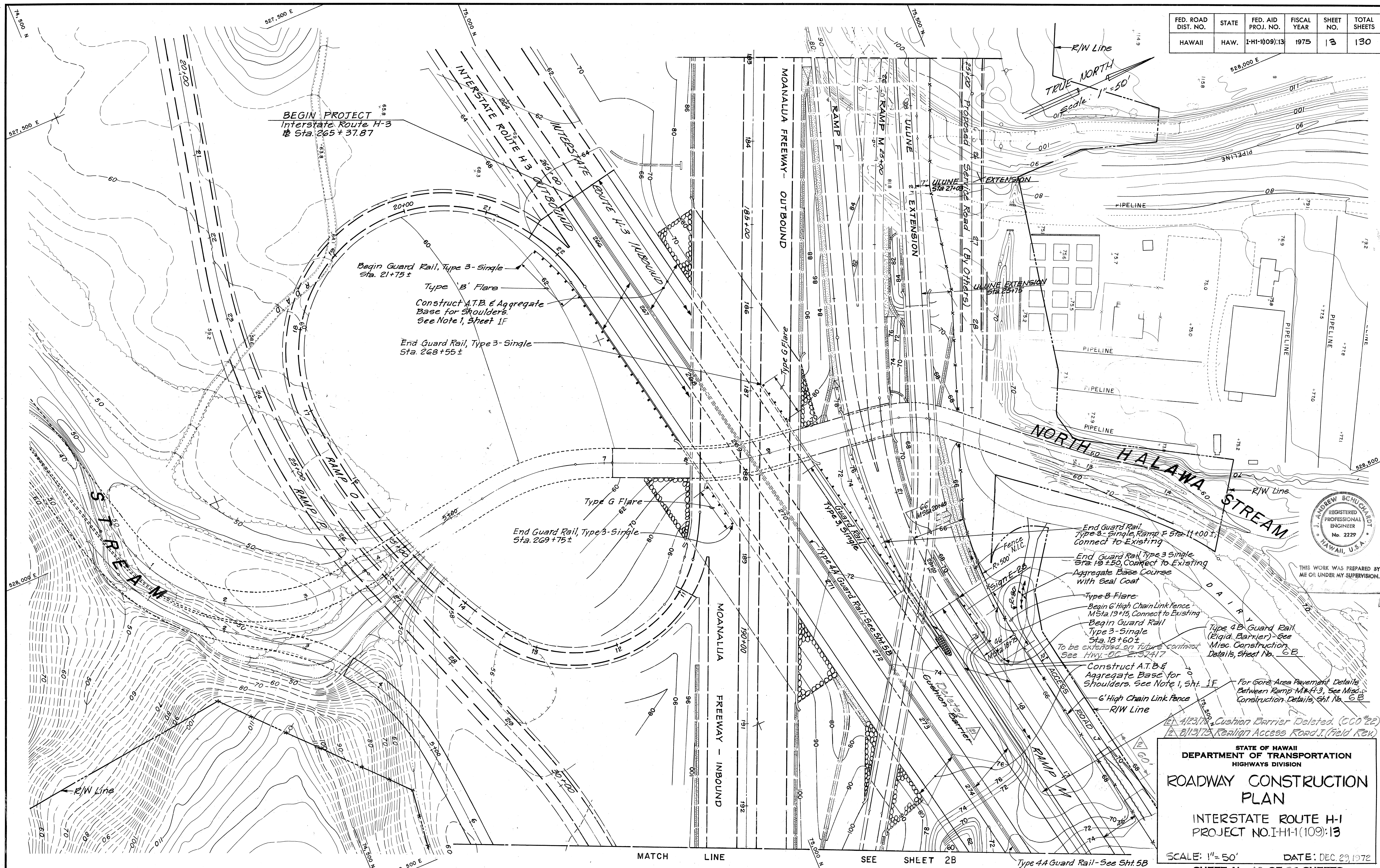


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H1-1(109):13	1975	13	130



THIS WORK WAS PREPARED
ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION
PLAN

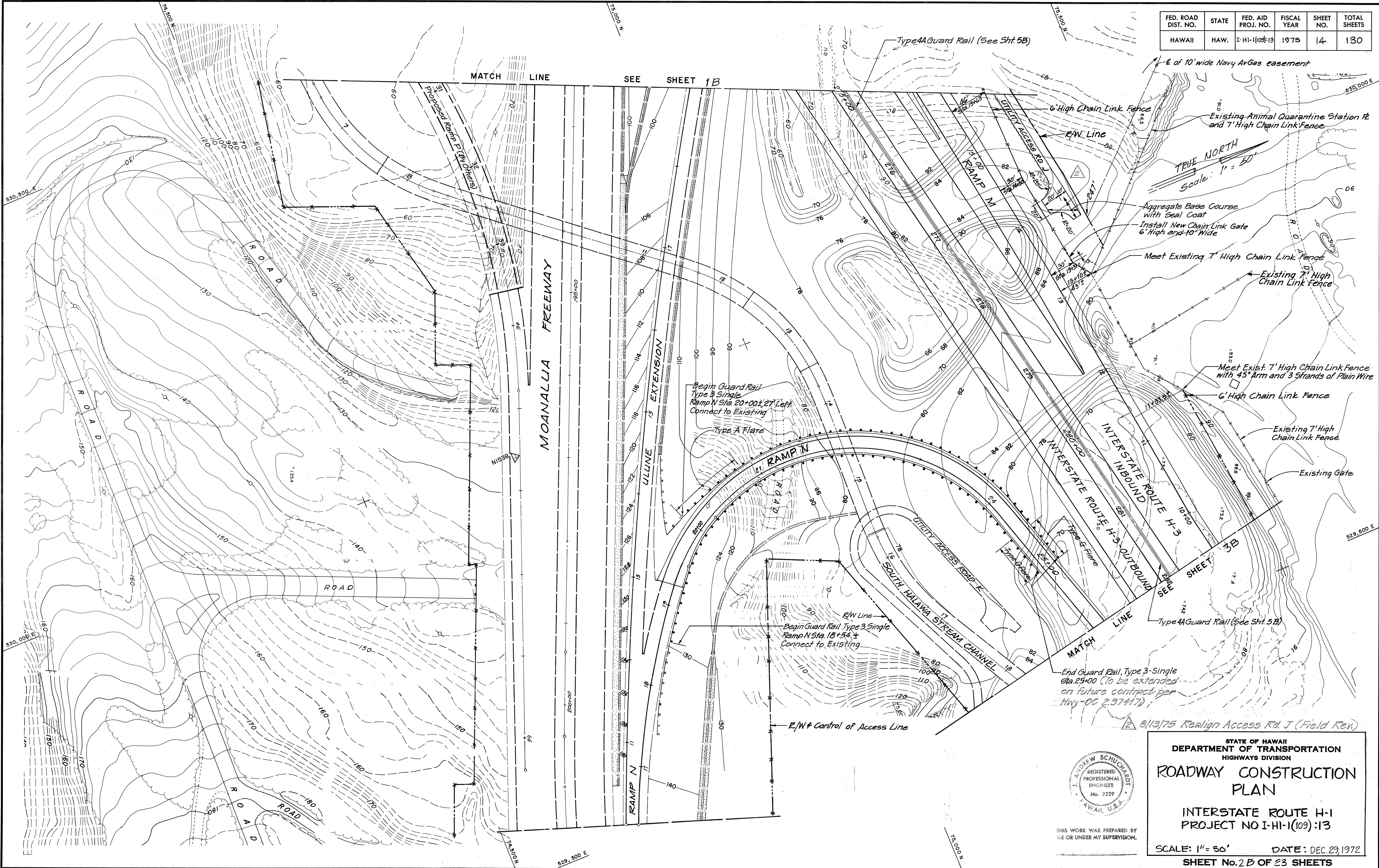
INTERSTATE ROUTE H-1
PROJECT NO. I-H-1(109):13

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

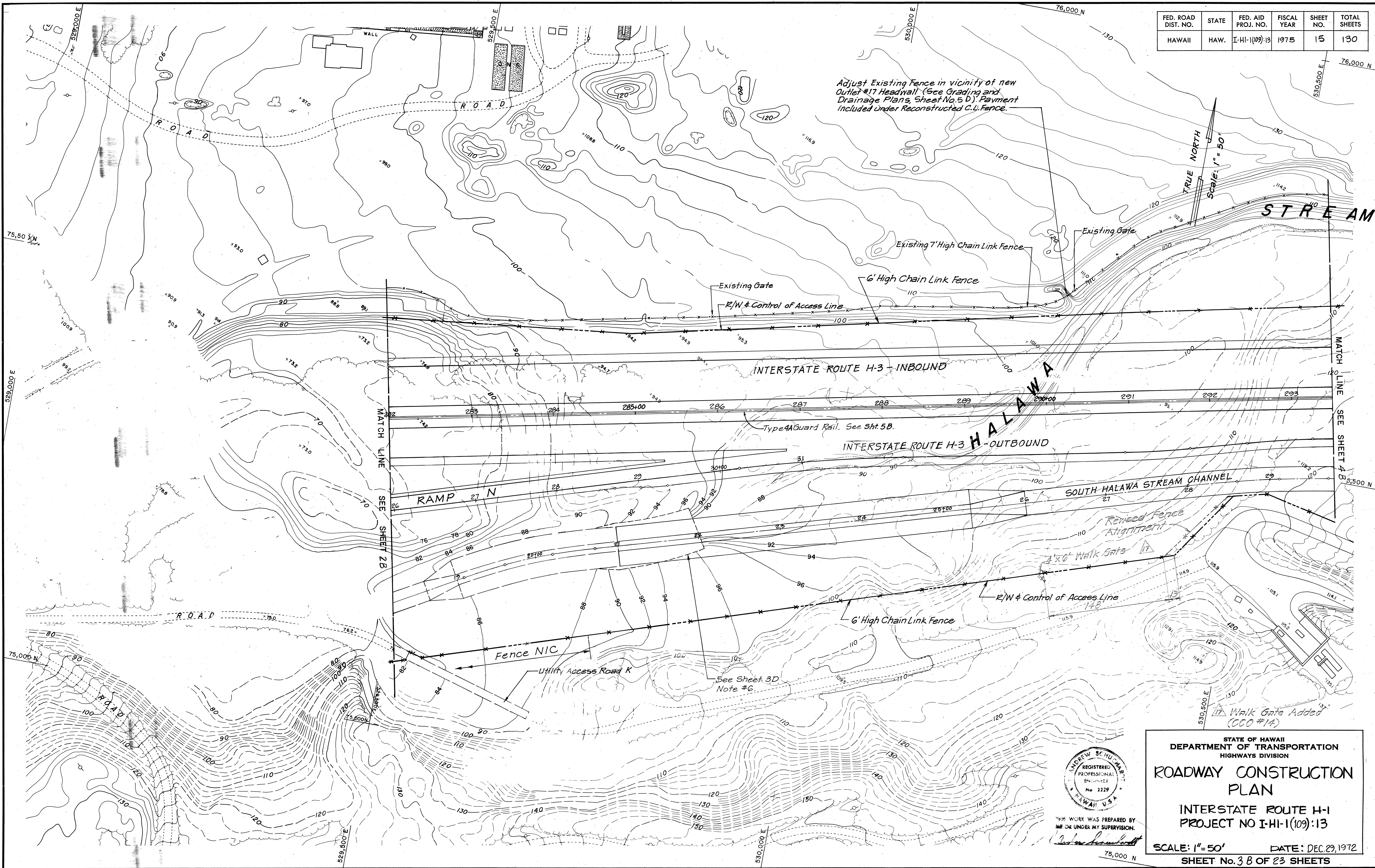
SHEET No. 1B OF 23 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(109):13	1975	14	130

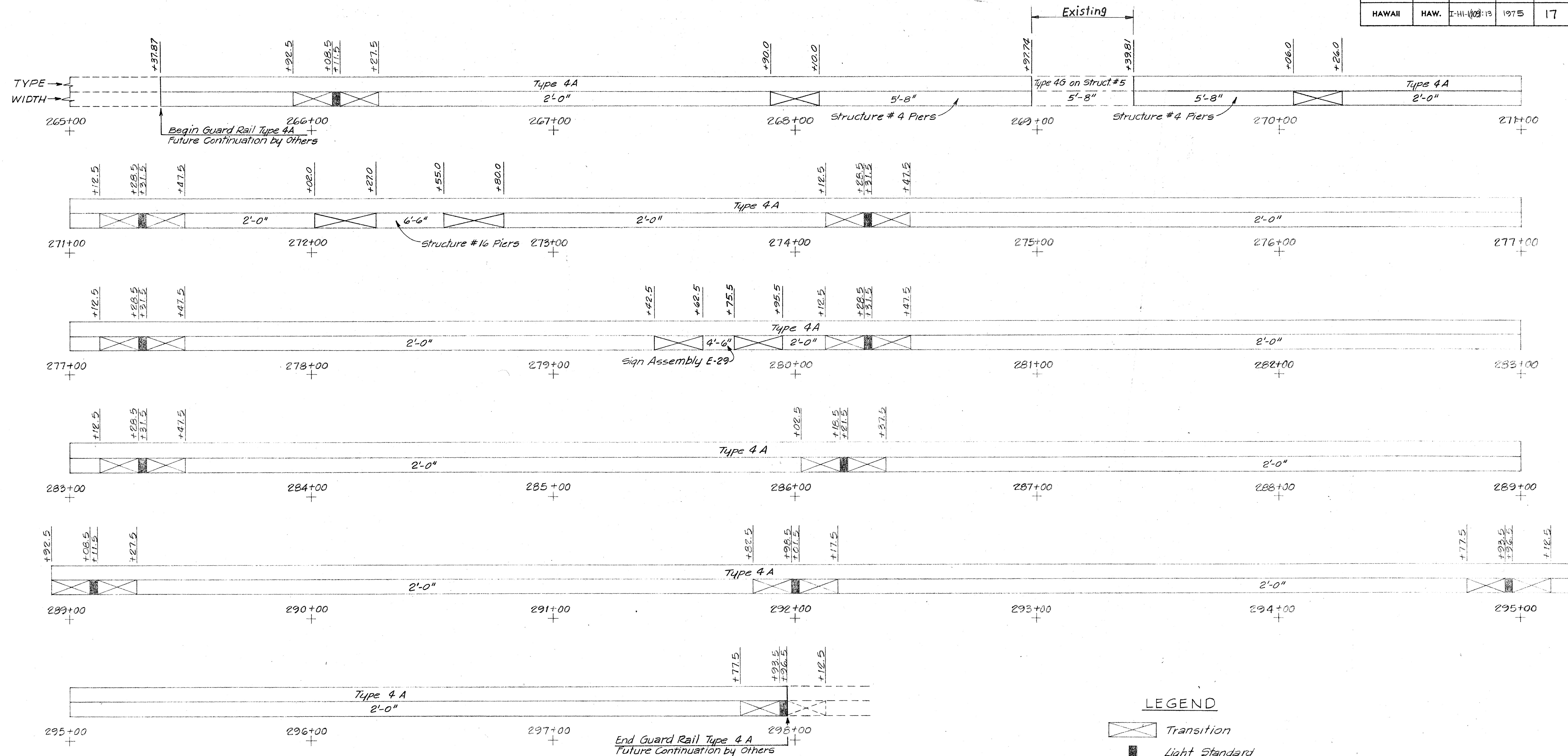
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	CHECKED BY	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(109):13	1975	15	130



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(109):13	1975	17	130



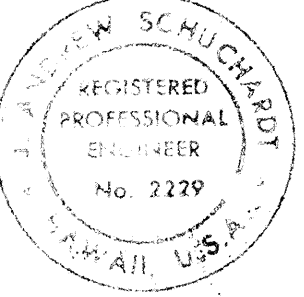
INTERSTATE ROUTE H-3 STATIONING

- NOTES:**
- Guard Rail Type 4A, is to be paid on a linear foot basis, including transitions and widened sections around bridge piers and overhead sign support structures.
 - The three (3) foot widened section of Rigid Barrier around a lighting standard is to be included in the cost of the lighting standard mounting. See Highway Lighting Details.
 - Place Headlight Glare Screen on top of Guard Rail Type 4A along 4-3. See Sheet 23B for details. (NIC) Add. No. 1
 - See Sheet 8B for widened sections of Rigid Barriers at piers.
 - See Signing Plans, Sheet 15T and Highway Lighting Plans, Sheet 8E, for Rigid Barrier Details at Sign Foundations and Lighting Standard Foundations.

LEGEND

Transition

Light Standard



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS ROADWAY DETAILS

RIGID BARRIER VARIATIONS

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

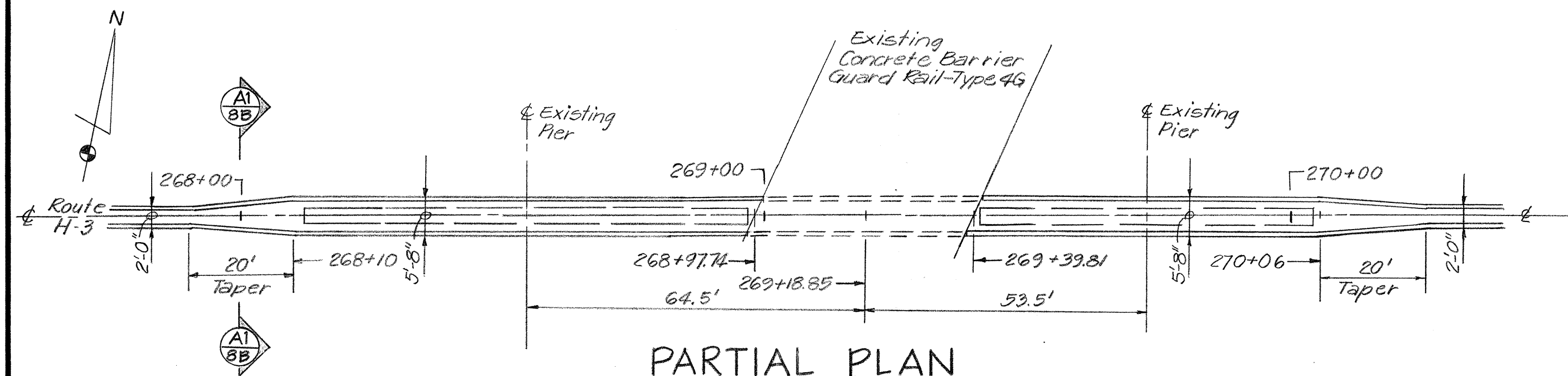
NOT TO SCALE DATE: DEC. 29, 1972

SHEET No. 5B OF 23 SHEETS

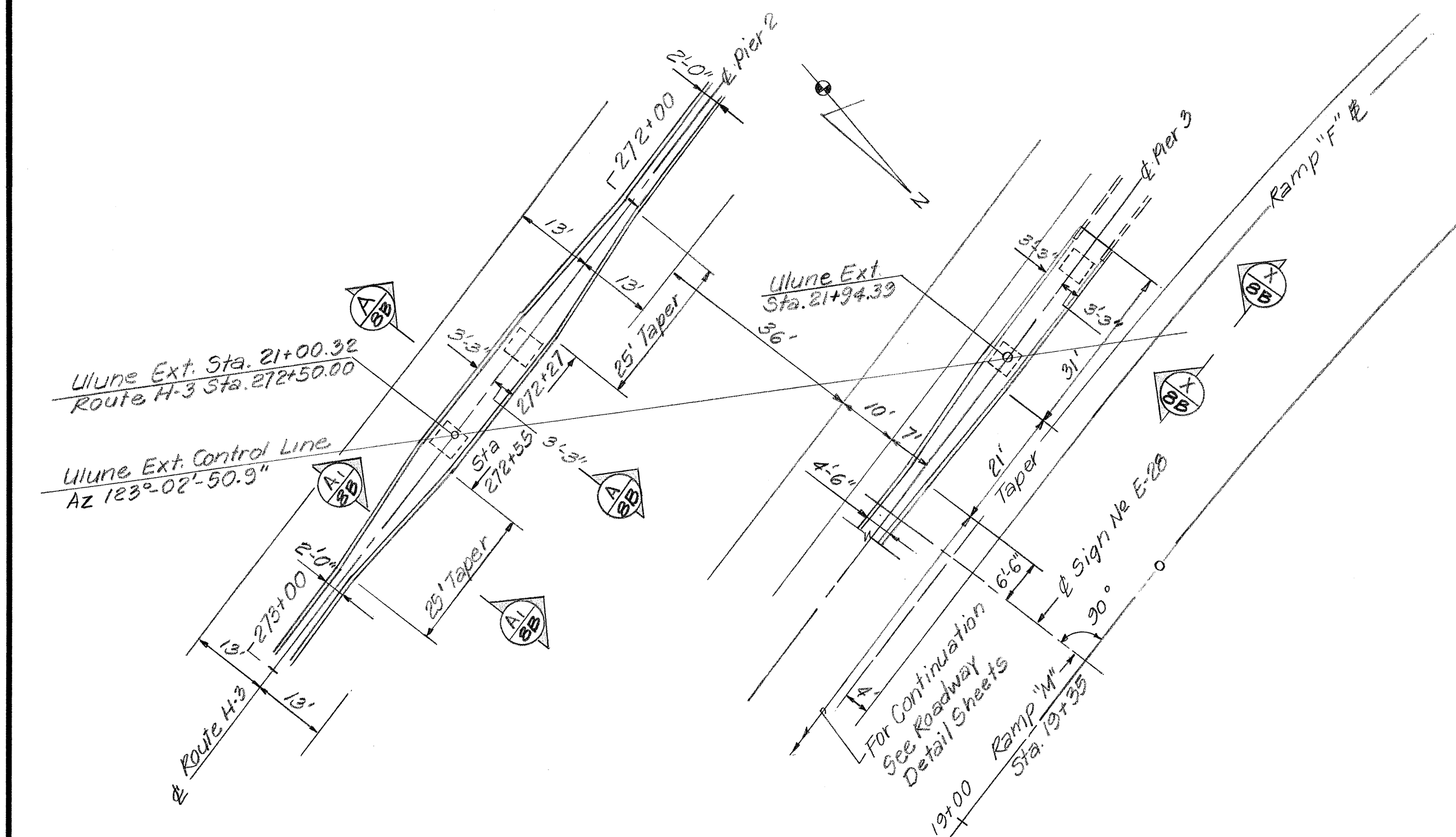
21 Delete Backup Block For Cushion Barrier (CCO#22)

11/14/75 Concrete Fill in Lieu of Agg. (Field Rev)

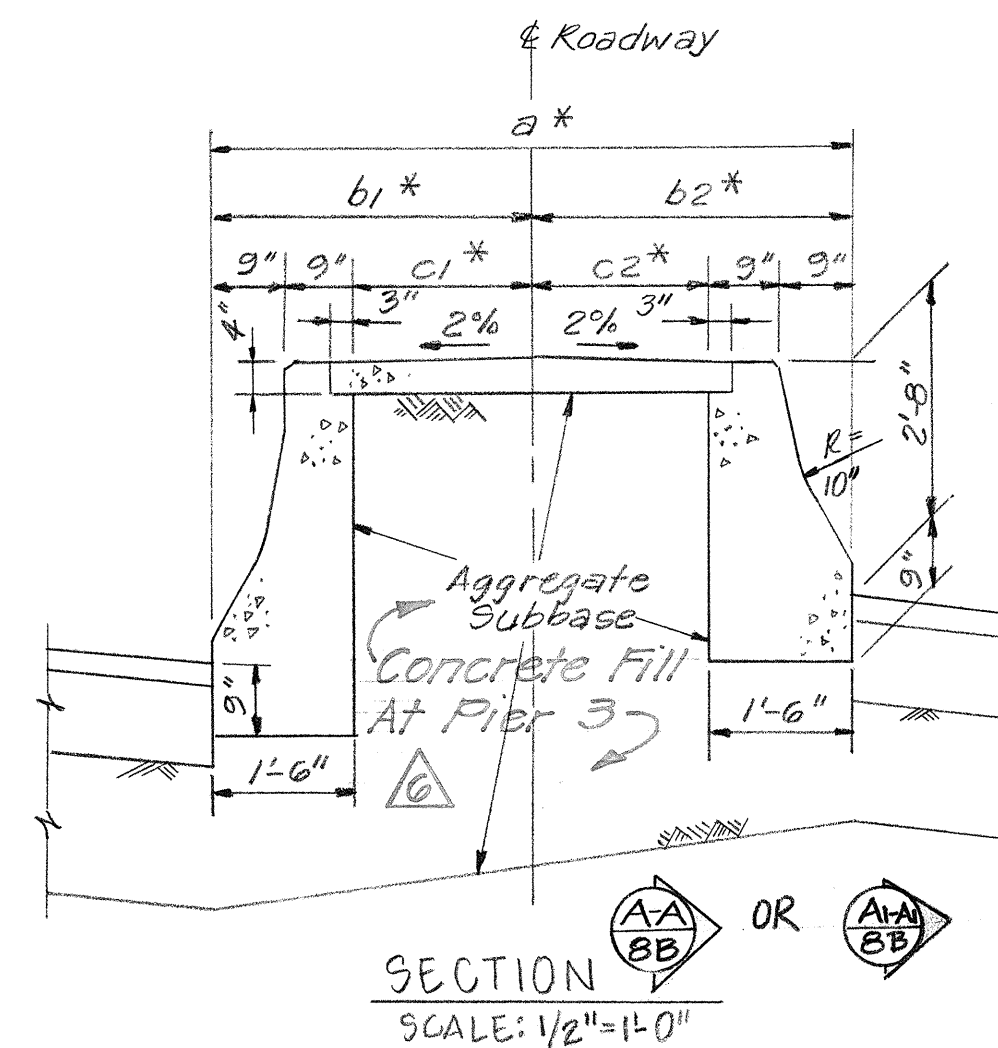
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(109):13	1975	20	130



PARTIAL PLAN
RIGID BARRIER AT H-3
SCALE: 1"=20'-0"

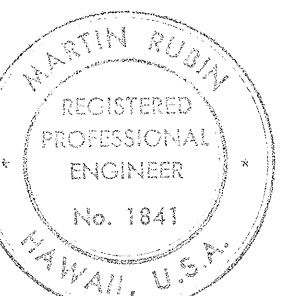
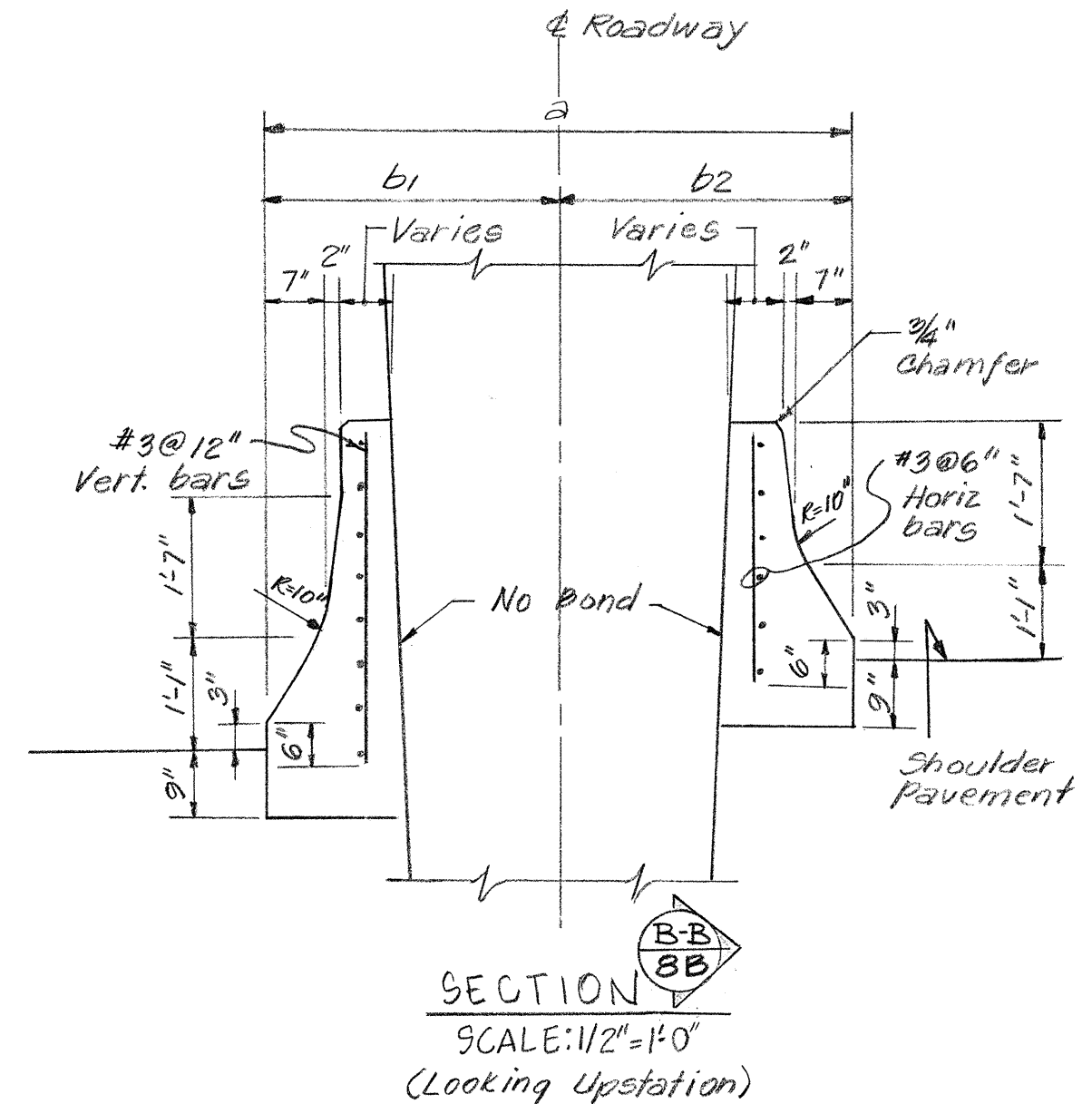


PARTIAL PLAN
RIGID BARRIER AT H-3 & RAMP M
SCALE: 1"=20'-0"

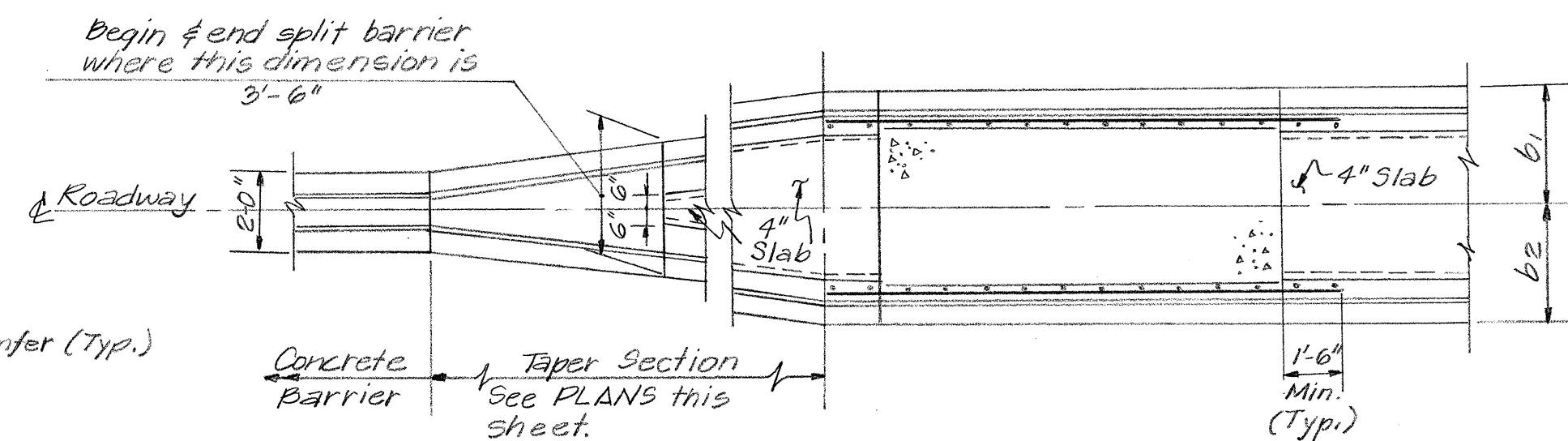


Shown for super-elevated section.
For normal section right-hand dimensions
are symmetrical about centerline.
* Section 'A1-A1' similar except width
dimensions vary. For additional barrier
dimensions see Section B-B.

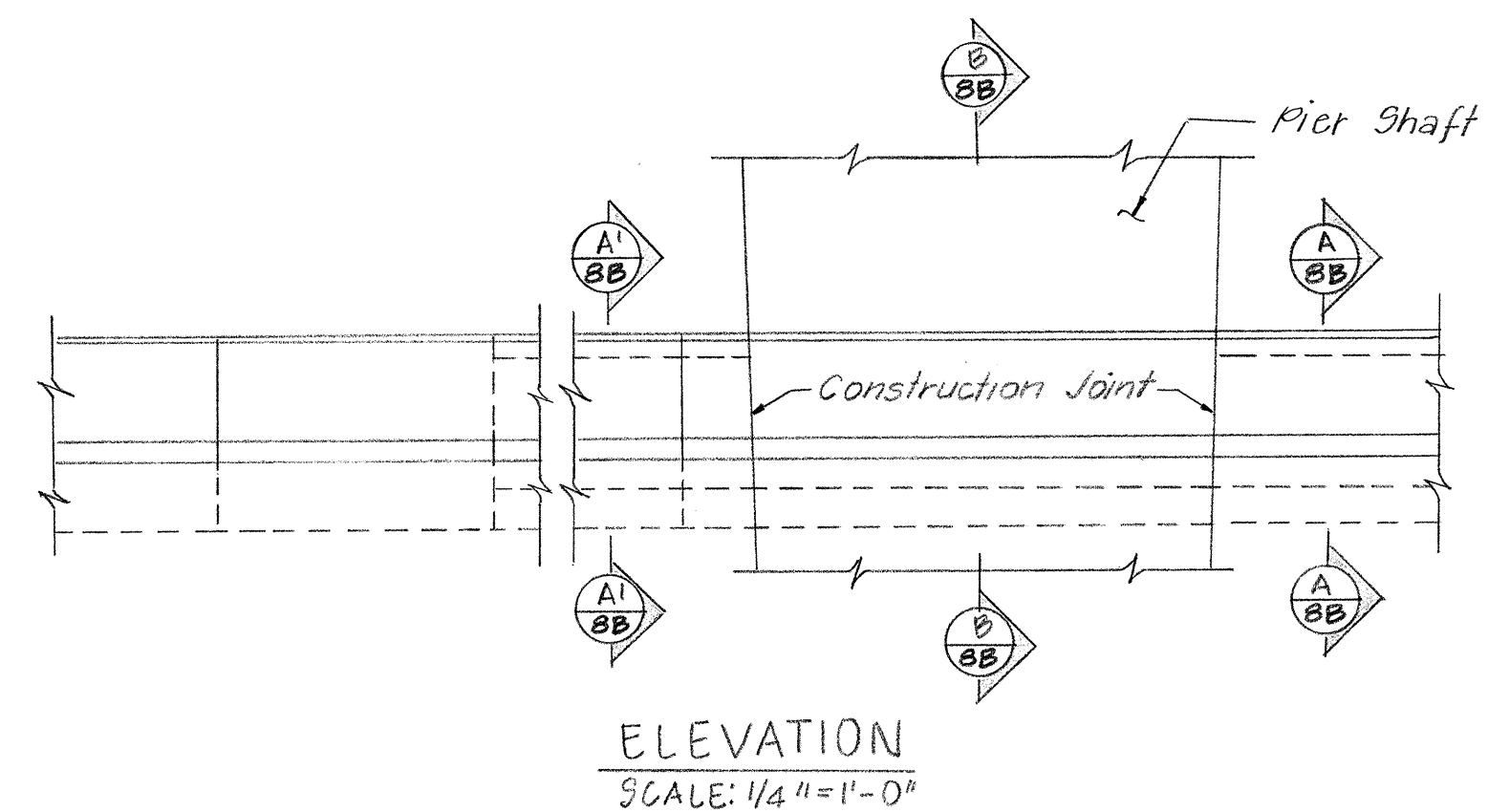
TABLE OF APPLIED DIMENSIONS					
LOCATION	a	b ₁	b ₂	C ₁	C ₂
Structure No. 4	5'-8"	2'-10"	2'-10"	1'-4"	1'-4"
Struct. No. 16	Pier 2	6'-6"	3'-3"	3'-3"	1'-9"
	Pier 3	6'-6"	3'-3"	3'-3"	1'-9"



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



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



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

- NOTES:
1. Median barrier reinforcement, concrete and all work required for installation are not bridge items.
 2. For location and details of electrical conduits in pier shafts and concrete barriers see Electrical Plans.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RIGID BARRIER DETAILS
PIER PROTECTION

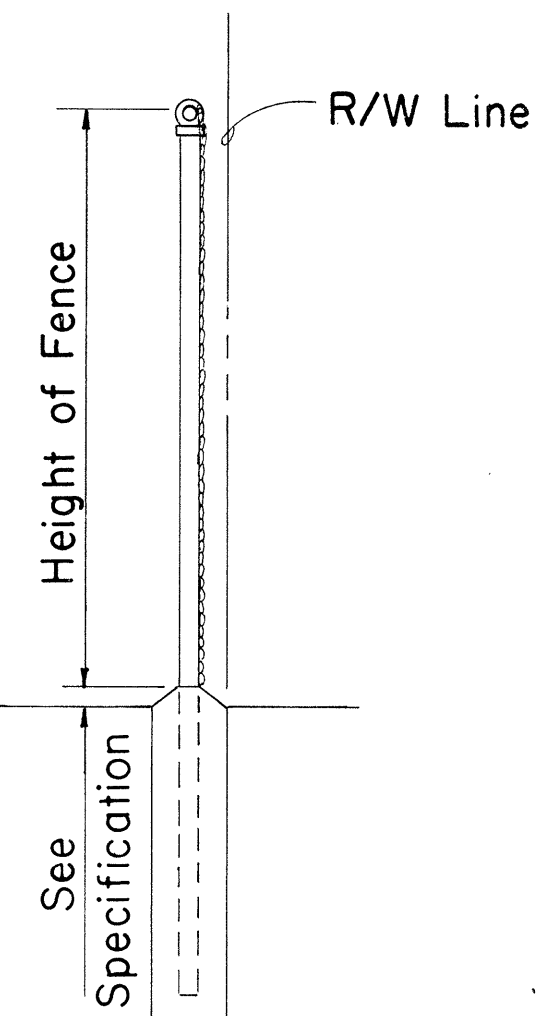
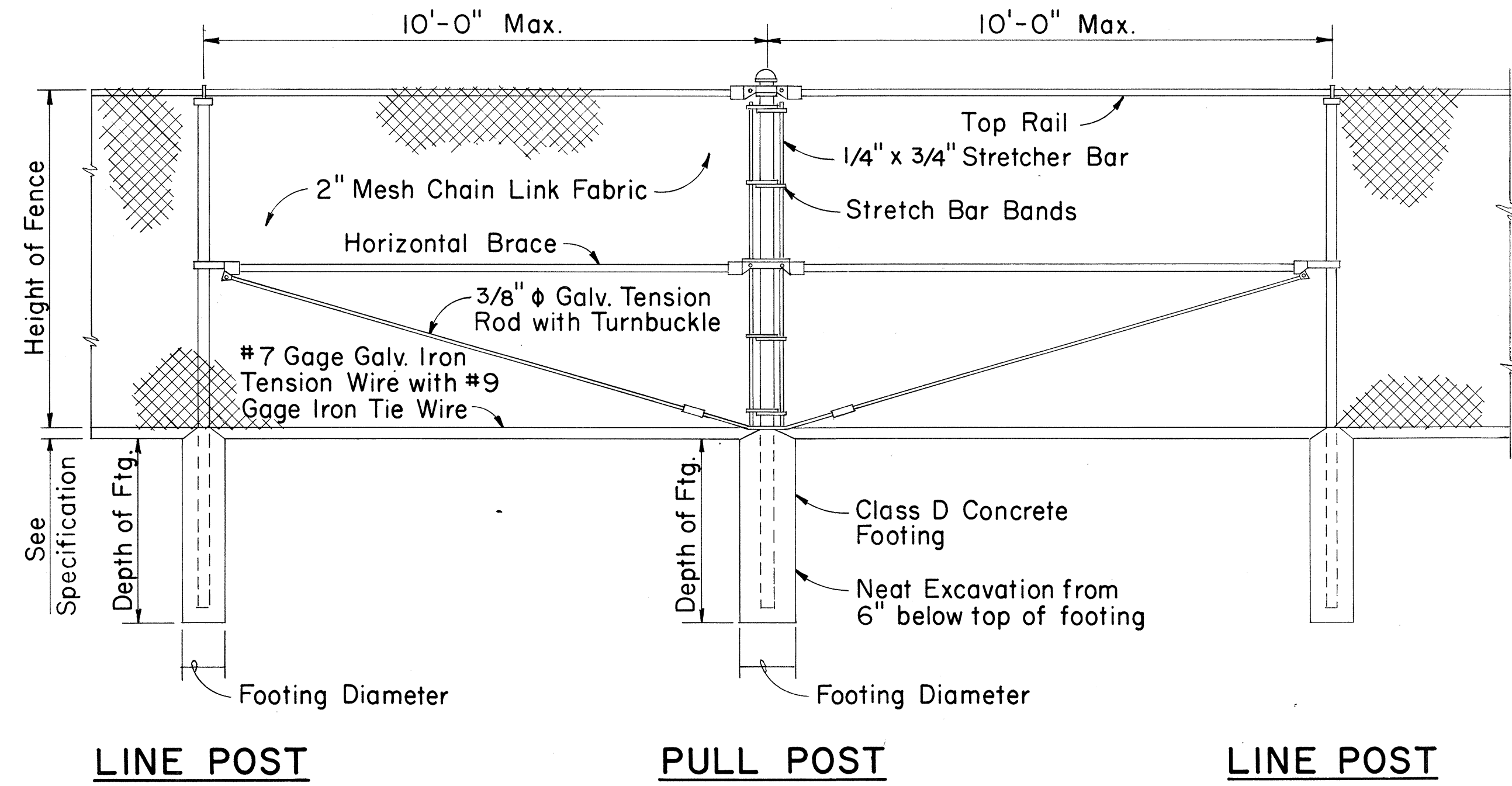
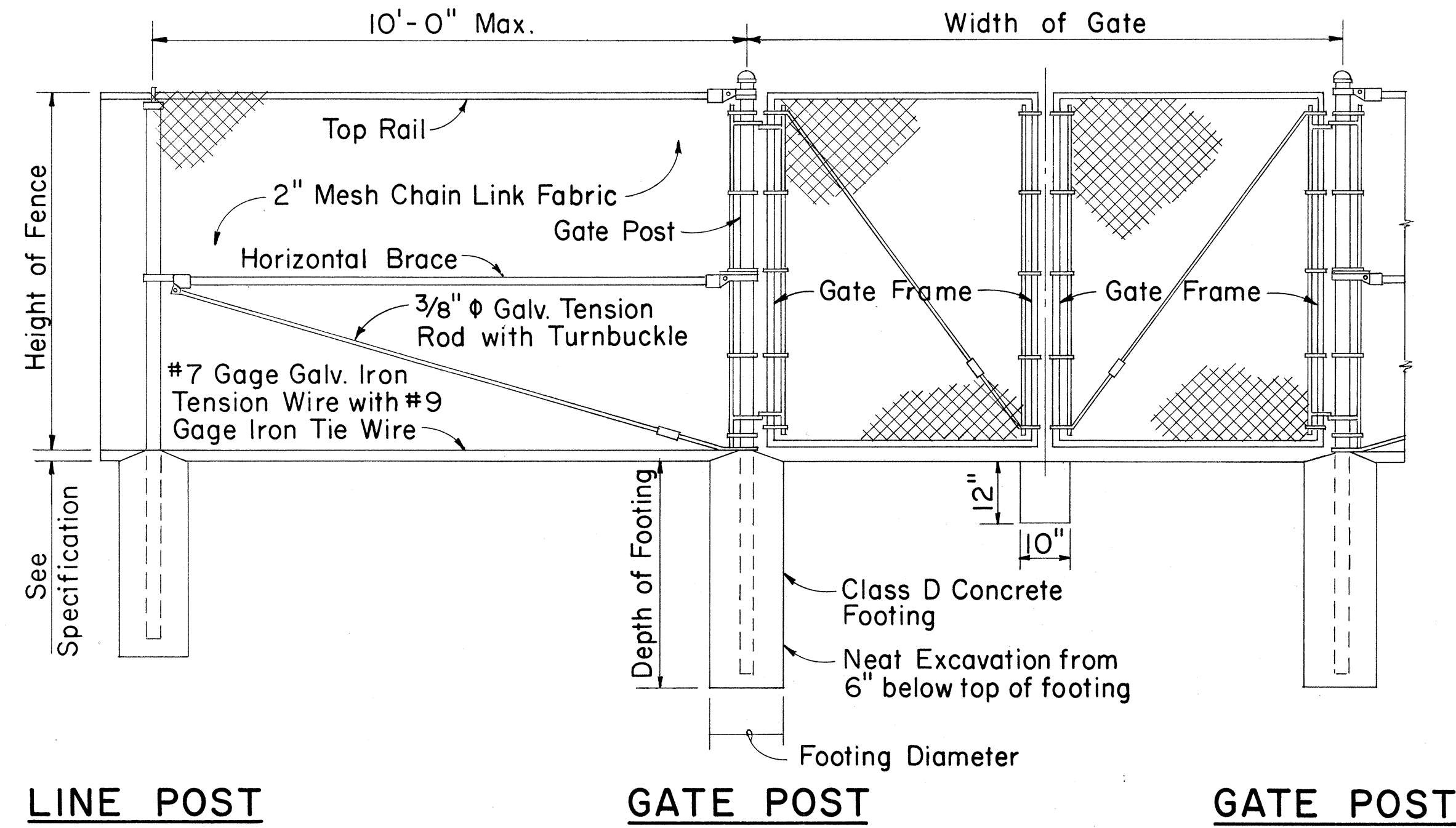
INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1(109):13

SCALE: AS SHOWN DATE: DEC. 29, 1972

SHEET No. 8 B OF 23 SHEETS

DATE	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
NOTED BY	
NO.	

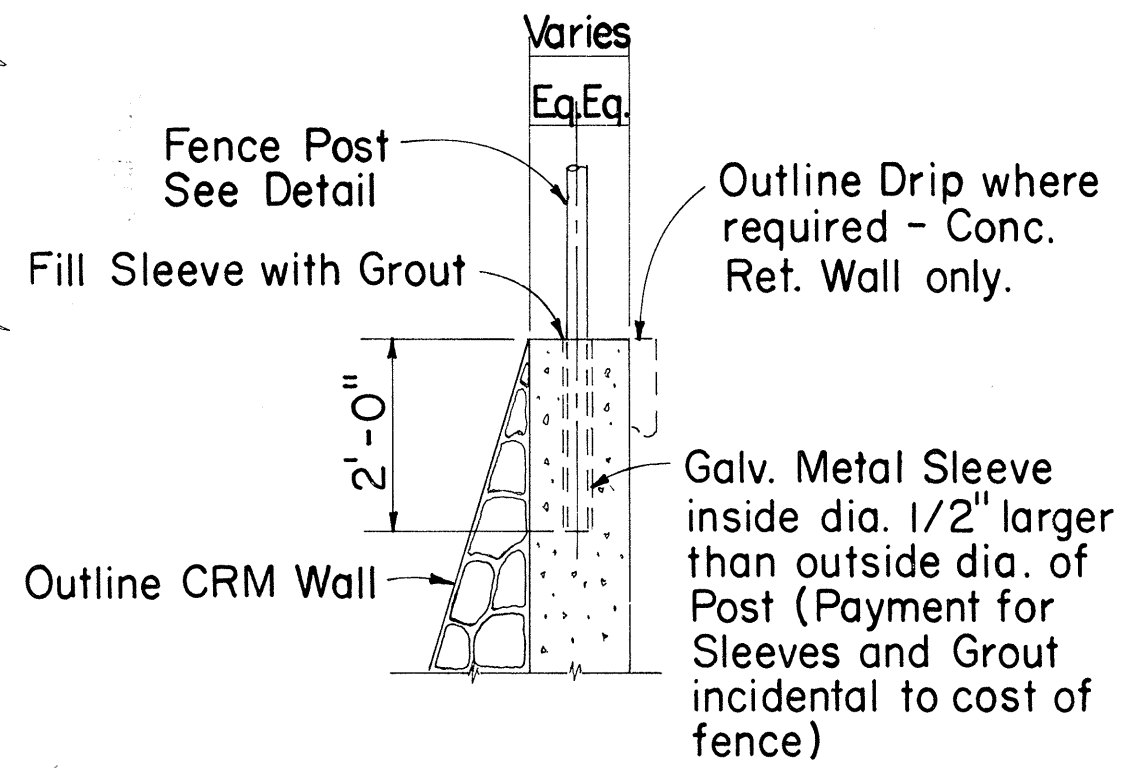
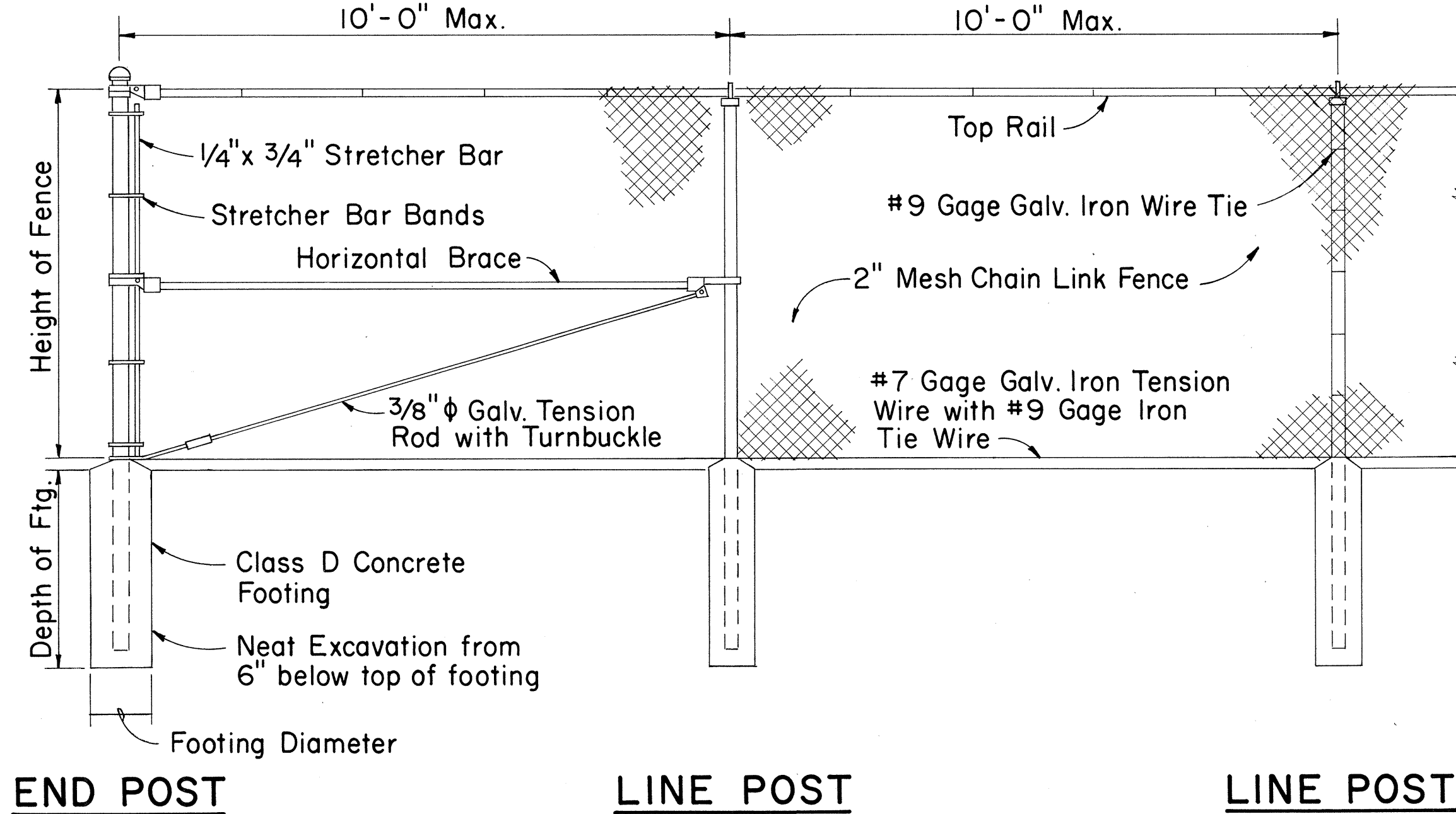
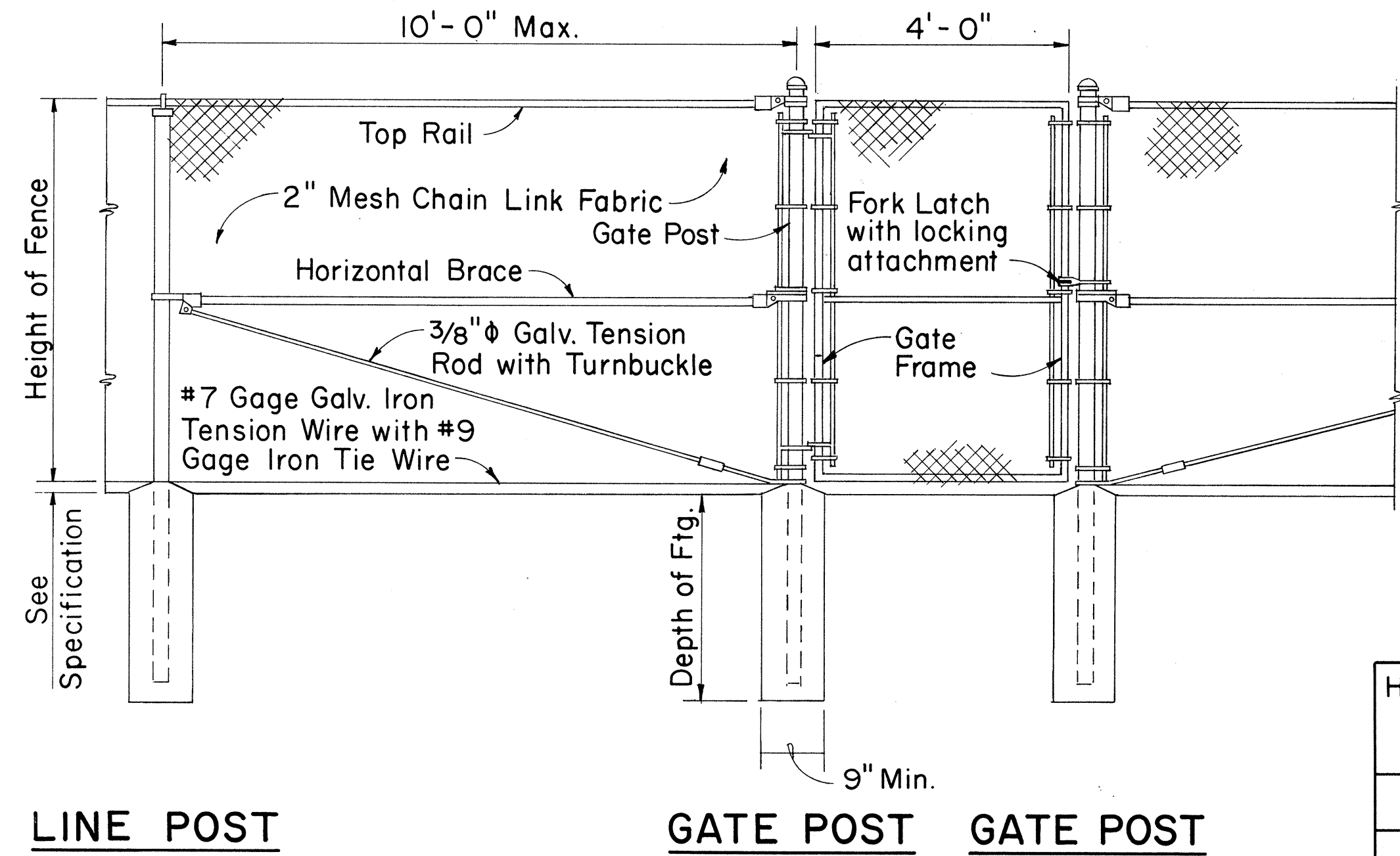
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(102)13	1975	21	130



TYPICAL SECTION
(WITH CONCRETE FOOTING)

DETAIL OF CHAIN LINK GATE

- 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.



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:
HIGHWAY DESIGN ENGINEER
DATE 12-4-69

APPROVED:
ASSISTANT CHIEF, ENGINEERING
DATE 12-10-69

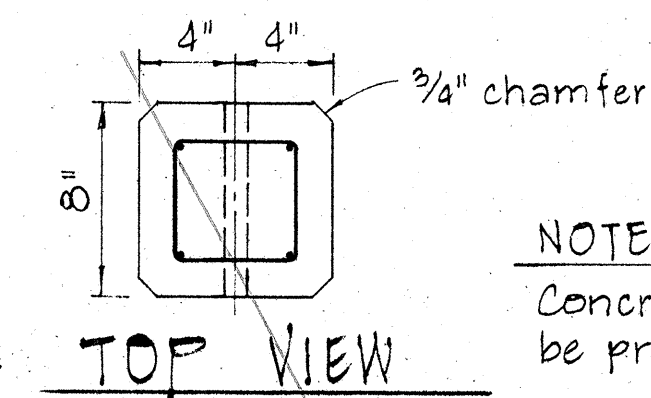
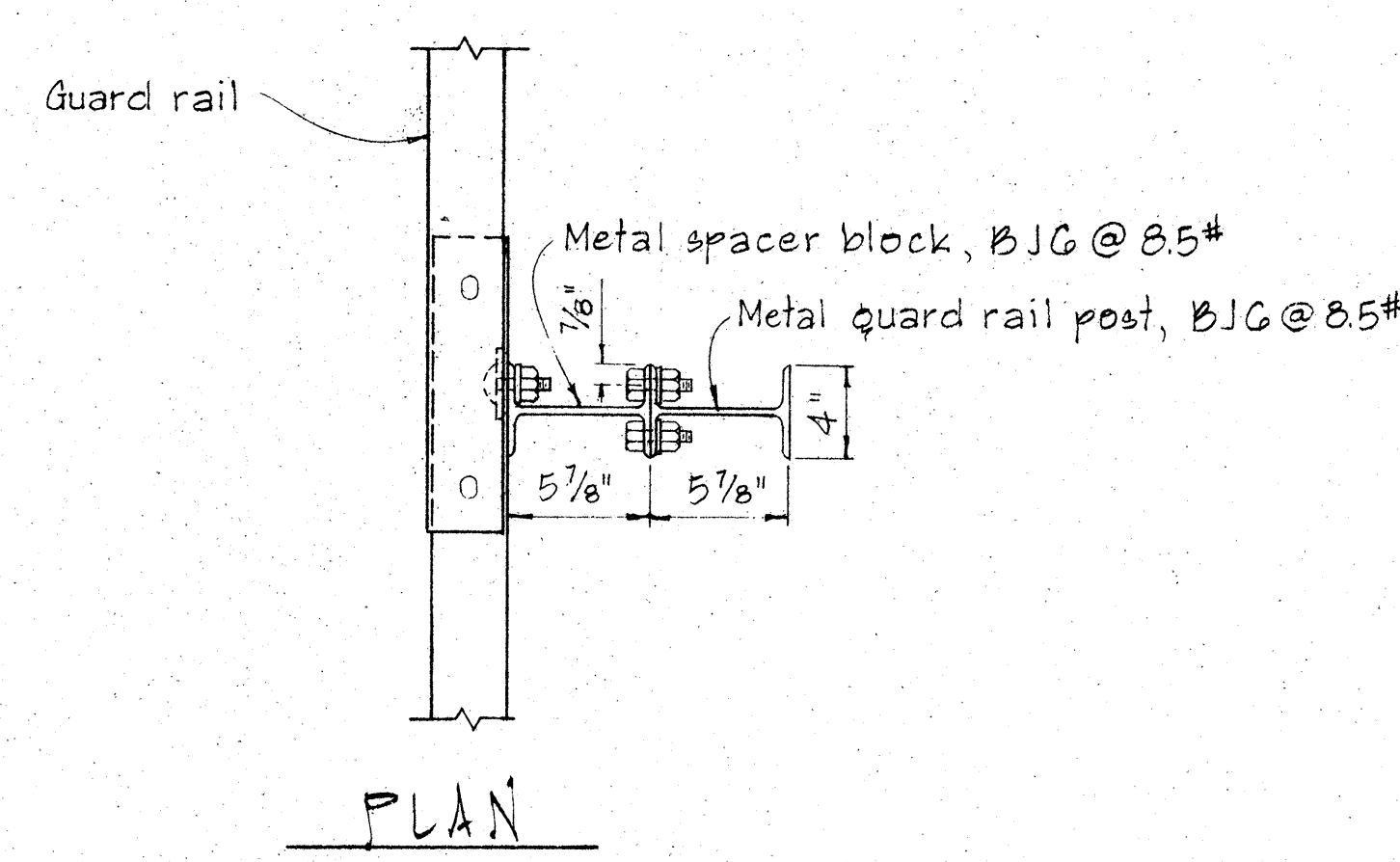
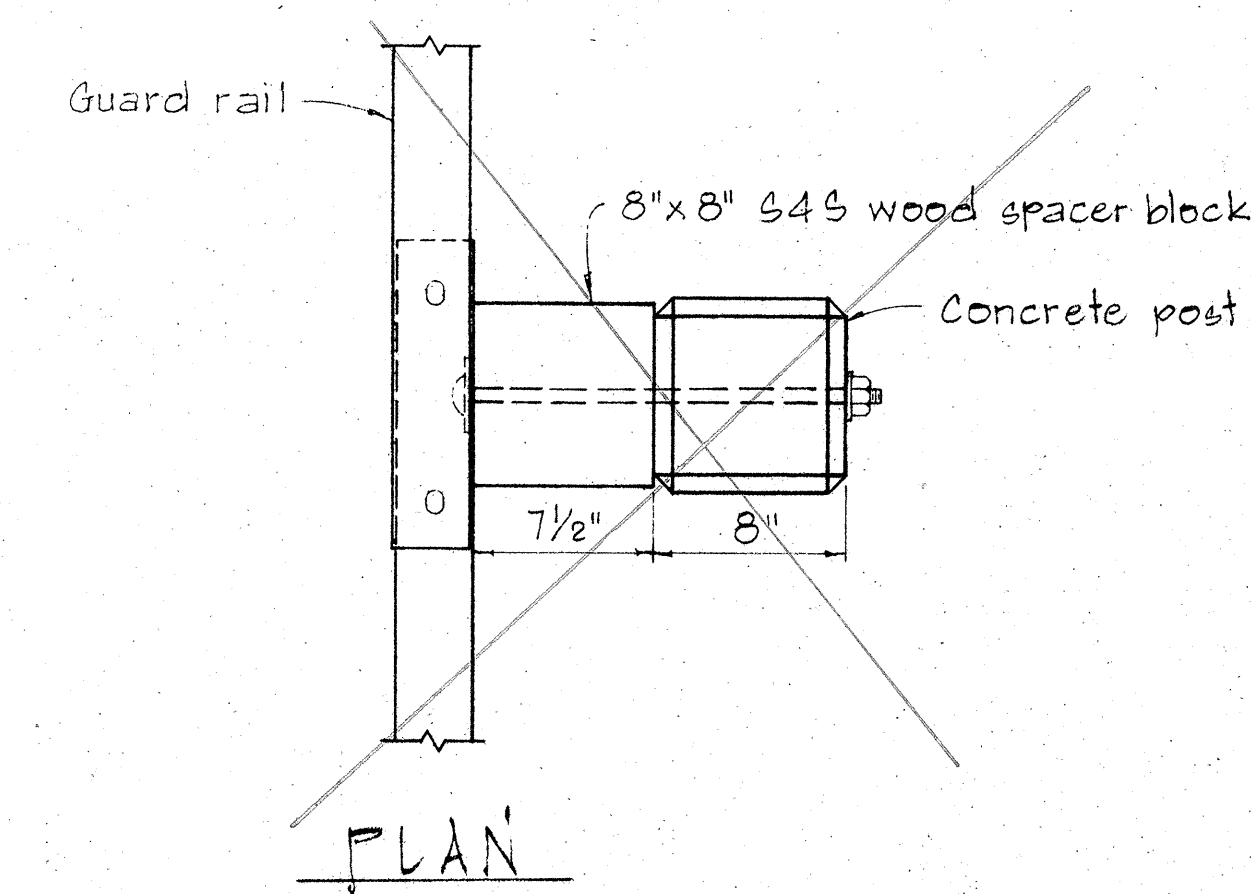
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

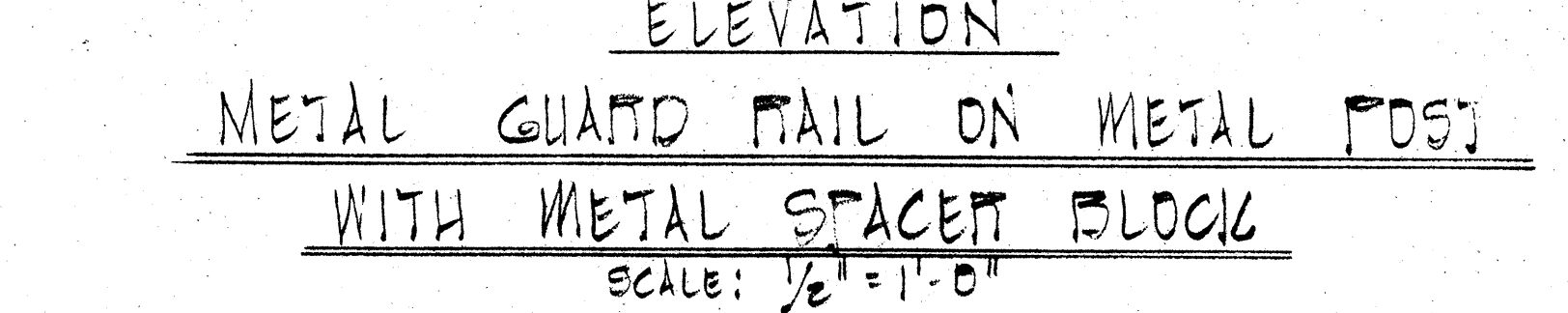
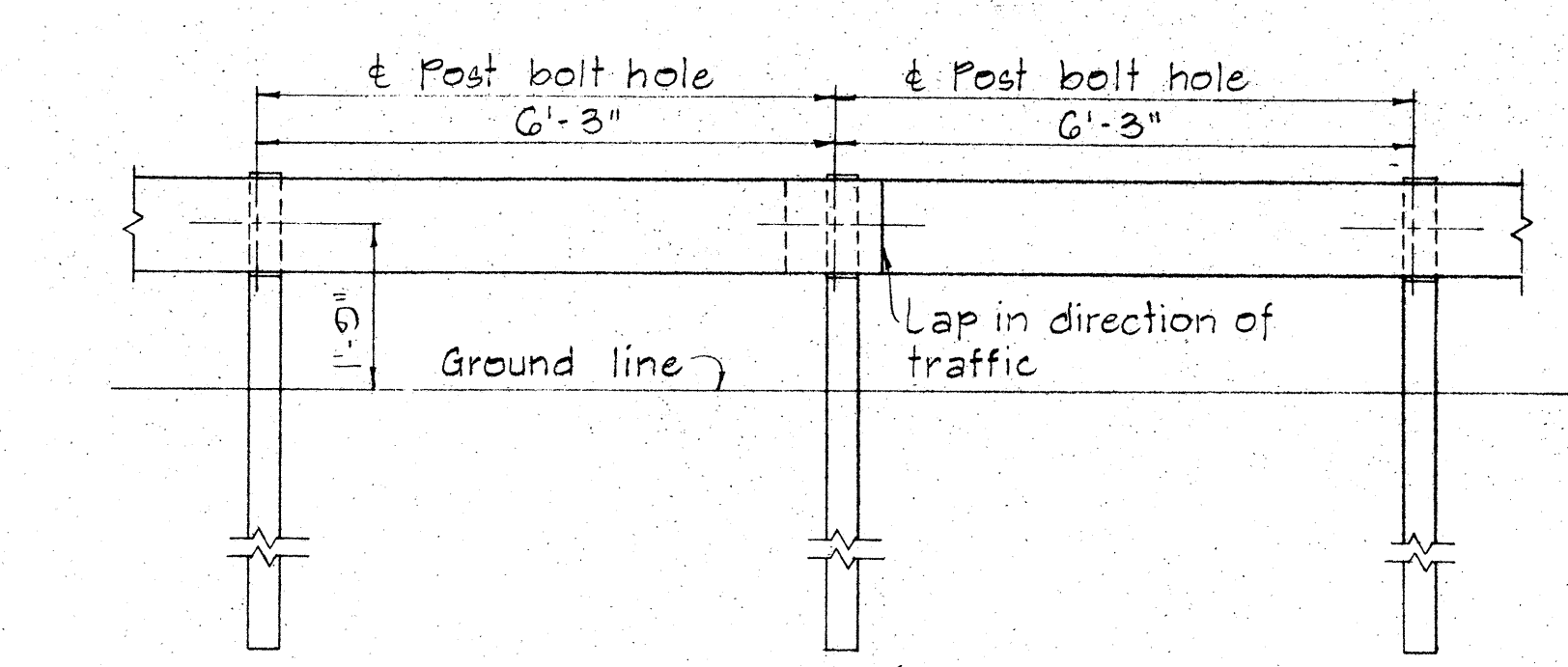
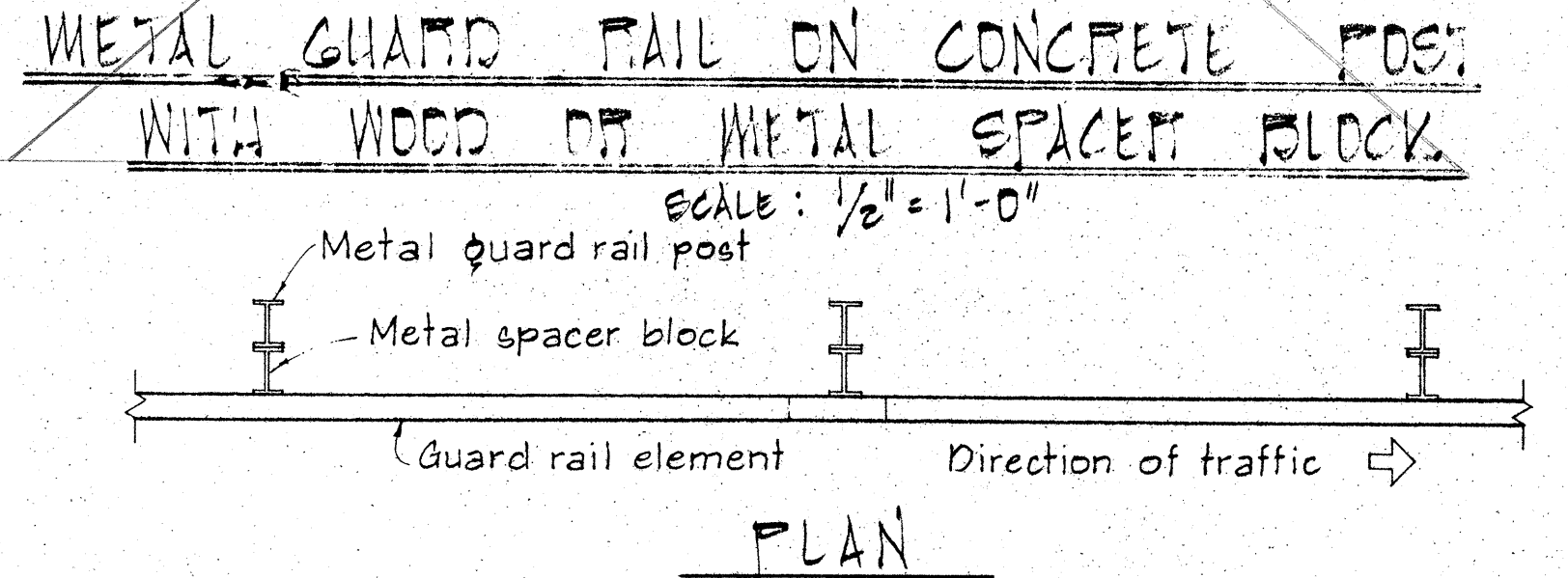
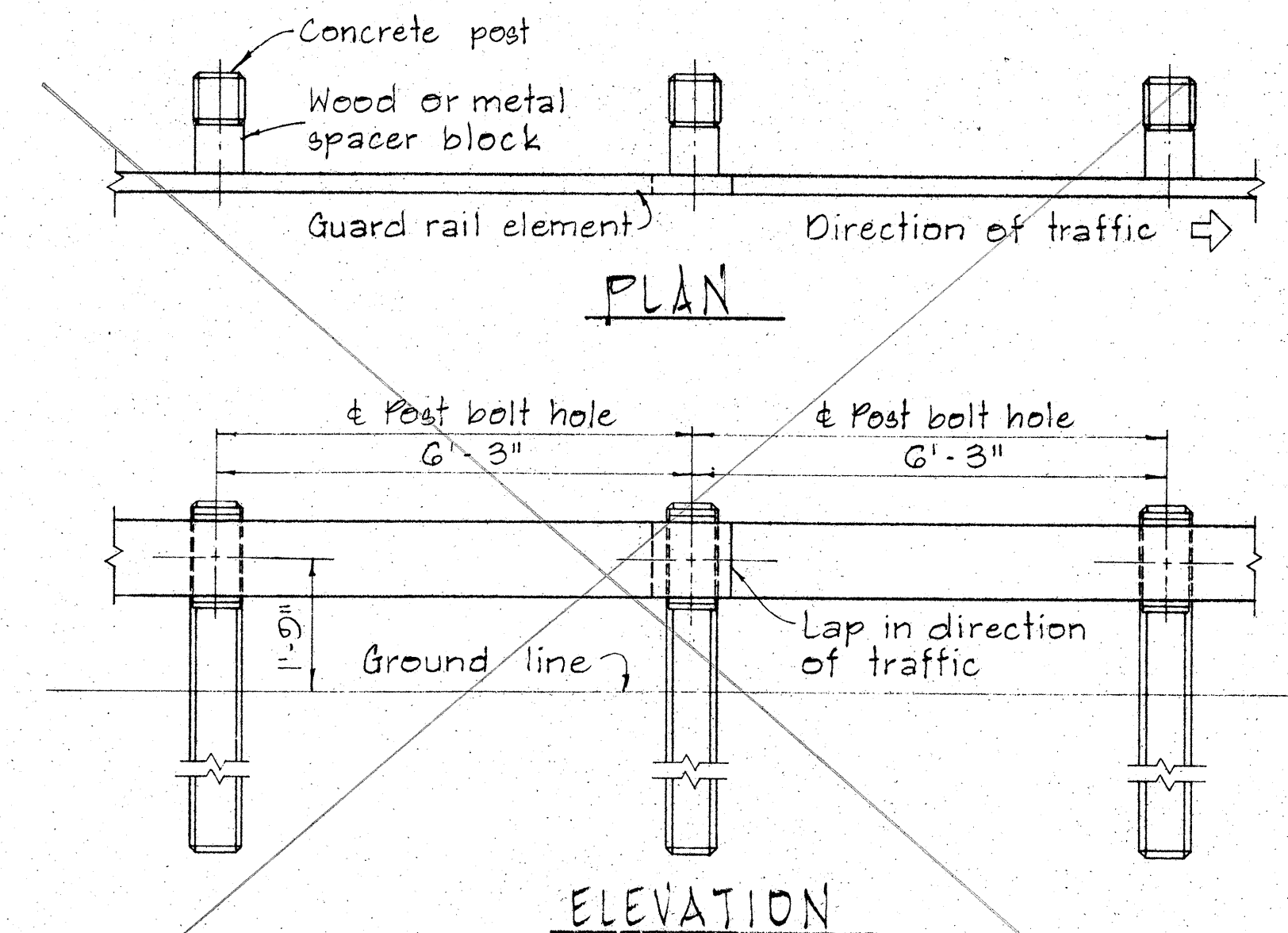
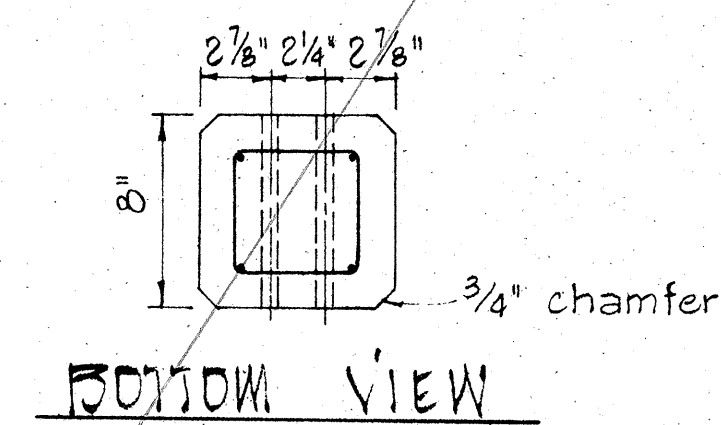
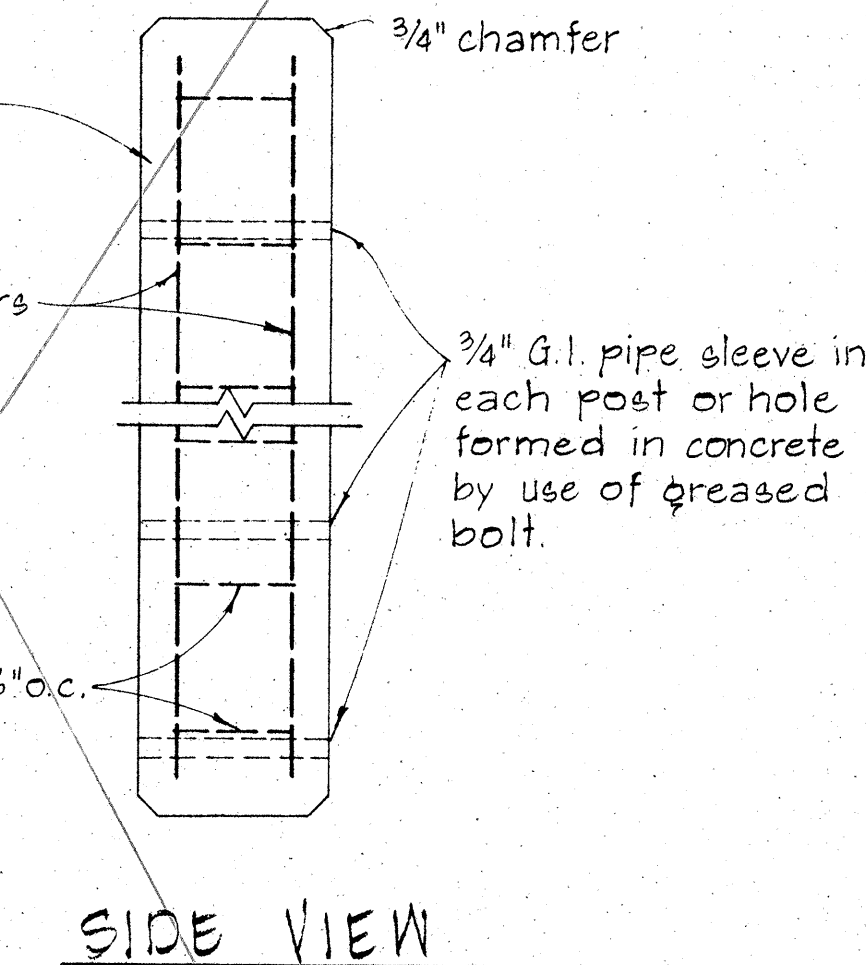
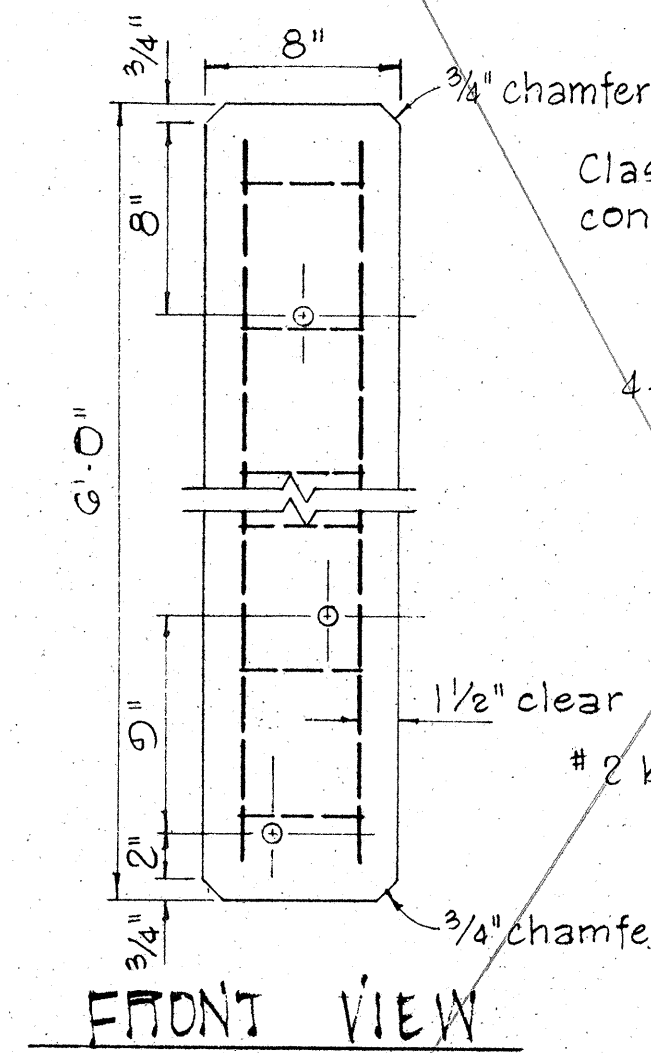
STANDARD DETAILS
CHAIN LINK FENCE
(WITH TOPRAIL)

Scale: 1/2" = 1'-0" Date: Dec. 29 1972

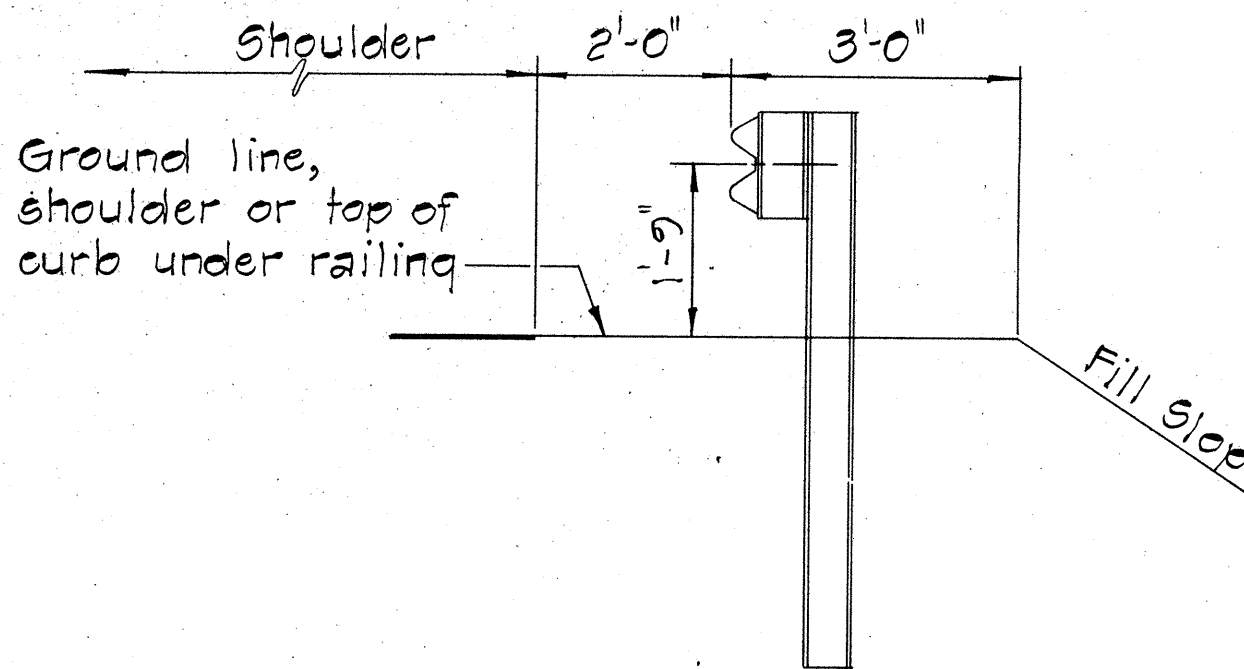
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(100)-13	1975	22	130



NOTE:
Concrete post shall be precast



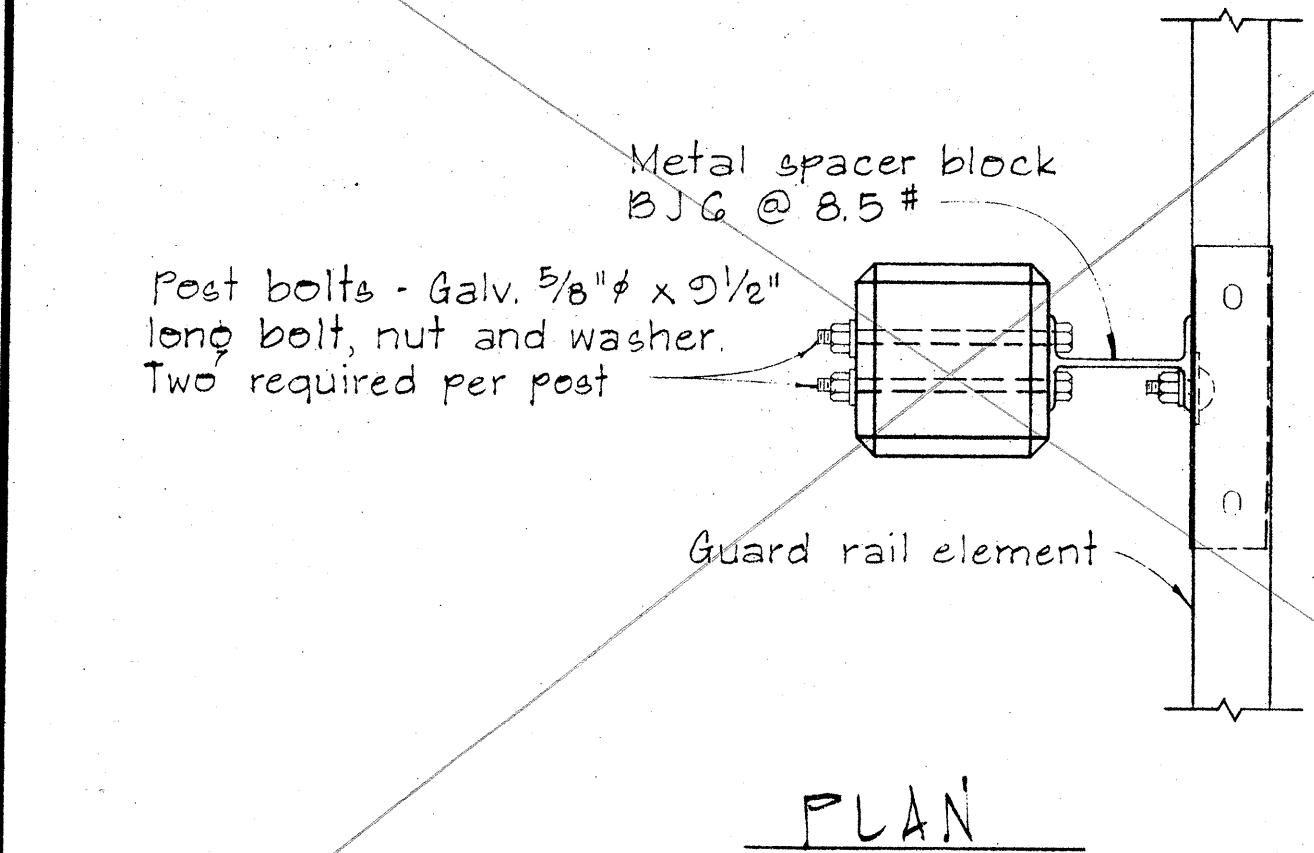
SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"



AT SHOULDER SECTION

TYPICAL METAL GUARD RAIL DETAIL

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"

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

APPROVED:
Shelton J. Nelson
ASSISTANT CHIEF, ENGINEERING
12-30-62
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

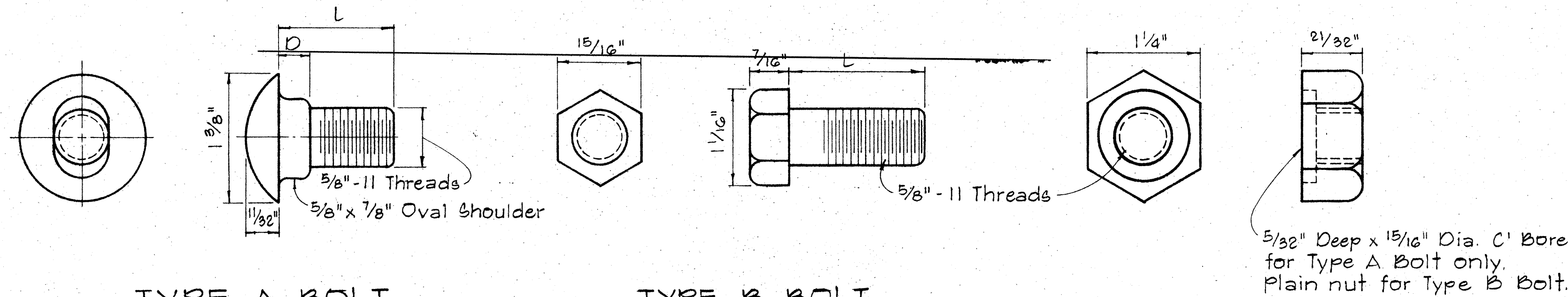
STANDARD DETAILS
METAL GUARD RAIL

SCALE: AS SHOWN
NOV 1968

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

BOLT DIMENSIONS		
TYPE B BOLT		
Post Bolt for Conc. Post w/ Metal Blocks	5/16"	
Post Bolt for Metal Post w/ Metal Block	1 3/4"	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(100)13	1975	23	130



TYPE A BOLT

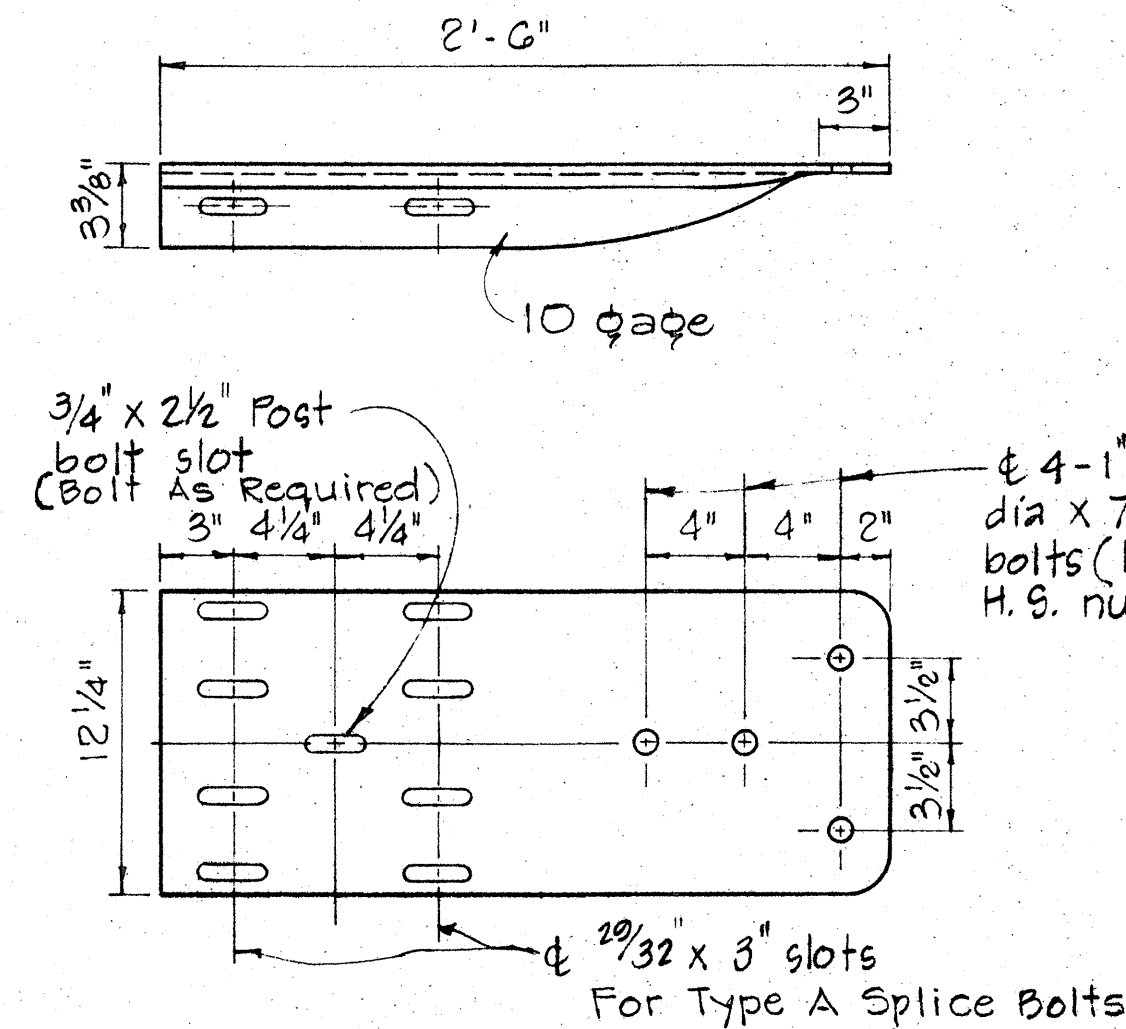
TYPE B BOLT

HEXAGON NUT

SPUCE RAIL AND POST BOLTS

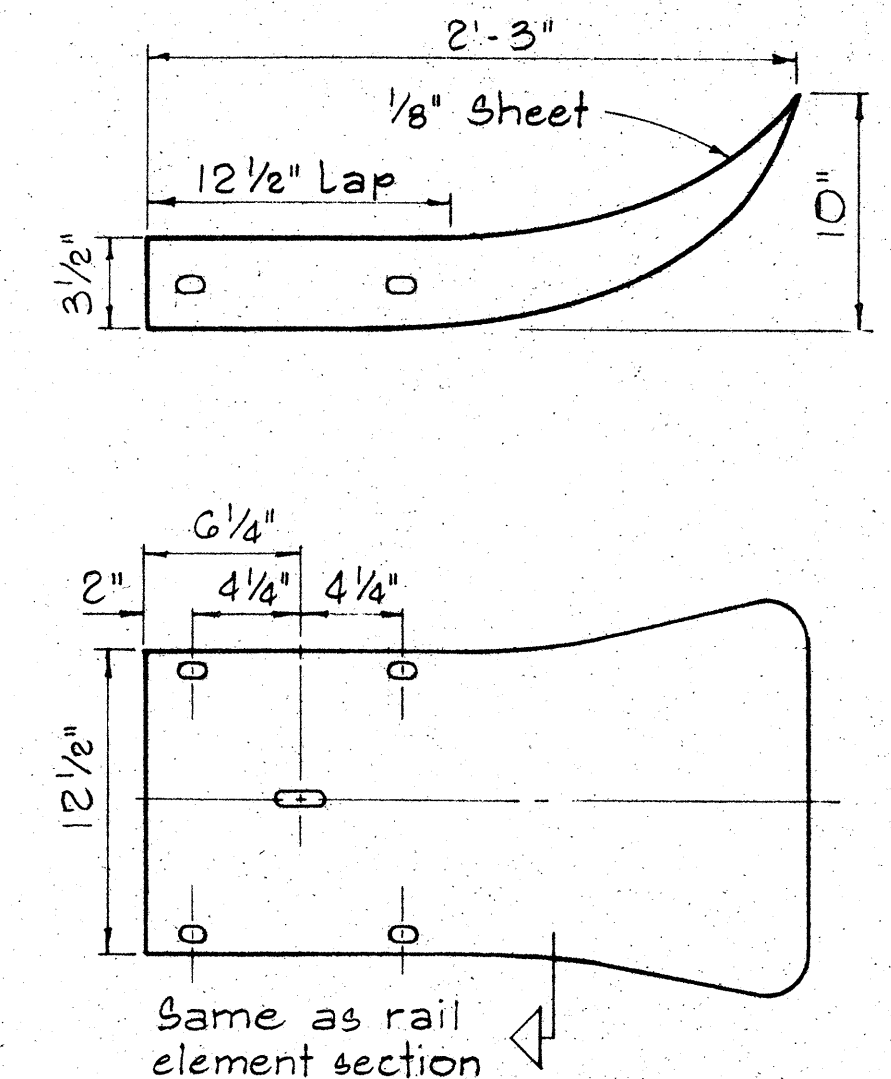
Scale: Full Size

Scale: Full Size



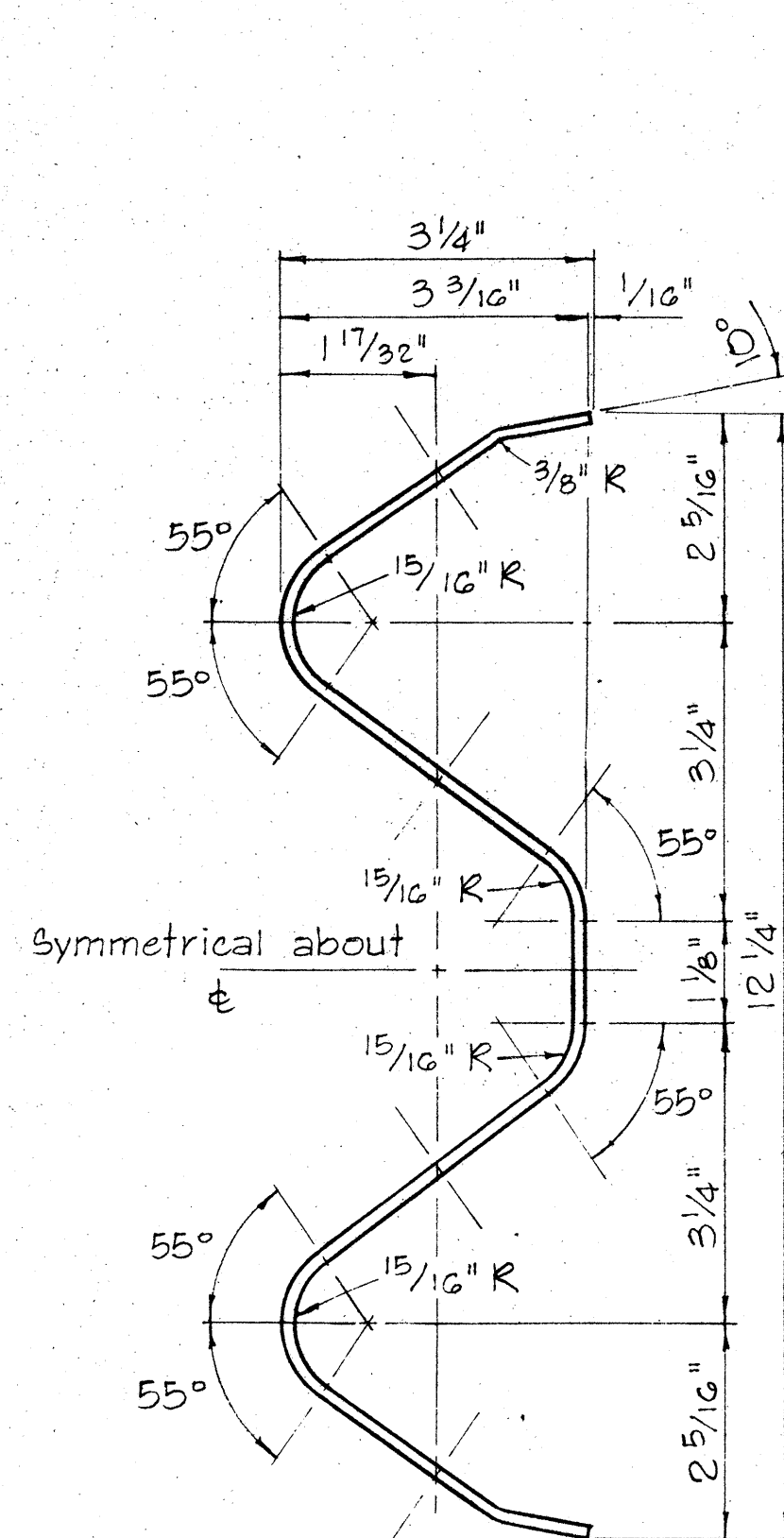
SPECIAL END SHOE

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



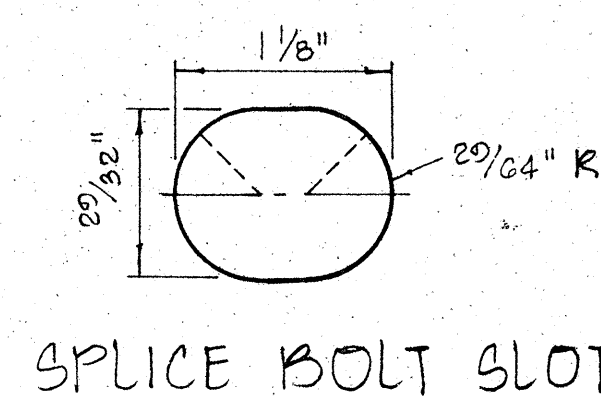
FLARED END

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



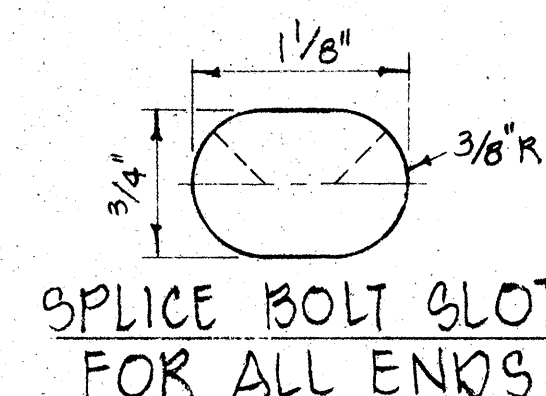
RAIL ELEMENT SECTION

Scale: 6\" = 1'-0"

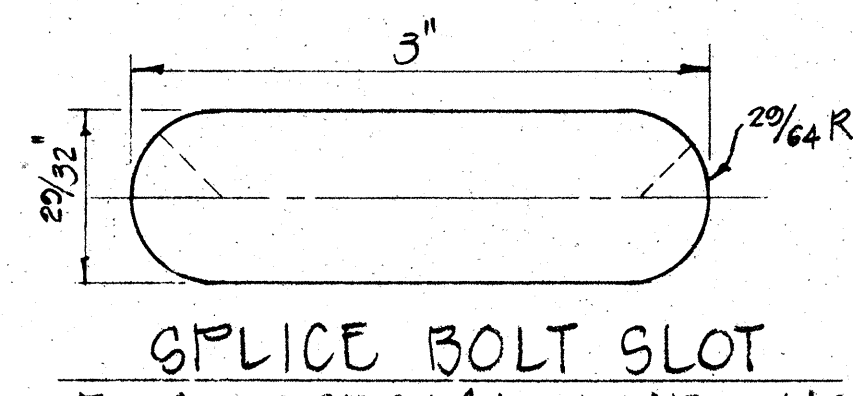


SPUCE BOLT SLOT

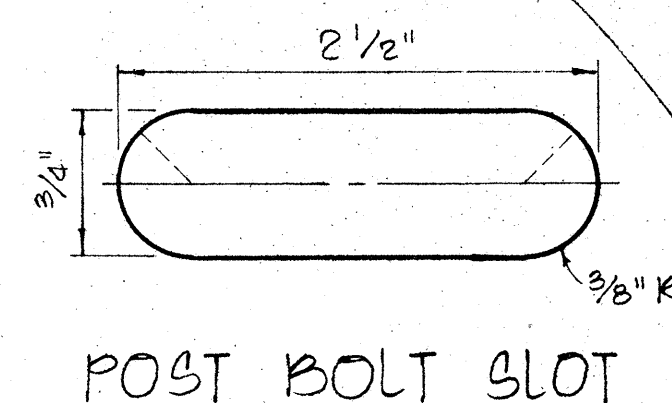
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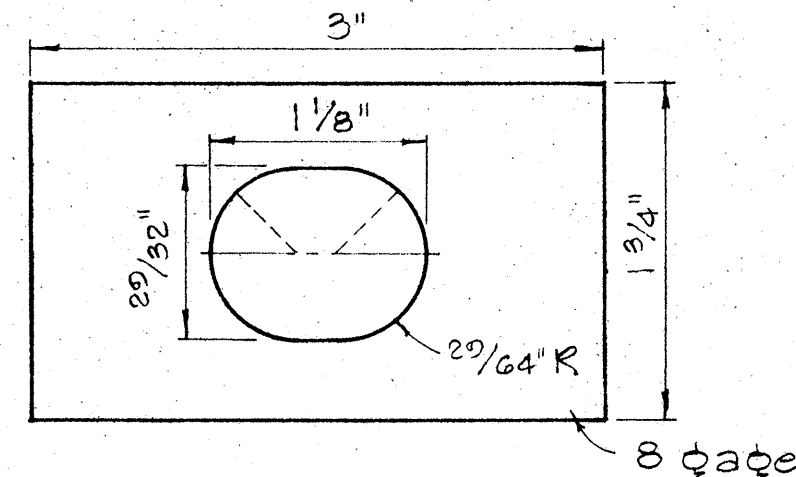
SPUCE BOLT SLOT FOR ALL ENDS



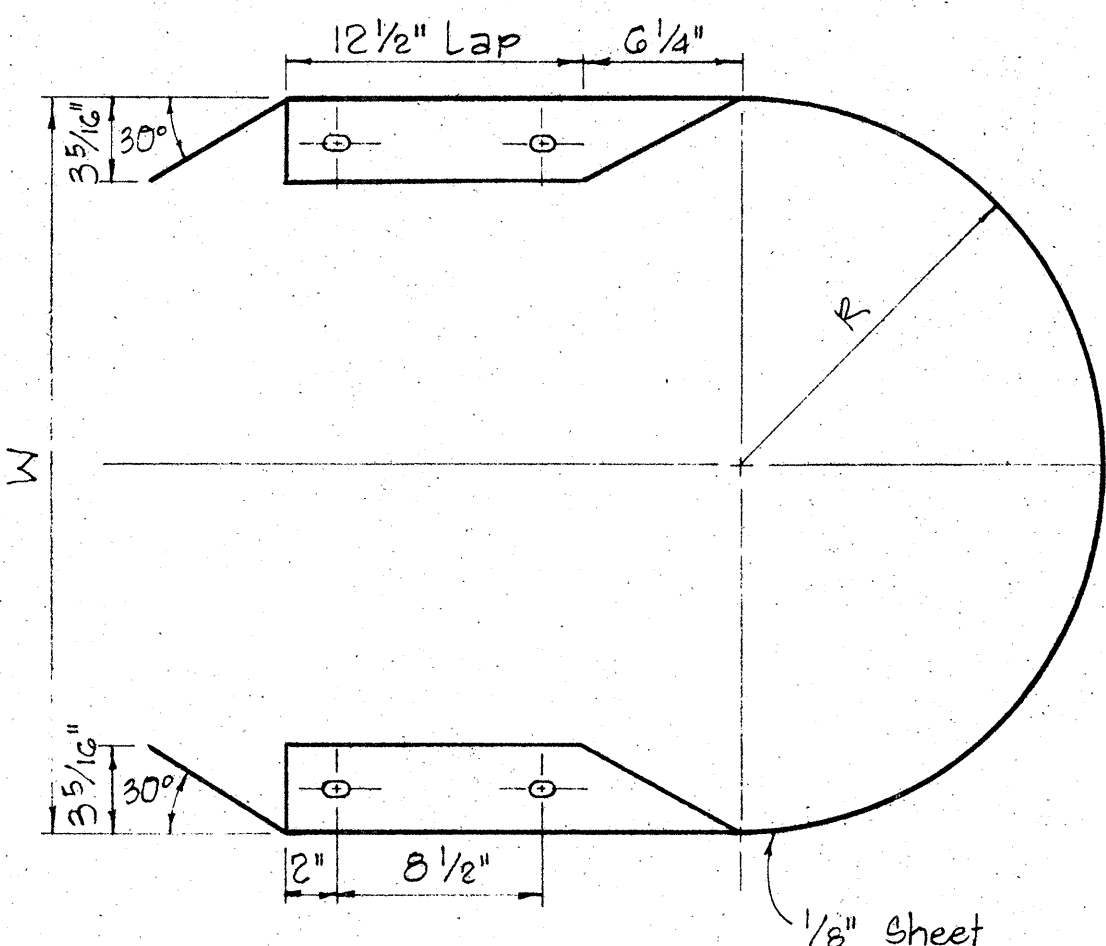
SPUCE BOLT SLOT FOR SPECIAL END SHOE



POST BOLT SLOT

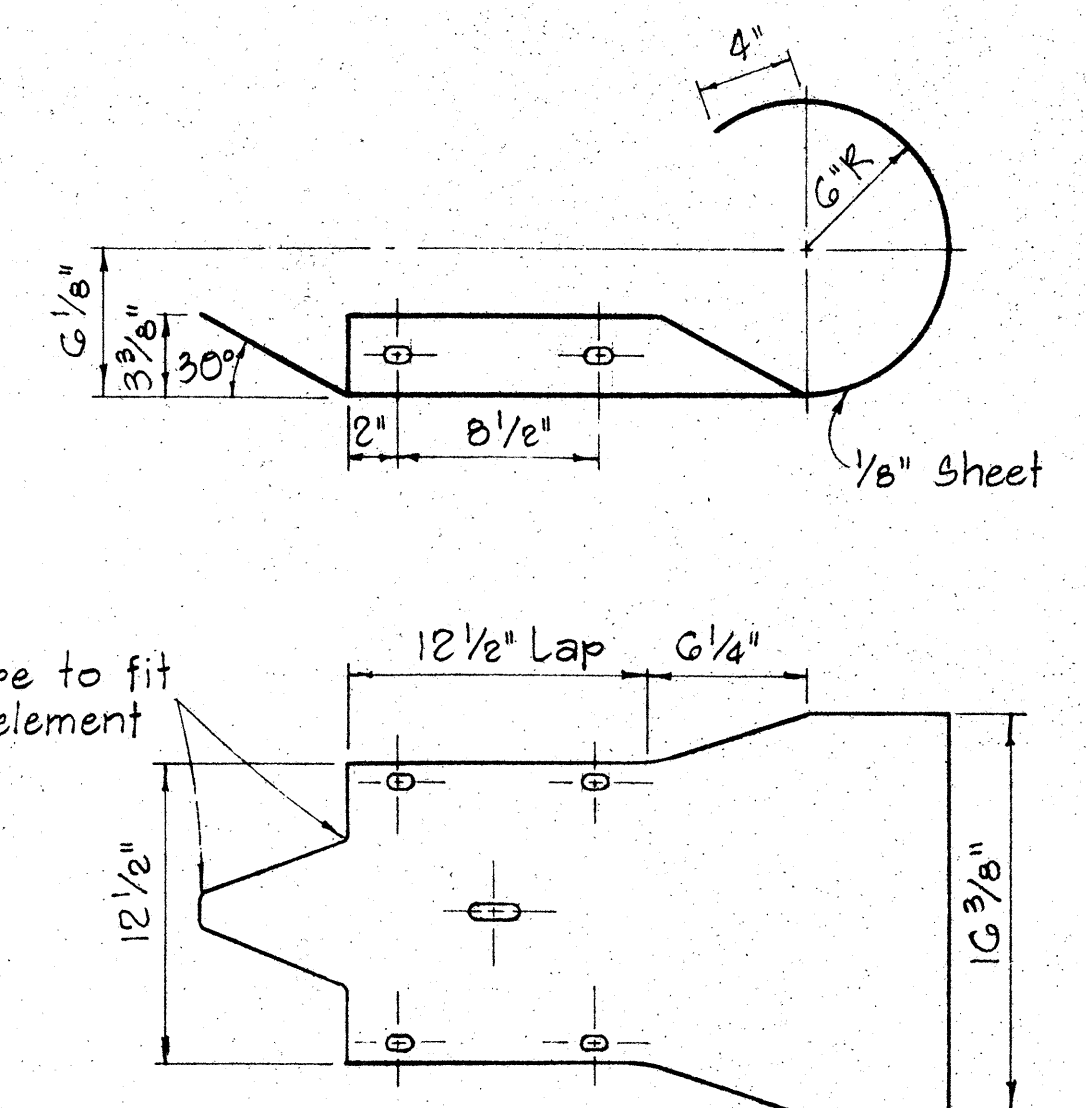


RAIL WASHER



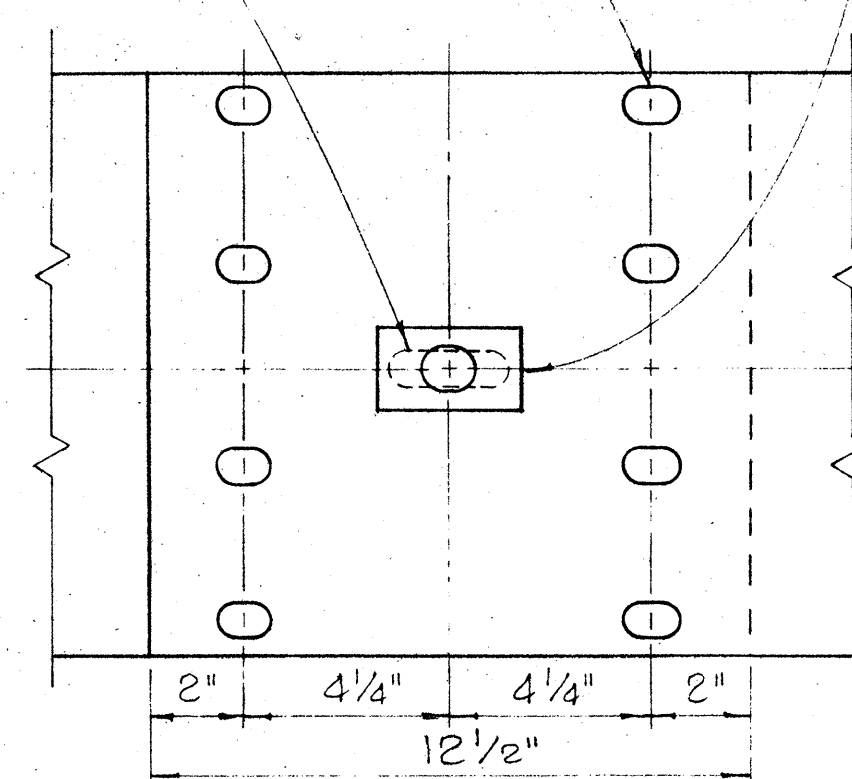
MEDIAN END

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



CURVED END

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



RAIL SPUCE

Scale: 3\" = 1'-0"

- NOTES:
1. H.S. Bolts shall conform to the requirements of ASTM A 325.
 2. 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

APPROVAL RECOMMENDED:
Eishi Tanaka
 TRAFFIC ENGINEER
 APPROVED:
2/2/76
 ASSISTANT CHIEF, ENGINEERING

12/29/69
DATE

12-30-69
DATE

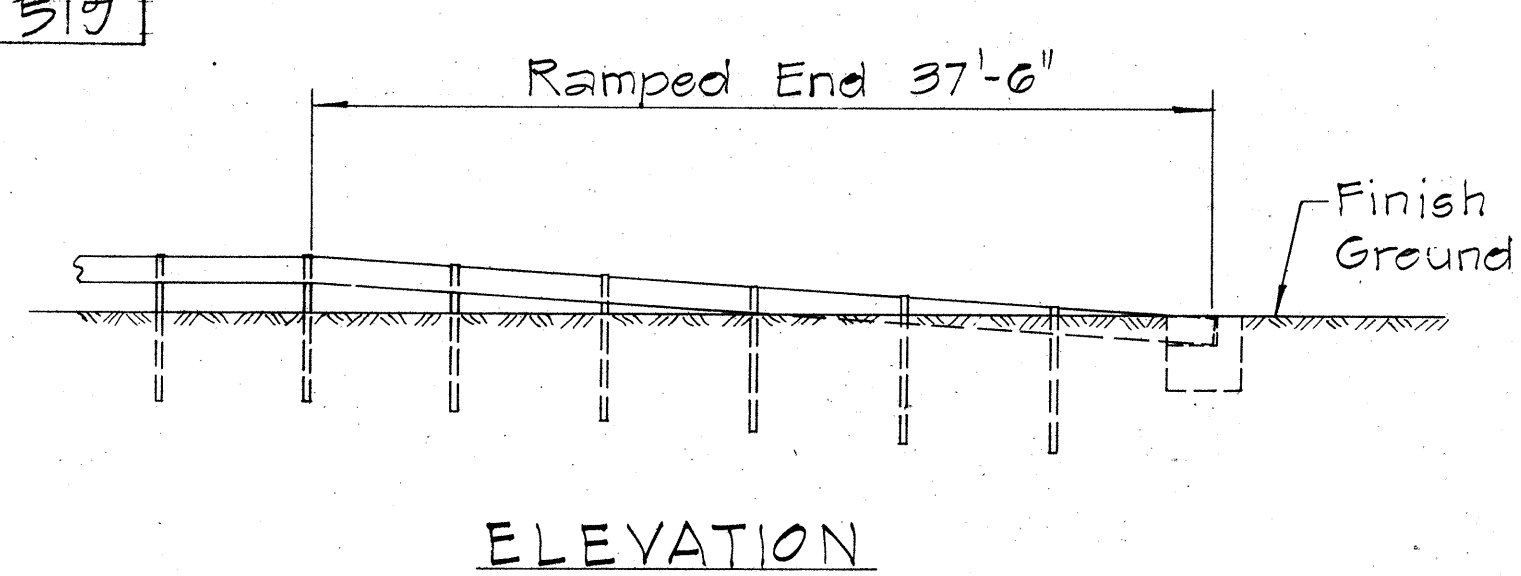
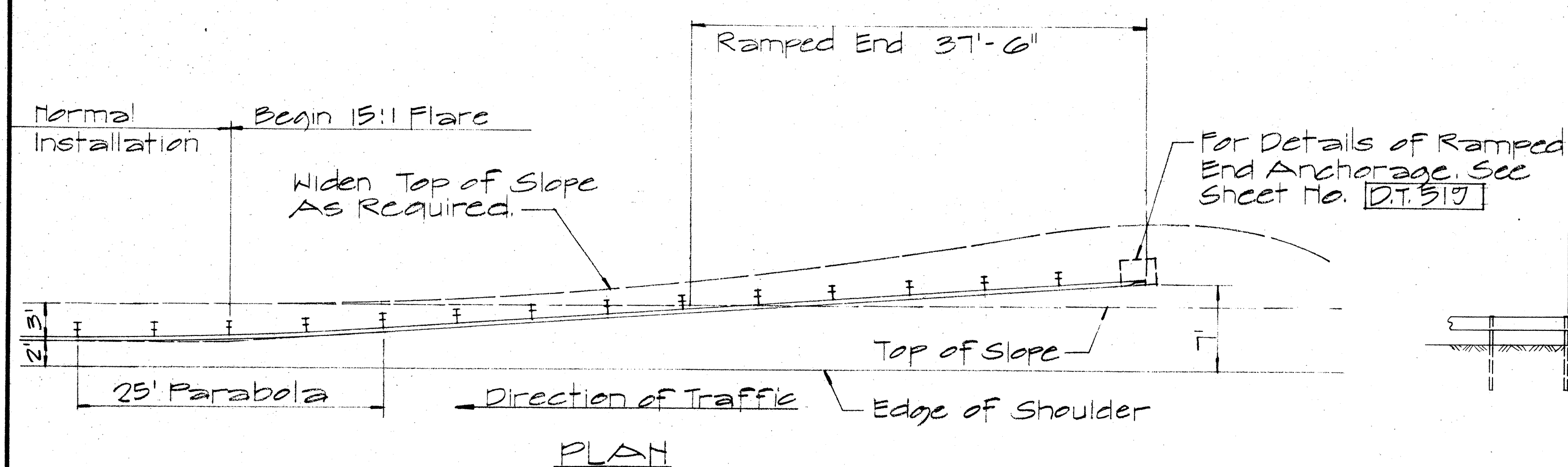
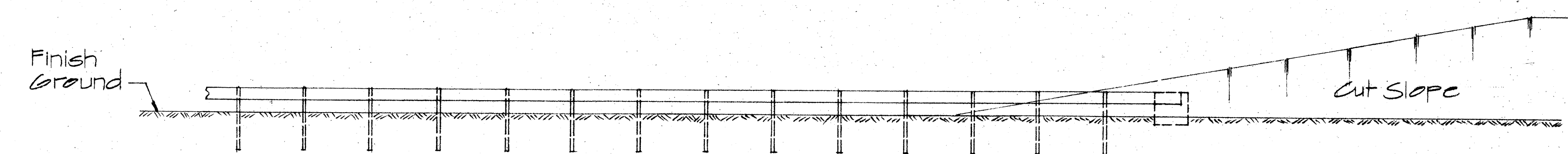
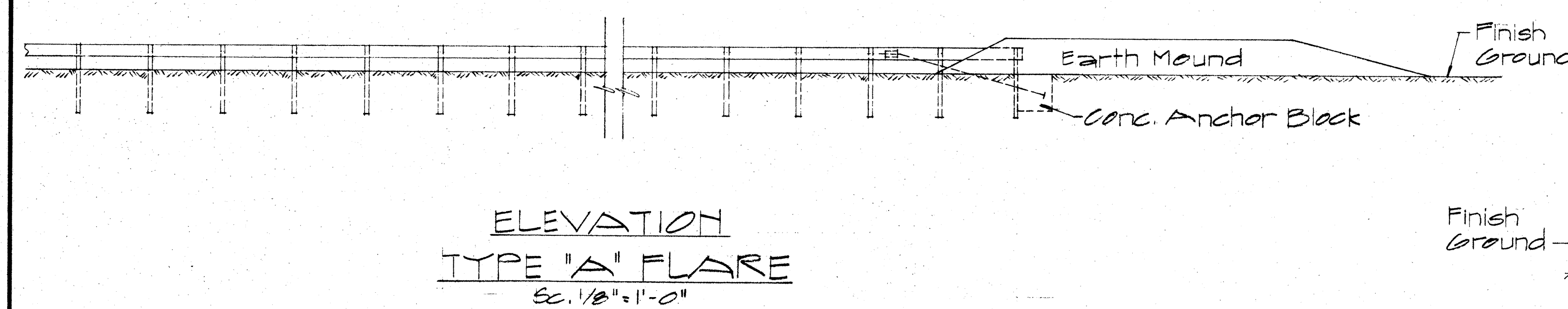
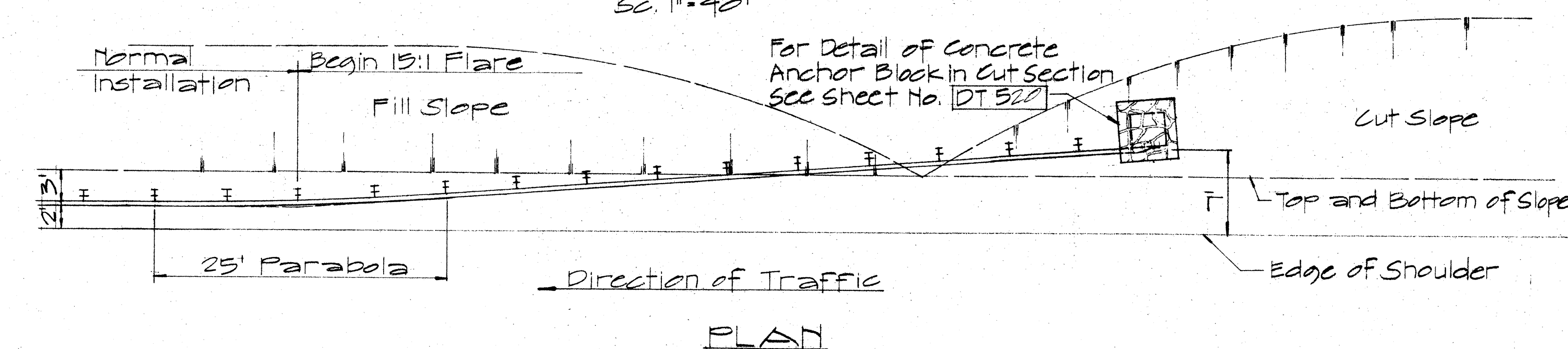
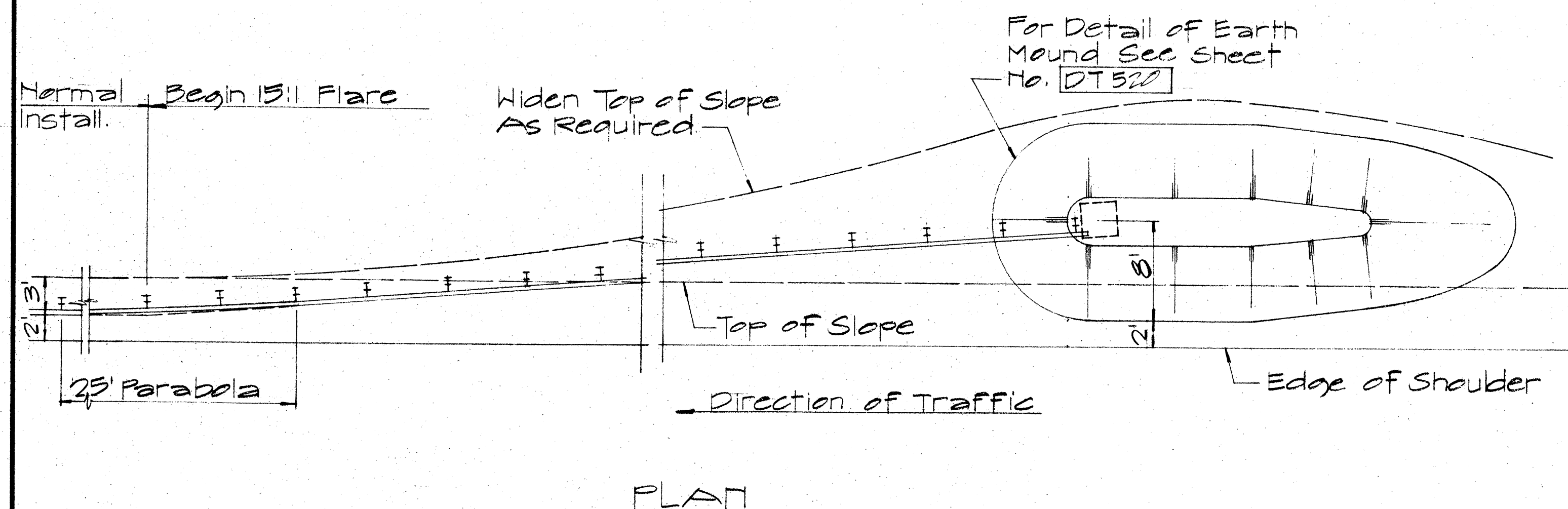
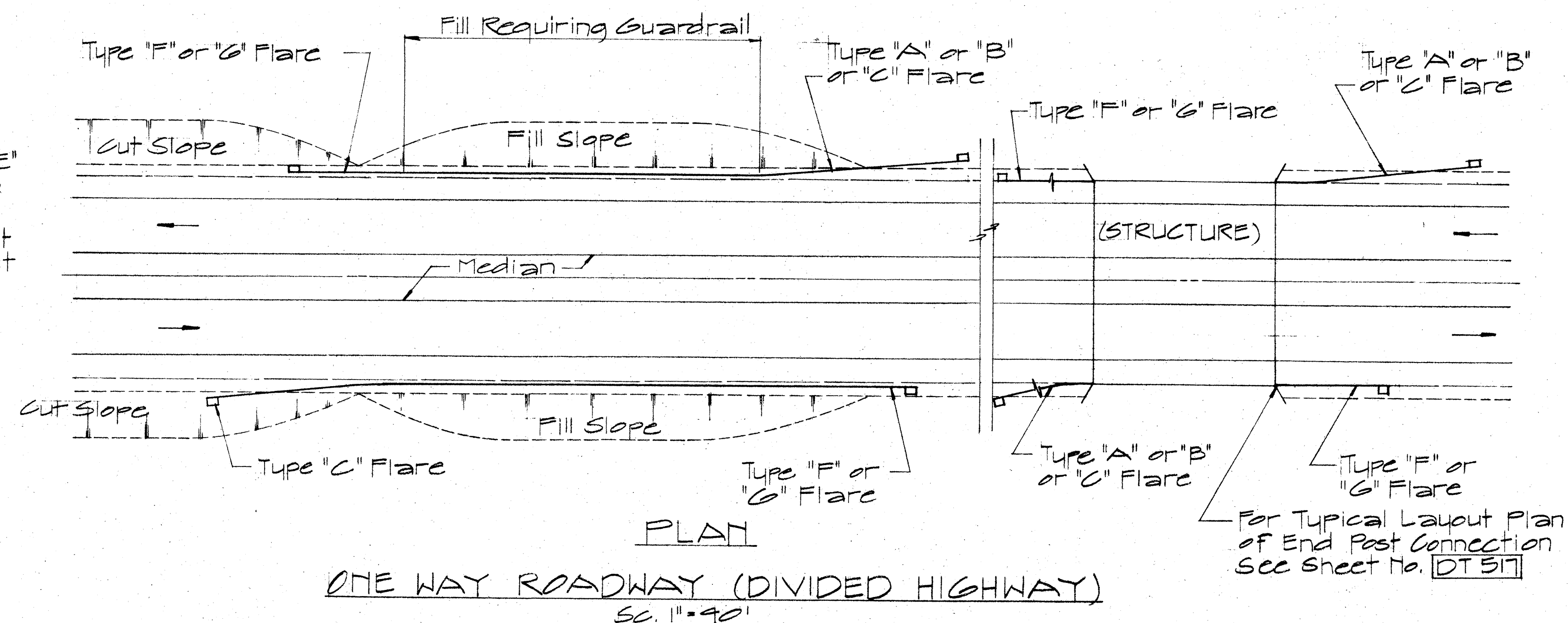
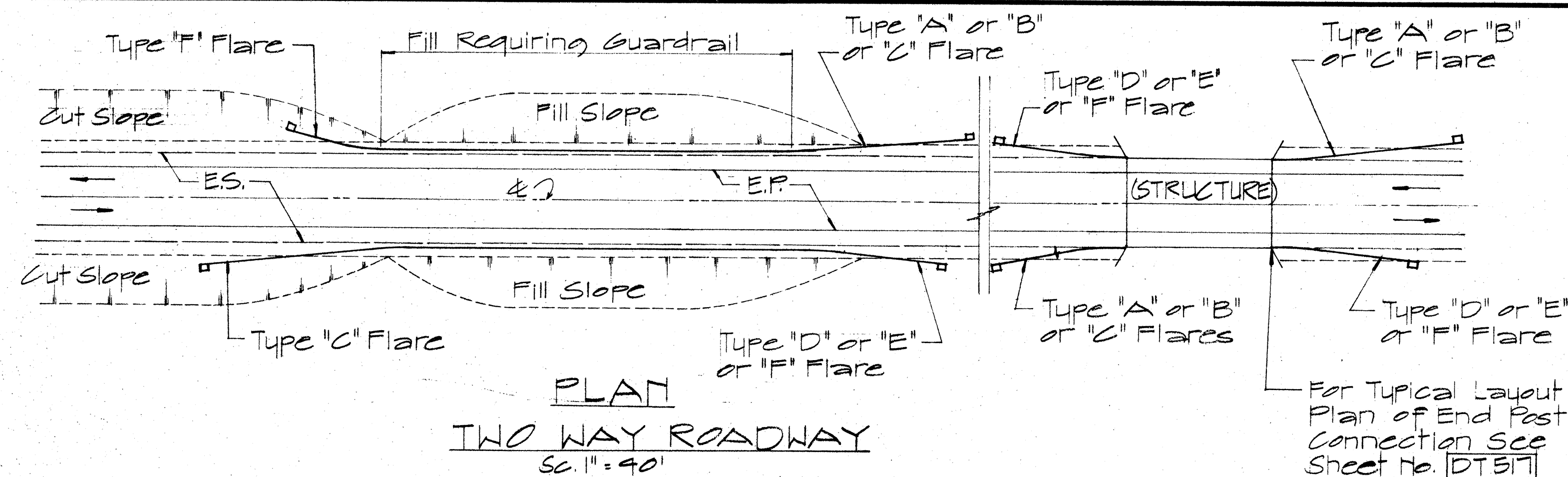
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
STANDARD DETAILS
METAL GUARD RAIL
 Scale: As Noted
 August, 1968
SHEET No. 118 OF 23 SHEETS DT 501

ORIGINAL PLAN	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(103)-B	1975	24	130

NOTE:

Metal guard rail connection to structures requires End Post Connection. See structure plans.



ELEVATION TYPE "C" FLARE Sc. 1/8" = 1'-0"

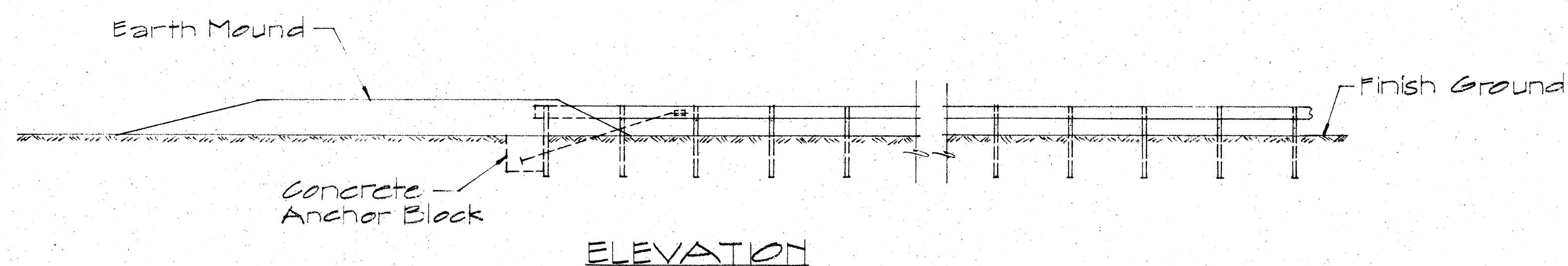
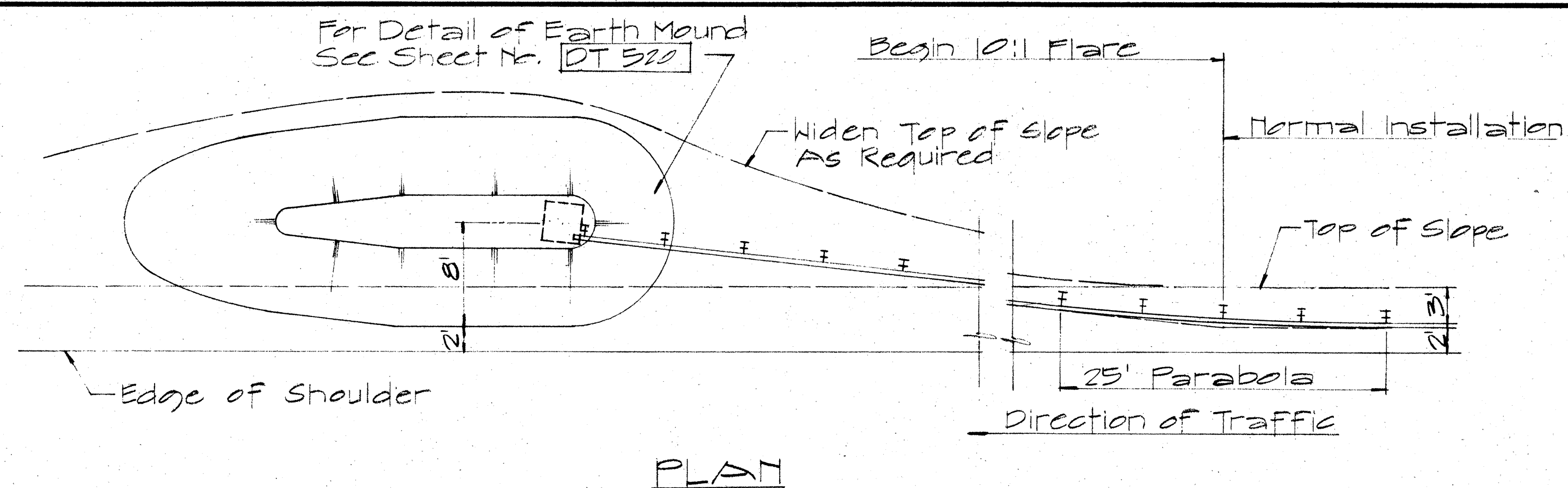
NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
Eishi Tanaka
TRAFFIC ENGINEER 12/29/63
DATE

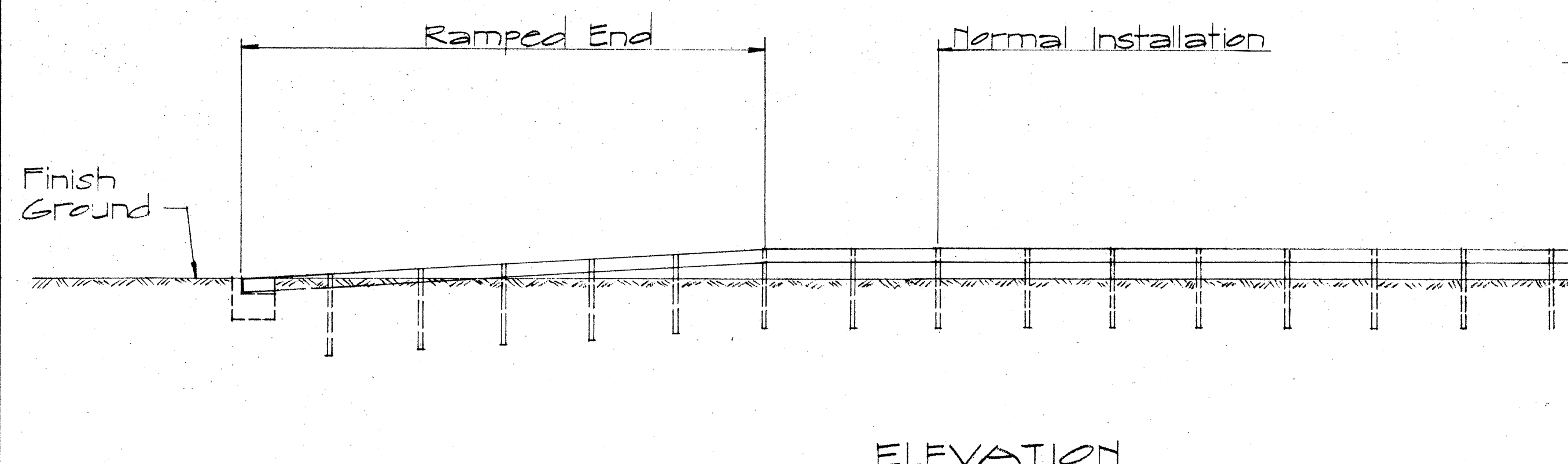
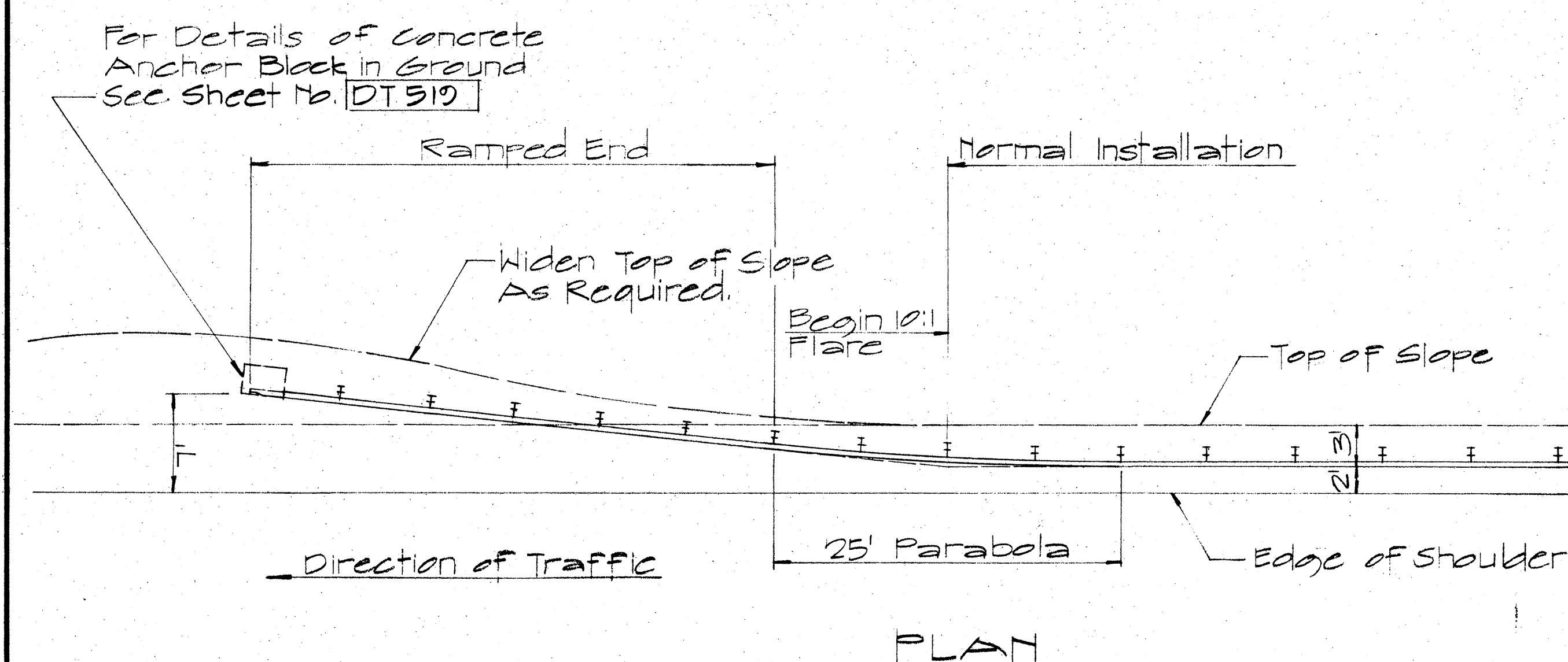
APPROVED:
W. B. B. B.
ASSISTANT CHIEF, ENGINEERING 12-30-69
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**STANDARD DETAILS
OF APPROACH END
FLARE - ONE & TWO
WAY ROADWAY**
Sc. As Noted April 1969
SHEET No. 12B OF 23 SHEETS DT 516

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(109):13	1975	25	130



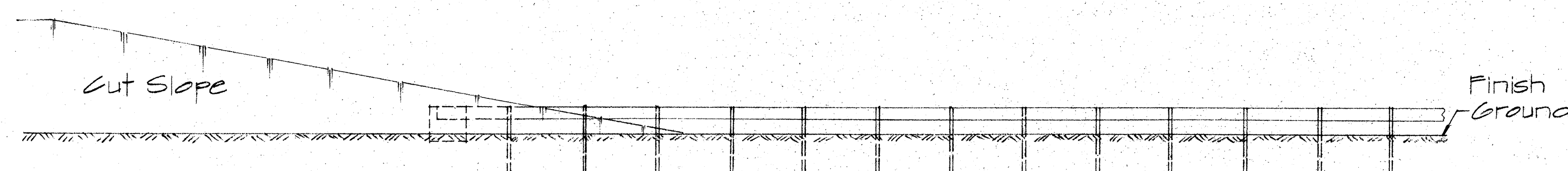
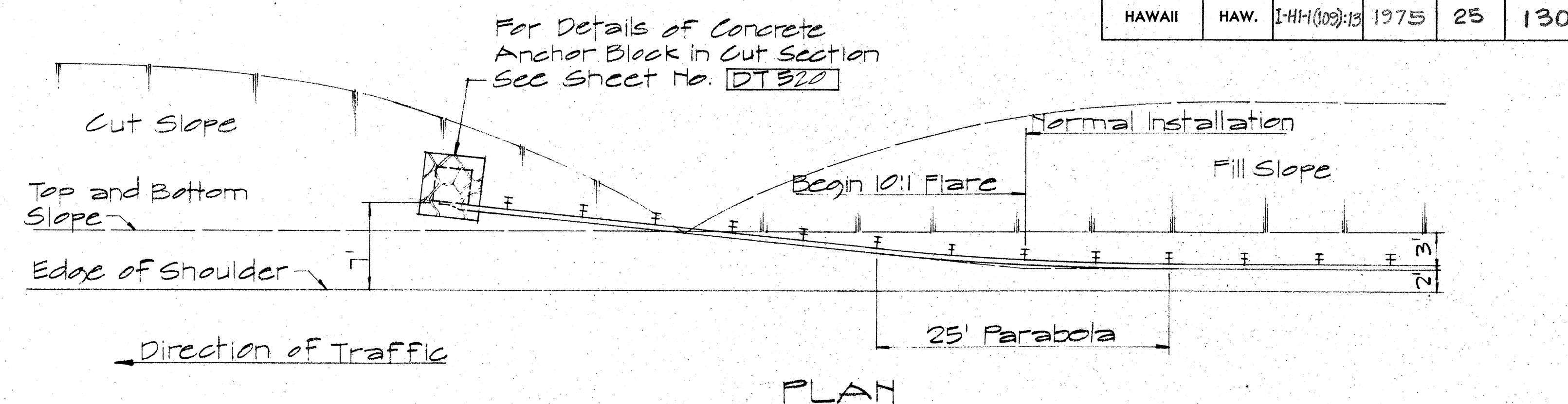
TYPE "D" FLARE
SC. 1/8" = 1'-0"



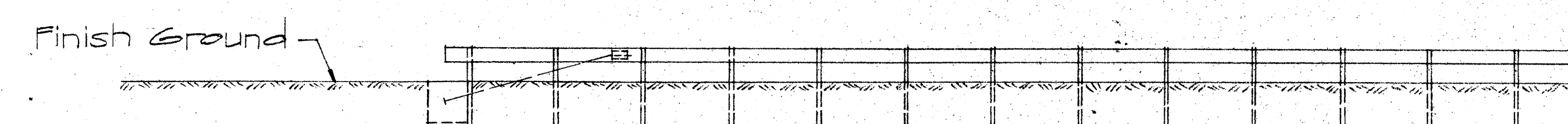
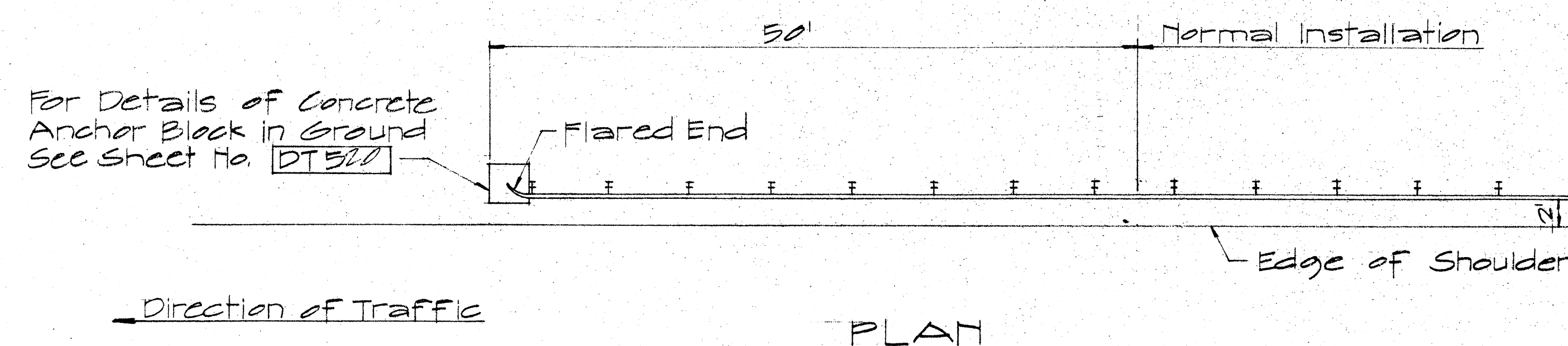
ELEVATION

TYPE "E" FLARE

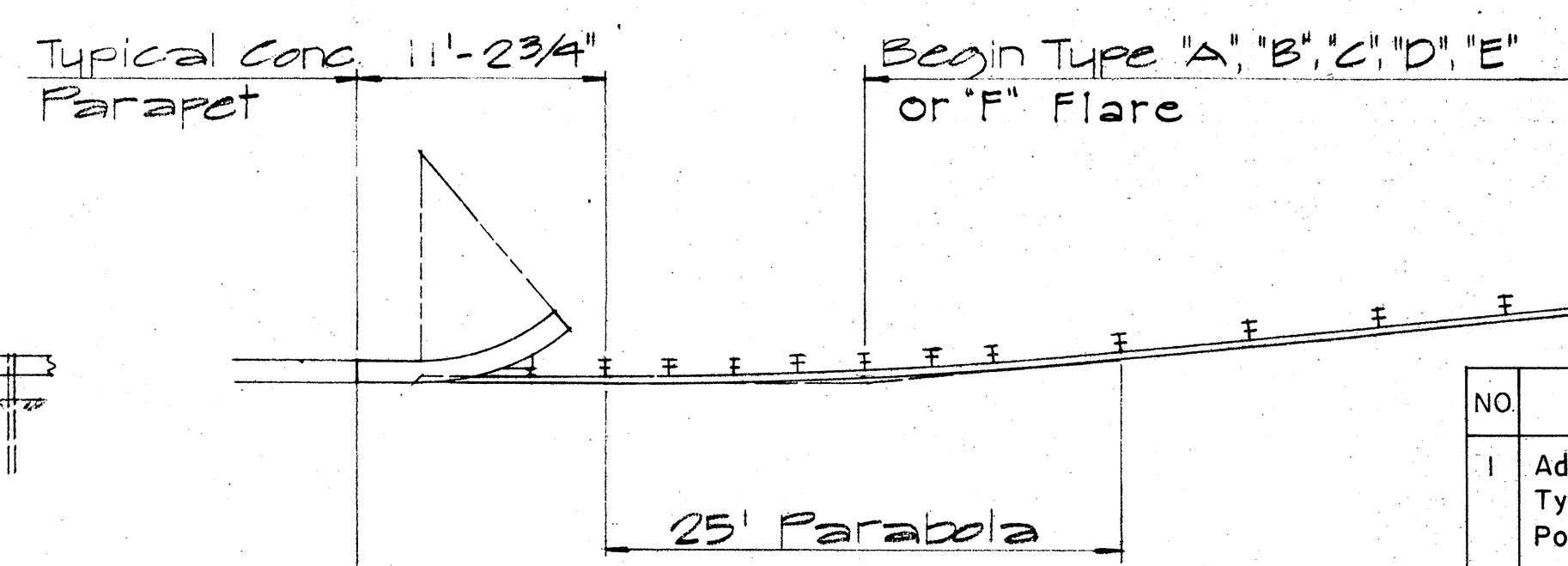
S. 1/8" = 1'-0"



ELEVATION
TYPE "F" FLARE
SC. 1/8" = 1'-0"



ELEVATION
TYPE "G" FLARE
SC. 1/8" = 1'-0"



TYPICAL LAYOUT PLAN OF
END POST CONNECTION
SC. 1/8" = 1'-0"

NO	REVISION	APPROVED BY	DATE
1	Additional Posts Added to Typical Layout Plan Of End Post Connection	H.C.	4-12

APPROVAL RECOMMENDED:
Euchi Tanaka
TRAFFIC ENGINEER

12/29/65
DATE

APPROVED:
Walter J. J. J. J.
ASSISTANT CHIEF, ENGINEERING

12-30-65
DATE

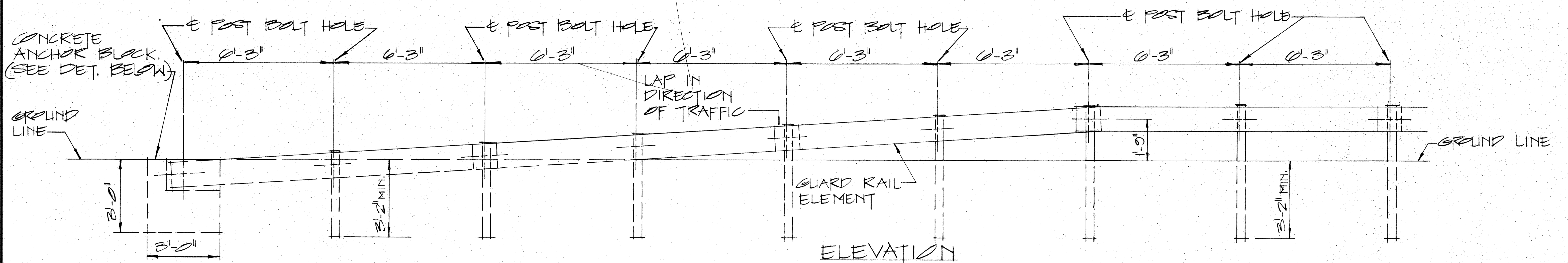
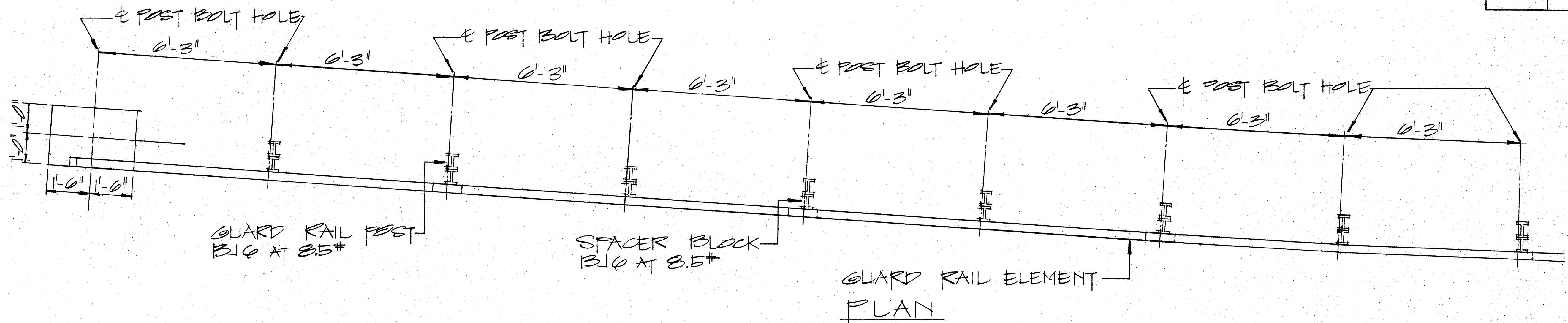
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
TRAILING END
FLARE - ONE & TWO
WAY ROADWAY

Scale: As Noted April 1960

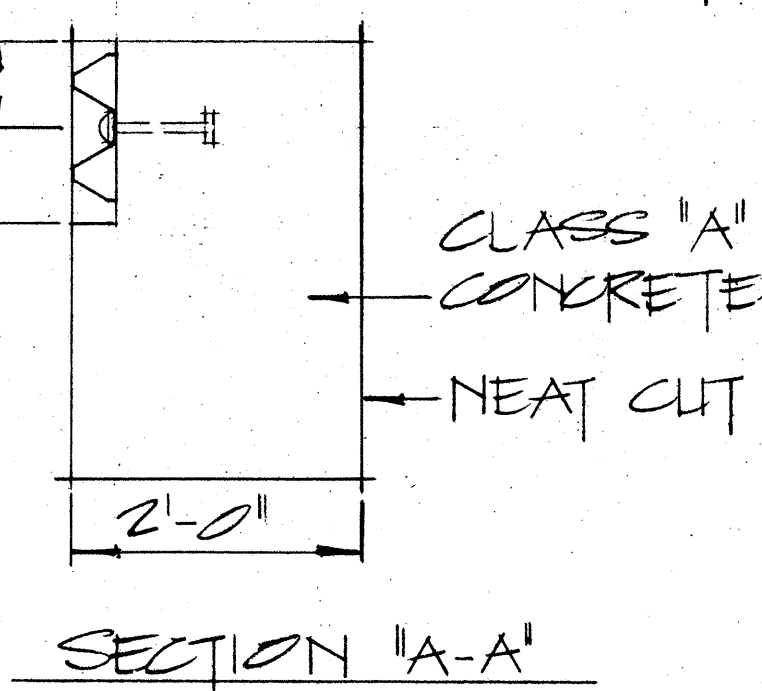
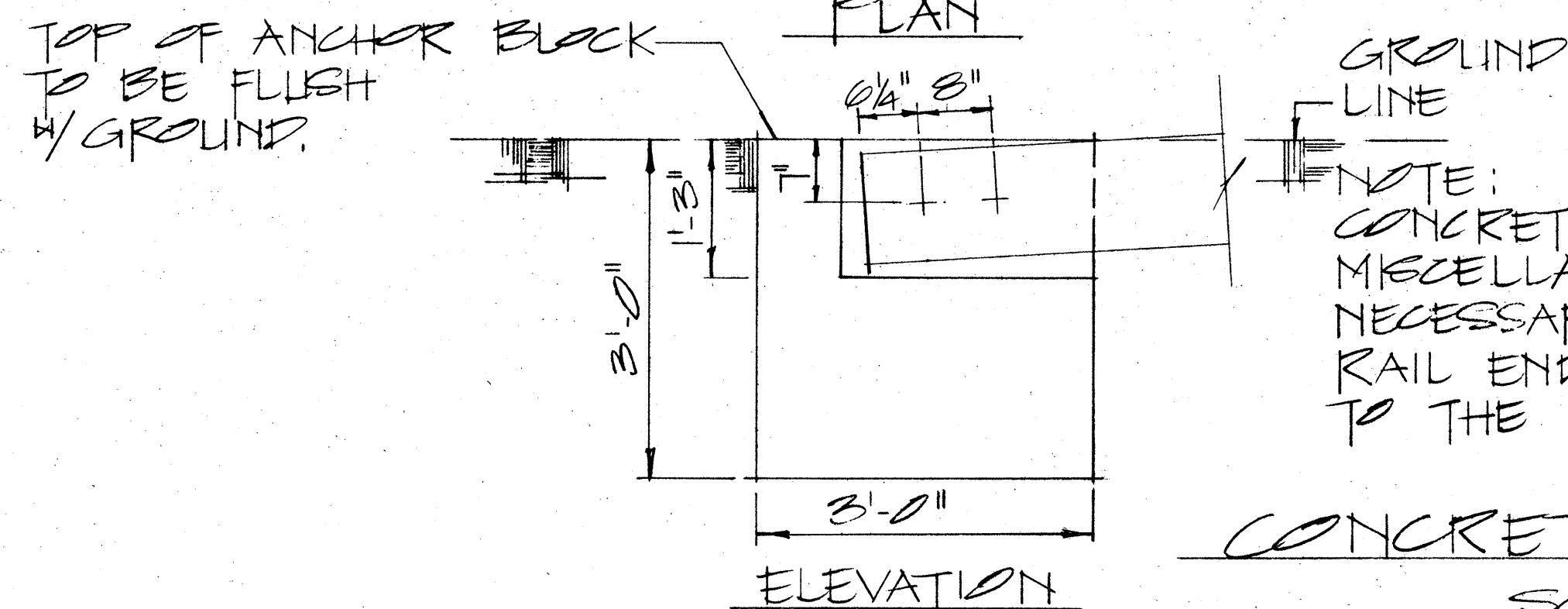
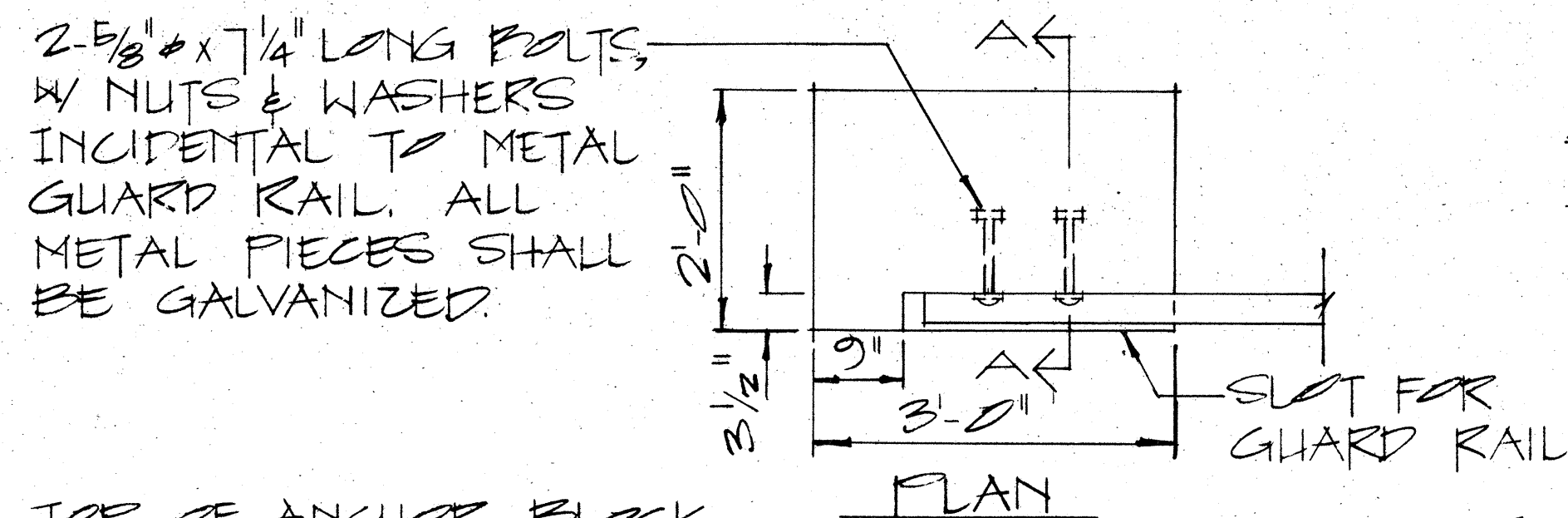
SHEET No. 13B OF 23 SHEETS DT 5

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(103)13	1975	26	130



RAMP END ANCHORAGE
SCALE: 1/2" = 1'-0"

2-5/8" x 7/4" LONG BOLTS, NUTS & WASHERS INCIDENTAL TO METAL GUARD RAIL. ALL METAL PIECES SHALL BE GALVANIZED.



NOTE: CONCRETE, EXCAVATION AND MISCELLANEOUS APPURTENANCES NECESSARY TO ANCHOR THE GUARD RAIL ENDS, SHALL BE INCIDENTAL TO THE METAL GUARD RAIL.

CONCRETE ANCHOR BLOCK
SCALE: 3/4" = 1'-0"

APPROVAL RECOMMENDED:
Eishi 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
HIGHWAYS DIVISION

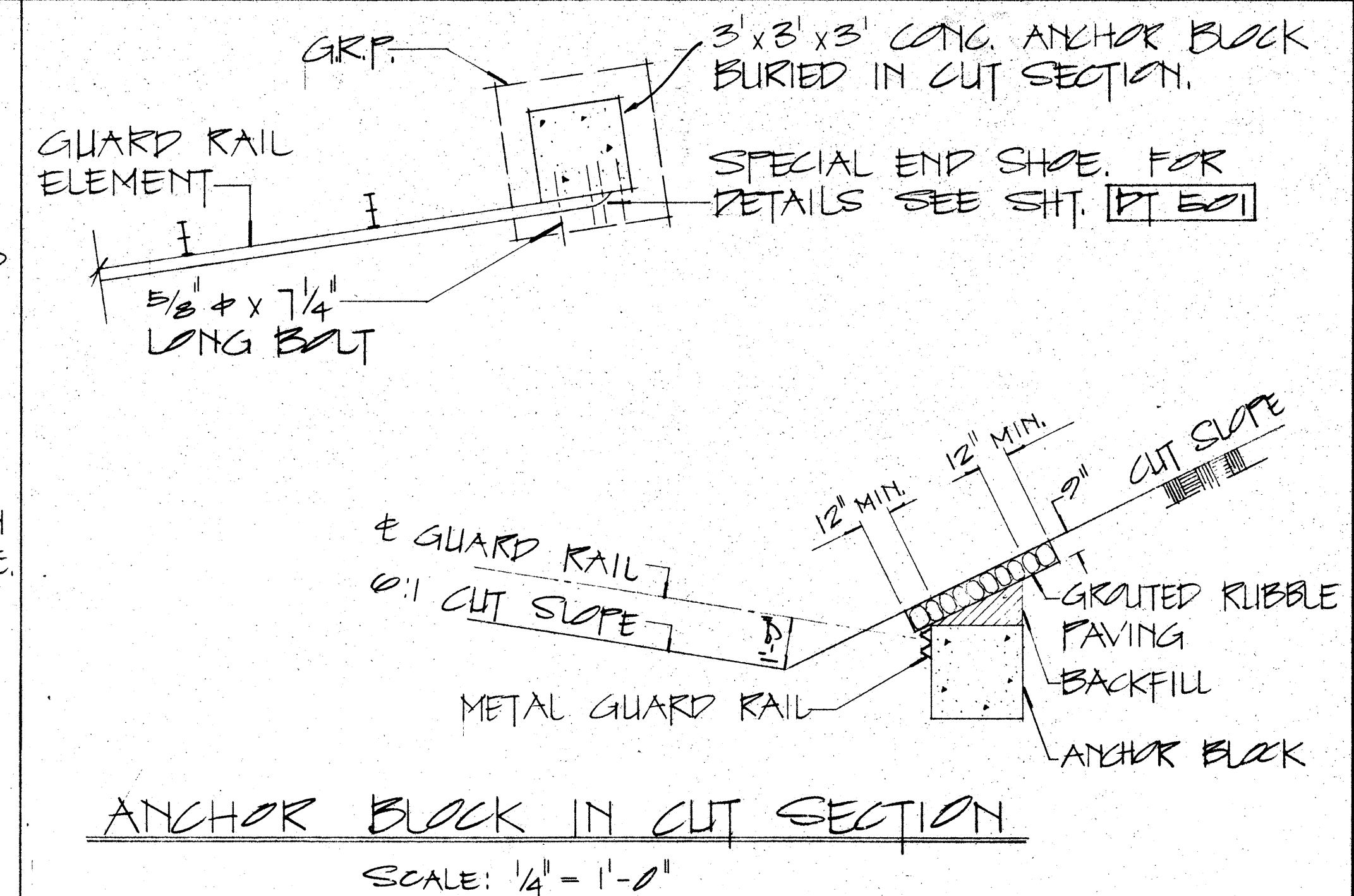
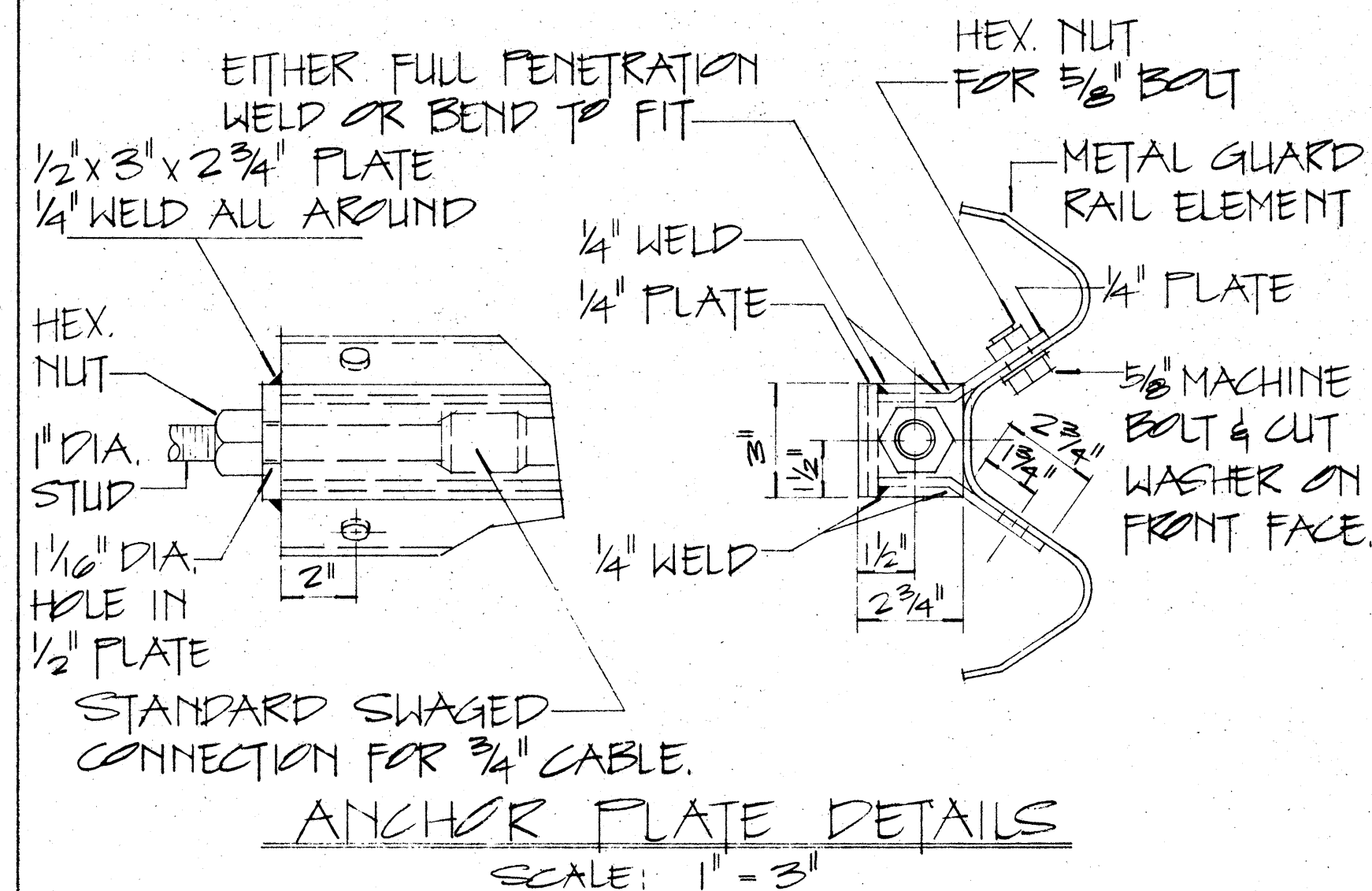
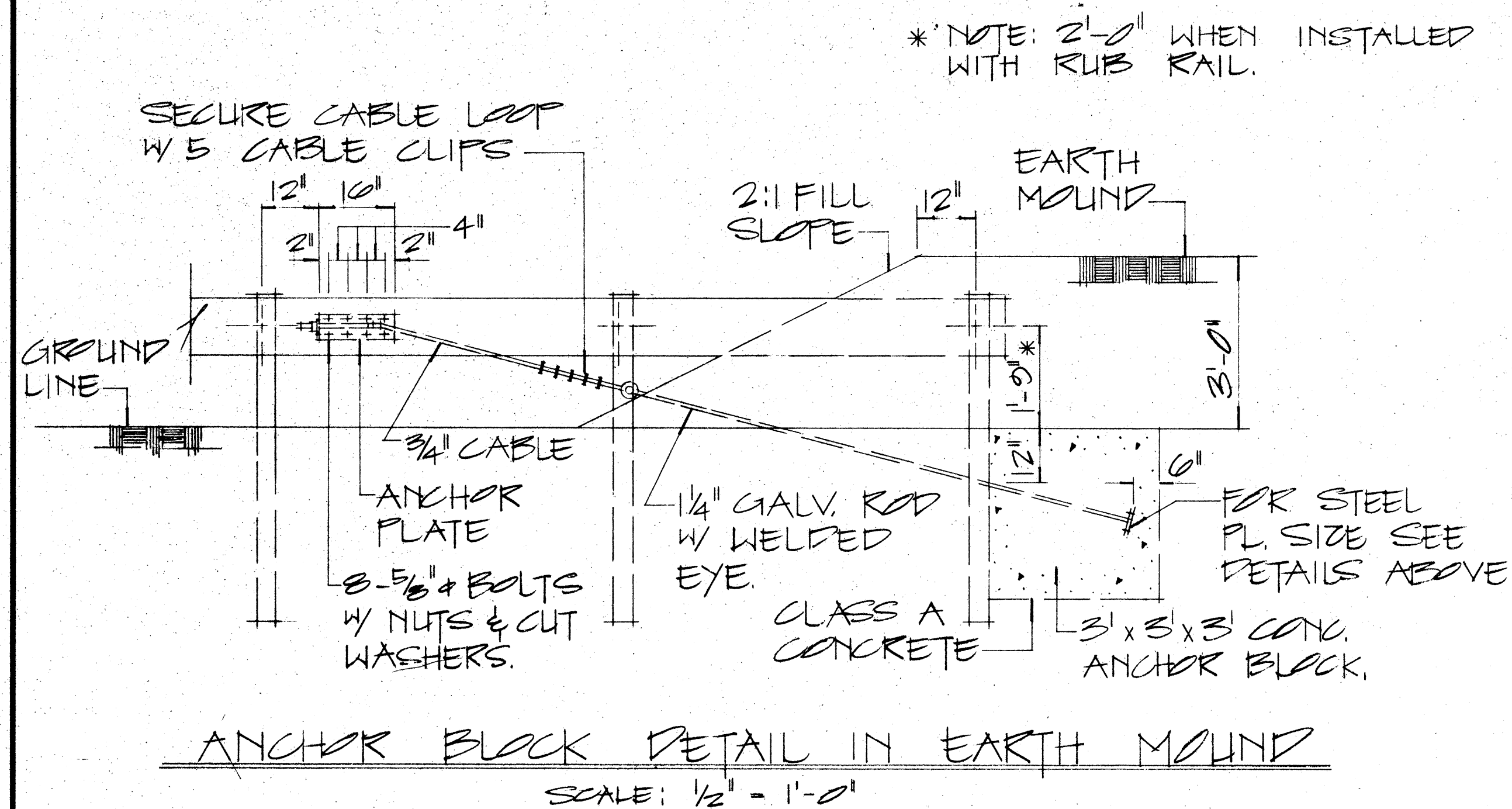
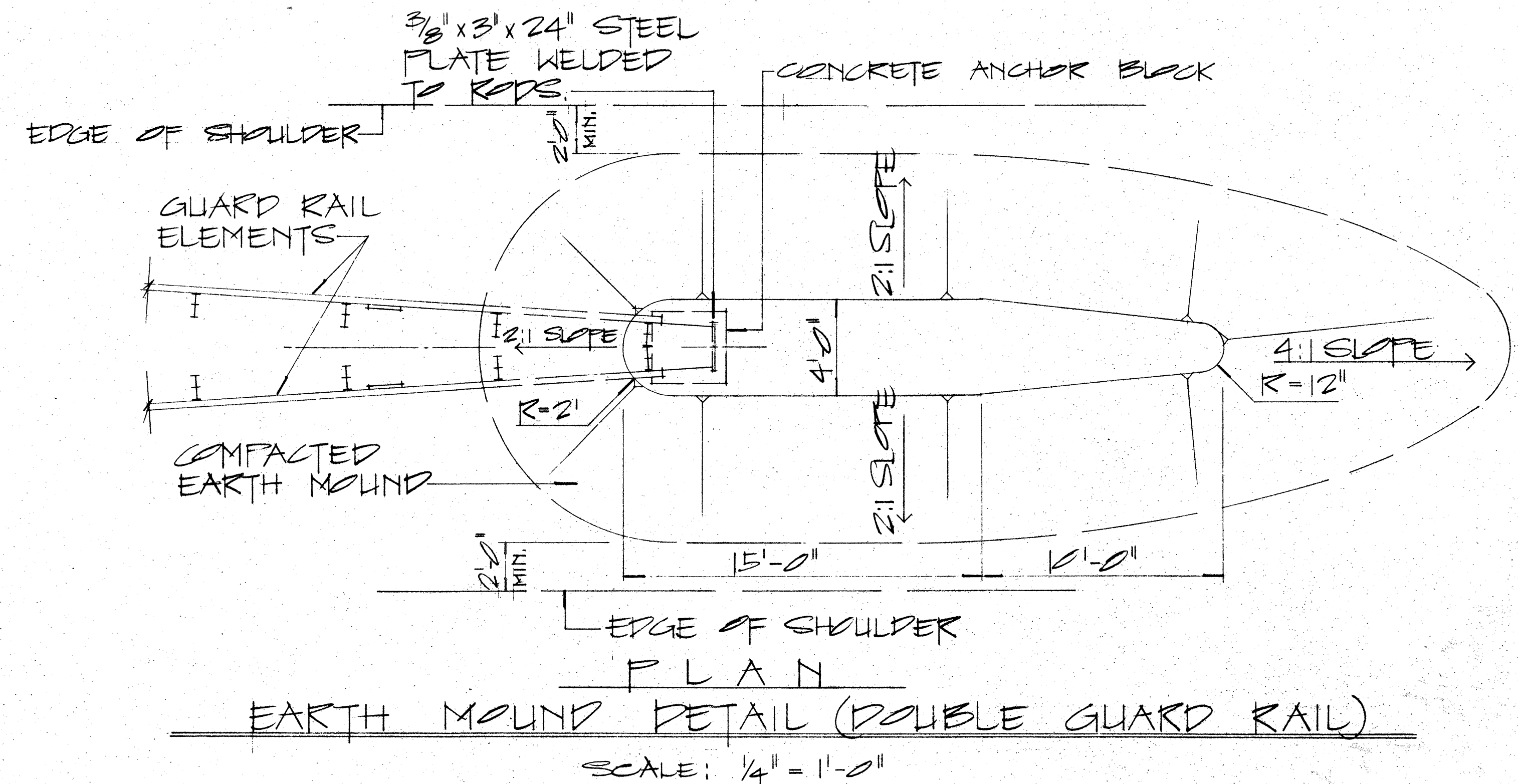
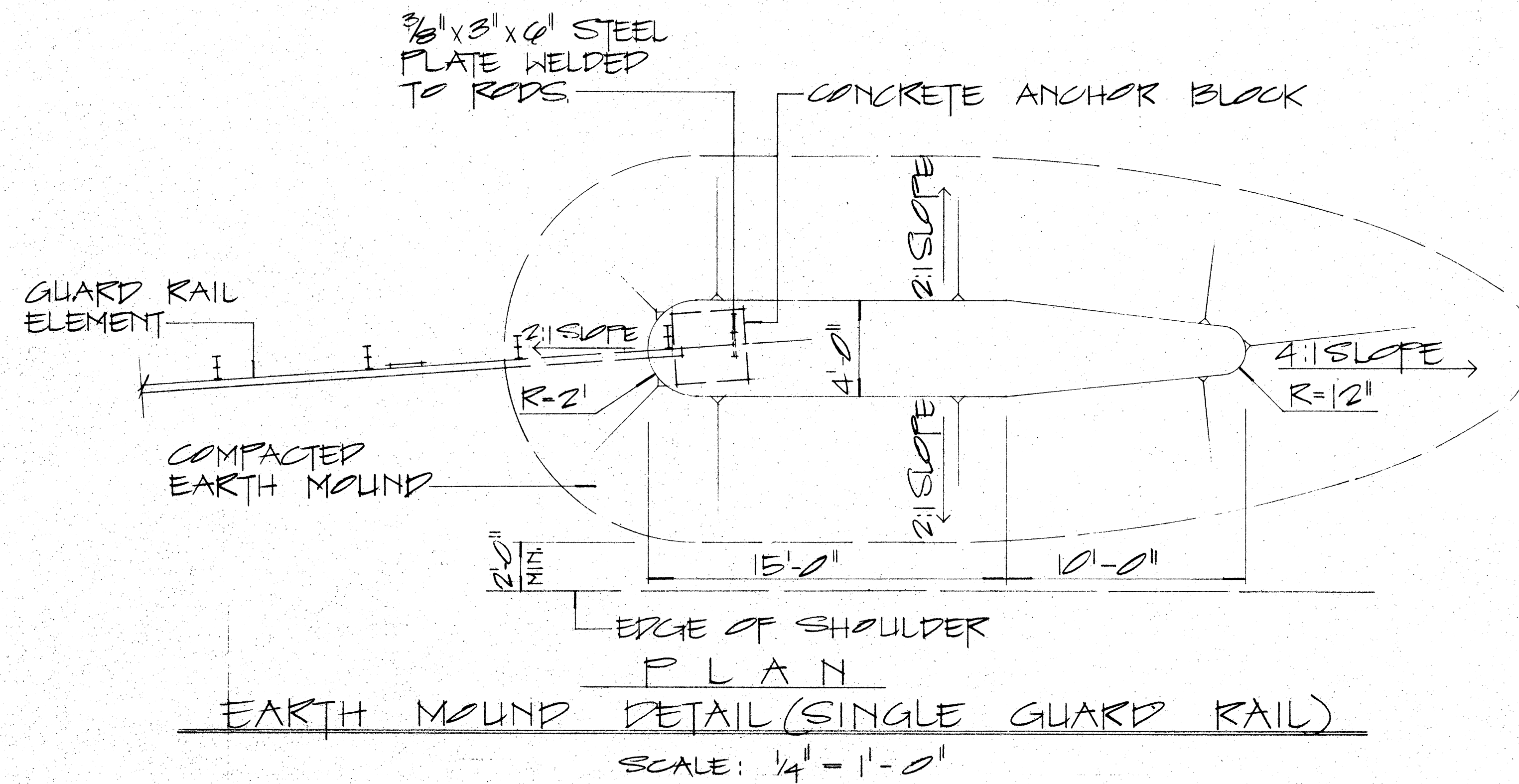
STANDARD DETAILS
GUARD RAIL, TYPE 3
RAMP END ANCHORAGE

SCALE: AS SHOWN

SHEET No. 148 OF 23 SHEETS

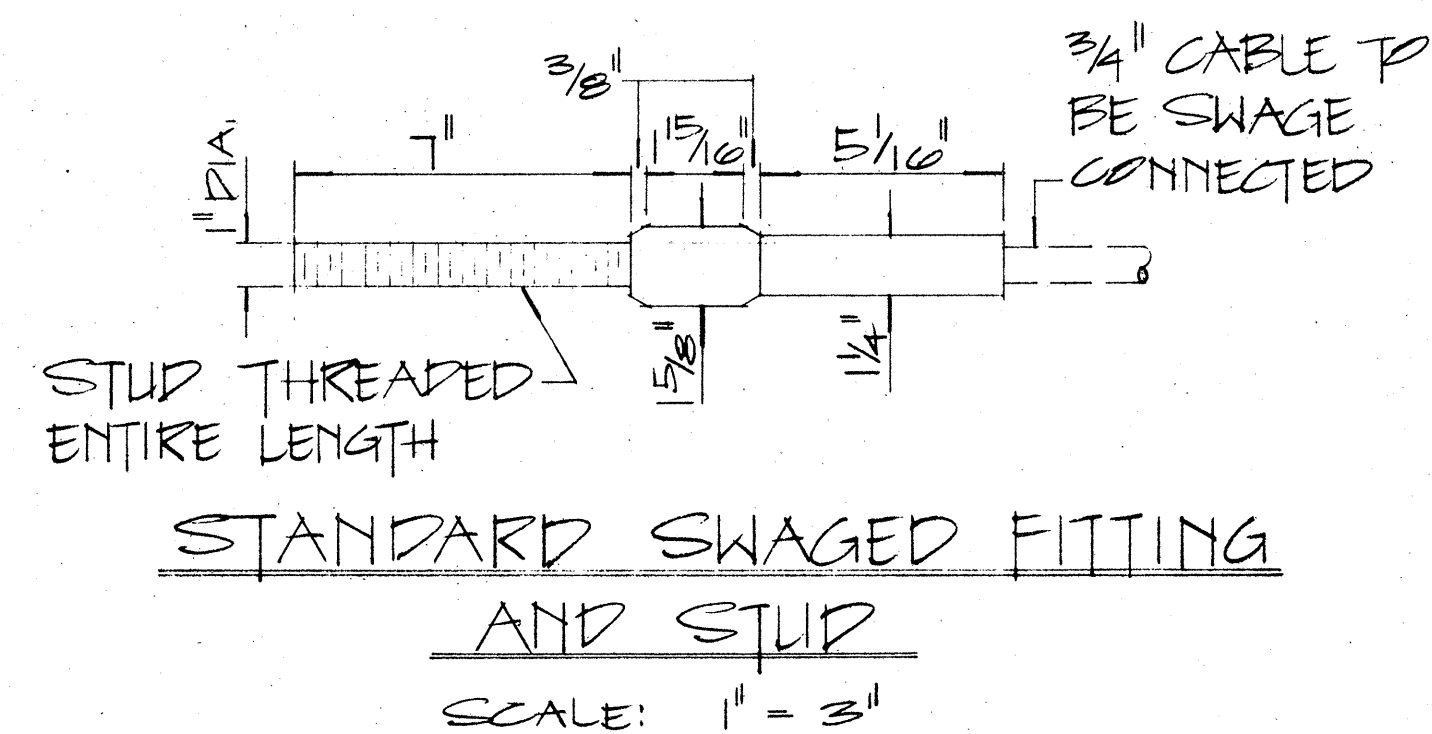
SURVEY PLATTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(109):13	1975	27	130



NOTE:

1. GALVANIZED ANCHOR ROD, METAL GUARD RAIL AND POST BURIED IN GROUND SHALL BE COVERED WITH a Min. 20-Mil Thickness of Coal TAR ENAMEL conforming to AWWA Standard: C 203
2. CONCRETE, GRP, EXCAVATION, EARTH MOUND, ANCHOR RODS AND MISCELLANEOUS APPURTENANCES NECESSARY TO ANCHOR THE GUARD RAIL ENDS SHALL BE INCIDENTAL TO THE METAL GUARD RAIL.



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

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

NO.	REVISION	APPROVED By	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
EARTH MOUND AND
ANCHOR BLOCK DETAILS

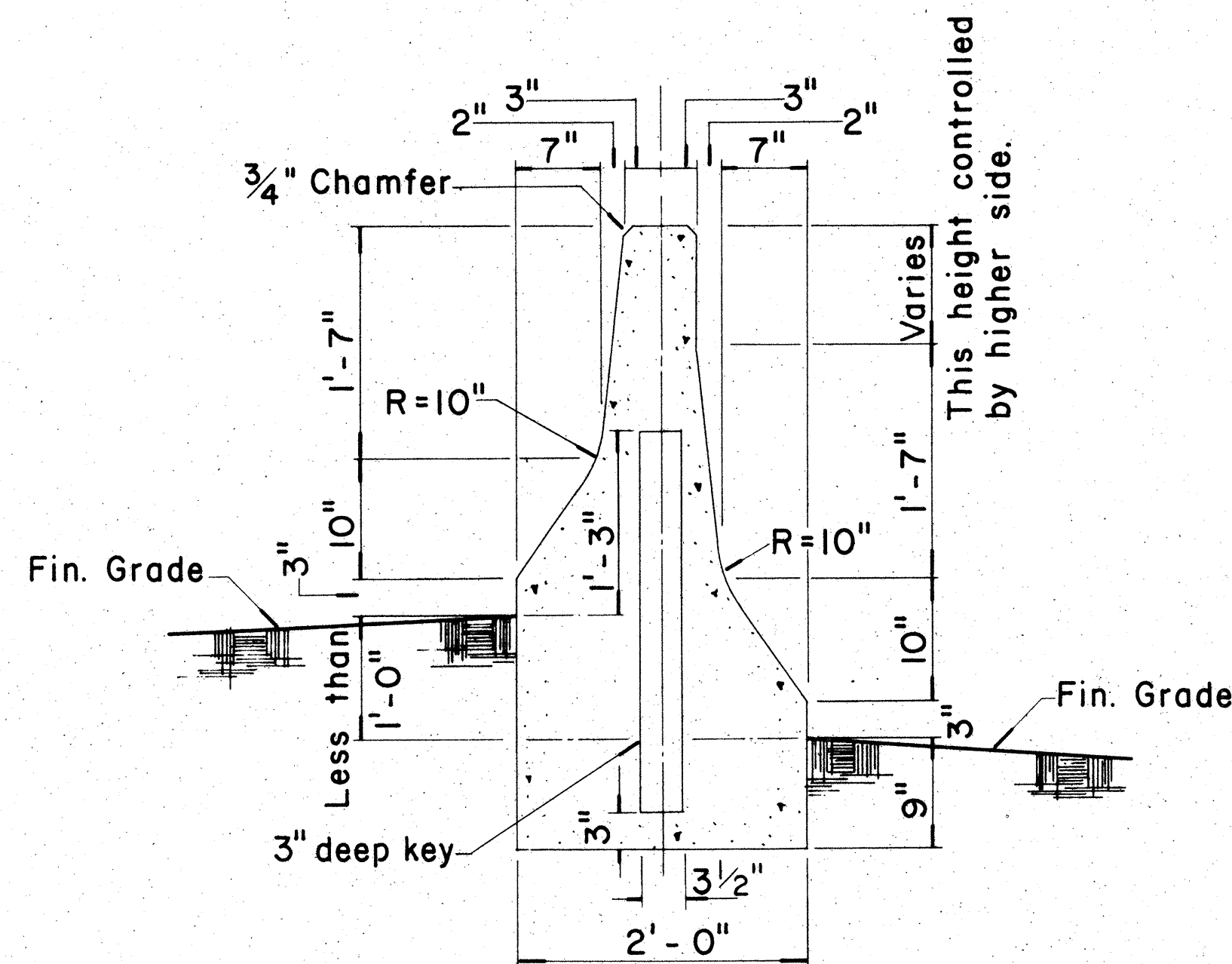
SCALE: AS SHOWN AT 1960

SHEET No. 15B OF 23 SHEETS 17520

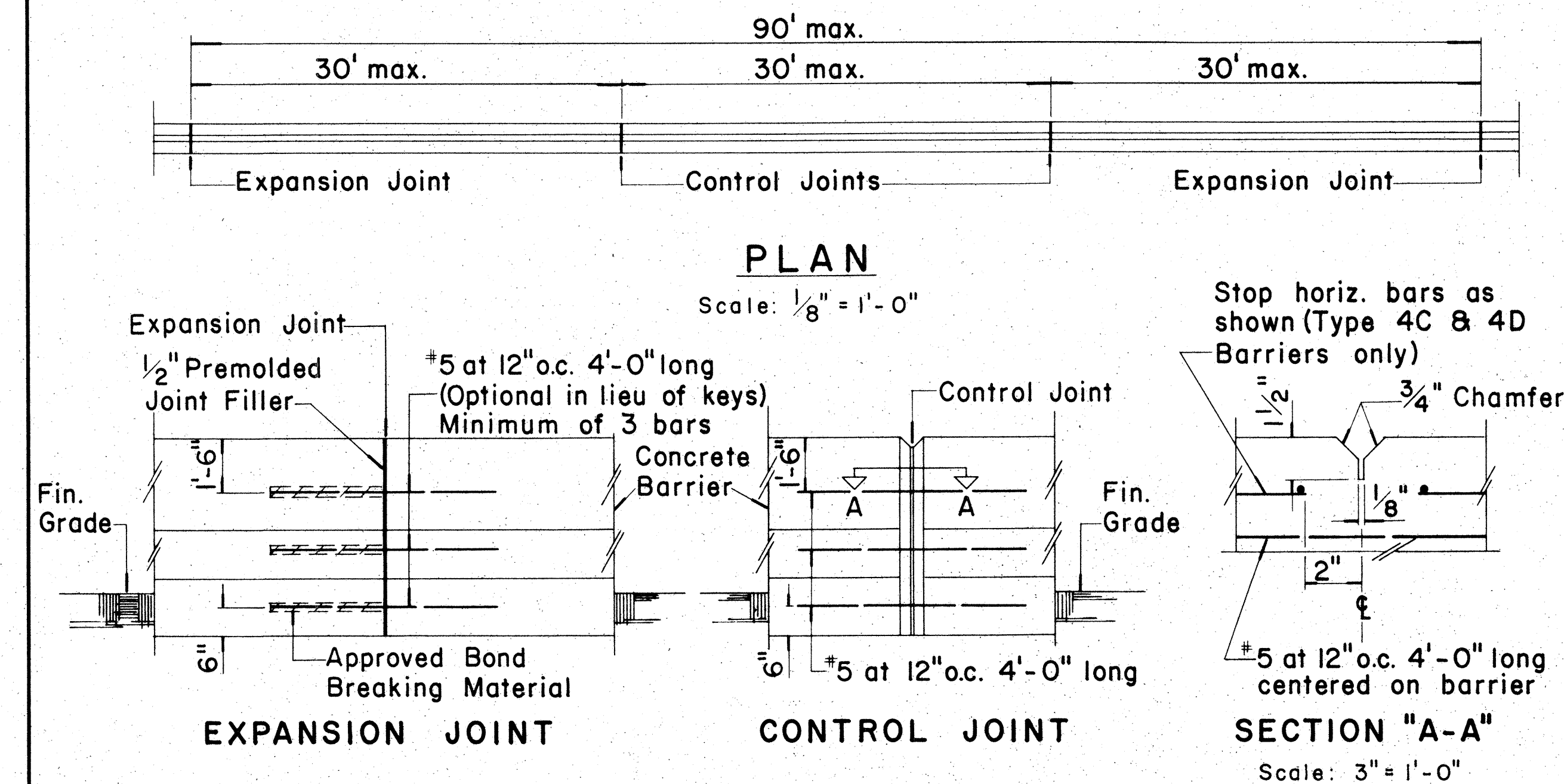
Technical drawing of a bridge pier cross-section. The drawing shows a central pier with a central opening. Key dimensions and features include:

- Overall Width:** 2' - 0"
- Overall Height:** 1' - 7"
- Top Section:** 3" wide, 2" high, with a 3/4" Chamfer.
- Central Opening:** 7" wide, 1' - 9" high, with a 3" deep key.
- Radius:** R = 10" for the curved sections.
- Base Section:** 3" wide, 3" high, with a 3/2" base.
- Ground Level:** Fin. Grade is indicated on both sides.
- Barrier:** A barrier is shown at the top of the pier.

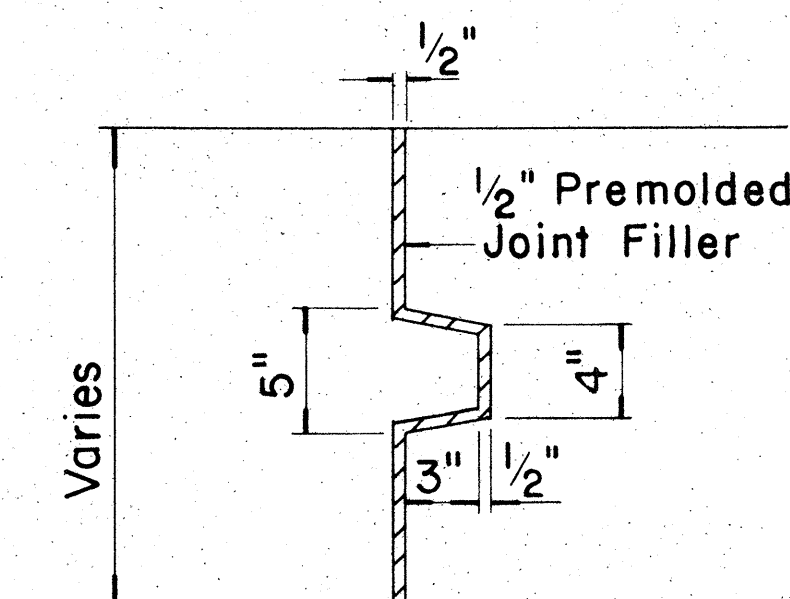
Scale: 1" = 1' - 0"



Scale: 1" = 1'-0"

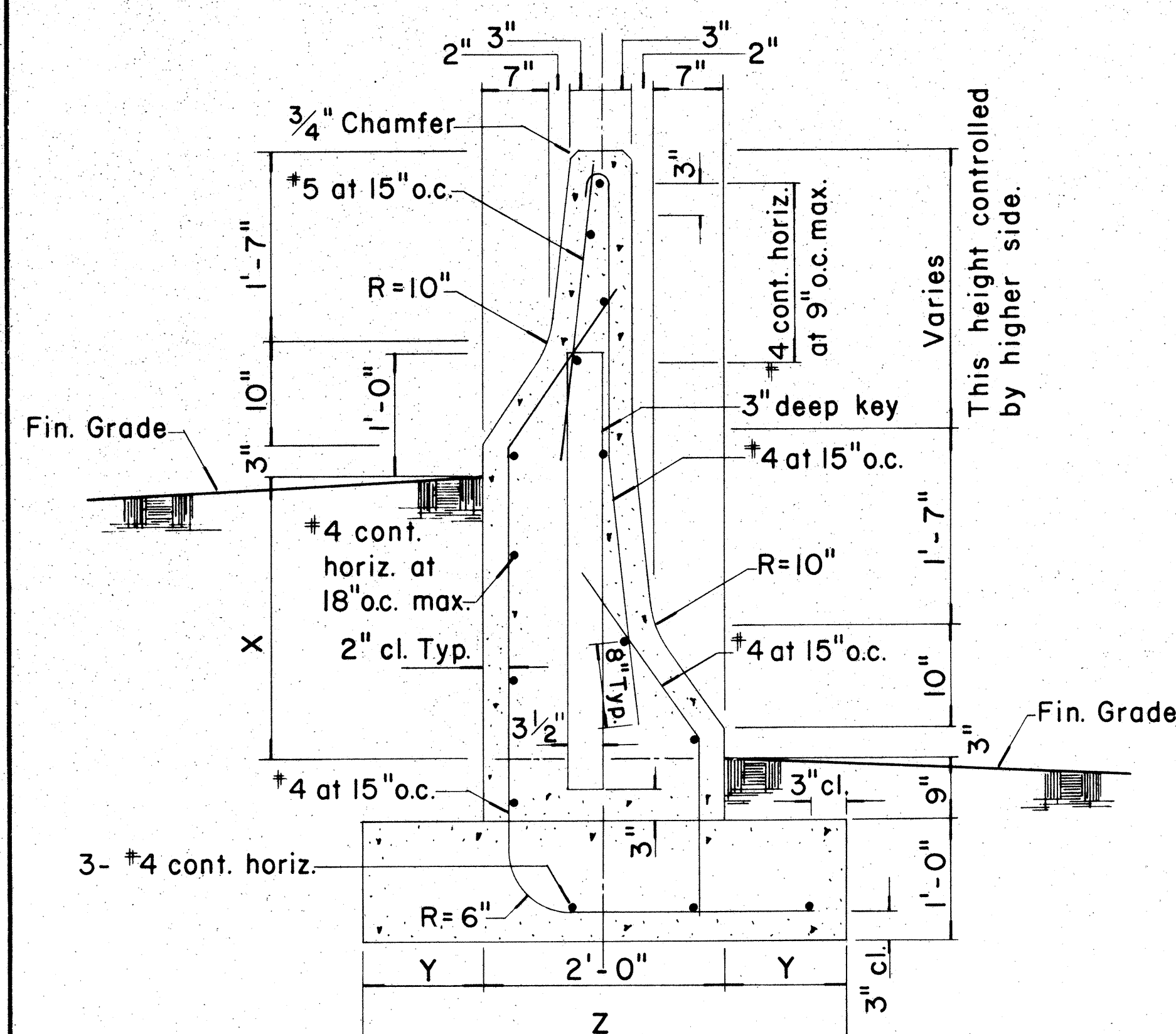


1. Precast Rigid Barrier Guard Rail may be installed as an option to cast-in-place Type 4 Rigid Barrier Guard Rail. Contractor shall submit shop drawings to Engineer for approval.
2. Expansion Joints shall be constructed at ninety-foot (90 ft.) maximum intervals and at existing expansion joints of structures. (Use $\frac{1}{2}$ " premolded joint filler, incidental to Type 4 Rigid Barrier Guard Rail). Control Joints shall be placed between expansion joints at 30' maximum. Shear keys shall be required at all construction joints.
3. The exterior surface and vertical alignment of the Type 4 Rigid Barrier Guard Rail shall be constructed to give a uniform and presentable appearance. Variation of more than $\frac{1}{4}$ " in 20' max. and $\frac{1}{2}$ " in 40' or more will be considered objectionable. The Engineer shall determine the acceptability of the work.
During the course of the work, samples may be tested and measurements made to establish whether or not the specified values or dimensions are being met. If the specified values or dimensions are not being met, the Engineer shall determine the degree of the non-conformance, the effect on the serviceability of the project, whether the work be accepted and remain in place and, if so, the amount to be paid for such work, or whether the work shall be removed and replaced or otherwise corrected at the Contractor's expense.



SECTION THRU KEY
AT EXPANSION JOINT

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

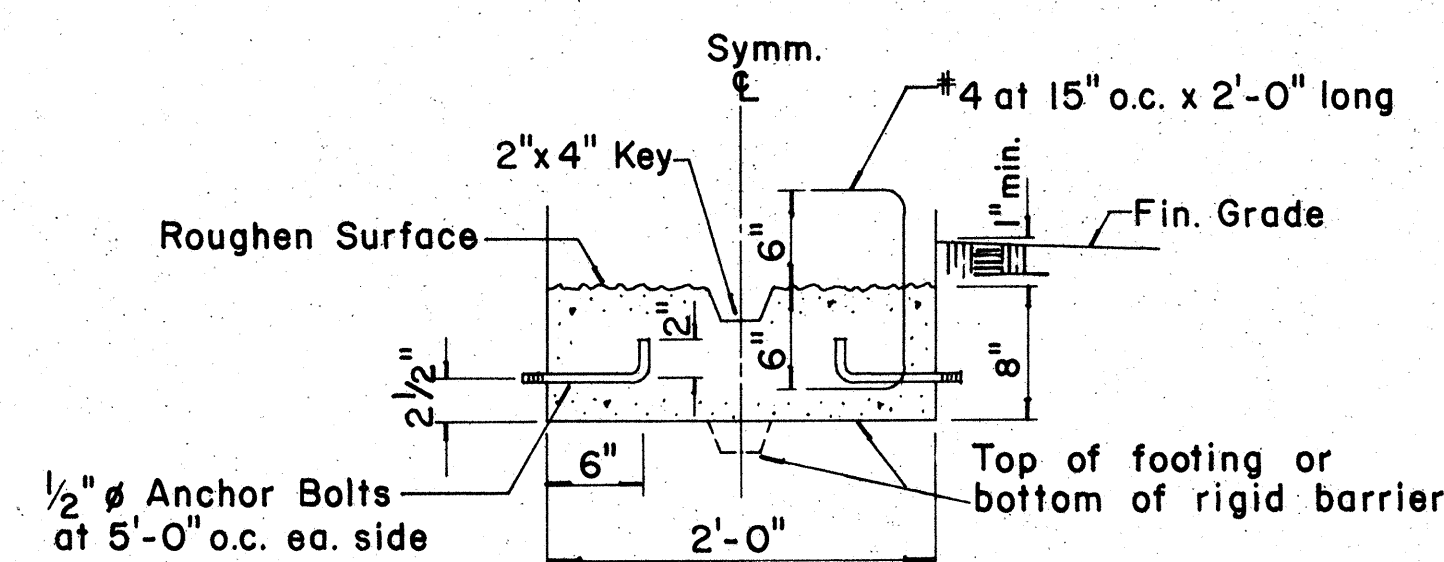


Scale: 1" = 1' - 0"

TYPE	DIFFERENCE IN FIN. GRADE	FOOTING	
	X	Y	Z
4 C	1'-0" min., 2'-4" max.	1'-0"	4'-0"
4 D	Greater than 2'-4" 4'-4" max.	1'-3"	4'-6"

NOTE:

Except where noted all dimensions shall be the same for Type 4C and Type 4D.



OPTIONAL CONSTRUCTION JOINT DETAILS

Scale: 1" = 1'-0"

NOTE:

The intent of the optional construction joint details for the Type 4 Rigid Barrier Guard Rail is to provide a method of securing the forms and preventing uplift so that the barrier will have a uniform and presentable appearance.

The contractor may submit an alternate method of constructing the barrier for the approval of the Engineer and for use on a trial basis. Any unsatisfactory work shall be removed or corrected as directed by the Engineer and at the Contractor's expense.

NO.	REVISION	APPROVED BY	DATE
1	Supersede Sht. DT 521 Approved 12-30-69	H.T.	2/10/70

APPROVAL RECOMMENDED:

Eiichi Tanaka
TRAFFIC ENGINEER

2/10/7.
DATE

APPROVED:

27th Feb 2018
ASSISTANT CHIEF ENGINEERING

2/20/
DATE

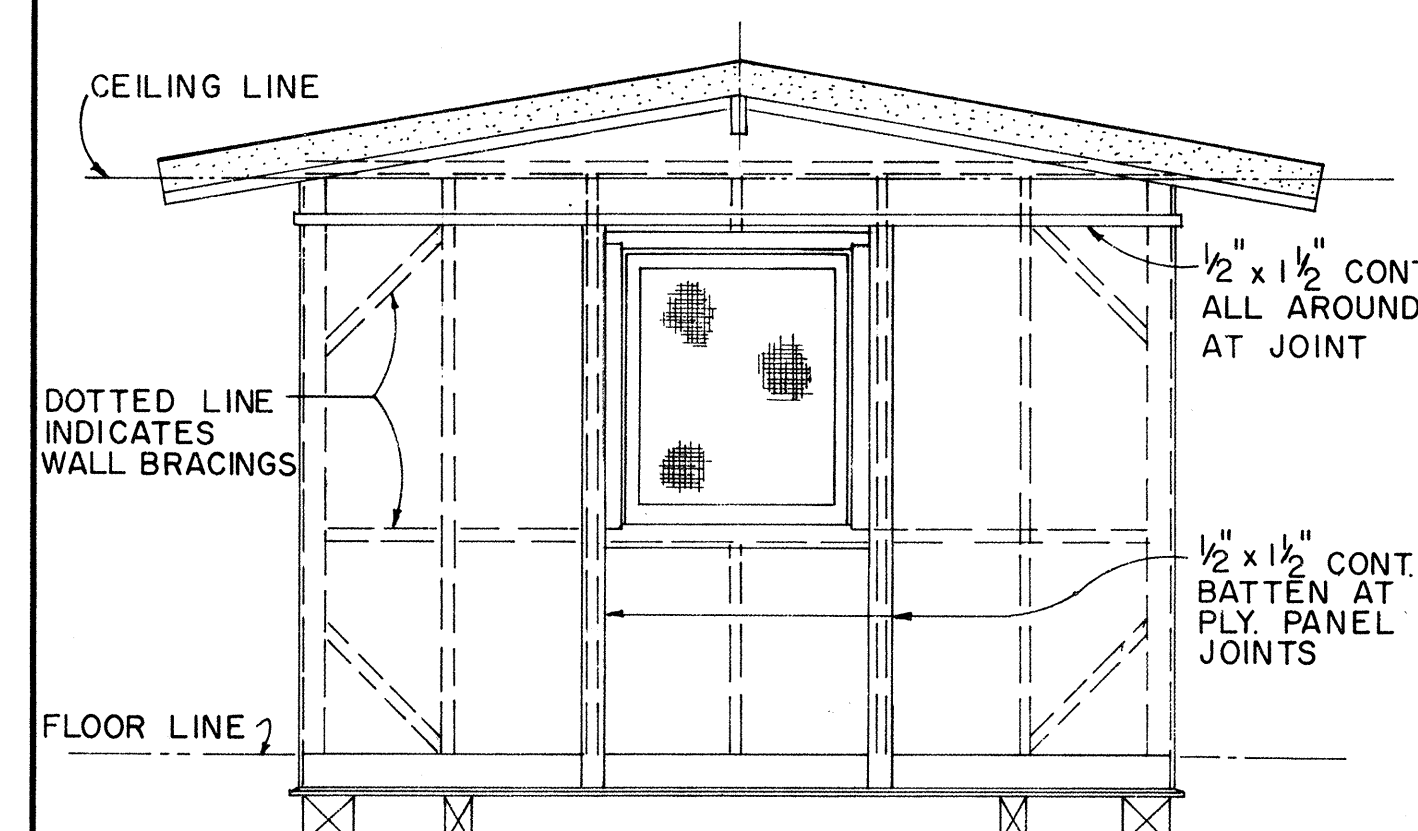
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
GUARD RAIL TYPE 4
(RIGID BARRIER)

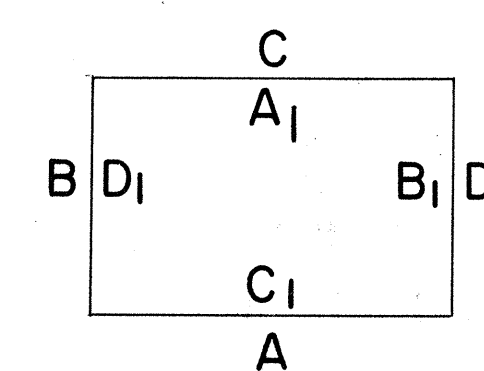
Scale: As Shown

SHEET No. 16B OF 23 SHEETS		DT 521
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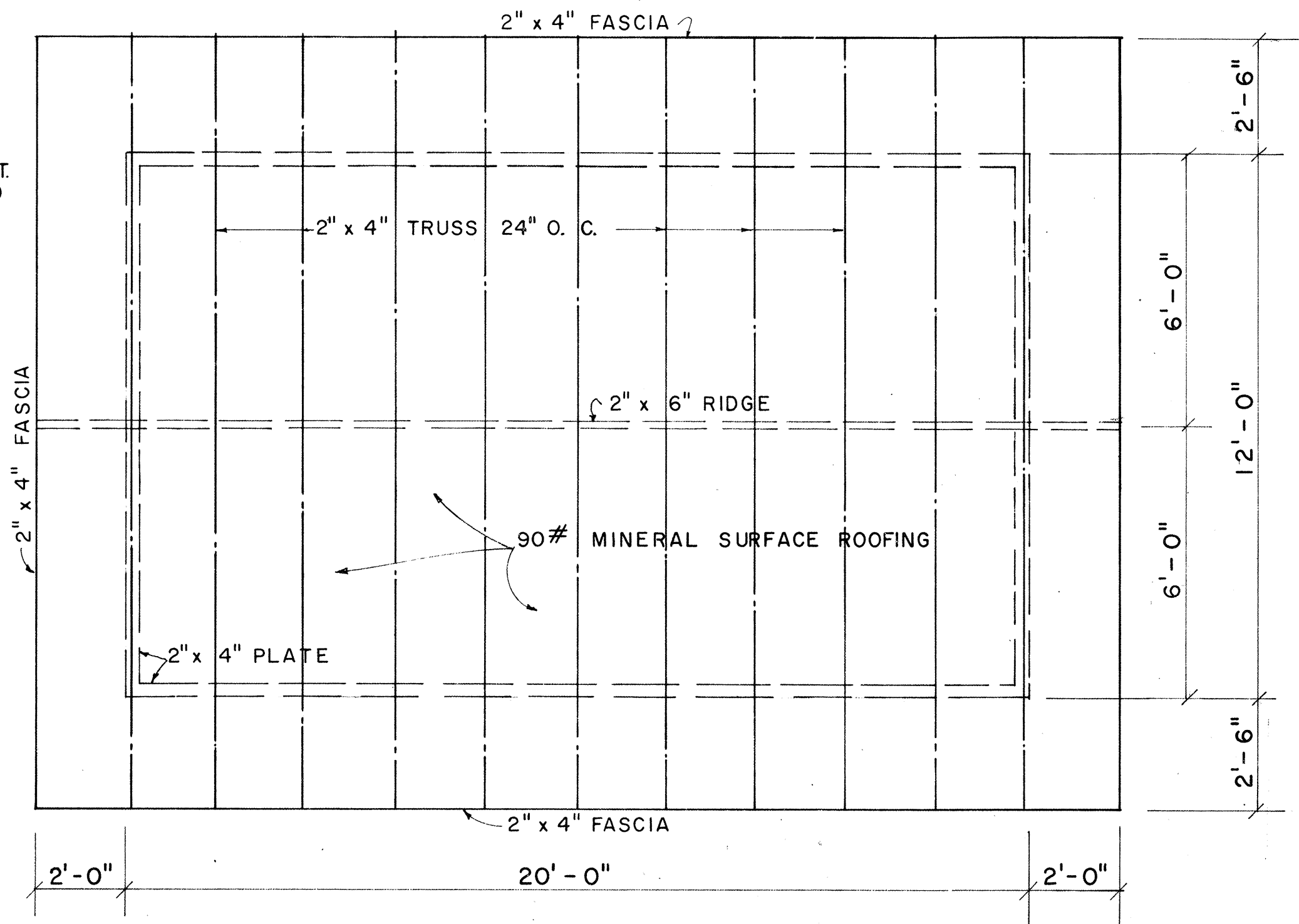
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	I-41-1(102)-13	1975	29	130



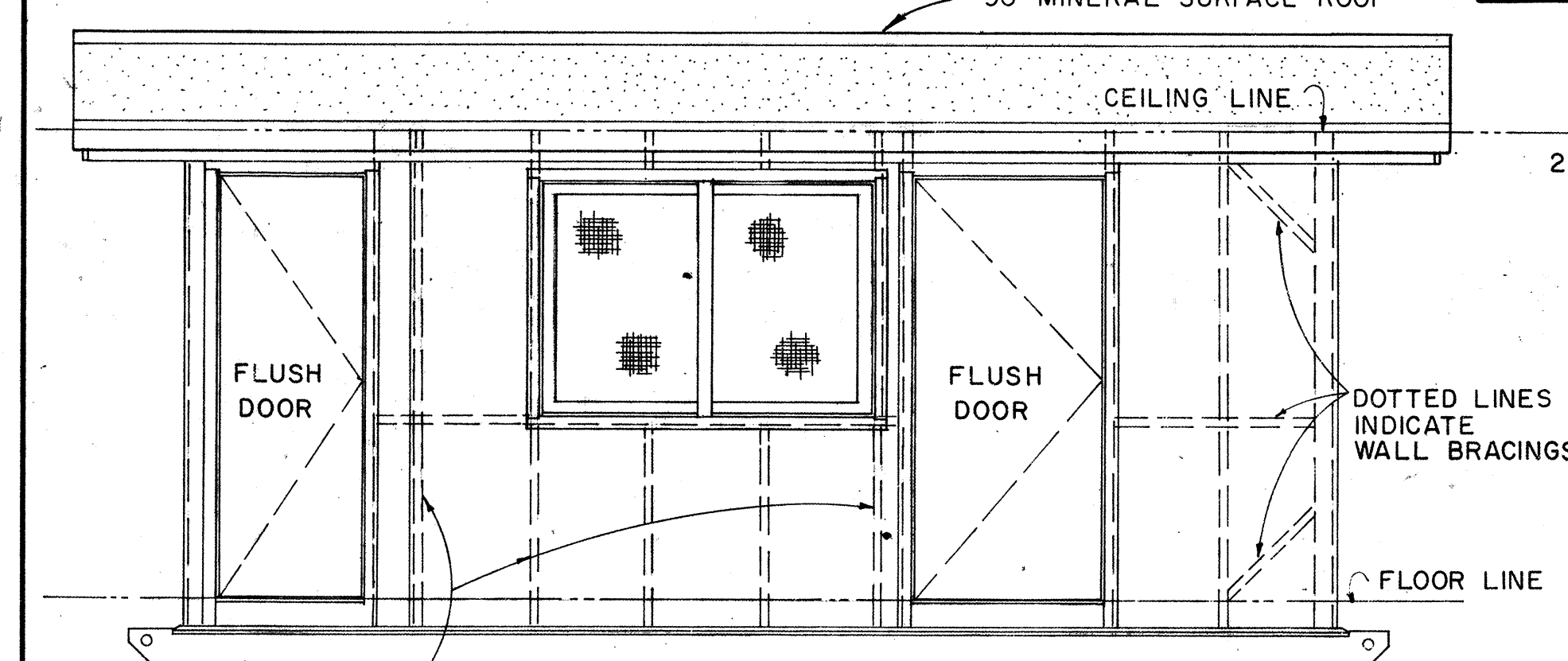
ELEVATION B
ELEVATION D SIMILAR
SCALE: 3/8" = 1'-0"



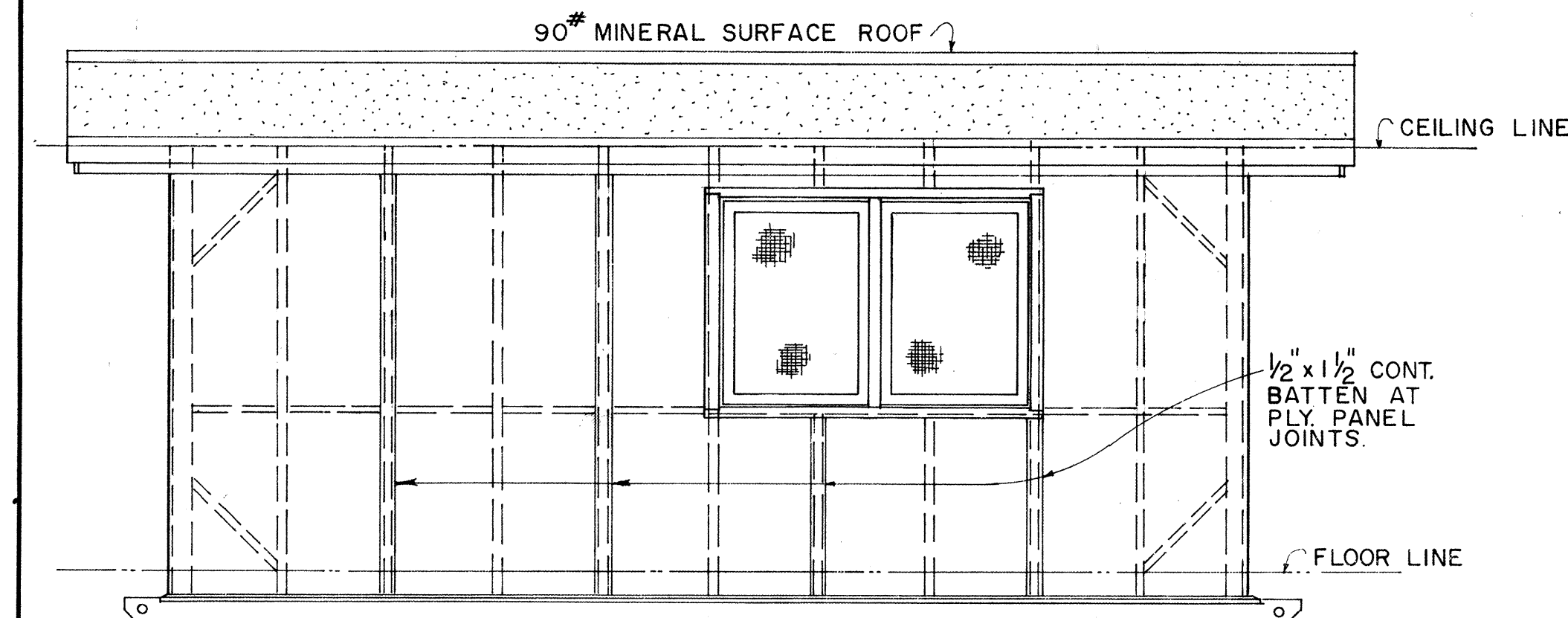
EXTERIOR & INTERIOR KEY



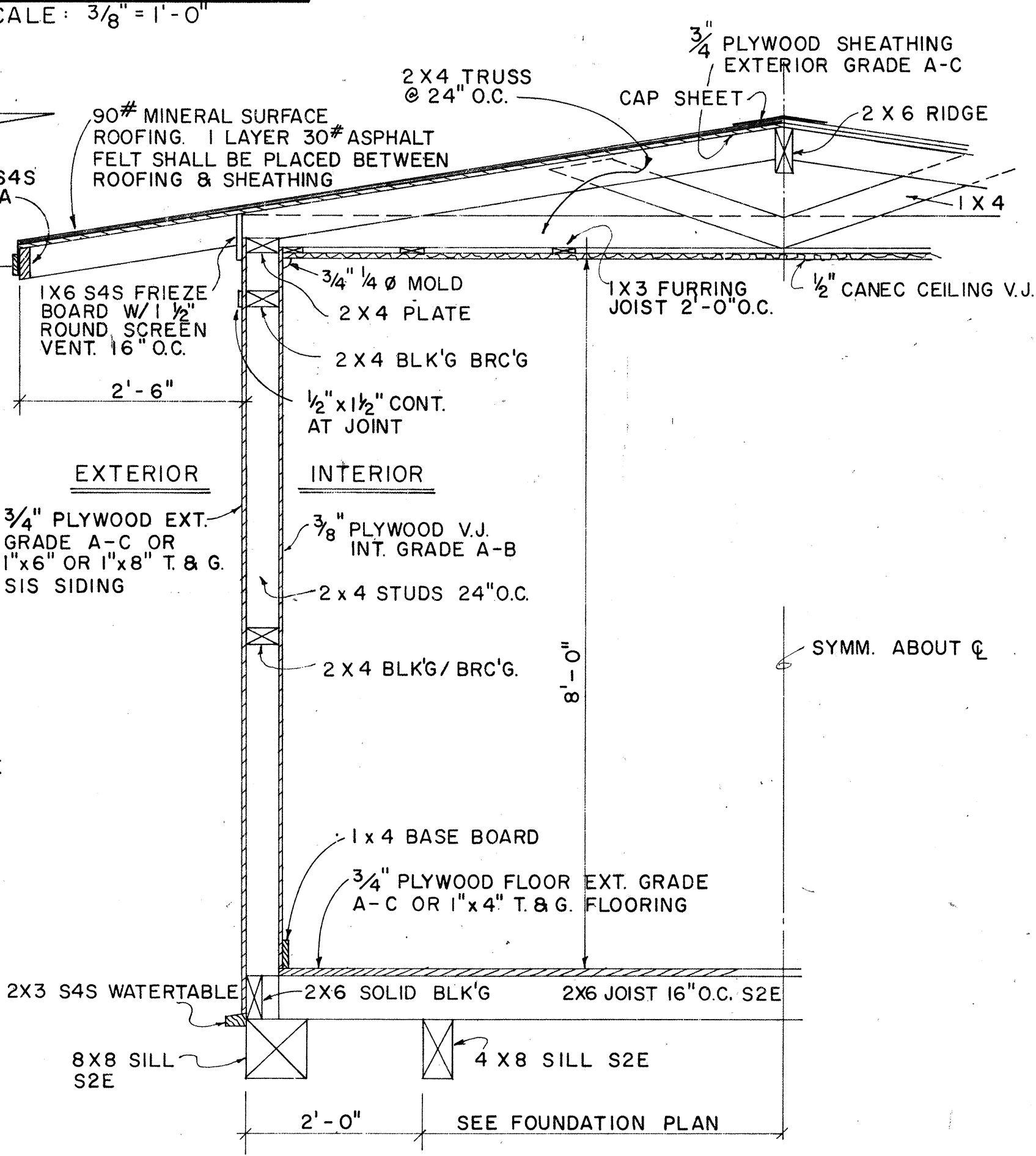
ROOF FRAMING PLAN
SCALE: 3/8" = 1'-0"



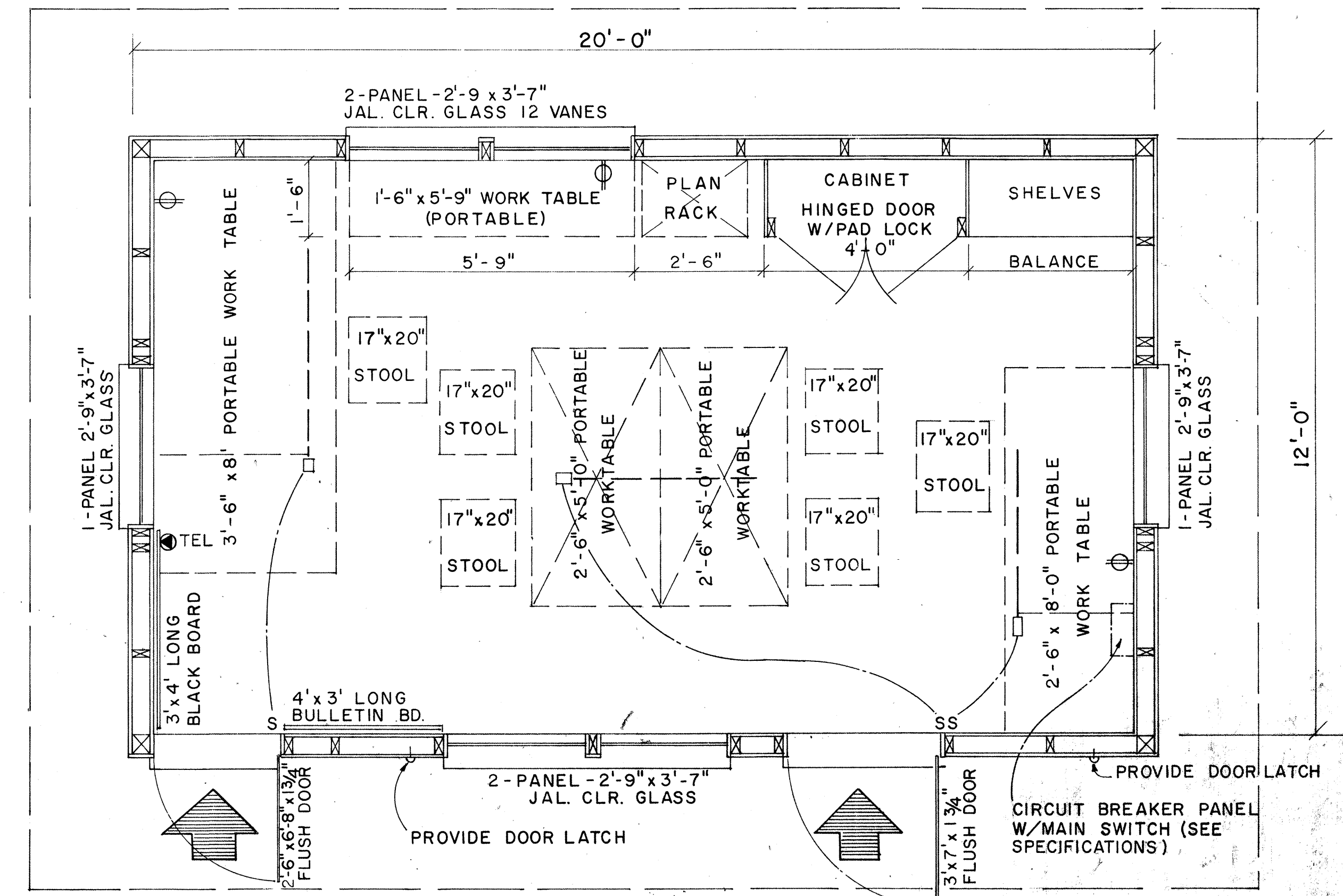
ELEVATION A
SCALE: 3/8" = 1'-0"



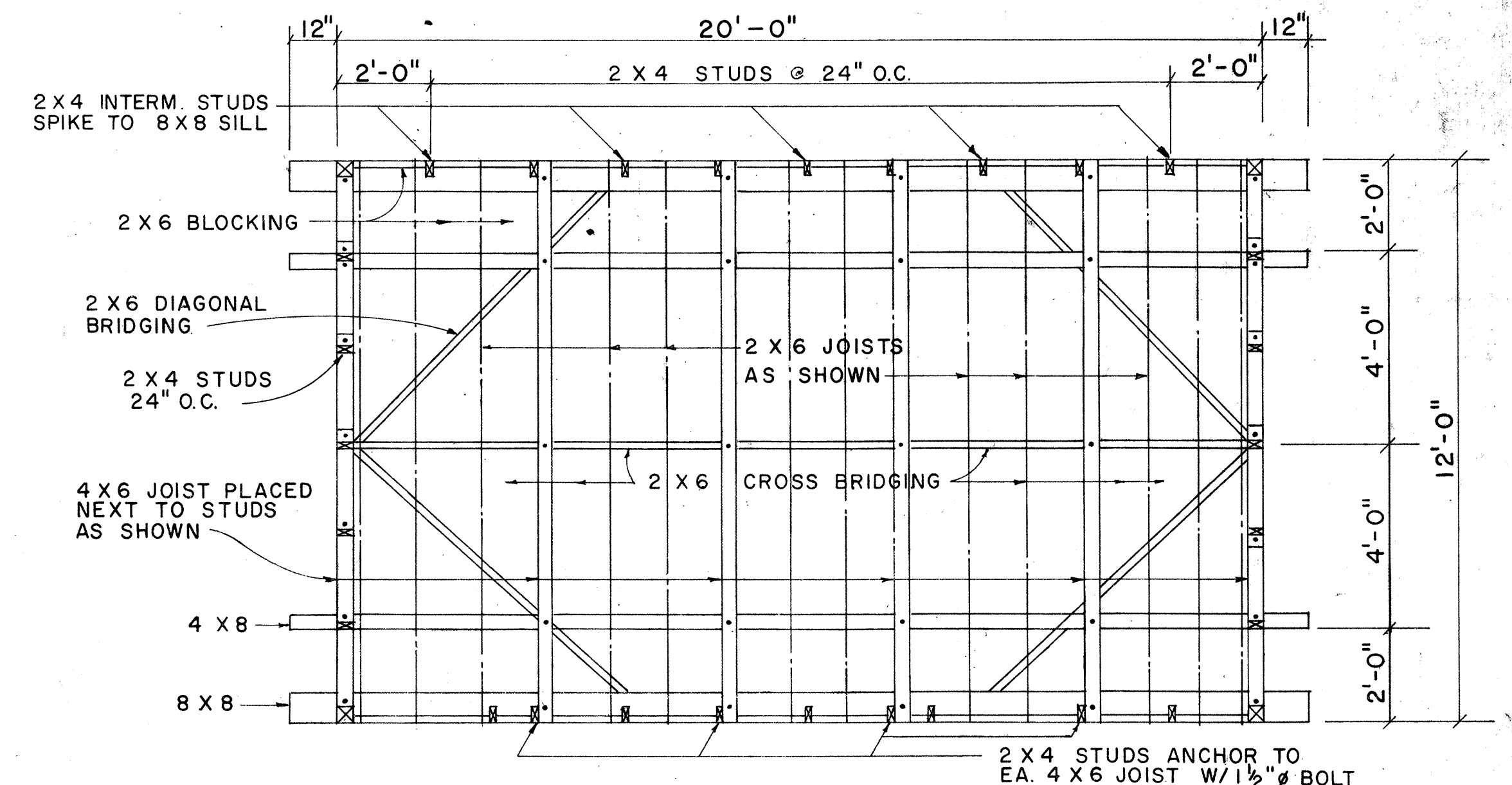
ELEVATION C
SCALE: 3/8" = 1'-0"



TYPICAL WALL SECTION
SCALE: 3/4" = 1'-0"



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



FOUNDATION FRAMING PLAN
SCALE: 3/8" = 1'-0"

APPROVAL RECOMMENDED:

HIGHWAY DESIGN ENGINEER
12-4-69
DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING
12-10-69
DATE

NO.	REVISION	APPROVED BY	DATE

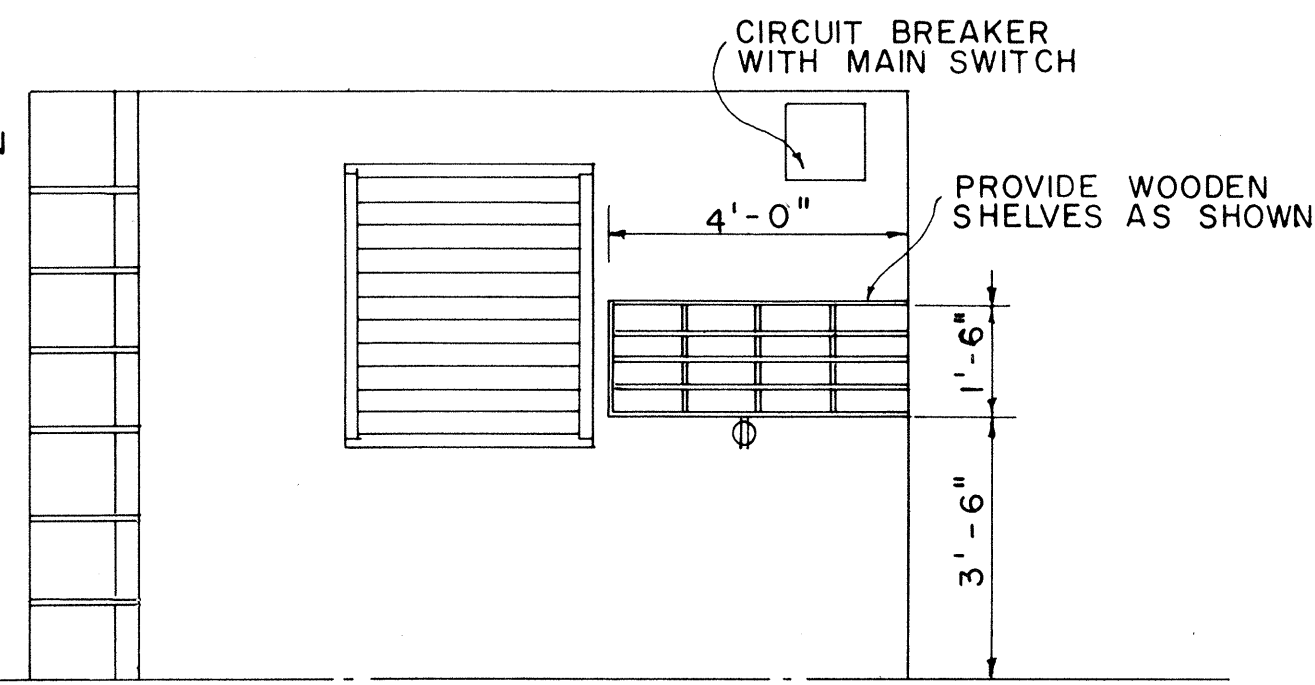
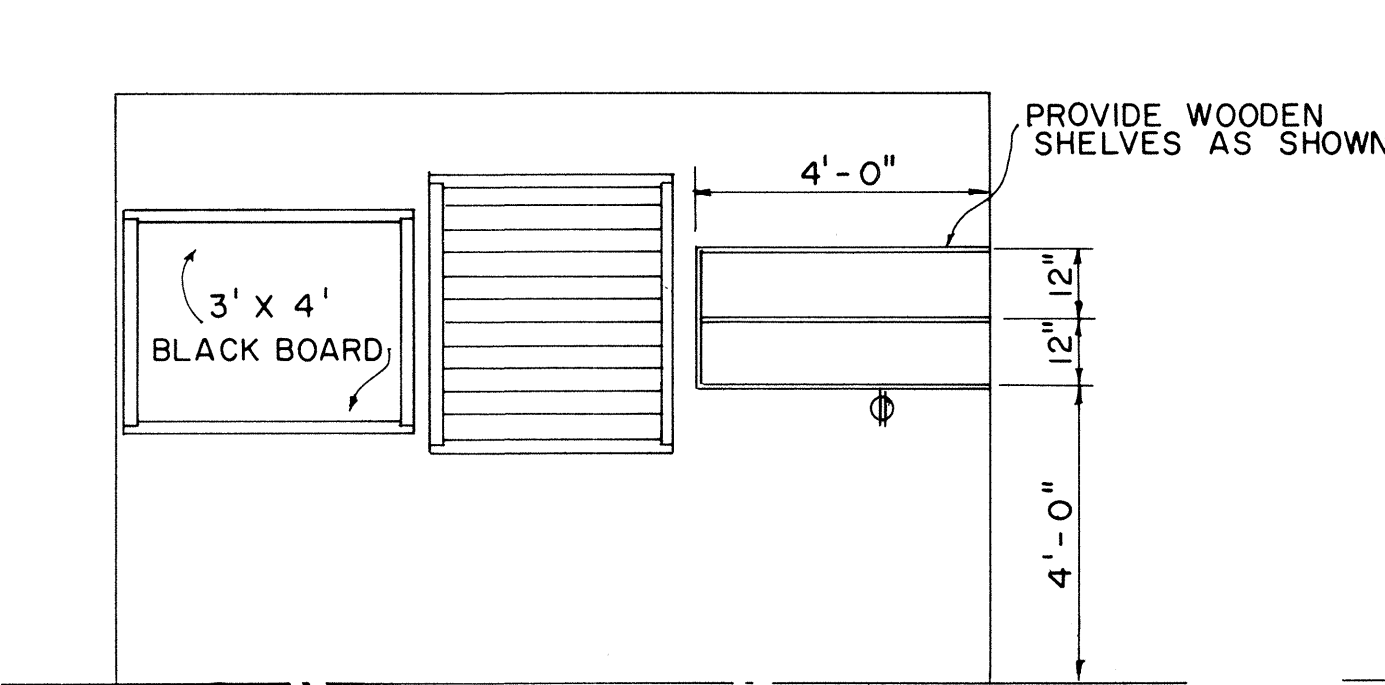
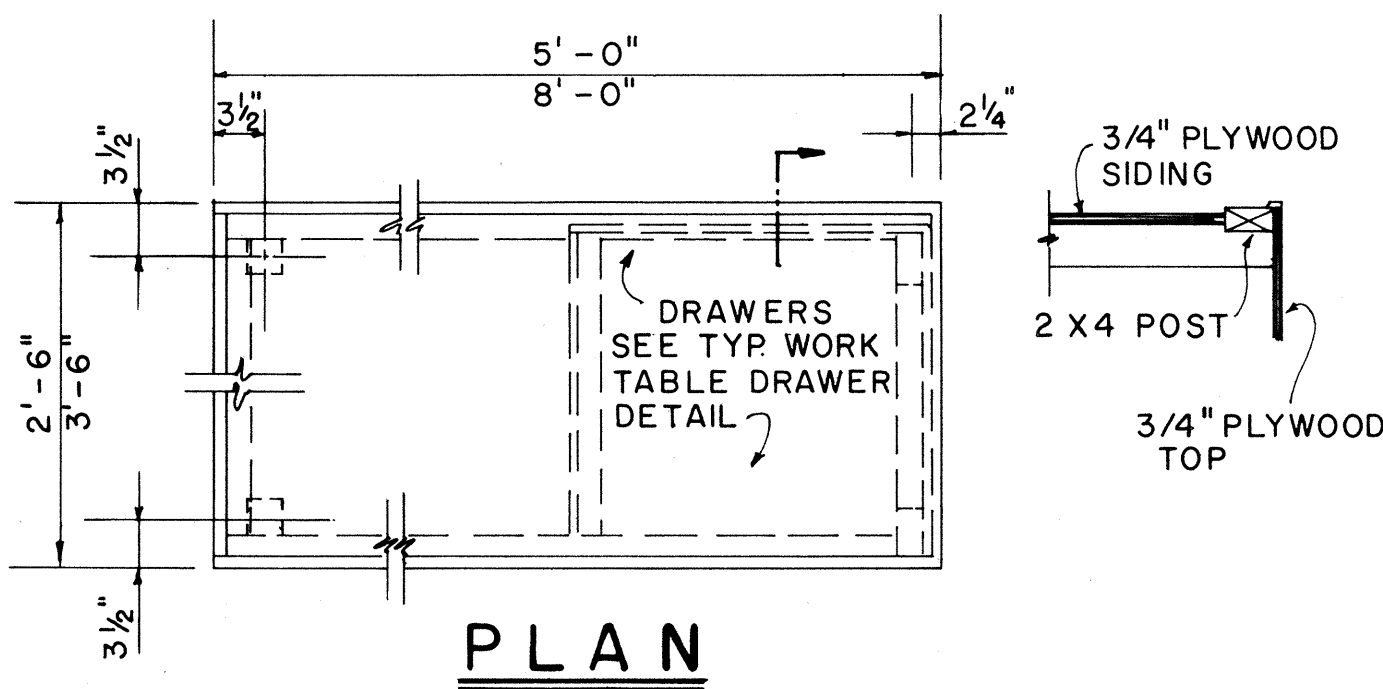
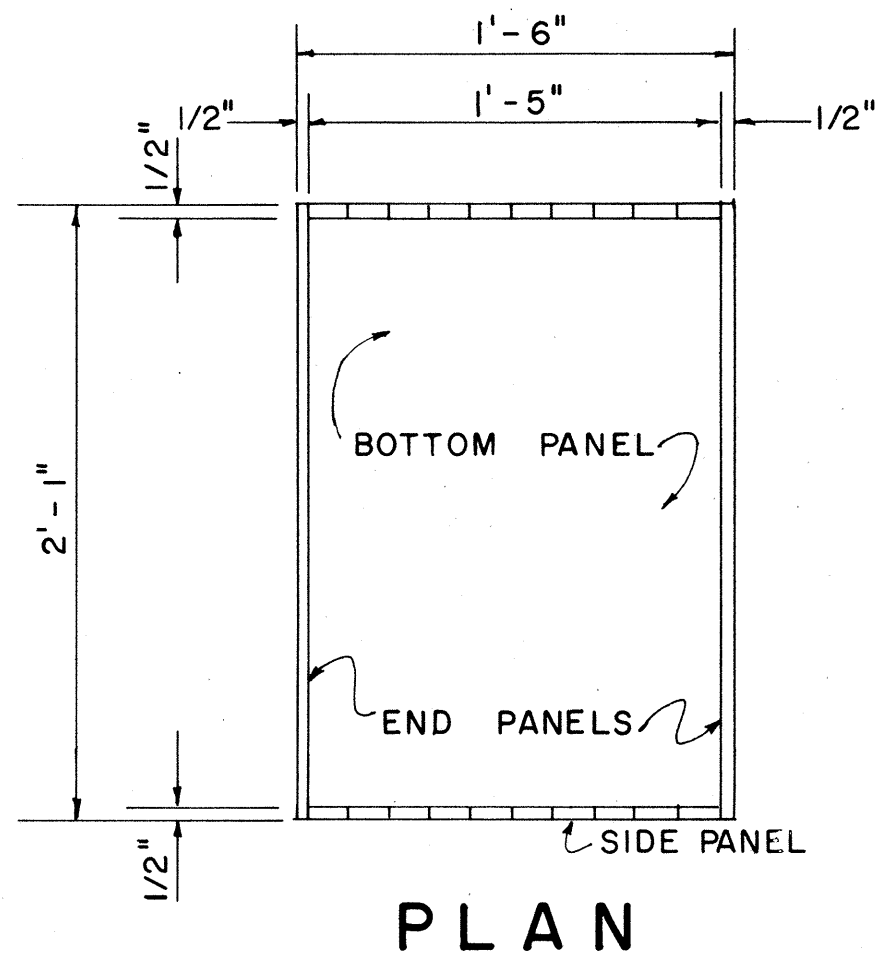
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

FIELD OFFICE

Scale: As Noted Date: Dec. 23, 1972
SHEET NO. 178 OF 23 SHEETS DD 636.1

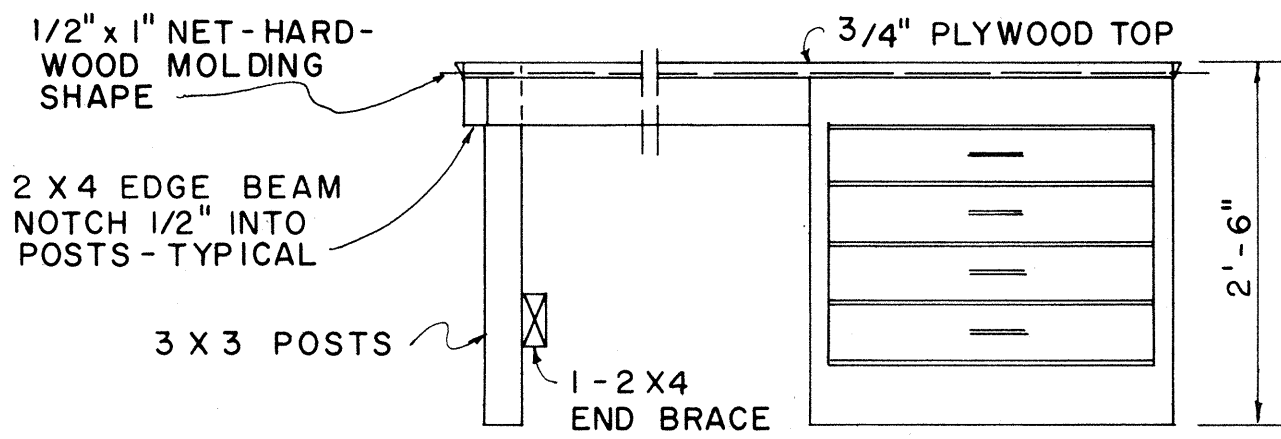
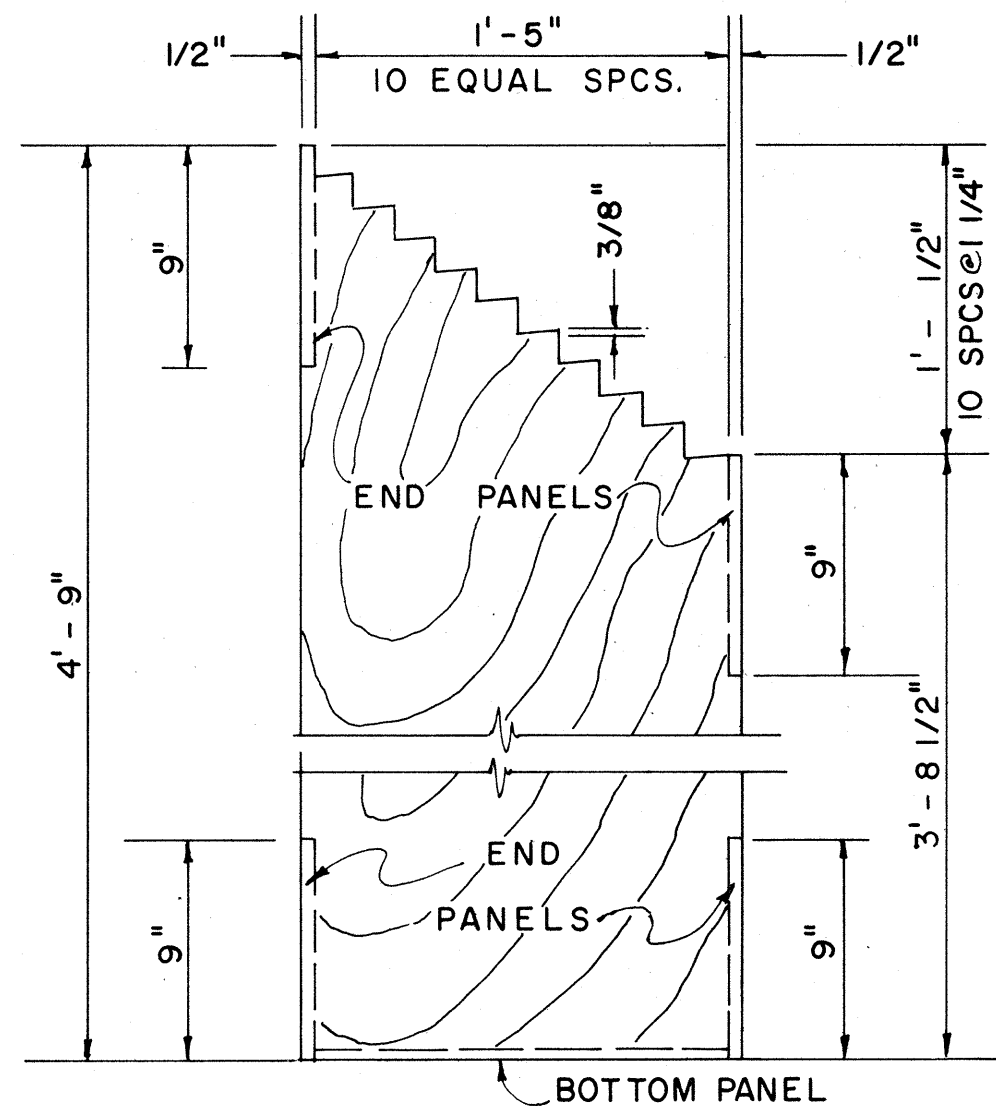
SURVEY PLOTTED BY: _____ DATE: _____
PLAN CHECKED BY: _____
NOTE BOOK DESIGNED BY: _____
QUANTITIES BY: _____
CHECKED BY: _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	I-HI-1(109)-13	1975	30	130



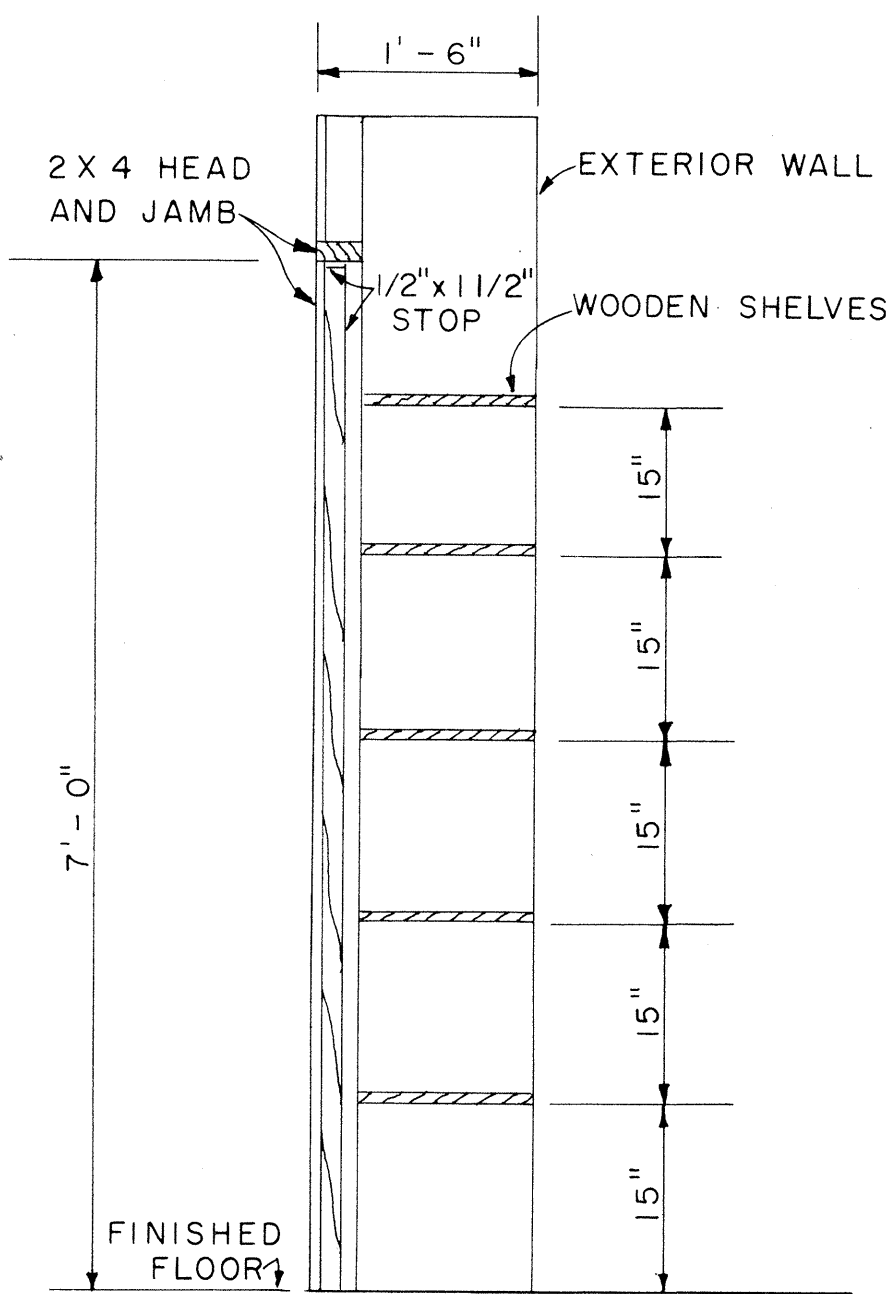
ELEVATION D1
SCALE: 3/8" = 1'-0"

ELEVATION B1
SCALE: 3/8" = 1'-0"

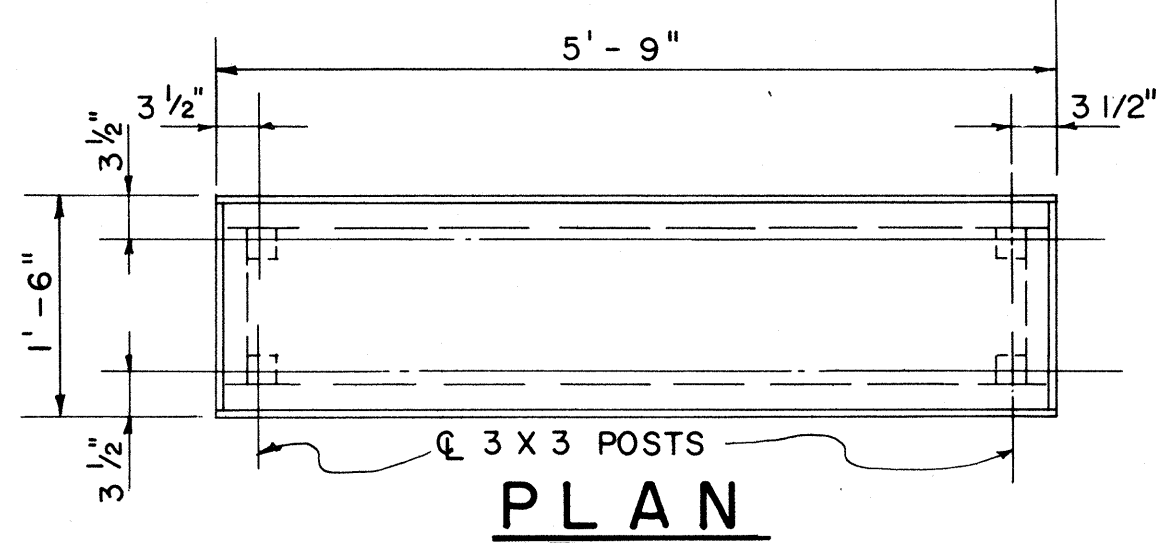


ELEVATION
2'-6" x 5'-0" 2 REQ'D.
3'-8" x 8'-0" 1 REQ'D.
2'-6" x 8'-0" 1 REQ'D.

PORTABLE WORK TABLE DETAIL
SCALE: 3/4" = 1'-0"

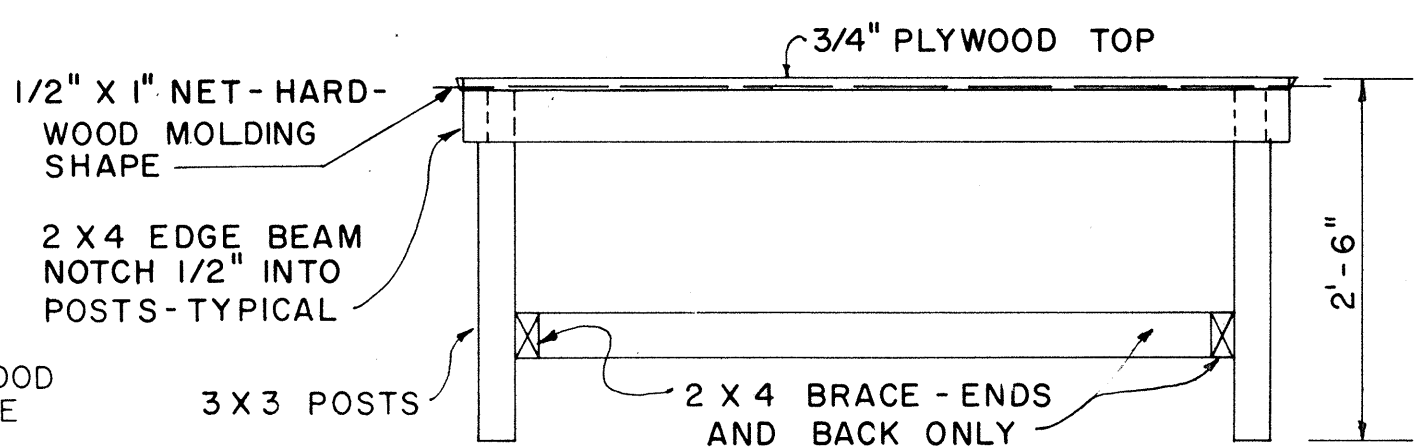


SECTION G
SCALE: 3/4" = 1'-0"



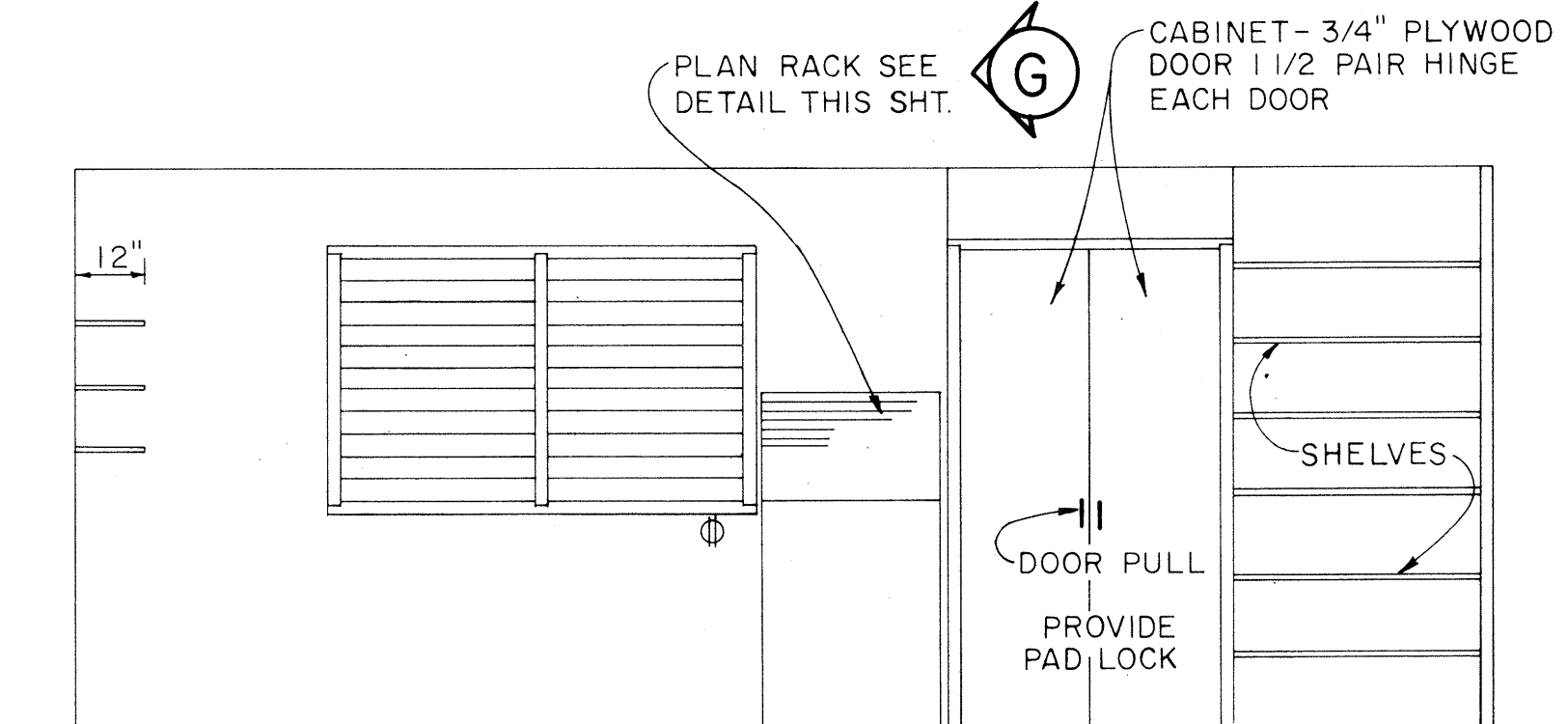
END ELEVATION

PLAN RACK DETAIL
SCALE: 1 1/2" = 1'-0"
(ONE REQUIRED)



ELEVATION

1'-6" x 5'-9" PORTABLE WORK TABLE DETAIL
SCALE: 3/4" = 1'-0"



ELEVATION A1
SCALE: 3/8" = 1'-0"

APPROVAL RECOMMENDED:
M. J. J. J. 12-4-69
HIGHWAY DESIGN ENGINEER DATE

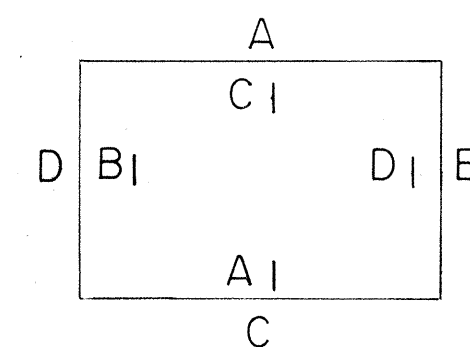
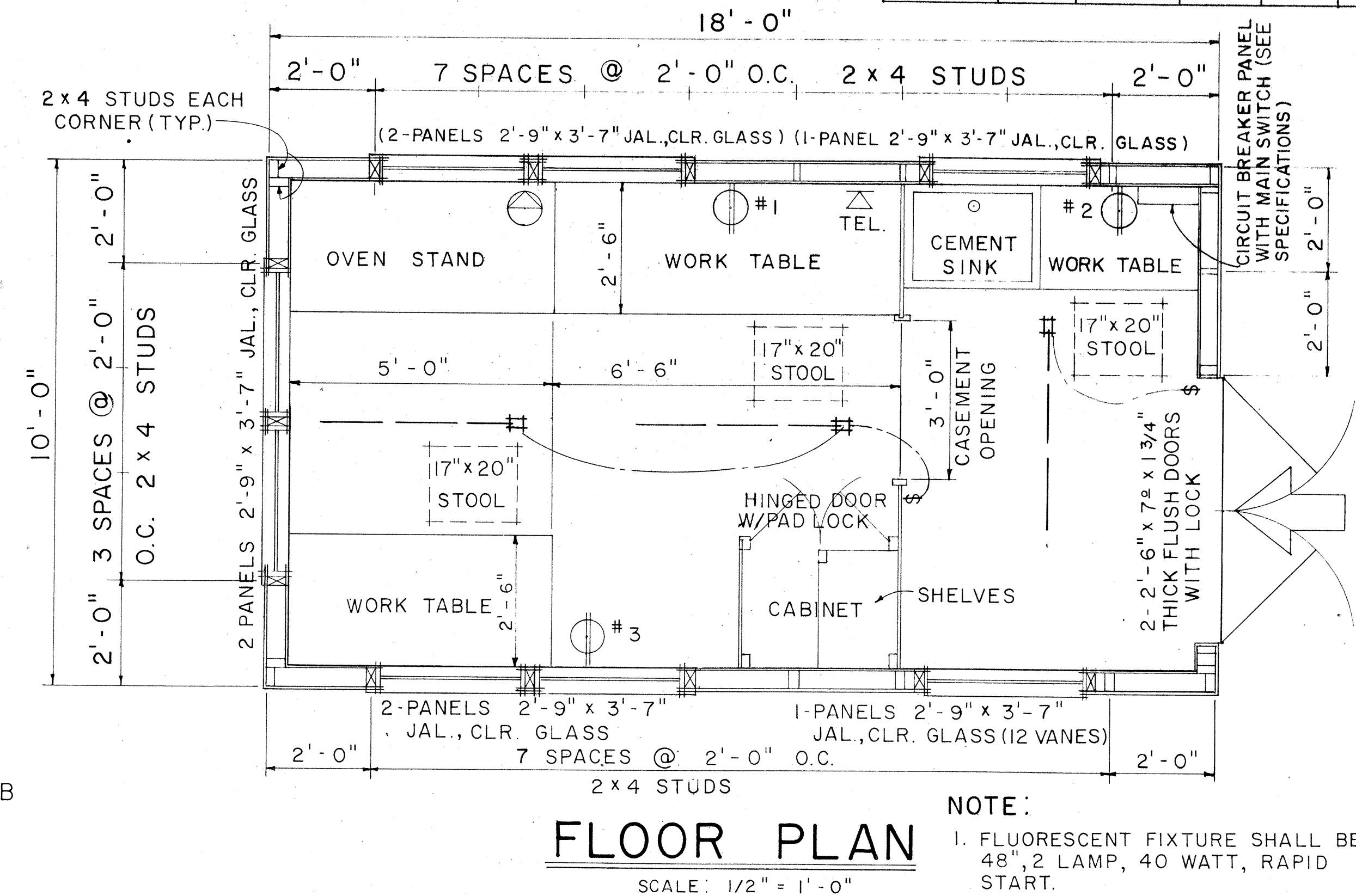
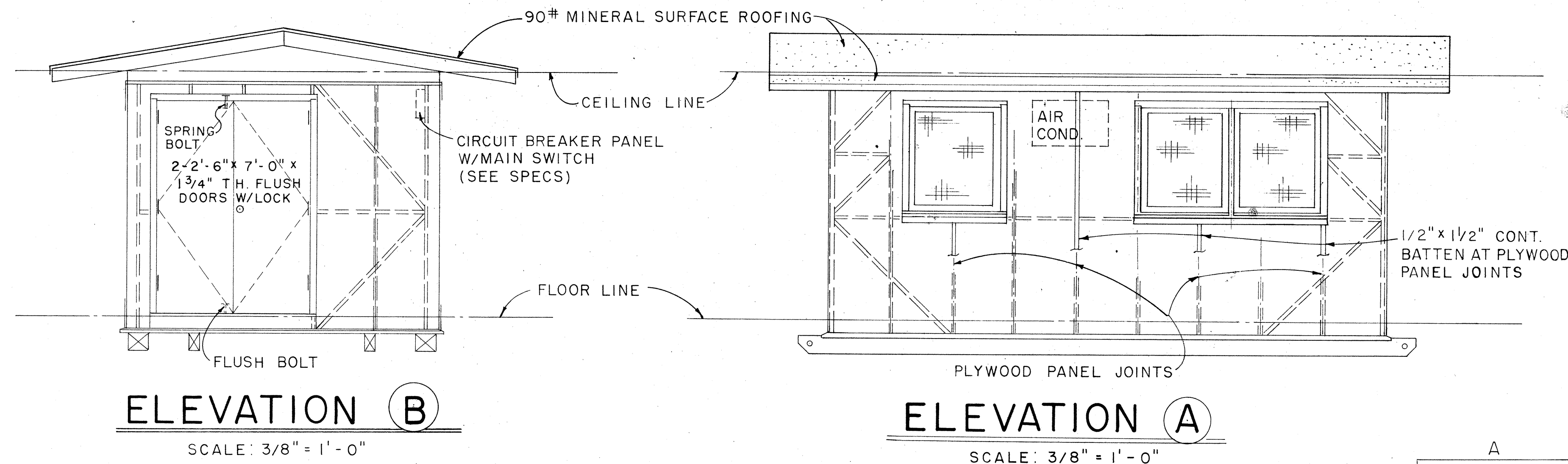
APPROVED:
M. J. J. J. 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

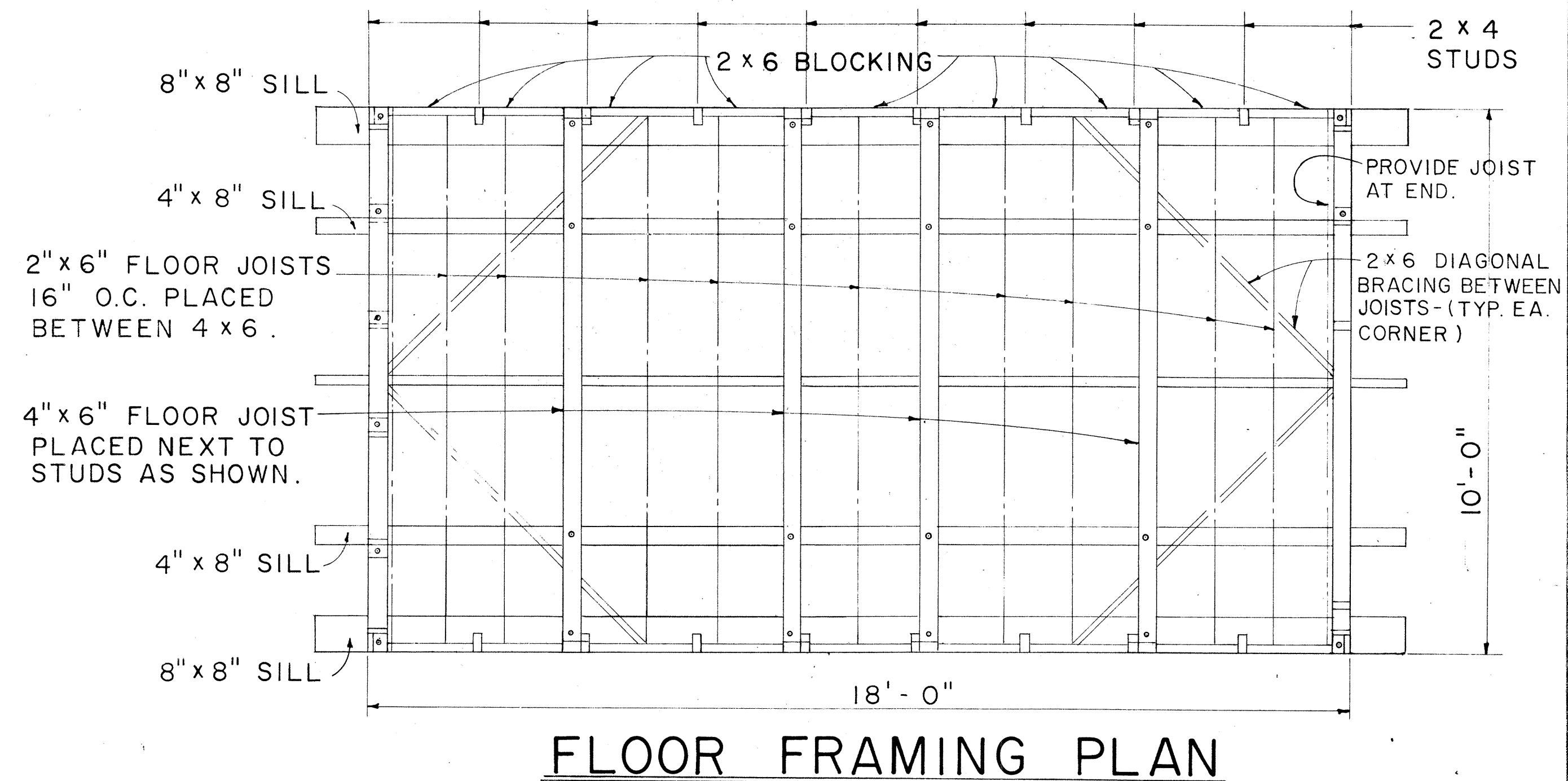
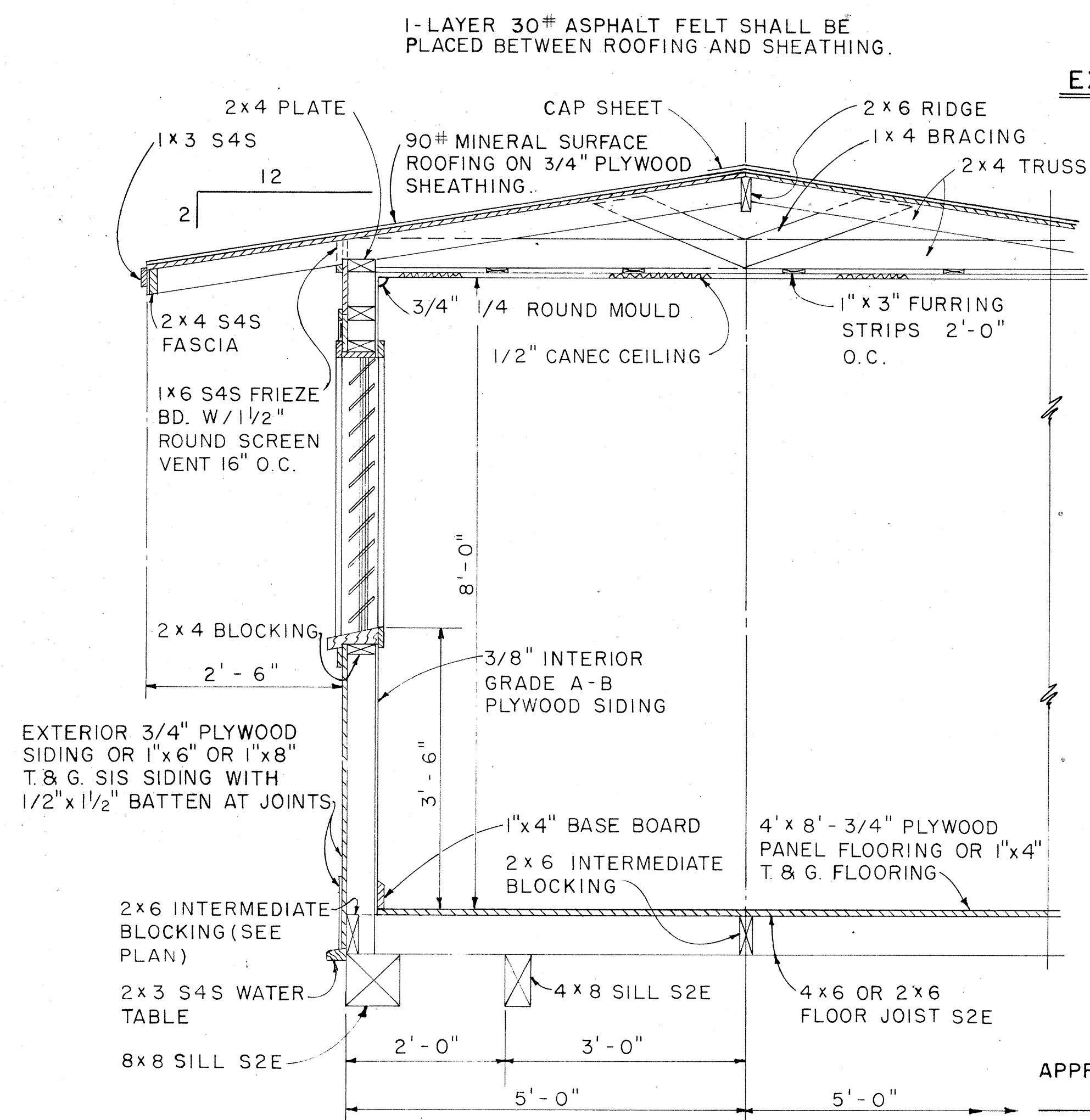
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIELD OFFICE

Scale: As Noted Date: Dec. 29, 1972



EXTERIOR & INTERIOR KEY



NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PROJECT SITE LABORATORY

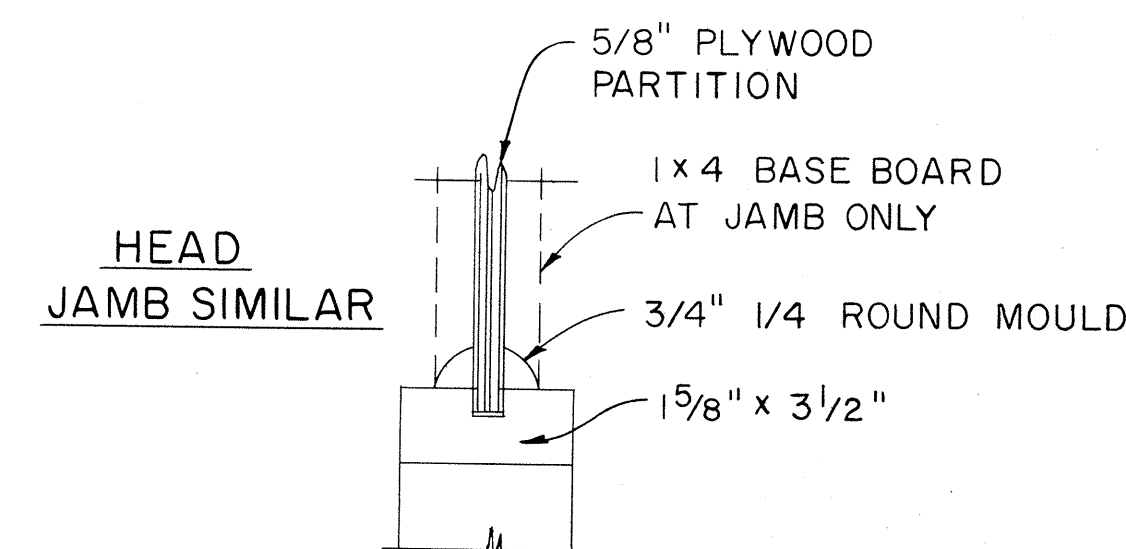
Scale: As Noted Date: Dec. 29, 1972

APPROVAL RECOMMENDED:
HIGHWAY DESIGN ENGINEER 12-4-69 DATE

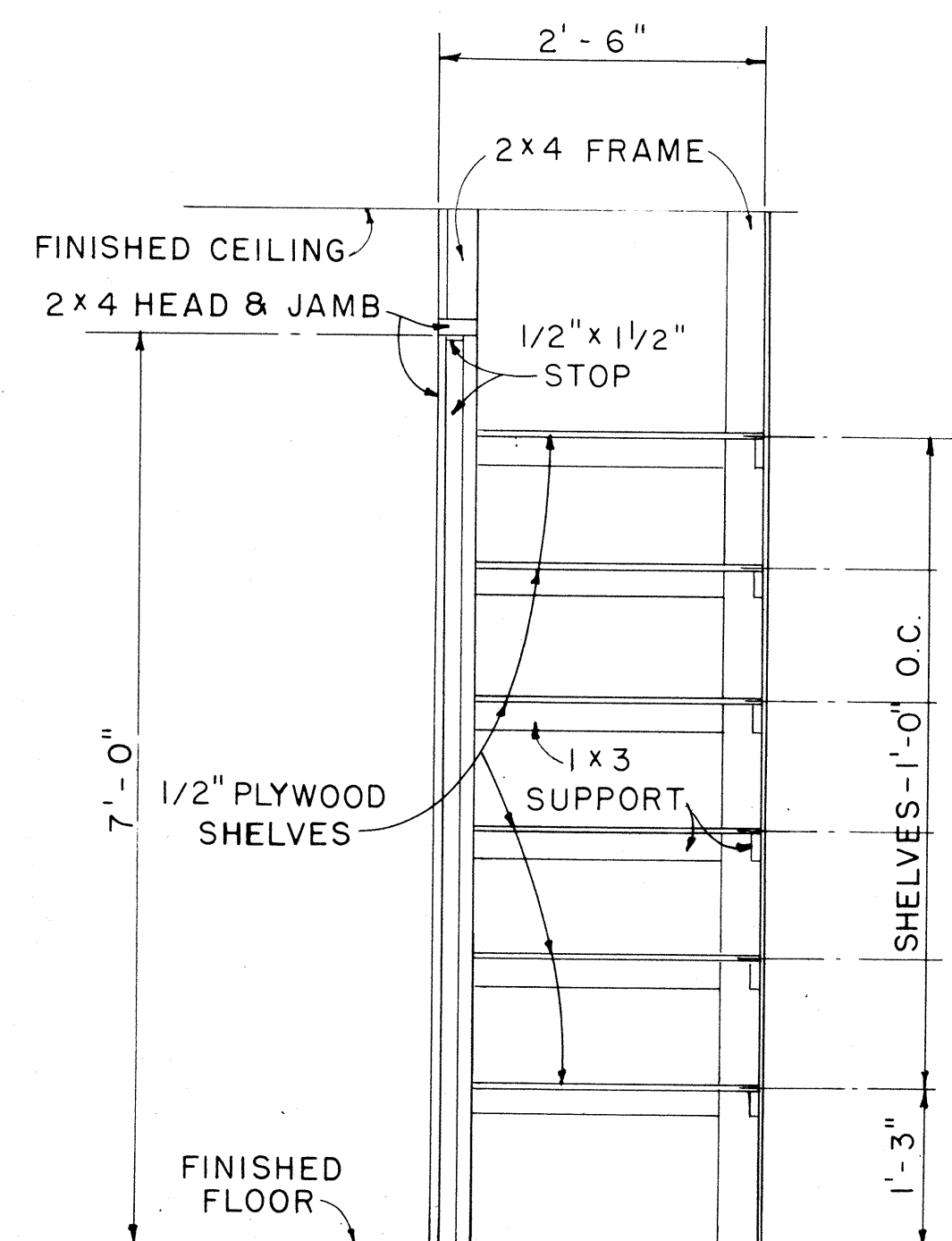
APPROVED:
ASSISTANT CHIEF, ENGINEERING 12-10-69 DATE

NOTE:
ALL 3/4" PLYWOOD SHALL BE EXTERIOR GRADE A-C OR BETTER.

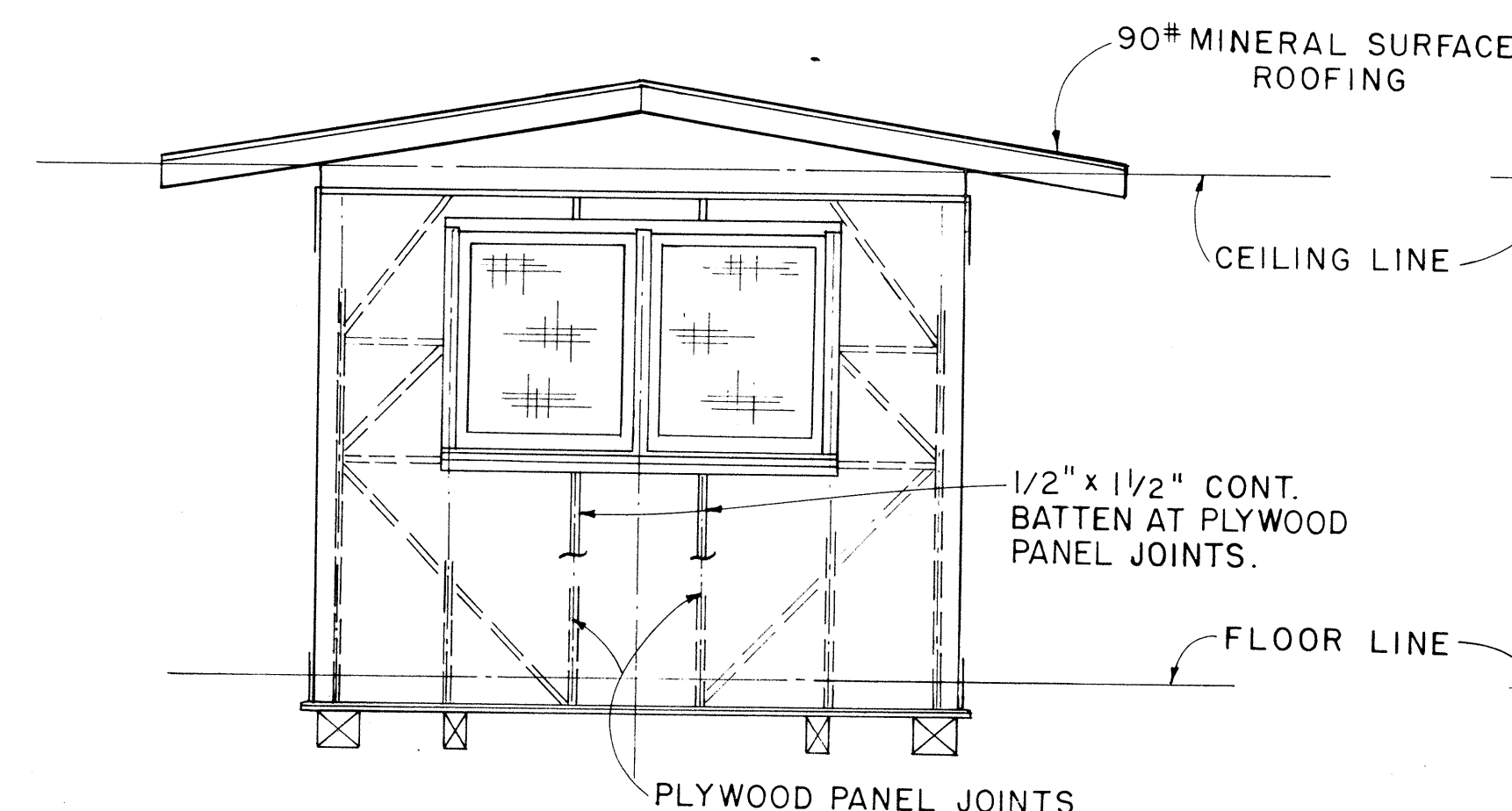
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(109)13	1975	32	130



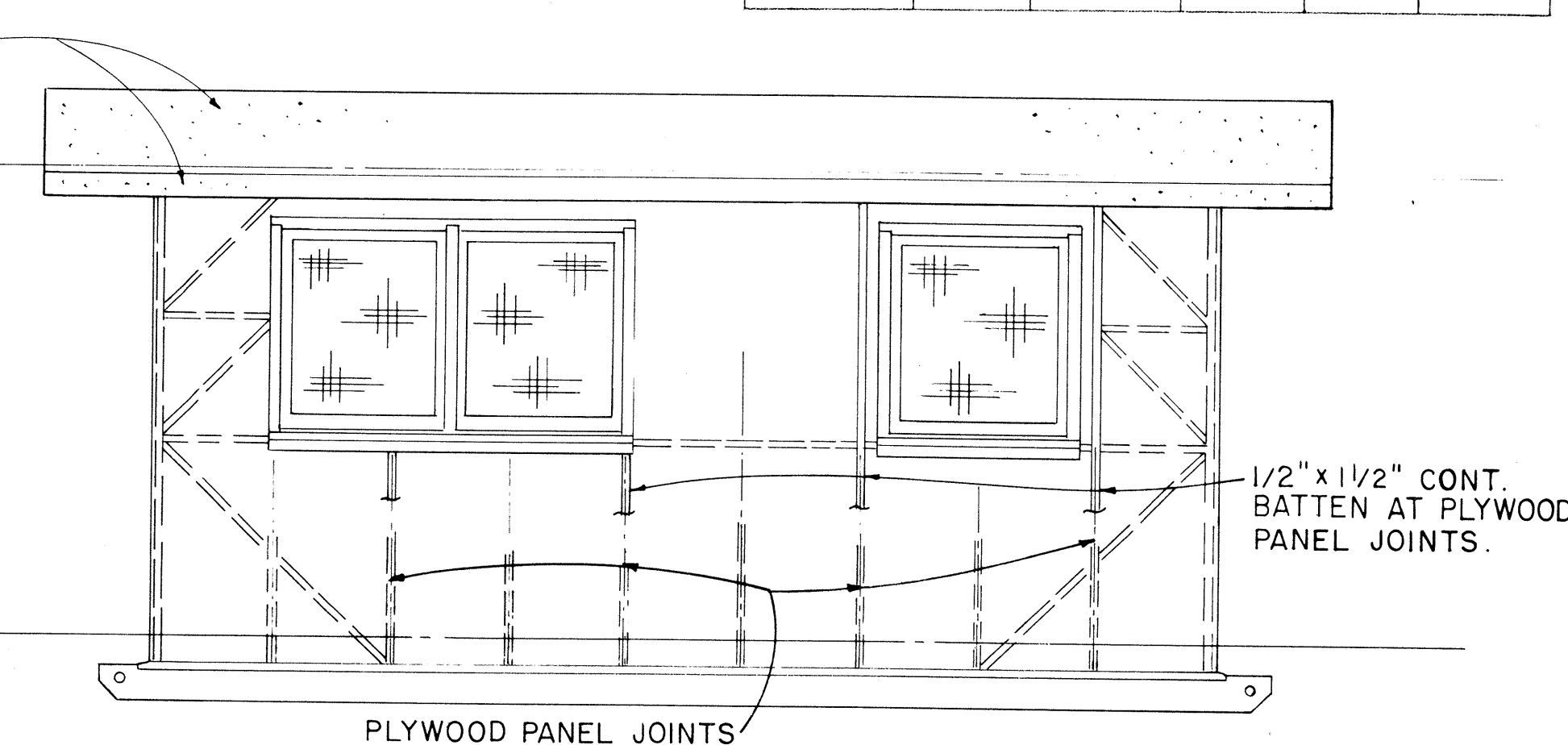
CASEMENT DETAIL
SCALE: 3" = 1'-0"



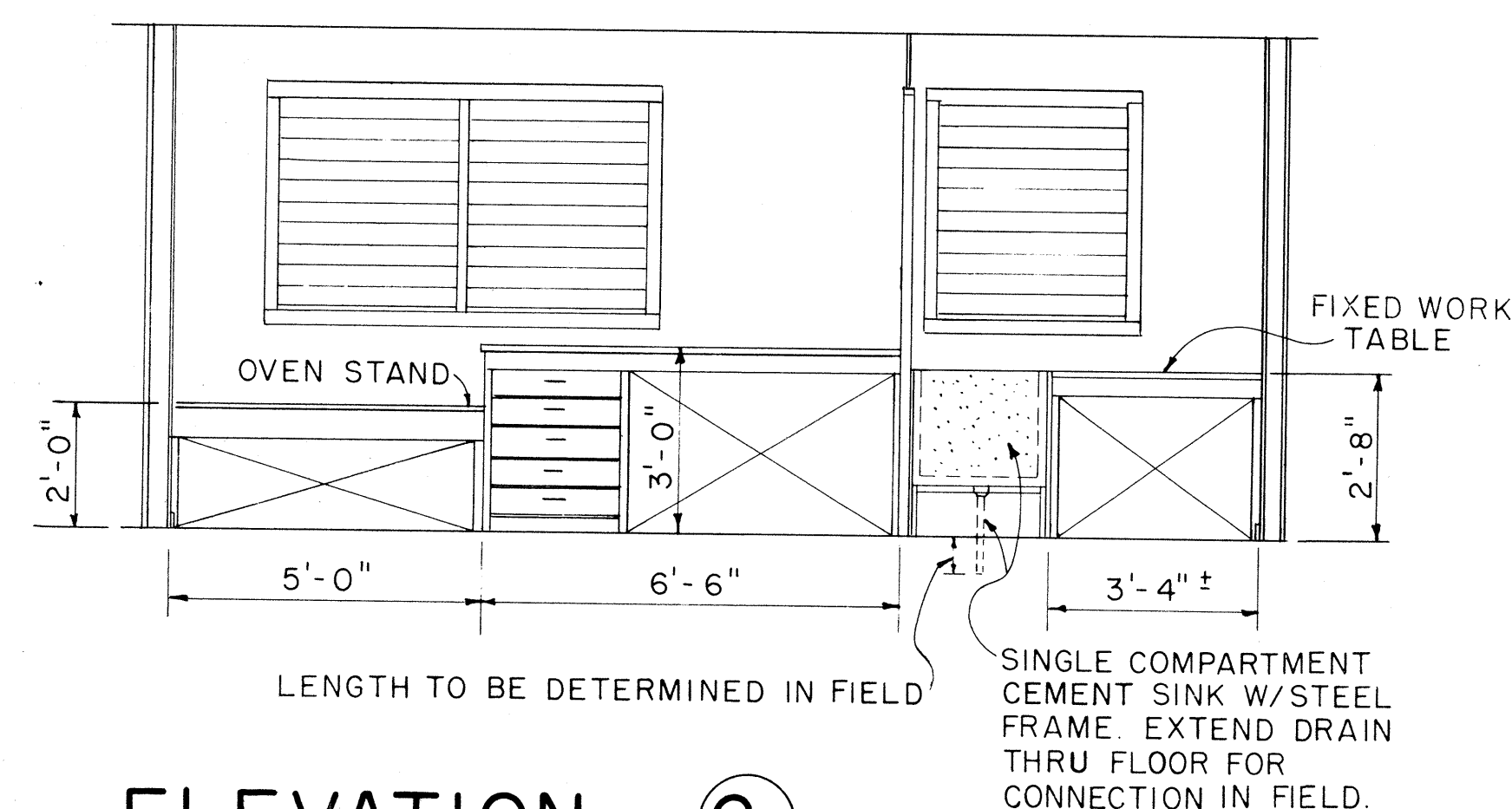
CABINET DETAIL
SCALE: 3/4" = 1'-0"



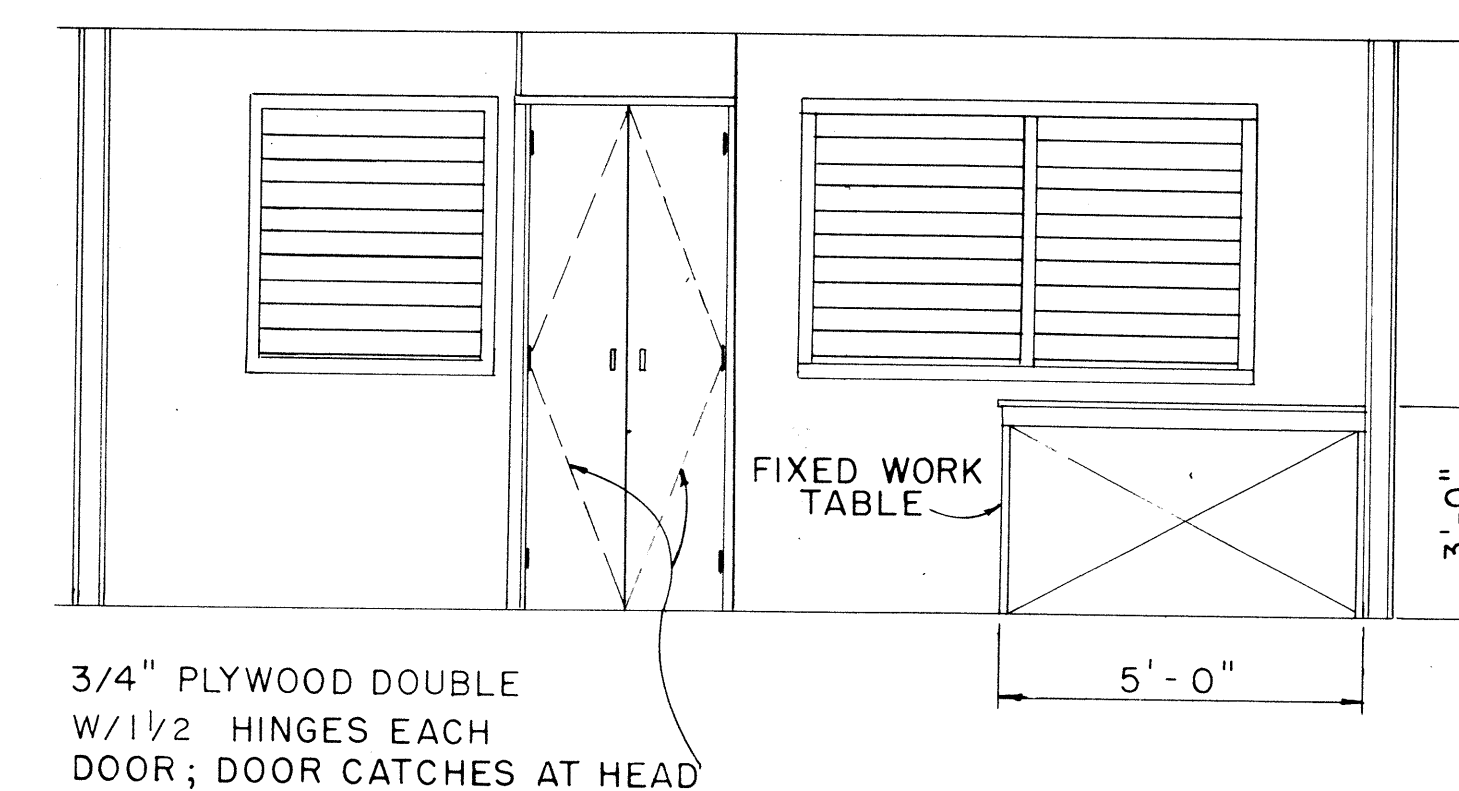
ELEVATION D
SCALE: 3/8" = 1'-0"



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



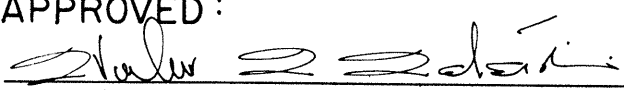
ELEVATION C1
SCALE: 3/8" = 1'-0"



ELEVATION A1
SCALE: 3/8" = 1'-0"

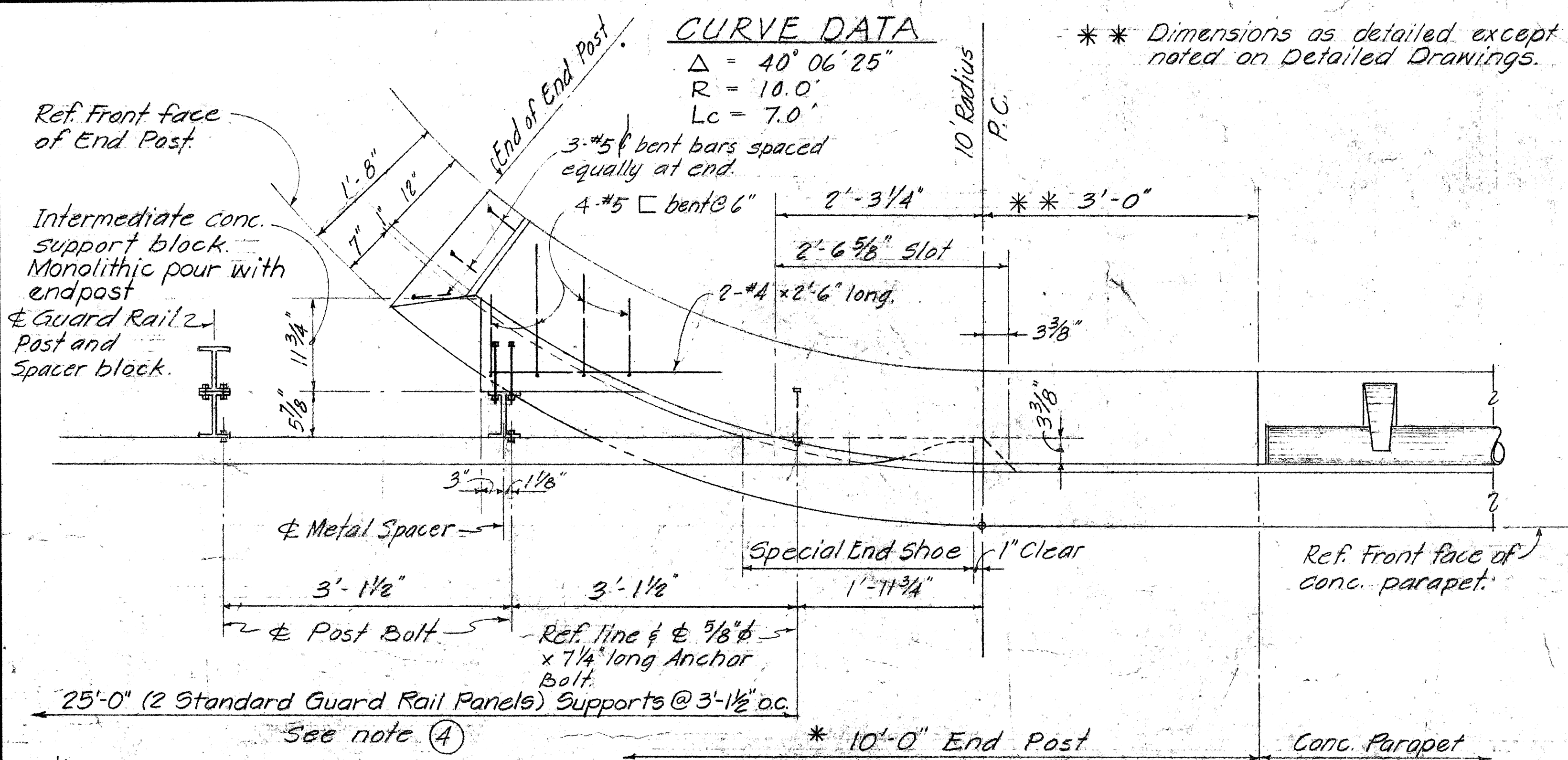
NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
 12-4-69
HIGHWAY DESIGN ENGINEER DATE

APPROVED:
 12-10-69
ASSISTANT CHIEF, ENGINEERING DATE

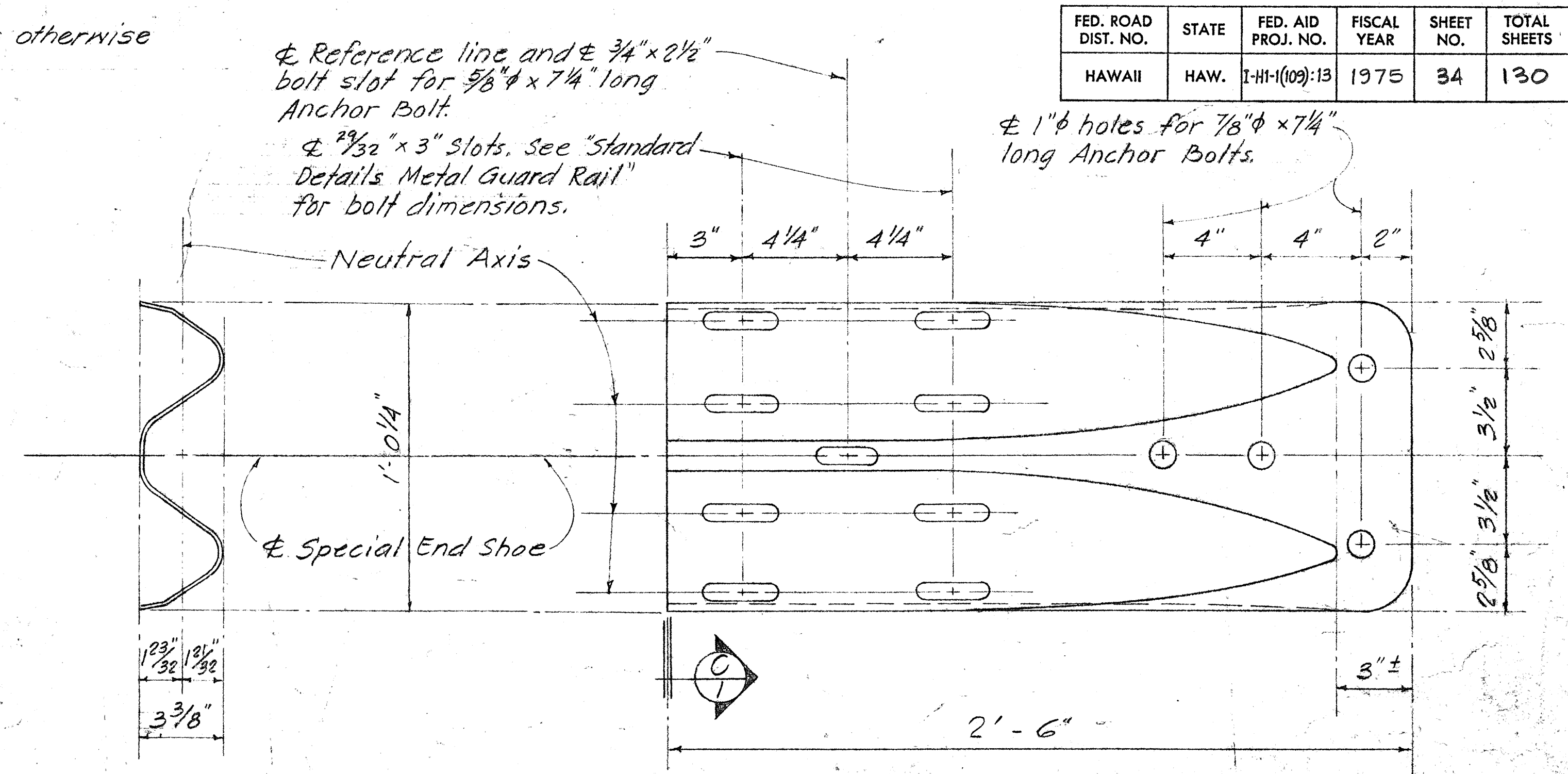
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PROJECT SITE LABORATORY Scale: As Noted Date: Dec. 29, 1972	
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(109)13	1975	34	130

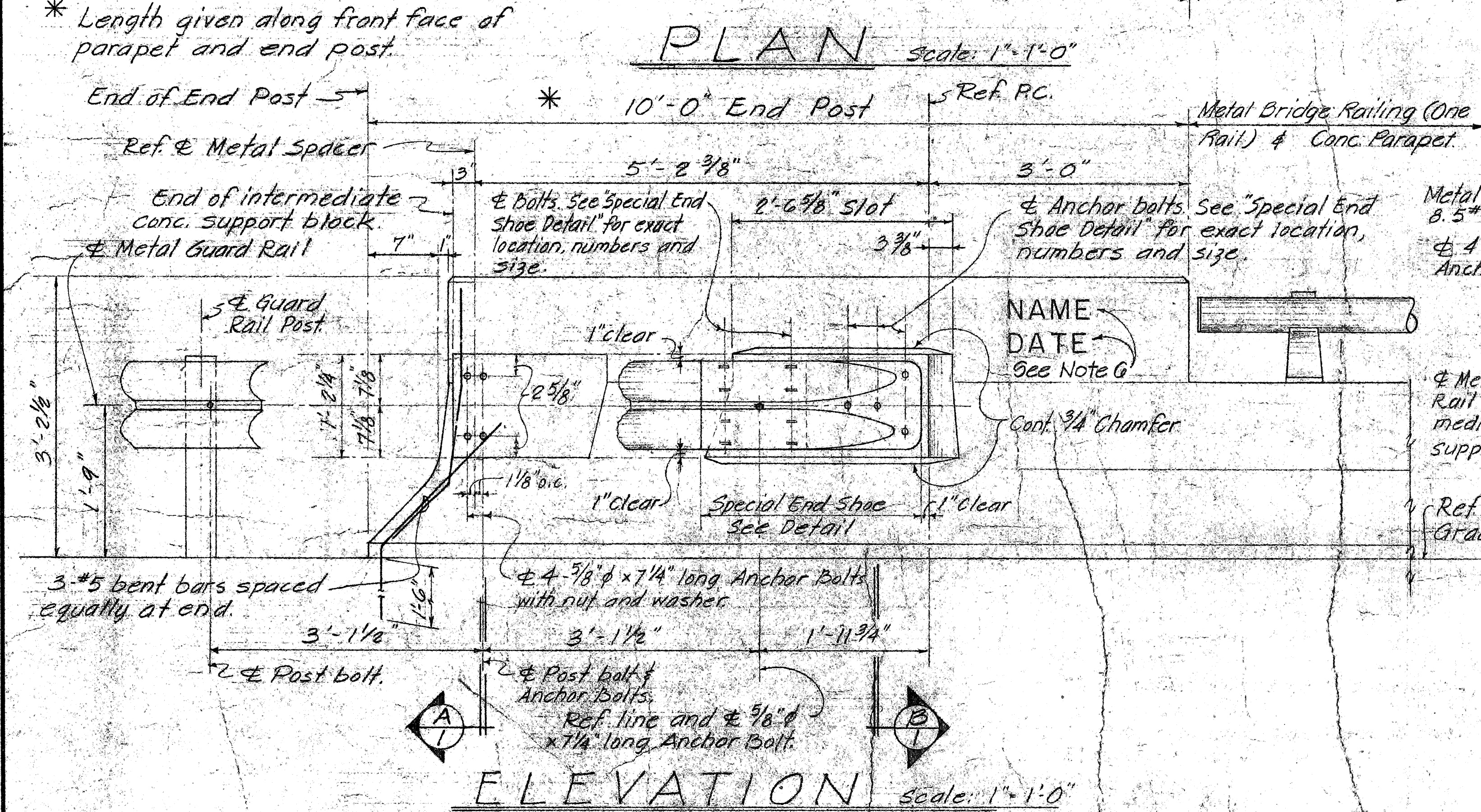


CURVE DATA
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 $L_c = 7.0'$

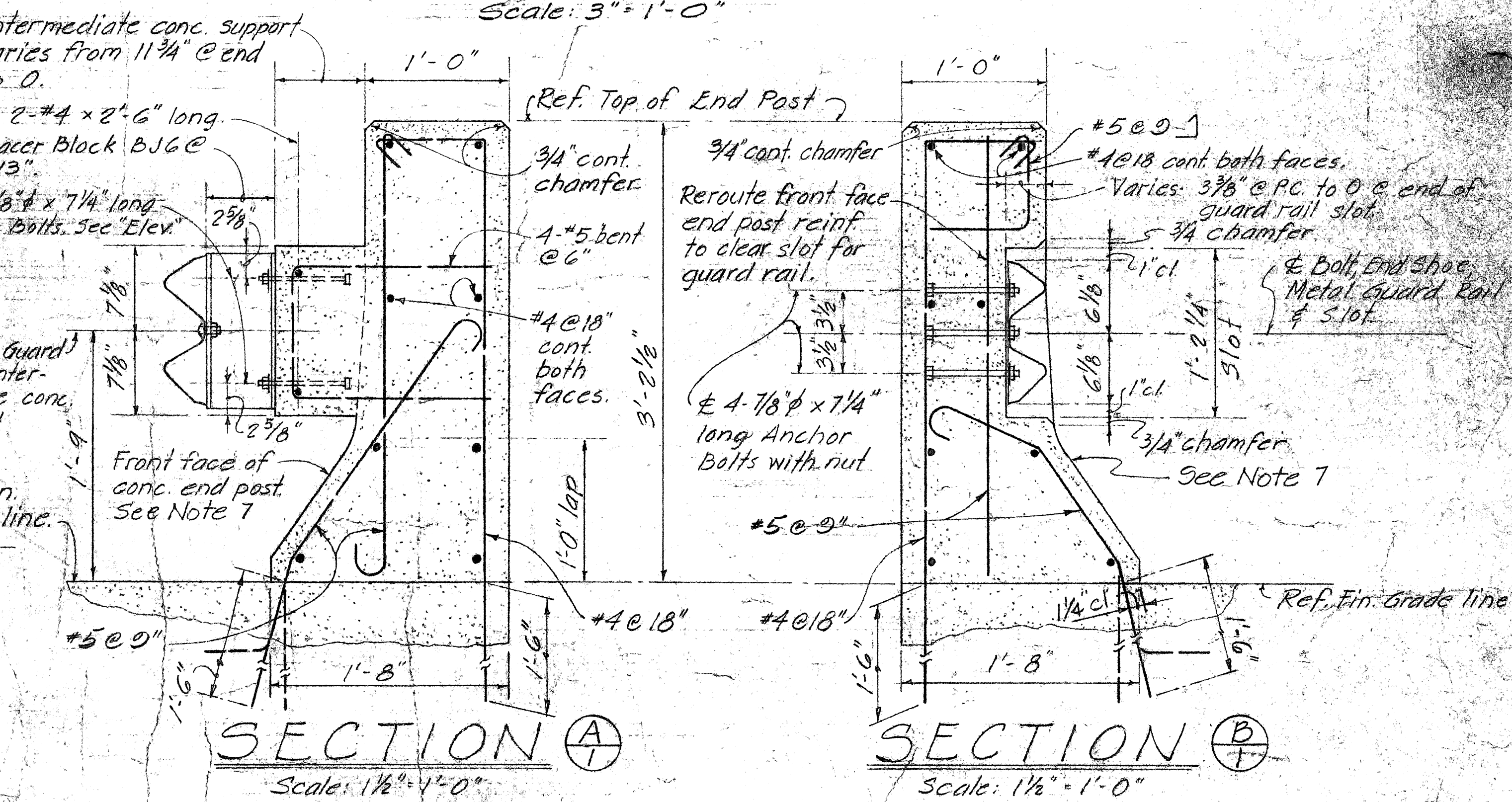
** Dimensions as detailed except as otherwise noted on Detailed Drawings.



SECTION C
SPECIAL END SHOE DETAILS
 Scale: 3" = 1'-0"



ELEVATION
 Scale: 1" = 1'-0"



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

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

NOTES:

- All Anchor Bolts shall be High Strength bolts conforming to the requirements of ASTM A325.
- All Shoe assembly, including anchor bolts, nuts and washers, shall be galvanized.
- Special End Shoe shall be fabricated from 10 gage steel conforming to the requirements of AASHTO 180.
- First 25'-0" of guard rail adjoining "Special End Shoe" shall be galvanized steel.
- Anchor Bolt length given from under bolt head.
- Place name of structure as shown. For location, see "Plan" on Contract Drawing. Date shown will be year structure is completed. Letter size and detail see standard Drawing DB-100.
- Front face of End Post to match front face of typical conc. parapet.

NO.	REVISION	APPROVED BY	DATE
1	Note 4 revised, 3'-1 1/2" post spacing extended to 25'-0". Note G, 1 added.		2-29-72

APPROVAL RECOMMENDED:
Paul T. Yamashita
 BRIDGE DESIGN ENGINEER

APPROVED:
Paul T. Yamashita
 ASSISTANT CHIEF, ENGINEERING

1-23-70
 DATE

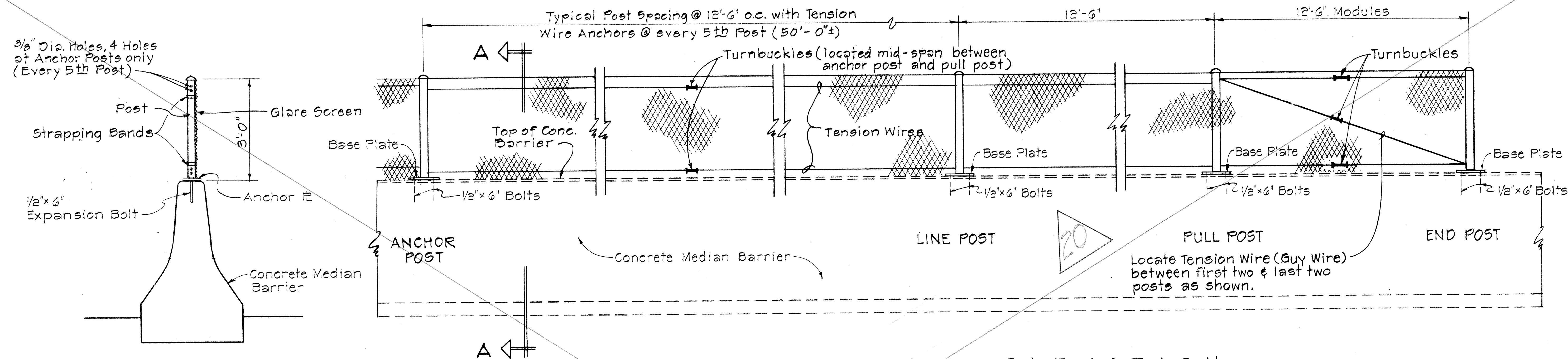
1-26-70
 DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

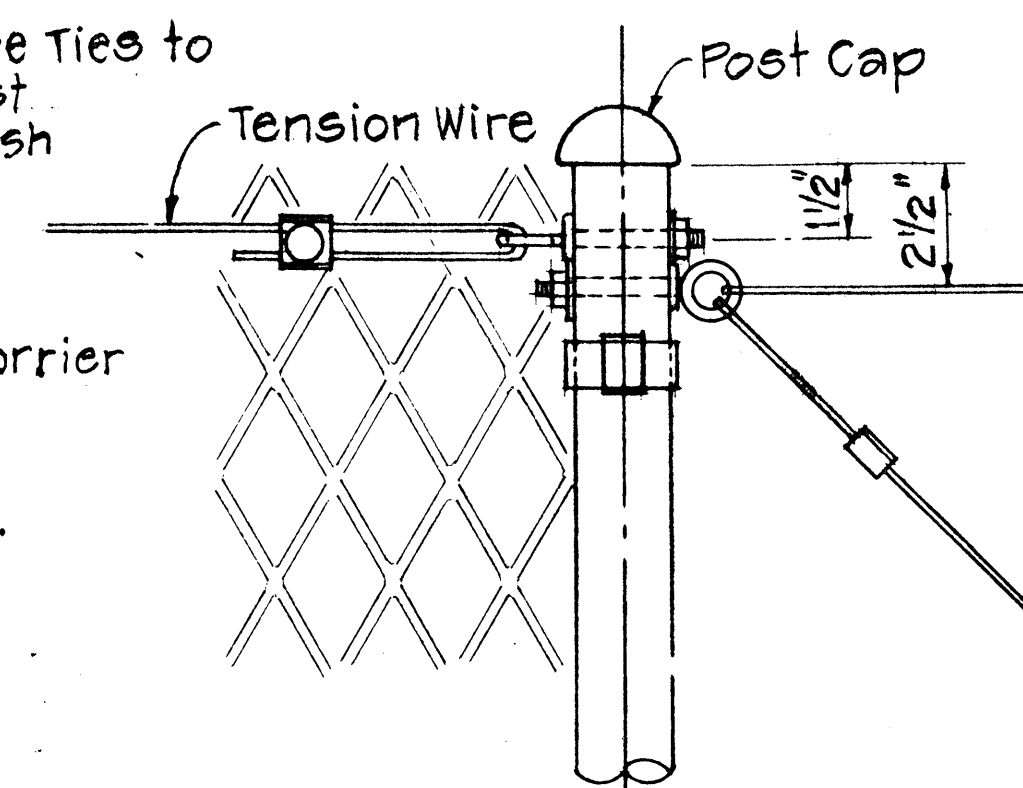
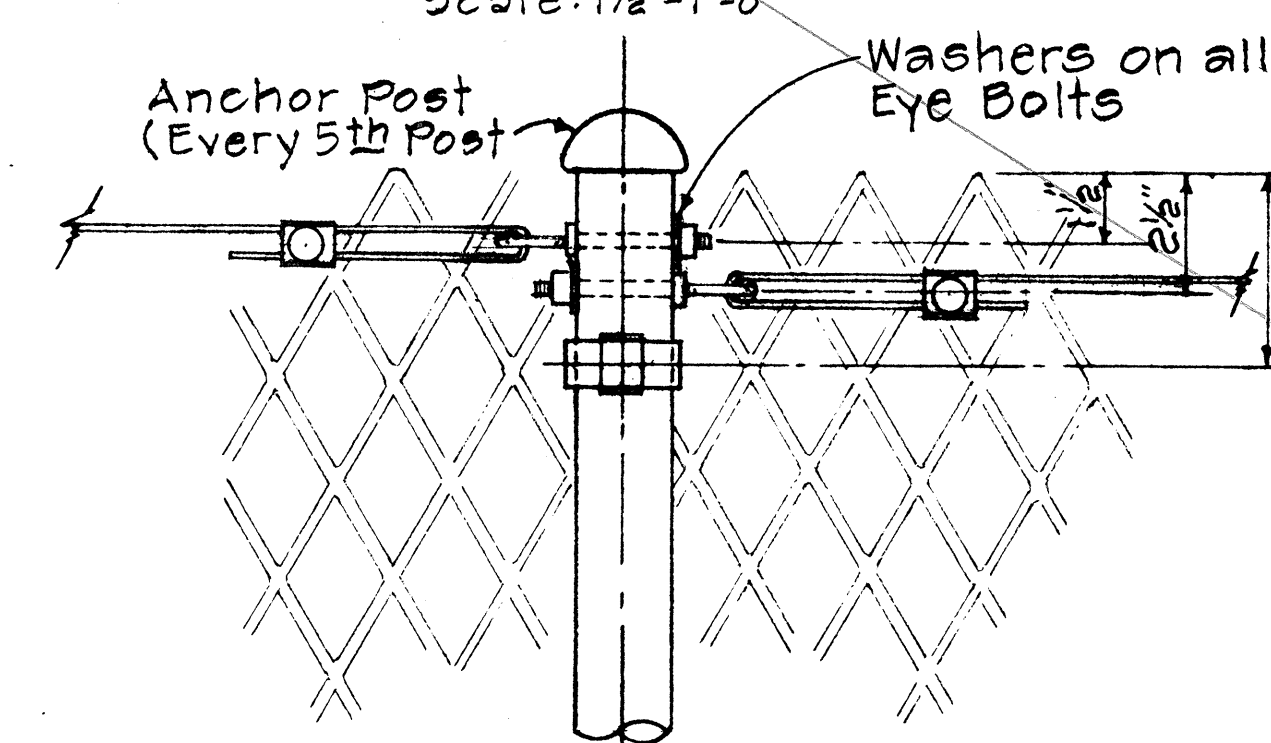
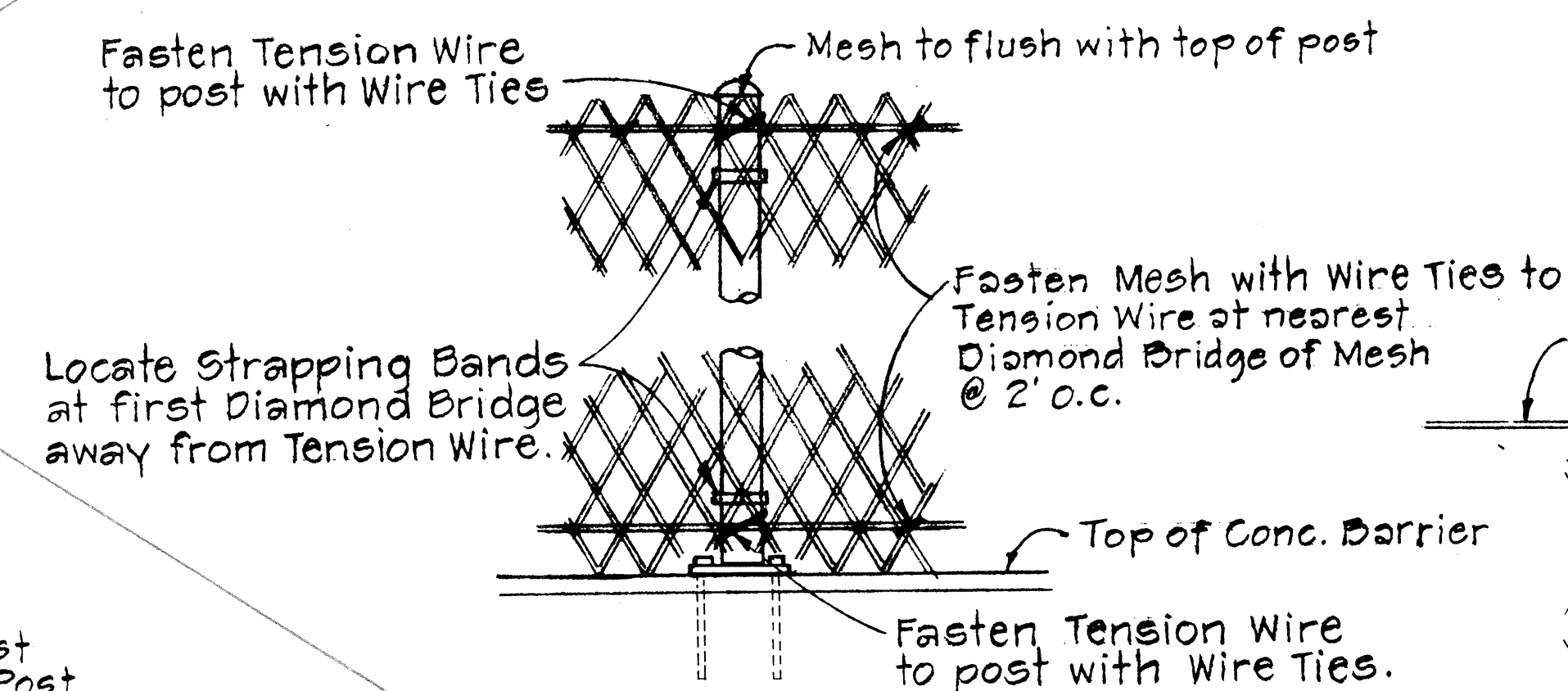
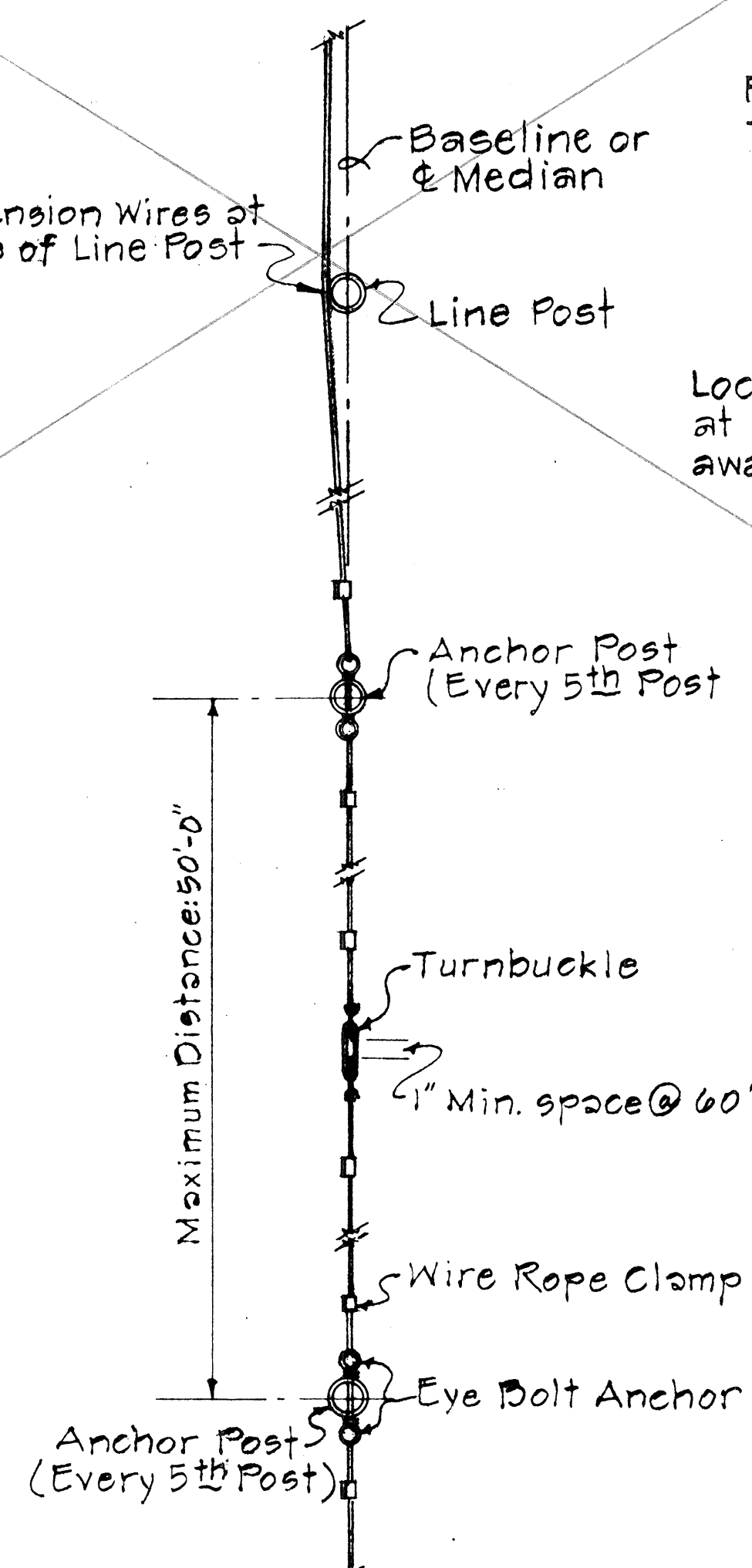
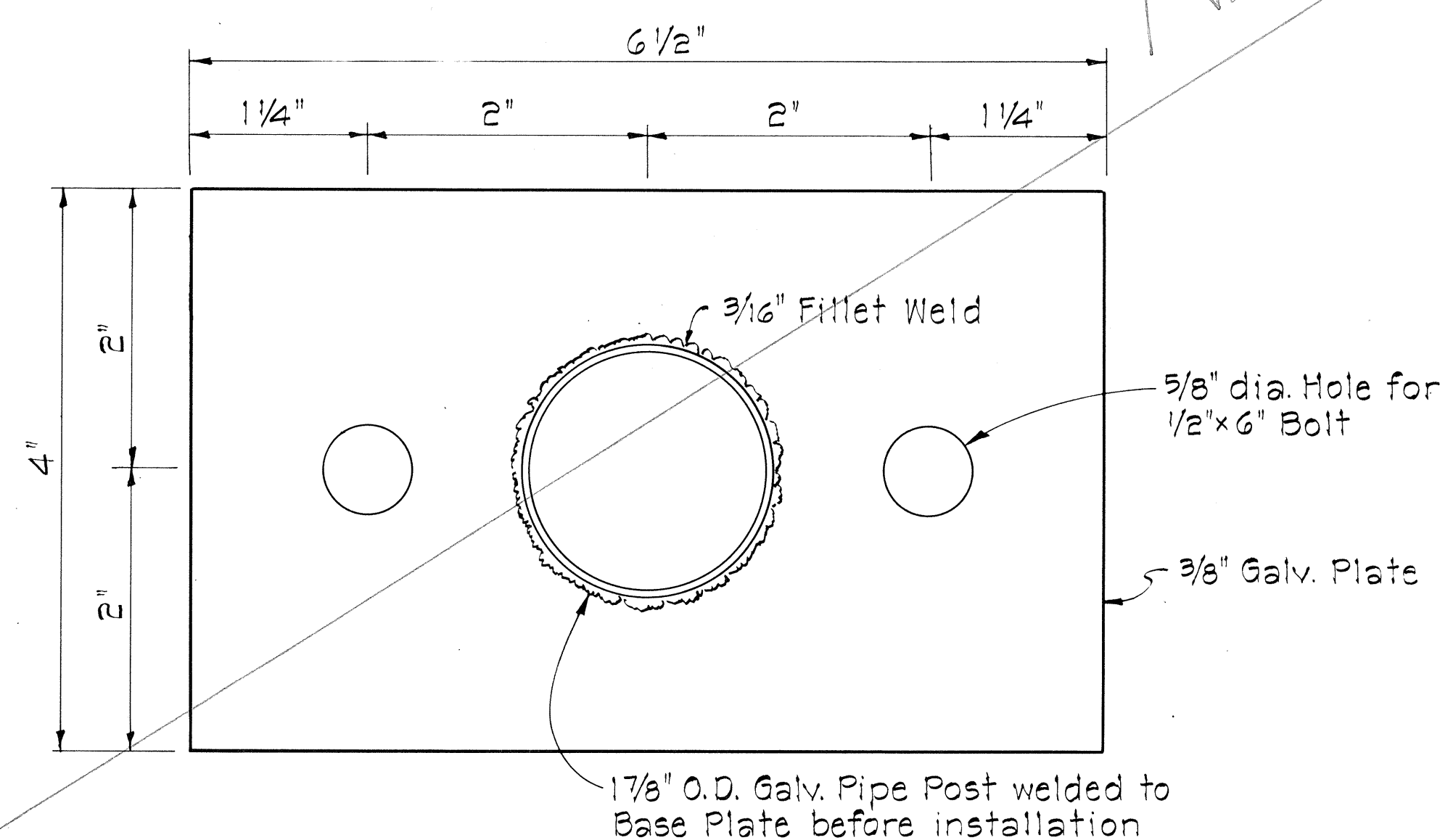
STANDARD DETAILS
 METAL GUARD RAIL CONNECTION
 ONE RAIL COMBINATION TYPE ENDPOST

Scale: As shown Date: DEC 29, 1972
 SHEET No. 22B OF 23 SHEETS DB-206

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	141-1(109)13	1975	35	130



TYPICAL ELEVATION
Not to Scale



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**HEADLIGHT
GLARE SCREEN**

(INSTALLATION OVER MEDIAN
CONCRETE BARRIER)

SCALE: AS NOTED Date: Dec. 29, 1972
SHEET No. 23 OF 23 SHEETS

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