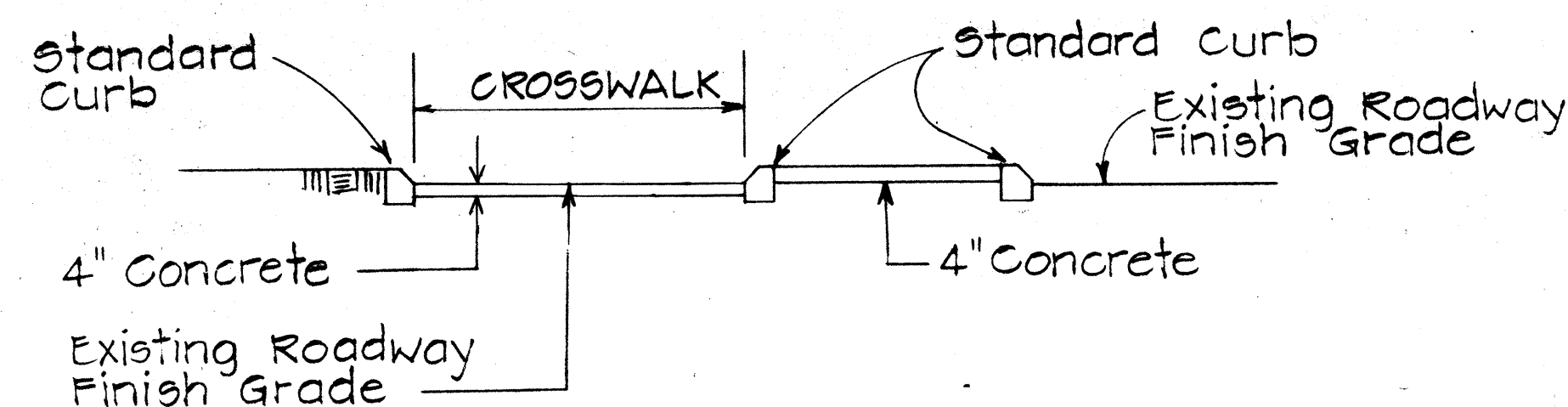


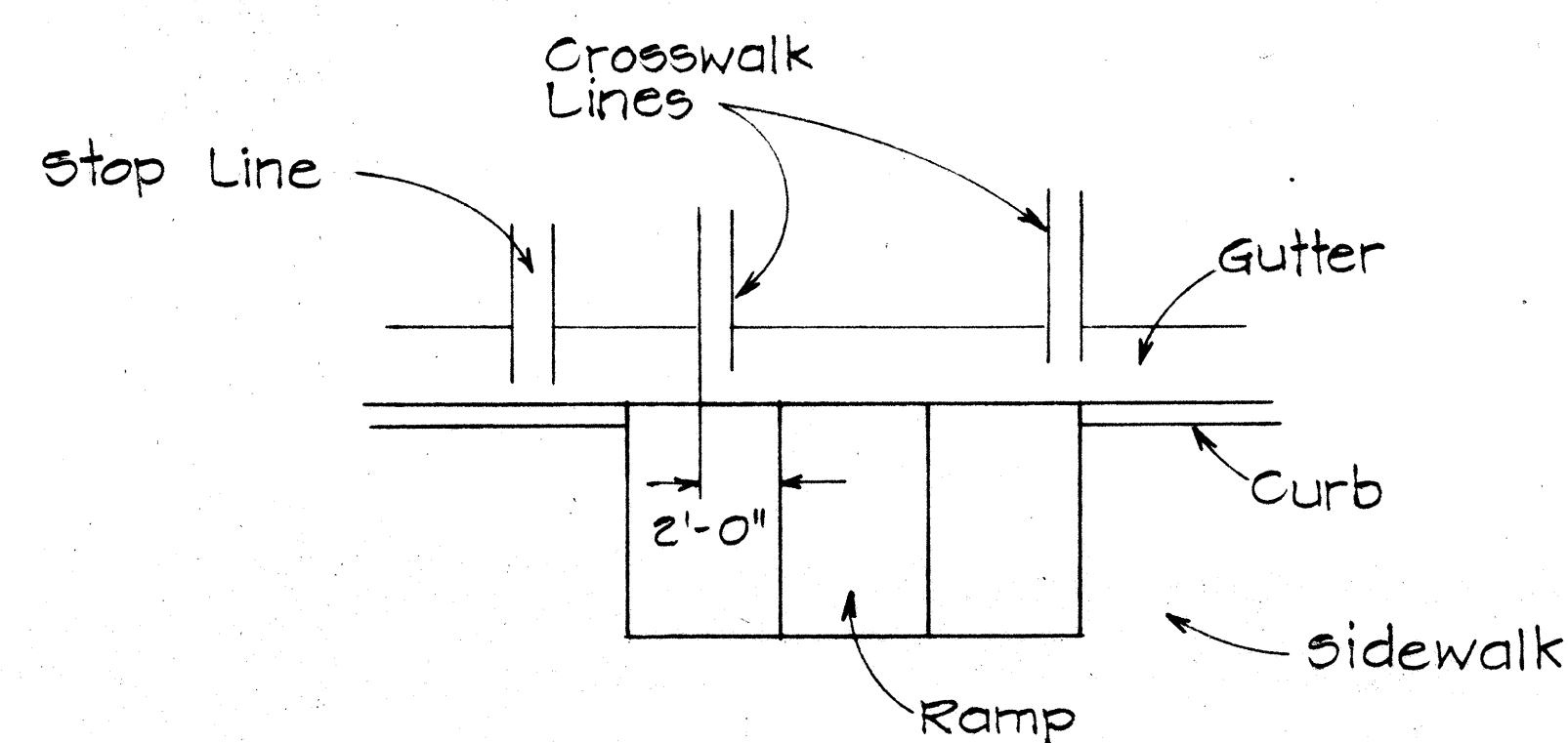
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	76008-01-82 S-RS-0760(2)	1982	32	163



SECTION "A-A"

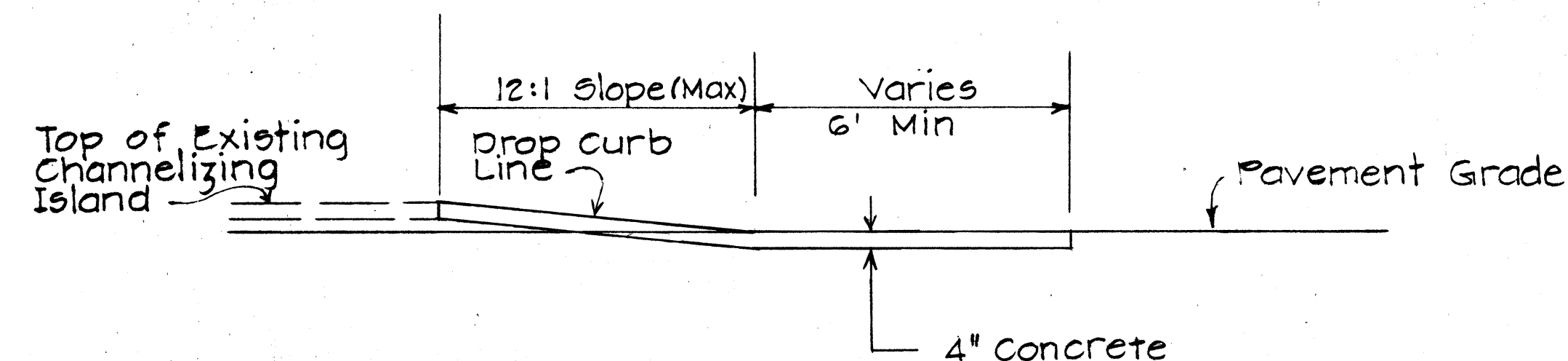
Use at Median Nose Crossings
Scale: 1" = 5'

For Additional Details, See Type "C" Wheel Chair Ramp



TYPICAL INSTALLATION AT CROSSWALKS

Scale: 1" = 5'



SECTION "B-B"

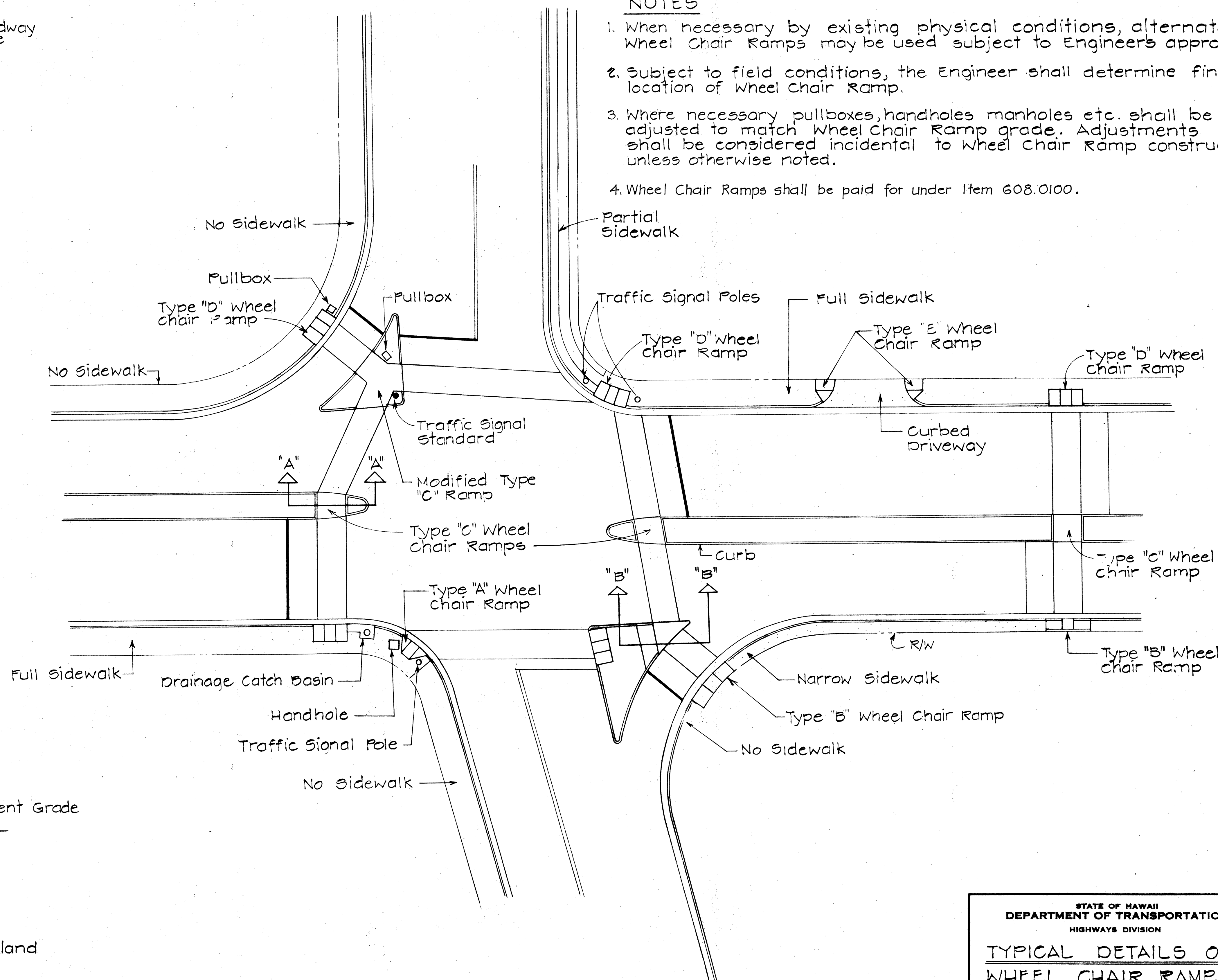
TYPE "B" MODIFIED WHEEL CHAIR RAMP

Use at Intersection of 2 Crosswalks On Channelizing Island
Scale: 3/8" = 1'

For Additional Details See Type "B" Wheelchair Ramp

NOTES

1. When necessary by existing physical conditions, alternate Wheel Chair Ramps may be used subject to Engineers approval.
2. Subject to field conditions, the Engineer shall determine final location of Wheel Chair Ramp.
3. Where necessary, pullboxes, handholes manholes etc. shall be adjusted to match Wheel Chair Ramp grade. Adjustments shall be considered incidental to Wheel Chair Ramp construction, unless otherwise noted.
4. Wheel Chair Ramps shall be paid for under Item 608.0100.



TYPICAL WHEEL CHAIR RAMPS

Scale: 1" = 20'

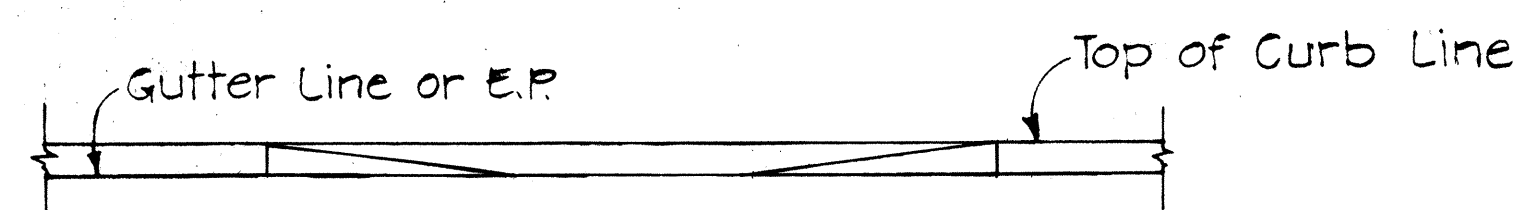
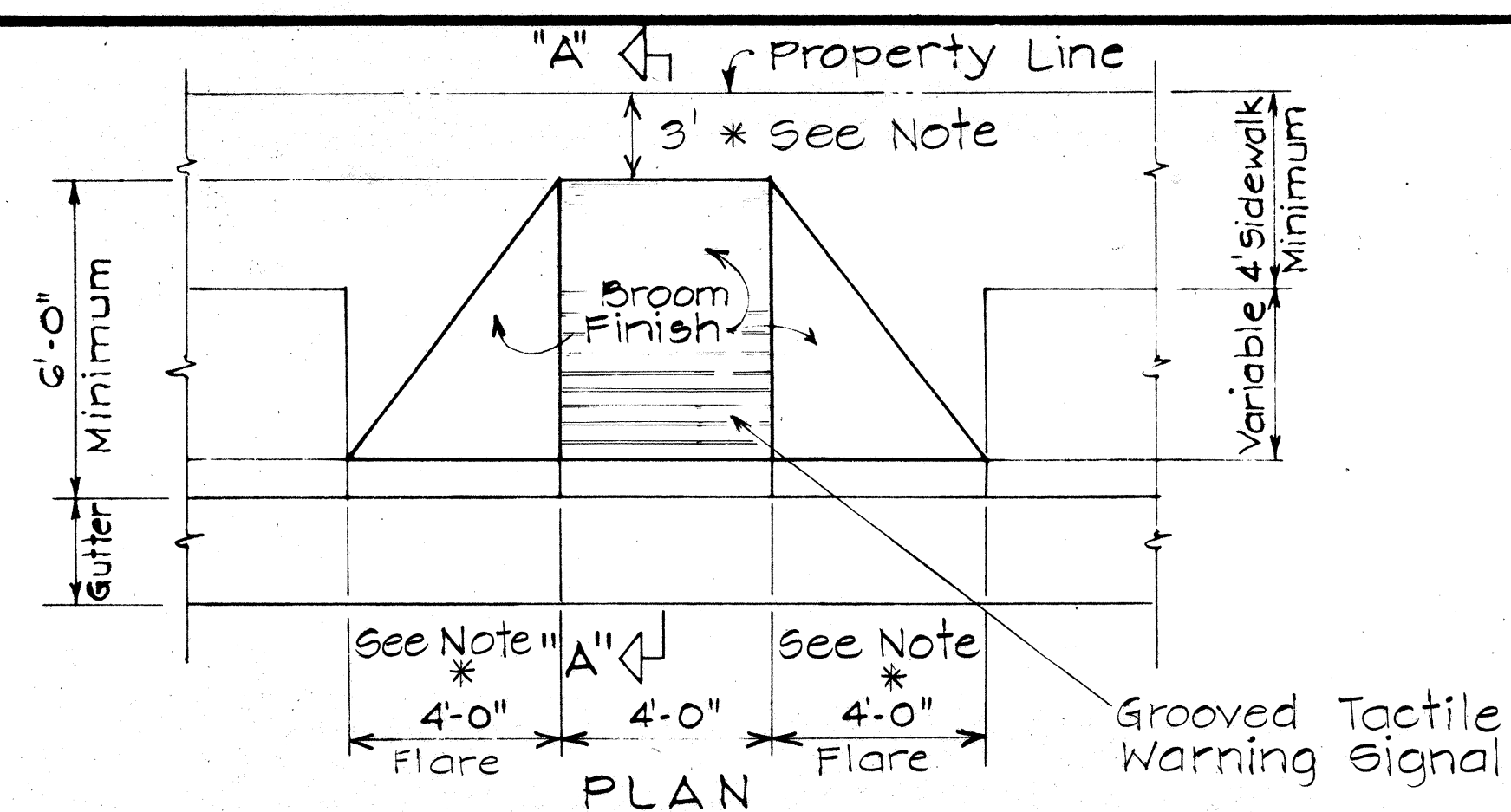
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS OF WHEEL CHAIR RAMPS

Scale: As Shown May, 1978
SHEET NO. 1 OF 8 SHEETS

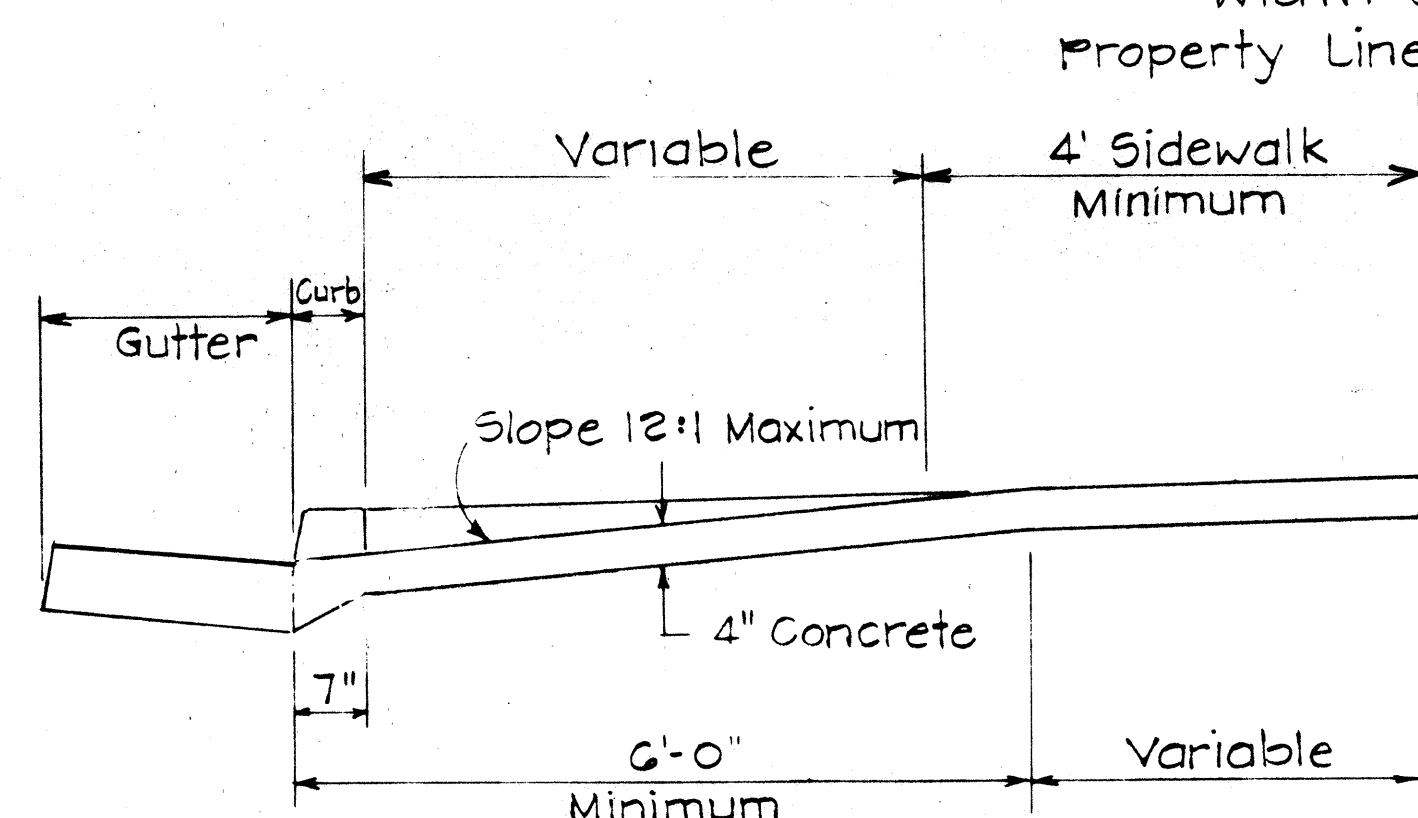
DATE	
SURVEY PLOTTED BY	
DRAWN BY	
CHECKED BY	
NOTED BY	
IN	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	33	163



ELEVATION

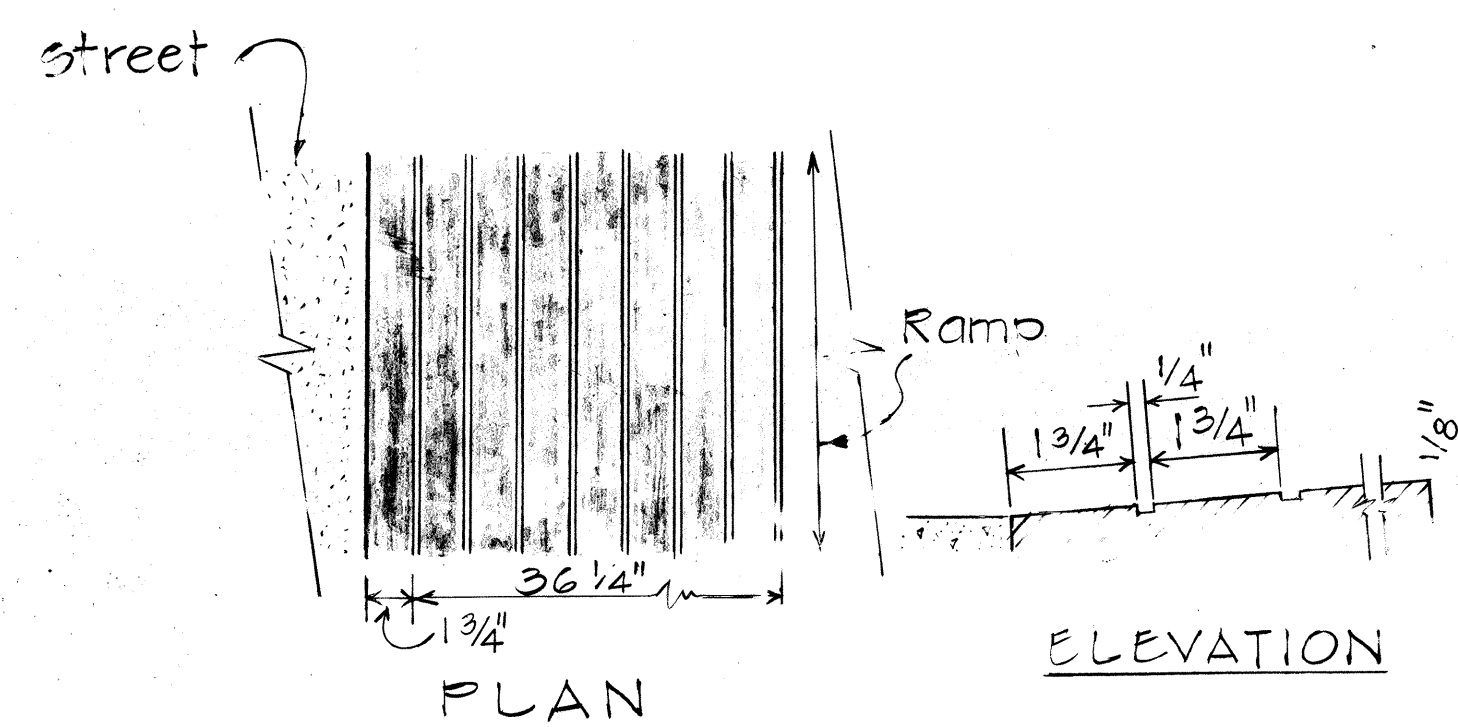
- * Where dimension is less than 3', Flare width shall be 5'



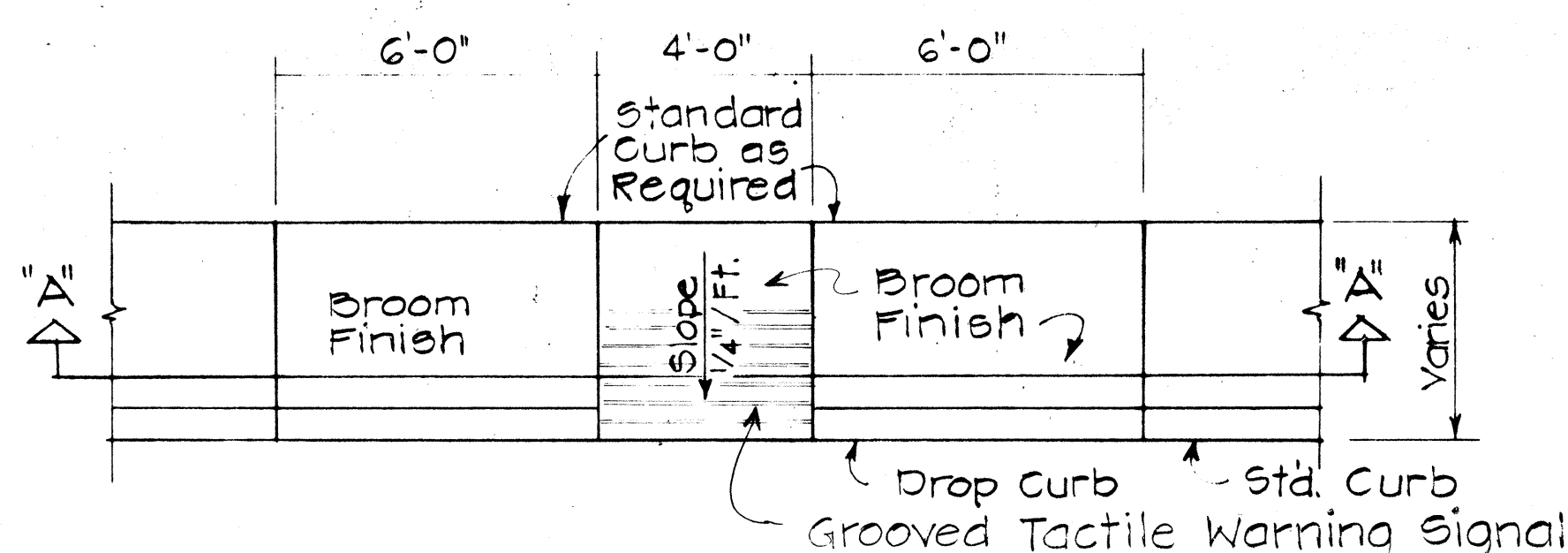
SECTION "A-A"

WHEELCHAIR RAMP - TYPE "A"

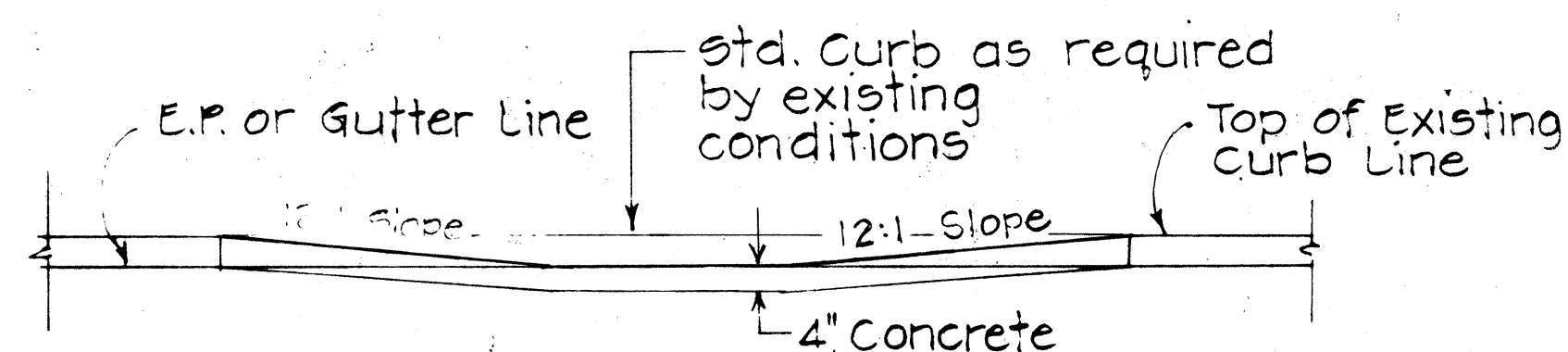
USE WHERE OBSTRUCTIONS EXIST



GROOVED TACTILE WARNING SIGNAL



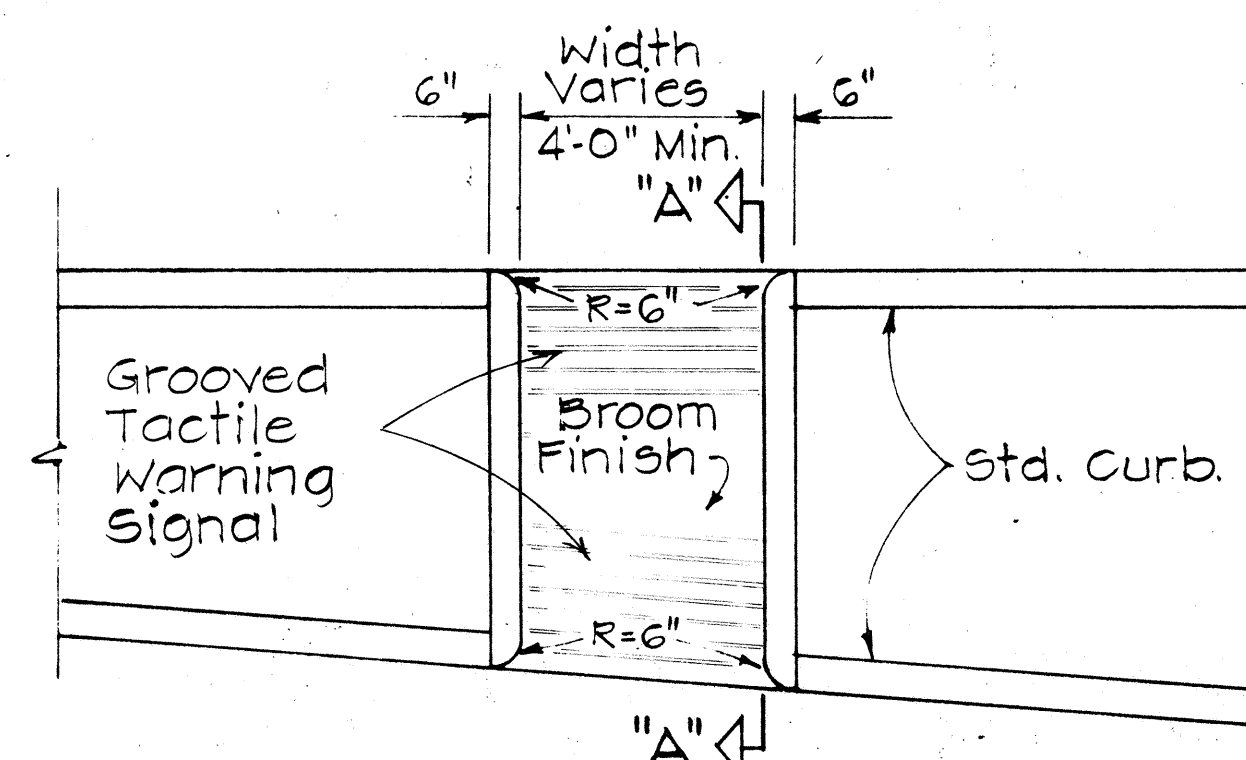
PLAN



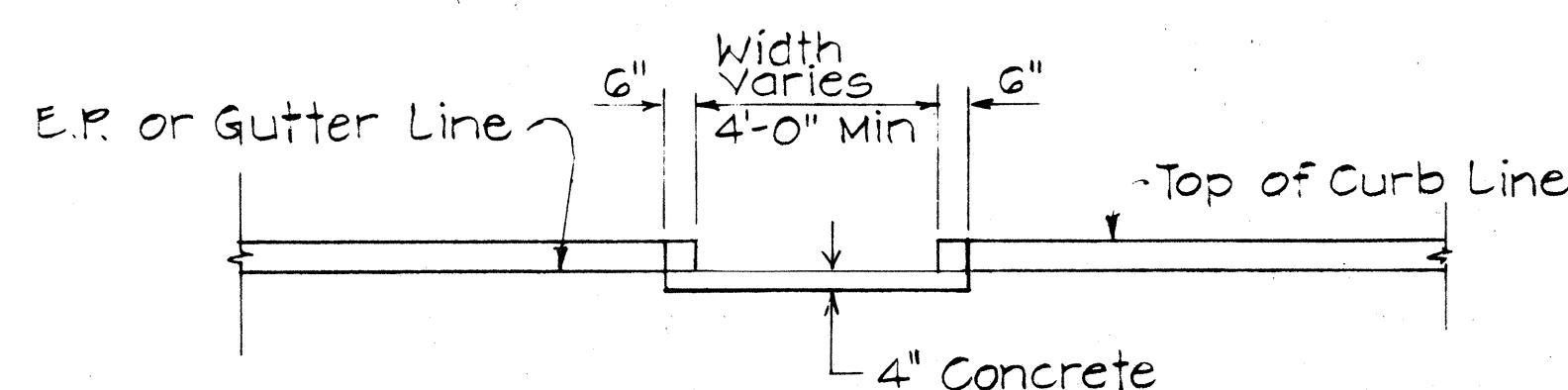
ELEVATION
SECTION "A-A"

WHEELCHAIR RAMP - TYPE "B"

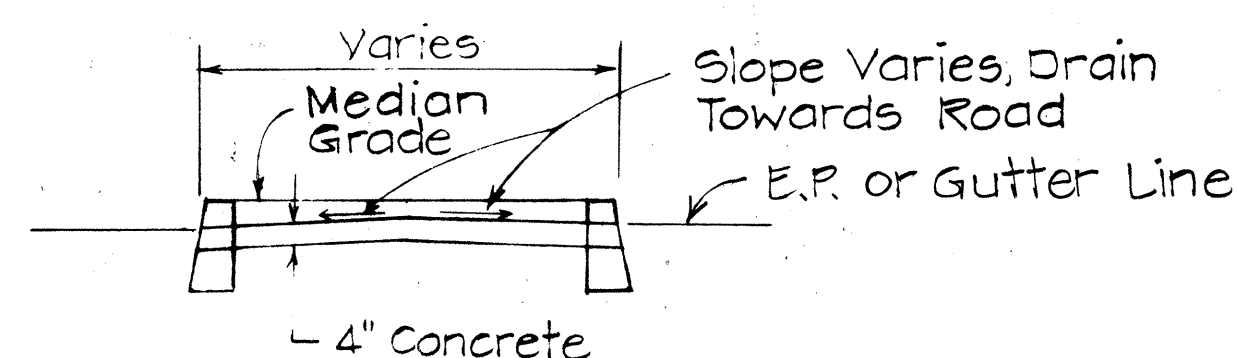
USE AT SIDEWALKS WITH LESS THAN 6'-0" WIDTH



PLAN



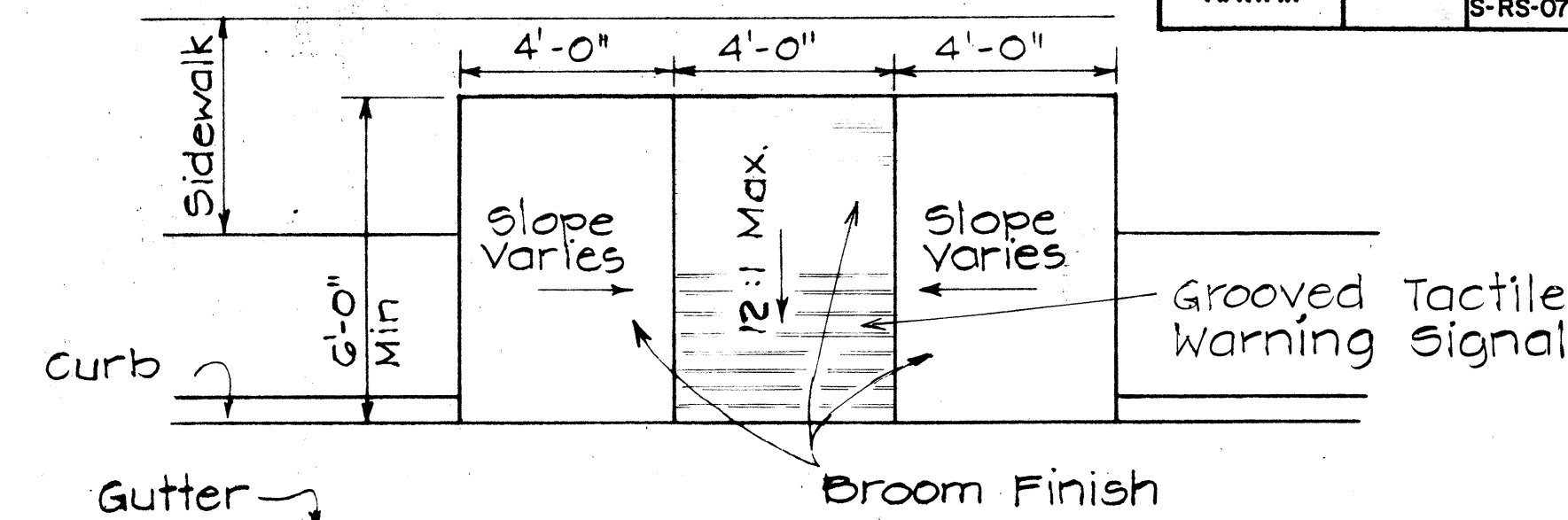
ELEVATION



SECTION "A-A"

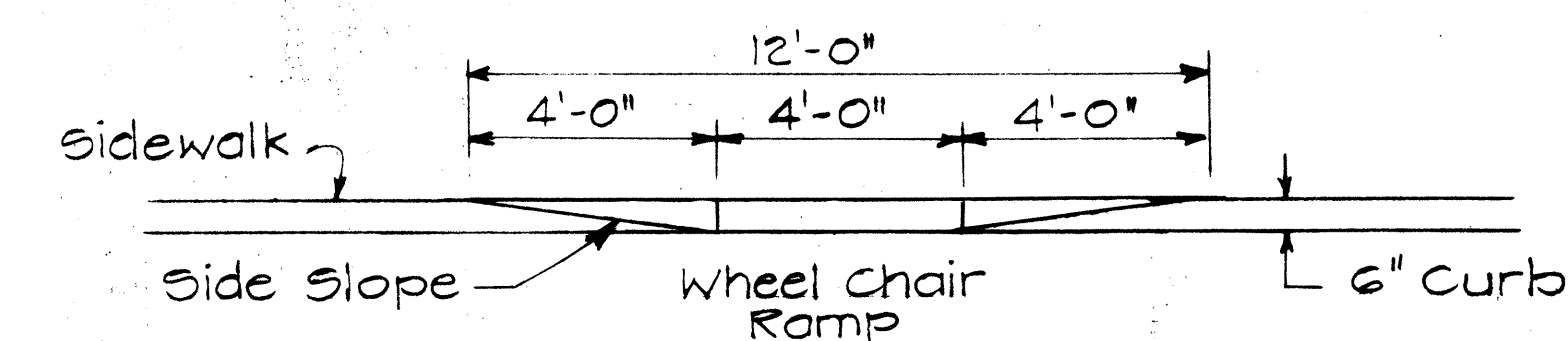
WHEELCHAIR RAMP - TYPE "C"

USE AT MEDIAN CROSSINGS, ISLANDS



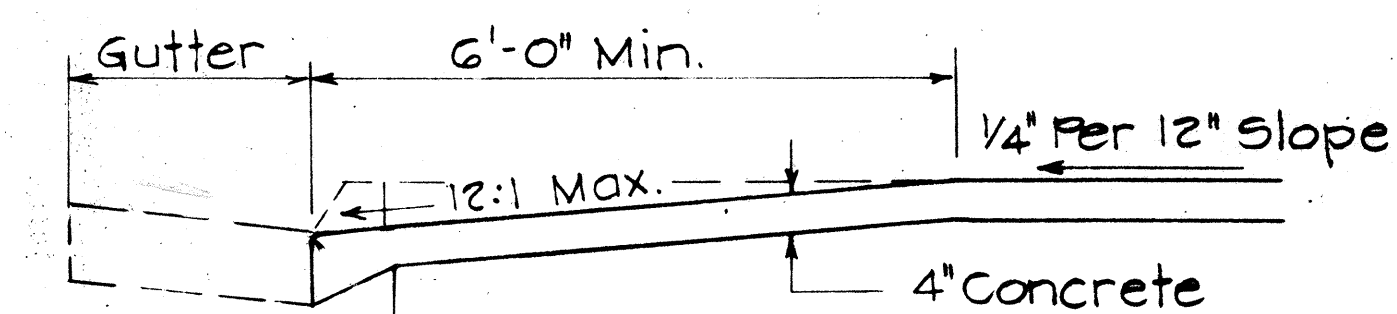
PLAN

Scale: $3/8" = 1'-0"$



ELEVATION

Scale: $3/8" = 1' - 0"$

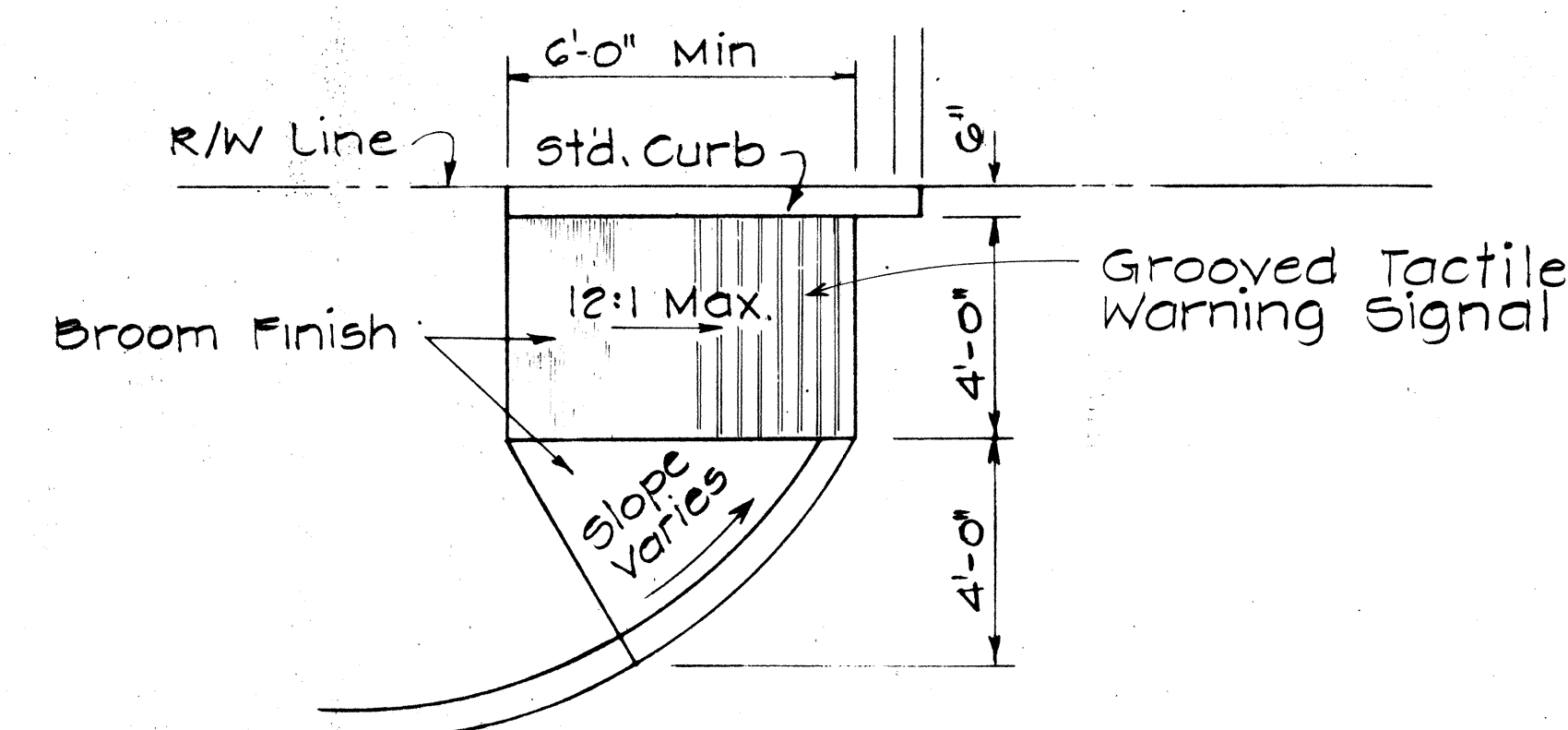


TYPICAL SECTION

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

WHEELCHAIR RAMP - TYPE "D"

USE WHEN IDEAL CONDITIONS EXIST



WHEELCHAIR RAMP - TYPE "E"

USE AT CURBED DRIVEWAYS
Scale: $3/8" = 1'-0"$

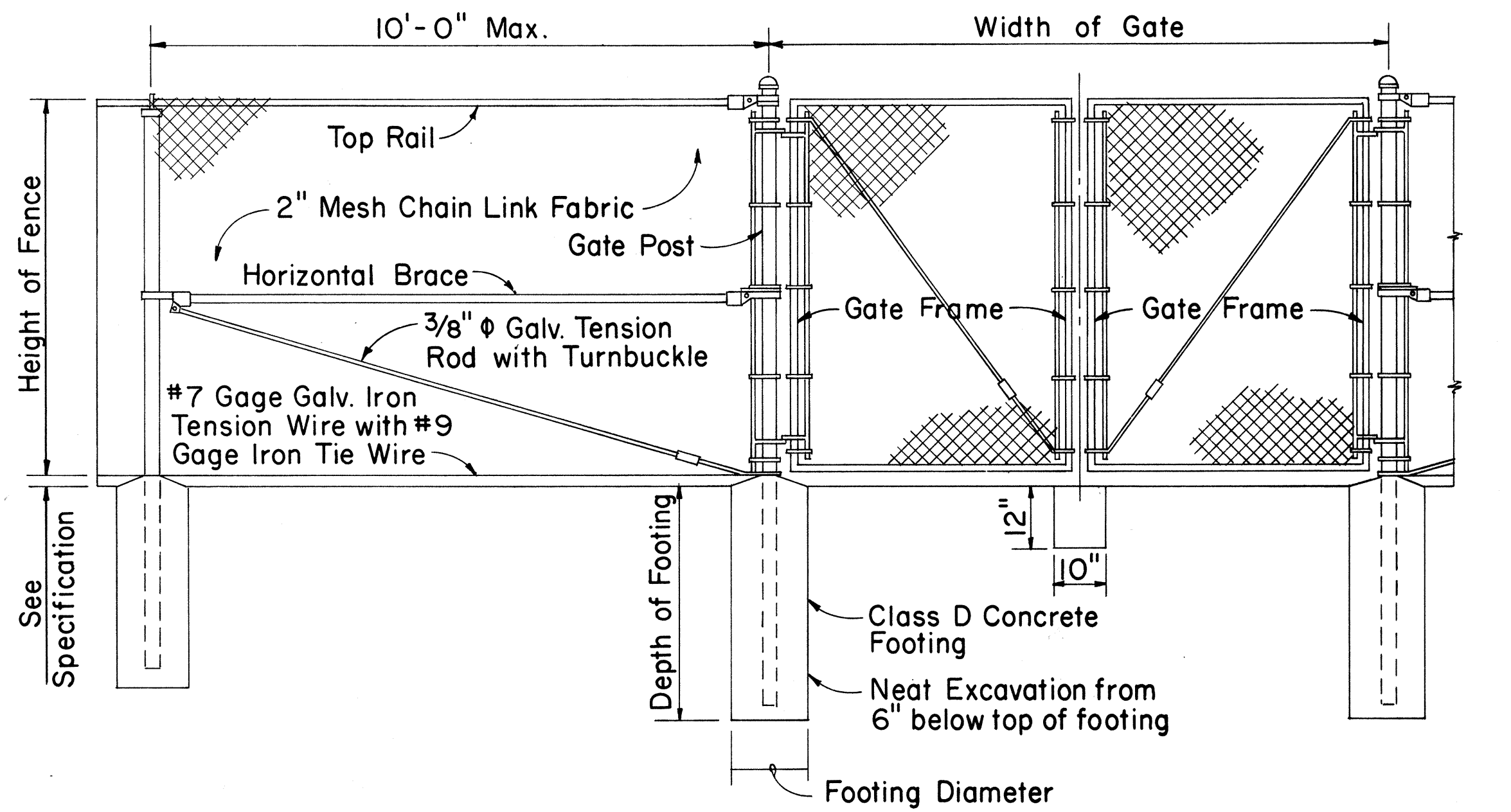
**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION**

TYPICAL DETAILS OF WHEEL CHAIR RAMPS

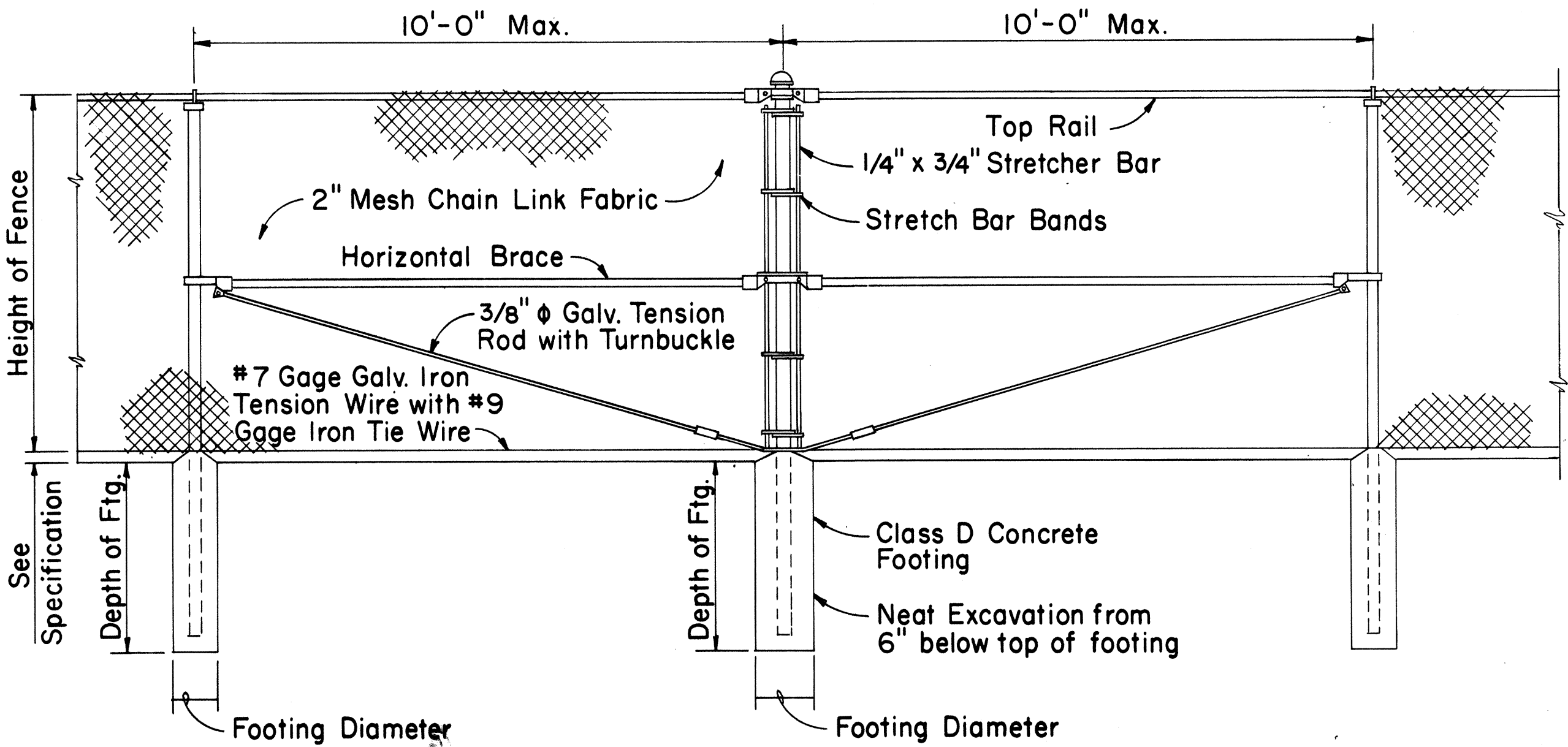
Scale: As Shown May 1978

SHEET No. 2 OF 8 SHEETS

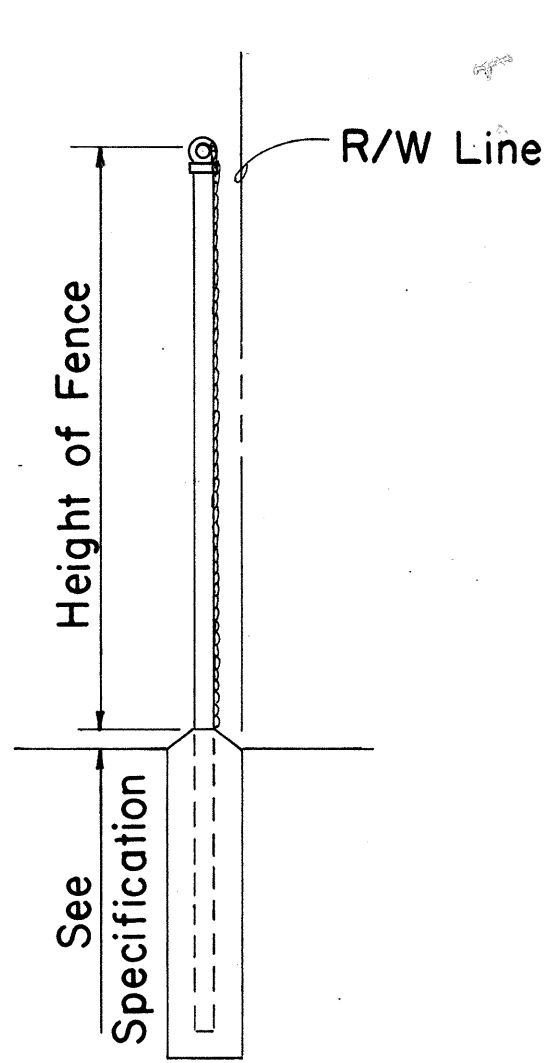
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	34	163



LINE POST GATE POST GATE POST

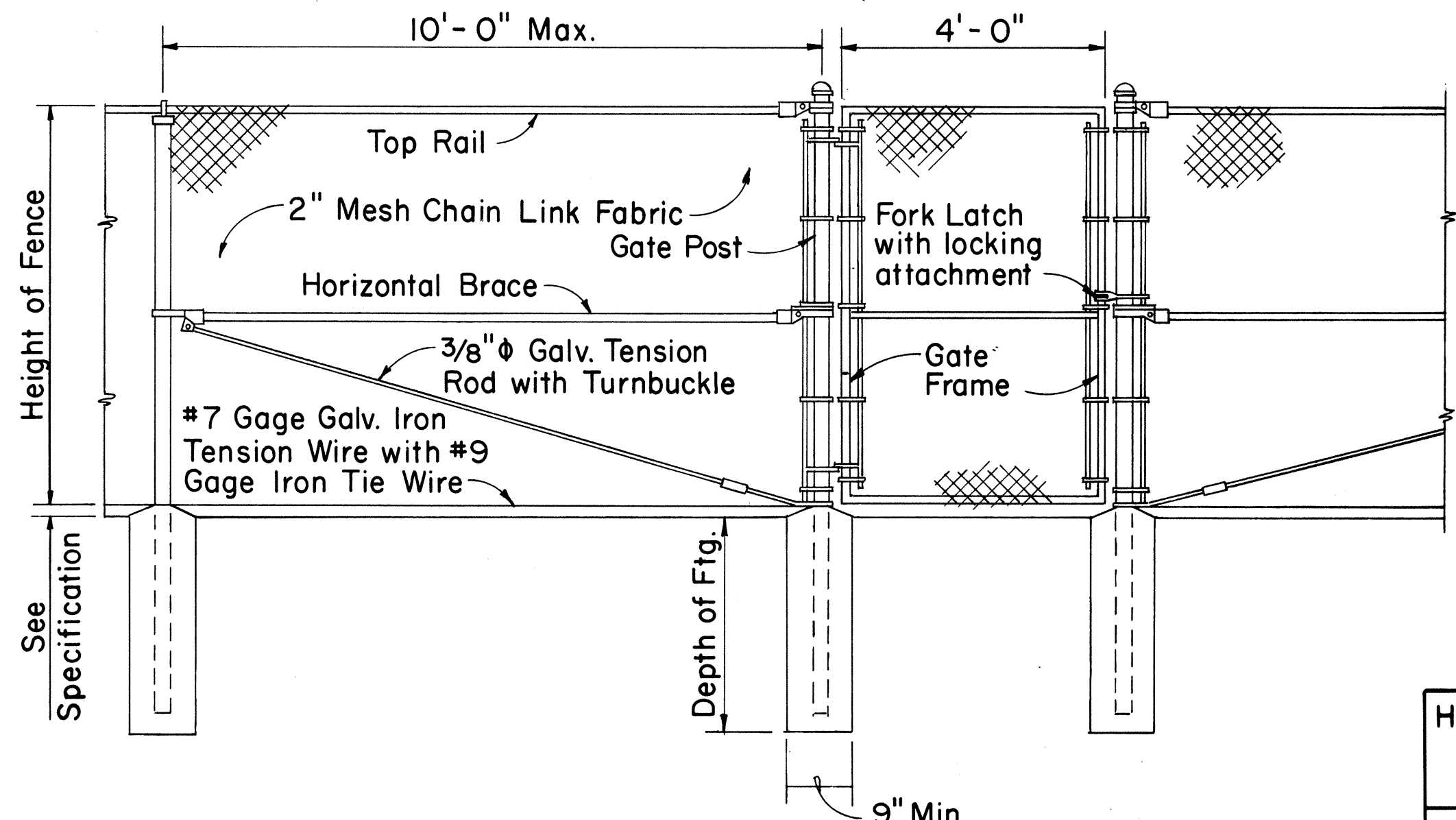


LINE POST PULL POST LINE POST

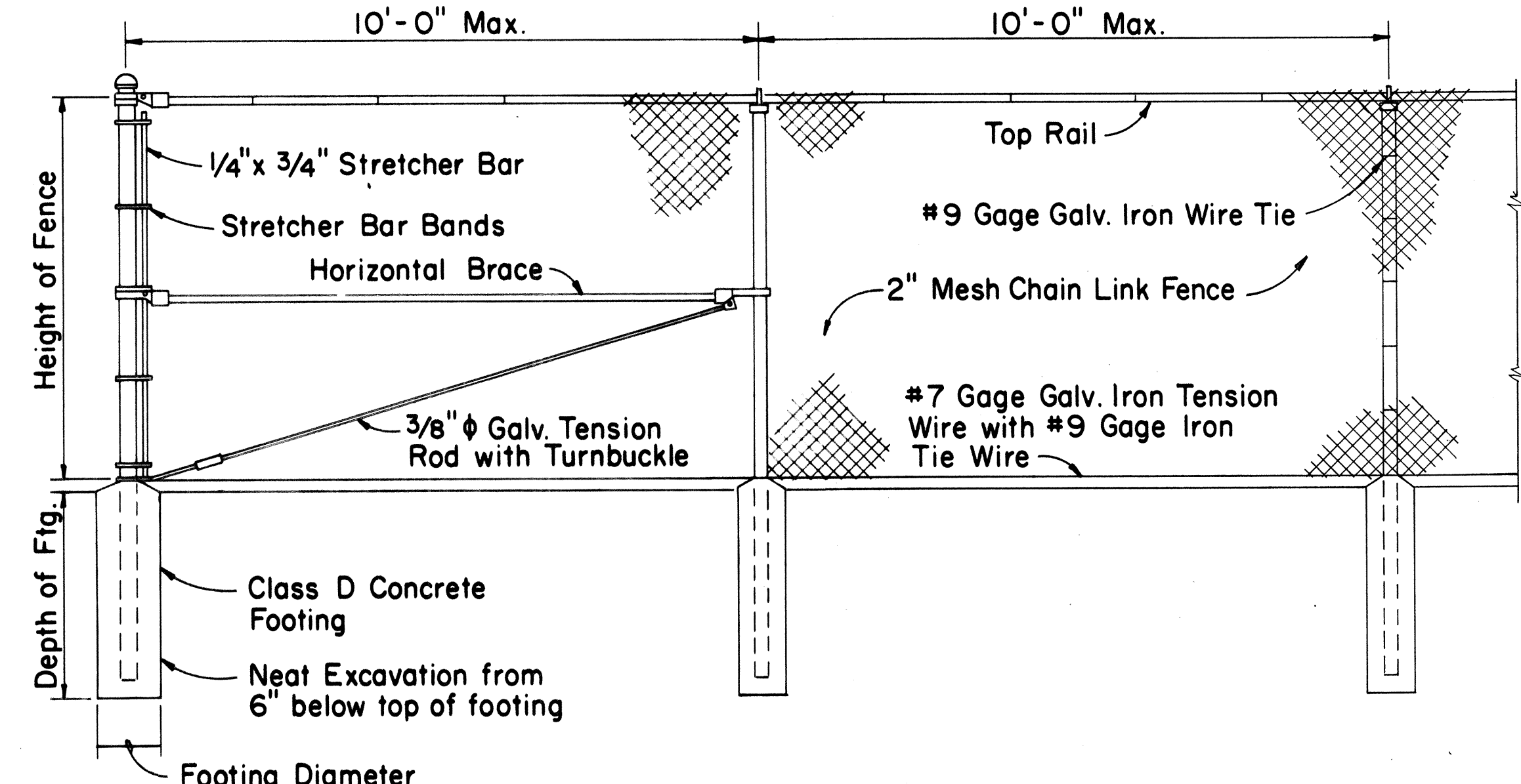


TYPICAL SECTION
(WITH CONCRETE FOOTING)

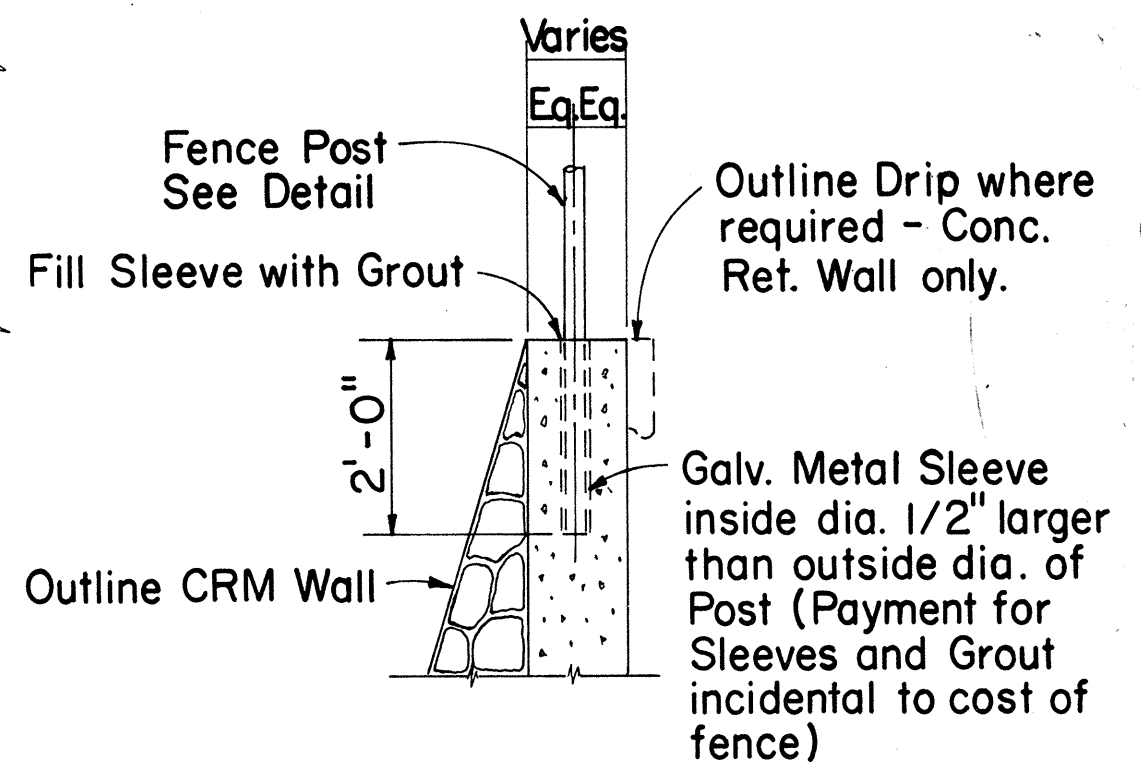
NOTE: 1. Gate fork latch and lock, flush plate and anchor, and plunger shall be installed with Gates, and shall be considered as incidental to Chain Link Fence Gate.
2. Gate frames shall be mitered and welded at corners.
3. Fence detail not shown shall be in accordance with the Standard Specifications.



LINE POST GATE POST GATE POST



END POST LINE POST LINE POST



TYPICAL SECTION
(ON CRM & CONC. RET. WALL)

CHAIN LINK FENCE DETAILS

Height of Fence	Minimum Depth of Footing		Minimum Footing Diameter	
	Line Post	Corner, Pull, End and Gate Posts	Line Post	Corner, Pull and End Posts
3'	2'-0"	2'-6"	8"	8"
4'	2'-6"	2'-6"	8"	8"
5'	3'-0"	3'-0"	8"	8"
6'	3'-0"	3'-0"	8"	9"

APPROVAL RECOMMENDED: *[Signature]* 12-4-69
HIGHWAY DESIGN ENGINEER DATE

APPROVED: *[Signature]* 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

NO	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CHAIN LINK FENCE
(WITH TOPRAIL)

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

Cast-In-Place Concrete Curb and Gutter

Construction Joint

2- 1 1/2" ϕ 18" Long Dowels

9" 9"

PLAN

Cast-In-Place Concrete Curb or Lava Rock Curb

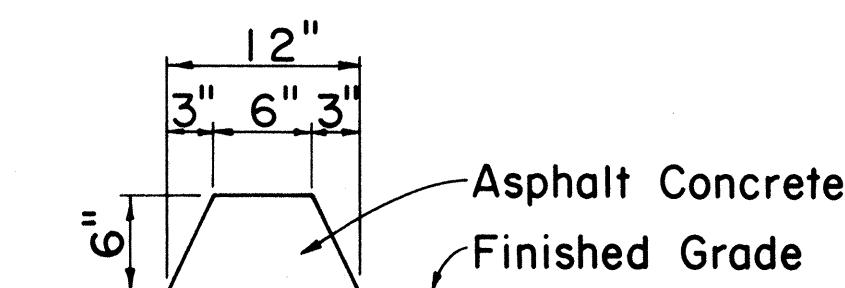
Construction Joint

Mortar Joints

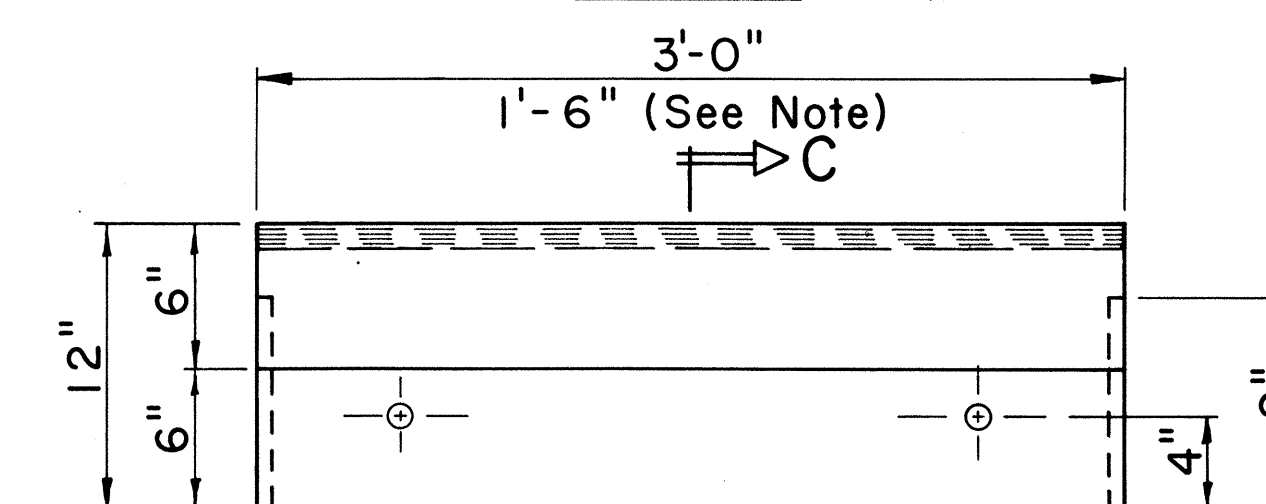
9" 9"

Cast-In-Place Gutter Type 2A

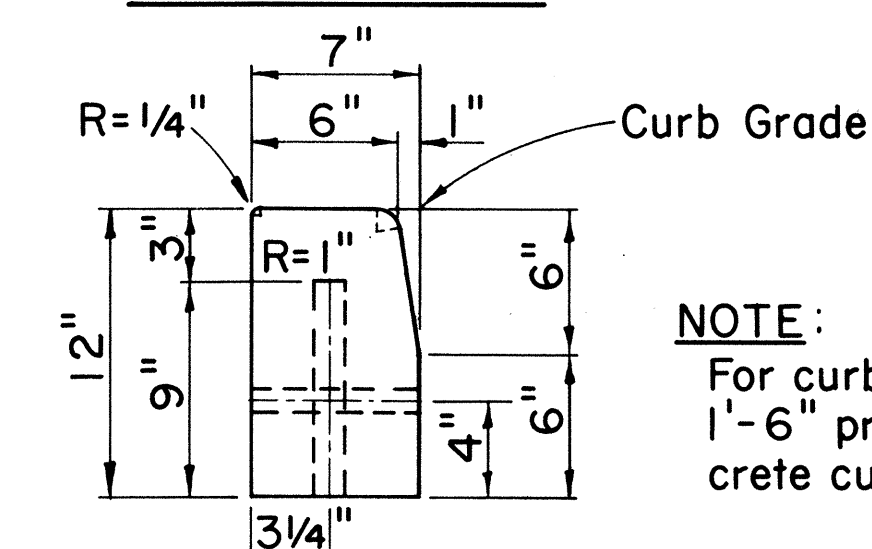
PLAN



PLAN



ELEVATION



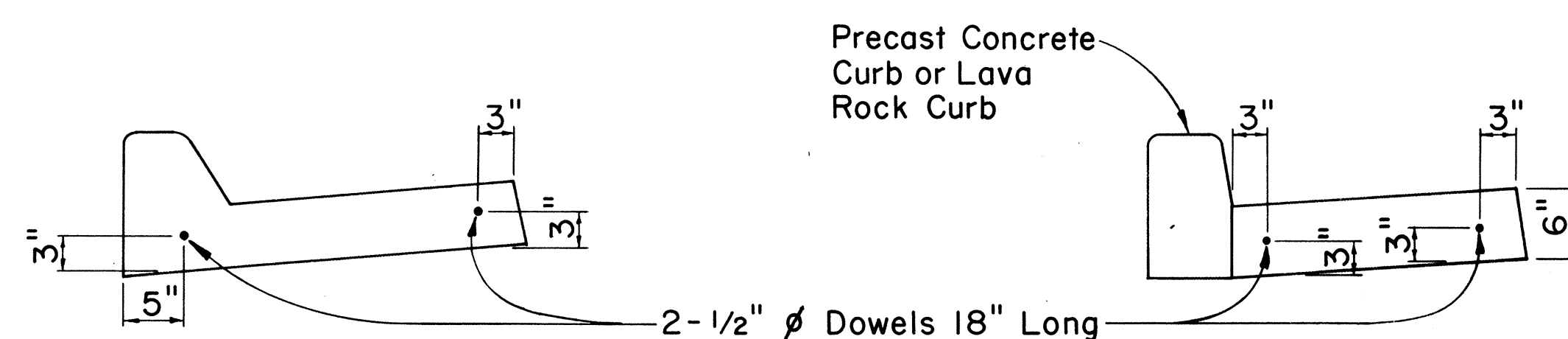
NOTE:
For curb returns use
1'-6" pre-cast con-
crete curbs.

SECTION C-C

CURB, TYPE 3D

PRE-CAST CONC. CURB

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



SECTION A-A

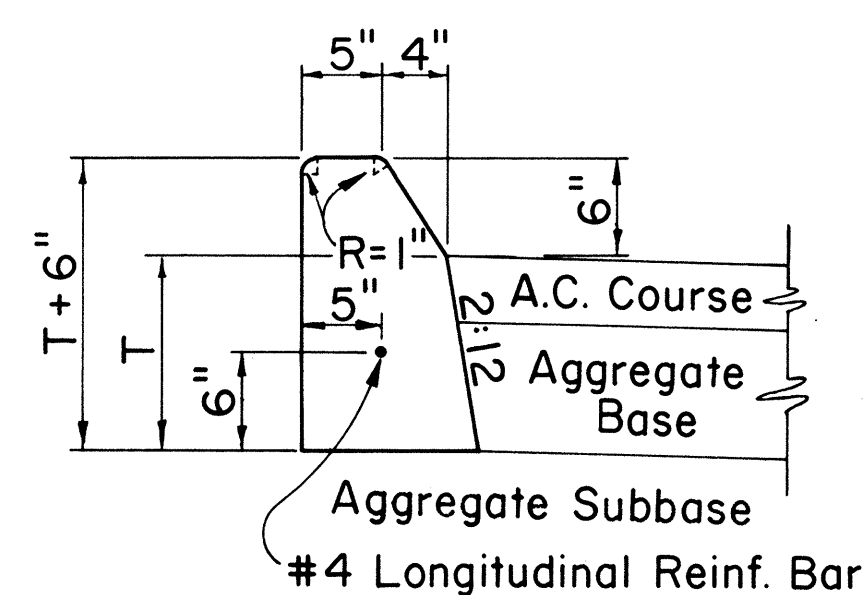
SECTION B-B

CAST-IN-PLACE CURB & GUTTER

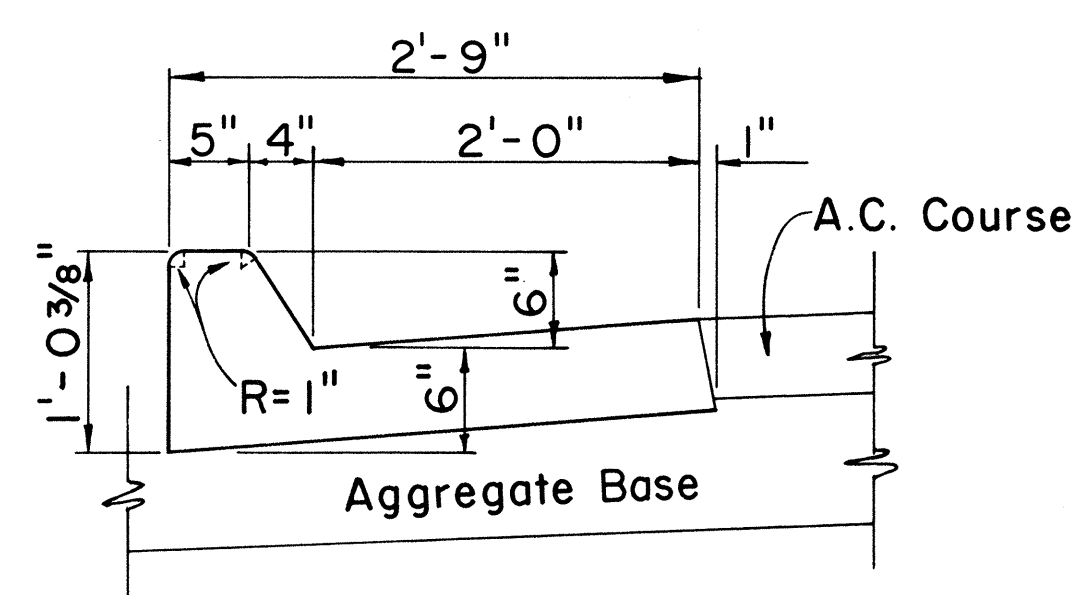
CAST-IN-PLACE GUTTER

CONSTRUCTION JOINT DETAIL

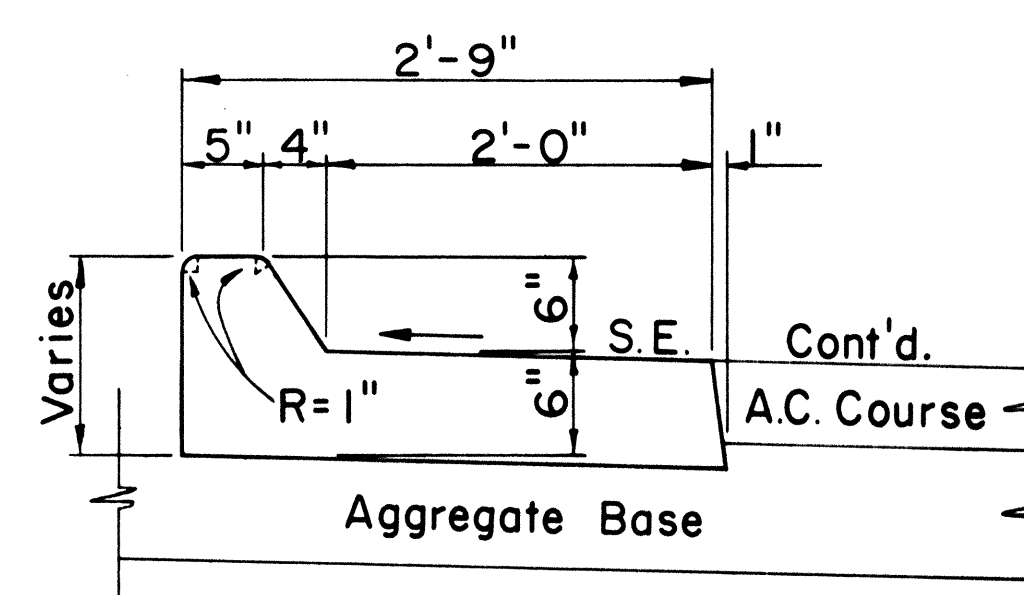
Scale: 1" = 1'-0"



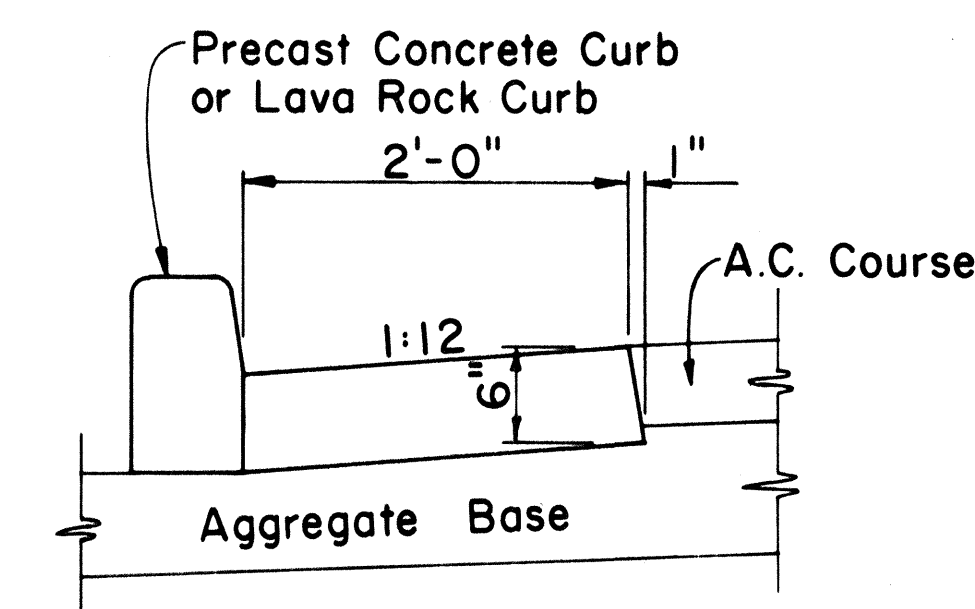
CURB, TYPE 2A



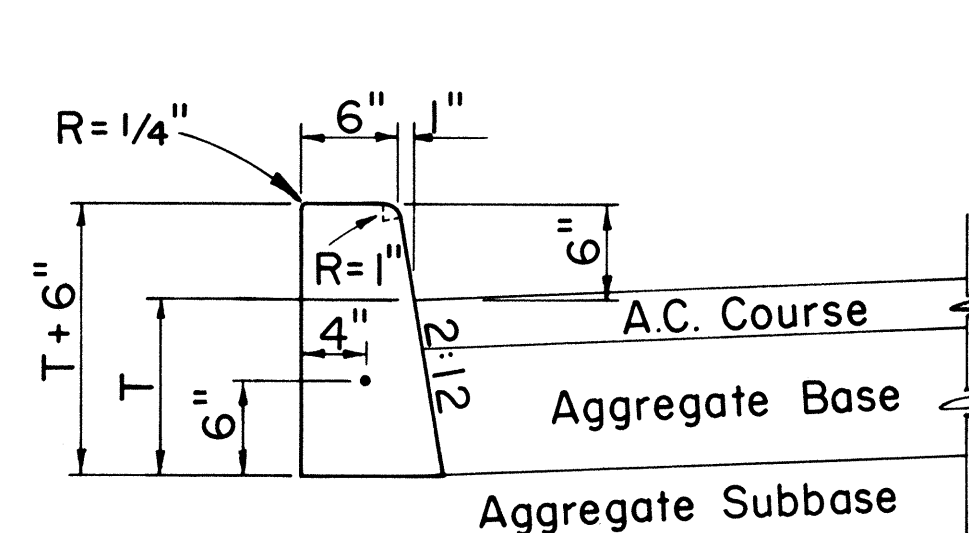
CURB & GUTTER, TYPE 2AG



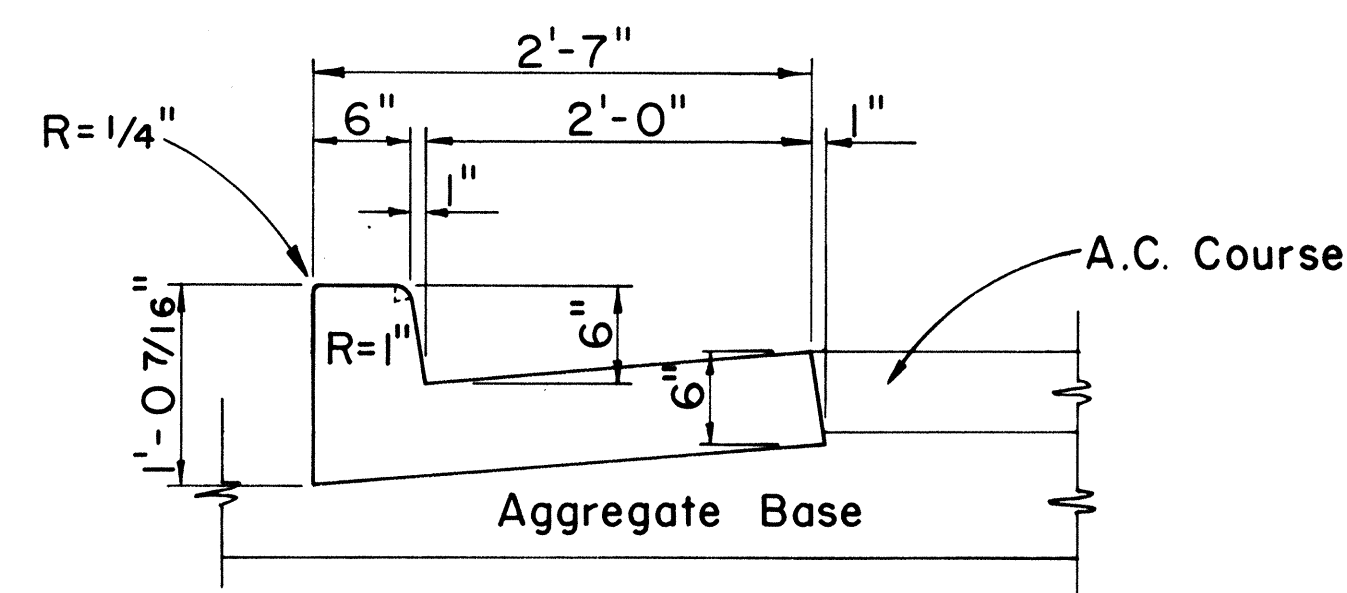
CURB & GUTTER, TYPE 2AGM



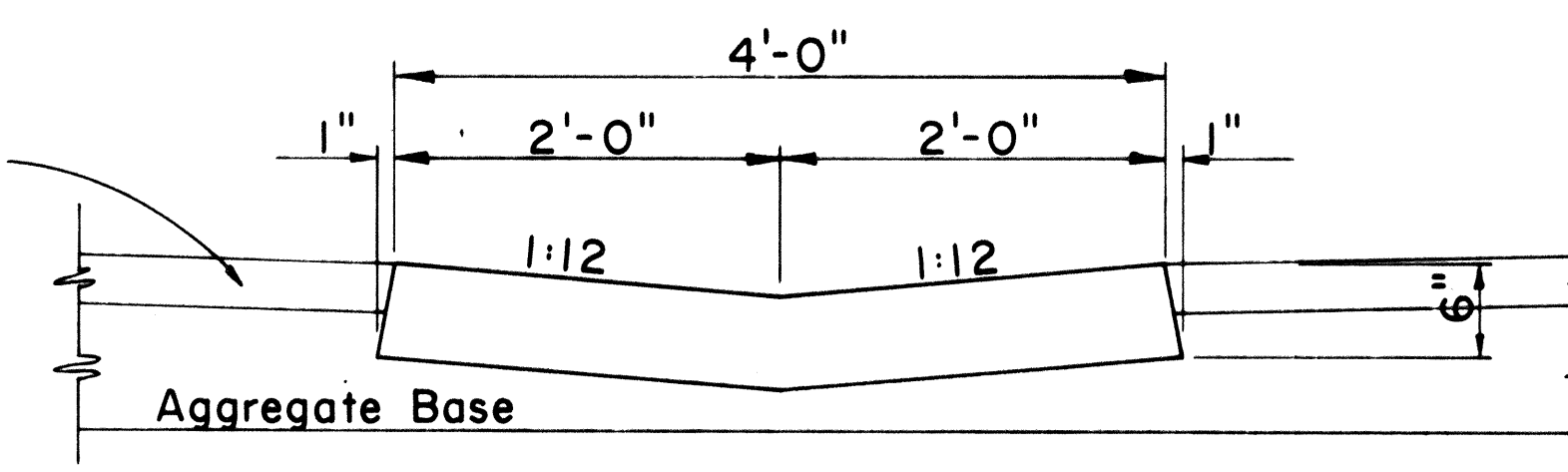
GUTTER, TYPE 2A



CURB, TYPE 2D



CURB & GUTTER, TYPE 2DG



GUTTER, TYPE 2G

CAST-IN-PLACE CONCRETE CURBS AND/OR GUTTERS

Scale: 1" = 1'-0"

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

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:

HIGHWAY DESIGN ENGINEER

12-4-69
DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING

12-10-65
DATE

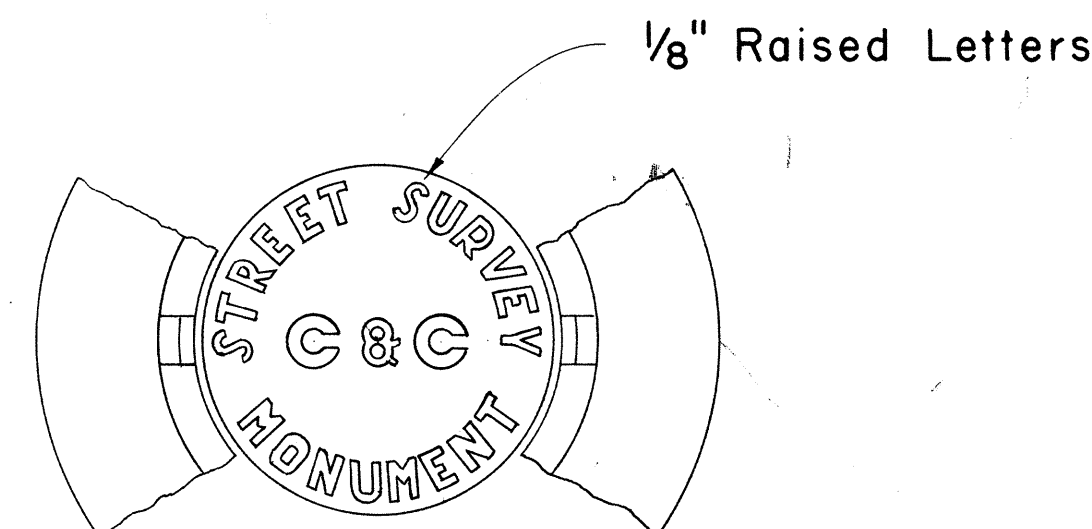
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
TYPICAL DETAILS OF CURB
AND/OR GUTTERS

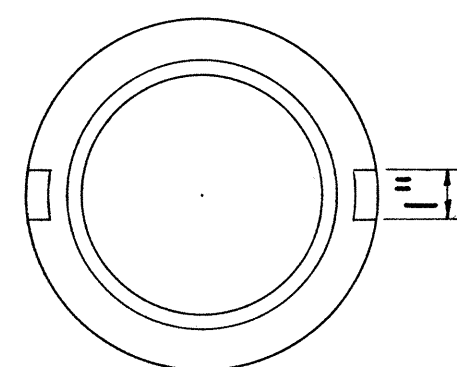
Scale: As Shown

SHEET No. 4 OF 8 SHEETS		DD 609.1
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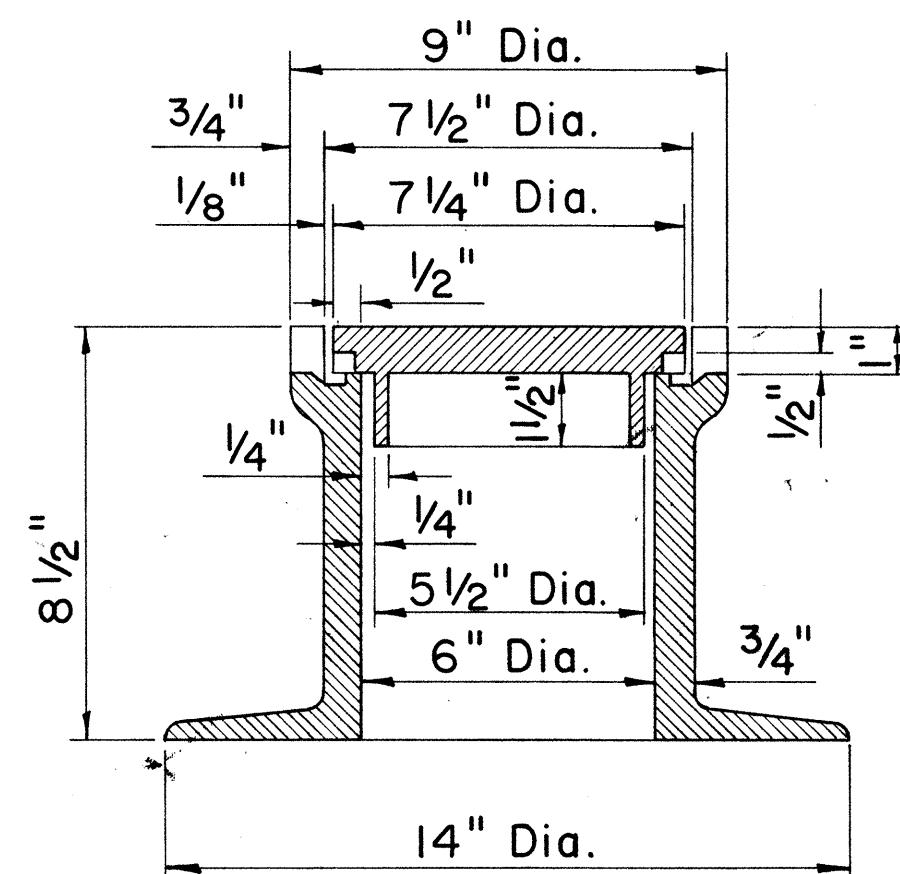
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	36	163



TOP VIEW OF COVER
AND PORTION OF FRAME



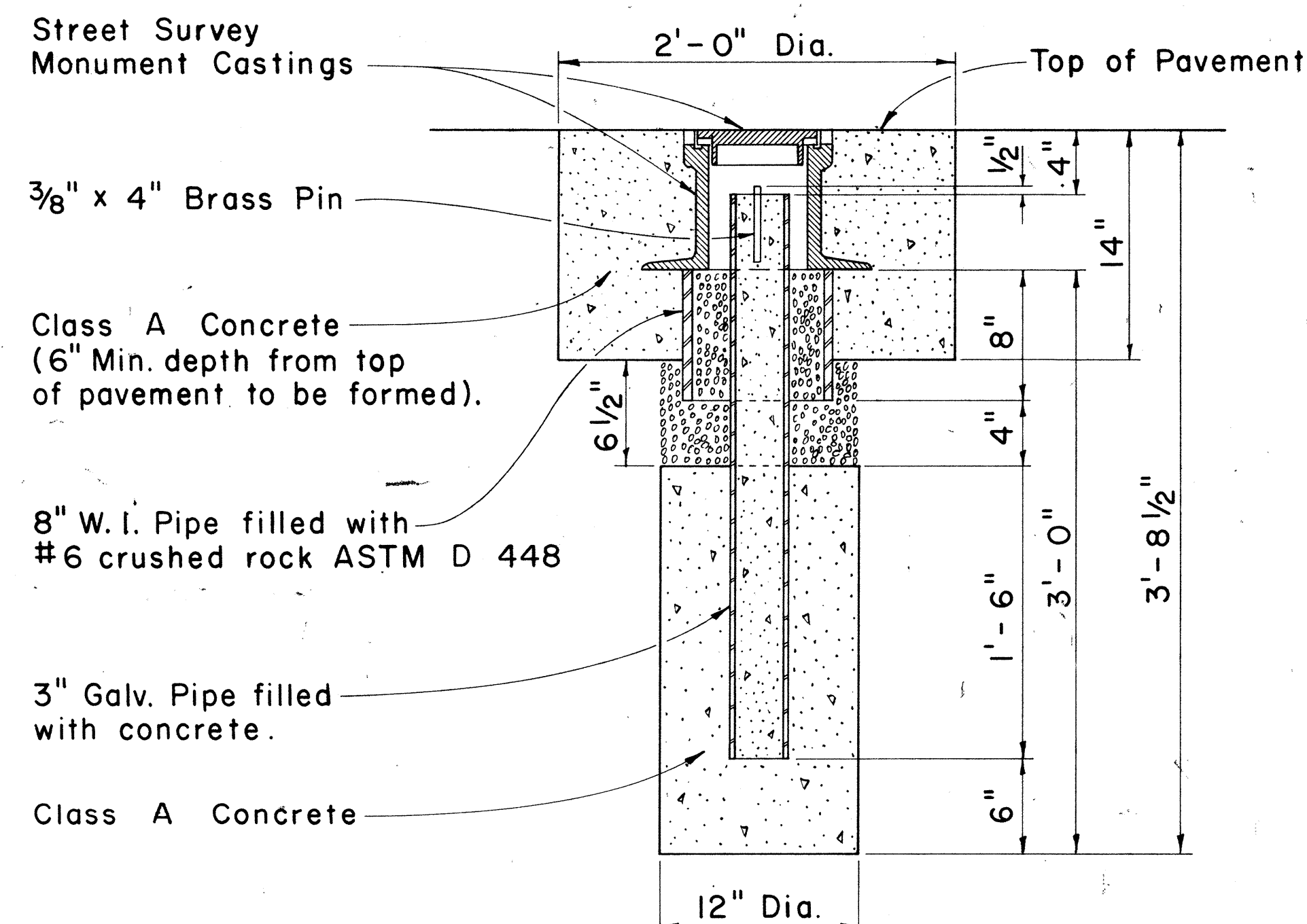
BOTTOM OF COVER



SECTIONAL VIEW OF
FRAME AND COVER

STREET SURVEY MONUMENT CASTINGS

Scale: 3" = 1'-0"

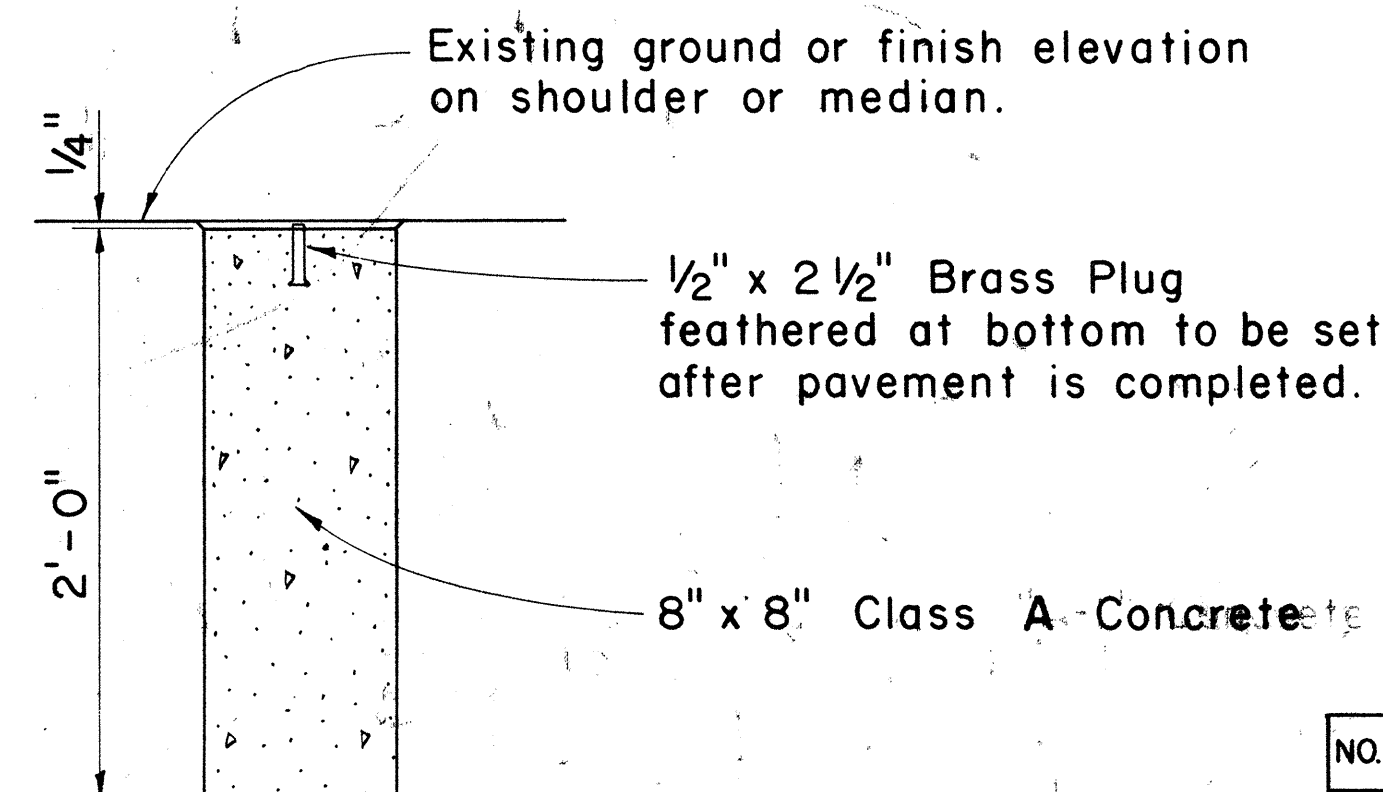


NOTE:

Where the excavation extends into solid rock the depth may be decreased if approved by the Engineer.

STREET SURVEY MONUMENT

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



DETAIL FOR CENTERLINE AND REFERENCE SURVEY MONUMENT

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

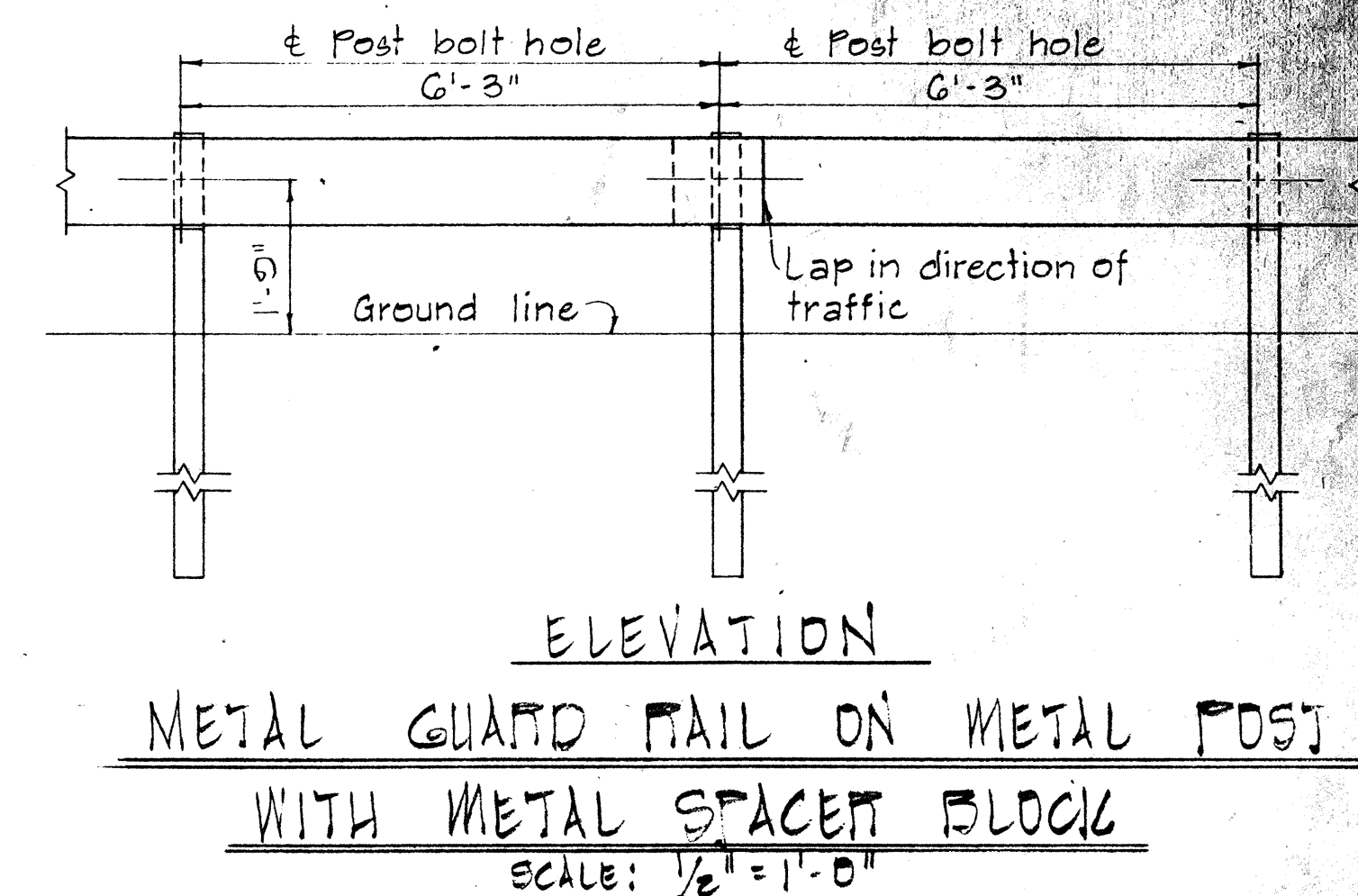
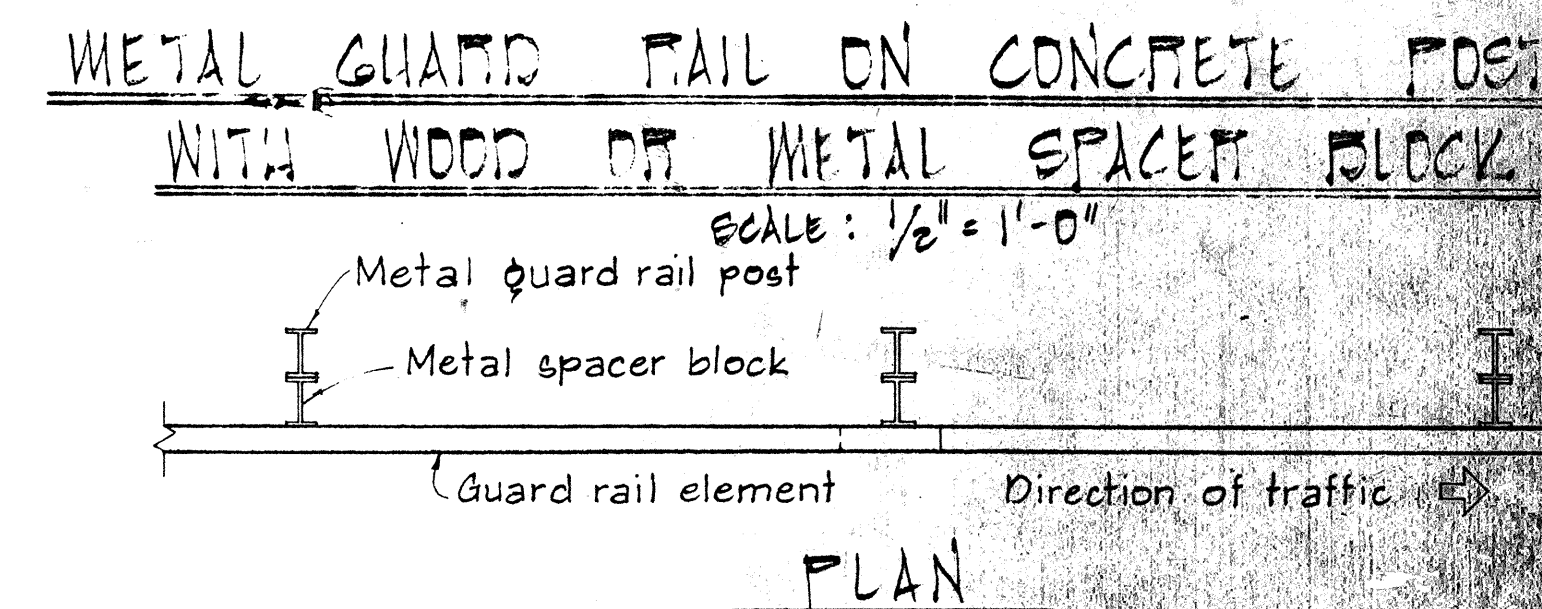
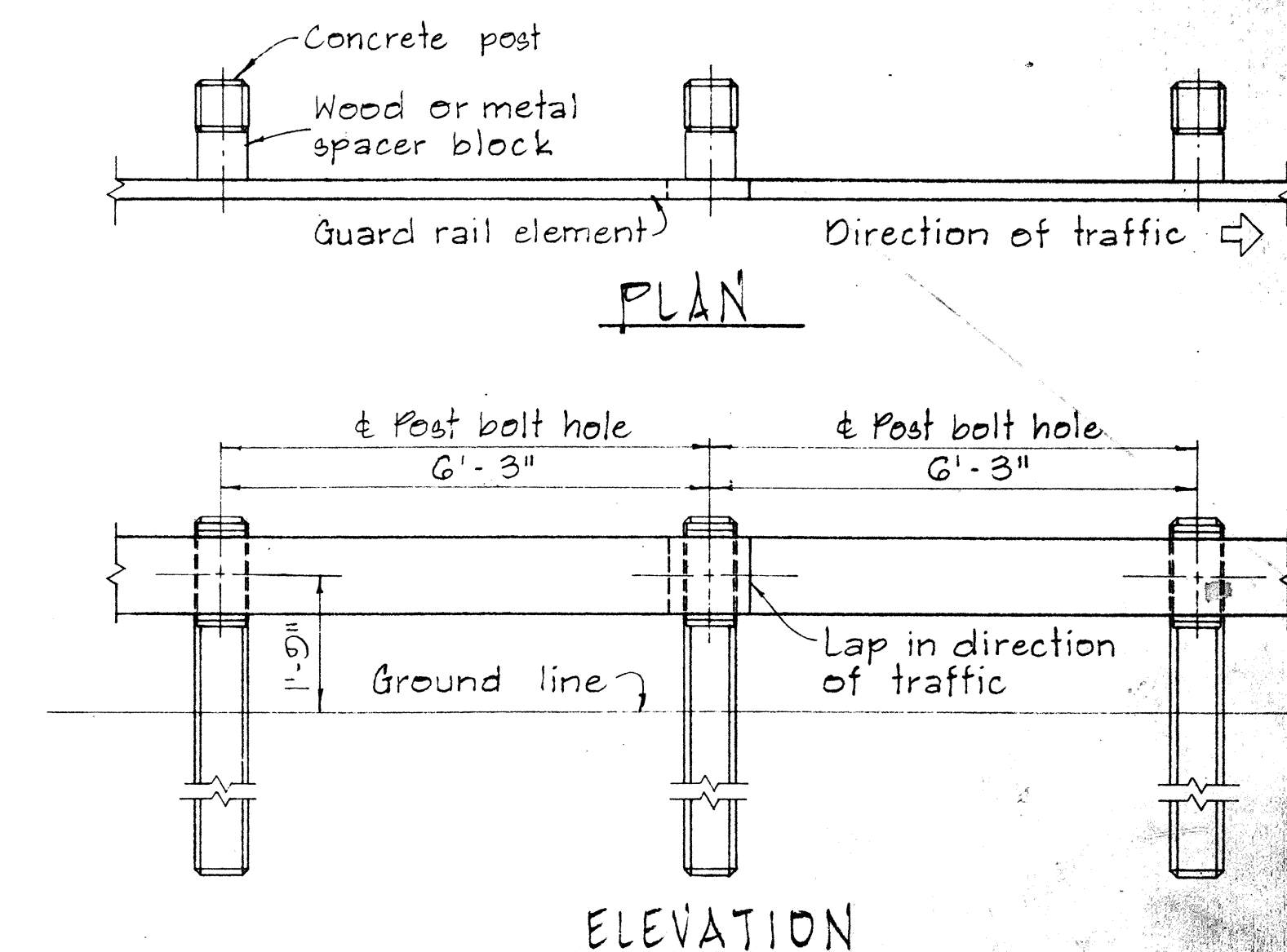
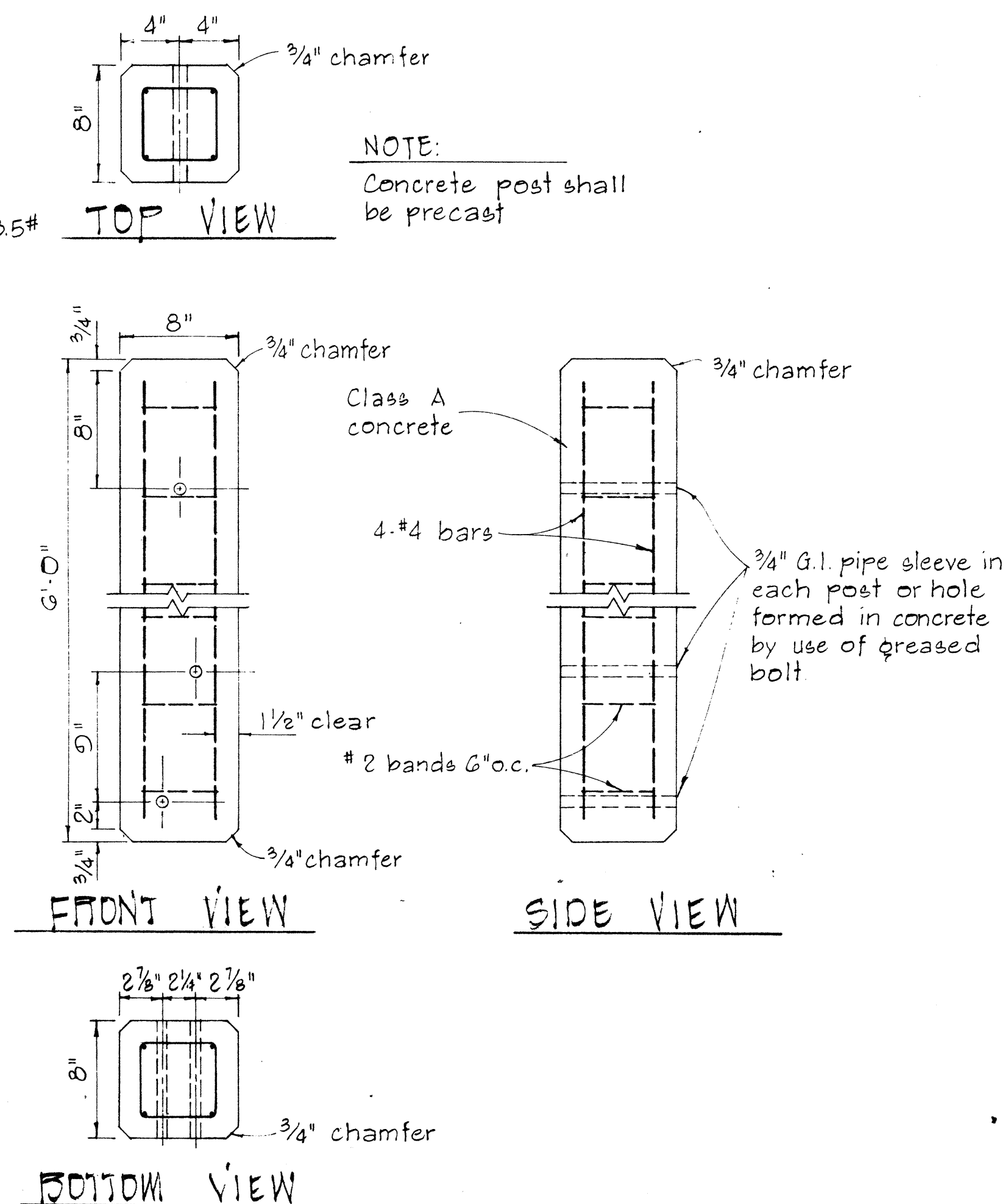
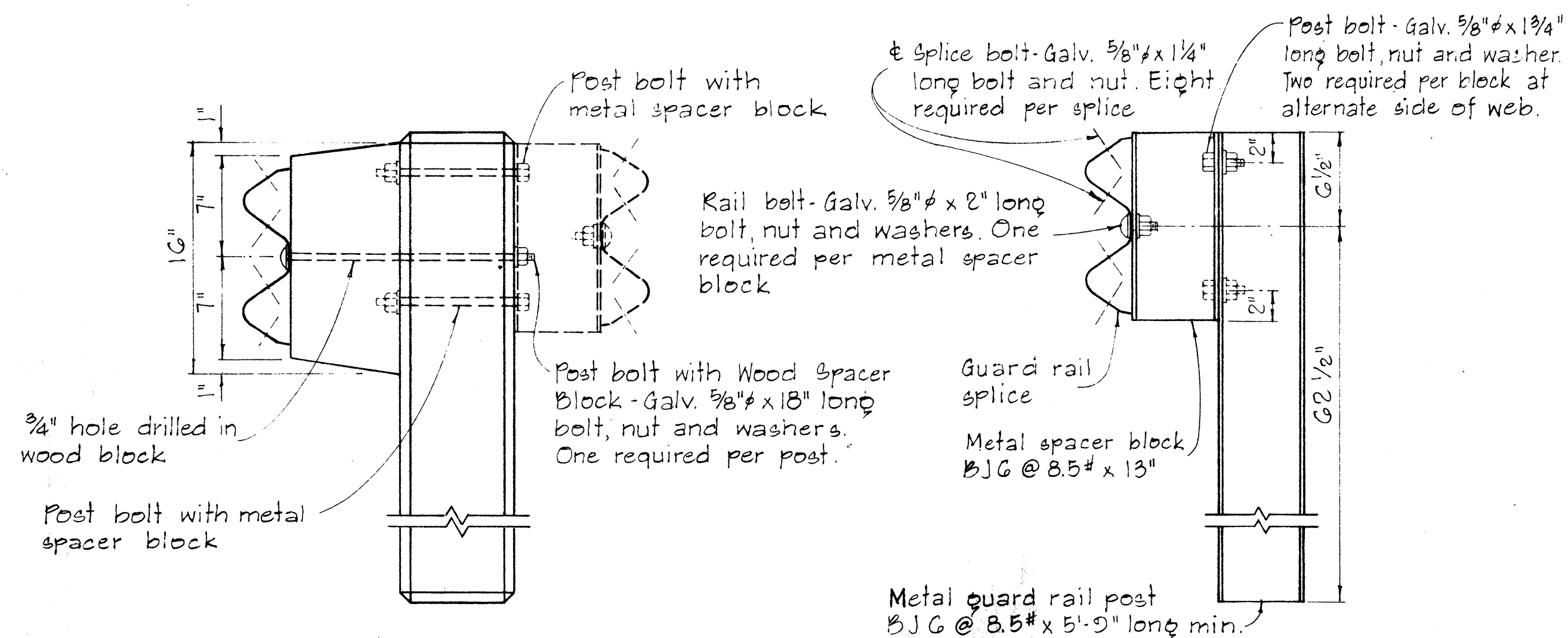
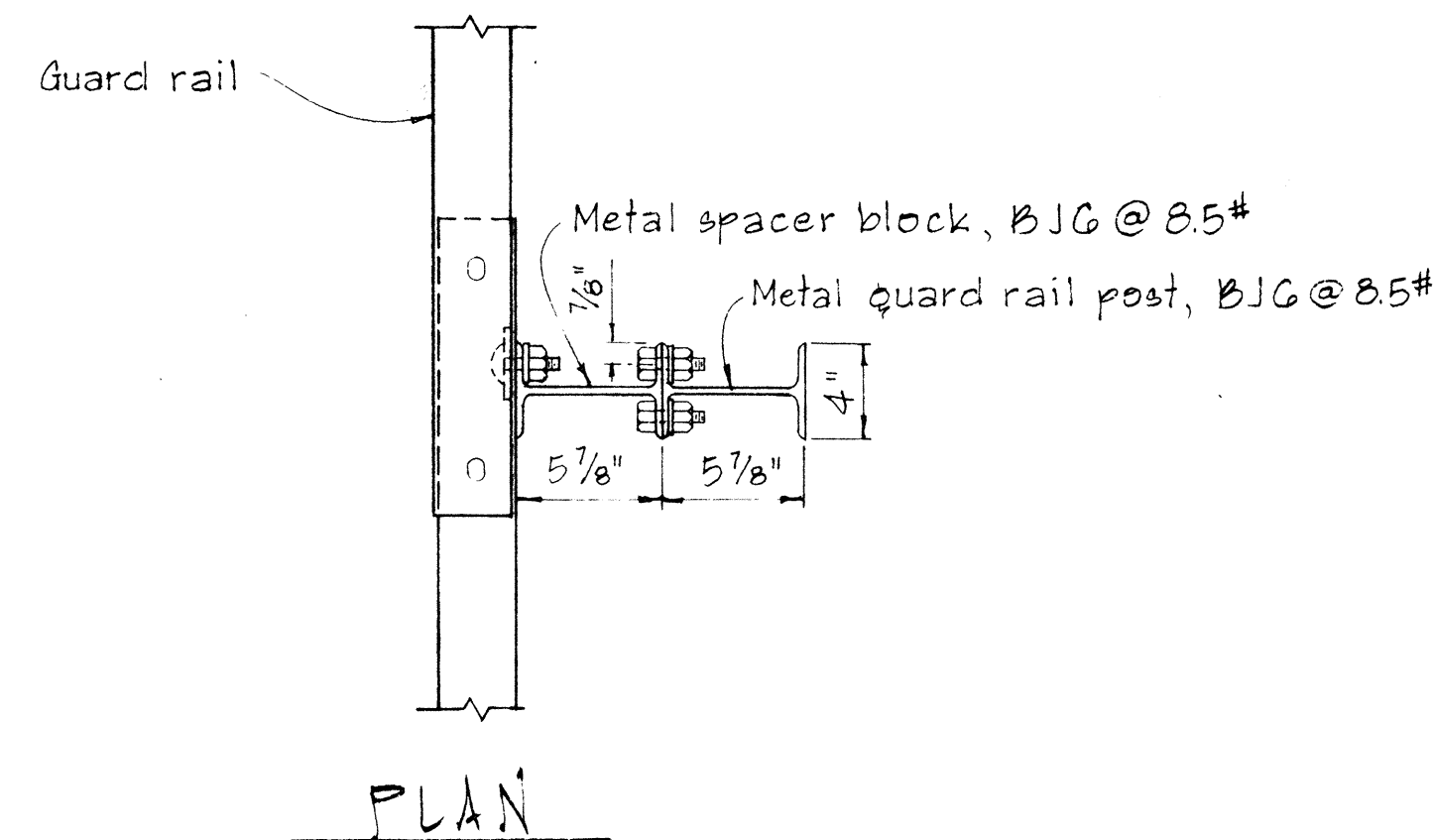
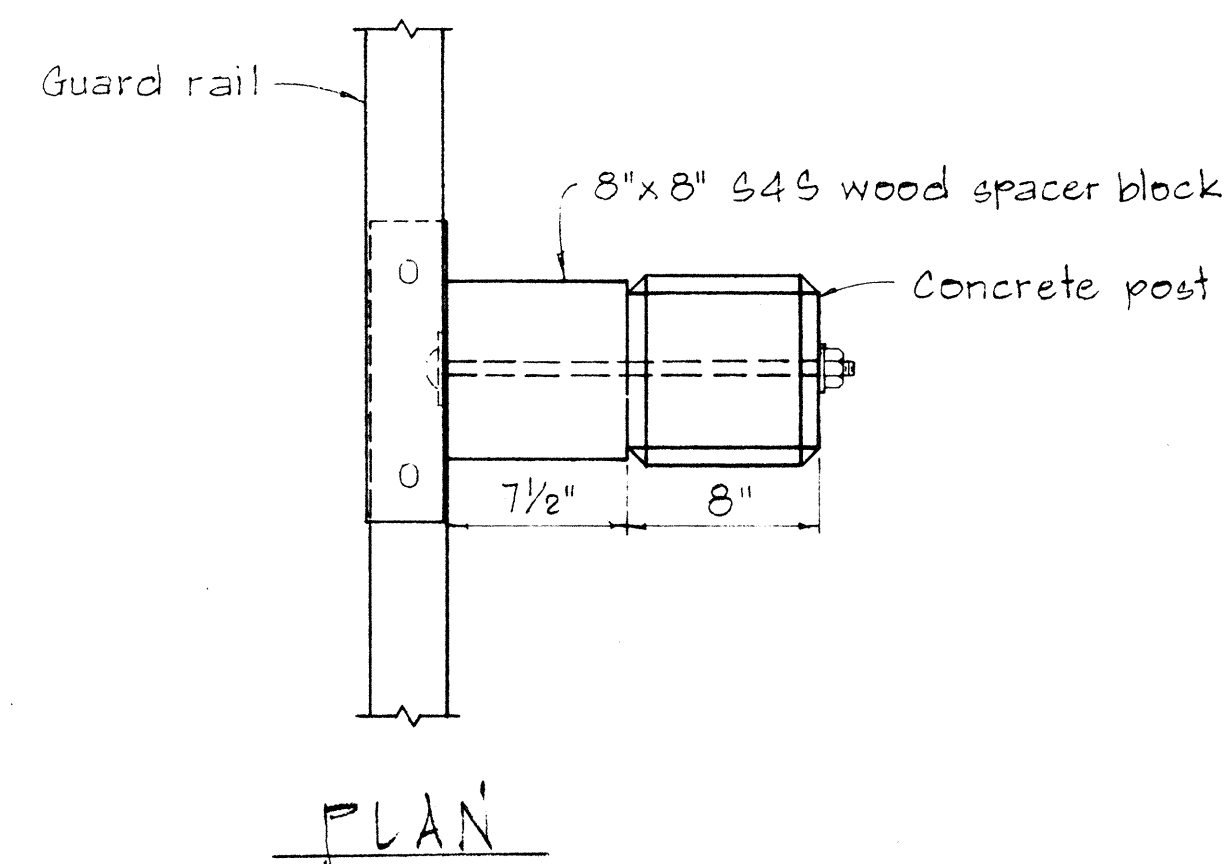
APPROVAL RECOMMENDED:
M. H. H. H.
HIGHWAY DESIGN ENGINEER
DATE: 12-10-69

APPROVED:
M. H. H. H.
ASSISTANT CHIEF, ENGINEERING
DATE: 12-10-69

NO.	REVISION	APPROVED BY	DATE

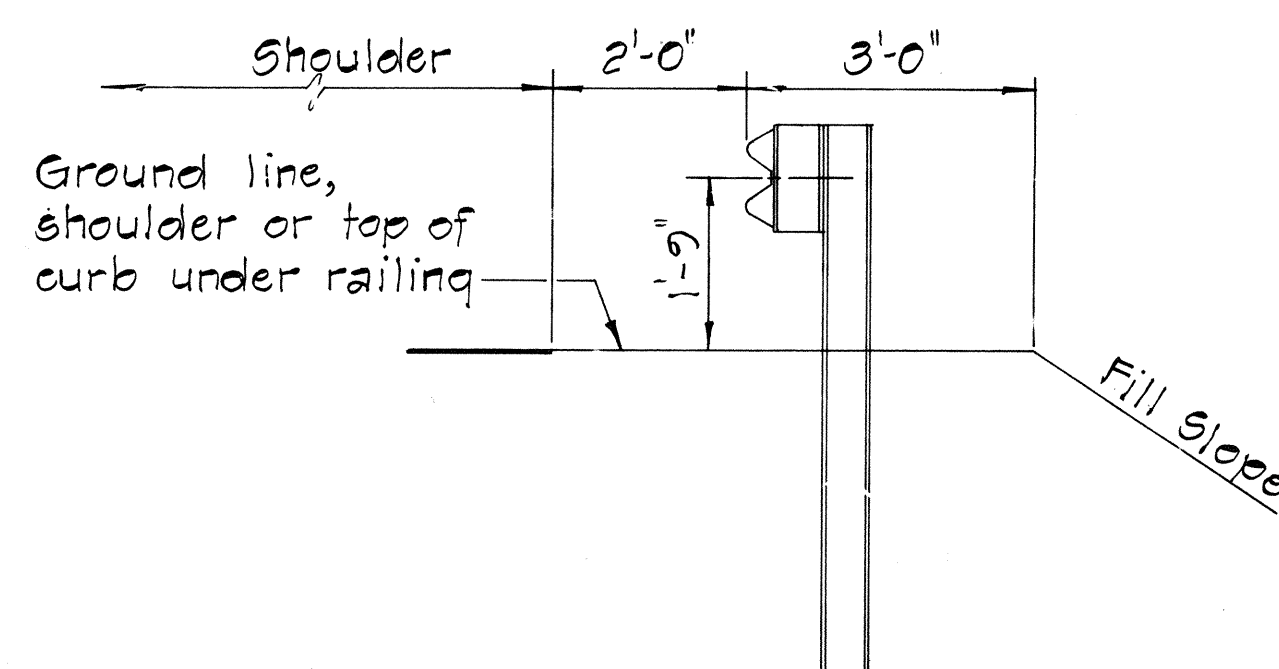
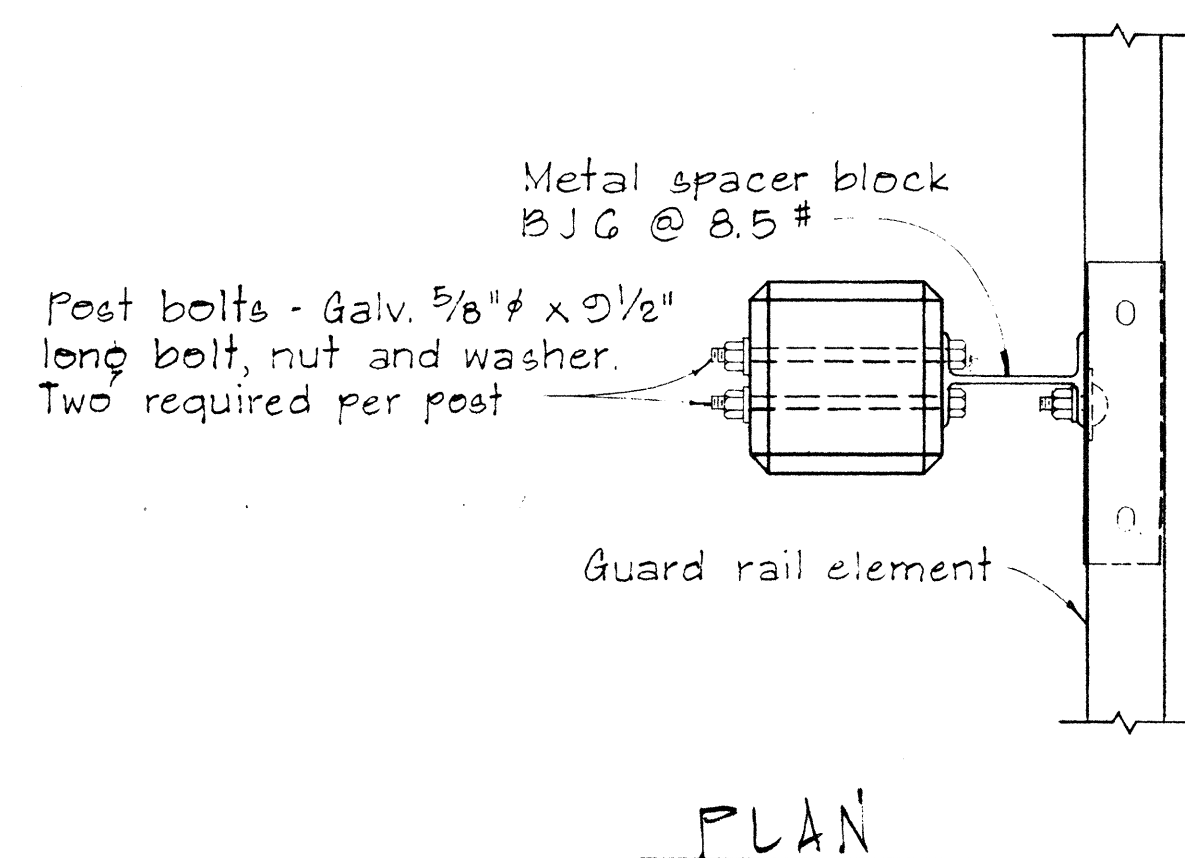
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STANDARD DETAILS CENTERLINE, REFERENCE SURVEY AND C & C STREET SURVEY MONUMENTS Scale: As Shown SHEET No. 5 OF 8 SHEETS DD 613.1	
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	37	163



SINGLE METAL GUARD RAIL ON METAL POST
WITH METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"

DETAIL OF CONCRETE POST
SCALE: 1 1/2" = 1'-0"



SINGLE METAL GUARD RAIL ON PRECAST
CONCRETE POST WITH WOOD OR METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"

TYPICAL METAL GUARD
RAIL DETAIL
SCALE: 1/2" = 1'-0"

APPROVAL RECOMMENDED:
Eugene Tanaka
TRAFFIC ENGINEER
12/29/62
DATE

APPROVED:
William J. Zelnick
ASSISTANT CHIEF, ENGINEERING
12-30-62
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL GUARD RAIL

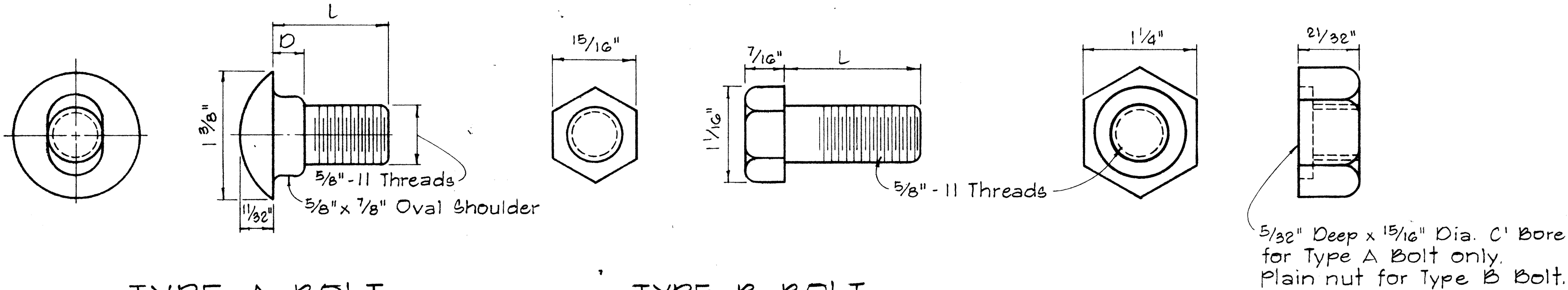
SCALE: AS SHOWN
NOV. 1982

SHEET No. 6 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-01-82 S-RS-0760(2)	1982	38	163

BOLT DIMENSIONS		
TYPE A BOLT		
Splice Bolt	D	L
Post Bolt for Conc. Post w/ Double Wood Blocks	5/16"	1 1/4"
Post Bolt for Conc. Post w/ Single Wood Block	3/32"	24"
Rail Bolt for Metal Block	3/32"	18"
	3/32"	2"

BOLT DIMENSIONS		
TYPE B BOLT		
Post Bolt for Conc. Post w/ Metal Blocks		L
Post Bolt for Metal Post w/ Metal Block		1 3/4"



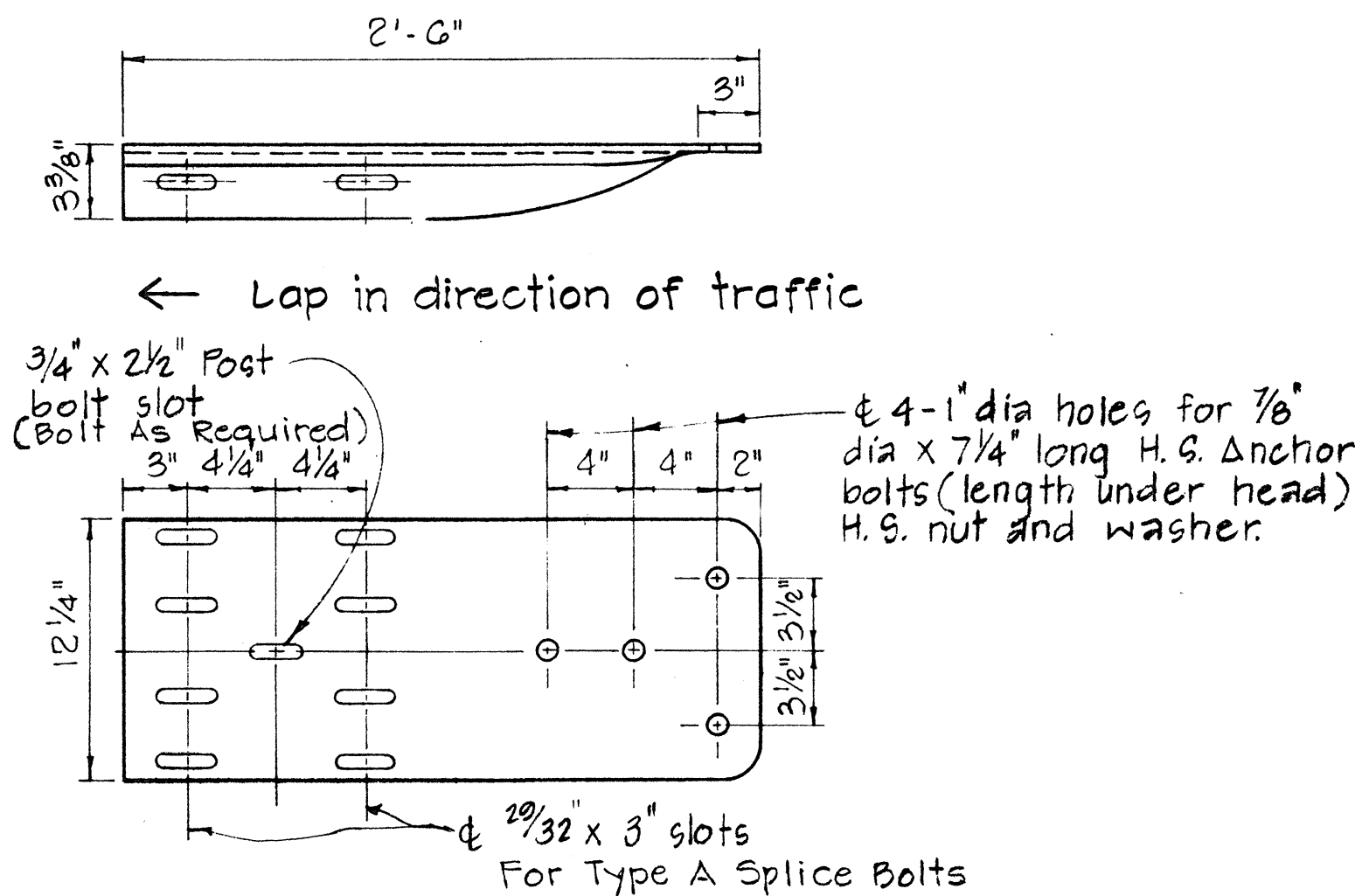
TYPE A BOLT TYPE B BOLT

SPlice RAIL AND POST BOLTS

Scale: Full Size

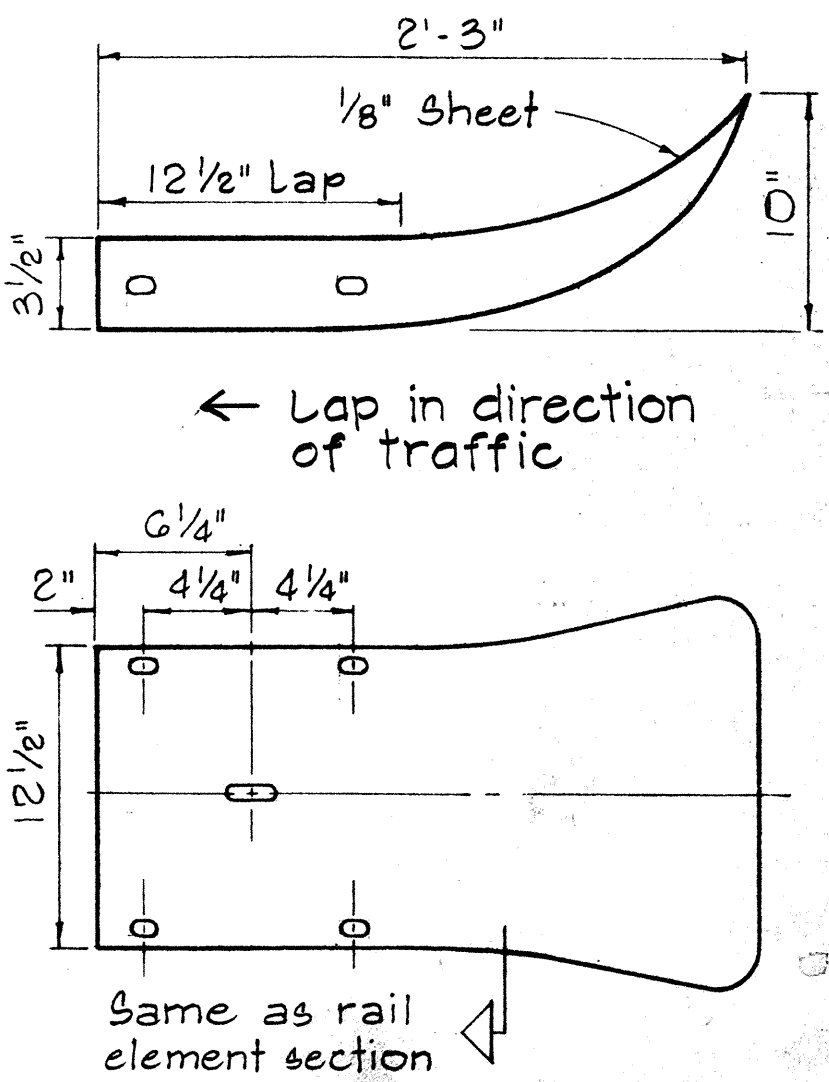
HEXAGON NUT

Scale: Full Size



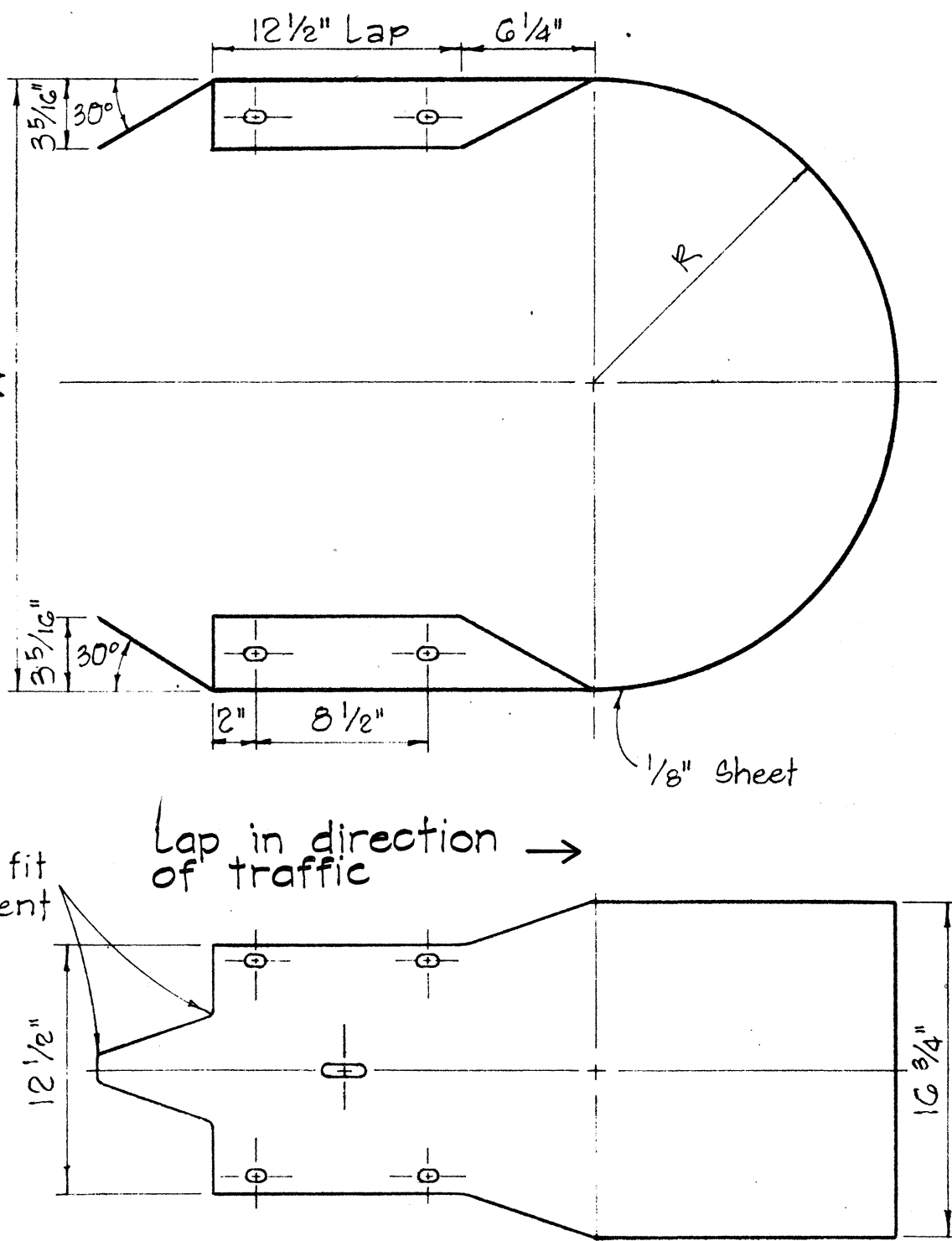
SPECIAL END SHOE

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



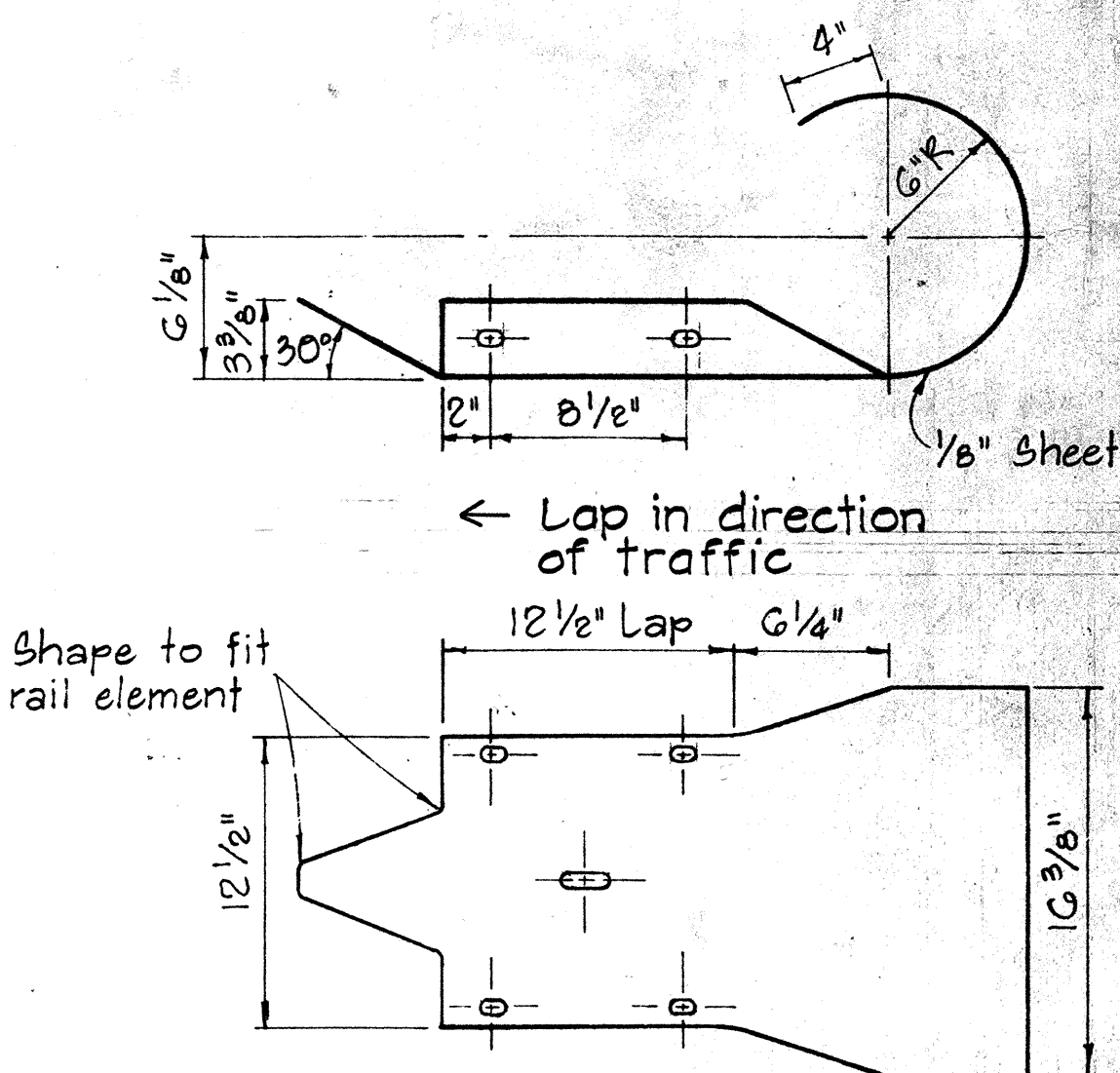
FLARED END

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



MEDIAN END

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



CURVED END

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

APPROVAL RECOMMENDED:

TRAFFIC ENGINEER

APPROVED:

ASSISTANT CHIEF, ENGINEERING

12/23/63
DATE

12-30-63
DATE

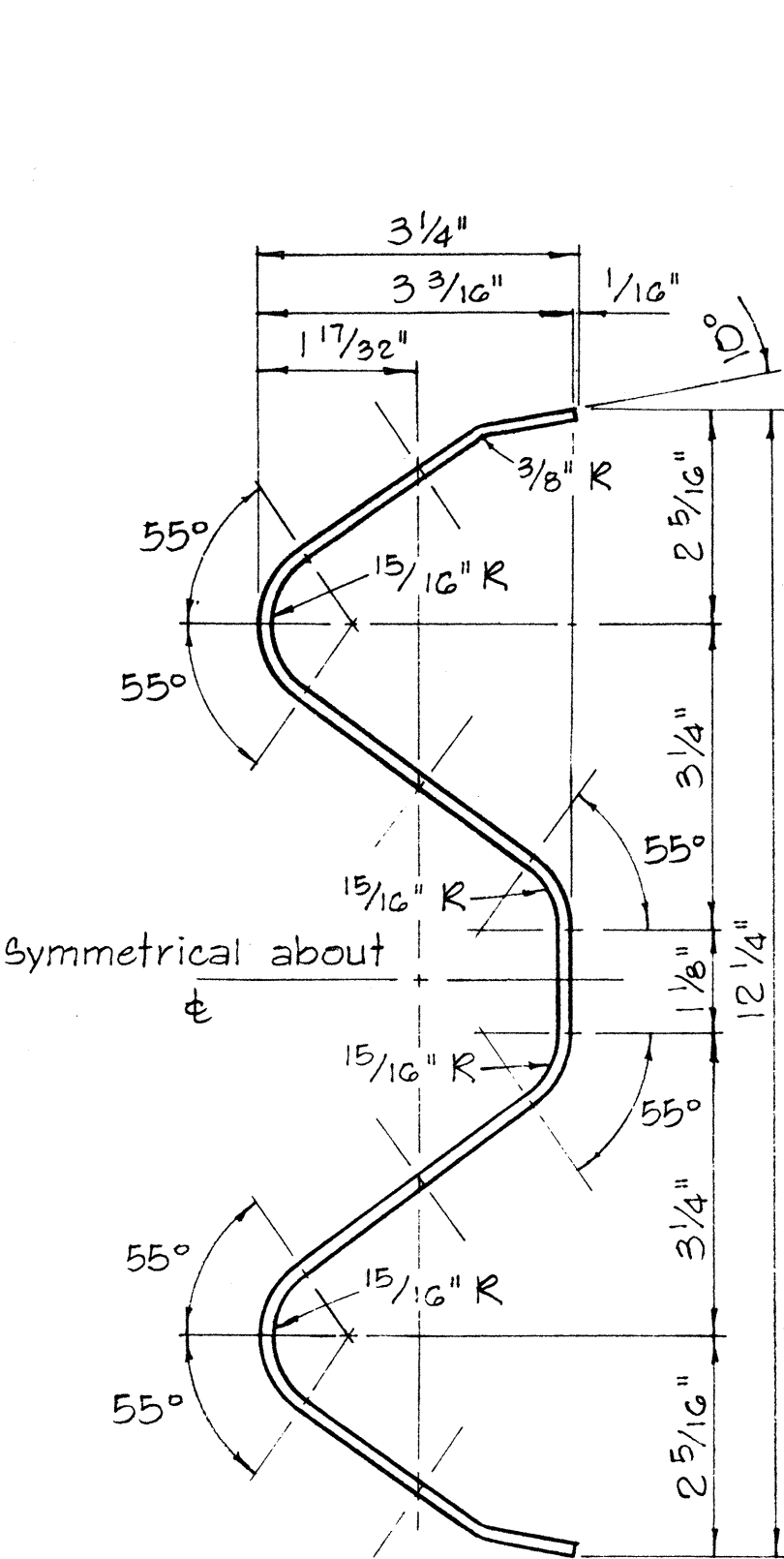
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS METAL GUARD RAIL

Scale: As Noted

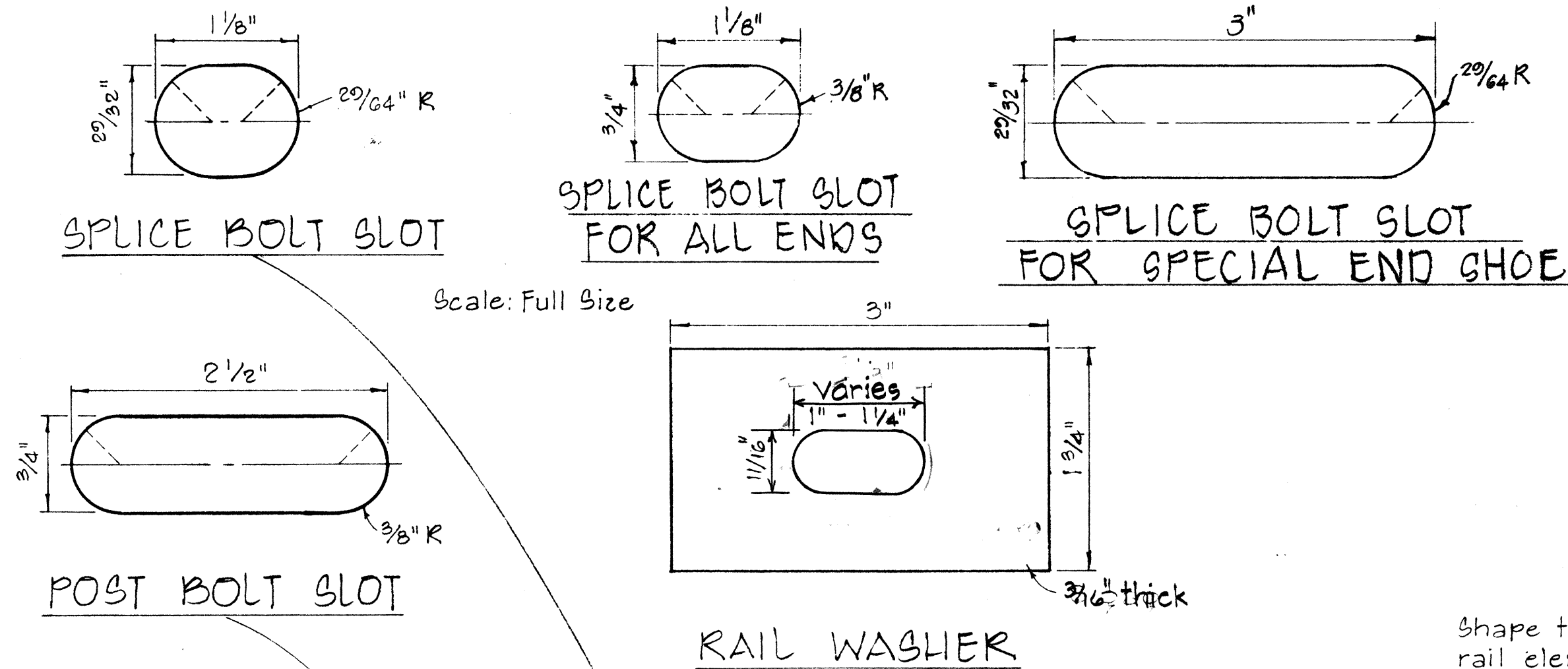
August, 1968

SHEET No. 7 OF 8 SHEETS DT 501



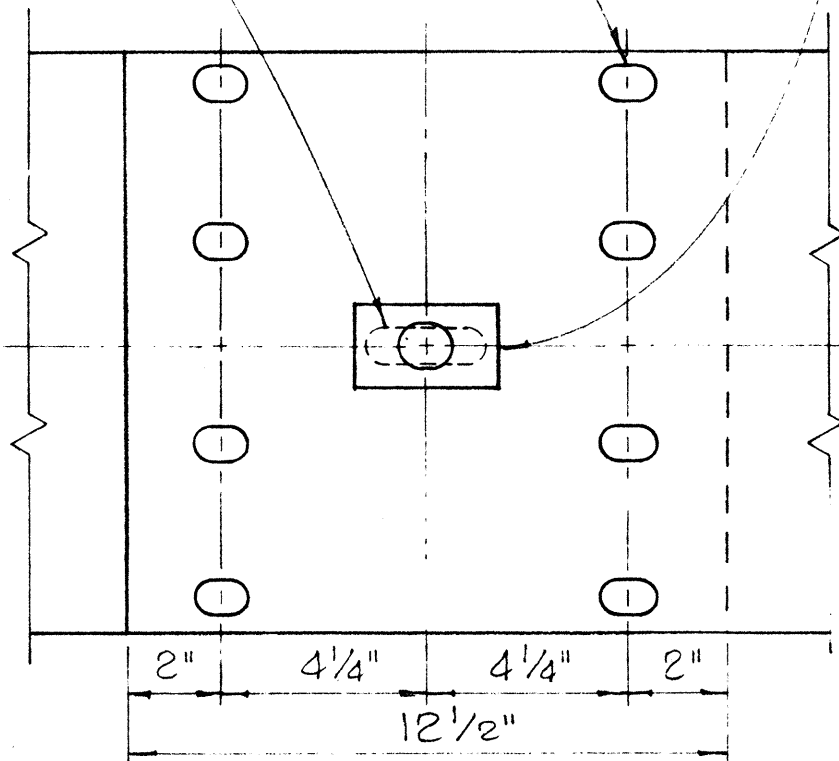
RAIL ELEMENT SECTION

Scale: 6" = 1'-0"



POST BOLT SLOT

RAIL WASHER



RAIL SPLICE

Scale: 3" = 1'-0"

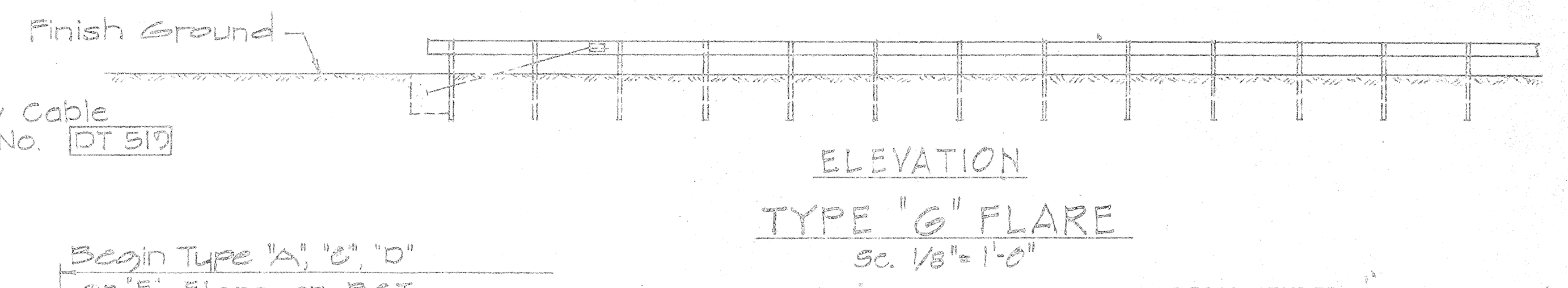
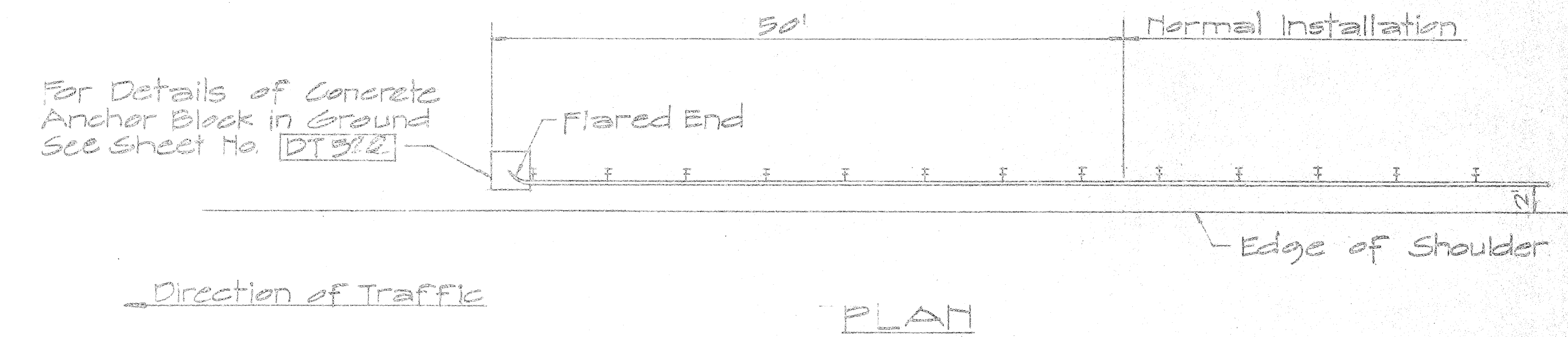
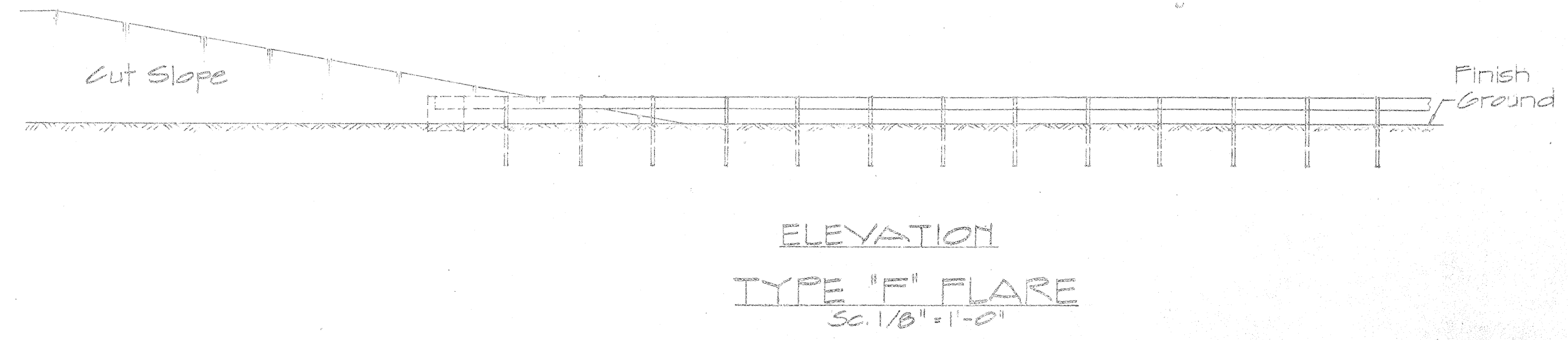
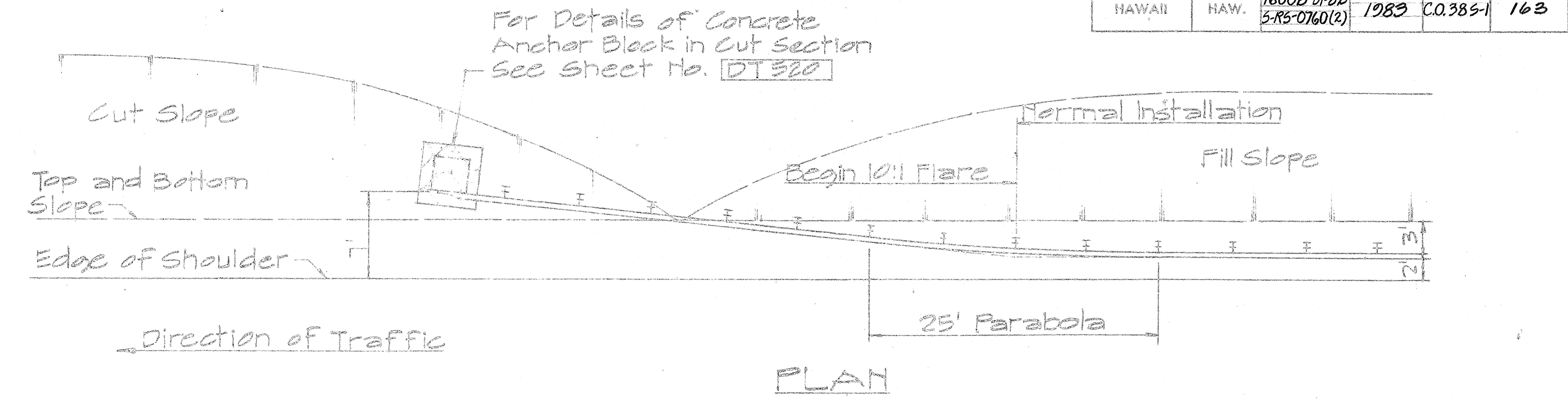
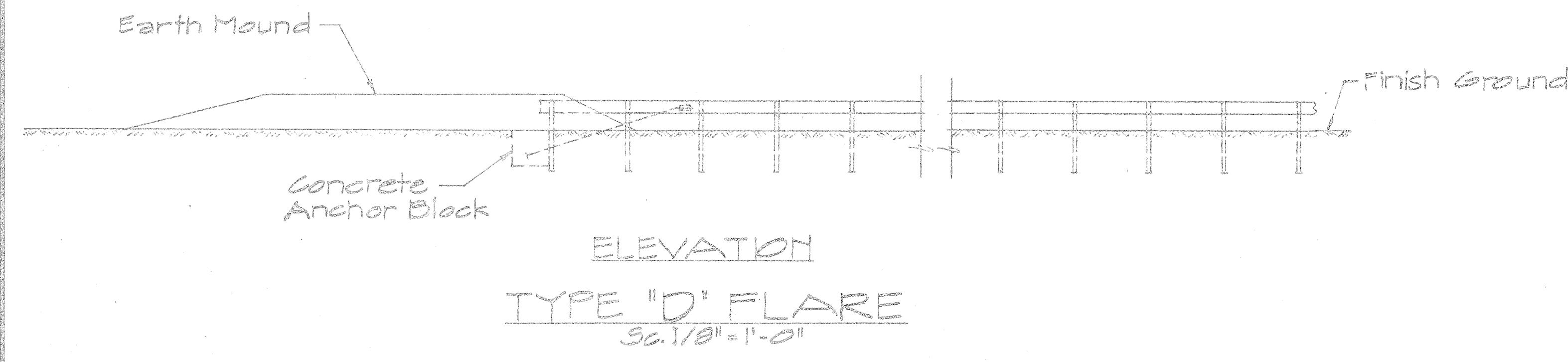
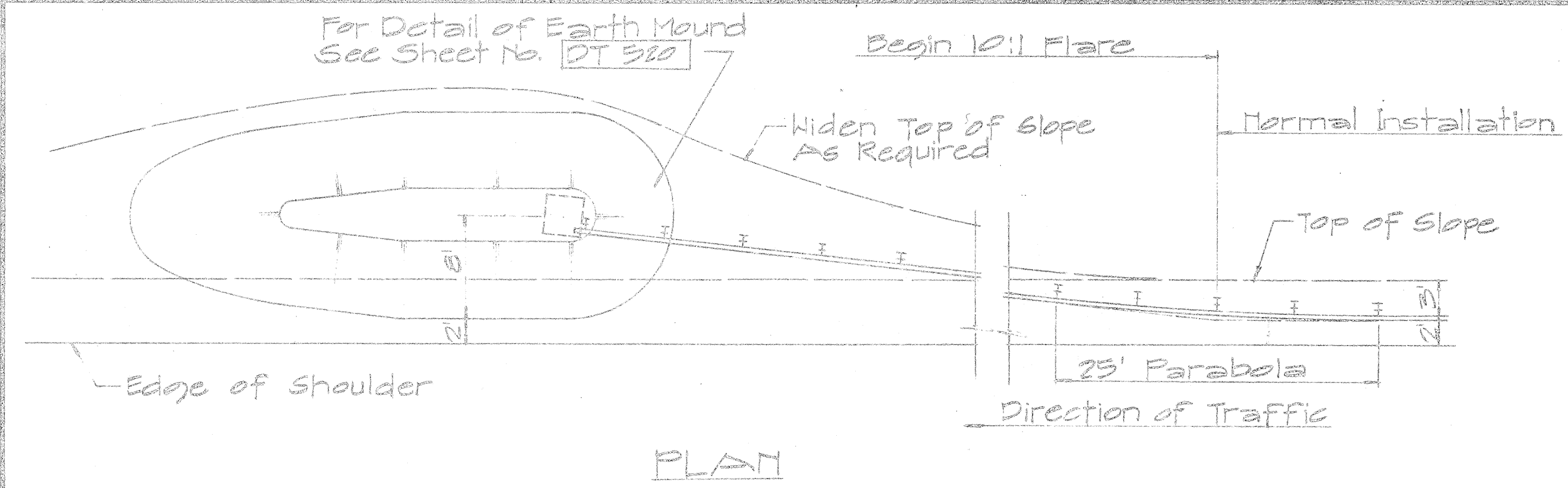
- NOTES:
- H.S. Bolts shall conform to the requirements of ASTM A 325.
 - Special End Shoe shall be fabricated from 10 Gage steel conforming to the requirements of AASHTO 180.

MEDIAN END DIMENSIONS		
TYPE OF POST AND BLOCK	W	R
Double Metal Guard Rail on Concrete Post with Wood Blocks	29 3/4"	14 7/8"
Double Metal Guard Rail on Concrete Post with Metal Blocks (BJG)	26 1/2"	13 1/4"
Double Metal Guard Rail on Metal Post with Metal Blocks (BJG)	24 3/8"	12 3/16"

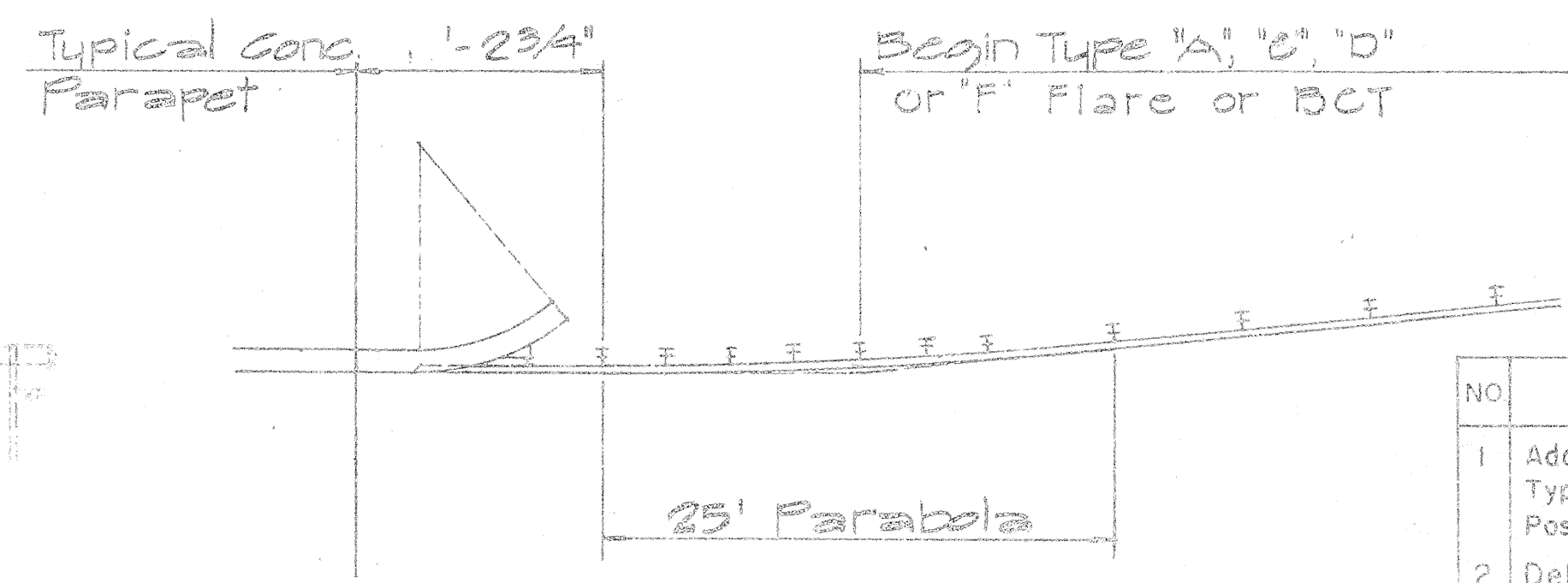
NO.	REVISION	APPROVED BY	DATE
1	Revised Hole Size for Rectangular Rail Washer	H.T.	8/10/77

ORIGINAL PLAN	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
NOTES BOOK	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	76008-01-82 S-AS-0760(2)	1983	C.O.385-1	163



NOTE:
For detail of Breakaway Cable Terminal (BCT) See Sheet No. DT 510



APPROVAL RECOMMENDED:
Eishi Tanaka 12/20/69
TRAFFIC ENGINEER DATE

APPROVED:
W. S. Sal 12-20-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Additional Posts Added to Typical Layout Plan Of End Post Connection	H.C.	4-12-72
2	Delete Type "B" Flare and Type "E" Flare	H.C.	6-15-78

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
TRAILING END
FLARE - ONE & TWO
WAY ROADWAY

Scale: As Noted APRIL 1970

SHEET No. OF SHEETS DT 517

DATE	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

NOTES:

-
- Technical drawing of a Terminal Connector. The drawing includes two views: a top view and a side view.
- Top View Dimensions:**
- Overall length: 2'-6"
 - Left end width: 3 3/8"
 - Right end width: 3"
 - Distance from left end to start of taper: 8 1/2"
 - Distance from start of taper to right end: 2"
- Side View Dimensions:**
- Overall length: 2'-6"
 - Overall height: 12 1/4"
 - Slot dimensions: 29/32" x 3" Slots (indicated by arrows pointing to the slots)
 - Right end feature: 3/4" Dia. Hole
- Labels:**
- Neutral Axis (indicated by a dashed line in the top view)
 - Terminal Connector (title)
- Scale:** 1" = 1'-0"

Eichi Tanaka 6/14/78
TRAFFIC ENGINEER DATE

Herbert Zaleski 6/15/78
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAIL

BREAKAWAY CABLE TERMINAL (BCT)

Scale: As Shown Date: June 1978

SHEET No. 8 OF 8 SHEETS DT 1



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



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



Scale: $3'' = 1'-0''$



Scale: 3" = 1'-0"



Scale: 3" = 1'-0"



Scale: Full Size

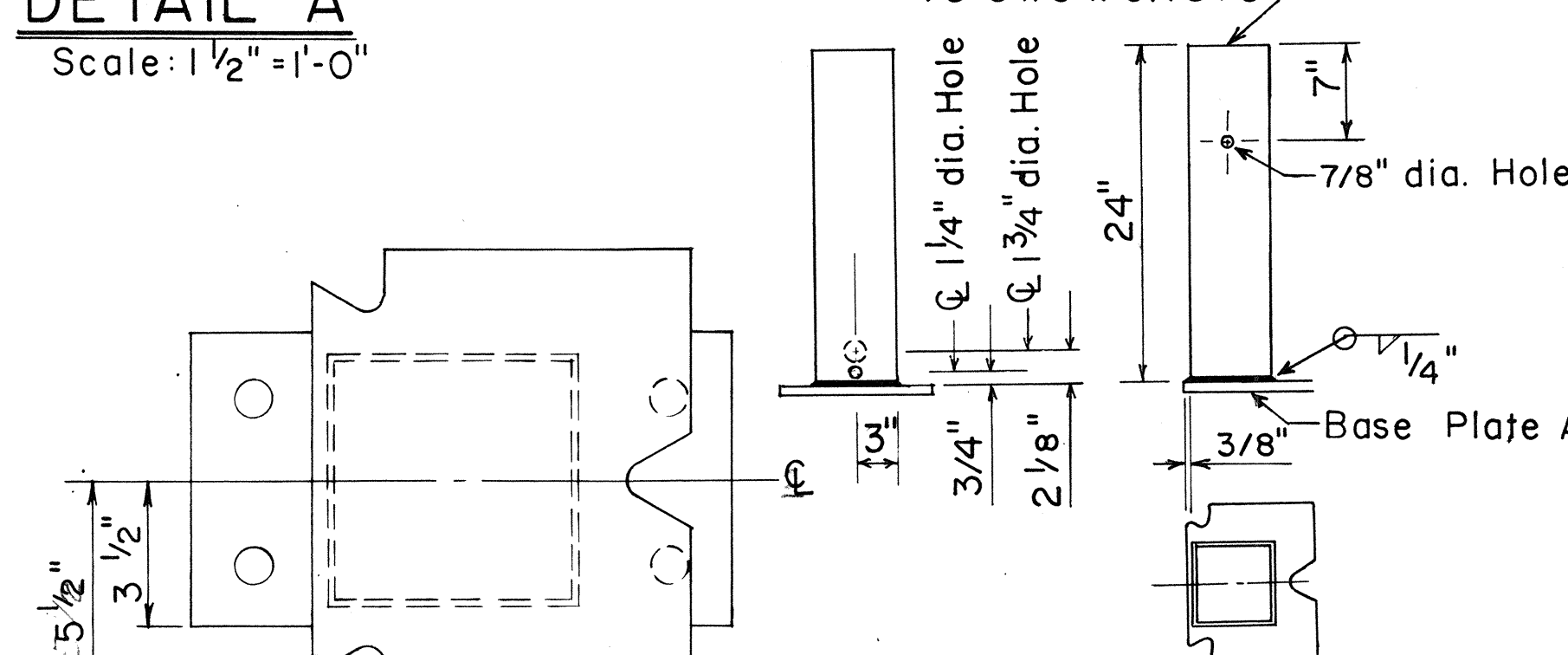


DETAIL A

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

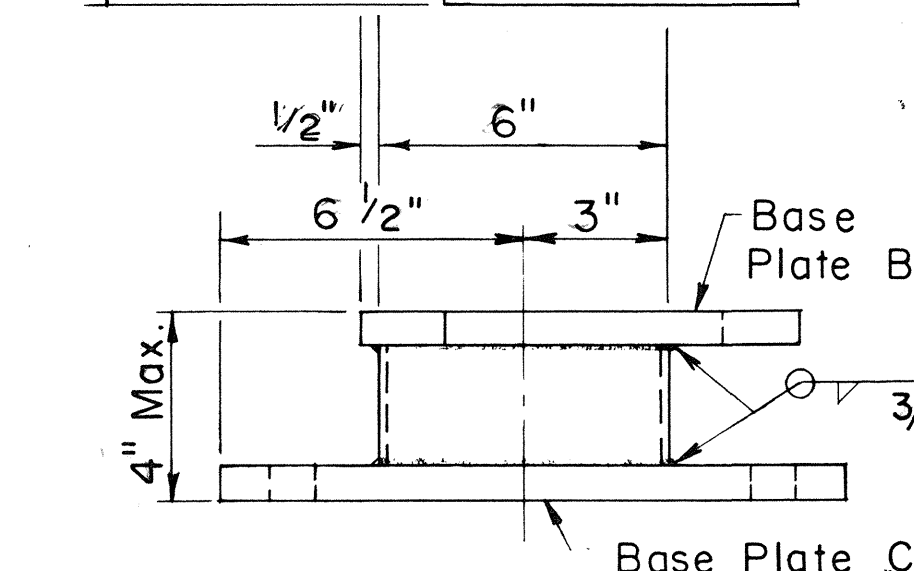


Scale: Full Size



TERMINAL POST

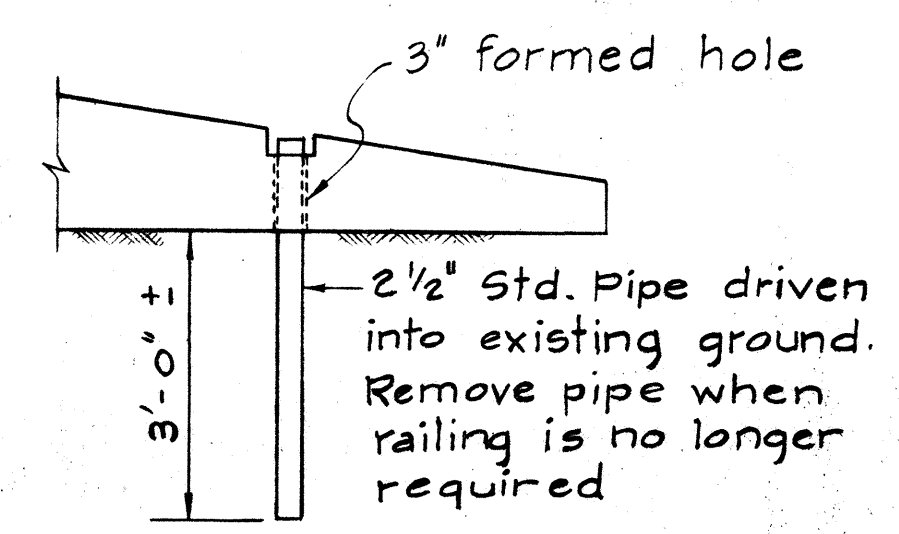
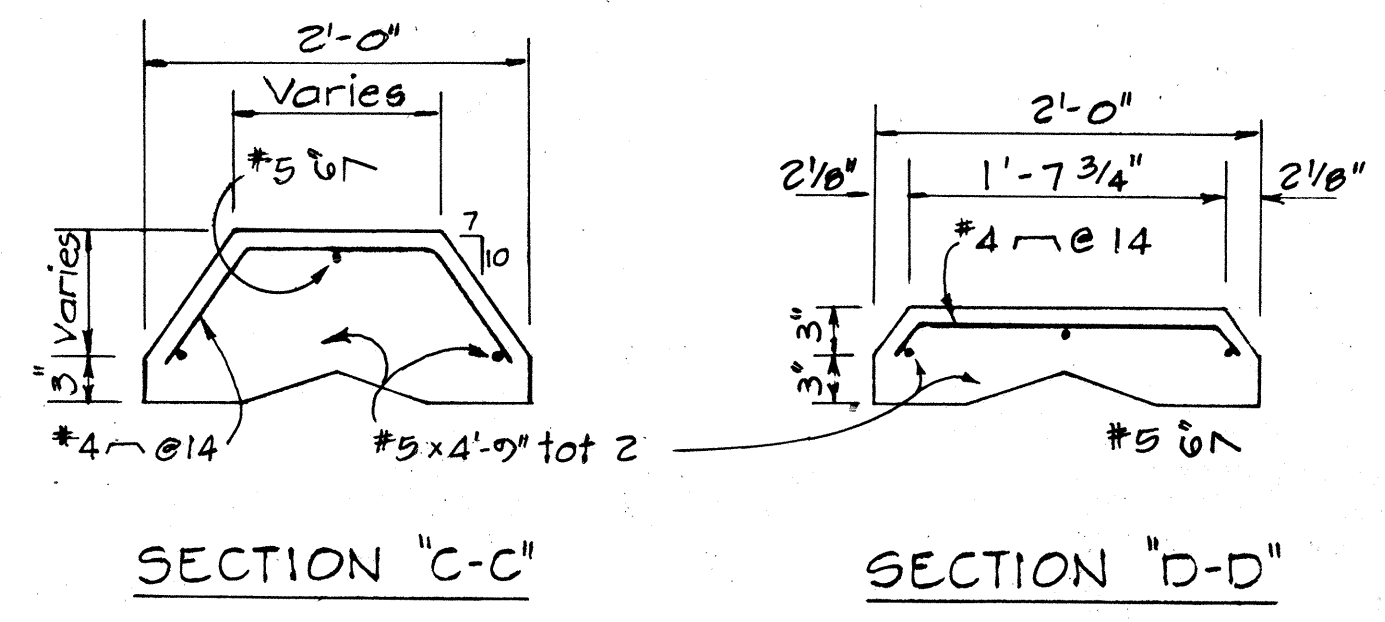
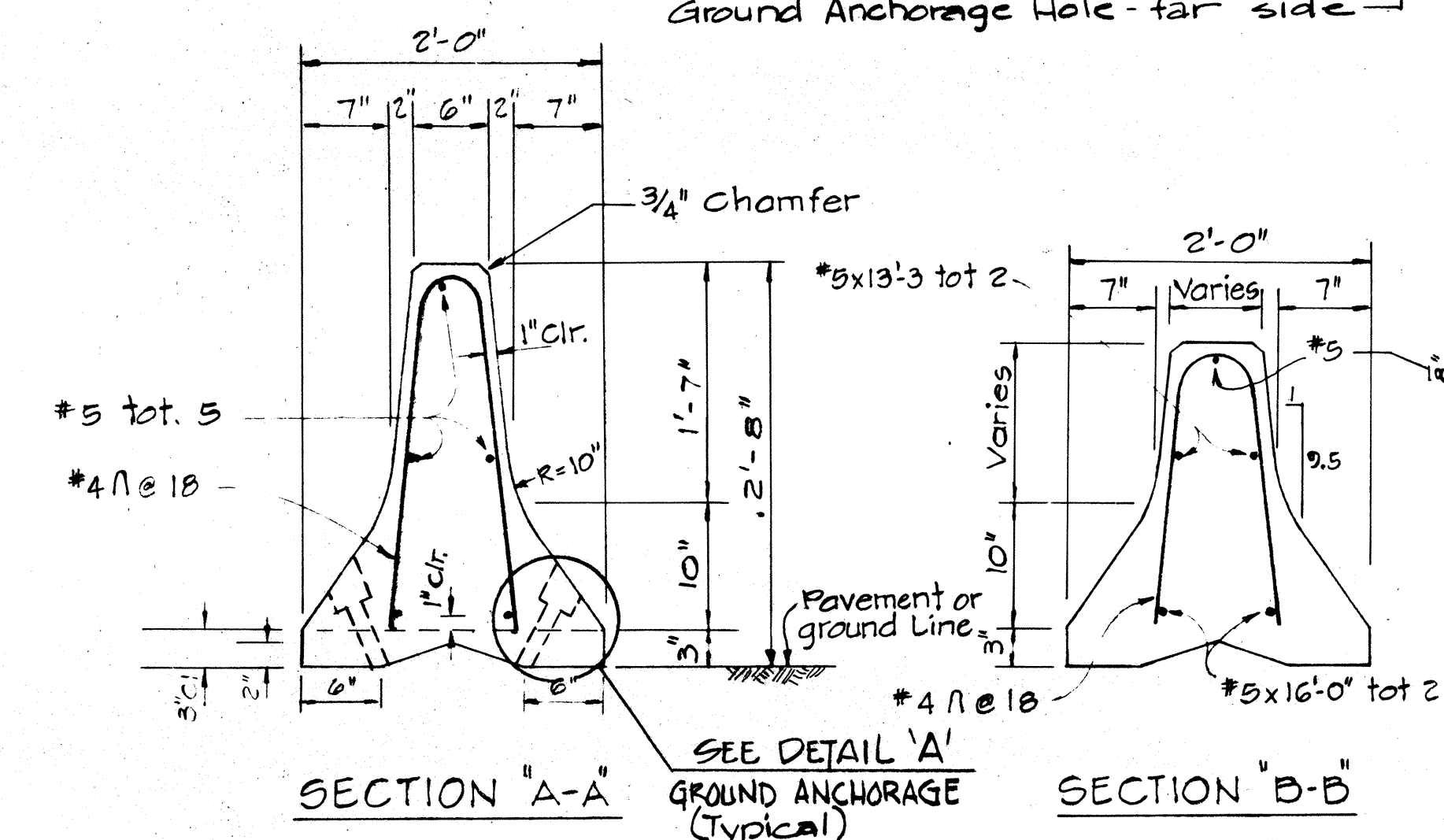
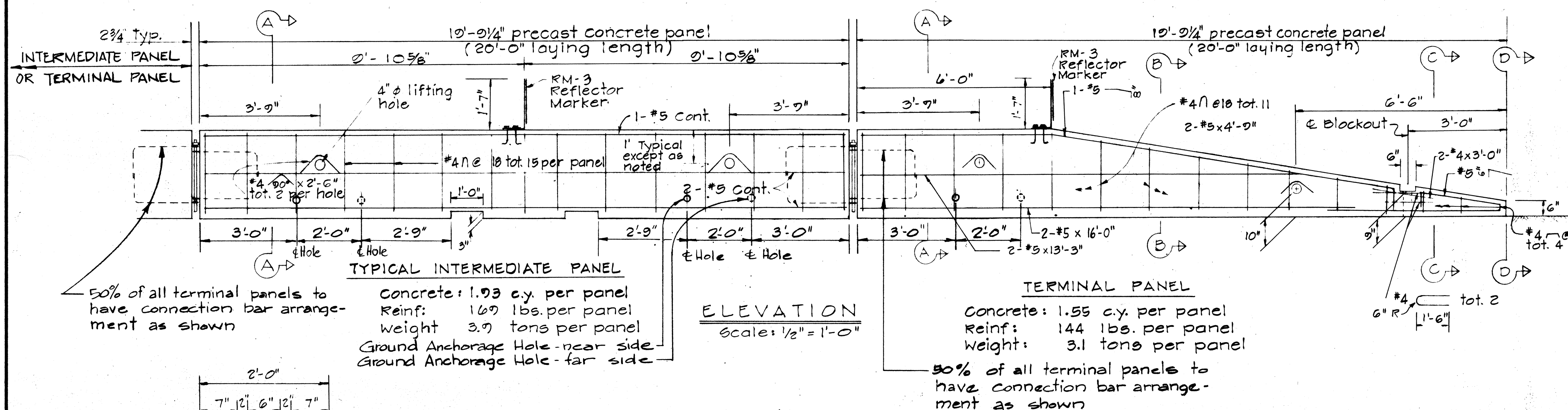
Scale : 1" = 1' - 0"



FOUNDATION POST

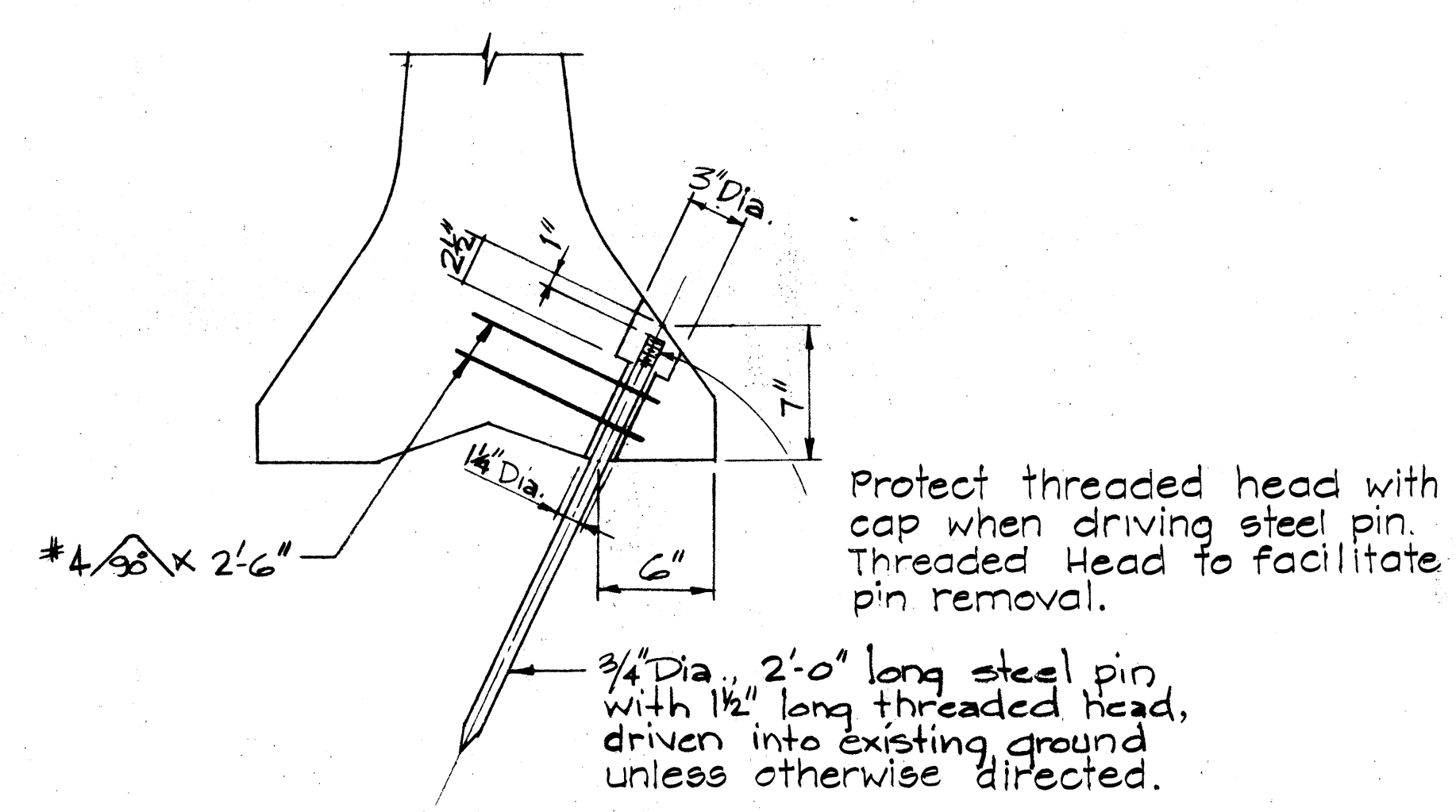
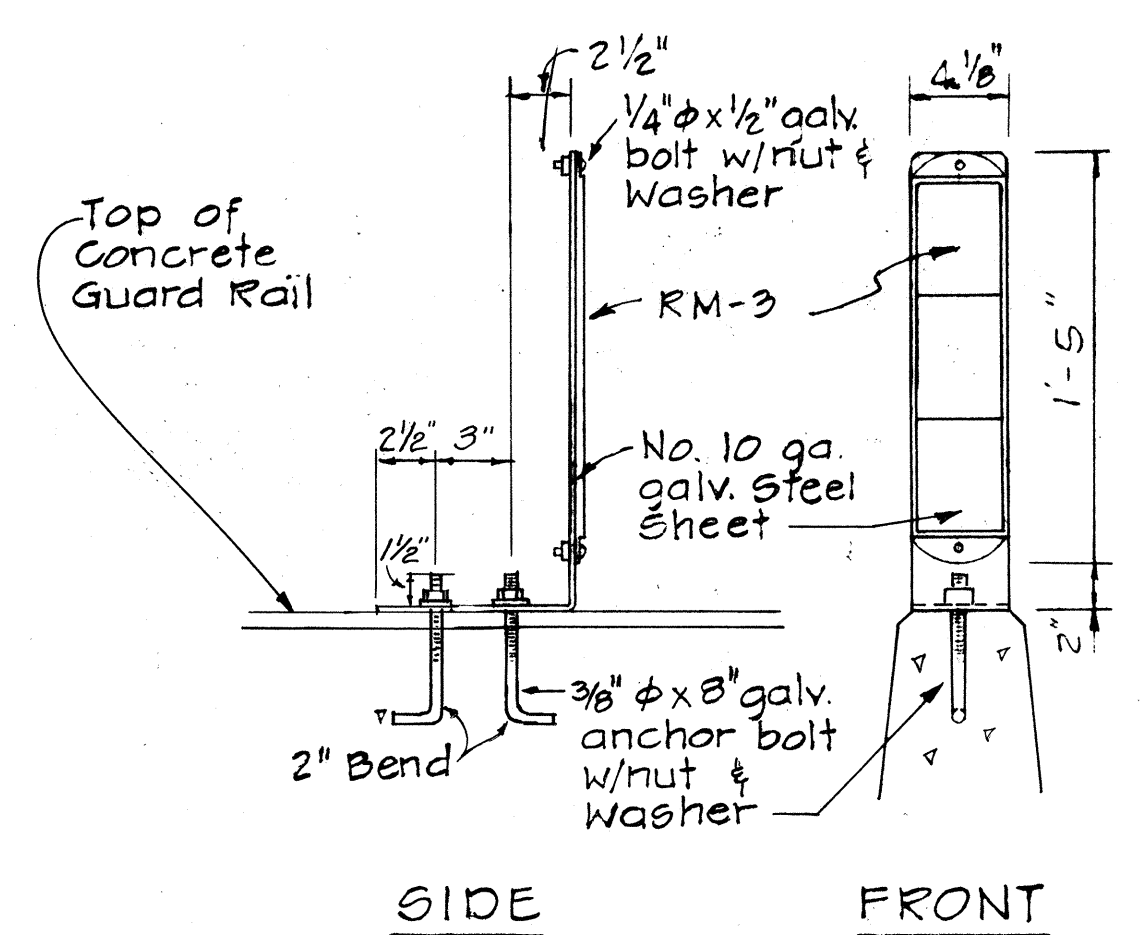
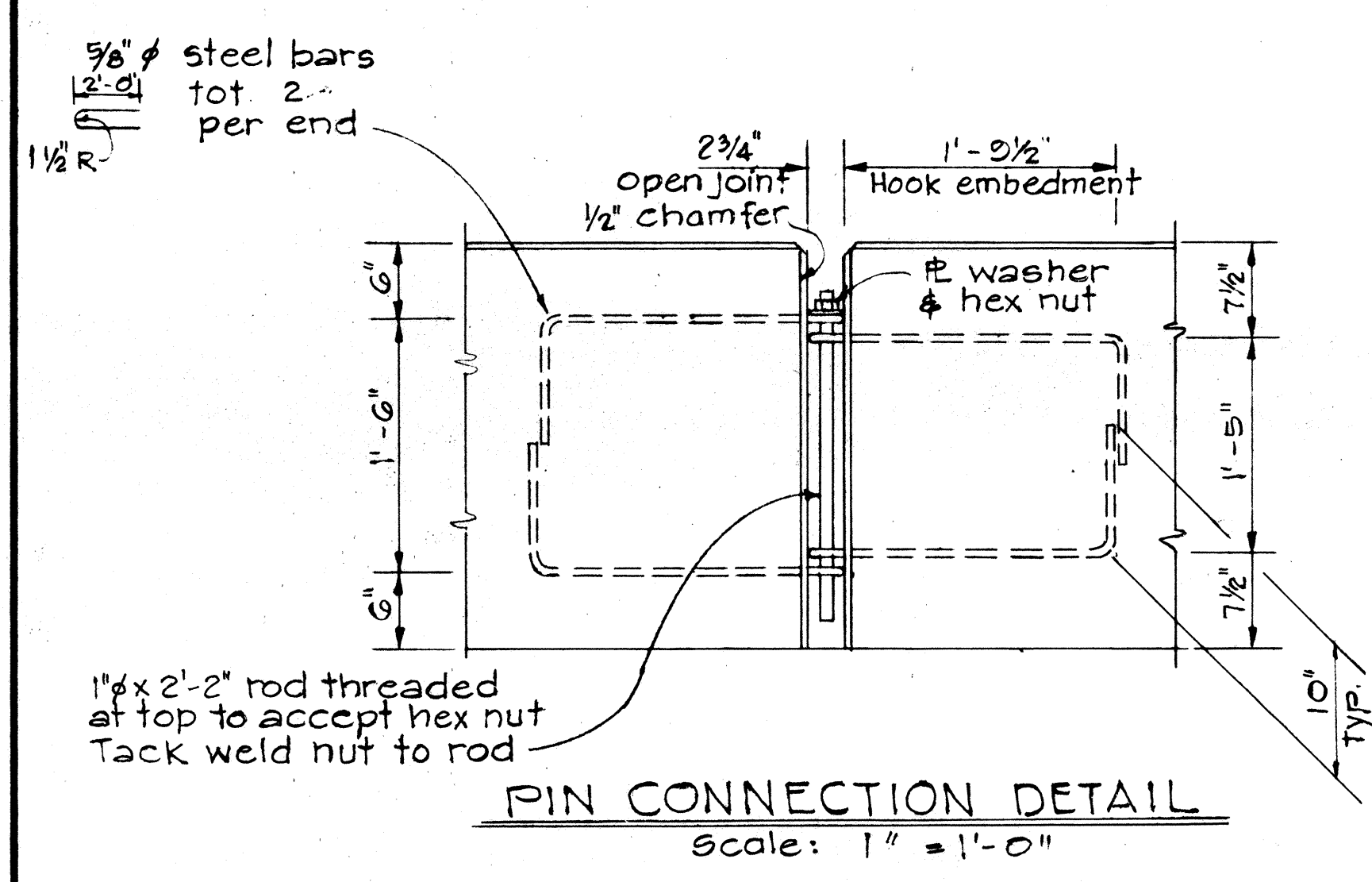
Scale: $3'' = 1'-0''$

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7600B-0182 S-RS-0760(2)	1982	39A	163



NOTES

1. For details not shown in Sections BB, C-C, & D-D, see Section A-A
2. Reflector Marker shall not be paid for separately but shall be considered incidental to "Portable Concrete Guard Rail."
3. Concrete shall be Class "A".
4. All bolts to have cut washers unless otherwise noted.



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PORTABLE CONCRETE GUARD RAIL TYPICAL DETAILS

Scale: As Noted Date: _____

SHEET No. OF SHEETS

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NOTE BOOK	