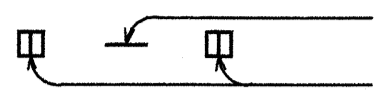
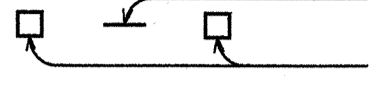
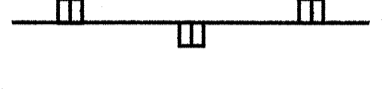
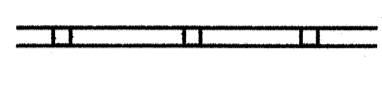








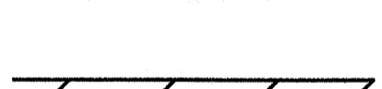


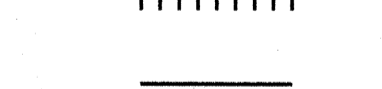

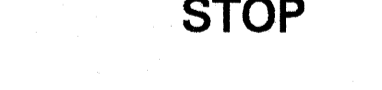


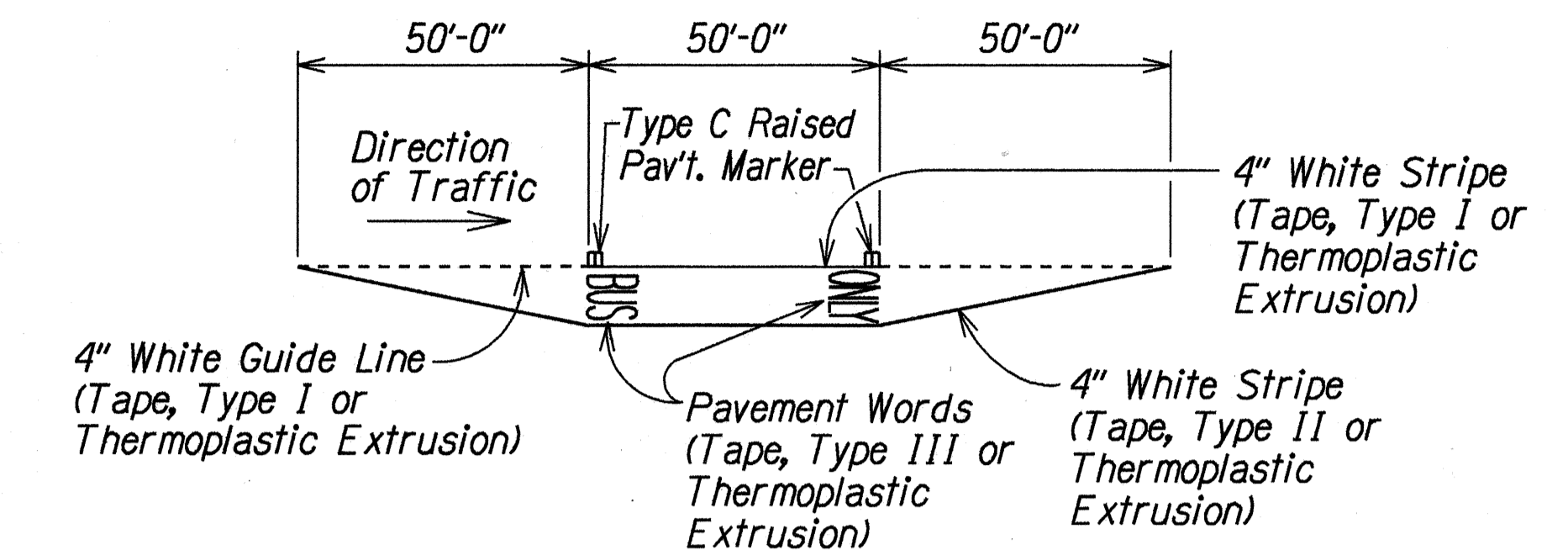
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 18	31

LEGEND

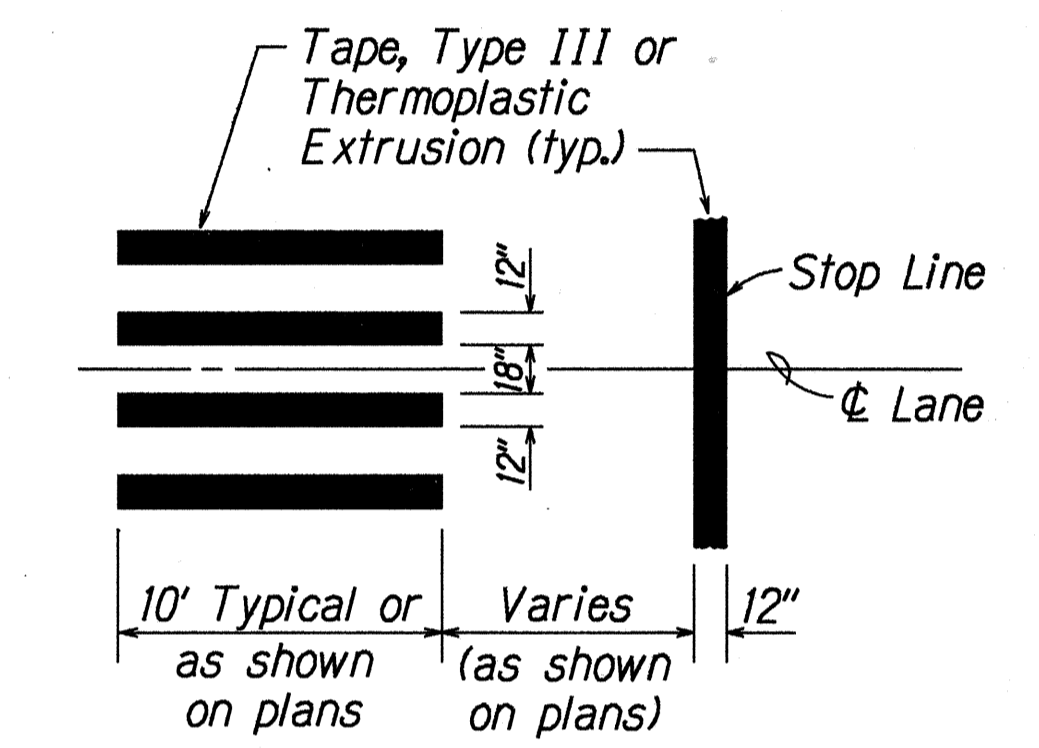
-  4 each Type A Raised Pavement Markers
Type C Raised Pavement Markers @ 40'-0" o.c.
-  4 each Type J Raised Pavement Markers
Type D Raised Pavement Markers @ 40'-0" o.c.
-  8" White Stripe with Type C Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
-  4" Double Solid 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

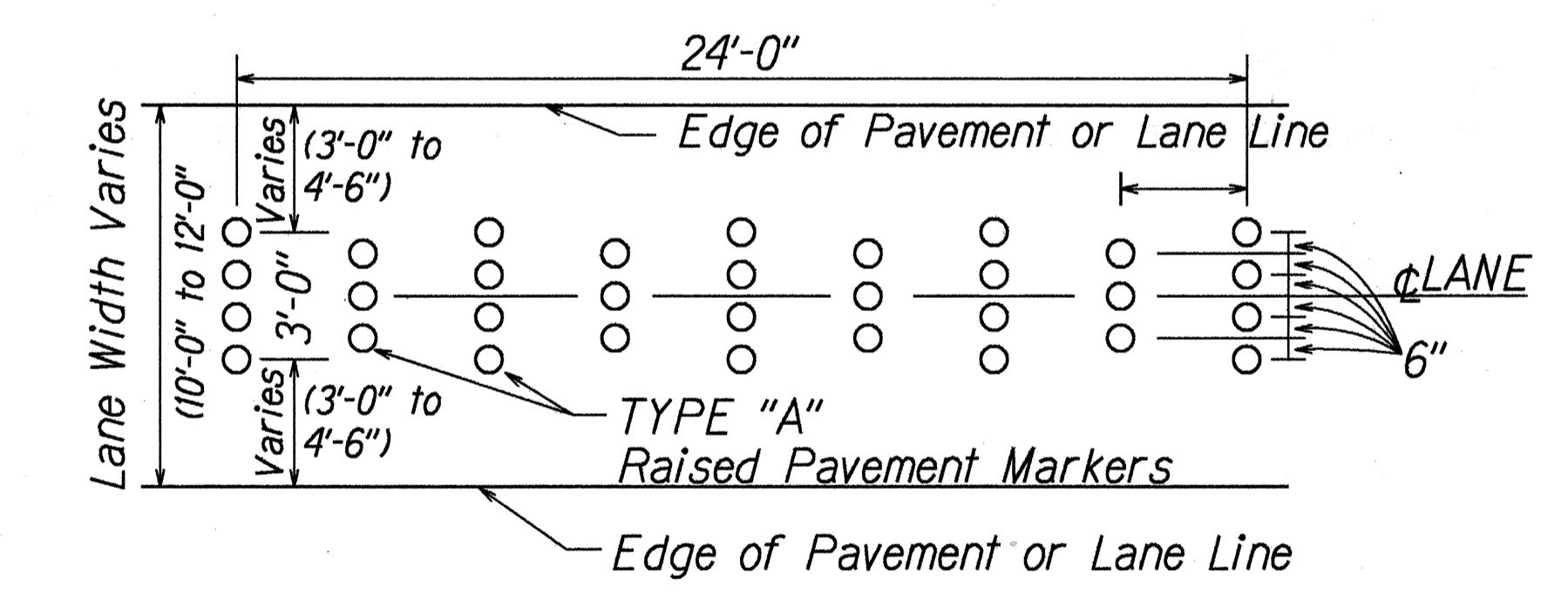
1. Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
2. Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. Costs shall be incidental to the various pavement 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. Backing for all new Regulatory and Warning Signs shall not be spliced.
10. 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"
11. 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.
12. 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.
13. Removing existing signs and reinstalling on new post shall not be paid for separately, but shall be considered incidental to the various signing items.
14. 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.
15. Removing and Reinstalling existing Street Name Signs on Regulatory and Warning Signs Post shall not be paid for separately but shall be considered incidental to the various Signing Items.
16. Removal of Existing Delineators and Posts as directed by the Engineer shall be considered incidental to the various signing items.
17. 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.
18. The Contractor shall notify the Oahu Transit Services Inc. (OTS), Ed Sniffen, at 848-4571 or Lowell Tom at 848-4578 two weeks prior to beginning any work, informing them of location, scope of work, proposed closure of any street or traffic lanes, and the need to relocate any bus stop.
19. 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.
20. Install Type II Object Marker on all utility poles or trees that are within the State Highway right-of-way and within 50 feet of the roadway edge of pavement shall be marked as directed by the Engineer.



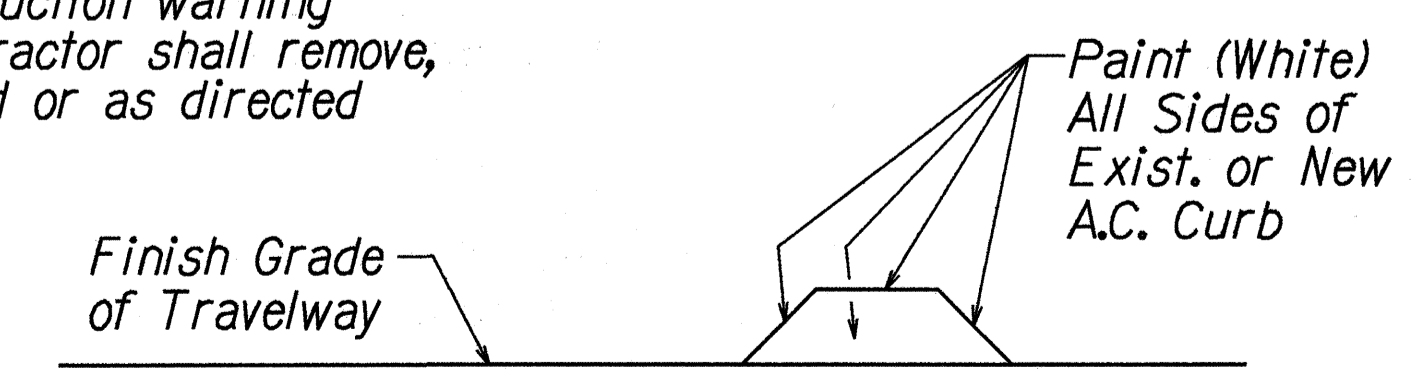
TYPICAL BUS BAY STRIPING
Not to Scale



CROSSWALK STRIPING DETAIL
Not to Scale



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



PAINTING OF A.C. CURB
Not to Scale

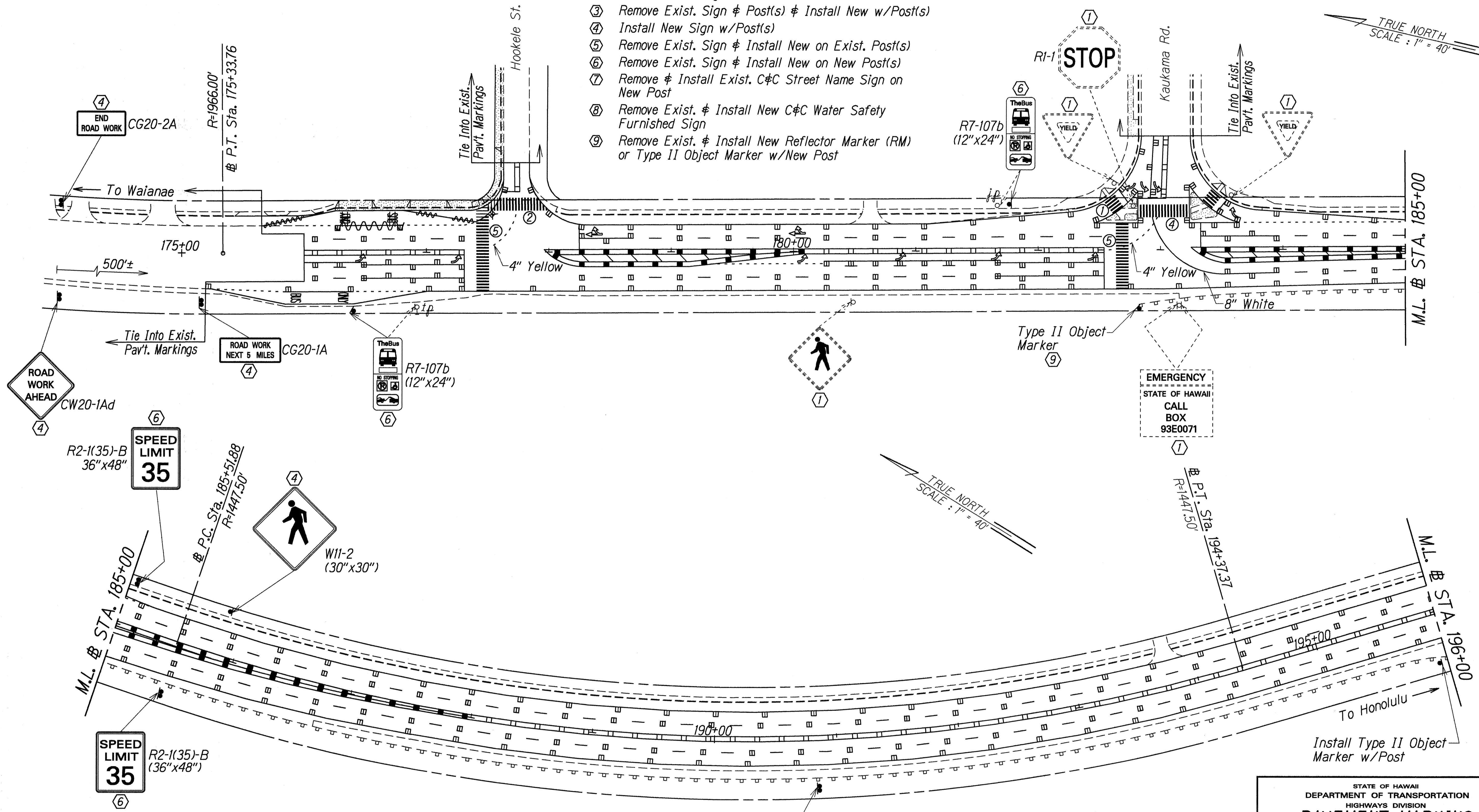
SURVEY PLOTTED BY	DATE
DRAWN BY M. FARRINGTON	
TRACED BY GARY KATZ	
QUANTITIES BY	
CHECKED BY	

6/16/97	Added Note No. 20 & Deleted Reflector Marker Legend
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PAVEMENT MARKING	
LEGEND, DETAILS & NOTES	
FARRINGTON HIGHWAY RESURFACING	
Hookele Street to Piliokoe Bridge	
Project No. 93A-01-97M	
Scale: As Shown	Date: May, 1997
SHEET No. T1 OF 14 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 19	31

- 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
 - ⑨ Remove Exist. & Install New Reflector Marker (RM) or Type II Object Marker w/New Post

TRUE NORTH
SCALE: 1" = 40'



SURVEY PLOTTED BY	DATE
DRAWN BY M. Makijii	7-10-97
DESIGNED BY GUY KASHI	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
102 mg	
No. 58719	

LEGEND FOR AS-BUILT POSTINGS

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

6/16/97	Revised Sign Numbers and Added Sign Dimensions and Type II Object Markers
DATE	REVISION

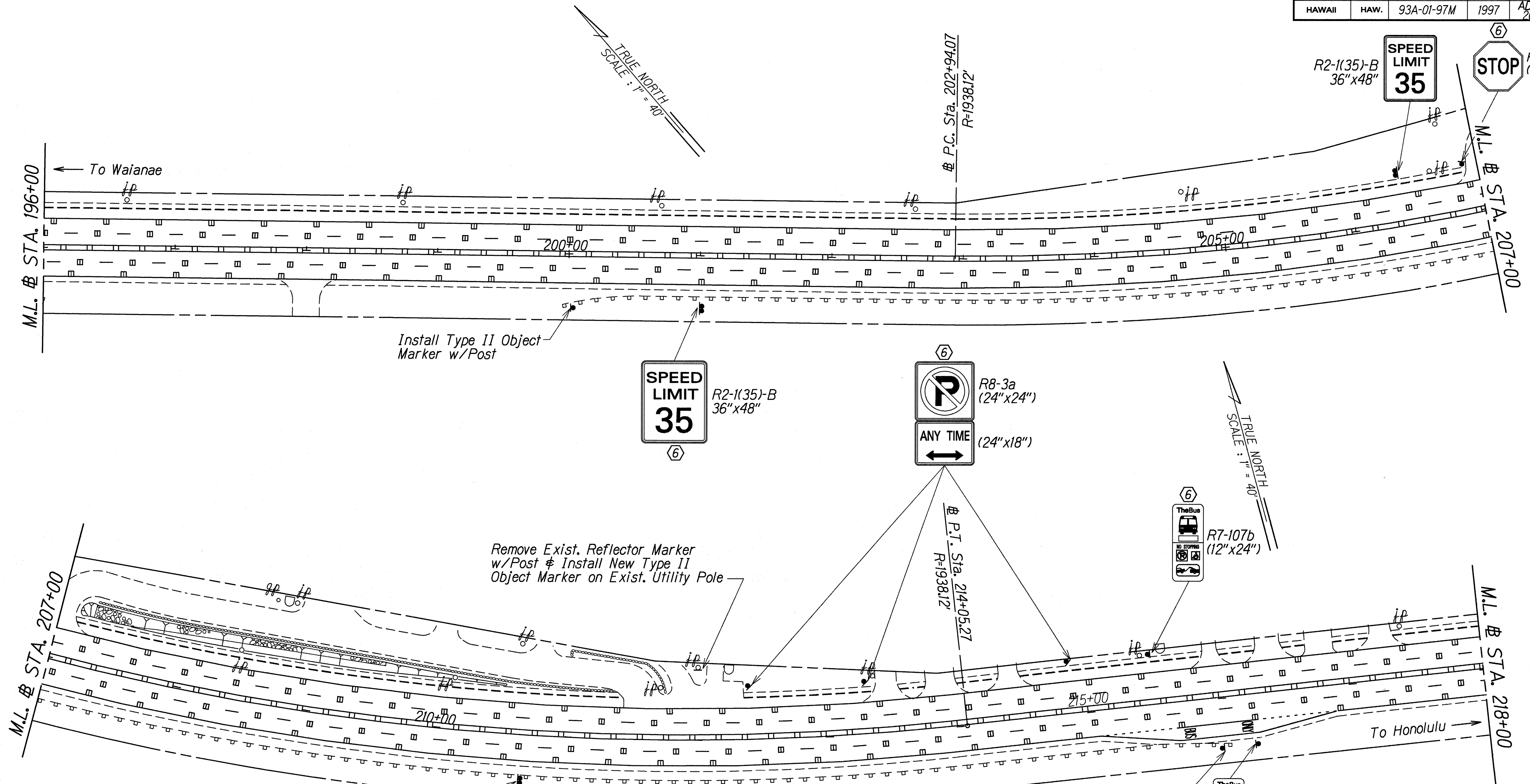
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN

FARRINGTON HIGHWAY RESURFACING
Hookele Street to Piliokoe Bridge
Project No. 93A-01-97M
Scale: 1" = 40' Date: May, 1997

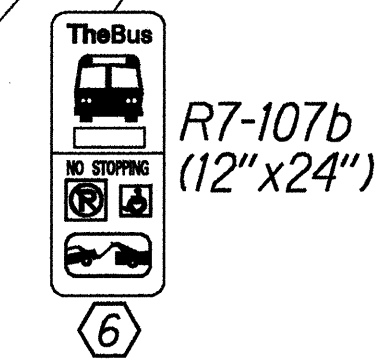
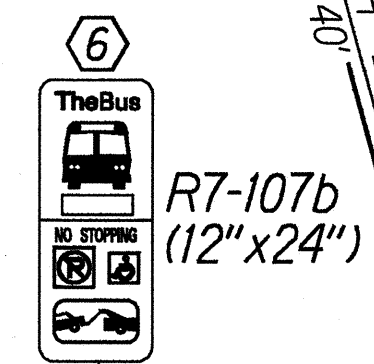
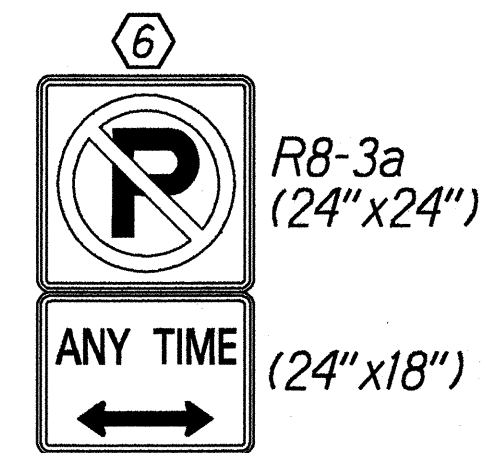
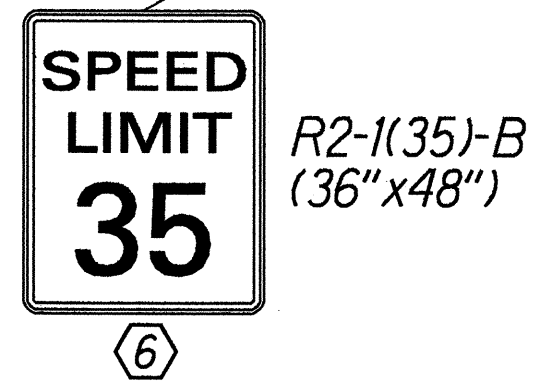
SHEET No. T2 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 20	31



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
- ⑨ Remove Exist. & Install New Reflector Marker (RM) or Type II Object Marker w/New Post



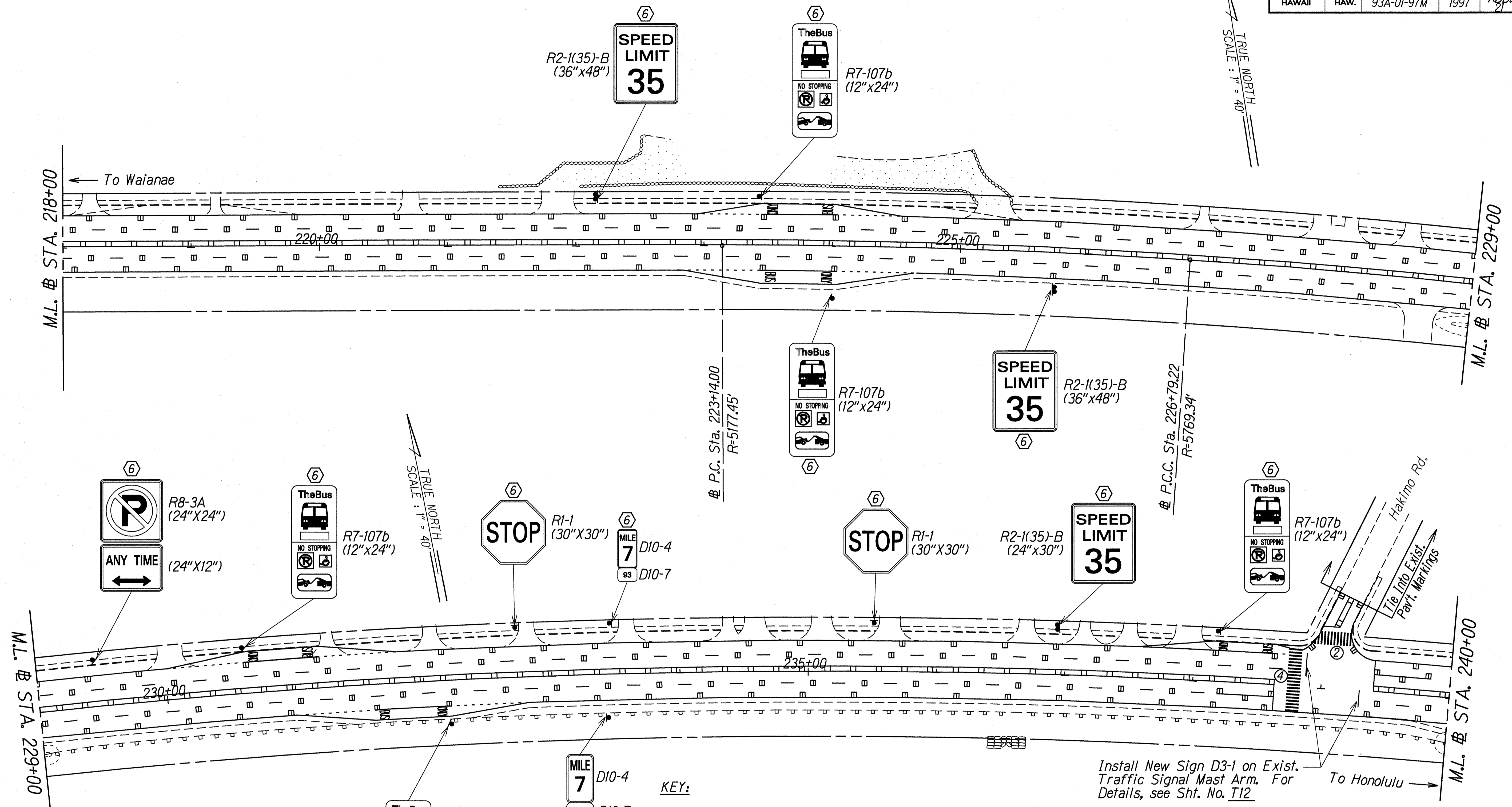
DATE	12-10-97
SURVEY PLOTTED BY	
DRAWN BY	J. Matsuzaki
DESIGNED BY	S. Hirakawa
CHECKED BY	
CONTR. NO.	102
CONTR. BY	at/arp/m2

6/16/97 Revised Sign Numbers, Added Sign Dimensions and Type II Object Markers

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PAVEMENT MARKING
& SIGNING PLAN
FARRINGTON HIGHWAY RESURFACING
Hookele Street to Piliokoe Bridge
Project No. 93A-01-97M
Scale: 1" = 40' Date: May, 1997
SHEET No. T3 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 21	31



TRUE NORTH
SCALE: 1" = 40'

TRUE NORTH
SCALE: 1" = 40'

Install New Sign D3-1 on Exist. Traffic Signal Mast Arm. For Details, see Sht. No. T12

DATE: 7-10-97
SURVEY PLOTTED BY: M. Takahashi
DRAWN BY: M. Takahashi
NOTE BOOK: 162/893
QUANTITIES BY: M. Takahashi
CHECKED BY: M. Takahashi

- 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
 - ⑨ Remove Exist. & Install New Reflector Marker (RM) or Type II Object Marker w/New Post

DATE	REVISION
6/16/97	Revised Sign Numbers and Added Sign Dimensions

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

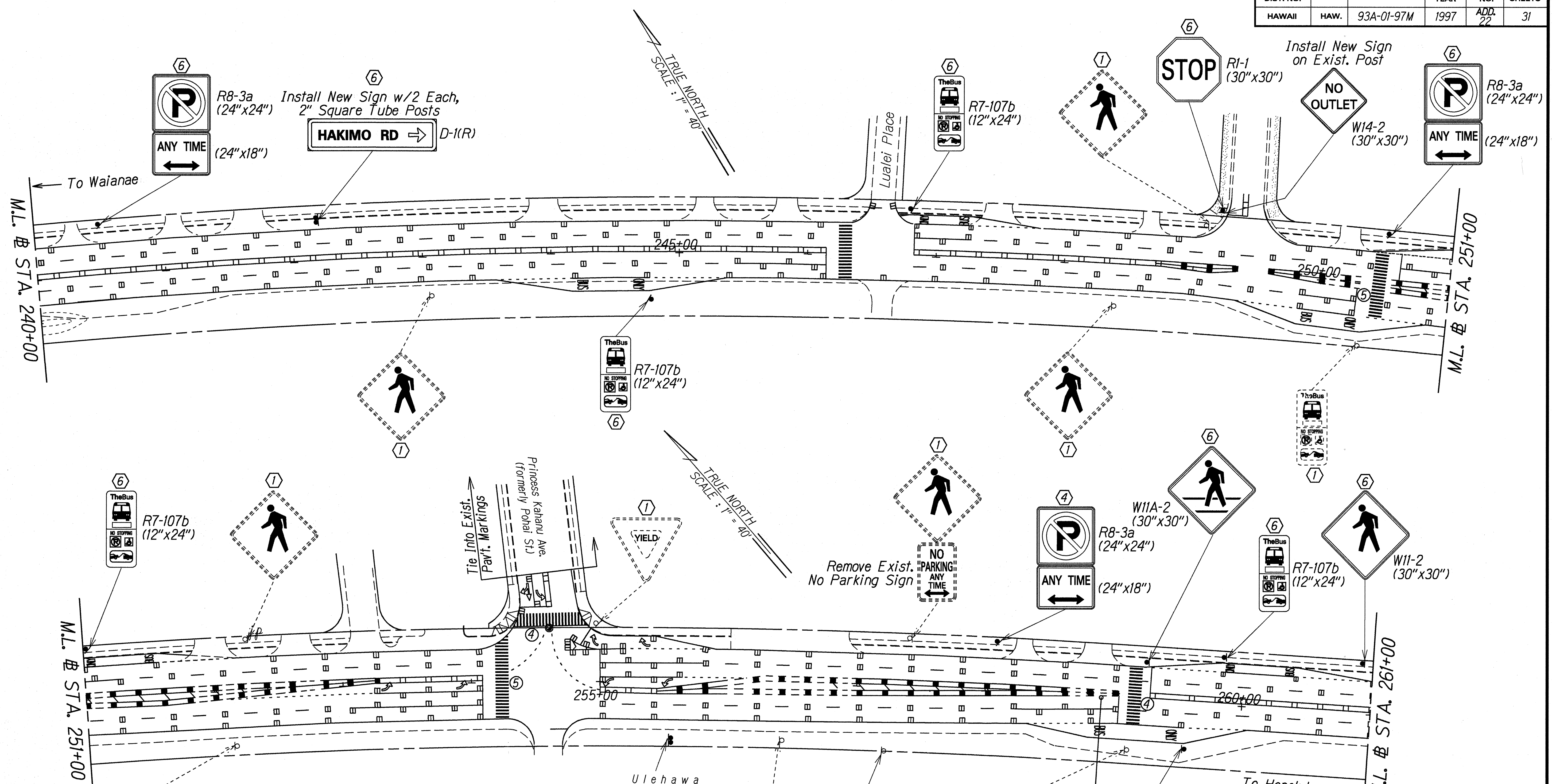
**PAVEMENT MARKING
& SIGNING PLAN**

FARRINGTON HIGHWAY RESURFACING
Hookele Street to Piliokoe Bridge
Project No. 93A-01-97M

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

SHEET No. T4 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 22	31



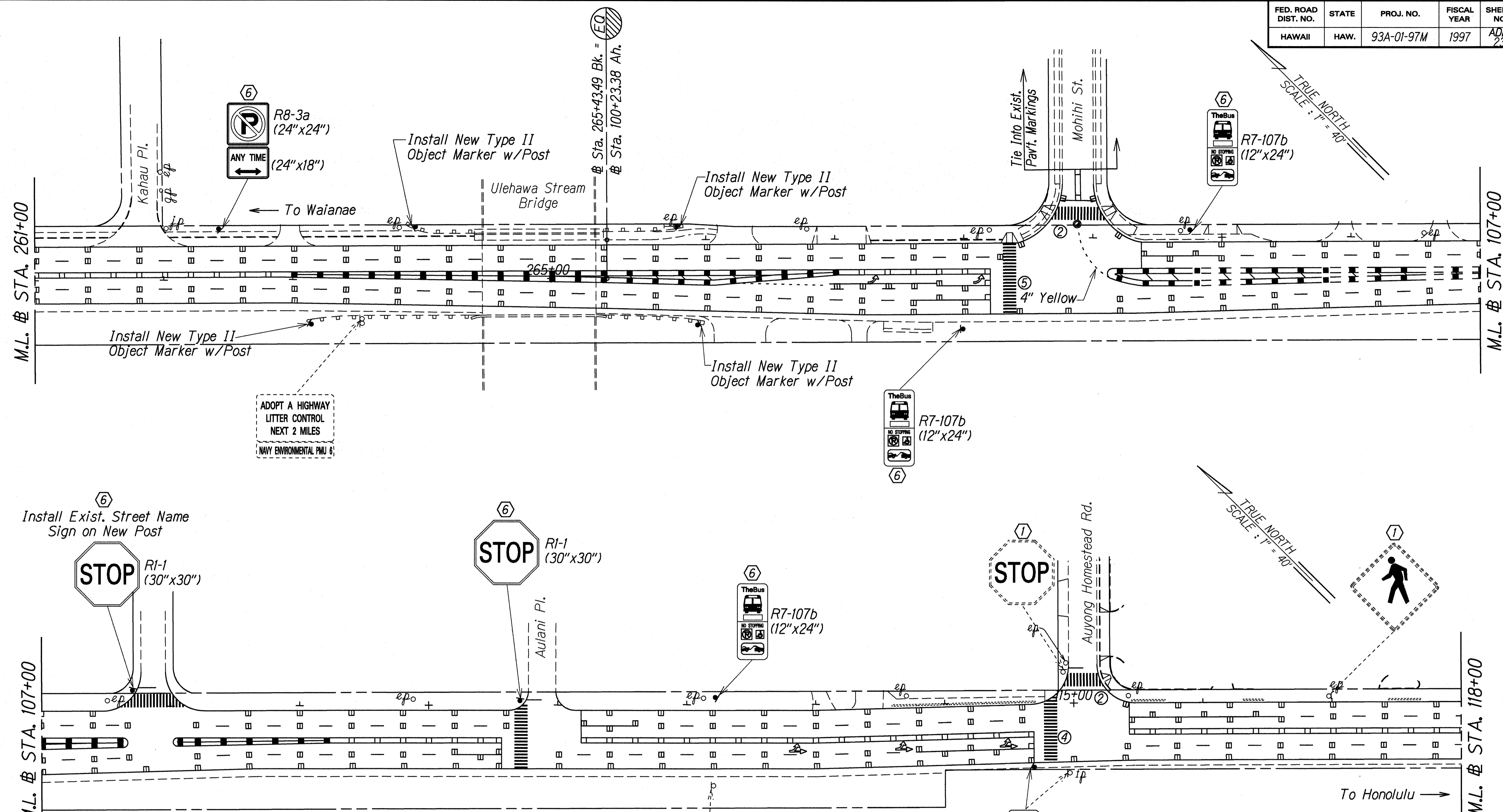
- KEY:**
- ① Exist. Sign to Remain
 - ② Remove Exist. Sign & Post(s)
 - ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
 - ④ Install New Sign w/Post(s)
 - ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
 - ⑥ Remove Exist. Sign & Install New on New Post(s)
 - ⑦ Remove & Install Exist. C&C Street Name Sign on New Post
 - ⑧ Remove Exist. & Install New C&C Water Safety Furnished Sign
 - ⑨ Remove Exist. & Install New Reflector Marker (RM) or Type II Object Marker w/New Post

SURVEY PLOTTED BY: DATE: 12-10-97
 DRAWN BY: M. Takahashi
 TRACED BY: GARY KAGERT
 DESIGNED BY: 10/2/97
 CHECKED BY: a/atp/pt

DATE	REVISION
6/16/97	Revised Sign Numbers and Added Sign Dimensions

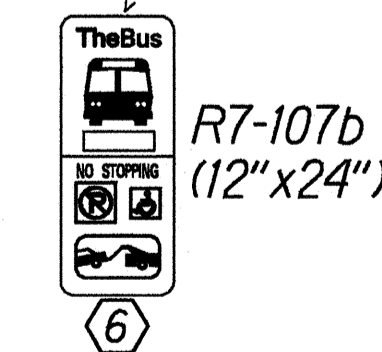
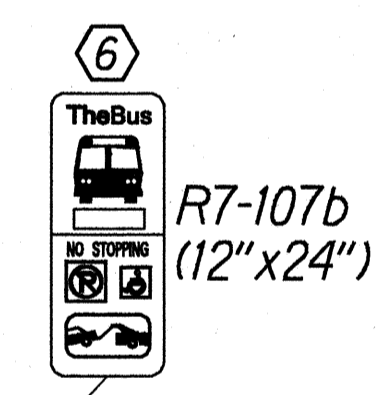
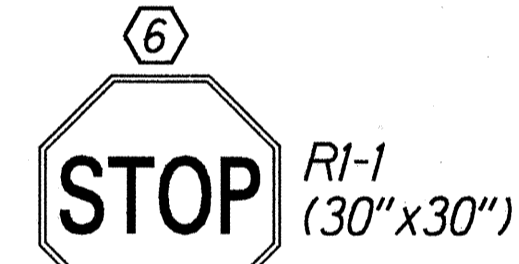
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING
& SIGNING PLAN
 FARRINGTON HIGHWAY RESURFACING
 Hookele Street to Piliokoe Bridge
 Project No. 93A-01-97M
 Scale: 1" = 40' Date: May, 1997

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 23	31



ADOPT A HIGHWAY
LITTER CONTROL
NEXT 2 MILES
NAVY ENVIRONMENTAL PMU'S

Install Exist. Street Name Sign on New Post



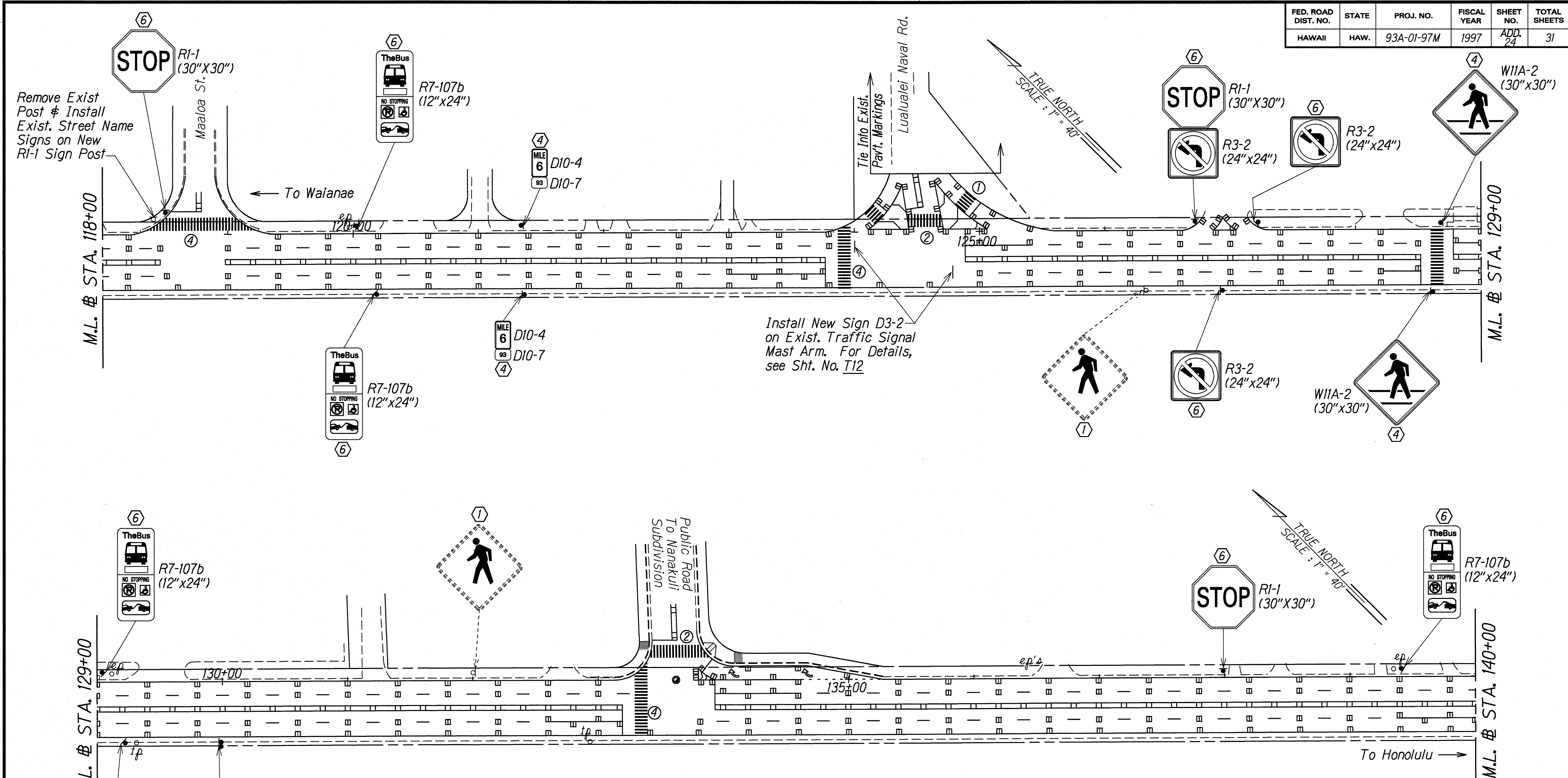
- KEY:**
- ① Exist. Sign to Remain
 - ② Remove Exist. Sign & Post(s)
 - ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
 - ④ Install New Sign w/Post(s)
 - ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
 - ⑥ Remove Exist. Sign & Install New on New Post(s)
 - ⑦ Remove & Install Exist. C&C Street Name Sign on New Post
 - ⑧ Remove Exist. & Install New C&C Water Safety Furnished Sign
 - ⑨ Remove Exist. & Install New Reflector Marker (RM) or Type II Object Marker w/New Post

6/16/97	Added Sign Dimensions
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PAVEMENT MARKING
& SIGNING PLAN
FARRINGTON HIGHWAY RESURFACING
Hookele Street to Piliokoe Bridge
Project No. 93A-01-97M
Scale: 1" = 40' Date: May, 1997

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	7-2-97
DRAWN BY	J. Matsunaga
NOTE BOOK	
162/163	
QUANTITIES BY	
Checked by	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 24	31



Install New Sign D3-2 on Exist. Traffic Signal Mast Arm. For Details, see Sht. No. T12

Remove Exist Post & Install Exist. Street Name Signs on New R1-1 Sign Post

- 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
 - ⑨ Remove Exist. & Install New Reflector Marker (RM) or Type II Object Marker w/New Post

DATE	REVISION
6/16/97	Revised Sign Numbers, Added Sign Dimensions & Milepost Markers.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKING
& SIGNING PLAN**

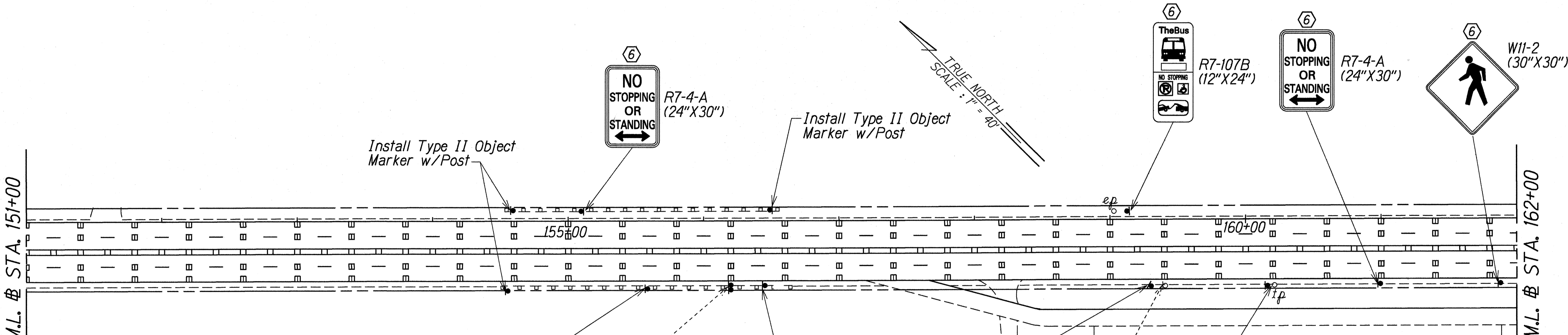
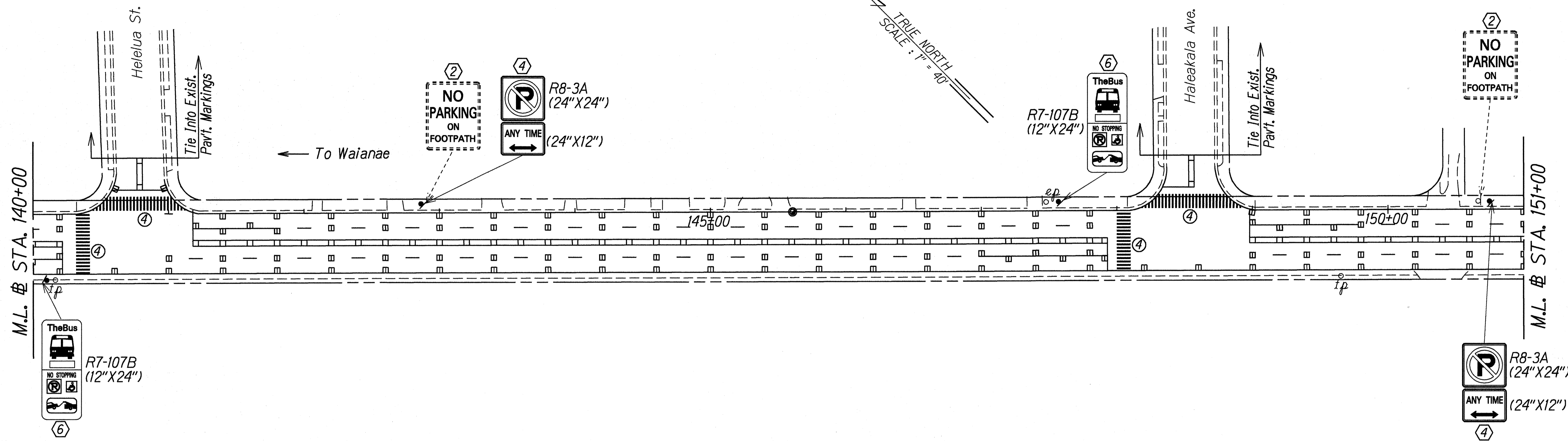
FARRINGTON HIGHWAY RESURFACING
Hookele Street to Piliokoe Bridge
Project No. 93A-01-97M

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

SHEET No. T7 OF 14 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY M. Tanaka	7-2-97
NOTES BOOK	
142 mg	
QUANTITIES BY	
Checked by	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 25	31



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
- ⑨ Remove Exist. & Install New Reflector Marker (RM) or Type II Object Marker w/New Post

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	14-10-97
DRAWN BY	M. Takahashi
CHECKED BY	GARY KASSEL
NOTED BY	102/mjg
DESIGNED BY	N. Arai
CHECKED BY	

6/16/97	Added Sign Dimensions and Type II Object Markers
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKING
& SIGNING PLAN**

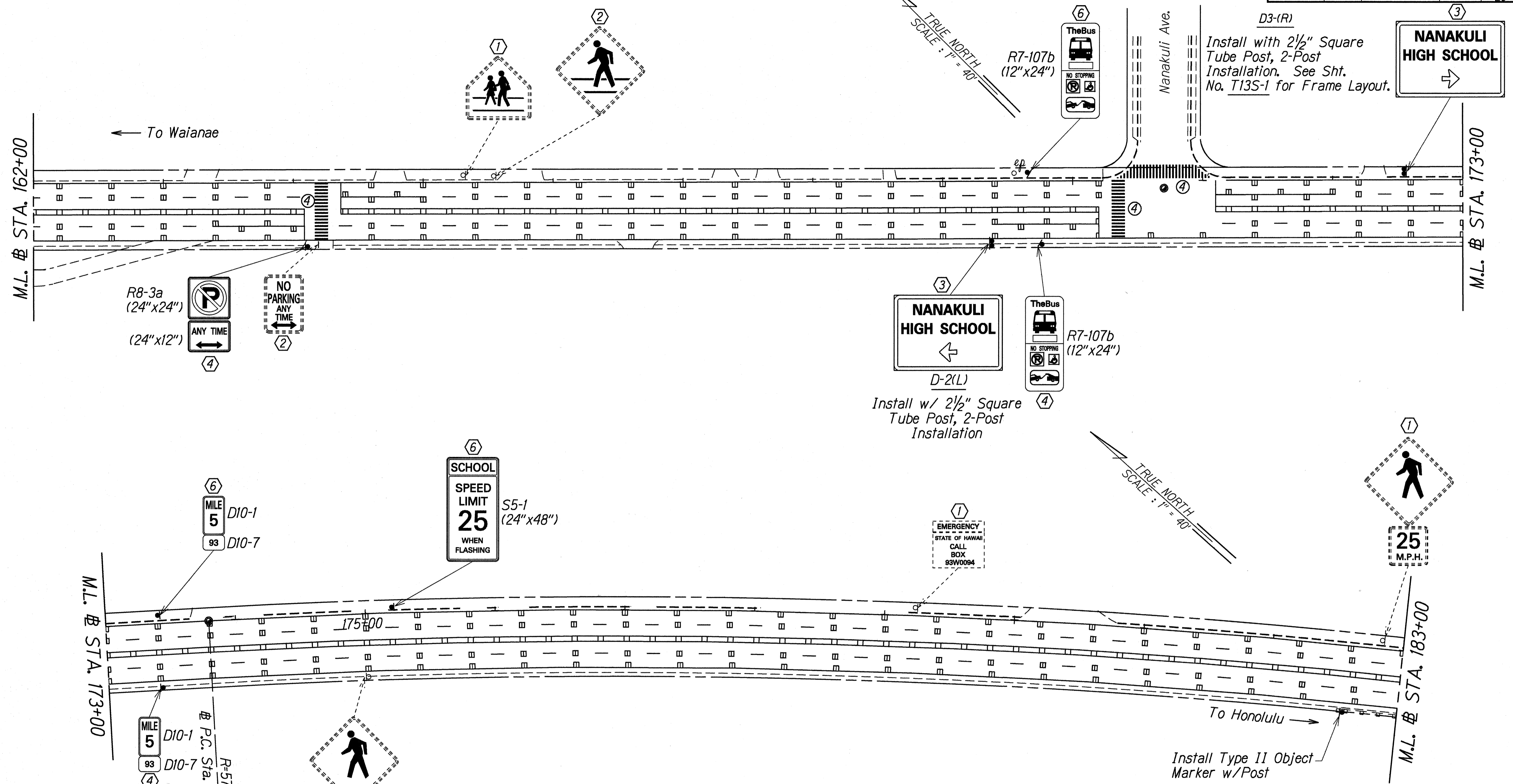
FARRINGTON HIGHWAY RESURFACING
Hookele Street to Piliokoe Bridge
Project No. 93A-01-97M

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

SHEET No. T8 OF 14 SHEETS

ADD. 25

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 26	31



- 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	REVISION
6/16/97	Added Sign Dimension and Notes to Signs D-2(L) & D-3(R)

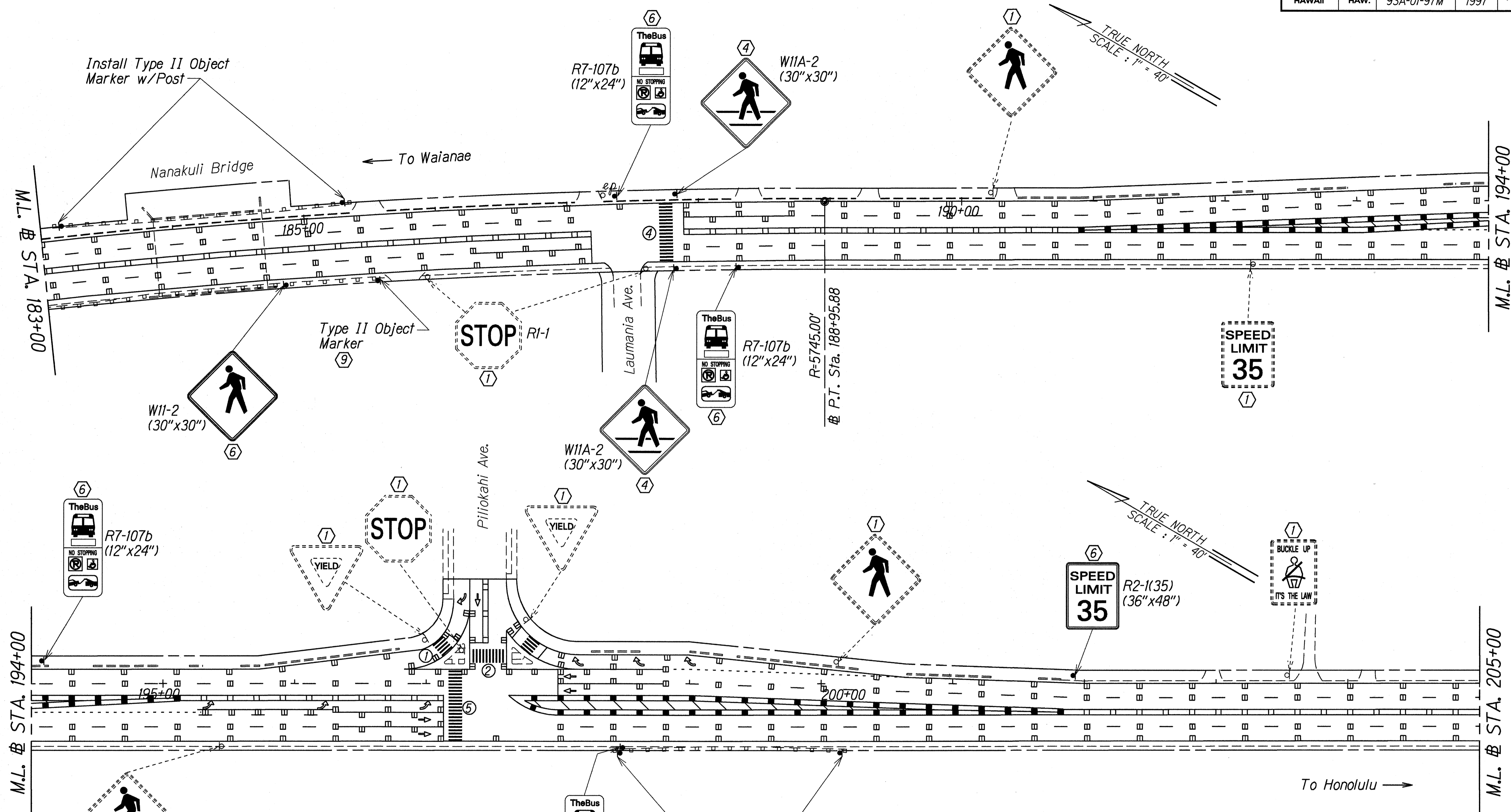
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKING
& SIGNING PLAN**

FARRINGTON HIGHWAY RESURFACING
Hookele Street to Piliokoe Bridge
Project No. 93A-01-97M
Scale: 1" = 40' Date: May, 1997
SHEET No. T9 OF 14 SHEETS

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 27	31



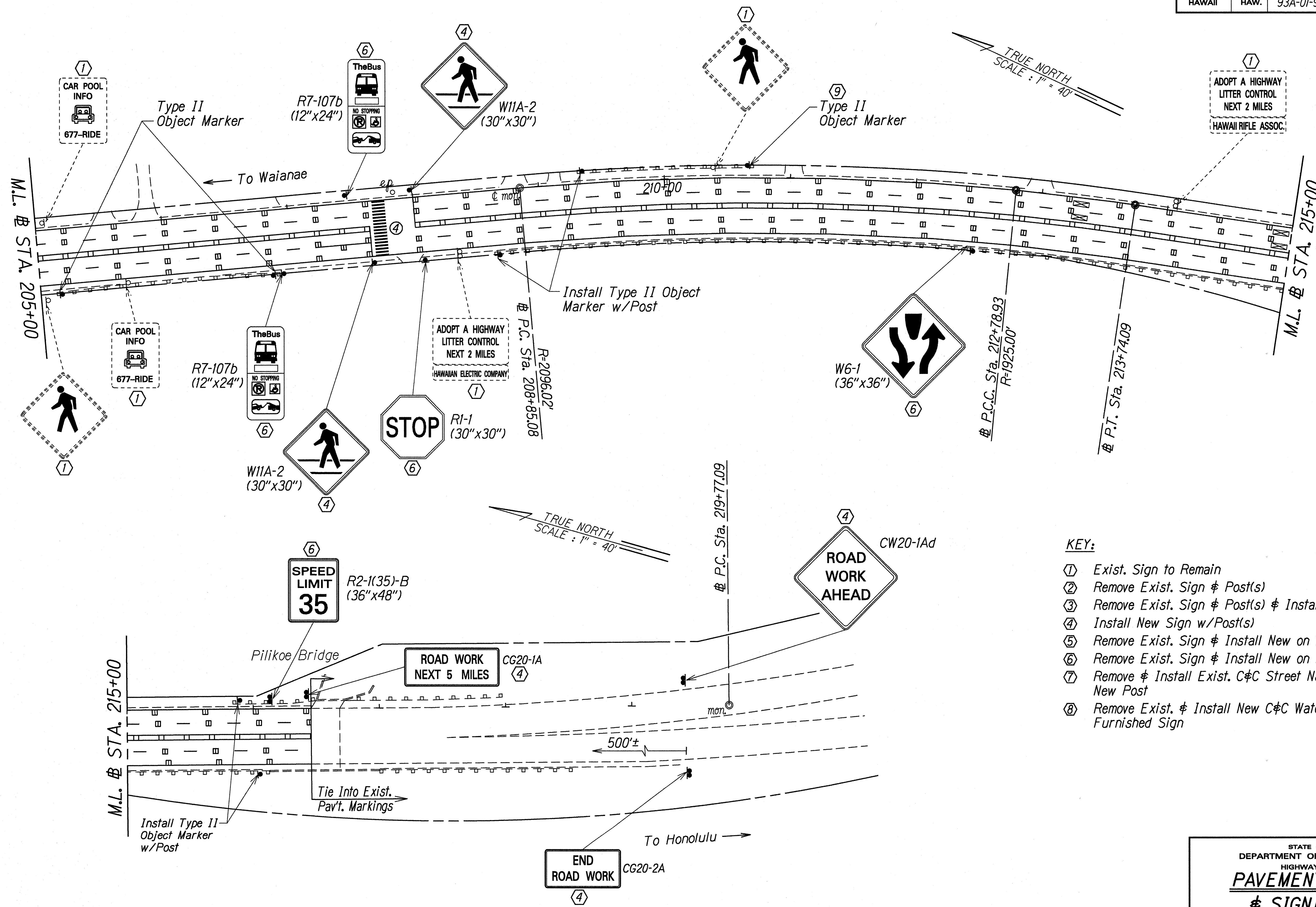
- KEY:**
- ① Exist. Sign to Remain
 - ② Remove Exist. Sign & Post(s)
 - ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
 - ④ Install New Sign w/Post(s)
 - ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
 - ⑥ Remove Exist. Sign & Install New on New Post(s)
 - ⑦ Remove & Install Exist. C&C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

DATE: 7-10-97
 SURVEY PLOTTED BY: [blank]
 DRAWN BY: J. Takahashi
 CHECKED BY: GERT KOBACH
 NOTE BOOK: 162, 163
 QUANTITIES BY: [blank]
 CHECKED BY: [blank]

DATE	REVISION
6/16/97	Revised Sign Numbers and Added Sign Dimensions and Type II Object Markers

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING
& SIGNING PLAN
 FARRINGTON HIGHWAY RESURFACING
 Hookele Street to Piliokoe Bridge
 Project No. 93A-01-97M
 Scale: 1" = 40' Date: May, 1997
 SHEET No. 110 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 28	31



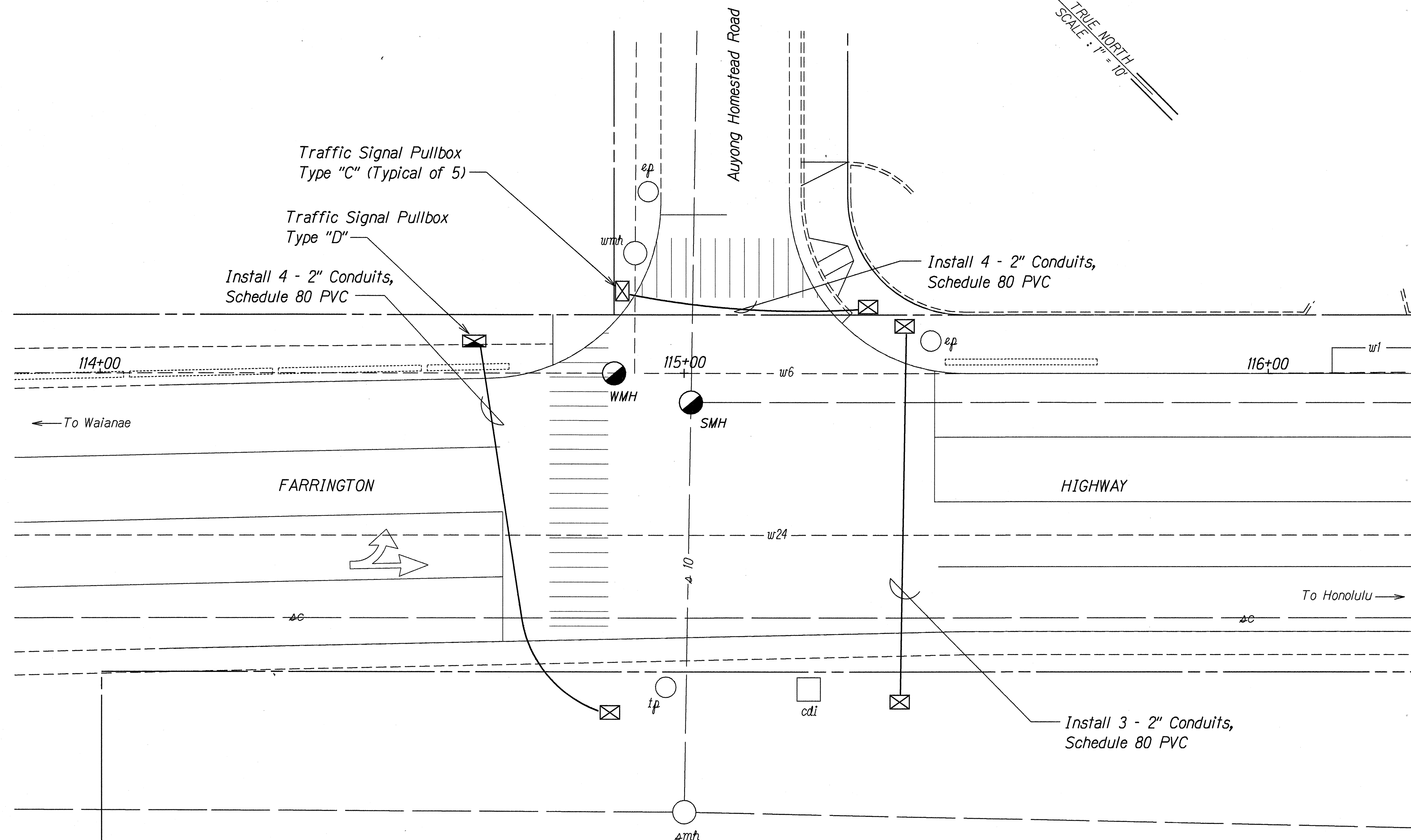
- KEY:**
- ① Exist. Sign to Remain
 - ② Remove Exist. Sign & Post(s)
 - ③ Remove Exist. Sign & Post(s) & Install New w/Post(s)
 - ④ Install New Sign w/Post(s)
 - ⑤ Remove Exist. Sign & Install New on Exist. Post(s)
 - ⑥ Remove Exist. Sign & Install New on New Post(s)
 - ⑦ Remove & Install Exist. C&C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

SURVEY PLOTTED BY: DATE: 7-10-97
 DRAWN BY: M. Takahashi
 CHECKED BY: Gary Kuehli
 NOTE BOOK: 142.may
 QUANTITIES BY: S. Bartolo
 CHECKED BY:

6/16/97	Revised Sign Numbers and Added Sign Dimensions and Type II Object Markers
DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING
& SIGNING PLAN
 FARRINGTON HIGHWAY RESURFACING
 Hookele Street to Piliokoe Bridge
 Project No. 93A-01-97M
 Scale: 1" = 40' Date: May, 1997
 SHEET No. 28 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	C.O. ADD. 28S-1	31



NOTE:
 1. Provide 3' horizontal clearance between traffic signal conduit and water lines.

9/8/97	Sheet add to Contract Plan Set to Install Traffic Signal Conduits & Pullboxes for future Traffic Signal Project.
DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PARTIAL TRAFFIC SIGNAL PLAN

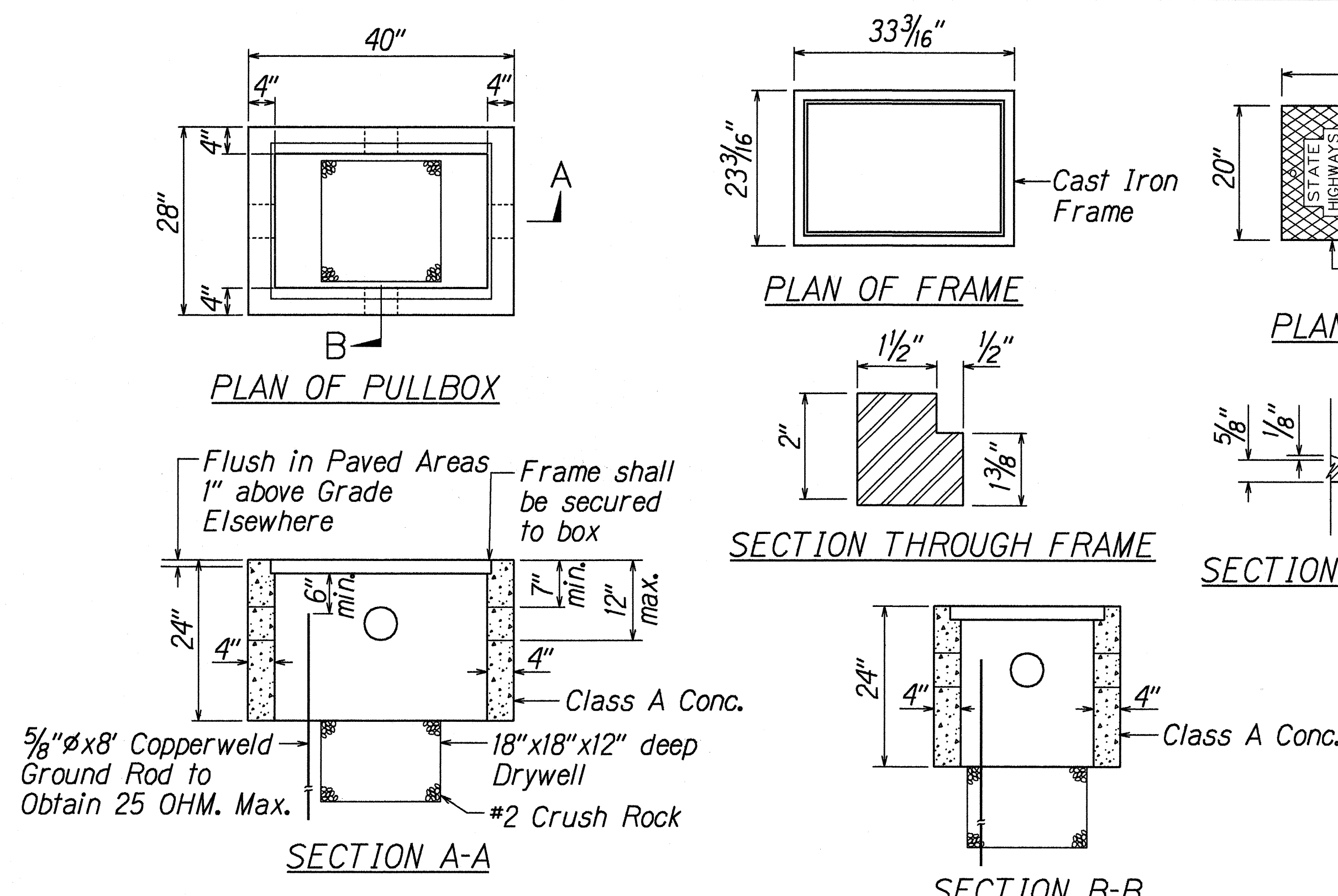
FARRINGTON HIGHWAY RESURFACING
Hookele Street to Piliokoe Bridge
Project No. 93A-01-97M

Scale: 1" = 10' Date: Sept., 1997

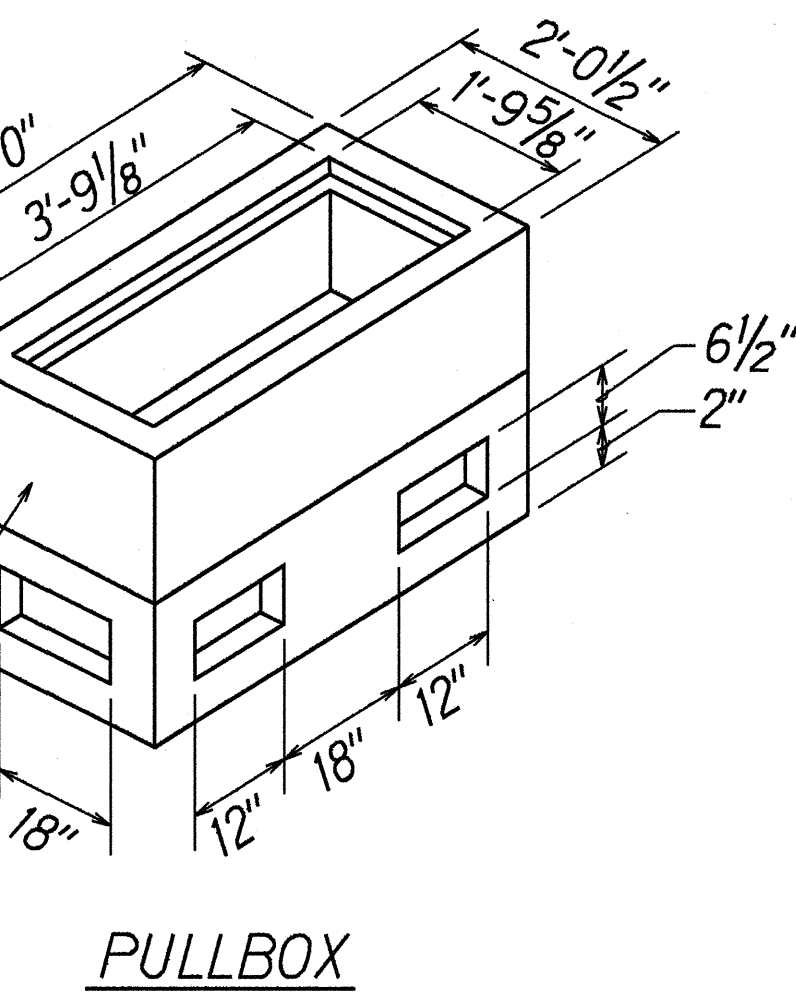
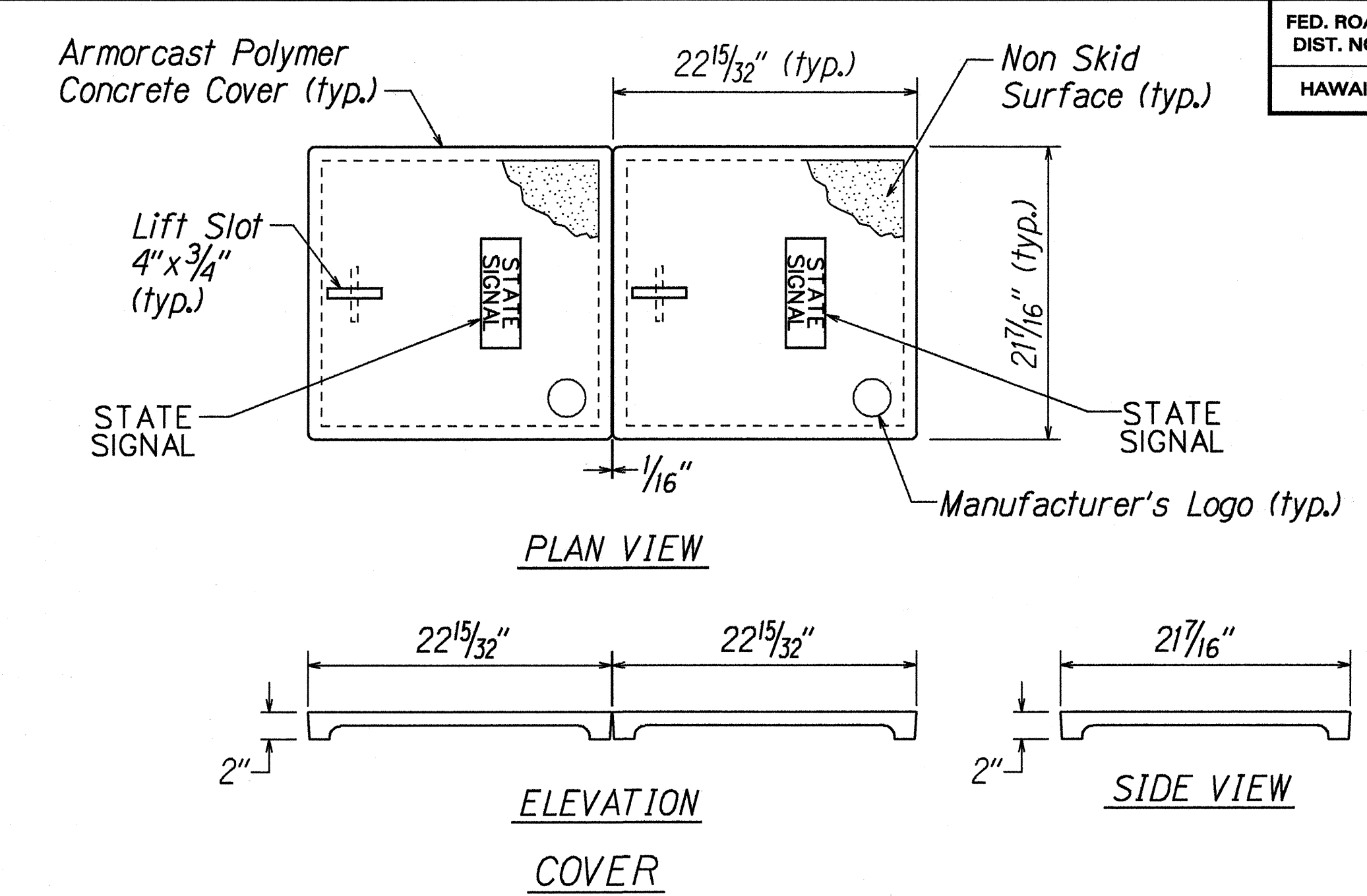
SHEET No. *TIIS-1* OF 14 SHEETS

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	9/16/97
DRAWN BY	
TRACED BY	
NOTES BOOK	
142mgj	
QUANTITIES BY	
M. J. Ferris	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	C.O. ADD 28S-2	31

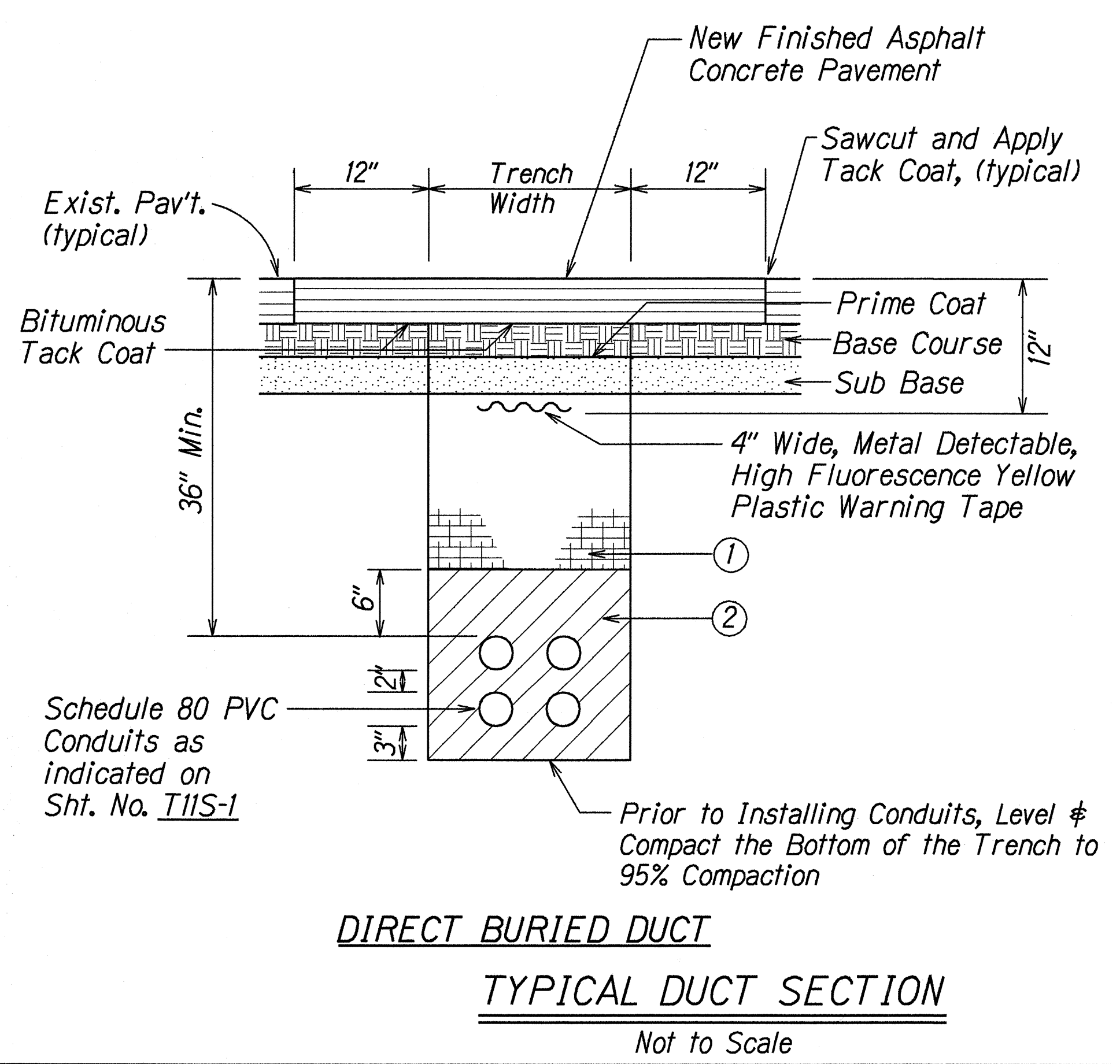


TYPE "C" PULLBOX
 Not to Scale



TYPE "D" PULLBOX & COVER
 Not to Scale

- NOTES:**
1. Provide Armorcast Polymer Concrete Cover.
 2. Install on 6" bed of #3 Crushed Rock.
 3. Provide sufficient amount of 5/8" x 8' Copperweld Ground Rods as directed by the Traffic Signal Inspector/Engineer. Cost shall be incidental to the various Traffic Signal Items.

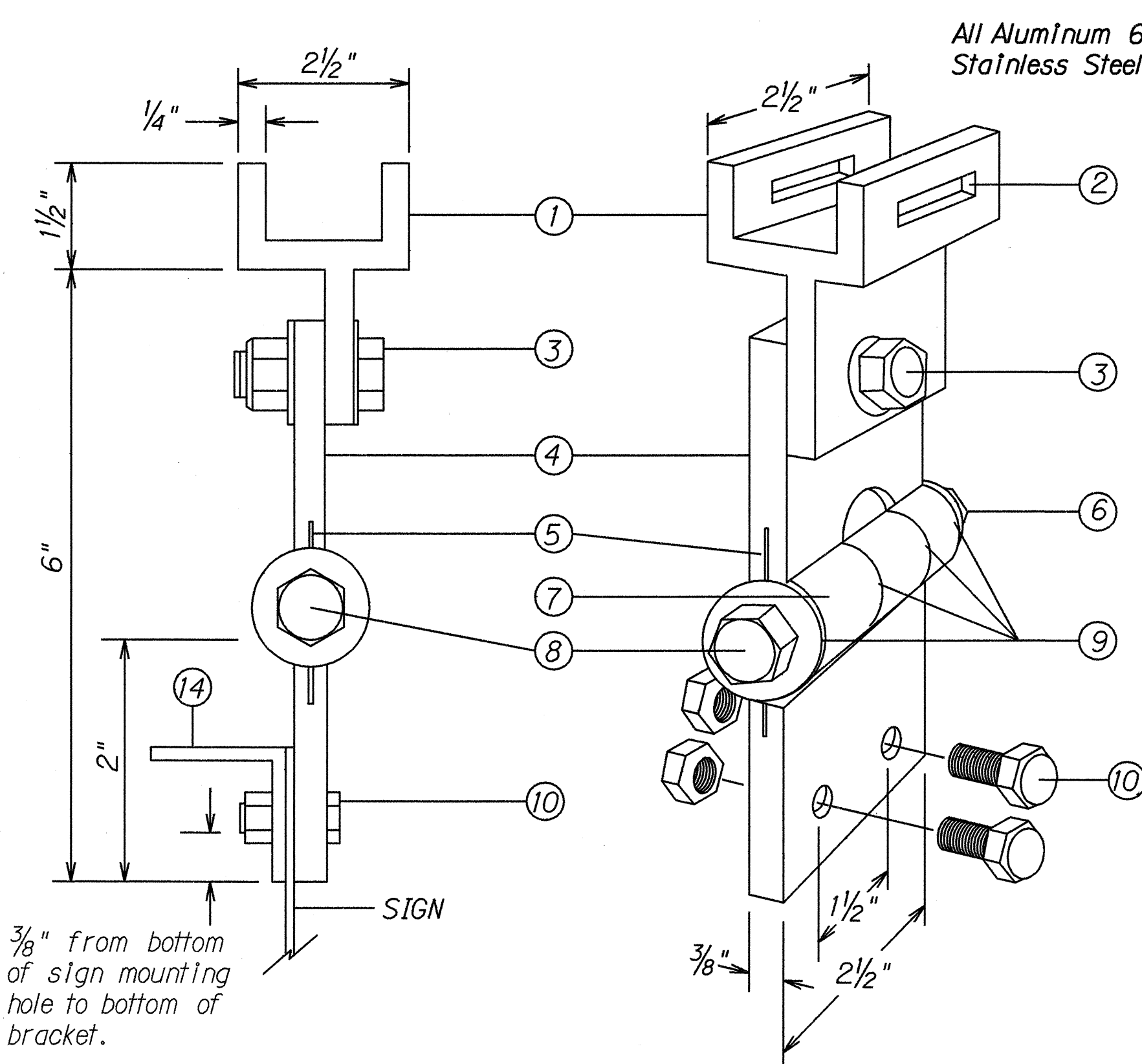


- NOTES:**
- ① Type "A" Backfill - Beach Sand, Earth, or Earth and Gravel. If Earth and Gravel, the maximum rock size shall be 1" and the mixture shall not contain more than 50% by volume of rock particles.
 - ② Type "B" Backfill - Beach Sand, Earth, or Earth and Gravel. If Earth and Gravel, the mixture must pass a 1/2" mesh screen and contain not
 - ③ The Metal Detectable High Fluorescence Yellow Plastic Warning Tape shall be a minimum 5 mils thick and 4 inches wide with a continuous metallic backing and corrosion resistant 1 mil thick foil core. The tape shall read, "CAUTION - STATE TRAFFIC SIGNAL AND/OR HWY LIGHTING BURIED BELOW," utilizing 3 inch series "C" lettering. The message will be repeated with a 12-inch spacing between the end and beginning of repeated message.
 - ④ Pavement and Sidewalk structure shall be equivalent or better than existing in thickness of quality.

9/8/97	Sheet added to Contract Plan Set with Traffic Signal Details.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION TRAFFIC SIGNAL DETAILS FARRINGTON HIGHWAY RESURFACING Hookele Street to Piliokoe Bridge Project No. 93A-01-97M Scale: As Shown Date: Sept., 1997 SHEET No. T1IS-2 OF 14 SHEETS	

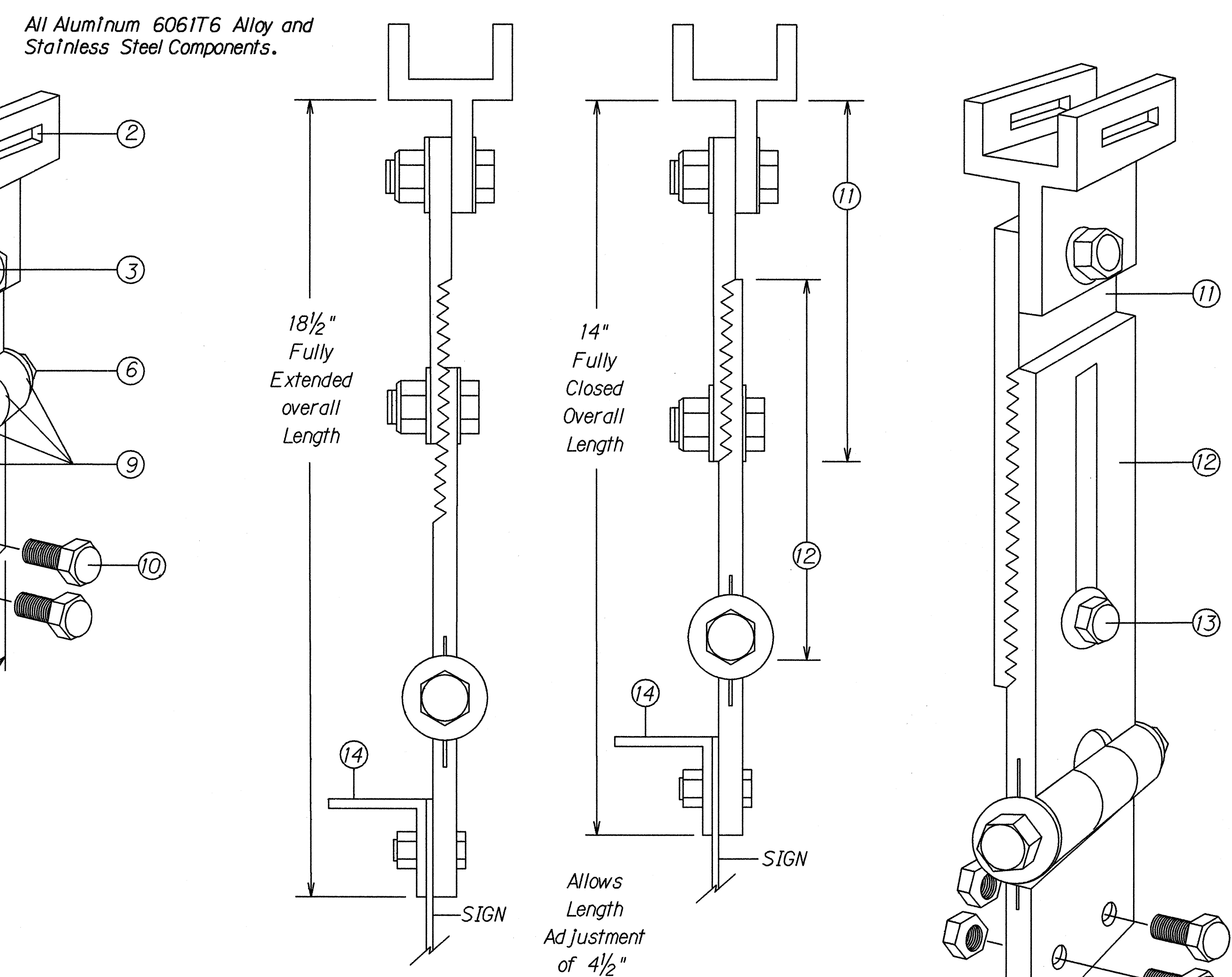
SURVEY PLOTTED BY: DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 QUANTITIES BY: _____
 CHECKED BY: _____

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	29	31



FIXED LENGTH NON-ADJUSTABLE SWING SIGN BRACKET

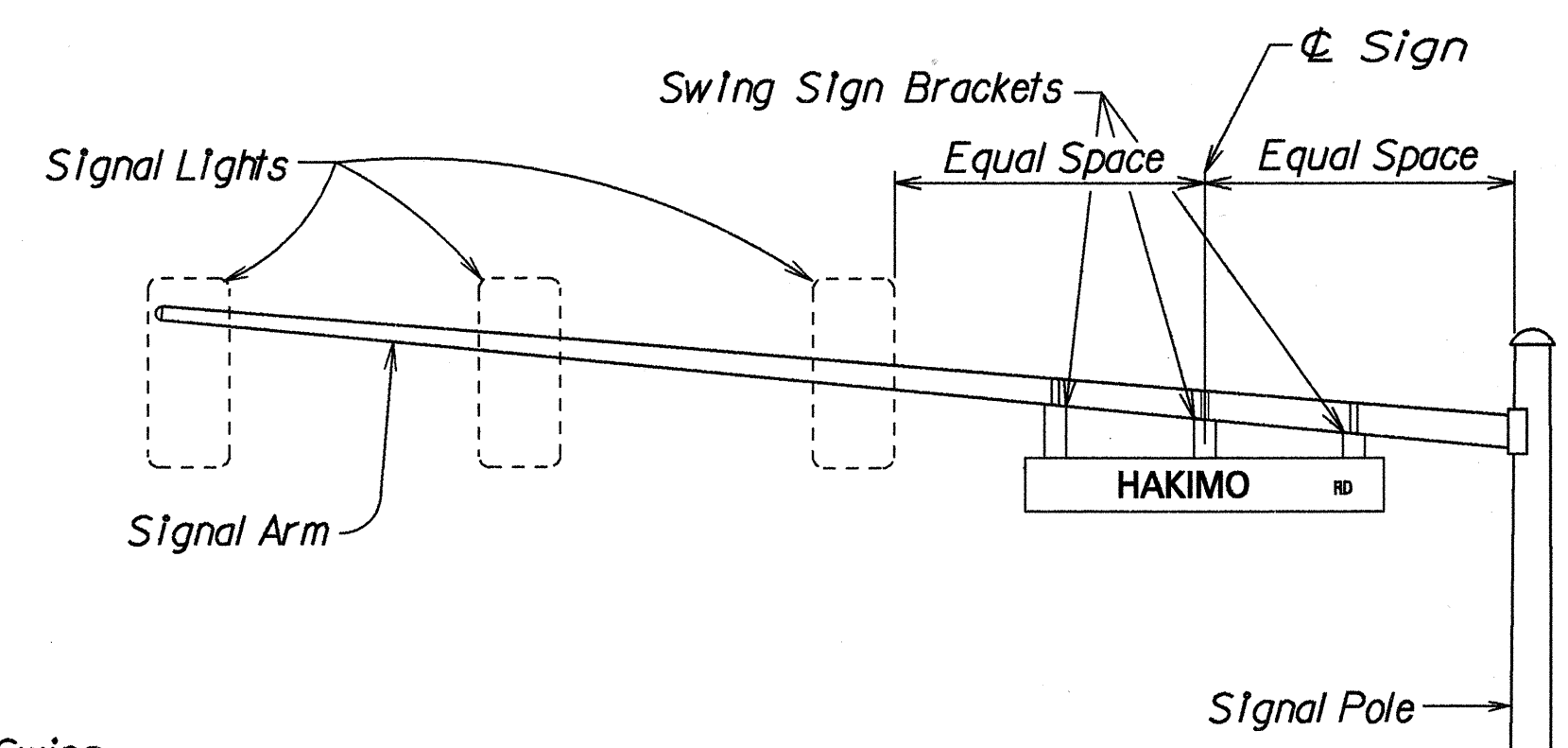
- ① Pivotal Upper Bracket
- ② 1 5/8" x 1/4" Slot for double strapping to electrolier mast arm. (M2G-34S(HD) .030" x 3/4" Heavy Duty Stainless Steel Strap with M2G-34B(HD) Buckle recommended.)
- ③ 1/2" - 13 x 1 1/2" Stainless Steel Hex Head Bolt with Stainless Steel Hex Lock Nut and 1/16" Stainless Steel Washer (both sides). Allows upper bracket to pivot and align with electrolier 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 Ollite 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 1/2" centers provide positive lock sign mounting to 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.
- ⑭ 1/4" x 1/4" x 1/8" Aluminum Angle



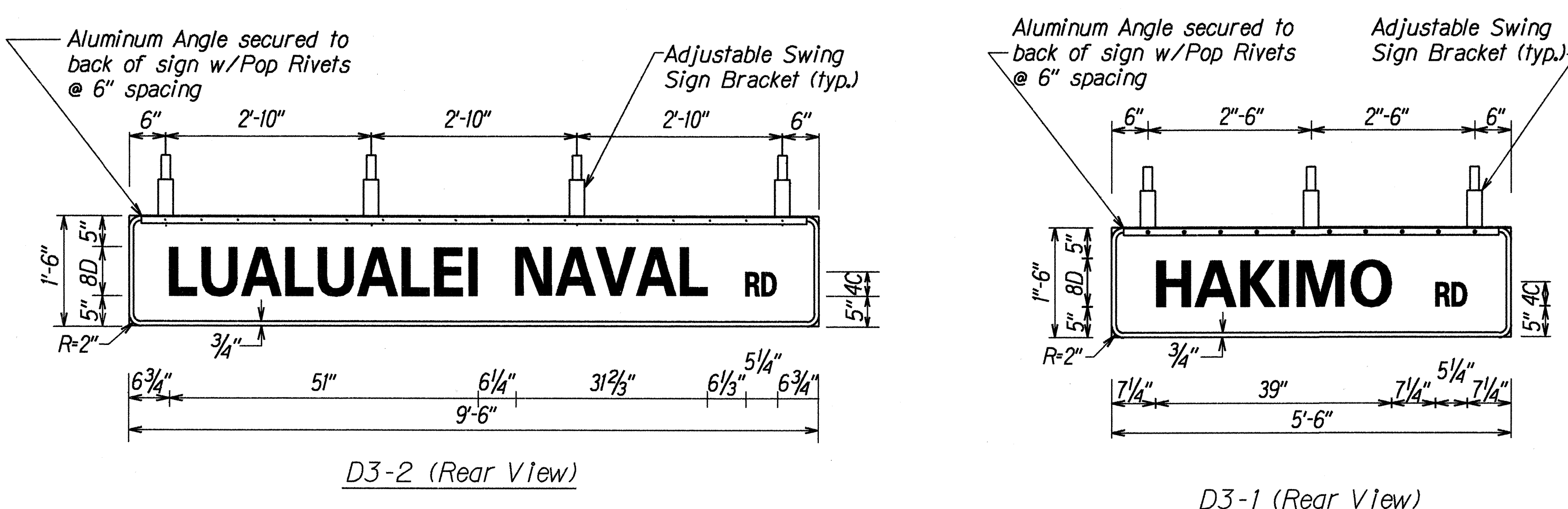
ADJUSTABLE LENGTH SWING SIGN BRACKET

NOTES:

1. Sign D3-1 & D3-2 shall be a new Street Name Sign. The Contractor shall 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 III or IV retroreflective 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, aluminum angle, 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. All panels 7'-0" or less in length shall be installed with three (3) sign mounting brackets. Signs longer than 7'-0" shall have four (4) sign mounting brackets.
8. Diacritical Marks are not authorized.



STREET NAME SIGN MOUNTING ON MAST ARM



TYPICAL PANEL & SWING BRACKET LAYOUT FOR STREET NAME SIGN

*NOTE: The Contractor shall verify if Sign D3-2 can be installed on Exist. Mast Arm without relocating Signal Head before manufacturing sign. If Sign D3-2 cannot fit, delete sign from contract.

DATE	X
SURVEY PLOTTED BY	J. Takahashi
DRAWN BY	J. Takahashi
FRACED BY	W. Casper, A. Cho
QUANTITIES BY	rd/2/mj
CHECKED BY	ns/rt/ss/d
ORIGINAL PLAN	
NOTE BOOK	

Note: Dimensions may vary slightly.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

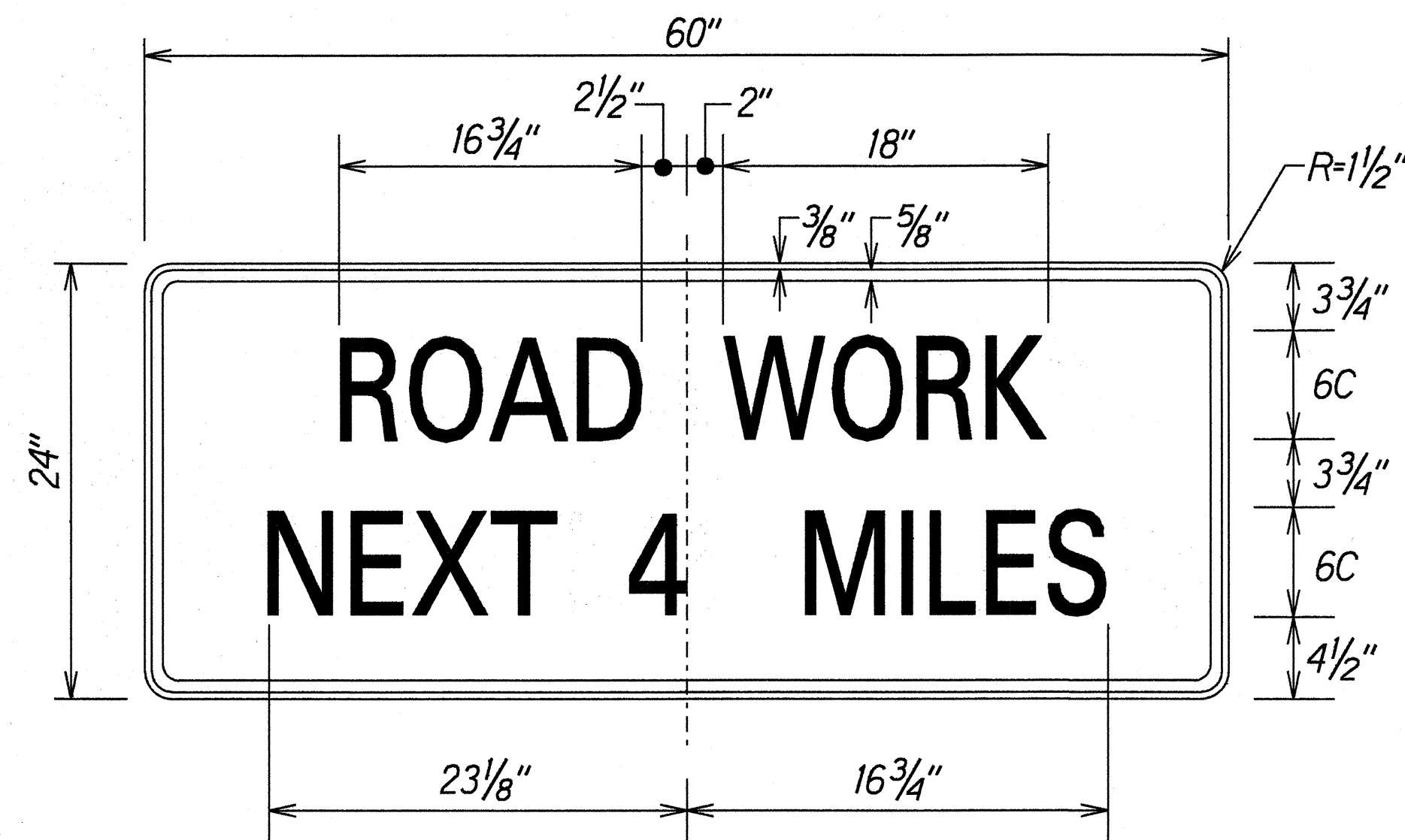
SWING SIGN BRACKET DETAIL

FARRINGTON HIGHWAY RESURFACING
Hookele Street to Piikoe Bridge
Project No. 93A-01-97M

Not to Scale Date: May, 1997

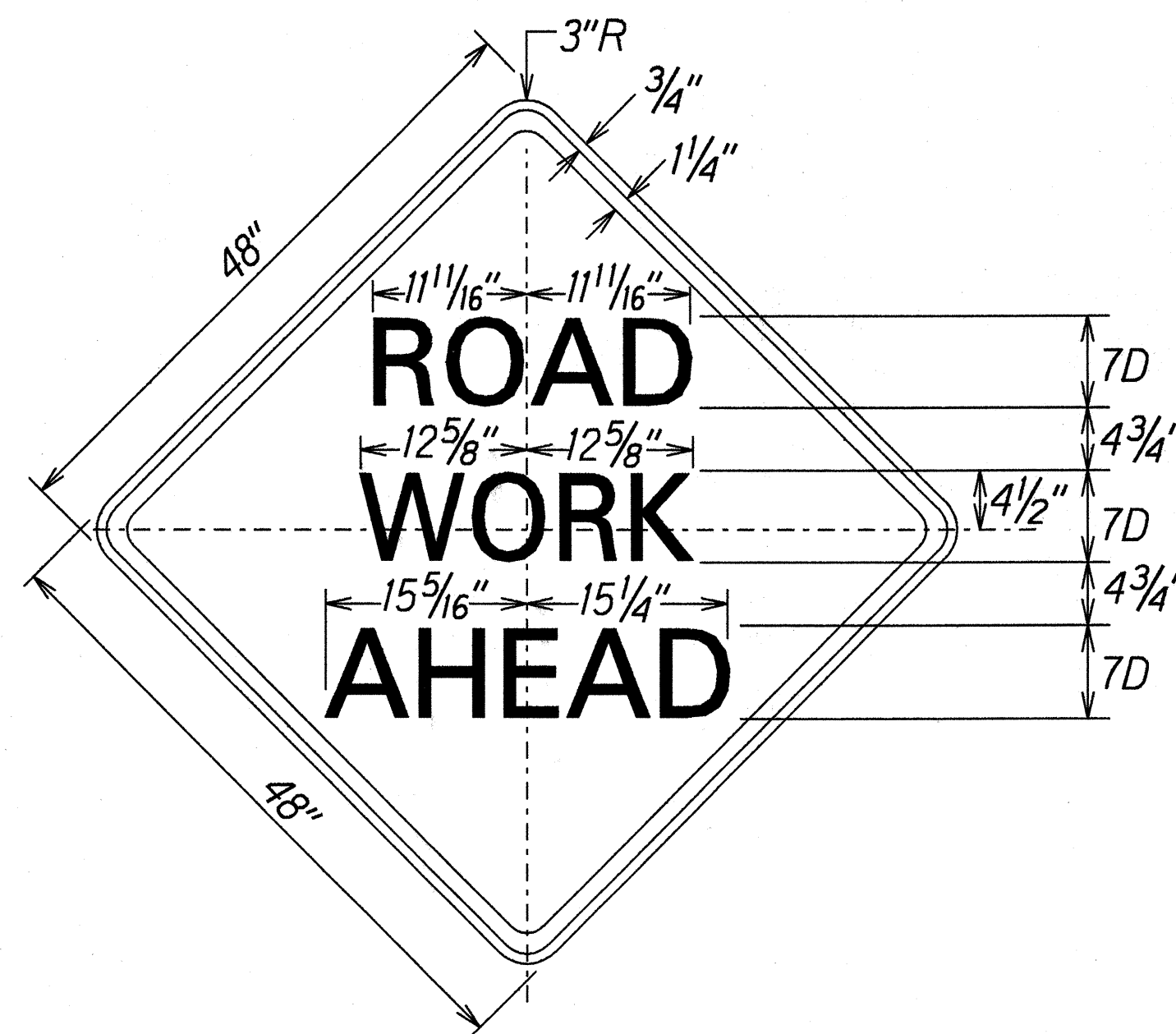
SHEET No. T12 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD. 30	31



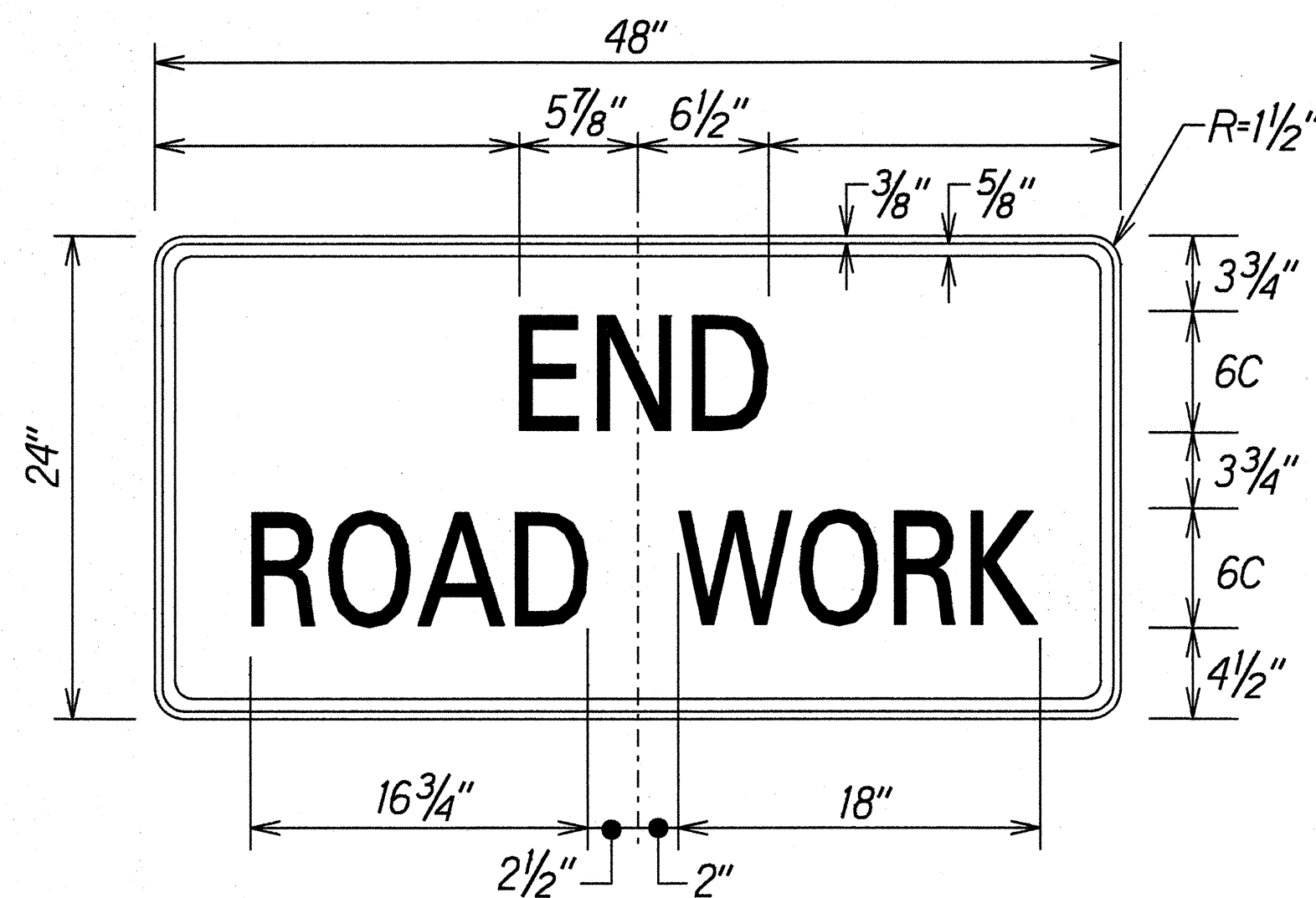
CG20-1A
Scale: 1/2" = 1'-0"

Colors:
Legend: Black (Non Refl)
Background: Orange



CW20-1Ad
Scale: 1" = 1'-0"

Colors:
Legend: Black (Non Refl)
Background: Orange



CG20-2A
Scale: 1/2" = 1'-0"

Colors:
Legend: Black (Non Refl)
Background: Orange

SURVEY PLOTTED BY	DATE
DRAWN BY M. Takafuji	X
DESIGNED BY Casey Aho	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
1/12/97	
NA. a/ah/ed	

6/16/97	Sign D-1(R) Moved to Plan Sheet No. ADD 30S-1
DATE	REVISION

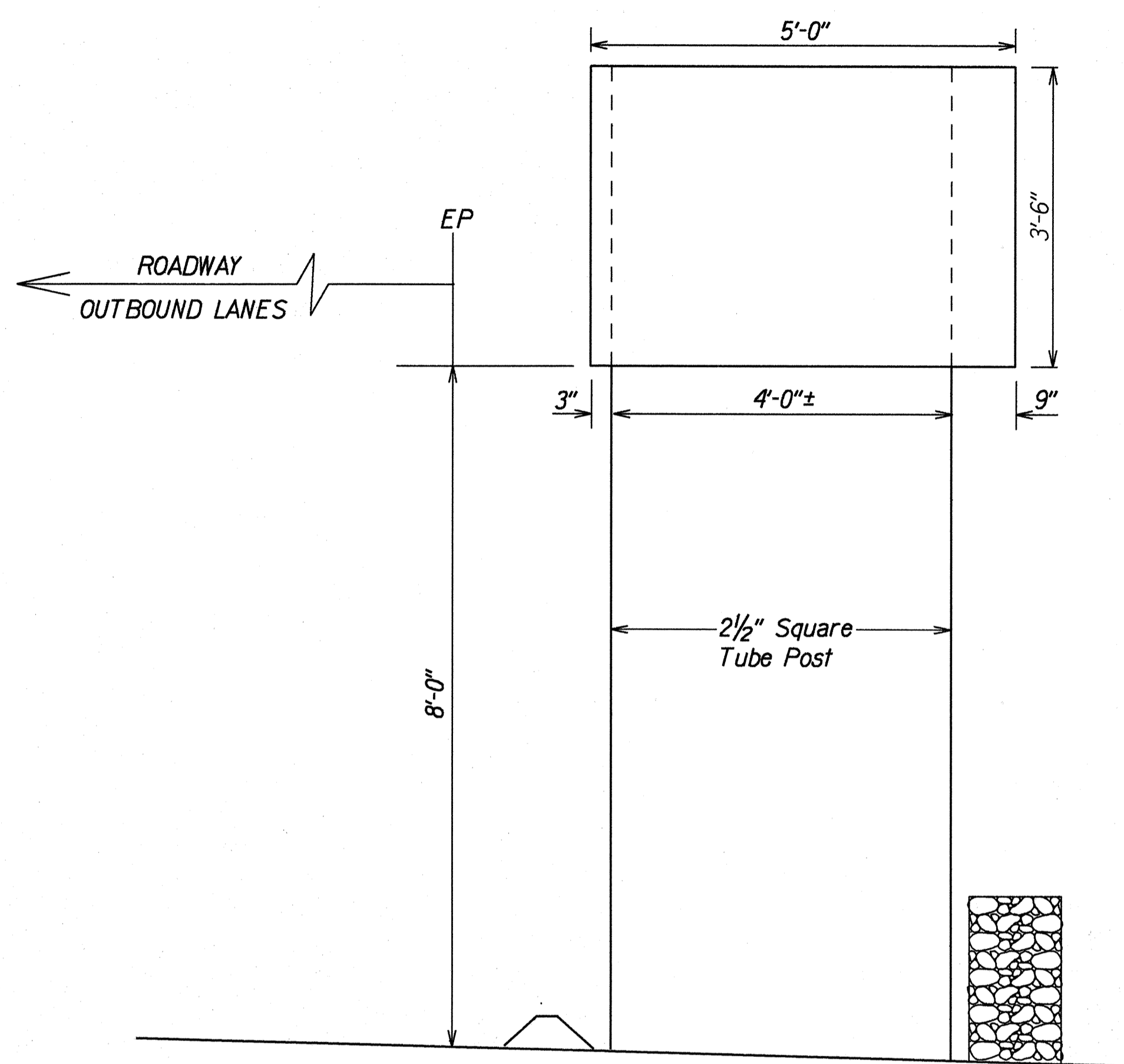
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN DETAILS

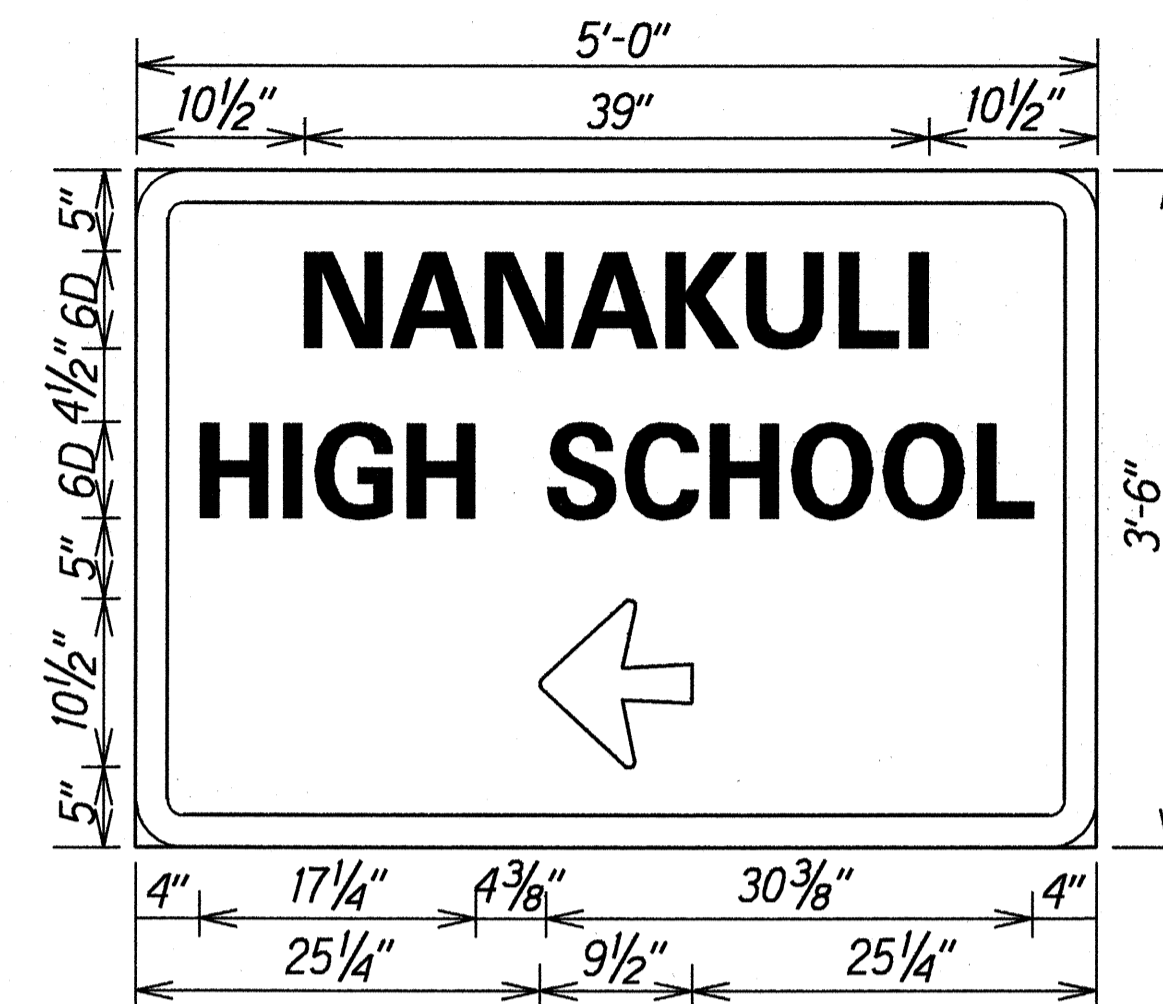
FARRINGTON HIGHWAY RESURFACING
Hookele Street to Piliokoe Bridge
Project No. 93A-01-97M

Scale: As Shown Date: May, 1997

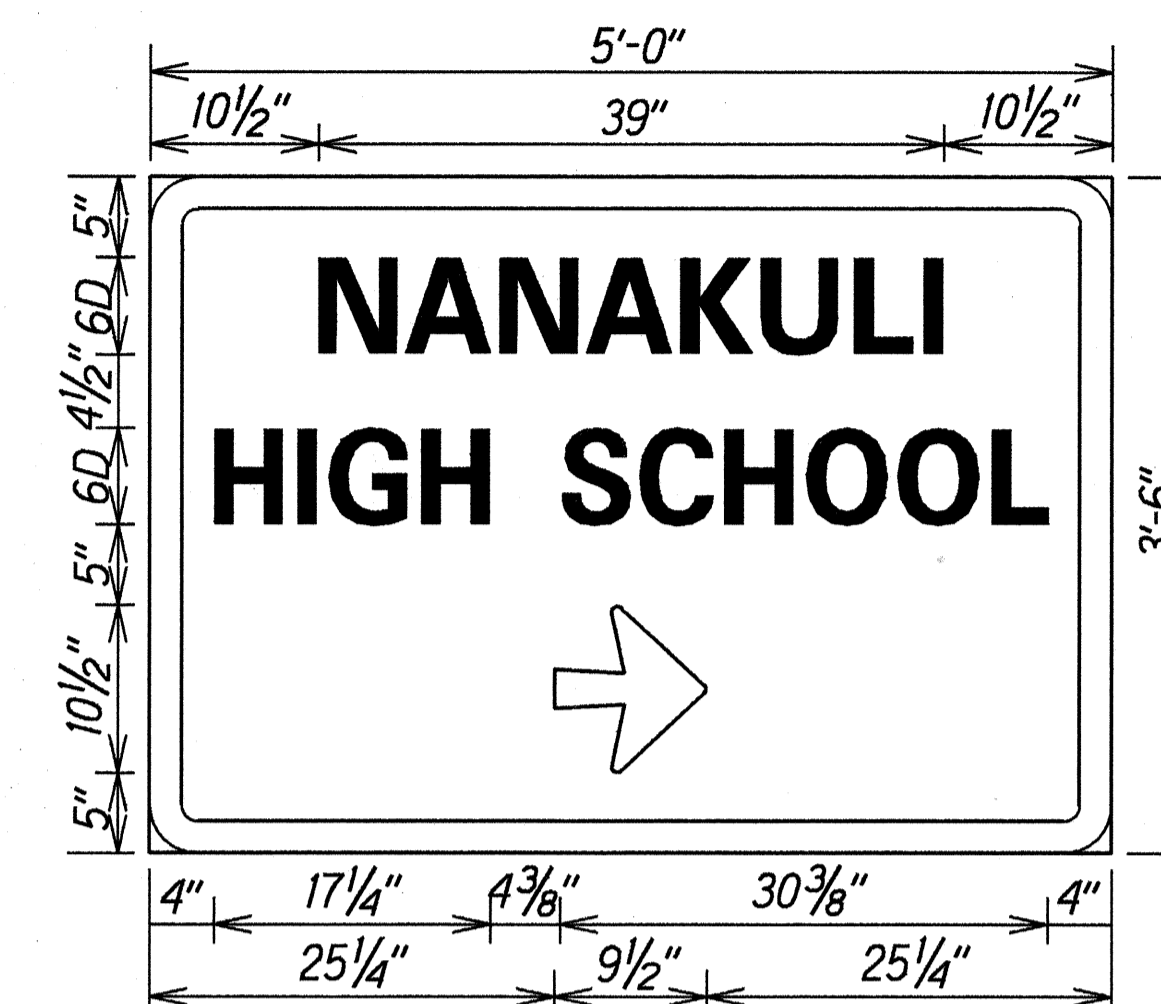
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	ADD, 30S-1	31



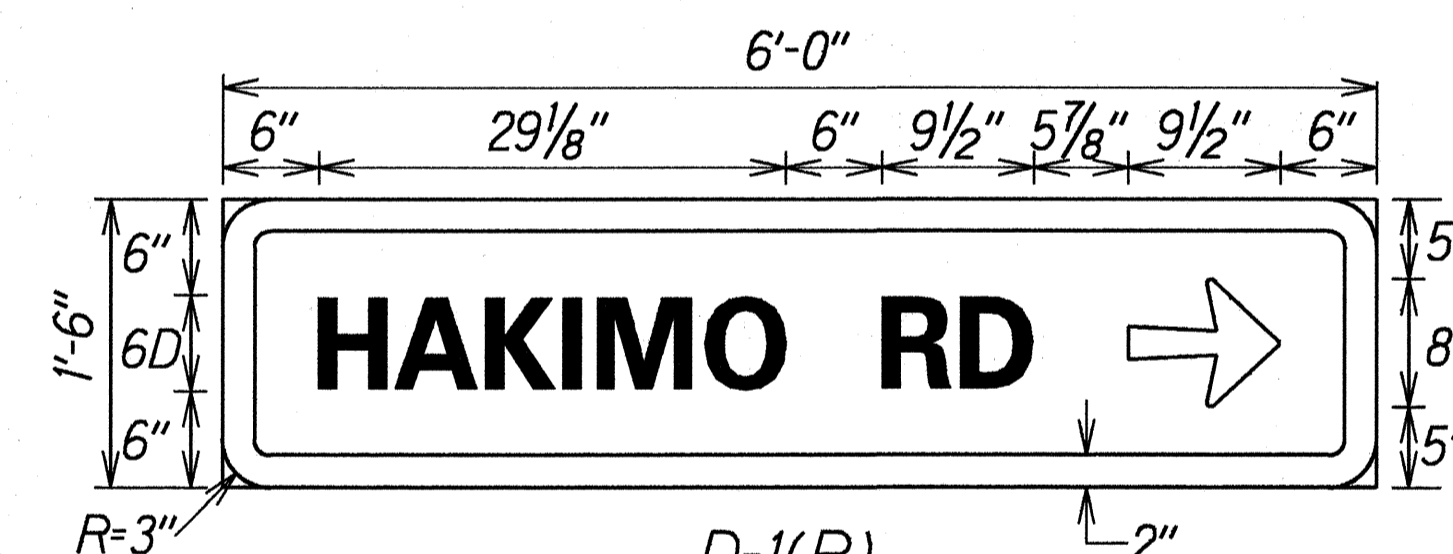
SIGN D-2(L) FRAME LAYOUT
 @ STA. 172+50± LT.
 Scale: 3/4" = 1'-0"



D-2(L)
 @ STA. 169+40± RT.
 Scale: 1" = 1'



D-3(R)
 @ STA. 172+50± LT.
 Scale: 1" = 1'



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

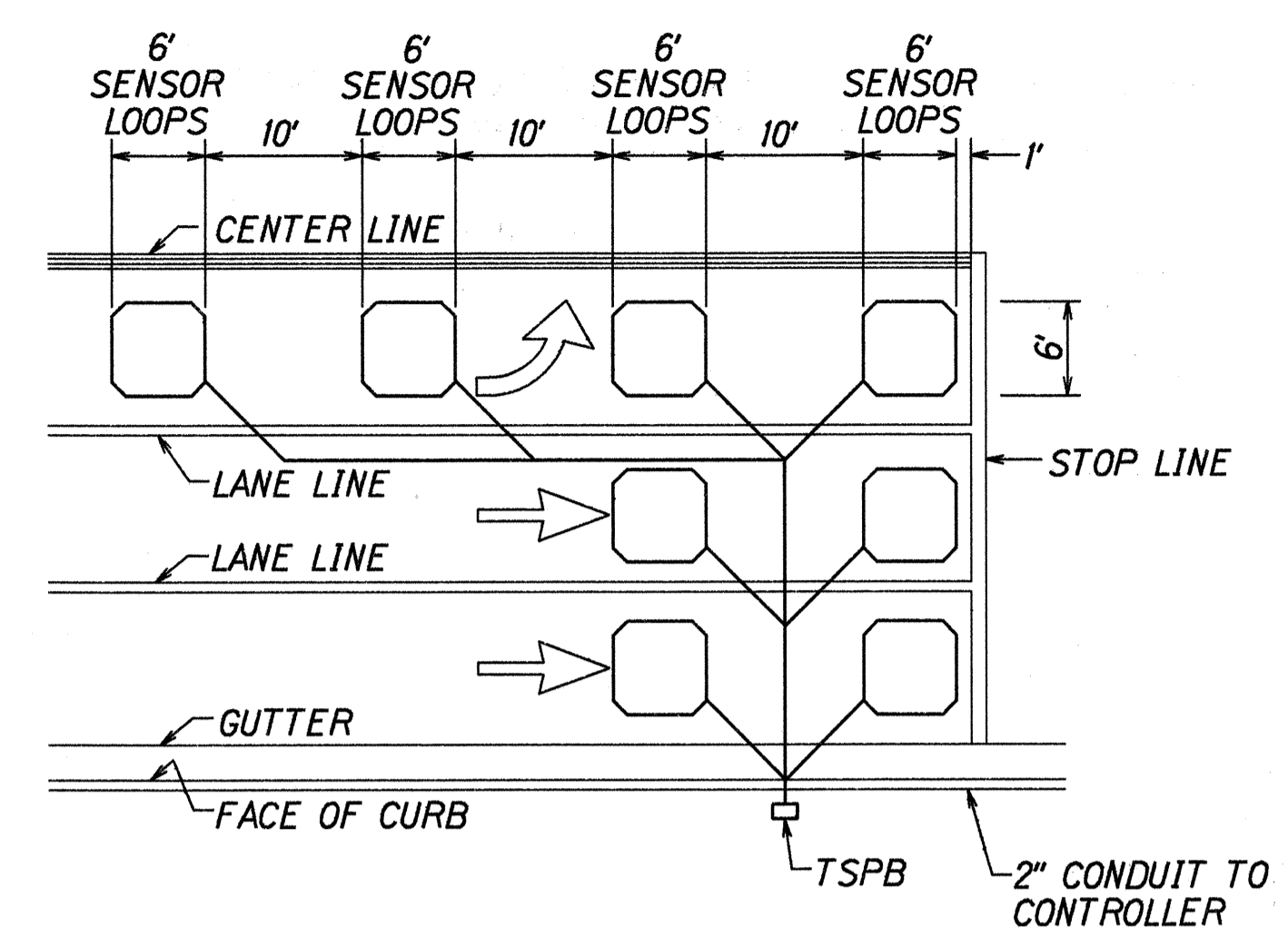
GENERAL NOTES

- All signs shall conform to Section 621 of the Special Provisions and the latest editions amendments of the following FHWA publications:
 - "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD)
 - "Standard Highway Signs"
 - "Standard Alphabets for Highway Signs"
- Borders, messages, arrows, symbols and shield conform to details as shown on the plans and as specified in the MUTCD.
- Sign messages shall be as indicated on the plans.
- All panels shall be reflectorized in accordance with Section 712.20 of the Standard Specifications.

ORIGINAL PLAN	DATE	BY
NOTE BOOK		
10/2/97		
NA		

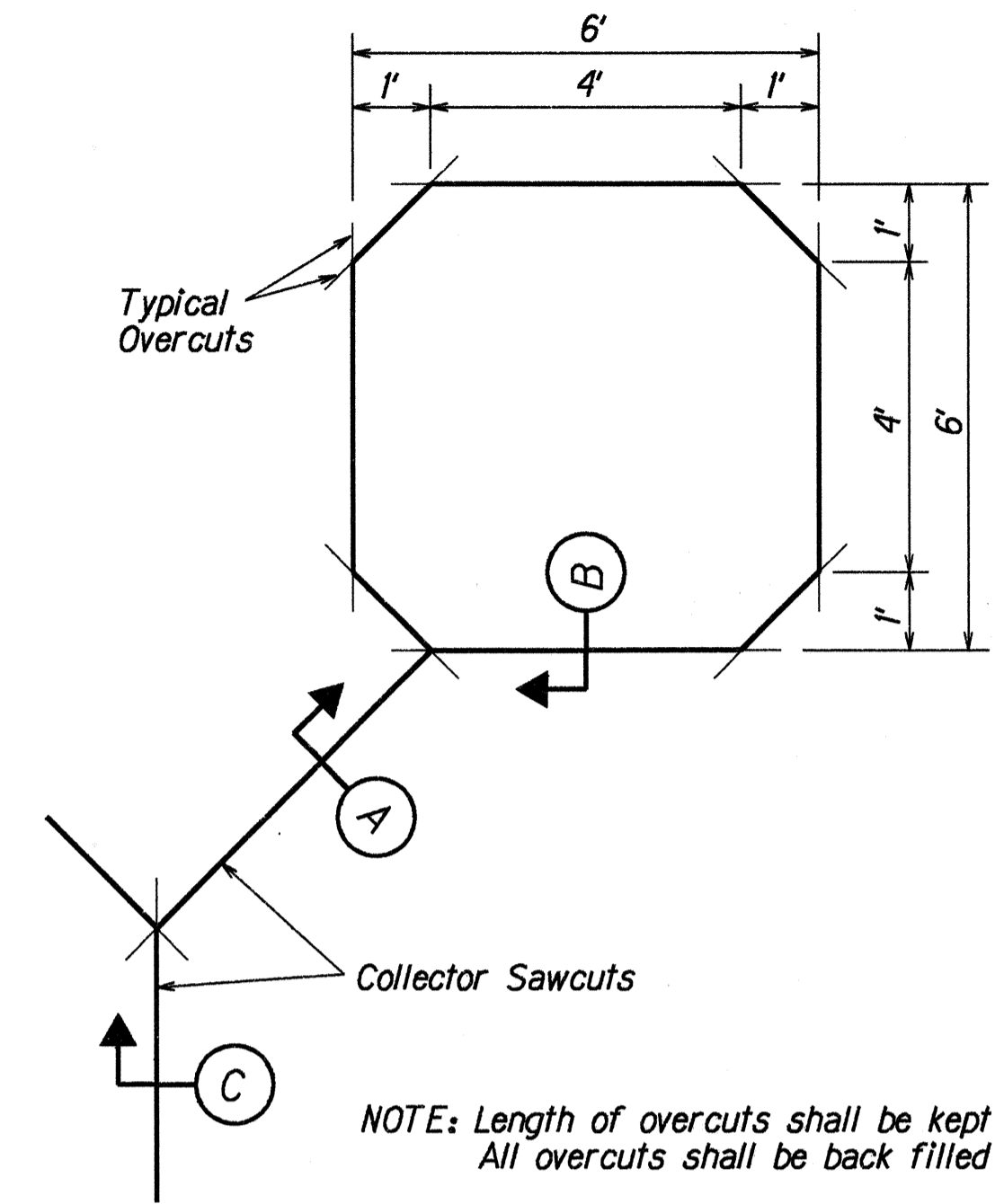
6/16/97	Sheet Added to Plans Showing Details
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION DESTINATION SIGN FRAME LAYOUT DETAILS FARRINGTON HIGHWAY RESURFACING Hookele Street to Piliokoe Bridge Project No. 93A-01-97M Scale: As Shown Date: May, 1997	
SHEET No. T13S-1 OF 14 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-97M	1997	31	31

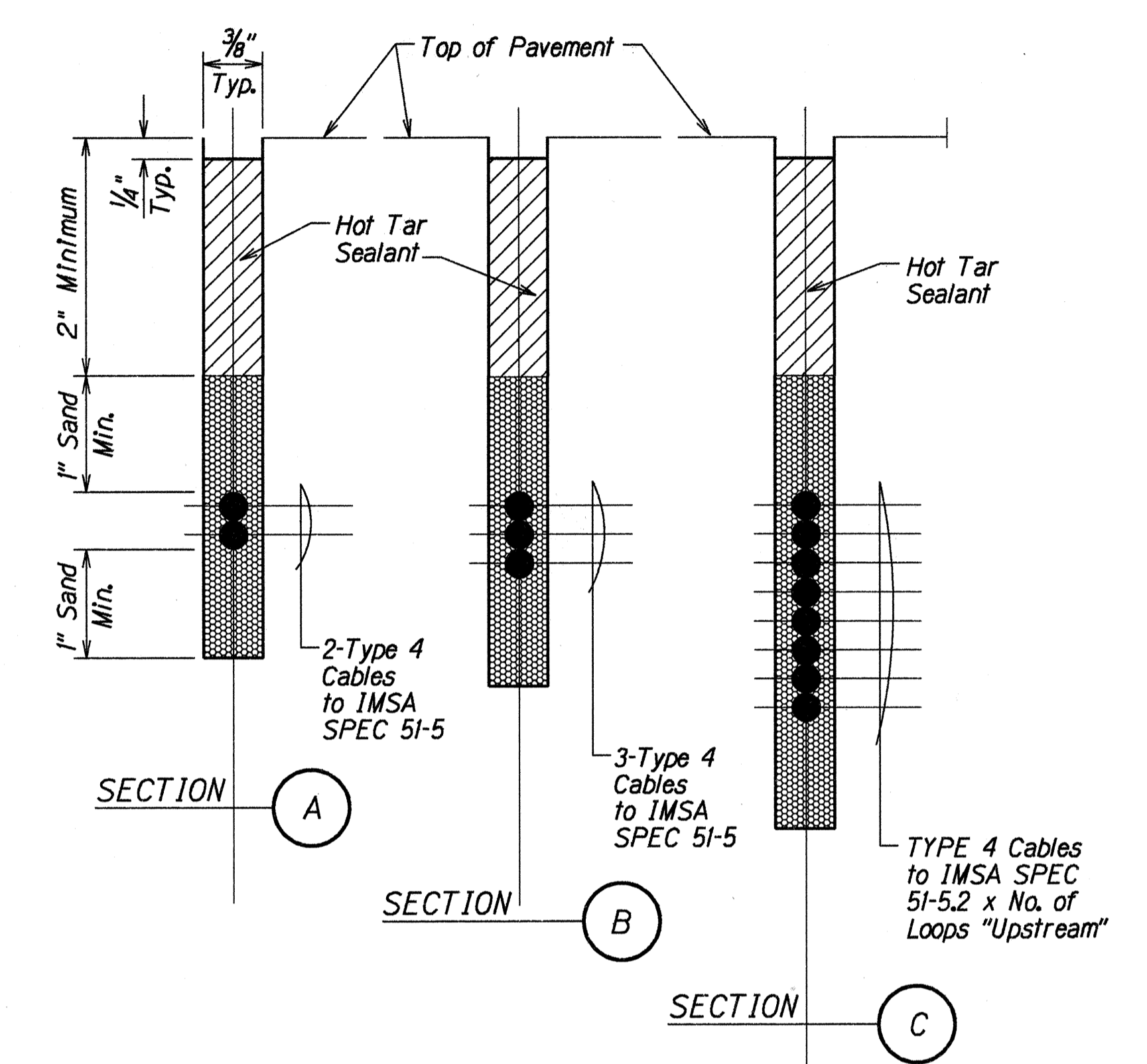


- NOTES:
1. Center sensor loops in lanes.
 2. Collector cables shall be twisted 2 turns per foot.
 3. Number of loops and locations vary. See project plans.
 4. Number and locations of collector sawcuts may be varied in the field to suit.

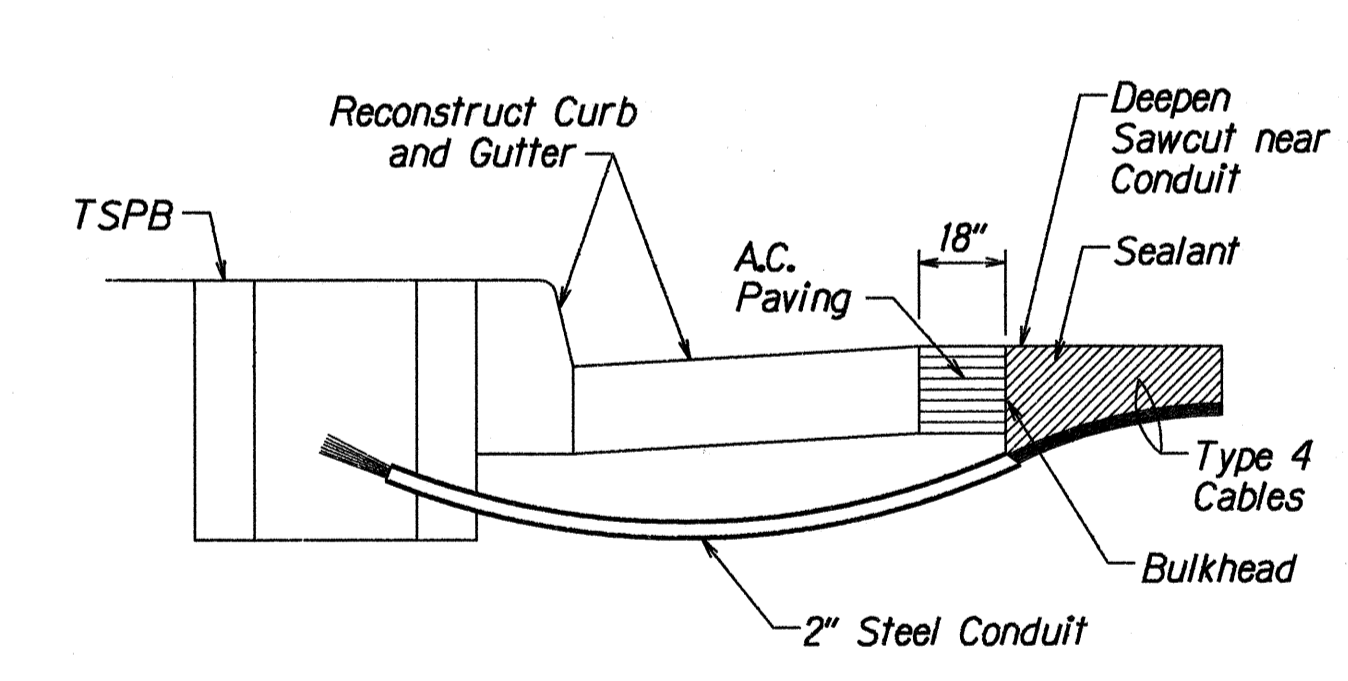
TYPICAL SENSOR LOOP LAYOUT



TYPICAL SENSOR LOOP SAWCUT DETAIL

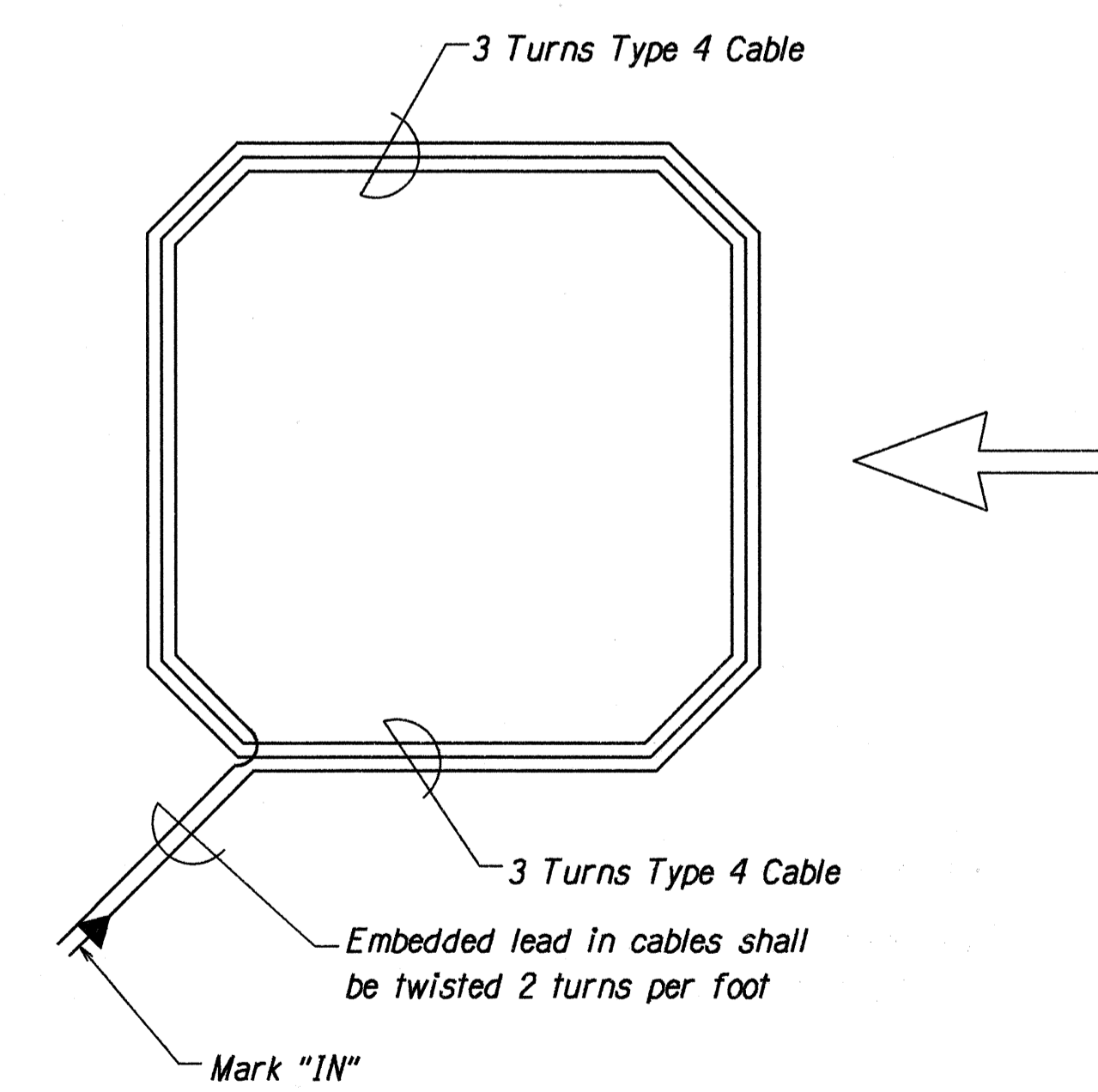


TYPICAL SECTION THROUGH SENSOR LOOP



- 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 AC.
 5. Reconstruct curb and gutter as required.

DETAIL OF SENSOR LOOP INSTALLATION AT EDGE OF ROADWAY



TYPICAL SENSOR LOOP WIRING DIAGRAM

SURVEY PLOTTED BY	DATE
DRAWN BY M. Takaijii	X
DESIGNED BY Cassy Abe	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
10/2/97	
N. #/11/10d	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS

FARRINGTON HIGHWAY RESURFACING
Hookele Street to Pilihoe Bridge
Project No. 93A-01-97M

Not to Scale Date: May, 1997

SHEET No. T14 OF 14 SHEETS

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	11			
R2-1(35)-B	SPEED LIMIT 35			13	
R3-2		2	1		
R7-4-A	NO STOPPING OR STANDING	3			
R7-107b	THE BUS SYMBOL	35			
R8-3a	ANY TIME	13			
R16-1	BUCKLE UP SYMBOL	1			
S5-1	SCHOOL SPEED LIMIT 25 WHEN FLASHING	2			
W6-1	DIVIDED HIGHWAY SYMBOL	1			
W11-2	ADVANCE PEDESTRIAN CROSSING SYMBOL	4			
W11A-2	PEDESTRIAN CROSSING SYMBOL	7			
W14-2	NO OUTLET		1		
TOTAL		79	2	13	

PAVEMENT MARKING SUMMARY		
DESCRIPTION	QUANTITY	
PAVEMENT MARKERS		
TYPE A _____	3,684	EA.
TYPE C _____	2,314	EA.
TYPE D _____	836	EA.
TYPE H _____	326	EA.
TAPE - TYPE I OR THERMOPLASTIC EXTRUSION		
4-INCH PAVEMENT STRIPE (WHITE) _____	2,510	L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	3,140	L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	16,960	L.F.
TAPE - TYPE II OR THERMOPLASTIC EXTRUSION		
4-INCH PAVEMENT STRIPE (WHITE) _____	38,340	L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	920	L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	270	L.F.
12-INCH PAVEMENT STRIPE (YELLOW) _____	710	L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	3,940	L.F.
TAPE - TYPE III OR THERMOPLASTIC EXTRUSION		
4-INCH PAVEMENT STRIPE (WHITE) _____	1,170	L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	320	L.F.
12-INCH PAVEMENT STRIPE (WHITE) _____	1,175	L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	1,040	L.F.
CROSSWALK MARKINGS _____	125	LANES
PAVEMENT ARROW _____	33	EA.
PAVEMENT WORD _____	29	EA.
PAINT		
ASPHALT CONCRETE CURB (WHITE) _____	5,520	L.F.

CONSTRUCTION SIGN SUMMARY				
SIGN NO.	LOCATION	MESSAGE	W/POSTS	W/O POST
CG20-2A	# STA. 170+00± LT.	END ROAD WORK	1	
CW20-1Ad	# STA. 170+00± RT.	ROAD WORK AHEAD	1	
CG20-1A	# STA. 175+00± RT.	ROAD WORK NEXT 5 MILES	1	
CG20-1A	# STA. 216+45± LT.	ROAD WORK NEXT 5 MILES	1	
CW20-1Ad	# STA. 221+45± LT.	ROAD WORK AHEAD	1	
CG20-2A	# STA. 221+45± RT.	END ROAD WORK		
TOTAL			6	

OBJECT MARKER SUMMARY				
TYPE	QUANTITY			
	W/O POST		W/STEEL POST	
	YELLOW	WHITE	YELLOW	WHITE
II	224		24	

MILEPOST MARKER SUMMARY				
LOCATION	SIGN NO. AND MESSAGE	QUANTITY		
		W/POST	W/O POST	
# STA. 233+45± LT. # RT.	D10-4 7 D10-7 93	2		
# STA. 121+40± LT. # RT.	D10-4 6 D10-7 93	2		
# STA. 173+40± LT. # RT.	D10-4 5 D10-7 93	2		
TOTAL		6		

DESTINATION SIGN SUMMARY				
SIGN NO.	MESSAGE	SIZE	NEW PANEL AREA (SQ. FT.)	
			W/O POSTS	W/POSTS
D-1(R)	HAKIMO RD	6'-0" x 1'-6"		9.00
D-2(L)	NANAKULI HIGH SCHOOL	5'-0" x 3'-6"		17.50
D-3(R)	NANAKULI HIGH SCHOOL	5'-0" x 3'-6"		17.50
TOTAL				44.00

6/17/97 Sheet Added to Plans With Traffic Summaries

DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SUMMARIES

FARRINGTON HIGHWAY RESURFACING
Hooleke Street to Piliokoe Bridge
Project No. 93A-01-97M

Not to Scale Date: May, 1997

SHEET No. T14S-1 OF 14 SHEETS

SURVEY PLOTTED BY: _____ DATE: _____
 DRAWN BY: J. Takahira
 TRACED BY: G. Kelly
 QUANTITIES BY: G. Kelly
 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 10/2/97
 N2/10/15/97