

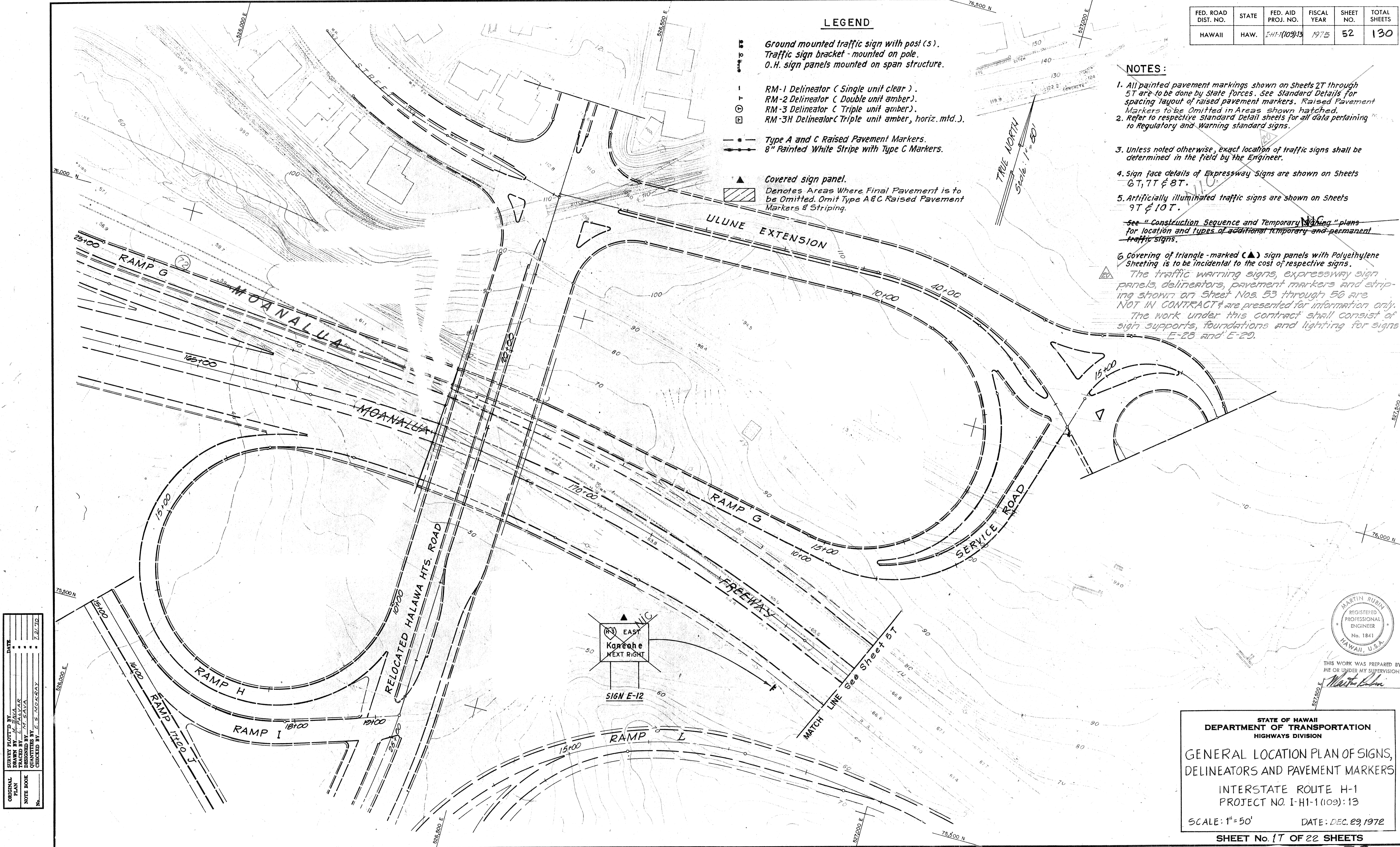
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(109)13      | 1975        | 52        | 130          |

**LEGEND**

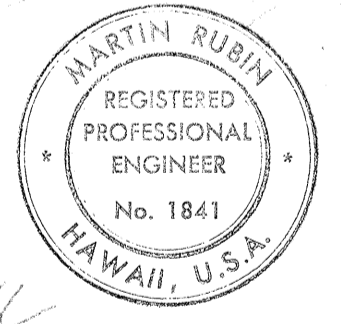
- Ground mounted traffic sign with post (s).  
 Traffic sign bracket - mounted on pole.  
 O.H. sign panels mounted on span structure.
- RM-1 Delineator (Single unit clear).
- RM-2 Delineator (Double unit amber).
- RM-3 Delineator (Triple unit amber).
- RM-3H Delineator (Triple unit amber, horiz. mtd.).
- Type A and C Raised Pavement Markers.
- 8" Painted White Stripe with Type C Markers.
- Covered sign panel.  
 Denotes Areas Where Final Pavement is to be Omitted. Omit Type A&C Raised Pavement Markers & Striping.

**NOTES:**

1. All painted pavement markings shown on Sheets 2T through 5T are to be done by State forces. See Standard Details for spacing layout of raised pavement markers. Raised Pavement Markers to be Omitted in Areas shown hatched.
2. Refer to respective standard Detail sheets for all data pertaining to Regulatory and Warning standard signs.
3. Unless noted otherwise, exact location of traffic signs shall be determined in the field by the Engineer.
4. Sign face details of Expressway Signs are shown on Sheets 6T, 7T & 8T.
5. Artificially illuminated traffic signs are shown on Sheets 9T & 10T.
6. See "Construction Sequence and Temporary Signing" plans for location and types of additional temporary and permanent traffic signs.
7. Covering of triangle-marked (▲) sign panels with Polyethylene Sheeting is to be incidental to the cost of respective signs.
8. The traffic warning signs, expressway sign panels, delineators, pavement markers and striping shown on Sheet Nos. 53 through 56 are NOT IN CONTRACT and are presented for information only. The work under this contract shall consist of sign supports, foundations and lighting for signs E-18 and E-20.



|               |            |
|---------------|------------|
| DATE          | DATE       |
| DESIGNED BY   | CHECKED BY |
| DRAWN BY      | TRACED BY  |
| ORIGINAL PLAN | NOTE BOOK  |
| No.           | No.        |

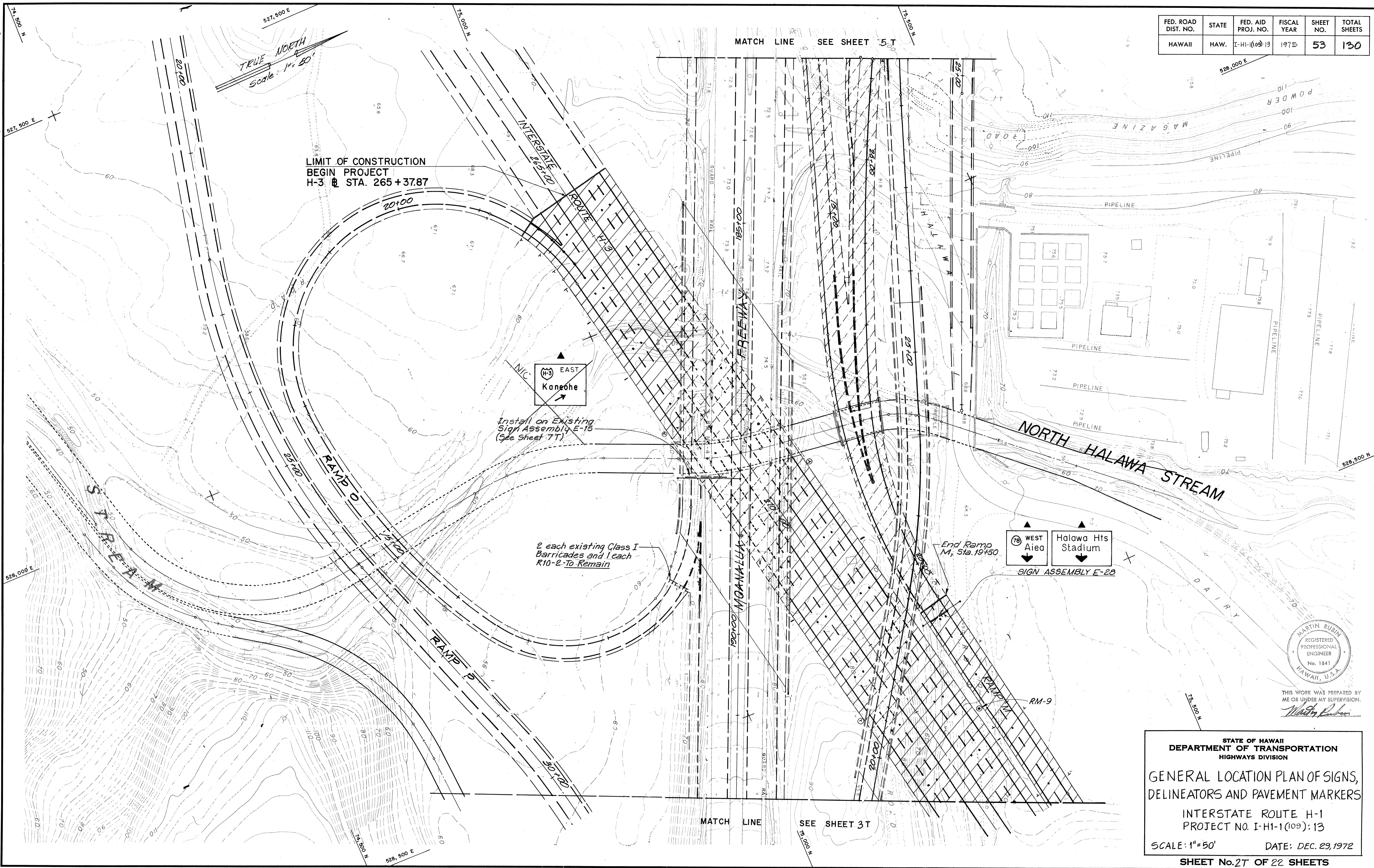


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
 Martin Rubin

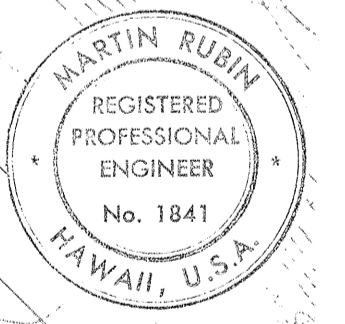
**STATE OF HAWAII**  
**DEPARTMENT OF TRANSPORTATION**  
**HIGHWAYS DIVISION**

**GENERAL LOCATION PLAN OF SIGNS, DELINEATORS AND PAVEMENT MARKERS**  
**INTERSTATE ROUTE H-1**  
**PROJECT NO. I-HI-1(109)13**  
**SCALE: 1"=50'      DATE: DEC. 29, 1972**  
**SHEET No. 17 OF 22 SHEETS**

|                     |       |                    |             |           |              |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII              | HAW.  | I-HI-1(109):13     | 1975        | 53        | 130          |



|                   |        |
|-------------------|--------|
| ORIGINAL PLAN     | DATE   |
| SURVEY PLATTED BY |        |
| DRAWN BY          |        |
| TRACED BY         |        |
| QUANTITIES BY     |        |
| CHECKED BY        |        |
| No.               | 7.1.72 |



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*Martin Rubin*

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

GENERAL LOCATION PLAN OF SIGNS,  
 DELINEATORS AND PAVEMENT MARKERS

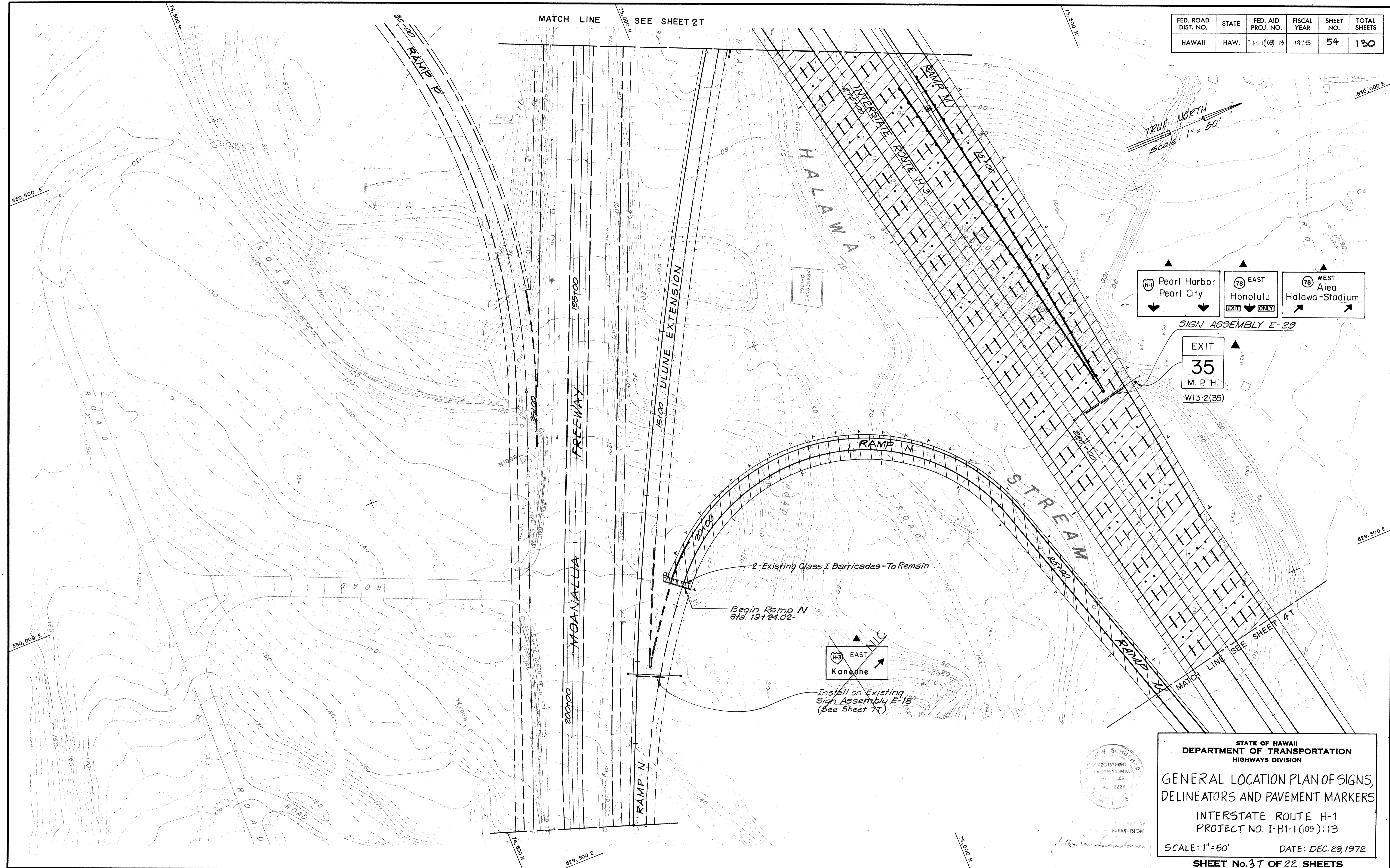
INTERSTATE ROUTE H-1  
 PROJECT NO. I-HI-1(109):13

SCALE: 1"=50'      DATE: DEC. 29, 1972

SHEET No. 27 OF 22 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(09):13      | 1975        | 54        | 130          |

| ORIGINAL PLAN              | DATE    |
|----------------------------|---------|
| SURVEY PLOTTED BY: M. SAWA | 7.21.72 |
| DRAWN BY: M. SAWA          |         |
| DESIGNED BY: M. SAWA       |         |
| QUANTITIES BY: M. SAWA     |         |
| CHECKED BY: E. S. MURPHY   |         |



TRUE NORTH  
Scale: 1" = 50'

|                            |                  |                                |
|----------------------------|------------------|--------------------------------|
| Pearl Harbor<br>Pearl City | EAST<br>Honolulu | WEST<br>Aiea<br>Halawa-Stadium |
|----------------------------|------------------|--------------------------------|

SIGN ASSEMBLY E-29

EXIT  
**35**  
M. P. H.  
W13-2(35)

EAST  
Kaneohe

Begin Ramp N  
Sta. 19+24.02

2-Existing Class I Barricades -To Remain

Install on Existing  
Sign Assembly E-18  
(See Sheet 7T)



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

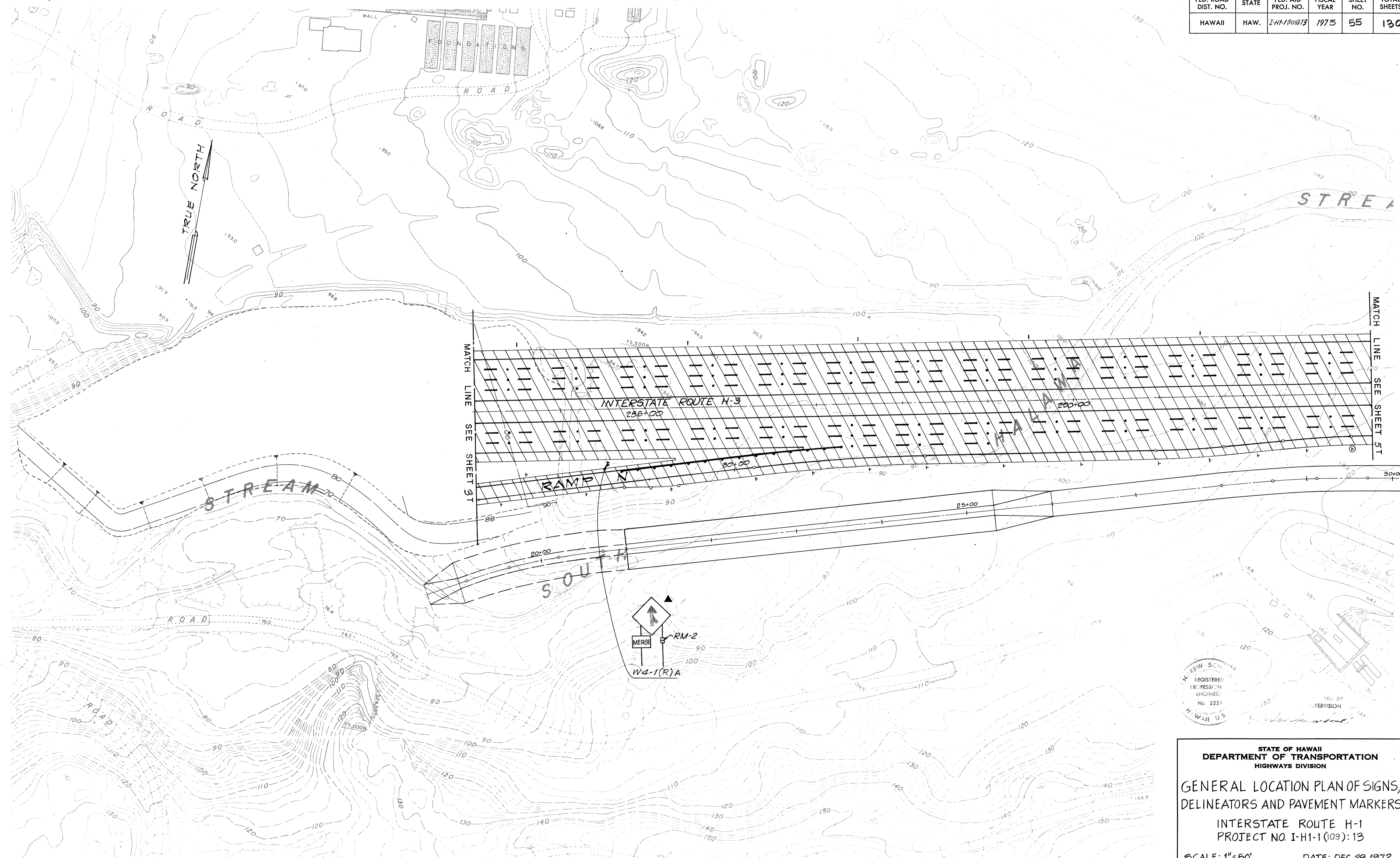
GENERAL LOCATION PLAN OF SIGNS,  
DELINEATORS AND PAVEMENT MARKERS

INTERSTATE ROUTE H-1  
PROJECT NO. I-HI-1(09):13

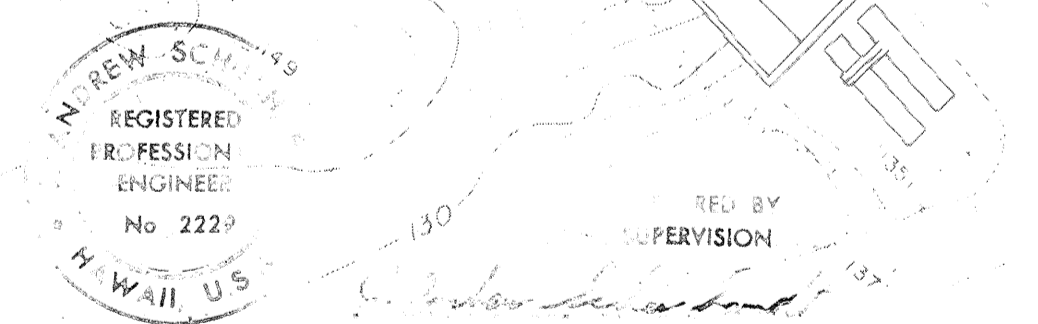
SCALE: 1"=50'      DATE: DEC. 29, 1972

SHEET No. 3T OF 22 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-H-1(109)13       | 1975        | 55        | 130          |

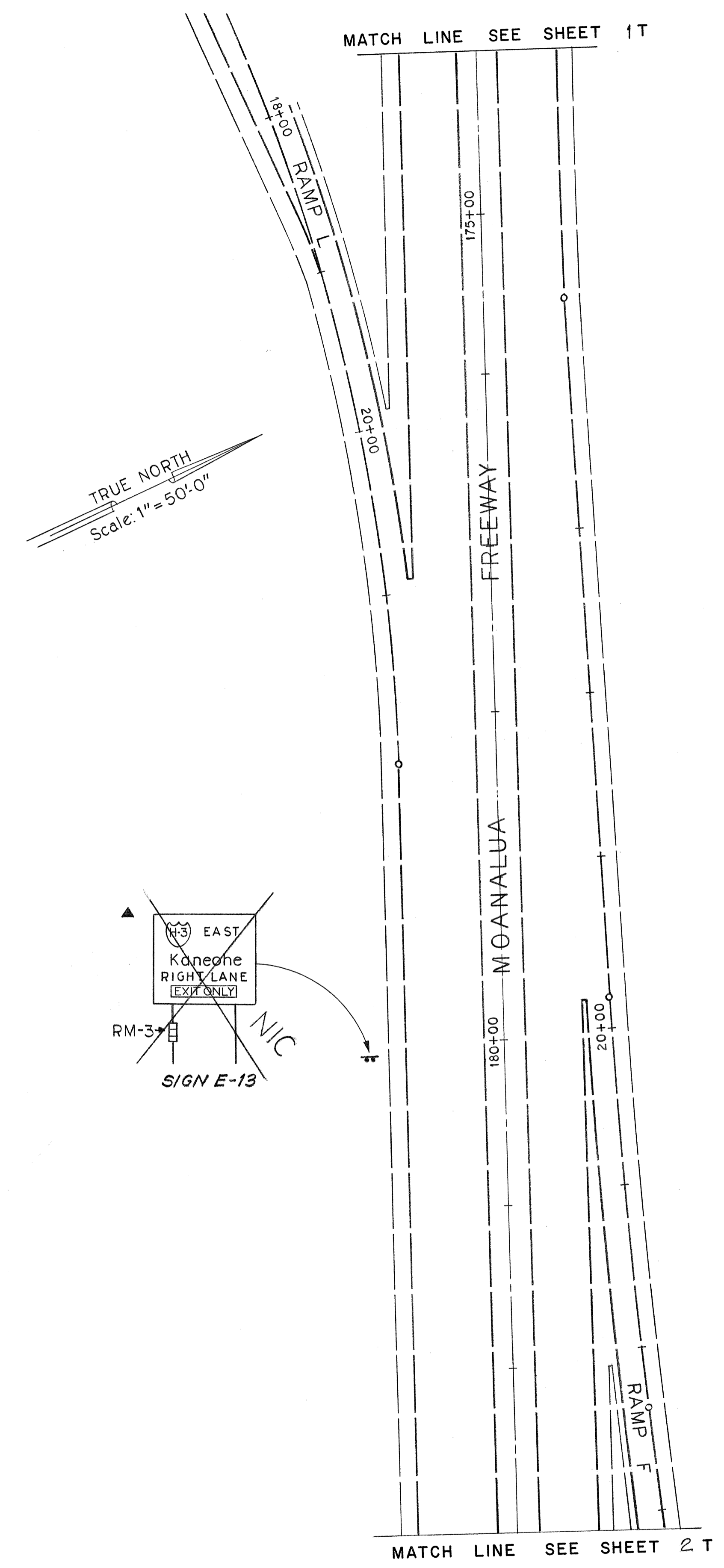
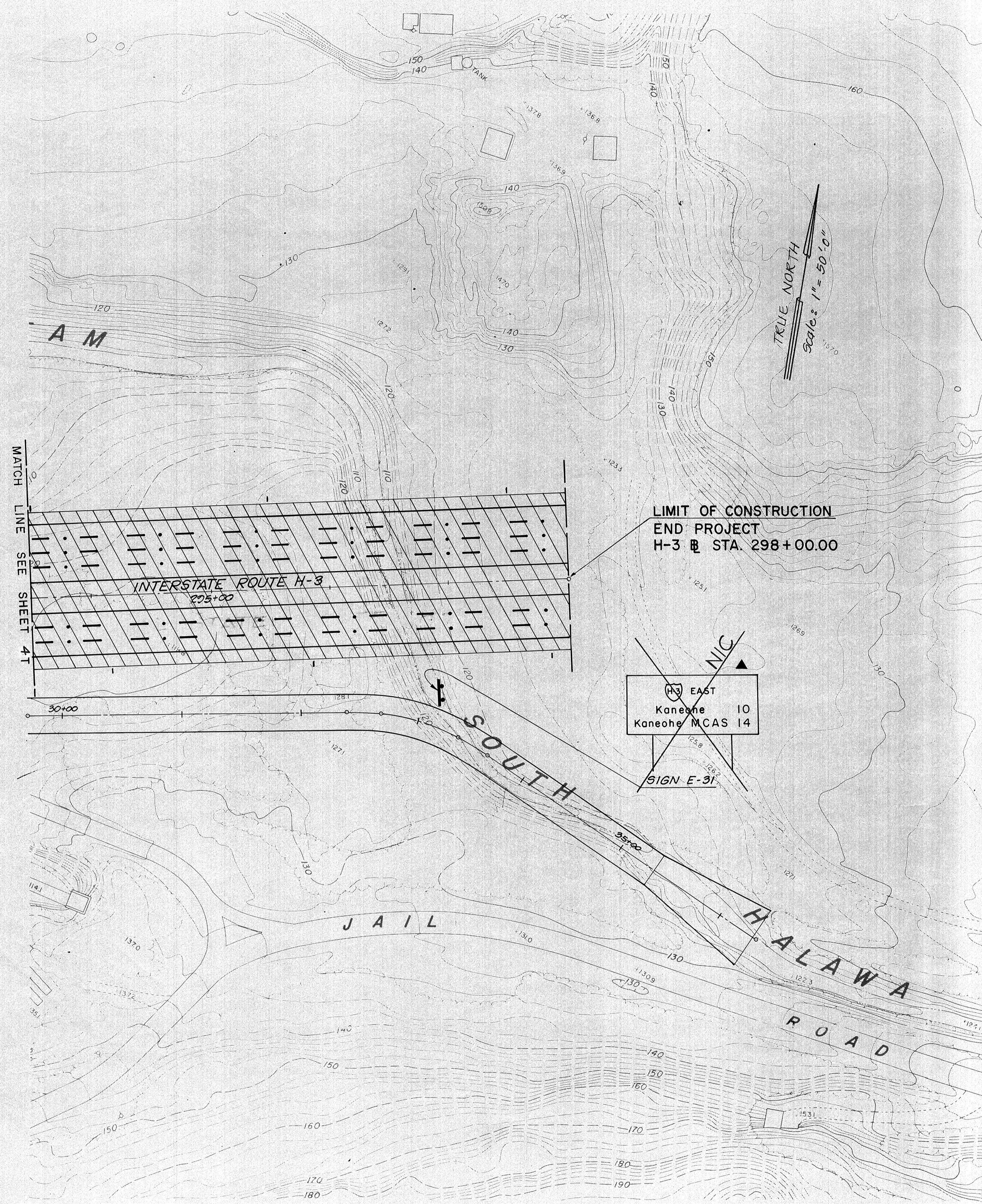


SURVEY PLOTTED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY M. SALVA  
 CHECKED BY E. MEKLEY  
 NOTE BOOK No. 9370



STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
 GENERAL LOCATION PLAN OF SIGNS,  
 DELINEATORS AND PAVEMENT MARKERS  
 INTERSTATE ROUTE H-1  
 PROJECT NO. I-H-1(109):13  
 SCALE: 1"=50' DATE: DEC. 29, 1972  
 SHEET No. 47 OF 22 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | E-H-1(109):13      | 1975        | 56        | 130          |

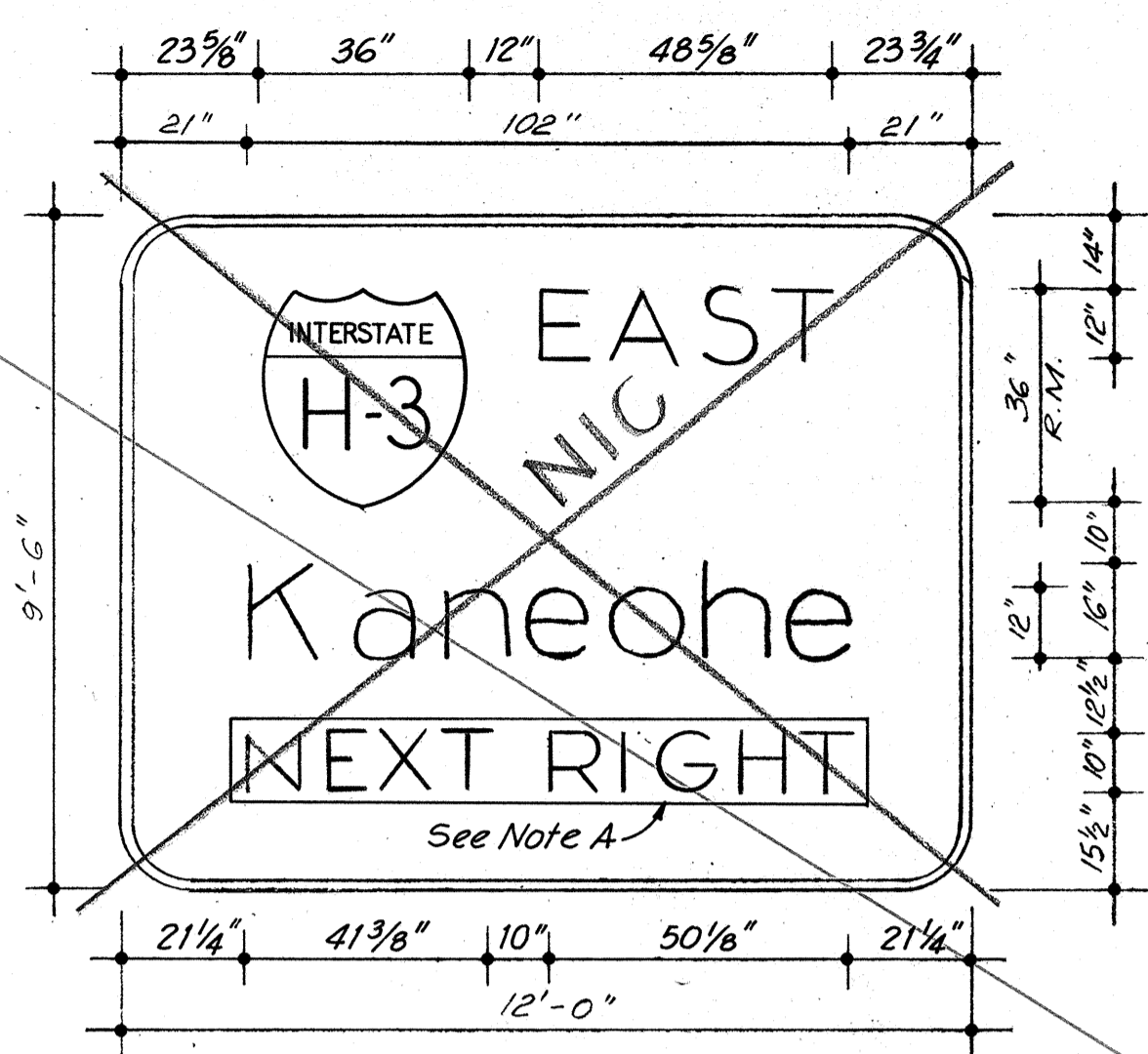


|                   |        |
|-------------------|--------|
| DATE              | 3.3.72 |
| SURVEY PLOTTED BY | SAVA   |
| TRACED BY         | SAVA   |
| DESIGNED BY       | SAVA   |
| QUANTITIES BY     | SAVA   |
| CHECKED BY        | SAVA   |

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*Martin Rubin*

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**GENERAL LOCATION PLAN OF SIGNS,  
 DELINEATORS & PAVEMENT MARKERS**  
 INTERSTATE ROUTE H-1  
 PROJECT NO. 1-H1-1(109):13  
 SCALE: 1"=50'      DATE: DEC. 29, 1972  
 SHEET No. 57 OF 22 SHEETS

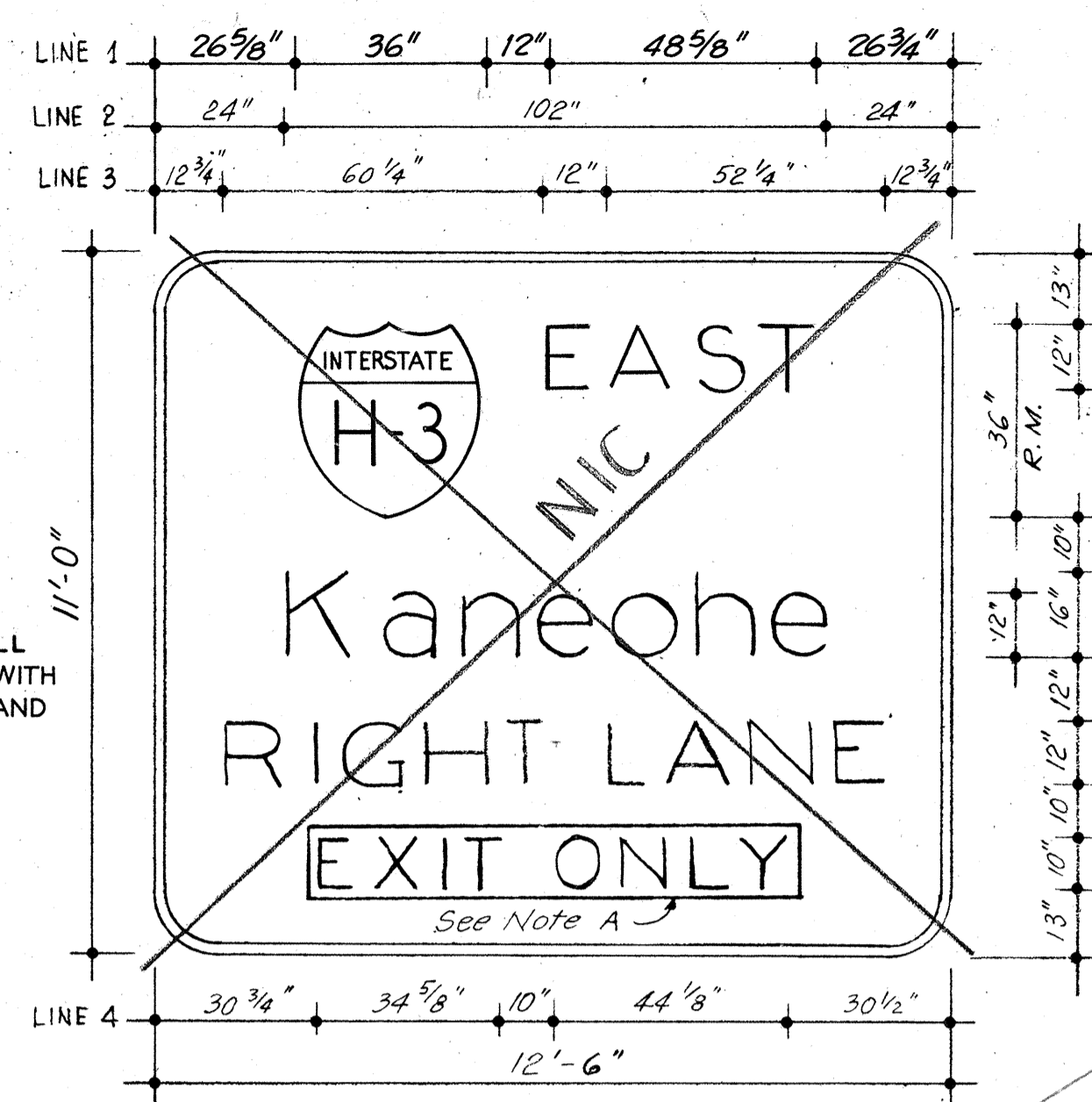
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | IHI-1(109)13       | 1975        | 57        | 130          |



**SIGN E-12**

MOANALUA FREEWAY INBOUND @ STA. 173+35  
SCALE: 3/8" = 1'-0"

NOTE A: OVERLAY PANEL SHOWN SHALL BE OF 0.040 IN. THICK SHEET ALUMINUM WITH YELLOW REFLECTORIZED BACKGROUND, AND BLACK CHARACTERS.

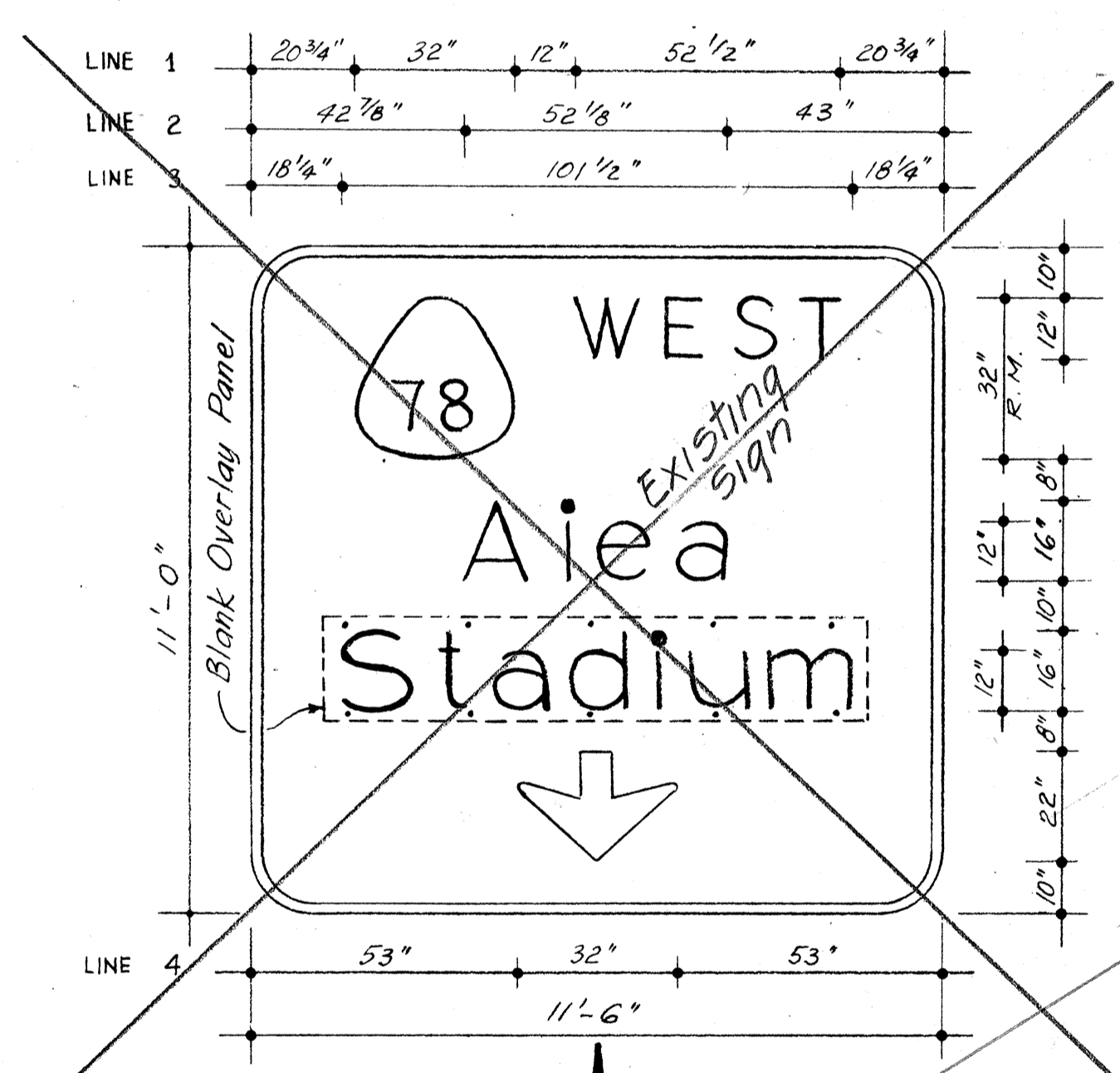


**SIGN E-13**

MOANALUA FREEWAY INBOUND @ STA. 180+10  
SCALE: 3/8" = 1'-0"

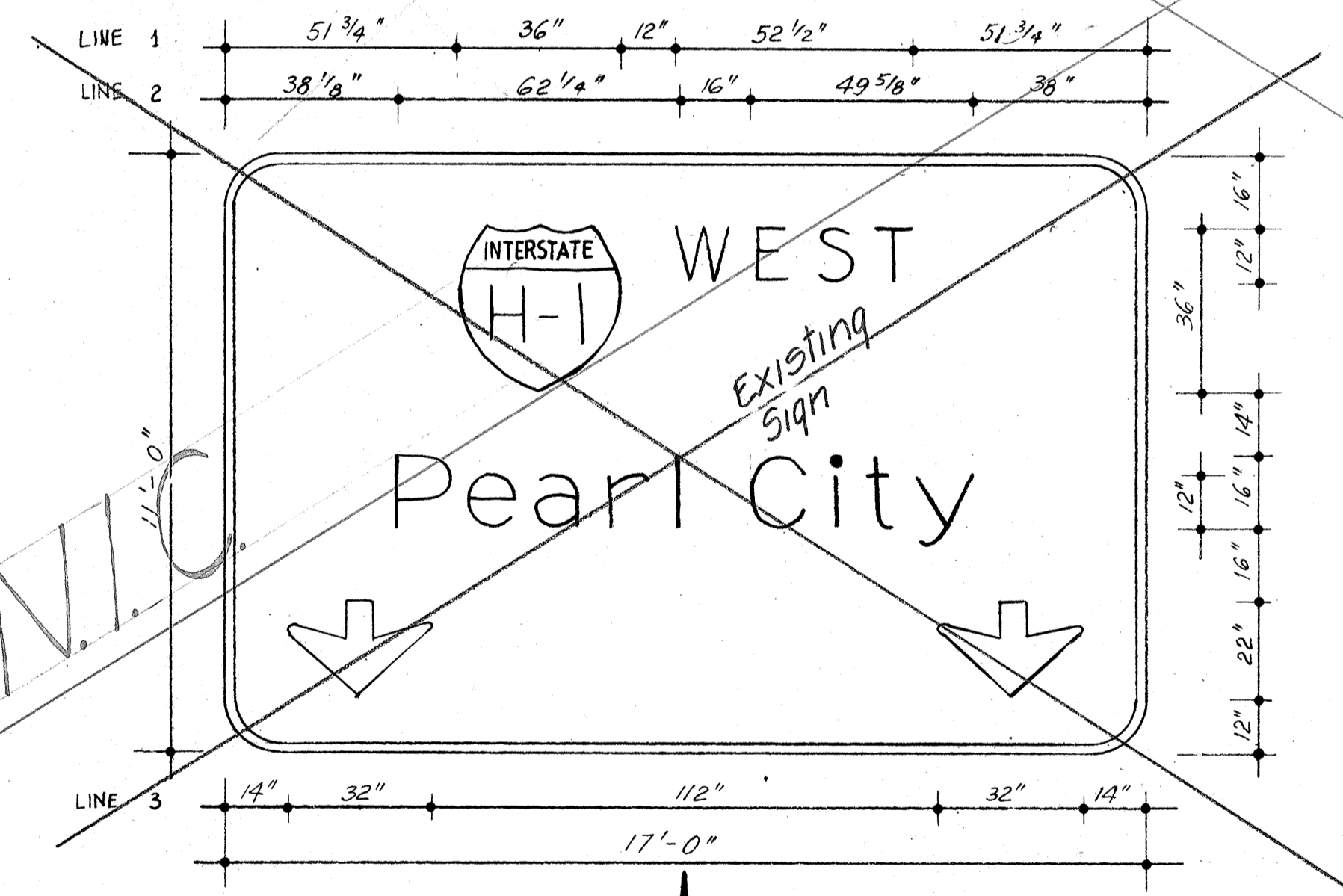
NOTES

- FOR ADDITIONAL NOTES PERTAINING TO EXPRESSWAY SIGNS, SEE SHEET 9T.
- SUMMARY TABLES FOR ALL EXPRESSWAY SIGNS ARE LOCATED ON SHEET 10T.
- OUTLINES OF OVERLAY PANELS MASKING TEMPORARILY CERTAIN PORTIONS OF SIGN PANEL MESSAGE ARE SHOWN IN BROKEN LINES.
- LAYOUT OF OVERLAY PANELS WITH MESSAGES ARE SHOWN ON SHEETS 8T, NIC.
- SUMMARY TABLES FOR ALL BLANK OVERLAY PANELS AND OVERLAY PANELS WITH MESSAGES ARE SHOWN ON SHEET 10T.
- THE WORDS "EXIT.....ONLY" OR "NEXT RIGHT" SHALL BE BLACK ON REFLECTORIZED YELLOW BACKGROUND PANELS, 16" HIGH.



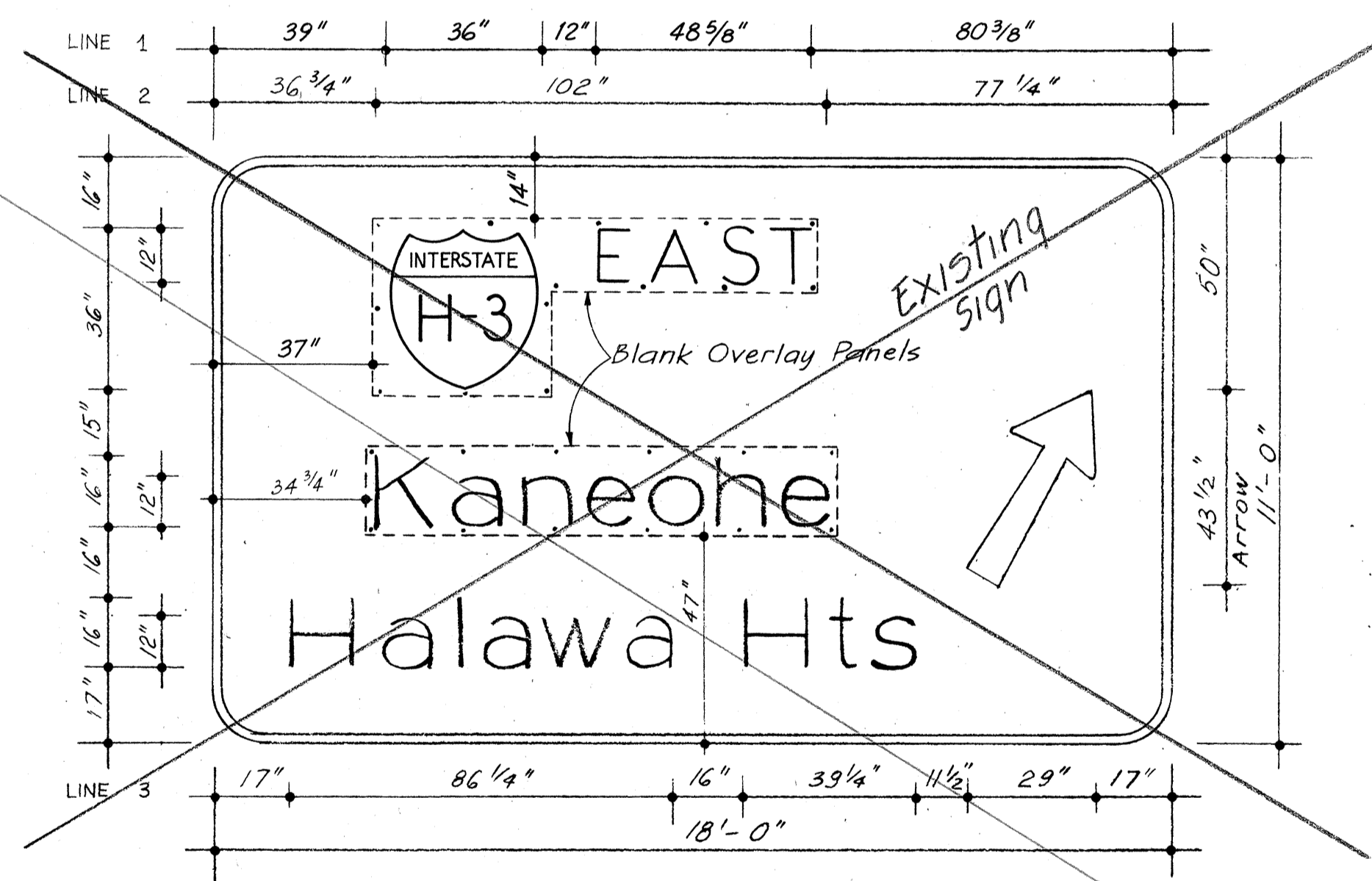
**SIGN ASSEMBLY E-14** NIC

MOANALUA FREEWAY OUTBOUND @ STA. 174+05  
SCALE: 3/8" = 1'-0"



**SIGN ASSEMBLY E-17** NIC

MOANALUA FREEWAY OUTBOUND @ STA. 208+00  
SCALE: 3/8" = 1'-0"



|                   |         |
|-------------------|---------|
| DATE              | 7-21-72 |
| SURVEY PLATTED BY |         |
| DRAWN BY          |         |
| DESIGNED BY       |         |
| NOTED BY          |         |
| CHECKED BY        |         |
| NO.               |         |



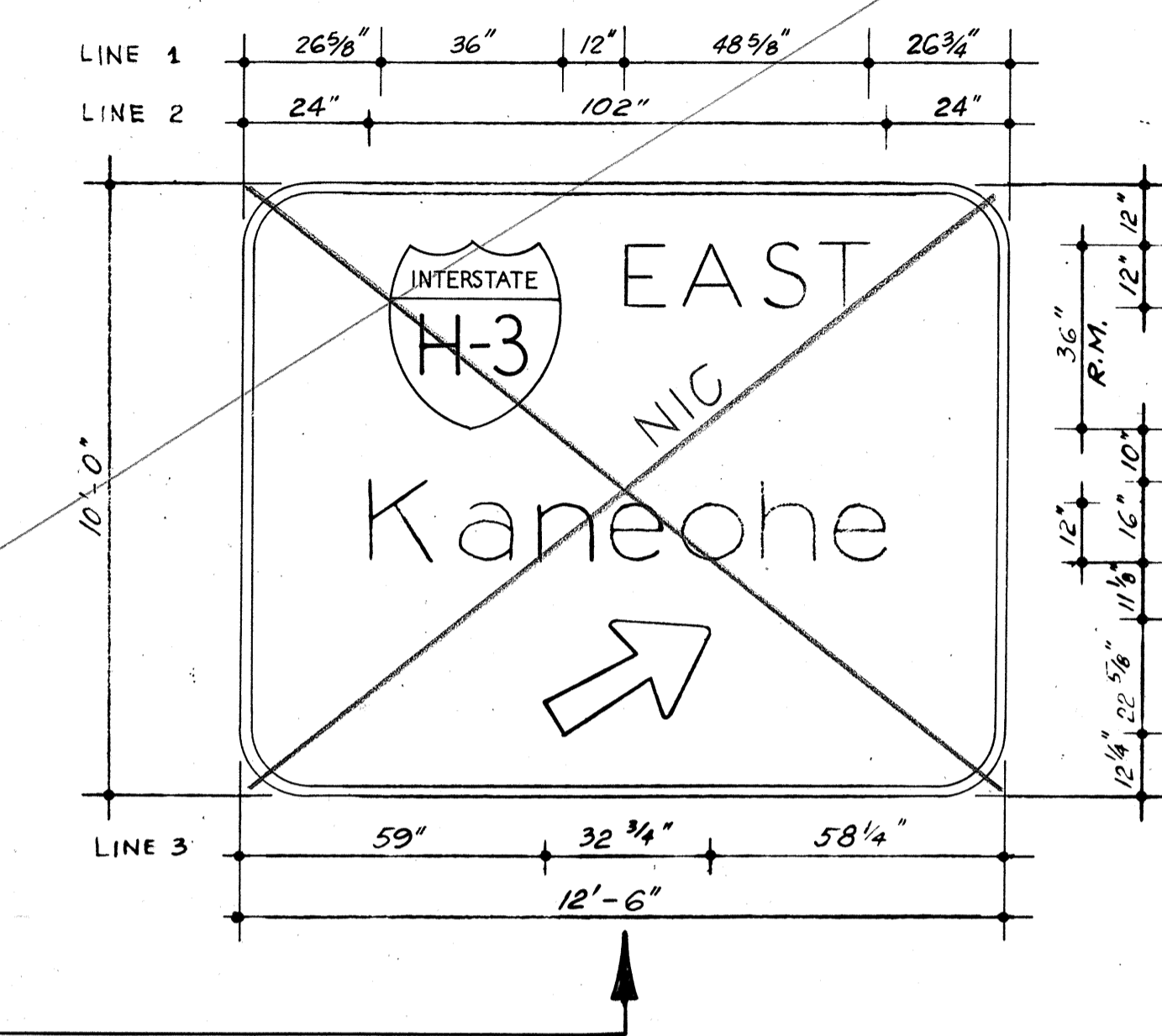
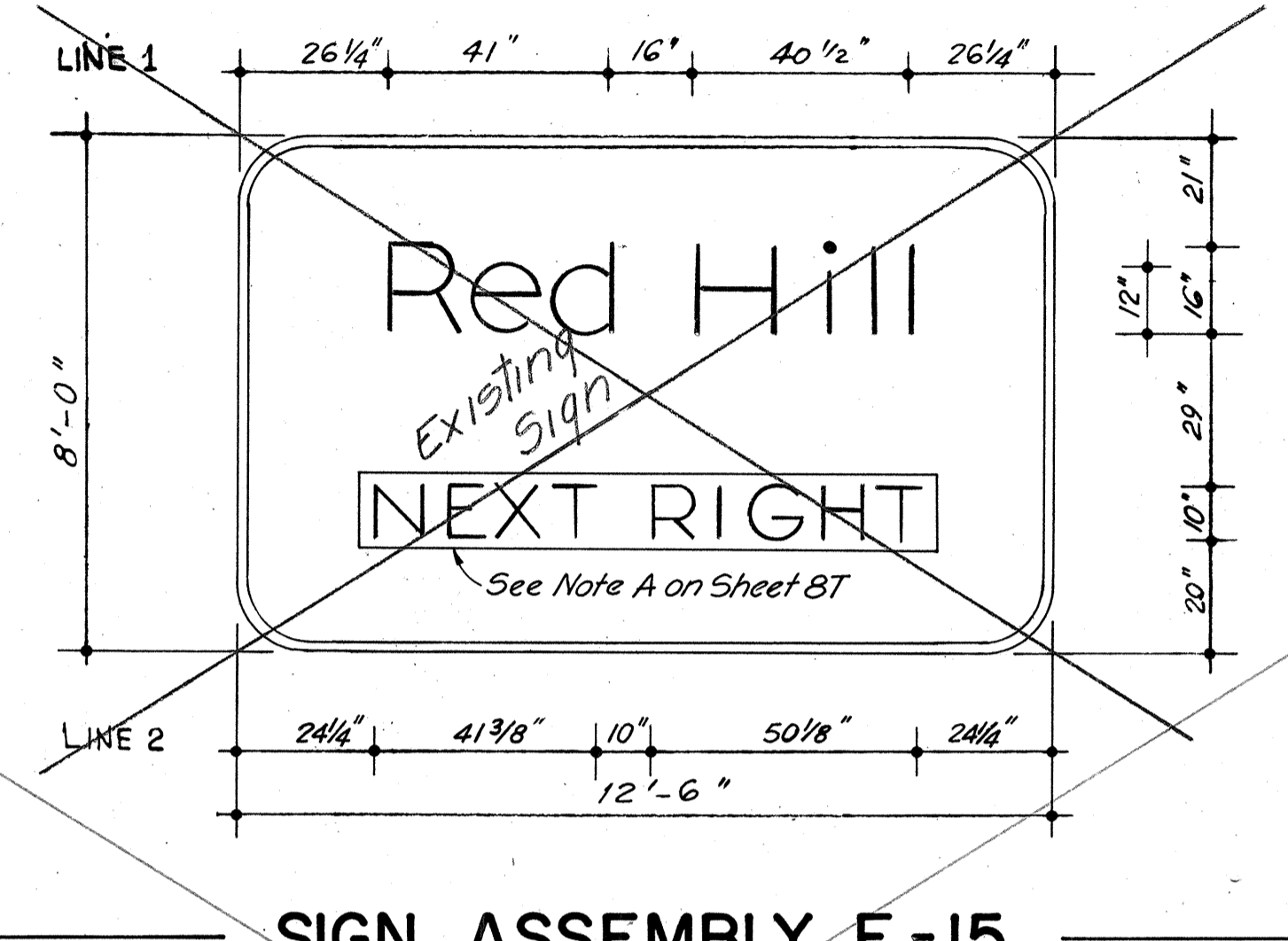
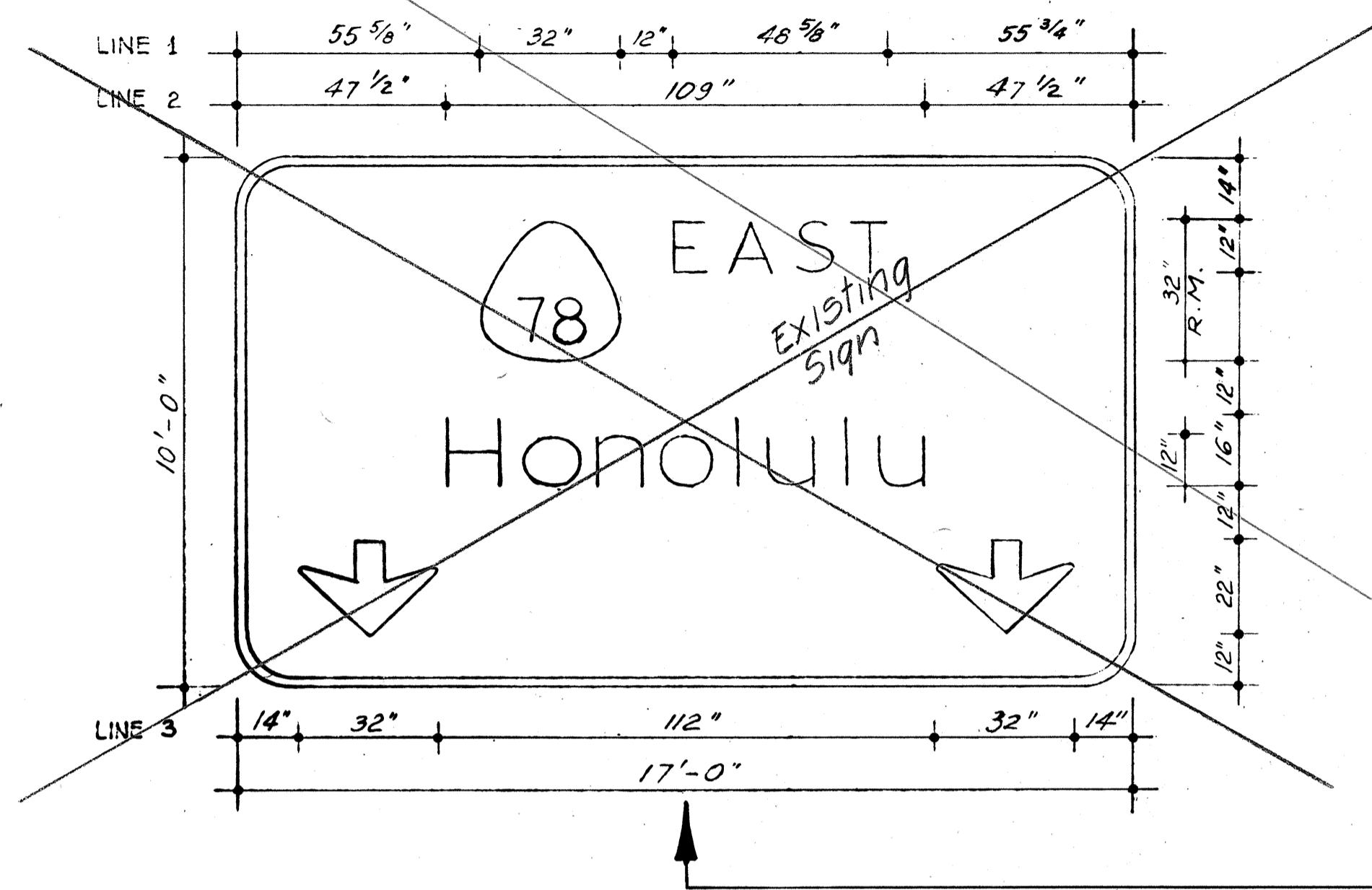
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

SIGN FACE DETAILS

INTERSTATE ROUTE H-1  
PROJECT NO. I-HI-1(109)13

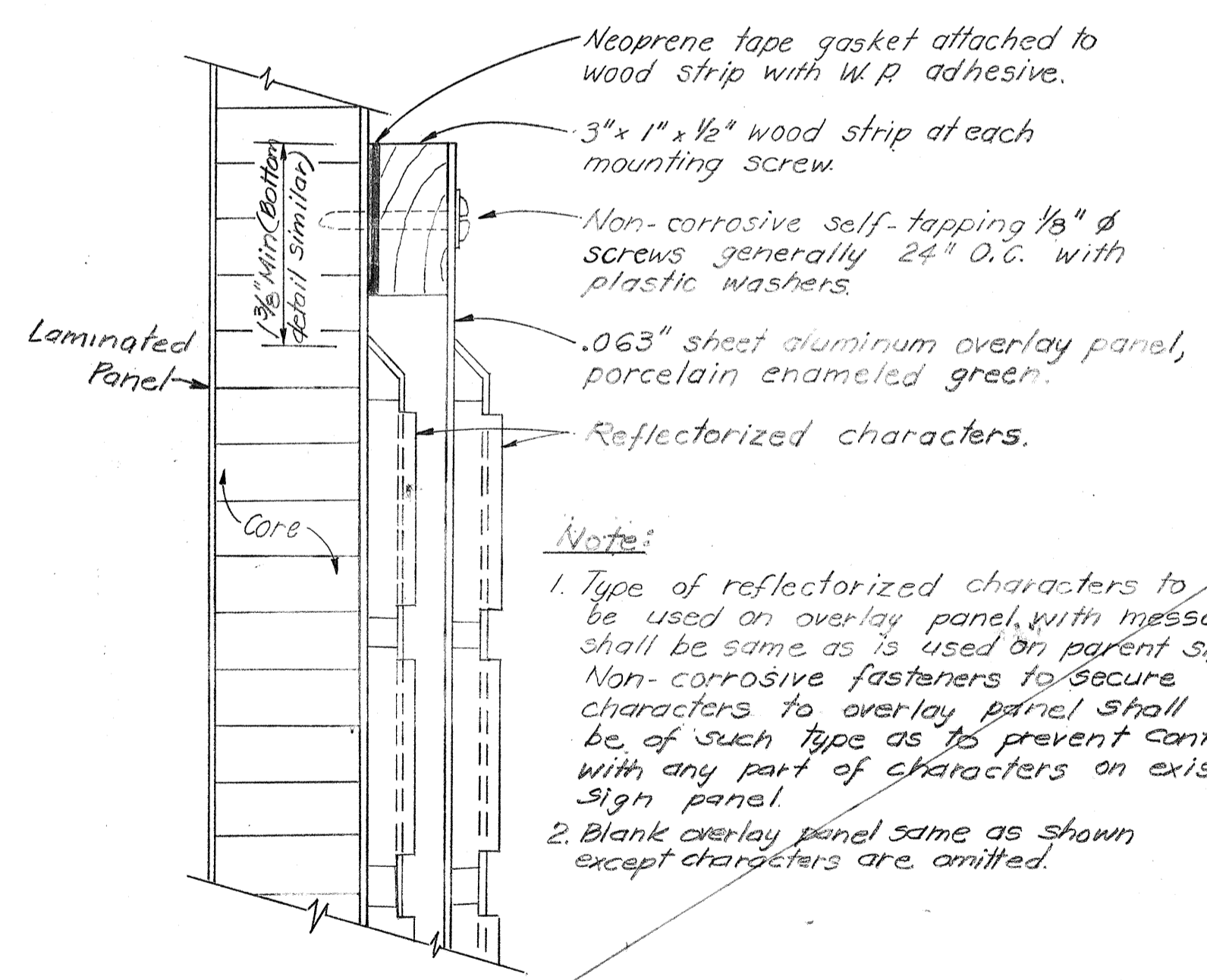
SCALE: AS SHOWN DATE: DEC. 29, 1972

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(109):13     | 1975        | 58        | 130          |

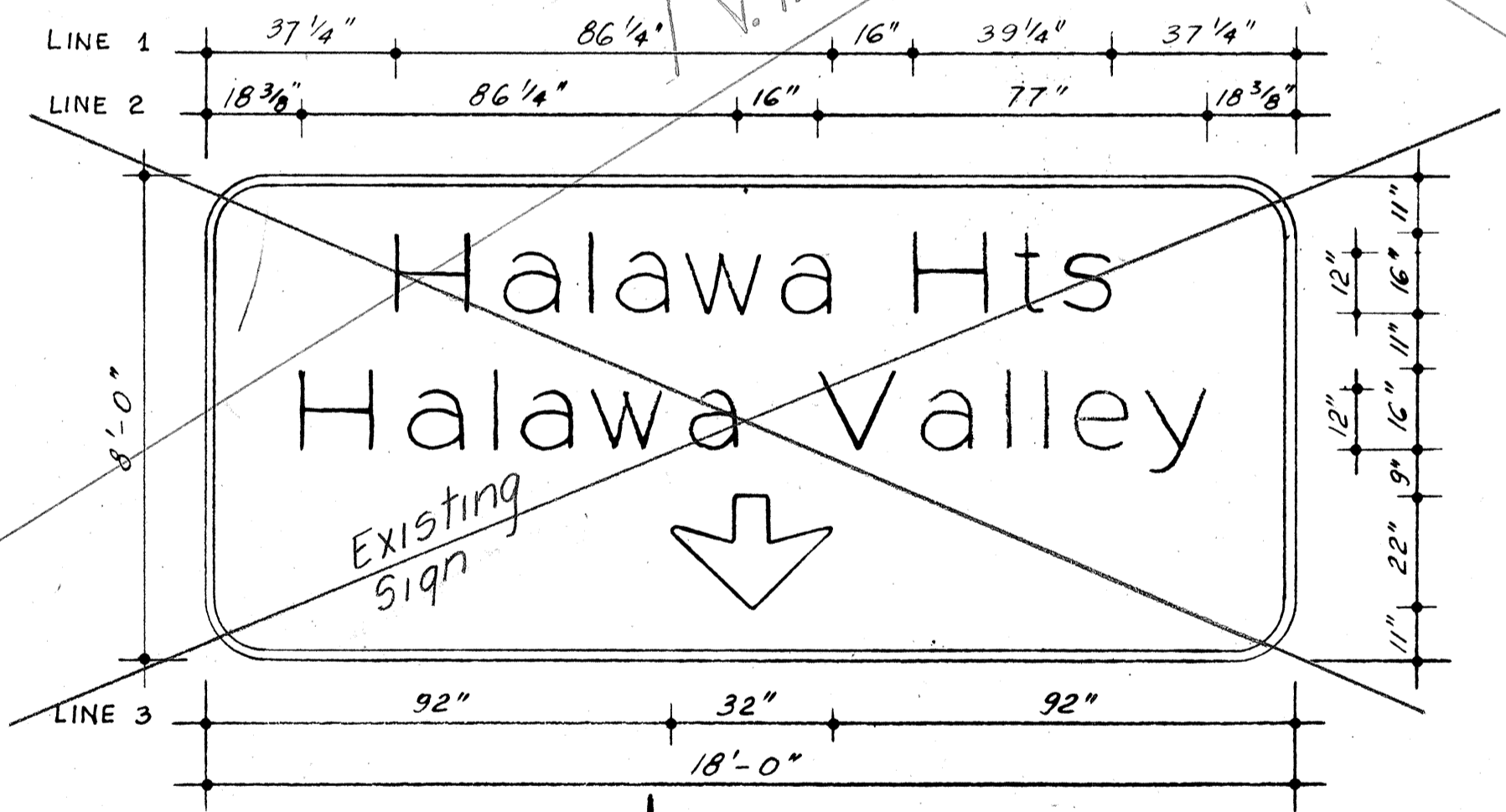


**SIGN ASSEMBLY E-15**  
MOANALUA FREEWAY INBOUND @ STA. 188+10  
SCALE: 3/8" = 1'-0"

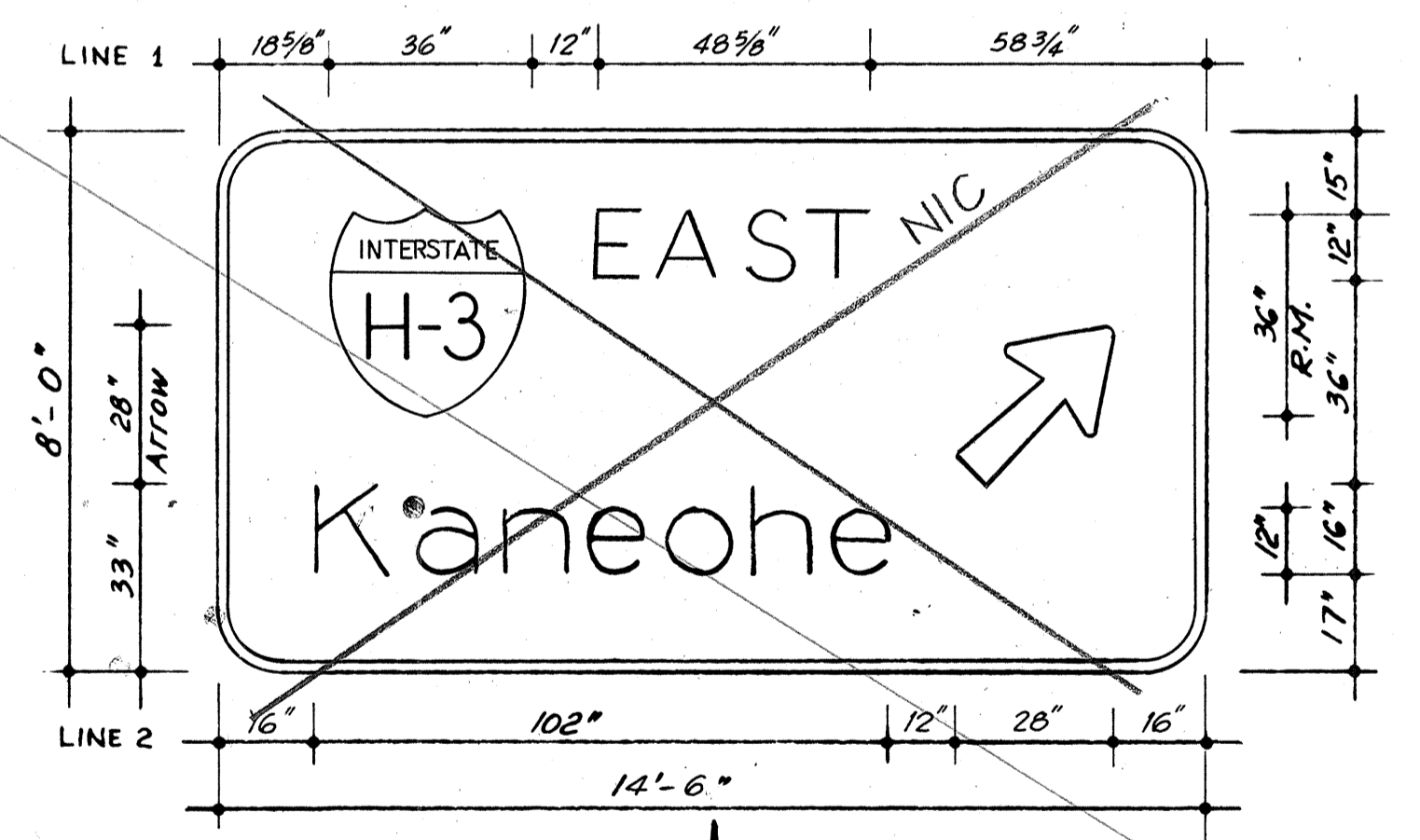
NOTE: Sign Supports for Sign Assemblies E-15 and E-18 built in previous contract.



- Notes:
- Type of reflectorized characters to be used on overlay panel with message shall be same as is used on parent sign. Non-corrosive fasteners to secure characters to overlay panel shall be of such type as to prevent contact with any part of characters on existing sign panel.
  - Blank overlay panel same as shown except characters are omitted.



**SIGN ASSEMBLY E-18**  
ULUNE EXTENSION @ STA. 11+85  
SCALE: 3/8" = 1'-0"



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

SIGN FACE DETAILS

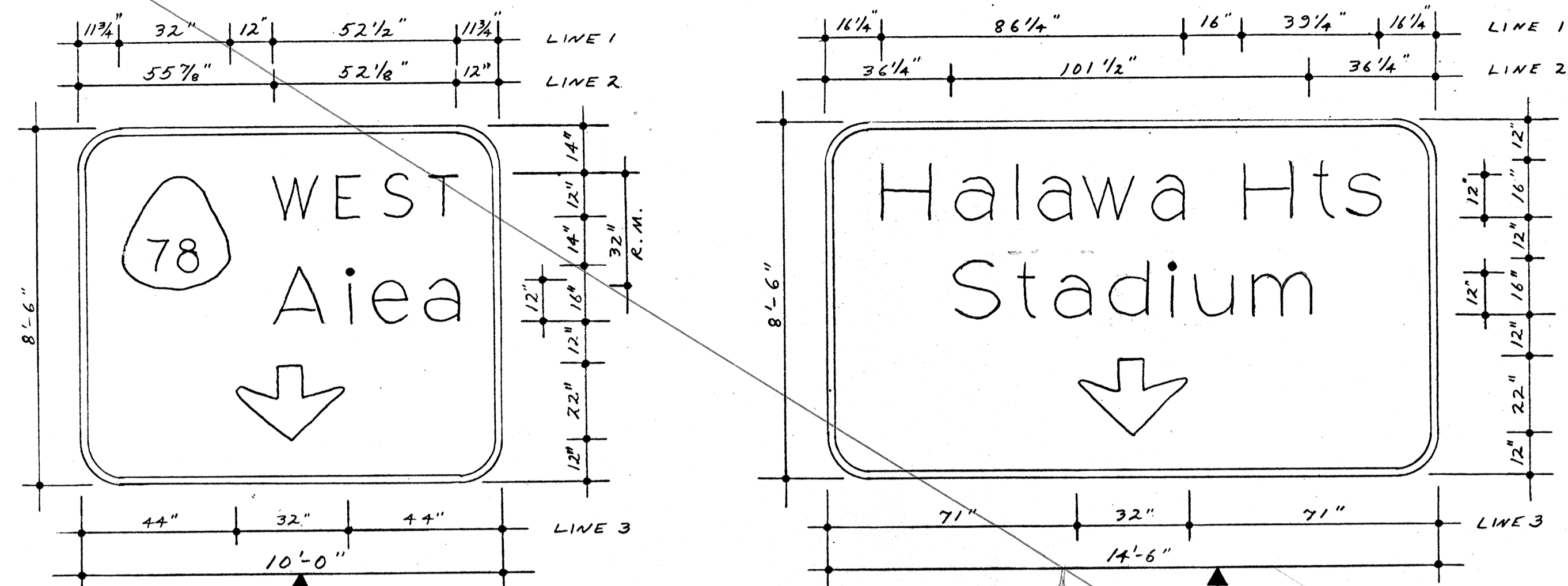
INTERSTATE ROUTE H-1  
PROJECT NO. I-HI-1(109):13  
SCALE: AS SHOWN DATE: DEC. 29, 1972

SHEET No. 77 OF 22 SHEETS



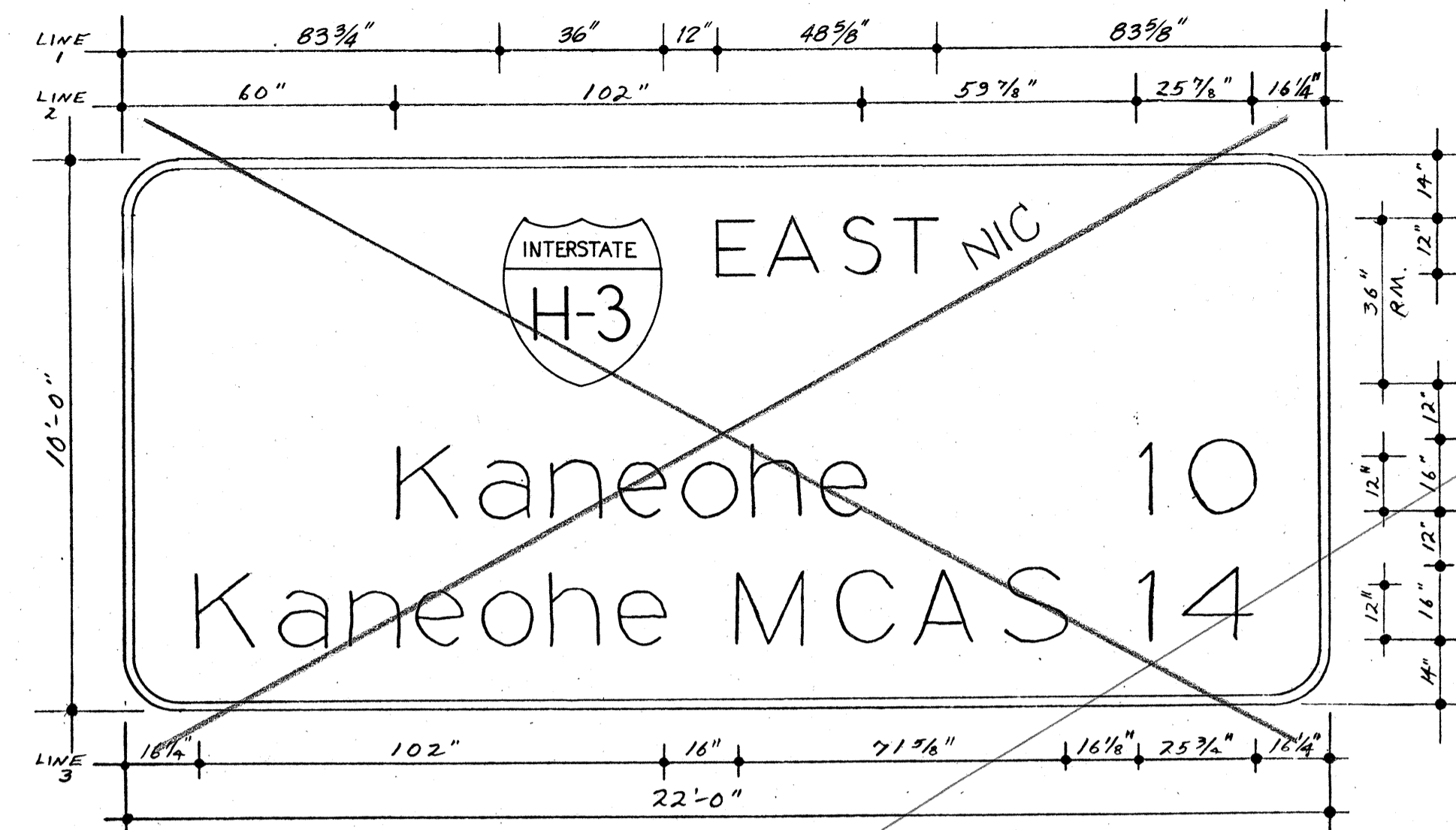
DATE: 12/29/75  
SURVEY PLOTTED BY: [blank]  
DRAWN BY: M. SALVA  
DESIGNED BY: M. SALVA  
QUANTITIES BY: [blank]  
CHECKED BY: E. S. WYREKEY

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | IHI-1(109)-13      | 1975        | 59        | 130          |



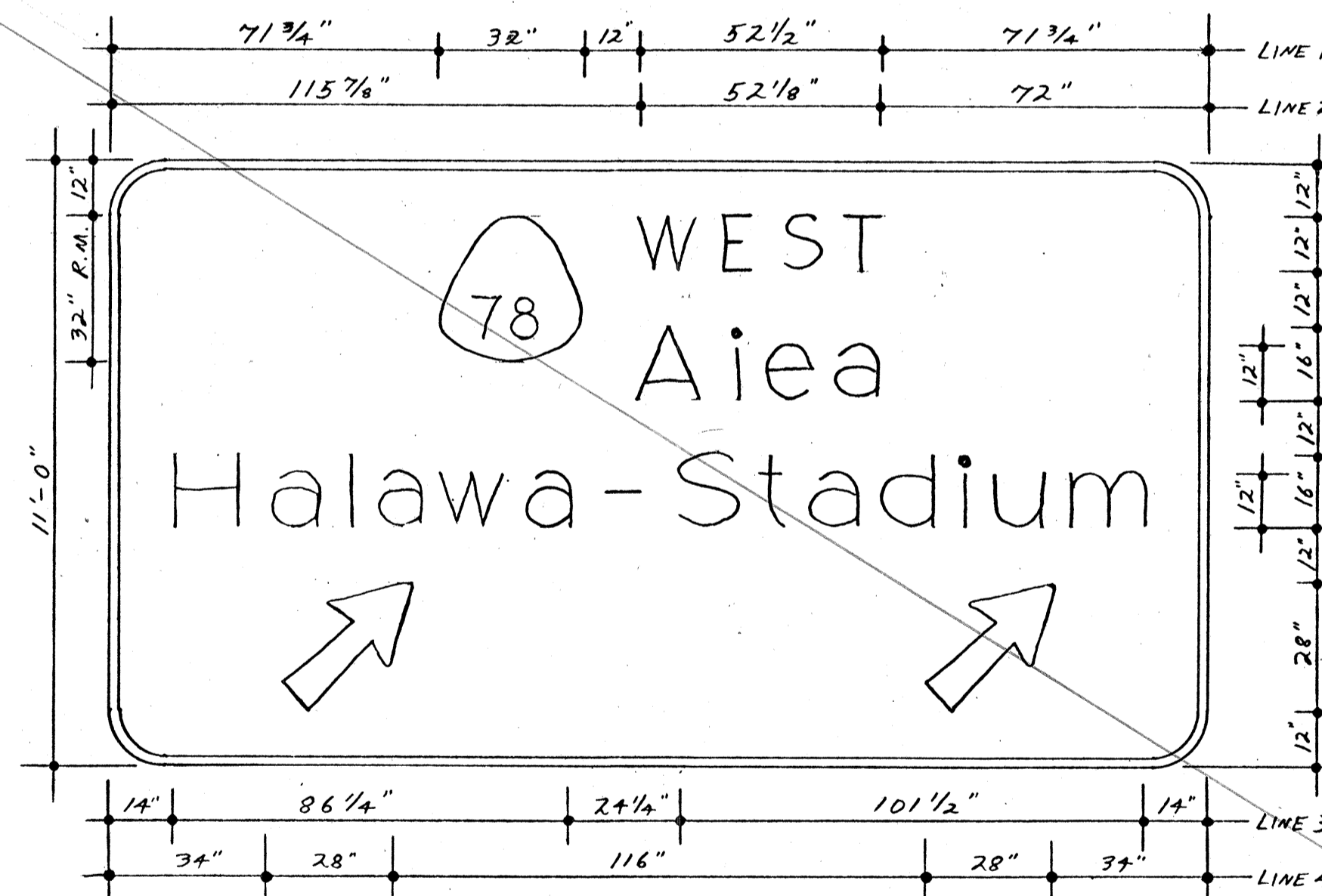
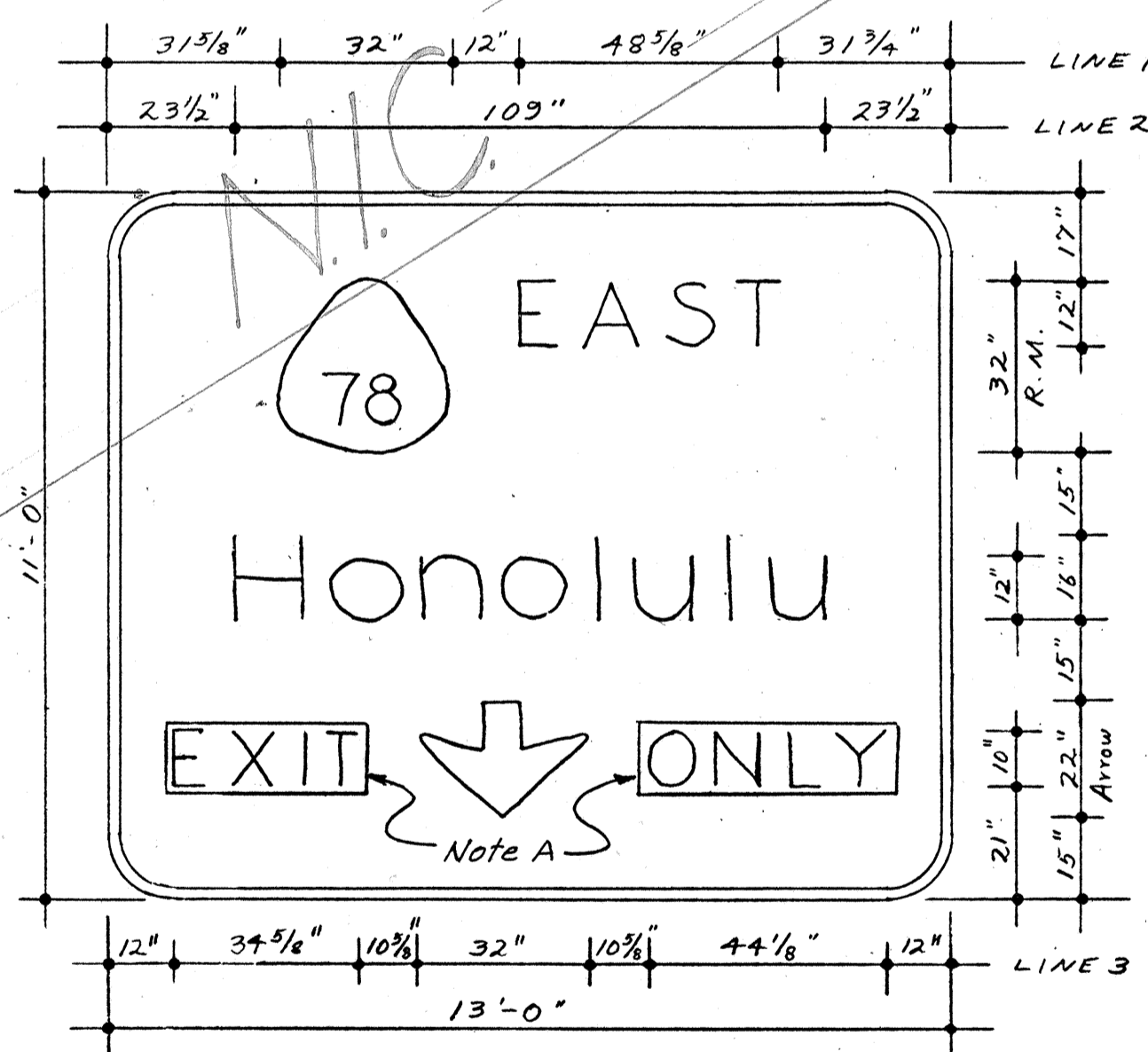
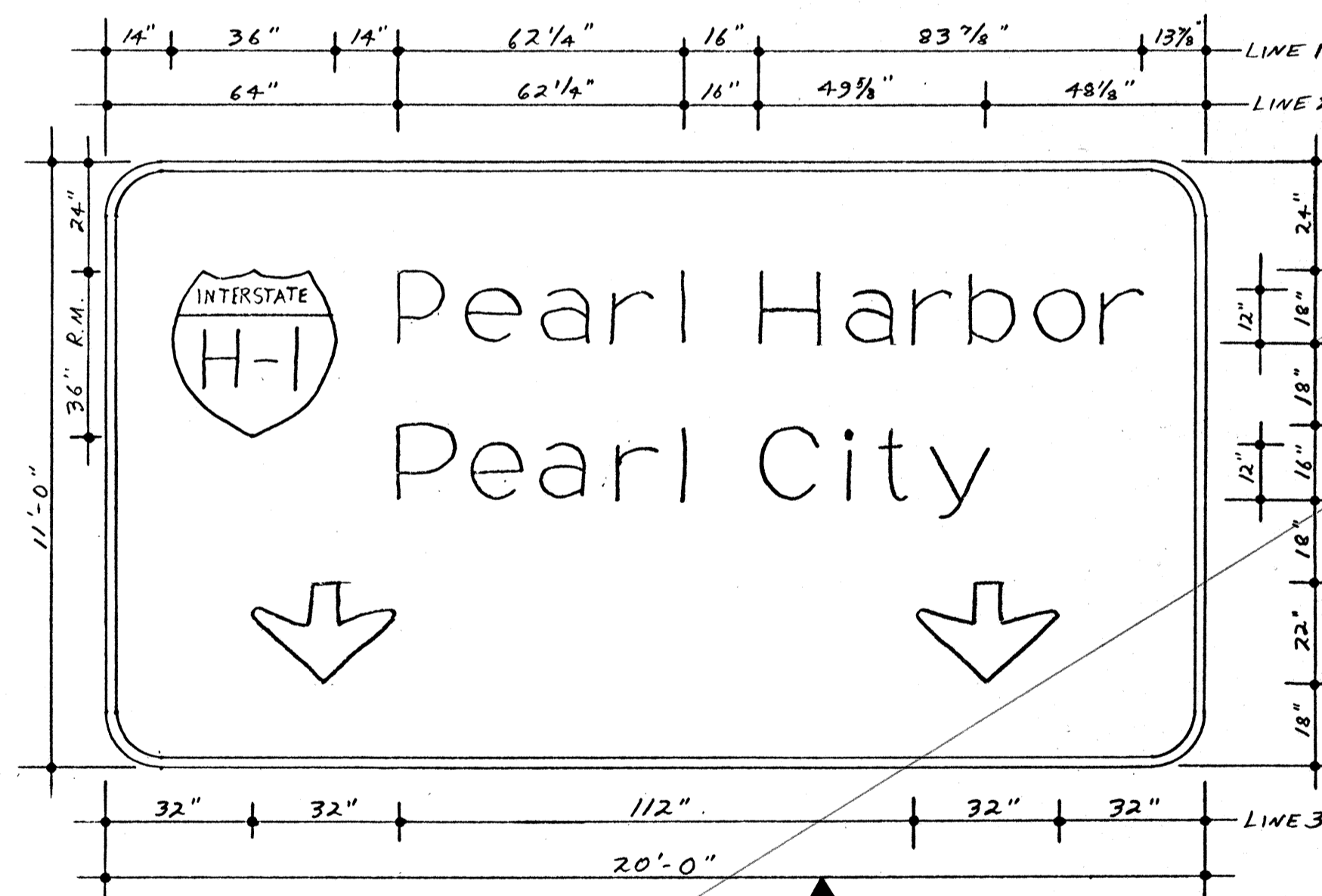
**SIGN ASSEMBLY E-28**

RAMP M STA. 19 + 35



**SIGN E-31**

INTERSTATE ROUTE H-3 OUTBOUND STA. 296 + 90



**SIGN ASSEMBLY E-29**

INTERSTATE ROUTE H-3 INBOUND STA. 279 + 69

See NOTE A on Sheet 01 for Overlay Panel materials.



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*J. Andrew Schuchardt*

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

SIGN FACE DETAILS

INTERSTATE ROUTE H-1  
PROJECT NO. I-HI-1(109)-13

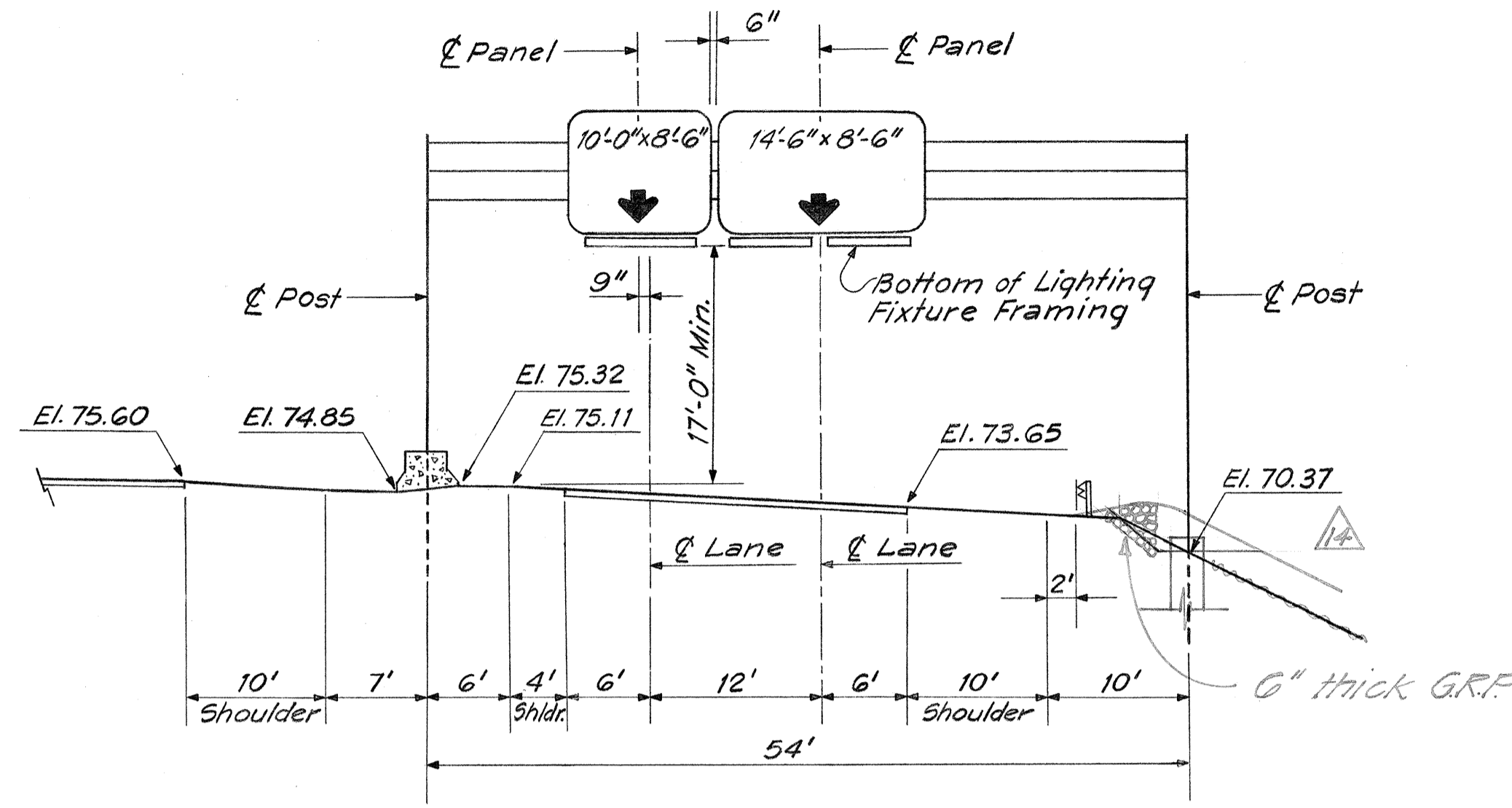
SCALE: AS SHOWN DATE: DEC. 29, 1972

SHEET No. 87 OF 22 SHEETS

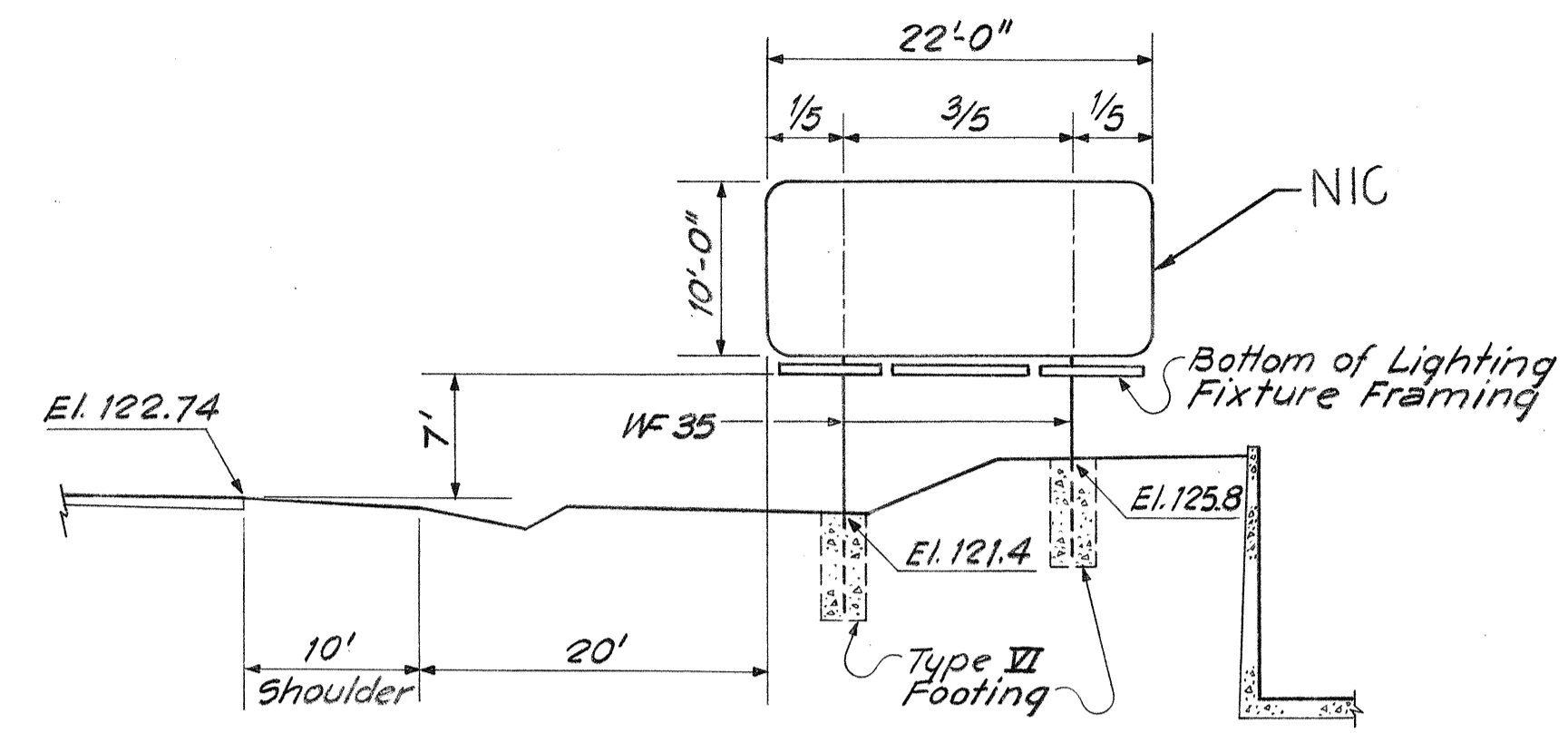
|                   |               |
|-------------------|---------------|
| DATE              | 9.3.72        |
| SURVEY PLOTTED BY |               |
| DRAWN BY          |               |
| DESIGNED BY       |               |
| QUANTITIES BY     | E. S. MOKERAY |
| CHECKED BY        |               |

1/23/76 Regrade area at sign E-28 Fly. & G.P. slope (CCO #12)

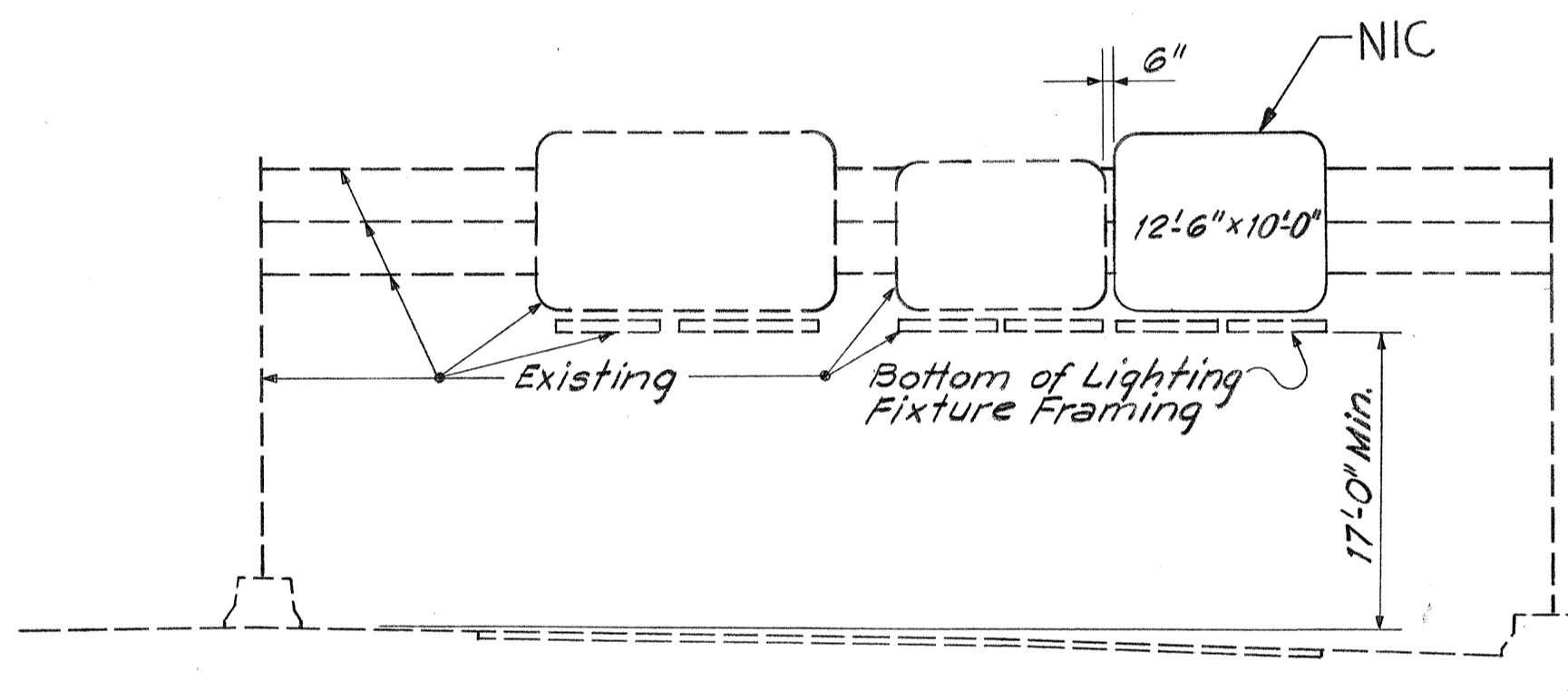
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-H-1(109)13       | 1975        | 60        | 130          |



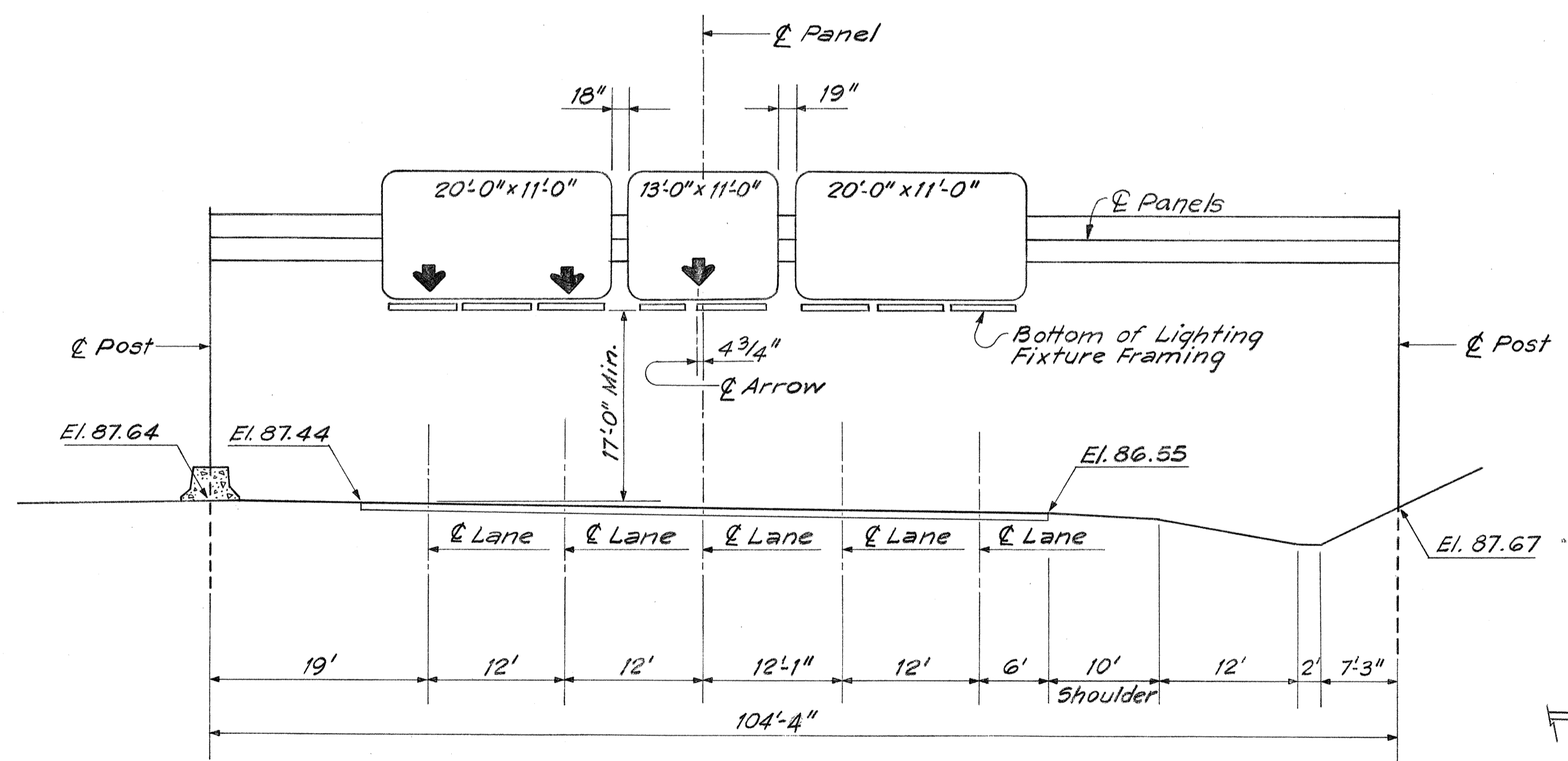
**ELEVATION-SIGN ASSEMBLY E-28**  
RAMP M STA. 19+35



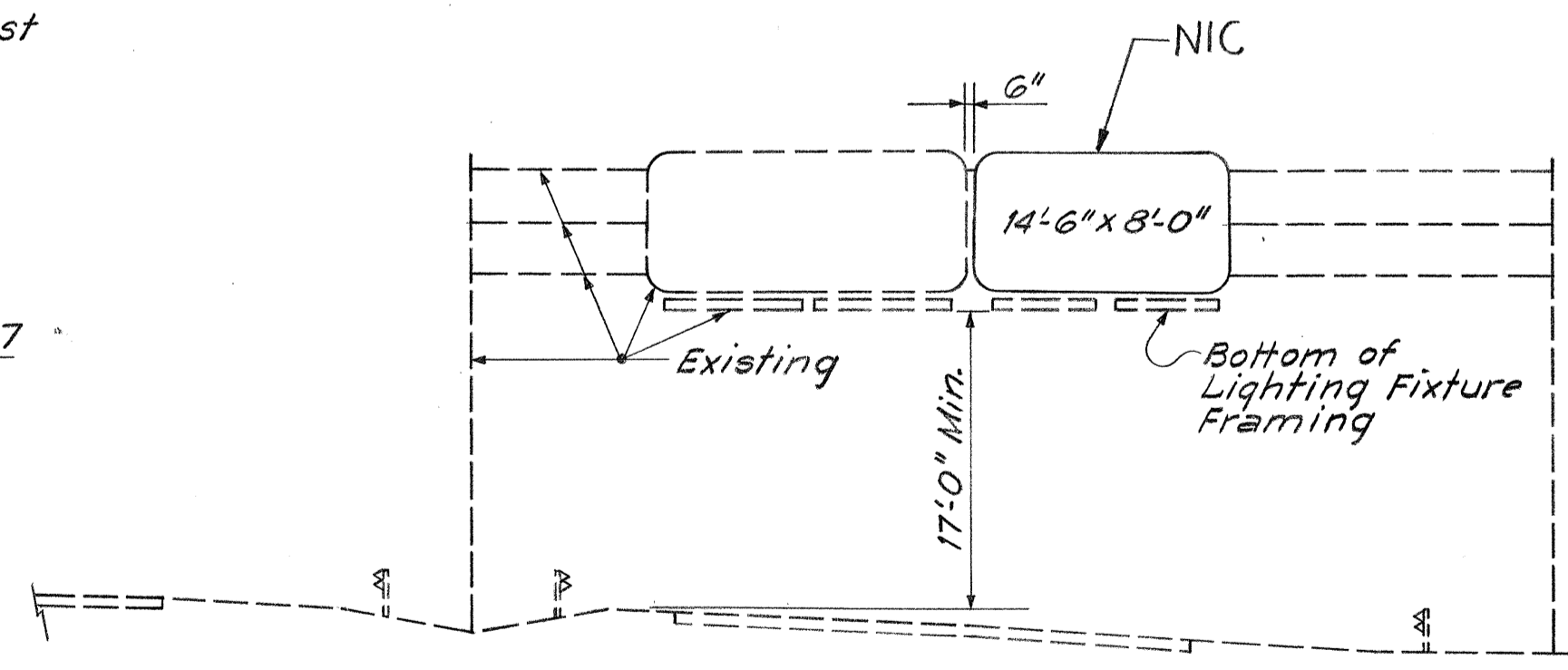
**ELEVATION-SIGN ASSEMBLY E-31**  
INTERSTATE ROUTE H-3 OUTBOUND STA. 296+90



**ELEVATION-SIGN ASSEMBLY E-15**  
MOANALUA FREEWAY INBOUND STA. 188+10



**ELEVATION-SIGN ASSEMBLY E-29**  
INTERSTATE ROUTE H-3 INBOUND STA. 279+69



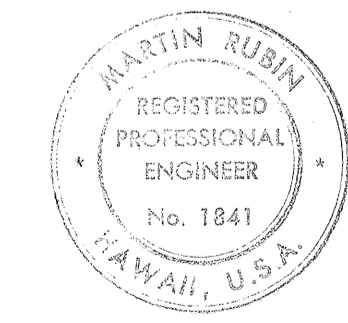
**ELEVATION-SIGN ASSEMBLY E-18**  
ULUNE EXTENSION STA. 11+85

- NOTES PERTAINING TO EXPRESSWAY (E) SIGNS AND DESTINATION (D) SIGNS
- DESIGN OF THE COMPANION UPPER AND LOWER CASE CHARACTERS, MODIFIED SERIES "E" CAPITAL LETTERS AND DIGITS, AND INTERCHARACTER SPACING FOR LINE MESSAGES SHALL MEET THE REQUIREMENTS ESTABLISHED BY THE BUREAU OF PUBLIC ROADS, U. S. DEPARTMENT OF COMMERCE, IN ITS REFERENCE GUIDE, "STANDARD ALPHABETS FOR HIGHWAY SIGNS", 1966 EDITION.
  - UNLESS OTHERWISE NOTED, SIGN BORDERS AND CORNER RADII FOR ALL SIGN FACES DETAILED HEREIN SHALL BE 2 INCHES WIDE, AND 12 INCHES, RESPECTIVELY.
  - STATE AND INTERSTATE ROUTE MARKERS INCORPORATED ON SIGN PANELS SHALL CONFORM TO THE DIMENSIONS AS SHOWN. MARKER SHAPE, COLOR, LETTER AND NUMERAL SERIES, ETC., ARE TO COMPLY WITH THOSE OF THE OFFICIAL MARKER DESIGNS ON THE STANDARD DETAIL SHEETS.
  - ALL ARROWS SHALL BE AS PRESCRIBED FOR SIGNS ON THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS.
  - INDIVIDUAL LETTERS, NUMERALS, SYMBOLS, AND BORDERS SHALL BE DEMOUNTABLE AND CONSIST OF:
    - (A) EMBOSSED ALUMINUM CUT-OUTS WITH APPLIED SILVER-WHITE REFLECTIVE SHEETING MATERIAL; OR
    - (B) WHITE PORCELAIN ENAMELED ALUMINUM FRAMES IN WHICH ARE INSTALLED PLASTIC REFLEX REFLECTORS.
  - ALL ARTIFICIALLY ILLUMINATED EXPRESSWAY SIGNS SHALL HAVE REFLECTORIZED MESSAGE AND BORDER ON A GREEN PORCELAIN ENAMELED BACKGROUND. DESTINATION SIGNS SHALL BE COMPLETELY REFLECTORIZED WITH SILVER-WHITE REFLECTIVE SHEETING FOR MESSAGE CUT-OUTS AND BORDER STRIPS, AND GREEN REFLECTIVE SHEETING FOR SIGN BACKGROUND. NON-ILLUMINATED EXPRESSWAY SIGN PANELS SHALL BE FABRICATED IN ACCORDANCE WITH SPECIFICATIONS FOR DESTINATION SIGNS.
  - FASTENERS: DEMOUNTABLE CHARACTERS SHALL BE FASTENED TO SIGN PANELS WITH BLIND RIVETS. OVERLAY PANELS SHALL BE FASTENED TO PARENT SIGN PANELS WITH SELF-TAPPING SCREWS AS SHOWN.
  - DEMOUNTABLE CHARACTERS, EXCEPT AS OTHERWISE SPECIFIED, SHALL BE OF ONE TYPE ON ANY SIGN PANEL OR GROUP OF SIGN PANELS MOUNTED ON A COMMON SUPPORT, AND SHALL INCLUDE LETTERS, NUMERALS, ARROWS AND BORDERS.
  - WHERE MORE THAN ONE SIGN PANEL IS MOUNTED ON THE SAME OVERHEAD SIGN PANEL SUPPORT, THE LEFT TO RIGHT POSITION OF SIGN FACES OF PANELS ON THE SUPPORT (AS VIEWED BY APPROACHING TRAFFIC) IS REPEATED IN THE SAME ORDER ON THESE SIGN FACE DETAIL SHEETS.

MISCELLANEOUS SIGN NOTES

- FOR SIGN FACE DETAILS OF PANELS MOUNTED ON OVERHEAD SIGN STRUCTURES, SEE SHEETS 77 AND 87.
- FOR DETAILS OF (A) OUTRIGGER BRACKETS SUPPORTING SIGN PANEL LIGHTING FIXTURES, (B) OVERHEAD SIGN STRUCTURES, (C) STRUCTURE FOOTINGS, (D) SPECIAL CONCRETE MEDIAN BARRIER SECTION AT OVERHEAD SIGN STRUCTURE POSTS, (E) SIGN PANEL BRACKETS, SEE SHEETS 117 THROUGH 217 AND ELECTRICAL DRAWINGS.
- SEE ELECTRICAL DRAWINGS FOR SIGN PANEL LIGHTING FIXTURE TYPES, INSTALLATION DETAILS, ETC.
- FOR PROTECTIVE TREATMENT OF EXPOSED OVERHEAD SIGN STRUCTURE SUPPORTS, SEE SPECIAL GUARD RAIL INSTALLATIONS ON GENERAL LOCATION PLANS, SPECIFICATIONS AND STANDARD DETAILS.

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



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Martin Rubin

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

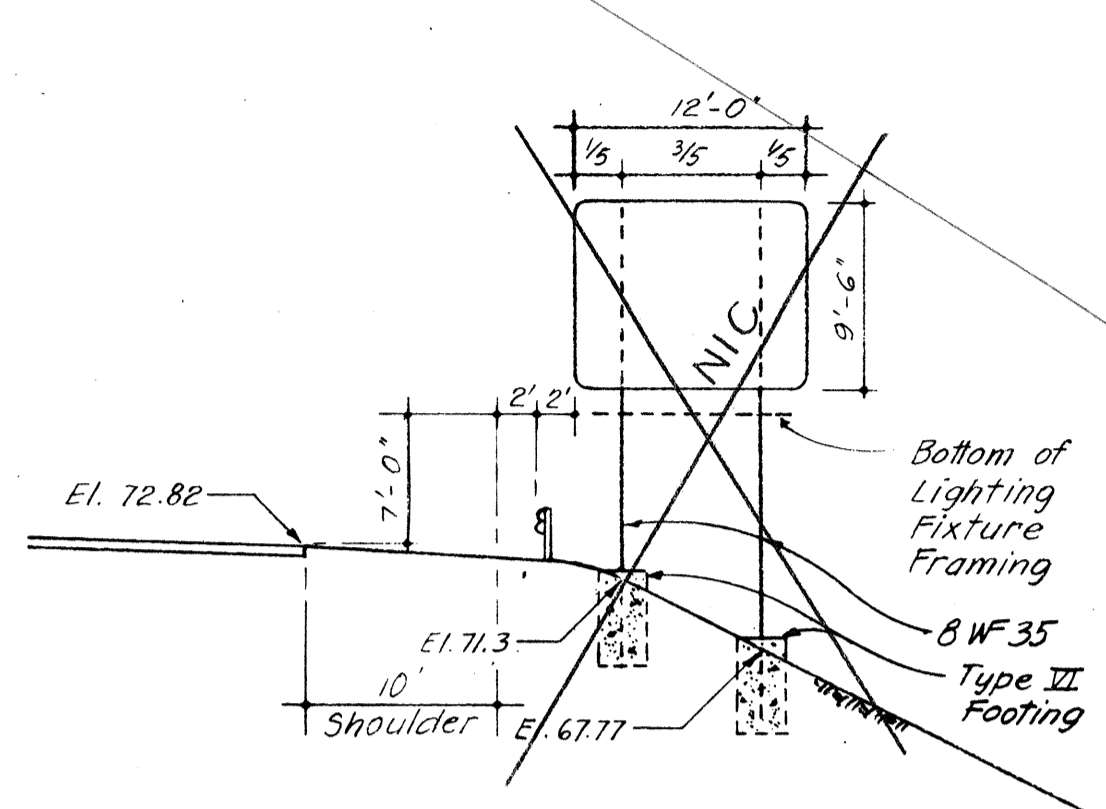
MISCELLANEOUS SIGN DETAILS  
INTERSTATE ROUTE H-1  
PROJ. NO. I-H-3-1(109)13

SCALE: 1" = 10'-0" DATE: DEC. 29, 1972  
SHEET No. 9T OF 22 SHEETS

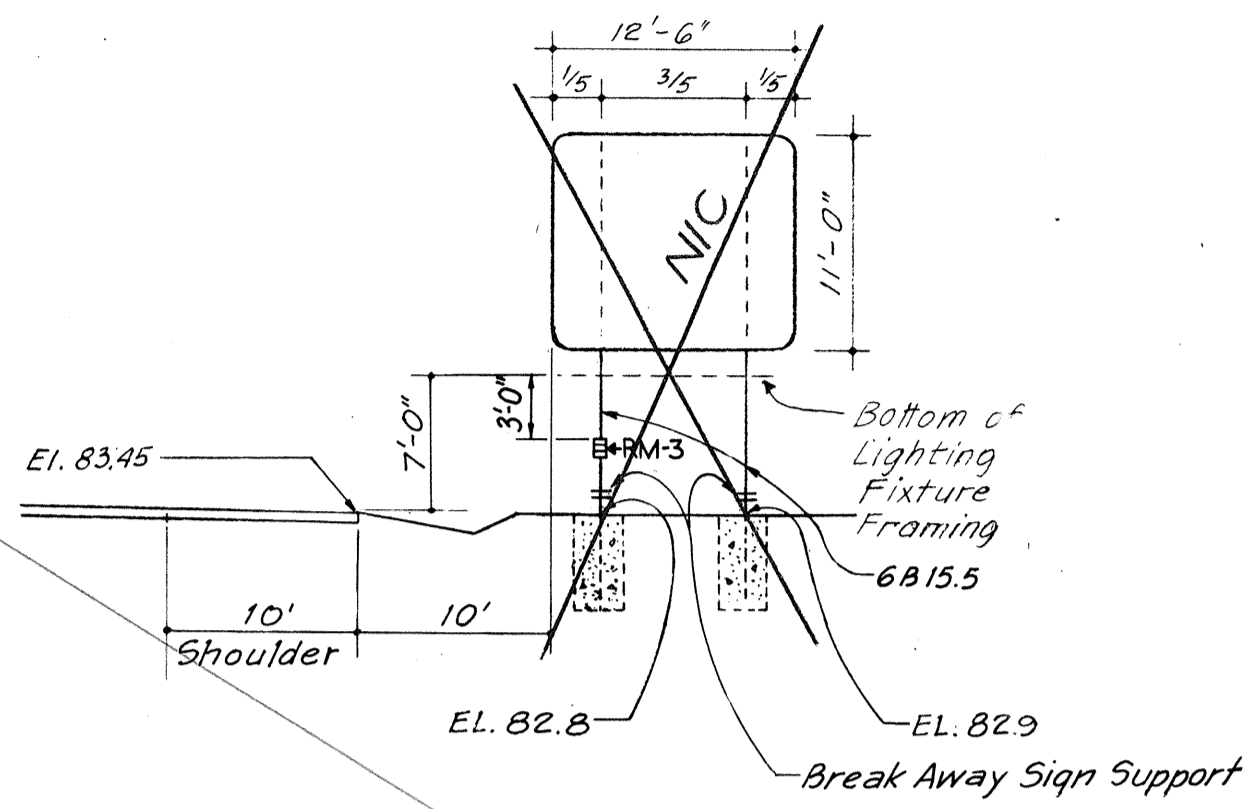
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(09):13      | 1975        | 61        | 130          |

NOTES

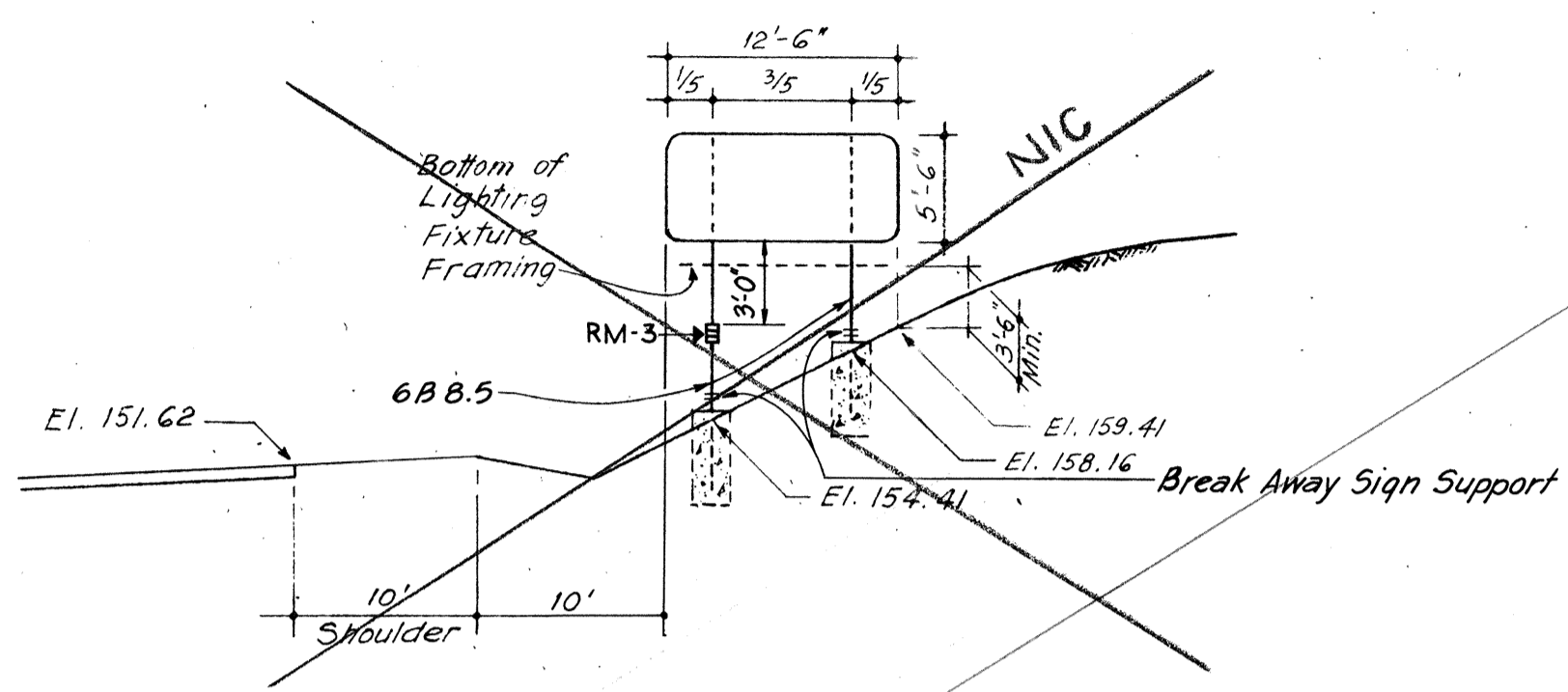
- FOR SIGN FACE DETAILS OF PANELS MOUNTED ON STRUCTURAL STEEL POSTS SEE SHEETS 61, 71 AND 81.
- FOR DETAILS OF OUTRIGGER BRACKETS SUPPORTING SIGN PANEL LIGHTING FIXTURES, SEE SHEET 11E.
- SEE ELECTRICAL DRAWINGS FOR SIGN PANEL LIGHTING FIXTURE TYPES, INSTALLATION DETAILS, ETC.



**SIGN E-12**  
MOANALUA FREEWAY  
INBOUND STA. 173+35  
Scale: 1" = 10'-0"



**SIGN E-13**  
MOANALUA FREEWAY  
INBOUND STA. 180+10  
Scale: 1" = 10'-0"



**SIGN E-16**  
MOANALUA FREEWAY INBOUND  
STA. 201+60  
Scale: 1" = 10'-0"

| SHEET NO. | RM-1 CLEAR |          | RM-2 AMBER |          | RM-3 AMBER |          | RM-3H AMBER |          | RM-9   |          |
|-----------|------------|----------|------------|----------|------------|----------|-------------|----------|--------|----------|
|           | W/POST     | W/O POST | W/POST     | W/O POST | W/POST     | W/O POST | W/POST      | W/O POST | W/POST | W/O POST |
| 1T OF 22  | -          | -        | -          | -        | -          | -        | -           | -        | -      | -        |
| 2T OF 22  | 6          | -        | 9          | -        | 3          | -        | -           | -        | 1      | -        |
| 3T OF 22  | 5          | -        | 37         | -        | -          | -        | 2           | -        | -      | -        |
| 4T OF 22  | 5          | -        | 14         | 1        | 1          | -        | -           | -        | -      | -        |
| 5T OF 22  | 6          | -        | -          | -        | -          | -        | -           | -        | -      | -        |
| TOTAL     | 22         | -        | 60         | 1        | 4          | -        | 2           | -        | 1      | -        |

| SHEET NO. | QUANTITY |        |
|-----------|----------|--------|
|           | TYPE A   | TYPE C |
| 1T OF 21T | 366      | 33     |
| 2T OF 21T | 738      | 95     |
| 3T OF 21T | 558      | 54     |
| 4T OF 21T | 668      | 74     |
| 5T OF 21T | 520      | 94     |
| 6T OF 21T | -        | -      |
| 7T OF 21T | -        | -      |
| TOTAL     | 2850     | 350    |

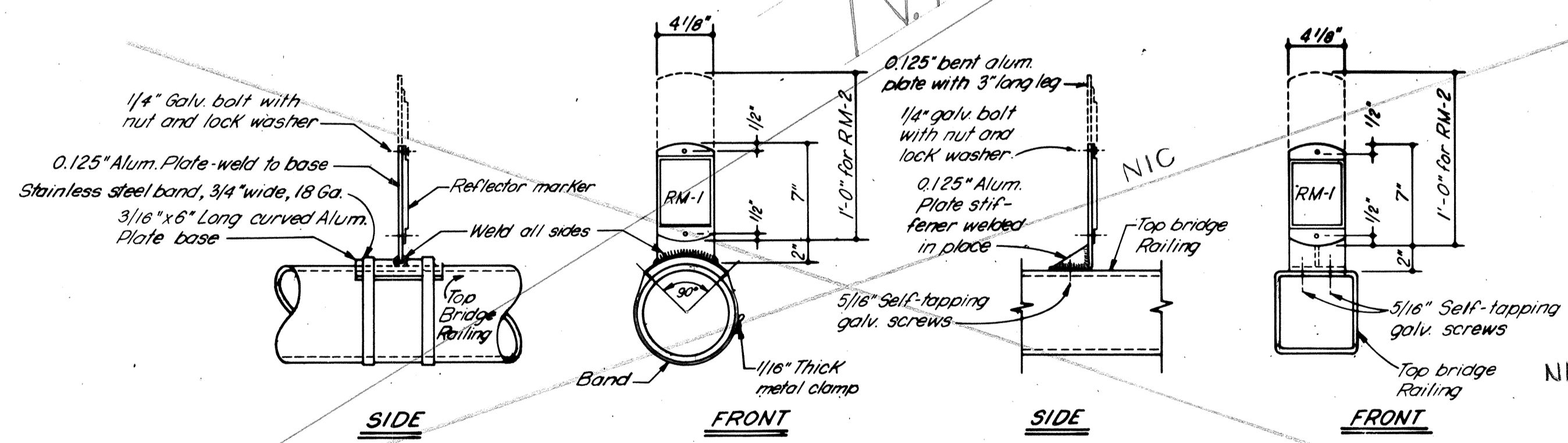
| SIGN NO. | MESSAGE                                     | AREA (SQ. FT.) |
|----------|---|----------------|
| E-12     | KANEHOE                                     | 114.00         |
| E-13     | KANEHOE                                     | 137.50         |
| E-14     | AIEA, PEARL CITY                            | 313.50         |
| E-15     | HONOLULU, RED HILL, KANEHOE                 | 125.00         |
| E-16     | RED HILL                                    | 68.75          |
| E-17     | AIEA, PEARL CITY, KANEHOE                   | 511.50         |
| E-18     | HALAWA HTS., KANEHOE                        | 116.00         |
| E-27     | SALT LAKE BLVD., HALAWA HTS., HALAWA VALLEY | 348.00         |
| E-28     | AIEA, HALAWA HTS.                           | 210.25         |
| E-29     | PEARL HARBOR, HONOLULU, AIEA.               | 583.00         |
| E-31     | KANEHOE                                     | 220.00         |
| TOTAL    |   | 793.25         |

| TYPE                 | MESSAGE              | QUANTITY |          |
|----------------------|----------------------|----------|----------|
|                      |                      | W/POST   | W/O POST |
| W1-2(R)              | (CURVED ARROW)       | 1        | -        |
| W13-1(25)-E          | 25 M.P.H.            | -        | 1        |
| W1-2(R)              | (CURVED ARROW)       | 1        | -        |
| W13-1(25)-E          | 25 M.P.H.            | -        | 1        |
| W3-3                 | SIGNAL AHEAD         | 2        | -        |
| W4-1-E               | MERGING TRAFFIC      | 1        | -        |
| SIMILAR TO W13-3(25) | RAMP 25 M.P.H.       | -        | 1        |
| SIMILAR TO W13-3(35) | RAMP 35 M.P.H.       | -        | 1        |
| W13-2(35)            | EXIT 35 M.P.H.       | 1        | -        |
| W4-1(R)A             | (CURVED ARROW) MERGE | 1        | -        |
| TOTAL                |                      | 2        | 0        |

| TYPE       | MESSAGE            | QUANTITY |          |
|------------|--------------------|----------|----------|
|            |                    | W/POST   | W/O POST |
| R3-2-E     | NO LEFT TURN       | 2        | -        |
| R3-11(L)   | (DIVERGING ARROWS) | 1        | -        |
| R10-2      | ROAD CLOSED        | -        | 6        |
| R2-1(25)-E | SPEED LIMIT (25)   | 1        | -        |
| R2-1(35)-E | SPEED LIMIT (35)   | 3        | -        |
| R2-1(45)-E | SPEED LIMIT (45)   | 1        | -        |
| TOTAL      |                    | 8        | 6        |

| SIGN NO. | MESSAGE COVERED     | AREA (SQ. FT.) |
|----------|---------------------|----------------|
| E-14     | STADIUM             | 15.00          |
| E-17     | STADIUM             | 15.00          |
| E-17     | (ROUTE-MARKER)-EAST | 18.50          |
| E-17     | KANEHOE             | 15.00          |
| E-27     | SALT LAKE BLVD.     | 27.50          |
| E-28     | STADIUM             | 15.00          |
| TOTAL    |                     | 115.00         |

| SIGN NO. | MESSAGES | AREA (SQ. FT.) |
|----------|----------|----------------|
| E-27     | HONOLULU | 15.75          |
| E-29     | HTS.     | 17.00          |
| TOTAL    |          | 32.75          |



(ALTERNATE BRACKET DESIGNS)  
DETAILS OF BRACKETS FOR REFLECTOR MARKERS  
MOUNTED ON BRIDGE RAILINGS  
Scale: 1/2" = 1'-0"

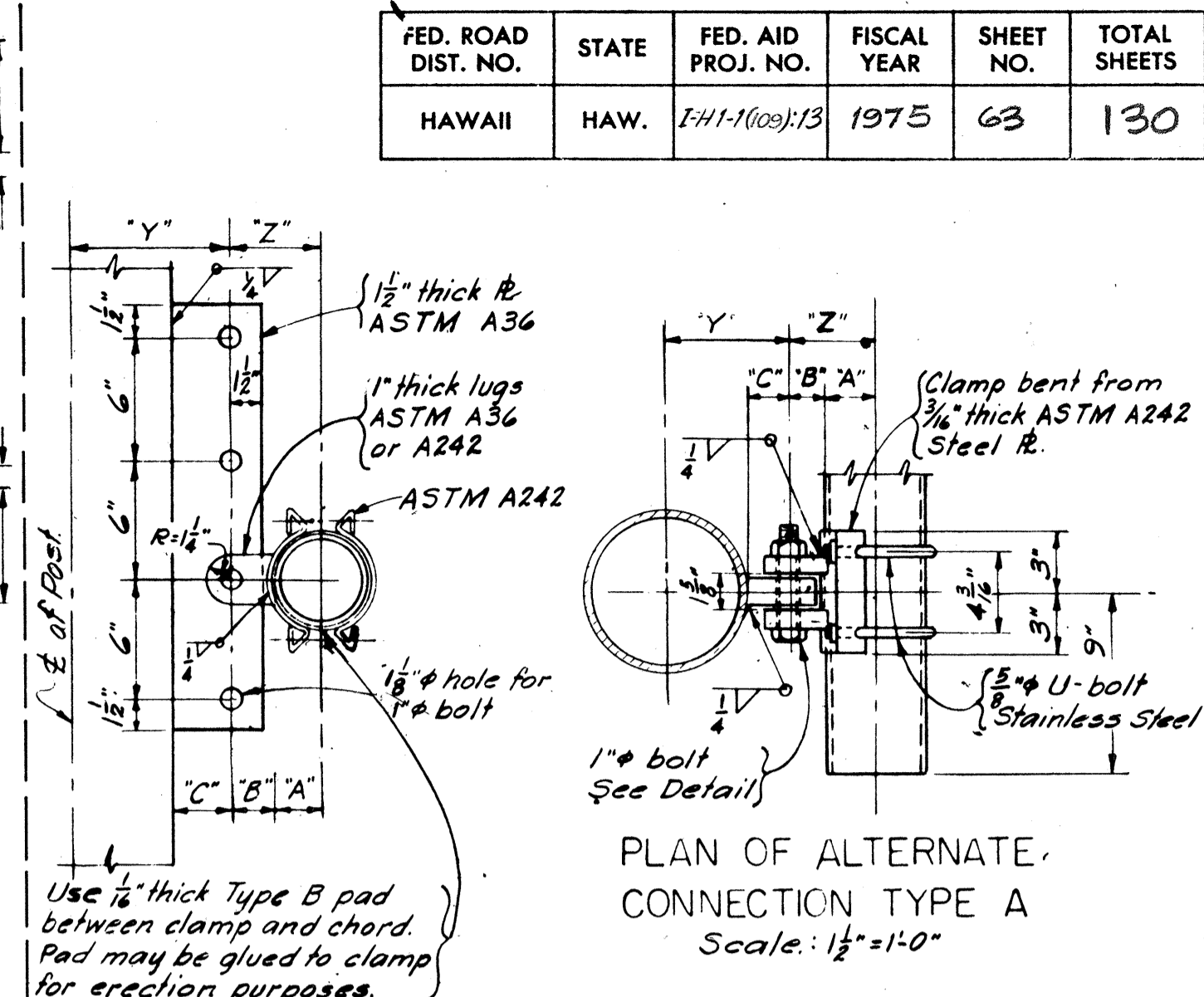
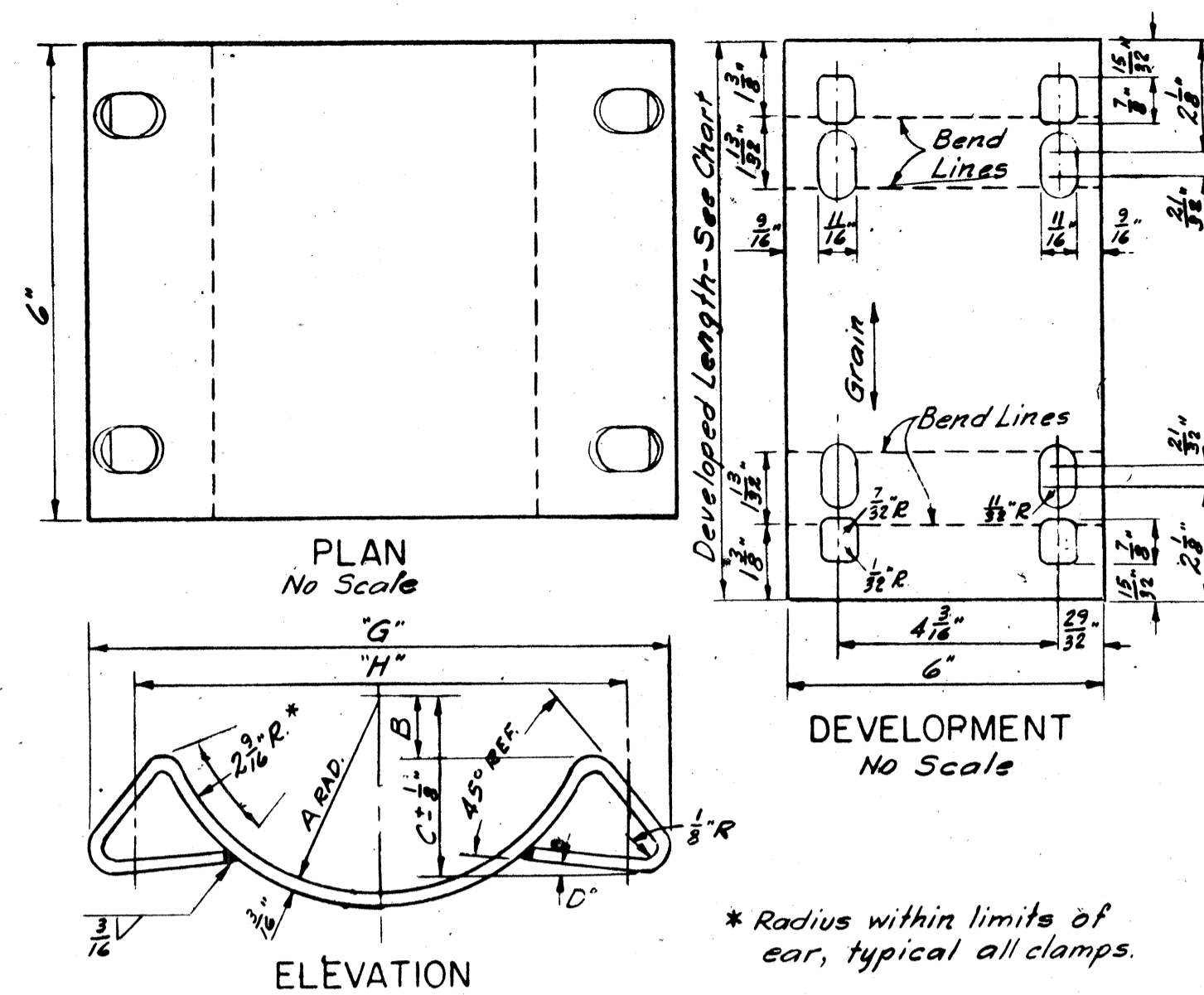
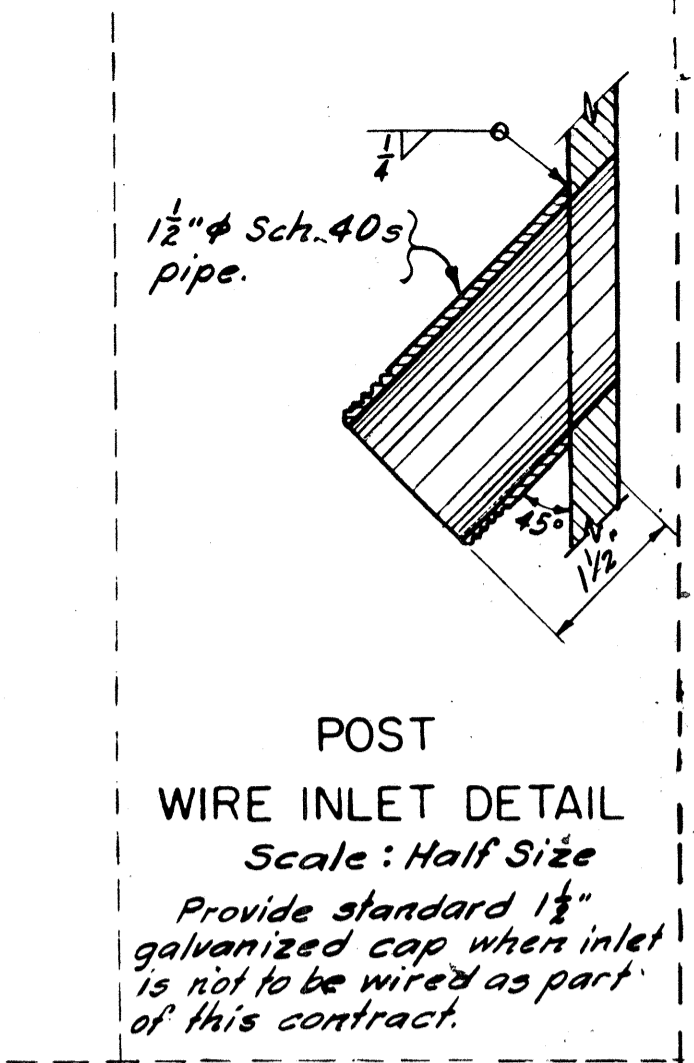
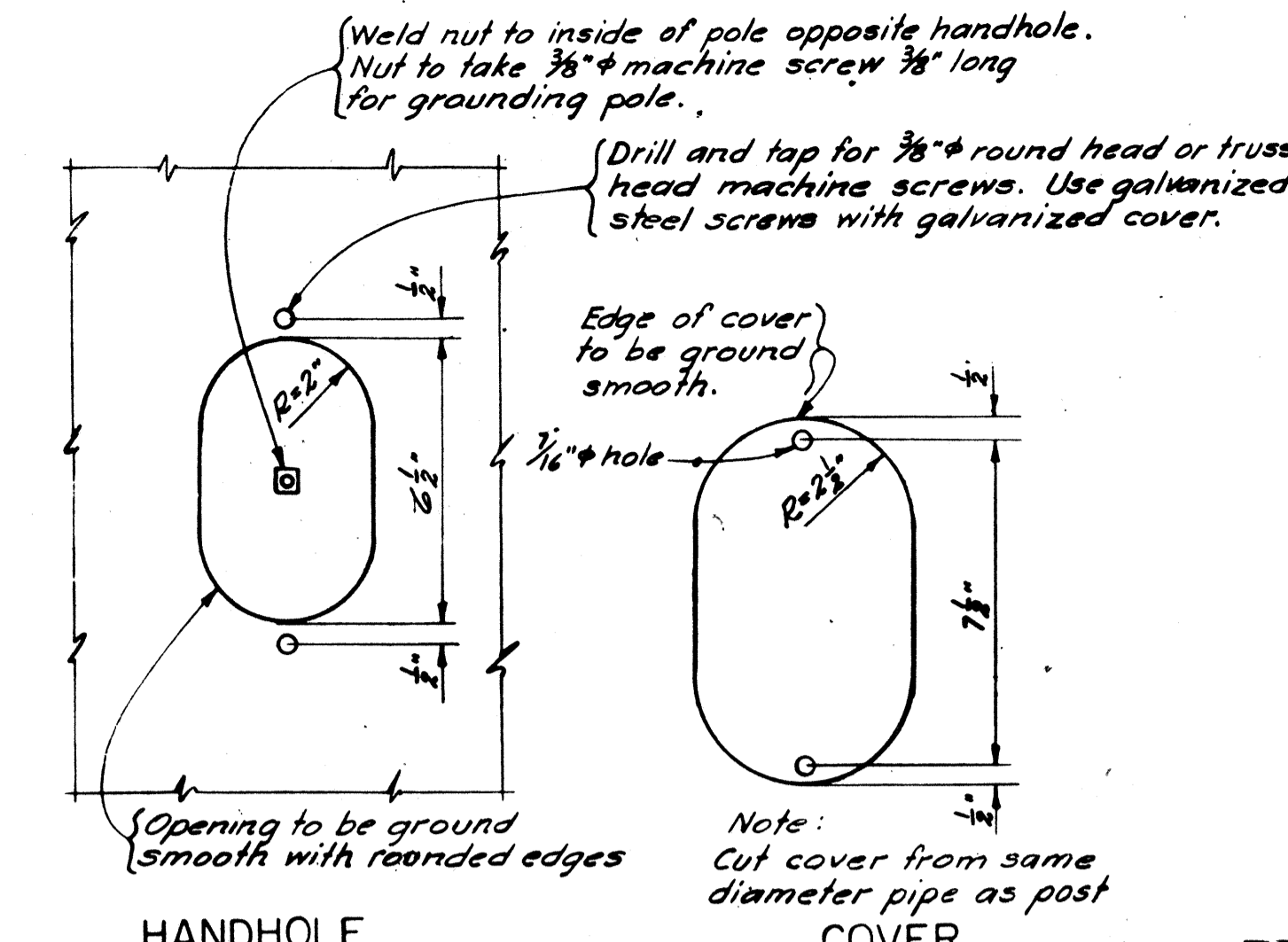
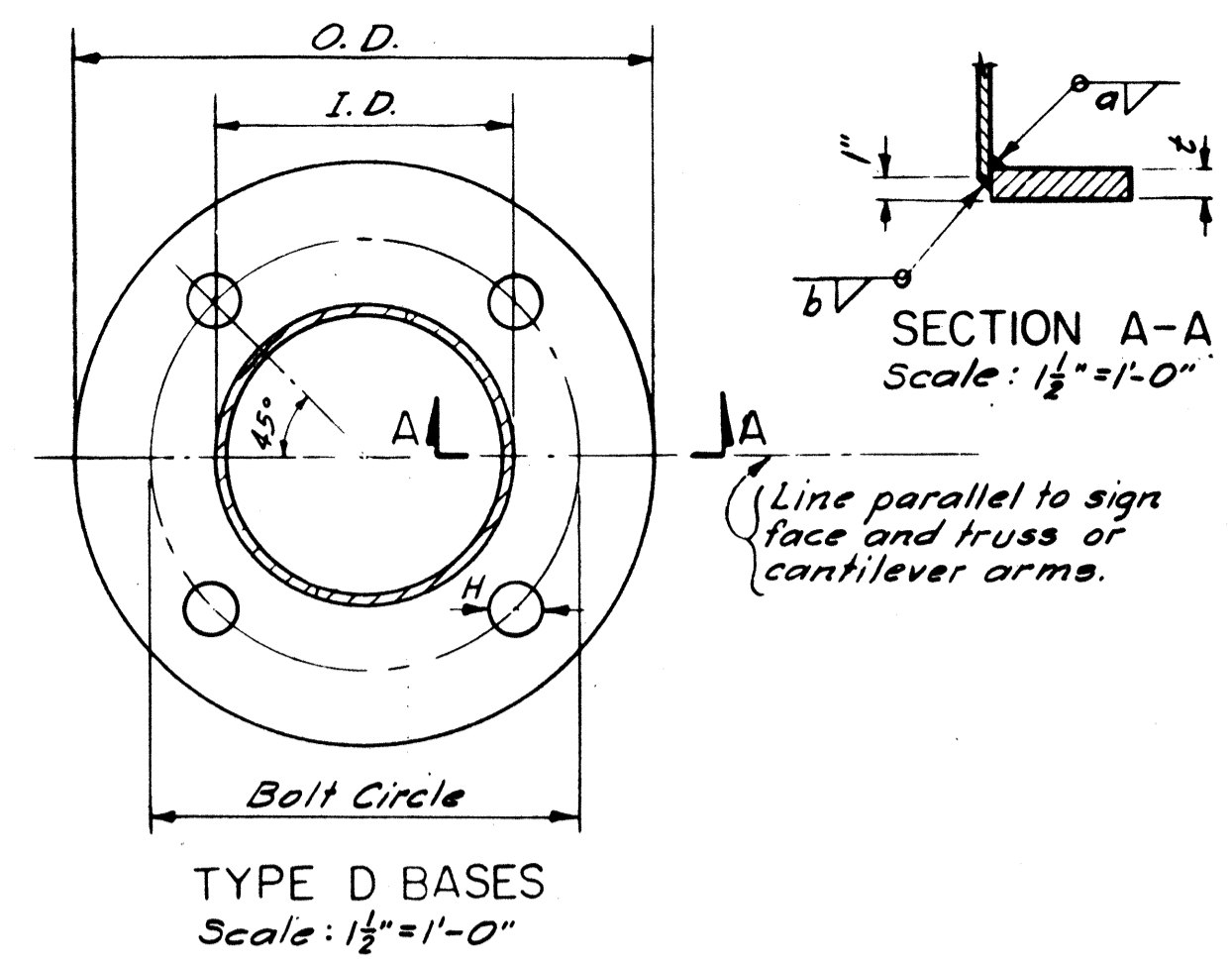
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

LINE DIAGRAMS OF GROUND  
MOUNTED SIGNS AND SIGN SUPPORTS  
INTERSTATE ROUTE H-1  
PROJECT NO. I-HI-1(09):13  
SCALE: AS SHOWN DATE: DEC. 29, 1972  
SHEET No. 107 OF 22 SHEETS

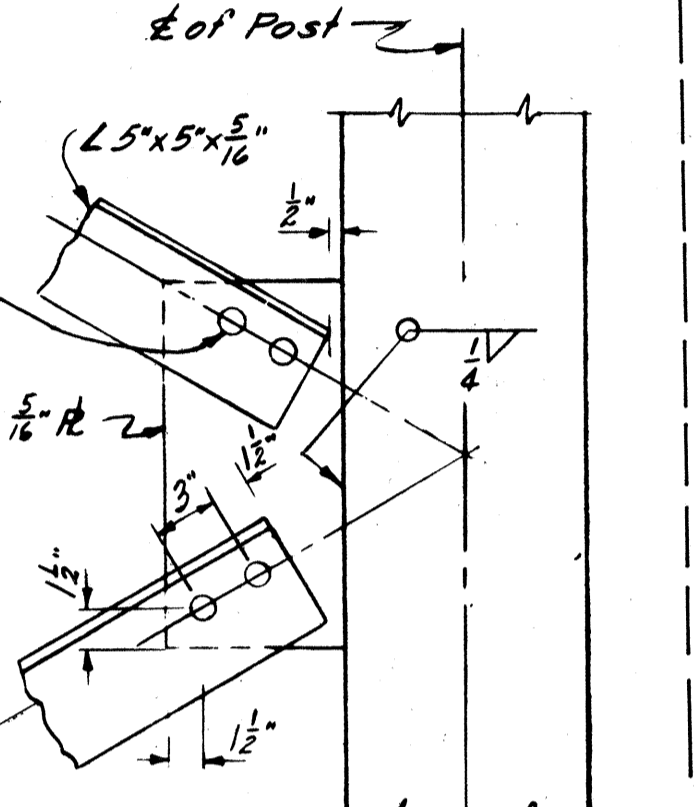
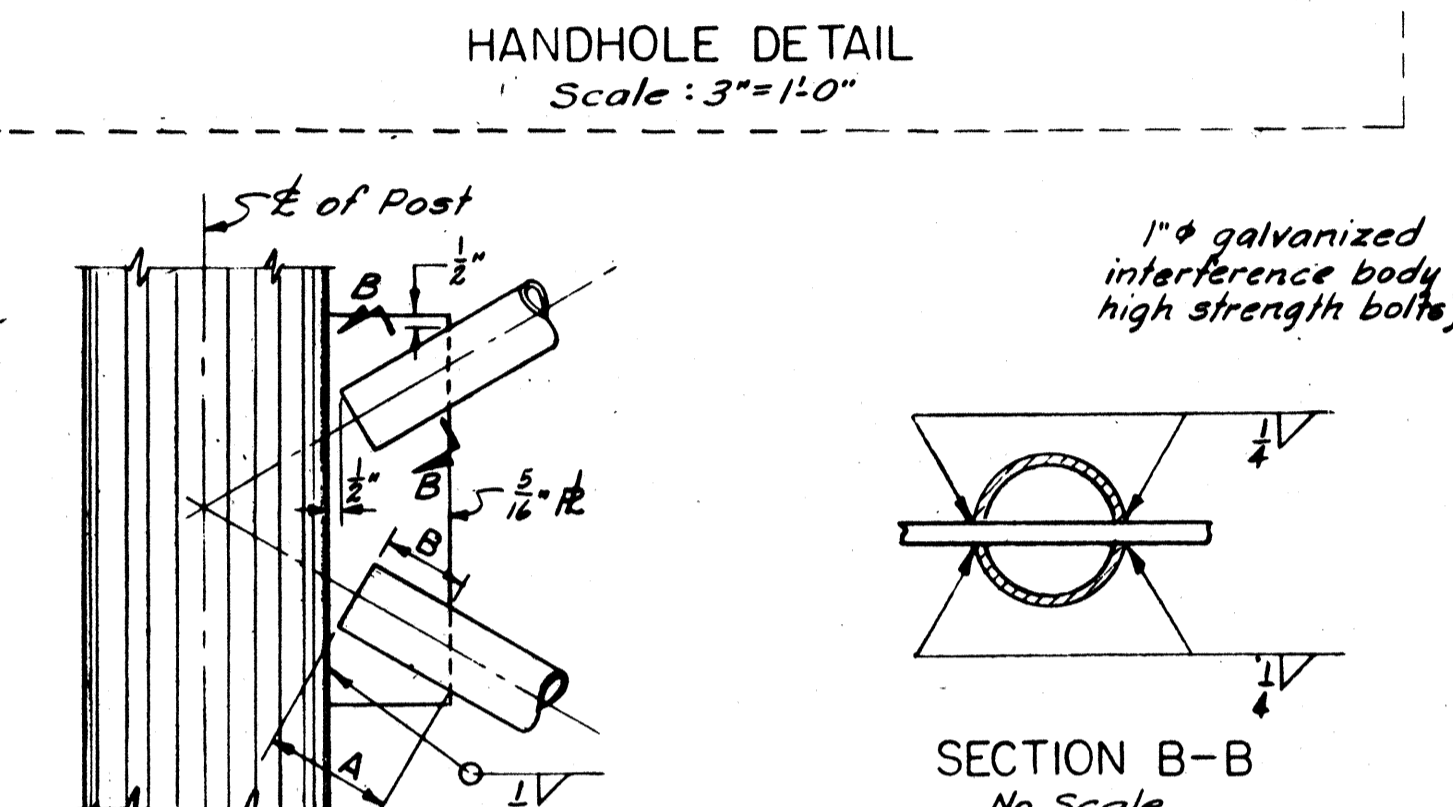
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 DRAWN BY: [ ]  
 DESIGNED BY: [ ]  
 QUANTITIES BY: [ ]  
 CHECKED BY: [ ]



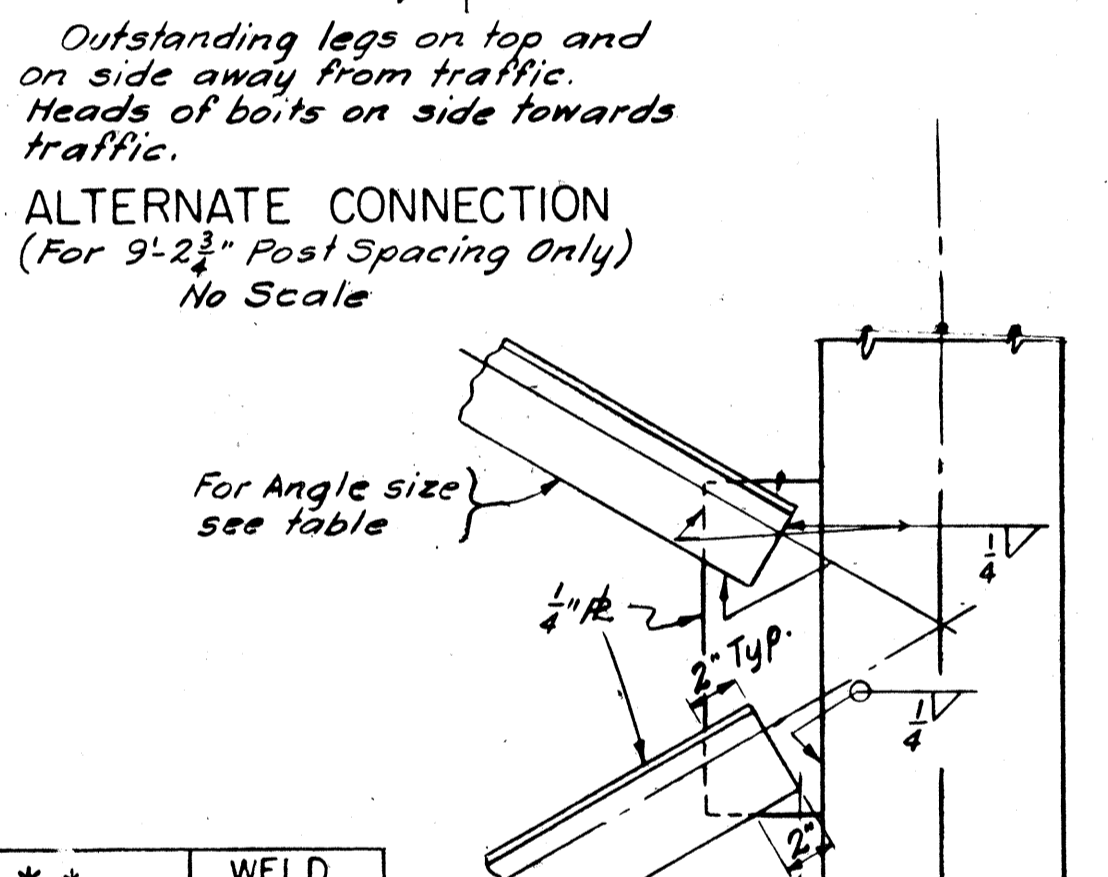
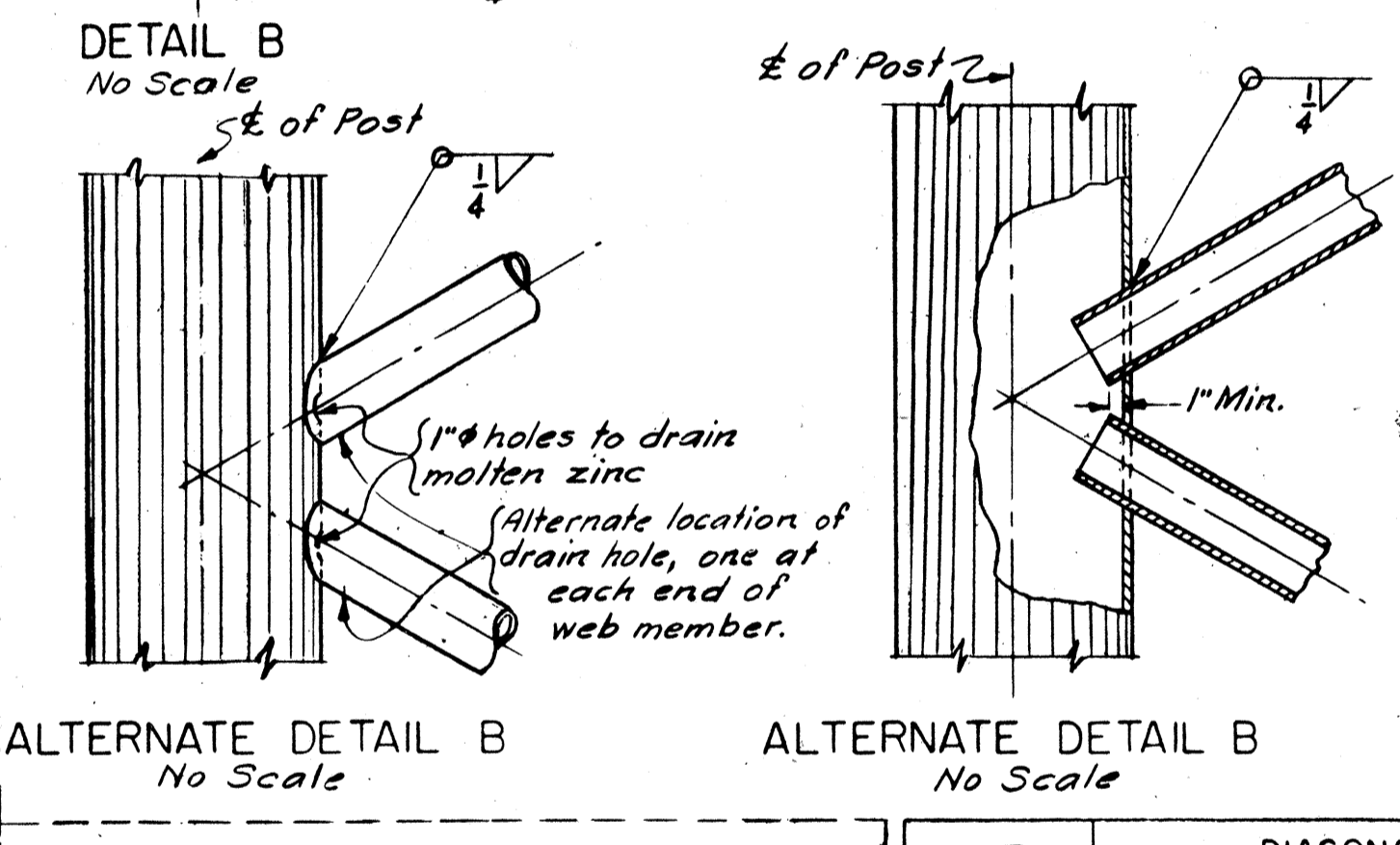
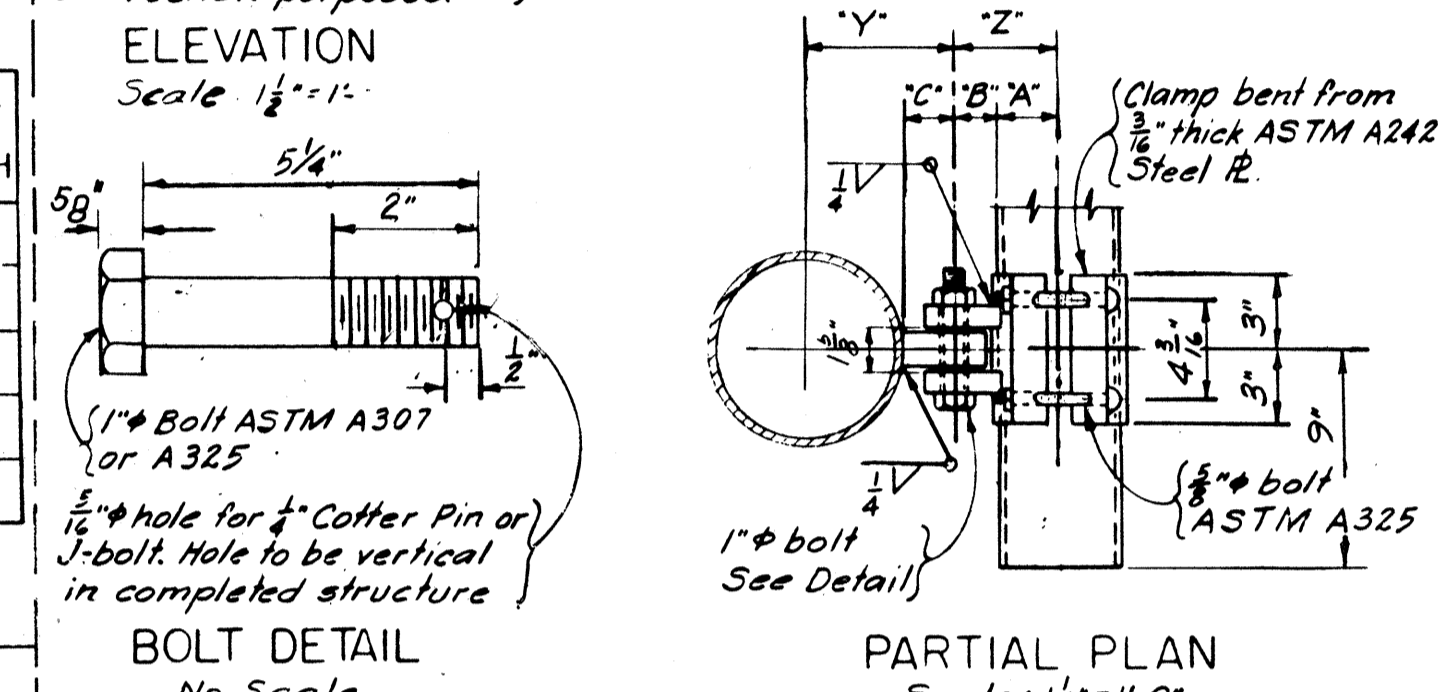
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | FH-1(100)13        | 1975        | 63        | 130          |



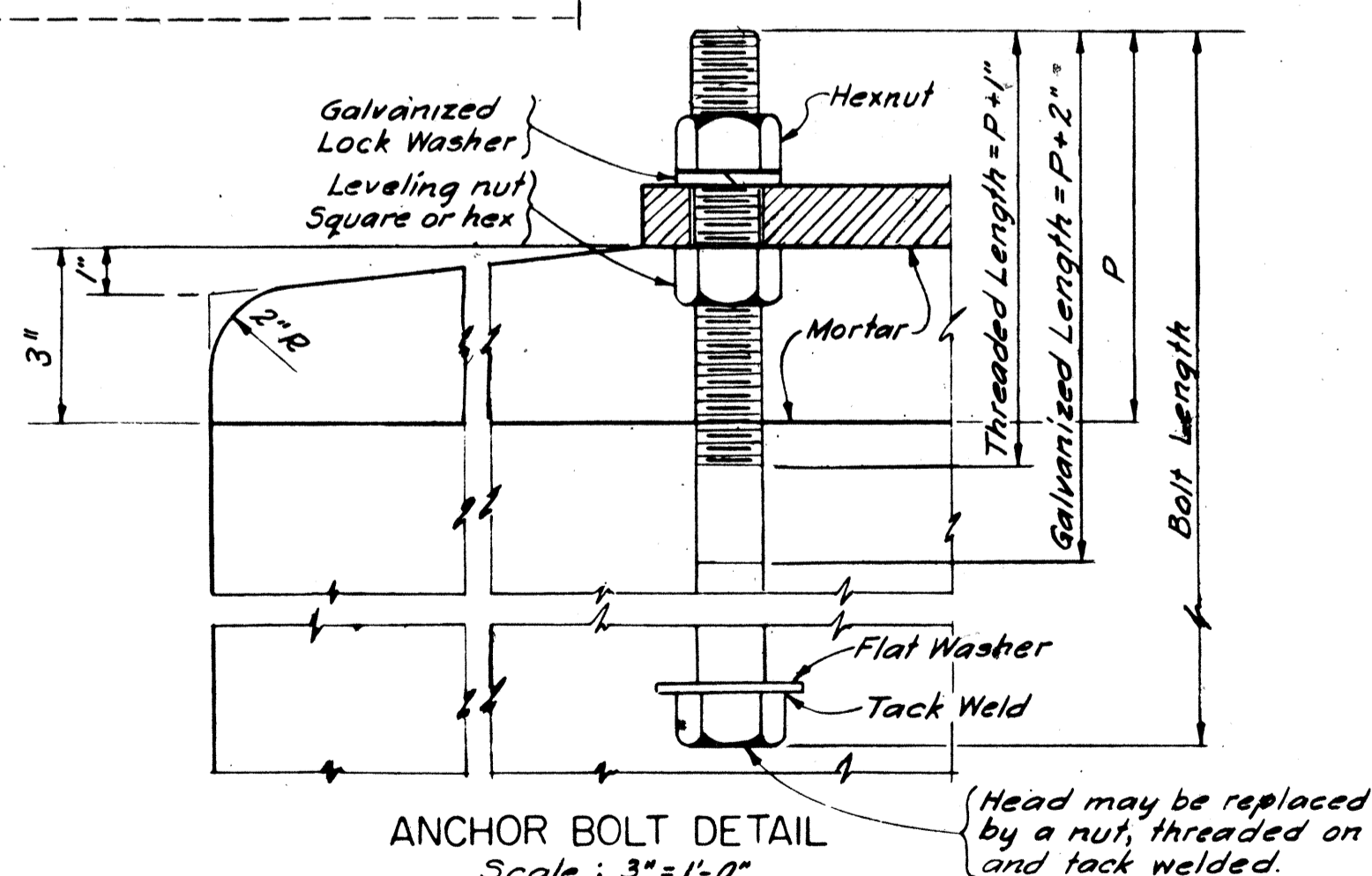
| POST       | BASE R. O. D. | BASE R. I. D. | MIN. t | BOLT CIRC. DIA. | BOLT DIA. | HOLE DIA. | a    | b    |
|------------|---------------|---------------|--------|-----------------|-----------|-----------|------|------|
| 6 Sch 40s  | 14.0"         | 6 3/8"        | 1 1/8" | 11 1/2"         | 1 3/8"    | 1 3/8"    | 1/2" | 1/4" |
| 6 Sch 80x  | 14.0"         | 6 3/8"        | 1 3/8" | 11 1/2"         | 1 1/2"    | 1 3/4"    | 3/8" | 3/8" |
| 8 Sch 20   | 17.0"         | 8 3/8"        | 1 1/4" | 13"             | 1 1/4"    | 2"        | 3/8" | 1/4" |
| 8 Sch 30   | 17.0"         | 8 3/8"        | 1 1/4" | 13"             | 1 3/4"    | 2"        | 1/2" | 1/4" |
| 8 Sch 40s  | 17.0"         | 8 3/8"        | 1 3/8" | 13"             | 1 3/8"    | 2"        | 1/2" | 3/8" |
| 8 Sch 60   | 18.0"         | 8 3/8"        | 1 1/4" | 14"             | 2"        | 2 1/4"    | 3/8" | 3/8" |
| 8 Sch 80x  | 18.0"         | 8 3/8"        | 1 1/4" | 14"             | 2"        | 2 1/4"    | 3/8" | 1/4" |
| 10 Sch 20  | 20.0"         | 10 3/4"       | 1 3/8" | 16"             | 1 3/8"    | 2"        | 1/2" | 1/4" |
| 10 Sch 30  | 20.0"         | 10 3/4"       | 1 3/8" | 16"             | 2"        | 2 1/4"    | 1/2" | 1/4" |
| 10 Sch 40s | 20.0"         | 10 3/4"       | 1 1/2" | 16"             | 2"        | 2 1/4"    | 3/8" | 3/8" |
| 10 Sch 60x | 21.0"         | 10 3/4"       | 1 1/2" | 17"             | 2 1/4"    | 2 1/2"    | 3/8" | 1/2" |
| 10 Sch 80  | 21.0"         | 10 3/4"       | 2 1/8" | 17"             | 2 1/2"    | 2 3/4"    | 3/8" | 1/4" |
| 12 Sch 20  | 24.0"         | 12 3/4"       | 1 1/2" | 19"             | 2"        | 2 1/4"    | 3/8" | 1/4" |
| 12 Sch 30  | 24.0"         | 12 3/4"       | 1 1/2" | 19"             | 2 1/4"    | 2 1/2"    | 1/2" | 3/8" |
| 12 Sch s   | 24.0"         | 12 3/4"       | 1 3/8" | 19"             | 2 1/4"    | 2 1/2"    | 3/8" | 3/8" |
| 12 Sch 40  | 25.0"         | 12 3/4"       | 1 1/2" | 20"             | 2 1/4"    | 2 1/2"    | 3/8" | 3/8" |
| 12 Sch x   | 25.0"         | 12 3/4"       | 2 1/8" | 20"             | 2 1/2"    | 2 3/4"    | 3/8" | 1/2" |
| 12 Sch 60  | 25.0"         | 12 3/4"       | 2 1/4" | 20"             | 2 3/4"    | 3"        | 1/2" | 1/4" |
| 12 Sch 80  | 25.0"         | 12 3/4"       | 2 1/4" | 20"             | 2 3/4"    | 3"        | 1"   | 3/8" |
| 14 Sch 10  | 25.0"         | 14"           | 1 3/8" | 20"             | 2"        | 2 1/4"    | 3/8" | 1/4" |
| 14 Sch 20  | 25.0"         | 14"           | 1 3/8" | 20"             | 2 1/4"    | 2 1/2"    | 1/2" | 3/8" |
| 14 Sch 30s | 27.0"         | 14"           | 1 1/2" | 22"             | 2 1/4"    | 2 1/2"    | 3/8" | 3/8" |
| 14 Sch 40  | 27.0"         | 14"           | 2 1/8" | 22"             | 2 1/2"    | 2 3/4"    | 3/8" | 3/8" |
| 16 Sch 10  | 27.0"         | 16"           | 1 3/8" | 22"             | 2 1/4"    | 2 1/2"    | 3/8" | 1/4" |
| 16 Sch 30s | 29.0"         | 16"           | 2 1/8" | 23 1/2"         | 2 1/2"    | 2 3/4"    | 3/8" | 3/8" |
| 16 Sch 40x | 29.0"         | 16"           | 2 3/8" | 23 1/2"         | 3"        | 3 1/4"    | 1/2" | 3/8" |
| 18 Sch 10  | 30.0"         | 18"           | 1 3/8" | 24 1/2"         | 2 1/4"    | 2 1/2"    | 1/2" | 1/4" |
| 18 Sch 20  | 30.0"         | 18"           | 2 1/8" | 24 1/2"         | 2 3/4"    | 3"        | 1/2" | 3/8" |
| 18 Sch x   | 32.0"         | 18"           | 2 3/8" | 26"             | 3"        | 3 1/4"    | 3/8" | 1/2" |
| 20 Sch 30x | 33.0"         | 20"           | 2 3/8" | 28"             | 3 1/4"    | 3 1/4"    | 3/8" | 1/2" |



| CHORD DIAM. | DEVELOPED LENGTH | DIMENSIONS |        |        |        |         |         | BOLT LENGTH |
|-------------|------------------|------------|--------|--------|--------|---------|---------|-------------|
|             |                  | A          | B      | C      | D      | G       | H       |             |
| 3           | 10 5/8"          | 1 1/2"     | 1/2"   | 1 1/2" | 7"     | 5 1/2"  | 4 3/8"  | 4"          |
| 4           | 11 1/2"          | 2 1/4"     | 3/2"   | 2 3/2" | 1 1/2" | 6 3/16" | 5 3/16" | 5"          |
| 5           | 12 3/8"          | 2 3/8"     | 1 3/2" | 2 3/2" | 7"     | 7 1/4"  | 5 7/16" | 5"          |
| 6           | 13 7/16"         | 3"         | 3 1/2" | 2 7/2" | 5"     | 8 1/2"  | 6 3/16" | 6"          |
| 8           | 16 1/8"          | 4 1/2"     | 1 3/2" | 2 7/2" | 3 1/2" | 10 3/8" | 8 1/2"  | 7"          |

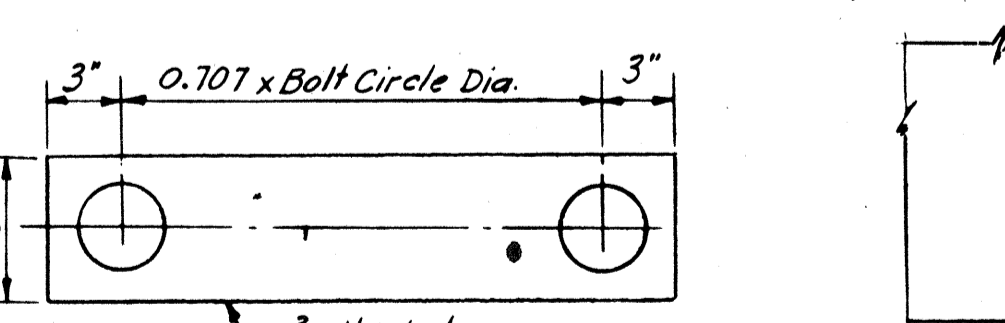


| BOLT DIA. | BOLT LENGTH | P   |
|-----------|-------------|-----|
| 1 3/8"    | 4'-1"       | 7"  |
| 1 1/2"    | 4'-5"       | 8"  |
| 1 3/4"    | 5'-0"       | 8"  |
| 2"        | 5'-9"       | 9"  |
| 2 1/4"    | 6'-5"       | 9"  |
| 2 1/2"    | 7'-1"       | 9"  |
| 2 3/4"    | 7'-9"       | 10" |
| 3"        | 8'-5"       | 10" |
| 3 1/4"    | 9'-1"       | 11" |

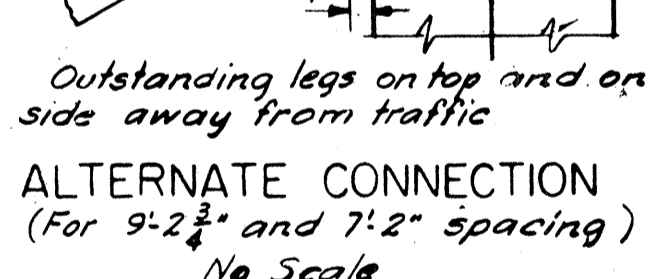


| P         | DIAGONALS **    |                 | WELD LENGTH A+B |
|-----------|-----------------|-----------------|-----------------|
|           | PIPE SIZE       | ANGLE SIZE      |                 |
| 5'-2"     | 2 1/2" Sch. 40s | (Do not use)    | 6"              |
| 7'-2"     | 2 1/2" Sch. 40S | 4' x 4' x 1/4"  | 6"              |
| 9'-2 3/8" | 3" Sch. 40s     | 5' x 5' x 5/16" | 7"              |

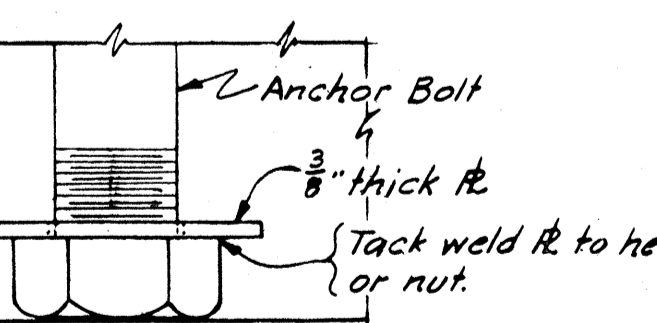
\*\* Use pipe when assembly is to be single dip galvanized.  
Use welded angles when assembly is to be double dip galvanized.  
Use bolted angles only when assembly cannot be double dip galvanized.



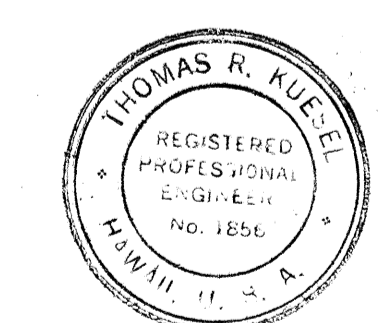
ANCHOR PLATE DETAIL  
No Scale  
To be used with rectangular footings when nominal bolt length exceeds height of pedestal plus (\"P\"-3\").



ALTERNATE CONNECTION  
(For 9'-2 3/8\"/>



DETAIL OF ANCHOR BOLT WITH PLATE  
No Scale



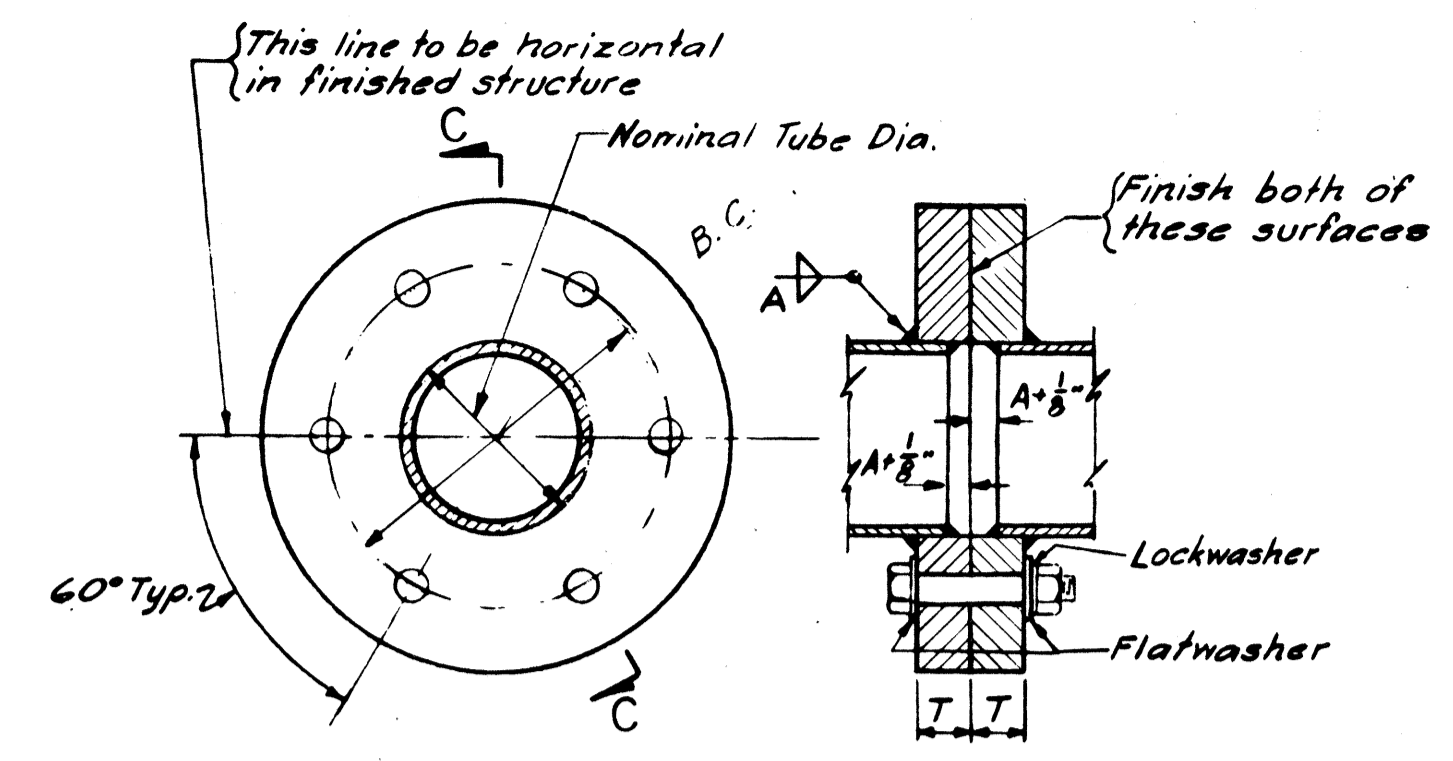
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

BASES & CONNECTION  
DETAILS

INTERSTATE ROUTE H-1  
PROJECT NO. I-H-11(100)13

SCALE: AS SHOWN DATE: DEC. 29, 1975  
SHEET No. 127 OF 22 SHEETS

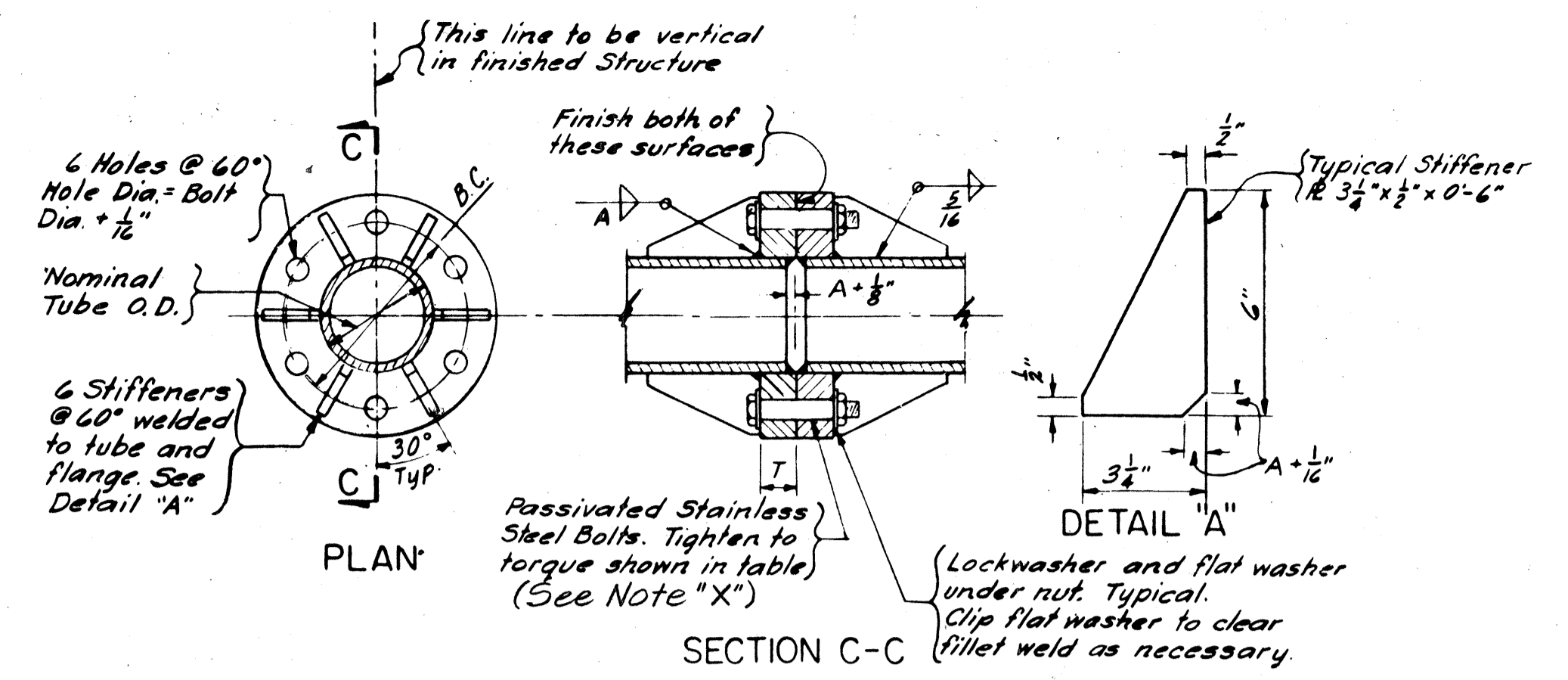
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 ORIGINAL PLAN: [ ]  
 NOTE BOOK: [ ]



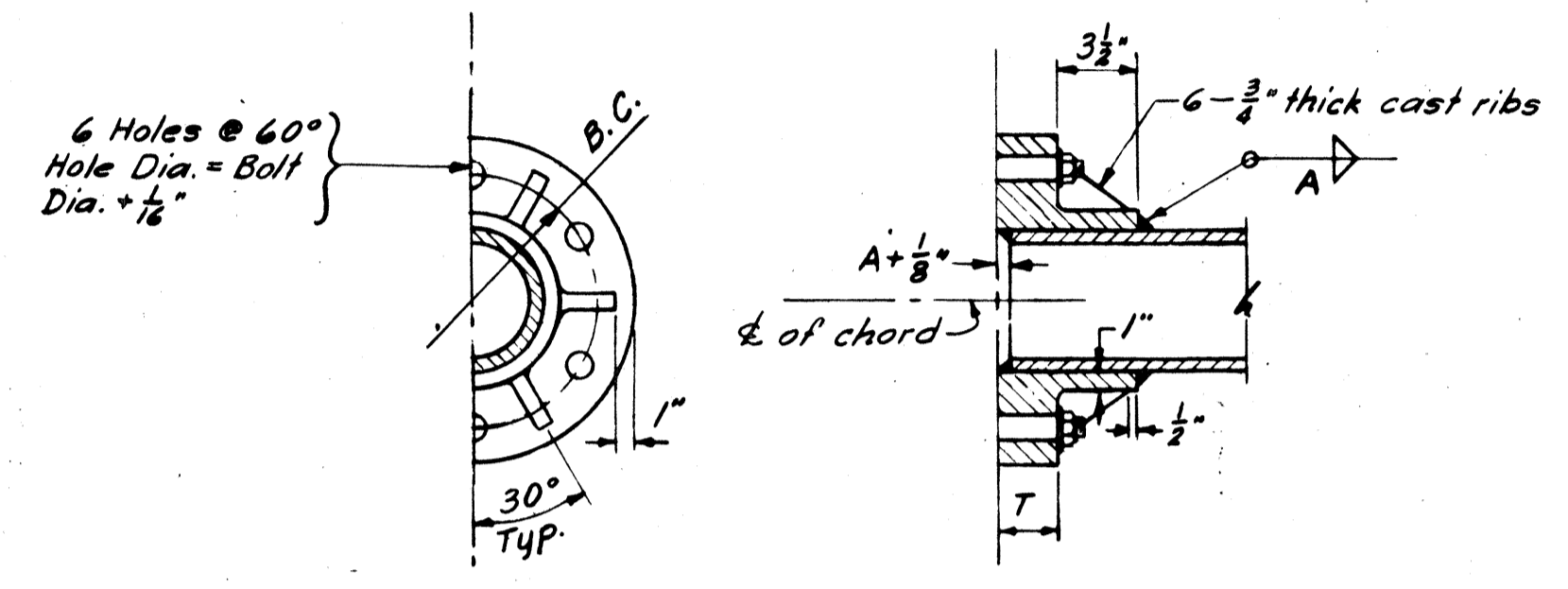
PLAN SECTION C-C  
**TYPE A FLANGE CONNECTION**  
 Scale: 3"=1'-0"  
 All bolts are Passivated Stainless Steel  
 (See Note "X")

| CHORD SIZE | FLANGE |         |        | BOLT DIA. | BOLT CIRCLE | BOLT TORQUE FT. LBS. |
|------------|--------|---------|--------|-----------|-------------|----------------------|
|            | "A"    | O.D.    | "T"*   |           |             |                      |
| 3" x 3/16" | 3/16"  | 7"      | 7/8"   | 1/2"      | 5"          | 100                  |
| 3" x 1/4"  | 1/4"   | 7"      | 7/8"   | 1/2"      | 5"          | 100                  |
| 3" x 5/16" | 5/16"  | 7"      | 7/8"   | 1/2"      | 5"          | 100                  |
| 4" x 1/4"  | 1/4"   | 8 1/2"  | 7/8"   | 5/8"      | 6 1/2"      | 150                  |
| 4" x 5/16" | 5/16"  | 8 1/2"  | 7/8"   | 5/8"      | 6 1/2"      | 150                  |
| 4" x 3/8"  | 3/8"   | 8 1/2"  | 7/8"   | 5/8"      | 6 1/2"      | 150                  |
| 5" x 5/16" | 5/16"  | 9 1/2"  | 1"     | 5/8"      | 7 1/2"      | 150                  |
| 5" x 3/8"  | 3/8"   | 9 1/2"  | 1"     | 5/8"      | 7 1/2"      | 150                  |
| 6" x 1/4"  | 1/4"   | 11 1/2" | 1 1/4" | 3/4"      | 9"          | 200                  |
| 6" x 5/16" | 5/16"  | 11 1/2" | 1 1/4" | 3/4"      | 9"          | 200                  |
| 6" x 3/8"  | 3/8"   | 11 1/2" | 1 1/4" | 3/4"      | 9"          | 200                  |
| 8" x 1/4"  | 1/4"   | 13 1/2" | 1 1/4" | 3/4"      | 11"         | 200                  |
| 8" x 5/16" | 5/16"  | 13 1/2" | 1 1/4" | 3/4"      | 11"         | 200                  |
| 8" x 3/8"  | 3/8"   | 13 1/2" | 1 1/4" | 3/4"      | 11"         | 200                  |

\* Cast flanges may be used. All dimensions will be the same except that the thickness "T" shall be 1/4" greater in each case.



PLAN SECTION C-C  
**TYPE B FLANGE CONNECTION FABRICATED**  
 Not to Scale

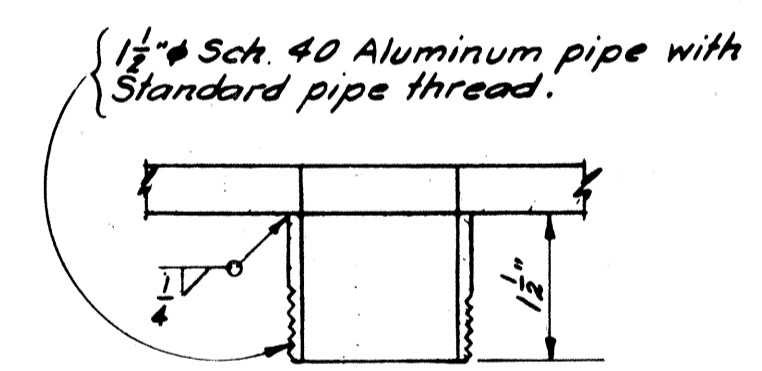


PLAN SECTION C-C  
**TYPE B FLANGE CONNECTION CAST**  
 Not to Scale

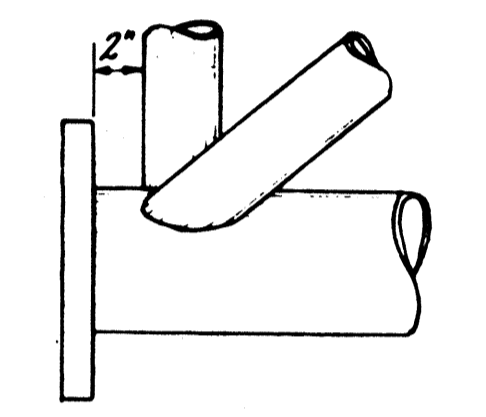
|                   | CHORD SIZE | FLANGE |         |        | BOLT DIA. | BOLT CIRCLE | BOLT TORQUE FT. LBS. |
|-------------------|------------|--------|---------|--------|-----------|-------------|----------------------|
|                   |            | A      | O.D.    | T      |           |             |                      |
| FABRICATED FLANGE | 5" x 1/2"  | 3/8"   | 10 1/2" | 1"     | 3/4"      | 8"          | 75                   |
|                   | 6" x 1/2"  | 3/8"   | 11 1/2" | 1 1/4" | 3/4"      | 9"          | 75                   |
|                   | 8" x 1/2"  | 3/8"   | 13 1/2" | 1 1/4" | 3/8"      | 11"         | 75                   |
|                   | 8" x 5/8"  | 1/2"   | 13 1/2" | 1 1/4" | 1"        | 11"         | 100                  |
| CAST FLANGE       | 8" x 3/4"  | 3/8"   | 13 1/2" | 1 1/4" | 1"        | 11"         | 150                  |
|                   | 5" x 1/2"  | 1/2"   | 13"     | 1 1/4" | 3/4"      | 10"         | 100                  |
|                   | 6" x 1/2"  | 1/2"   | 14"     | 1 1/2" | 3/4"      | 11"         | 100                  |
|                   | 8" x 1/2"  | 1/2"   | 16"     | 1 1/2" | 7/8"      | 13"         | 100                  |
| 8" x 5/8"         | 5/8"       | 16"    | 1 1/2"  | 1"     | 13"       | 150         |                      |
| 8" x 3/4"         | 3/4"       | 16"    | 1 1/2"  | 1"     | 13"       | 200         |                      |

**NOTE "X"**

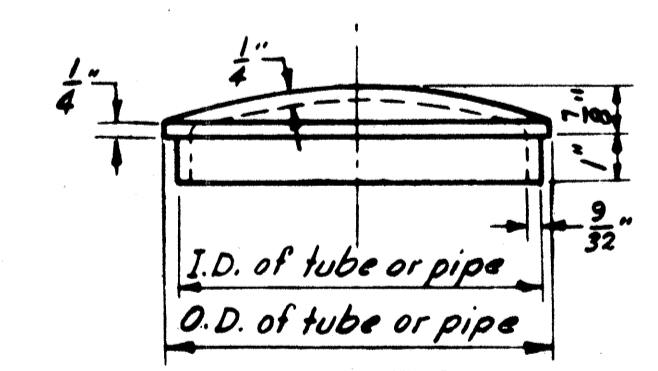
Stainless steel bolts shall conform to the Standard Specification for Alloy-Steel Bolting Materials for High Temperature Service, ASTM Designation A193, current edition, Type B6 (AISI Type 410 with a minimum yield of 85000 psi). Nuts shall conform to the Standard Specification for Carbon and Alloy Steel Nuts for High-Pressure and High-Temperature Service, ASTM Designation A194, current edition, Type 6 (AISI Type 416). Flat washers and lock washers shall conform to the Standard Specification for Corrosion-Resisting Chromium-Nickel Steel Plate, Sheet and Strip, ASTM Designation A167, current edition, Type 304. After heat treatment all stainless steel hardware must be descaled and cleaned to conform to ASTM Designation A380-57, Descaling and Cleaning Stainless Steel Surfaces, and then passivated.



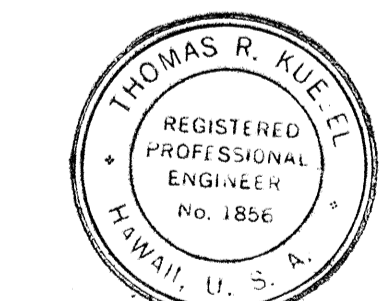
**WIRE INLET DETAIL FOR TRUSS OR CHORD**  
 Scale: Half Size



**TYPICAL CONNECTION AT FLANGE**  
 No Scale



**ELEVATION CAP FOR ARMS**  
 No Scale



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**FLANGE CONNECTIONS**

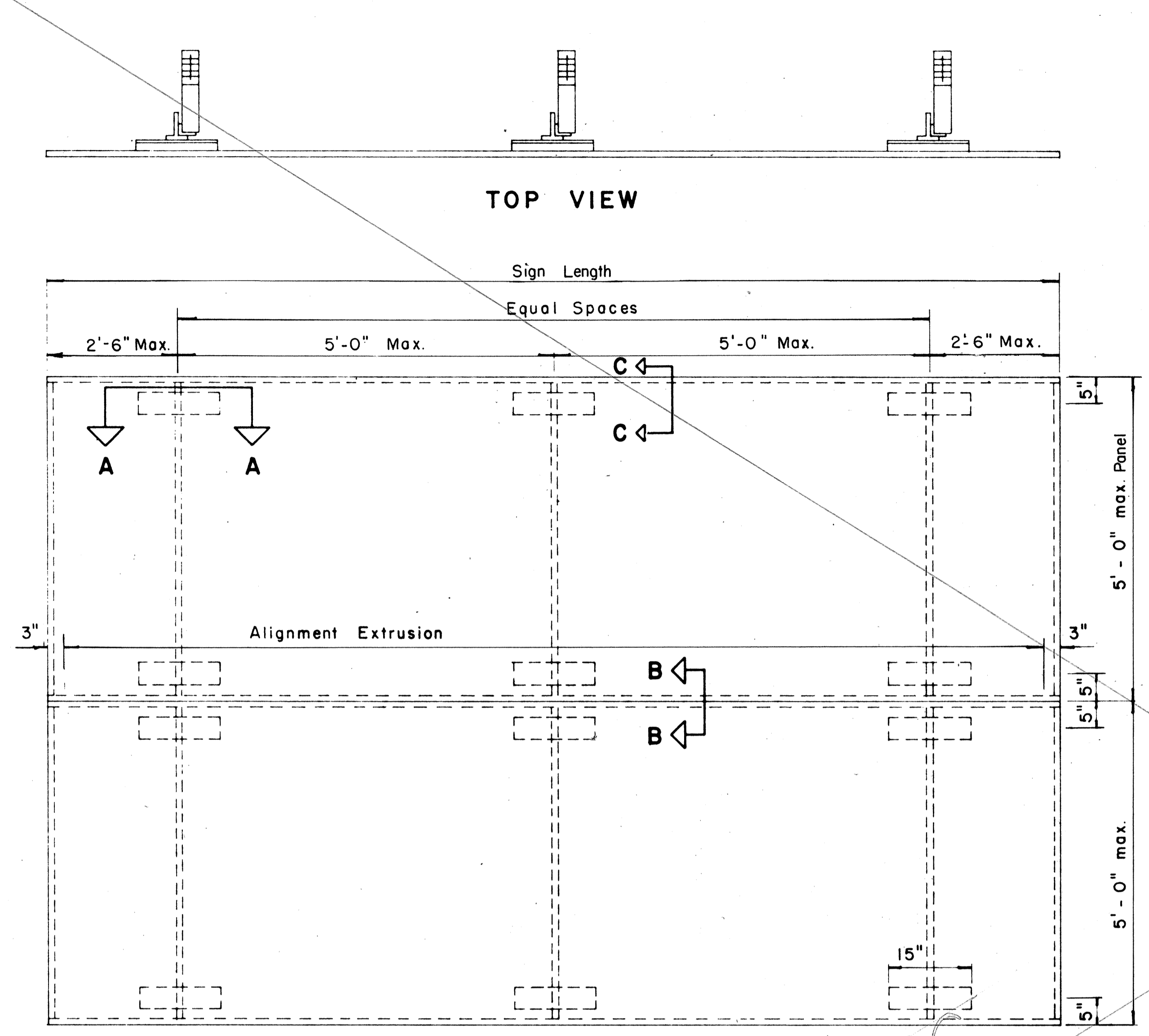
INTERSTATE ROUTE H-1  
 PROJECT NO. I-HI-1(109)13

SCALE: AS SHOWN DATE: DEC. 29, 1972

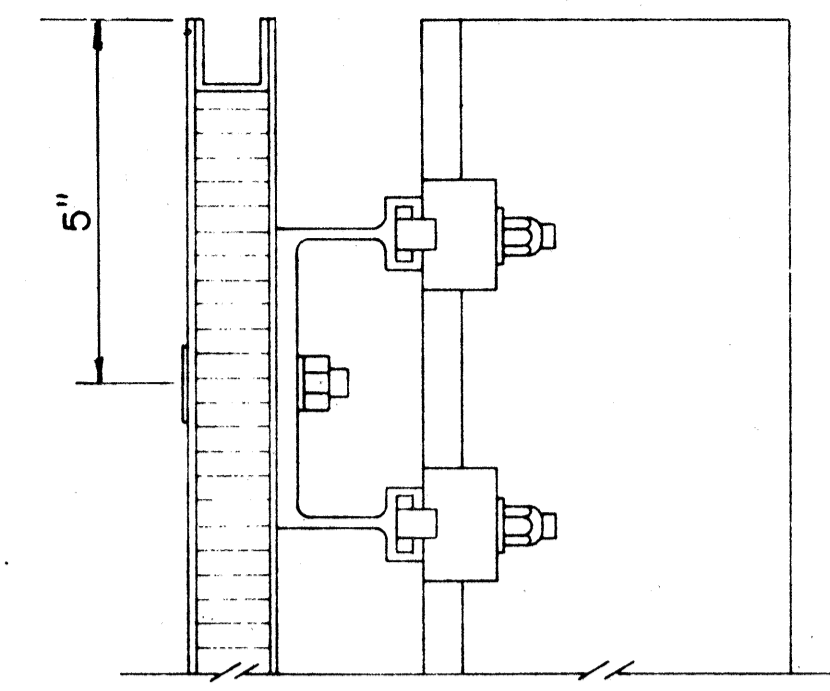
**SHEET No. 13T OF 22 SHEETS**

|                   |         |
|-------------------|---------|
| DATE              | 7/10/75 |
| ORIGINAL PLAN     |         |
| NO. BOOK          |         |
| CHECKED BY        |         |
| QUANTITIES BY     |         |
| DRAWN BY          |         |
| TRACED BY         |         |
| SURVEY PLOTTED BY |         |

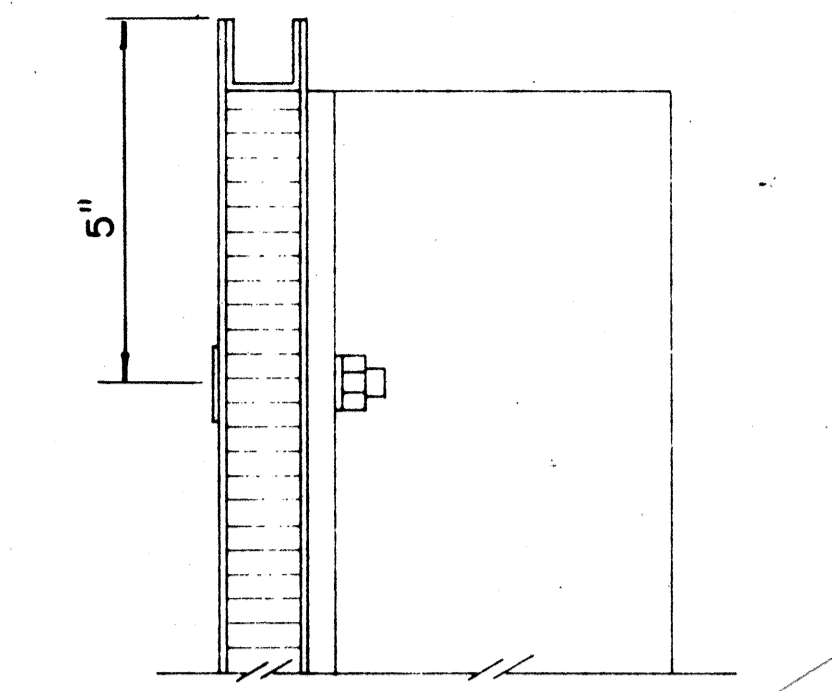
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 441-1(00)13        | 1975        | 65        | 130          |



**TYPICAL SIGN ASSEMBLY**  
Scale:  $\frac{3}{4}$ " = 1' - 0"

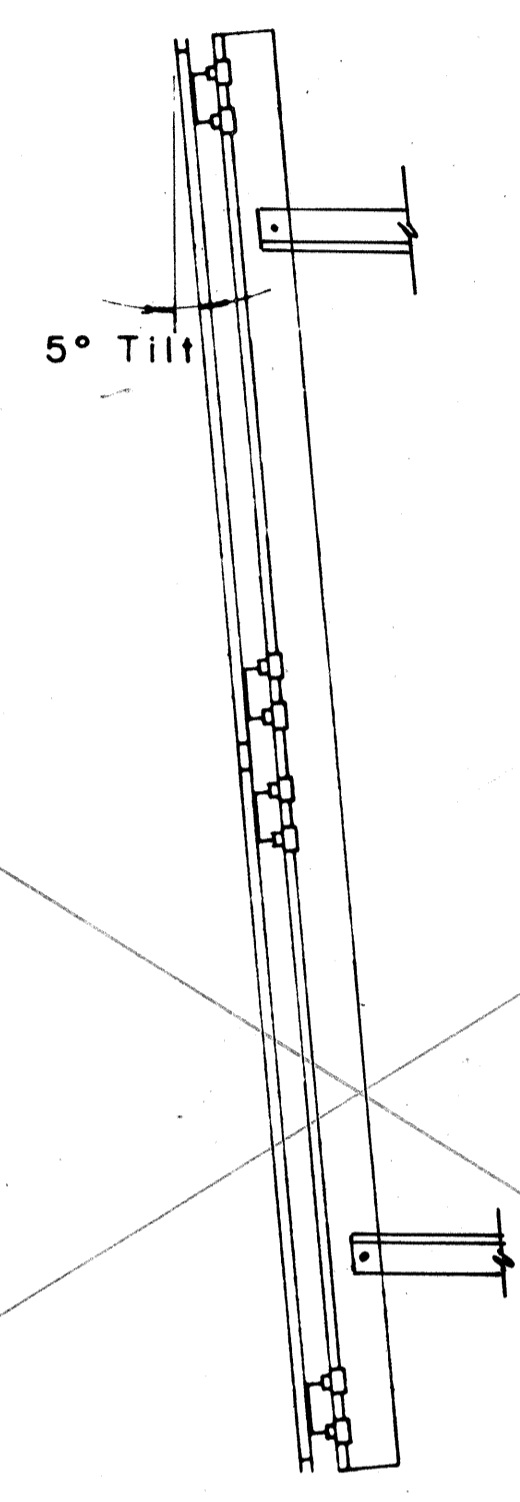


**SECTION "C-C"**  
Scale:  $\frac{3}{8}$ " = 1"

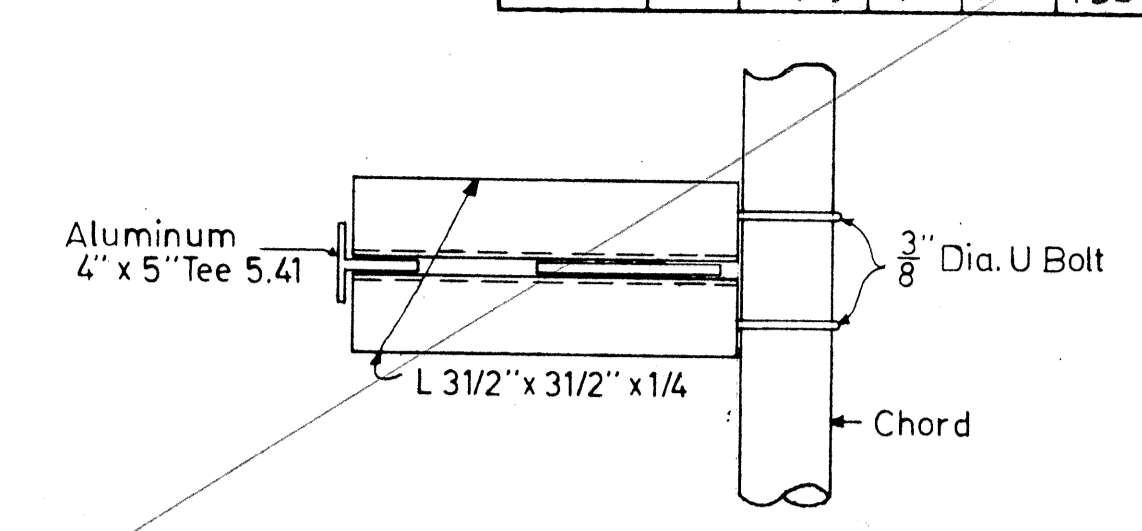


**SECTION "C-C" (Alternate)**  
Scale:  $\frac{3}{8}$ " = 1"

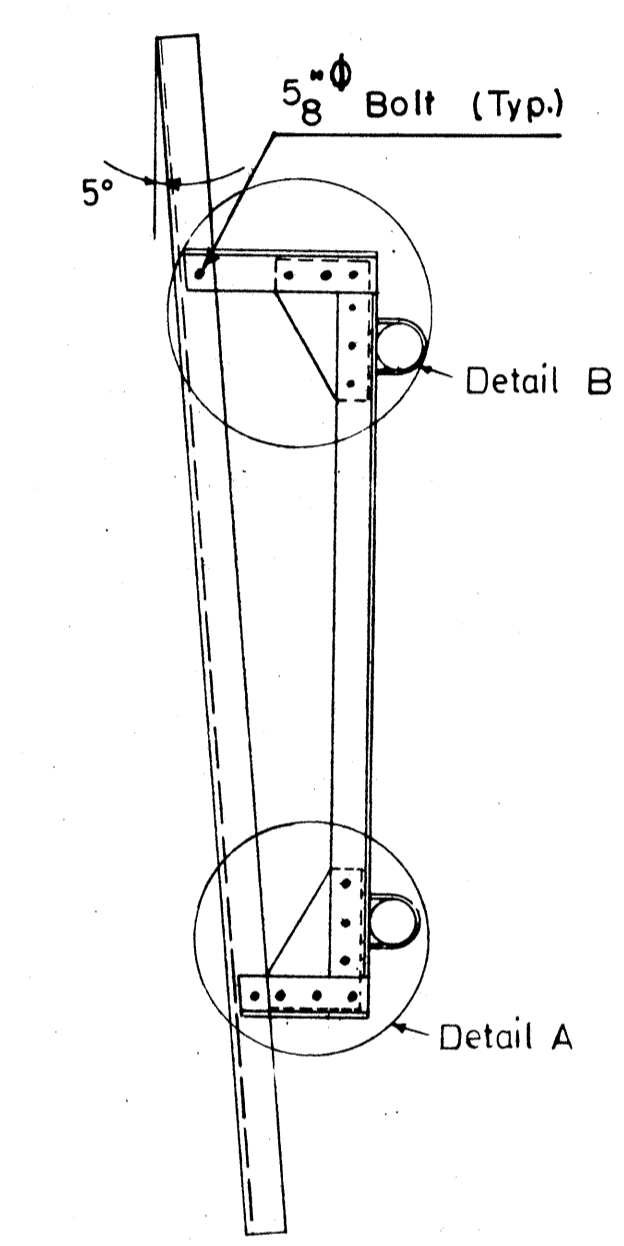
NOTE:  $\frac{3}{8}$ " Dia. "U" Bolts to be Stainless Steel with hex nuts and washers.  
 $\frac{5}{8}$ " Bolts to be Stainless Steel with Nuts and Lock Washers.



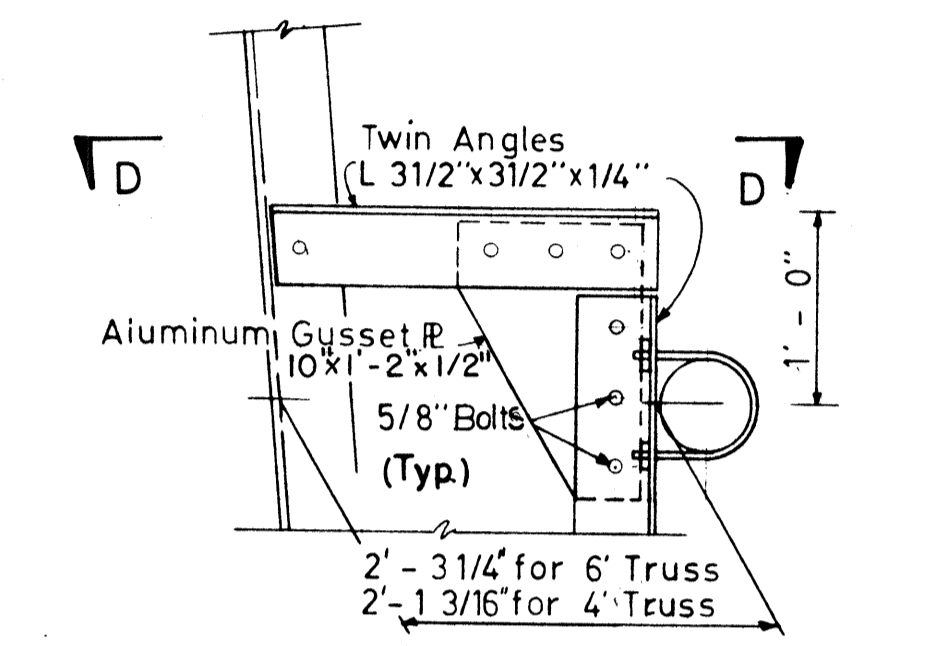
**SIDE VIEW**



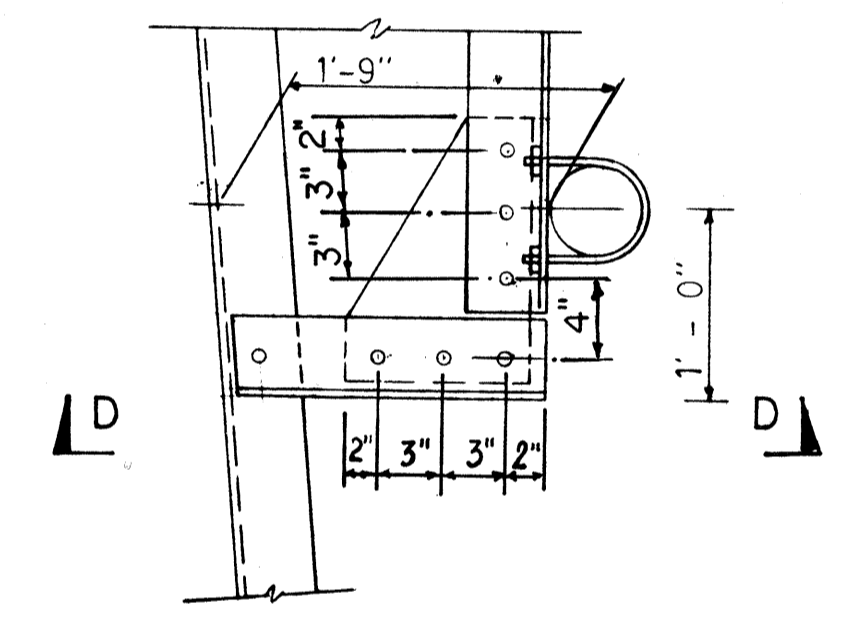
**SECTION D-D**  
Scale: 1" = 1' - 0"



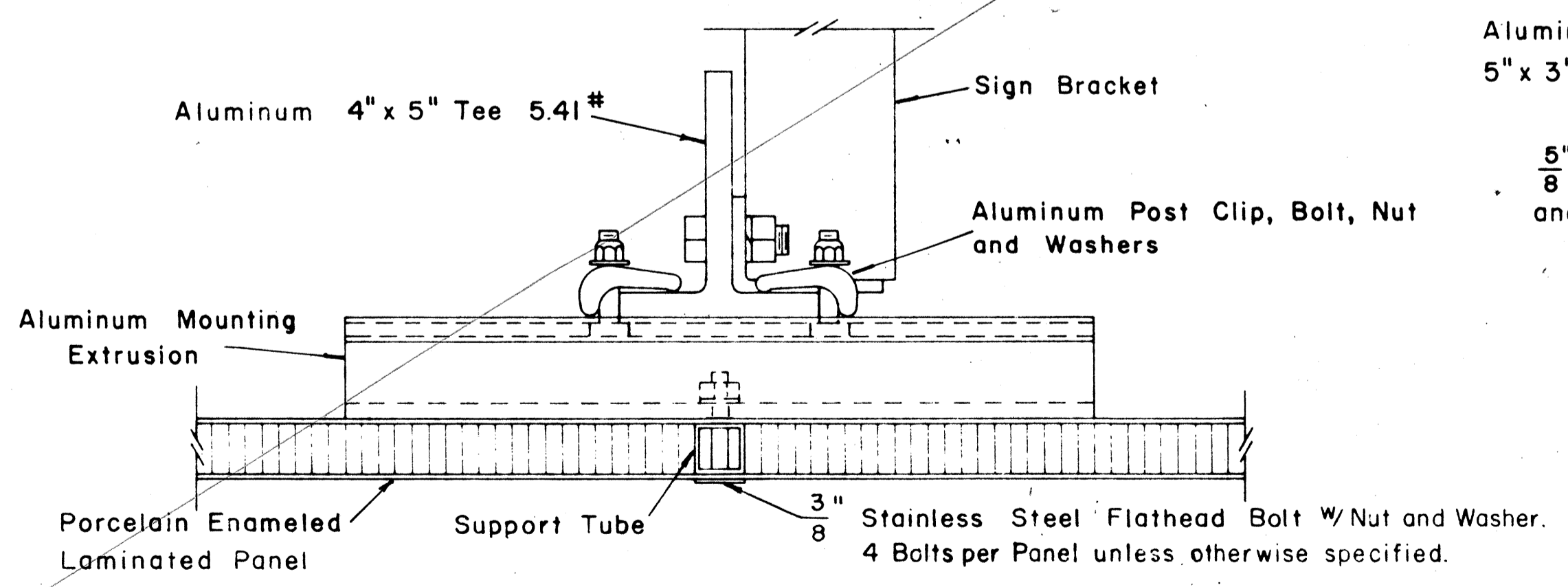
**FRONT MOUNTING**  
Scale:  $\frac{1}{2}$ " = 1' - 0"



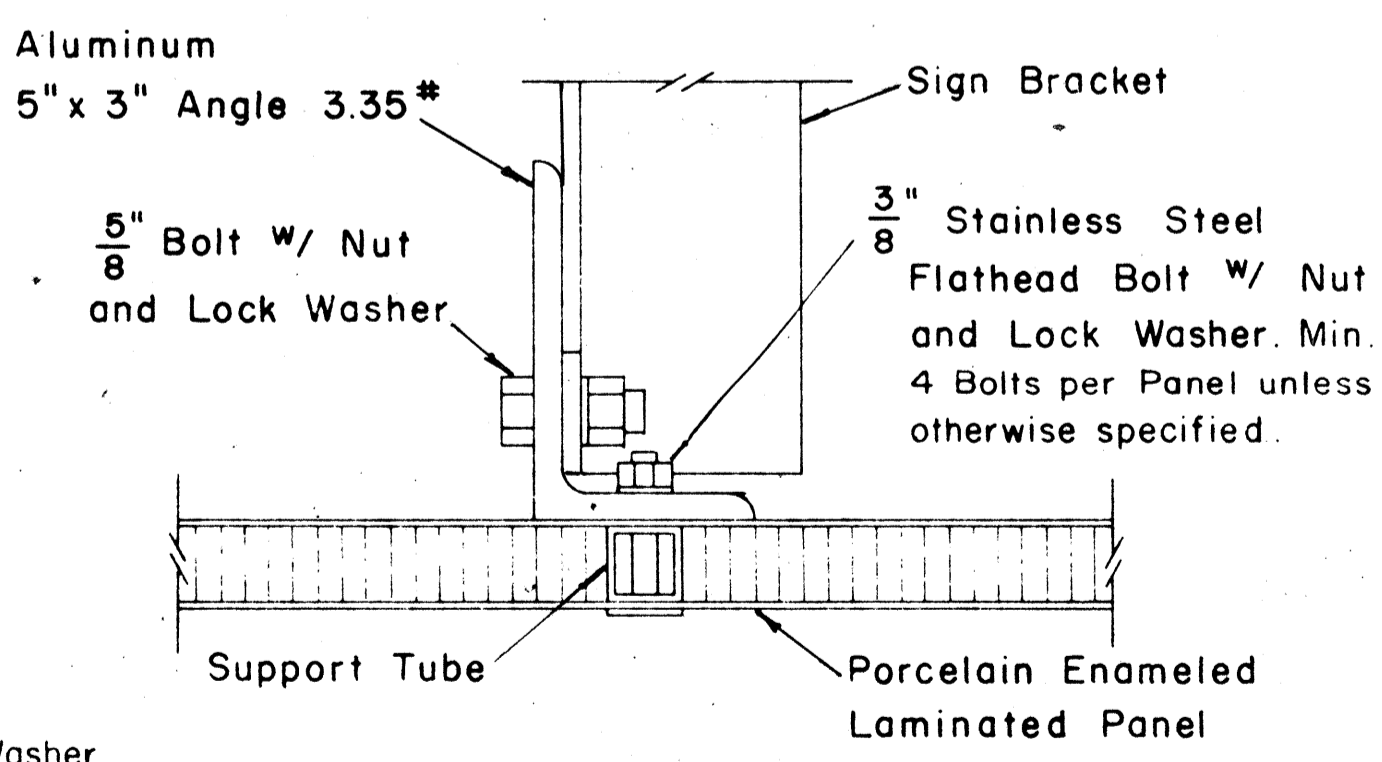
**DETAIL B**  
Not to Scale



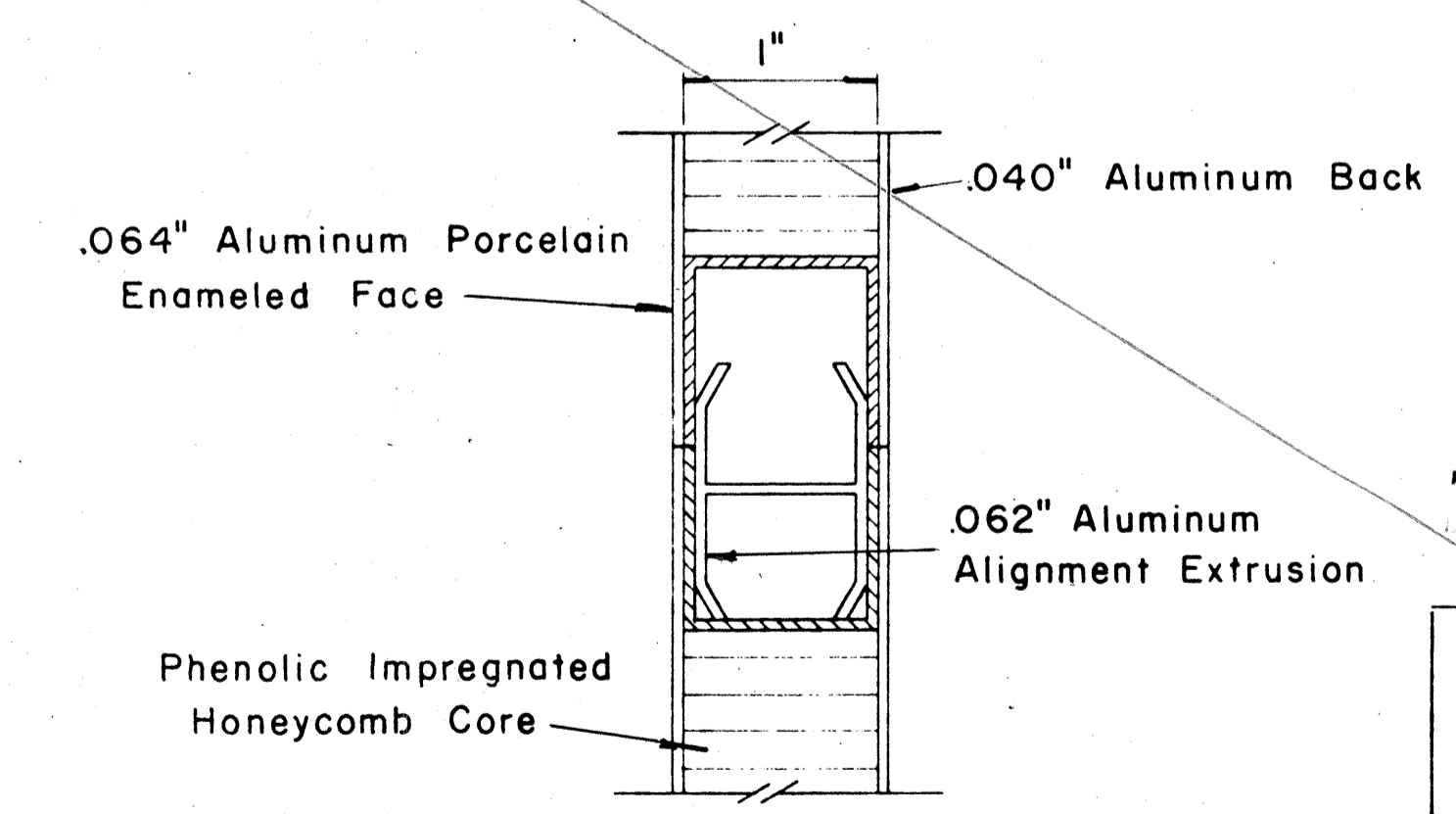
**DETAIL A**  
Not to Scale



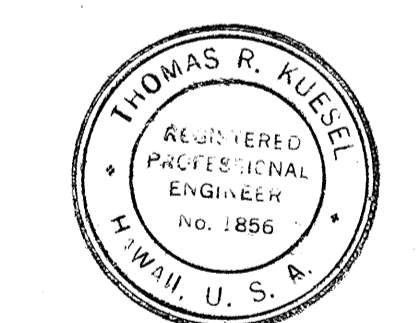
**SECTION "A-A"**  
Scale:  $\frac{3}{8}$ " = 1"



**SECTION "A-A" (Alternate)**  
Scale:  $\frac{3}{8}$ " = 1"



**CLOSURE DETAIL SECTION "B-B"**  
FULL SCALE



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DETAILS**  
LAMINATED ALUMINUM  
SIGN PANELS  
(OVERHEAD)

Scale: As Shown DATE: DEC. 29, 1972

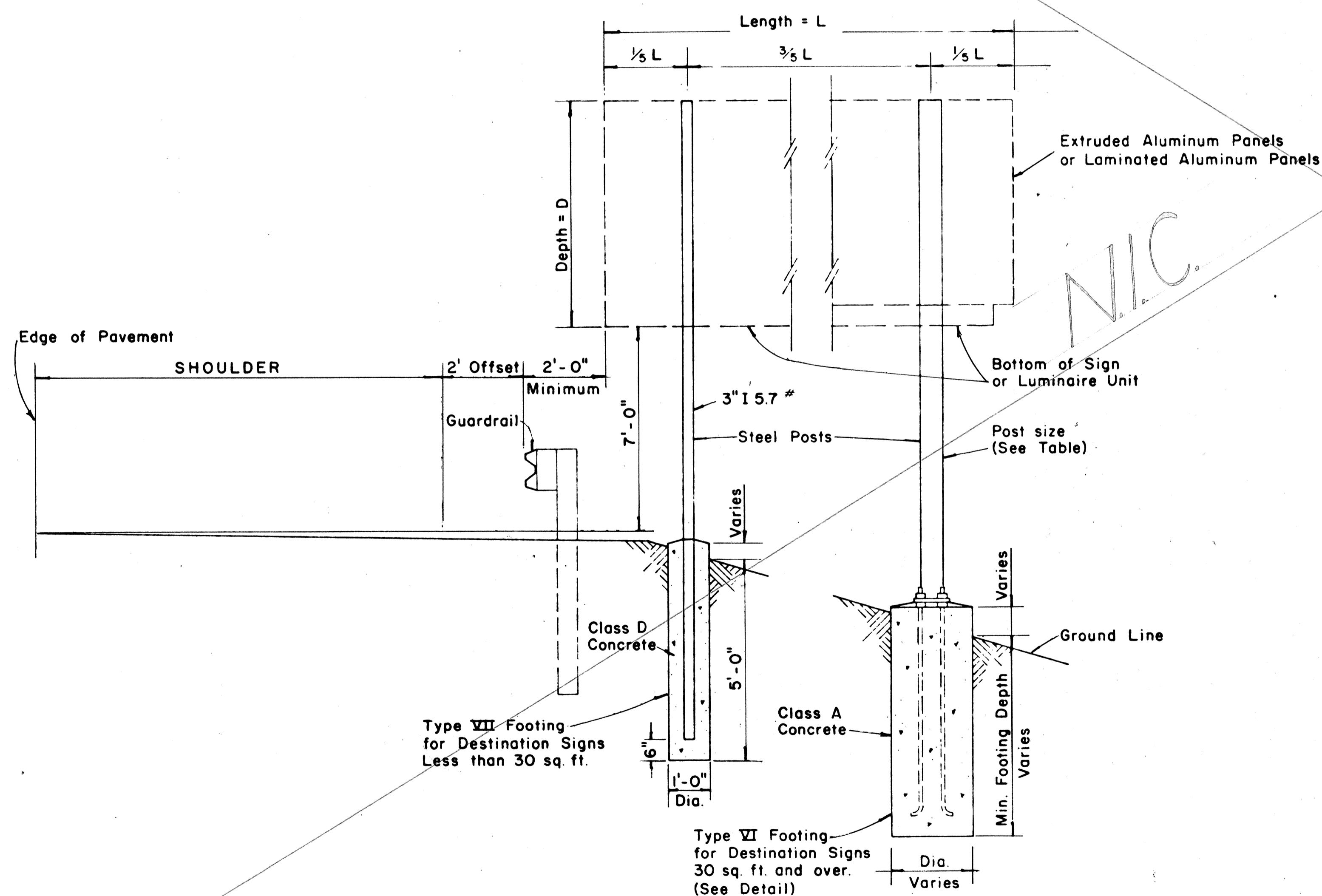
DATE: 7/10/72  
DRAWN BY: E. L. ...  
CHECKED BY: J. ...



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | IHI-1009-13        | 1975        | 67        | 130          |

\* For moment calculations only. Post shall be from top of foundation to top of sign.  
 \*\* For fills with side slopes flatter than 4:1, Minimum Footing Depth shall be 4½ feet.

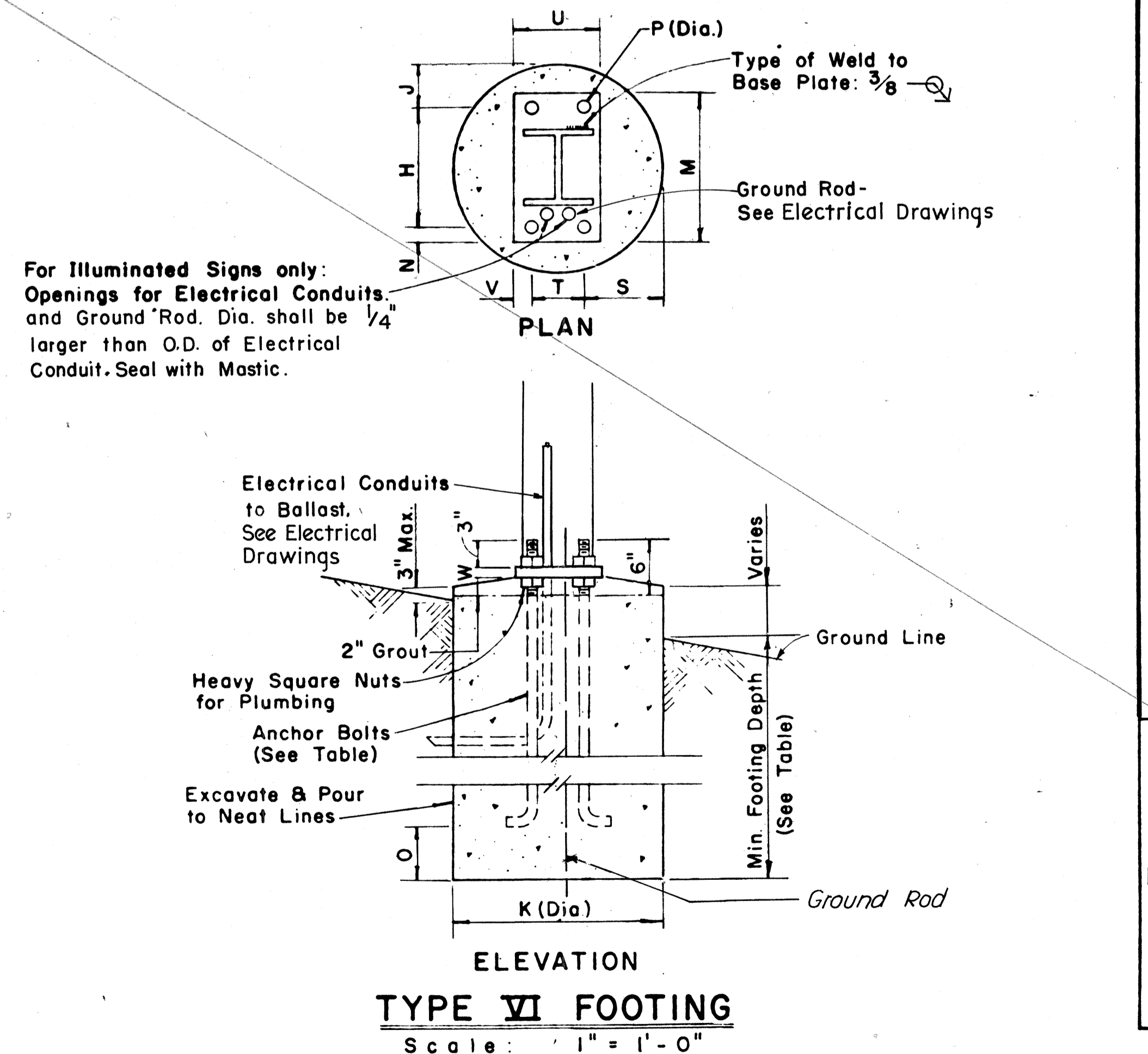
| POST SIZE | MAXIMUM SIGN AREA | POST HEIGHT TOP OF FOUNDATION TO CENTER OF SIGN * | DIMENSIONS |     |     |      |     |    |     |      |     |     |     |    |      | ANCHOR BOLT DIA. | MINIMUM FOOTING DEPTH |  |
|-----------|-------------------|---|------------|-----|-----|------|-----|----|-----|------|-----|-----|-----|----|------|------------------|-----------------------|--|
|           |                   |   | H          | J   | K   | M    | N   | O  | P   | S    | T   | U   | V   | W  | CUT  |                  | FILL**                |  |
| 8 J 10    | 50 sq. ft.        | 14'   | 14"        | 5"  | 24" | 17¼" | 1⅝" | 6" | 1¼" | 9"   | 6"  | 10" | 2"  | 1" | 1⅛"Ø | 4½'              | 4½'                   |  |
| 8 WF 24   | 90 sq. ft.        | 21'   |            |     |     |      |     |    |     |      |     |     |     |    |      |                  | 5'                    |  |
| 8 WF 35   | 190 sq. ft.       | 15'   | 16½"       | 6¾" | 30" | 20"  | 1¾" | 6" | 1¾" | 11¾" | 6½" | 10" | 1¾" | 1" | 1¼"Ø | 6'               | 7'                    |  |
| 10 WF 45  | 190 sq. ft.       | 25'   |            |     |     |      |     |    |     |      |     |     |     |    |      |                  |                       |  |
| 10 WF 45  | 200 sq. ft.       | 25'   |            |     |     |      |     |    |     |      |     |     |     |    |      |                  |                       |  |
| 12 WF 50  | 230 sq. ft.       | 25'   |            |     |     |      |     |    |     |      |     |     |     |    |      | 7'               |                       |  |
| 12 WF 50  | 250 sq. ft.       | 23'   |            |     |     |      |     |    |     |      |     |     |     |    |      |                  |                       |  |



TYPICAL DESTINATION & GROUND MOUNTED EXPRESSWAY SIGN

Not to Scale

20

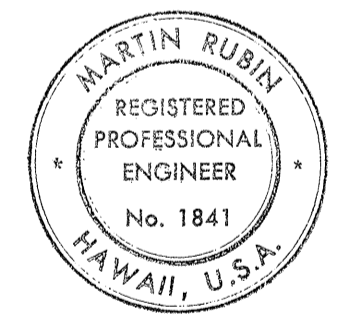


For Illuminated Signs only:  
 Openings for Electrical Conduits, and Ground Rod, Dia. shall be ¼" larger than O.D. of Electrical Conduit. Seal with Mastic.

TYPE VI FOOTING

Scale: 1" = 1'-0"

SURVEY PLOTTED BY: DATE: 7/22/75  
 DRAWN BY: DESIGNED BY: CHECKED BY:  
 NOTE BOOK: QUANTITIES BY: No.:



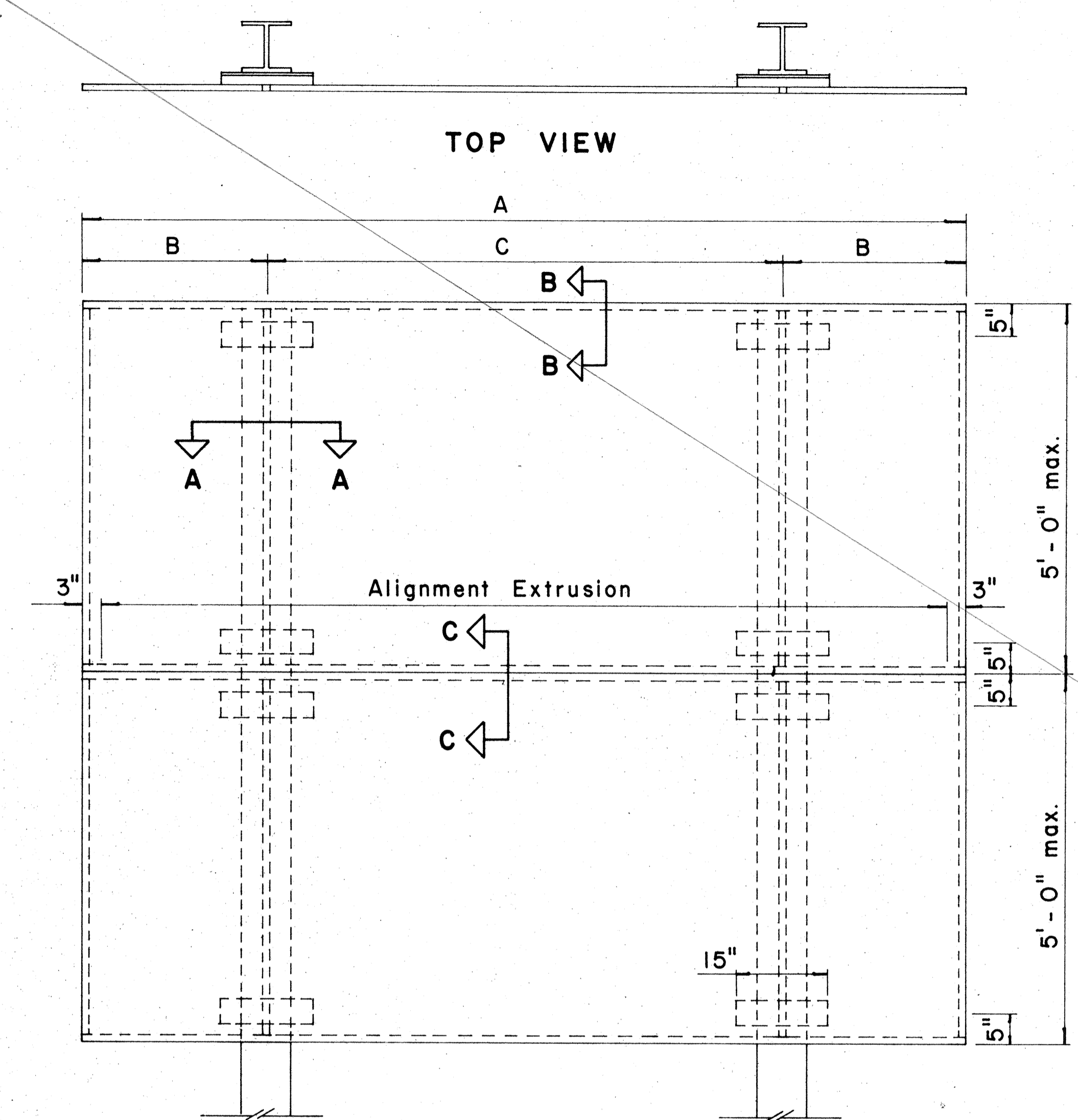
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION  
 Martin Rubin

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
 DESTINATION & GROUND MOUNTED EXPRESSWAY SIGNS  
 Scale: As Shown Date: Dec. 29, 1972  
 SHEET No. 67 OF 22 SHEETS

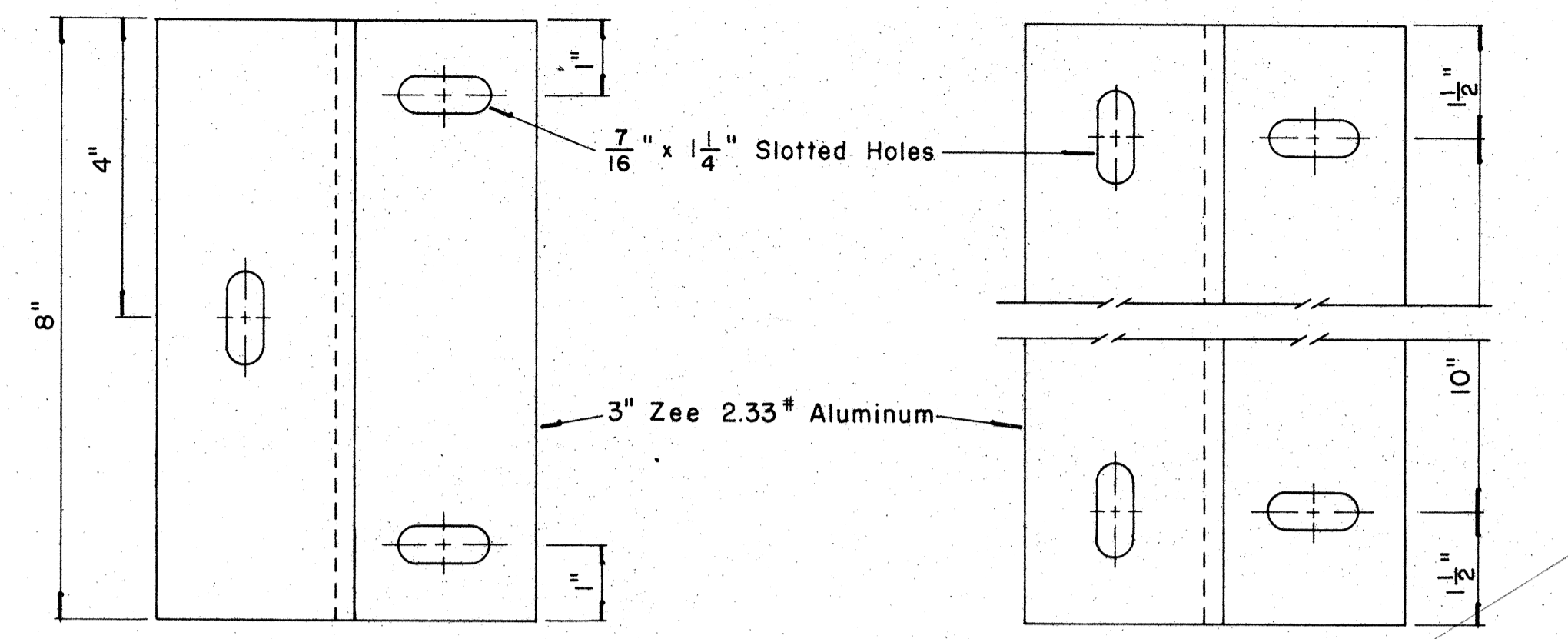
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(09)-13      | 1975        | 68        | 130          |

(GROUND MOUNTED SIGNS)  
SUPPORT SPACING TABLE

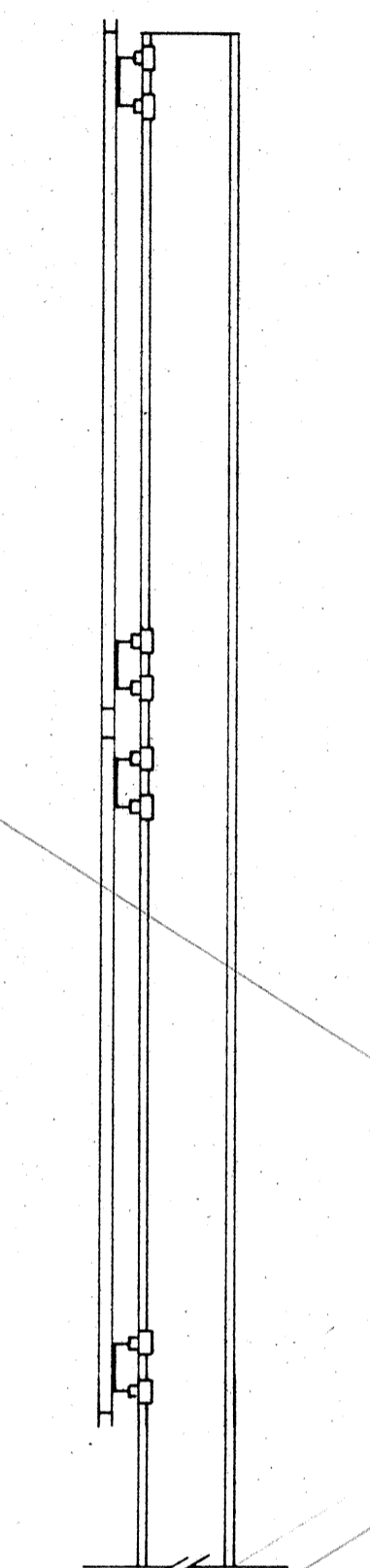
| PANEL THICK. | LENGTH OF SIGN | NO. OF SUPPORTS | OVERHANG | SUPPORT SPACING |
|--------------|----------------|-----------------|----------|-----------------|
|              | A              |                 | B        | C               |
| 1"           | 6'-0"          | 2               | 12"      | 48"             |
| 1"           | 6'-6"          | 2               | 15"      | 48"             |
| 1"           | 7'-0"          | 2               | 15"      | 54"             |
| 1"           | 7'-6"          | 2               | 18"      | 54"             |
| 1"           | 8'-0"          | 2               | 18"      | 60"             |
| 1"           | 8'-6"          | 2               | 20"      | 62"             |
| 1"           | 9'-0"          | 2               | 22"      | 64"             |
| 1"           | 9'-6"          | 2               | 23"      | 72"             |
| 1"           | 10'-0"         | 2               | 24"      | 72"             |
| 1"           | 10'-6"         | 2               | 24"      | 78"             |
| 1"           | 11'-0"         | 2               | 24"      | 84"             |
| 1"           | 11'-6"         | 2               | 27"      | 84"             |
| 1"           | 12'-0"         | 2               | 30"      | 84"             |
| 1"           | 12'-6"         | 2               | 30"      | 90"             |
| 1"           | 13'-0"         | 2               | 30"      | 96"             |
| 1"           | 13'-6"         | 2               | 30"      | 102"            |
| 1"           | 14'-0"         | 2               | 30"      | 108"            |
| 1"           | 14'-6"         | 2               | 36"      | 102"            |
| 1"           | 15'-0"         | 2               | 36"      | 108"            |
| 2.5"         | 15'-6"         | 2               | 36"      | 114"            |
| 2.5"         | 16'-0"         | 2               | 39"      | 114"            |
| 2.5"         | 16'-6"         | 2               | 39"      | 120"            |
| 2.5"         | 17'-0"         | 2               | 39"      | 126"            |
| 2.5"         | 17'-6"         | 2               | 42"      | 126"            |
| 2.5"         | 18'-0"         | 2               | 42"      | 132"            |
| 2.5"         | 18'-6"         | 2               | 45"      | 132"            |
| 2.5"         | 19'-0"         | 2               | 45"      | 138"            |
| 2.5"         | 19'-6"         | 2               | 45"      | 144"            |
| 2.5"         | 20'-0"         | 2               | 48"      | 144"            |
| 2.5"         | 20'-6"         | 2               | 48"      | 150"            |
| 2.5"         | 21'-0"         | 2               | 51"      | 150"            |
| 2.5"         | 21'-6"         | 2               | 51"      | 156"            |
| 2.5"         | 22'-0"         | 2               | 51"      | 162"            |
| 2.5"         | 22'-6"         | 2               | 54"      | 162"            |
| 2.5"         | 23'-0"         | 2               | 54"      | 168"            |
| 2.5"         | 23'-6"         | 2               | 54"      | 174"            |
| 2.5"         | 24'-0"         | 2               | 57"      | 174"            |



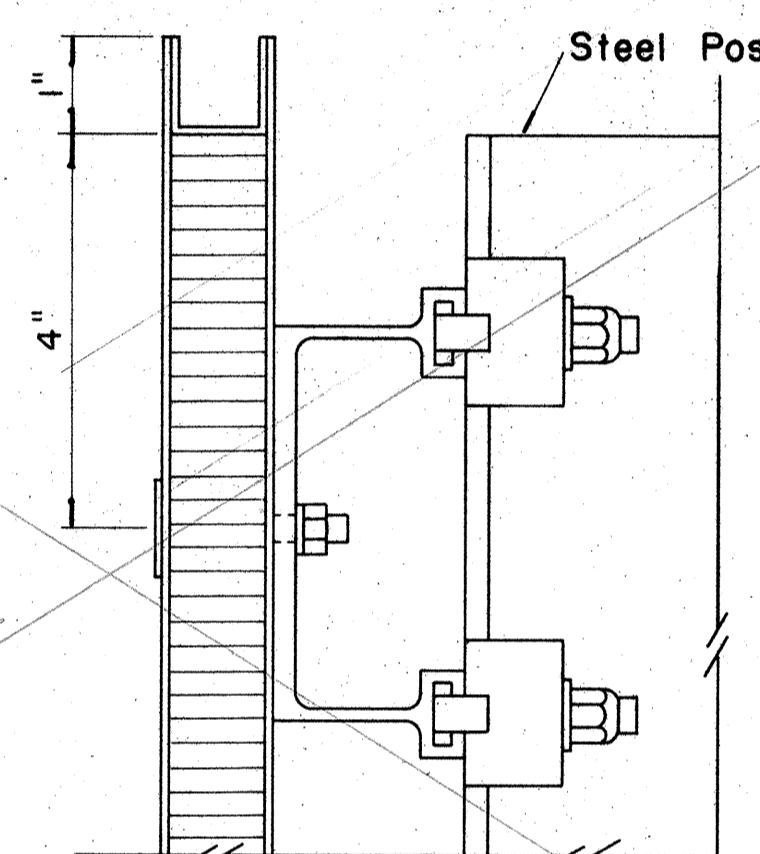
TYPICAL SIGN ASSEMBLY  
Scale:  $\frac{3}{4}$ " = 1'-0"



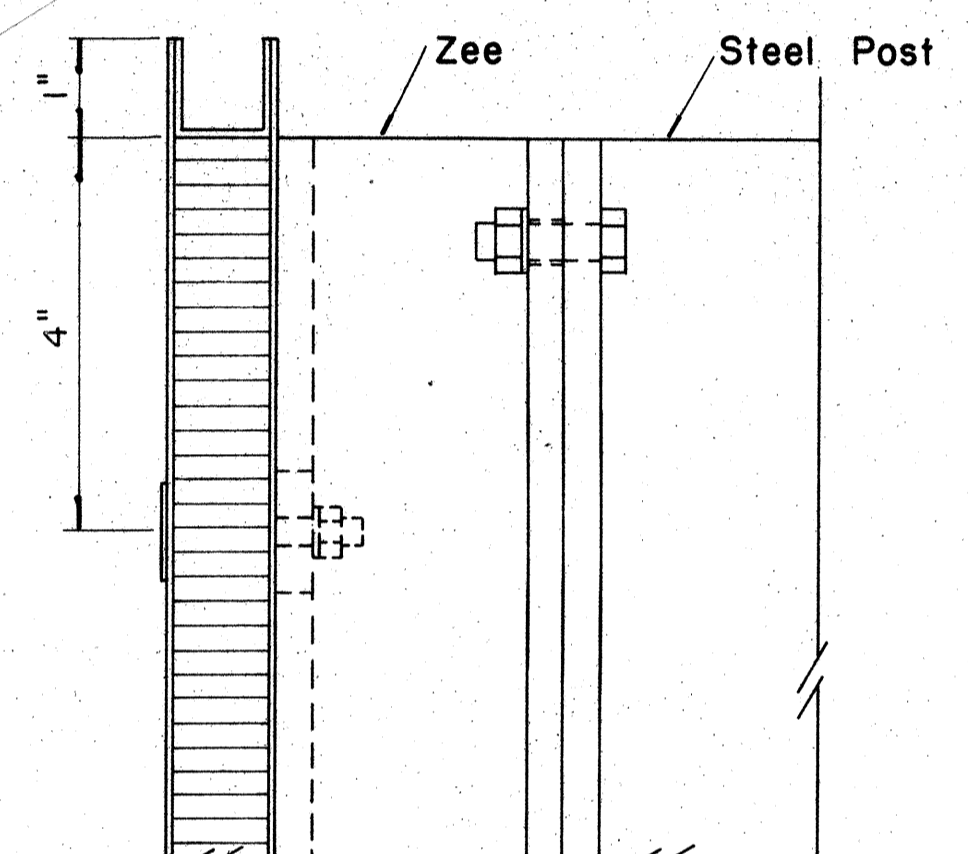
ZEE MOUNTING DETAILS  
Scale:  $\frac{1}{2}$ " = 1"



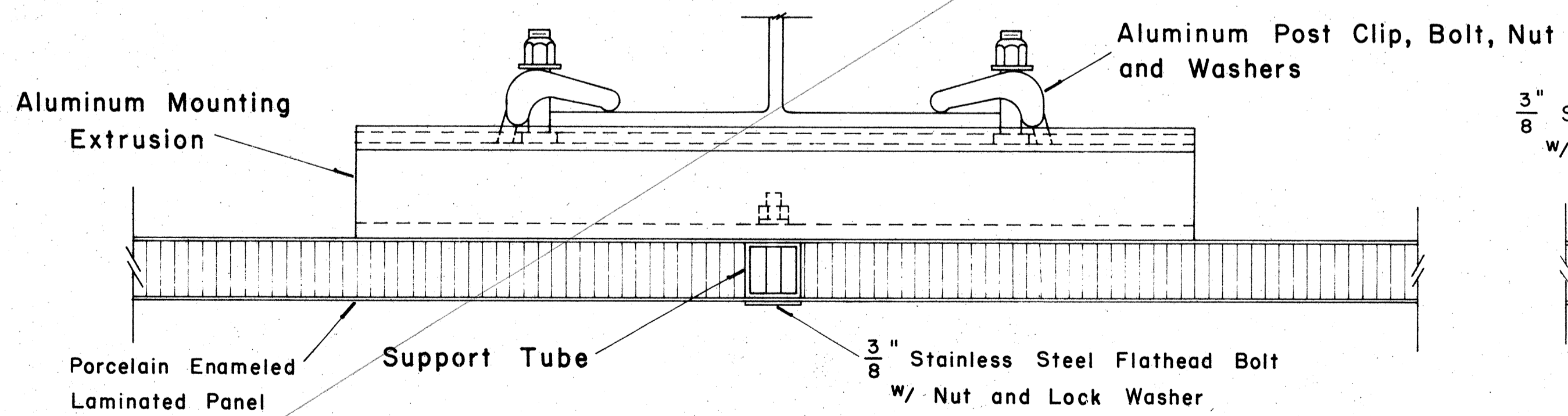
SIDE VIEW



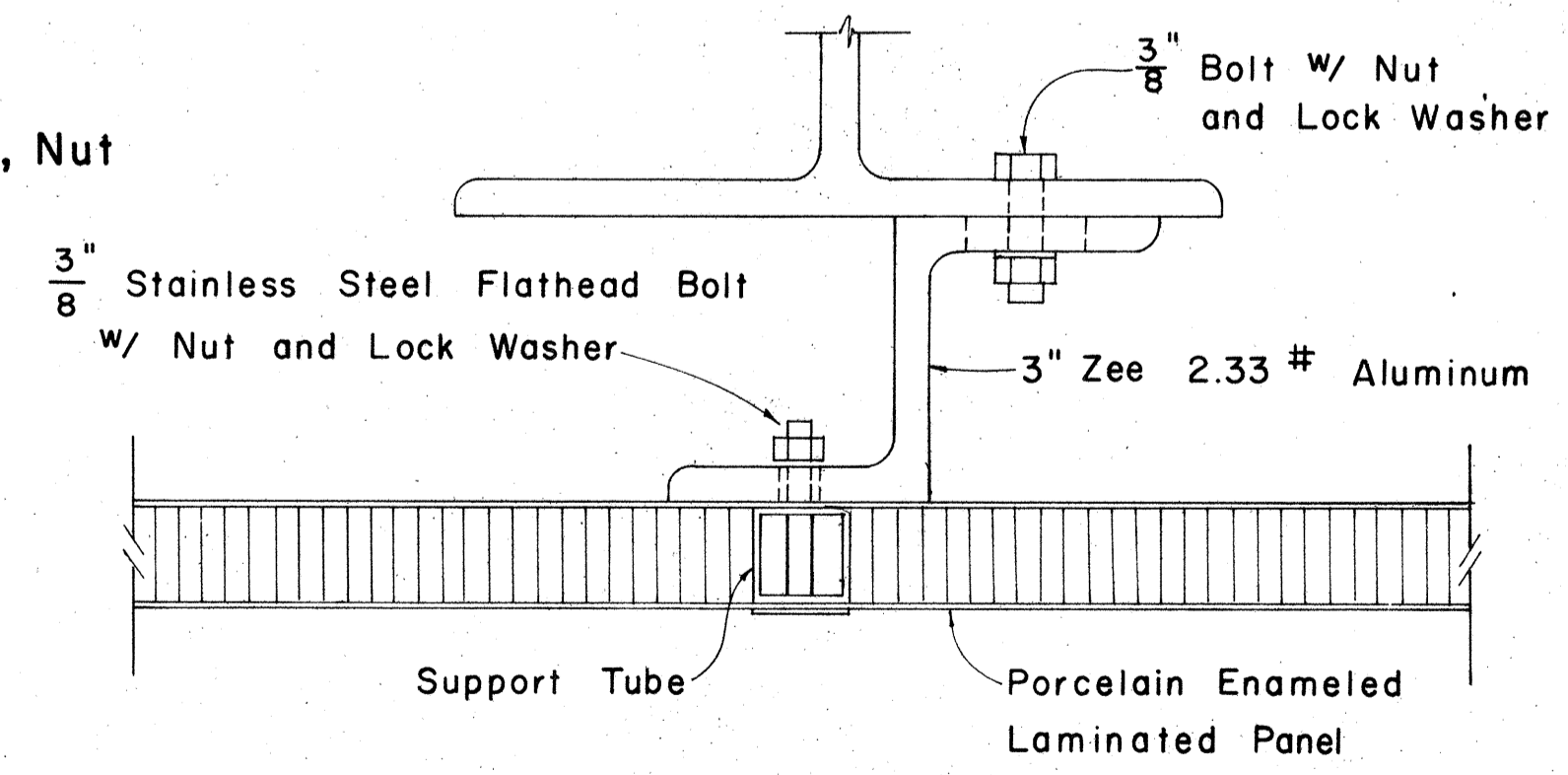
SECTION "B-B"  
Scale:  $\frac{1}{2}$ " = 1"



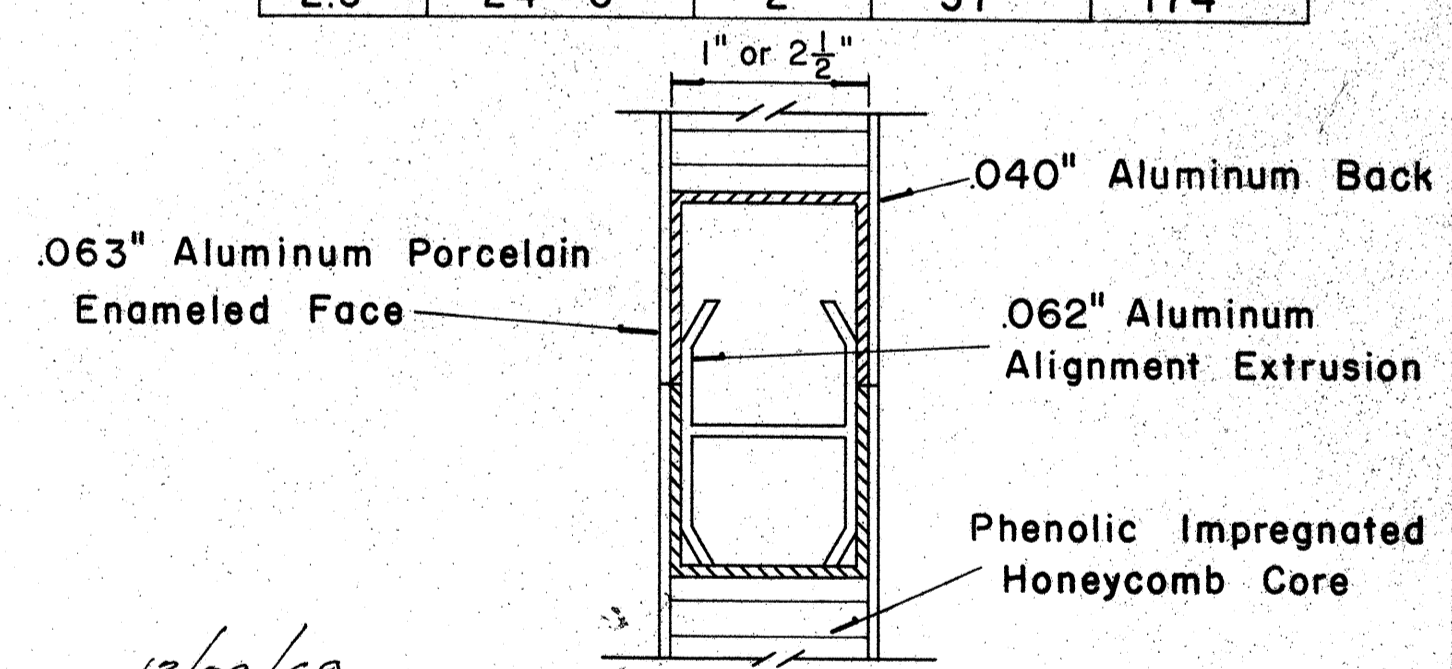
SECTION "B-B" (Alternate)  
Scale:  $\frac{1}{2}$ " = 1"



SECTION "A-A"  
Scale:  $\frac{1}{2}$ " = 1"



SECTION "A-A" (Alternate)  
Scale:  $\frac{1}{2}$ " = 1"



CLOSURE DETAIL SECTION "C-C"  
FULL SCALE

APPROVAL RECOMMENDED:  
*Eiichi Tanaka*  
TRAFFIC ENGINEER  
12/29/69  
DATE

APPROVED:  
*John J. [Signature]*  
ASSISTANT CHIEF, ENGINEERING  
12-30-69  
DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

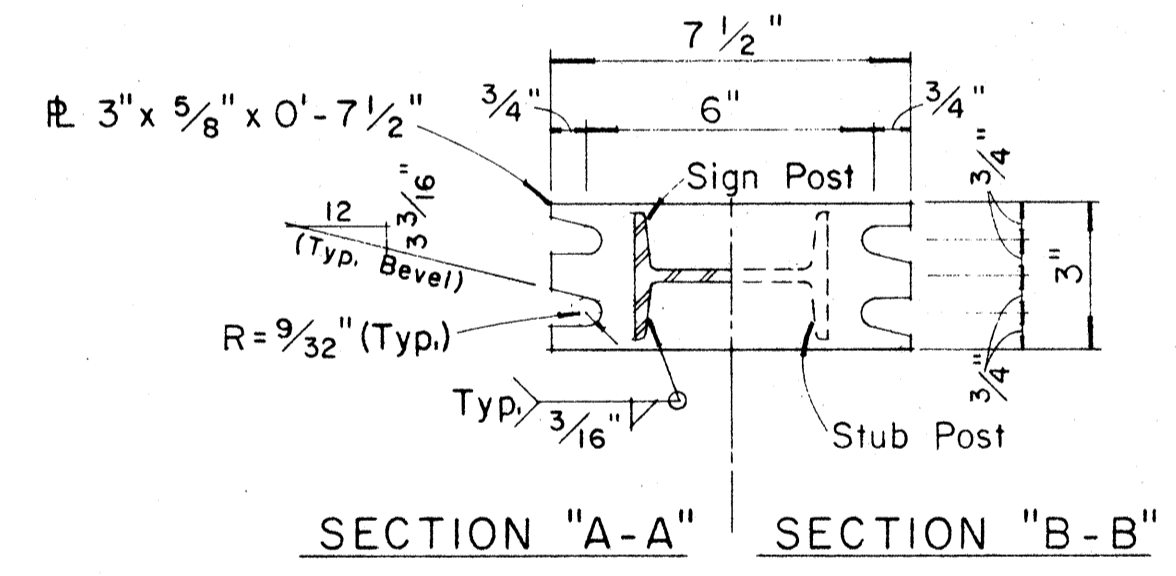
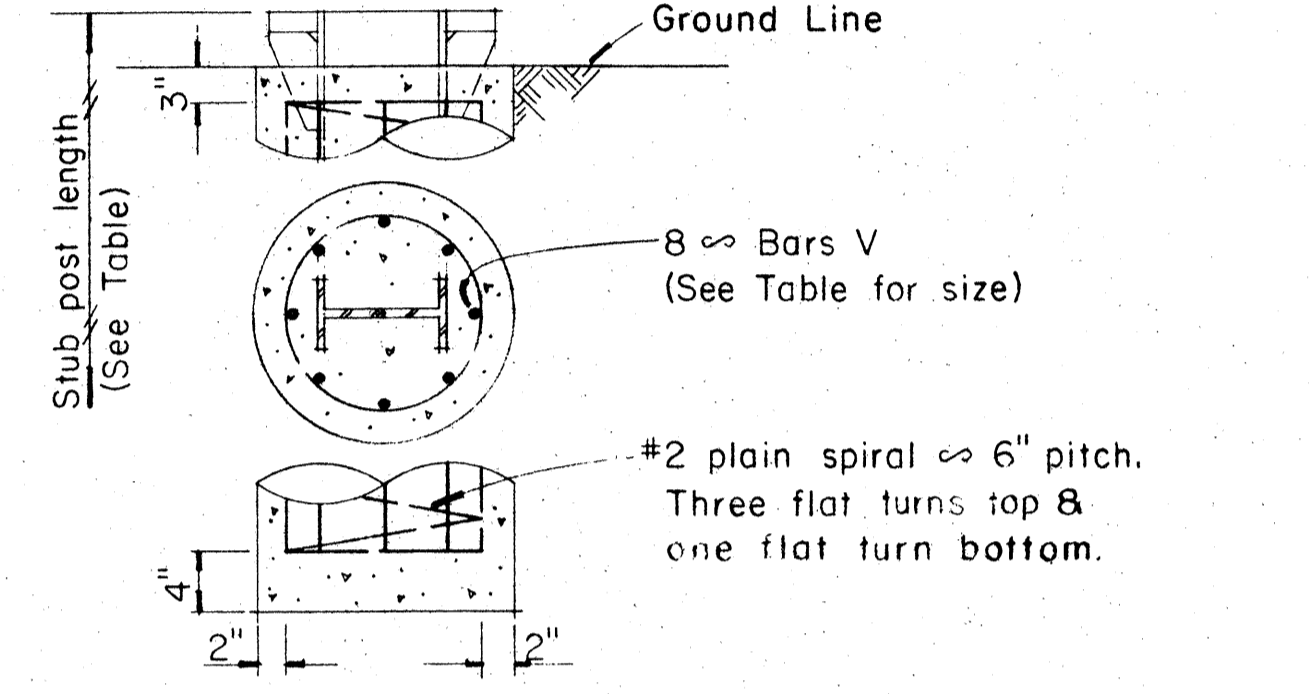
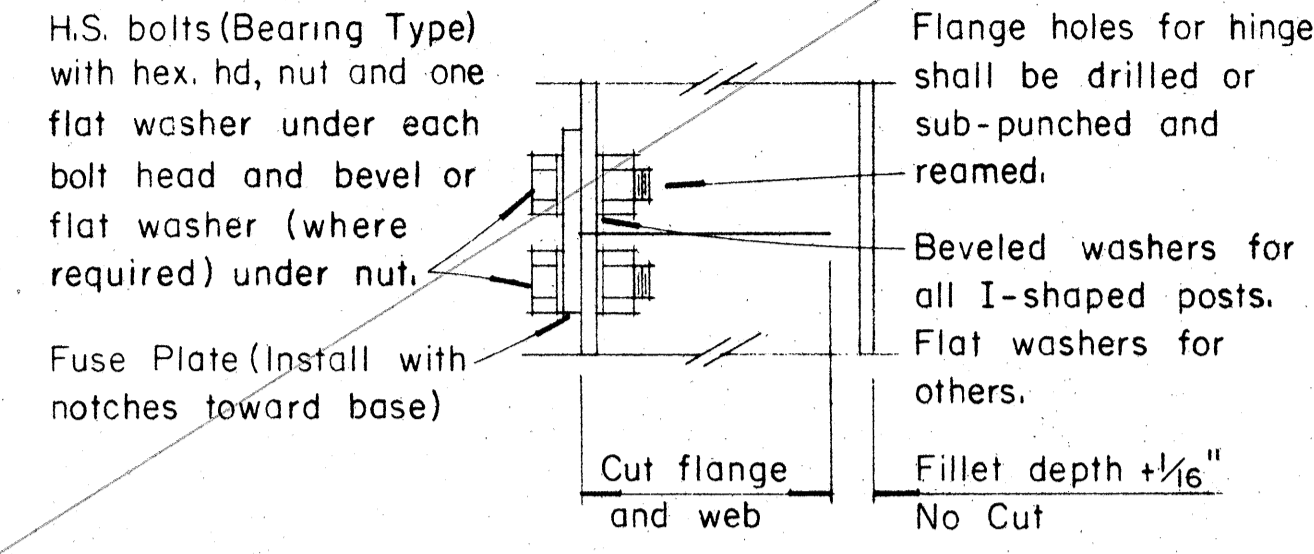
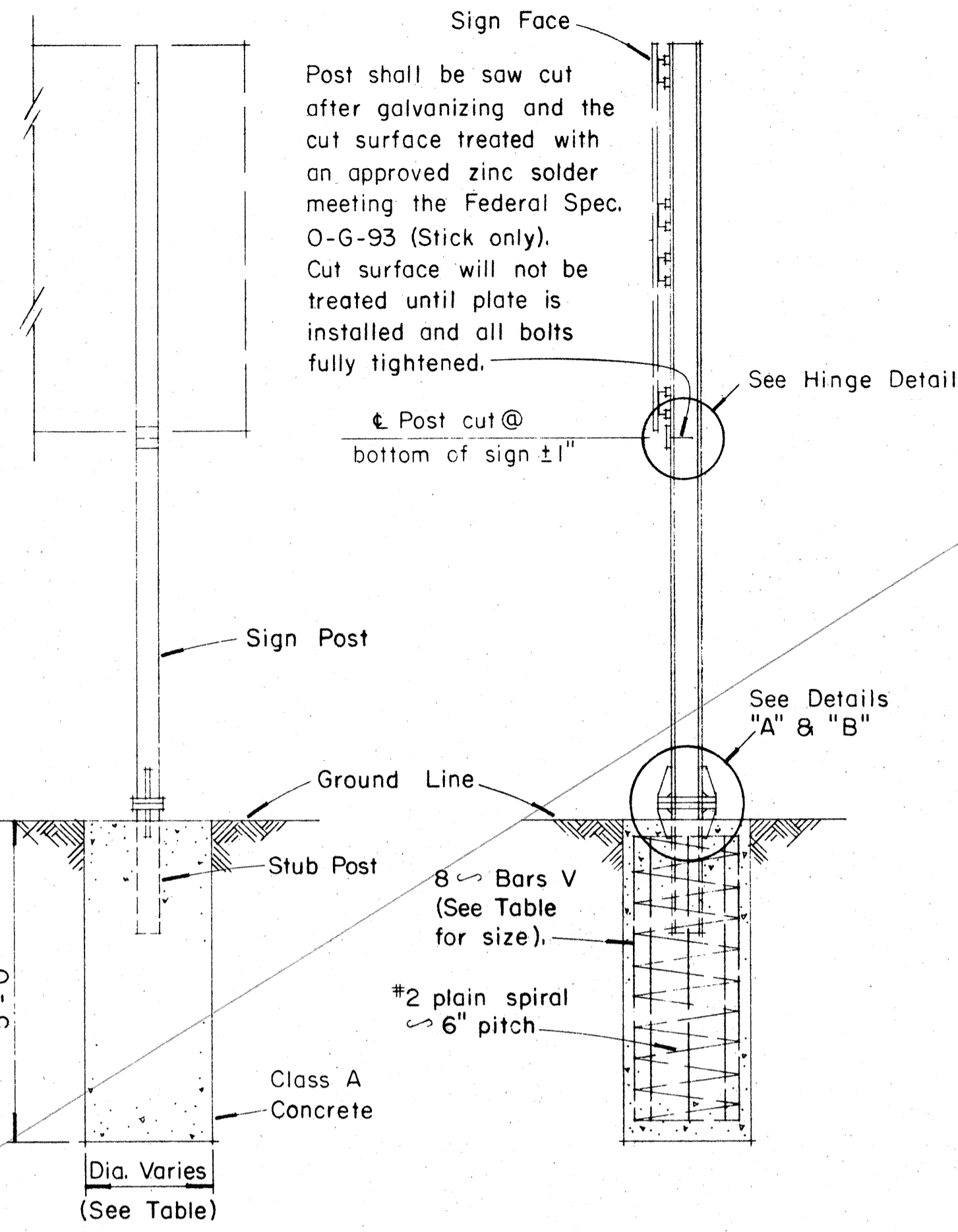
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STANDARD DETAILS  
LAMINATED ALUMINUM  
SIGN PANELS  
(GROUND MOUNTED)  
Scale: As Shown  
DATE: DEC. 29, 1972  
SHEET No. 177 OF 22 SHEETS DT 206

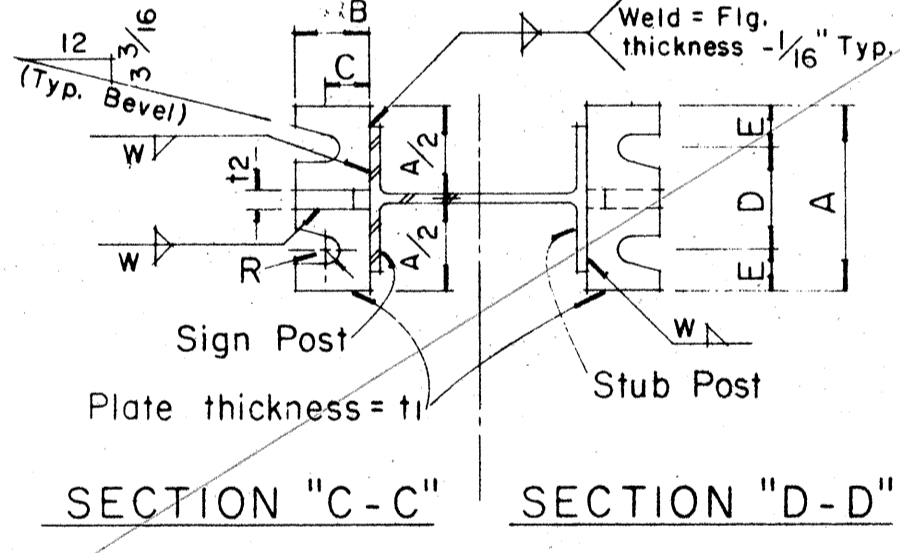
DATE: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
NO. \_\_\_\_\_

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(109)-13     | 1975        | 69        | 130          |

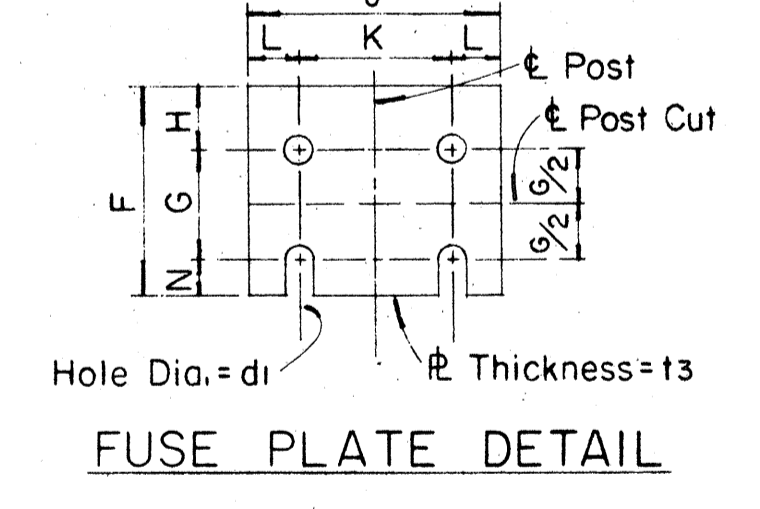
| BASE CONNECTION DATA TABLE |  |                |        |        |        |        |      |      |       |         | FUSE PLATE DATA TABLE |        |        |        |        |        |      |         | FOUNDATION DATA |           |                            |             |                 |                  |             |
|----------------------------|--|----------------|--------|--------|--------|--------|------|------|-------|---------|-----------------------|--------|--------|--------|--------|--------|------|---------|-----------------|-----------|----------------------------|-------------|-----------------|------------------|-------------|
| Post Size                  | Bolt Size & Torque                     | A              | B      | C      | D      | E      | t1   | t2   | W     | R       | F                     | G      | H      | J      | K      | L      | N    | d1      | t3              | Bolt Dia. | Wt. of each Fuse $\bar{P}$ | Stub Length | Stub Projection | Footing Diameter | Bars V Size |
| 6 B 8.5                    |  |                |        |        |        |        |      |      |       |         | 3 5/8"                | 2"     | 1 1/8" | 4"     | 2 1/4" | 7/8"   | 1/2" | 9/16"   | 1/4"            | 1/2"      | 1.09#                      | 2'-0"       | 3"              | 2'-0"            | #5          |
| 6 B 12                     | 5/8" $\phi$ x 2 3/4"<br>Torque = 450"# | 5"             | 2"     | 1 1/4" | 2 3/4" | 1 1/8" | 3/4" | 1/2" | 1/4"  | 1 1/32" | 3 3/4"                | 2"     | 1 1/8" | 4"     | 2 1/4" | 7/8"   | 5/8" | 1 1/16" | 3/8"            | 5/8"      | 1.60#                      | 2'-0"       | 3"              | 2'-0"            | #5          |
| 6 B 15.5                   |  |                |        |        |        |        |      |      |       |         | 4 1/2"                | 2 1/2" | 1 1/4" | 6"     | 3 1/2" | 1 1/4" | 3/4" | 1 3/16" | 1/2"            | 3/4"      | 3.75#                      | 2'-6"       | 3"              | 2'-0"            | #6          |
| 8 WF 17                    |  |                |        |        |        |        |      |      |       |         | 4 1/2"                | 2 1/2" | 1 1/4" | 5 1/4" | 2 3/4" | 1 1/4" | 3/4" | 1 3/16" | 1/2"            | 3/4"      | 3.27#                      | 2'-6"       | 3"              | 2'-0"            | #7          |
| 8 WF 20                    |  |                |        |        |        |        |      |      |       |         | 4 7/8"                | 2 1/2" | 1 1/2" | 5 1/4" | 2 3/4" | 1 1/4" | 7/8" | 1 5/16" | 9/16"           | 7/8"      | 3.93#                      | 3'-0"       | 2 1/2"          | 2'-0"            | #8          |
| 10 WF 21                   | 3/4" $\phi$ x 3 1/2"<br>Torque = 750"# | 6"             | 2 1/4" | 1 3/8" | 3 1/2" | 1 1/4" | 1"   | 3/4" | 5/16" | 1 3/32" | 5 3/8"                | 3"     | 1 1/2" | 5 3/4" | 2 3/4" | 1 1/2" | 7/8" | 1 5/16" | 9/16"           | 7/8"      | 4.75#                      | 3'-0"       | 2 1/2"          | 2'-0"            | #9          |
| 10 WF 25                   |  |                |        |        |        |        |      |      |       |         | 5 3/8"                | 3"     | 1 1/2" | 5 3/4" | 2 3/4" | 1 1/2" | 7/8" | 1 5/16" | 9/16"           | 7/8"      | 4.79#                      | 3'-0"       | 2 1/2"          | 2'-0"            | #10         |
| 12 WF 27                   |  |                |        |        |        |        |      |      |       |         | 5 3/8"                | 3"     | 1 1/2" | 6 1/2" | 3 1/2" | 1 1/2" | 7/8" | 1 5/16" | 9/16"           | 7/8"      | 5.42#                      | 3'-0"       | 2 1/2"          | 2'-0"            | #11         |
| 3 I 5.7                    | 1/2" $\phi$ x 2 1/2"<br>Torque = 200"# | SEE DETAIL "A" |        |        |        |        |      |      |       |         | 3 1/8"                | 1 1/2" | 1 1/8" | 2 5/8" | 1 1/2" | 9/16"  | 1/2" | 9/16"   | 1/4"            | 1/2"      | 0.64#                      | 1'-6"       | 3 1/2"          | 1'-6"            | #5          |
| 4 I 7.7                    |  |                |        |        |        |        |      |      |       |         | 3 1/8"                | 1 1/2" | 1 1/8" | 2 5/8" | 1 1/2" | 9/16"  | 1/2" | 9/16"   | 1/4"            | 1/2"      | 0.64#                      | 1'-6"       | 3 1/2"          | 1'-6"            | #5          |



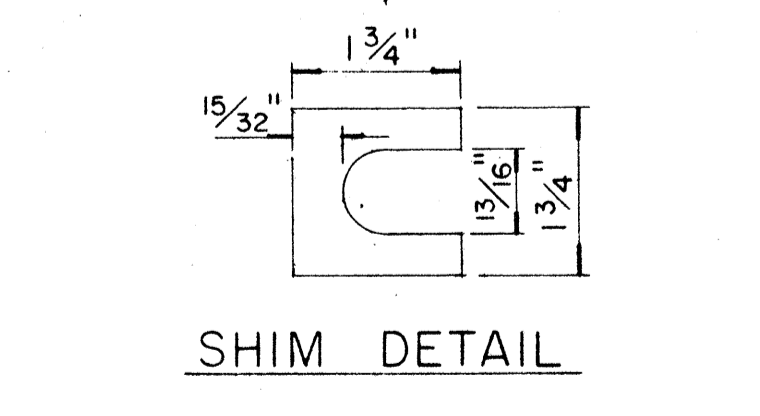
NOTE:  
Sections shown are for installations on right shoulder and in gore. Reverse plate slot bevels for installations on left shoulder.



STIFFENER PLATE DETAIL



FUSE PLATE DETAIL



SHIM DETAIL

Furnish 2  $\times$  .012"  $\pm$  thick and 2  $\times$  .032"  $\pm$  thick shims per post. Shims shall be fabricated from brass shim stock or strip conforming to A.S.T.M. - B 36.

GENERAL NOTES

- Design conforms with AASHO Specifications for the design and Construction of Structural Supports for Highway Signs.
- Materials and Fabrication shall conform to the requirements of the Standard Specifications and Special Provisions.
- All holes shall be drilled. All plate cuts shall preferably be saw cuts, however; flame cutting will be permitted provided all edges are ground. Metal projecting beyond the plane of the plate face will not be tolerated.
- Tighten the high strength bolts in the base connection only to the torque shown, do not overtighten. All bolts other than high strength bolts shall conform to ASTM A 307, Class A.
- All structural steel, bolts, nuts and washers shall be galvanized as per the Standard Specifications and Special Provisions. Structural steel to be galvanized after fabrication except as noted.
- Structural steel shall conform with with the requirements of ASTM A 441
- Galvanizing of all posts shall be projection above concrete plus 6" minimum.
- All friction fuse bolts shall be tightened in the shop following a method approved by the Engineer. Tightening shall be to such a degree as to obtain the following minimum residual tension in each bolt:

| Bolt Size   | Min. Tension | Bolt Size   | Min. Tension |
|-------------|--------------|-------------|--------------|
| 1/2" $\phi$ | 12050 Lbs.   | 3/4" $\phi$ | 28400 Lbs.   |
| 5/8" $\phi$ | 19200 Lbs.   | 7/8" $\phi$ | 36050 Lbs.   |

APPROVAL RECOMMENDED:  
*Eishi Tanaka* 12/29/69  
TRAFFIC ENGINEER DATE

ASSISTANT CHIEF, ENGINEERING 12-30-69  
DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**

**BREAK-AWAY SIGN SUPPORTS**

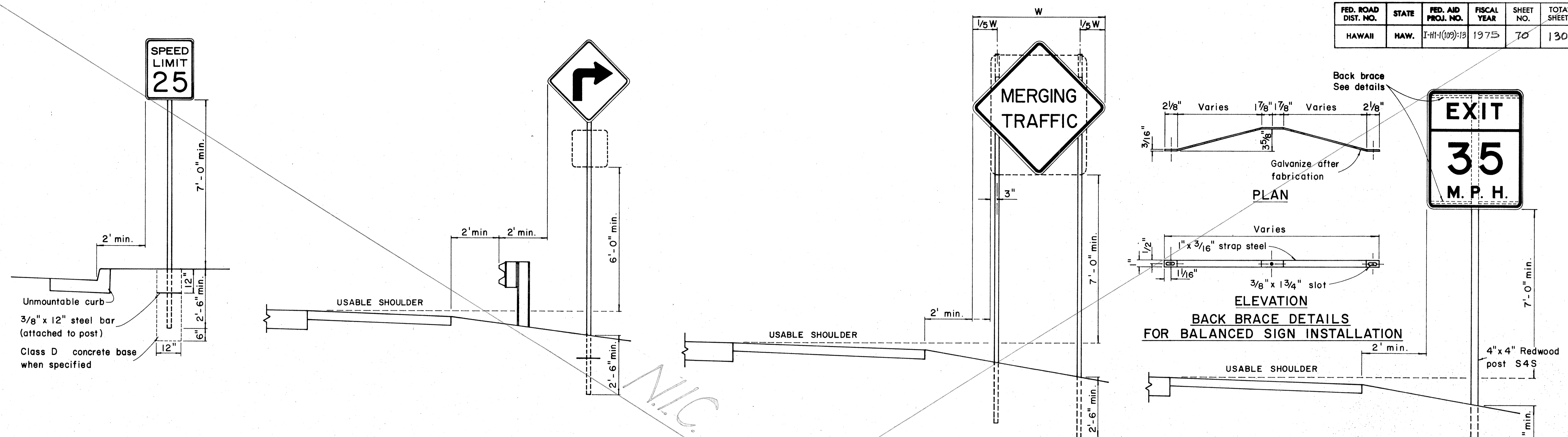
**FOR**

**GROUND MOUNTED GUIDE SIGNS**

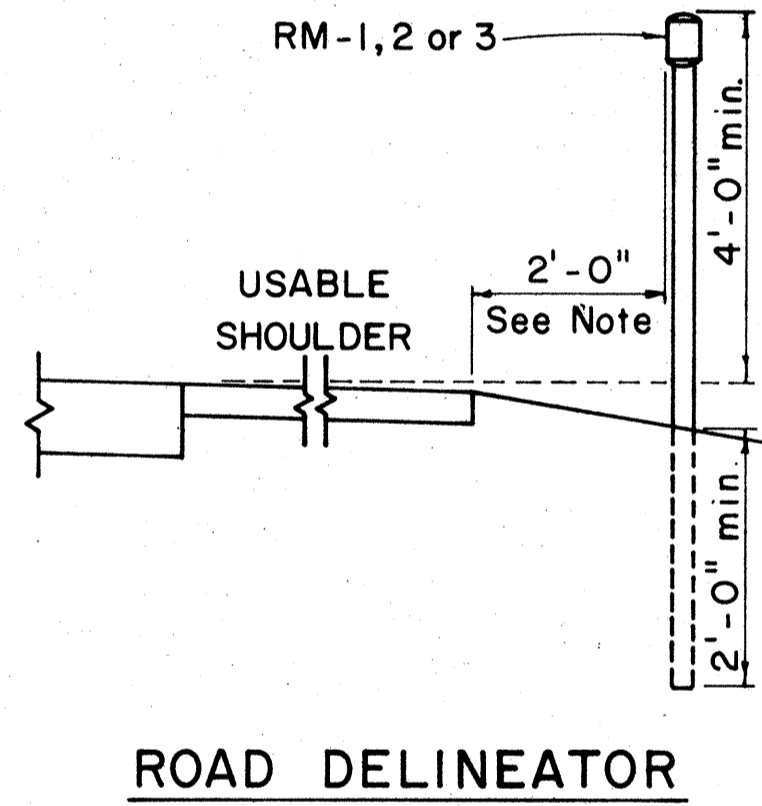
Not to Scale DATE: DEC. 29, 1972  
SHEET No. 187 OF 22 SHEETS DT 204

DATE: \_\_\_\_\_  
SURVEY PLOTTED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
No. \_\_\_\_\_

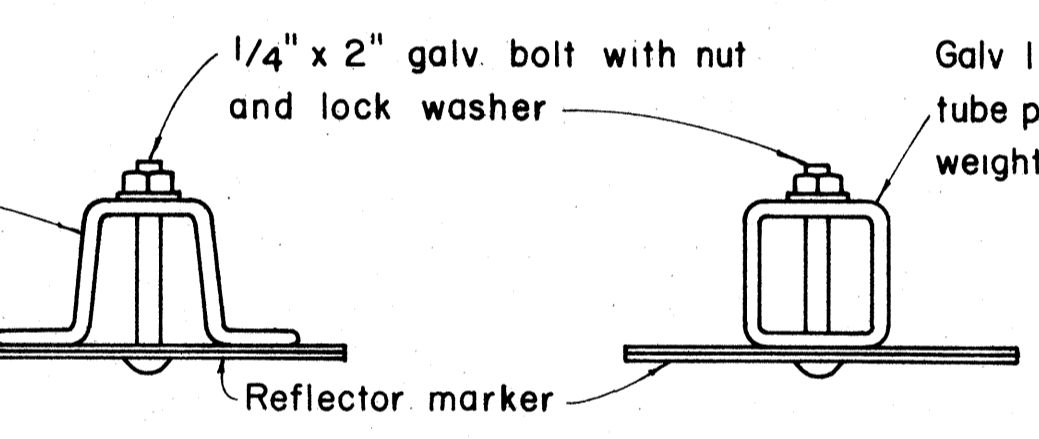
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(109):13     | 1975        | 70        | 130          |



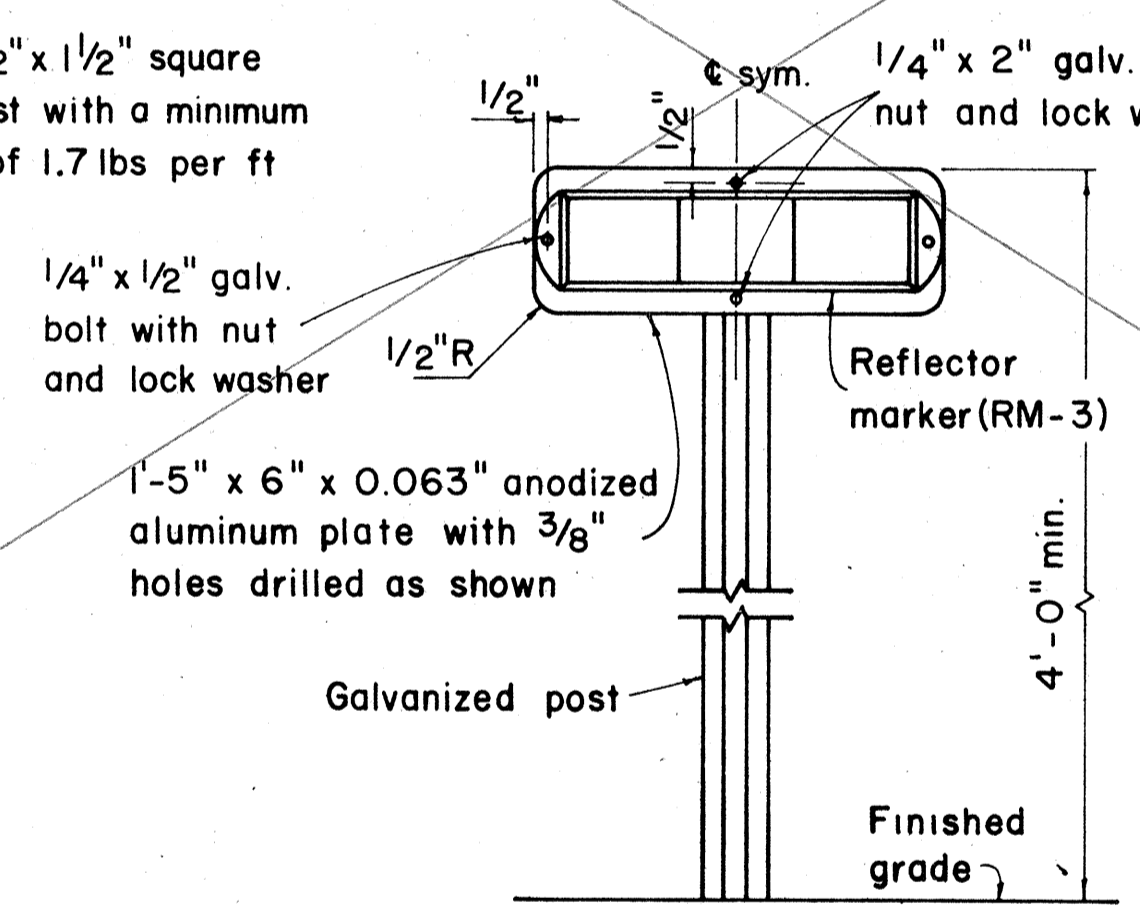
## HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATION



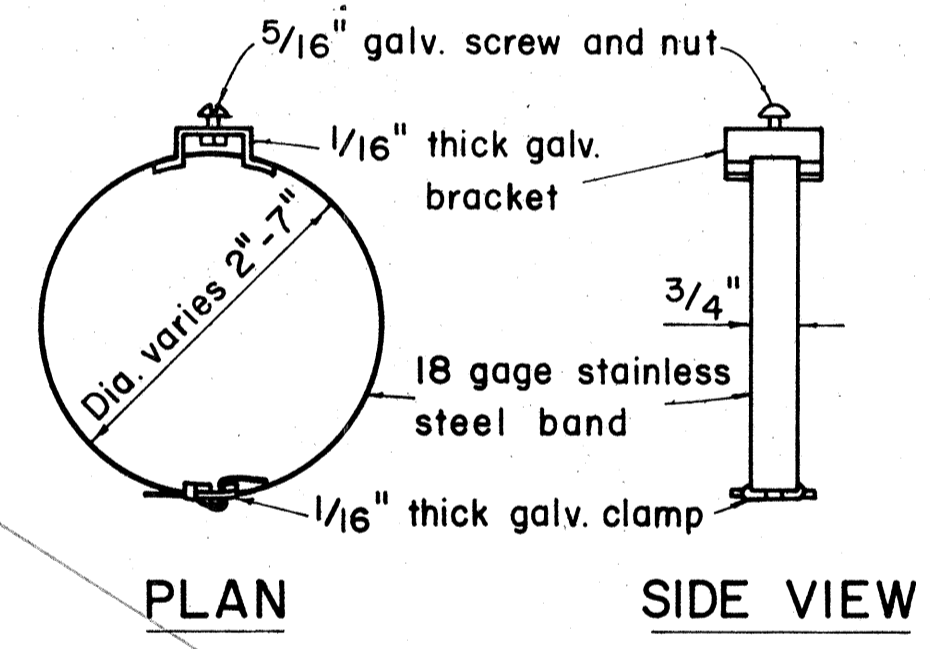
Galv. flanged channel  $1/8" \times 3/16"$  rolled section post with a minimum weight of 2 lbs. per ft. Upper 2 ft. shall have a single row of  $3/8"$  holes centered in the web at 1" o.c.



TYPICAL SECTION OF ROAD DELINEATOR



TYPICAL DETAIL  
HORIZONTAL REFLECTOR MARKER  
RM-3H



PLAN  
SIDE VIEW  
FRONT VIEW

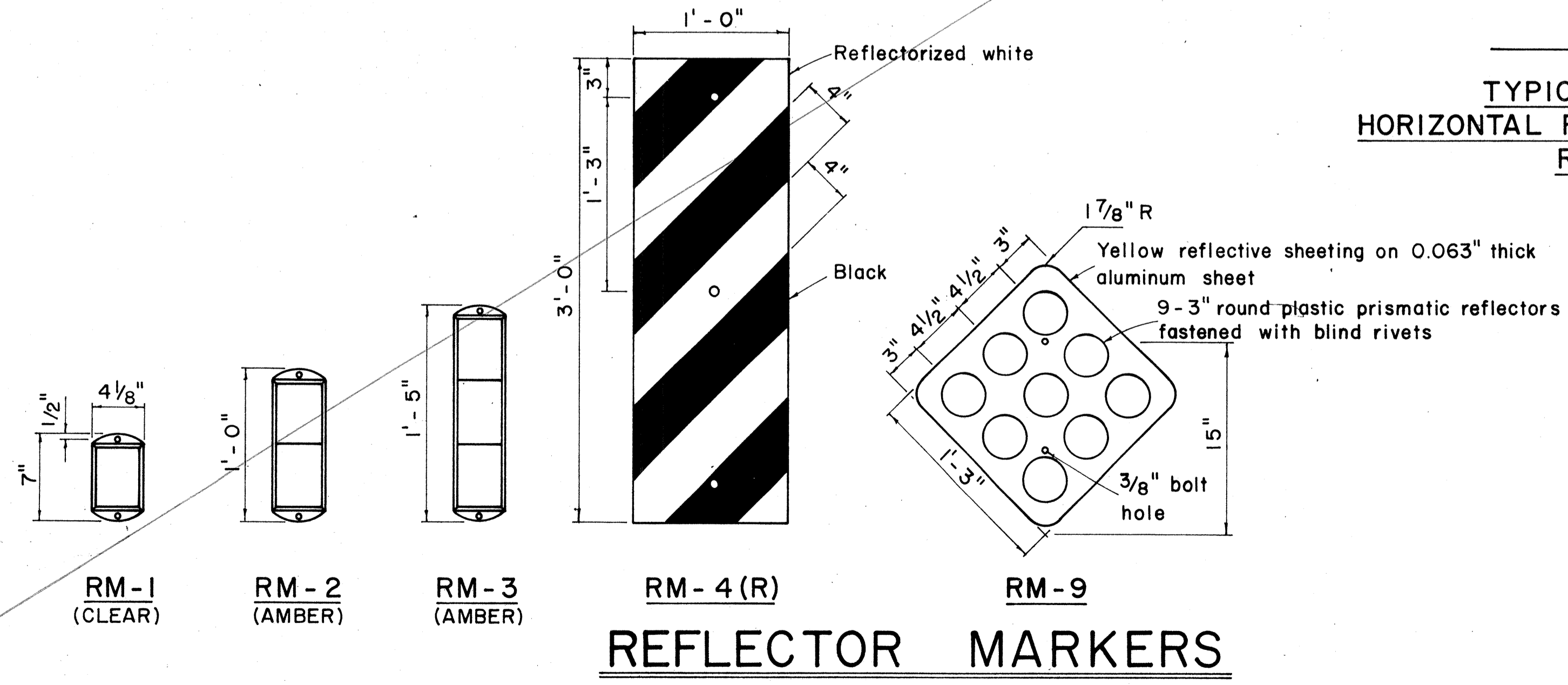
## TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS

- GENERAL NOTES:**
- Sign posts shall be 2" galv. standard pipe or 2" x 2" galv. sq. tube post.
  - Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two 2" galv. standard pipe or two 2" x 2" galv. sq. tube post or 4" x 4" redwood post S4S.
  - Signs shall be attached to post with  $5/16"$  galv. bolts with nuts and  $7/8"$  x 0.06 stainless steel washers with neoprene rubber gasket.
  - Sign posts shall extend  $3/2"$  above sign where required for City and County street name signs.
  - Reflector markers RM-1, 2, 3 shall be glass sphere reflector markers with 4" x 5" reflector units (as shown) or plastic prismatic reflector markers with 3" diameter reflector units.
  - Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
  - (R) or (L) indicates right or left and shall be as shown on the plans.

APPROVAL RECOMMENDED:  
*Etsuki Tanaka* 12/22/69  
 TRAFFIC ENGINEER DATE

APPROVED:  
*[Signature]* 12-20-69  
 ASSISTANT CHIEF, ENGINEERING DATE

|                   |      |
|-------------------|------|
| ORIGINAL PLAN     | DATE |
| SURVEY PLATTED BY |      |
| DRAWN BY          |      |
| DESIGNED BY       |      |
| QUANTITIES BY     |      |
| CHECKED BY        |      |



## REFLECTOR MARKERS

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

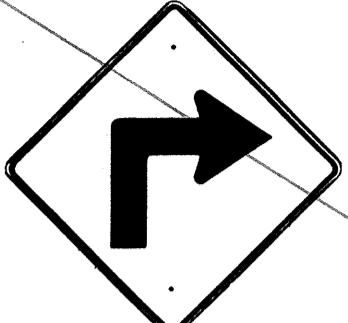

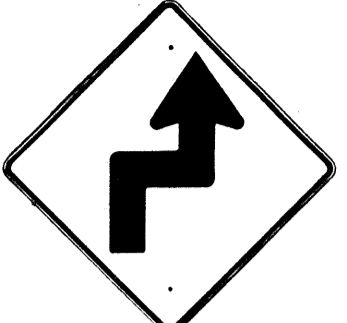
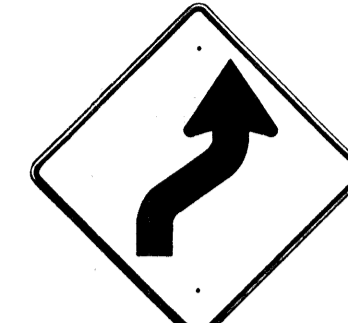
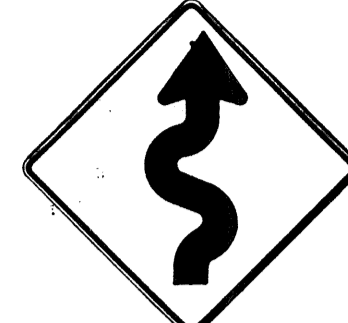
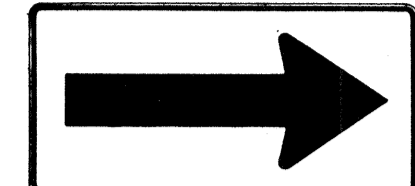
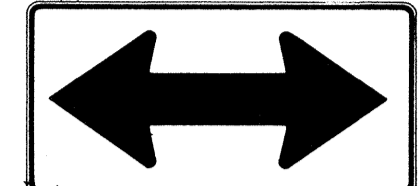
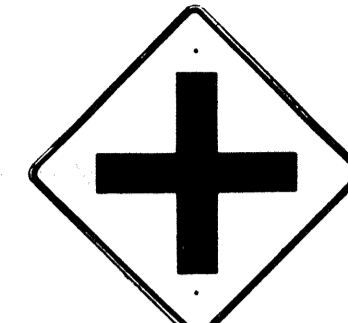
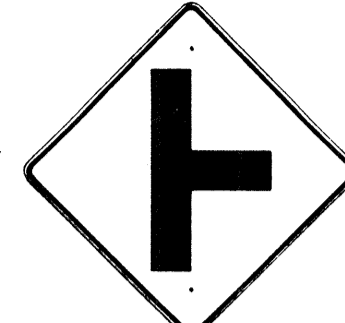
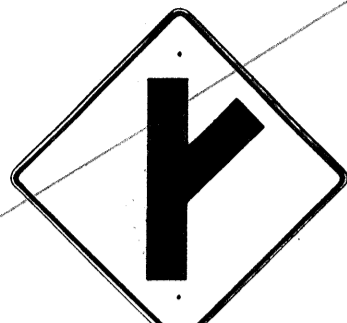
### STANDARD DETAILS

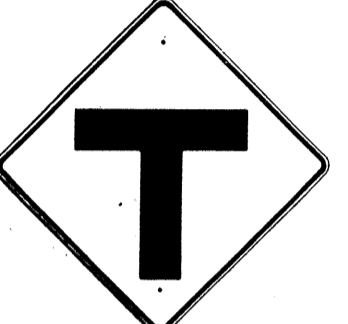
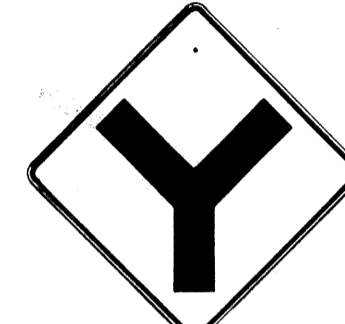


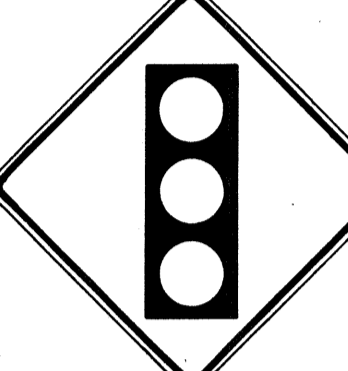

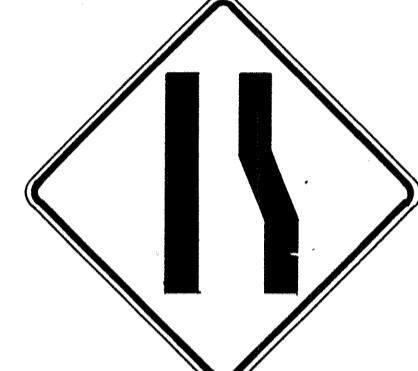



MISCELLANEOUS SIGN DETAILS






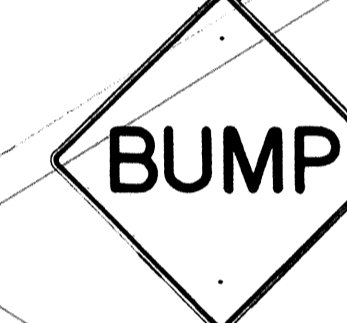




Not to scale March, 1968








SHEET No. 19 OF 22 SHEETS DT 100

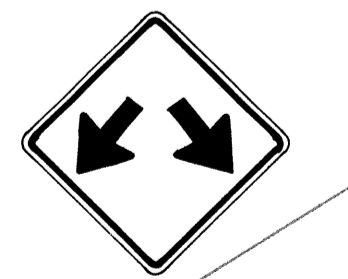


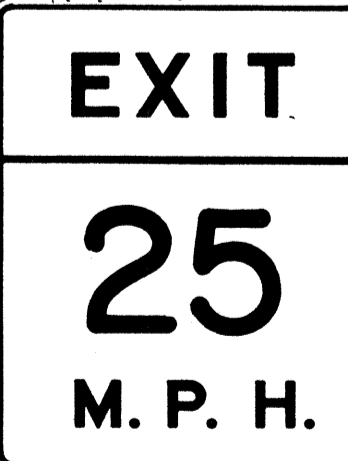
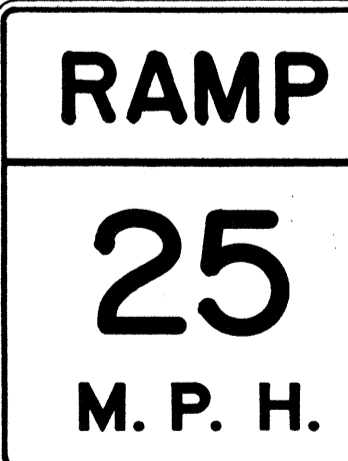


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII*             | HAW.  | [H-1](109)13       | 1975        | 71        | 130          |

|   |   |  |   |   |   |   |   |   |   |
|---|---|--|---|---|---|---|---|---|---|
| <br>W1-1(R) 30"x30"<br>W1-1(R)-A 48"x48" | <br>W1-2(R) 30"x30"<br>W1-2(R)-A 48"x48" | <br>W1-3(R) 30"x30"<br>W1-3(R)-A 48"x48" | <br>W1-4(R) 30"x30"<br>W1-4(R)-A 48"x48" | <br>W1-5(R) 30"x30"<br>W1-5(R)-A 48"x48" | <br>W1-6 48"x24" | <br>W1-7 48"x24" | <br>W2-1 30"x30"<br>W2-1-A 48"x48" | <br>W2-2 30"x30"<br>W2-2-A 48"x48" | <br>W2-3(R) 30"x30"<br>W2-3(R)-A 48"x48" |
|---|---|--|---|---|---|---|---|---|---|

|   |   |  |   |  |   |   |   |   |   |
|---|---|--|---|--|---|---|---|---|---|
| <br>W2-4 30"x30"<br>W2-4-A 48"x48" | <br>W2-5 30"x30"<br>W2-5-A 48"x48" | <br>W3-1 30"x30"<br>W3-1-A 36"x36" | <br>W3-2 30"x30"<br>W3-2-A 36"x36" | <br>W3-3 36"x36"<br>24"x18" | <br>W4-1(R) 30"x30"<br>24"x18"<br>W4-1(R)-A 48"x48"<br>24"x18" | <br>W4-2(R) 36"x36"<br>W4-2(R)-A 48"x48" | <br>W5-1 36"x36" | <br>W5-2 30"x30"<br>W5-2-A 36"x36" | <br>W5-3 36"x36" |
|---|---|--|---|--|---|---|---|---|---|

|   |   |  |  |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|--|--|
| <br>W6-1 36"x36"<br>24"x18" | <br>W6-2 36"x36"<br>24"x18" | <br>W6-3 30"x30"<br>24"x18"<br>W6-3-A 36"x36"<br>24"x18"<br>W6-3-B 48"x48"<br>24"x18" | <br>W7-1 30"x30"<br>24"x18"<br>W7-1-A 36"x36"<br>24"x18" | <br>W7-2 24"x18" | <br>W8-1 30"x30"<br>W8-1-A 36"x36" | <br>W8-2 30"x30"<br>W8-2-A 36"x36" | <br>W8-3 30"x30"<br>W8-3-A 36"x36" | <br>W8-4 30"x30"<br>W8-4-A 36"x36" | <br>W8-5 30"x30"<br>24"x18"<br>W8-5-A 36"x36"<br>24"x18" |
|---|---|--|--|--|--|--|--|--|--|

|  |   |  |   |   |   |   |
|--|---|--|---|---|---|---|
| <br>W9-1(R) 30"x30"<br>W9-1(R)-A 36"x36"<br>W9-1(R)-B 48"x48" | <br>W9-2(L) 36"x36"<br>W9-2(L)-A 48"x48" | <br>W10-1 36" Diameter | <br>W11-1 30"x30"<br>24"x18"<br>W11-1-A 36"x36"<br>24"x18" | <br>W11-2 30"x30"<br>24"x18"<br>W11-2-A 36"x36"<br>24"x18" | <br>W11-4 30"x30"<br>24"x18"<br>W11-4-A 36"x36"<br>24"x18" | <br>W11-5 30"x30"<br>24"x18"<br>W11-5-A 36"x36"<br>24"x18" |
|--|---|--|---|---|---|---|

|  |   |  |  |  |  |  |
|--|---|--|--|--|--|--|
| <br>W12-1 24"x24"<br>W12-1-A 36"x36"<br>W12-1-B 48"x48" | <br>W12-2(12'-6") 36"x36"<br>24"x18" | <br>W13-1(25) 18"x18"<br>W13-1(25)-A 24"x24" | <br>W13-2(25) 48"x60" | <br>W13-3(25) 48"x60" | <br>W14-1 30"x30" | <br>W14-3 36"x48"x48" |
|--|---|--|--|--|--|--|

**GENERAL NOTES**

1. Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
2. All warning signs shall be reflectorized unless otherwise specified.
3. All warning signs shall have 3/8" bolt holes drilled at appropriate locations.
4. Numerals in ( ) indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
5. Signs prefixed with "CW" on the plans shall indicate orange and black construction signs.

APPROVAL RECOMMENDED:  
*E. J. Tanaka* 3/17/72  
 TRAFFIC ENGINEER DATE

APPROVED:  
*Hubert Salsider* 3-20-72  
 ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION                                 | APPROVED BY | DATE     |
|-----|--|-------------|----------|
| 1   | Supersedes Sht. DT 102 Approved 12-30-69 | H.T.        | 3/20/72  |
| 2   | Revised General Note 1                   | H.T.        | 10/16/74 |

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS**  
**WARNING SIGNS**

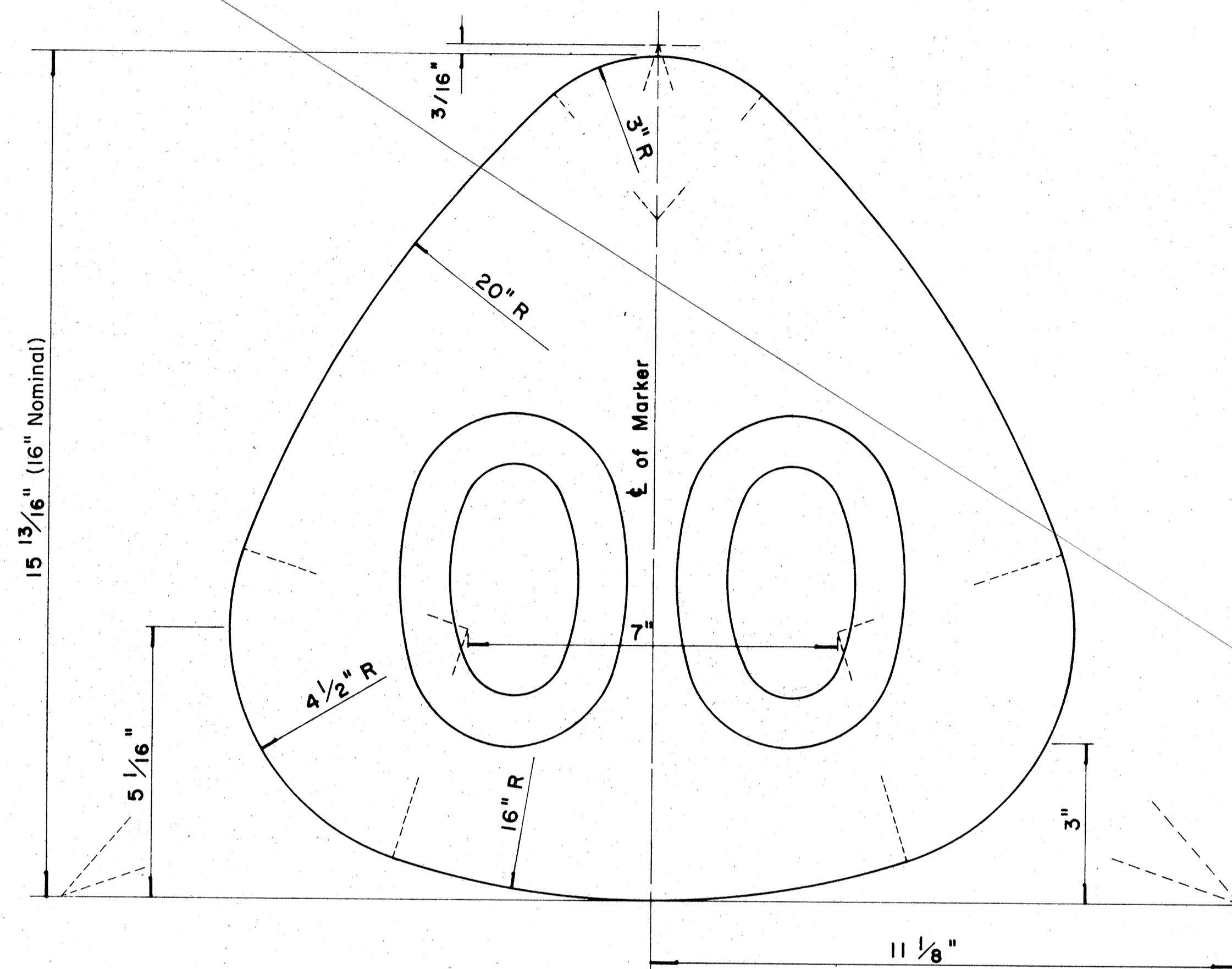
NOT TO SCALE

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-H-1(109)B        | 1975        | 72        | 130          |

| MARKER SIZE | MULTIPLY DIMENSIONS BY | NUMERAL SIZE       |                    |
|-------------|------------------------|--------------------|--------------------|
|             |                        | 2 Digit - Series D | 3 Digit - Series C |
| 16"         | 1                      | 6"                 |                    |
| 21"         | 1.3                    | 8"                 |                    |
| 32"         | 2.0                    | 12"                |                    |
| 42"         | 2.63                   | 16"                |                    |

| RADII FOR SIGNS         |    |     |
|-------------------------|----|-----|
| Least Dimension of Sign | W  | R   |
| 2'-0" to 4'-6"          | 2" | 3"  |
| 4'-9" to 5'-6"          | 2" | 6"  |
| 5'-9" to 7'-6"          | 2" | 9"  |
| 7'-9" and greater       | 2" | 12" |

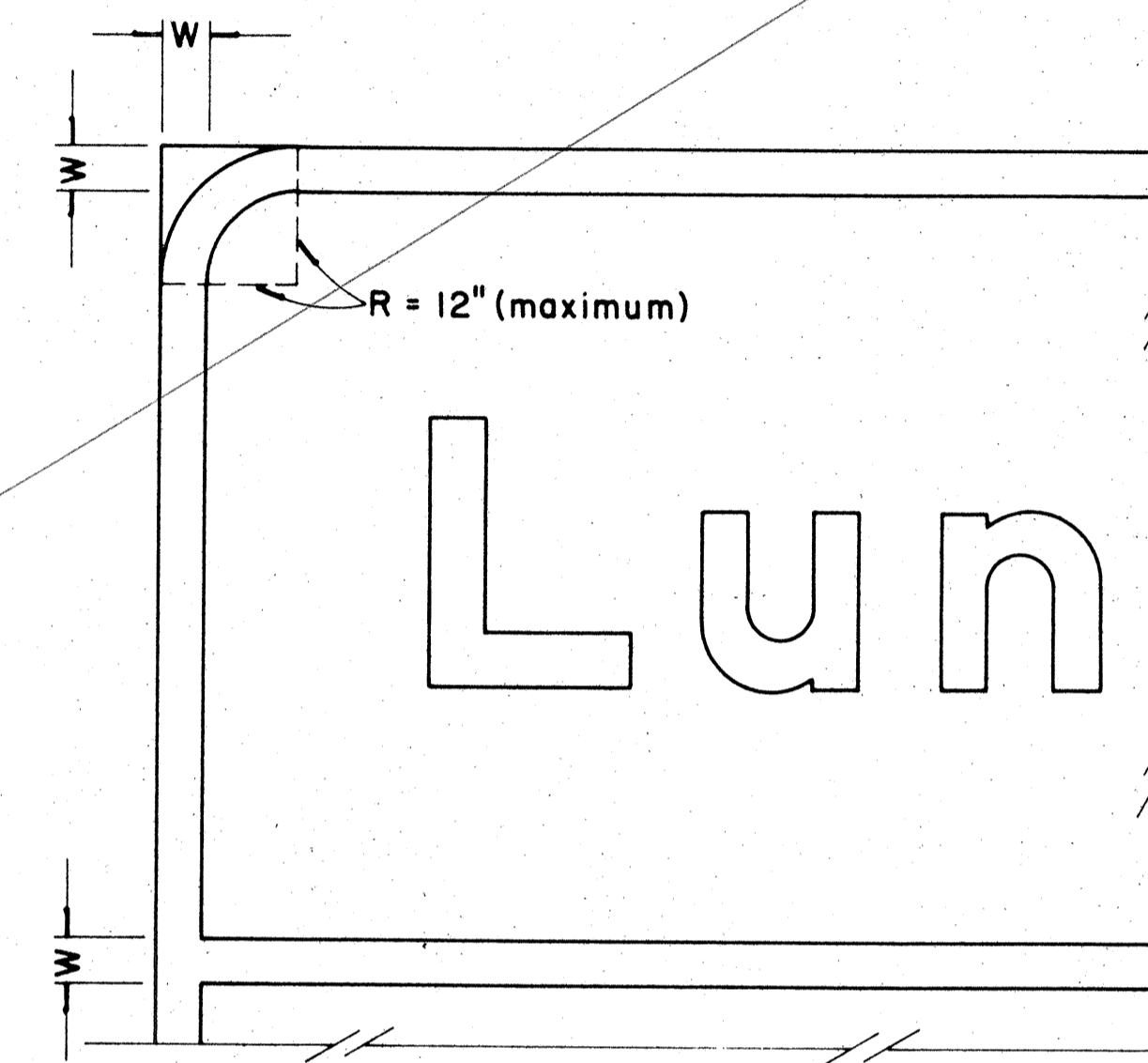


**STATE ROUTE MARKER  
FOR GUIDE SIGNS**

Scale: Half Size

**NOTE:**

1. State Route Markers on Guide signs shall have black numerals on a white reflectorized background mounted on a flat aluminum cut-out.
2. Numerals shall conform to the FHWA publication "Standard Alphabets for Highway Signs," 1966.
3. Cut-outs shall be fastened on sign panel with aluminum blind rivets. See Standard Specifications.
- \* 4. The 16" State Route Marker shall be used only with the Construction Identification sign.



**BORDER DETAIL  
FOR GUIDE SIGNS**

Not to Scale

**NOTE:**

1. Area outside corner radius need not be trimmed.
2. All borders shall be embossed cut-outs, white and reflectorized.
3. All Guide signs shall have borders.

APPROVAL RECOMMENDED:

*Eishi Tanaka* 4/11/72  
TRAFFIC ENGINEER DATE

APPROVED:

*Hubert Z. Sakishi* 4/12/72  
ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION                                    | APPROVED BY | DATE    |
|-----|---|-------------|---------|
| 1   | Supersedes Sht. DT 209<br>Approved 12-30-69 | H.T.        | 4/12/72 |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**

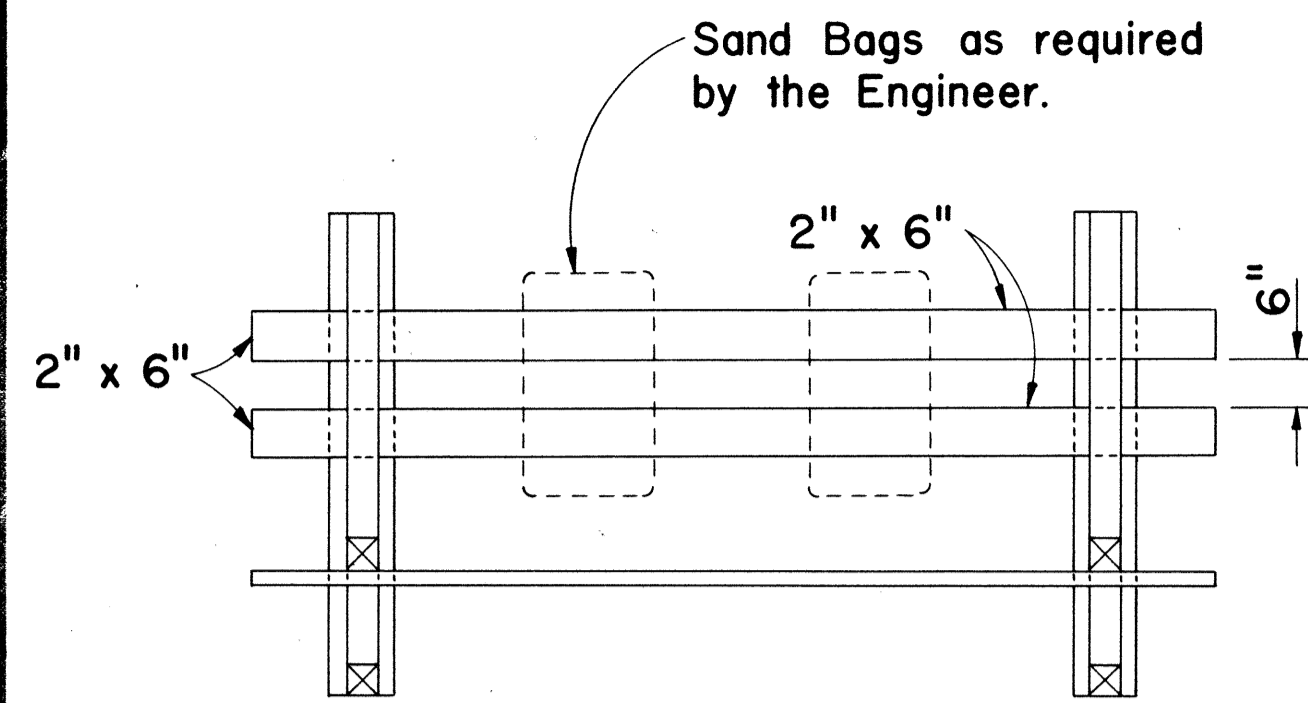
**STATE ROUTE MARKER  
AND BORDER DETAIL  
FOR GUIDE SIGNS**

Scale: As Shown Date: Dec. 29, 1972

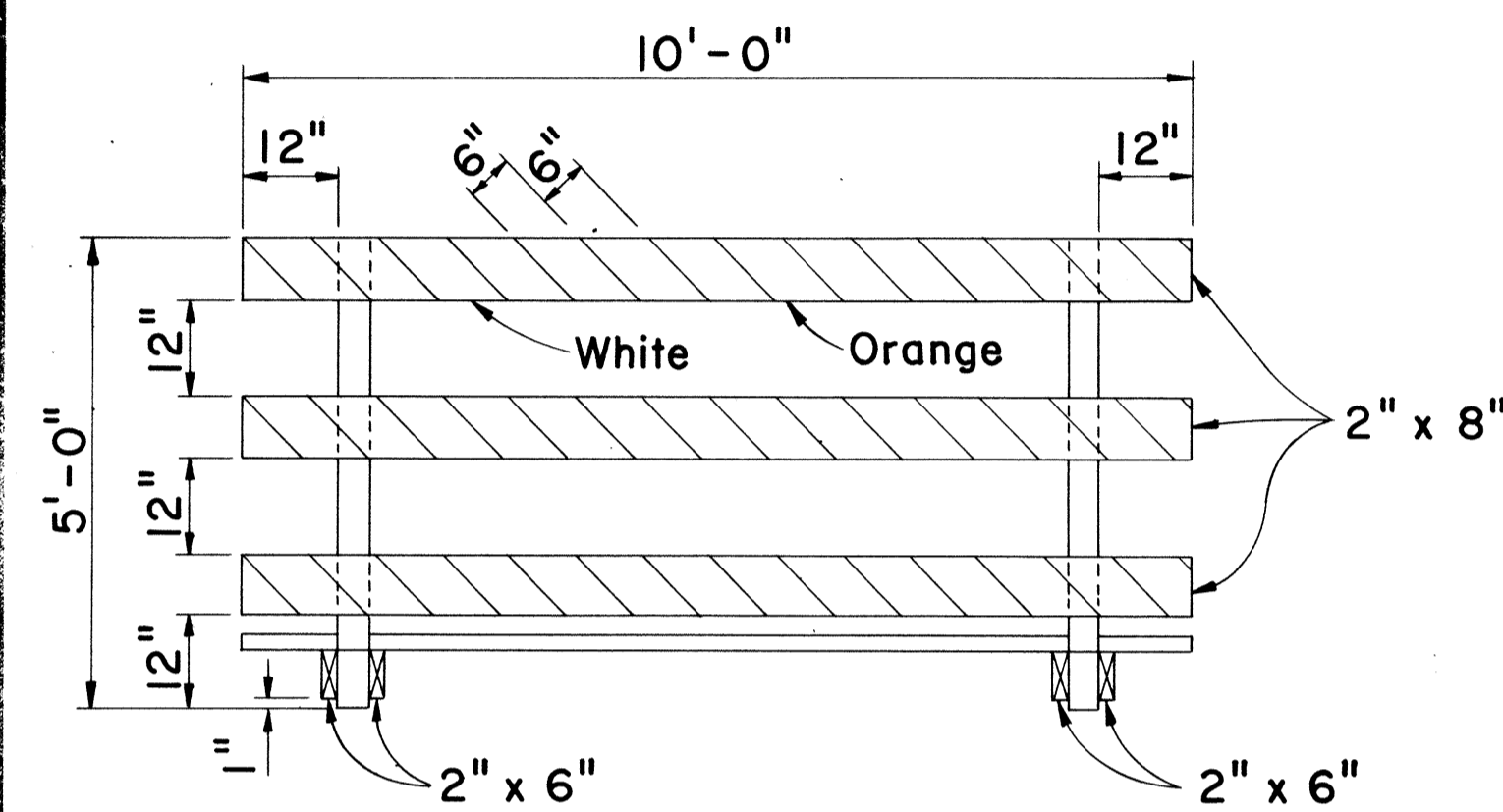
SHEET No. 21 OF 22 SHEETS DT 209

|               |  |
|---------------|--|
| DATE          |  |
| DESIGNED BY   |  |
| TRACED BY     |  |
| QUANTITIES BY |  |
| CHECKED BY    |  |
| ORIGINAL PLAN |  |
| NOTE BOOK     |  |
| No.           |  |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-HI-1(103)13      | 1975        | 73        | 130          |



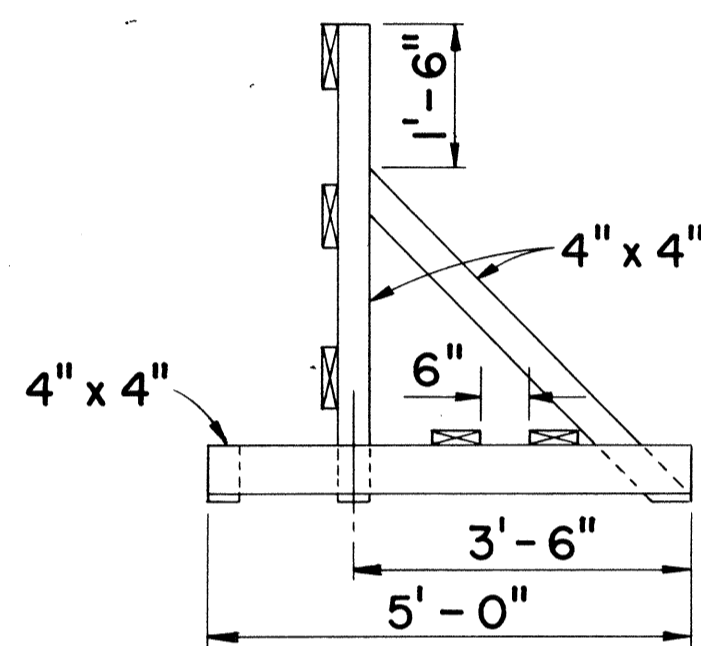
PLAN VIEW



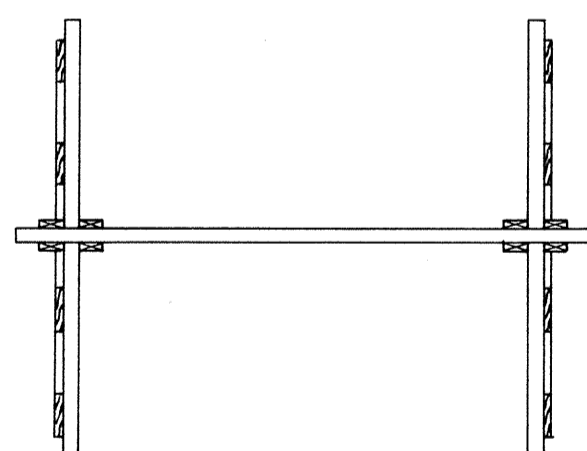
FRONT VIEW

**CLASS I BARRICADE**

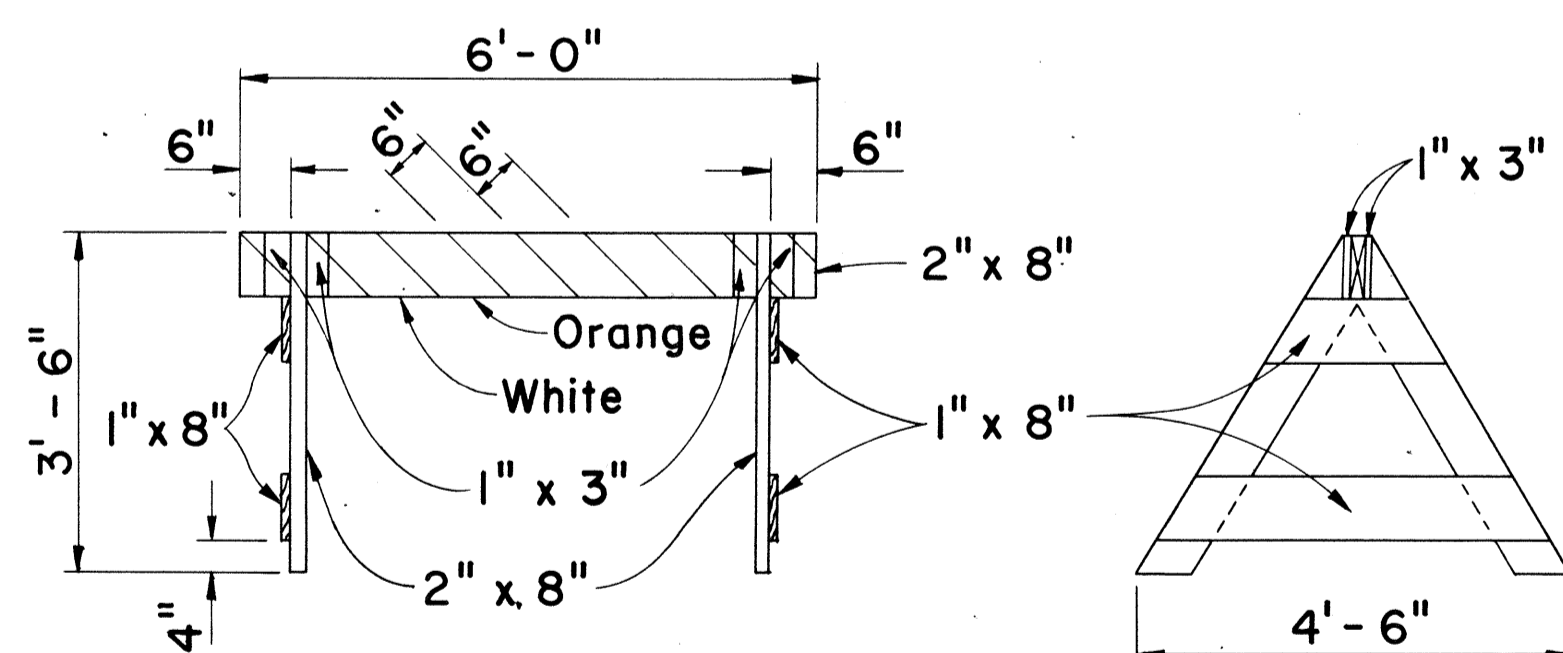
Scale: 1/2" = 1'-0"



END VIEW



PLAN VIEW



FRONT VIEW

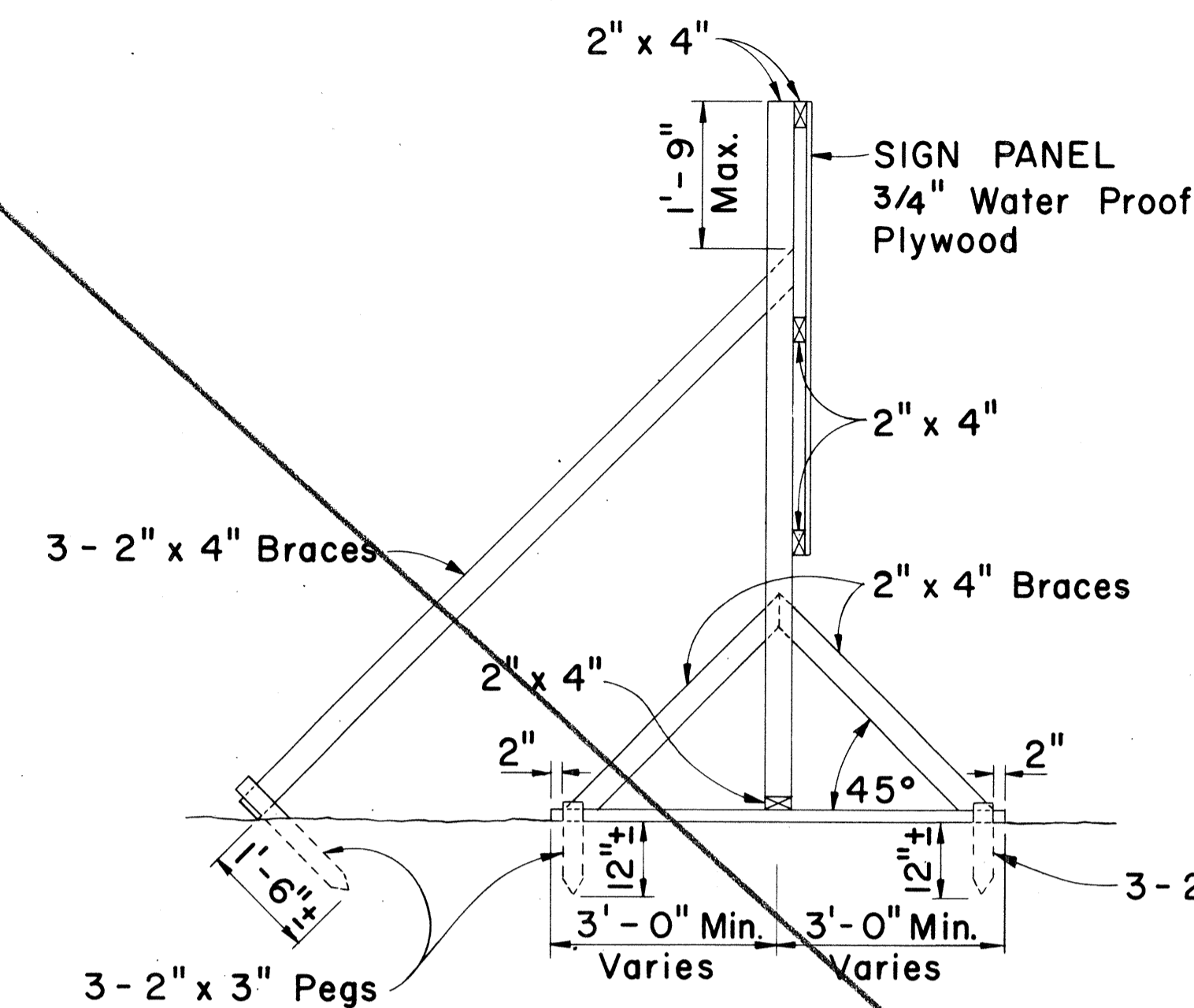
END VIEW

**CLASS II BARRICADE**

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

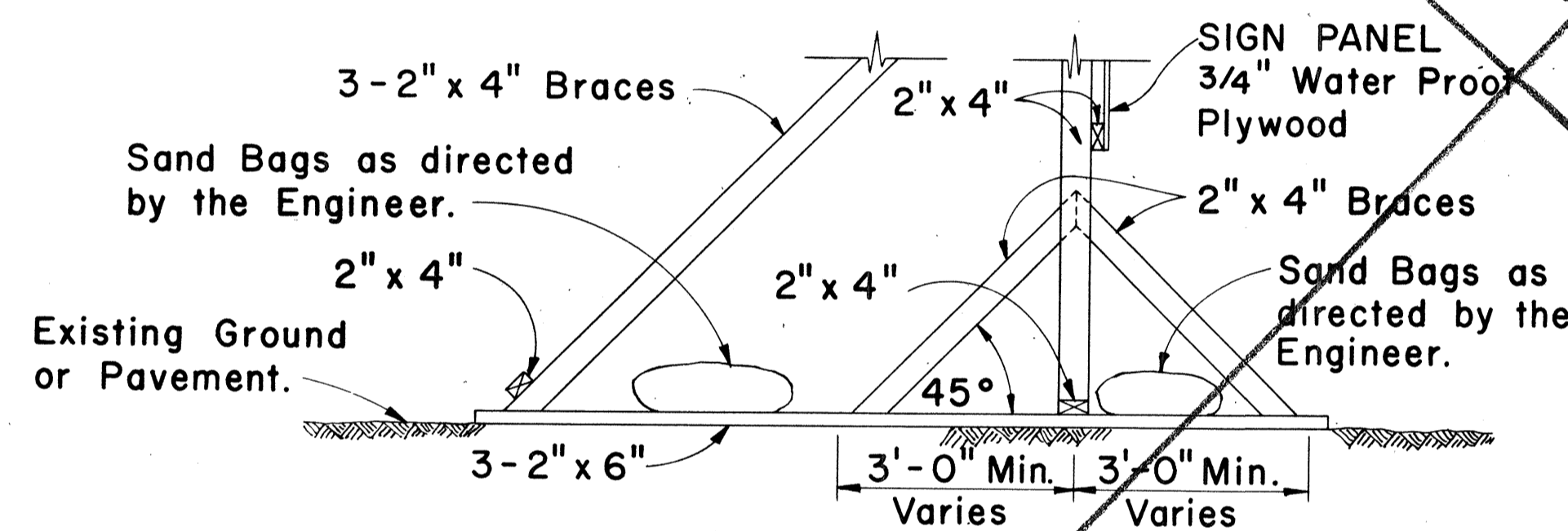
**GENERAL NOTES**

1. The Contractor shall construct, install and maintain the wood barricades at the locations shown on the Plans.
2. The permanent wood barricades shall be left in place or relocated upon completion of the project as ordered by the Engineer and are to become State property.
3. The orange and white stripes shall slant downward toward the side on which traffic is to pass and shall be reflectorized.



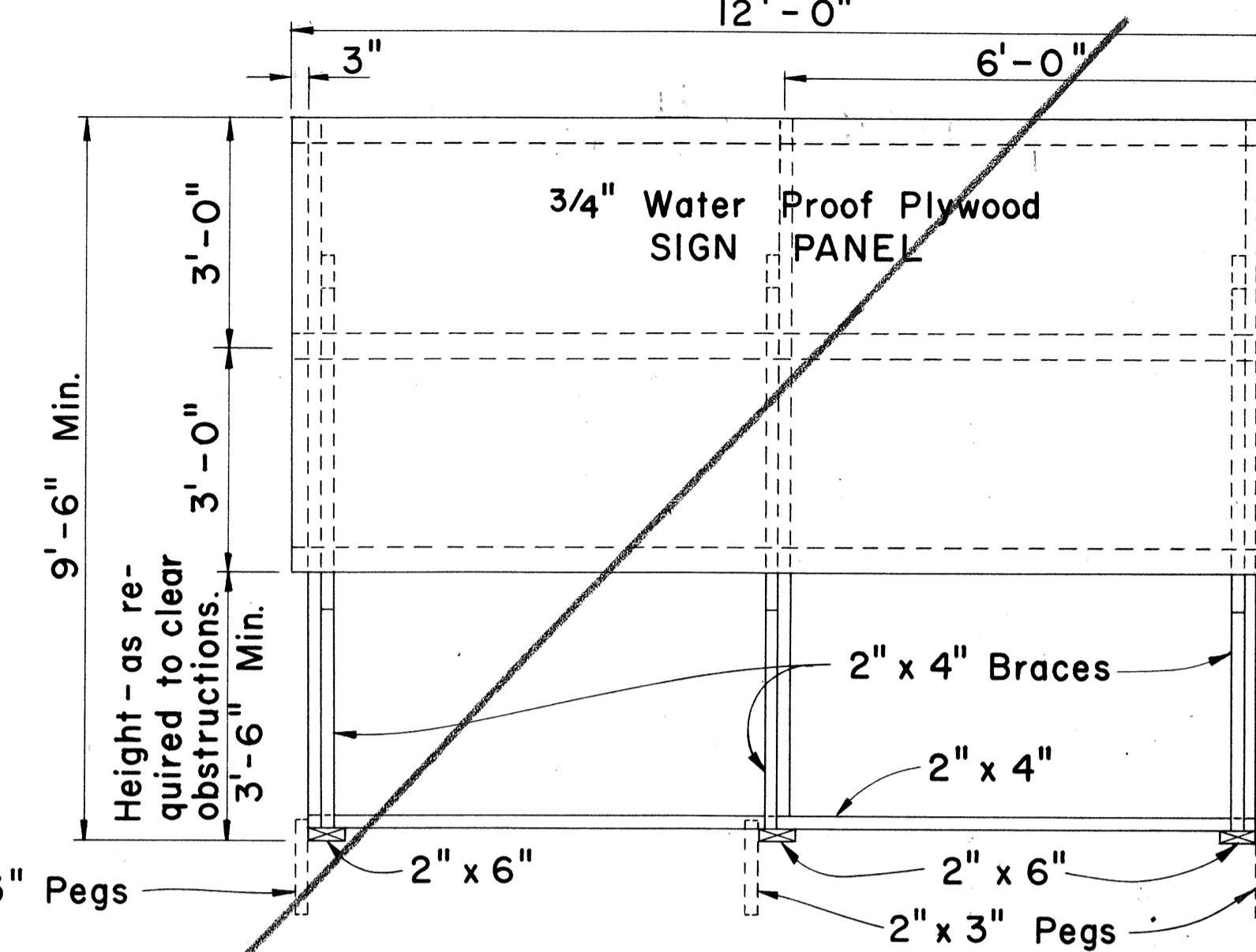
SIDE VIEW

(SIGN FRAME ANCHORED IN GROUND)  
Scale: 1/2" = 1'-0"



SIDE VIEW

(SIGN FRAME WEIGHTED DOWN)  
Scale: 1/2" = 1'-0"



FRONT VIEW

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

**GENERAL NOTES**

1. The sign legend shall be black on white background except for the Interstate Route marker which shall be as shown on the plan.
2. The Contractor shall construct, install and maintain the project signs at the locations shown on the Plans and as ordered by the Engineer.
3. Letters shall be Series "C" of the sizes shown on the Plan and shall conform with the "Standard Alphabet for Highway Signs", Bureau of Public Roads, 1966.
4. The Contractor shall fill in the proper numerals in place of ciphers as ordered by the Engineer.

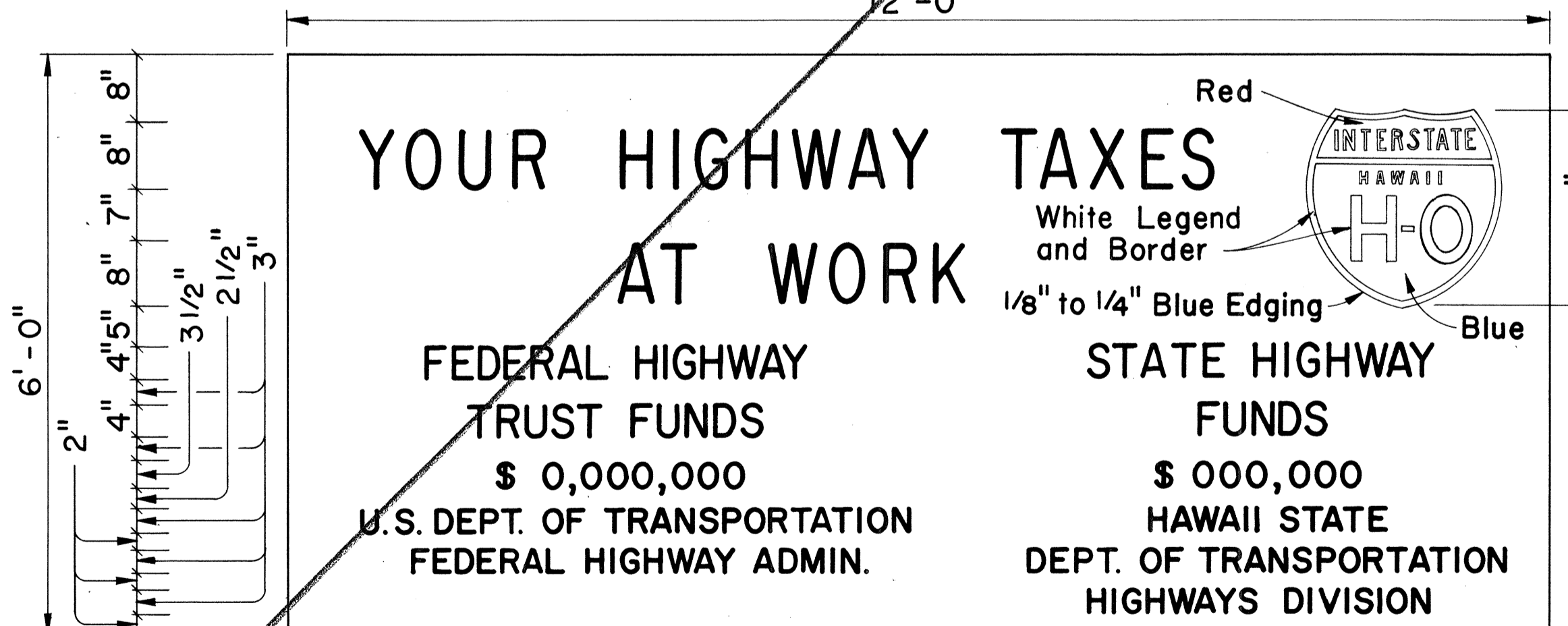
APPROVAL RECOMMENDED:

*Eiichi Tanaka* 12/29/69  
TRAFFIC ENGINEER DATE

APPROVED:

*Richard J. ...* 12-30-69  
ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION                           | APPROVED BY | DATE     |
|-----|------------------------------------|-------------|----------|
| 1   | Reduce sign width to 12'-0"        | H.T.        | 9-3-10   |
| 2   | Delete "Bureau of Public Roads"    | H.T.        | 9-29-10  |
| 3   | Add Note No. 3 for Barricades      | H.T.        | 5-4-11   |
| 4   | Revise stripe color for Barricades | H.T.        | 10-21-12 |



SIGN PANEL  
Scale: 3/4" = 1'-0"

**INTERSTATE SYSTEM  
CONSTRUCTION IDENTIFICATION SIGN**

Scale: As Shown

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL DETAILS**

CONSTRUCTION IDENTIFICATION SIGN  
AND  
WOOD BARRICADES

SCALE: As Shown DATE:

SHEET No. 22 OF 22 SHEETS DT 800

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