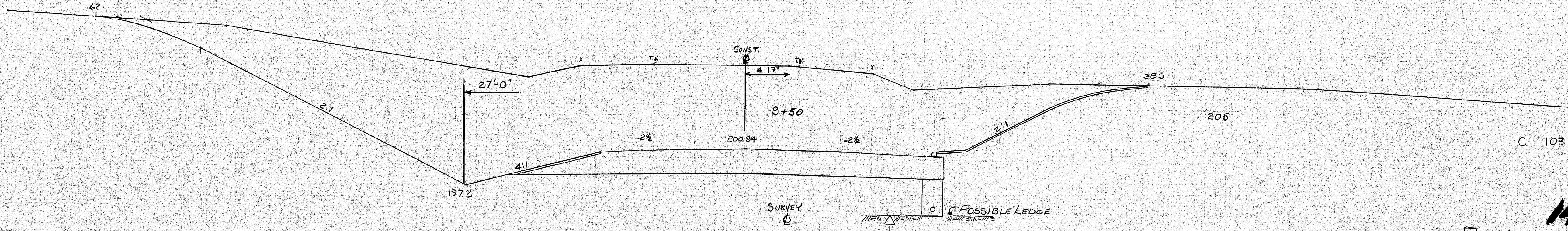
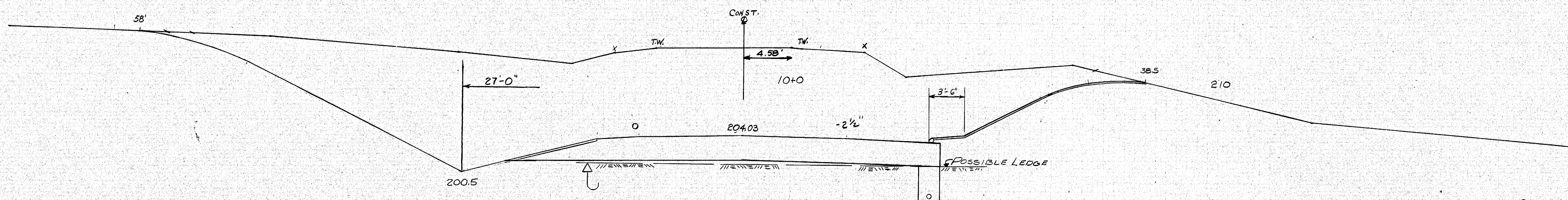
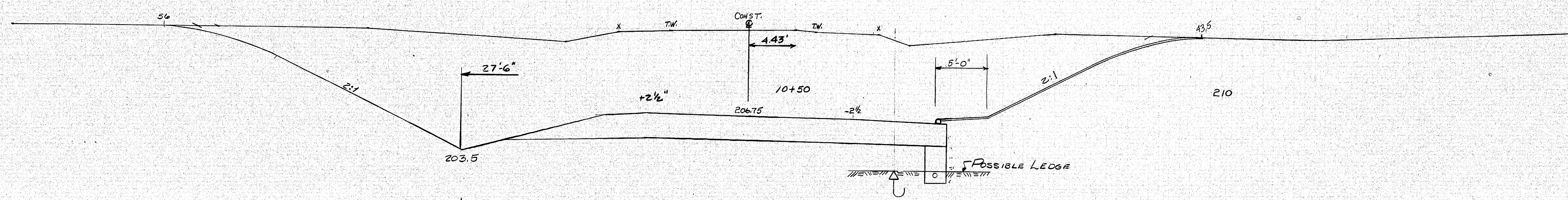


147-192 RICHMOND I 95-5(39)





DATE: 4-14-79  
BY: J. G. GARY  
CHECKED: J. G. GARY  
95-5(39)

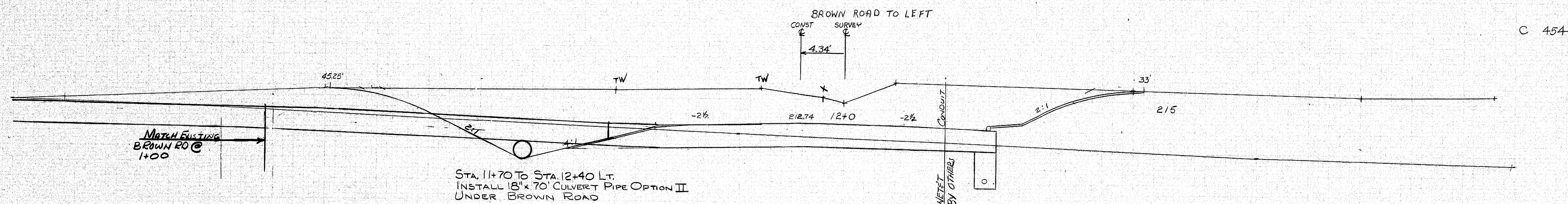
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147-193  
RICHMOND I-95-5(39)

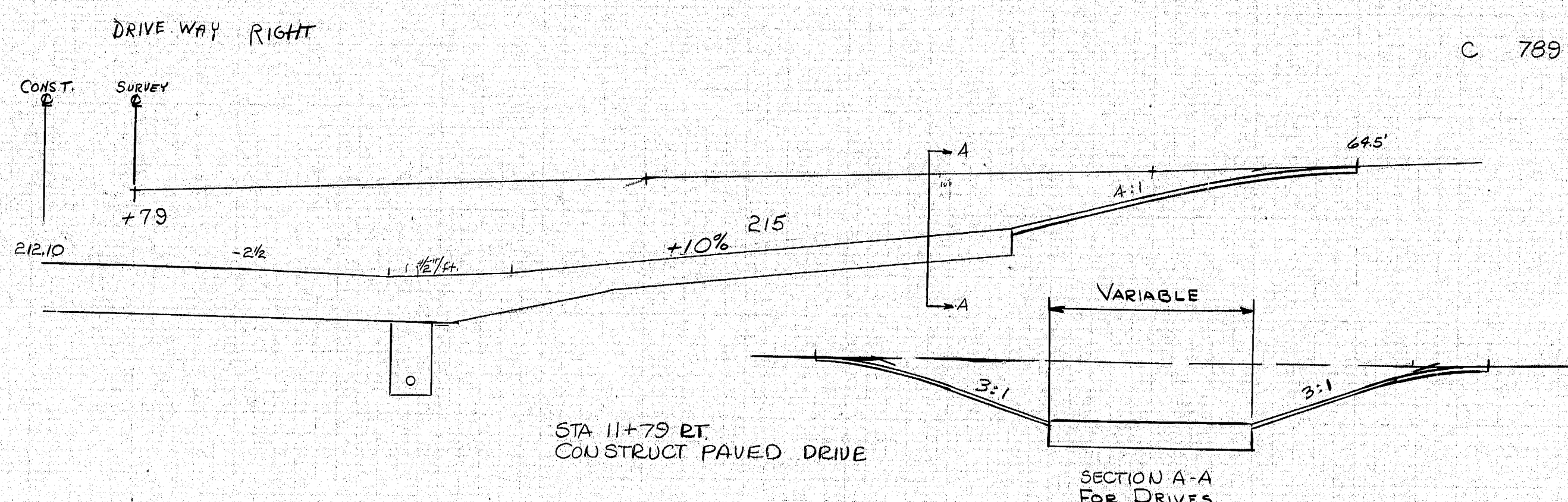


DATE	1-25-53
BY	R. W. B. & C. W. B.
FOR	REED RD. STA. 11+00 TO STA. 12+00
PROJECT	147-194
REVISION	

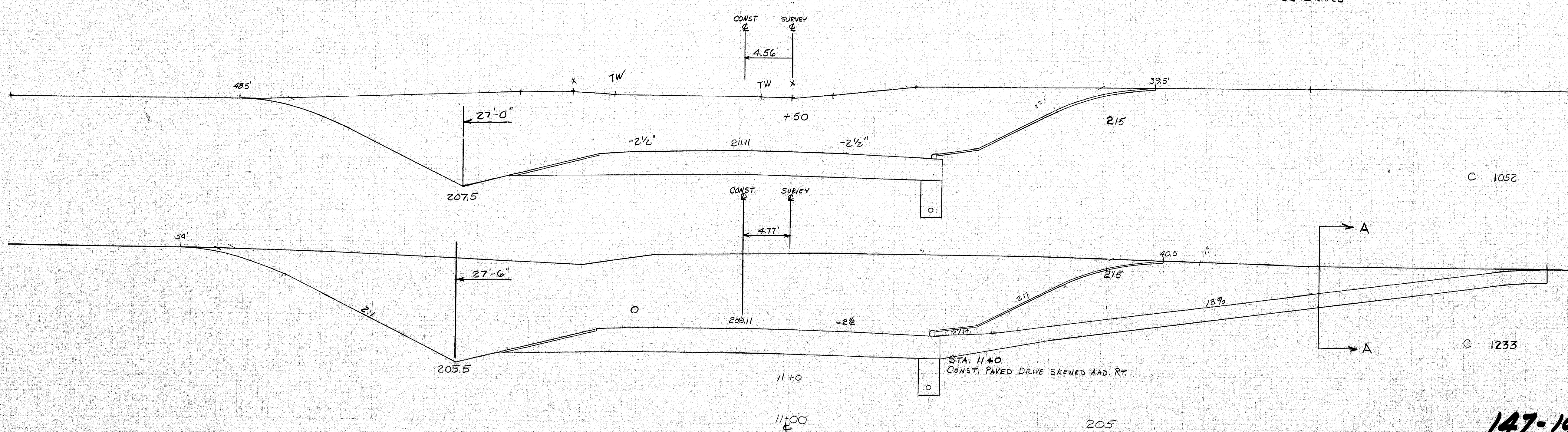
DATE	1-25-53
BY	R. W. B. & C. W. B.
FOR	REED RD. STA. 11+00 TO STA. 12+00
PROJECT	147-194
REVISION	



C 454



C 789



C 1052

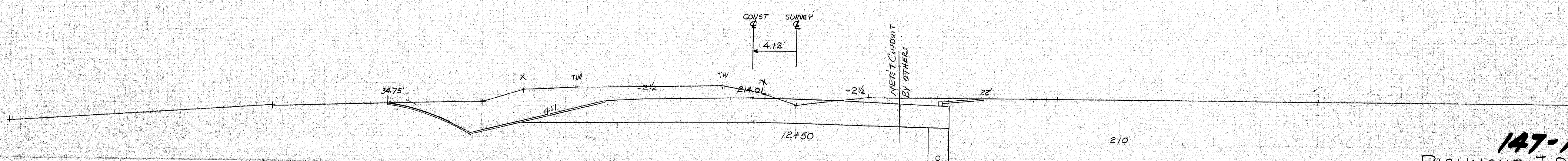
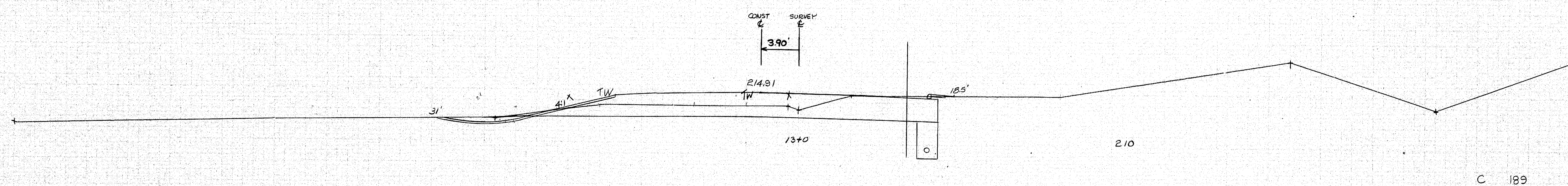
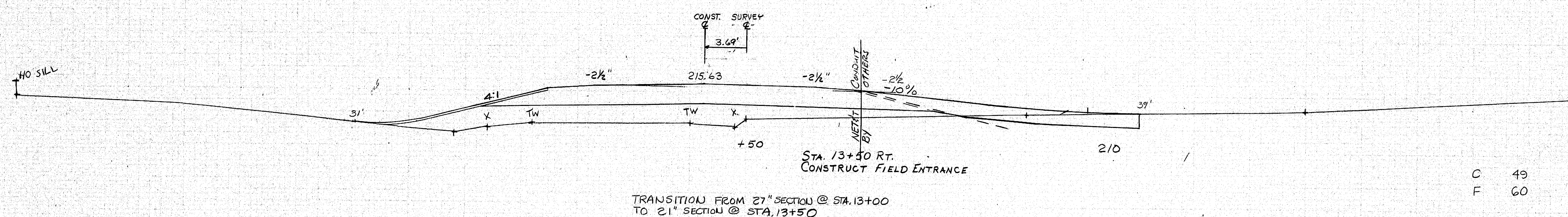
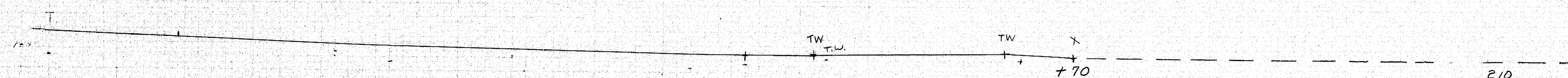
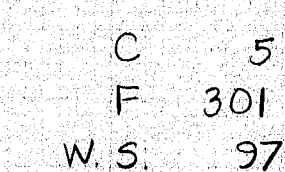
C 1233

REED RD. STA. 11+00 TO STA. 12+00

147-194  
RICHMOND I-95-5(39)



CHERRY STREET  
NEW YORK  
MAY 1907  
DANIELS  
PENN.

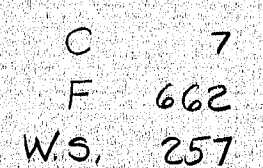
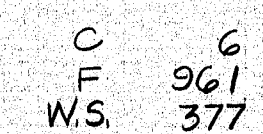
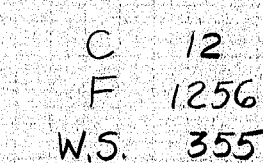


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REED RD. STA. 12+50 TO STA 13+70

147-196  
RICHMOND I-95-5(39)



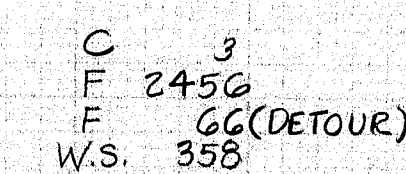
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NOTE BOOK	FILED		
	PLATE		
	AREAS COVERED		



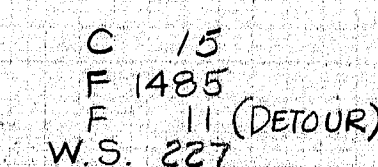
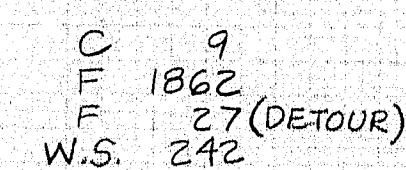
REED RD. STA. 14+00. TO STA. 15+20



FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		



ORIGINAL	SURVEYED	BY	DATE
SURVEY	PIOTED	R. YATES & CREW	4/13/69
NOTE BOOK	TEMPLATE	S. BLASZEL & H. ROY	4/24/69
NO.	AREAS		
	AREAS CHECKED		



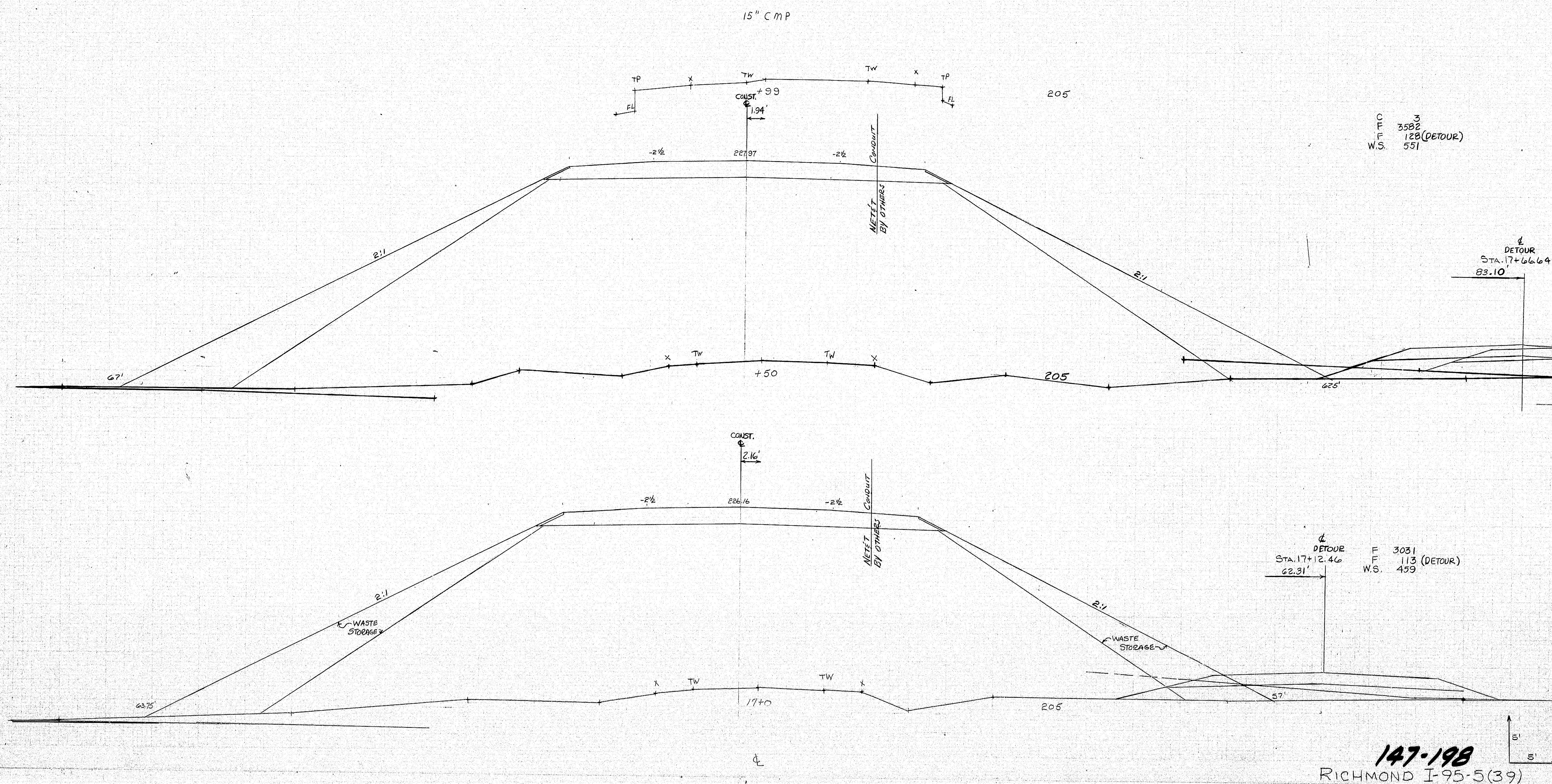
207.5  
STA 15+51 TO BRIDGE (STA. 18+51 ± RT.)  
INSTALL GUARD RAIL TYPE 3 - SINGLE RAIL

147-197  
RICHMOND I-95-5(39)



[illegible]

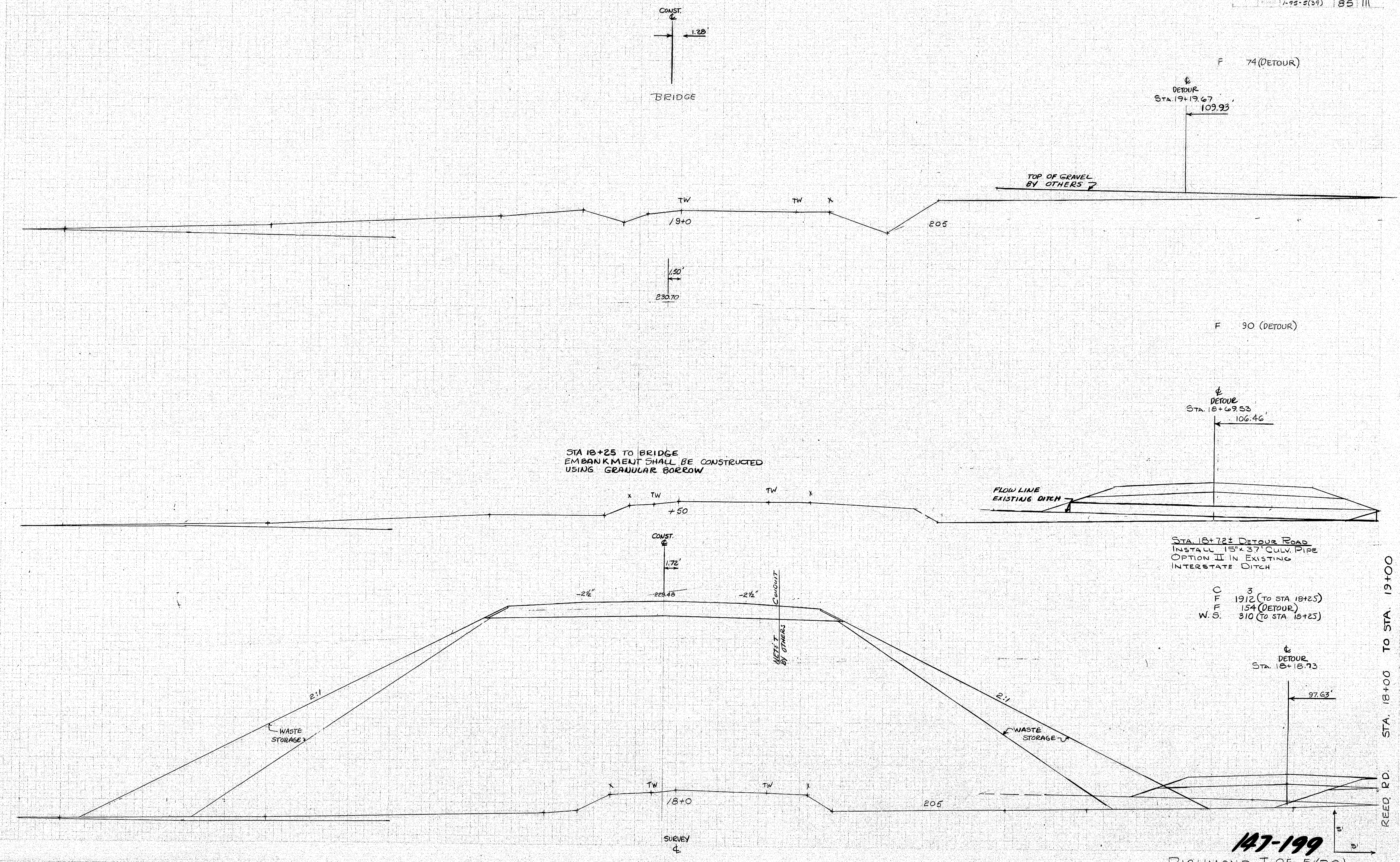
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SURVEY PLOTS  
DATE 02/27/98  
95/98  
R. YATES & CREW  
S. BLANKET & H. ROY  
11/13/94  
11/24/97  
LAWRENCE CHECKED





DATE	1-95-5(39)
BY	1-95-5(39)
REVIEWED	1-95-5(39)
DESIGNED	1-95-5(39)
CHECKED	1-95-5(39)
NO. OF SHEETS	1-95-5(39)
TOTAL SHEETS	1-95-5(39)

DATE	1-95-5(39)
BY	1-95-5(39)
REVIEWED	1-95-5(39)
DESIGNED	1-95-5(39)
CHECKED	1-95-5(39)
NO. OF SHEETS	1-95-5(39)
TOTAL SHEETS	1-95-5(39)

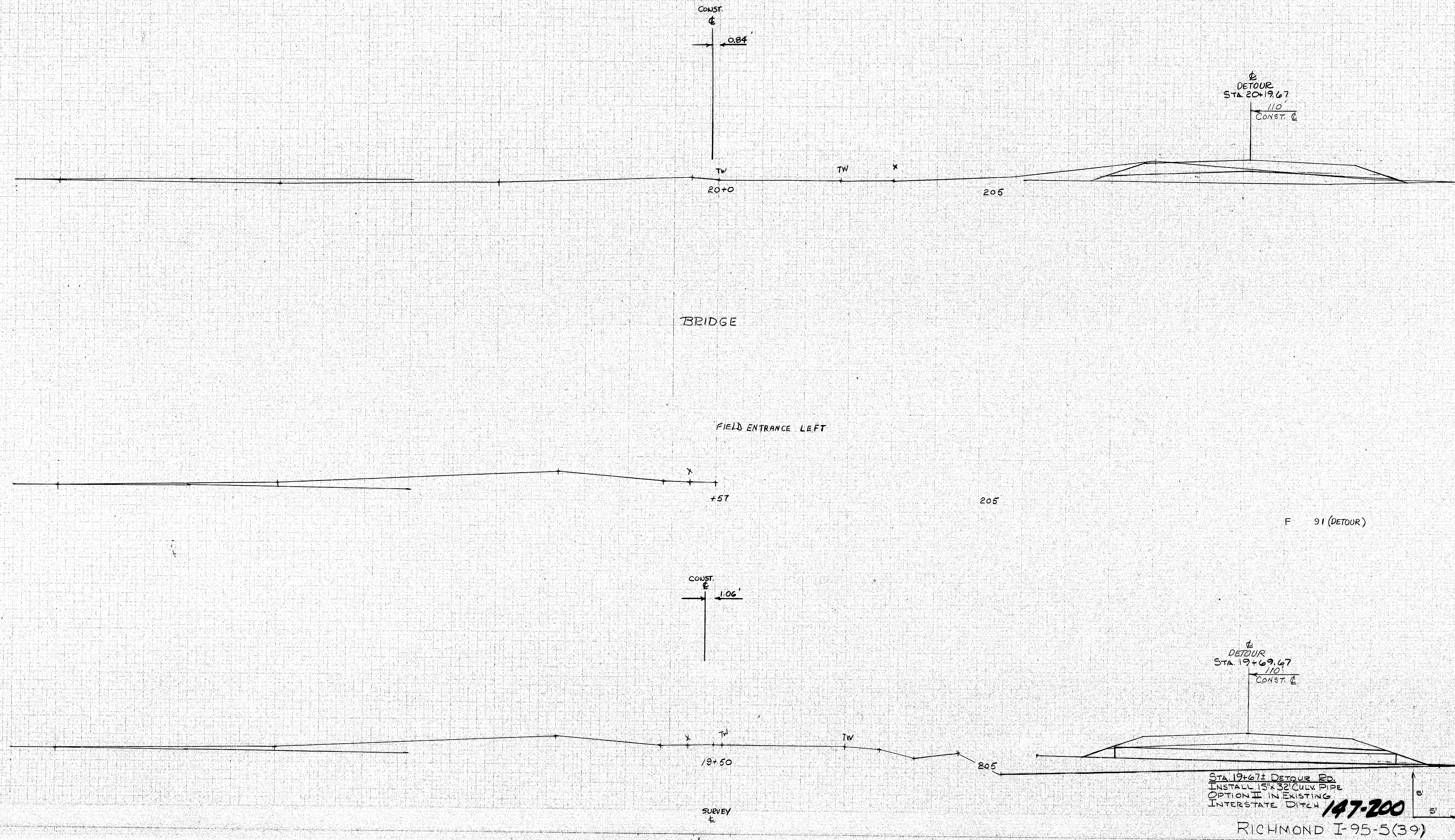




DATE	BY	DATE	BY	DATE	BY
1-95-5(39)	86	111			

FINAL SURVEY	DATE	BY
SURVEY	1-95-5(39)	86
NO. 1		
NO. 2		
NO. 3		
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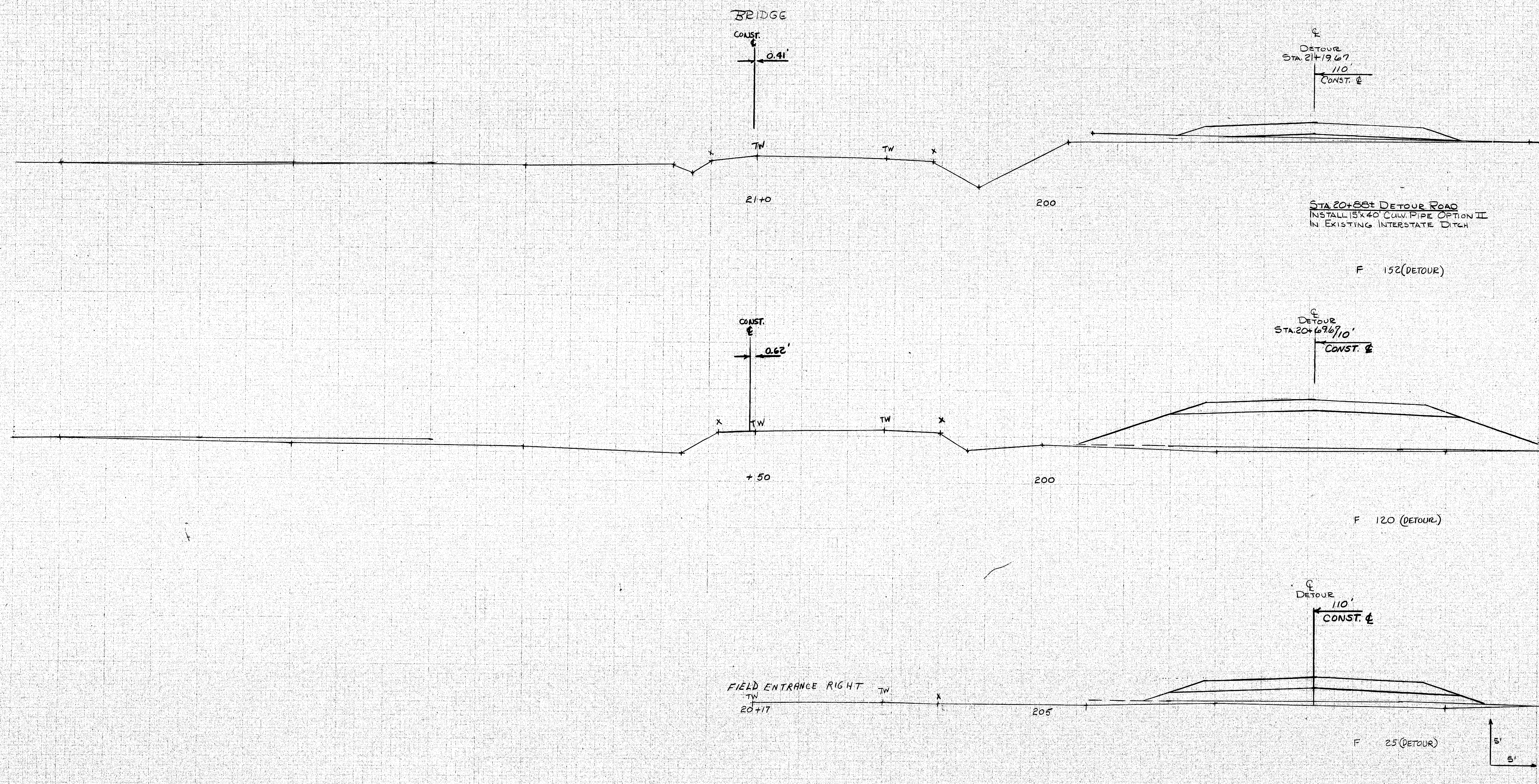
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SURVEY	1-95-5(39)	86
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NO. 100		





DATE	
BY	
DESIGNED	
CHECKED	
NOTED	
AREA CHECKED	

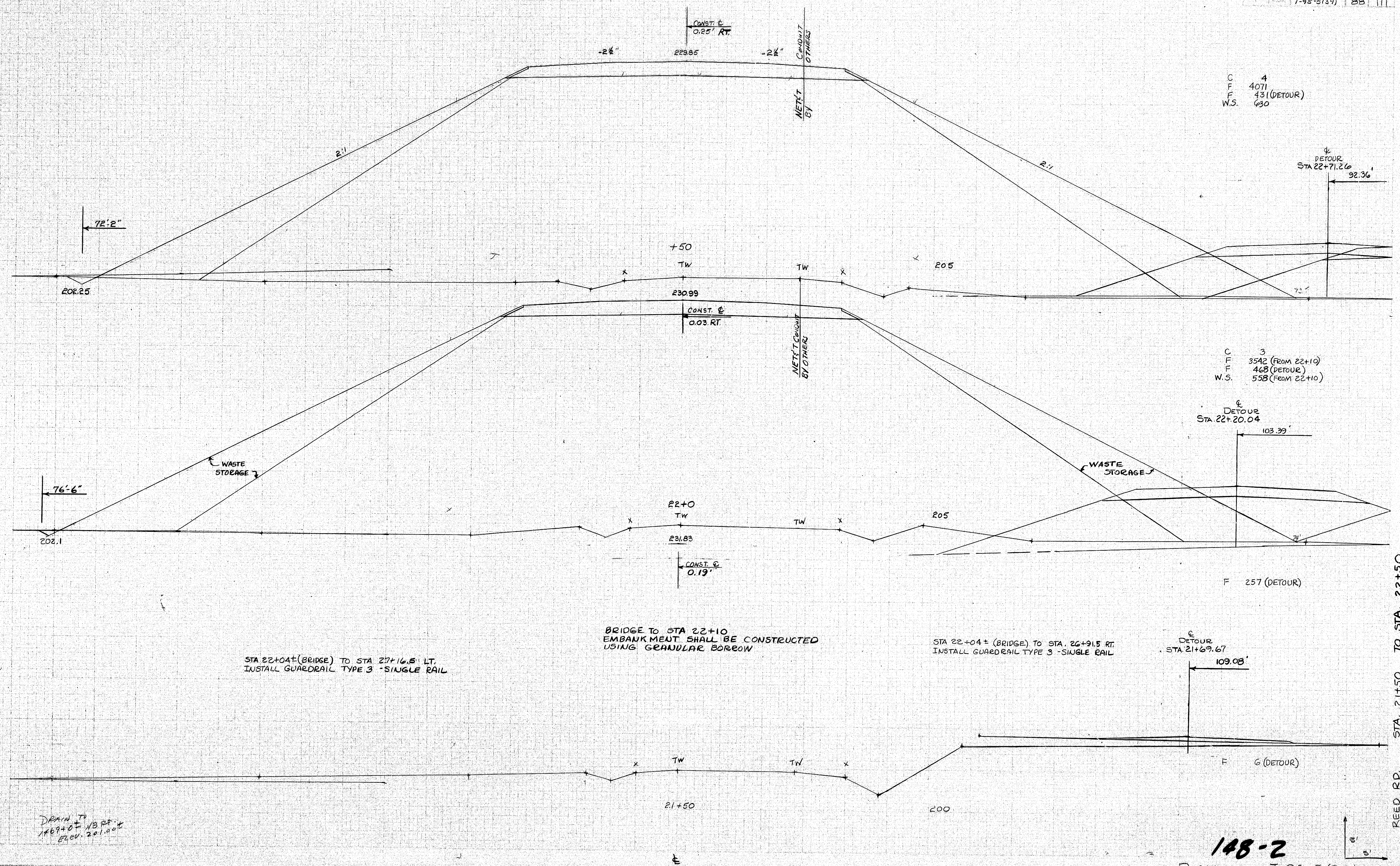
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REVISION	12/1/67
BY	12/1/67
CHECKED	12/1/67
NOTED	12/1/67
AREA CHECKED	12/1/67





FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

<b>ORIGINAL</b>	SURVEYED _____ BY _____ DATE _____
<b>SURVEY</b>	PLOTTED _____ R. HATES C. CREW 5/8/64
<b>NOTE BOOK</b>	TITLE PLATE _____ S. O. GORET & M. ROY 10/1/67
<b>No.</b>	AREAS CHECKED _____ 9998 AREAS _____



C 4  
F 4071  
F 431 (DETOUR)  
W.S. 630

C 3  
F 3542 (FROM 22+10)  
F 468 (DETOUR)  
W.S. 558 (FROM 22+10)

DETOUR  
STA. 22+20.04

F 2.57 (RETOUR)

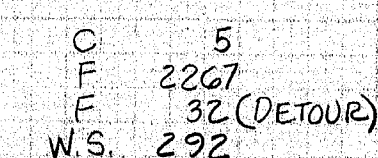
DETOUR  
STA. 21+69.67

148-2

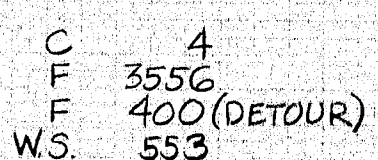
RICHMOND I-95-5(39)



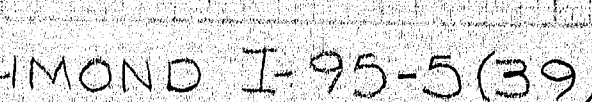
FINAL SURVEY	SURVEYED PLOTTER	BY	DATE
NOT BOOK	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		



C 5  
F 2908  
F 244 (DETOUR)  
W.S. 444



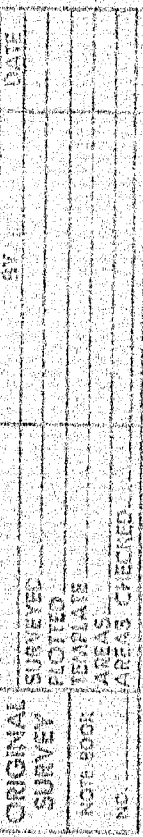
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SURVEY	TRAVERSED	5-8-69
NOTE BOOK	PLOTTED	12-1-69
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	AREAS	
	AREAS CHECKED	



148-3 RICHMOND I-95-5(39)



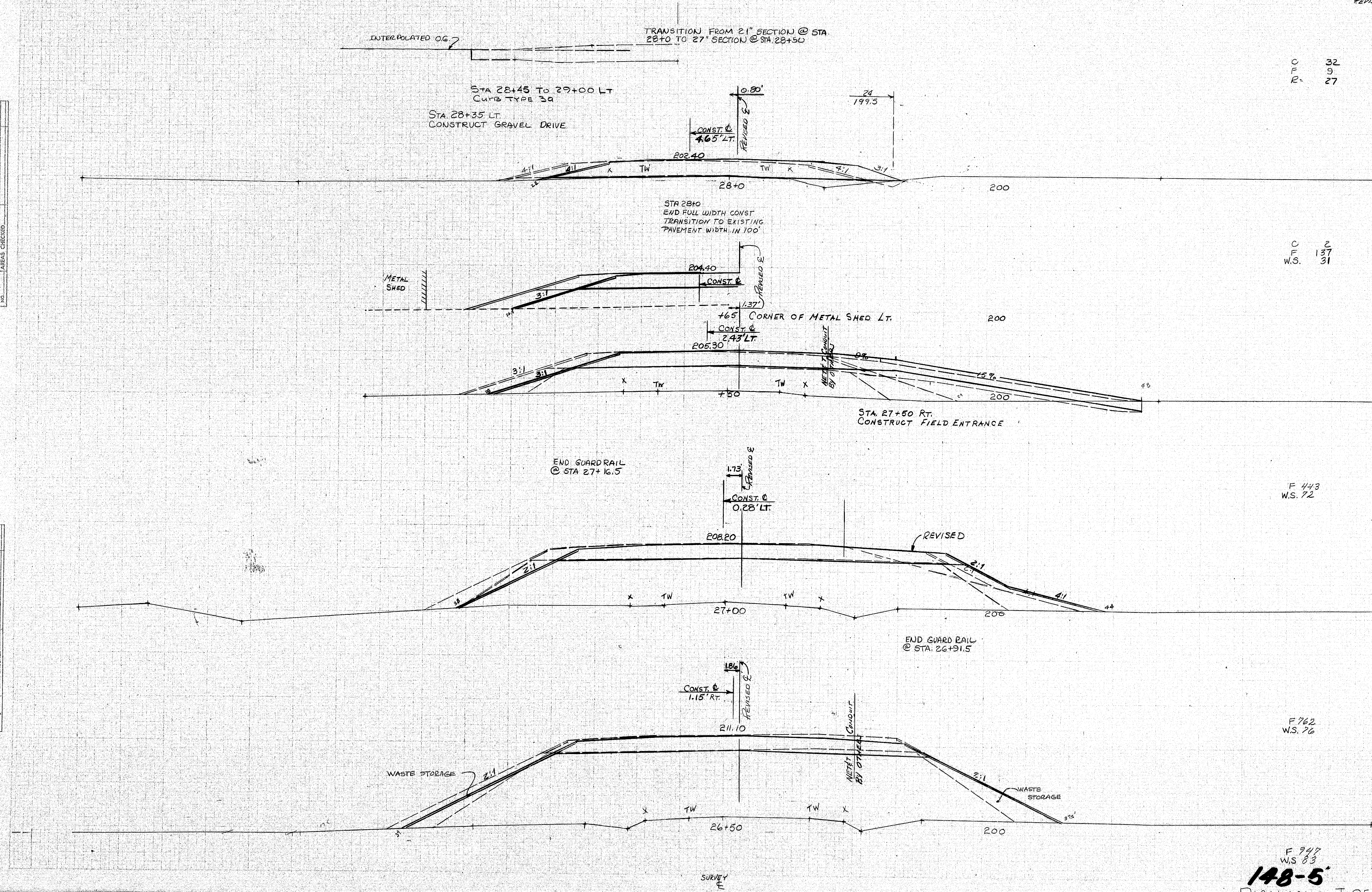
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NOV 5206	PLOTTED		
	TEMPLATE		
	1825.5		
	AREA		
	CHANGES		



148-4  
RICHMOND I-95-5(39)



F 947  
W.S. 83



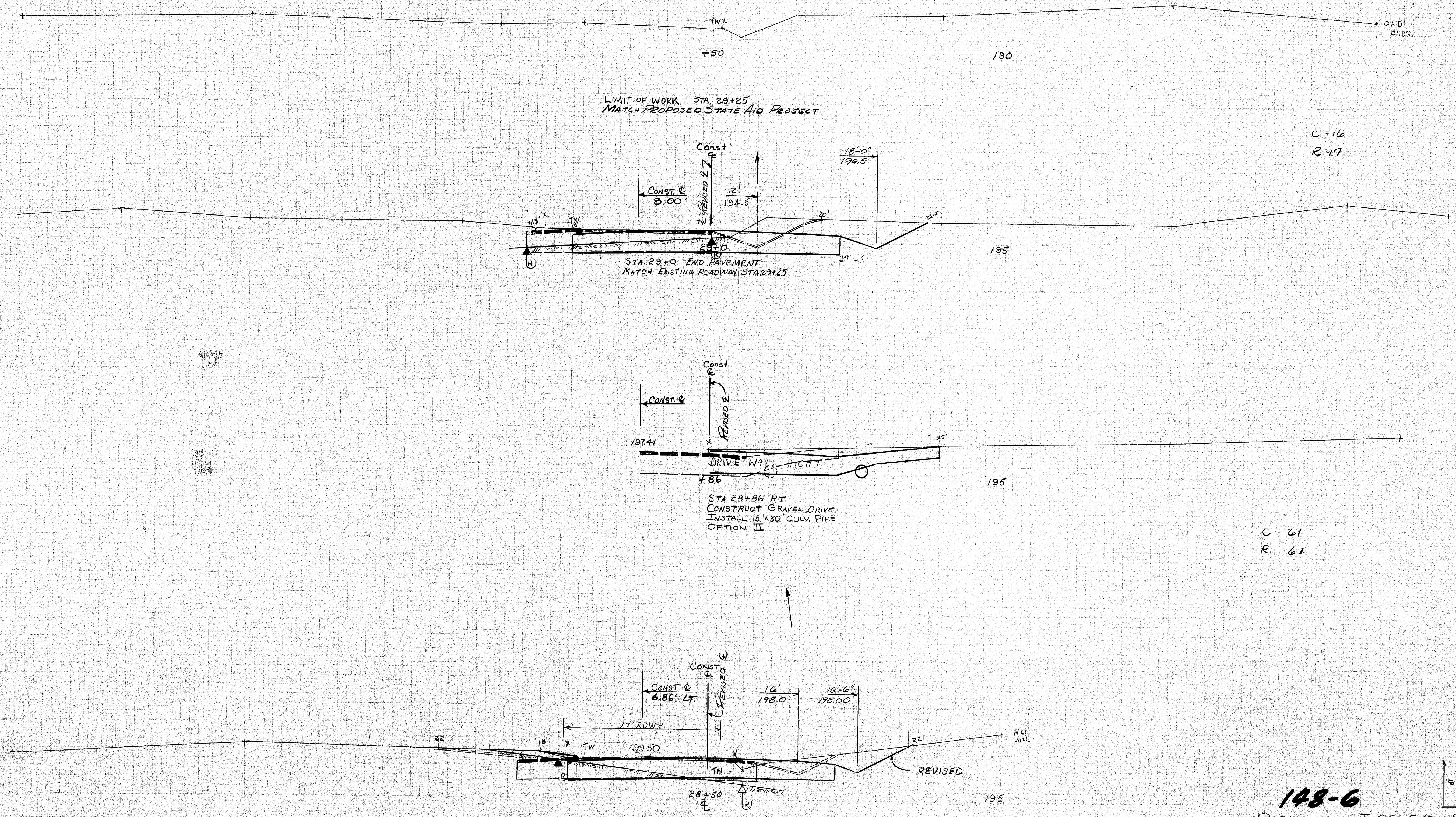
REED RD. STA. 26+50 TO STA. 28+00

F 947  
WS 83  
**148-5**  
RICHMOND I-95-5(39)



DATE	4/23/75
BY	
CHECKED	
DESIGNED	
NOTED	
APPROVED	
AREAS CHECKED	

DATE	4/23/75
BY	
CHECKED	
DESIGNED	
NOTED	
APPROVED	
AREAS CHECKED	

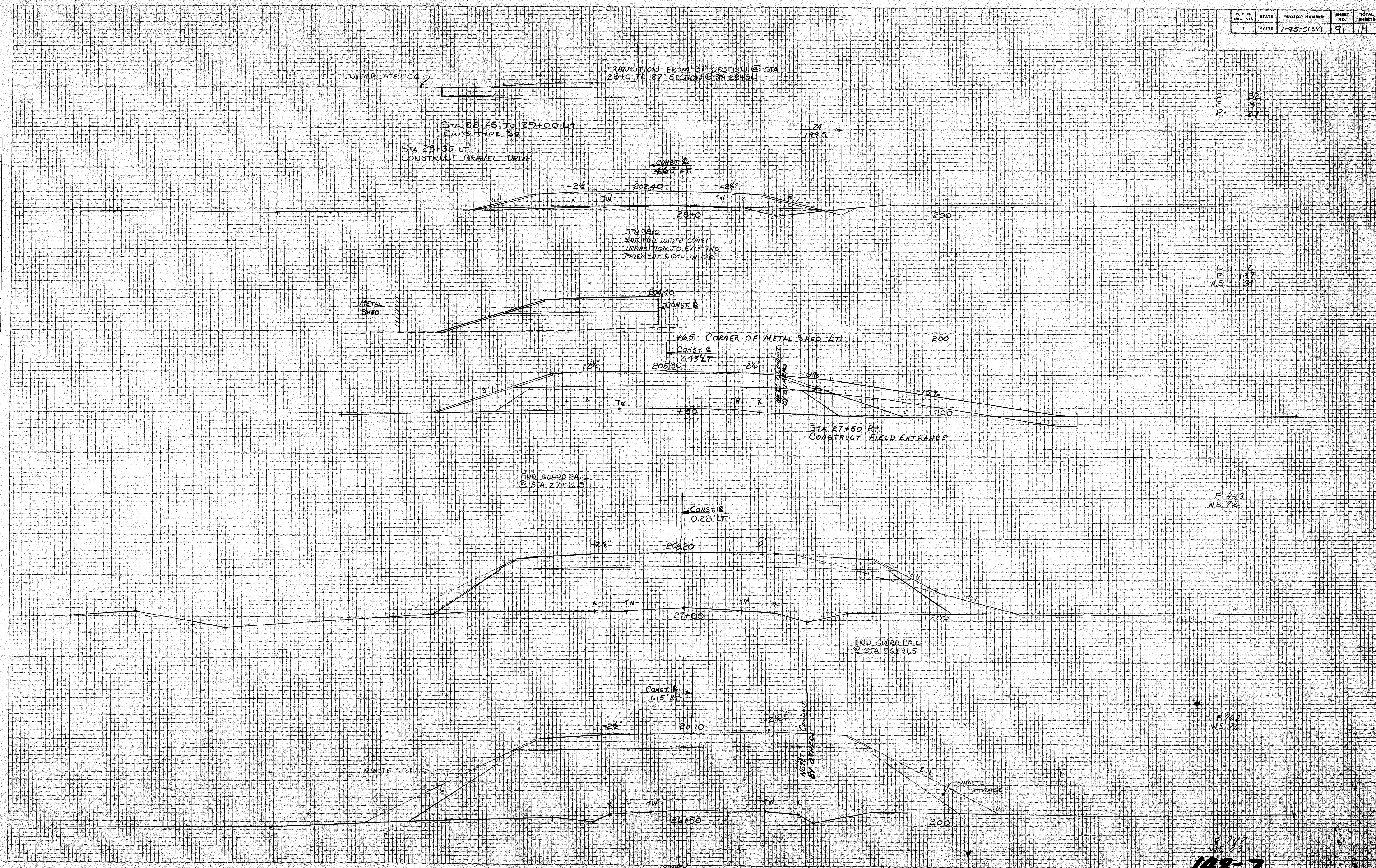


REED RD. STA. 28+50 TO STA. 29+50

148-6  
RICHMOND I-95-5(39)



B. P. R. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-5(39)	91	111



<b>FINAL SURVEY</b>	SURVEYED _____	<b>BY</b>	<b>DATE</b>
<b>NOTE BOOK</b>	PLOTTED _____		
<b>NO.</b>	TEMPLATE _____		
	AREAS CHECKED _____		

ORIGINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED	C. WATSON	5/2/44
	TEMPERATURE	86.4552 24.701	12.1/45
NOTE BOOK	AREAS		
NO. 95/983	AREAS CHECKED		

NEED RD. STA 26+50 TO STA. 28+00

F 847  
W 583  
**148-7**  
RICHMOND I 95-5(39)



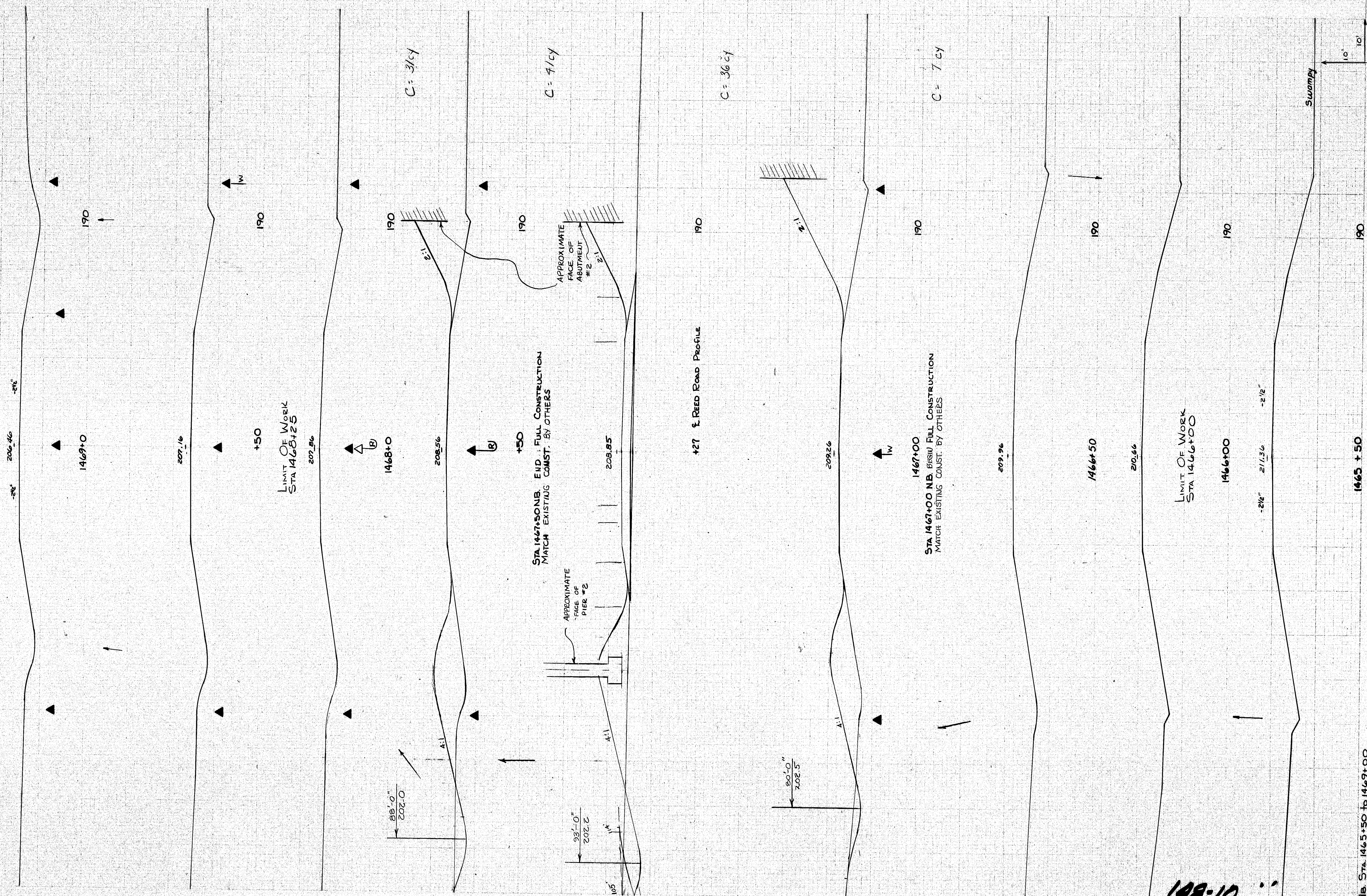








FINAL SURVEY	BY _____ DATE _____
NOTE BOOK	
NO. _____	
AREAS CHECKED	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	



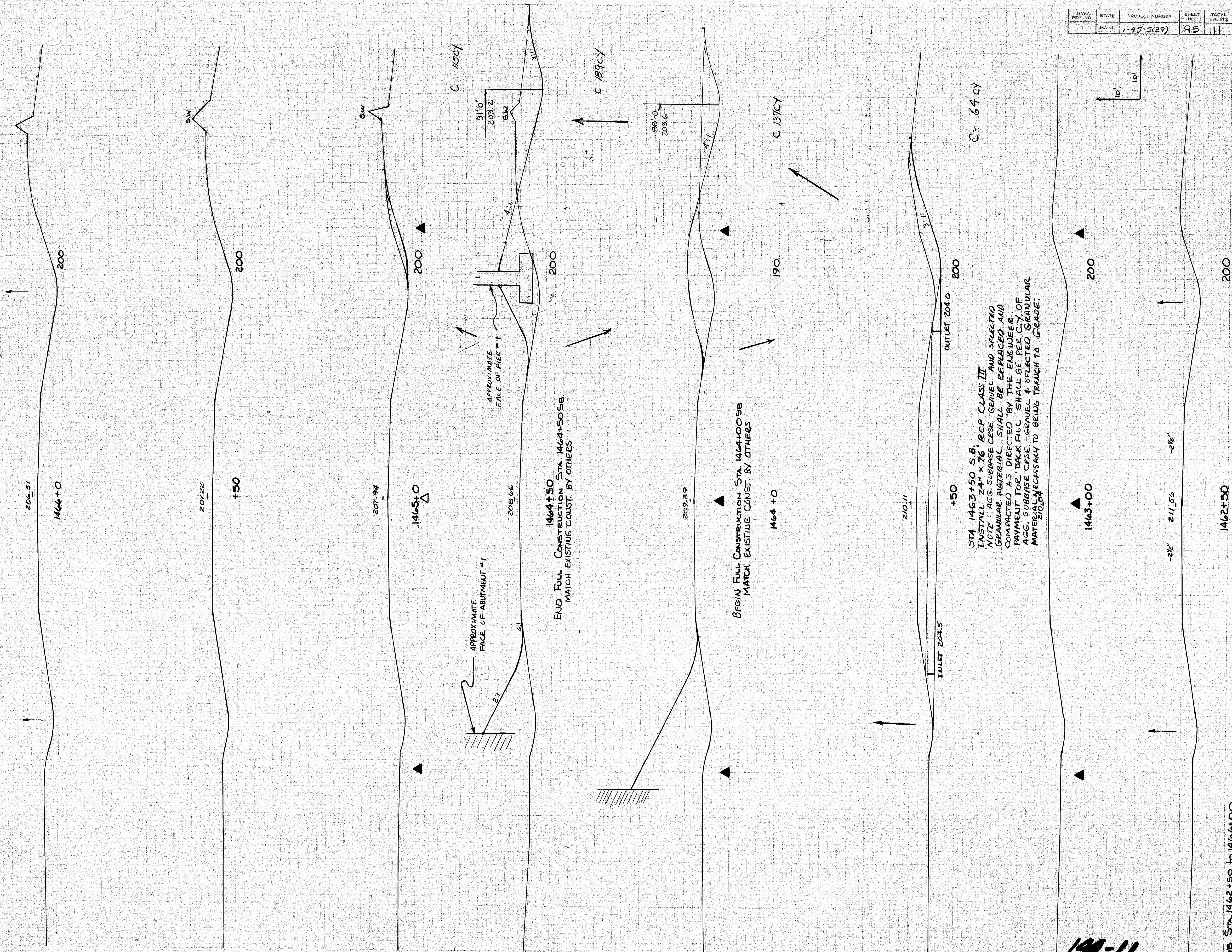
148-10  
RICHMOND I-95-5(39)

NB. STA. 1465+50 to 1469+00  
REED ROAD AC.



ORIGINAL SURVEY	DATE	BY
NOTED	12-27	60
NOTE BOOK		
NO.		

FINAL SURVEY	DATE	BY
NOTED		
NOTE BOOK		
NO.		



FILE NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-5(39)	95	111

198-11  
RICHMOND I-95-5(39)

SB STA 1462+50 TO 1466+00  
RED BKG AREA



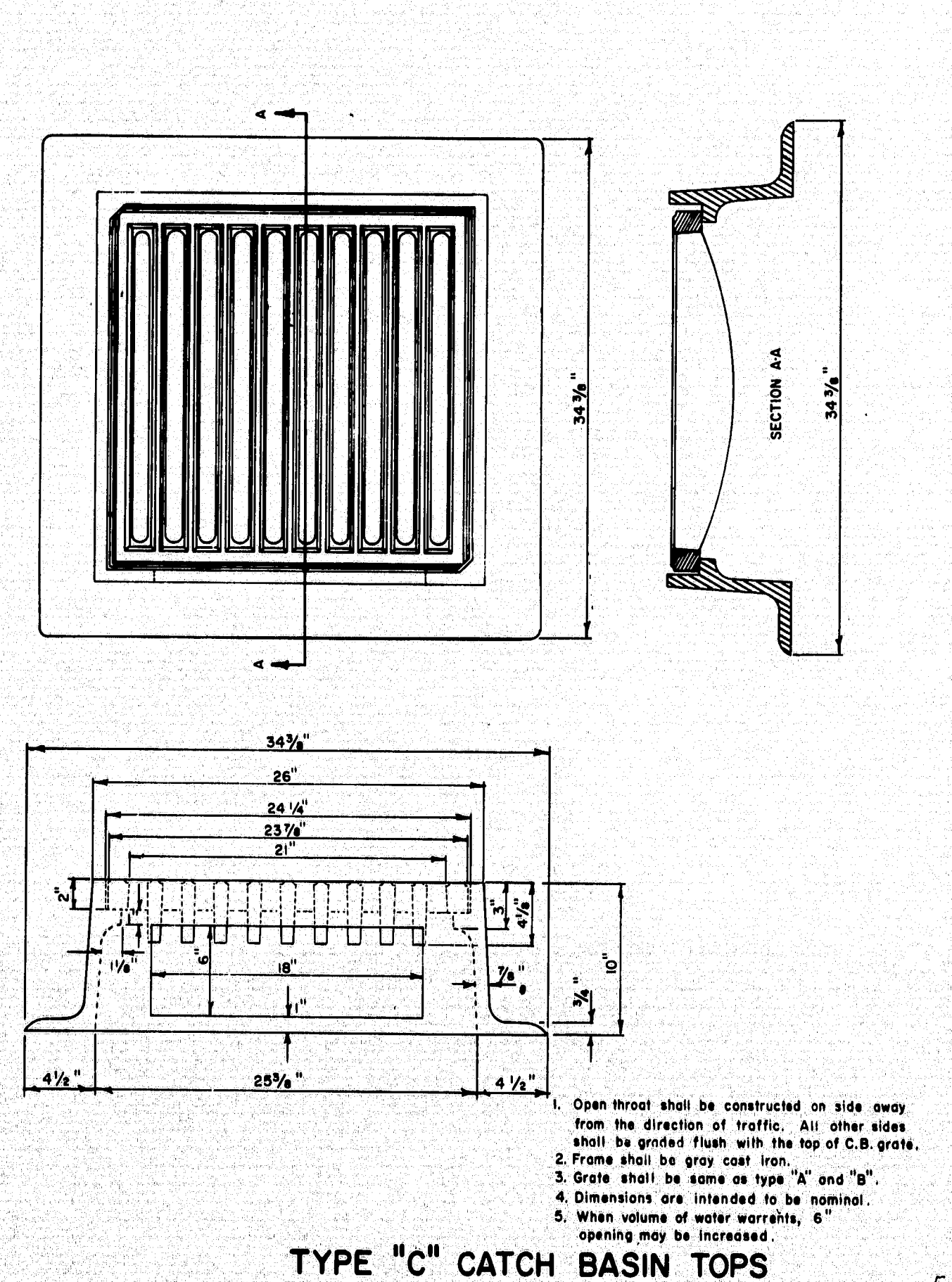
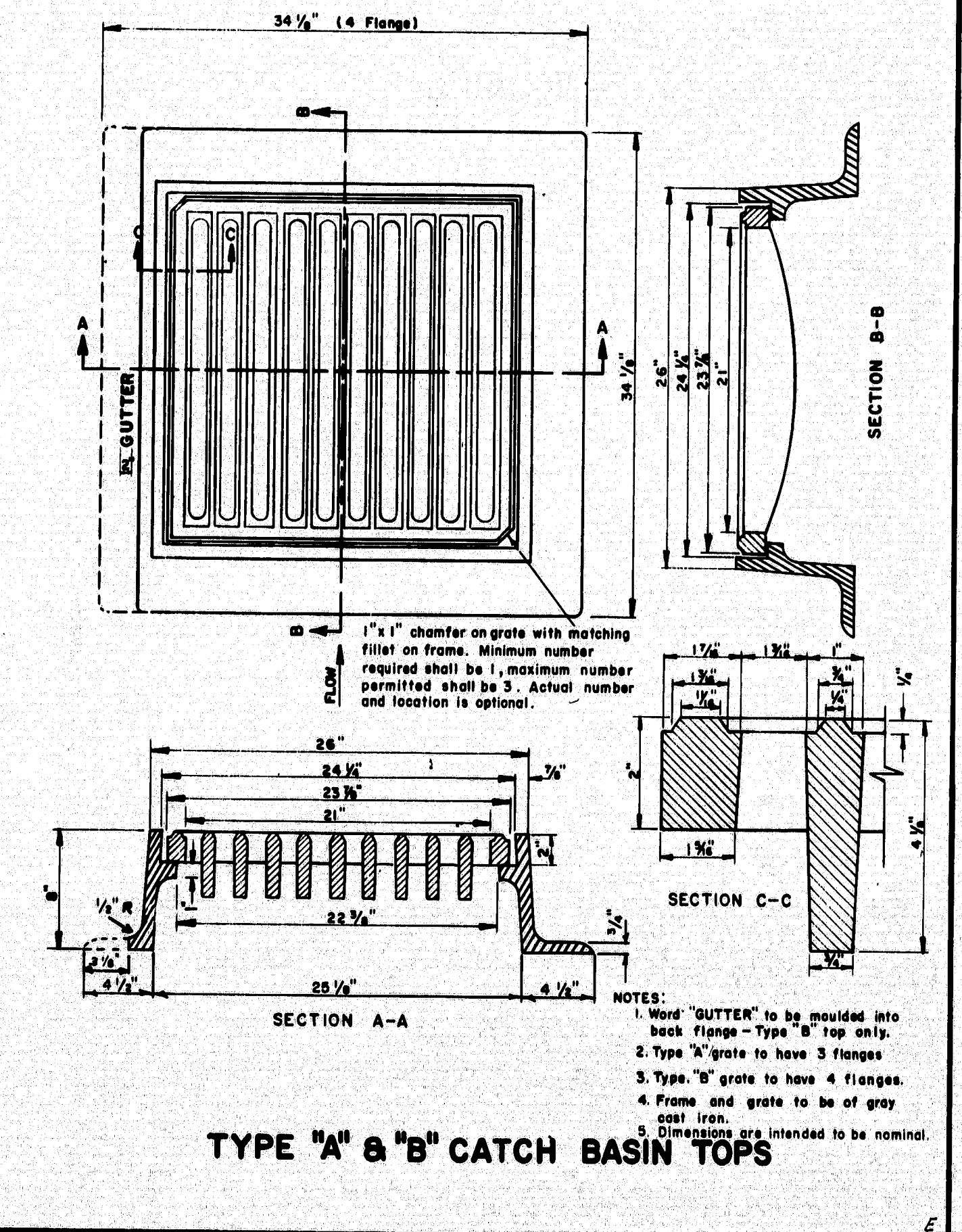
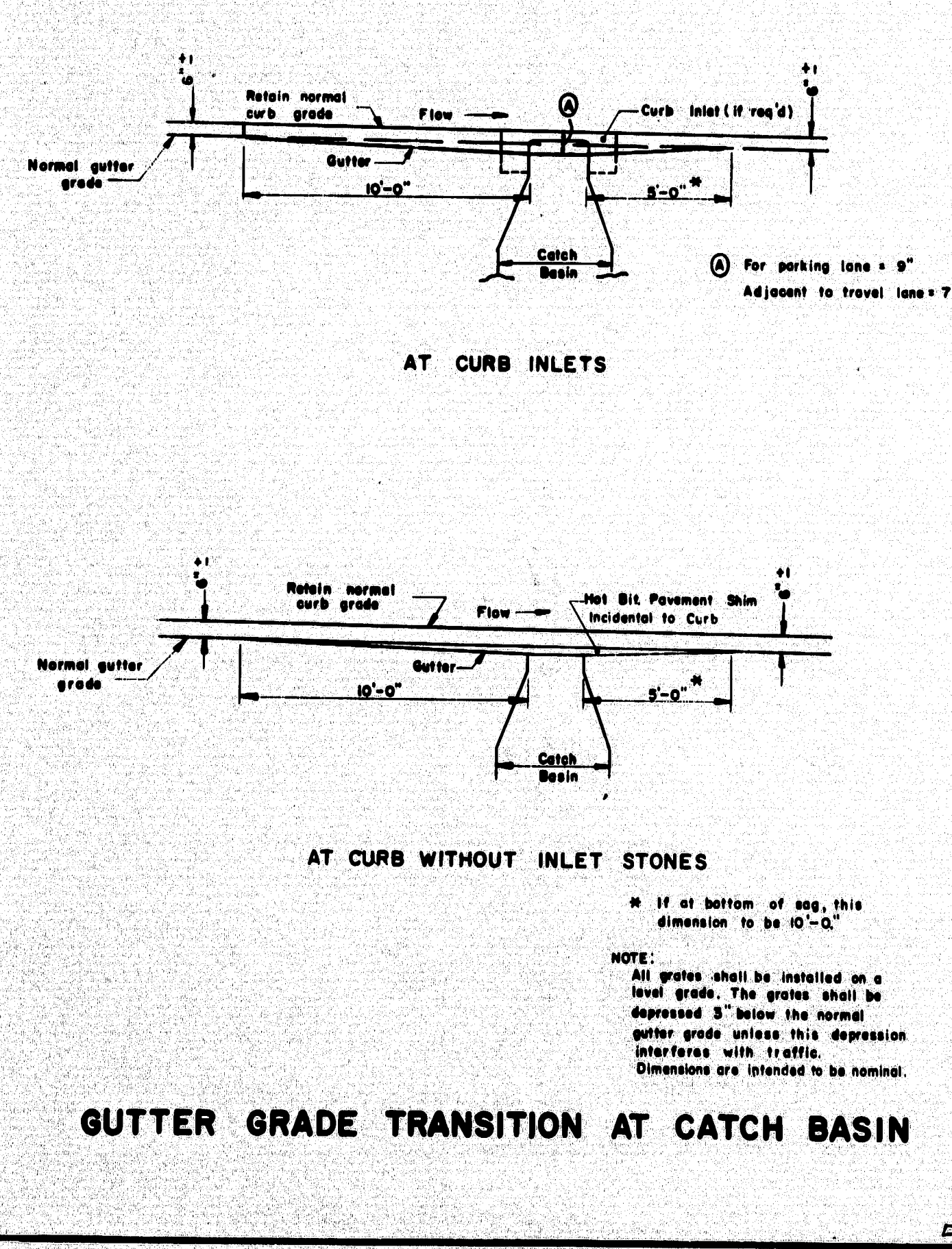
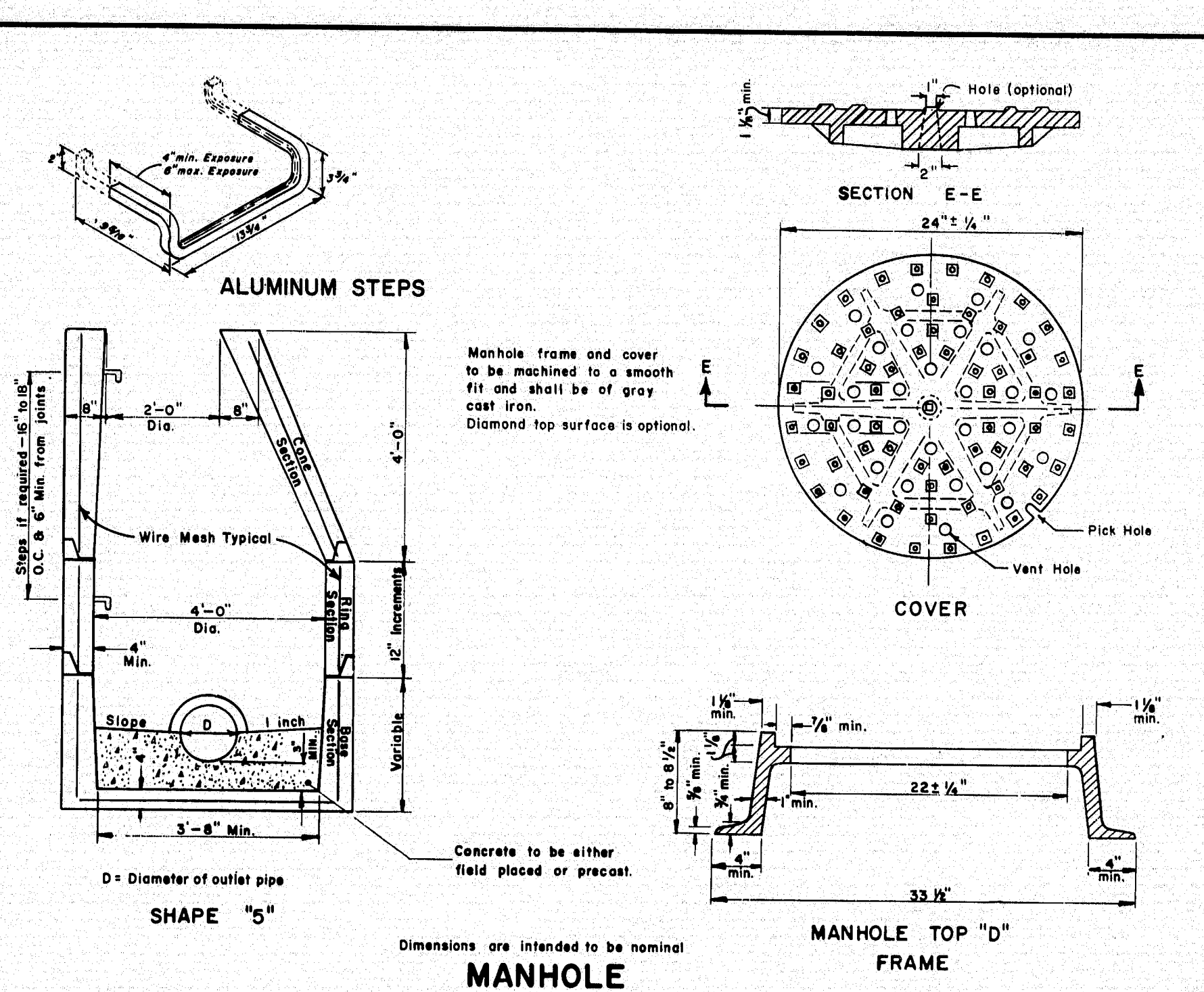
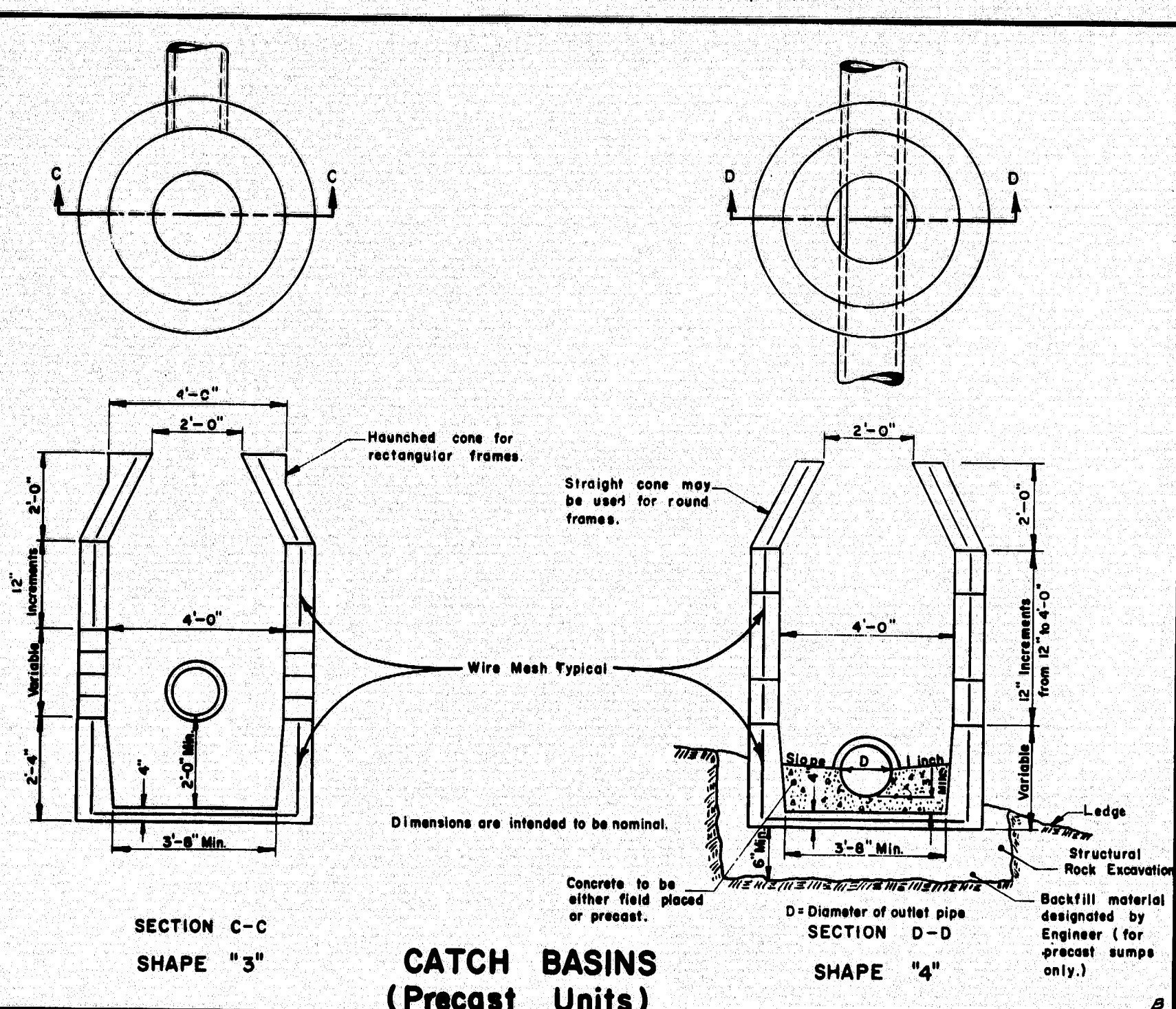
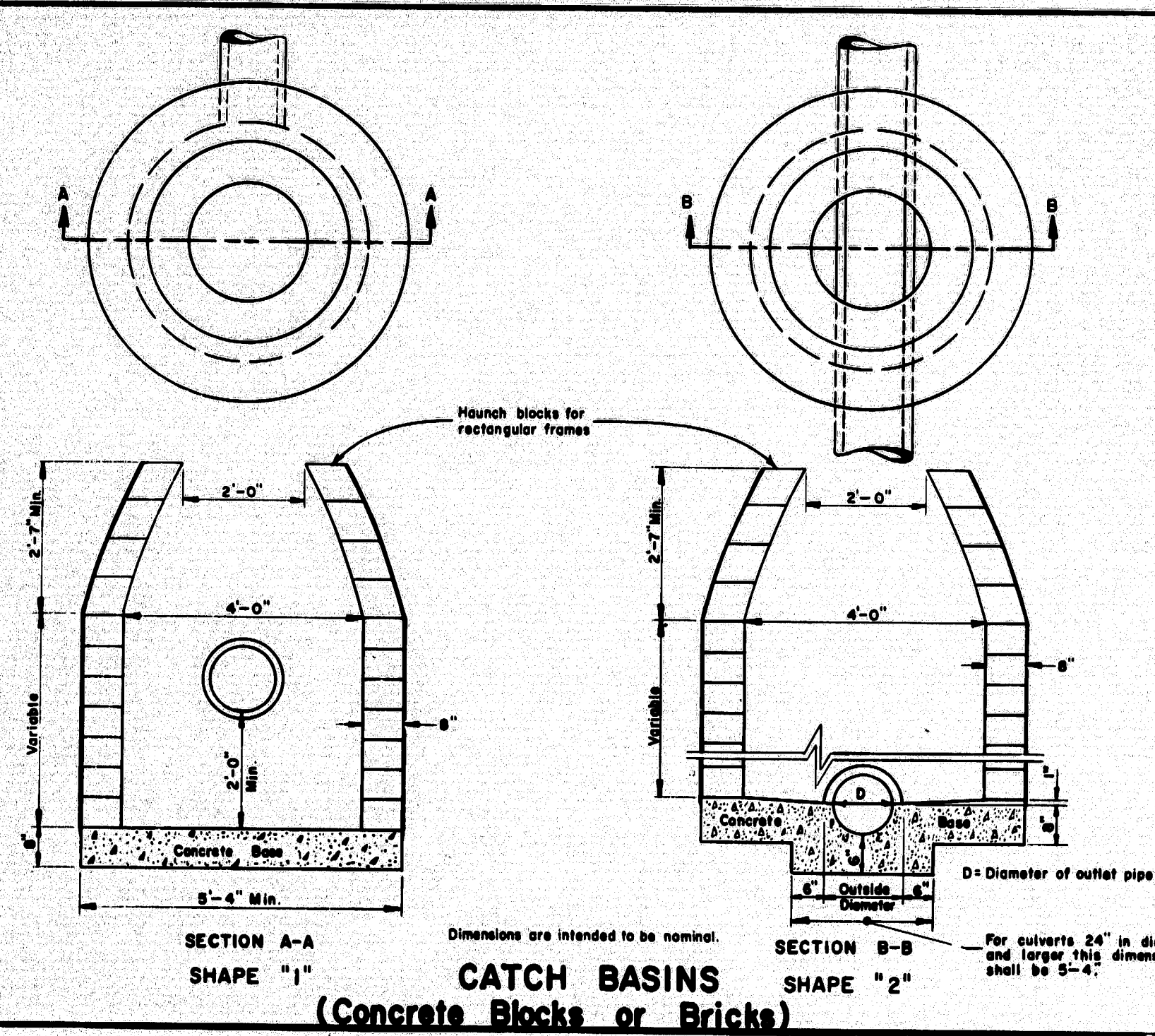
**GENERAL NOTES - ALL CATCH BASINS AND MANHOLES**

- Any Catch Basin in excess of 8' in depth shall, if directed be provided with steps similar to those detailed for Manholes.
- Frames, Grates & Covers shall be considered as part of the structure, and no separate payment shall be made.

**GENERAL NOTES - PRECAST CATCH BASINS AND MANHOLES**

- Drain holes in precast sumps to be not over 3" in diameter, and shall be plugged with mortar when constructed.
- All precast sections of less than 8" wall thickness shall have tongue and groove joints.
- Cone and Ring sections wall thickness min. 4", max. 6".
- Minimum wall thickness of sump may be 4" as specified in A.S.T.M. C-478, however, if concrete blocks are used around the inlet and outlet pipes, the wall thickness of sump shall be 6".
- Wall around inlet and outlet pipes may be built of 8" concrete blocks or a precast ring with an opening 2" larger than the outside diameter of the pipe may be used.
- Lift Holes shall be provided.

C.H. & A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-5(39)	96	111



STRUCTURE	TOP	SHAPE
CATCH BASIN	A B C D	1 2 3 4 5
Type A-1	X	X
Type A-2	X	X
Type B-1	X	X
Type B-2	X	X
Type C-1	X	X
Type C-2	X	X
MANHOLE	X	X

**TABLE OF CATCH BASIN TYPES (COMBINATION OF TOPS AND SHAPES)**

For Type "E" & Type "F" C.B. See Sheet No. 3

**CATCH BASIN TOP INSTALLATION**

TYPE "A": Shows a cross-section of a catch basin top with a 24 1/2" wide top, 22 1/2" wide bottom, and a 2'-0" high wall. It includes a concrete base and a 2'-0" diameter outlet pipe. Dimensions are intended to be nominal.

TYPE "B": Shows a cross-section of a catch basin top with a 24 1/2" wide top, 22 1/2" wide bottom, and a 2'-0" high wall. It includes a concrete base and a 2'-0" diameter outlet pipe. Dimensions are intended to be nominal.

REVISIONS	DATE
CATCH BASIN TOPS A-B-C	10-21-69
PLATE "E"	4-21-71

**STATE OF MAINE DEPARTMENT OF TRANSPORTATION AUGUSTA, MAINE**

**STANDARD DETAILS**

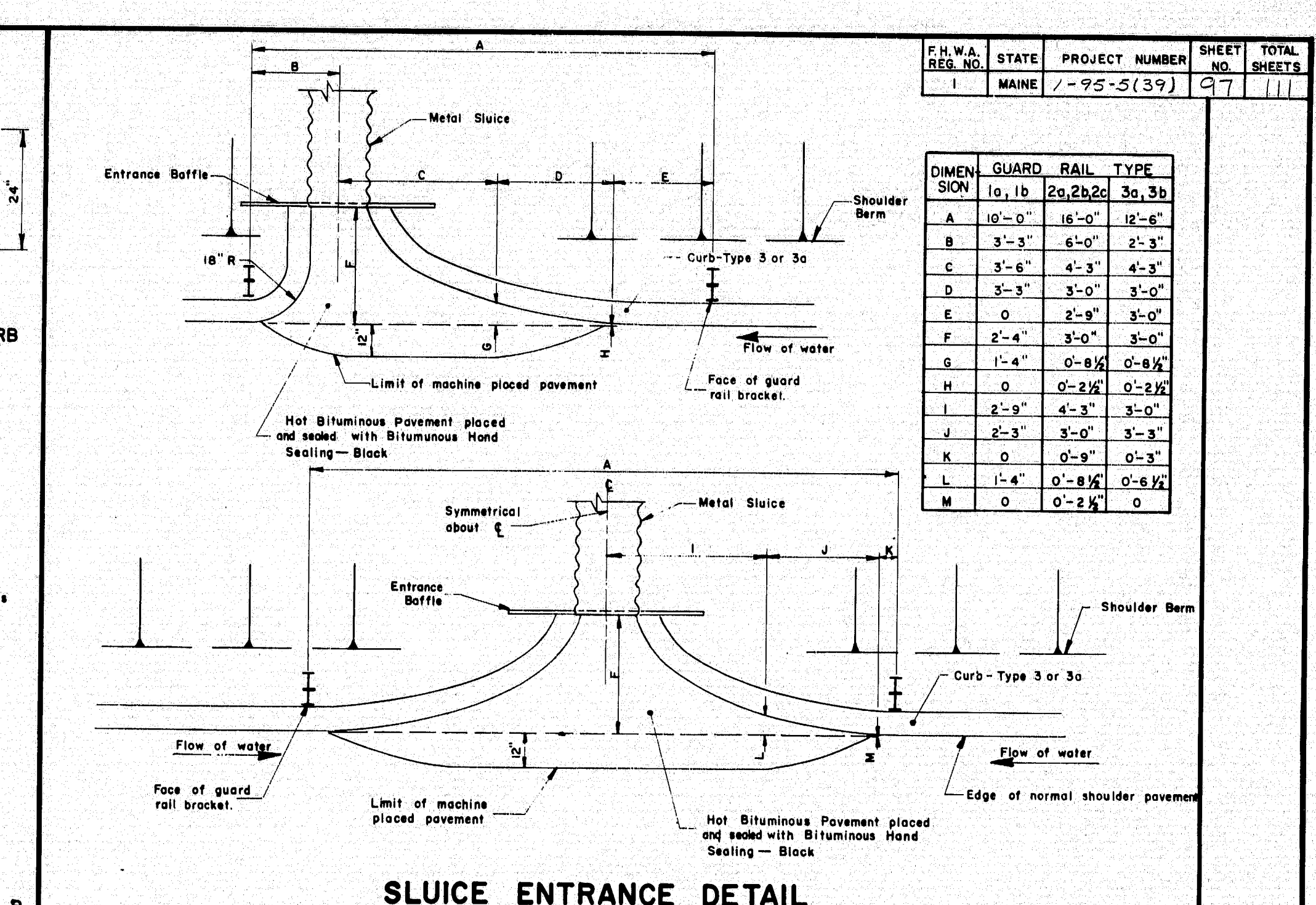
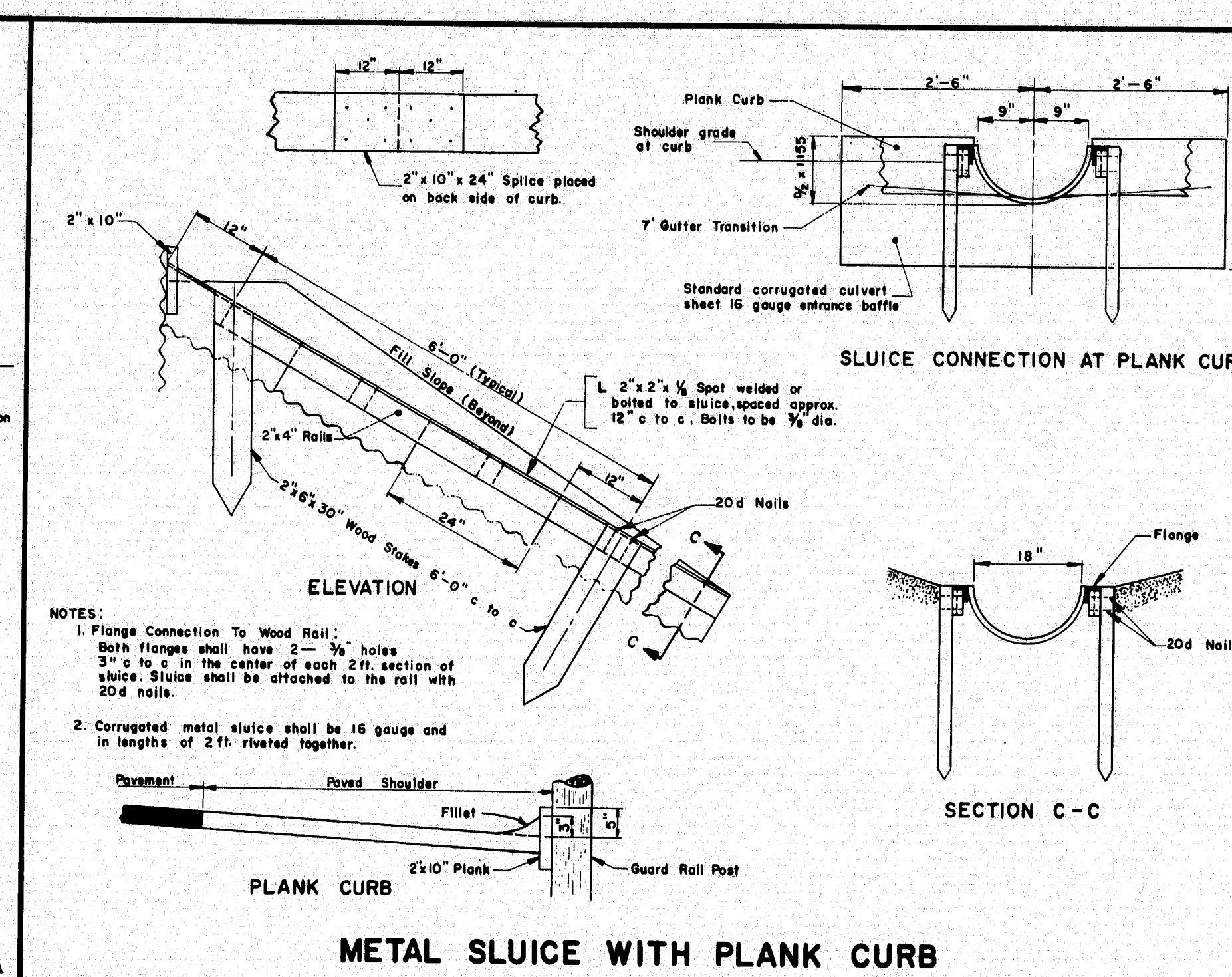
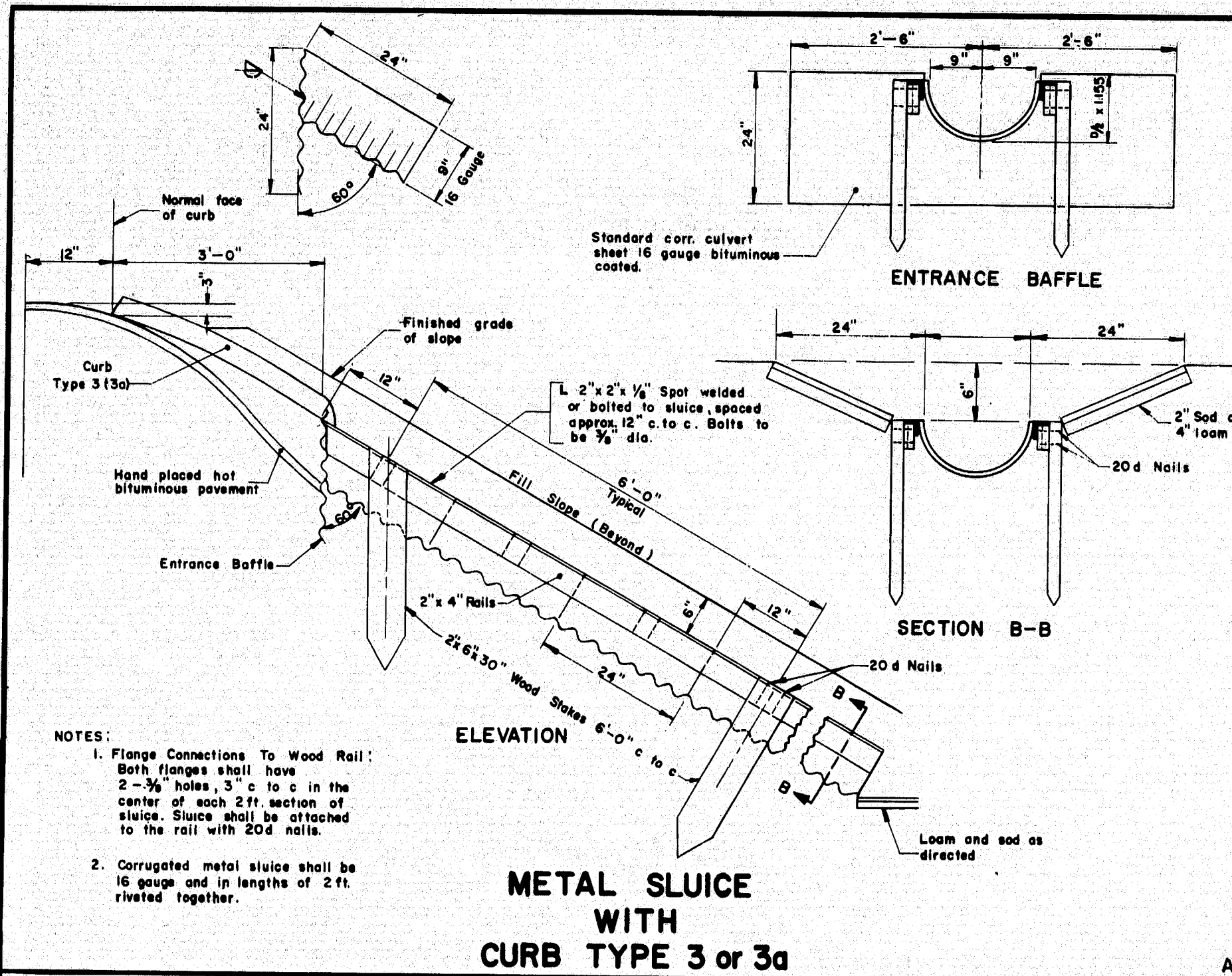
**CATCH BASINS AND MANHOLES**

**148-12**

**AUG. 1969**

RICHMOND I-95-5(39)



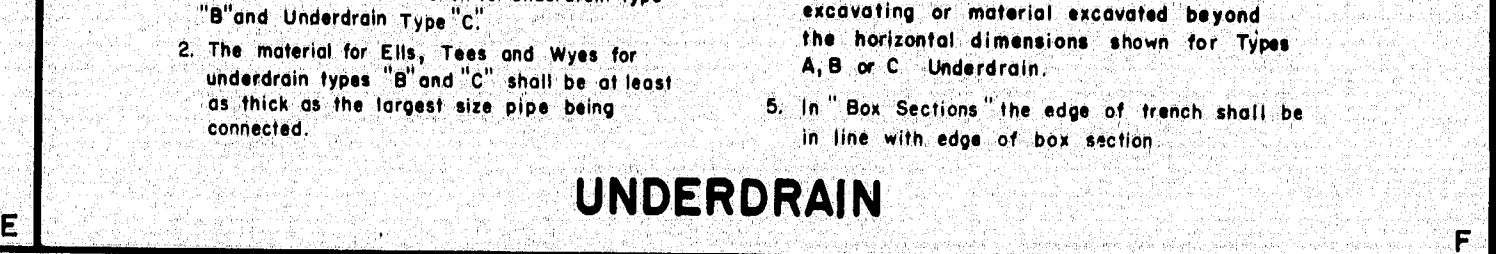
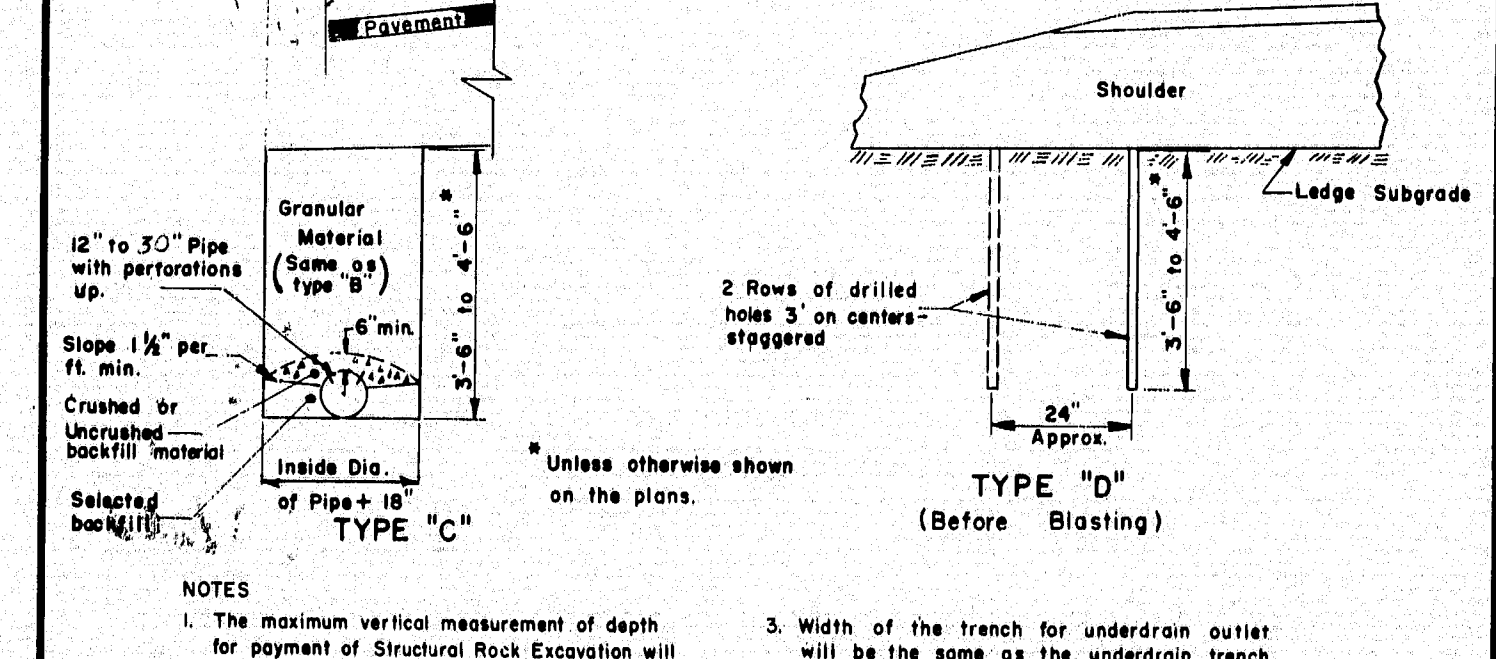
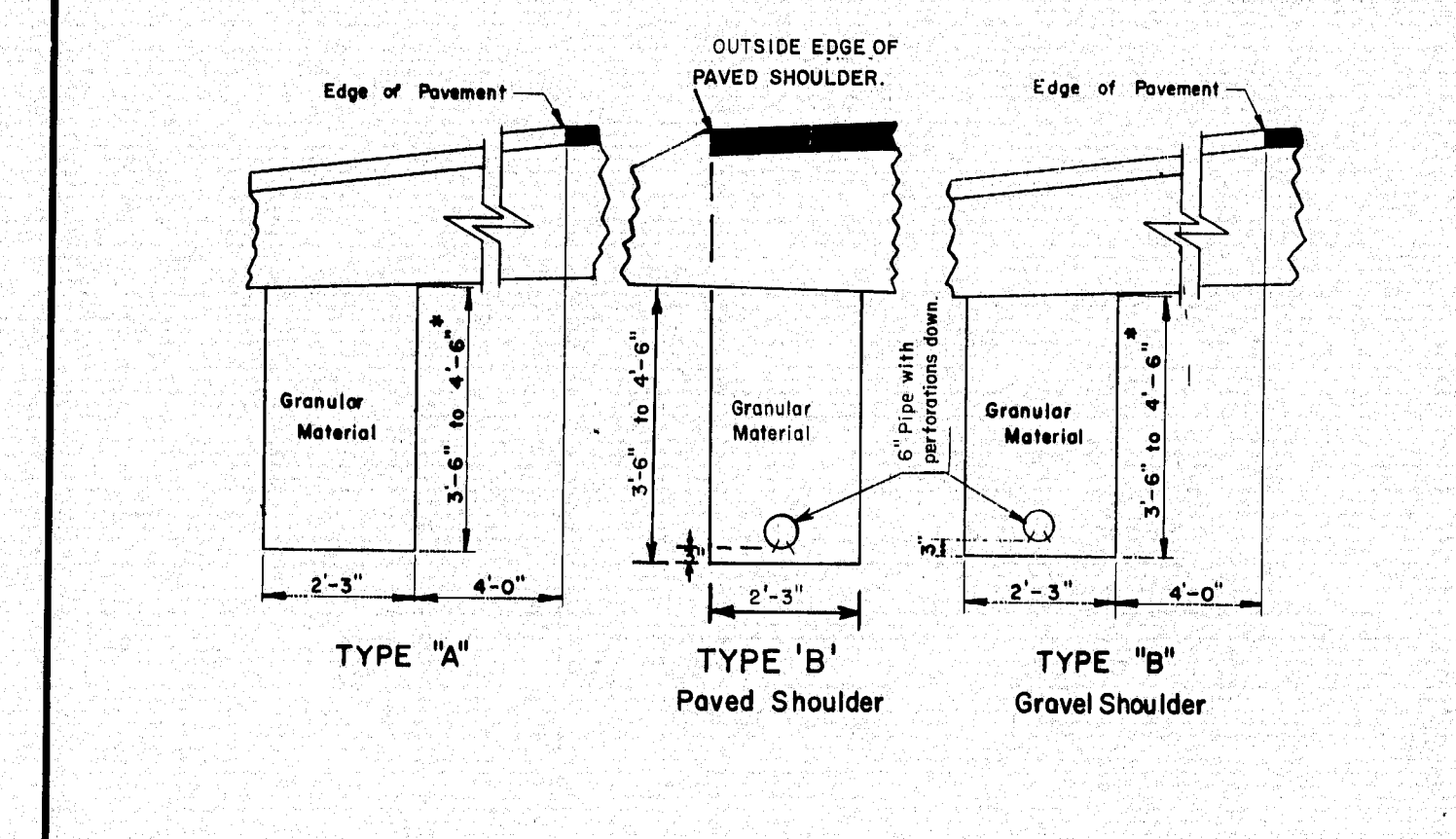
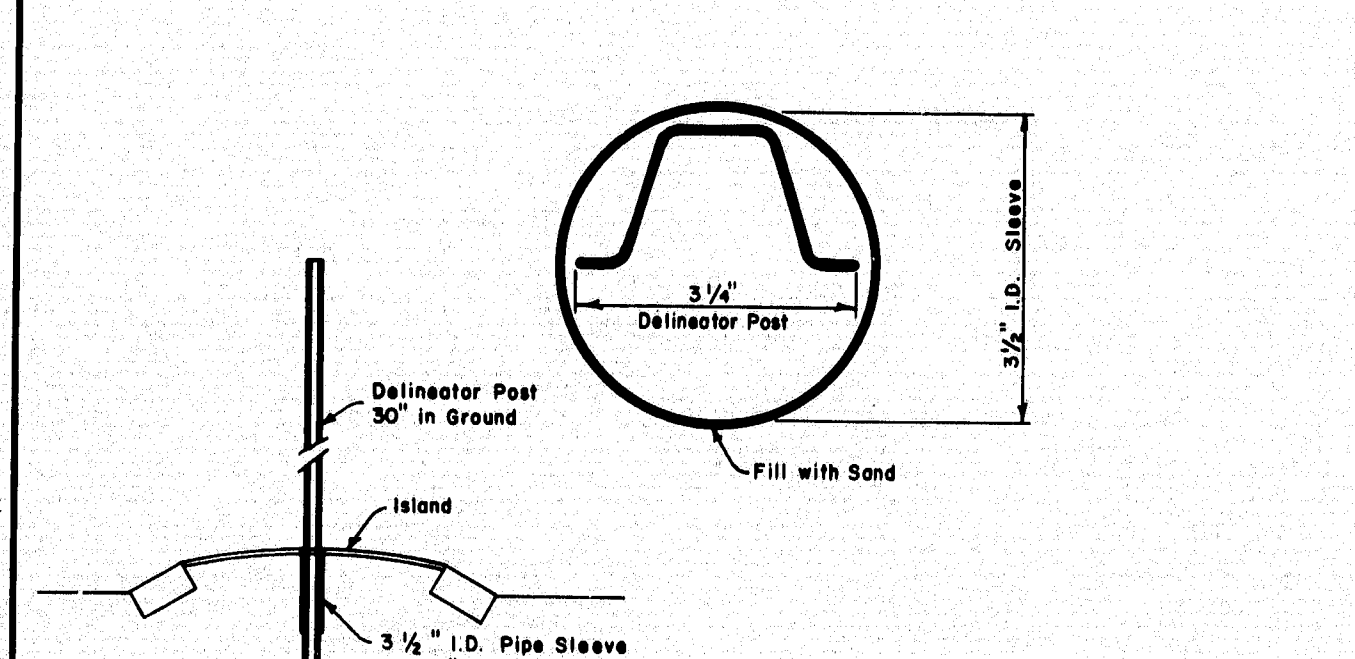
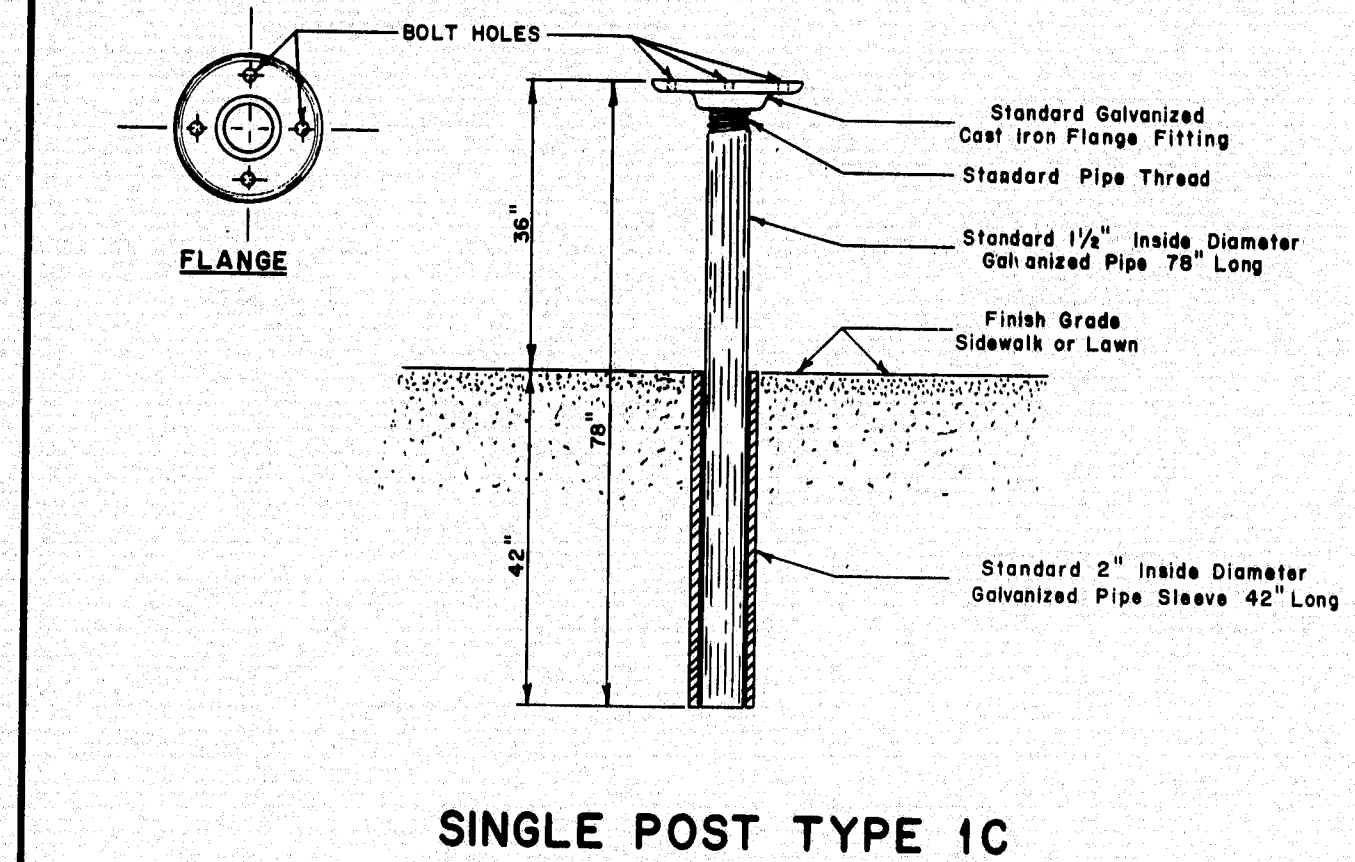


CIRCULAR				
NOMINAL INSIDE DIAMETER	THICKNESS IN INCHES	CLASS	CLASS	CLASS
	CMP or BCCMP	or WALL	RCP	ASBESTOS CEMENT PIPE
8 inch	.064	.060		
10 "	.064	.060		
12 "	.064	.060		
15 "	.064	.060		
18 "	.064	.060		
21 "	.064	.060		
24 "	.064	.060		
30 "	.079	.075		
36 "	.109	.105		
42 "	.109	.105		
48 "	.109	.105		
54 "	.138	.135		
60 "	.138	.135		
66 "	.168	.164		
72 "	.168	.164		

PIPE ARCH		
NOMINAL SIZES	GAUGE BCCMPA-CMPA	THICKNESS (inches) CAPA
18" span x 11" rise	16	.060
22" " x 13" "	16	.060
25" " x 16" "	16	.060
29" " x 18" "	14	.075
36" " x 22" "	14	.075
43" " x 27" "	12	.105
50" " x 31" "	12	.105
58" " x 36" "	10	.135
65" " x 40" "	10	.135
72" " x 44" "	8	.164

CMP = Corrugated Metal Pipe  
BCCMP = Bituminous Coated Corrugated Metal Pipe  
CAP = Corrugated Aluminum Pipe  
RCP = Reinforced Concrete Pipe  
Above abbreviations followed by "A" indicate "Arch"  
All RCPA shall be class III  
Minimum thickness, class, and wall types for culvert pipe, unless otherwise designated.

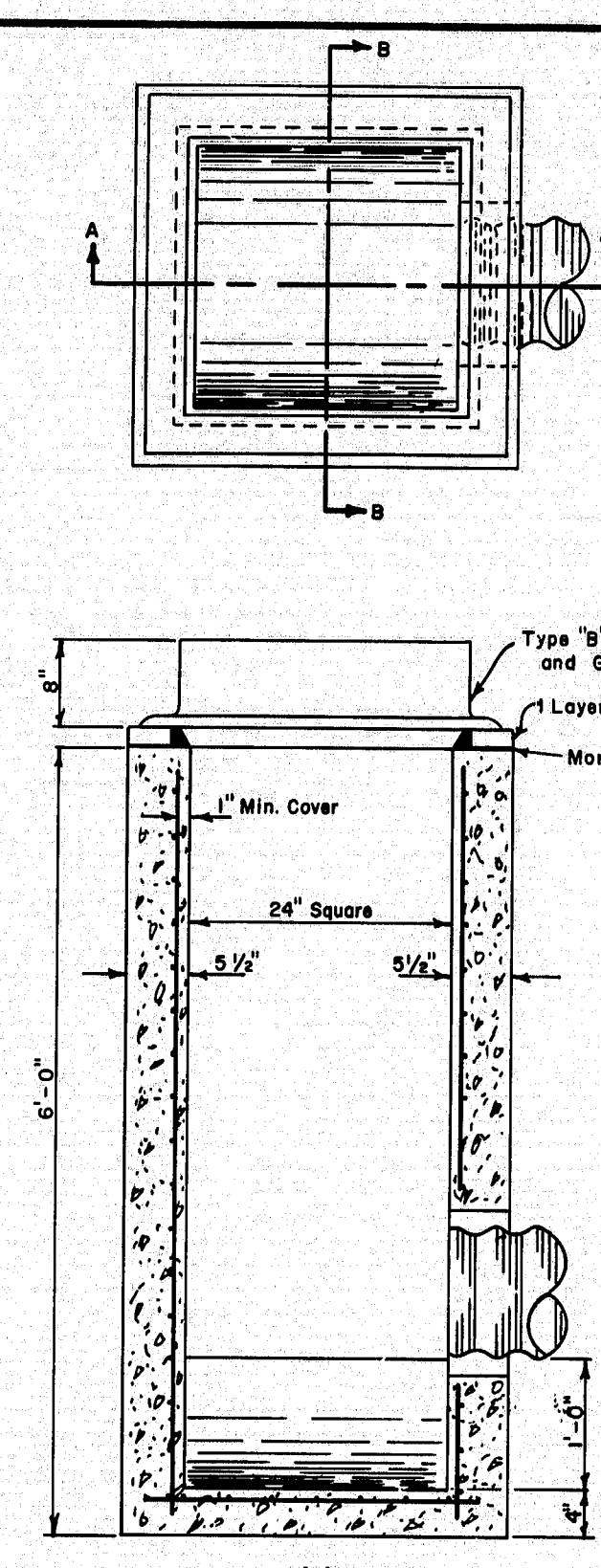
### CULVERT PIPE DATA



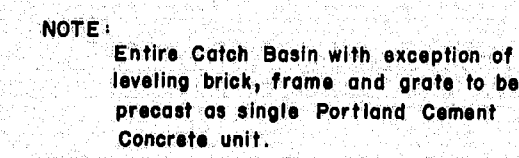
REVISIONS	
PLATE 'F'	9-17-70
PLATE 'G'	8-15-71
PLATE 'D'	12-20-71

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
AUGUSTA, MAINE  
**STANDARD DETAILS**  
METAL SLUICE - UNDERDRAIN -  
CULVERT PIPE DATA  
CULVERT INLET GRATE  
**148-13**  
AUG. 1969

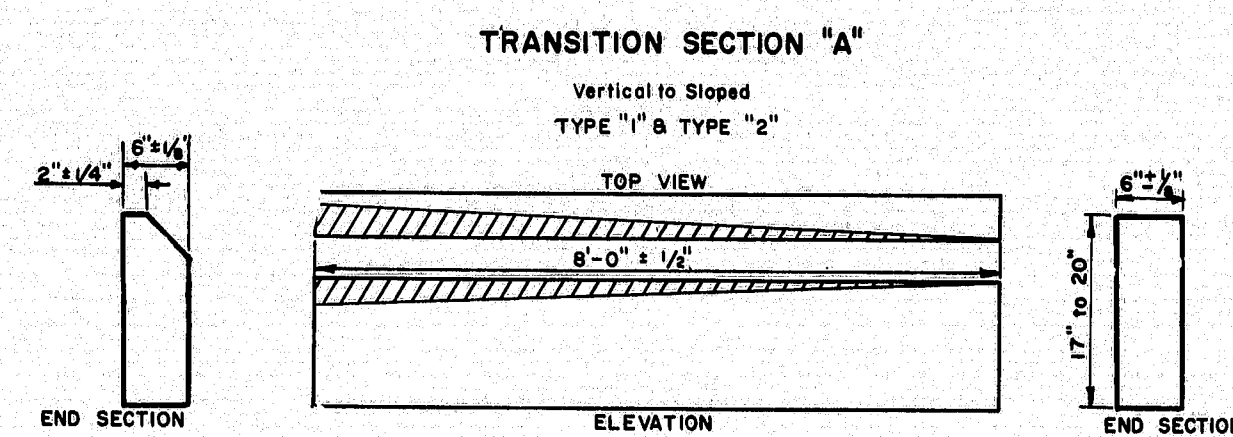
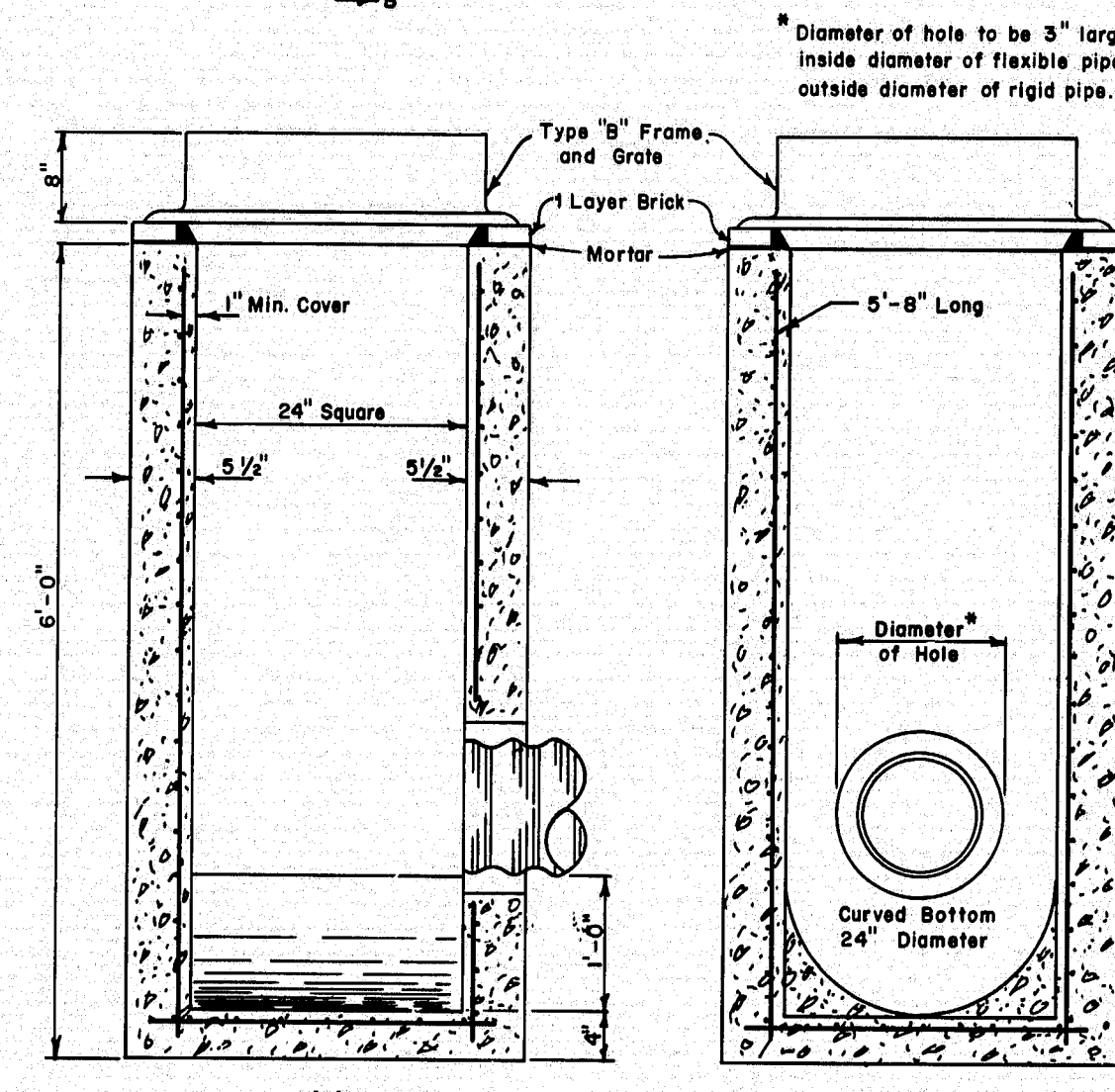




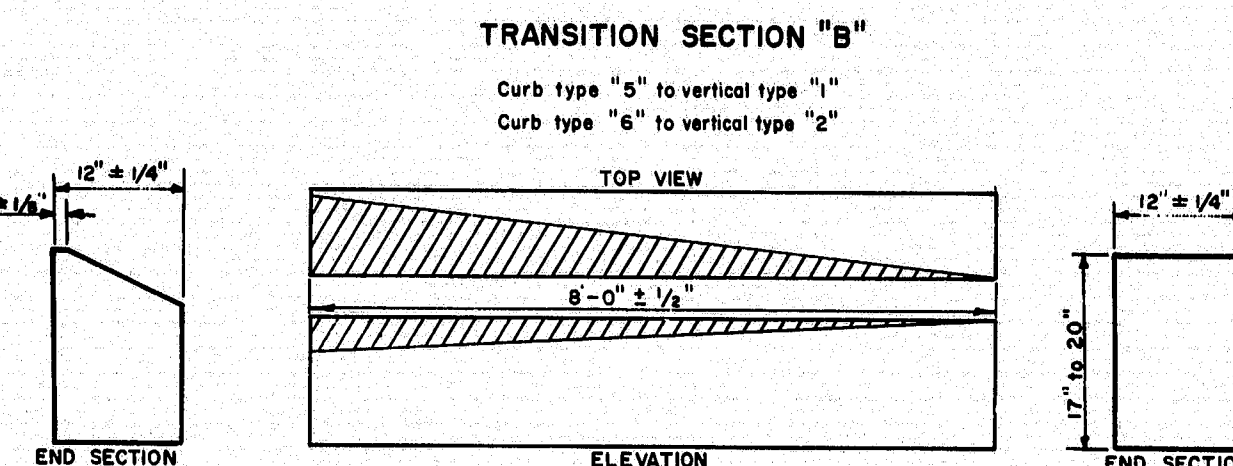
CATCH BASIN TYPE "F"



**NOTE:** Entire Catch Basin with exception of leveling brick, frame and grate to be precast as single Portland Cement Concrete unit.

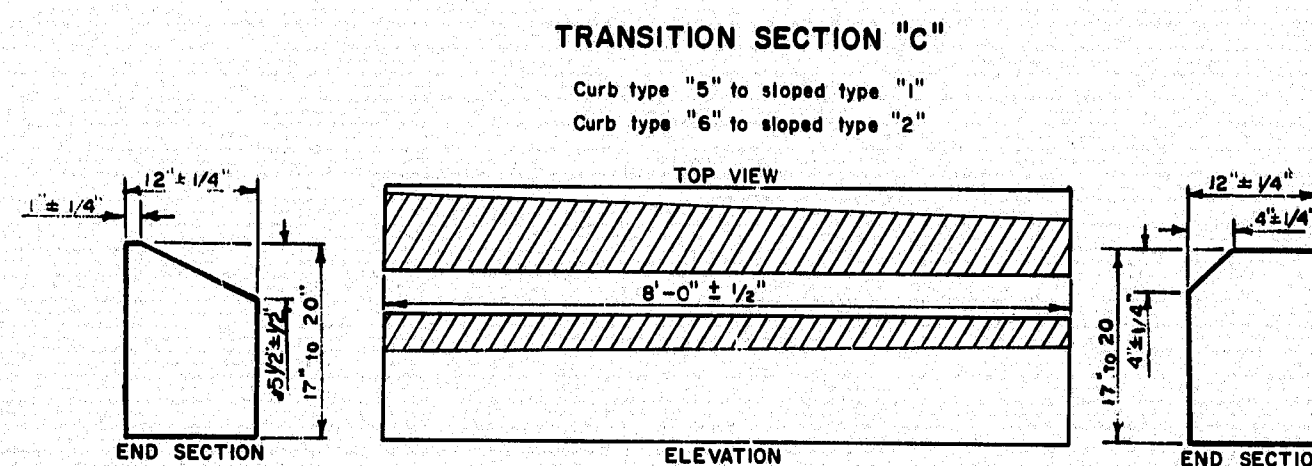


**TRANSITION SECTION "A"**  
Vertical to Sloped  
TYPE "1" & TYPE "2"



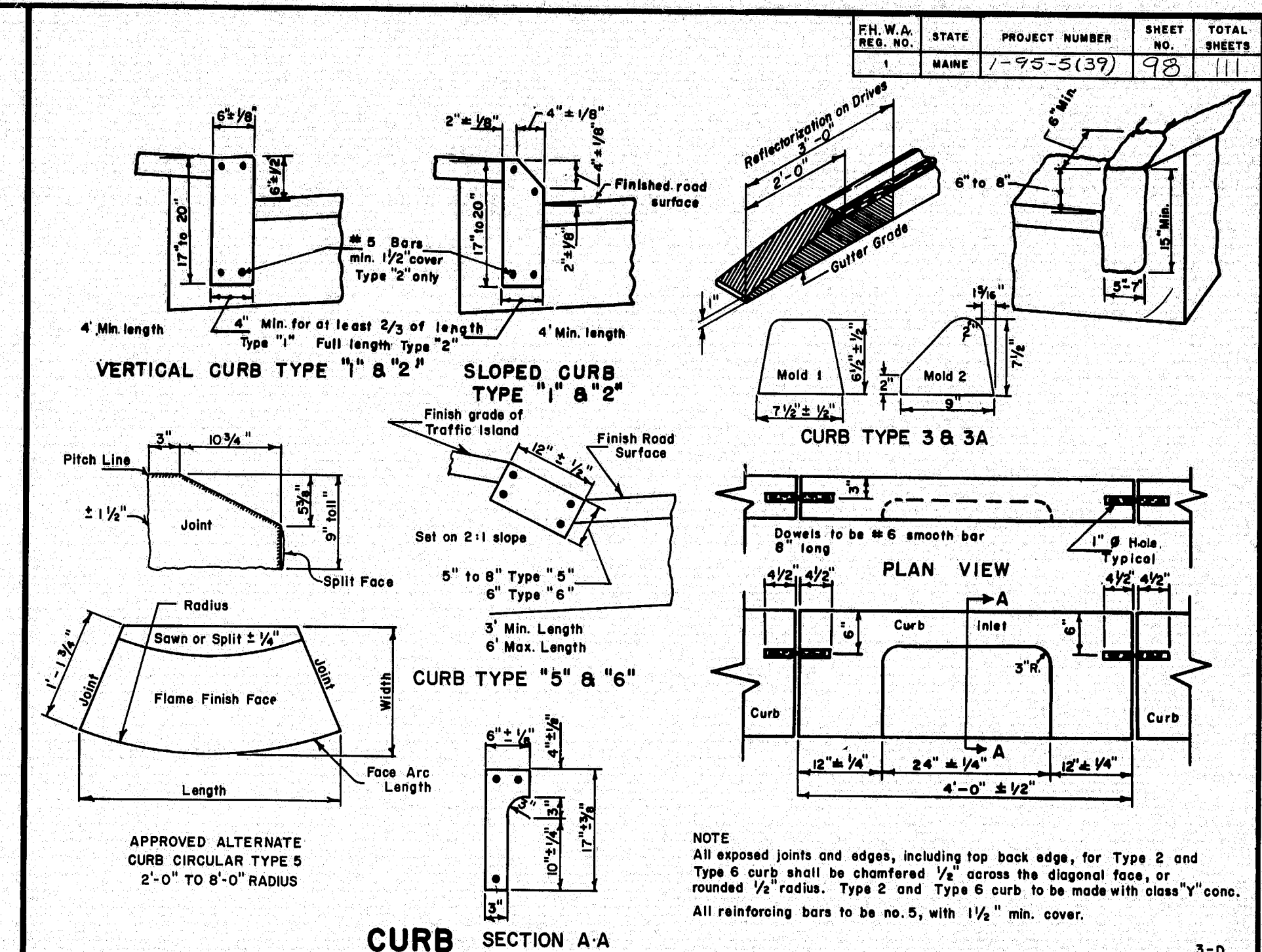
**TRANSITION SECTION "B"**

Curb type "5" to vertical type "1"  
Curb type "6" to vertical type "2"

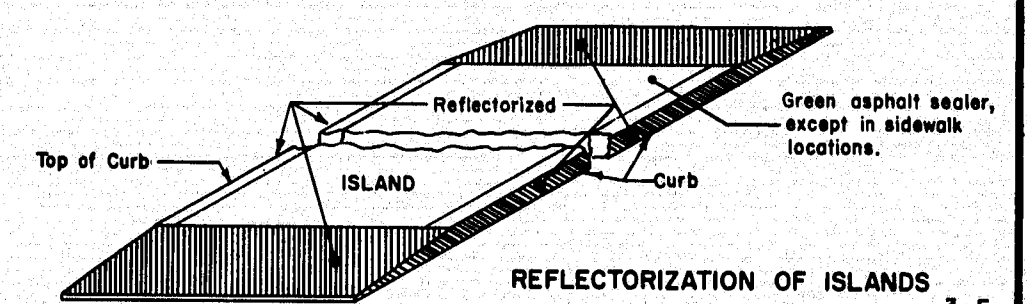


**TRANSITION SECTION "C"**  
Curb type "5" to sloped type "1"  
Curb type "6" to sloped type "2"

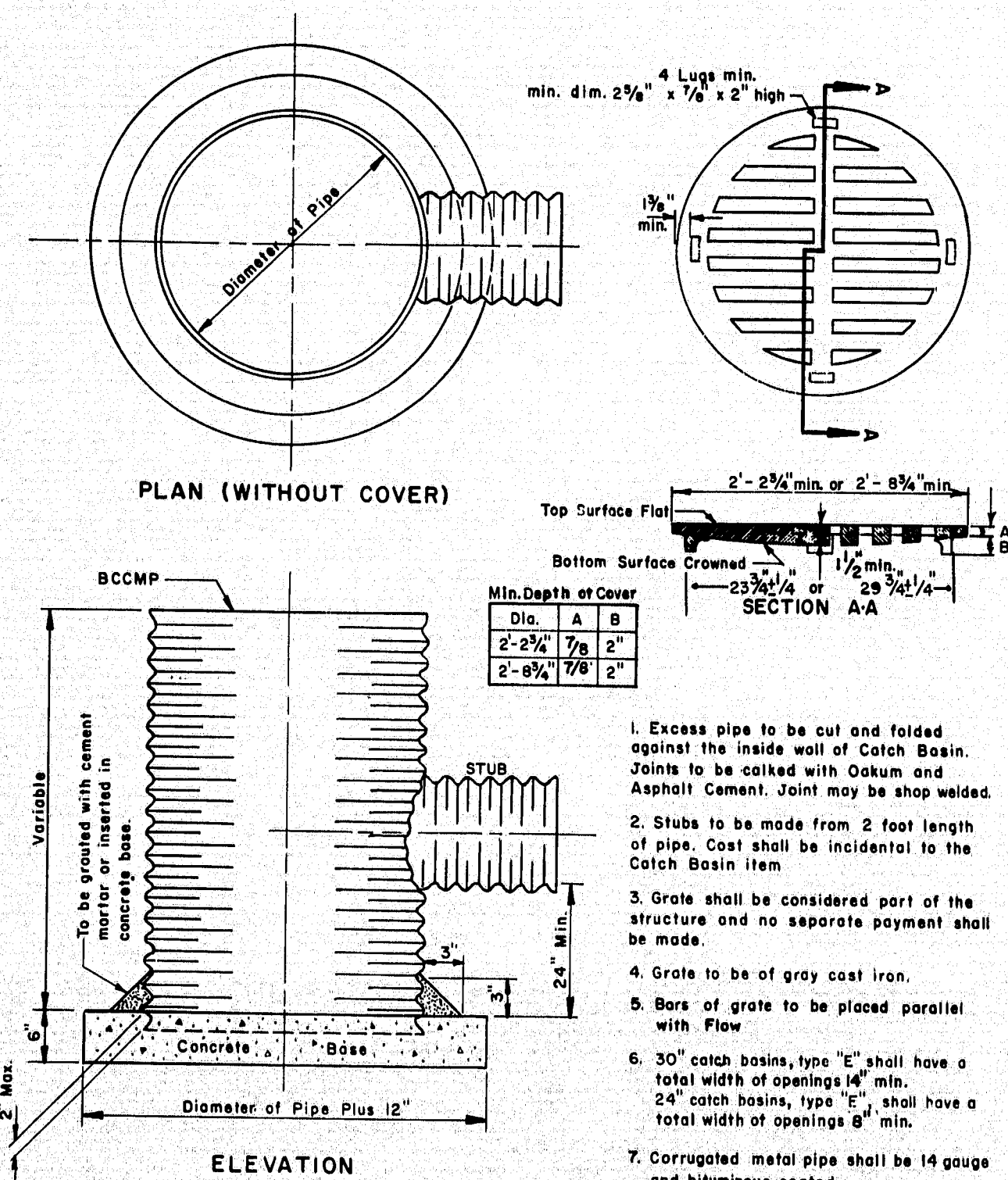
**NOTE - TYPE 2 CURB**  
Precast concrete curb to be made with class "Y" concrete.  
All reinf. bars to be # 5, 1 1/2 min. cover.



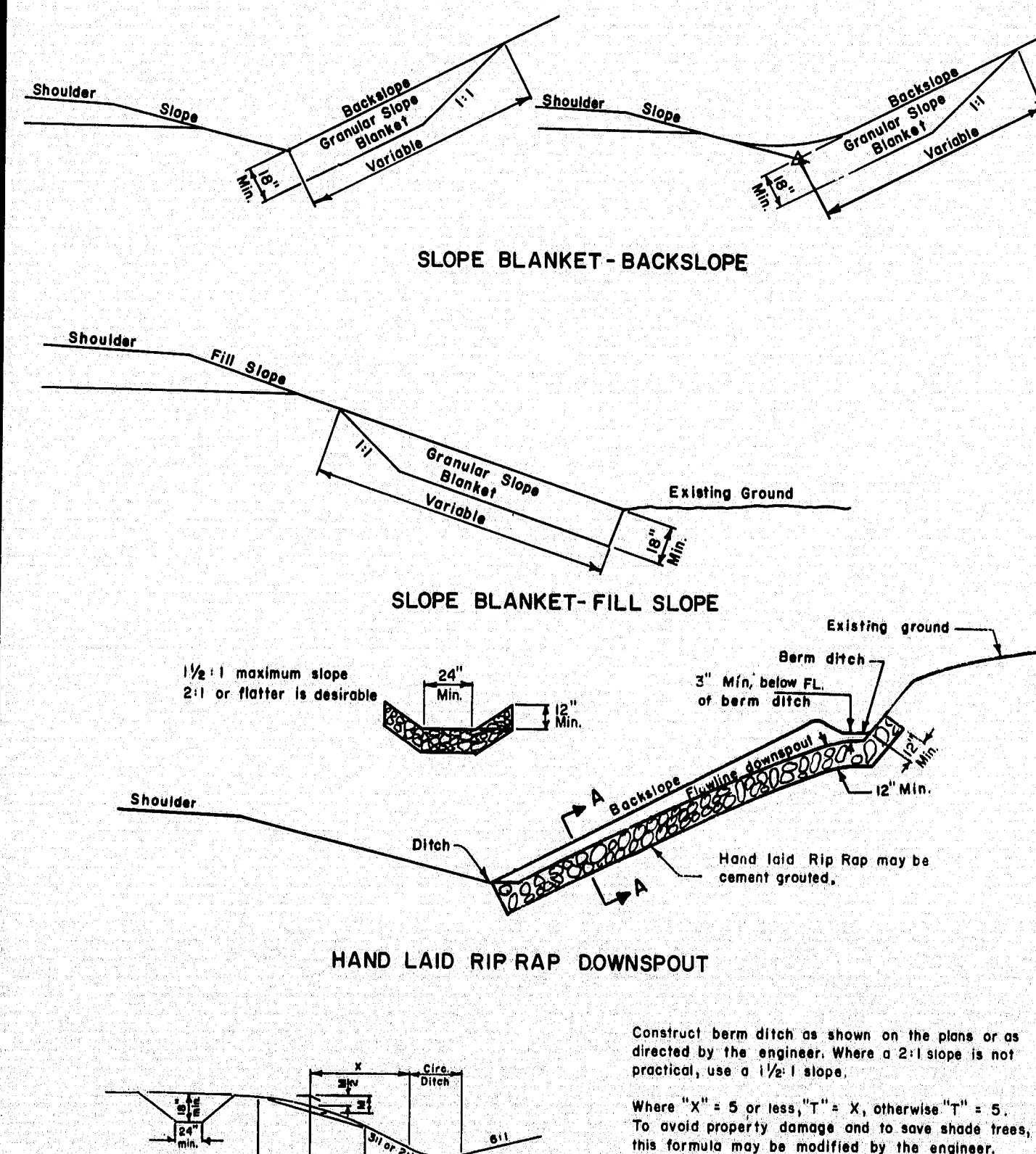
**CURB** SECTION A-A



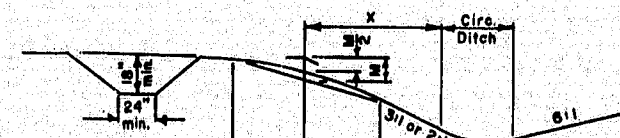
## REFLECTORIZATION OF ISLANDS



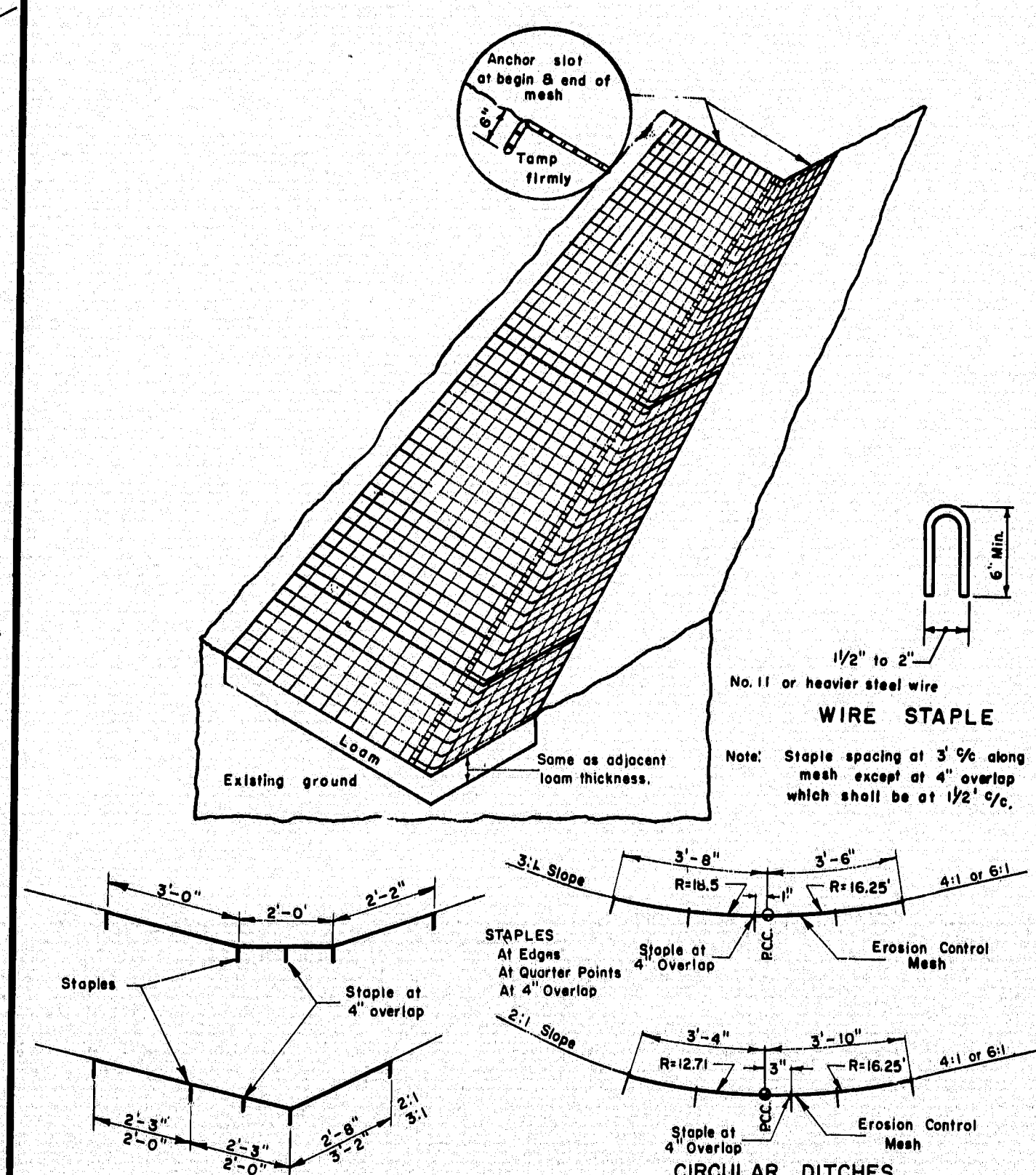
CATCH BASIN  
TYPE "E"



HAND LAID RIP RAP DOWNSPOUT



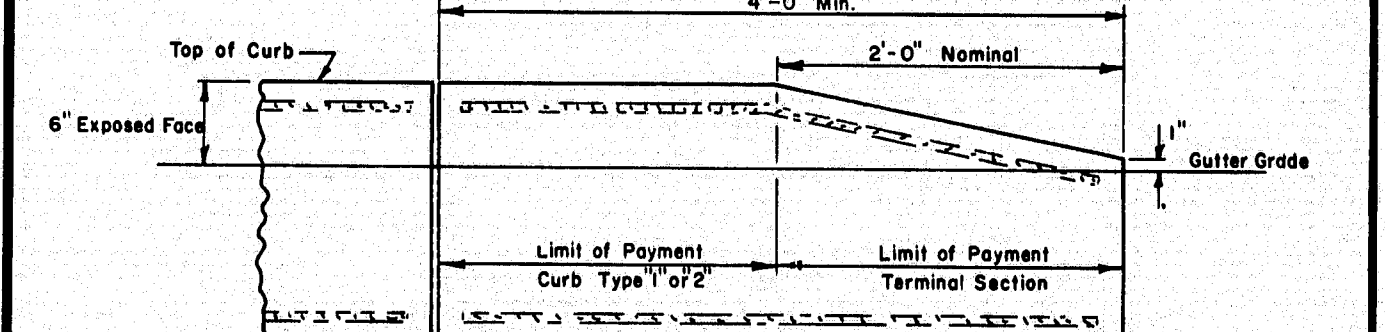
BERM DITCH



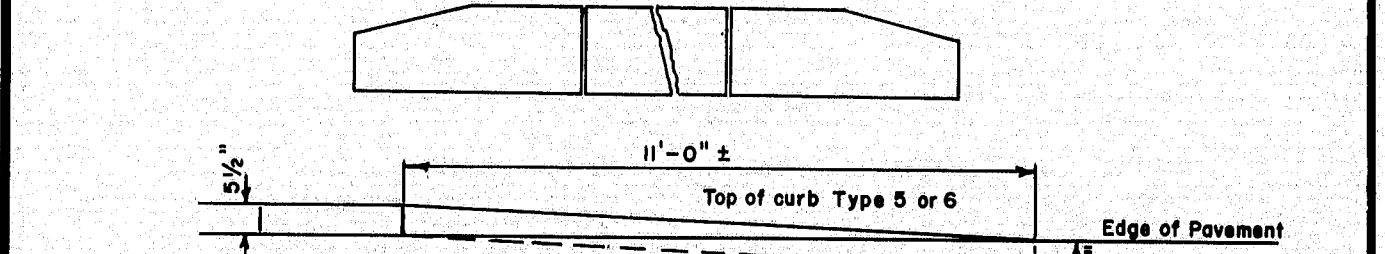
## EROSION CONTROL MESH

CURB TYPES (1 & 2), (5 & 6) ON CURVES				
RADIUS OF CURVE	LENGTH	PAID FOR AS	STONE IS CUT OR CAST	
1	0' to 60' Incl.	4' Min.	Circular	Arc To F.I. Curve
2	Over 60' To 160'	4' To 6'	Straight	Straight Pieces
3	0' to 2' Incl.	2' Min.	Circular	To Fill Curve
4	Over 2' To 30' Incl.	12" Min. Chord	Circular	Straight Pieces, Radial Ends
5	Over 30' And Under 160'	2' To 3'	Straight	Straight Pieces
6	160' And Over	3' To 6'	Straight	Straight Pieces

### TERMINAL CURB SECTION



TERMINAL SECTION TYPE "1" & "2"



**TERMINAL SECTION TYPE "5" & "6"** (Use when shown on plans only)

REVISIONS	
Plate 3-G	12-23-69
Plate 3-F	5-27-70
Plate 3-J	7-15-70
PLATE 3G	3-4-71
PLATE 3H	8-28-73

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
AUGUSTA, MAINE

## STANDARD DETAILS

CURB, DITCHES AND  
SLOPES, AND CATCH BASINS  
TYPE "E"

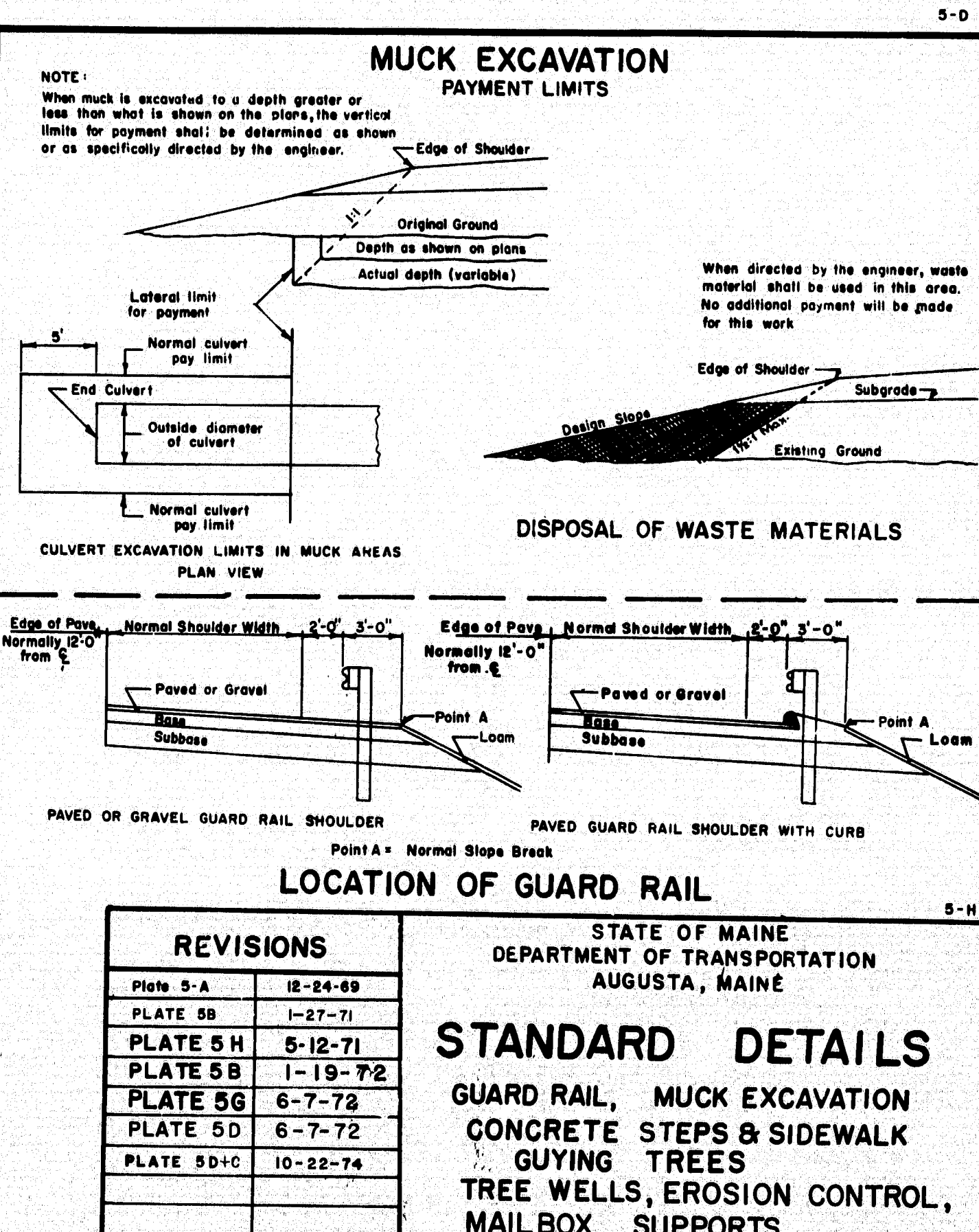
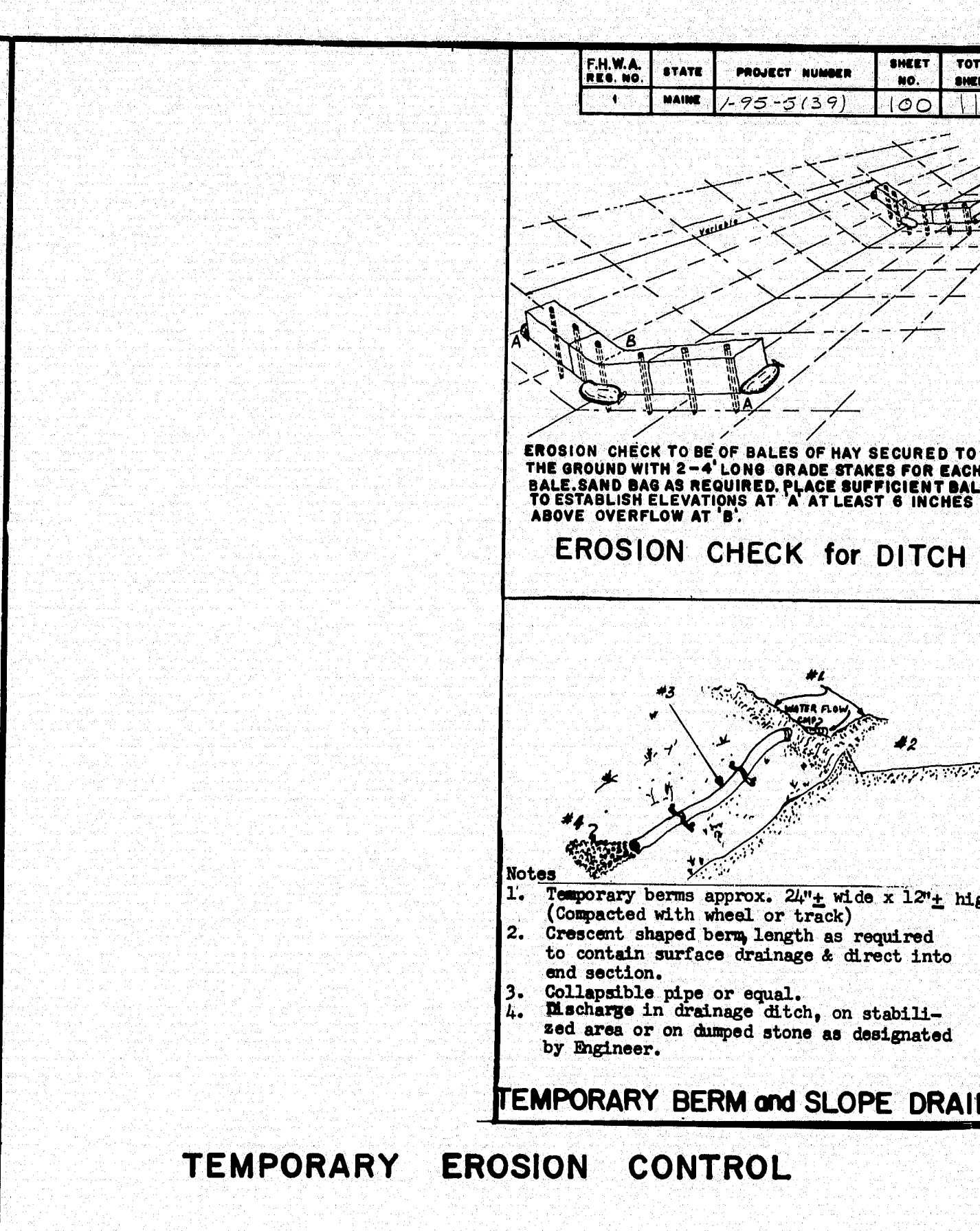
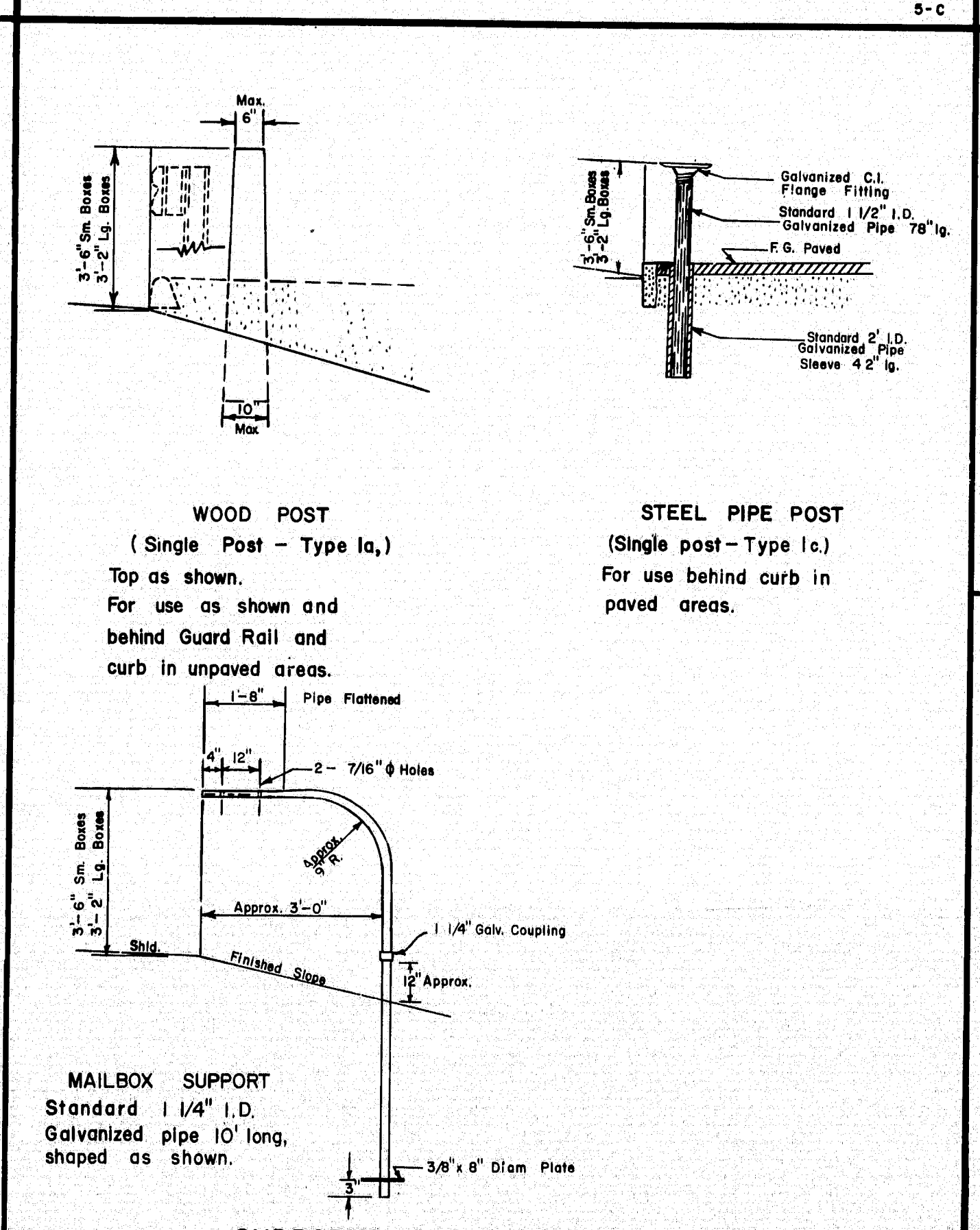
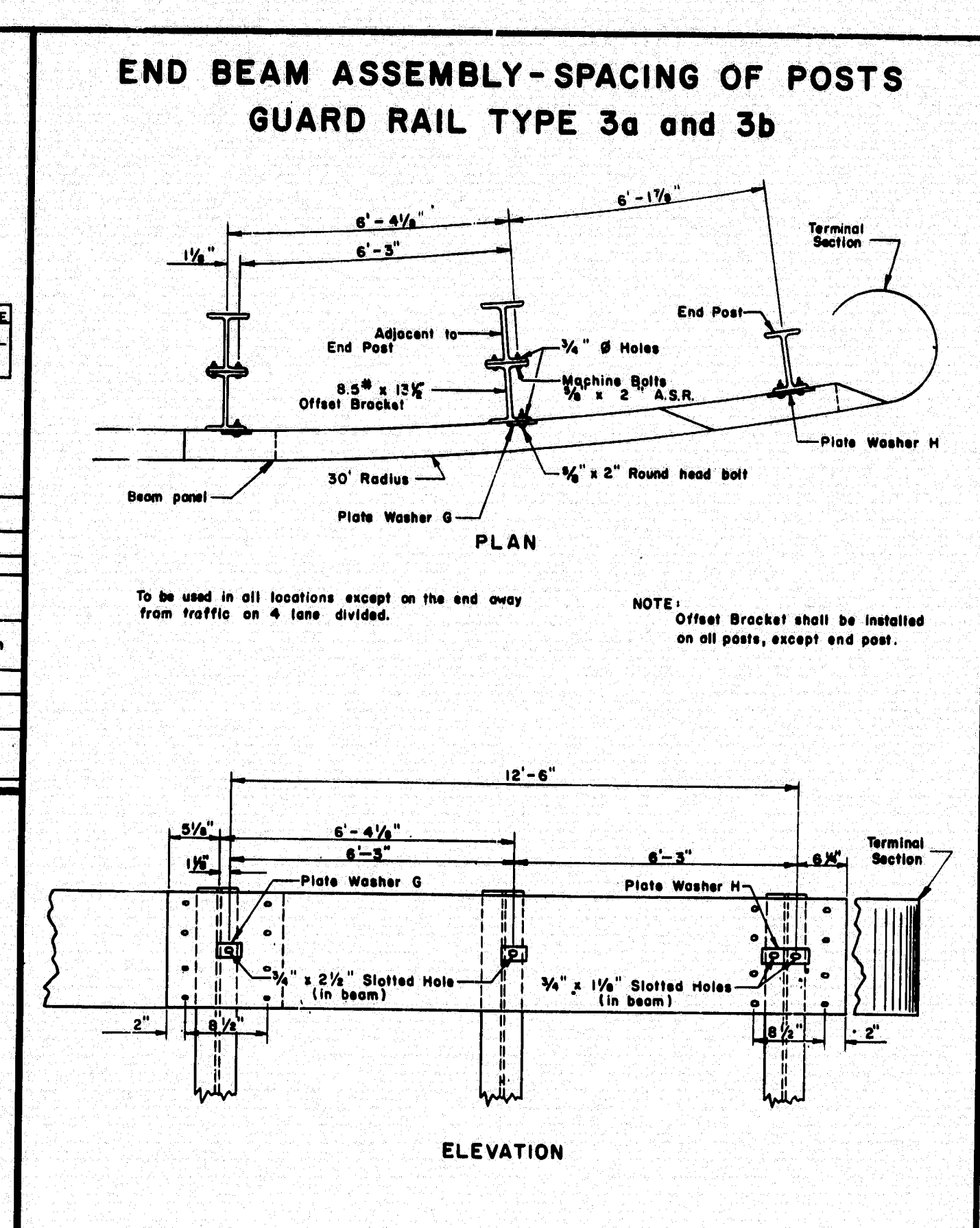
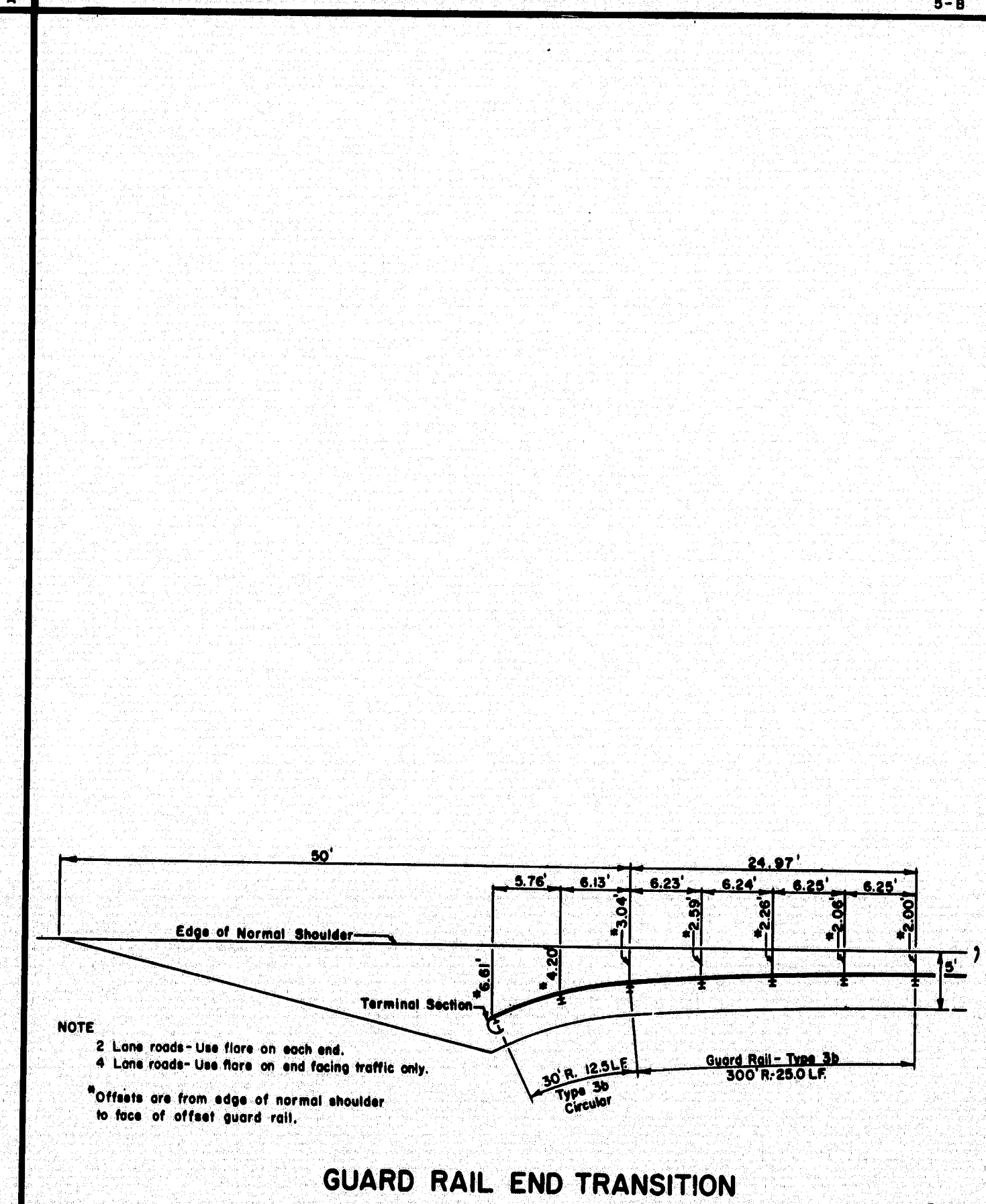
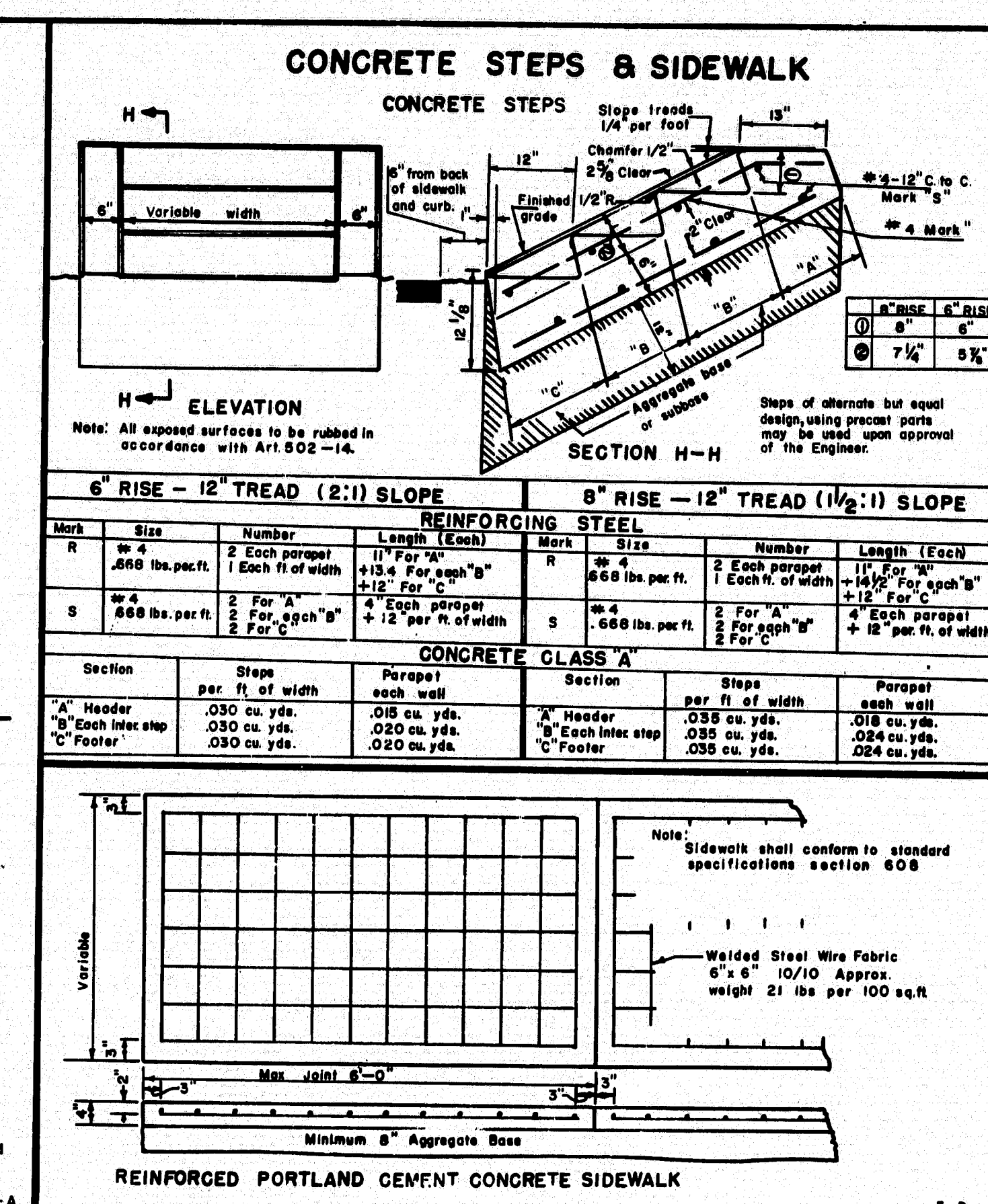
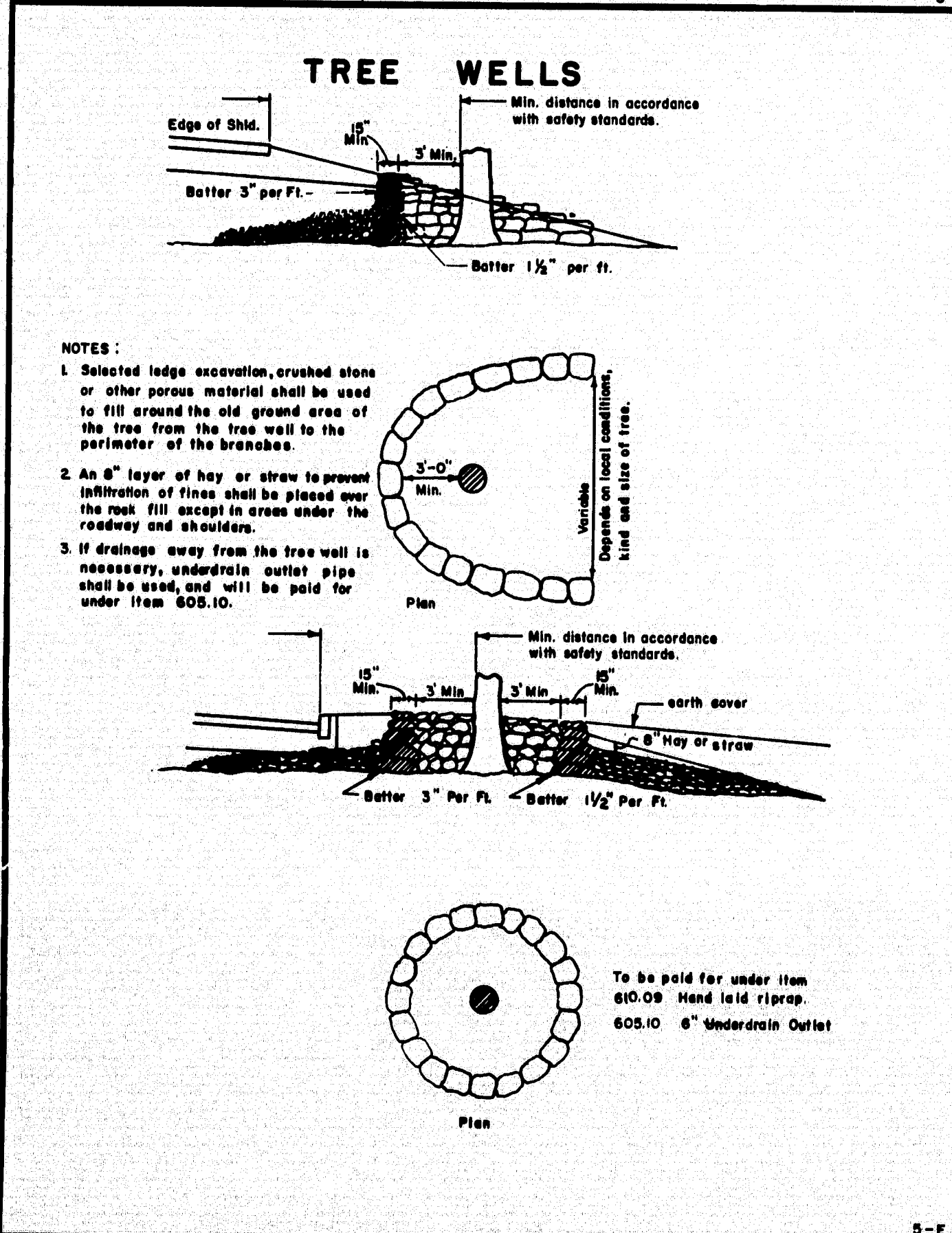
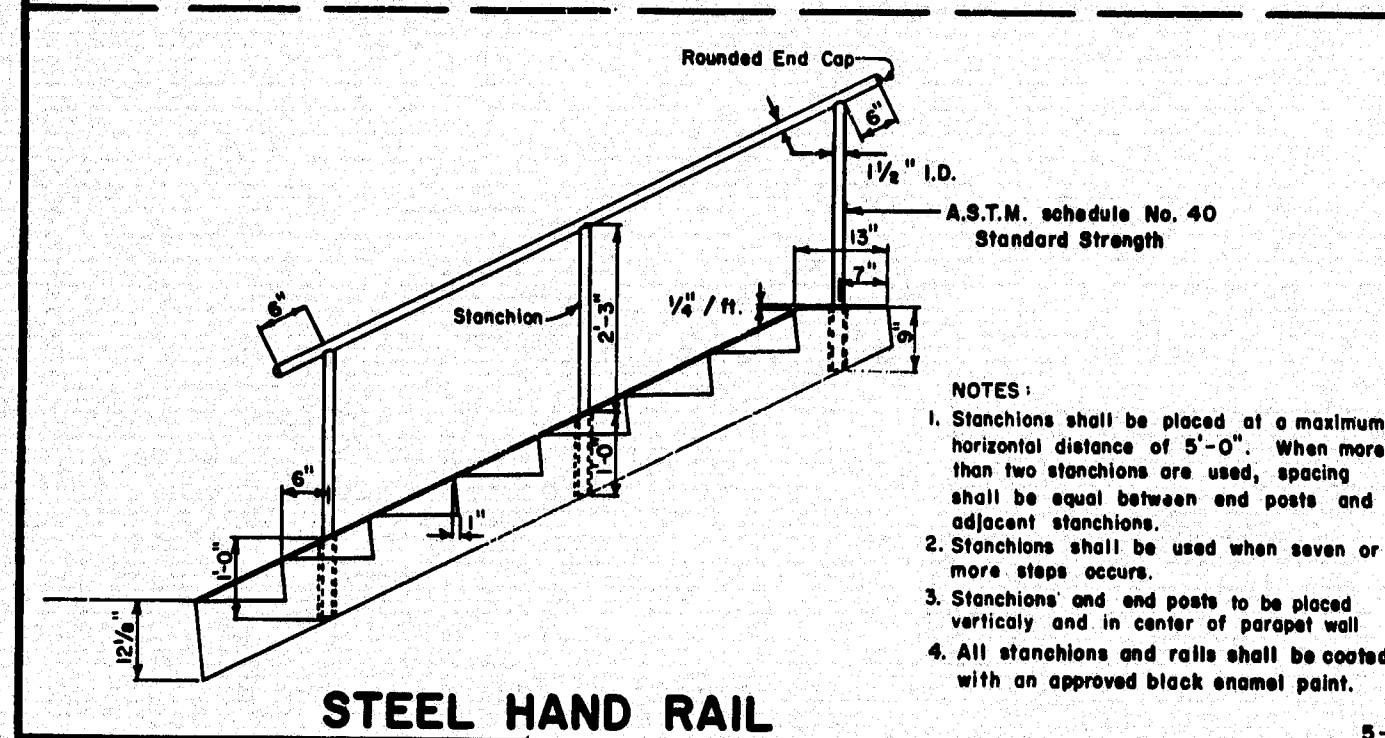
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RICHMOND I-95-5(39)

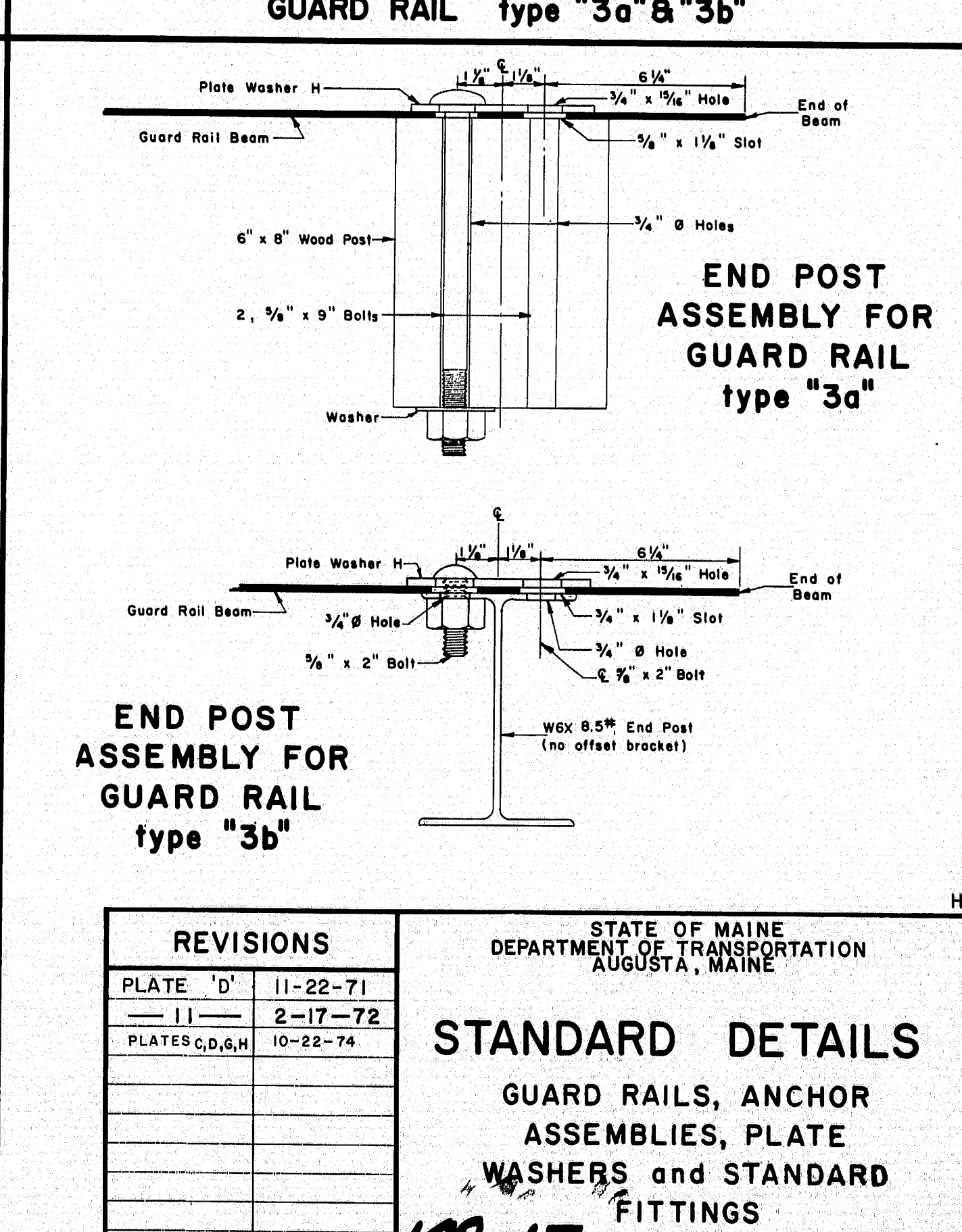
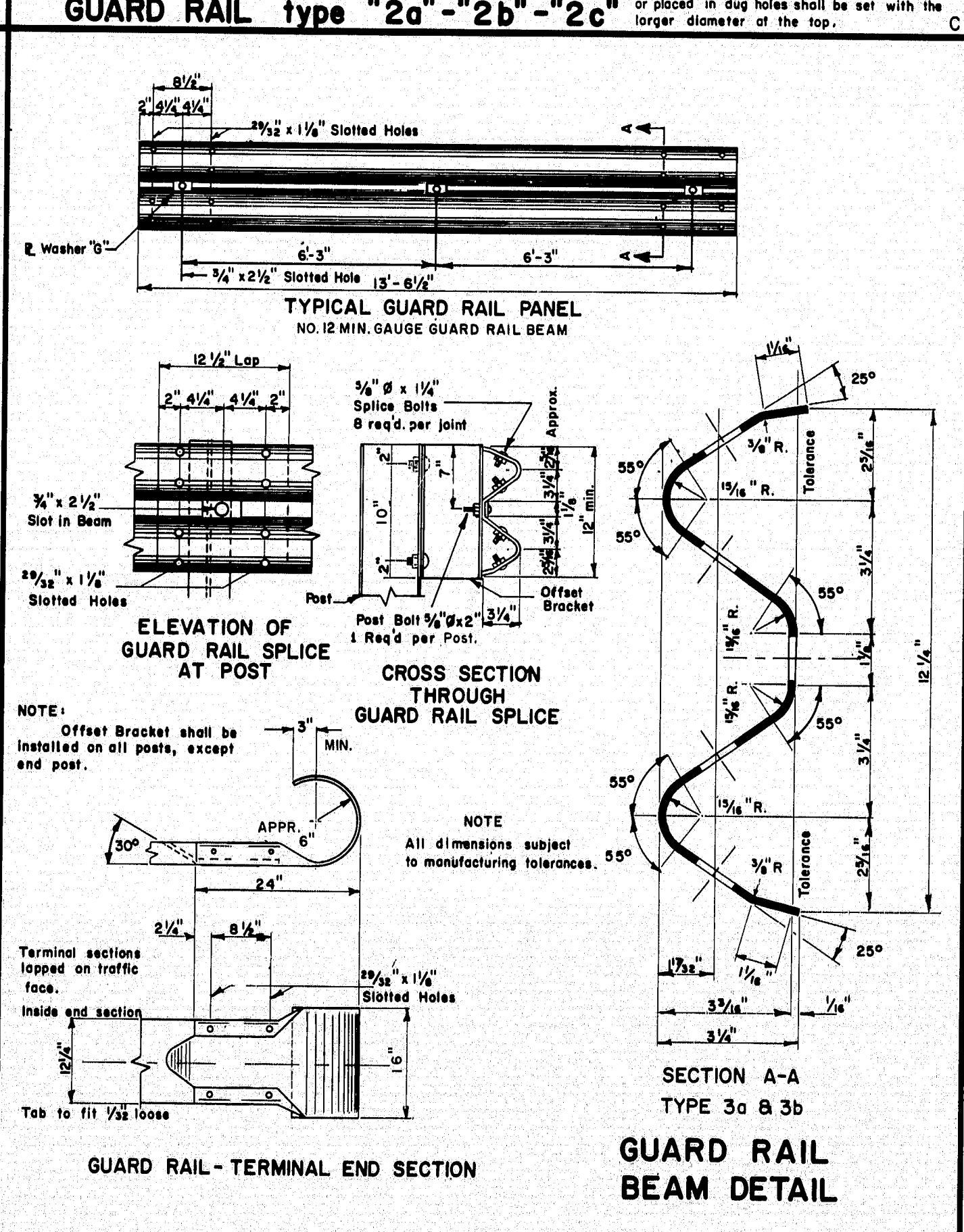
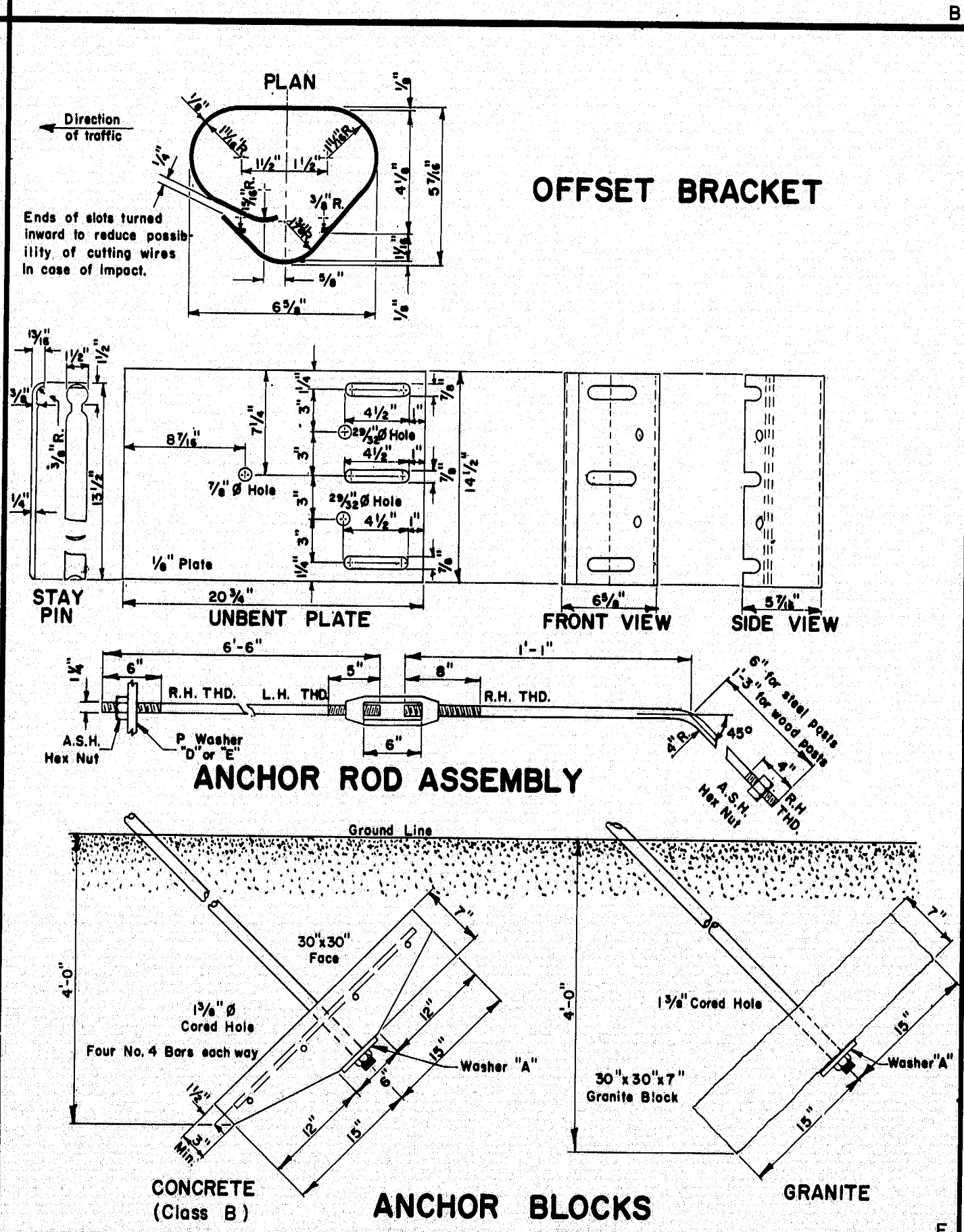
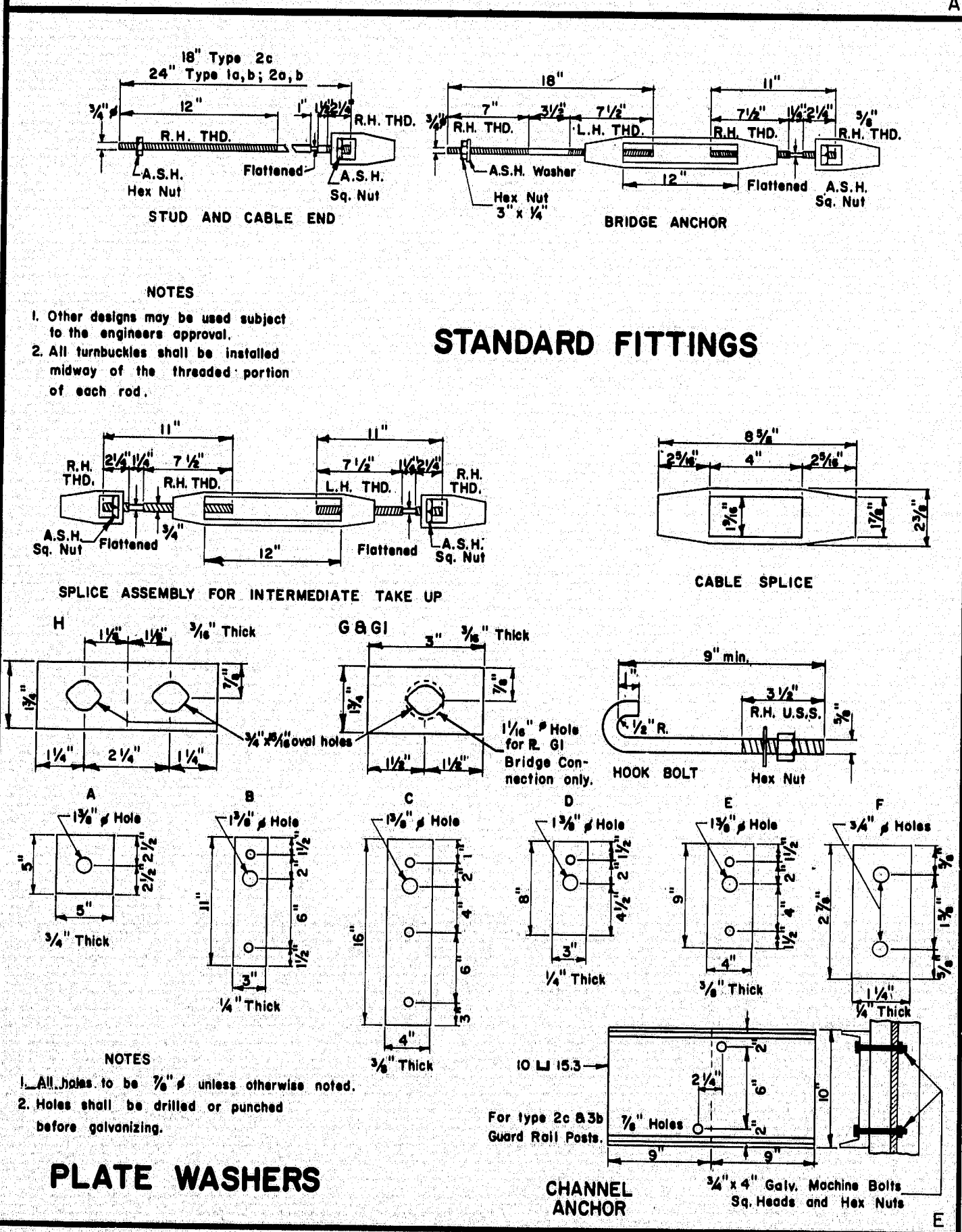
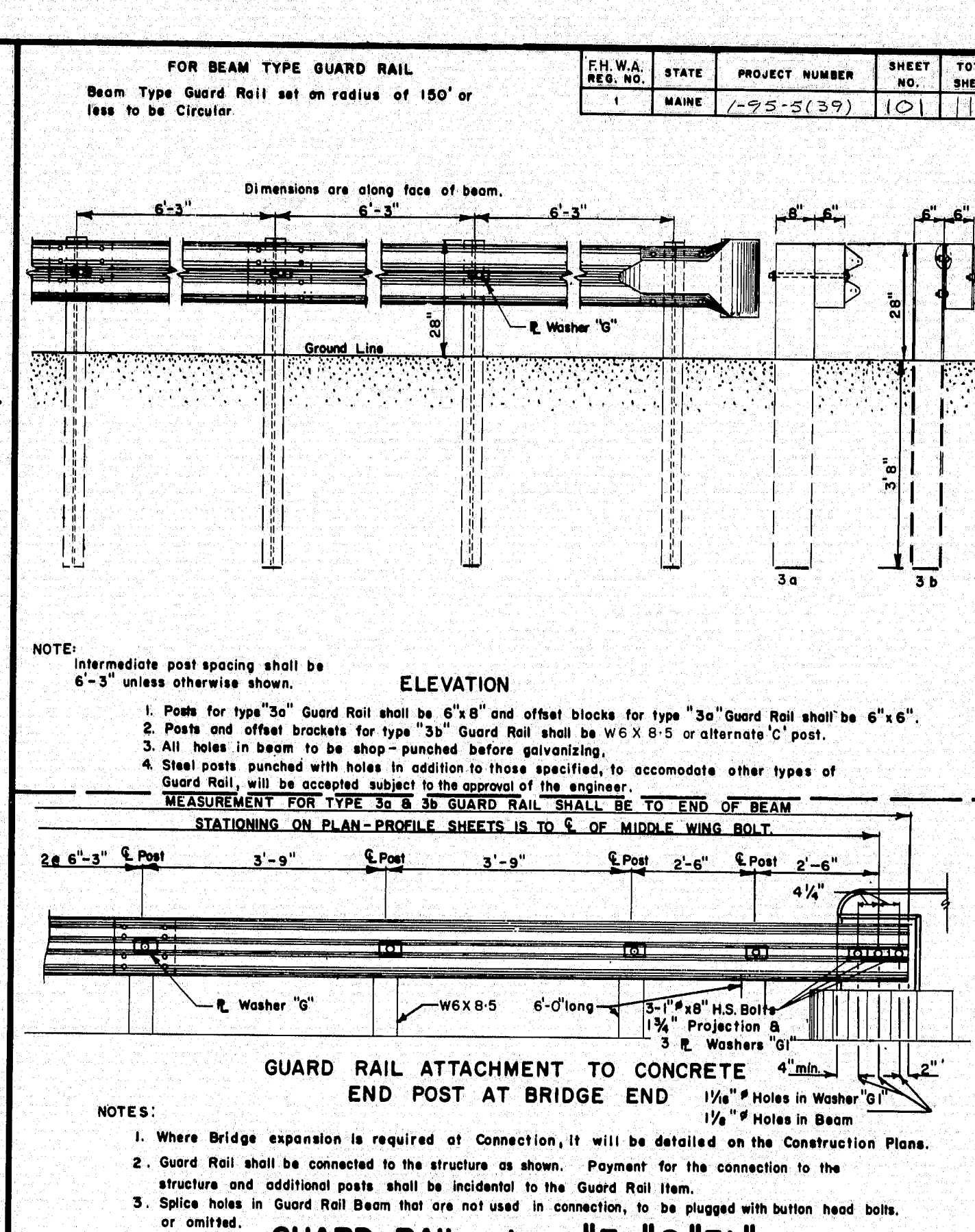
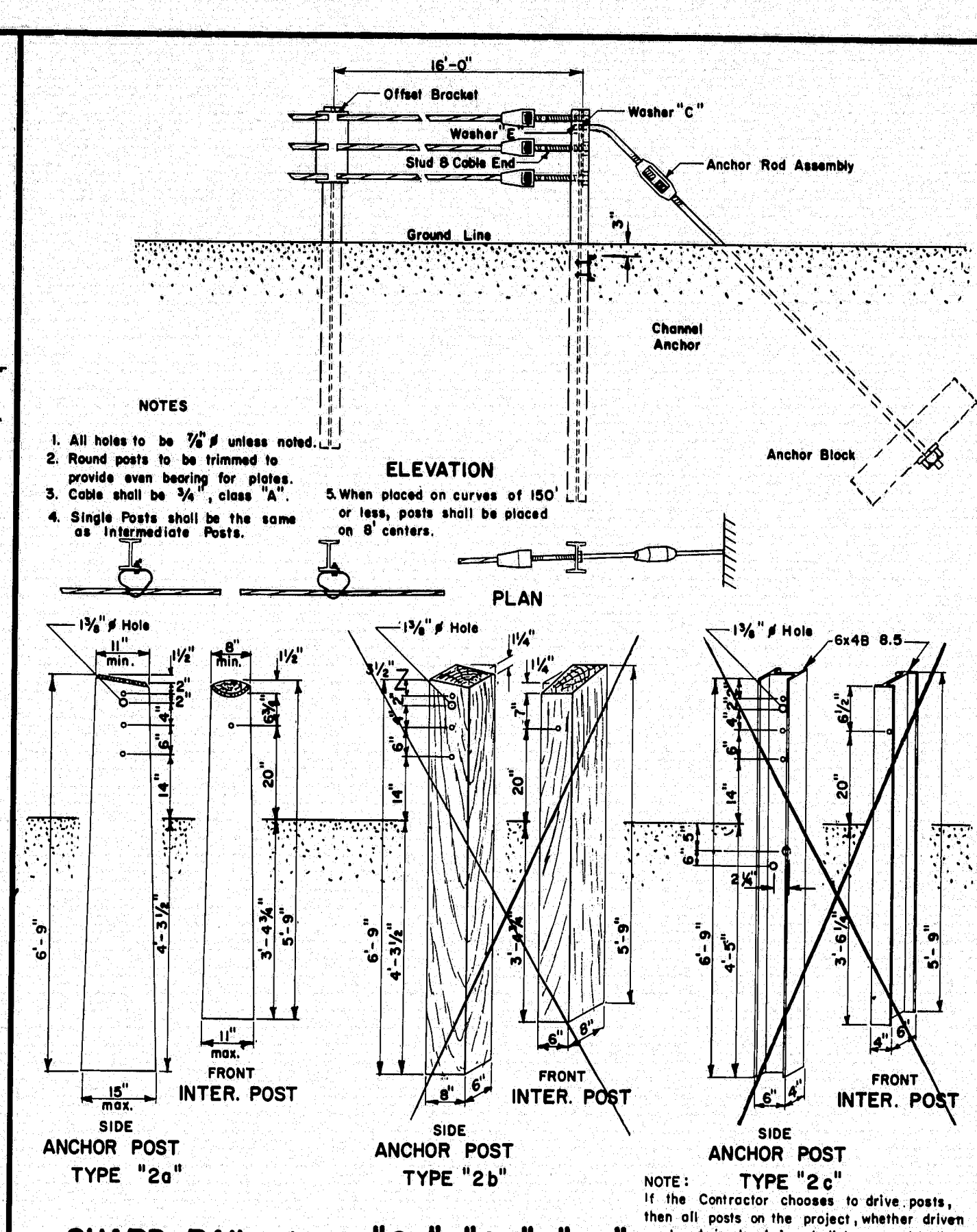
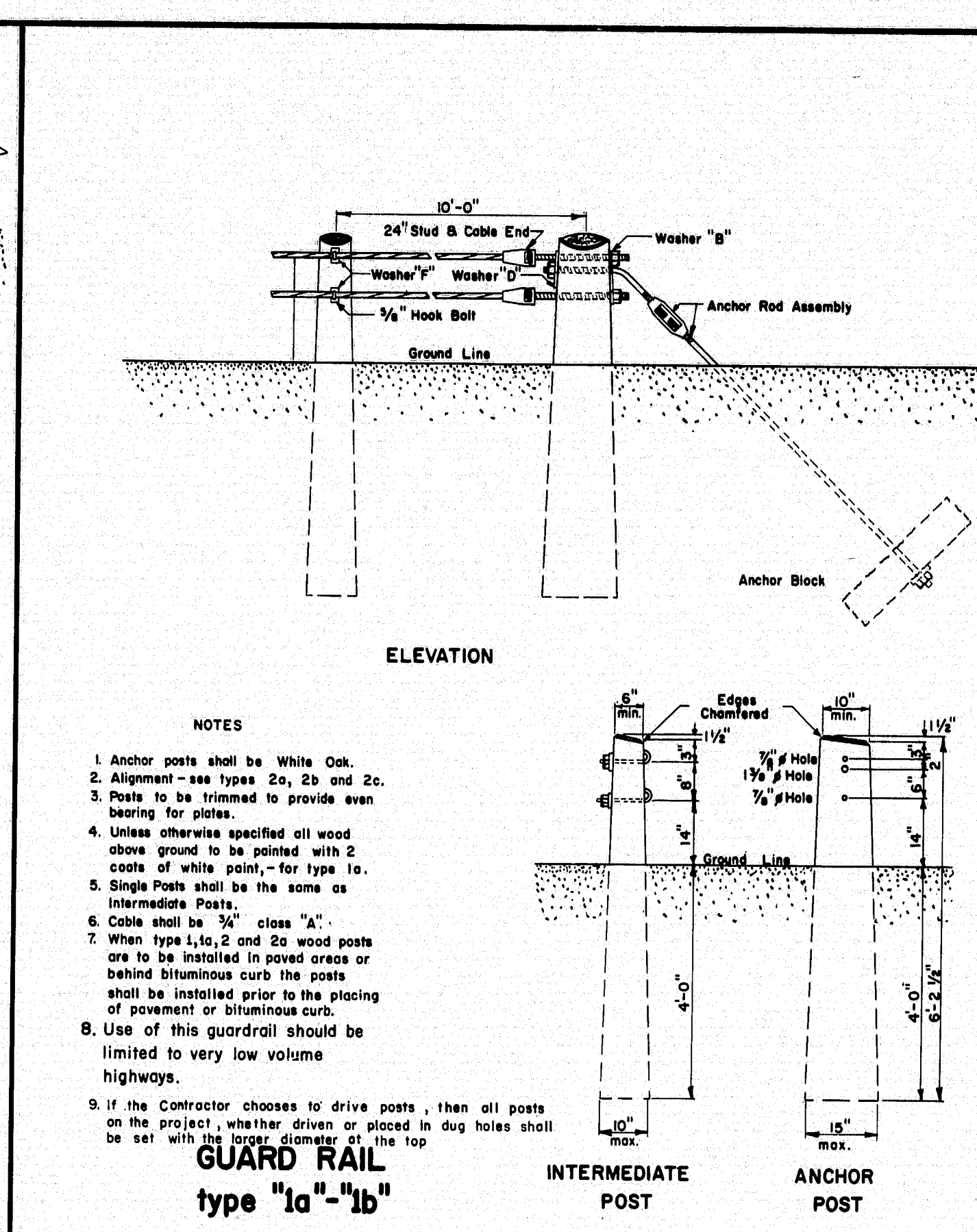
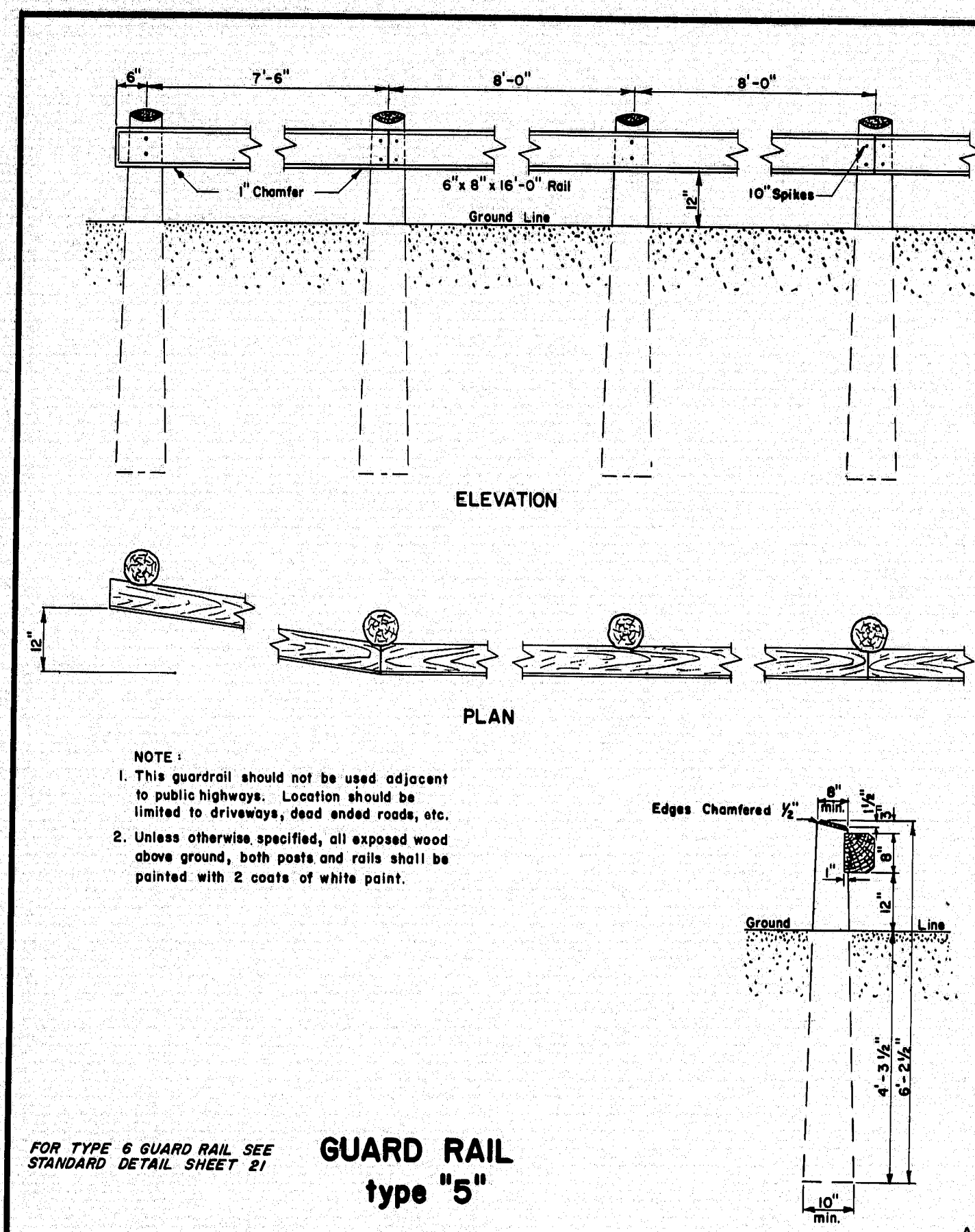






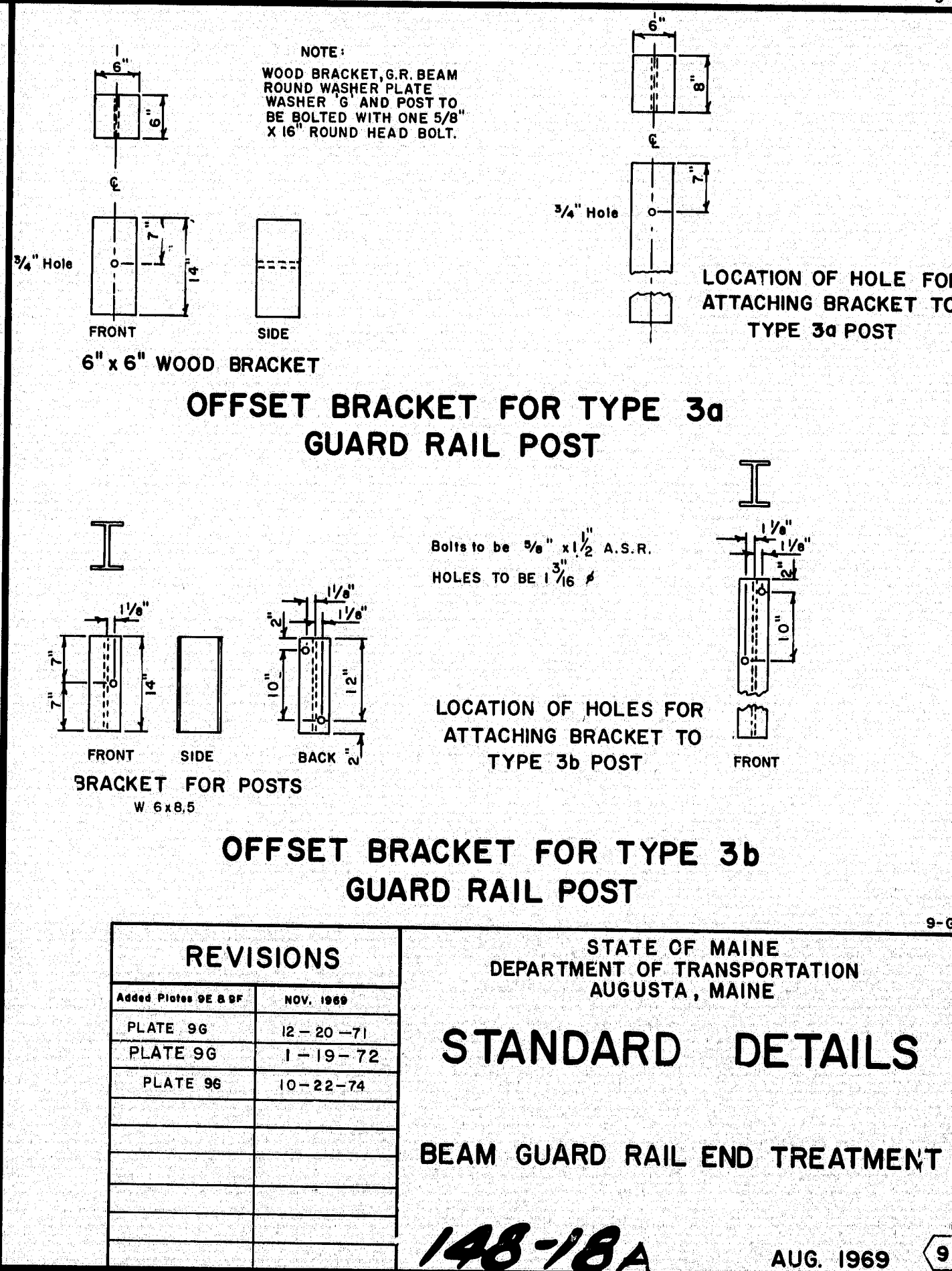
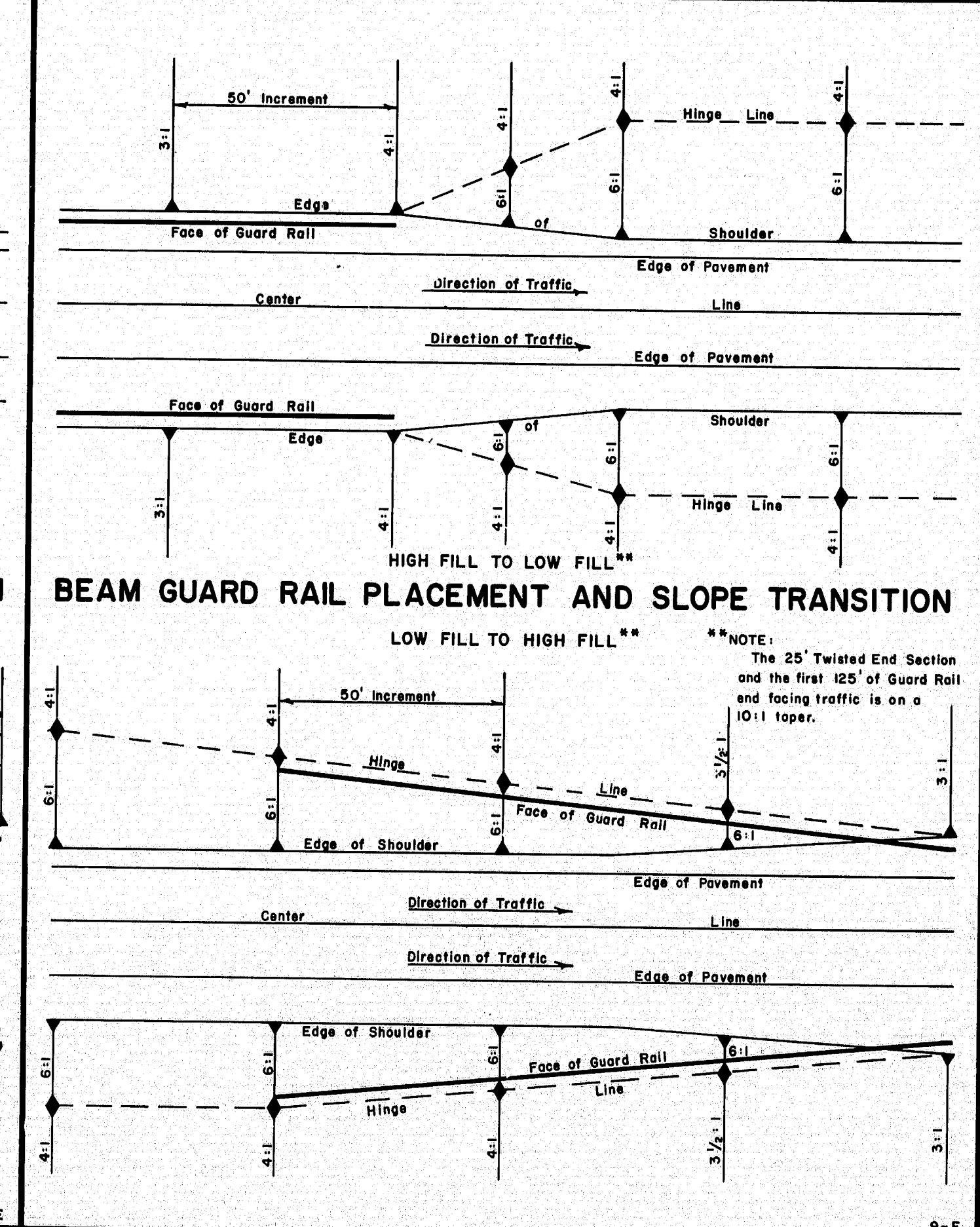
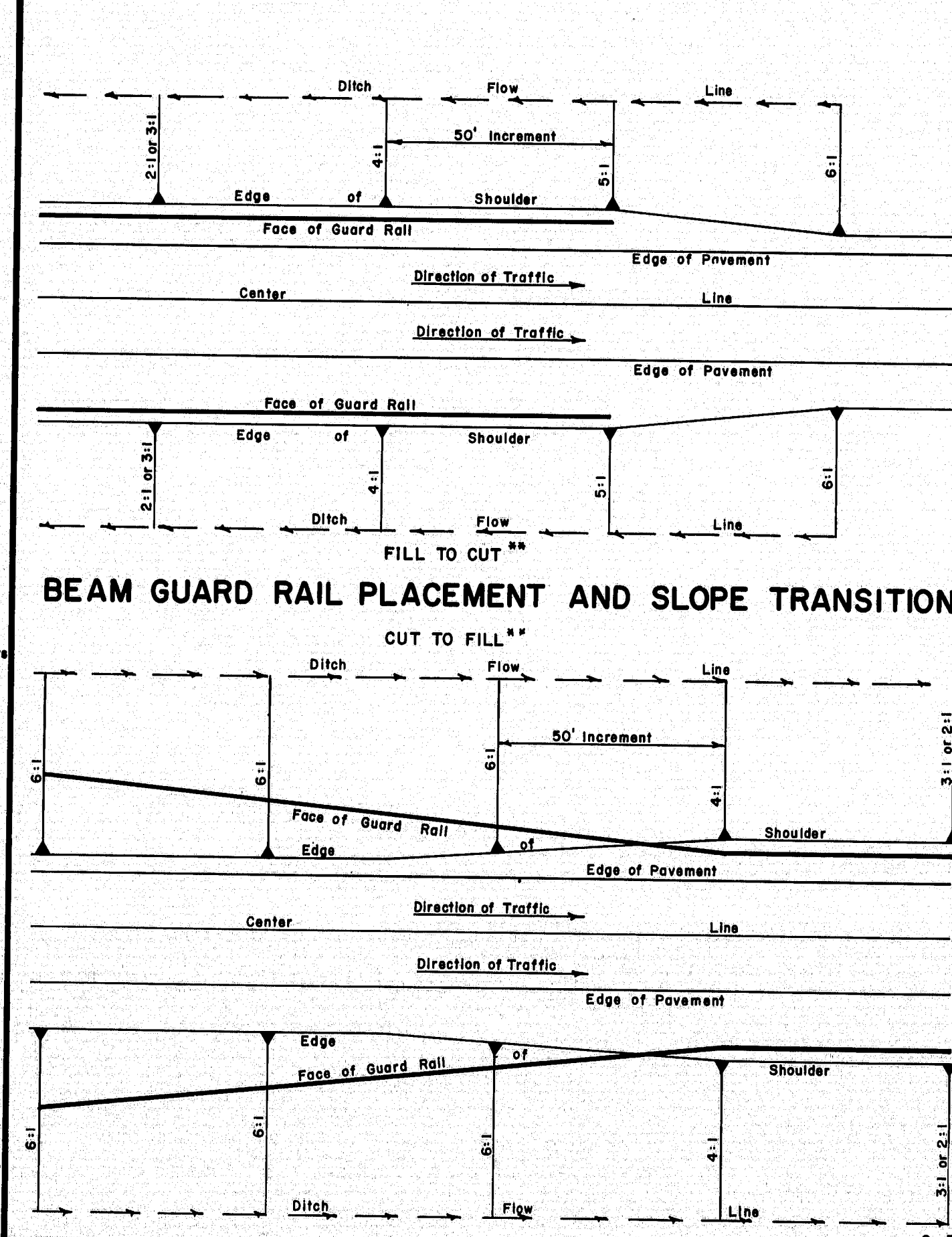
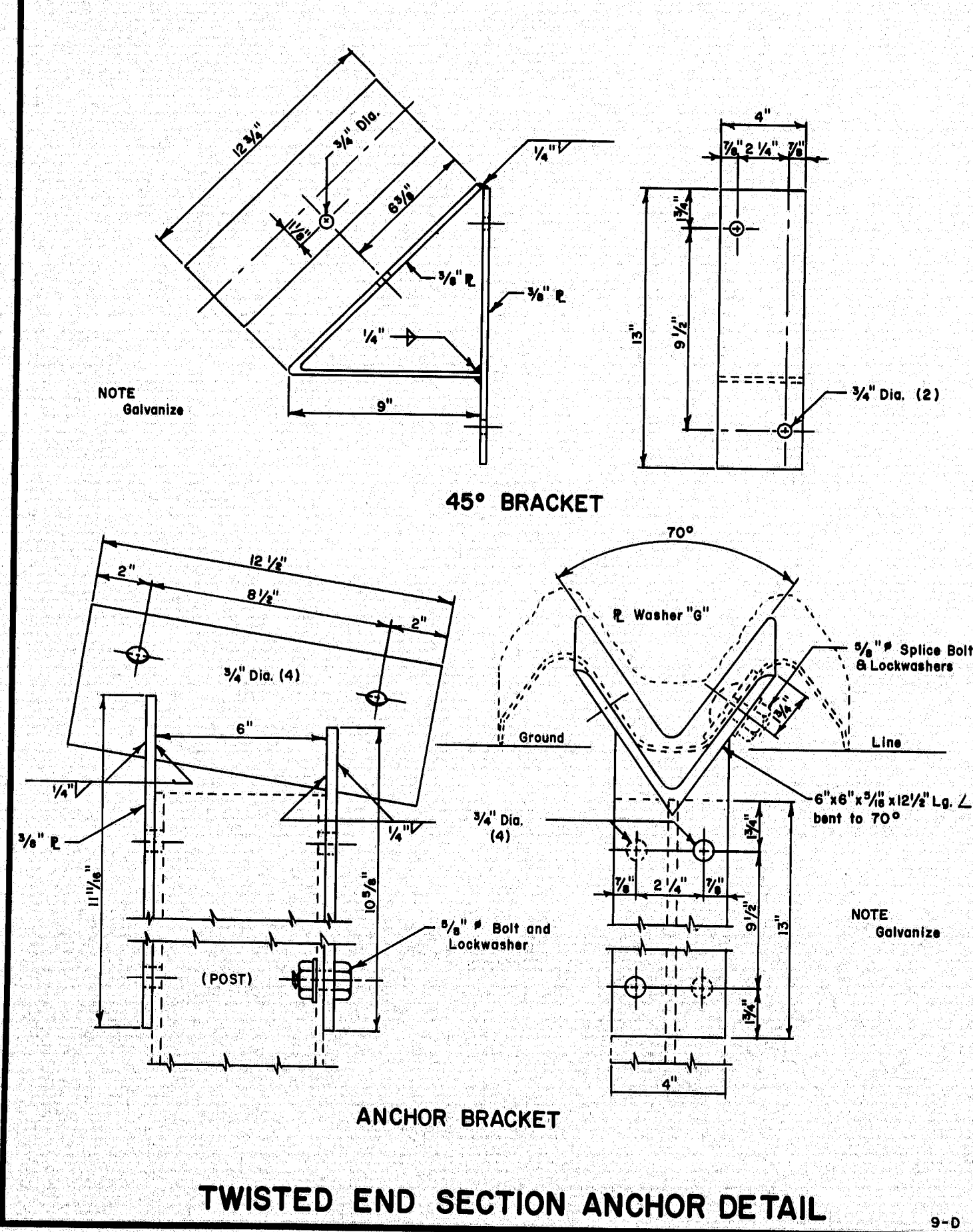
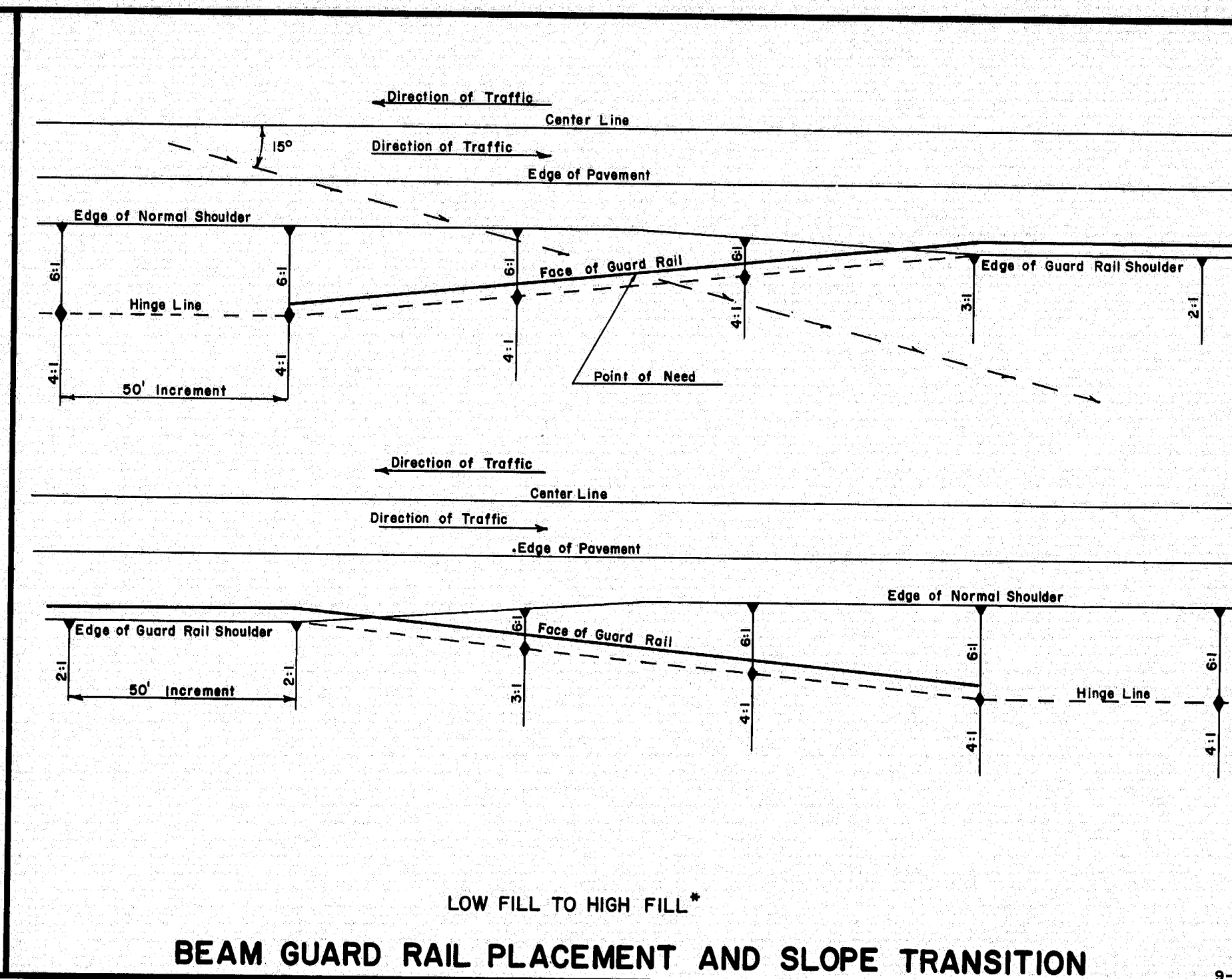
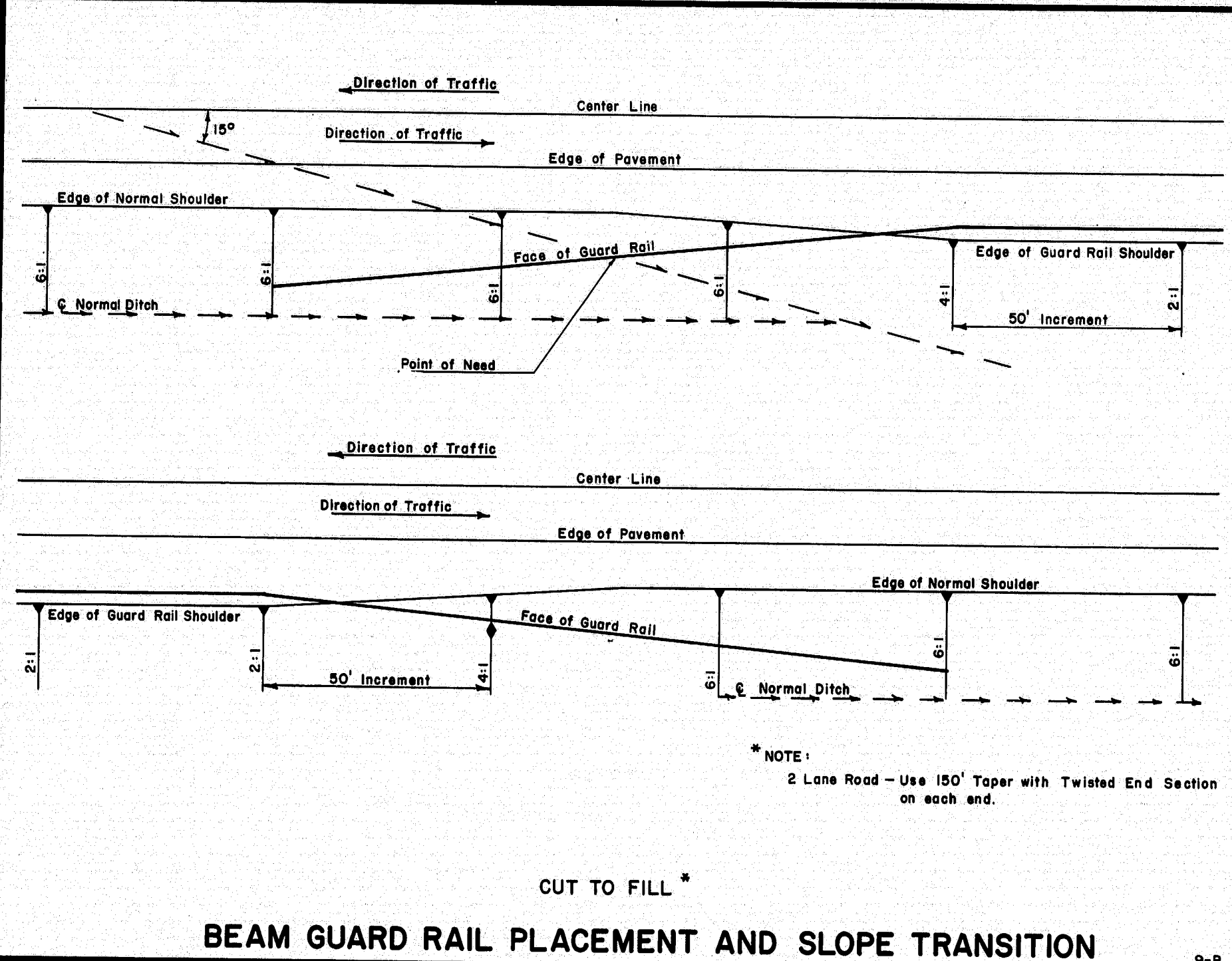
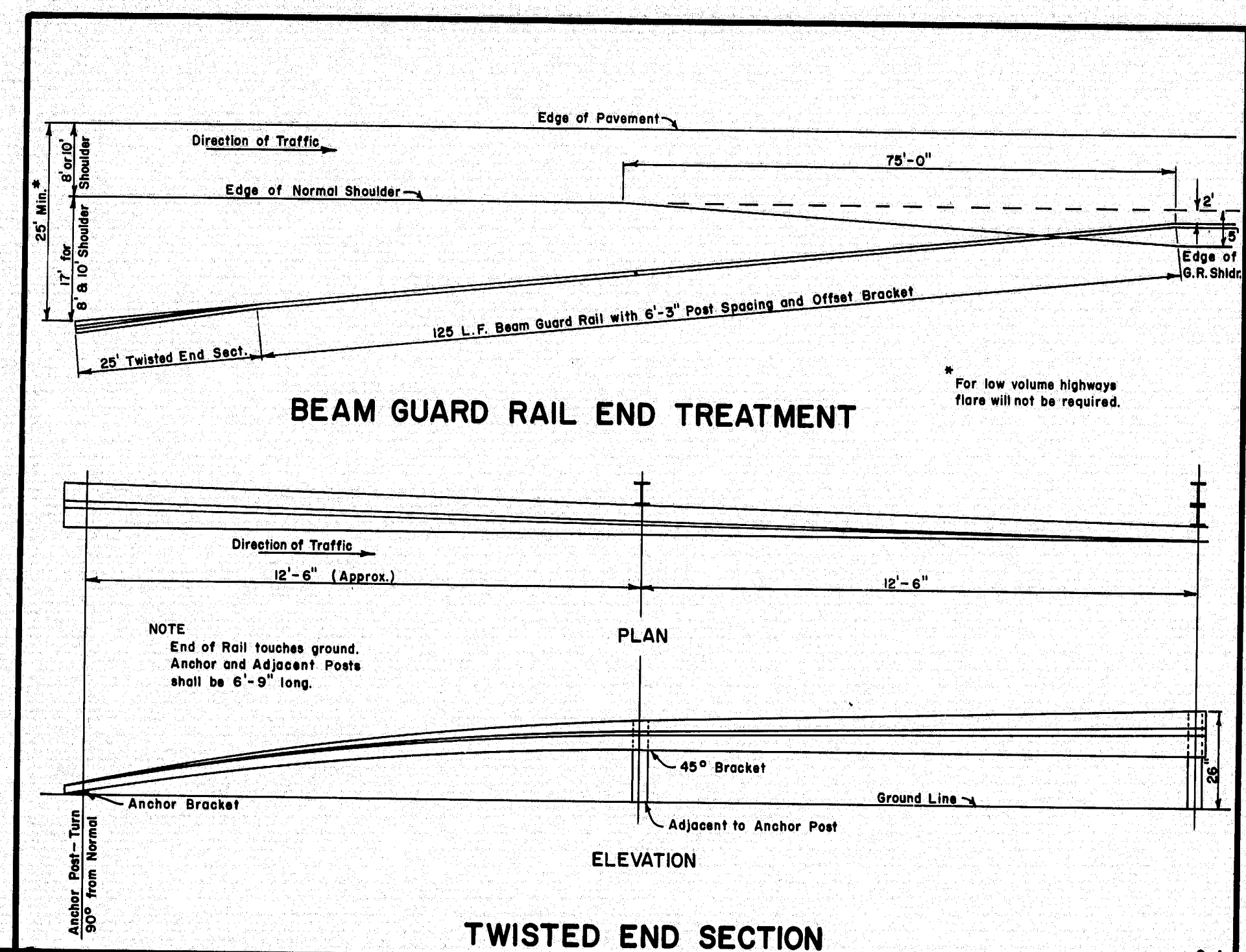




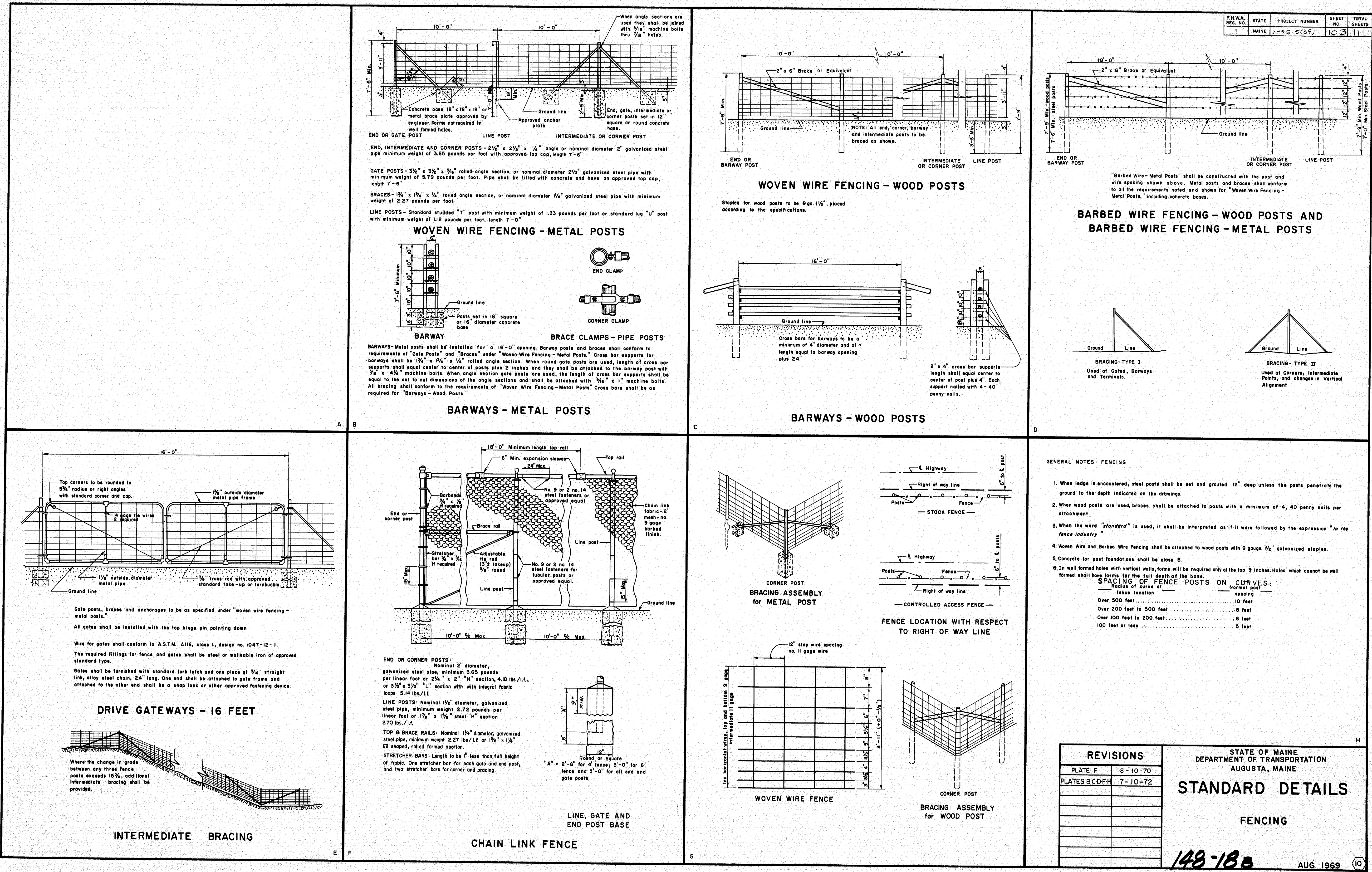


REVISIONS		STATE OF MAINE DEPARTMENT OF TRANSPORTATION AUGUSTA, MAINE	
PLATE 'D'	11-22-71	<b>STANDARD DETAILS</b> GUARD RAILS, ANCHOR ASSEMBLIES, PLATE WASHERS AND STANDARD FITTINGS	
PLATE 'E'	2-17-72		
PLATE 'F', 'G', 'H'	10-22-74		





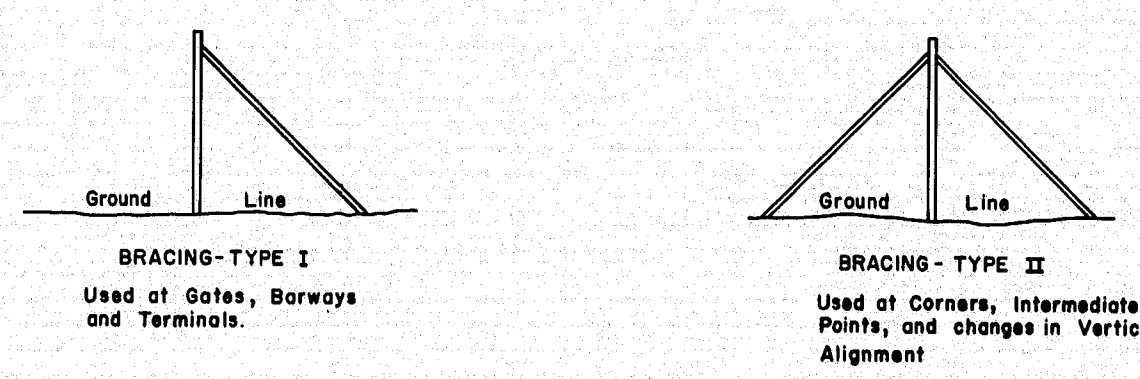




F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-5(39)	103	111

"Barbed Wire - Metal Posts" shall be constructed with the post and wire spacing shown above. Metal posts and braces shall conform to all the requirements noted and shown for "Woven Wire Fencing - Metal Posts," including concrete bases.

BARBED WIRE FENCING - WOOD POSTS AND BARBED WIRE FENCING - METAL POSTS

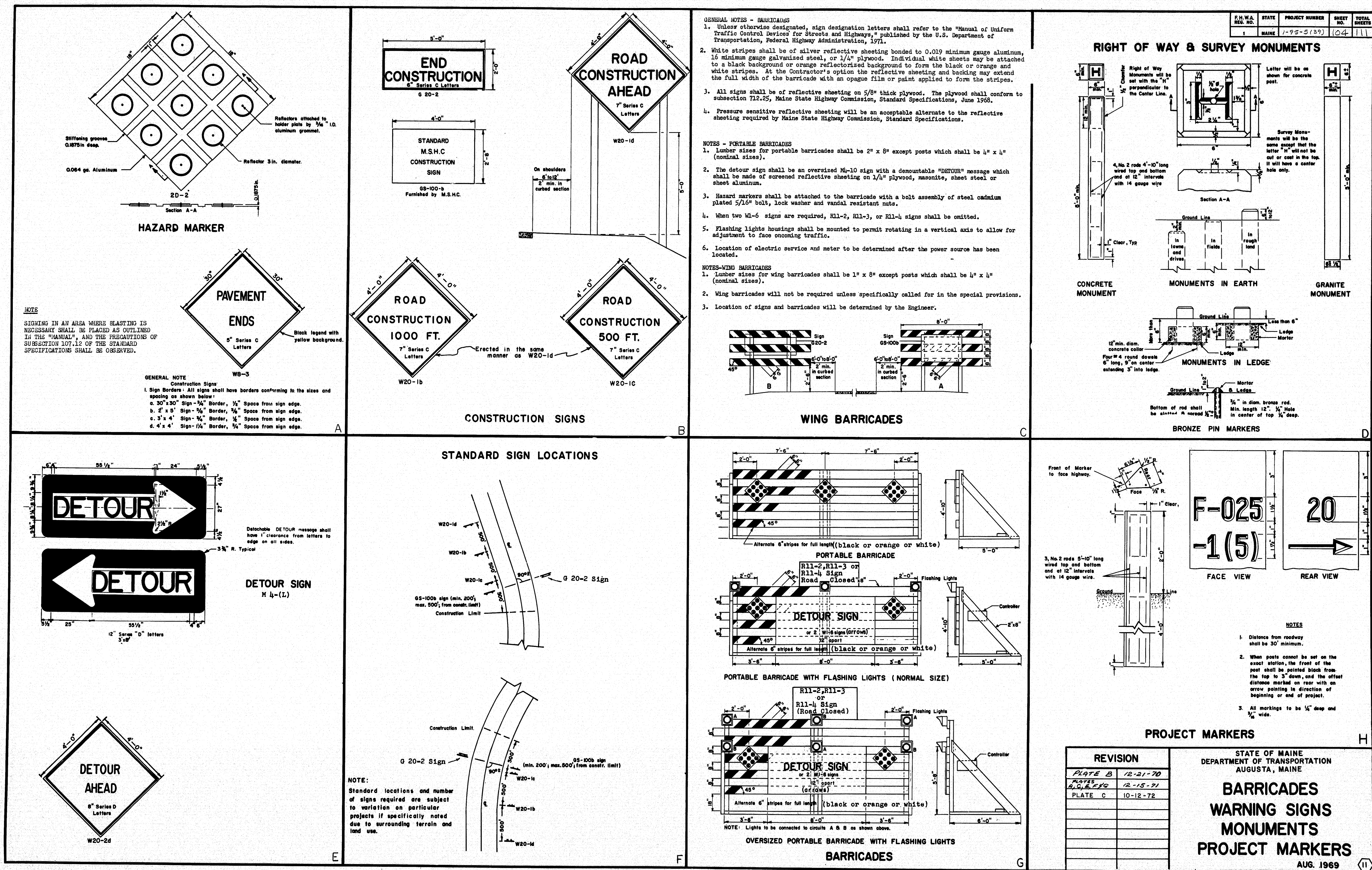


- GENERAL NOTES: FENCING
- When ledge is encountered, steel posts shall be set and grouted 12" deep unless the posts penetrate the ground to the depth indicated on the drawings.
  - When wood posts are used, braces shall be attached to posts with a minimum of 4, 40 penny nails per attachment.
  - When the word "standard" is used, it shall be interpreted as if it were followed by the expression "to the fence industry."
  - Woven Wire and Barbed Wire Fencing shall be attached to wood posts with 9 gauge 1 1/2" galvanized staples.
  - Concrete for post foundations shall be class B.
  - In well formed holes with vertical walls, forms will be required only at the top 9 inches. Holes which cannot be well formed shall have forms for the full depth of the base.
- SPACING OF FENCE POSTS ON CURVES:
- | Radius of curve at fence location | Normal post spacing |
|-----------------------------------|---------------------|
| Over 500 feet                     | 10 feet             |
| Over 200 feet to 500 feet         | 8 feet              |
| Over 100 feet to 200 feet         | 6 feet              |
| 100 feet or less                  | 5 feet              |

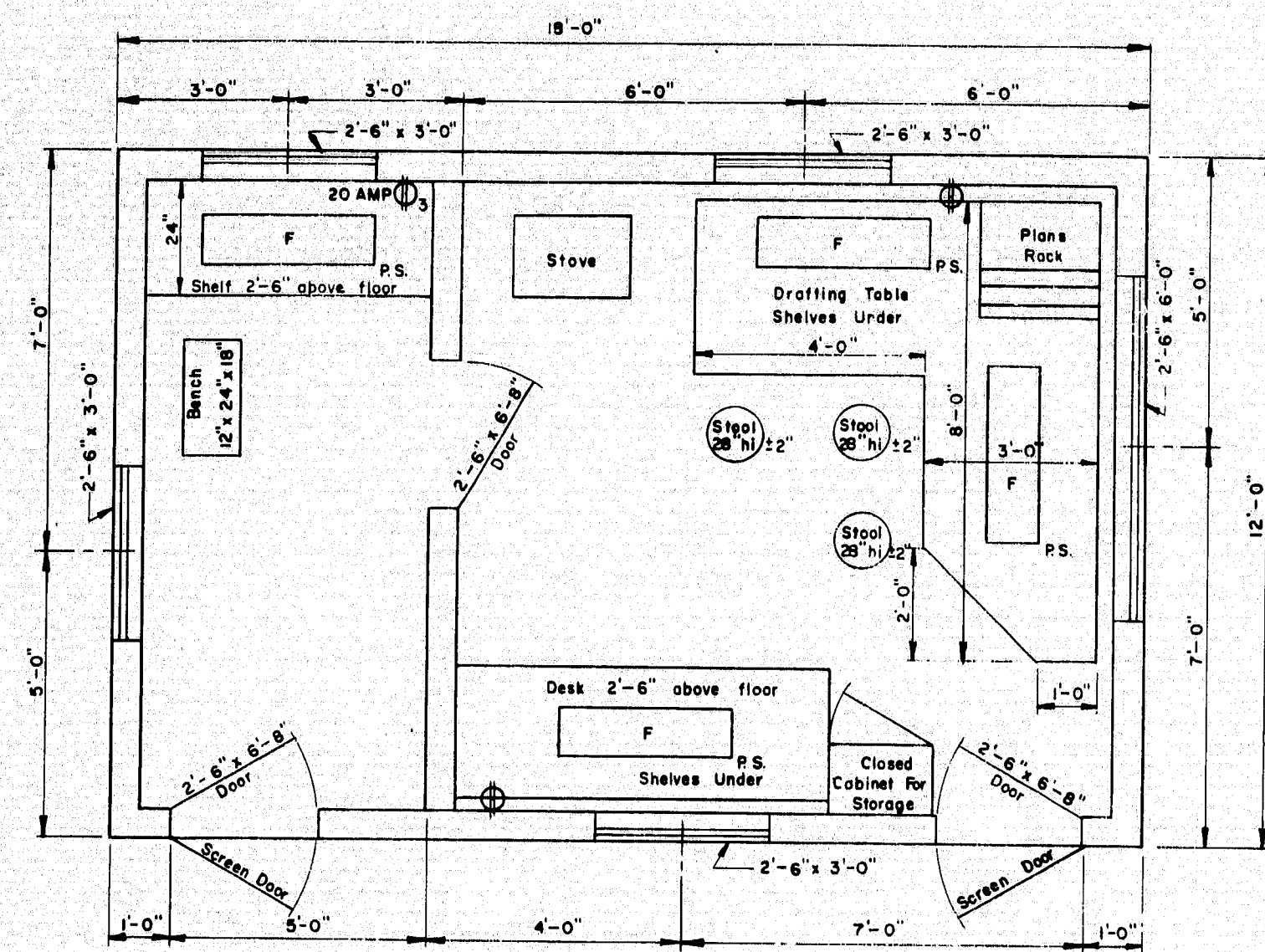
REVISIONS		STATE OF MAINE DEPARTMENT OF TRANSPORTATION AUGUSTA, MAINE  STANDARD DETAILS  FENCING
PLATE F	8-10-70	
PLATES BCD FH	7-10-72	

148-18B  
AUG. 1969  
RICHMOND I-95-5(39)

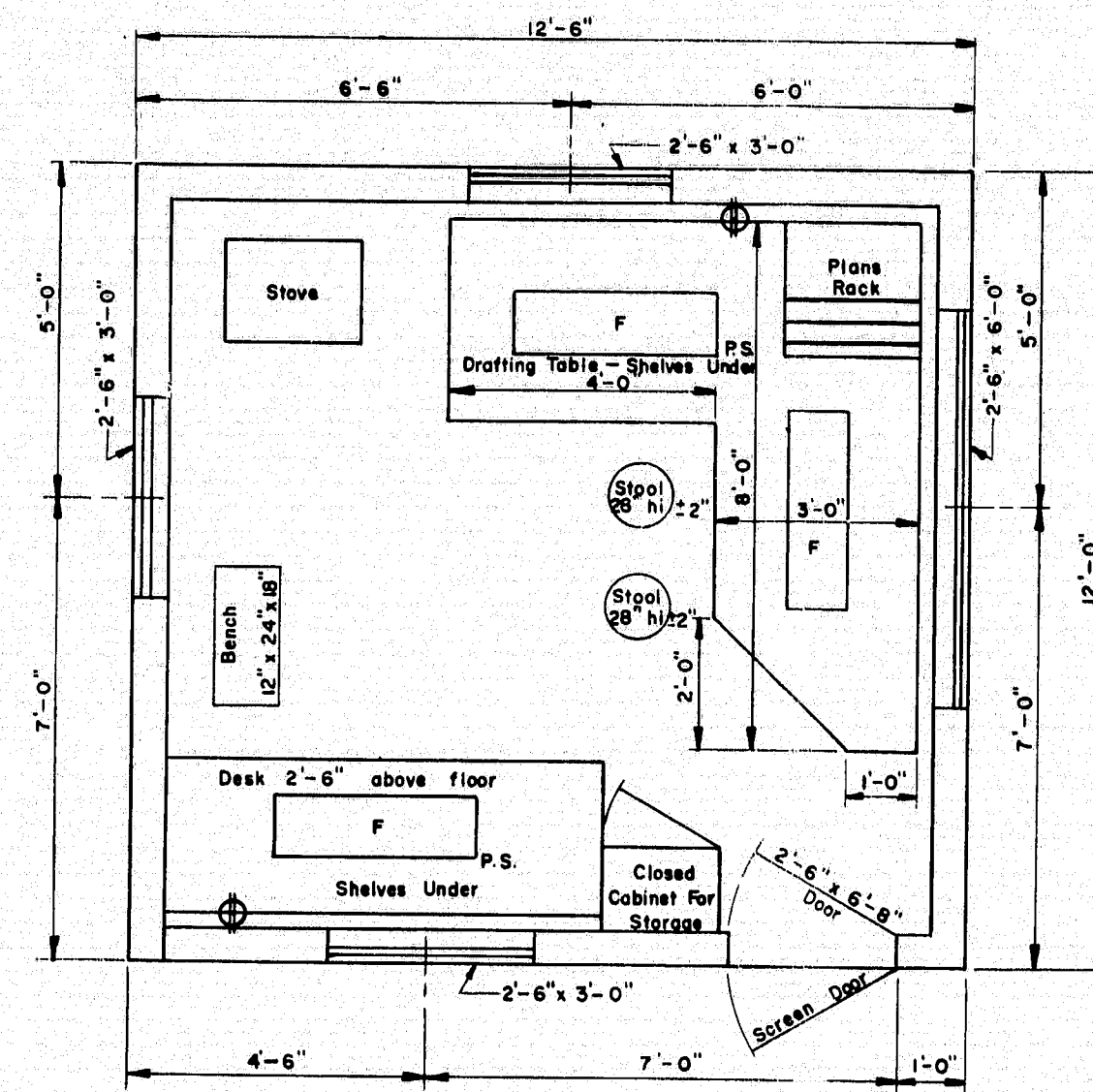




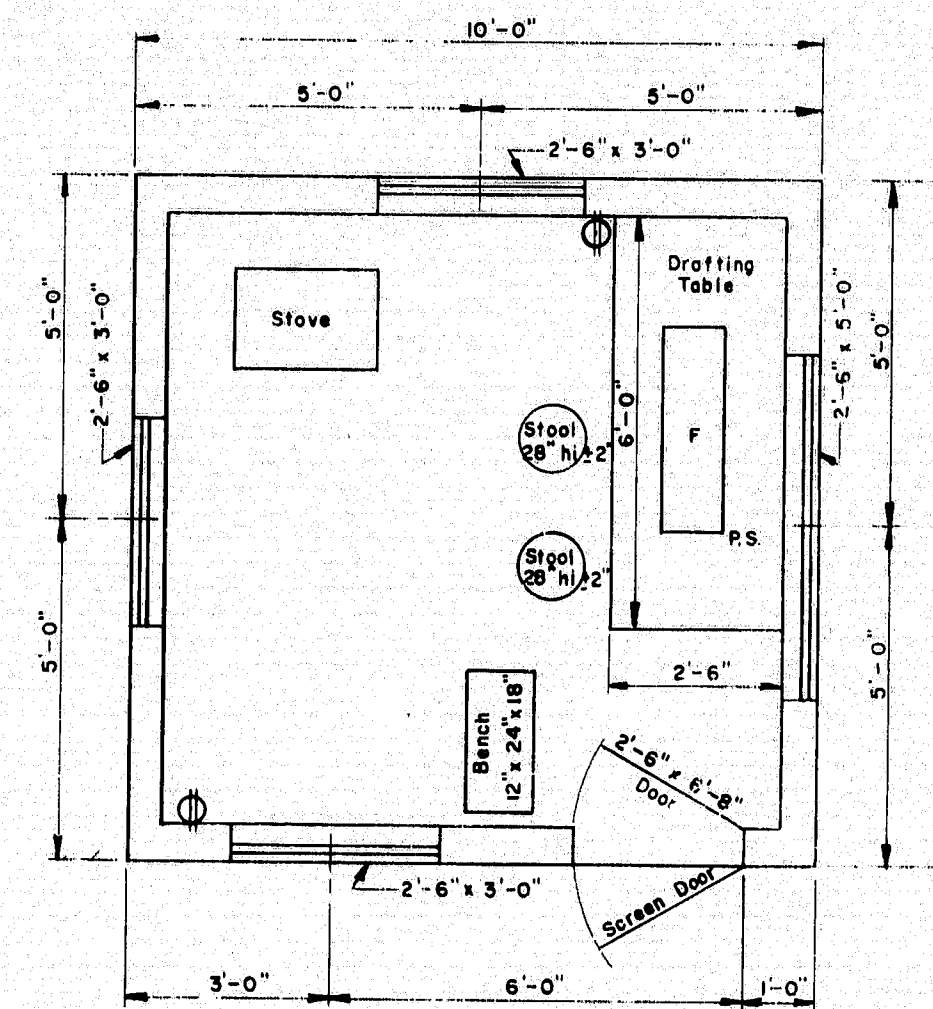




FLOOR PLAN  
TYPE "A"

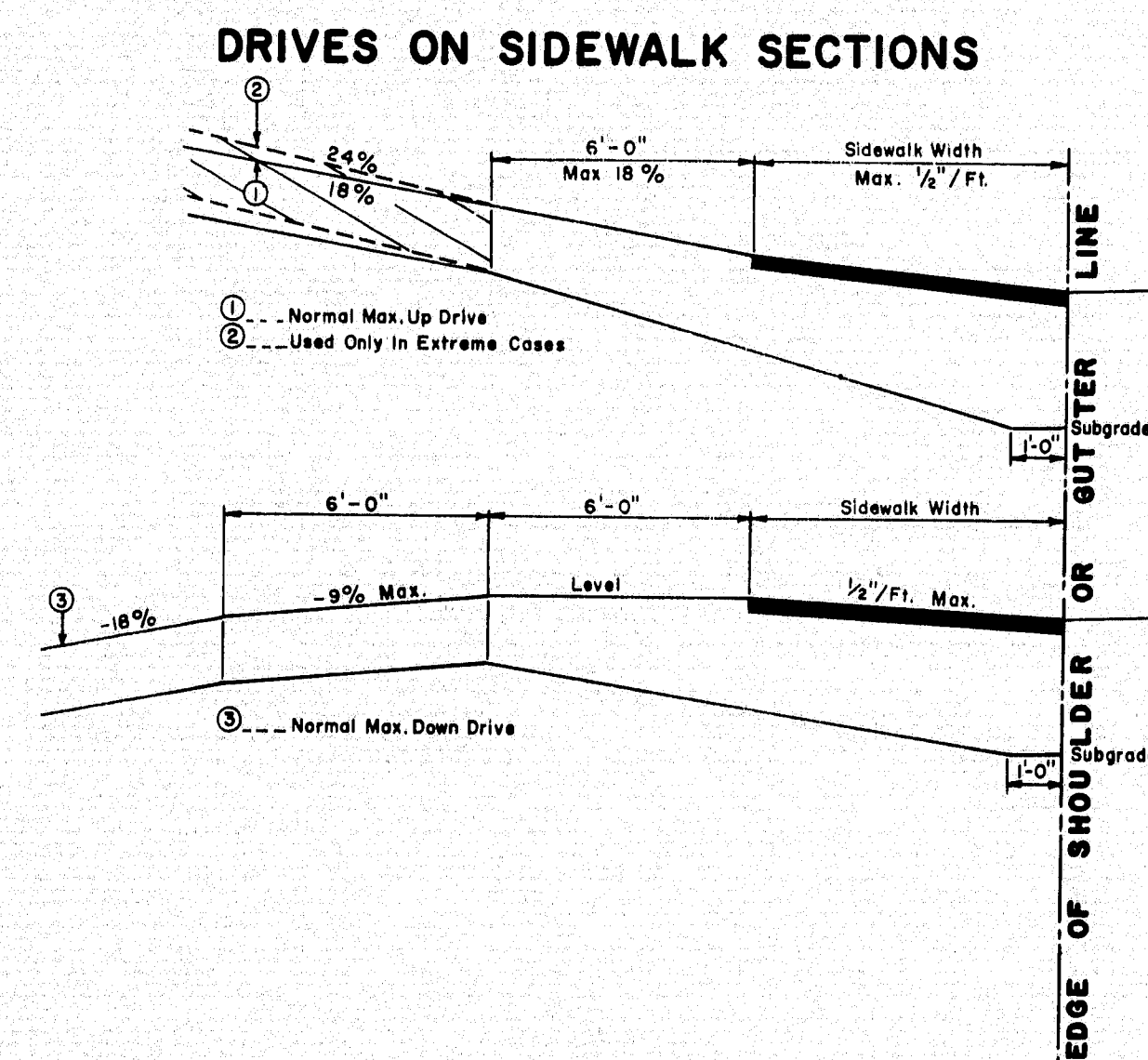


FLOOR PLAN  
TYPE "B"

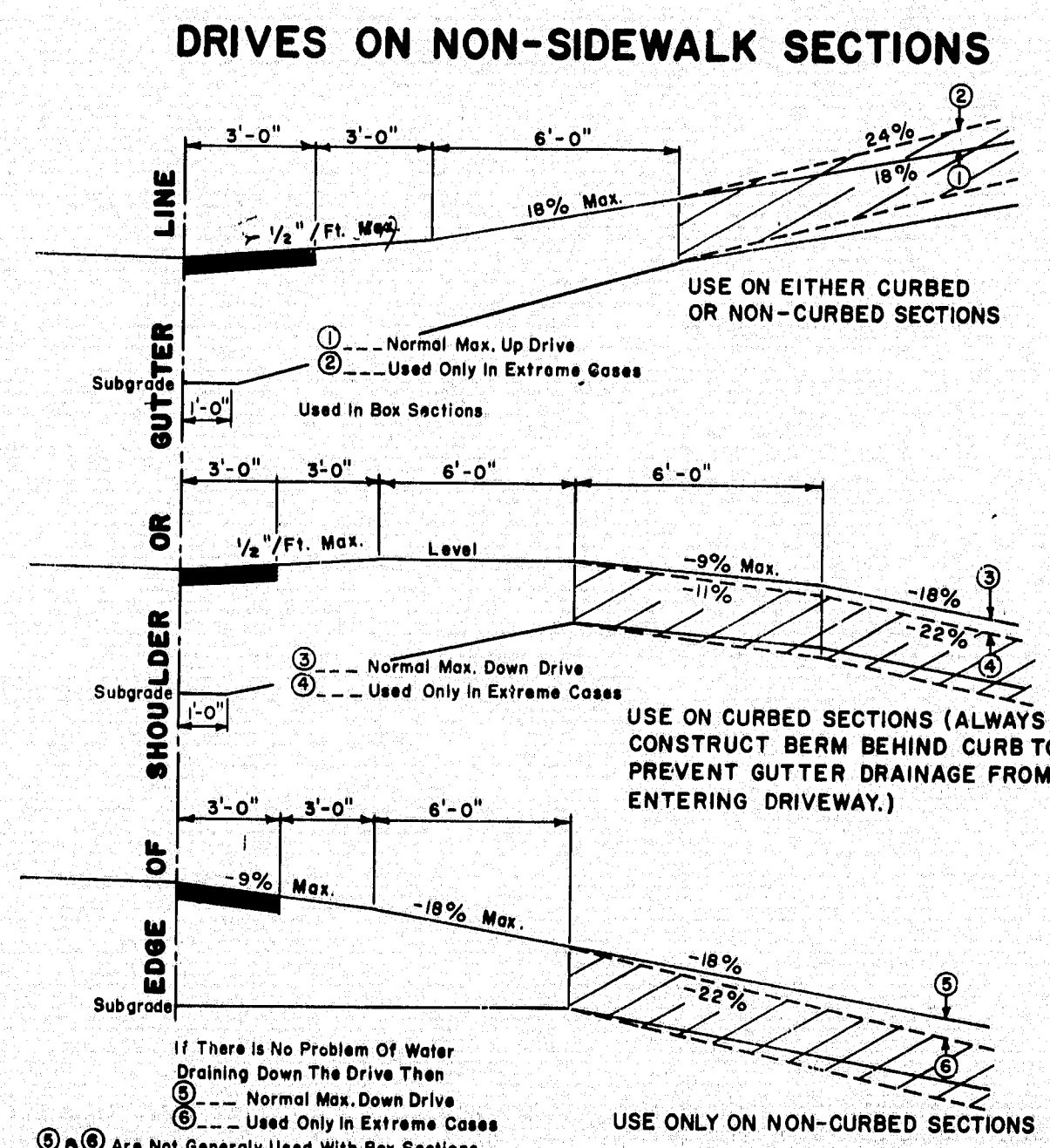


FLOOR PLAN  
TYPE "C"

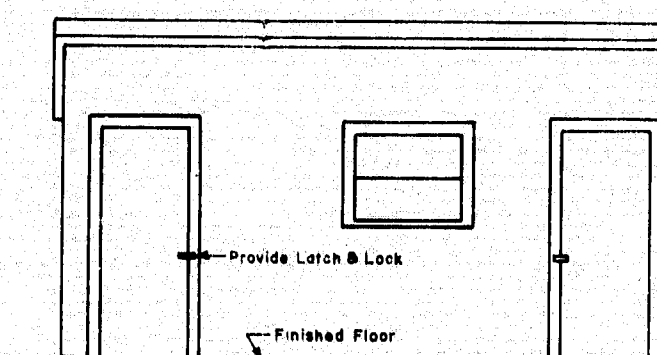
- GENERAL NOTES**
- Drafting table shall be 3'-4" high at front edge and placed 2" from studs to allow prints to hang down behind table when in use.
  - Shelves under desk shall be constructed to receive 11 1/2" x 14" x 25" transfiles.
  - Windows shall be double hung.
  - Stovepipe shall not be in direct contact with combustible material; the pipe shall be surrounded with at least 6" of fireproof material.
  - Continuous 110 volt 60 cycle electric service shall be supplied.
  - The engineer may rearrange the items shown on the plan views during construction of the field office.
  - FURNISHINGS TO BE SUPPLIED:
    - 2 Straight back chairs for types A and B
    - 1 Bench for types A, B & C
    - 3 Stool for type A
    - 2 Stools for types B & C
  - SYMBOLS:
    - F: Fluorescent lights (2 light, rapid start 48" strips and 40 watt bulbs.)
    - PS: Pull switch
    - ⊕: Duplex wall outlet—15 amp unless otherwise noted
    - ⊗: Triplex Wall Outlet
  - For the Type "A" Field Office one clean 55 gal. drum shall be supplied, installed on a suitable rack and equipped with a spigot suitable for drawing off water. The drum shall be furnished with water at all times.



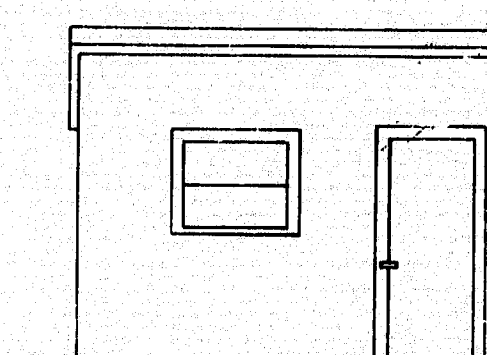
- GENERAL NOTES**
- The sidewalk width shall be paved in all cases.
  - All residential or commercial drives 10% and over shall be paved.
- NOTES ON MAXIMUM DRIVEWAY PROFILES**
- These profiles are a guide for the majority of cases, but should be field checked when the main line grade is steep (4% to 6% or greater) or the angle of approach to the drive is unusual.
  - Generally the majority of drives on a project will be built with flatter profiles than these maximum cases.
  - When grading drives which are flatter than the maximum profiles the following rule of thumb should be used, do not exceed a grade % change of more than 9% in a 6 foot increment of driveway length. This applies to both up and down profiles.



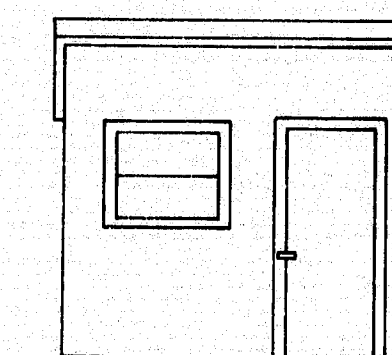
- GENERAL NOTES**
- The first 3' shown as pavement shall be paved only when abutting a paved area.
  - All residential or commercial drives 10% and over shall be paved.
- NOTES ON MAXIMUM DRIVEWAY PROFILES**
- These profiles are a guide for the majority of cases, but should be field checked when the main line grade is steep (4% to 6% or greater) or the angle of approach to the drive is unusual.
  - Generally the majority of drives on a project will be built with flatter profiles than these maximum cases.
  - When grading drives which are flatter than the maximum profiles the following rule of thumb should be used, do not exceed a grade % change of more than 9% in a 6 foot increment of driveway length. This applies to both up and down profiles.



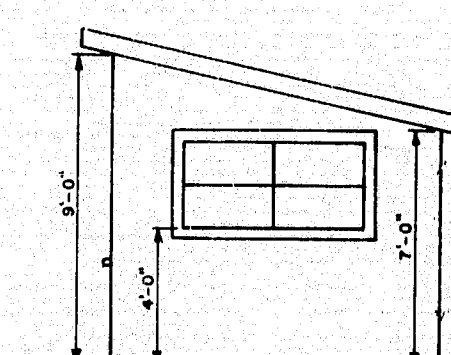
FRONT ELEVATION  
TYPE "A"



FRONT ELEVATION  
TYPE "B"



FRONT ELEVATION  
TYPE "C"



SIDE ELEVATION  
TYPES "A" "B" & "C"

REVISIONS		
PLATE	D'E	3-16-73

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
AUGUSTA, MAINE

## STANDARD DETAILS

DRIVEWAY DETAILS  
FIELD OFFICES  
TESTING LABORATORY

148-20

AUG. 1969

RICHMOND I-95-5(39)



STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	95-5(39)	106	111

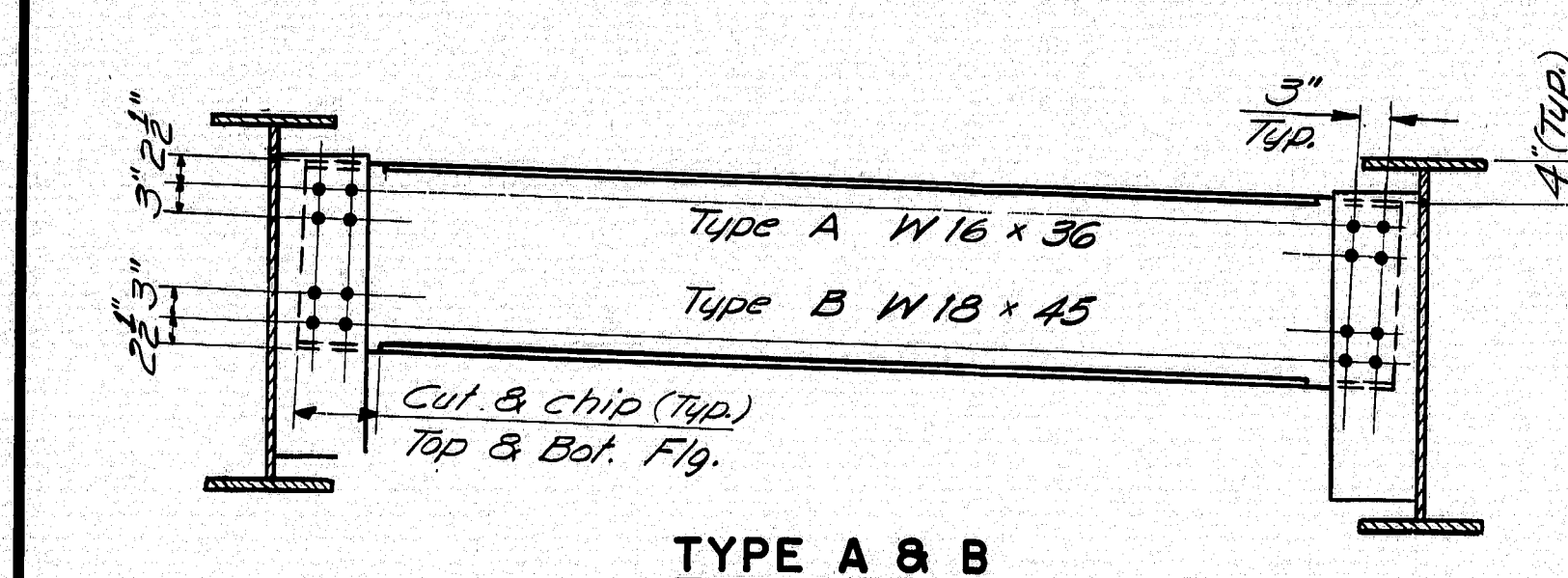
# **FABRICATION NOTES**

1. For location and type of diaphragm or crossframe see design details.
2. Holes for  $\frac{3}{4}$ " diameter bolts shall be  $\frac{15}{16}$ " dia. and edge distances shall be  $\frac{1}{2}$ " minimum unless otherwise shown.
3. Connection plates and gusset plates shall have a minimum thickness of  $\frac{3}{8}$ " and shall have sufficient width to provide erection clearances. When bearing stiffeners or intermediate stiffeners are used as connection plates, the plate size will be given on the design details.
4. Connection plates shall be fastened to beam and girder webs as follows:  
0° to 30° skew... fillet weld both sides.  
Over 30° skew... full penetration groove weld (see Detail B) except as indicated in Note 5.  
Over 45° skew... weld prequalification will be required.

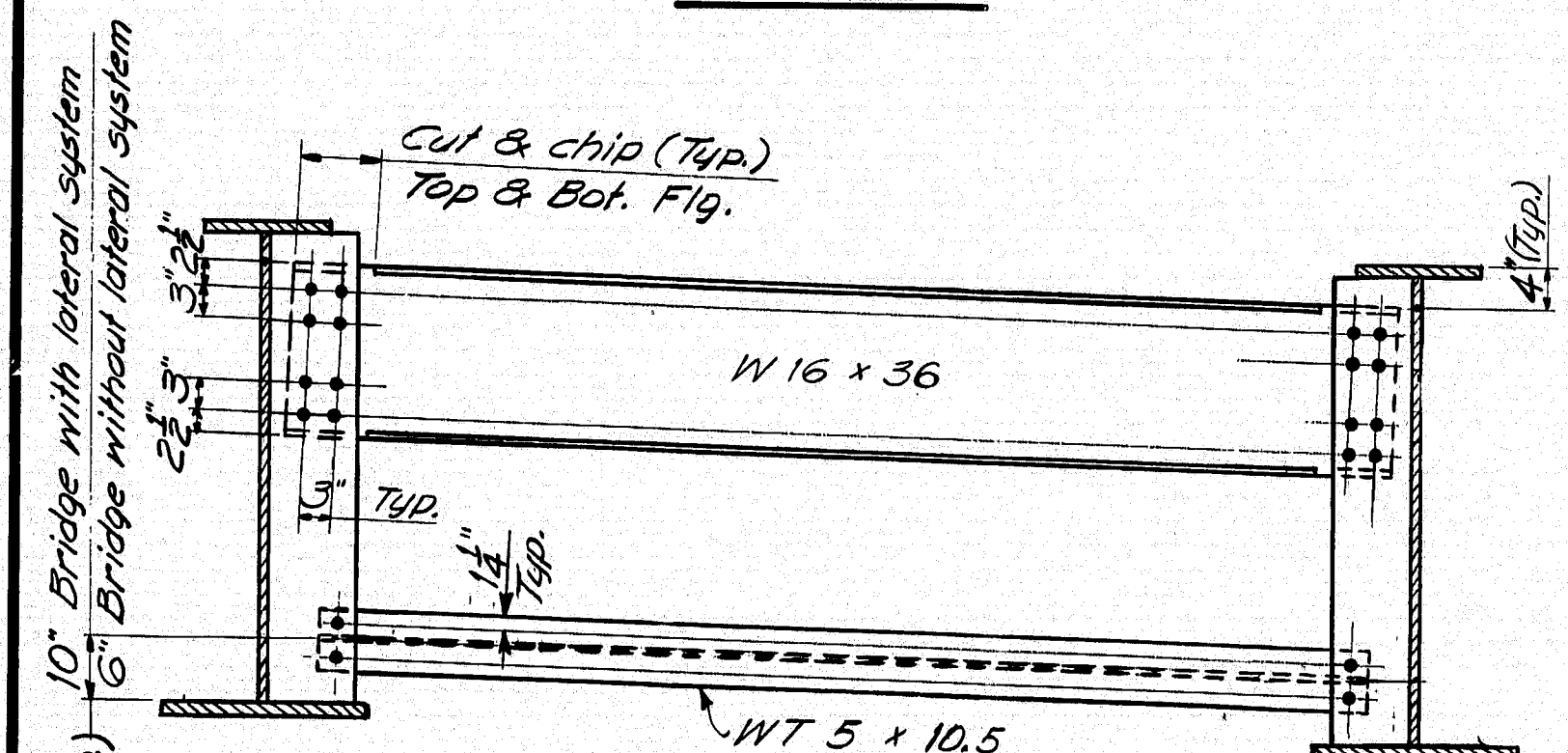
The skew angle is the angle between the connection plate and a line normal to the beam.

5. Bearing stiffeners shall be used as connection plates when the skew is not over 30°. When the skew is over 30° a bent connection plate shall be attached to the web adjacent to the bearing stiffener as shown in Detail A.
6. All fillet weld sizes shall be the minimum for the thickness of metal being joined according to AWS Specifications for Welded Highway & Railway Bridges.
7. Connection plates on welded beams and girders shall extend to the top flange in areas where the top flange is always in compression or when used as a bearing stiffener or intermediate stiffener.
8. Connection plates shall extend to the bottom flange when used as a bearing stiffener, at points where lateral bracing is attached & on welded beams and girders in areas where the bottom flange is always in compression.
9. When a conn. plate is extended to a flange it shall be a paint tight fit except as otherwise indicated on design details.
10. Conn. plates shall be 24" clear from flanges, except as indicated by Notes 7 & 8.
11. Use only those items called for on the design details. In case of conflict between these standard details and the design details, the design details shall be followed.

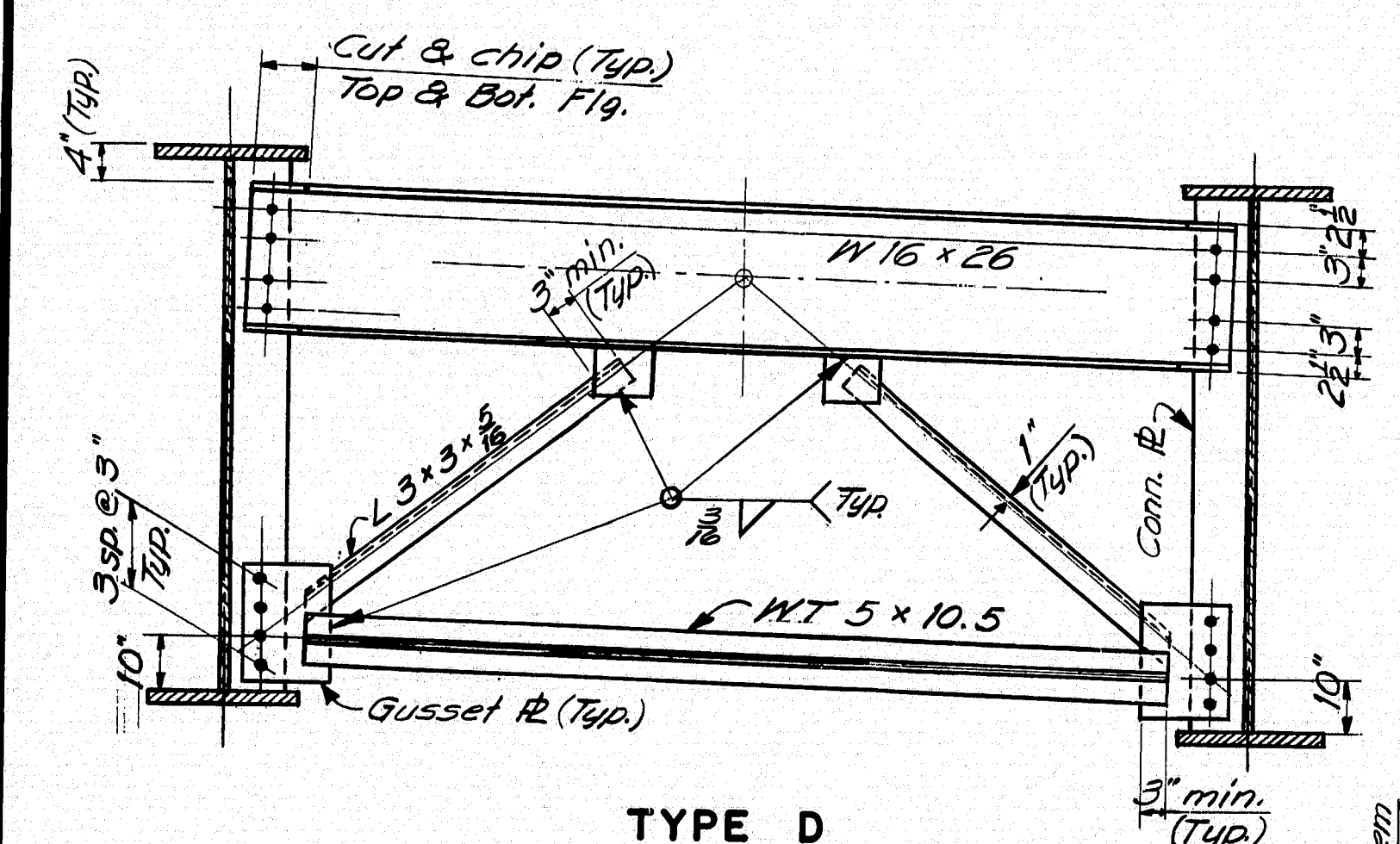
**NOTE A** This dimension may be varied ( $\pm 1"$ ) to allow a series of diagonals to have the same slope.



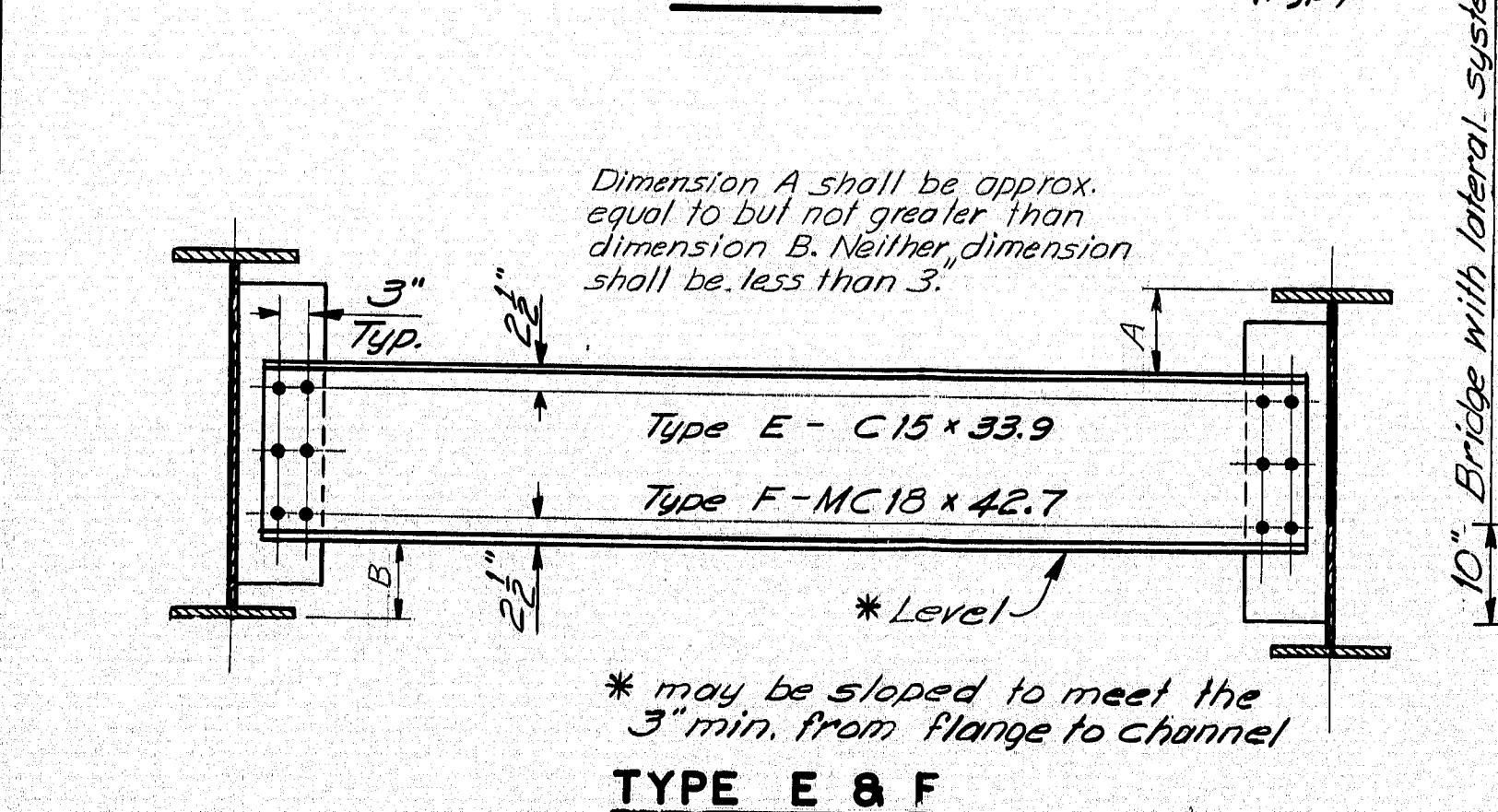
**TYPE A & B**



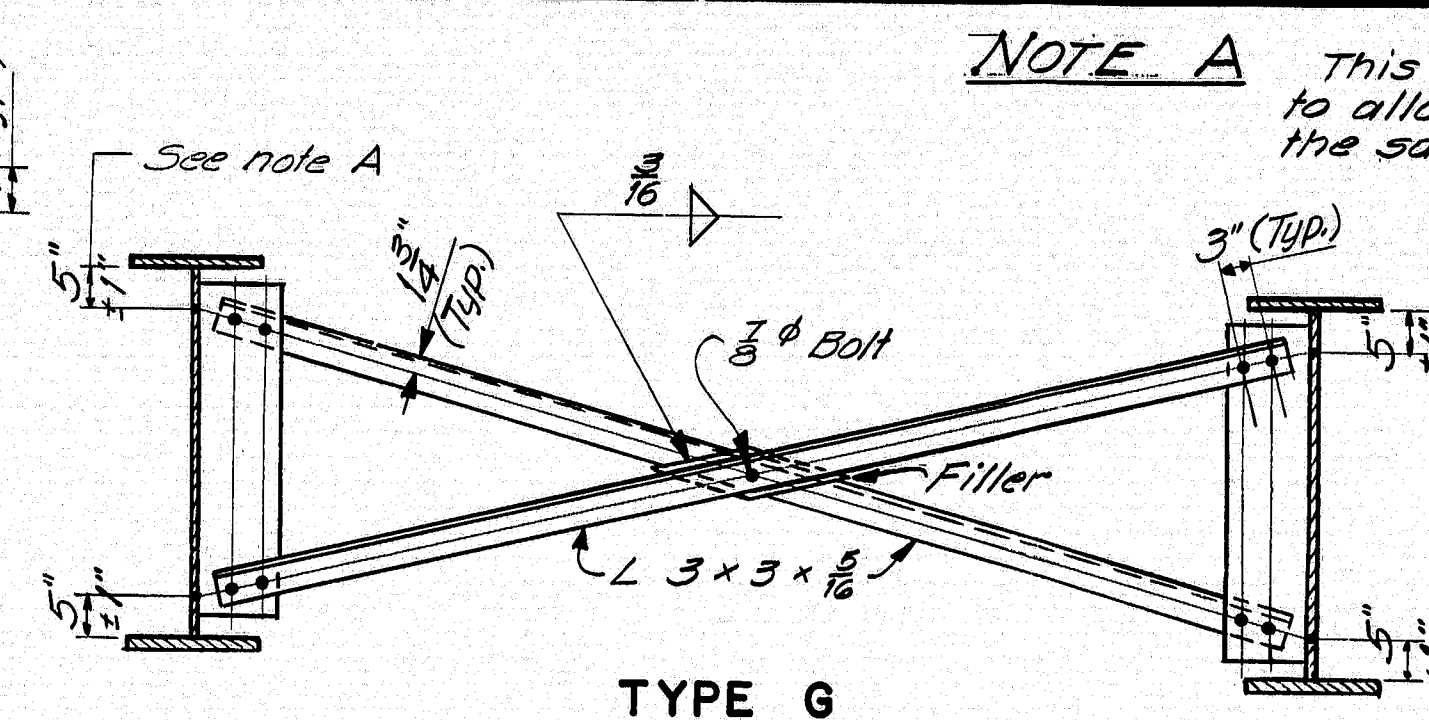
**TYPE C**



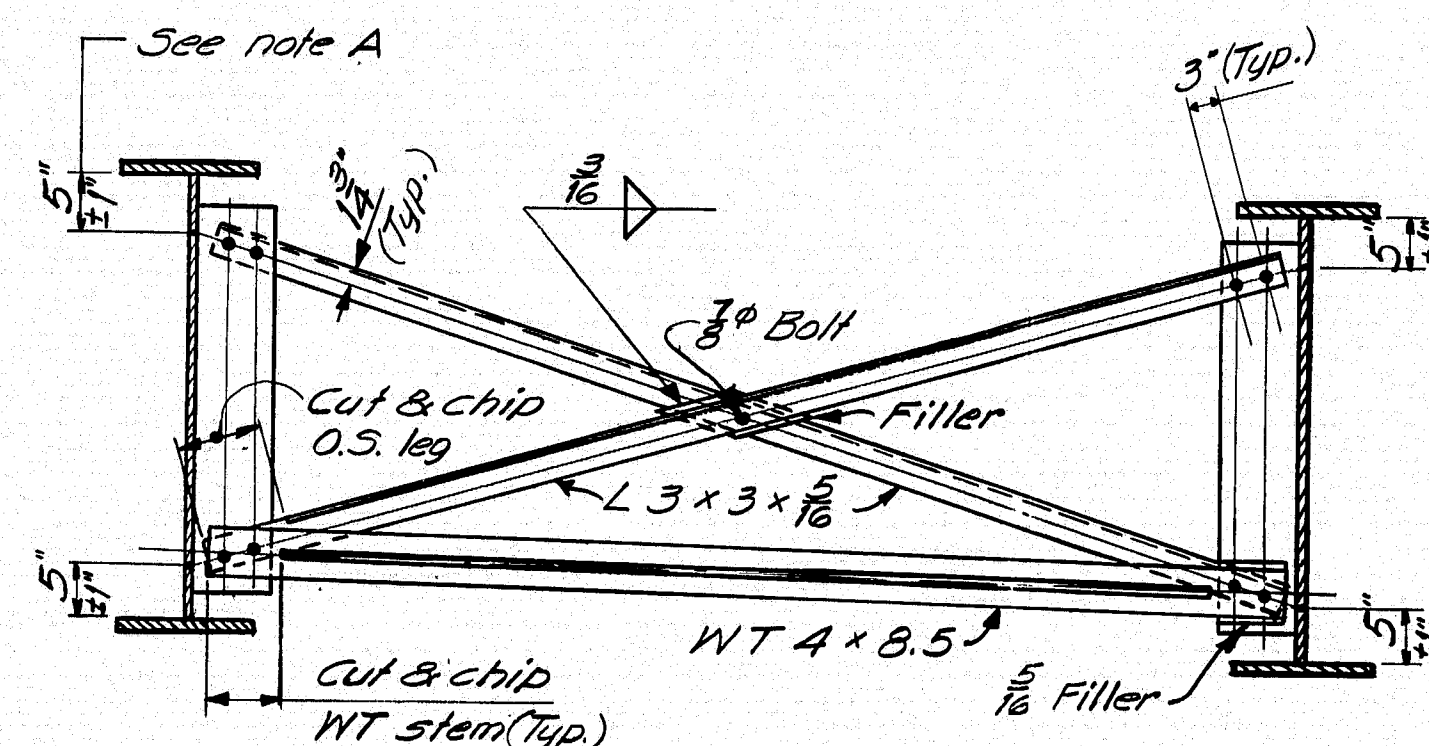
**TYPE D**



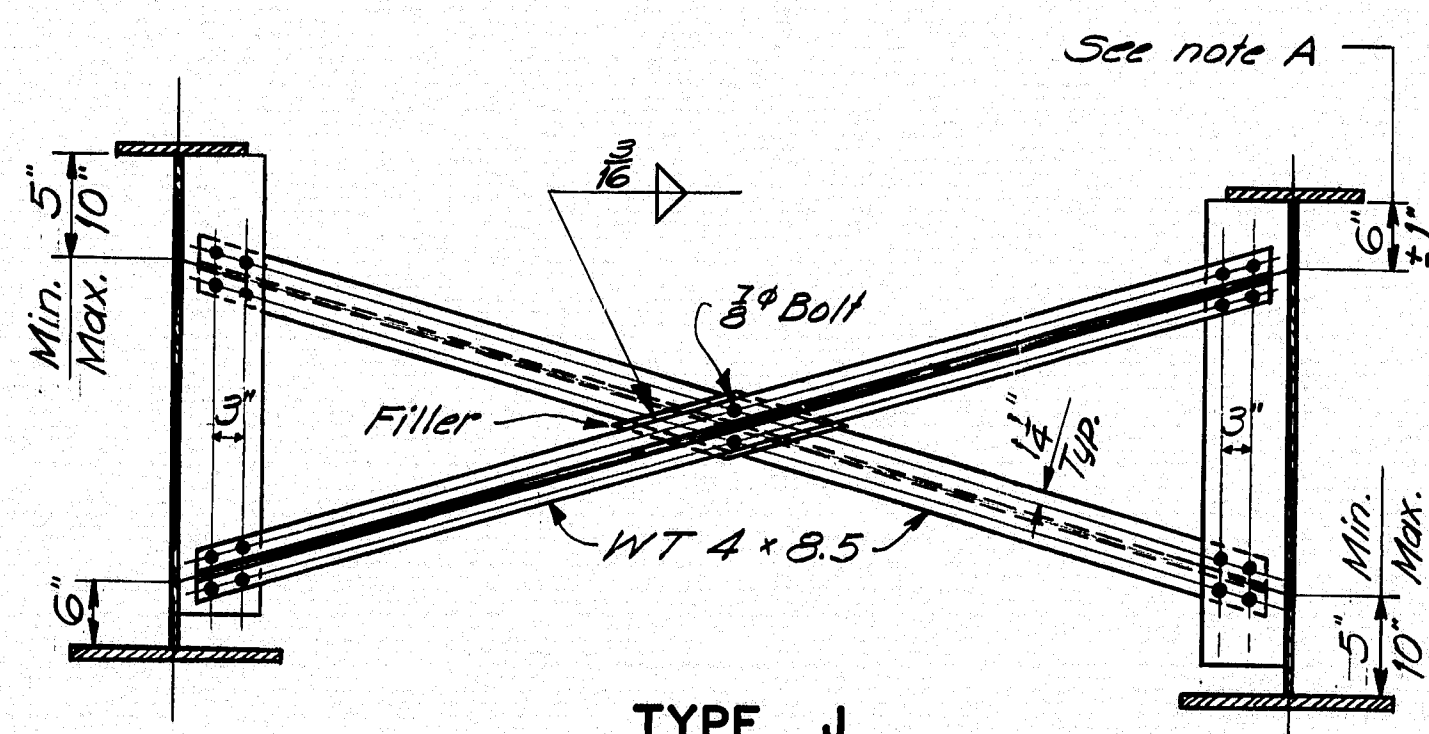
**TYPE E & F**



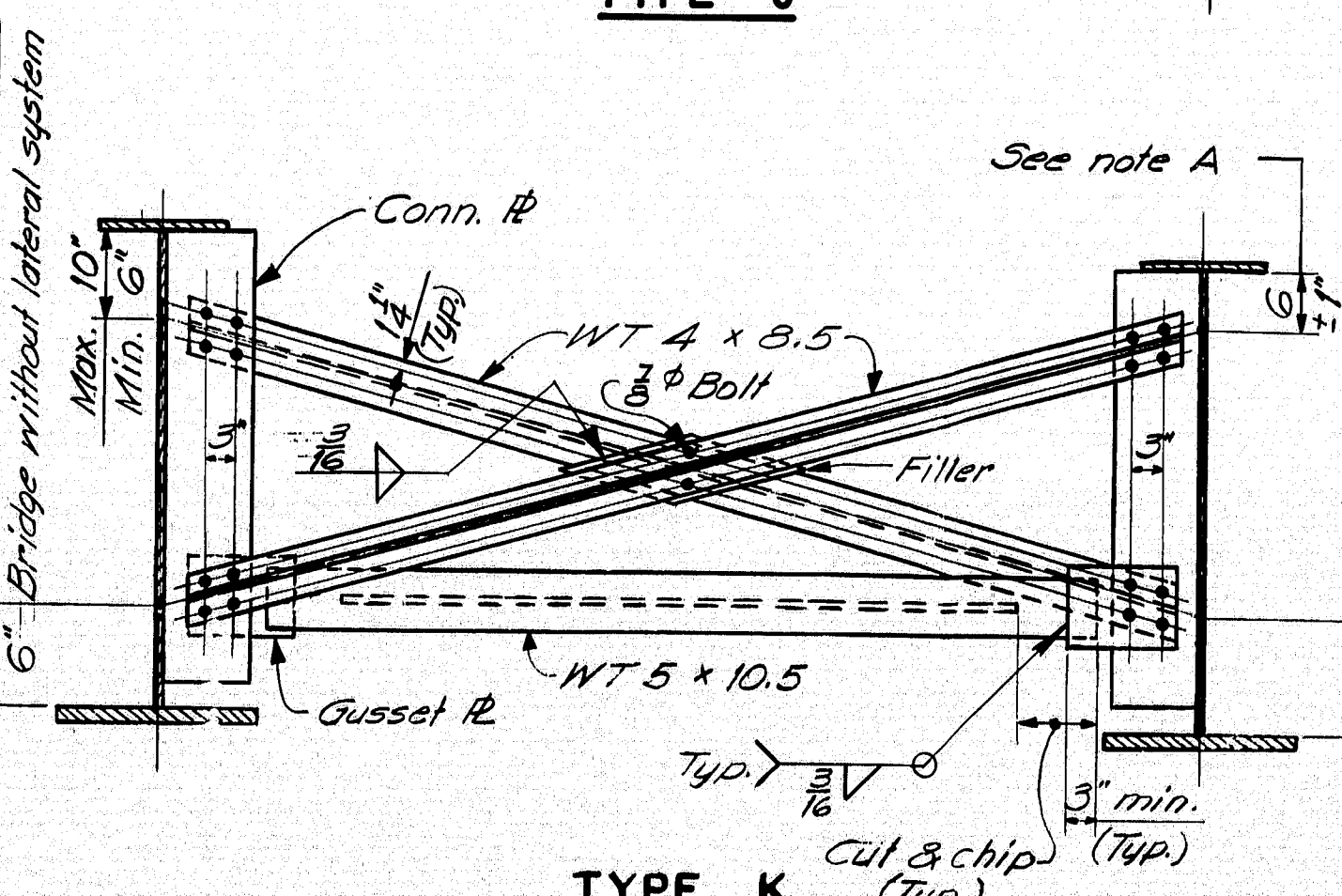
**TYPE G**



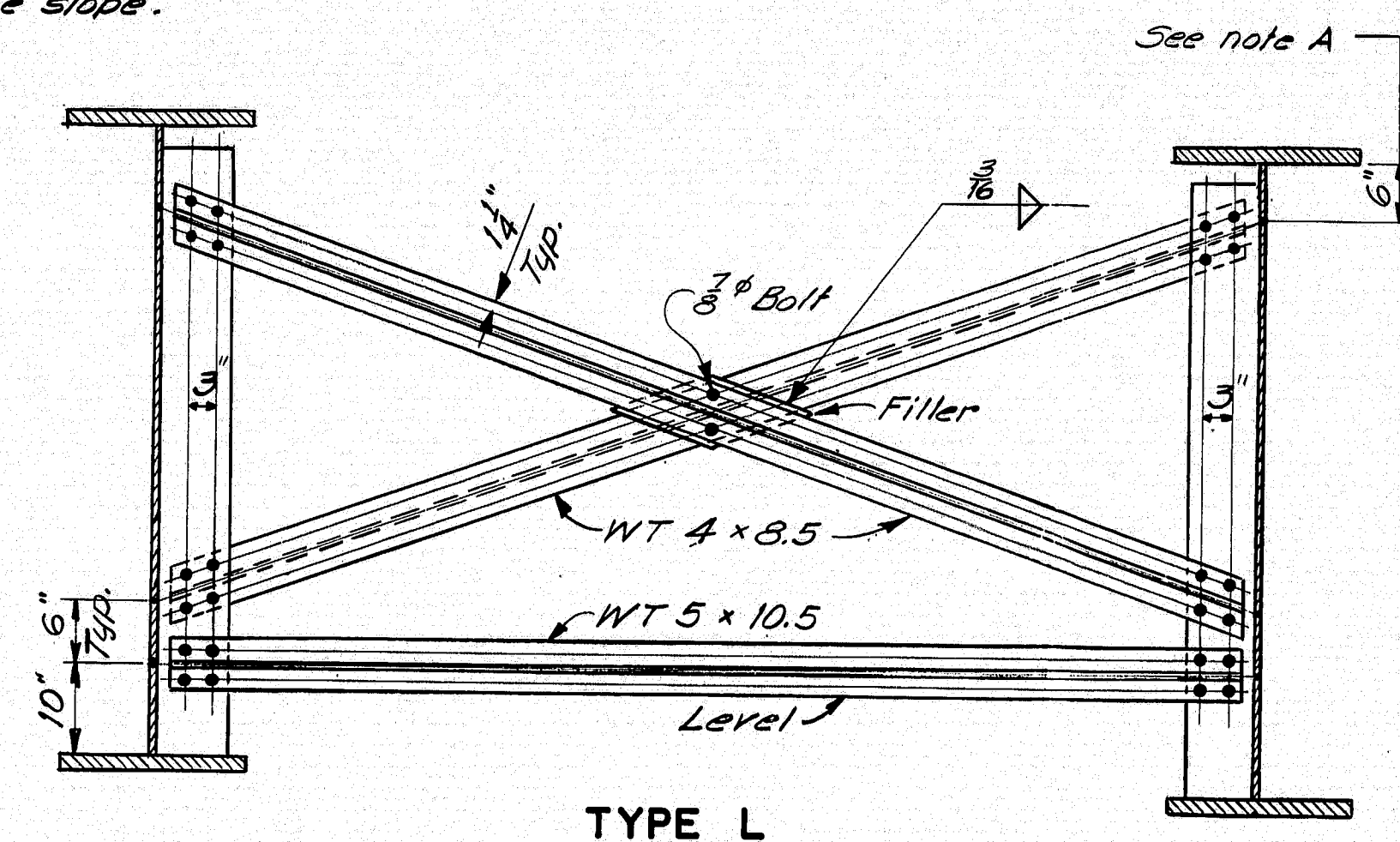
**TYPE H**



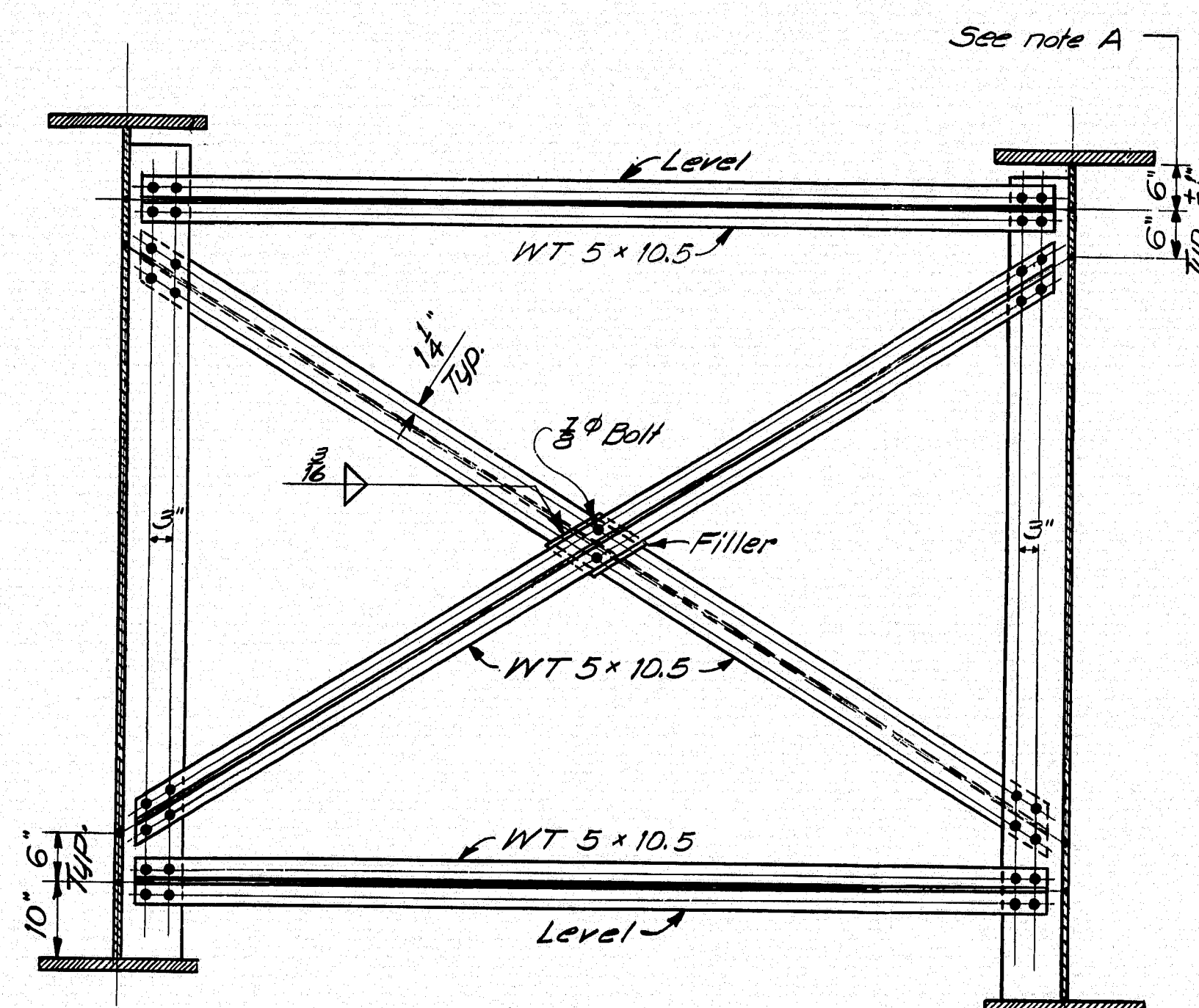
**TYPE J**



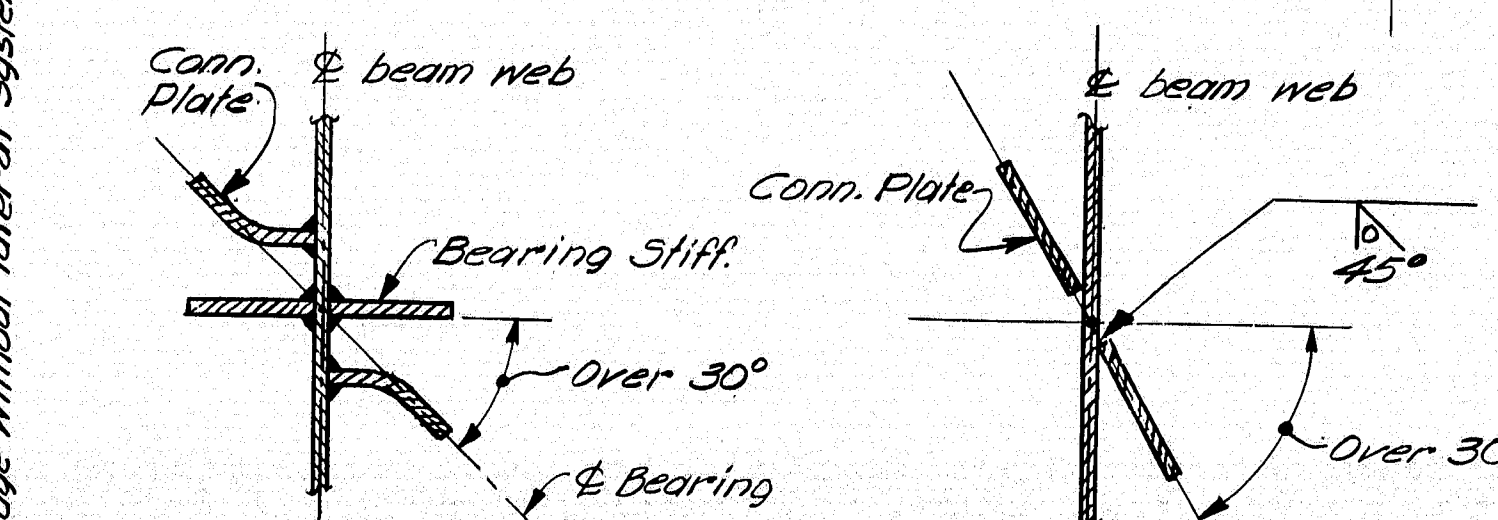
**TYPE K**



**TYPE L**



**TYPE M**



**DETAIL A**  
Referenced from Note 5

**DETAIL B**  
Referenced from Note 4

## **MATERIALS**

Diaphragms, Crossframes and All Plates (Filler, gusset, and connection) ASTM A36  
High Strength Bolts  $\frac{3}{4}$ " diameter — — — ASTM A325

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

## **STANDARD DETAILS** (BD 113 - 72) **DIAPHRAGMS & CROSSFRAMES**

SHEET 106 OF 111 AUGUSTA, MAINE SEPT. 1972

148-21



DESIGN SPECIFICATIONS  
A.A.S.H.O. Standard Specifications for  
Highway Bridges 1969 and  
Interim Specifications.



Lengths of rail shall be attached to a minimum of four (4) rail posts wherever possible, and in any case never less than two (2). Rail posts are to be set normal to grade unless otherwise shown on the Bridge Plans.



NOTE - An alternate to the dimple system for holding the splice bar in position may be used if approved by the Engineer.



See "Rail Detail"



\* Preferable minimum dimensions. For actual dimensions see Bridge Plan.



(Bottom View)



(Assembly)



(For Anchorage)



If cut threads are used, body diameter shall be not less than nominal diameter.  
If rolled threads are used, body diameter shall be not less than root diameter of the threads.

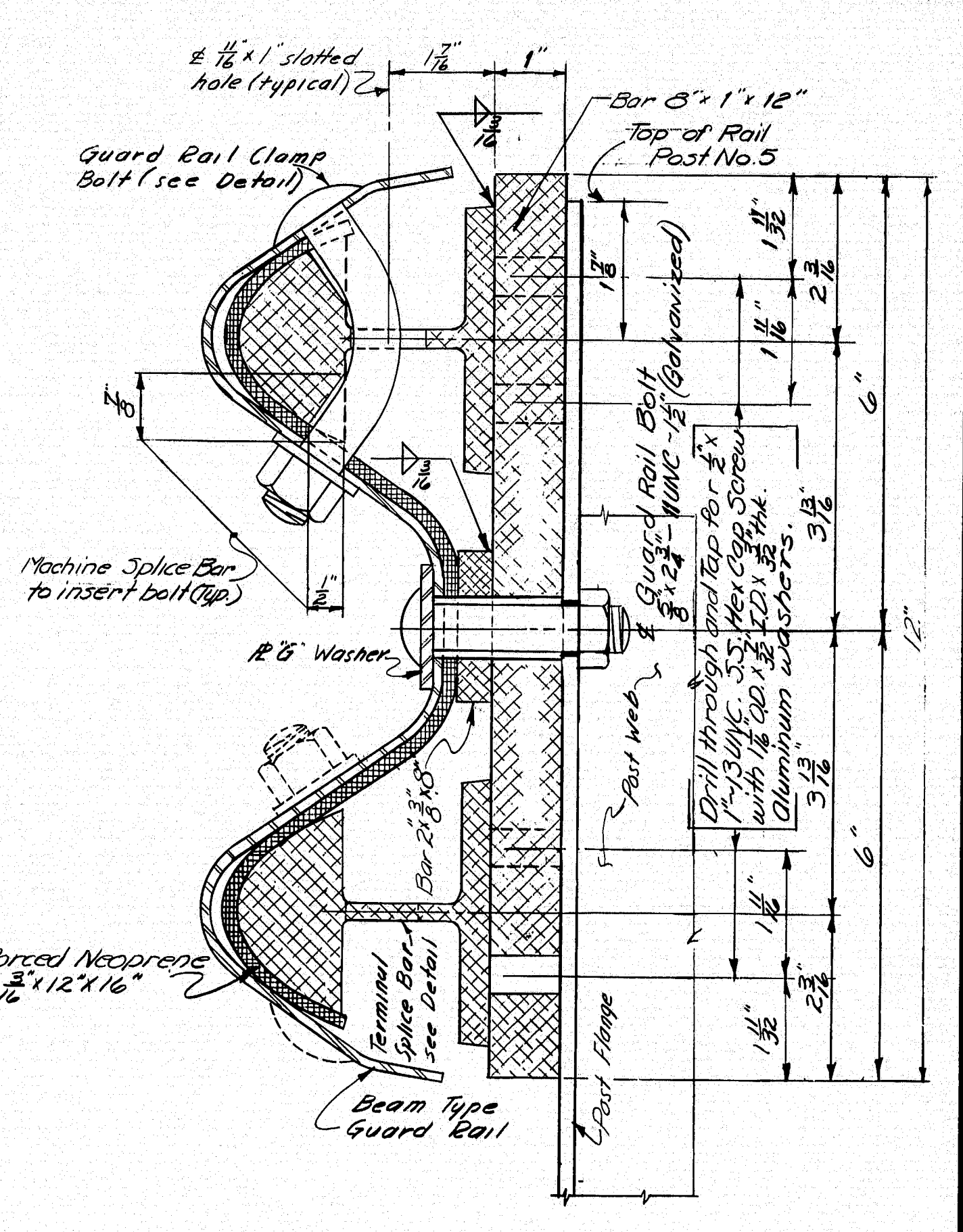
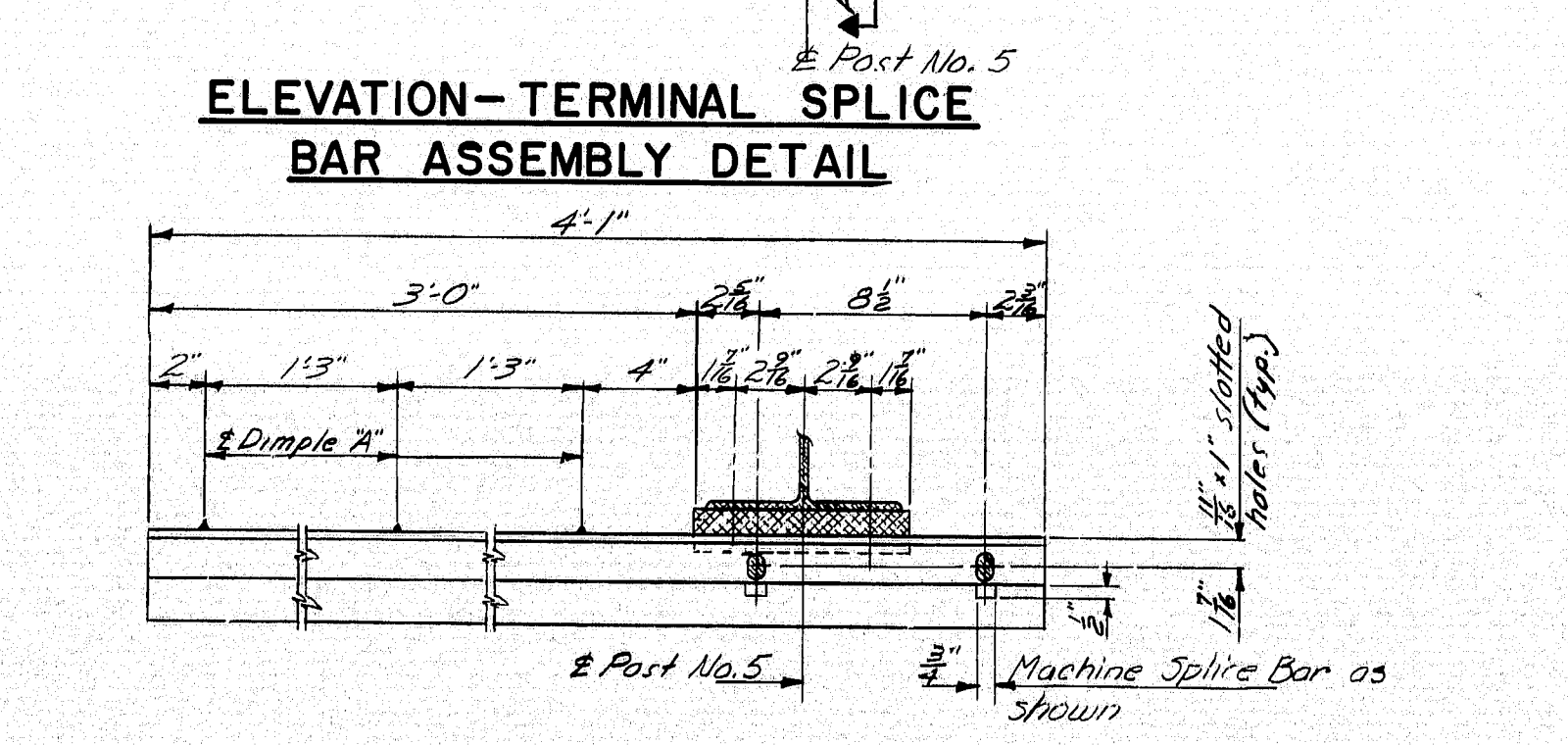
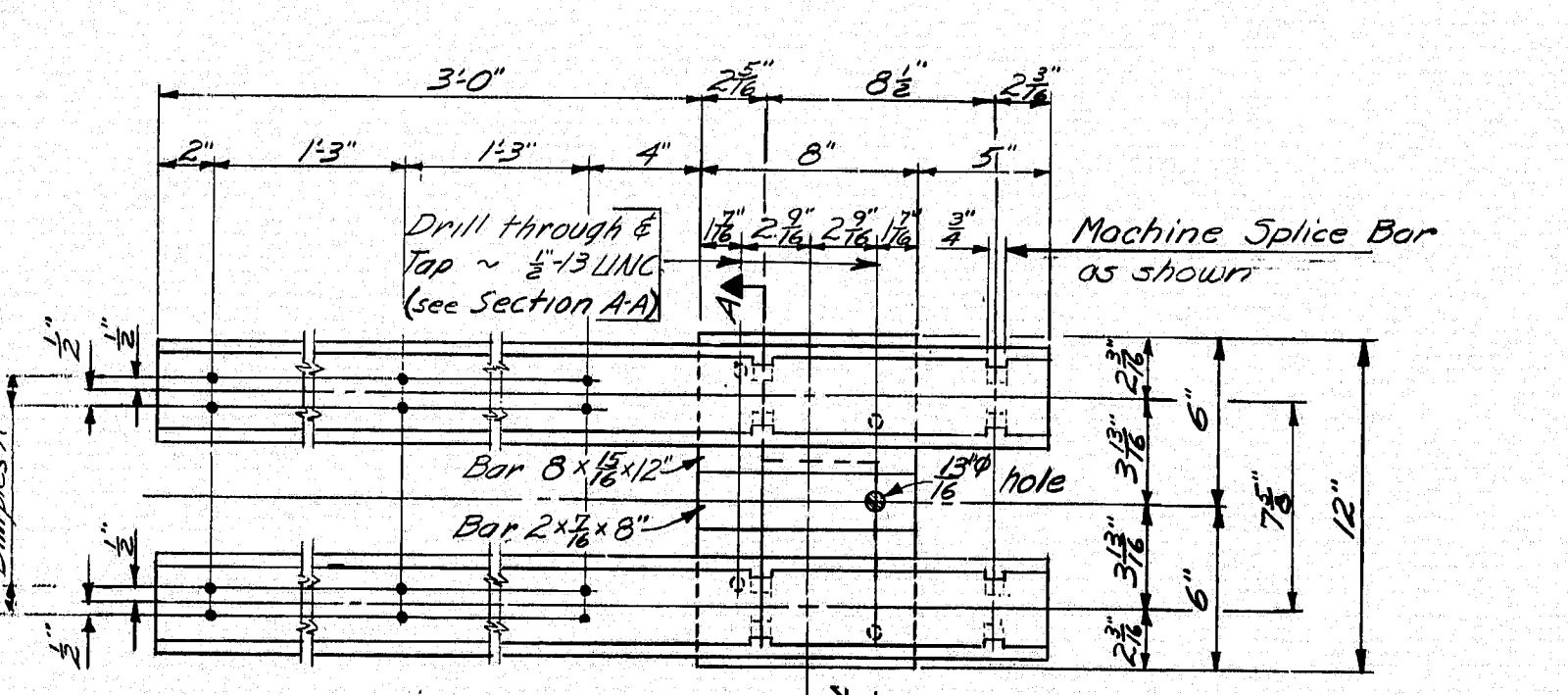
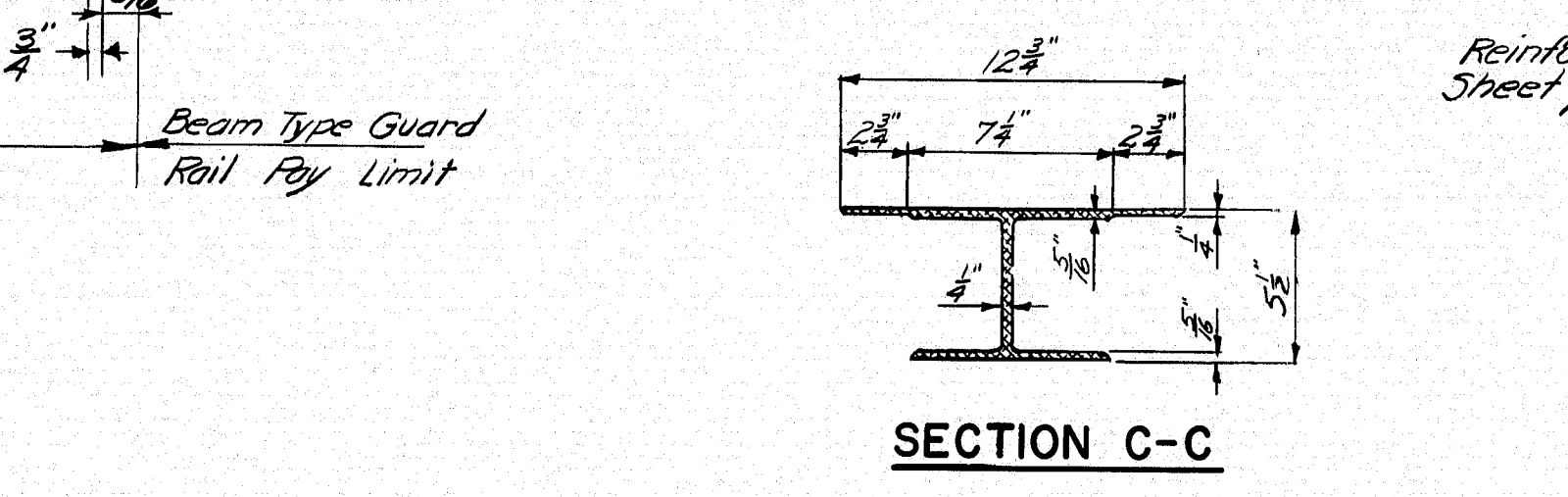
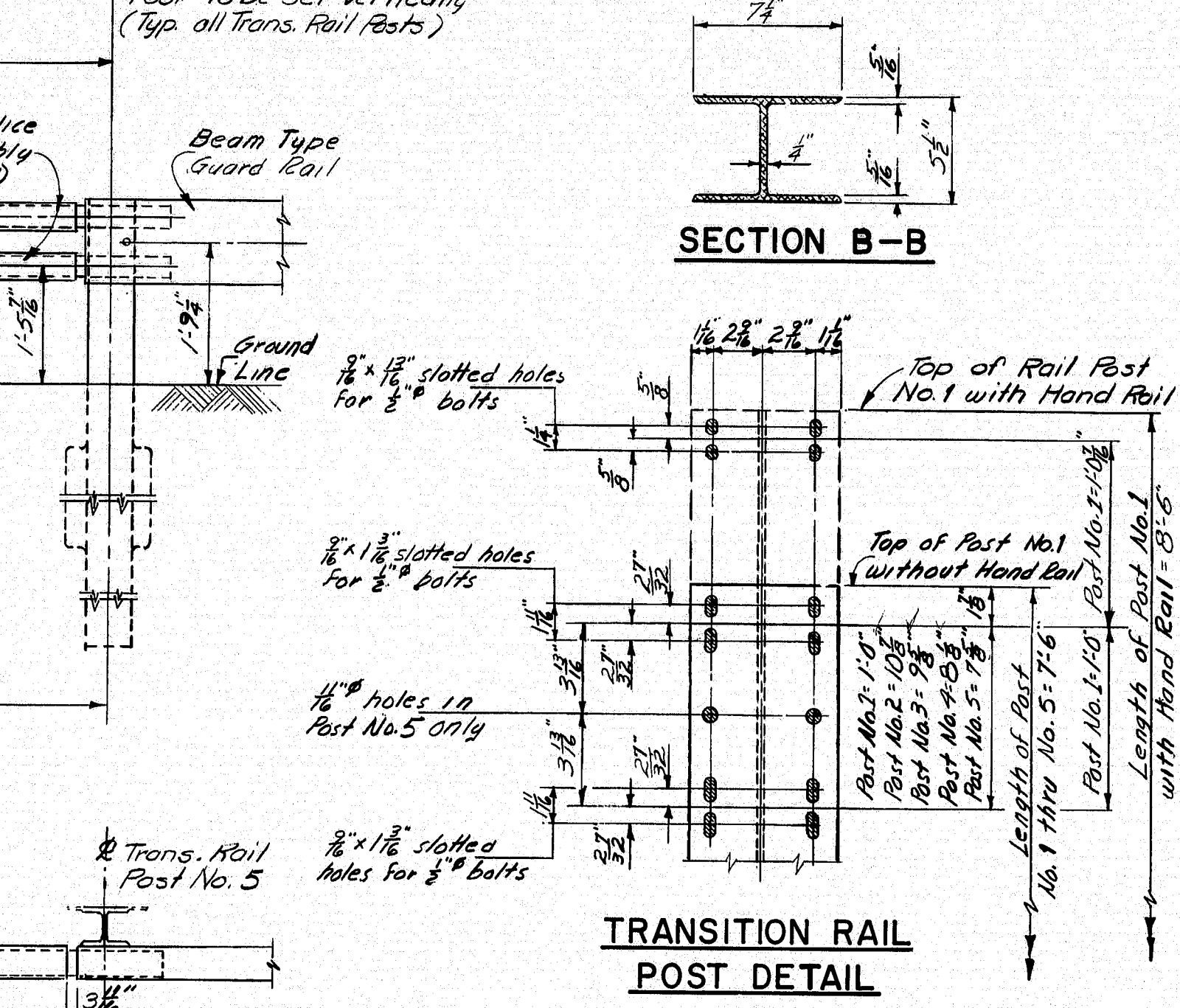
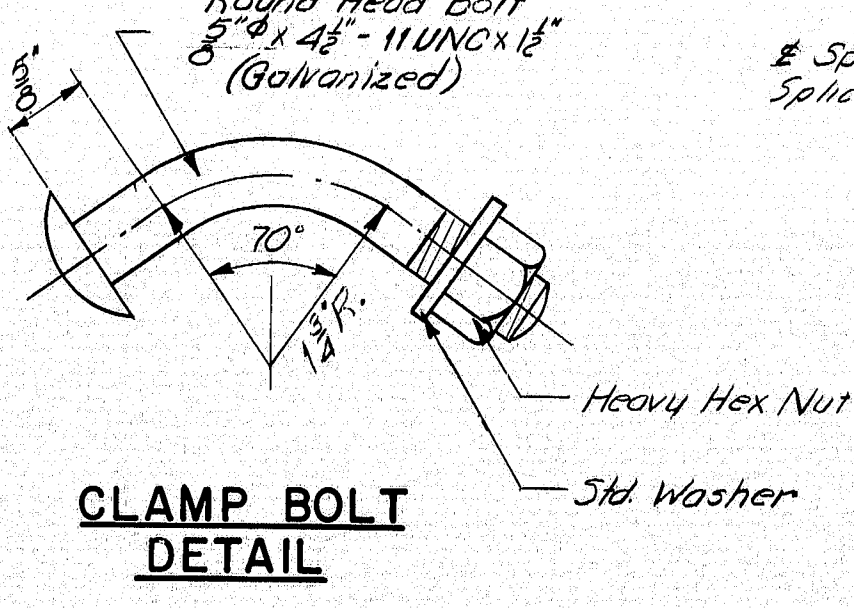
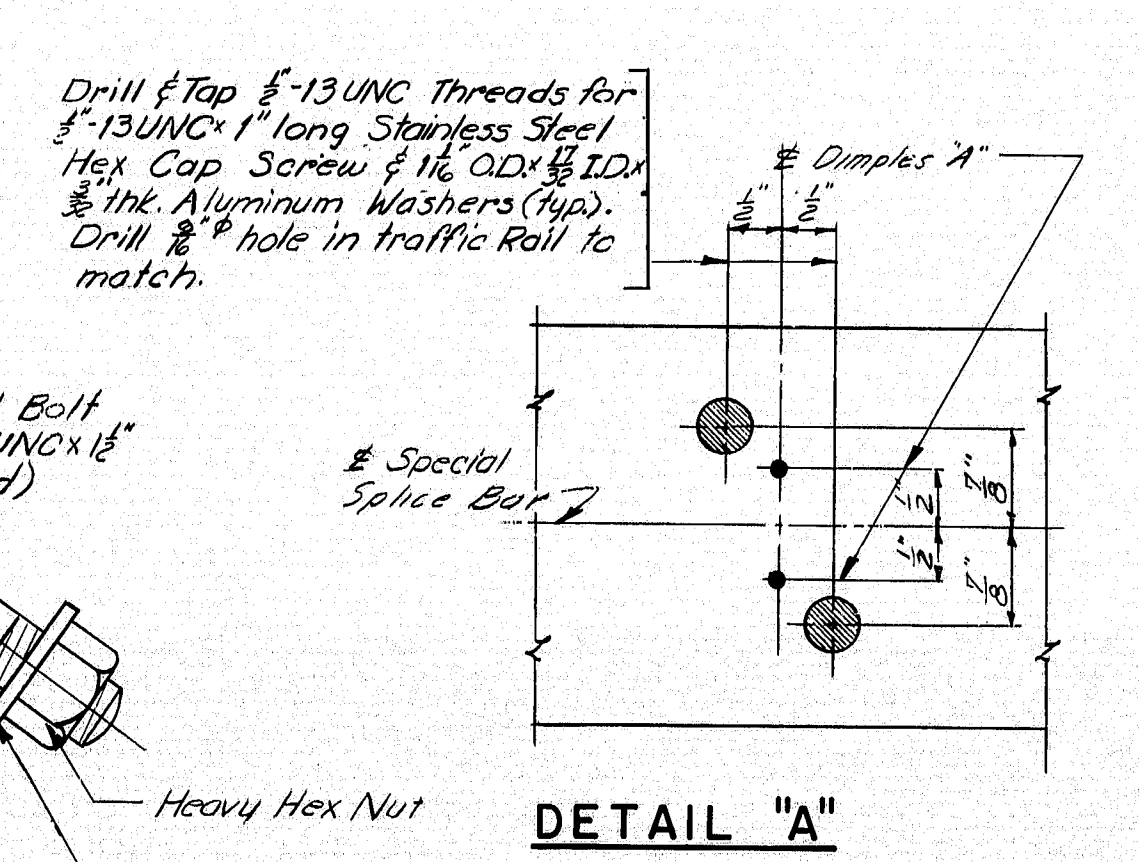
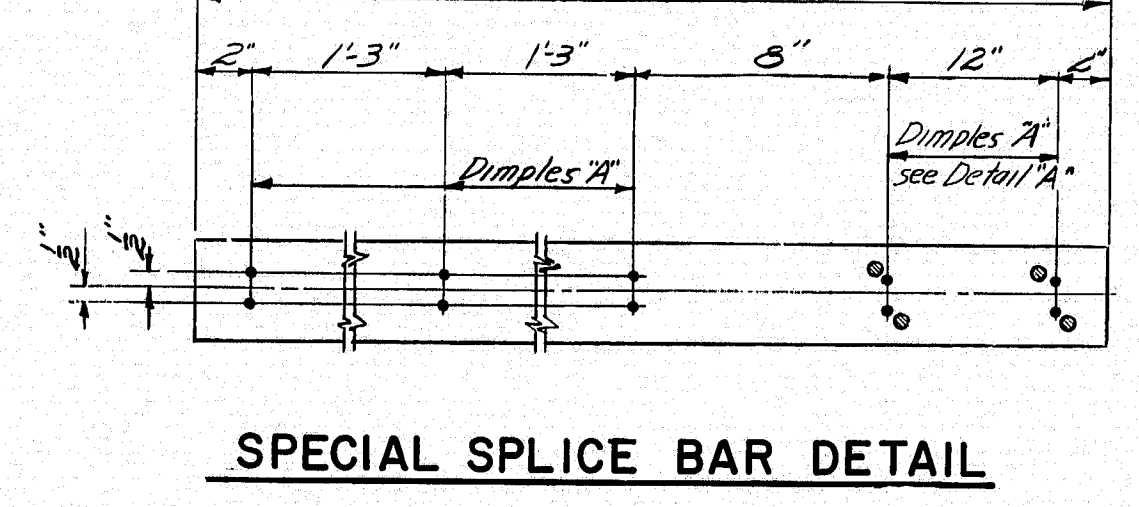
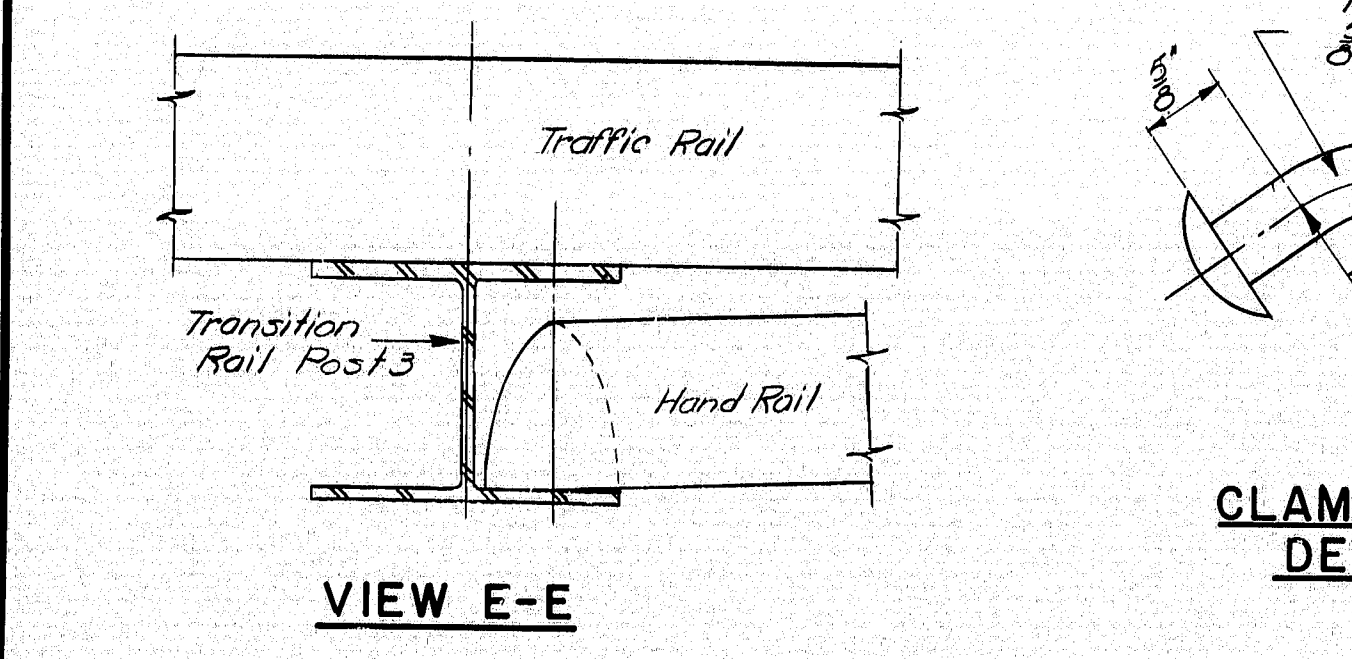
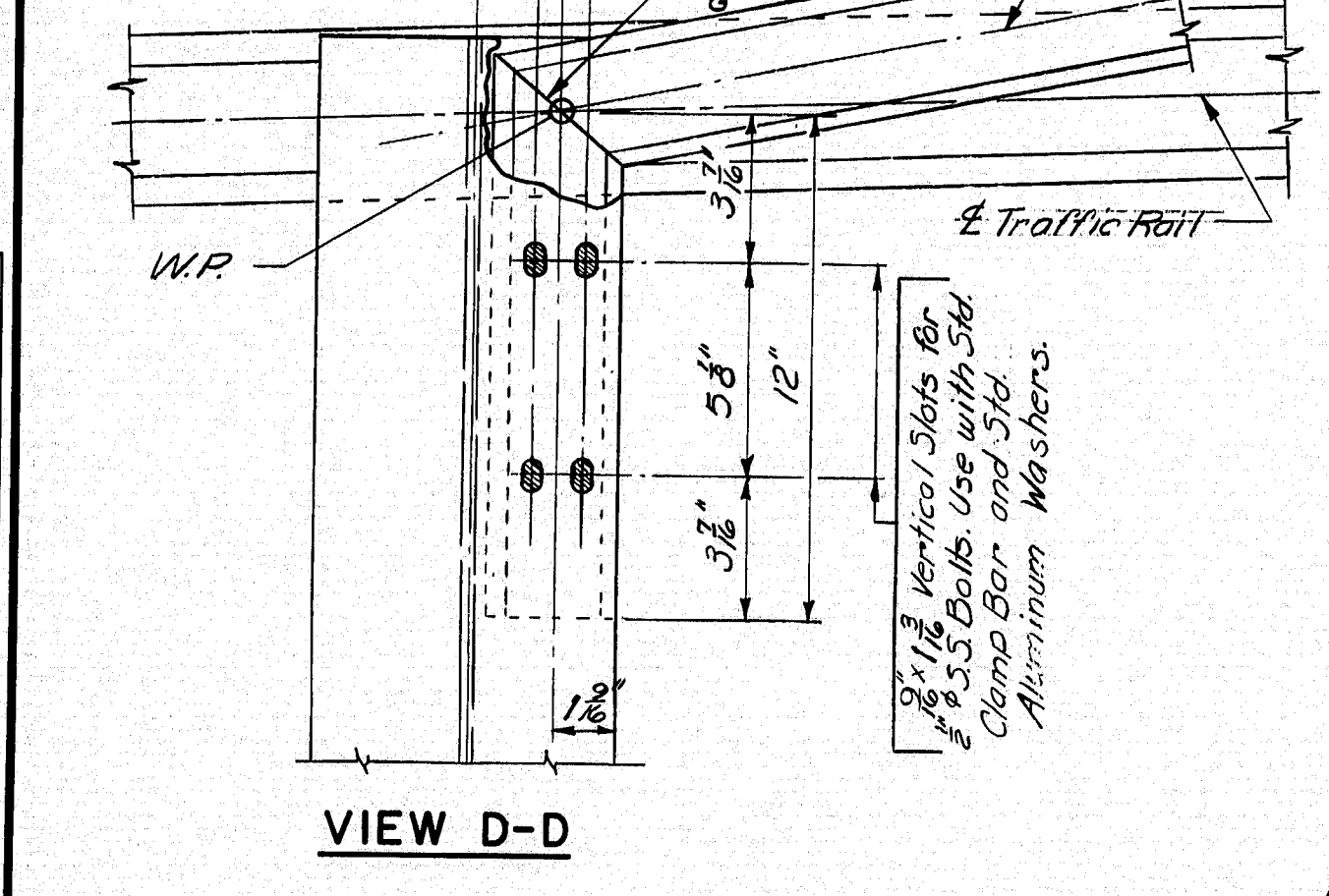
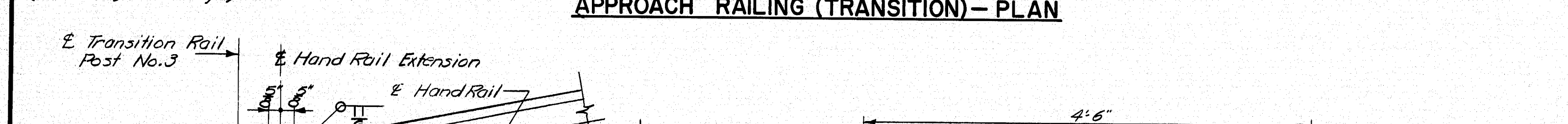
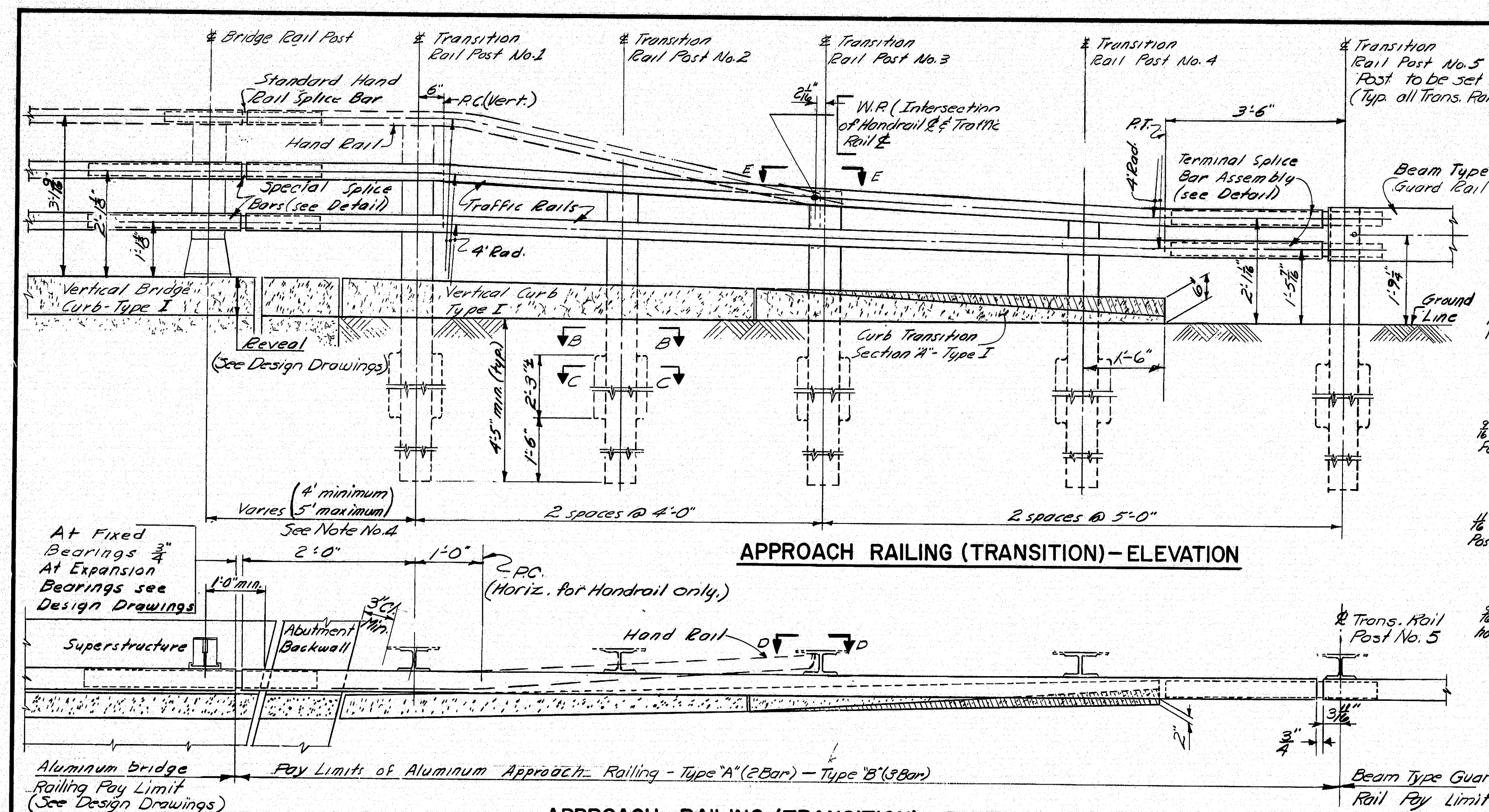
STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
**STANDARD DETAILS**  
(8D 114-73)  
**ALUMINUM RAILING**  
**2 - BAR (SEMI-ELLIPSE)**  
**EXTRUDED POST**

SHEET 107 OF 111 AUGUSTA, MAINE FEBRUARY 1973

148-22



F.H.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-5(39)	108	111



# NOTES

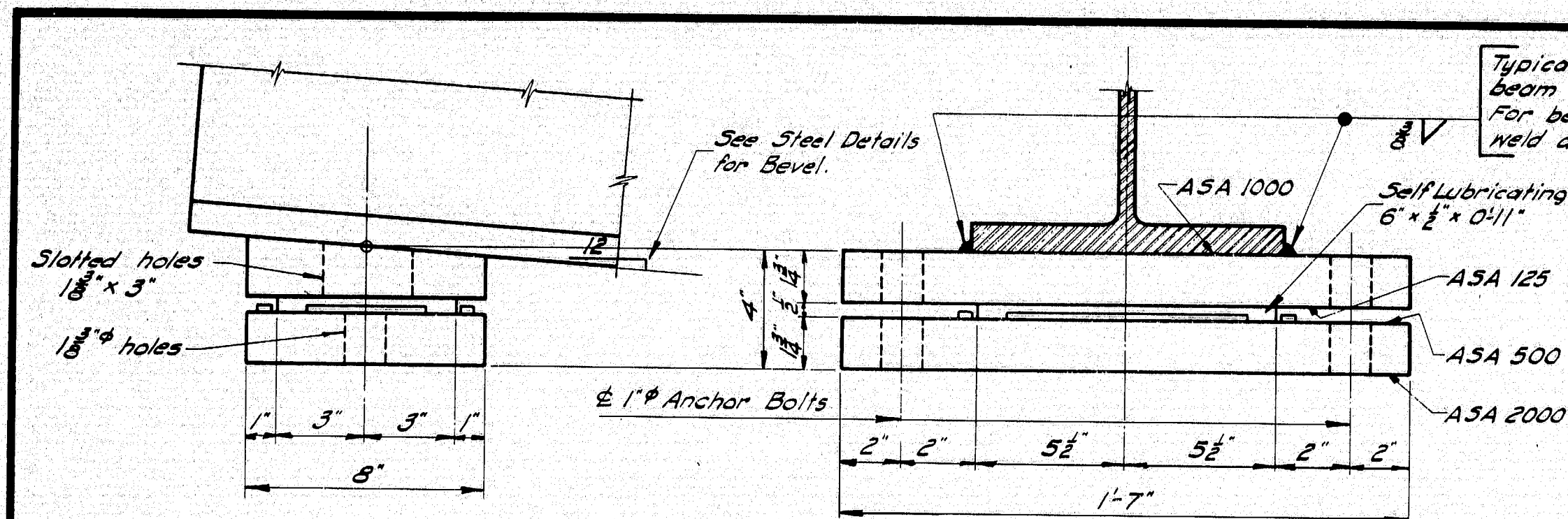
1. Beam Type Guard Rail and Plate "G" Washer (Section A-A) to be paid for under Section "606" Guard Rail of the Standard Specifications. All other material detailed on this drawing shall be included in "Transition Rail" - Pay Item.
2. In case of conflict between these standard details and the design details, the requirements of the design details shall be followed.
3. Curb as shown, to be used with Approach Railing Type "A" only. For curbing for use with Approach Railing Type "B", see design drawings.
4. If the first approach rail post is mounted on the abutment backwall, the post and anchorage must match the Bridge railing, and will be supplied and paid for under the Bridge Railing Item. See design drawings for post location.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION (SHEET BD 114-73, BD 115-73 AND BD 116-73 SHALL ACCOMPANY THIS SHEET AS NEEDED) <b>STANDARD DETAILS</b> (BD 117-73) <b>ALUMINUM APPROACH RAILING</b> 2 BAR OR 3 BAR (SEMI-ELLIPSE) TYPE "A" OR "B" TRANSITION TO TYPE 3b GUARD RAIL SHEET 108 OF 111 AUGUSTA, MAINE JUNE 1973
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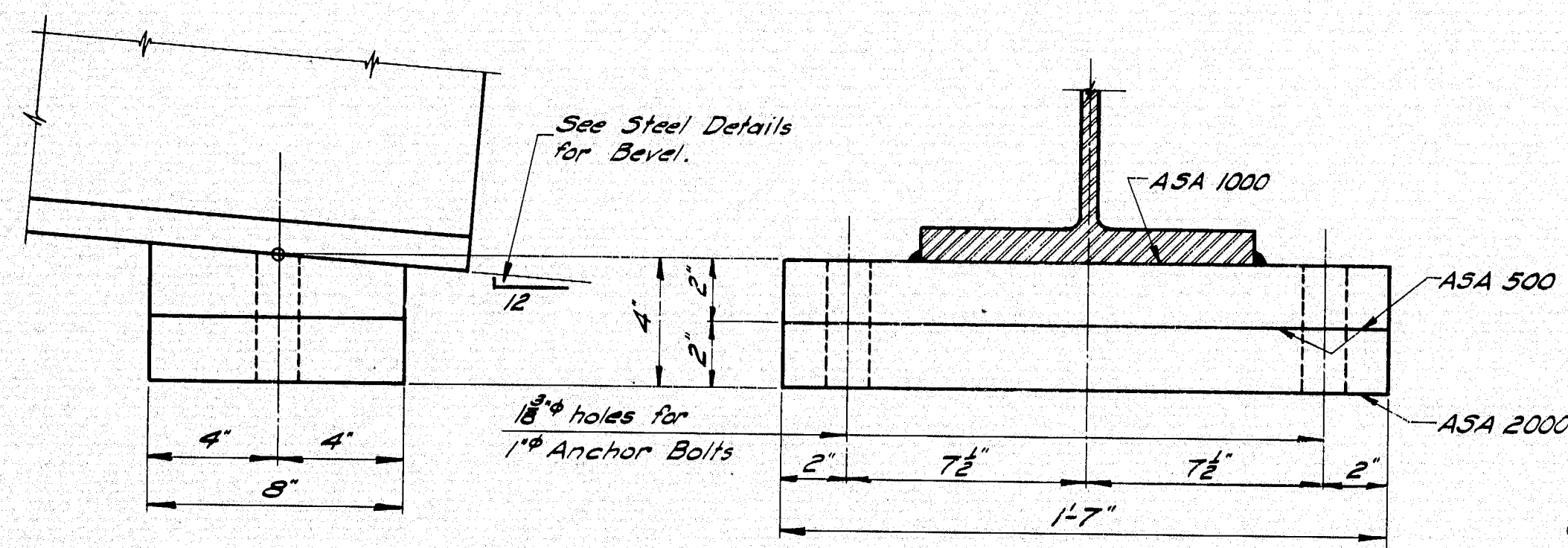
148-23

DATE	BY	DESIGN - DETAILED	CHECKED	REVISIONS	PLANS
1/19/73	A. Jacobs				

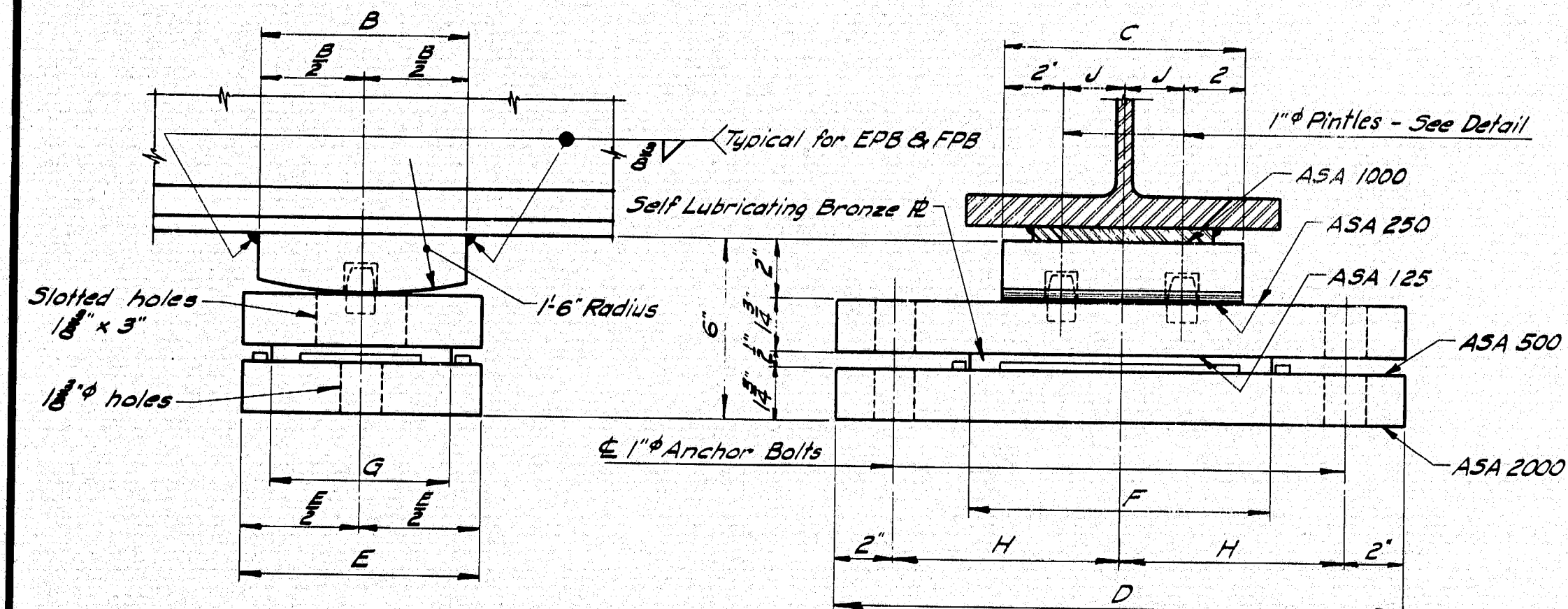




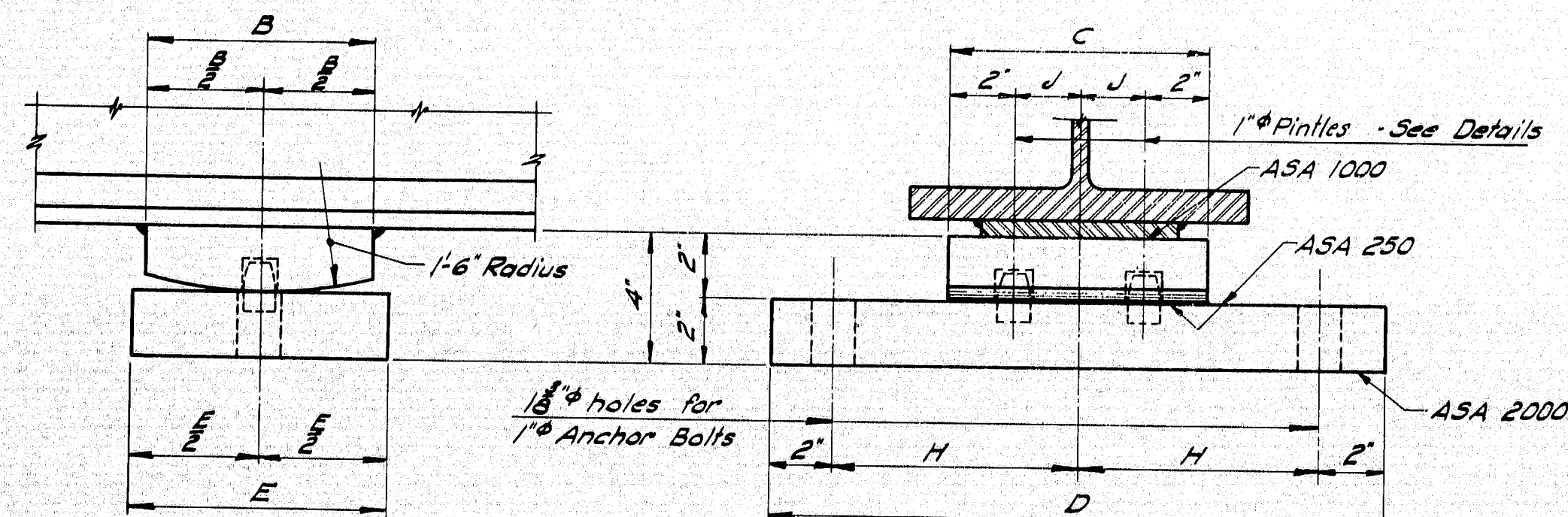
EXPANSION PEDESTAL - EPA



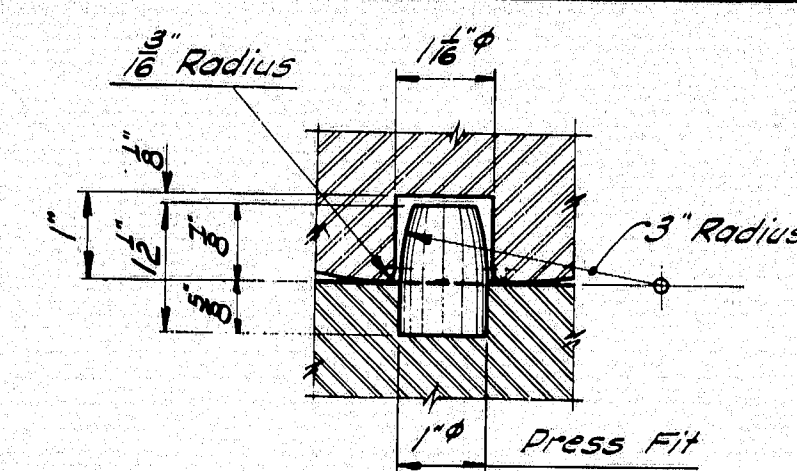
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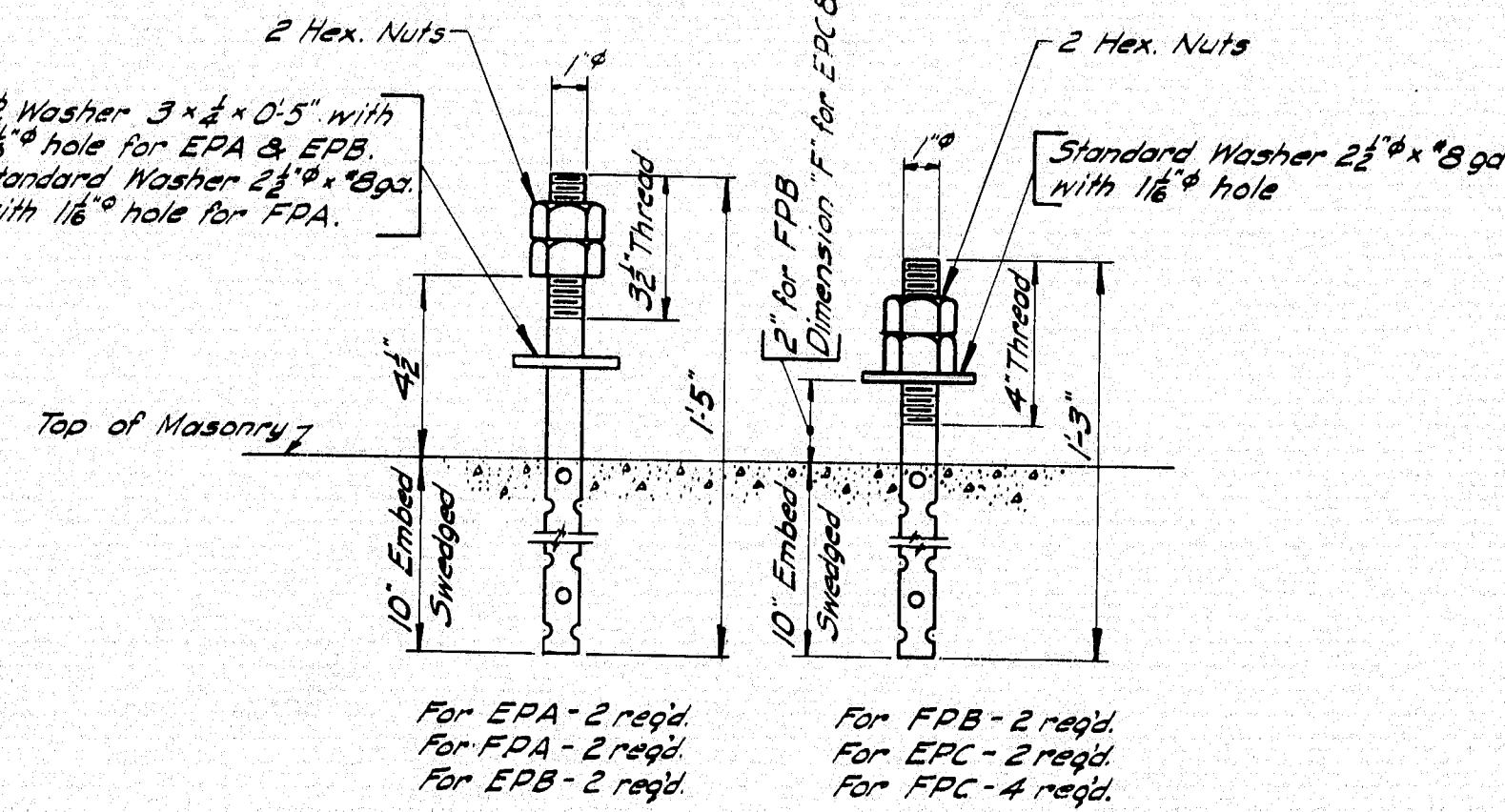
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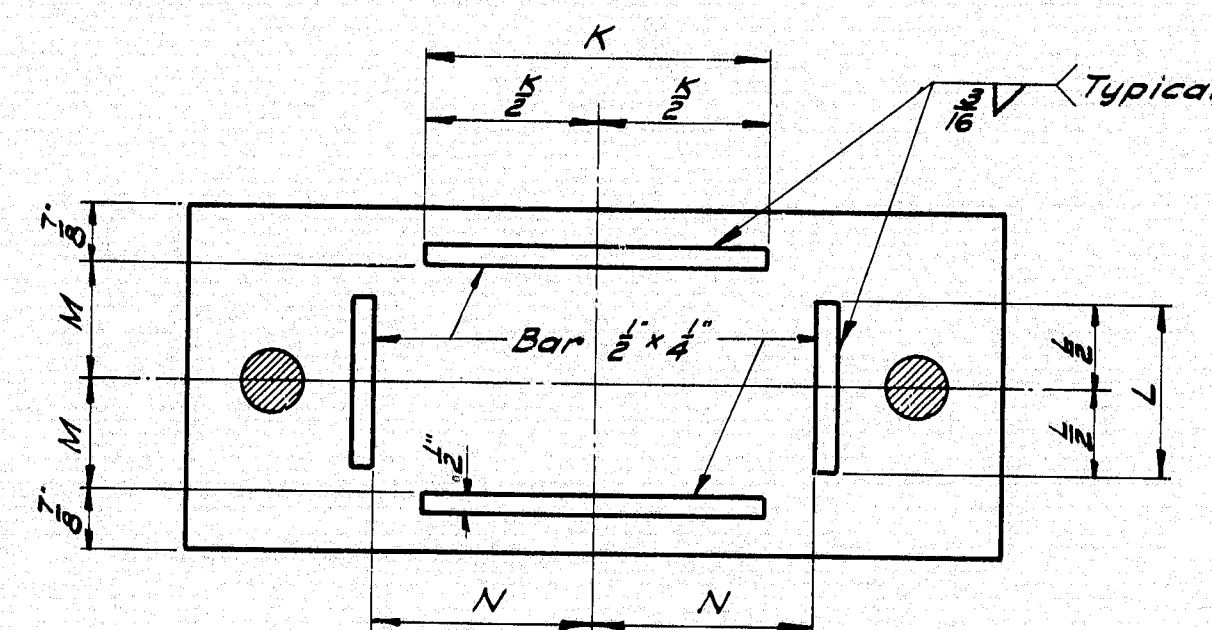
FIXED PEDESTAL - FPB



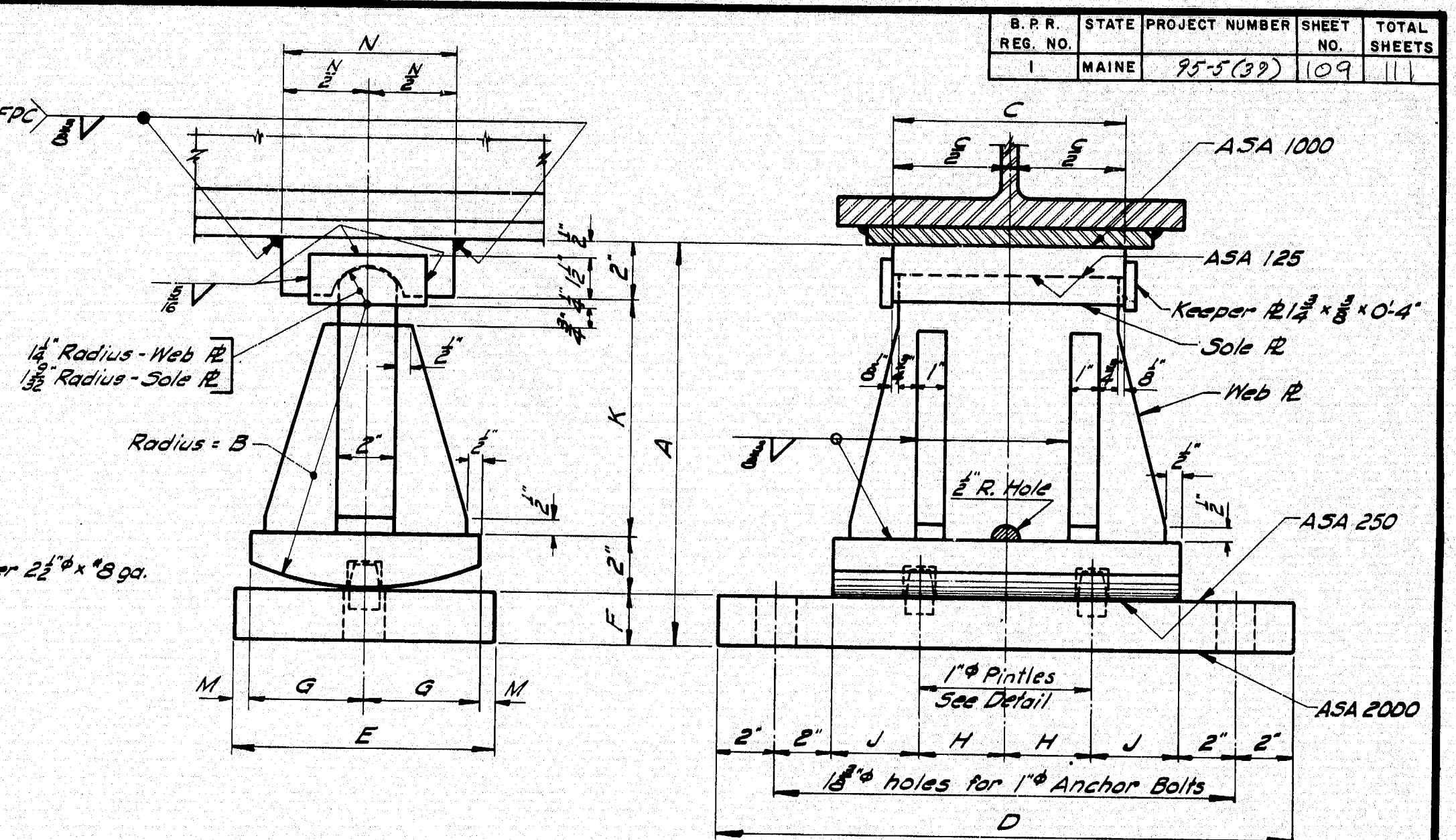
PINTLE DETAIL



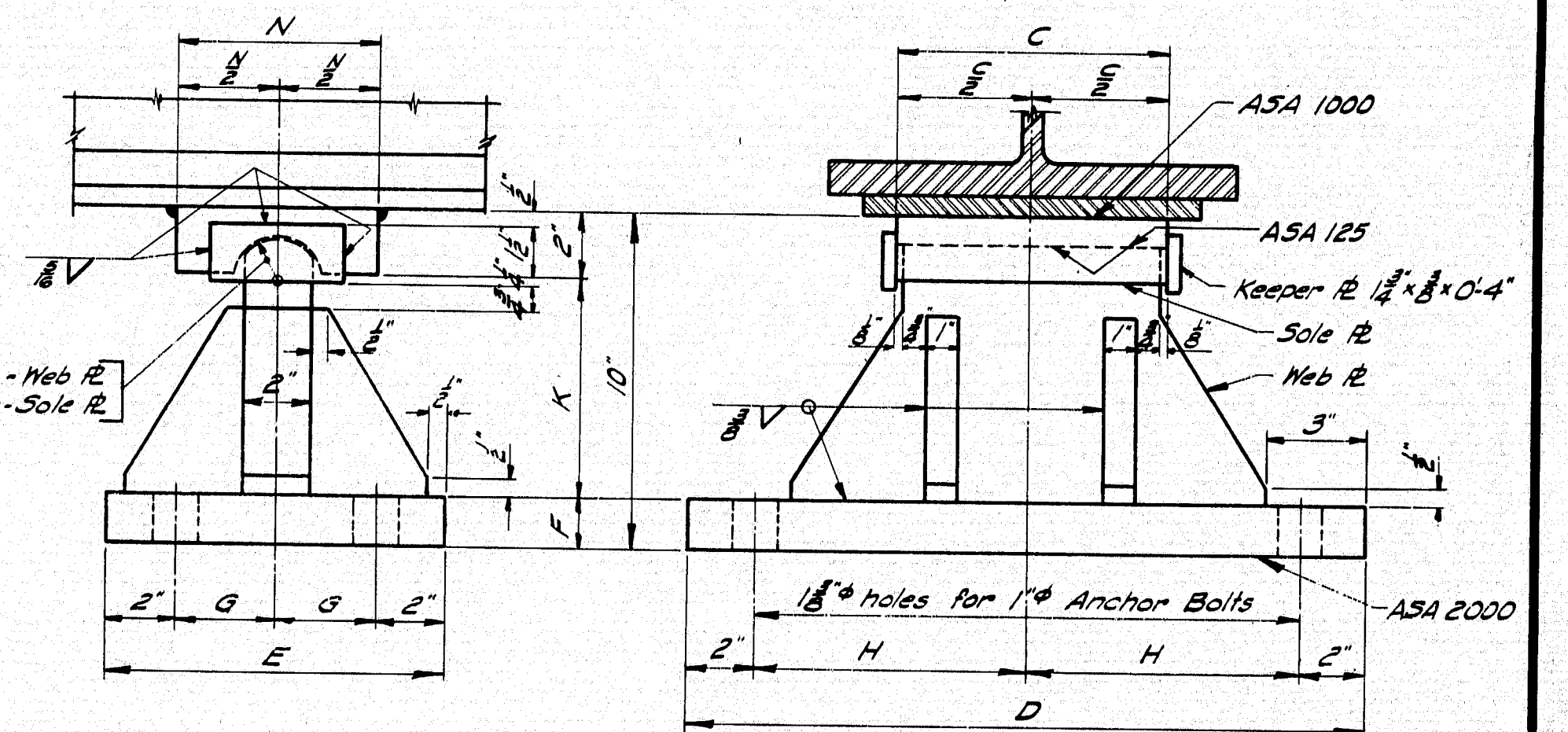
ANCHOR BOLT DETAIL



FOR EPA & EPB  
MASONRY PLATE



EXPANSION PEDESTAL - EPC



FIXED PEDESTAL - FPC

PEDESTALS - ALLOWABLE LOADS & DIMENSIONS													
Pedestal	Load	A	B	C	D	E	F	G	H	J	K	L	N
EPA	132K	-	-	-	-	-	-	-	-	-	8"	4"	3 1/2"
FPA	150K	-	-	-	-	-	-	-	-	-	-	-	-
EPB-1	120K	-	6"	8"	11 1/2"	8"	10"	6"	7 1/2"	2"	8"	4"	3 1/2"
EPB-2	165K	-	7"	10"	14 1/2"	9"	14 1/2"	7"	8"	3"	10"	5"	3 1/2"
EPB-3	224K	-	8"	11 1/2"	20"	10"	14 1/2"	8"	10"	4 1/2"	12 1/2"	5"	4 1/2"
FPB-1	120K	-	6"	8"	11 1/2"	8"	-	-	7 1/2"	2"	-	-	-
FPB-2	165K	-	7"	10"	14 1/2"	9"	-	-	8"	3"	-	-	-
FPB-3	224K	-	8"	11 1/2"	20"	10"	-	-	10"	5"	-	-	-
EPC-1	70K	3 1/2"	6"	8"	11 1/2"	8"	12"	3 1/2"	3"	3"	4 1/2"	1 1/2"	6"
EPC-2	100K	1 1/2"	8"	8"	11 1/2"	8"	12"	3 1/2"	3"	3"	6 1/2"	2"	6"
EPC-3	130K	1 1/2"	10"	8"	11 1/2"	9"	12"	4"	3"	3"	8 1/2"	2"	7"
EPC-4	160K	1 1/2"	10"	8"	14 1/2"	9"	12"	4"	4"	3"	8 1/2"	2"	7"
EPC-5	190K	1 1/2"	10"	9"	20"	10"	2"	4 1/2"	5"	3"	8 1/2"	2"	8"
EPC-6	220K	1 1/2"	10"	10"	20"	10"	2 1/2"	5"	5"	3"	10 1/2"	1"	8"
EPC-7	250K	1 1/2"	10"	10"	20"	10"	2 1/2"	5"	5"	4"	10 1/2"	1"	8"
FPC-1	100K	-	-	8"	11 1/2"	9"	12"	2 1/2"	8"	-	6 1/2"	-	6"
FPC-2	160K	-	-	9"	11 1/2"	10"	12"	3"	8"	-	6 1/2"	-	7"
FPC-3	190K	-	-	9"	20"	10"	12"	3"	10"	-	6 1/2"	-	8"
FPC-4	220K	-	-	10"	20"	10"	12"	4"	10"	-	6 1/2"	-	8"
FPC-5	250K	-	-	10"	20"	10"	2"	4"	10"	-	6"	-	8"

NOTE: At the location of bearing pedestals the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on the plans. If dressed areas are below the surface of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 2" and min. slope of 1/8 inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items.

DESIGN SPECIFICATIONS

A.A.S.H.O., Standard Specifications for Highway Bridges, 1973

A.S.T.M. STEEL CLASSIFICATION

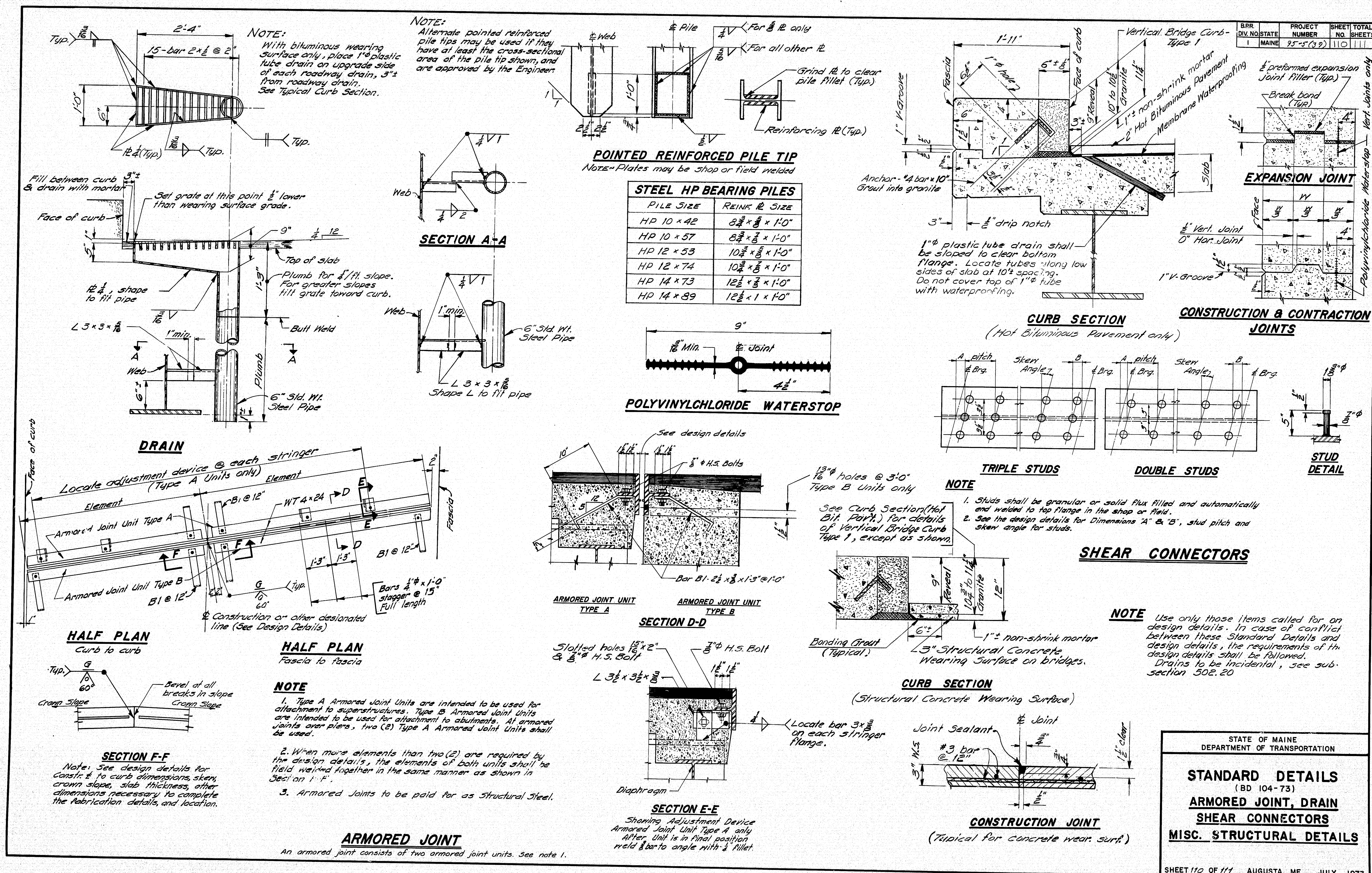
Anchor Bolts - A36  
All other - A36

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
**STANDARD DETAILS**  
(BD 101 - 74)  
BEARING PEDESTALS

SHEET 109 OF 111 AUGUSTA, ME. APRIL, 1974

148-24





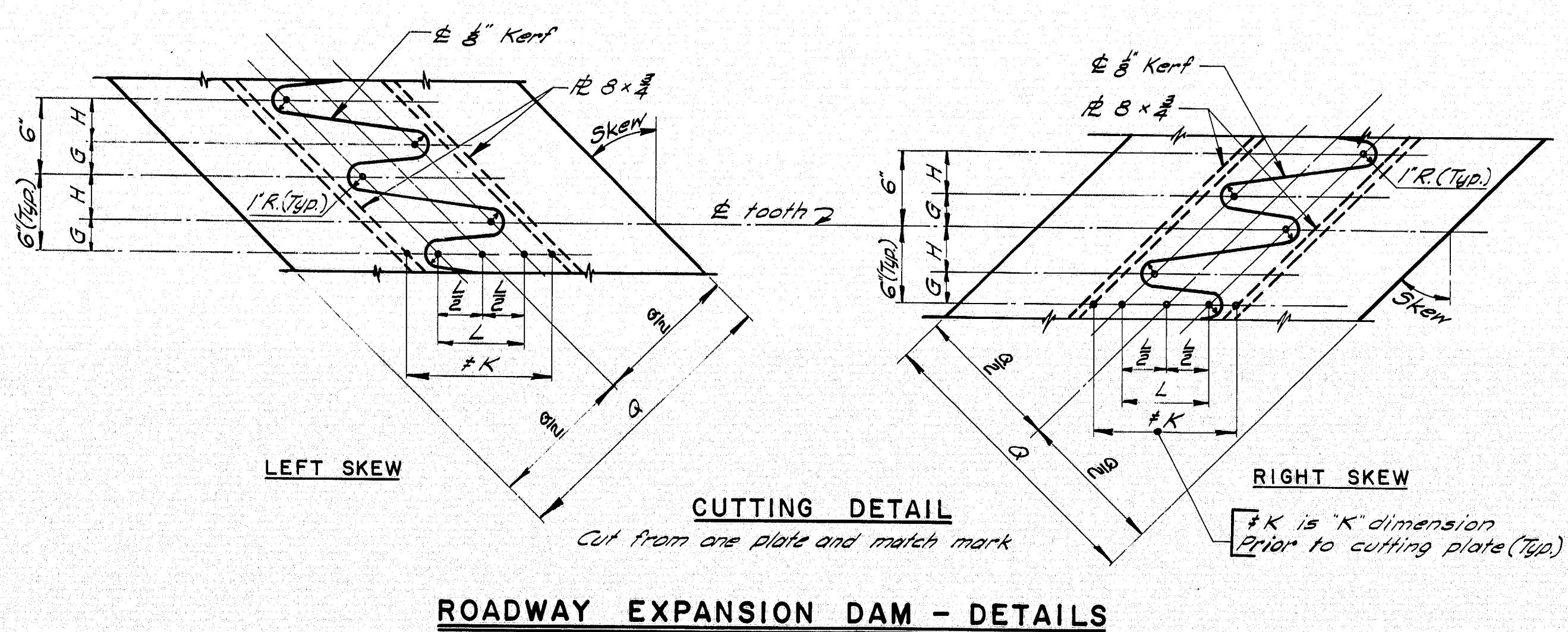
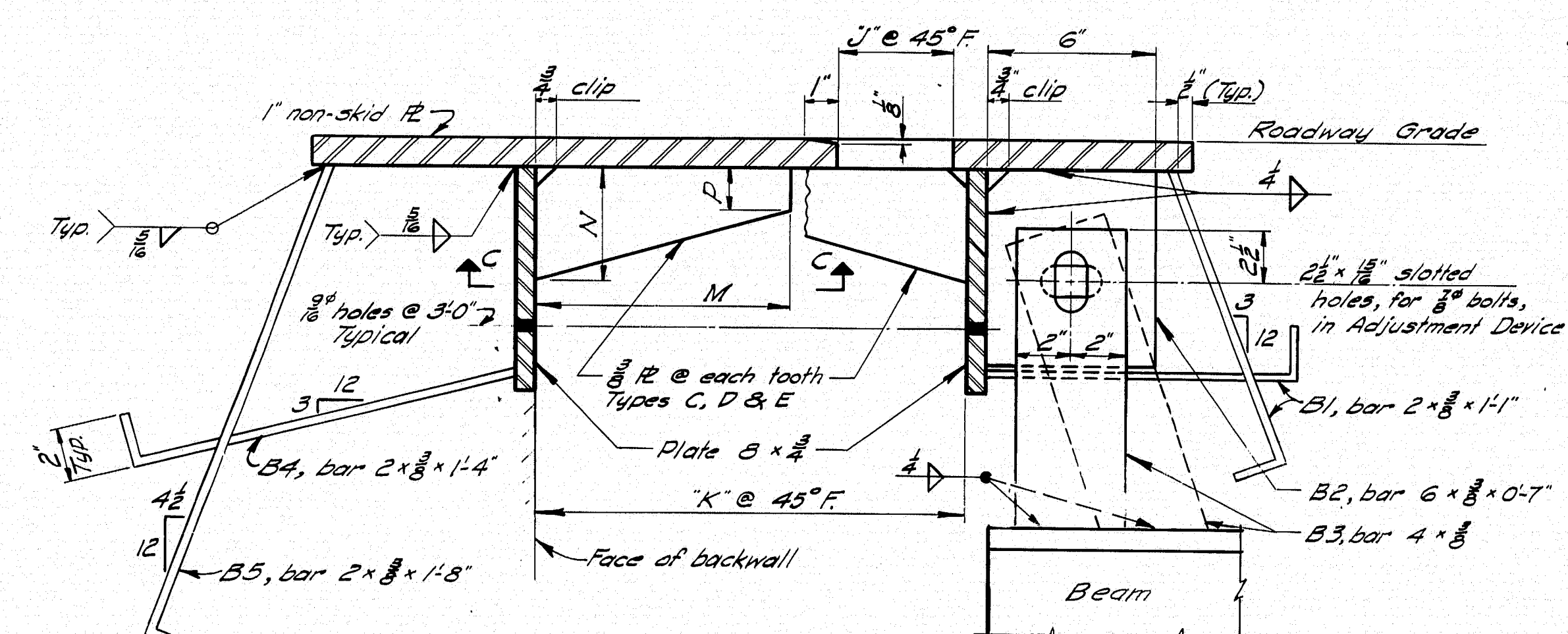
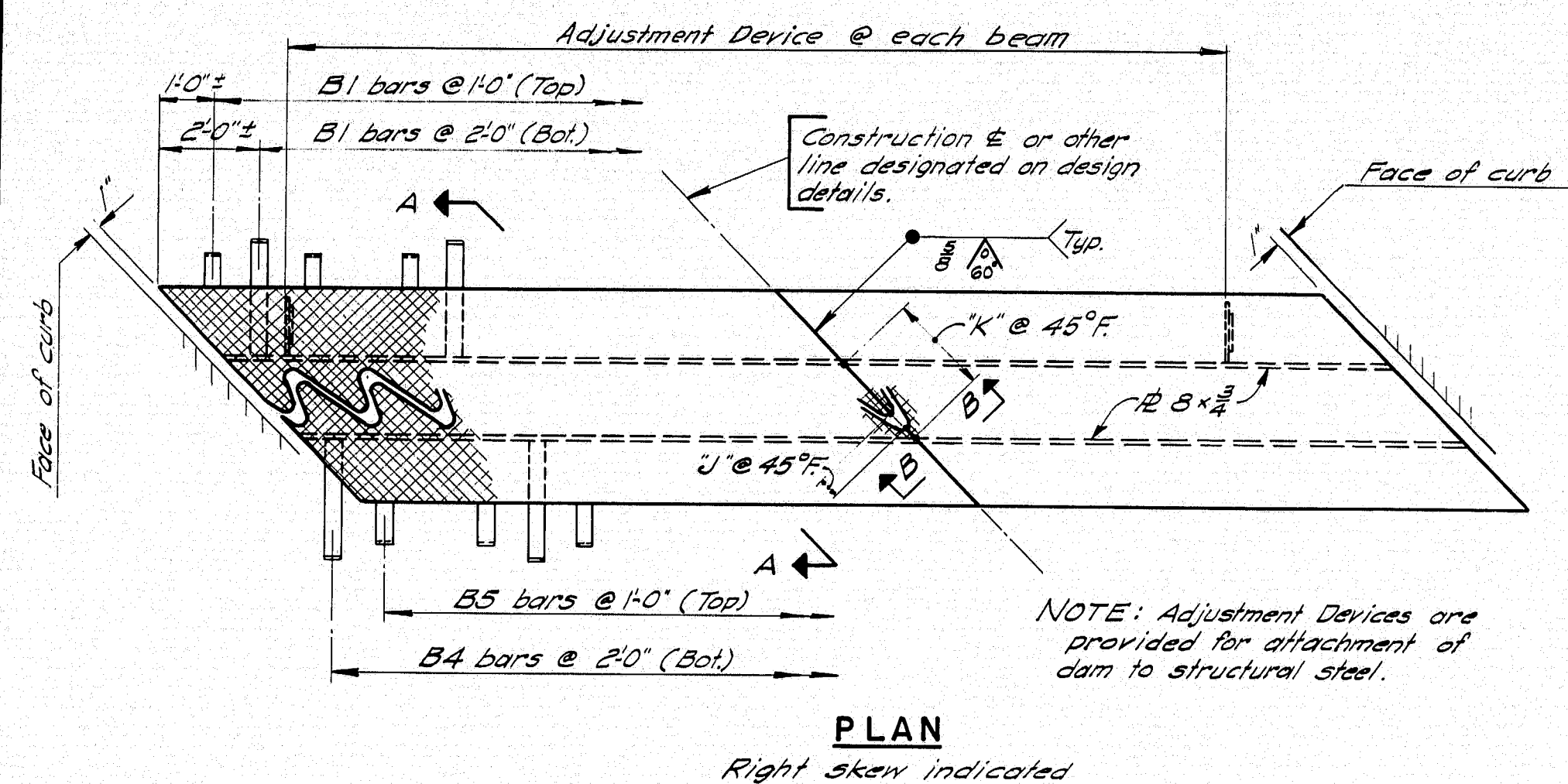
BRR.	DIV. NO.	STATE	PROJECT NUMBER	SHEET TOTAL
1	MAINE	95-5	(32)	110

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
<b>STANDARD DETAILS</b> (BD 104-73)
<b>ARMORED JOINT, DRAIN</b>
<b>SHEAR CONNECTORS</b>
<b>MISC. STRUCTURAL DETAILS</b>

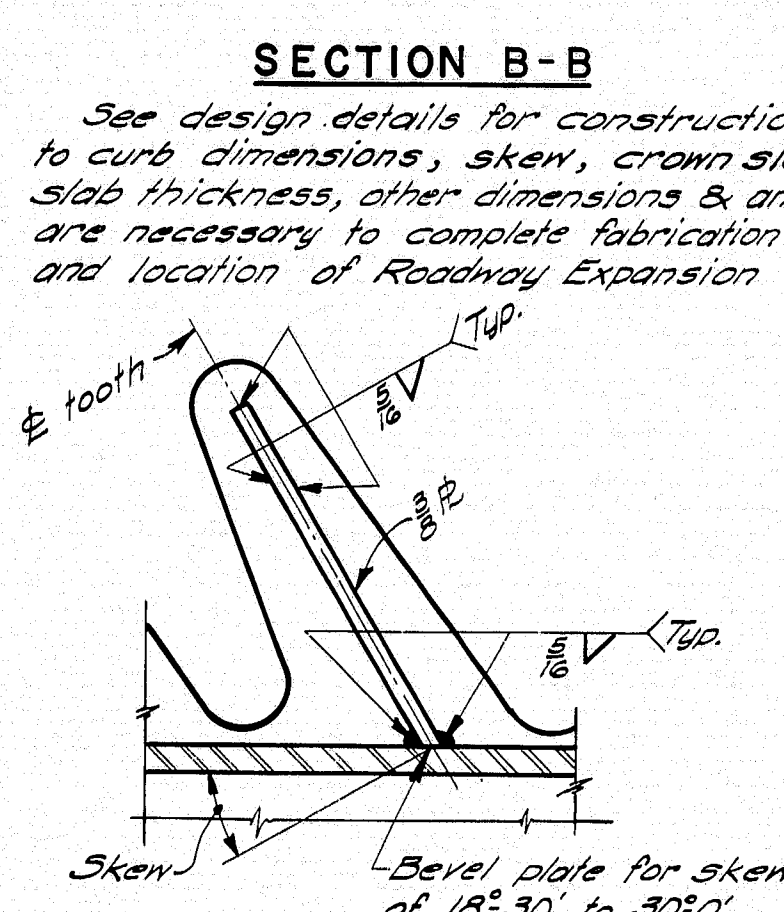
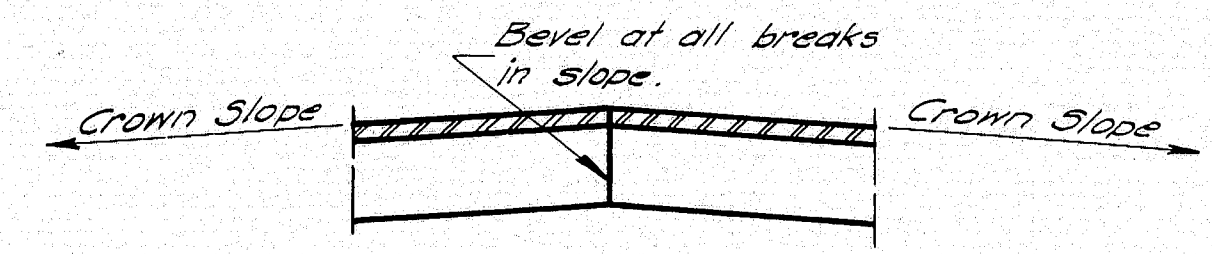
SHEET 110 OF 111 AUGUSTA, ME. JULY 1973

148-25

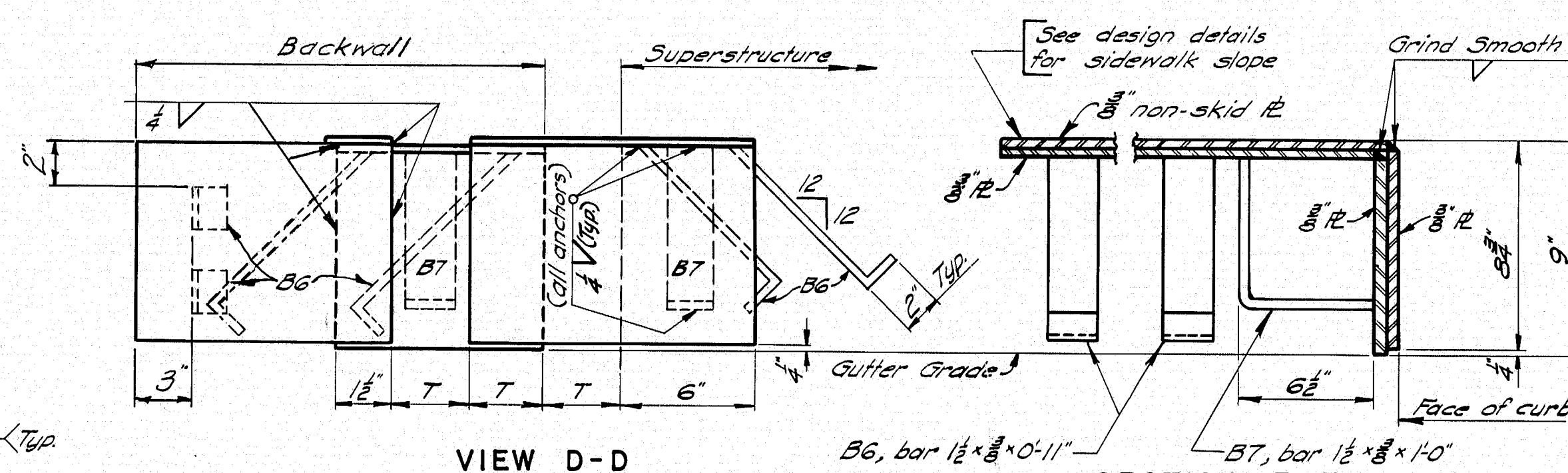
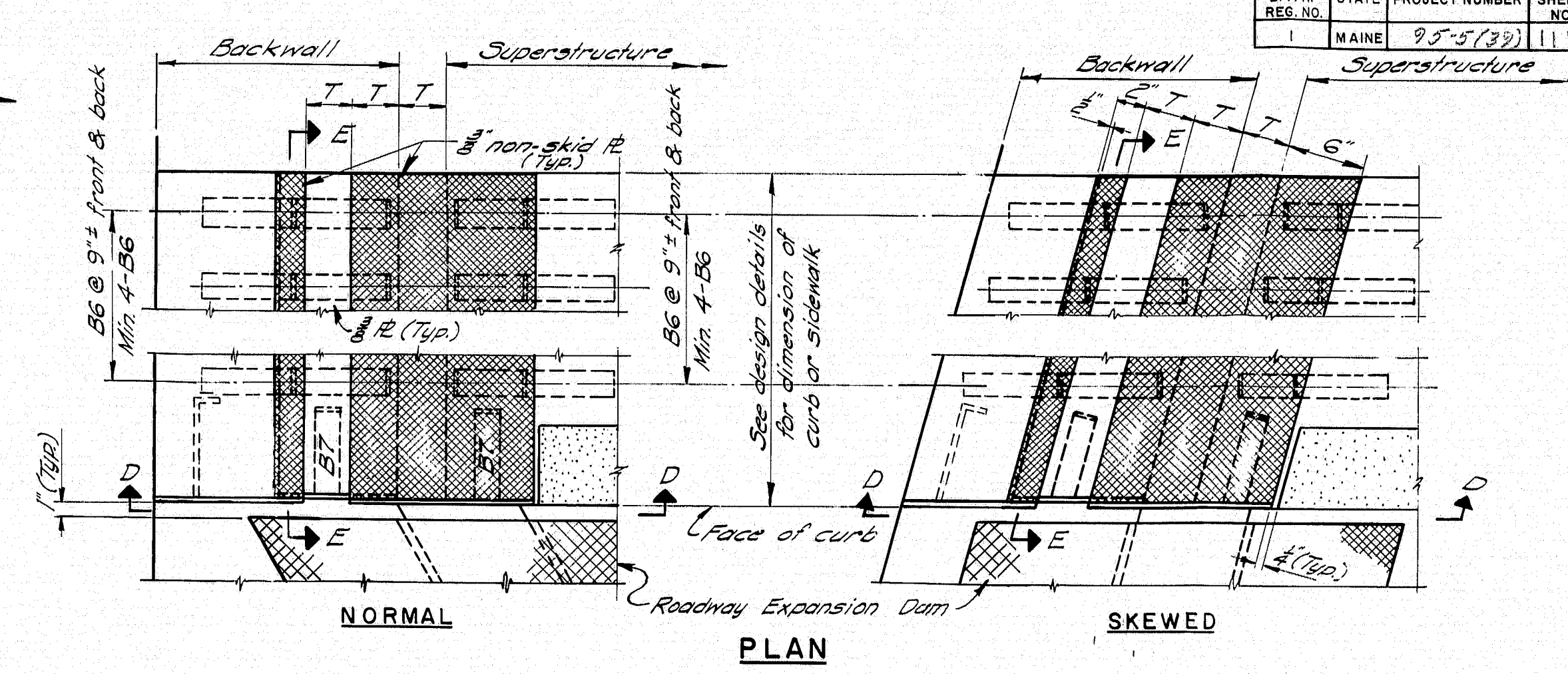




**ROADWAY EXPANSION DAM - DETAILS**



**SECTION C-C**  
Skew over 30°



**CURB AND SIDEWALK EXPANSION DAM - DETAILS**

TYPE	V	W	X	Y	Z
Exp. Length	100'-280'	280'-440'	440'-600'	600'-760'	760'-920'
T	3"	4"	5"	6"	7"

TABLE OF DIMENSIONS												
Type	Exp. Length	Skew	# K	L	G	H	K @ 45°	M	N	P	Q	
A	100'-280'	0°-5° incl.	7"	4"	3"	3"	9"	28"	—	—	—	21"
		5°-10°	7 1/2"	4 1/2"	3 1/2"	3 1/2"	9 1/2"	28 1/2"	—	—	—	22"
		10°-20°	8"	4 1/2"	3 1/2"	3 1/2"	10"	29"	—	—	—	22"
		20°-30°	8 1/2"	5"	3 1/2"	3 1/2"	10 1/2"	29 1/2"	—	—	—	23"
		30°-40°	9"	5 1/2"	3 1/2"	3 1/2"	11"	30"	—	—	—	23"
B	280'-440'	0°-5° incl.	9"	6"	3"	3"	12"	36"	—	—	—	23"
		5°-10°	9 1/2"	6 1/2"	3 1/2"	3 1/2"	12 1/2"	36 1/2"	—	—	—	24"
		10°-20°	10"	6 1/2"	3 1/2"	3 1/2"	13"	37"	—	—	—	24"
		20°-30°	10 1/2"	7"	3 1/2"	3 1/2"	13 1/2"	37 1/2"	—	—	—	25"
		30°-40°	11"	7 1/2"	3 1/2"	3 1/2"	14"	38"	—	—	—	25"
C	440'-600'	0°-5° incl.	11 1/2"	8 1/2"	3"	3"	15 1/2"	48"	9"	4"	1 1/2"	26"
		5°-10°	12"	8 1/2"	3 1/2"	3 1/2"	16"	48 1/2"	10"	4"	1 1/2"	26"
		10°-20°	12 1/2"	9"	3 1/2"	3 1/2"	16 1/2"	49"	11"	4"	1 1/2"	26"
		20°-30°	13"	9 1/2"	3 1/2"	3 1/2"	17"	49 1/2"	12"	4"	1 1/2"	26"
		30°-40°	13 1/2"	10"	3 1/2"	3 1/2"	17 1/2"	50"	13"	4"	1 1/2"	26"
D	600'-760'	0°-5° incl.	13 1/2"	10 1/2"	3"	3"	18 1/2"	54"	11"	5"	2"	30"
		5°-10°	14"	10 1/2"	3 1/2"	3 1/2"	19"	54 1/2"	12"	5"	2"	30"
		10°-20°	14 1/2"	11"	3 1/2"	3 1/2"	19 1/2"	55"	13"	5"	2"	30"
		20°-30°	15"	11 1/2"	3 1/2"	3 1/2"	20"	55 1/2"	14"	5"	2"	30"
		30°-40°	15 1/2"	12"	3 1/2"	3 1/2"	20 1/2"	56"	15"	5"	2"	30"
E	760'-920'	0°-5° incl.	15 1/2"	12 1/2"	3"	3"	21 1/2"	60"	15"	6"	2 1/2"	36"
		5°-10°	16"	12 1/2"	3 1/2"	3 1/2"	22"	60 1/2"	16"	6"	2 1/2"	36"
		10°-20°	16 1/2"	13"	3 1/2"	3 1/2"	22 1/2"	61"	17"	6"	2 1/2"	36"
		20°-30°	17"	13 1/2"	3 1/2"	3 1/2"	23"	61 1/2"	18"	6"	2 1/2"	36"
		30°-40°	17 1/2"	14"	3 1/2"	3 1/2"	23 1/2"	62"	19"	6"	2 1/2"	36"

**GENERAL NOTES**  
Expansion Dams to be paid for as Structural Steel.  
If there is conflict between this Standard Detail and the design details, the requirements of the design details shall be followed.  
Steel Classification: A.S.T.M. A36

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
**STANDARD DETAILS**  
(BD 105 - 74)  
**EXPANSION DAMS**