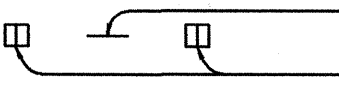
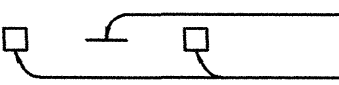
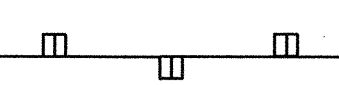
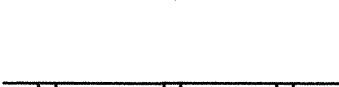


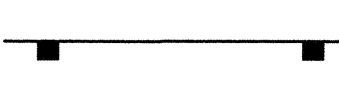




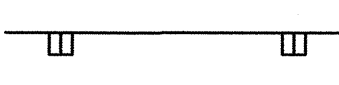
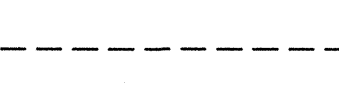
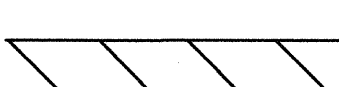
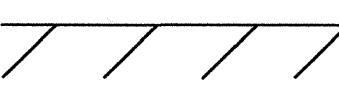


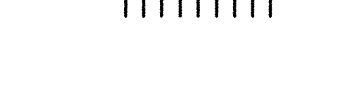


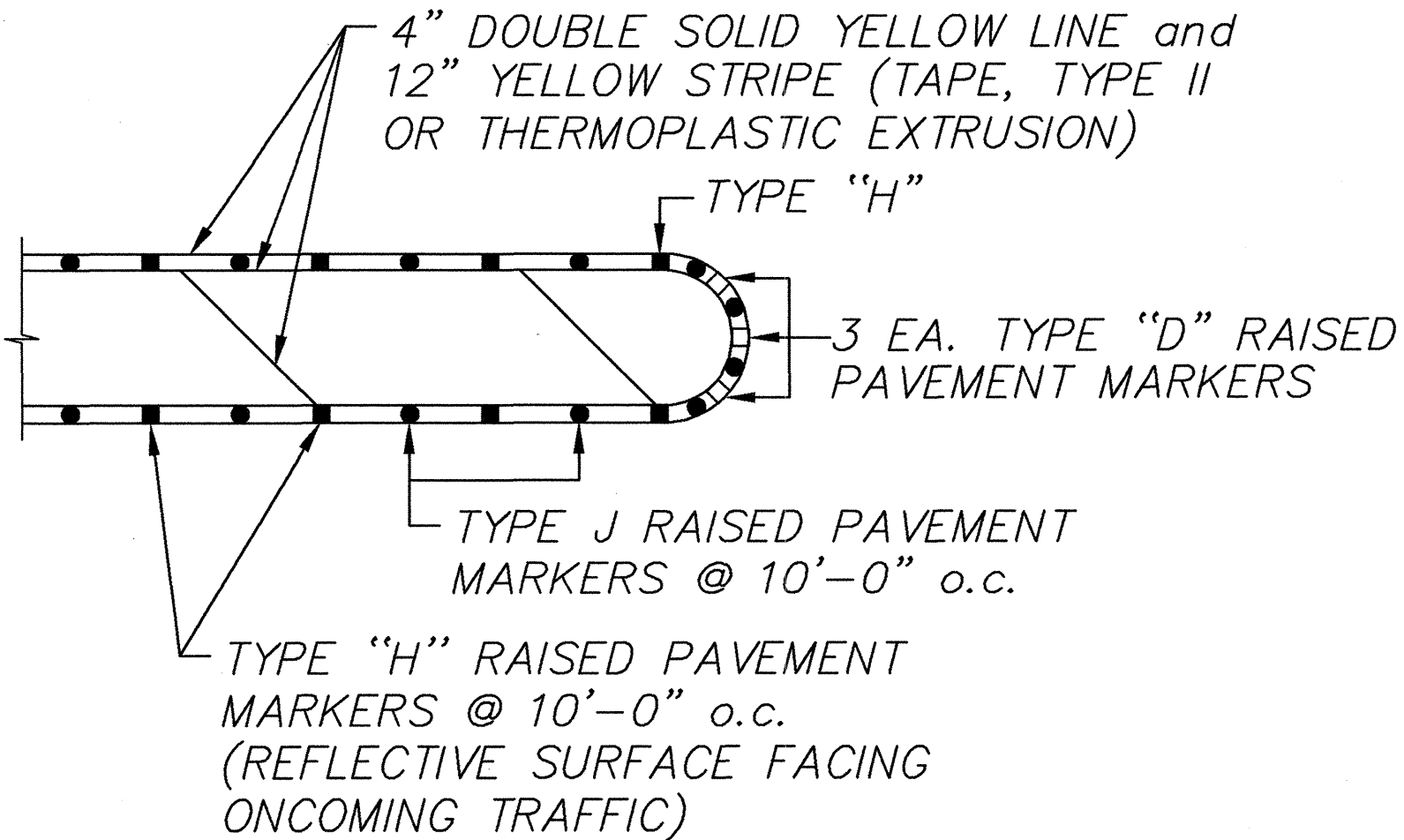
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-03-97	1998	8	18

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)

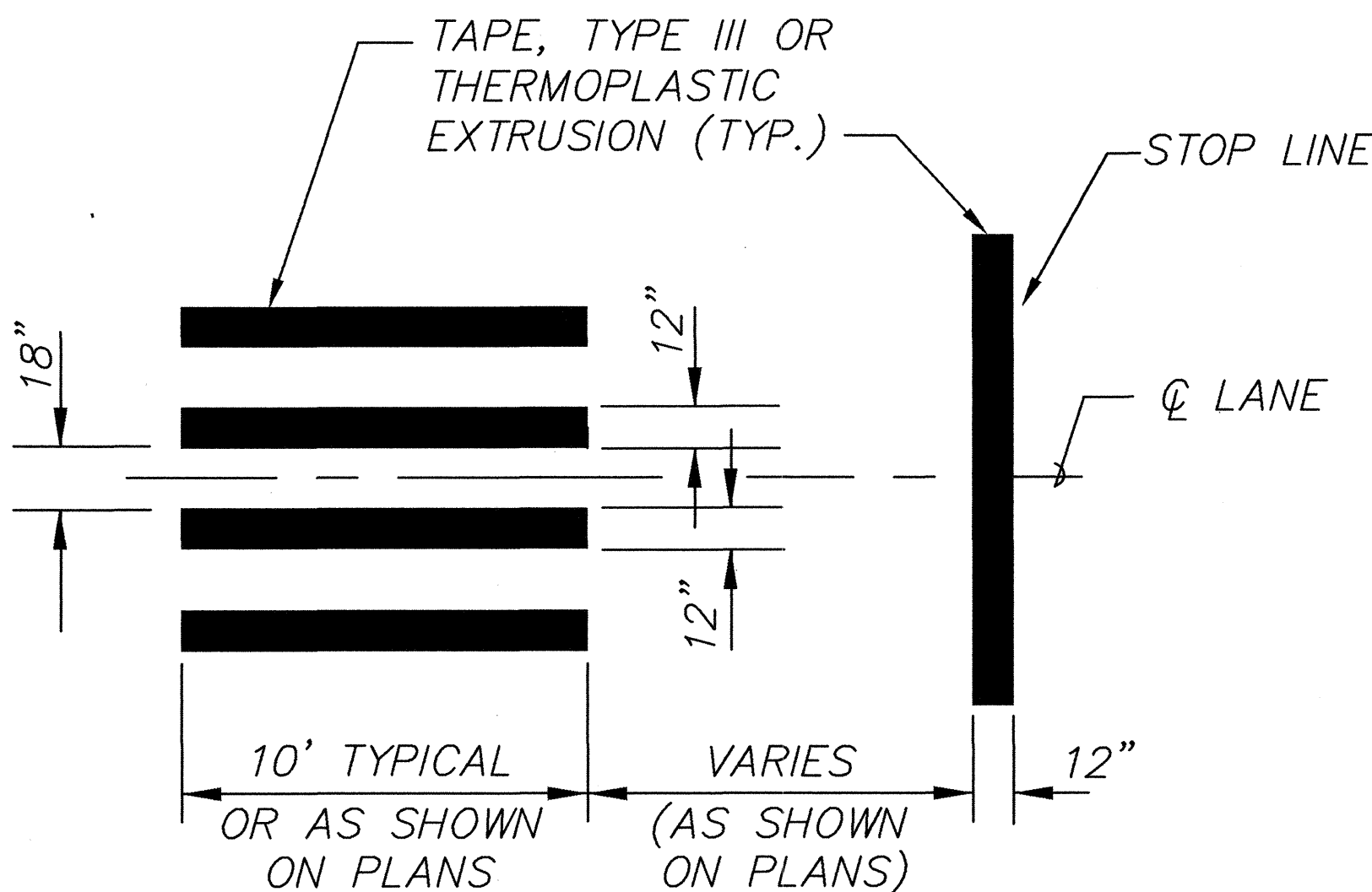
NOTES

- Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
- 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.
- Raised pavement markers shall not be installed within crosswalks.
- Final locations of all signs shall be approved by the Engineer prior to any installation work.
- 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.
- Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
- All pavement striping shall be as noted on the legend or plans.
- All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as directed by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
- Curb marking shall include top and face of curb.
- Backing for all new Regulatory and Warning Signs shall not be spliced.
- All sign panels shall conform to Section 621 of Special Provisions and the latest editions and 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 shields shall conform to details as shown on the plans and as specified in the MUTCD.
- Sign messages shall be as indicated on the plan.
- All panels shall be reflectorized in accordance with Section 712.20 of the Standard Specifications. Minimum width of panels shall be 2 ft. abutting edges of panels shall be in only one direction if vertical abutting edges are used, no horizontal abutting edges shall be allowed and vice versa.
- 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.
- Final location of all sign post installed within the sidewalk areas shall maintain a minimum clear width of 36 inches from sidewalk edge to provide for wheelchair accessibility.
- 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.
- Removing existing signs and reinstalling on new post shall not be paid for separately, but shall be considered incidental to the various signing items.



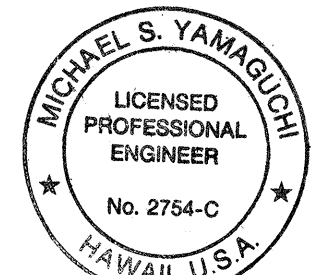
MEDIAN NOSE DELINEATION

SCALE: 1"=10'-0"



CROSSWALK STRIPING DETAIL

SCALE: 1/4"=1'-0"



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
By: *Michael S. Yamaguchi*
FUJITA & ASSOCIATES

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKING
LEGEND, DETAILS & NOTES**

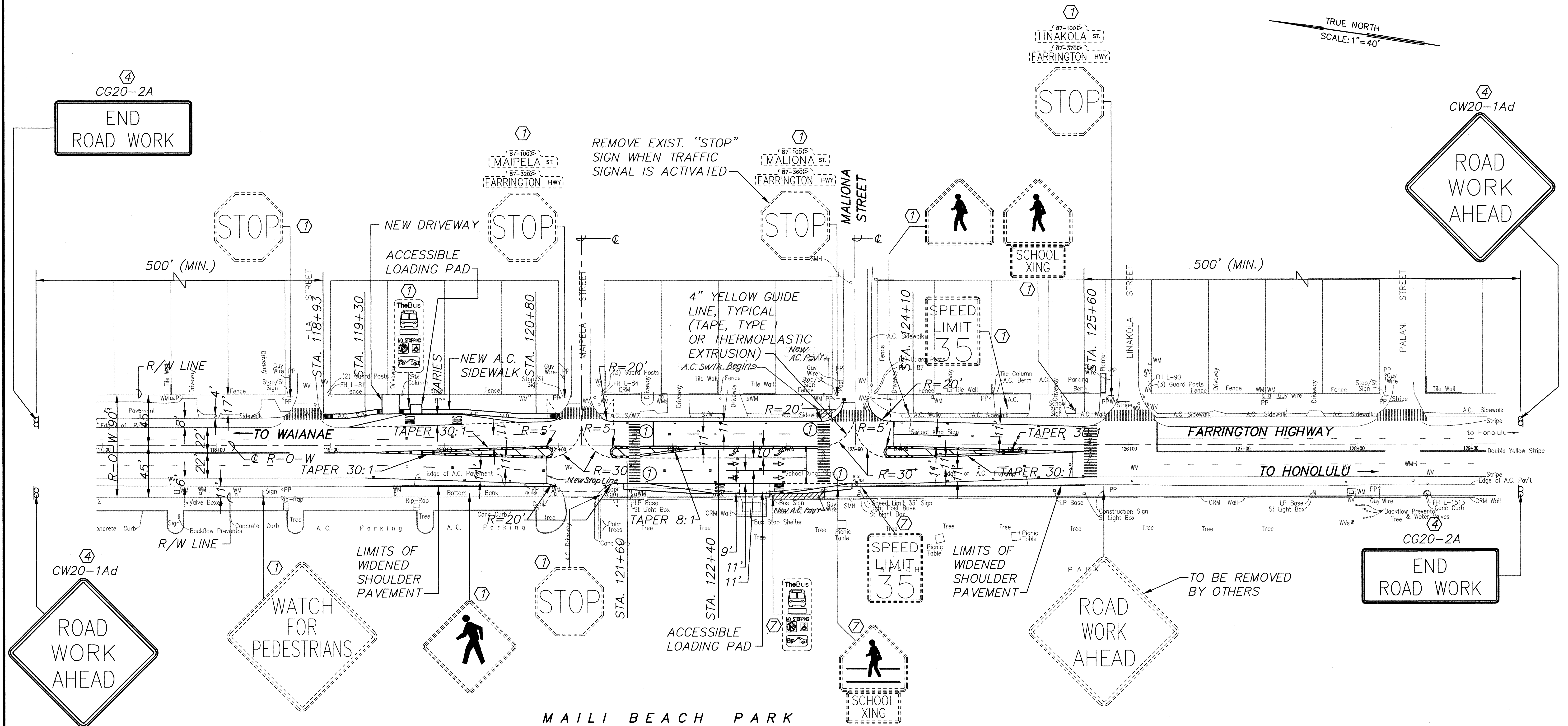
**FARRINGTON HIGHWAY
Intersection Improvements at Maliona St.**

Project No. 93A-03-97

Scale: As Shown Date: Apr. 1998

SHEET No. 71 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-03-97	1998	9	18



- ① EXIST. SIGN(S) & POST(S) TO REMAIN
- ② REMOVE EXIST. SIGN(S) W/ POST(S)
- ③ REMOVE EXIST. SIGN(S) W/ POST(S) AND INSTALL NEW SIGN(S) W/ POST(S).
- ④ INSTALL NEW SIGN(S) W/ POST(S)
- ⑤ REMOVE EXIST. SIGN(S) AND INSTALL NEW ON EXIST. POST(S)
- ⑥ TO BE INSTALLED BY OTHERS
- ⑦ REMOVE EXIST. SIGN(S) W/ POSTS AND REINSTALL
- ⑧ REMOVE EXIST. SIGN(S) AND INSTALL NEW SIGN(S)

PLAN
SCALE: 1"=40'

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

SIGNING AND PAVEMENT

MARKINGS

FARRINGTON HIGHWAY

Intersection Improvements at Maliona St.

Project No. 93A-03-97

Scale: 1"=40' Date: Apr. 1998

MICHAEL S. YAMAGUCHI

LICENSED PROFESSIONAL ENGINEER

No. 2754-C

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

By: *Michael S. Yamaguchi*

FUJITA & ASSOCIATES

SHEET No. T2 OF 4 SHEETS

9

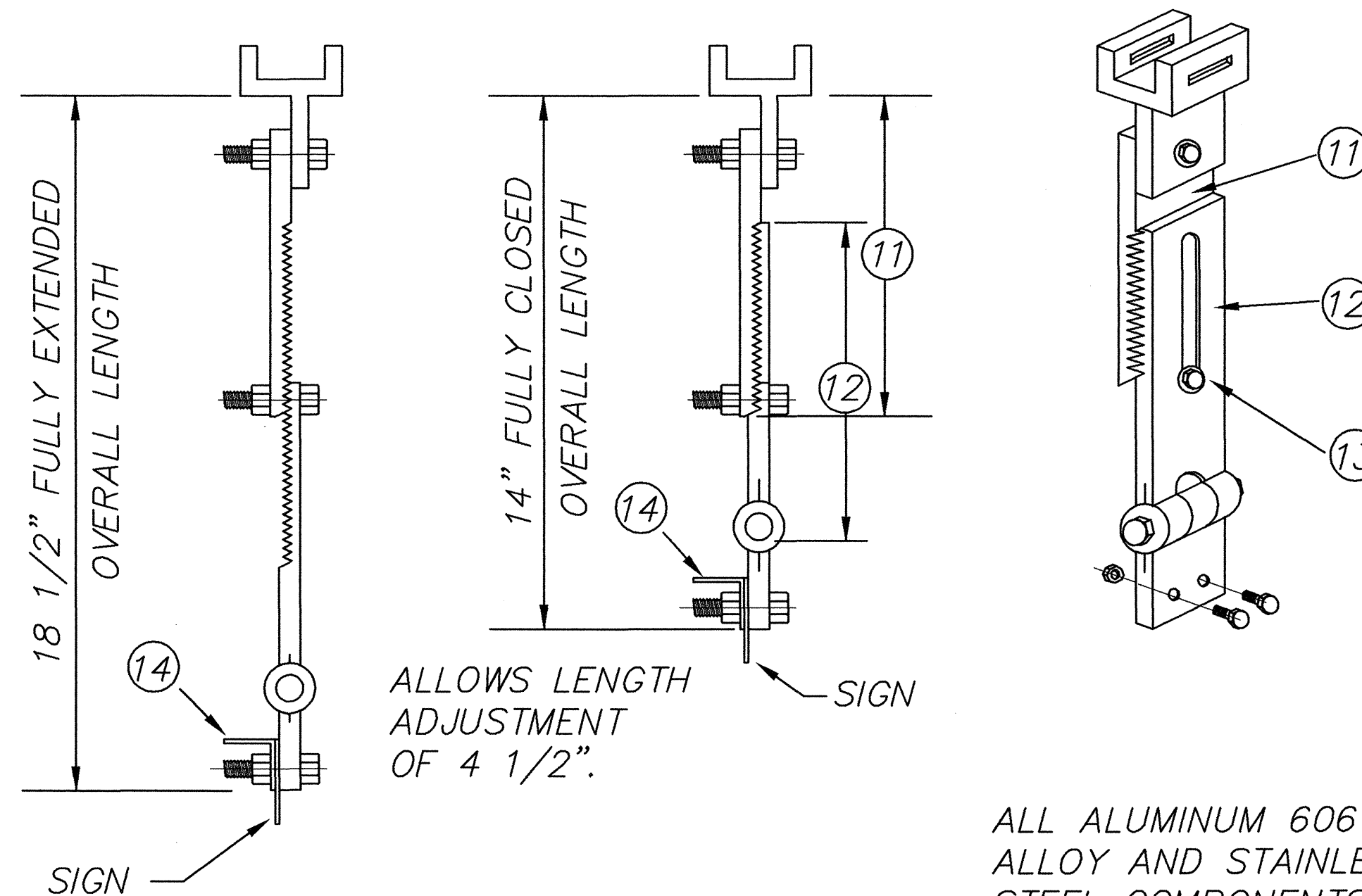
FIXED LENGTH NON-ADJUSTABLE SWING SIGN BRACKET

- ① PIVOTAL UPPER BRACKET.
- ② 1 5/8" x 1/4" SLOT FOR DOUBLE STRAPPING TO ELECTROLIER MAST ARM. (M2G-34S(HD) . 03 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 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 1/2" CENTERS PROVIDE POSITIVE LOCK SIGN MOUNTING TO BRACKET.

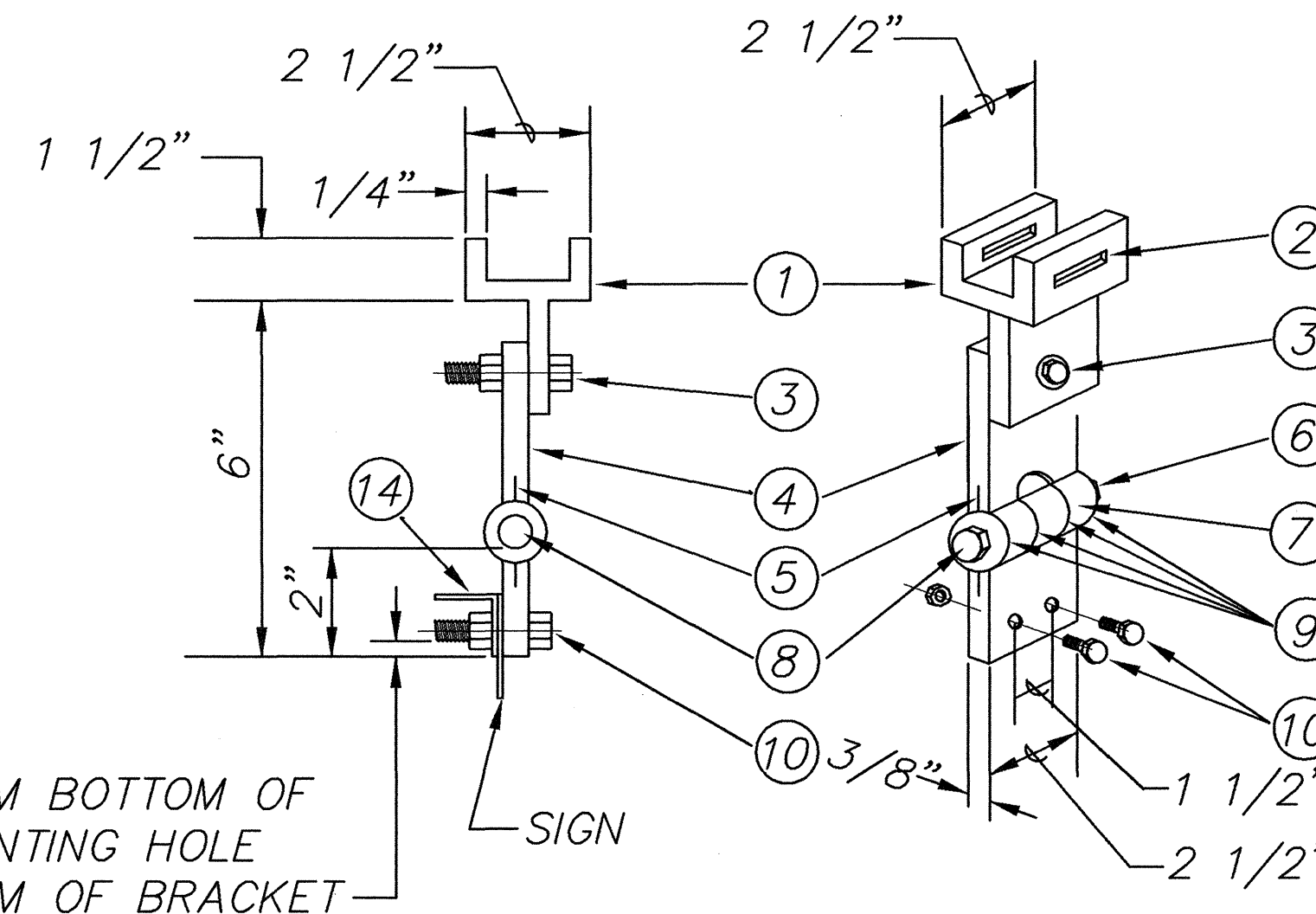
ADJUSTABLE LENGTH SWING SIGN BRACKET

- ⑪ 8 1/2" 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 1/4" x 1 1/4" x 1/8" ALUMINUM ANGLE.

NOTE: DIMENSIONS MAY VARY SLIGHTLY.

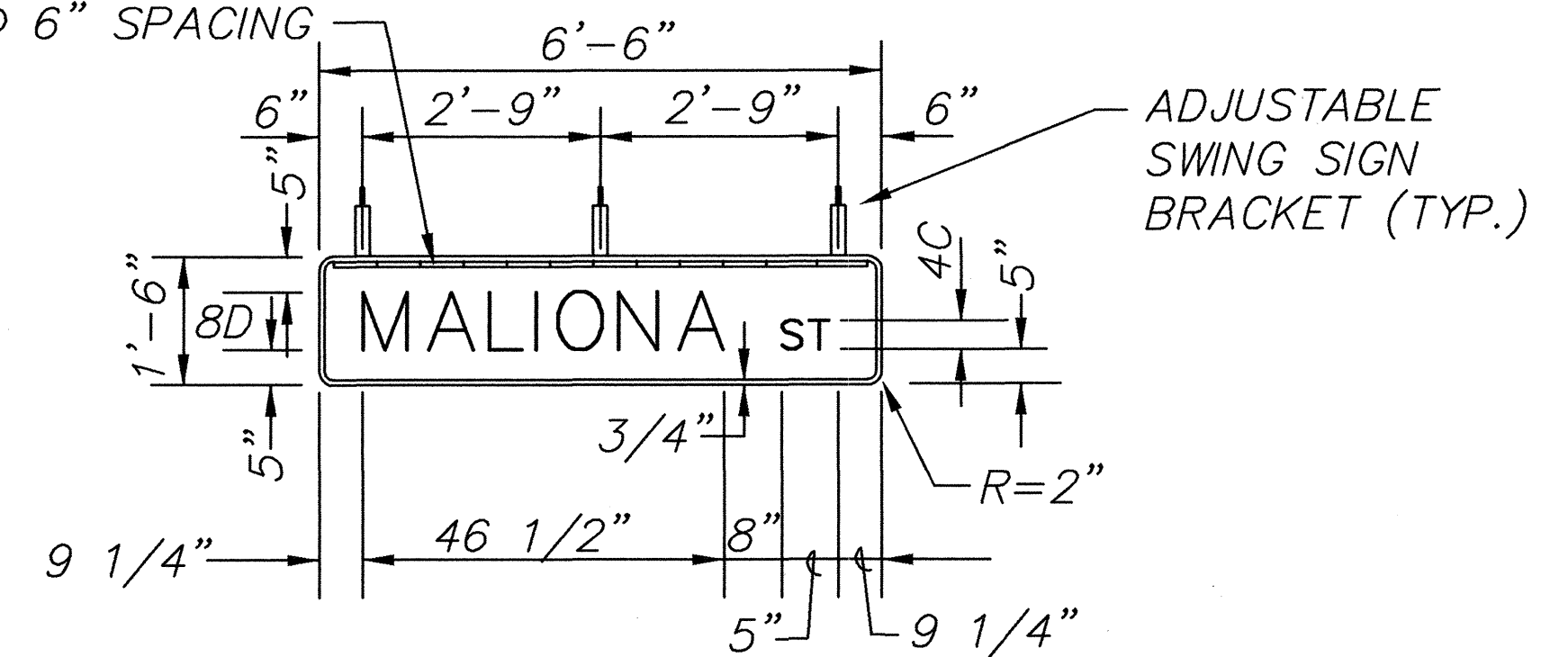


ADJUSTABLE LENGTH
SWING SIGN BRACKET
NOT TO SCALE



FIXED LENGTH NON-ADJUSTABLE
SWING SIGN BRACKET
NOT TO SCALE

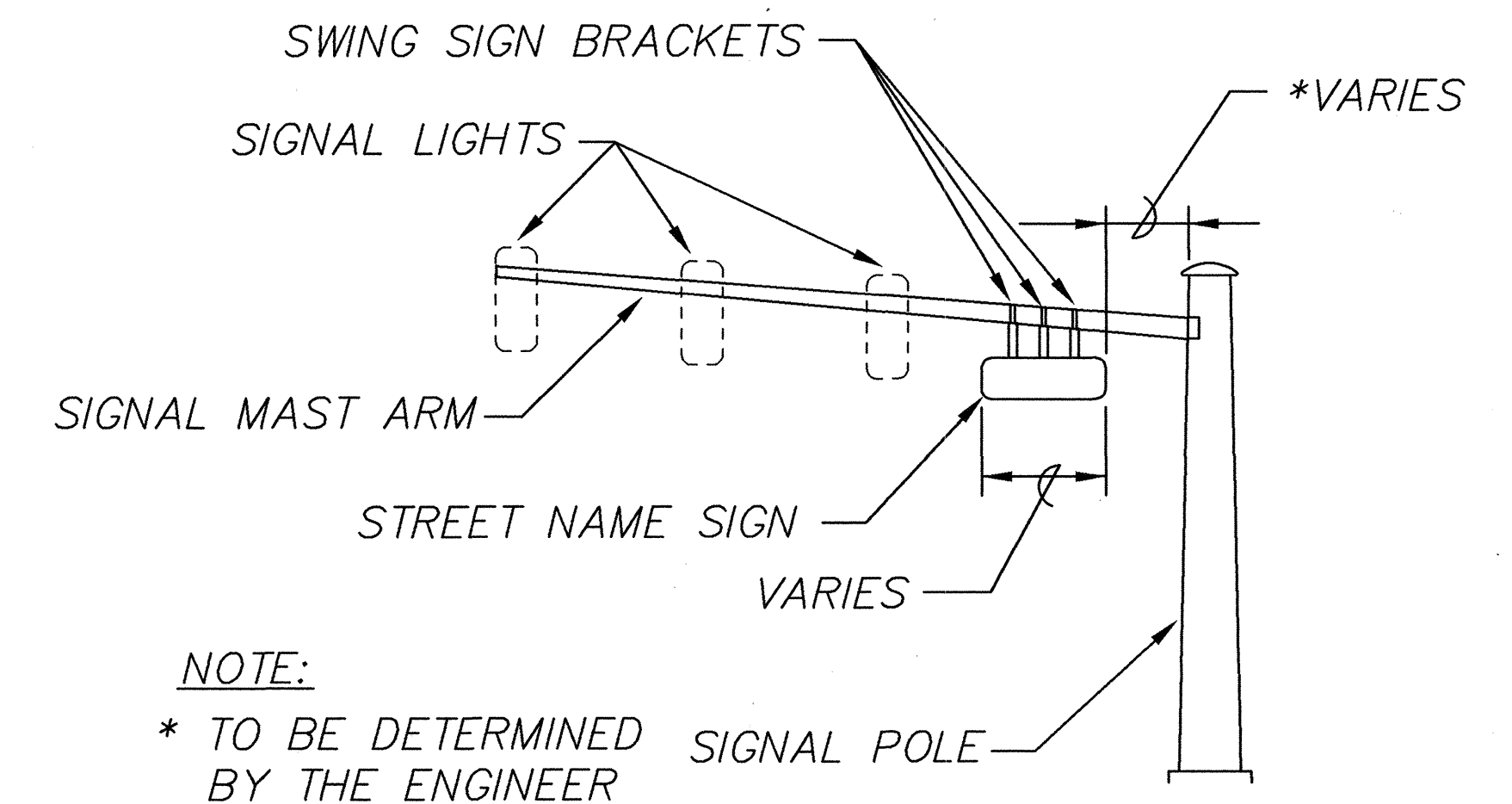
ALUMINUM ANGLE SECURED
TO BACK OF SIGN W/POP
RIVETS @ 6" SPACING



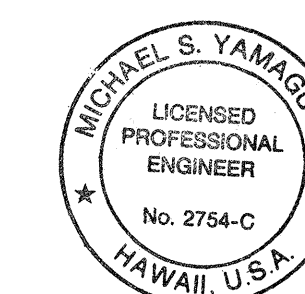
COLORS:
LEGEND: WHITE (REFL.)
BACKGROUND: GREEN (REFL.)

NOTE: PROVIDE THE SAME MESSAGE
ON THE FRONT AND BACK
SIDE OF THE SIGN.

PANEL & SWING BRACKET LAYOUT
FOR STREET NAME SIGN
NOT TO SCALE



STREET NAME SIGN
MOUNTING ON MAST ARM
NOT TO SCALE



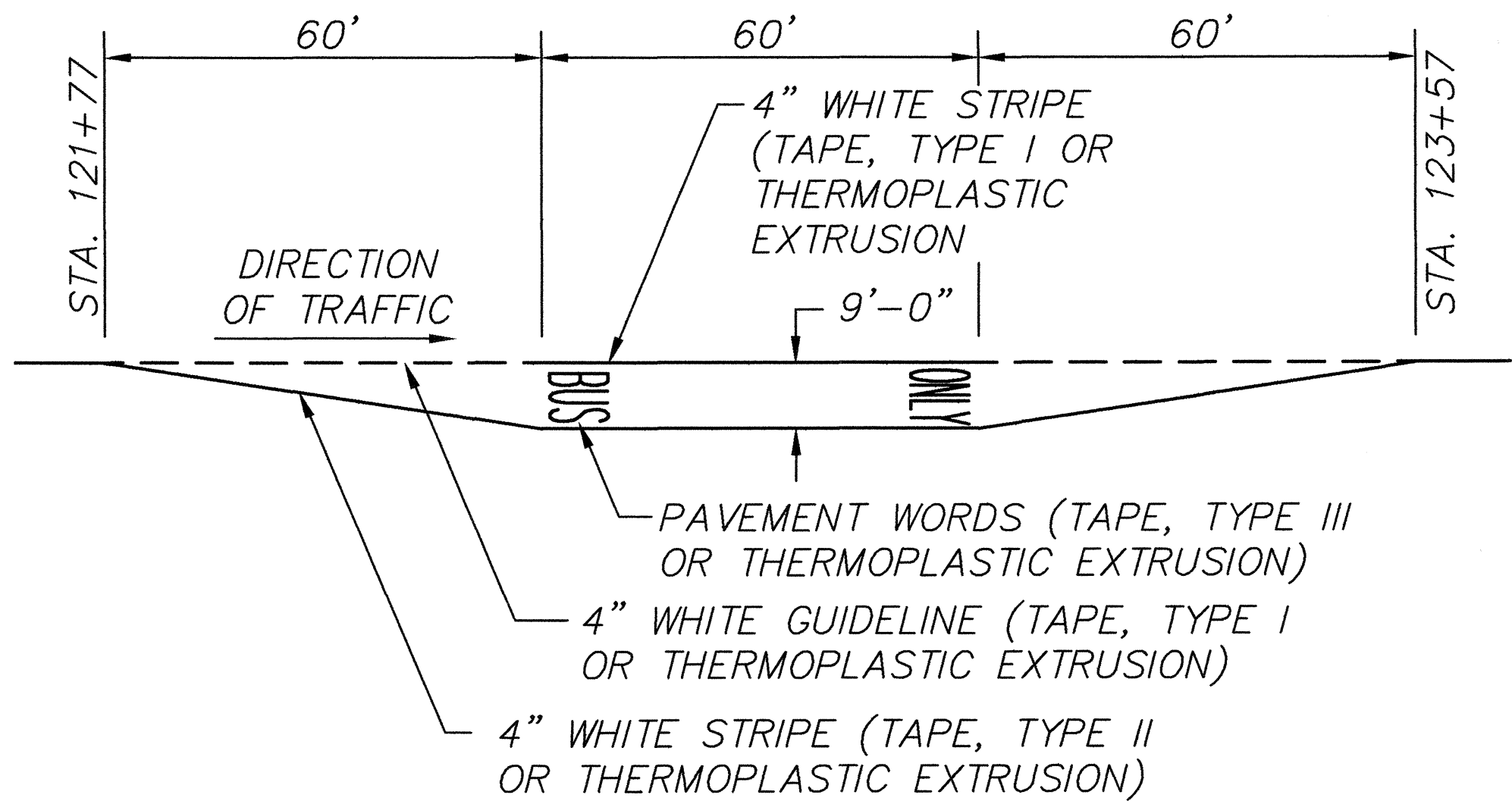
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
By: *Michael S. Yamaguchi*
FUTATA & ASSOCIATES

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION					
SWING SIGN BRACKET DETAIL					
FARRINGTON HIGHWAY					
Intersection Improvements at Maliona St.					
Project No. 93A-03-97					
Scale: As Shown			Date: Apr. 1998		
SHEET No. T3			OF 4 SHEETS		

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-03-97	1998	11	18

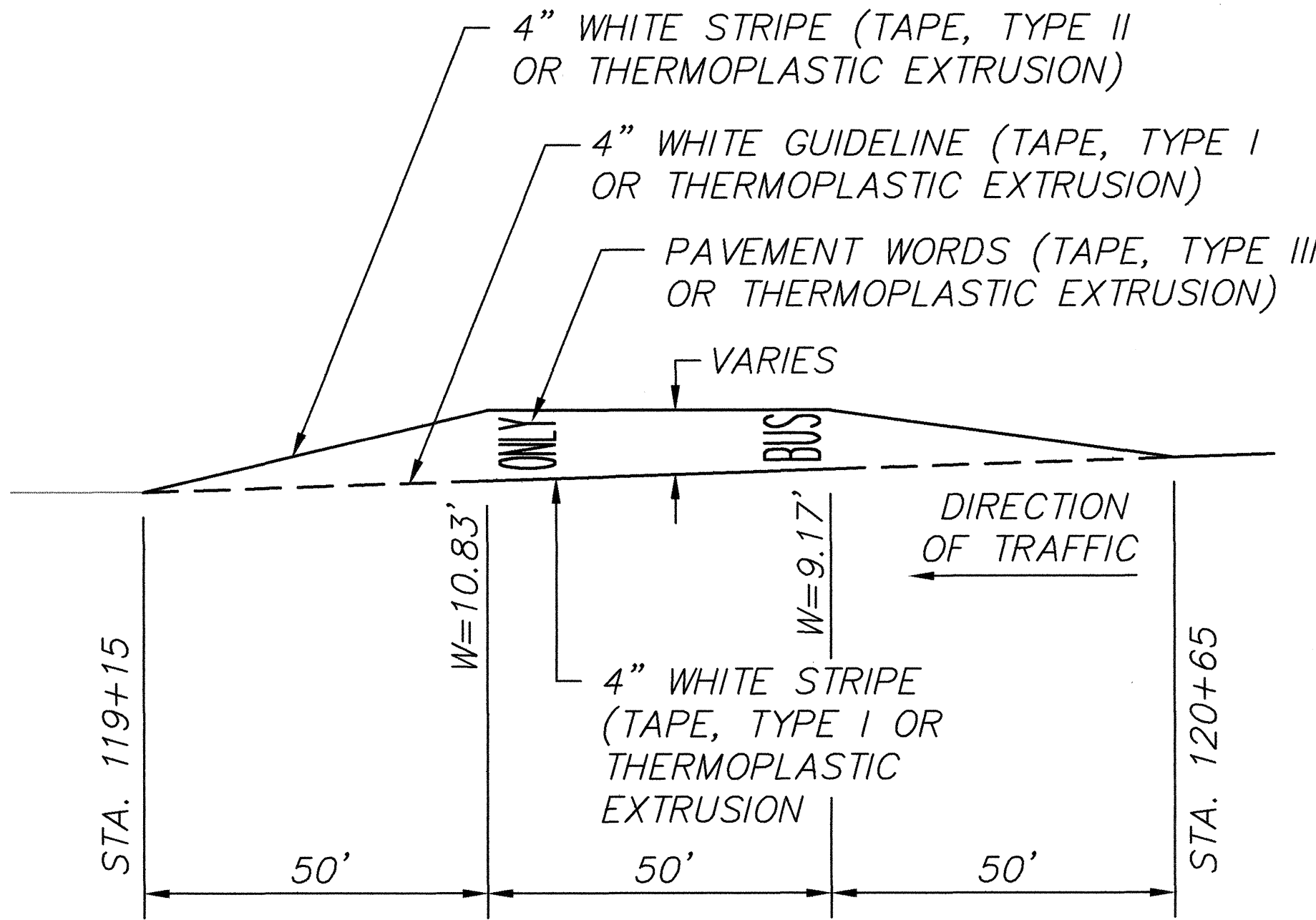
CONSTRUCTION SIGN SUMMARY			
SIGN NO.	LOCATION	MESSAGE	W/POSTS
CG20-2A	Ⓟ STA. 113+93 LT.	END ROAD WORK	1
CW20-1Ad	Ⓟ STA. 113+93 RT.	ROAD WORK AHEAD	1
CW20-1Ad	Ⓟ STA. 130+60 LT.	ROAD WORK AHEAD	1
CG20-2A	Ⓟ STA. 130+60 RT.	END ROAD WORK	1
TOTAL			4

PAVEMENT MARKING SUMMARY	
DESCRIPTION	QUANTITY
PAVEMENT MARKERS	
TYPE A _____	114 EA.
TYPE C _____	70 EA.
TYPE D _____	13 EA.
TYPE H _____	54 EA.
TYPE J _____	20 EA.
TAPE-TYPE I OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	330 L.F.
4-INCH PAVEMENT STRIPE (YELLOW) _____	181 L.F.
8-INCH PAVEMENT STRIPE (WHITE) _____	206 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	77 L.F.
TAPE-TYPE II OR THERMOPLASTIC EXTRUSION	
4-INCH PAVEMENT STRIPE (WHITE) _____	1,164 L.F.
12-INCH PAVEMENT STRIPE (YELLOW) _____	165 L.F.
DOUBLE 4-INCH PAVEMENT STRIPE (YELLOW) _____	868 L.F.
TAPE-TYPE III OR THERMOPLASTIC EXTRUSION	
12-INCH PAVEMENT STRIPE (WHITE) _____	20 L.F.
CROSSWALK MARKINGS _____	4 LANES
PAVEMENT ARROW _____	6 EA.
PAVEMENT WORD _____	4 EA.



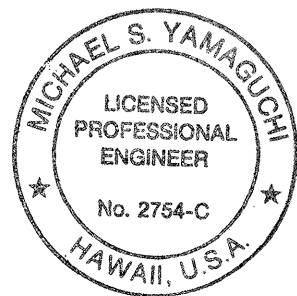
MAKAI BUS TURNOUT STRIPING

SCALE: 1"=20'



MAUKA BUS TURNOUT STRIPING

SCALE: 1"=20'



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
By: *Michael S. Yamaguchi*
Fujita & Associates

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TRAFFIC SUMMARIES
AND DETAILS**

FARRINGTON HIGHWAY
Intersection Improvements at Maliona St.

Project No. 93A-03-97

Scale: As Shown Date: Apr. 1998

SHEET No. T4 OF 4 SHEETS