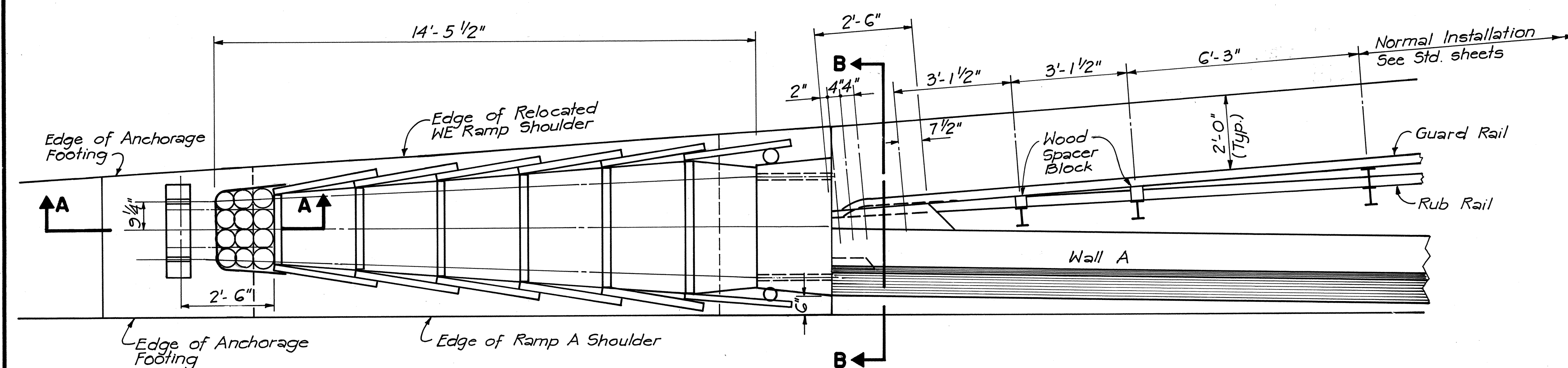
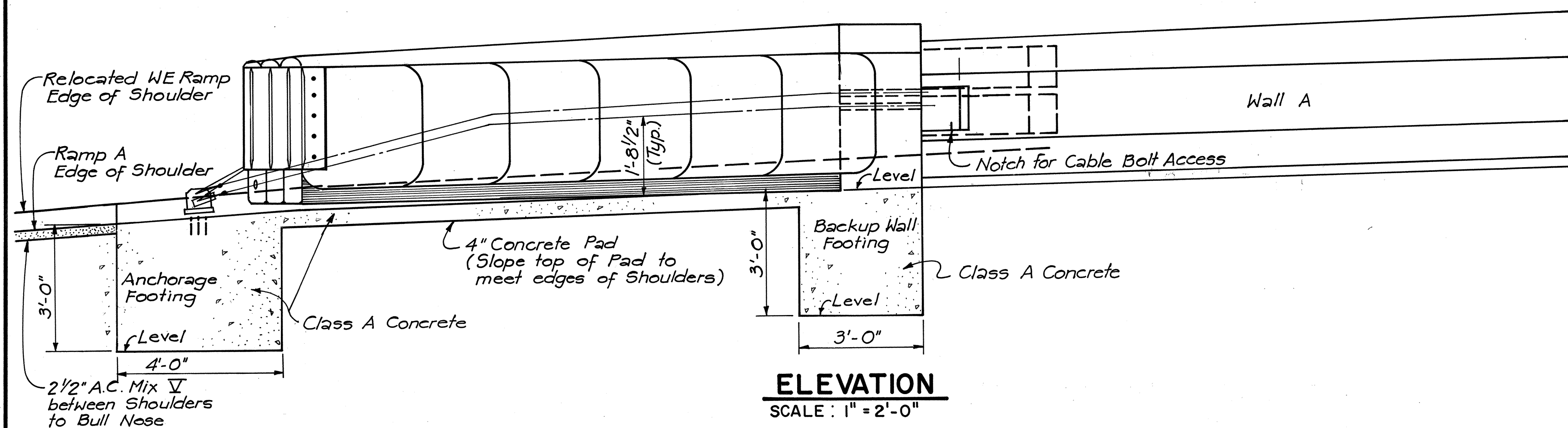


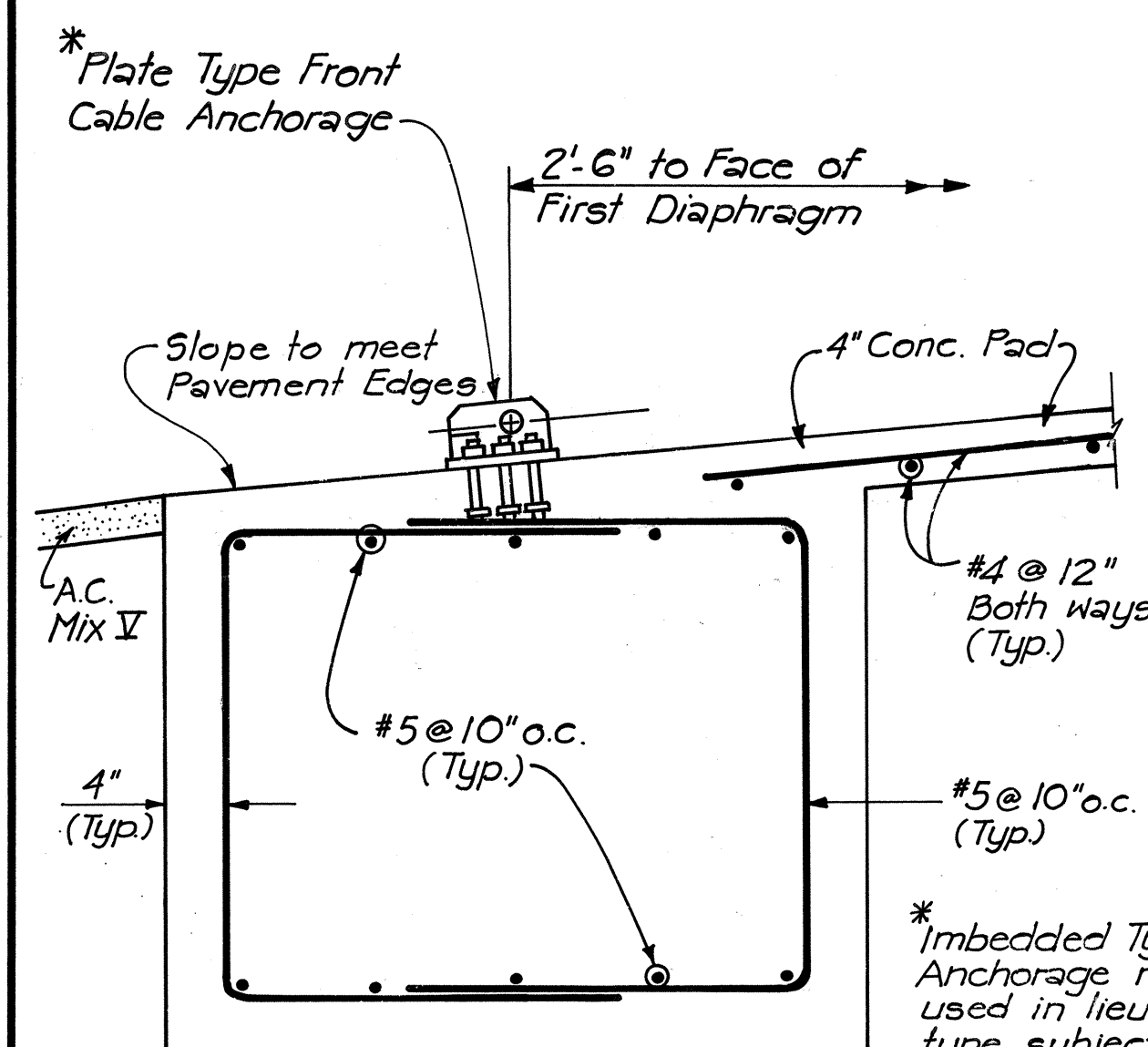
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(144):13	1977	15	52



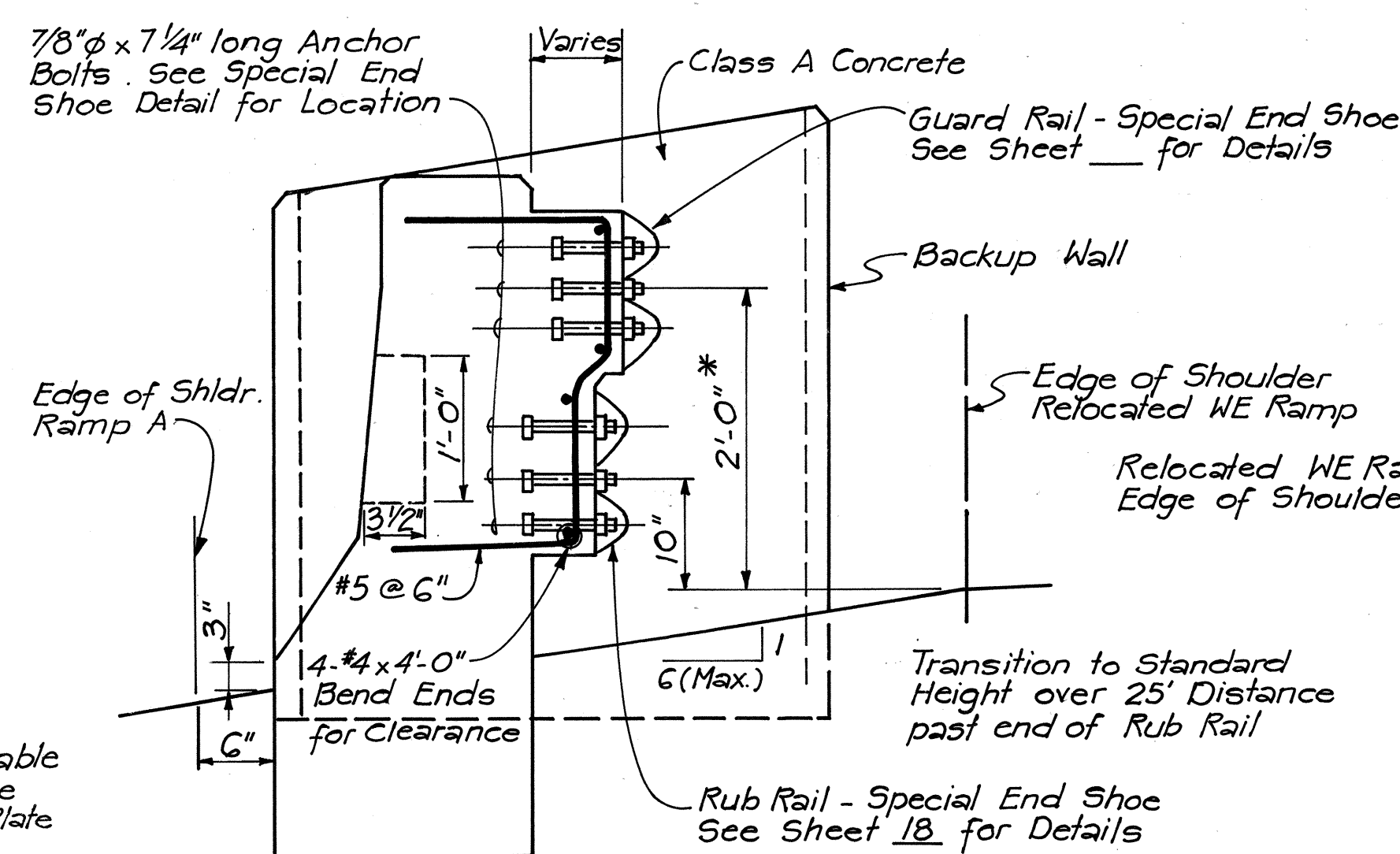
PLAN
SCALE: 1" = 2'-0"



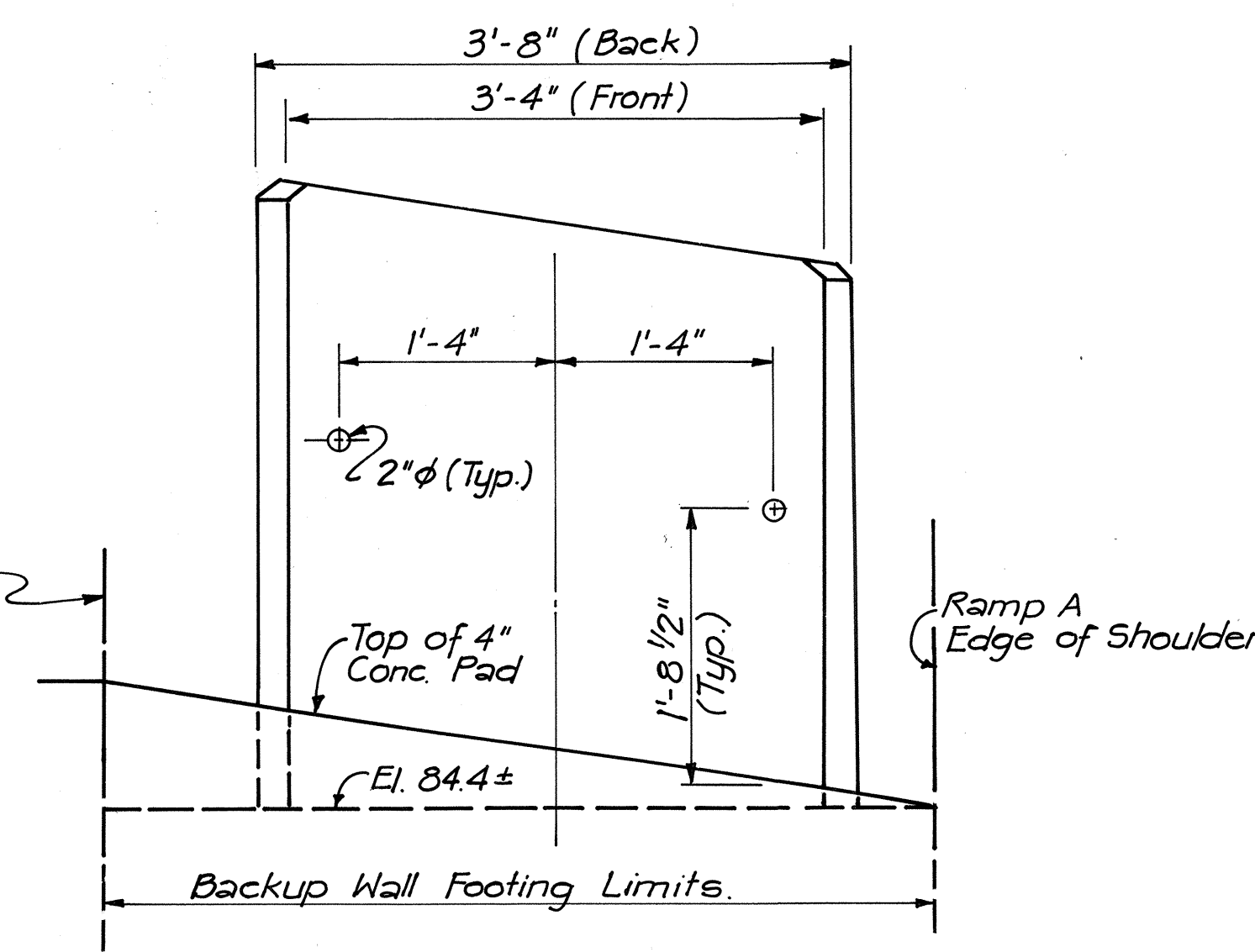
ELEVATION
SCALE: 1" = 2'-0"



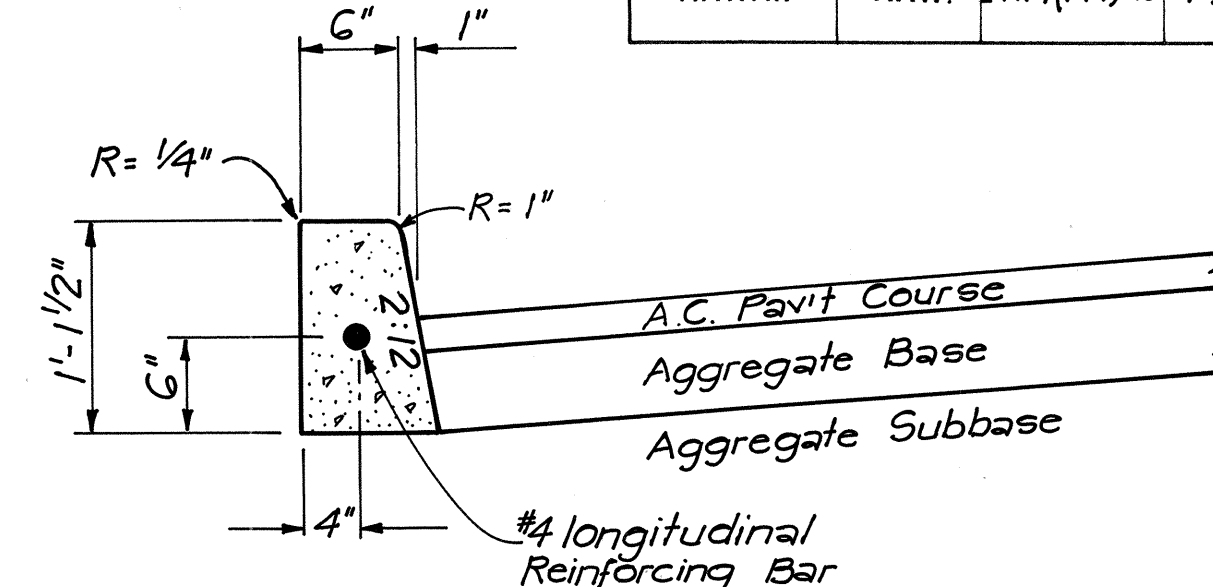
SECTION A-A
SCALE: 1" = 1'-0"



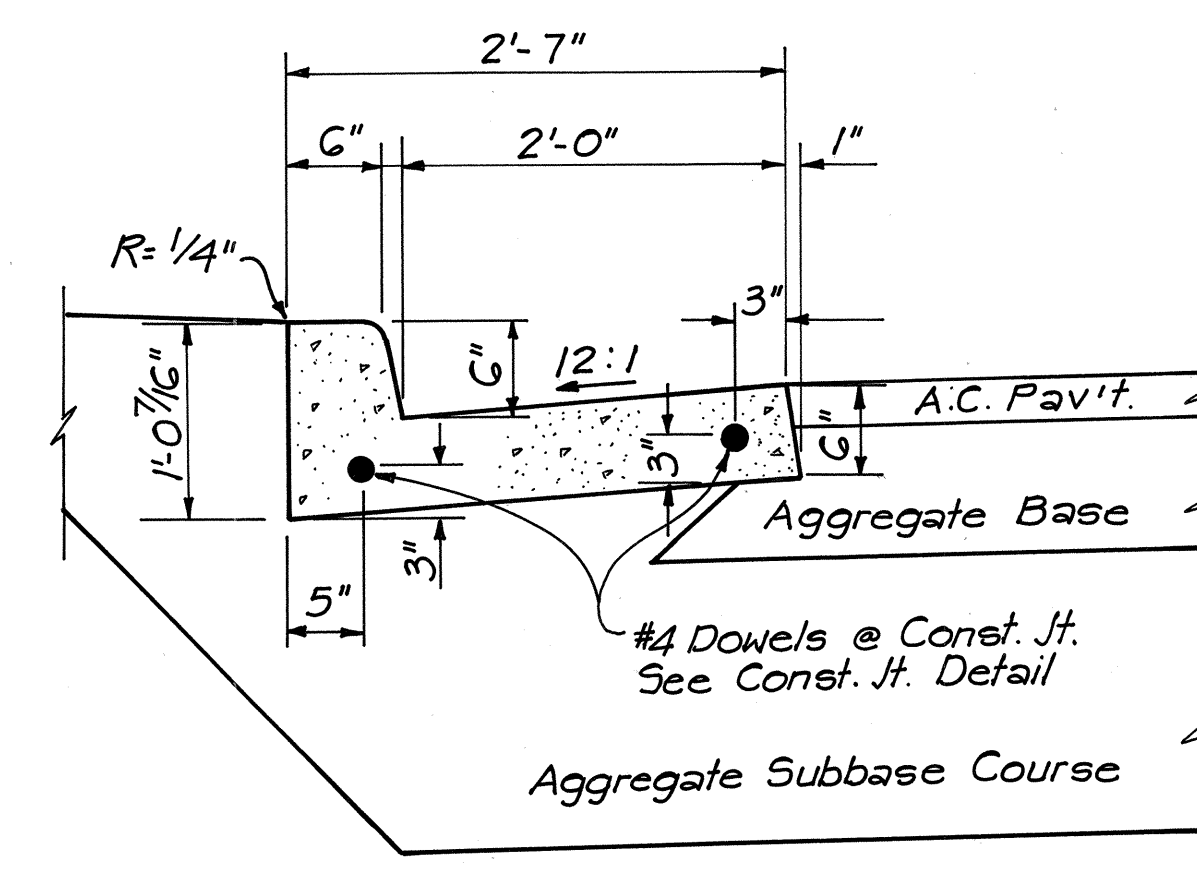
SECTION B-B
SCALE: 1" = 1'-0"



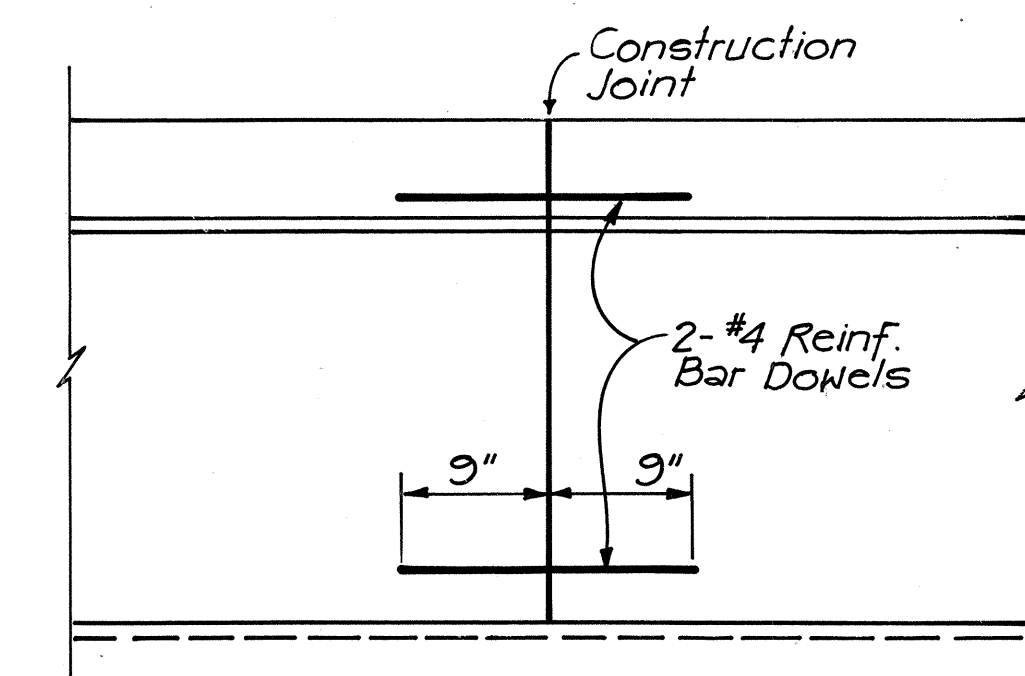
FRONT ELEVATION - CONC. BACKUP WALL
SCALE: 1" = 1'-0"



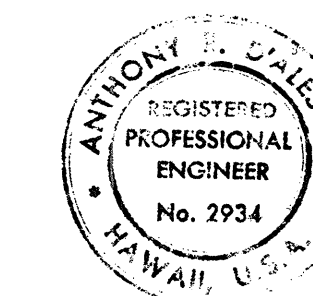
TYPE 2D CURB
SCALE: 1" = 1'-0"



TYPE 2DG CONC. CURB & GUTTER
SCALE: 1" = 1'-0"



CONSTRUCTION JOINT DETAIL
SCALE: 1" = 10'-0"



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.

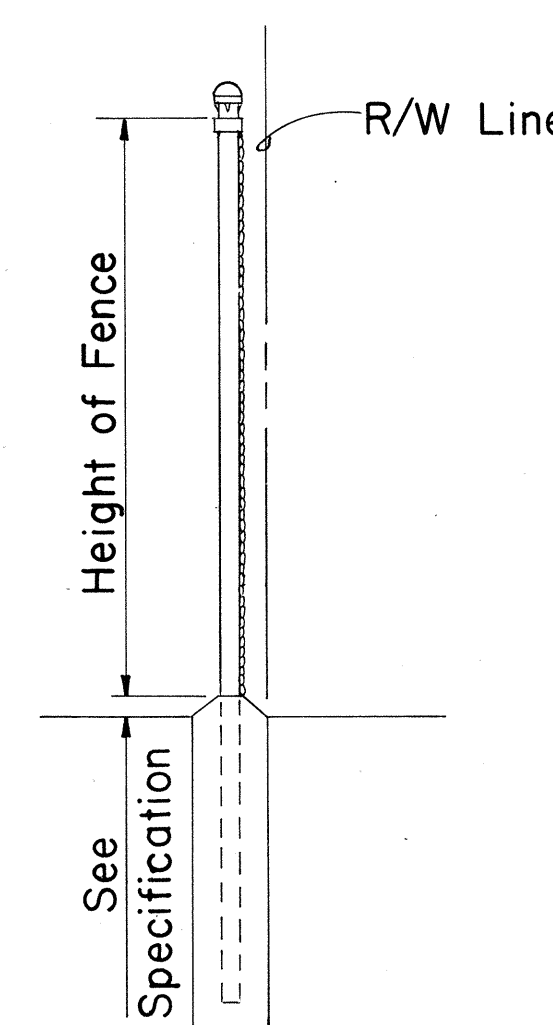
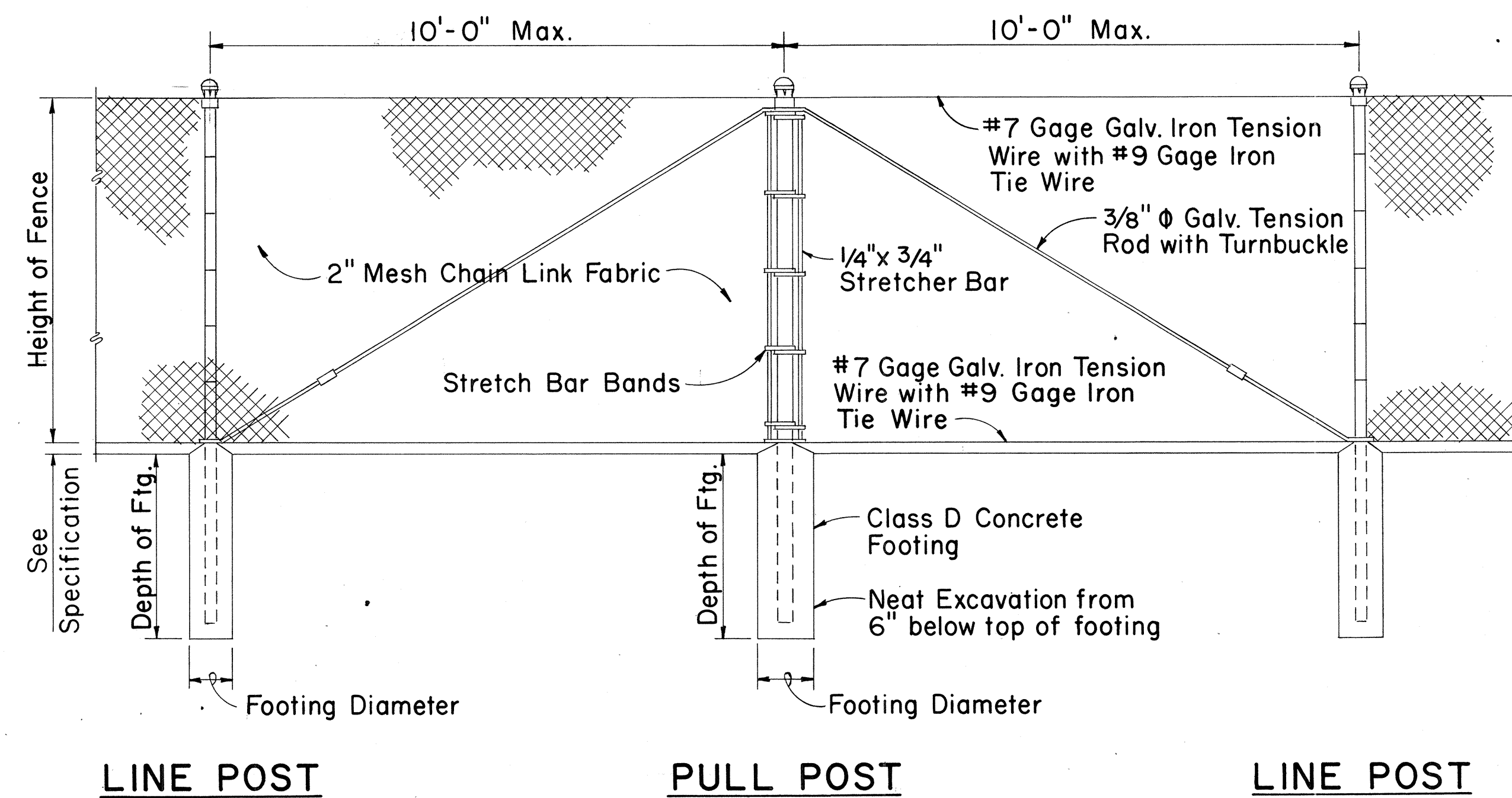
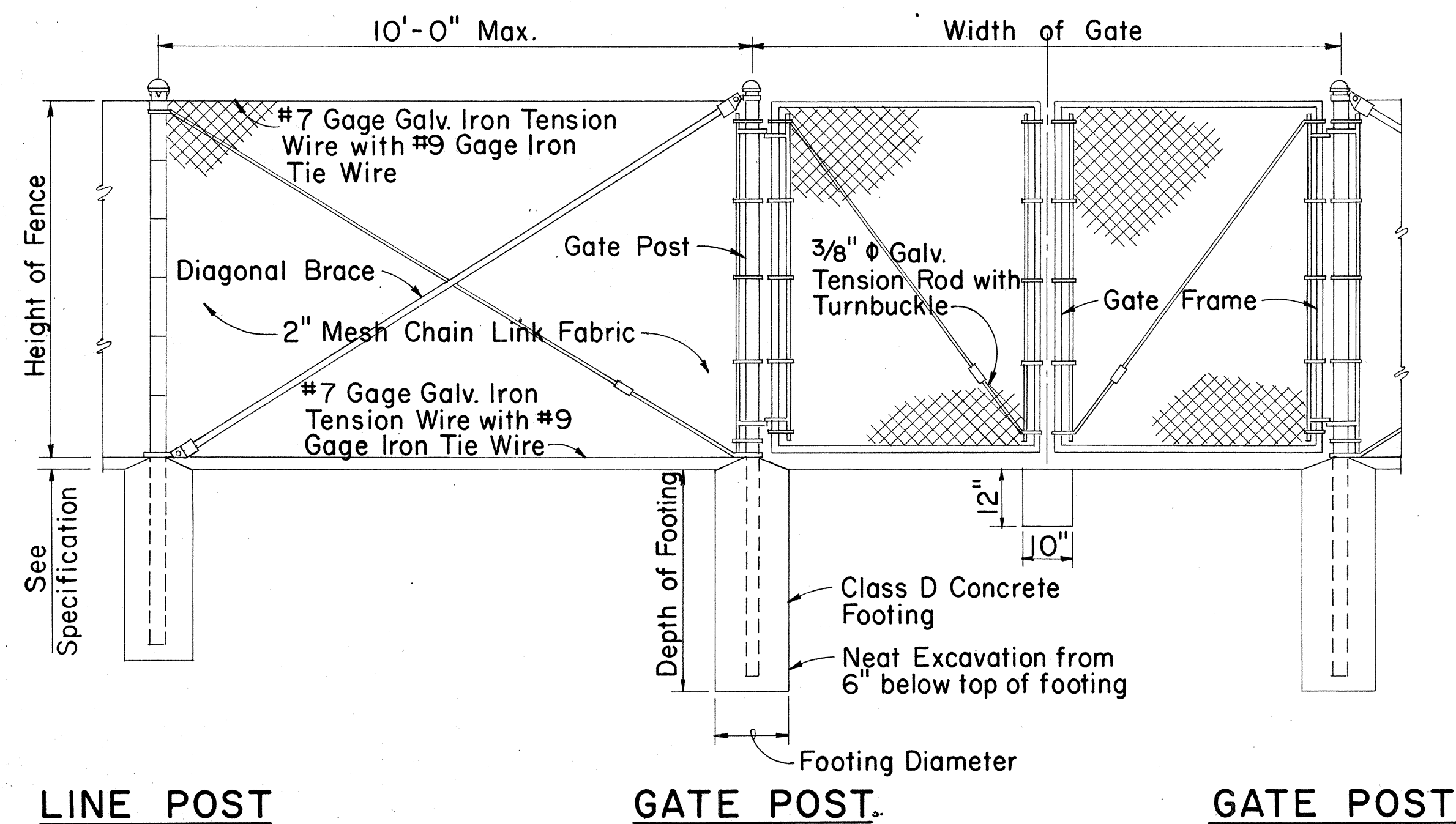
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**CUSHION BARRIER
& MISC. DETAILS**

HALAWA INTERCHANGE
PROJECT NO. I-HI-1(144):13

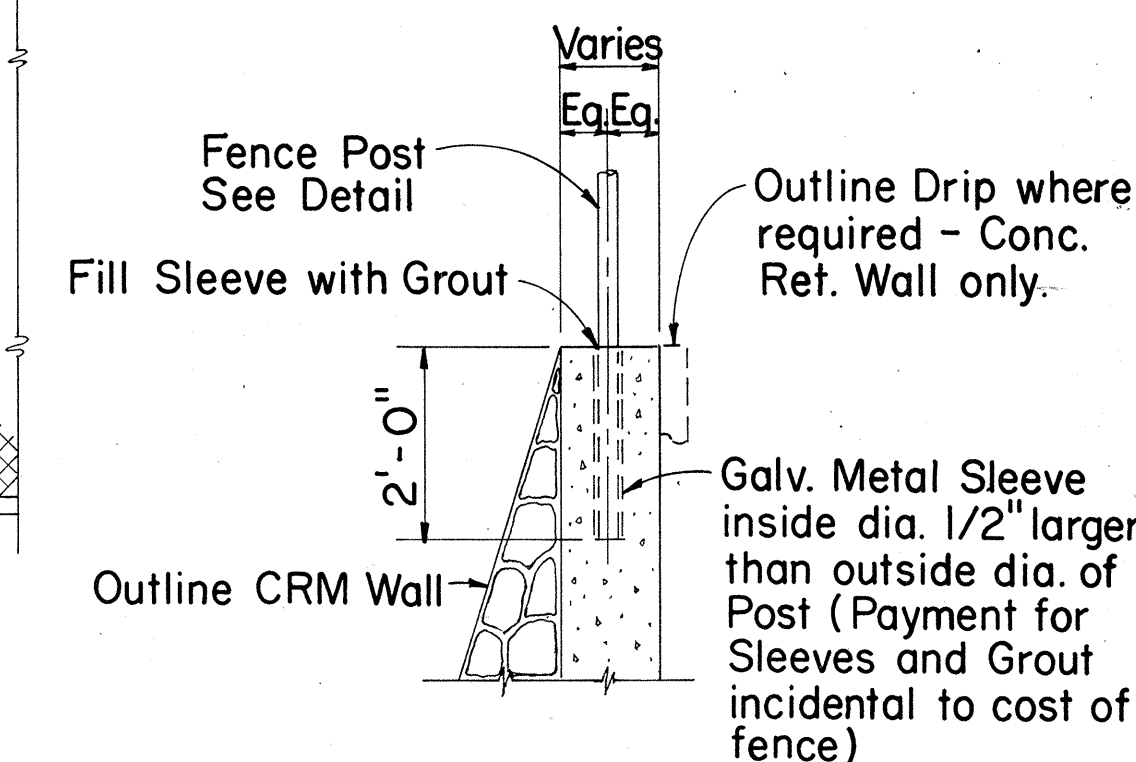
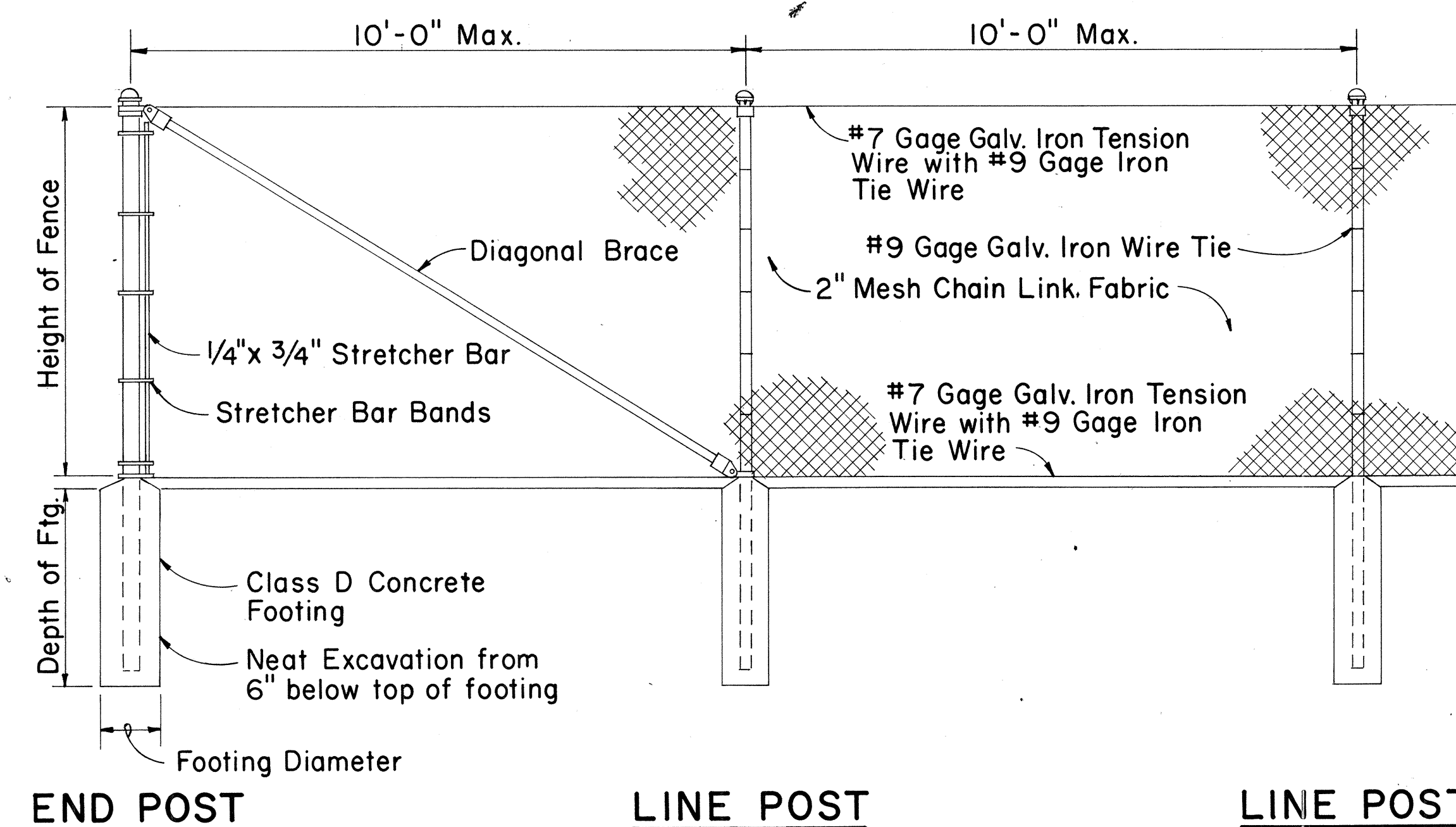
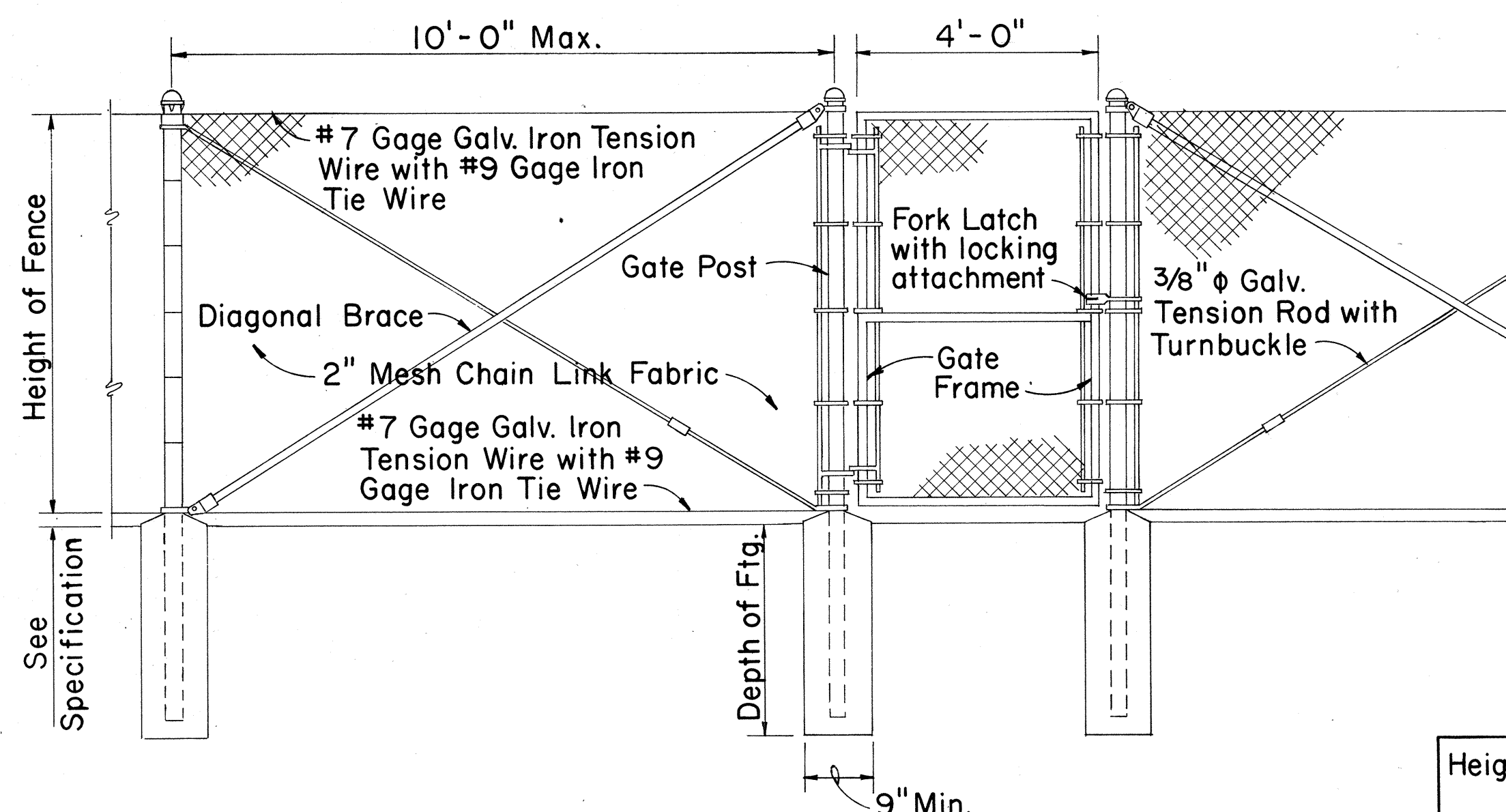
SCALE: AS SHOWN DATE: JULY, 1977
SHEET NO. 1 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	144-13	1977	16	52



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.



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"

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
 Highway Design Engineer
 12-4-69
 DATE

APPROVED:
 Assistant Chief, Engineering
 12-10-69
 DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

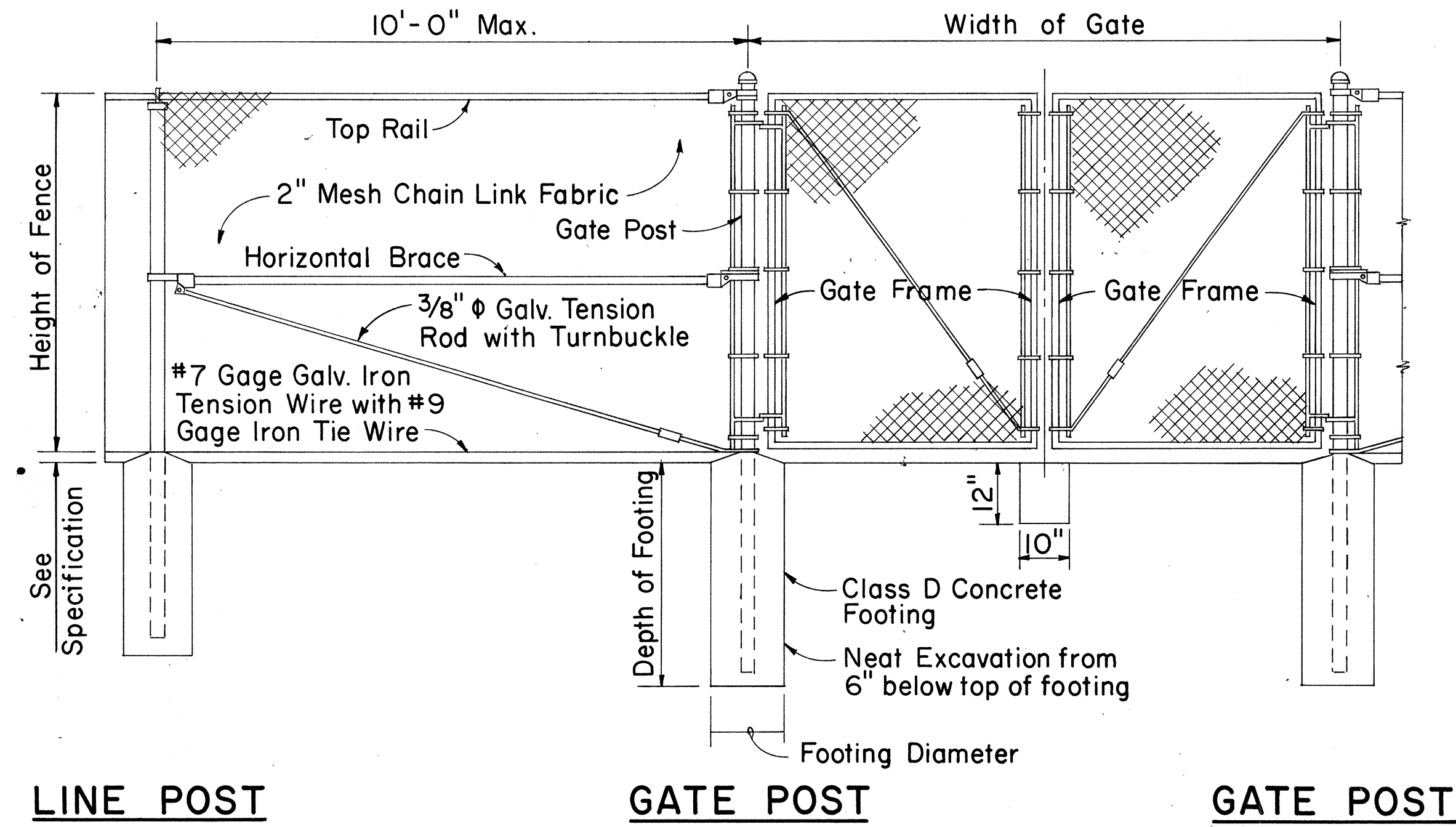
STANDARD DETAILS

CHAIN LINK FENCE
 (WITHOUT TOPRAIL)

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

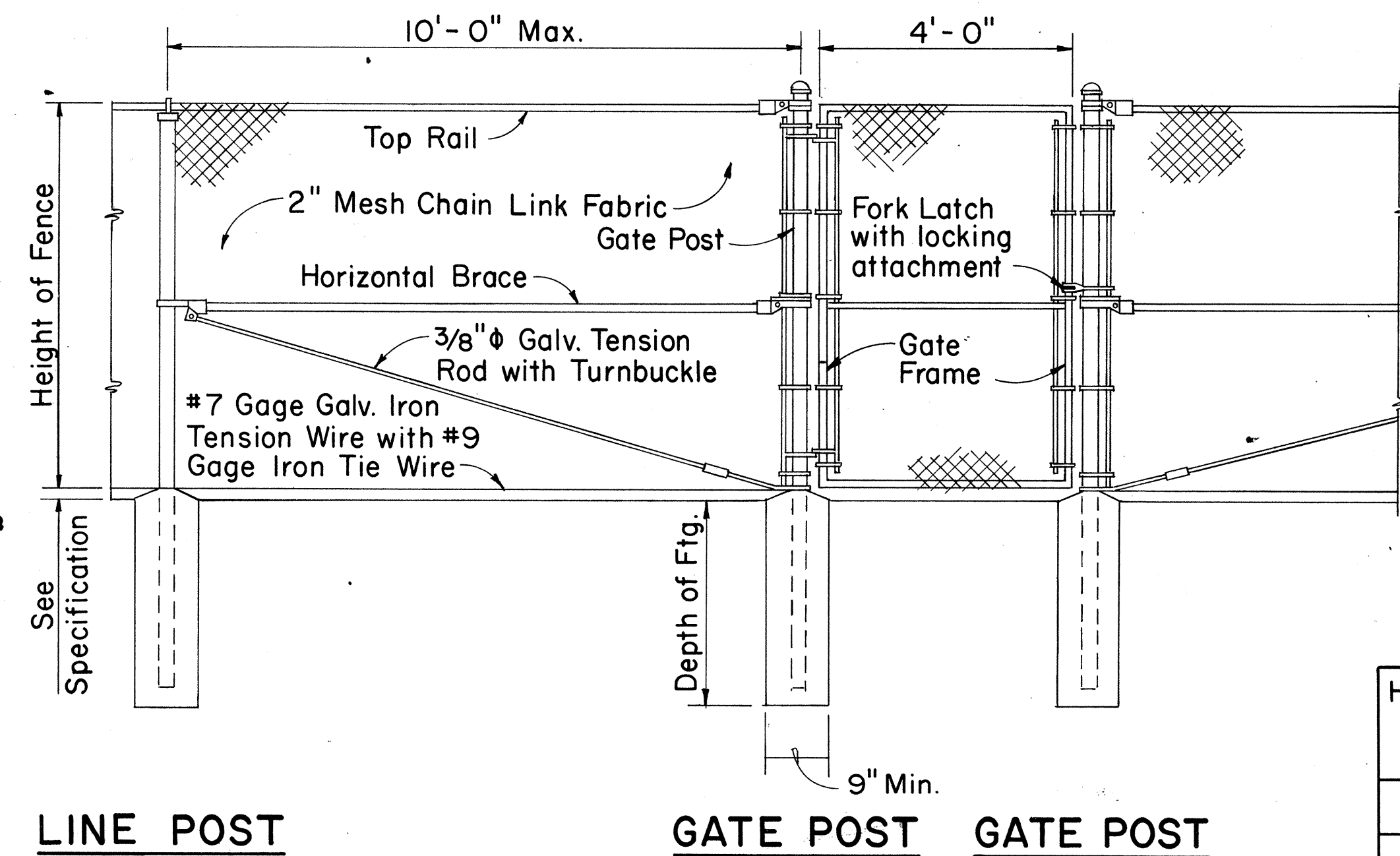
SHEET No. 2 OF 8 SHEETS DD 607.2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	144/13	1977	17	52

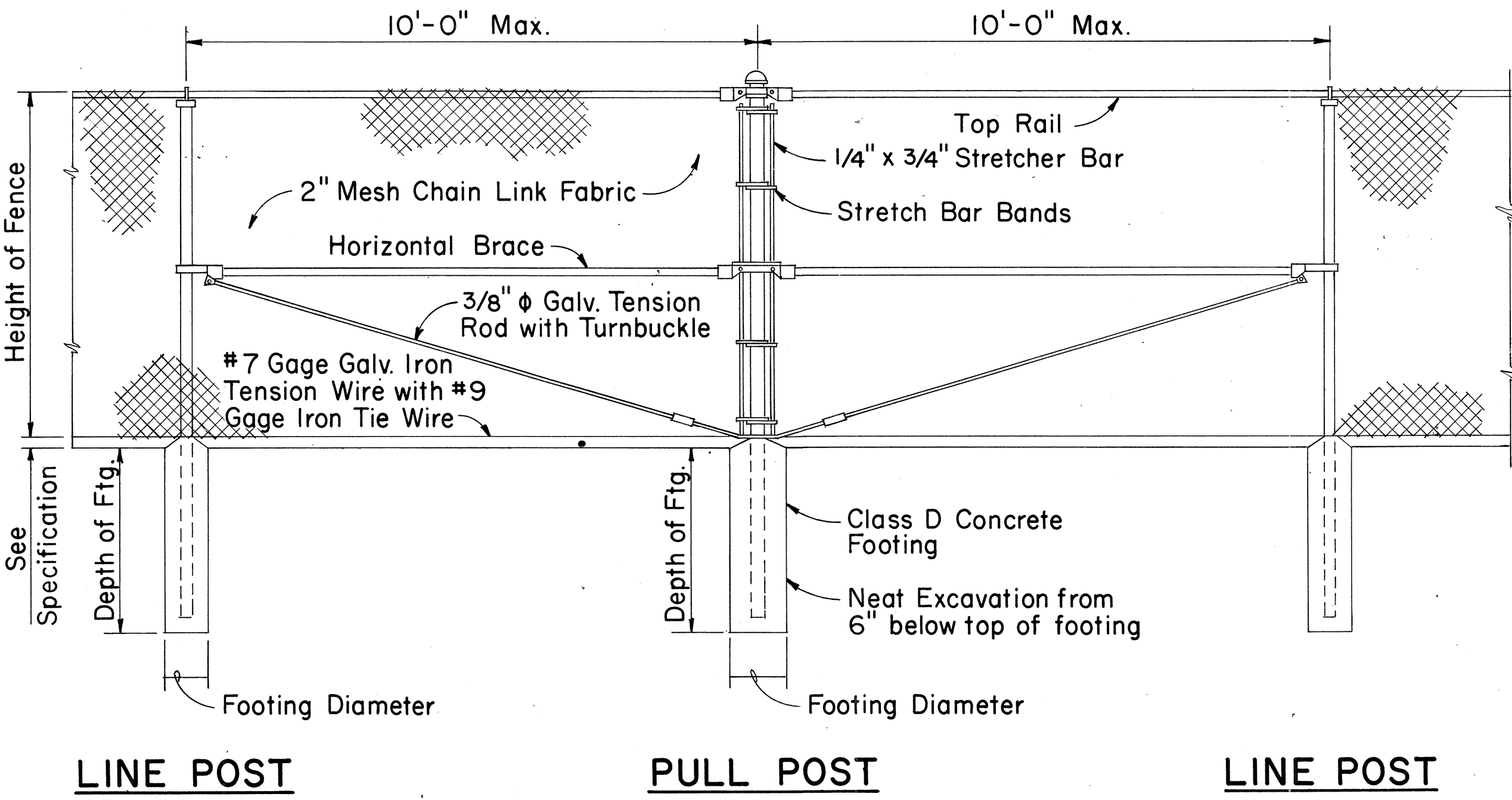


DETAIL OF CHAIN LINK GATE

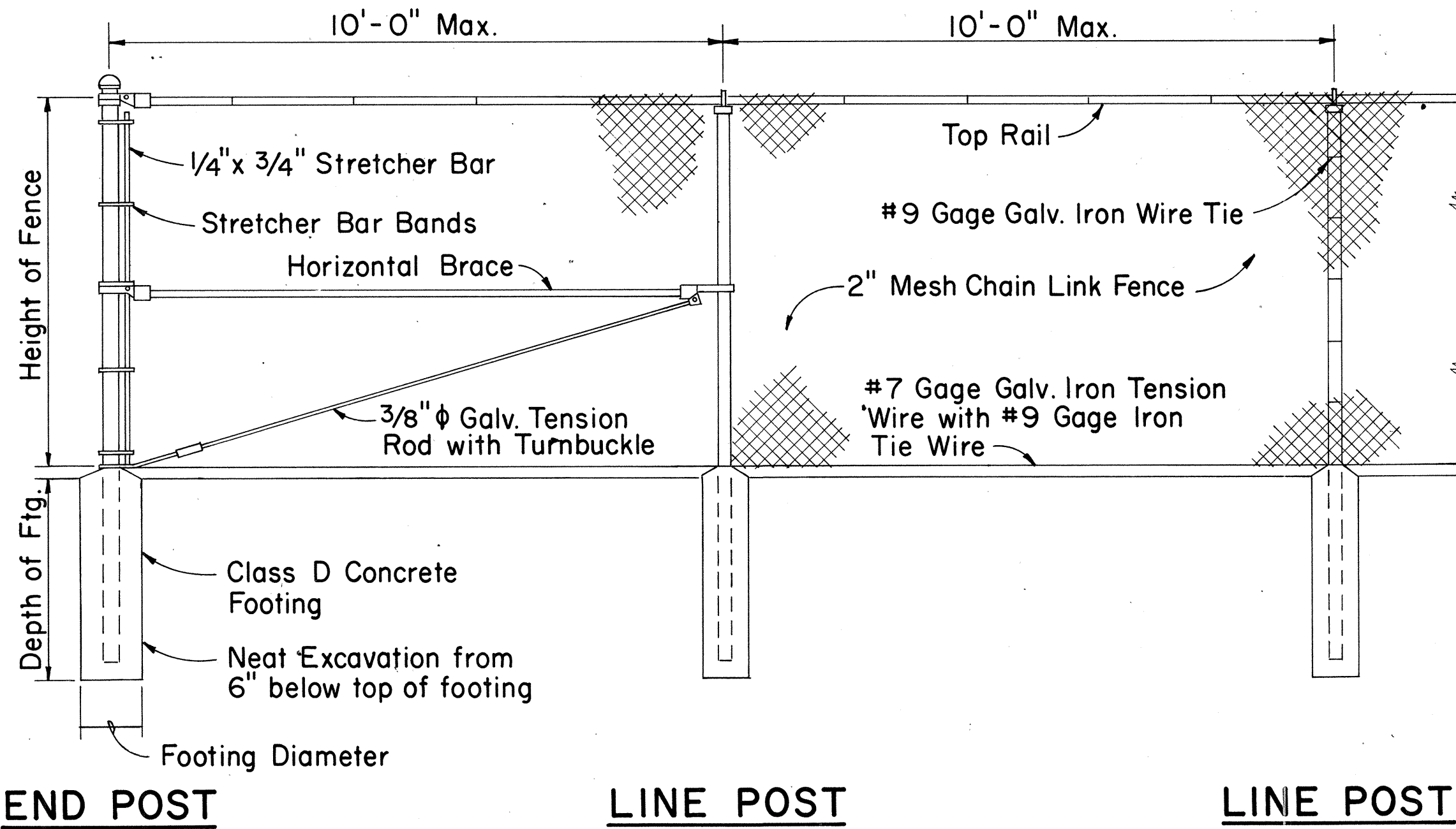
- NOTE: 1. Gate fork latch and lock, flush plate and anchor, and plunger shall be installed with Gates, and shall be considered as incidental to Chain Link Fence Gate.
 2. Gate frames shall be mitered and welded at corners.
 3. Fence detail not shown shall be in accordance with the Standard Specifications.



DETAIL OF 4 FT. CHAIN LINK GATE



TYPICAL SECTION (WITH CONCRETE FOOTING)



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"

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

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

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

NO.	REVISION	APPROVED BY	DATE

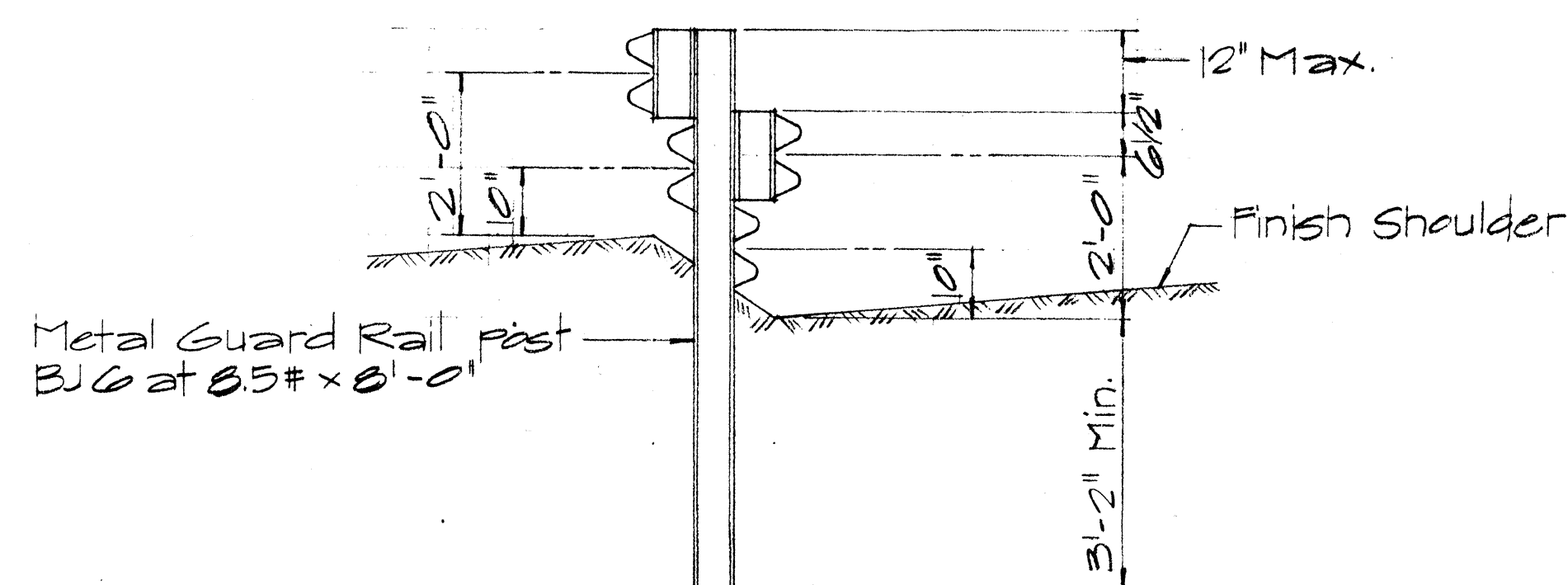
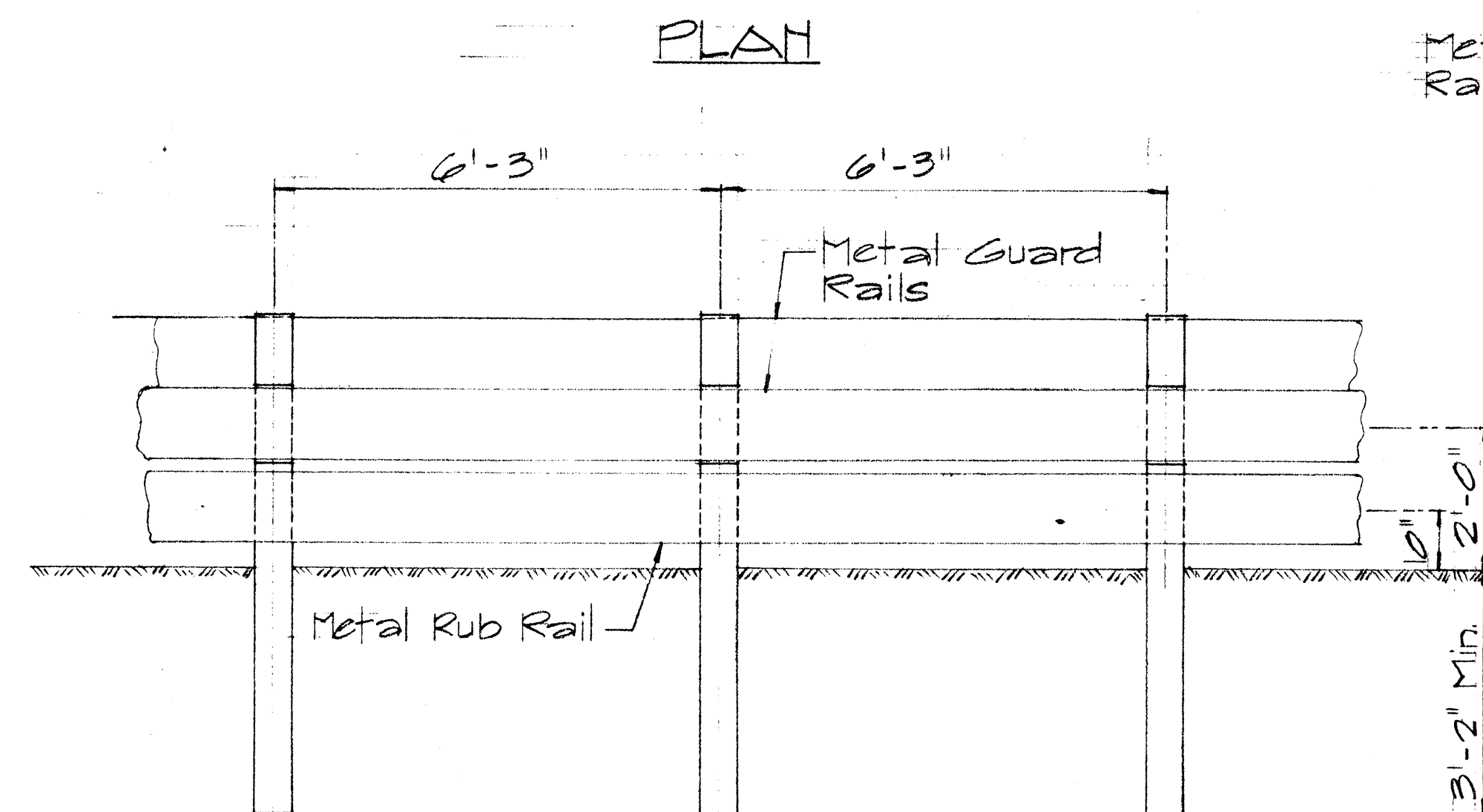
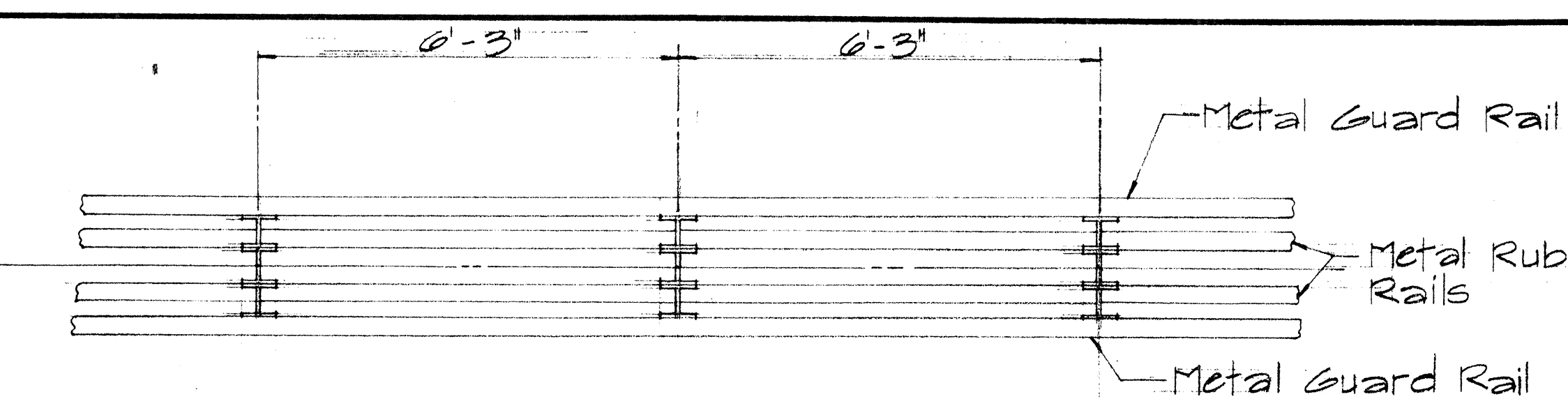
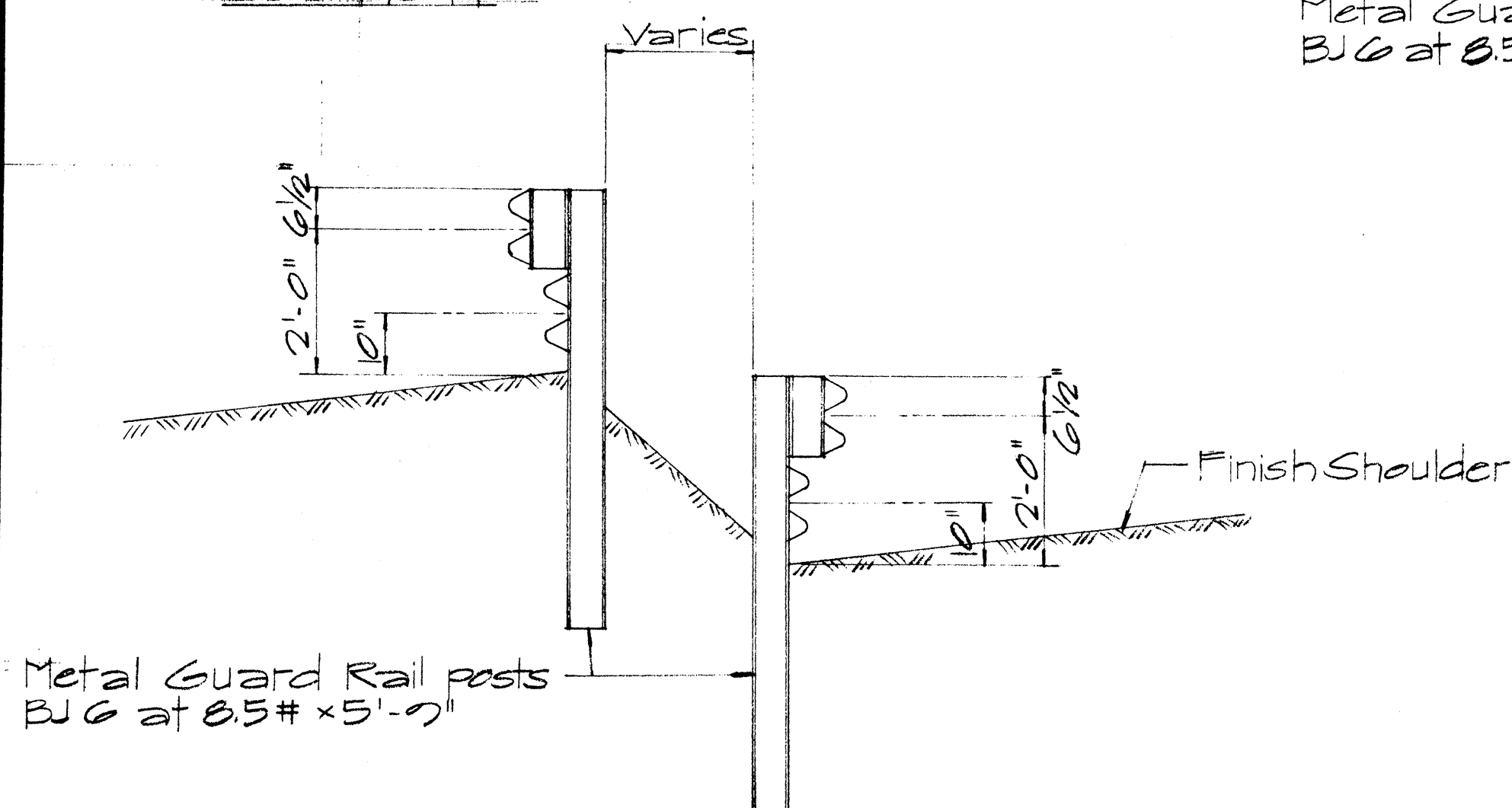
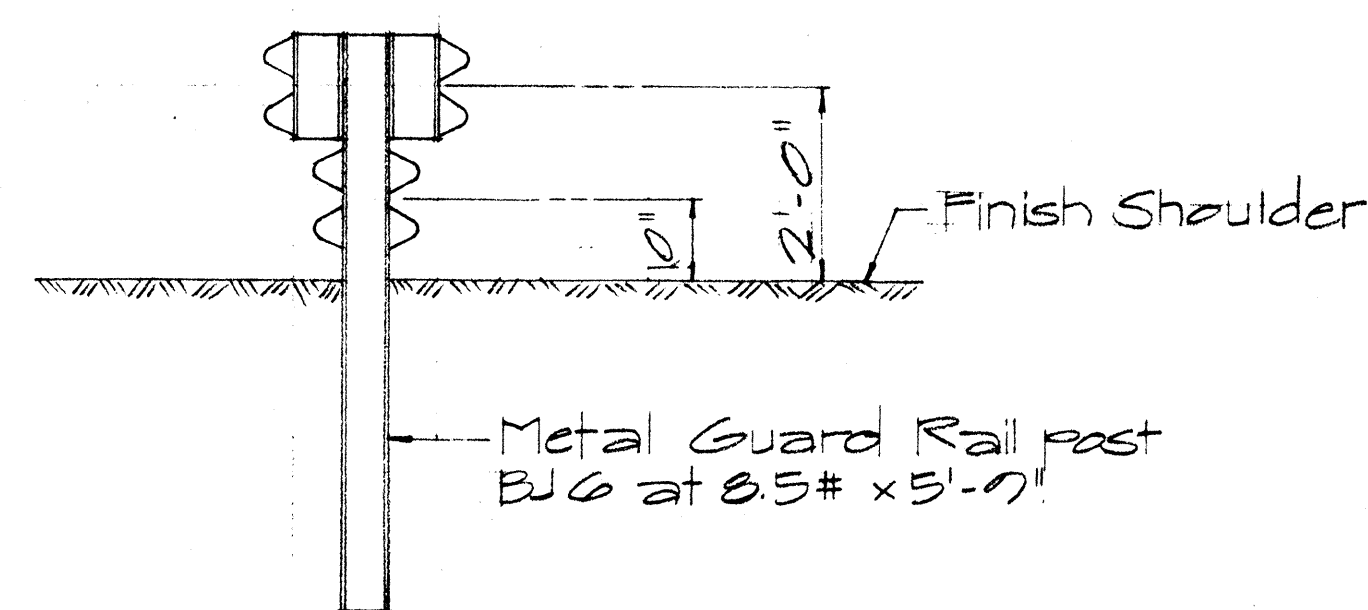
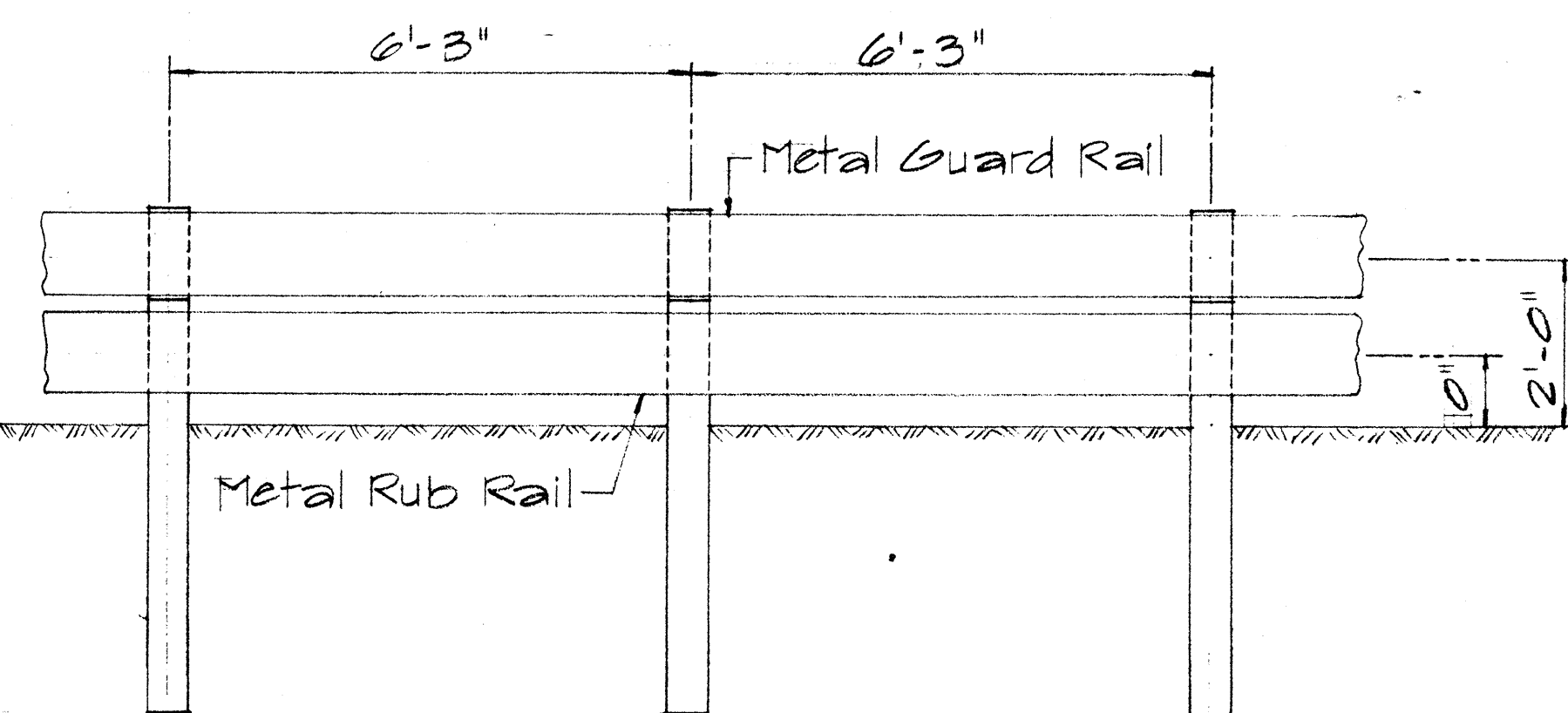
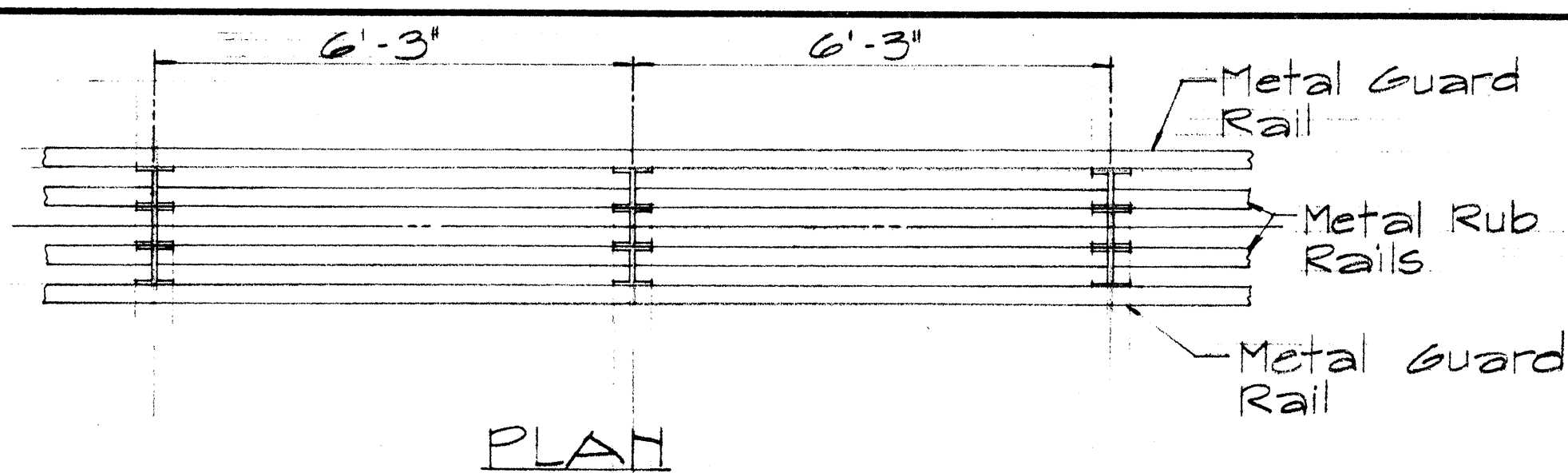
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

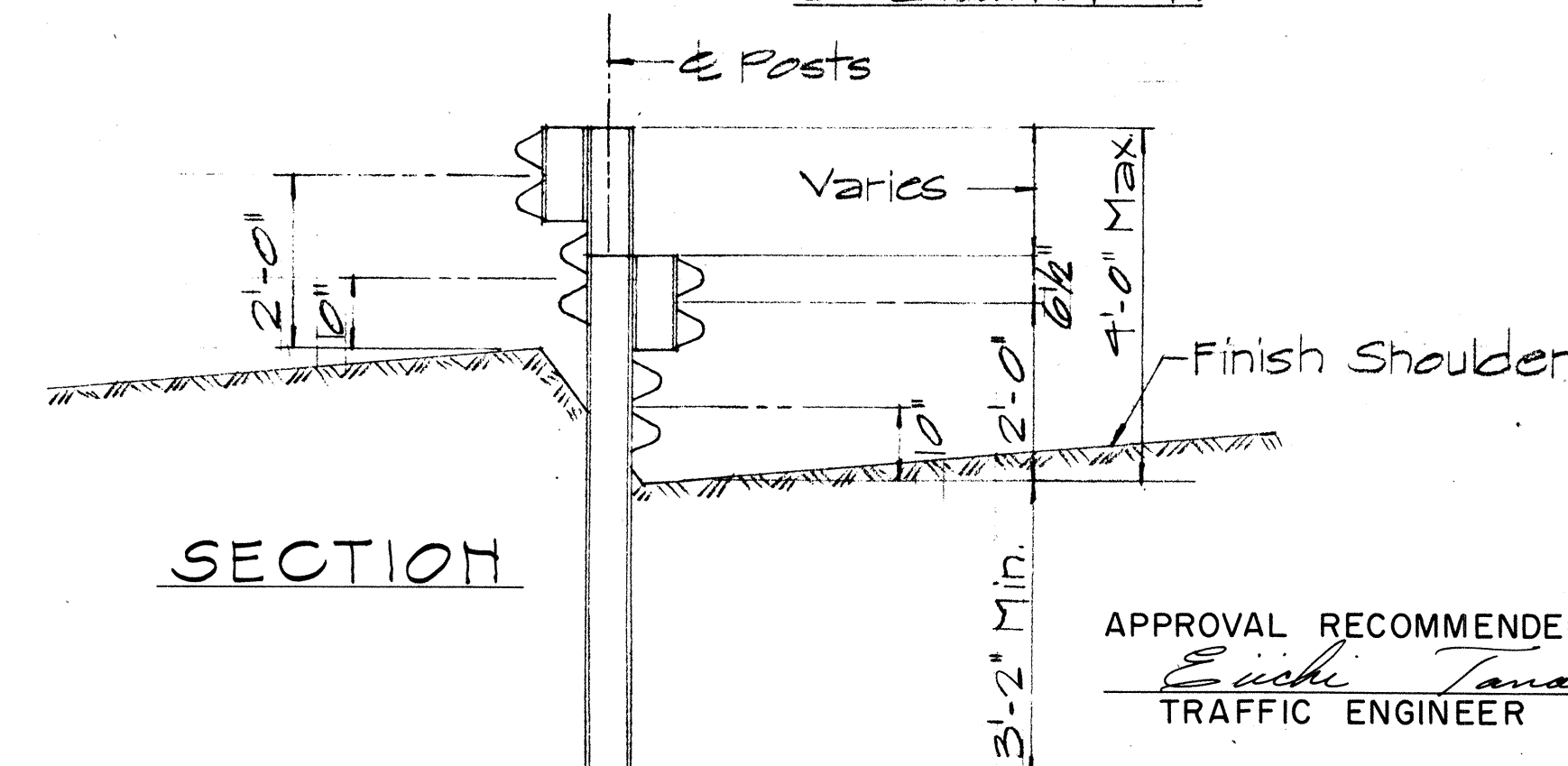
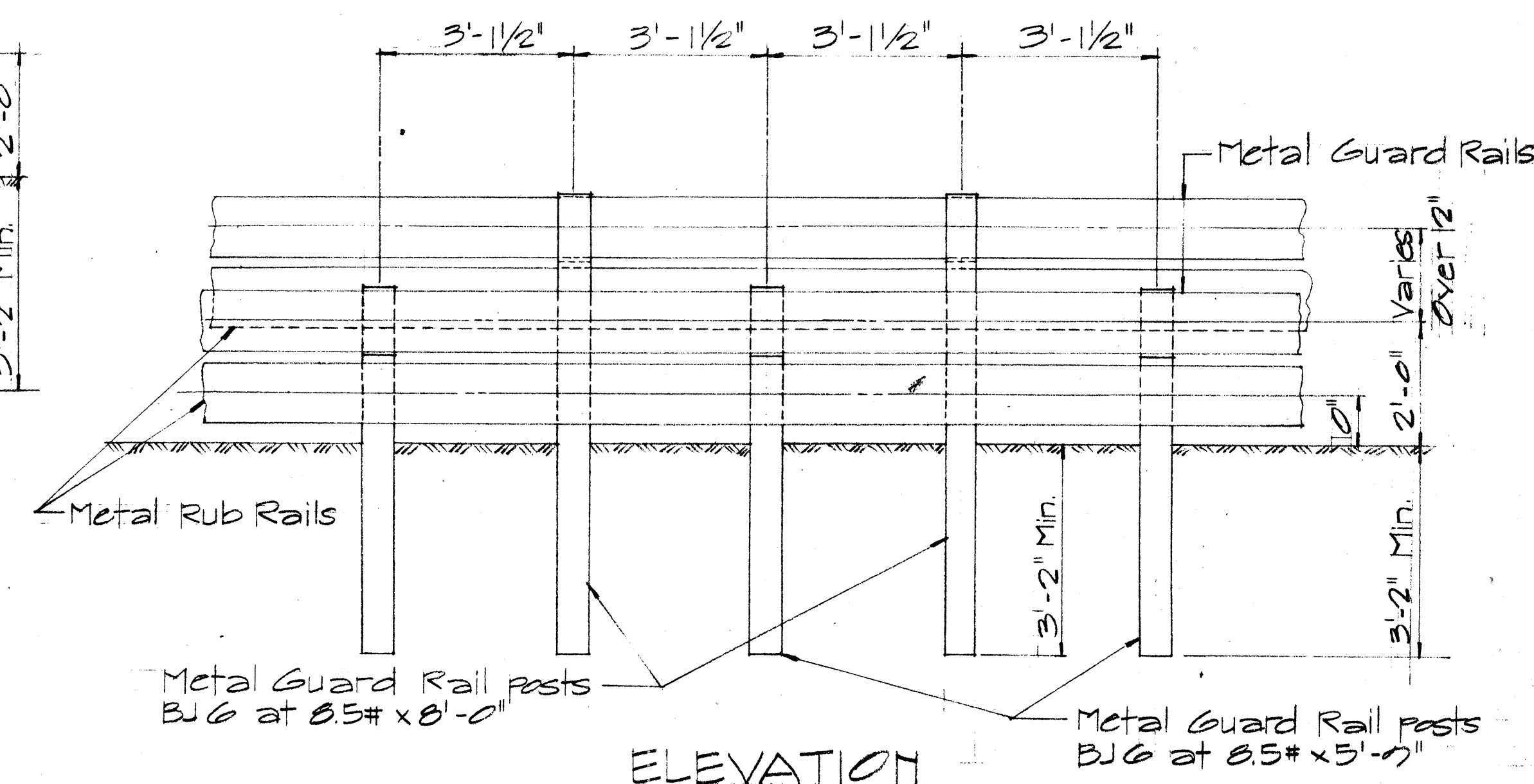
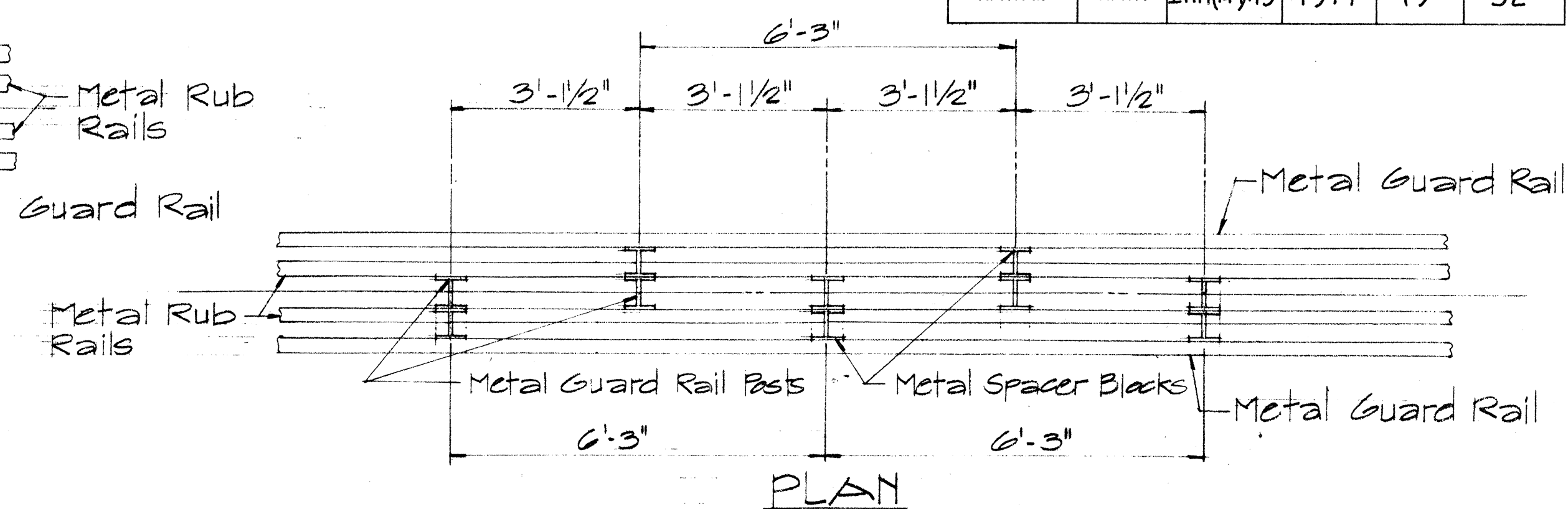
CHAIN LINK FENCE
 (WITH TOPRAIL)

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	144-13	1977	19	52



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



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

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

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

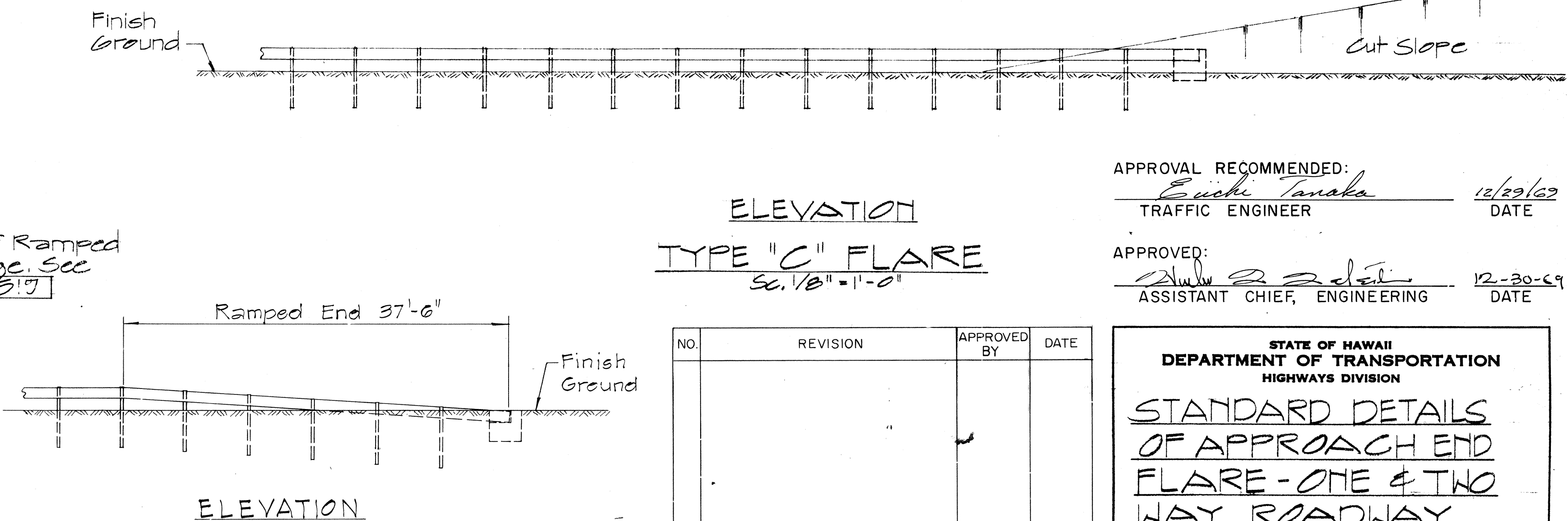
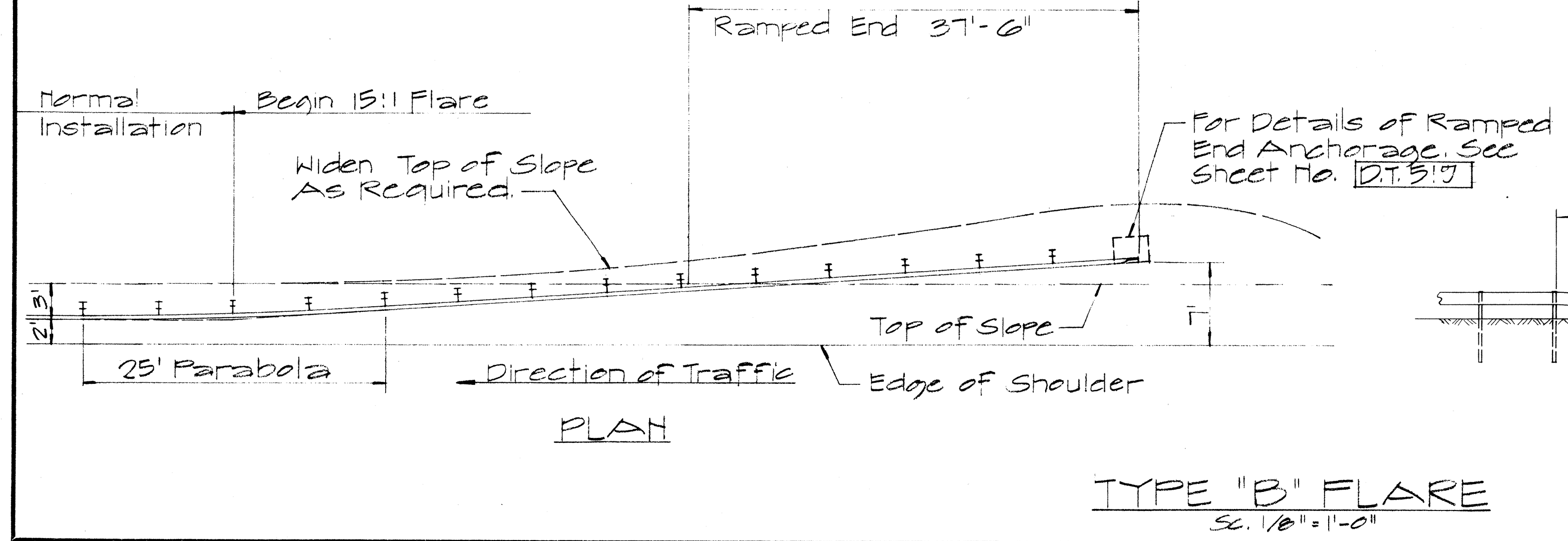
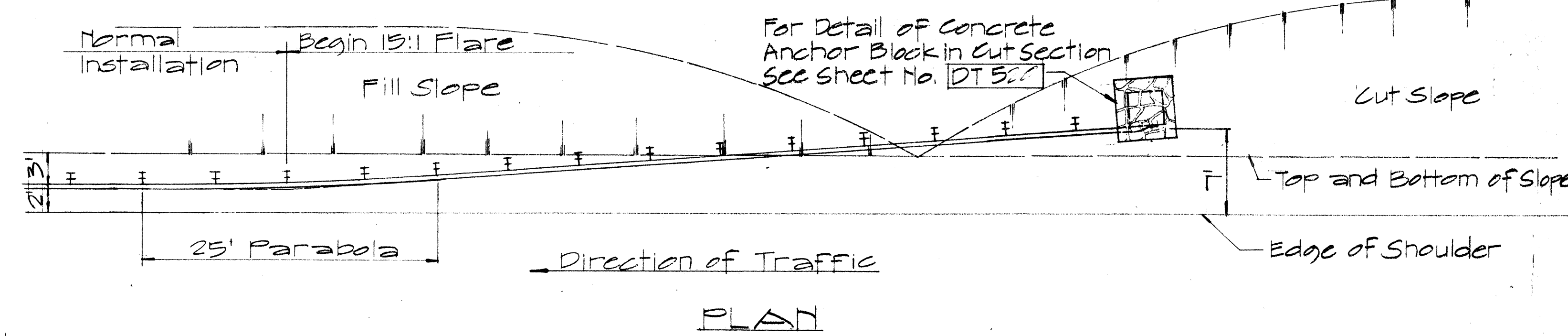
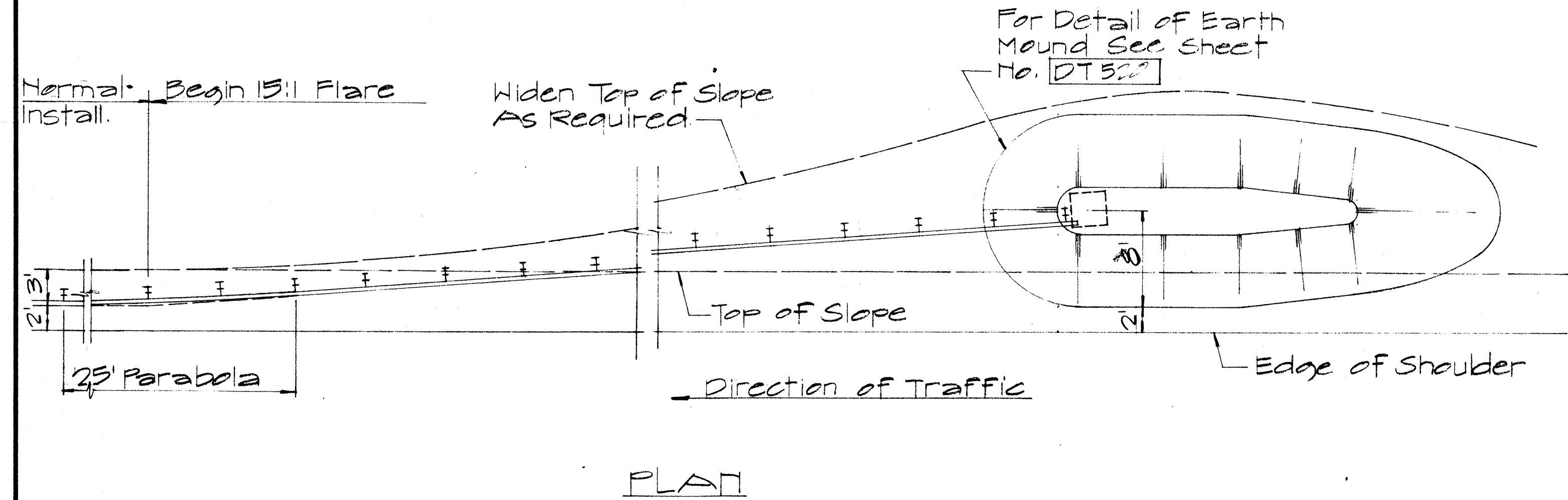
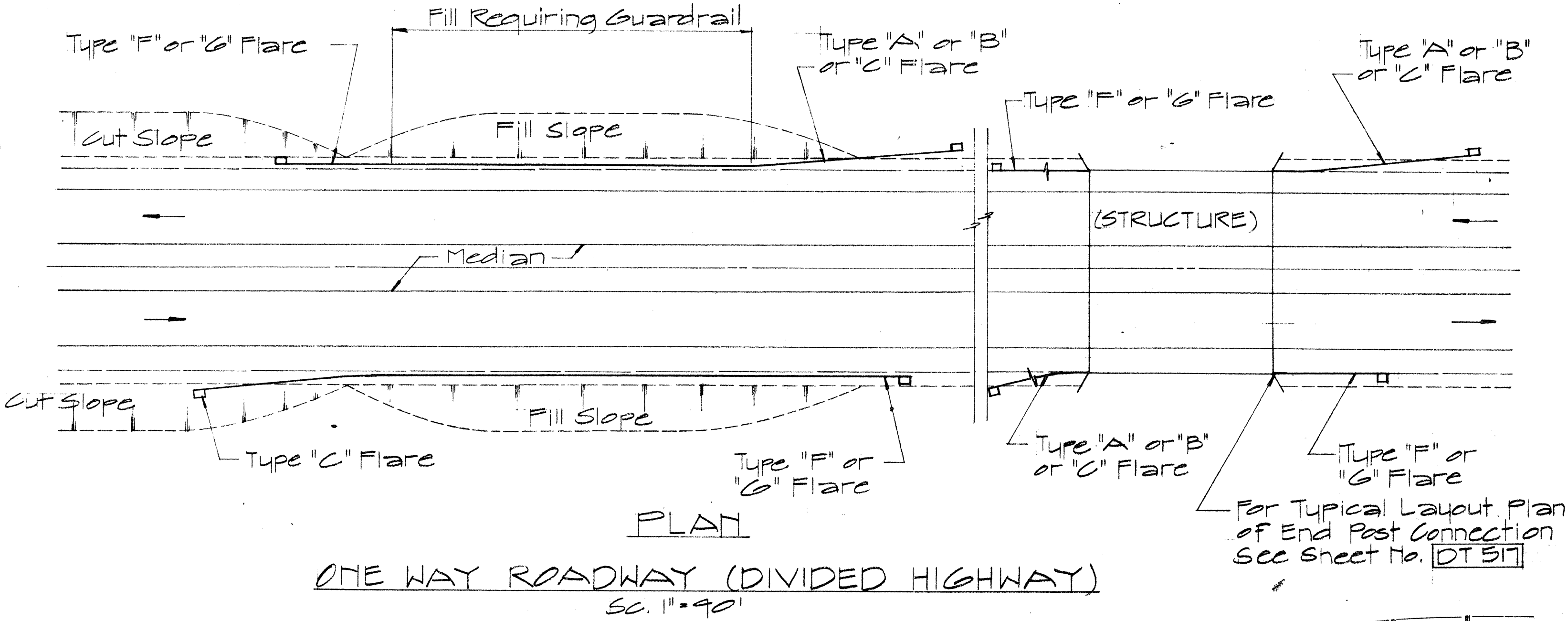
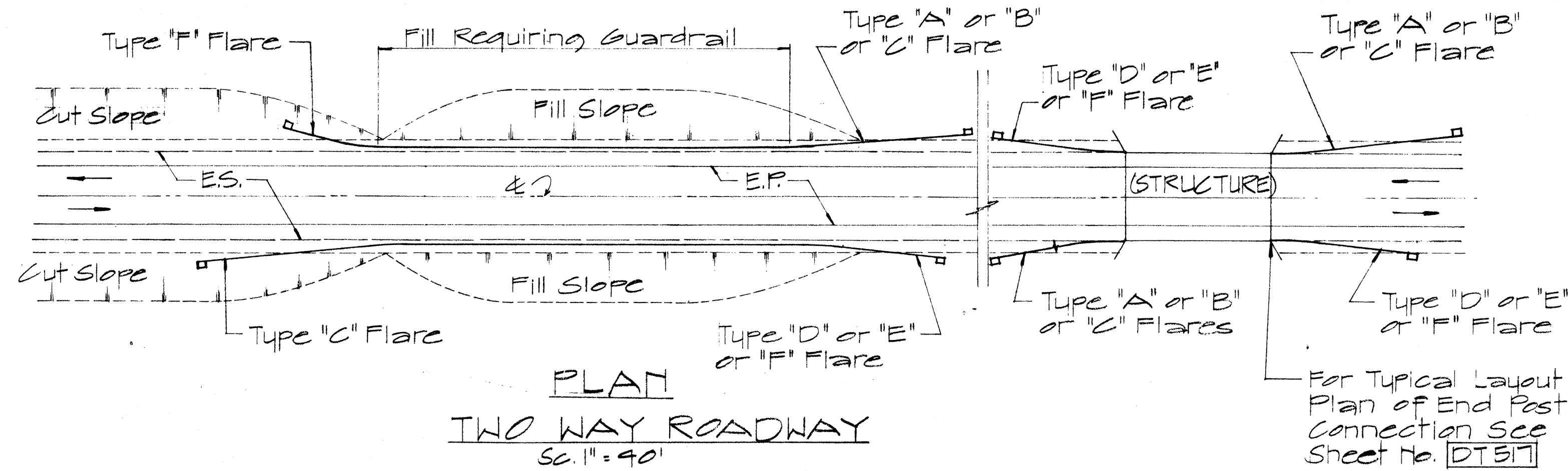
STANDARD DETAIL
METAL GUARD RAIL
WITH RUB RAIL

Scale: 1/2" = 1'-0" Feb. 10, 1977

SHEET No. 5 OF 8 SHEETS DT 514

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HH(144)13	1977	20	52

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



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

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

NO.	REVISION	APPROVED BY	DATE

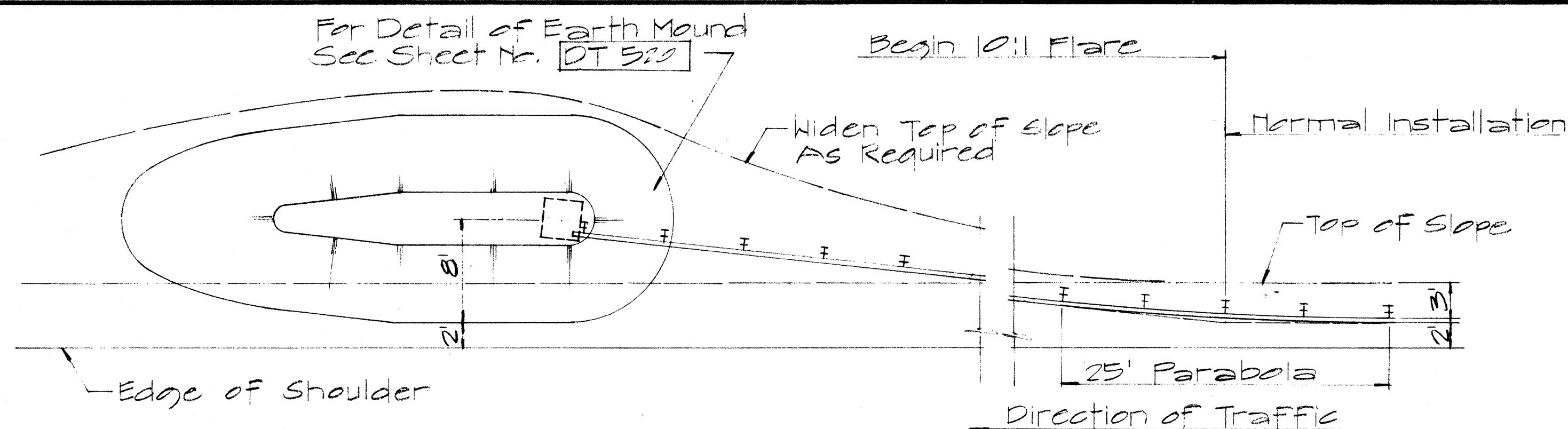
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**STANDARD DETAILS
OF APPROACH END
FLARE - ONE & TWO
WAY ROADWAY**

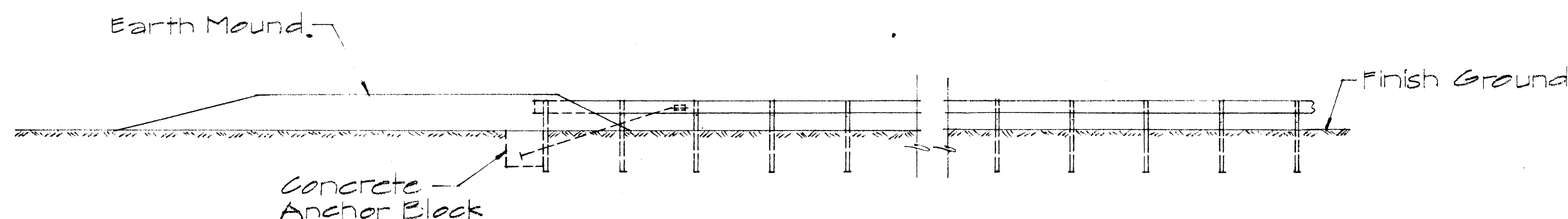
Sc. As Noted April 1967
SHEET No. 6 OF 8 SHEETS DT 516

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.	144-13	1977	21	52

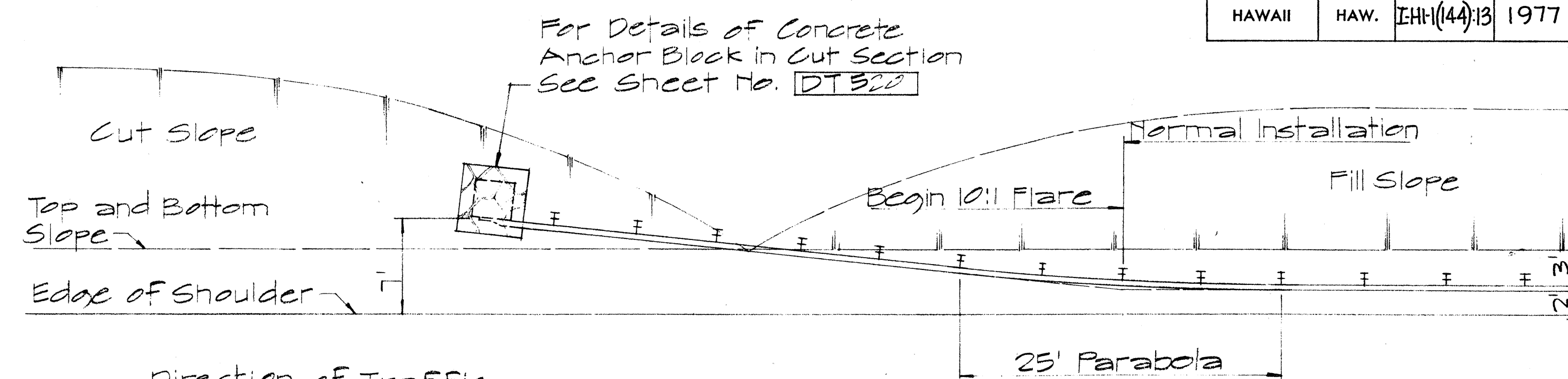


PLAN

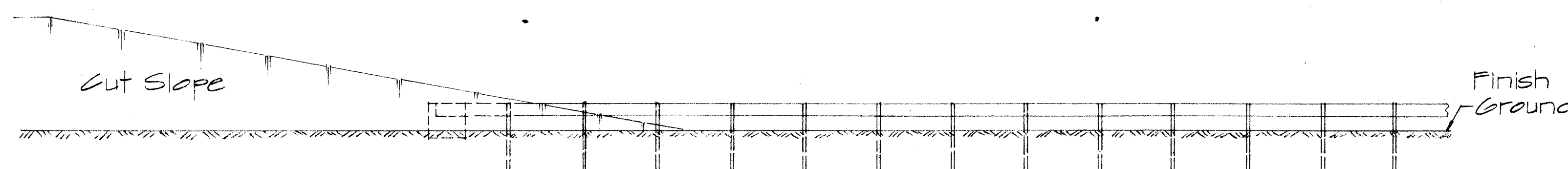


ELEVATION

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

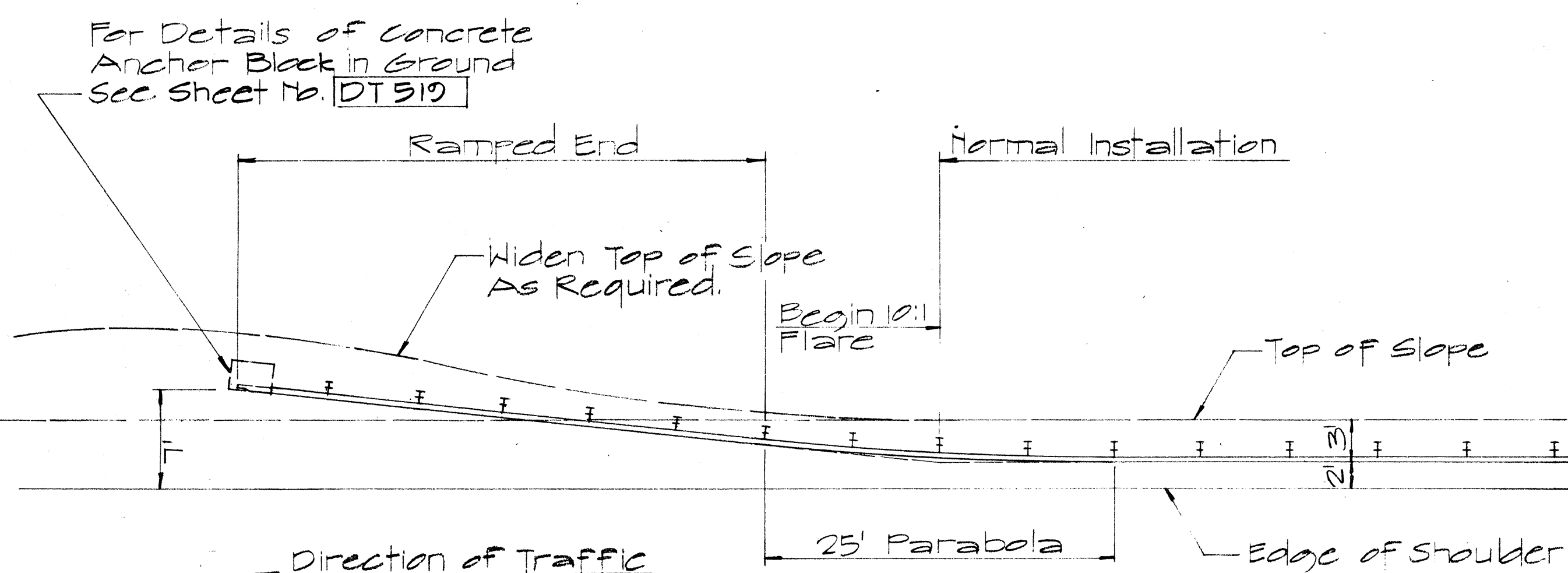


PLAN

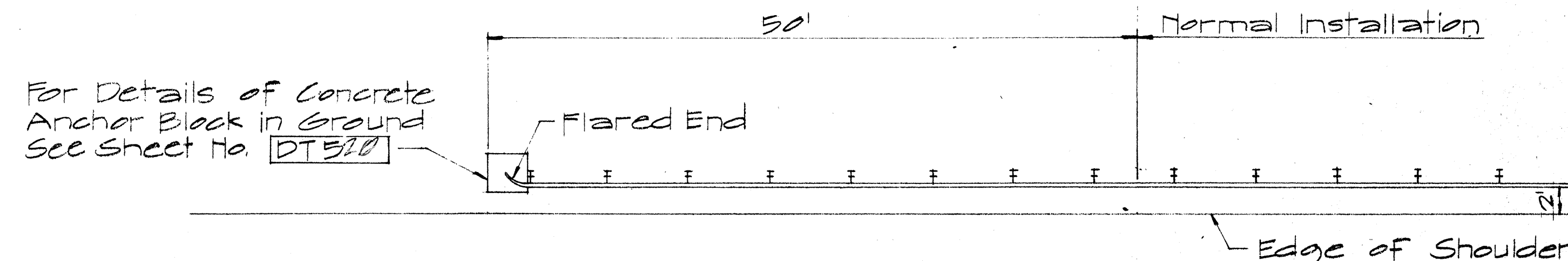


ELEVATION

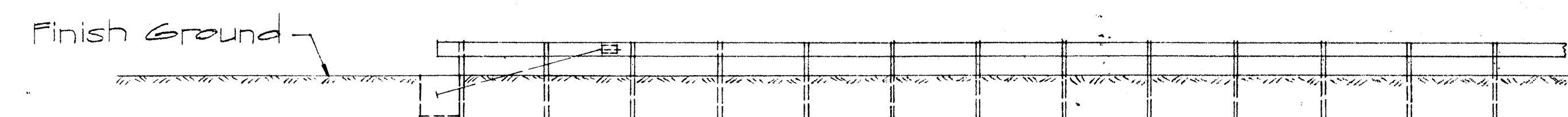
TYPE "F" FLARE
Sc. 1/8" = 1'-0"



PLAN

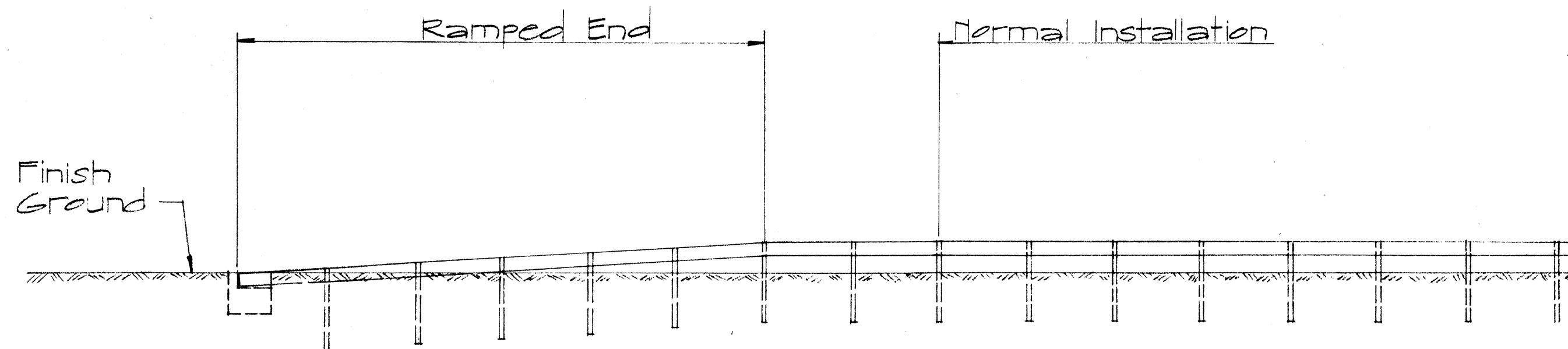


PLAN



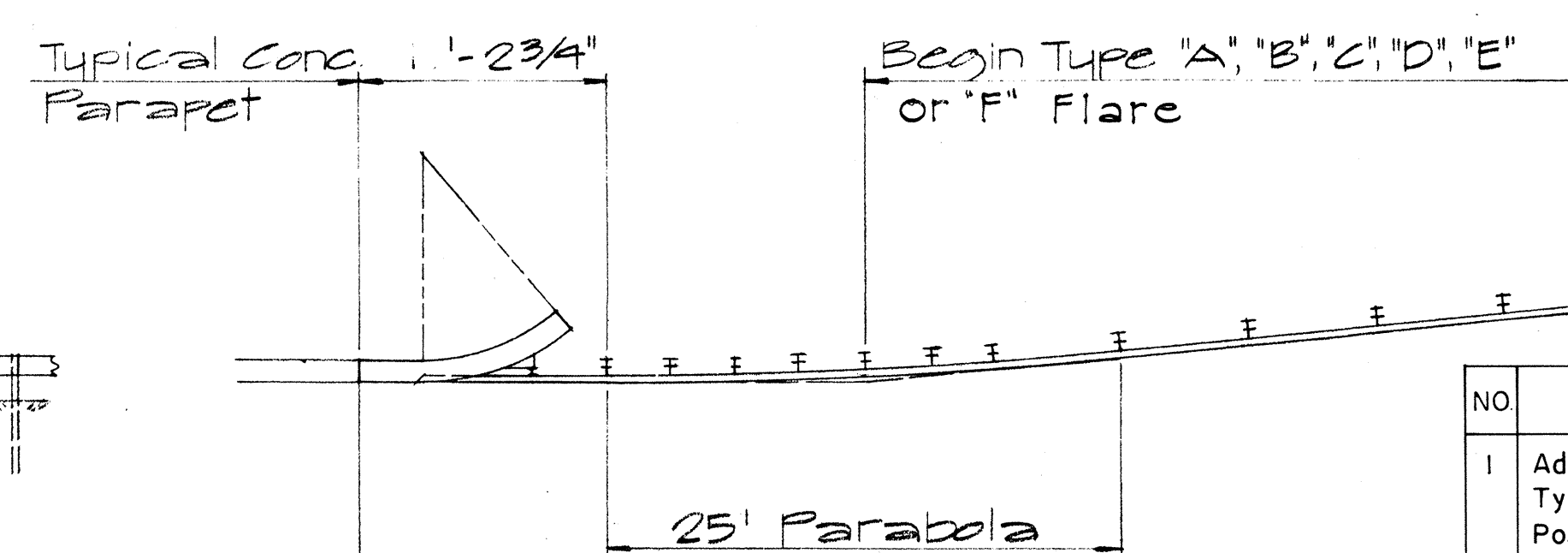
ELEVATION

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



ELEVATION

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



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

APPROVAL RECOMMENDED:
E. Tanaka 12/29/69
TRAFFIC ENGINEER DATE

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

NO.	REVISION	APPROVED BY	DATE
1	Additional Posts Added to Typical Layout Plan of End Post Connection	H.T.	4-12-72

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
TRAILING END
FLARE - ONE & TWO
WAY ROADWAY

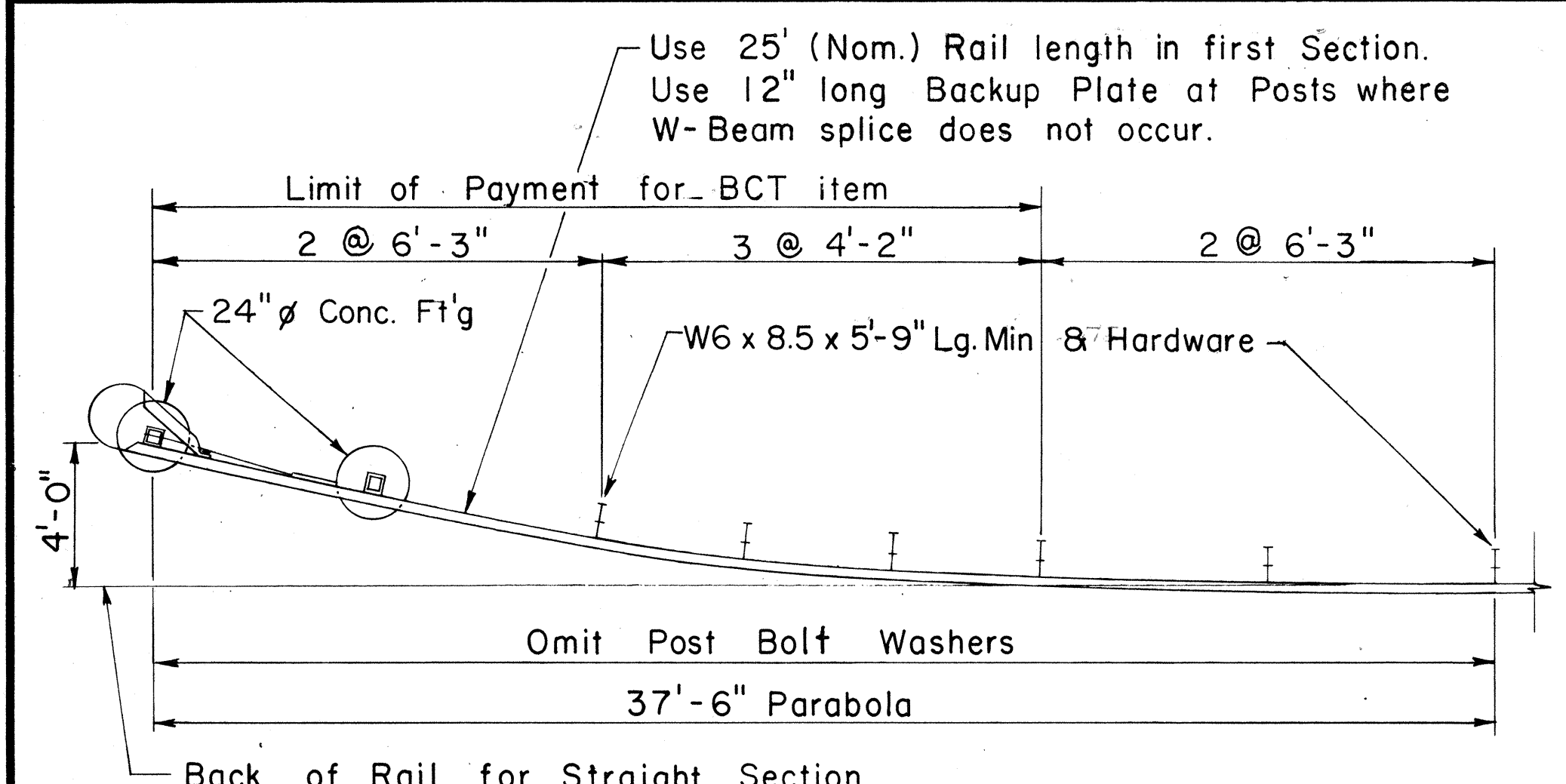
Scale: As Noted April 1967

SHEET No. 7 OF 8 SHEETS DT 517

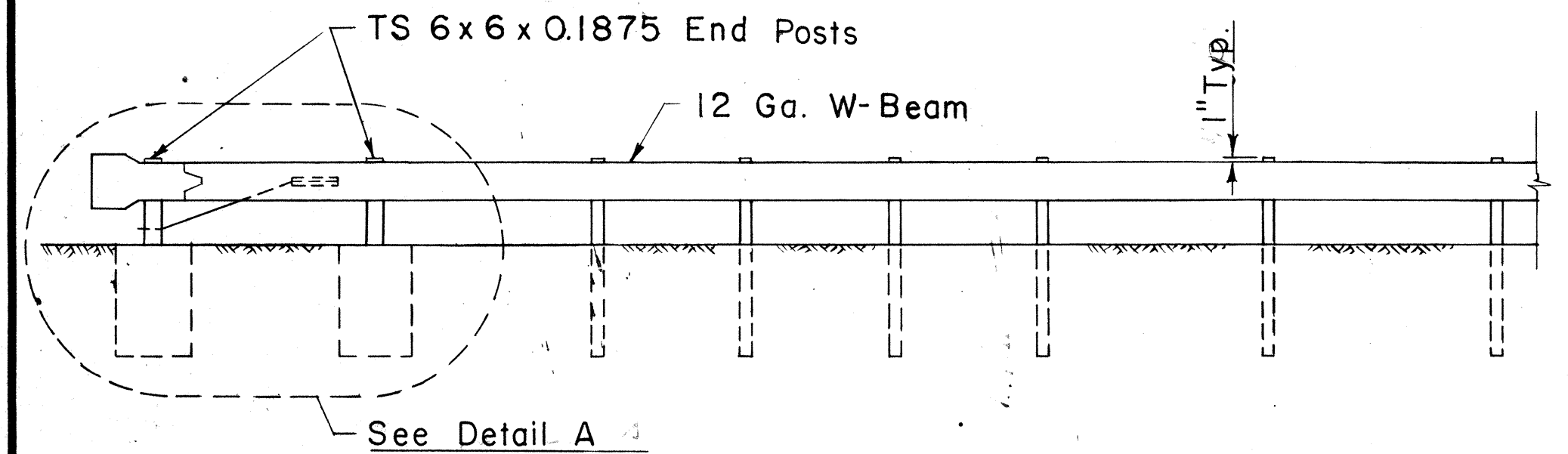
DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	144-1(44)-13	1979	CO215-1	52

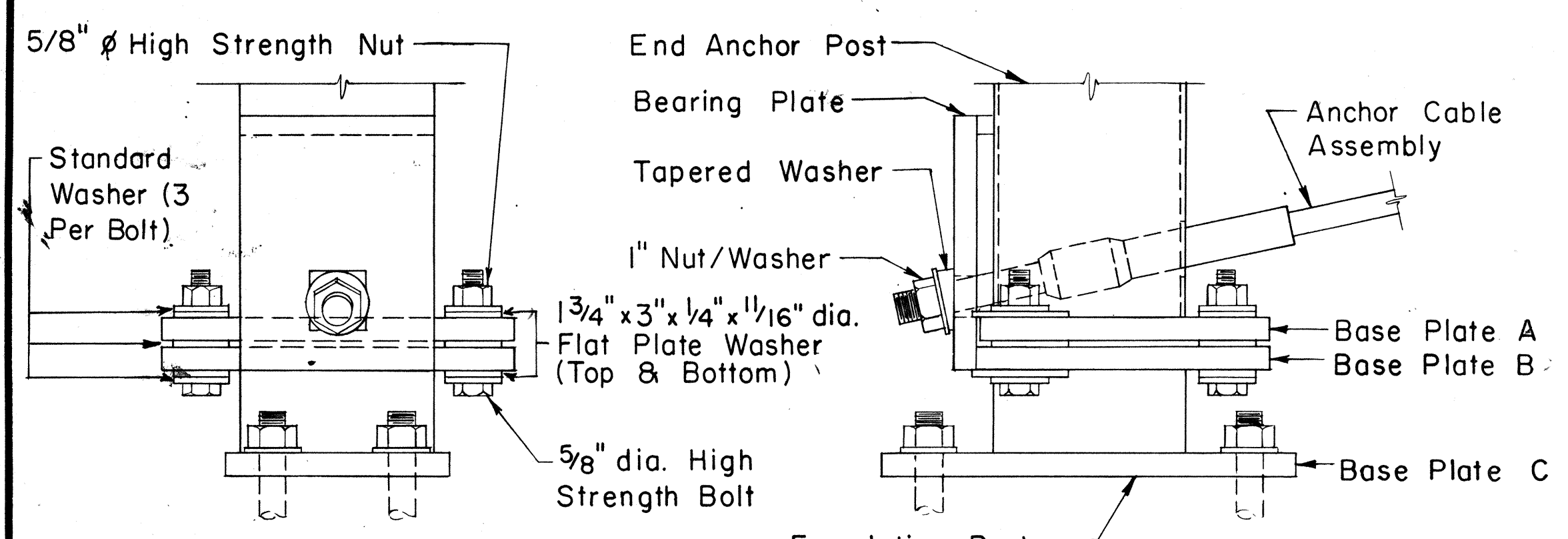
- NOTES:**
1. Anchor Plate and Anchor Cable Assembly (Standard Swaged Fitting and Stud). See Standard Detail Sheet No. DT 520.
 2. Other Anchor Cable Assemblies may be used. Minimum breaking strength of assembly should be 40,000 lbs.
 3. Second Terminal Post does not require holes to accomodate Anchor Cable.
 4. Slip Base Load shall be controlled with a Calibrated Torque Wrench - Torque 155 - 170 ft. lbs.
 5. Concrete shall be Class A.



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



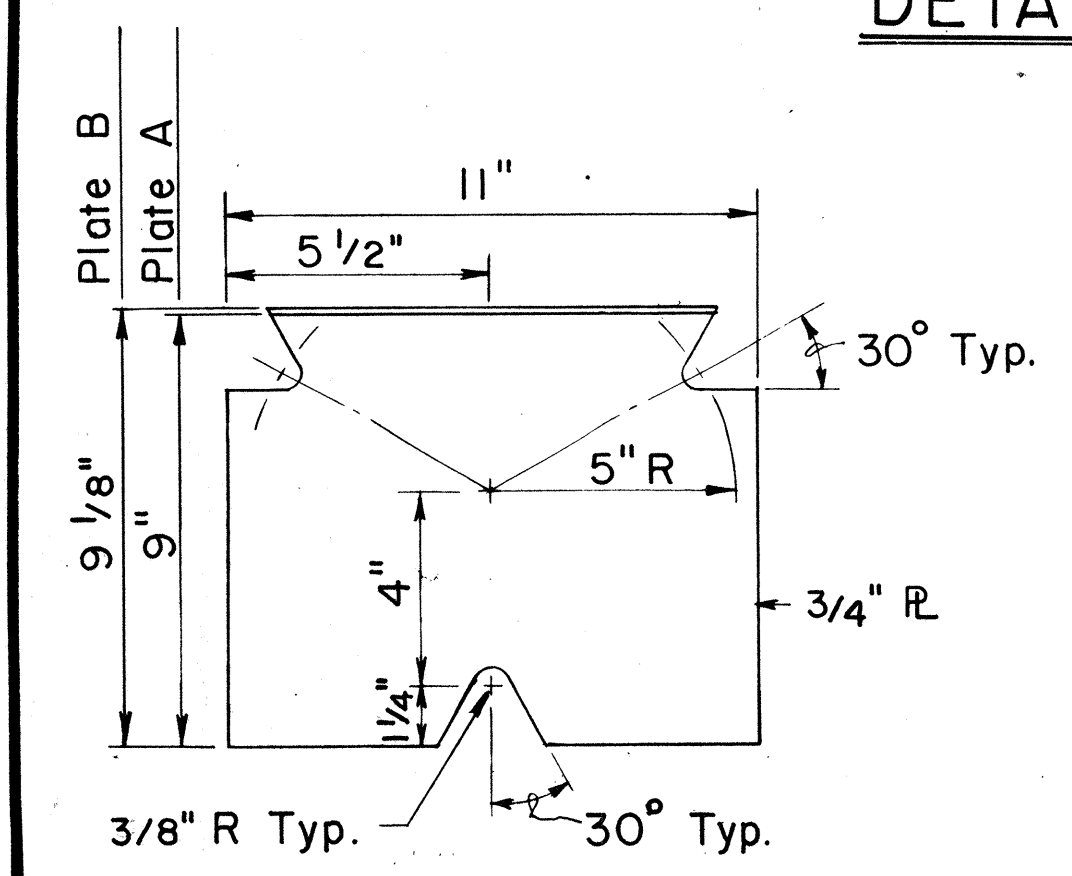
ELEVATION
Scale: 1/4" = 1'-0"



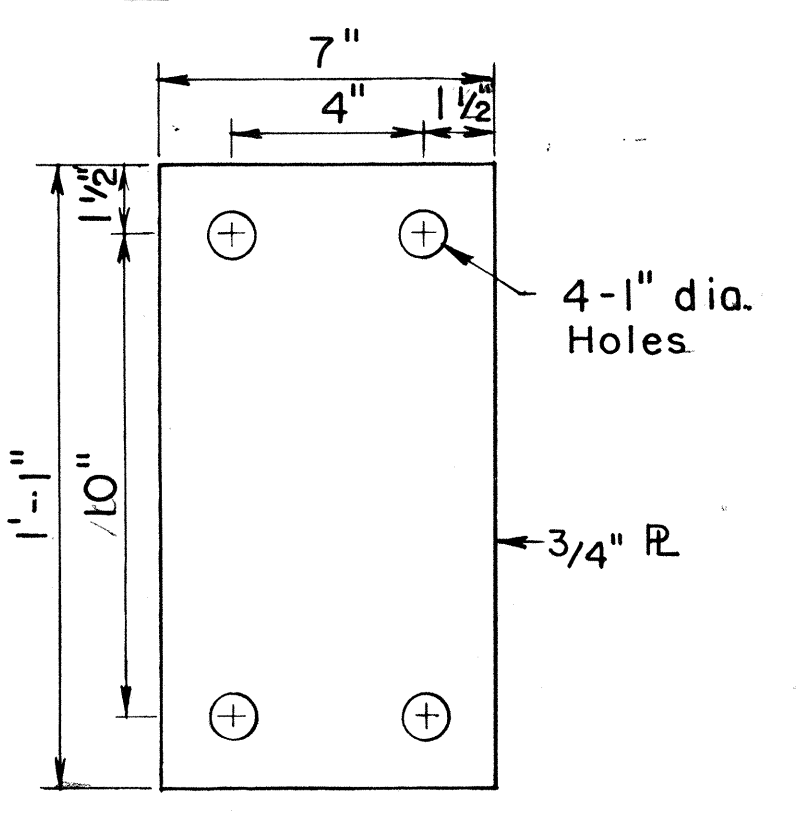
SIDE ELEVATION

FRONT ELEVATION

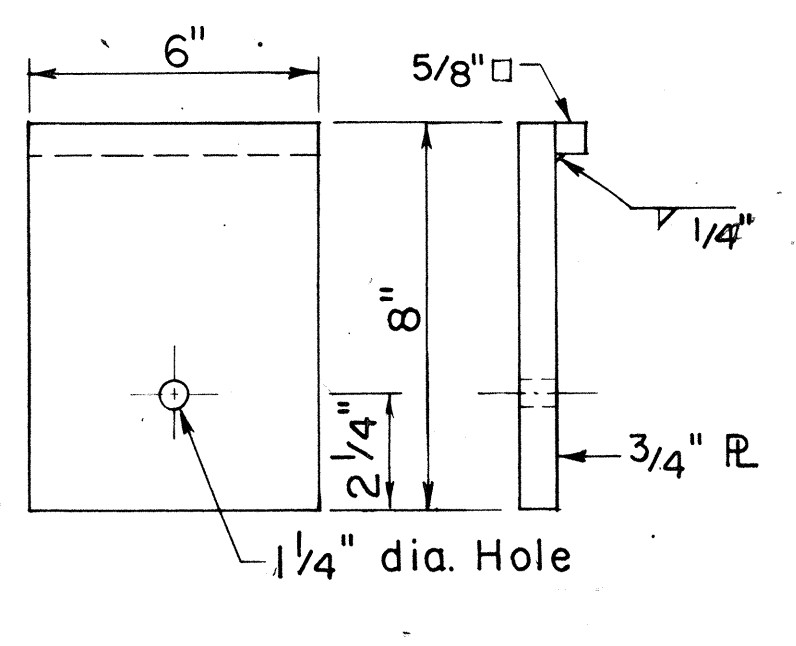
DETAIL B



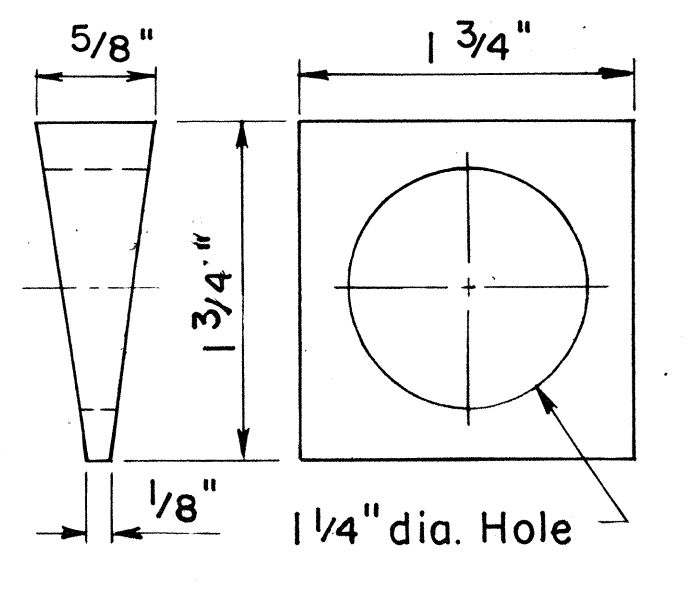
BASE PLATES A & B
Scale: 3" = 1'-0"



BASE PLATE C
Scale: 3" = 1'-0"

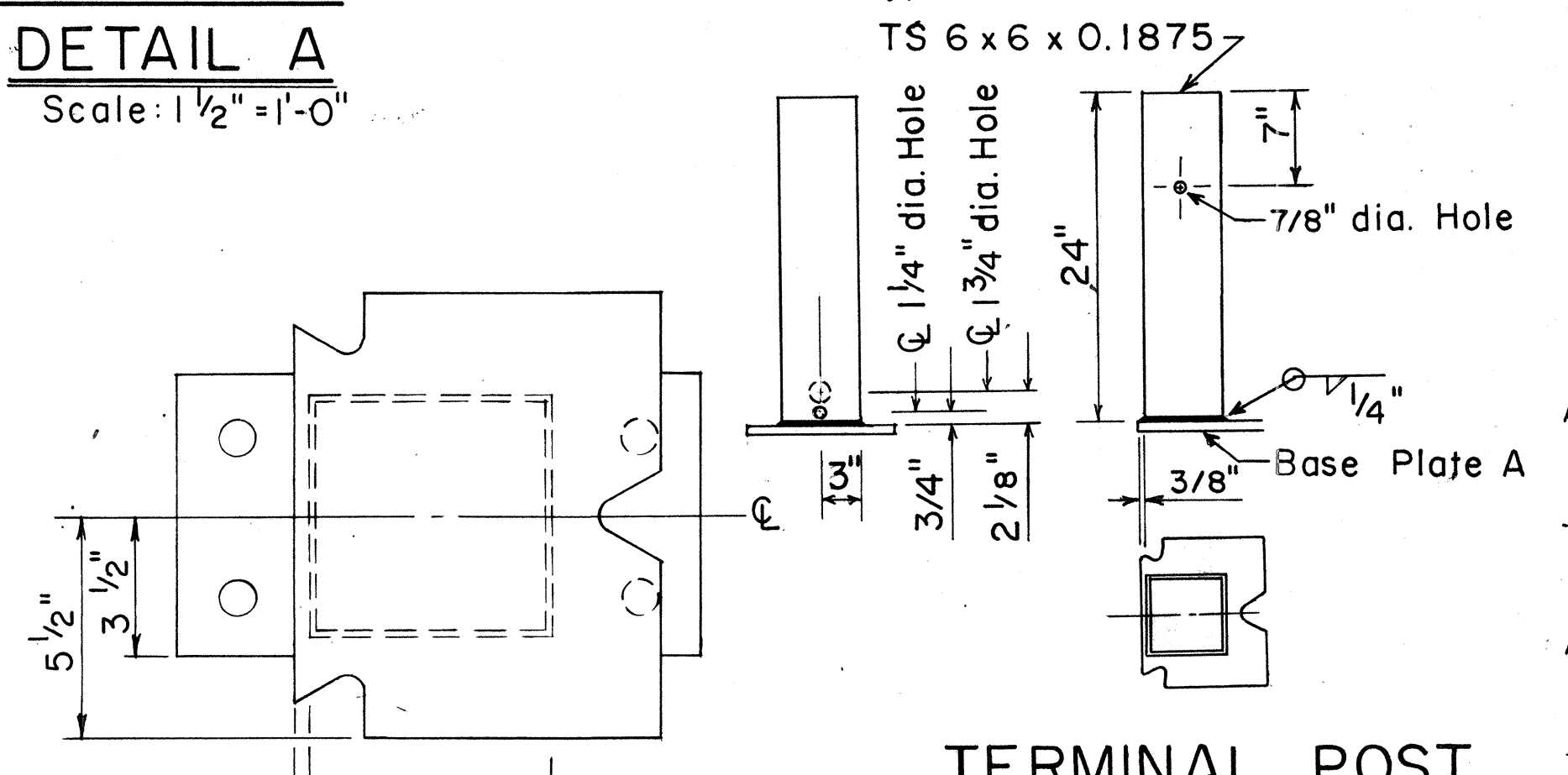


BEARING PLATE
Scale: 3" = 1'-0"



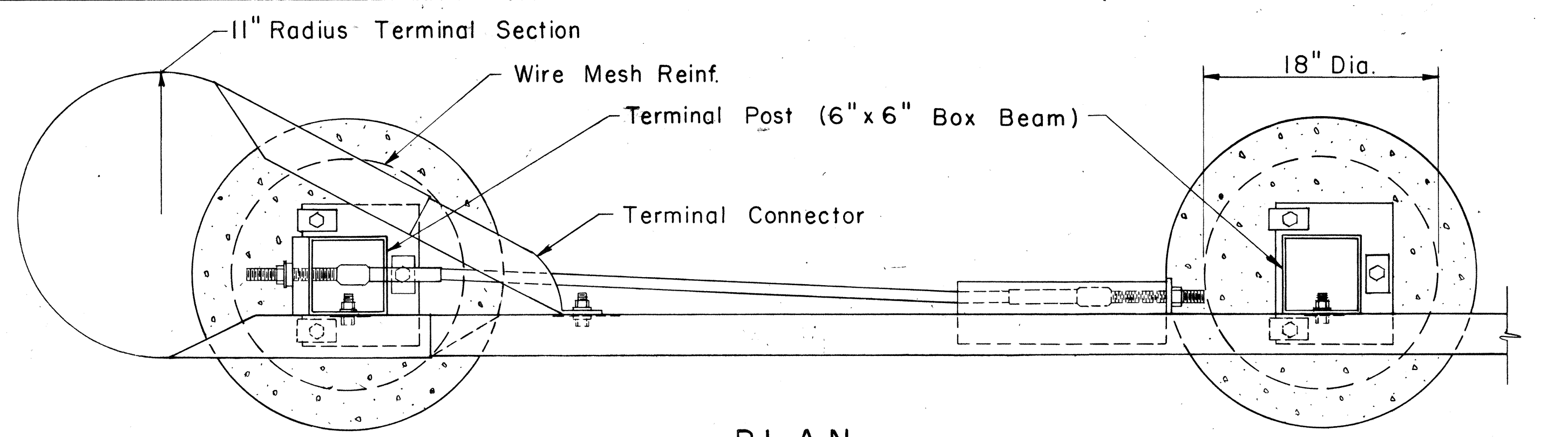
TAPERED WASHER
Scale: Full Size

**ELEVATION
DETAIL A**
Scale: 1 1/2" = 1'-0"

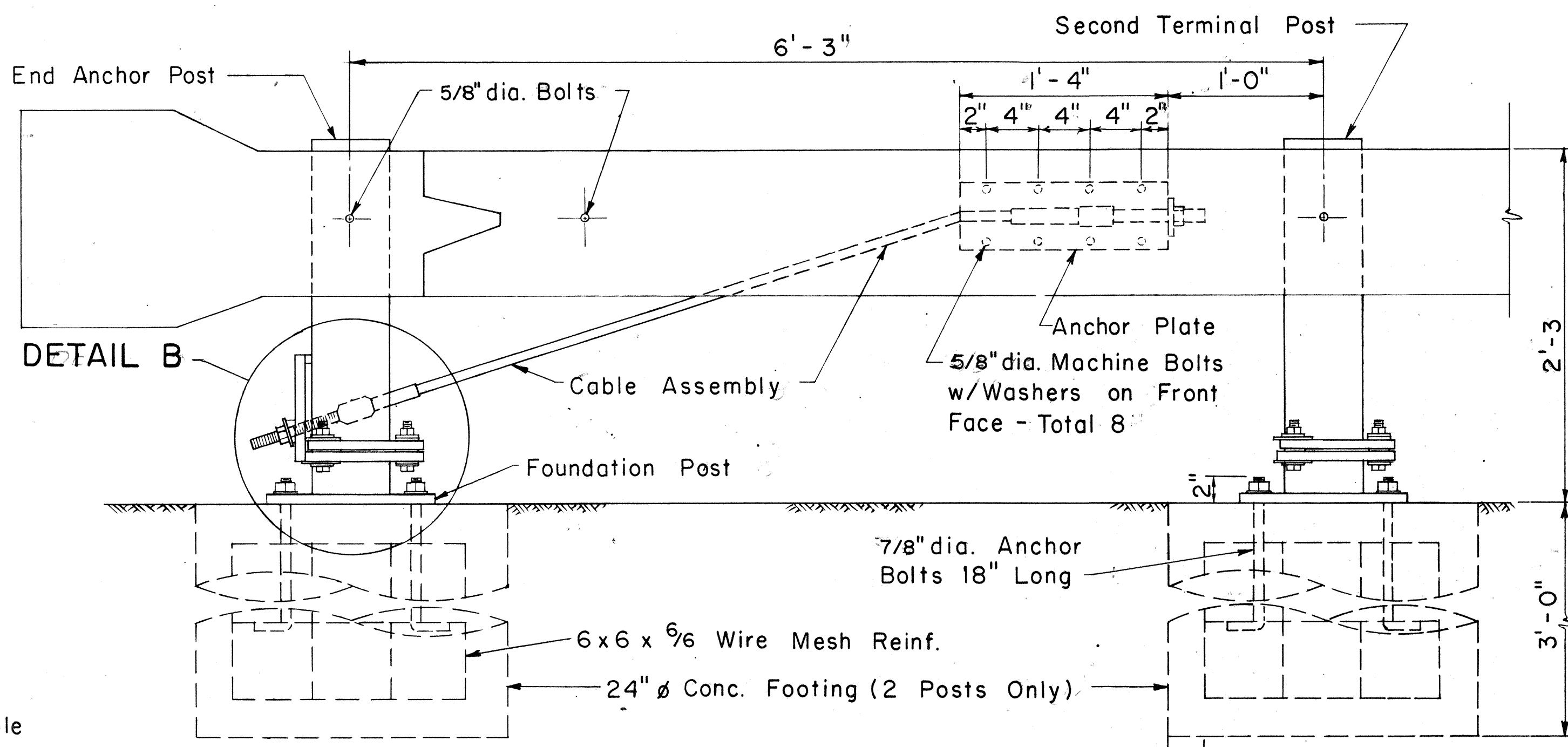


TERMINAL POST
Scale: 1" = 1'-0"

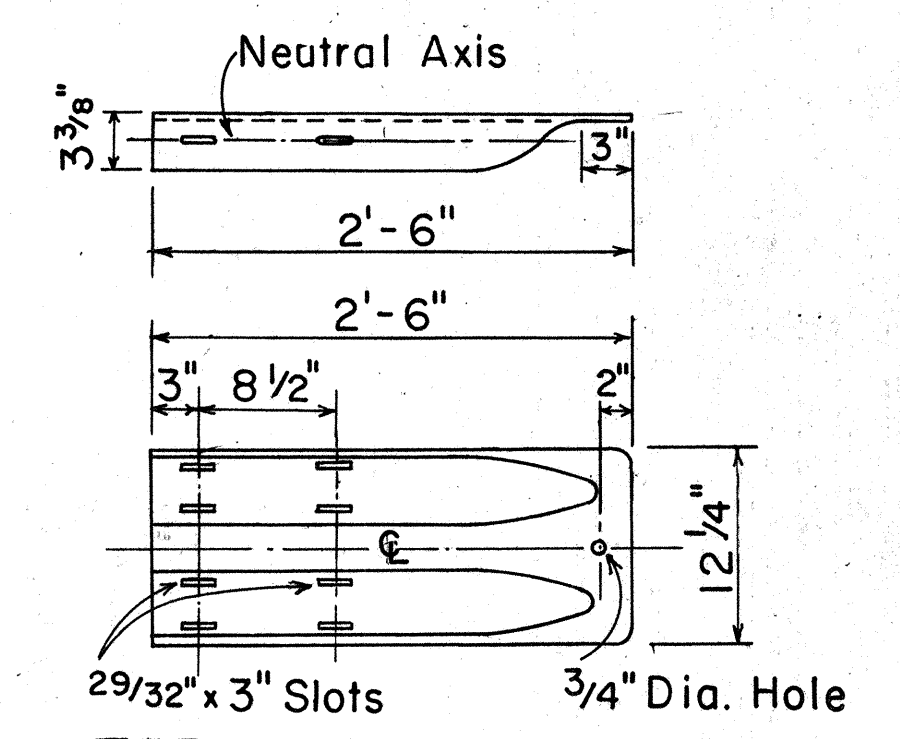
NO.	REVISION	APPROVED BY	DATE
	Supersedes Sht. DT 519 Approved 12/30/69	H.I.	6/15/78



PLAN



**ELEVATION
DETAIL A**
Scale: 1 1/2" = 1'-0"



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

APPROVAL RECOMMENDED:

Eiichi Tanaka 6/14/78
TRAFFIC ENGINEER DATE

APPROVED:

Harbour Sakaiishi 6/15/78
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAIL

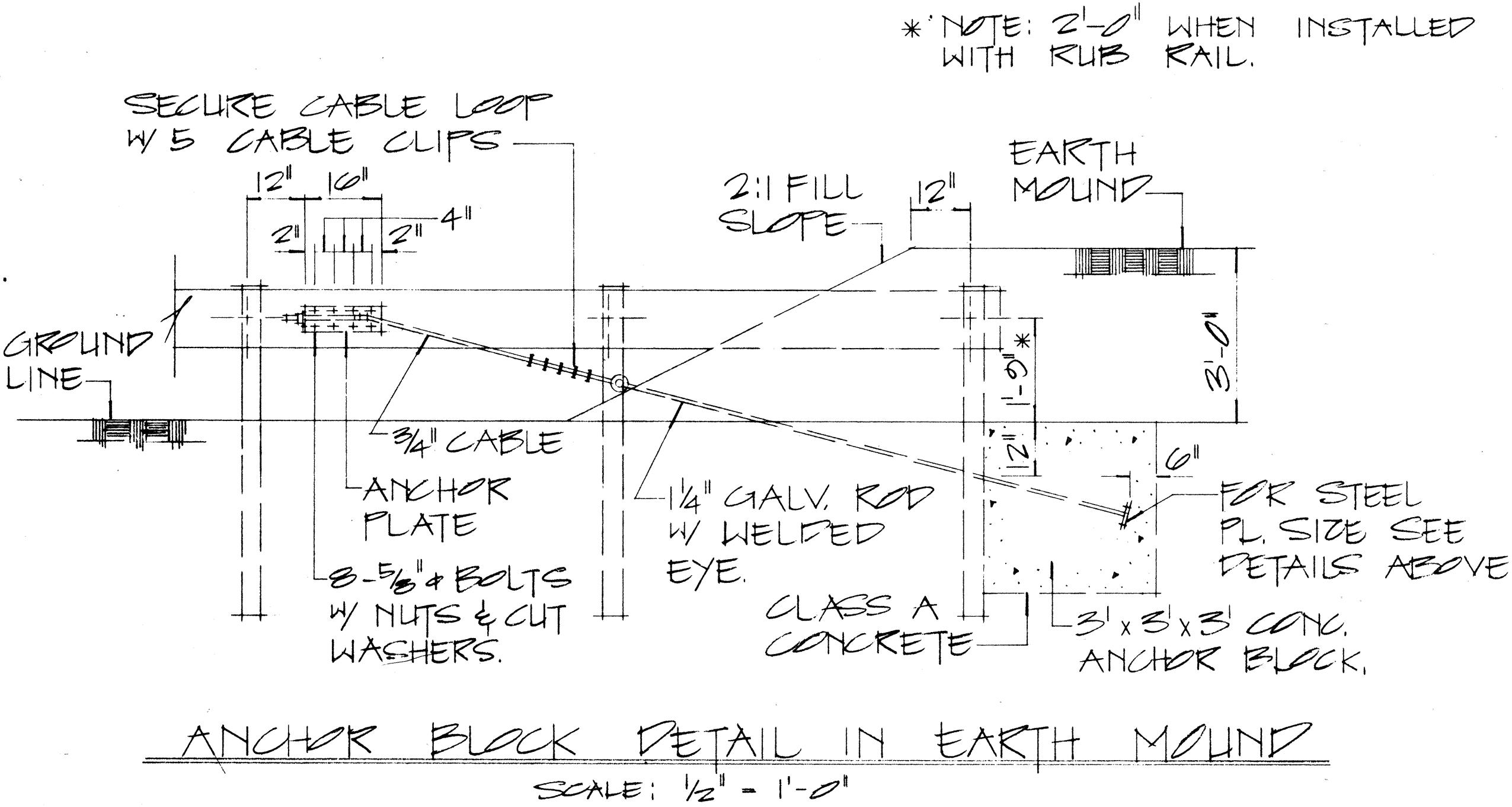
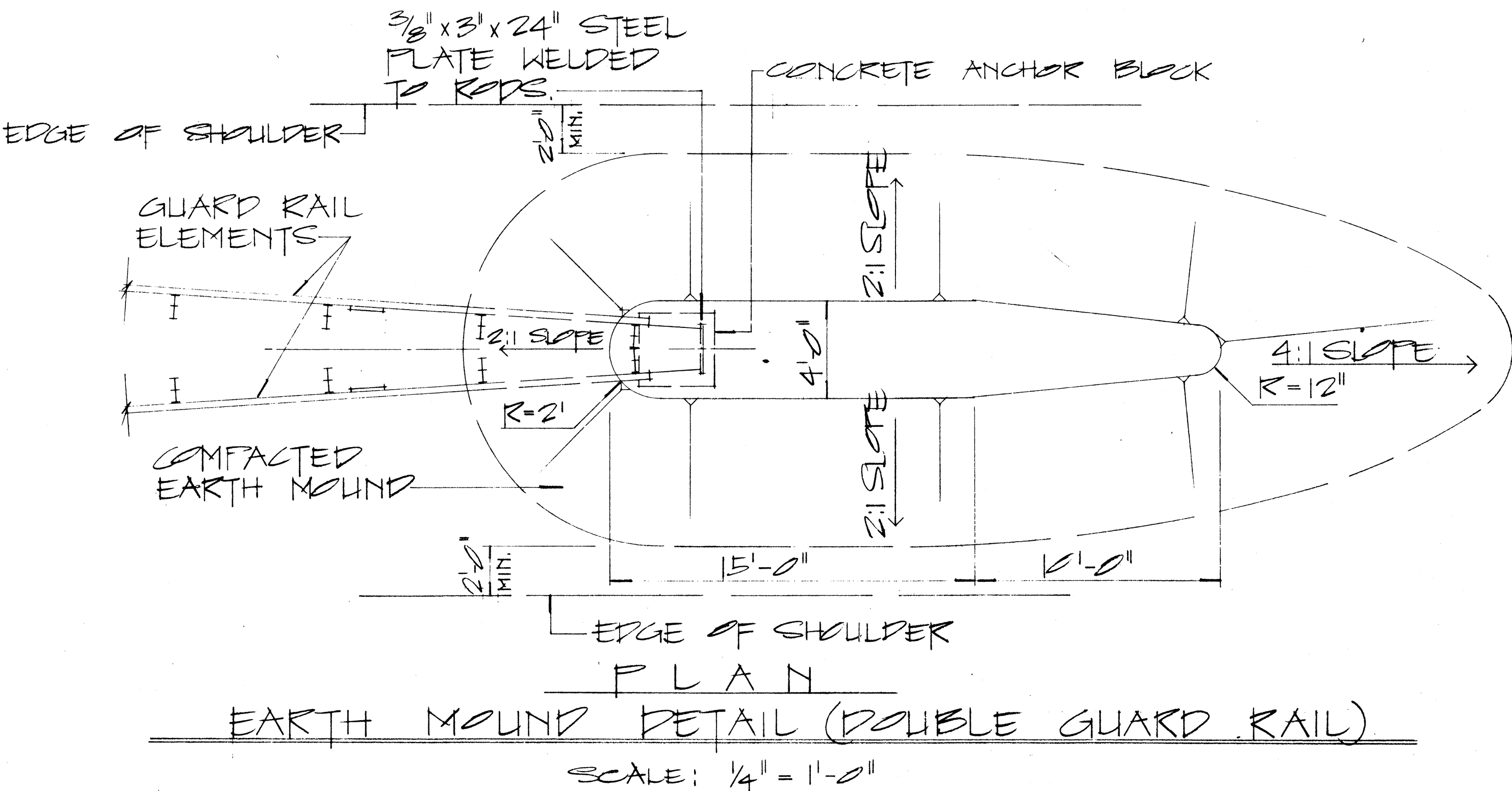
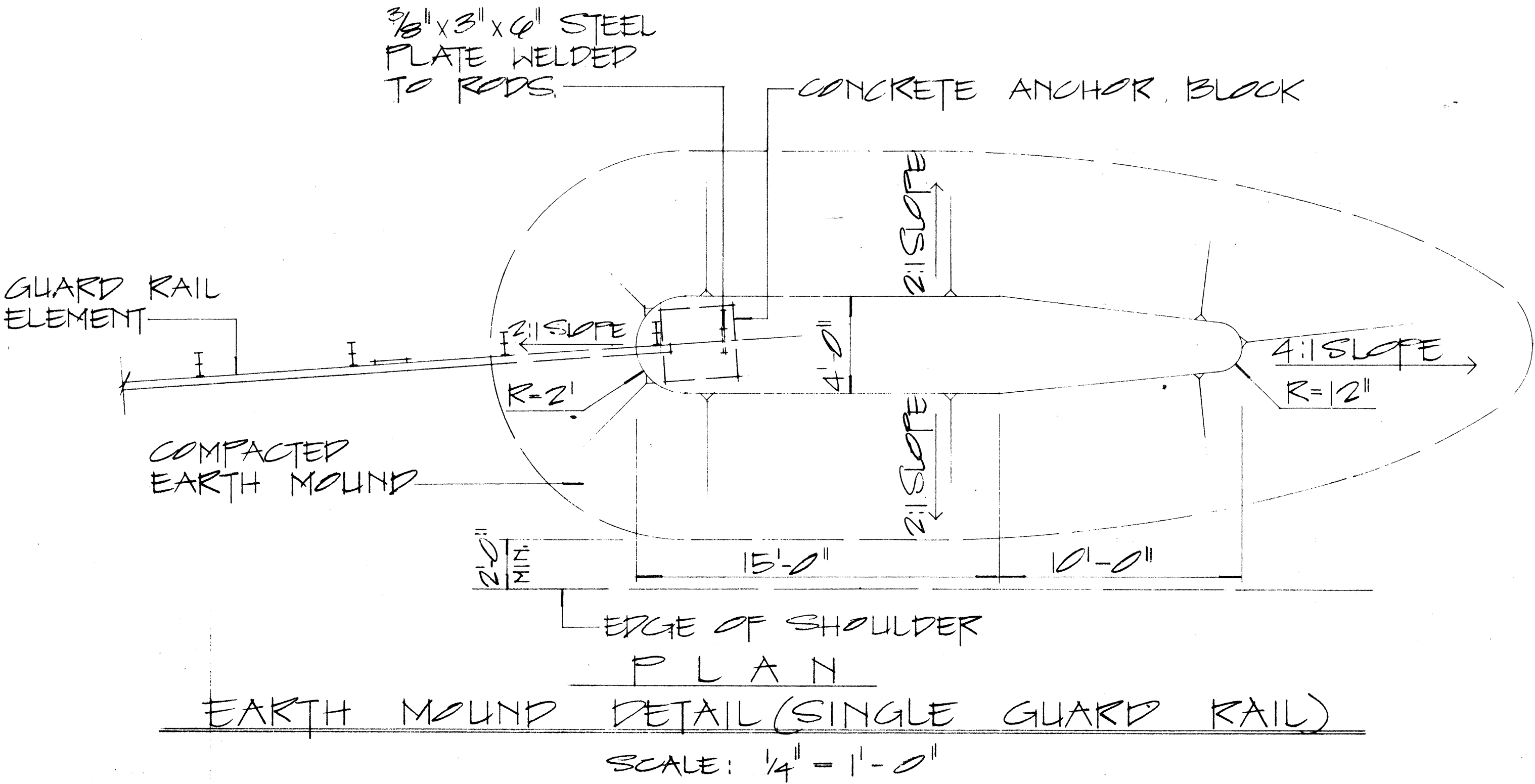
BREAKAWAY CABLE TERMINAL (BCT)

Scale: As Shown Date: June 1978

SHEET No. 7A OF 8 SHEETS DT 519

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

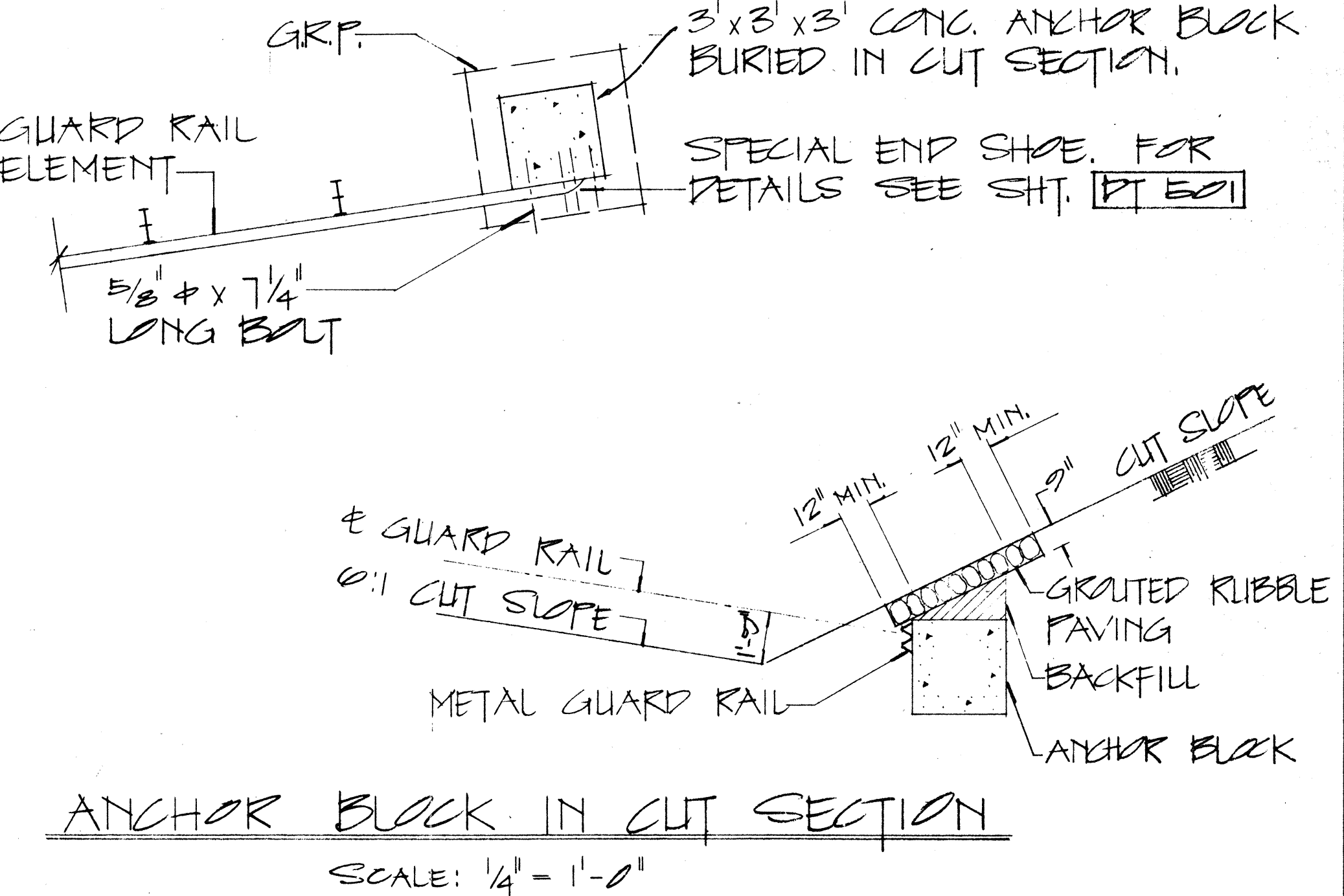
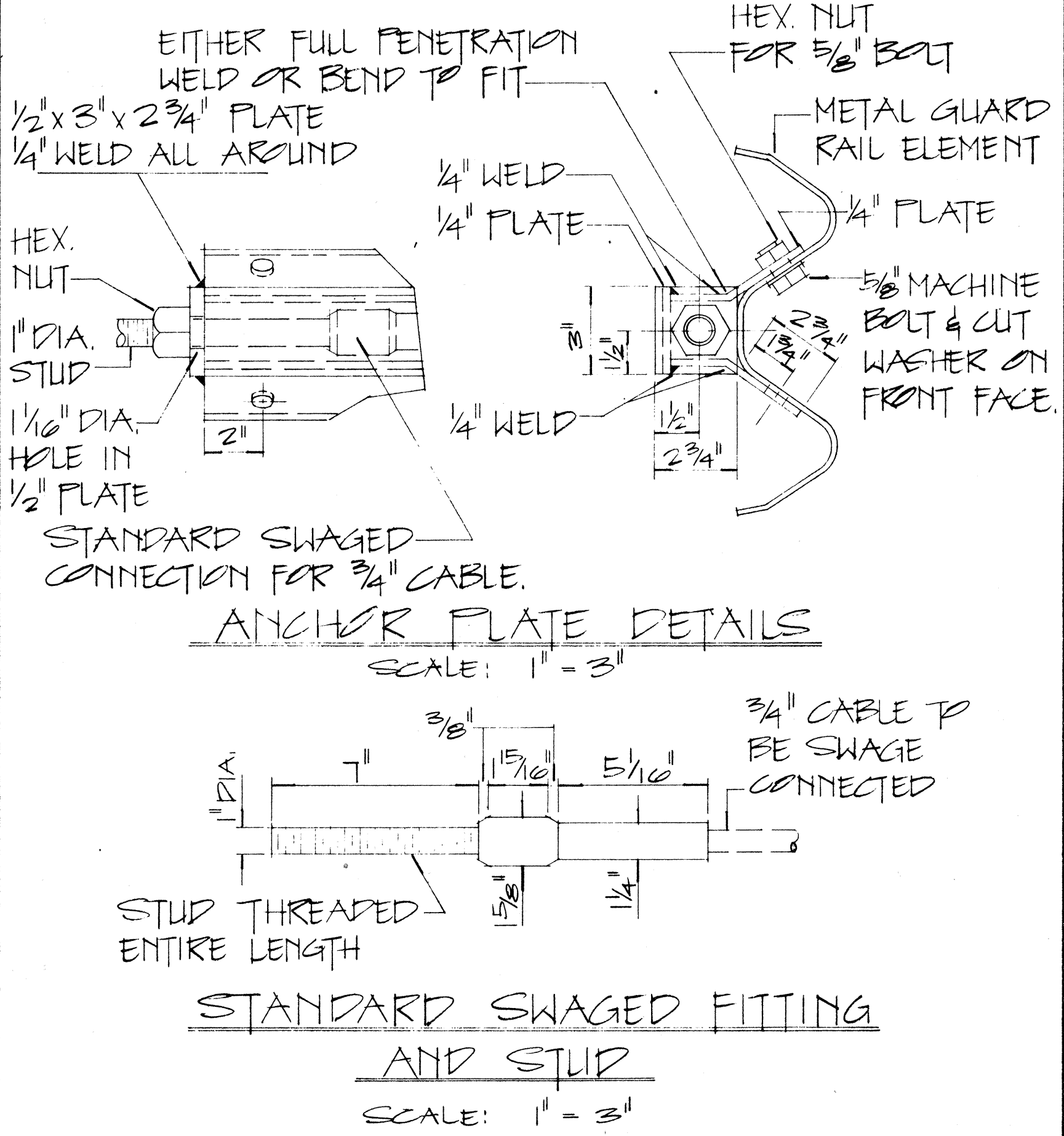
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IHA-1(44)13	1977	22	52



NOTE:

1. GALVANIZED ANCHOR ROD, METAL GUARD RAIL AND FAST BURIED IN GROUND SHALL BE COVERED WITH 2 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:

Eiichi Tanaka 12/23/69

TRAFFIC ENGINEER DATE

APPROVED:

John J. Salas 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

22

SHEET No. 8 OF 8 SHEETS

DATE	
ORIGINAL PLAN	
DESIGNED BY	
NOTED BY	
CHECKED BY	