

Note: All reinforcement shown unless otherwise noted to be 3/4\"/>

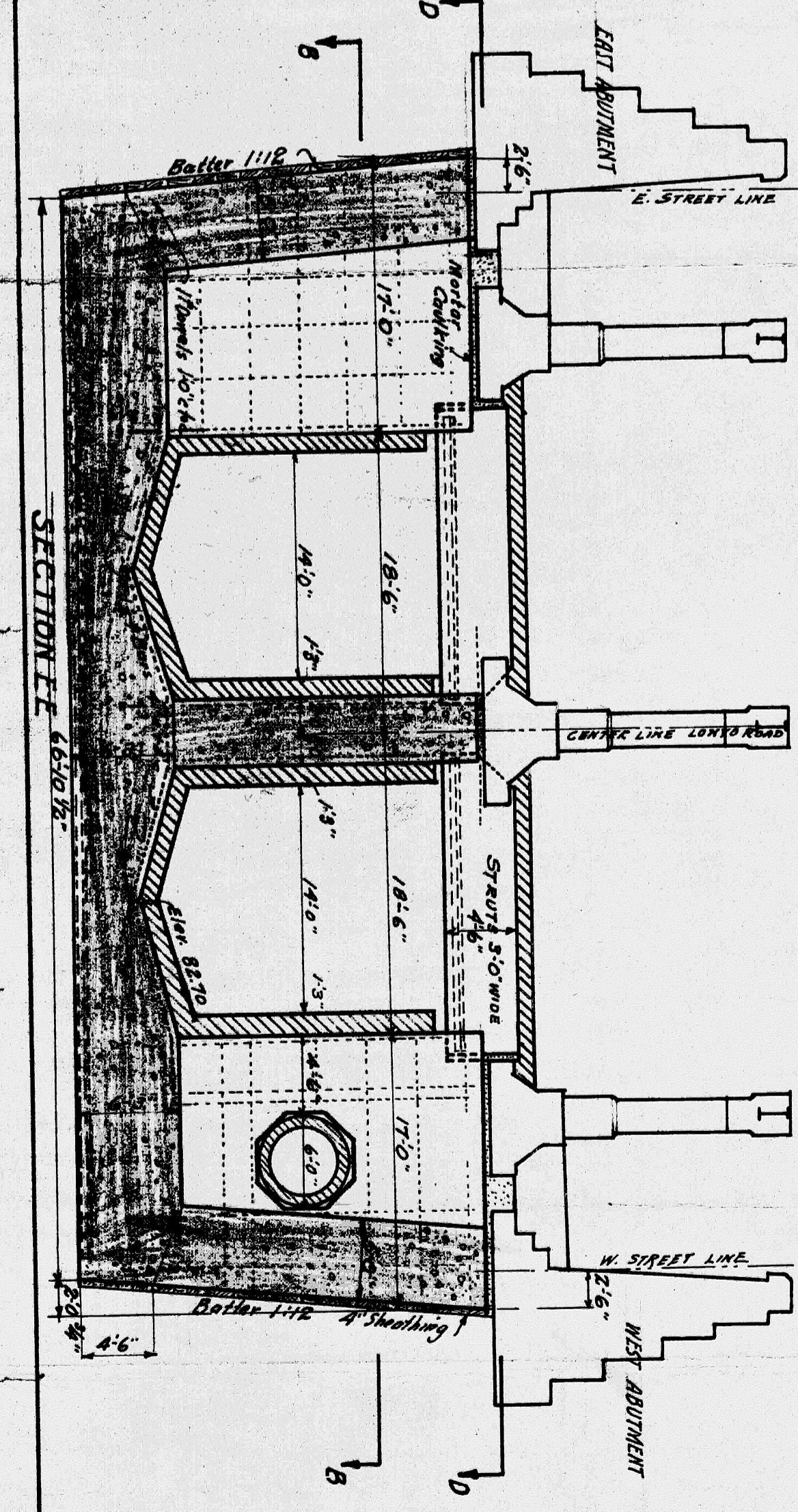
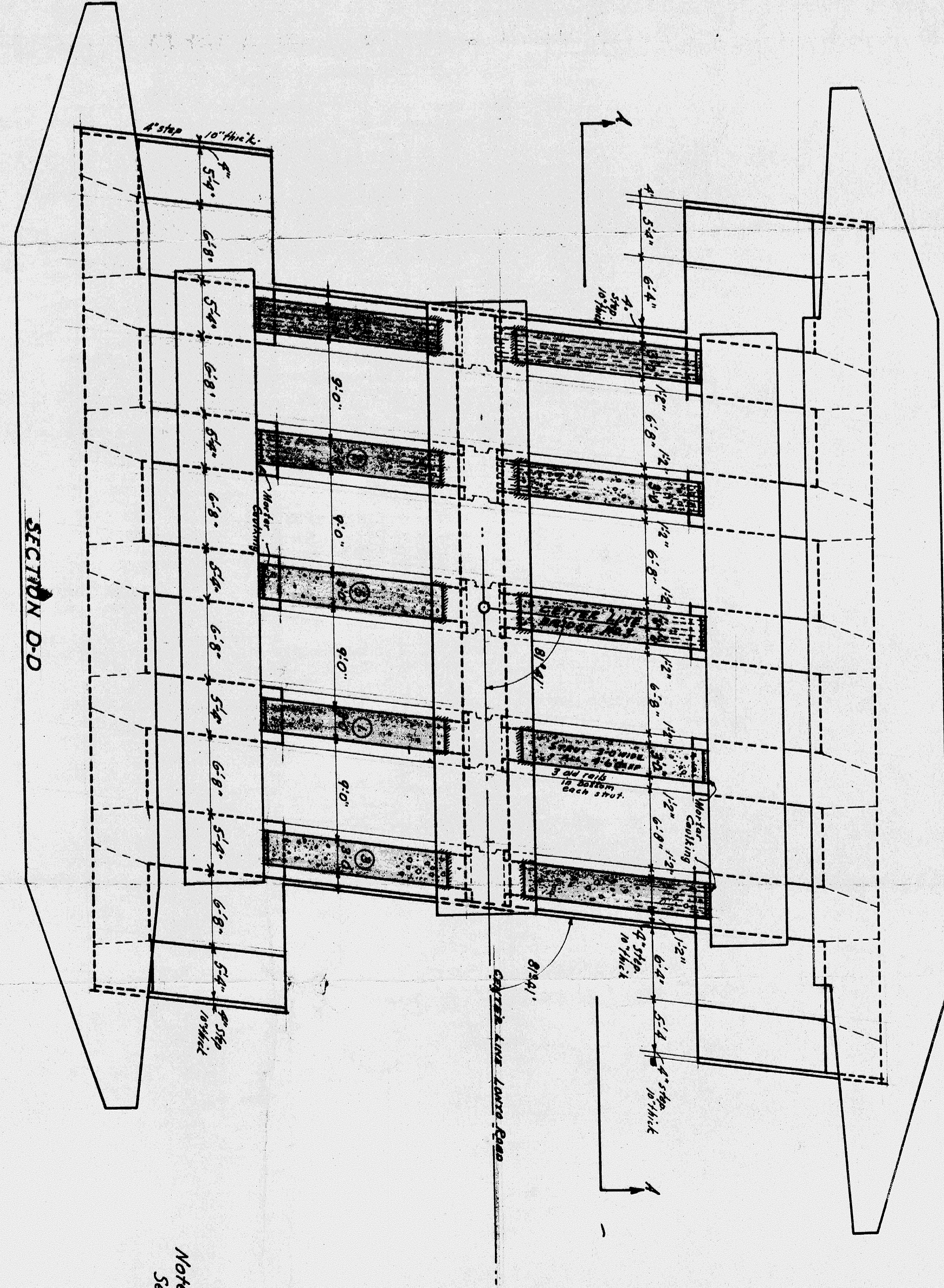
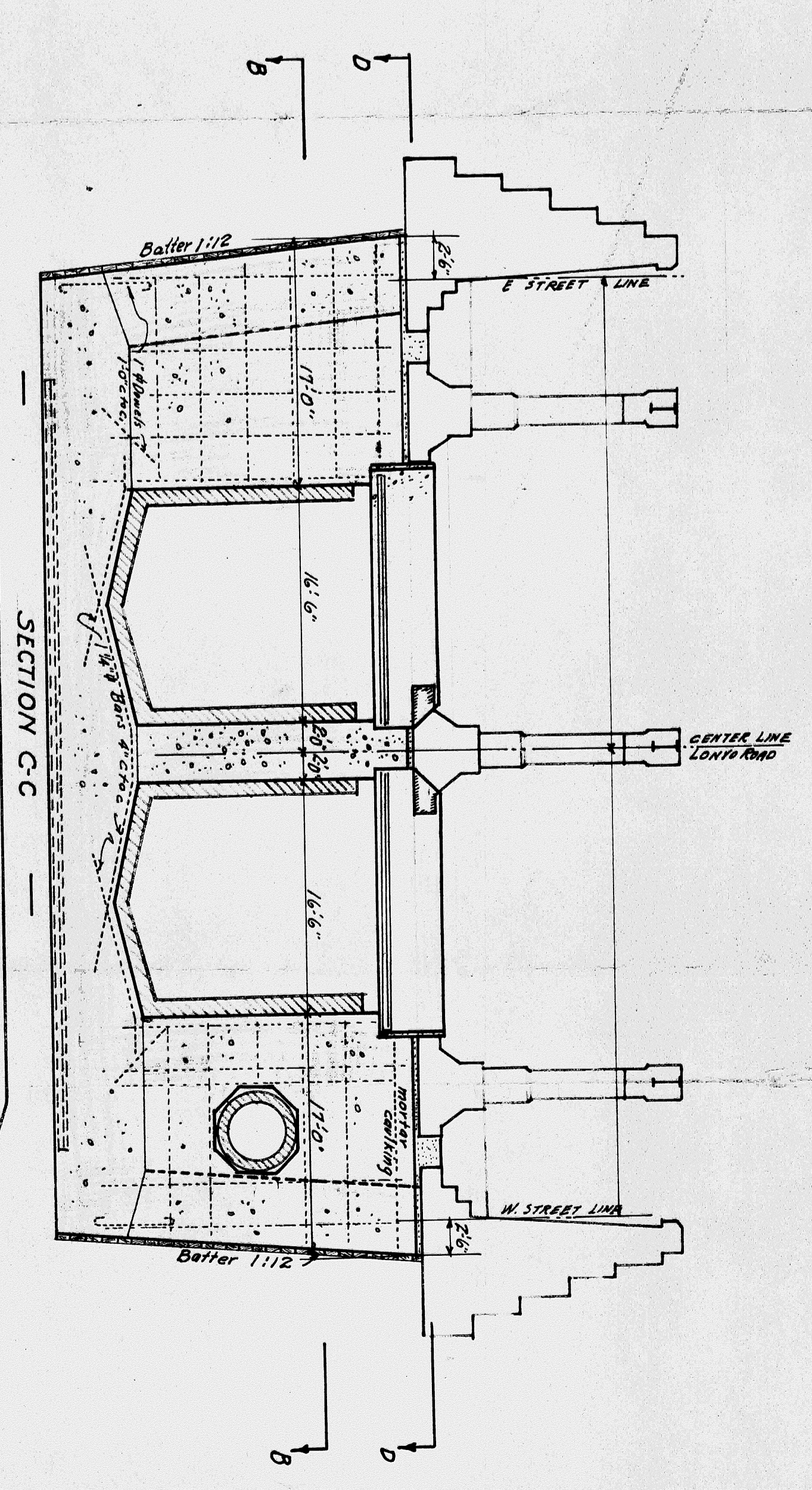
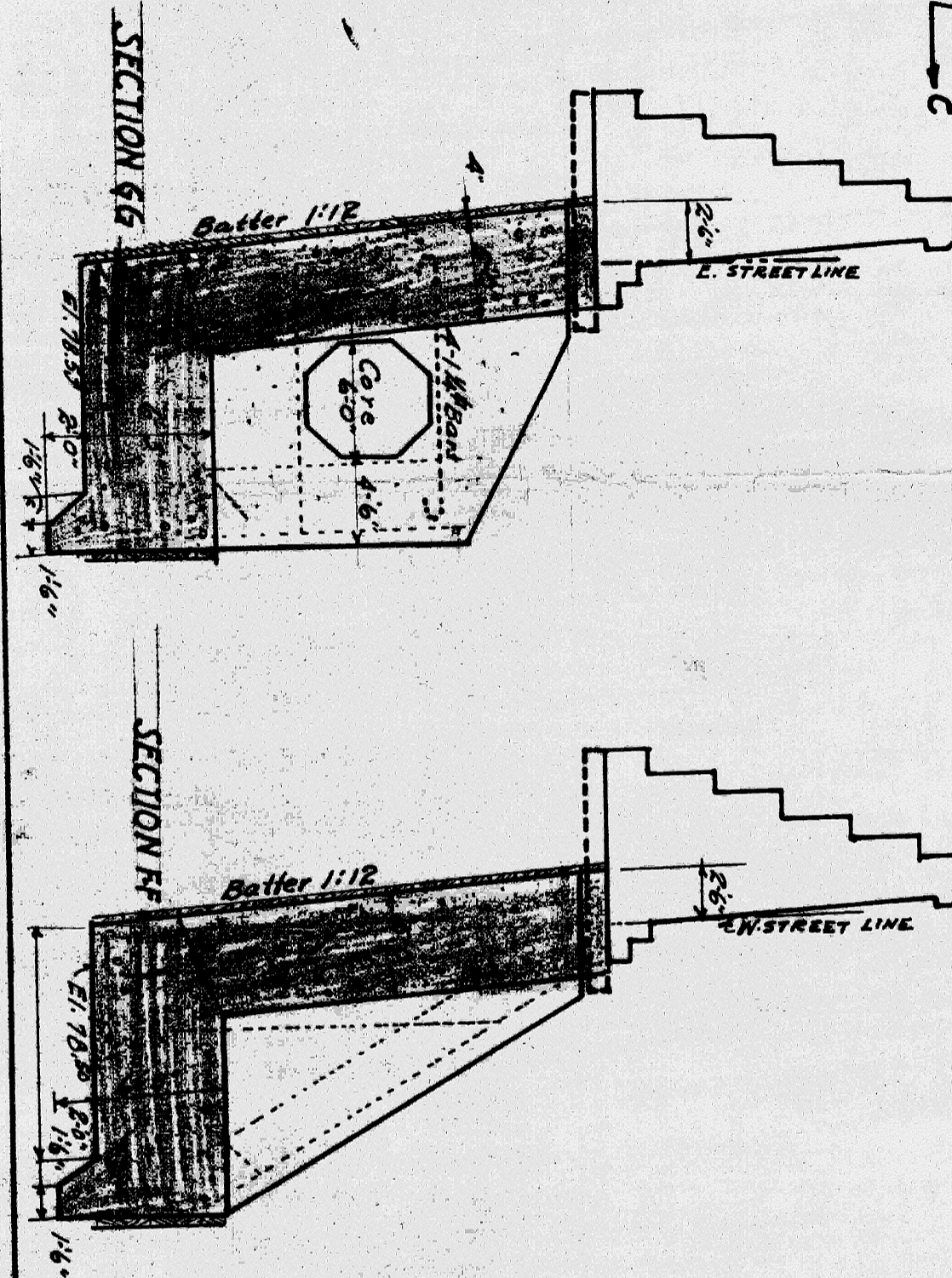
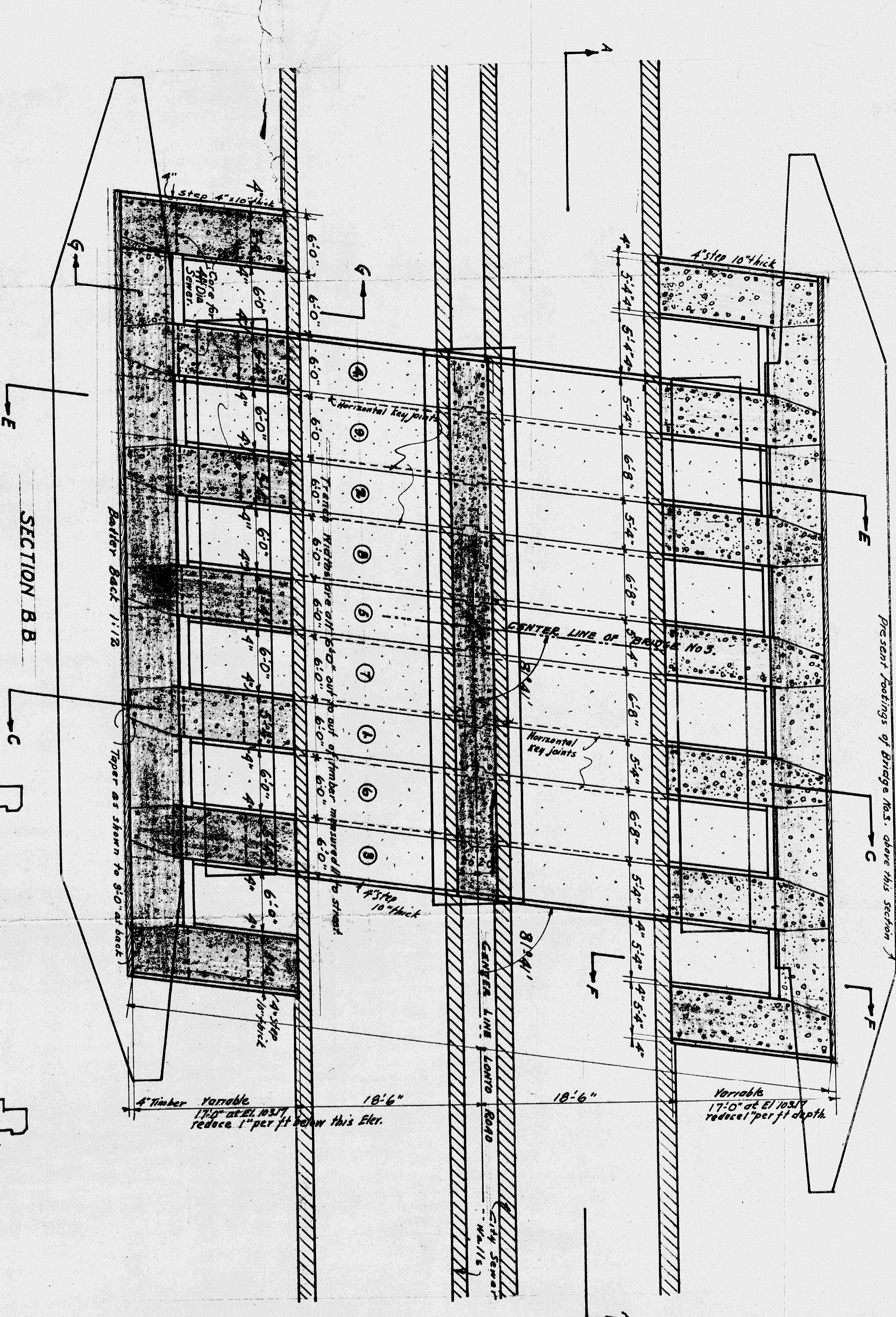
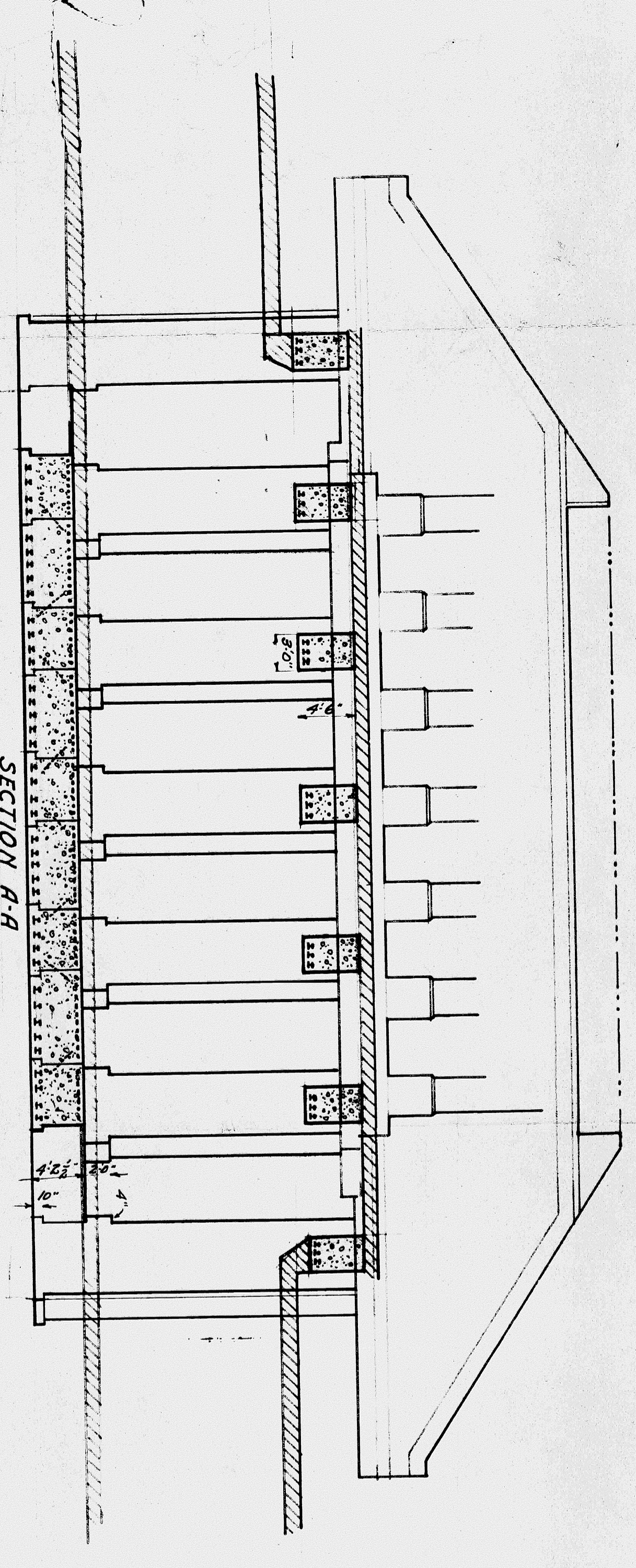
Note:
 Start with section about 5'-0\"/>

Approved: _____
 City Engineer
 Detroit Michigan

Approved: _____
 Chief Engineer
 M.C.R.R.

M.C.R.R.-Div.- Main Line
 Bridge 4.45 Lonzo Road
 Underpinning for City Sewers.

Scale: 1/4\"/>



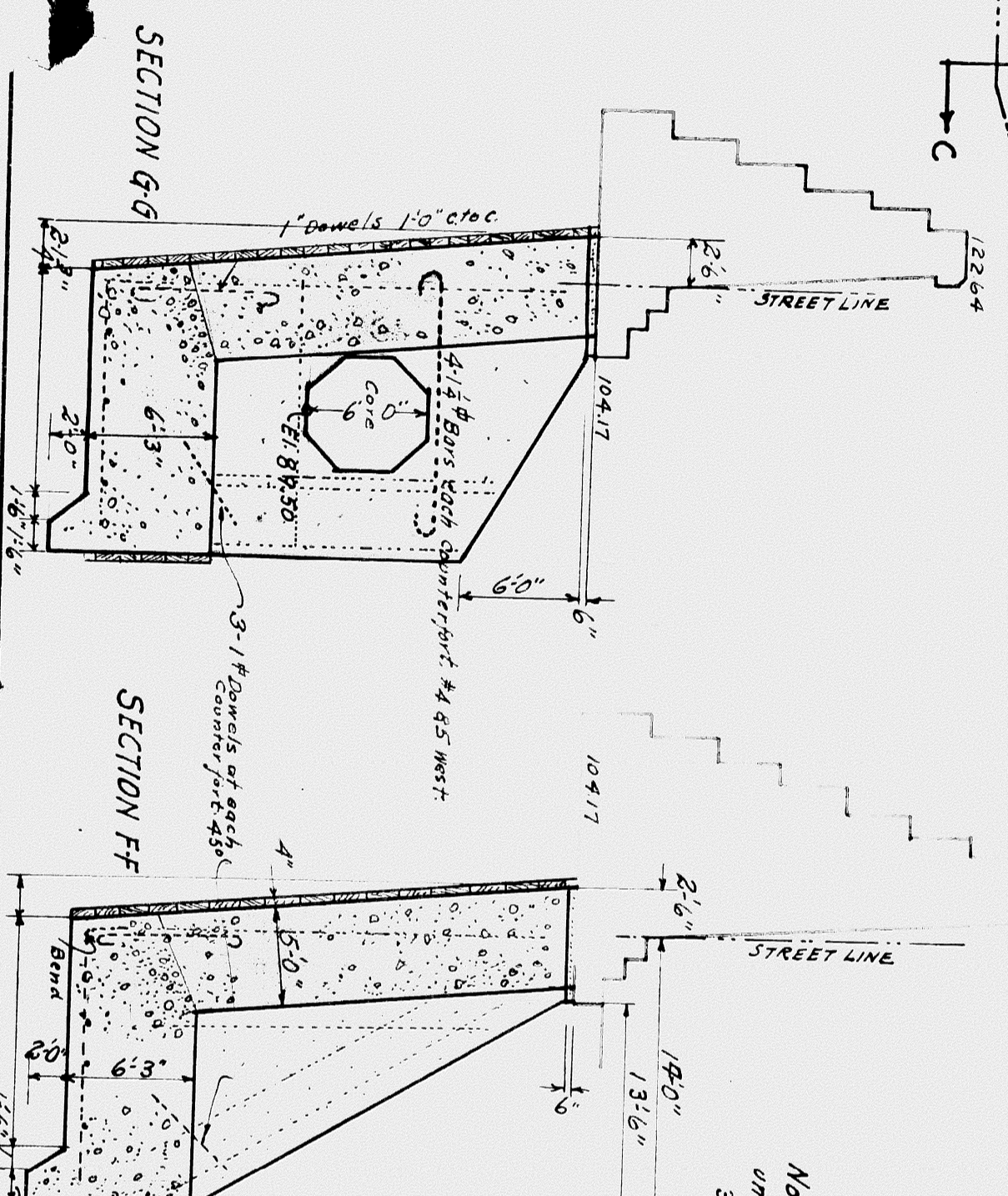
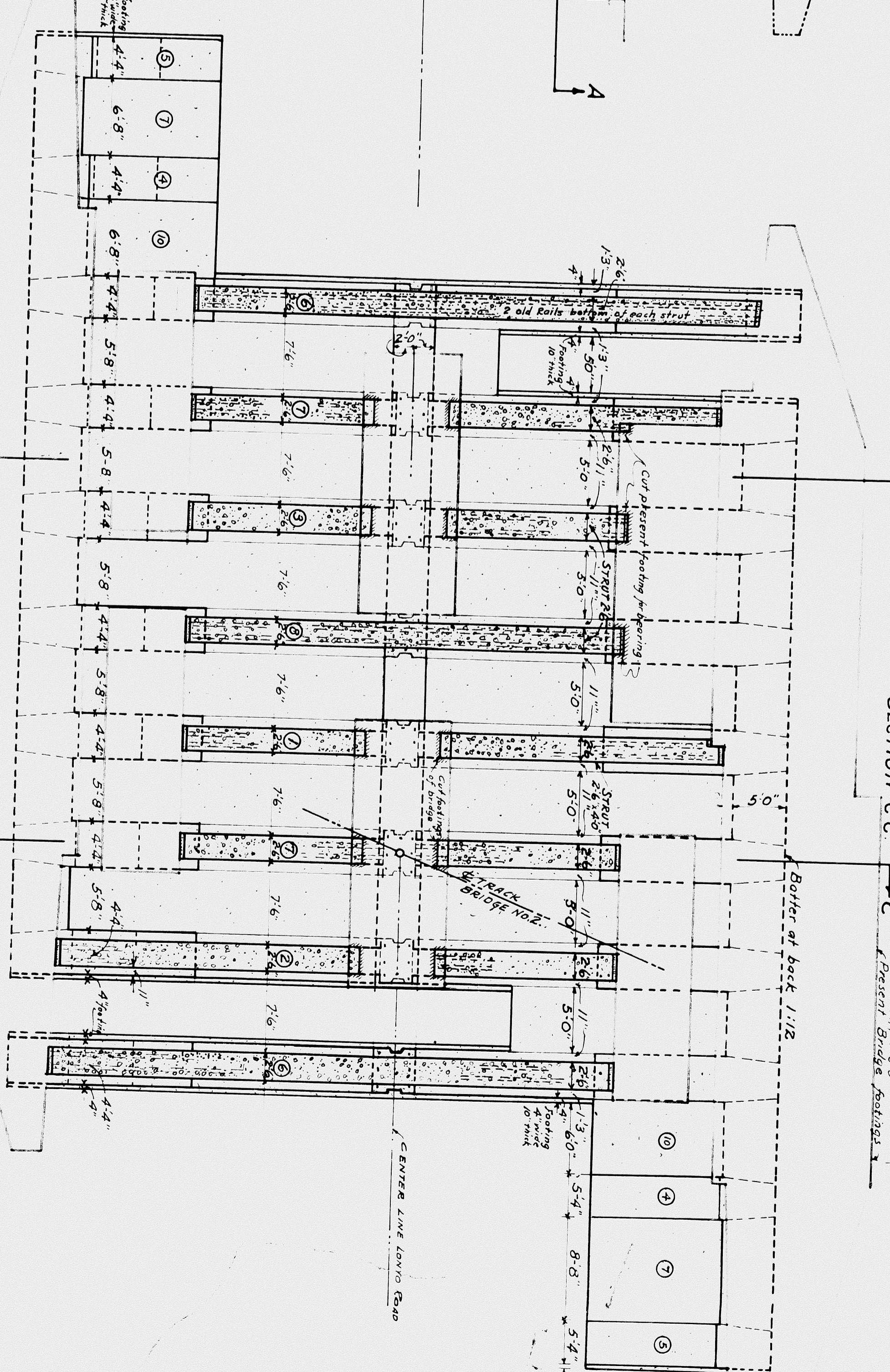
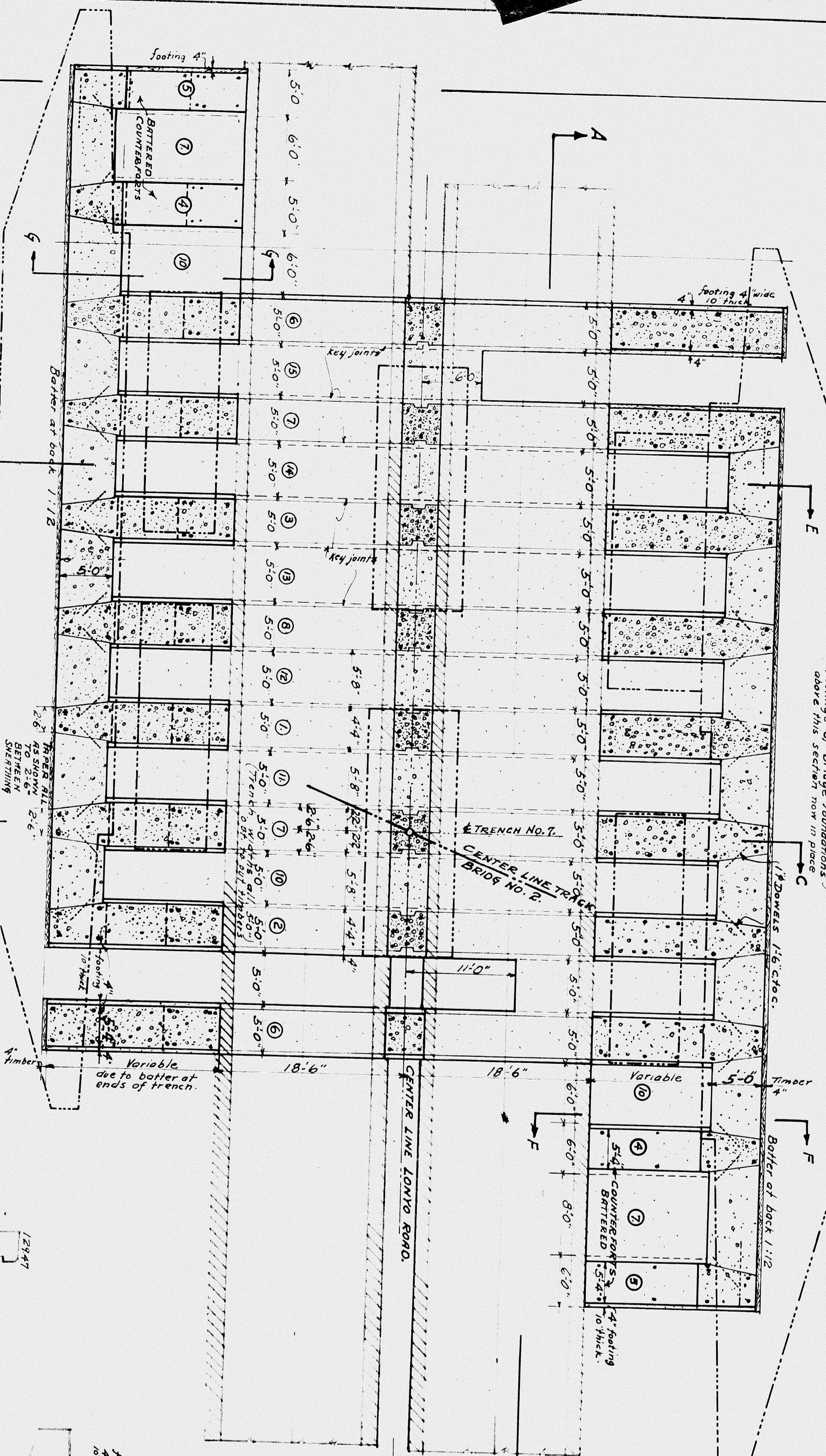
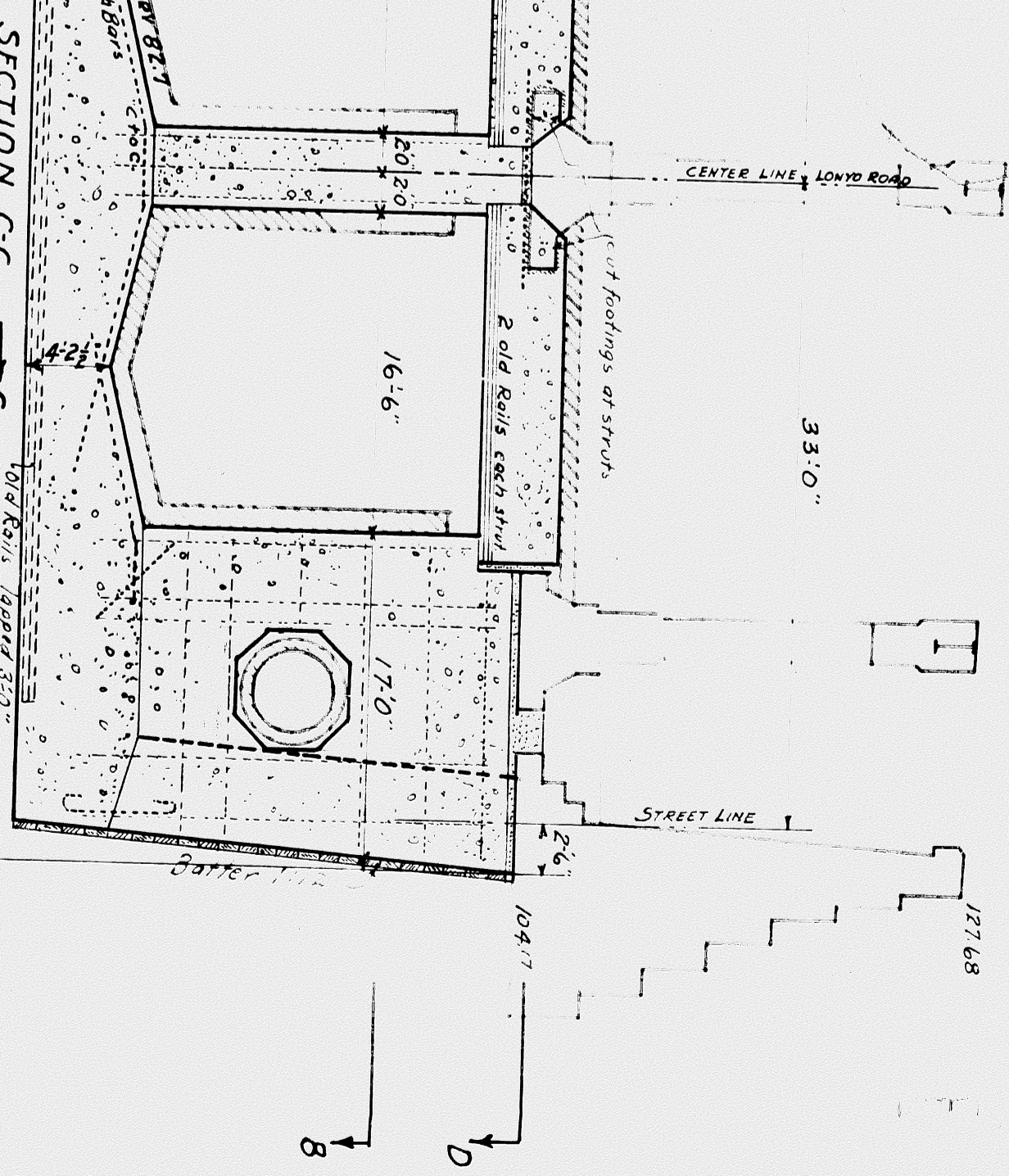
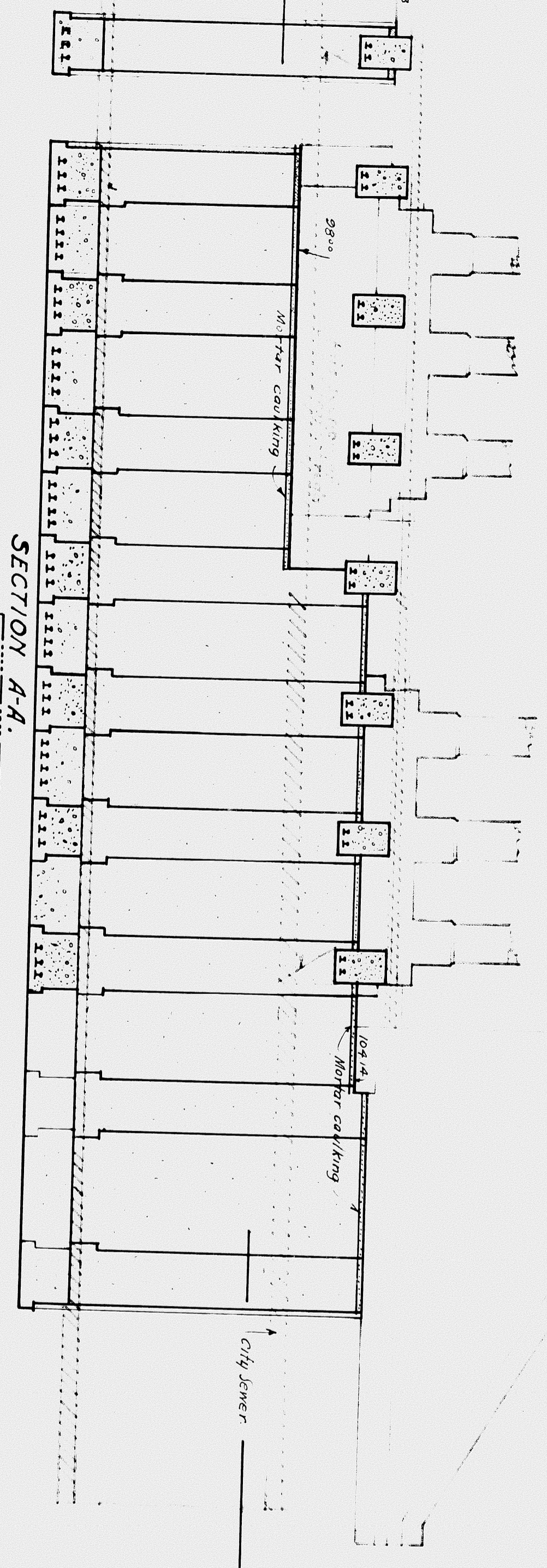
Note:
See Note on sheet 2

Approved: _____
City Engineer
Detroit Michigan

Approved: _____
Chief Engineer
M. C. R. R.

M. C. R. R. Div. - Main Line
Bridge 4.45 Longo Road
Underpinning for City Sewers.

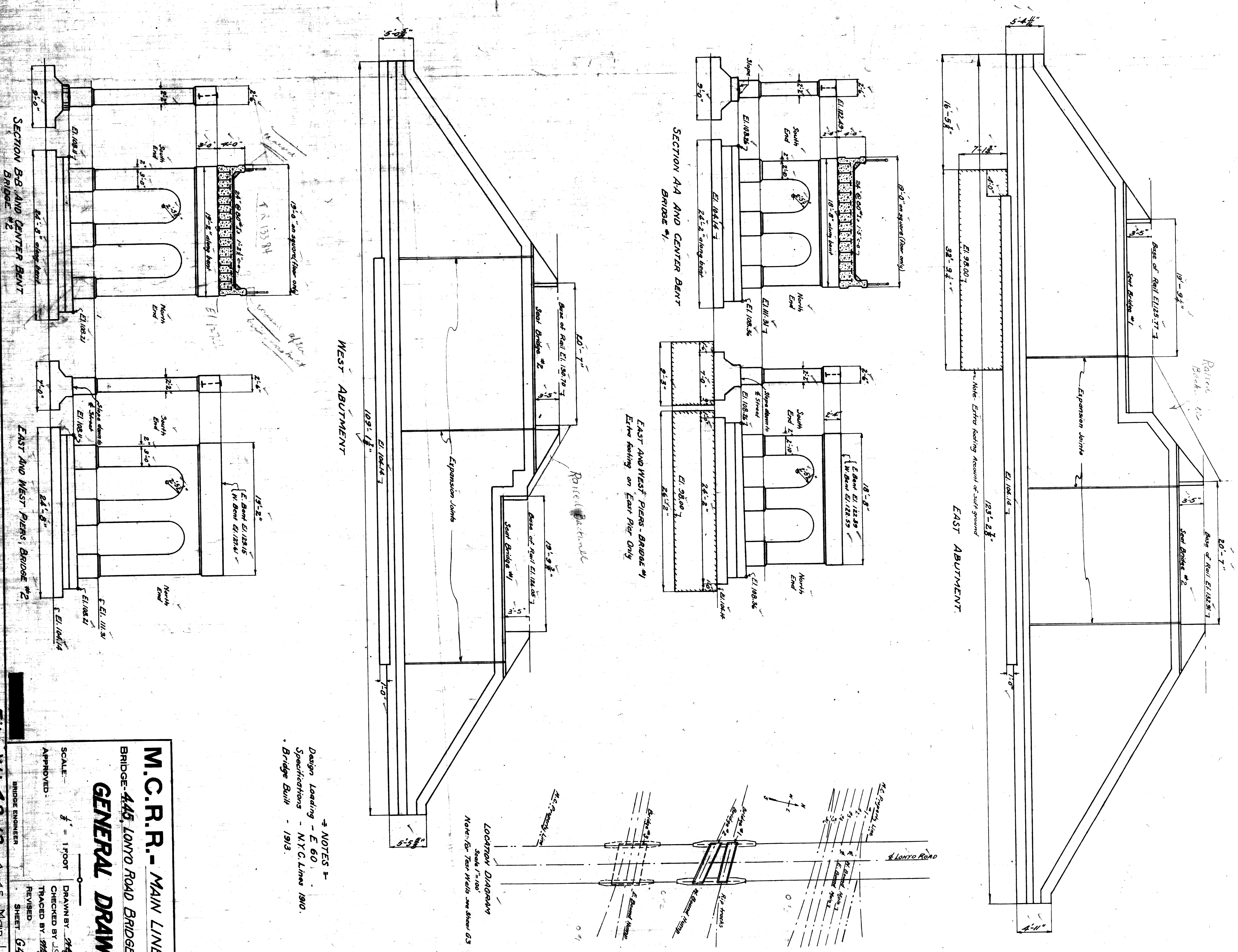
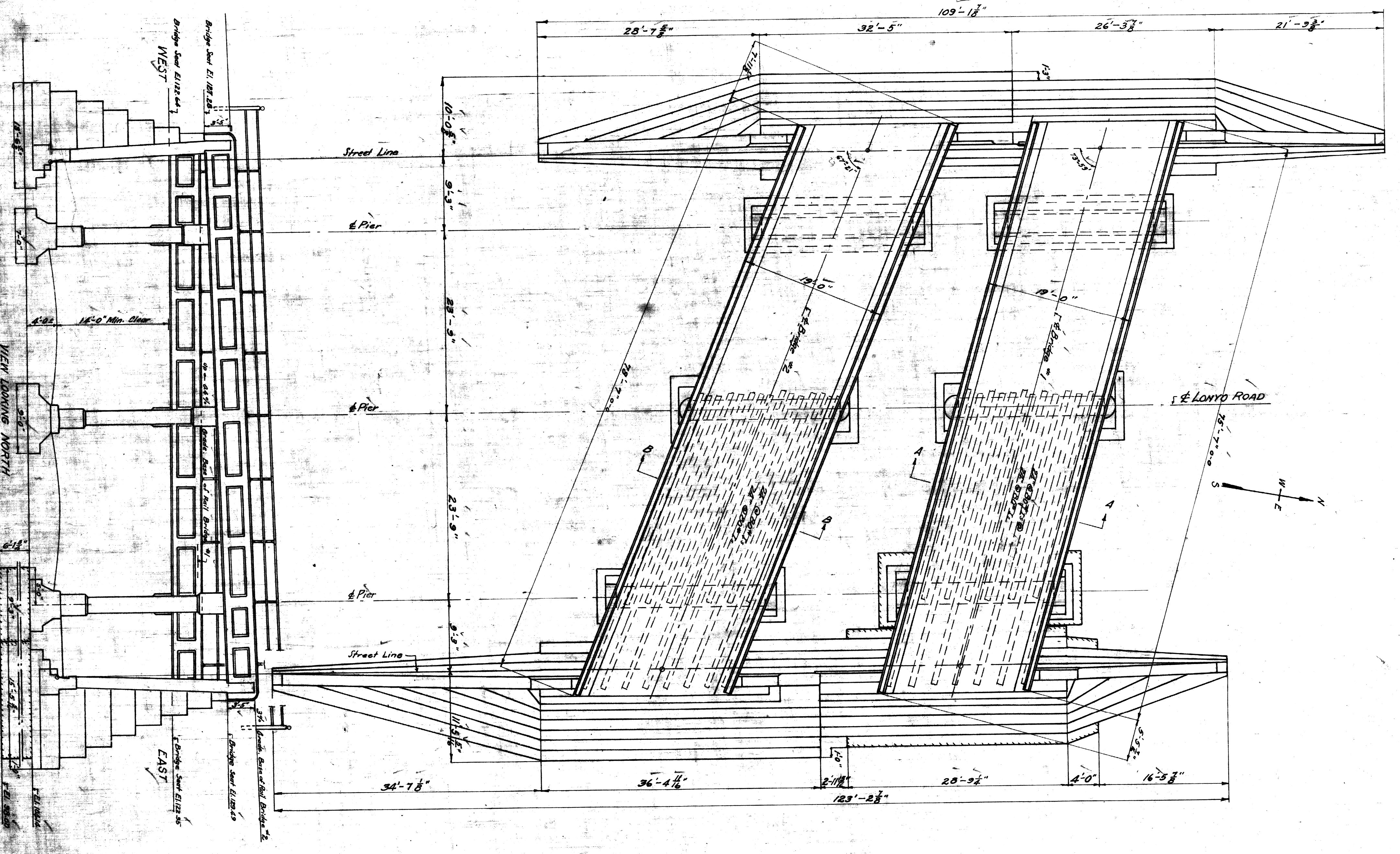
Scale: 1/4" = 1'-0"
Drawn by: G. M. M. C. S. 11917
Checked by: _____
Chief Engineer/Traced by: G. M. M. C. S. 11917
Sheet 3 of 3



NOT CHECKED

M.C.R.R.-Div.- Main Line
 Bridge 4.45 Lonyo Road
 Underpinning for City Sewers.

Scale: 1/4" = 1'-0"
 Bridge Engineer: G.M.W.C. 94917
 Checked by: G.M.W.C. 94917
 Chief Engineer: Traced by G.M.W.C. 94917
 Revised: 19
 Sheet 2 of 3



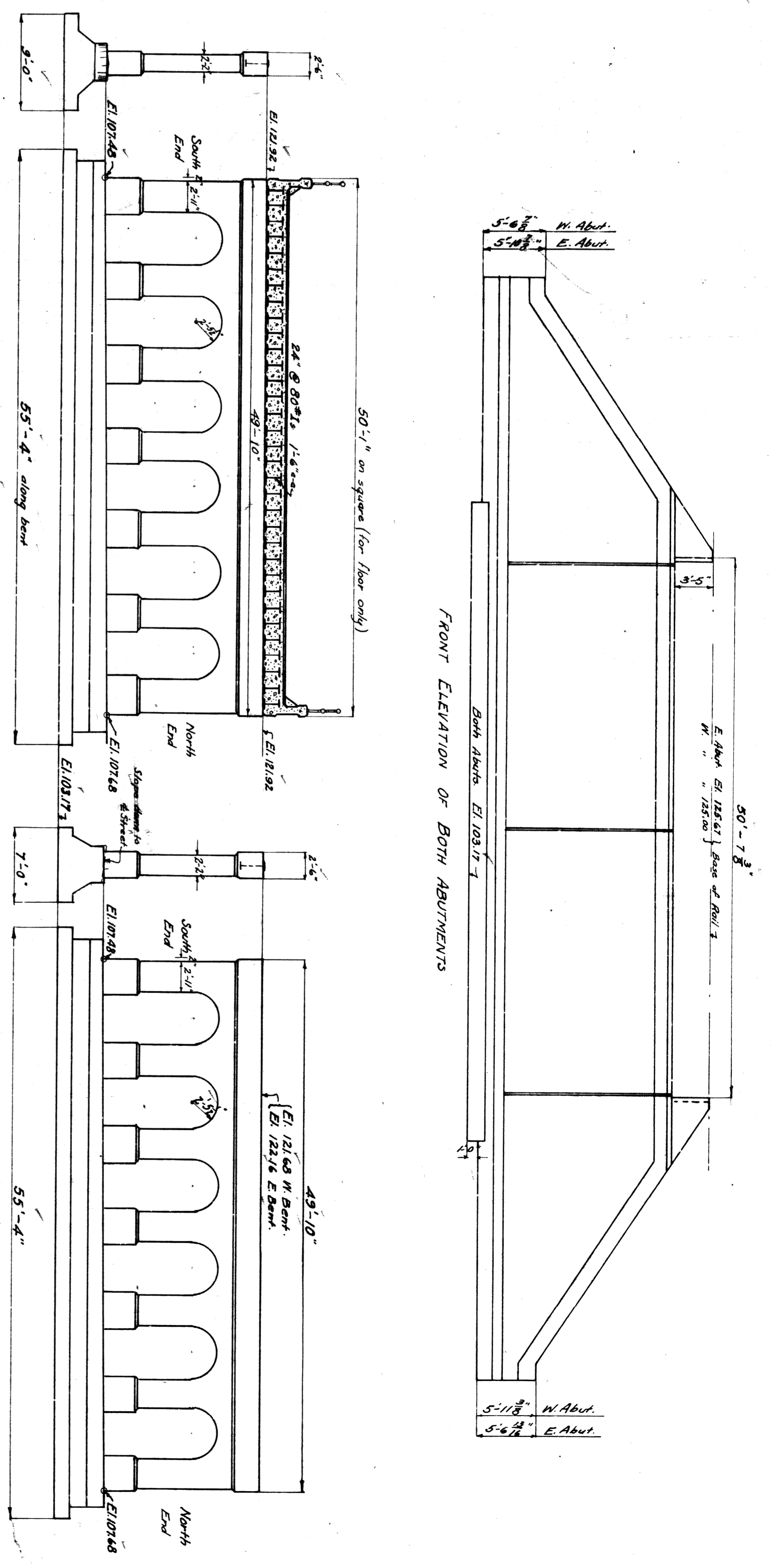
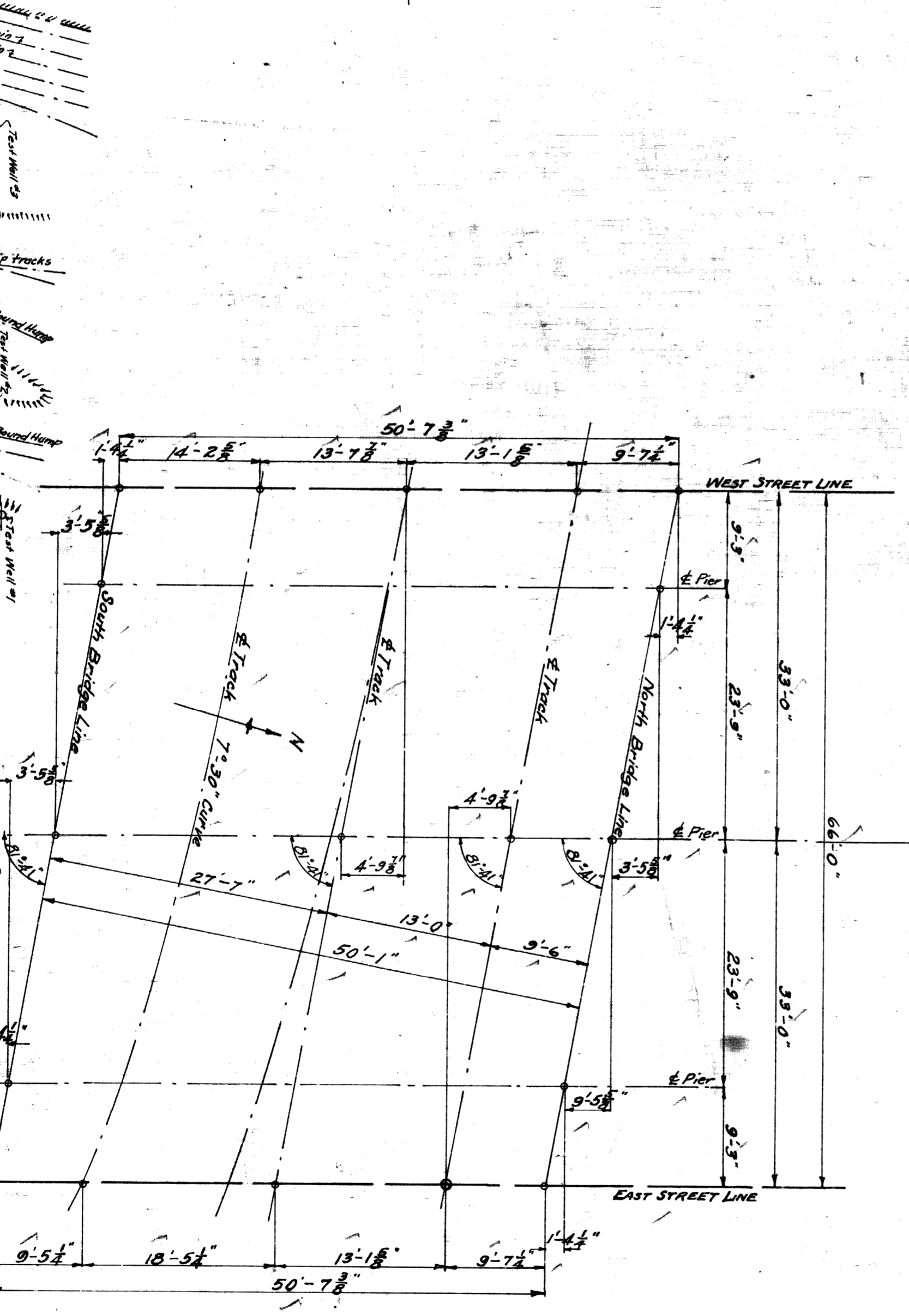
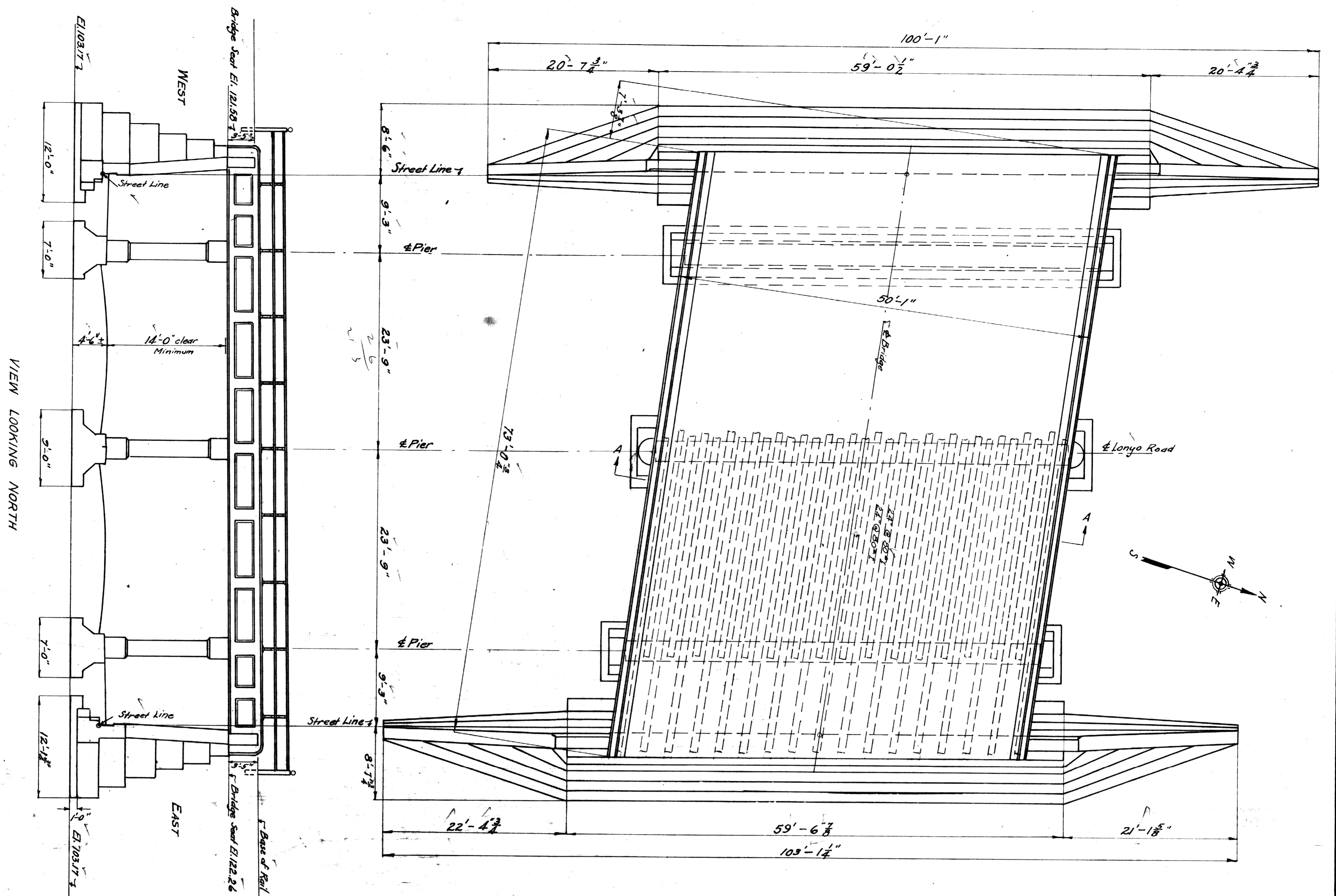
4 NOTES -
 Design Loading - E 60
 Specifications - N.Y.C. Lines 1910.
 Bridge Built - 1913.

LOCATION DIAGRAM
 Scale 1/4" = 100'
 Note: For Top Walls see Sheet G5

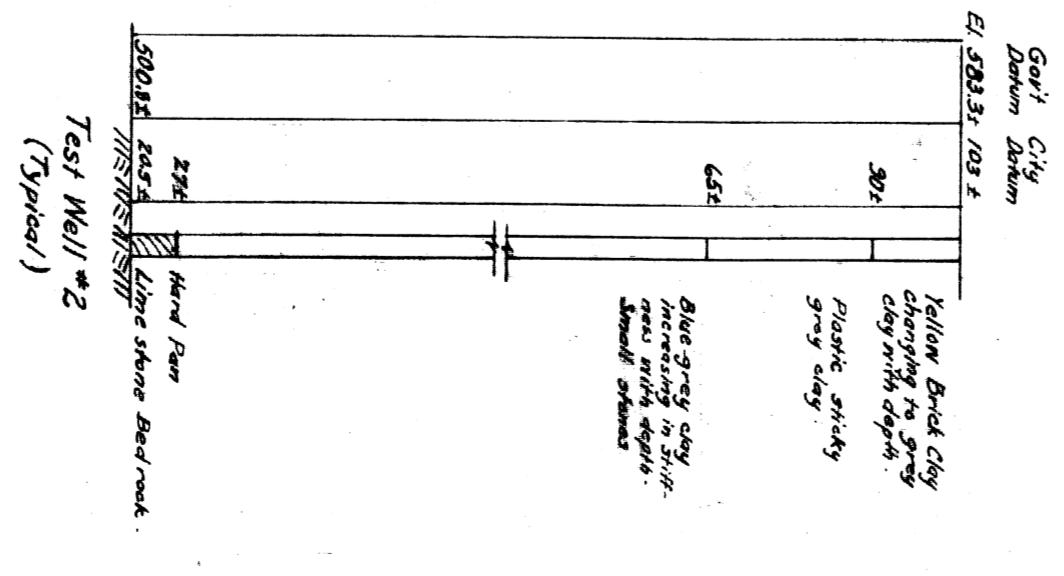
M.C.R.R. - MAIN LINE DIV.
BRIDGE - 446 LONTO ROAD BRIDGES #1 & #2
GENERAL DRAWING

SCALE: 1/2" = 1 FOOT
 DRAWN BY: J.H.G. 12-29-1912
 CHECKED BY: J.C.M. 12-29-1912
 REVISED: SHEET G4-00
 BRIDGE ENGINEER

File XU 42-13 4-15 Main Line A



NOTES -
 Design Looking - E 60
 Specifications - N.Y.C. Lines 1910
 Bridge B'v' - 1918

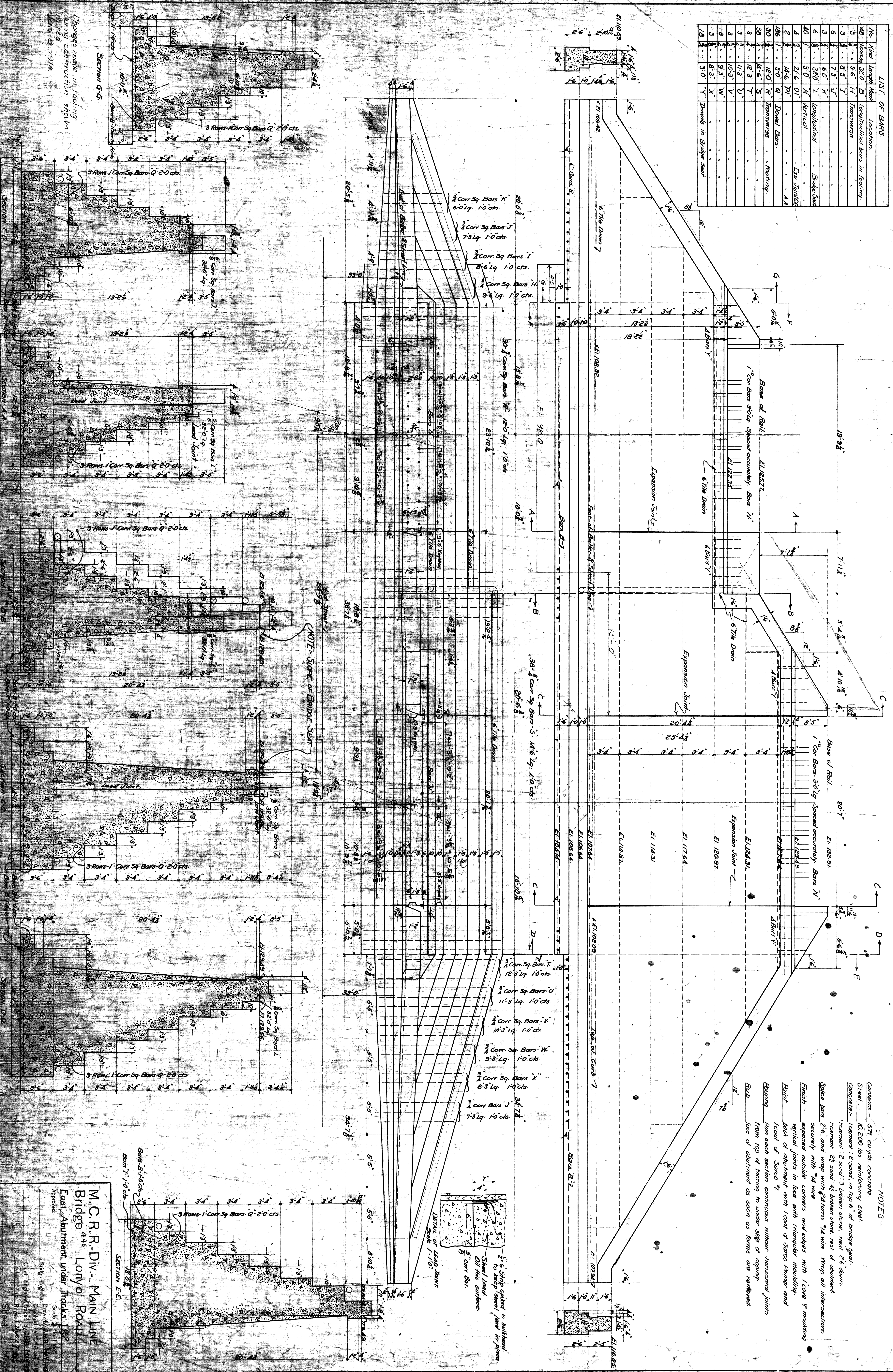


M.C.R.R. - MAIN LINE DIV.
 BRIDGE - 4.45 LONYO ROAD, BRIDGE #3
GENERAL DRAWING

SCALE - 1/8" = 1'-0"
 DRAWN BY - [Signature]
 CHECKED BY - J.C. MILLER
 APPROVED - [Signature]
 BRIDGE ENGINEER
 SHEET G3 OF

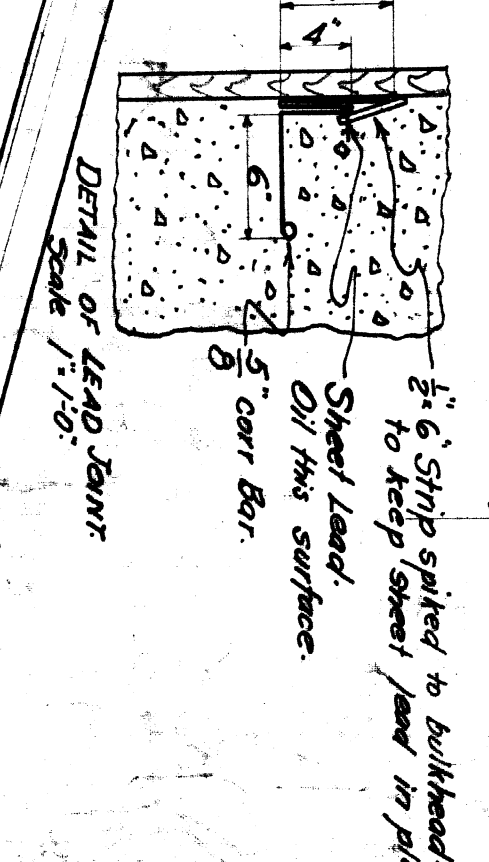
File XII 42-14 4.45 Main Line

No.	Kind	Length	Material	Location
1	Long	32.0	E	Longitudinal bars in footing
2	Long	9.6	Y	Transverse
3	Long	7.3	Y	"
4	Long	6.0	Y	"
5	Long	32.0	L	Longitudinal
6	Long	3.0	N	Vertical
7	Long	21.6	O	Exp. Joints
8	Long	14.6	P	Down Bars
9	Long	3.0	R	Transverse
10	Long	12.3	S	"
11	Long	11.3	U	"
12	Long	10.3	V	"
13	Long	9.3	W	"
14	Long	8.3	X	"
15	Long	3.0	Y	Downs in Bridge Deck



Changes made in footing during construction shown in red.
Jan. 5, 1914

NOTE: SLOPE OF BRIDGE SEAT



NOTES-

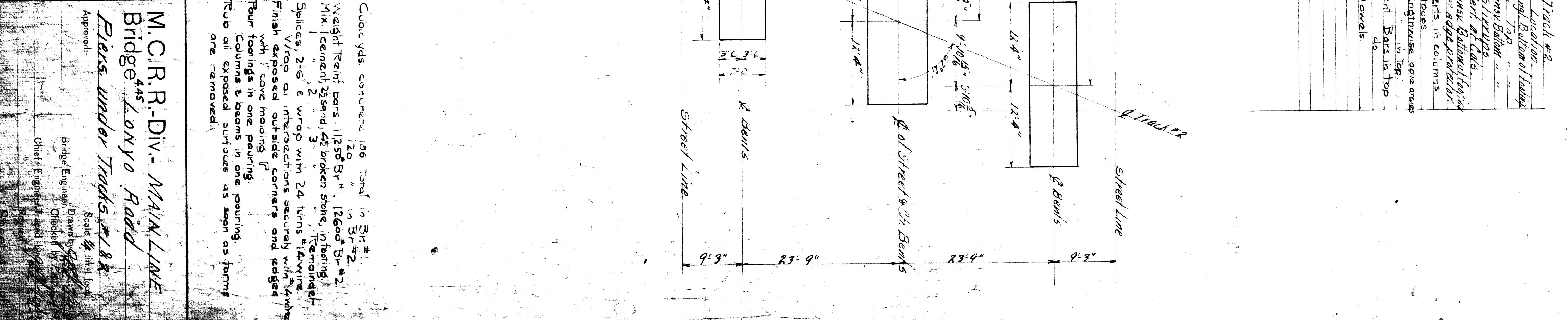
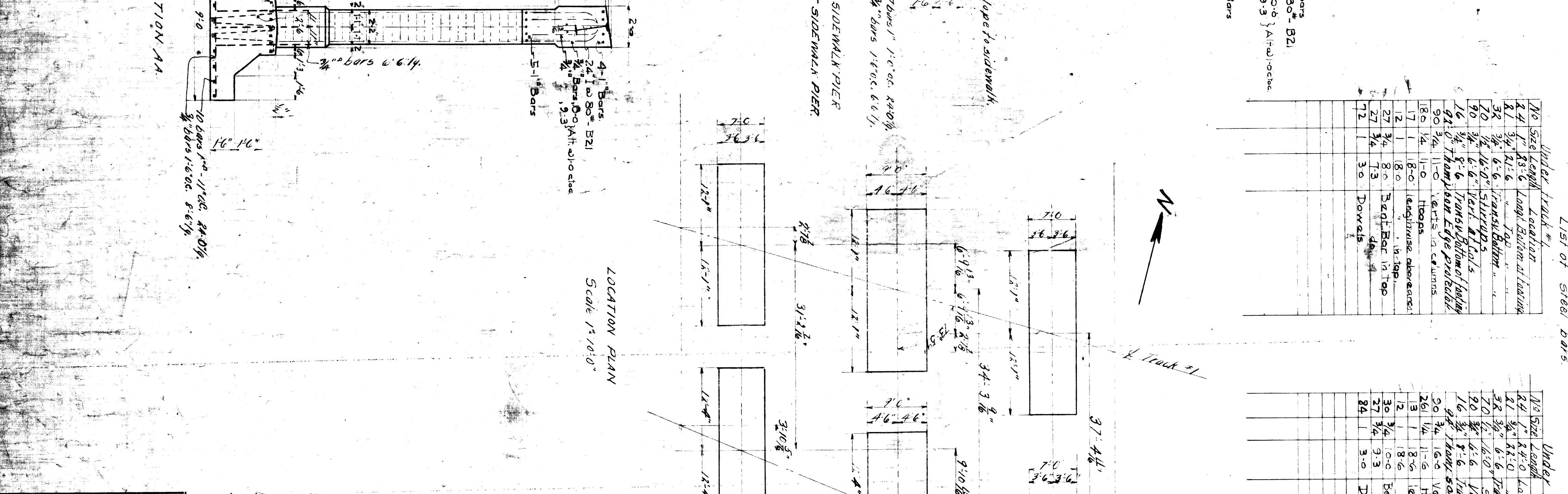
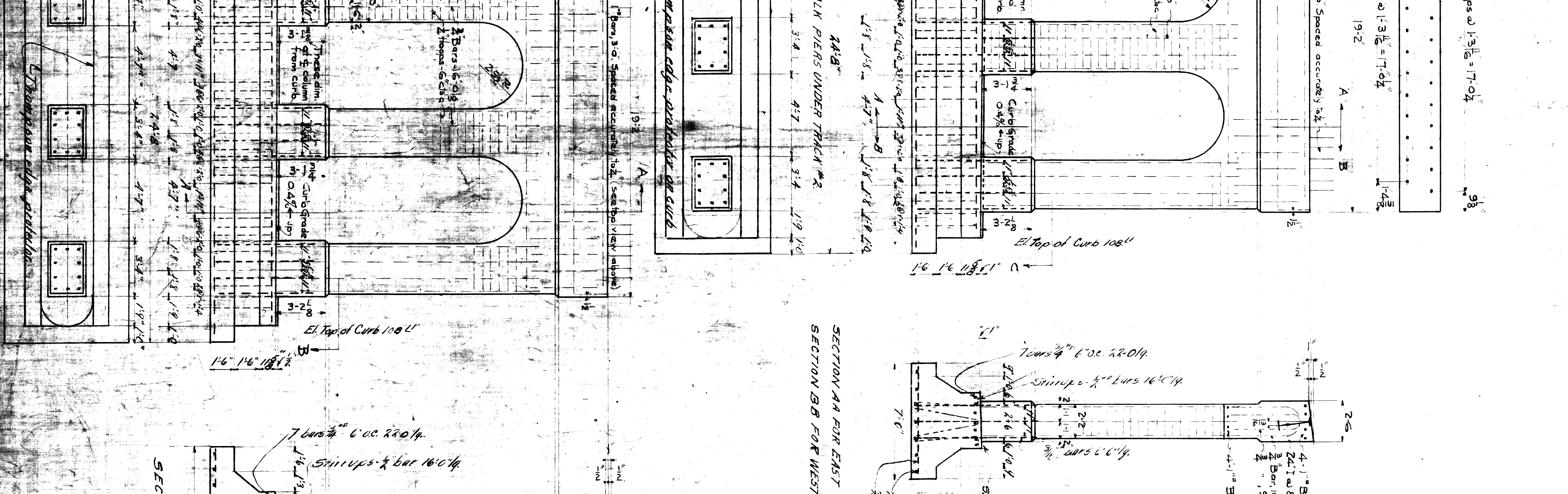
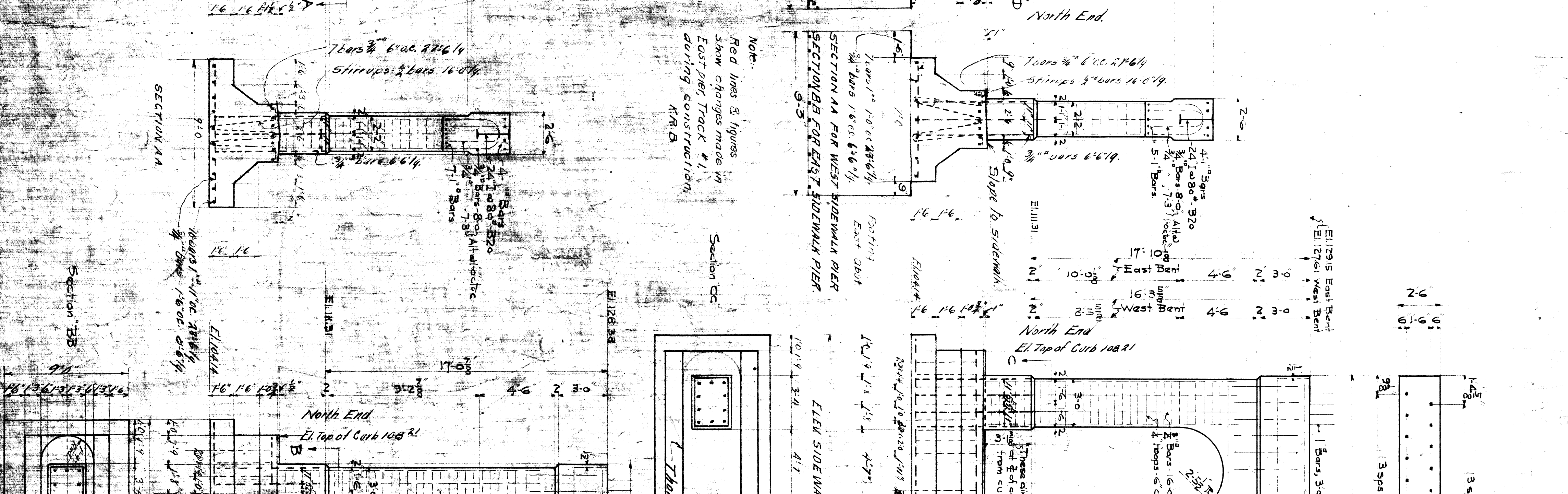
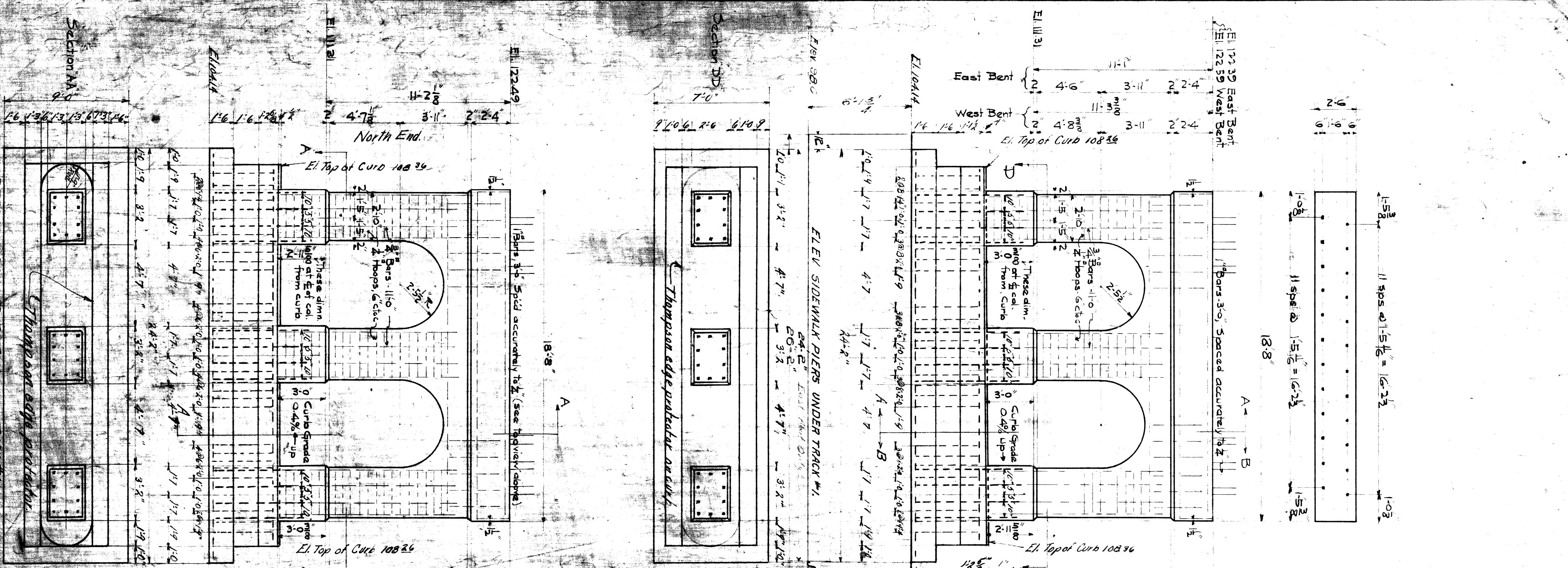
- Concrete - 571 cu yds concrete
- Steel - 10,200 lbs reinforcing steel
- CONCRETE: (cement) 2 sand, in top 6 of bridge girth
- (cement) 2 sand; 3 broken stone, next 2 1/2 down
- (cement) 2 sand; 4 1/2 broken stone, rest of abutment
- Splice bars 2'-6" and wrap with 24 turns 1/4 wire. Wrap all intersections securely with 1/4 wire
- Finish: exposed outside corners and edges with 1/4 wire meshing
- Point: vertical joints in face with triangular mauling
- Back of abutment with 1 coat of Soco Primer and 1 coat of Soco
- Routing: Run each section continuous without horizontal joints
- From top of footing to under side of coping
- Red: face of abutment as soon as forms are removed

M.C.R.R.-Div.- MAIN LINE
 Bridge 445 Lonyb Road
 East Abutment under Tracks 1 & 2

Scale: As Shown
 Bridge Engineer: D. J. B. [Signature]
 Checked: W. C. [Signature]
 Civil Engineer: T. [Signature]
 Revised: Dec. 1913
 Steel

File XU 42-15

LIST OF BARS		
No	Length	Location
1	18'-0"	Transverse bars in footing
2	30'-0"	Longitudinal
3	7'-0"	Transverse
4	8'-0"	"
5	9'-0"	"
6	10'-0"	"
7	11'-0"	"
8	12'-0"	"
9	13'-0"	"
10	14'-0"	"
11	15'-0"	"
12	16'-0"	"
13	17'-0"	"
14	18'-0"	"
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374	378'-0"	"
375	379'-0"	"
376	380'-0"	"
377	381'-0"	"
378	382'-0"	"
379		



List of Steel Bars

No.	Size	Length	Location
1	4-#1	18'-8"	Long. Section at Piering
2	2-#1	17'-0"	"
3	2-#1	17'-0"	"
4	2-#1	17'-0"	"
5	2-#1	17'-0"	"
6	2-#1	17'-0"	"
7	2-#1	17'-0"	"
8	2-#1	17'-0"	"
9	2-#1	17'-0"	"
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68	2-#1	17'-0"	"
69	2-#1	17'-0"	"
70	2-#1	17'-0"	"
71	2-#1	17'-0"	"
72	2-#1	17'-0"	"

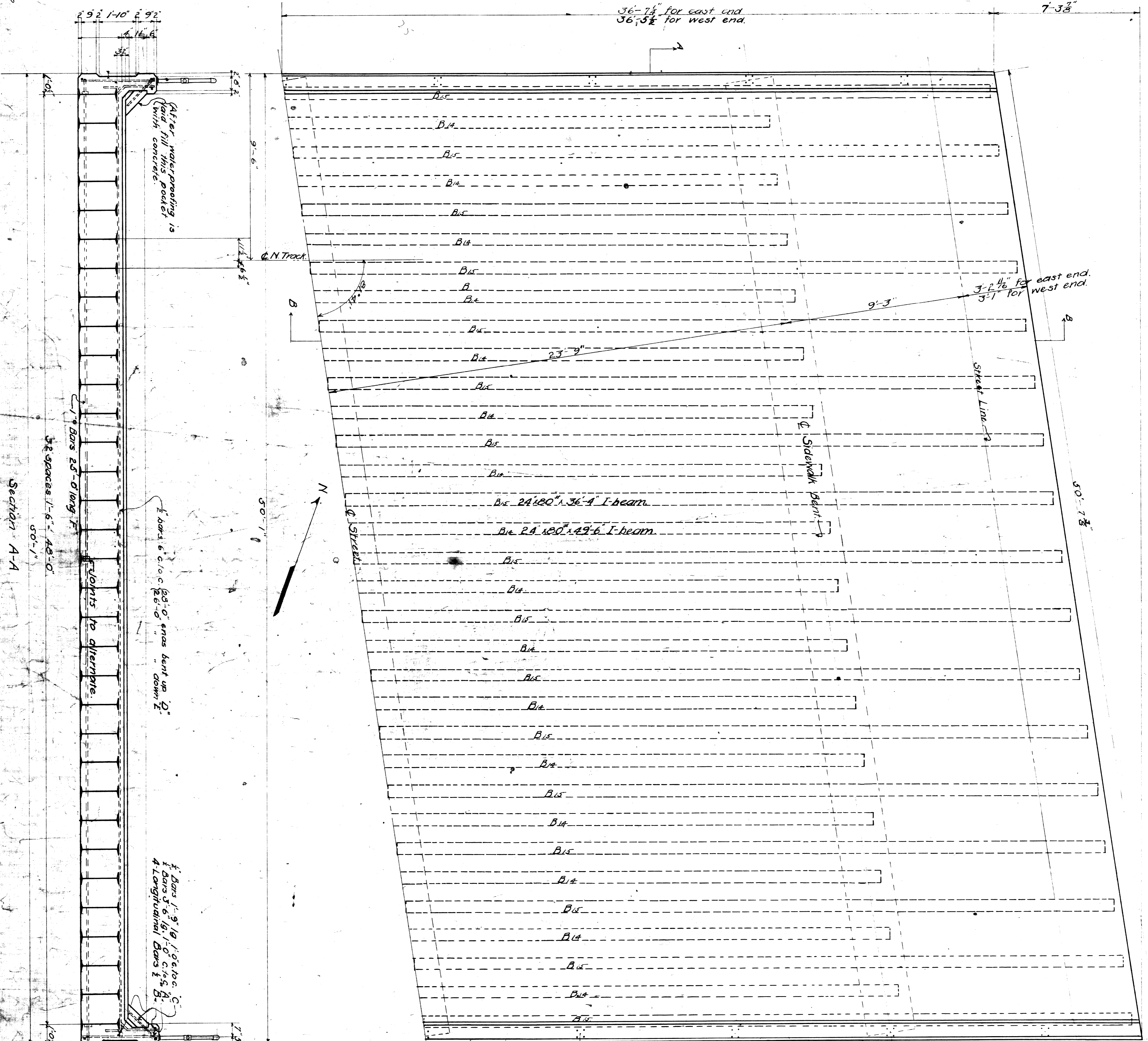
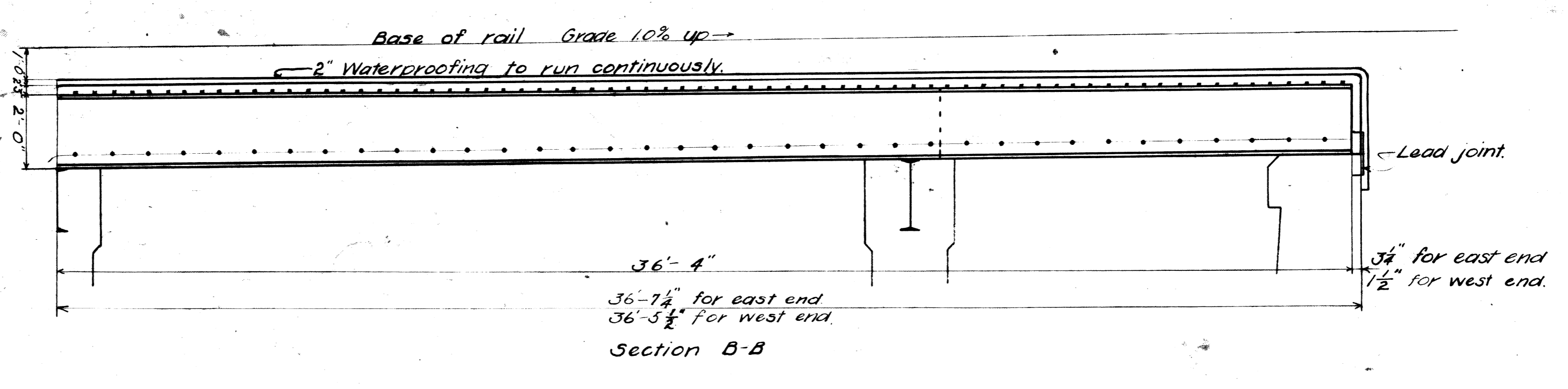
M.C.R.R.-Div.-MAIN LINE
 Bridge 445
 Lonyo Road
 Piers under Tracks #1 & 2

Scale: 1/4" = 1'-0"
 Chief Engineer: [Signature]
 Designer: [Signature]
 Checker: [Signature]
 Date: [Date]

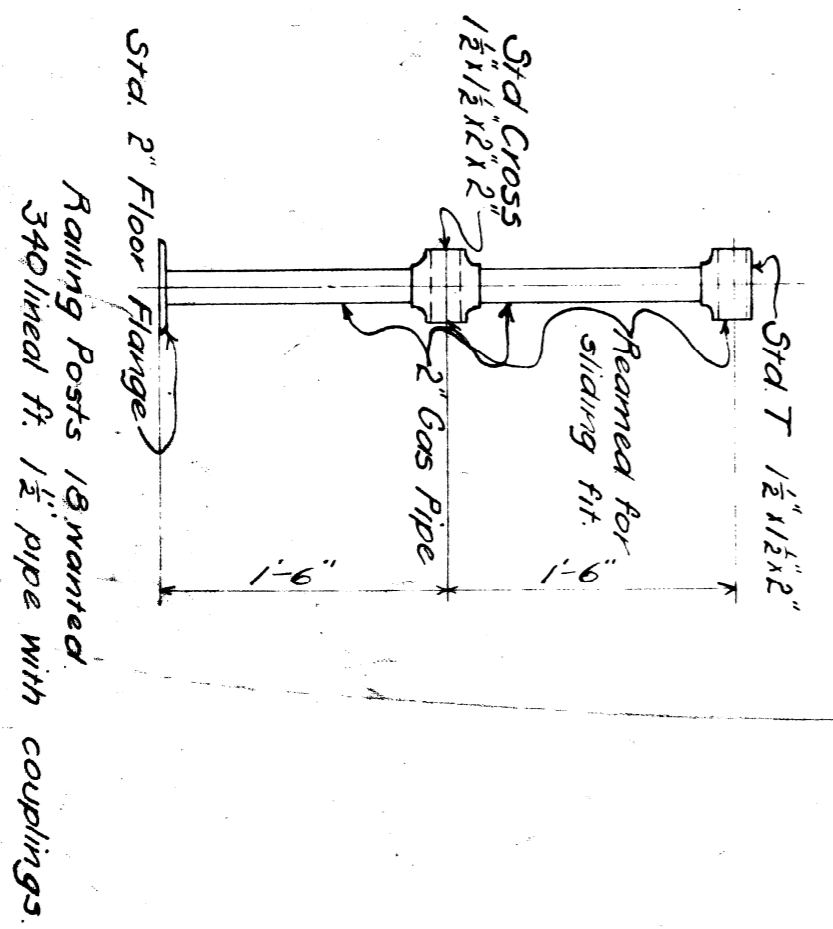
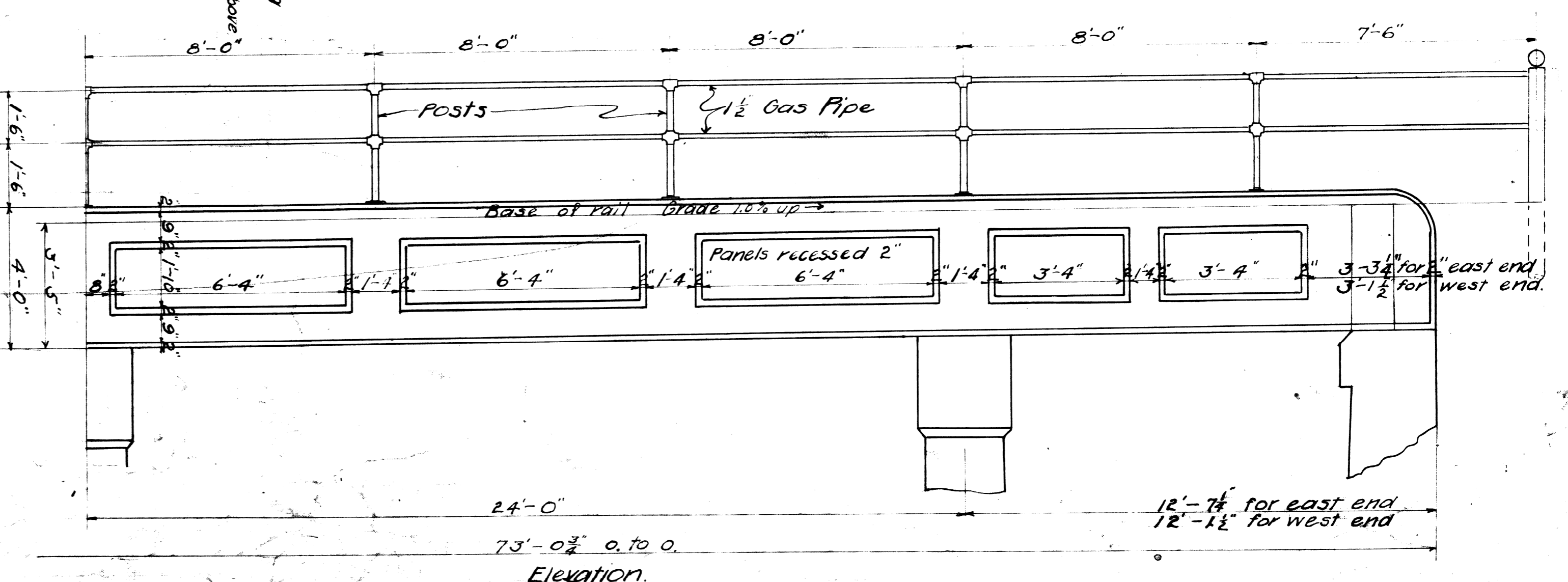
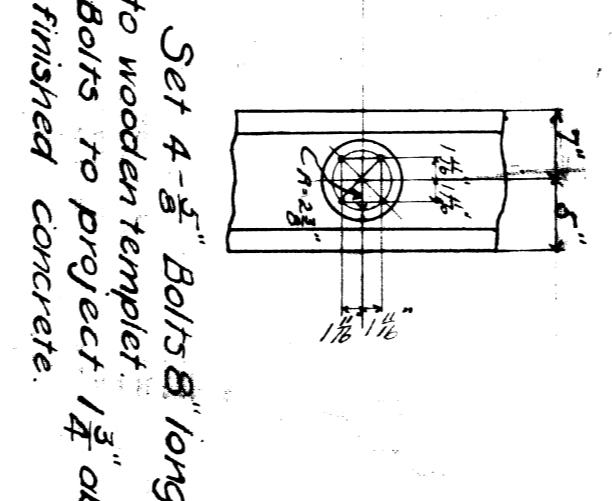
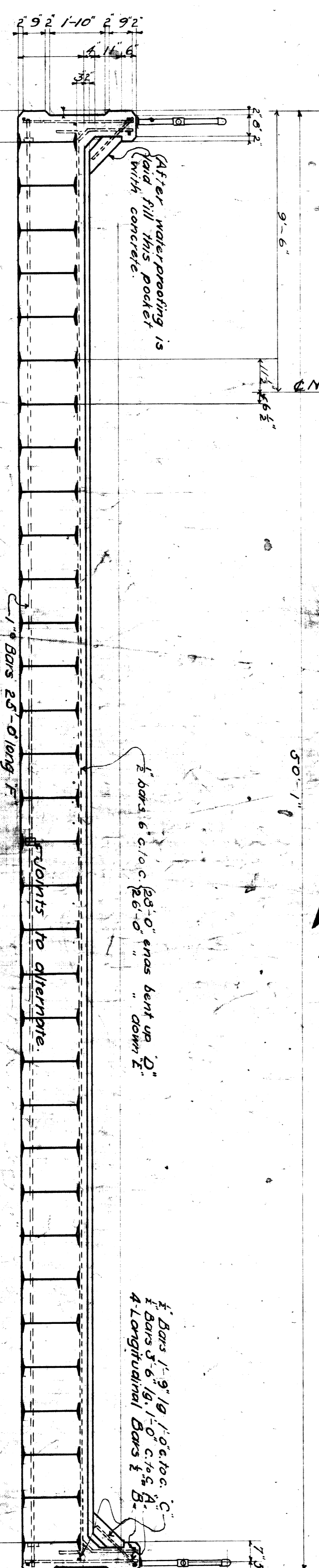
Cubic yds. concrete 106.5
 Weight Rein. bars 11250 lbs.
 Weight cement 22500 lbs.
 Weight sand 22500 lbs.
 Weight broken stone 22500 lbs.
 Spikes 2-0" x 24" turned
 Finish exposed outside corners and edges
 with 1" cover mounding
 Four footings in one pouring
 Columns & beams in one pouring
 Tub all exposed surfaces as soon as forms
 are removed

Mark	No.	Size	Length	Location
A	146	2" x 4"	32'-0"	Vertical in sides
B	20	2" x 4"	32'-0"	Horizontal in sides
C	146	1/2" corr. 18'-0"	1-9'	Sides
D	146	1/2" corr. 18'-0"	Floor ends bent up	
E	146	1/2" corr. 18'-0"	Floor ends bent down	
F	144	1" x 4"	25'-0"	FLOOR THRESH 3 EACH END

Contents - 317 cu. yds concrete
 Weight of reinforcing bars 8115 lbs
 Weight of steel beams 162160 lbs
 Area of waterproofing 420 sq. yds.
 Mixture - 1 cement, 2 sand, 3 broken stone
 Slab bars 2" x 4" and wrap with 24 turns of #4 wire.
 Wrap all intersections secured with #4 wire.
 Rub faces of girders as soon as forms are removed.
 Waterproofing - Paint surface of floor slabs with Sarcos
 Primer Top with Sarcos #5. Apply 3 layers of Sarcos
 with overlapping joints and mop with Sarcos #5
 over waterproofing mat with 1/2" Sarcos Mastic
 in 1/2" layer.



Section A-A

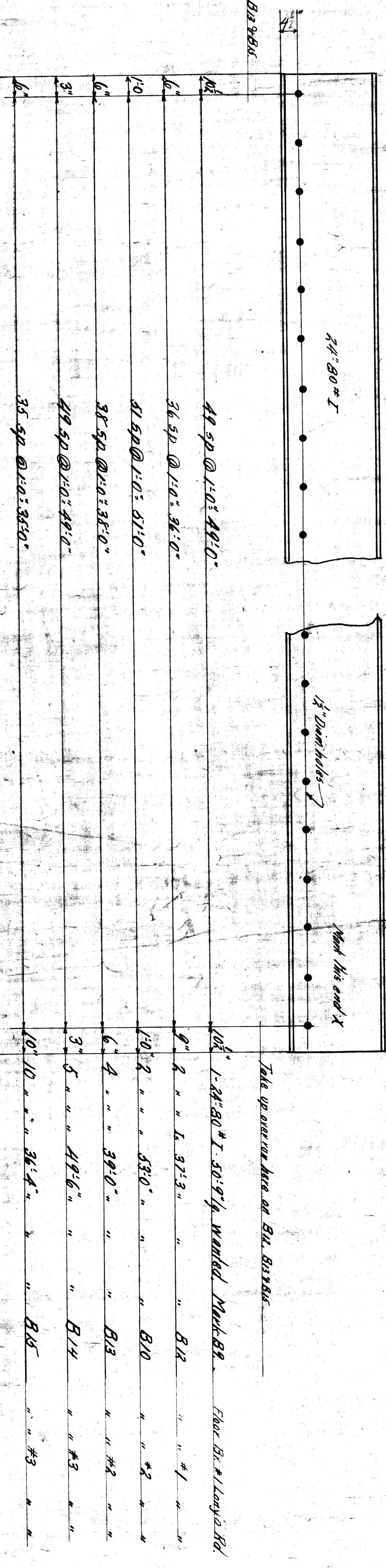


M.C.R.R.-Div.-Main Line
 Bridge No. 131
 Lonyo Road
 FLOOR TRACK 3

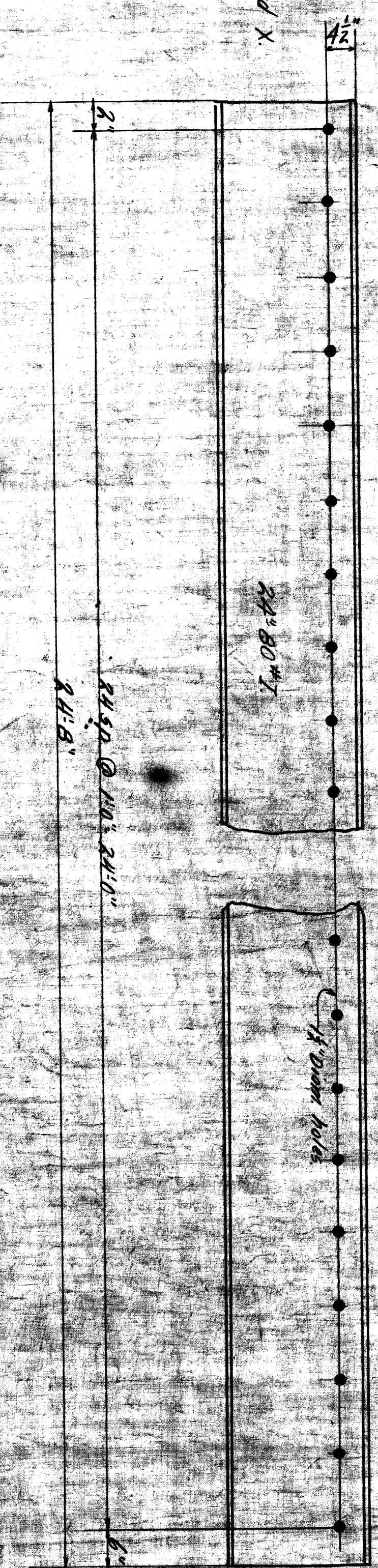
Scale: 1/4" = 1'-0"
 Bridge Engineer: [Signature]
 Civil Engineer: [Signature]
 Revised: [Date]
 Sheet: [Number]

FILE XU-42-22

This distance is used on B12, B13, B14



Mark this end X



Material's Workmanship, NYC Lines Specs. m.a.
 All holes punched 1/2 diam. no reaming
 No shop paint required

6-24-30 24 bars w/ly washed - Mark B11 - Grade Br. w/ Longy Rd

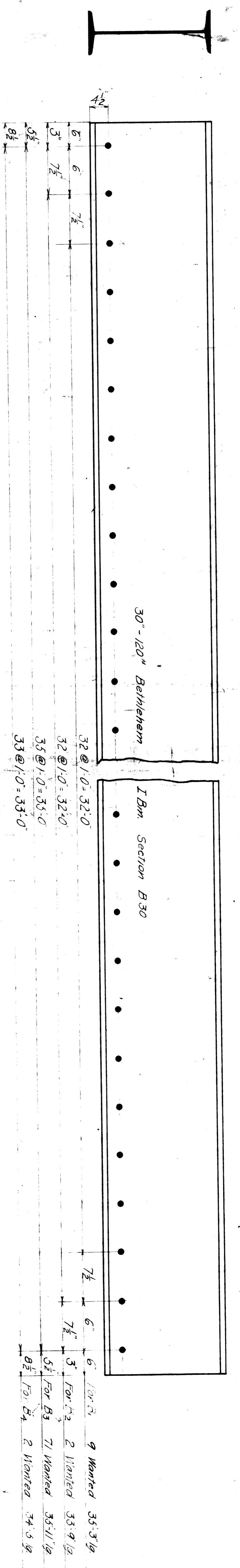
Other beams for these bridges, shown on separate sheet.

M. C. R. R. Div. - **MANHATTAN**
 Bridge - **Longy Road Bridges #1, 2, 3**
 Beams for floor and girders

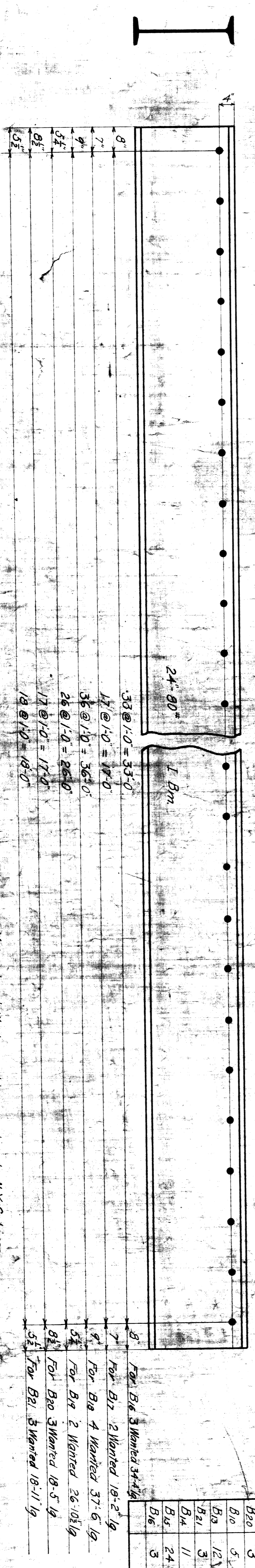
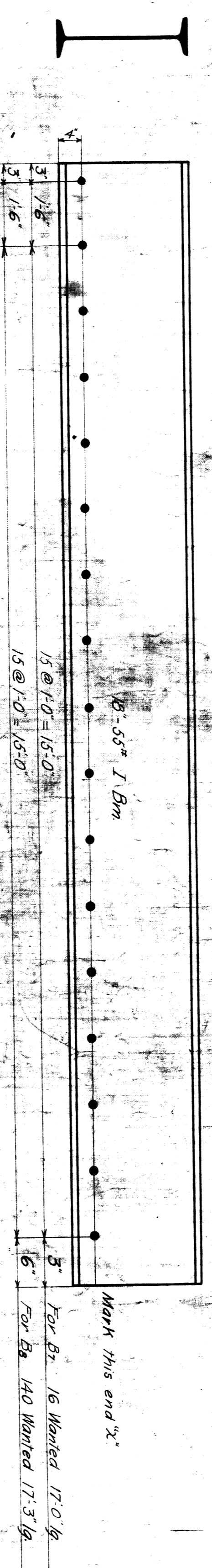
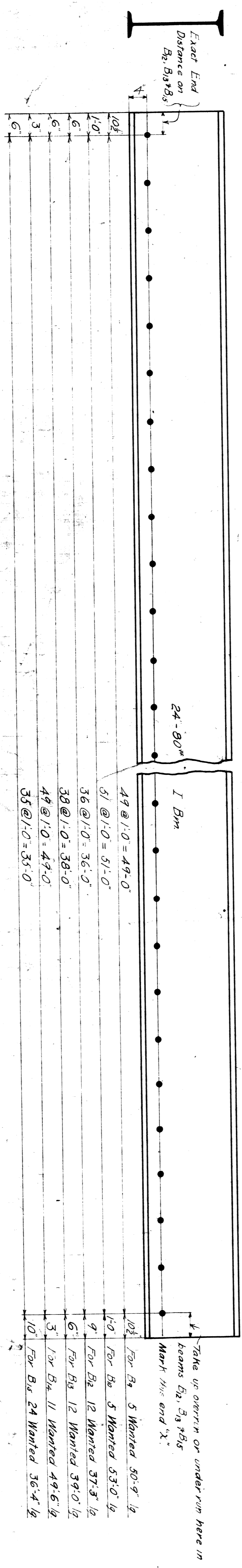
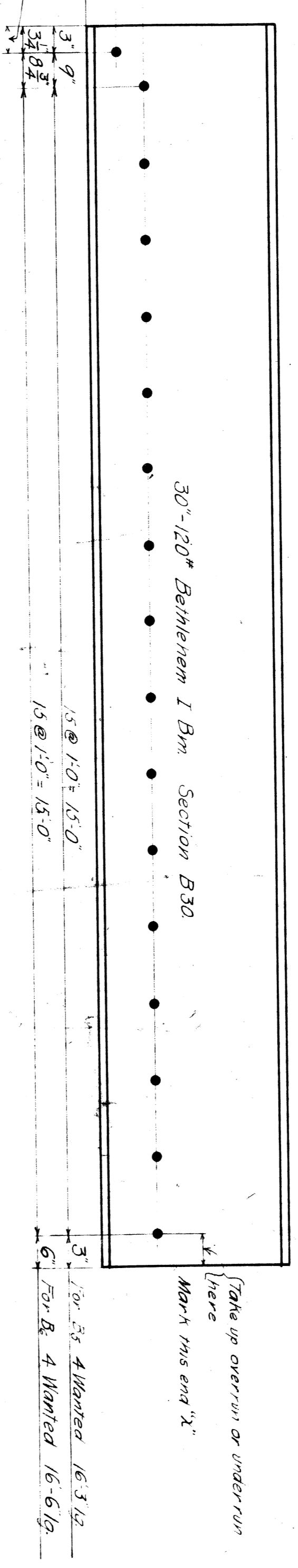
Scale: 3/4" = 1'-0"
 Drawn by: [Signature]
 Checked by: [Signature]
 Civil Engineer: [Signature]
 Date: 10/22/28

Sheet 4 of 4

10/22-28 4 of 4



Exact End Distance on B₁ B₂ B₃



Material and Workmanship according to N.Y.C. Lines
 Specifications 1910, except as noted.
 Holes punched 1/2", no reaming.
 No shop paint shall be applied.

Mark	No	Section	Length	Street	Span
B ₁	9	Bethlehem I Bm 30'-120"	35'-0"	Central	#4
B ₂	2	Bethlehem I Bm 30'-120"	33'-9"	"	"
B ₃	4	Bethlehem I Bm 30'-120"	16'-3"	"	"
B ₄	16	I Bm 18'-55"	17'-0"	"	"
B ₅	2	I Bm 24'-80"	18'-2"	"	"
B ₆	2	Bethlehem I Bm 30'-120"	34'-5"	"	#5
B ₇	2	Bethlehem I Bm 30'-120"	35'-11"	"	"
B ₈	71	Bethlehem I Bm 30'-120"	16'-6"	"	"
B ₉	4	Bethlehem I Bm 30'-120"	17'-3"	"	"
B ₁₀	140	I Bm 18'-55"	37'-6"	"	"
B ₁₁	4	I Bm 24'-80"	26'-10"	"	"
B ₁₂	2	I Bm 24'-80"	50'-9"	Long	#1
B ₁₃	5	I Bm 24'-80"	37'-3"	"	"
B ₁₄	12	I Bm 24'-80"	18'-5"	"	"
B ₁₅	3	I Bm 24'-80"	53'-0"	"	#2
B ₁₆	3	I Bm 24'-80"	39'-0"	"	"
B ₁₇	12	I Bm 24'-80"	18'-11"	"	"
B ₁₈	11	I Bm 24'-80"	49'-6"	"	#3
B ₁₉	4	I Bm 24'-80"	36'-4"	"	"
B ₂₀	24	I Bm 24'-80"	34'-4"	"	"
B ₂₁	3	I Bm 24'-80"	34'-4"	"	"

Additional beams detailed on separate sheet

M.C.R.R.-Div.- Main Line
 Bridge
 Steel for Spans #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #12, #13, #14, #15, #16, #17, #18, #19, #20, #21, #22, #23, #24, #25, #26, #27, #28, #29, #30, #31, #32, #33, #34, #35, #36, #37, #38, #39, #40, #41, #42, #43, #44, #45, #46, #47, #48, #49, #50, #51, #52, #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, #65, #66, #67, #68, #69, #70, #71, #72, #73, #74, #75, #76, #77, #78, #79, #80, #81, #82, #83, #84, #85, #86, #87, #88, #89, #90, #91, #92, #93, #94, #95, #96, #97, #98, #99, #100

LONG ISLAND RAILROAD
 Bridge Engineer
 Chief Engineer
 Approved
 SHEET

FILE NO 42-24