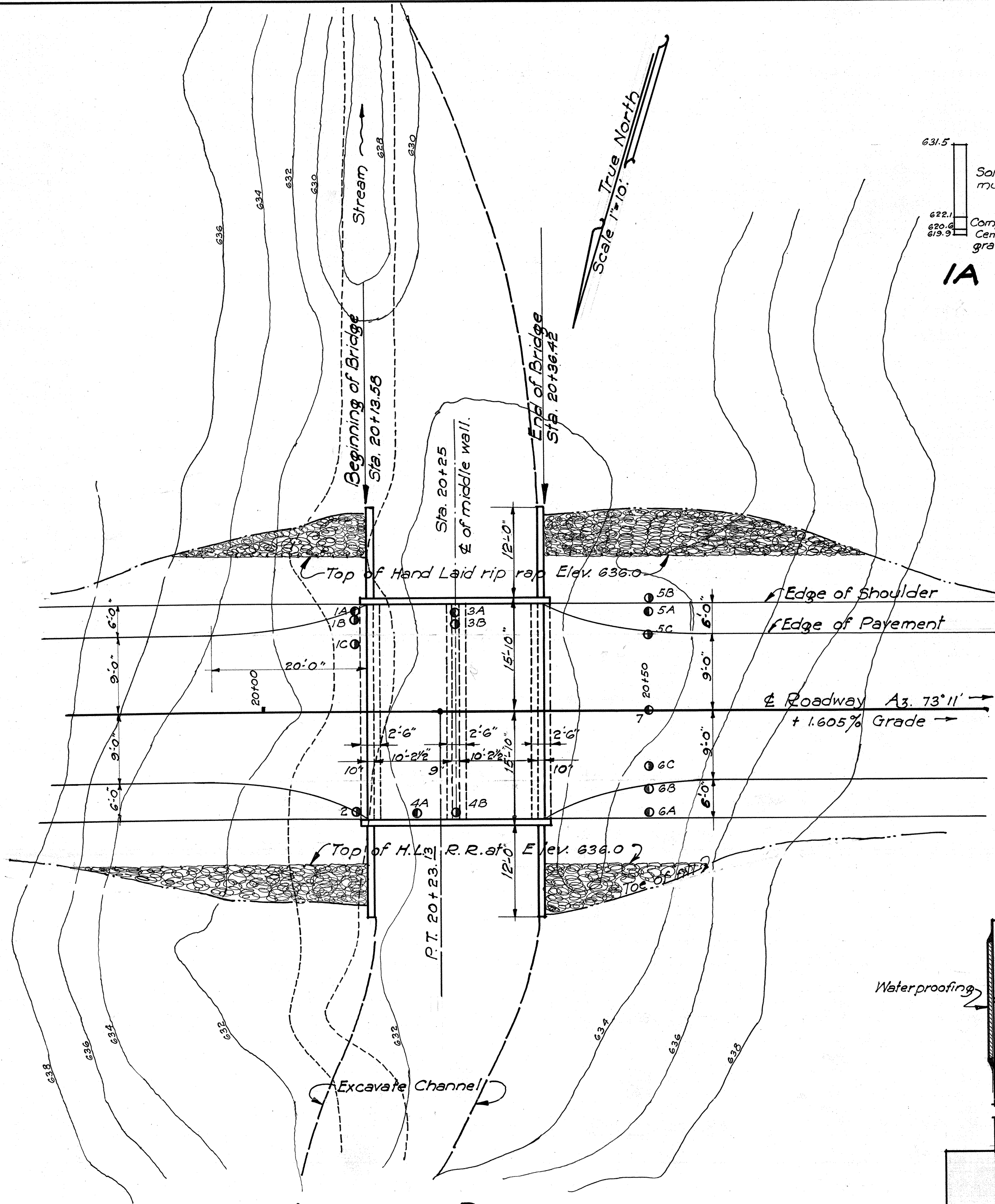




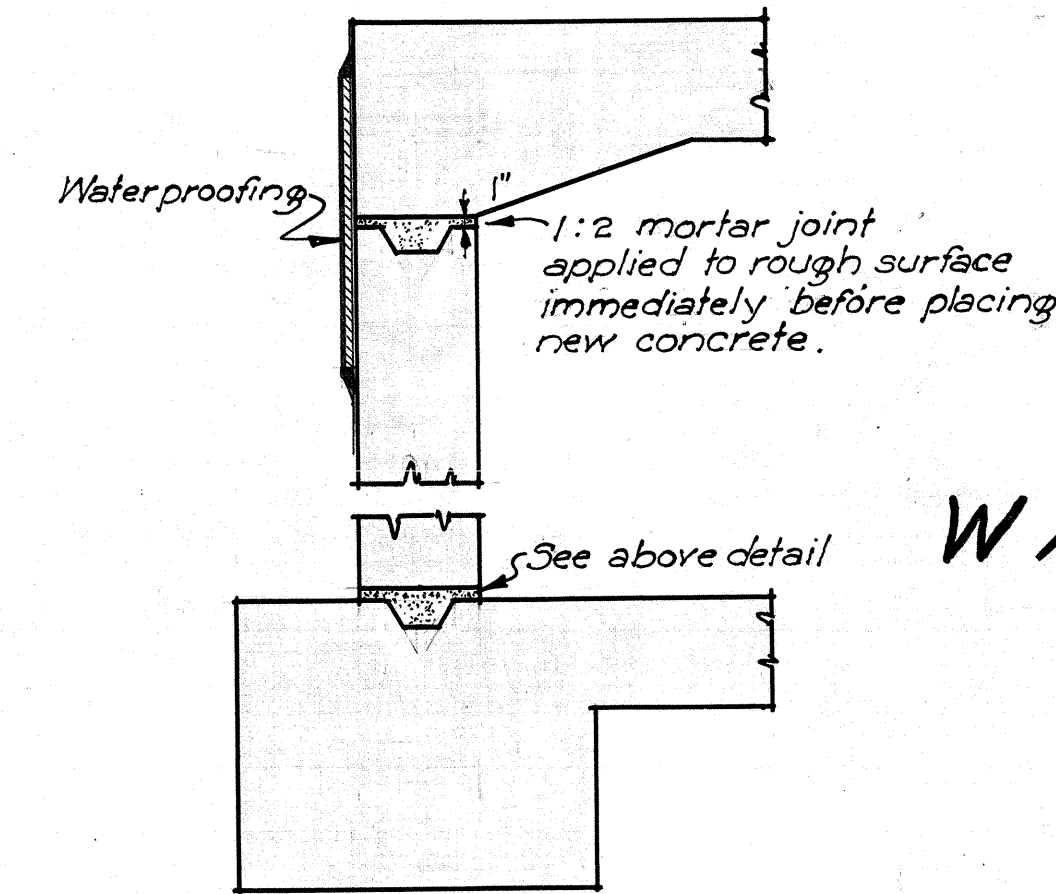
LAYOUT PLAN.

Scale 1"=10'.

Note: The rip-rap on the downstream side shall be put in only at the discretion of the Resident Engineer.

BOX CULVERT QUANTITIES.

Unclass. Exc. Cu. Yds.	Structure Exc. Cu. Yds.	Concrete Cu. Yds.	Steel Lbs.	Conc. Piles No.	Rip-rap
100.0 C.Y.	118.0 C.Y.	103.0 C.Y.	14,000.0#	18-16"x16"x45'-0"	28.0 Cu.yds.



CONSTRUCTION JOINT.

TYPICAL FOR ALL STRUCTURES ON THIS PROJECT.

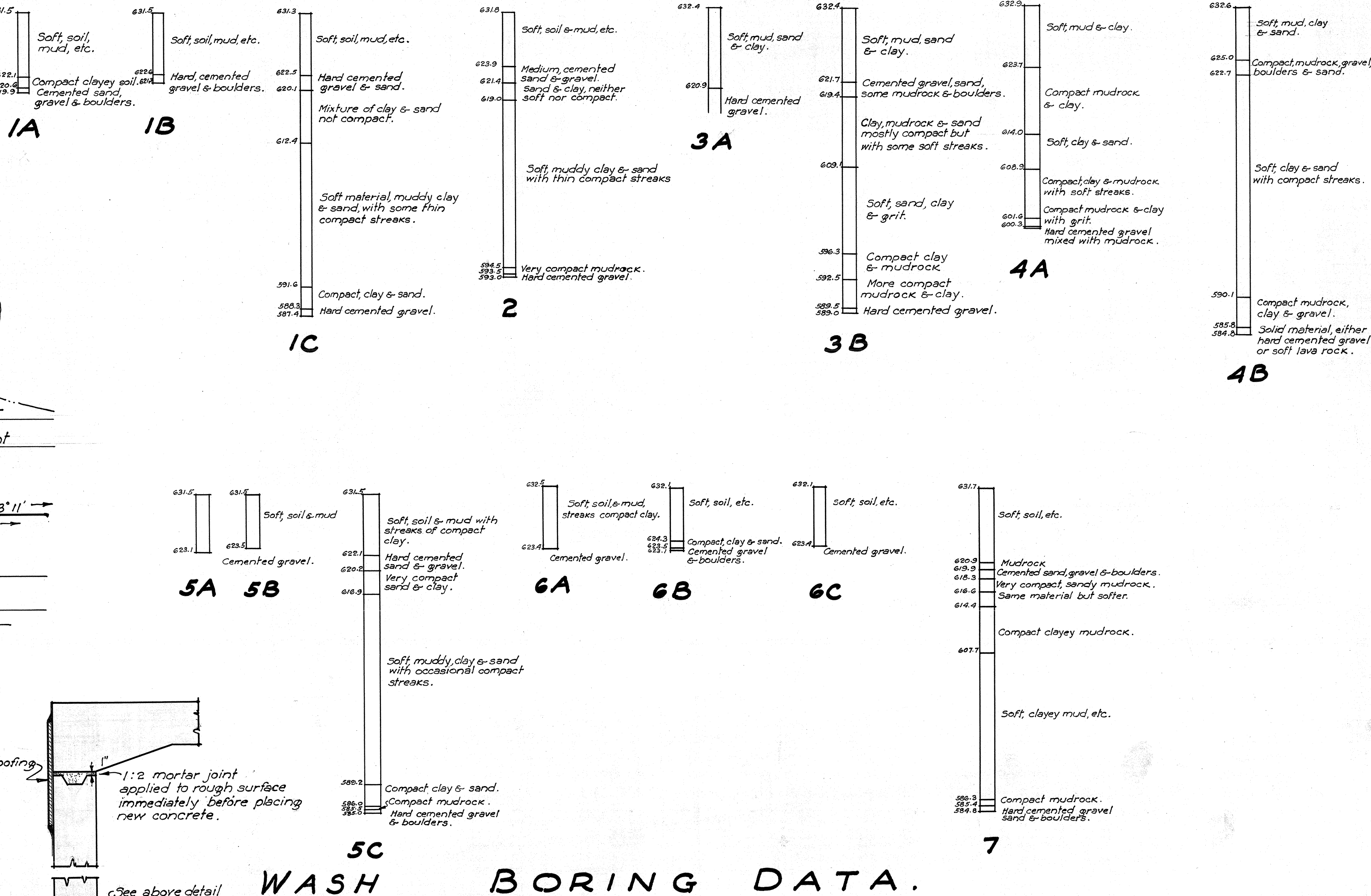
METHOD OF APPLYING WATERPROOFING.

First: Map surface 18" either side of joint with hot asphalt.

Second: Apply 1 layer of 2 ply roofing paper 12" either side of joint to hot asphalt, then mop entire surface with a thick coat of hot asphalt.

General Notes: All construction joints shall be constructed according to details shown on this sheet, as this detail is typical for culverts also.

In retaining walls apply waterproofing at joint between top of footing and bottom of wall, inside and outside.



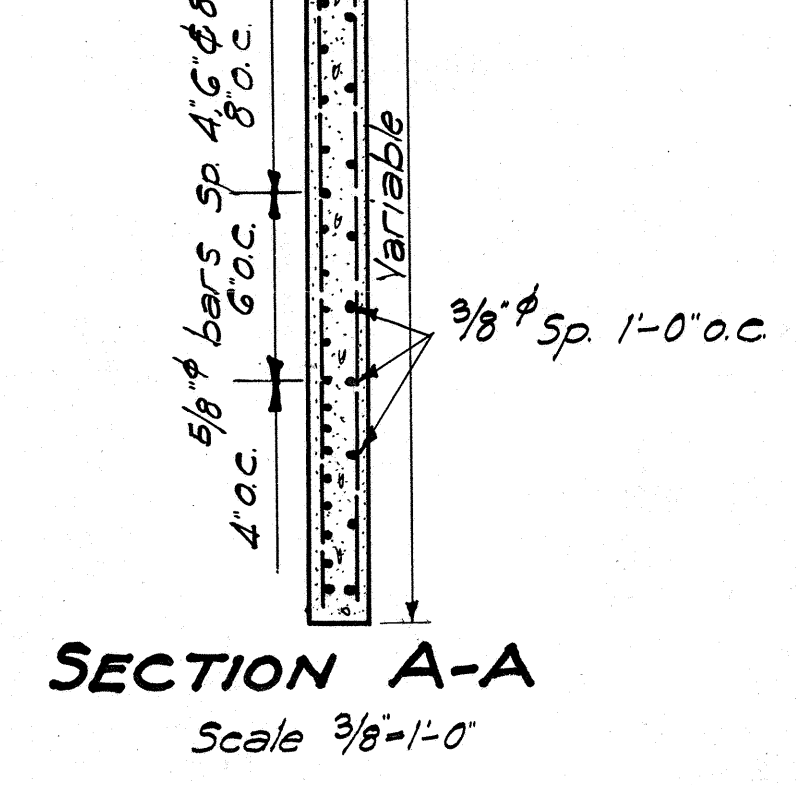
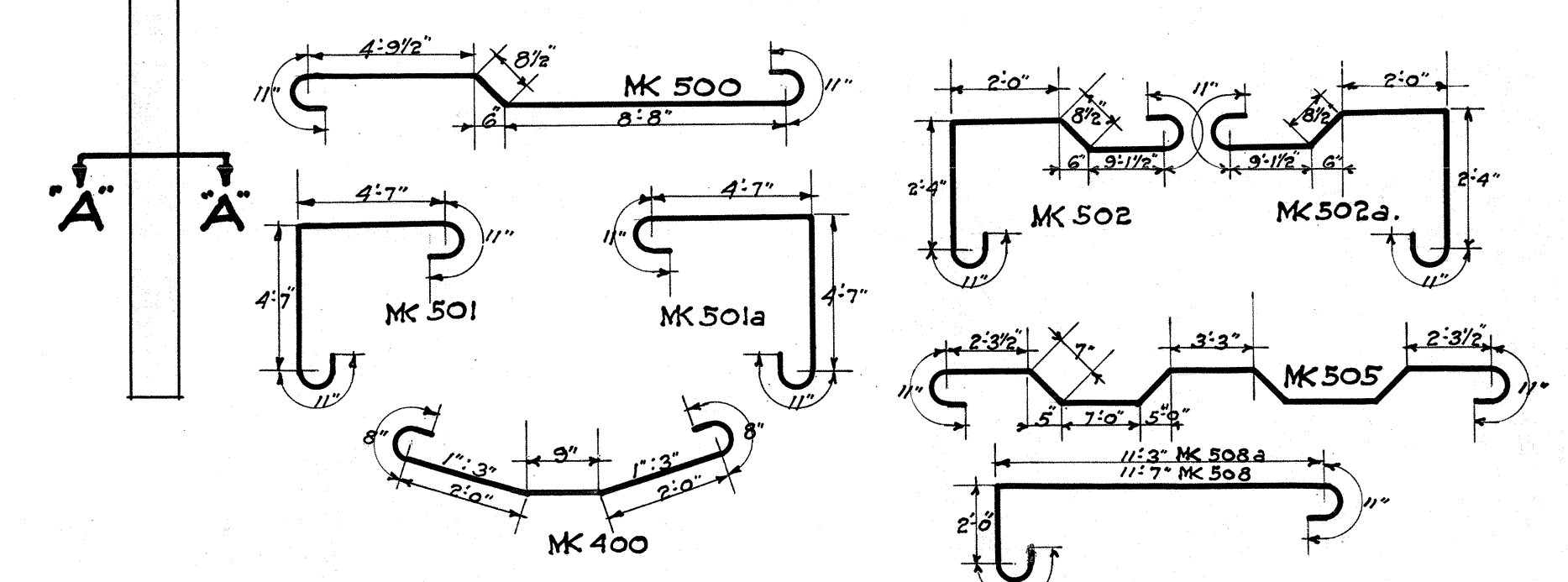
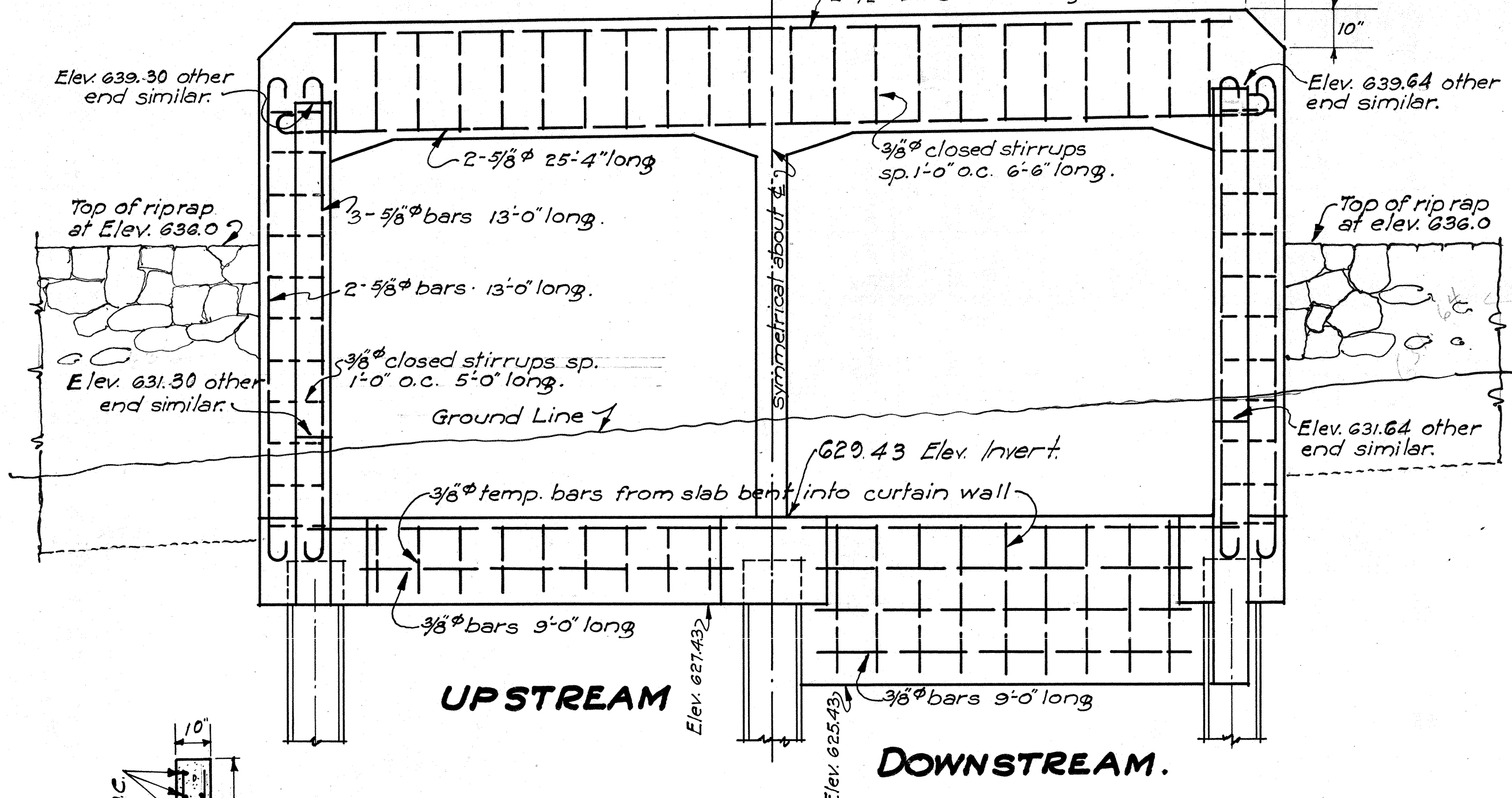
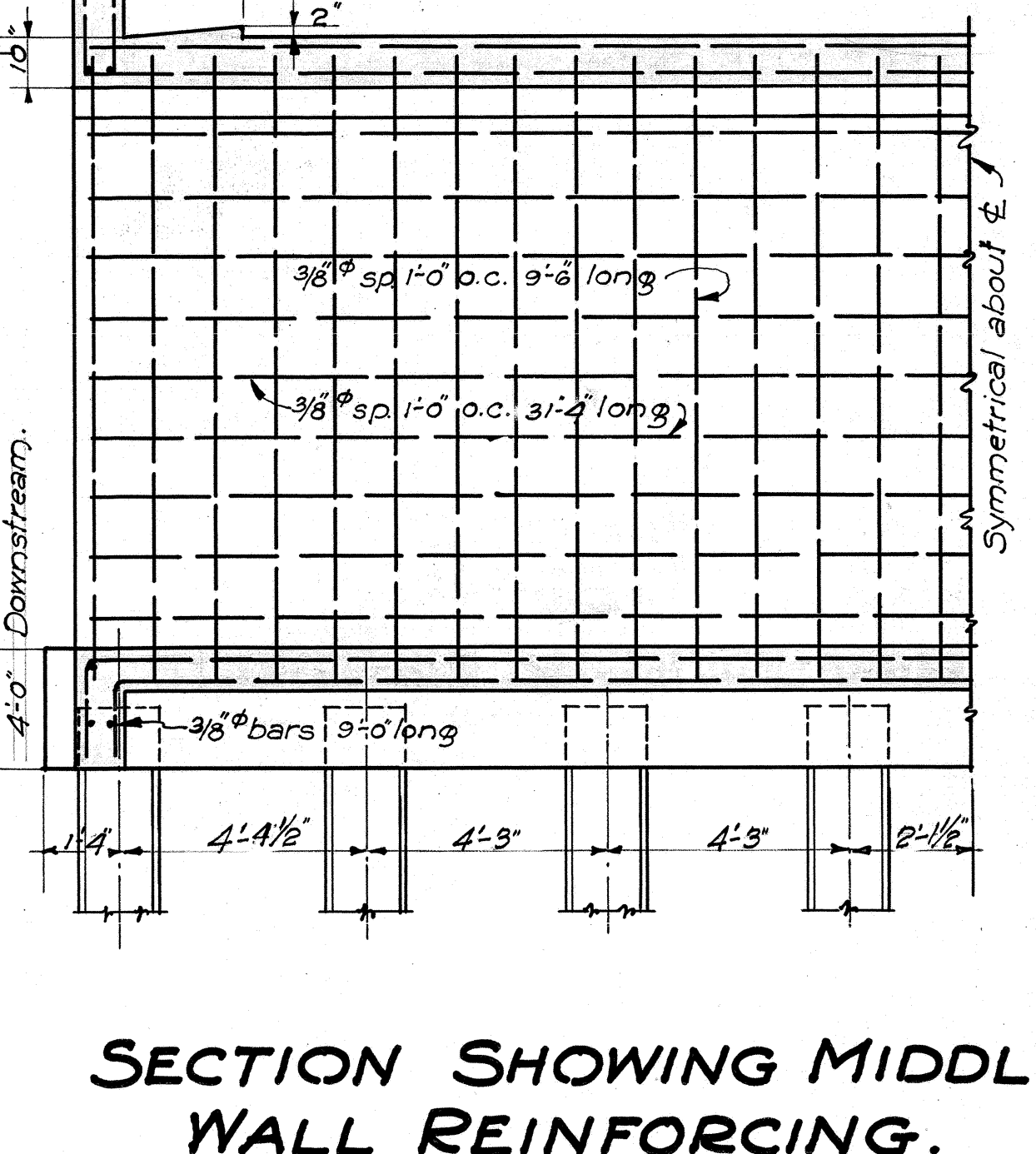
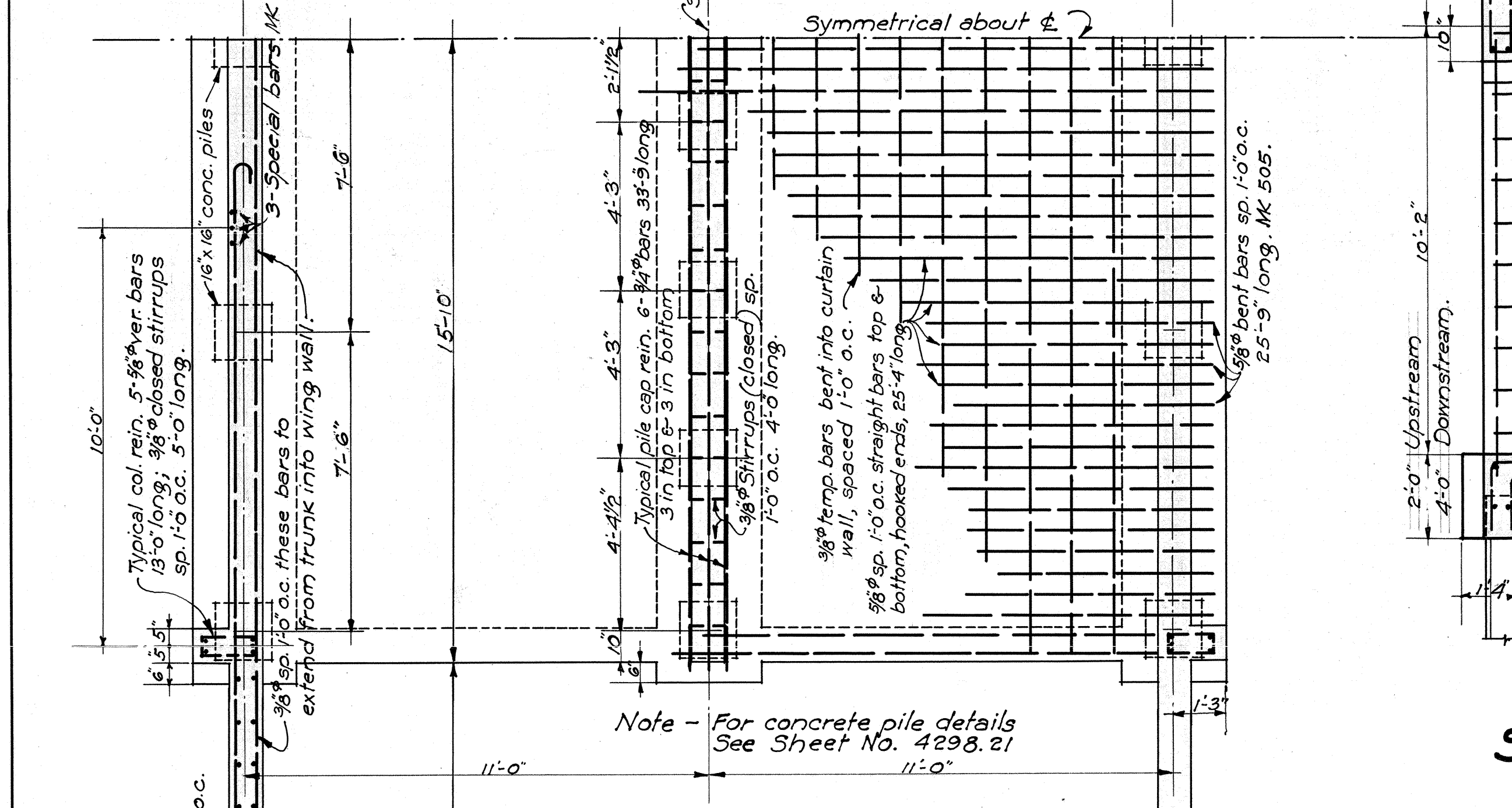
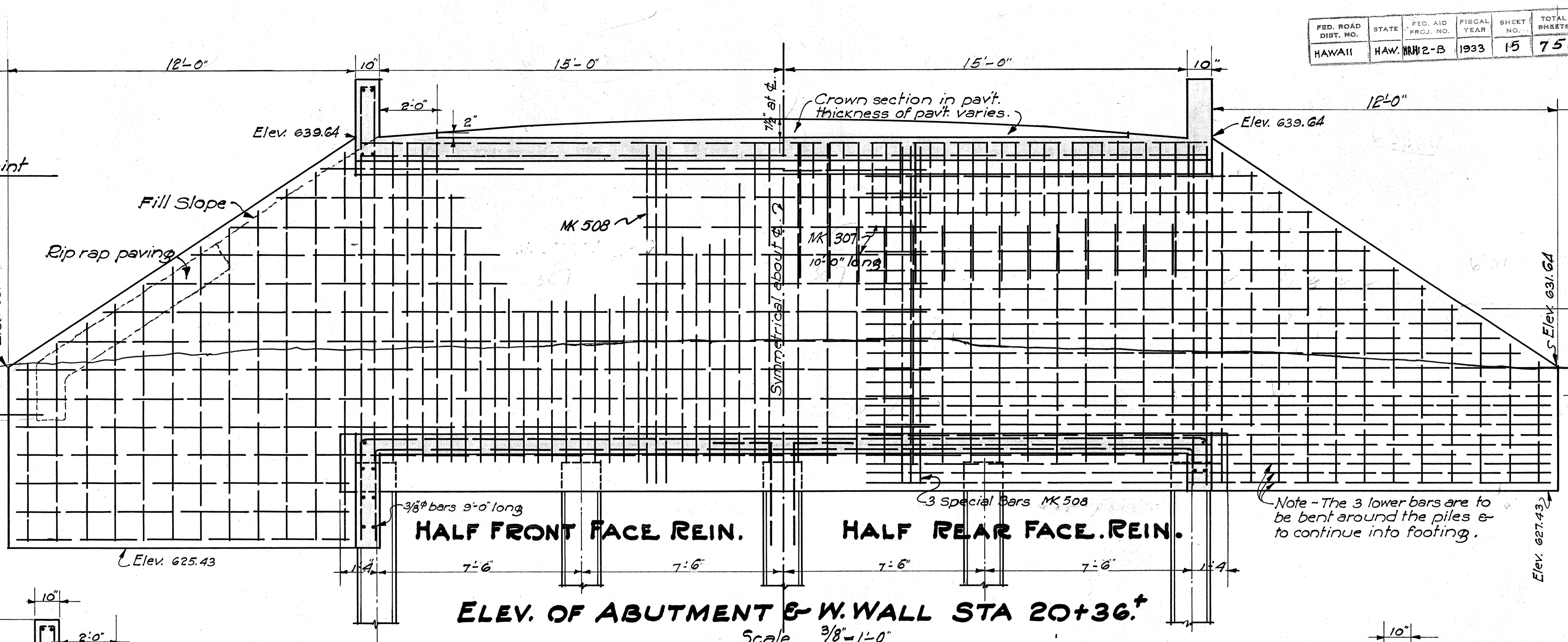
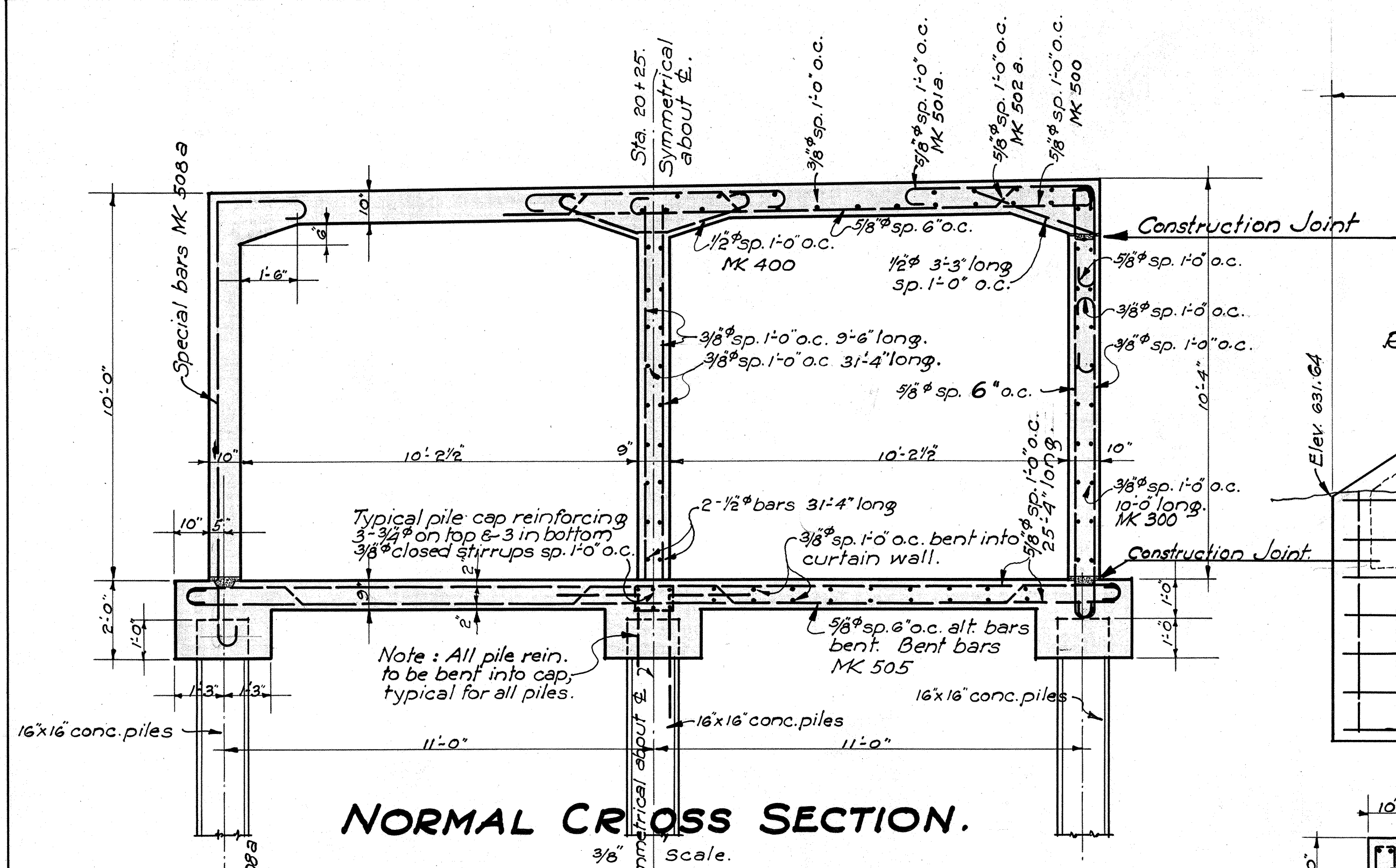
BRIDGE No 7-E.

STA 20+25.

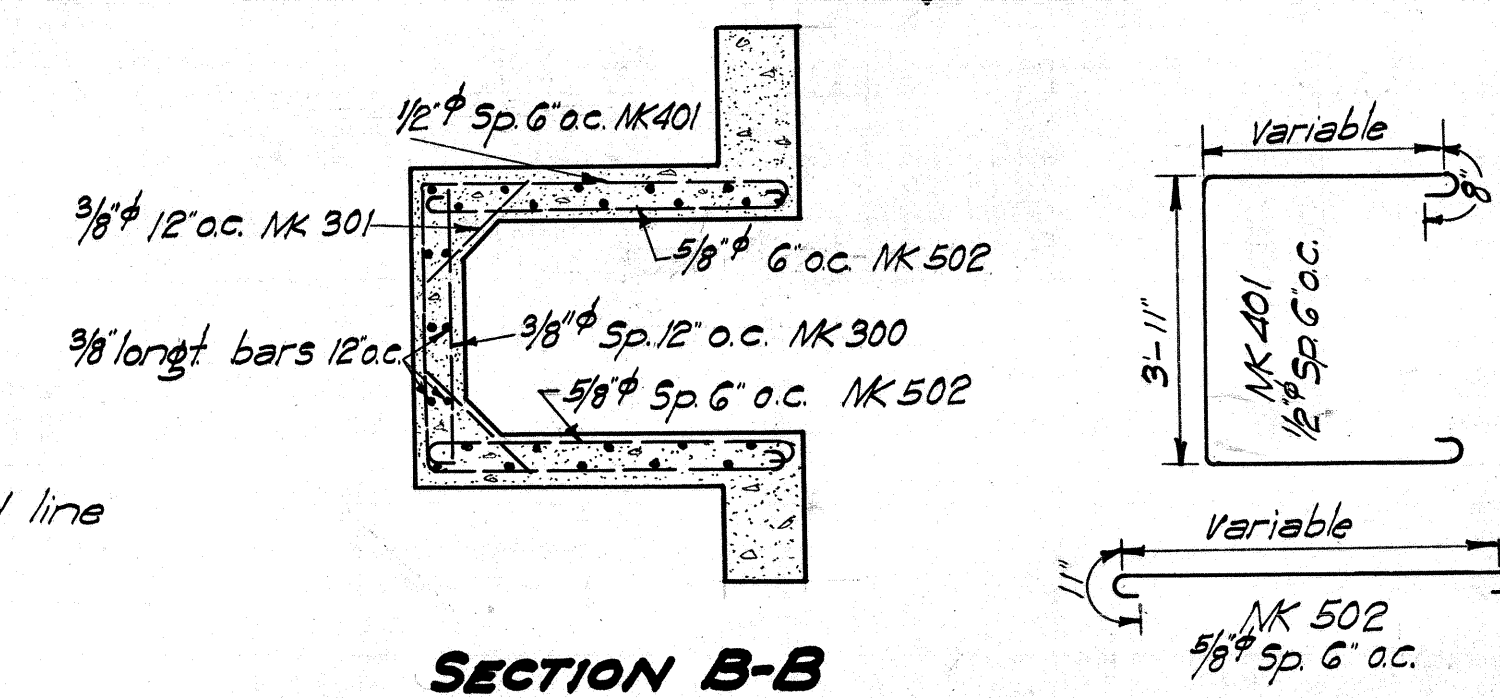
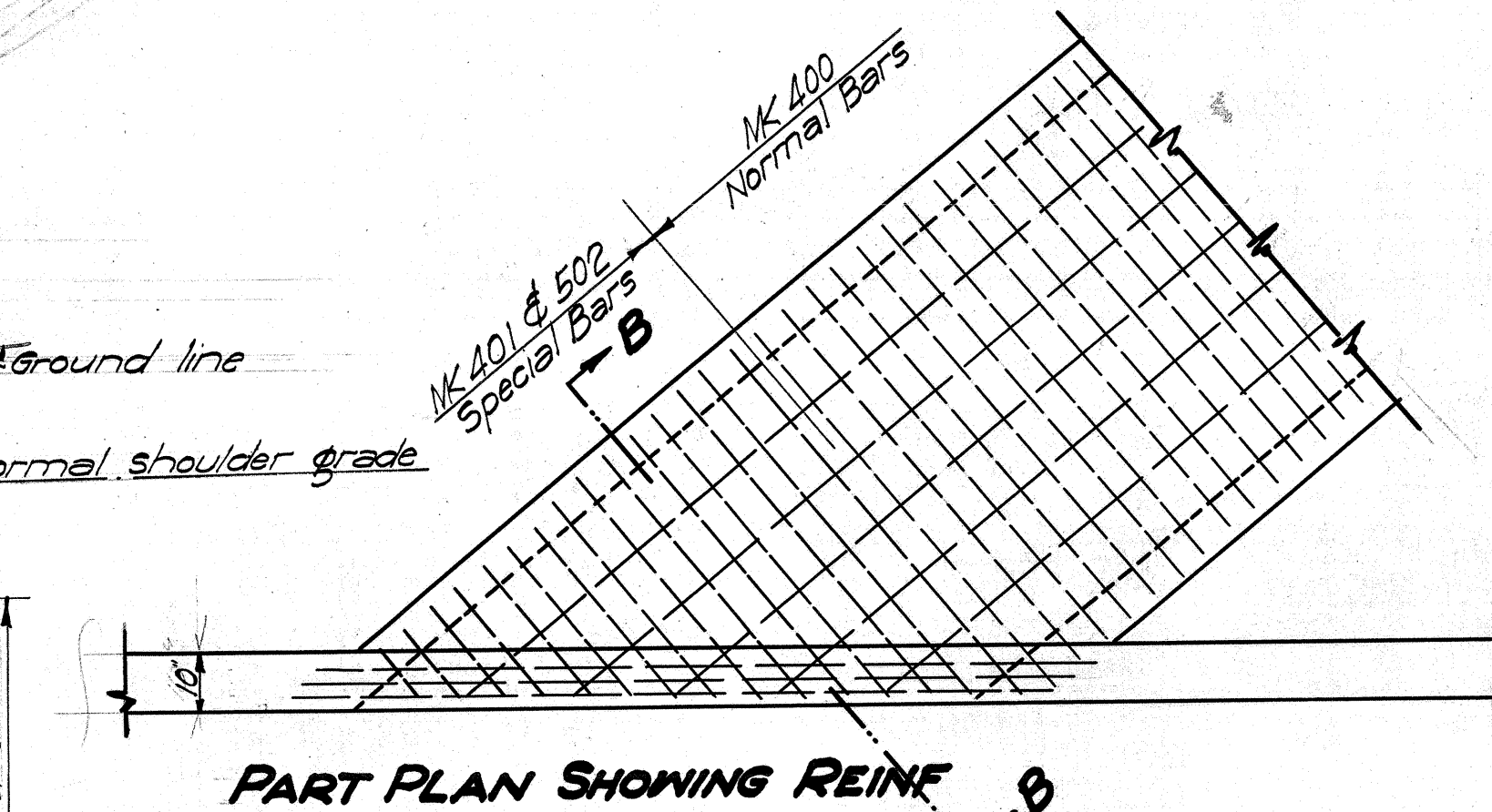
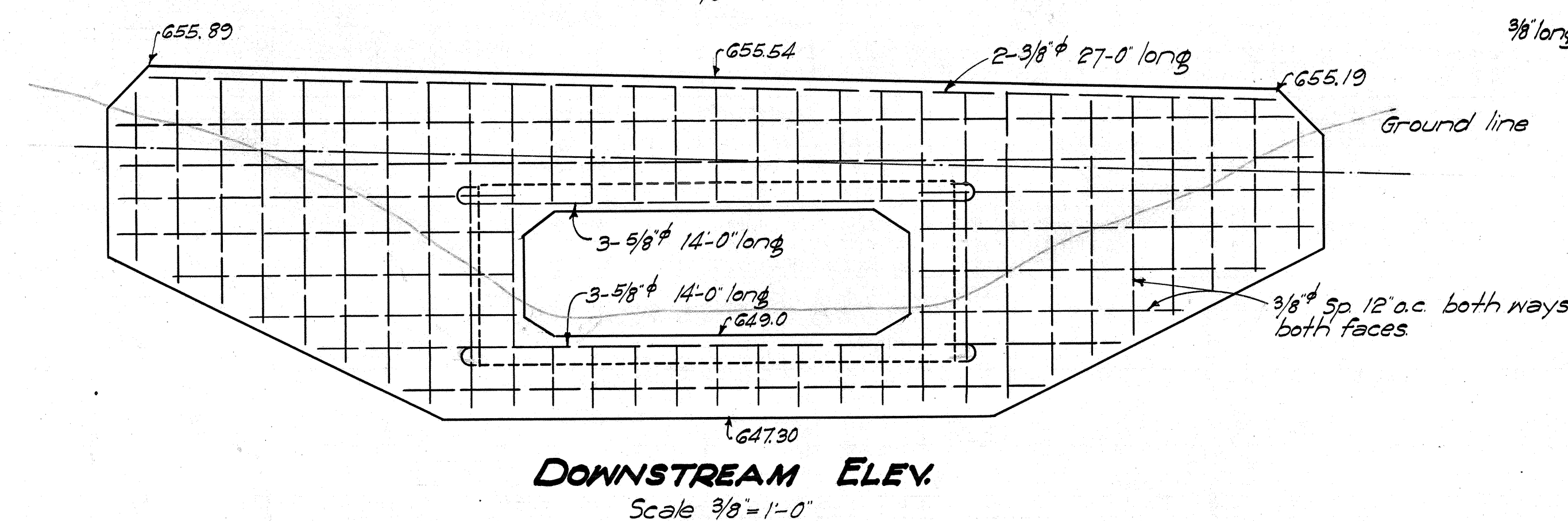
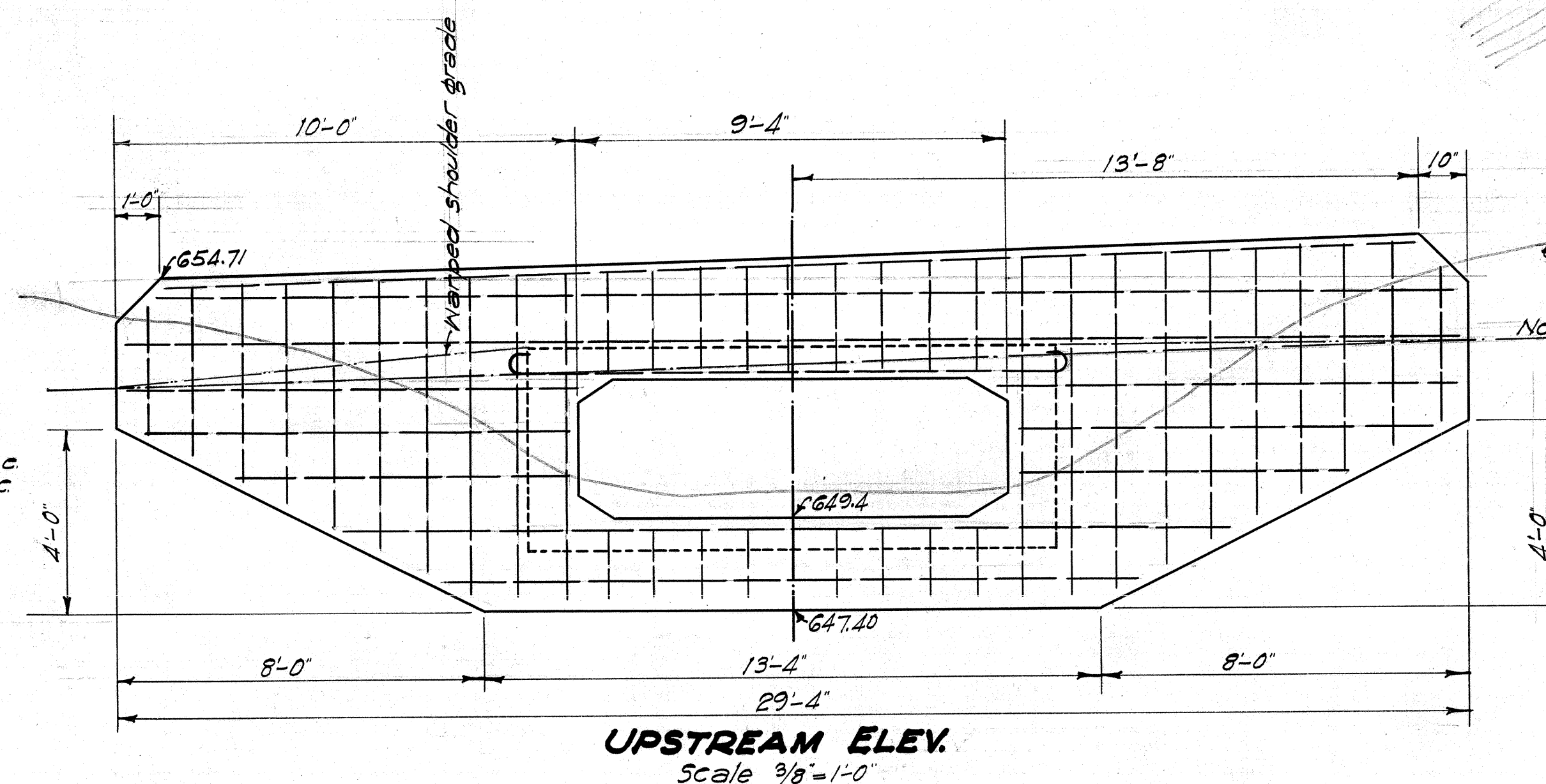
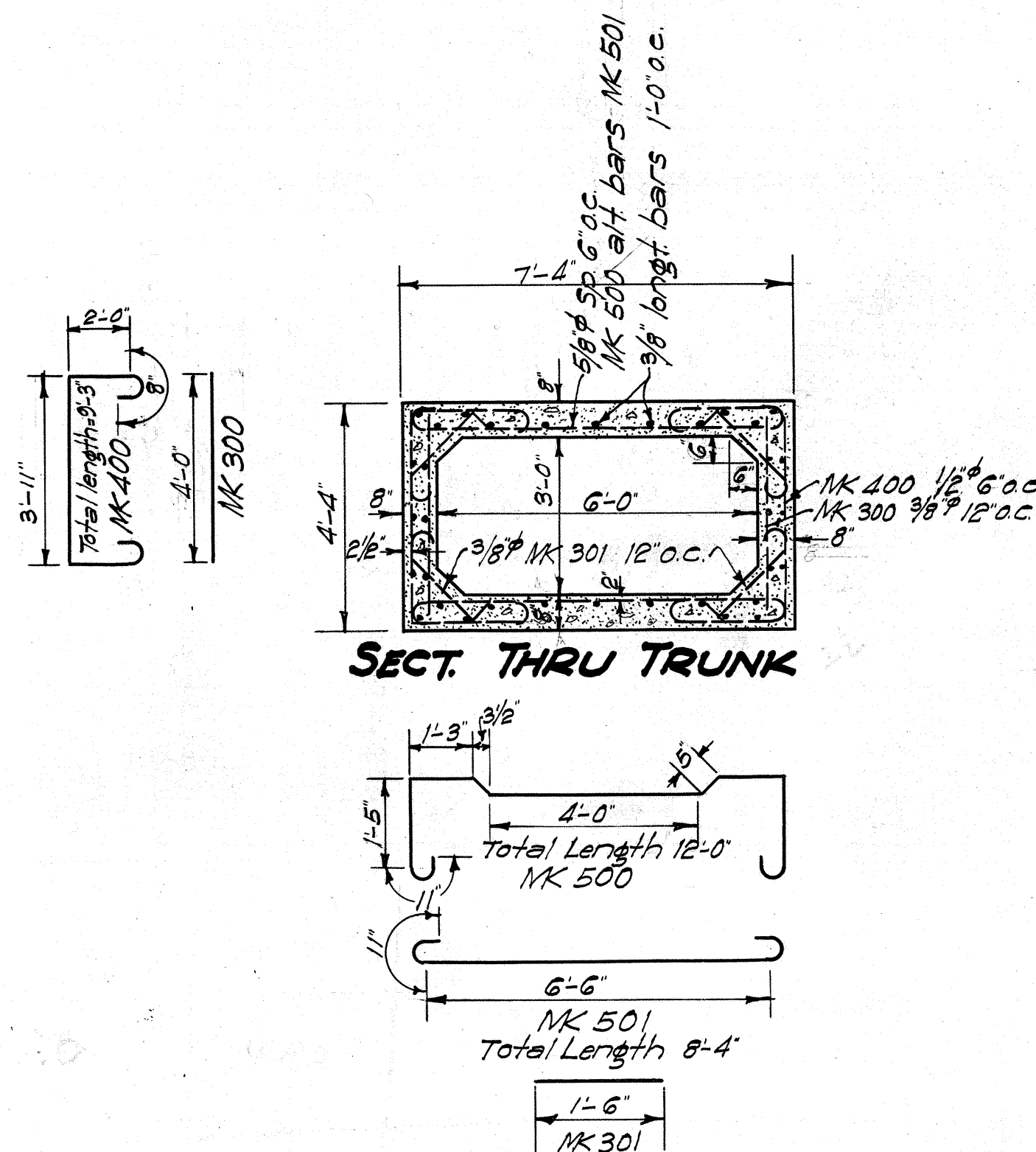
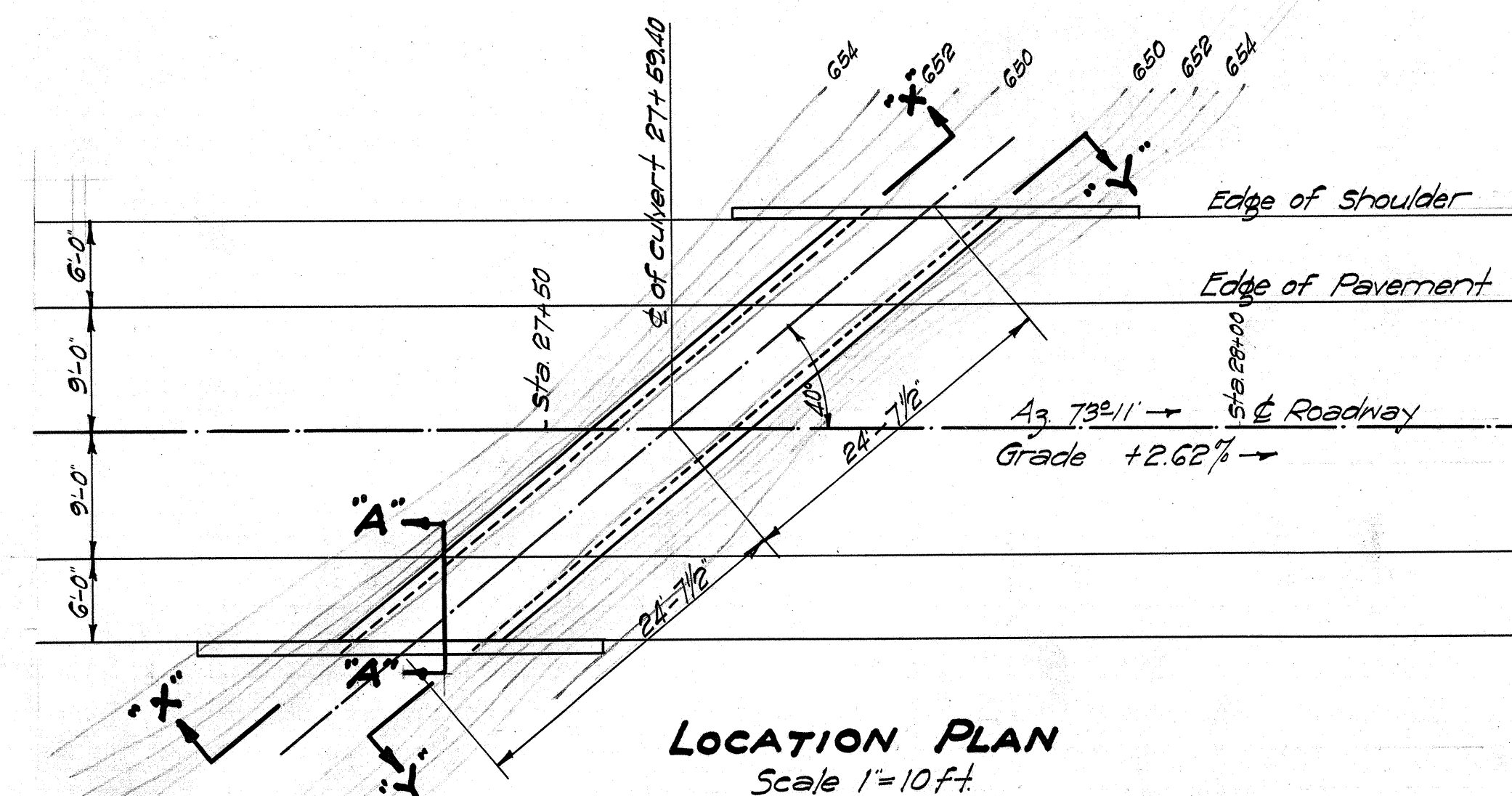
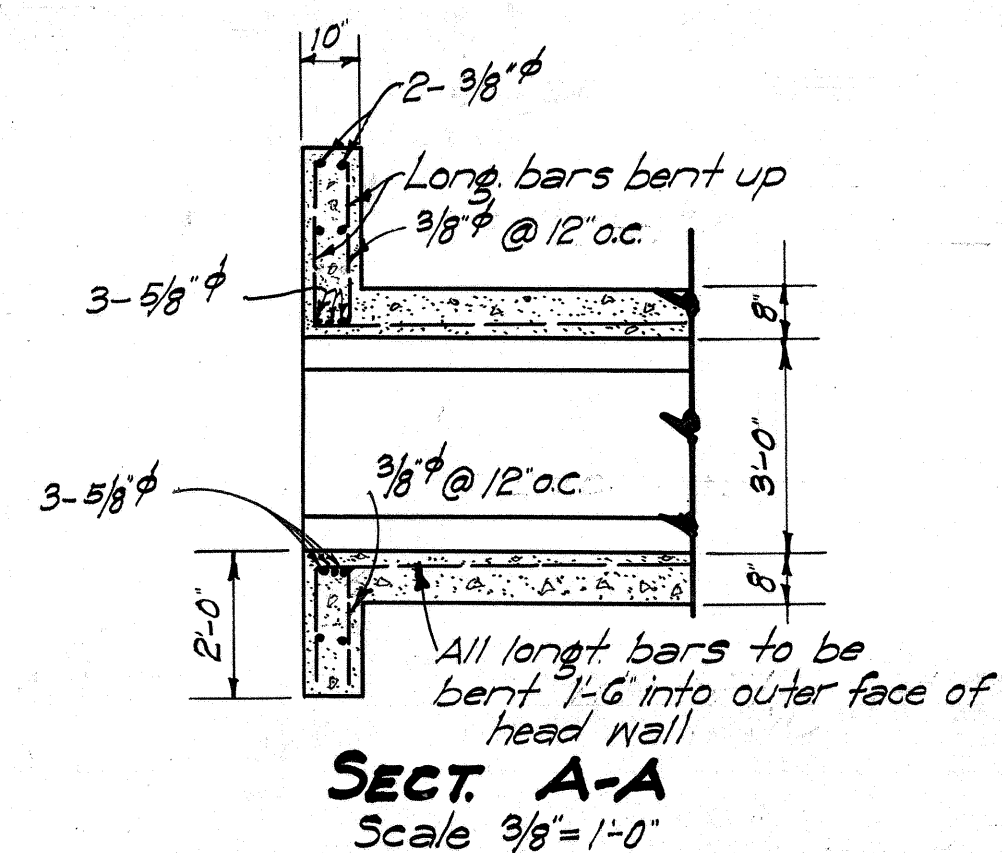
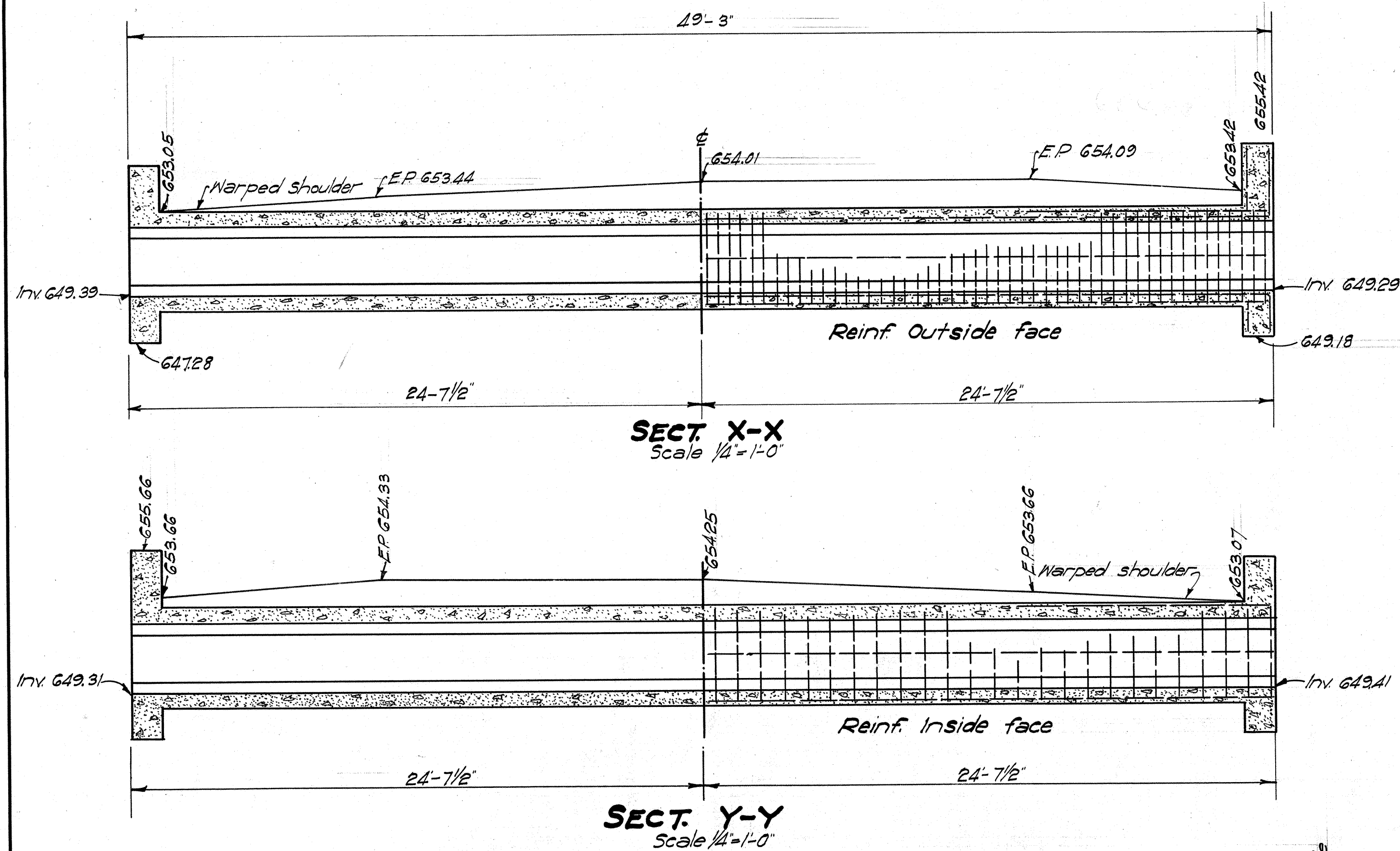
F.A.R. 12-B. KAUAI BELT ROAD.

SHEET 1 OF 11 SHEETS.

4298.15



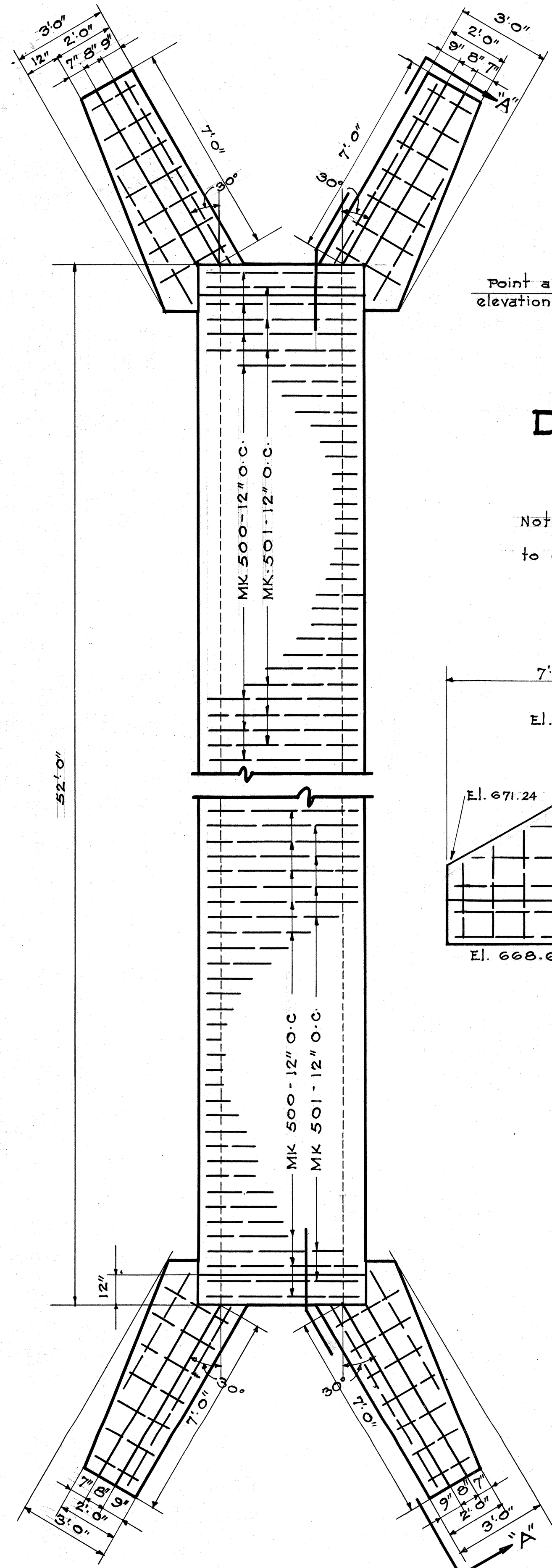
BRIDGE No 7-E.
STA 20+25.
F.A.R. 12-B. KAUAI BELT ROAD.
SHEET 2 OF 11 SHEETS.



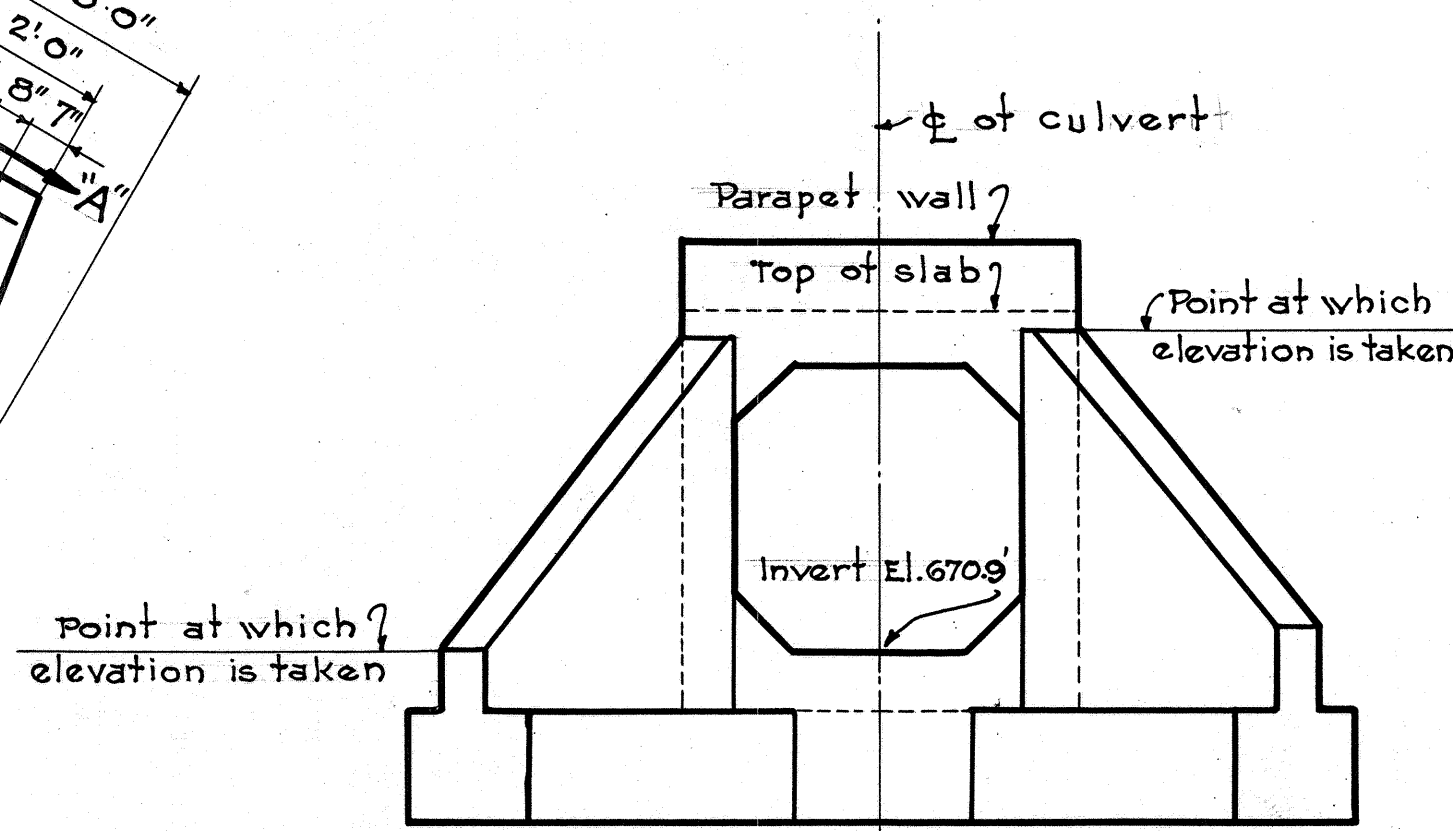
QUANTITY TABLE		
Structural Exc.	Class "A" Concrete	Steel
29.0 C.Y.	35.0 C.Y.	4800 #

BOX CULVERT
STA. 27+59.4
FAR 12-B. KAUAI BELT ROAD
SHEET 3 OF 11 SHEETS.

4298.17

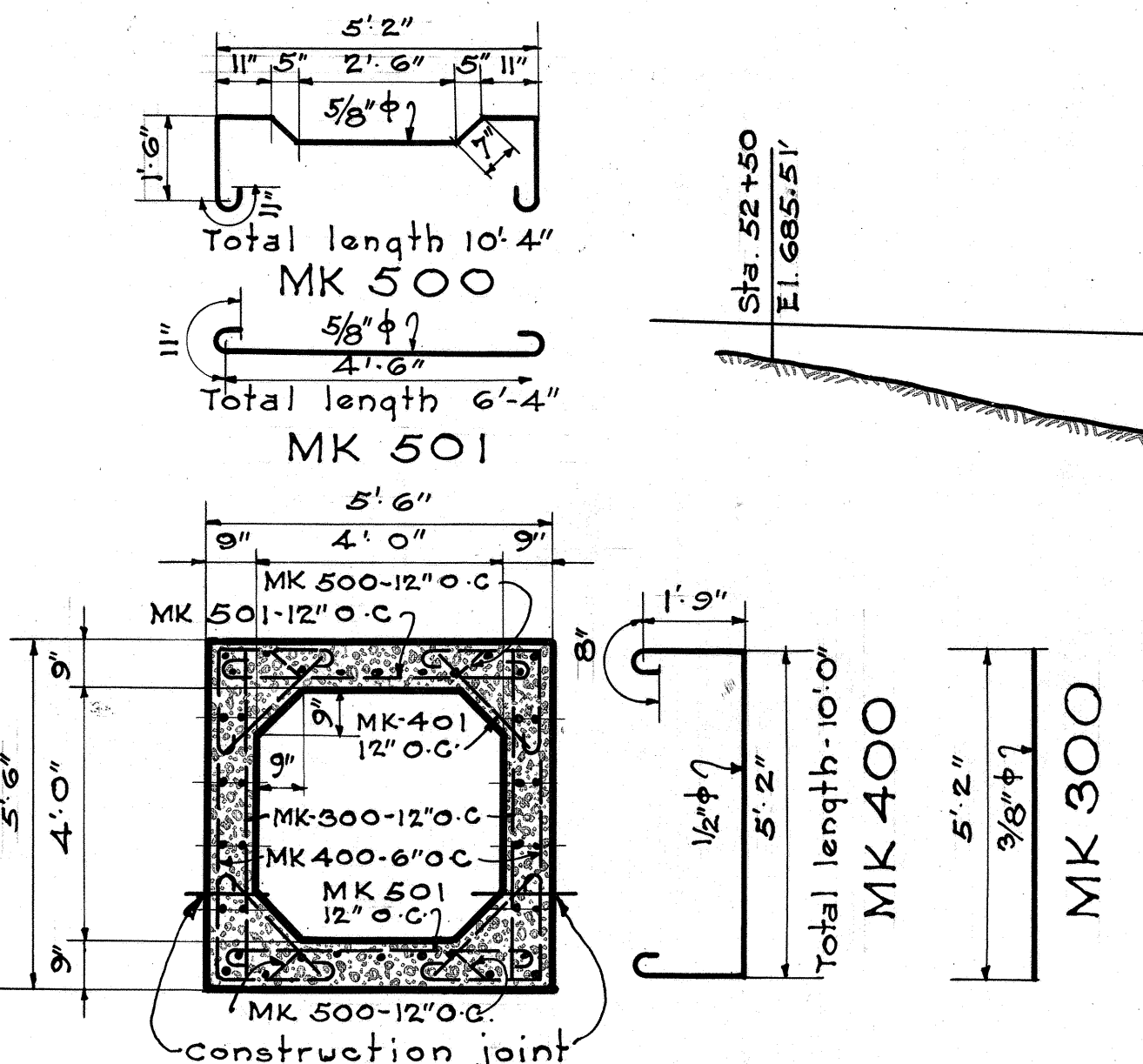


PLAN OF CULVERT
Scale 3/8" = 1'-0"



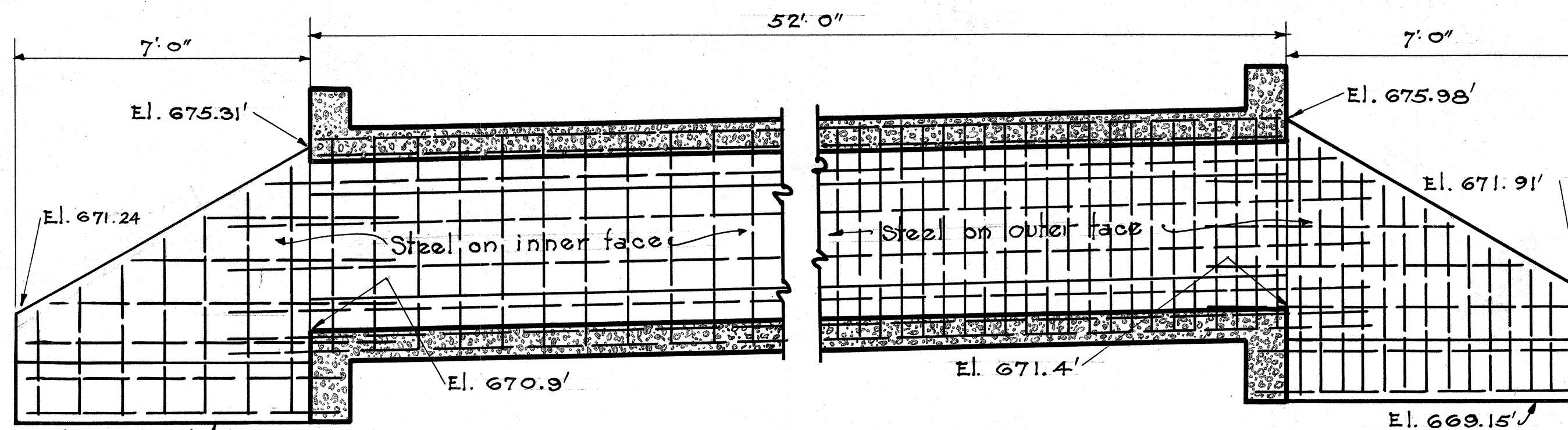
DOWNSTREAM ELEVATION
Scale 3/8" = 1'-0"

Note!
All horiz. bars in wingwalls to extend 2'-0" into trunk.

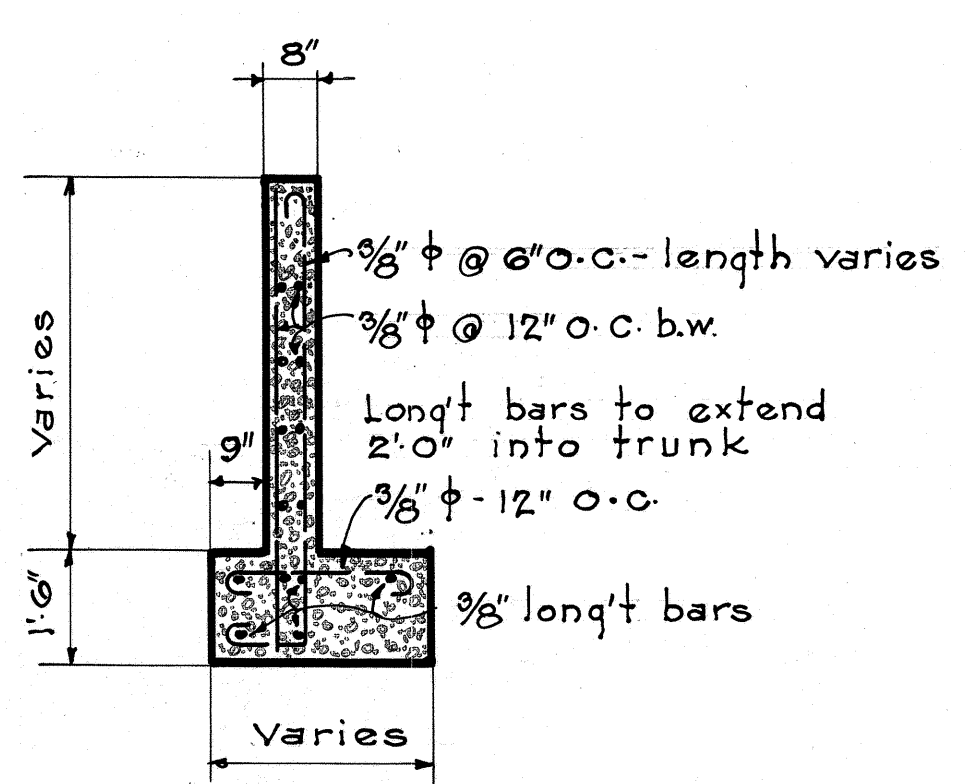


Note!
All horiz. bars - 3/8" φ. All 3/8" φ horiz. bars in side walls to extend 2'-0" into wingwalls.

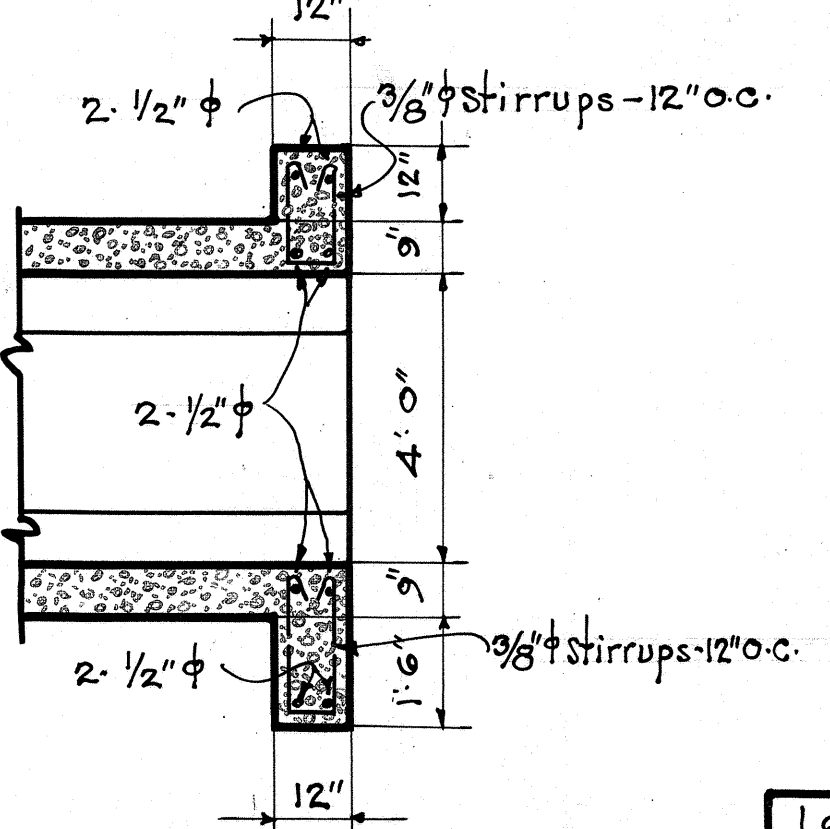
TYPICAL TRUNK SECTION
Scale 3/8" = 1'-0"



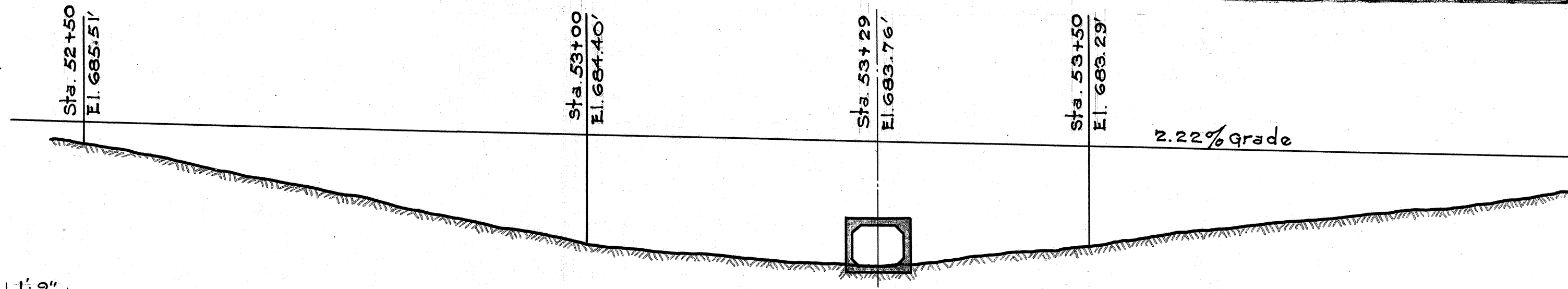
LONG'S SECTION AT "A-A"
Scale 3/8" = 1'-0"
OPPOSITE SIDE SIMILAR



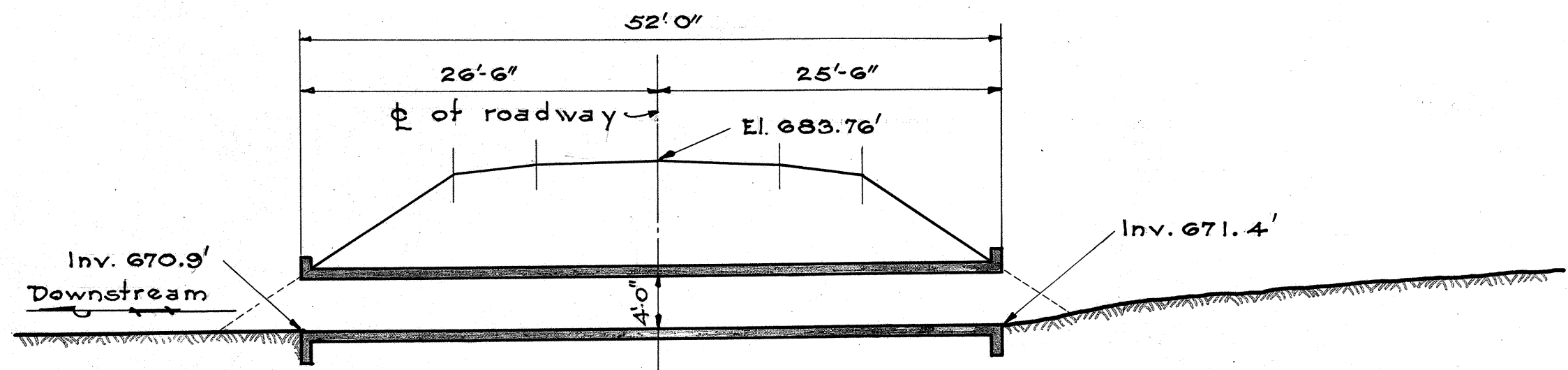
TYPICAL WING WALL SECTION
Scale 3/8" = 1'-0"



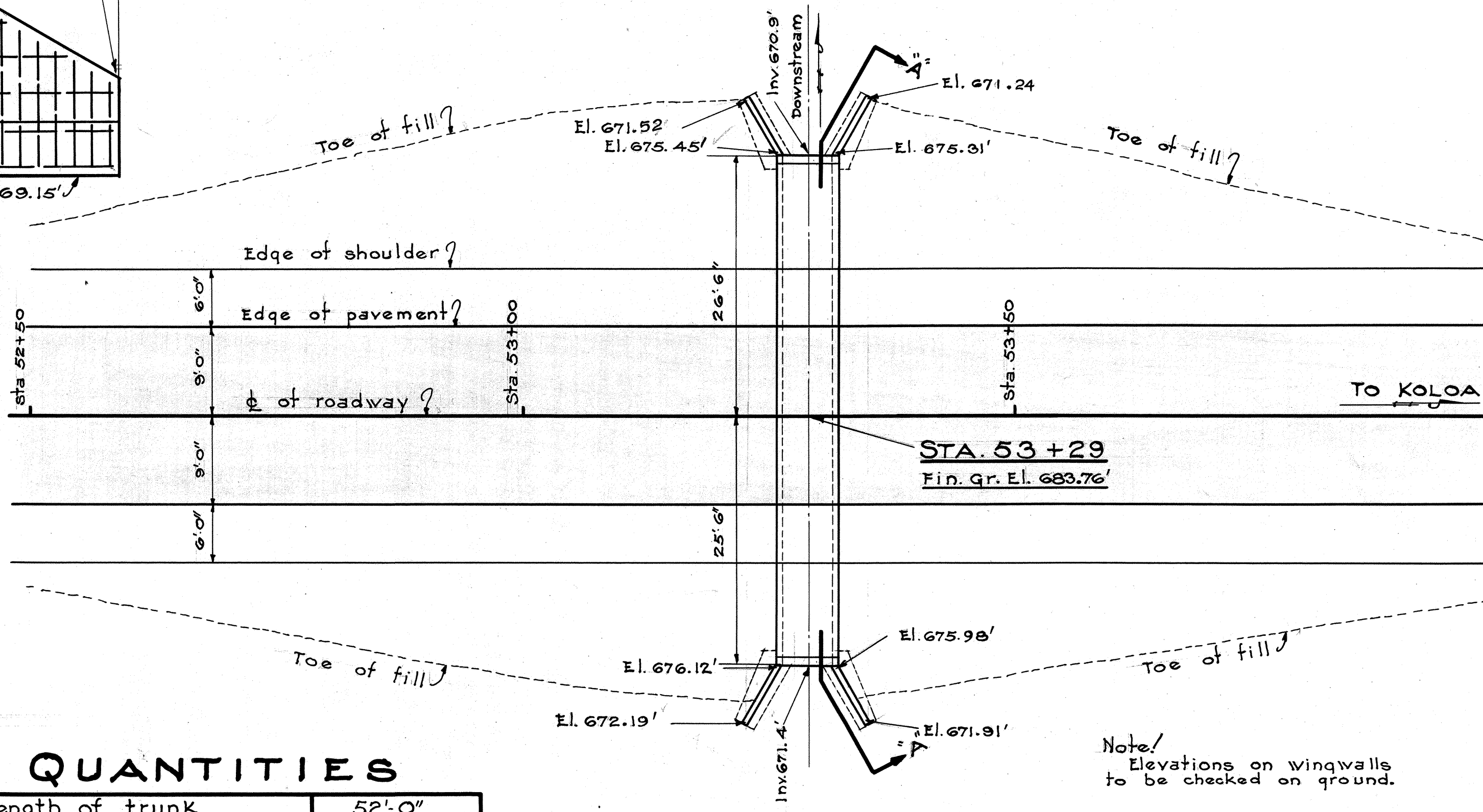
SECTION THRU HEAD
Scale 3/8" = 1'-0"



SECTION ON ROAD
Scale 1" = 10 Ft.



LONG'S SECTION THRU CULVERT ON
Scale 1" = 10 Ft.



Note!
Elevations on wingwalls to be checked on ground.

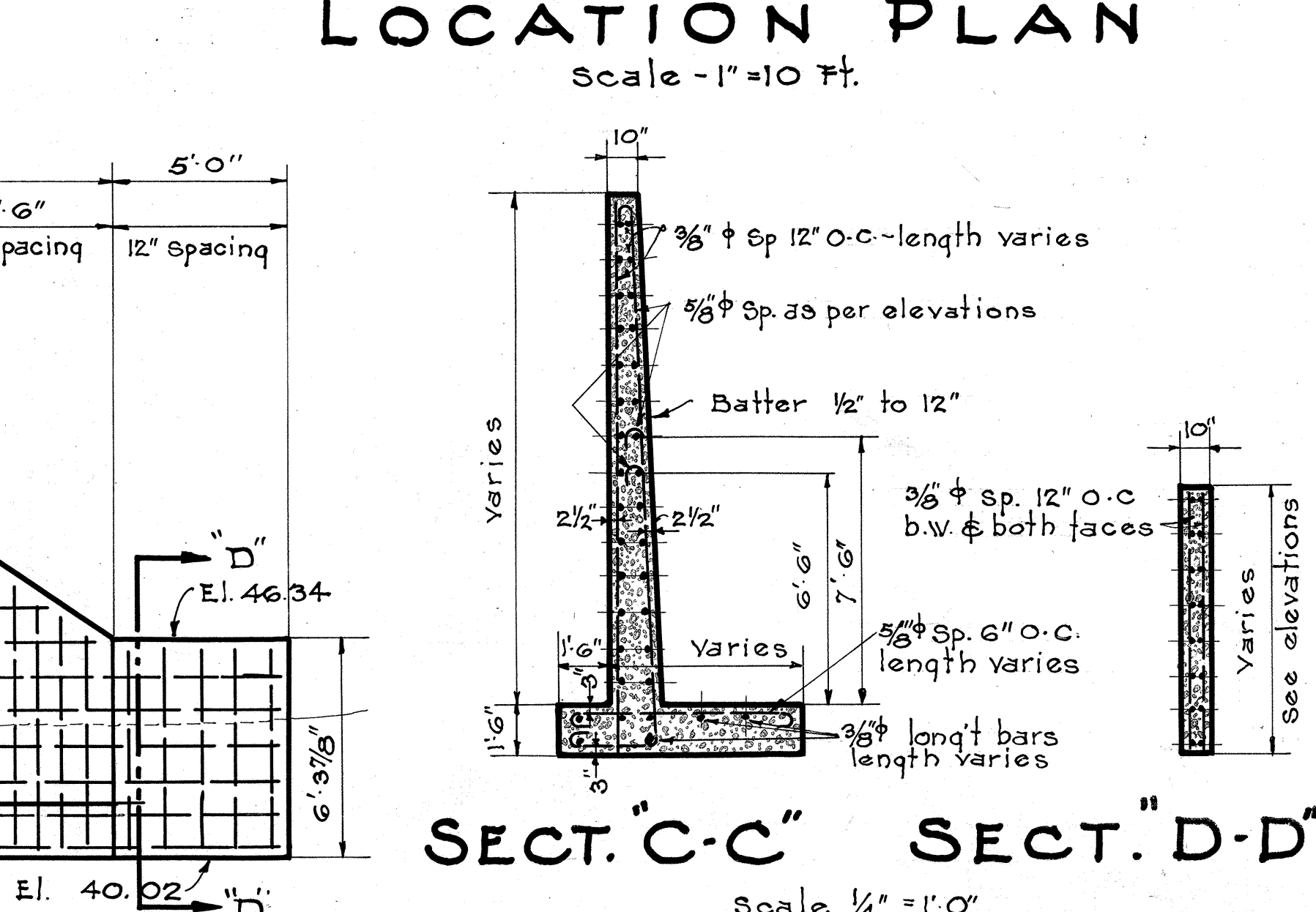
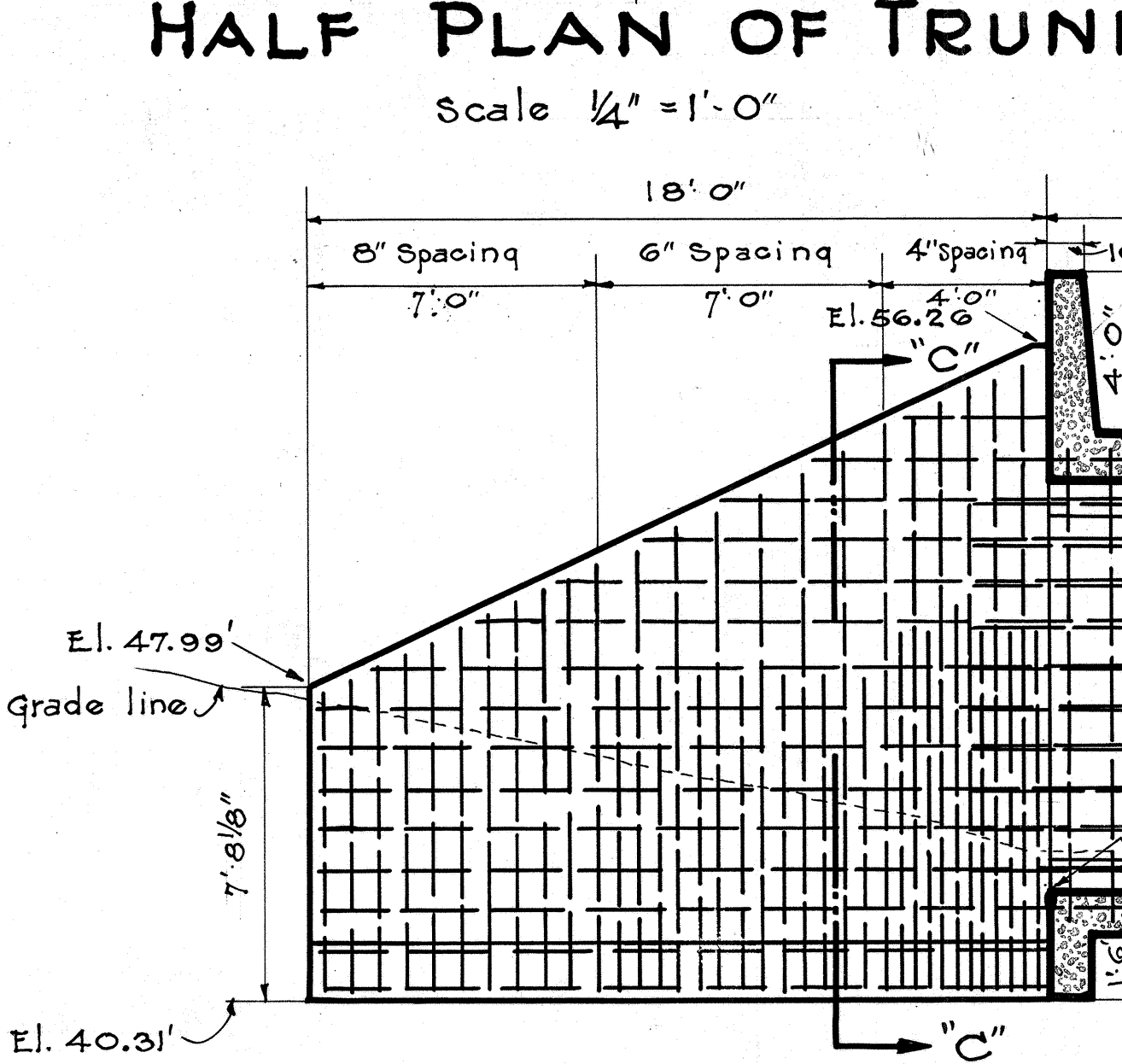
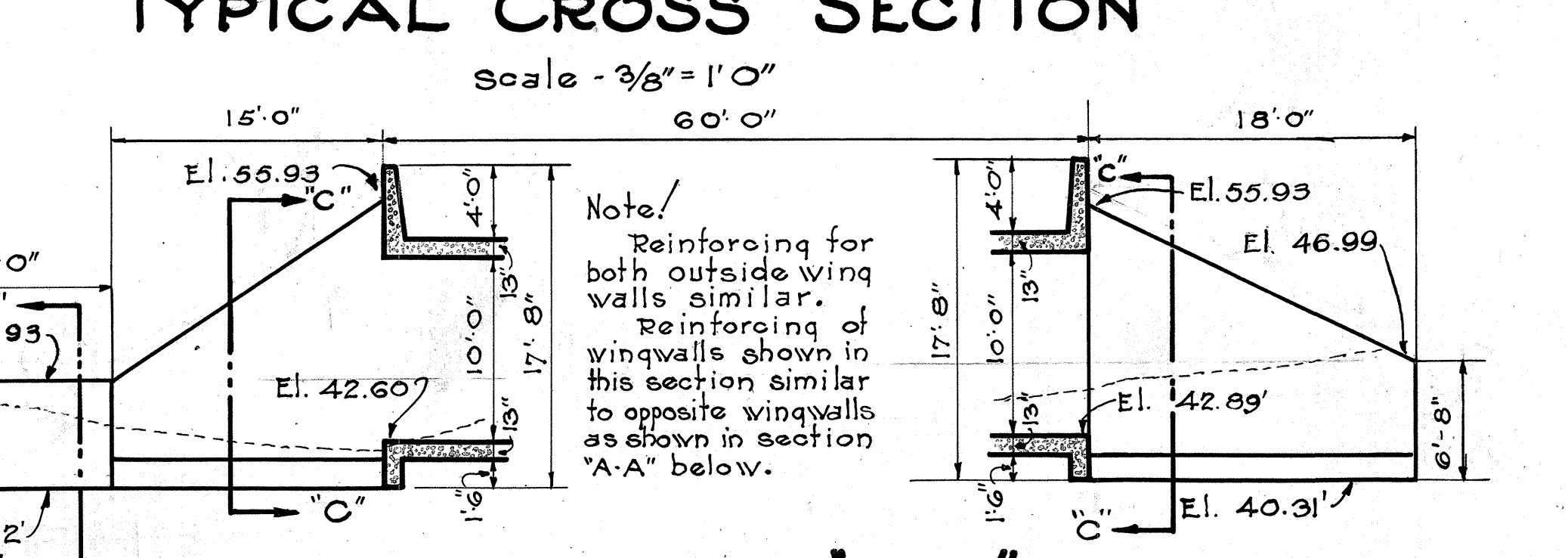
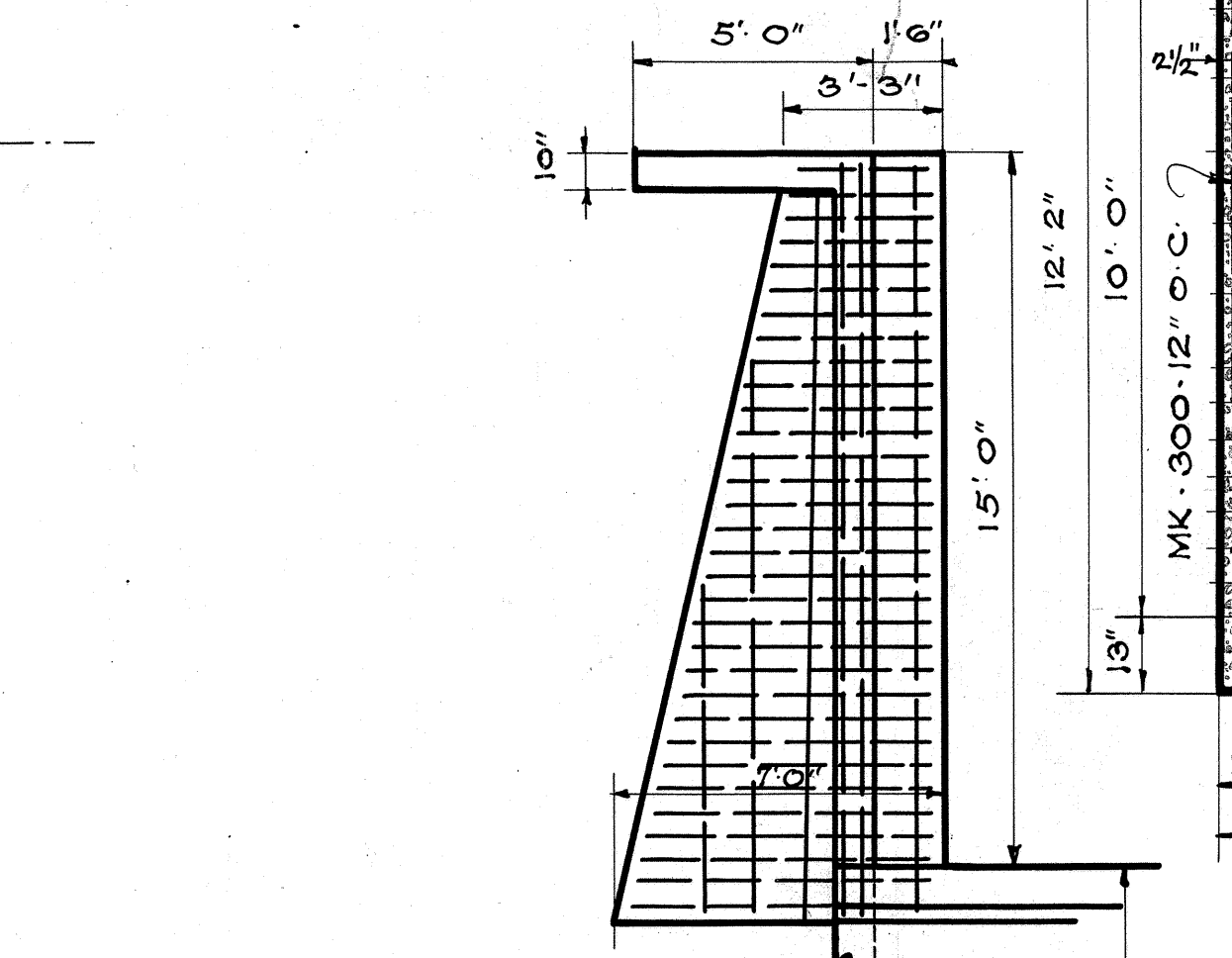
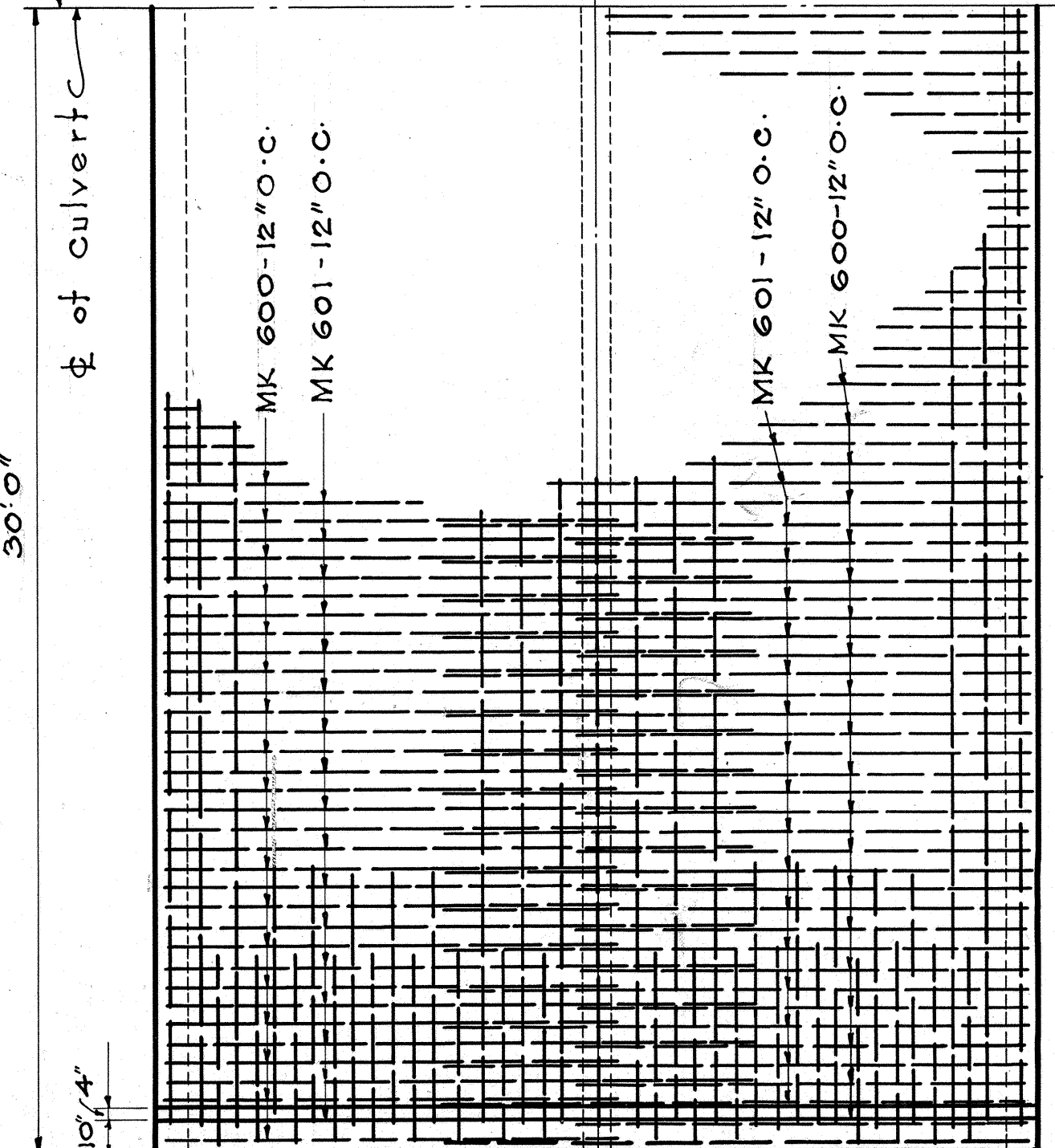
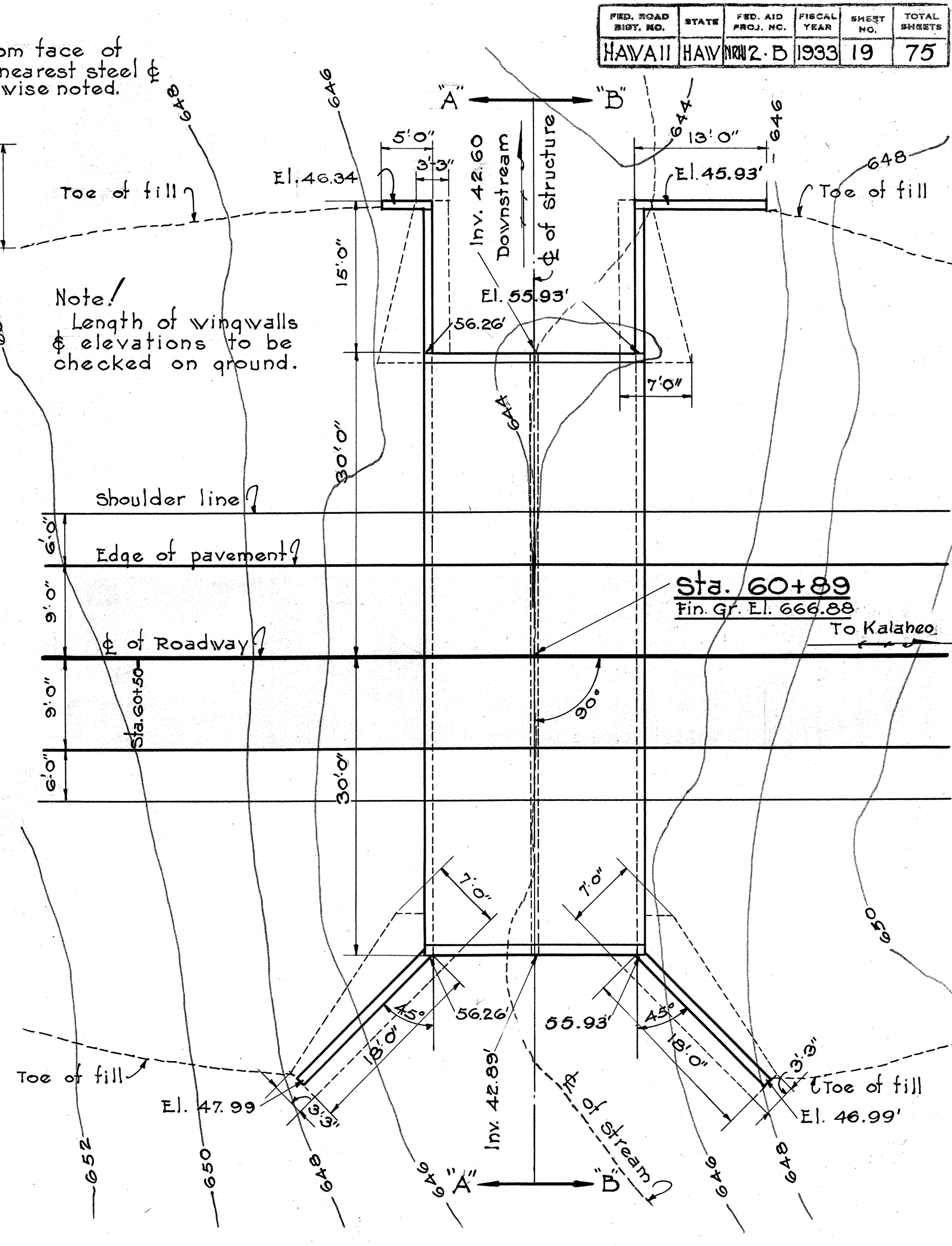
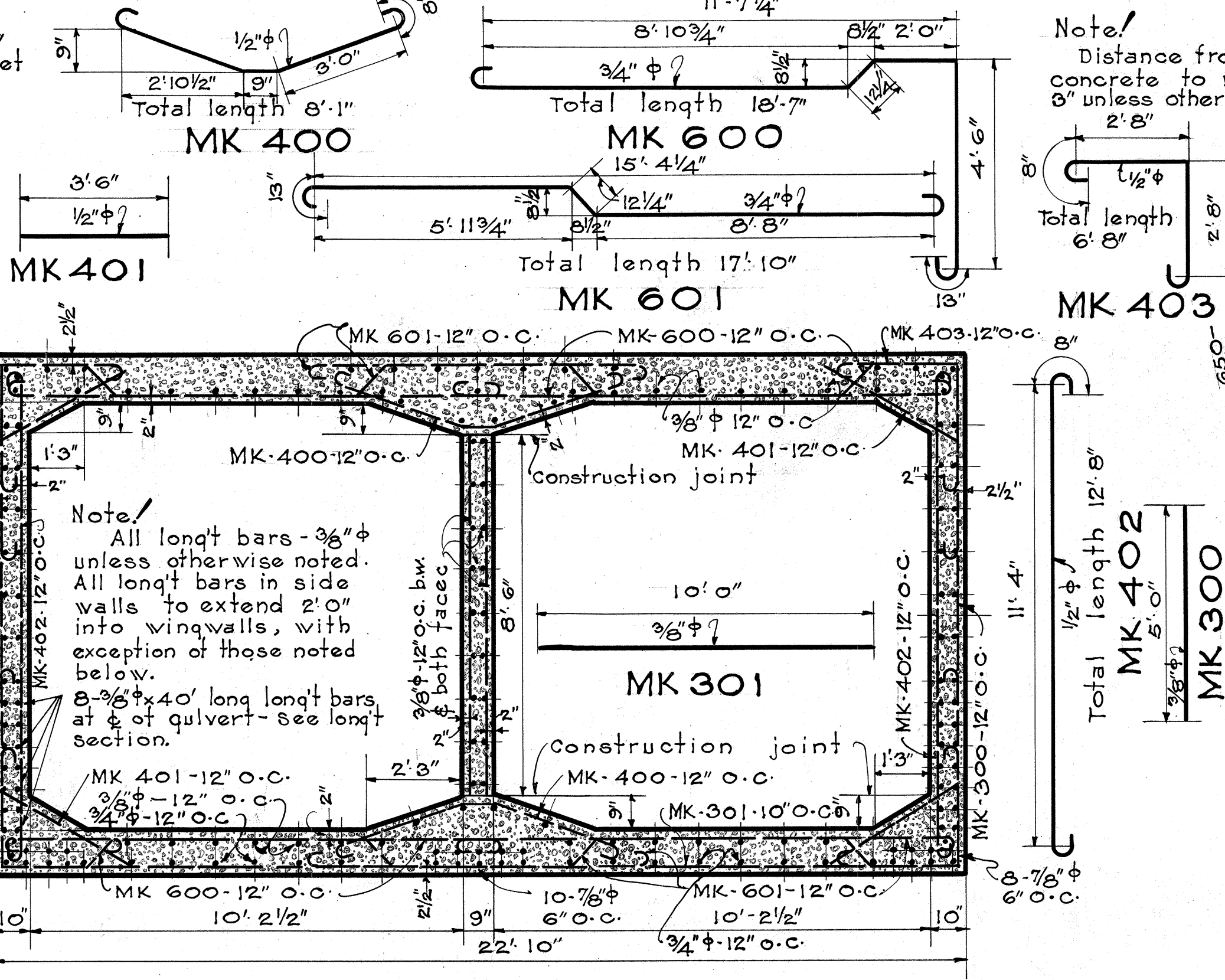
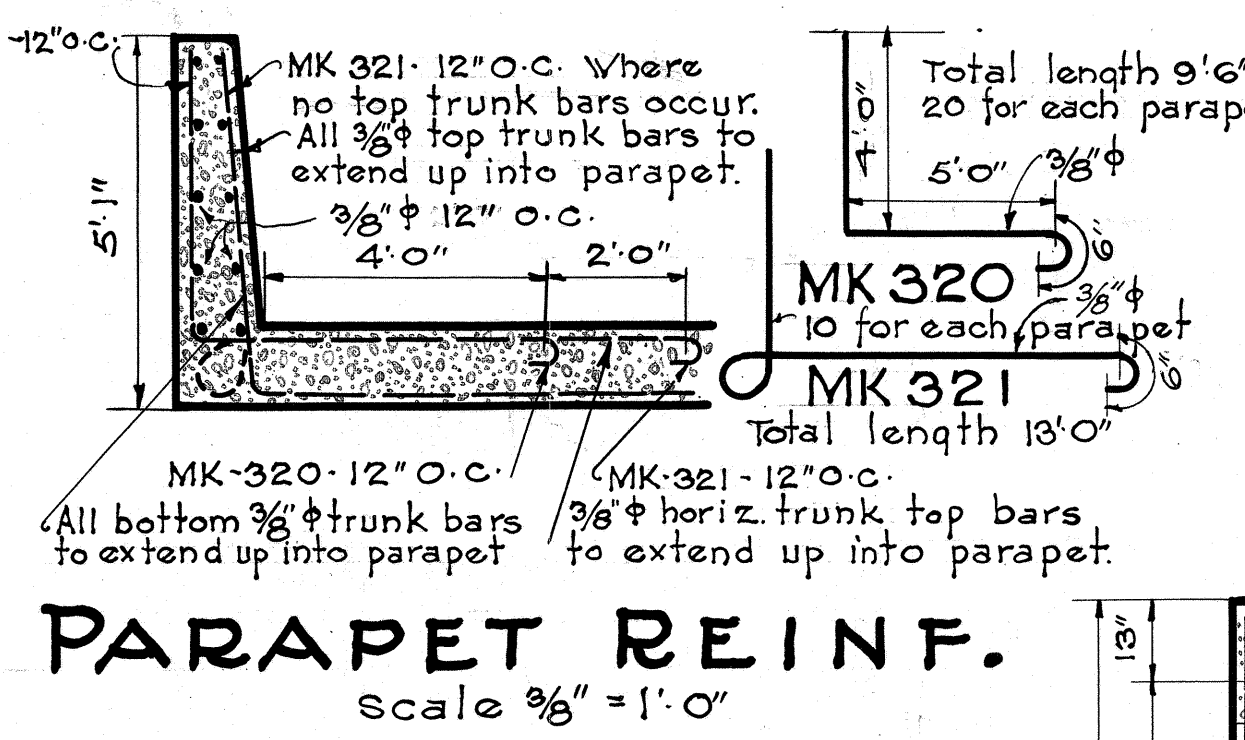
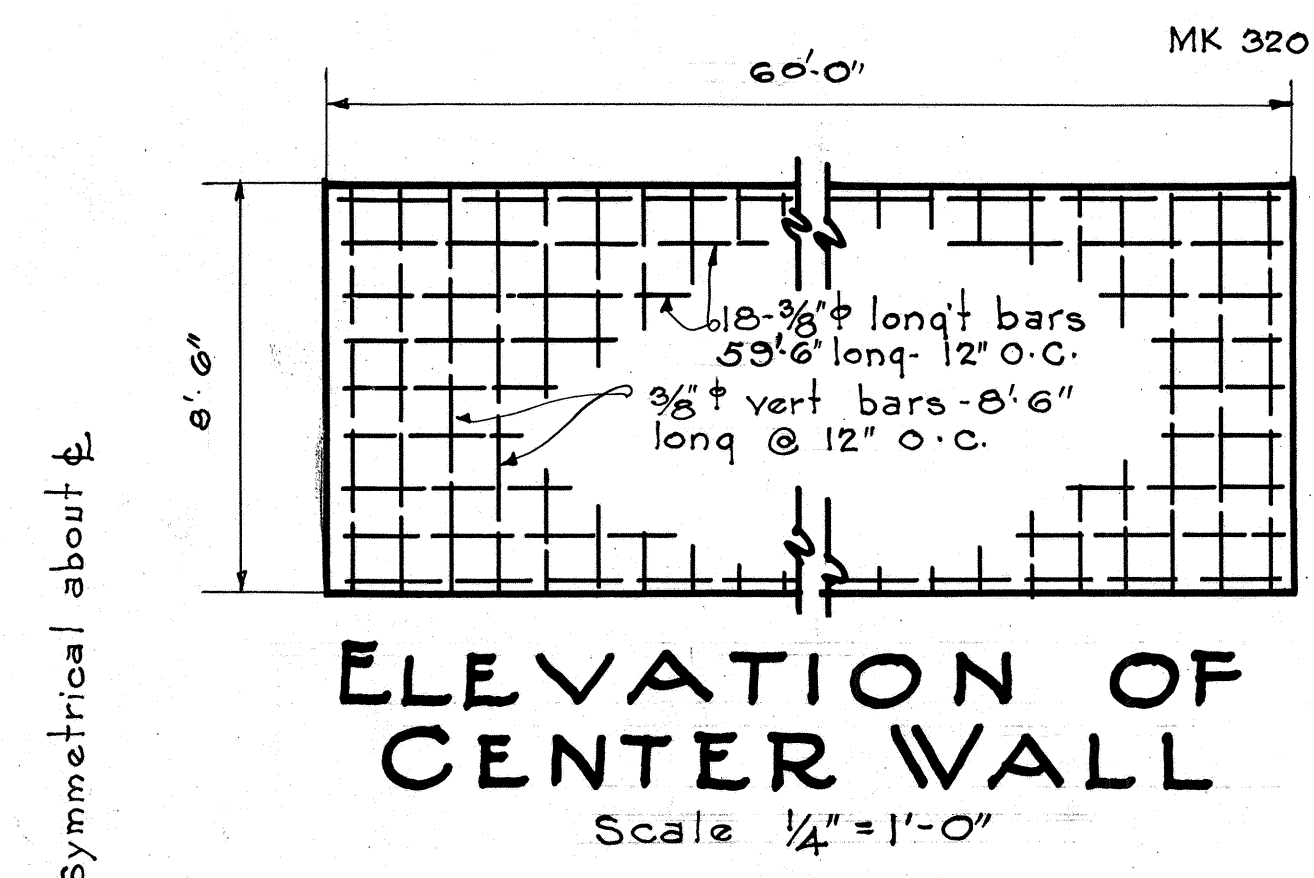
QUANTITIES	
Length of trunk	52'-0"
Size	4'-0" x 4'-0"
Total amount of concrete	37 CU. YDS
" " " steel	5,083 lbs.
Structural Exo.	29 Cu. Yds.

LOCATION PLAN
Scale 1" = 10 Ft.

BOX CULVERT AT STA. 53+29

DETAILS OF BOX CULVERT
Sheet 4 of 11 sheets

4298.18



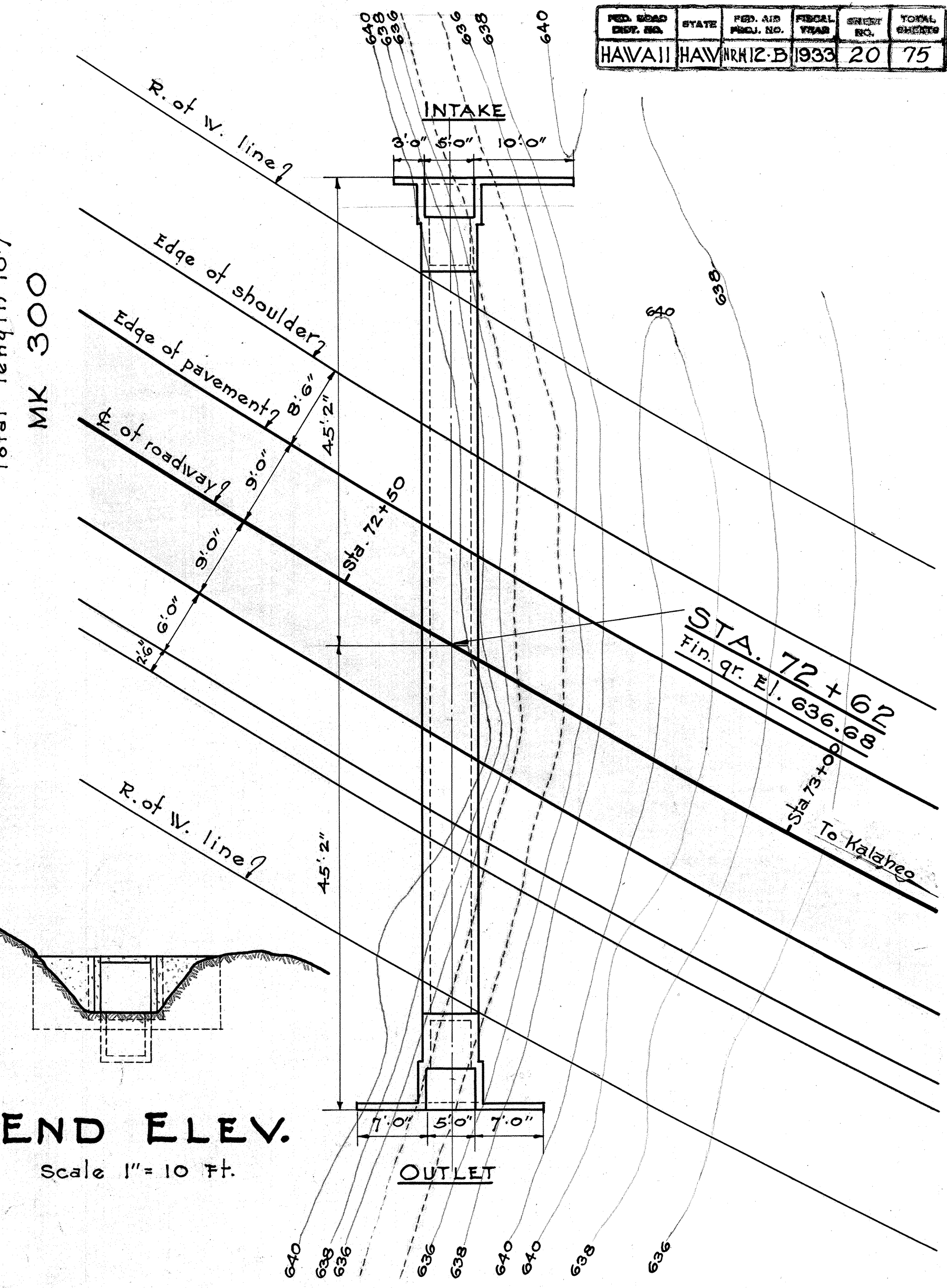
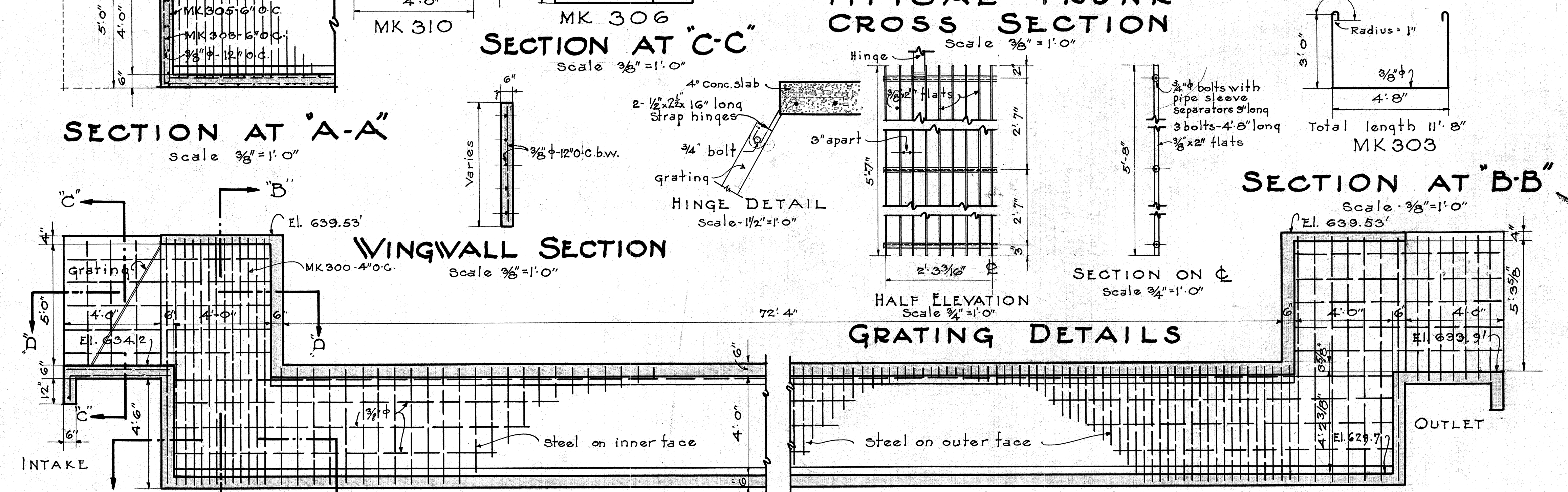
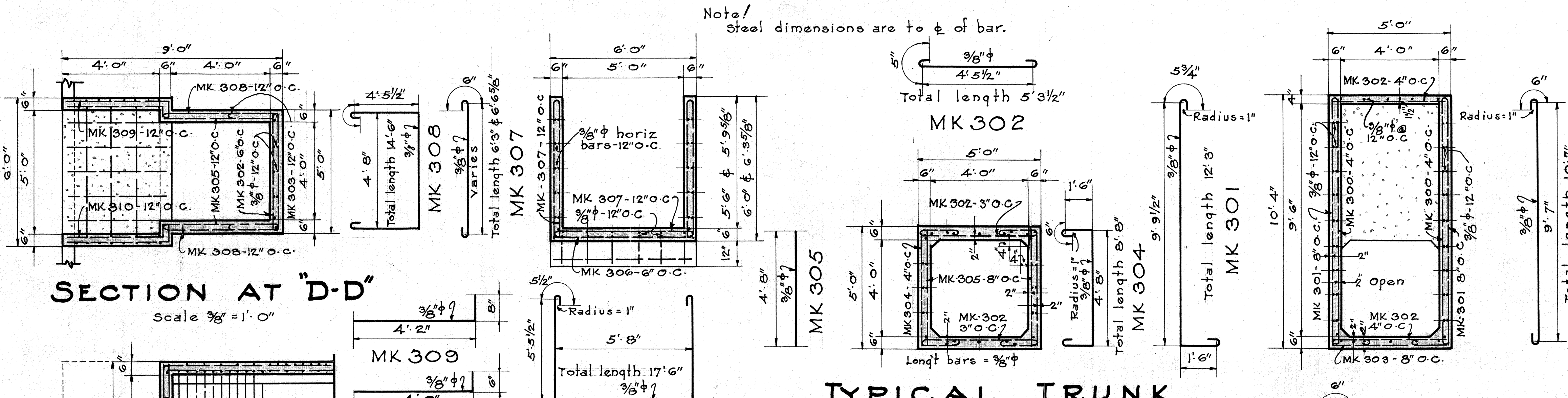
QUANTITY TABLE

AT STATION	60+89
Total amount of concrete	232 Cu.Yds.
" " " Steel	29,176 #
Structural Exc.	236 Cu.Yds.
Channel Exc.	26 " "

DOUBLE BOX CULVERT AT STA. 60+89

BRIDGE NO. 7D
DETAILS OF BOX CULVERT
Sheet 5 of 11 Sheets

4298.19



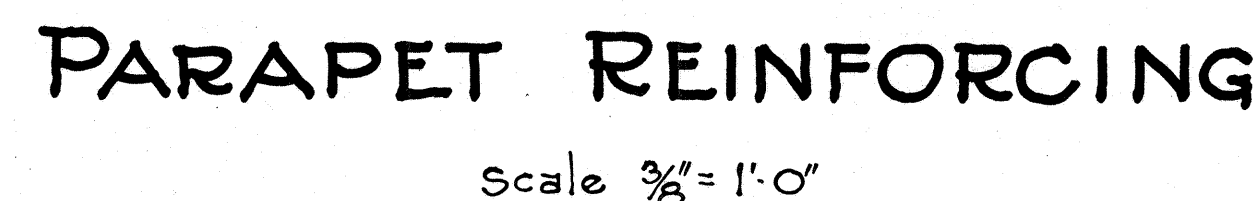
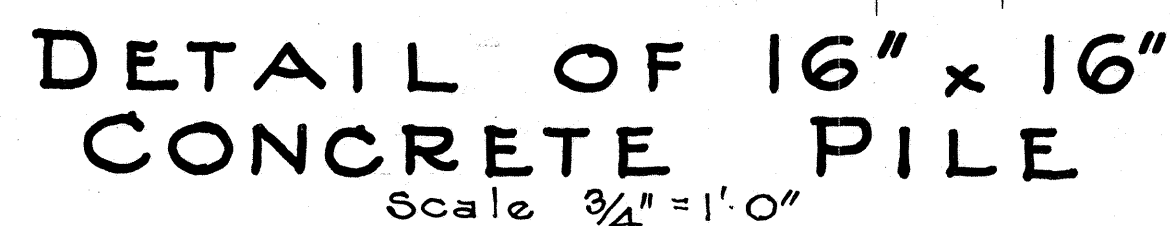
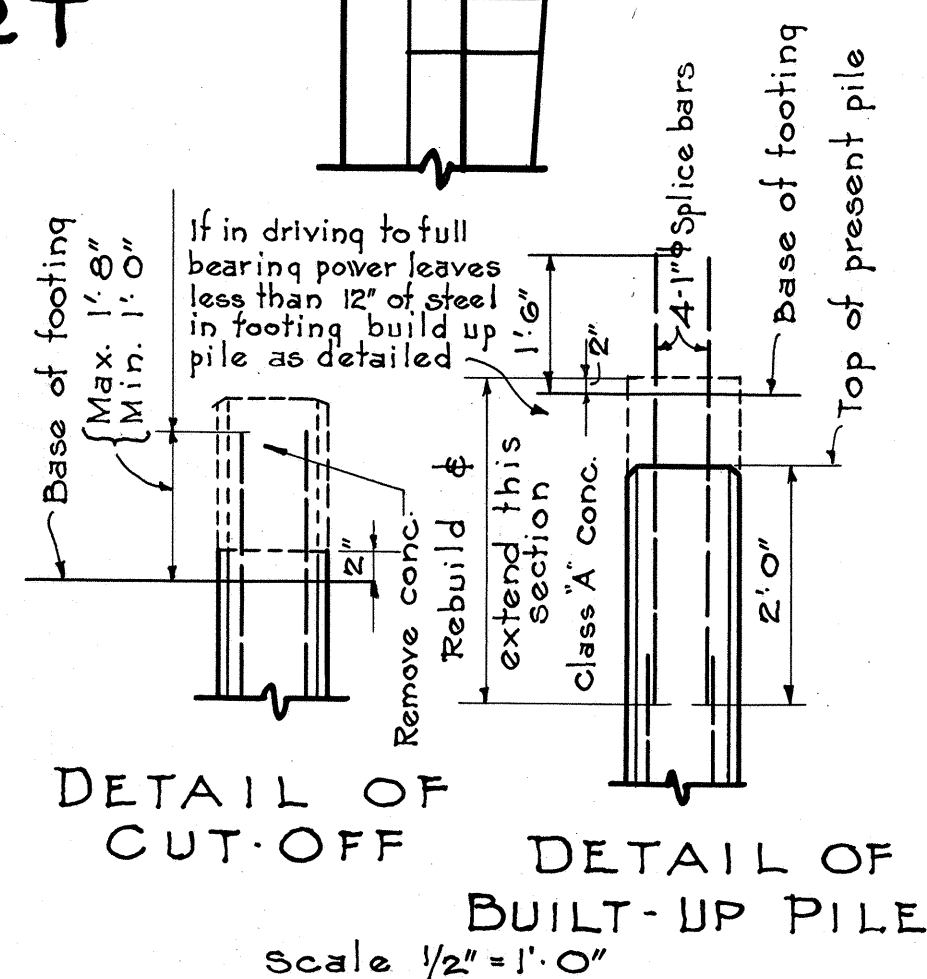
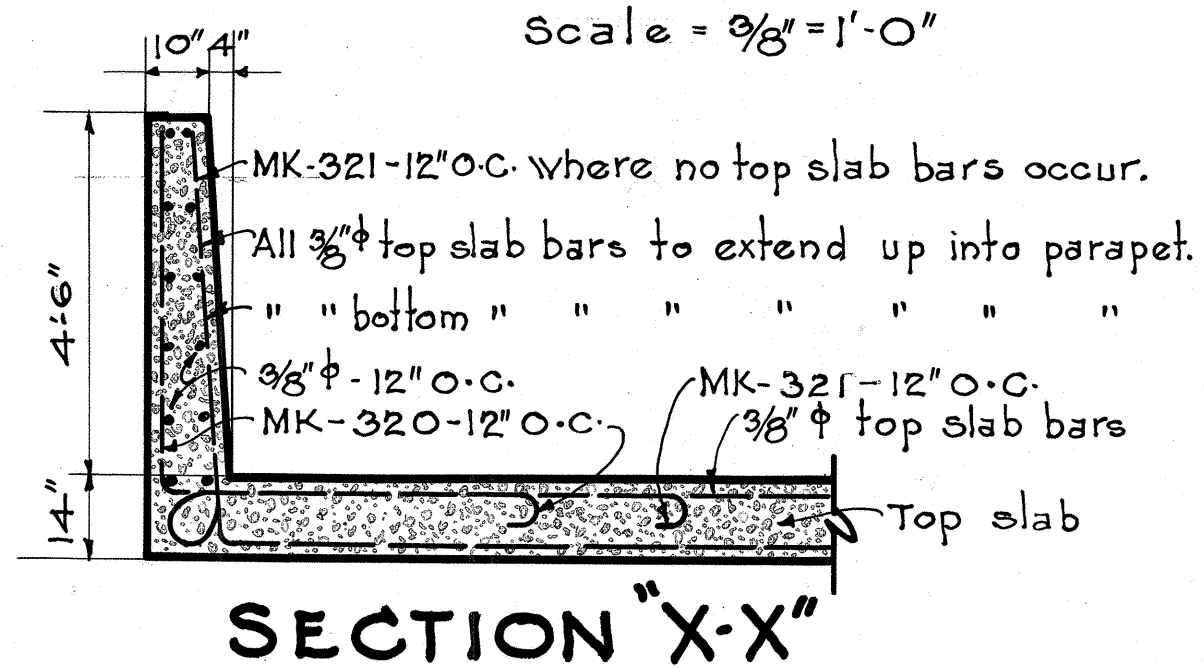
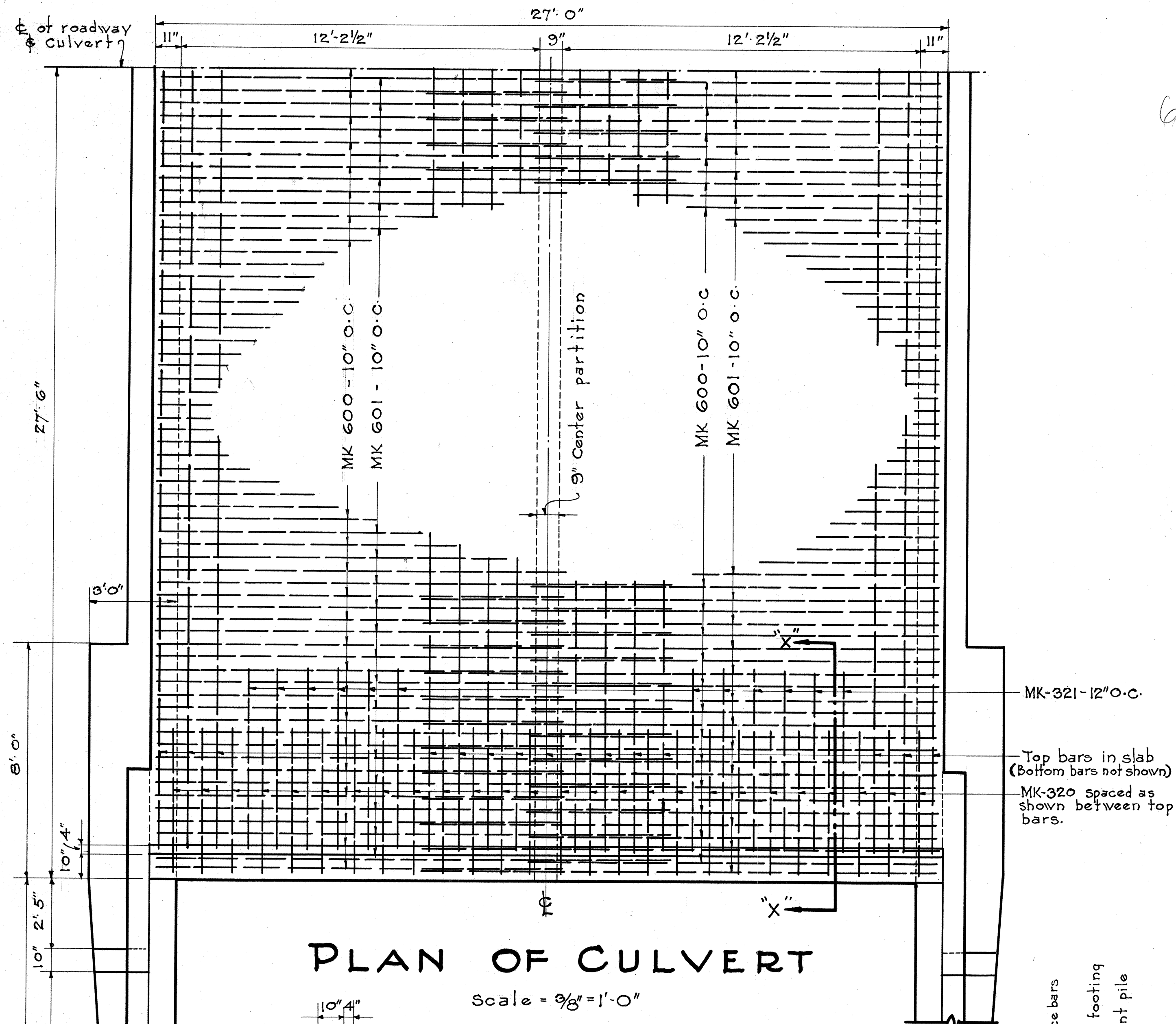
QUANTITIES

Length of trunk	72'-4"
Size "	4'-0" x 4'-0"
Total amount of concrete	38 Cu.Yds.
" " Steel	4,674 #
Structural Exc.	178 Cu.Yds.

SIPHON AT STA. 72+62

DETAILS OF BOX CULVERTS
Sheet 6 of 11 sheets

4298.20



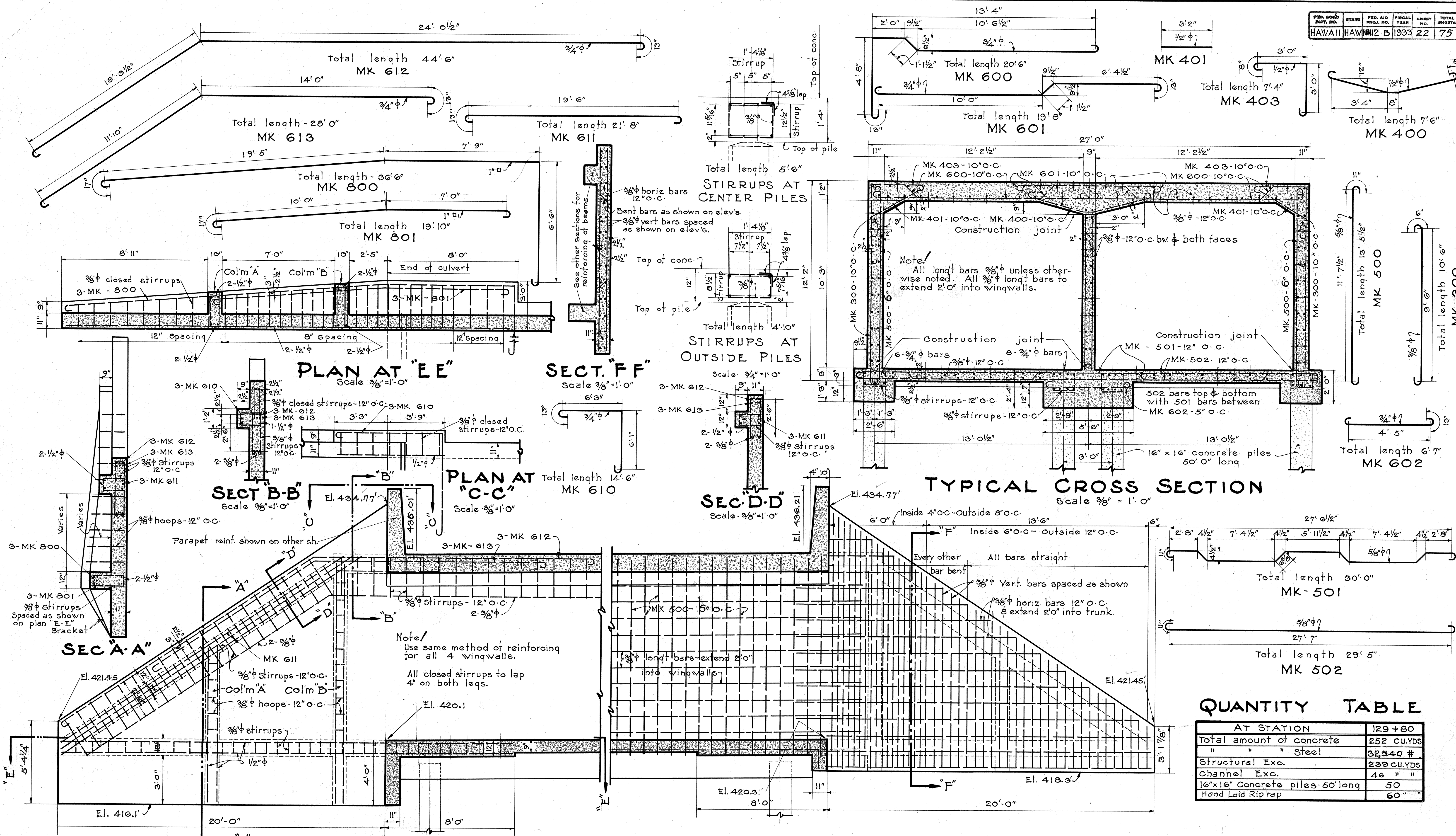
DOUBLE BOX CULVERT AT STA. 129+80

SHEET 1 OF 2 SHEETS

EL.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.
El. 420'	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.
El. 410'	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.
El. 400'	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.
El. 390'	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.
El. 380'	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.
El. 370'	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.
El. 360'	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.	Grass, roots, mud, etc.

WASH BORING DATA **BRIDGE NO. 7B** **DETAILS OF BOX CULVERT** Sheet 7 of 11 Sheets

429 S. 21

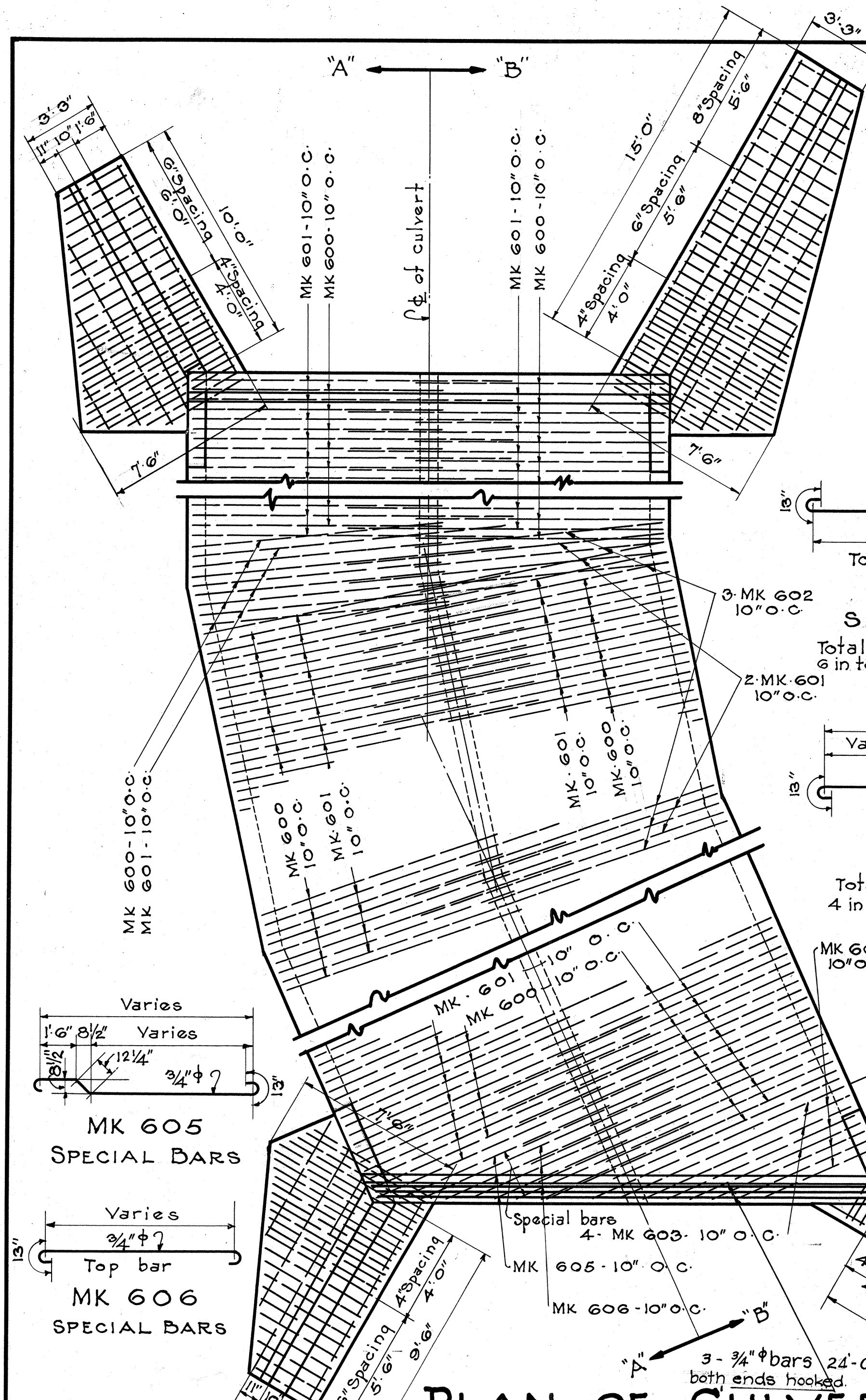


QUANTITY TABLE

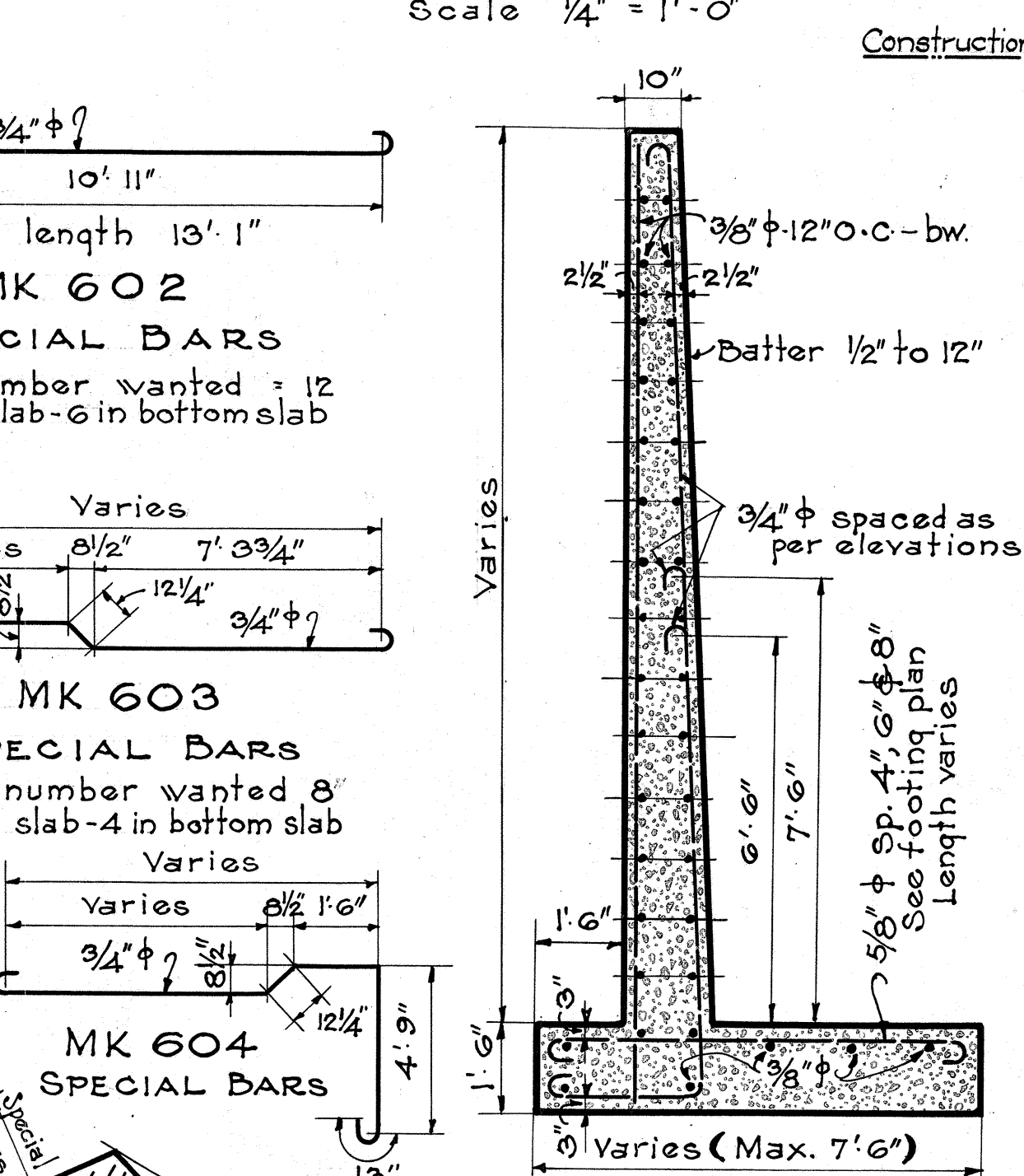
AT STATION		129+80
Total amount of concrete		252 CU.YDS
" " " Steel		32,540 #
Structural Exc.		239 CU.YDS
Channel Exc.		46 " "
16"x16" Concrete piles-50' long		50
Hand Laid Rip rap		60 " "

DOUBLE BOX CULVERT AT STA. 129+80
SHEET 2 OF 2 SHEETS

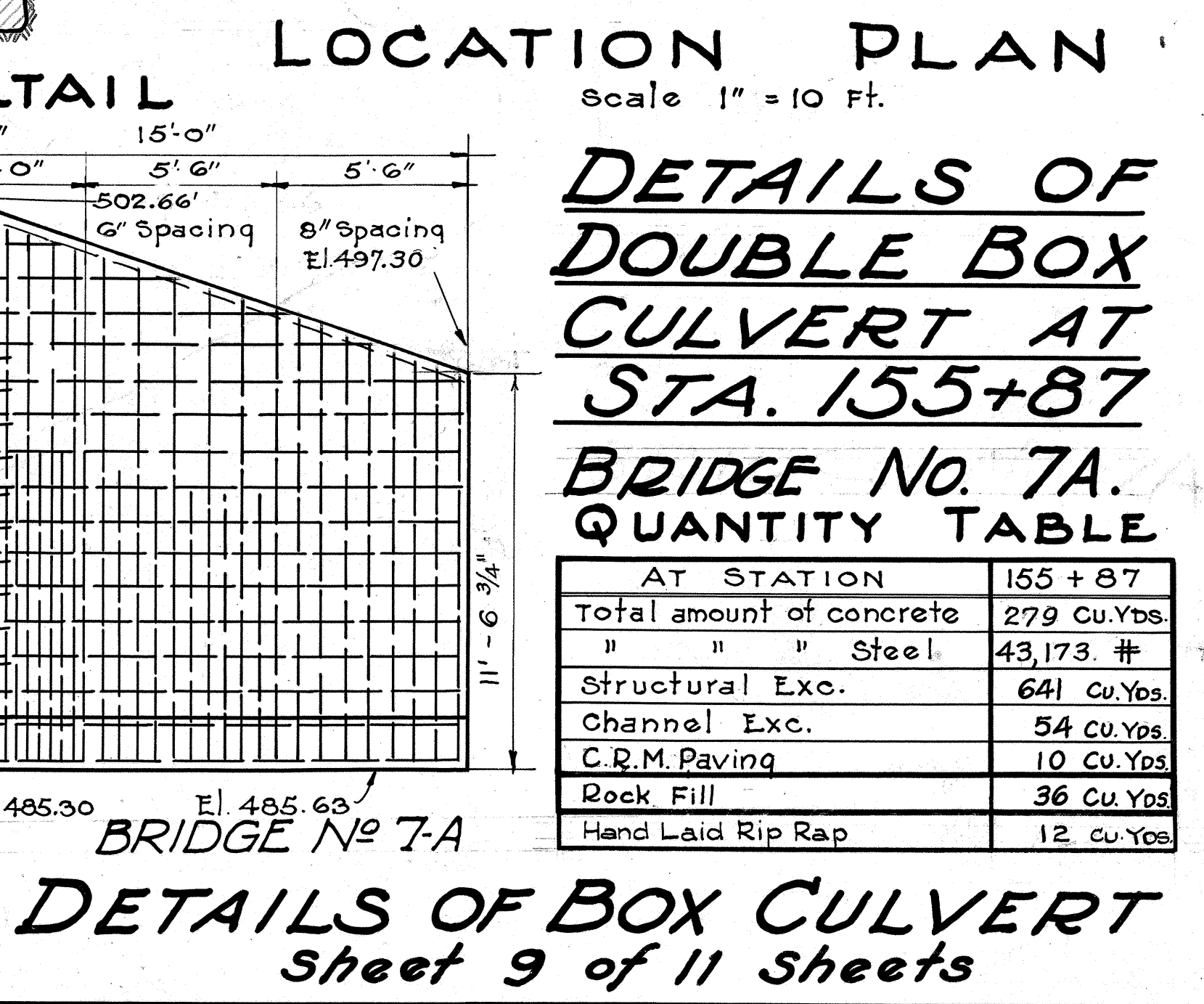
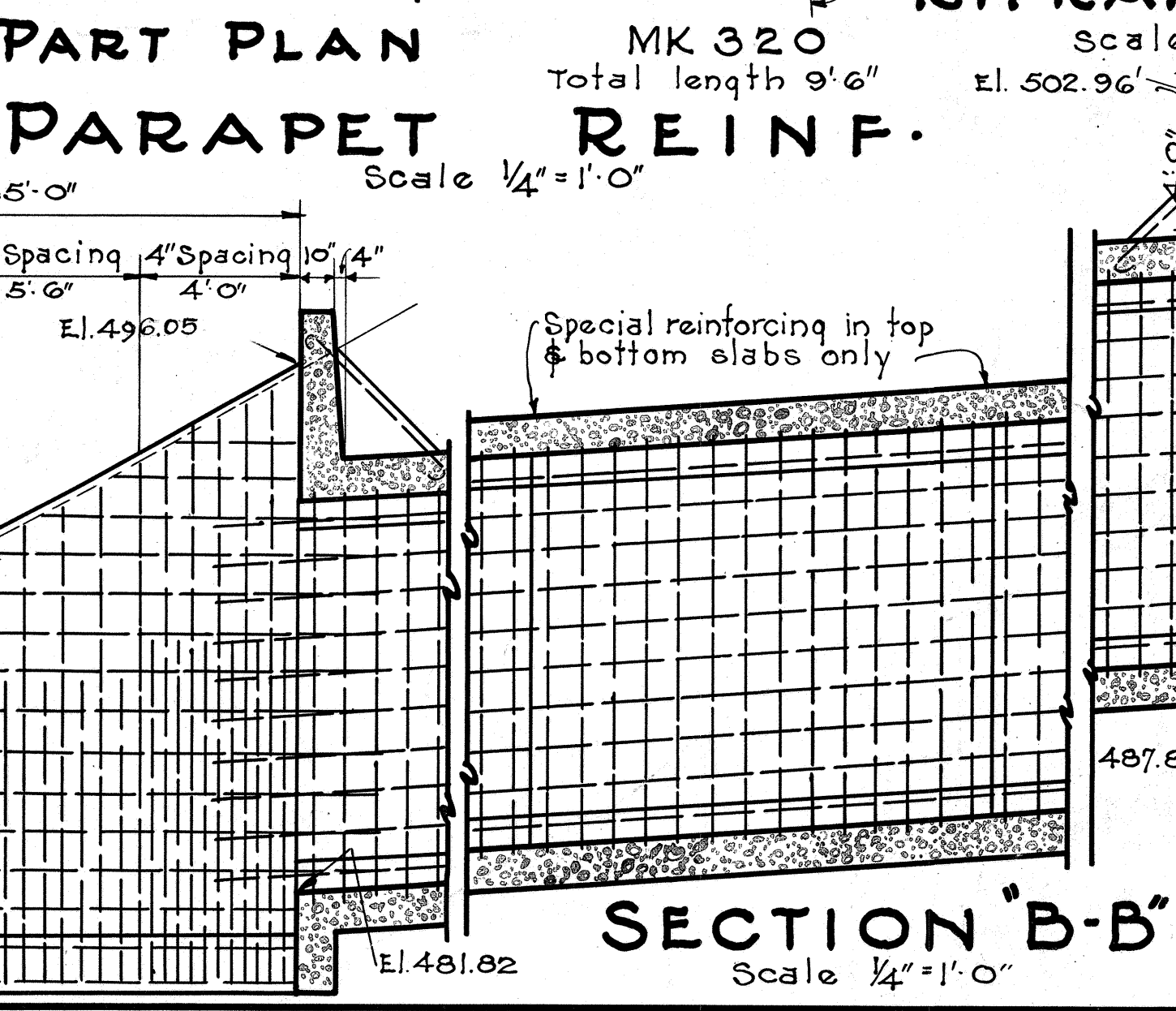
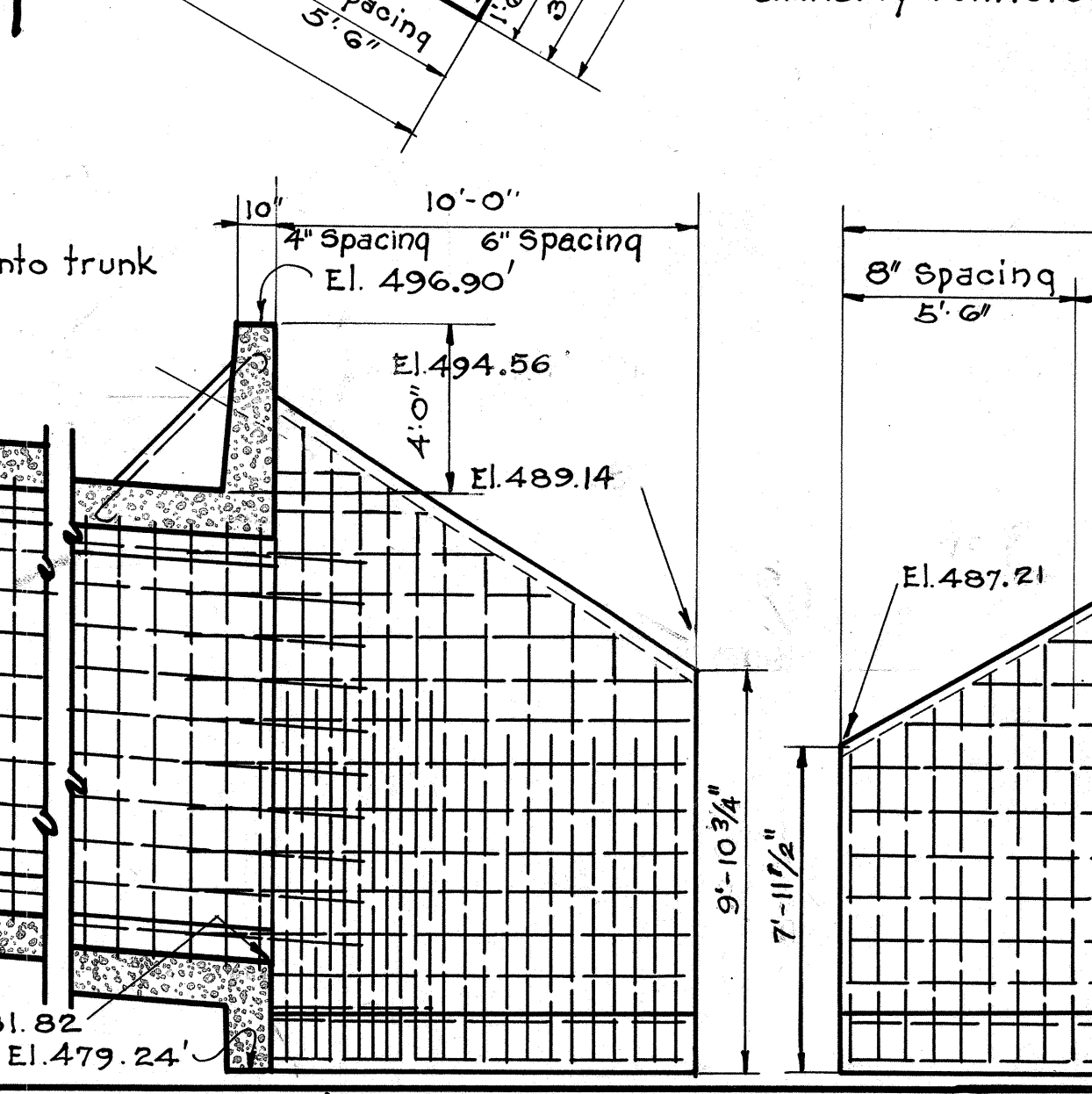
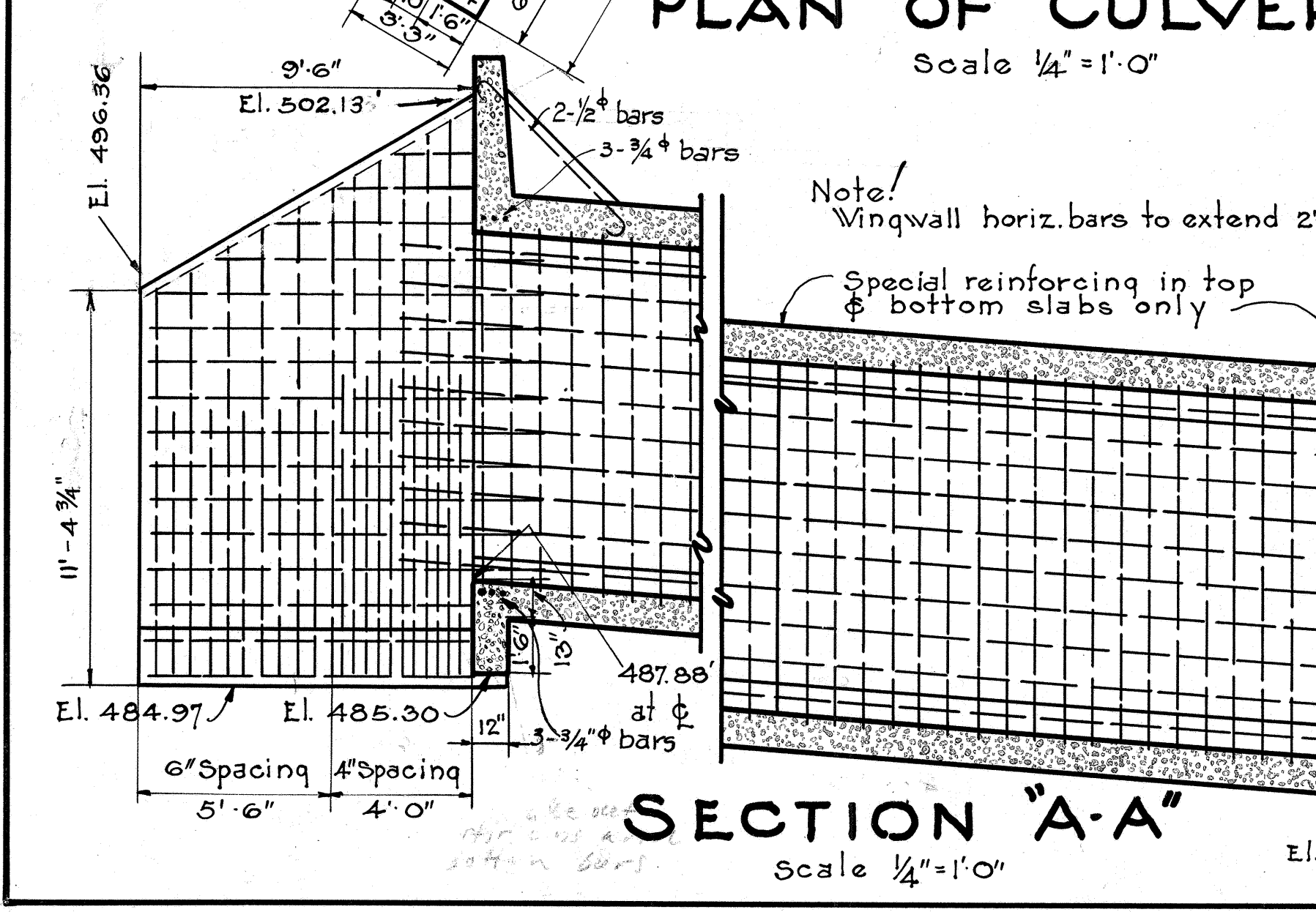
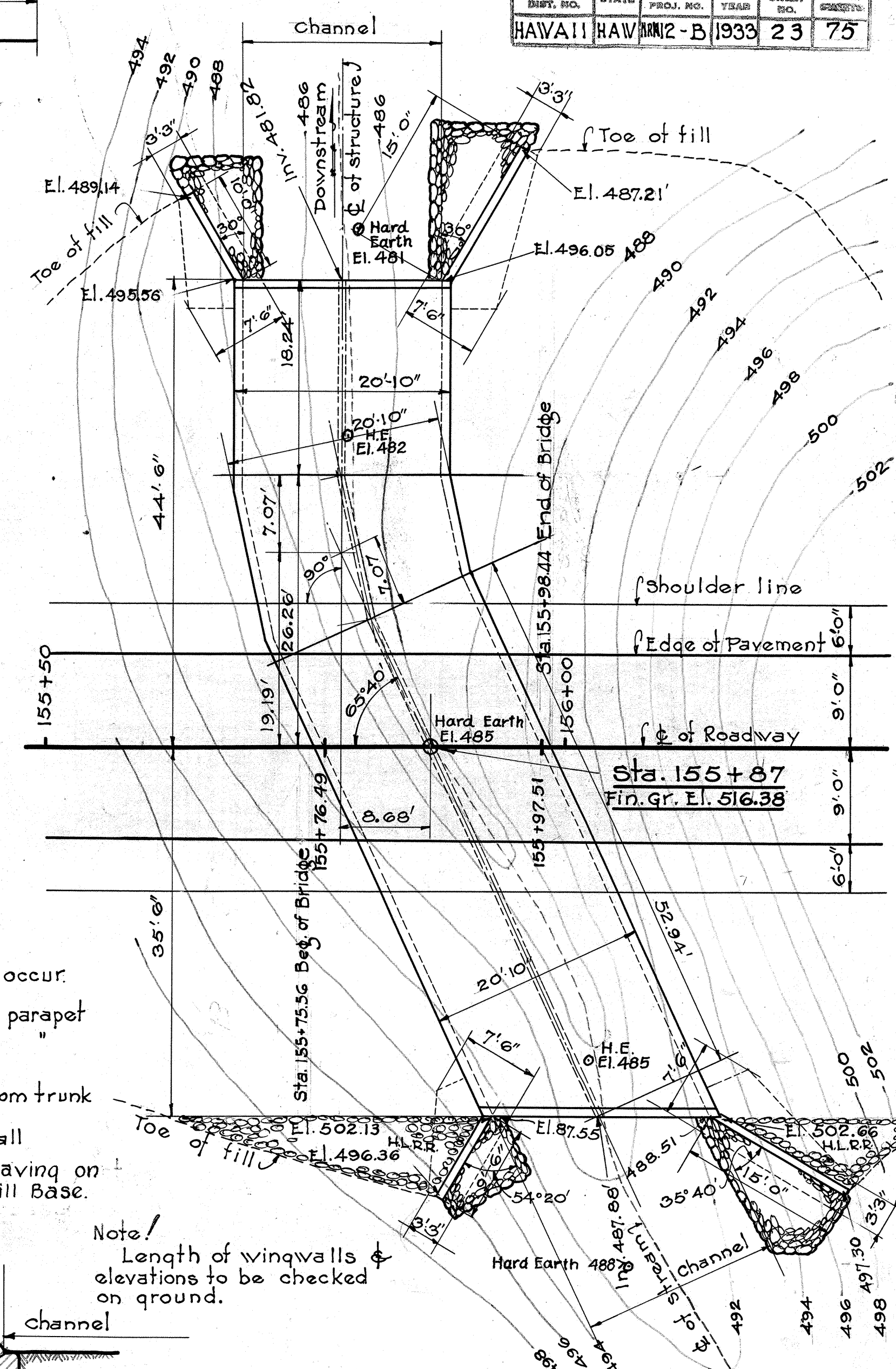
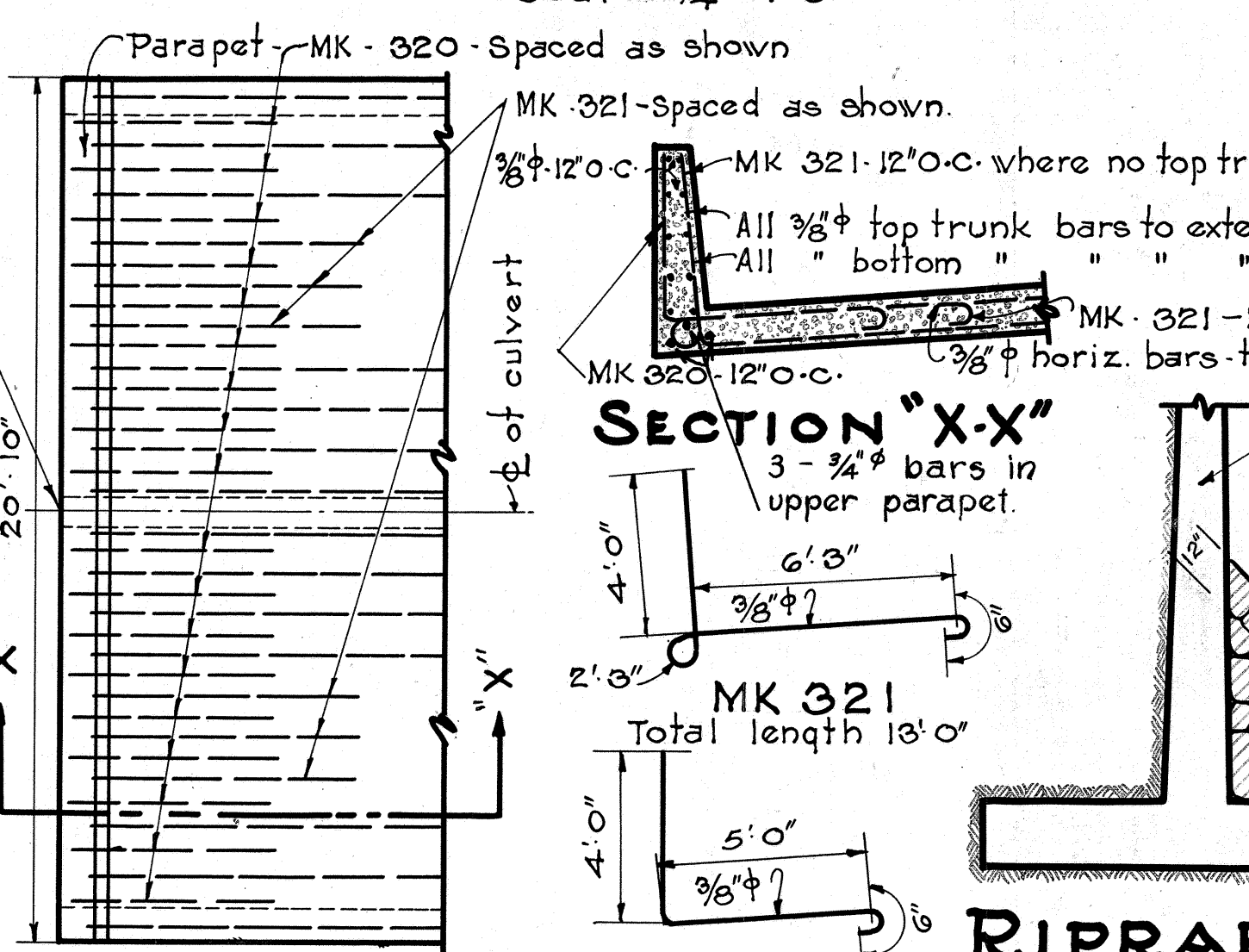
BRIDGE No 7B
DETAILS OF BOX CULVERT
Sheet 3 of 11 Sheets
4298.22



CENTER WALL REINF.



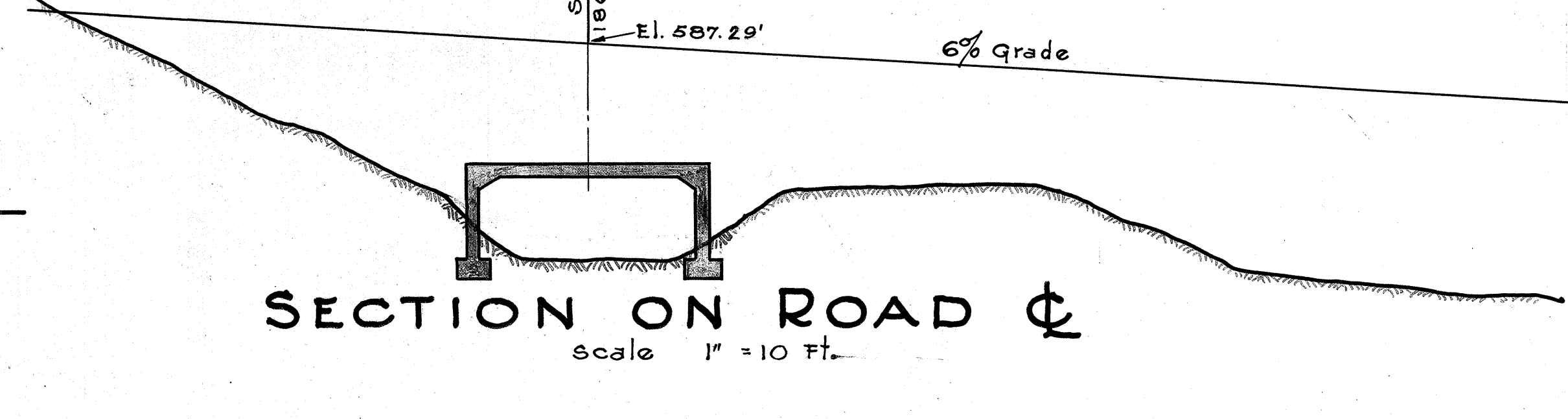
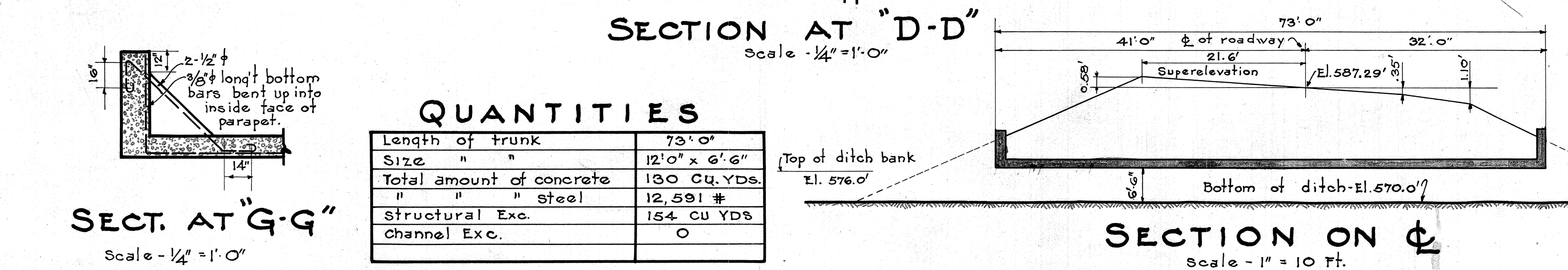
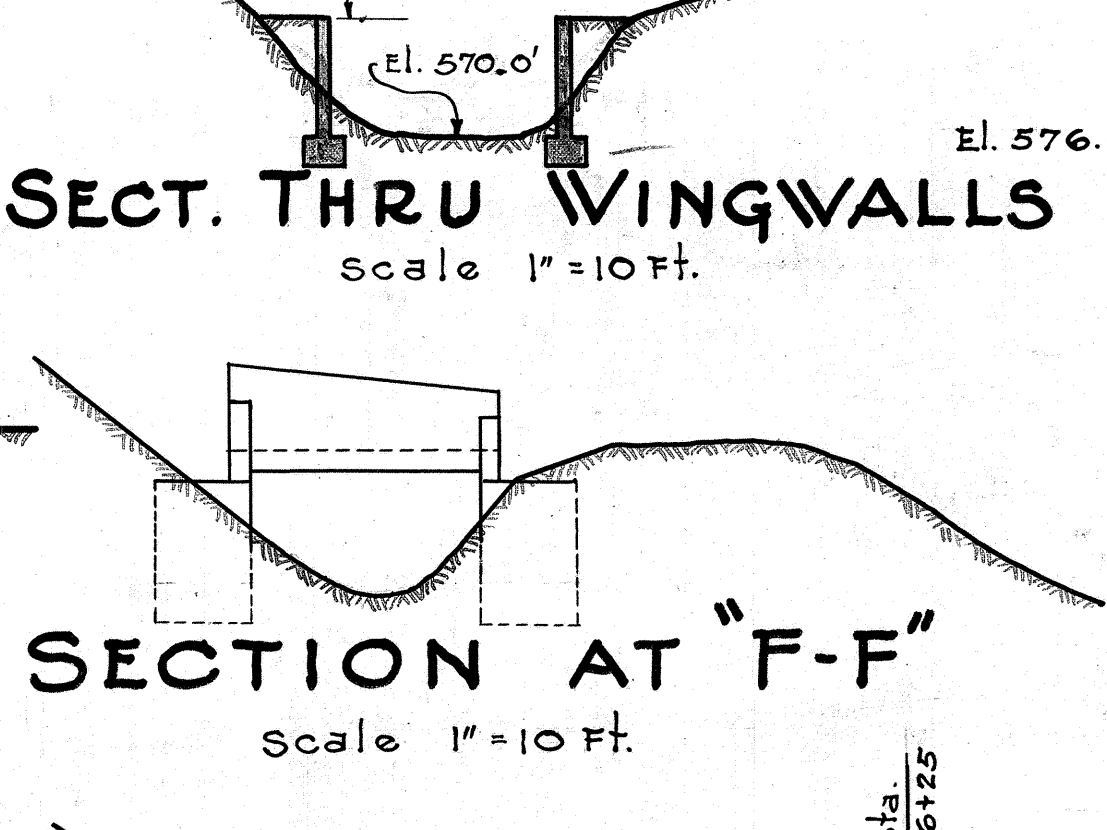
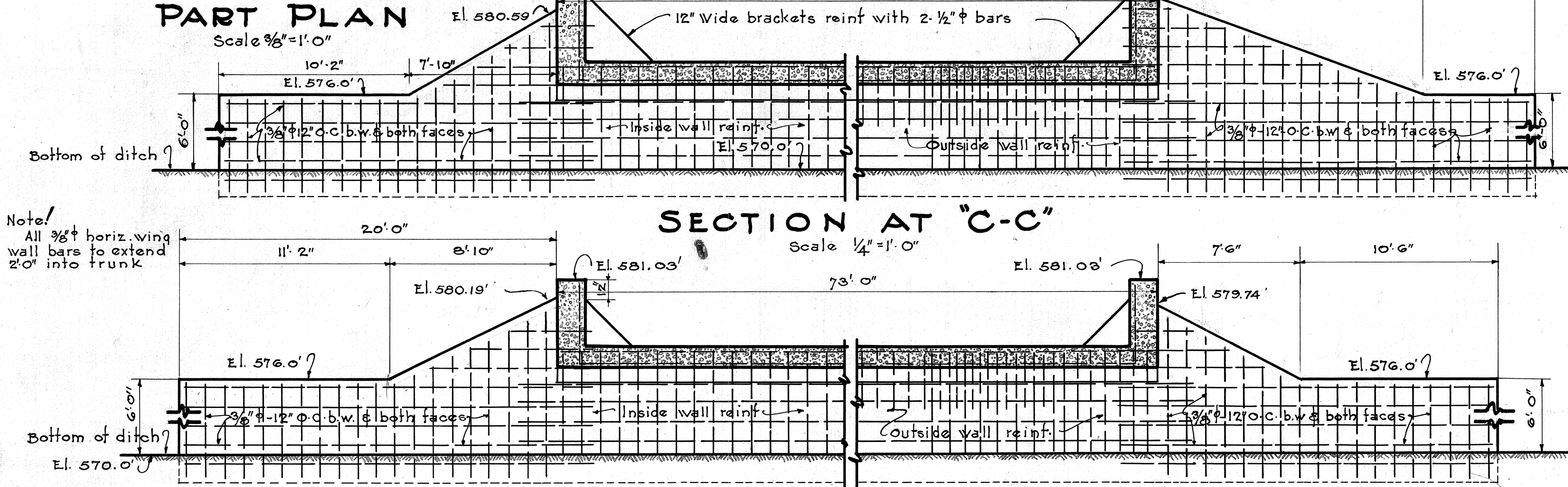
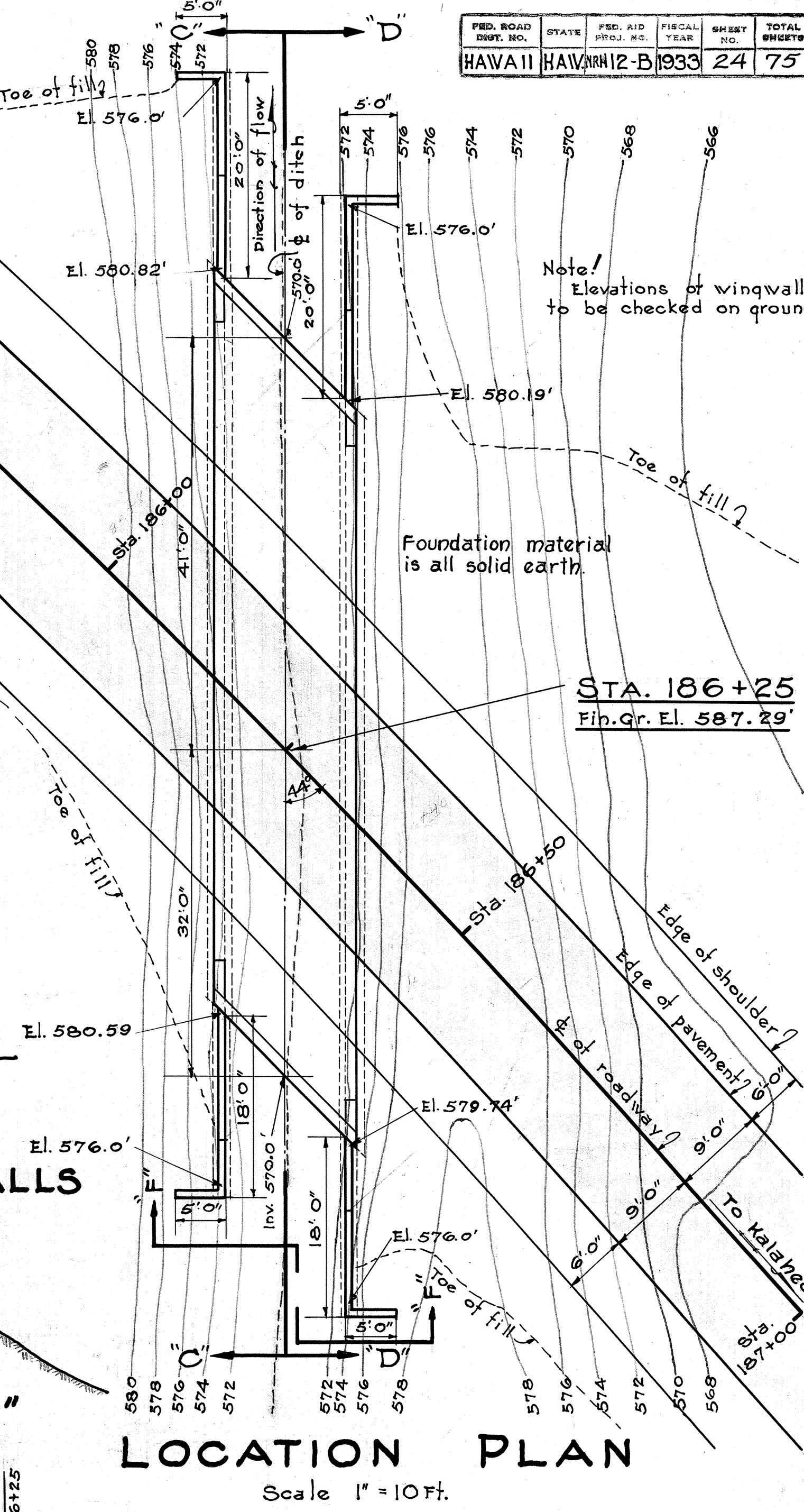
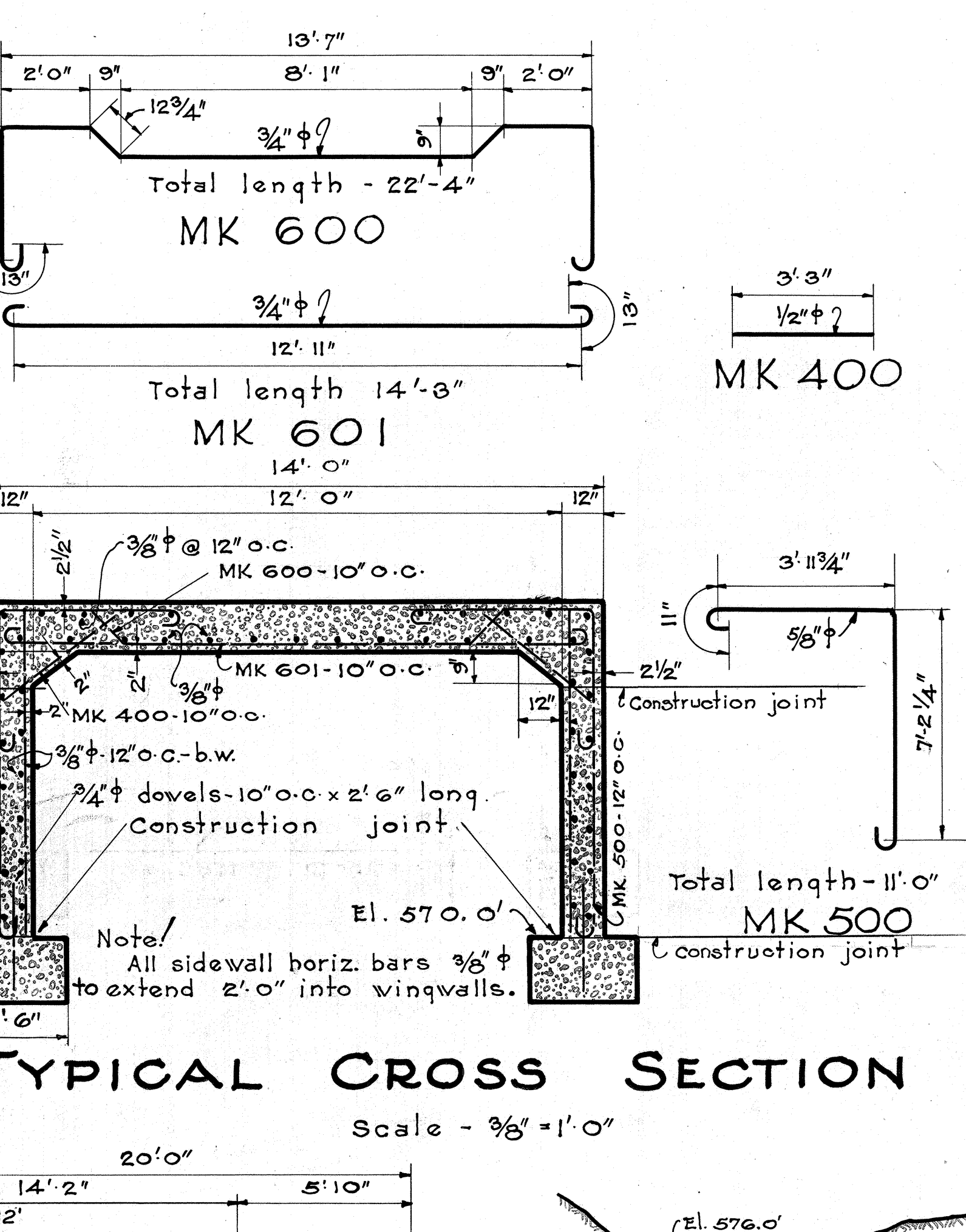
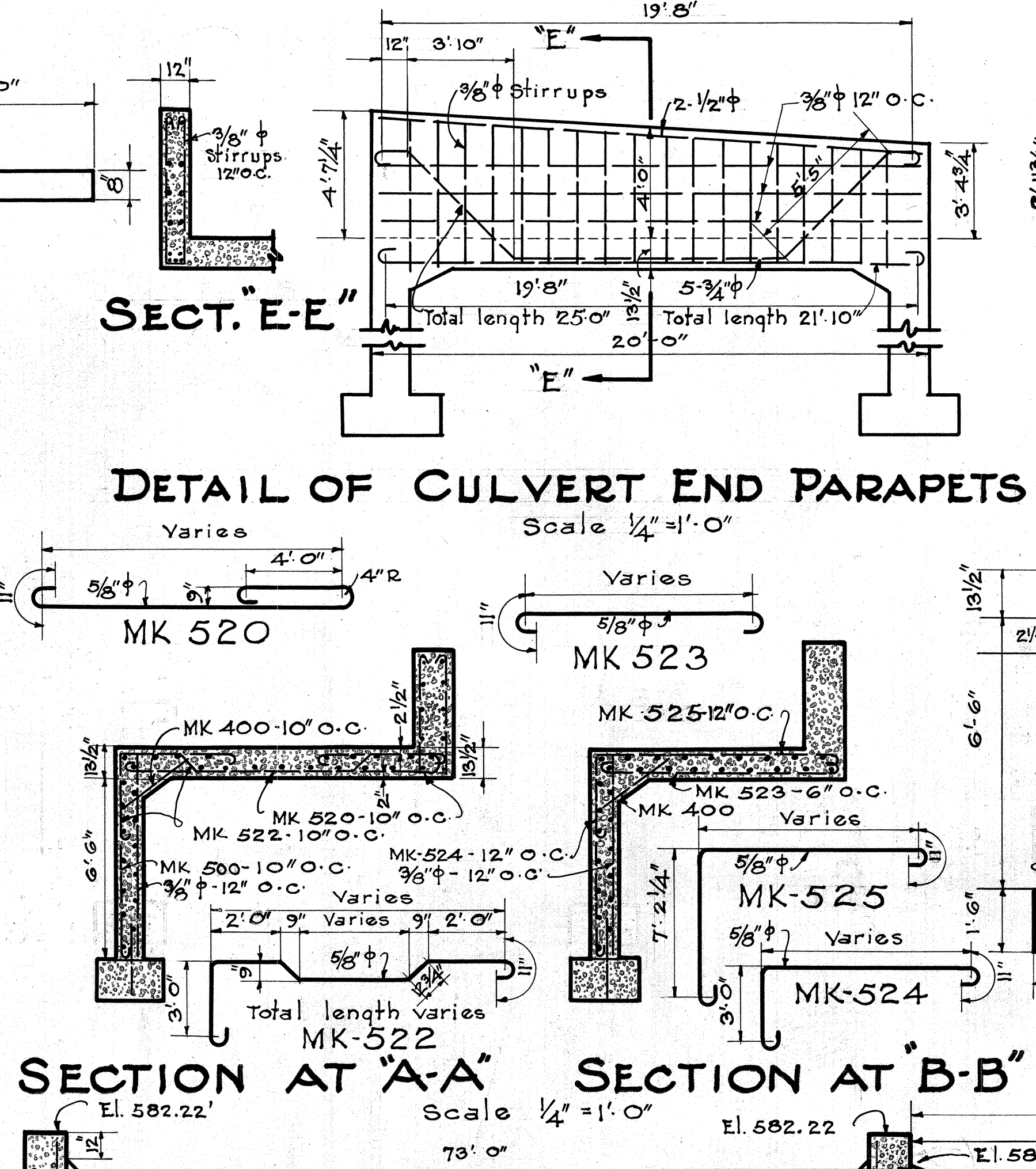
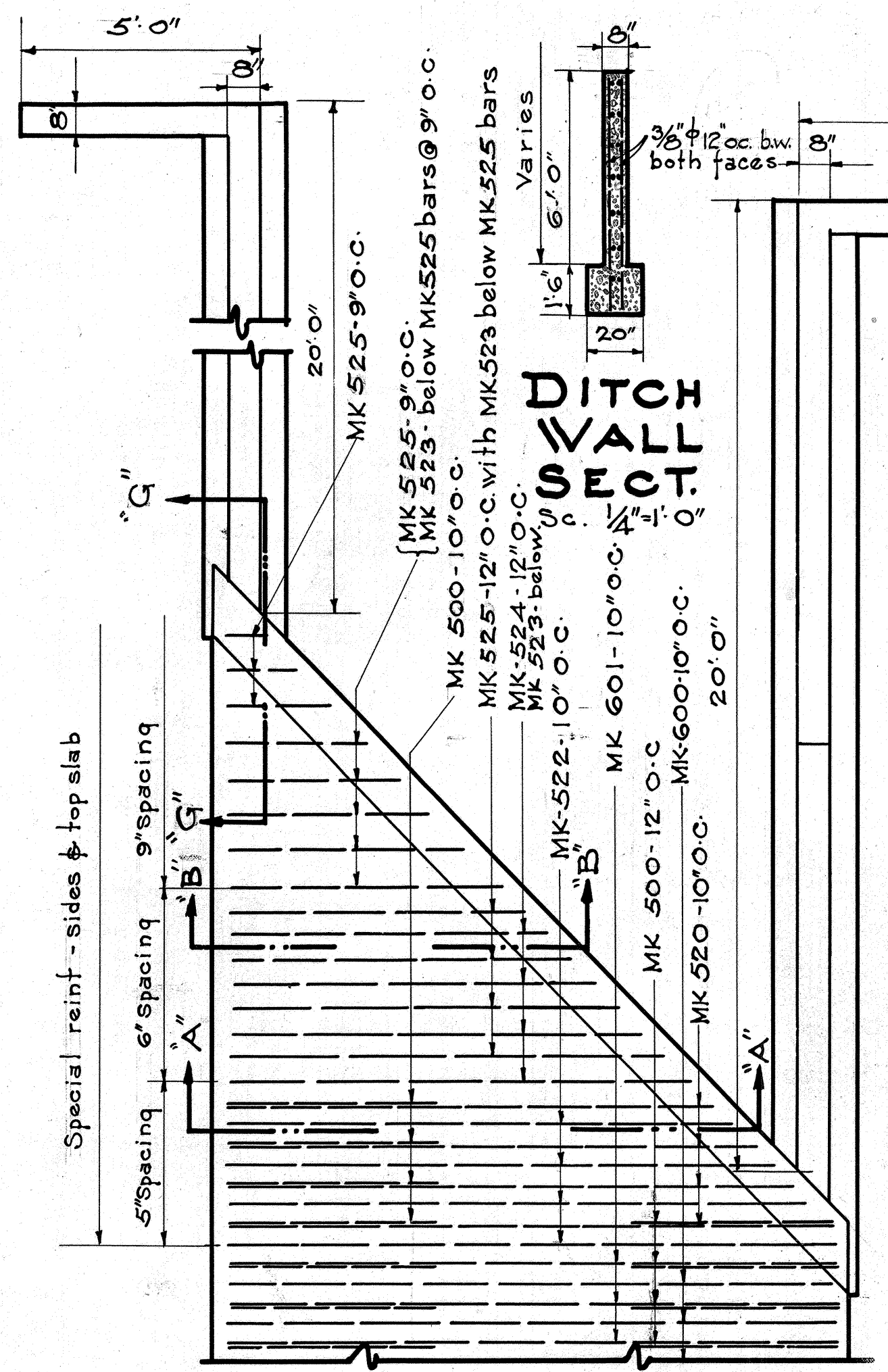
TYPICAL CROSS SECTION Scale 1/4" = 1'-0"



DETAILS OF DOUBLE BOX CULVERT AT STA. 155+87 BRIDGE No. 7A. QUANTITY TABLE

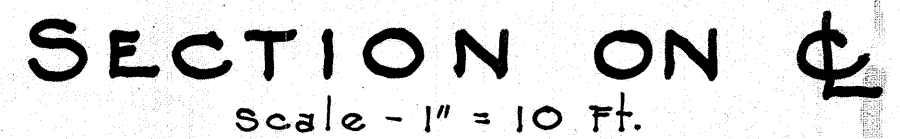
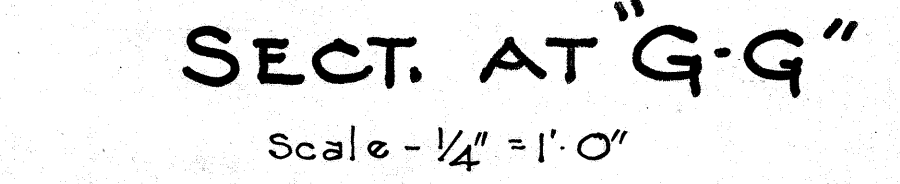
AT STATION	155 + 87
Total amount of concrete	279 Cu.Yds.
" " " Steel	43,173 #
Structural Exc.	641 Cu.Yds.
Channel Exc.	54 Cu.Yds.
C.R.M. Paving	10 Cu.Yds.
Rock Fill	36 Cu.Yds.
Hand Laid Rip Rap	12 Cu.Yds.

DETAILS OF BOX CULVERT Sheet 9 of 11 Sheets



QUANTITIES

Length of trunk	73'0"
Size "	12'0" x 6'6"
Total amount of concrete	130 CU. YDS.
" " " Steel	12,591 #
Structural Exc.	154 CU YDS
Channel Exc.	0



DETAILS OF DITCH CROSSING AT STA. 186+25

DETAILS OF BOX CULVERT
Sheet 10 of 11 Sheets

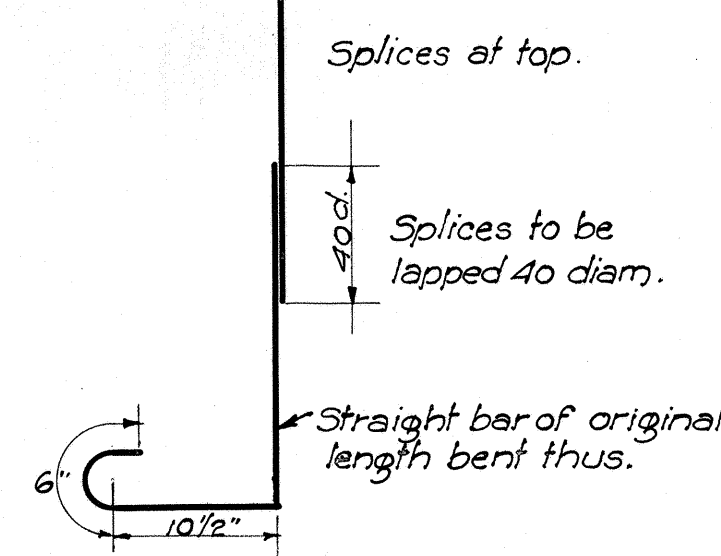
4298.24

PARTIALLY REVISED SEE SHEET No. 4298.24A

DATE: 6/23/33
DESIGNED BY: J. J. S.
CHECKED BY: J. J. S.
APPROVED BY: J. J. S.
DRAWN BY: J. J. S.
REVISIONS: 1/2/33

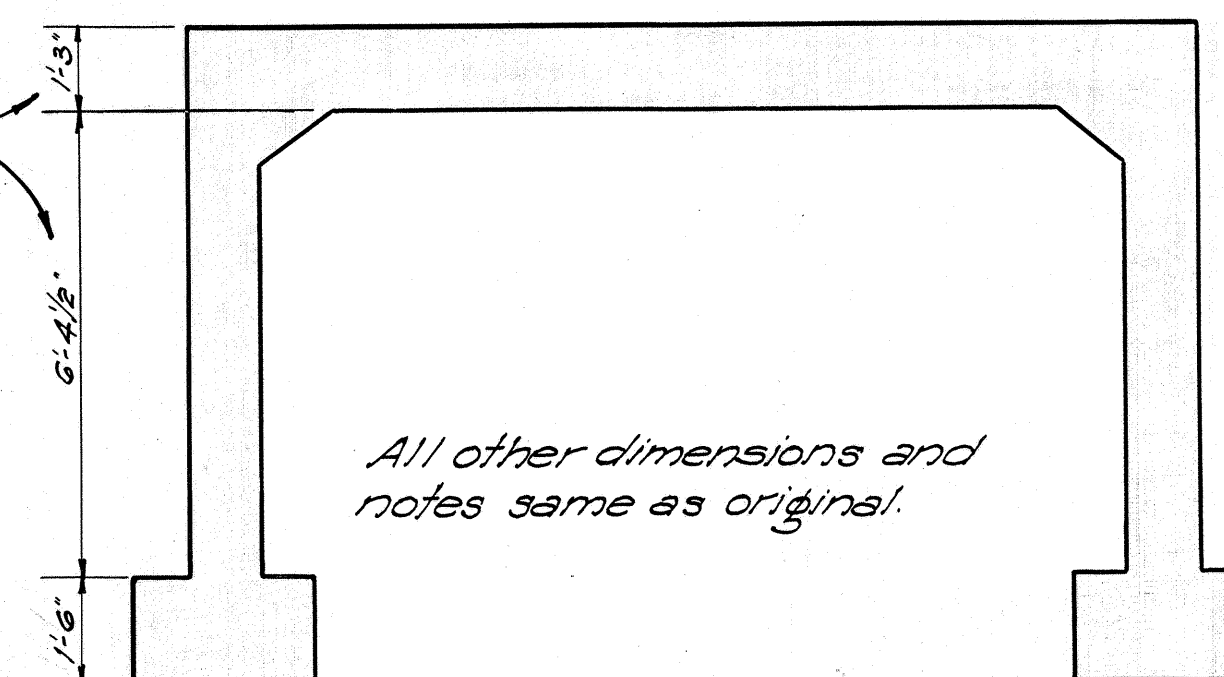
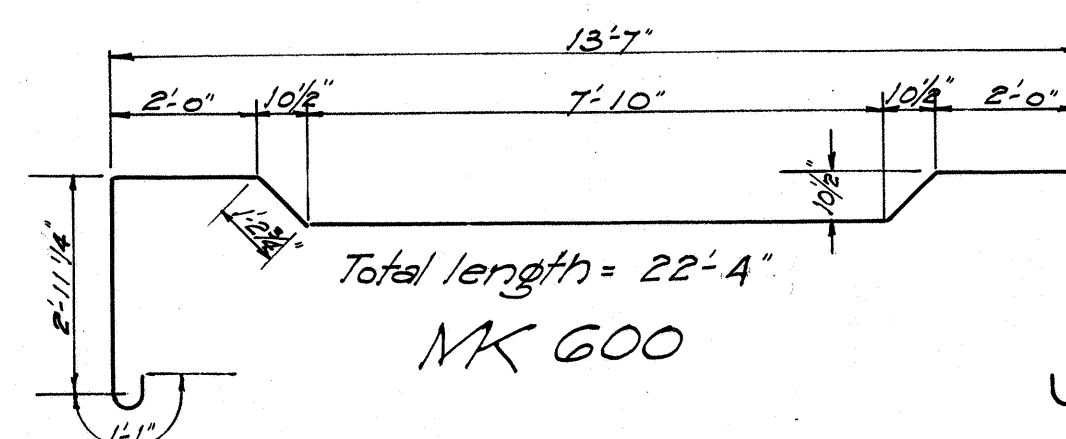
ORIGINAL	SURVEY PLOTTED BY	DATE
PLAN	DRAWN BY	
NOTE BOOK	TRACED BY	12/28/35
No.	QUANTITIES BY	
	CHECKED BY	

Revised as per Bu. Pub. Rd's. Radios of 11-21-33 & 12-22-33



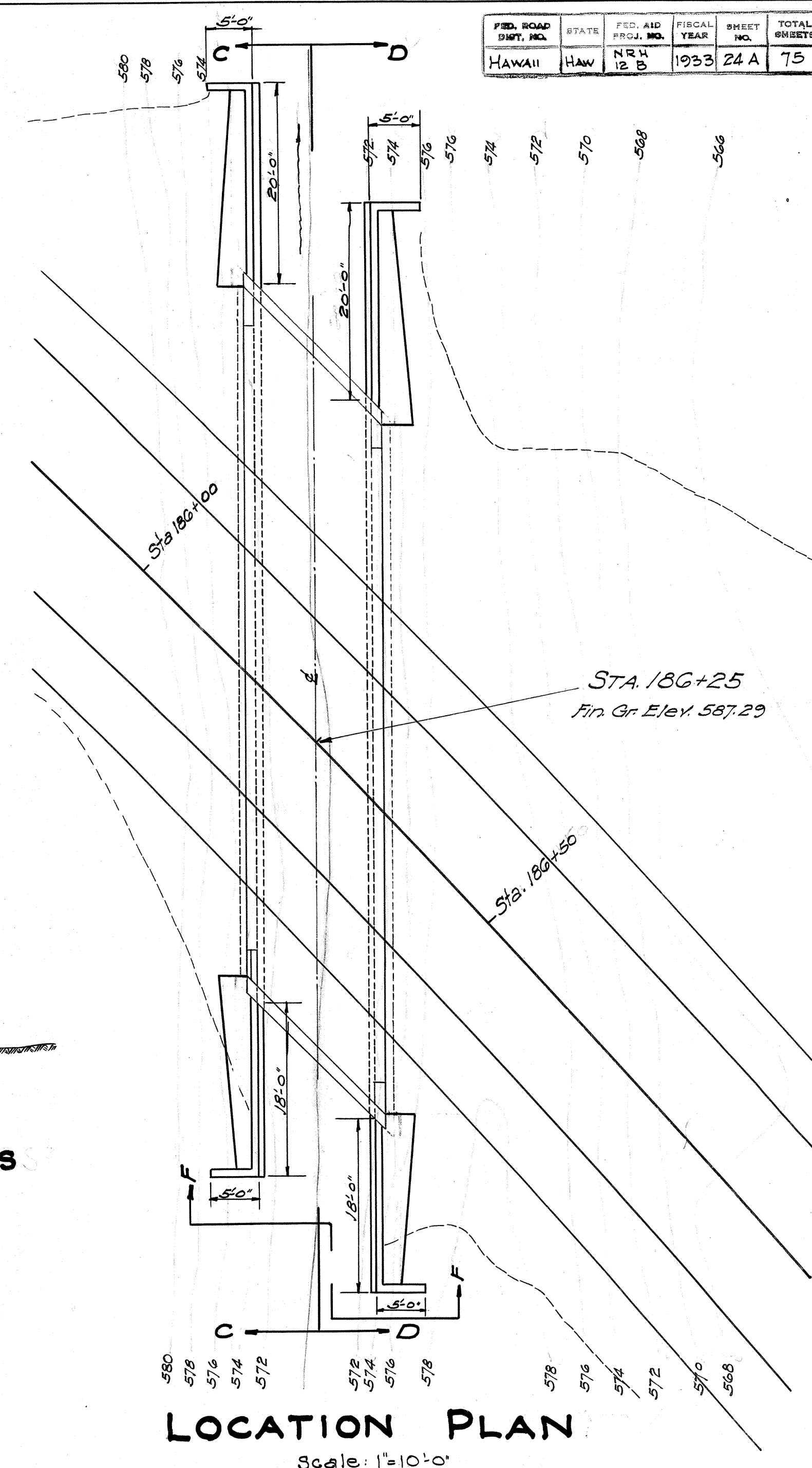
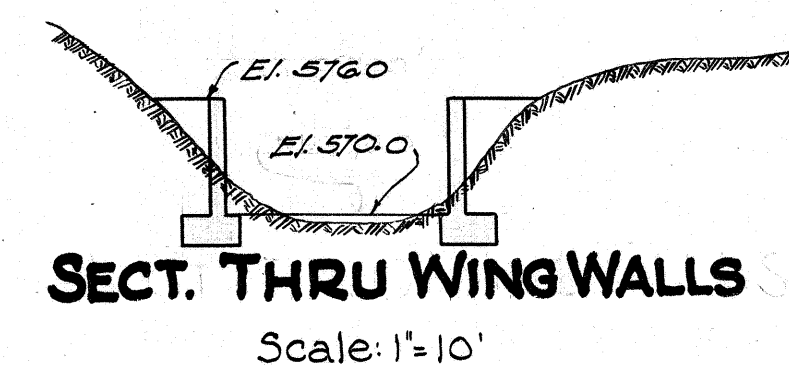
METHOD OF LENGTHENING ORIGINAL BARS.

NOTE: Other sections
change dimensions to
conform with these dimens.



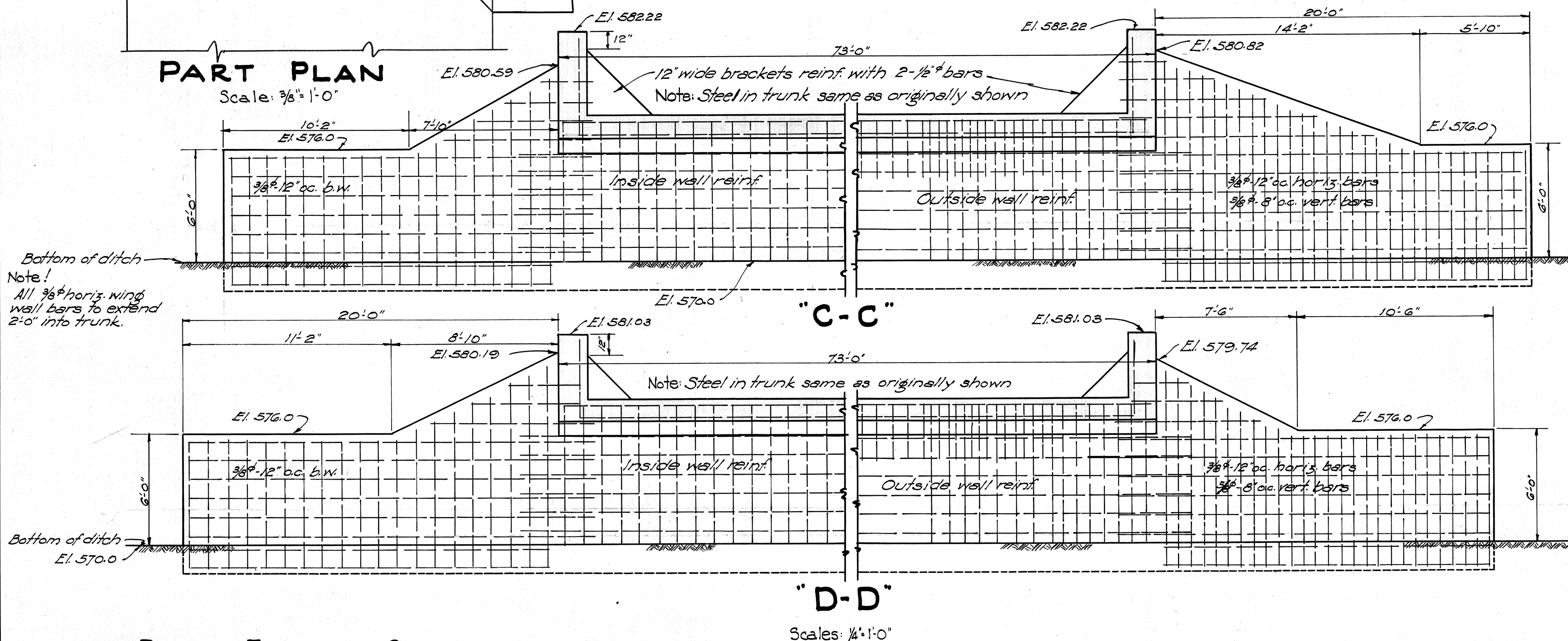
TYPICAL CROSS SECTION

Scale: $\frac{3}{8}'' = 1'-0''$



LOCATION PLAN

Scale: 1"=10'-0"



"D-D"

Scales: $\frac{1}{4}'' = 1'-0''$

REVISED ESTIMATED QUANTITIES

Length of Trunk	73'-0"
Size of Trunk	12'-0" x 6'-4 1/2"
Total amount of Concrete	143 c.y.
Total amount of Steel	13,800 lbs
Structural Excavation	171 c.y.
Channel Excavation	0

**NOTE: DETAILS ON THIS SHEET SUPERSEDE THE CORRESPONDING
DETAILS ON SHEET NO. 4298.24. ALL OTHER WORK TO BE
IDENTICAL TO THAT SHOWN ON THE ORIGINAL.**

*REVISED DETAILS OF DITCH CROSSING
AT STA. 186 + 25*

SUPPLEMENTARY TO SHEET No. 4298.24

4298.24A

