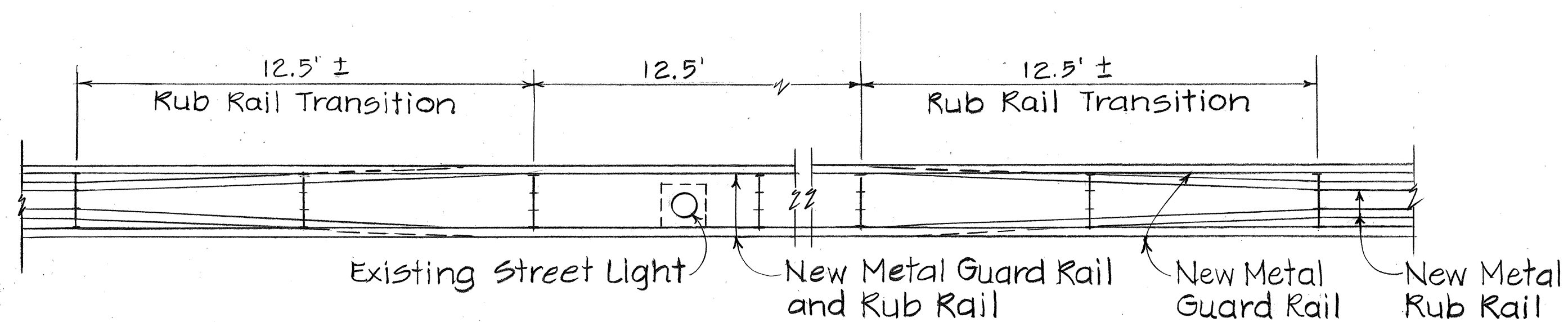
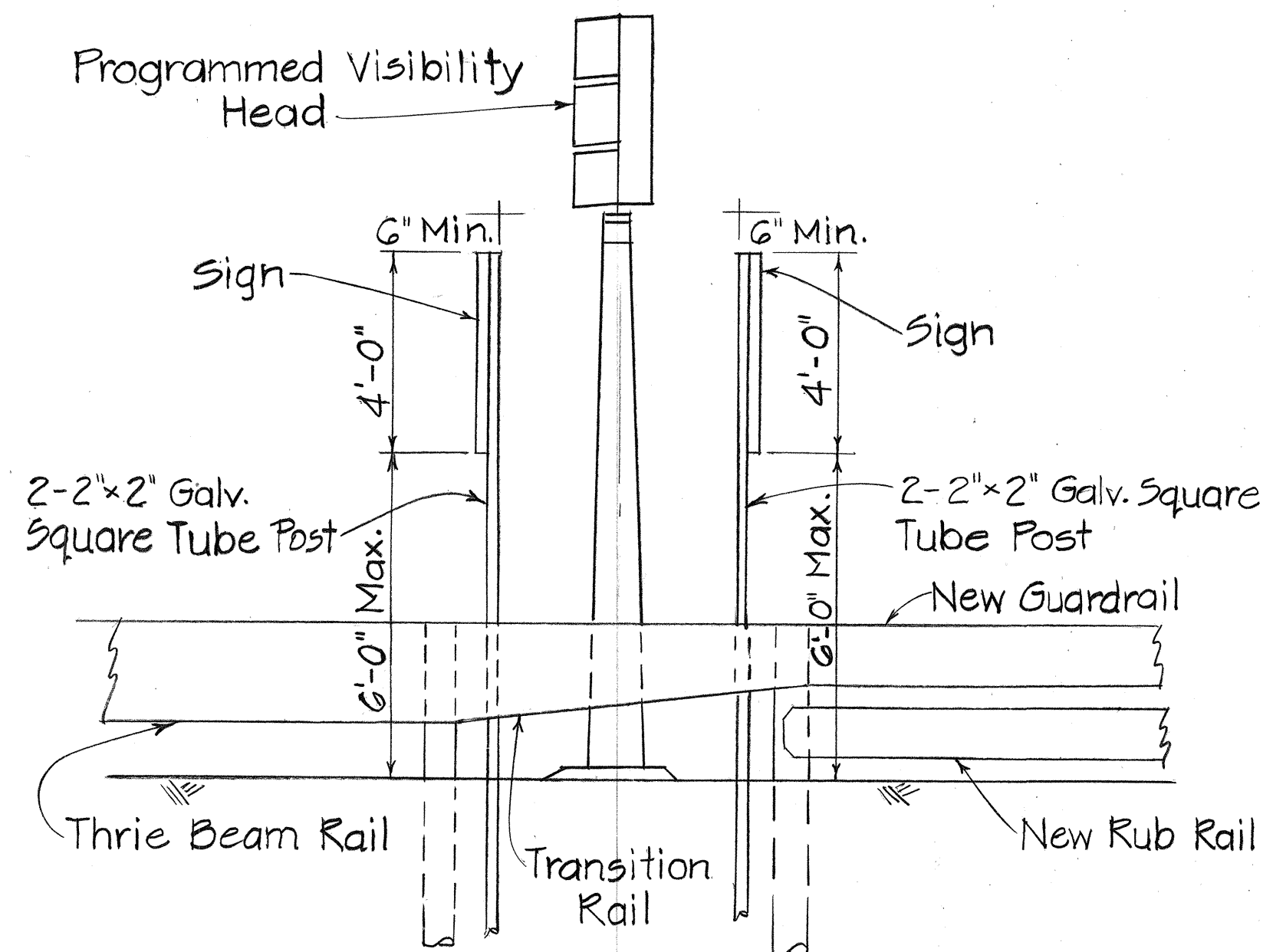


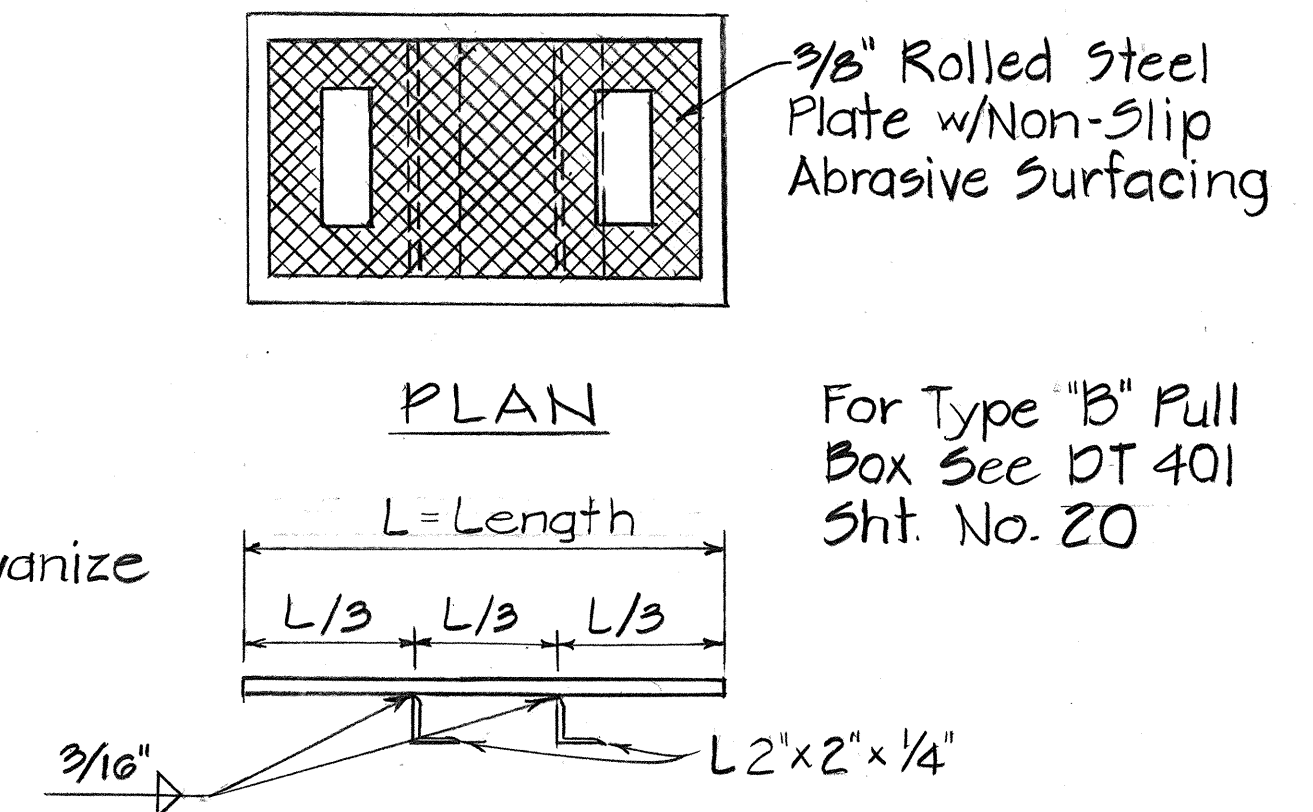
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	G1B-01-79	1979	8	24



TYPICAL DETAIL OF METAL GUARD RAIL AT STREET LIGHT STANDARD
NOT TO SCALE

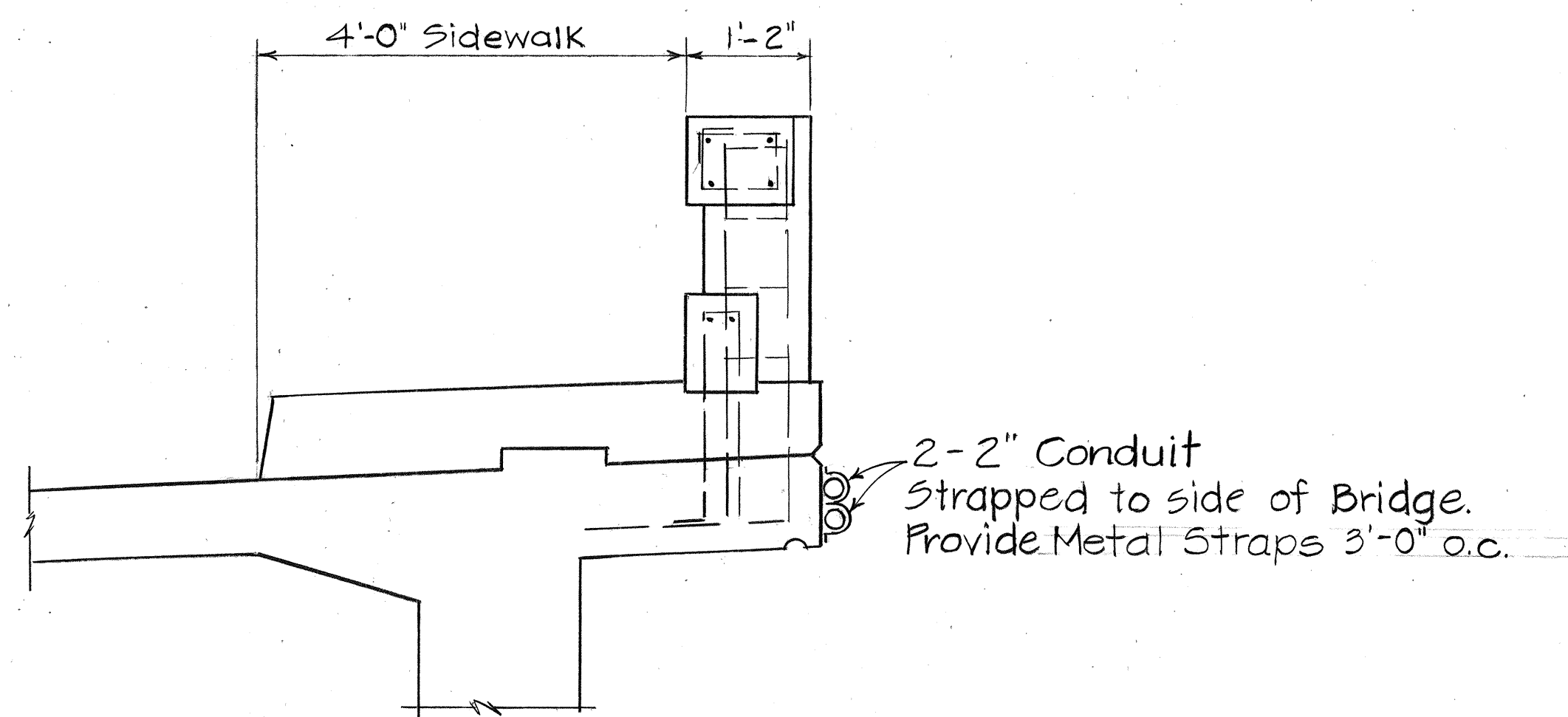


SIGN INSTALLATION DETAILS AT STA. 265+85 ±
KAL. HWY. AT KAPAA QUARRY ROAD
NOT TO SCALE

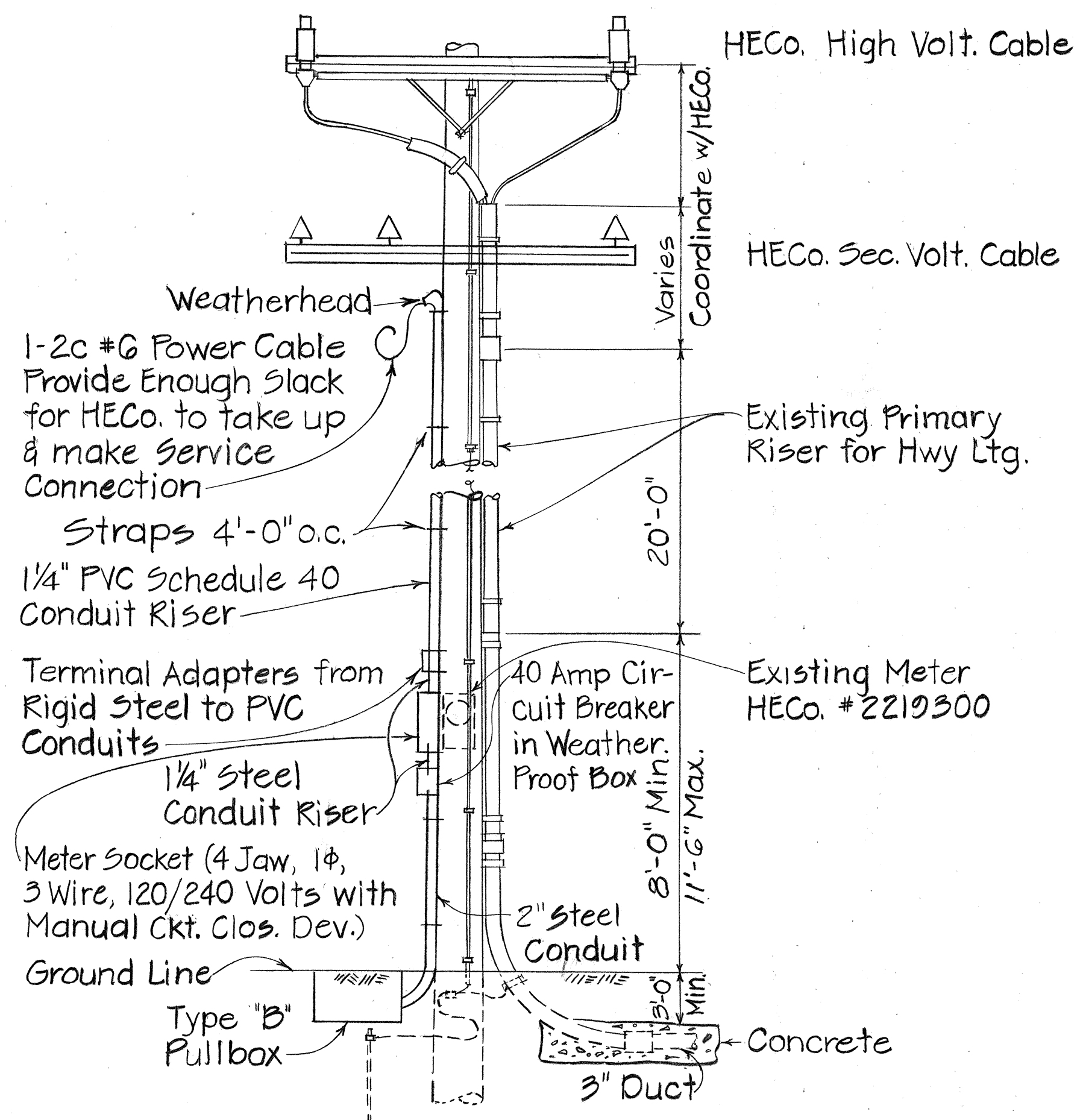


COVER DETAIL
MODIFIED TYPE "B" PULL BOX

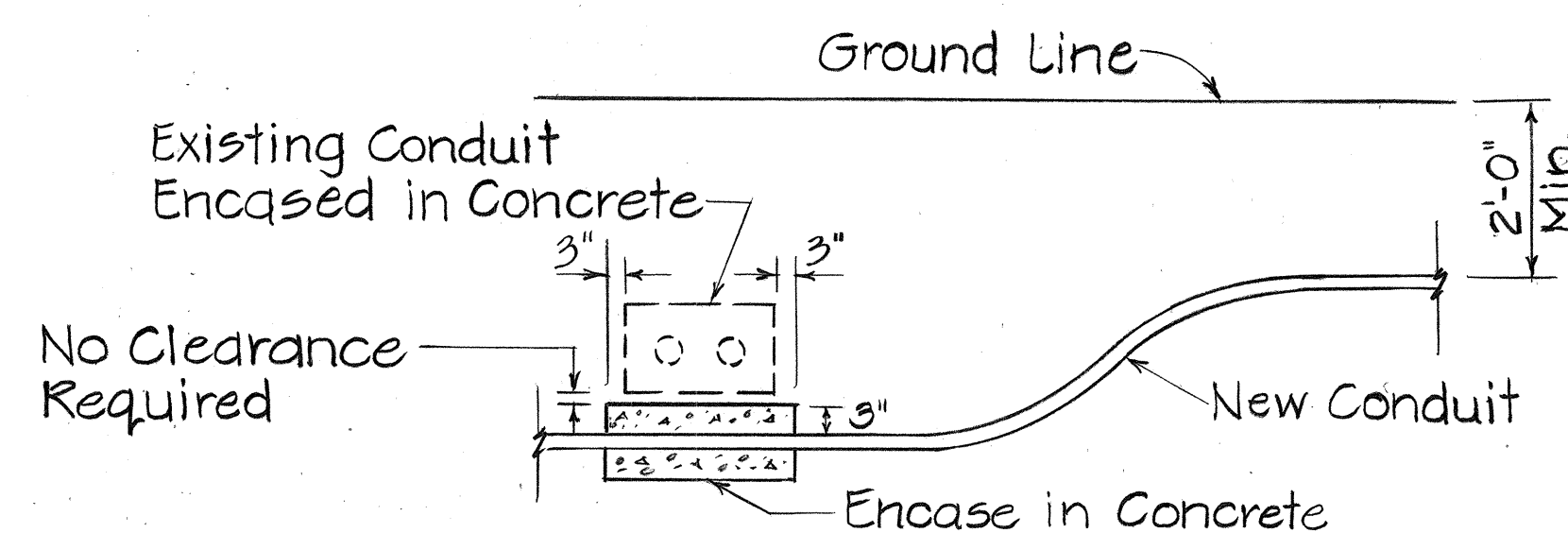
NOTE:
Hot-Dip Galvanize
Cover After
Fabrication



DETAIL OF CONDUIT INSTALLATION
ON KAHANAIKI BRIDGE
NOT TO SCALE



POLE P118 SECONDARY RISER DETAIL
NOT TO SCALE



CONDUIT BY-PASS DETAIL
NOT TO SCALE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

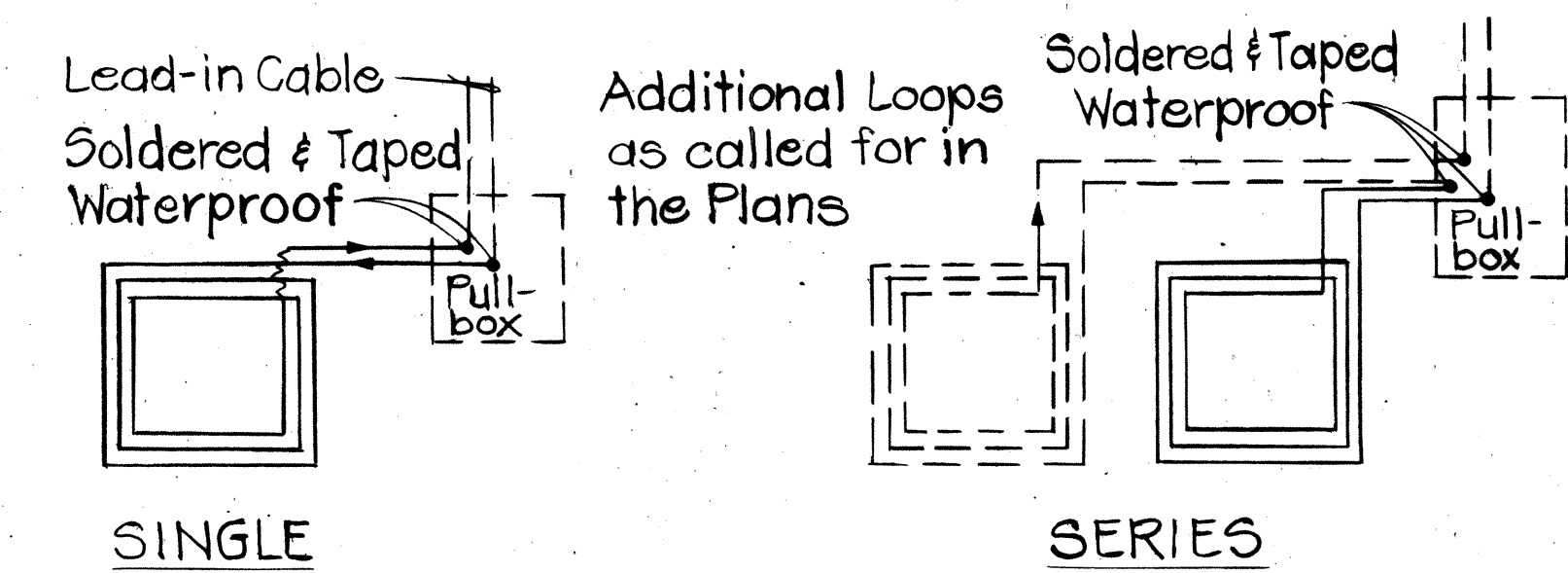
MISCELLANEOUS DETAILS

PROJ. NO. G1B-01-79

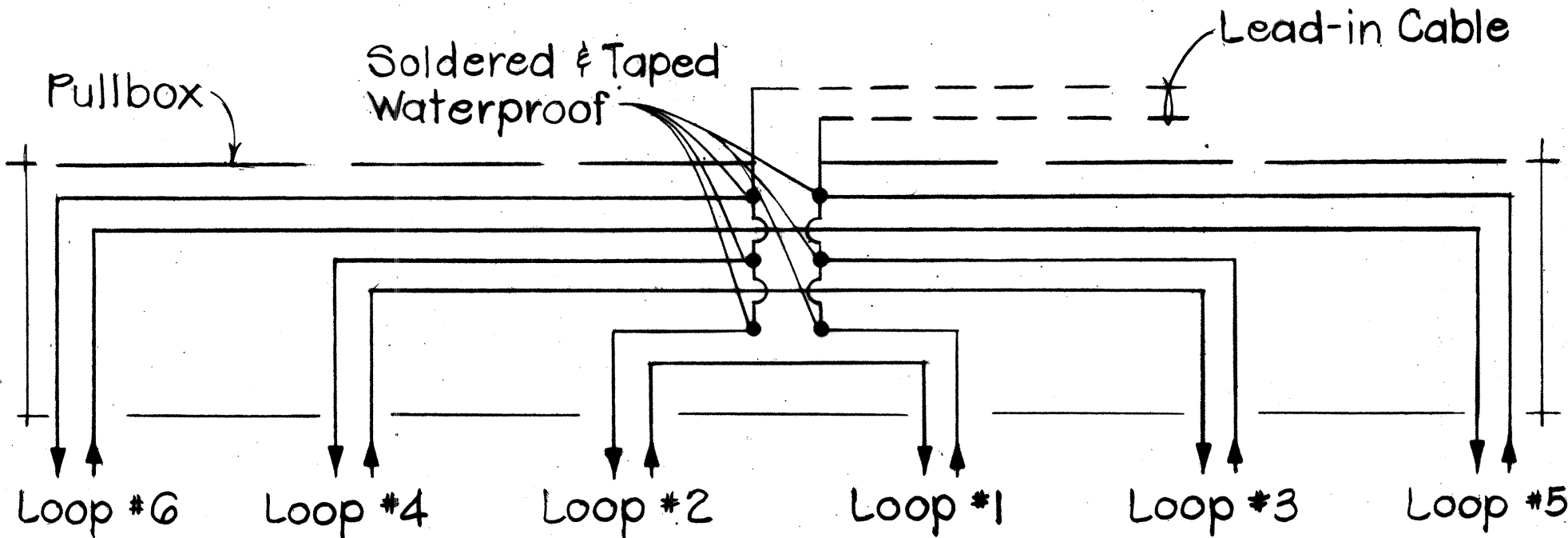
NOT TO SCALE AUG. 1978

SHEET No. 8 OF 24 SHEETS

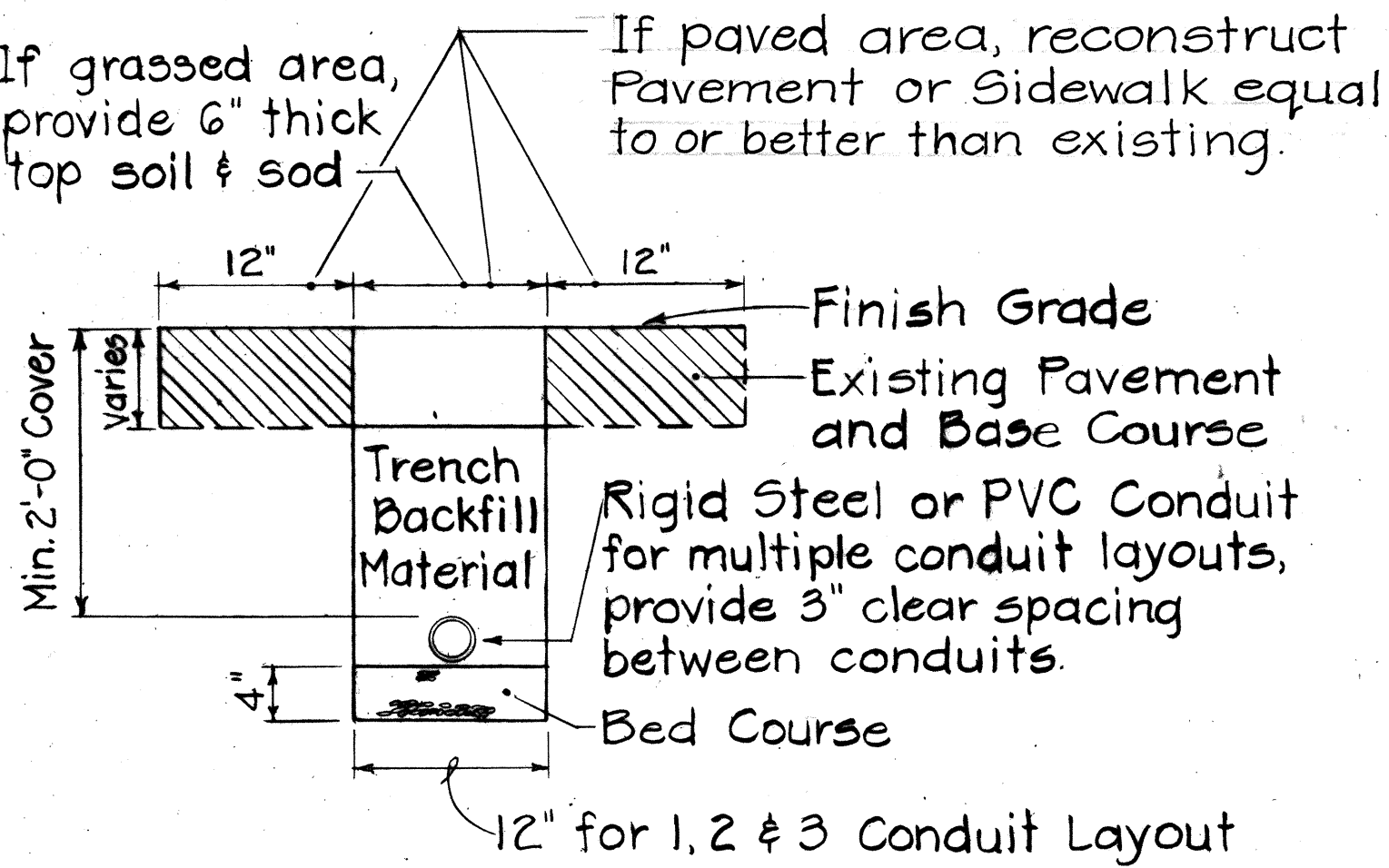
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	618-01-79	1979	9	24



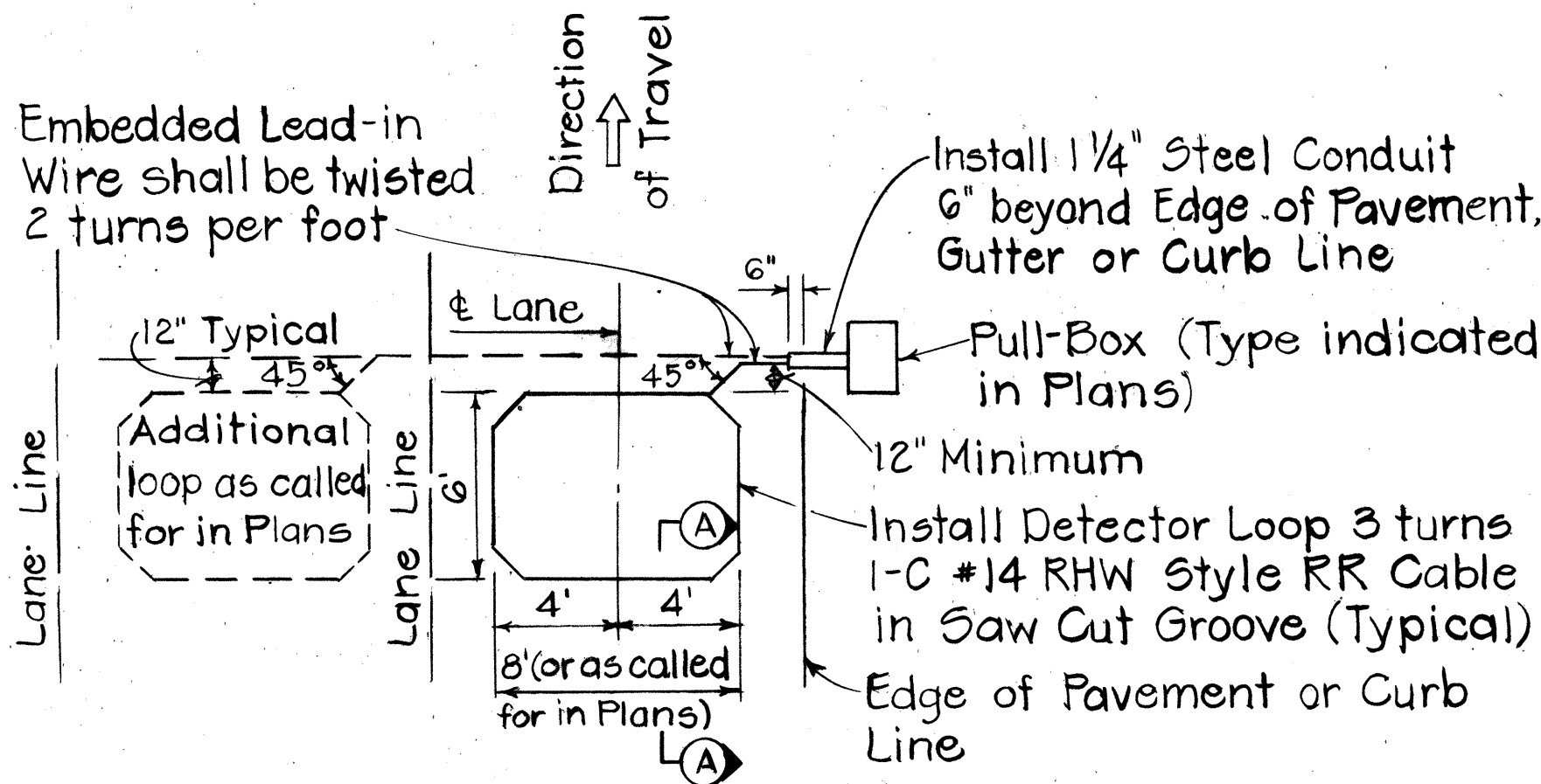
TYPICAL LOOP CONFIGURATIONS



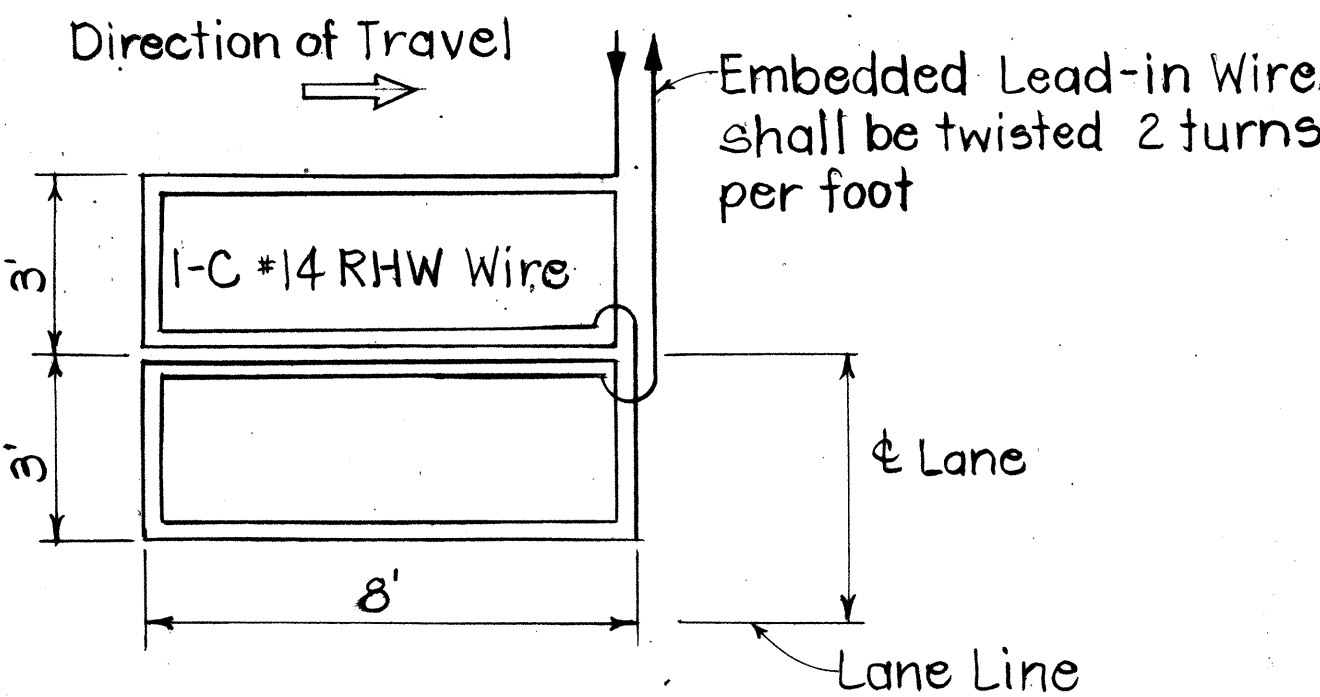
TYPICAL SERIES - PARALLEL LOOP CONNECTION



TYPICAL TRENCH SECTION FOR CONDUIT

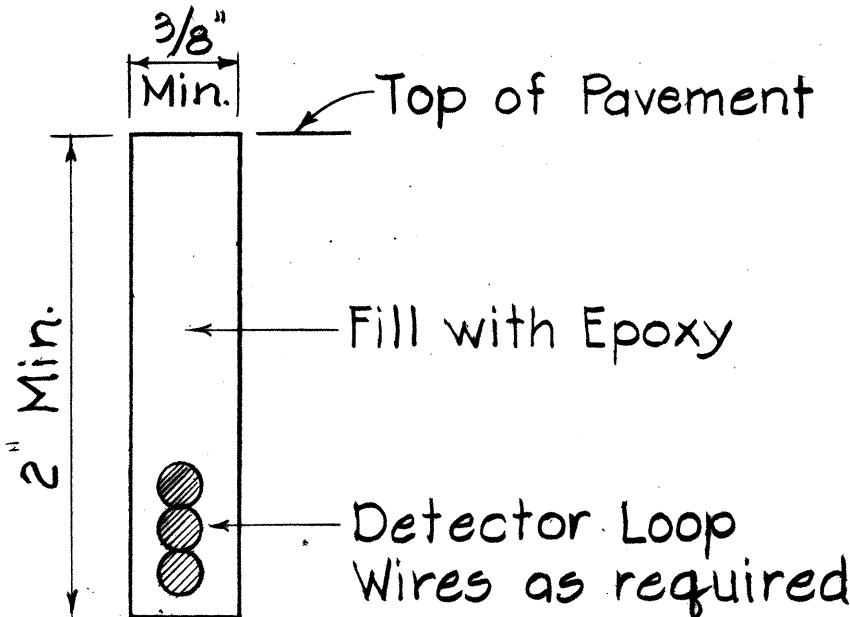


PLAN - THRU LANE LOOP LAYOUT

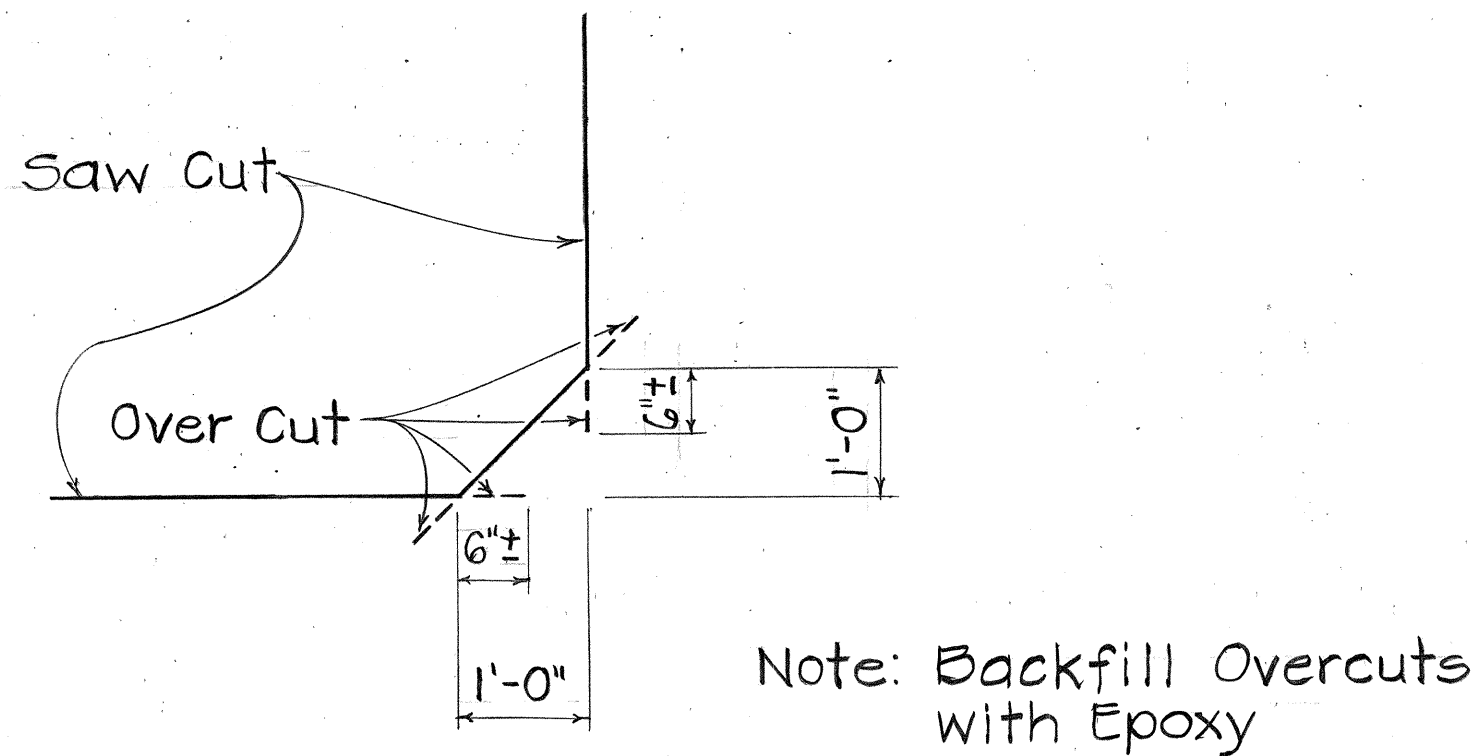


TYPICAL WIRING FOR 8'x6' LOOP DETECTOR

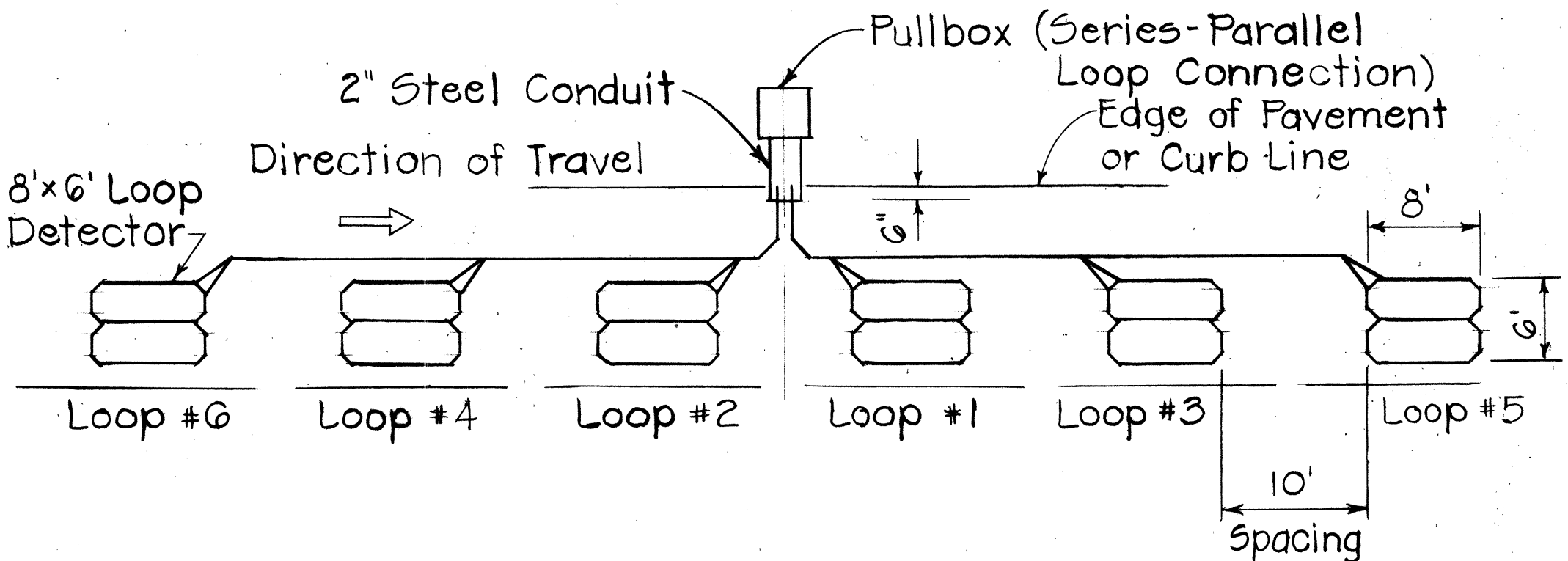
NOTE:
1. All conduits under roadways shall be steel or PVC schedule 80. All other conduits shall be steel or PVC schedule 40, unless otherwise noted.



DETECTOR LOOP SAW-CUT SECTION A-A (TYPICAL)



DETAIL OF SAW CUT AT CORNERS

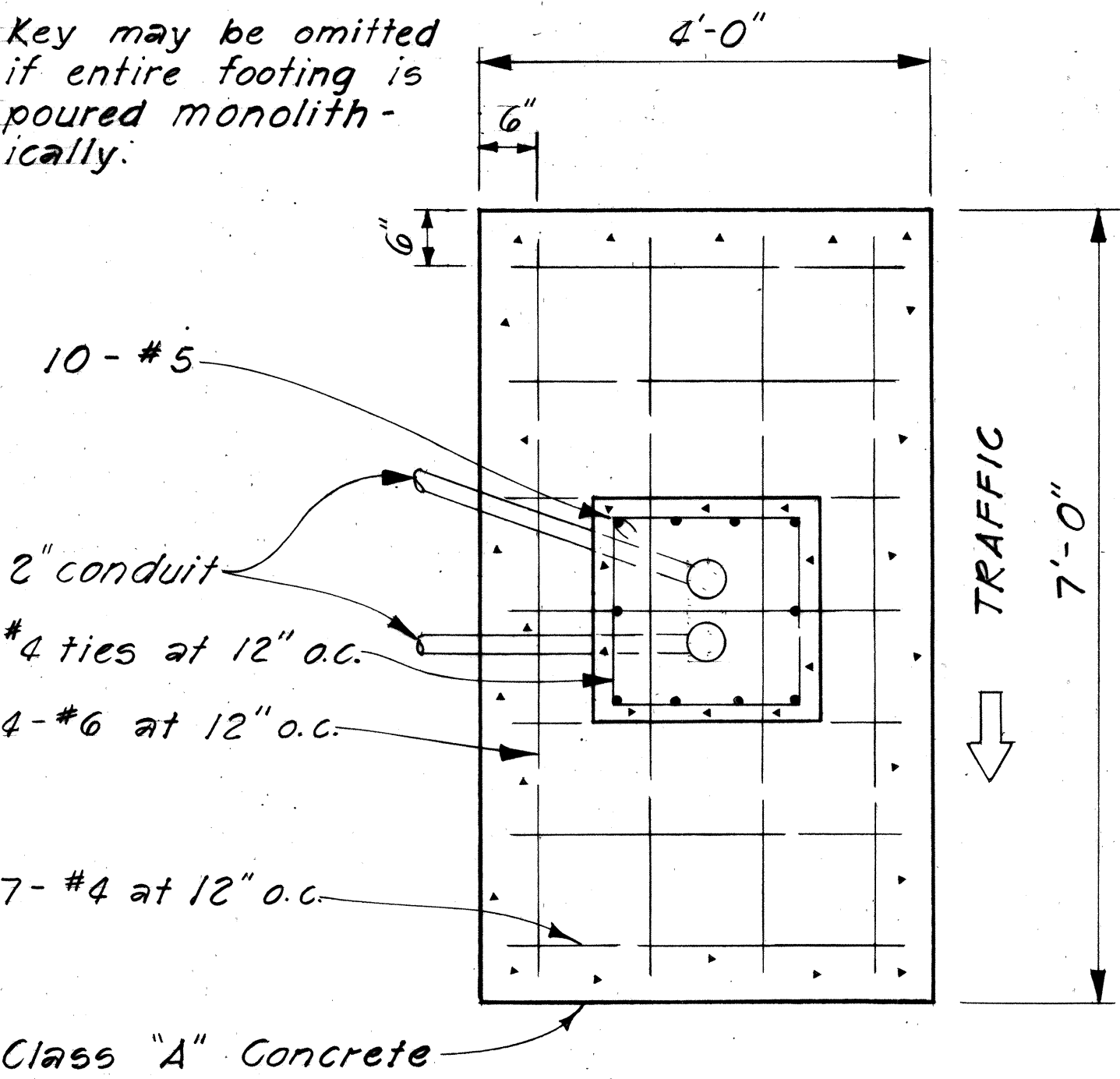


PLAN - 8'x6' LOOP DETECTOR LAYOUT

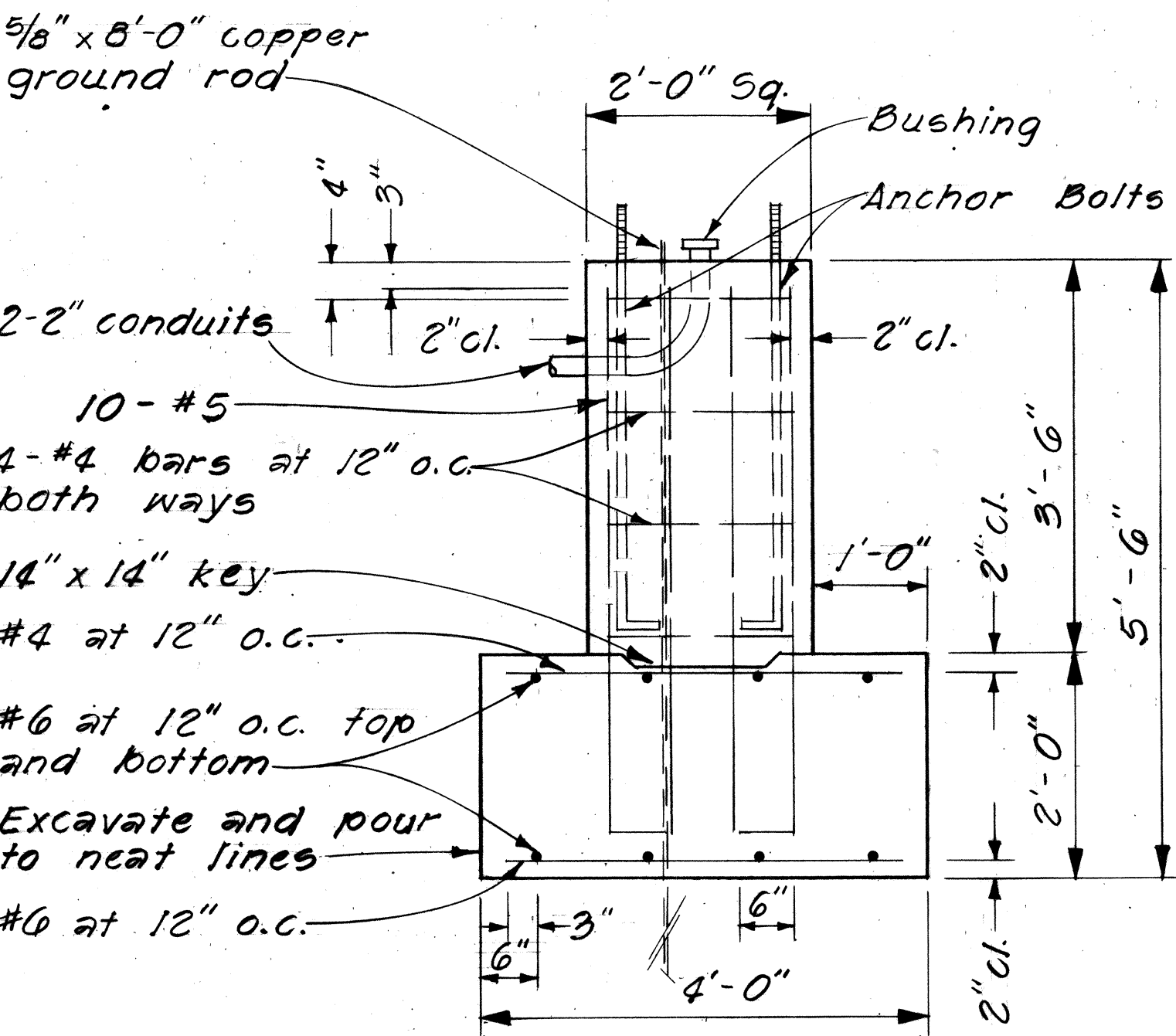
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION LAND TRANSPORTATION FACILITIES DIVISION	
TYPICAL DETAILS VEHICLE LOOP DETECTORS & MISCELLANEOUS DETAILS	
Project No. 618-01-79	
Not to Scale	August 1978
SHEET No. 9 OF 24 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-01-79	1979	10	24

NOTE:
Key may be omitted if entire footing is poured monolithically.



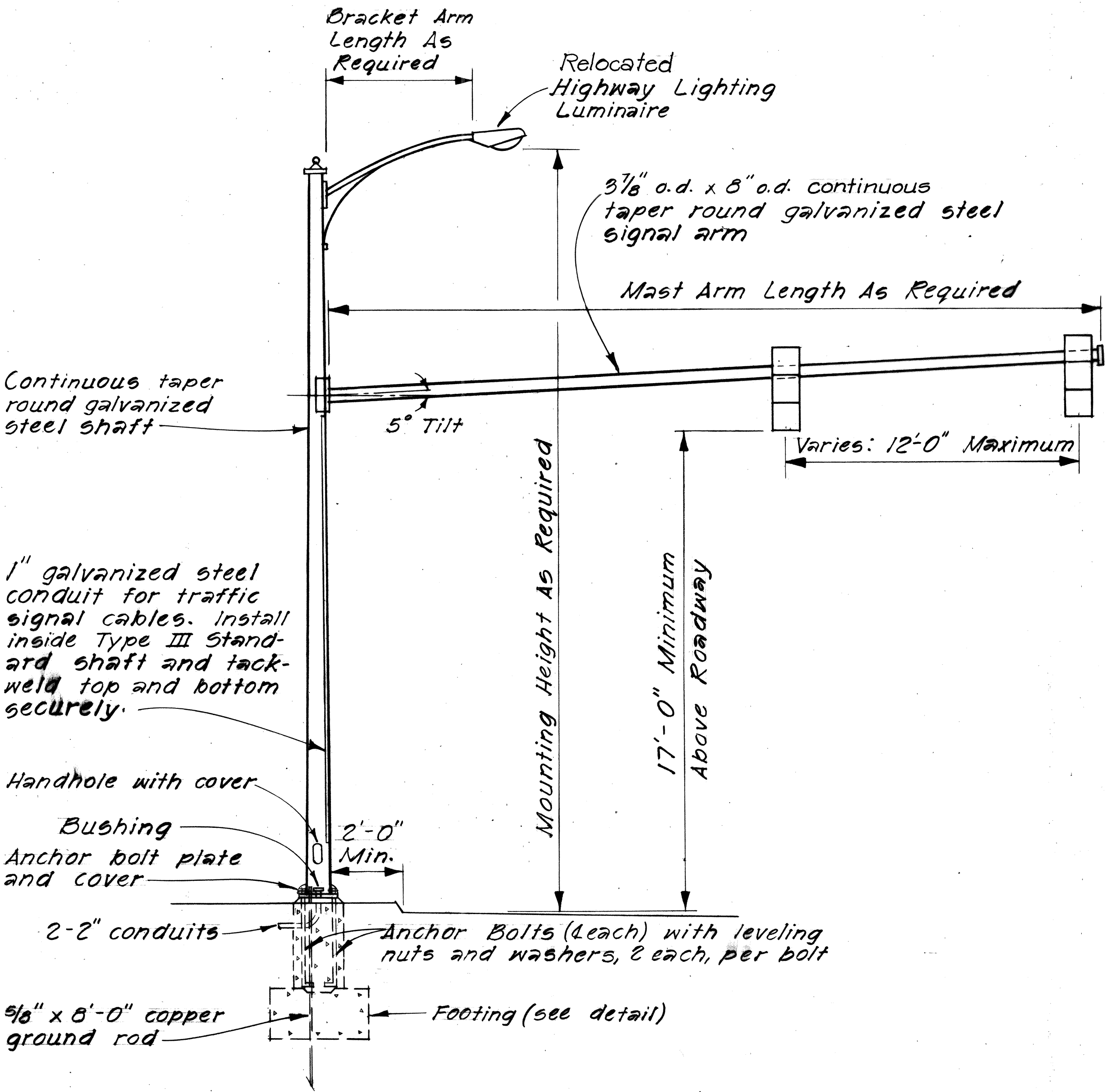
TOP VIEW



ELEVATION

FOOTING
FOR TYPE III STANDARD

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



TYPE III STANDARD

Not to Scale

NOTES:

- Item for Type III Traffic Signal Standard with mast arm and foundation includes highway lighting bracket arm.
- Highway Lighting Luminaire to be paid for under respective items in Section 622.
- For additional details see Sheet DT400.
- Size, length, and diameter of anchor bolts shall be as recommended by the manufacturer. Contractor shall submit catalog cuts to the Engineer for approval.

SUMMARY OF MAST ARMS AND BRACKET ARMS FOR TYPE III STANDARD

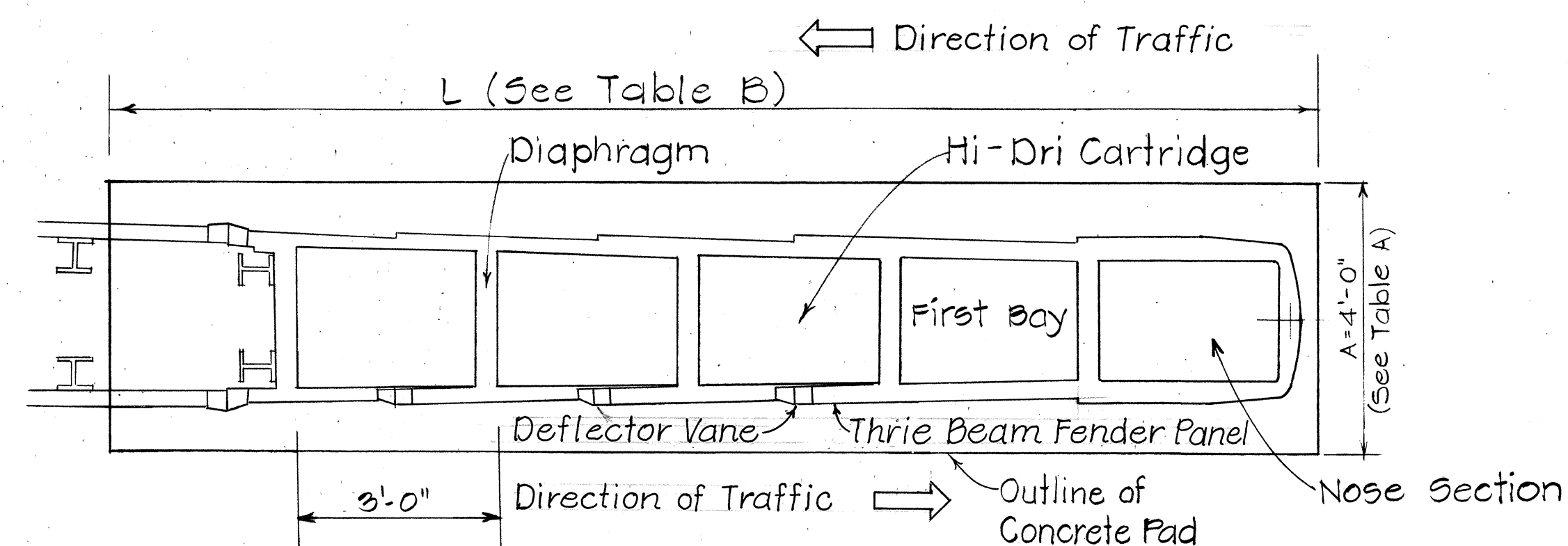
INTERSECTION	TRAFFIC SIGNAL MAST ARM LENGTH	HIGHWAY LIGHTING BRACKET ARM LEN.	MOUNTING HEIGHT
KALANIANA'OLE HWY. AT KAPAA QUARRY RD.	35'-0"	15'-0"	30'-0"

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

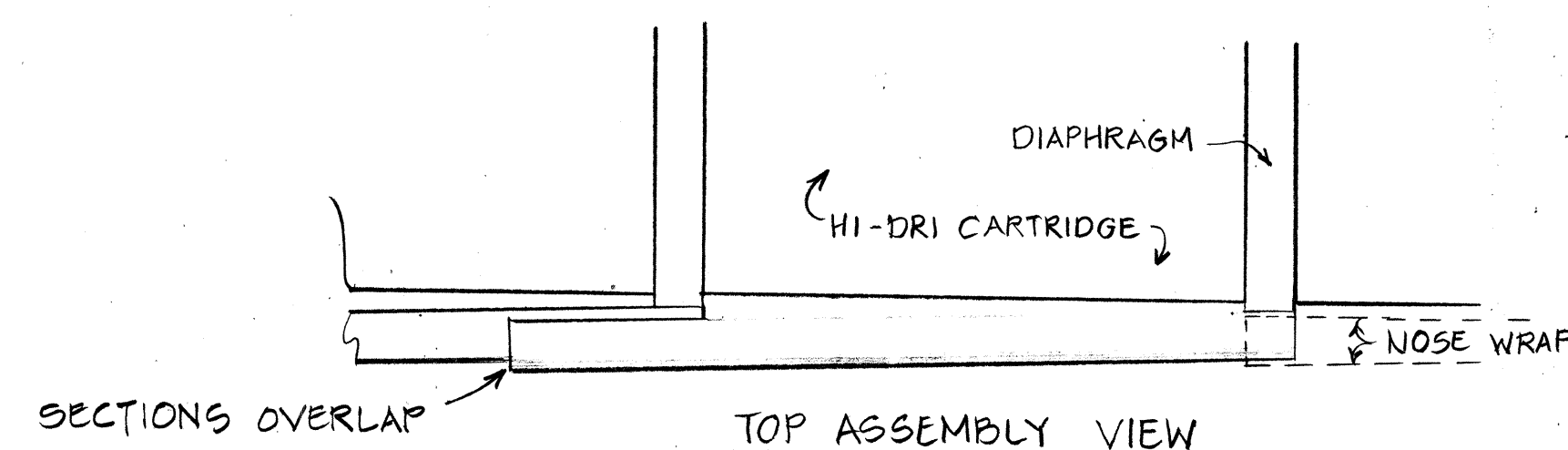
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL DETAILS
TYPE III TRAFFIC
SIGNAL STANDARD

SCALE: As Shown DATE: April, 1977
SHEET No. 10 OF 24 SHEETS

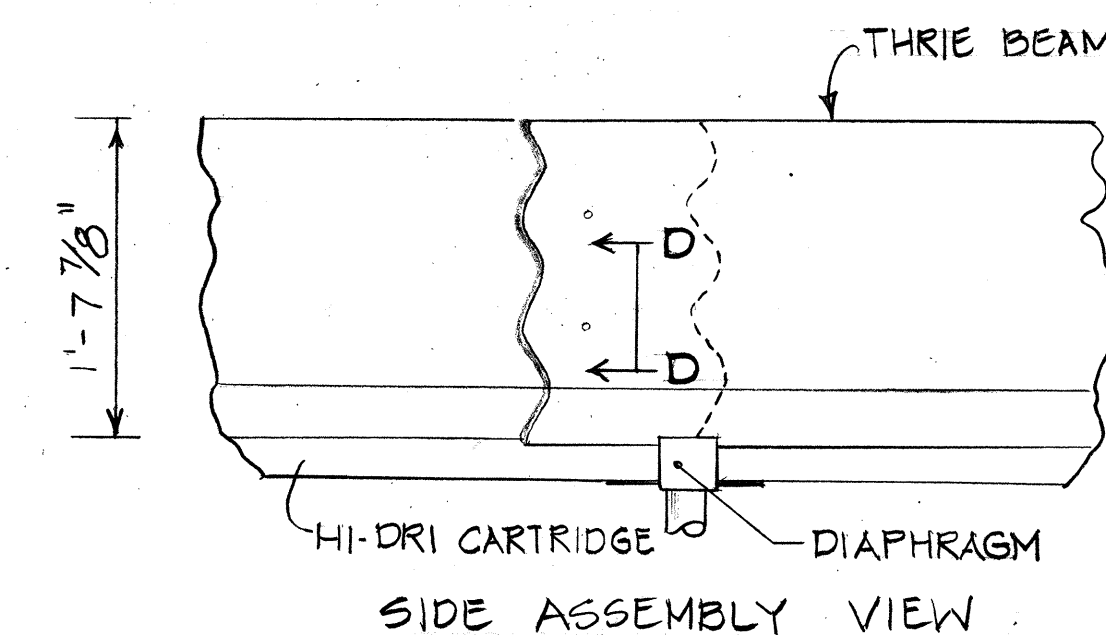
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	61B-01-79	1979	11	24



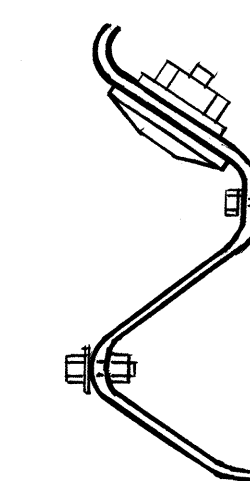
PLAN
Scale: $\frac{1}{2}" = 1'-0"$



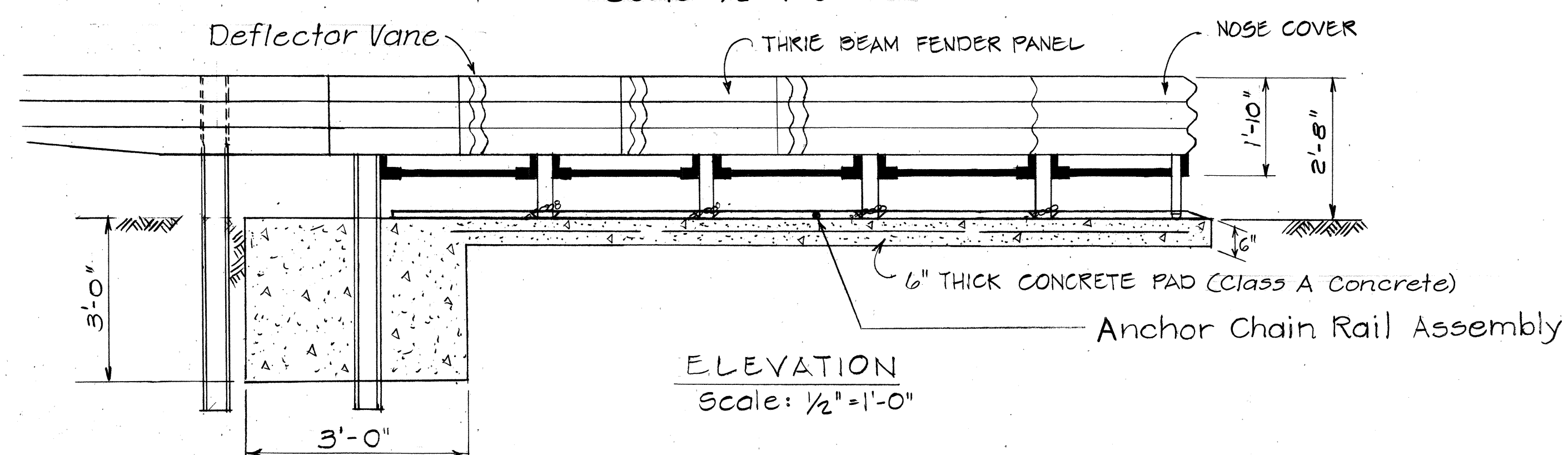
TOP ASSEMBLY VIEW



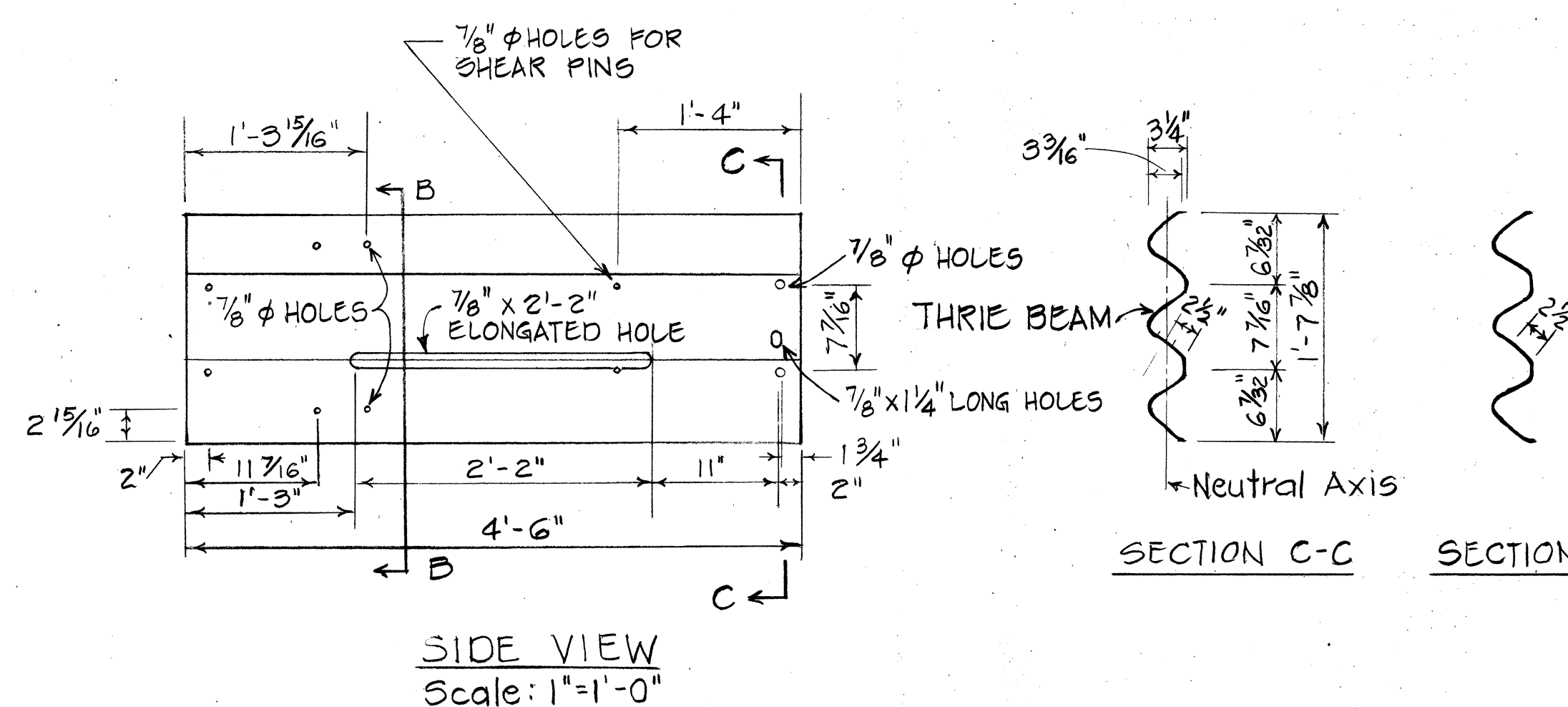
SIDE ASSEMBLY VIEW



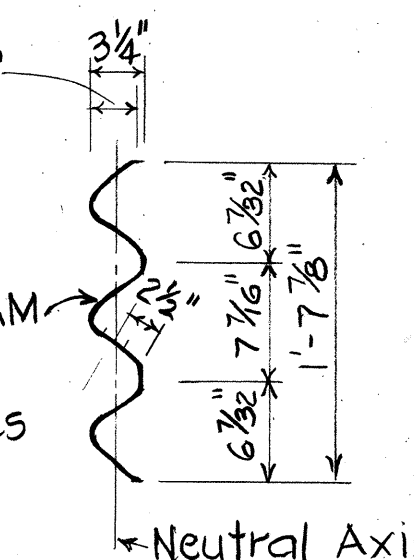
SECTION D-D



ELEVATION
Scale: $\frac{1}{2}'' = 1'-0''$



SIDE VIEW
Scale: 1"=1'-0"



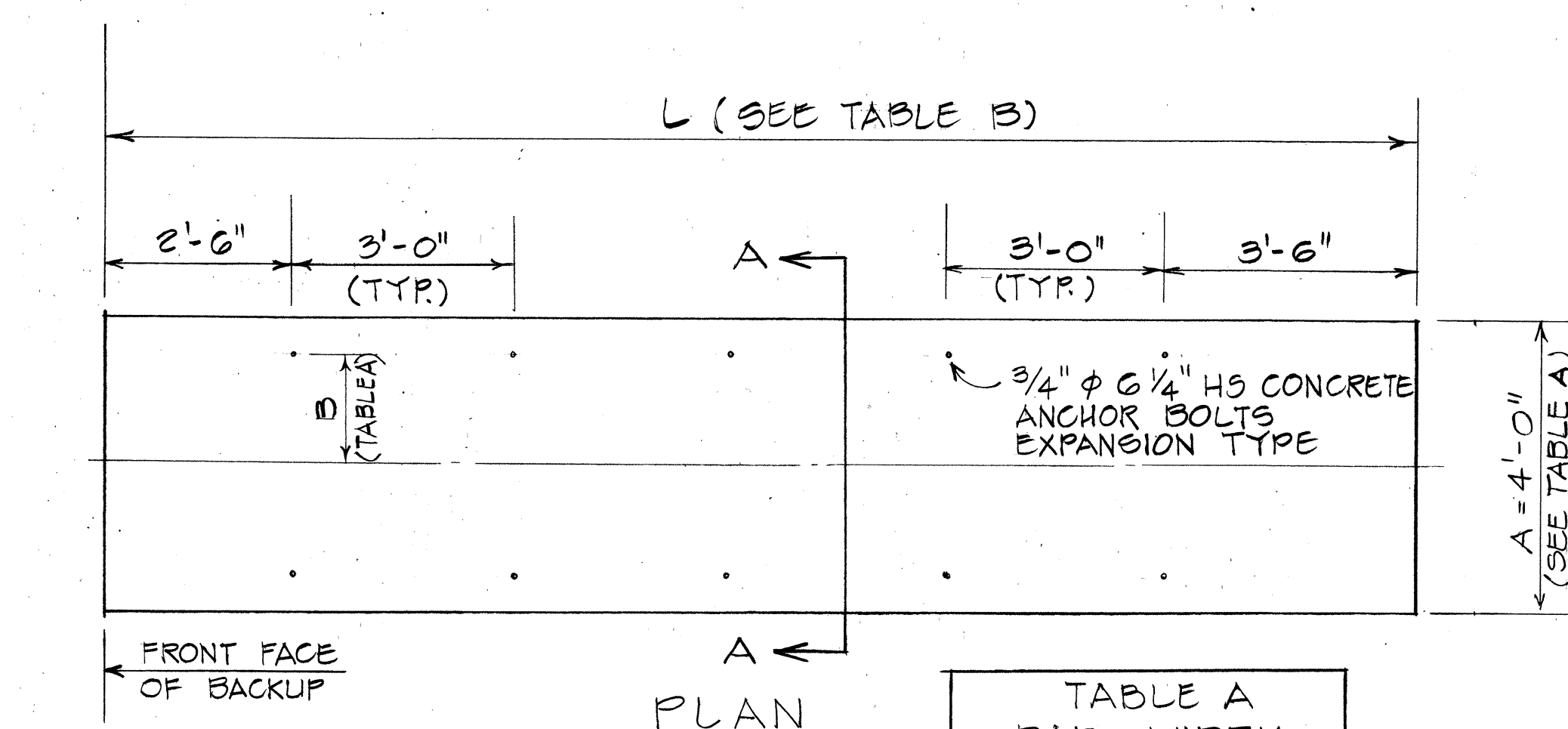
SECTION C-C



SECTION B-B

NOTE:

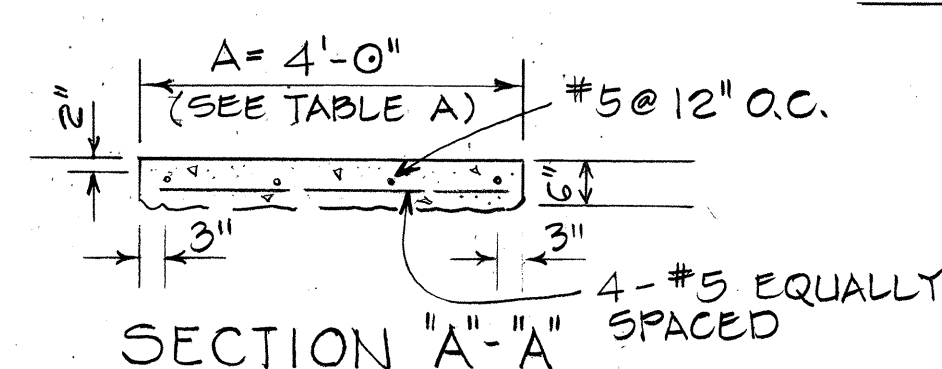
1. The Contractor shall verify with the manufacturer, any amendments or revisions thereof as may be made from time to time, shall be used in this project.
2. Constant longitudinal and transverse slope throughout Concrete Pad.
3. Concrete Pad cross slope shall not exceed 3%.
4. Outline of concrete pad shall match grades with surrounding median area.



PLAN

MODEL NO.	A	B
200200	4'-0"	1'-0"
206206	4'-0"	1'-3"
300300	4'-0"	1'-6"

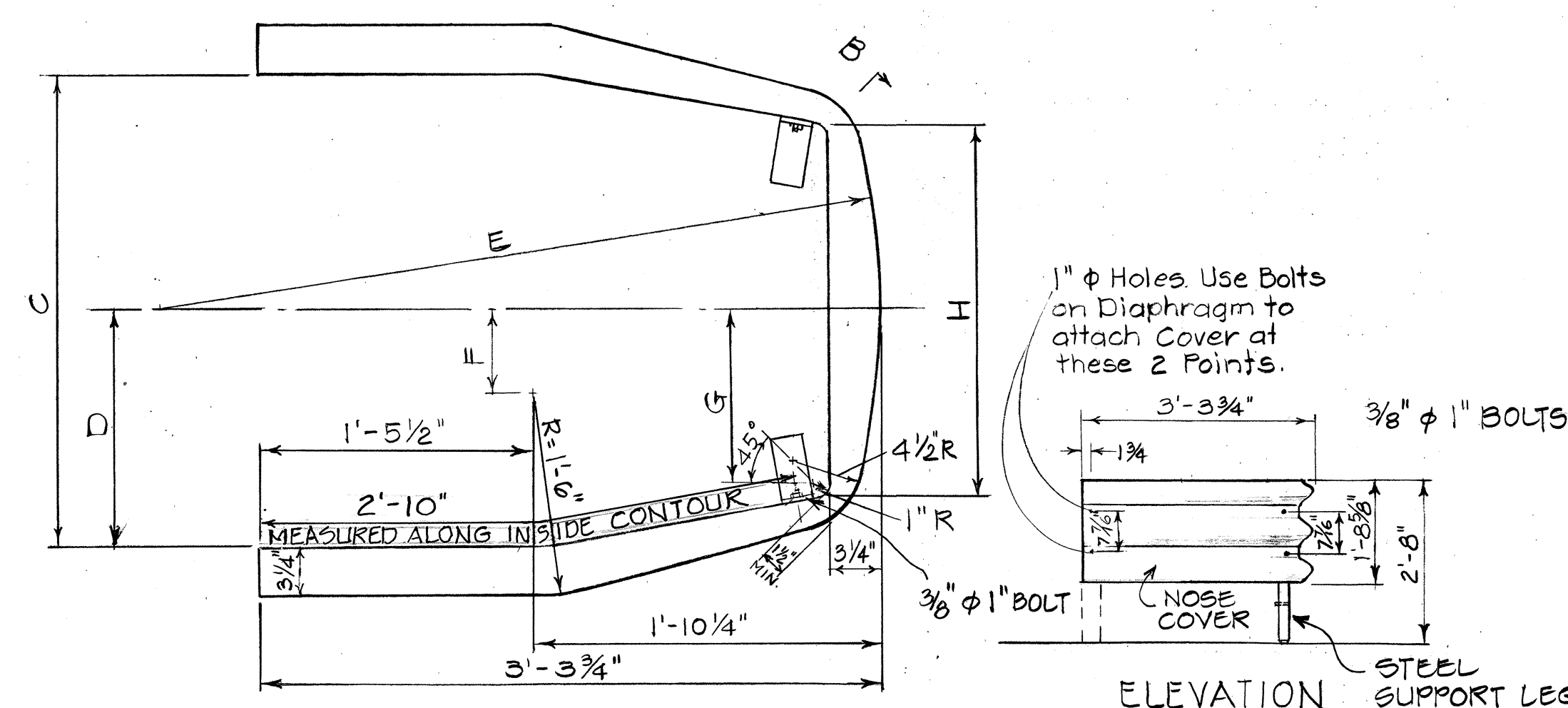
NO. OF BAYS	L	ANCHOR BOLTS QUANT
4	15'-6"	14
5	18'-6"	16
6	21'-6"	20
7	24'-6"	22
8	27'-6"	24
9	30'-6"	26
10	33'-6"	30
3	12'-6"	12



SECTION "A" - "A"

CONCRETE PAD DETAILS

Scale: $\frac{1}{2}'' = 1' - 0''$



ELEVATION

STEEL
SUPPORT LEG

PLAN
N.T.S.

UNIT SIZE	ASST. NO	C	D	E	F	G	H
2' - 0"	35-02-031	2'-0"	1'-0"	2'-13/8"	3'-1/4"	8"	1'-6"
2' - 6"	35-02-032	2'-6"	1'-3"	3'-10"	6'-1/4"	11"	2'-0"
3' - 0"	35-02-032	2'-6"	1'-3"	3'-10"	6'-1/4"	11"	2'-0"

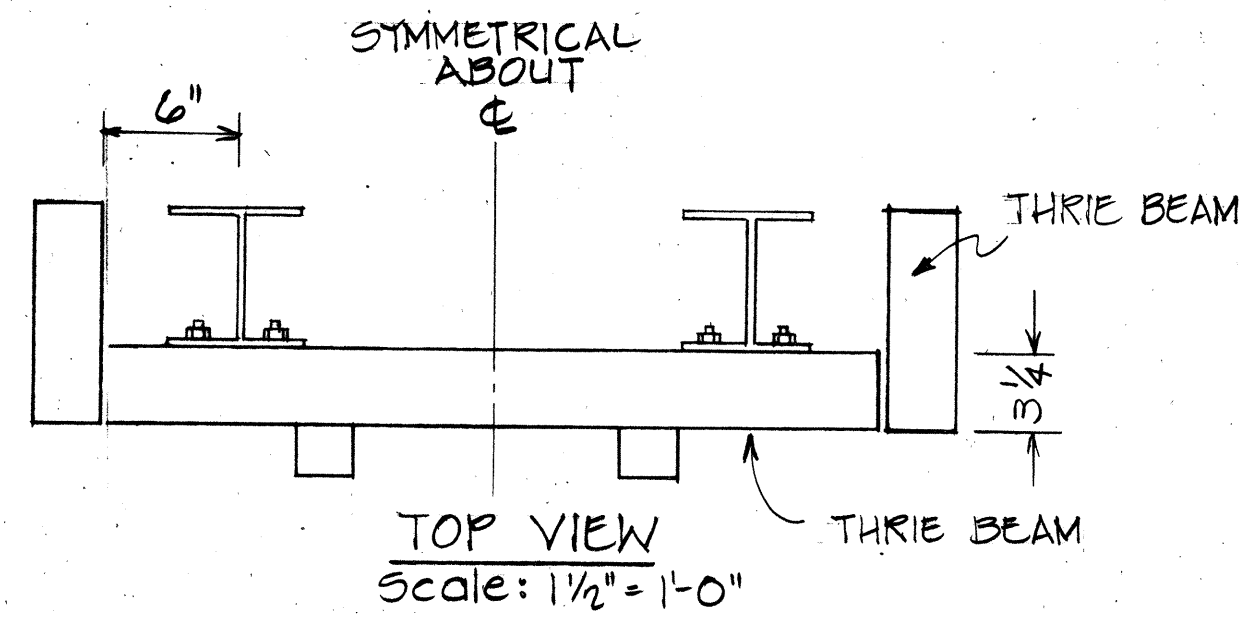
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
DETAILS OF GUARD RAIL
ENERGY ABSORBING TERMINAL

Scale: As Shown Date: 1978

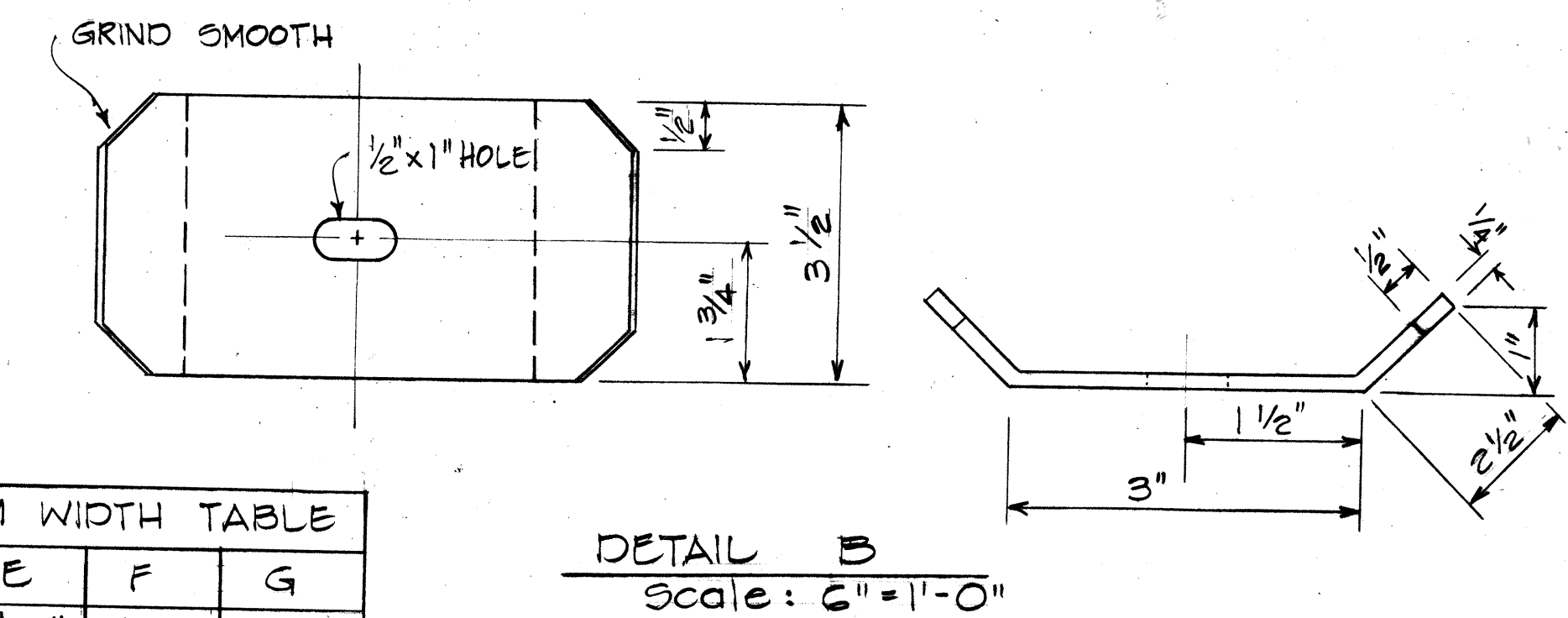
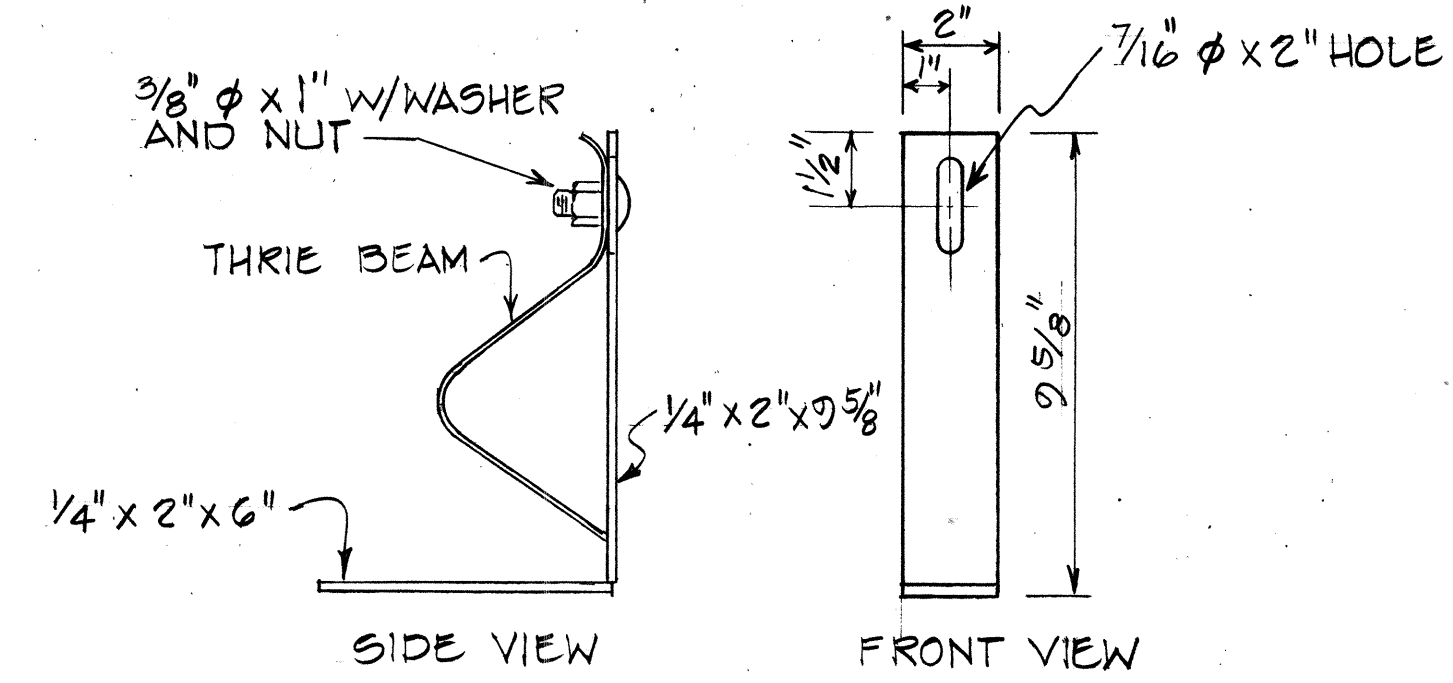
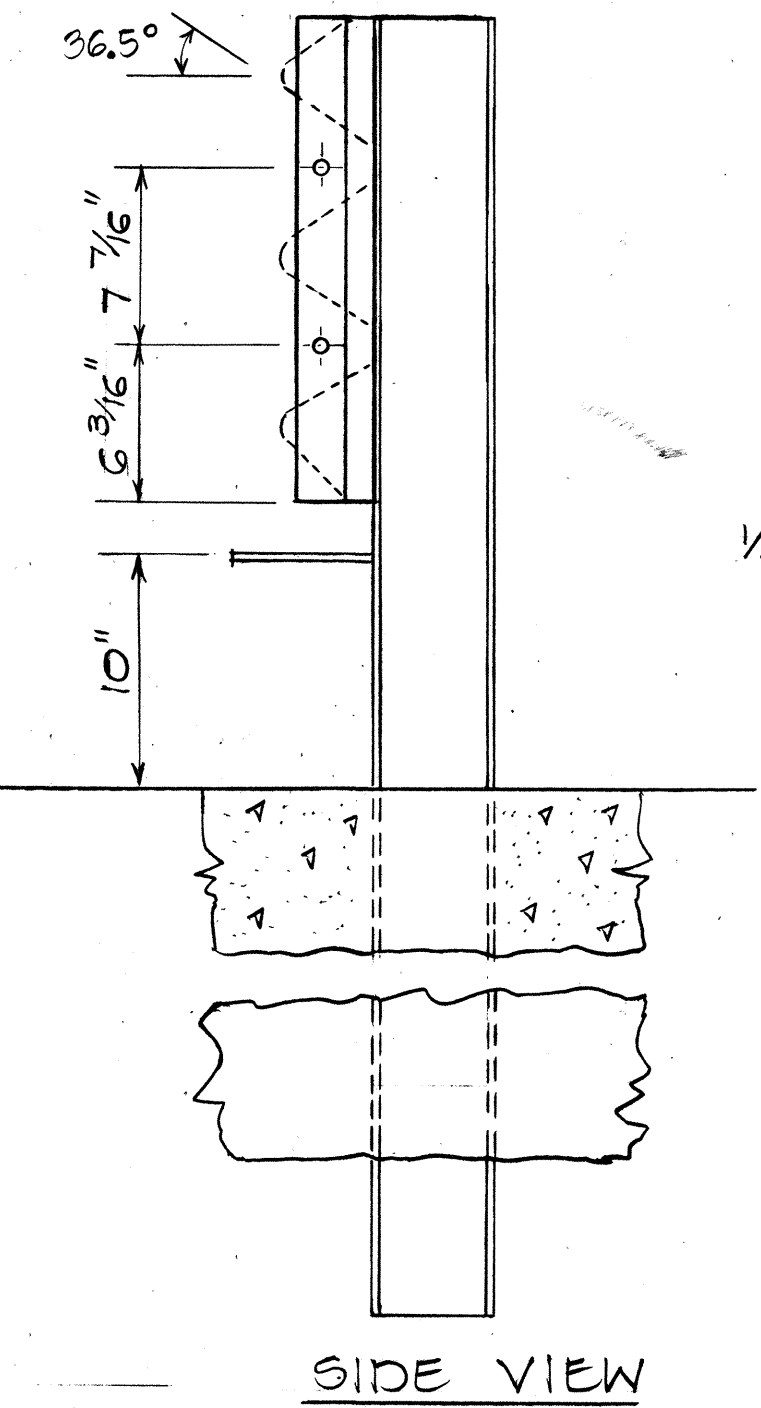
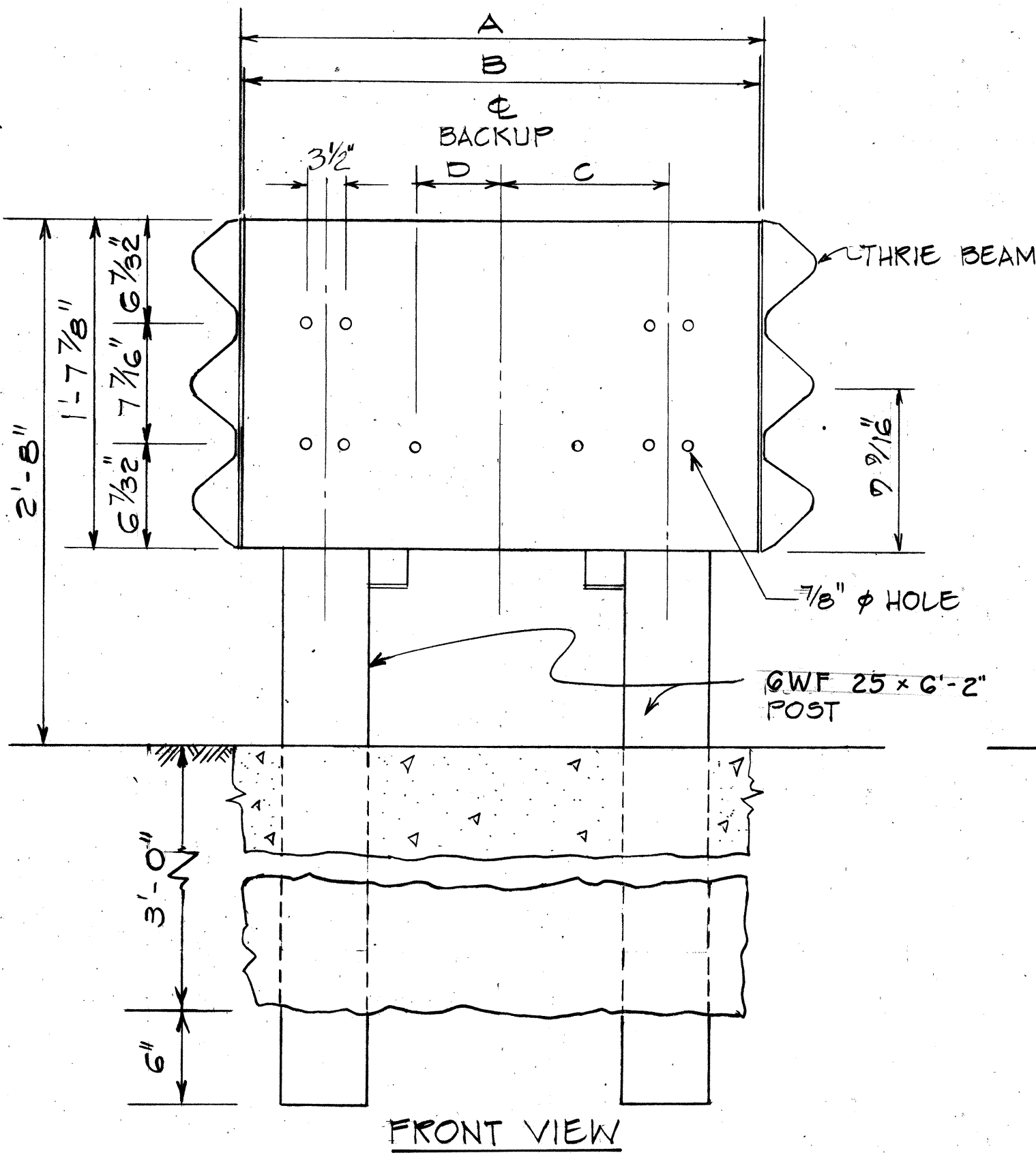
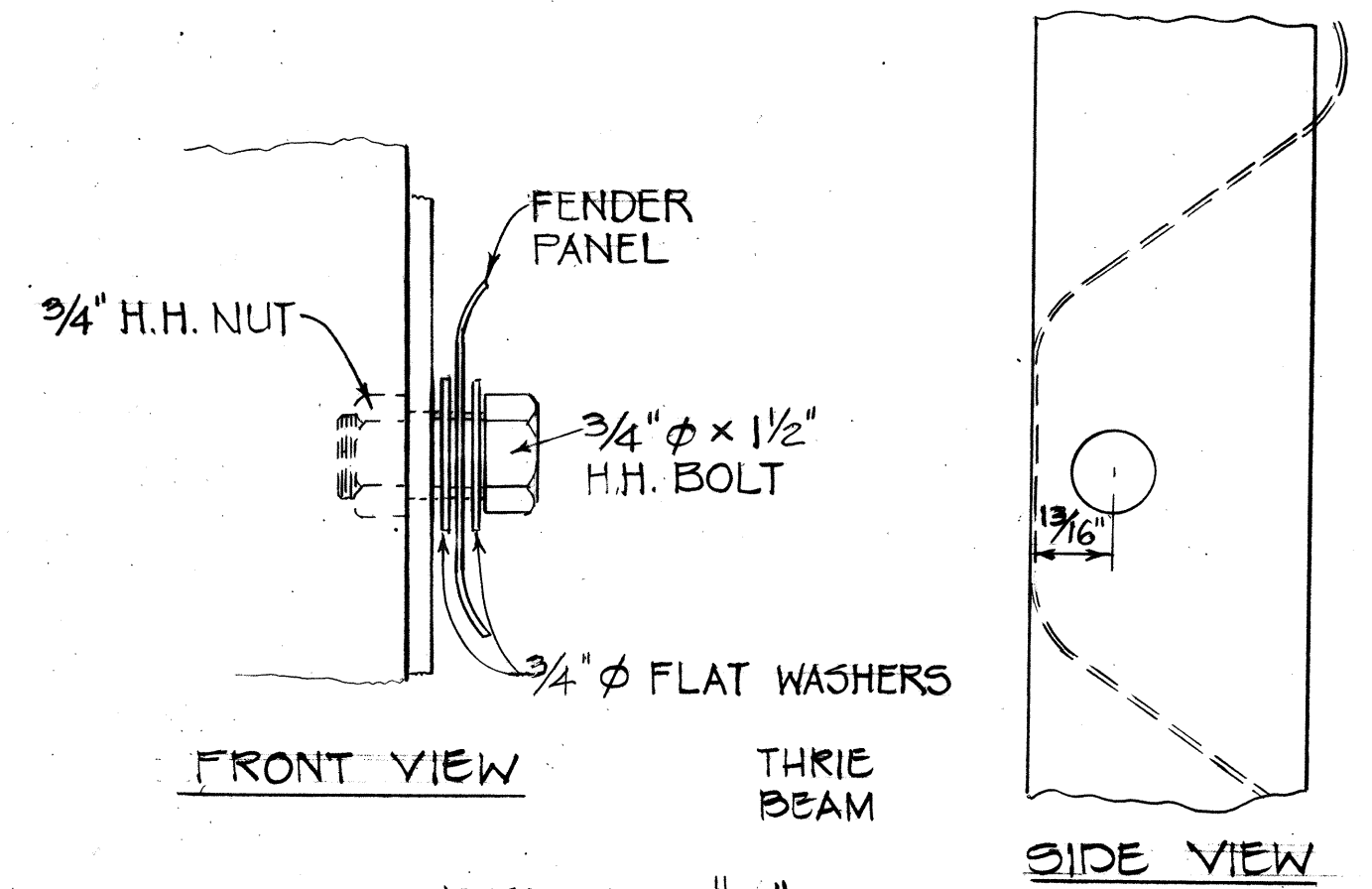
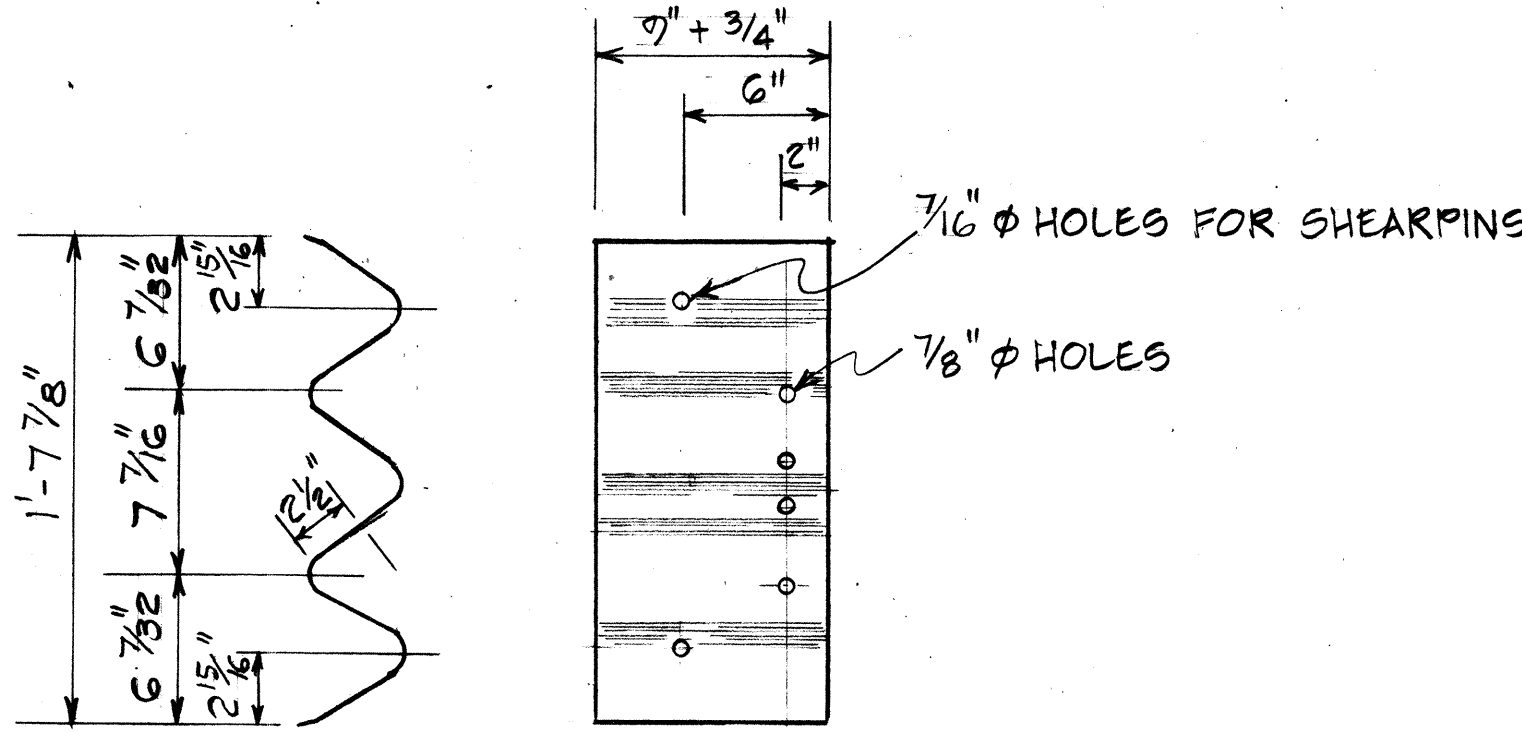
SHEET No. 11 OF 24 SHEETS

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

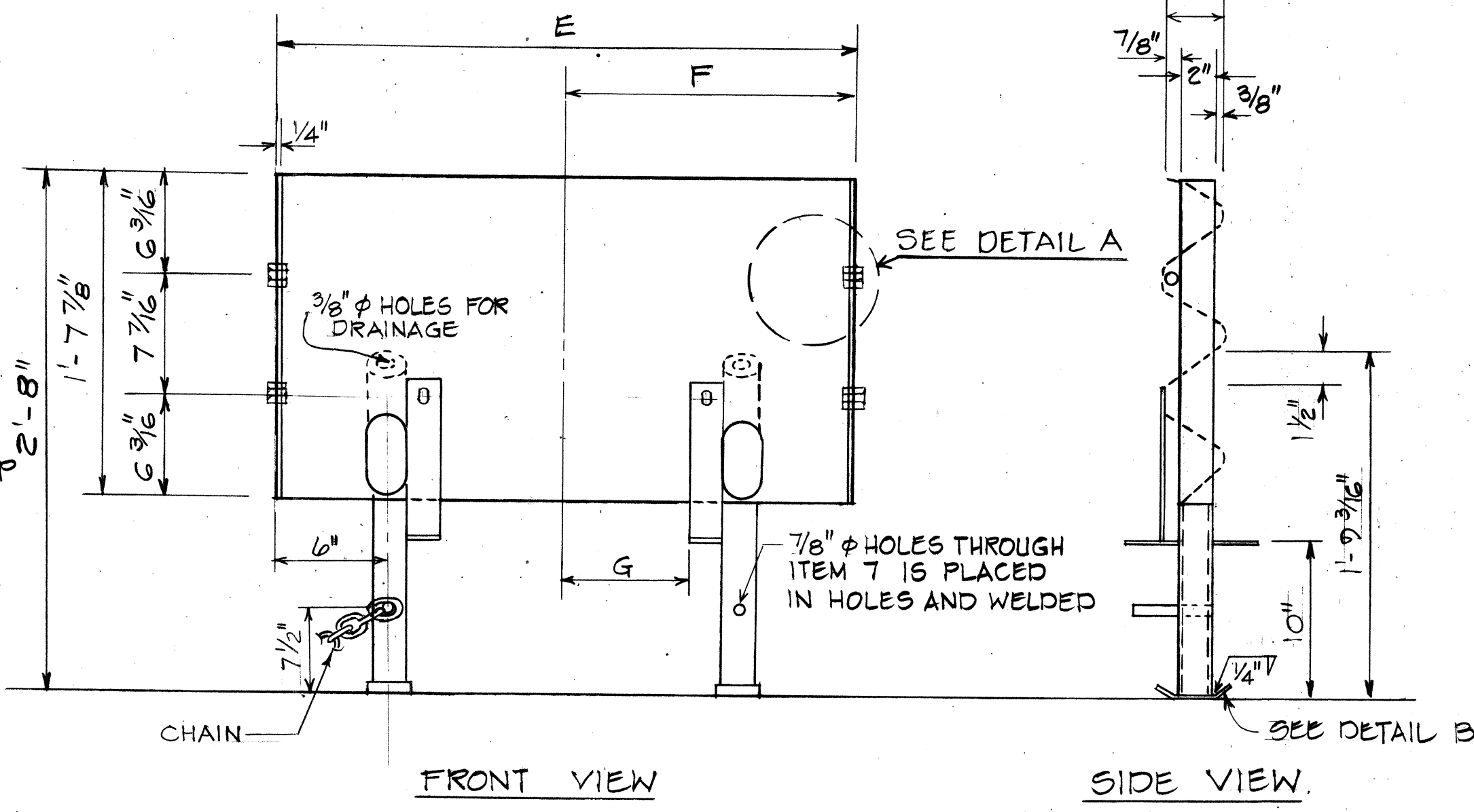
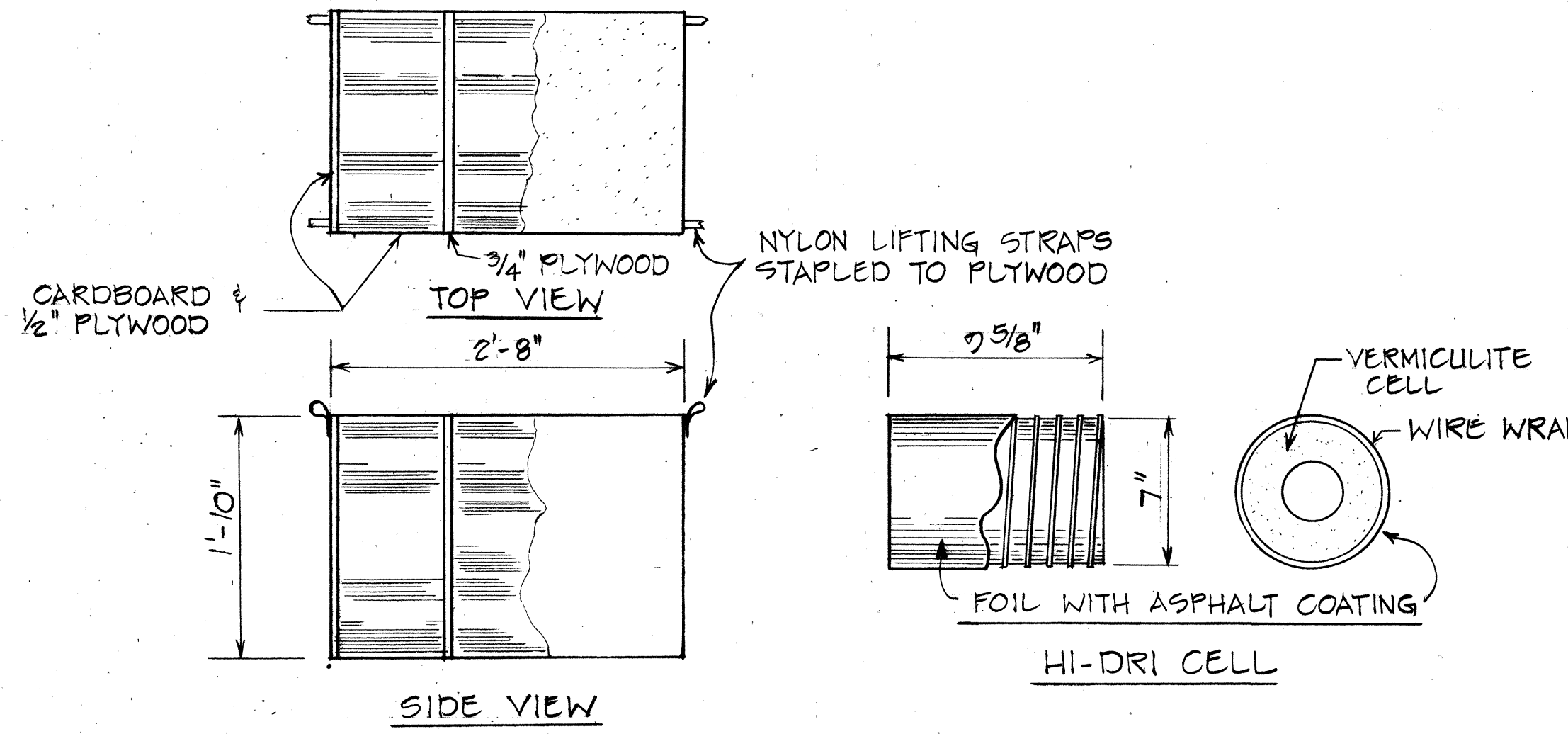
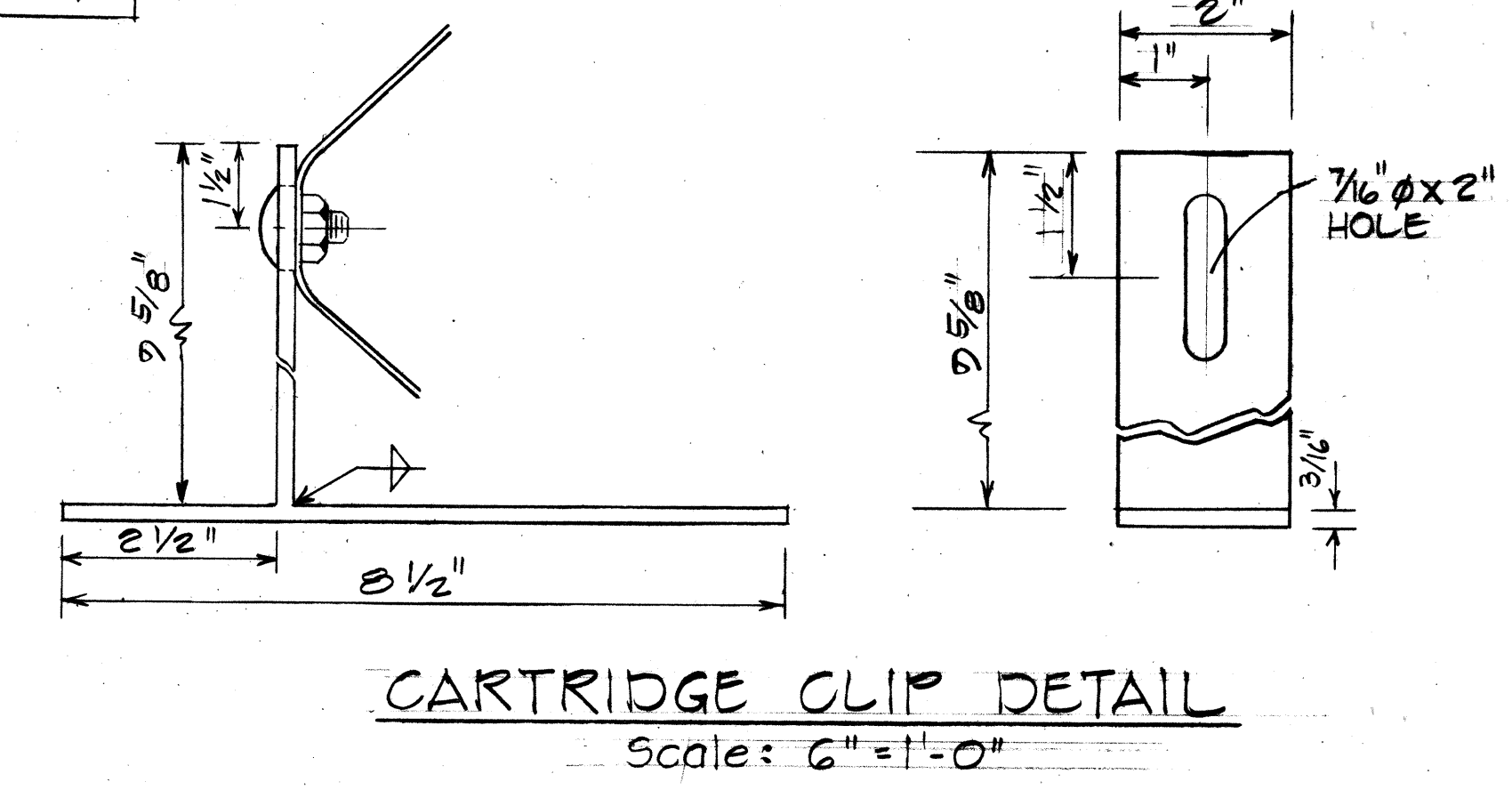
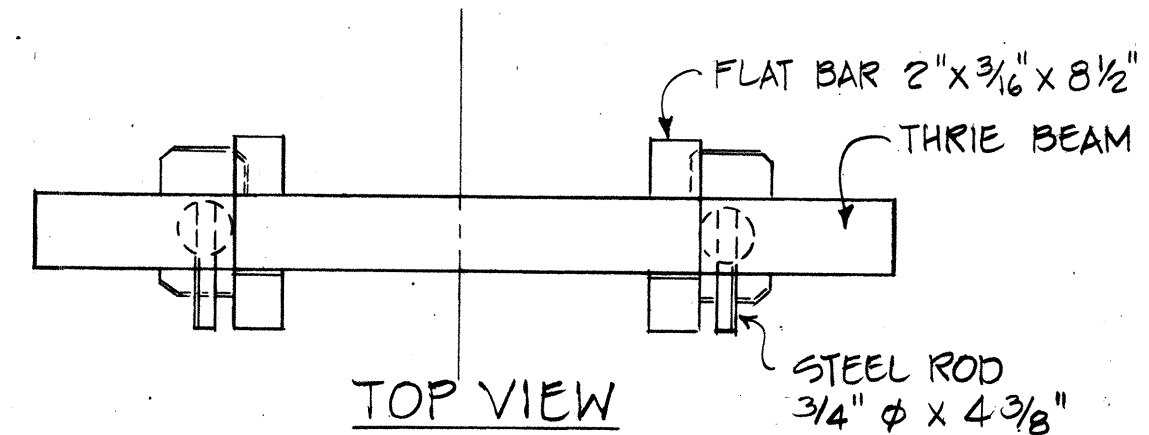
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	618-01-79	1979	12	24



BACKUP WIDTH TABLE				
UNIT WIDTH	A	B	C	D
2'-0"	2'-0"	1'-11 1/2"	0'-6"	2"
2'-6"	2'-6"	2'-5 1/2"	0'-9"	5"
3'-0"	3'-0"	2'-11 1/2"	1'-0"	8"



DIAPHRAM WIDTH TABLE			
MODEL NO	E	F	G
200200 S	2'-0"	1'-0"	
206206 S	2'-6"	1'-3"	5 3/4"
300300 S	3'-0"	1'-6"	8 3/4"



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

LAND TRANSPORTATION FACILITIES DIVISION

DETAILS OF GUARD RAIL

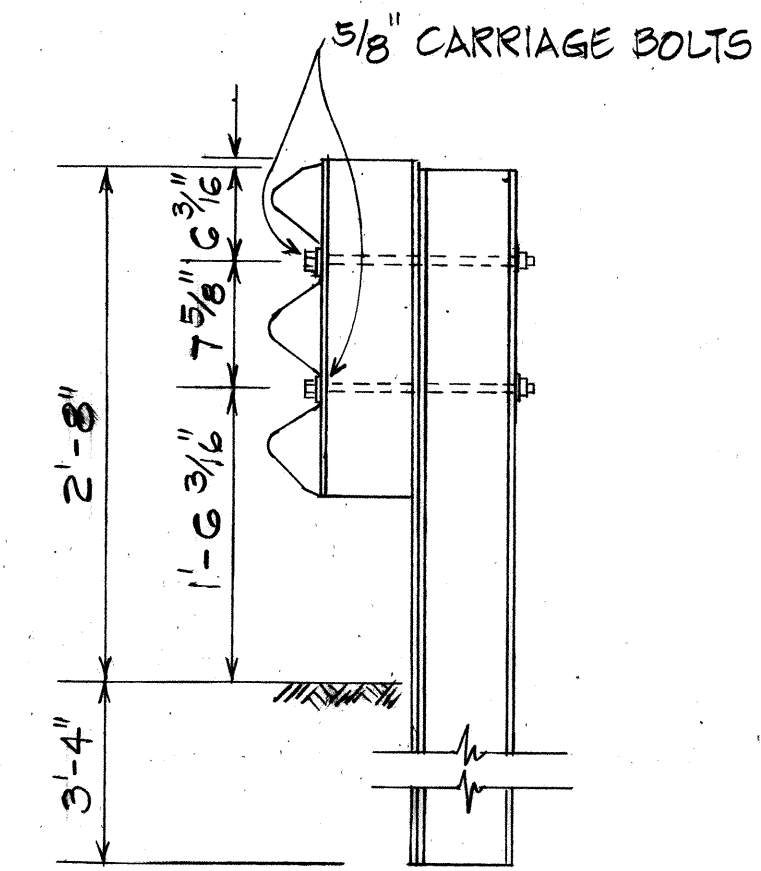
ENERGY ABSORBING TERMINAL

Scale: As Shown Date: 1978

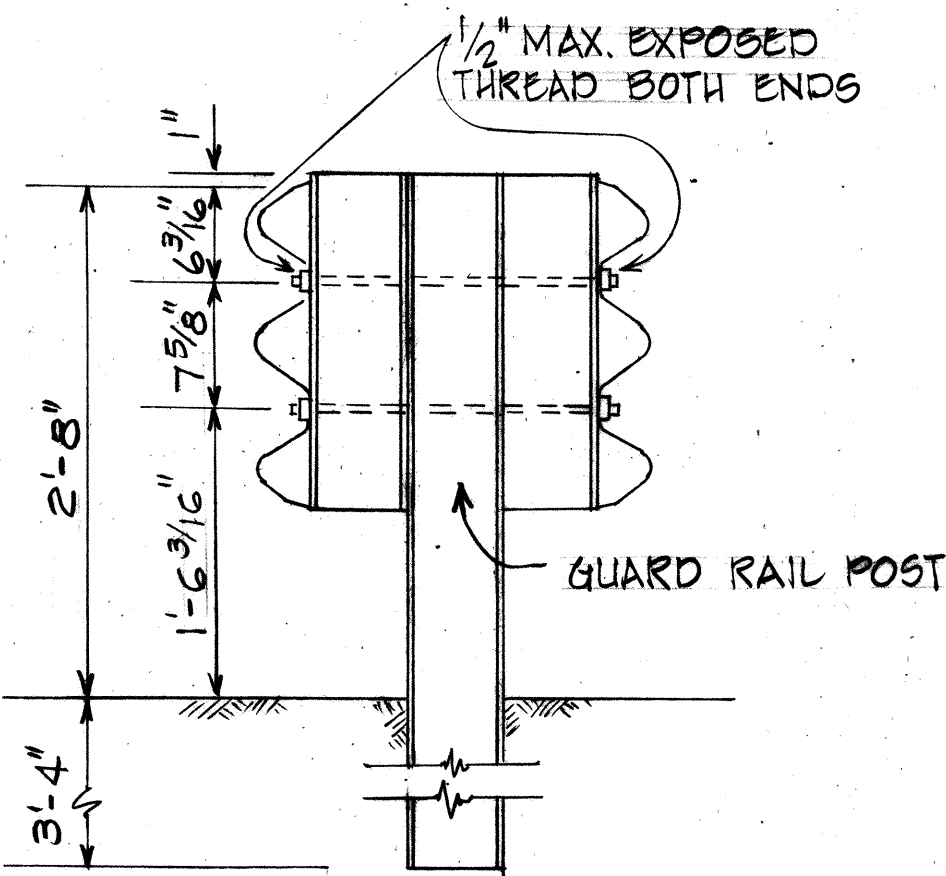
SHEET No. 12 OF 24 SHEETS

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

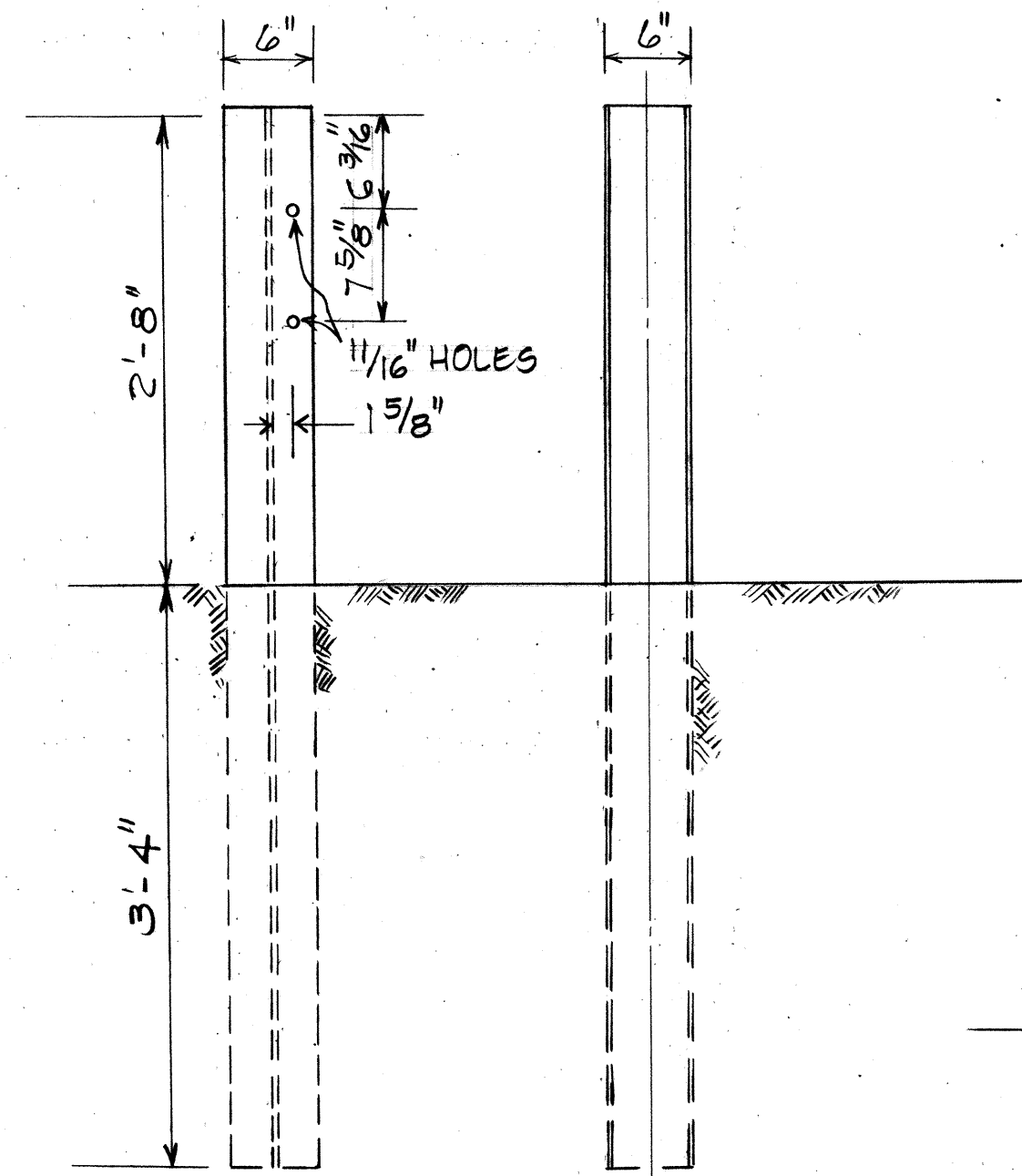
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	618-01-79	1979	13	24



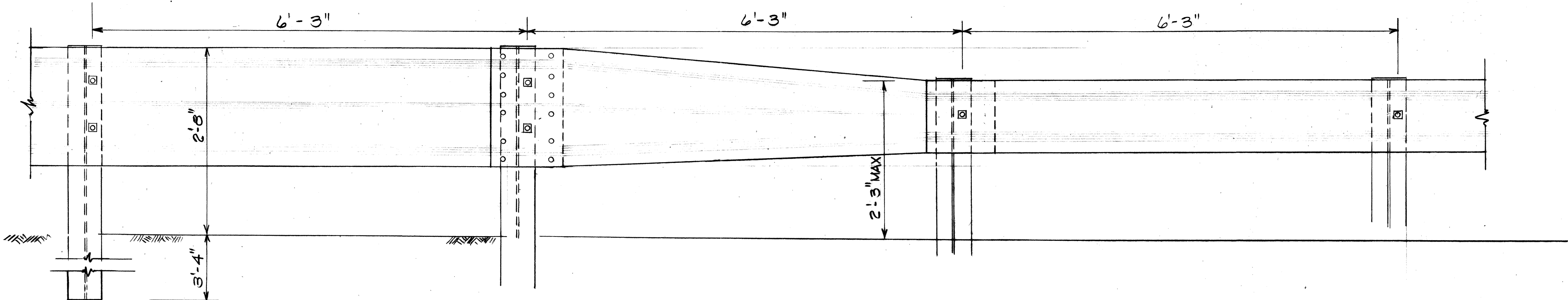
SINGLE POST



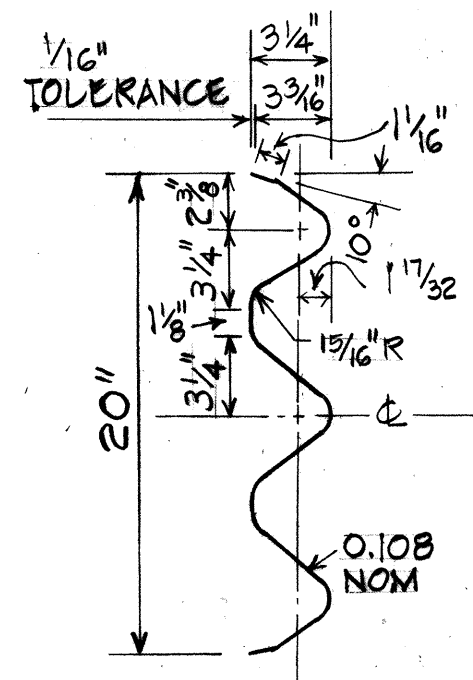
DOUBLE POST
Scale: 1"=1'-0"



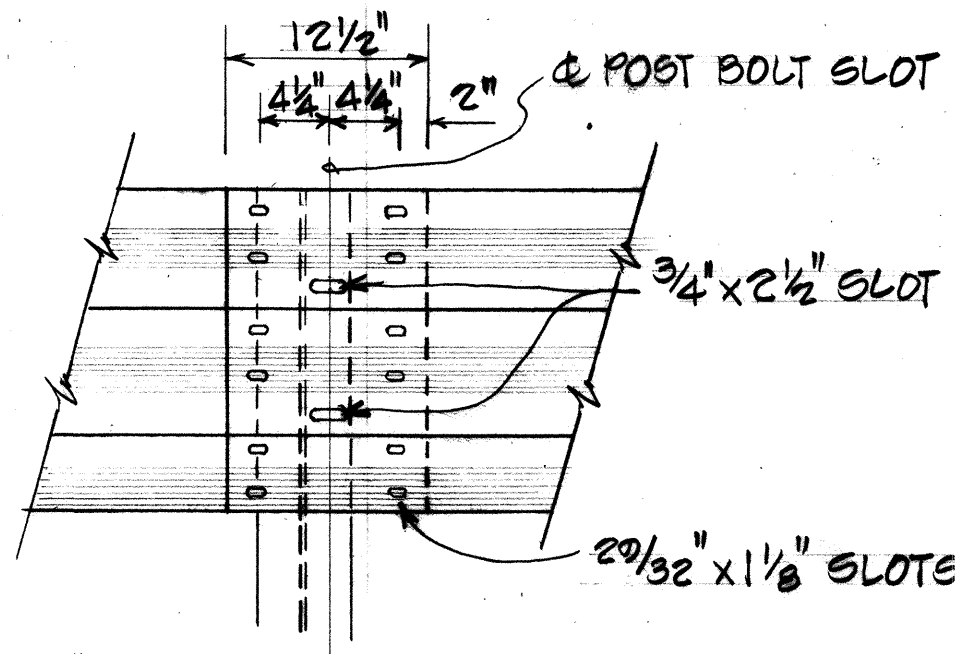
POST DETAILS
W6 x 15.0
Scale: 1"=1'-0"



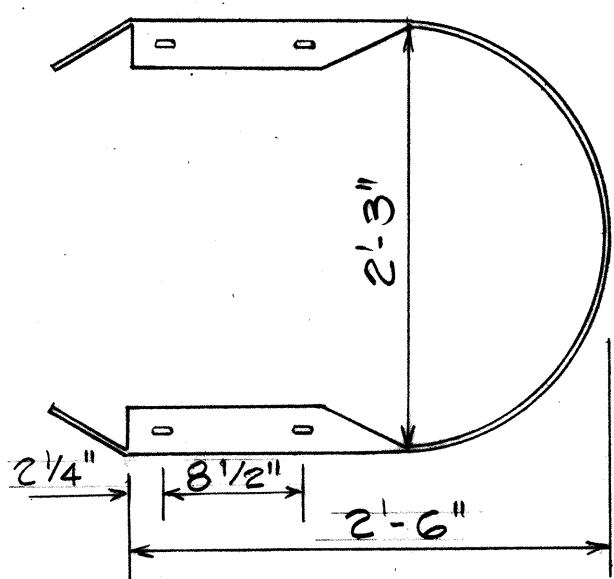
TRANSITION SECTION
Scale: 1"=1'-0"



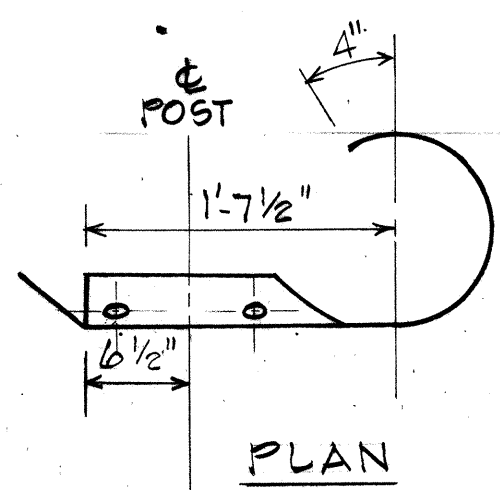
SECTION THRU
RAIL ELEMENT
Scale: 1 1/2"=1'-0"



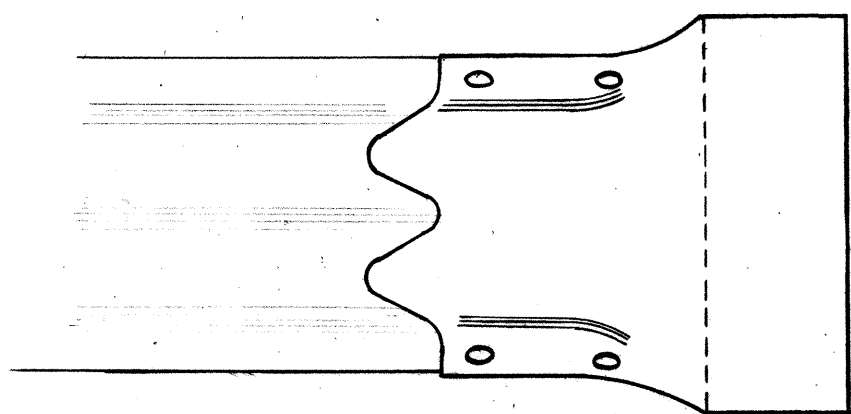
5/8" x 1 1/4" BUTTON HEAD OVAL SHOULDER BOLTS
WITH 1 1/4" RECESSED HEX NUTS - TOTAL - 12 PER
SPlice AND 4 PER TERMINAL SECTION OR
RETURN SECTION LAP IN DIRECTION OF TRAFFIC
RAIL SPlice
1"=1'-0"



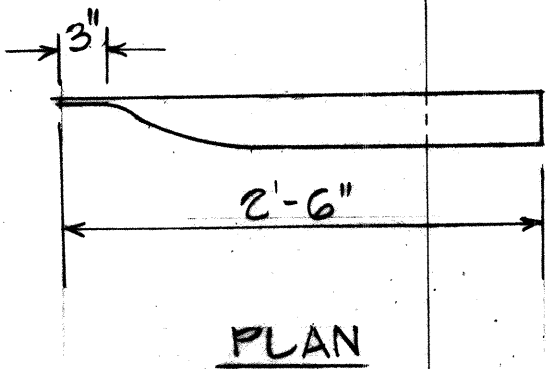
RETURN SECTION
Scale: 1"=1'-0"



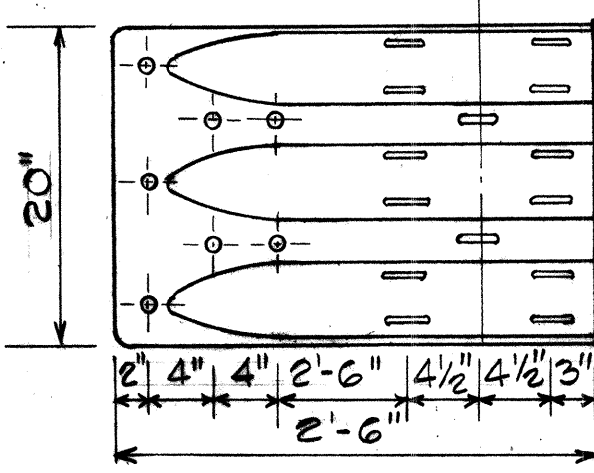
PLAN



ELEVATION



PLAN



ELEVATION

TERMINAL CONNECTOR
Scale: 1"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

TYPICAL DETAIL
GUARD RAIL TYPE 3
THREE BEAM

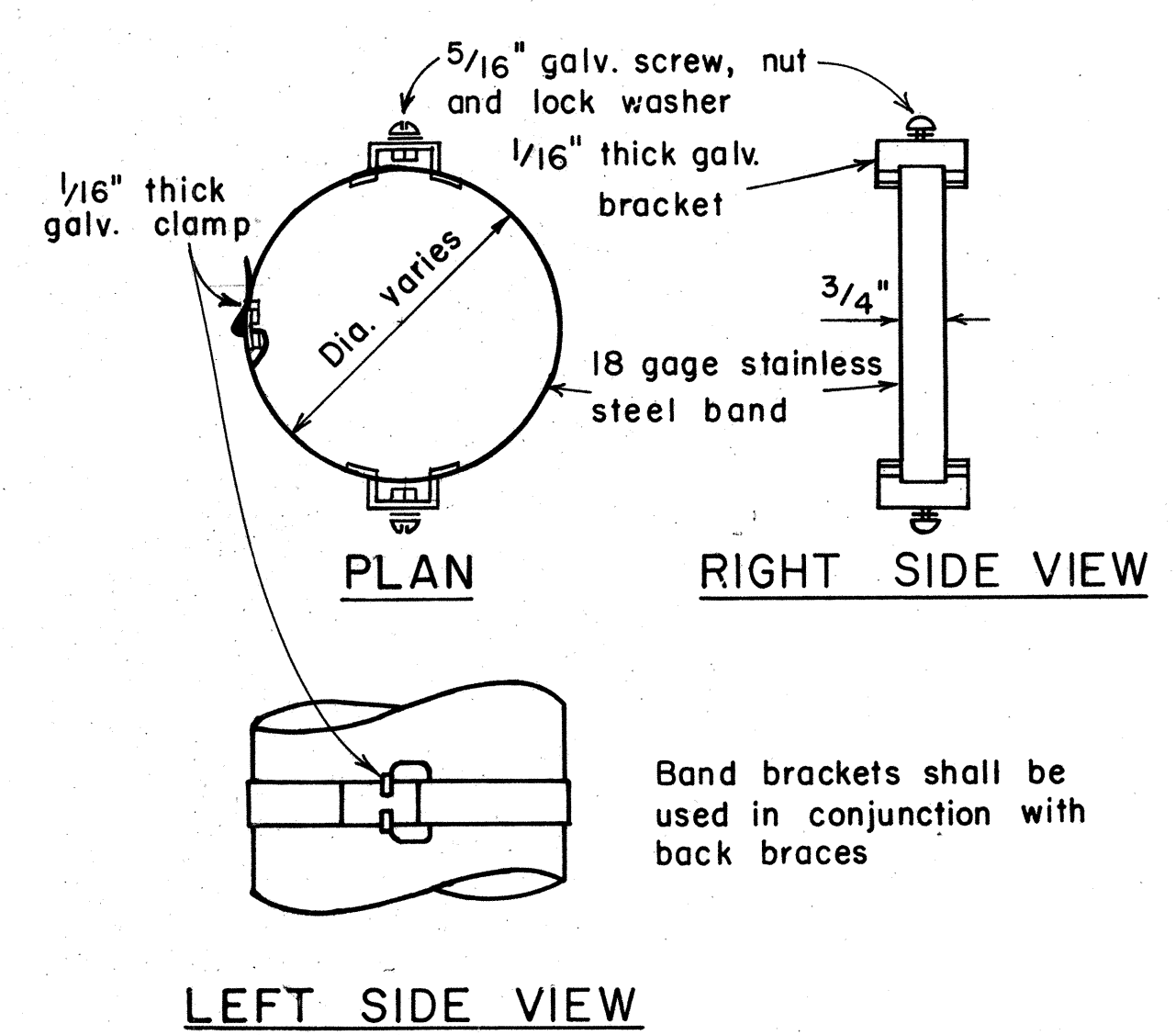
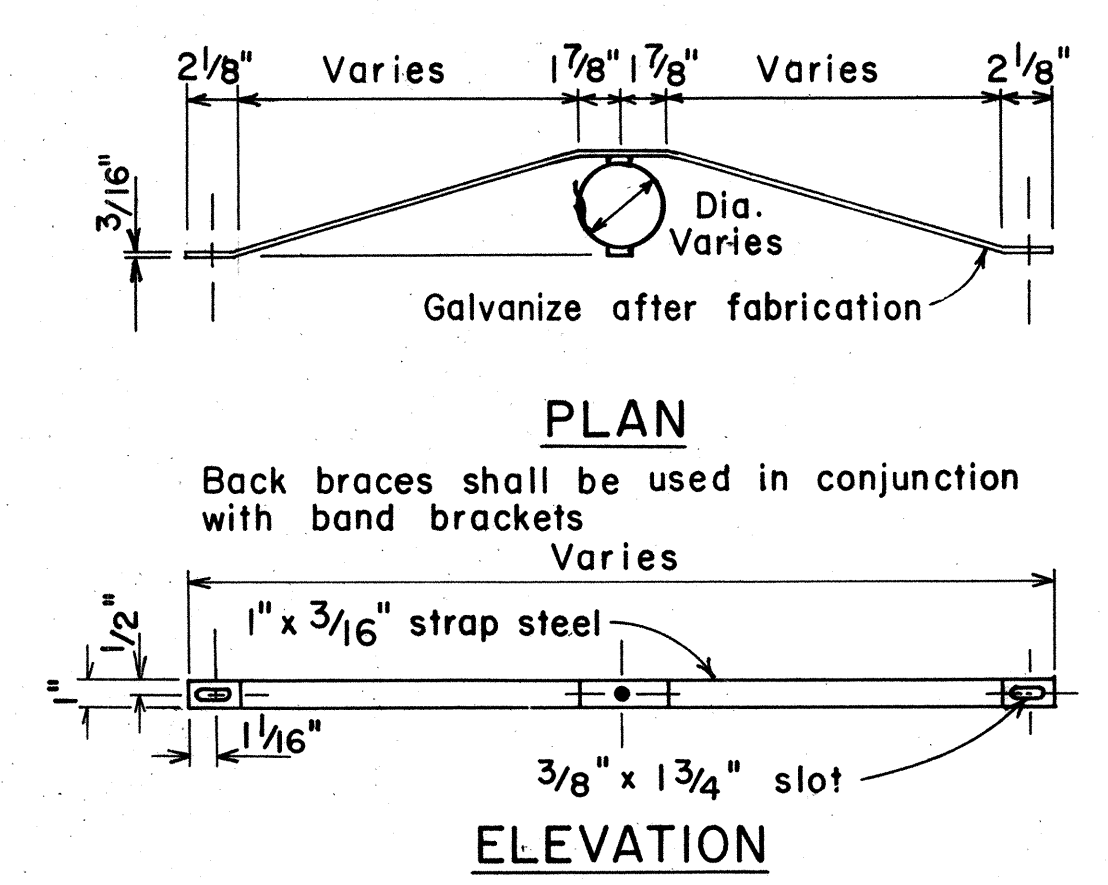
Scale: As Shown Date: _____
SHEET NO. 13 OF 24 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	618-01-79	1979	14	24

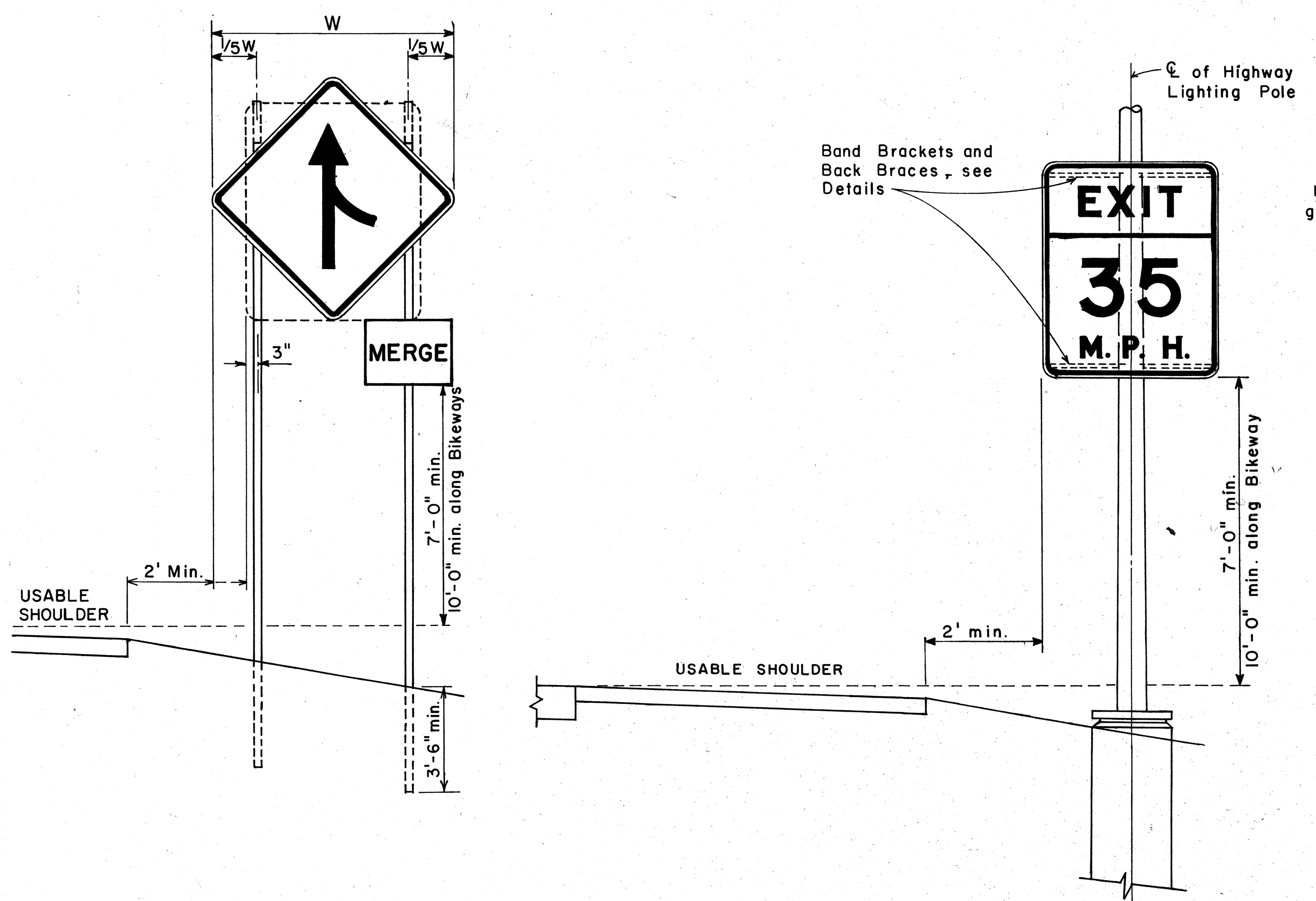
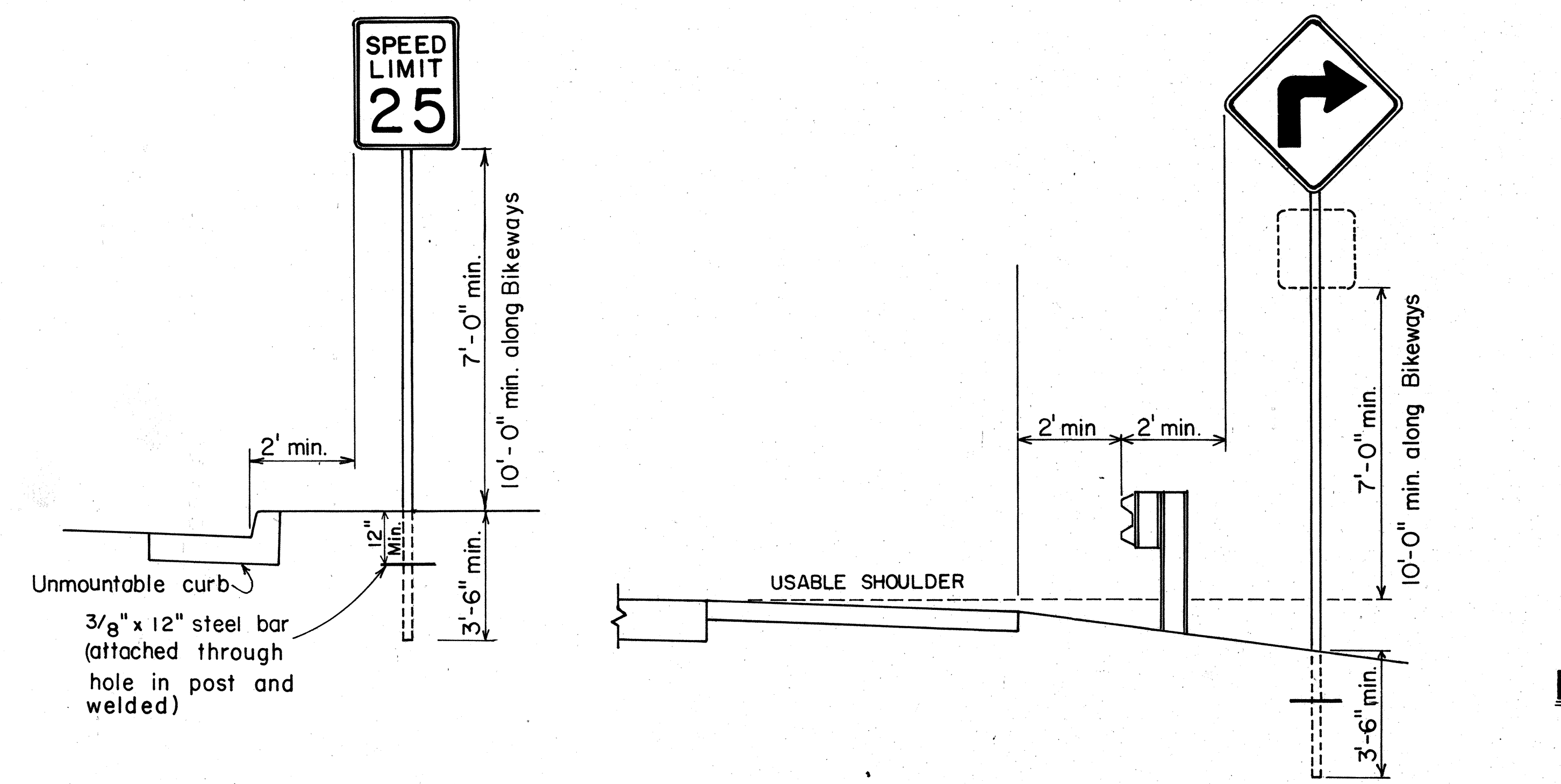
GENERAL NOTES

- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts.
- All signs larger than 10 sq. ft. in area or 48" inches and wider, and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least two sets of band brackets and back braces.
- All signs 28 sq. ft. in area or larger and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least three sets of band brackets and back braces.
- 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.
- (R) or (L) indicates right or left and shall be as shown on the plans.

BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS



HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

APPROVAL RECOMMENDED:
Erich Tanaka 11/10/77
TRAFFIC ENGINEER DATE

APPROVED:
Harold S. Sakai 11/15/77
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT-100 approved 12/30/69	H.T.	11/15/77

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS SIGN DETAILS

Not to scale
June, 1977

DATE	11/10/77
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

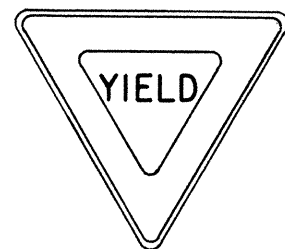
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-01-77	1979	15	24



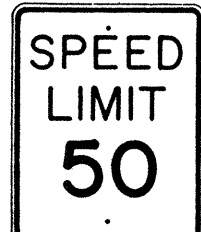
R1-1 30" x 30"
R1-1-A 36" x 36"

4-WAY

R1-3 12" x 6"
R1-3-A 18" x 9"



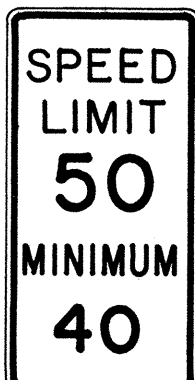
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



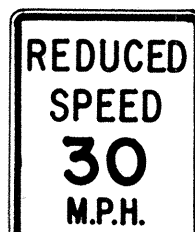
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



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



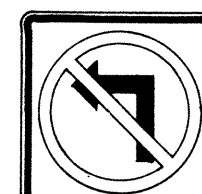
R2-4a(50/40) 24" x 48"
R2-4a(50/40)-A 48" x 96"



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



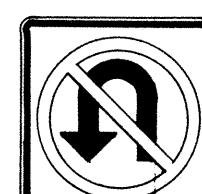
R3-1 24" x 24"
24" x 18"
R3-1-A 48" x 48"
48" x 36"



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



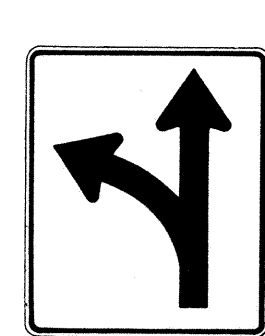
R3-3 24" x 24"
R3-3-A 48" x 48"



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



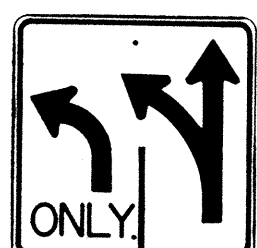
R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"



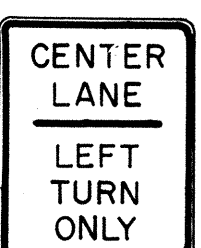
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



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"



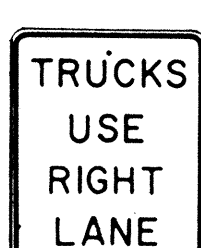
R4-1 24" x 30"



R4-2 24" x 30"



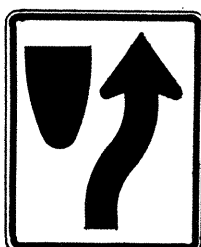
R4-3 24" x 30"
R4-3-A 48" x 60"



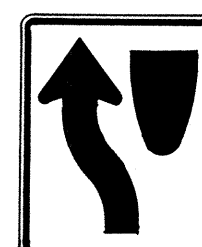
R4-5 24" x 30"



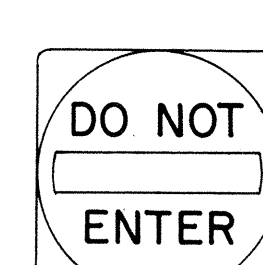
R4-6(500) 24" x 30"



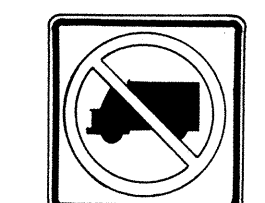
R4-7 24" x 30"
24" x 18"



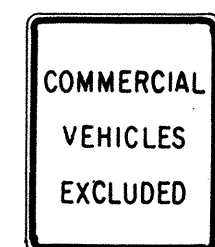
R4-8 24" x 30"
24" x 18"



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"



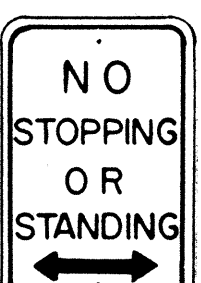
R6-1(R) 36" x 12"



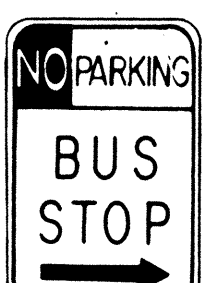
R6-2(R) 18" x 24"



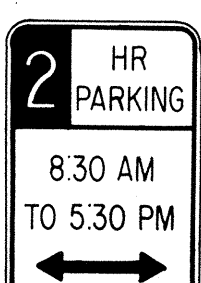
R7-1 12" x 18"
R7-1-A 24" x 30"



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



R7-1-7(R) 12" x 18"



R7-108 12" x 18"



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



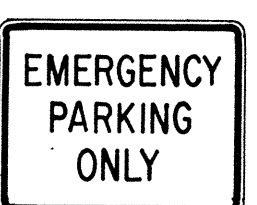
R8-1 24" x 30"



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"



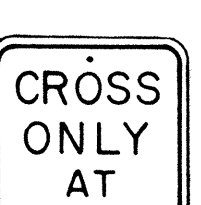
R8-6 24" x 30"



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



R9-1 18" x 24"



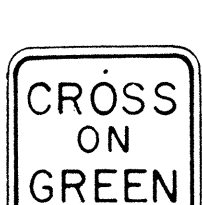
R9-2 12" x 18"



R9-3 12" x 18"



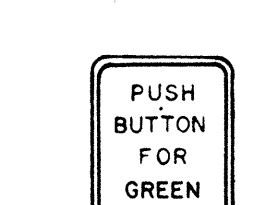
R9-4 18" x 24"



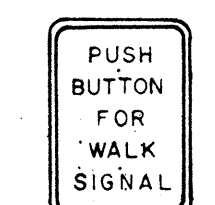
R10-1 12" x 18"



R10-2 12" x 18"



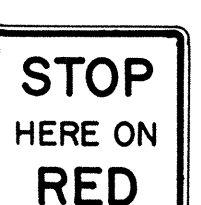
R10-3 9" x 12"



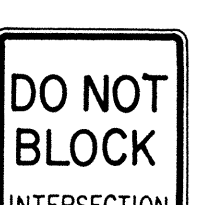
R10-4 9" x 12"



R10-5 24" x 30"



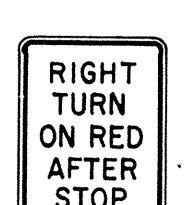
R10-6 24" x 36"



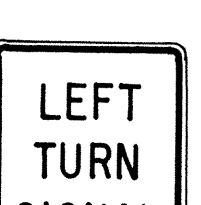
R10-7 24" x 30"



R10-8 24" x 30"



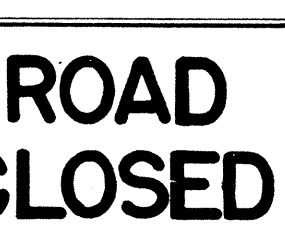
R10-9 24" x 30"



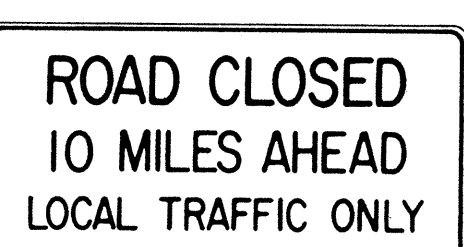
R10-10 24" x 30"



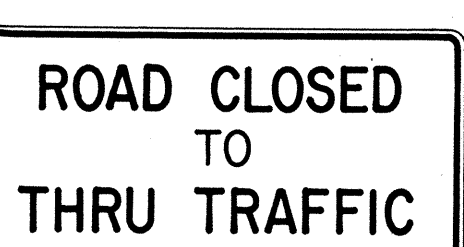
R11-1 24" x 30"



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 $\frac{3}{8}$ " 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:
Erich Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
Robert Zetser 3-20-72
ASSISTANT CHIEF, ENGINEERING 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.	10/16/74

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS REGULATORY SIGNS

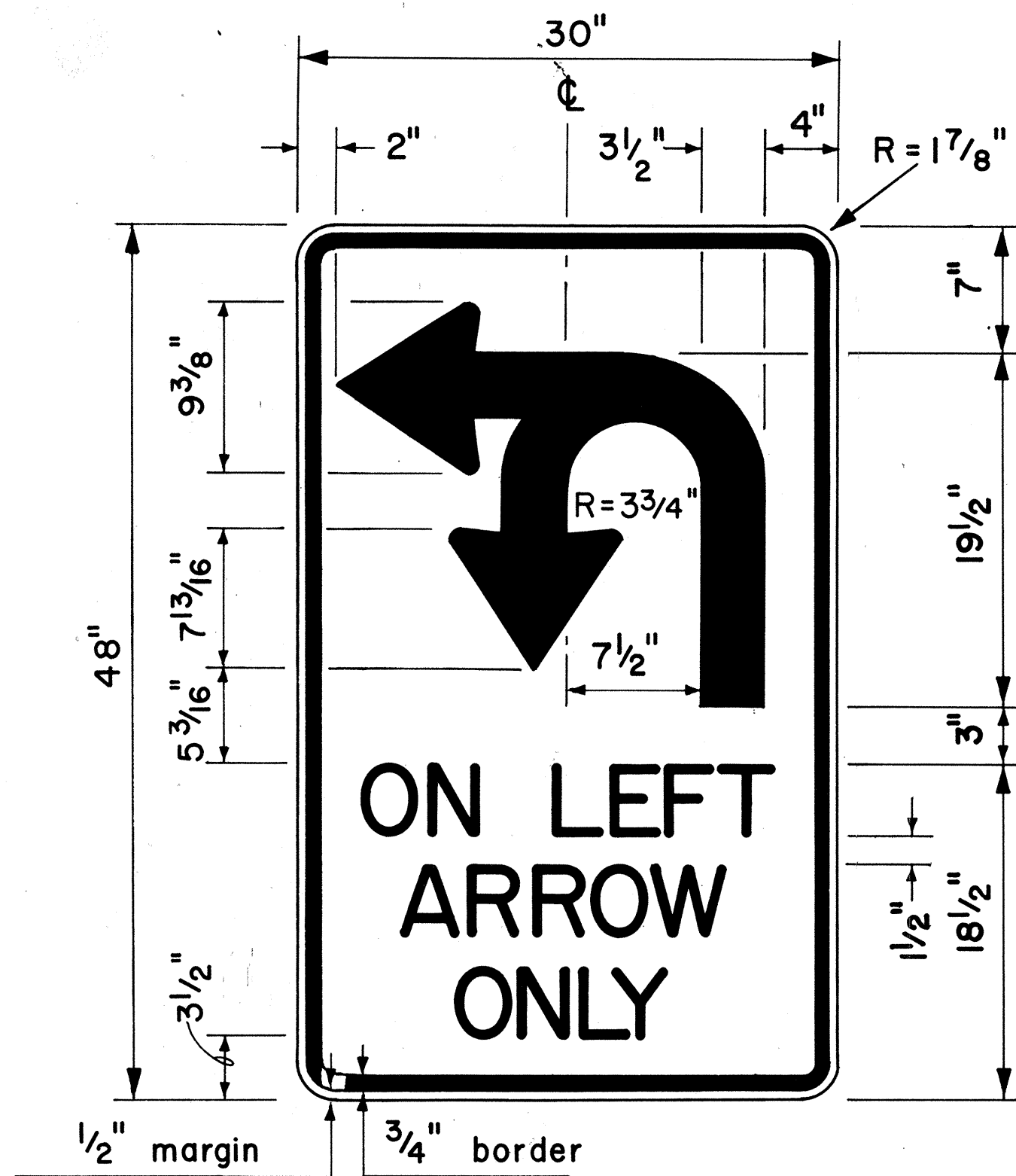
NOT TO SCALE

SHEET No. 15 OF 24 SHEETS DT 101

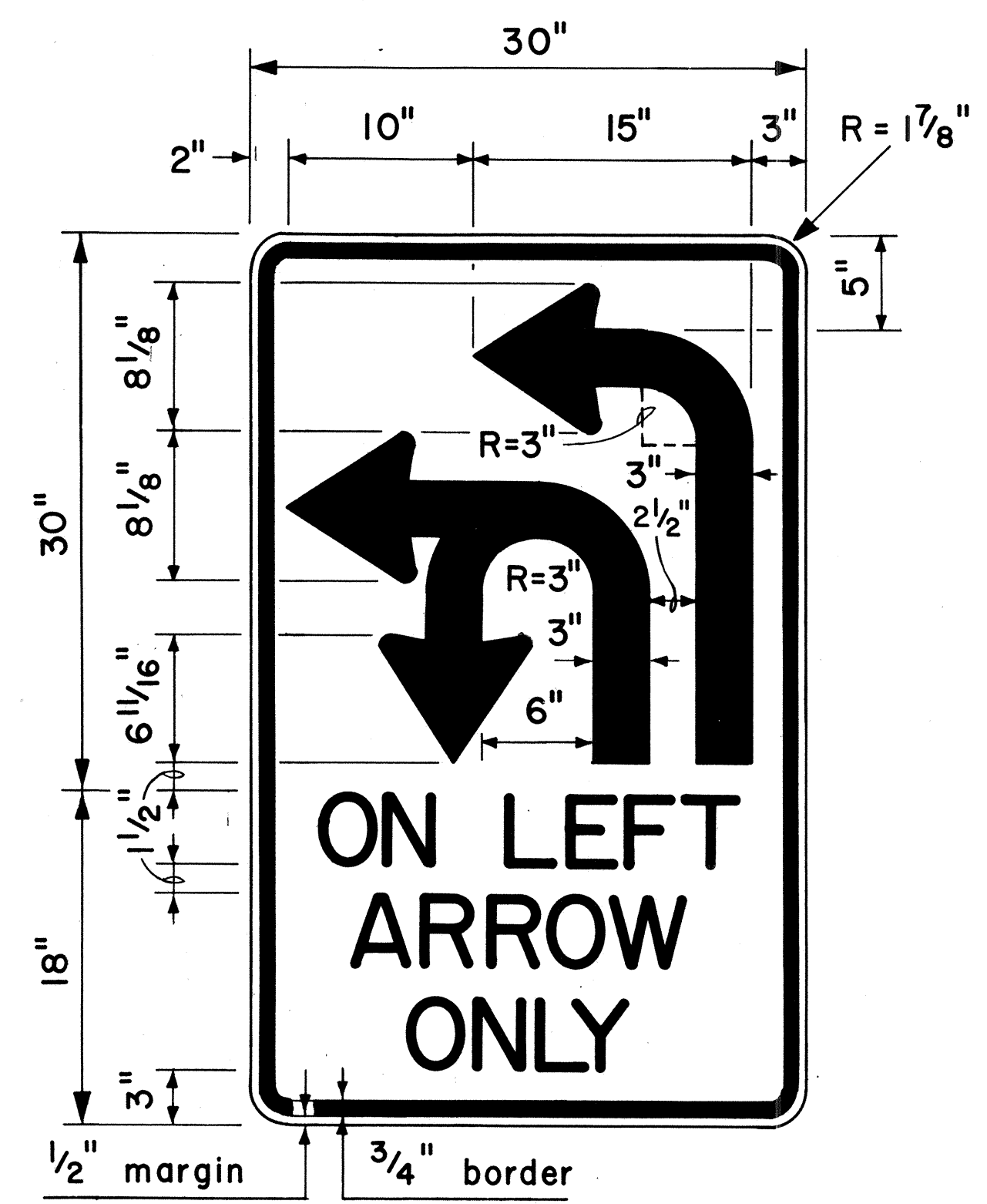
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	618-01-79	1979	16	24

GENERAL NOTES

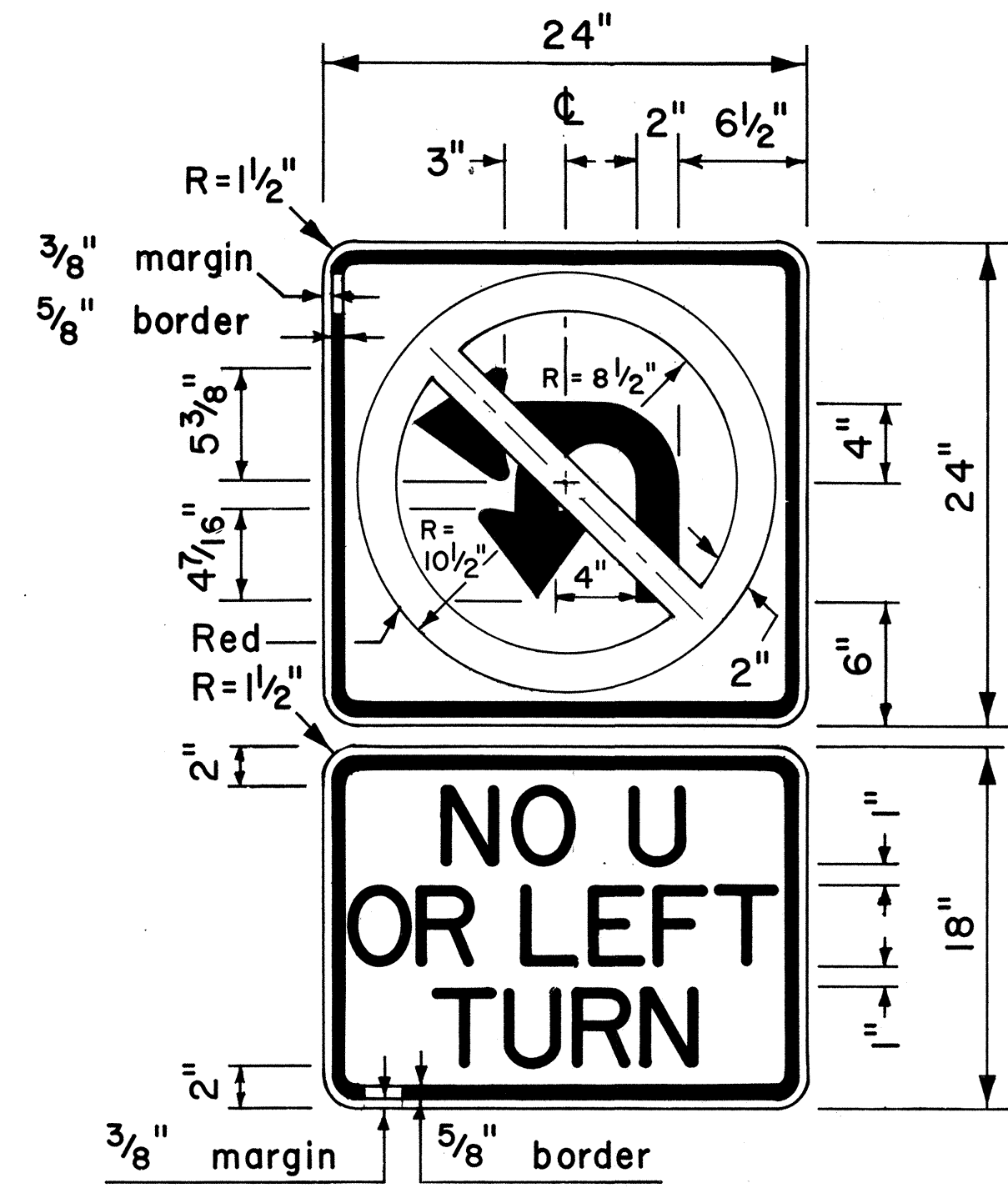
- Sign details shall conform to the latest editions of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and "Standard Highway Signs," and as amended.
- All regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.



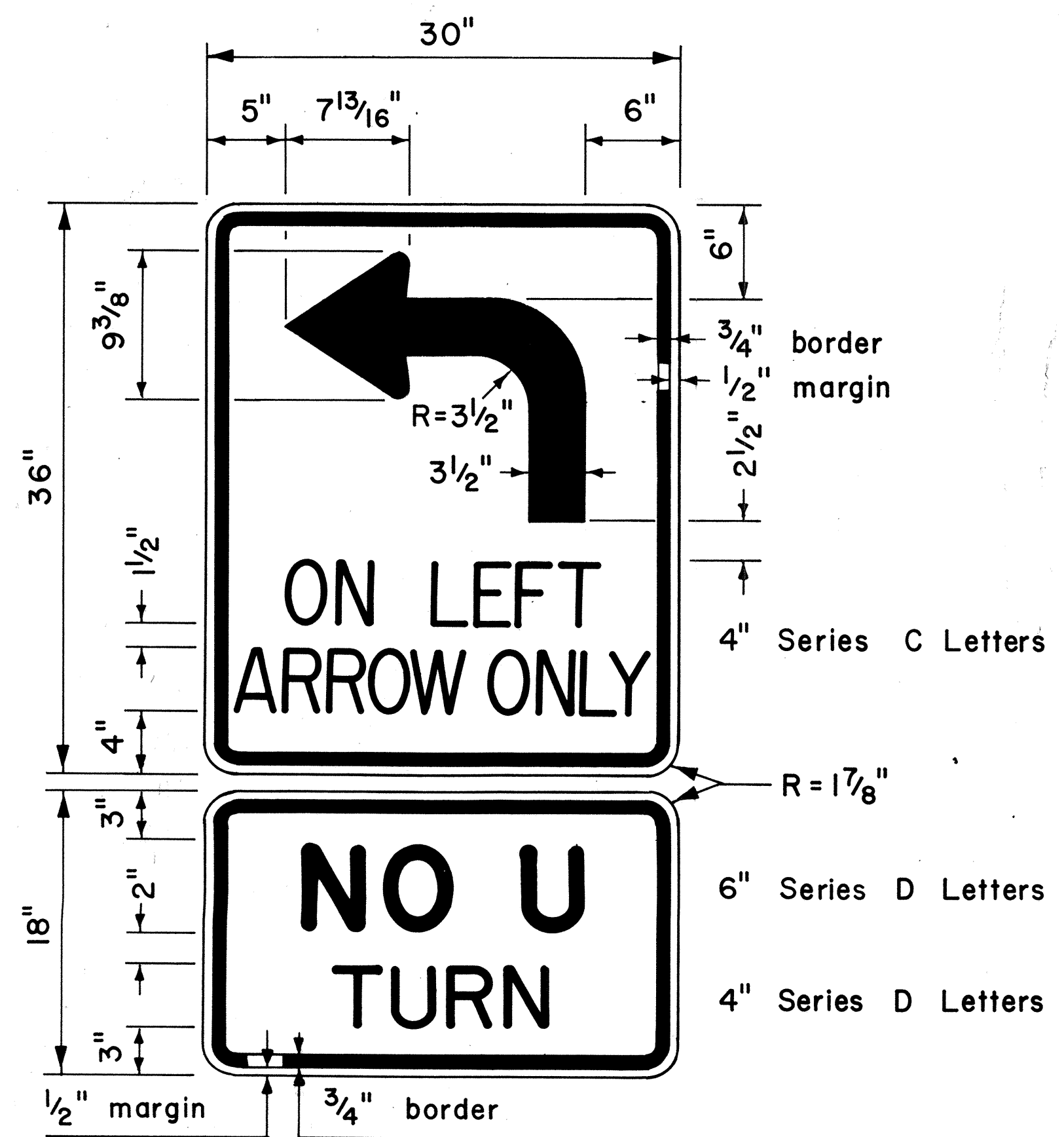
4" Series D Letters
R17-1



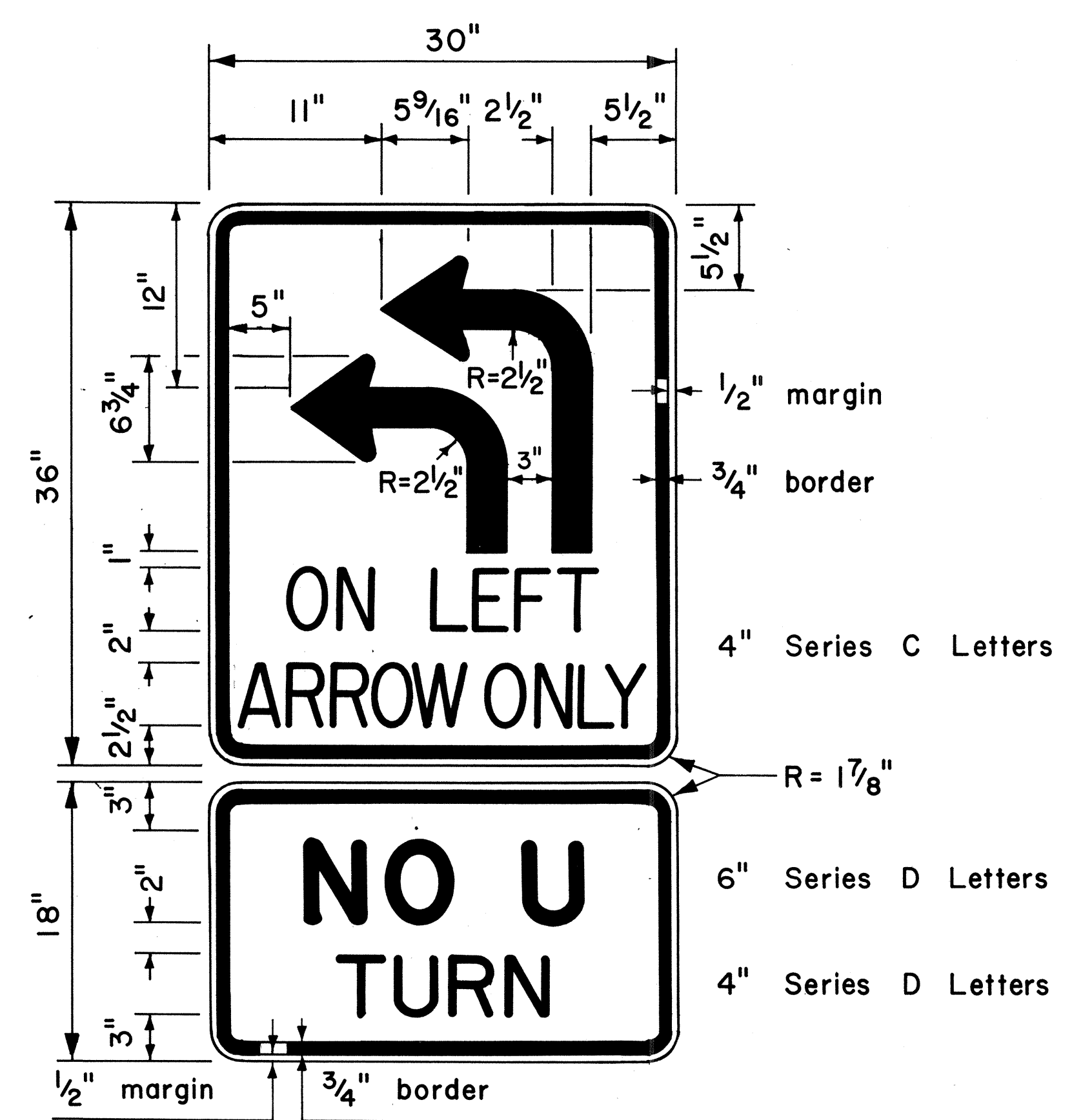
4" Series D Letters
R17-2



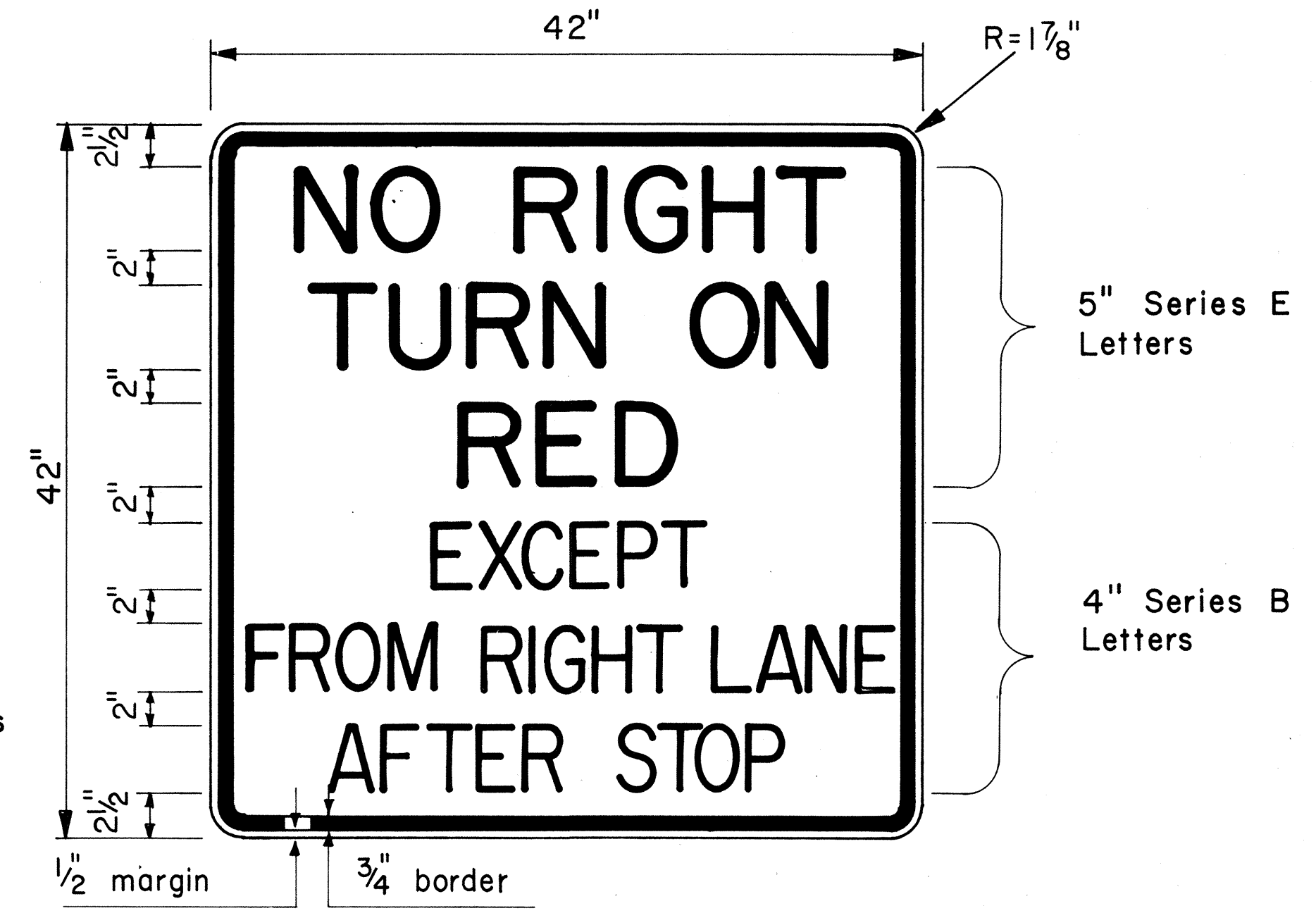
4" Series D Letters
R3-4b



R17-3



R17-4



R10-11d

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
Eishi Tanaka 8/1/77
TRAFFIC ENGINEER DATE

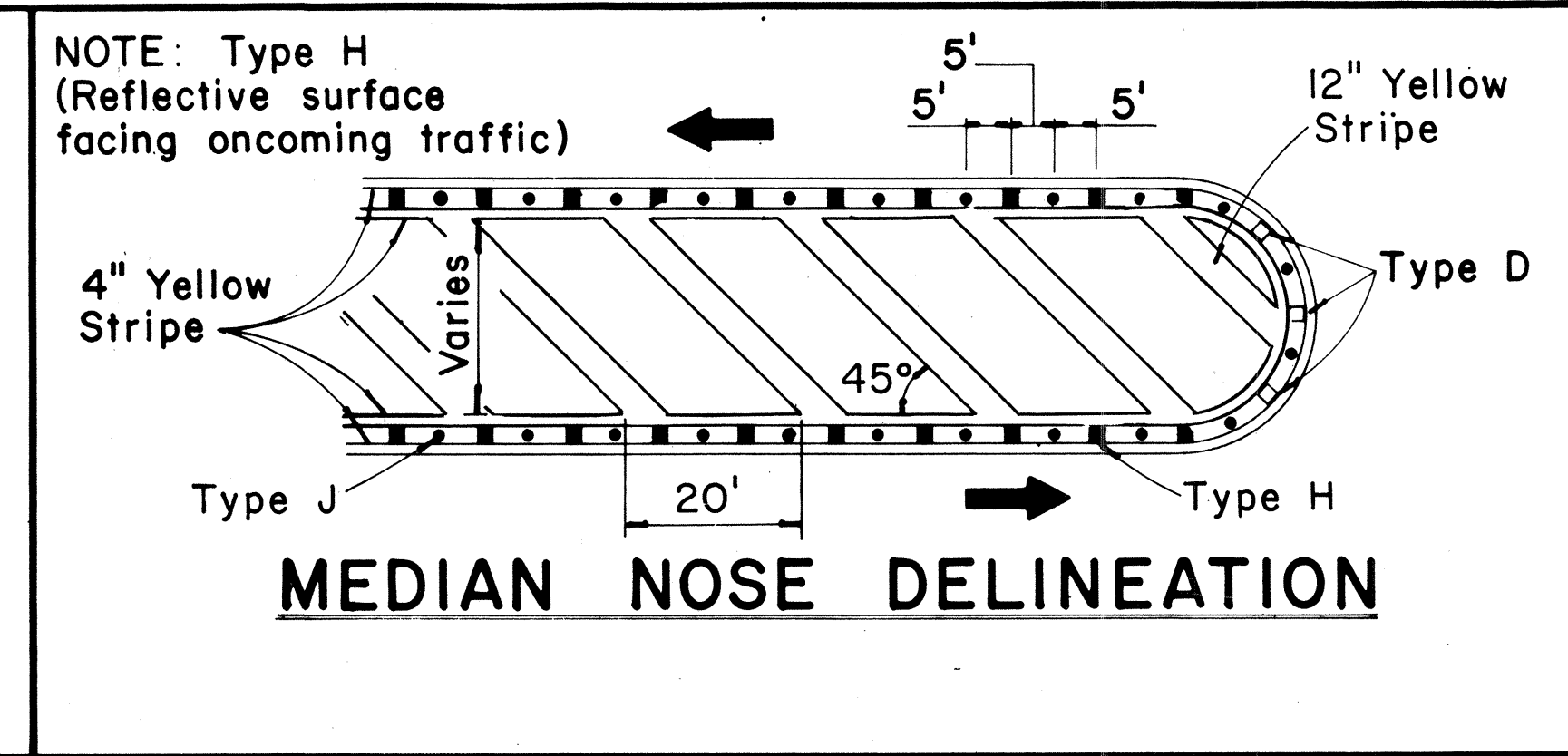
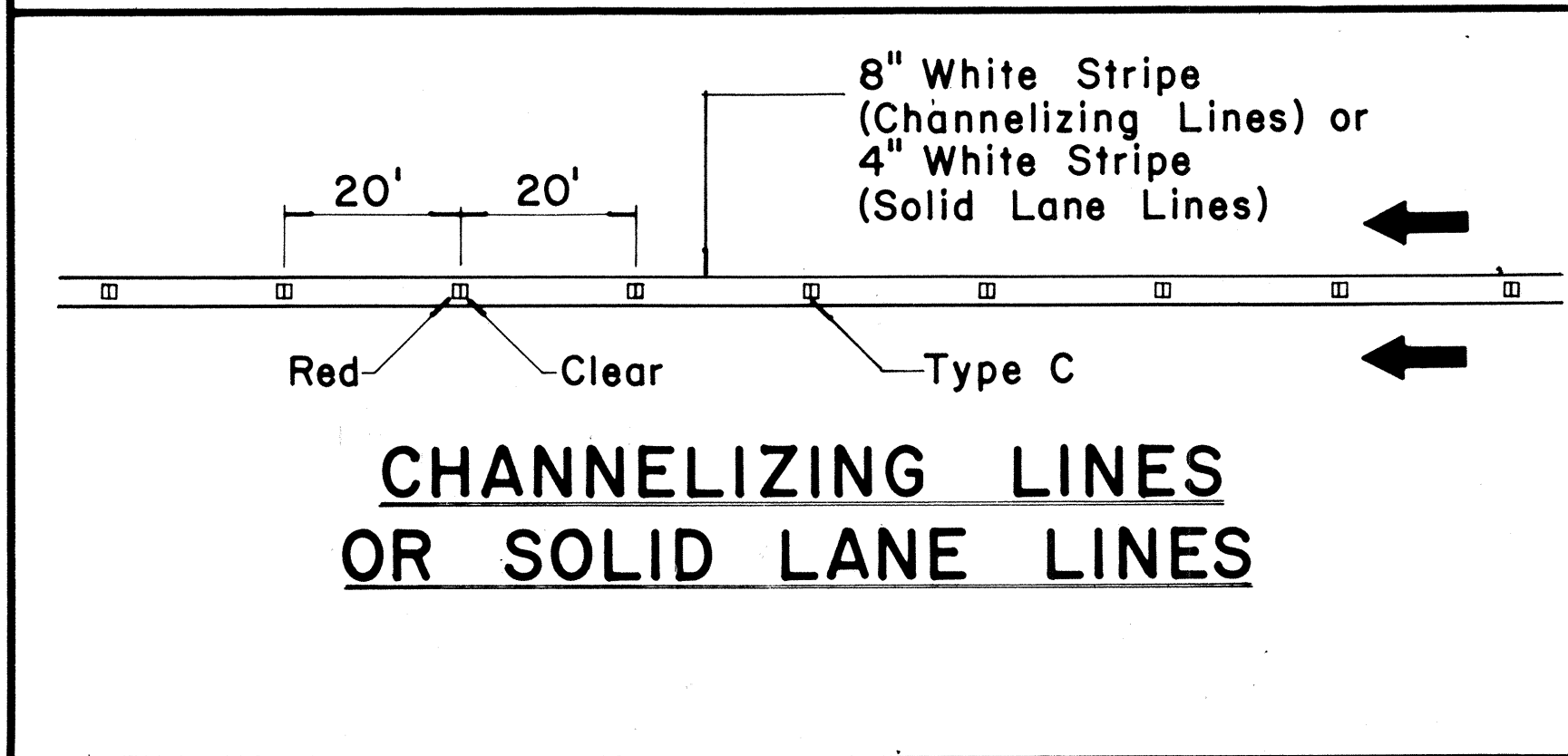
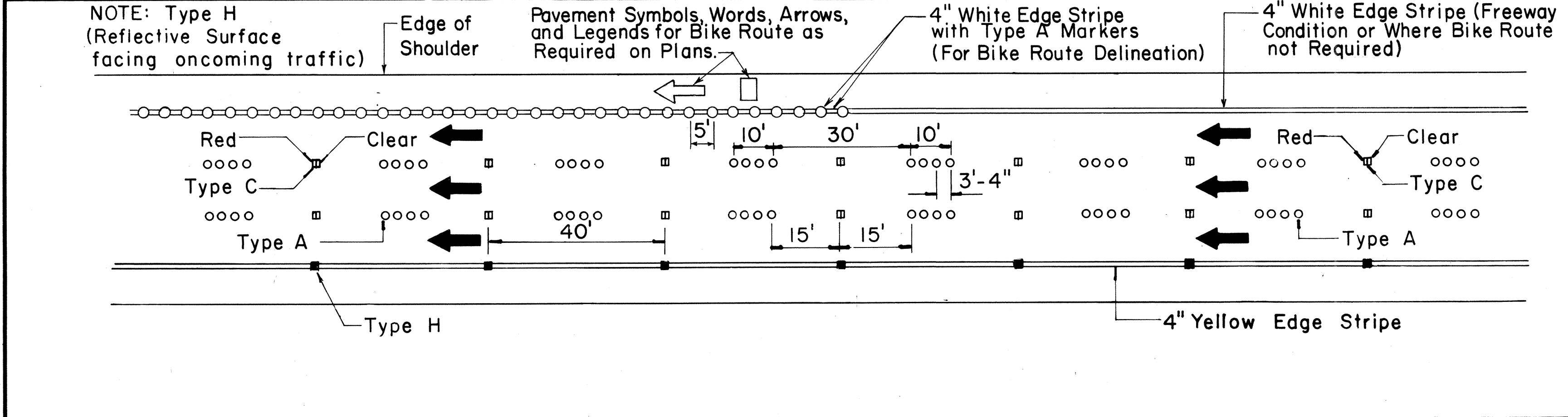
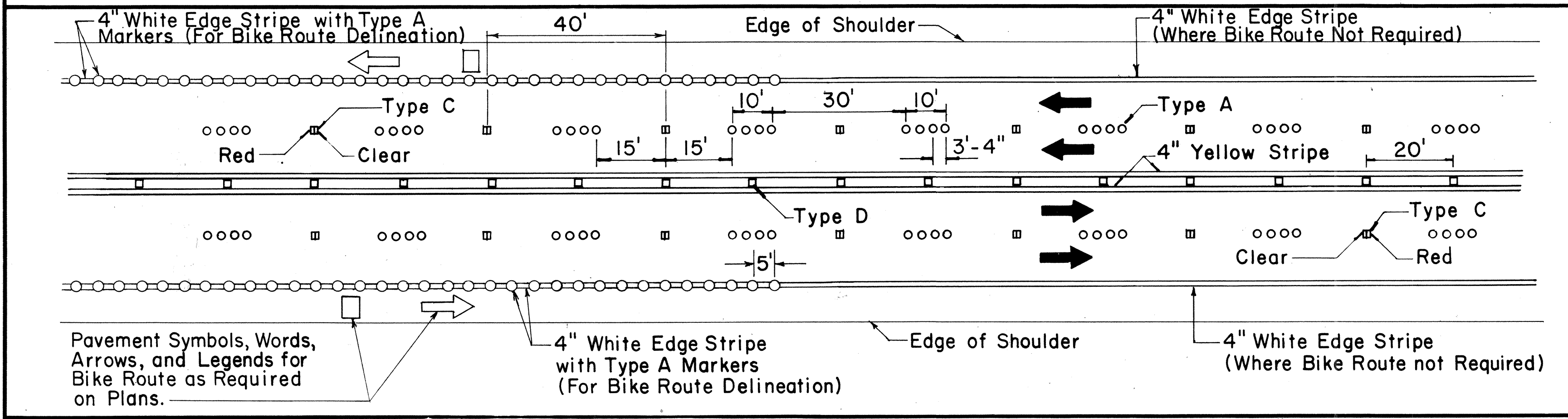
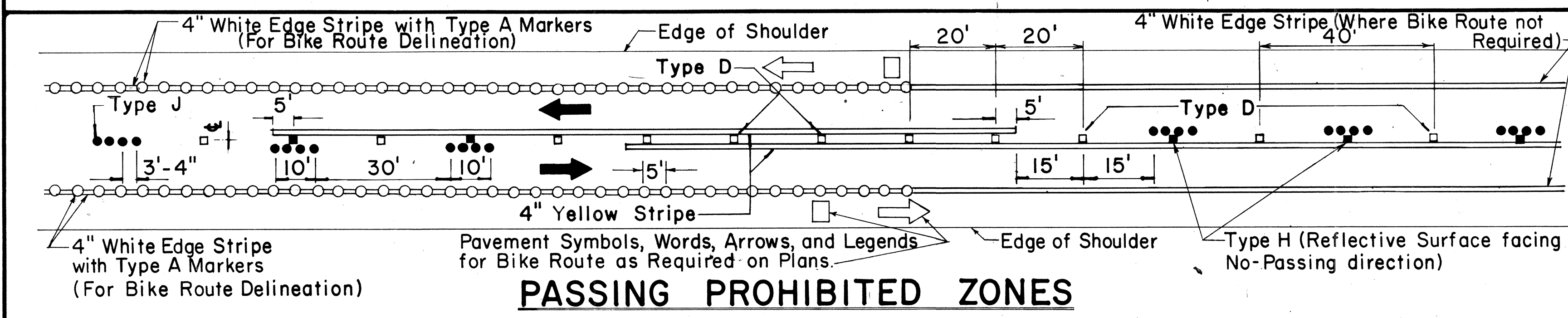
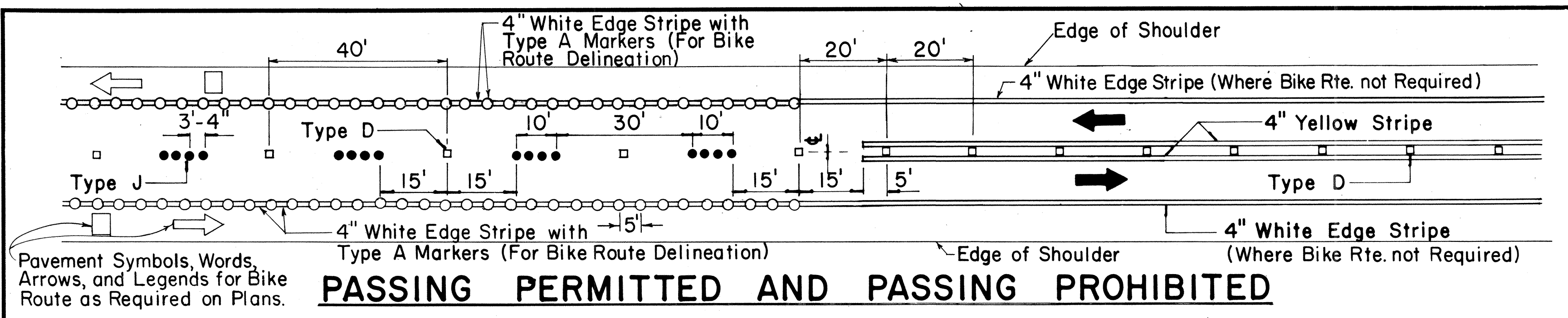
APPROVED:
Harbor Zaleski 8/16/77
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS
INTERSECTION SIGNS

Scale: 1 1/2" = 1'-0" Date: Aug., 1977
SHEET No. 16 OF 24 SHEETS DT 112

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	G18-01-79	1979	17	24

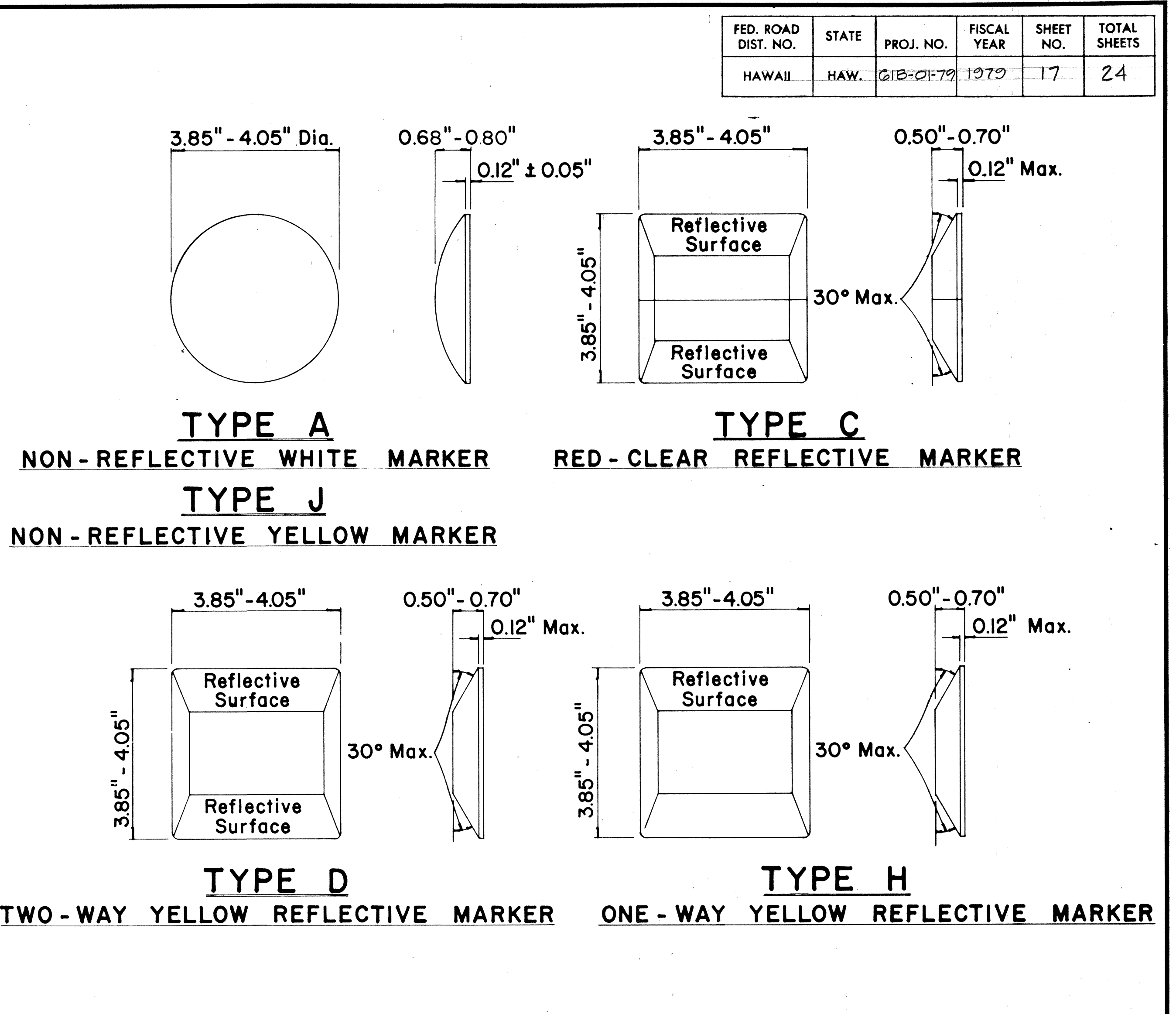


TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

MISCELLANEOUS



GENERAL NOTES

- Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- Layout and installation of pavement marking and striping shall be done by the Contractor. The Contractor shall check the layouts with the Engineer prior to performing work.

LEGEND

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

APPROVAL RECOMMENDED:
Ericki Tanaka
 TRAFFIC ENGINEER
 7/21/78
 DATE

APPROVED:
Robert S. DeKish
 ASSISTANT CHIEF, ENGINEERING
 1/24/78
 DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.T.	1/24/78

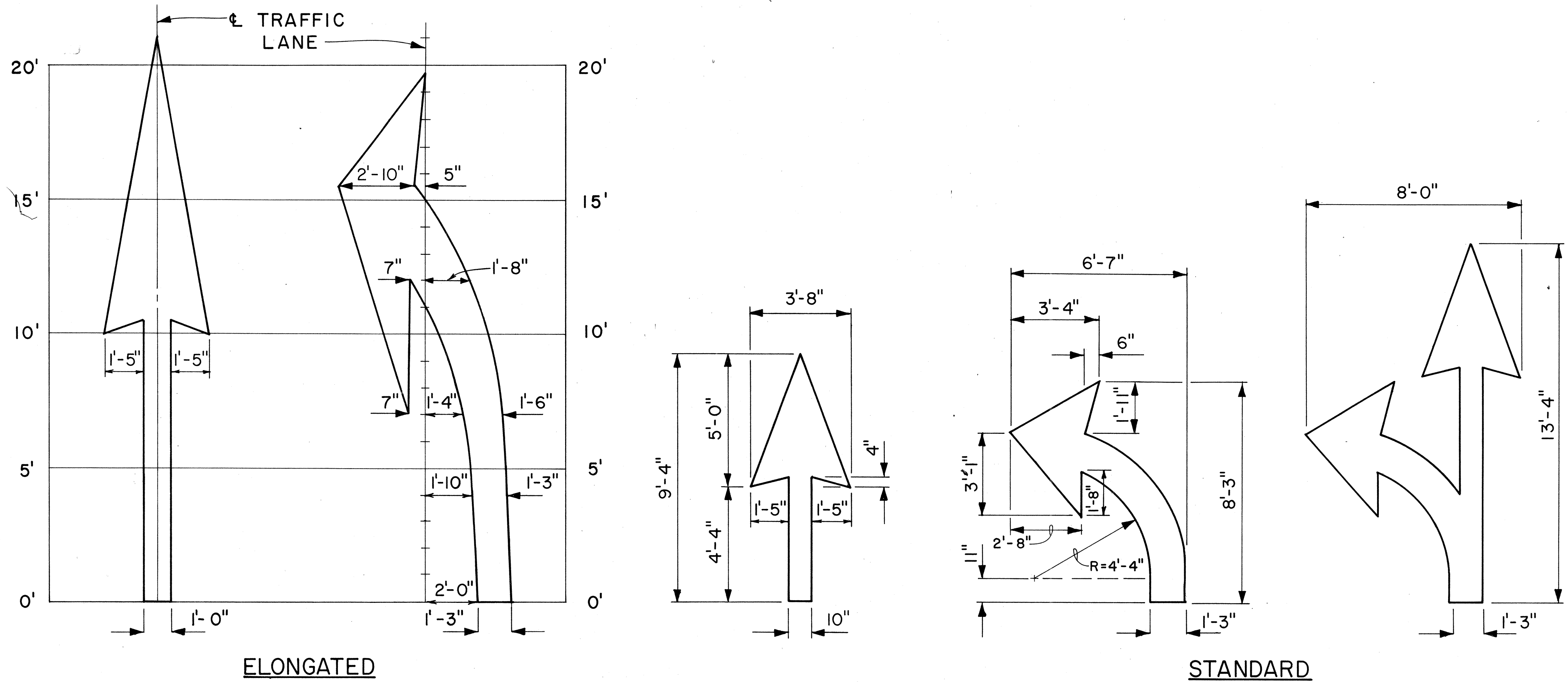
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS AND STRIPING

Not to Scale July 1978
 SHEET No. 17 OF 24 SHEETS DT 300

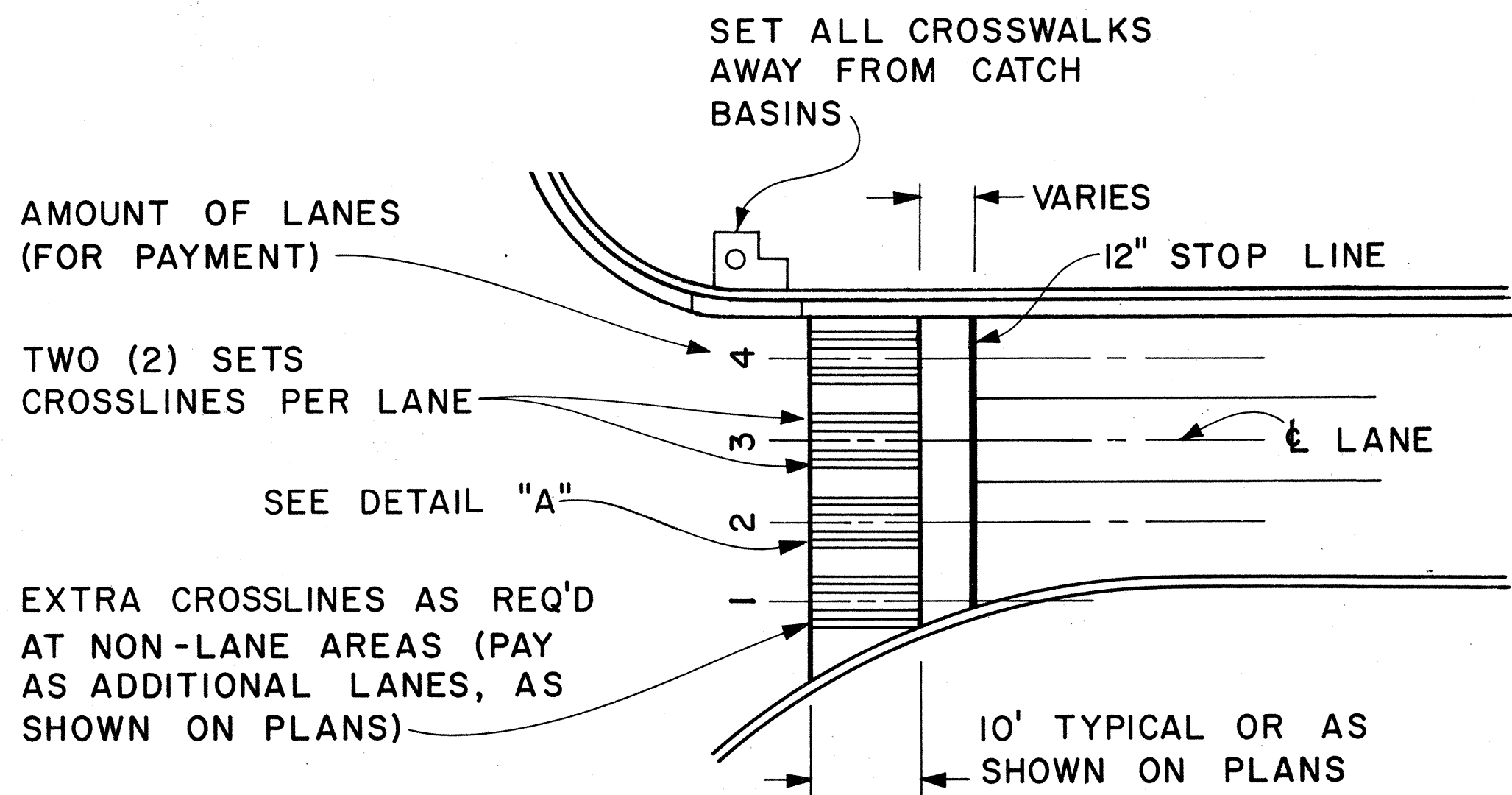
GENERAL NOTES:

1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and striping with the Engineer prior to performing work.
3. For additional pavement marking details, see sheet DT 300.

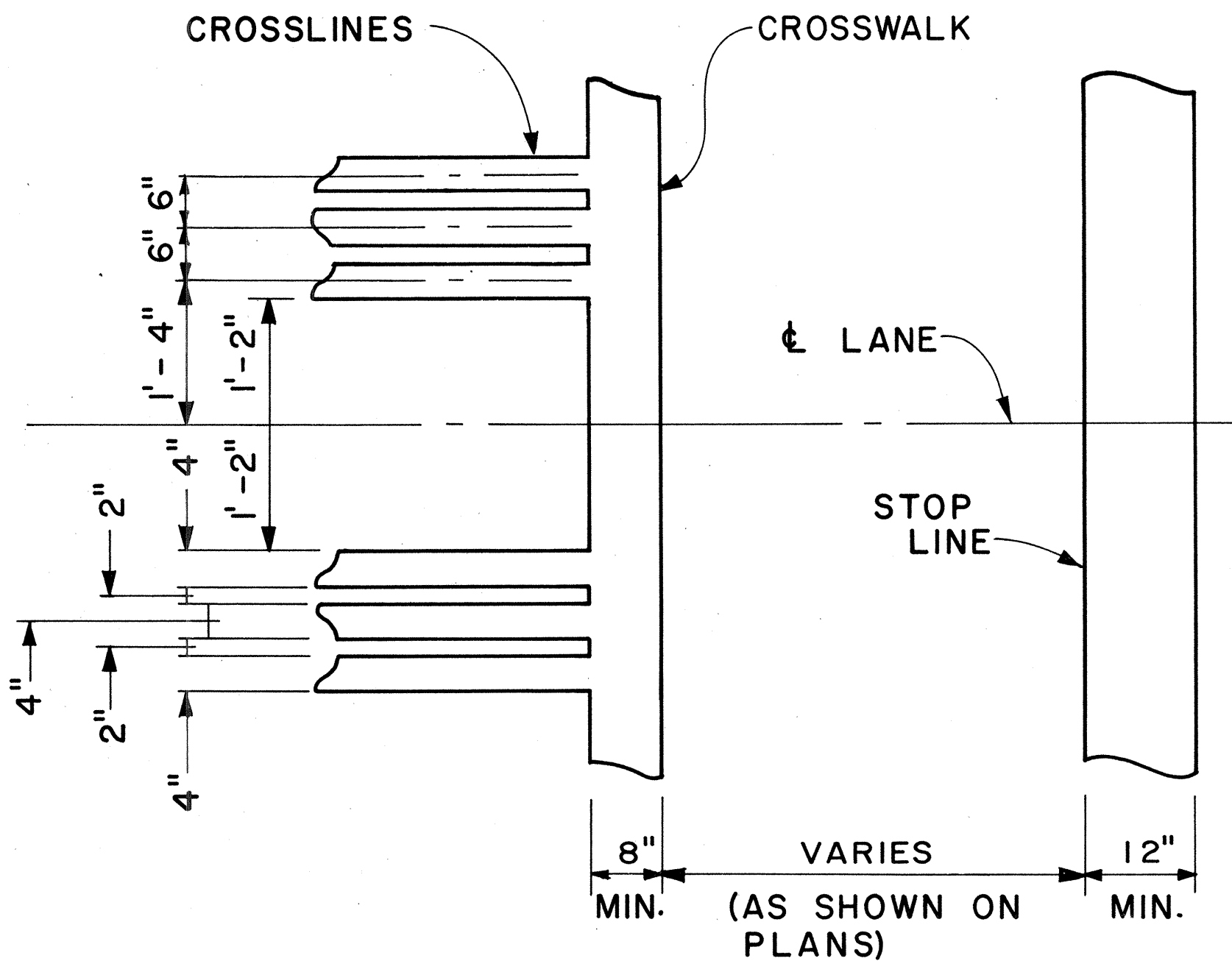


PAVEMENT ARROWS

Scale: $3/8" = 1'$



PLAN



DETAIL "A"

CROSSWALK & STOP LINE

Scale: Not to Scale

APPROVAL RECOMMENDED:
Erichi Tanaka
TRAFFIC ENGINEER

5/2/78
DATE

APPROVED:
Harbert W. Zalcischi
ASSISTANT CHIEF, ENGINEERING

5/3/78
DATE

NO.	REVISION	APPROVED BY	DATE

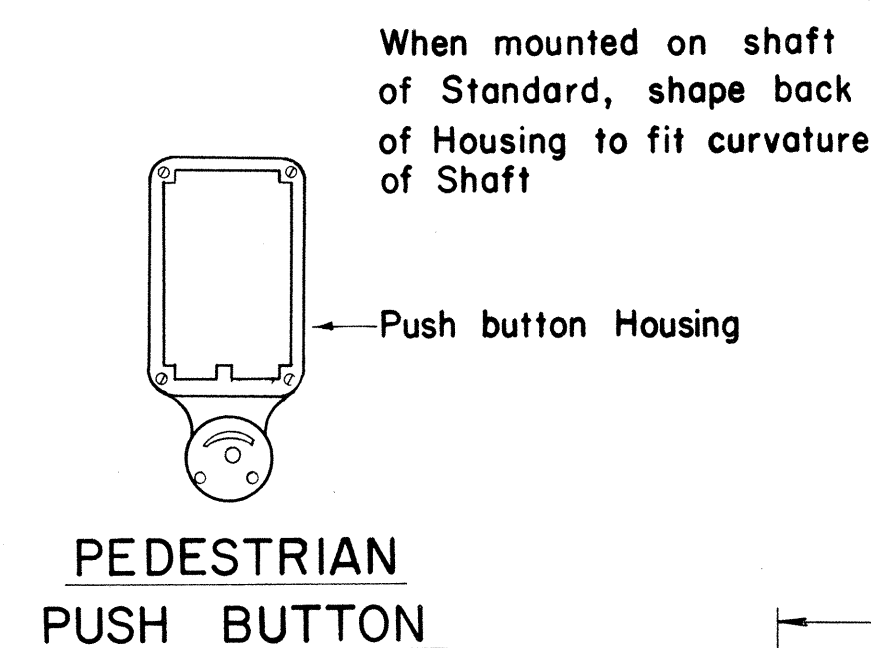
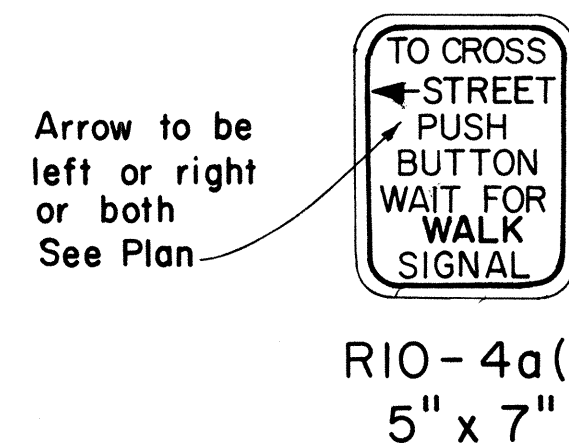
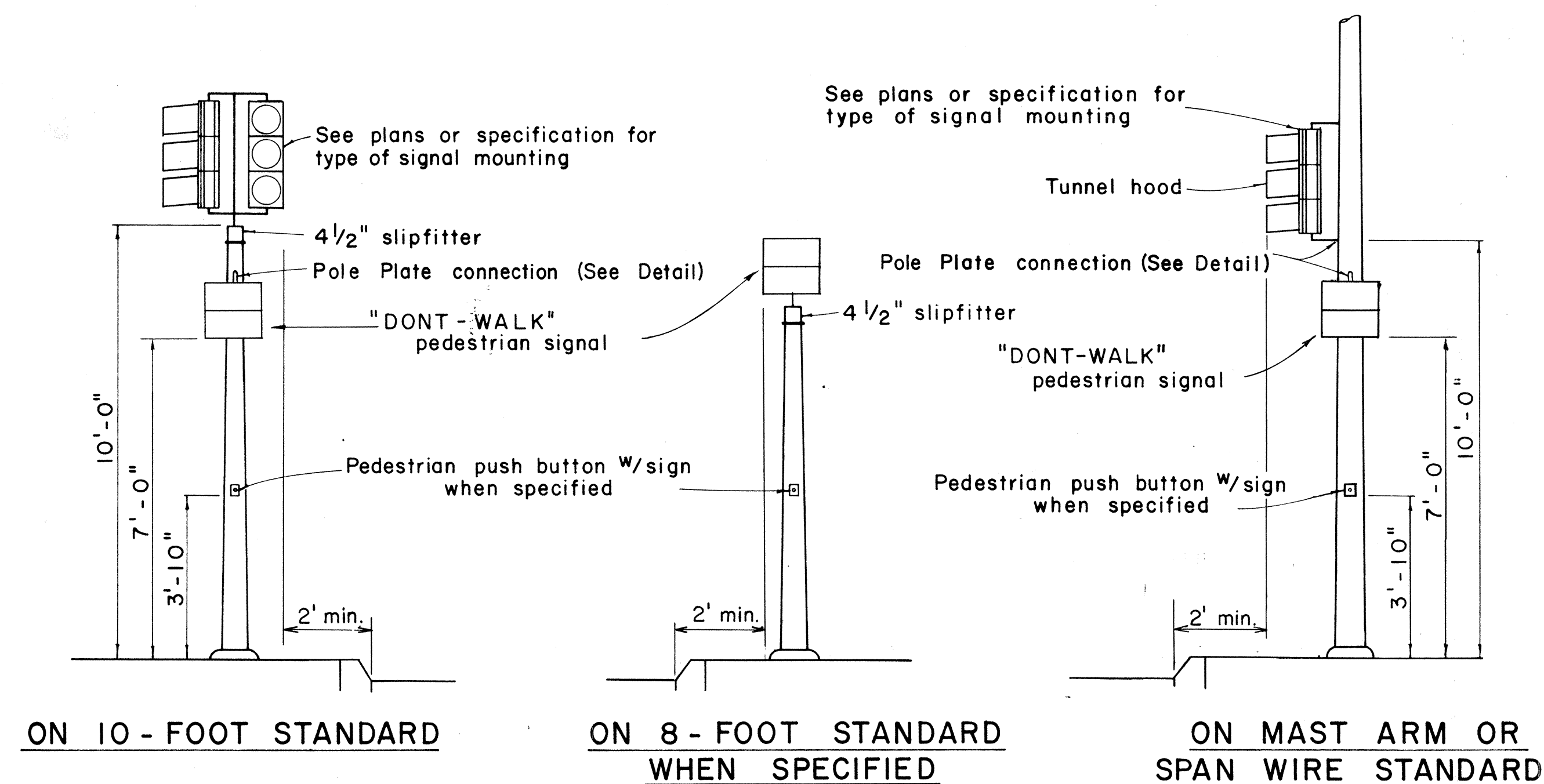
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

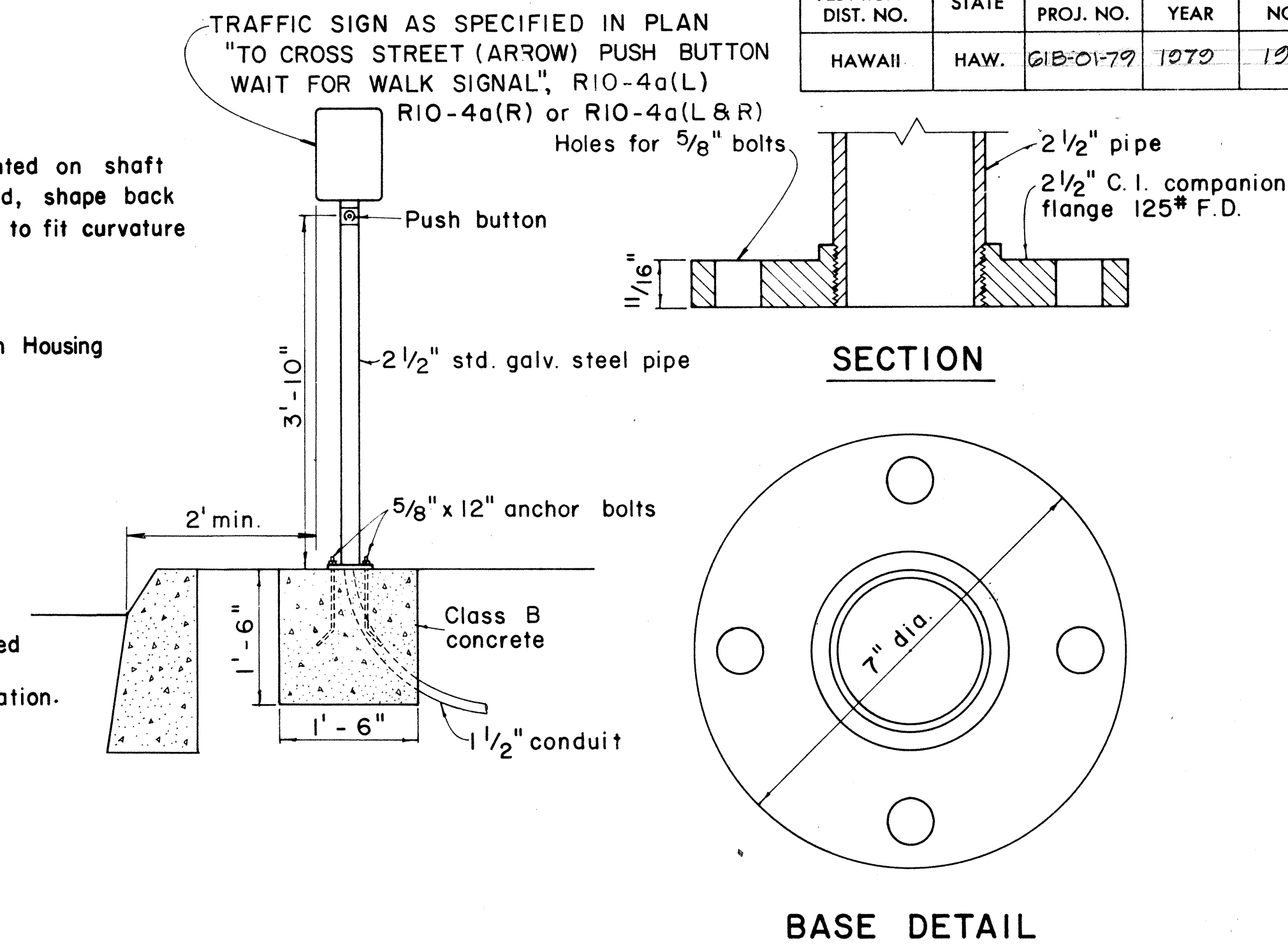
MISCELLANEOUS
PAVEMENT MARKINGS

Scale: As Shown Date: March, 1978
SHEET No. 18 OF 24 SHEETS DT 306

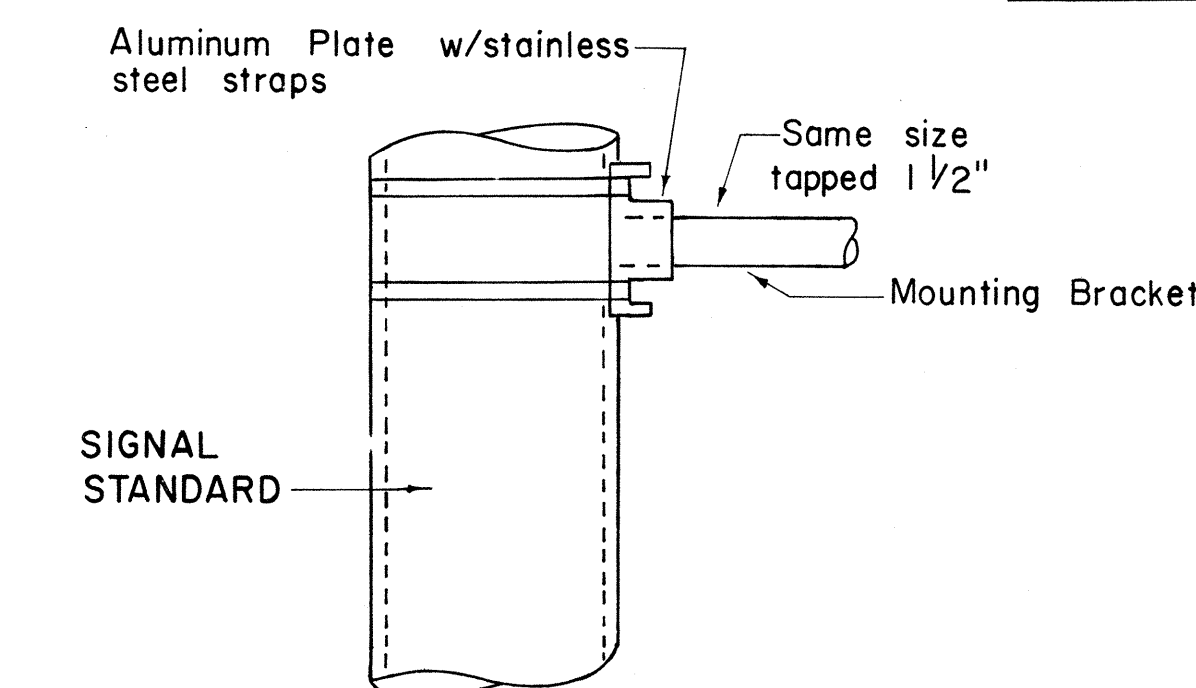
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	G1B-01-79	1979	12	24



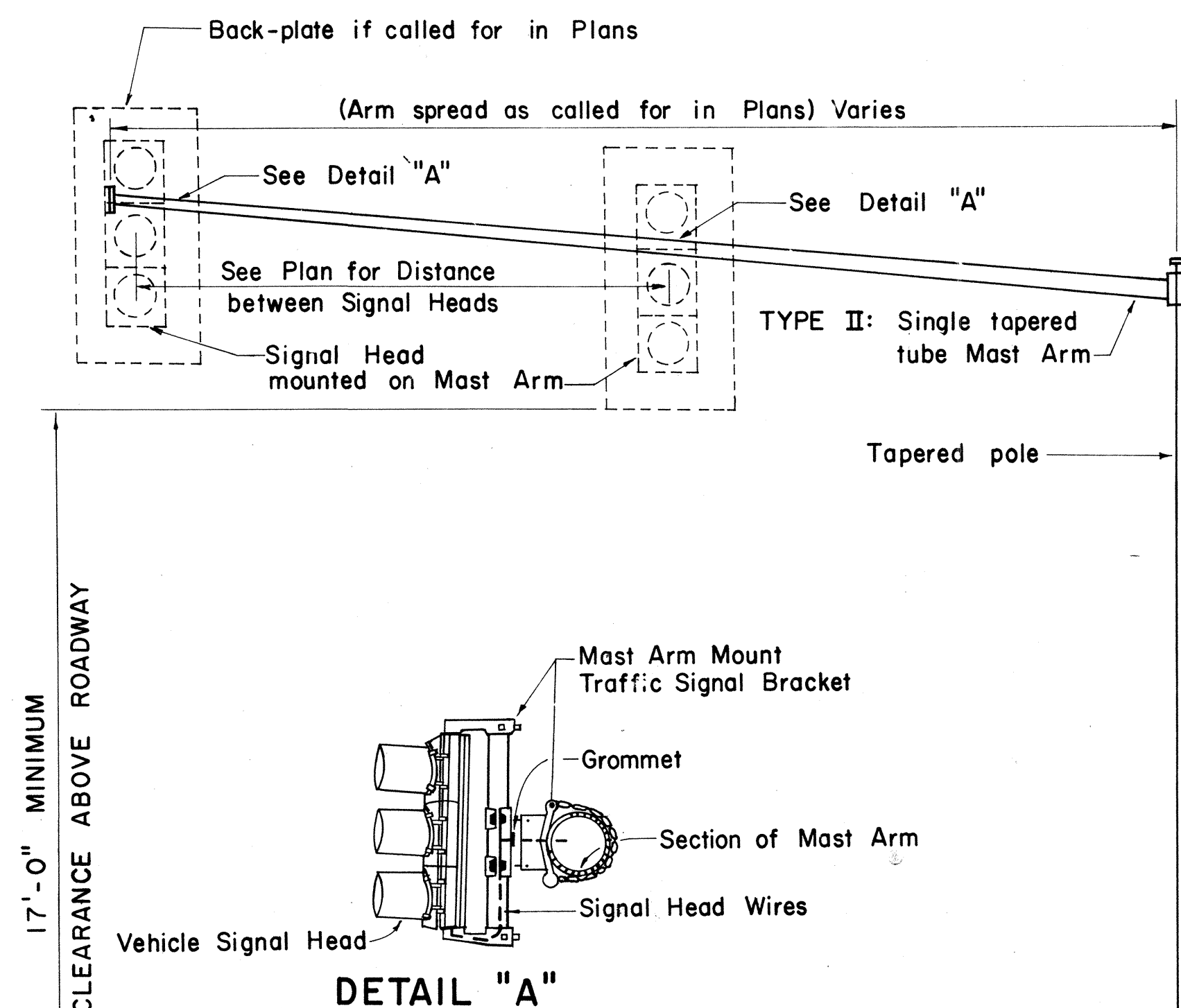
- NOTE:**
1. Conduits shall protrude 2" max. above finished surface of foundation.
 2. Conduits shall slope away from pole foundation.



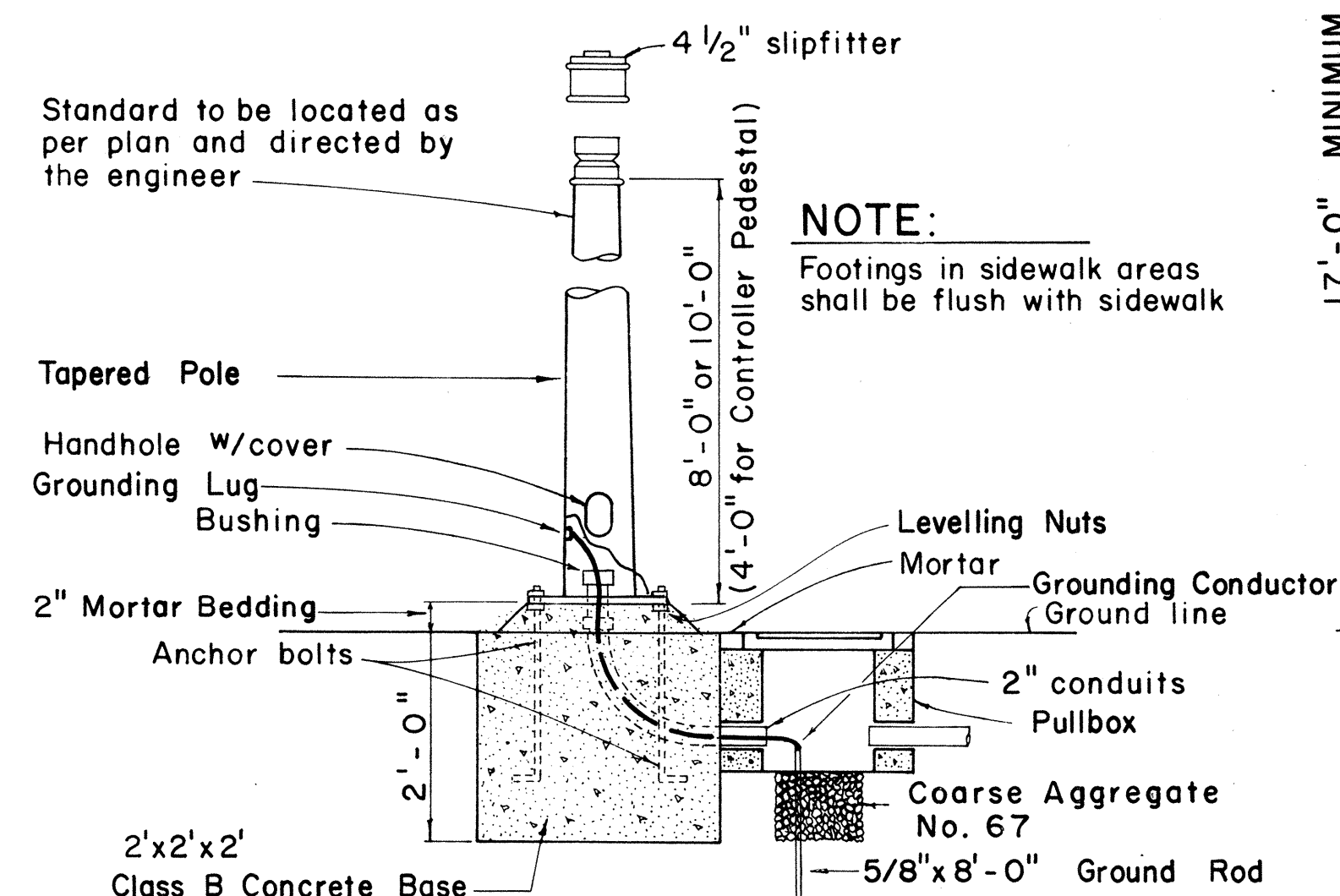
TYPICAL EQUIPMENT MOUNTINGS



DETAIL OF POLE PLATE CONNECTIONS



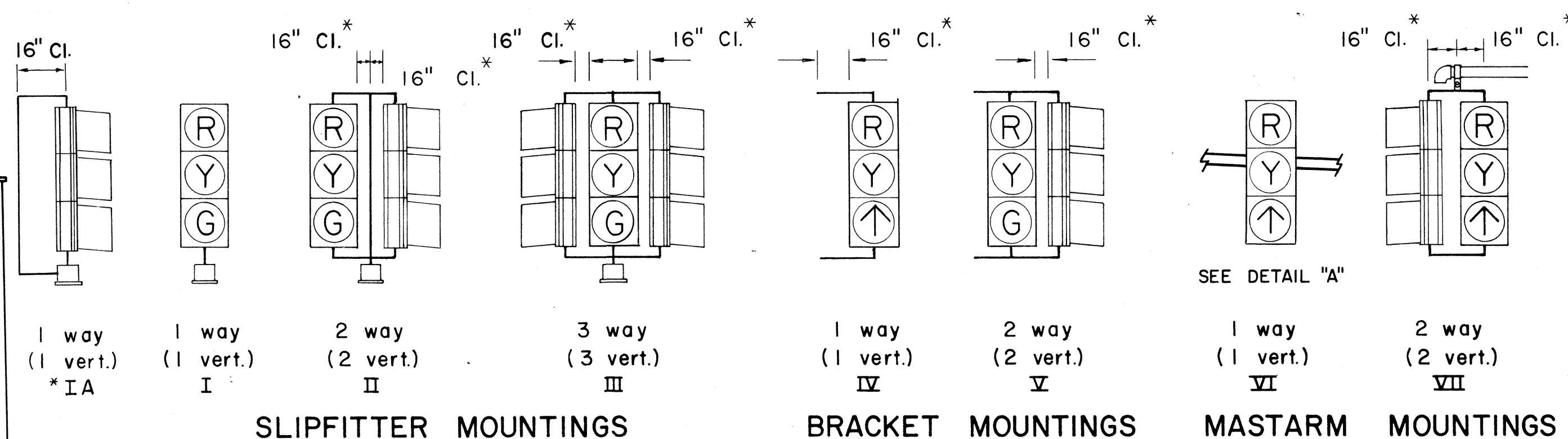
DETAIL "A"



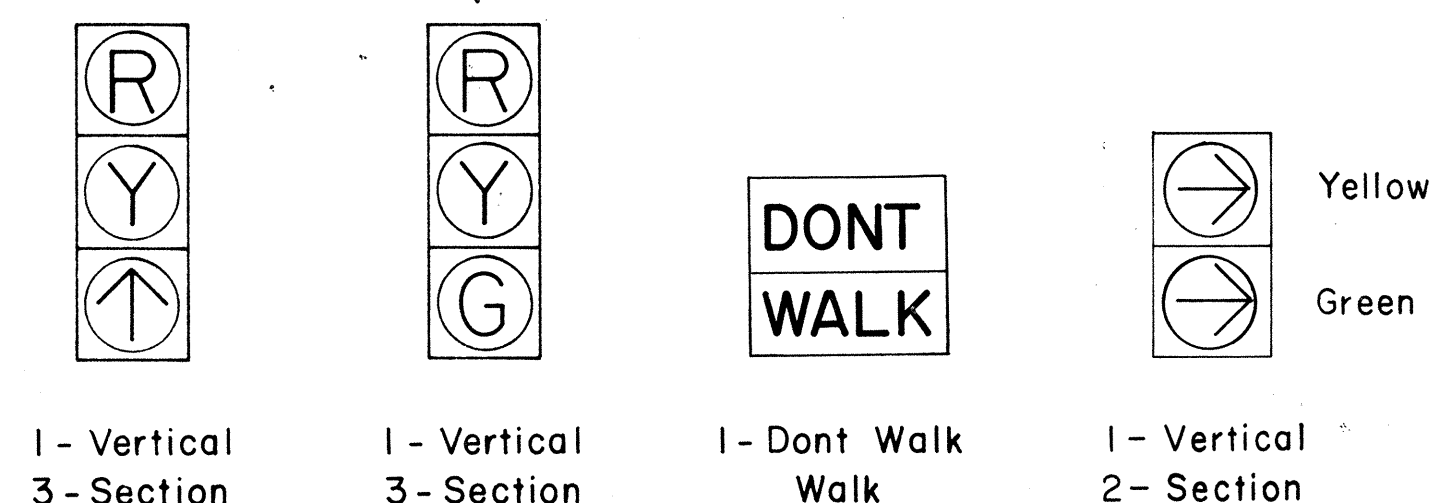
TYPE I SIGNAL STANDARD OR CONTROLLER PEDESTAL AND FOOTING

TYPE II MAST ARM AND STANDARD

PEDESTRIAN PUSH BUTTON POST AND FOOTING



TYPICAL VEHICULAR AND PEDESTRIAN SIGNAL MOUNTINGS



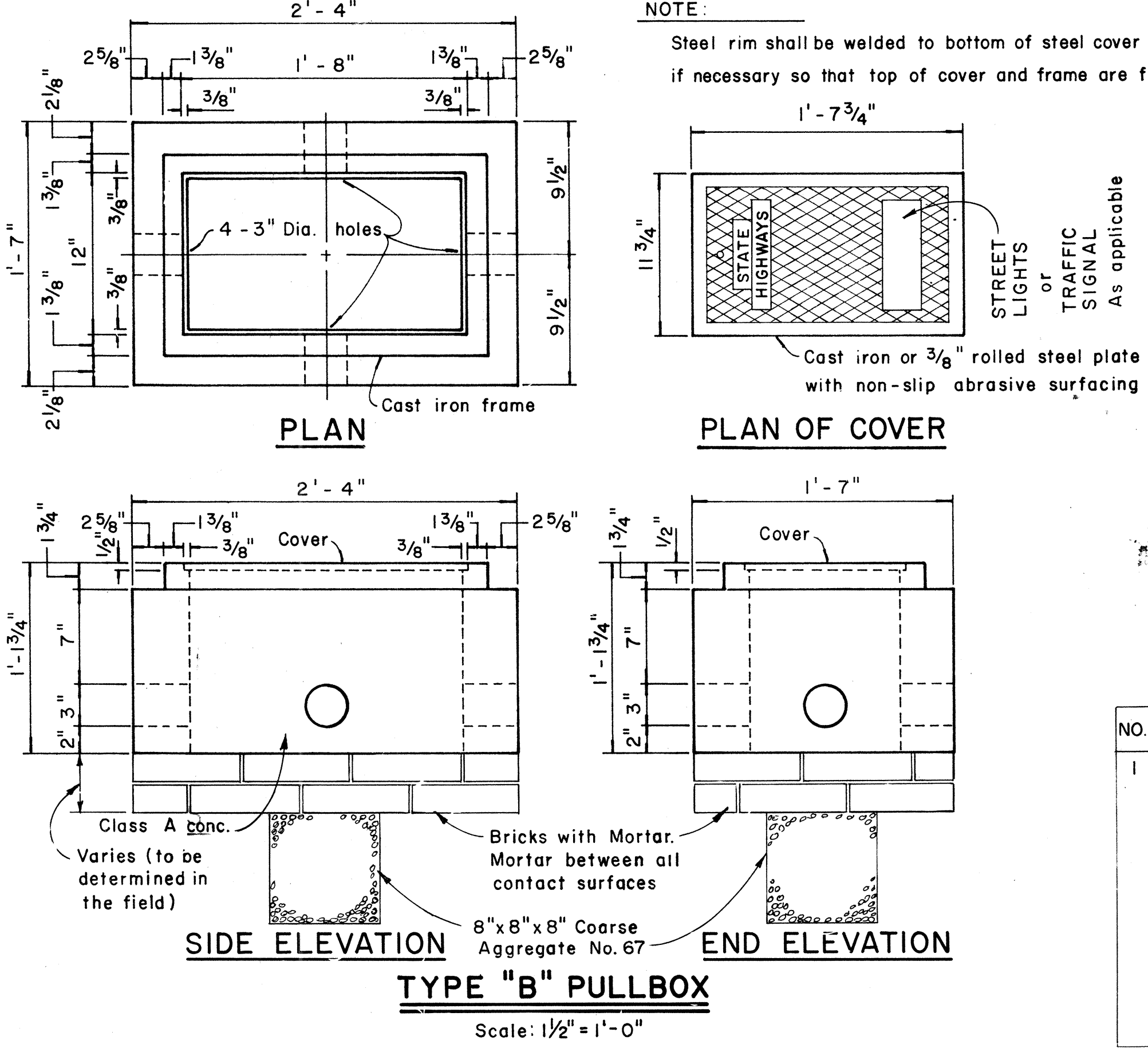
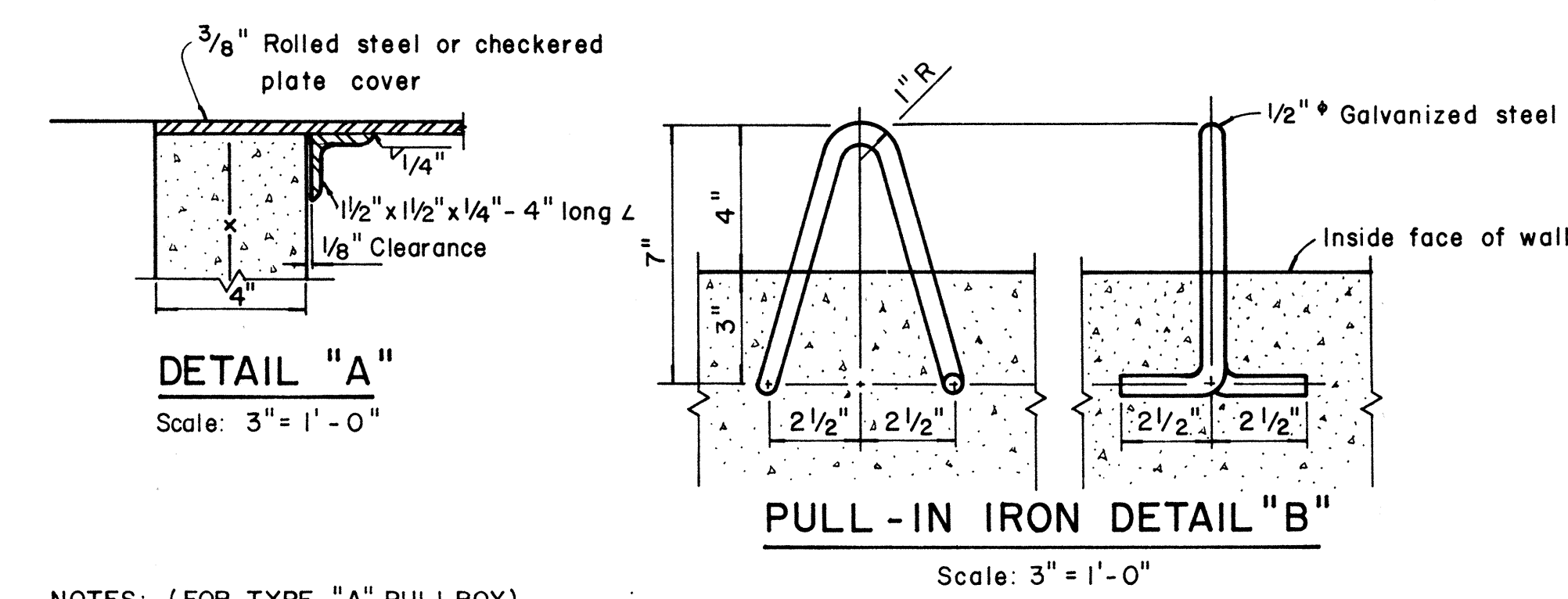
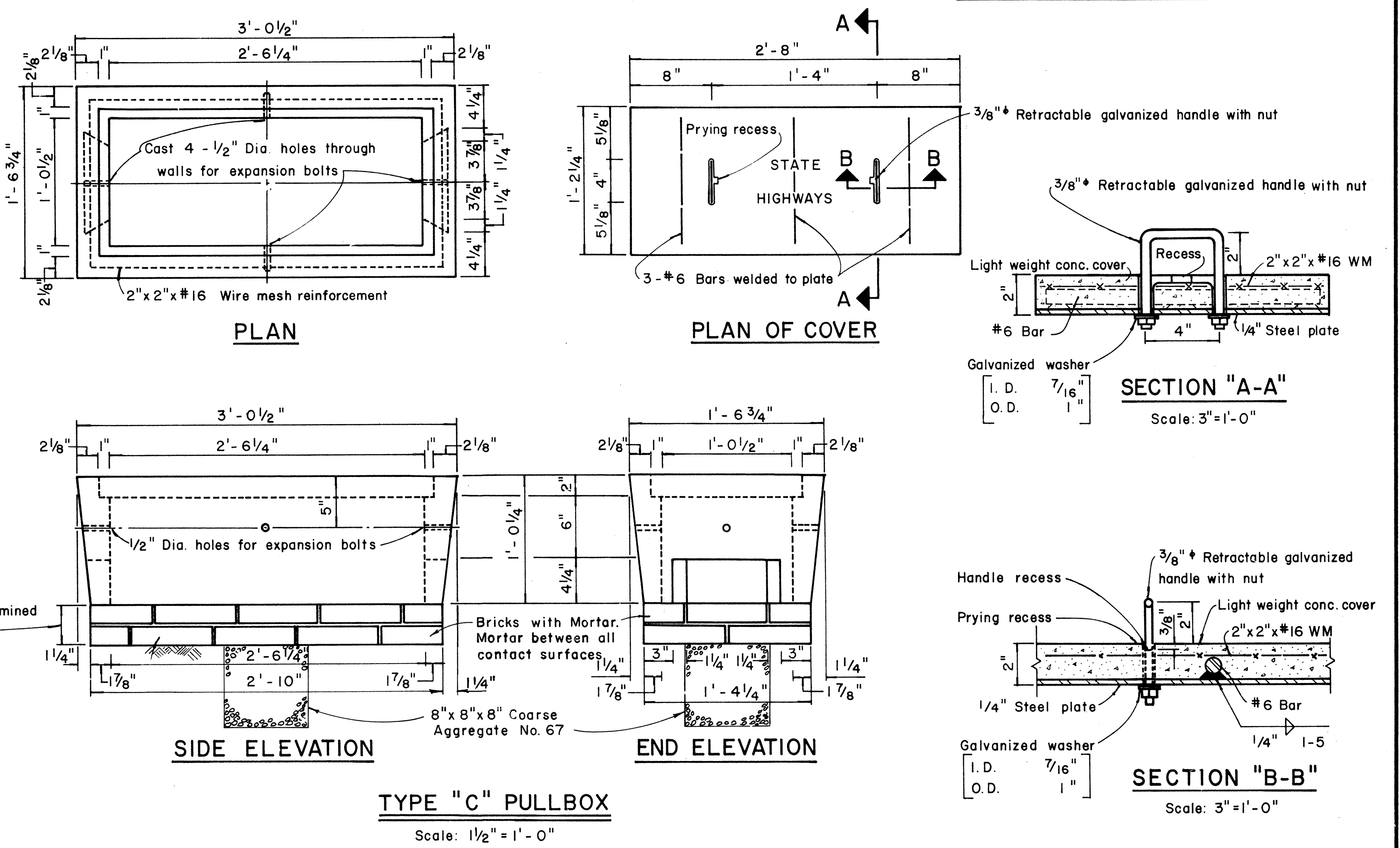
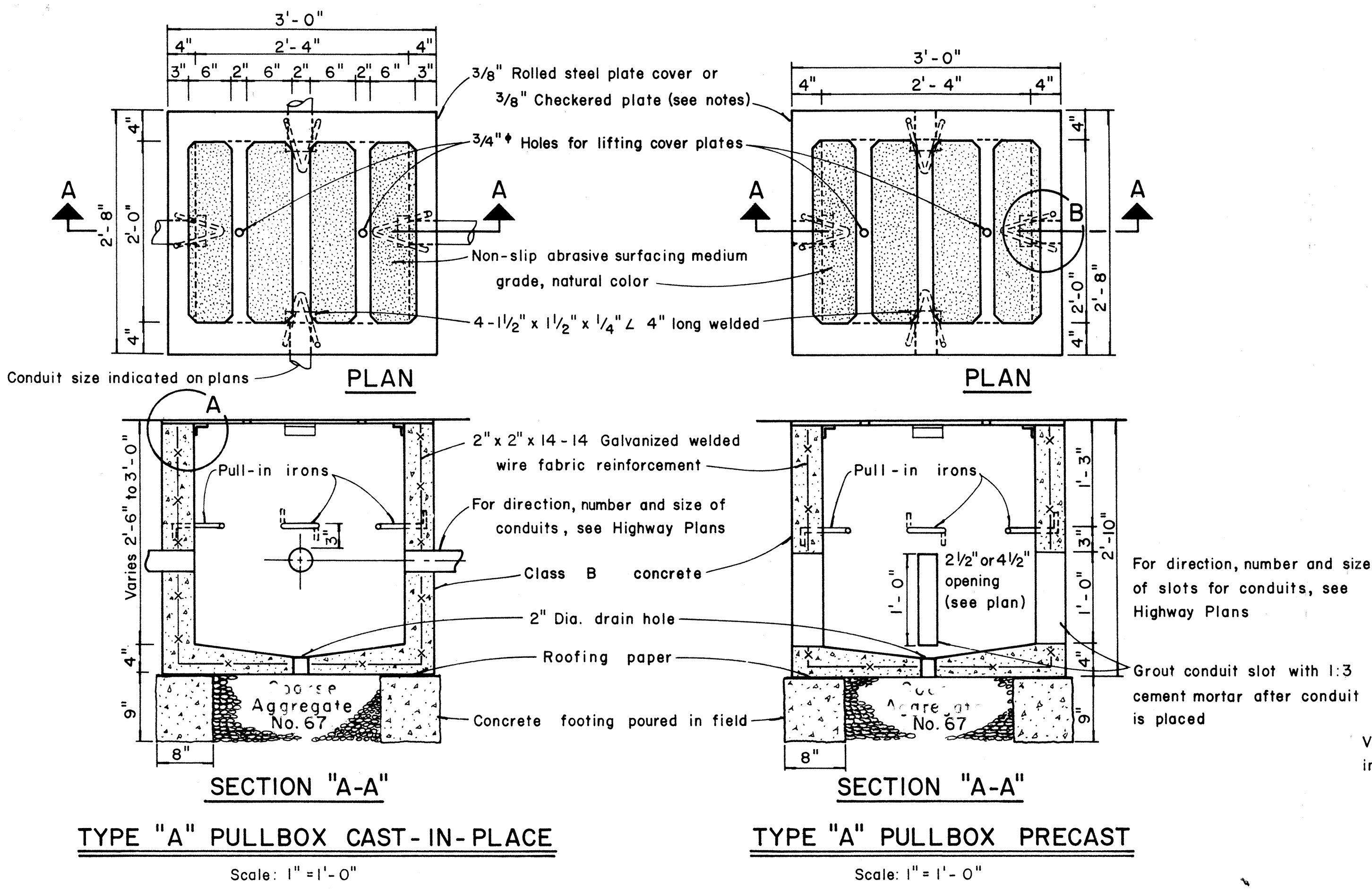
TYPICAL SIGNAL ARRANGEMENTS

NO.	REVISION	APPROVED BY	DATE
1	Revise code nos. for Pedestrian Push Button signs.	H.T.	3/23/12
2	Revise Details of Traffic and Pedestrian Signals, Standards and Pedestrian Push Button and Signs.	H.T.	3/5/12
3	Revise signal indications.	H.T.	9/22/16
4	Remove Note No. 3 & Revise clearance and dimension.	H.T.	9/19/11

APPROVAL RECOMMENDED:
Eichi Tanaka 12/29/69
 TRAFFIC ENGINEER DATE
Shirley S. S. S. 12/29/69
 ASSISTANT CHIEF, ENGINEERING DATE

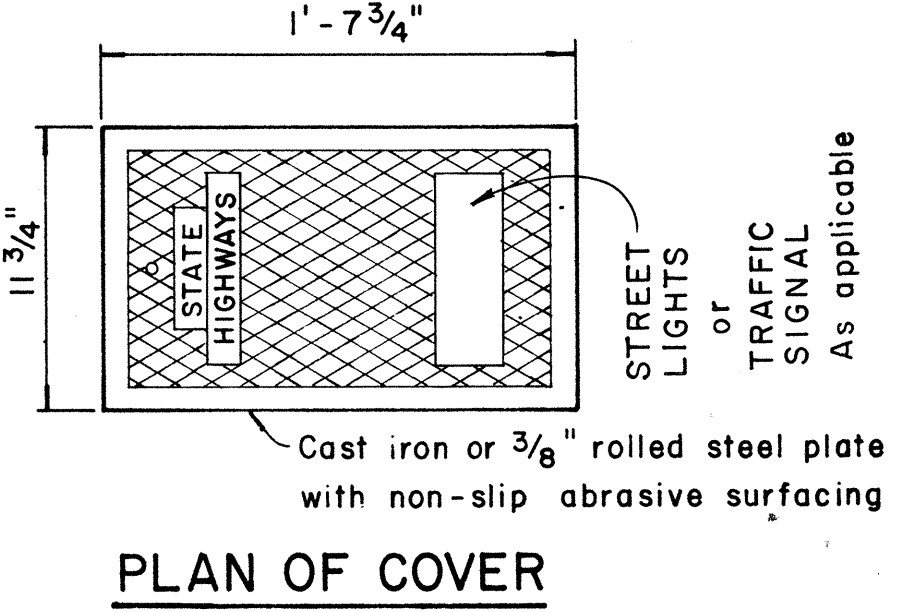
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS
 Not to Scale
 SHEET No. 12 OF 24 SHEETS DT 400

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	618-01-79	1979	20	24



- NOTES: (FOR TYPE "A" PULLBOX)
- 3/8" Rolled steel plate cover with non-slip abrasive surfacing medium grade, natural color shall be used on all pullboxes located on sidewalk areas where pedestrians are walking.
 - 3/8" Checkered plate cover shall be used on all pullboxes located in median areas and other locations where there are no pedestrians walking.
 - Pull irons shall be placed opposite each conduit slot.
 - Covers on all pullboxes located in sidewalk areas shall be set flush with the concrete sidewalk.
 - Each pullbox shall have a pair of pull irons opposite each other for lifting purposes.

NOTE:
Steel rim shall be welded to bottom of steel cover if necessary so that top of cover and frame are flush.



APPROVAL RECOMMENDED:
Enrique Luna
TRAFFIC ENGINEER
DATE: 12/6/79

APPROVED:
Enrique Luna
ASSISTANT CHIEF, ENGINEERING
DATE: 12-30-79

NO.	REVISION	APPROVED BY	DATE
1	Revised Type B & C Pullbox details	H.T.	3-5-76

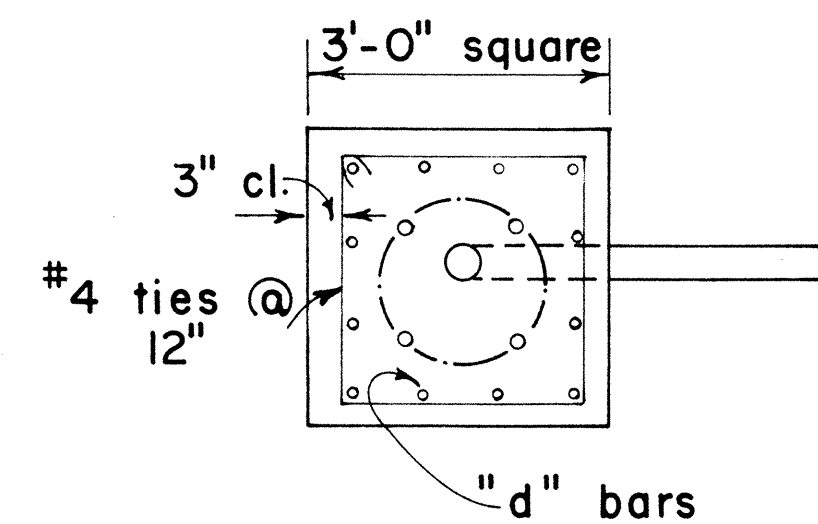
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
PULLBOXES

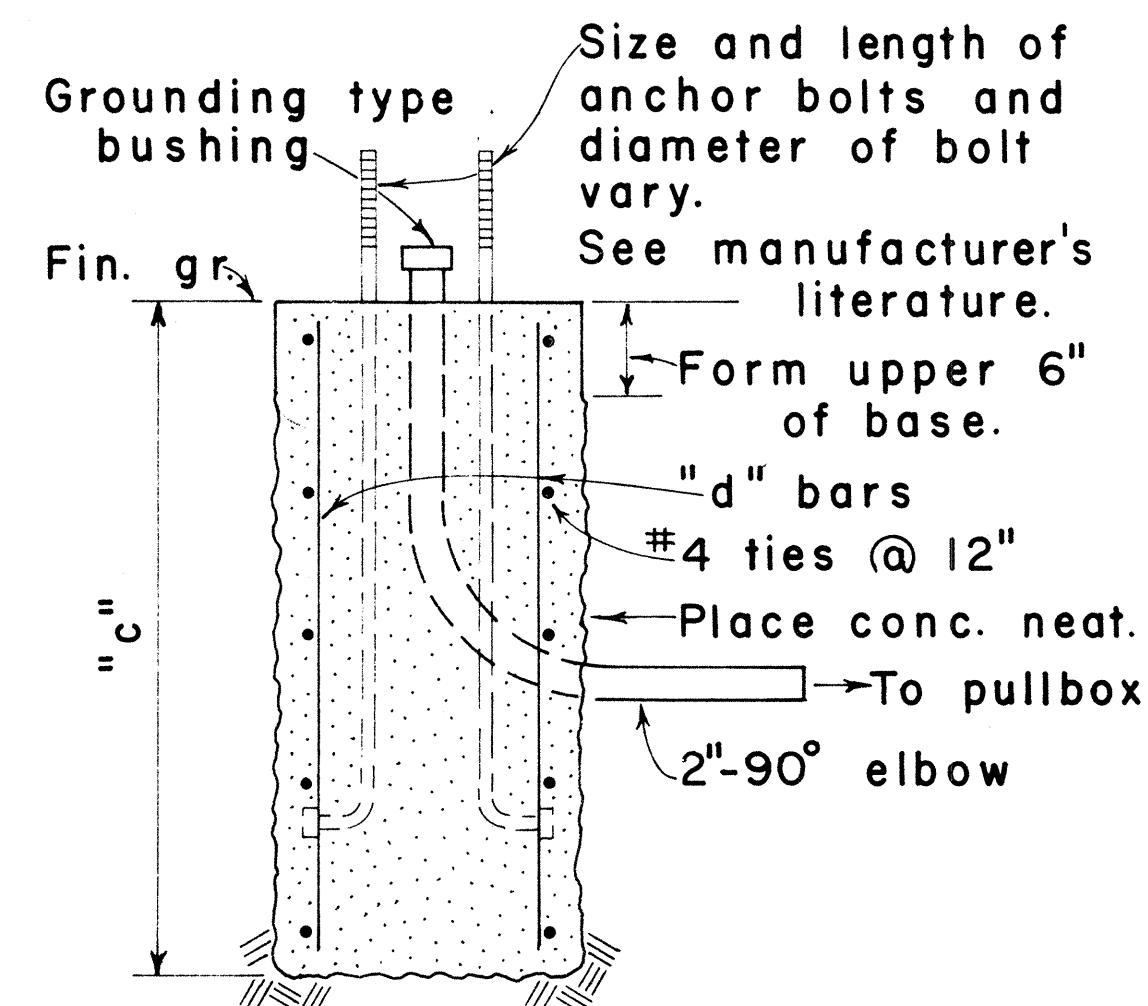
Scale as noted Date

SHEET No. 20 OF 24 SHEETS DT 401

DATE	12/6/79
SURVEY PLOTTED BY	...
DRAWN BY	...
CHECKED BY	...
ORIGINAL PLAN	...
NOTE BOOK	...
No.	...



PLAN - SECTION



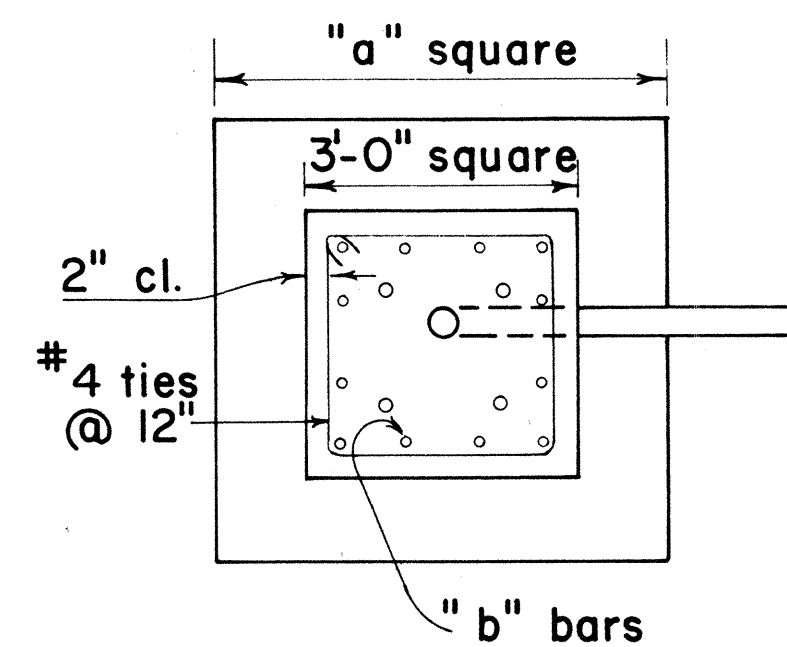
NOTE:

Concrete shall be Class B.

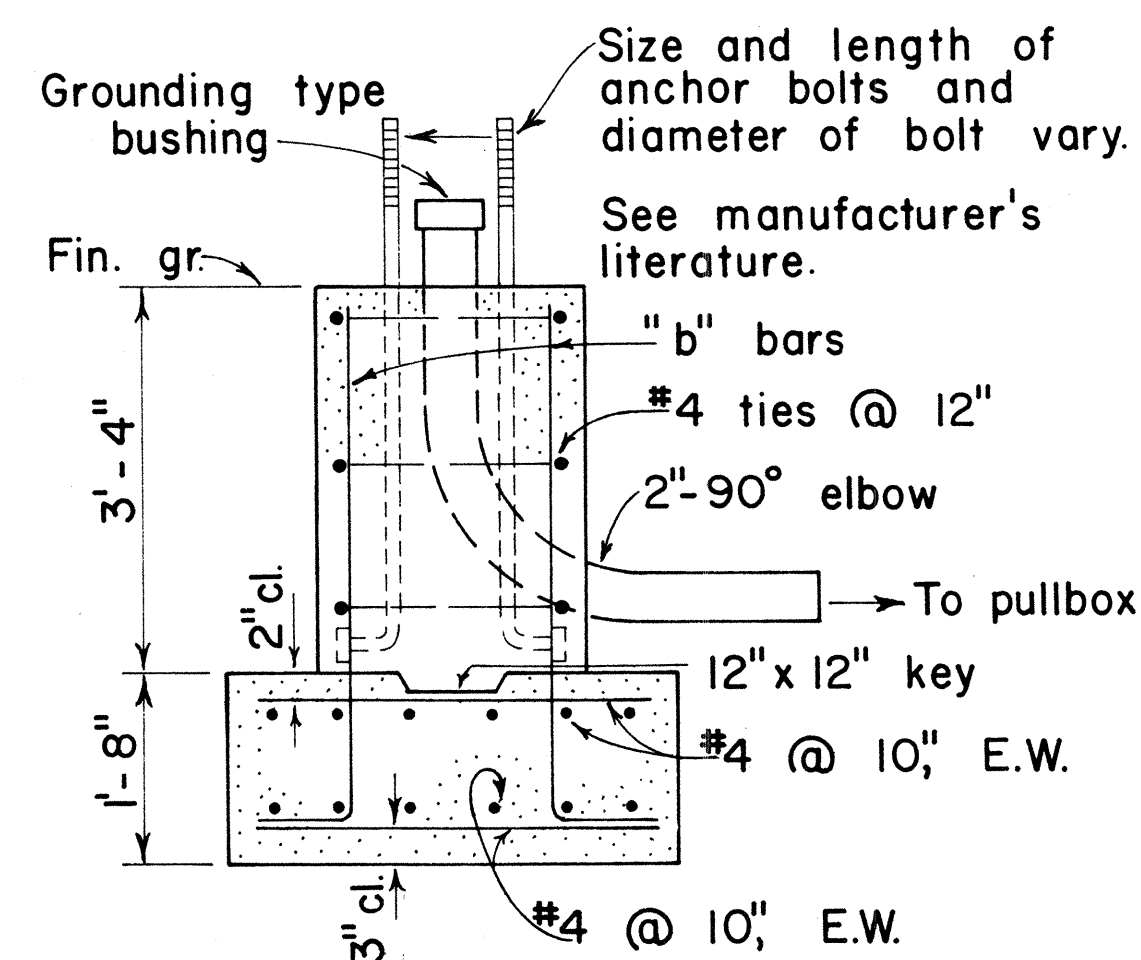
SECTION

MAST ARM LENGTH	"c"	"d" BARS
16' - 18'	5' - 0"	12 - #6
20'	5' - 6"	12 - #6
25'	6' - 0"	12 - #6
30'	6' - 6"	12 - #6
35'	7' - 0"	12 - #8
40'	8' - 0"	12 - #8

TYPE II



PLAN - SECTION



NOTE:

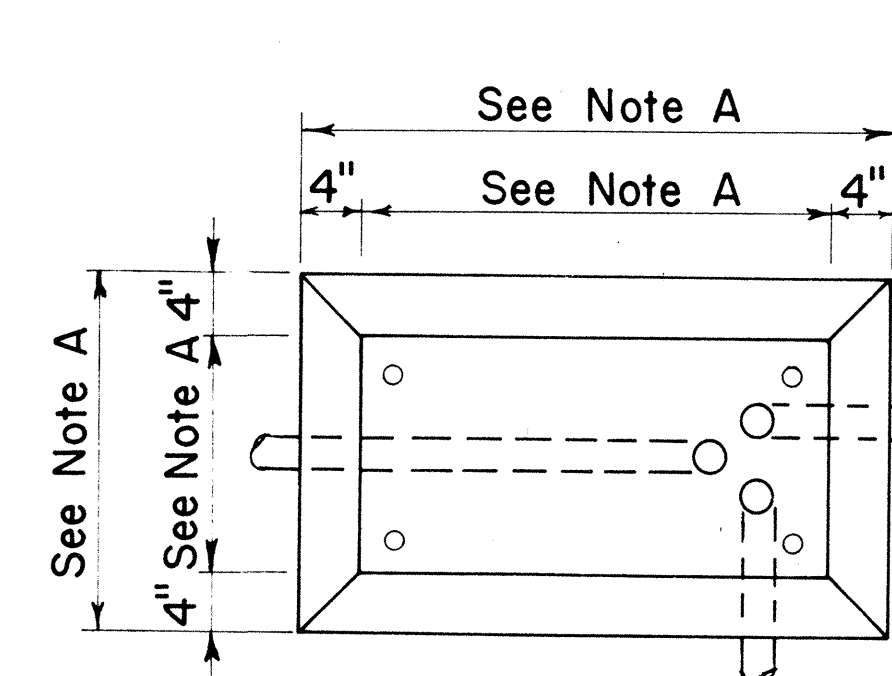
Concrete shall be Class B.

SECTION

MAST ARM LENGTH	"a"	"b" BARS
16' - 18'	5' - 0"	12 - #6
20'	5' - 6"	12 - #6
25'	6' - 0"	12 - #6
30'	6' - 6"	12 - #8
35'	6' - 6"	12 - #8
40'	7' - 0"	12 - #8

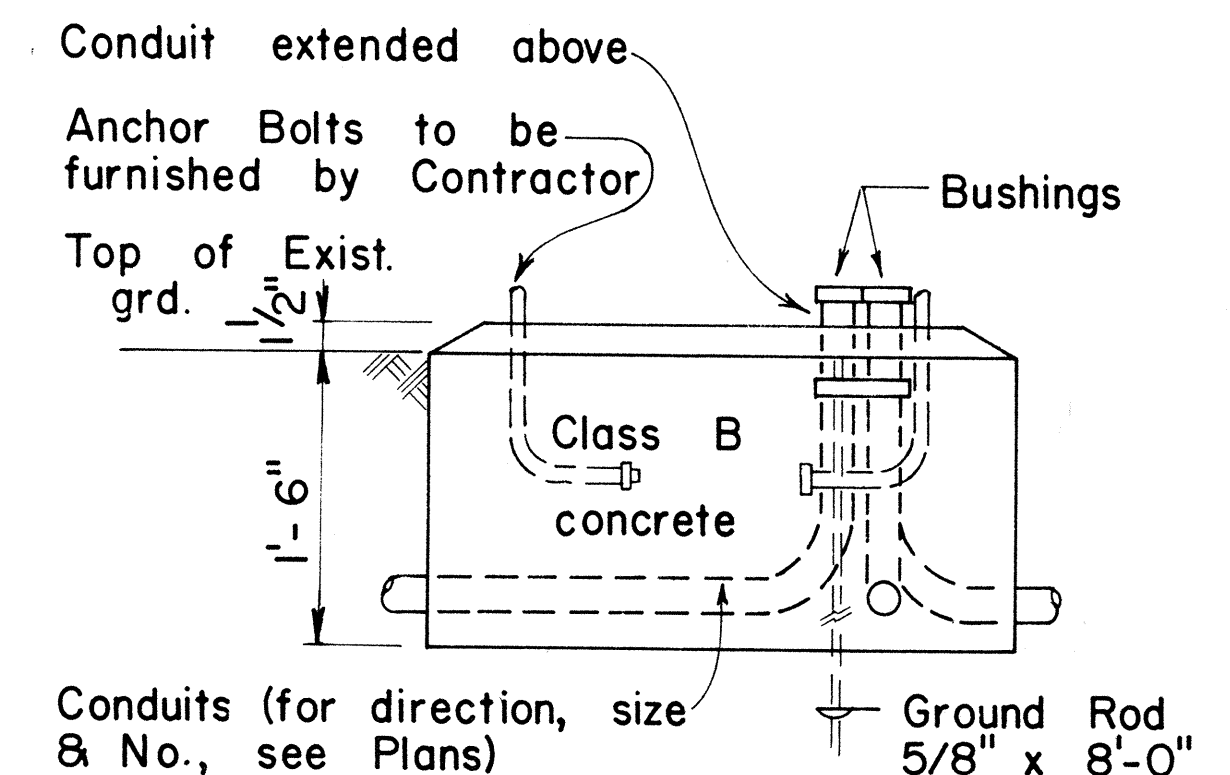
TYPE IIA

FOOTING FOR MAST ARM STANDARD



PLAN

CONCRETE BASE FOR CONTROLLER CABINET



ELEVATION

NOTES:

- Dimensions to be determined by the size of the Controller Cabinet to be furnished under this Contract.
- Details of Conduits, Anchor Bolts, etc., are approximate only. Exact details shall be secured by the Contractor from Manufacturer.

APPROVAL RECOMMENDED:
Erich Tanaka 3/4/76
TRAFFIC ENGINEER DATE

APPROVED:
Robert B. Rasmussen 2-5-76
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

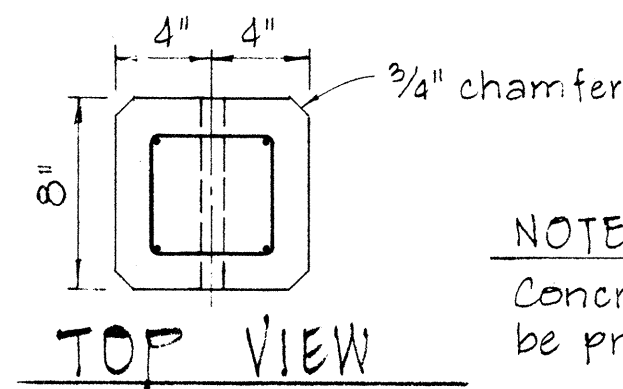
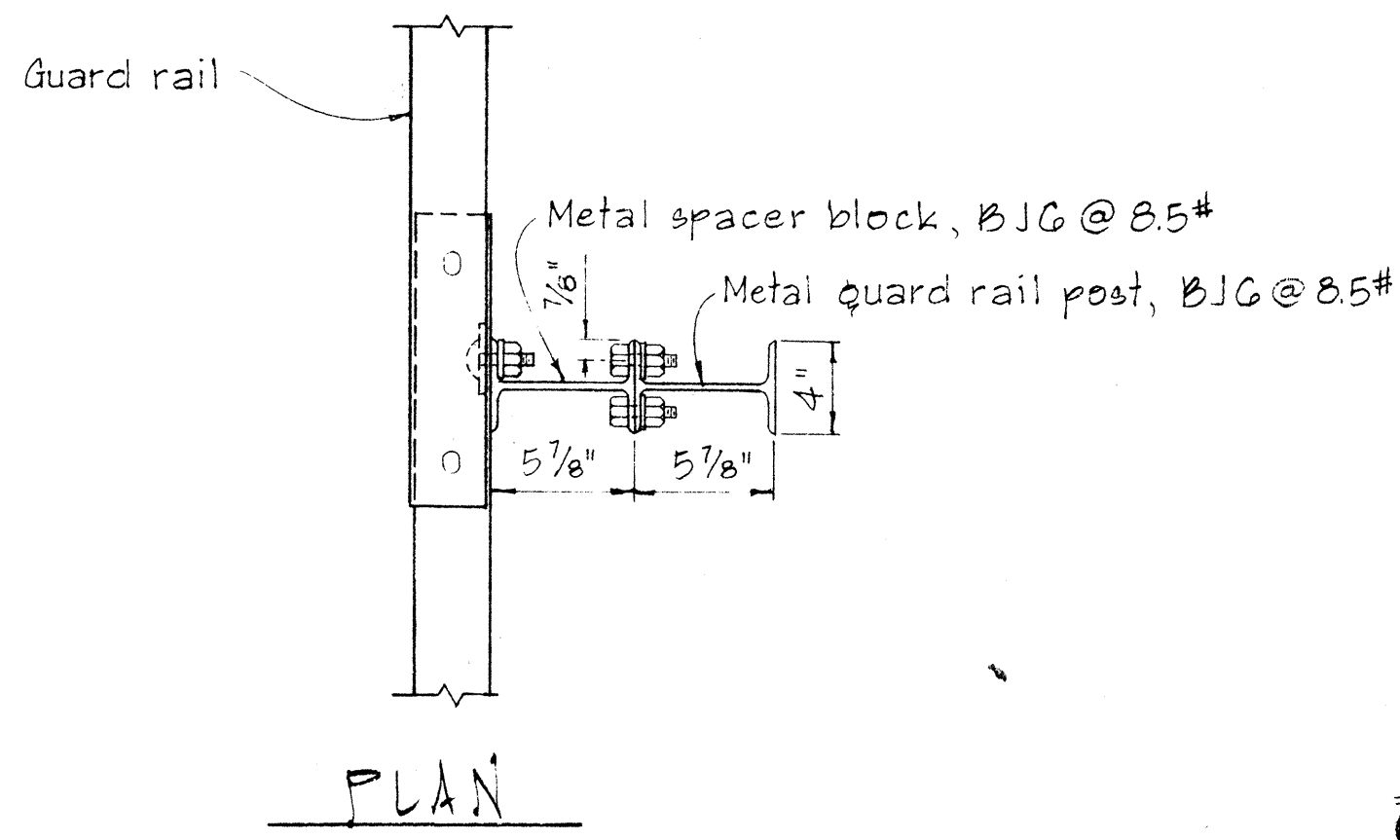
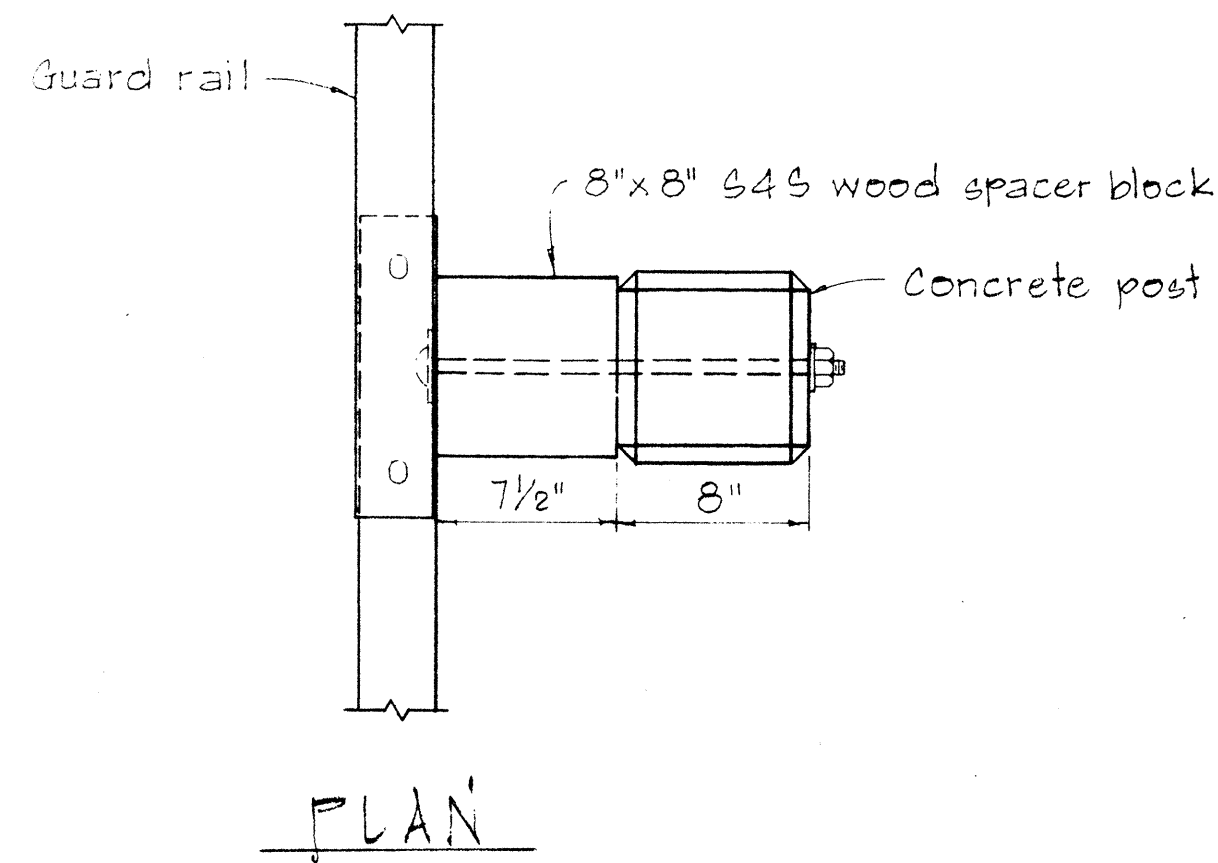
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS

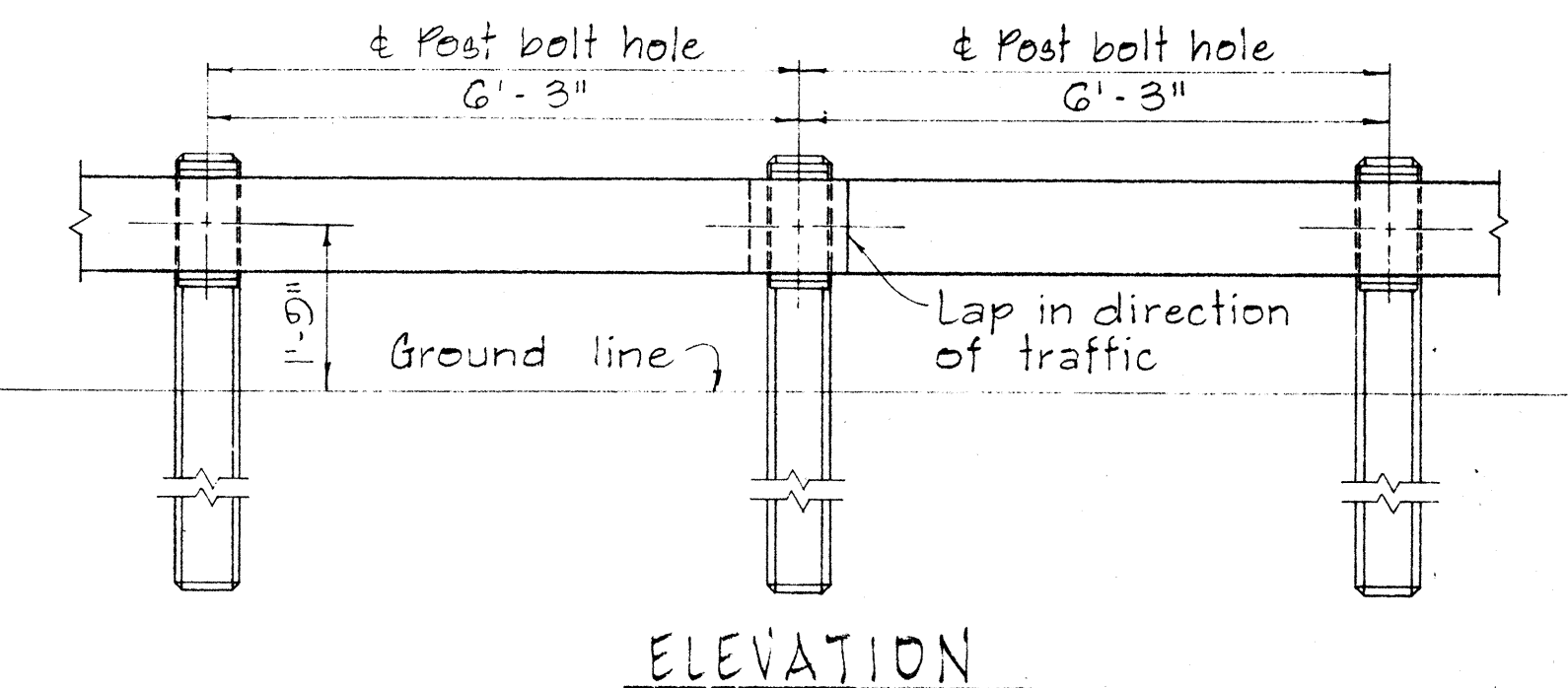
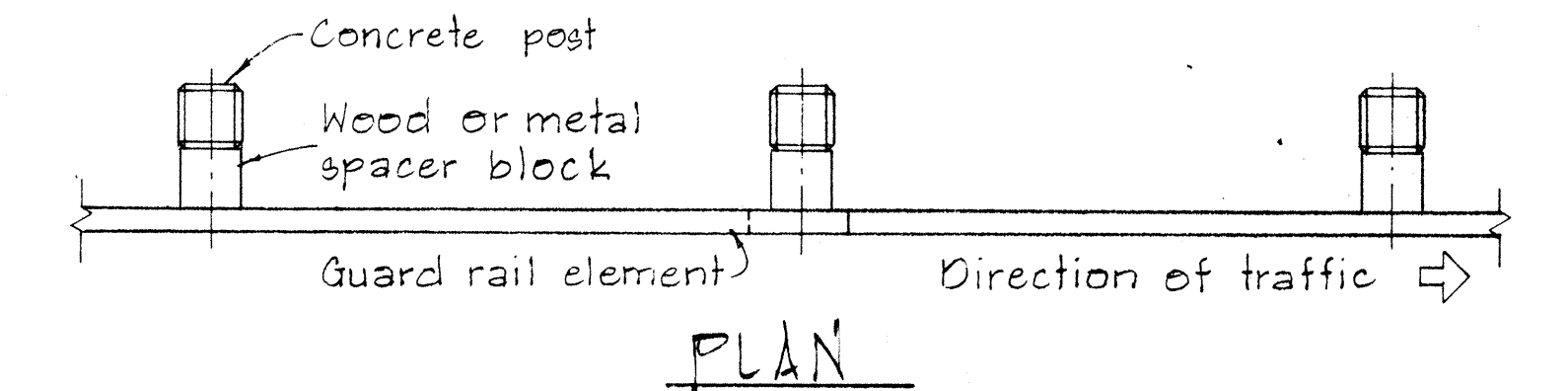
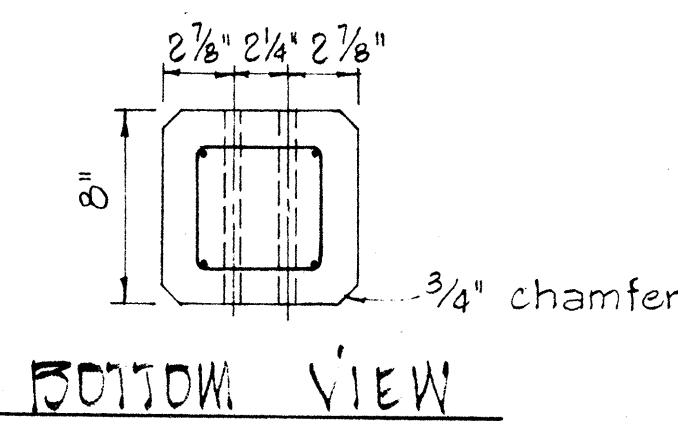
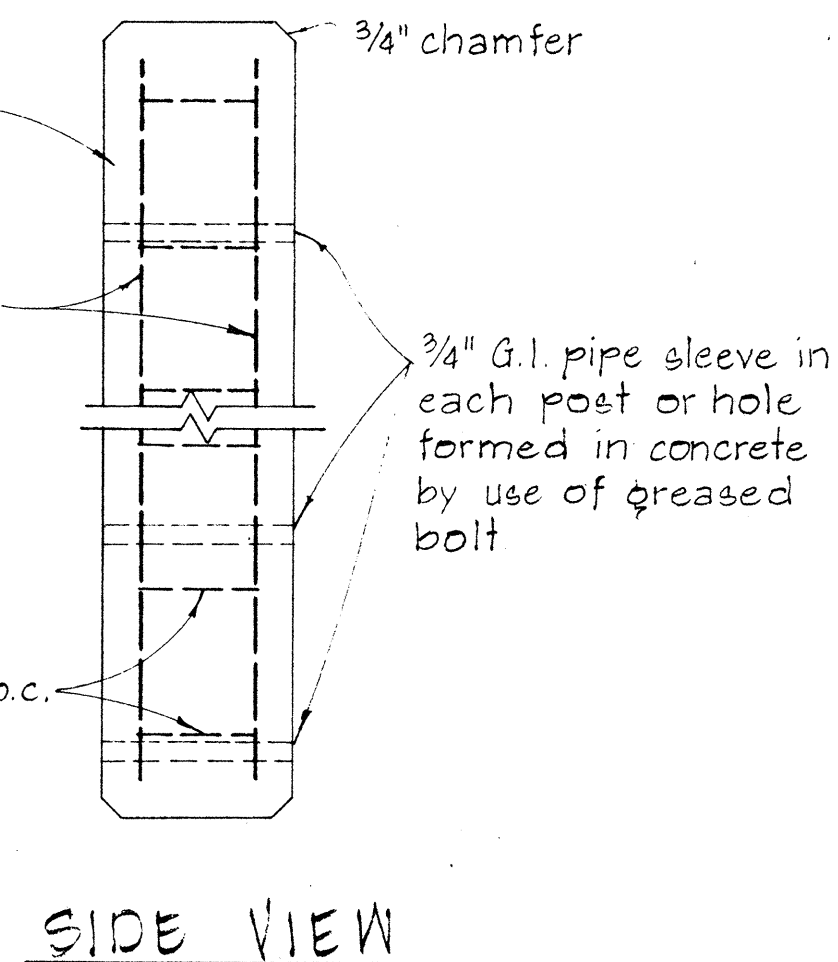
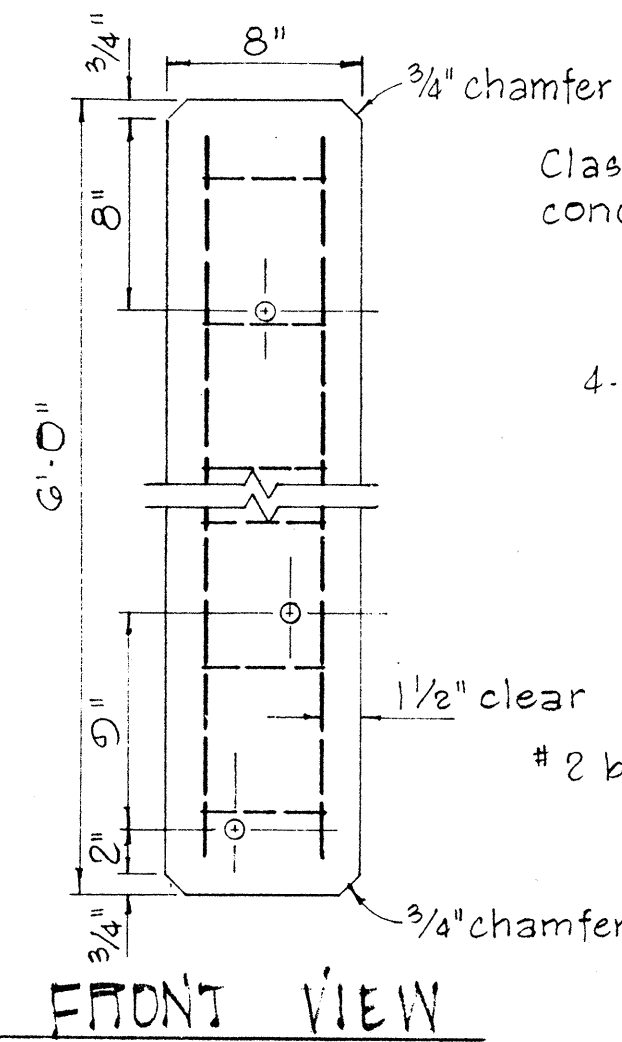
Not to Scale

SHEET No. 21 OF 24 SHEETS DT404

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	GIB-01-79	1979	22	24

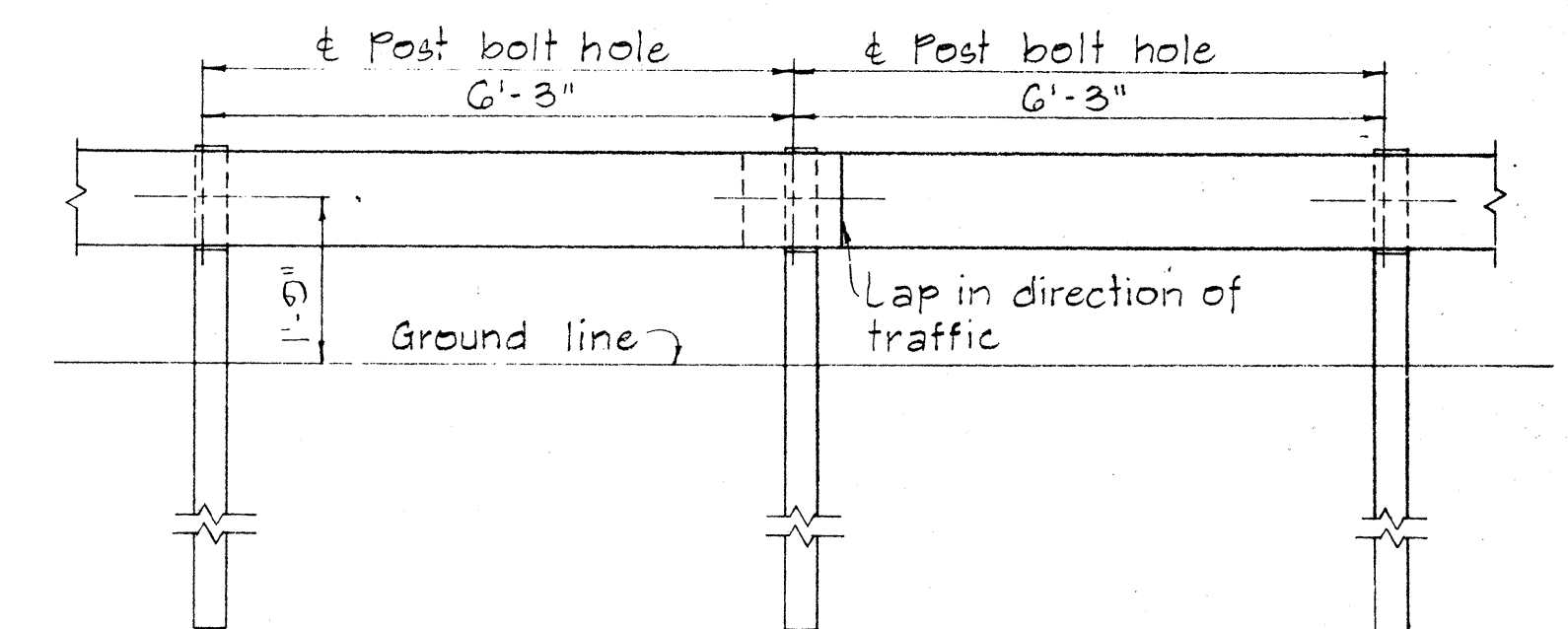
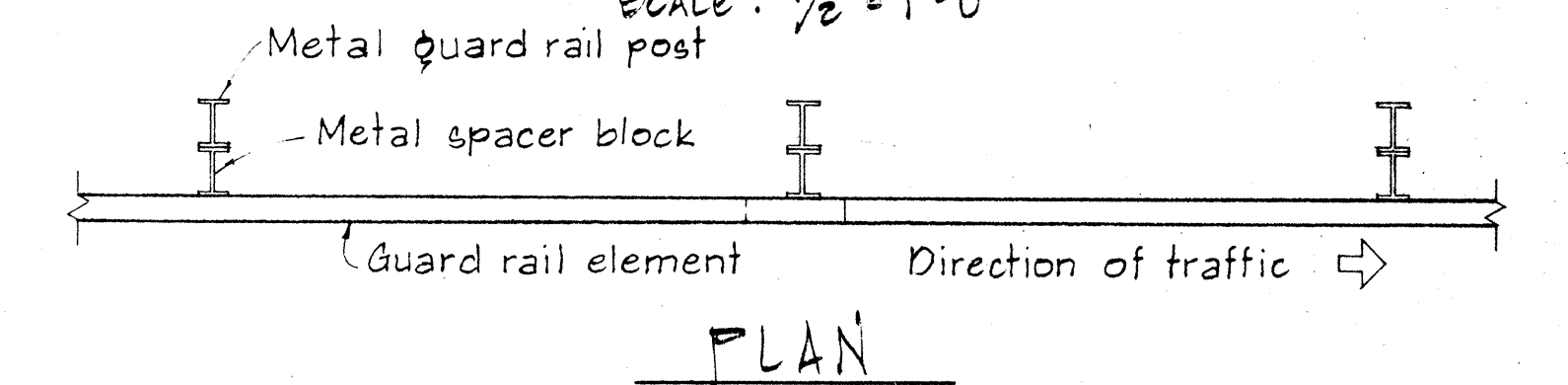


NOTE:
Concrete post shall be precast



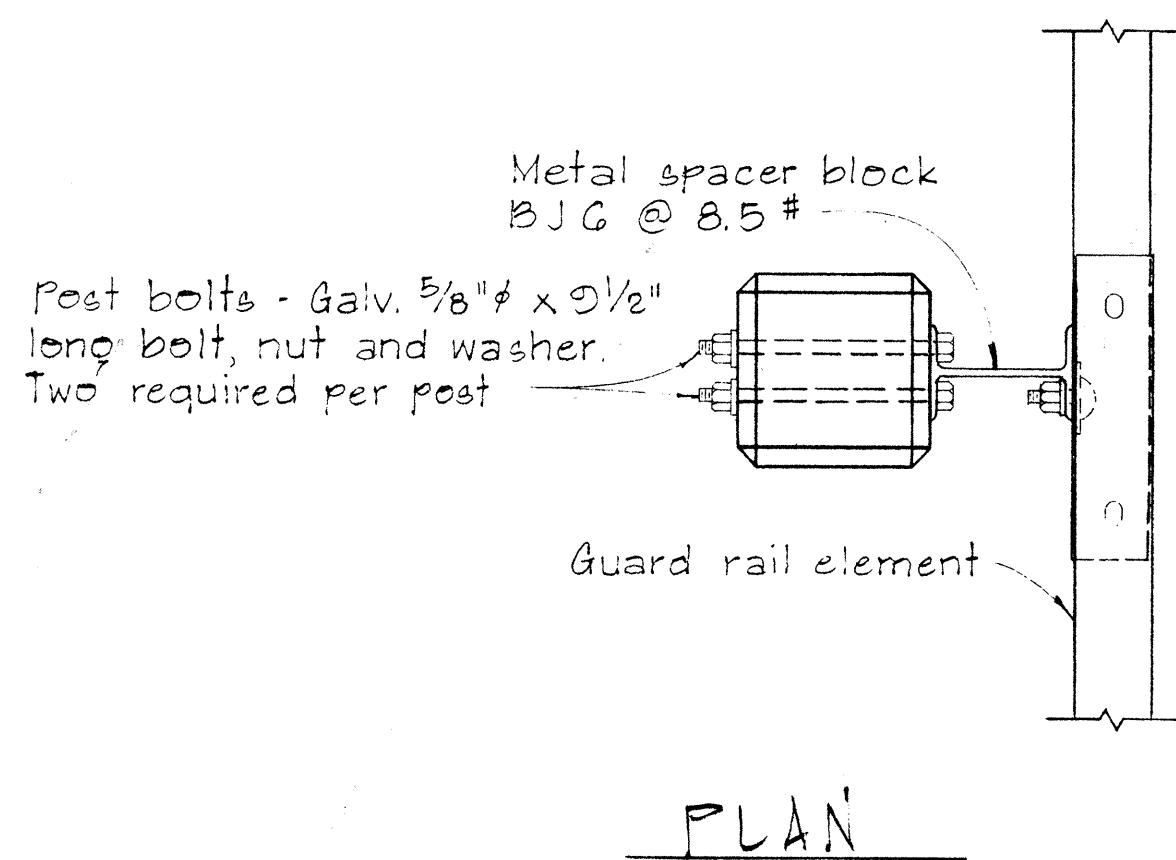
METAL GUARD RAIL ON CONCRETE POST WITH WOOD OR METAL SPACER BLOCK

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



METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK

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

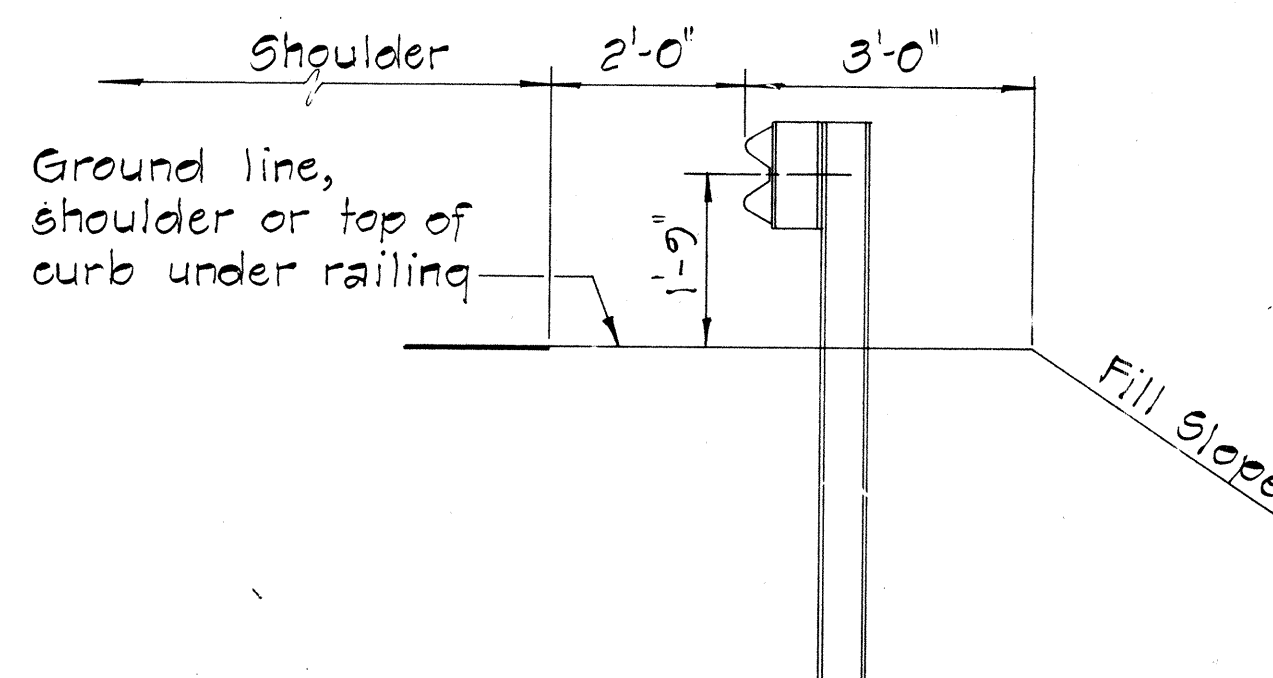


SINGLE METAL GUARD RAIL ON PRECAST CONCRETE POST WITH WOOD OR METAL SPACER BLOCK

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

SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK

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



TYPICAL METAL GUARD RAIL DETAIL

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

APPROVAL RECOMMENDED:
Traffic Engineer

12/29/62
DATE

APPROVED:
Assistant Chief, Engineering

12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

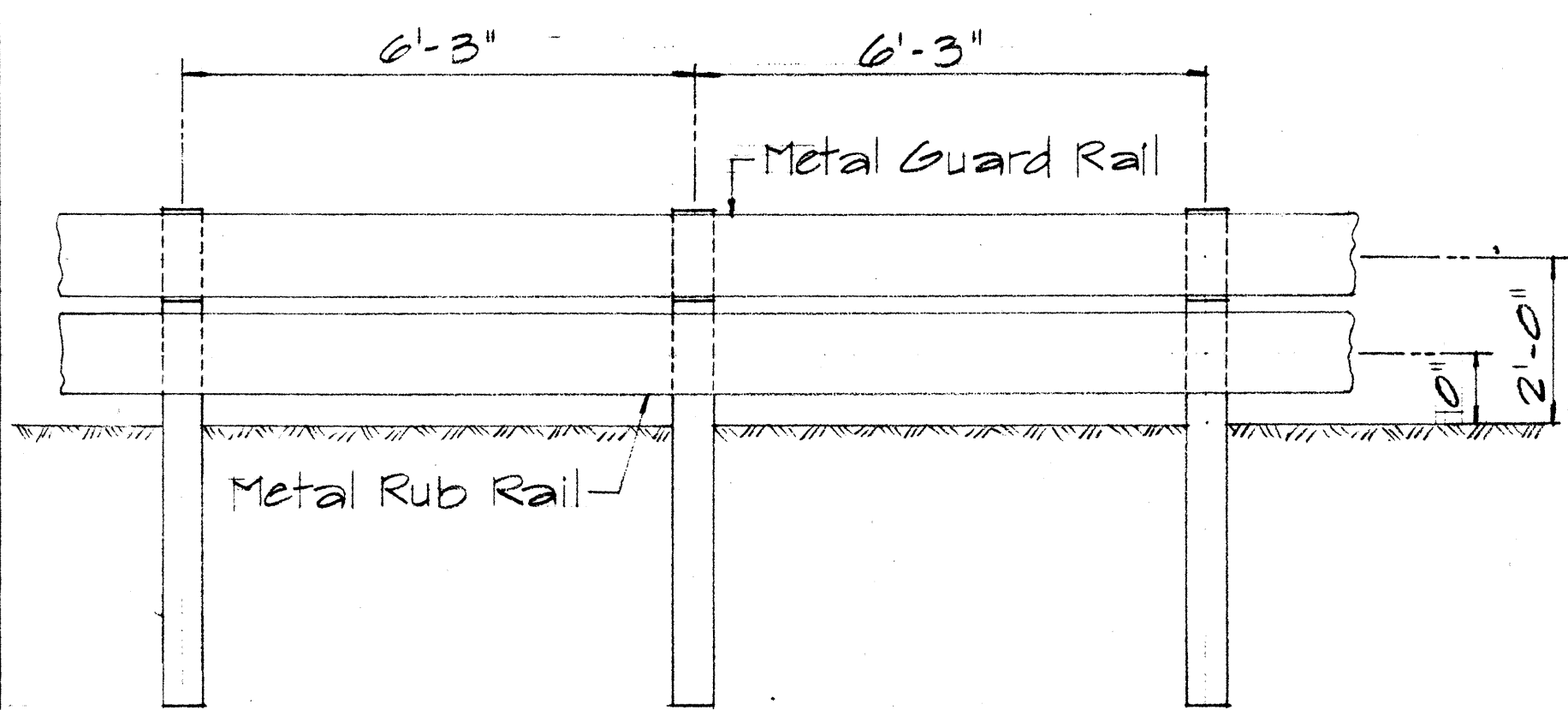
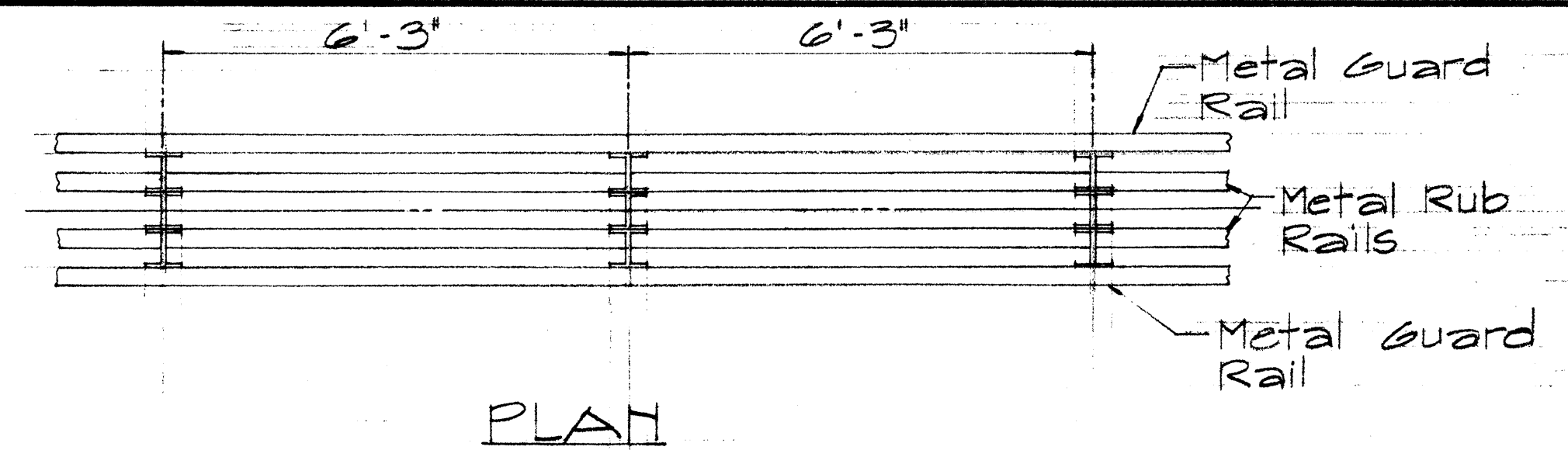
STANDARD DETAILS
METAL GUARD RAIL

SCALE: AS SHOWN

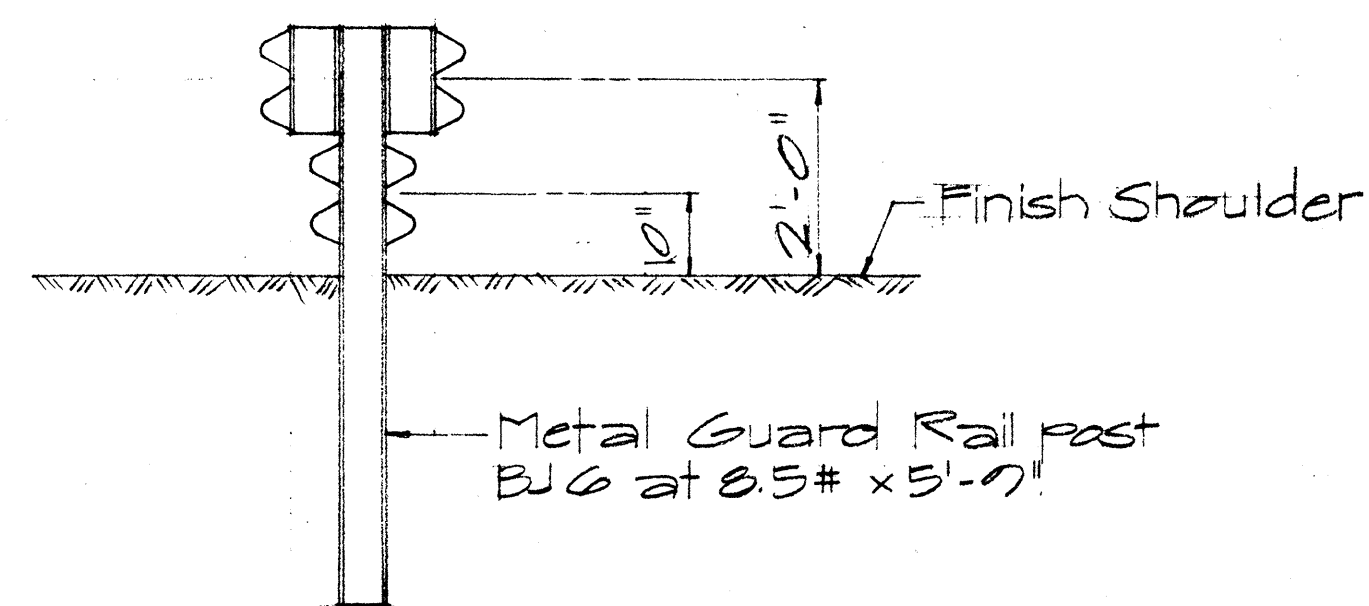
NOV. 1968

SHEET No. 22 OF 24 SHEETS DT 500

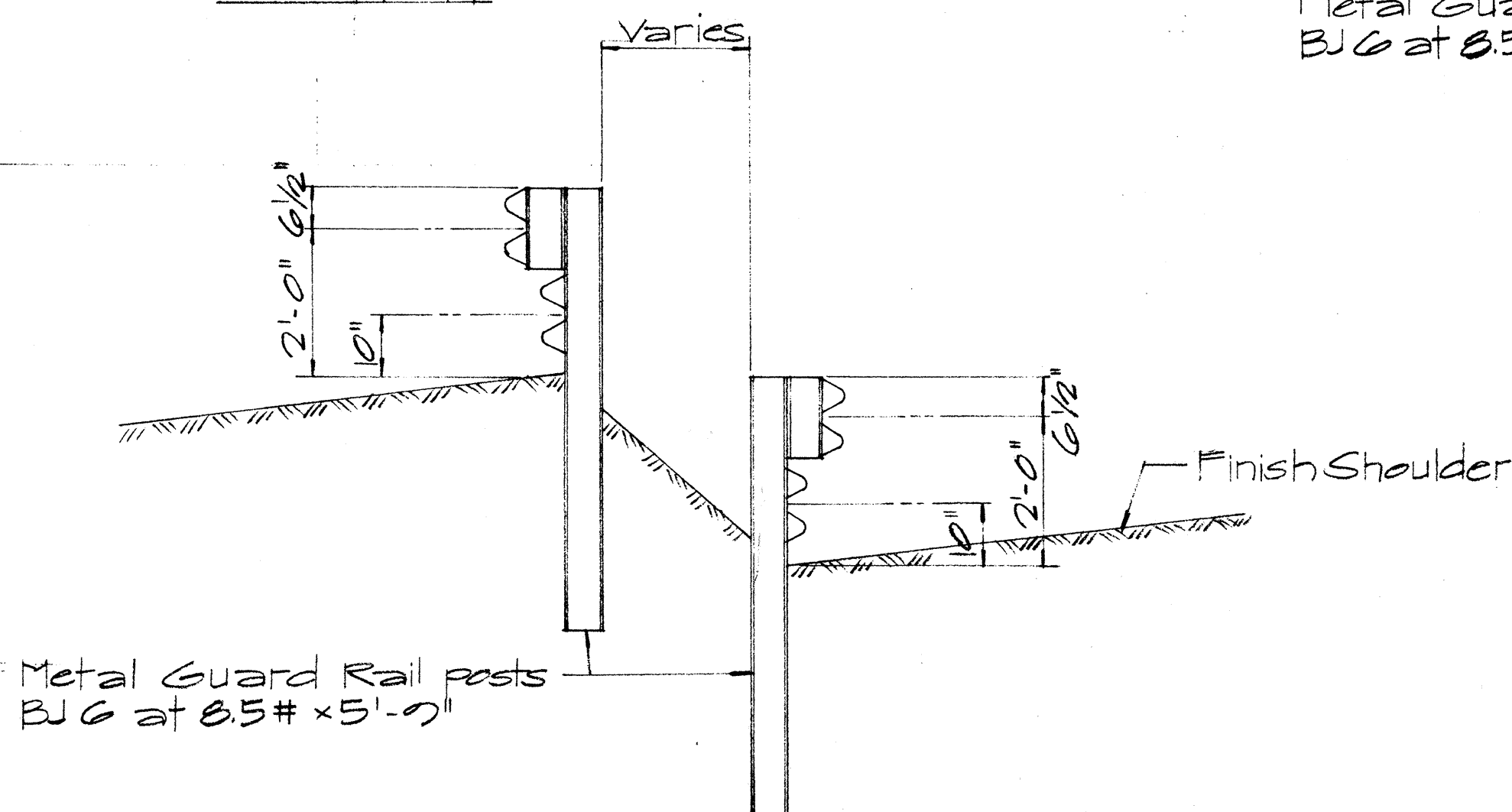
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61B-01-79	1970	24	24



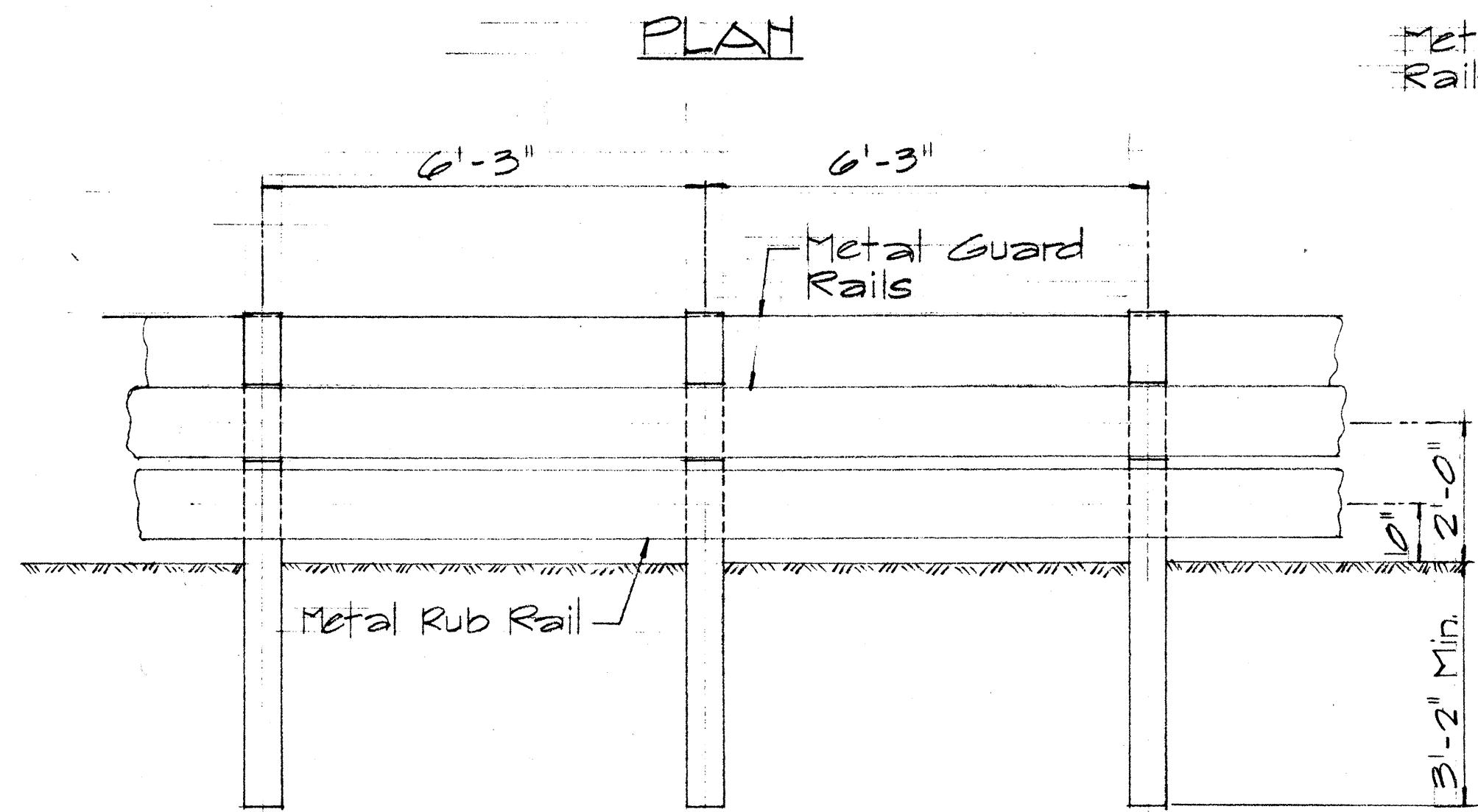
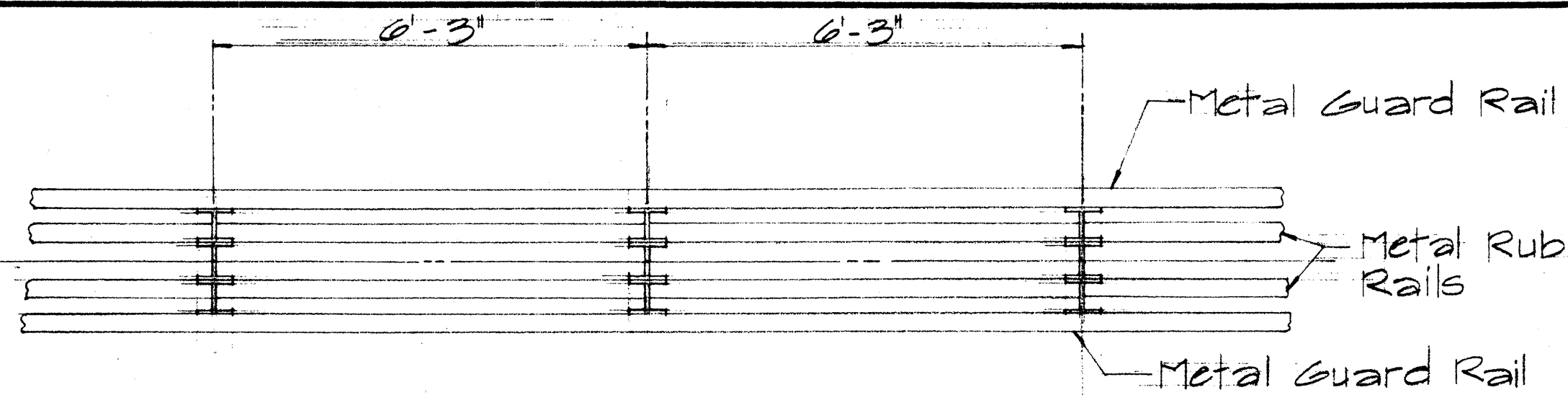
ELEVATION



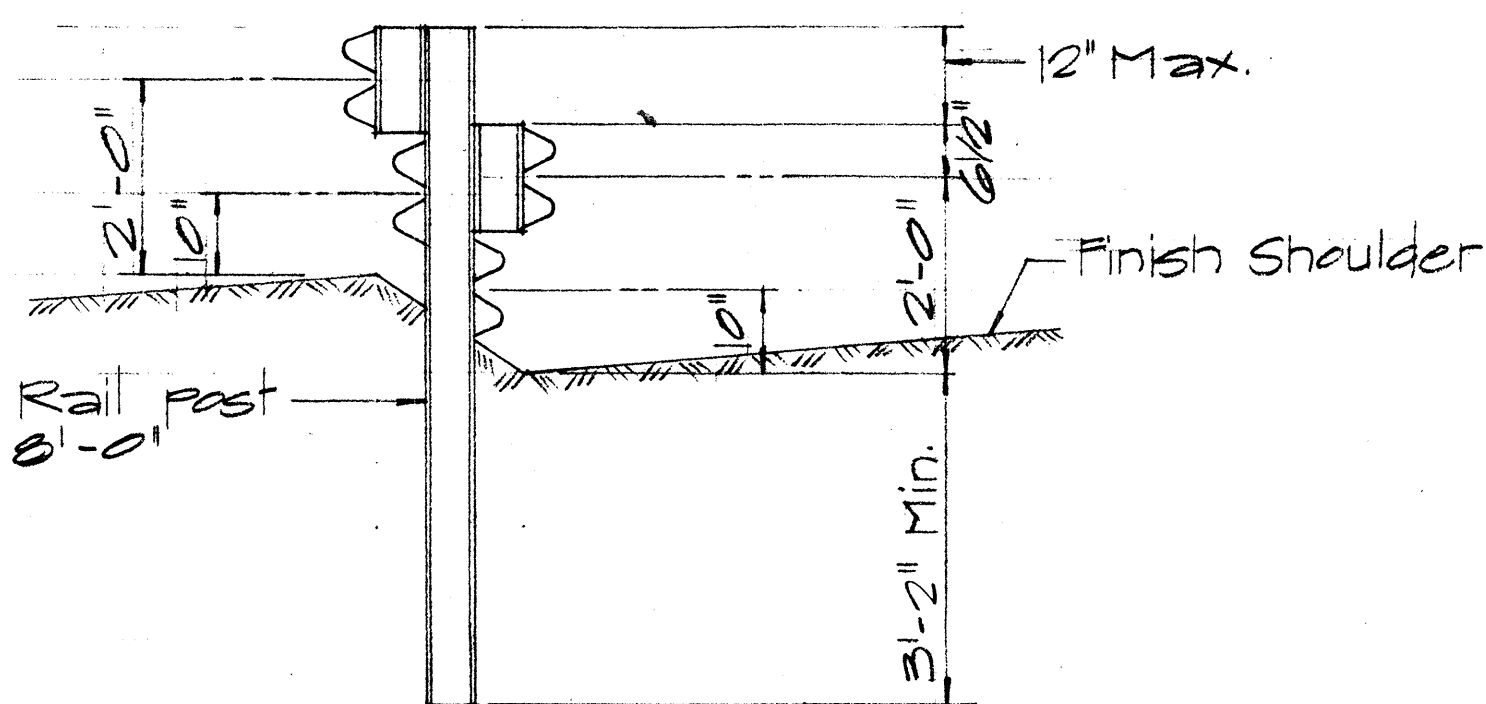
SECTION



TYP. DOUBLE POST SEC.

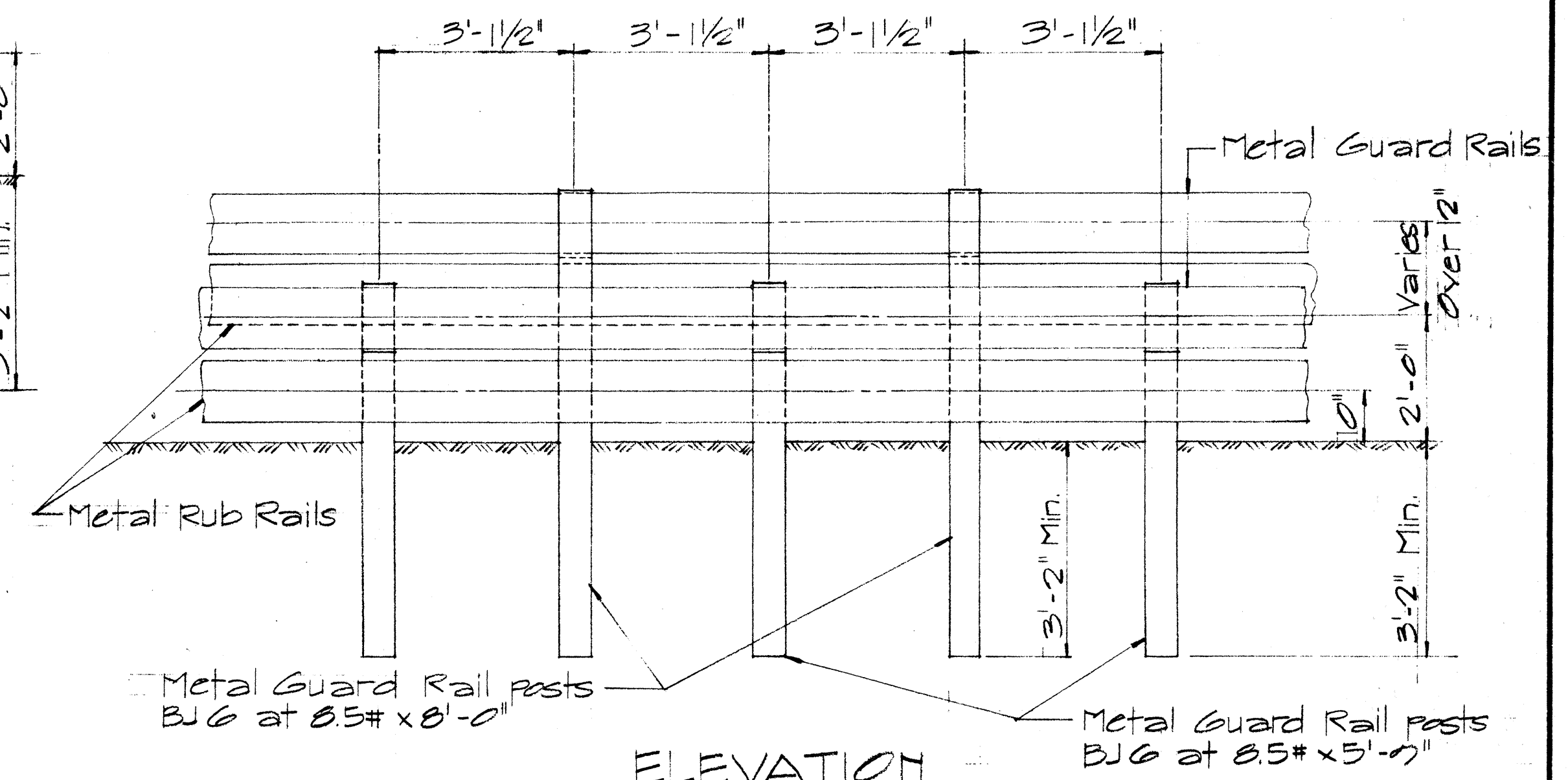
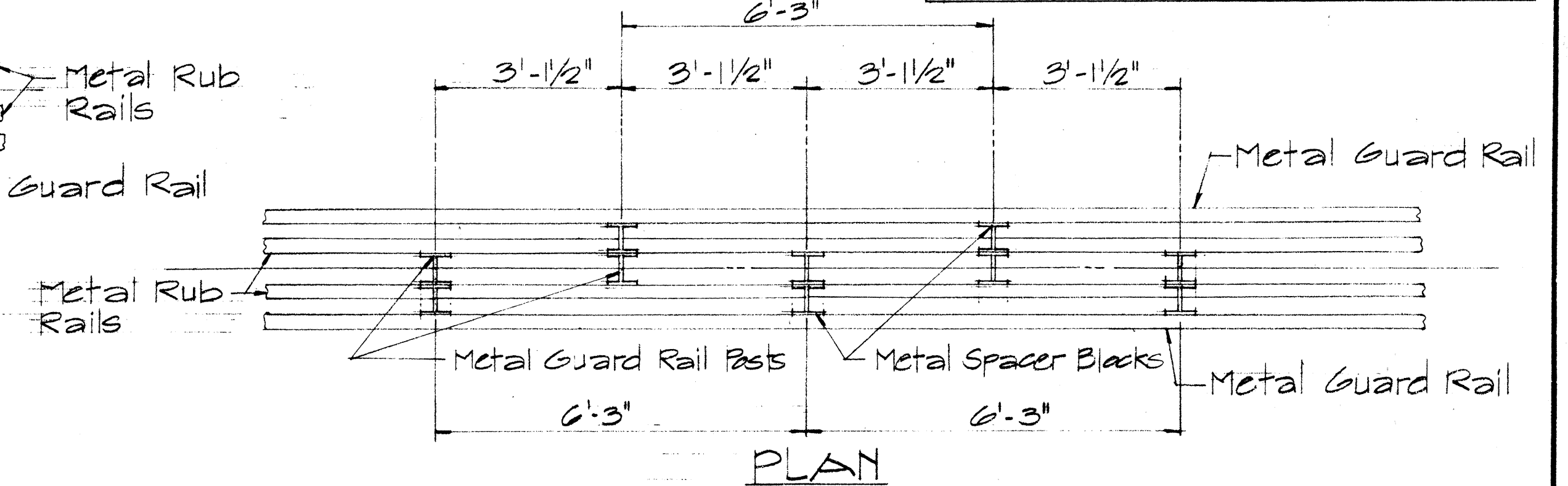


ELEVATION

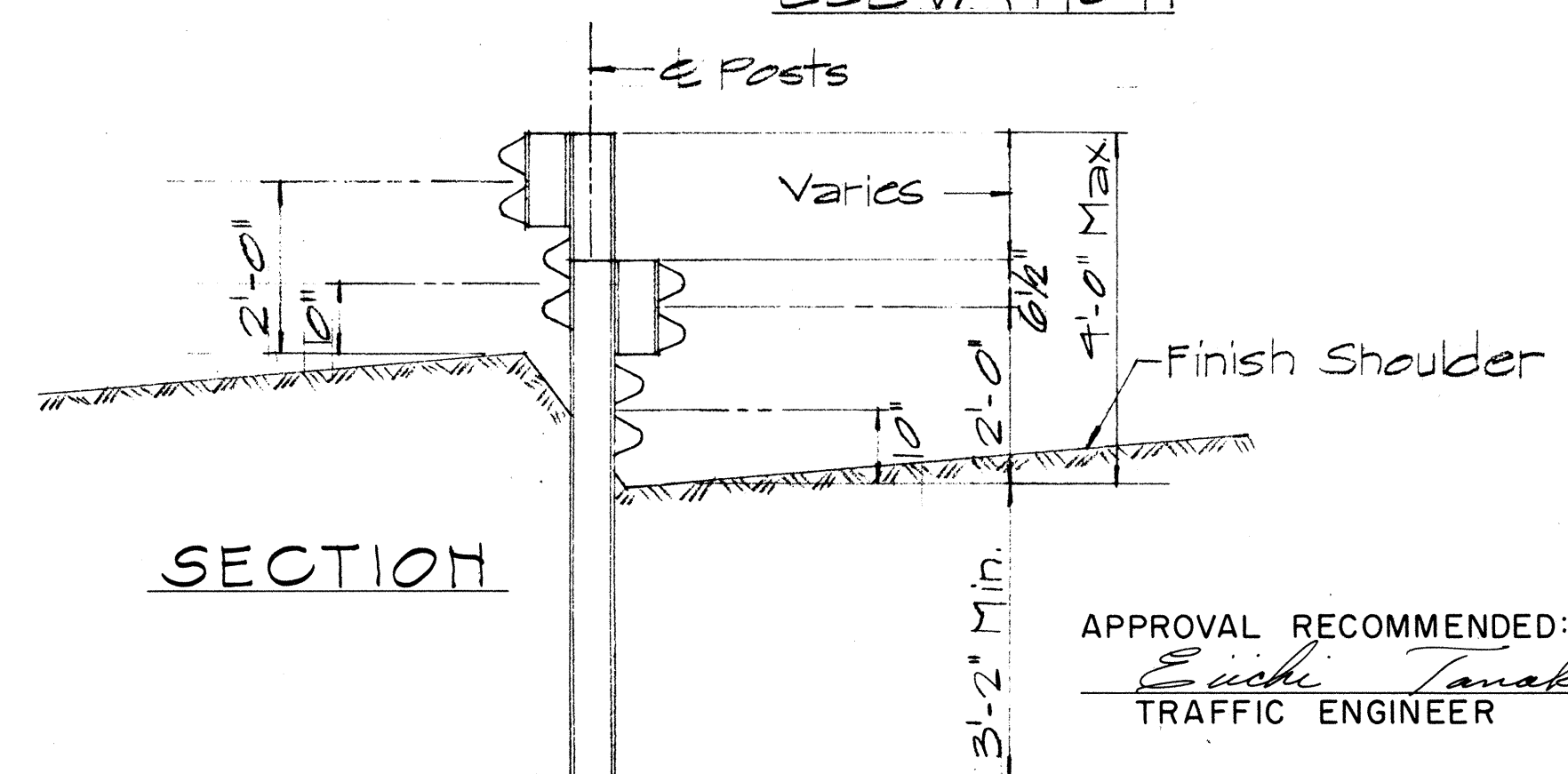


SECTION

TYPICAL SAW TOOTH INSTALLATION
Sc. 1/2" = 1'-0"



ELEVATION



SECTION

TYPICAL STAGGERED INSTALLATION
Sc. 1/2" = 1'-0"

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

APPROVED:
[Signature]
ASSISTANT CHIEF, ENGINEERING
12/30/69
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAIL
METAL GUARD RAIL
WITH RUB RAIL
Scale: 1/2" = 1'-0" Feb. 10/69
SHEET No. 24 OF 24 SHEETS DT 514