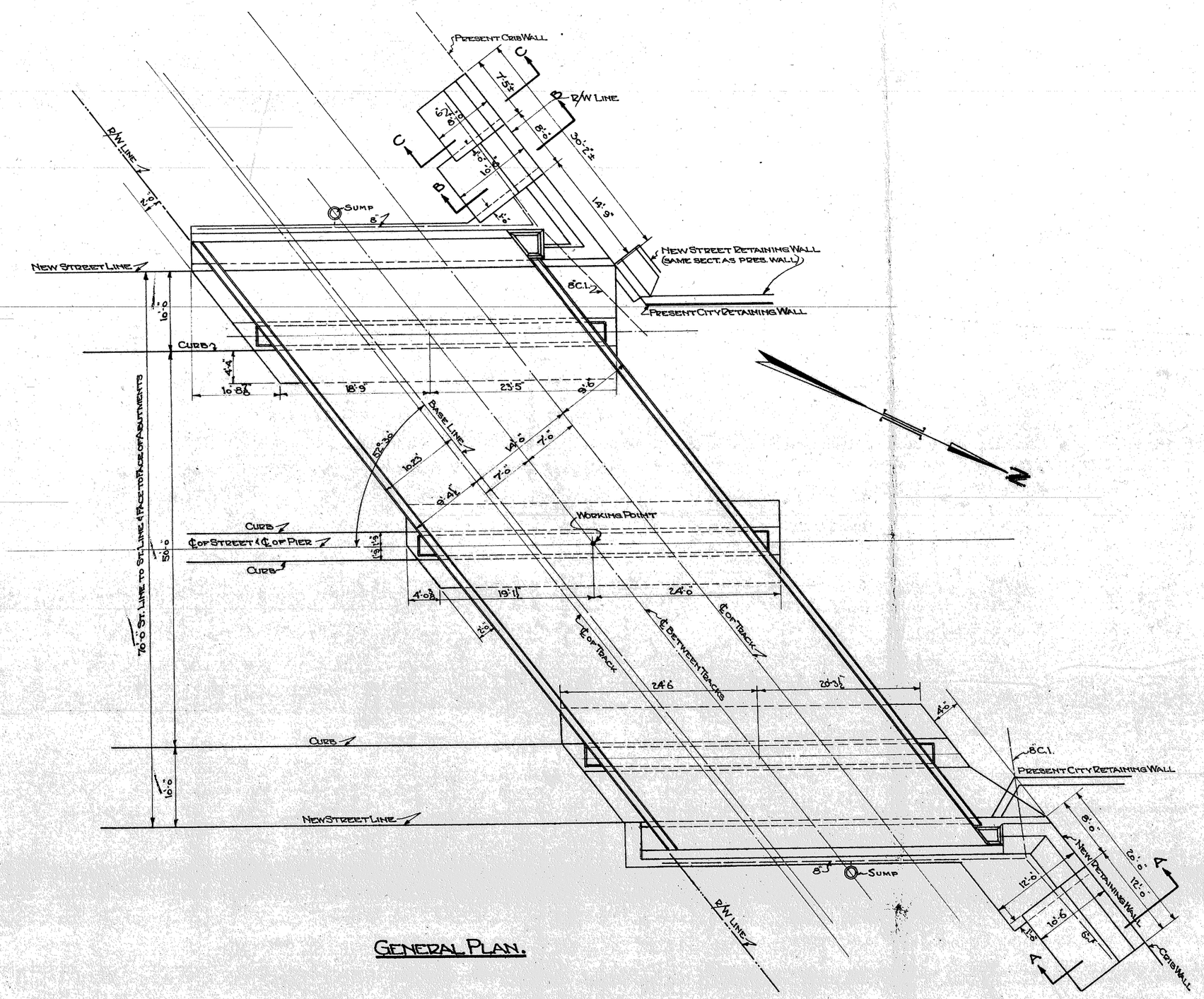
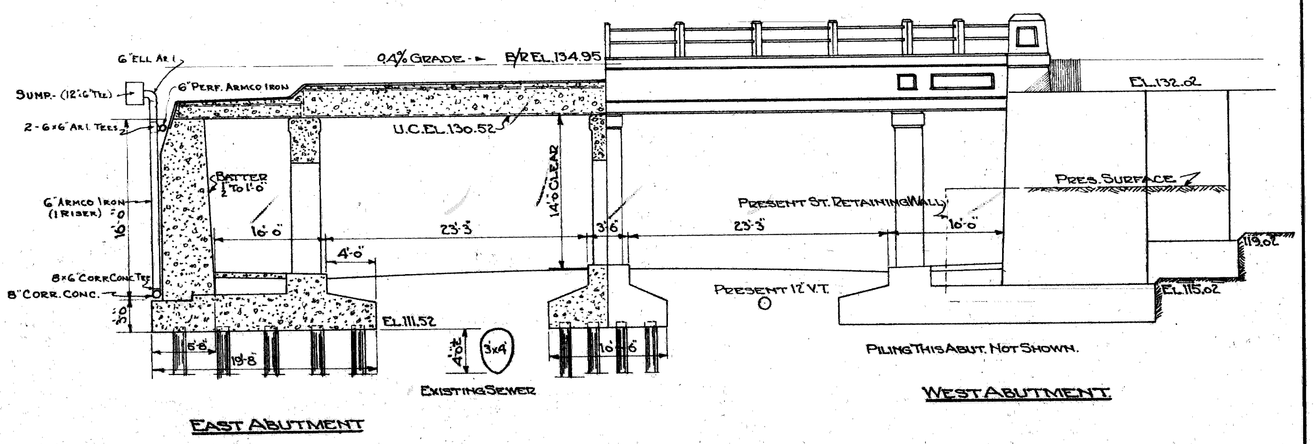
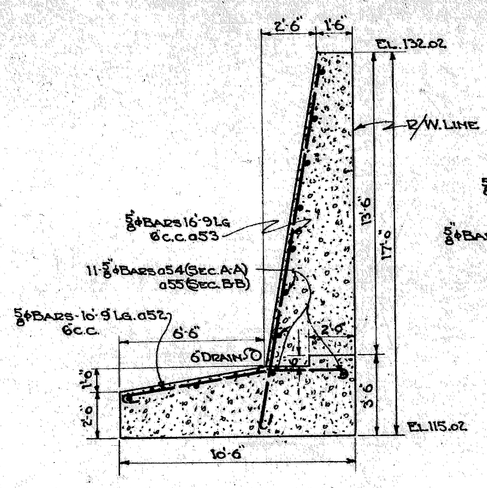


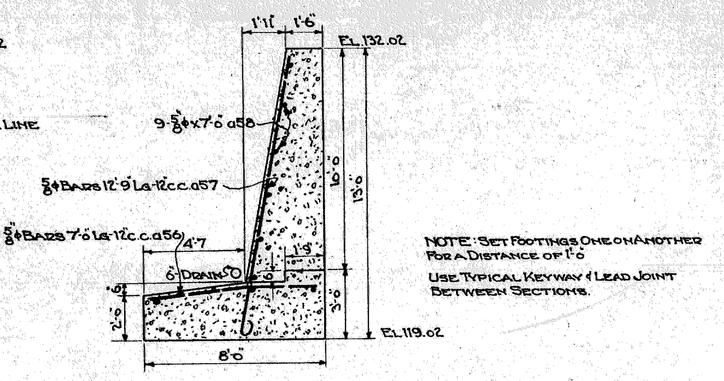
General Plan.



Half Section. Scale 1/8"=1'-0" Half Elevation.



Sections A-A & B-B



Section C-C

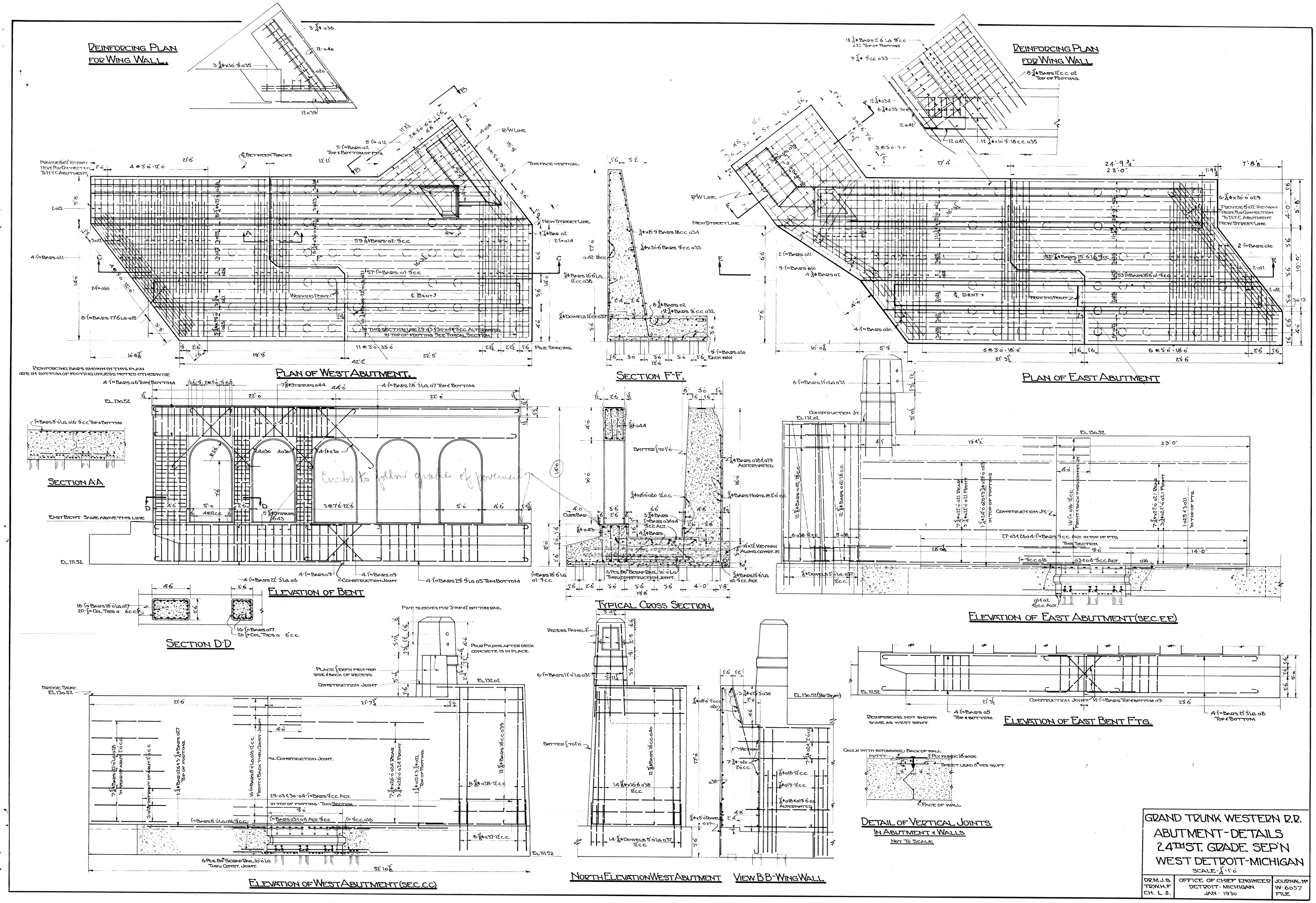
NOTE: Set Footings One on Another for a Distance of 1'-0

Use Typical Keyway & Lead Joint Between Sections.

Scale 1/4"=1'-0"

GRAND TRUNK WESTERN R.R. GENERAL PLAN & SECTIONS 24TH ST. GRADE SEPARATION WEST DETROIT-MICHIGAN SCALE: 1/8"=1'-0"		
DR. M.J.B. TR. W.H.P. CH. L.S.	OFFICE OF CHIEF ENGINEER DETROIT, MICHIGAN. JAN - 1931	JOURNAL 119 W-6056 FILE

File XU22-4 57KB-20


REINFORCING PLAN FOR WING WALL.
PLAN OF WEST ABUTMENT.
SECTION F-F.
REINFORCING PLAN FOR WING WALL
PLAN OF EAST ABUTMENT
SECTION A-A
ELEVATION OF BENT
TYPICAL CROSS SECTION.
ELEVATION OF EAST ABUTMENT (SEC. EE)
SECTION D-D
ELEVATION OF WEST ABUTMENT (SEC. CC)
NORTH ELEVATION WEST ABUTMENT
VIEW B-B-WING WALL
ELEVATION OF EAST BENT FTG.
DETAIL OF VERTICAL JOINTS IN ABUTMENT & WALLS
NOT TO SCALE
GRAND TRUNK WESTERN R.R.
ABUTMENT-DETAILS
24TH ST. GRADE SEP'N
WEST DETROIT-MICHIGAN
SCALE-1/4"=1'-0"
DR. M.J.B.
TR. W.H.F.
CH. L.S.
OFFICE OF CHIEF ENGINEER
DETROIT-MICHIGAN
JAN-1930
JOURNAL No. W-6057
FILE
File XU22-5
326B-19

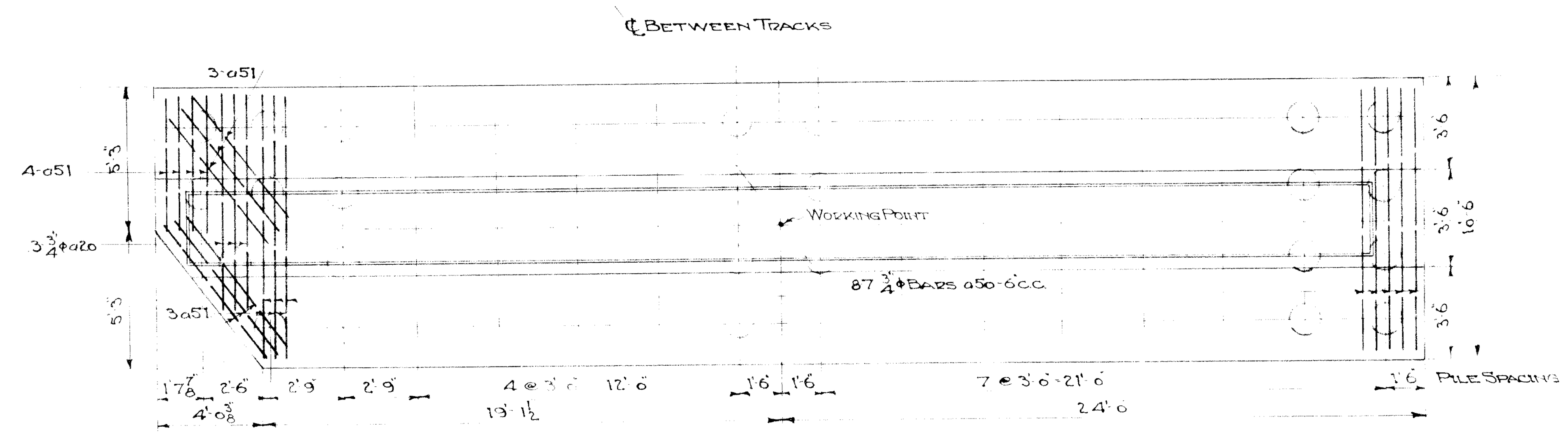
ABUTMENTS - BENTS AND RIGHT OF WAY WALLS

BILL OF REINFORCING STEEL

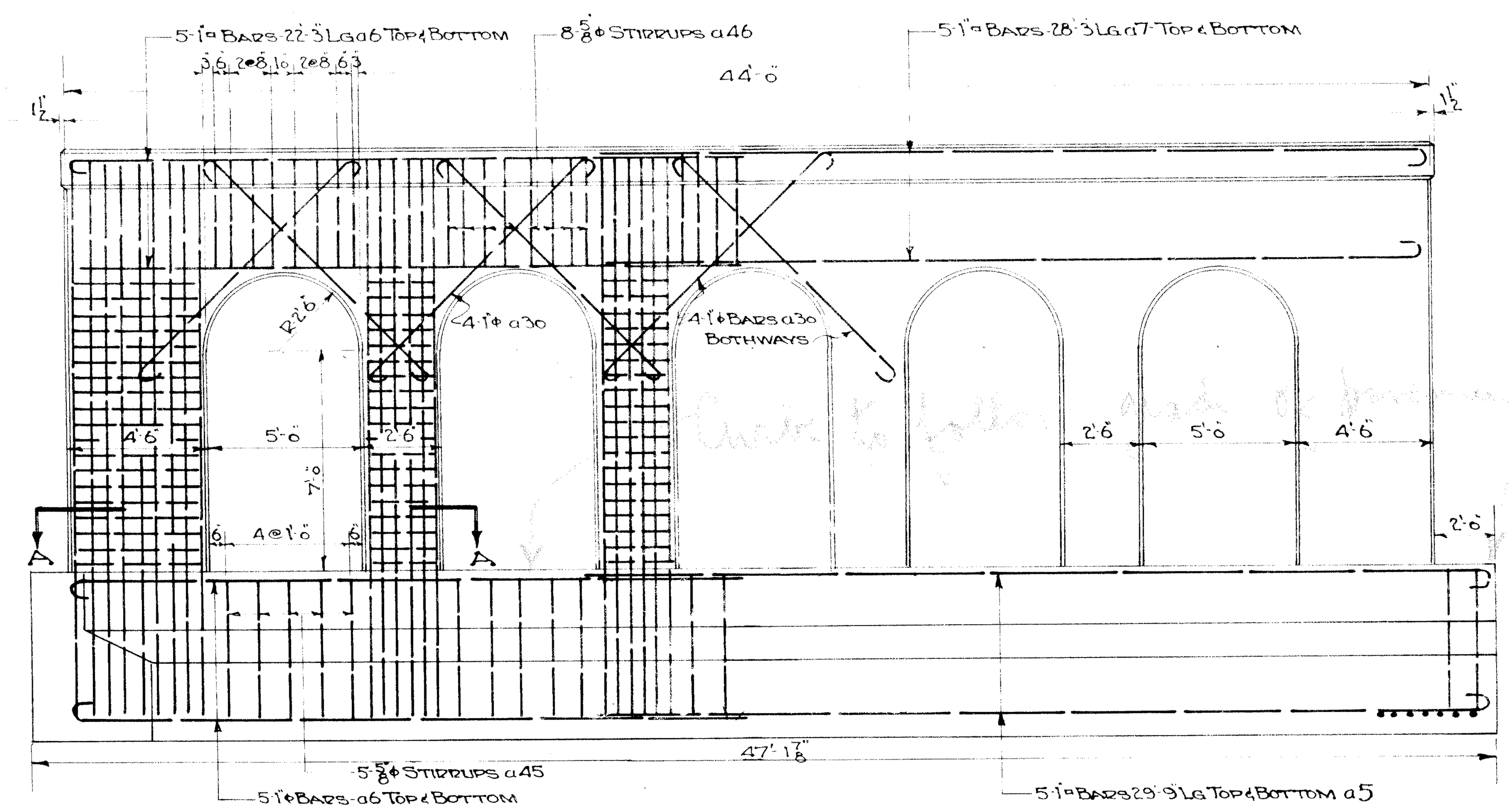
LOCATION	MK.	NO. REQ.	SIZE	LENGTH	BENDING DIAGRAM
ABUTMENT FOOTING	a1	110	1"□	18'6"	1'3" 3R 16'6" 3R 1'3"
	a2	137	7/8"φ	15'6"	13'0"
TOP	a3	56	1"□	11'0"	10'0"
ABUTMENT FOOTING TOP	a4	56	1"□	12'0"	3R 2'6" 3'6" 1'3"
BENT FOOTINGS	a5	26	1"□	29'9"	1'3" 3R 28'6"
& UPPER BEAMS	a6	44	1"□	22'3"	21'3"
BENTS UPPER BEAM	a7	26	1"□	28'3"	27'0"
BENT FOOTING	a8	8	1"□	21'3"	20'0"
THRU CONST. JT FTG SIDE BENTS	a9	16	1"□	13'2"	1'3" 3R 2'6" 5'8" 2'6" 3R 1'3"
ABUTMENT FOOTINGS	a10	35	1"□	13'6"	1'3" 3R 16'6" 3R 1'3"
	a11	8	1"□	11'6"	9'0"
	a12	14	1"□	9'6"	7'6"
	a13	5	1"□	5'0"	STRAIGHT
	a14	6	1"□	16'6"	1'3" 3R 14'6" 3R 1'3"
	a15	8	1"□	17'6"	STRAIGHT
THRU CONST. JOINT ABUT. FTG. WALL	a16	168	1"□	8'0"	"
VERTICAL IN COLUMNS	a17	332	1"□	18'0"	
ABUTMENT	a18	97	7/8"φ	16'3"	15'0" 3R 1'3"
	a19	97	7/8"φ	11'3"	10'0"
VERT. IN ABUTS. & HORIZ. CTR. B. FTG.	a20	112	3/4"φ	8'0"	STRAIGHT
LONGITUDINAL IN FOOTING	a21	57	3/4"φ	22'0"	
	a22	11	3/4"φ	30'0"	
	a23	3	3/4"φ	28'0"	
	a24	18	3/4"φ	26'0"	
	a25	17	3/4"φ	19'0"	
	a26	17	3/4"φ	24'0"	
	a27	6	3/4"φ	17'0"	
	a28	23	3/4"φ	21'0"	
	a29	6	3/4"φ	20'0"	
DIAGONAL IN BENTS	a30	120	1"φ	11'6"	1'3" 3R 9'6" 3R 1'3"
DOWELS TO PYLON	a31	12	1"φ	11'0"	STRAIGHT
TOP OF FTG. WING WALL E. ABUT.	a32	12	3/4"φ	12'6"	10'6" 3R 1'3"
VERT. REAR OF WING WALL	a33	15	3/4"φ	20'6"	3R 1'3" 19'3"
HORIZ. E. ABUT.	a34	12	3/4"φ	8'9"	7'6"
	a35	15	3/4"φ	10'9"	9'6"
W. ABUT.	a36	3	3/4"φ	13'3"	12'0"
DOWELS FACE OF WING WALLS	a37	35	3/4"φ	5'0"	STRAIGHT
VERTICAL FACE OF WING WALLS	a38	35	5/8"φ	16'6"	
HORIZONTAL	a39	12	5/8"φ	12'9"	2'0" 2R 10'0"
	a40	12	5/8"φ	15'9"	13'0"
HORIZ. FACE OF W. WALLS E. ABUT.	a41	12	5/8"φ	10'3"	8'6" R 2"
	a42	12	5/8"φ	8'6"	6'9"

BILL OF REINFORCING STEEL

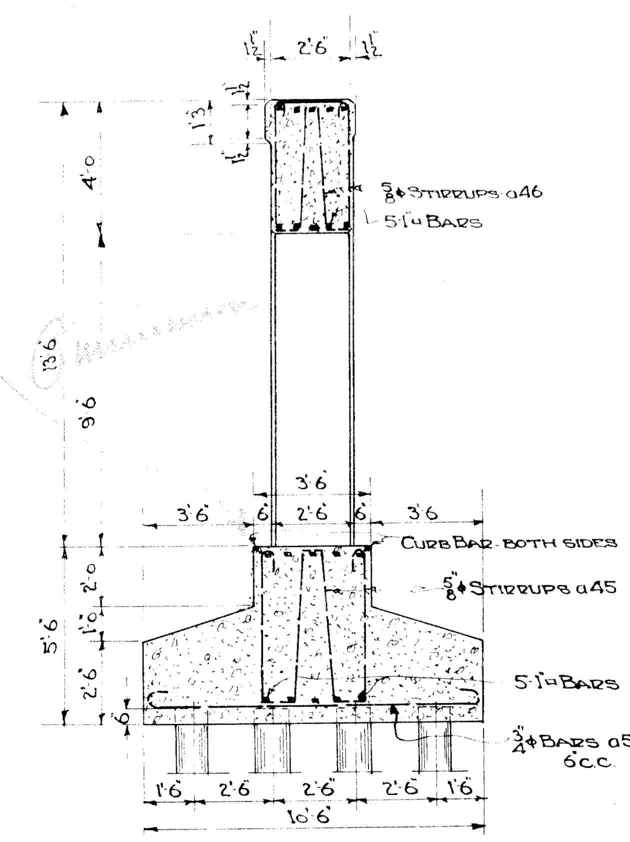
LOCATION	MK.	NO. REQ.	SIZE	LENGTH	BENDING DIAGRAM
STIRRUPS, FOOTING BEAM SIDE BENTS	a43	52	5/8"φ	20'2"	4'0" TO 0 ; 3'6" TO 0
TOP BEAM SIDE BENTS	a44	70	5/8"φ	17'2"	3'6" TO 0 ; 2'2" TO 0
STIRRUPS, FOOTING BEAM CENTER BENT	a45	27	5/8"φ	21'2"	4'6" TO 0 ; 3'6" TO 0
TOP BEAM CENTER BENT	a46	40	5/8"φ	16'4"	3'6" TO 0 ; 2'2" TO 0
COLUMN TIES	a47	236	1/2"□	9'4"	2'2" TO 0 ; 2'2" TO 0
COLUMN TIES	a48	118	1/2"□	13'0"	3'11" TO 0 ; 2'2" TO 0
FOOTING	a50	87	3/4"φ	12'0"	1'3" 3R 9'6" 3R 1'3"
	a51	10	3/4"φ	5'6"	STRAIGHT
R/W RET. WALL SEC. AA & BB	a52	40	5/8"φ	16'9"	9" 2R 6'3" 3'0" 2R 9"
SEC. AA & BB	a53	40	5/8"φ	16'9"	16'0" 2R 9"
SEC. AA	a54	11	5/8"φ	11'0"	STRAIGHT
SEC. BB	a55	11	5/8"φ	7'6"	
SEC. BB	a56	9	5/8"φ	7'0"	4'6" 3'0"
SEC. BB	a57	9	5/8"φ	12'9"	12'0" 2R 9"
SEC. BB	a58	9	5/8"φ	7'0"	STRAIGHT



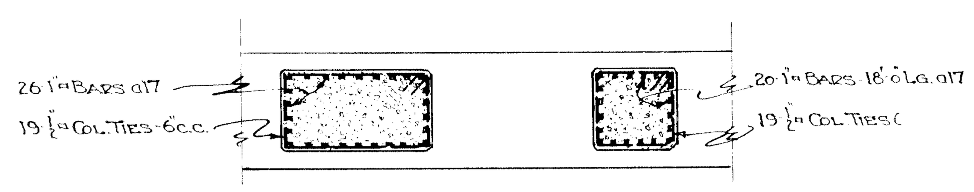
PLAN OF CENTER BENT



ELEVATION OF CENTER BENT



SECTION

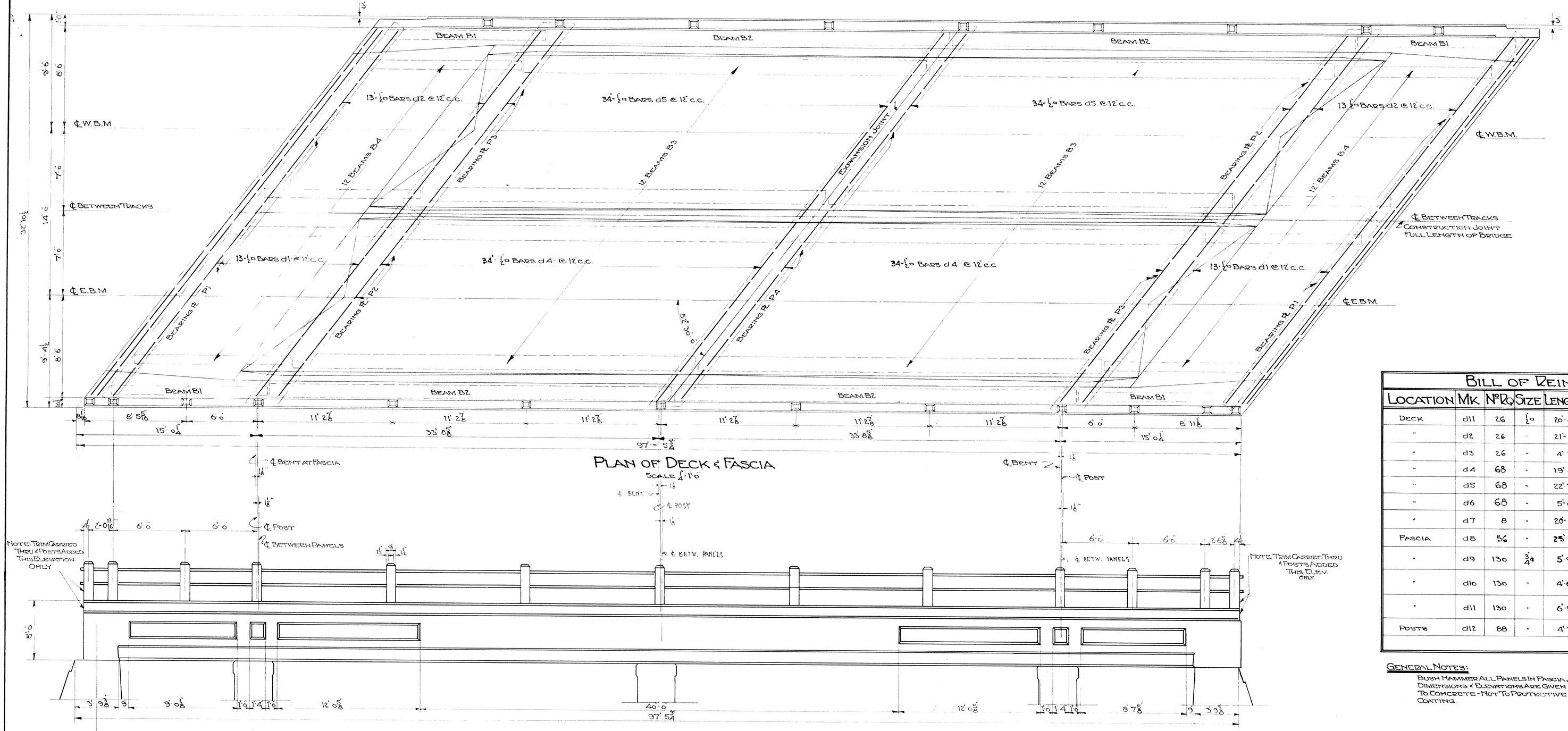


SECTION A-A

GRAND TRUNK WESTERN R.R.
DETAILS OF CTR. BENT & REINF. PLAN
24TH ST. GRADE SEPARATION
WEST DETROIT - MICHIGAN.
SCALE 1/4" = 1'0"

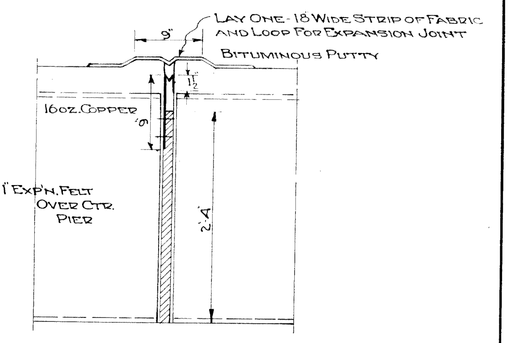
DR. M.J.B. TR. W.H.F. CH. L.S.	OFFICE OF CHIEF ENGINEER DETROIT MICHIGAN JAN. 1931	JOURNAL NO. W. 6058 FILE.

File XU22-6



PLAN OF DECK & FASCIA

SCALE ¼"=1'-0"



EXP'N JT. OVER CTR PIER

BILL OF REINFORCING STEEL

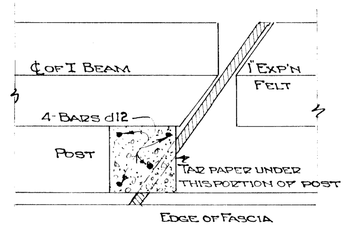
LOCATION	MK.	No. Pcs.	SIZE	LENGTH	BENDING DIAGRAM.
DECK	d11	26	½ϕ	26'-4"	
"	d2	26	"	21'-11"	
"	d3	26	"	4'-1"	
"	d4	68	"	19'-4"	
"	d5	68	"	22'-7"	
"	d6	68	"	5'-8"	
"	d7	8	"	20'-0"	STRAIGHT
FASCIA	d8	56	"	25'-6"	"
"	d9	130	¾ϕ	5'-9"	
"	d10	130	"	4'-6"	
"	d11	130	"	6'-9"	
POSTS	d12	88	"	4'-3"	STRAIGHT.

GENERAL NOTES:

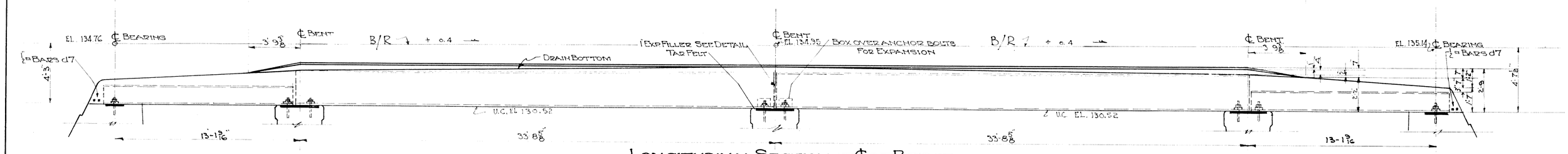
BUSH HAMMER ALL PANELS IN FASCIA. DIMENSIONS & ELEVATIONS ARE GIVEN TO CONCRETE - NOT TO PROTECTIVE COATING.

ELEVATION OF FASCIA.

SCALE ¼"=1'-0"

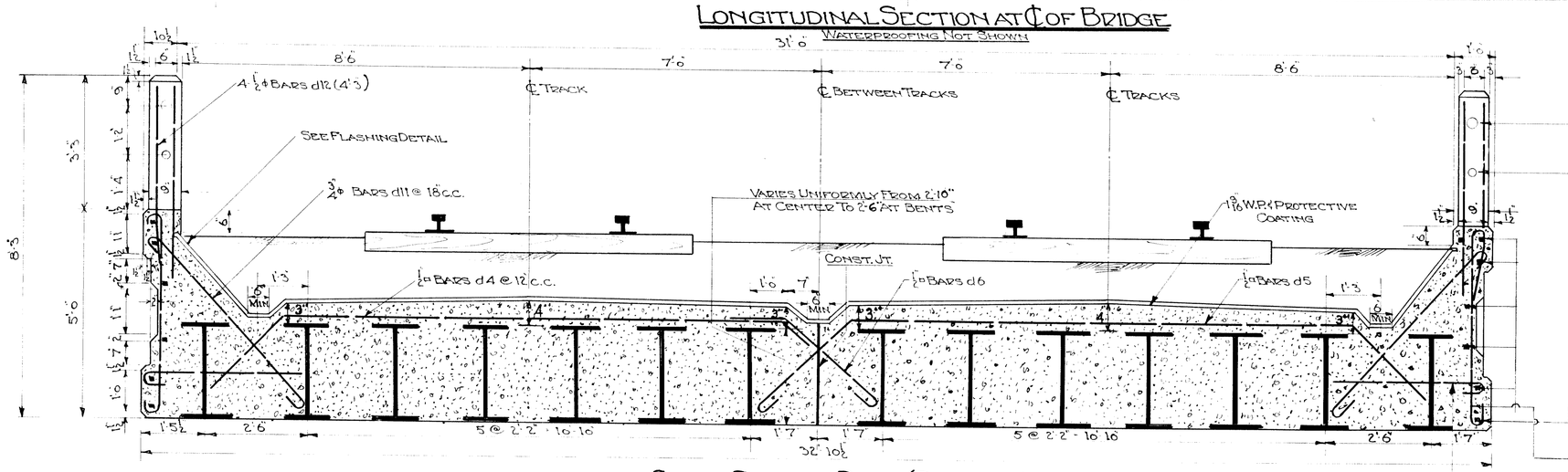


EXP'N AT FASCIA.



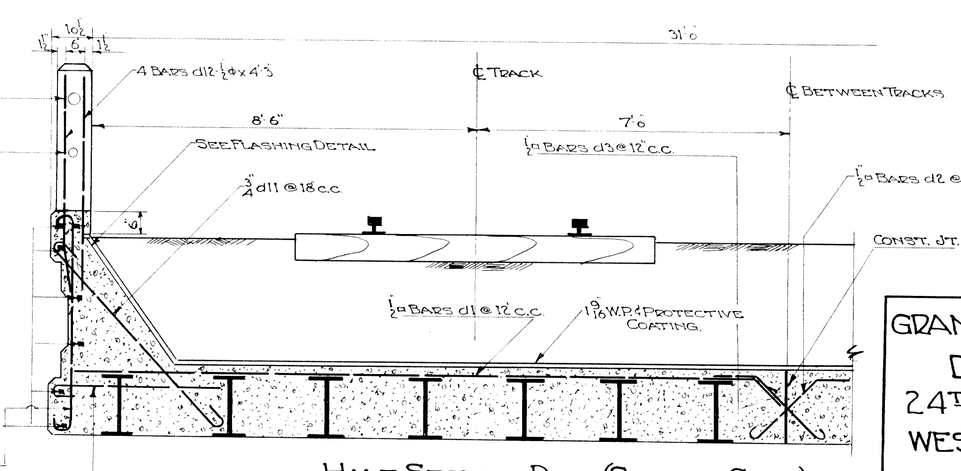
LONGITUDINAL SECTION AT ℄ OF BRIDGE

31'-0 WATERPROOFING NOT SHOWN



CROSS SECTION DECK (ROADWAY SPAN)

SCALE ¼"=1'-0"



HALF SECTION DECK (SIDEWALK SPAN)

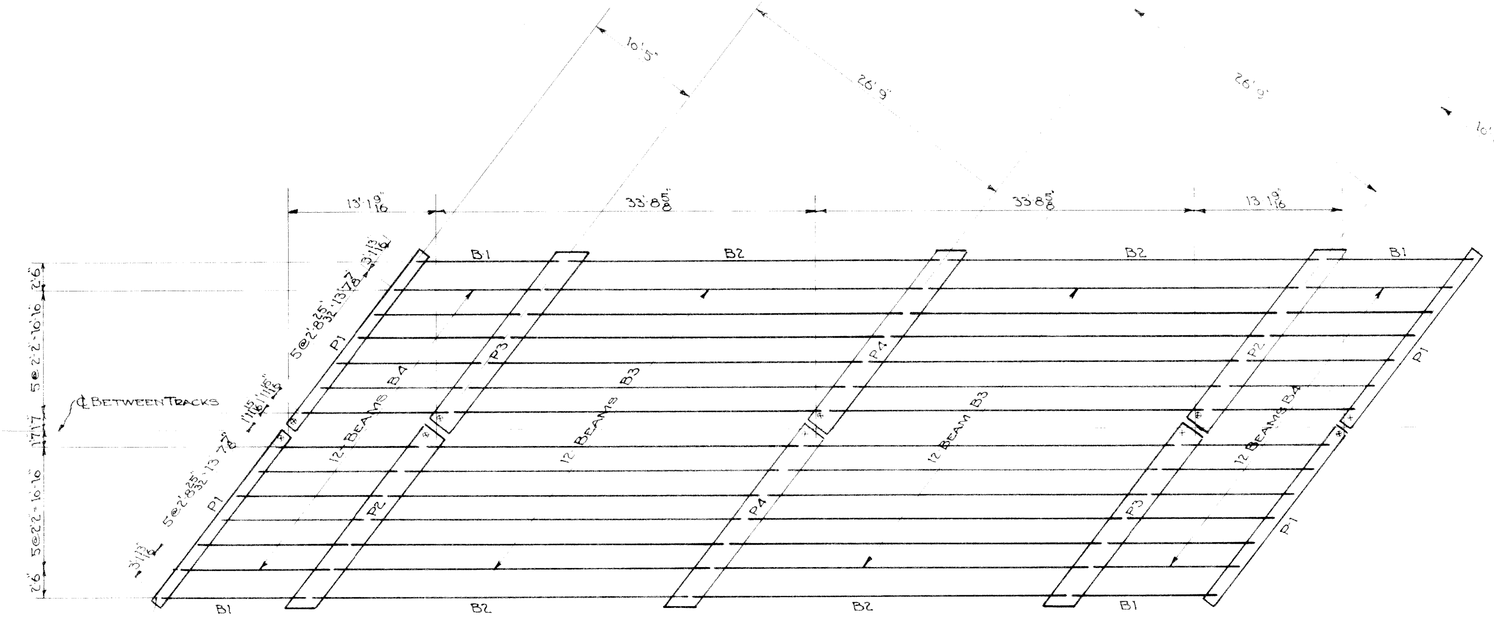
SCALE ¼"=1'-0"

GRAND TRUNK WESTERN R.R.
DECK DETAILS
24TH ST. GRADE SEPARATION
WEST DETROIT - MICHIGAN
SCALE AS NOTED

DR. A.M.S. TR. W.H.F. CH. L.S.	OFFICE OF CHIEF ENGINEER DETROIT, MICHIGAN FEB. 1931	JOURNAL No. W 6659 FILE

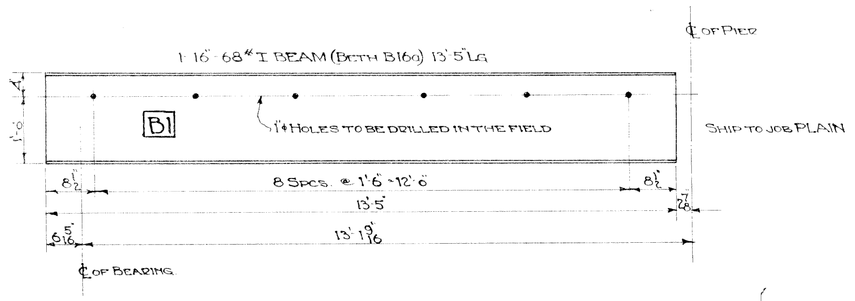
File XU 22-7

526B-17

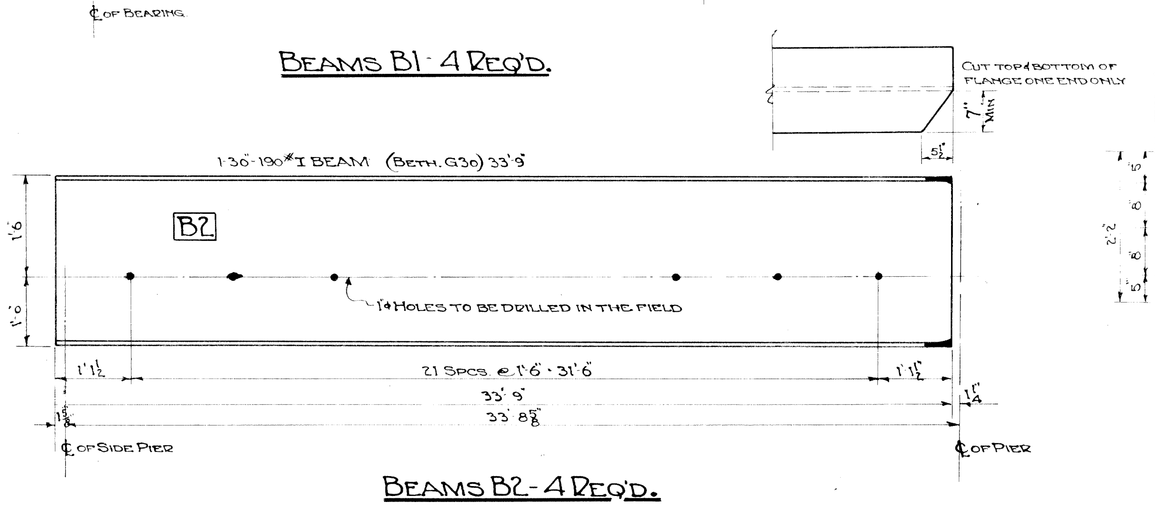


ERECTION DIAGRAM - DECK STEEL.

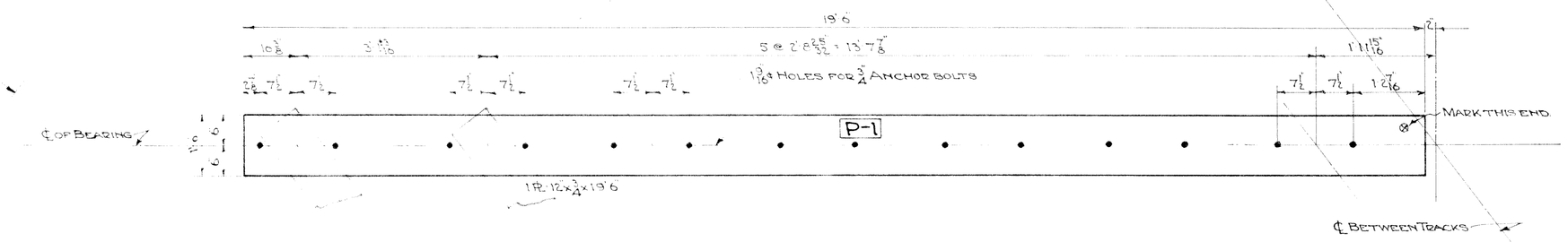
SCALE 1/4" = 1'-0



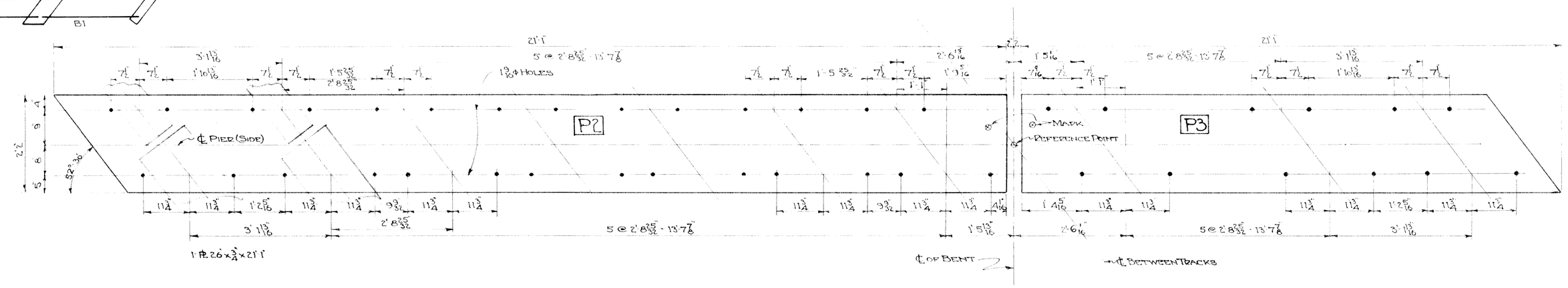
BEAMS B1 - 4 REQ'D.



BEAMS B2 - 4 REQ'D.

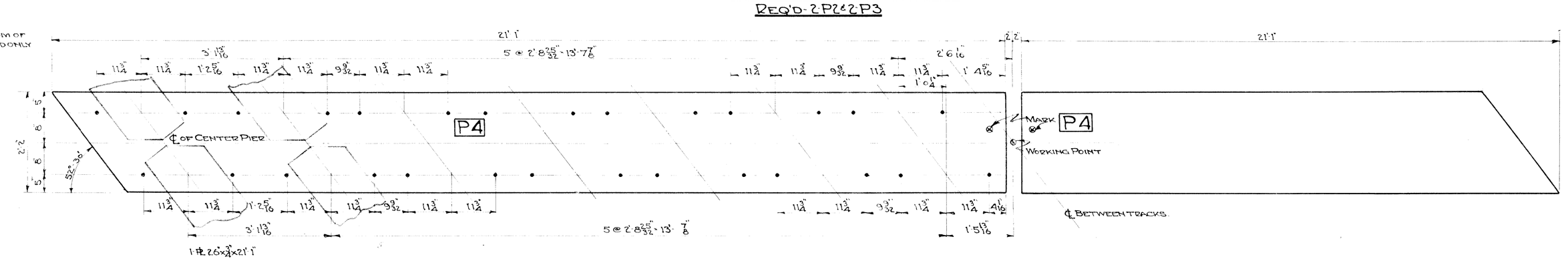


BEARING PL. P1 - 4 REQ'D.



BEARING PLATES P2 & P3

REQ'D - 2 P2 & 2 P3



BEARING PLATE P4 - 2 REQ'D.

DETAILS OF BEARING PLATES.

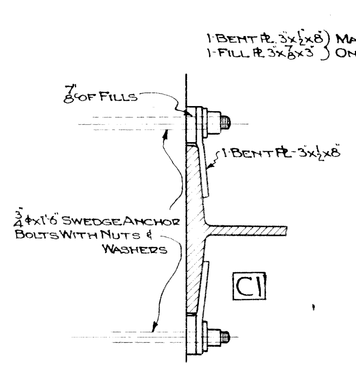
SCALE 1/4" = 1'-0

BILL OF STRUCTURAL STEEL			
No. REQ.	MK.	DESCRIPTION	REMARKS
4	B1	BETH. 16-68# I BEAM 13'5" LG.	SHIPPED PLAIN - DRILL IN FIELD
4	B2	BETH. 36-190# I, - 33'9" LG	T & BOTT. FLG. CUT AS SHOWN DRILL IN FIELD
16	B3	BETH. 36-190# I - 33'9" LG	T & BOTT. FLG. CUT AS SHOWN - ONE END
24	B4	BETH. 16-68# I - 13'5" LG.	SHIPPED PLAIN
4	P1	12" x 3/4" x 19'6"	ABUTMENT BEAR. PL.
2	P2	26" x 3/4" x 21'1"	SIDE PIER BEAR. PL.
2	P3	26" x 3/4" x 21'1"	SIDE PIER BEAR. PL.
2	P4	26" x 3/4" x 21'1"	CENTER PIER BEAR. PL.
112	C1	CLIPS FOR 36-190# Is	2 PLS EACH
112	C2	CLIPS FOR 16-66# Is	2 PLS EACH
224		3/4" SWEDGE ANCHOR BOLTS WITH NUTS & WASHERS	x 18" LG

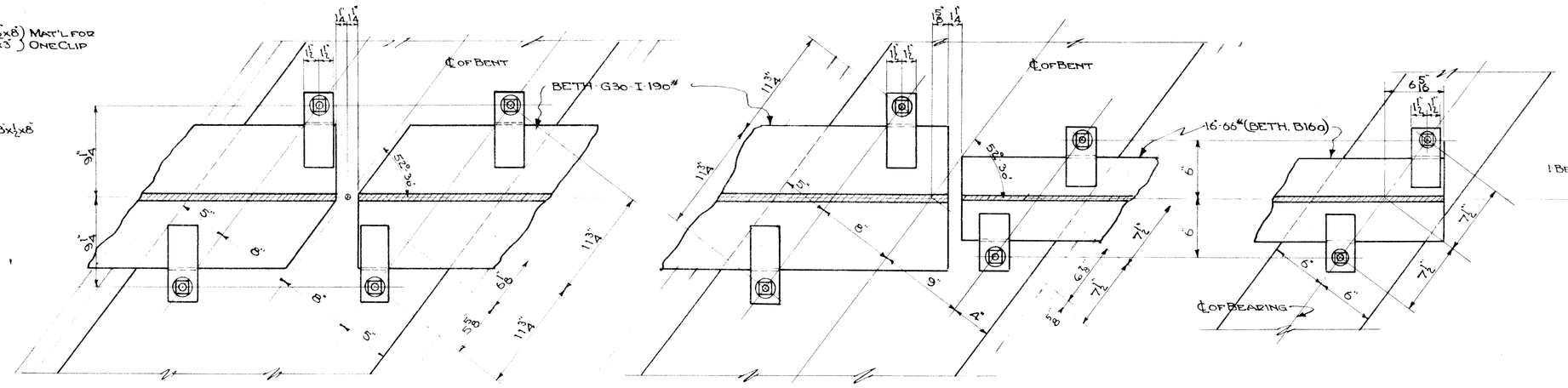
8 B3 BETH. 36-190# I - 33'9" LG. TOP & BOTT. FL. CUT AS SHOWN. ONE END.

NOTE: BEAMS B3 ARE TO BE USE IN TEMPORARY TRESTLE. CUT THESE BEAMS IN FIELD TO 33'9" BEFORE PLACING SAME IN PERMANENT DECK & REMARK TO B3.

NOTE: EQUIV. CARNEGIE SECTIONS MAY BE USED WITH CORRESPONDING CHANGES IN ANCHOR BOLT LAYOUT & CLIP DN.
STEEL SECTIONS SHOWN ARE NEW SERIES.



CLIPS FOR 36" 190# Is



CLIPS FOR 16" 68# Is

LAYOUT FOR ANCHOR BOLTS & BEAM CLIPS

SCALE 1/2" = 1'-0

GRAND TRUNK WESTERN R.R.

STEEL DETAILS

24TH ST. GRADE SEPARATION

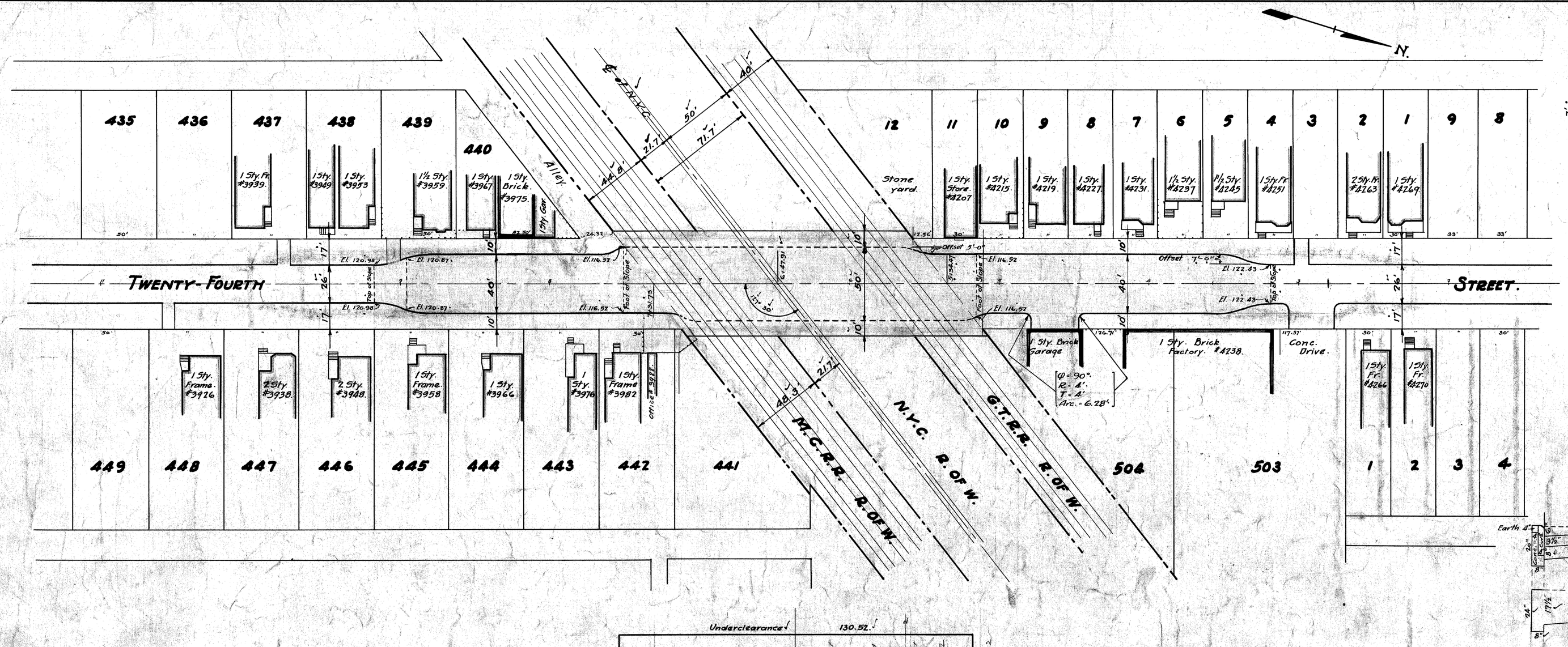
WEST DETROIT - MICHIGAN

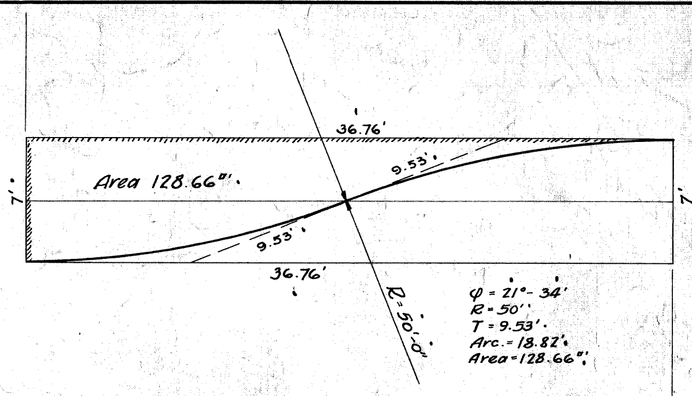
SCALE AS SHOWN

DR. M.J.B. TR. W.H.F. CH. L.S.	OFFICE OF CHIEF ENGINEER DETROIT MICHIGAN FEB 1931	JOURNAL No. W-6666 FILE

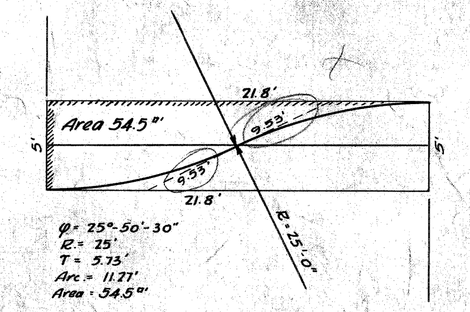
SHEET No. 12

File XU 22-8

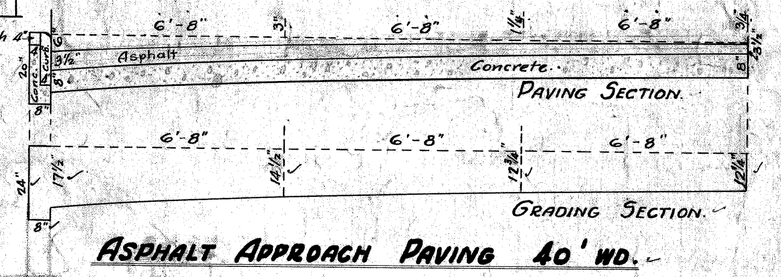




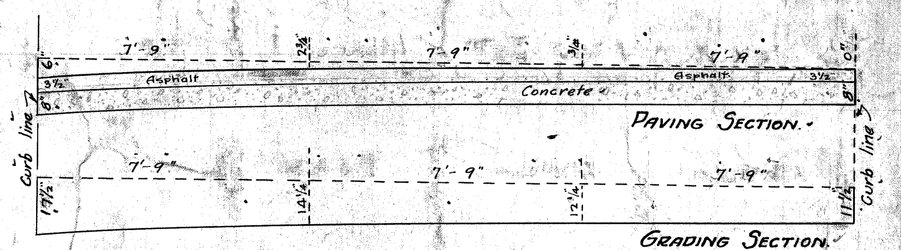
DETAIL OF CURVE FOR PAVEMENT - FOR WIDENING 26' TO 40'



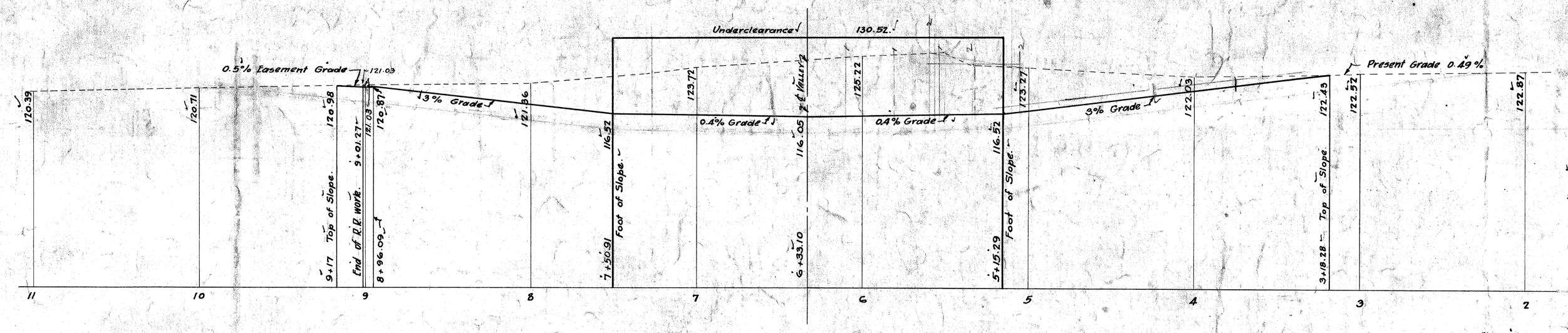
CURVE FOR WIDENING PAVEMENT 40' TO 50'



ASPHALT APPROACH PAVING 40' WD.

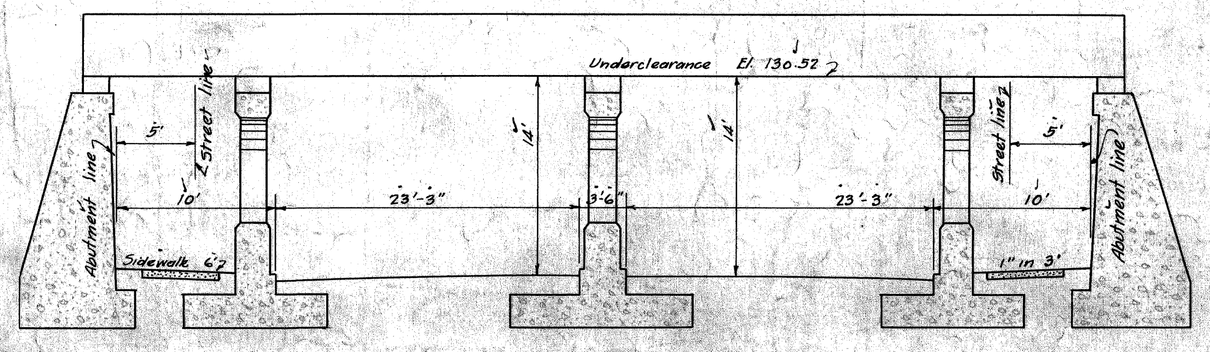


ASPHALT SUBWAY PAVING 50' WD. LESS 3.5' FOR PIER.

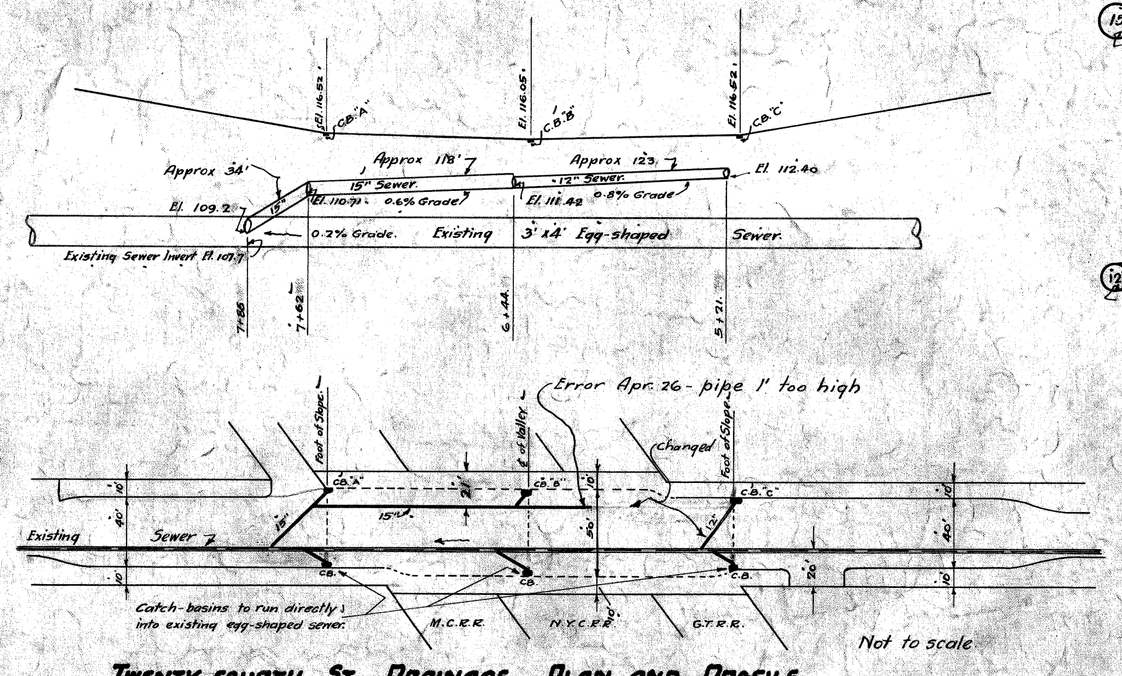


PROFILE ON TWENTY-FOURTH ST.

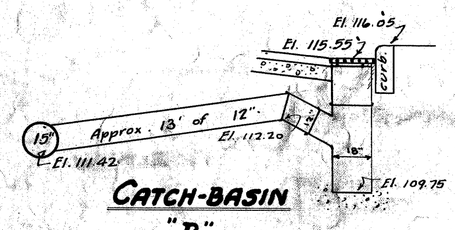
Scales: Hor. 1" = 20'. Ver. 1" = 10'.



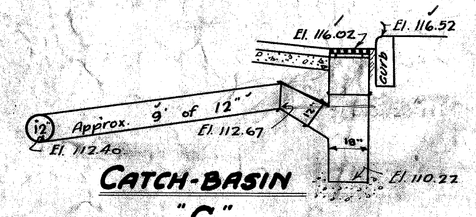
SECTIONAL ELEVATION OF SUBWAY.



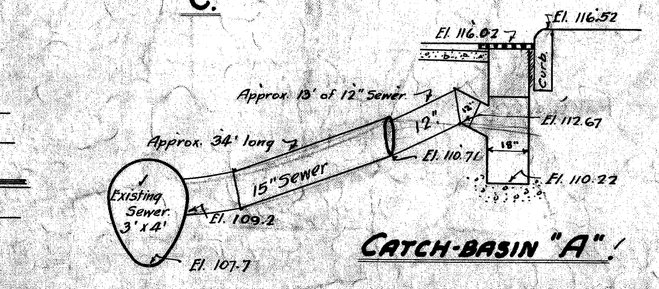
TWENTY-FOURTH ST. DRAINAGE PLAN AND PROFILE.



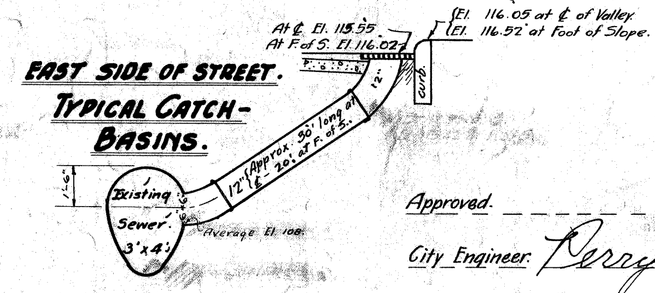
CATCH-BASIN "B".



CATCH-BASIN "C".



CATCH-BASIN "A".



Approved.

City Engineer: Percy A. Freeman

Asst. Chief Engineer M.C.R.R. Geo. H. Harris

Chief Engineer G.T.R.R. J. A. Seaman

CITY OF DETROIT.

DEPARTMENT OF PUBLIC WORKS.

OFFICE OF CITY ENGINEER.

DIVISION OF GRADE SEPARATION & BRIDGES.

TWENTY-FOURTH ST.

SCALES AS INDICATED.

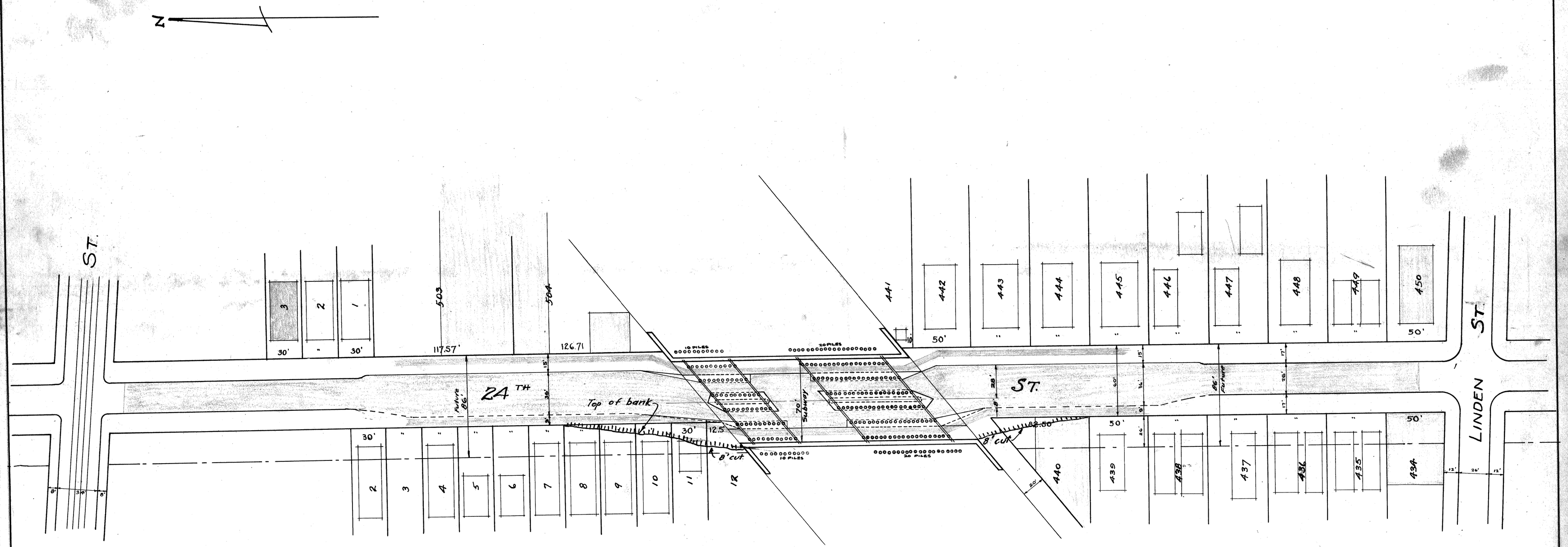
DR. BY H.J.S.

CHKD. BY R.S. 7-13-25.

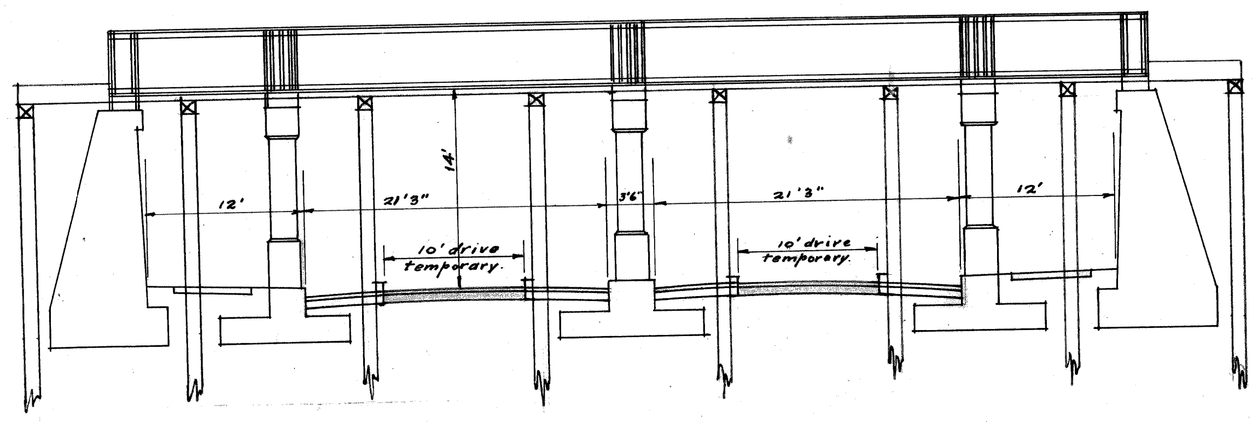
REVISED: 7-29-25
Drainage C.B. & Elev. 8-24-25
Alley drive taken off 9-22-25
Asphalt for brick paving 10-19

Field Books W-495 - 440.

File XU22-9



STREET PLAN
1" = 40'



SUBWAY SECTION
1" = 8'

CITY OF DETROIT

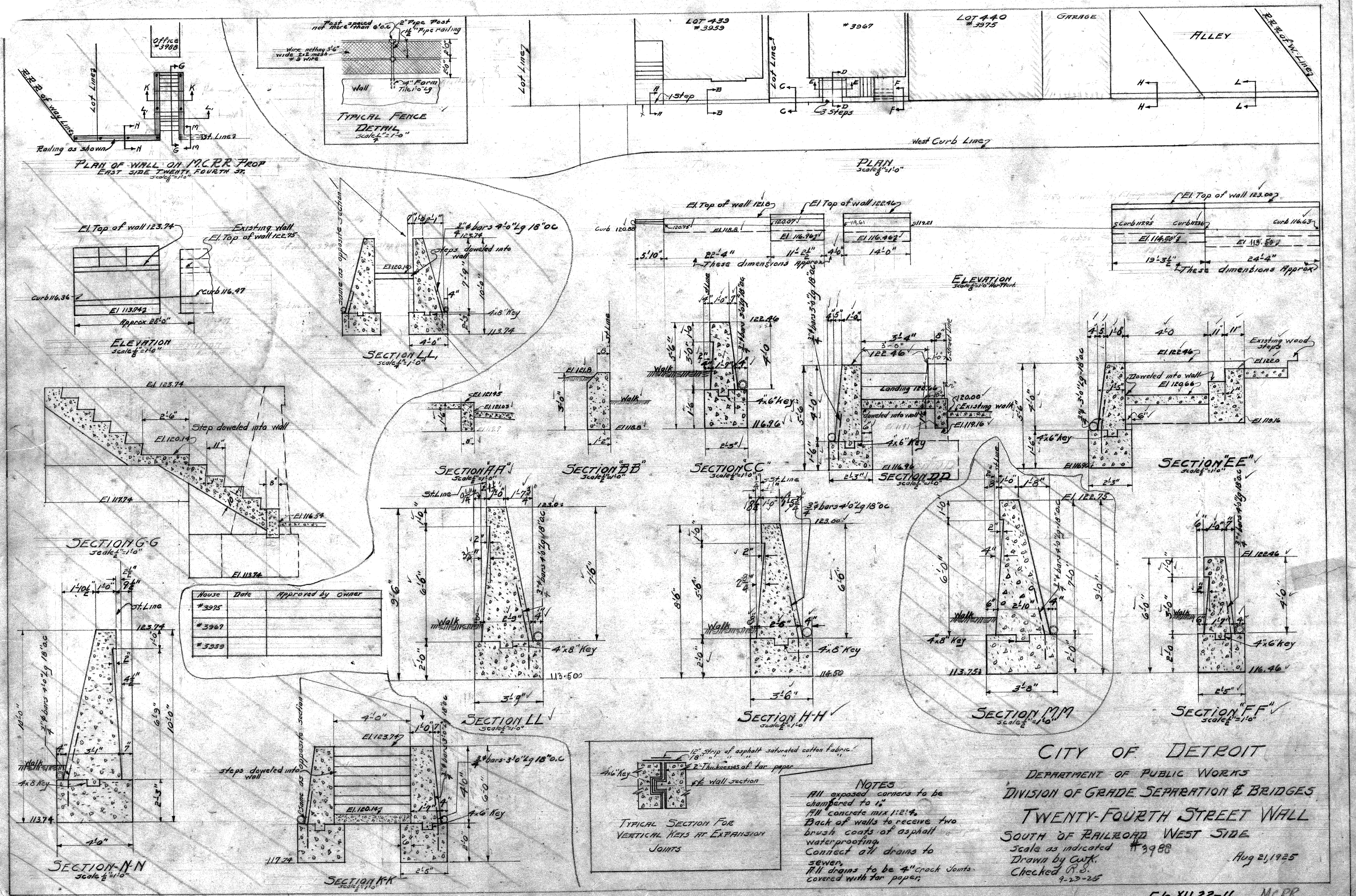
DEPARTMENT OF PUBLIC WORKS
OFFICE OF CITY ENGINEER
DIVISION OF GRADE SEPARATION & BRIDGES.

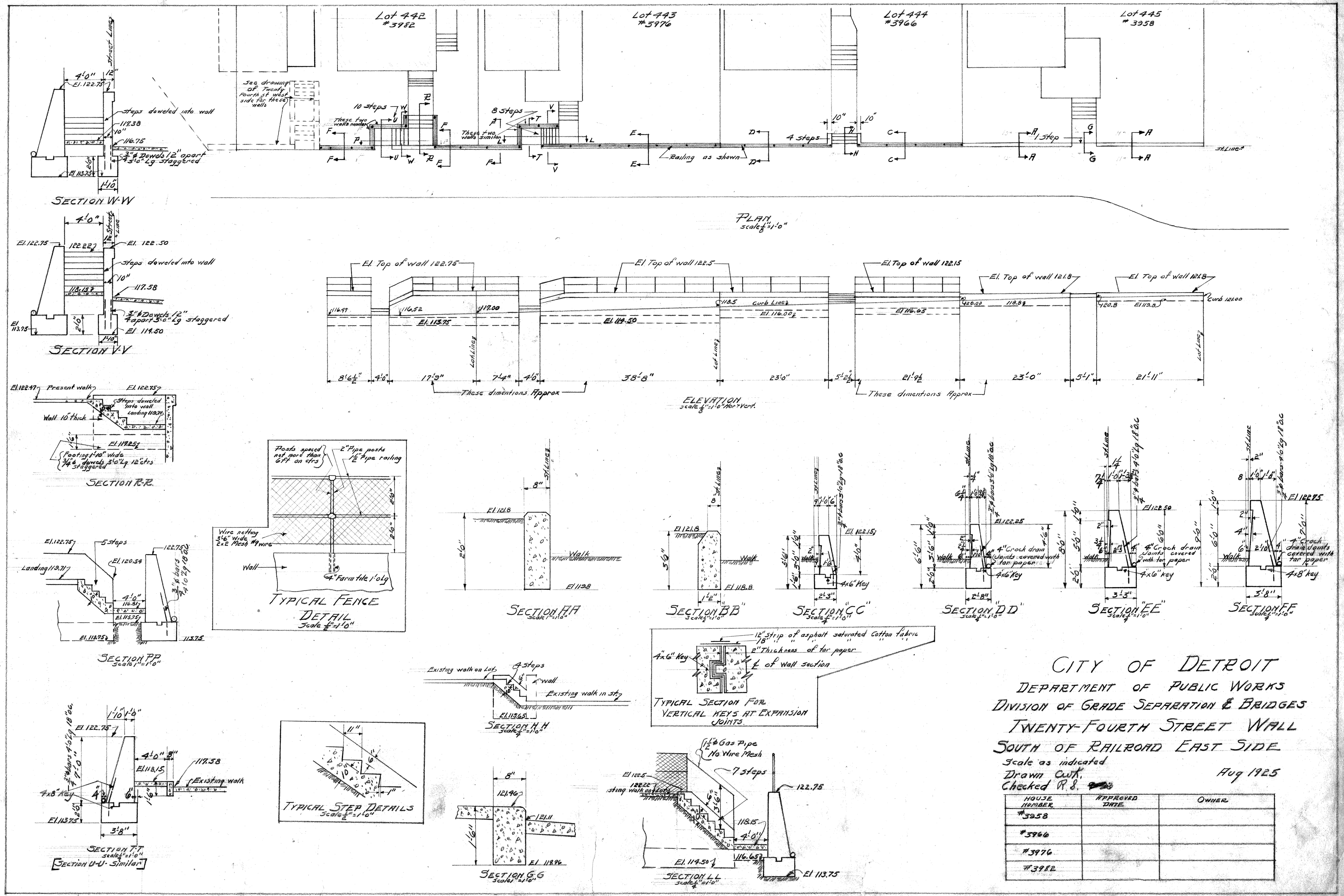
PROPOSED GRADE SEPARATION AT 24TH ST. OVER M.C.R.-N.Y.C.R. & G.T.R. TRACKS

Scales as indicated

February 17th 25.

File XU 22-10


Office #3988
R.R. R of way Line
Lot Line
Railing as shown
PLAN OF WALL ON M.C.R.R. PROP
EAST SIDE TWENTY FOURTH ST.
Post spaced not more than 6'o.c
2" Pipe Post
1½" Pipe railing
Wire netting 3'-6" wide 2x2 mesh #8 wire
4" Form Tile 1'-0" Lg
Wall
TYPICAL FENCE DETAIL
LOT 439 #3959
#3967
LOT 440 #3975
GARAGE
ALLEY
R.R. R of W. Line
Lot Line
1 Step
3 Steps
West Curb Line
PLAN
El. Top of wall 123.74
Existing Wall
El. Top of wall 122.75
Curb 116.34
Curb 116.47
El 113.742
Approx 25'-0"
ELEVATION
El. Top of wall 121.8
El. Top of wall 122.46
These dimensions approx
El. Top of wall 123.00
These dimensions Approx
Same as opposite section
Steps doweled into wall
SECTION LL
El. 123.74
Step doweled into wall
SECTION G-G
SECTION AA
SECTION BB
SECTION CC
SECTION DD
SECTION EE
SECTION HH
SECTION MM
SECTION FF
SECTION NN
SECTION KK
Steps doweled into opposite wall
Landing
Existing walk
Existing wood steps
Doweled into wall
Walk
Street Line
St. Line
Typical Section For Vertical Keys at Expansion Joints
12" Strip of asphalt saturated cotton fabric
2" Thicknesses of tar paper
wall section
House | Date | Approved by Owner
#3975
#3967
#3959
NOTES
All exposed corners to be chamfered to 1"
All concrete mix 1:2:4.
Back of walls to receive two brush coats of asphalt waterproofing.
Connect all drains to sewer.
All drains to be 4" crock joints covered with tar paper.
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
DIVISION OF GRADE SEPARATION & BRIDGES
TWENTY-FOURTH STREET WALL
SOUTH OF RAILROAD WEST SIDE
Scale as indicated
Drawn by C.W.K.
Checked R.S.
9-23-25
#3988
Aug 21, 1925
File XU 22-11
MCRR



CITY OF DETROIT

DEPARTMENT OF PUBLIC WORKS

DIVISION OF GRADE SEPARATION & BRIDGES

TWENTY-FOURTH STREET WALL

SOUTH OF RAILROAD EAST SIDE

Scale as indicated

Drawn CWK

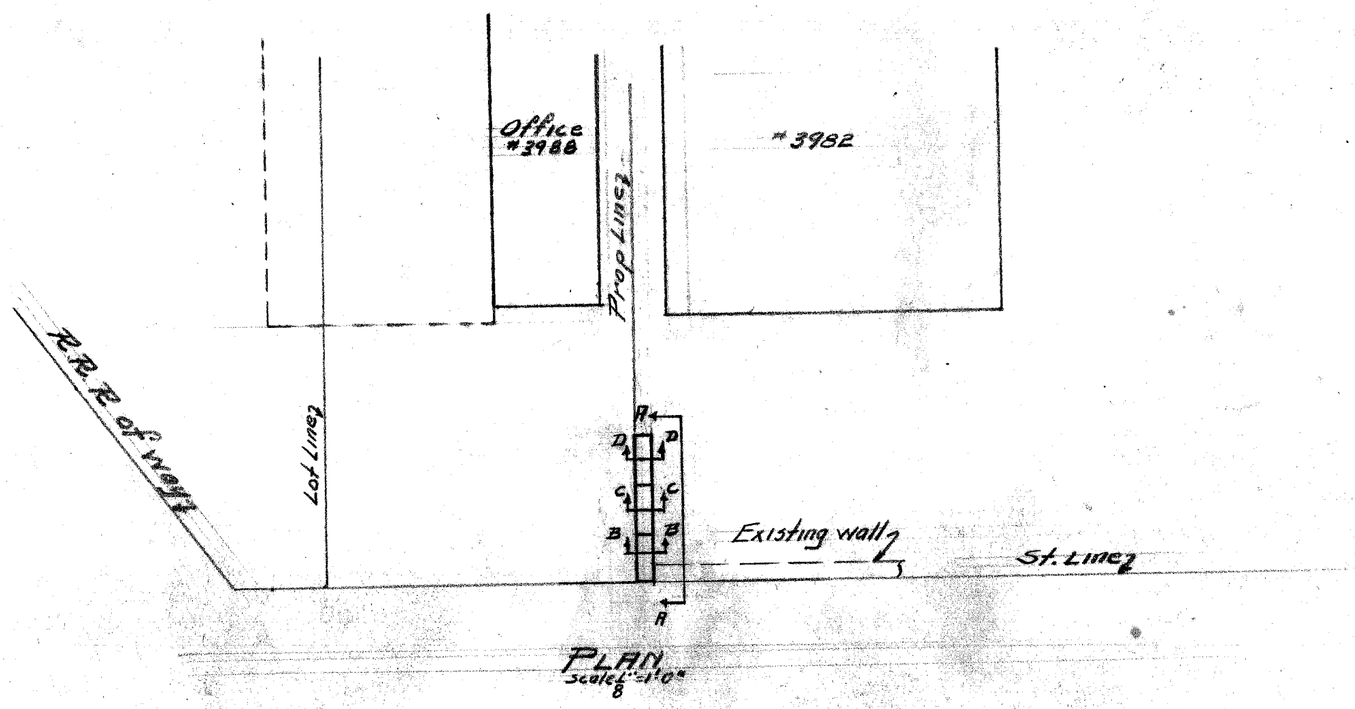
Checked R.S.

Aug 1925

HOUSE NUMBER	APPROVED DATE	OWNER
#3958		
#3966		
#3976		
#3982		

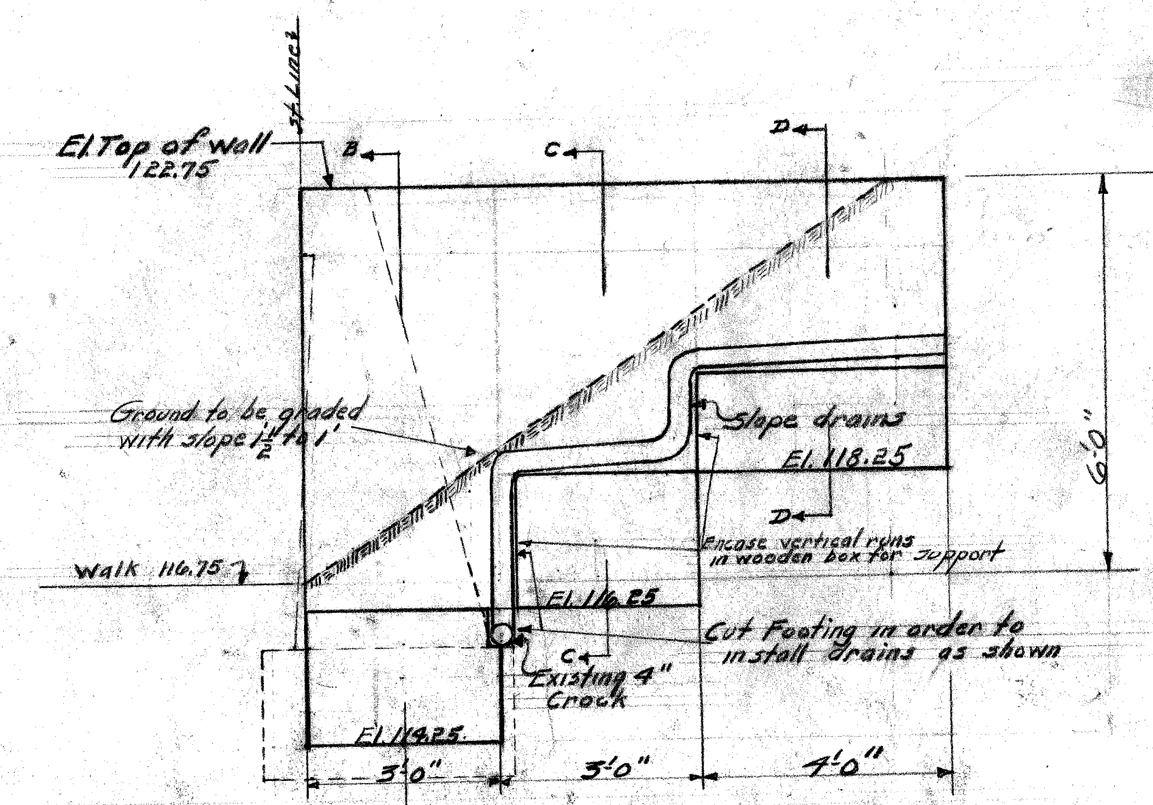
File XU 22-12

MCRR

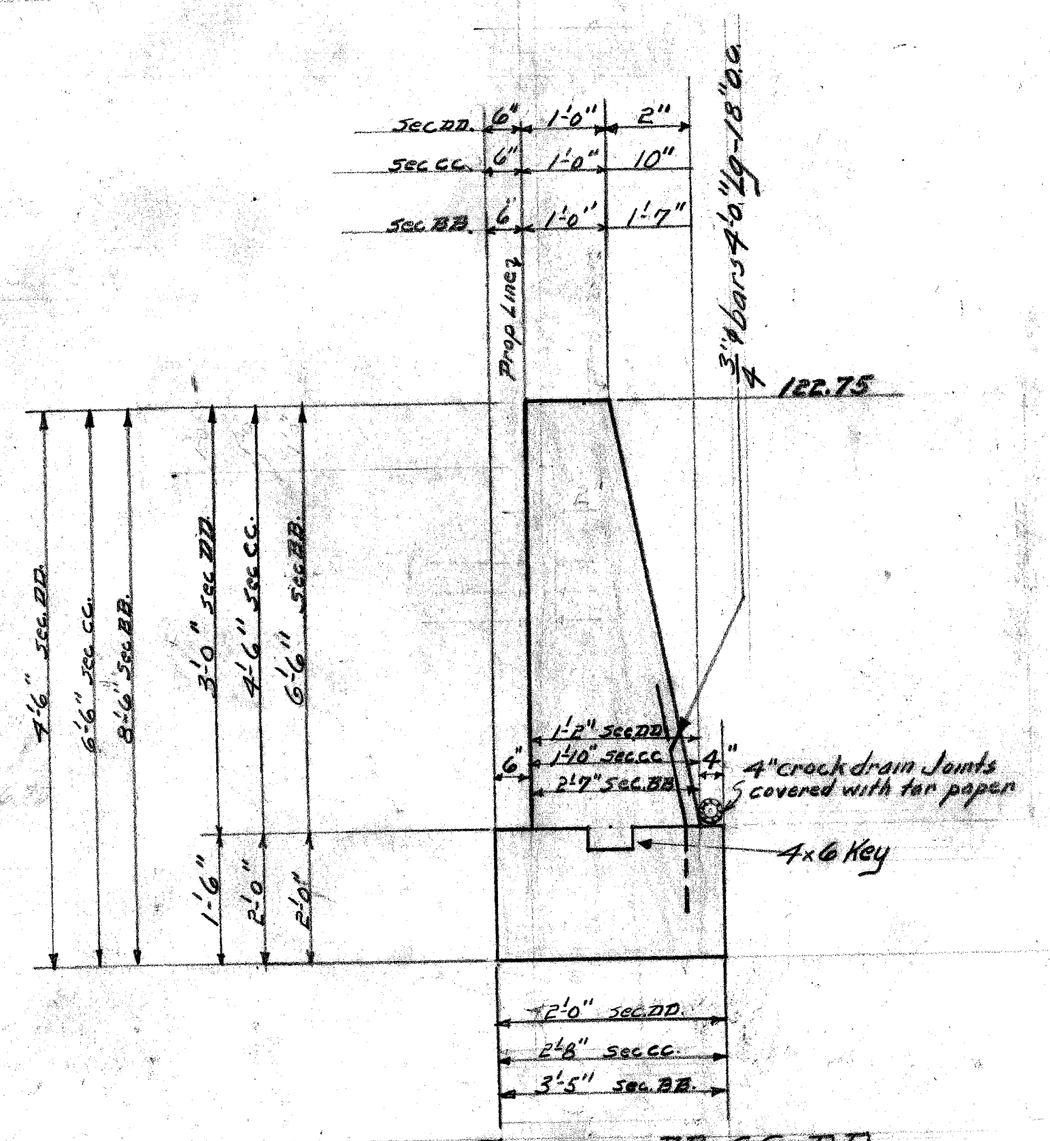


PLAN
scale 1/8"=1'0"

QUANTITIES
Reinforcing Steel 42#
10 Ft of 4" Crock
5 cu Yds of Concrete



ELEVATION AA
scale 1/2"=1'-0"



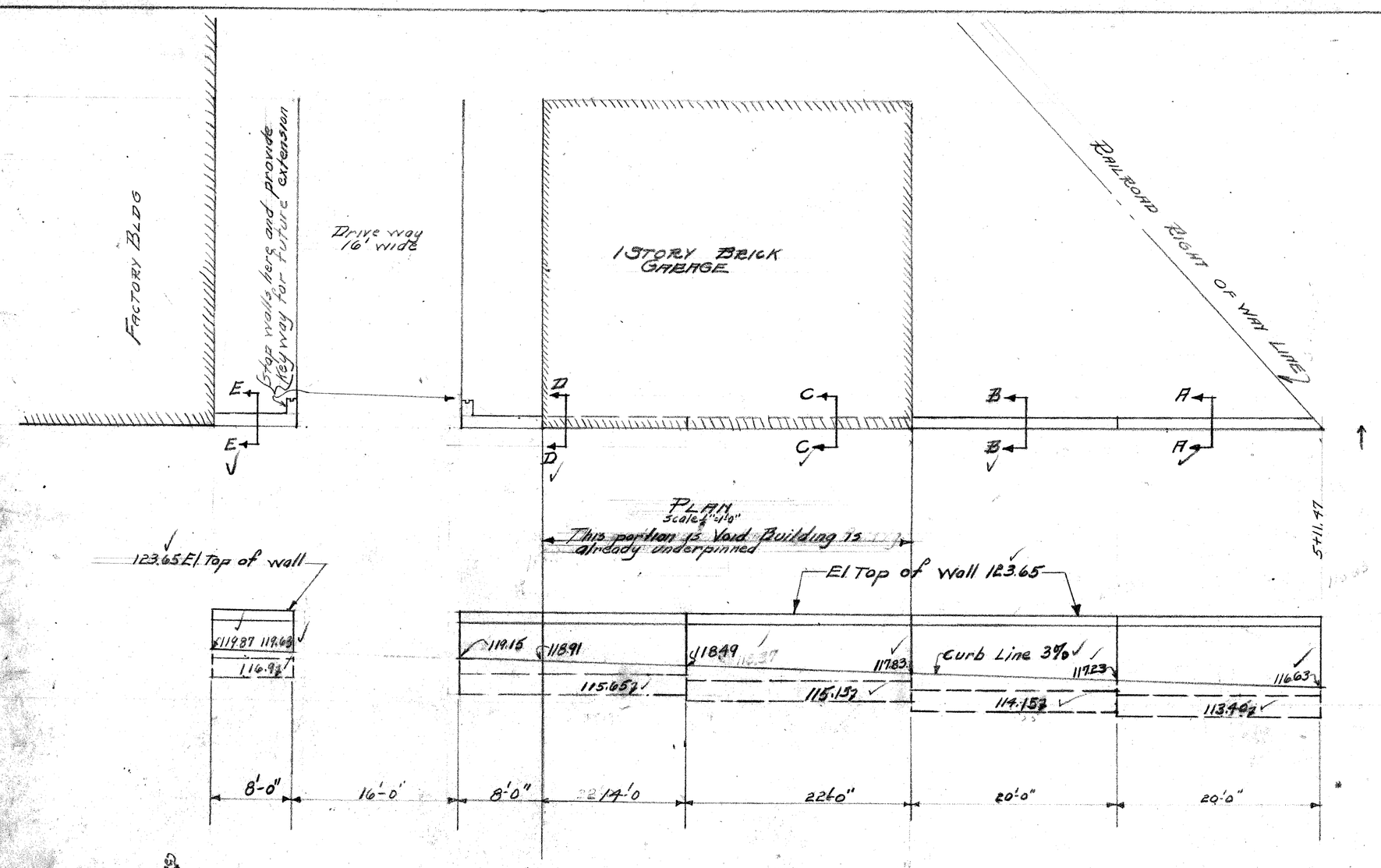
SECTION BB, CC, DD
scale 1/2"=1'-0"

NOTES
All concrete Mix 1:2:4
Back of walls to receive two brush Coats of asphalt waterproofing
Connect all drains to sewer

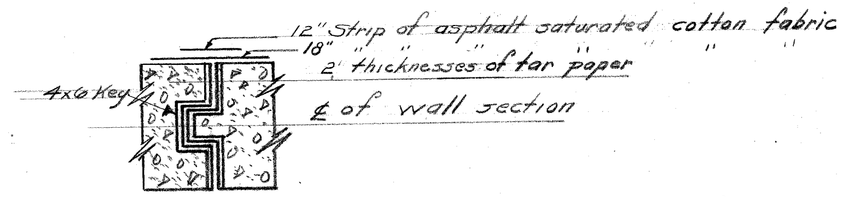
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
DIVISION OF GRADE SEPARATION & BRIDGES
RETAINING WALL ON M.C.R.R. PROP.
AT TWENTY FOURTH ST.
SOUTH OF RAILROAD EAST SIDE

Drawn by CWK #3988 Sept 1925
checked by - R.S.
9-8-25

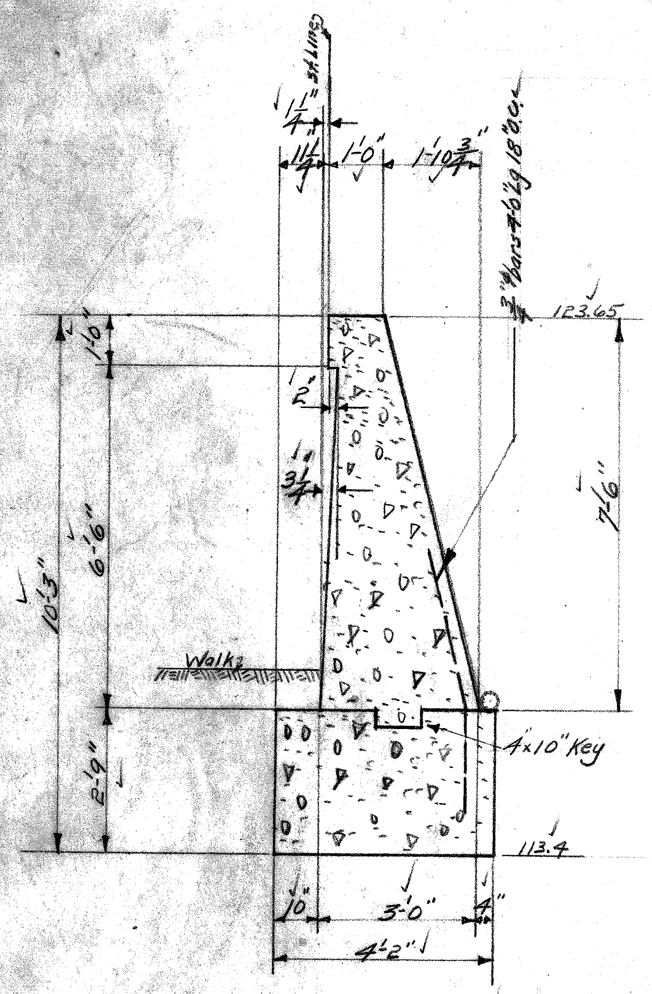
File XU 22-13 MCRR



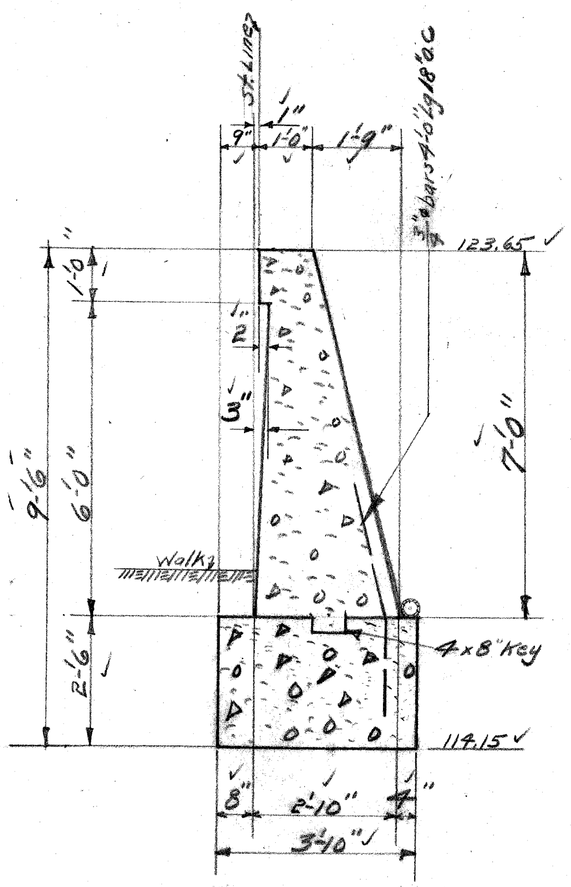
ELEVATION
Scale 1/8" = 1'-0" Hor. & Vert.



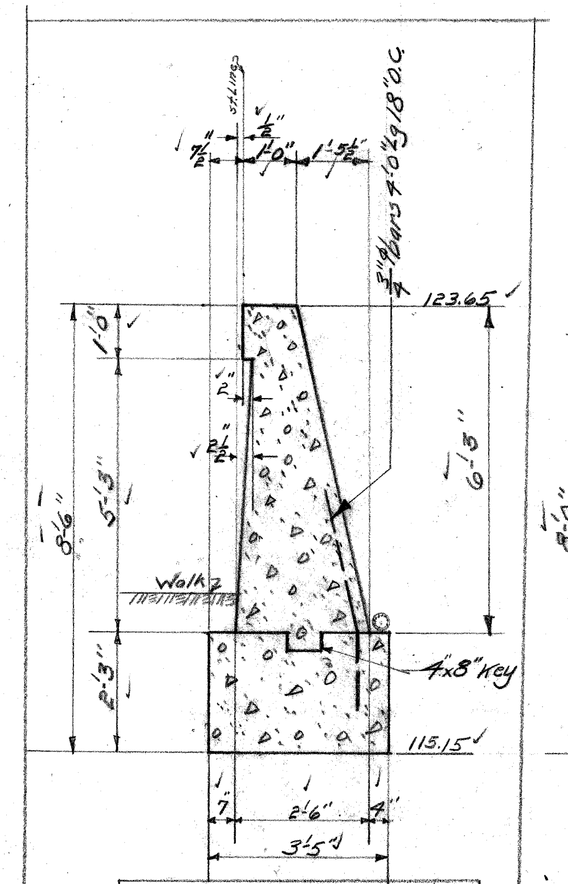
TYPICAL SECTION FOR VERTICAL KEYS AT EXPANSION JOINTS



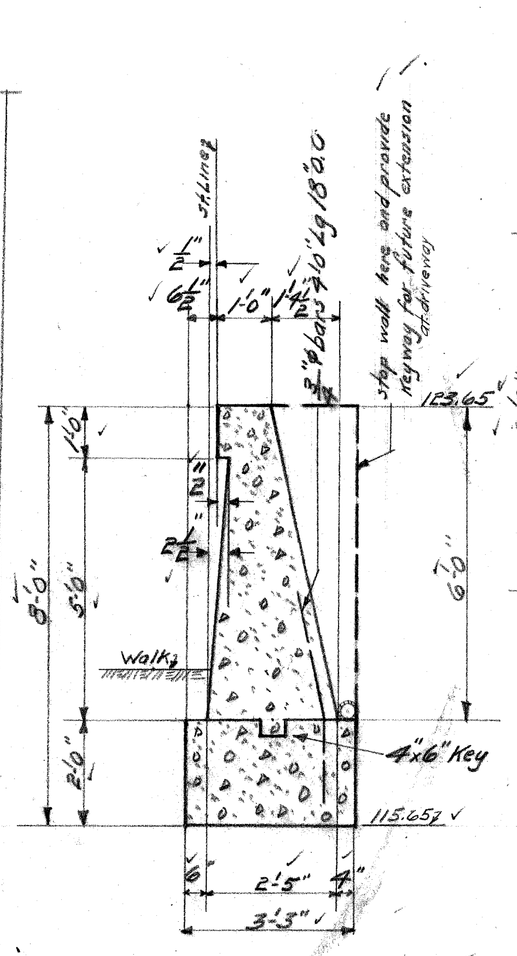
SECTION A-A
Scale 1/2" = 1'-0"



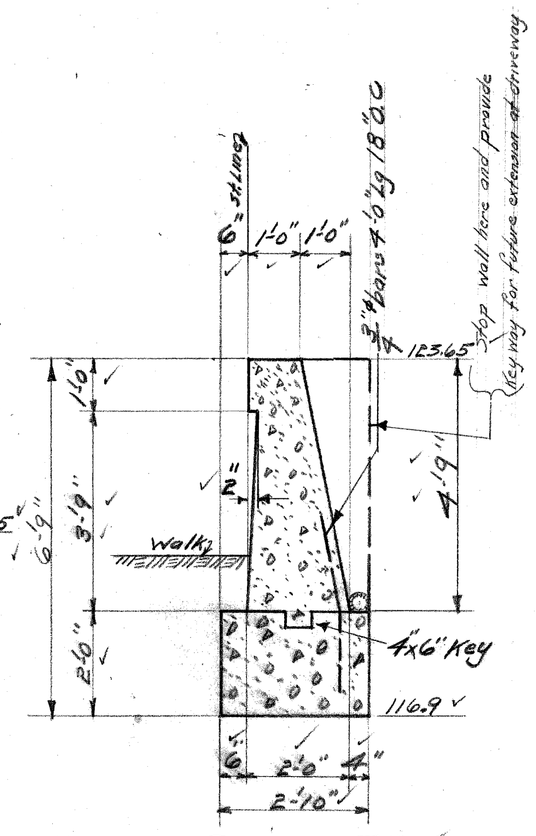
SECTION B-B
Scale 1/2" = 1'-0"



SECTION C-C
Scale 1/2" = 1'-0"
This section Void; Building is underpinned



SECTION D-D
Scale 1/2" = 1'-0"



SECTION E-E
Scale 1/2" = 1'-0"

NOTES

All exposed corners to be chamfered to 1".
All concrete mix 1:2:4.
Back of walls to receive two brush coats of asphalt waterproofing.
All drains to be 4" crock. Joints covered with tar paper.
Connect all drains to sewer.

CITY OF DETROIT

DEPARTMENT OF PUBLIC WORKS

DIVISION OF GRADE SEPARATION & BRIDGES

TWENTY-FOURTH ST. WALL

North of R.R.

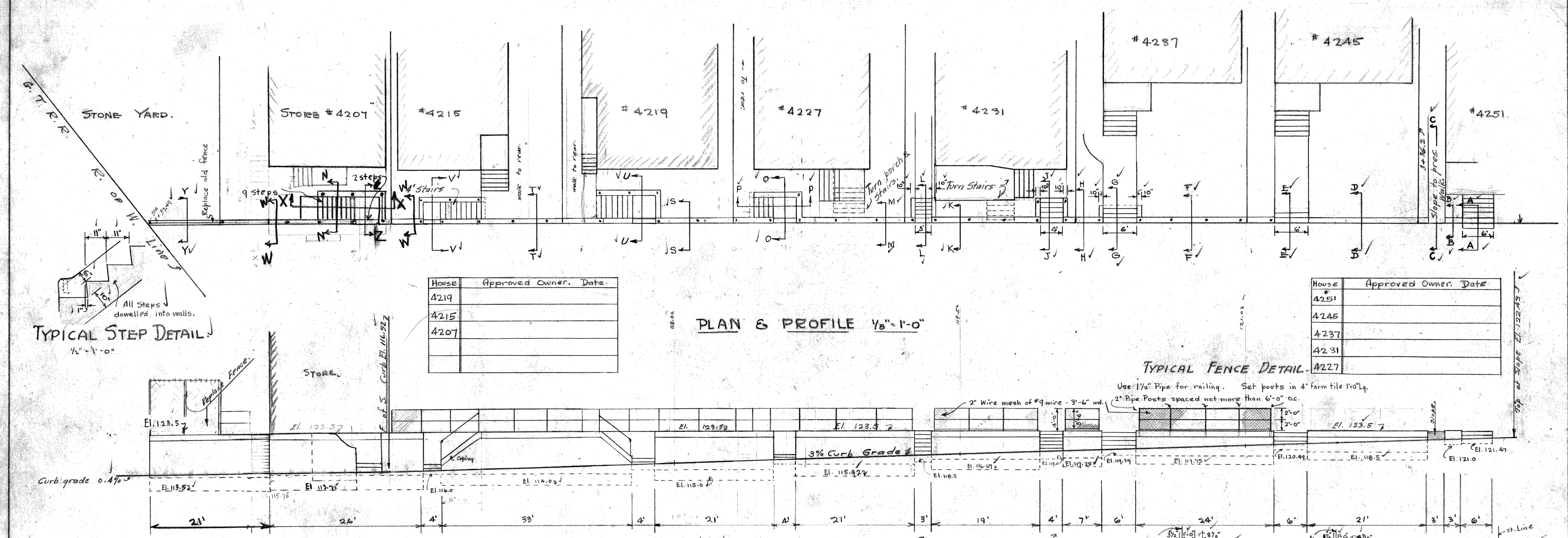
IN FRONT OF GENERAL CARBONIC CO'S PROPT.

Scales as indicated
Drawn CWK.
Checked by R.S.
10-21-25.

Oct 20 1925

GTRR

File XU 22-14



House	Approved Owner. Date
4219	
4215	
4207	

House #	Approved Owner. Date
4251	
4245	
4237	
4231	
4227	

NOTES:

All exposed corners to be chamfered to 1".
All concrete mix 1:2:4.
Back of walls to receive 2 brush coats of asphalt waterproofing.
Connect all drains to sewer. Crack joints to be covered with tar paper.

CITY OF DETROIT.

DIVISION OF GRADE SEPARATION & BRIDGES.

WEST SIDE OF TWENTY-FOURTH NORTH OF RAILROAD.

Scales 1/4" = 1'-0" or as noted. Oct. 15, 1925.

DRAWN BY H.T.J.

CHKD BY R.S.

10-21-25.

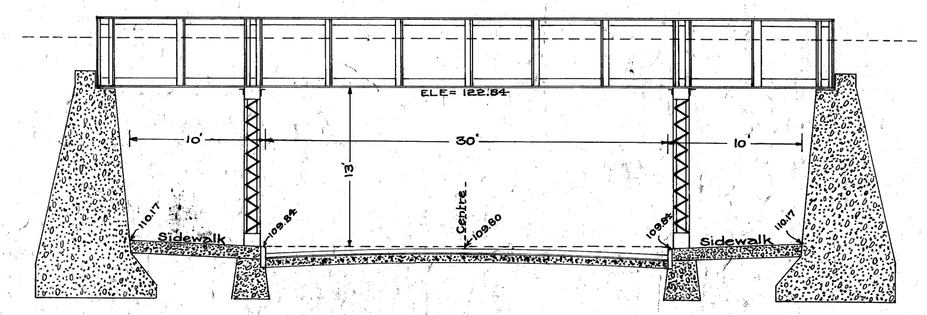
Houses #4219 & #4227 Revised Nov. 12, 1925

File XU 22-15 G.T.R.R.

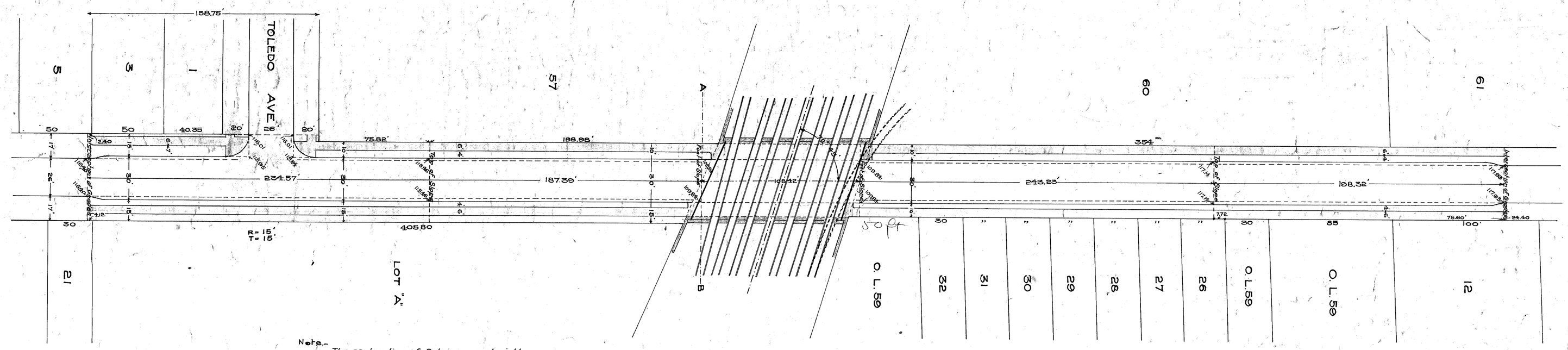
Approved:
City Engineer
Chief Engineer, M.C.R.R.

O.K.

PROPOSED SUBWAY IN TWENTY-FOURTH STREET UNDER M.C.R.R.

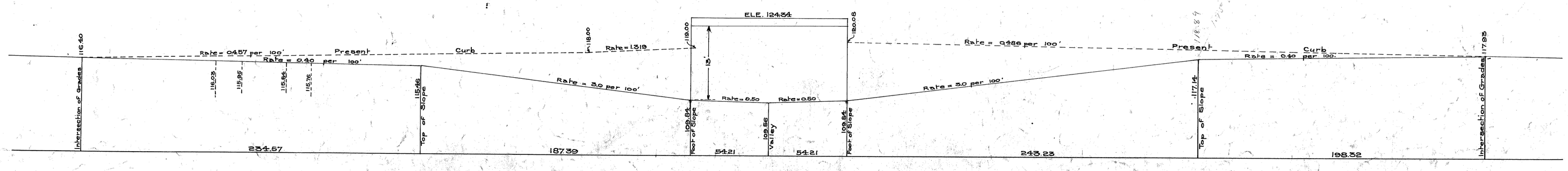


SECTION AT A-B
Scale, one inch = 8 Feet.



Note.- The centre line of Subway is a straight line between basins and not on the centre of 24th St. according to recorded plats. The basins on the North are 150' N. of Thm. of Grades

PLAN
Scale, one inch = 40 Feet



LONGITUDINAL SECTION
Hor. Scale, one inch = 40 Feet
Ver. " " " 10 "

3 A

24 TH. ST.

CITY ENGINEER'S OFFICE
GRADE SEPARATION & BRIDGES
Case A Drawer 2 No. I-6a

Drawn by J.W. Reid. Jan. 16, 1908.

City Engineer's Office.

A-2 I-6a

File XU 22-16

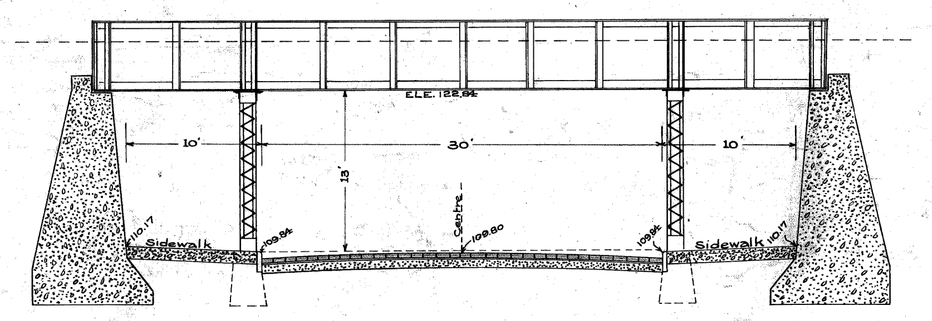
-11

Approved: _____

_____ City Engineer

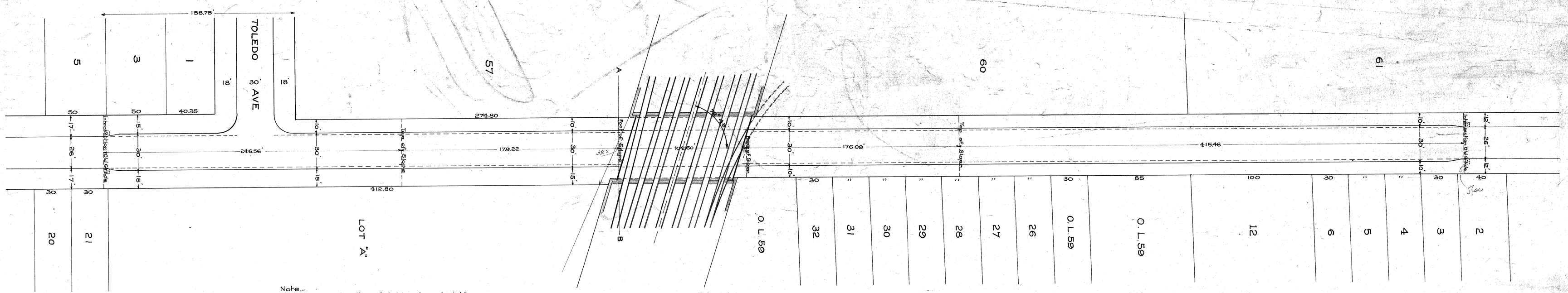
_____ Chief Engineer, M.C.R.R.

PROPOSED SUBWAY IN TWENTY-FOURTH STREET UNDER M. C. R. R.



SECTION AT A-B

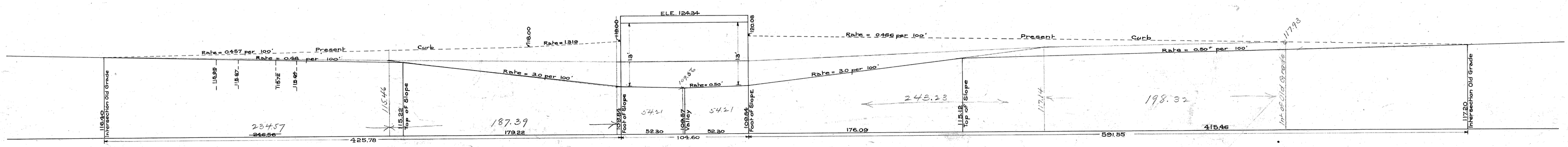
Scale, one inch = 8 Feet.



Note.— The centre line of Subway is a straight line between basins and not on the centre of 24th St. according to recorded plats.

PLAN

Scale, one inch = 40 Feet



LONGITUDINAL SECTION

Hor. Scale, one inch = 40 Feet

Ver. " " " 10 "

CITY ENGINEER'S OFFICE
GRADE SEPARATION & BRIDGES

Case A Drawer 2 I No. 66

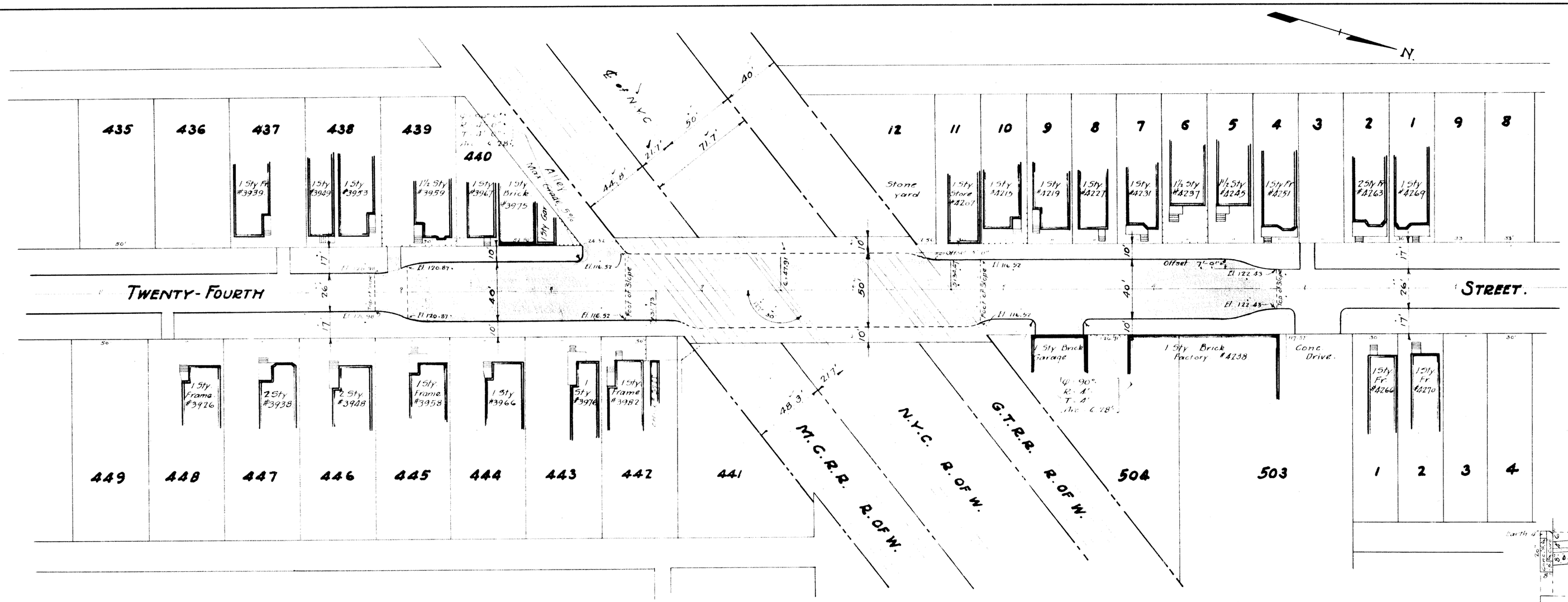
Drawn by J.W. Reid. — Feb. 25, 1907

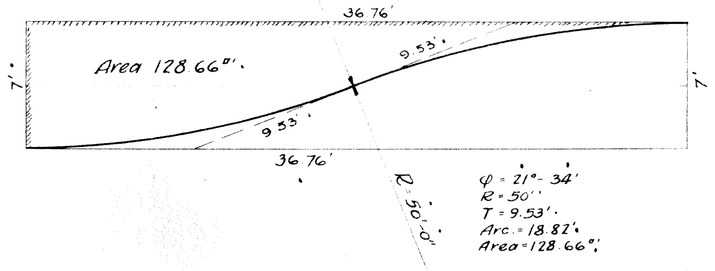
24TH ST.

City Engineer's Office.

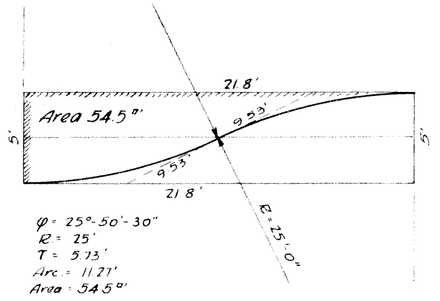
A-2-I-6-C

File XU22-18

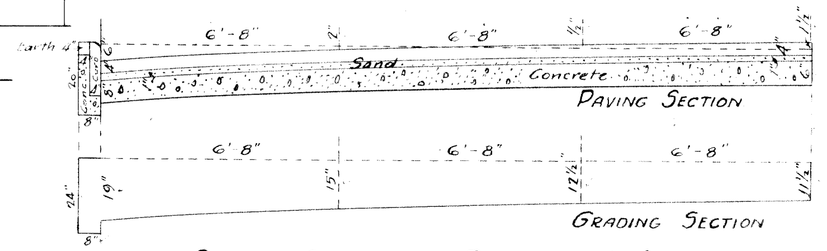




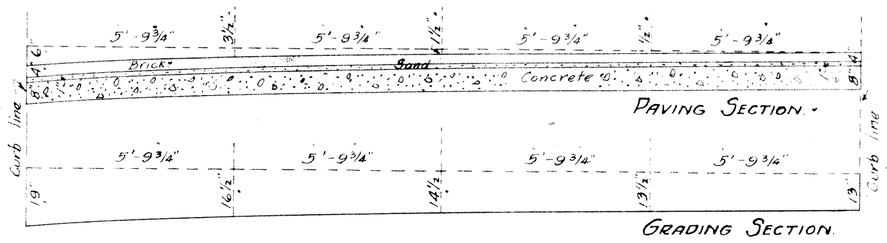
DETAIL OF CURVE FOR PAVEMENT - FOR WIDENING 26' TO 40'.



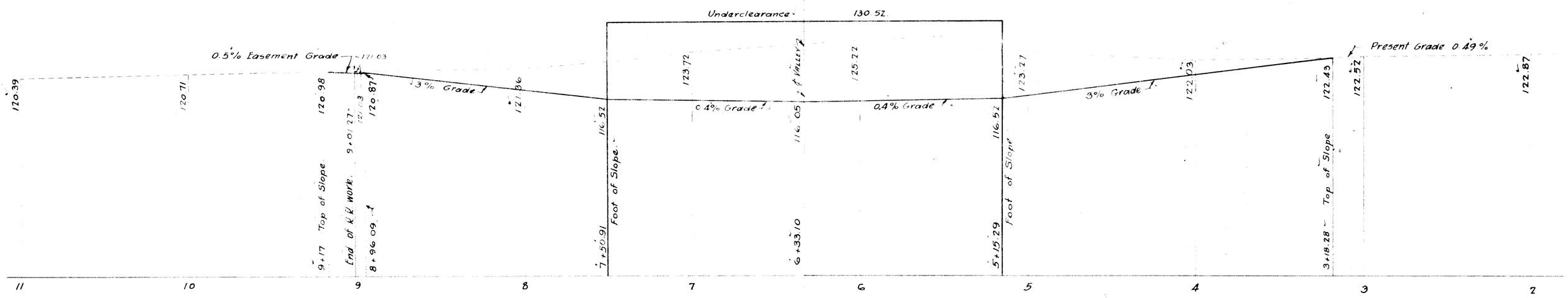
CURVE FOR WIDENING PAVEMENT 40' TO 50'



BRICK APPROACH PAVING 40' WD.

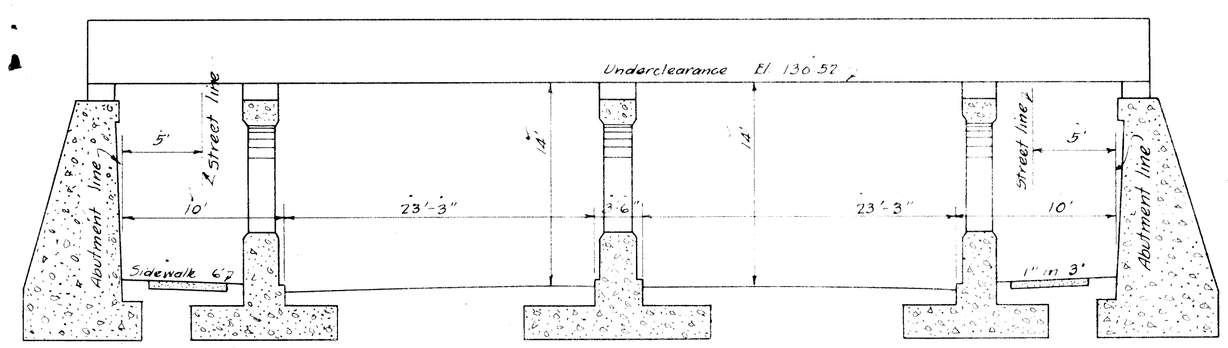


BRICK SUBWAY PAVING 50' WD. LESS 3.5' FOR PIER.

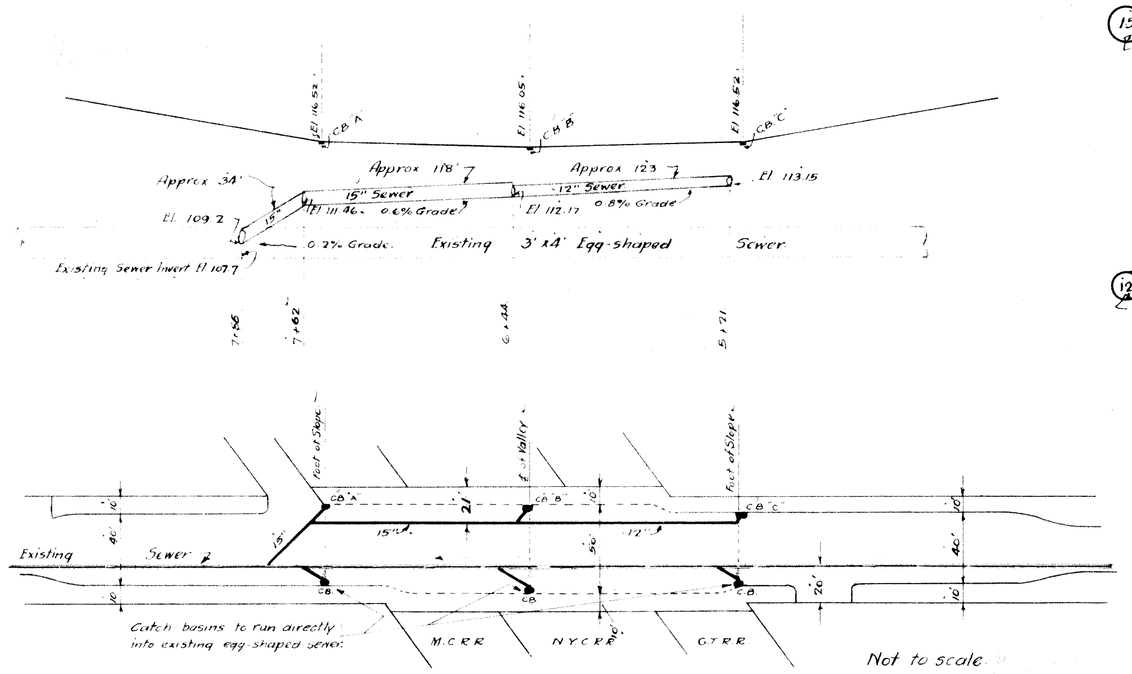


PROFILE ON TWENTY-FOURTH ST.

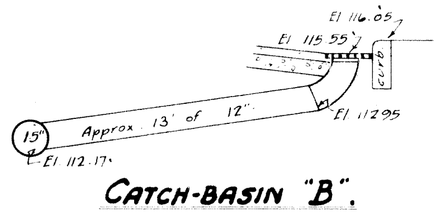
Scales: Hor. 1" = 40'
Ver. 1" = 10'



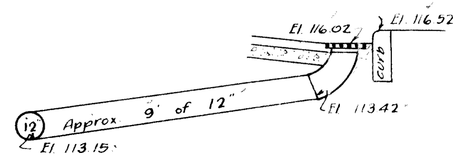
SECTIONAL ELEVATION OF SUBWAY.



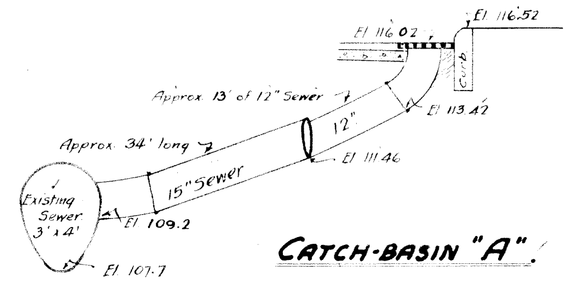
TWENTY-FOURTH ST. DRAINAGE PLAN AND PROFILE.



CATCH-BASIN "B".

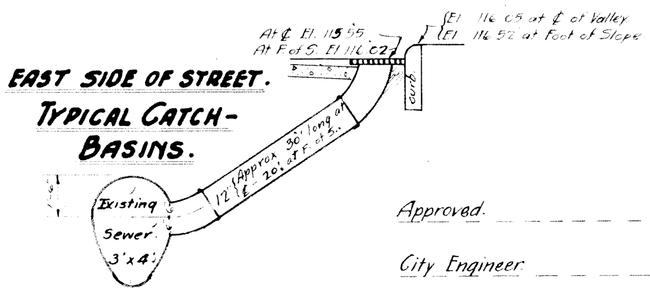


CATCH-BASIN "C".



CATCH-BASIN "A".

EAST SIDE OF STREET.
TYPICAL CATCH-BASINS.



Approved. _____

City Engineer. _____

Chief Engineer M.C.R.R. _____

Chief Engineer G.T.R.R. _____

OFFICE COPY

DO NOT TAKE OUT

CITY OF DETROIT.

DEPARTMENT OF PUBLIC WORKS.

OFFICE OF CITY ENGINEER.

DIVISION OF GRADE SEPARATION & BRIDGES.

TWENTY-FOURTH ST.

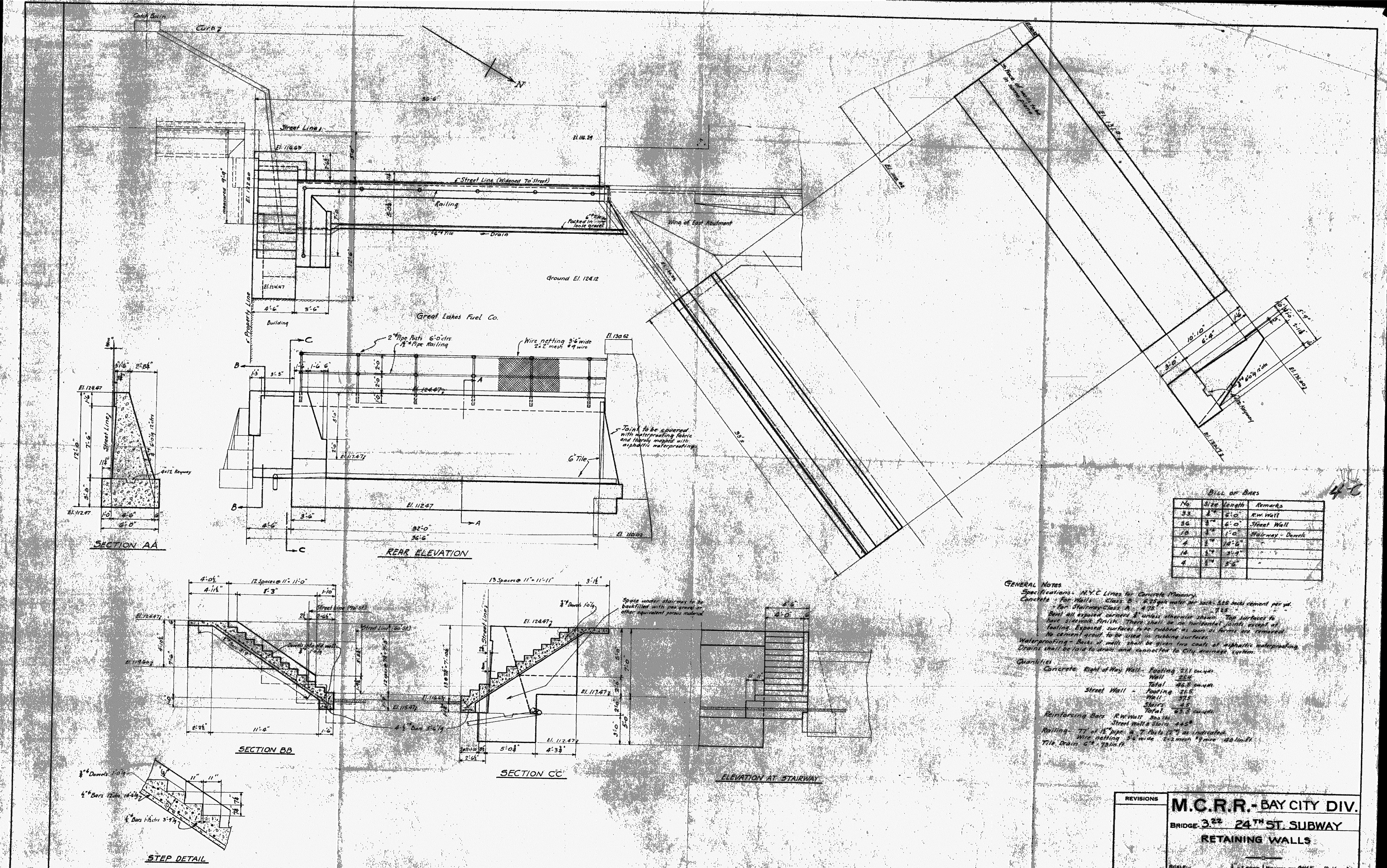
SCALES AS INDICATED — REVISED 7-29-25

DR. BY W.J.G.

CHKD. BY [illegible] 7-10-[illegible]

Field Books: W-495 440

File XU 22-19



4-C

BILL OF BARS

No.	Size	Length	Remarks
33	¾"	6'-0"	R.W. Wall
56	¾"	6'-0"	Street Wall
18	¾"	1'-0"	Stairway - Dowels
4	¾"	10'-6"	"
14	¾"	3'-9"	"
4	¾"	5'-6"	"

GENERAL NOTES

Specifications - N.Y.C. Lines for Concrete Masonry.

Concrete - For Walls - Class B - 4.25 gal. water per sack, 5.25 sacks cement per yd.
- For Stairway Class B - 4.75 " " 7.5 " " "

Bevel all exposed corners 3/4" unless otherwise shown. Top surfaces to have sidewalk finish. There shall be no horizontal joints except at footing. Exposed surfaces to be rubbed as soon as forms are removed. No cement grout to be used in rubbing surfaces.

Waterproofing - Backs of walls shall be given two coats of asphaltic waterproofing.

Drains shall be laid to drain and connected to City drainage system.

Quantities

Concrete Right of Way Wall - Footing 21.1 cu. yds.
Wall 25.4
Total 46.5 cu. yds.

Street Wall - Footing 21.5
Wall 37.5
Stairs 4.5
Total 63.5 cu. yds.

Reinforcing Bars R.W. Wall 800 lbs.
Street Wall & Stairs 4,445#

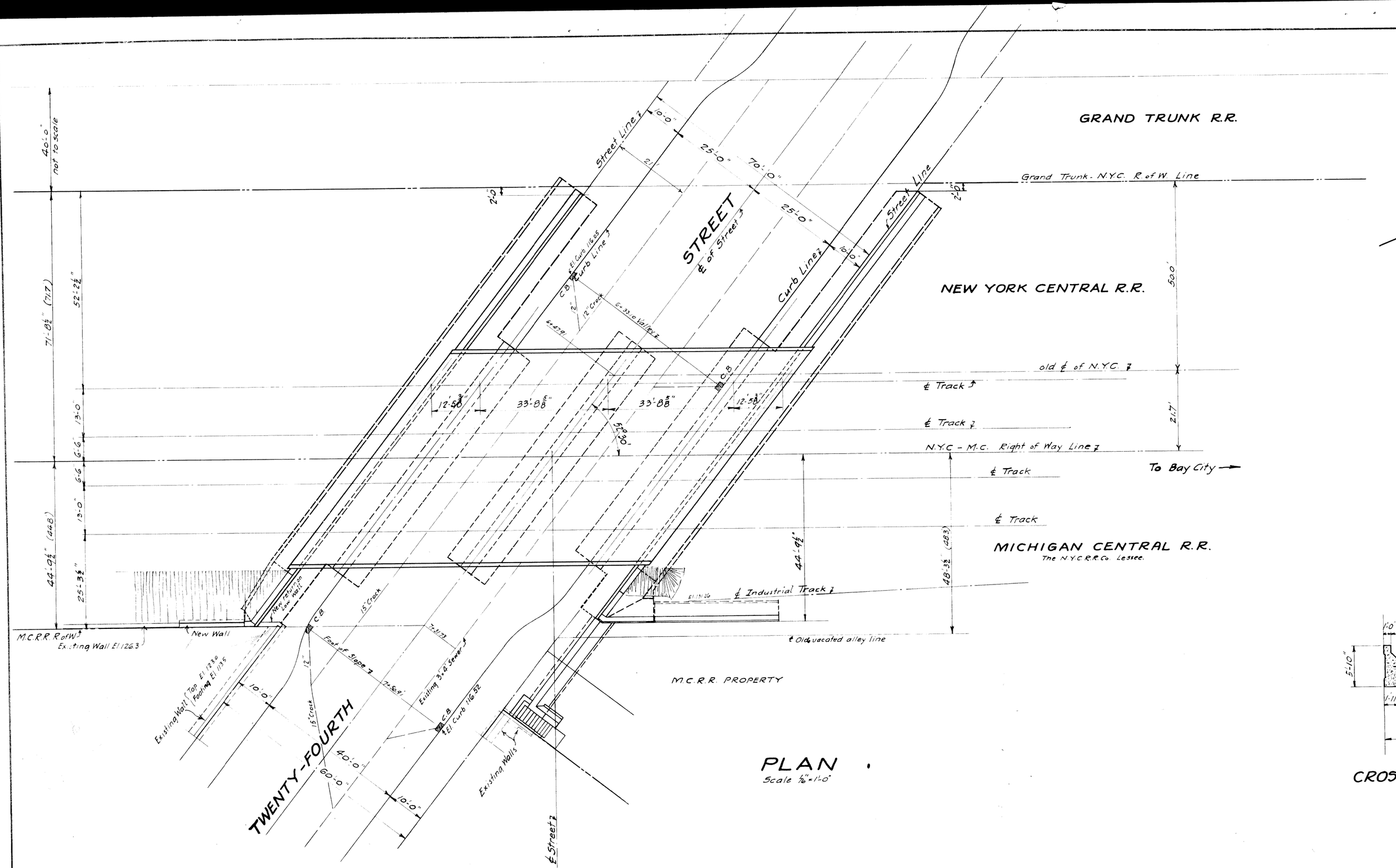
Railing - Tee of 1½" pipe & T. Posts (2") as indicated.
Wire netting 3'-6" wide 2x2 mesh #9 wire 48 lin. ft.

Tile Drain 6" T. 33 lin. ft.

REVISIONS	M.C.R.R. - BAY CITY DIV.
	BRIDGE 3.22 24TH ST. SUBWAY
	RETAINING WALLS
ISSUE NO. DATE 19	SCALE: ¼" = 1 FOOT · DRAWN BY CHUCK 10-16 1921 · CHECKED BY 19 · TRACED BY D.E.K.S. 10-17 1921 · APPROVED · BRIDGE ENGINEER · SHEET 1 OF 2

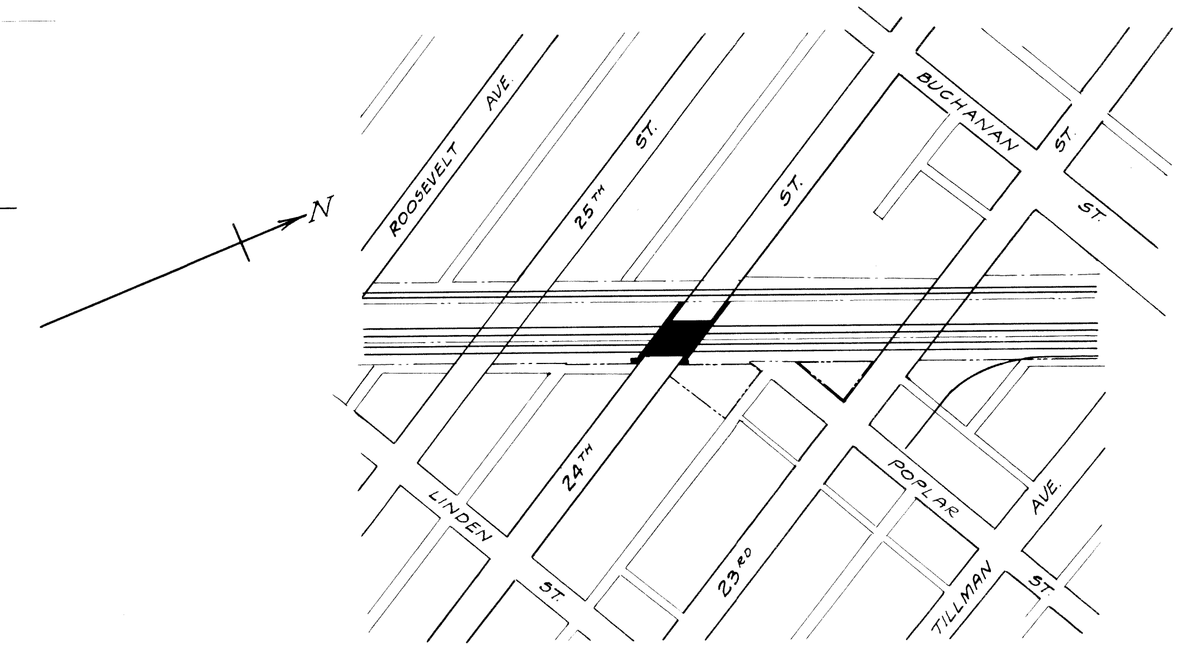
File XU 22-20

DETROIT BLUE PRINT & SUPPLY CO. 0101-05-0-002



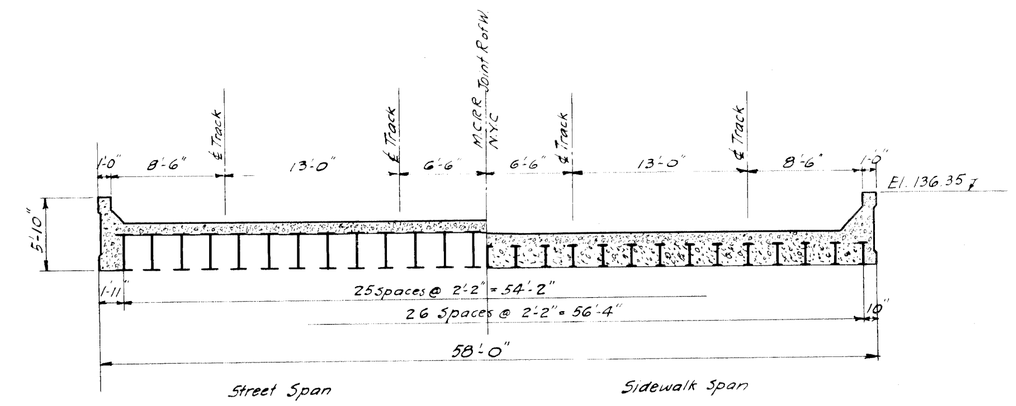
PLAN

Scale 1/16" = 1'-0"



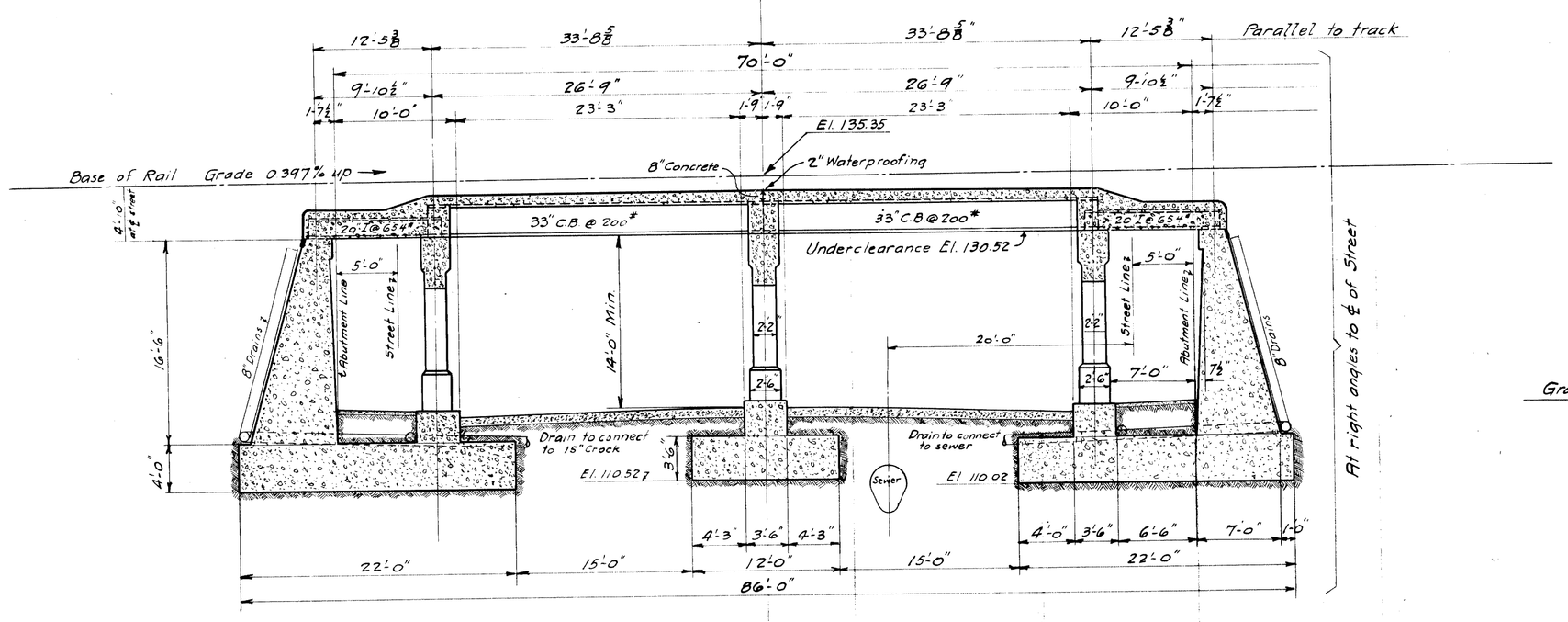
LOCATION PLAN

Scale 1" = 200'



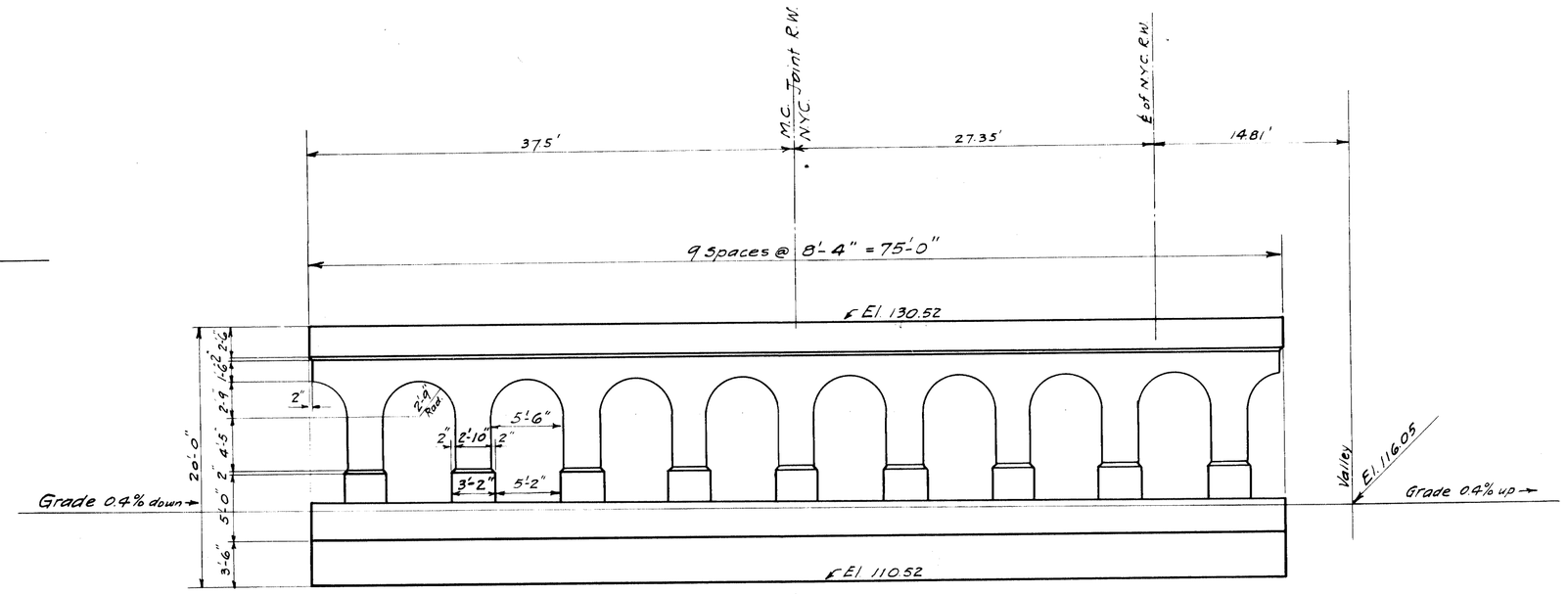
CROSS SECTION OF FLOOR AT RIGHT ANGLES TO TRACK

Scale 1/4" = 1'-0"



LONGITUDINAL SECTION

Scale 1/4" = 1'-0"

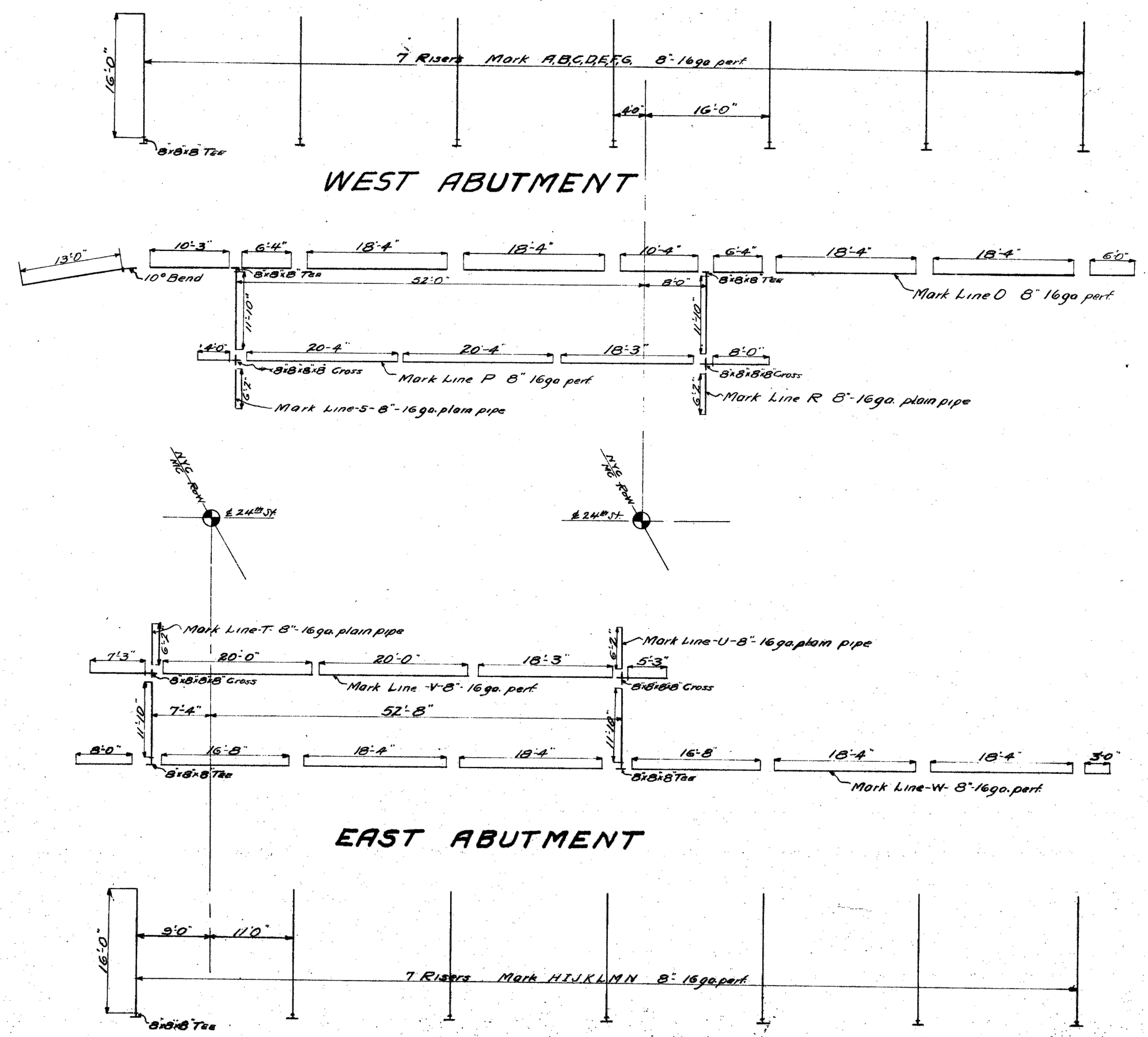


ELEVATION OF CENTER PIER

Scale 1/4" = 1'-0"

REVISIONS	M.C.R.R.- BAY CITY DIV.
7-29-31 Grade Edges of Floor Revised 11-4-31 Sidewalk Curb Added	BRIDGE 3.22 24TH ST. SUBWAY
	GENERAL PLAN
	SCALE AS INDICATED = 1 FOOT APPROVED BRIDGE ENGINEER
	DRAWN BY O.M.S.K. 1-20 1931 CHECKED BY J.E.B. 4-11 1931 TRACED BY O.M.S.K. 1-20 1931
ISSUE NO. 3 DATE 11-4 1931	SHEET G1 OF 1

File XU 22-21



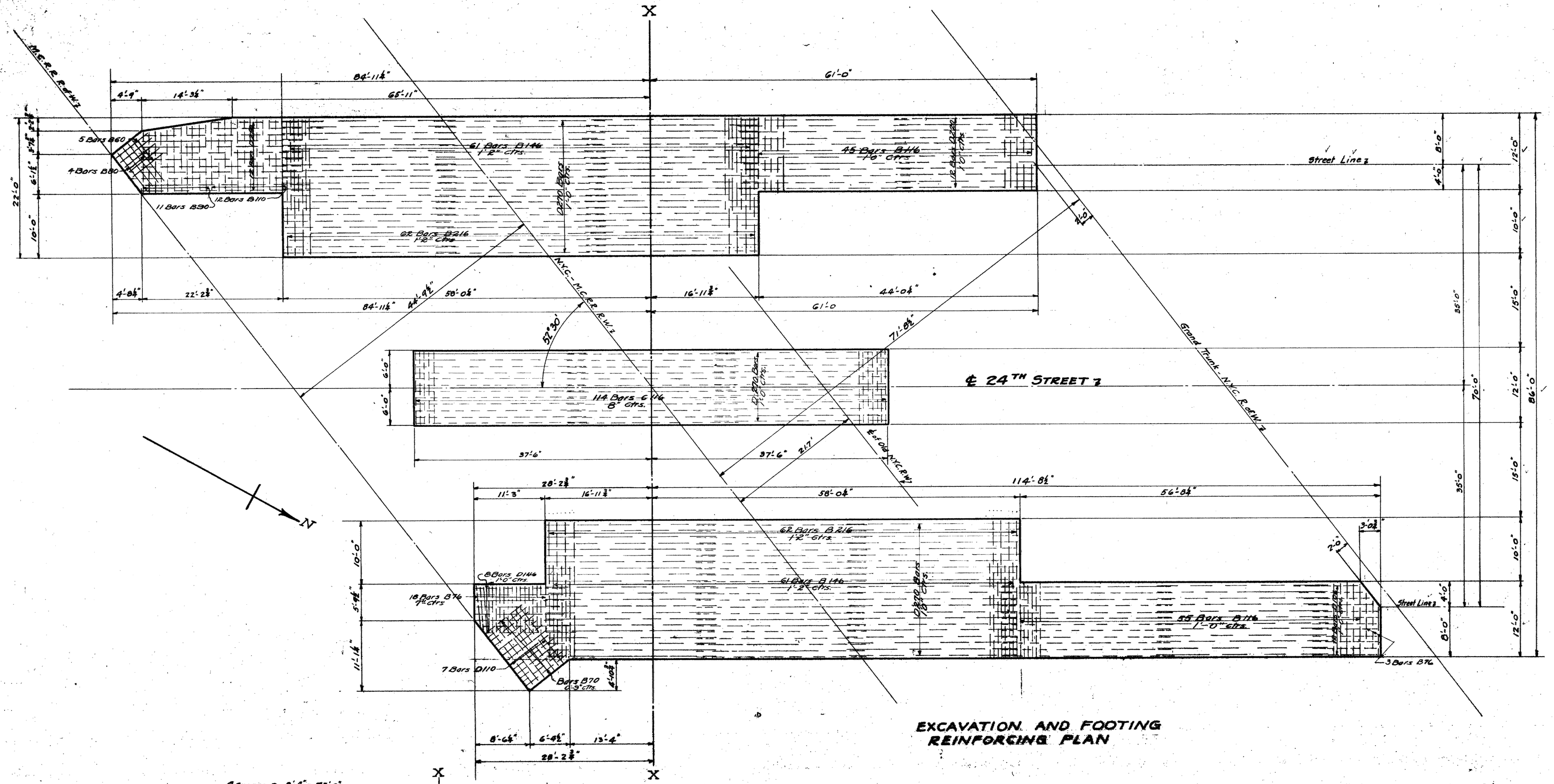
Line O 1 Req'd 8" 16ga perf
" P "
" V "
" W "
" R " 8" 16ga plain pipe
" S "
" T "
" U "
Risers A B C D E F G H I J K L M N 14 Req'd 8" 16ga perf
Fittings for above 1-10° Bend
10-8"x8"x8" Tees
4 8"x8"x8"x8" Crosses
[illegible] Blind Caps
[illegible] Reg Bands

Note:- Fittings to be welded to pipe where no space is shown.

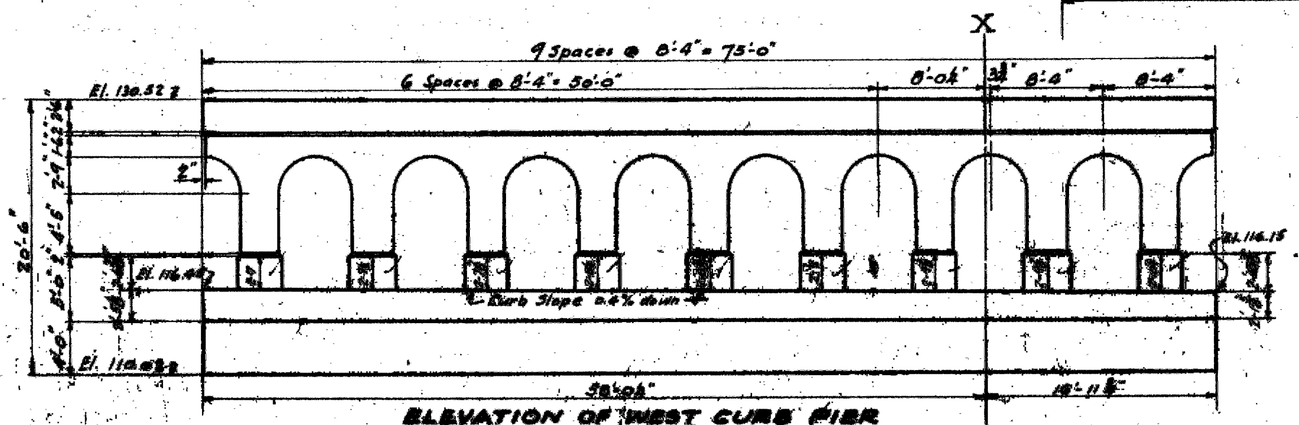
W.P. 6-3-M
E.C.T. 6-3-[illegible]

M.C.R.R. - BAY CITY DIV.
BRIDGE 3 ST. TWENTY FOURTH ST.
DRAIN PIPES

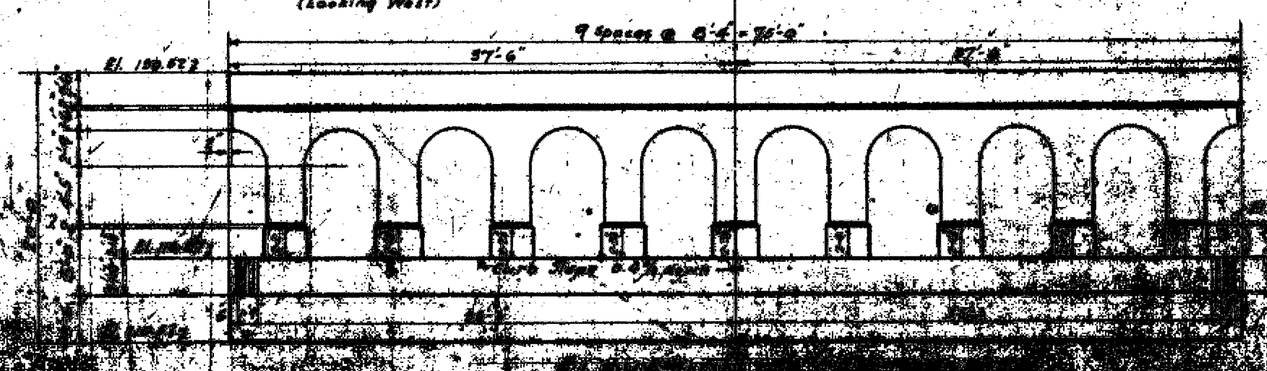
SCALE
REVISED

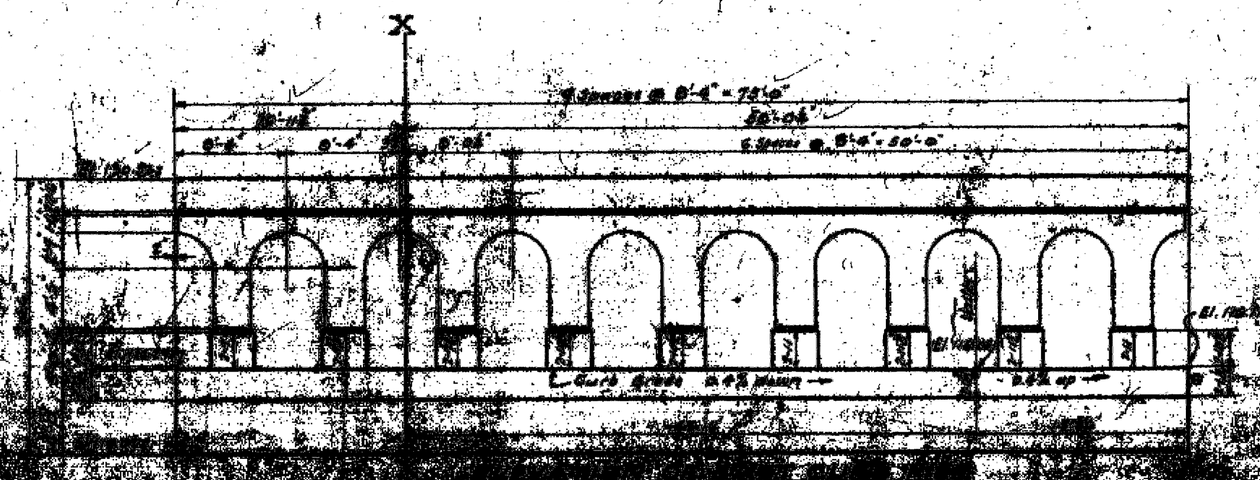


EXCAVATION AND FOOTING REINFORCING PLAN



ELEVATION OF WEST CURB PIER
(Looking West)





Note:-
For Specifications see Sheet M3.

Revisions

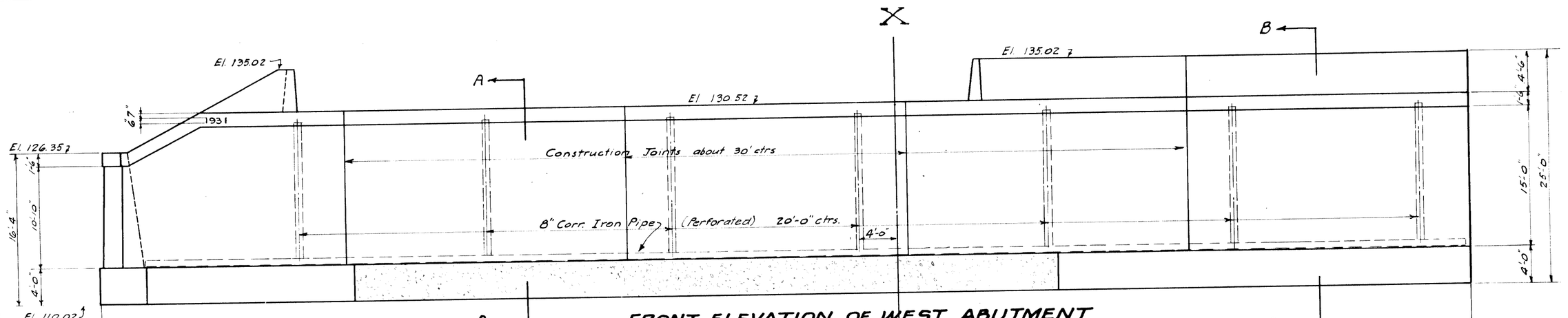
M.C.R.R.-BAY CITY DIV.

Bridge 328 24TH ST. SUBWAY

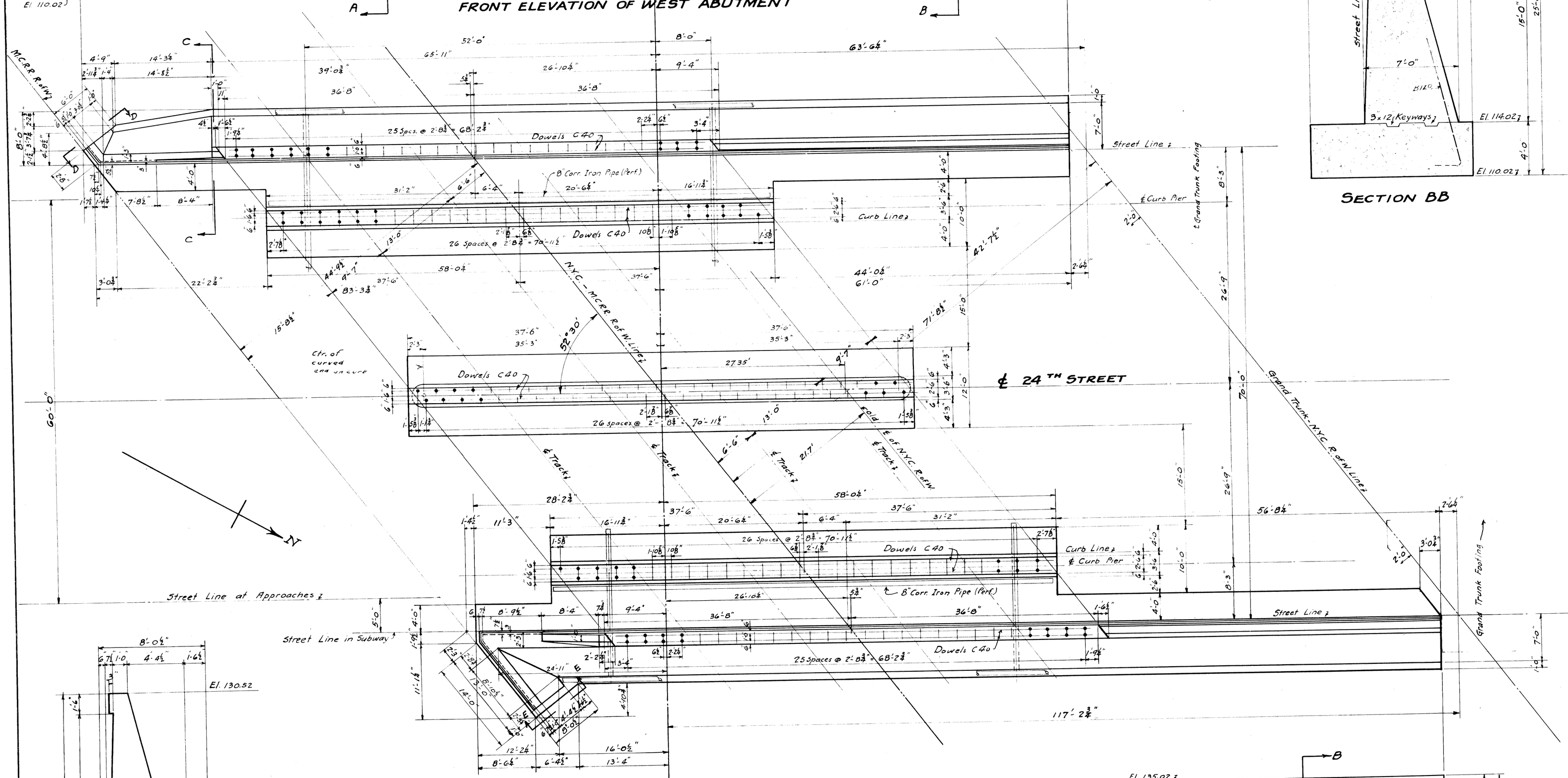
FOOTING PLAN AND PIER ELEVATIONS

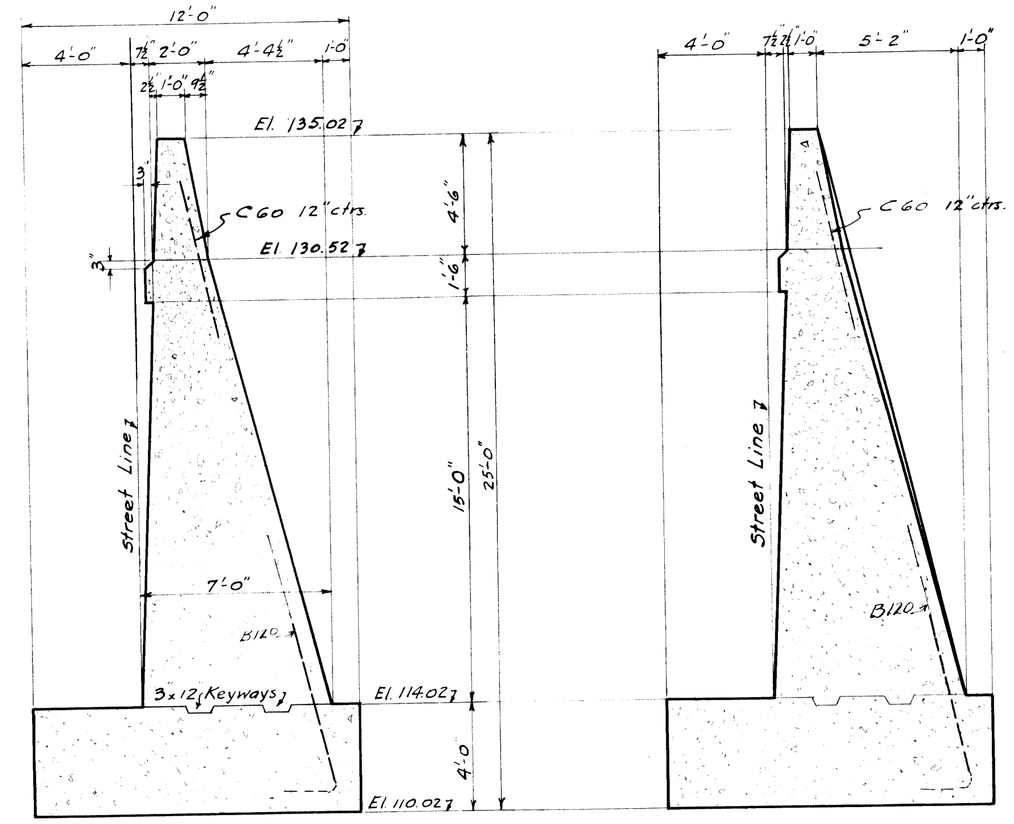
Scale

Filed | Built by | Designed by



FRONT ELEVATION OF WEST ABUTMENT

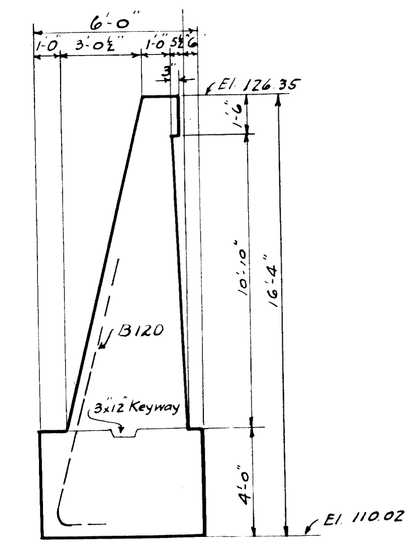




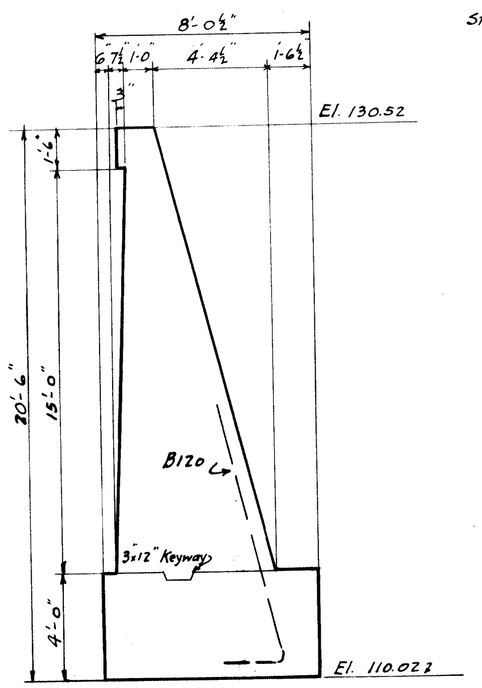
SECTION BB

SECTION CC

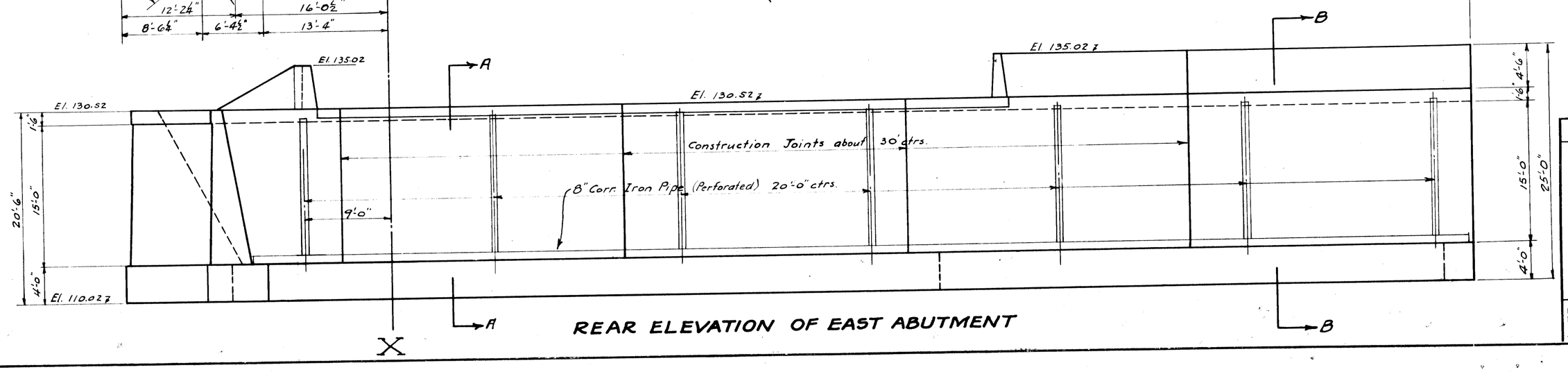
Note: Dimensions not shown same as for Section BB



SECTION DD



END VIEW EE

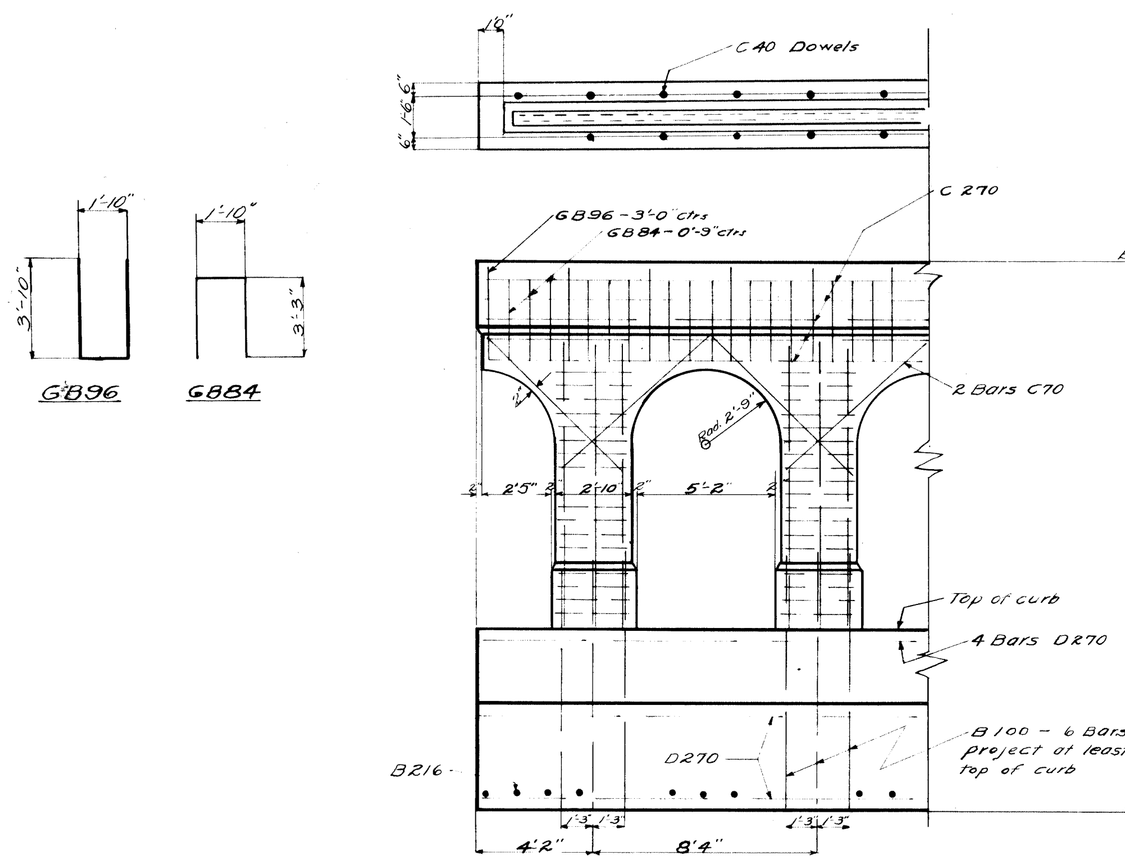


REAR ELEVATION OF EAST ABUTMENT

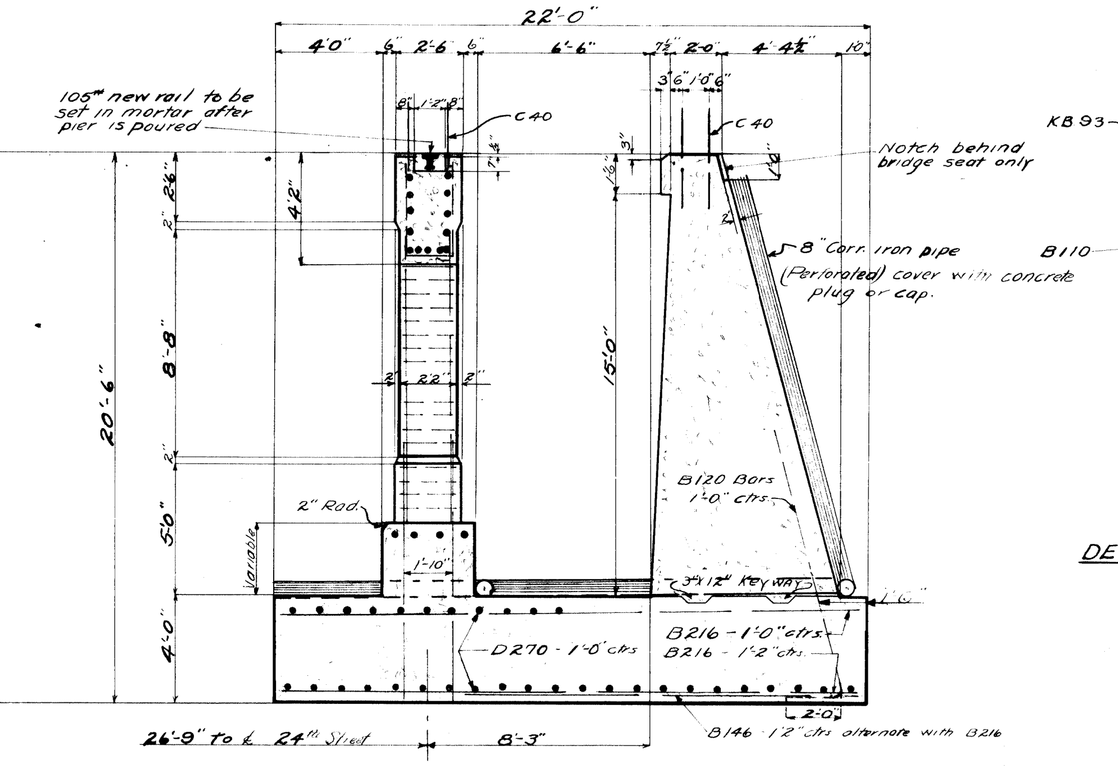
Note:
For Specifications see Sheet M3.
For Section AA see Sheet M3.

REVISIONS	M.C.R.R.- BAY CITY DIV.
	BRIDGE 322 24TH ST. SUBWAY
	ABUTMENTS AND SUBSTRUCTURE PLAN
	SCALE: ⅛" = 1 FOOT — DRAWN BY O.N.S.K. 5-28 1931
	APPROVED — CHECKED BY L.O.A. 19
	BRIDGE ENGINEER — TRACED BY O.N.S.K. 6-29 1931
ISSUE NO. 2 DATE 9/1/31 19	SHEET M2 OF 4

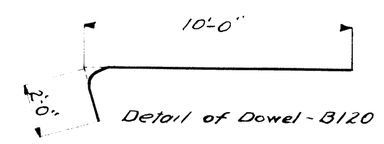
File XU 22-23



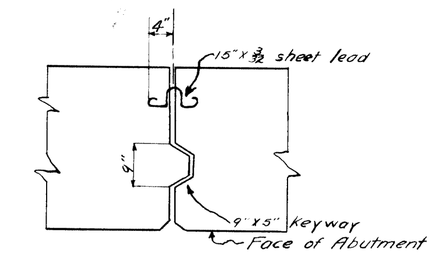
DETAILS OF SIDEWALK PIER



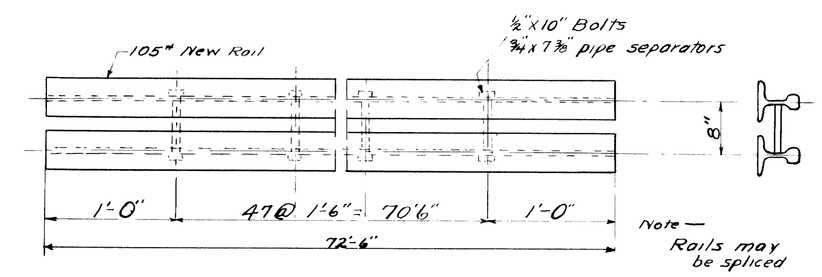
SECTION A-A



DETAILS OF COLUMN REINFORCING



PLAN OF VERTICAL CONSTRUCTION JOINT IN ABUTMENT



DETAILS OF RAILS FOR CENTER PIER

GENERAL NOTES

Specifications:— N.Y.C. Lines for Concrete Masonry

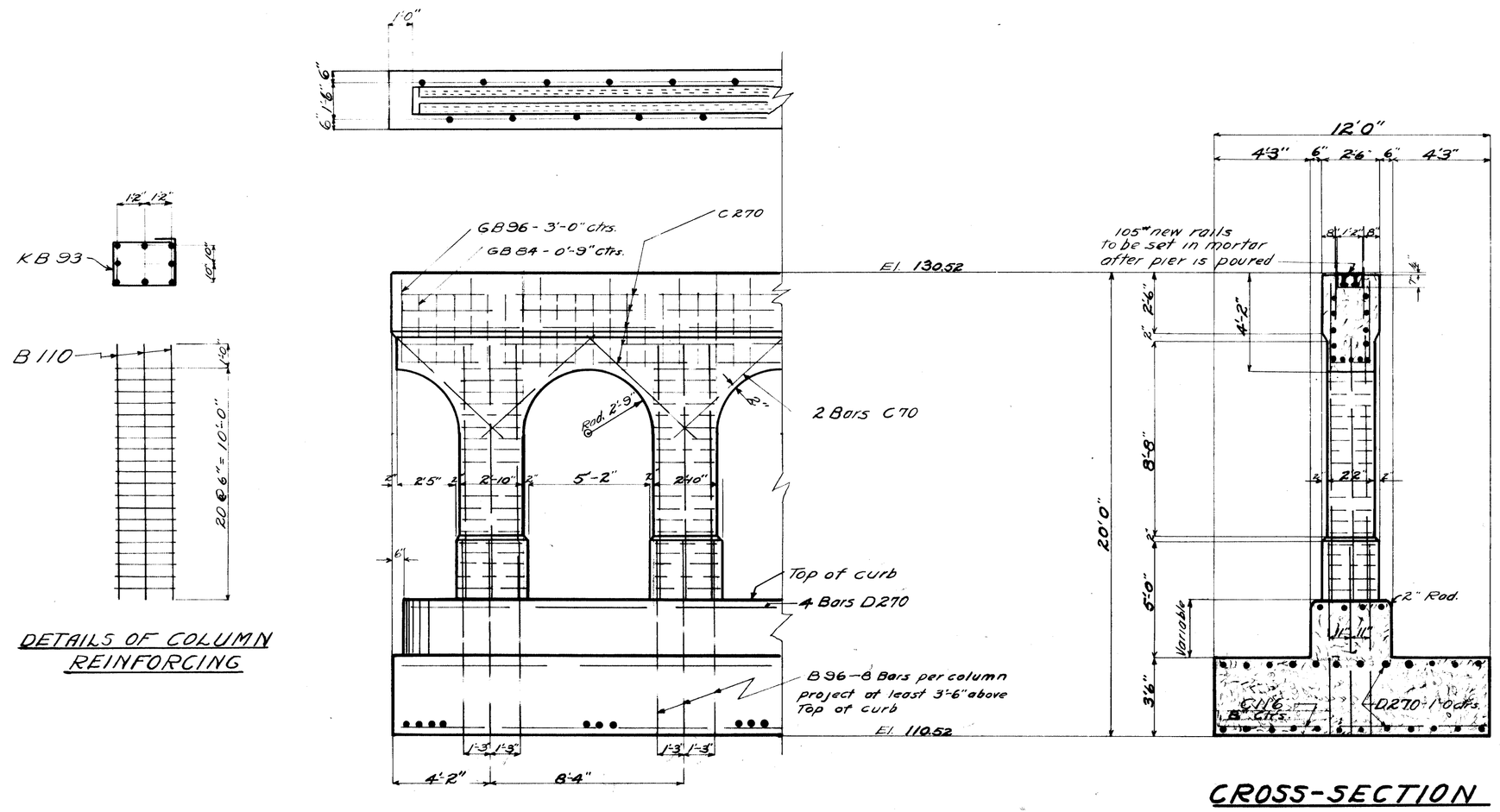
Concrete:— To be class "B" (6.25 gals of water per sack of cement and 5.25 sacks of cement per cu. yd. of concrete)

Bevel all exposed corners 3/4" unless otherwise shown. Top surfaces to have a sidewalk finish. There shall be no horizontal joints except at top of footing and at coping. Exposed surfaces to be rubbed as soon as forms are removed. No cement grout to be used in rubbing surfaces.

Reinforcing:— All bars to be deformed. They shall be securely wired together at each intersection. All splices they shall lap for a length of 40 diameters and be securely wired. SEE § 509 of specs.

Waterproofing:— Backs of Abutments shall be painted with two coats of asphaltic waterproofing.

Drains:— Shall be laid to drain and be connected to city sewer by Substructure Contractor.



DETAILS OF COLUMN REINFORCING

DETAILS OF CENTER PIER

CROSS-SECTION CENTER PIER

BILL OF BARS

Mark	No.	Size	Length	Remarks
D106	12	3/4"ϕ	10'-6"	Tran. in E. Abut. Foot.
D110	7		11-0	"
D146	8		14-6	"
D220	12		22-0	Long. in W. Abut. Foot.
D250	12		25-0	" "
D270	342	3/4"ϕ	27-0	Long. in all footings
C40	264	3/8"ϕ	4-0	Dowels in tops of piers & abut.
C60	127		6-0	" " " " abut.
C70	108		7-0	Diagonals over arches
C116	114		11-6	Trans. - center pier foot.
C270	117	3/8"ϕ	27-0	Long. in top of piers.
B60	5	1"ϕ	6-0	Trans. - W. Abut. Foot.
B70	13		7-0	" E. " "
B76	21		7-6	" E. " "
B80	4		8-0	" W. " "
B90	11		9-0	" W. " "
B96	72		9-6	Dowels in center pier
B100	108		10-0	" " sidewalk piers
B110	12		11-0	Trans. - W. Abut. Foot.
B110	180		11-0	Vertical - Columns.
B116	100		11-6	Trans. Abut. Foot.
B120	296		12-0	Dowels in Abut. & Wall Foot.
B146	122		14-6	Trans. Abut. Foot.
B216	274	1"ϕ	21-6	Trans. " "
KB93	540	1/4"ϕ	9'-3"	Hoops in Piers
GB96	75	1/2"ϕ	9-6	Stirrups in Piers
GB84	226	1/2"ϕ	8-4	" "

All bars to be deformed
Weight 77260#

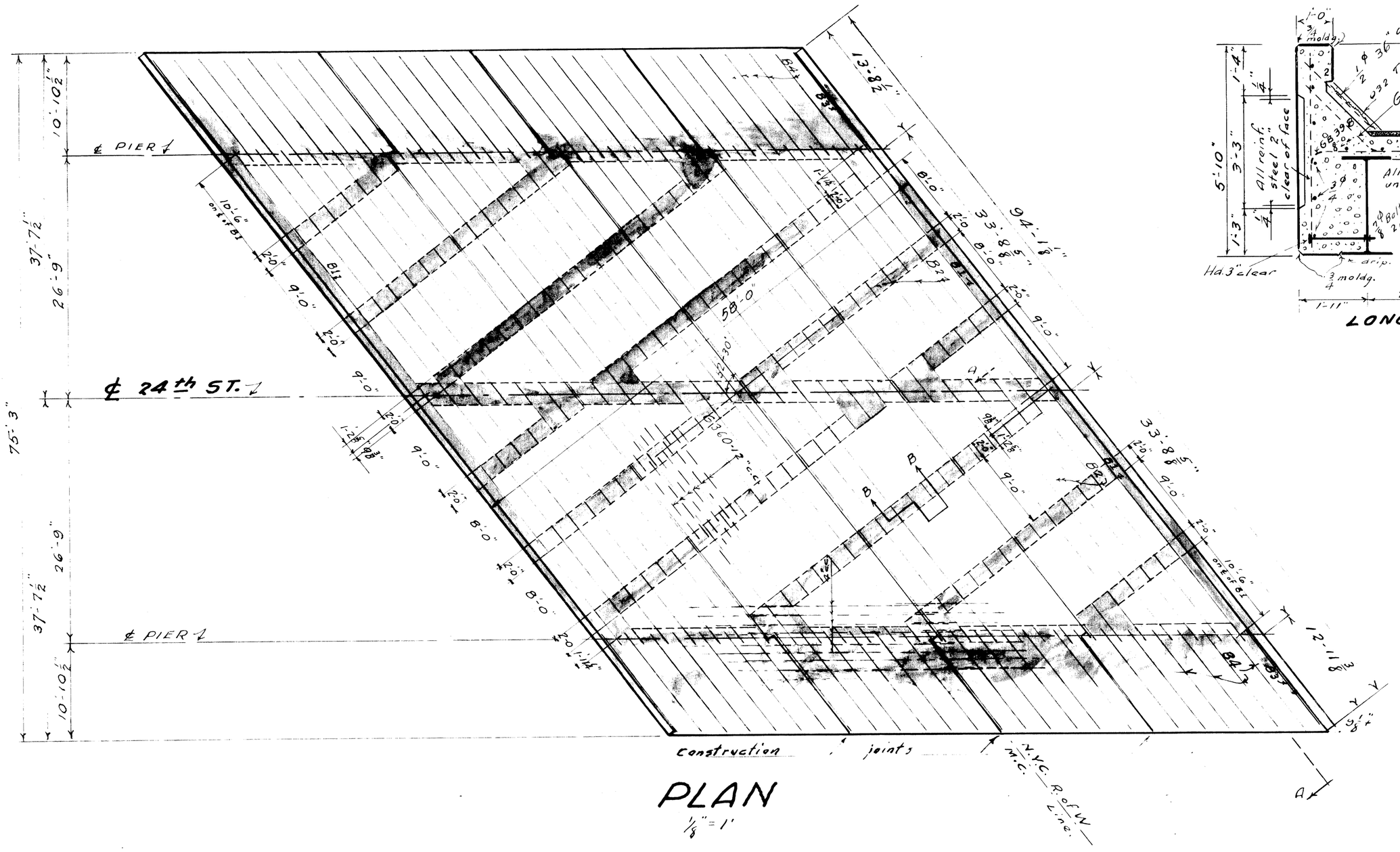
Quantities

		M.C.R.R.	N.Y.C.R.R.	Total
Concrete				
Footing	Center Pier	71 cu.yds.	71 cu.yds.	142 cu.yds.
	West Abutment	161	225	386
	East Abutment	168	221	389
	Total Footing	400	517	917
Above Footing	Center Pier	25.5	25.5	51
	Curb Piers	52.2	52.2	104.4
	West Abutment	138	260.	398
	East Abutment	168	247	415
	Total above footing	383.7	584.7	968.4
	Total	783.7	1101.7	1885.4

REVISIONS	M.C.R.R.-BAY CITY DIV.
Alterations Quantities Revised.	BRIDGE-3.22 24TH. ST. SUBWAY
	PIERS AND DETAILS
	SCALE:— 1/4" = 1 FOOT — DRAWN BY G.M.C. 6-11 1931
	APPROVED — CHECKED BY L.D.A. 19__
ISSUE NO. 3 DATE 9-25 1931	BRIDGE ENGINEER — TRACED BY 19__
	SHEET M3 OF 4

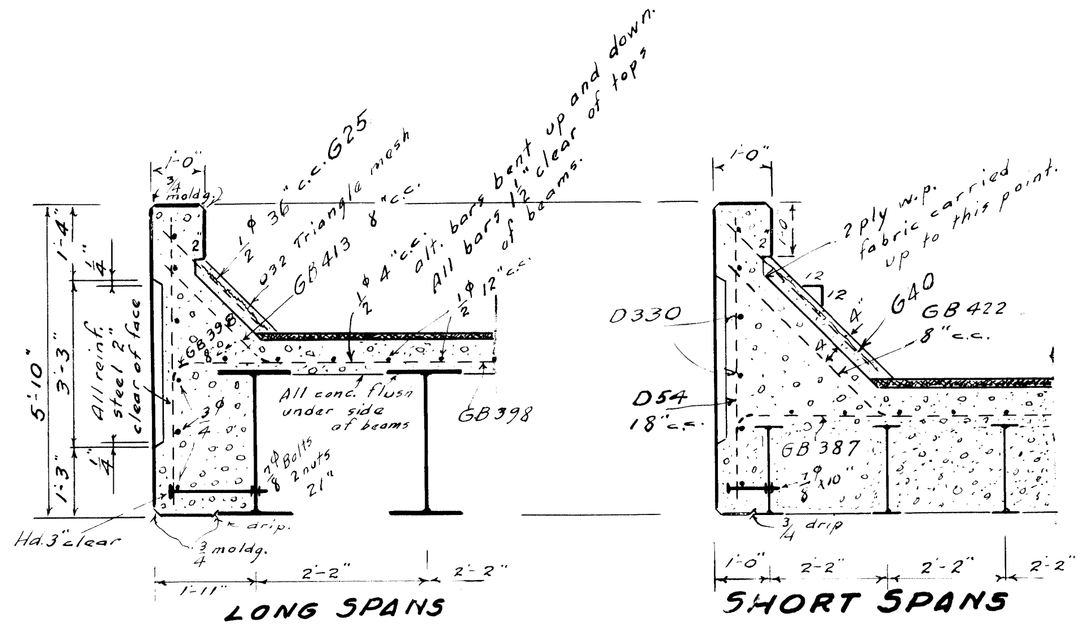
File XU 22-24

DETROIT BLUE PRINT & SUPPLY CO. 0101-01-0-005



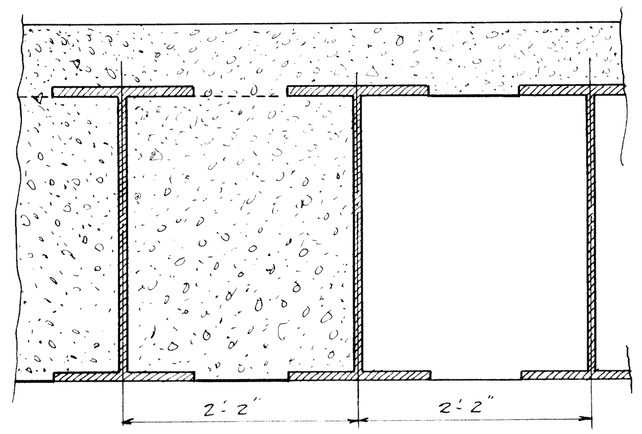
PLAN

1/8" = 1'

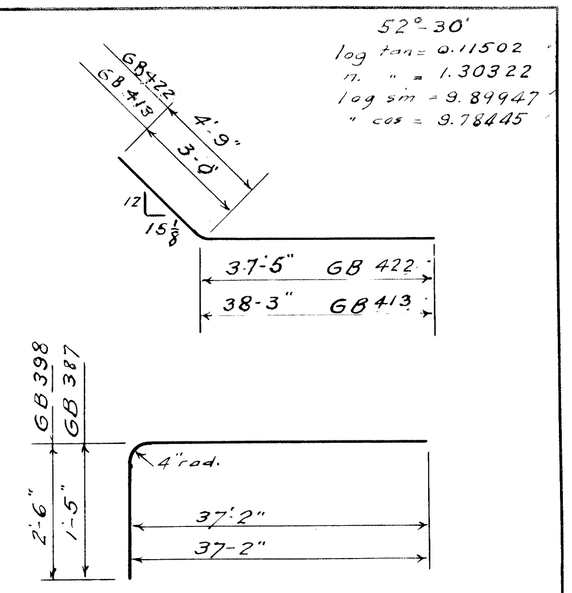


PART SECTIONS - RT. Lᴳ TO FASCIA GDRS.

1/2" = 1'



SECTION BB AT DIAPHRAGMS

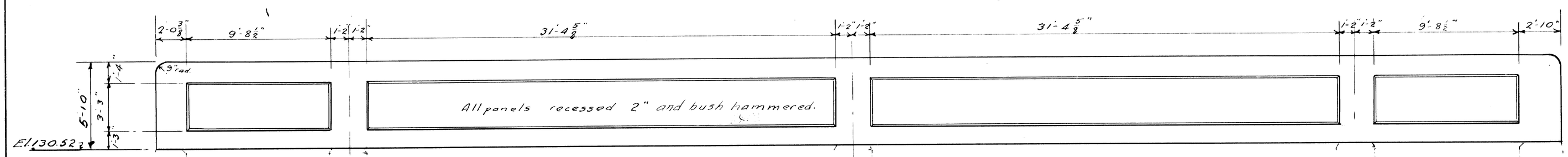


DETAILS BENT BARS

BILL-BEAMS & PLS.			
MARK	No. PCS.	SIZE	LOCATION
B1	4	33" CB 200# x 34'-6"	Fascia, Long Span
B2	48	do.	Long spans
B3	4	20" 65.4# x 13'-7	Short spans, Fasc.
B4	50	do	" "
P1	52	8 x ⅞ x 0'-11"	Spl. over ctr.

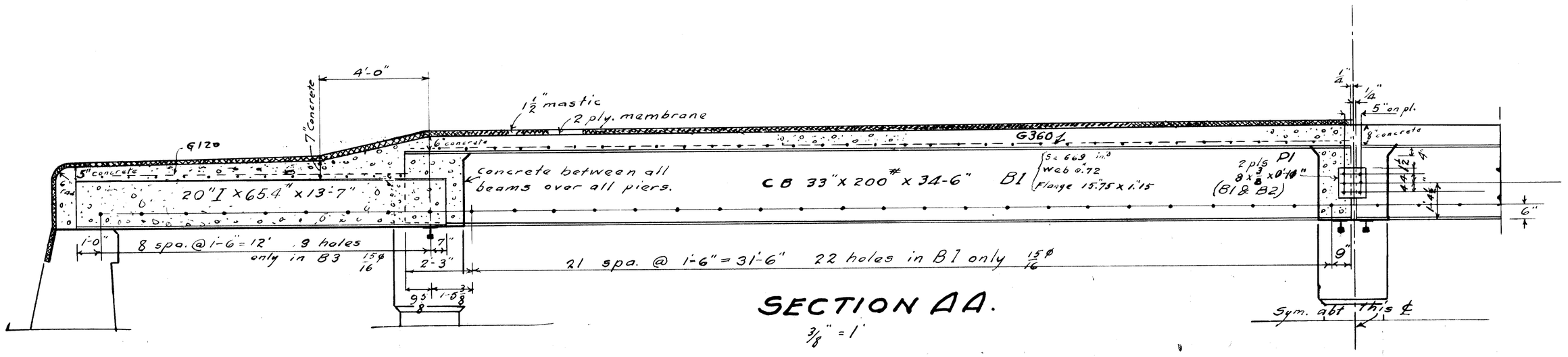
Est Wgt 407255#

BILL-REINFORCING				
MARK	No. PCS.	SIZE	LENGTH	LOCATION
GB387	64	½"	38'-7"	Transv. in floor
GB398	160		39'-8"	" " "
GB422	60		42'-2"	" " "
GB413	164		41'-3"	" " "
G25	44		2'-5"	Diagonal in w.p. seal
G40	20		4'-0"	" " " "
G54	124		5'-4"	Vert. in fascia.
G120	114		12'-0"	Longtdl. Short spans.
G360	114	½"	36'-0	" Long. "
D330	36	¾"	33'-0	Longtdl. in Fascia.



ELEV. OF FASCIA GIRDER

1/4" = 1'



SECTION AA.

3/8" = 1'

GENERAL NOTES

Concrete:
Class "A" N.Y.C. Specs. (4.75 gals. water per sack cement and 7.25 sacks cement per cu yd.)
All exposed surfaces to be rubbed as soon as stripped.
No cement grout to be used in rubbing.

Reinforcing:
Bars shall be securely wrapped at all intersections and splices.
At splices they shall lap for a distance of 40 diameters.

QUANTITIES -

Concrete 373 cu yds.
Reinf. steel see bill sheet. (18174#)
W.P. - membrane 6067□'
" mastic 5333.□'
Triangle mesh 200' 24" wide. (88#)
Bolts - 36 pcs. ⅞# x 3⅝" 3" thread 2 hex. nuts, 2 washers.
88 " ⅞# x 21" 3½" thread 2 hx. nuts, 2 washers.
156 " ⅞# x 3" 1" nut, 1 washer

REVISIONS
Rffs: Concrete Diaphragms

ISSUE NO. 2
DATE 8-7 1931

M.C.R.R.-BAY CITY DIV.

BRIDGE 3.22 24TH ST.

-FLOOR-

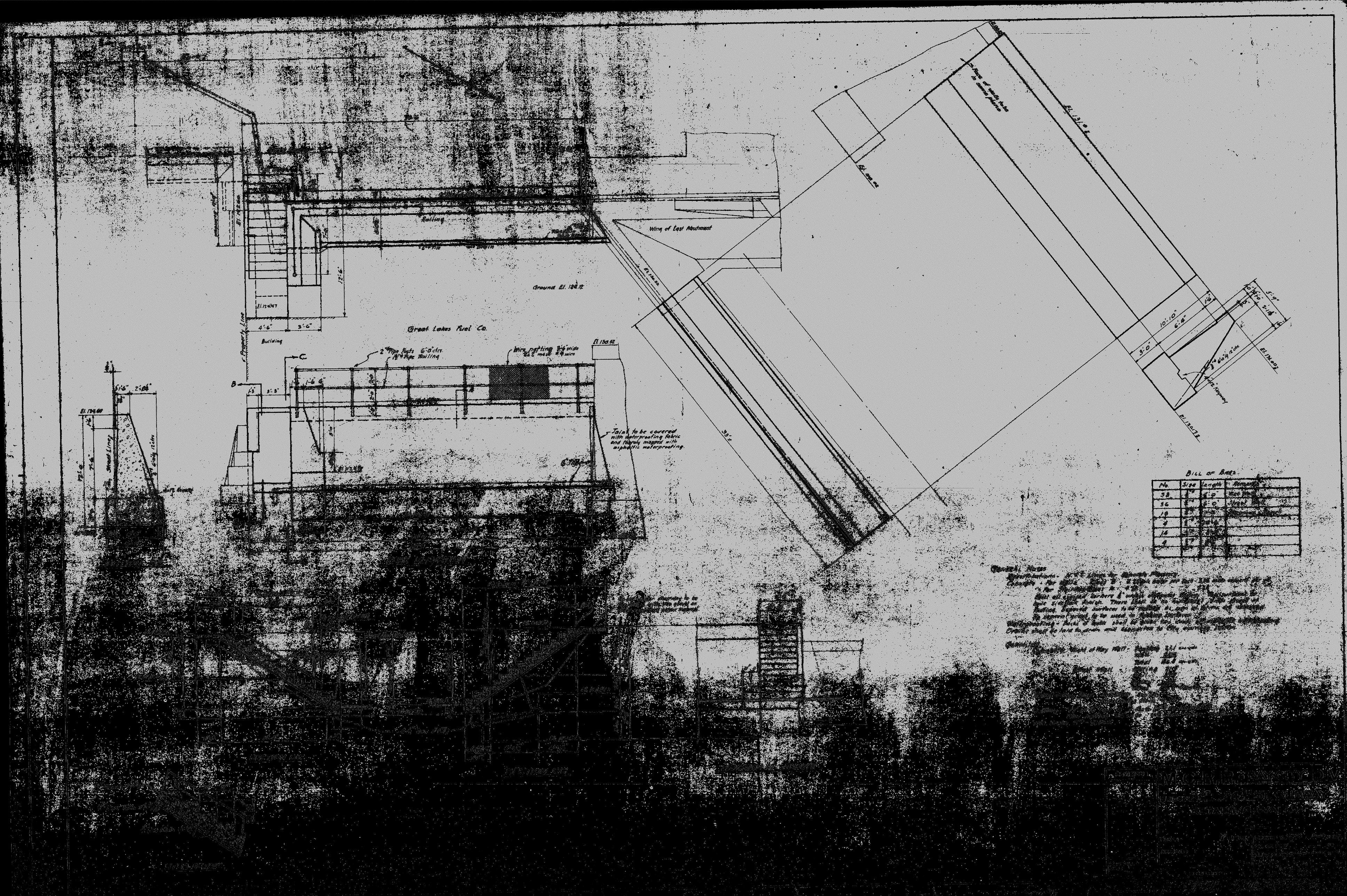
SCALE: Shown = 1 FOOT
APPROVED
BRIDGE ENGINEER

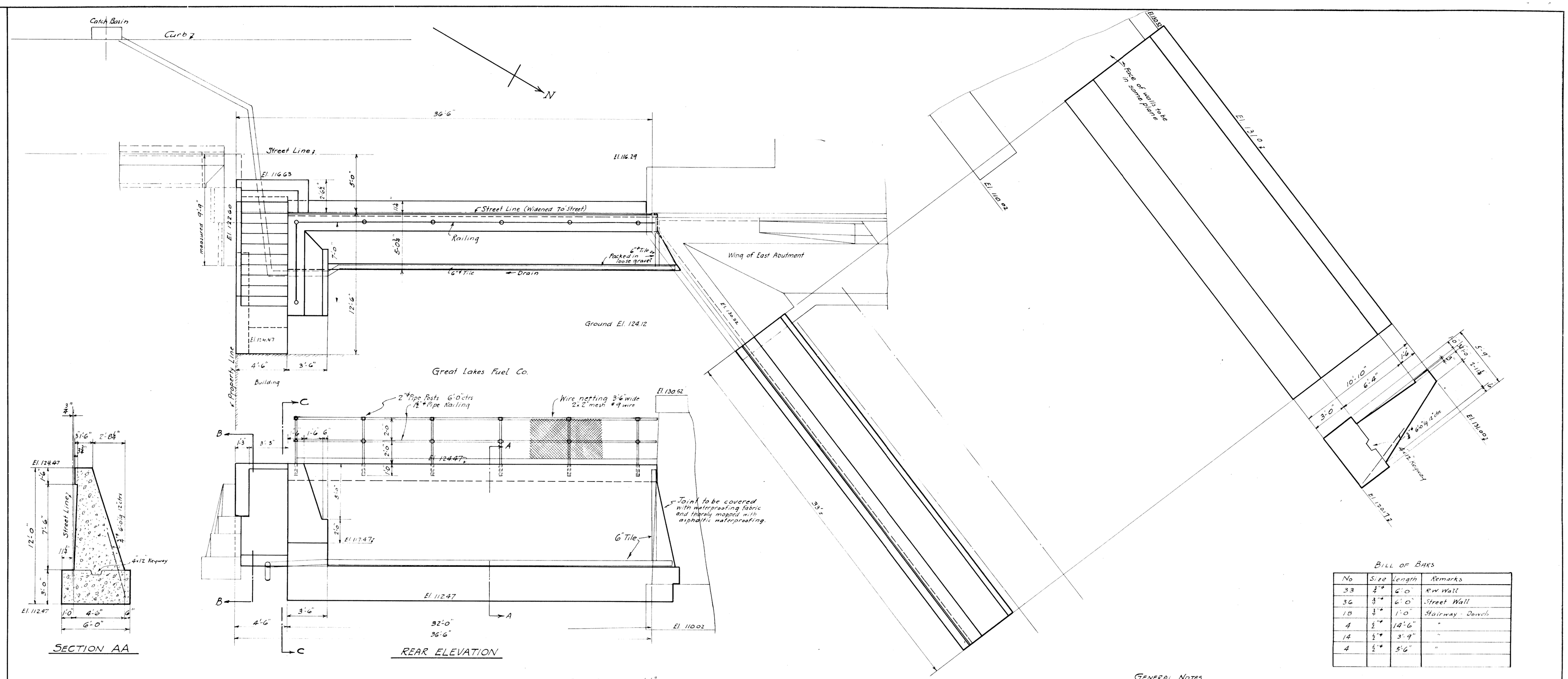
DRAWN BY L.B.A. 4/21 1931
CHECKED BY CMC 7/ 1931
TRACED BY L.B.A. 1931

SHEET M4 OF 4

File XU 22-22.5

DETROIT BLUE PRINT & SUPPLY CO. 0-03-0-1000


Railing
Wing of East Abutment
Ground El. 130.12
Great Lakes Fuel Co.
Building
Property Line
4'-6"
3'-6"
17'-6"
Talck to be covered with waterproofing fabric and thoroughly mopped with asphaltic waterproofing.
Bill of Bars
No.
Size
Length



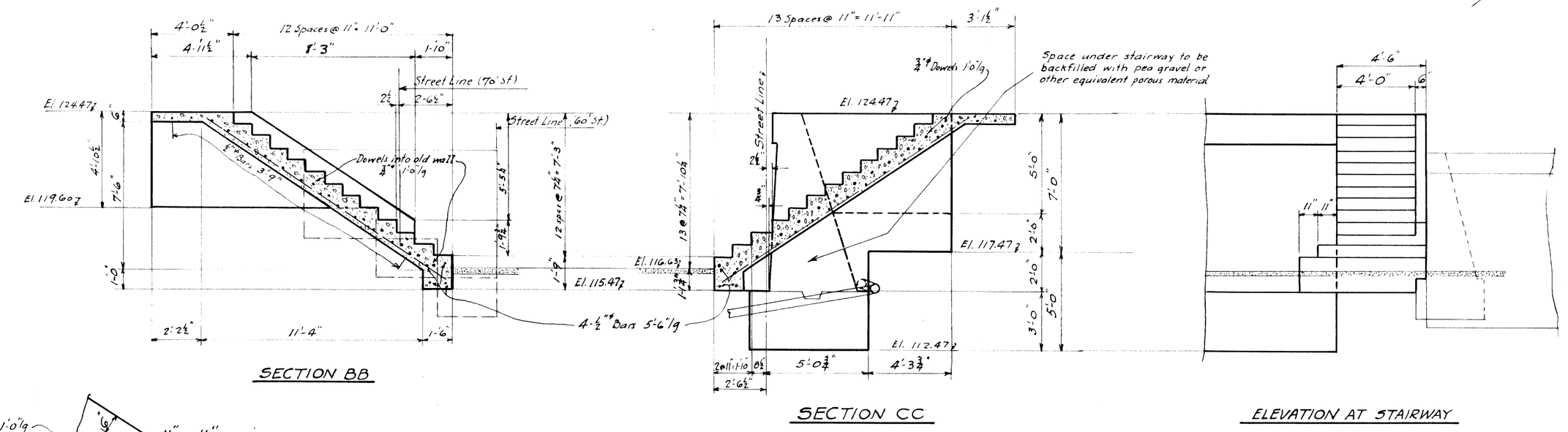
BILL OF BARS

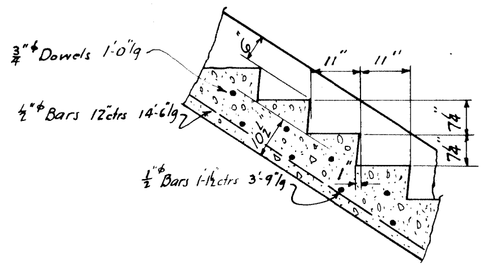
No	Size	Length	Remarks
33	¾"φ	6'-0"	R.W. Wall
36	¾"φ	6'-0"	Street Wall
18	¼"φ	1'-0"	Stairway - Dowels
4	½"φ	14'-6"	"
14	½"φ	3'-9"	"
4	½"φ	5'-6"	"

GENERAL NOTES

Specifications - N.Y.C. Lines for Concrete Masonry.
Concrete - For Walls Class B - 6.25 gals water per sack - 5.25 sacks cement per yd.
- For Stairway-Class A - 4.75 " " " " - 7.25 " " " "
Bevel all exposed corners ¾" unless otherwise shown. Top surfaces to have sidewalk finish. There shall be no horizontal joints except at footing. Exposed surfaces to be rubbed as soon as forms are removed. No cement grout to be used in rubbing surface.
Waterproofing - Backs of walls shall be given two coats of asphaltic waterproofing. Drains shall be laid to drain and connected to City drainage system.

Quantities
Concrete Right of Way Wall - Footing 21.1 cu.yds.
Wall 25.4
Total 46.5 cu.yds.
Street Wall - Footing 21.5
Wall 37.5
Stairs 4.5
Total 63.5 cu.yds.
Reinforcing Bars R.W. Wall 800 lbs.
Street Wall & Stairs 445#
Railing - 77' of 1½"φ pipe @ 7' Posts (2"φ) as indicated.
Wire netting 3'-6" wide 2"x2" mesh #9 wire 40 lin.ft.
Tile Drain 6"φ - 73 lin.ft.





REVISIONS
ISSUE NO. DATE ____ 19__

M.C.R.R. - BAY CITY DIV.

BRIDGE 3.22 24TH ST. SUBWAY

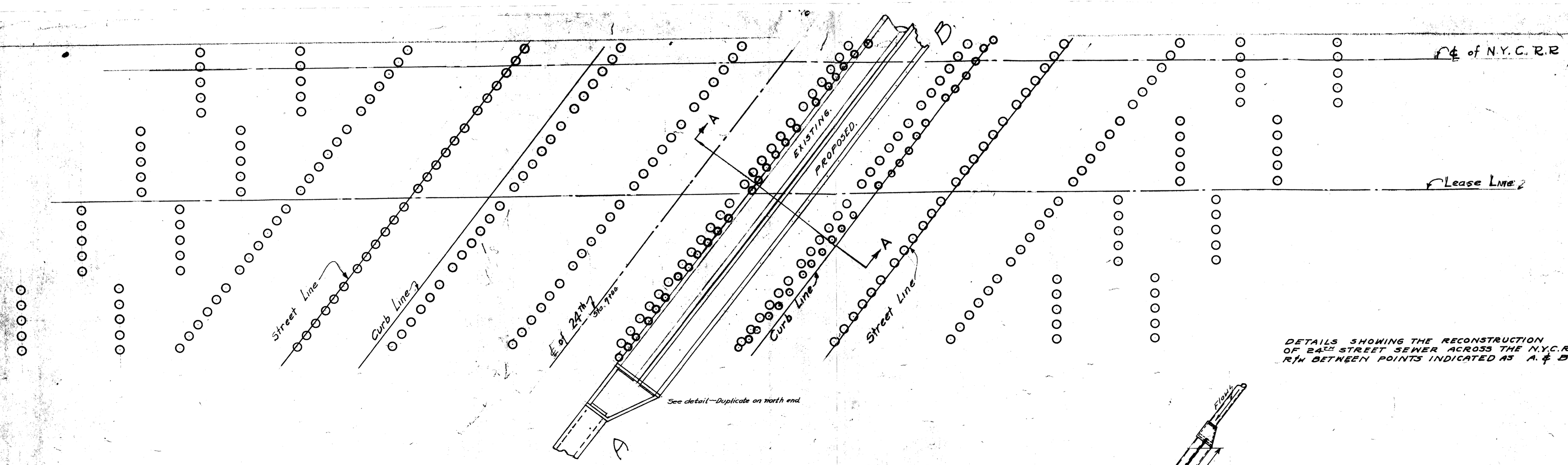
RETAINING WALLS

SCALE: ¼" = 1 FOOT
APPROVED
BRIDGE ENGINEER

DRAWN BY GHER 10-16 1931
CHECKED BY ____ 19__
TRACED BY O.H.SK 10-17 1931
SHEET 1 OF 1

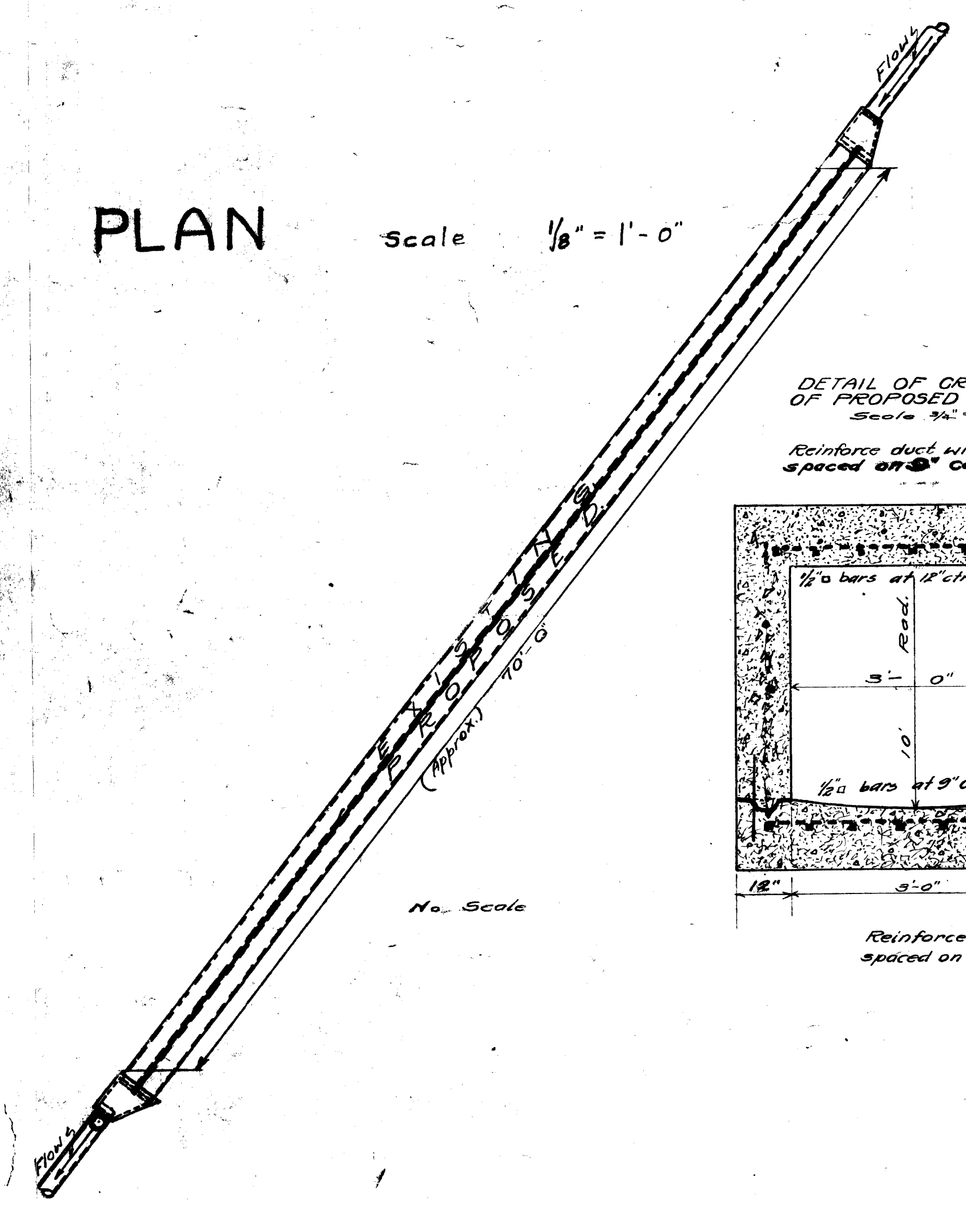
File XU 22-26

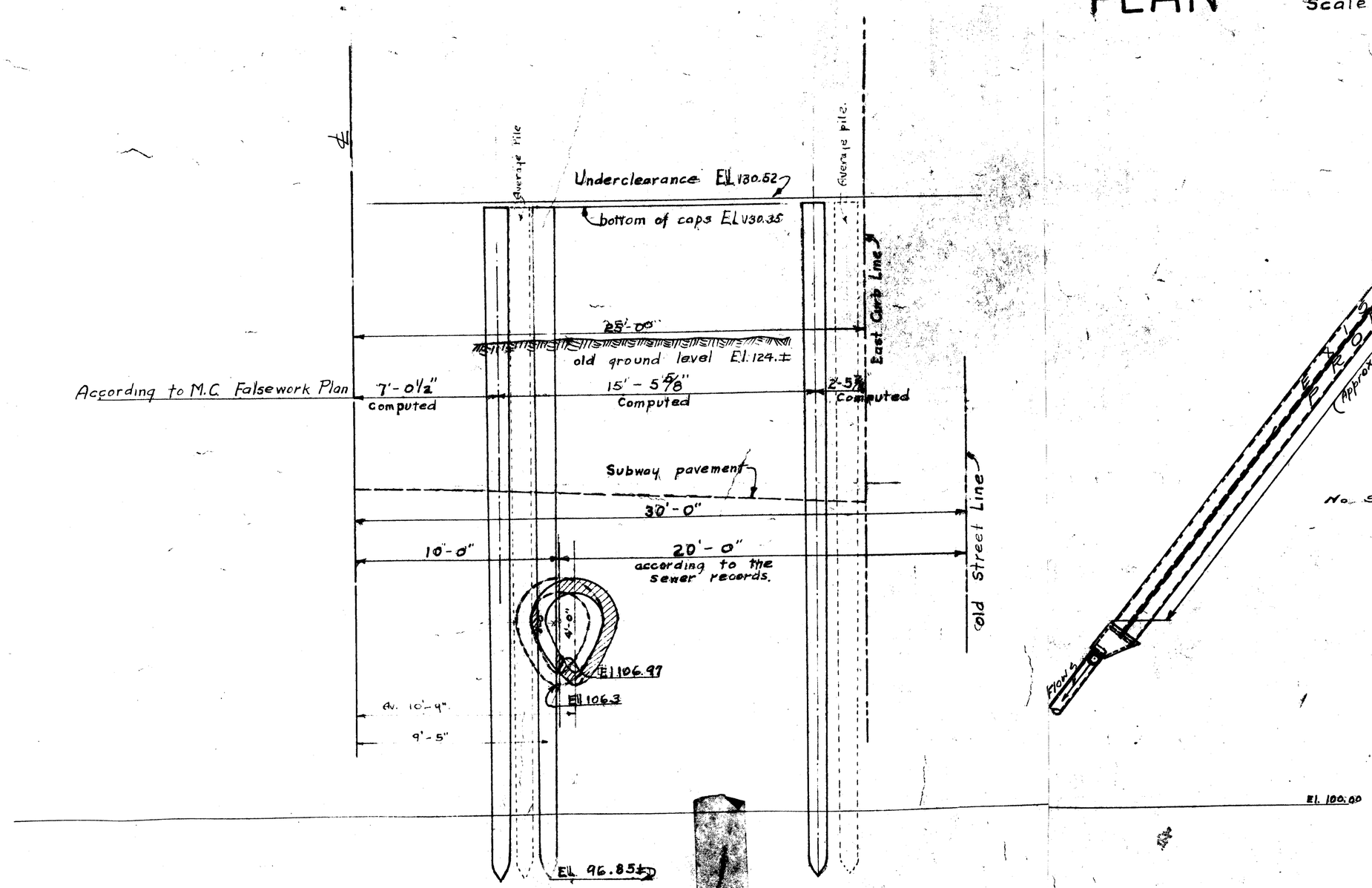
DETROIT BLUE PRINT & SUPPLY CO. 0101-05-0-000



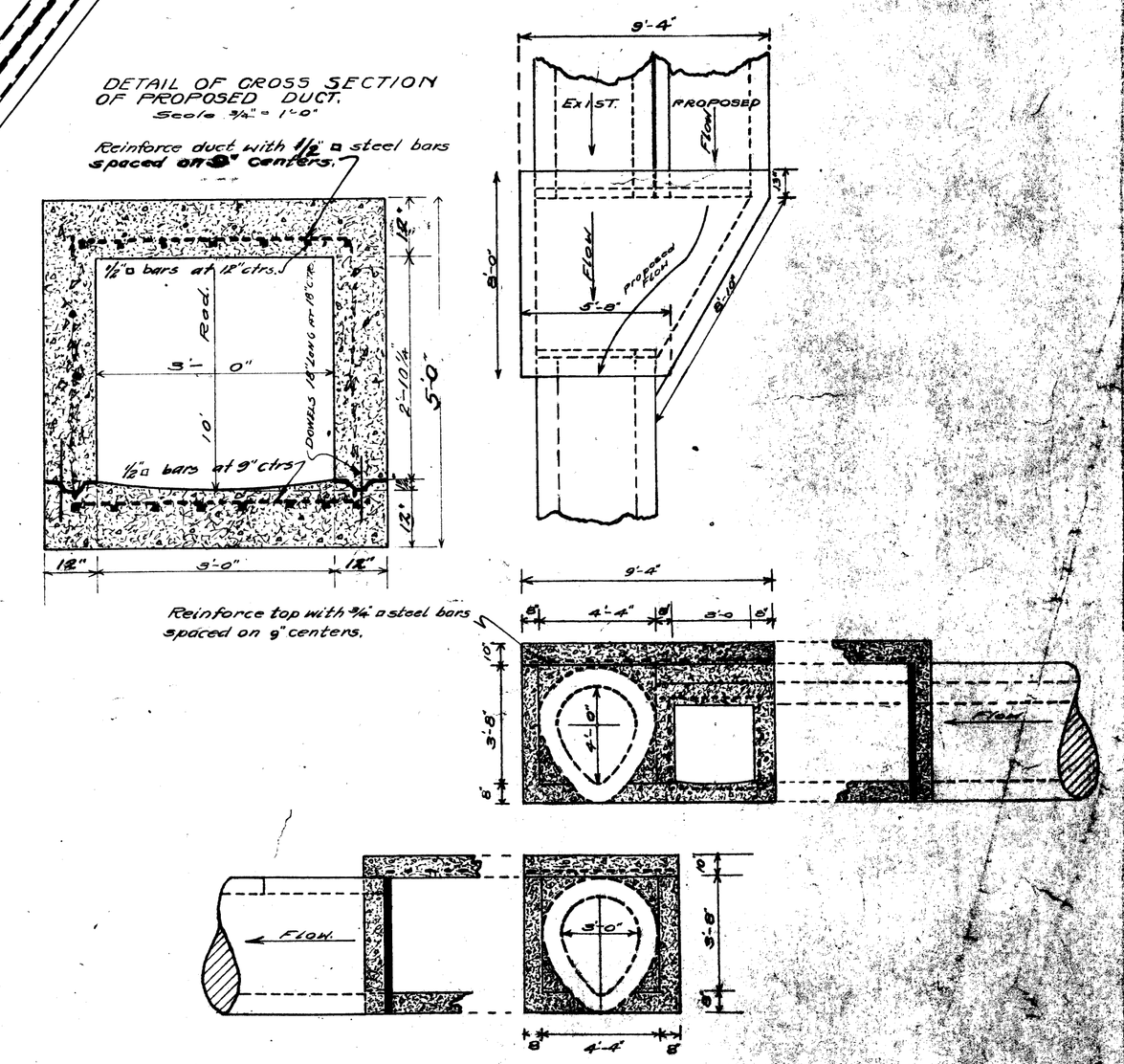
DETAILS SHOWING THE RECONSTRUCTION OF 24TH STREET SEWER ACROSS THE N.Y.C.R.R. R/W BETWEEN POINTS INDICATED AS A & B.

PLAN Scale 1/8" = 1'-0"





SECTION "AA" Scale 1/4" = 1'-0"



CITY OF DETROIT
DEPT. OF PUBLIC WORKS
CITY ENGINEER'S OFFICE
Approved: [illegible] City Engineer

File X-22-27