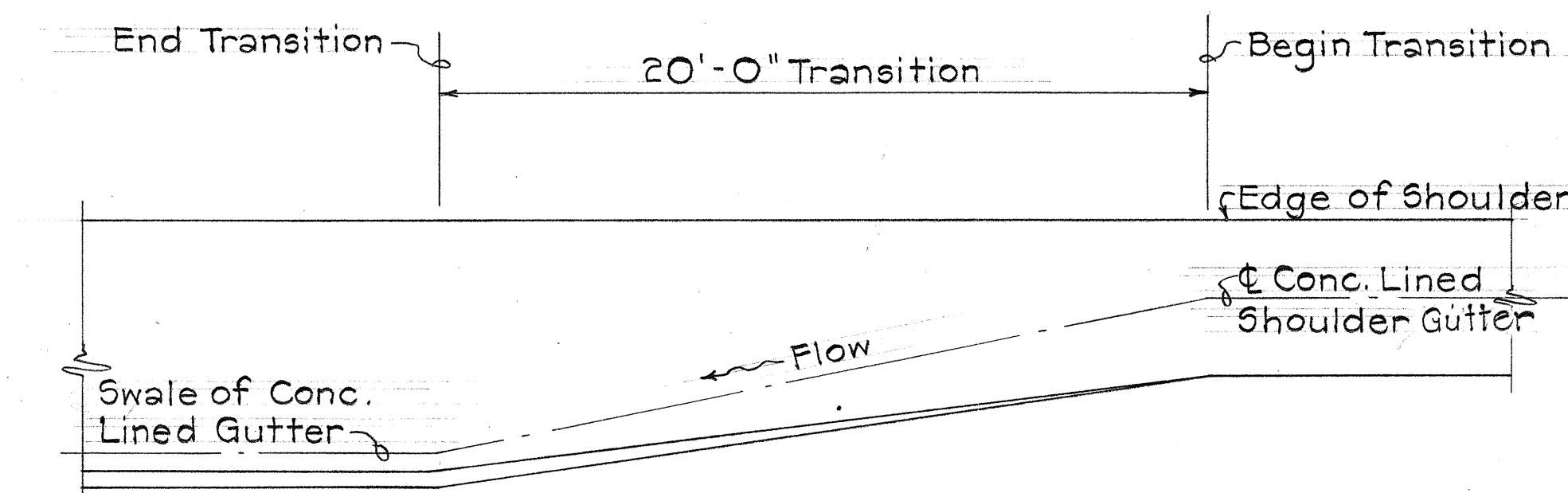
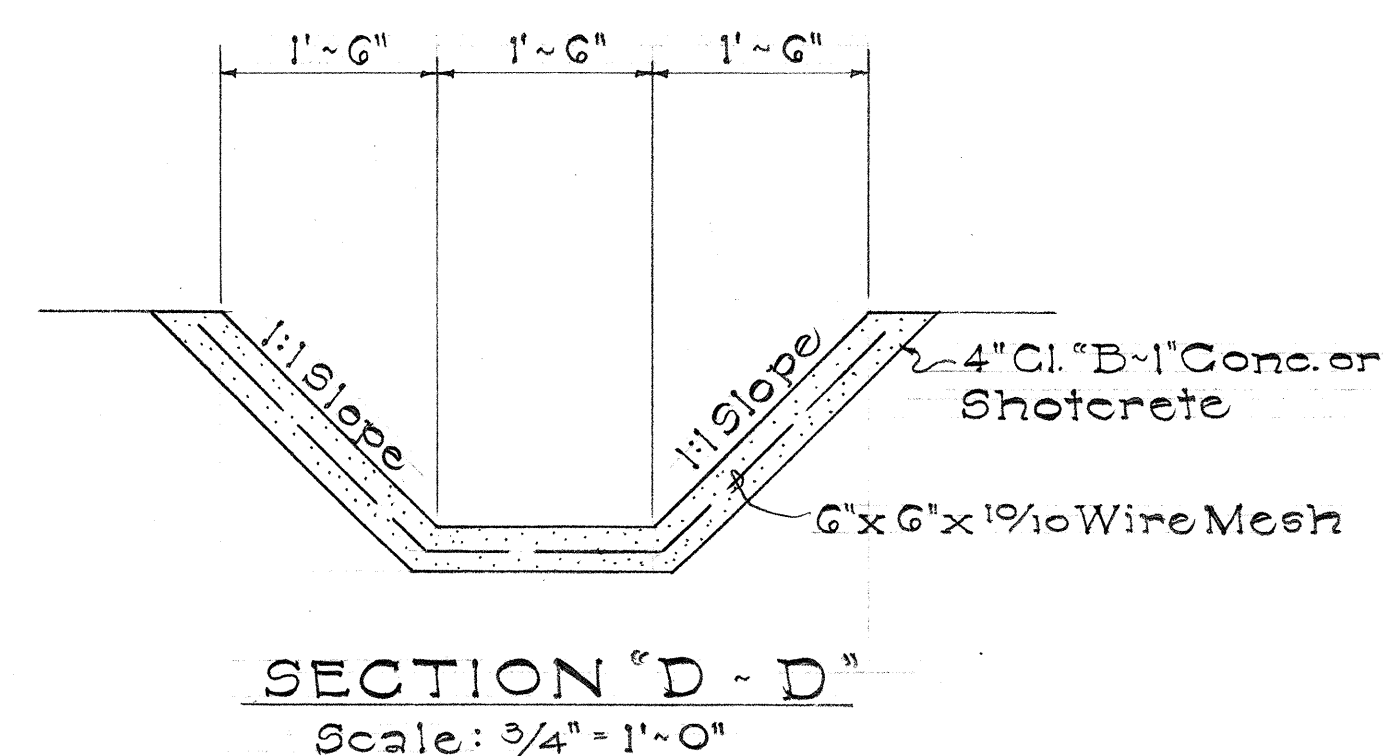
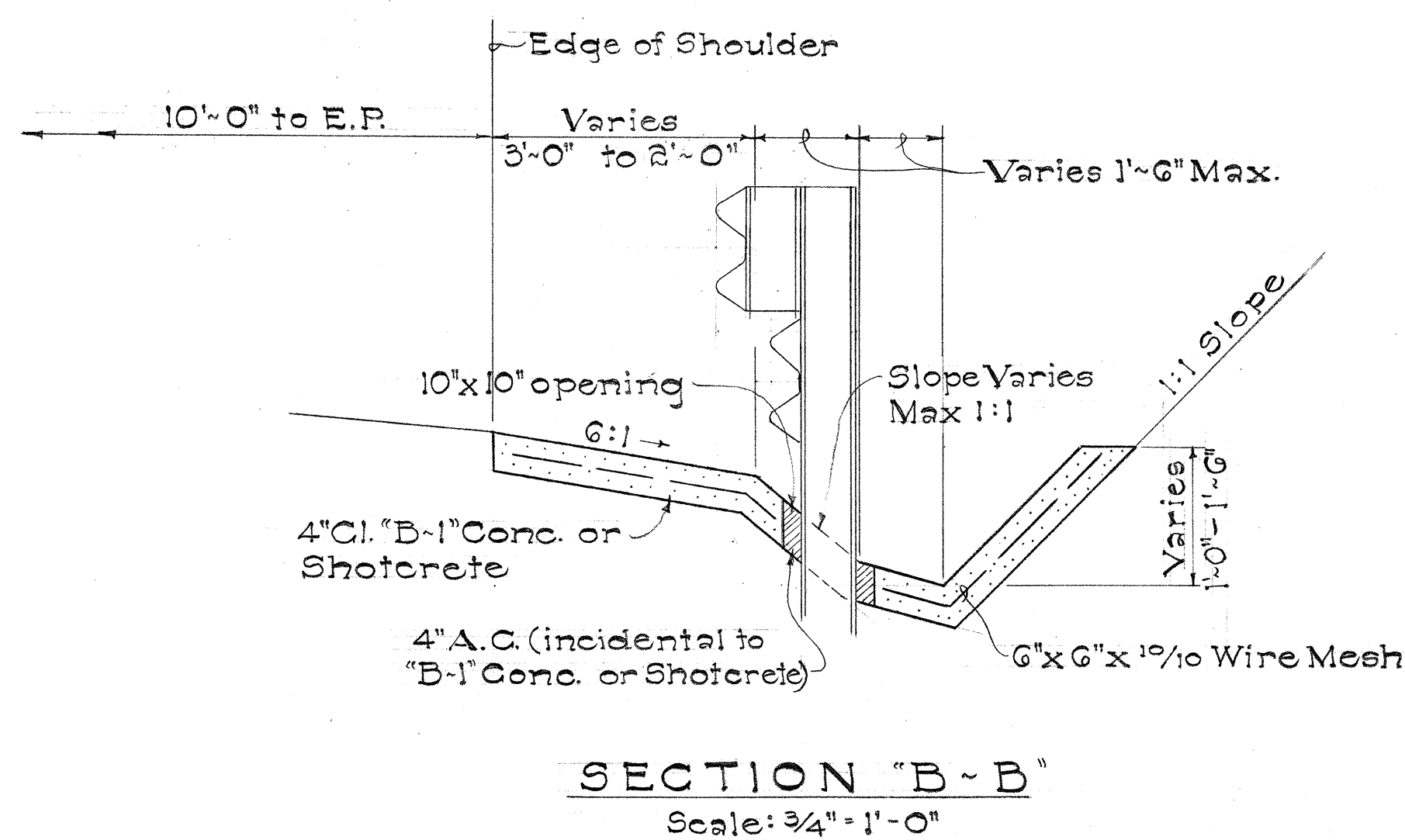
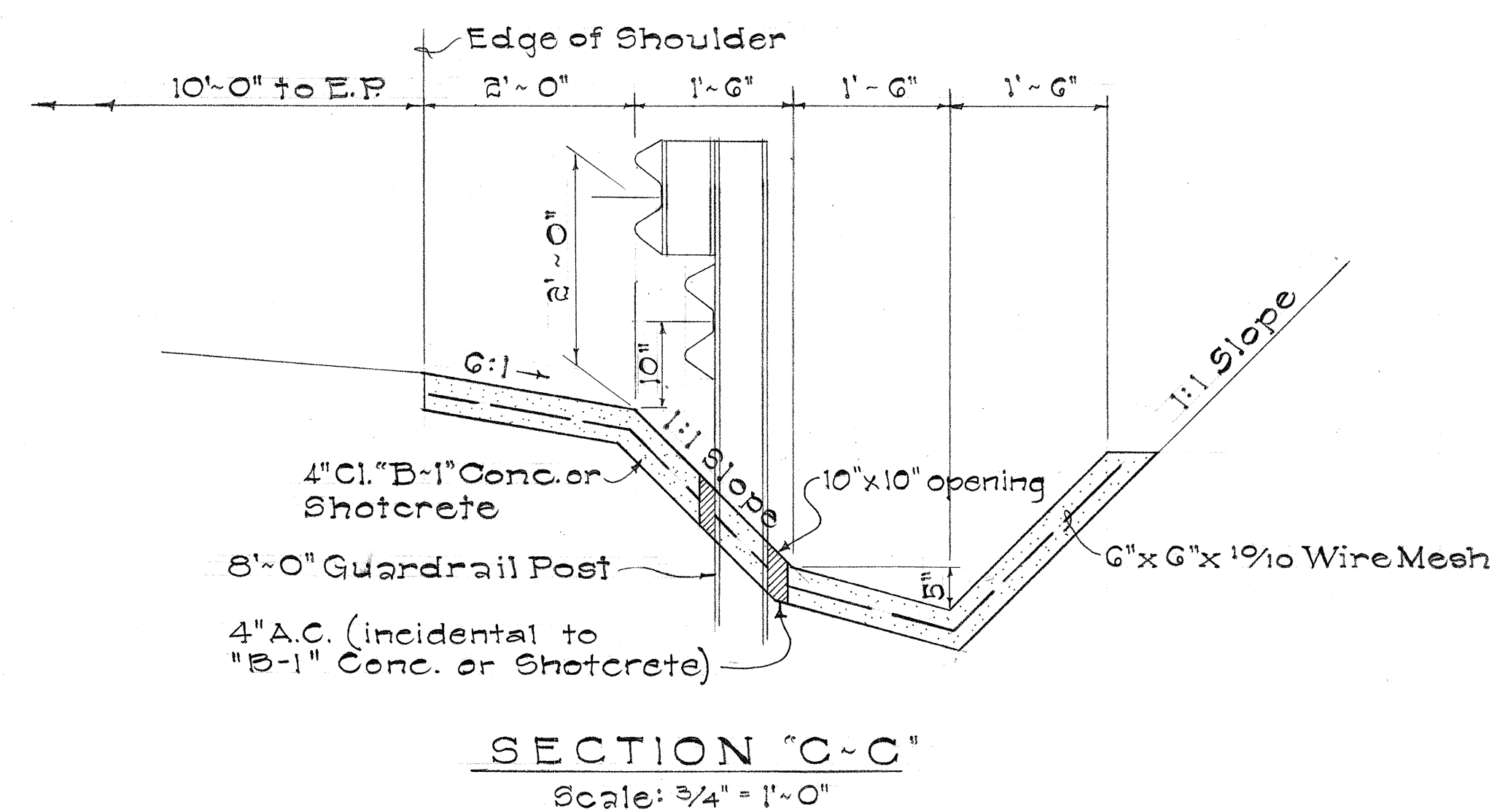
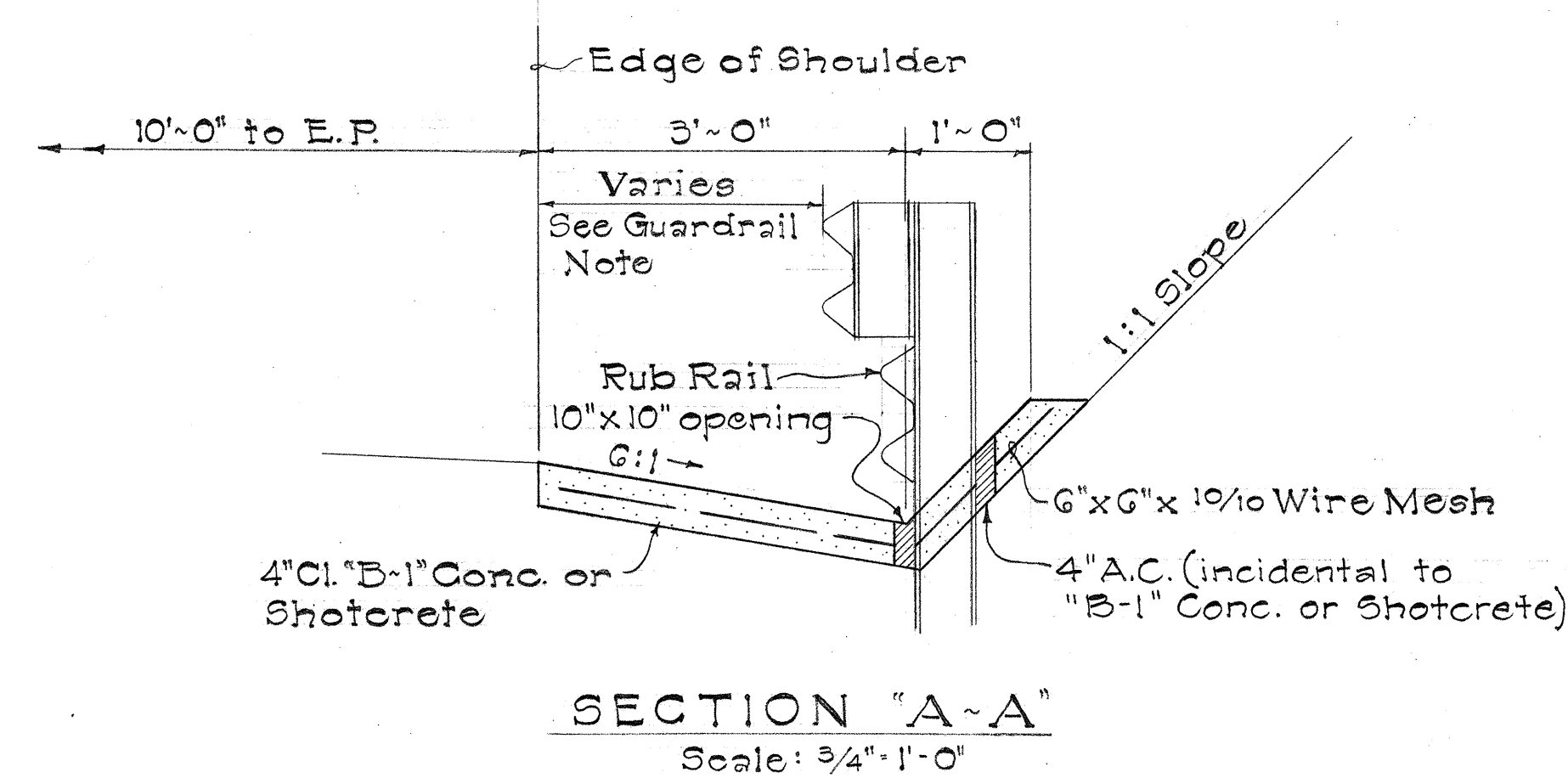
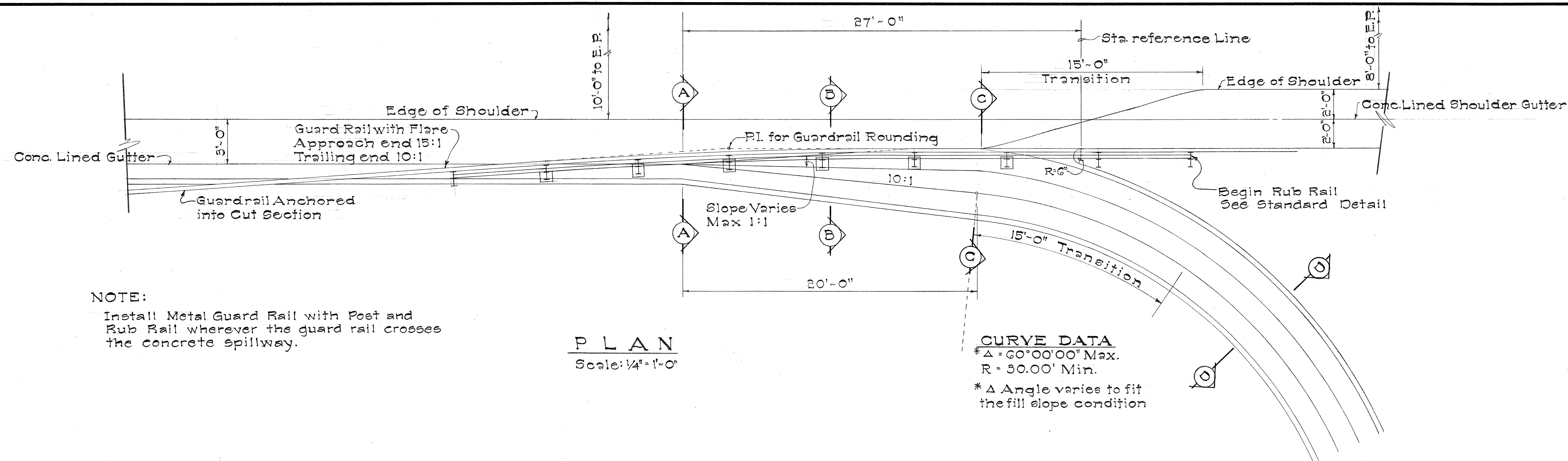


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	F-072-1(24)	1969	11	26



DETAILS OF CONCRETE SPILLWAY

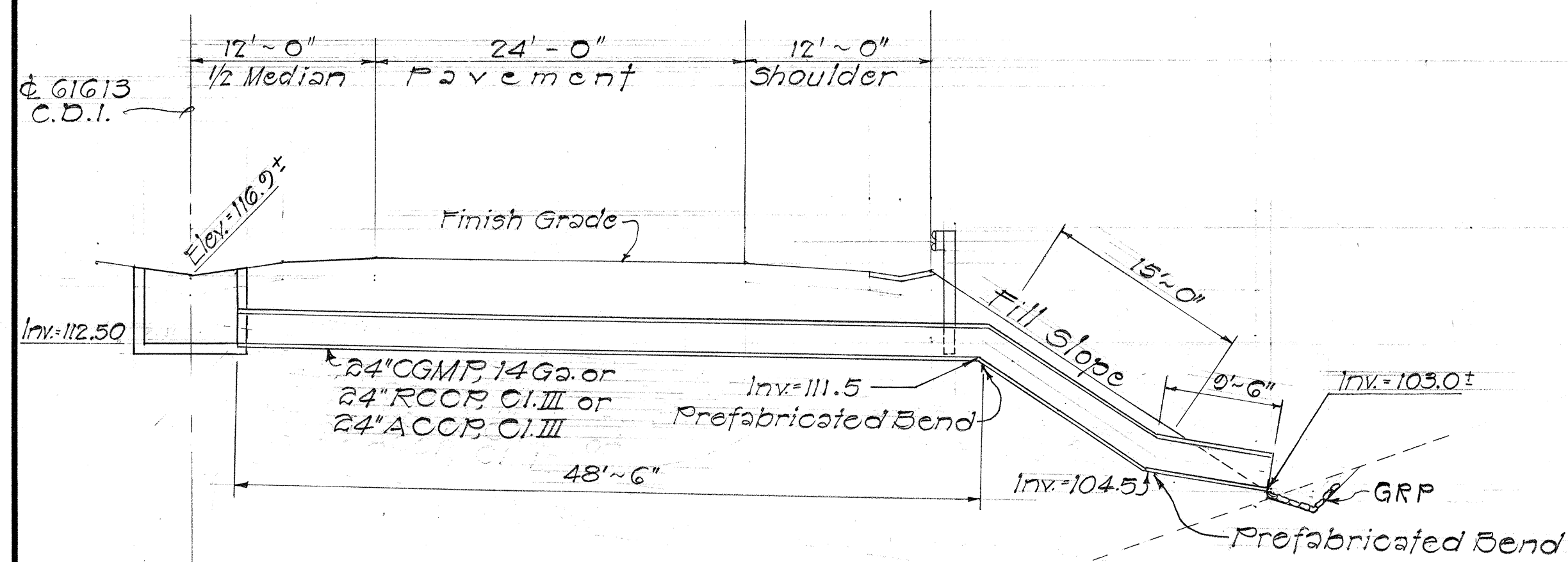
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS
CONCRETE SPILLWAY
KALANIANA'OLE HIGHWAY
PROJ. No. F-072-1(24)

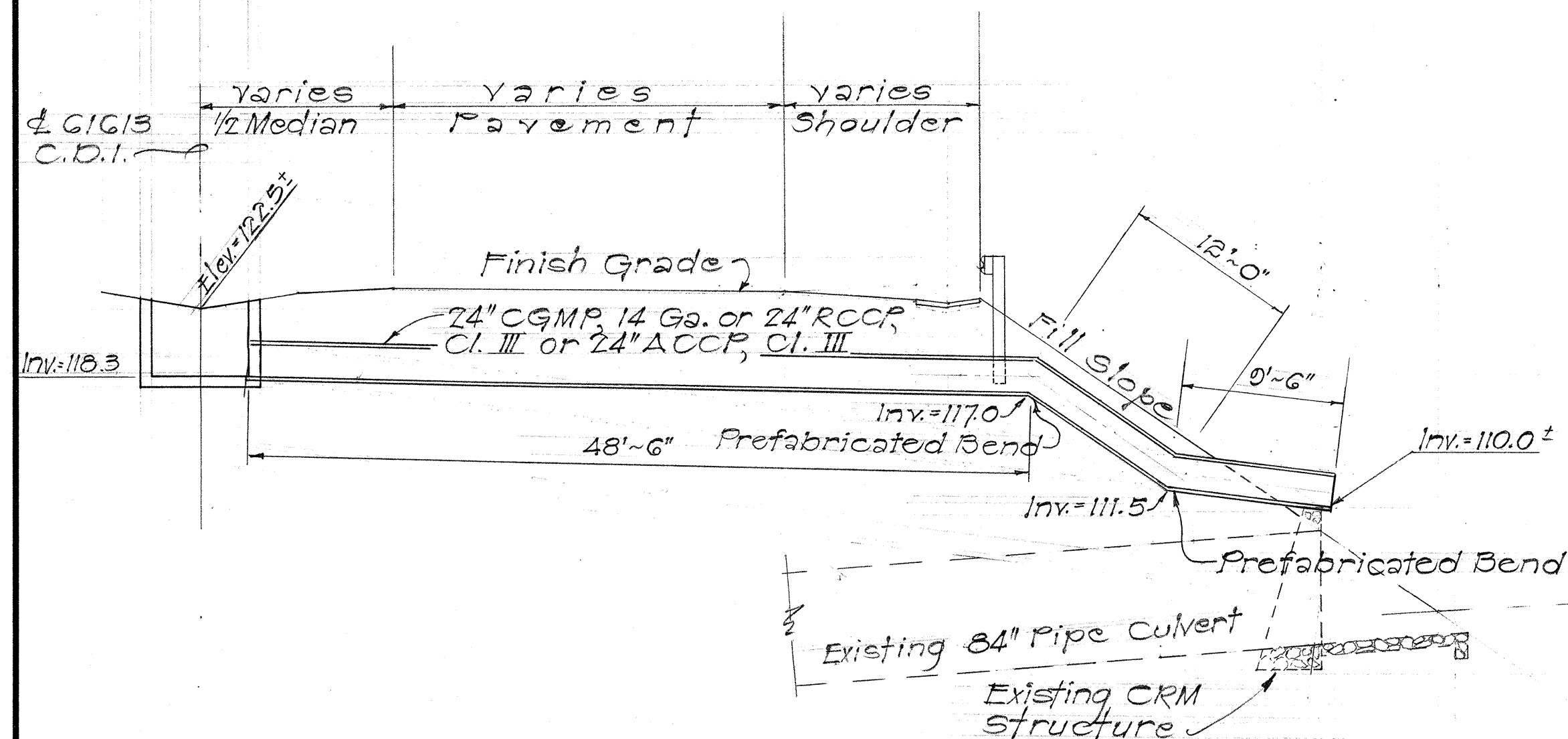
Scale: As Shown Date: May, 1969

SHEET No. 1 OF 4 SHEETS

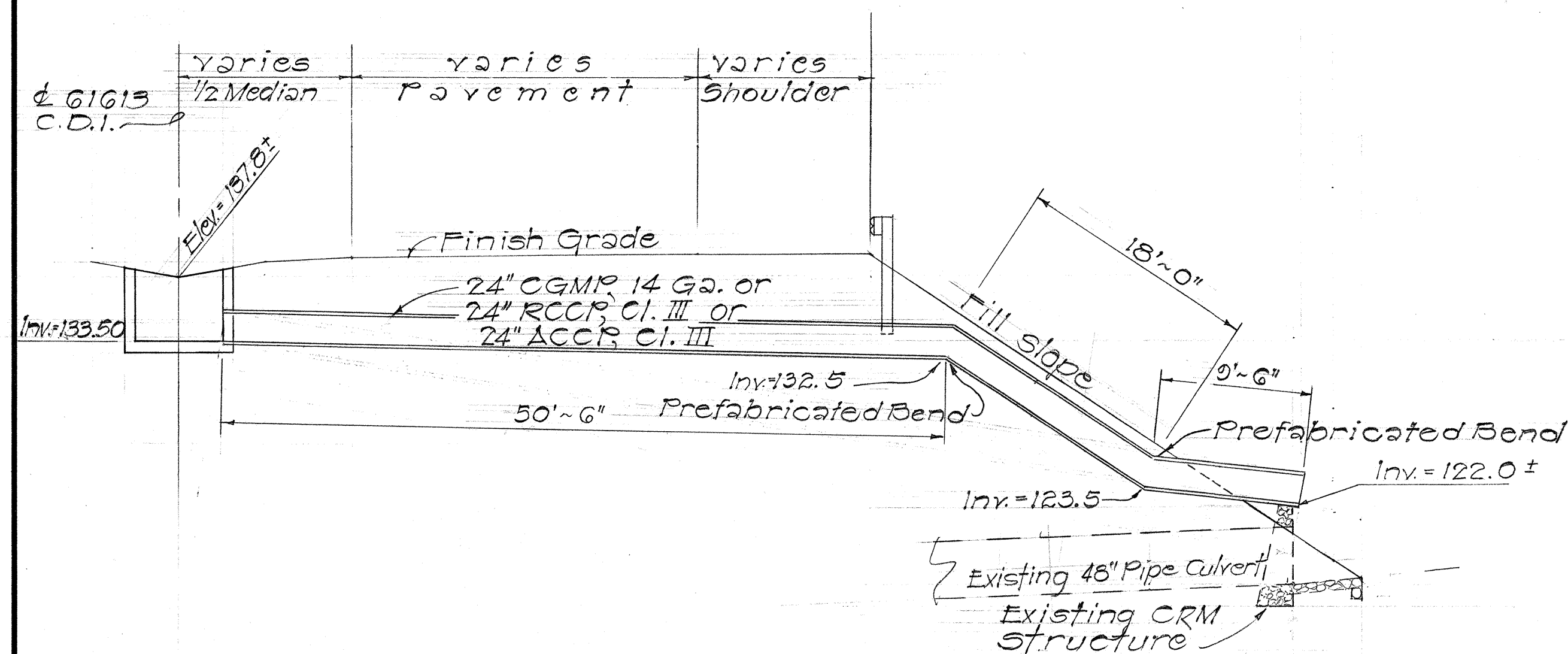
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(24)	1969	12	26



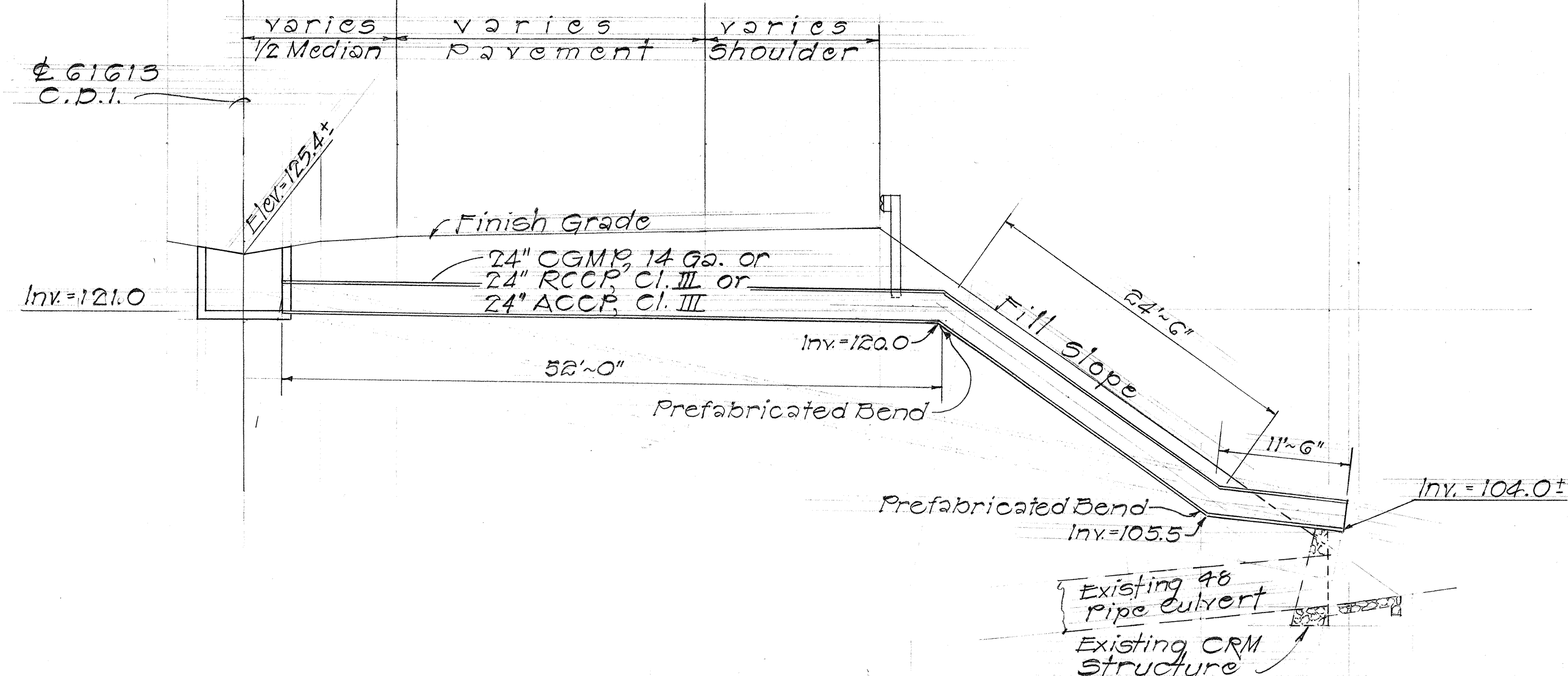
PROFILE OF CULVERT @ STA. 81+00 O.B.



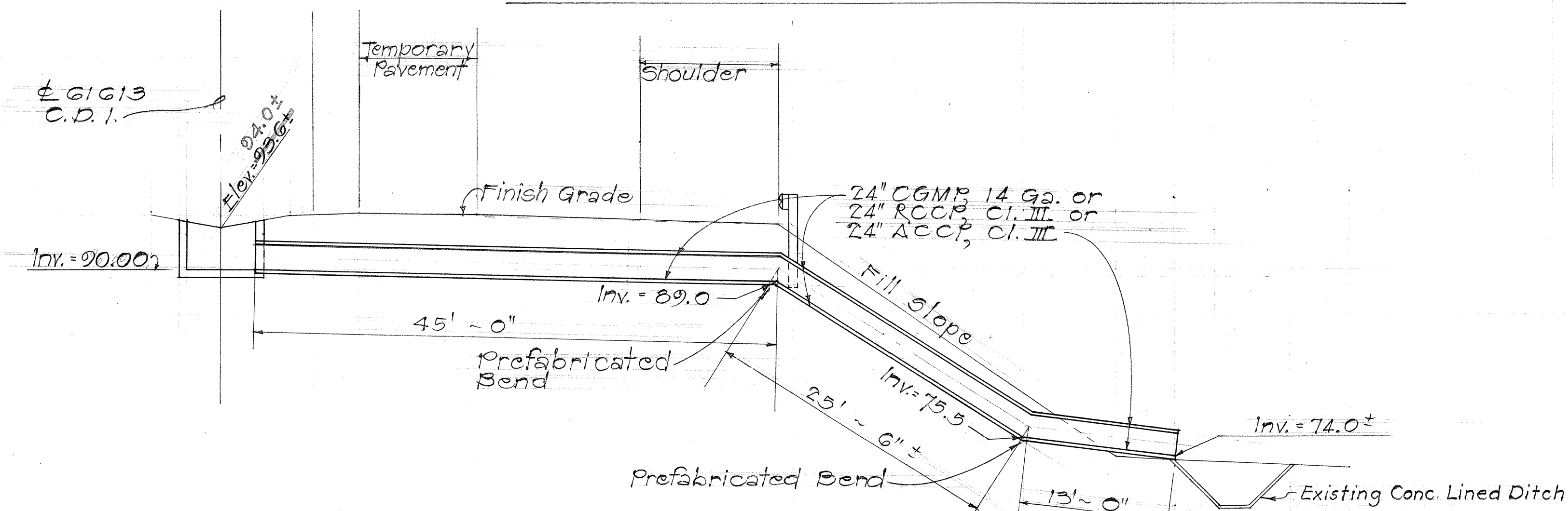
PROFILE OF CULVERT @ STA. 91+00 O.B.



PROFILE OF CULVERT @ STA. 100+00 O.B.



PROFILE OF CULVERT @ STA. 116+00 O.B.



PROFILE OF CULVERT @ STA. 122+50 O.B.

NOTE:
Profiles shown are along ϕ of culverts and lengths shown are approximate.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRAINAGE DETAILS
PROFILES OF PIPE CULVERT
CROSSINGS
KALANIANA'OLE HIGHWAY
PROJ. NO. F-072-1(24)
Scale: 1/8" = 1'-0" Date:
SHEET No. 2 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(24)	1969	13	26

GENERAL NOTES

- Grates and Frames shall be hot dip galvanized after fabrication, see specifications.
- All welds $\frac{3}{8}$ " unless otherwise noted.
- Refer to "Spacing Table" for Types 61612 & 61613 Drop Intake and Frame & Grates dimensions.
- The Frame & Grate materials shall conform to the specifications of ASTM Designation Structural Steel A283, Grade D and the Standard Specifications.
- Culvert shall leave Drop Intake from any position and any direction indicated by plans or ordered by the Engineer. Culverts may both enter and leave Drop Intake so that Drop Intake will act as manhole.

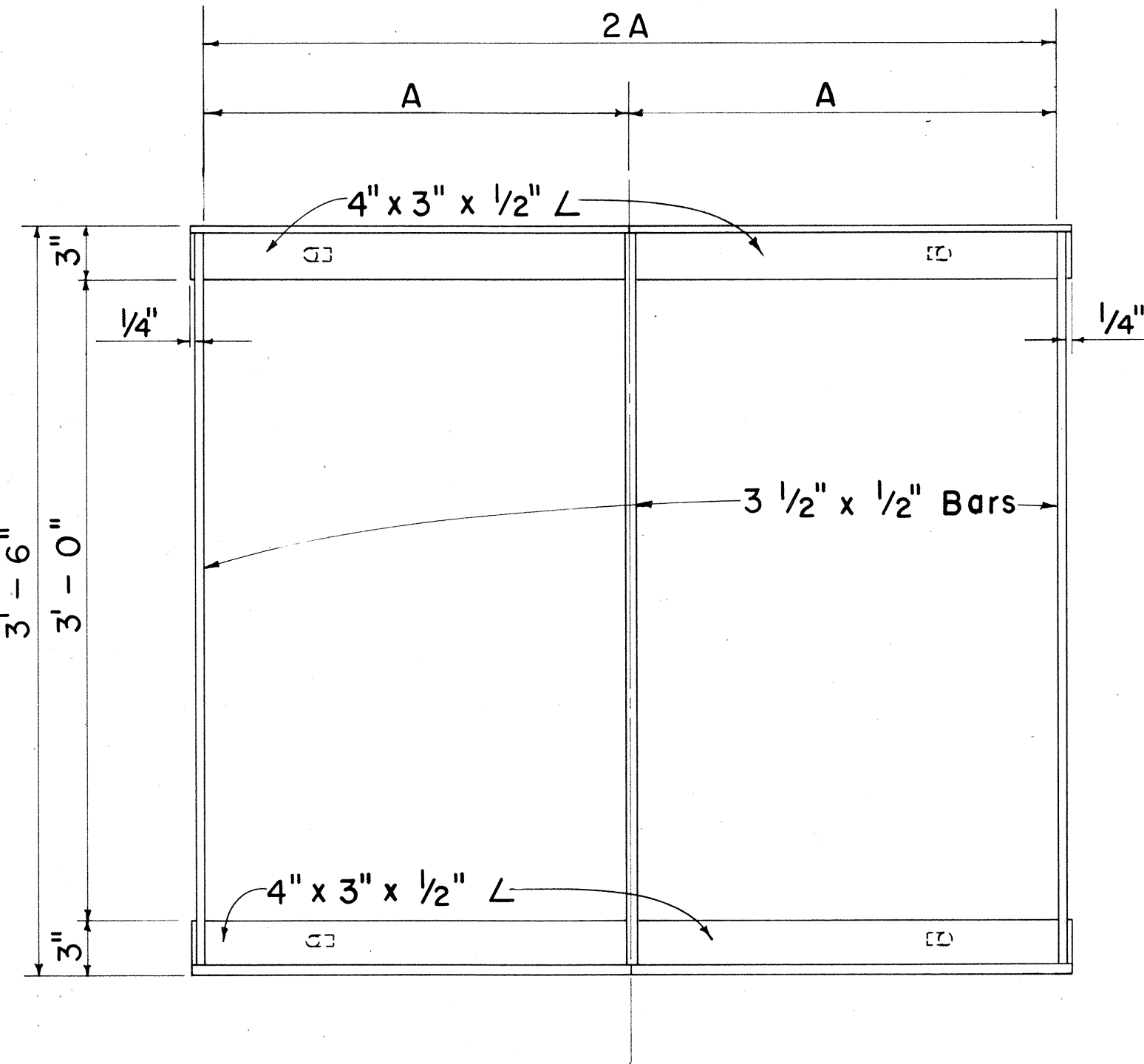
SPACING TABLE					
TYPE	NO. BARS	A	B	C	D
61612	11	2'-0"	1'-11½"	1¼"	1'-6"
61613	17	3'-0"	2'-11½"	1⅛"	2'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAIL
DETAILS OF 61612 & 61613
DROP INTAKE

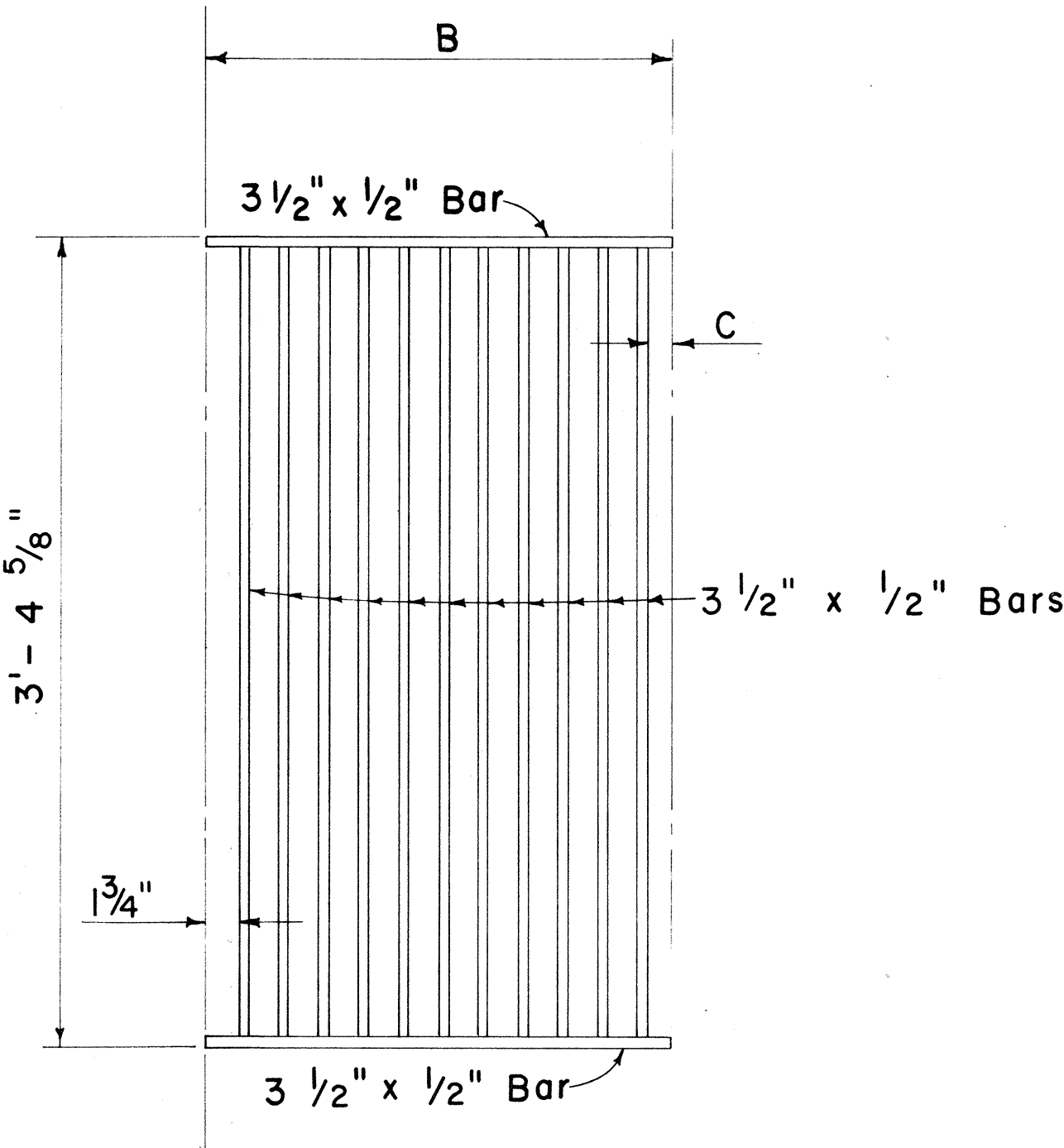
Scales: As Noted Date: Feb. 1969

SHEET No. 3 OF 4 SHEETS



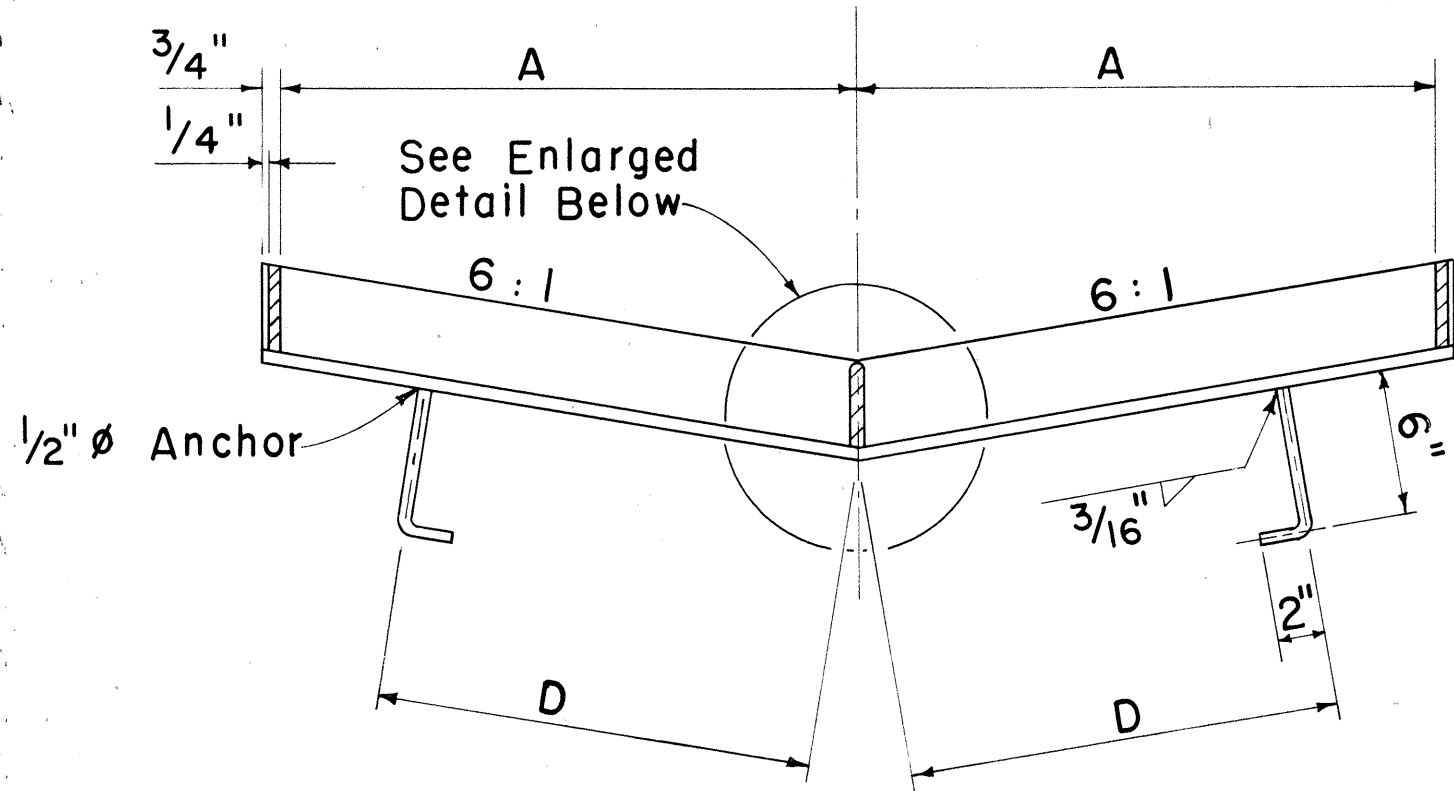
PLAN

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



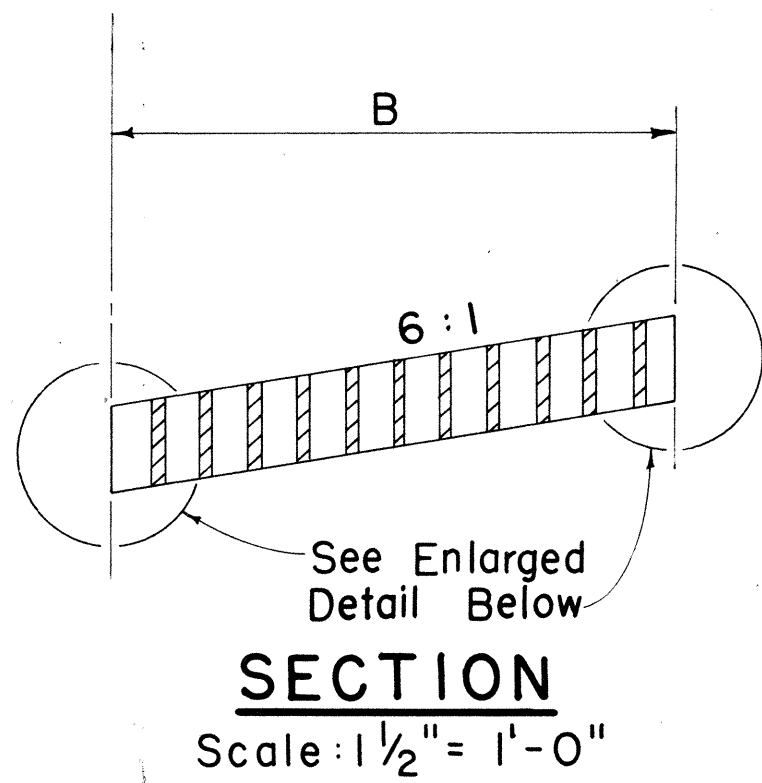
PLAN

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



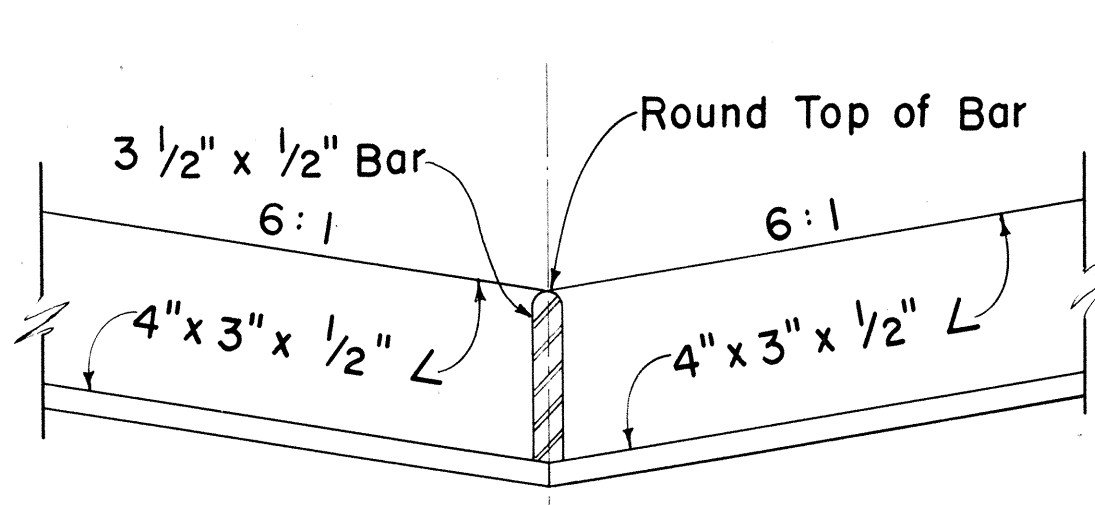
SECTION

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



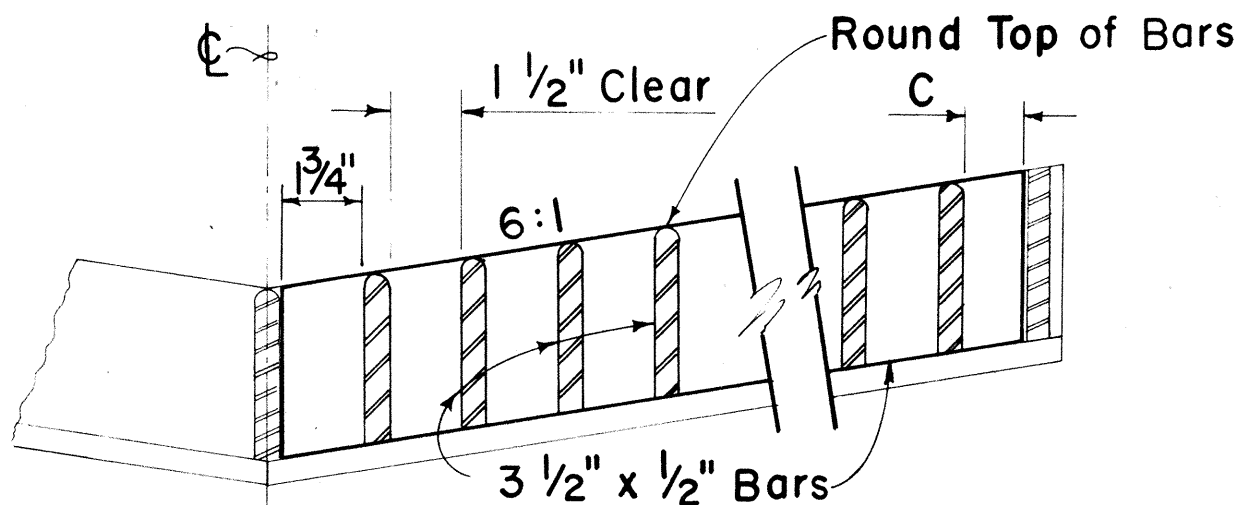
SECTION

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



FRAME

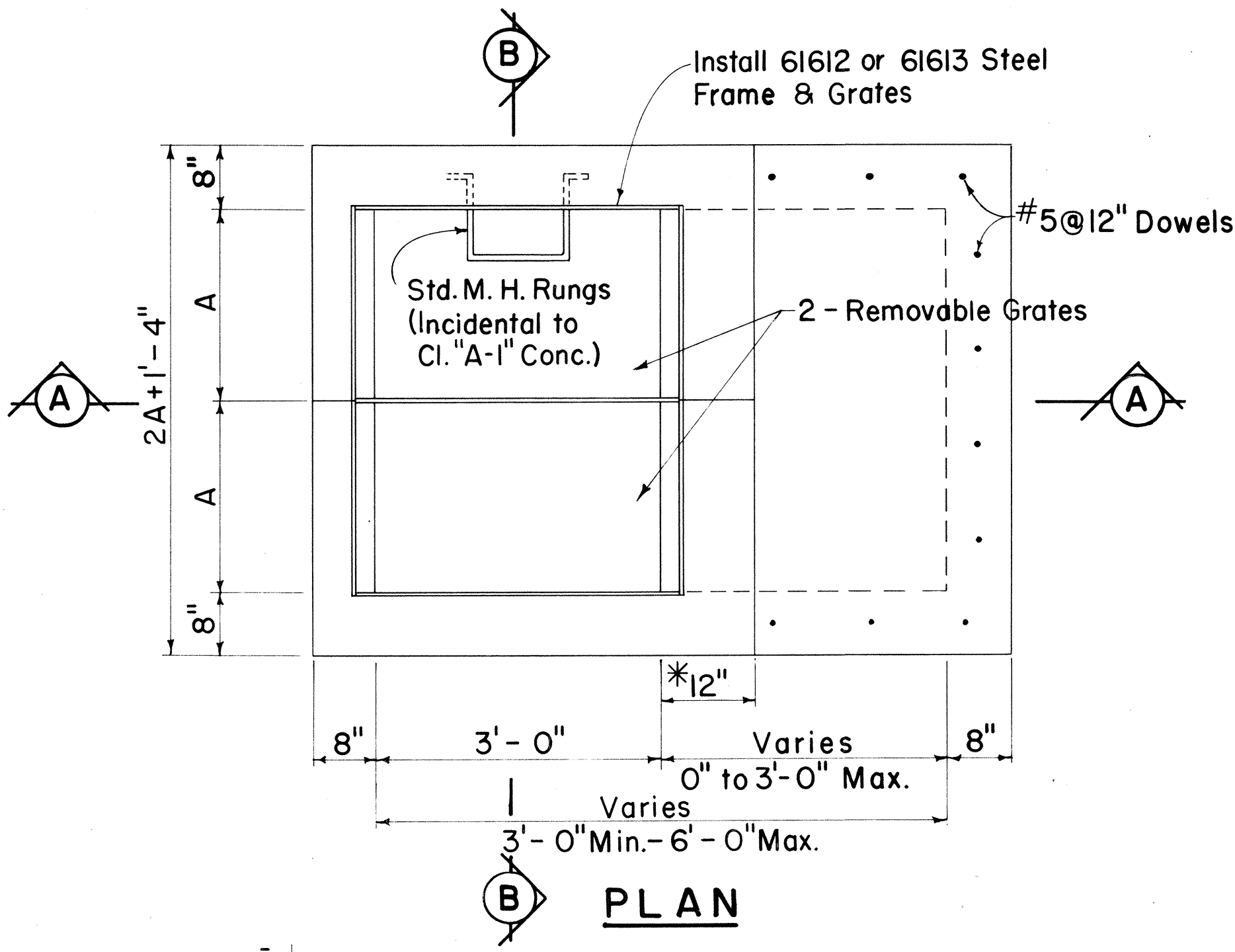
Scale: 3" = 1'-0"



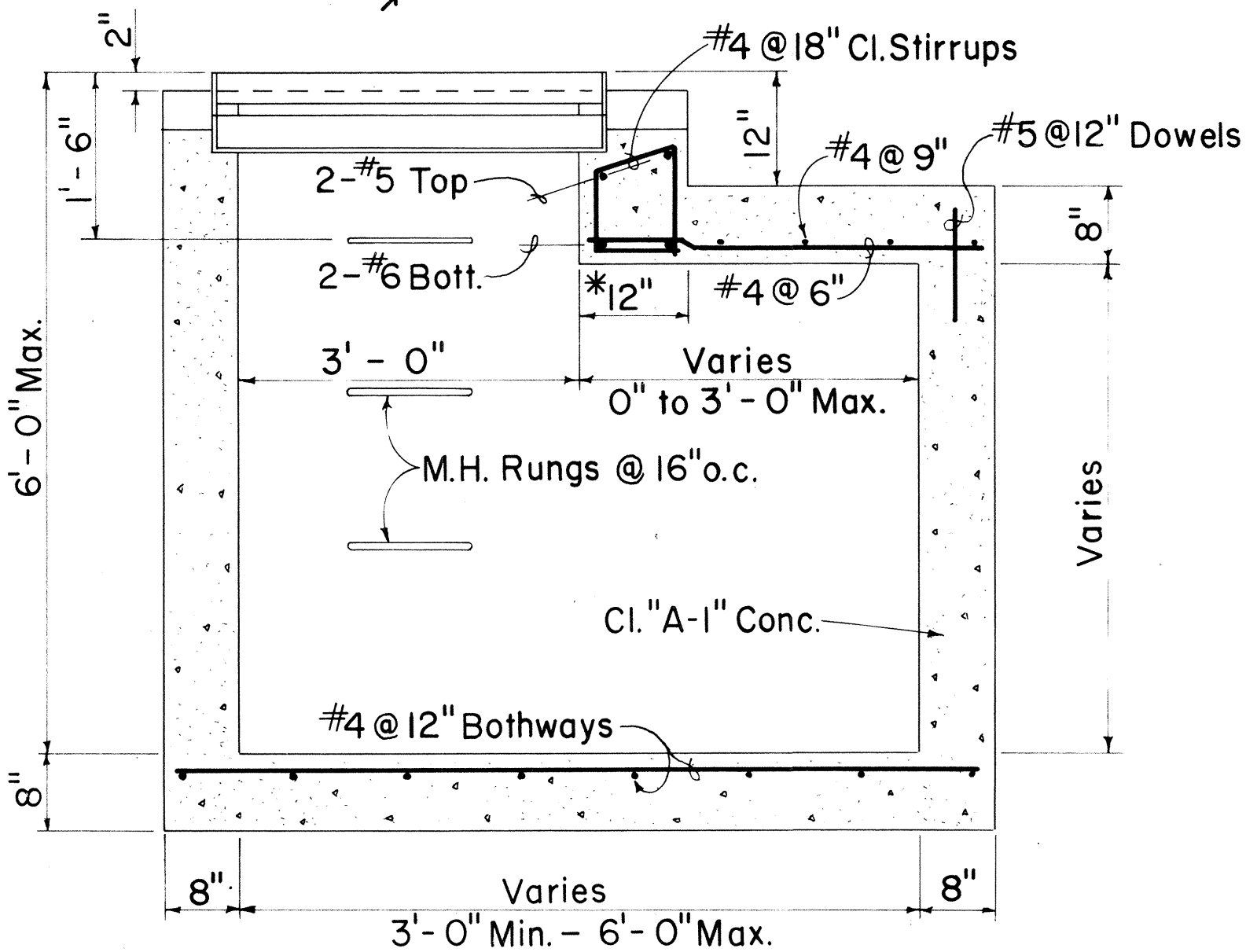
GRATE

Scale: 3" = 1'-0"

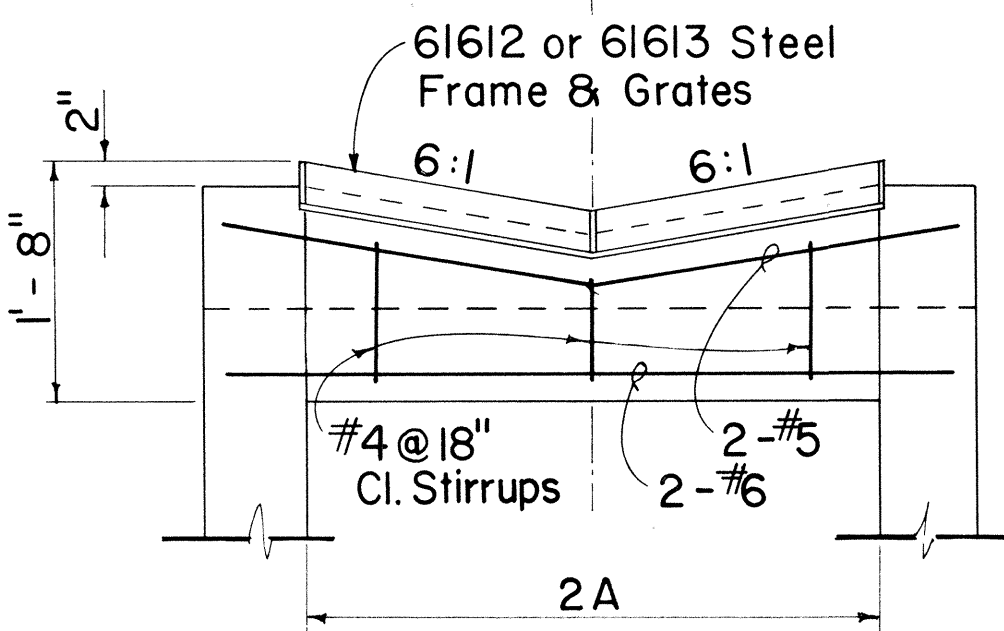
DETAILS OF TYPE 61612 OR 61613
STEEL FRAME AND GRATES



PLAN



SECTION A - A

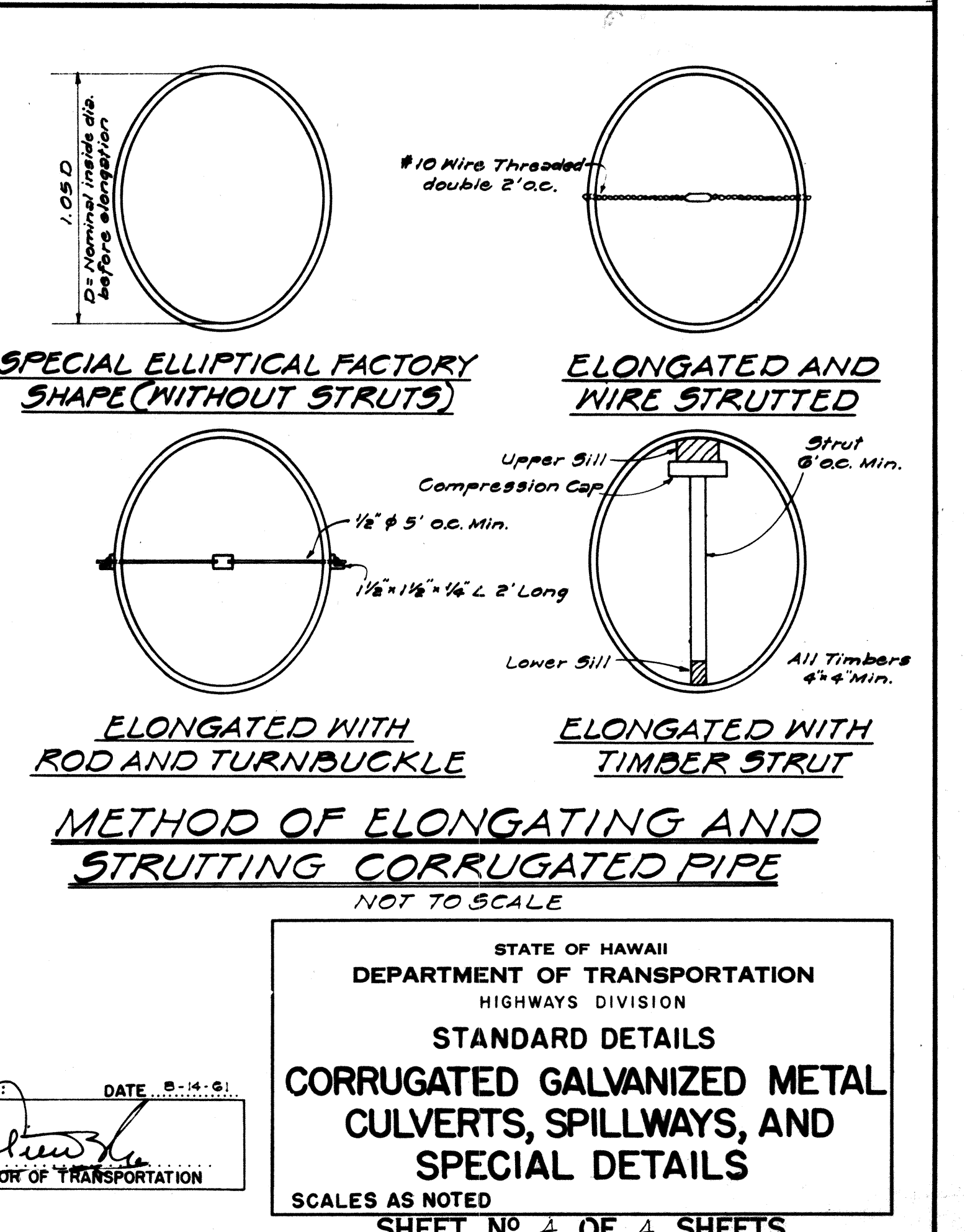
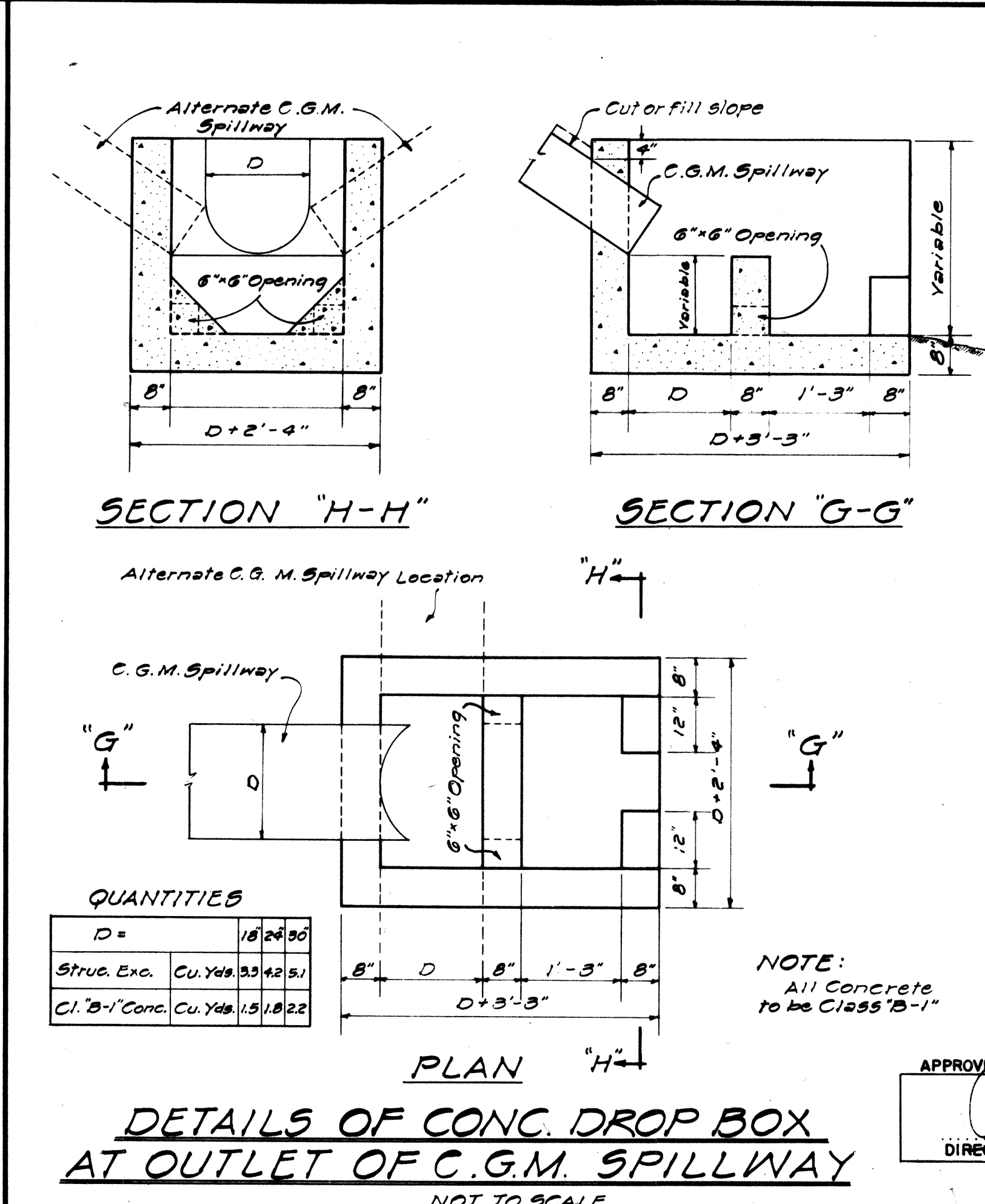
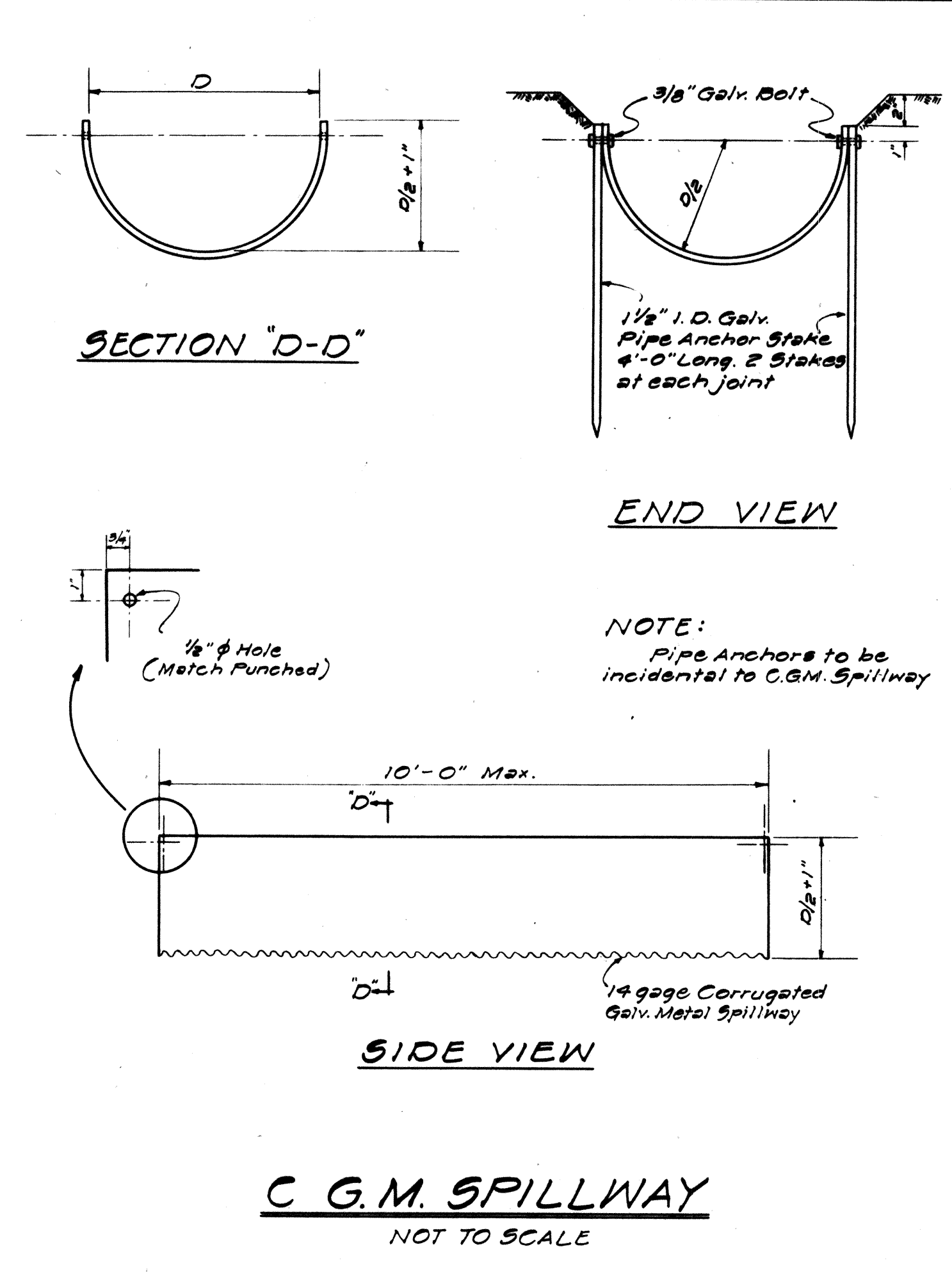
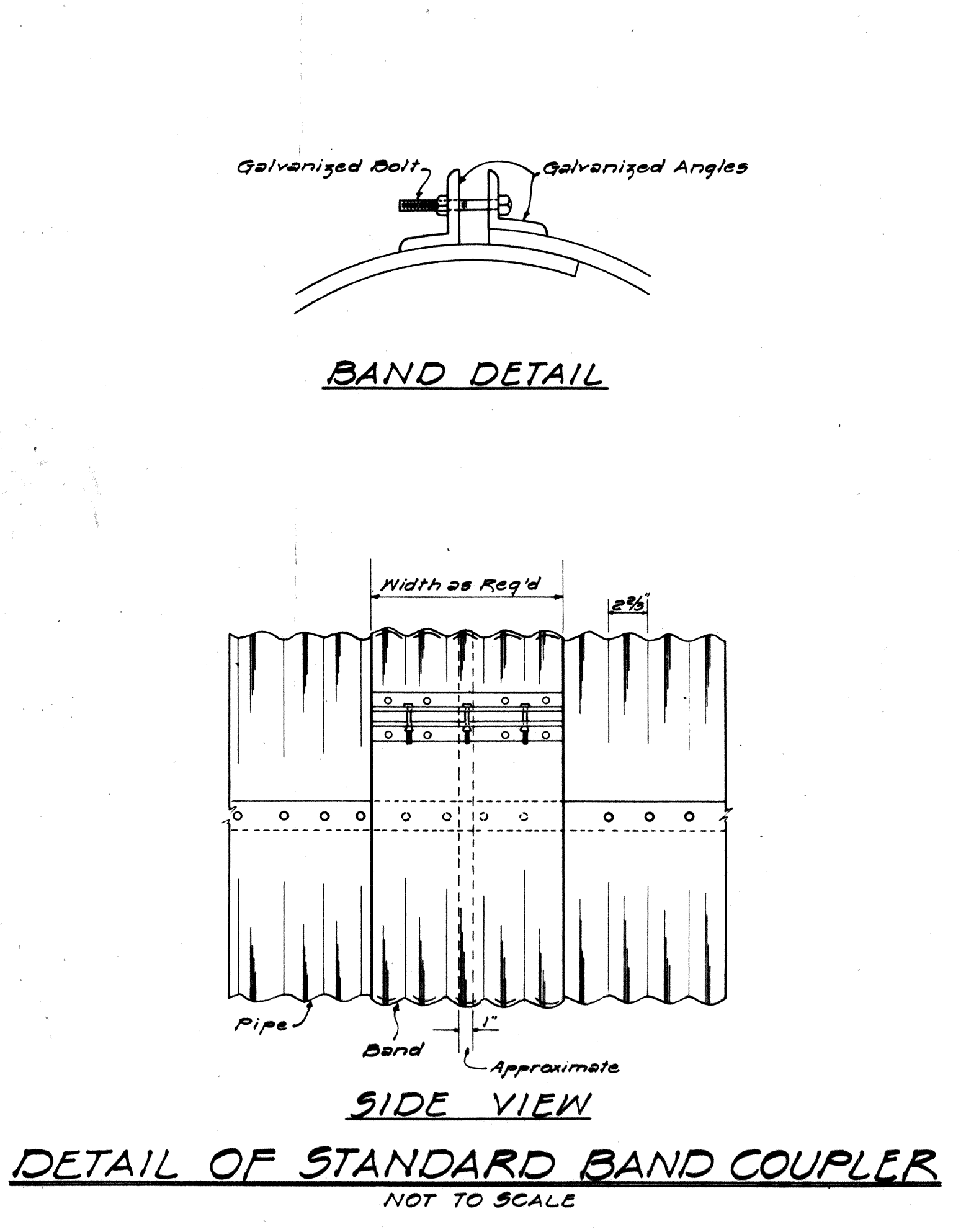
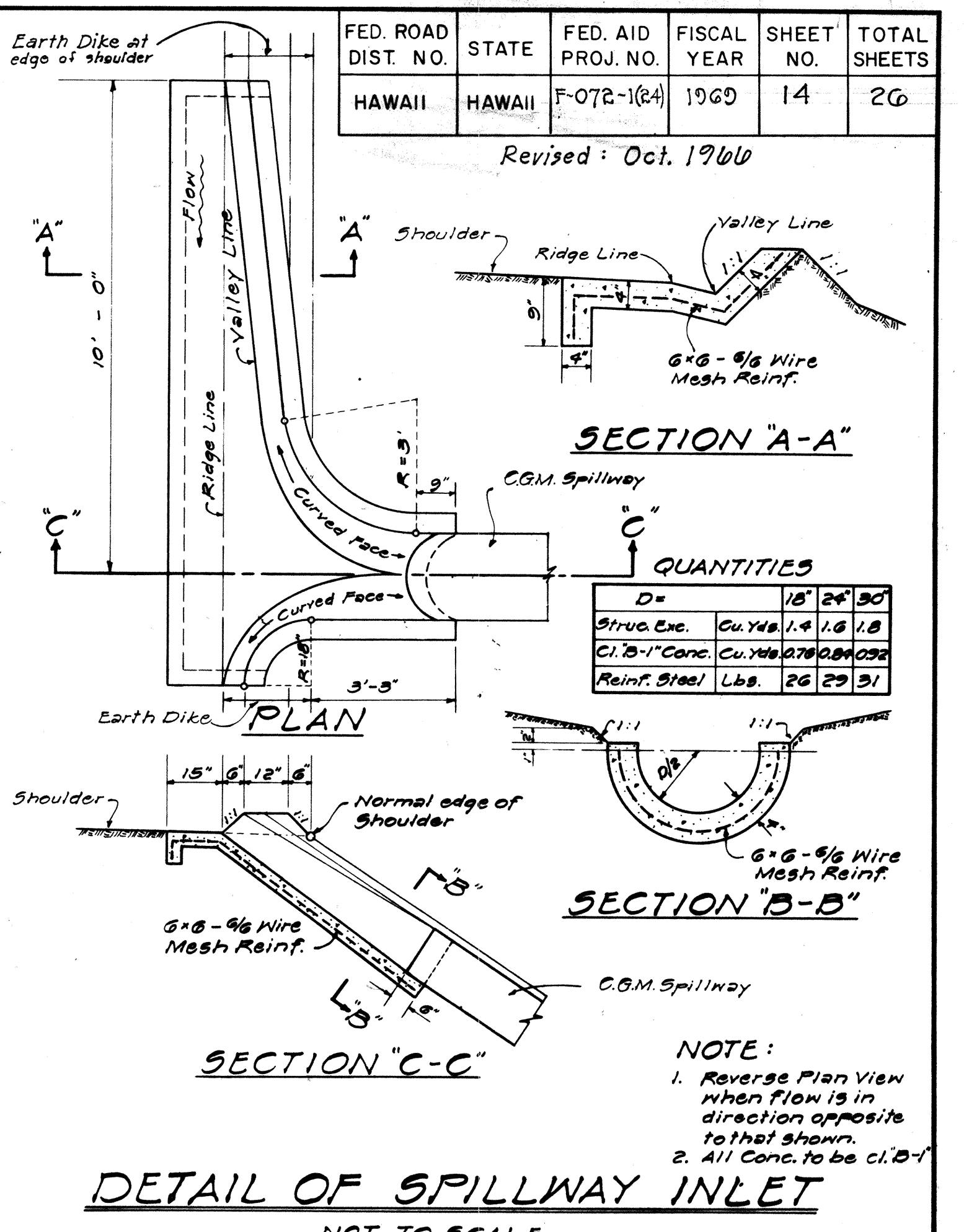
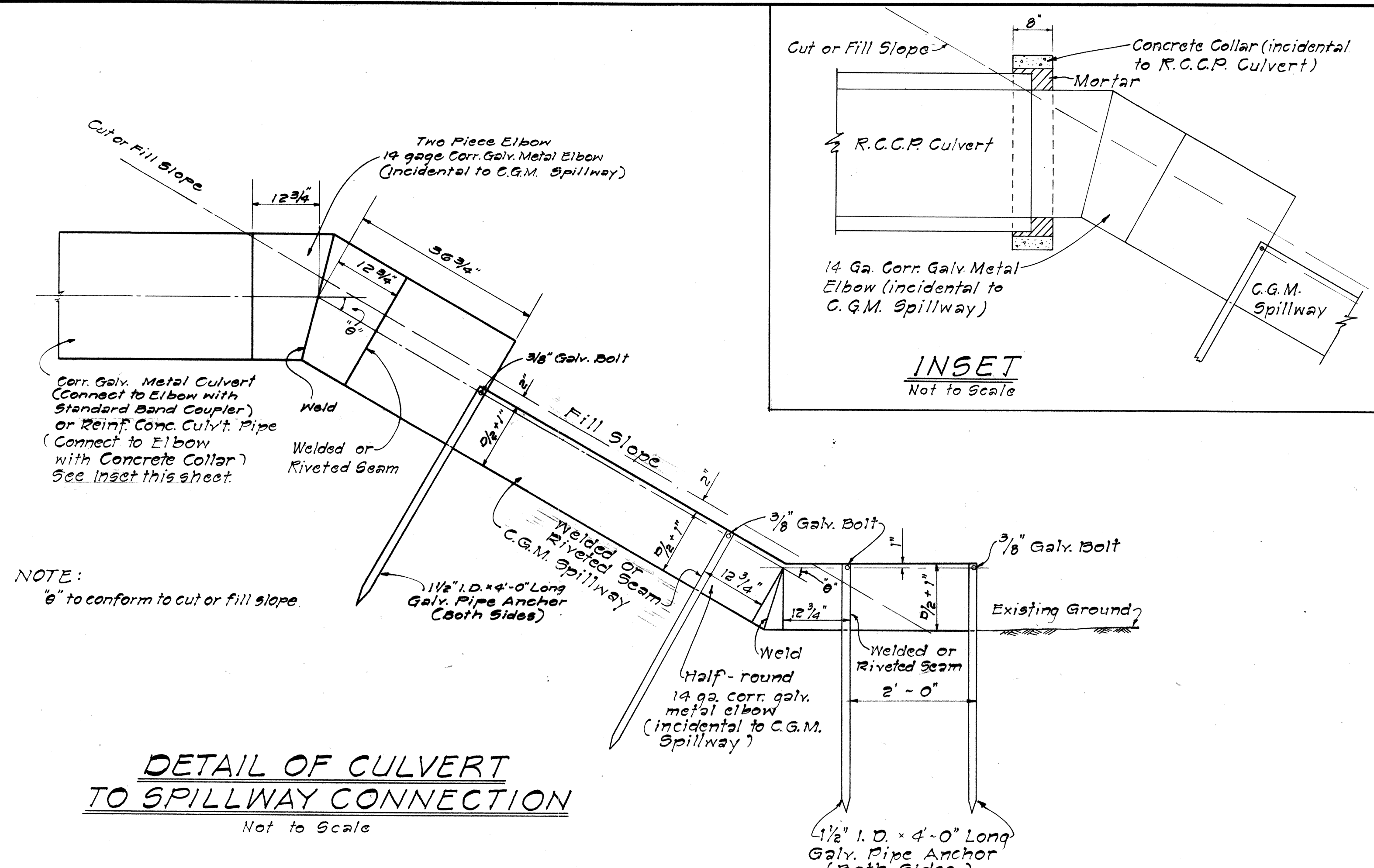
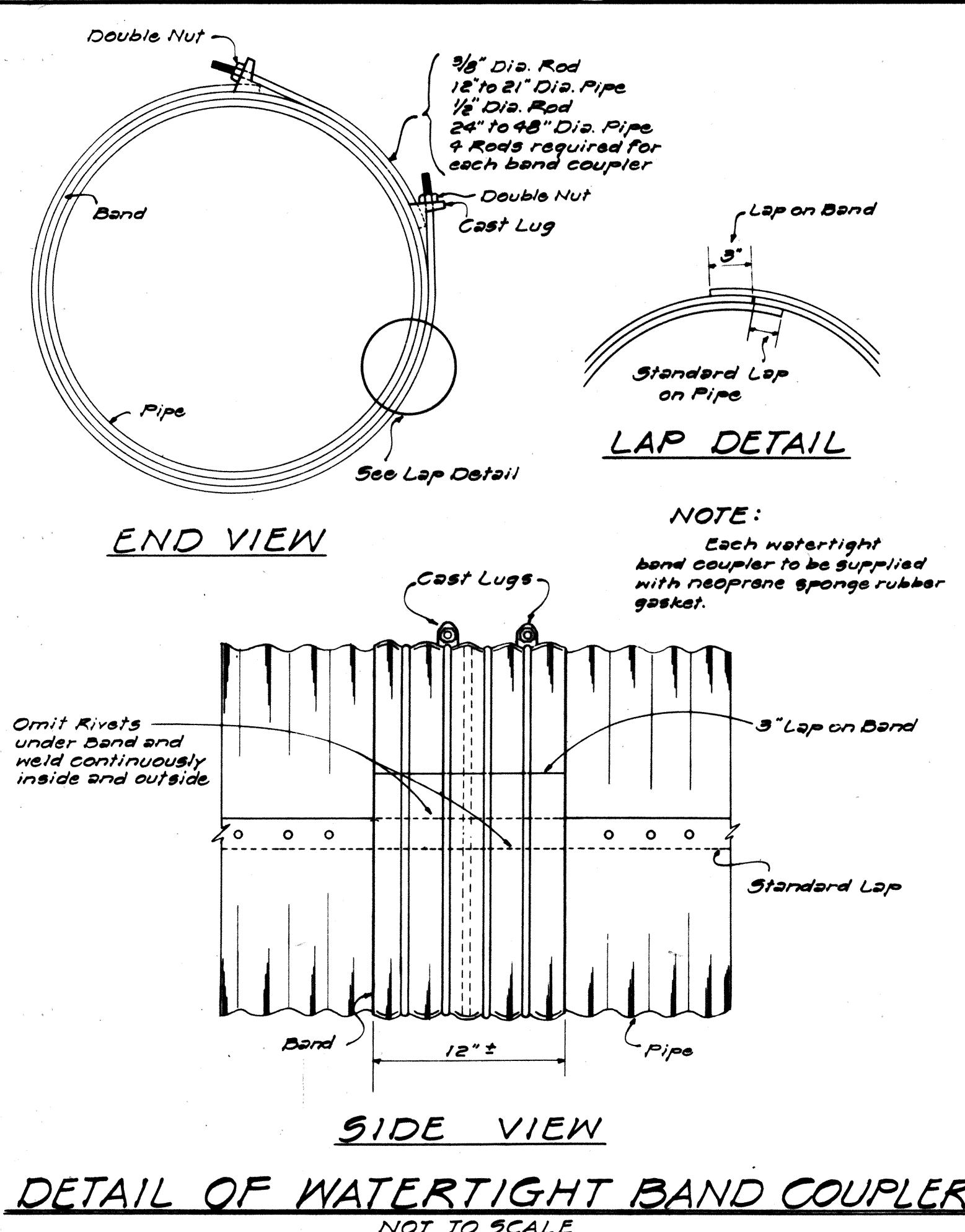


SECTION B - B

DETAIL OF 61612 OR 61613 DROP INTAKE

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

*For Minimum size box of 3'-0" only use 8" and eliminate reinforcing steel shown in the top portion.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
CORRUGATED GALVANIZED METAL
CULVERTS, SPILLWAYS, AND
SPECIAL DETAILS
SCALES AS NOTED
SHEET NO. 4 OF 4 SHEETS

APPROVED: DATE: 8-14-61
DIRECTOR OF TRANSPORTATION

SURVEY PLOTTED BY: DATE: 8-24-61
DESIGNED BY: TRACED BY: 5-24-61
NOTE BOOK: QUANTITIES BY: 5-24-61
CHECKED BY: No.