 TO 1013+10 I.B.	150
STA. 1012+60 TO 1015+30 O.B.	270
STA. 1021+80 TO 1023+10 I.B.	130
MEDIAN ISLAND AT STA. 1106+00 O.B.	90
TOTAL	2,100

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC SUMMARIES**

**KAMEHAMEHA HIGHWAY RESURFACING**  
*Lehua Ave to Vicinity of Honomanu St*  
Project No. 99E-01-91M

Date: May, 1991

DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 PLAN: \_\_\_\_\_  
 N: \_\_\_\_\_