

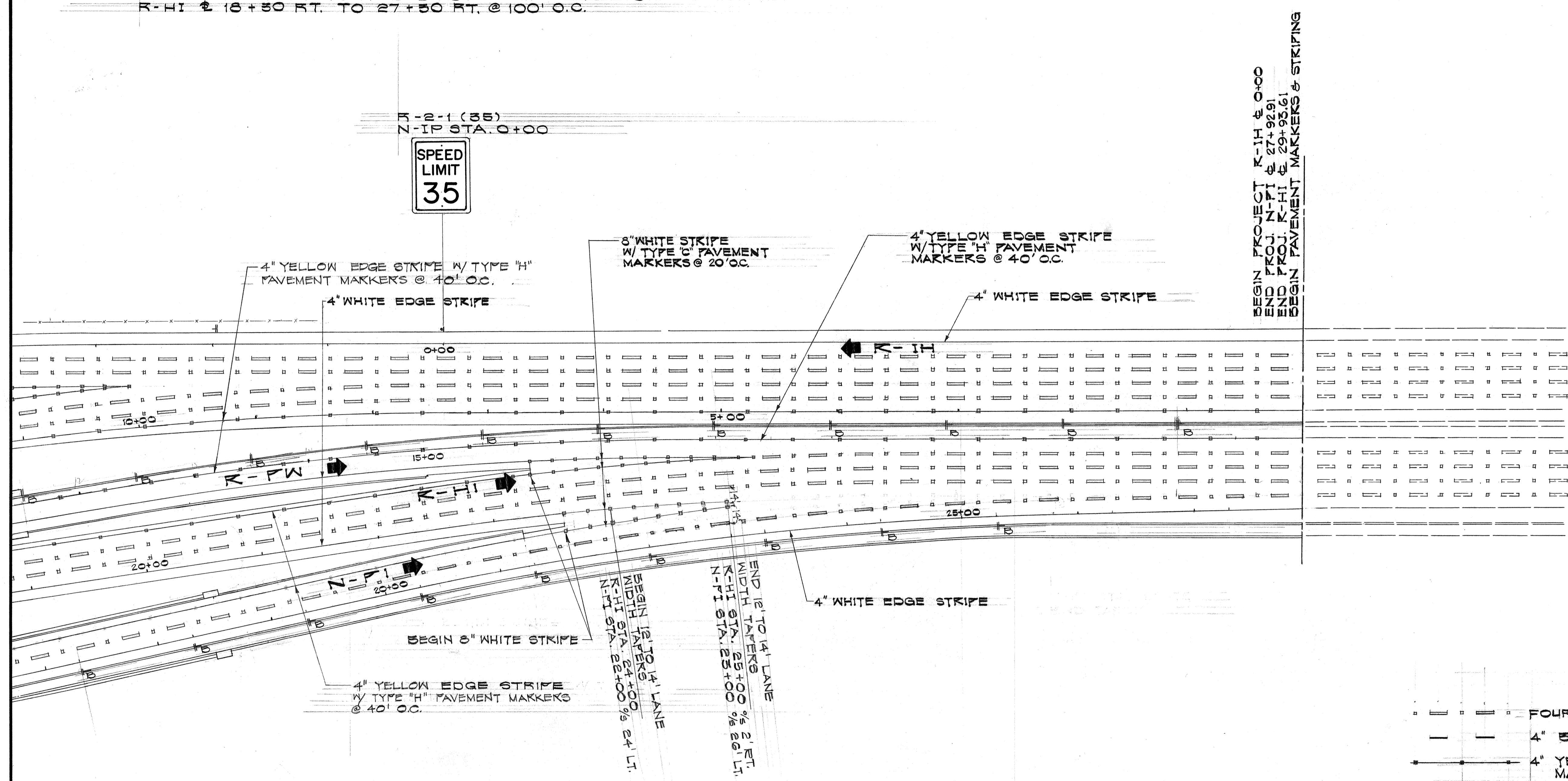
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1-(99)15	1977	04	350

NOTE:

DELINEATORS (RM-2)
 R-PW @ 11+50 LT. TO R-HI @ 26+50 LT. @ 100' O.C.
 N-PI @ 16+50 RT. TO 27+50 RT. @ 100' O.C.

N-2-1 (35)
 N-IP STA. 0+00

SPEED LIMIT 35



BEGIN PROJECT R-HI @ 0+00
 END PROJ. N-PI @ 27+92.91
 END PROJ. R-HI @ 29+95.61
 BEGIN PAVEMENT MARKERS & STRIPING

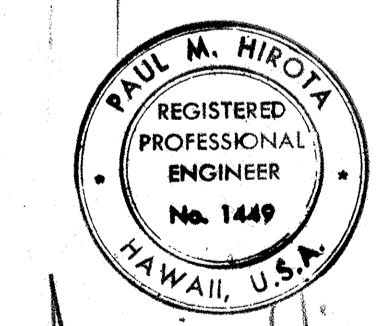
LEGEND

- — — — — FOUR TYPE "A" W/ALTERNATING TYPE "C" PAV'T. MARKER.
- - - - - 4" BROKEN WHITE STRIPE
- — — — — 4" YELLOW STRIPE, W/TYPE "H" PAVEMENT MARKERS @ 40' O.C.
- — — — — 8" WHITE STRIPE W/TYPE "C" PAVEMENT MARKERS @ 20' O.C.
- — — — — REGULATORY AND WARNING SIGN
- — — — — DESTINATION SIGN (D)
- — — — — EXPRESSWAY SIGN (E)
- — — — — DELINEATOR, TYPE RM-2 (SEE SUMMARY ON SHT. 07 FOR MOUNT TYPE SYMBOLS AND DESCRIPTION)

GENERAL NOTES

1. ALL PAVEMENT STRIPING SHALL BE DONE BY THE CONTRACTOR.
2. THE EXACT LOCATION OF ALL REGULATORY & WARNING SIGNS, EXPRESSWAY & DESTINATION SIGNS, PAVEMENT MARKERS & STRIPING SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. FOR SIGN & PAVEMENT MARKERS SUMMARY, SEE SHT. 07.
4. FOR EXPRESSWAY & DESTINATION SIGN SUMMARIES, SEE SHT. 07.

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



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 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

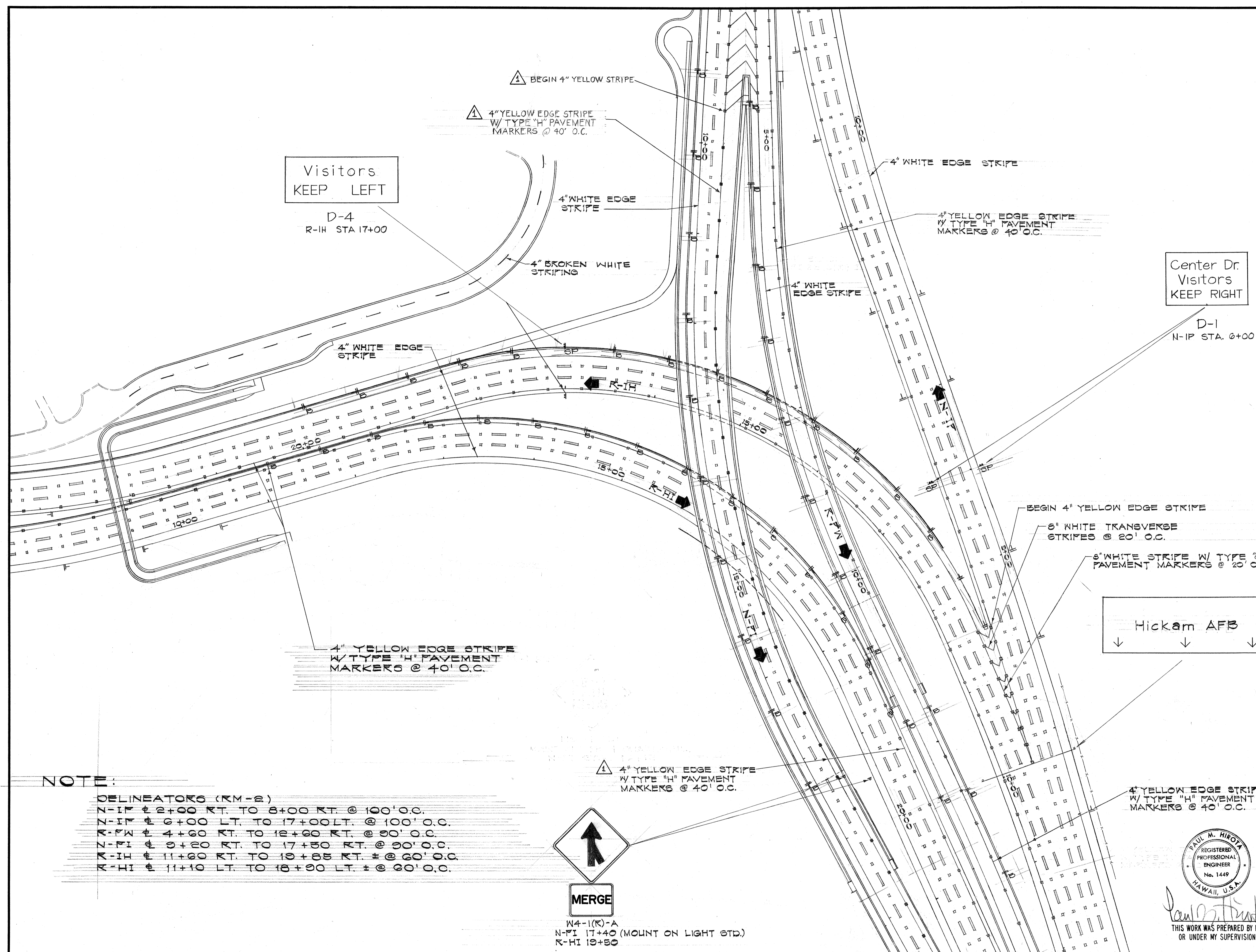
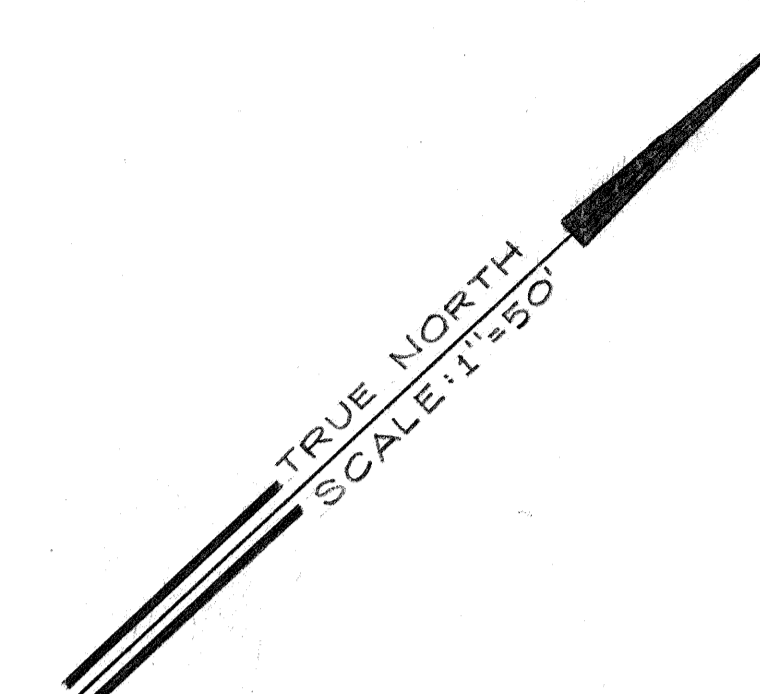
**NIMITZ SPUR
 PAVEMENT MARKERS,
 SIGNING & STRIPING**

INTERSTATE ROUTE H-1
 PROJ. NO. I-HI-1-(99)15

SCALE: 1" = 50' DATE: AUG 4 1976

SHEET No. 1 OF 28 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(00)15	1977	25	350



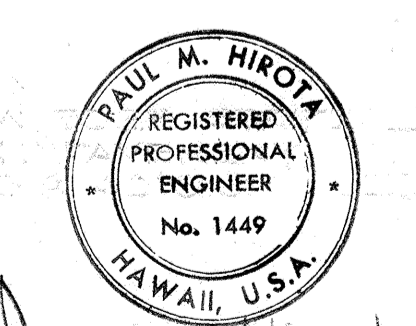
NOTE:

- DELINEATORS (RM-B)**
- N-17 # 2+00 RT. TO 8+00 RT. @ 100' O.C.
 - Z-17 # 6+00 LT. TO 17+00 LT. @ 100' O.C.
 - M-7N # 4+60 RT. TO 12+60 RT. @ 90' O.C.
 - Z-71 # 9+20 RT. TO 17+50 RT. @ 90' O.C.
 - M-11 # 11+60 RT. TO 19+85 RT. # @ 60' O.C.
 - K-11 # 11+10 LT. TO 18+90 LT. # @ 60' O.C.



MERGE

W4-1(K)-A
N-1I 17+40 (MOUNT ON LIGHT STD.)
K-11 19+50



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OR UNDER MY SUPERVISION

NO.	REVISION	APPROVED BY	DATE
			7/11/79

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**NIMITZ SPUR
PAVEMENT MARKERS
SIGNING & STRIPING**

INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(00)15

SCALE: 1"=50' DATE: AUG 4 1976

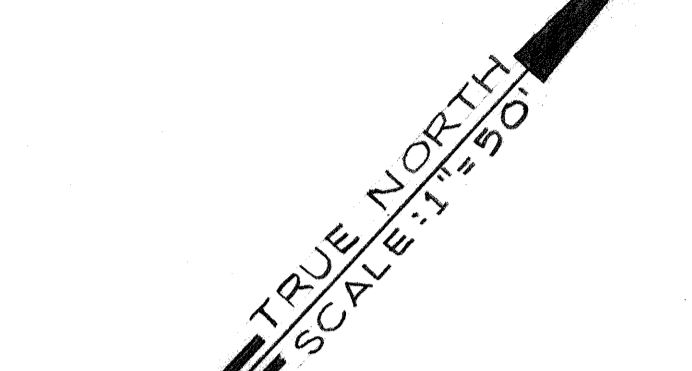
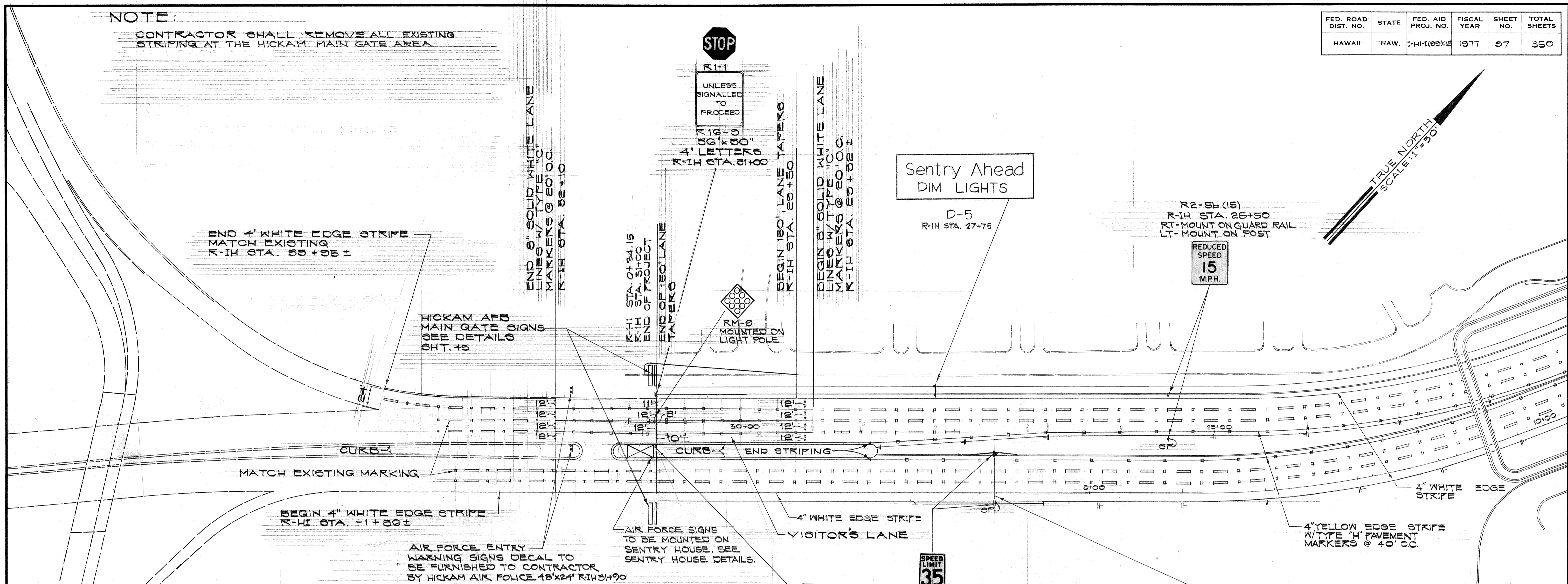
SHEET NO. 2 OF 28 SHEETS

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
NO.	

NOTE:

CONTRACTOR SHALL REMOVE ALL EXISTING STRIPING AT THE HICKAM MAIN GATE AREA

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H-1(89)15	1977	27	350



*** SUMMARY OF REGULATORY & WARNING SIGNS**

TYPE	DESCRIPTION	QUANTITY W/POST	QUANTITY W/O POST
R1-1	STOP	7	
K2-1(35)	SPEED LIMIT 35	3	5
K2-5b(15)	REDUCED SPEED 15 M.P.H.	2	
R5-1	DO NOT ENTER	1	
R7-107(R)	NO PARKING, BUS STOP	1	
R7-107(L)	NO PARKING, BUS STOP	1	
W9-1(L)	LEFT LANE ENDS	1	
R16-9	UNLESS SIGNALLED TO PROCEED	2	
W4-1(K)-A	↑	2	

SUMMARY OF EXPRESSWAY SIGNS

SIGN #	DESCRIPTION	SQ. FT.
E-1	HICKAM AF5 PEARL HARBOR	377
E-2&3	PEARL CITY HONOLULU AIRPORT	632

SUMMARY OF DESTINATION SIGNS

SIGN #	DESCRIPTION	SQ. FT.
D-1	CENTER DRIVE, VISITORS KEEP RIGHT	85.00
D-2	CENTER DRIVE VISITORS	42.00
D-3	VISITORS PARKING	16.25
D-4	VISITORS KEEP LEFT	52.50
D-5	SENTRY AHEAD DIM LIGHTS	21.25

*** SUMMARY OF RAISED PAVEMENT MARKERS**

TYPE	DESCRIPTION	QUANTITY
A	NON-REFLECTIVE WHITE	2,312
C	RED-CLEAR REFLECTIVE	688
H	ONE WAY YELLOW REFLECTIVE	230

*** SUMMARY OF PAINTED STRIPES**

DESCRIPTION	QUANTITIES (L.F.)
(YELLOW) PAVEMENT STRIPING	10,520
(WHITE) PAVEMENT STRIPING	20,470

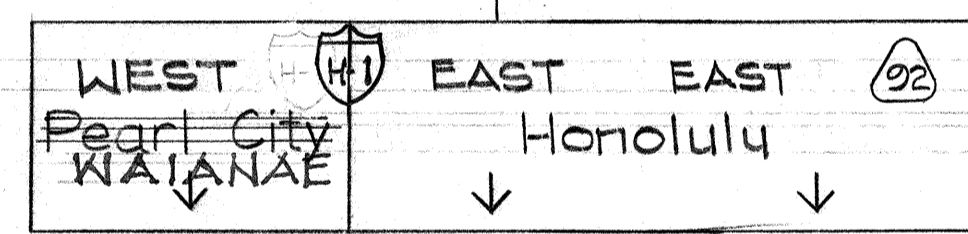
SUMMARY OF DELINEATORS - TYPE KM-2

SYMBOL	DESCRIPTION	QUANTITY
#1	KM-2 ON POSTS	32 EACH
#15	KM-2 MOUNTED ON BARRIER OR SKIRGE/RETAINING WALL PAVEMENT W/O RAILING	28 EACH
	W/ SKIRGE RAILING	8 "
	W/ PIPE RAILING	18 "
	W/ GLAZE SCREEN	13 "
#9	KM-2 MOUNTED ON SIGN POST	6 EACH

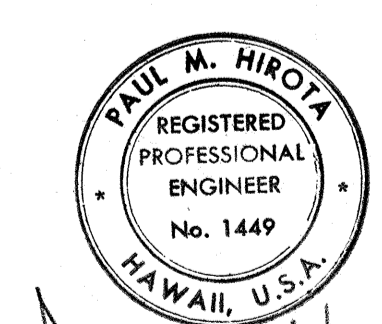
REFLECTOR MARKERS

TYPE	DESCRIPTION	QUANTITY
RM-9	MOUNTED ON LIGHT STANDARD	3

***NOTE:**
 1. FOR ADDITIONAL SUMMARY OF REGULATORY & WARNING SIGNS AND SUMMARY OF PAINTED STRIPES SEE SHT. 60
 2. SEE SHEETS 58 AND 59 FOR MOKULELE SCHOOL STRIPING



NOTE:
 DELINEATORS (KM-2)
 K-IH STA. 22+00 LT. TO 28+50 LT. @ 90' O.C.
 K-IH STA. 26+80 LT. TO 28+80 LT. @ 100' O.C.
 K-IH STA. 5+10 RT. TO 10+50 RT. @ 90' O.C.



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 DEPARTMENT OF TRANSPORTATION
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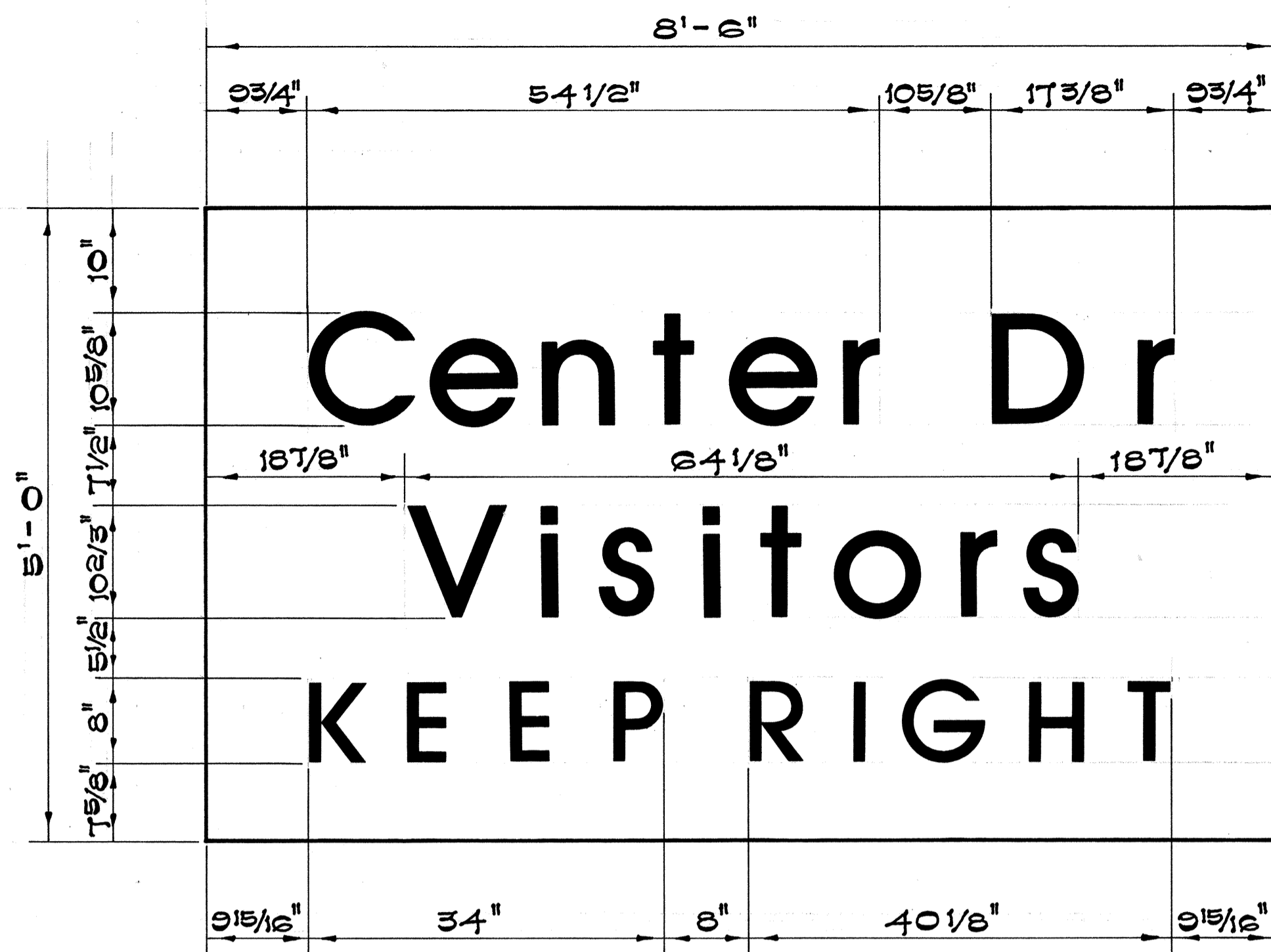
**NIMITZ SPUR
 PAVEMENT MARKERS,
 SIGNING & STRIPING**

INTERSTATE ROUTE H-1
 PROJ. NO. 1-H-1(89)15

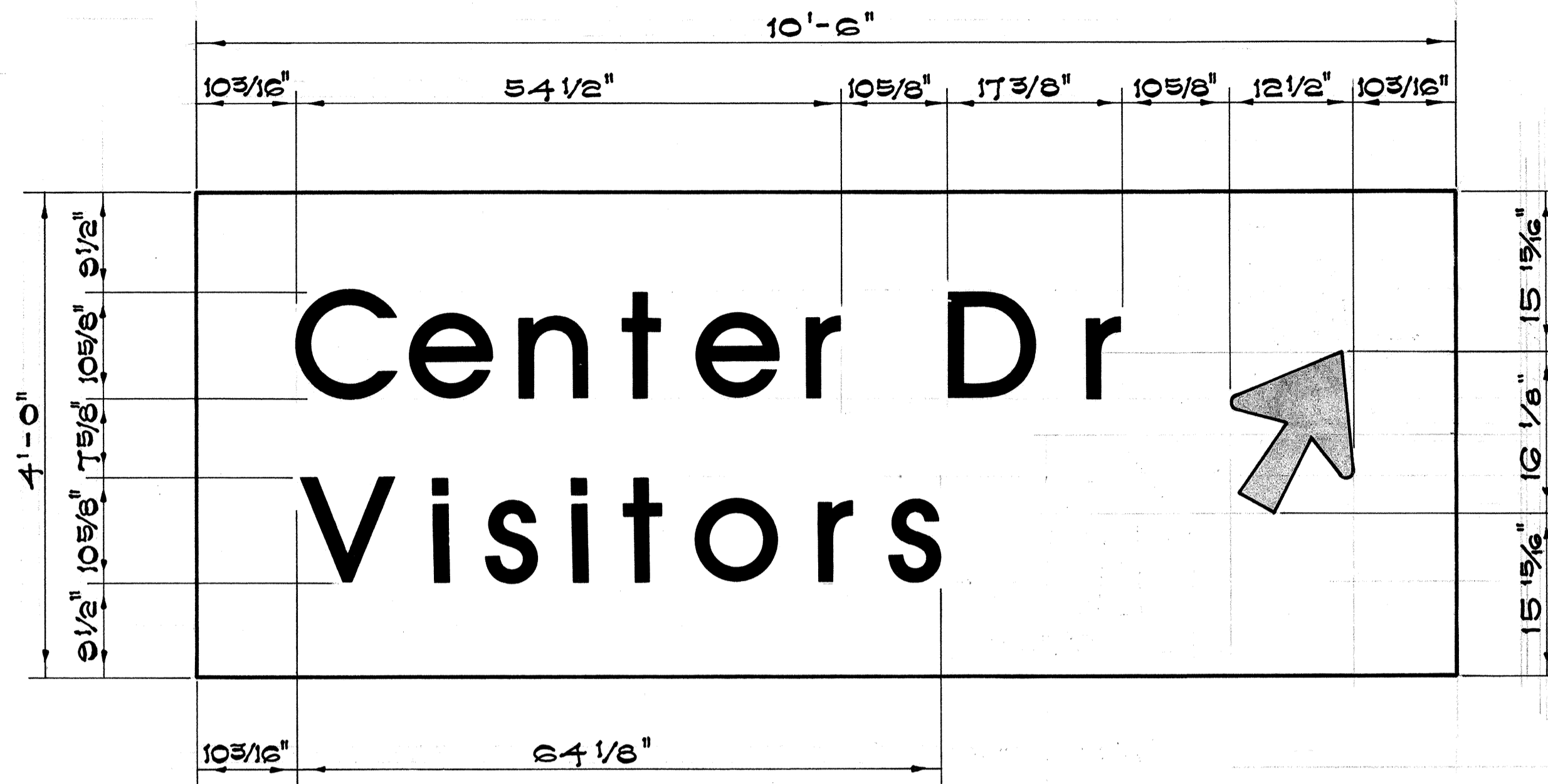
SCALE: 1"=50' DATE: AUG 4 1976
 SHEET NO. 4 OF 28 SHEETS

SURVEY PLOTTED BY: _____ DATE: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 NO. _____

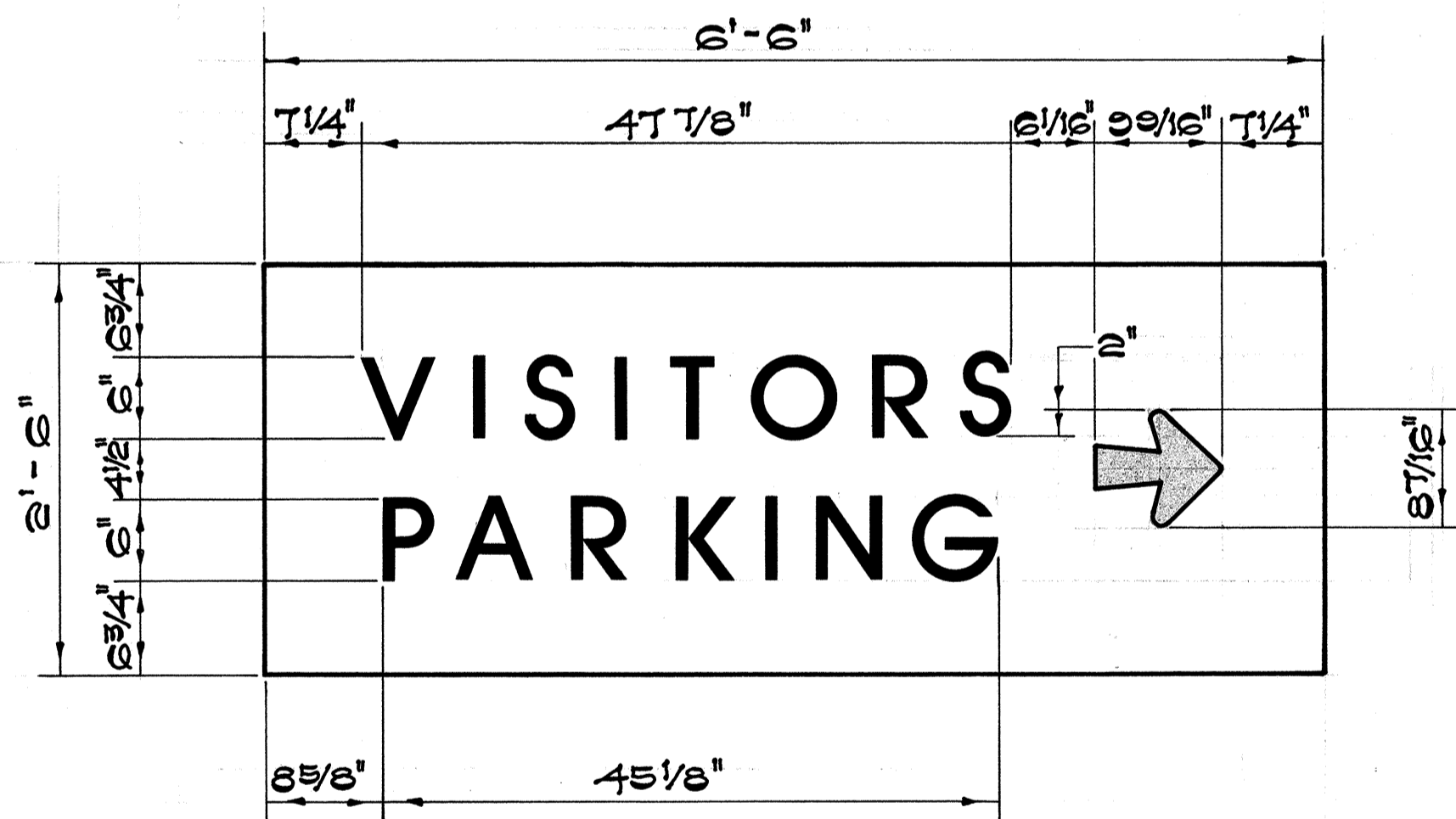
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(89)15	1977	28	350



SIGN D-1
(N-1P @ 8+00)
SCALE: 1" = 1'-0"



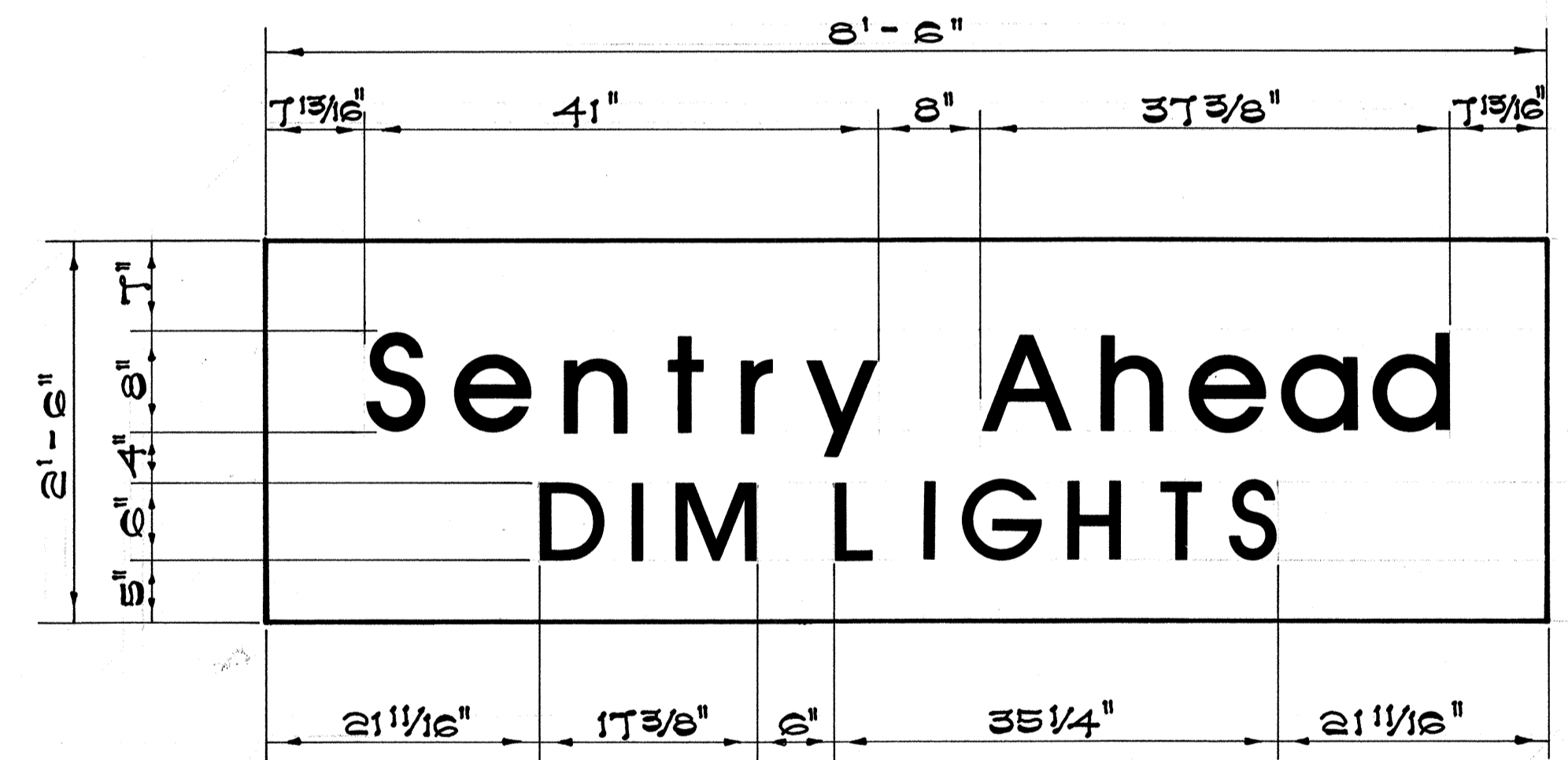
SIGN D-2
(N-1P @ 12+10)
SCALE: 1" = 1'-0"



SIGN D-3
(CENTER DRIVE @ 1+00)
SCALE: 1" = 1'-0"

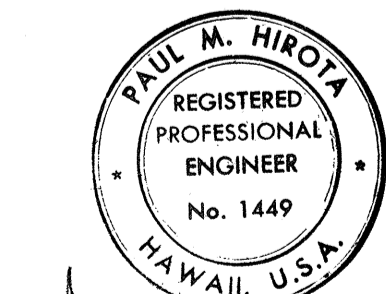


SIGN D-4
(R-1H @ 17+00)
SCALE: 1" = 1'-0"



SIGN D-5
(R-1H @ 27+75)
SCALE: 1" = 1'-0"

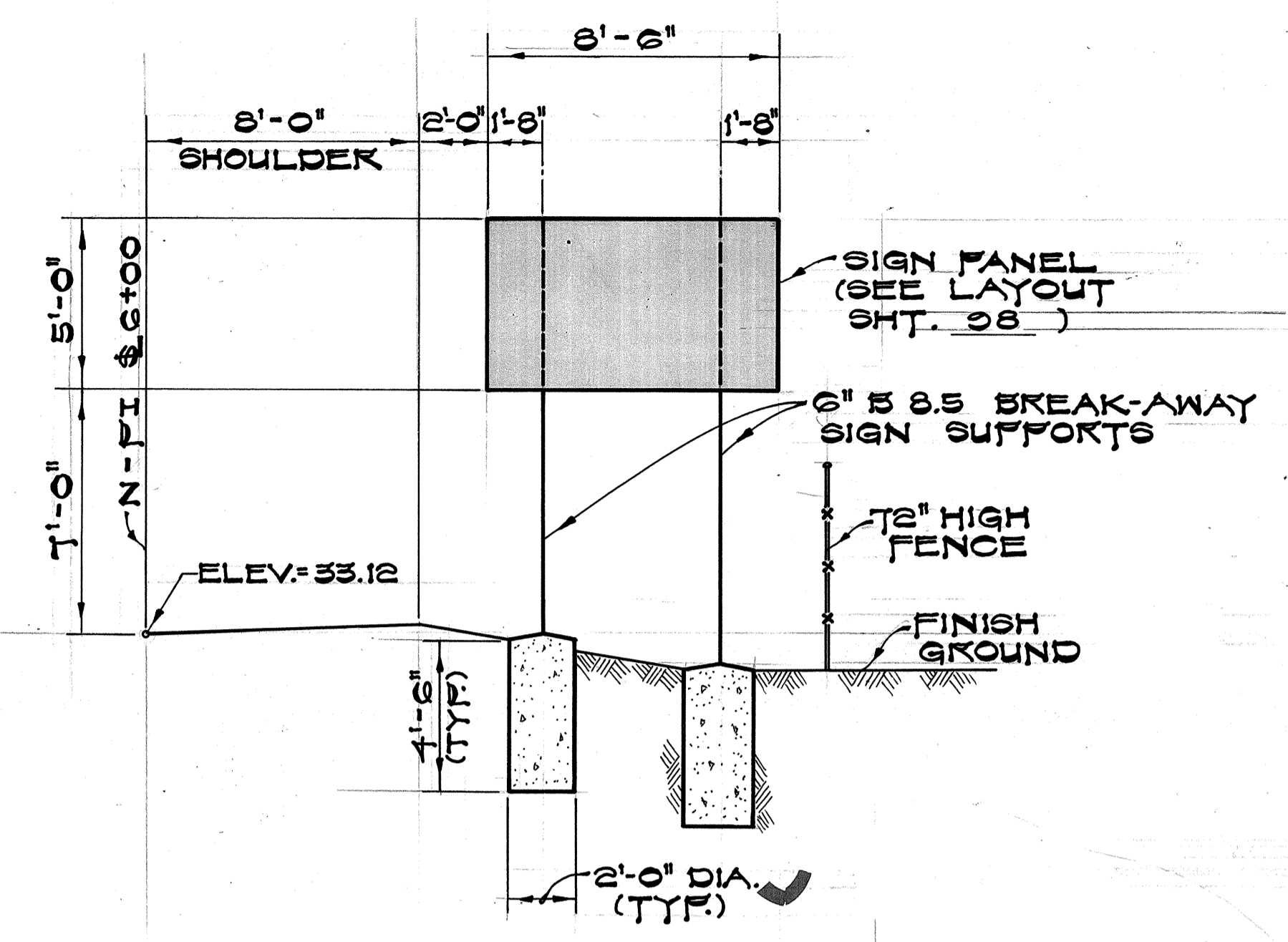
DATE
SURVEY PLOTTED BY
DRAWN BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
ORIGINAL PLAN
NOTE BOOK
No.



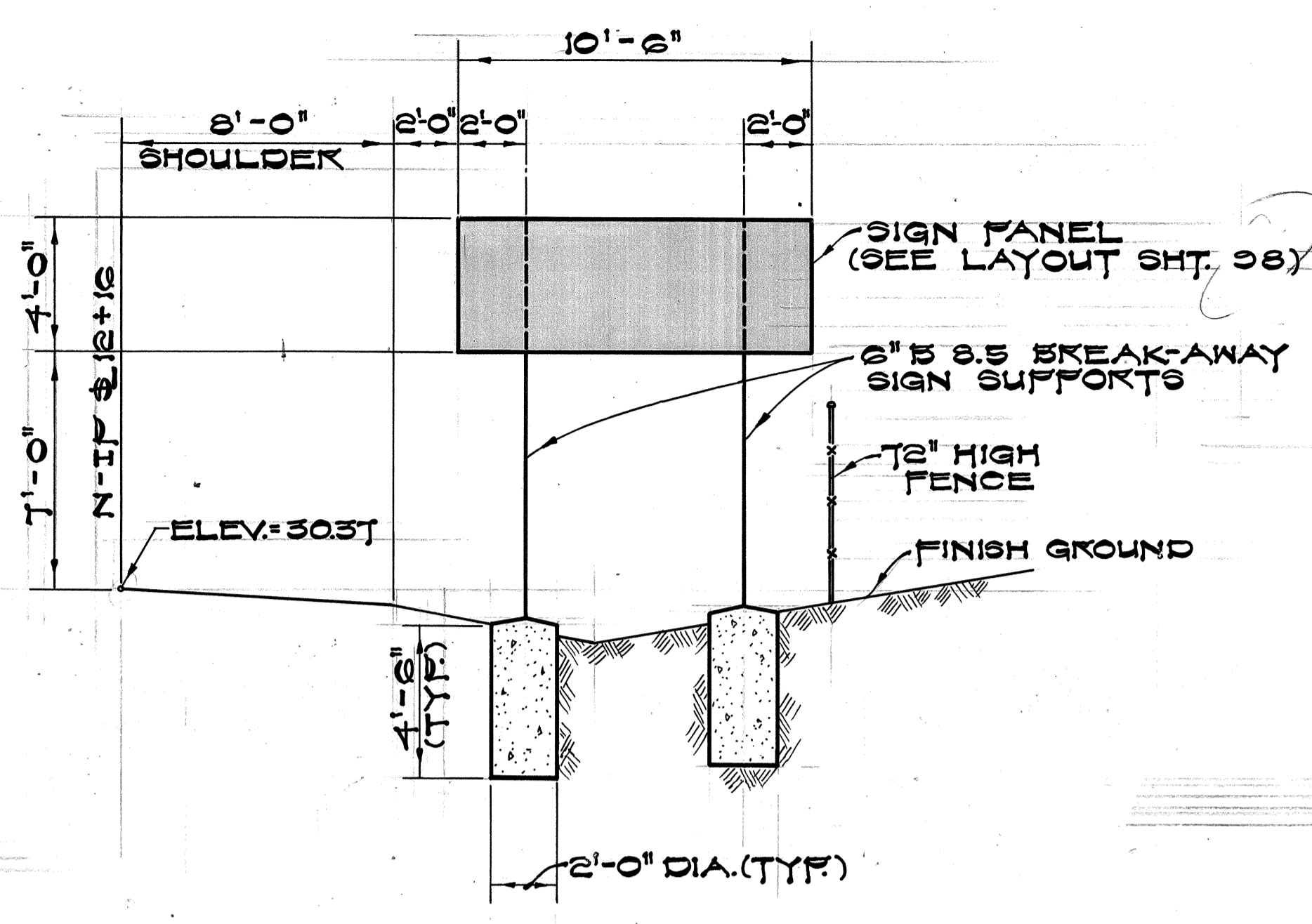
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ OPUR
DESTINATION SIGNS
PANEL LAYOUT
INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(89)15
SCALE: AS NOTED DATE: AUG 4 1977
SHEET No. 5 OF 28 SHEETS

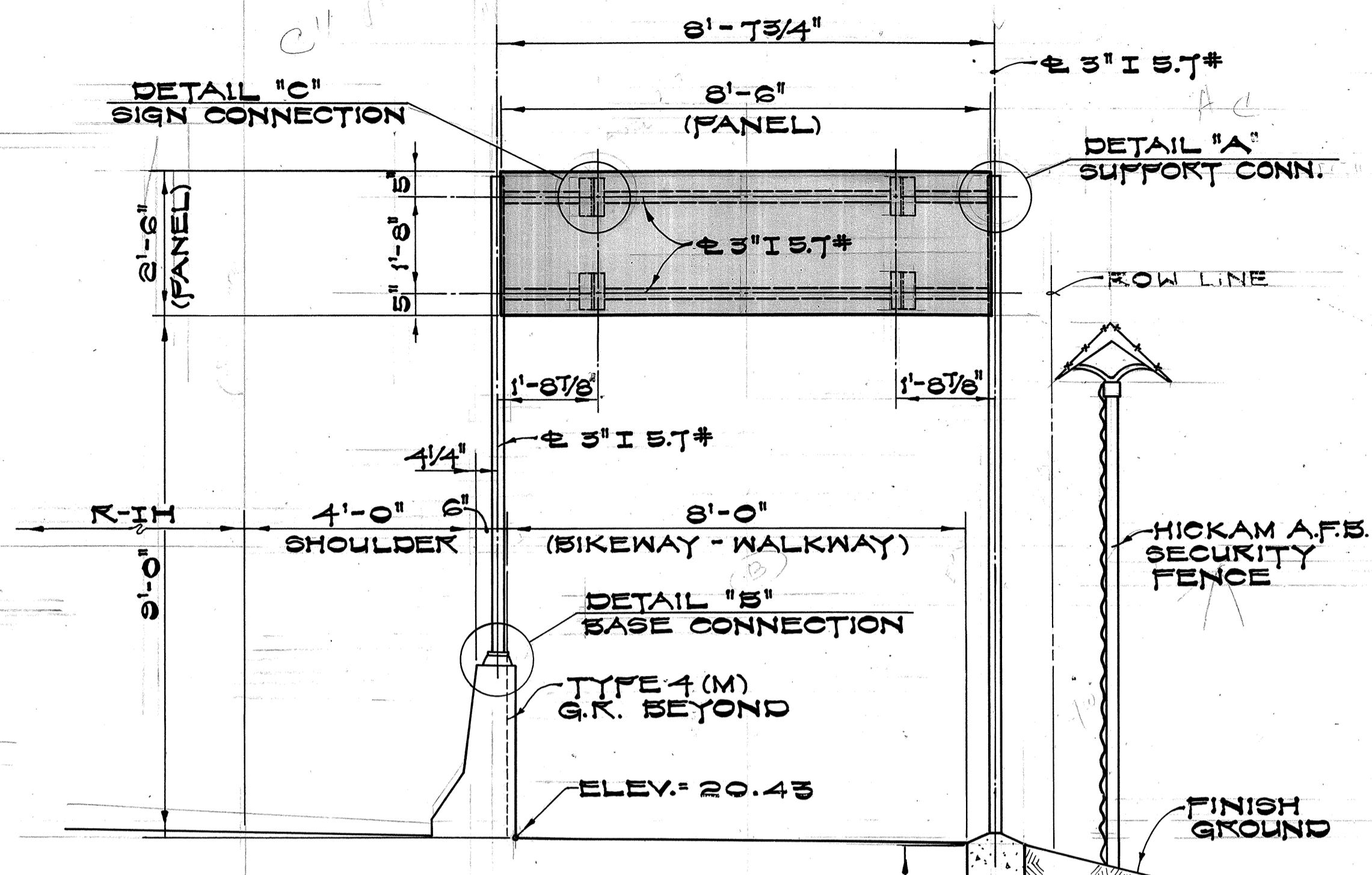
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(29)115	1977	92	350



SIGN D-1
(N-1P @ 6+00)
SCALE: 1/4" = 1'-0"

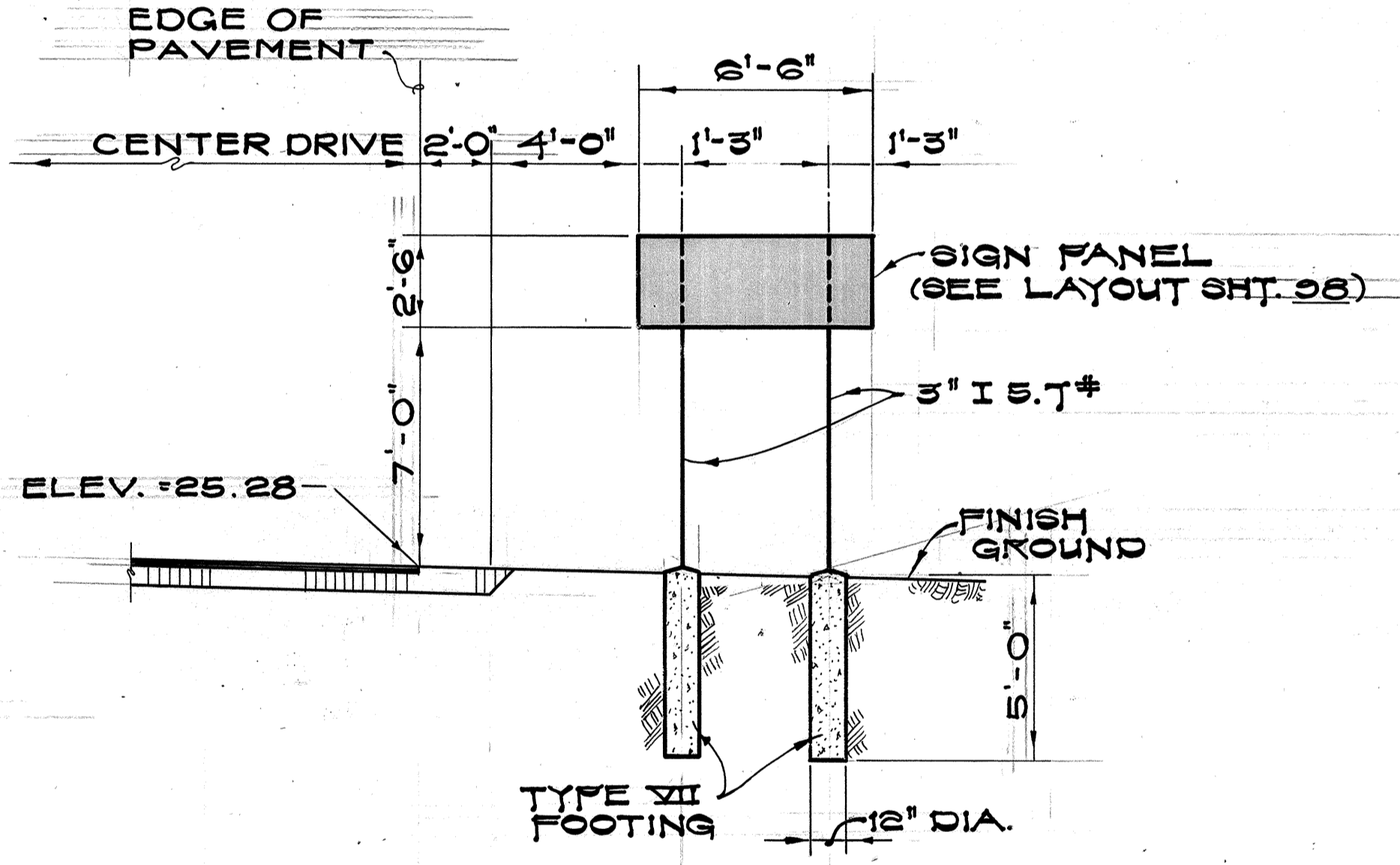


SIGN D-2
(N-1P @ 12+16)
SCALE: 1/4" = 1'-0"

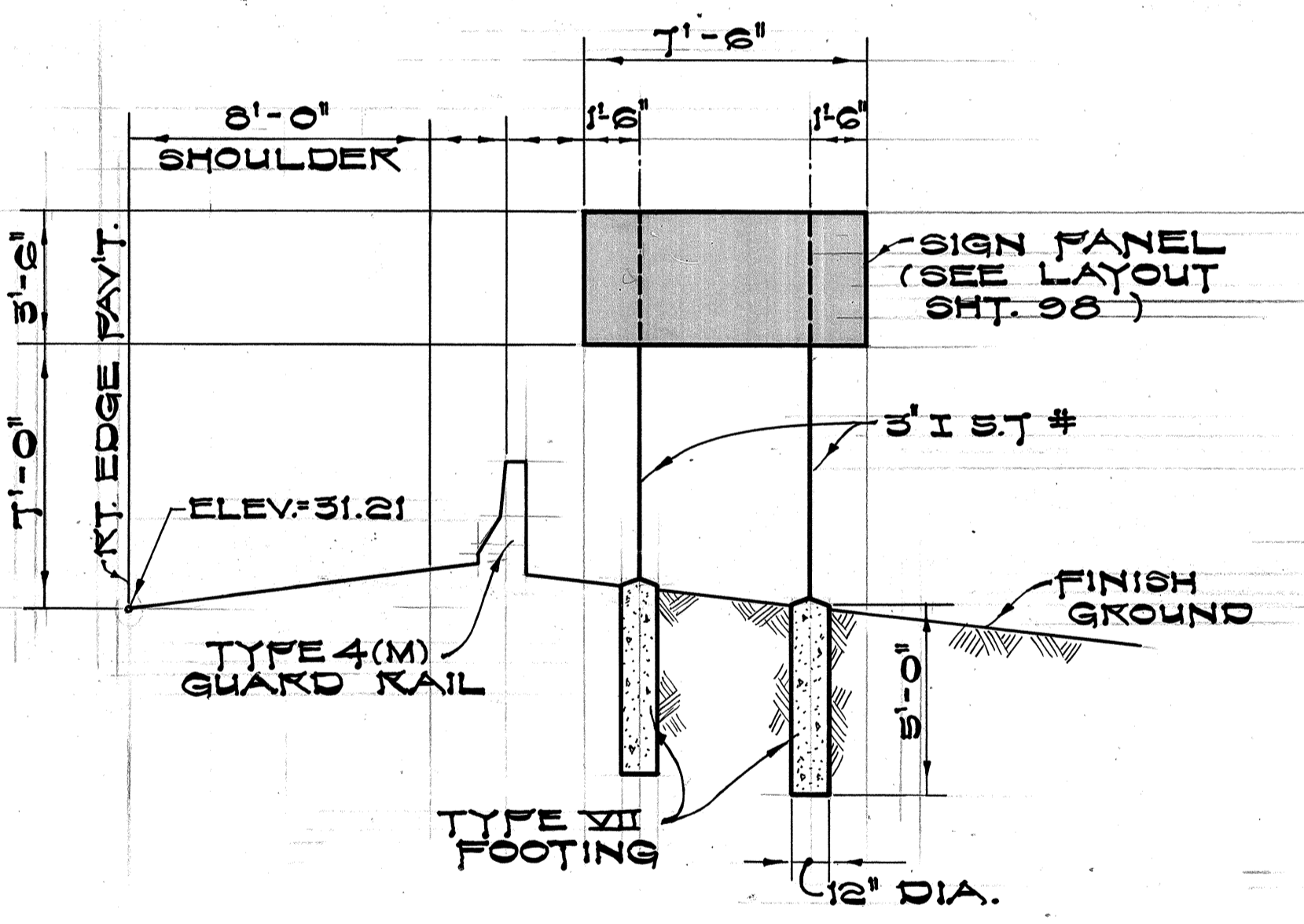


NOTE: SPECIAL SIGN MOUNTING BRACKET DETAILS "A" & "C", SEE THIS SHEET. (BRACKETS SHALL BE INCIDENTAL TO SIGN POST.)

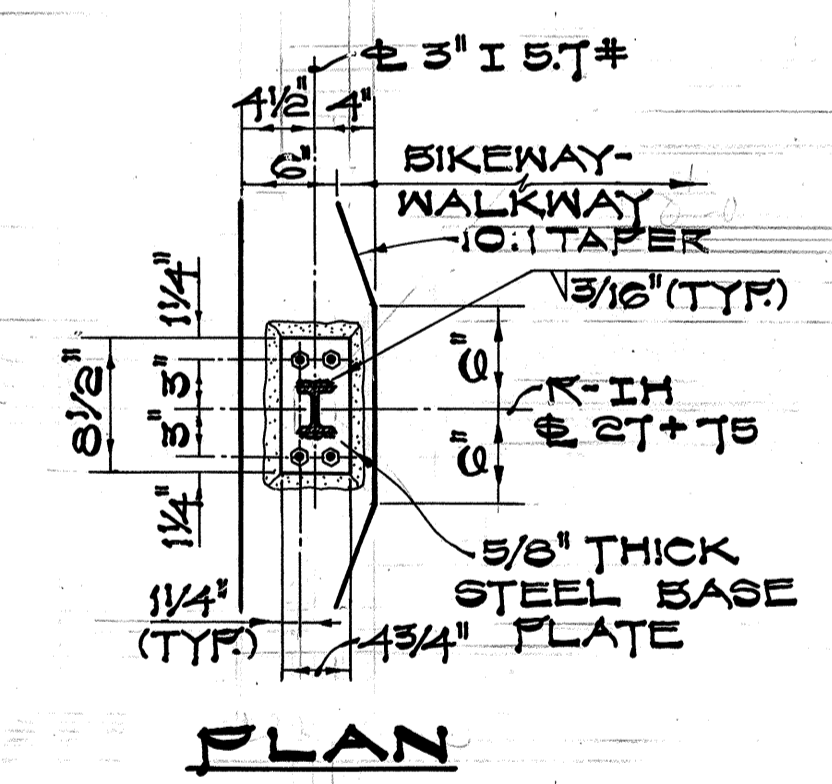
SIGN D-5
(R-1H @ 27+75)
SCALE: 1/2" = 1'-0"



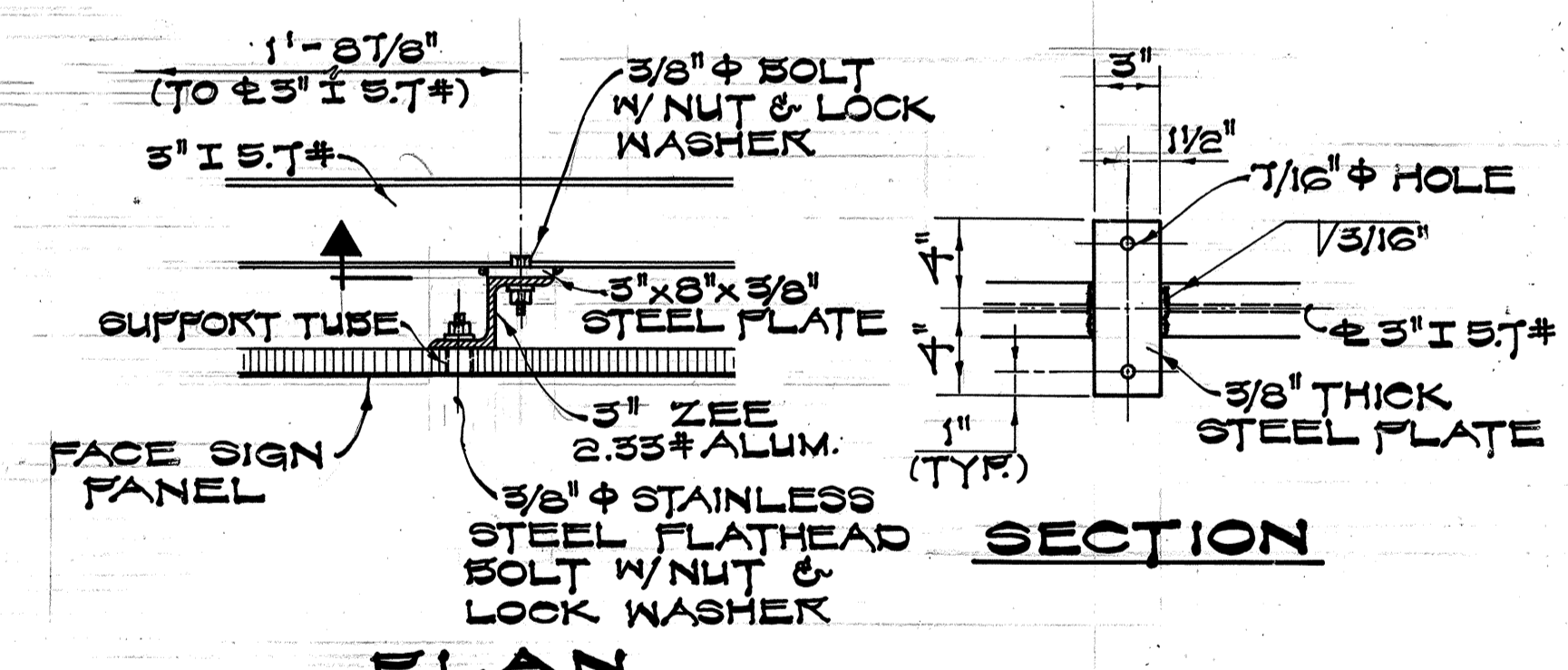
SIGN D-3
(CENTER DRIVE 1+00)
SCALE: 1/4" = 1'-0"



SIGN D-4
(R-1H @ 17+00)
SCALE: 1/4" = 1'-0"

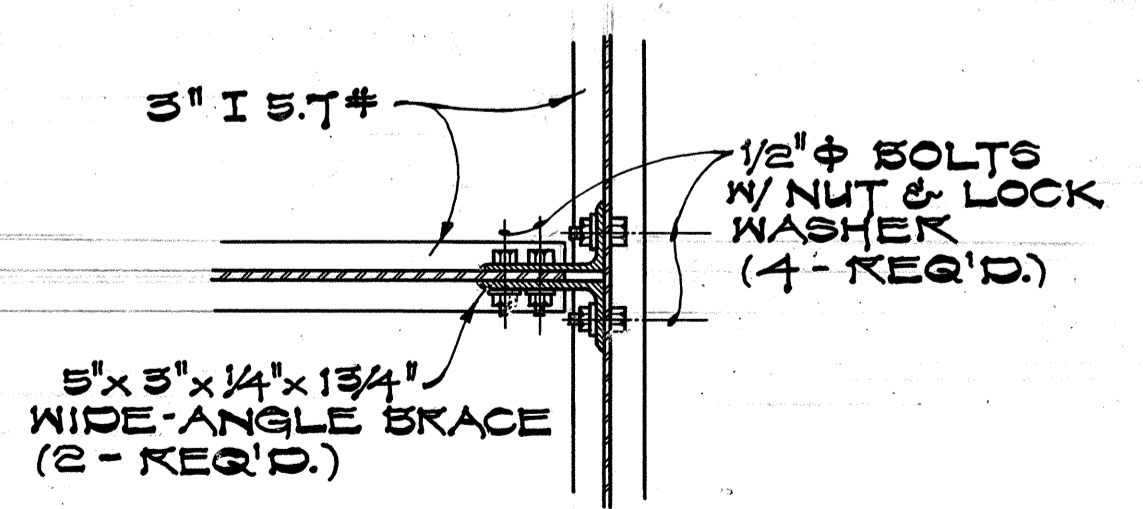


PLAN

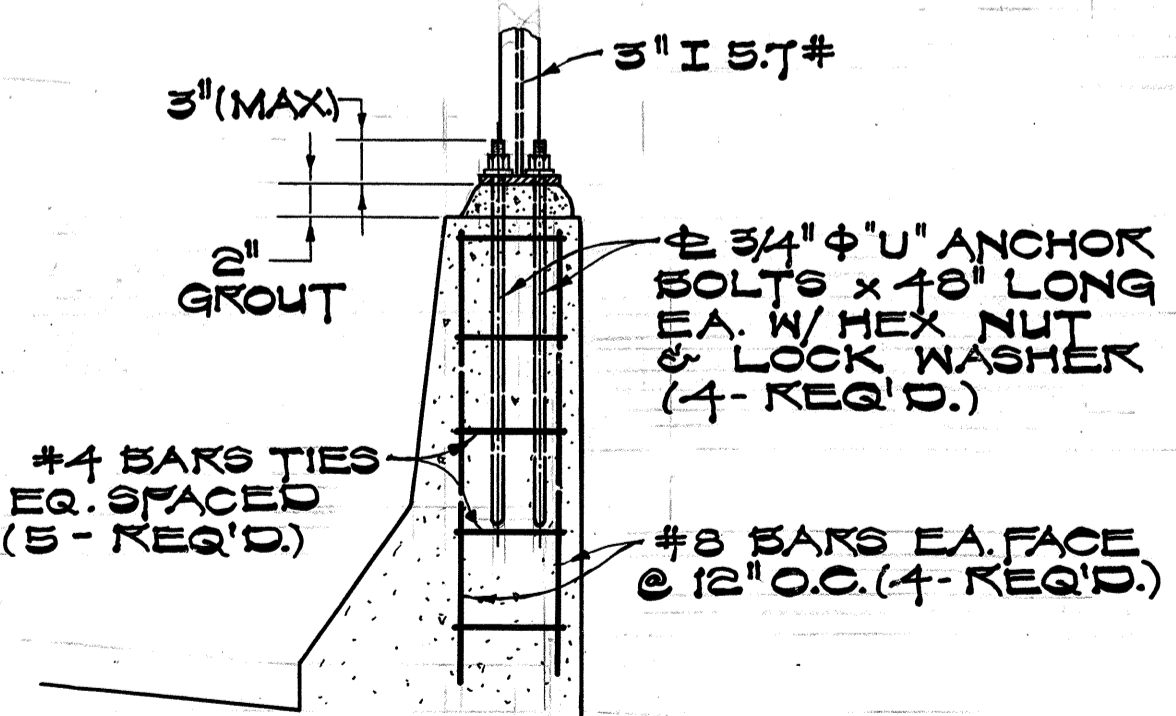


SECTION

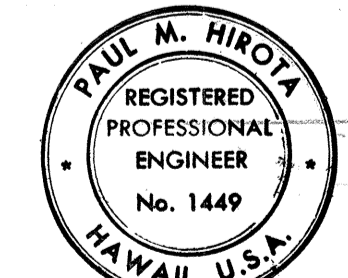
DETAIL "C"
SCALE: 1/2" = 1'-0"



DETAIL "A"
SCALE: 1/2" = 1'-0"



DETAIL "B"
SCALE: 1" = 1'-0"

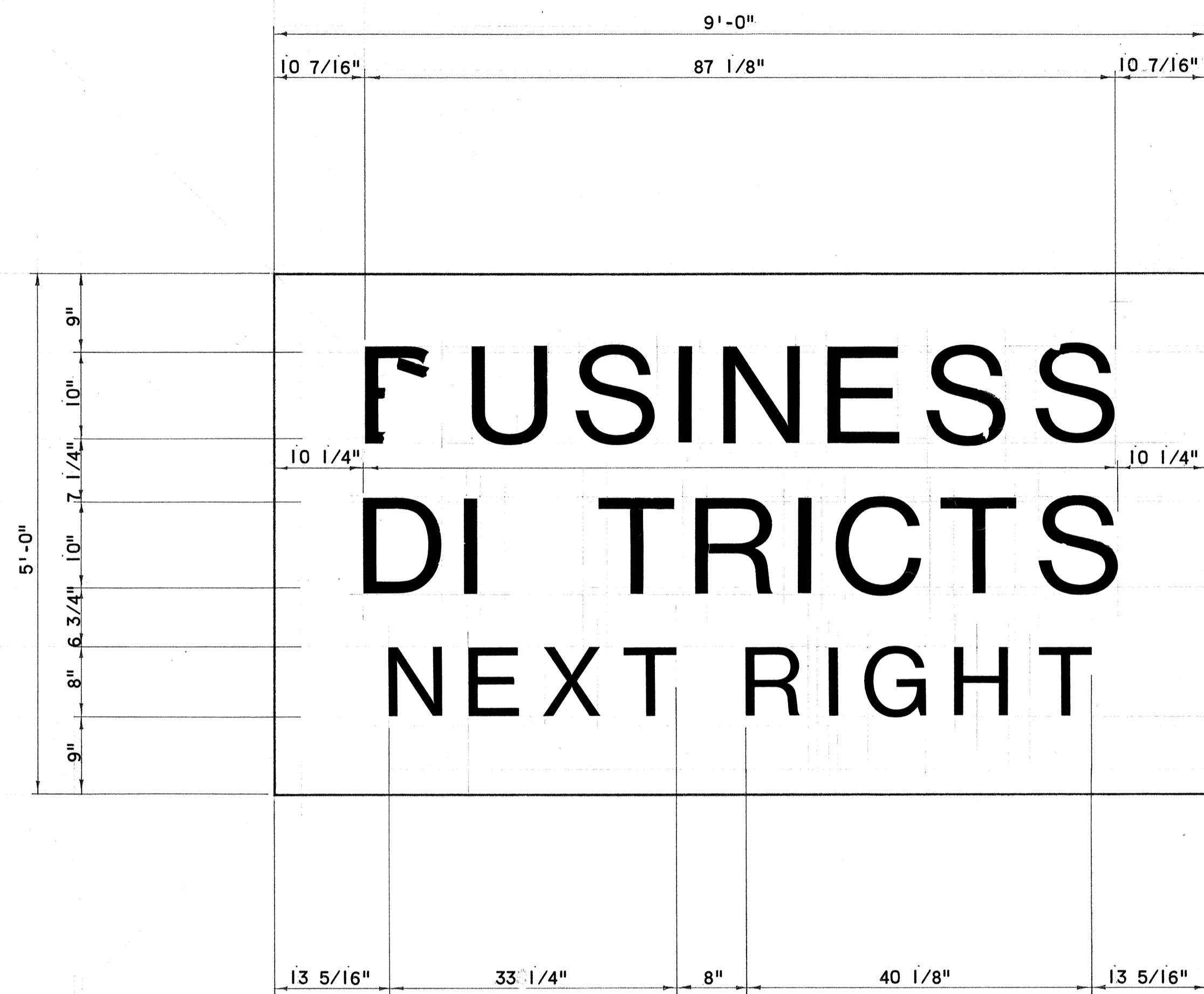


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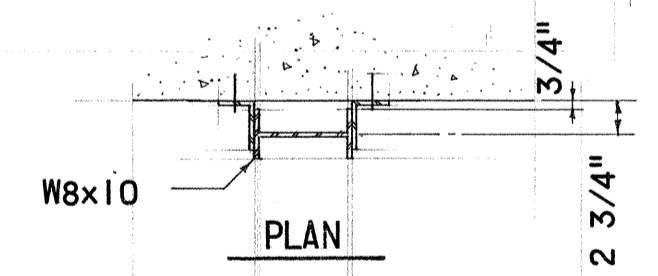
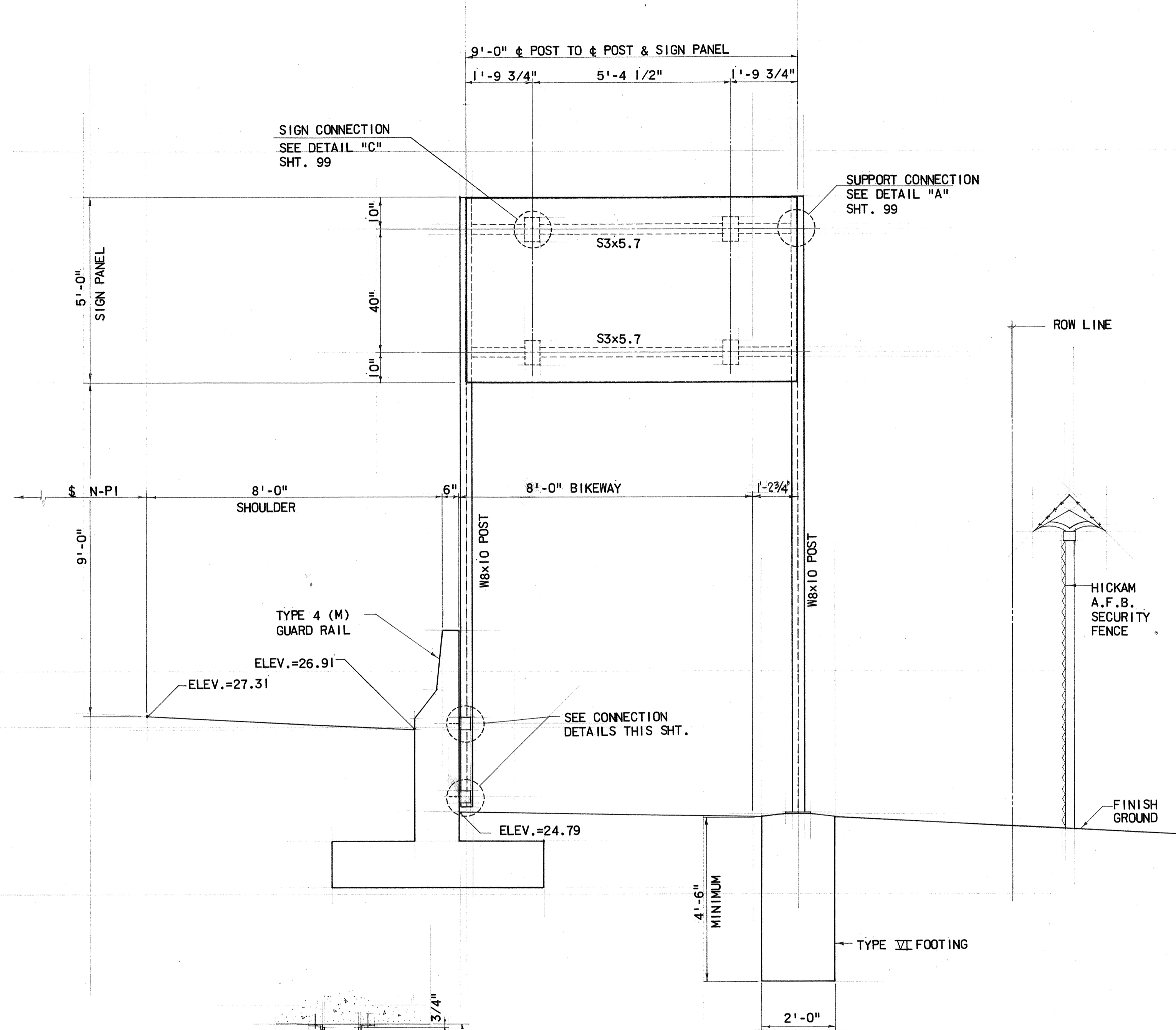
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR
DESTINATION SIGNS
FRAME MOUNTING LAYOUT &
BRACKET DETAILS
INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(29)115
SCALE AS NOTED DATE: AUG 4 1976
SHEET NO. 6 OF 28 SHEETS

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

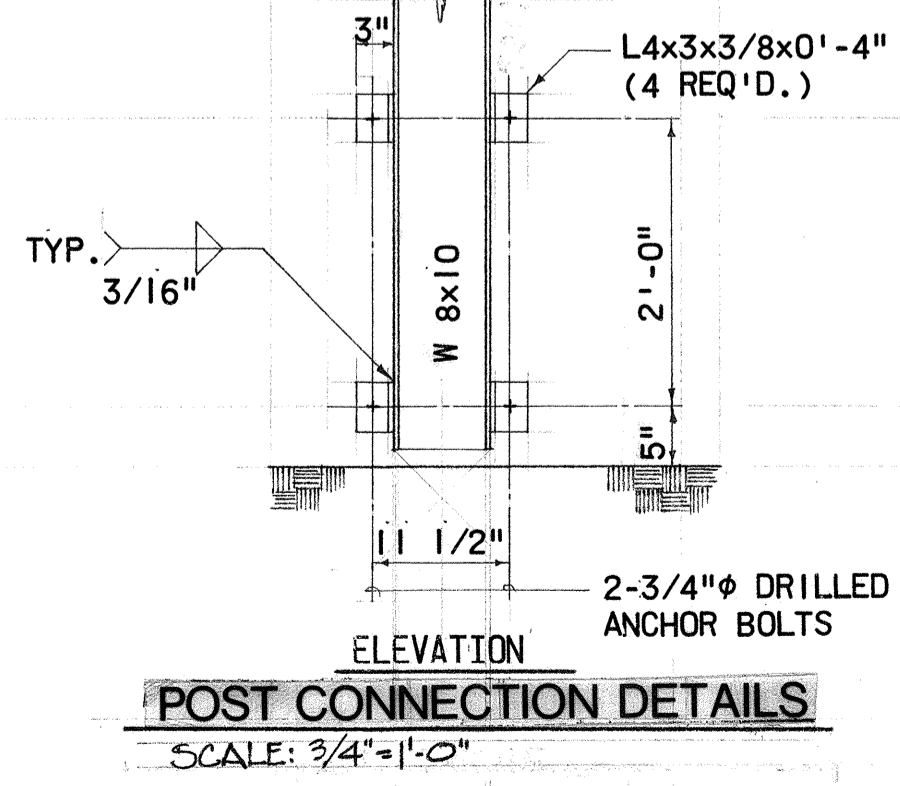
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(99)15	1977	99A	350



SIGN D-6
(N-PI § 25+00)
SCALE: 1" = 1'-0"



SIGN D-6
(N-PI § 25+00)
SCALE: 1/2" = 1'-0"

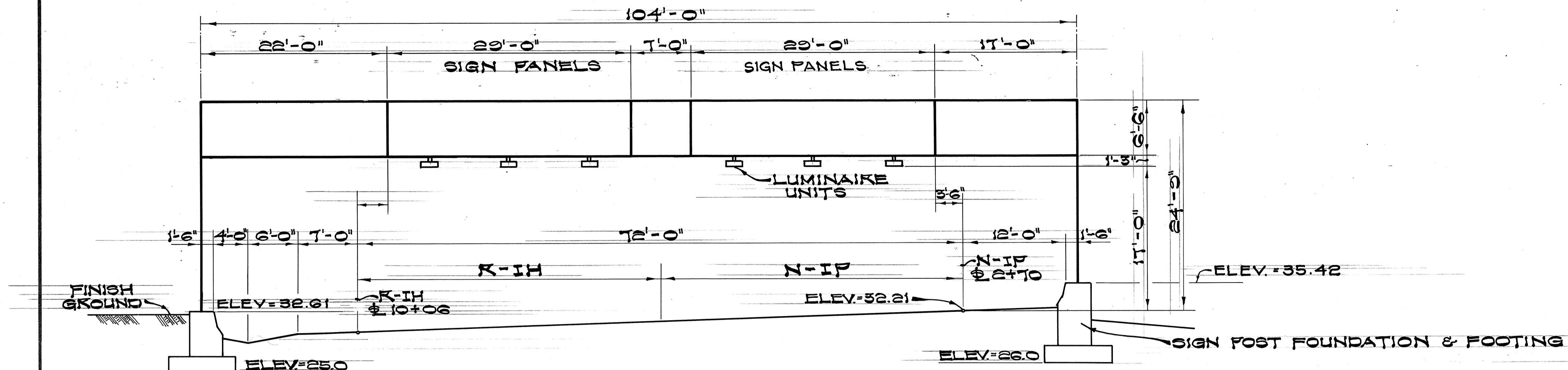


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR
DESTINATION SIGNS
PANEL LAYOUT & MOUNTING DETAILS
INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(99)15
SCALE: AS SHOWN DATE: JUNE 11, 1979
SHEET NO. 6A OF 28 SHEETS

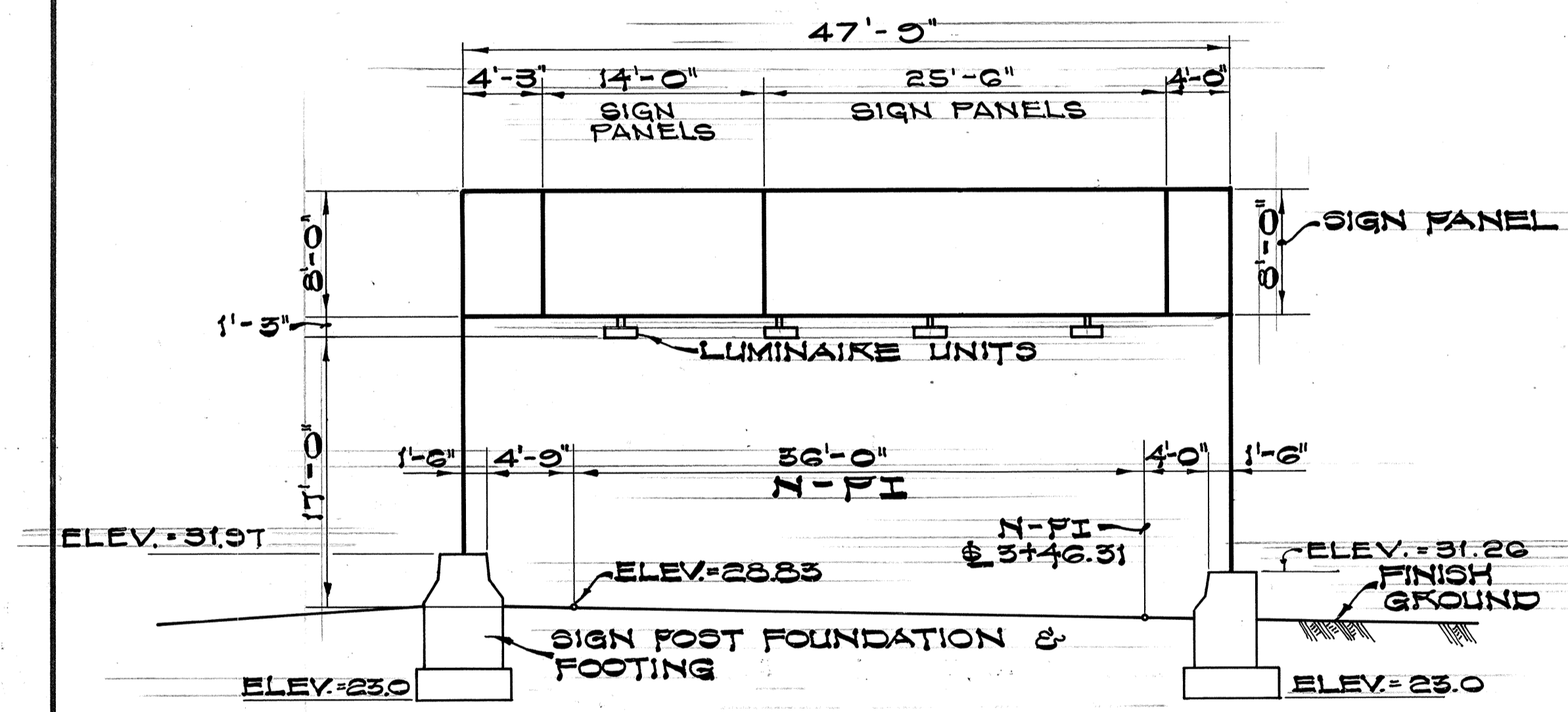
SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

6-5-7

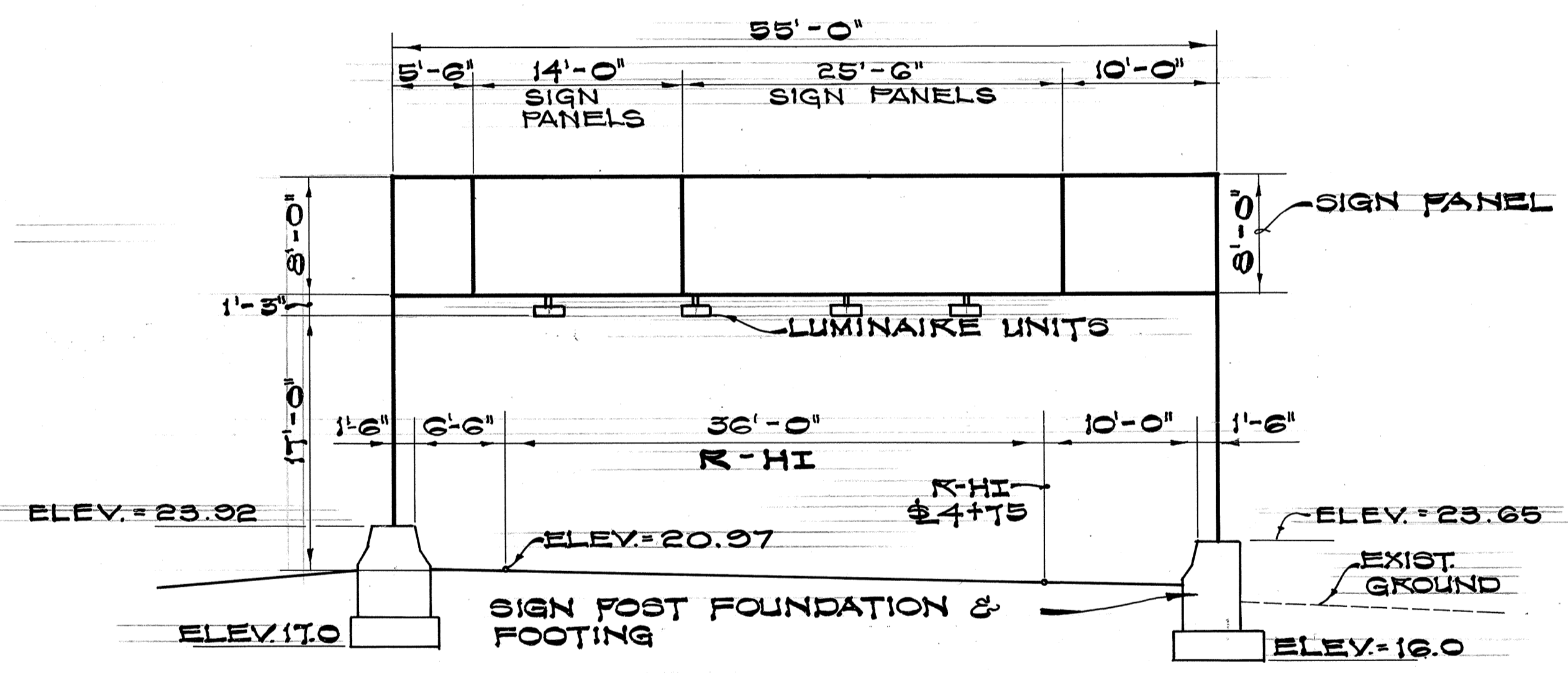
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(00):15	1977	101	350



SIGN E-1
 (K-IH ϕ 10+06 & N-IP ϕ 2+70)
 SCALE: 1/8"=1'-0"

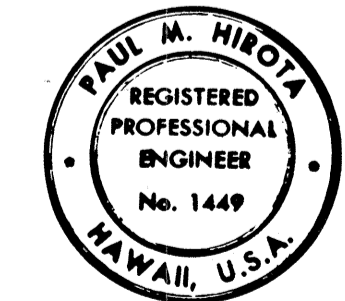


SIGN E-2
 (N-PI ϕ 3+46.31)
 SCALE: 1/8"=1'-0"



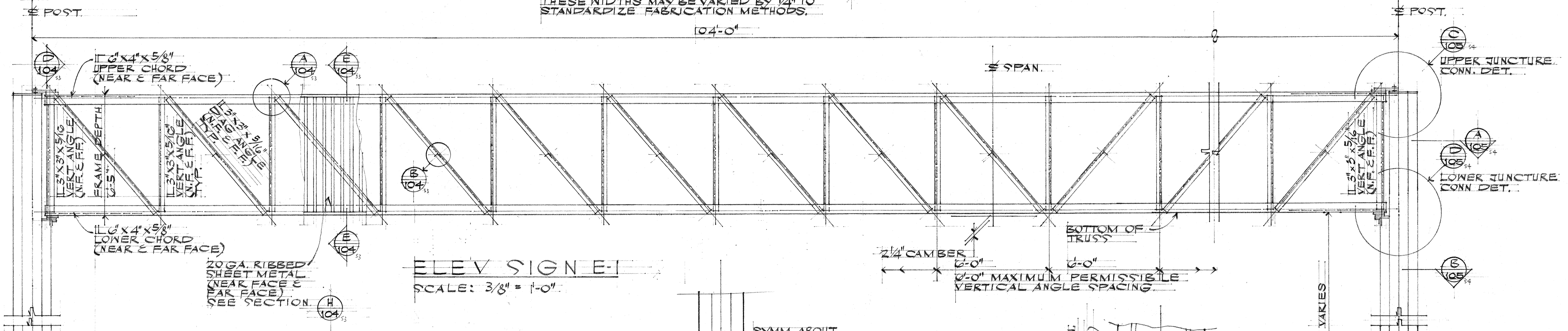
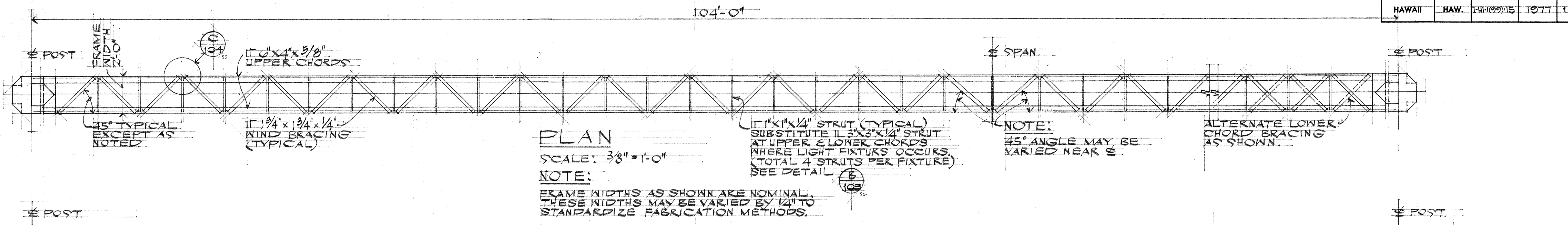
SIGN E-3
 (K-HI ϕ 4+75)
 SCALE: 1/8"=1'-0"

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 NIMITZ SPUR
EXPRESSWAY SIGNS
 FRAME MOUNTING LAYOUT
 DETAILS
 INTERSTATE ROUTE HI-1
 PROJ. NO. I-H-1(00):15
 SCALE: AS NOTED DATE: AUG 4 - 1976
 SHEET NO. 3 OF 26 SHEETS



GENERAL NOTES:

DESIGN:
AASHTO SPECIFICATIONS FOR THE DESIGN & CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS DATED 1968.

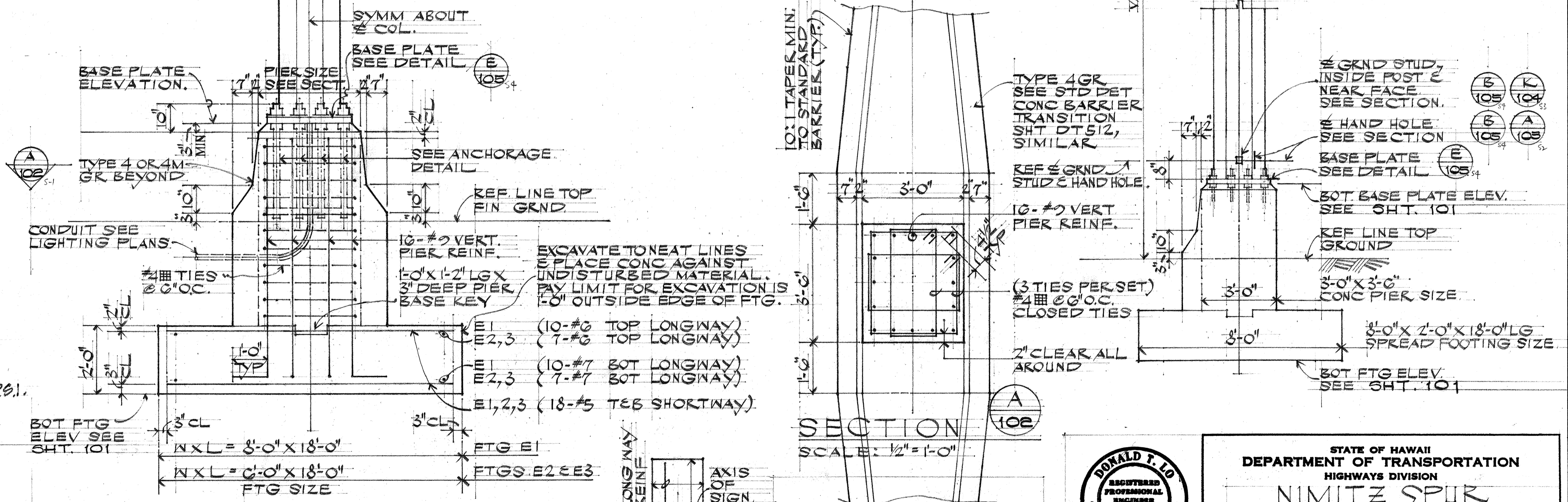
DESIGN DATA:
WIND LOADING: NORMAL TO FACE OF SIGN = 59 PSF (75 MPH WIND).
TRANSVERSE TO FACE OF SIGN = 0.2 OF NORMAL FORCE.

P.R.: ZONE 3
WALKWAYS: NONE
ICE LOAD: NONE
STRUCTURAL STEEL: ASTM A-36, fy = 36,000 P.S.I.
CONCRETE: fc = 3,000 P.S.I.
REINFORCED STEEL: fy = 40,000 P.S.I.
MAX. ALLOWABLE SOIL BEARING PRESSURE = 8,000 P.S.I.

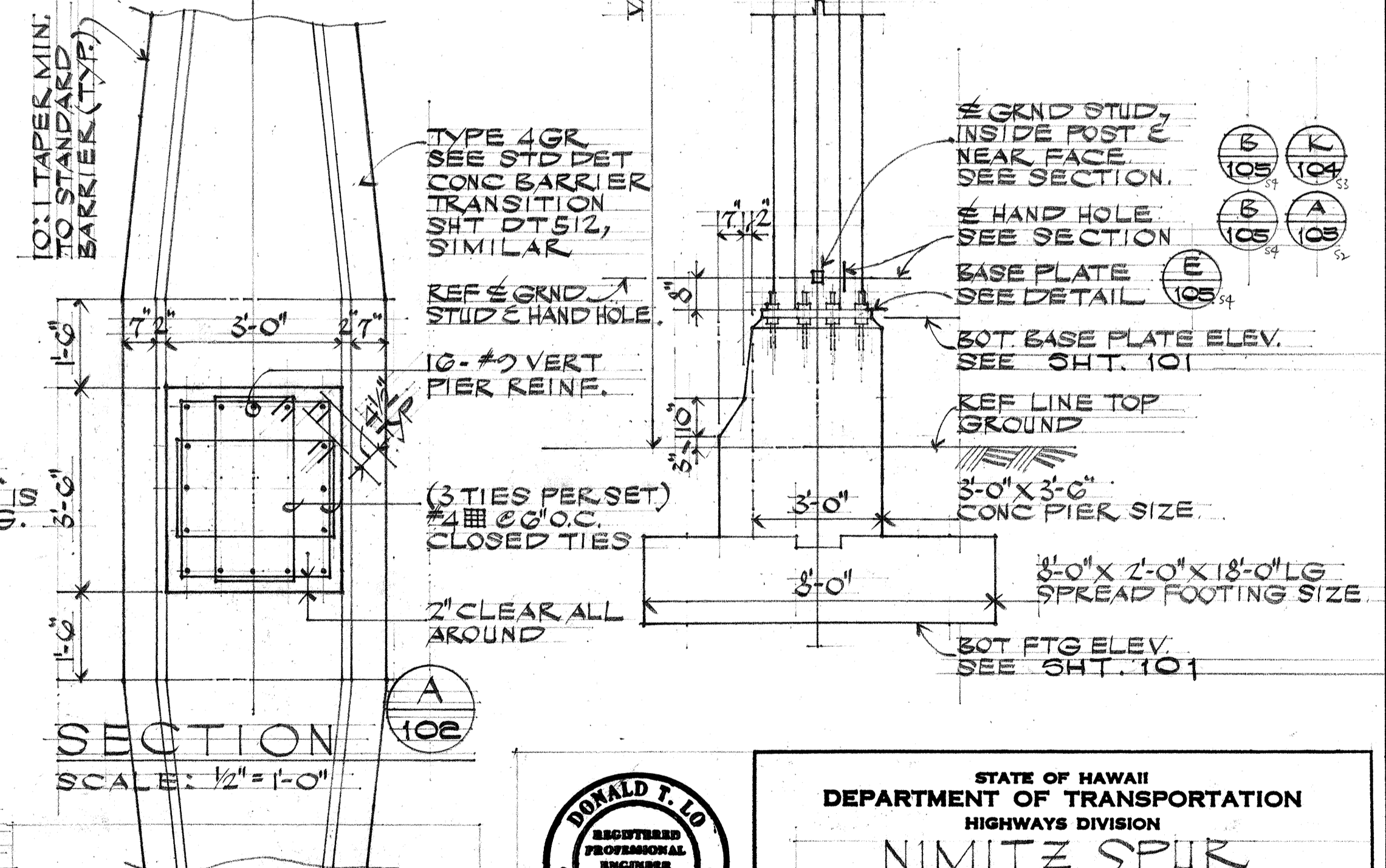
TYPE	FRAME DEPTH	WIDTH
E1	6'-5"	2'-0"
E2 & E3	7'-11"	2'-0"

WELDING:
ALL WELDING CONTINUOUS UNLESS OTHERWISE NOTED ON PLANS.

GALVANIZING:
ALL STRUCTURAL STEEL MEMBERS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A-123.



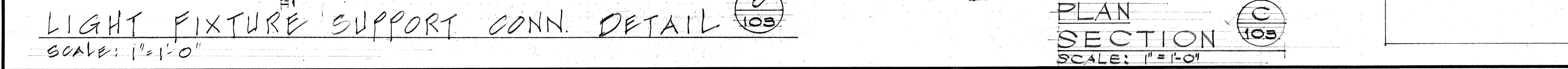
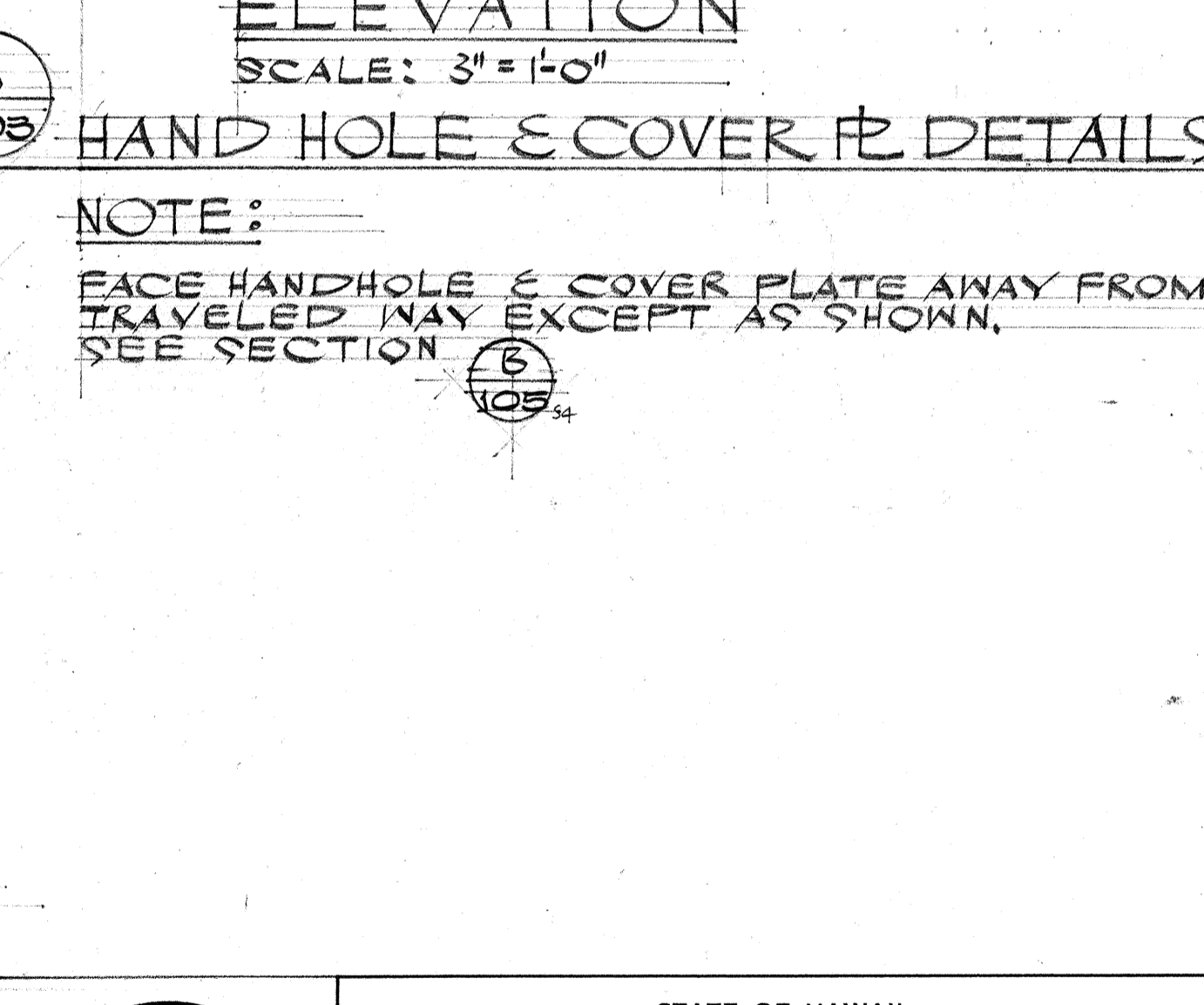
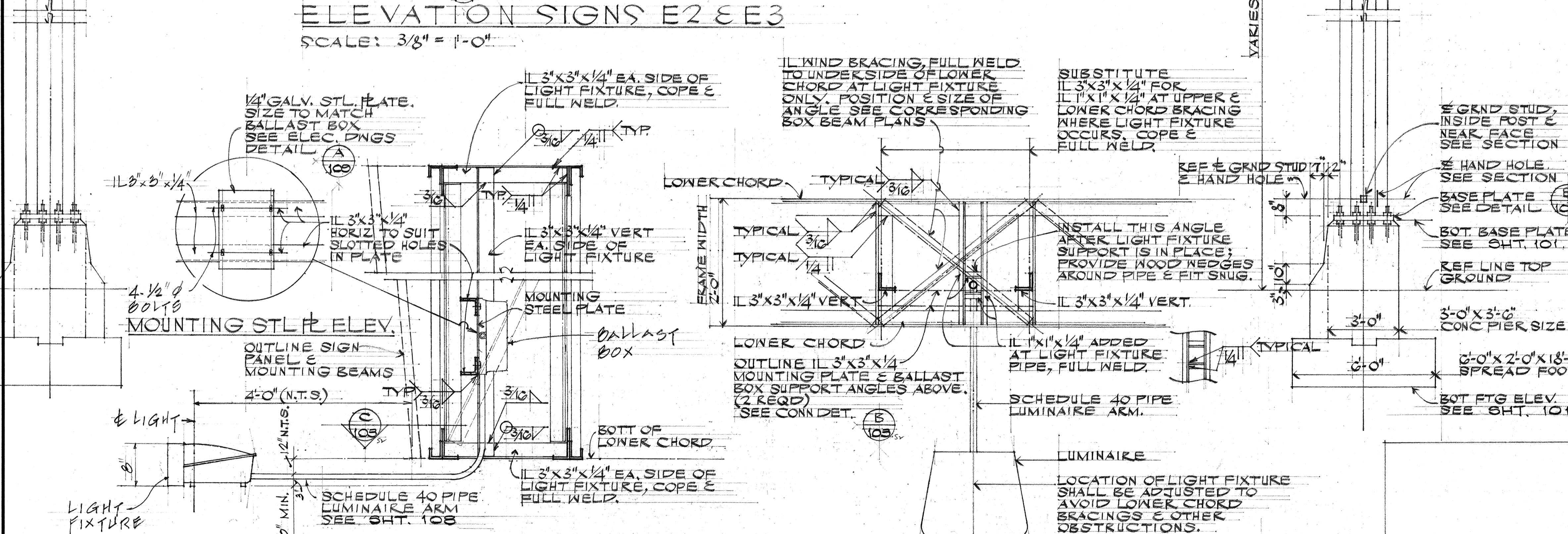
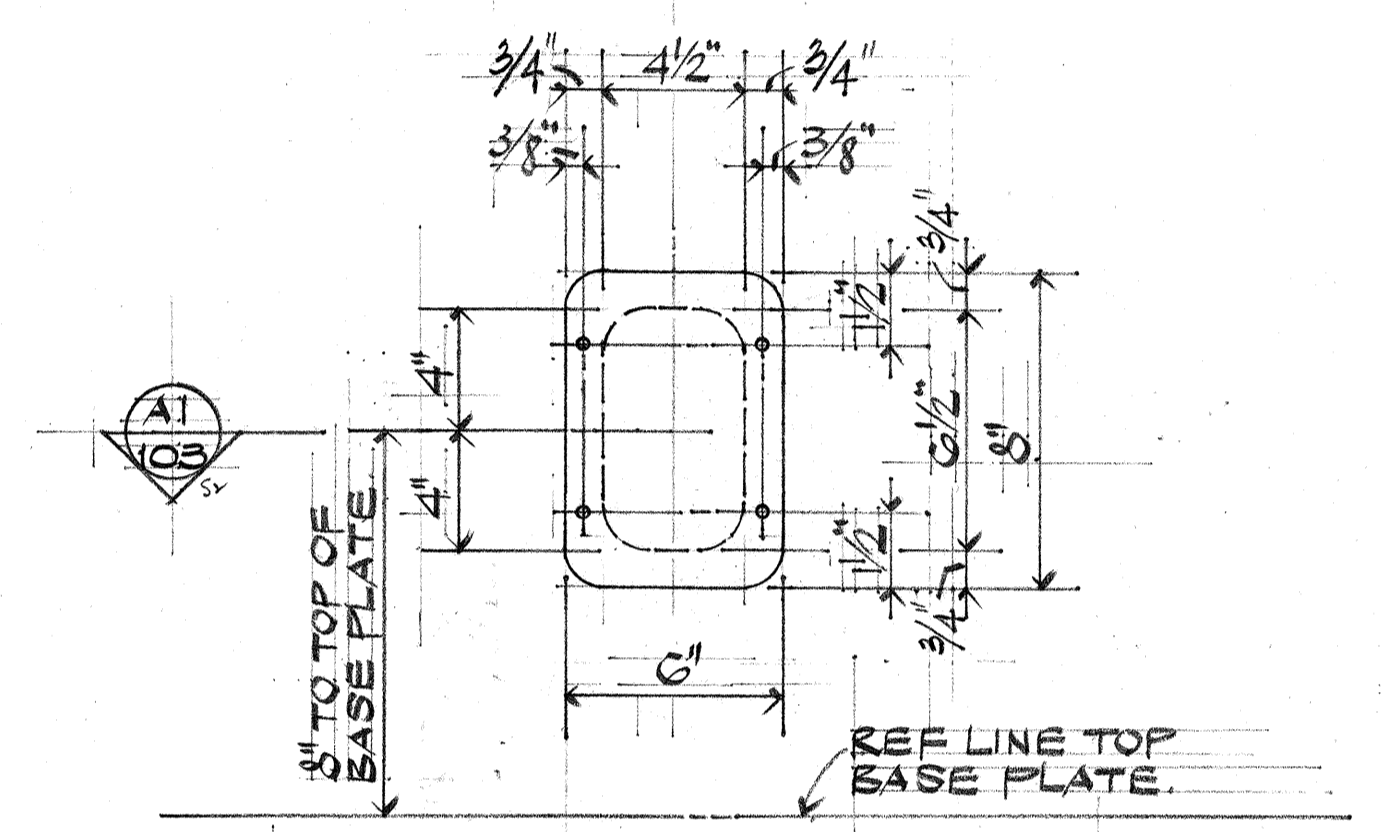
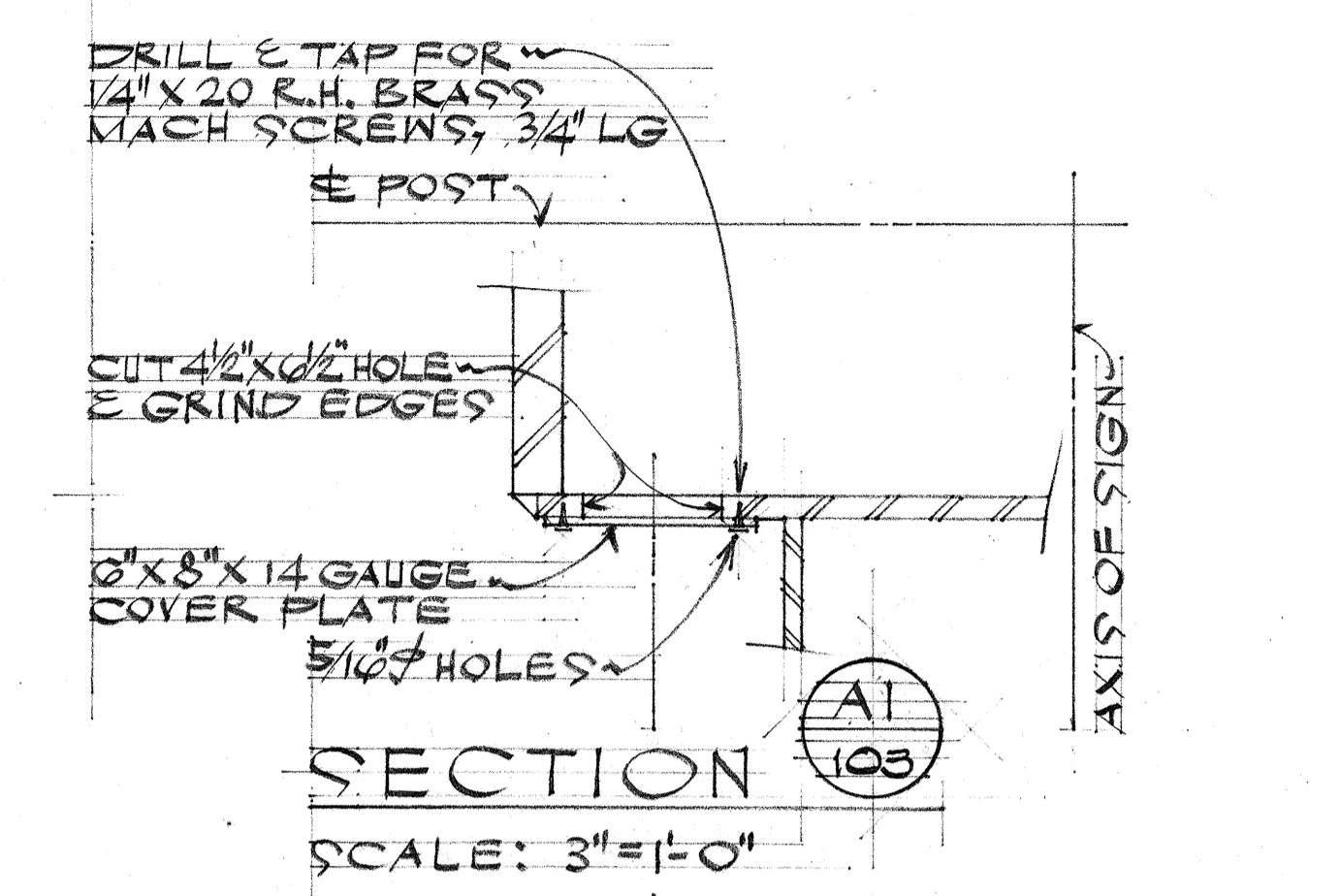
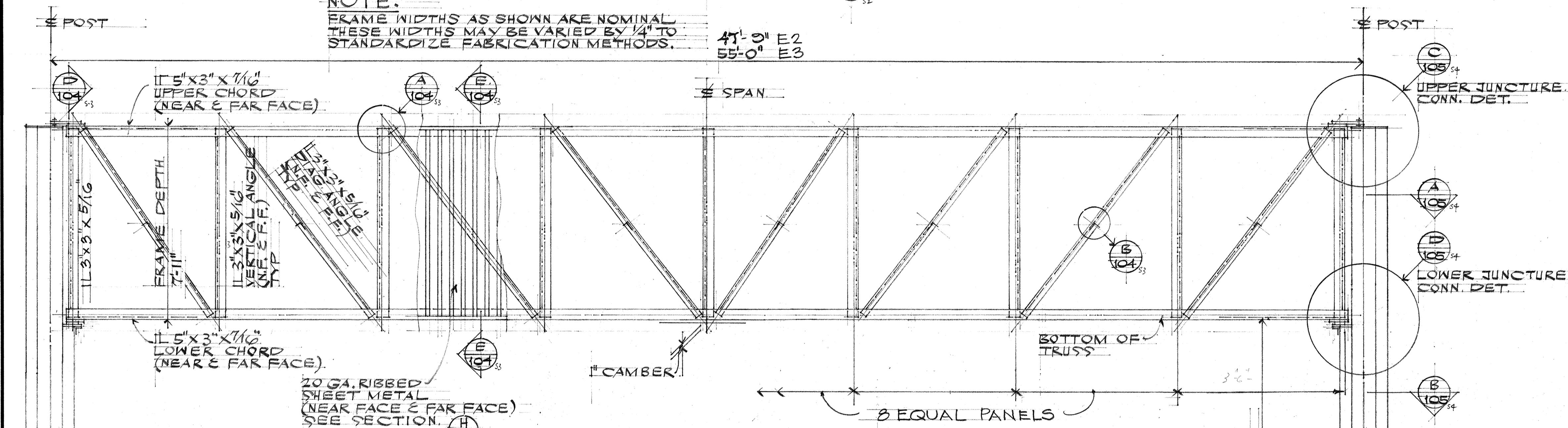
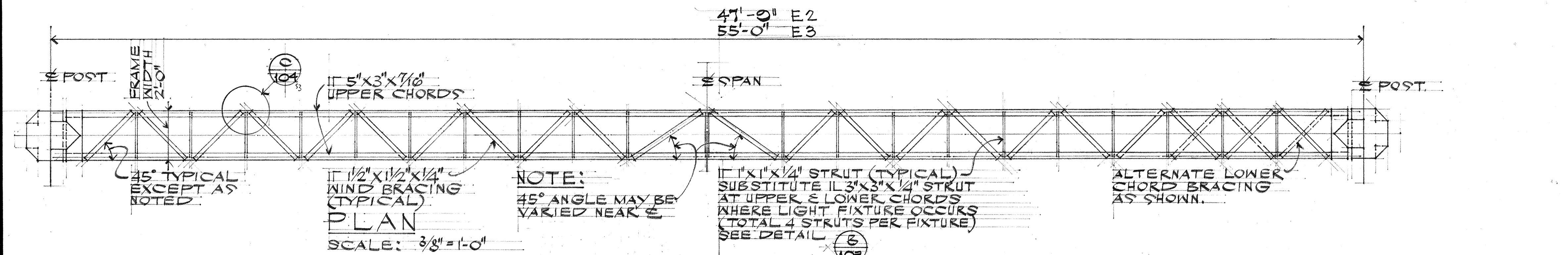
- NOTES:**
1. BASE PLATES, PEDESTALS & FOOTINGS, LONGER SIDES SHALL BE NORMAL TO AXIS OF SIGN.
 2. FOR ANCHOR BOLT LAYOUT SEE SHEET 105
 3. FOR BASE PLATE ELEVATION SEE SHT. 101
 4. PRIOR TO ERECTION OF THE POST, BACK FILL WHICH IS EQUIVALENT TO THE SURROUNDING MATERIAL SHALL BE IN PLACE.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR
EXPRESSWAY SIGNS
BOX BM, CLOSED TRUSS
2 POST TYPE, FRAME MEMBERS
& GENERAL FRAME DETAILS
INTERSTATE ROUTE HI
PROJECT NO. I-H-1(99):15
SCALE AS NOTED DATE: AUG 4 1976
SHEET No. 9 OF 28 SHEETS

DATE
ORIGINAL PLAN
TRACED BY
QUANTITIES BY
CHECKED BY
NO.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-1(99):15	1977	103	350



RONALD T. LO
REGISTERED PROFESSIONAL ENGINEER
No. 477
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Ronald T. Lo
SIGNATURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**NIMITZ SPUR
EXPRESSWAY SIGNS**

BOX BM, CLOSED TRUSS
2 POST TYPE, FRAME MEMBERS
& GENERAL FRAME DETAILS

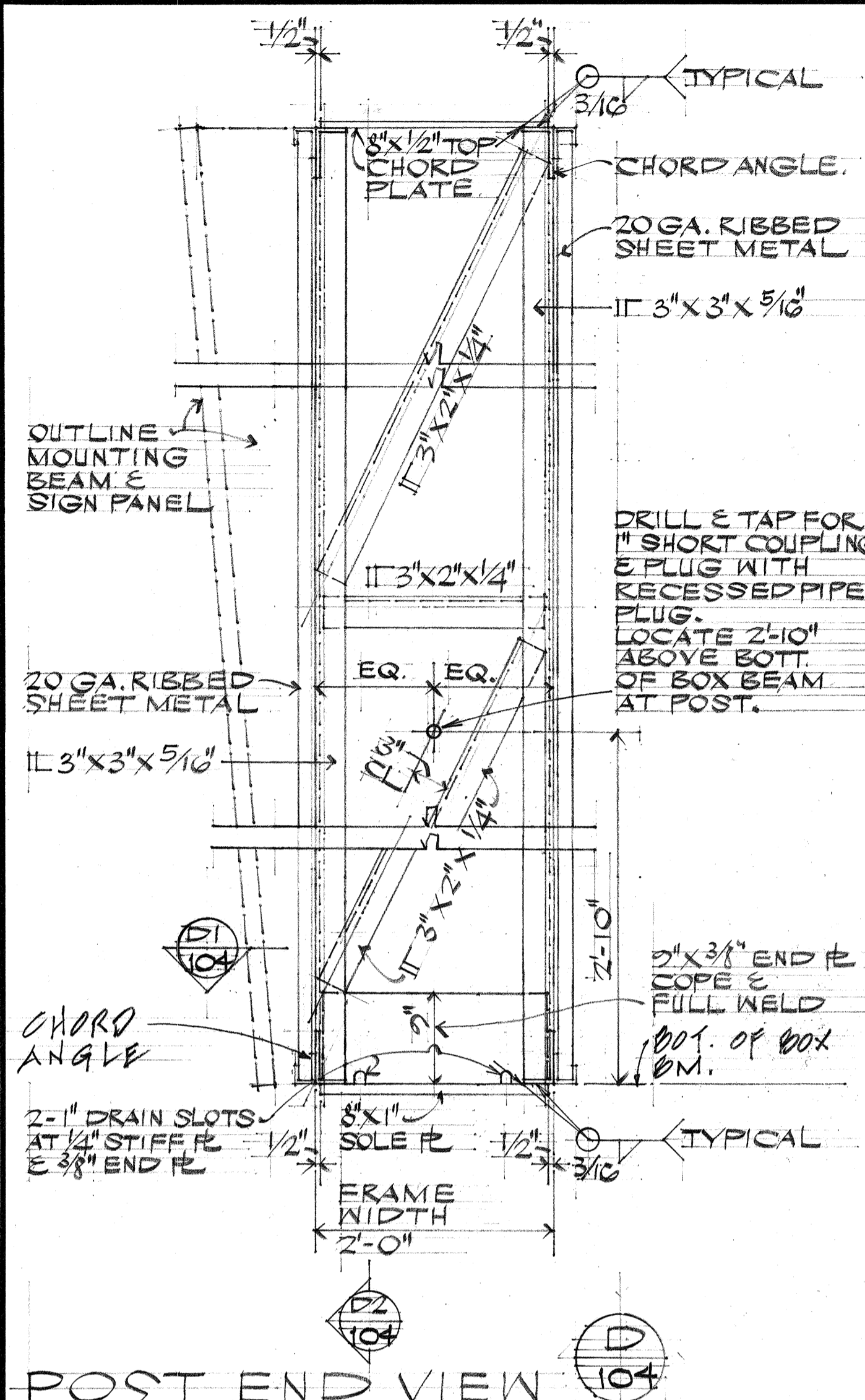
INTERSTATE ROUTE HI
PROJECT NO. I-HI-T(99):15
SCALE AS NOTED DATE: APR 4 1976

SHEET NO. 10 OF 28 SHEETS

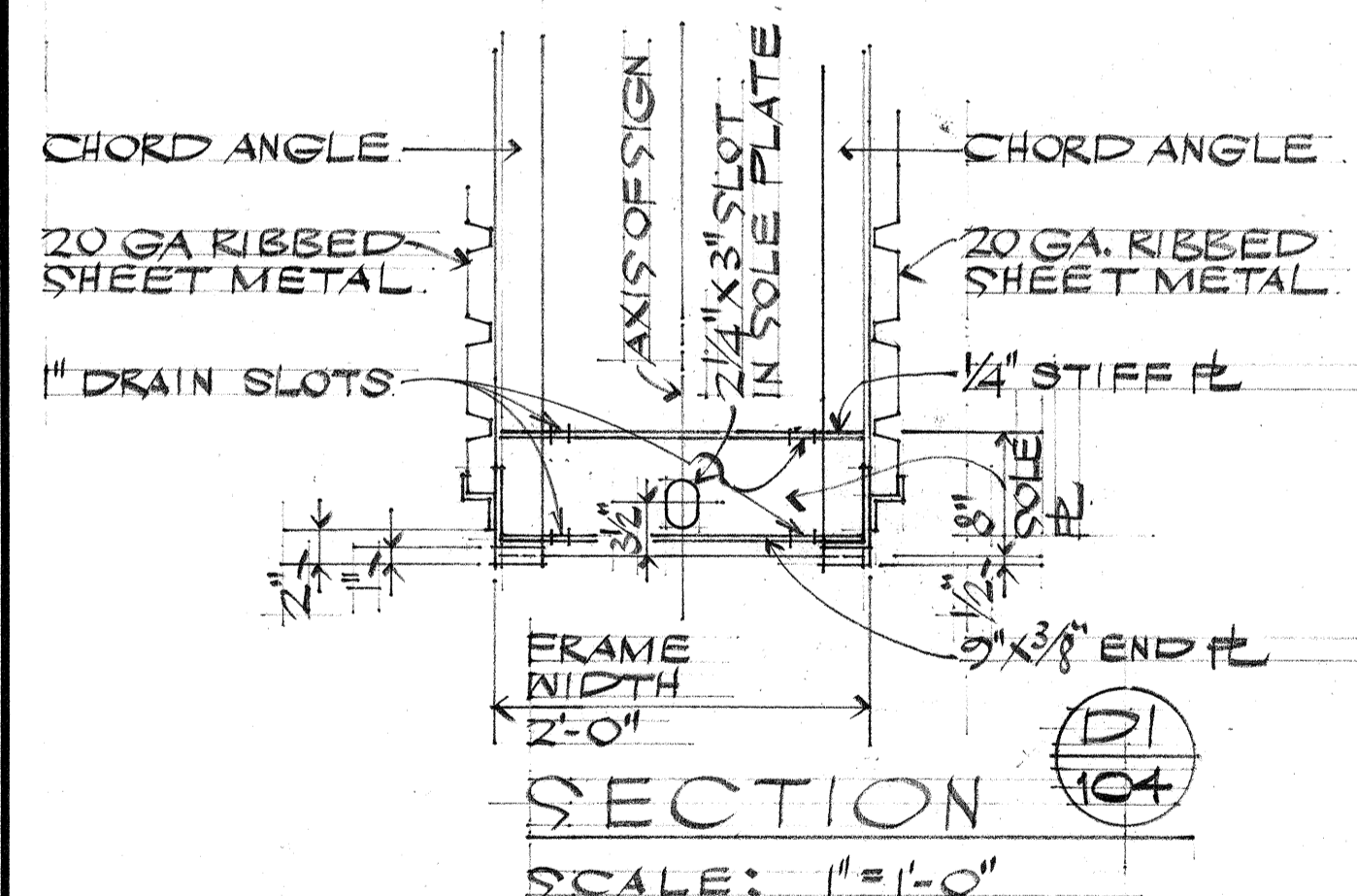
SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN NO. _____
 NOTE BOOK NO. _____

2-5-7

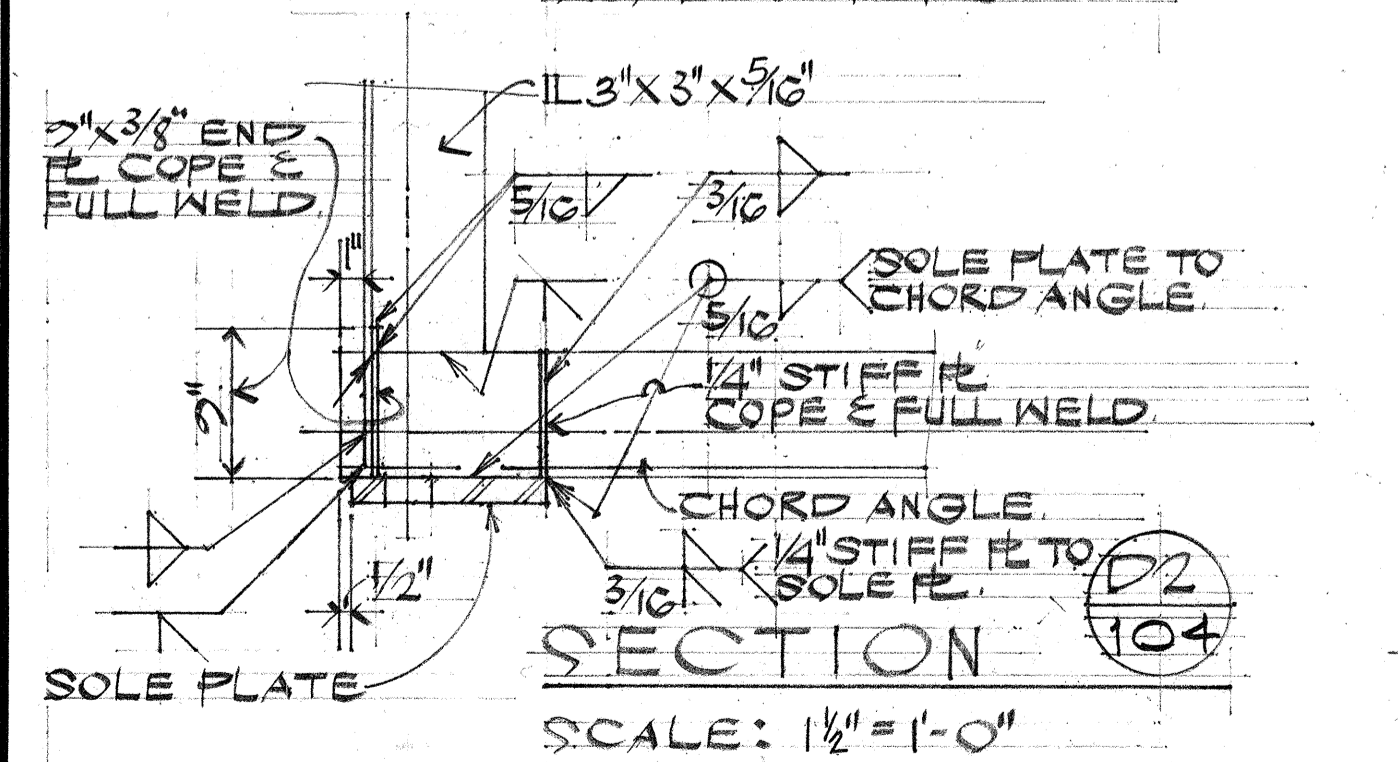
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(00)15	1977	104	220



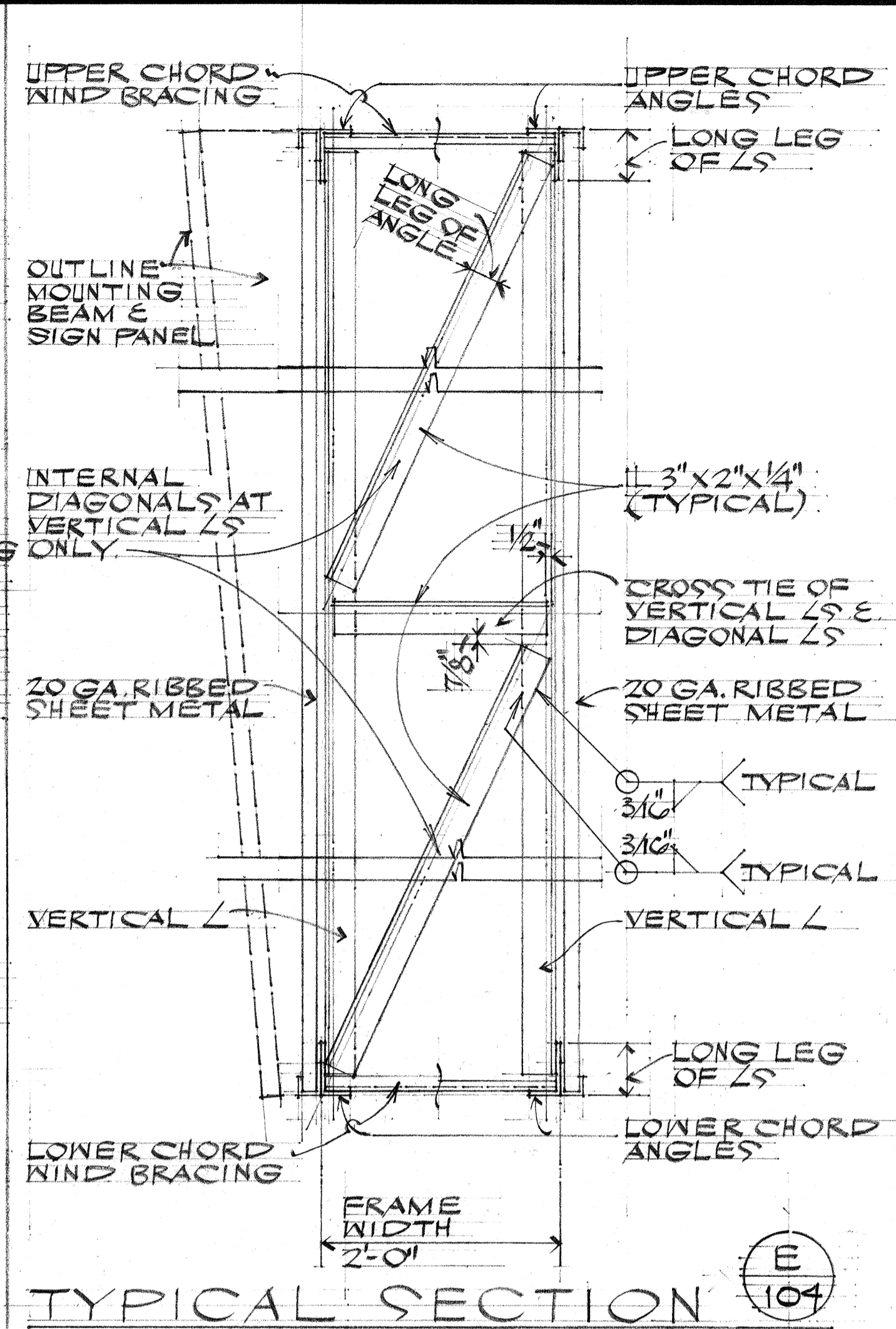
POST END VIEW (D) 104
SCALE: 1" = 1'-0"



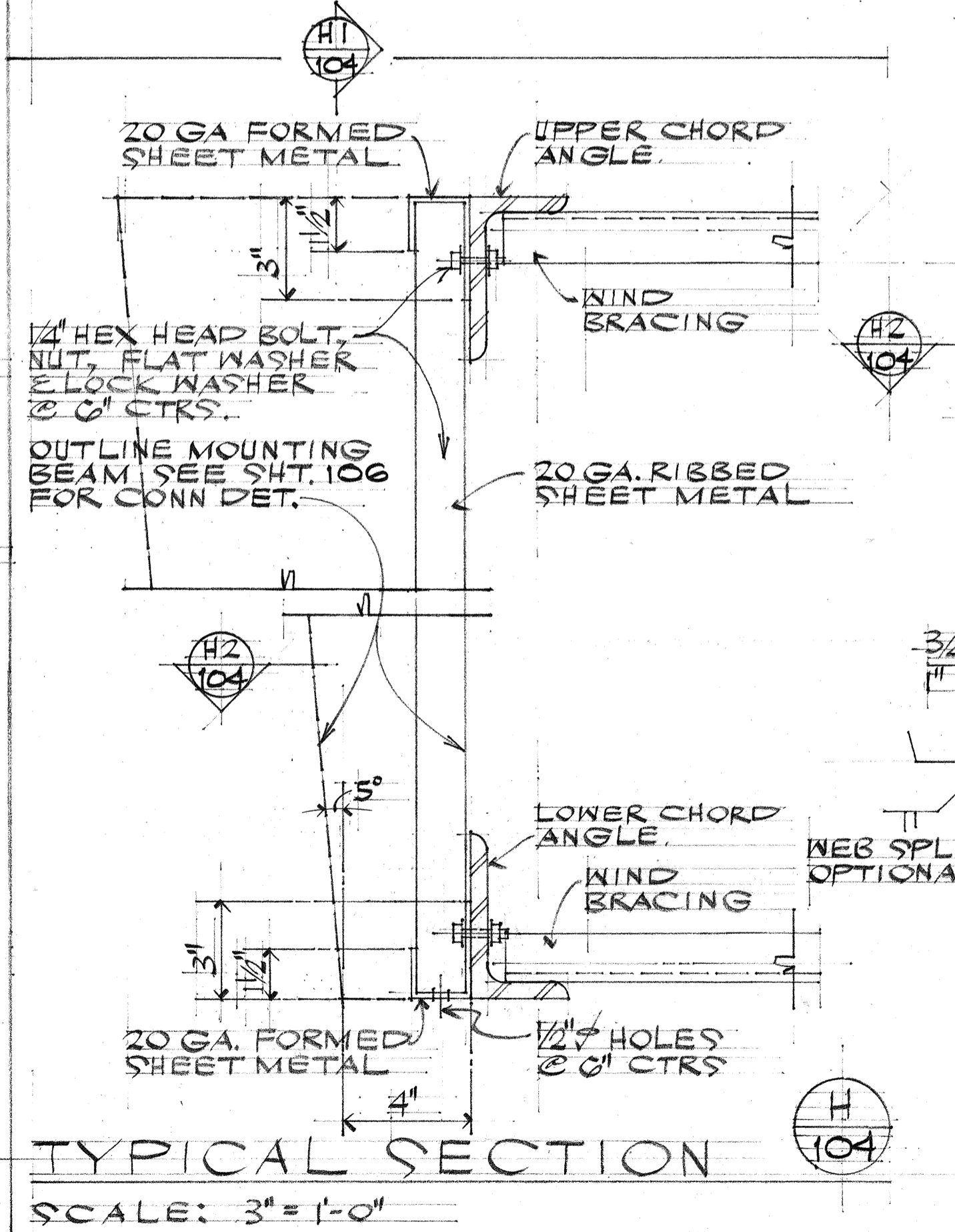
SECTION (D1) 104
SCALE: 1" = 1'-0"



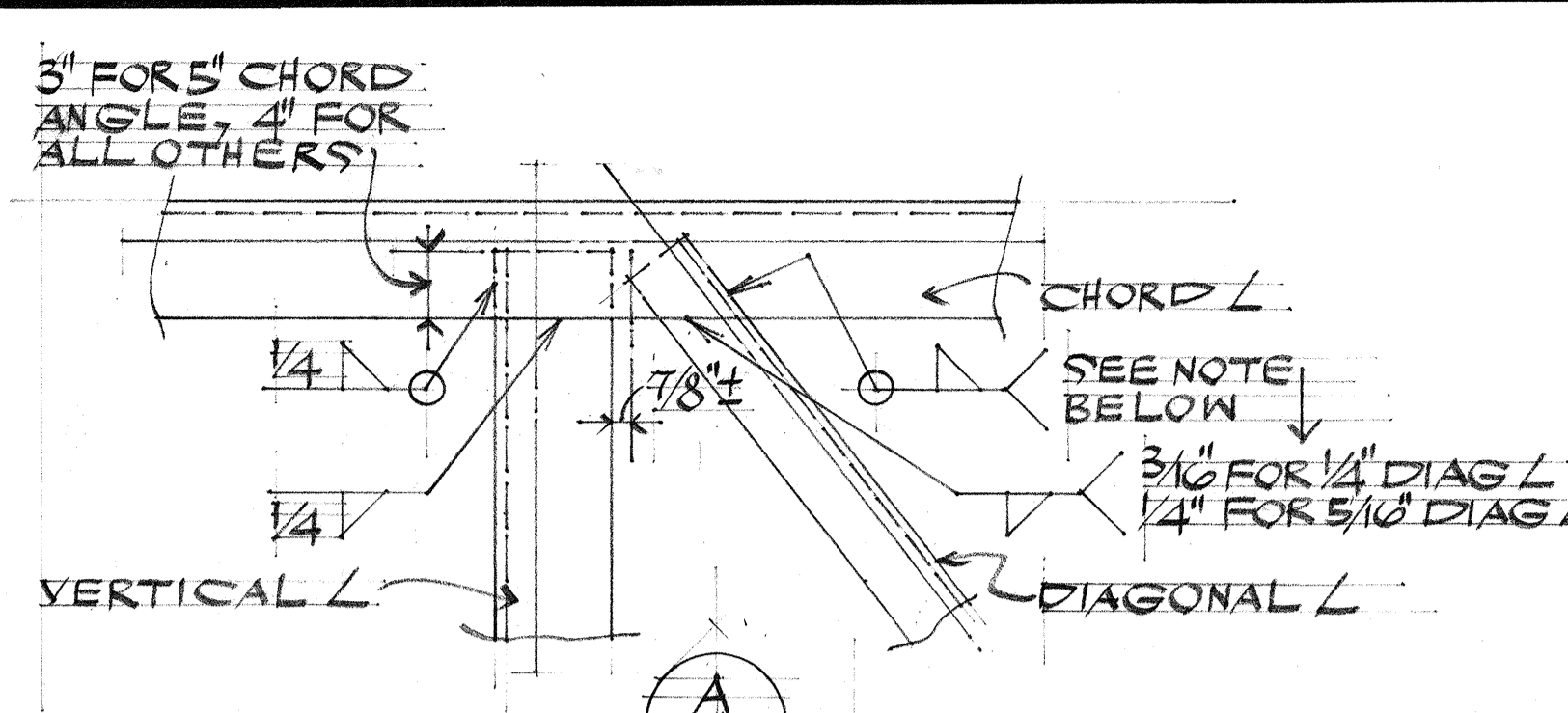
SECTION (D2) 104
SCALE: 1 1/2" = 1'-0"



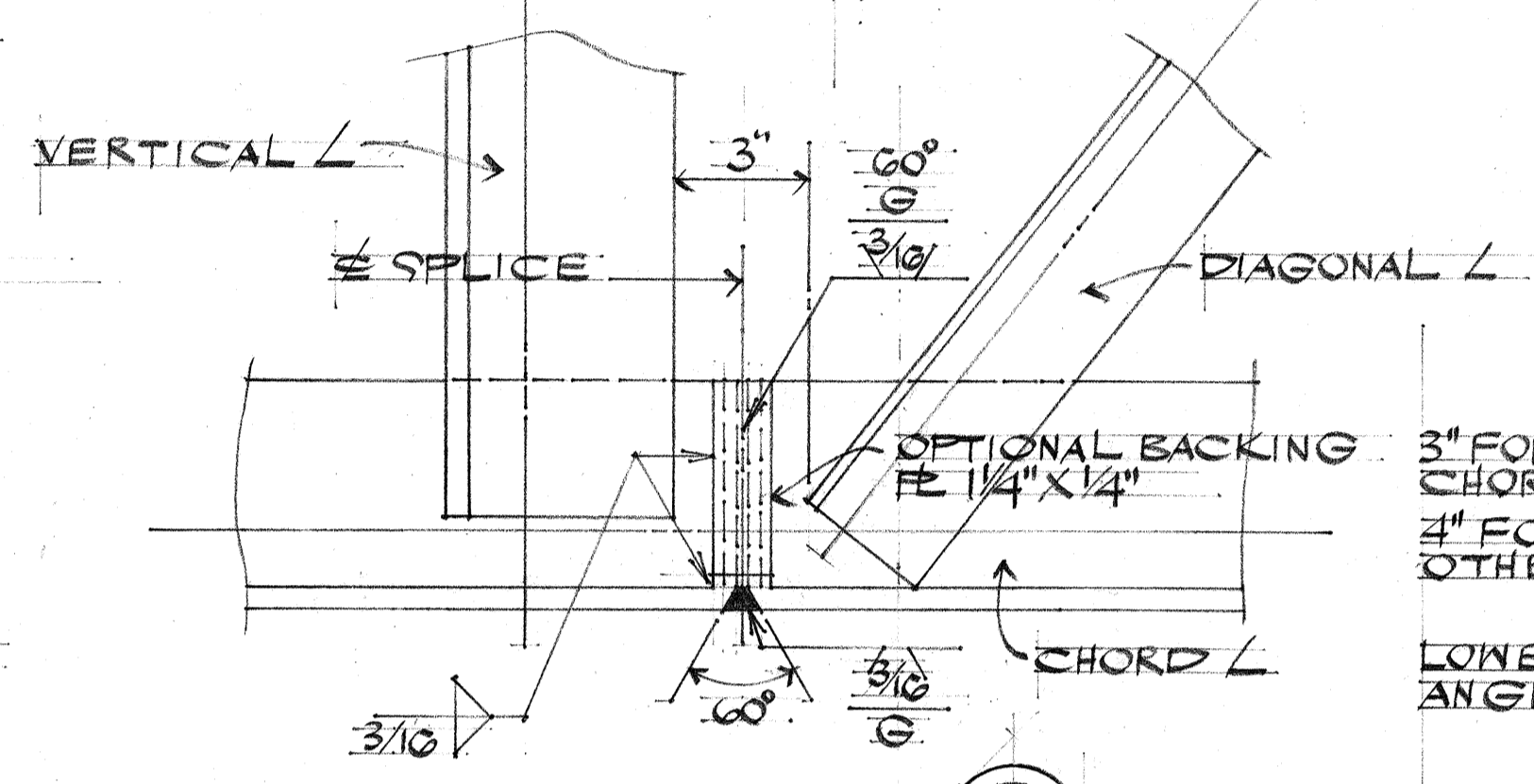
TYPICAL SECTION (E) 104
SCALE: 1" = 1'-0"



TYPICAL SECTION (H) 104
SCALE: 3" = 1'-0"

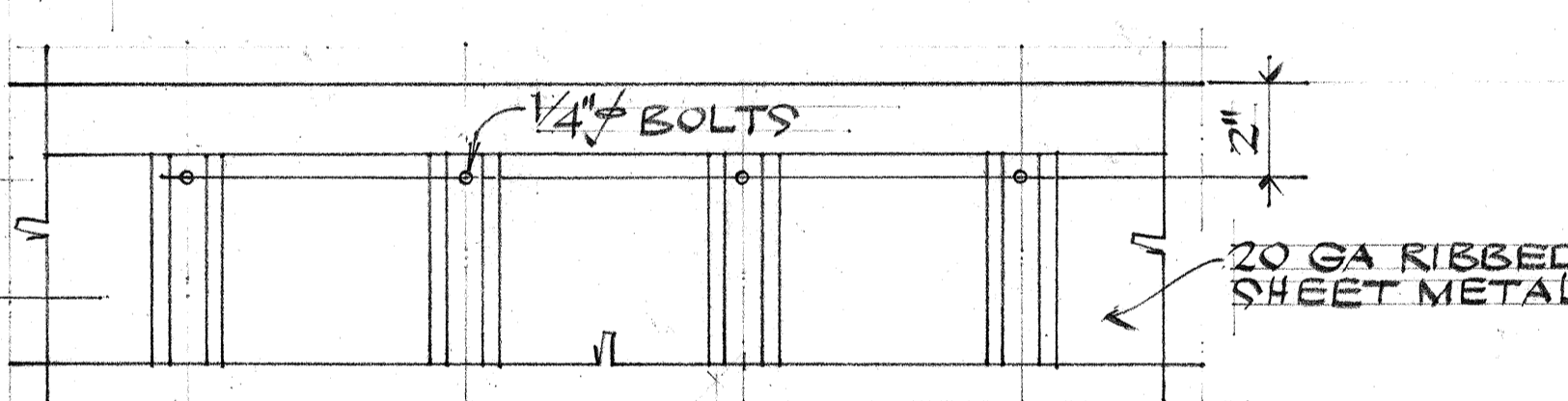


CONN DET (A) 104
SCALE: 1/2" = 1'-0"

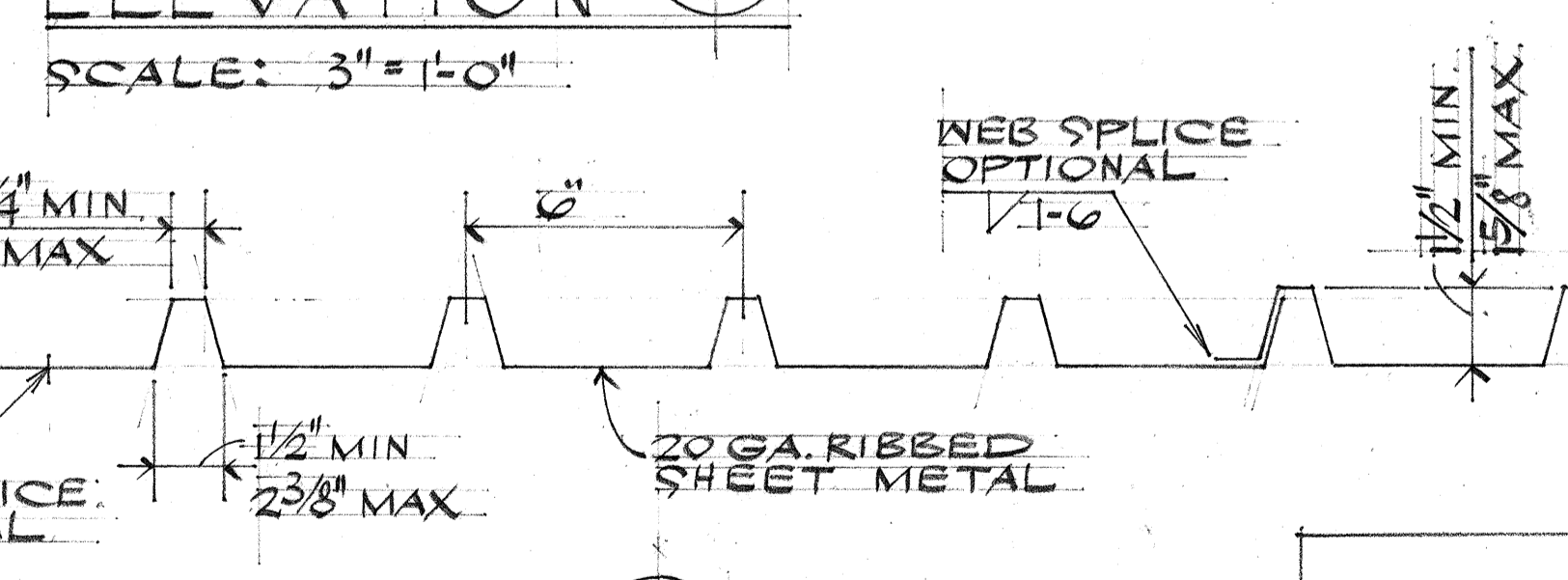


CONN DET (F) 104
SCALE: 3" = 1'-0"

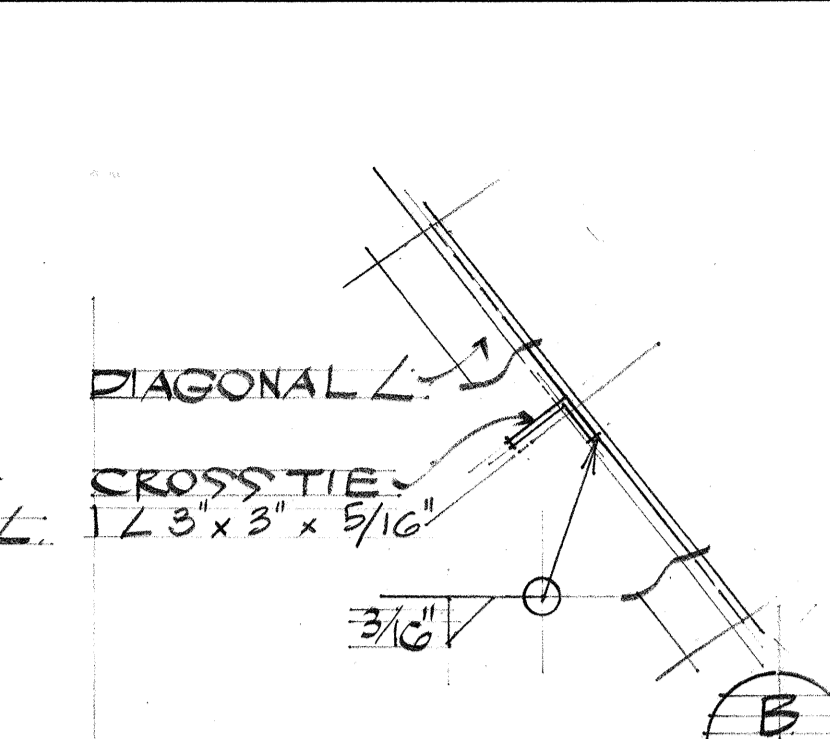
SPLICE NOTES:
1. THE SPLICE SHALL BE LOCATED SO AS NOT TO INTERFERE W/ MOUNTING THE LIGHT FIXTURE BRACKETS.
2. ALTERNATE SPLICE DETAILS MAY BE USED IF APPROVED BY THE ENGINEER.



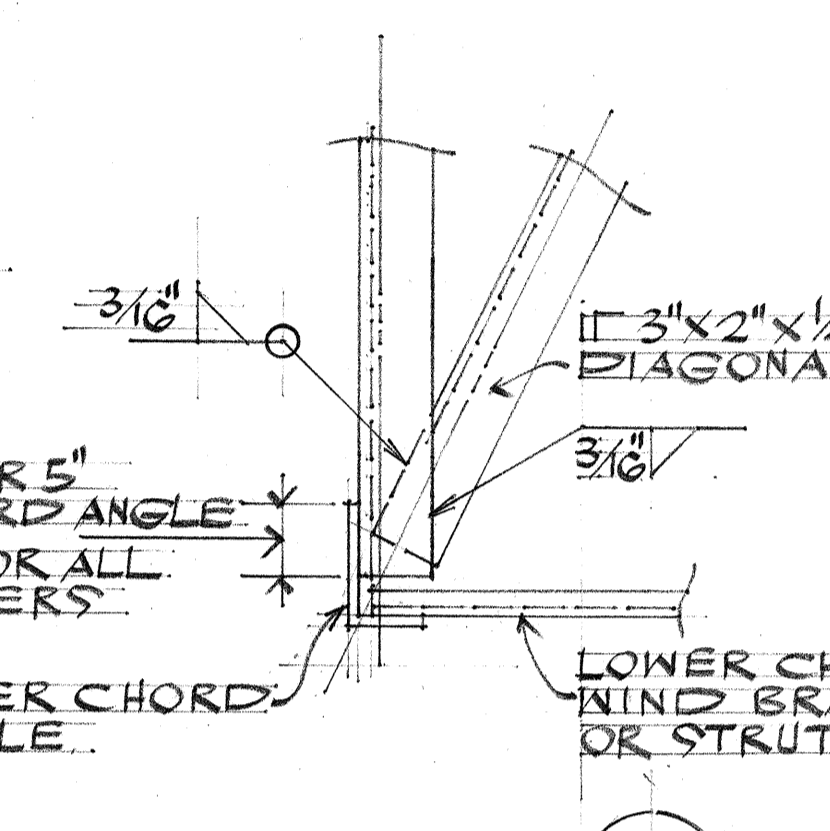
ELEVATION (H1) 104
SCALE: 3" = 1'-0"



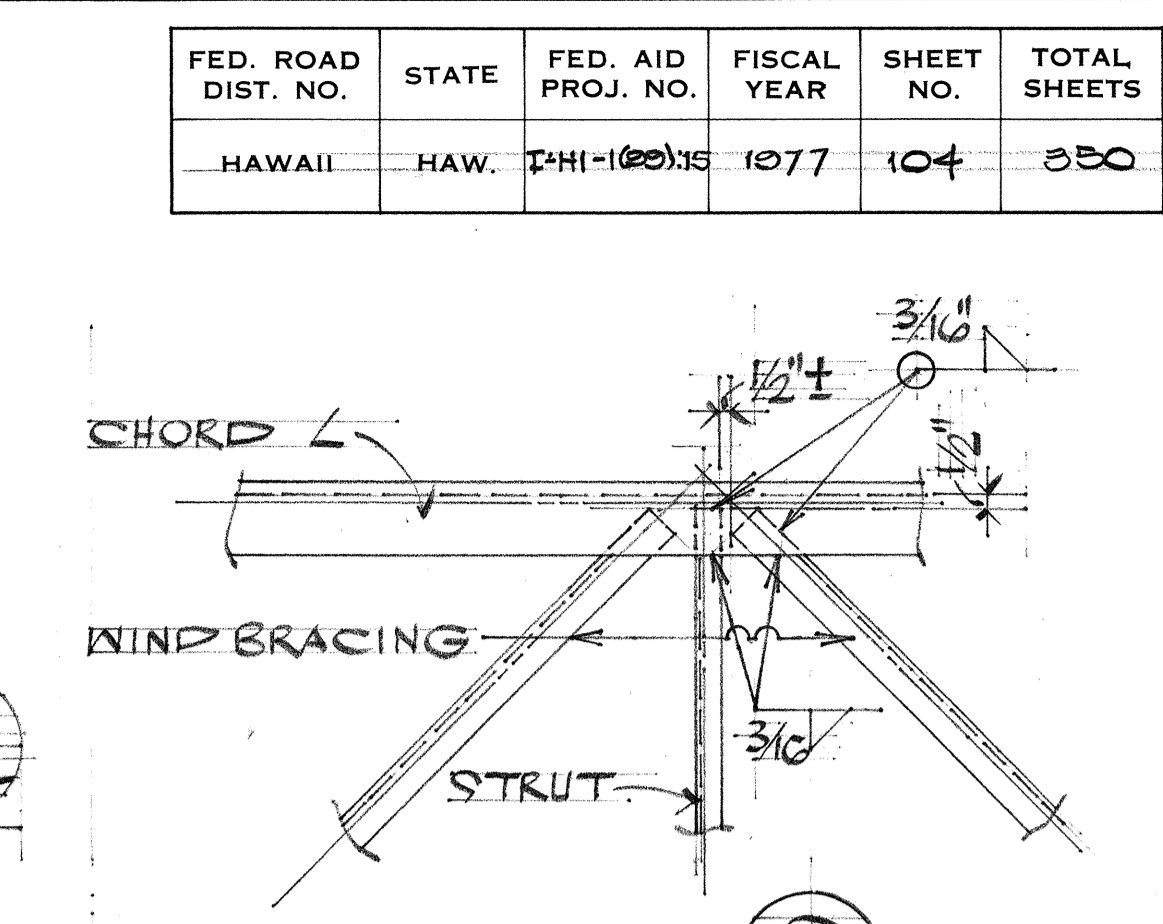
SECTION (H2) 104
SCALE: 3" = 1'-0"



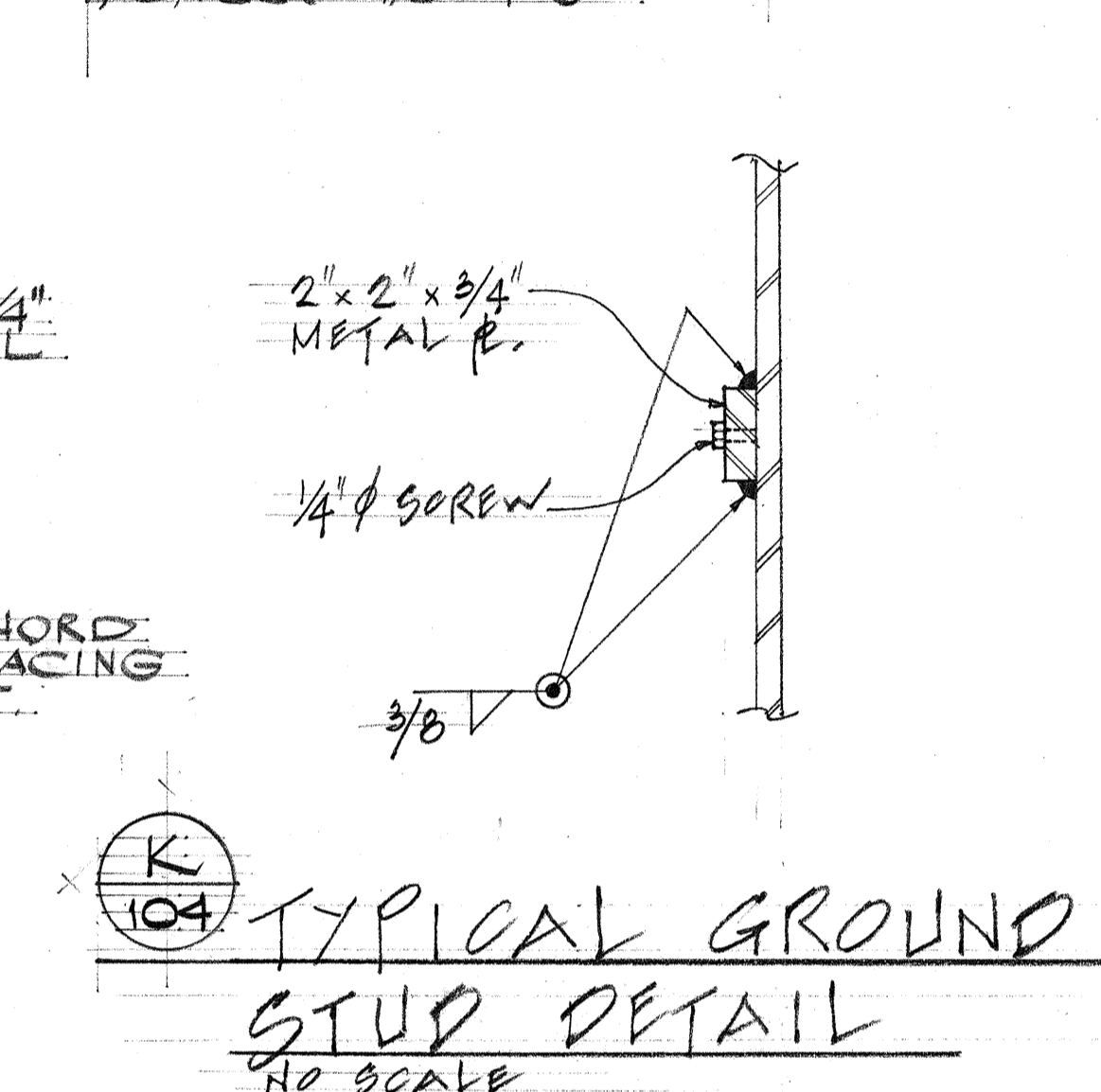
CONN DET (B) 104
SCALE: 1/2" = 1'-0"



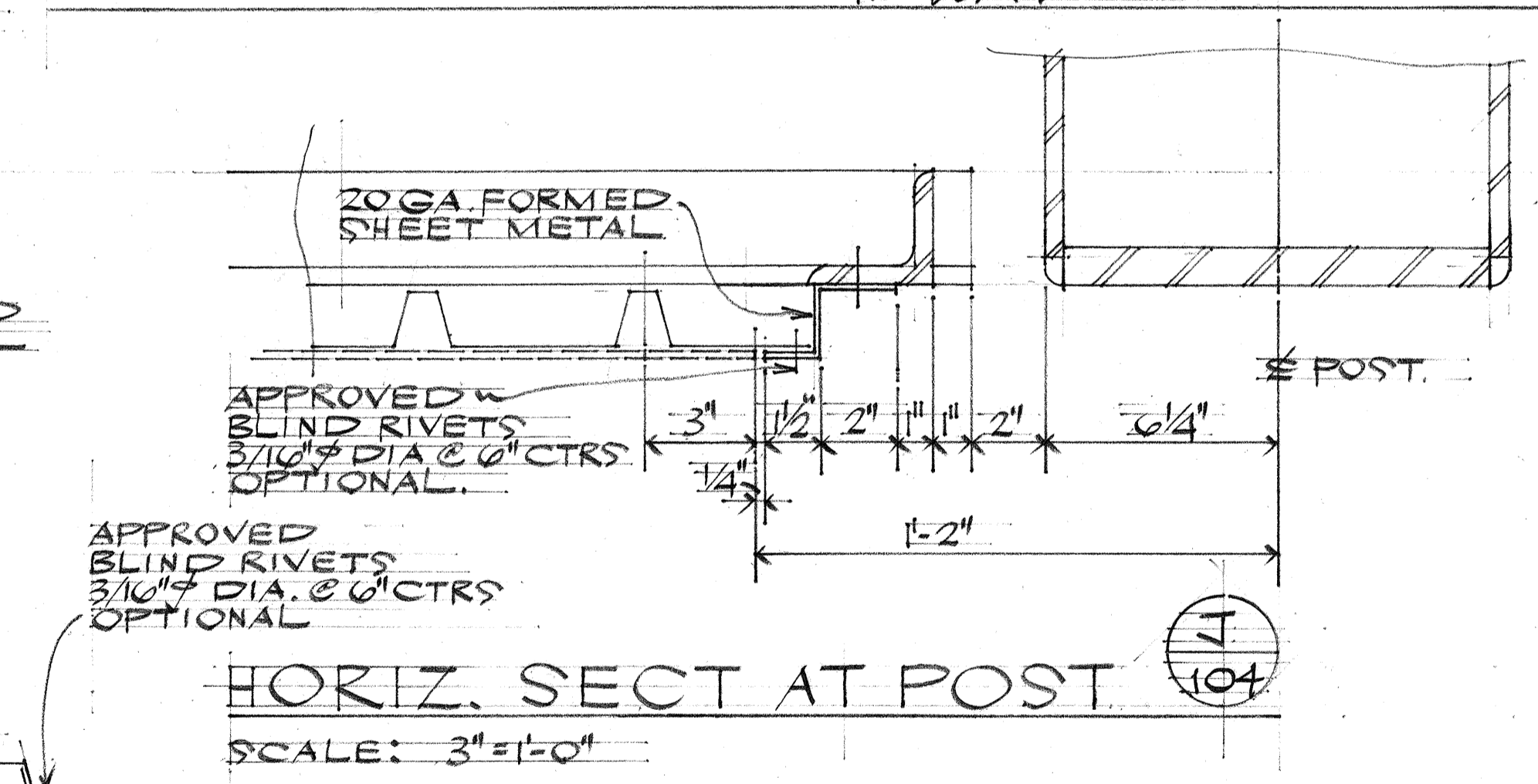
CONN DET (G) 104
SCALE: 1/2" = 1'-0"



CONN DET (C) 104
SCALE: 1/2" = 1'-0"



TYPICAL GROUND STUD DETAIL (K) 104
NO SCALE



HORIZ. SECT AT POST (J) 104
SCALE: 3" = 1'-0"

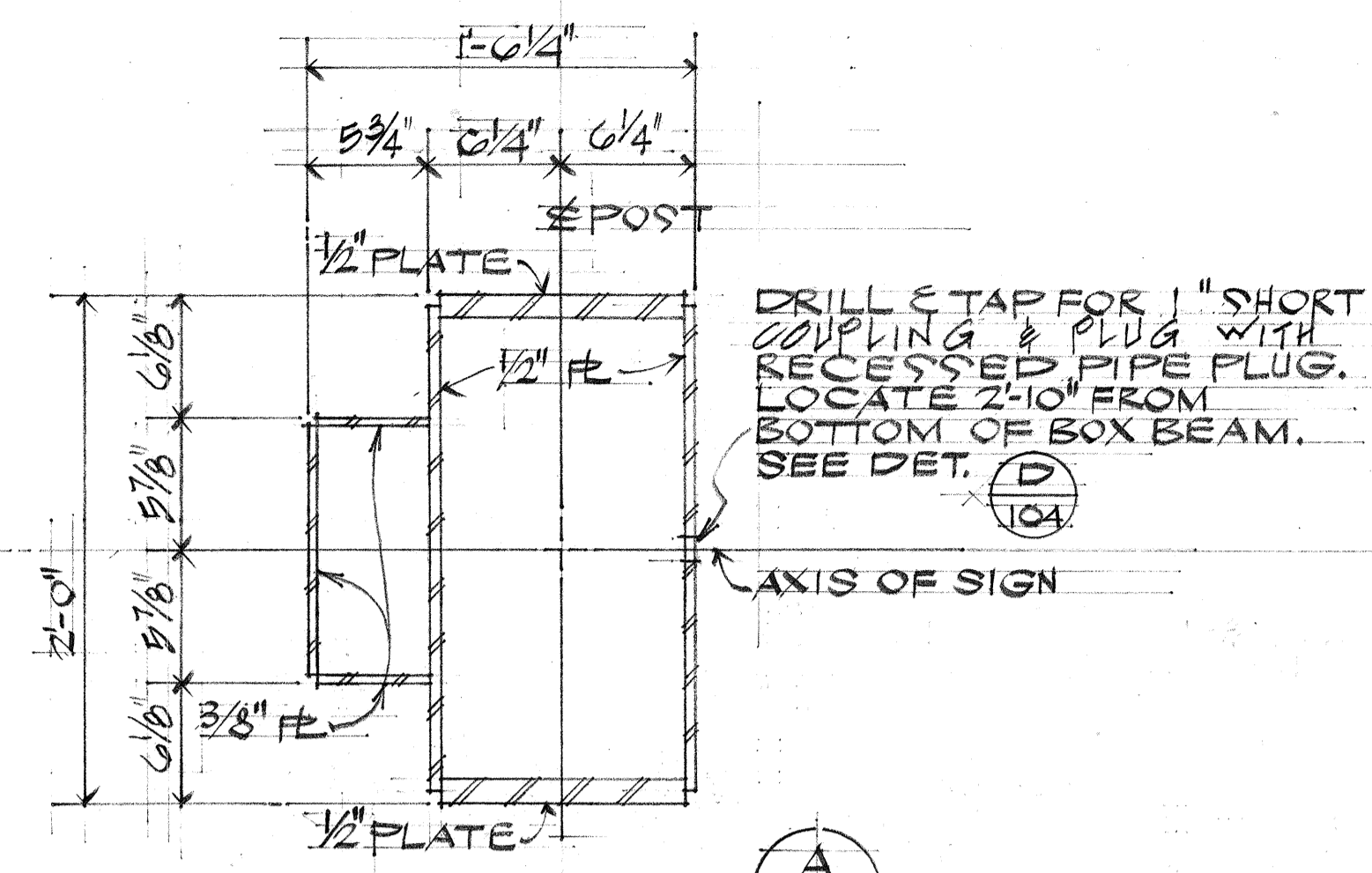
DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
DESIGNED BY: _____
NOTE BOOK QUANTITIES BY: _____
CHECKED BY: _____
NO. _____



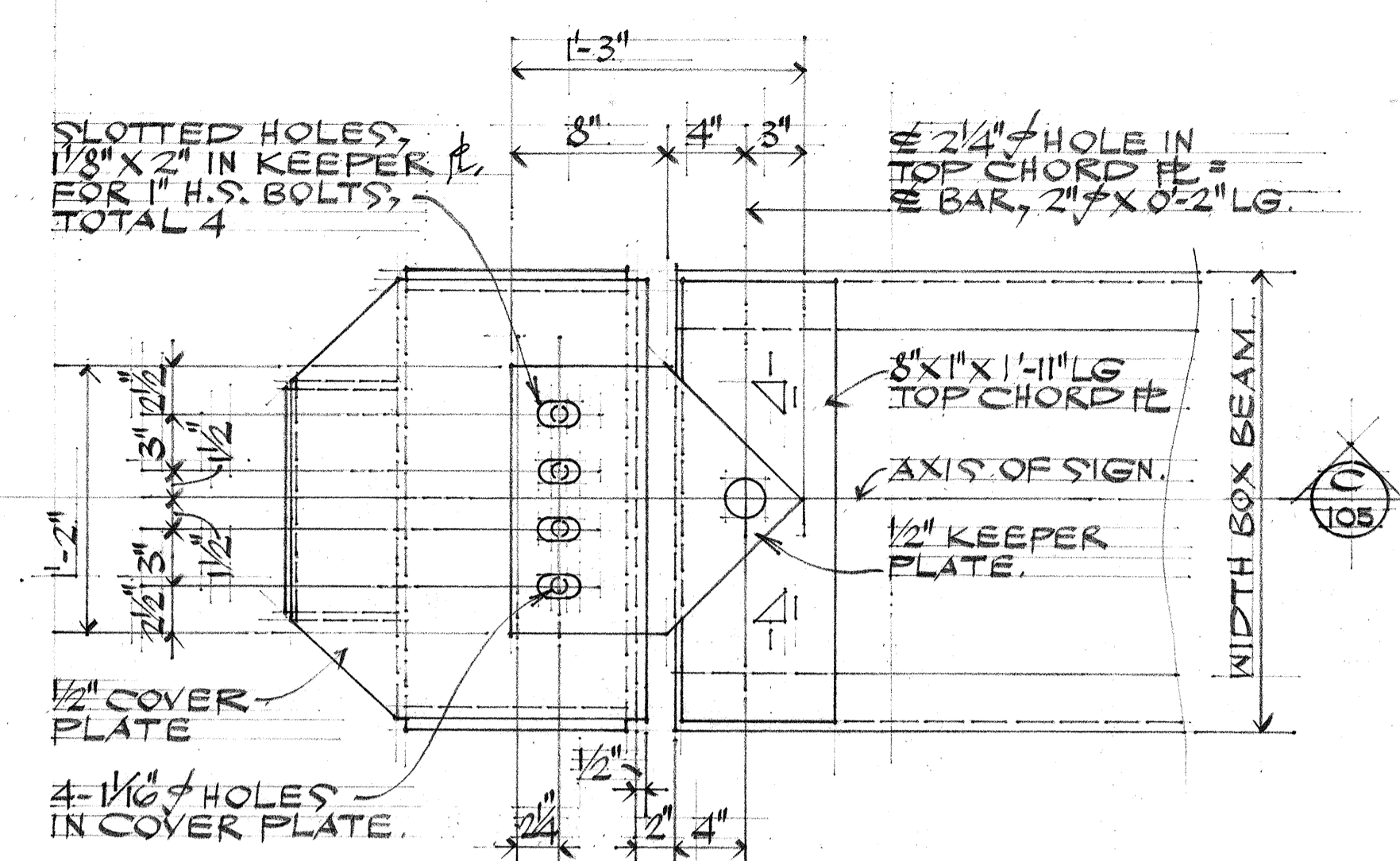
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR EXPRESSWAY SIGNS
BOX BM, CLOSED TRUSS,
2 POST TYPE, GENERAL.
FRAME DETAILS.
INTERSTATE ROUTE HI-1
PROJECT NO. I-HI-1(00)15
SCALE AS NOTED DATE: AUG 4 1976
SHEET No. 11 OF 28 SHEETS

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Donald F. Ito
ENGINEER

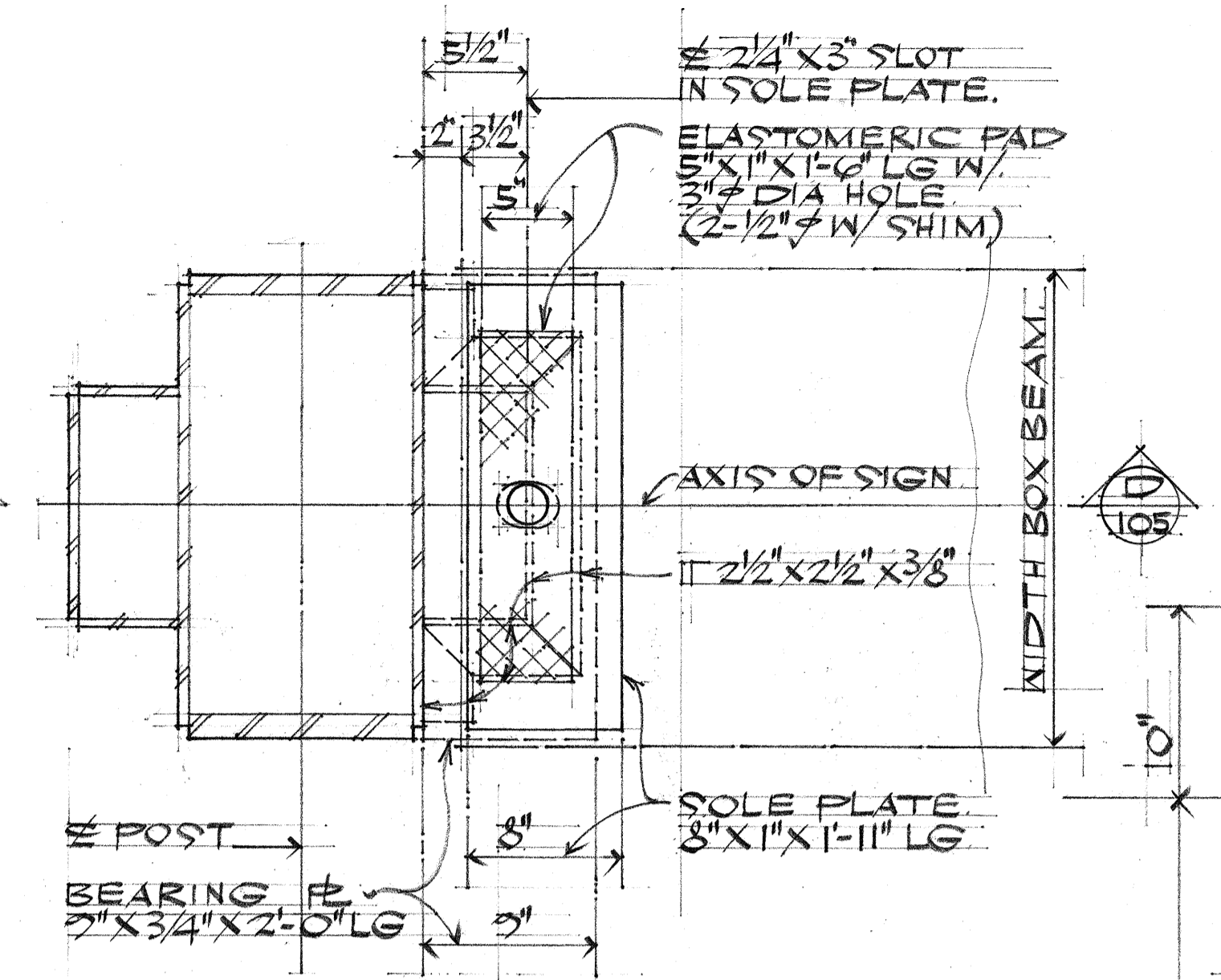
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(89)15	1977	105	350



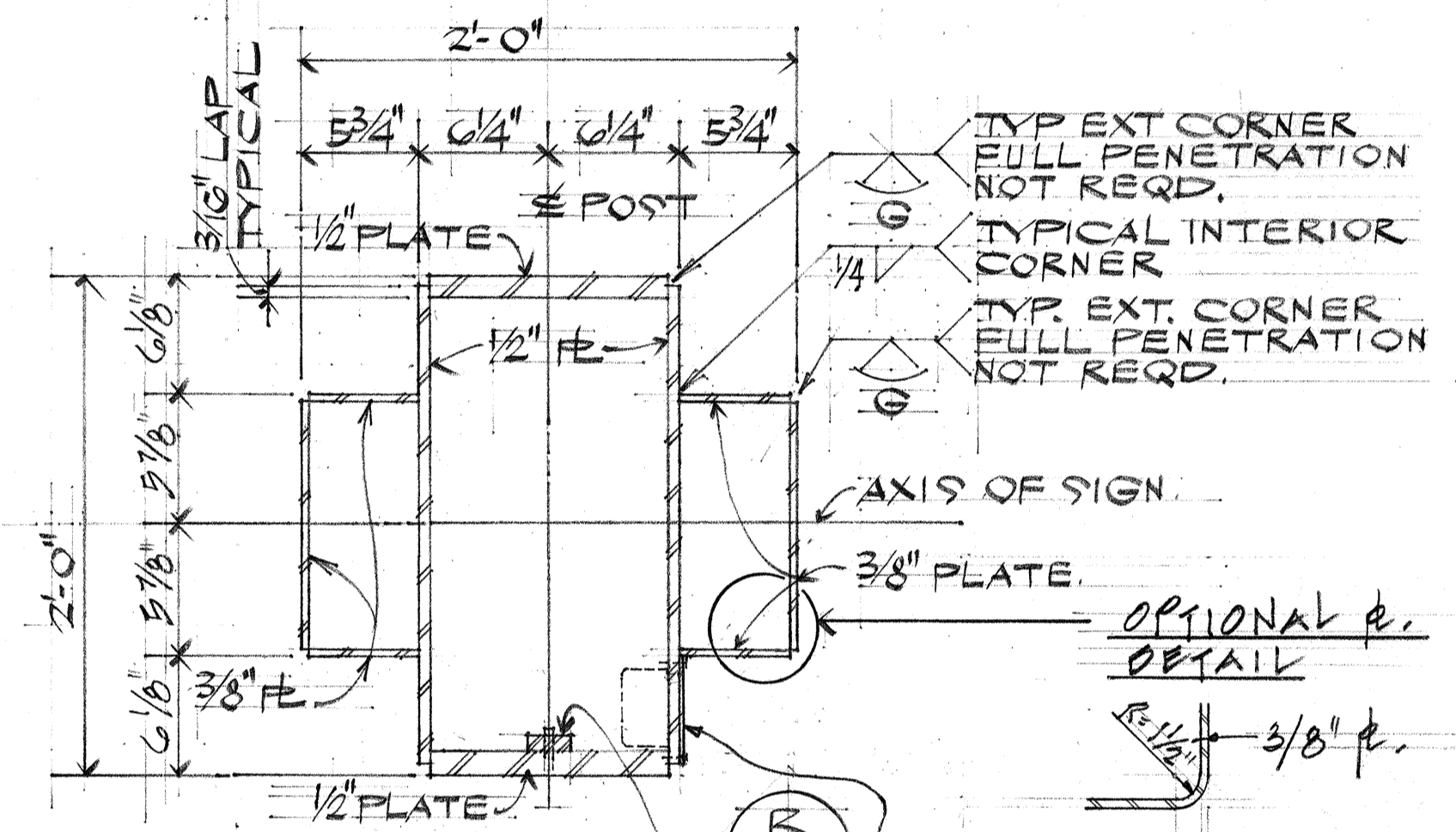
SECTION 105
SCALE: 1/2" = 1'-0"



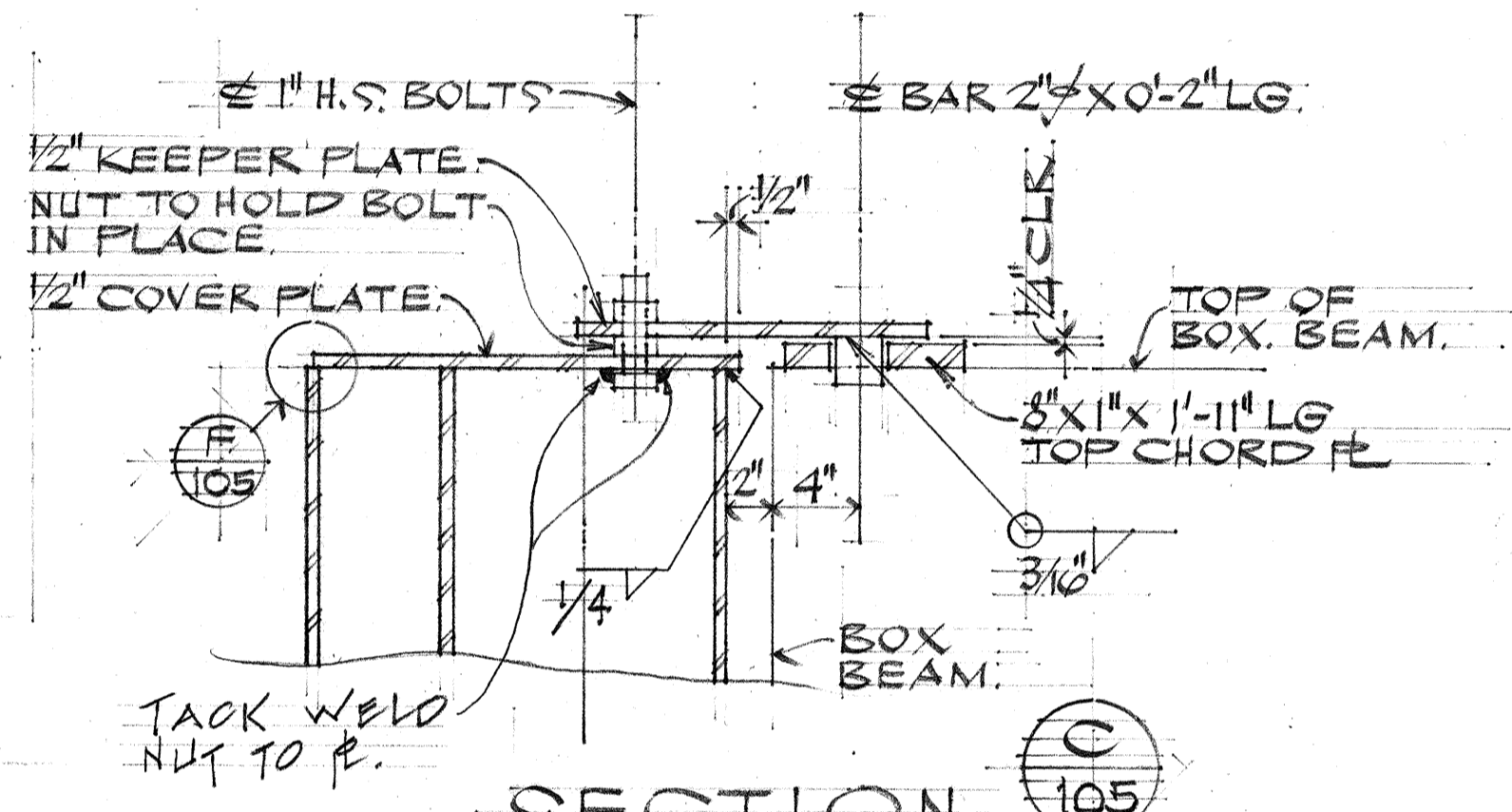
PLAN 105
SCALE: 1/2" = 1'-0"



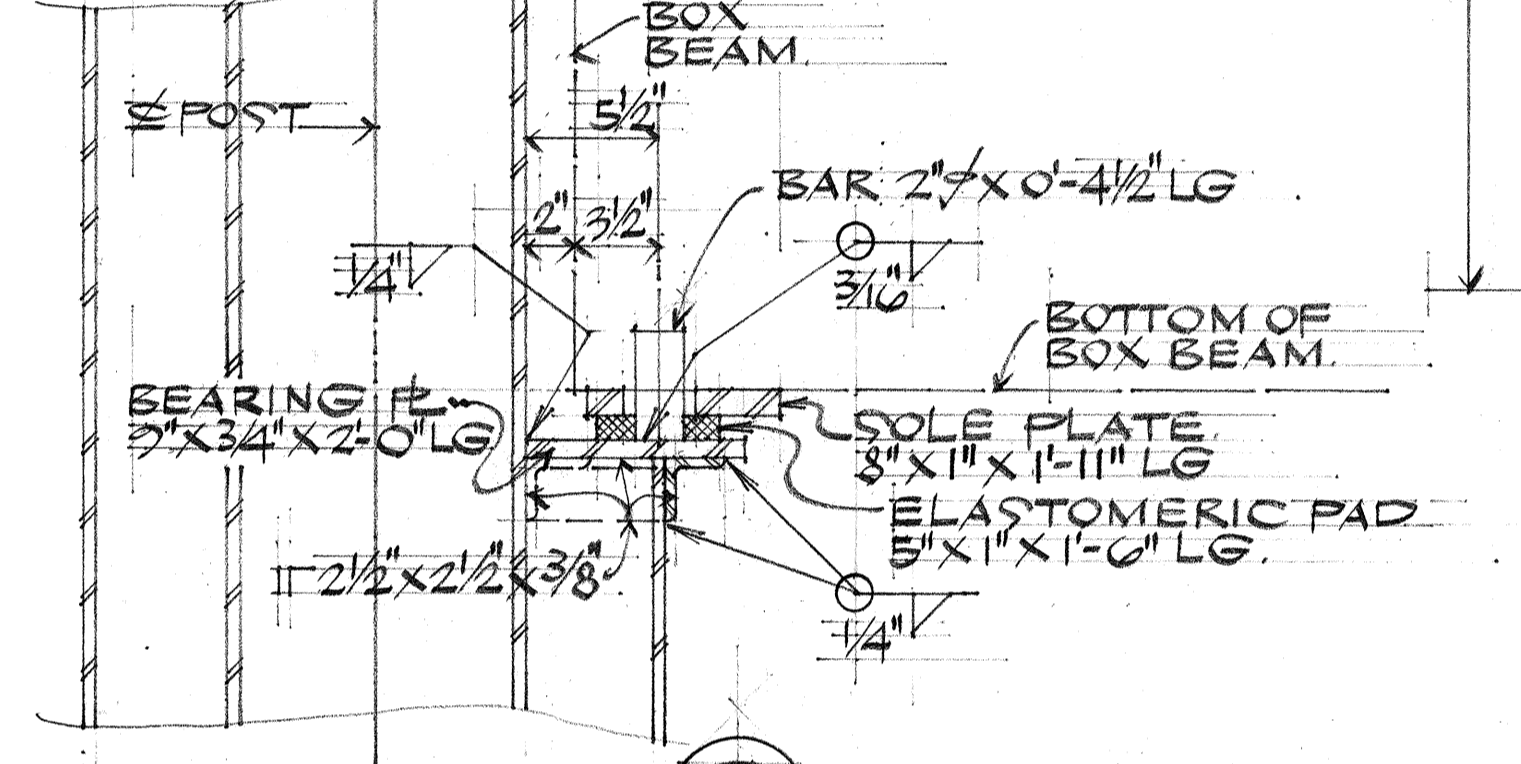
PLAN 105
SCALE: 1/2" = 1'-0"



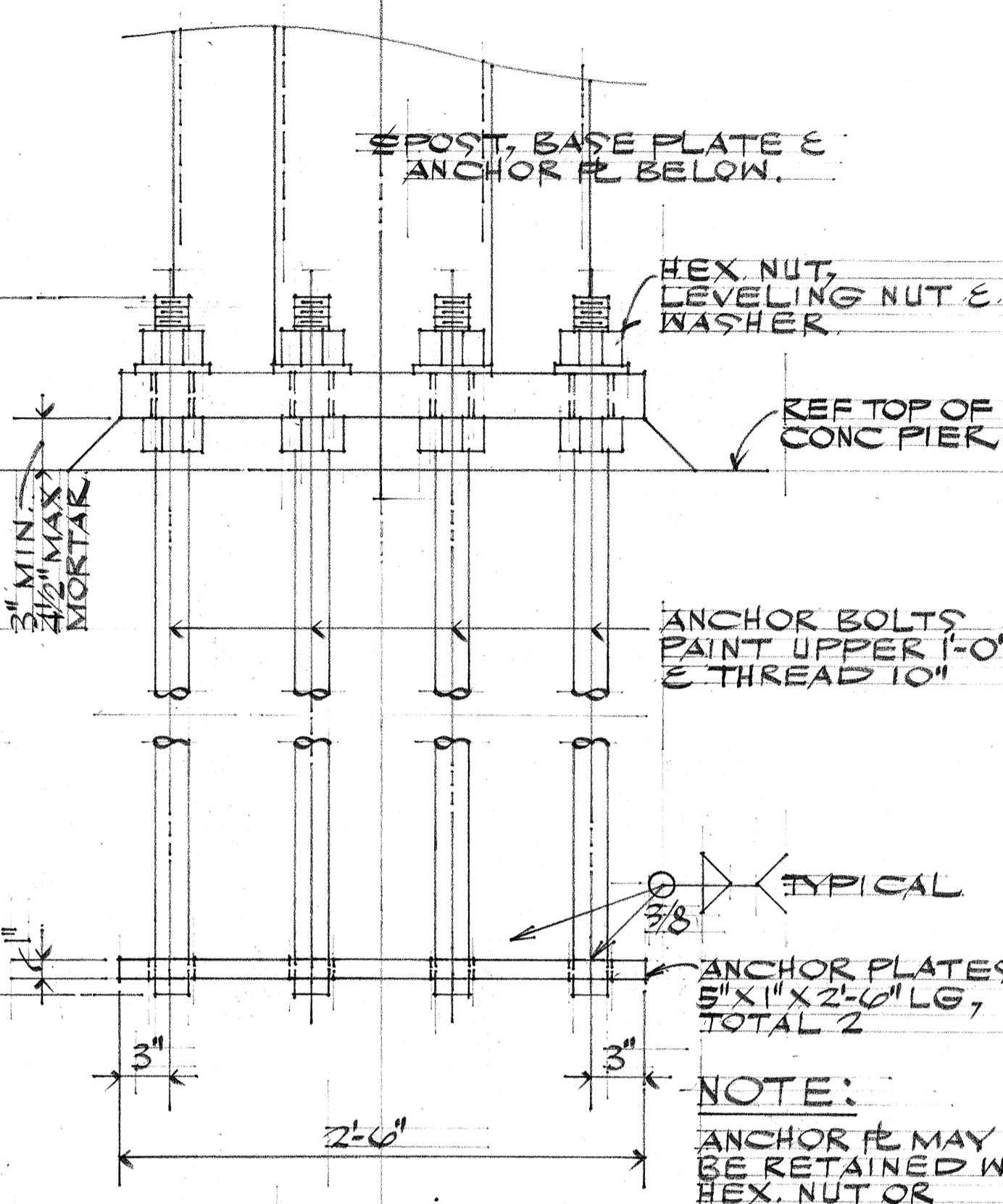
SECTION 105
SCALE: 1/2" = 1'-0"



SECTION 105
SCALE: 1/2" = 1'-0"



SECTION 105
SCALE: 1/2" = 1'-0"

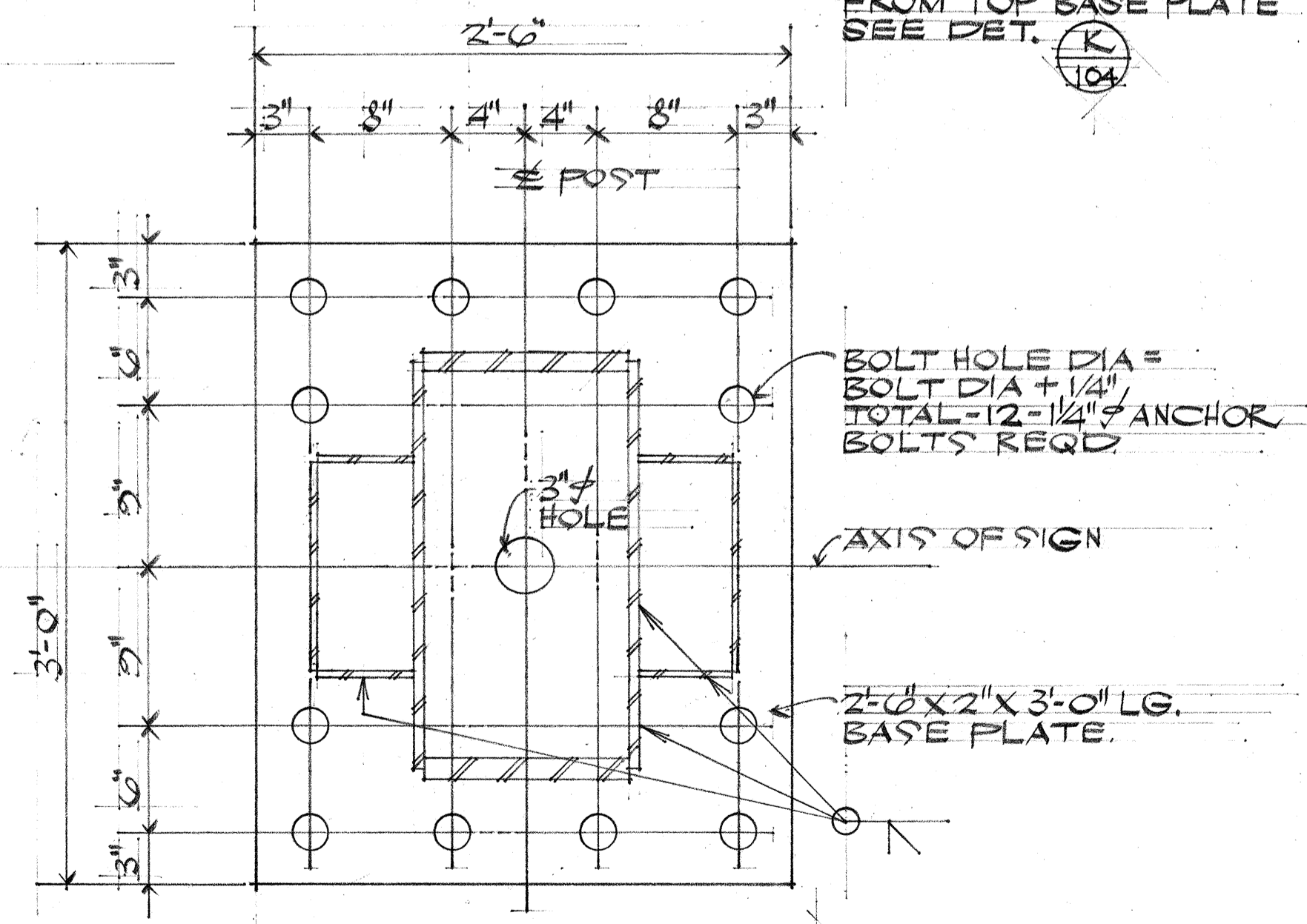


TYPICAL

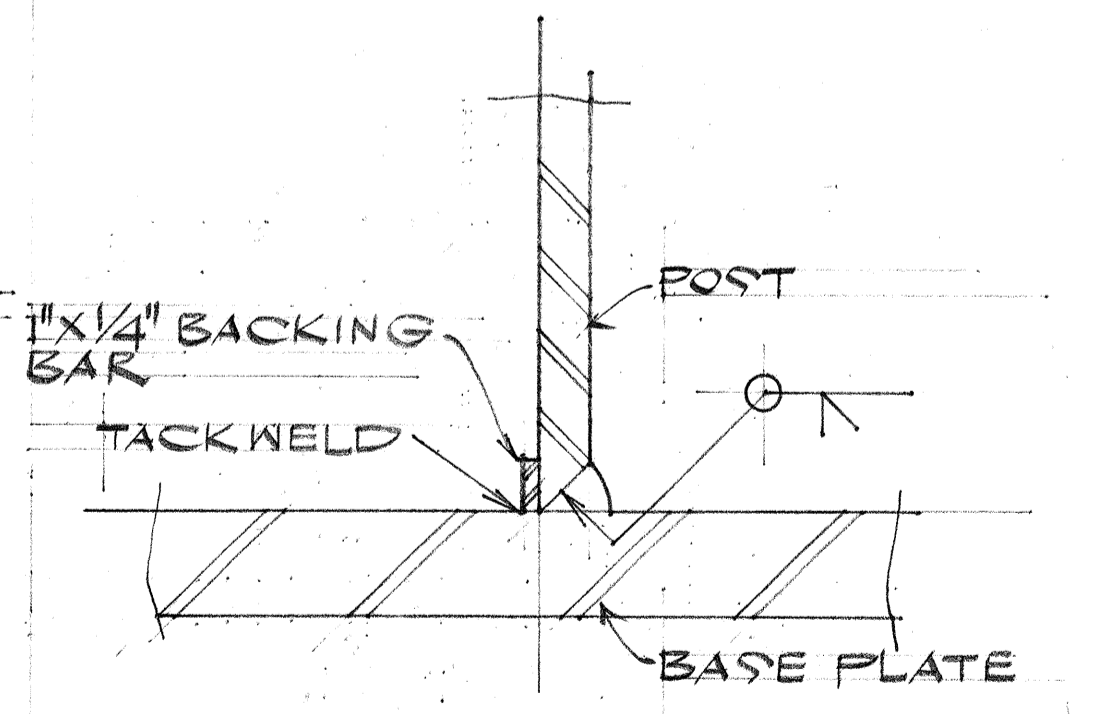
UPPER JUNCTURE CONNECTION

LOWER JUNCTURE CONN

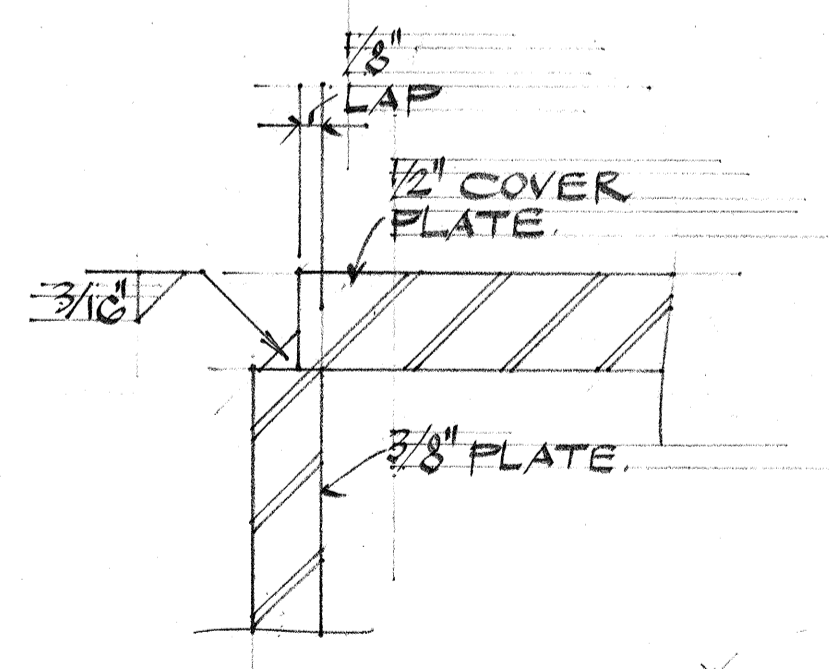
SINGLE SIDE BOLT ANCHORAGE DETAILS



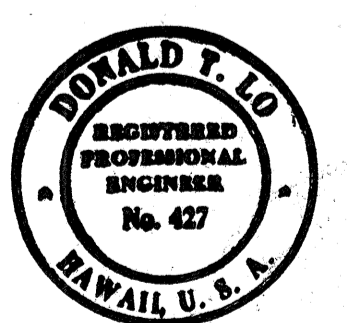
BASE PLATE E 105
SCALE: 1/2" = 1'-0"



POST TO BASE PLATE WELDING DETAIL
NO SCALE.

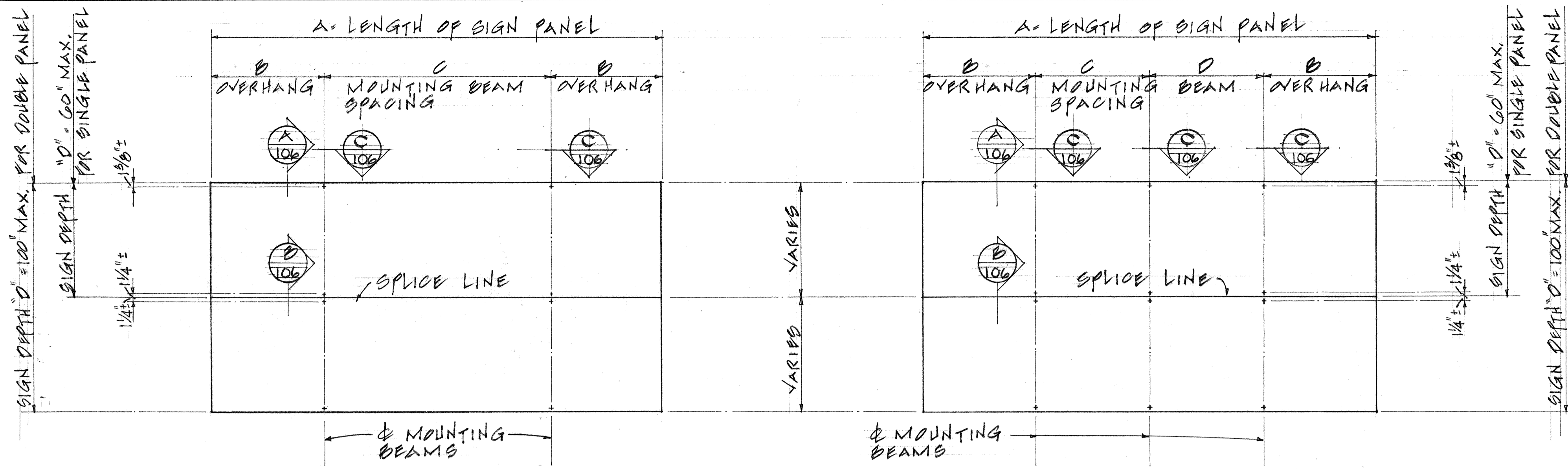


CONN. DET. F 105
SCALE: 1/2" = 1'-0"



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR
EXPRESSWAY SIGNS
BOX BM, CLOSED TRUSS,
2 POST TYPE, GENERAL
FRAME DETAILS.
INTERSTATE ROUTE HI
PROJECT NO. I-HI-1 (89) 15
SCALE AS NOTED DATE: AUG 4 1976
SHEET NO. 12 OF 28 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
NO.	

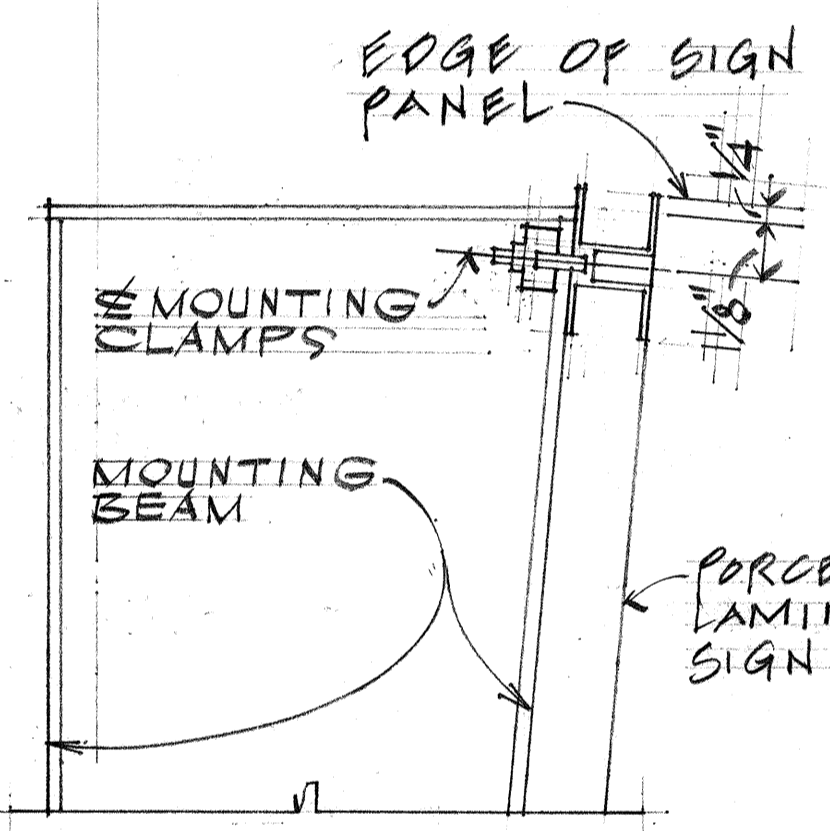


SIGN PANEL LENGTH 5'-0" TO 14'-0"

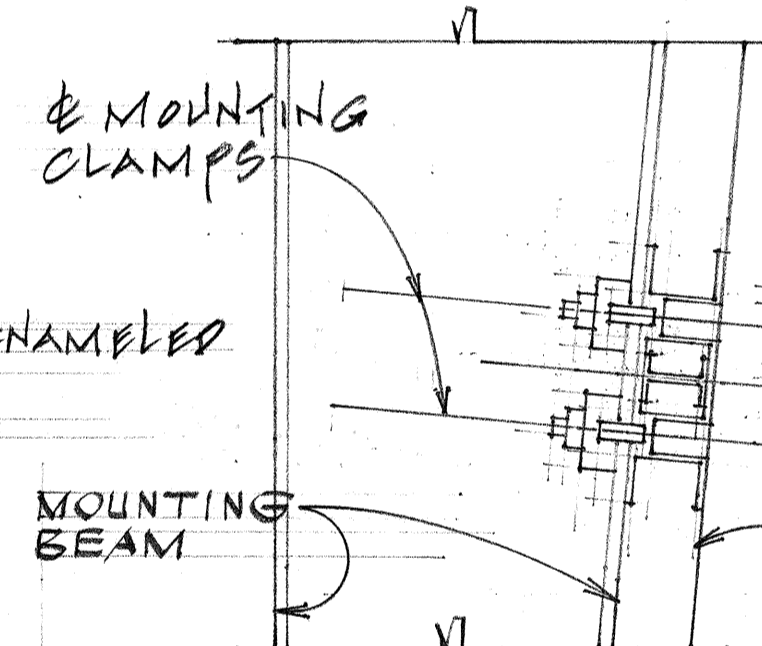
SIGN PANEL LENGTH 15'-0" TO 24'-0"

TYPICAL SIGN PANEL ELEVATIONS
NO SCALE

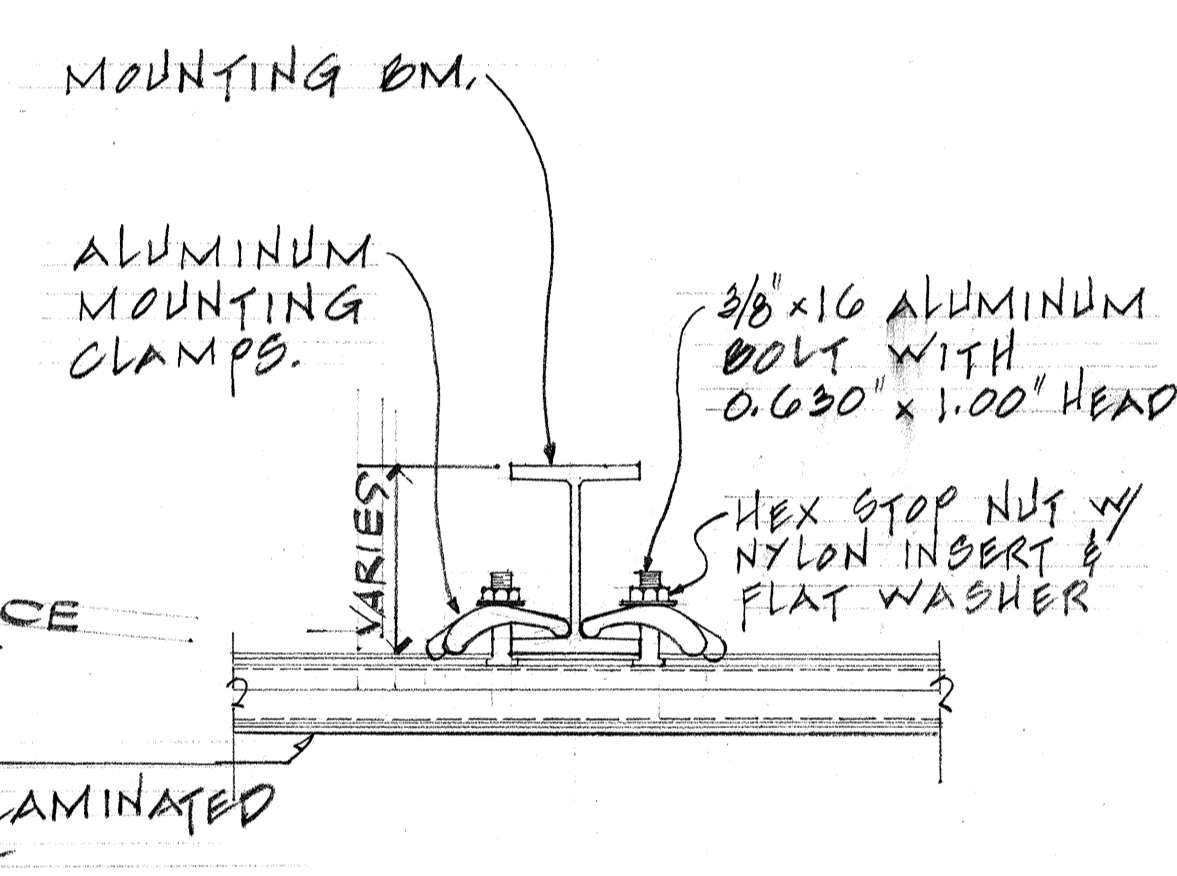
MOUNTING BEAM SPACING SCHEDULE				
SIGN PANEL LENGTH *	NUMBER MOUNTING BEAMS	SIGN PANEL OVERHANG MOUNTING BEAM SPACING		
		B	C	D
5'-0"	2	6"	4'-0"	
6'-0"	2	6"	5'-0"	
7'-0"	2	12"	5'-0"	
8'-0"	2	12"	6'-0"	
9'-0"	2	12"	7'-0"	
10'-0"	2	18"	7'-0"	
11'-0"	2	18"	8'-0"	
12'-0"	2	24"	8'-0"	
13'-0"	2	24"	9'-0"	
14'-0"	2	24"	10'-0"	
15'-0"	3	6"	7'-0"	7'-0"
16'-0"	3	6"	7'-6"	7'-6"
17'-0"	3	12"	7'-6"	7'-6"
18'-0"	3	12"	8'-0"	8'-0"
19'-0"	3	12"	8'-6"	8'-6"
20'-0"	3	18"	8'-6"	8'-6"
21'-0"	3	18"	9'-0"	9'-0"
22'-0"	3	24"	9'-0"	9'-0"
23'-0"	3	24"	9'-6"	9'-6"
24'-0"	3	24"	10'-0"	10'-0"



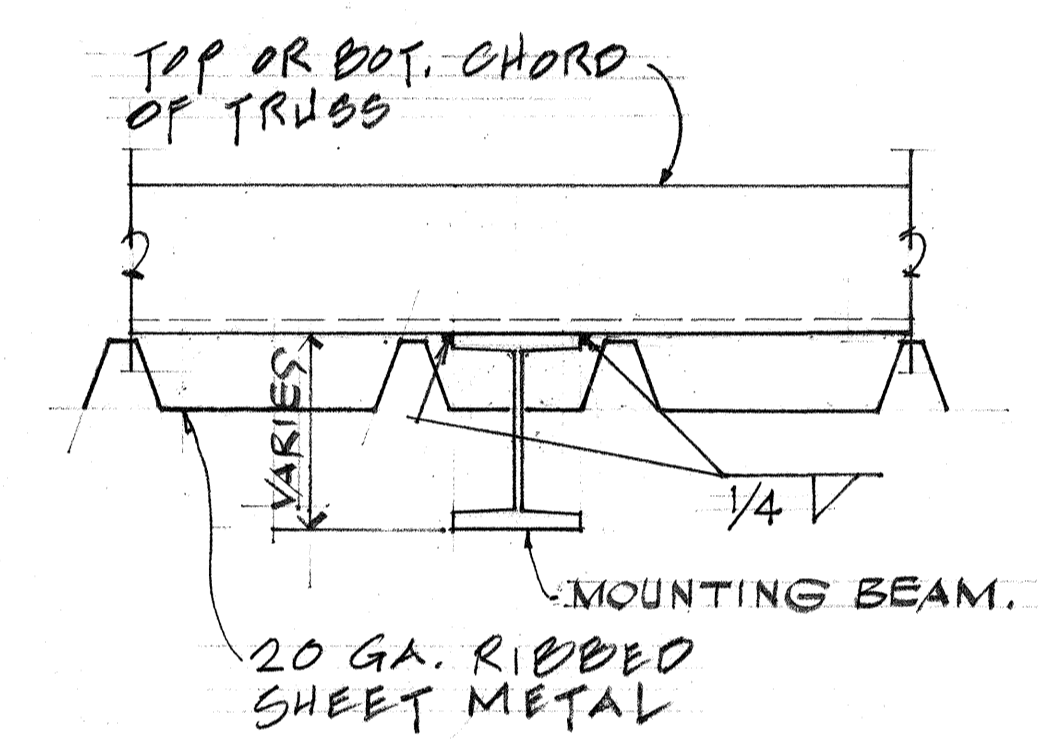
SECTION A
NO SCALE



SECTION B
NO SCALE



SECTION C
NO SCALE

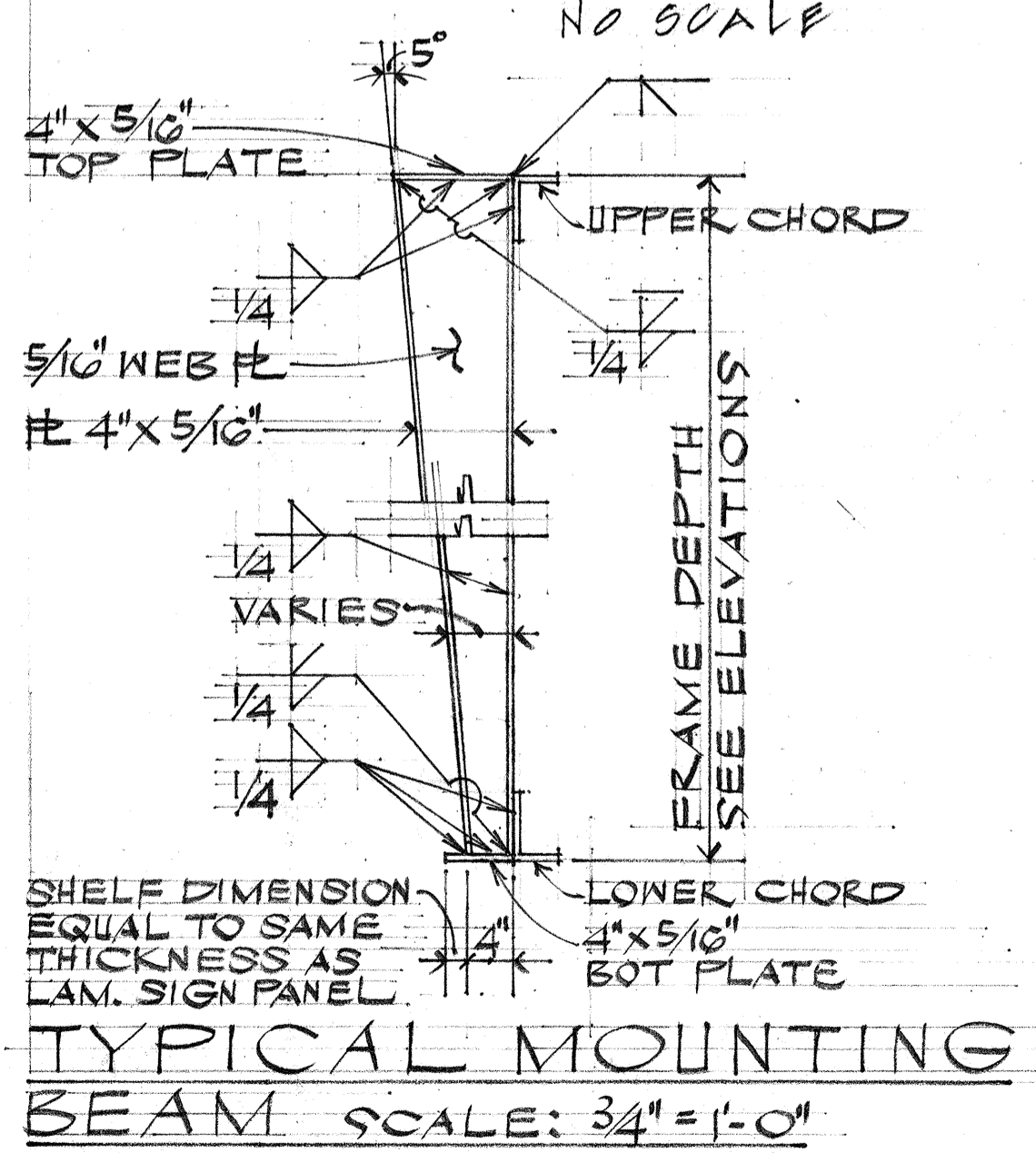


TYPICAL CONN OF MOUNTING BEAM TO TOP & BOT CHORD OF TRUSS
NO SCALE.

* SIGNS LONGER THAN 24' ARE FABRICATED AND MOUNTED AS ADJOINING SINGLE PANELS

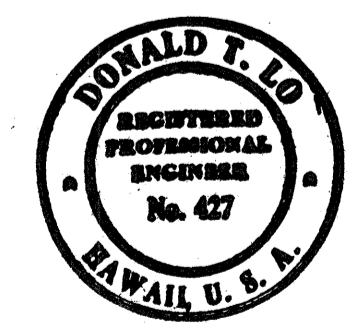
NOTES:

- 1.- LAMINATED PANEL SIGN DEPTHS MORE THAN 60" REQUIRE ADDITIONAL MOUNTING CLAMPS LOCATED 1/4" ± EA. SIDE OF PANEL SPLICE LINE. EXACT LOCATION IS DEPENDENT ON SIGN PANEL MANUFACTURER.
- 2.- TORQUE ALUMINUM SIGN PANEL MOUNTING BOLT TO 100 IN.- LBS.



TYPICAL MOUNTING BEAM SCALE: 3/4" = 1'-0"

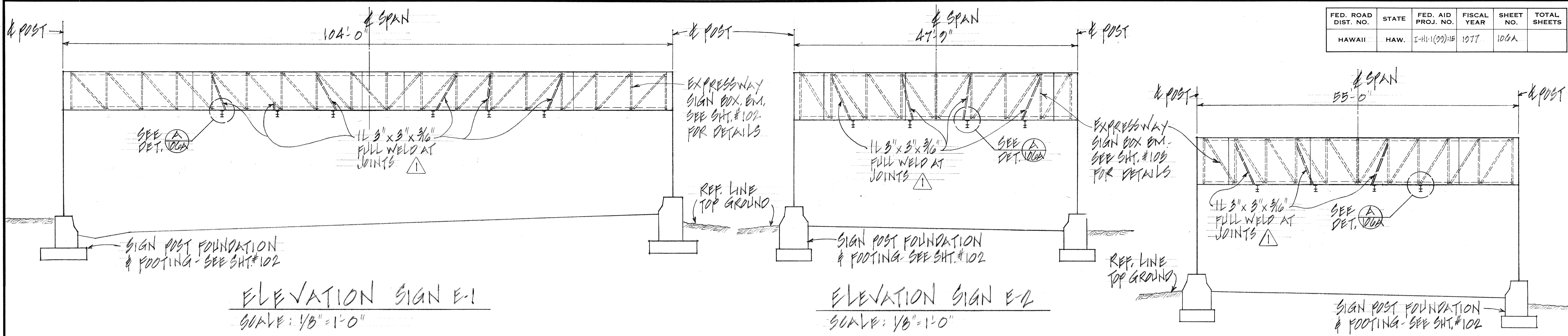
SURVEY PLOTTED BY: _____
 DATE: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 NOTE BOOK: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 NO.: _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 Donald T. Lo
 ENGINEER

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
NIMITZ SPUR OVERHEAD SIGNS LAMINATED ALUMINUM SIGN PANEL MOUNTING DETAILS
 INTERSTATE ROUTE, HI.
 PROJECT NO. 2-HI-1(99):15
 SCALE AS NOTED DATE AUG 4 1976
 SHEET NO. 13 OF 28 SHEETS

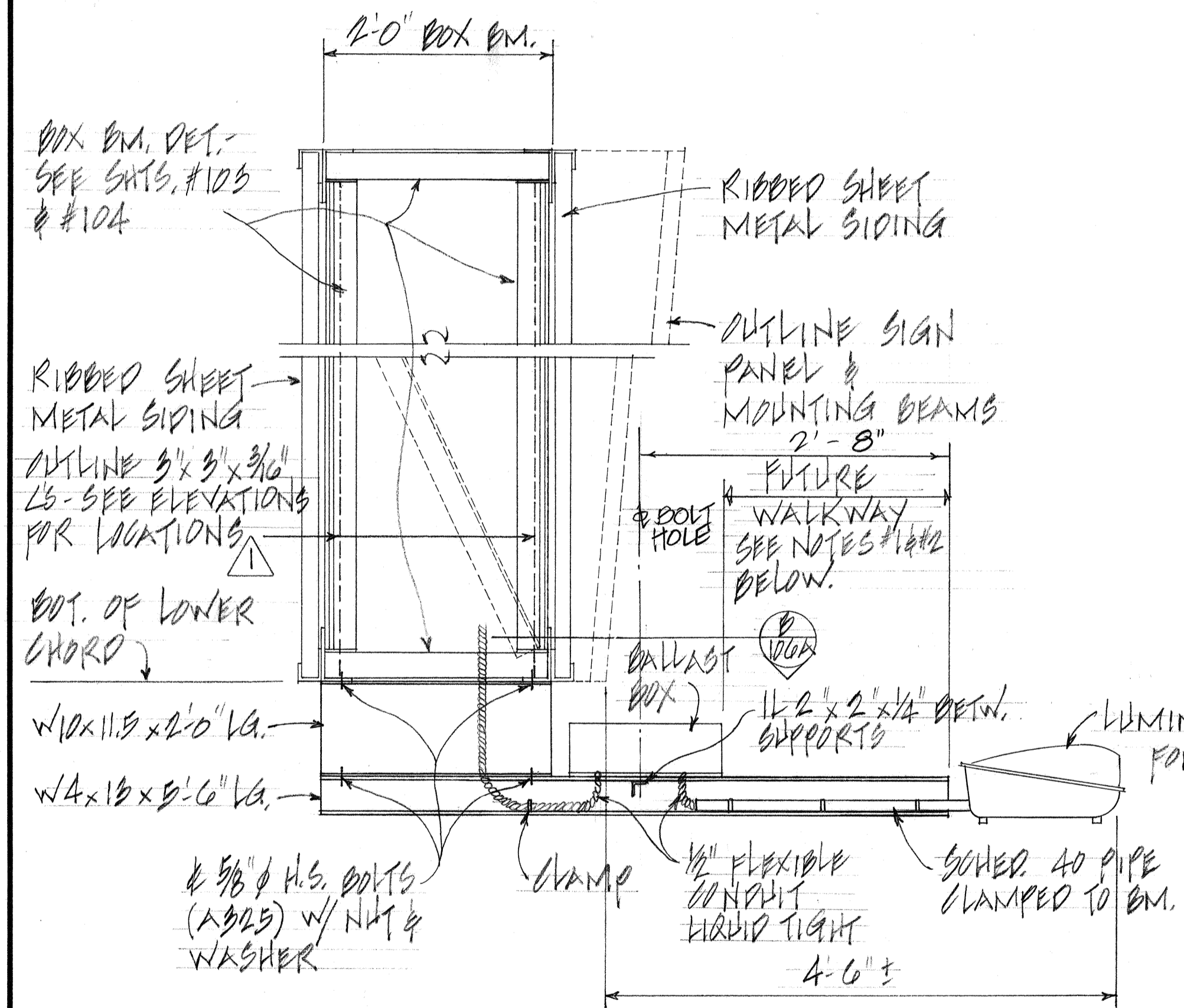
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(09)1B	1977	106A	



ELEVATION SIGN E-1
SCALE: 1/8" = 1'-0"

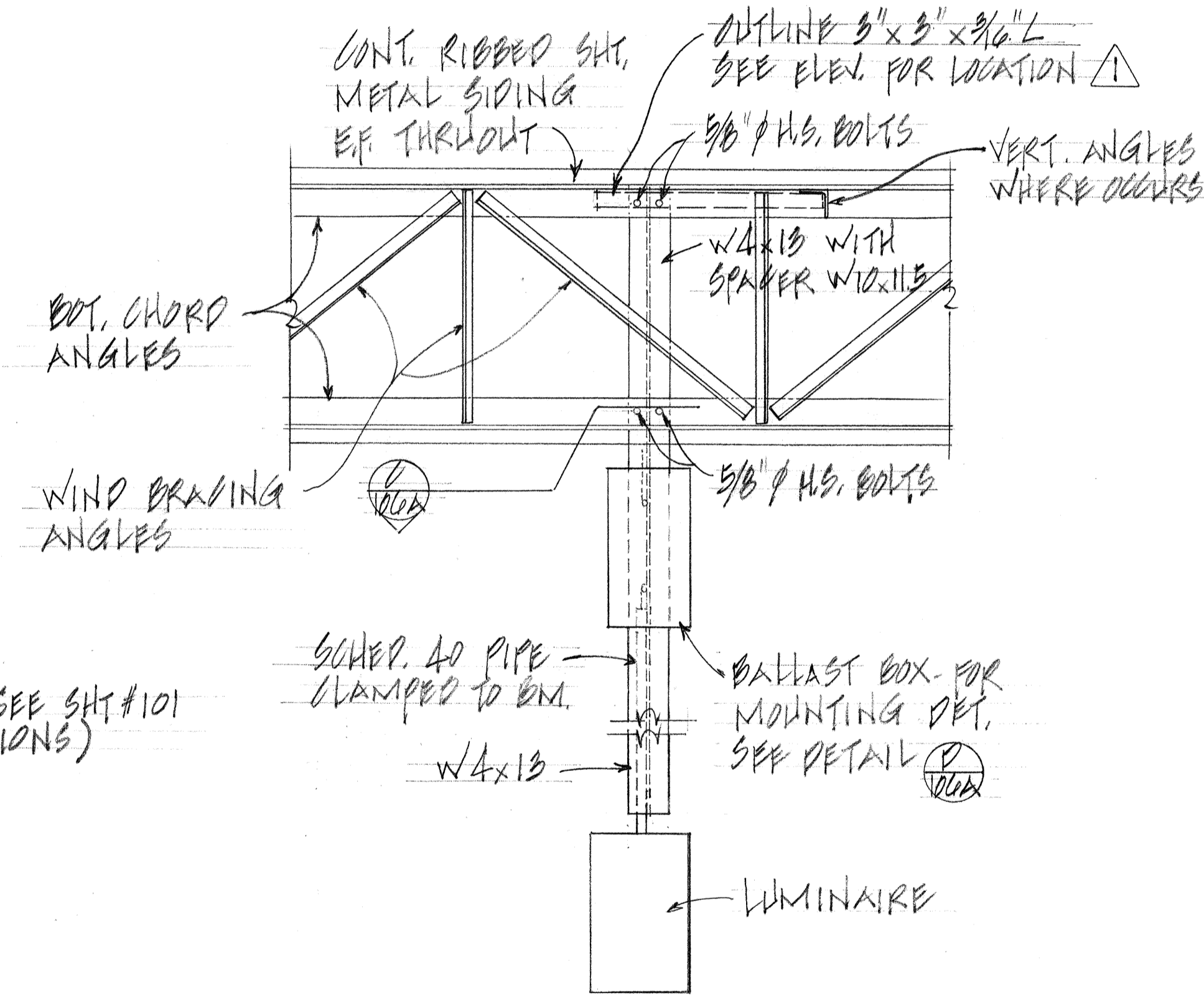
ELEVATION SIGN E-2
SCALE: 1/8" = 1'-0"

ELEVATION SIGN E-3
SCALE: 1/8" = 1'-0"

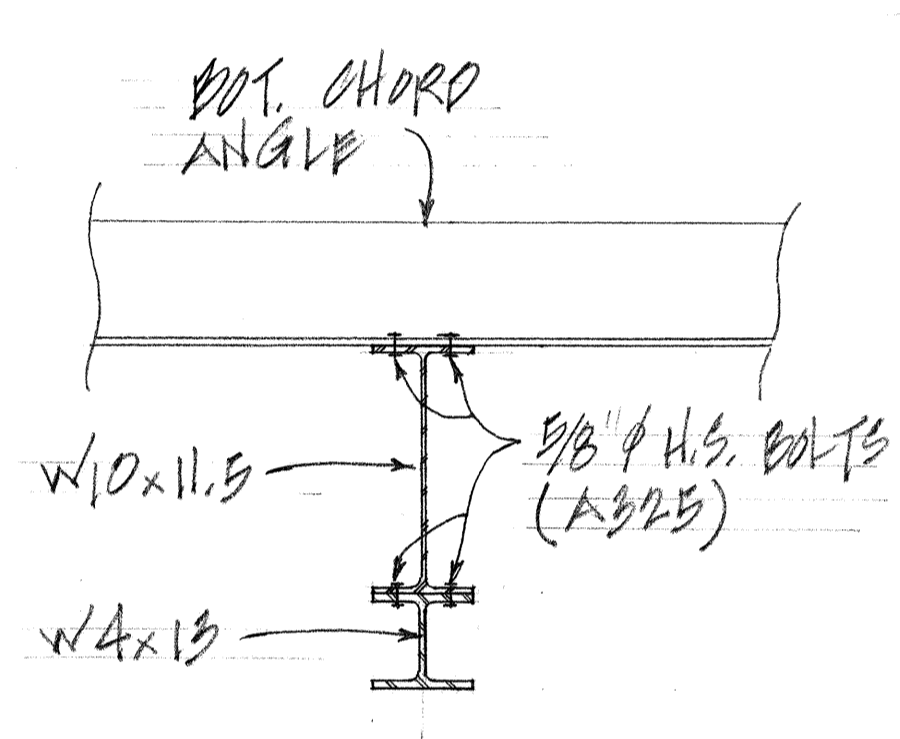


TYPICAL SIGN LUMINAIRE AND WALKWAY SUPPORT CONN. DETAILS
SCALE: 1" = 1'-0"

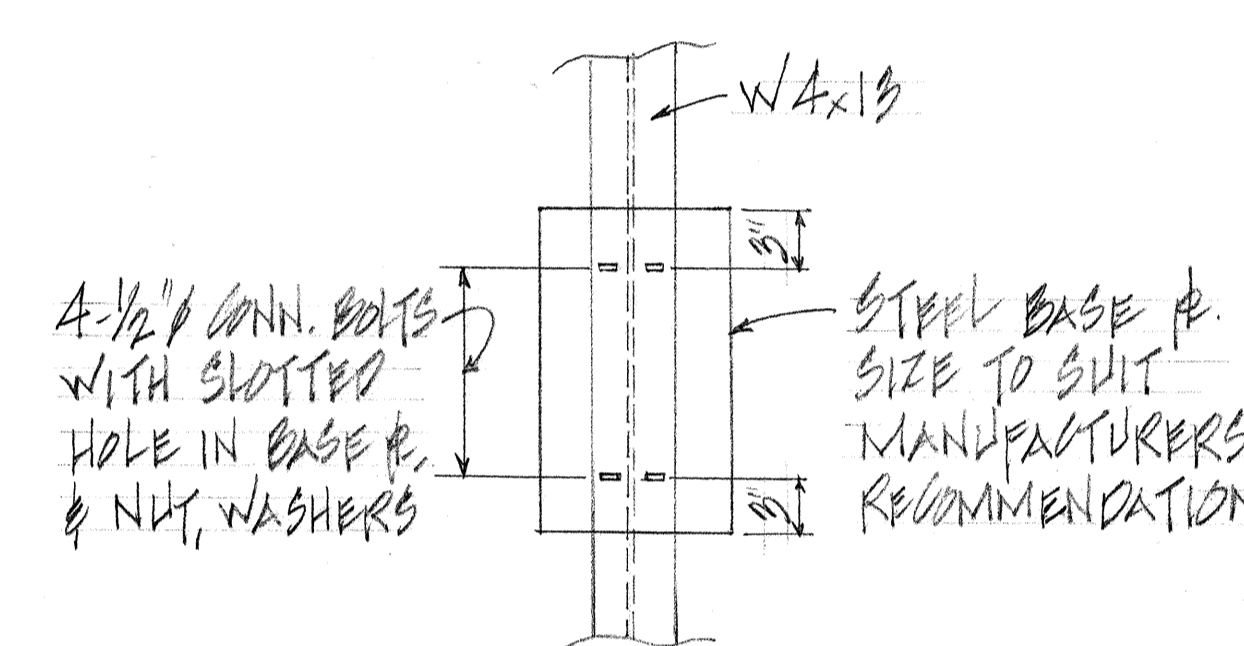
- NOTES:**
- LOAD OF WALKWAY & RAILING ON EACH BRACKET SHALL NOT EXCEED 375 POUNDS.
 - LIVE LOAD ON EACH BRACKET = 500 #



PLAN-SECTION
SCALE: 1" = 1'-0"



SECTION
SCALE: 1/2" = 1'-0"



DETAIL
N.T.S.

NOTES:

- FOR LOCATION OF LUMINAIRES, SEE SHEET #107
- LOCATION OF SIGN LUMINAIRES AND WALKWAY BRACKETS MAY BE ADJUSTED TO AVOID ANY INTERFERENCE WITH BOTTOM WIND BRACING SUBJECT TO THE APPROVAL OF THE ENGINEER.
- DETAILS ON THIS SHEETS REPLACES LIGHT FIXTURES SUPPORT CONNECTION DETAILS

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

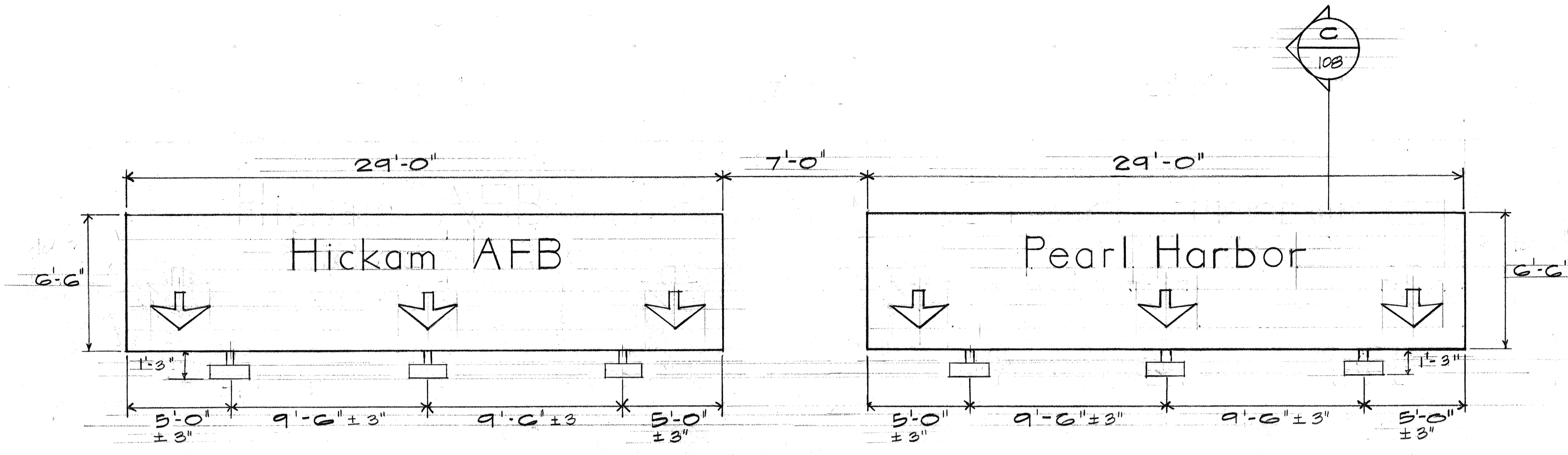
NO.	REVISION	APPROVED BY	DATE
△	REVISED WALKWAY BRACING		9/26/78



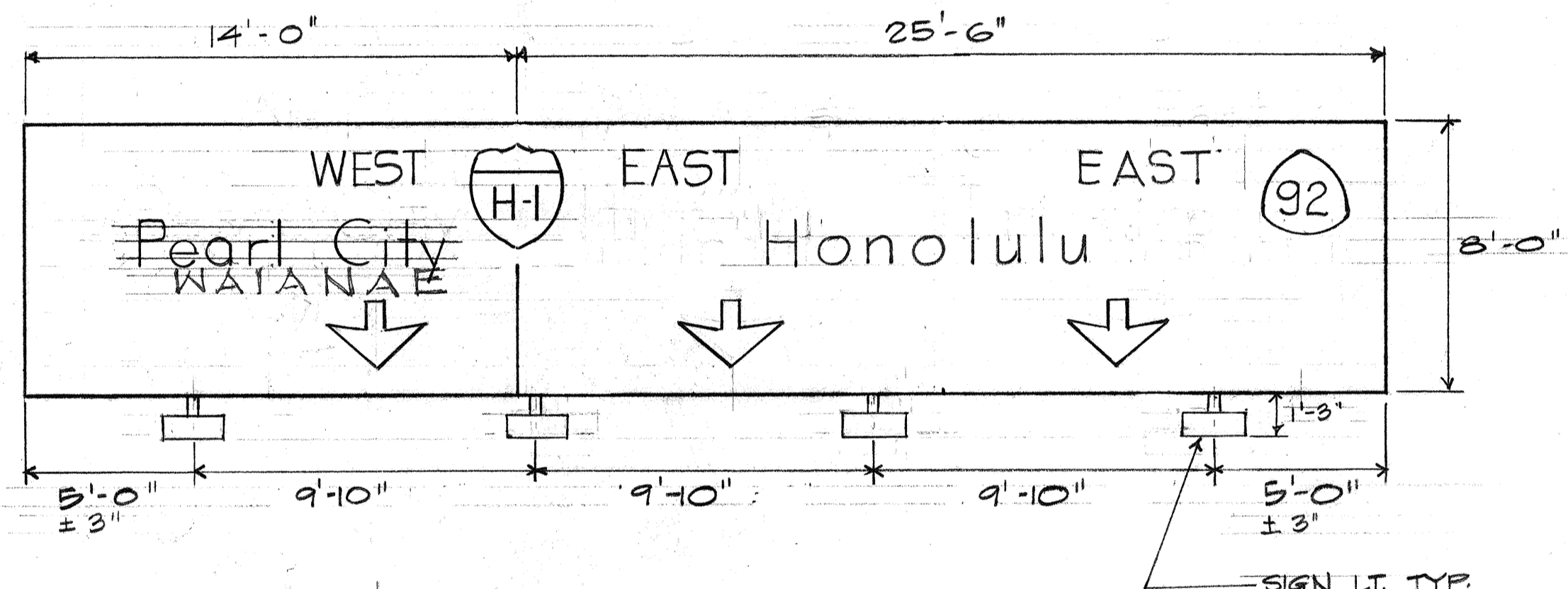
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 SIGNATURE: *Donald T. Lo*

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
NIMITZ SPUR EXPRESSWAY SIGNS WALKWAY BRACKET DETAILS
 INTERSTATE ROUTE HI PROJECT NO. I-HI-1(09)1B SCALE AS NOTED DATE: _____
 SHEET No. 13A OF SHEETS

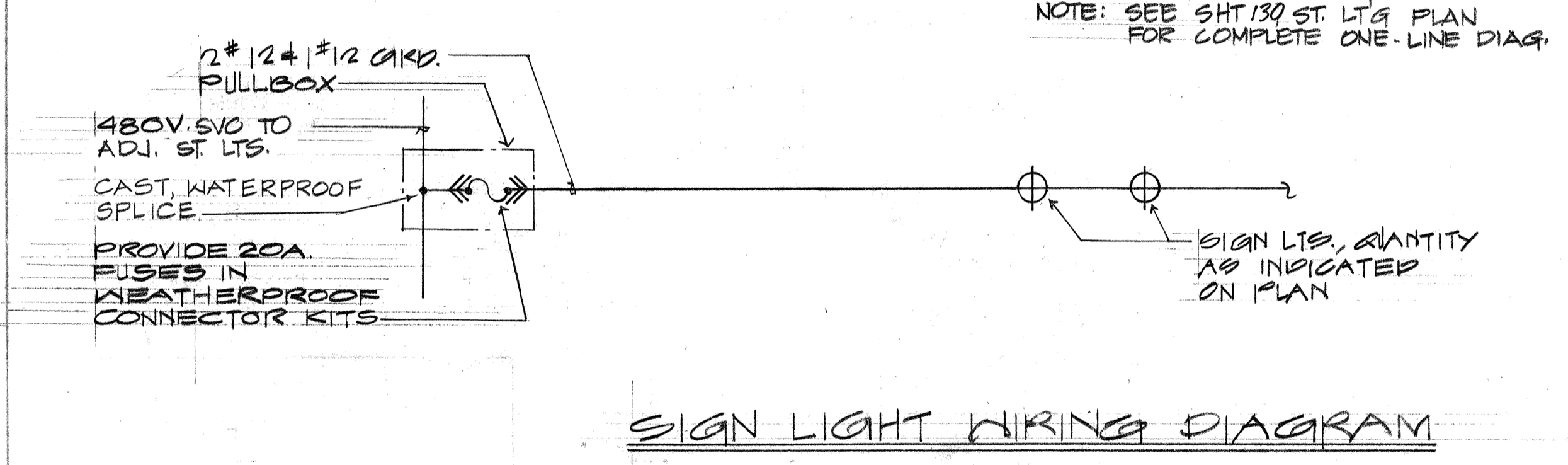
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(99)15	1977	107	350



SIGN E-1
 N-IP # 2+70
 K-IH # 10+00
 SCALE: 1/4" = 1'-0"



SIGN E-2 & SIGN E-3
 N-PI # 3+40.31 & R-HI # 4+75
 SCALE: 1/4" = 1'-0"



SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NO.	

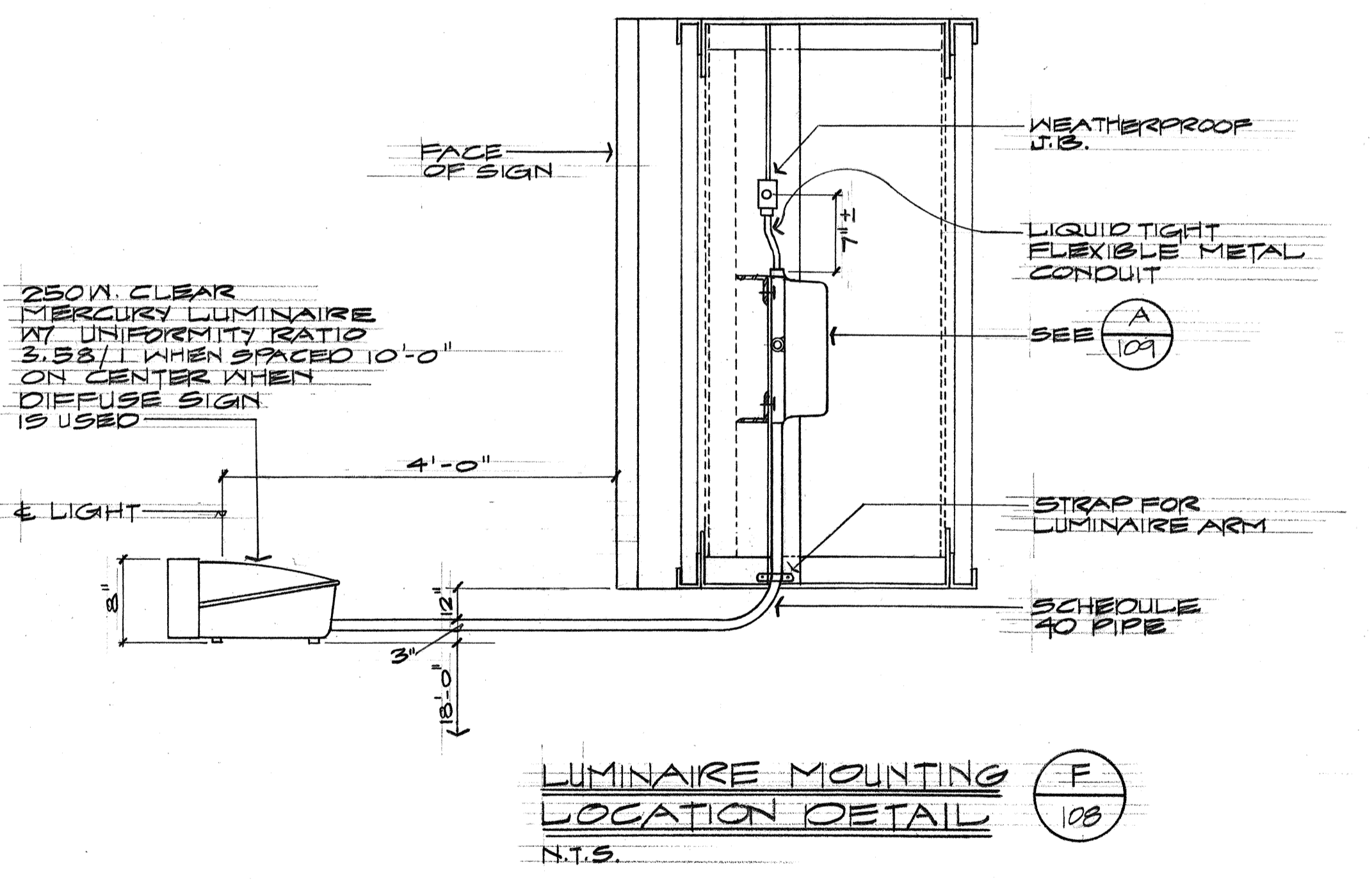
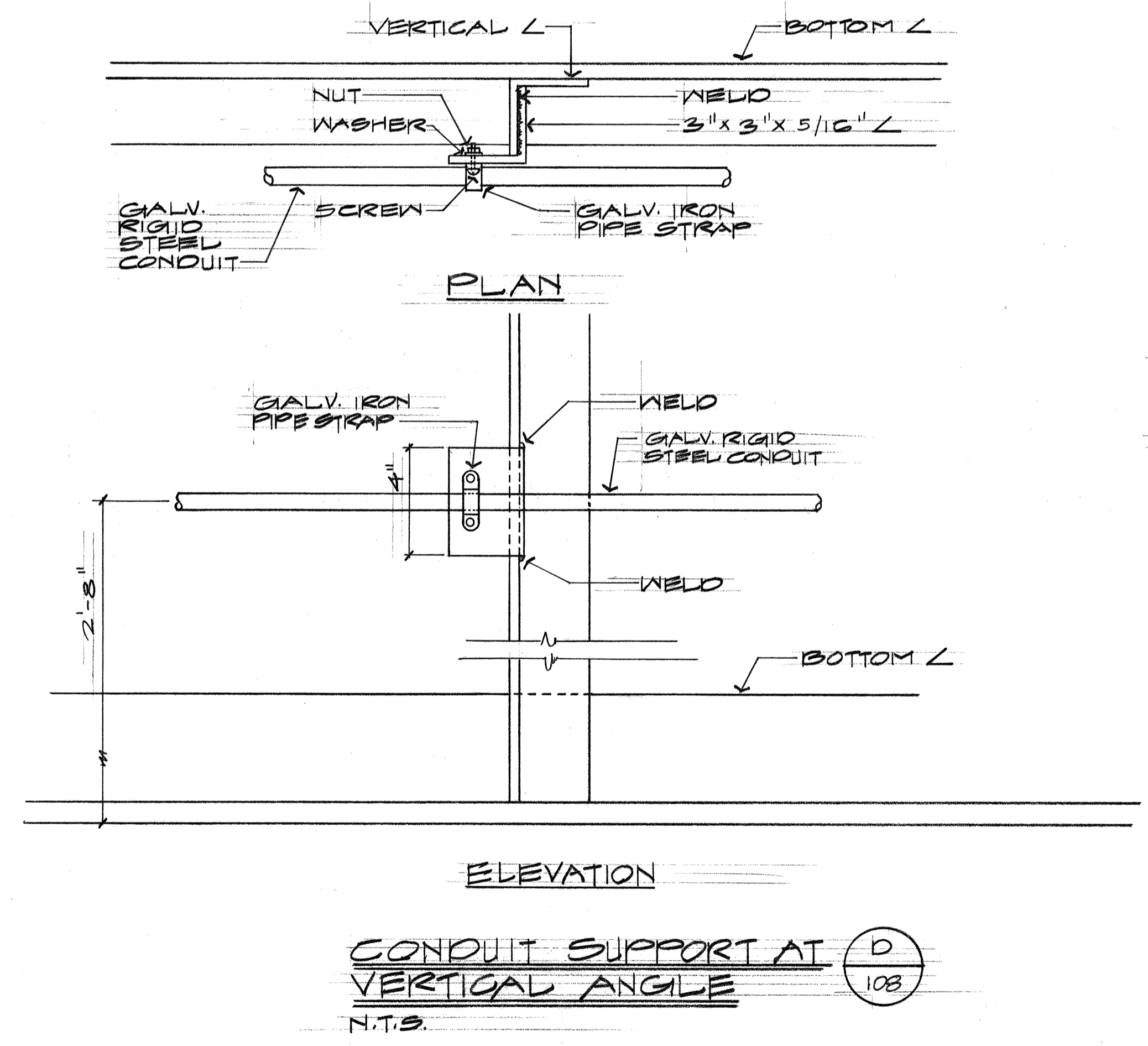
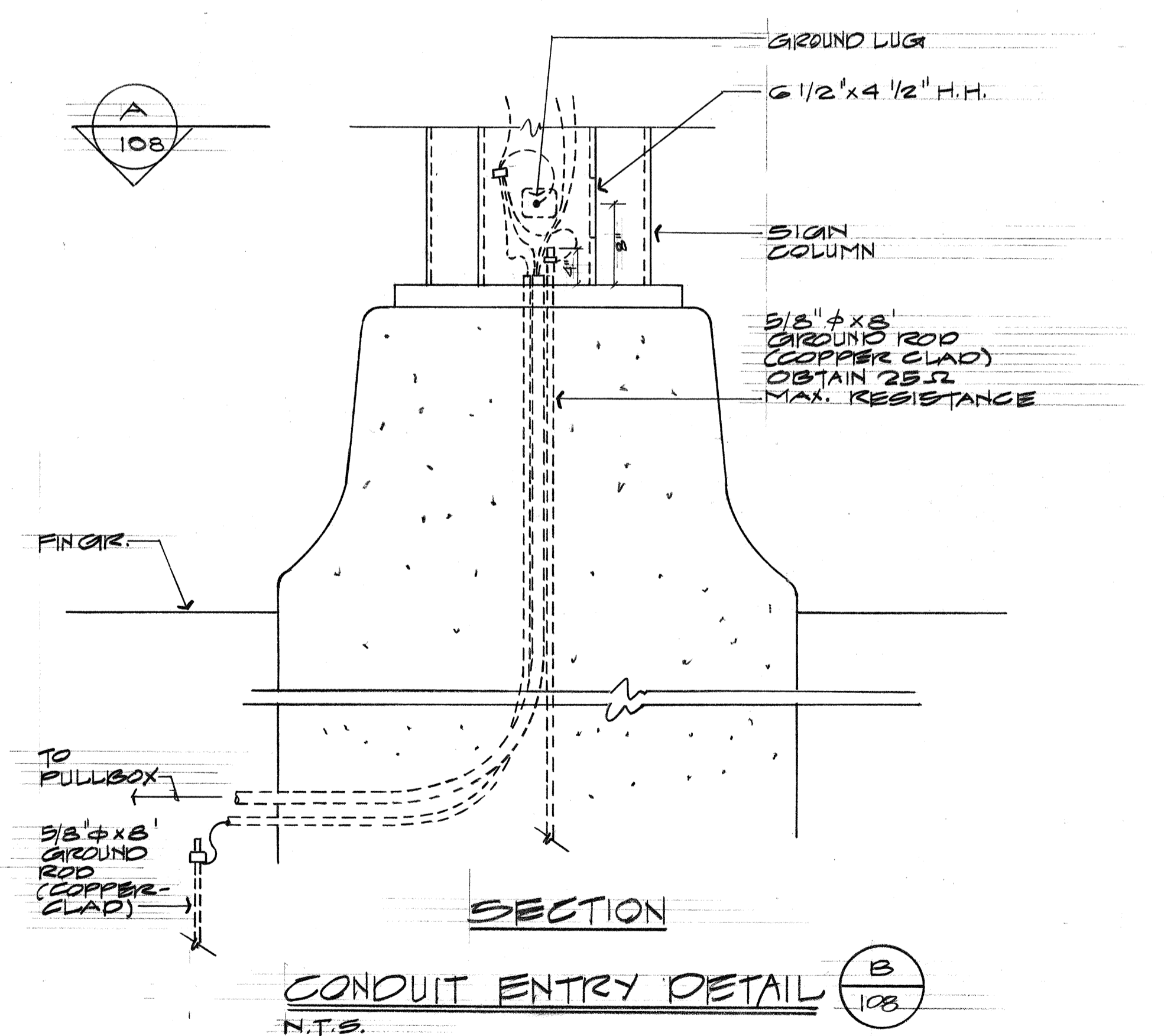
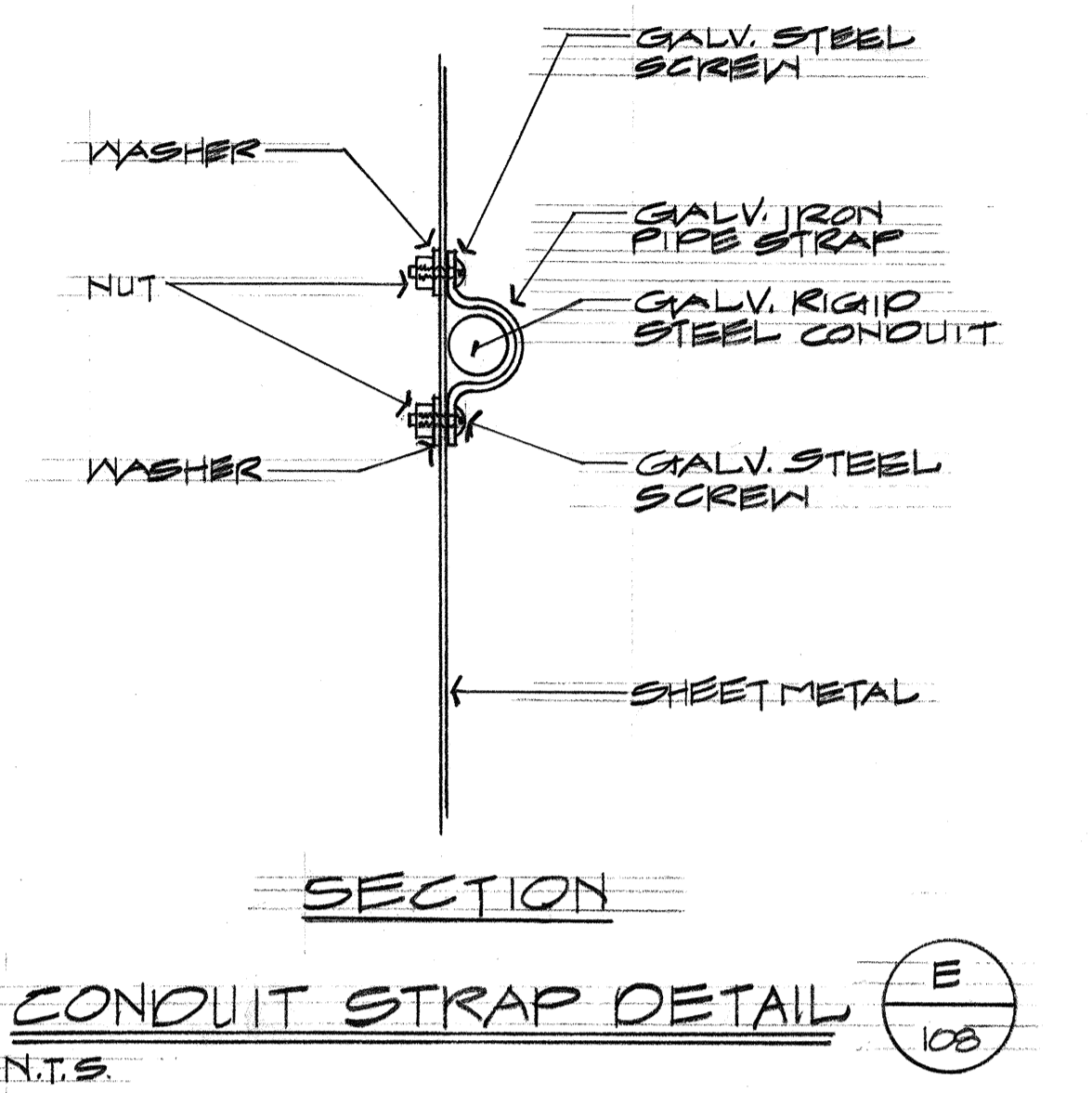
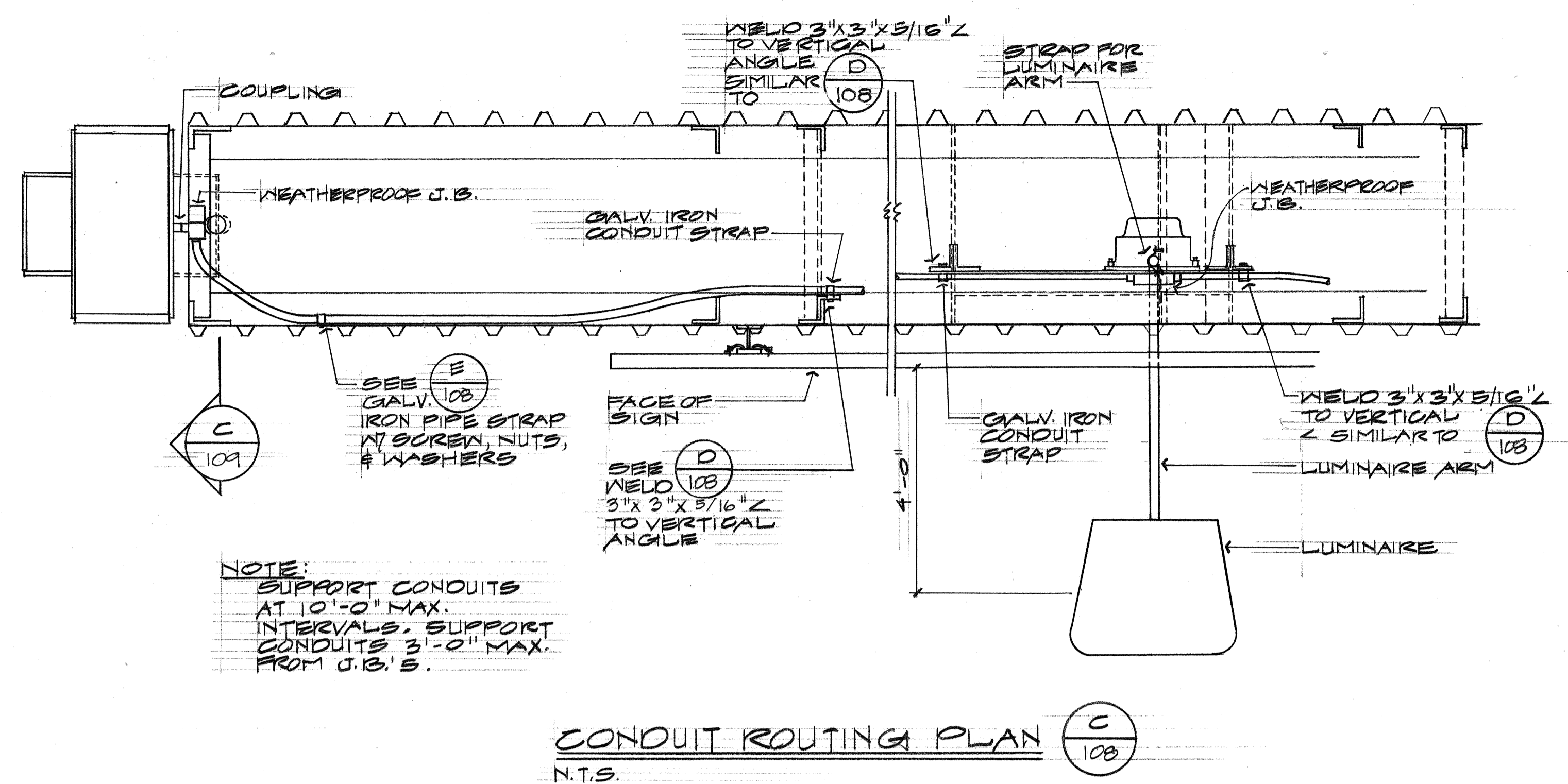
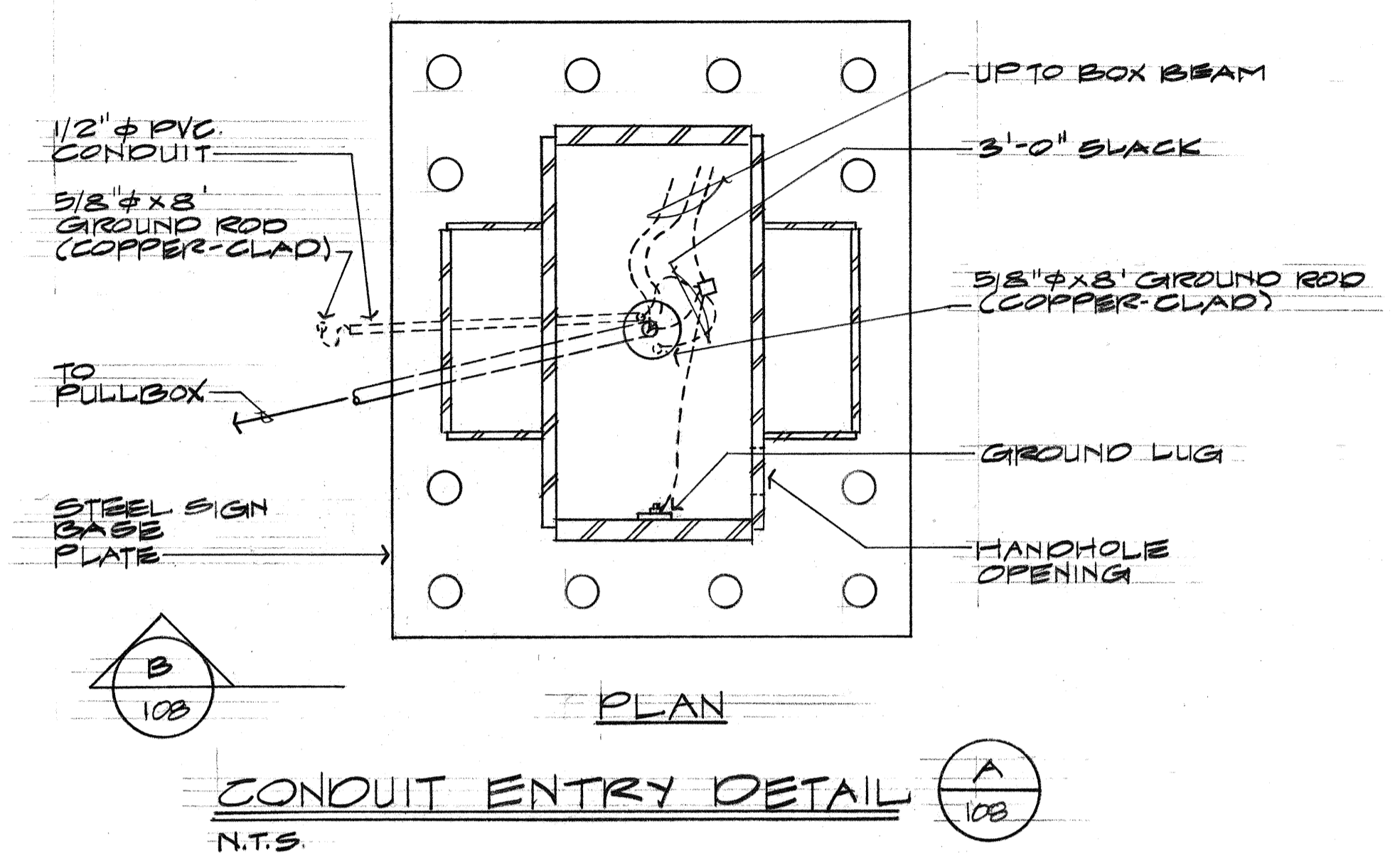
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Takio Kawabata

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

NIMITZ SPUR
SIGN LIGHTING PLAN

INTERSTATE ROUTE 41
 PROJECT No. I-H-1(99)15
 SCALE: NONE DATE: AUG 4 1976

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(99):15	1977	108	350



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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Taketo Kawabata

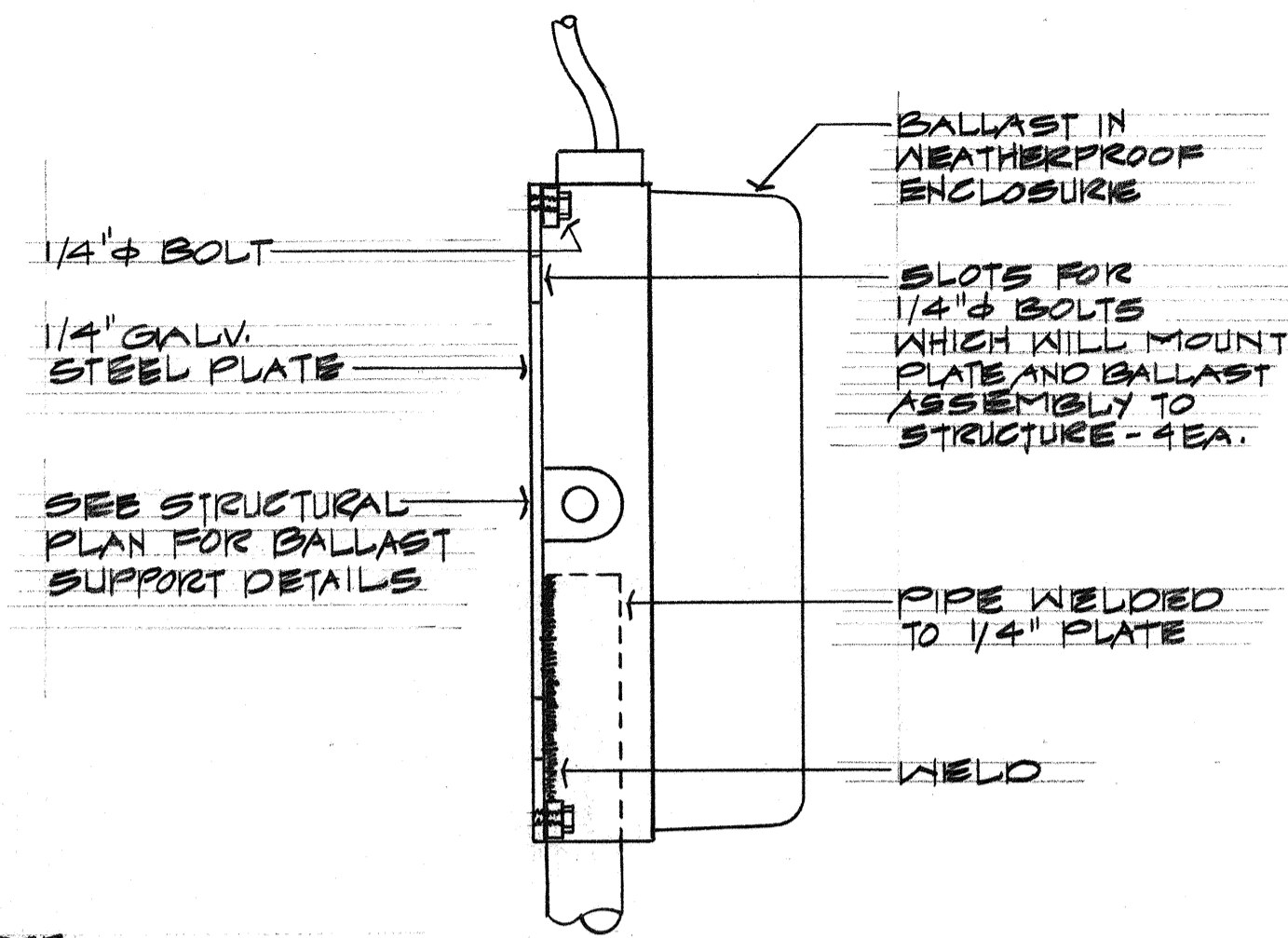
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**NIMITZ SPUR
 SIGN LIGHTING CONDUIT
 DETAILS**

INTERSTATE ROUTE H-1
 PROJECT NO. I-HI-1(99):15
 SCALE: NONE
 DATE: AUG 4 1976

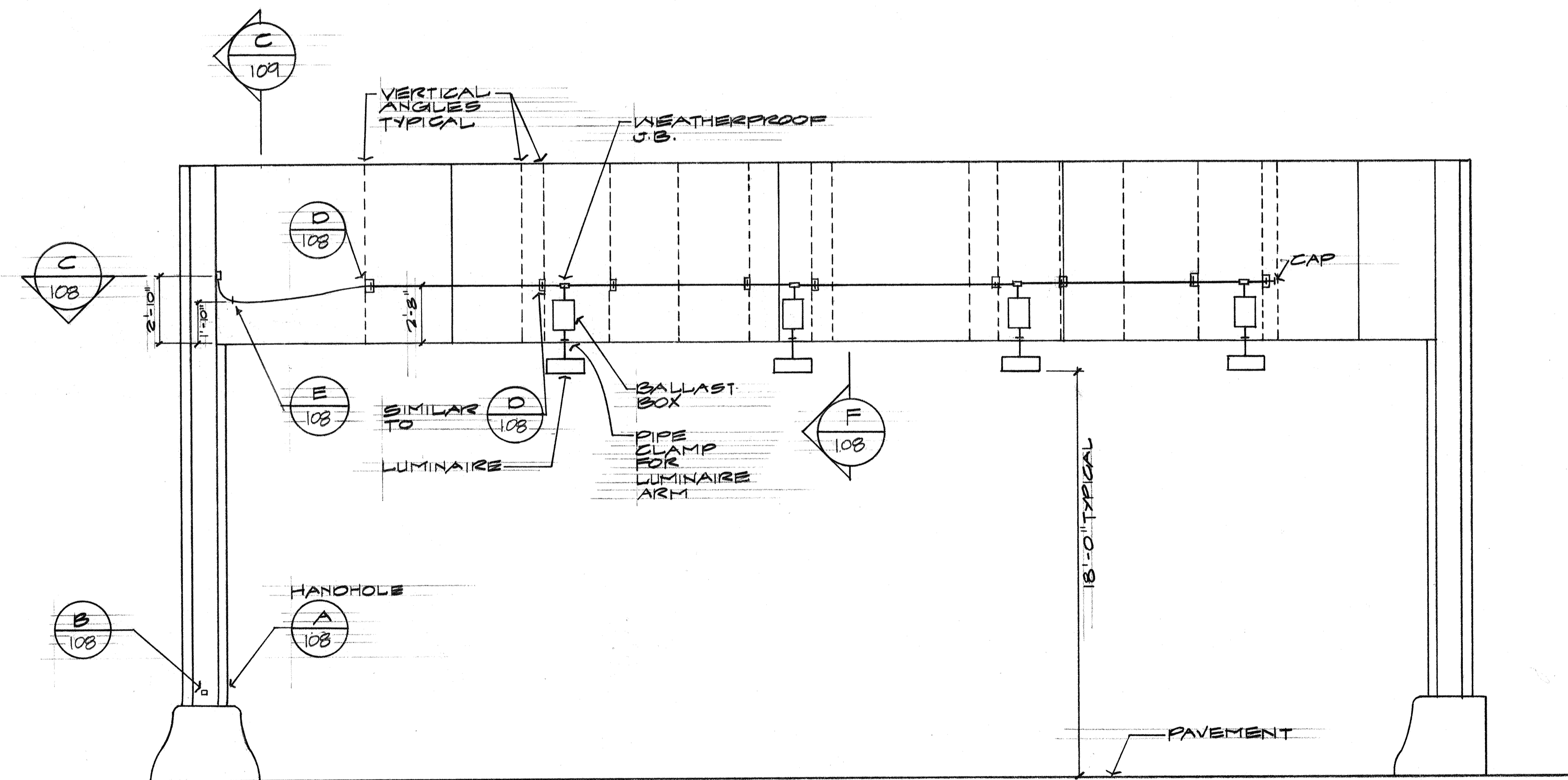
SHEET No. 15 OF 28 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(99)-15	1077	109	350



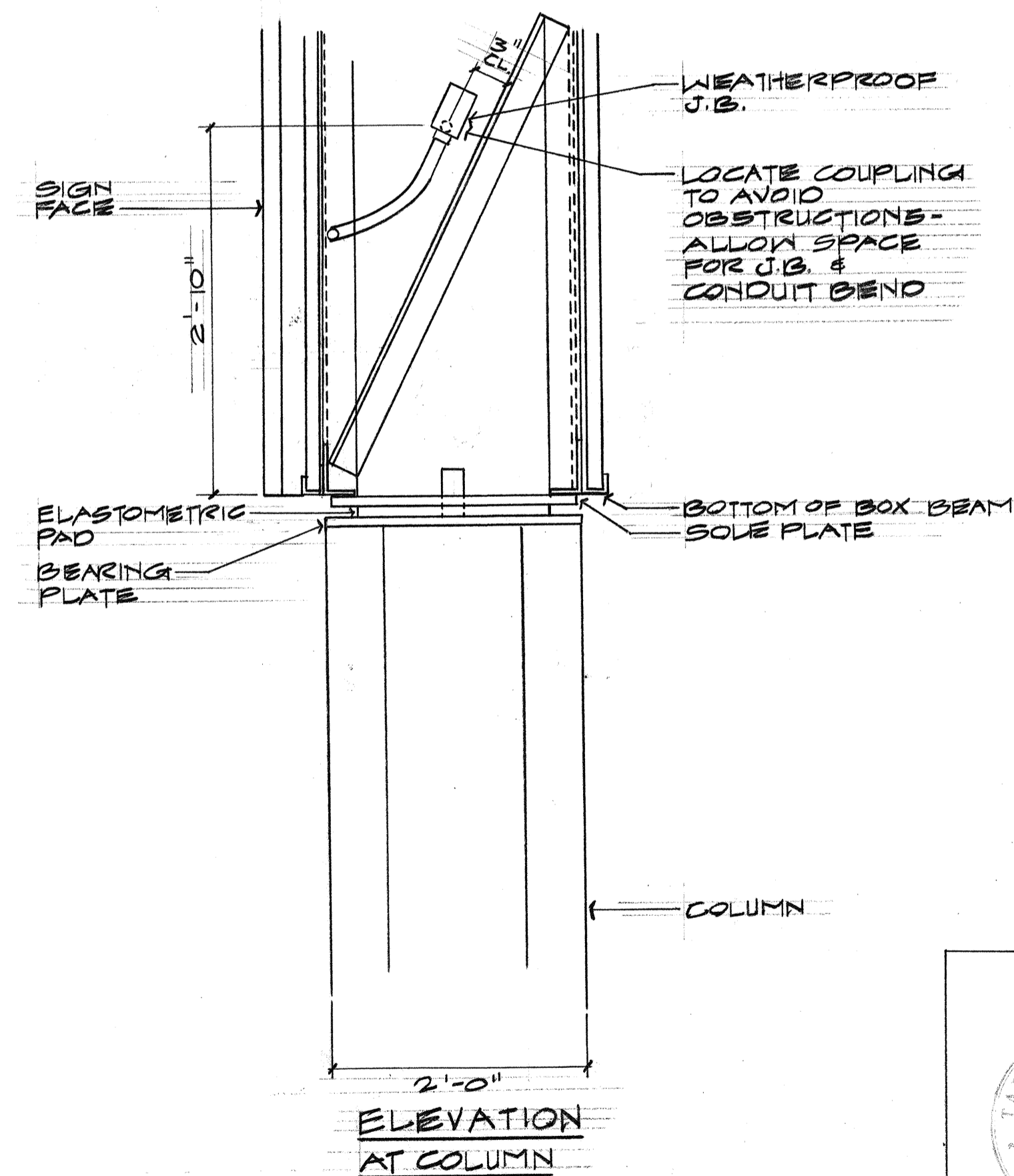
NOTE:
 PIPE & STEEL PLATE ASSEMBLY SHALL BE CAPABLE OF SUPPORTING LUMINAIRE AND BALLAST WITHOUT DAMAGE AGAINST 100 MPH WINDS. BOLTS ATTACHING BALLAST TO STEEL AND STEEL PLATE TO STRUCTURE SHALL BE PER MANUFACTURERS' RECOMMENDATIONS AND SHALL SUPPORT THE LUMINAIRE, BALLAST, AND PIPE AND STEEL PLATE ASSEMBLY WITHOUT DAMAGE AGAINST 100 MPH WINDS.

BALLAST AND STEEL PLATE DETAIL (A)
 N.T.S. 109



ELEVATION

SIGN E-2 CONDUIT ROUTING (B)
 N.T.S. 109
 (OTHER SIGNS SIMILAR)



ELEVATION AT COLUMN

HANDHOLE AND COUPLING DET. C
 N.T.S. 109

SURVEY PLOTTED BY:	DATE:
DRAWN BY:	
NOTED BY:	
CHECKED BY:	
NO.	

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Taketo Kawabata

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

NIMITZ SPUR

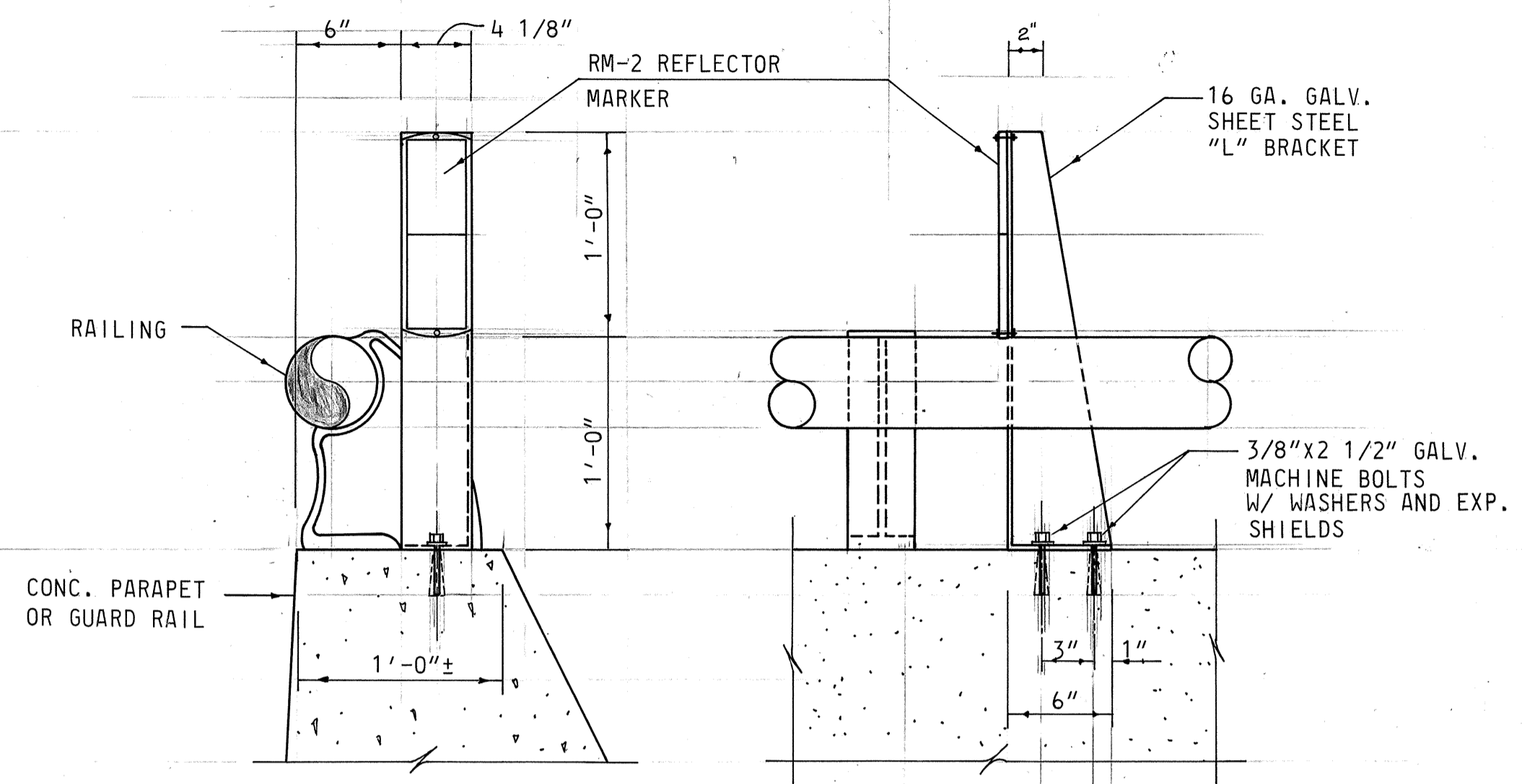
SIGN LIGHTING ELEVATIONS AND SECTIONS

INTERSTATE ROUTE H-1
 PROJECT NO. I-HI-1(99)-15

SCALE: NONE DATE: AUG 4 1976

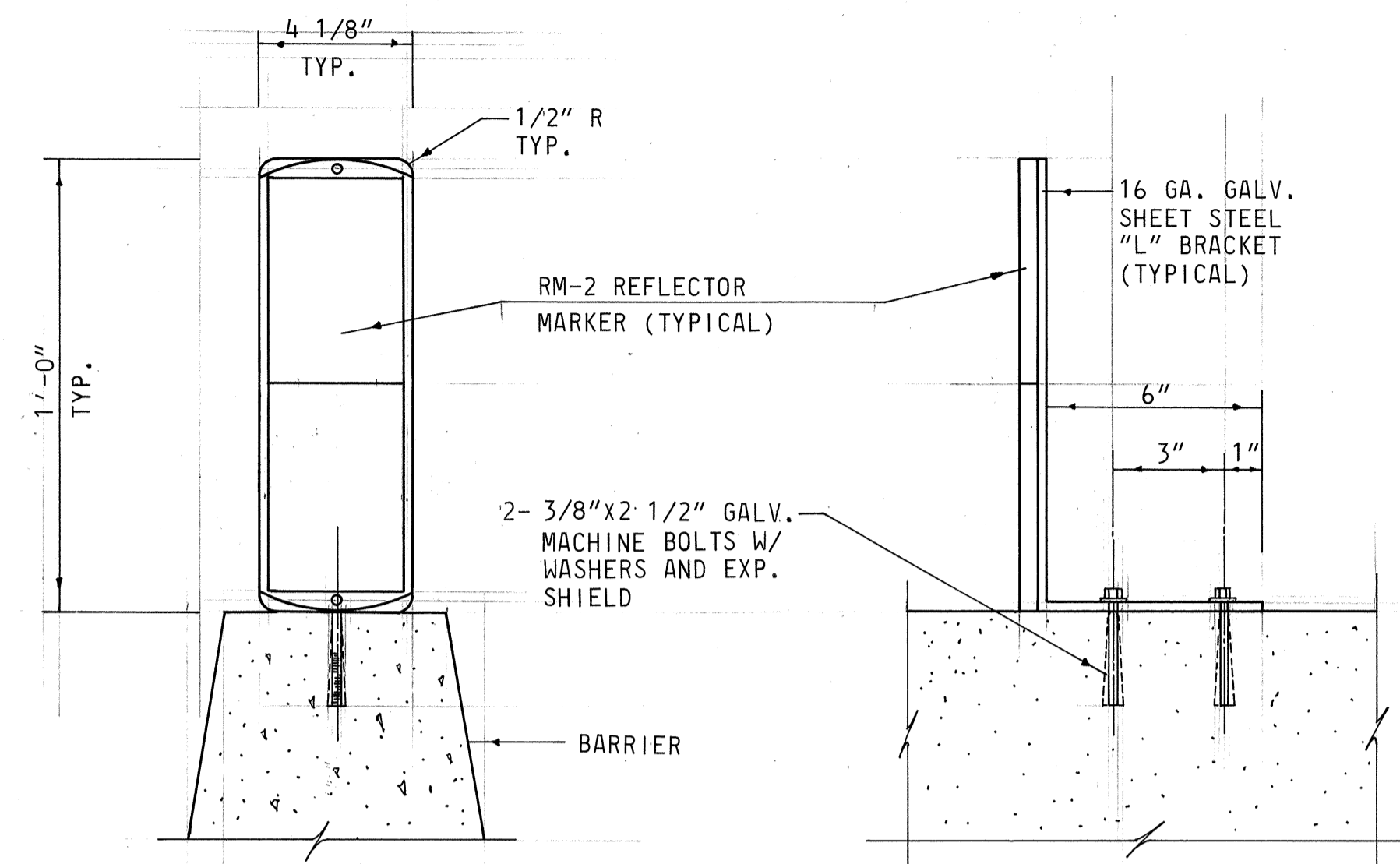
SHEET NO. 16 OF 28 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1(55):15	1977	110	250

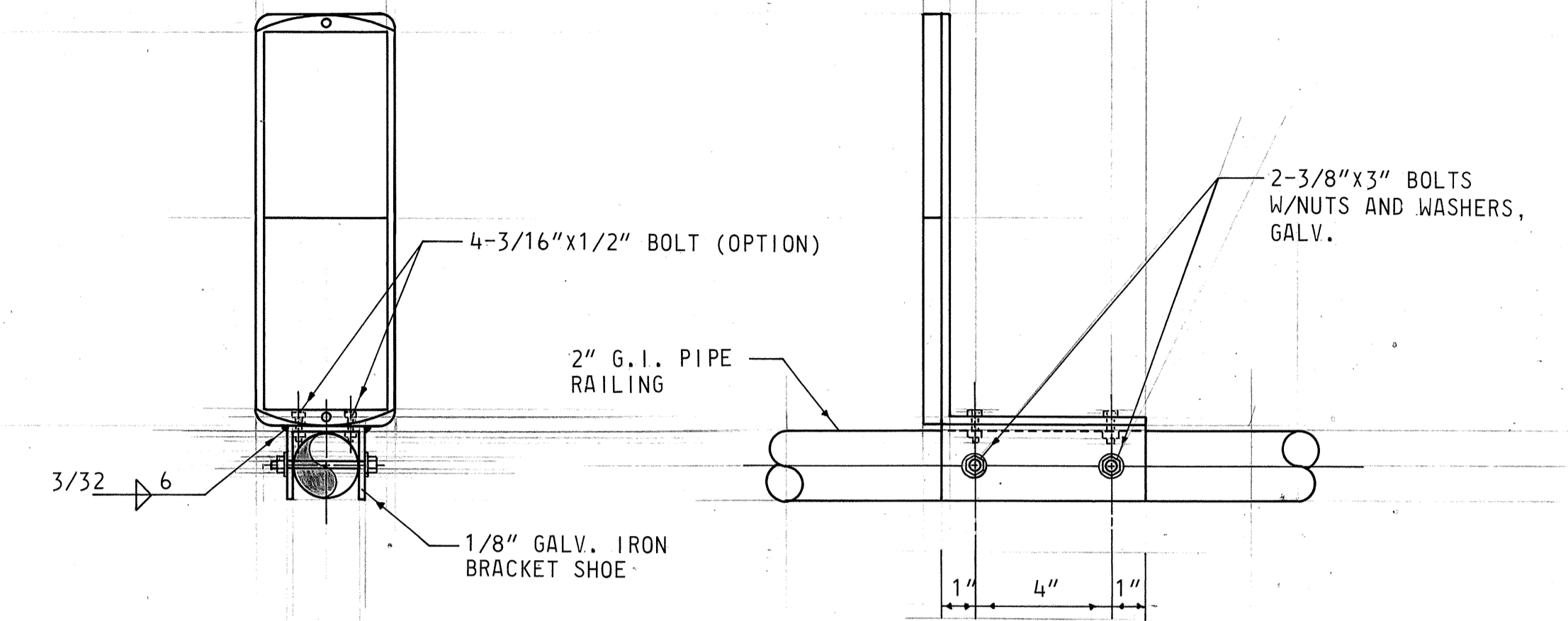


NOTE: DELENEATORS SHALL BE FASTENED TO BRACKETS WITH 1/4"x1/2" GALV. BOLTS WITH NUTS AND WASHERS.

FRONT ELEVATION SIDE ELEVATION
MOUNTED ON BARRIER (BRIDGE / RETAINING WALL PARAPET) WITH RAILING
 SCALE: 1 1/2" = 1'-0"



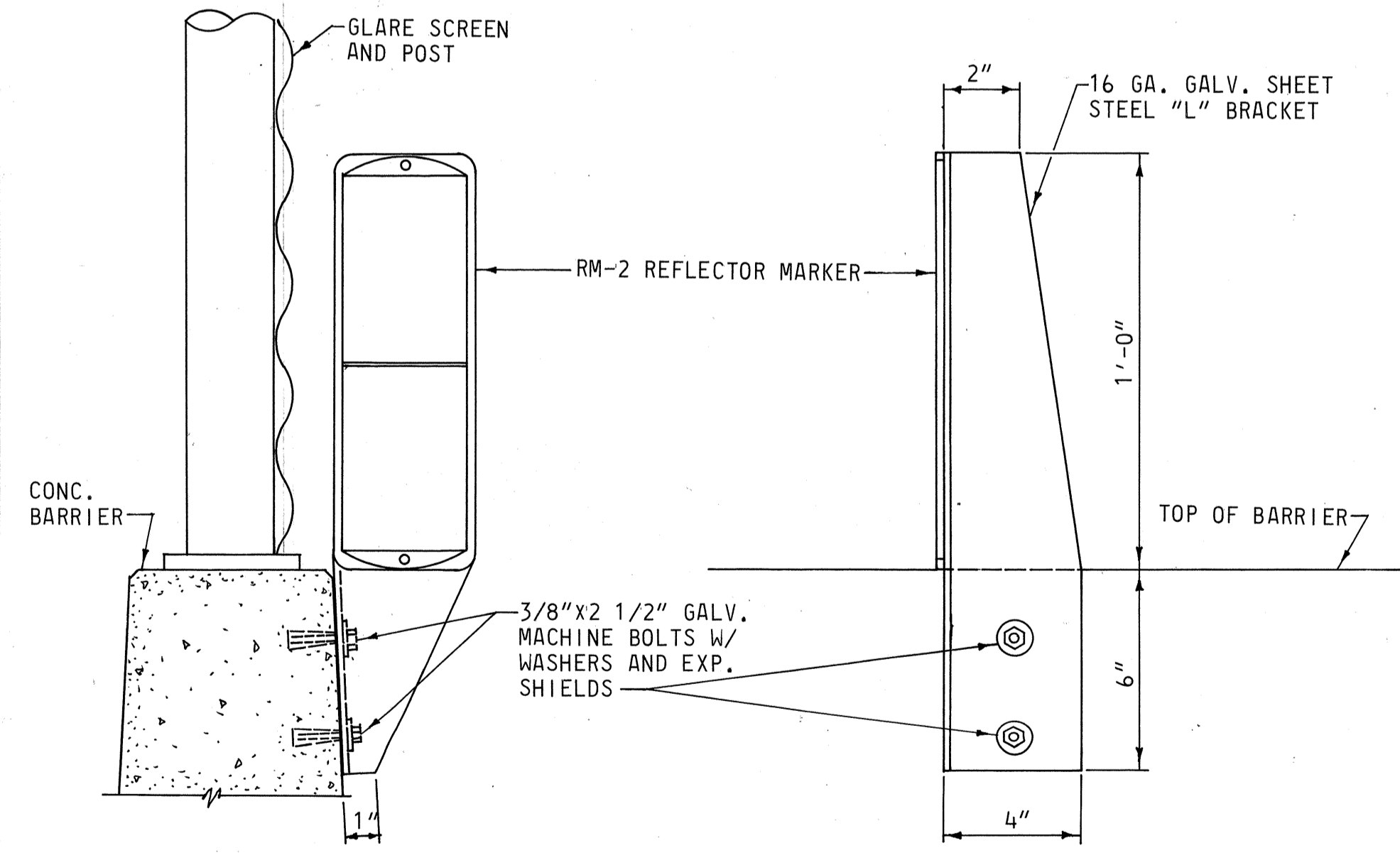
FRONT ELEVATION SIDE ELEVATION
MOUNTED ON BARRIER WITHOUT RAILING
 SCALE: 3" = 1'-0"



NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONNECTING THE "L" BRACKET AND SHOE W/ 3/16"x1/2" GALV. NUTS, BOLTS AND WASHERS AS SHOWN.

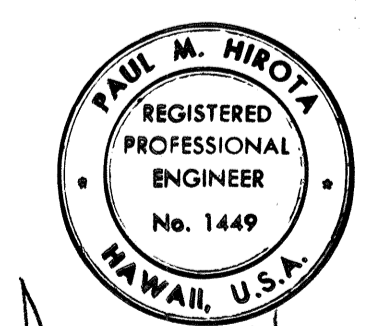
FRONT ELEVATION SIDE ELEVATION
MOUNTED ON PIPE RAILING
 SCALE: 3" = 1'-0"

DELINEATOR DETAILS
 SCALE AS SHOWN



FRONT ELEVATION SIDE ELEVATION
MOUNTED ON BARRIER WITH GLARE SCREEN
 SCALE: 3" = 1'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NO.	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

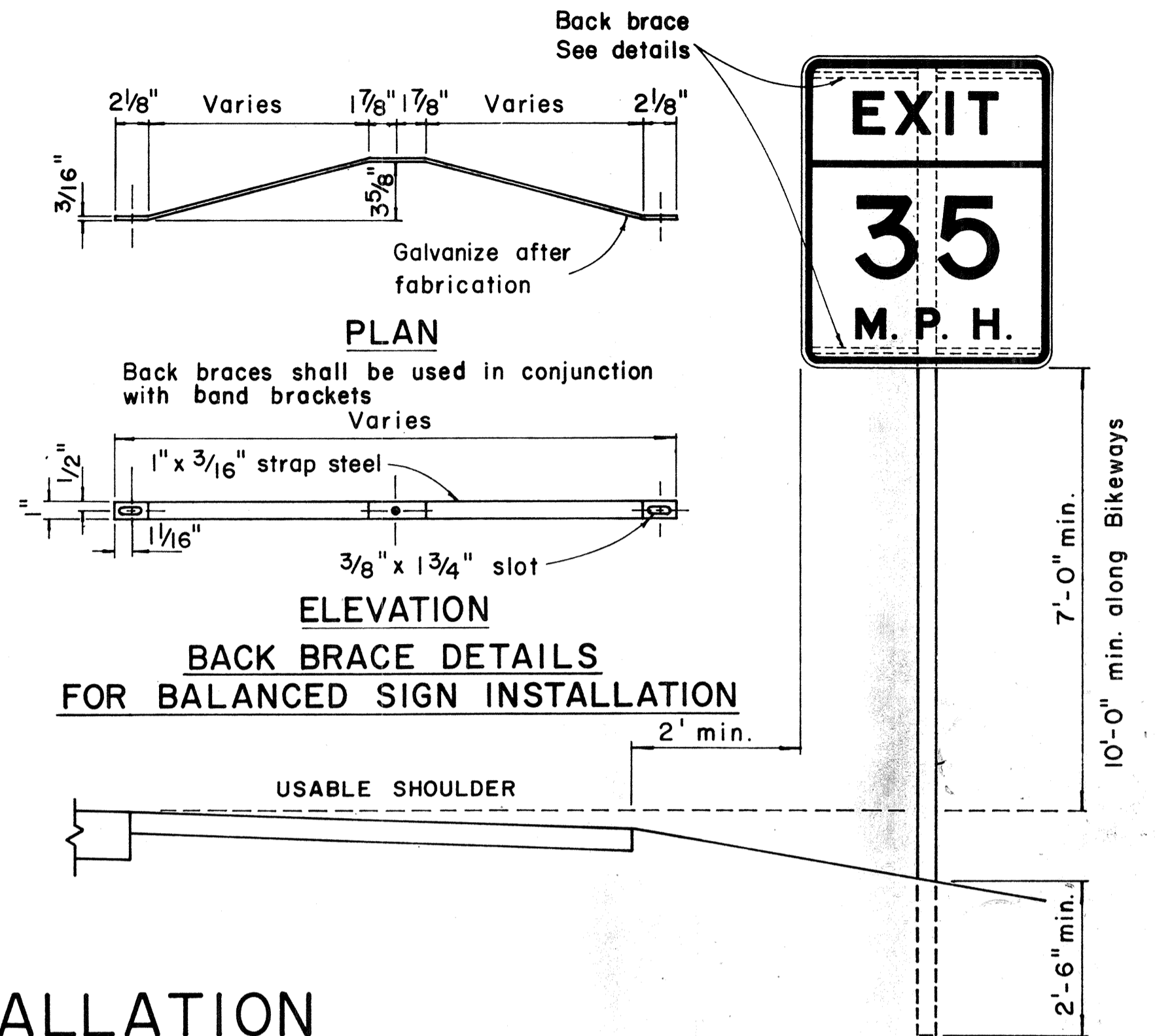
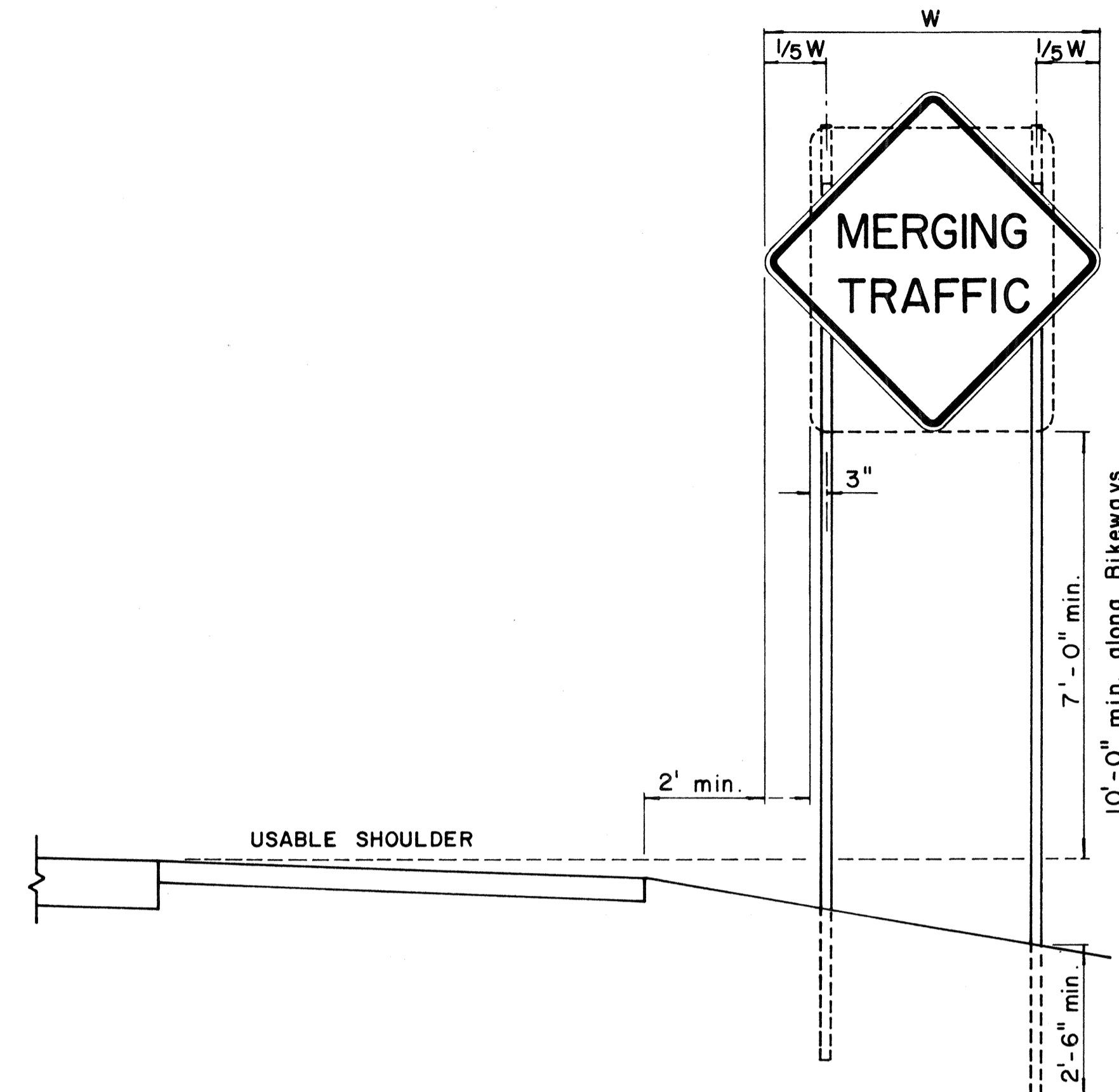
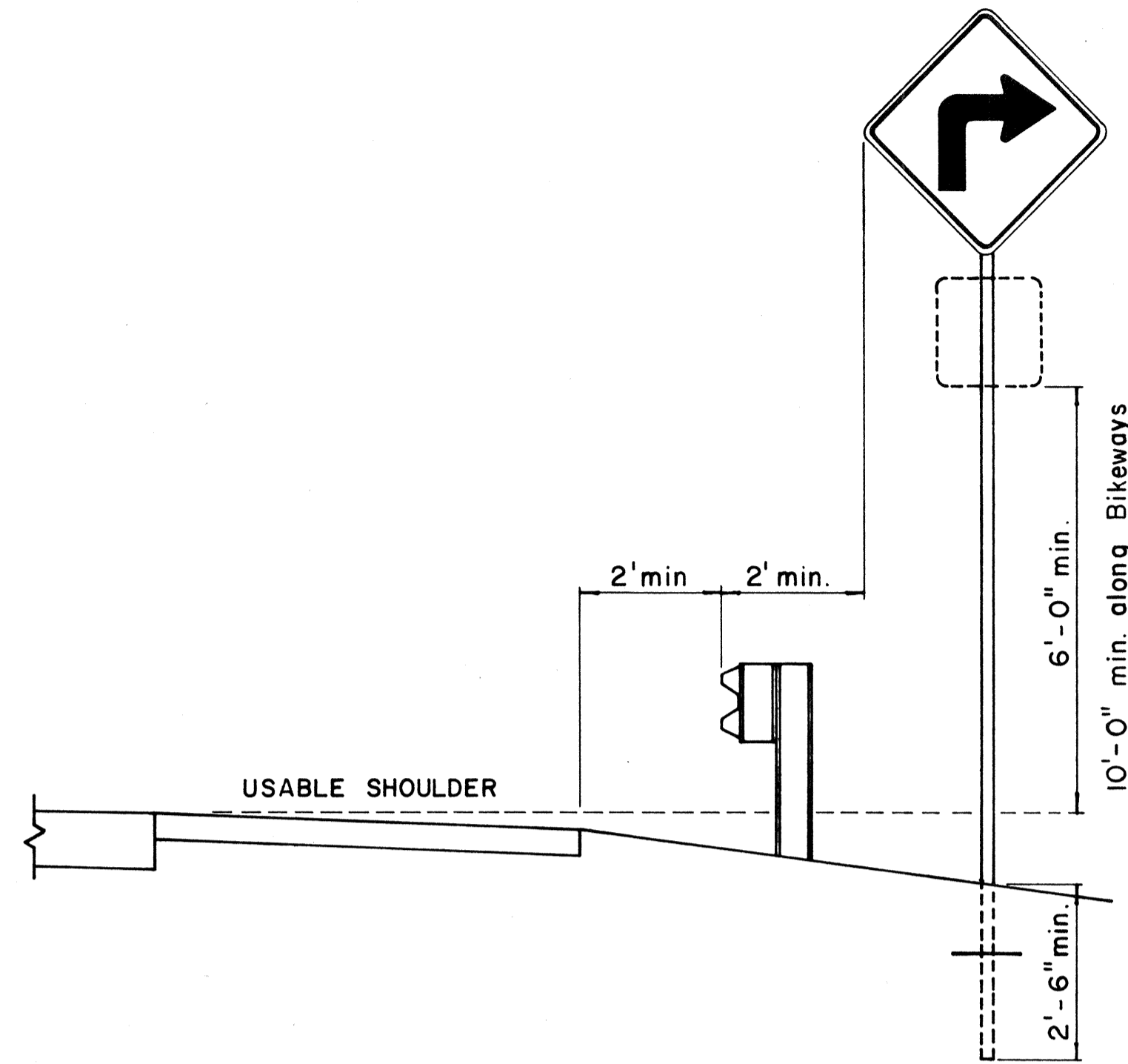
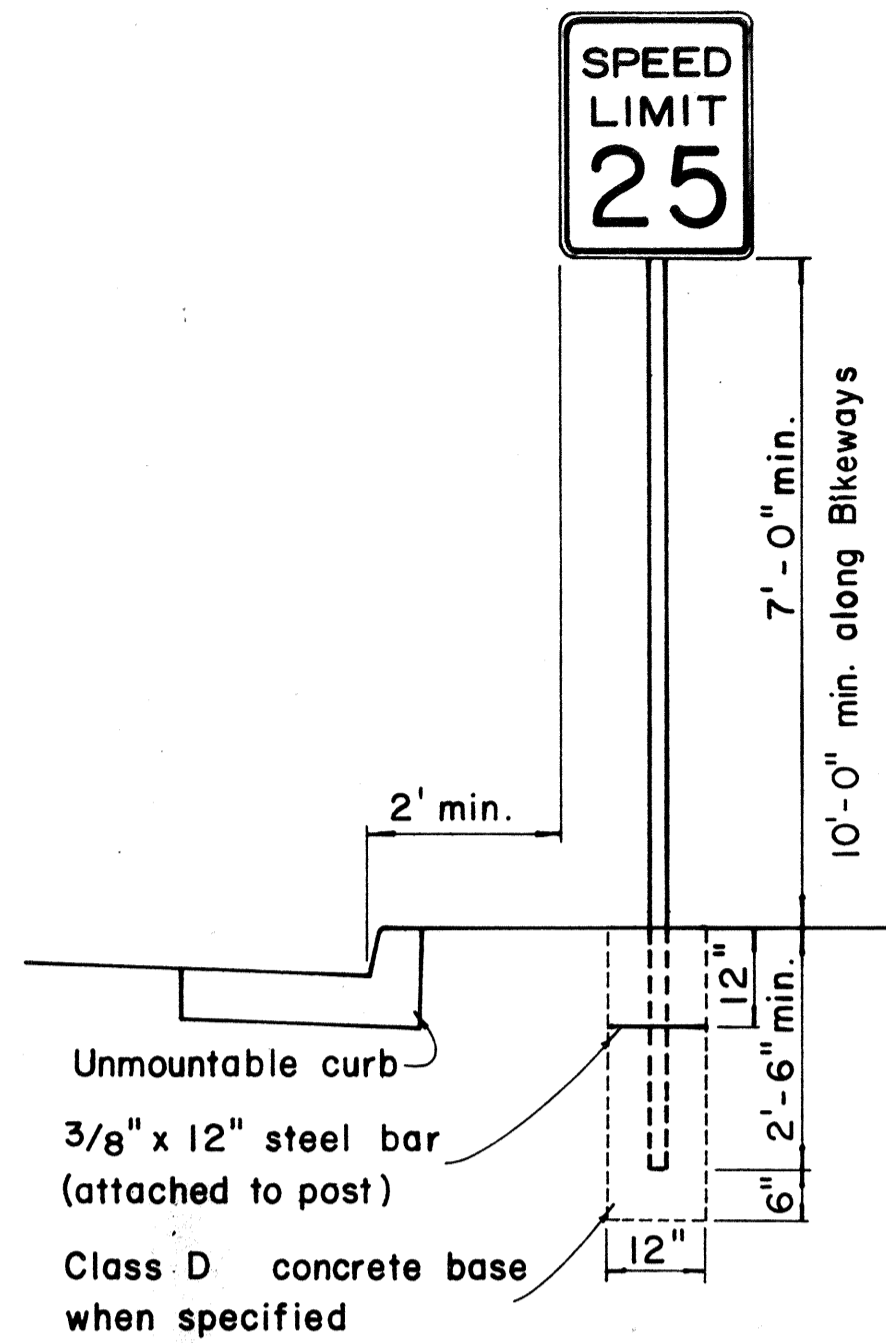
**NIMITZ SPUR
 MISCELLANEOUS
 ROADWAY DETAILS**

INTERSTATE ROUTE H-1
 PROJ. NO. I-HI-I(55):15

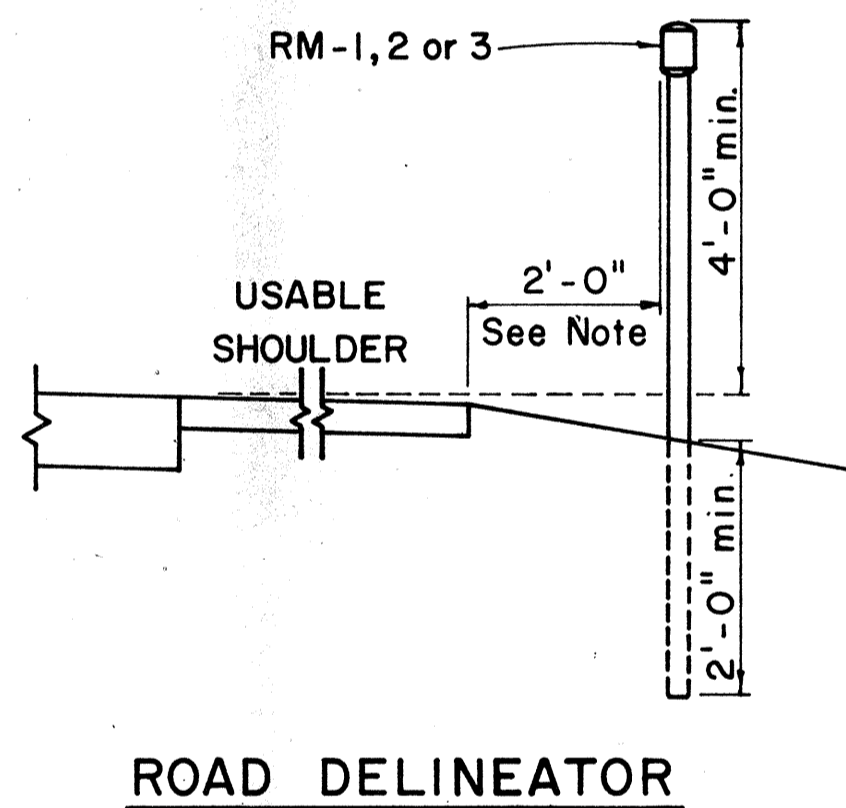
SCALE: 1" = 50' DATE: AUG 4 1976

SHEET No. 17 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				

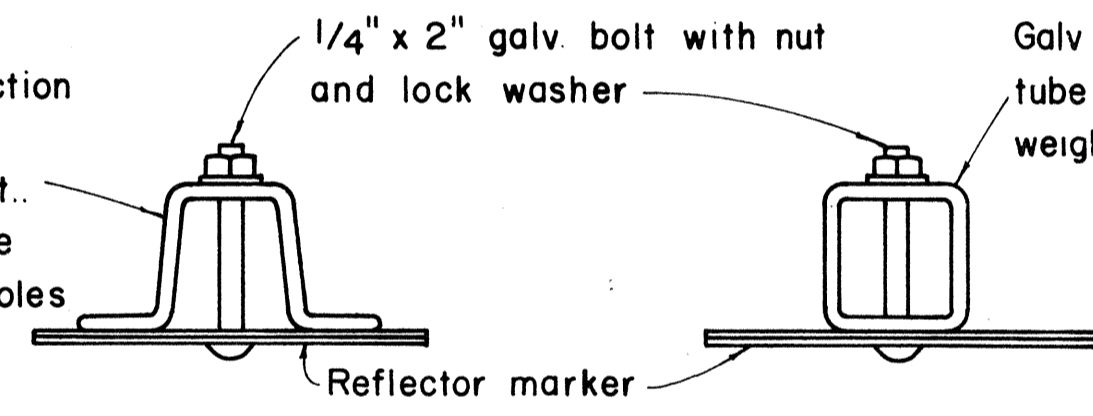


HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATION



Galv. flanged channel 1/8" x 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.

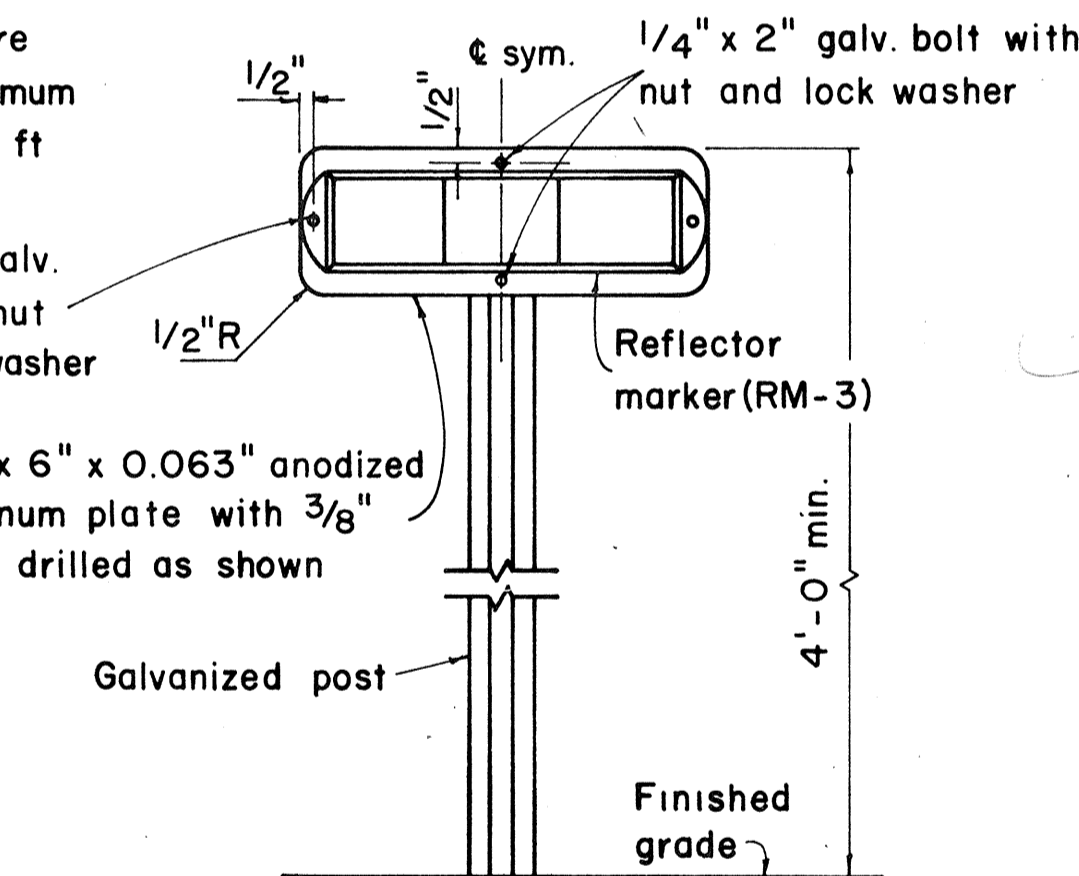
TYPICAL SECTION OF ROAD DELINEATOR



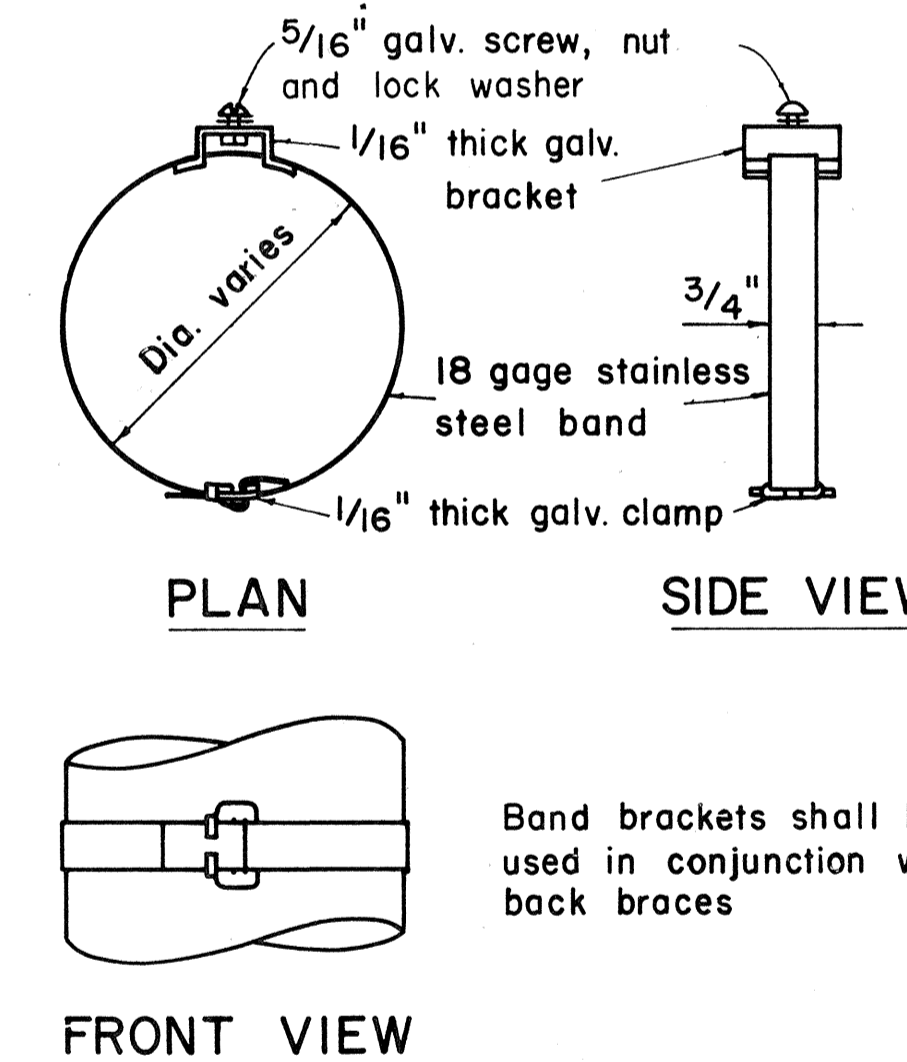
Galv 1 1/2" x 1 1/2" square tube post with a minimum weight of 1.7 lbs per ft

1/4" x 1/2" galv. bolt with nut and lock washer

1'-5" x 6" x 0.063" anodized aluminum plate with 3/8" holes drilled as shown



TYPICAL DETAIL
HORIZONTAL REFLECTOR MARKER
RM-3H



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.
- 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 1/2" 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:
Etschi Tanaka 12/29/69
TRAFFIC ENGINEER DATE

APPROVED:
Arthur J. J. J. 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1.	Revised Details.	H.C.	9-14-69

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR

STANDARD DETAILS

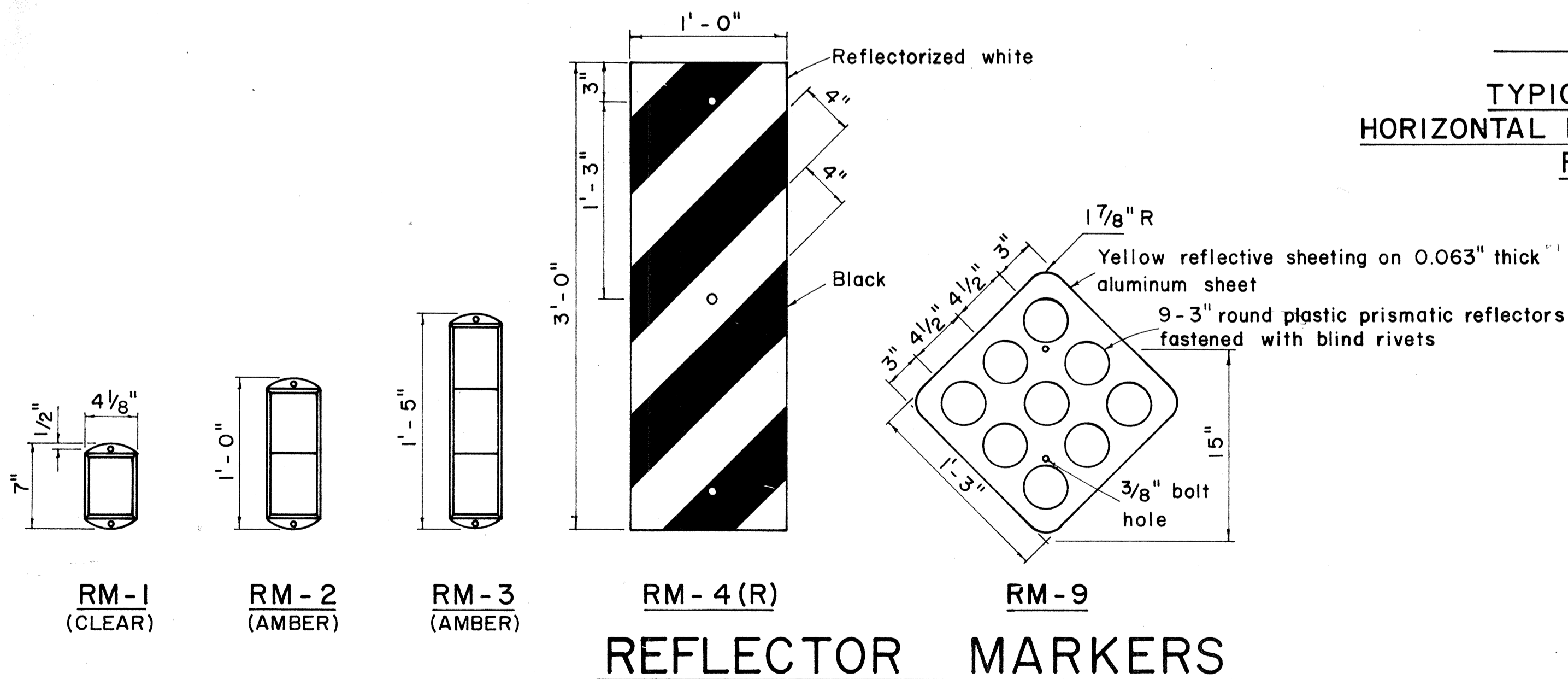
MISCELLANEOUS SIGN DETAILS

INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(99):15

Not to scale March, 1968

SHEET No. 16 OF 28 SHEETS DT 100

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

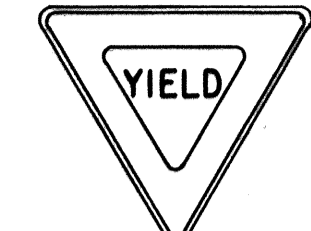


REFLECTOR MARKERS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	44-1(6)115	1977	112	350



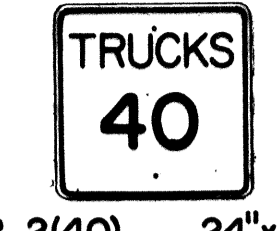
R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"



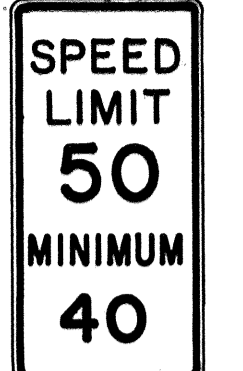
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



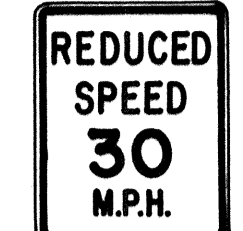
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



R2-2(40) 24" x 24"
R2-2(40)-A 48" x 48"



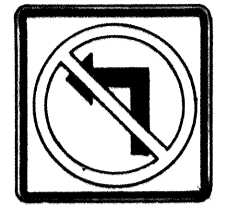
R2-4a(50/40) 24" x 48"
R2-4a(50/40)-A 48" x 96"



R2-5b(30) 24" x 30"
R2-5b(30)-A 48" x 60"



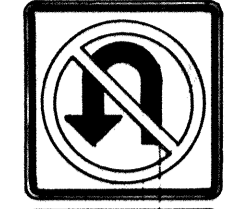
R3-1 24" x 24"
24" x 18"
R3-1-A 48" x 48"
48" x 36"



R3-2 24" x 24"
24" x 18"
R3-2-A 48" x 48"
48" x 36"



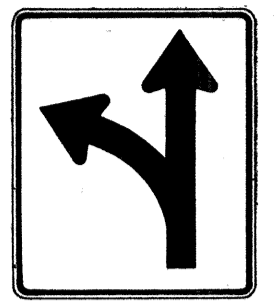
R3-3 24" x 24"
R3-3-A 48" x 48"



R3-4 24" x 24"
24" x 18"
R3-4-A 48" x 48"
48" x 36"



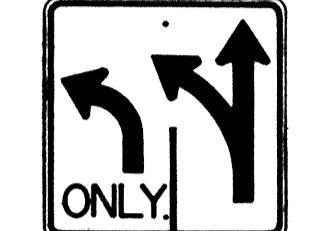
R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"



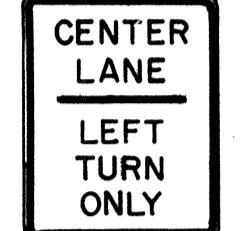
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



R3-7(R) 30" x 30"
R3-7(R)-A 48" x 48"



R3-8(L) 30" x 30"
R3-8(L)-A 36" x 36"
R3-8(L)-B 48" x 48"



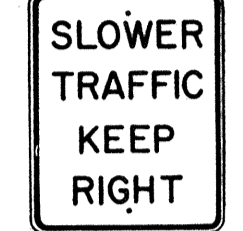
R3-9 24" x 30"



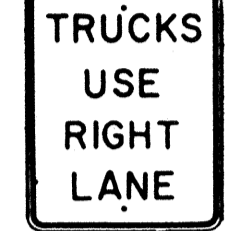
R4-1 24" x 30"



R4-2 24" x 30"



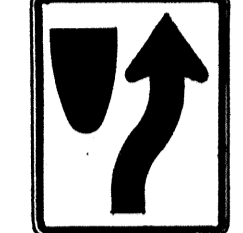
R4-3 24" x 30"
R4-3-A 48" x 60"



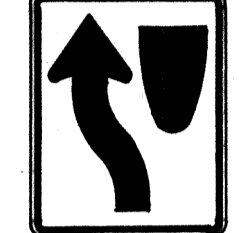
R4-5 24" x 30"



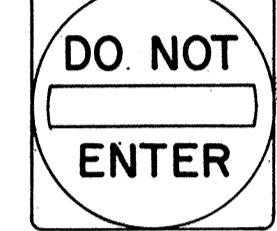
R4-6(500) 24" x 30"



R4-7 24" x 30"
24" x 18"



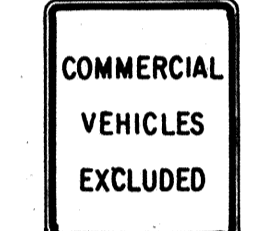
R4-8 24" x 30"
24" x 18"



R5-1 30" x 30"
R5-1-A 48" x 48"



R5-2 24" x 24"
24" x 18"



R5-4 24" x 30"



R5-6 24" x 24"
24" x 18"



R5-9 36" x 24"



R6-1(R) 36" x 12"



R6-2(R) 18" x 24"



R7-1 12" x 18"
R7-1-A 24" x 30"



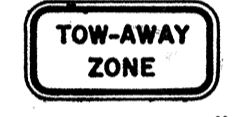
R7-4 12" x 18"
R7-4-A 24" x 30"



R7-107(R) 12" x 18"



R7-108 12" x 18"



R7-201 12" x 6"
R7-201-A 24" x 12"



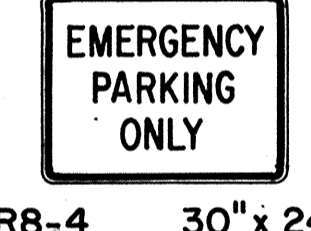
R8-1 24" x 30"



R8-2 24" x 30"



R8-3 24" x 30"



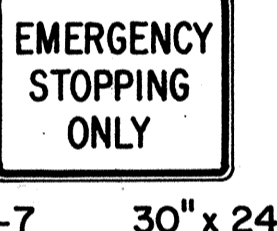
R8-4 30" x 24"
R8-4-A 48" x 36"



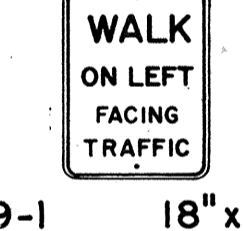
R8-5 24" x 30"



R8-6 24" x 30"



R8-7 30" x 24"
R8-7-A 48" x 36"



R9-1 18" x 24"



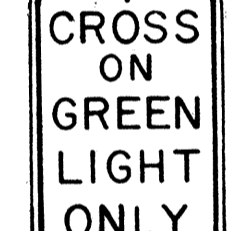
R9-2 12" x 18"



R9-3 12" x 18"



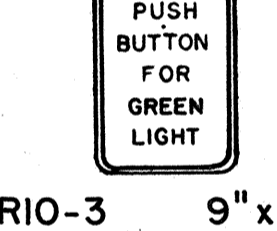
R9-4 18" x 24"



R10-1 12" x 18"



R10-2 12" x 18"



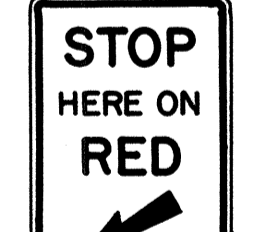
R10-3 9" x 12"



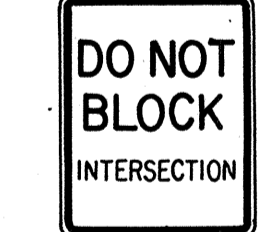
R10-4 9" x 12"



R10-5 24" x 30"



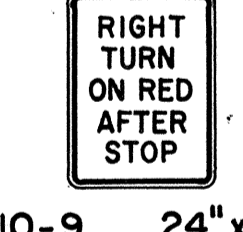
R10-6 24" x 36"



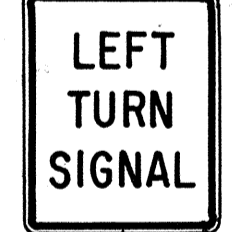
R10-7 24" x 30"



R10-8 24" x 30"



R10-9 24" x 30"



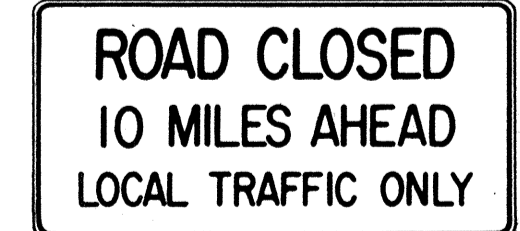
R10-10 24" x 30"



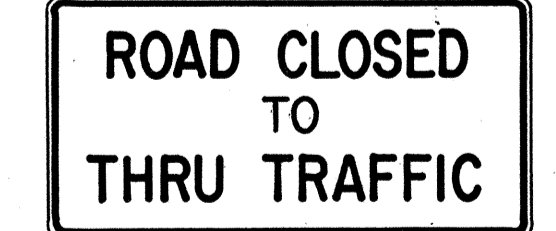
R11-1 24" x 30"



R11-2 48" x 30"



R11-3(10) 60" x 30"



R11-4 60" x 30"



R12-1(10) 24" x 30"

GENERAL NOTES

- 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.
- All regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.

APPROVAL RECOMMENDED:
Eiichi Tanaka
TRAFFIC ENGINEER 3/17/72
DATE

APPROVED:
Robert J. Davis
ASSISTANT CHIEF, ENGINEERING 3-20-72
DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1.	H.T.	10/14/74

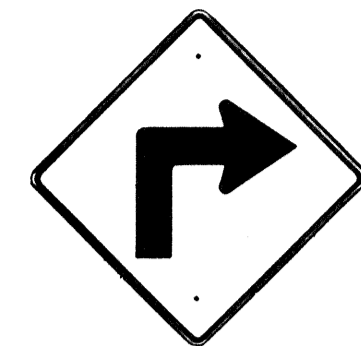
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
REGULATORY SIGNS

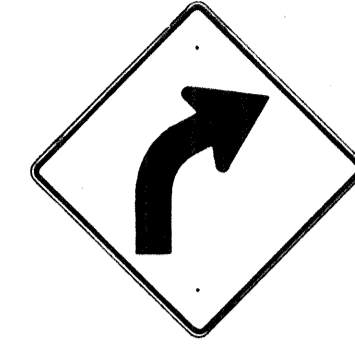
NOT TO SCALE
SHEET No. 10 OF 28 SHEETS DT 101

DATE _____
SURVEY PLOTTED BY _____
DRAWN BY _____
DESIGNED BY _____
QUANTITIES BY _____
CHECKED BY _____
NO. _____

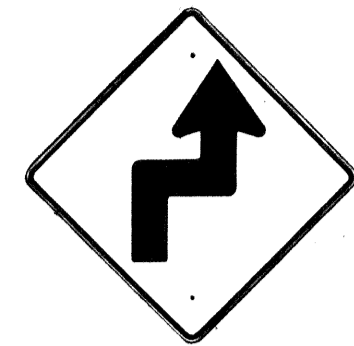
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII*	HAW.				



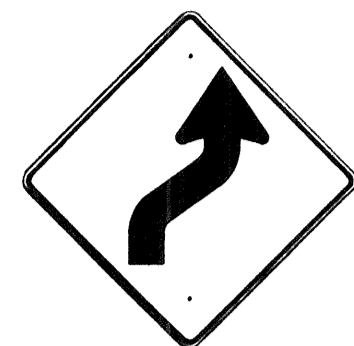
W1-1(R) 30"x30"
W1-1(R)-A 48"x48"



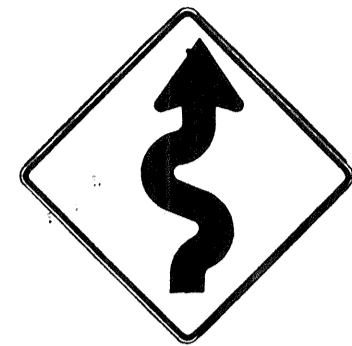
W1-2(R) 30"x30"
W1-2(R)-A 48"x48"



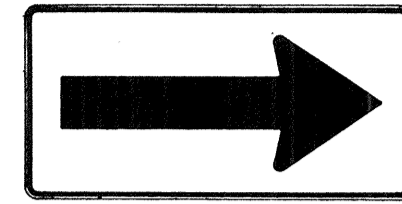
W1-3(R) 30"x30"
W1-3(R)-A 48"x48"



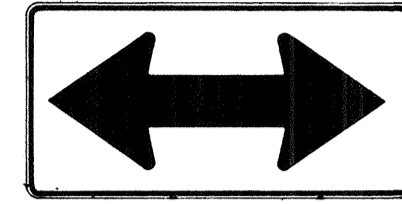
W1-4(R) 30"x30"
W1-4(R)-A 48"x48"



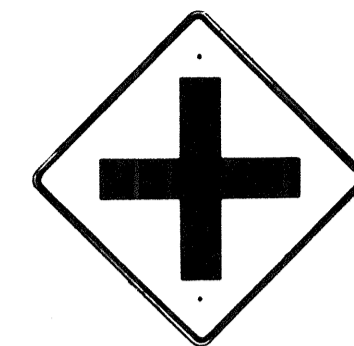
W1-5(R) 30"x30"
W1-5(R)-A 48"x48"



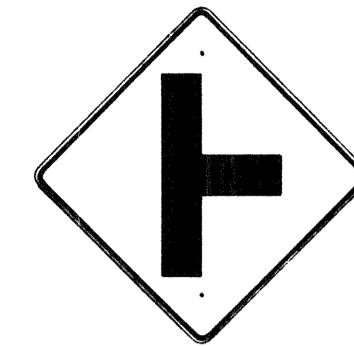
W1-6 48"x24"



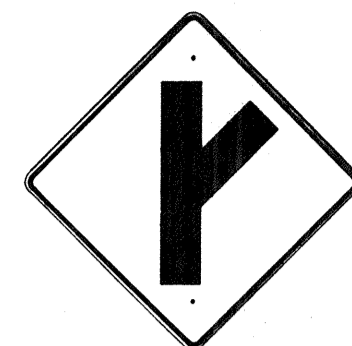
W1-7 48"x24"



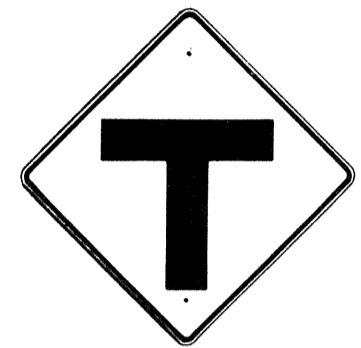
W2-1 30"x30"
W2-1-A 48"x48"



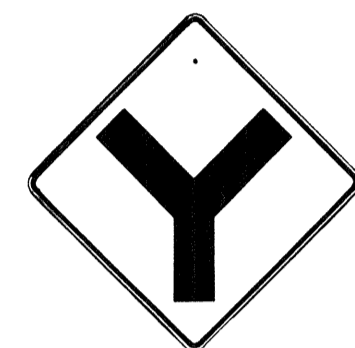
W2-2 30"x30"
W2-2-A 48"x48"



W2-3(R) 30"x30"
W2-3(R)-A 48"x48"



W2-4 30"x30"
W2-4-A 48"x48"



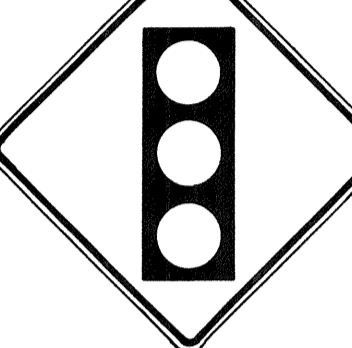
W2-5 30"x30"
W2-5-A 48"x48"



W3-1 30"x30"
W3-1-A 36"x36"



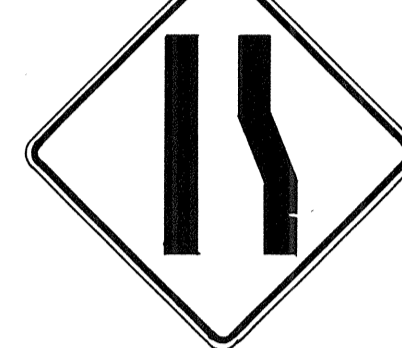
W3-2 30"x30"
W3-2-A 36"x36"



SIGNAL AHEAD
W3-3 36"x36"
24"x18"



MERGE
W4-1(R) 30"x30"
24"x18"
W4-1(R)-A 48"x48"
24"x18"



W4-2(R) 36"x36"
W4-2(R)-A 48"x48"



W5-1 36"x36"



W5-2 30"x30"
W5-2-A 36"x36"



W5-3 36"x36"



DIVIDED HIGHWAY
W6-1 36"x36"
24"x18"



DIVIDED HIGHWAY ENDS
W6-2 36"x36"
24"x18"



TWO WAY TRAFFIC
W6-3 30"x30"
24"x18"
W6-3-A 36"x36"
24"x18"
W6-3-B 48"x48"
24"x18"



HILL
W7-1 30"x30"
24"x18"
W7-1-A 36"x36"
24"x18"



USE LOW GEAR
W7-2 24"x18"



W8-1 30"x30"
W8-1-A 36"x36"



W8-2 30"x30"
W8-2-A 36"x36"



W8-3 30"x30"
W8-3-A 36"x36"



W8-4 30"x30"
W8-4-A 36"x36"



SLIPPERY WHEN WET
W8-5 30"x30"
24"x18"
W8-5-A 36"x36"
24"x18"



RIGHT LANE ENDS
W9-1(R) 30"x30"
W9-1(R)-A 36"x36"
W9-1(R)-B 48"x48"



LANE ENDS MERGE LEFT
W9-2(L) 36"x36"
W9-2(L)-A 48"x48"



W10-1 36" Diameter



BIKE XING
W11-1 30"x30"
24"x18"
W11-1-A 36"x36"
24"x18"



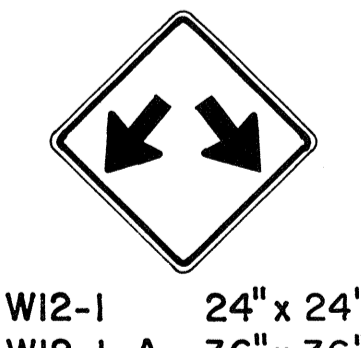
PED XING
W11-2 30"x30"
24"x18"
W11-2-A 36"x36"
24"x18"



CATTLE XING
W11-4 30"x30"
24"x18"
W11-4-A 36"x36"
24"x18"



FARM MACHINERY
W11-5 30"x30"
24"x18"
W11-5-A 36"x36"
24"x18"



W12-1 24"x24"
W12-1-A 36"x36"
W12-1-B 48"x48"



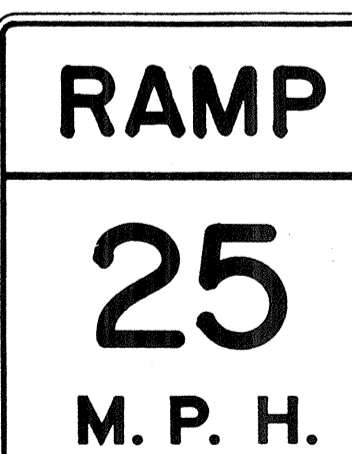
LOW CLEARANCE
W12-2(12'-6") 36"x36"
24"x18"



W13-1(25) 18"x18"
W13-1(25)-A 24"x24"



W13-2(25) 48"x60"



W13-3(25) 48"x60"



W14-1 30"x30"



W14-3 36"x48"x48"

GENERAL NOTES

- 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.
- All warning signs shall be reflectorized unless otherwise specified.
- All warning signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized.

APPROVAL RECOMMENDED:
Eishi Tanaka
TRAFFIC ENGINEER
DATE 3/17/12

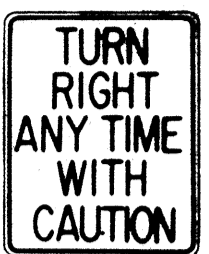
APPROVED:
Shirley Salsid
ASSISTANT CHIEF, ENGINEERING
DATE 3-20-12

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/12
2	Revised General Note 1	H.T.	10/16/11
3	Revised General Note 5	M.H.	9-16-75
4	Revised General Note 5	H.T.	9-14-76

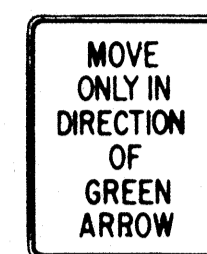
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR
STANDARD DETAILS
WARNING SIGNS
INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(99):15
NOT TO SCALE
SHEET No. 20 OF 28 SHEETS DT 102

DATE
DESIGNED BY
CHECKED BY
NO.

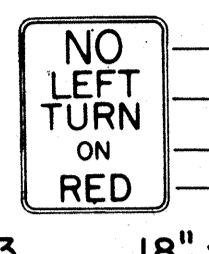
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-109)15	1977	114	350



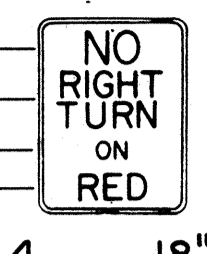
R16-1 24" x 30"




R16-2 24" x 30"



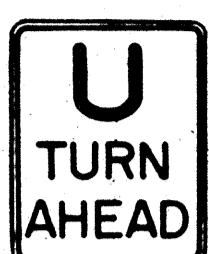
R16-3 18" x 24"




R16-4 18" x 24"



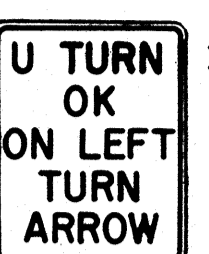
R16-5 36" x 42"




R16-6 24" x 30"




R16-7 24" x 30"




R16-8 24" x 30"




W15-1 24" x 24"




W15-2 24" x 24"



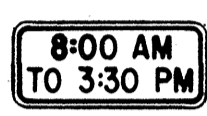
S1-1 36" x 36"




S2-1 36" x 36"



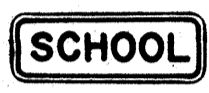
S3-1 30" x 30"




S4-1 24" x 10"



S4-2 24" x 10"



S4-3 24" x 8"



S4-4 24" x 10"

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 regulatory and warning signs shall be reflectorized unless otherwise specified.
3. All regulatory and 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.

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
NO.	

APPROVAL RECOMMENDED:
Eusiki Tanaka 3/17/72
 TRAFFIC ENGINEER DATE

APPROVED:
Shigeru Zatsich 2-20-12
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 103 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1	H.T.	10/16/74

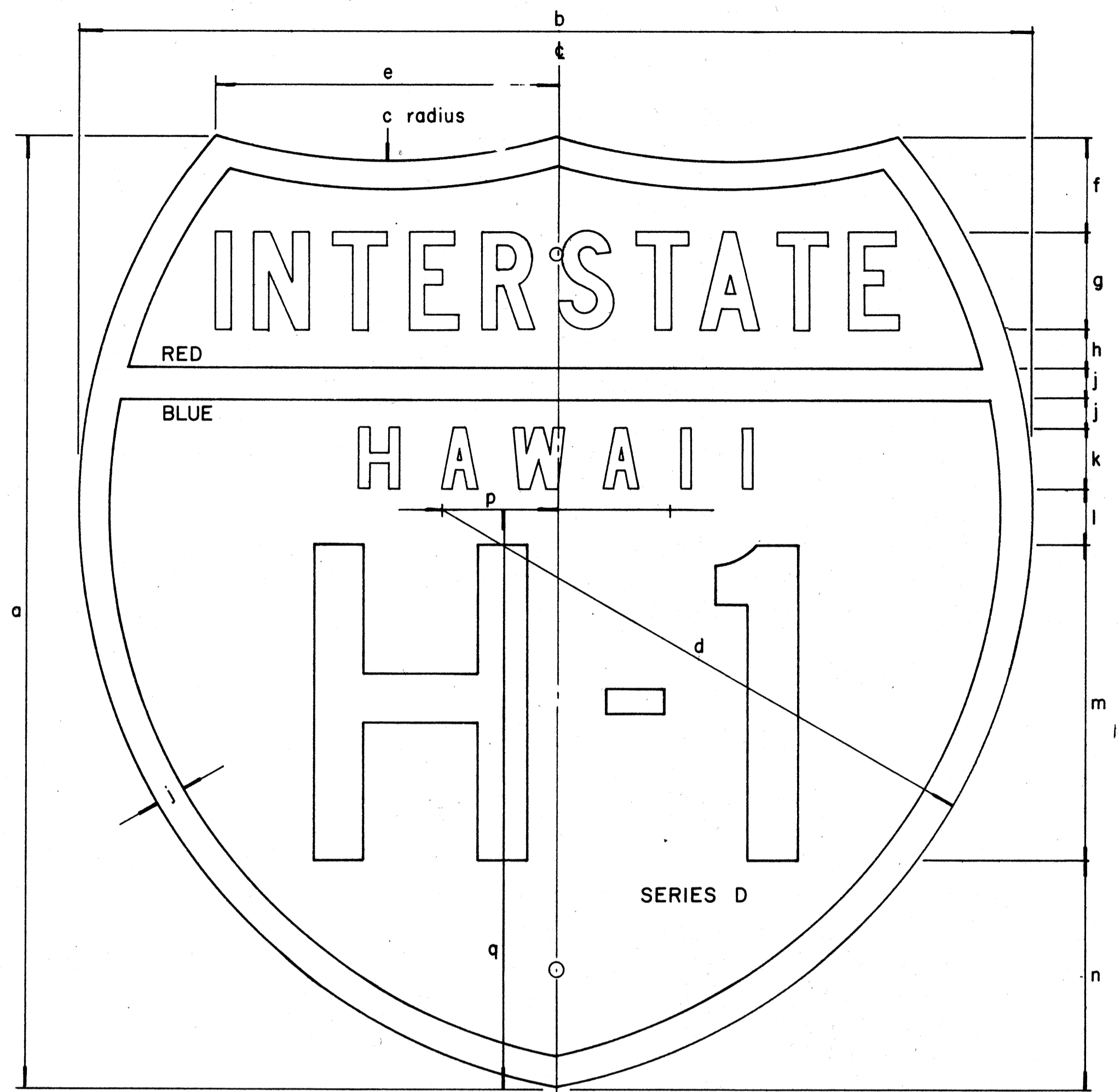
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 NIMITZ SPUR

STANDARD DETAILS

**MISCELLANEOUS
 REGULATORY & WARNING SIGNS**

INTERSTATE ROUTE H-1
 PROJ. NO. I-HI-1(99):15
 NOT TO SCALE

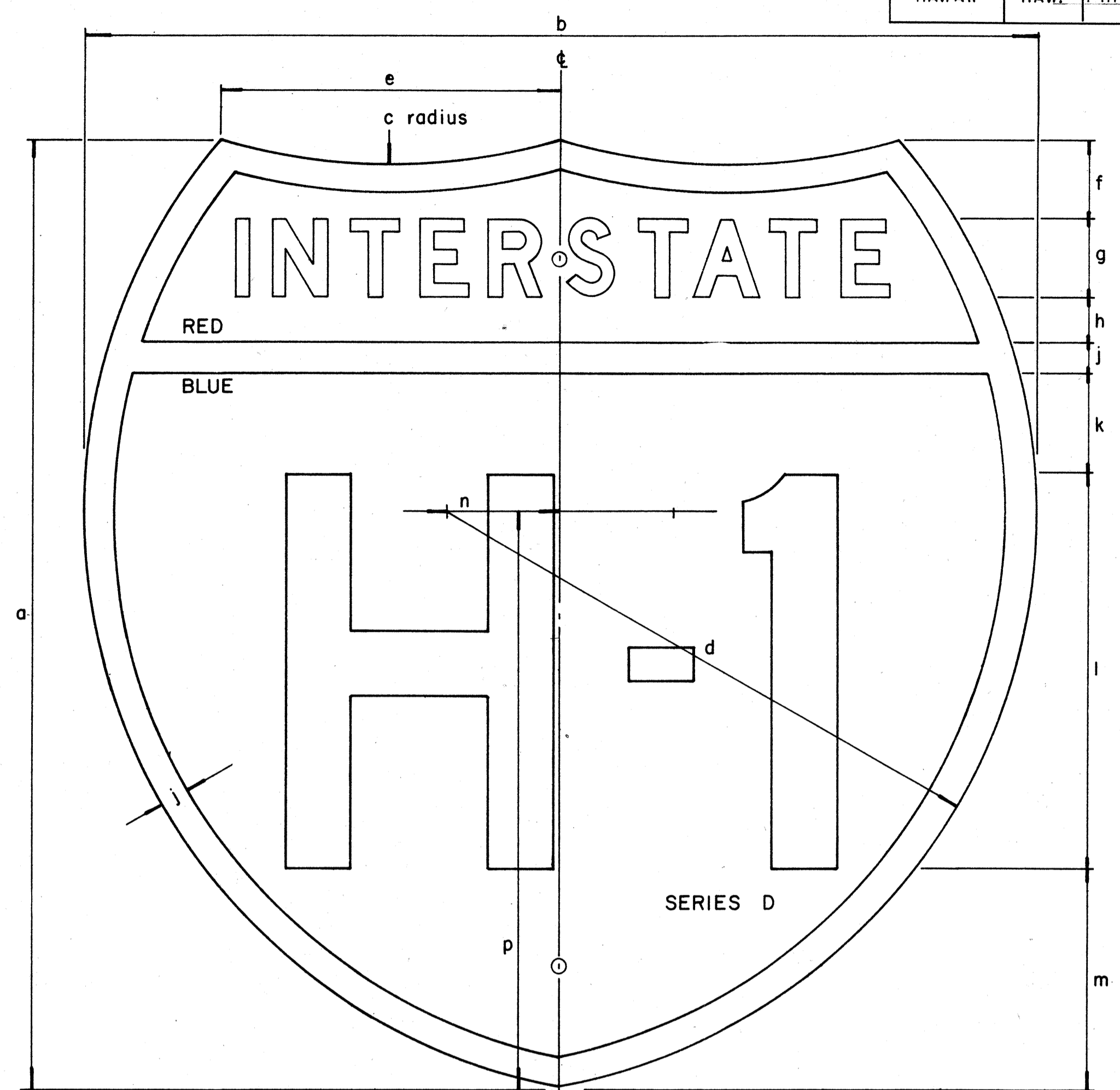
SHEET No. 21 OF 28 SHEETS DT 103



INTERSTATE ROUTE MARKER
IM-1()

INTERSTATE SHIELDS - INDEPENDENT USE

()	a	b	c	d	e	f	g	h	j	k	l	m	n	p	q
1	18	21	13 7/8	12 9/16	9 3/16	12 5/32	1 7/8 C	3/4	9/16	1 1/8 D	1 1/32	6	4 5/16	2 1/16	12 7/16
2	24	24	15	14 7/8	8 5/8	2 3/8	2 1/2 C	1	3/4	1 1/2 D	1 3/8	8	5 3/4	2 7/8	14 5/8
3	36	36	22 1/2	22 5/16	12 15/16	3 9/16	3 3/4 C	1 1/2	1 1/8	2 1/4 D	2 1/16	12	8 5/8	4 5/16	21 15/16



INTERSTATE ROUTE MARKER
IM-2()

INTERSTATE SHIELDS ON GUIDE SIGNS

()	a	b	c	d	e	f	g	h	j	k	l	m	n	p
2	24	24	15	14 7/8	8 5/8	2	2 D	1 3/16	3/4	2 9/16	10	5 1/2	2 7/8	14 5/8
3	36	36	22 1/2	22 5/16	12 15/16	3 7/16	3 C	1 5/16	1 1/8	3 1/8	15	9	4 5/16	21 15/16
4	48	48	30	29 3/4	17 1/4	4 3/4	5 C	2	1 1/2	4	18	12 3/4	5 3/4	29 1/4

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
CHECKED BY

GENERAL NOTES

- Marker details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, "Standard Alphabets for Highway Signs," 1966, and "Standard Highway Signs," 1972, and as amended.
- All markers shall be reflectorized unless otherwise specified.
- All markers shall have 3/8" bolt holes drilled at appropriate locations unless otherwise specified.
- The interstate Route Marker shall be a cut-out shield, in a red, white and blue design as shown on the plans.

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

APPROVED:
John S. ...
ASSISTANT CHIEF, ENGINEERING
12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised General Notes	H.R.	10/16/74

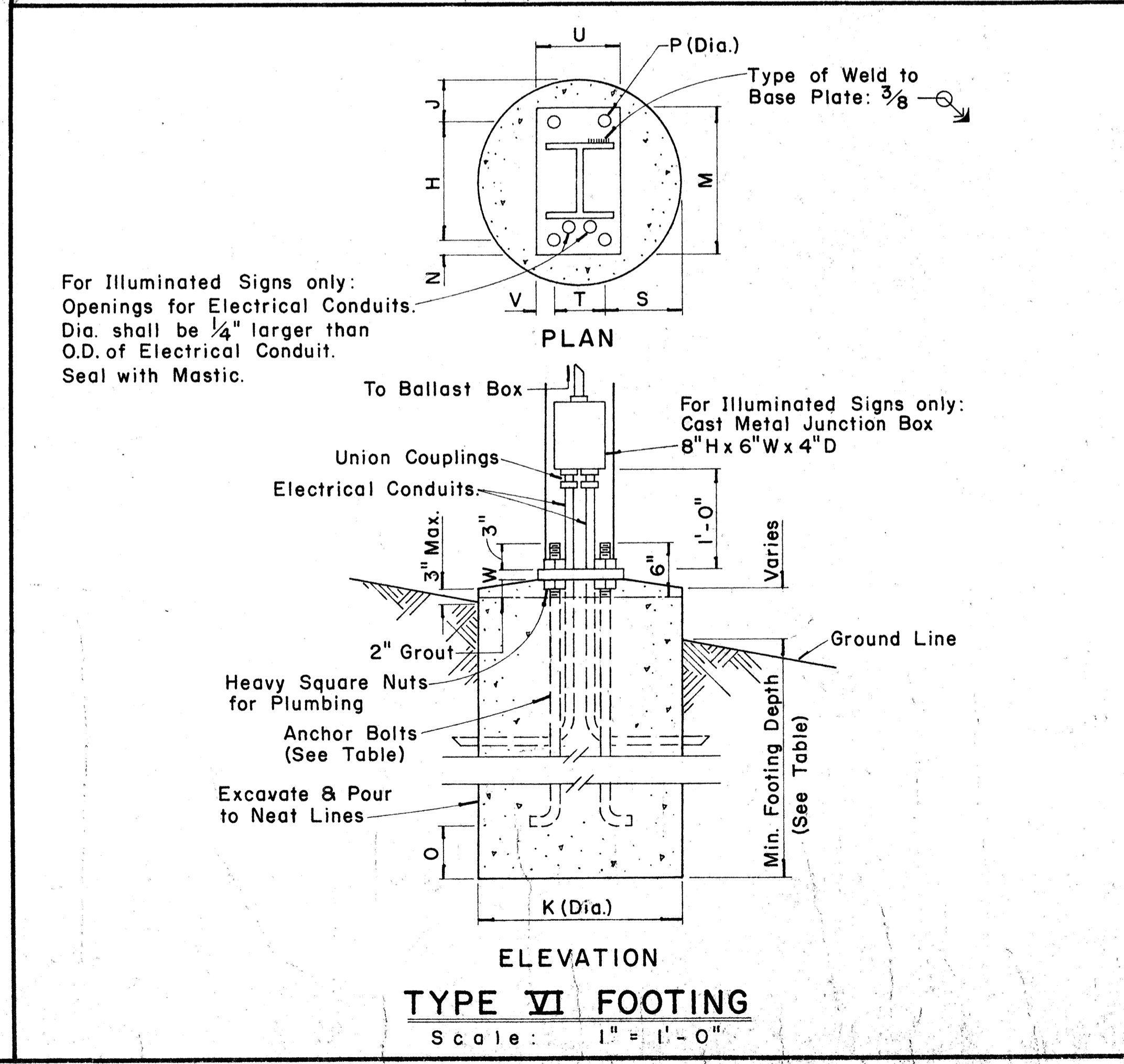
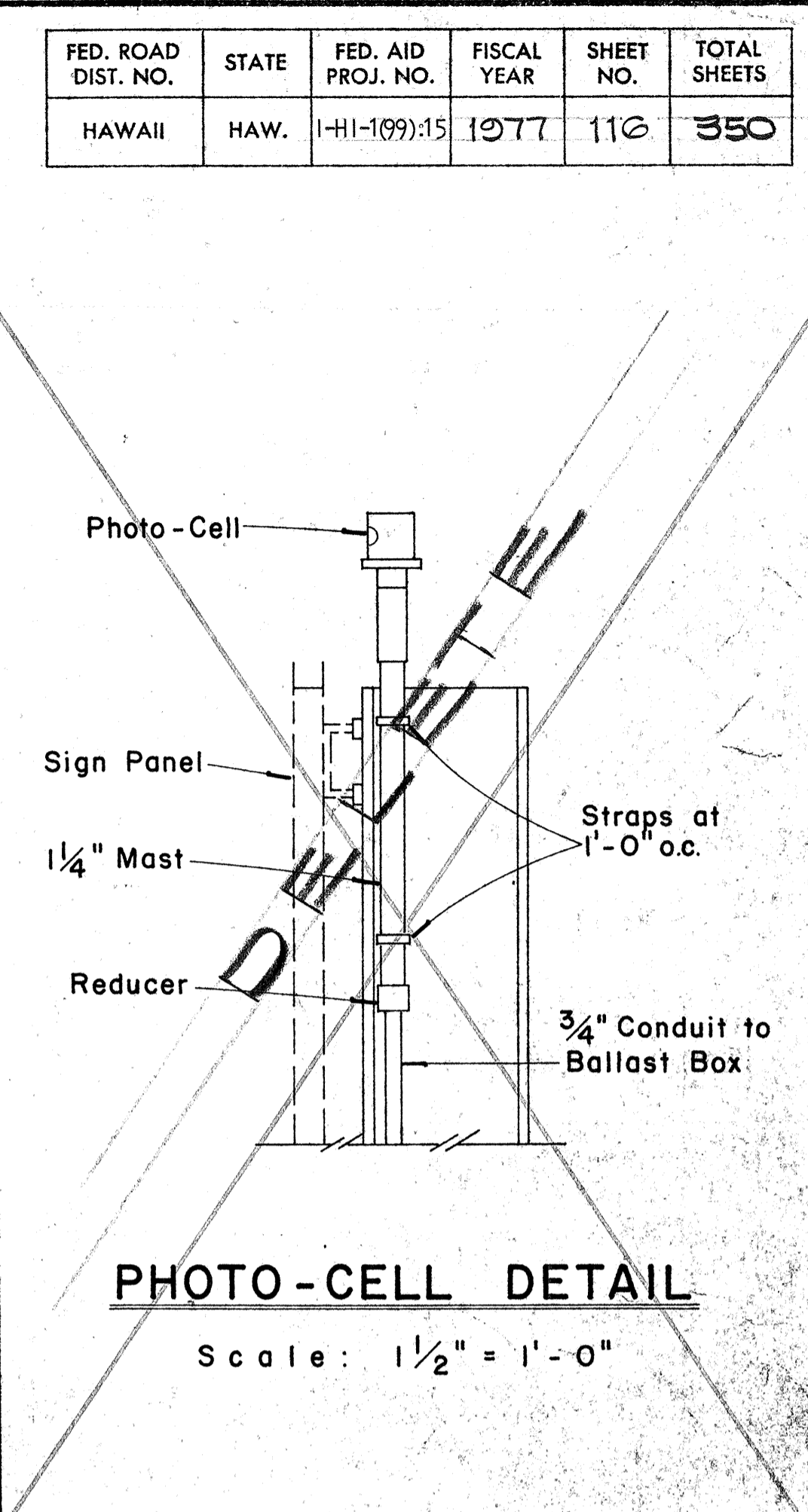
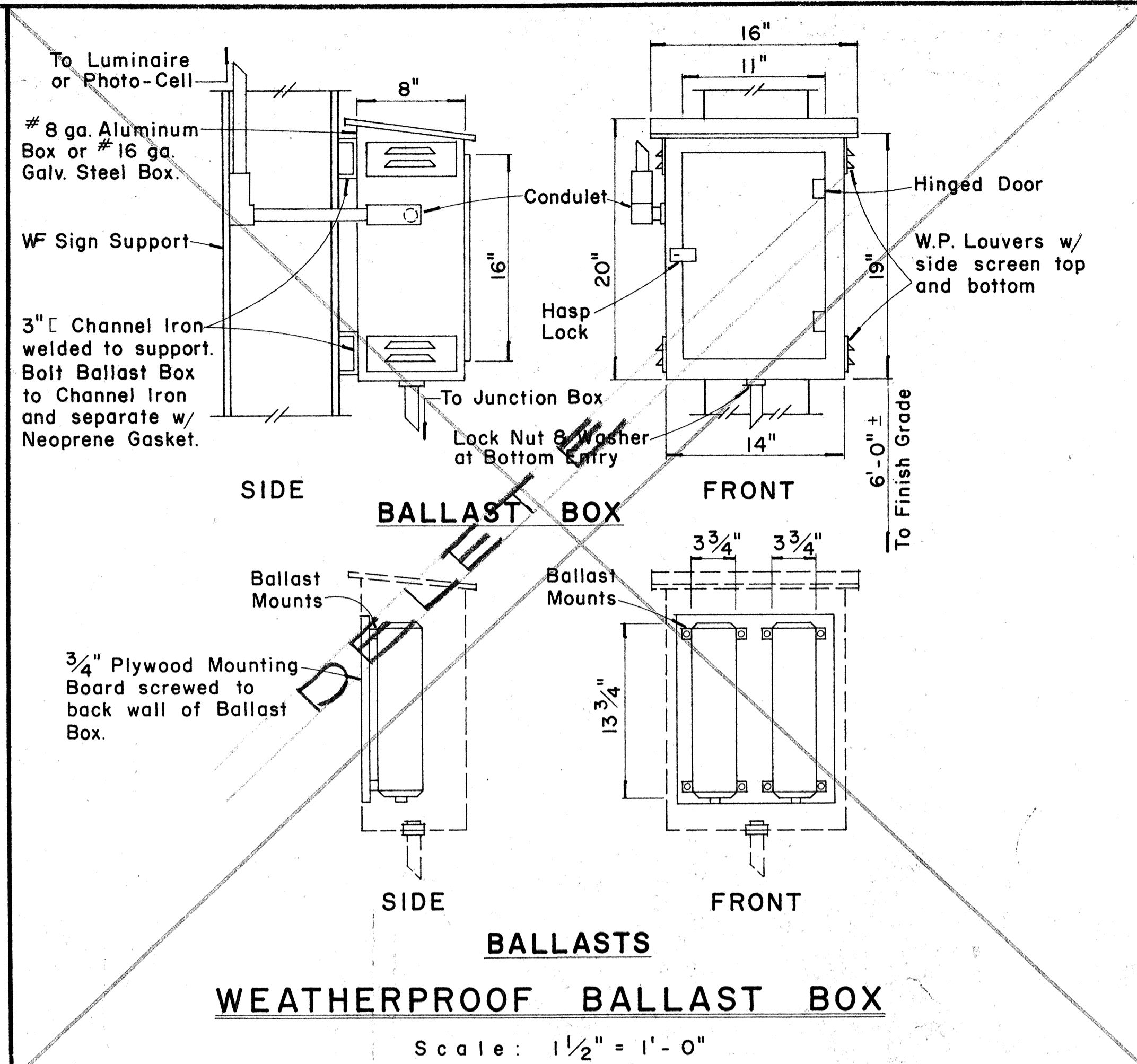
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR

STANDARD DETAILS
INTERSTATE ROUTE MARKERS

INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(99): 15

* 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 4 1/2 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 J10	50 sq. ft.	14'	14"	5"	24"	17 1/4"	15 3/8"	6"	1 1/4"	9"	6"	10"	2"	1"	1 1/8" Ø	4 1/2'	4 1/2'
8 WF24	90 sq. ft.	21'															5'
8 WF35	190 sq. ft.	15'	16 1/2"	6 3/4"	30"	20"	13 3/4"	6"	1 3/8"	11 3/4"	6 1/2"	10"	1 3/4"	1"	1 1/4" Ø	6'	7'
10 WF45	190 sq. ft.	25'															
10 WF45	200 sq. ft.	25'															
12 WF50	230 sq. ft.	25'															
12 WF50	250 sq. ft.	23'															

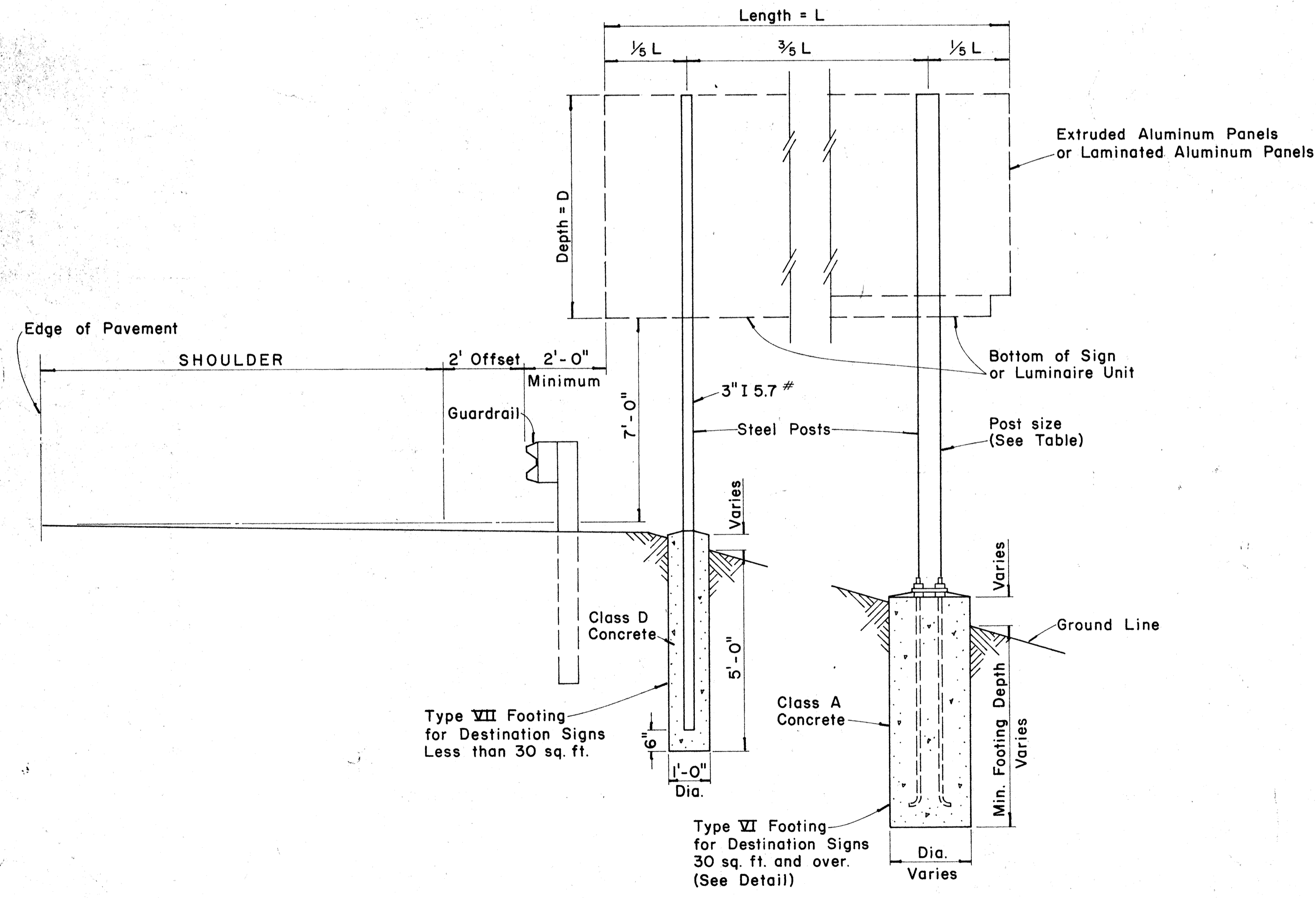


APPROVAL RECOMMENDED:
Eishi Tanaka 12/29/67
 TRAFFIC ENGINEER DATE

APPROVED:
John S. Salas 12-30-67
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

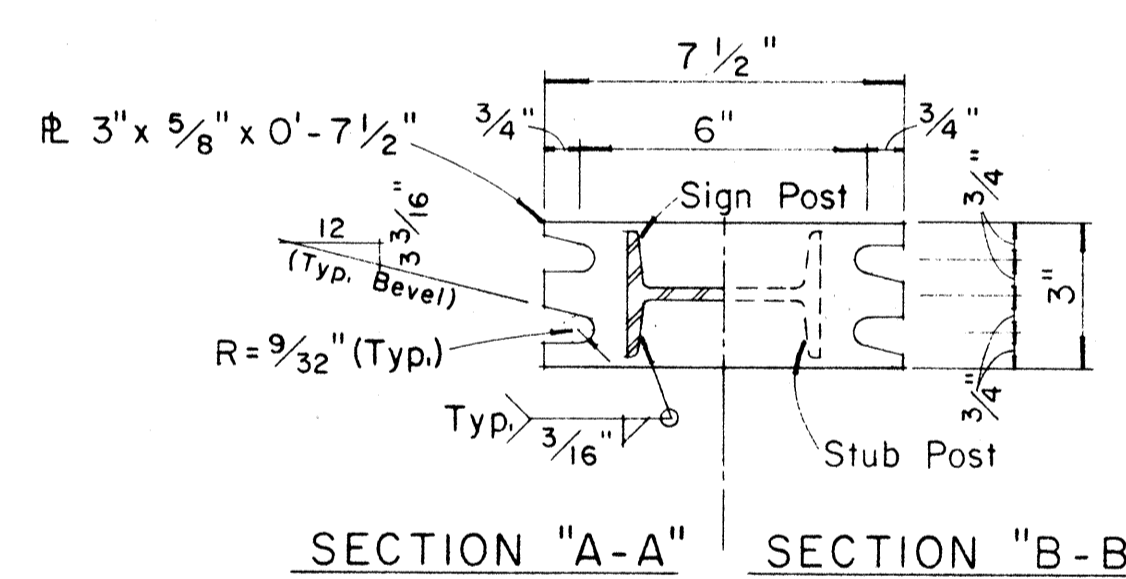
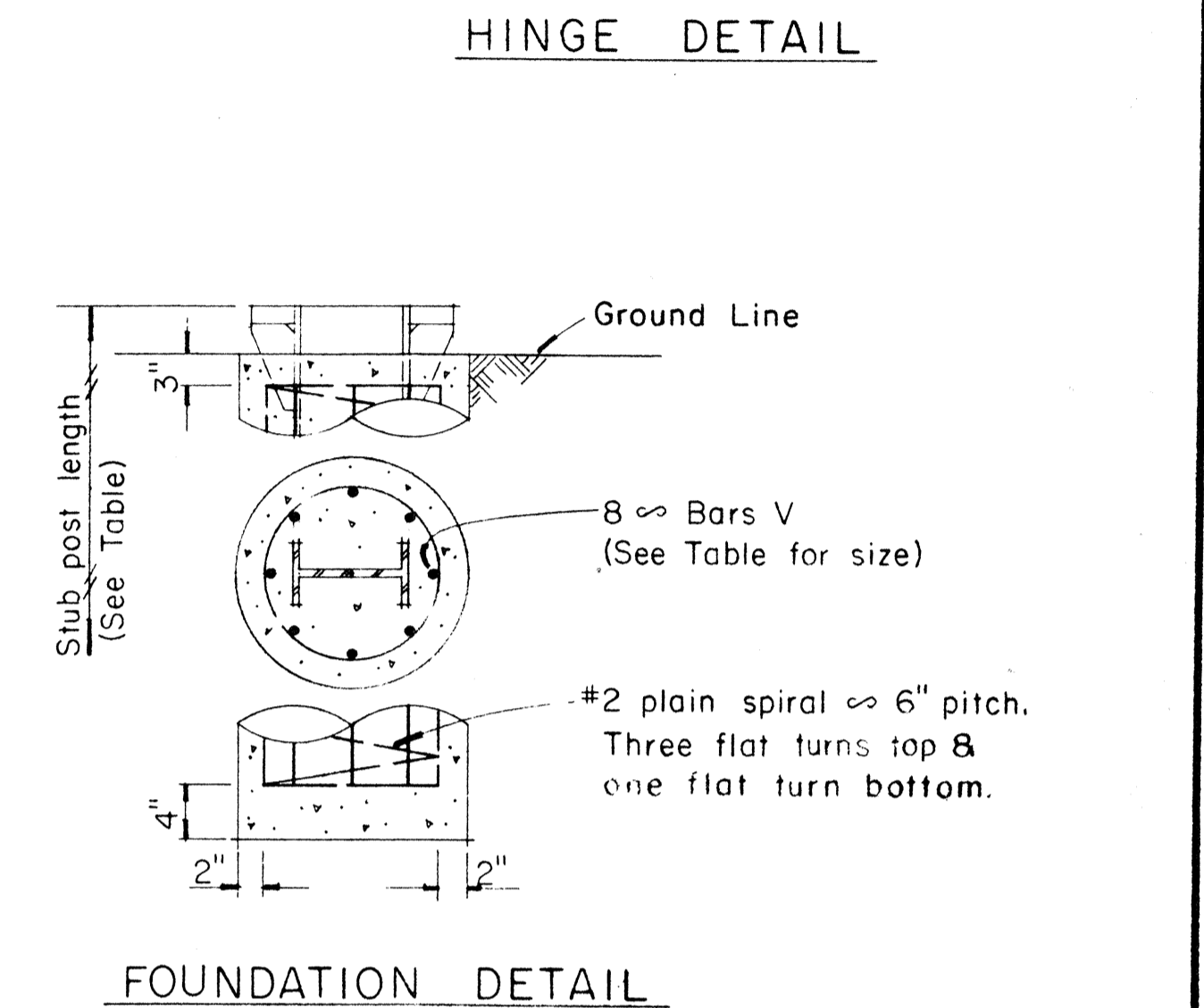
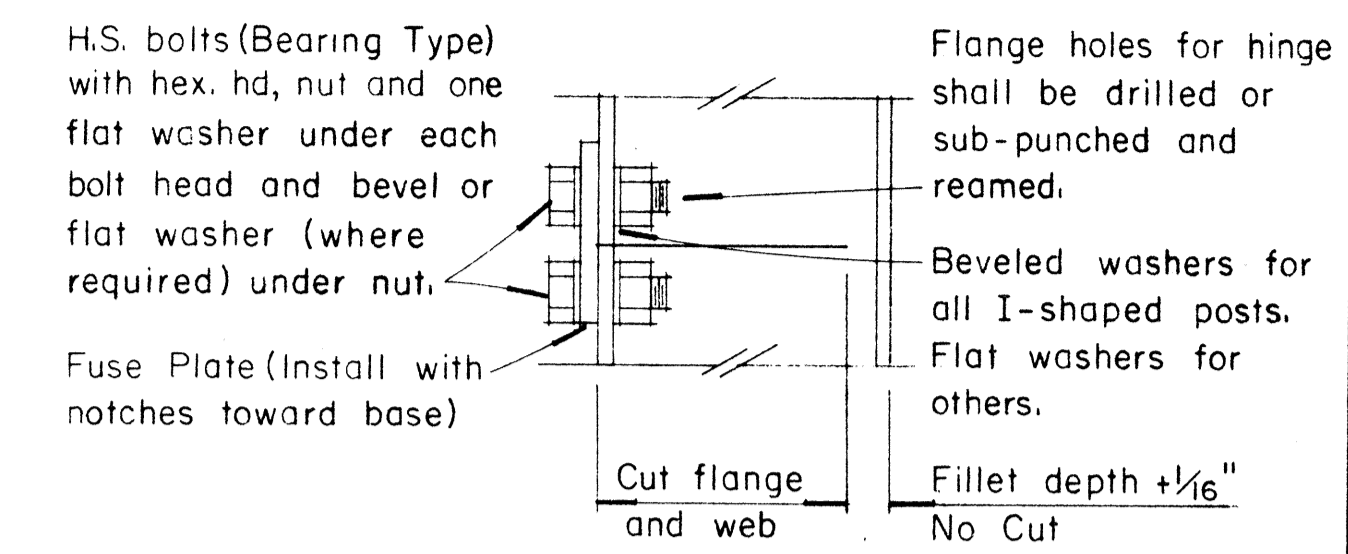
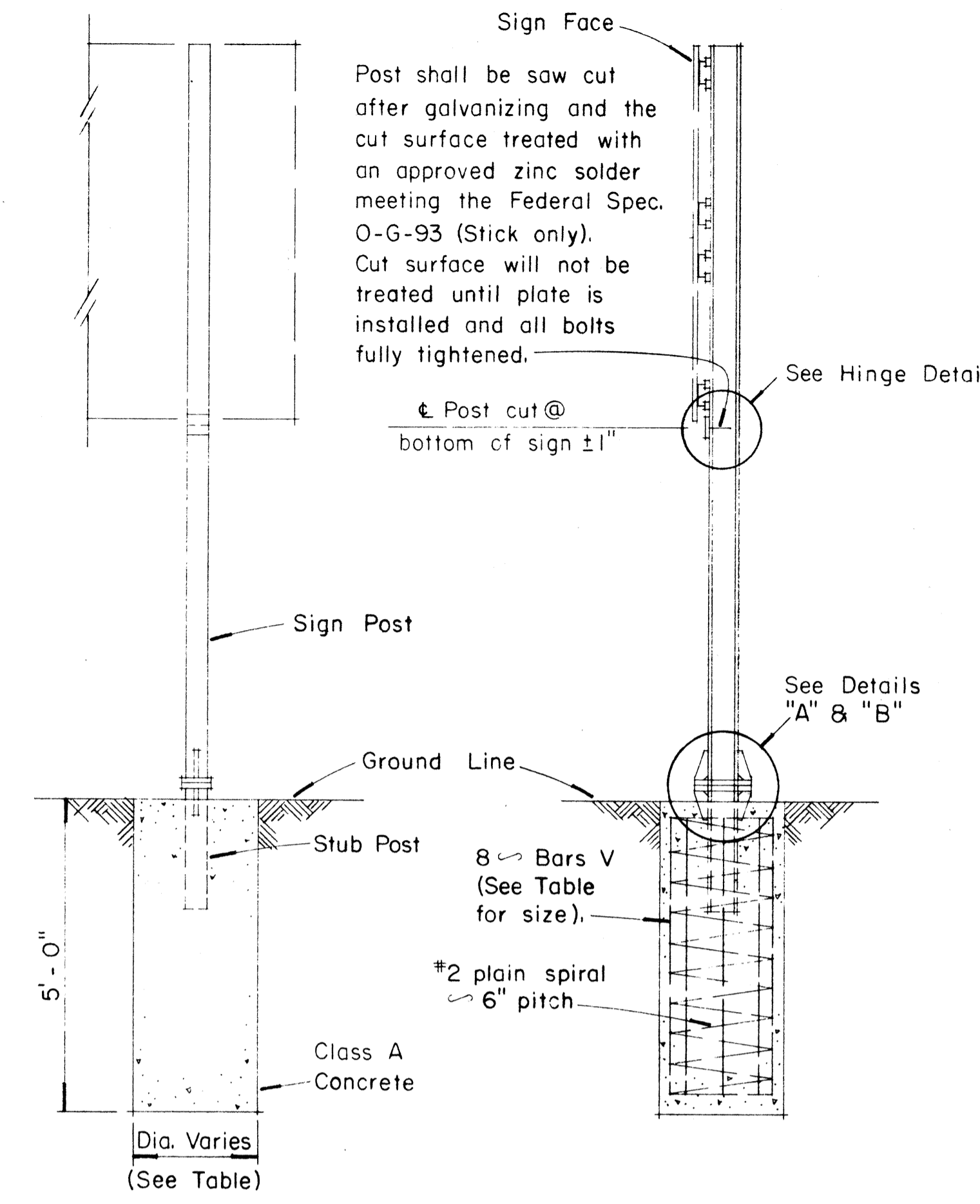
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 NIMITZ SPUR
STANDARD DETAILS
DESTINATION & GROUND MOUNTED EXPRESSWAY SIGNS
 INTERSTATE ROUTE H-1
 PROJ. NO. I-HI-1(99):15
 Scale: As Shown
SHEET No. 23 OF 28 SHEETS DT 203



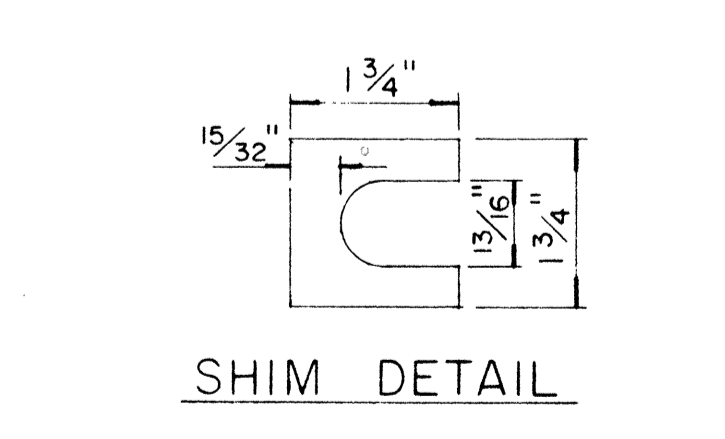
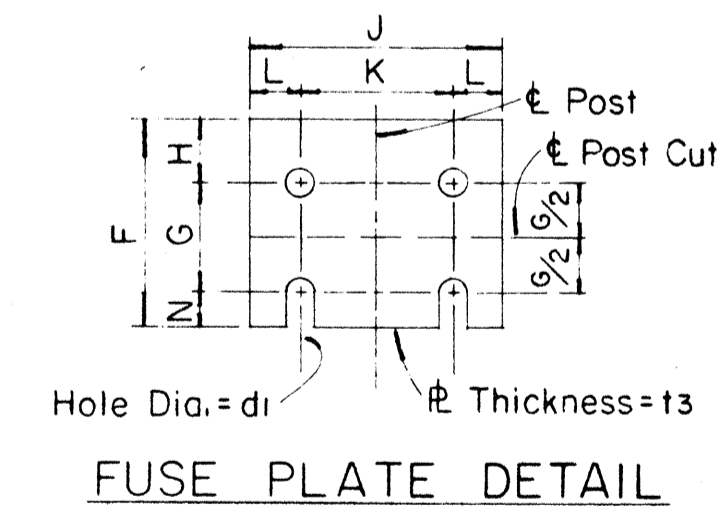
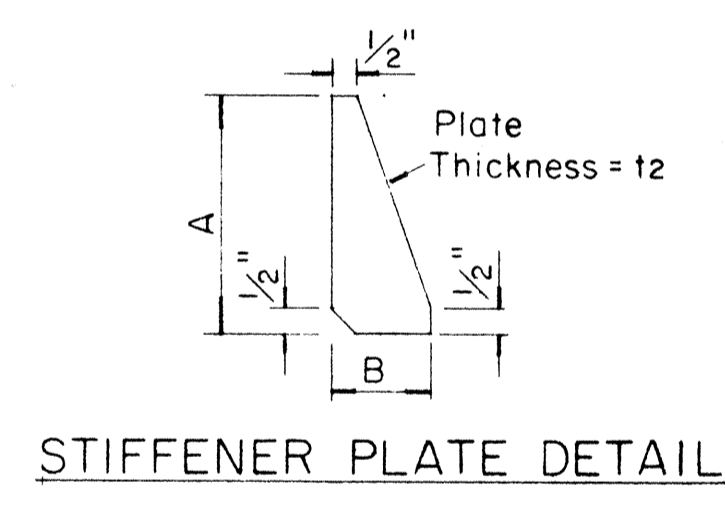
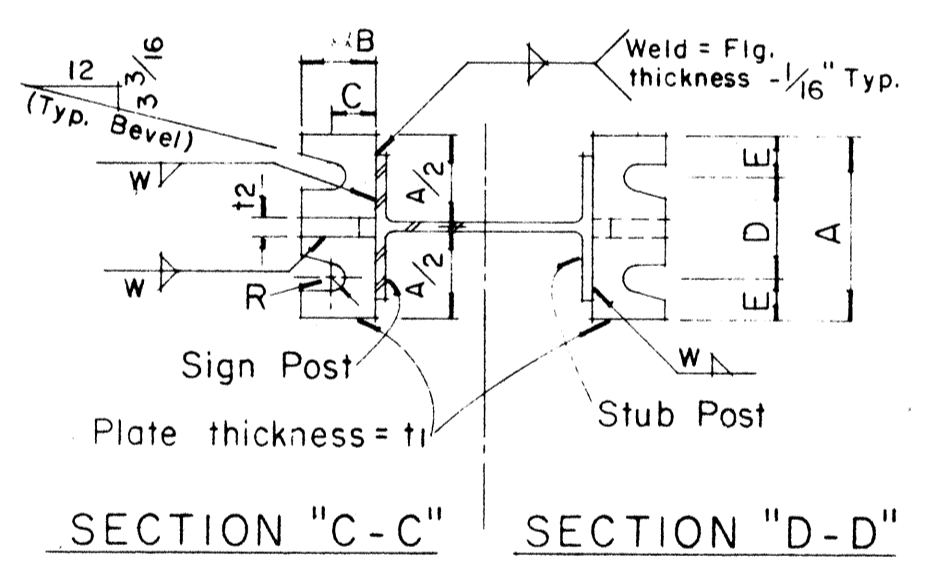
DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(99)-15	1977	117	350

BASE CONNECTION DATA TABLE											FUSE PLATE DATA TABLE								FOUNDATION DATA						
Post Size	Bolt Size & Torque	A	B	C	D	E	t ₁	t ₂	W	R	F	G	H	J	K	L	N	d ₁	t ₃	Bolt Dia.	Wt. of each Fuse Pl.	Stub Length	Stub Projection	Footing Diameter	Bars V Size
6 B 8.5	5/8" φ x 2 3/4" Torque = 450" #	5"	2"	1 1/4"	2 3/4"	1 1/8"	3/4"	1/2"	1/4"	1 1/32"	3 5/8"	2"	1 1/8"	4"	2 1/4"	7/8"	1/2"	9/16"	1/4"	1/2" φ	1.09 #	2'-0"	3"	2'-0"	#5
6 B 12											3 3/4"	2"	1 1/8"	4"	2 1/4"	7/8"	5/8"	1/16"	3/8"	5/8" φ	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" φ	3.75 #	2'-6"	3"	2'-0"	#6
8 WF 17	3/4" φ x 3 1/2" Torque = 750" #	6"	2 1/4"	1 3/8"	3 1/2"	1 1/4"	1"	3/4"	5/16"	1 3/32"	4 1/2"	2 1/2"	1 1/4"	5 1/4"	2 3/4"	1 1/4"	7/8"	1 5/16"	9/16"	7/8" φ	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" φ	3.93 #	3'-0"	2 1/2"	2'-0"	#8
10 WF 21											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" φ	4.75 #	3'-0"	2 1/2"	2'-0"	#9
10 WF 25	Torque = 750" #										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" φ	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" φ	5.42 #	3'-0"	2 1/2"	2'-0"	#11
3 I 5.7	1/2" φ x 2 1/2" 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" φ	0.64 #	1'-6"	3 1/2"	1'-6"	#5
4 I 7.7	Torque = 200" #										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" φ	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.



Furnish 2 \pm .012" thick and 2 \pm .032" 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 AASHTO 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" φ	12050 Lbs.	3/4" φ	28400 Lbs.
5/8" φ	19200 Lbs.	7/8" φ	36050 Lbs.

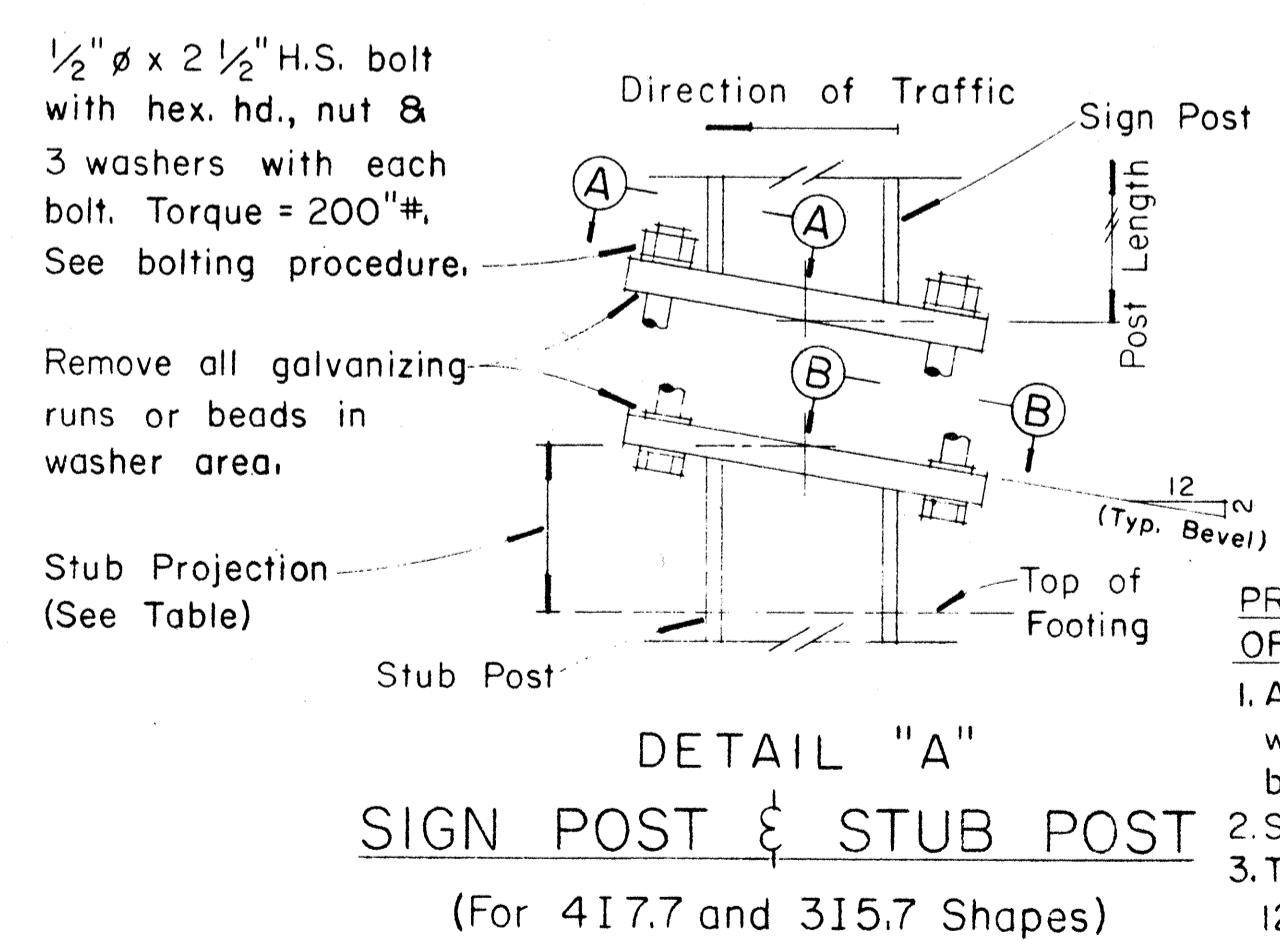
APPROVAL RECOMMENDED:
Eichi Tanaka 12/29/69
TRAFFIC ENGINEER DATE

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

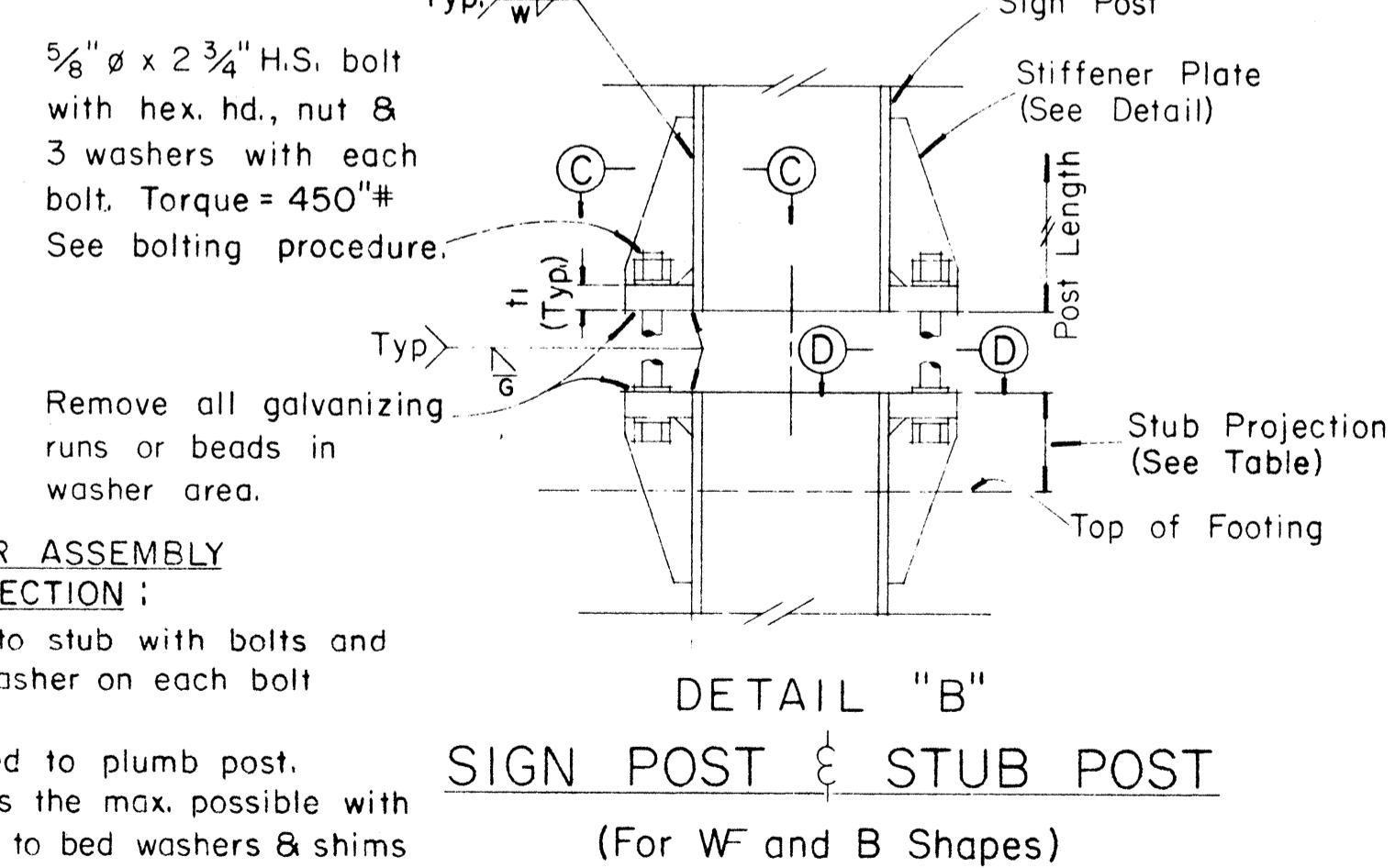
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR
STANDARD DETAILS
BREAK-AWAY SIGN SUPPORTS FOR
GROUND MOUNTED GUIDE SIGNS
INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(99)-15
Not to Scale
SHEET No. 24 OF 28 SHEETS DT 204

DATE
DESIGNED BY
CHECKED BY
NO. 1



PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:
1. Assemble post to stub with bolts and with one flat washer on each bolt between plates.
2. Shim as required to plumb post.
3. Tighten all bolts the max. possible with 12" to 15" wrench to bed washers & shims and to clean bolt threads then loosen each bolt in turn & retighten bolts in systematic order to prescribed torque. (See Table)
4. Burr threads at junction with nut using a center punch to prevent nut loosening.

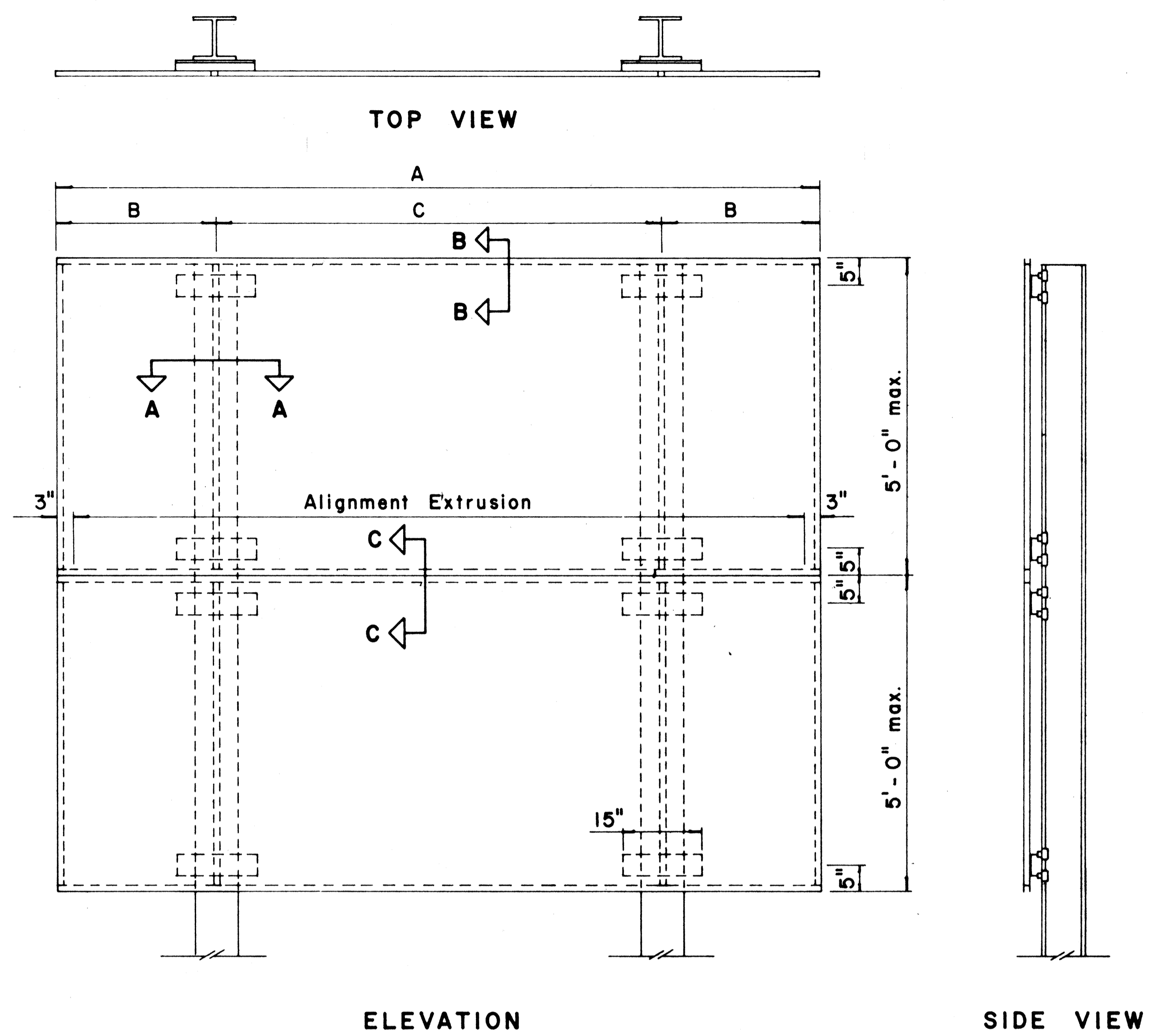


(For WF and B Shapes)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(99):15	1977	118	350

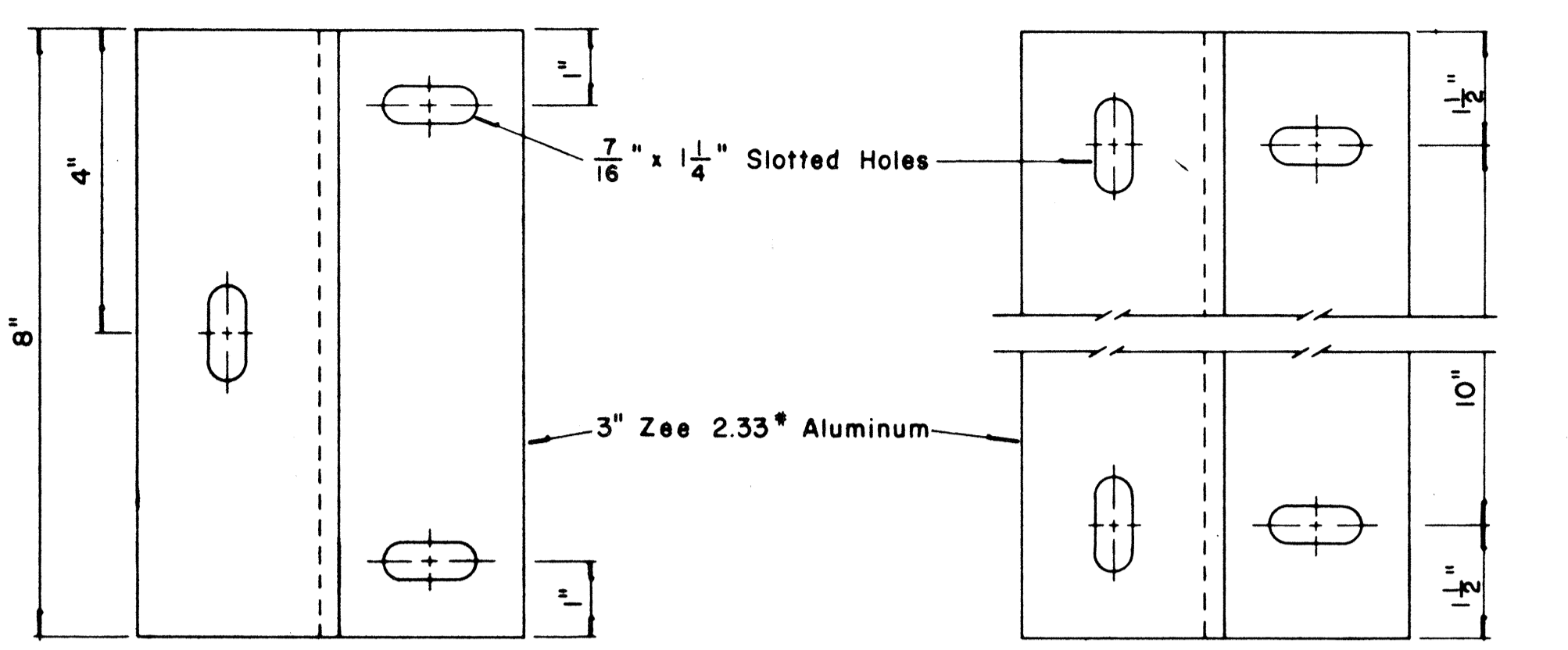
(GROUND MOUNTED SIGNS)
SUPPORT SPACING TABLE

PANEL THICK.	LENGTH OF SIGN	NO. OF SUPPORTS	OVERHANG		SUPPORT SPACING
			A	B	
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"	68"	
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"	



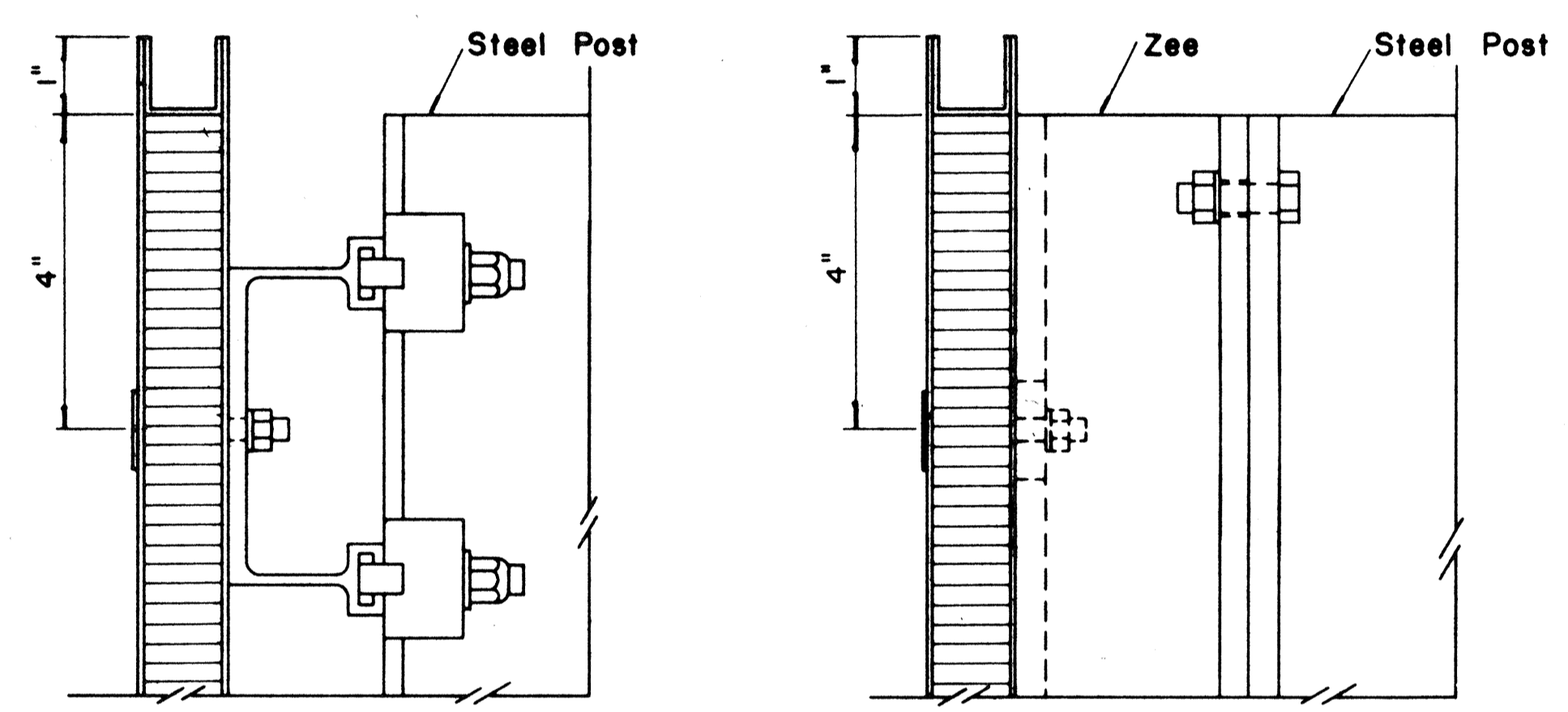
TYPICAL SIGN ASSEMBLY

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



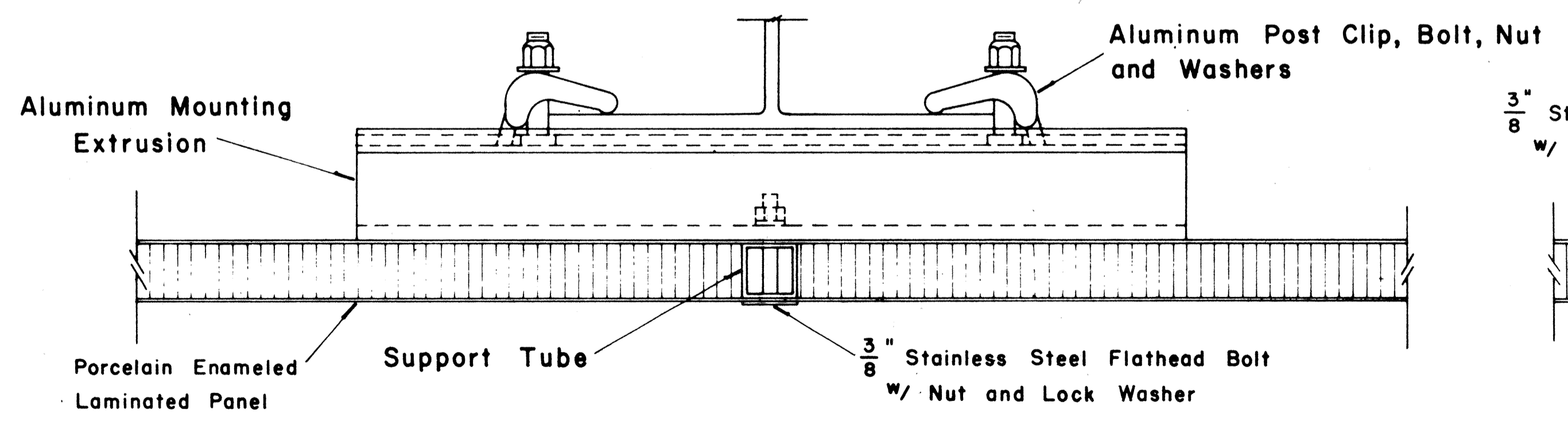
ZEE MOUNTING DETAILS

Scale: $\frac{1}{2}$ " = 1"



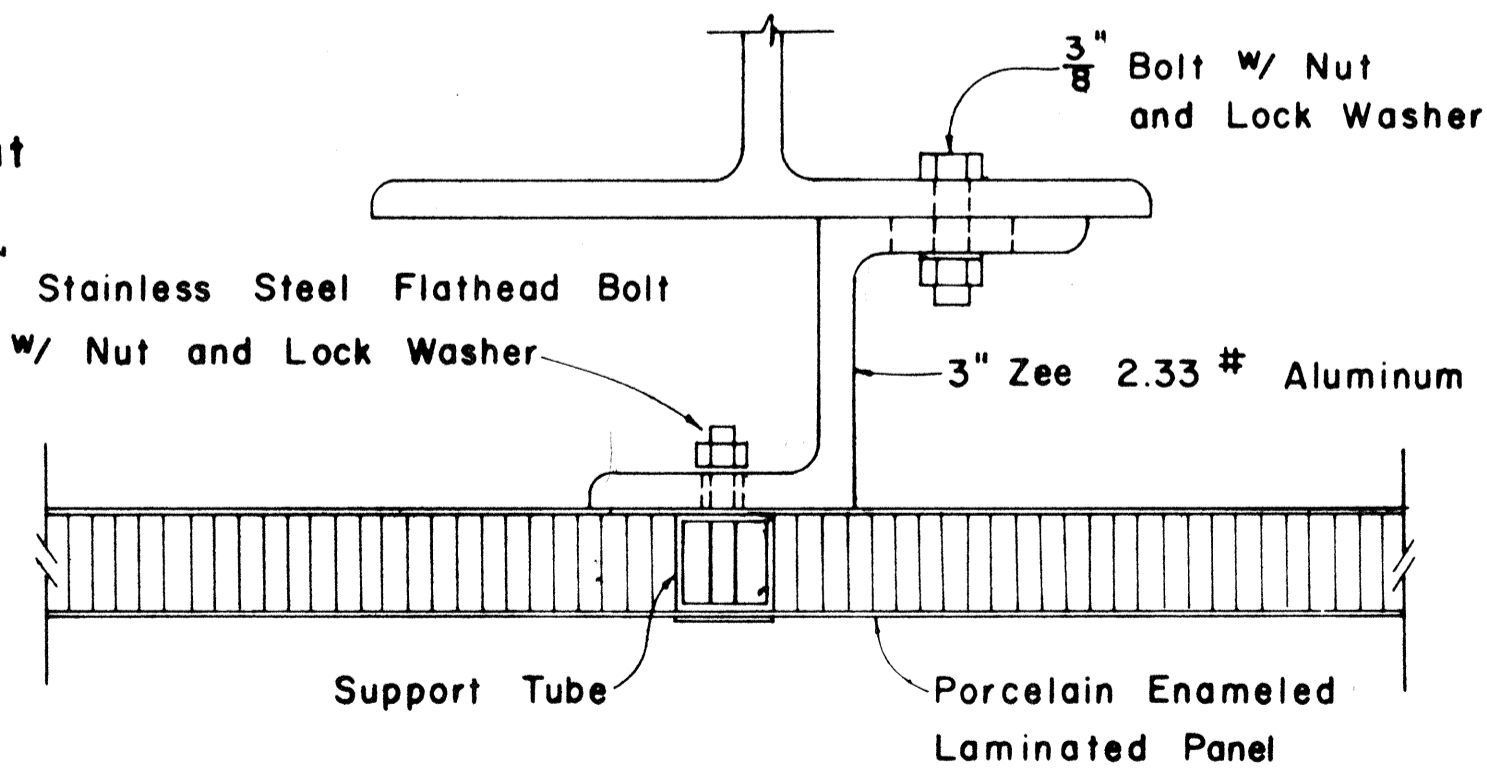
Scale: $\frac{1}{2}$ " = 1"

Scale: $\frac{1}{2}$ " = 1"



SECTION "A-A"

Scale: $\frac{1}{2}$ " = 1"



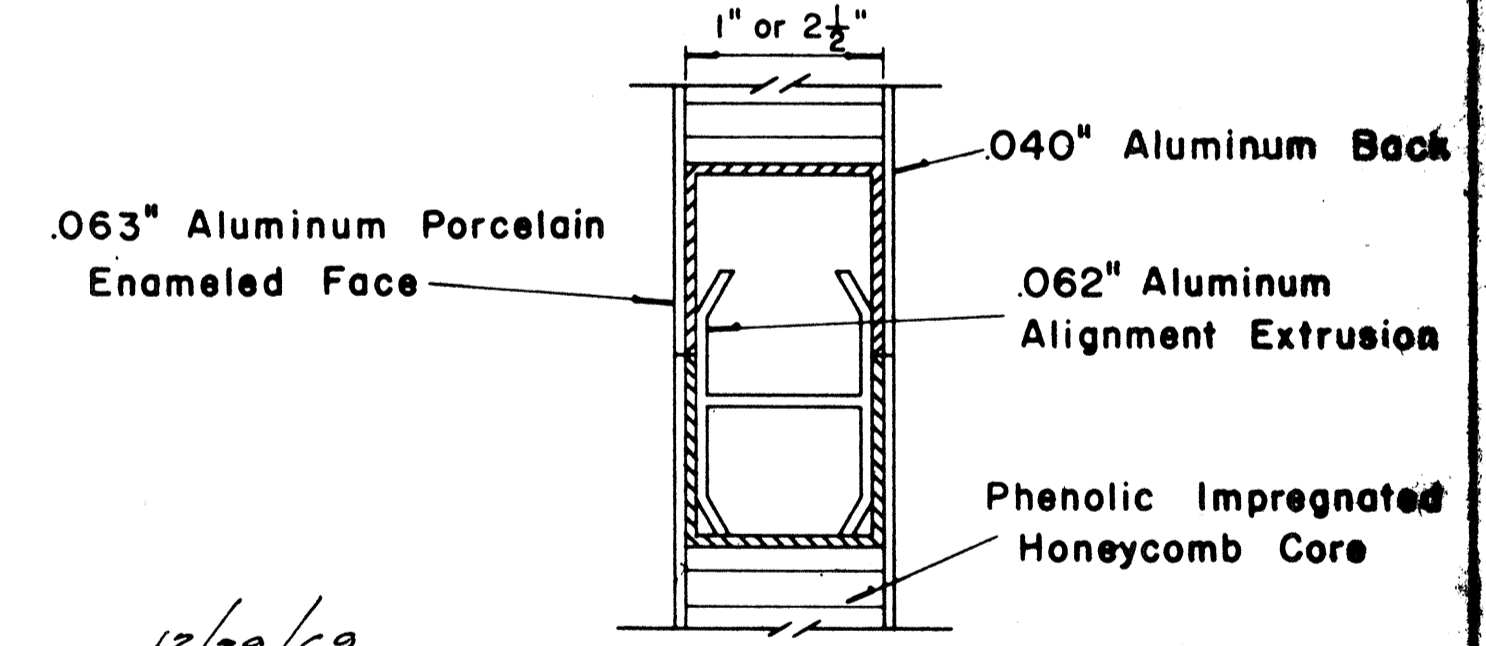
SECTION "A-A" (Alternate)

Scale: $\frac{1}{2}$ " = 1"

APPROVAL RECOMMENDED:
Erich Tanaka
TRAFFIC ENGINEER
12/29/69
DATE

APPROVED:
John S. Stiles
ASSISTANT CHIEF, ENGINEERING
12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE



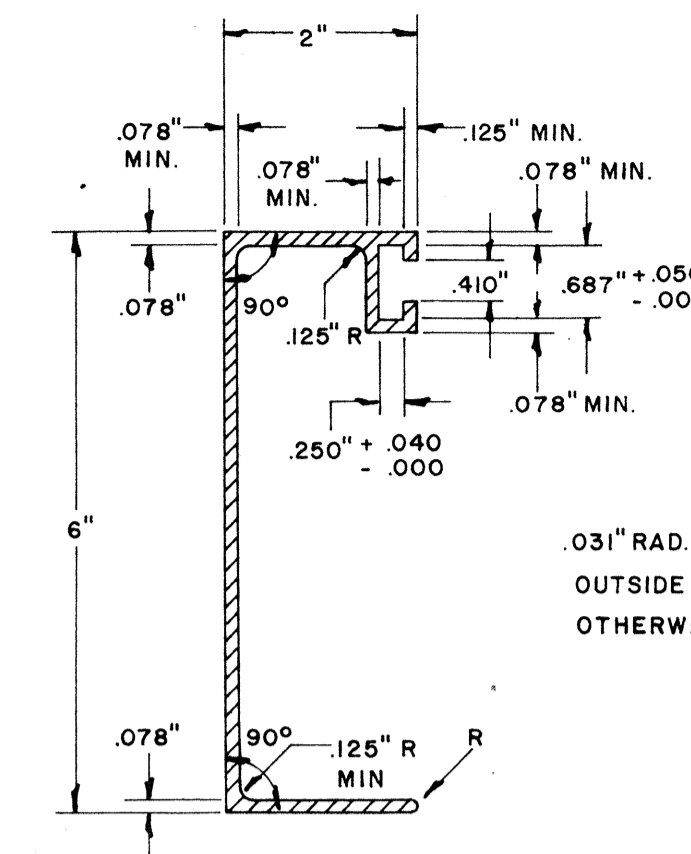
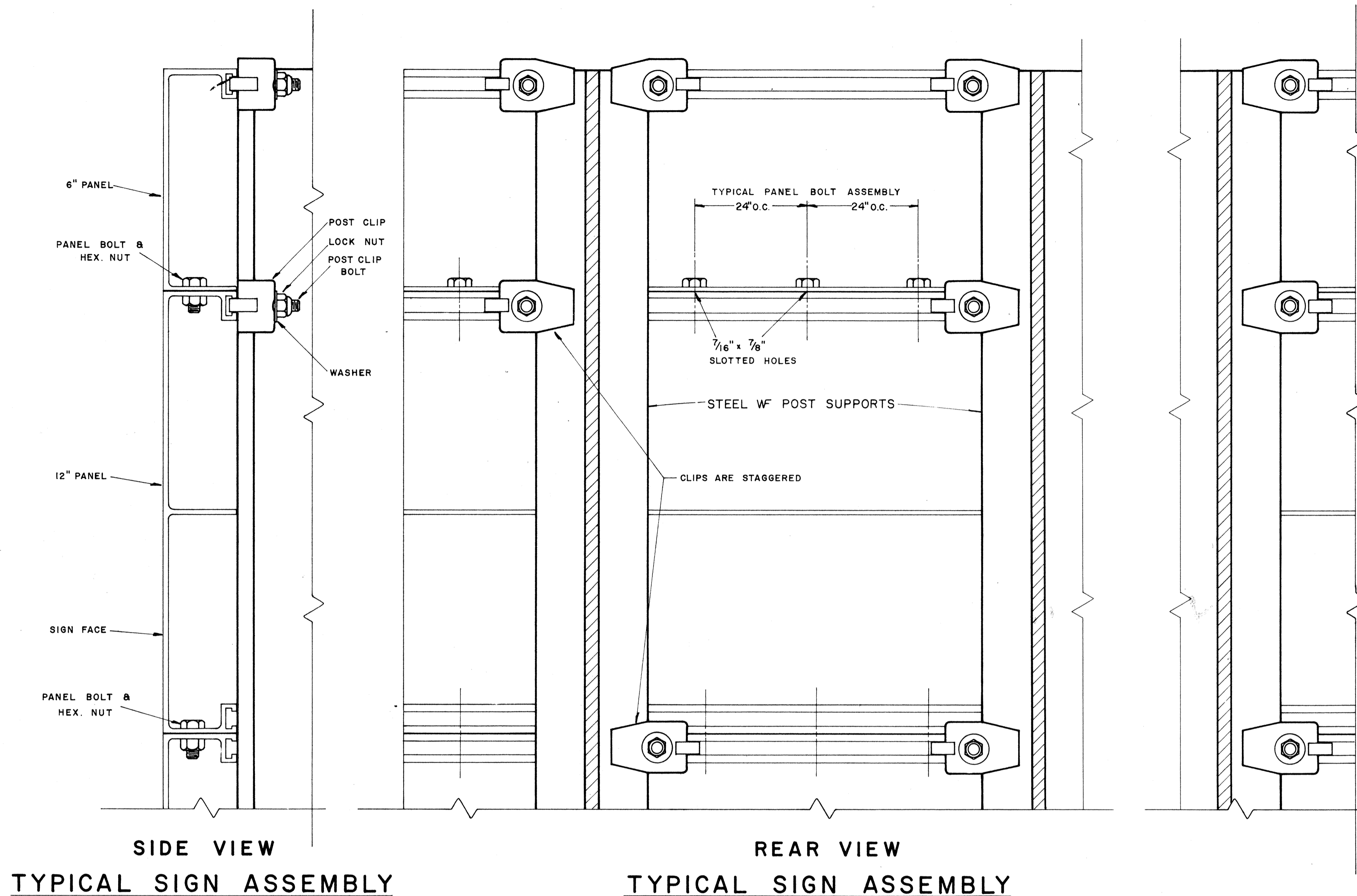
CLOSURE DETAIL SECTION "C-C"

FULL SCALE

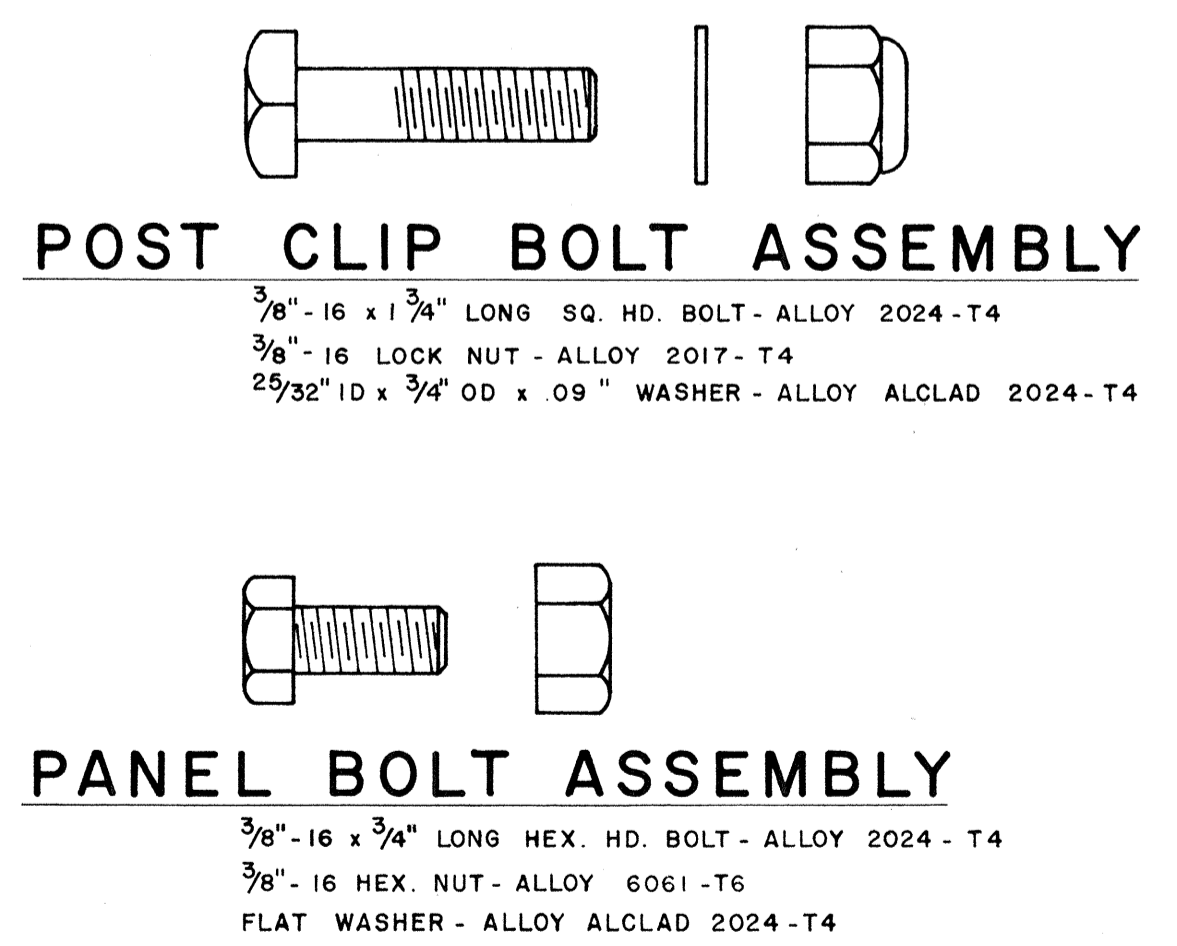
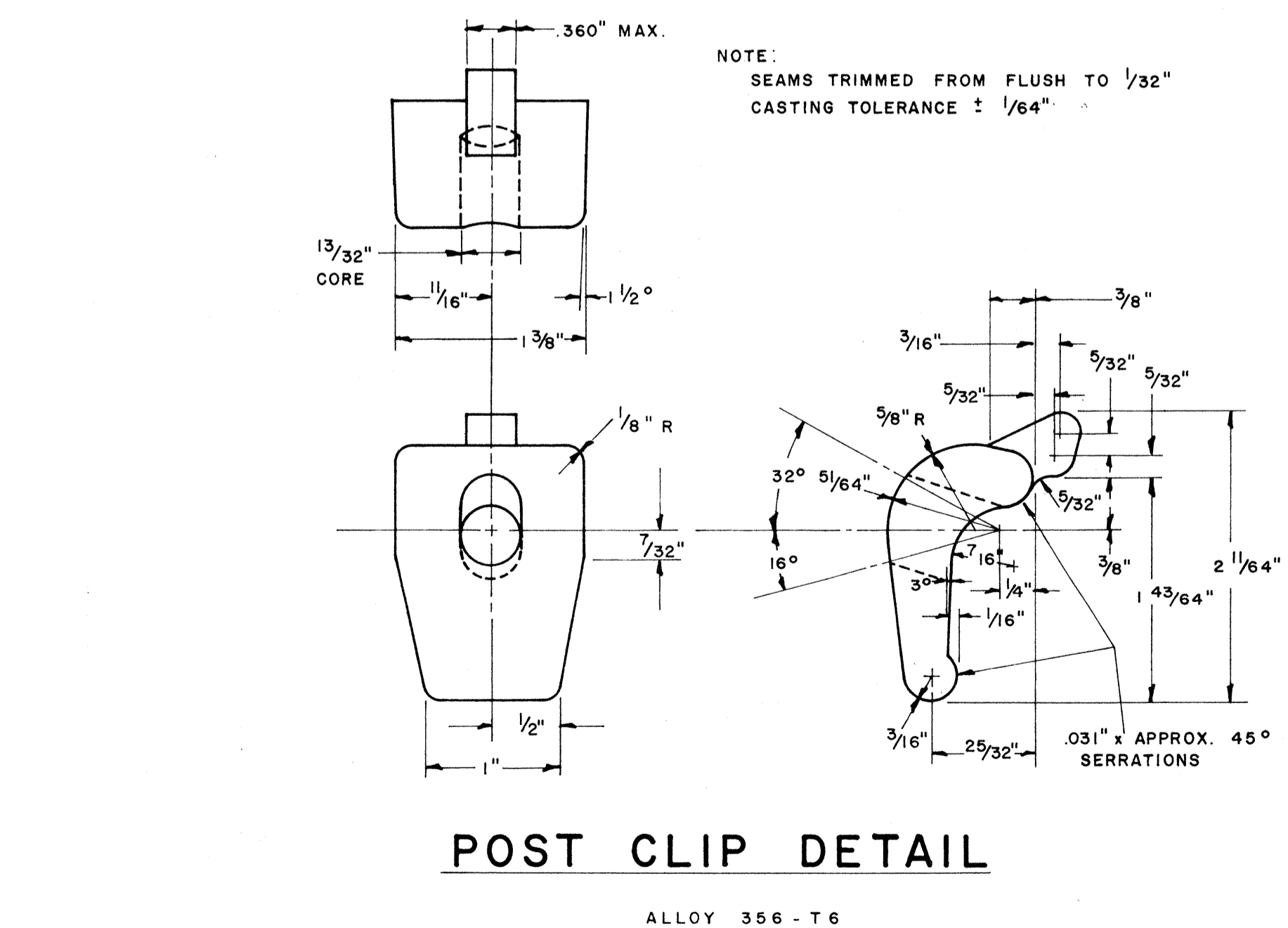
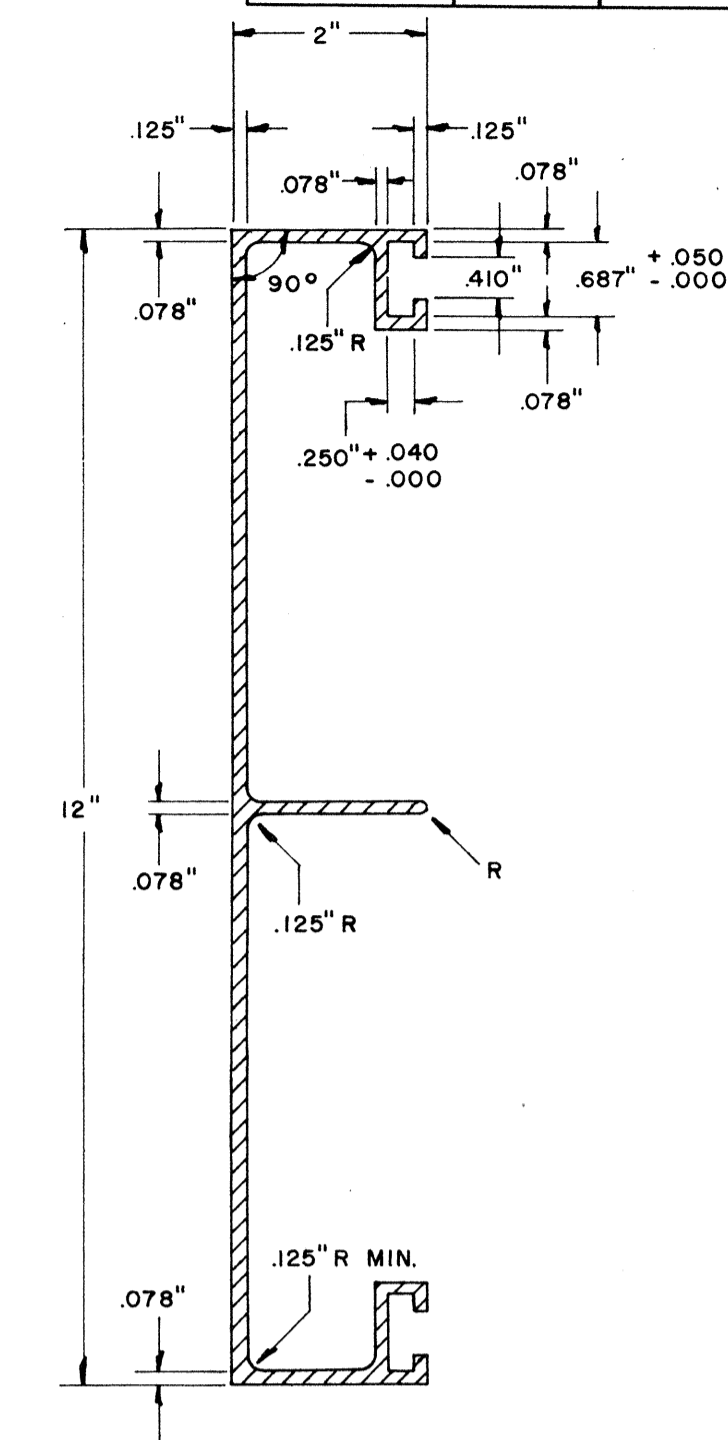
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR
STANDARD DETAILS
LAMINATED ALUMINUM
SIGN PANELS
(GROUND MOUNTED)
INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(99):15
Scale: As Shown

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1(99):15	1977	119	350



**SOLID EXTRUDED SIGN
PANEL DETAILS**



NOTE:
Extruded Aluminum Panels to be used for
Destination Signs with Reflective Sheeting Background

APPROVAL RECOMMENDED:
Eichi Tanaka
TRAFFIC ENGINEER
12/29/69
DATE

APPROVED:
Richard S. Smith
ASSISTANT CHIEF, ENGINEERING
12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR

STANDARD DETAILS
SOLID ALUMINUM
EXTRUDED SIGN PANEL AND
ACCESSORY DETAILS

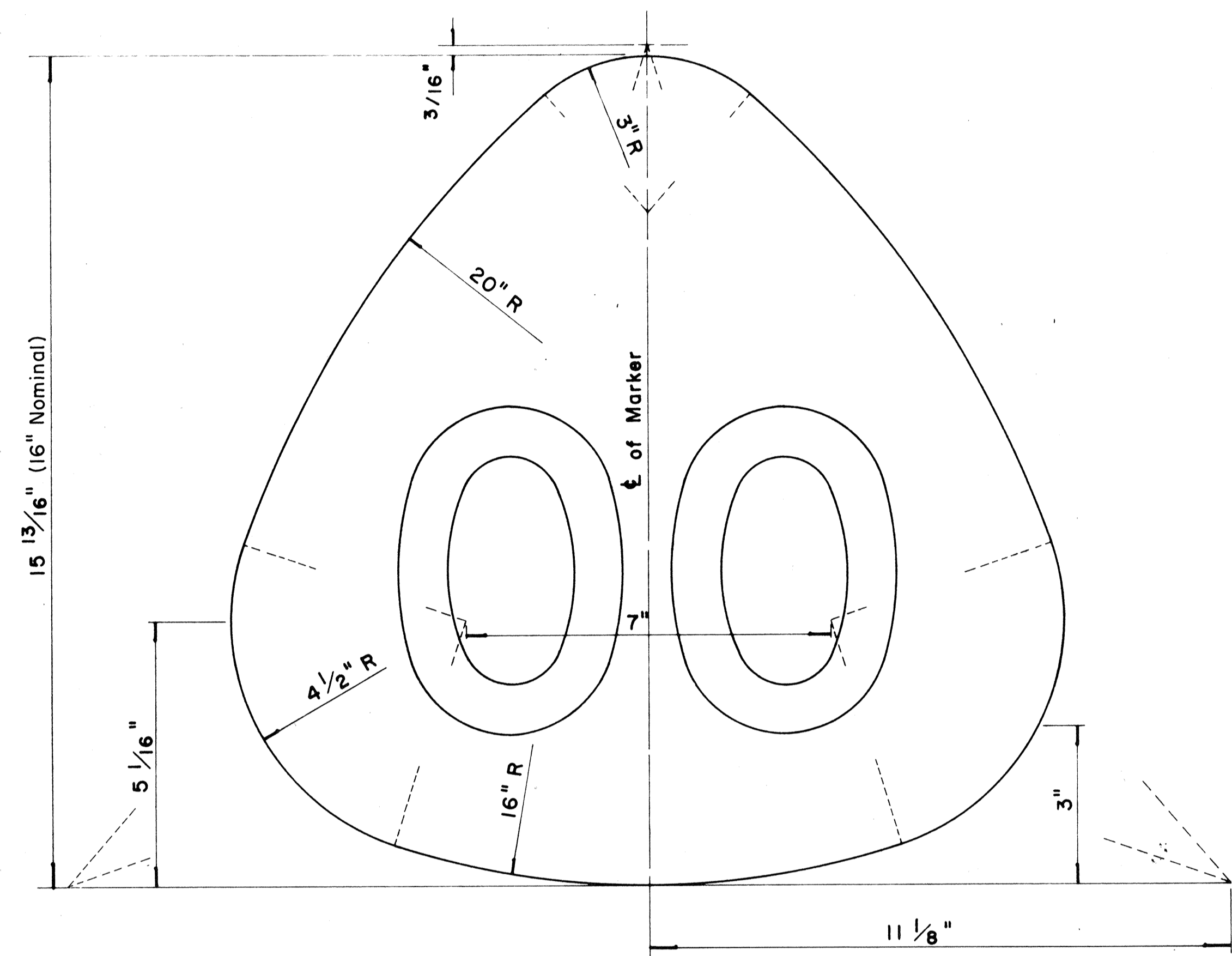
INTERSTATE ROUTE H-1
PROJ. NO. I.HI-1(99):15

SCALE:

DATE
DESIGNED BY
DRAWN BY
QUANTITIES BY
CHECKED BY
NO.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				

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



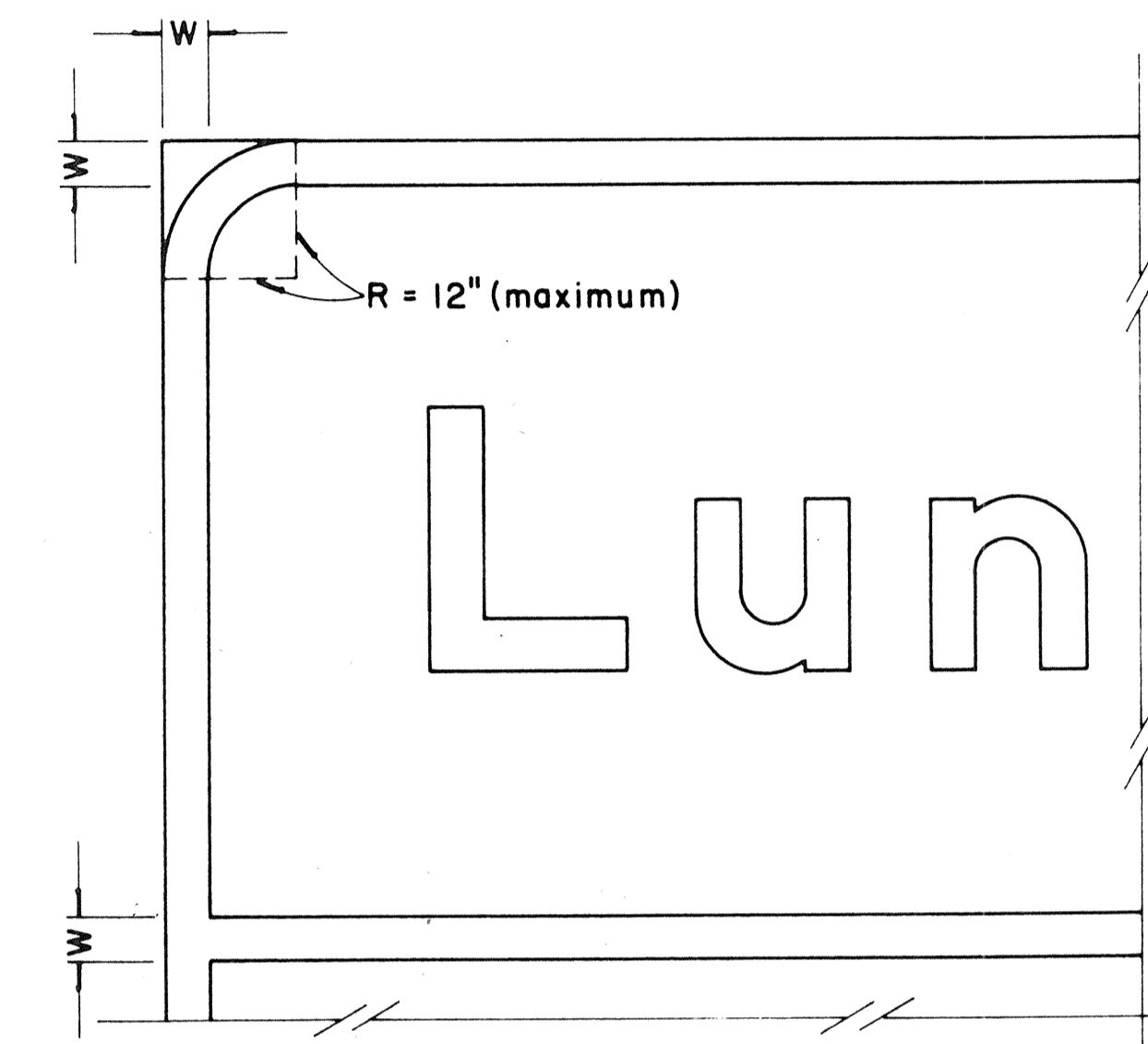
**STATE ROUTE MARKER
FOR GUIDE SIGNS**

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.

RADI 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"



**BORDER DETAIL
FOR GUIDE SIGNS**

Not to Scale

NOTE:

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

APPROVAL RECOMMENDED:

Eishi Tanaka 4/11/72
TRAFFIC ENGINEER DATE

APPROVED:

Mulu S. Salsiki 4/12/72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 209 Approved 12-30-69	HT	4/12/72
2	Revised Notes and Schedules	HT	9-14-70

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR
STANDARD DETAILS

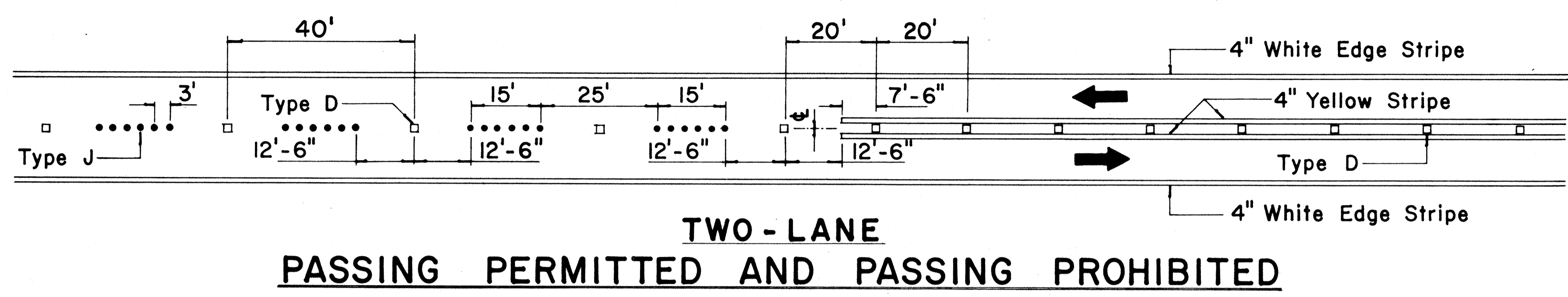
**STATE ROUTE MARKER
AND BORDER DETAIL
FOR GUIDE SIGNS**

INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(199): 15
Scale: As Shown

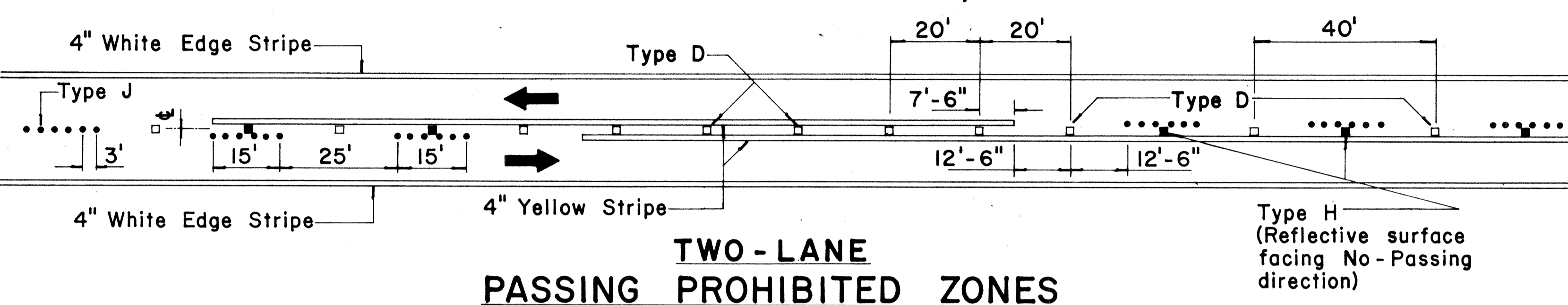
SHEET No. 27 OF 28 SHEETS DT 209

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

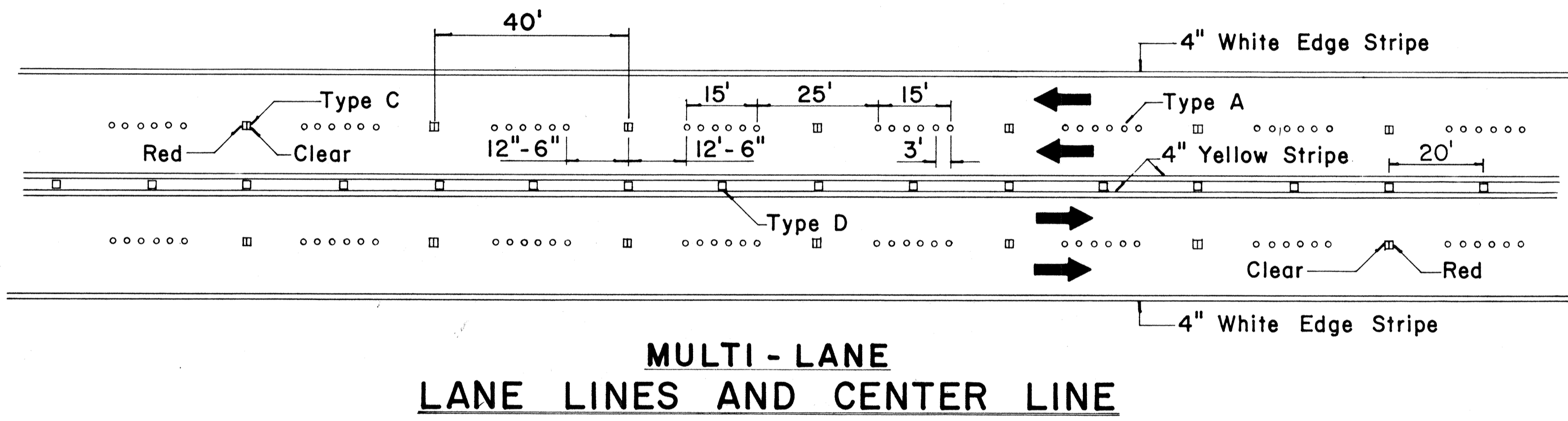
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(99):15	1977	121	350



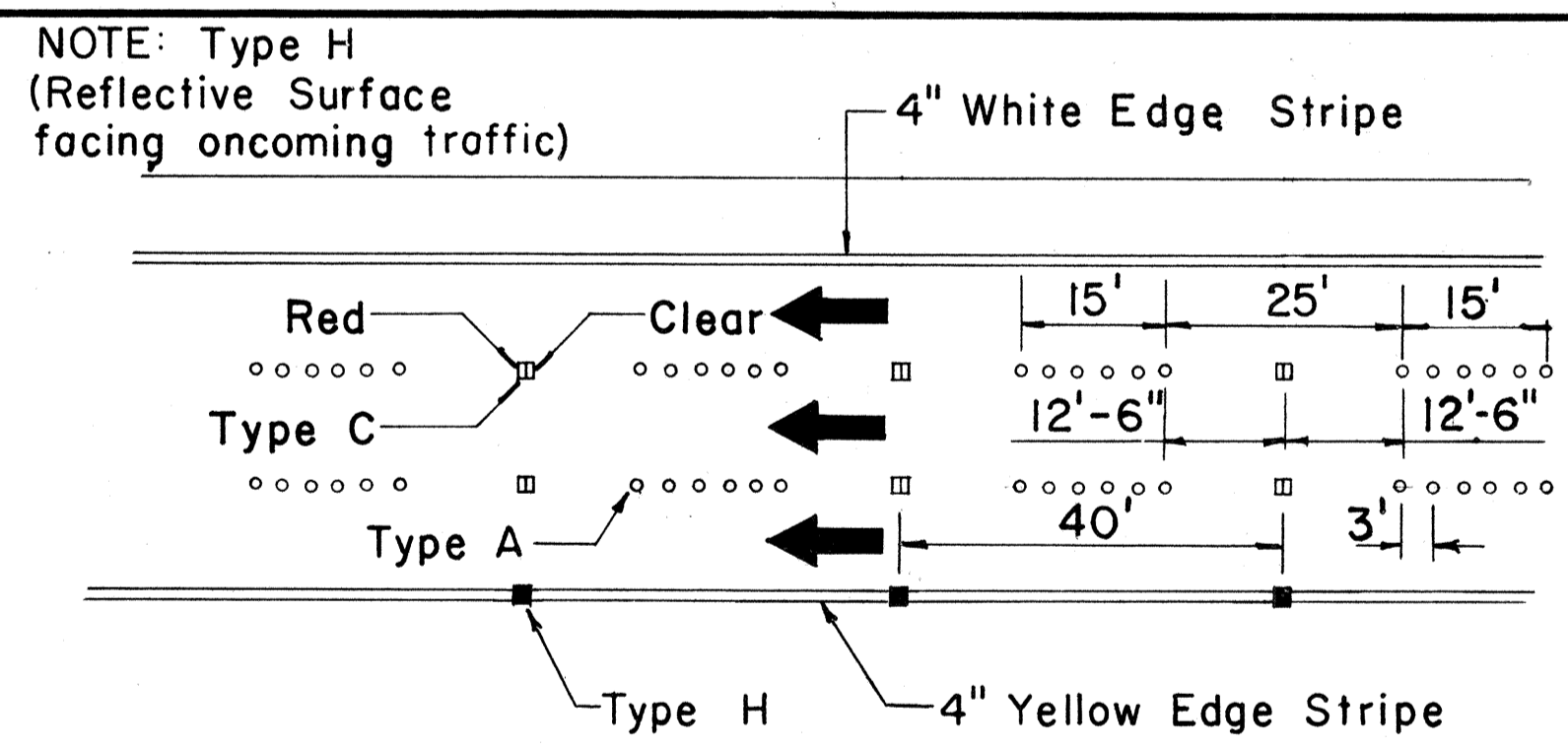
**TWO-LANE
PASSING PERMITTED AND PASSING PROHIBITED**



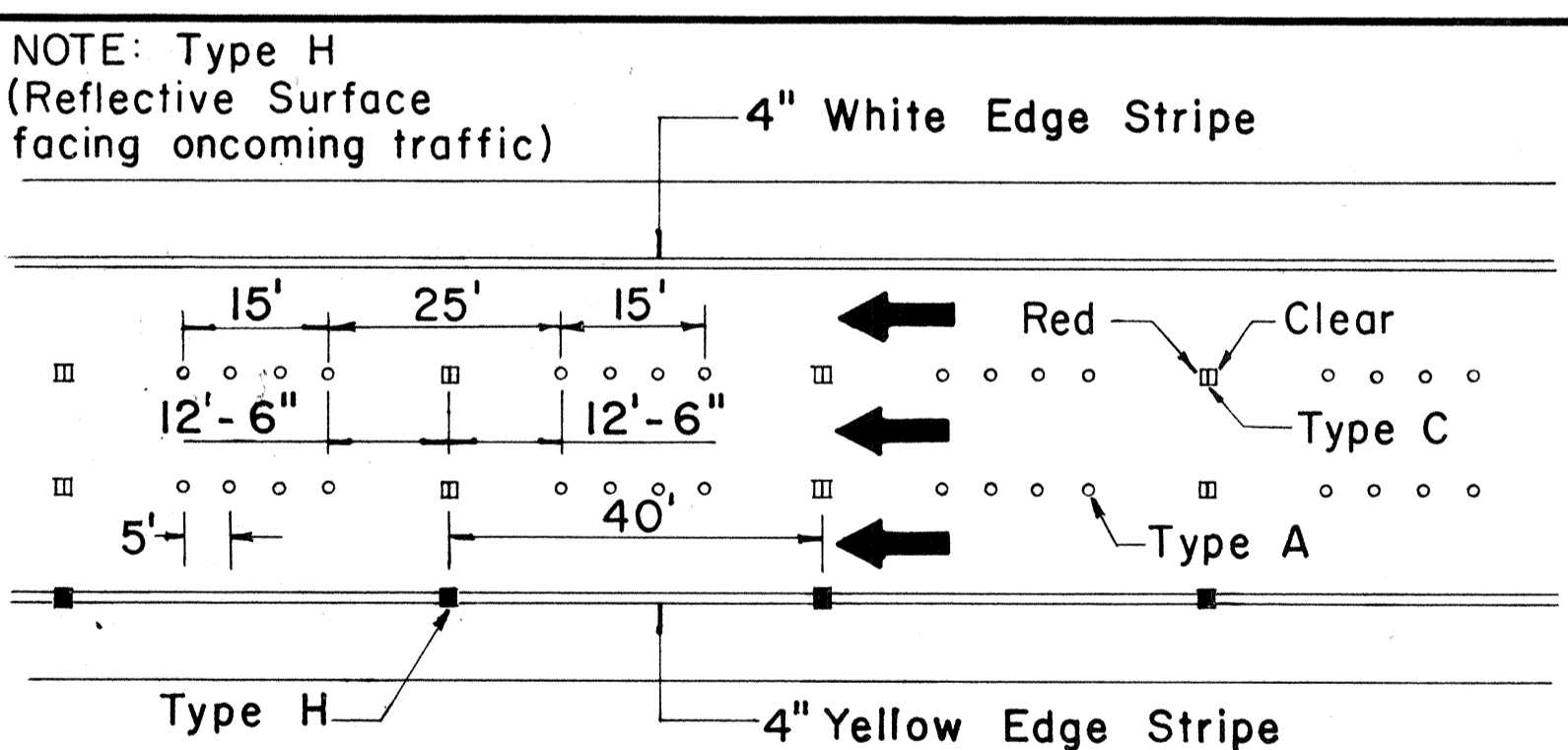
**TWO-LANE
PASSING PROHIBITED ZONES**



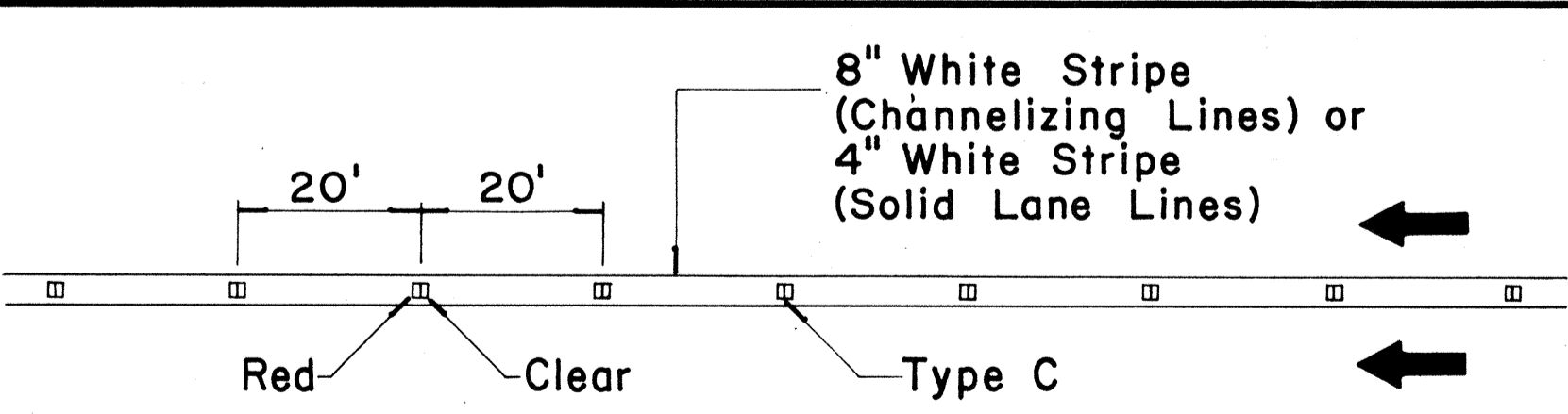
**MULTI-LANE
LANE LINES AND CENTER LINE**



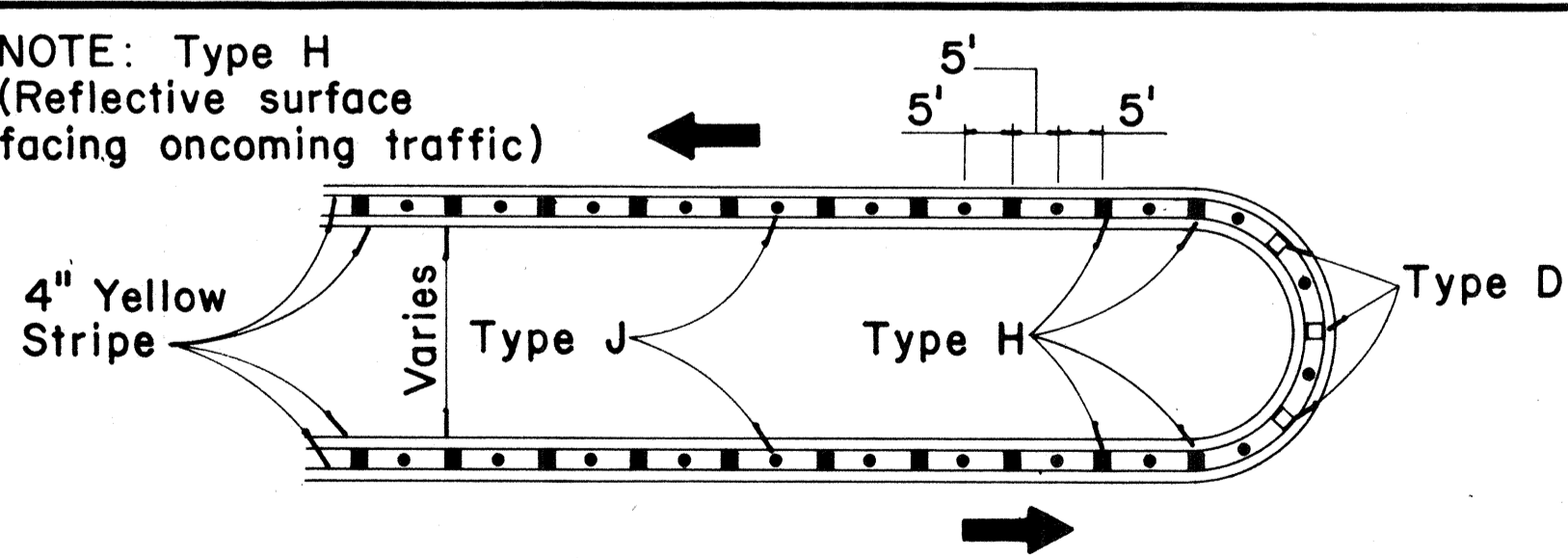
DIVIDED HIGHWAY LANE LINES



FREEWAY LANE LINES



**CHANNELIZING LINES
OR SOLID LANE LINES**



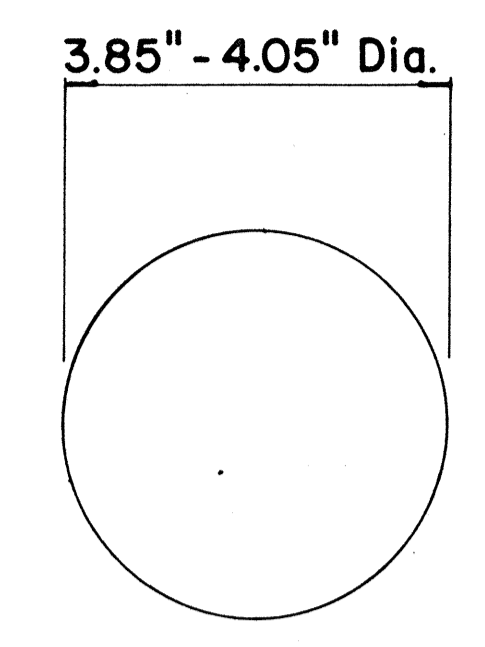
MEDIAN NOSE DELINEATION

TWO - LANE

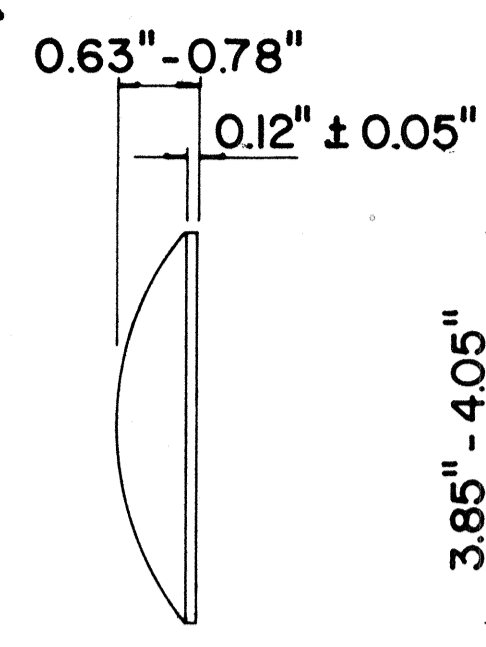
MULTI - LANE

DIVIDED HIGHWAY
AND
FREEWAY

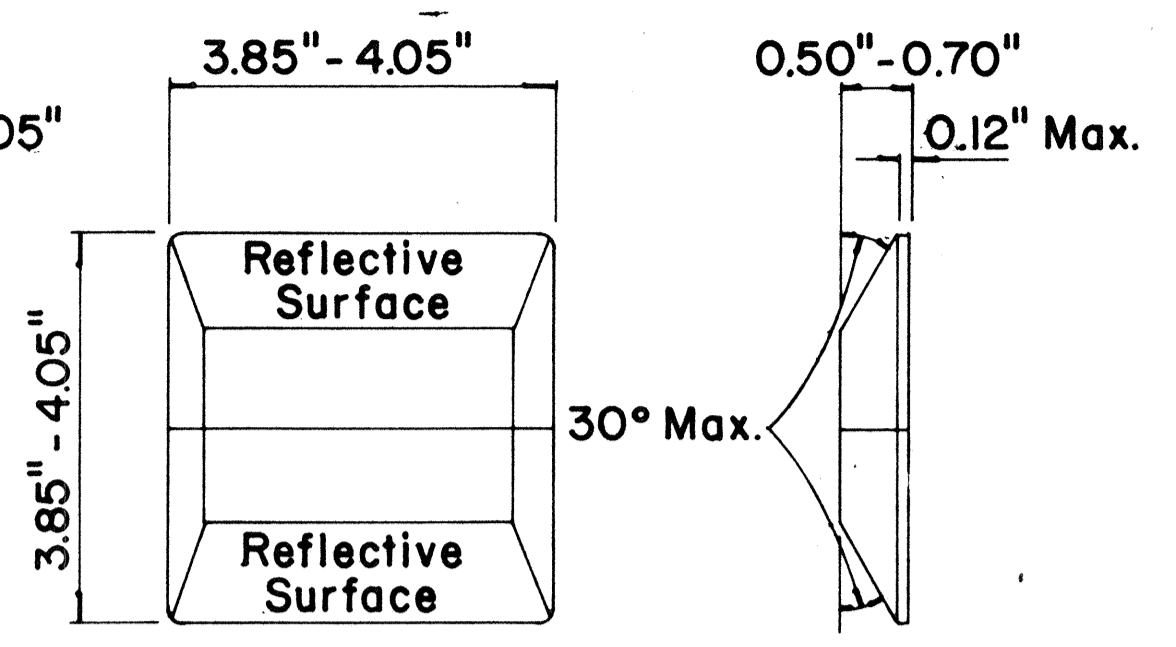
MISCELLANEOUS



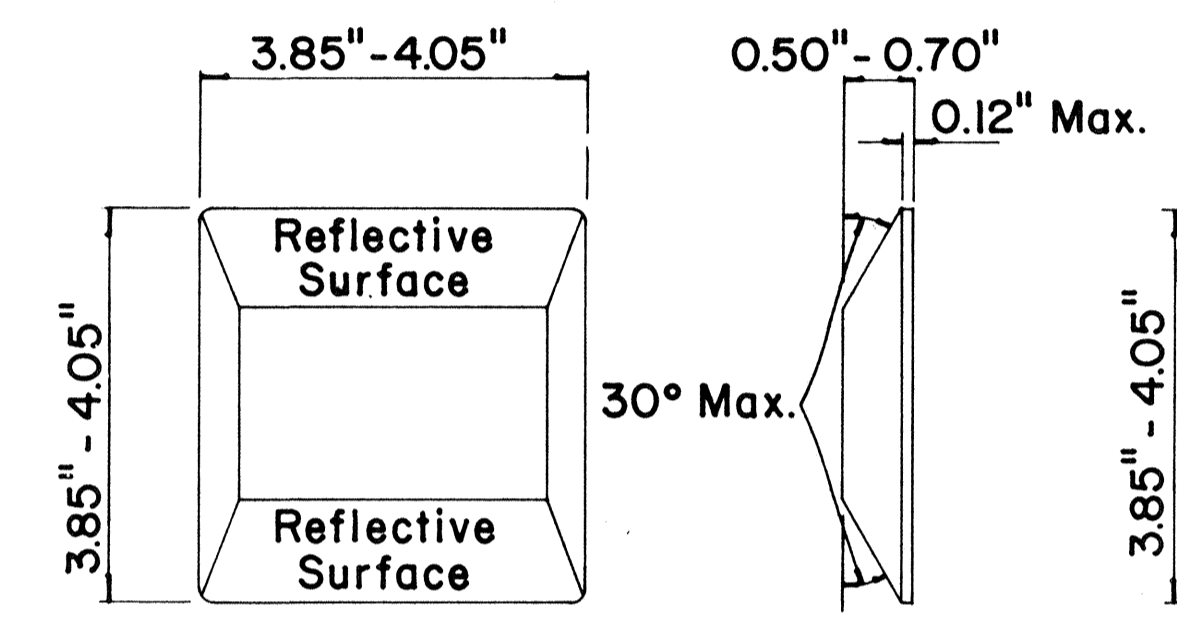
**TYPE A
NON-REFLECTIVE WHITE MARKER**



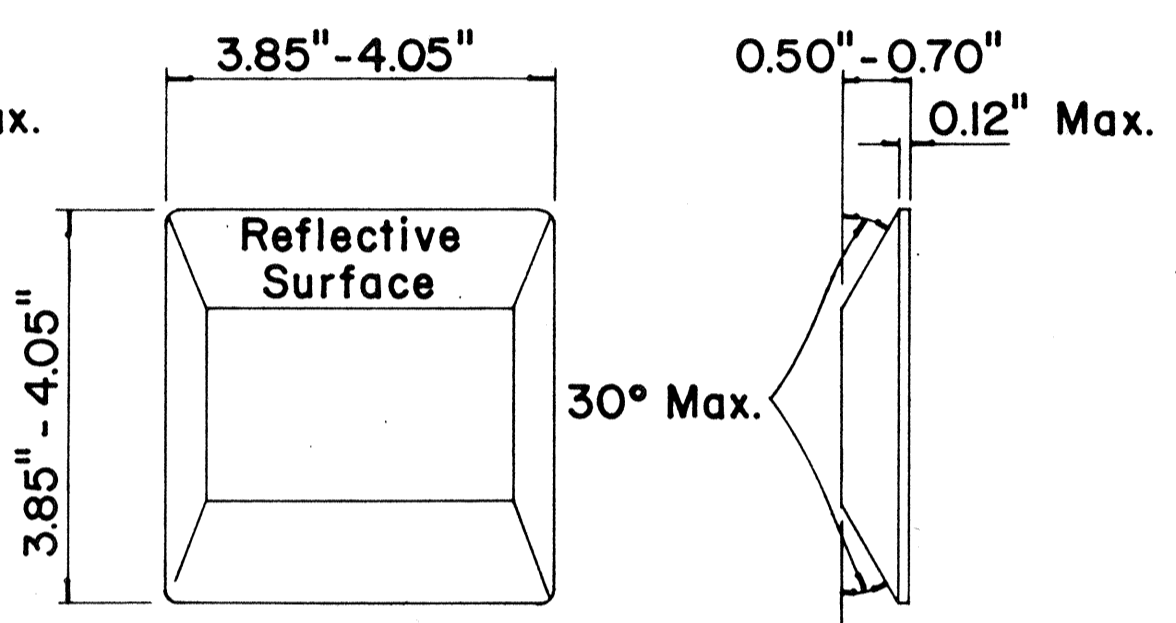
**TYPE J
NON-REFLECTIVE YELLOW MARKER**



**TYPE C
RED-CLEAR REFLECTIVE MARKER**



**TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER**



**TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER**

GENERAL NOTES

1. Painted stripes to be done by Contractor unless otherwise specified.

LEGEND

- Type A
- Type C
- Type D
- Type H
- Type J

APPROVAL RECOMMENDED:
Eiichi Tanaka 11/18/71
TRAFFIC ENGINEER DATE

APPROVED:
Hubert Sakai 11/18/71
ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Add reflector marker in each line gap.	H.C.	10-21-72
2	Revised General Notes.	H.C.	10-21-72
3	Change 4" white edge stripe to 4" solid yellow edge stripe to left edge of a travel path and Add. Type H Reflector Marker	H.C.	5-22-74

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
NIMITZ SPUR

STANDARD DETAILS
RAISED PAVEMENT MARKERS

INTERSTATE ROUTE H-1
PROJ. NO. I-HI-1(99):15

Not to Scale October 1971
SHEET No. 23 OF 26 SHEETS DT 300

DATE
DRAWN BY
CHECKED BY
DESIGNED BY
NOTED BY
NO.