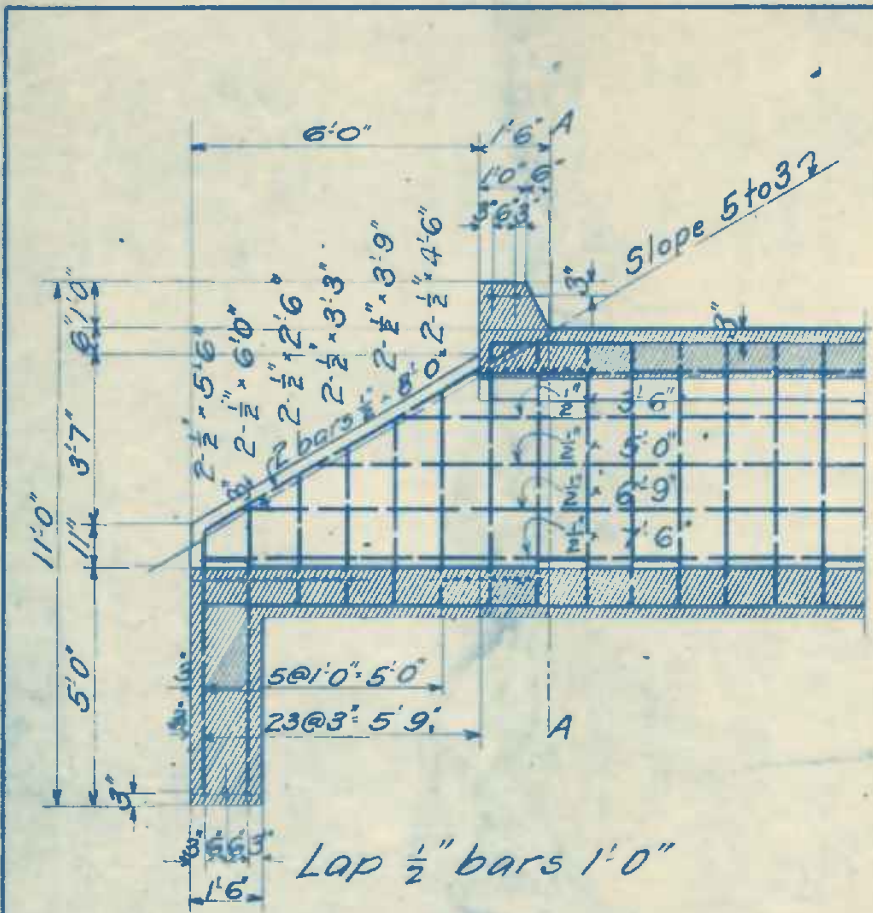


BAHVA R. BAKHSI

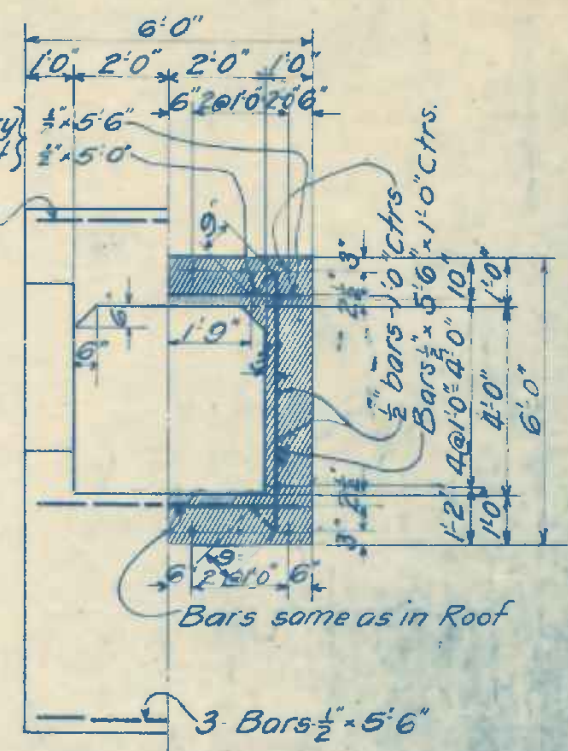
C. B. & Q. R. R.
REINFORCED CONCRETE
BOX CULVERTS

DRAWING NO. 244



Bars 3' Ctrs every
other one straight

2 Bars 1/2" x 5'6"

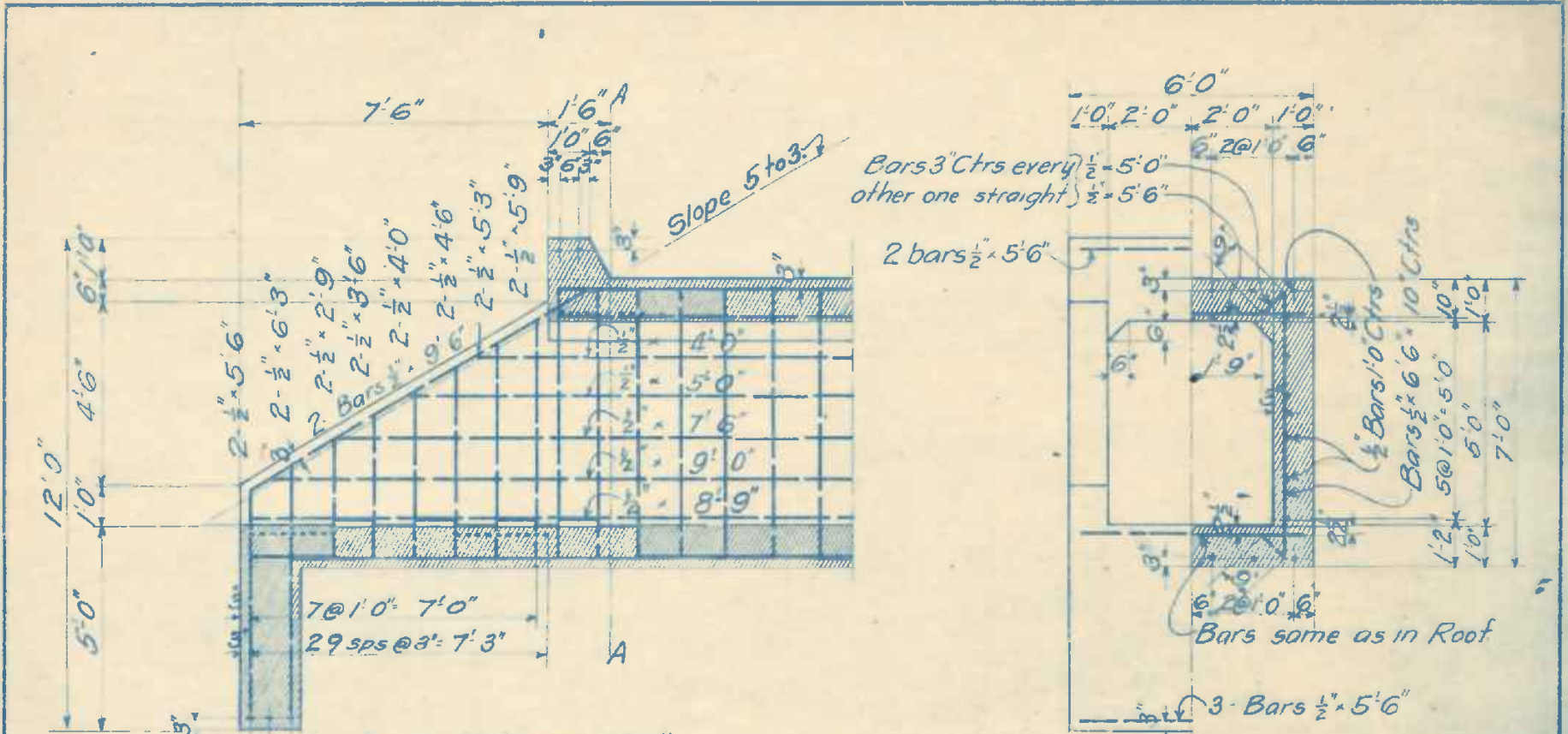


This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN TWO ENDS OUTSIDE OF AA
10.6-Cu.Yds. of Concrete.
915.0# of Corr. bars.

MATERIAL PER LIN FT. OF CULVERT.
.75 Cu.Yds. of Concrete
63.75# of Corr bars.

4' x 4'



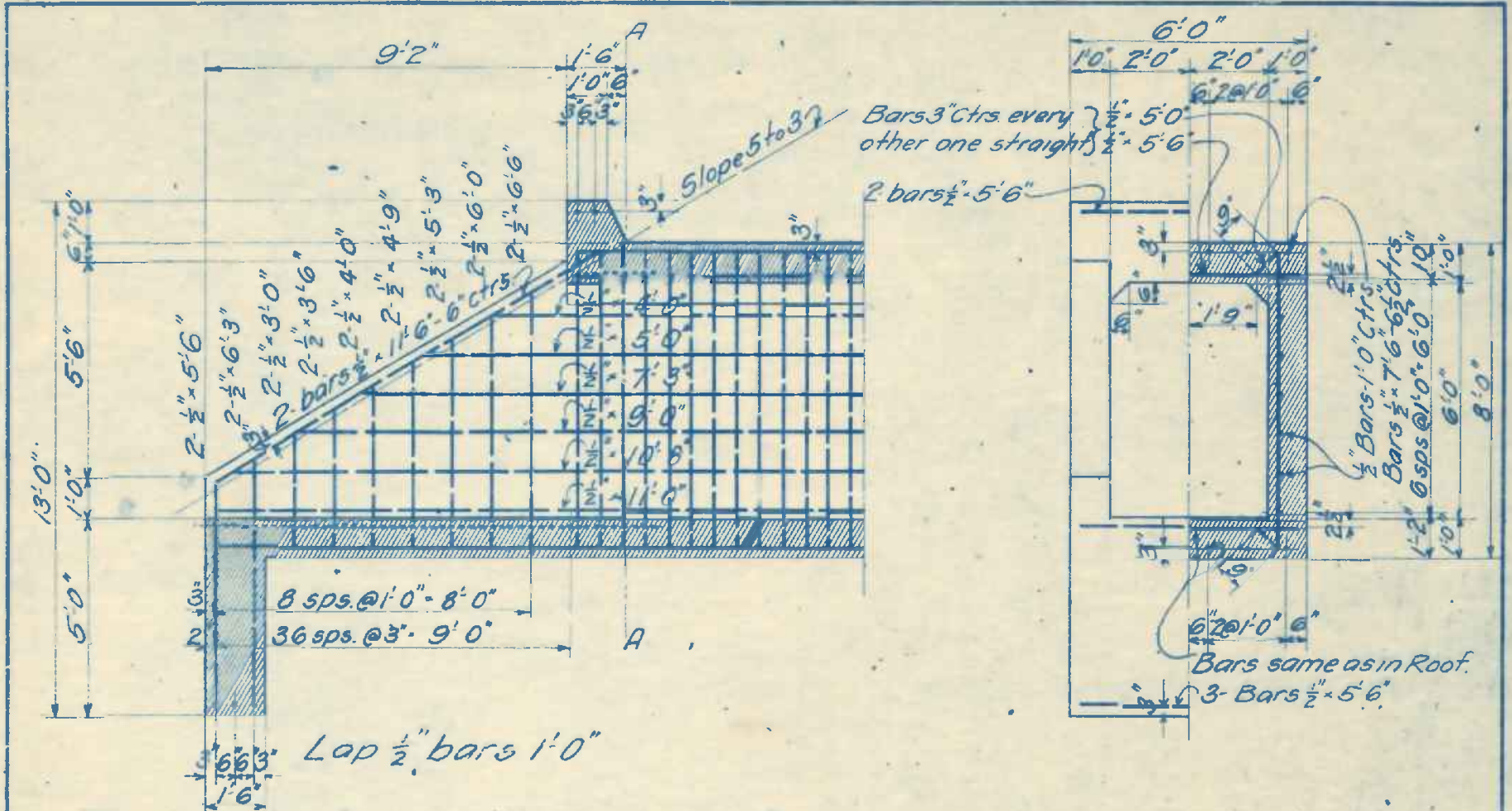
Lap 1/2" bars 1'-0"

This Culvert is figured with Standard live load for five ft. of fill.

MATERIAL IN TWO ENDS OUTSIDE OF AA.
 12.6 Cu.Yds. of Concrete.
 1140.# of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT
 .83 Cu.Yds. of Concrete
 69.3# of Corr. bars.

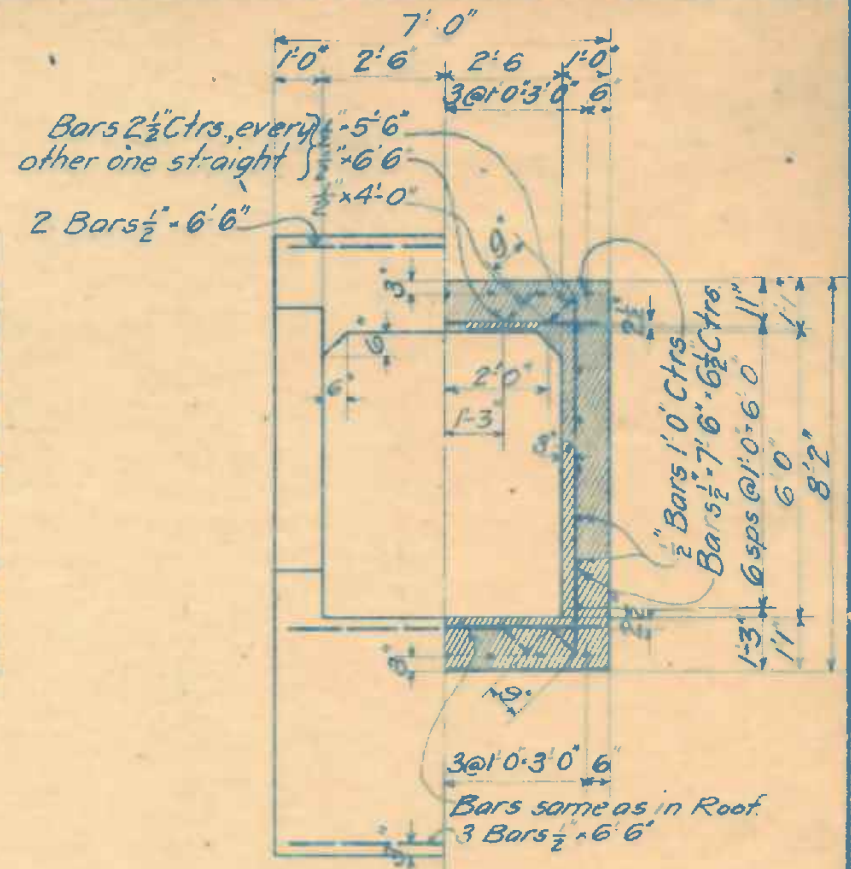
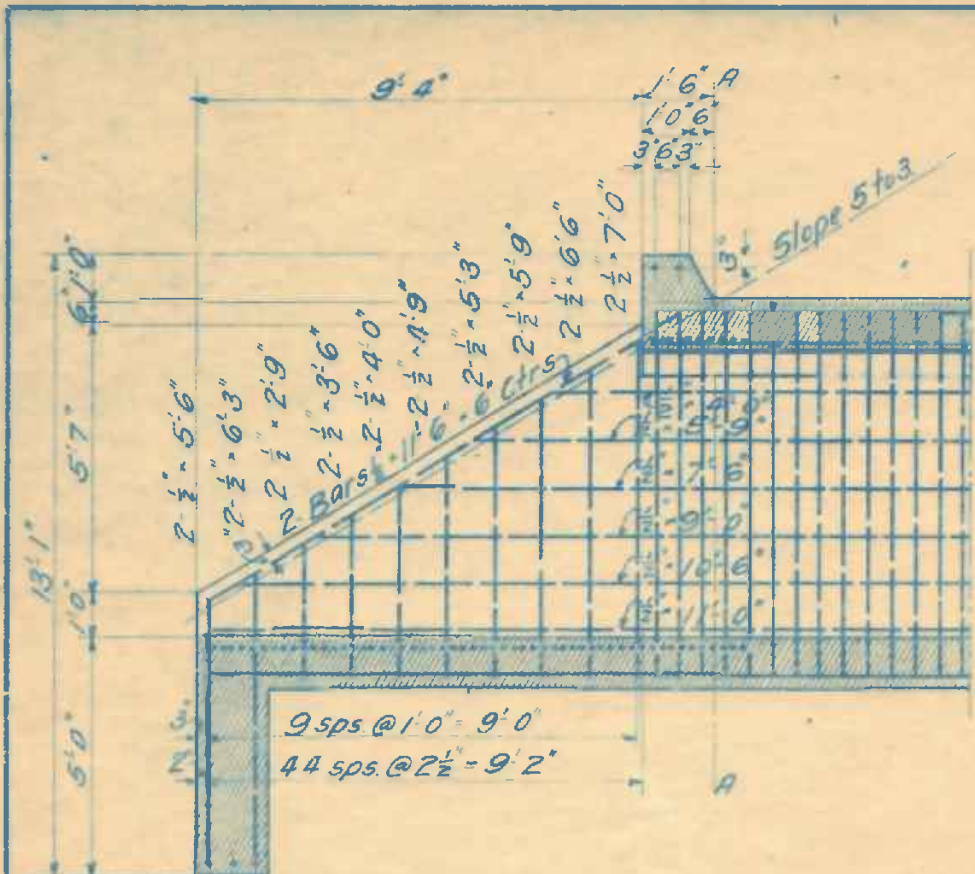
4'x5'



Lap 1/2" bars 1'-0"

This Culvert is figured with Standard live load for five feet of fill.
 MATERIAL IN TWO ENDS OUTSIDE OF A-A.
 15.08 Cu Yds. of Concrete.
 1400.# of Corr. bars.
 MATERIAL PER LIN. FT. OF CULVERT
 .9 Cu Yds of Concrete
 83.0# of Corr. bars.

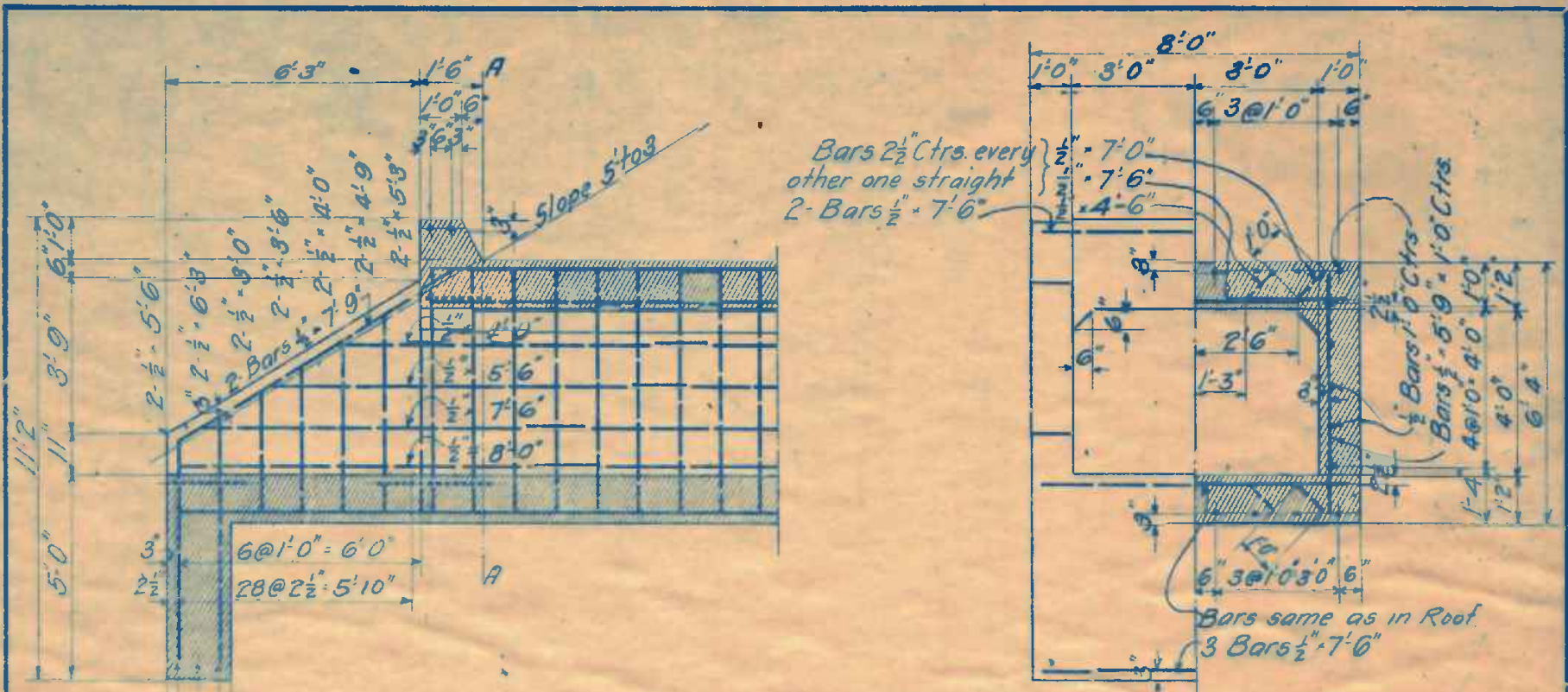
4'x6'



Lap 1/2" bars 1'0"

This Culvert is figured with Standard live load for five feet of fill.
 MATERIAL IN TWO ENDS OUTSIDE OF "A-A"
 172 Cu Yds Concrete
 1582.# of Corr bars.
 MATERIAL PER LIN. FT. OF CULVERT
 1.02 Cu. Yds of Concrete
 93.2# of Corr. bars.

5'x6'



Bars 2 1/2" Ctrs. every }
 other one straight }
 2- Bars 1 1/2" x 7'-6"

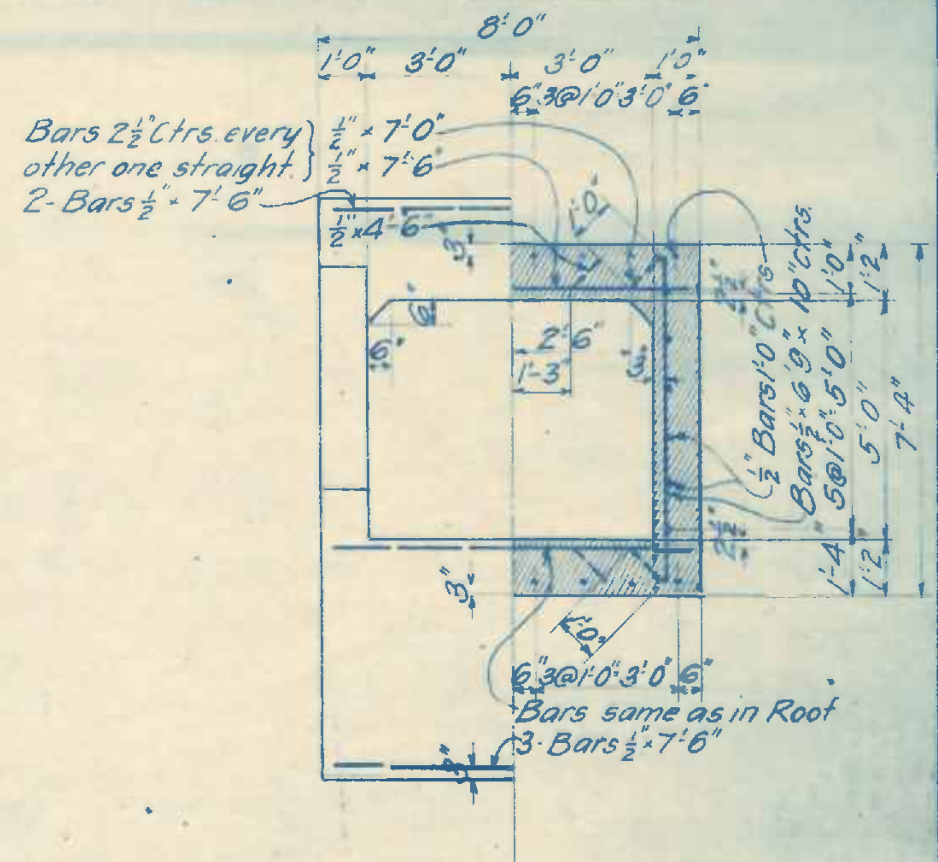
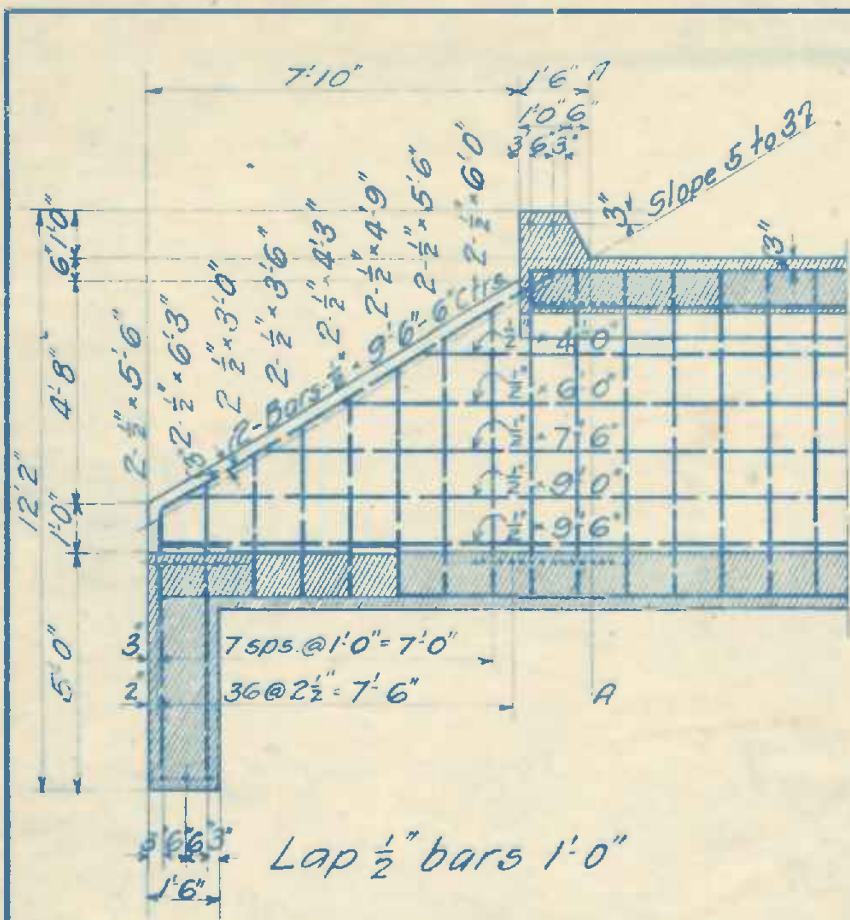
3663'
 1'6" Lap 1/2" bars 1'-0"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN TWO ENDS OUTSIDE OF "A-A"
 14.06 Cu. Yds. of Concrete
 1150.# of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 1.0 Cu Yd. of Concrete
 860.# of Corr. bars.

6'x4'

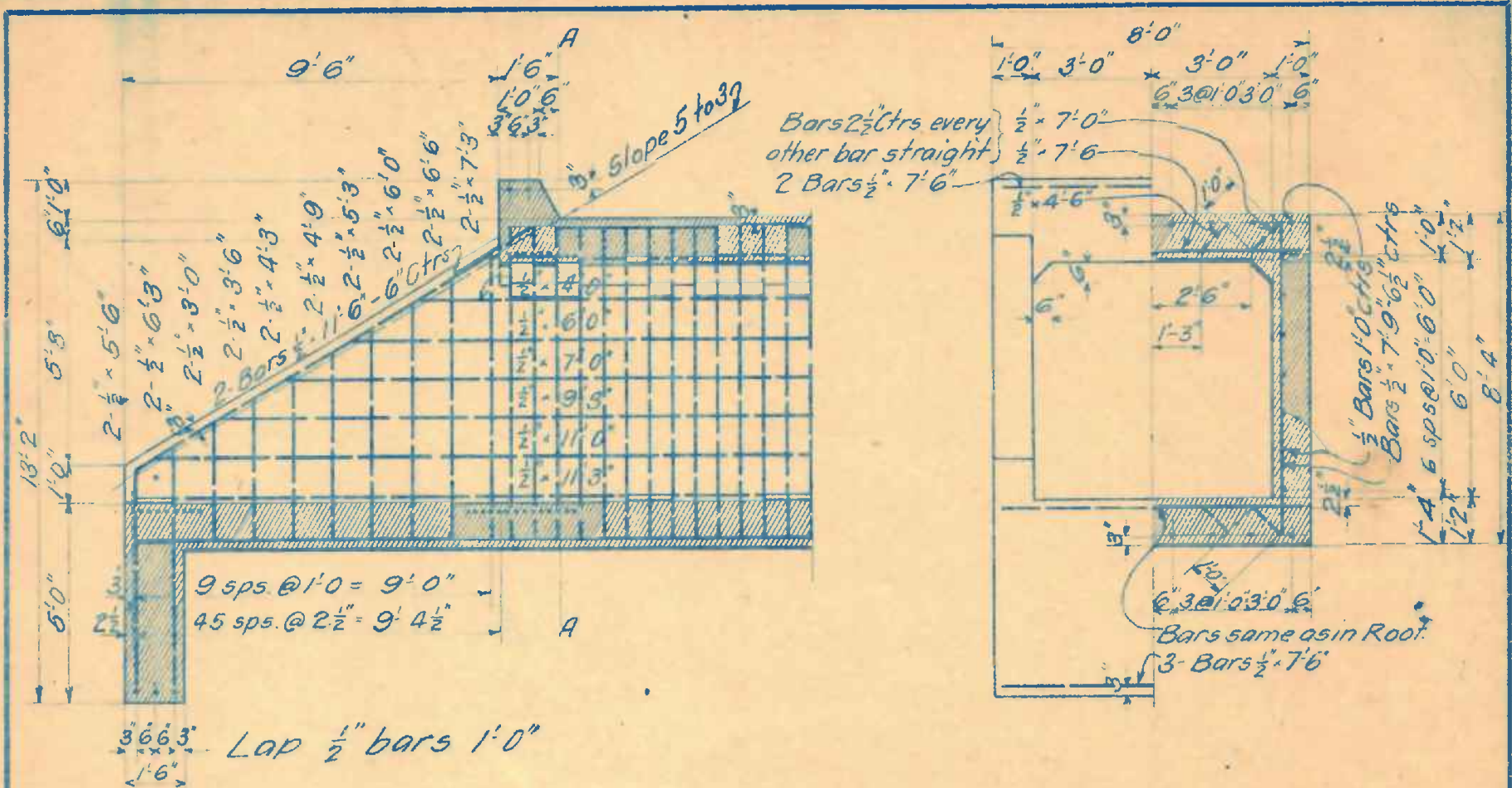


This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN TWO ENDS OUTSIDE OF AA
 16.50-Cu Yds of Concrete.
 1421.# of Corr. bars.

MATERIAL PER LIN. FT OF CULVERT.
 1.07-Cu. Yds. of Concrete.
 91.6# of Corr. bars.

6'x5'



This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN TWO ENDS OUTSIDE OF AA.

20- Cu Yds. of Concrete.

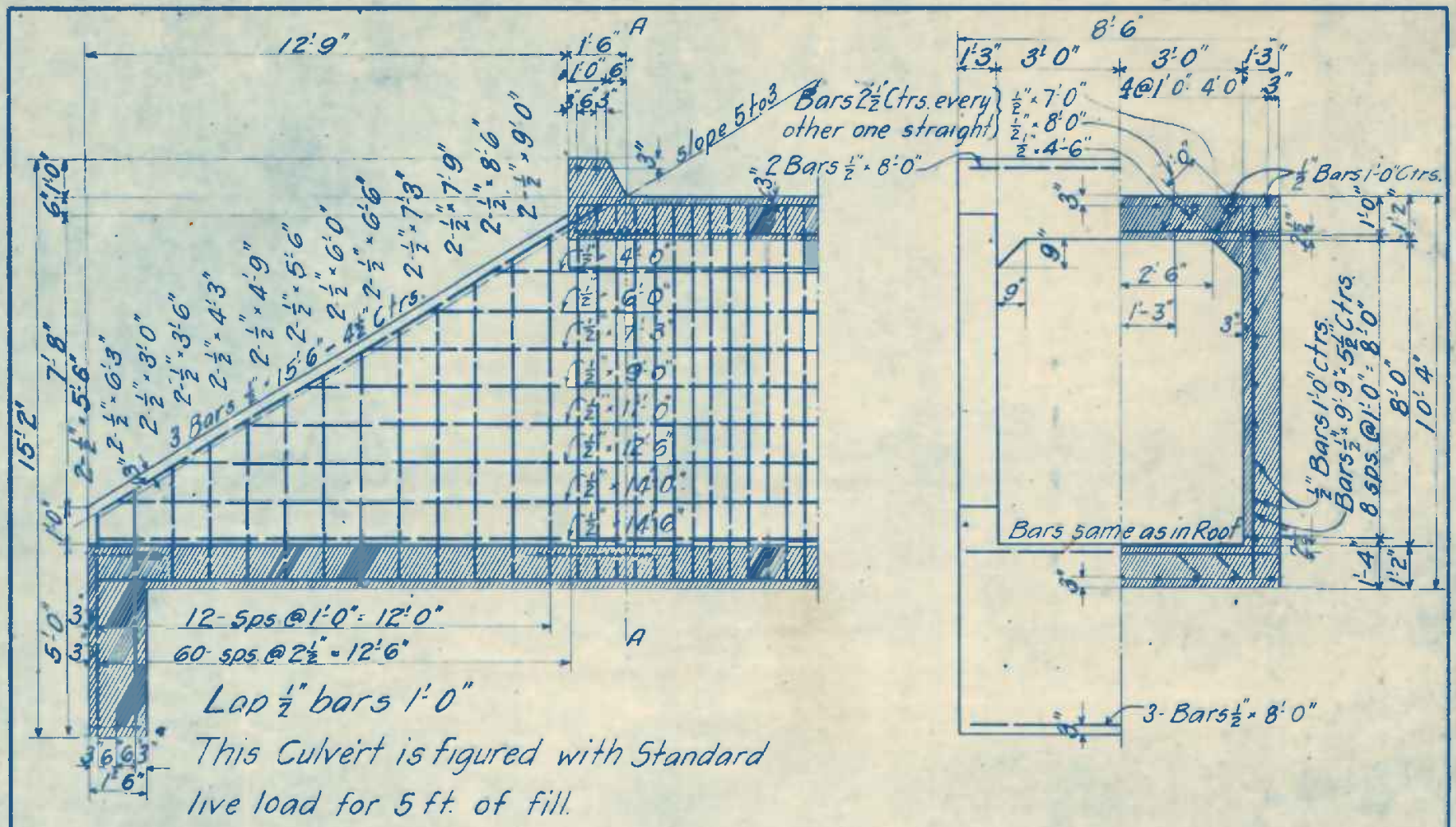
1771.# of Corr bars.

MATERIAL PER LIN. FT. OF CULVERT.

1.15- Cu Yds. of Concrete

103.9# of Corr. bars.

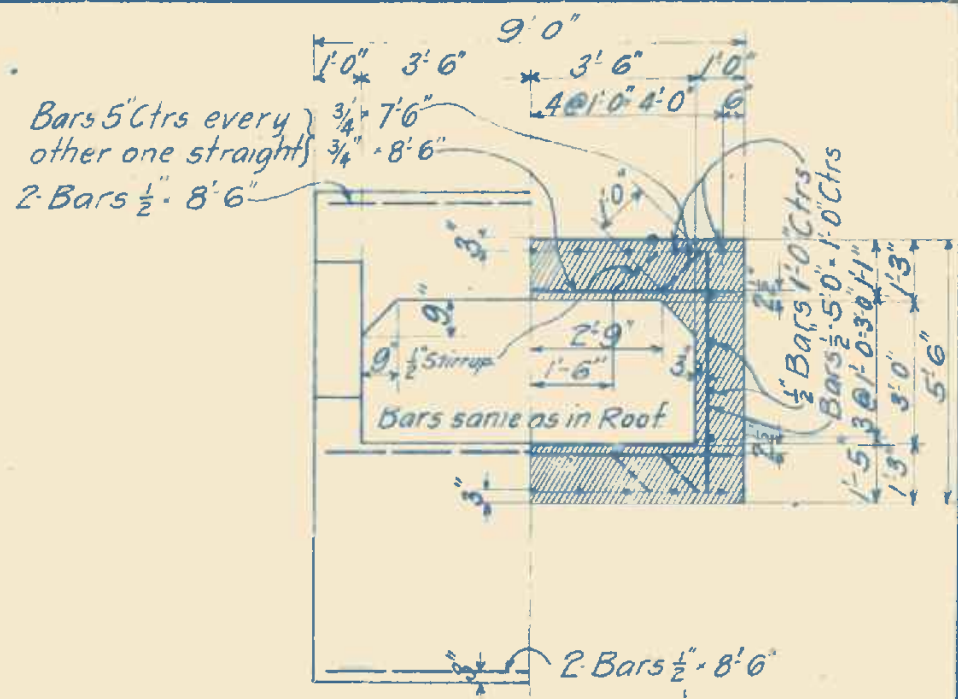
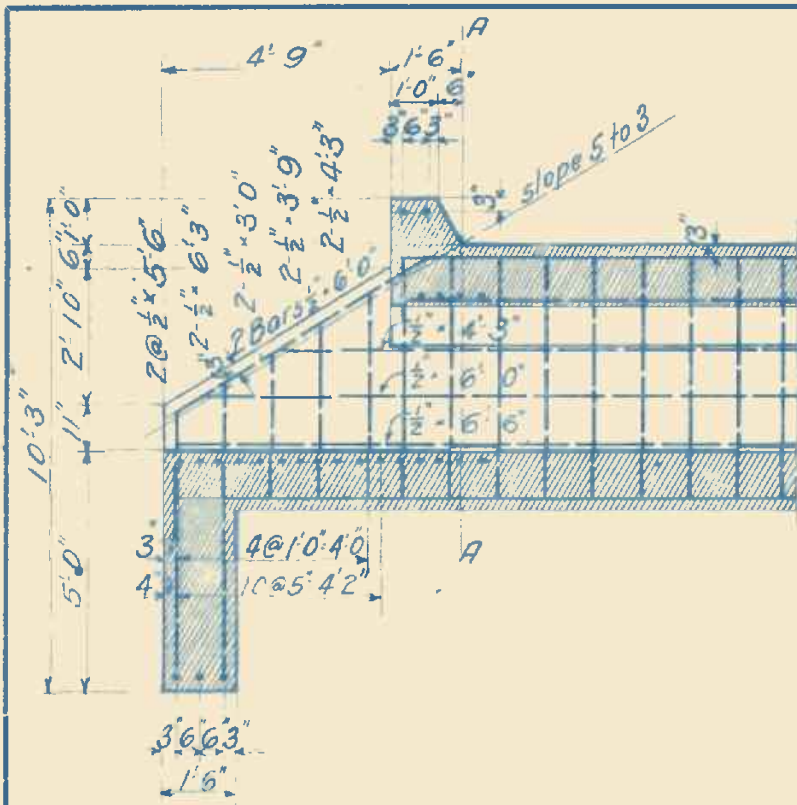
6'x6'



MATERIAL IN 2 ENDS OUTSIDE OF "A A"
 30.0-Cu. Yds. of Concrete
 2524.# of Corr. Bars.

MATERIAL PER LIN. FT. OF CULVERT
 1.5-Cu Yds. of Concrete
 123.0# of Corr. Bars.

6'x8'



Lap $\frac{1}{2}$ " bars 1'-0"

This Culvert is figured with Standard live load for five ft. of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "A-A"

13.4-Cu. Yds. Concrete

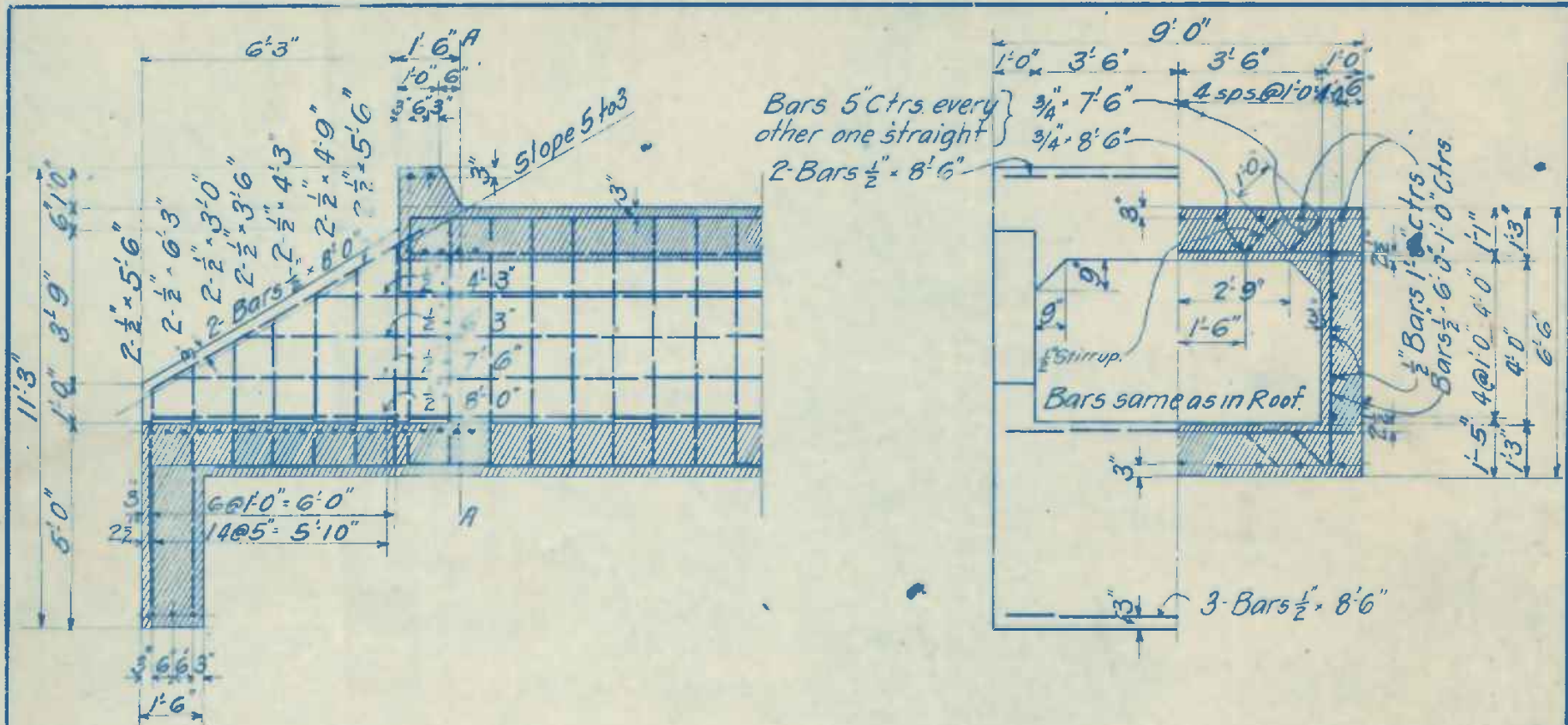
1176. # of Corr. bars

MATERIAL PER LIN. FT. OF CULVERT

1.08-Cu Yds. Concrete

112.5# of Corr Bars

7'x3'



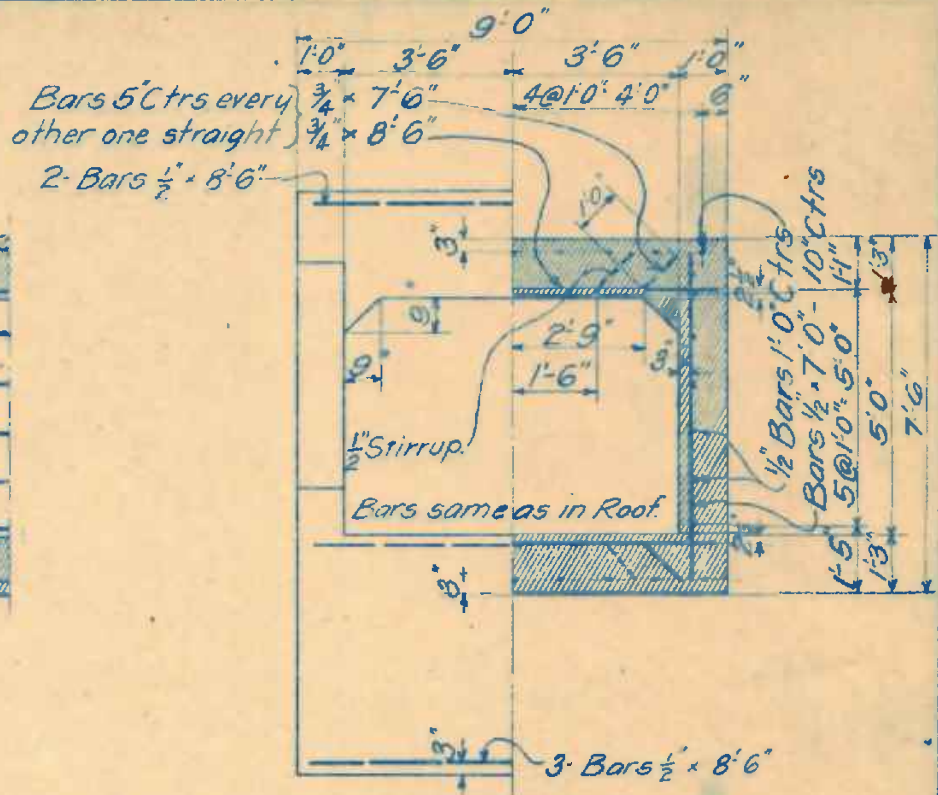
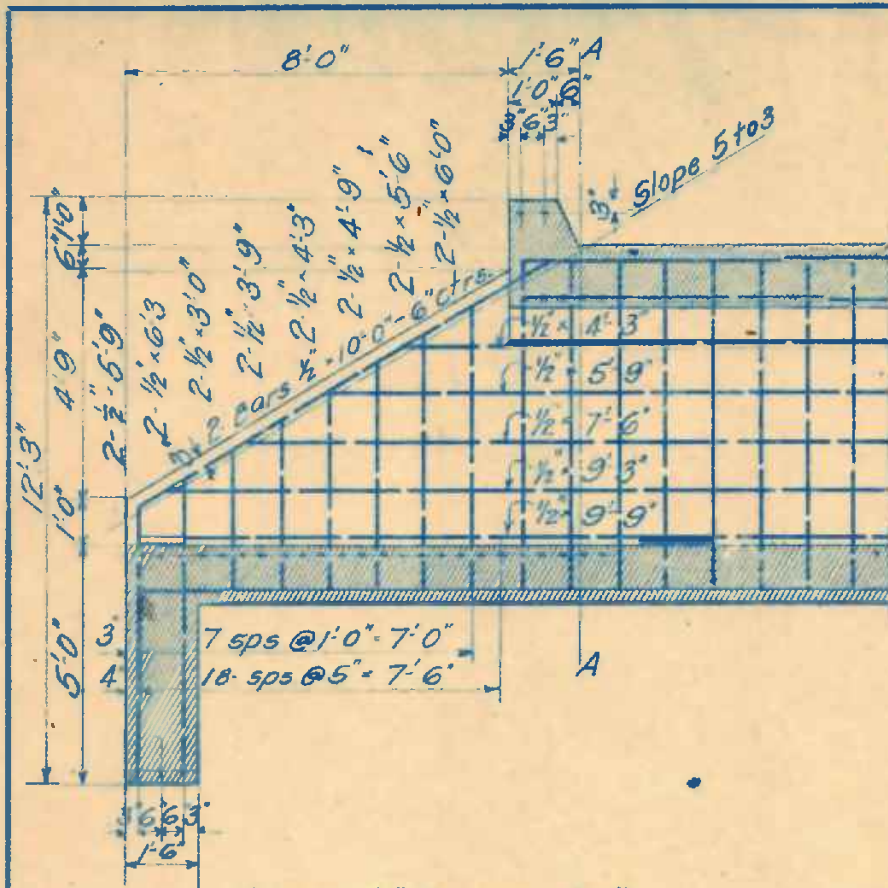
Bars 5" Ctrs. every
other one straight
2- Bars 1/2" x 8'6"

Bars same as in Roof.

Lap 1/2" bars 1'0"
This Culvert is figured with Standard
live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "A-A"
16.0-Cu. Yds. Concrete
1418.# of Corr. bars
MATERIAL PER LIN. FT. OF CULVERT
1.15-Cu. Yds. Concrete
116.0# of Corr. bars.

7' x 4'



Lap $\frac{1}{2}$ " bars 1'0"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN TWO ENDS OUTSIDE OF AA

19-Cu. Yds. of Concrete

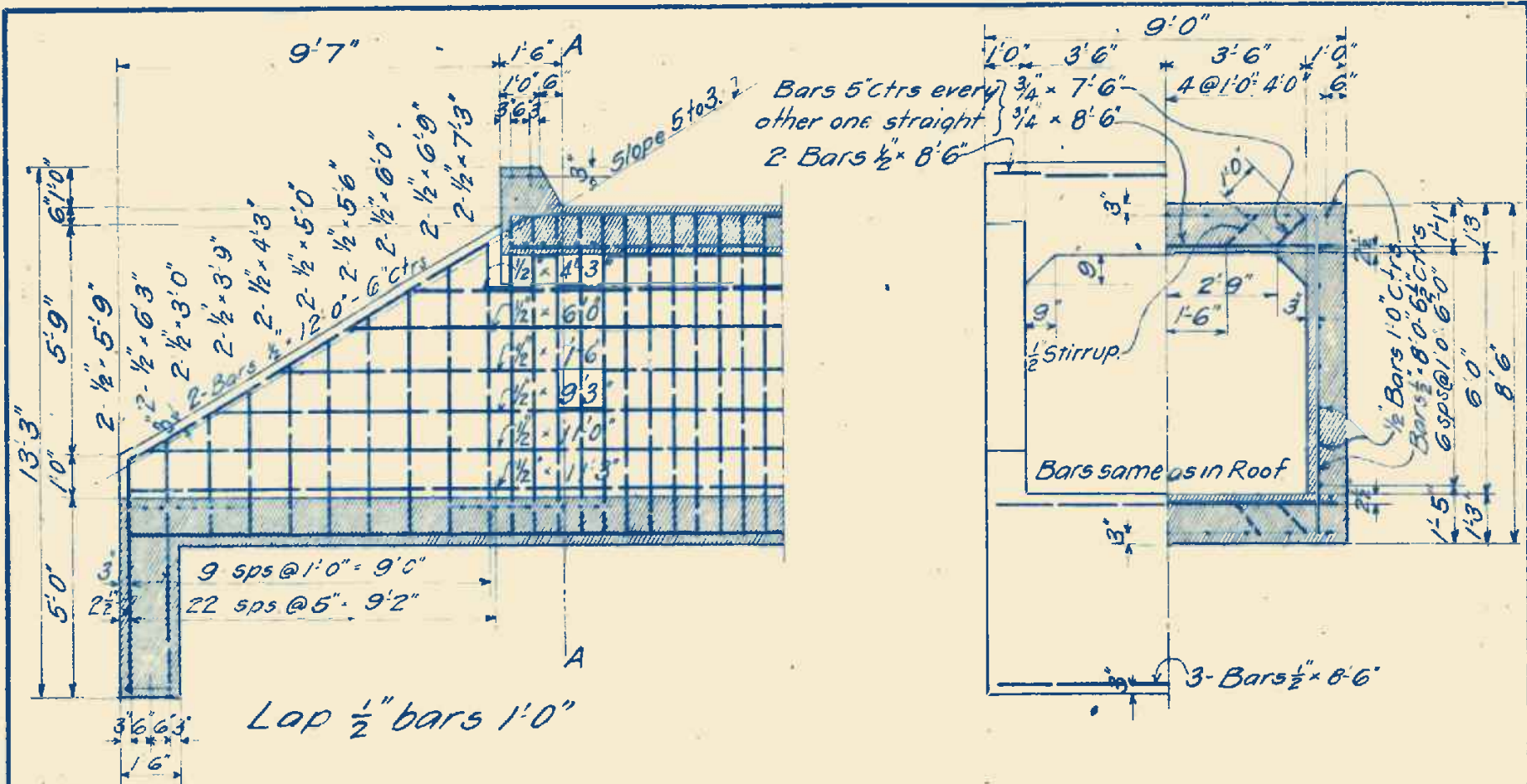
1701.# of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.

1.23-Cu. Yds. of Concrete

121.7# of Corr. bars.

7'x5'

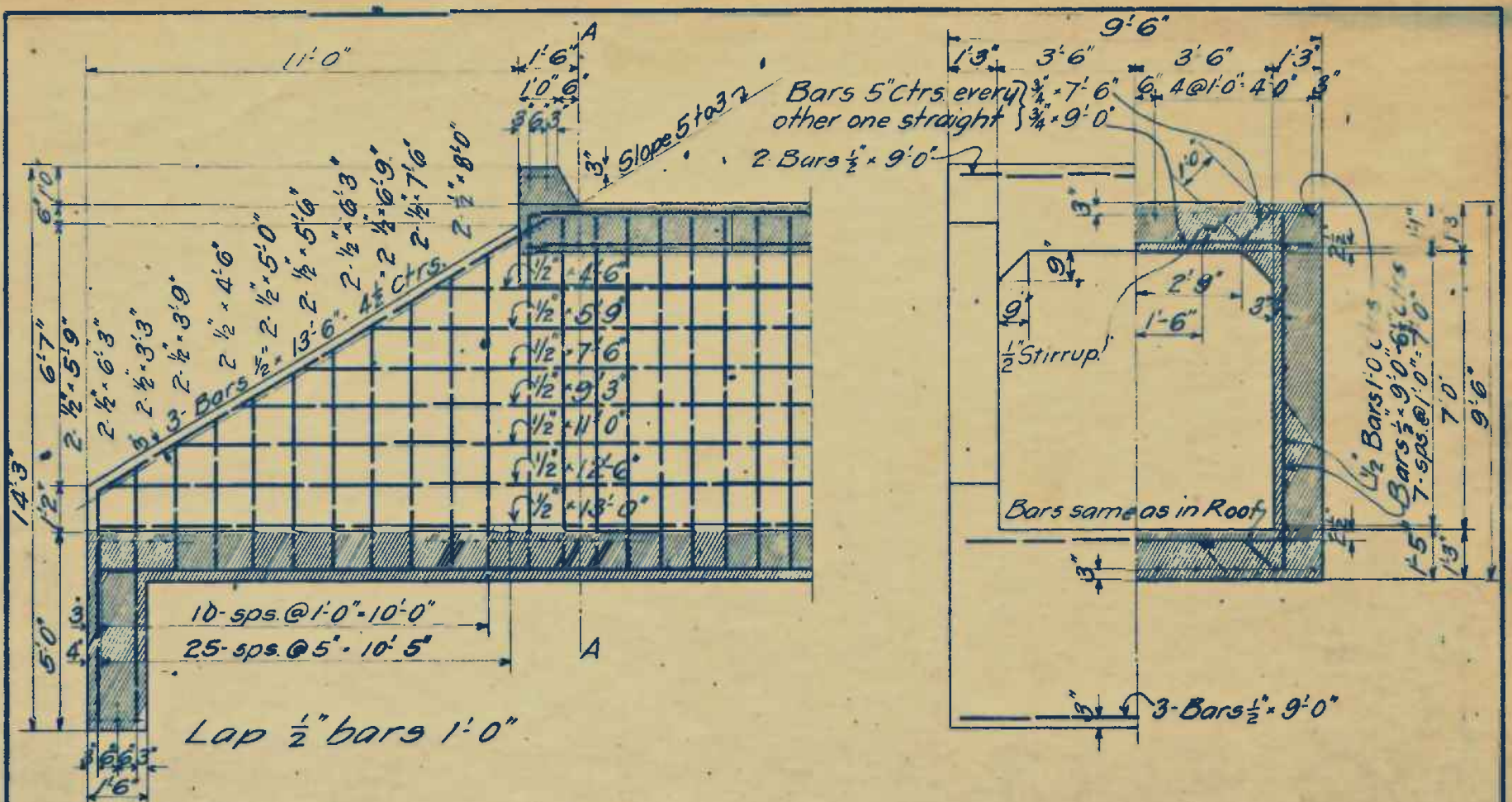


This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN TWO ENDS OUTSIDE OF AA
 22-Cu. Yds. of Concrete
 2090.# of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 1.3-Cu Yds of Concrete
 134.2# of Corr. bars.

7'x6'



This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN TWO ENDS OUTSIDE OF AA

28.3-Cu. Yds. of Concrete

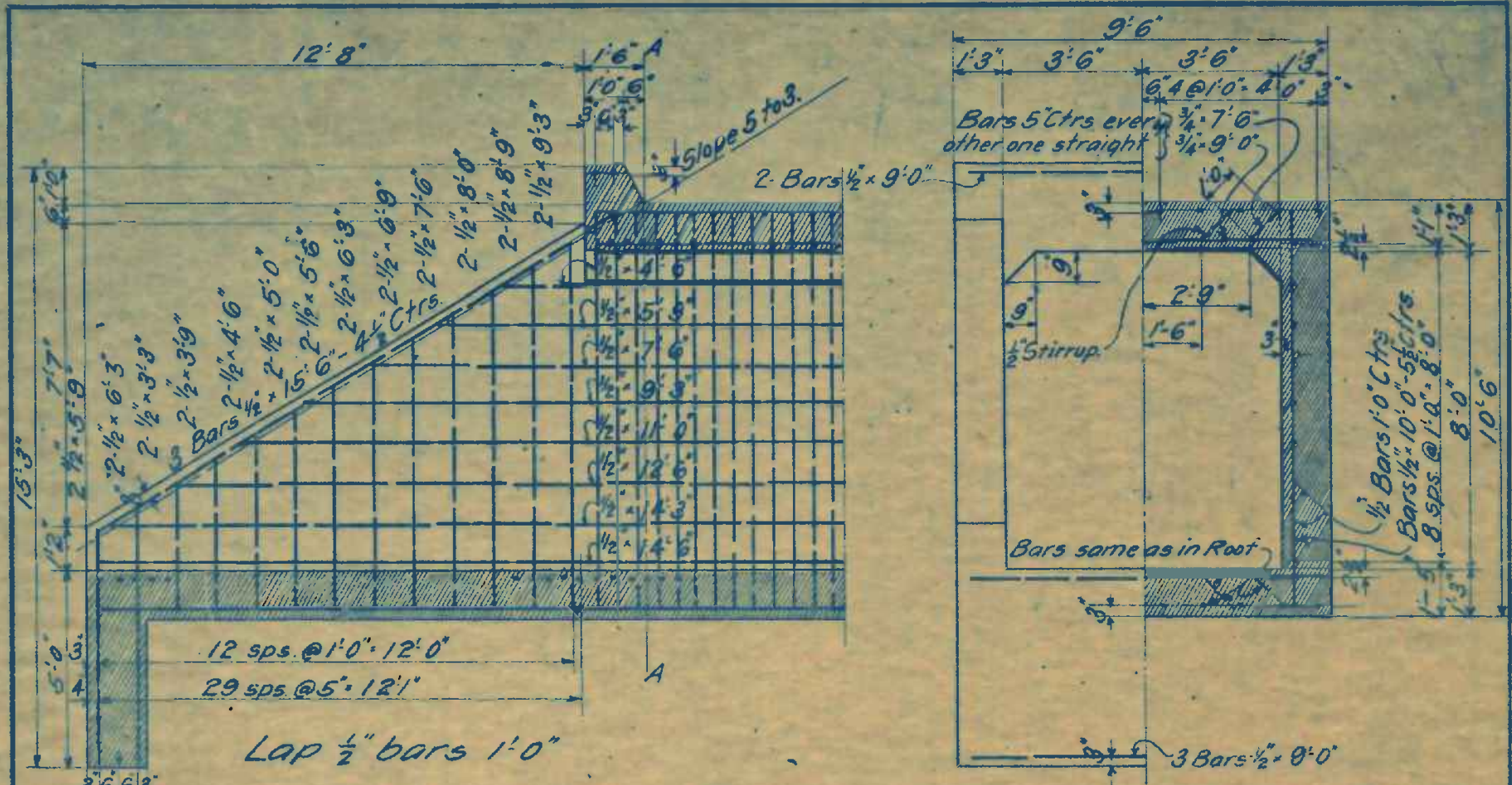
2474.# of Corr. bars.

MATERIAL PER LIN FT. OF CULVERT.

1.55-Cu. Yds. of Concrete

143.0# of Corr. bars.

7'x7'



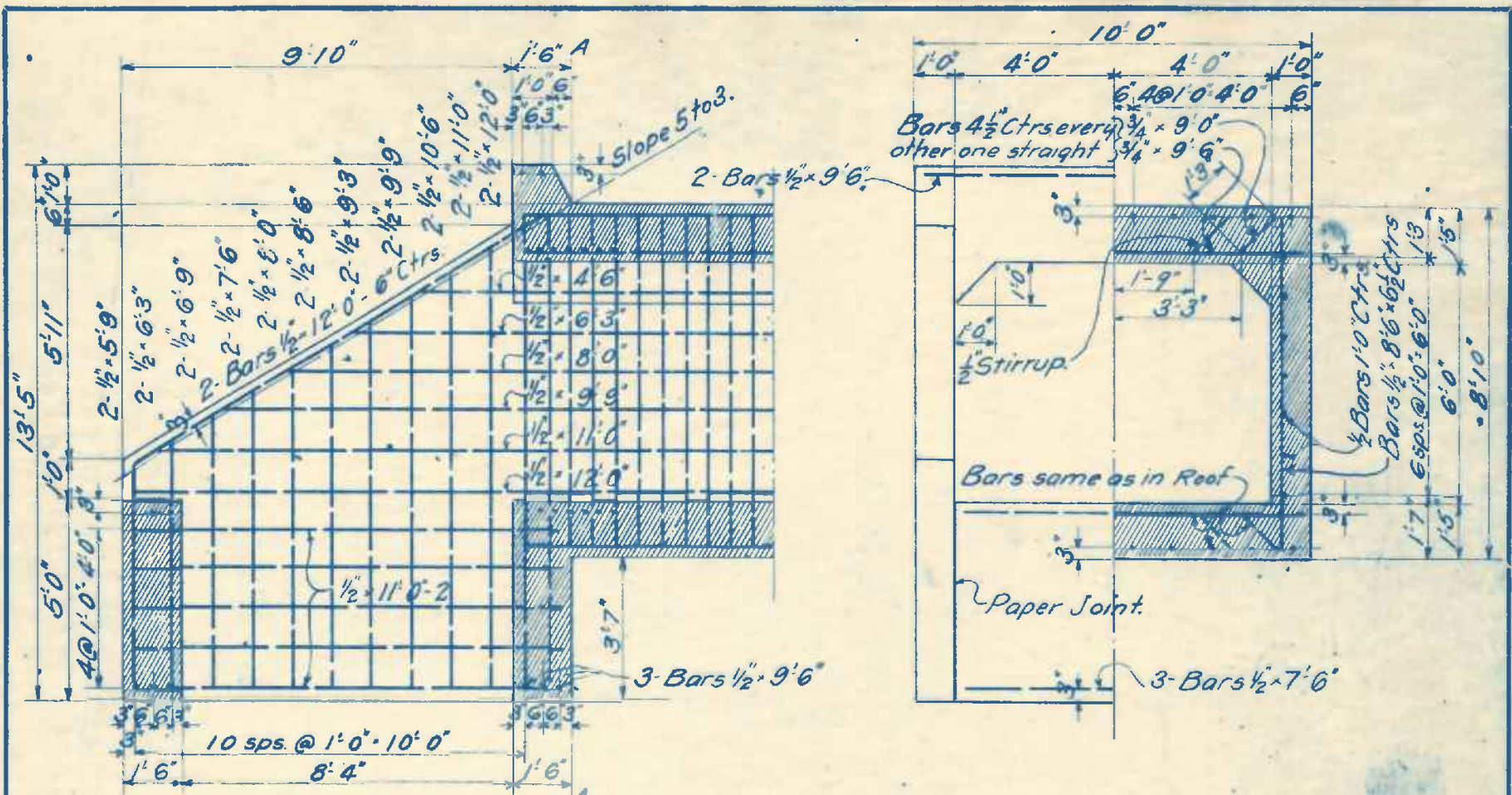
Lap 1/2" bars 1'-0"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN TWO ENDS OUTSIDE OF AA
 3234 Cu. Yds. Concrete
 3032 # of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 1.65 Cu Yds. of Concrete
 154.0 # of Corr. bars.

7' x 8'



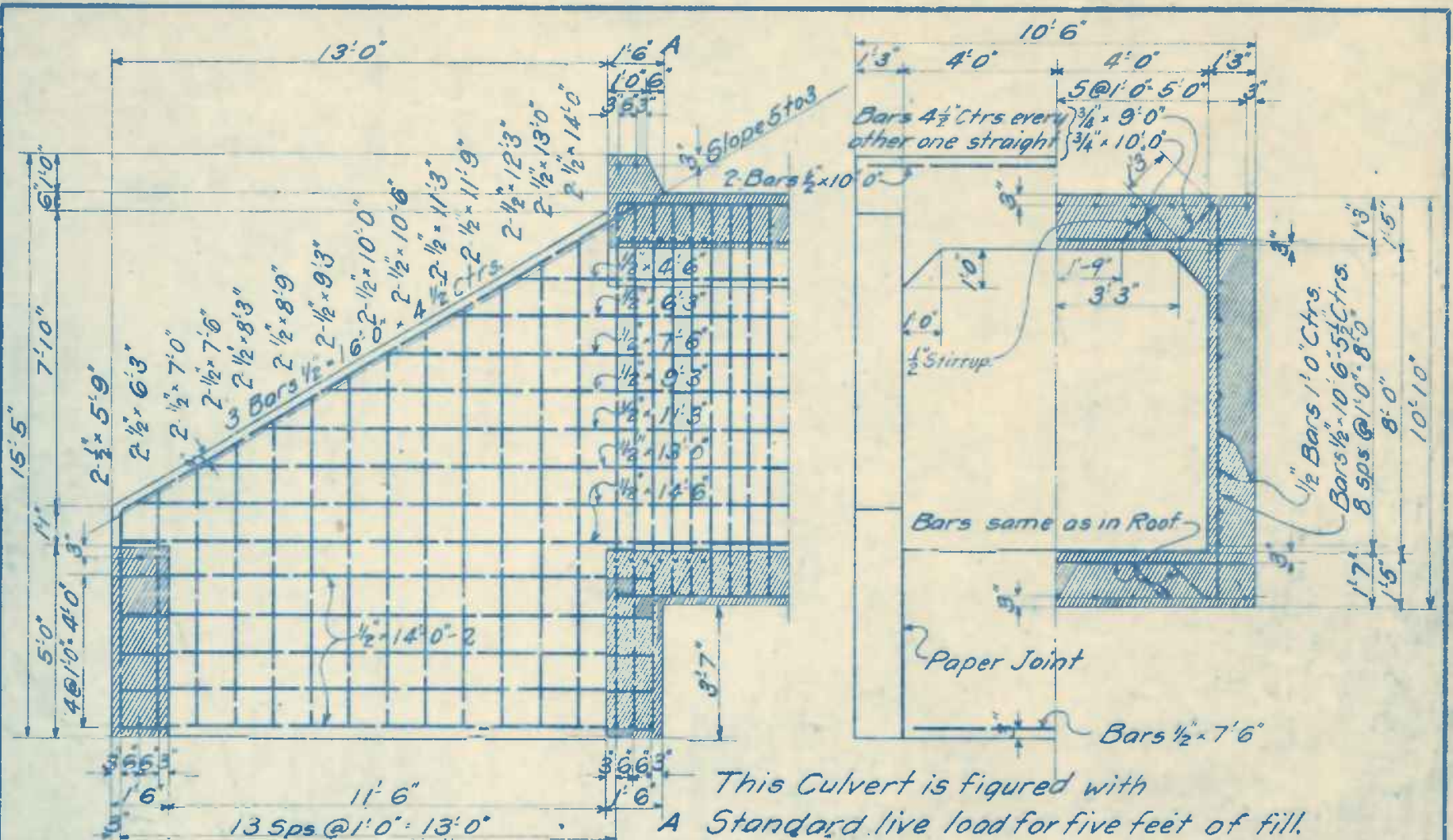
This Culvert is figured with Standard live load for five feet of fill.

Lap $\frac{1}{2}$ " bars 1'-0"

MATERIAL IN TWO ENDS OUTSIDE OF A A
 27.0 Cu. Yds. of Concrete
 1987.# of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 1.53-Cu. Yds. of Concrete
 160.2# of Corr. bars.

8'x6'

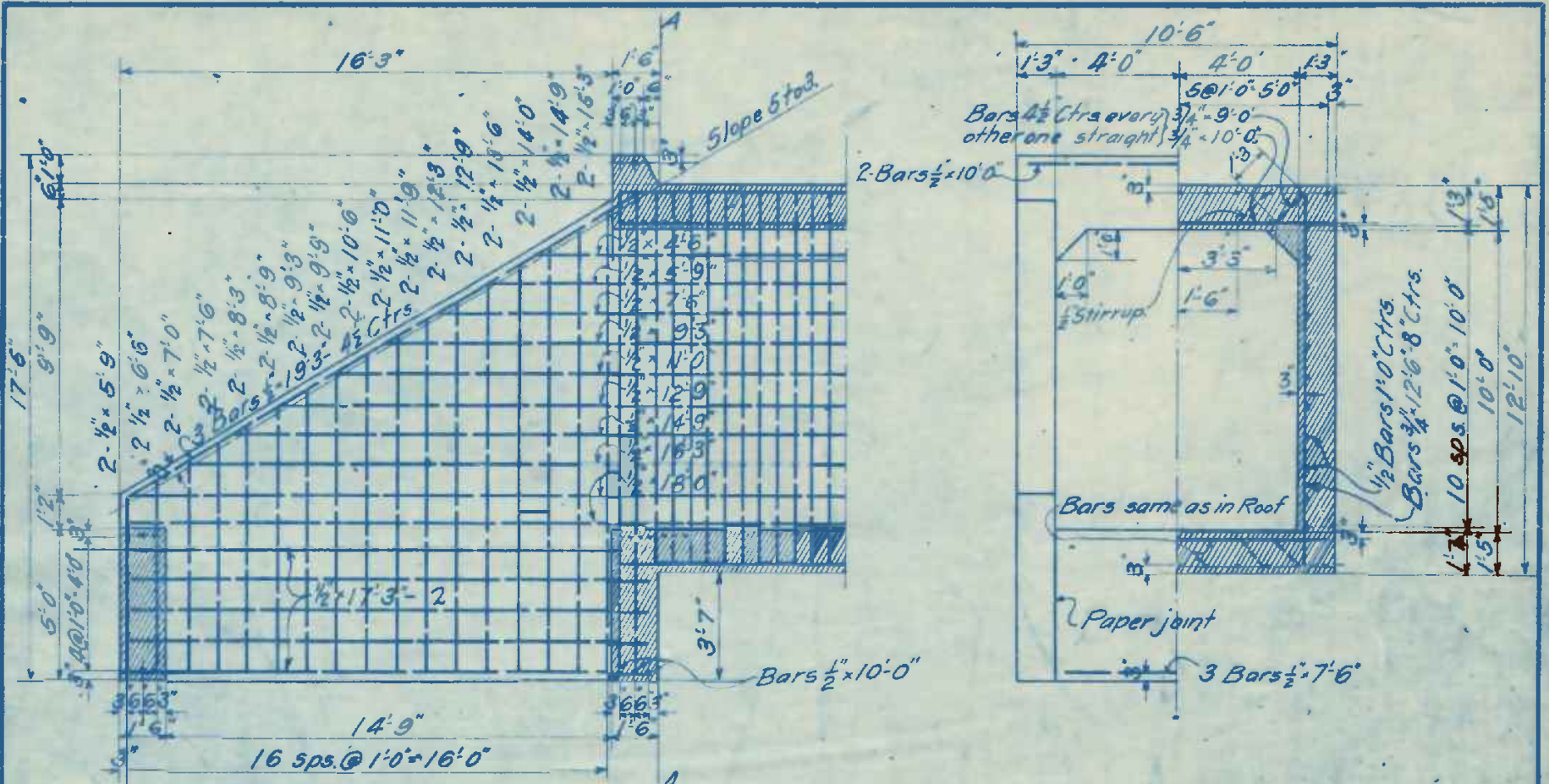


MATERIAL IN TWO ENDS OUTSIDE OF AA.
 39.6-Cu. Yds. of Concrete
 2716.# of Corr. bars.

MATERIAL PER LIN. FT OF CULVERT.
 1.88 Cu Yds. of Concrete
 180.0# of Corr. bars.

This Culvert is figured with
 A Standard live load for five feet of fill.
 Lap 1/2" bars 1'-0"

8' x 8'

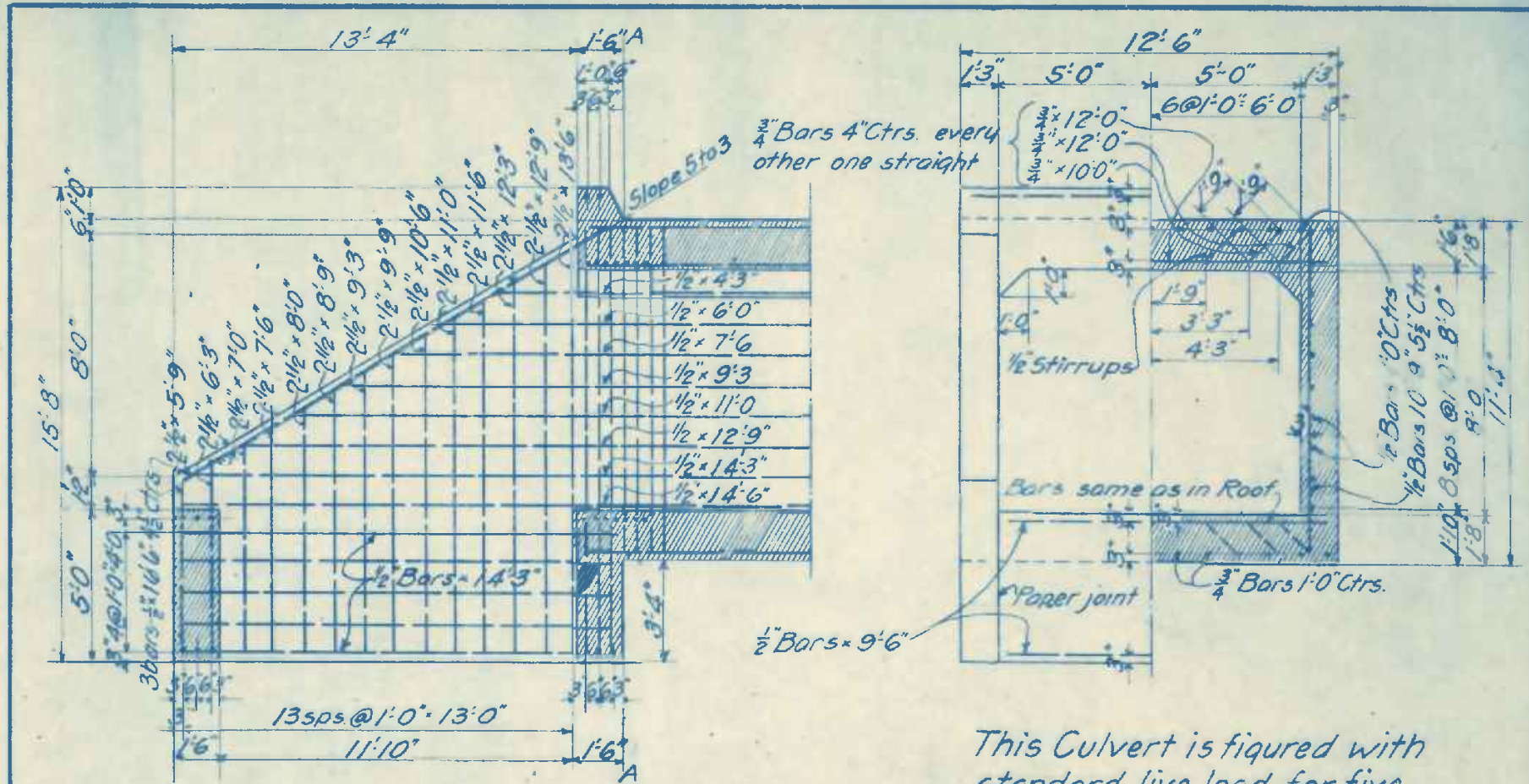


This Culvert is figured with Standard Lap $\frac{1}{2}$ " bars 1'-0" live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF AA
 49.02-Cu. Yds of Concrete
 3765.# of Corr. bars

MATERIAL PER LIN. FT. OF CULVERT.
 2.07-Cu. Yds. of Concrete
 216.# of Corr. bars.

8'x10'



$\frac{3}{4}$ " Bars 4" Ctrs. every other one straight

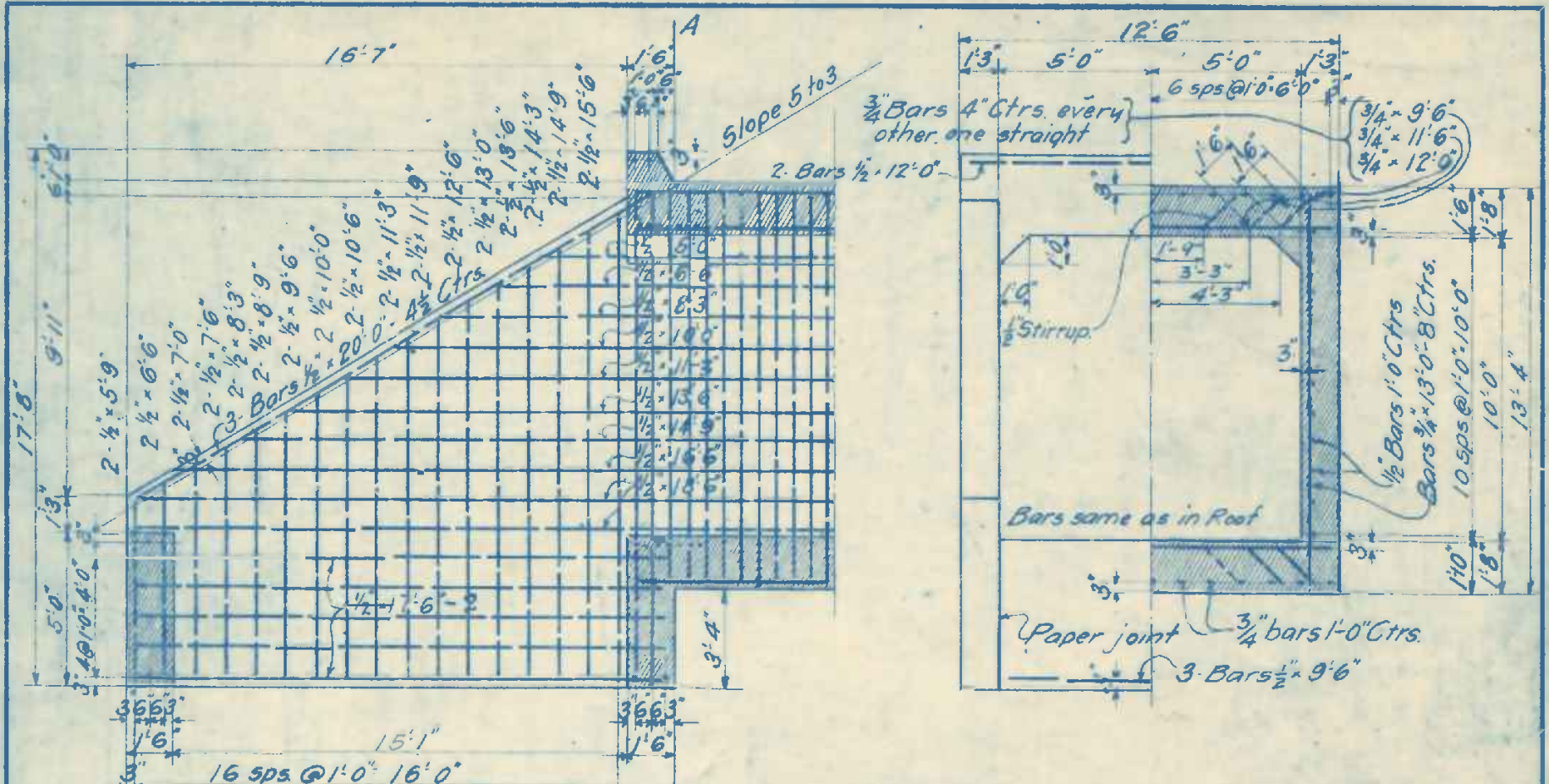
This Culvert is figured with standard live load for five feet of fill.

Lap $\frac{1}{2}$ " bars 1'-0"
Lap $\frac{3}{4}$ " bars 1'-6"

MATERIAL IN 2 ENDS OUTSIDE OF AA
43 Cu. Yds. of Concrete
2968# of Corr. Bars.

MATERIAL PER LIN. FT. OF CULVERT
2.3 Cu. Yds. Concrete
236.5# of Corr. Bars.

10' x 8'



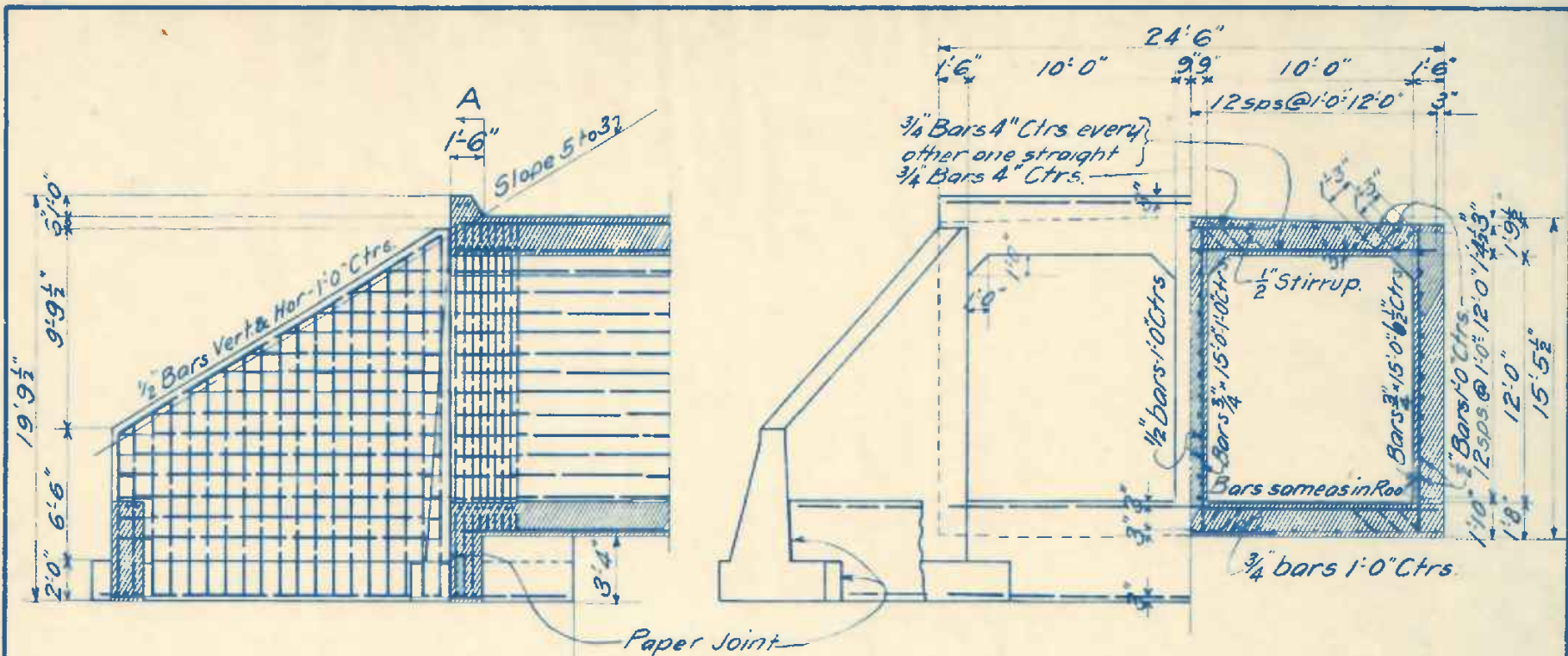
This Culvert is figured with Standard A live load for five feet of fill.

Lap 1/2" bars 1'-0"
 " 3/4" " 1'-6"

MATERIAL IN TWO ENDS OUTSIDE OF AA.
 53.5 Cu Yds of Concrete.
 3869.# of Corr. bars.

MATERIAL PER LIN. FT OF CULVERT.
 2.5 Cu Yds of Concrete.
 270.# of Corr. bars.

10'x10'



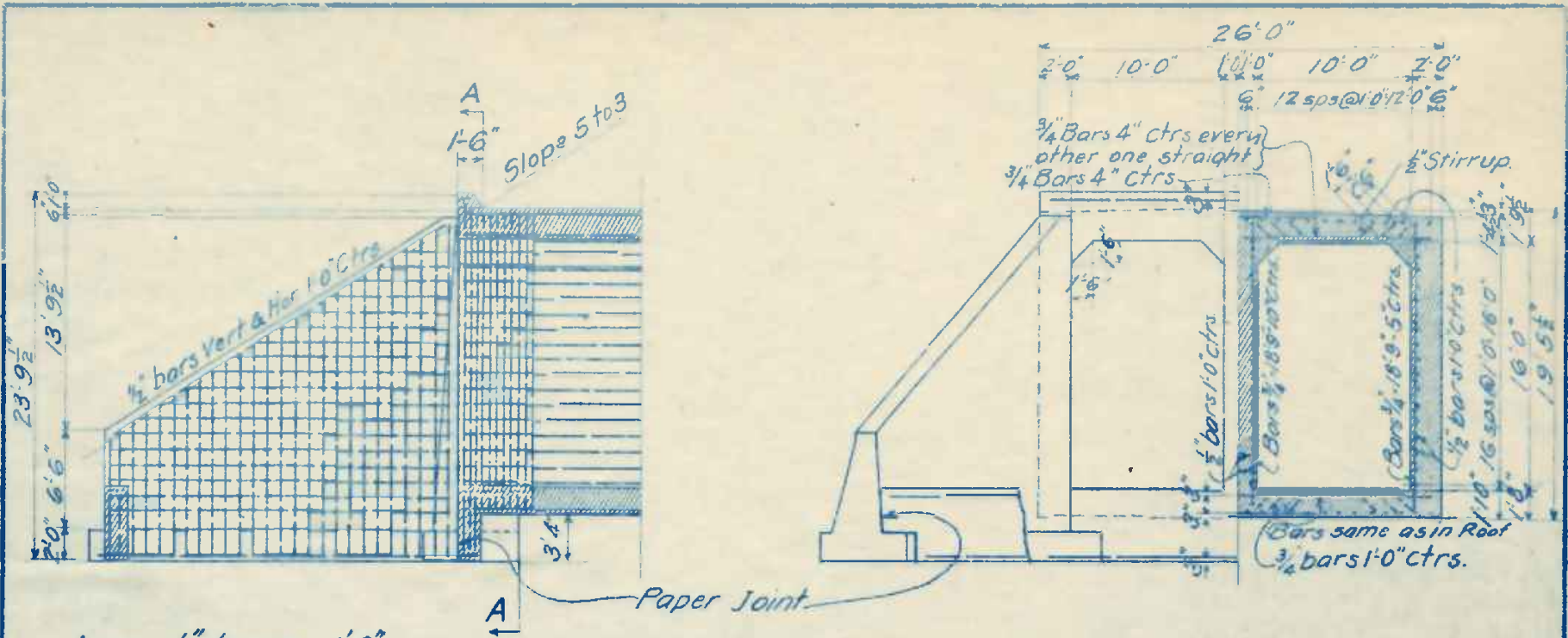
Lap $\frac{1}{2}$ " bars 1'0"
 " $\frac{3}{4}$ " " 1'6"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "AA".
 184.-Cu Yds. of Concrete
 8760.* of Corr bars.

MATERIAL PER LIN. FT. OF CULVERT.
 5.1-Cu. Yds. of Concrete
 641.* of Corr. bars.

DOUBLE 10'x12'



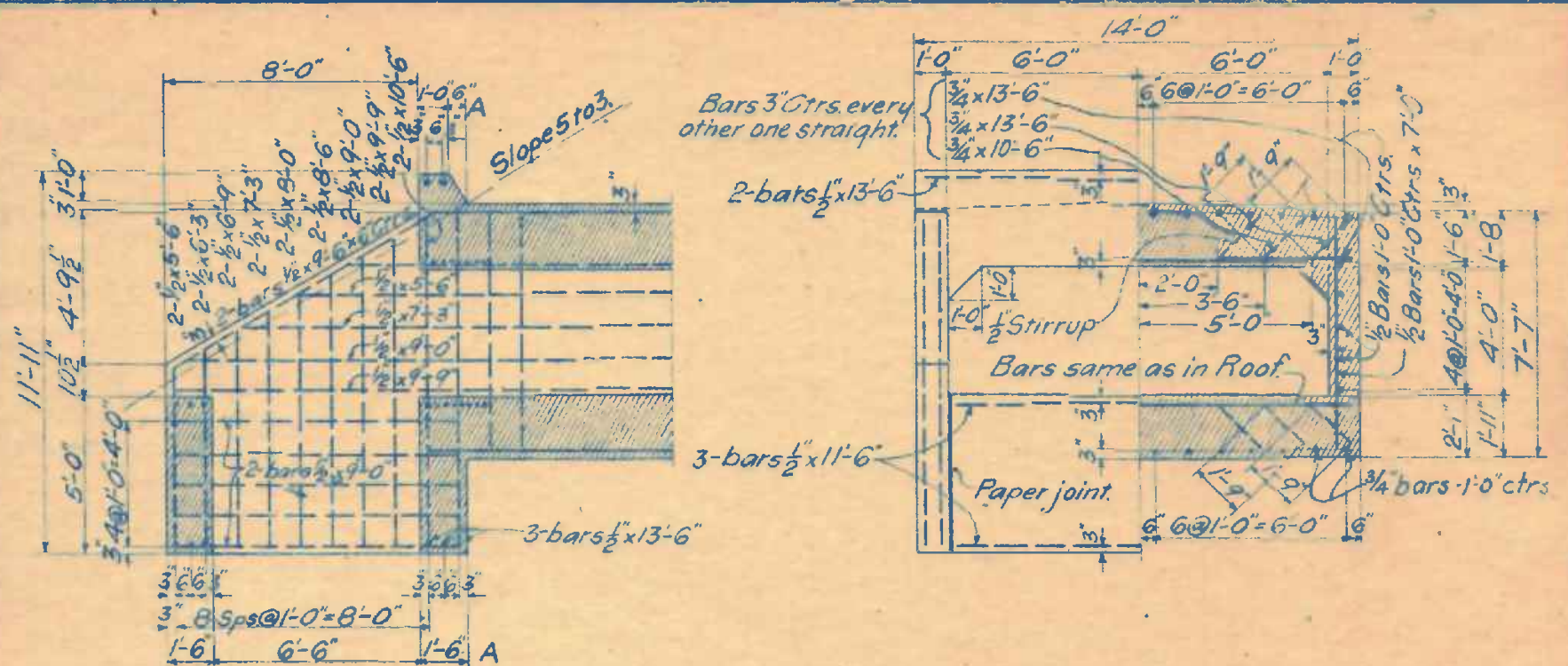
Lap $\frac{1}{2}$ " bars 1'-0"
 " $\frac{3}{4}$ " " 1'-6"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "A A".
 291.-Cu. Yds. of Concrete
 13272.* of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 6.93-Cu. Yds. of Concrete
 783.* of Corr. bars.

DOUBLE 10'x16'



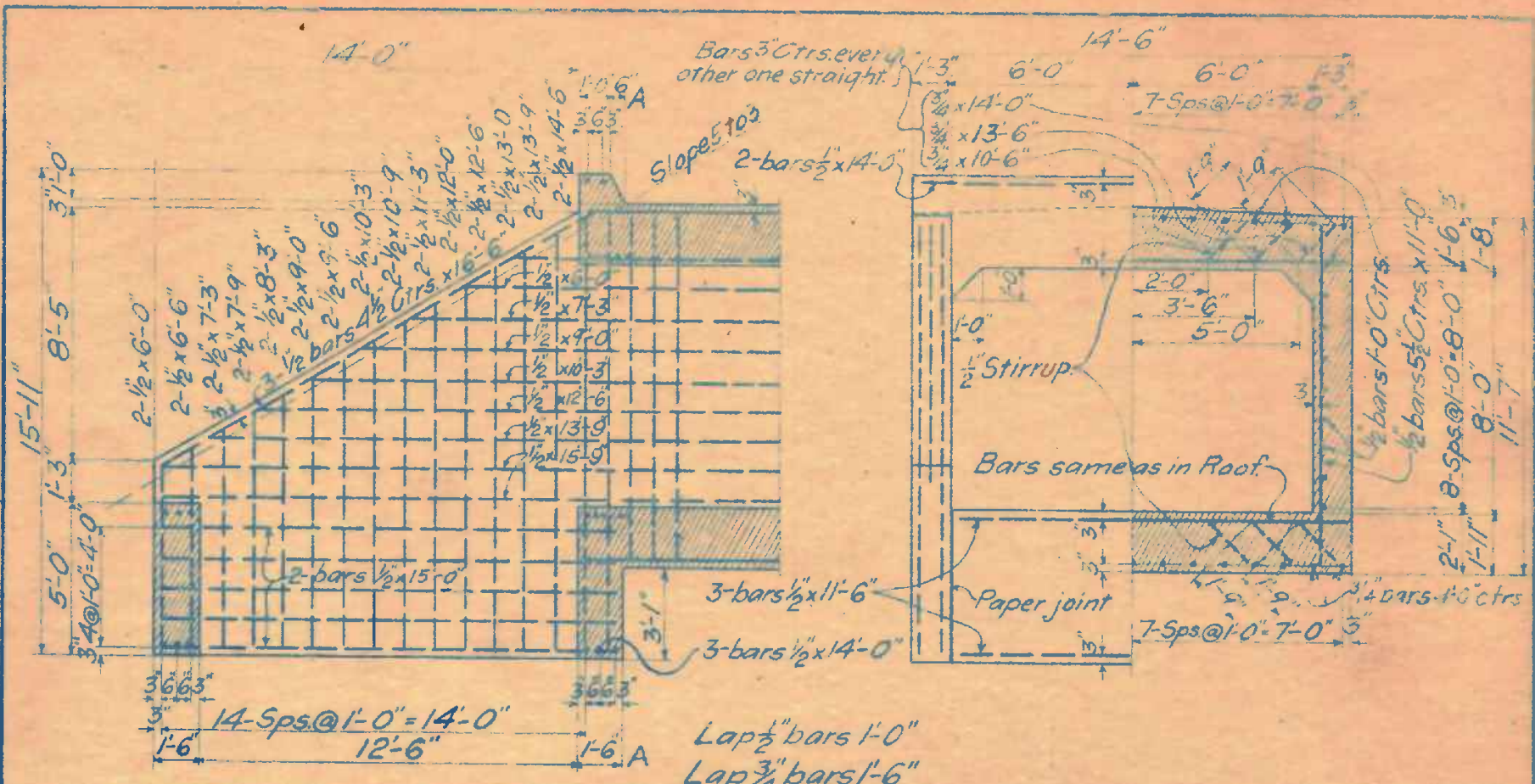
Lap $\frac{1}{2}$ " bars 1'-0"
 " $\frac{3}{4}$ " " 1'-6"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "AA"
 30.-Cu.Yds. of Concrete.
 2061.# of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 2.26-Cu.Yds. of Concrete.
 268.# of Corr. Bars.

12' x 4'

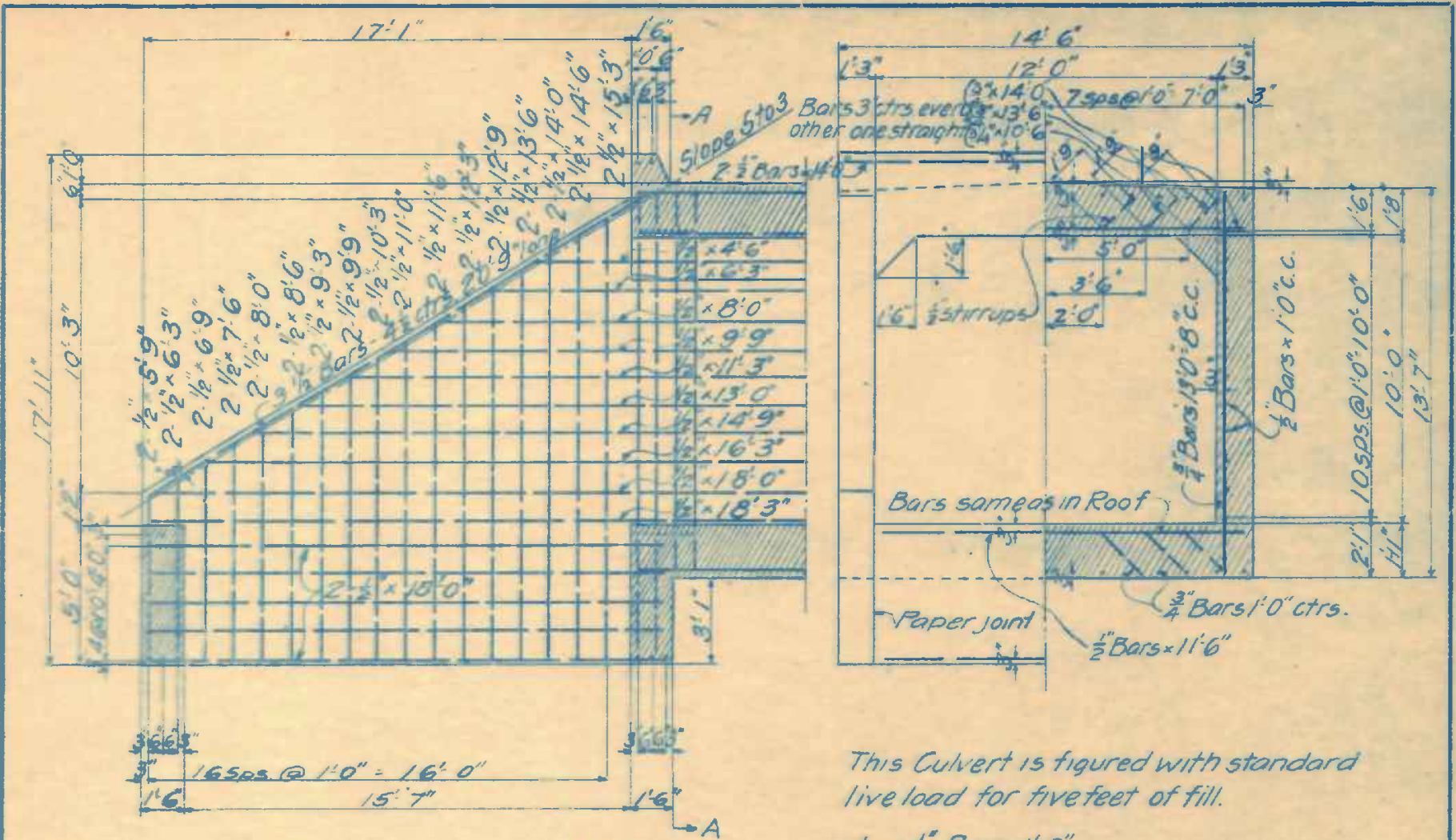


This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "AA".
 49-Cu.Yds. of Concrete.
 3415.# of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 2.77-Cu.Yds. of Concrete.
 310.# of Corr. bars.

12' x 8'



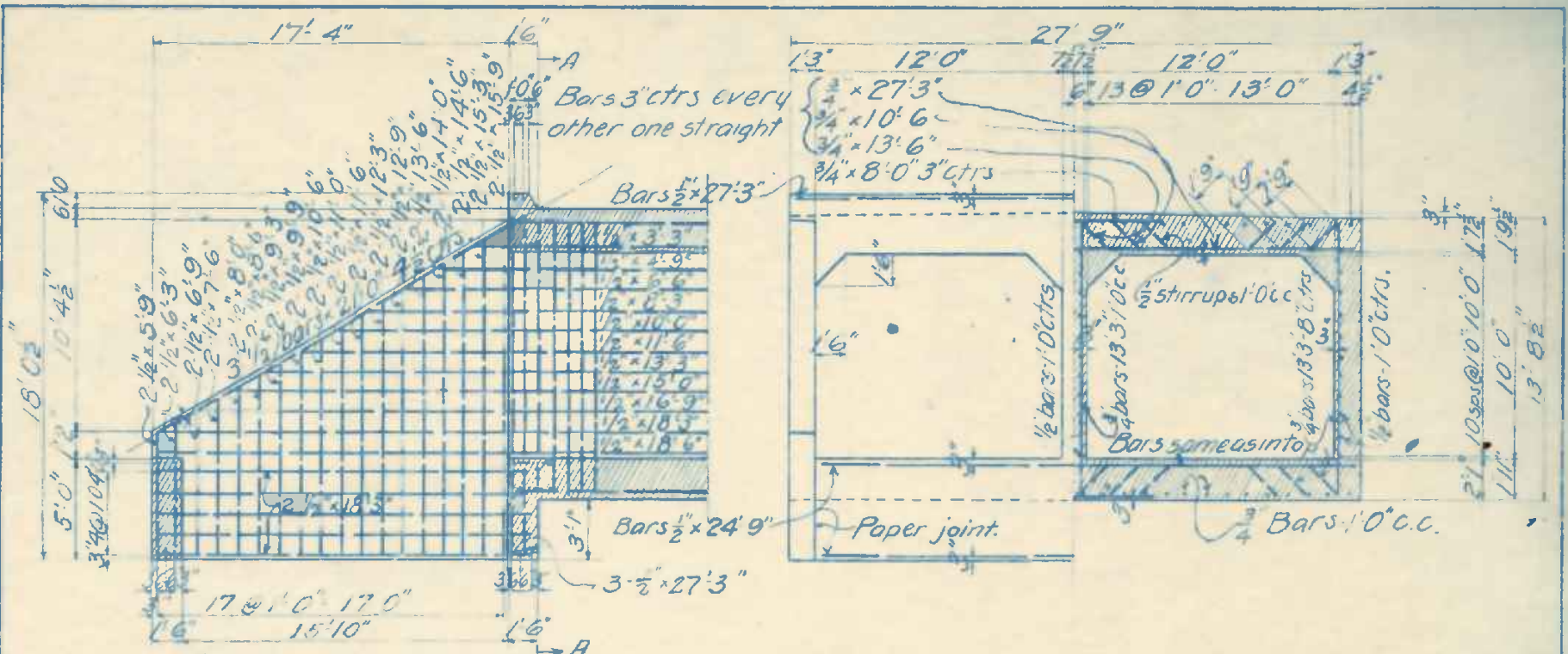
MATERIAL IN 2 ENDS OUTSIDE OF AA
 58 Cu Yds Concrete
 4187# of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 30 Cu Yds of Concrete
 347# of Corr. bars.

This Culvert is figured with standard live load for five feet of fill.

Lap $\frac{1}{2}$ " Bars 1'-0"
 " $\frac{3}{4}$ " " 1'-6"

12' x 10'



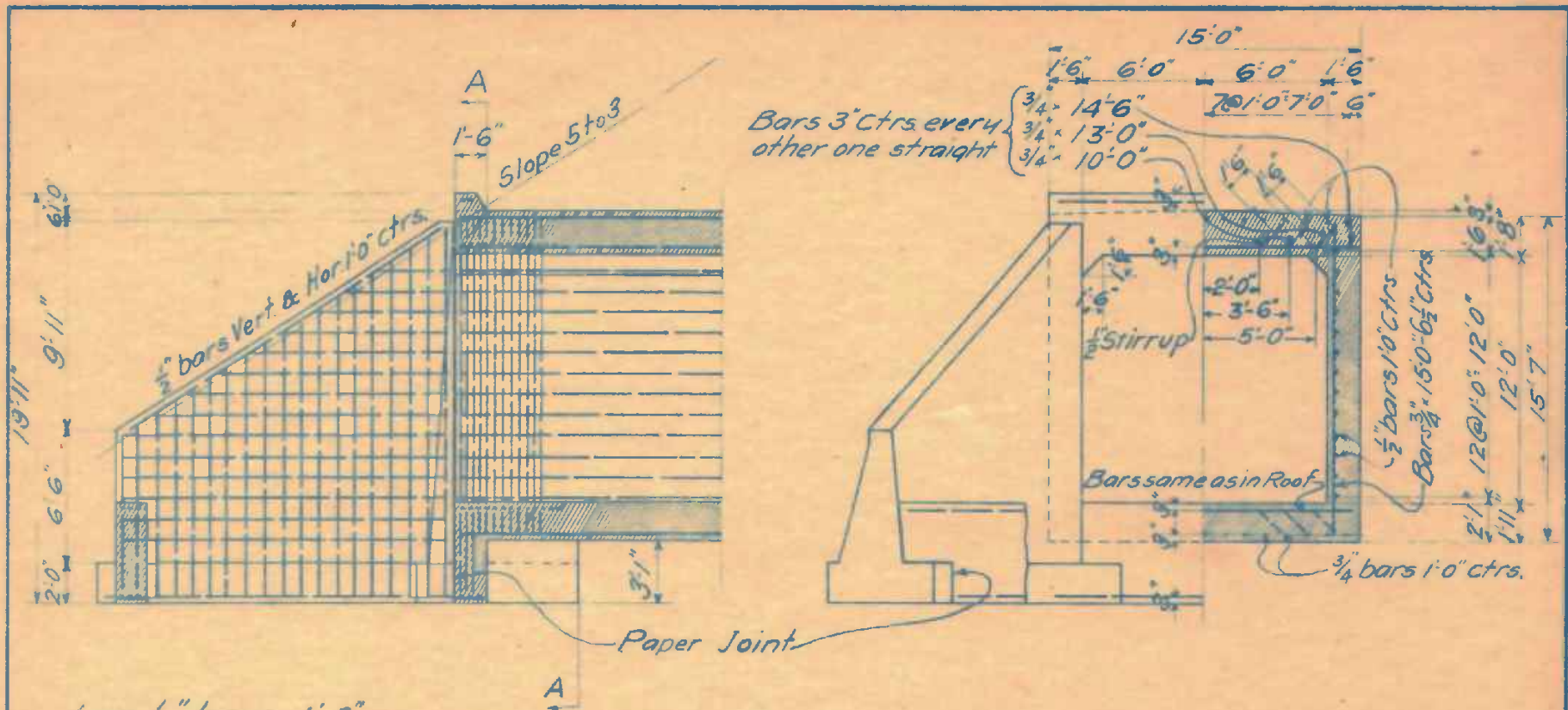
Lap $\frac{1}{2}$ bars @ 1'-0"
 " $\frac{3}{4}$ " " 1'-6"

This Culvert is figured with standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF 'AA'
 79 Cu Yds. of Concrete
 5924# of corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 5.5 Cu Yds. of Concrete
 782.2# of Corr. bars.

DOUBLE 12'x10'



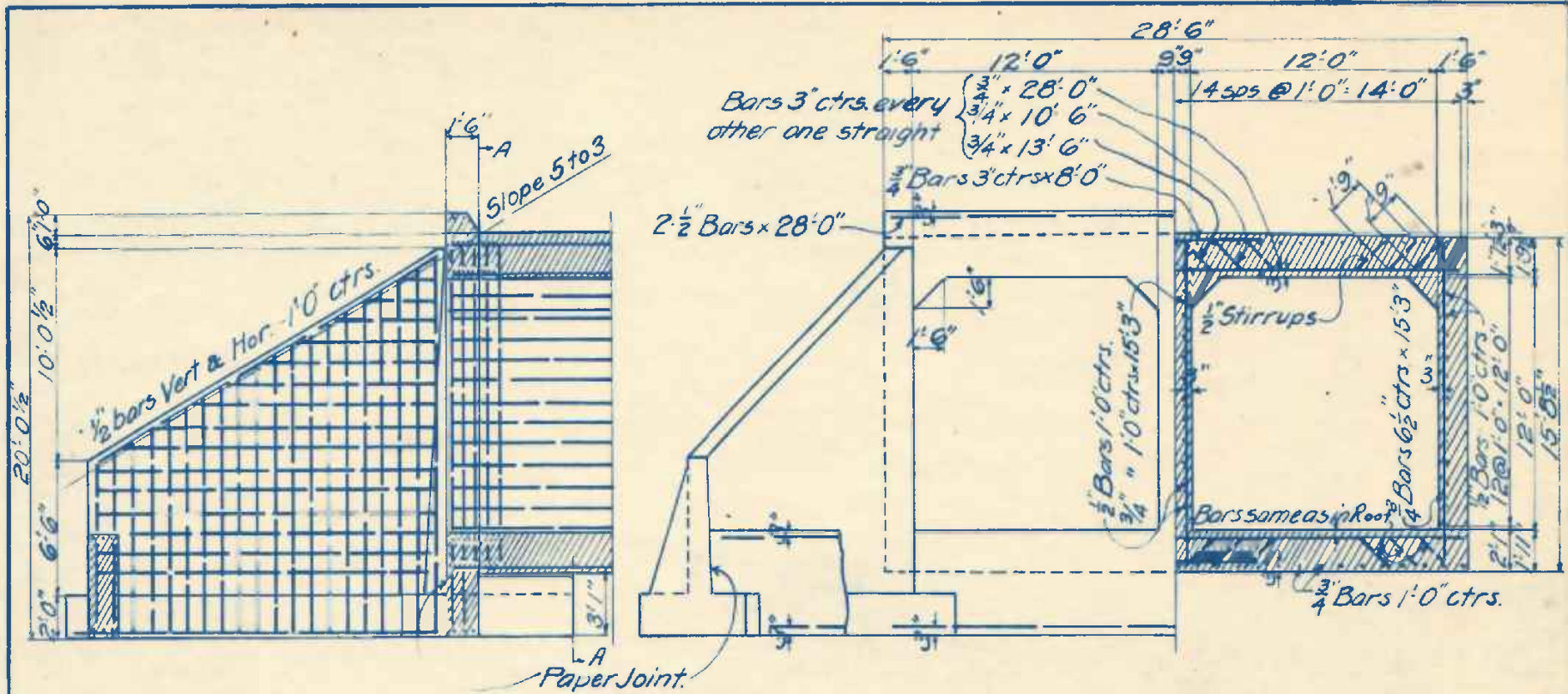
Lap 1/2" bars 1'0"
 " 3/4" " 1'6"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "AA"
 170-Cu. Yds. of Concrete
 7836.* of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 3.4-Cu. Yds. of Concrete
 380.* of Corr. bars.

12'x12'



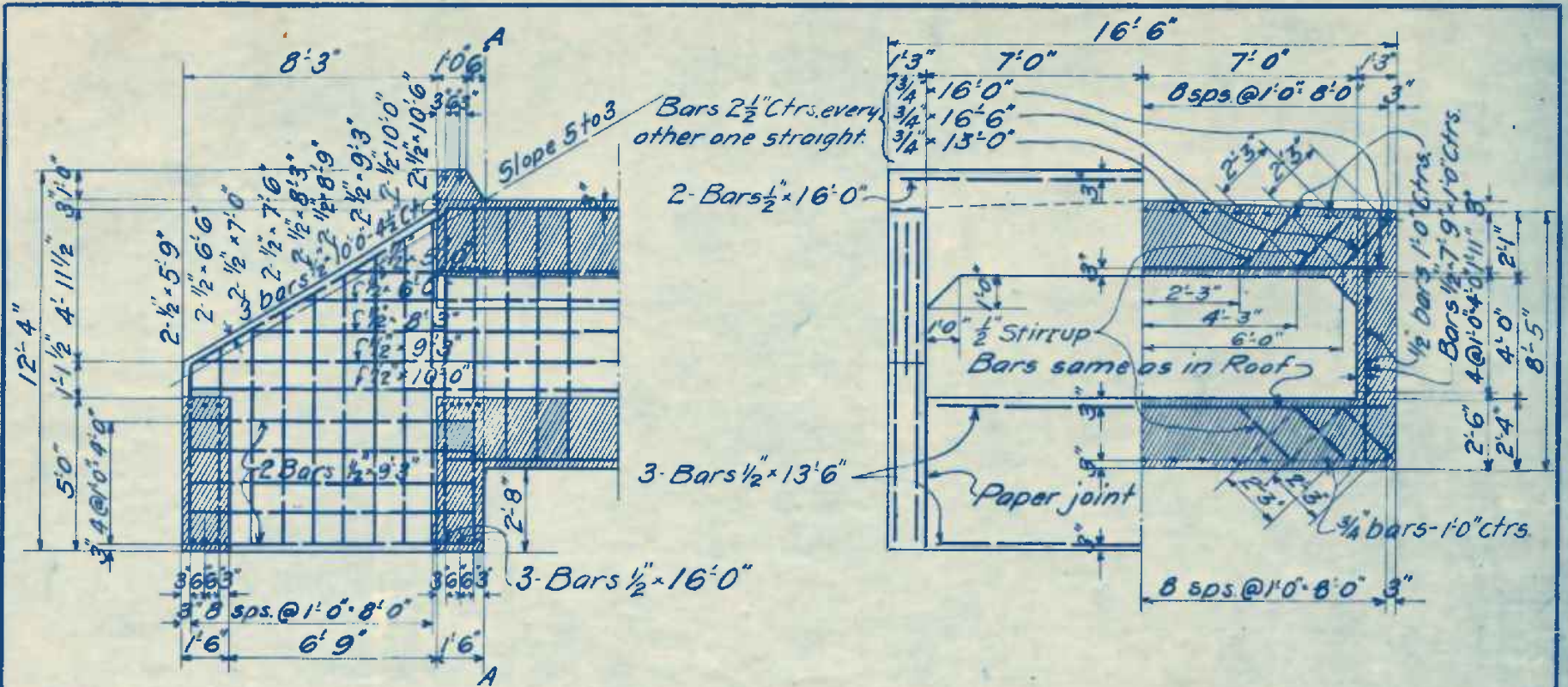
Lap 1/2" Bars 1' 0"
Lap 3/4" Bars 1' 6"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF AA
190 Cu. Yds of Concrete.
9972# of Corr. Bars.

MATERIAL PER LIN. FT. OF CULVERT.
6.2 Cu. Yds Concrete
900# of Corr. bars.

DOUBLE 12' x 12'



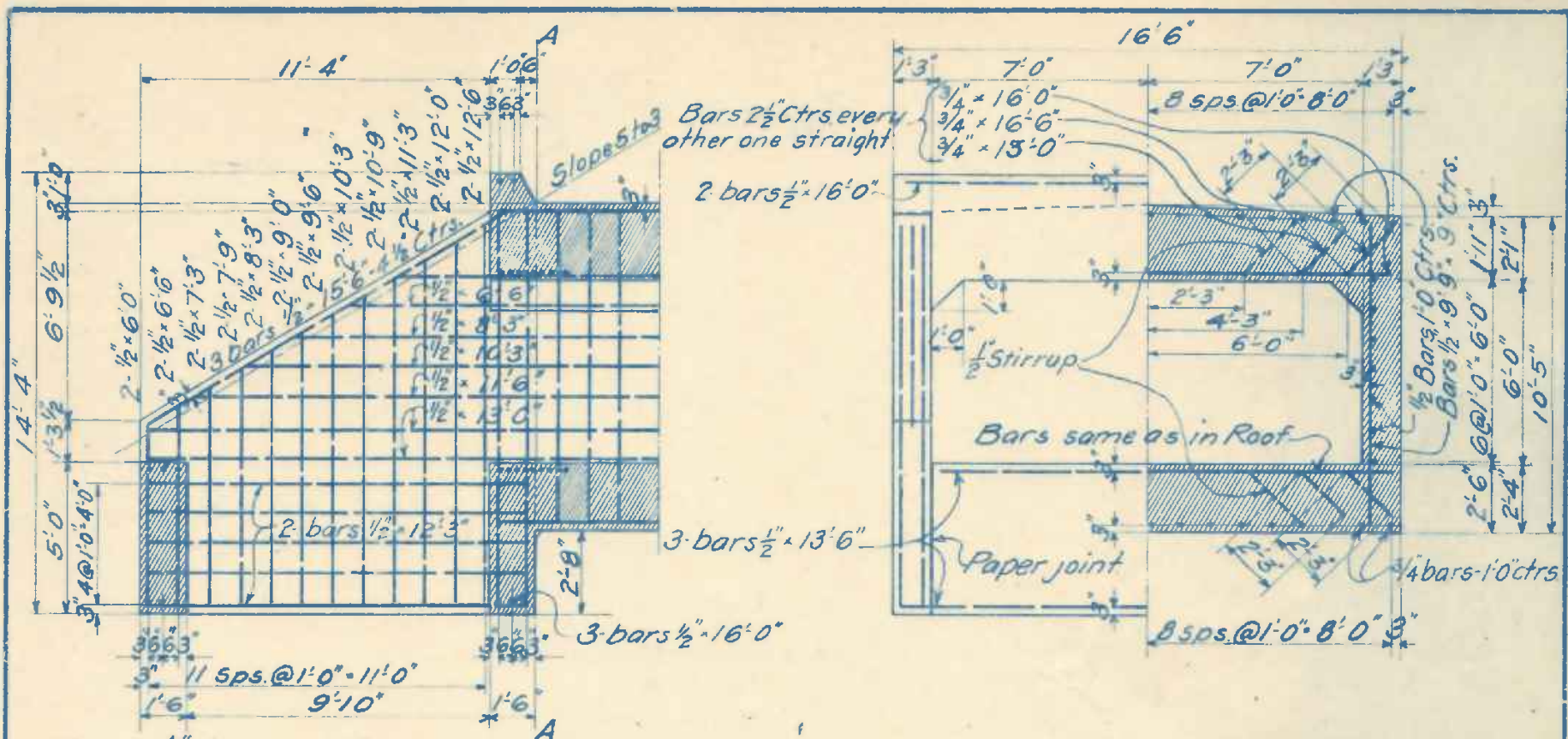
Lap $\frac{1}{2}$ " bars 1'0"
 " $\frac{3}{4}$ " " 1'6"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN TWO ENDS OUTSIDE OF A A
 37.1-Cu. Yds. of Concrete.
 2582.# of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT
 3.2-Cu. Yds. of Concrete.
 377.# of Corr. bars.

14'x4'



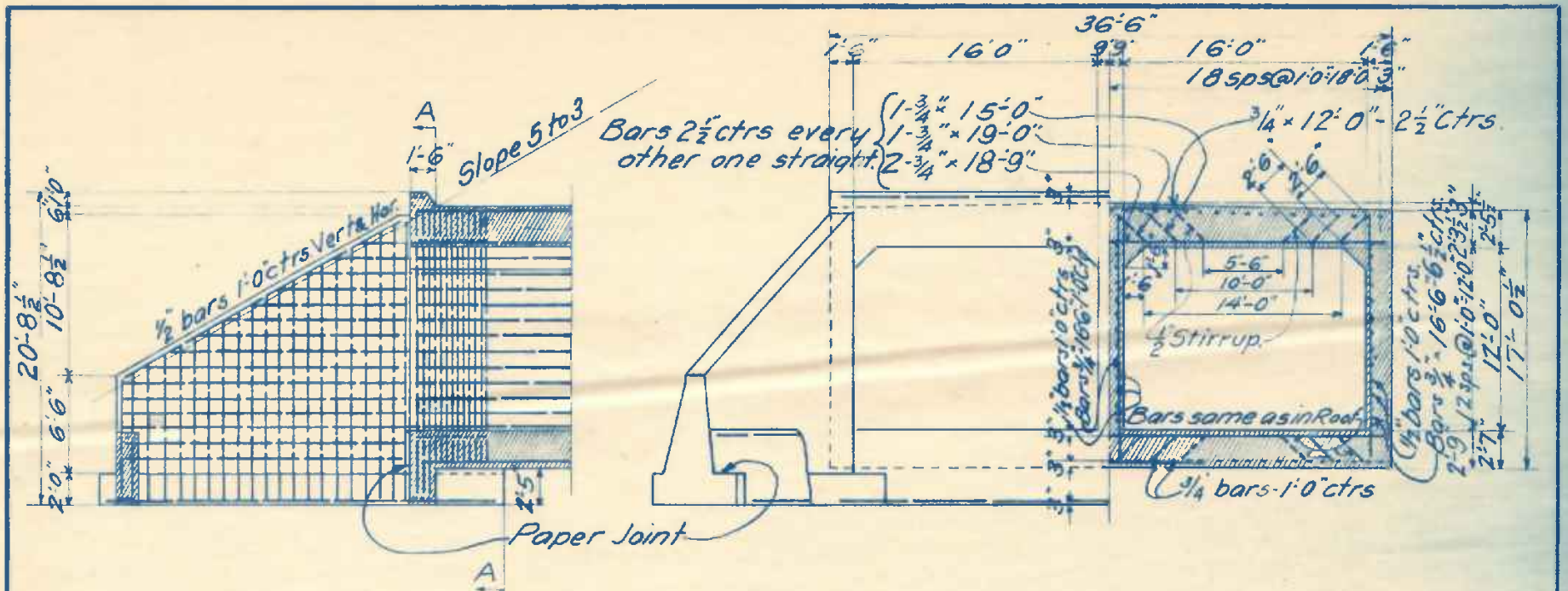
Lap $\frac{1}{2}$ " bars 1'-0"
 " $\frac{3}{4}$ " " 1'-6"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN TWO ENDS OUTSIDE OF AA.
 45-Cu.Yds of Concrete
 3123.# of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT.
 3.37-Cu.Yds. of Concrete
 330.# of Corr. bars.

14'x6'



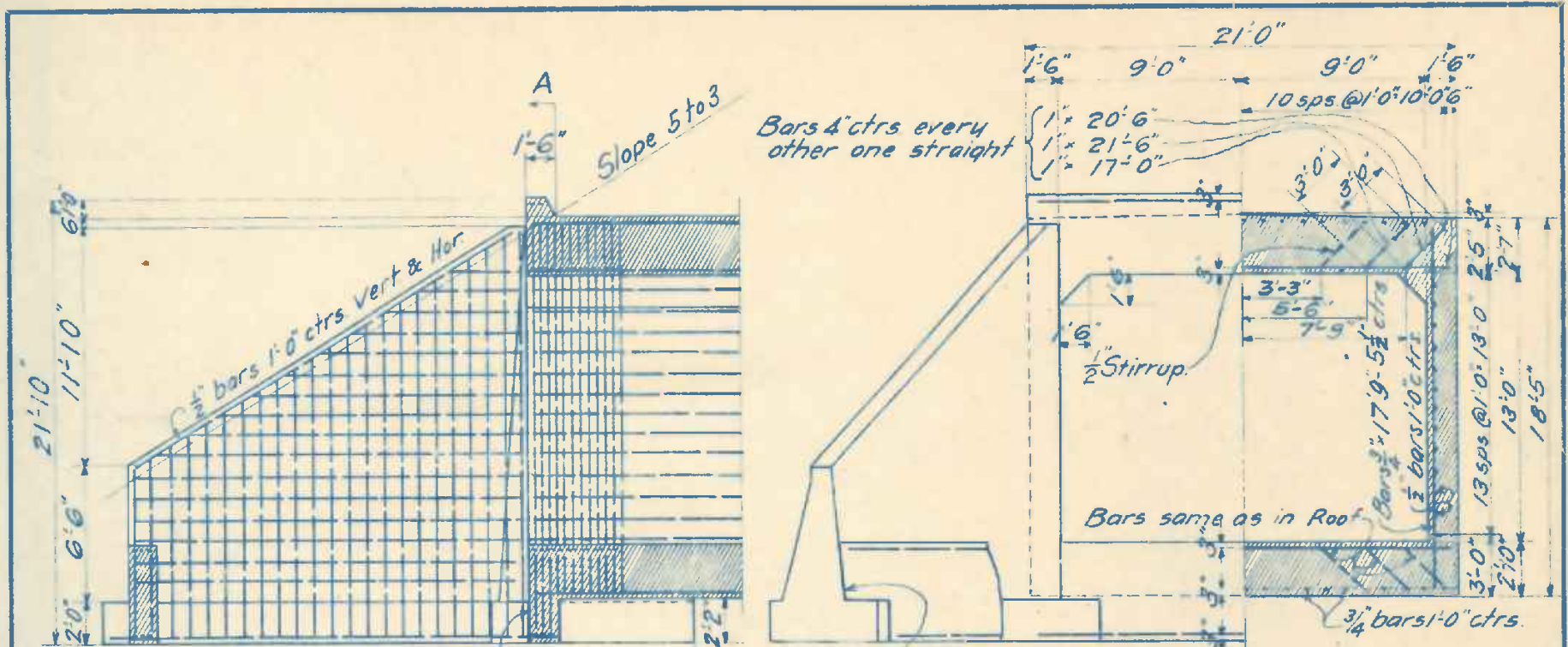
Lap $\frac{1}{2}$ " bars 1'-0"
 " $\frac{3}{4}$ " " 1'-6"

This Culvert is figured with standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "AA"
 220-Cu. Yds. of Concrete
 12062.# of Corr. bars

MATERIAL PER LIN. FT. OF CULVERT.
 9.2-Cu. Yds. of Concrete
 1239.# of Corr. bars.

DOUBLE 16' x 12'

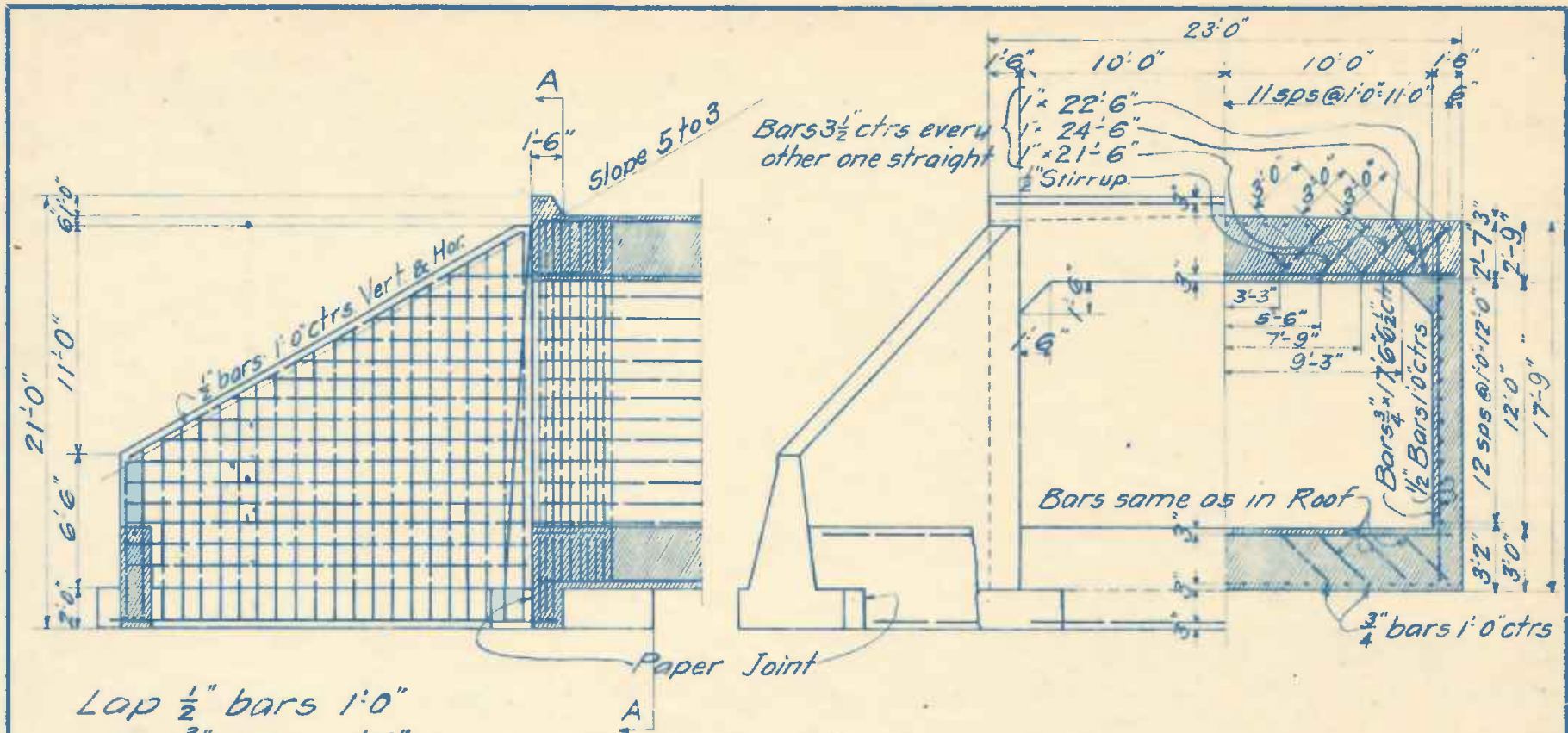


Lap $\frac{1}{2}$ " bars 1'-0"
 " $\frac{3}{4}$ " " 1'-6"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "A A".
 223.-Cu. Yds. of Concrete
 10894.* of Corr. bars.
 MATERIAL PER LIN. FT. OF CULVERT.
 5.8-Cu. Yds. of Concrete
 658.* of Corr. bars.

18'x13'

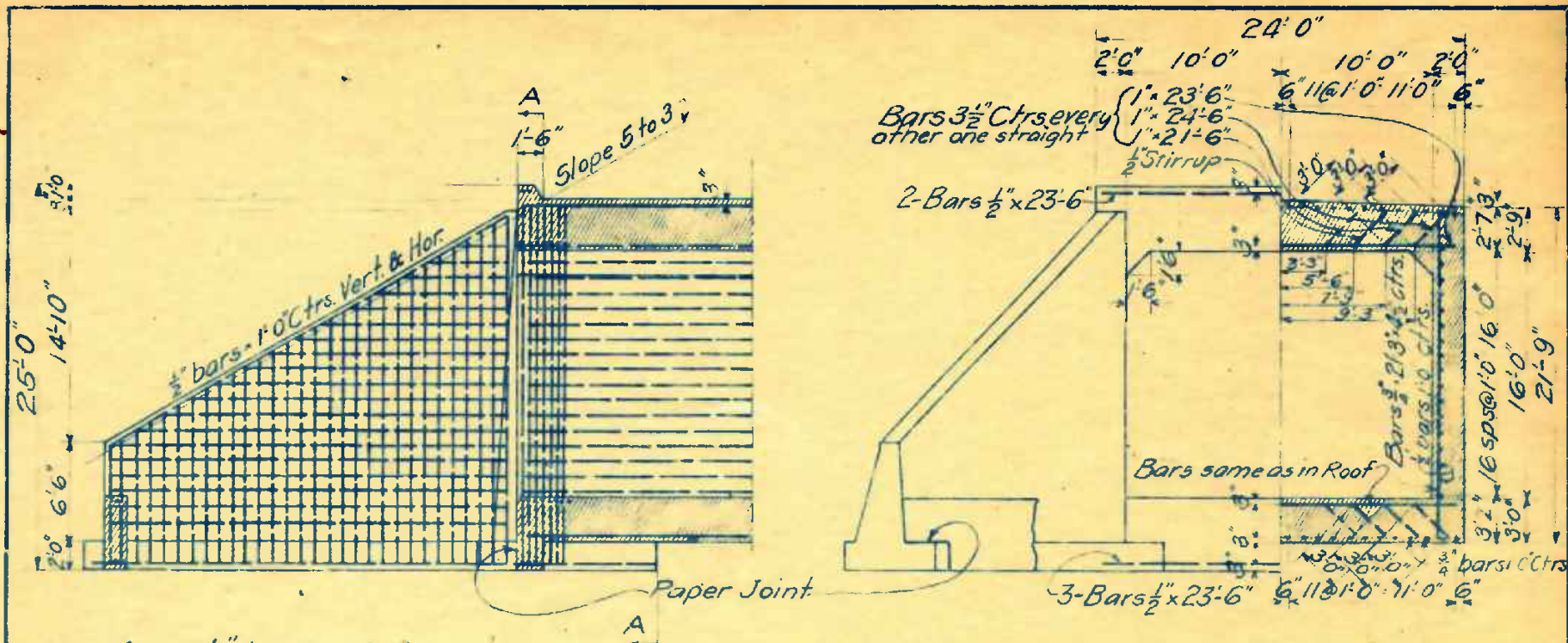


Lap $\frac{1}{2}$ " bars 1'0"
 " $\frac{3}{4}$ " " 1'6"

This Culvert is figured with standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "AA."
 209.-Cu Yds. of Concrete
 10925.*of Corr. bars.
 MATERIAL PER LIN. FT. OF CULVERT.
 6.5-Cu Yds. of Concrete
 784.*of Corr. bars.

20'x12'



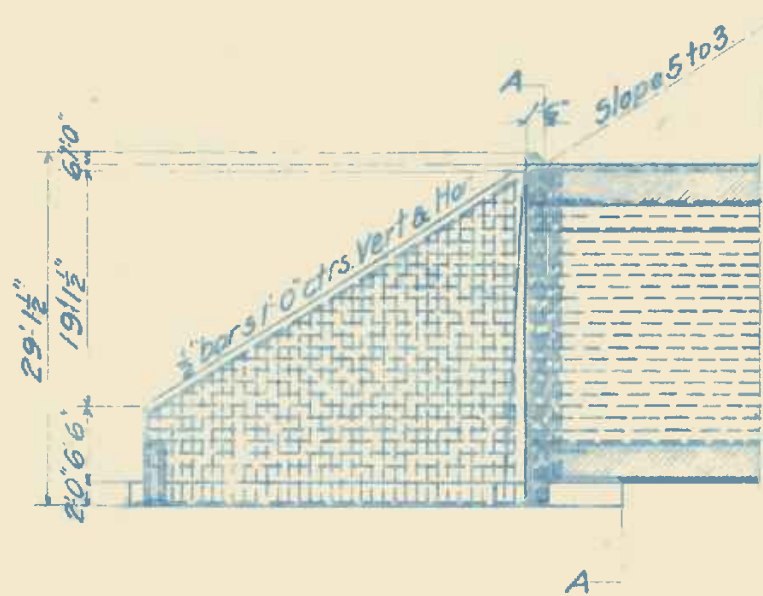
Lap $\frac{1}{2}$ " bars 1'-0"
 " $\frac{3}{4}$ " " 1'-6"

This Culvert is figured with Standard live load for five feet of Fill.

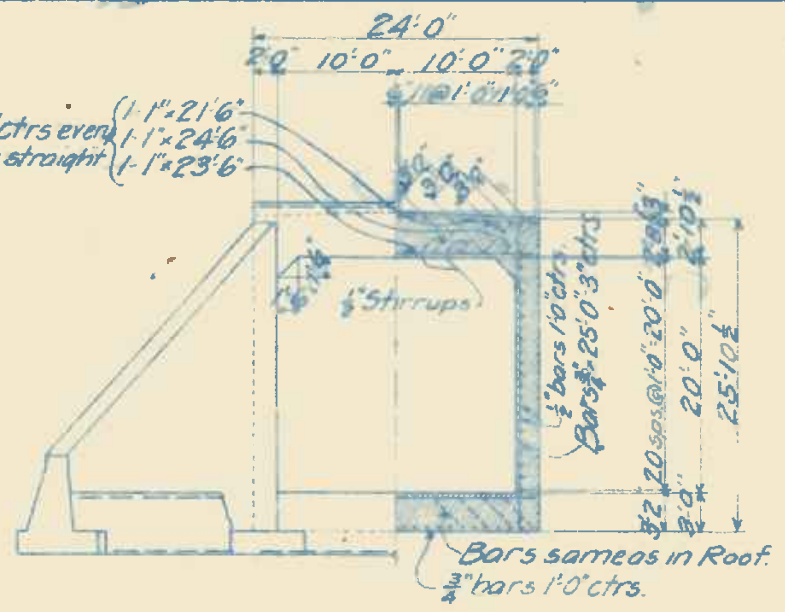
MATERIAL IN 2 ENDS OUTSIDE OF "A A" .
 332-Cu Yds. of Concrete
 15530# of Corr. bars.

MATERIAL PER LIN. FT OF CULVERT.
 7.7-Cu Yds. of Concrete.
 898# of Corr. bars.

20'x16'



Bars 3 1/2 ctrs even (1" x 21'6")
 other one straight (1" x 23'6")



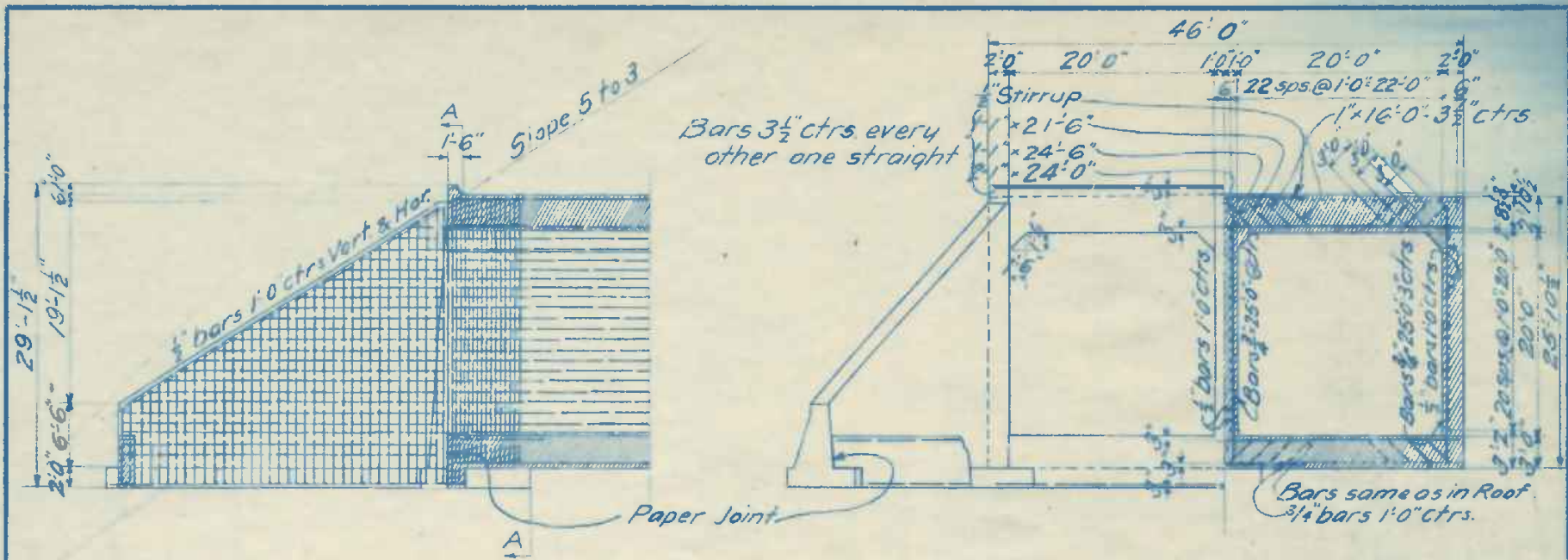
Bars same as in Roof.
 3/4" bars 1'0" ctrs.

Lap 1/2" bars 1'0"
 Lap 3/4" bars 1'6"

This Culvert is figured with Standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF AA.
 503 Cu. Yds. of Concrete
 22398# of Corr. bars.
 MATERIAL PER LIN. FT. OF CULVERT.
 8.4 Cu. Yds. of Concrete.
 1070# of Corr. bars.

20' x 20'



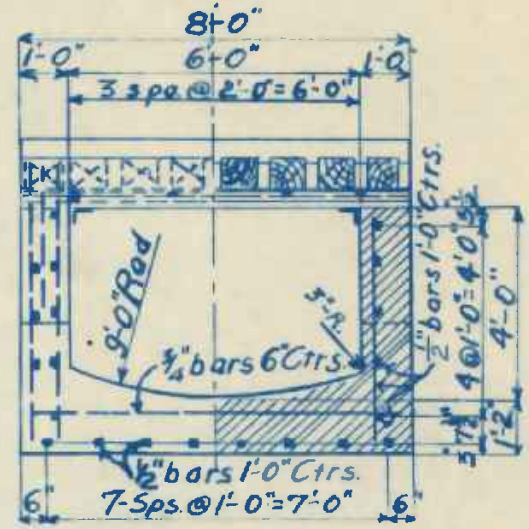
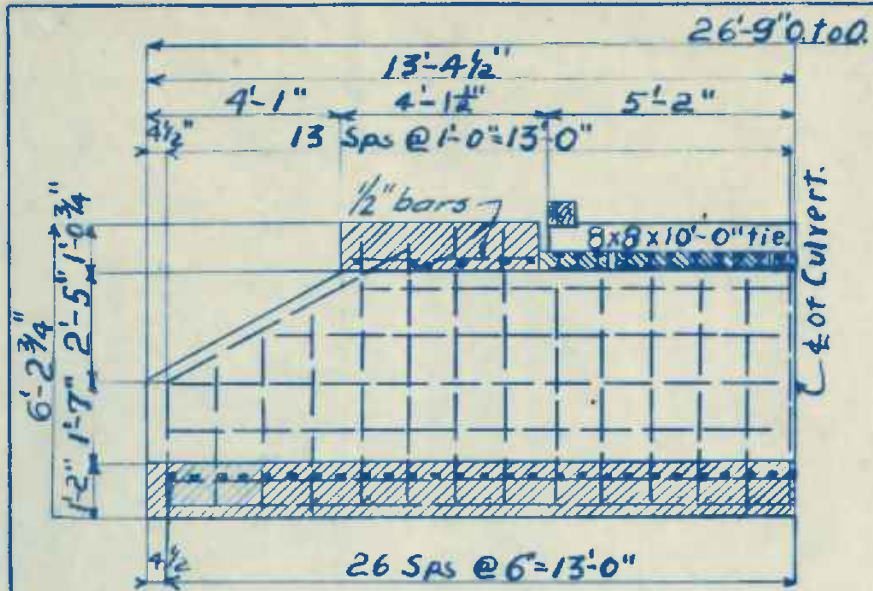
Lap $\frac{1}{2}$ " bars 1'-0"
 " $\frac{3}{4}$ " " 1'-6"
 " 1" " 2'-0"

This Culvert is figured with standard live load for five feet of fill.

MATERIAL IN 2 ENDS OUTSIDE OF "A A"
 570-Cu. Yds. of Concrete
 25356.* of Corr. bars.

MATERIAL PER LIN. FT. OF CULVERT
 14.8-Cu. Yds of Concrete
 2332.* of Corr. bars.

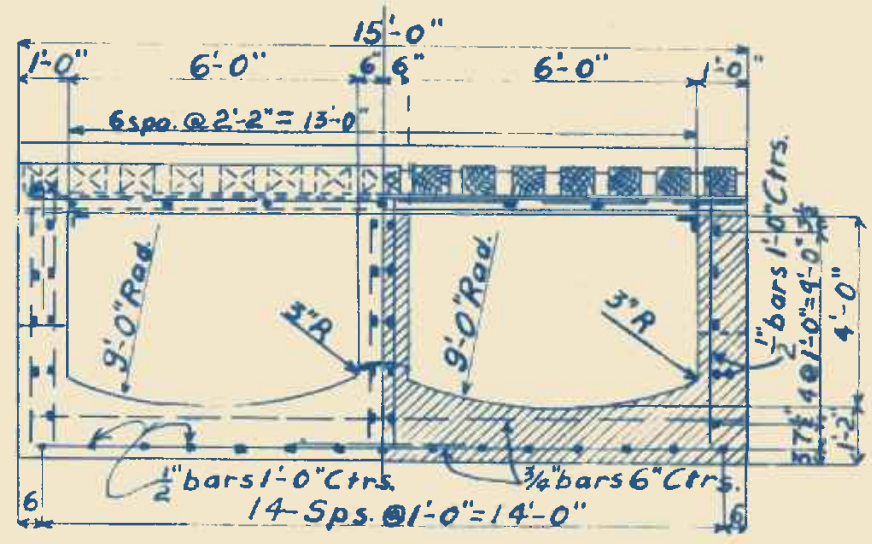
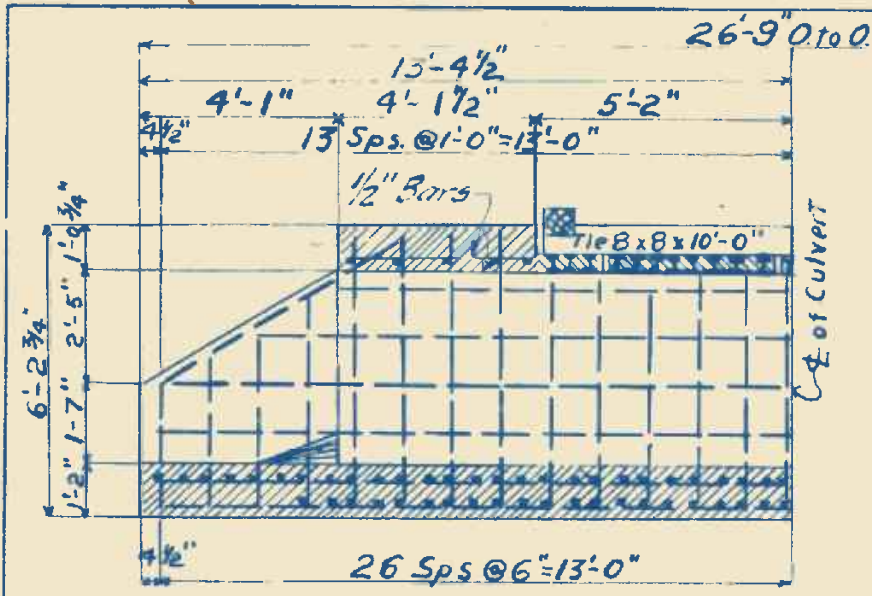
DOUBLE 20'x20'



BILL OF MATERIAL FOR SINGLE.

- 22 Cu. Yds. of Concrete.
- 1631 # of Corr. bars.
- 2.05 Tons of Rails.
- 267 # Bolts & Washers & Angles, etc.

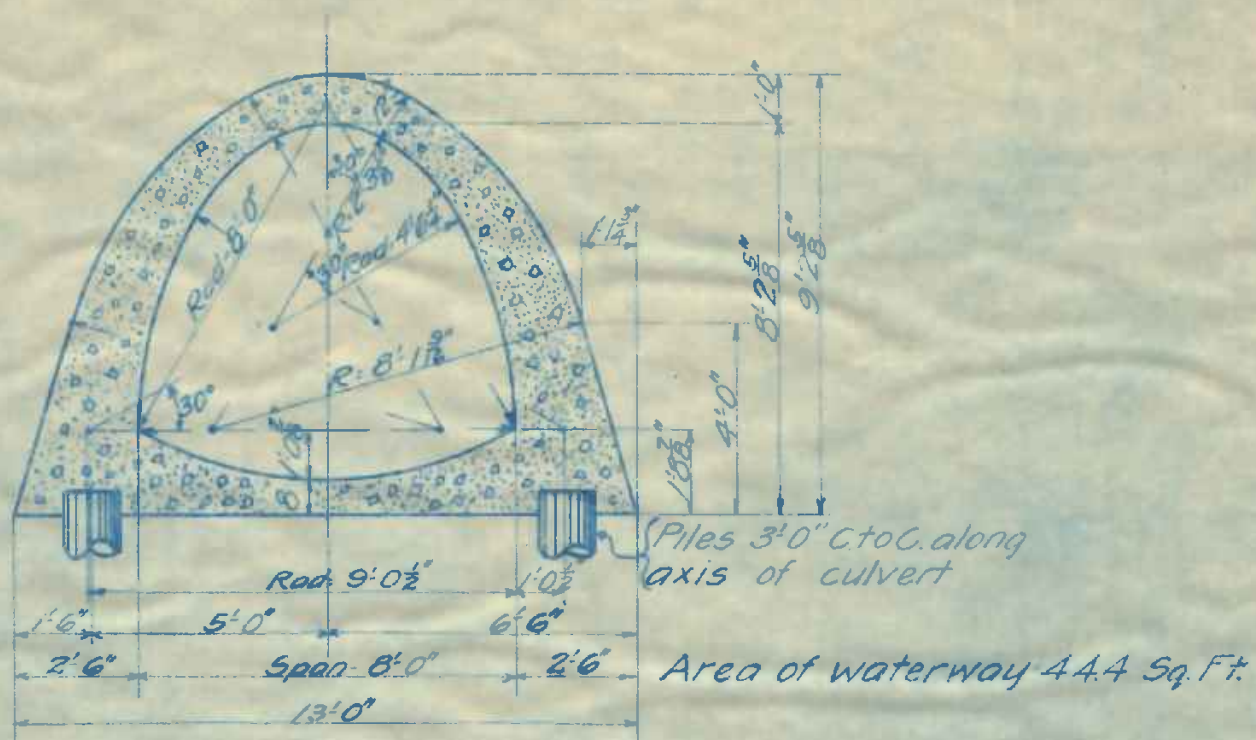
SINGLE 6' x 4' RAIL TOP.



BILL OF MATERIAL FOR DOUBLE

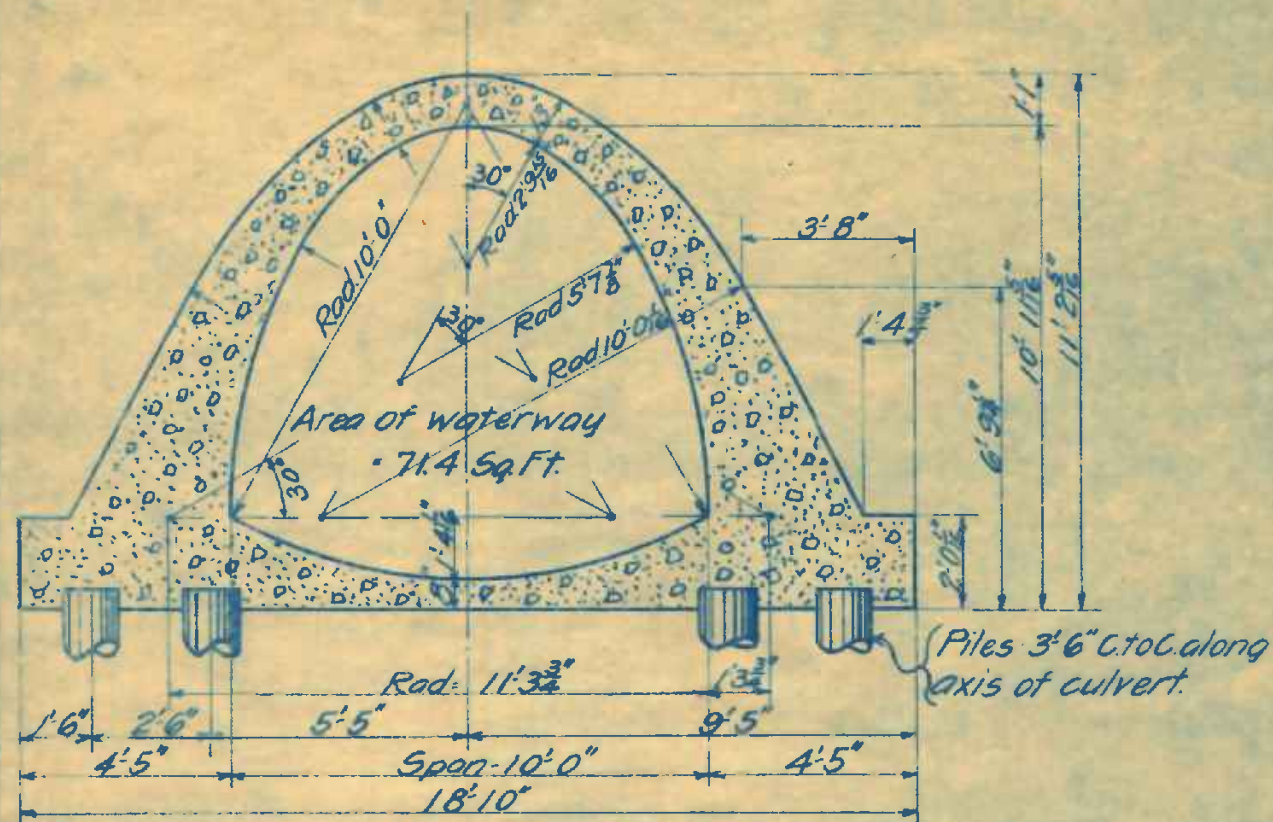
- 37-Cu. Yds. of Concrete.
- 3257[#] of Corr. bars.
- 3.85 Tons of Rails.
- 354[#] Bolts & Washers Angles, etc.

DB'L. 6' x 4' RAIL TOP.



MATERIAL PER LIN. FT. OF CULVERT.
 1.5 Cu. Yds. Concrete
 13 Lin. Ft. Piling

8' ARCH CULVERT.

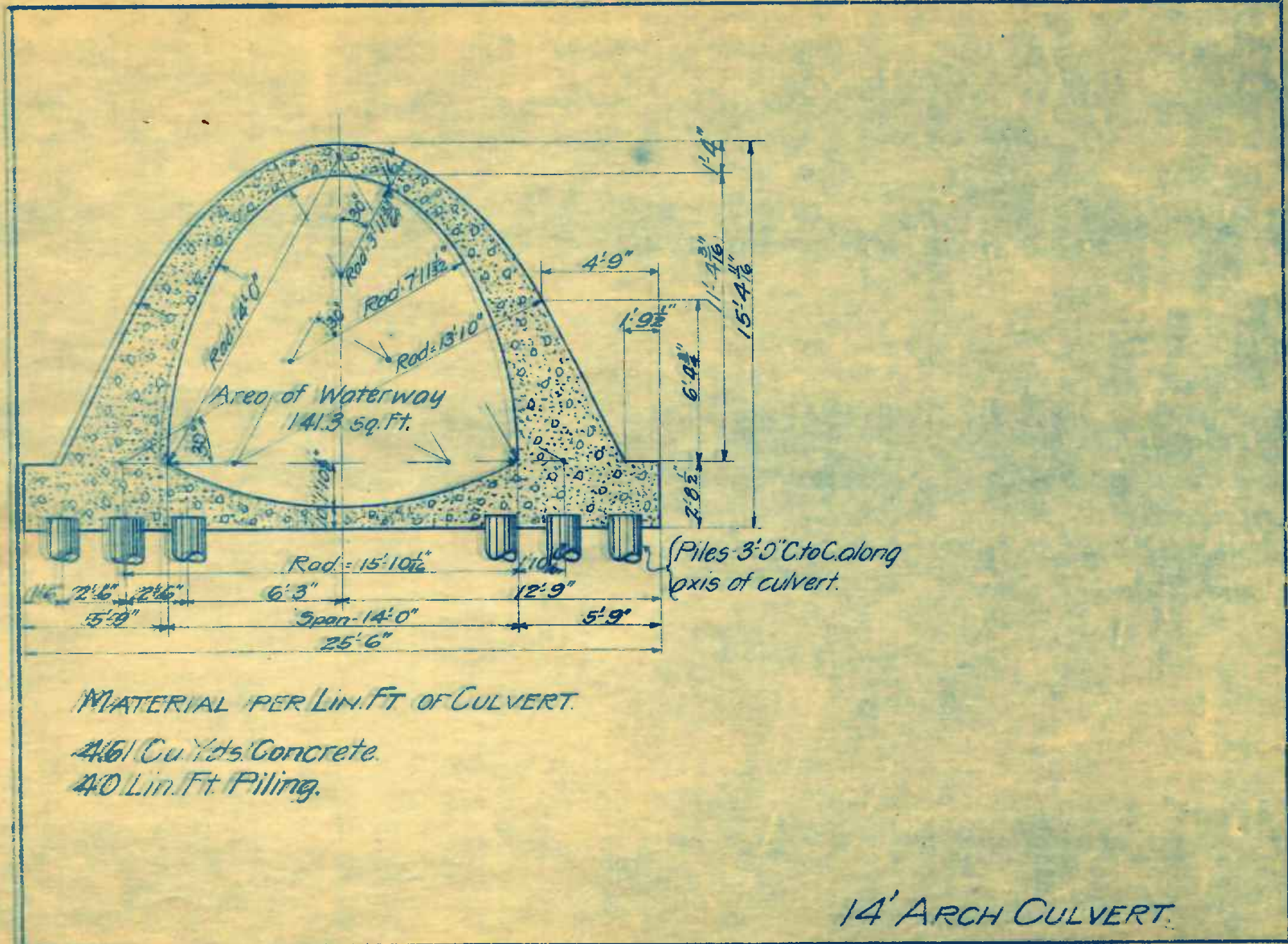


MATERIAL PER LIN. FT. OF CULVERT.

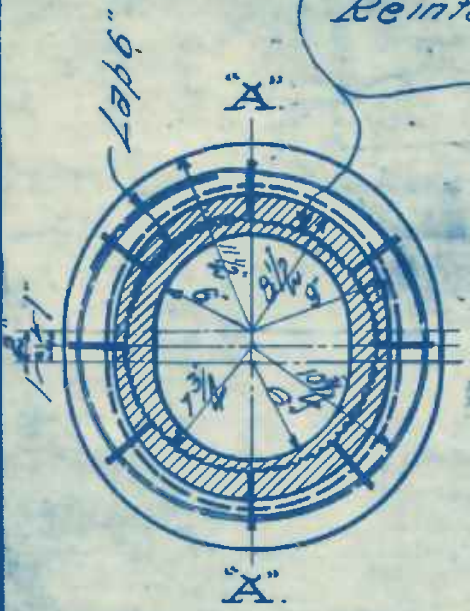
2.55 Cu. Yds. Concrete.

23 Lin. Ft. Piling.

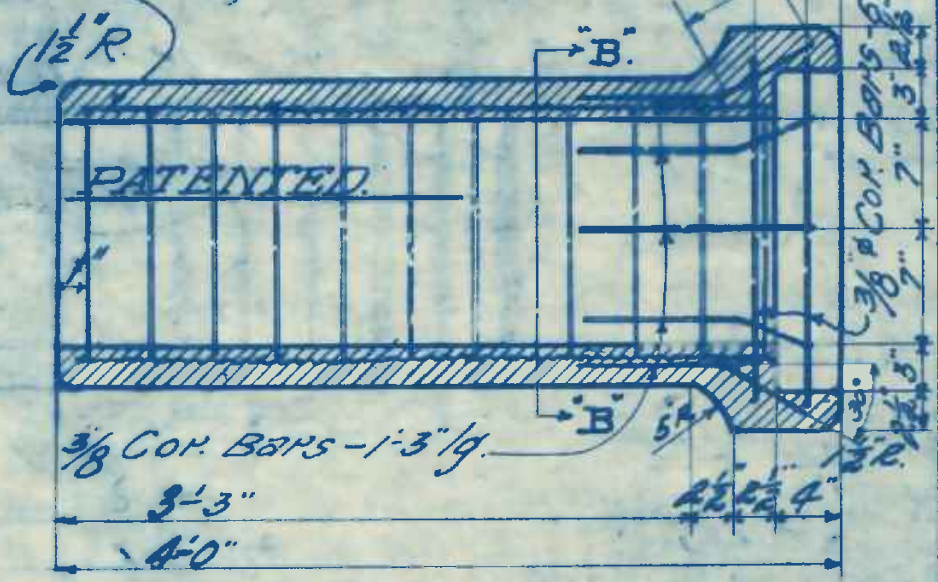
10' ARCH CULVERT.



American Steel and Wire Co's Triangular Mesh Reinforcement. Style No. 5-40" wide (See Specifications 3-2)



SECTION-BB.

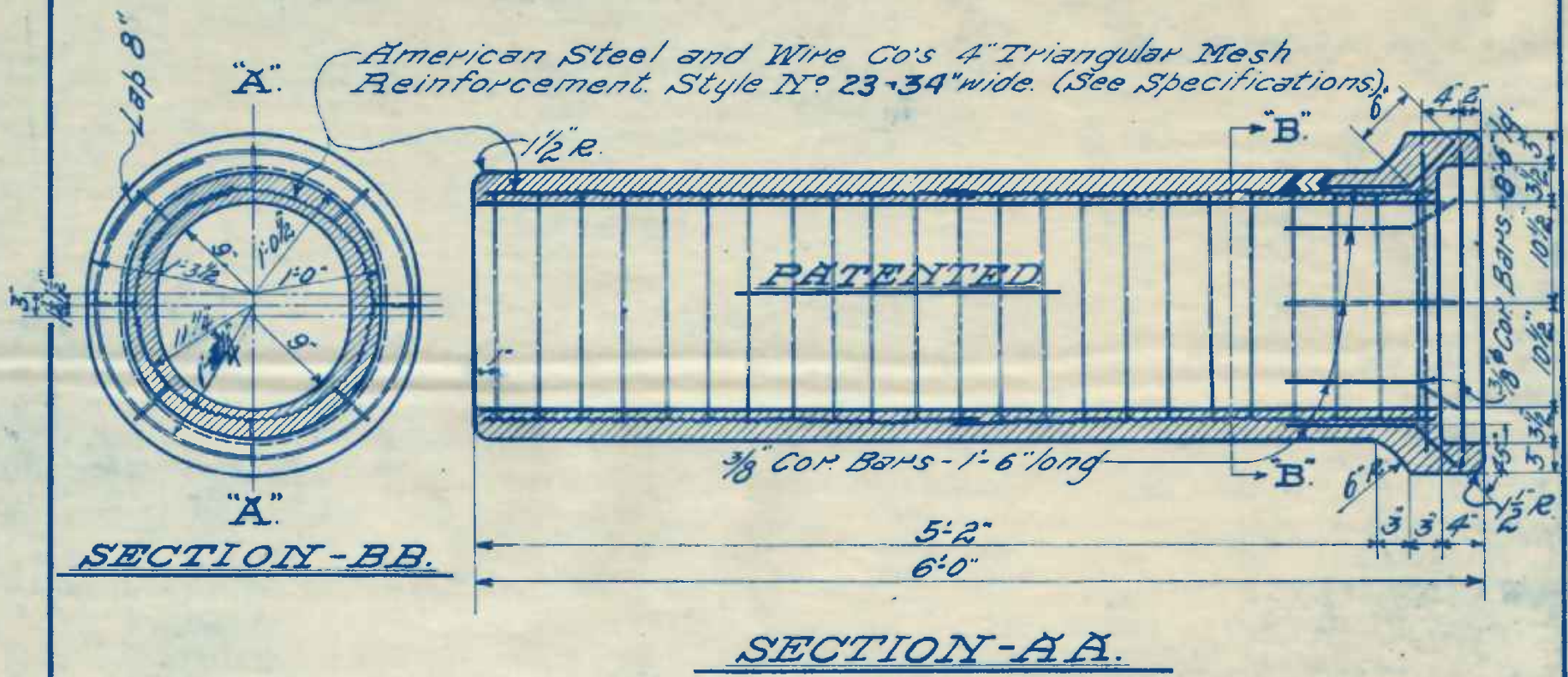


SECTION-AA.

MATERIAL IN ONE LENGTH
OF PIPE.

- .18 Cu. Yds. Concrete.
- 1078 Lbs. of Cor. Bars.
- 17.0 Sq. Ft. of # 5-4" Δ Mesh Rein.

12'-REINFORCED CONCRETE PIPE.

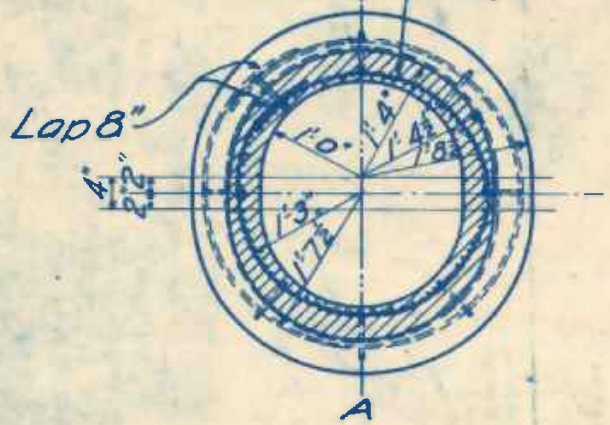


MATERIAL IN ONE LENGTH
OF PIPE

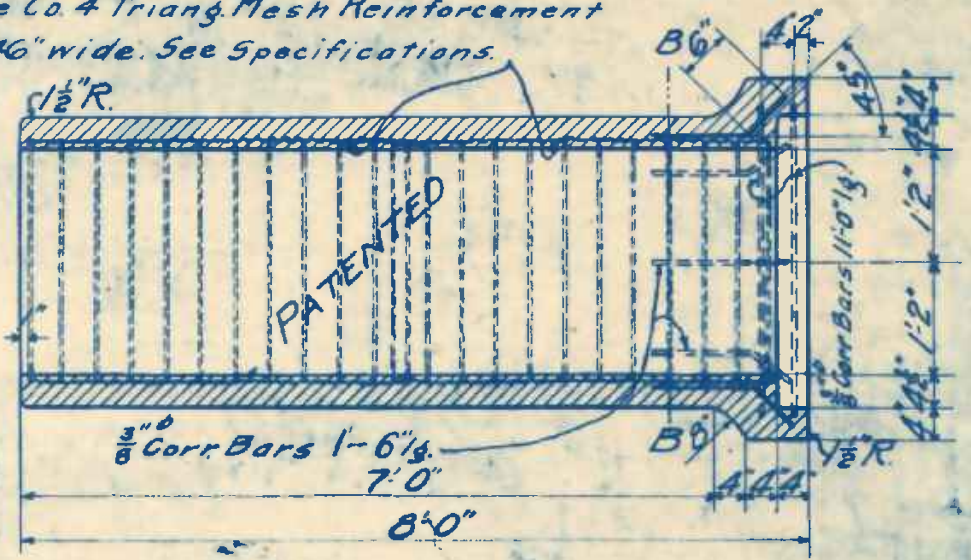
- .39 Cu. Yds. Concrete.
- 14.21 Lbs. of Cor. Bars.
- 44.7 Sq. Ft. of N^o 23-4" Δ Mesh Rein.

18" REINFORCED CONCRETE PIPE.

Am. Steel & Wire Co. 4" Triang. Mesh Reinforcement
Style No 23-46" wide. See Specifications.



SECTION BB.



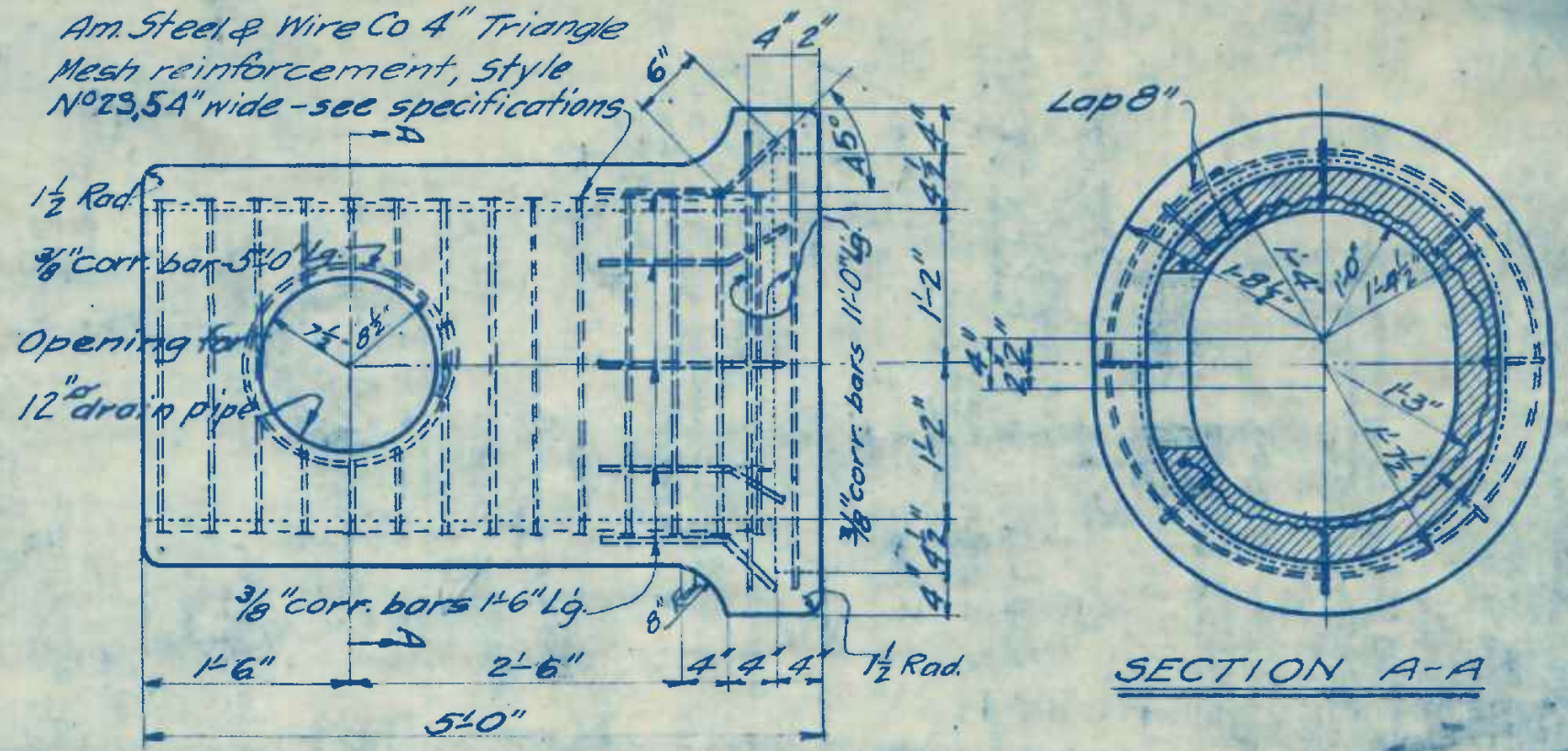
SECTION AA

WEIGHT PER SECTION = 3300 #

- MATERIAL IN ONE LENGTH OF PIPE
- .89 Cu. Yds. of Concrete
- 1666 Lbs. of Corr. bars.
- 65.16 Sq. Ft. of 4" Δ Mesh. Reinf.
- 1.56 Bbl's Cement
- .4 Lbs. Wire.

24" REINFORCED CONCRETE PIPE.

725. 711



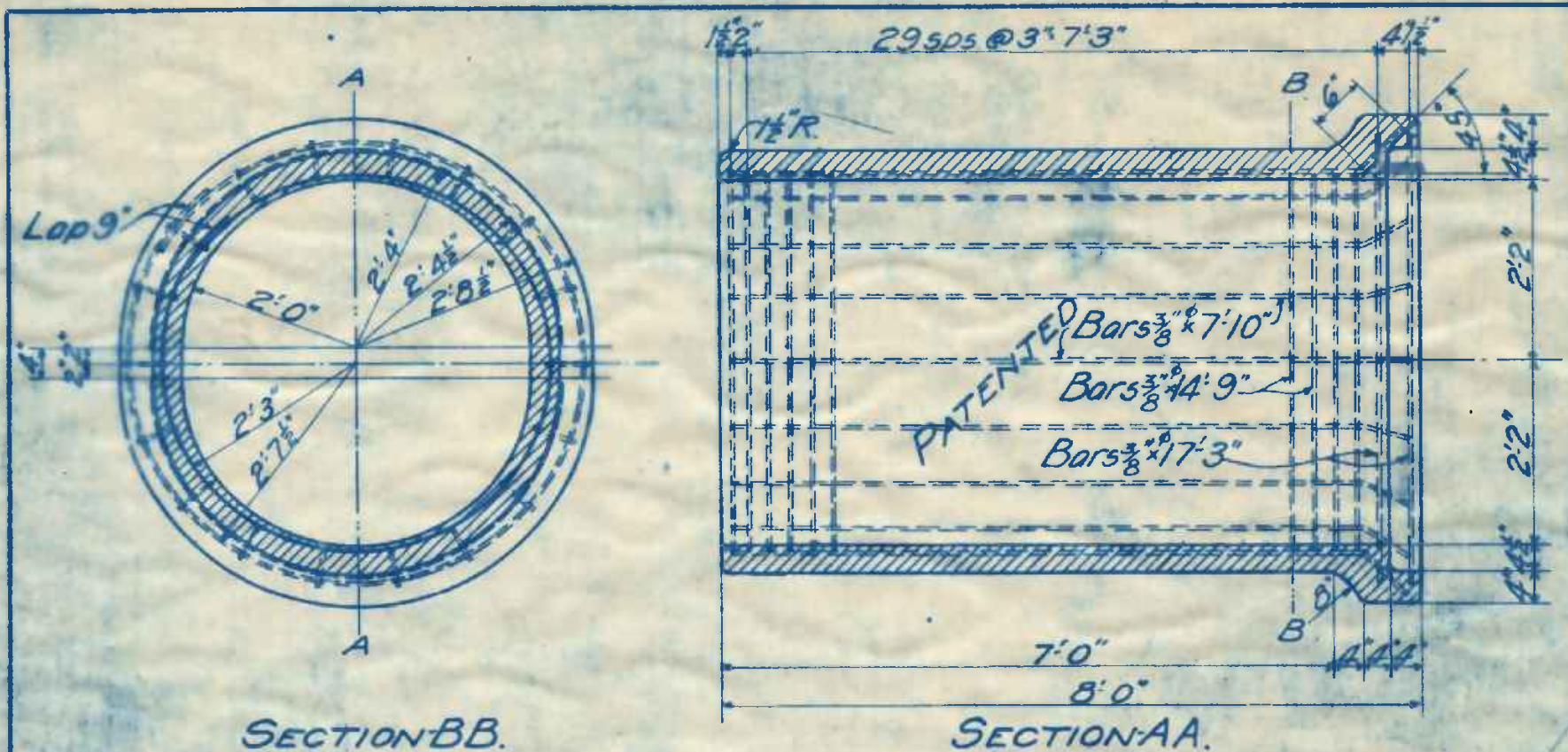
ELEVATION

Weight per section = 2234 #

MATERIAL IN ONE LENGTH OF PIPE

- 0.54 cu. yds of 1:2:4 concrete
- 0.94 bbls of portland cement
- 19.11 lbs of corrugated bars
- 38.35 Sq. Ft of 4" Δ Mesh reinforcement
- 0.3 lbs of wire

24" REINFORCED CONCRETE PIPE
WITH PROVISION FOR SIDE DRAINAGE



SECTION BB.

SECTION AA.

WEIGHT PER SECTION = 6000# ✓

MATERIAL IN ONE LENGTH OF PIPE.

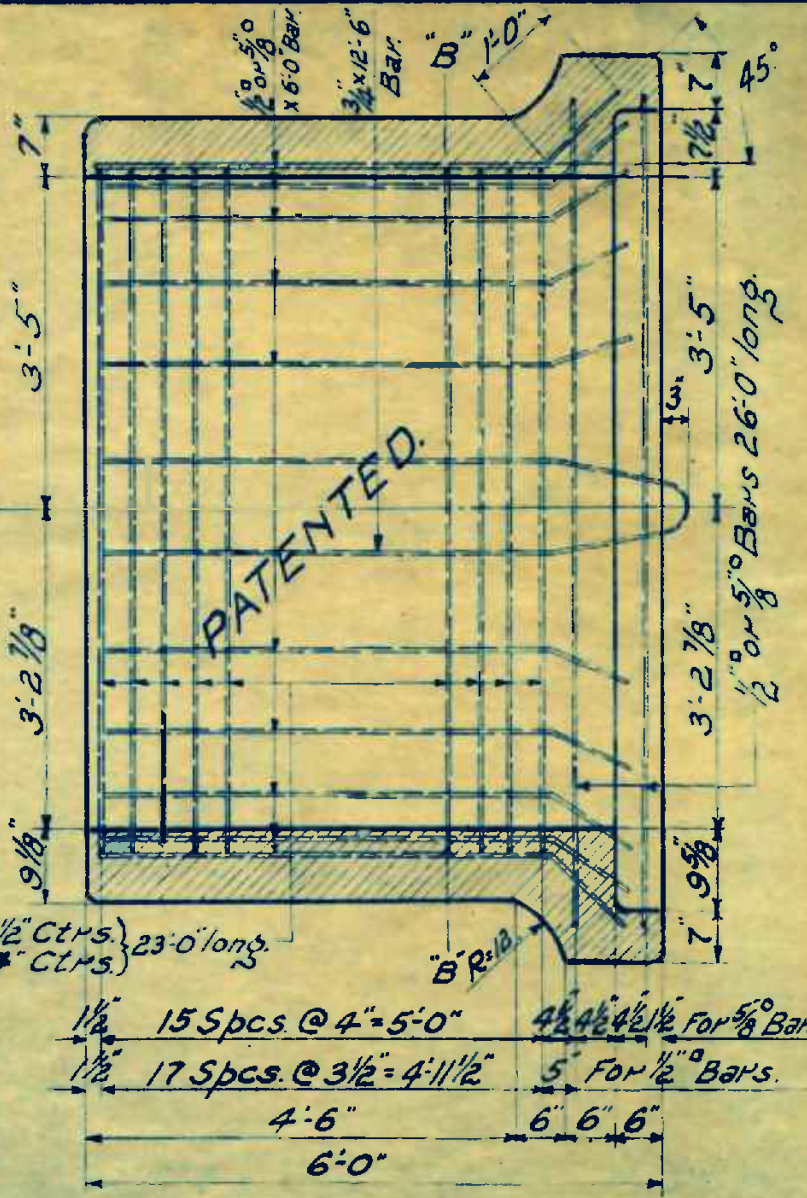
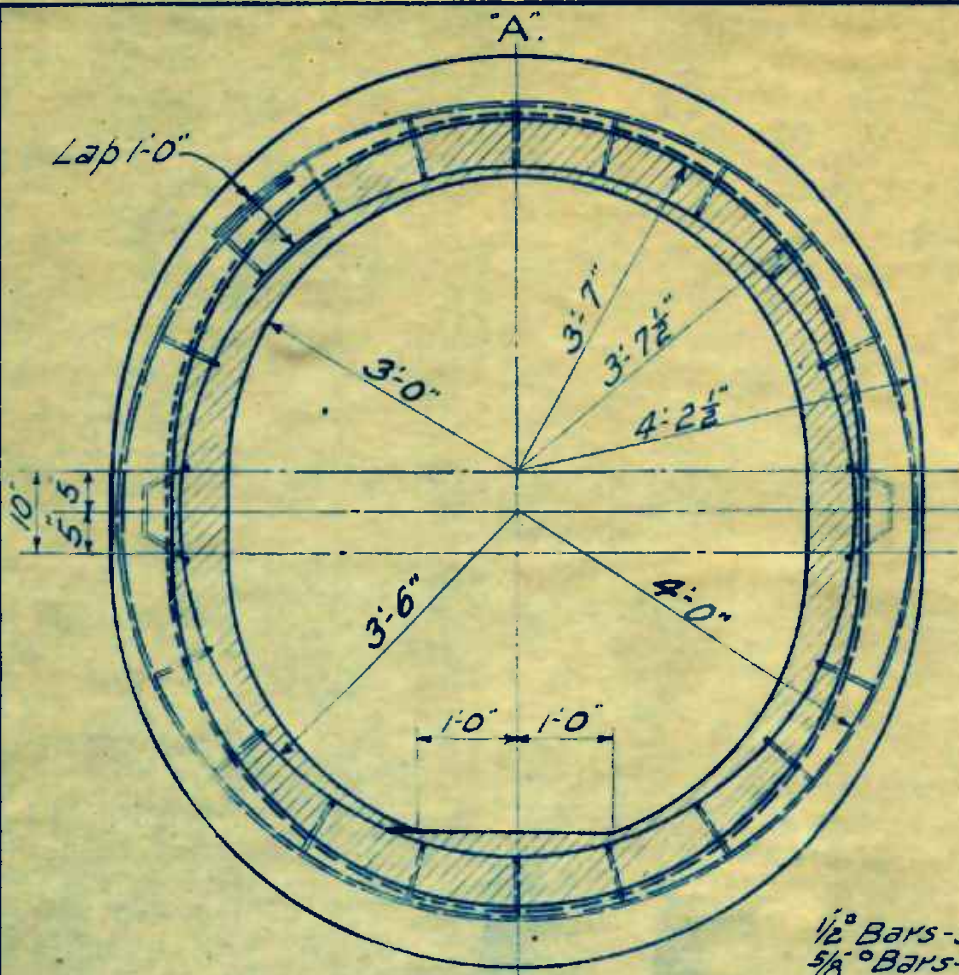
1.53 Cu. Yds. of Concrete

3030 Lbs. of Corr. bars.

2.77 Bbls. Cement.

3 Lbs Wire.

48" REINFORCED CONCRETE PIPE.



SECTION B-B.

MATERIAL FOR ONE LENGTH OF PIPE.

- 5 Cu. Yds. of Concrete.
- 48 Lbs. of Corrugated Bars.
- 13 Bbls of Cement.
- 2.5 Lbs. Wire.

1/2" Bars - 3 1/2" Ctrs. } 23'-0" long.
 5/8" Bars - 4" Ctrs. }

1/2" 15 Spcs. @ 4" = 5'-0" 4 1/2" 4 1/2" 4 1/2" 1/2" FOR 5/8" BARS
 1/2" 17 Spcs. @ 3 1/2" = 4'-11 1/2" 5" FOR 1/2" BARS.
 4'-6" 6' 6" 6"
 6'-0"

SECTION A-A.

72" REINFORCED CONCRETE PIPE.

Burlington
Route