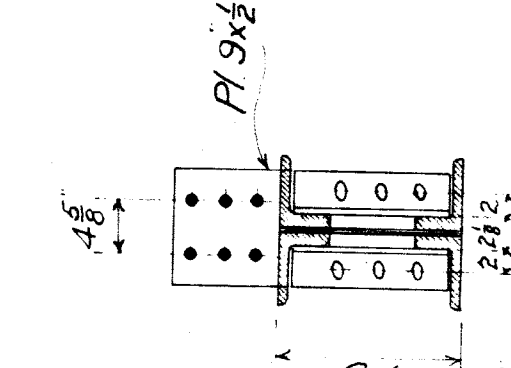
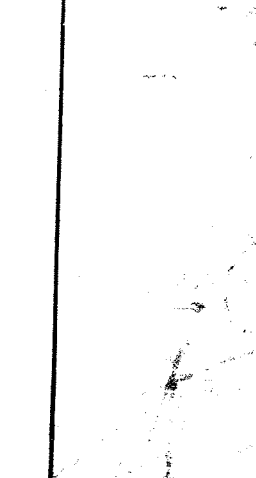
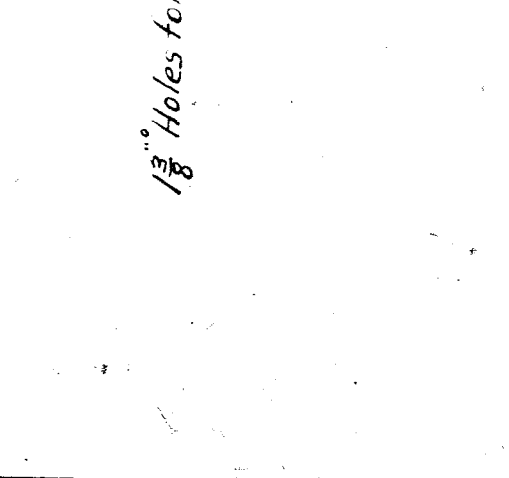
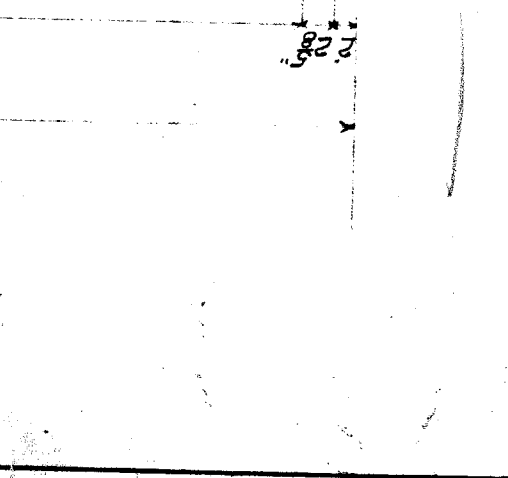
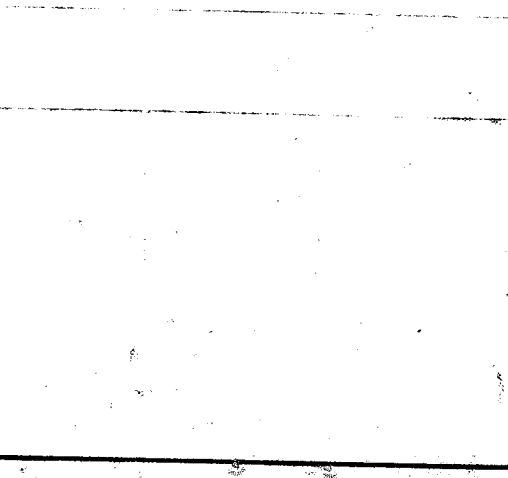
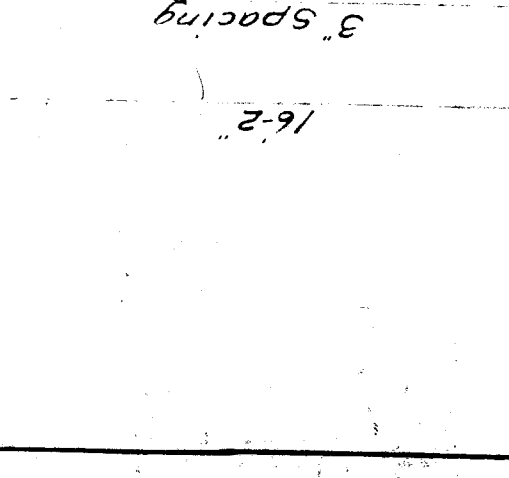
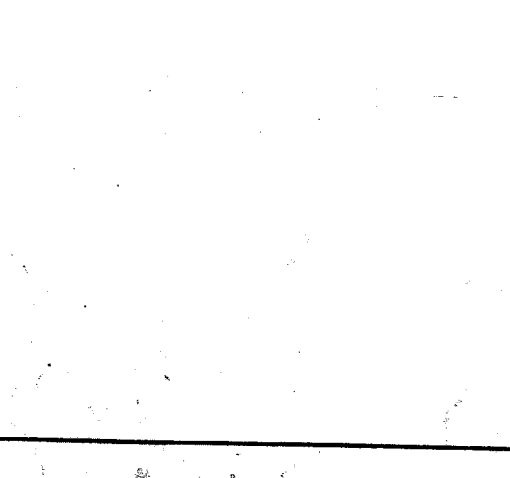
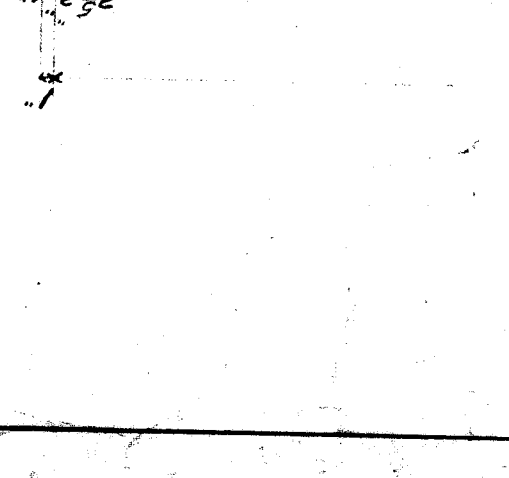
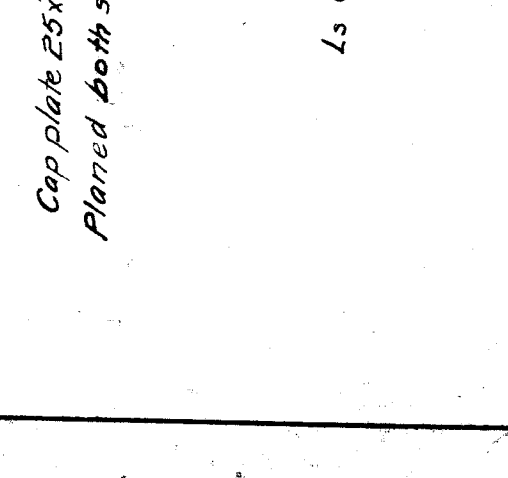
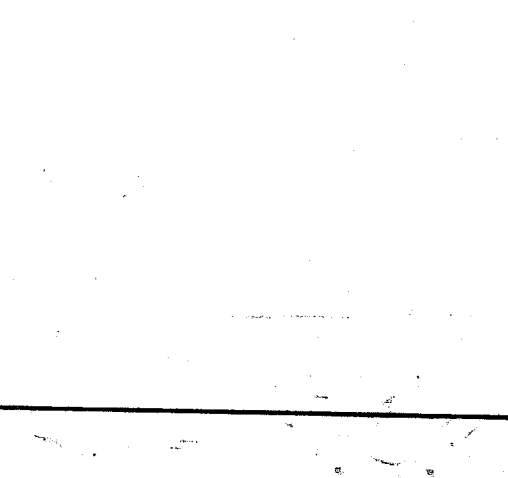
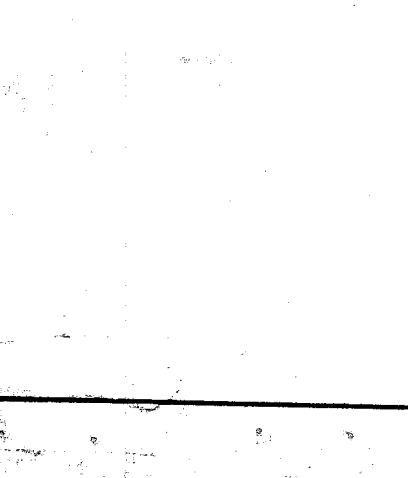
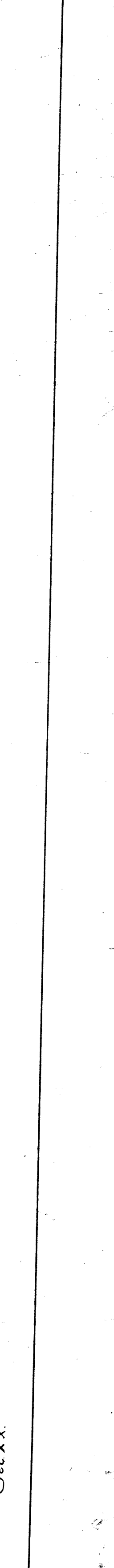
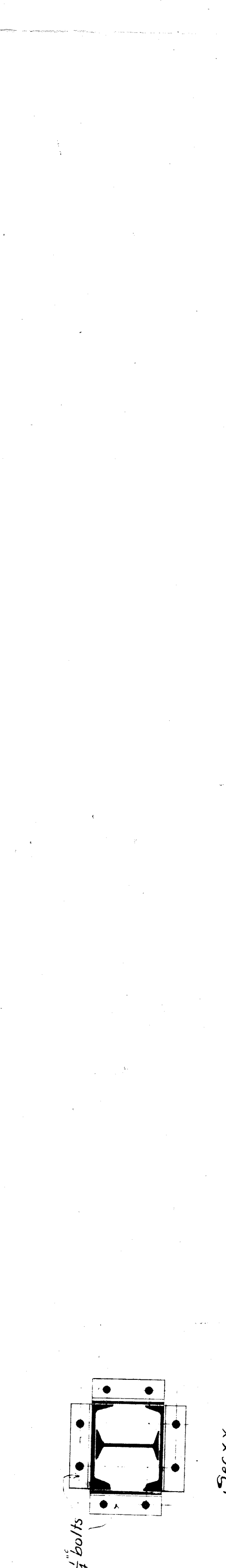
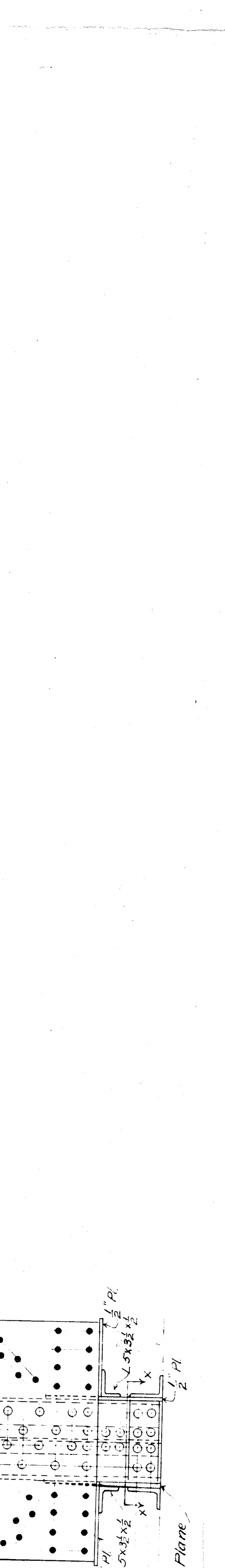
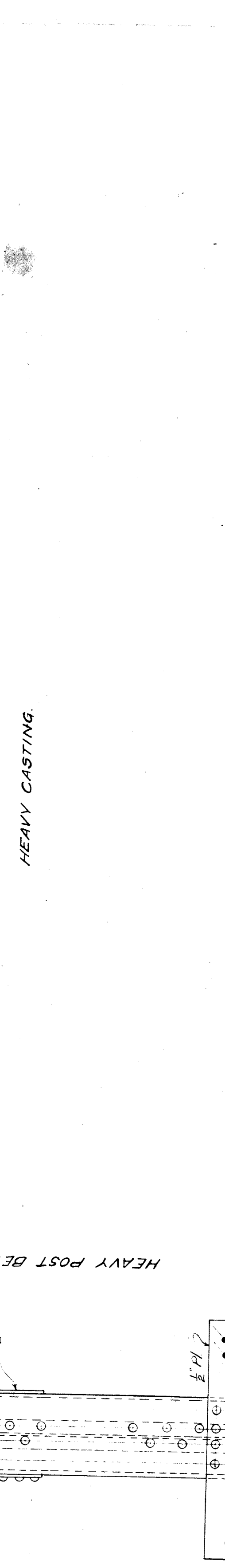
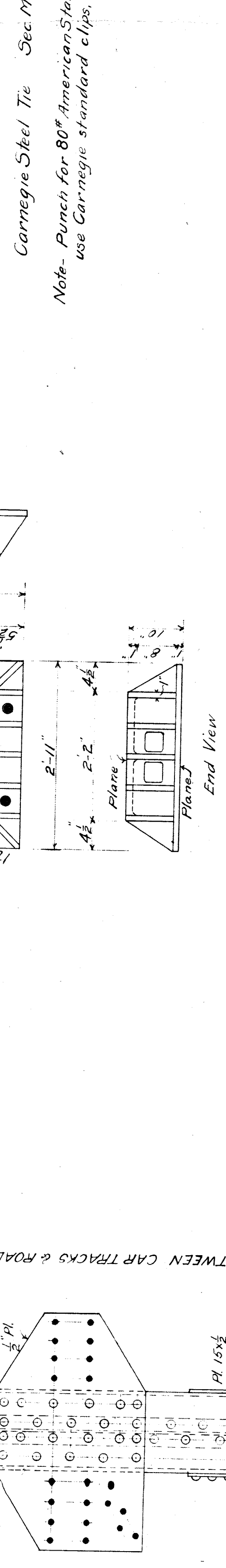
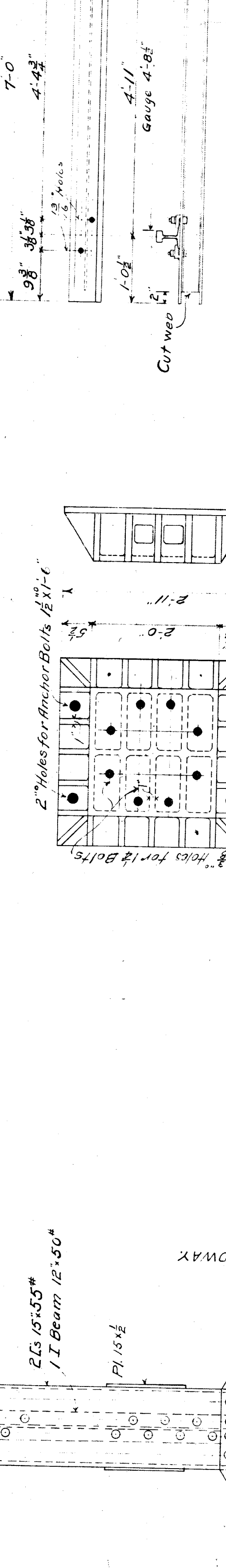
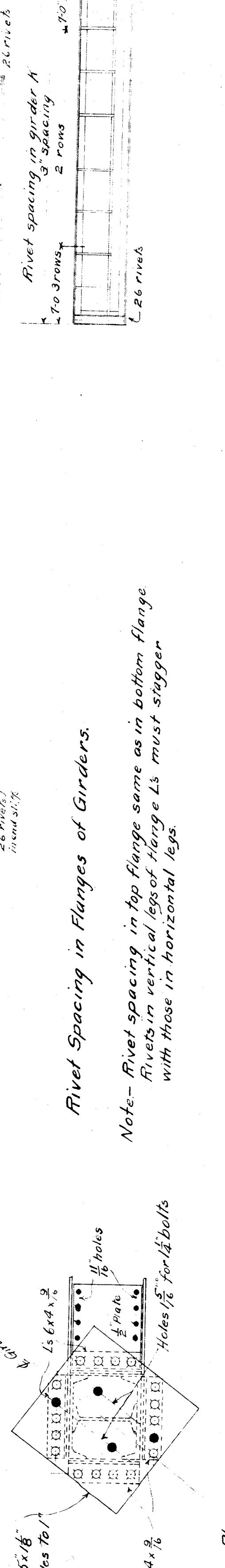
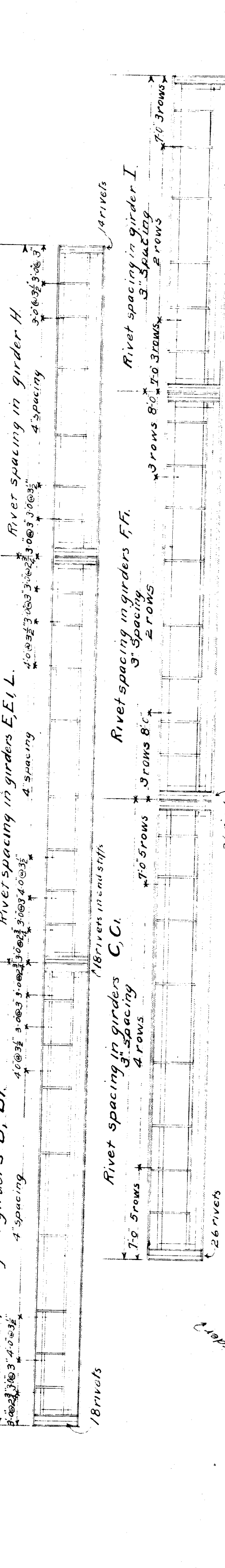
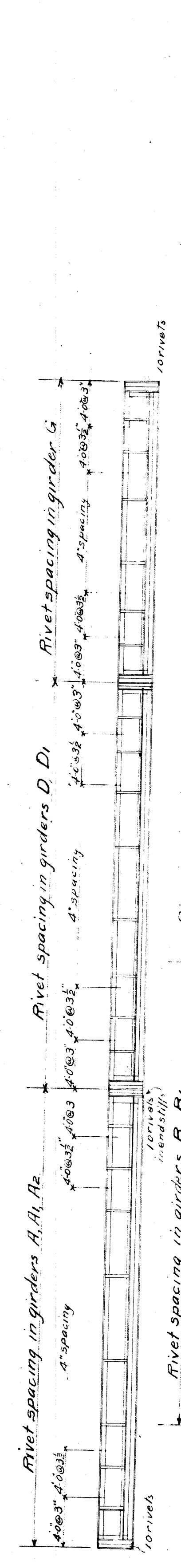
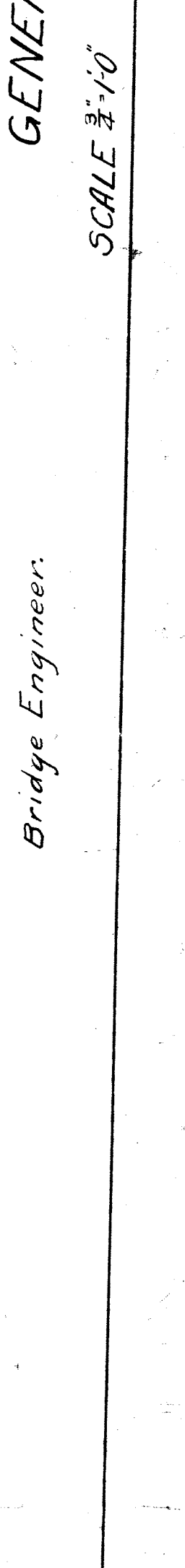
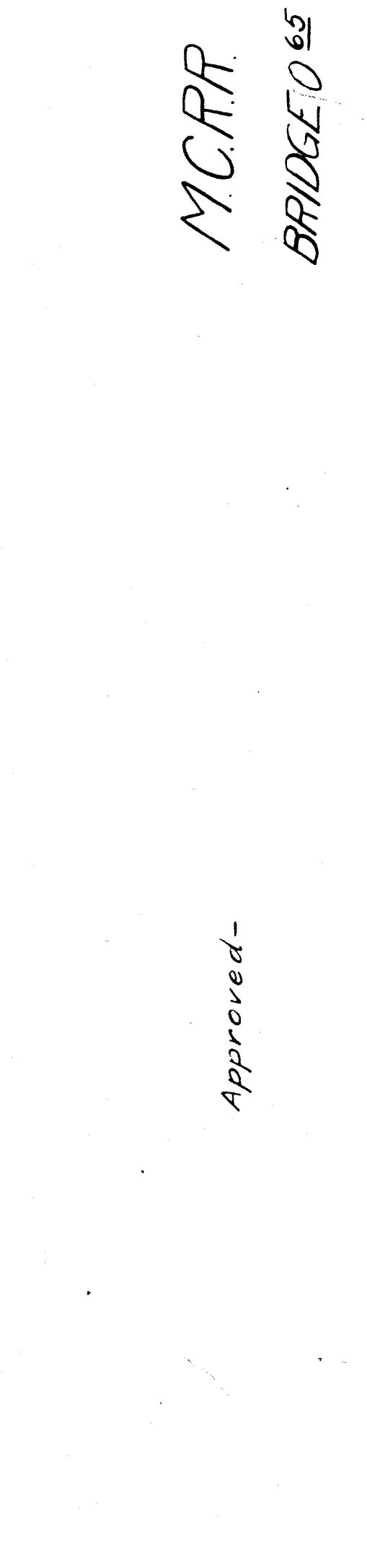
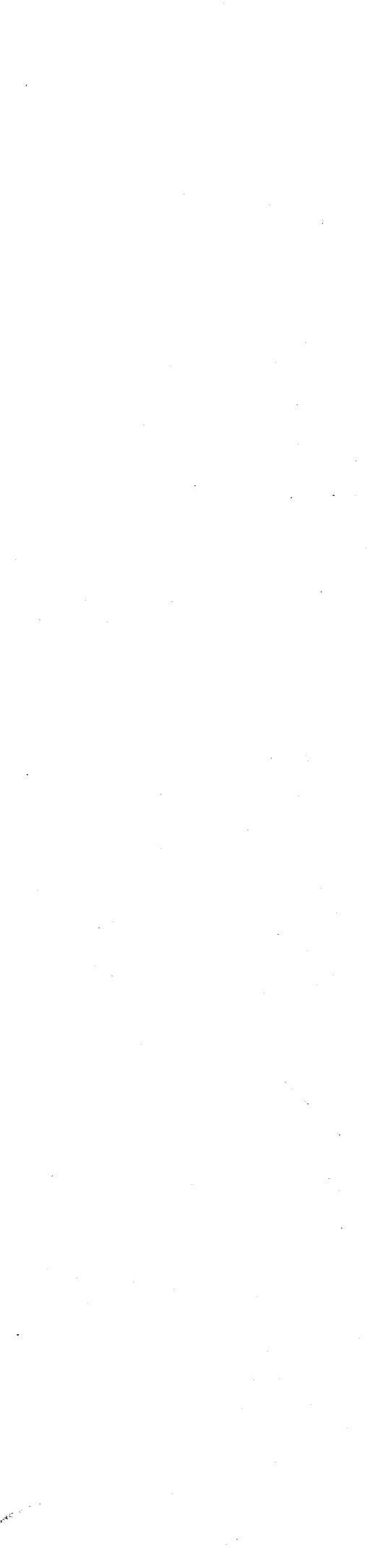
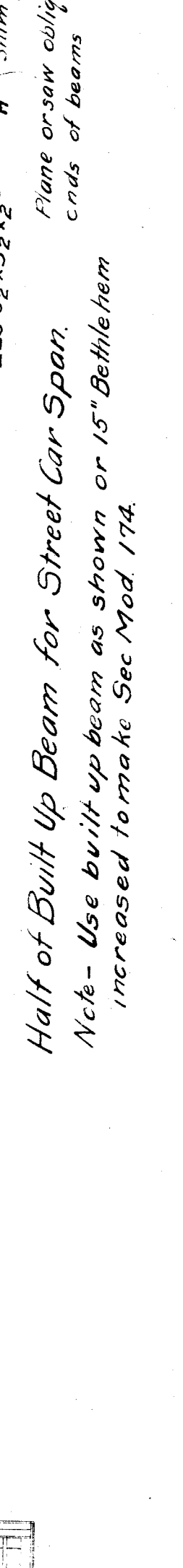
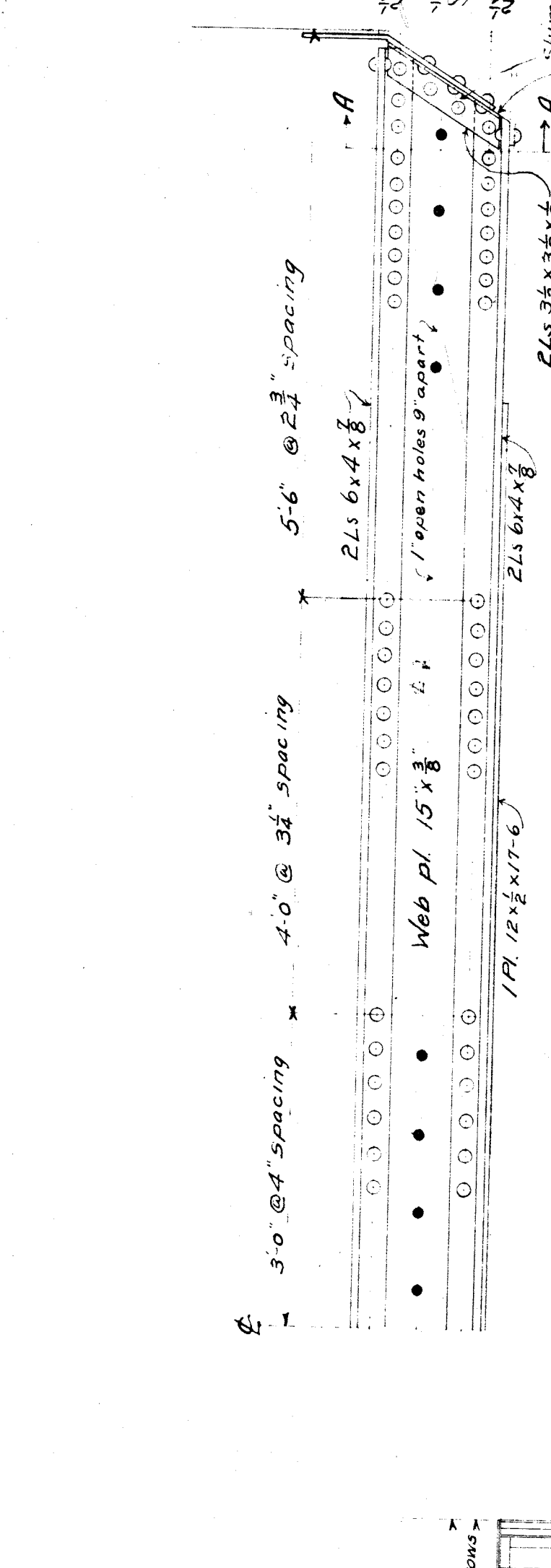
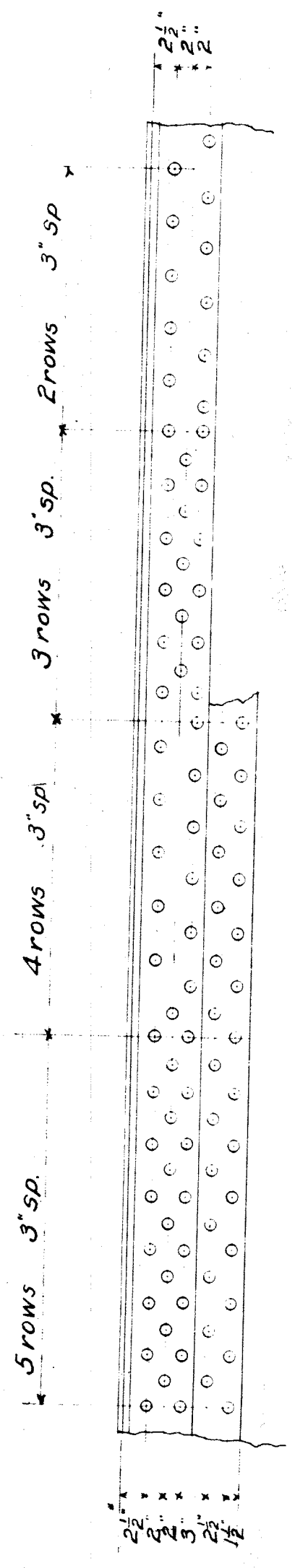


**M. C. R. R. MAIN LINE**  
**BRIDGE OVER FORT ST.**  
**DETROIT**  
**GENERAL PLAN**  
 Scale 1/4" = 1'-0"  
 March 1909

File X062-1

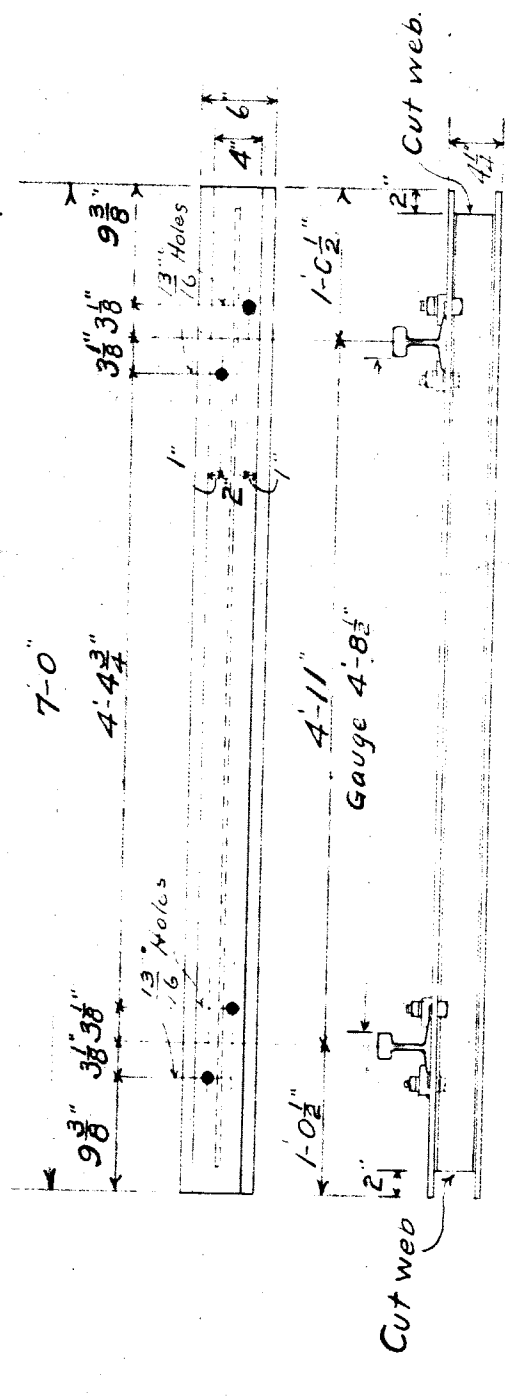
Detail Drawings to be made by Contractor and Trusses furnished the M. C. R. Co.



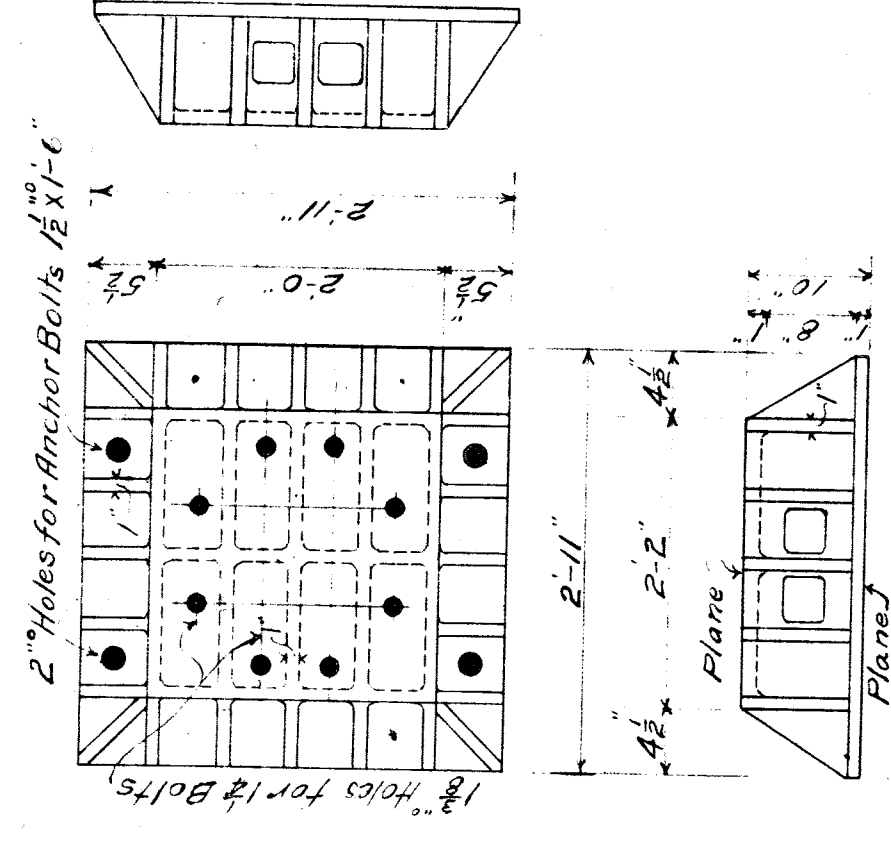
Half of Built Up Beam for Street Car Span.  
 Note - Use built up beam as shown or 15" Bethlehem increased to make Sec Mod 174.

Material Spd - 1904 Specifications.  
 Plates less than 36" wide to have rolled edges.  
 Plane sheared ends + edges of web plates.  
 Fit end stiffening Ls + shims at bottom.  
 Fit all stiffening Ls at top.  
 Plane posts, castings cap plates + base plates top + bottom.  
 Rivets in flanges of 10" I beams + channels.  
 Other rivets.  
 Punch holes for rivets.  
 except those in interior stiffener shims + bracing and side Ls which may be punched.  
 Girders to be completely assembled before reaming.  
 Holes for field rivets reamed to an iron template.  
 Holes in material more than 1/2" thick must be drilled.  
 Castings Steel, Anneal.

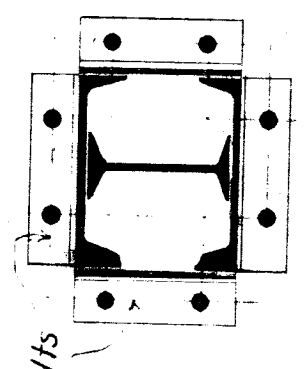
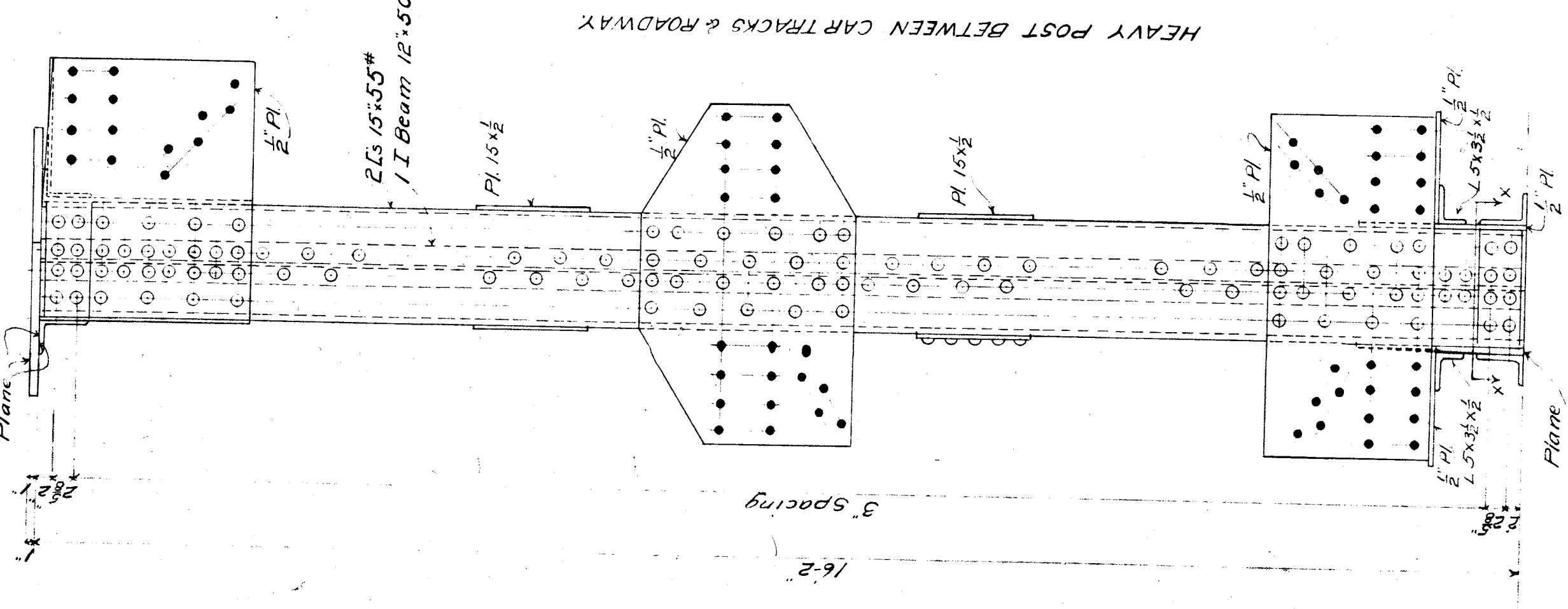
Paint - Red Lead 25% Raw Linseed Oil / Gallon.  
 Turp. Japan. pint. Mix as directed.  
 Rivet surfaces / Coat, Benis / Coat.  
 Parts inaccessible after erection Recoats.



Note - Punch for 80" American Standard rail and use Carnegie standard clips, bolts + washers.



HEAVY CASTING.



Sec X X

Approved -

Bridge Engineers

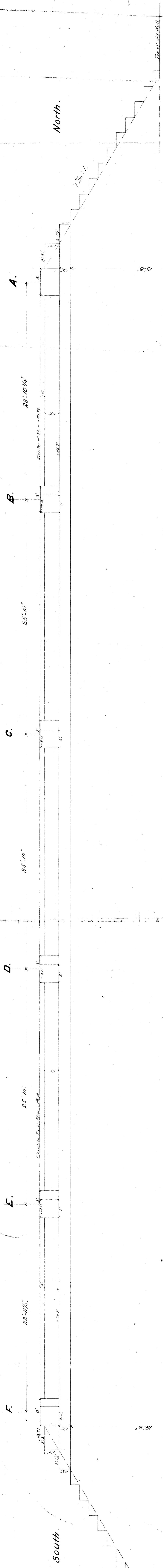
M.C.R.R. MAIN LINE  
 BRIDGE 65 FORT ST.

GENERAL DETAILS.

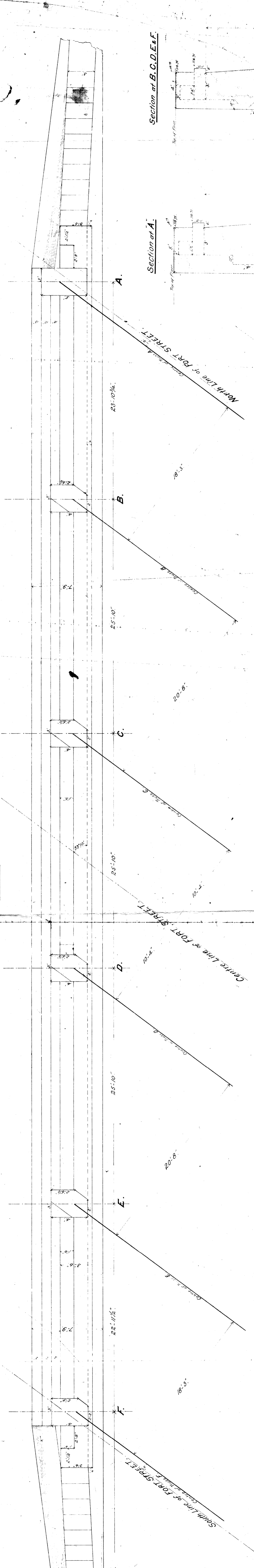
SCALE 3/4" = 1'-0" FEB. CH. No. 880 AUG. 1909.

165 #2  
 File X0 62-2

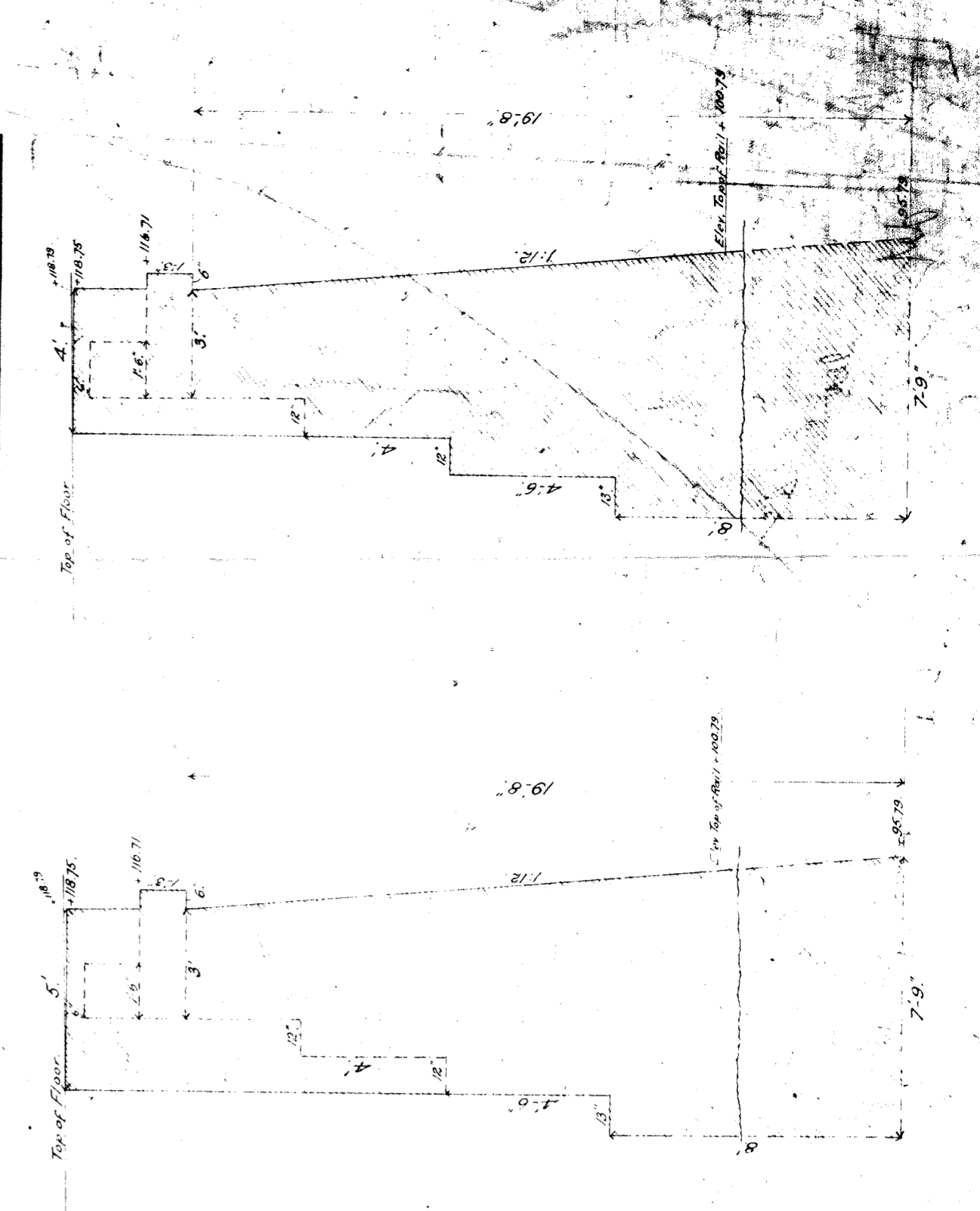
Side-Elevation.



Plan.



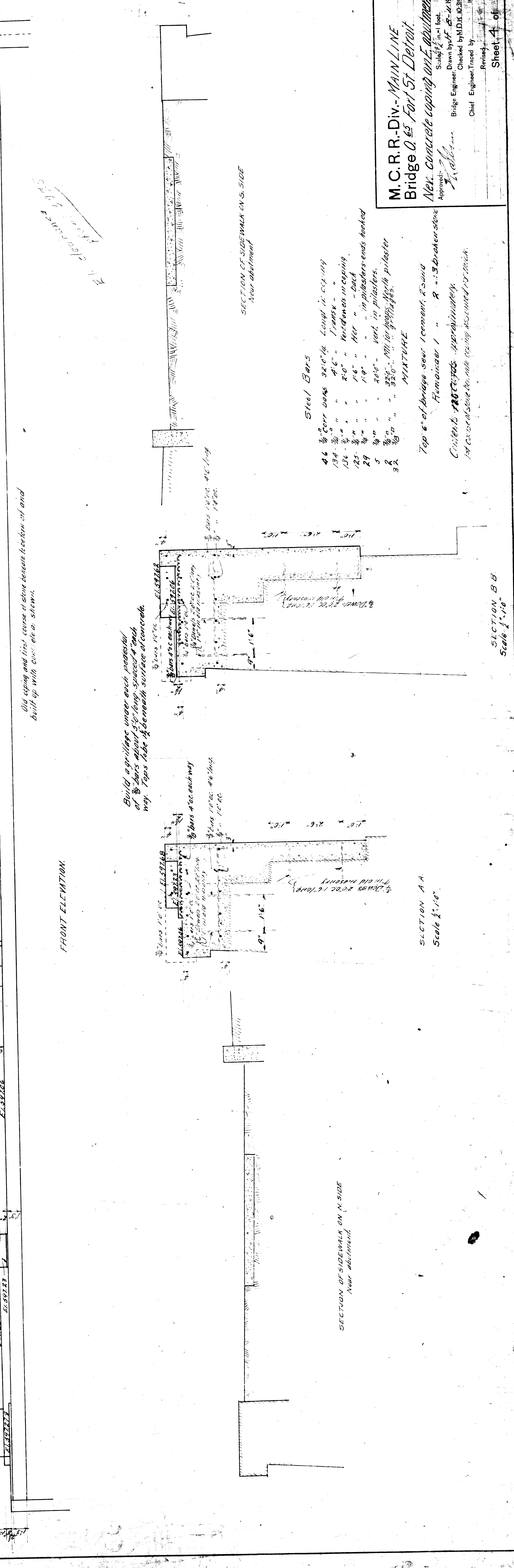
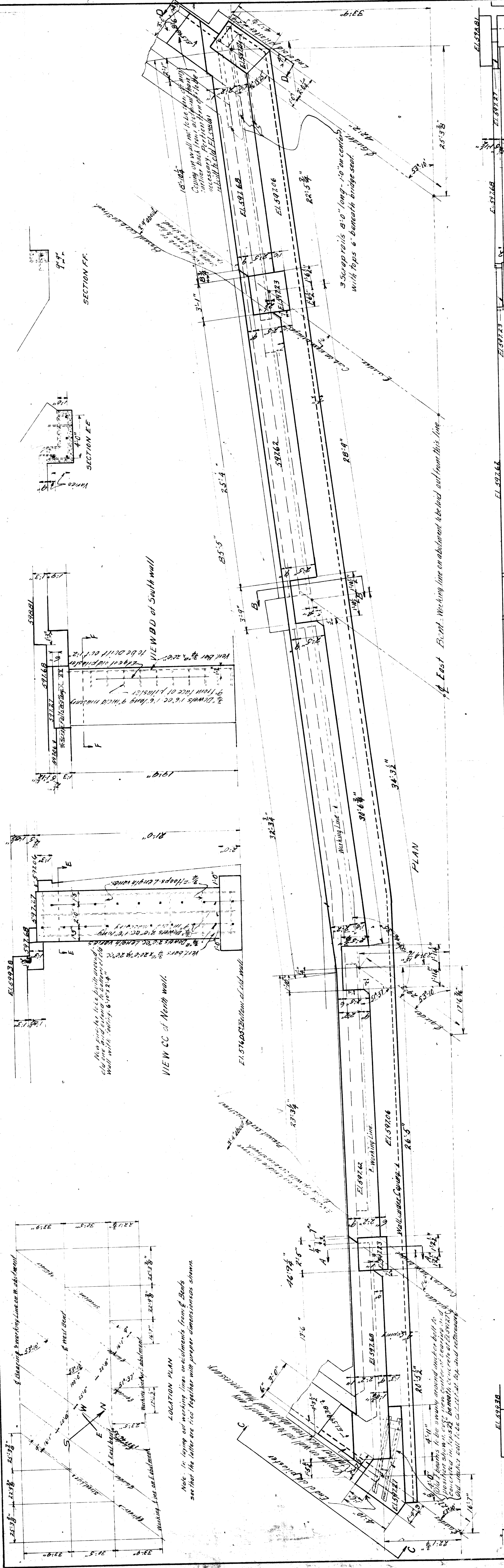
Section at A, C, D, E, F.



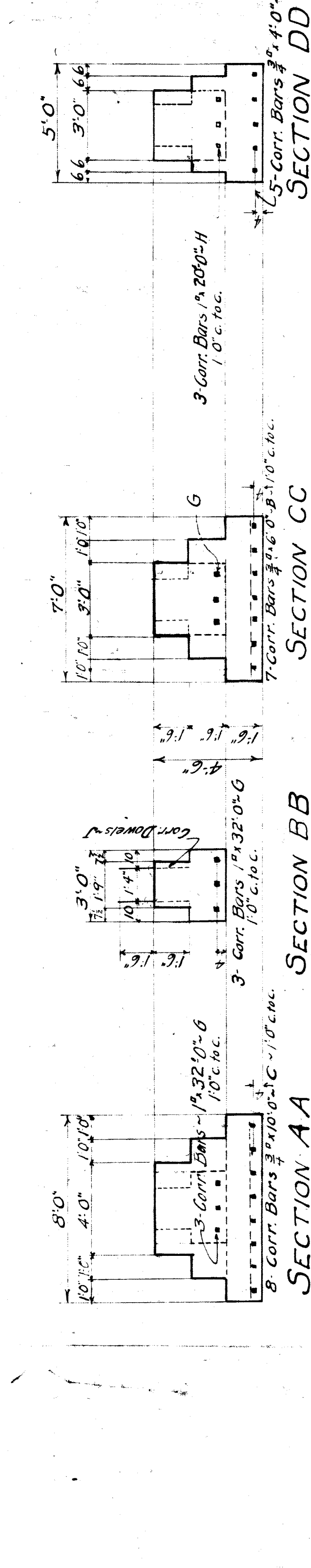
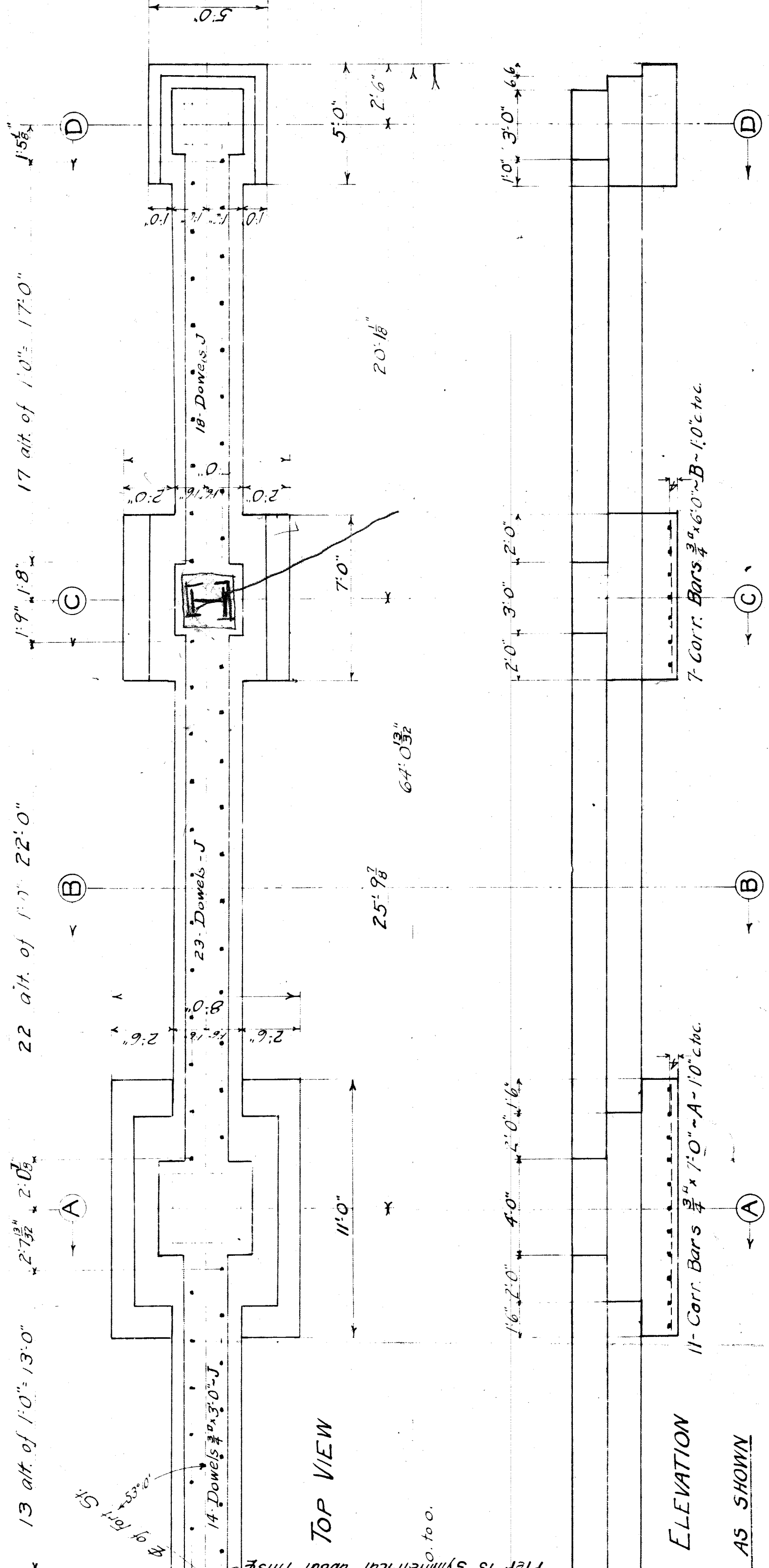
West Abutment  
FORT ST. BRIDGE  
DETROIT.

Scales: 1/4" = 1'  
July 1883





**M. C. R. R. DIV. - MAIN LINE**  
**Bridge 0.65 Fort St. Detroit.**  
 New concrete coping and abutment  
 Approved: [Signature]  
 Bridge Engineer: [Signature]  
 Checked by: M.D.K. [Signature]  
 Chief Engineer: [Signature]  
 Revised: [Signature]  
 Sheet 4 of 4  
 File X 0 62-5  
 0.65 7.36



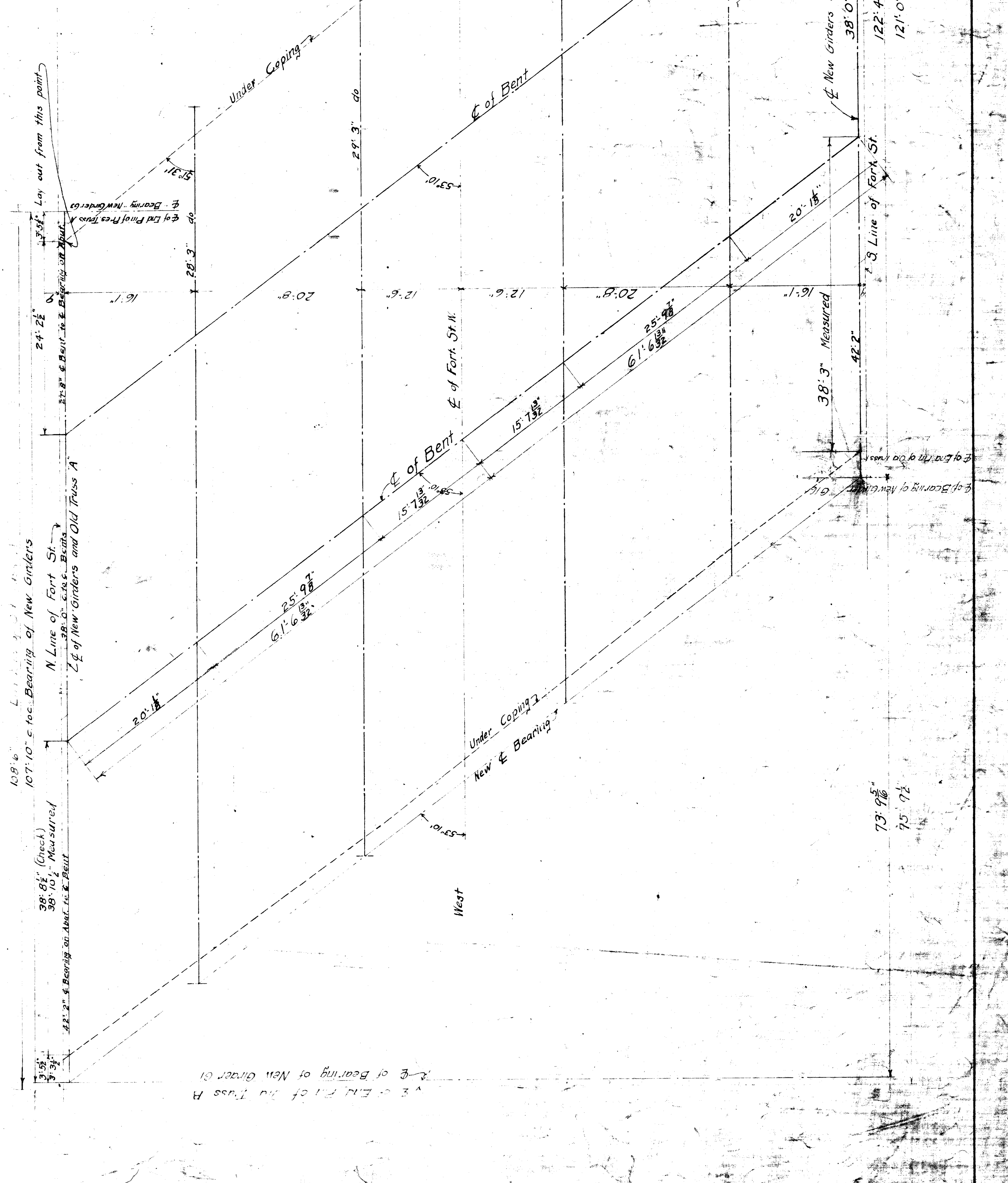
**NOTES TO BUILDER**  
 MAKE CONCRETE 1-CEMENT: 2 1/2 SAND: 4 1/2 BROKEN STONE.  
 CONTENTS OF EACH PIER= 50. CU. YDS.  
 WRAP INTERSECTIONS OF REINFORCING BARS WITH #14 WIRE.  
 LAP 1" BARS 2'-6" AT SPLICES, WRAPPING SECURELY WITH 24-TURNS OF #14 WIRE.

**BILL OF CORR. REINFORCING BARS WITH LAPS AND SPICES**

NO.	DESCRIPTION	QUANTITY
44	7-0" A	
56	6-0" B	
92	10-0" C	
20	4-0" F	
6	1" Beth. St. #4	
16	1" Beth. St. #6	
17	1" Beth. St. #8	
54	3-0" Dowels #4-10	
97	1" Beth. St. #10	
72	1" Beth. St. #12	

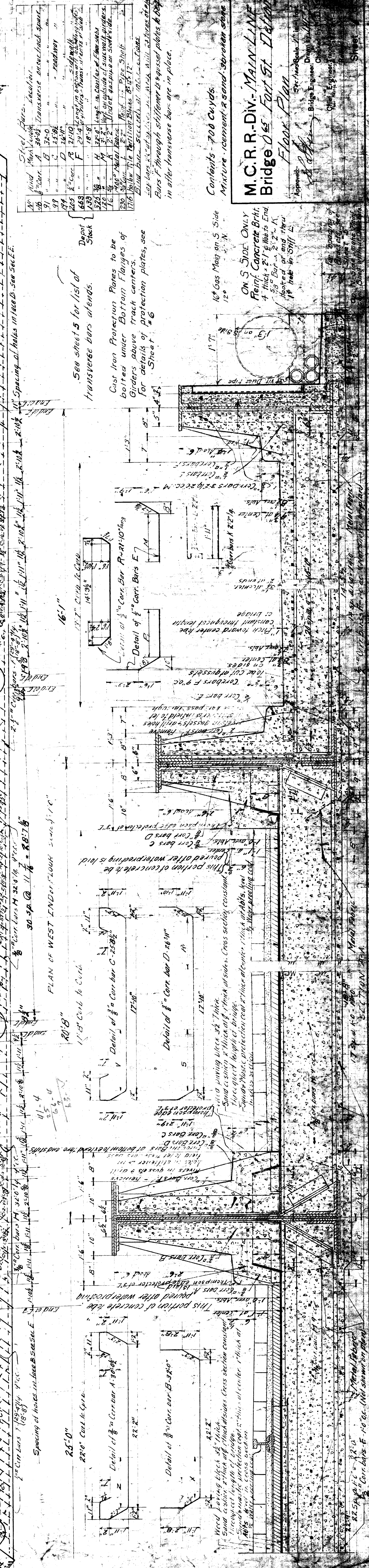
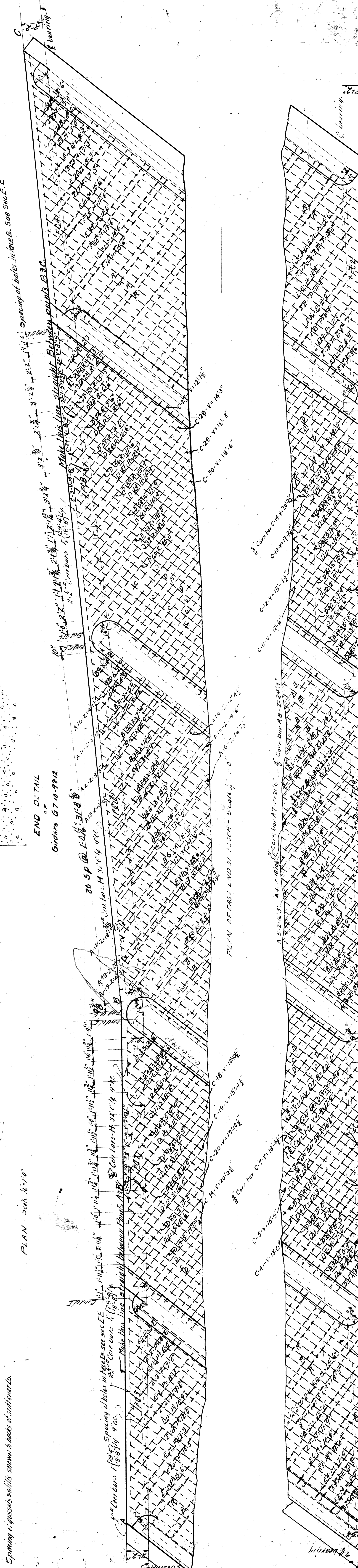
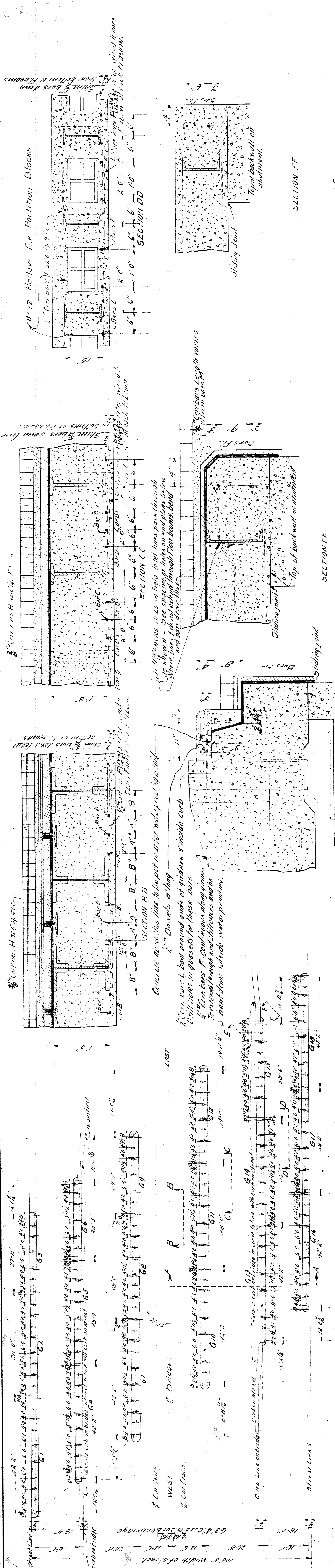
**M. C. R. R.-DIV.-MAIN LINE**  
**Bridge 0<sup>5</sup> FORT ST OVERHEAD**  
**PIERS**

Approved: *[Signature]*  
 Scales: 1" = 1' for Plan  
 1" = 10' for Elevation  
 Drawn by: B. D. C. 413  
 Checked by: J. L. S. 413  
 Chief Engineer: T. S. 413  
 Engineer: T. S. 413  
 Sheet No. 1  
 File No. 10-02-6-1-55



**BUILD 2-PIERS AS SHOWN**

Elev. 520.5 NEW SEA LEVEL  
 Elev. 572.5  
 Elev. 576

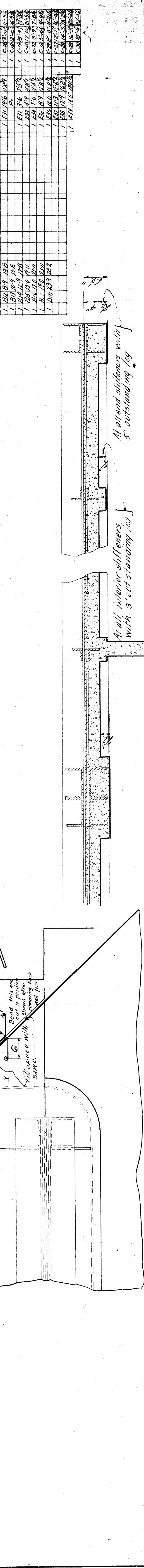
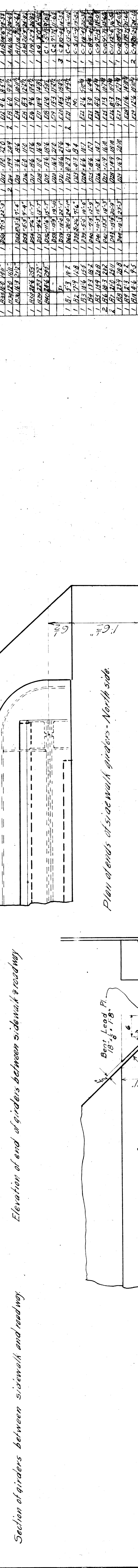
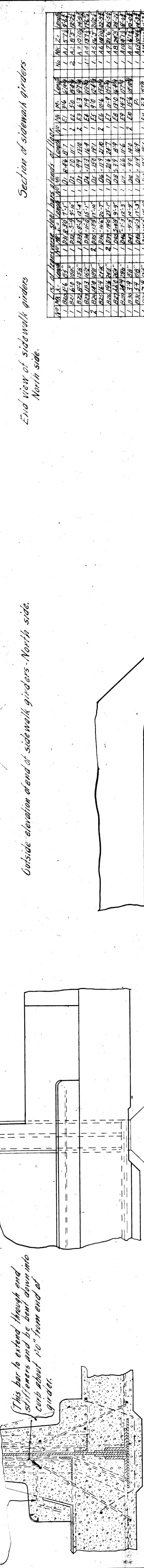
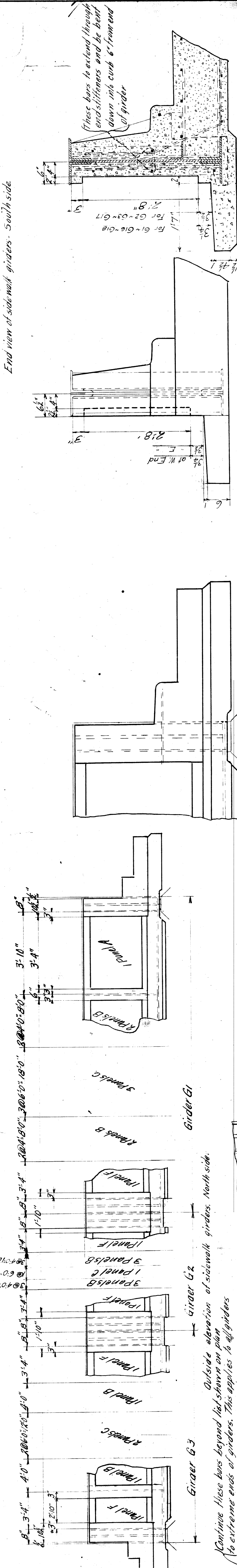
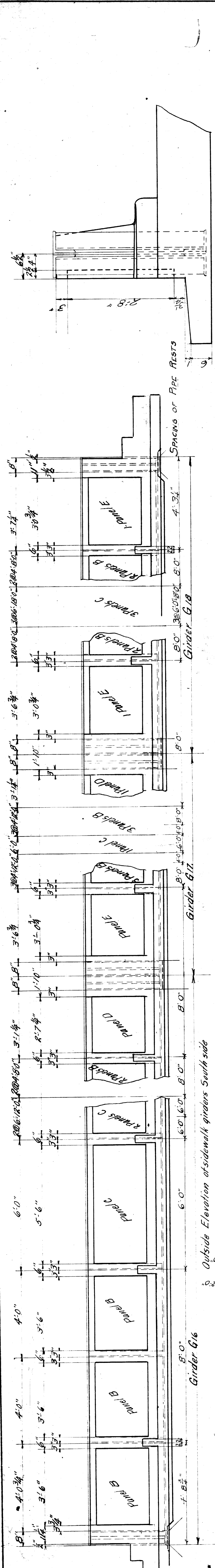


No.	Material	Quantity	Notes
1	Steel	...	...
2	Concrete	...	...
3	...	...	...
4	...	...	...
5	...	...	...
6	...	...	...
7	...	...	...
8	...	...	...
9	...	...	...
10	...	...	...
11	...	...	...
12	...	...	...

**M.C.R.R.-DIV.-MAIN LINE  
Bridge 055 For St. Paul  
Floor Plan**

Approved: \_\_\_\_\_  
Bridge Engineer: \_\_\_\_\_  
City Engineer: \_\_\_\_\_

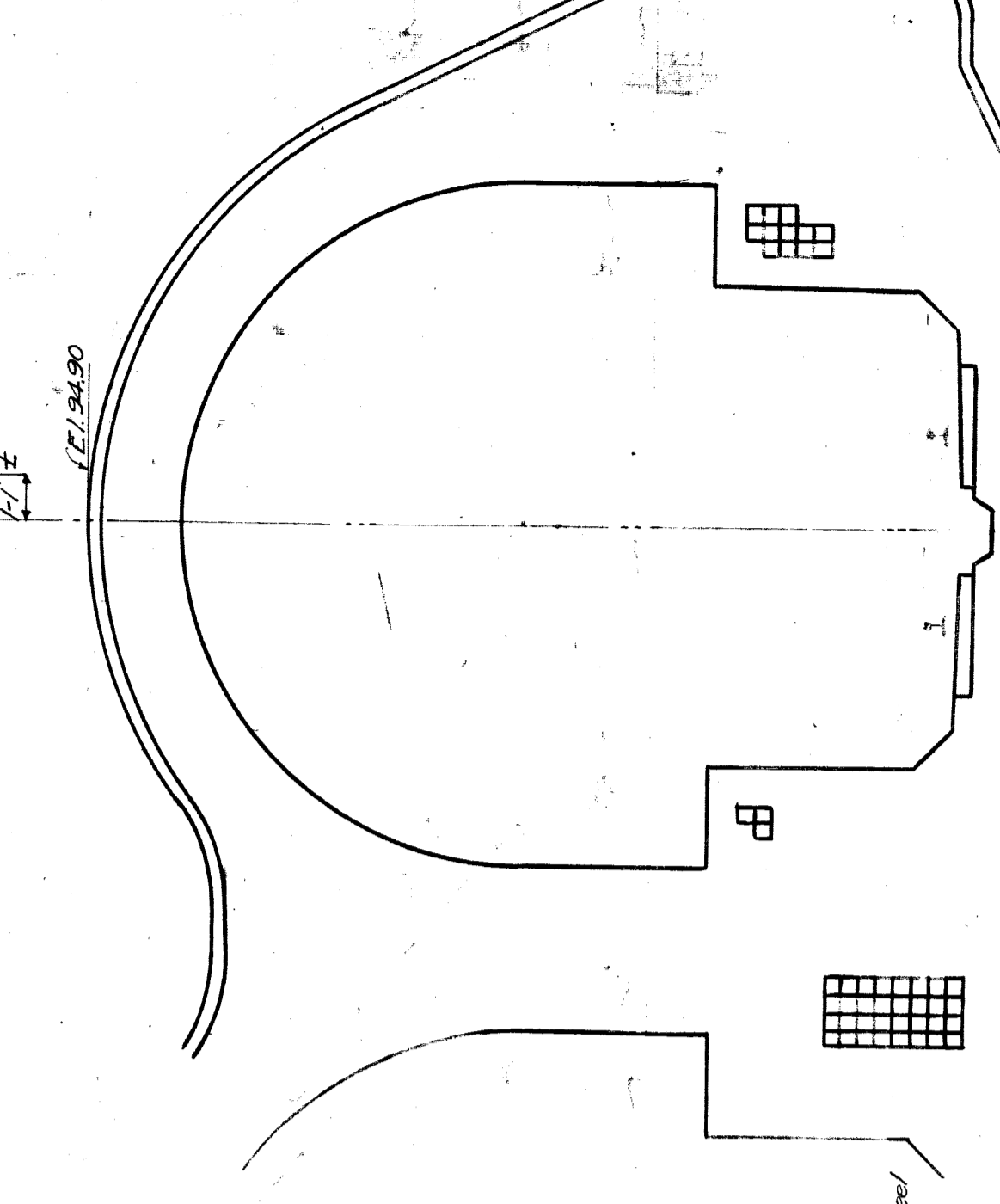
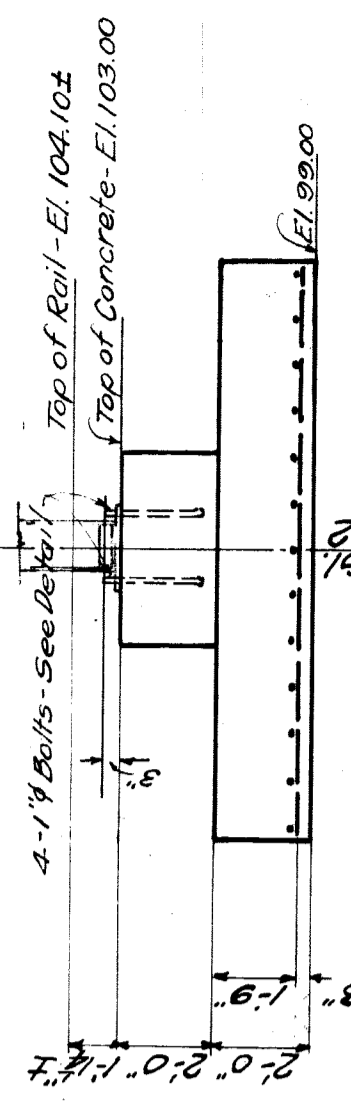
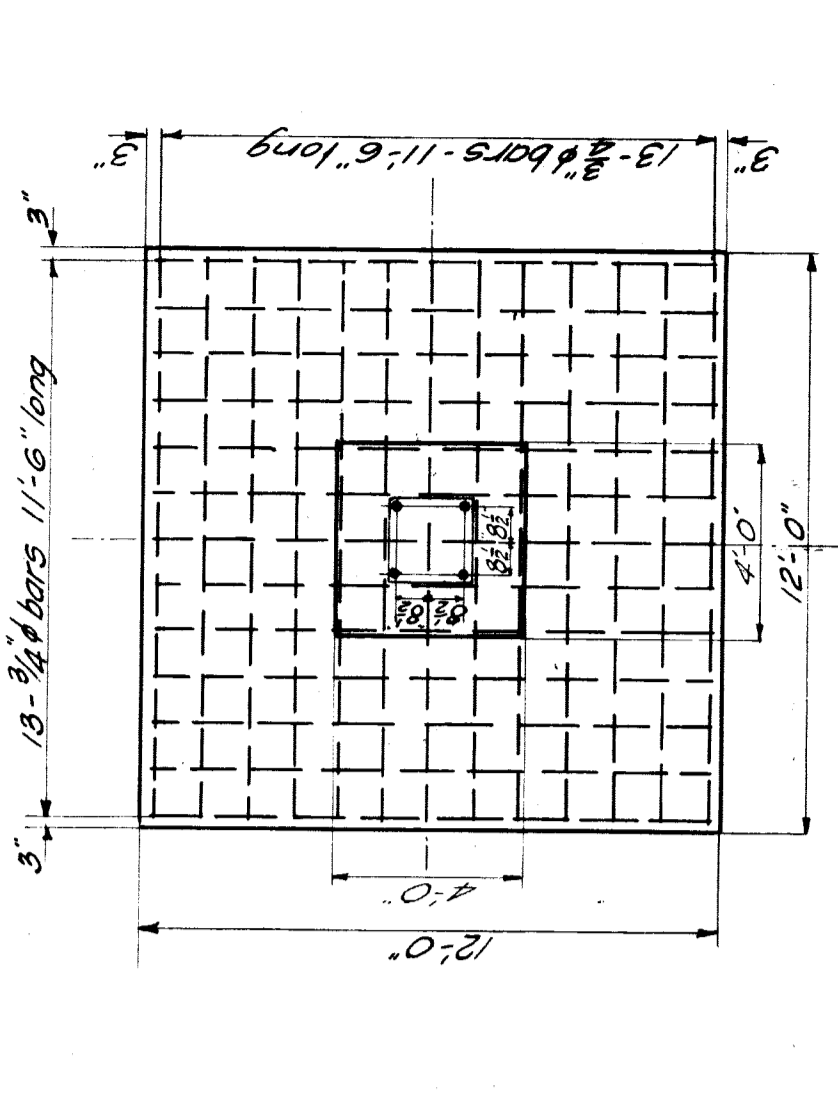
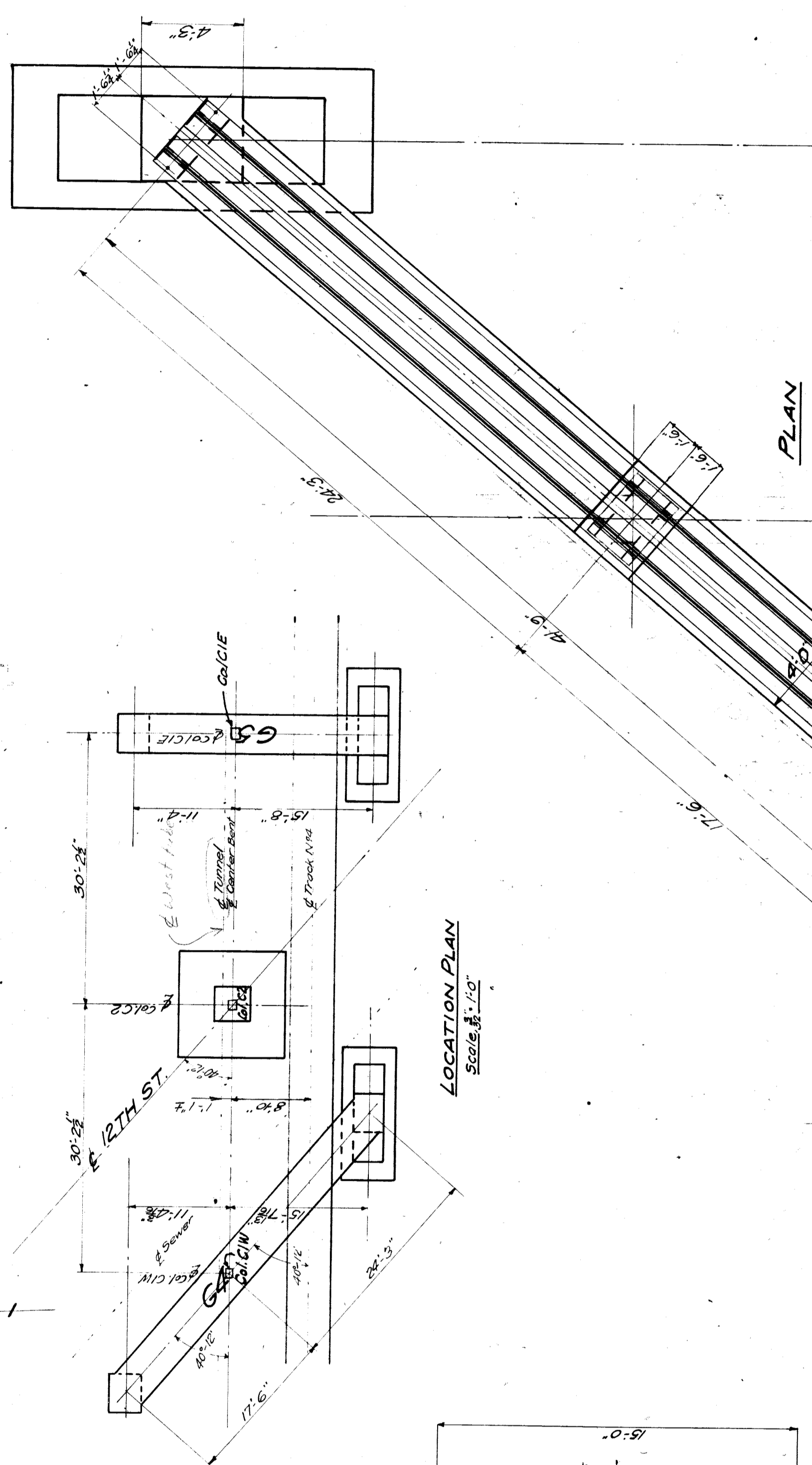
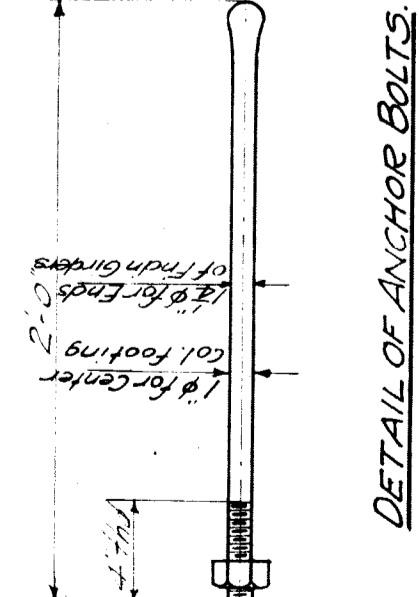
Contents - 700 Cuydes  
Mixture - cement - sand - broken stone



Panel	Span	Area	Volume	Weight	Stiffener	Weight	Volume	Area	Span	Panel
1	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	1
2	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	2
3	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	3
4	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	4
5	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	5
6	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	6
7	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	7
8	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	8
9	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	9
10	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	10
11	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	11
12	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	12
13	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	13
14	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	14
15	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	15
16	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	16
17	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	17
18	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	18
19	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	19
20	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	20
21	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	21
22	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	22
23	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	23
24	4'-0"	1.33	1.33	1.33	1.33	1.33	1.33	1.33	4'-0"	24

M. C. R. R. Div. - Main Line  
 Bridge Over Fort St. Detail  
 Details of concrete construction  
 Approved: \_\_\_\_\_  
 Bridge Engineer: \_\_\_\_\_  
 Checked by: \_\_\_\_\_  
 Chief Engineer: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Sheet 5 of 5





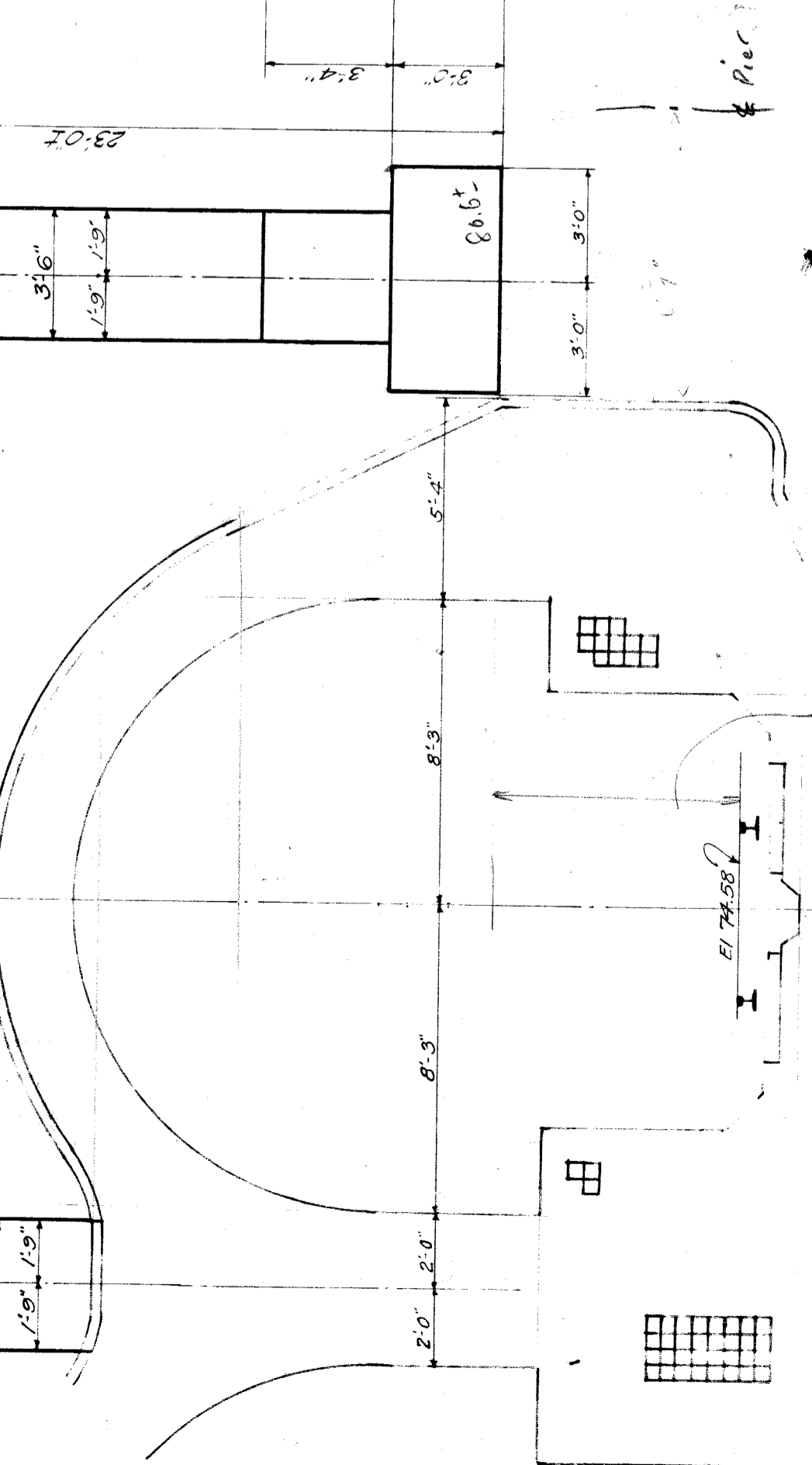
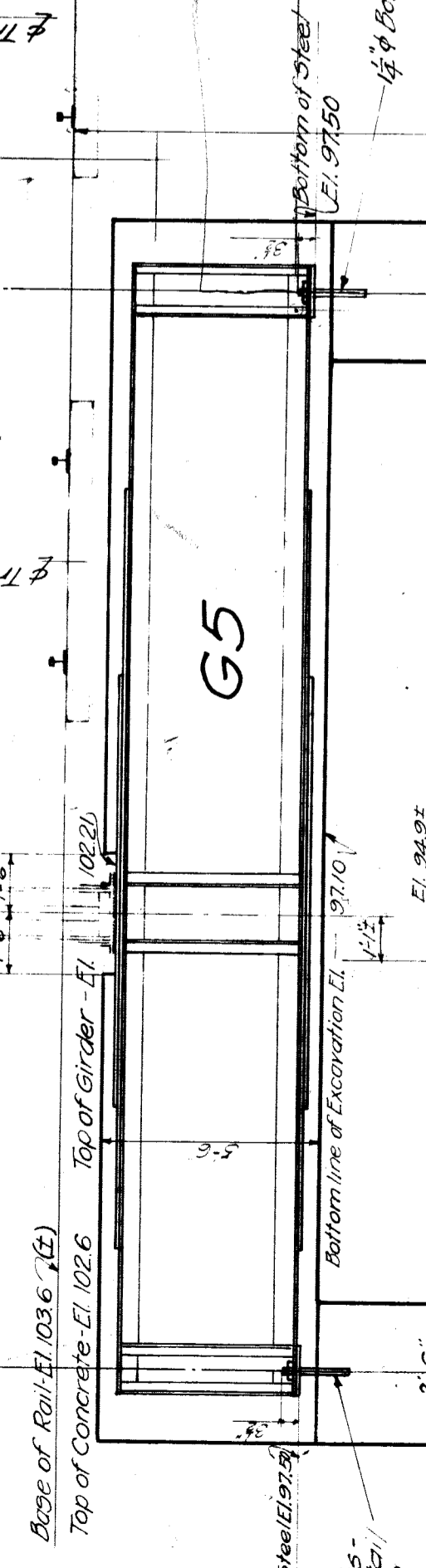
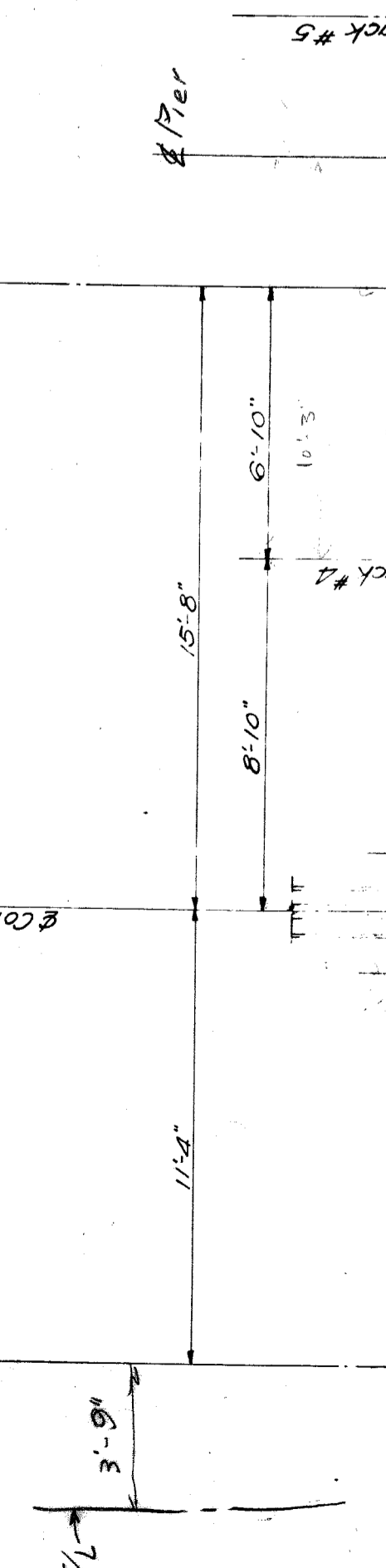
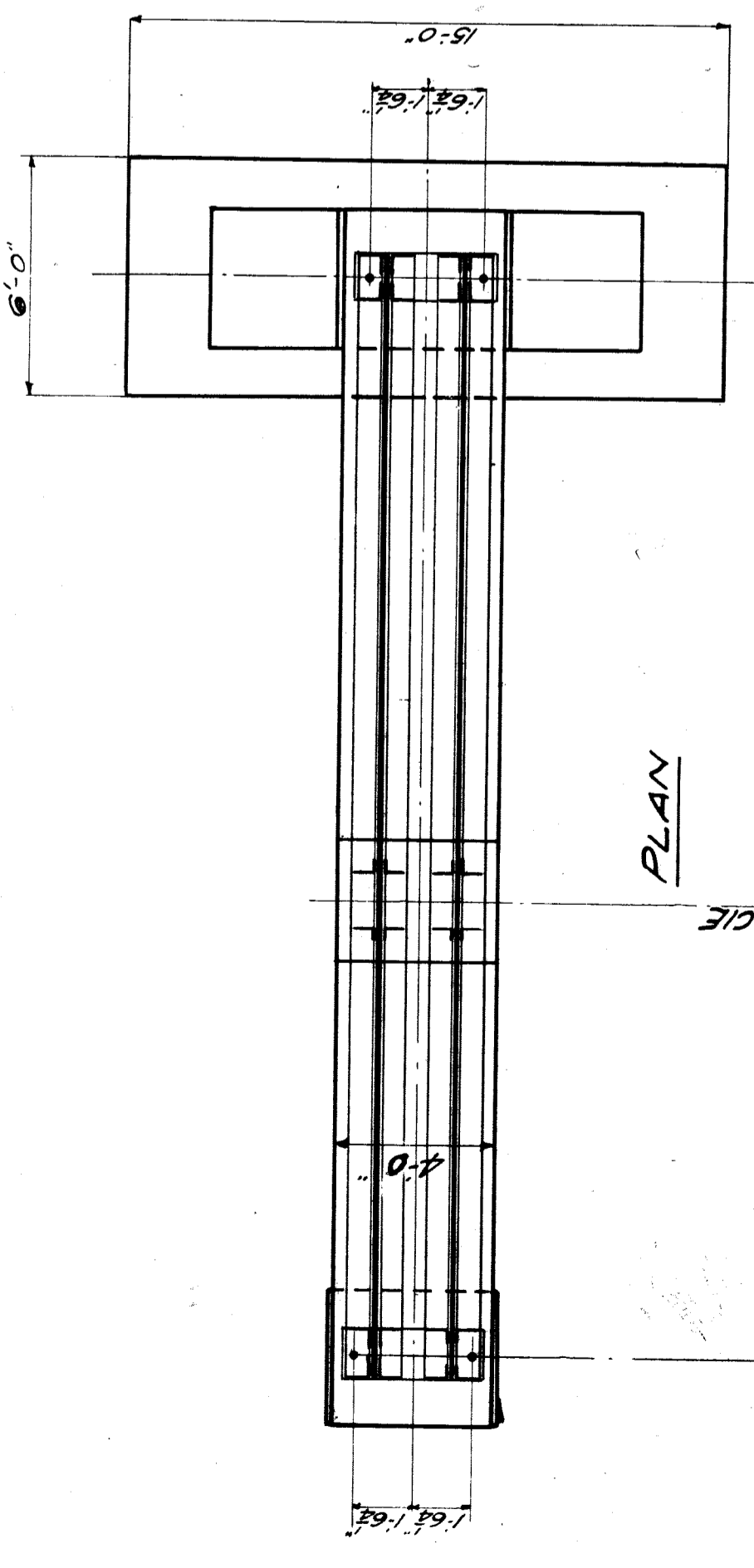
FOUNDATION FOR COLUMN G2

General Notes:  
Piers under ends of Girders G4 and G5 to be poured to El. 97.50 as shown. 4 #4 bars for G4 and G5 and girders set in place only. Reinforcement bars in concrete (concrete) in concrete above El. 97.50 to be placed. Concrete 1:2:4 mix.

CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
OFFICE OF CITY ENGINEER  
DIVISION OF GRADE SEPARATION & BRIDGES  
**TWELTH STREET BRIDGE**  
OVER M.C.R.R. MAIN LINE  
CONCRETE DETAILS - FOUNDATION CENTREBENT  
Scale 1/4" = 1'-0"  
Made by R.S. Sheet No. 8

Material Required:  
110 Cu Yds (Net) of 2:4 Concrete  
4500 # of 4" Bars  
8-18 # Anchor Bolts 2'-0" long, heavy duty, as detail.  
4-1/2"

FOUNDATION FOR COLUMN G1



END VIEW  
End View of Skewed Train Similar

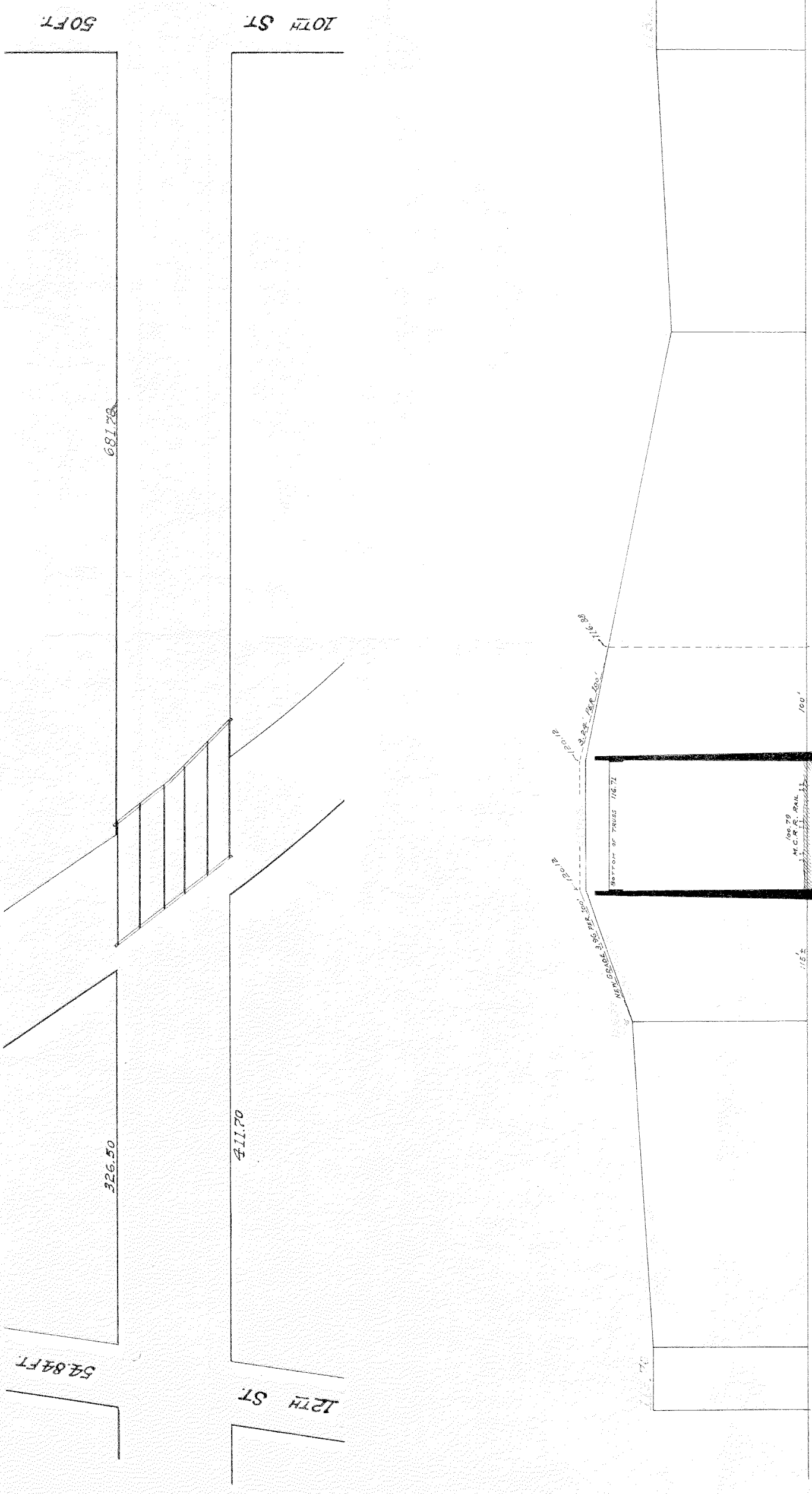
8-3  
5-4  
13-7  
10-3  
23-12  
10-6  
2-1  
10-6

FOUNDATION FOR COLUMN G1

ELEVATION

ELEVATION

ELEVATION



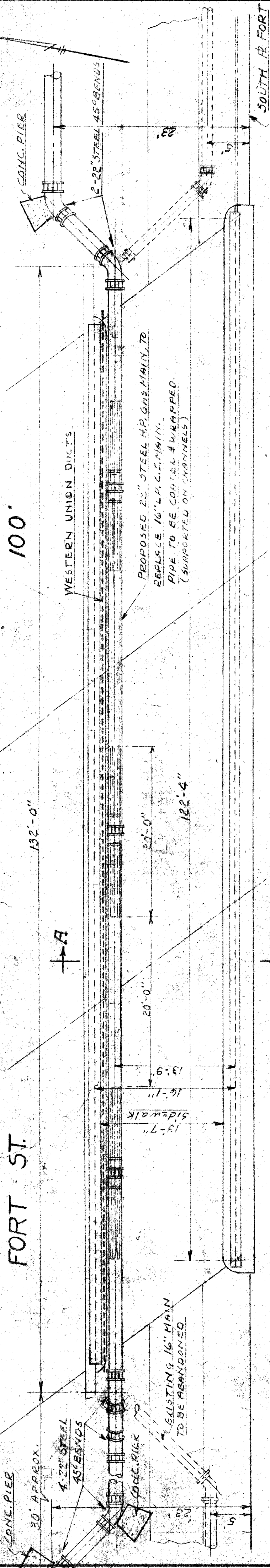
PLAN AND PROFILE OF FORT ST.  
 BETWEEN 10TH AND 12TH STS.  
 SHOWING PROPOSED CHANGE IN GRADE

To the Honorable the Common Council of the City of Detroit, Michigan, in receipt of communication under date of June 5th from Mr. George H. Webb, Chief Engineer of the Michigan Central Railroad Co., of which the attached is a copy. I deemed it advisable to refer the matter to your Honorable Body without comment at this time, and respectfully suggest that you refer the matter to the proper committee or committees of your Honorable Body who are already conversant with the matter, and have the matter under consideration. Respectfully submitted,  
 J. J. HAAREF,  
 Accepted.  
 The following is the communication referred to:  
 Mr. J. J. Haaref, Commissioner of Department of Public Works, Detroit, Mich., Sir—It has become necessary for us to renew the present bridge over our tracks on Fort street, Detroit. I would like very much to have you place this matter before the Council and endeavor to get the approval of the City for the raising of the floor of the bridge by this company 3 in. higher than it is at present and narrow the sidewalks from 18 ft. 3 in. to 16 ft. 1 in., and widen the center roadway from 20 ft. 8 in. to 25 ft.  
 Our object in asking the permission of the City to raise the elevation of the roadway is on account of the fact that the present bridge is made of bridge beams of cast iron construction and it is impossible of course, to build a new bridge with the same depth of floor as the present one, but it makes it almost impracticable to provide as strong a construction of floor under the street car tracks as their heavy loading requires. The increased weight of rolling stock and the amount of traffic handled by the Street Car Company over the tracks, makes it more desirable that the beams under their tracks, a positive necessity.  
 Our reason for desiring to increase the width of the center roadway across the bridge is to allow more clearance for the street car. The present bridge is, in our opinion, a menace to public safety on account of there not being sufficient room between the sidewalk tracks and the roadway. It is our belief that the widening of the roadway would be in favor of the changes.  
 The narrowing of the sidewalks to 16 ft. 1 in. is a very small matter, as there will be ample room to take care of the traffic with this width.  
 I would be very much pleased if you would give this matter your early attention and advise me as early as possible of the result of the approval of the City to make these alterations. You are aware of course, that it takes some time to get up plans and specifications for a new bridge, and we are very anxious to hurry the matter all possible.  
 Yours truly,  
 GEO. H. WEBB,  
 Chief Engineer.  
 Referred to Committee on Streets.

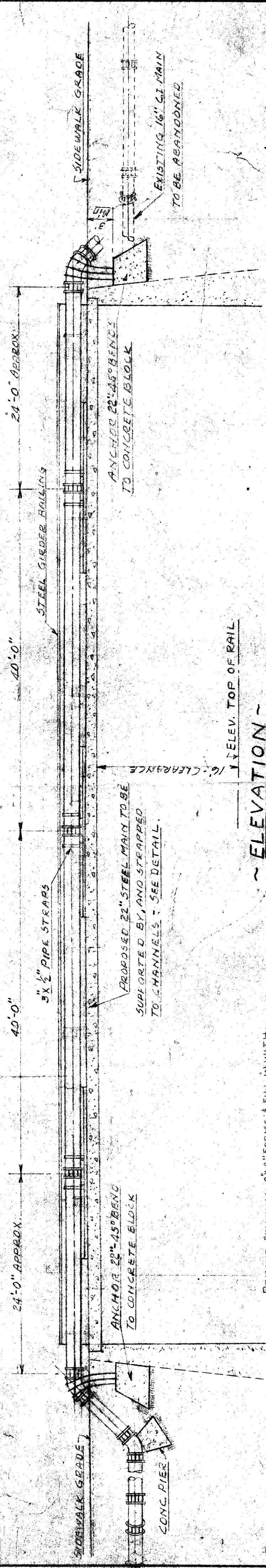
FORT ST.

100'

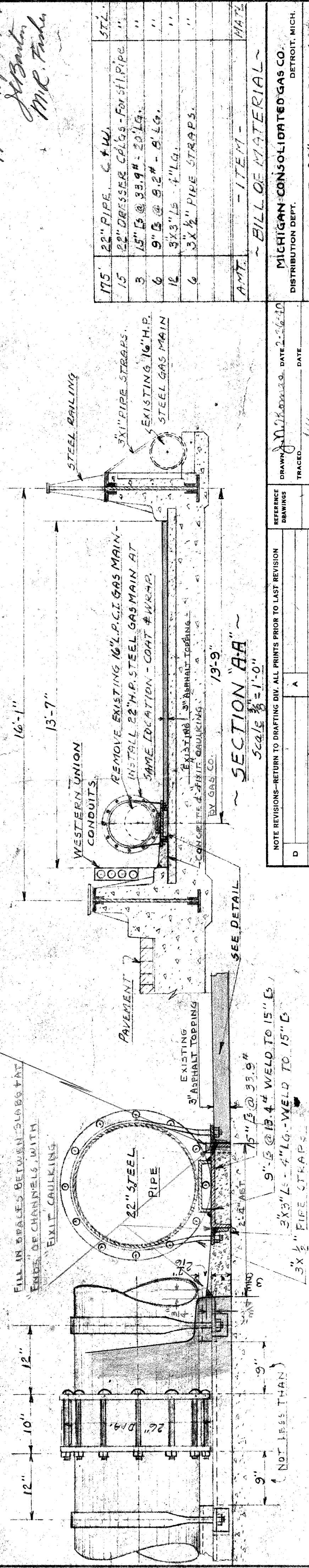
SOUTH R FORT



~ PLAN ~



~ ELEVATION ~



END SIDE ELEVATION OF SUPPORTS

# STRAPS AT COUPLINGS

Scale 1" = 12"

App *Apr 15, 1945*  
*J. B. Barton*  
*M.R. Fisher*

175	22" PIPE, C & W, STL.
15	22" DRESSER COUPLERS - FOR 21" PIPE
3	15" @ 33.9# - 20' LG.
6	9" @ 9.2# - 8' LG.
16	3" x 3/4" @ 1" LG.
6	3" x 1/2" PIPE STRAPS.
AMT.	- ITEM - MAT.

~ BILL OF MATERIAL ~

MICHIGAN CONSOLIDATED GAS CO.  
 DETROIT, MICH.  
 DISTRIBUTION DEPT.

TITLE **PROPOSED 22" H.P. STEEL GAS MAIN OVER VIADUCT.**

LOCATION **FORT ST. @ MICH. CENTER.**

FILE NO. **C48-282**

DATE PRINTED

SCALE **1" = 1'-0"**

REFERENCE DRAWINGS	DATE	BY	O.K.
A			
B			
C			

NOTE REVISIONS - RETURN TO DRAFTING DIV. ALL PRINTS PRIOR TO LAST REVISION

DATE	BY	O.K.

DRAWN BY *J. B. Barton* DATE *2-26-40*

CHECKED BY *J. B. Barton* DATE *3-2-40*

O.K. *J. B. Barton* DATE *3-2-40*

O.K. *J. B. Barton* DATE *3-2-40*

APPROVED BY *J. B. Barton* DATE *3-2-40*

USE DIMENSIONS ONLY

JOB NO. **33464**

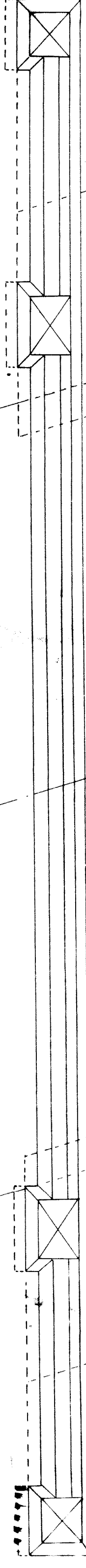
File No 62-11

SHEET NO 1.

# SUBWAY UNDER THE M. C. R. R TRACKS

AT TWENTY SEVENTH STREET

NORTH RIGHT OF WAY LINE



WEST BOUND PASS. MAIN TRACK

EAST " " "

WEST BOUND FREIGHT TRACK

EAST " " "

SOUTH RIGHT OF WAY LINE

No 3.

No 1

No 2

No 4

No 6

No 8

No 10

BOULEVARD

LINE

CENTER

SIGNAL TOWER

COMMISSIONERS OF PARKS & BOULEVARDS  
CITY OF DETROIT

ENGINEER

W.H. ASHVELL

SCALE 1" = 6 FT.

M.L. 219