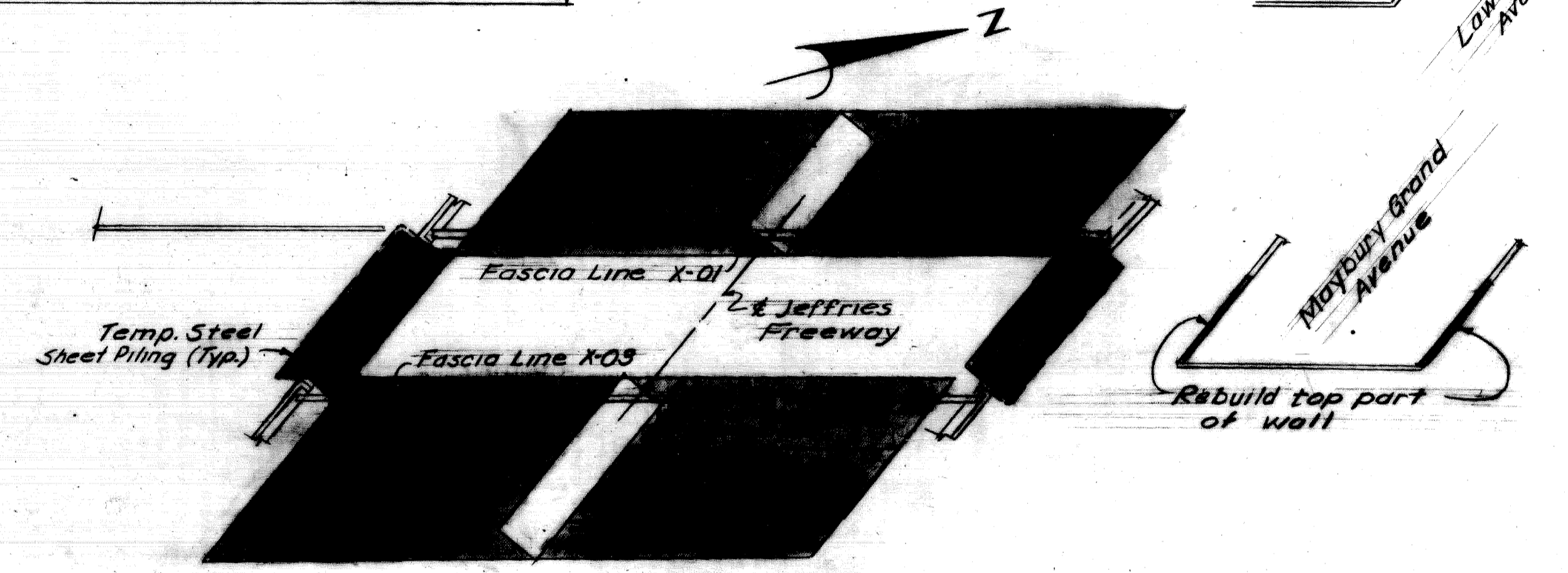


PLAN-STAGE II
Scale: 1" = 40'

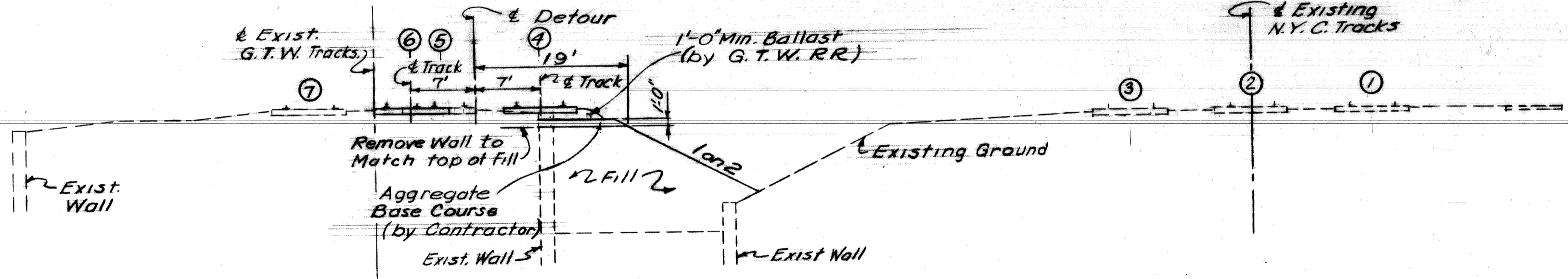
Curve Data

	Curve 1	Curve 2	Curve 3	Curve 4
Δ	8°-01'-27"	8°-01'-27"	8°-01'-27"	8°-01'-27"
D	5°-00'-00"	5°-00'-00"	5°-00'-00"	5°-00'-00"
R	1145.916'	1145.916'	1145.916'	1145.916'
T	80.372'	80.372'	80.372'	80.372'
L	160.483'	160.483'	160.483'	160.483'
E	2.815'	2.815'	2.815'	2.815'
P.C.	4+04.03'	7+14.52'	11+63.00'	14+73.48'
P.I.	4+84.41*	7+94.89*	12+43.37*	15+53.85*
P.T.	5+64.52'	8+75.00'	13+23.48'	16+33.97'

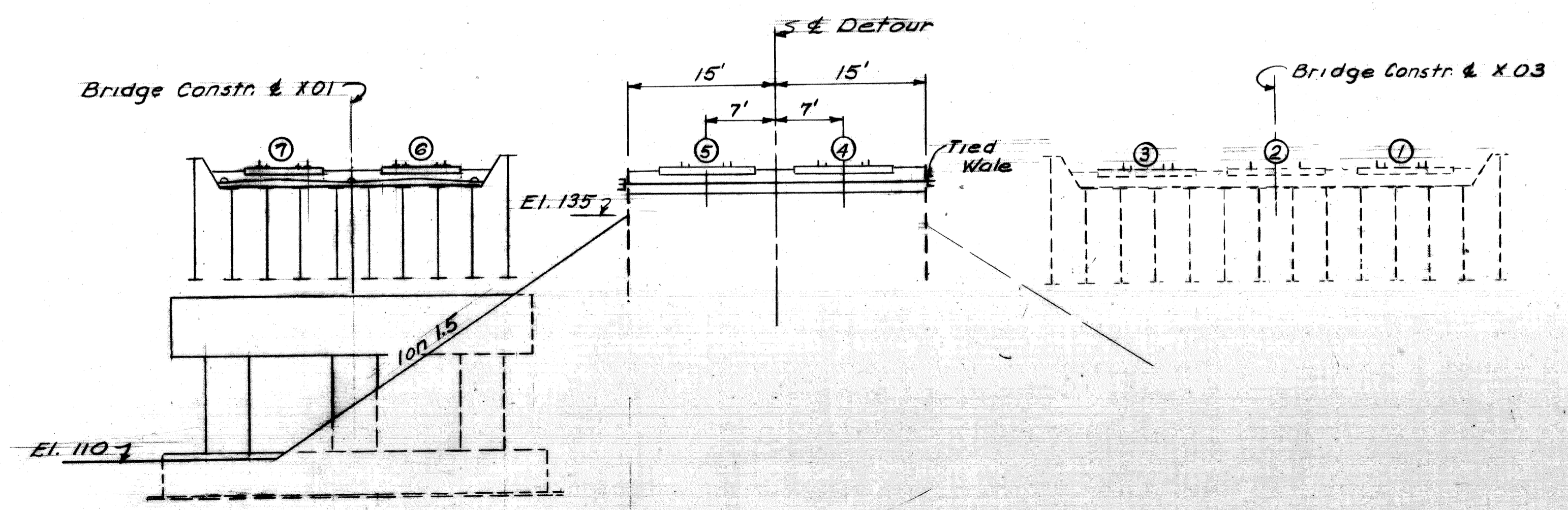
* Forward Station



PLAN-STAGE III
Scale: 1" = 40'



SECTION AA
Scale: 1" = 10'



SECTION BB
Scale: 1" = 10'

- Stage II**
- To be done by Contractor: Remove top portion of wall where tracks 4 & 5 cross, and place embankment of tracks 4 & 5.
 - To be done by G.T.W.R.R. Co.: Place ballast & detour tracks 4 & 5. Use Temporary Trestle & that part of temporary detour remaining from Stage I.
 - To be done by Contractor: Build Bridge X01. (Railroad traffic on detour tracks 4 & 5)
 - To be done by G.T.W.R.R. Co.: Place ballast and tracks 6 & 7 on new bridge X01. Remove tracks 4 & 5 except parts left by N.Y.C.R.R. in Stage I. (Railroad traffic in normal operation on tracks 6 & 7 over new Bridge X01).
 - To be done by N.Y.C.R.R. Company: Remove portion of tracks 4 & 5 left in Stage I.
 - To be done by Contractor: Rebuild portion of wall that was removed. (See Item 1, Stage II)
- Stage III**
- Remove temporary trestle and rebuild top portion of walls removed for trestle.
 - Build walls to connect Abuts. between Bridges X01 & X03.
 - Complete excavation and build Subbase Slab. Excavate and build in a manner that allows no more than 30' of footing unrestrained at any time.
- Note:** All operations in Stage III to be done by Contractor.

HOLD FOR FUTURE USE

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: _____
STRUCTURAL ENGINEER

JOB No.
PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

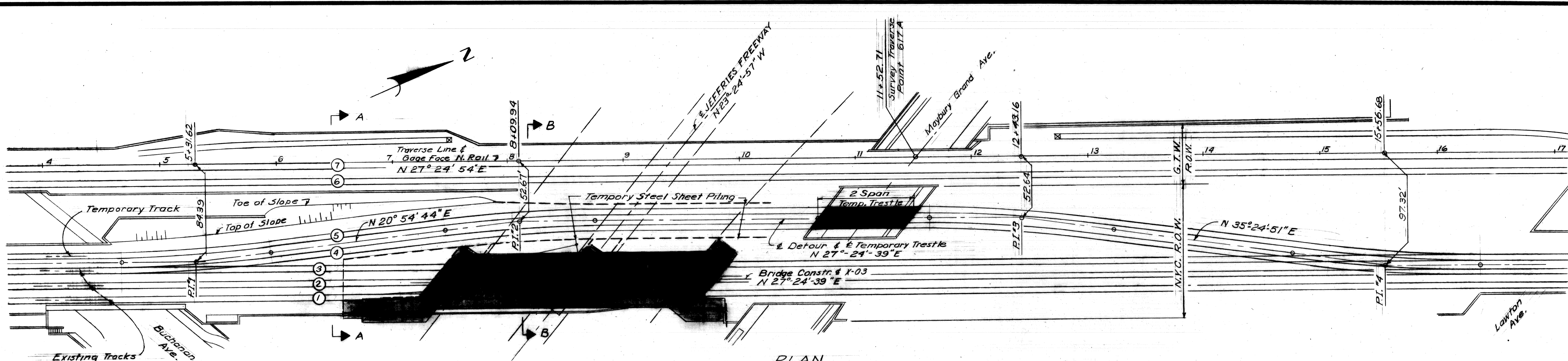
CONSTRUCTION SEQUENCE
STAGES 2 & 3

NO.	REVISIONS	DATE	BY

CITY OF DETROIT

DRAWN BY	SWAN	7/66
CHECKED BY	WAL	7/66
DESIGNED BY	SWAN	7/66
DATE	7	7

X03 of 82124A



Curve Data

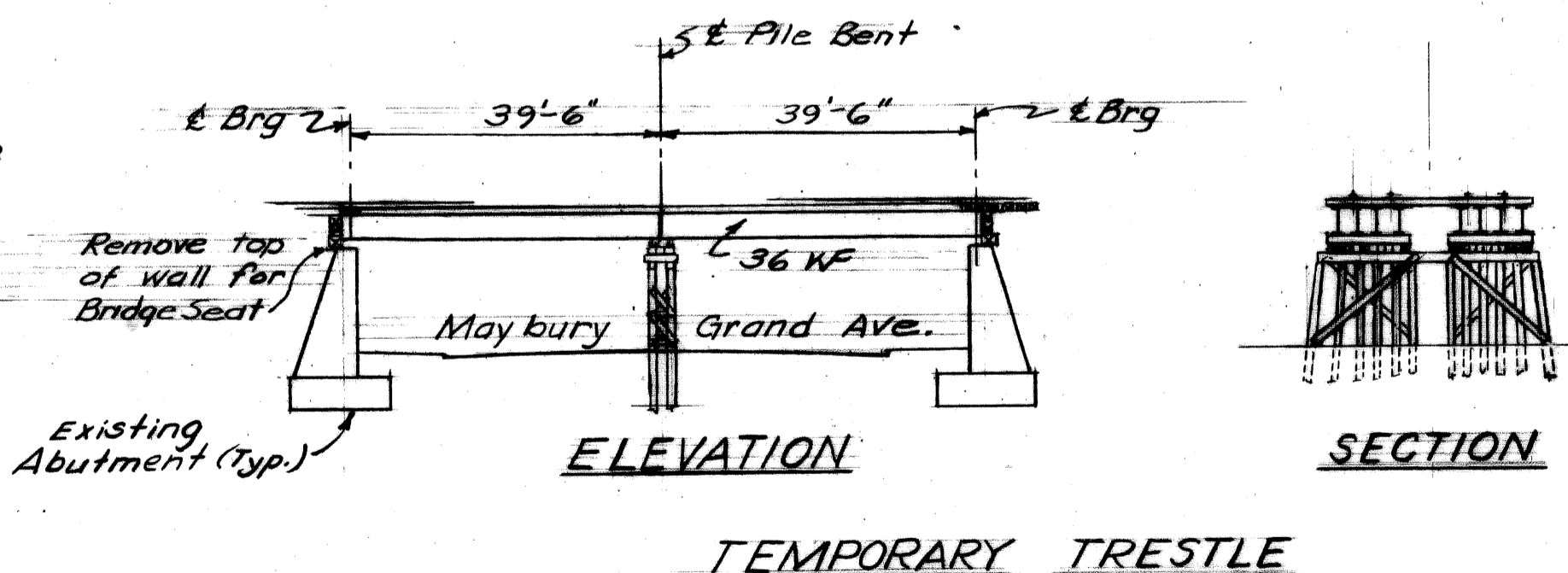
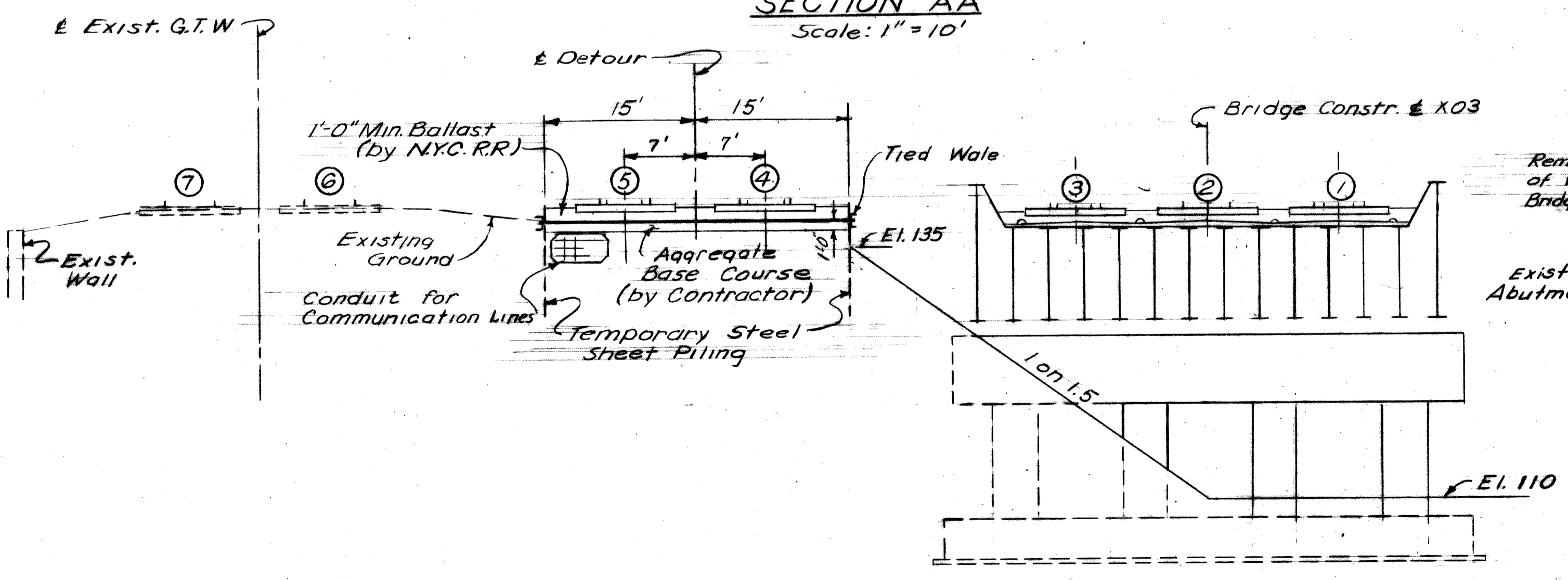
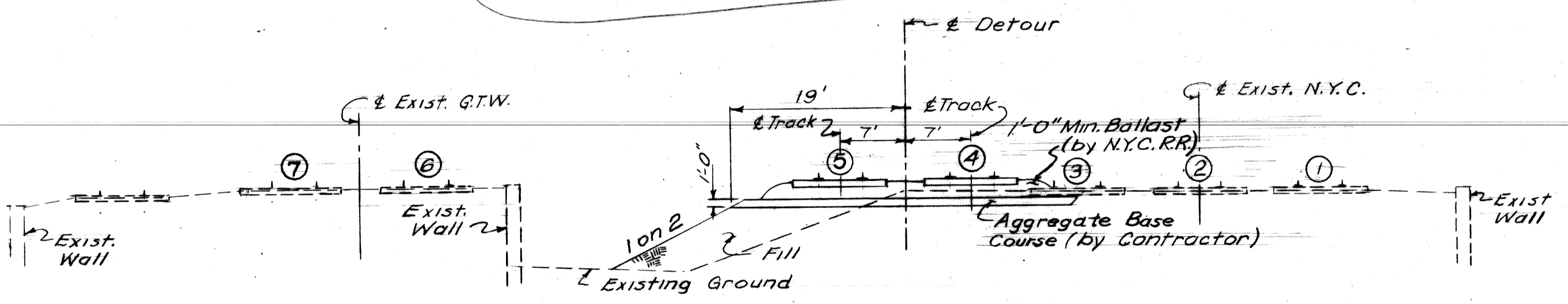
	Curve 1	Curve 2	Curve 3	Curve 4
Δ	6°-29'-55"	6°-29'-55"	8°-00'-12"	8°-00'-12"
D	5°-00'-00"	5°-00'-00"	5°-00'-00"	5°-00'-00"
R	1145.916'	1145.916'	1145.916'	1145.916'
L	65.056'	65.056'	80.164'	80.164'
E	129.971'	129.975'	160.067'	160.067'
L	1.845'	1.845'	2.801'	2.801'
P.C.	4+65.06	7+45.03	11+63.00	14+73.07
P.I.	5+30.11*	8+10.09*	12+43.16*	15+53.23*
P.T.	5+95.03	8+75.00	13+23.07	16+33.13

* Forward Station

See original to correct curve data

STAGE I

- To be done by Contractor: Place temporary sheet piling and embankment. Grade for detour tracks ④ & ⑤. Construct Temporary Trestle over Maybury Grand.
- To be done by N.Y.C.R.R. Company: Place ballast & detour tracks ④ & ⑤, crossovers as required outside of construction area, & rails on trestle.
- To be done by Contractor: Construct Bridge X03 (Railroad traffic on tracks ④ & ⑤).
- To be done by N.Y.C.R.R. Company: Place ballast and tracks ①, ② & ③ on new Bridge X03. Remove tracks ④ & ⑤ except parts required for Stage II (Railroad traffic in normal operation on tracks ①, ② & ③ over new Bridge X03.)



HOLD FOR FUTURE USE

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____
STRUCTURAL ENGINEER

JOB No.
PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

CONSTRUCTION SEQUENCE
STAGE I

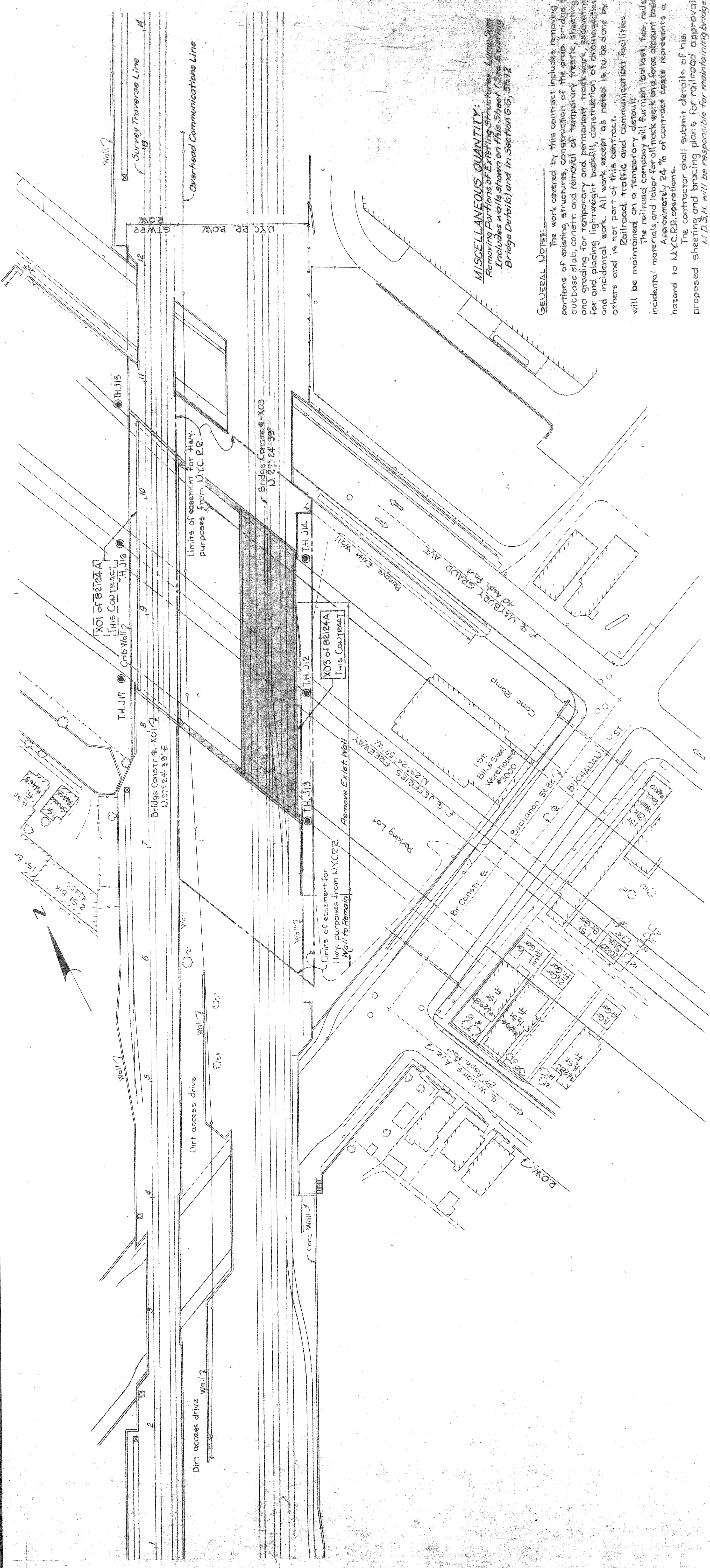
REVISIONS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

DRAWN BY	STUDY	TIME
WAL	7/66	
CHECKED BY	STJ	7/66
SHEET	6	OF

X03 of 82124A



MISCELLANEOUS QUANTITY:
 Removing Portions of Existing Structures - Lump Sum
 Includes walls shown on this sheet (See Existing
 Bridge Details) and in Section G-5, Sh. 12

GENERAL NOTES:
 The work covered by this contract includes removing
 portions of existing structures, construction of the prop. bridge
 subbase slab constr. and removal of temporary trestle, sheeting
 and grading for temporary and permanent track work, excavating
 for and placing light-weight backfill, construction of drainages, ties
 and incidental work. All work except as noted is to be done by
 others and is not part of this contract.
 Railroad traffic and communication facilities
 will be maintained on a temporary detour.
 The railroad company will furnish ballast, ties, rails,
 incidental materials and labor for all track work on a for-accrual basis.
 Approximately 24% of contract costs represents a
 hazard to U.Y.C. RR. operations.
 The contractor shall submit details of his
 proposed sheeting and bracing plans for railroad approval.
 M.D.S.H. will be responsible for maintaining bridge.

SURVEY PLAN
 Scale: 1"=40'0"

PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(1)

NO.	DESCRIPTION	DATE

MICHIGAN STATE HIGHWAY DEPARTMENT
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

GENERAL PLAN OF SITE

APPROVED: _____
 DESIGN SUPERVISING ENGINEER

APPROVED: _____
 ENGINEER OF DESIGN - CONSULTANTS

CITY OF DETROIT
 SQUAD BOSS: *[Signature]*
 DRAWN BY: *[Signature]*
 CHECKED BY: *[Signature]*
 SHEET: 2 OF 7

X03 of 82124A

LOG OF SOIL BORINGS

T.H. J-12

130 -
 P 5:1726
 P 5:1368
 P 5:540
 P 5:405
 P 5:2100
 P 5:230
 P 5:320
 P 5:215
 P 5:160
 P 5:350
 2:43
 P
 2:43
 P 5:350
 2:43
 P 5:275
 1:3
 P 5:260
 2:4
 P
 2:15
 P 5:315
 4:4
 2:421-10
 4:436
 2:725
 5:450-0
 5:470
 5:450-10
 5:0/2
 -20

Fill (cinders, concrete, wood, clay & miscellaneous).
 Stiff, vert.-colored clay, some sand, trace of gravel.
 Medium gray clay, some sand, few gravel, few large gravel.
 Medium to soft gray clay, trace of sand, few gravel, small seams, and partings.
 Medium gray clay, some sand, gravel, small seams of sand.
 Compact medium to fine gray sand, seams of clay.
 Very compact coarse to medium gray clay, large gravel.
 Very hard sandy gravelly gray clay, large gravel, partings, small boulders & seams of fine sand.
 Broken limestone fragments, some clay, sand & gravel.
 Refusal.

T.H. J-13

130 -
 4:8
 5:044-120
 5:1224
 4:842
 P 5:540
 P 5:345
 P 5:220
 P 5:240
 P 5:240
 P 5:205
 P 5:160
 End of boring.

Fill (cinders, clay, bricks and concrete).
 Medium vert.-colored sandy clay, trace of gravel.
 Stiff brown sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Soft gray sandy clay.
 Soft gray sandy clay, trace of gravel.

T.H. J-14

130 -
 1:83
 2:518-120
 5:1152
 2:34
 5:490
 P 5:110
 P 5:650
 P 5:285
 P 5:205
 P 5:375
 P 5:240
 P 5:175
 P 5:345
 P 5:260
 End of boring.

Fill (cinders, sandy clay, bricks & concrete).
 Soft vert.-colored sandy clay, trace of gravel.
 Medium vert.-colored sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Soft gray sandy clay, trace of gravel.
 Medium gray sandy clay, some silty seams.
 End of boring.

T.H. J-15

130 -
 3:85
 5:740-120
 5:1800
 2:345
 5:520
 P 5:110
 P 5:205
 P 5:195
 P 5:290
 P 5:435
 P 5:320
 P 5:175
 P 5:260
 2:4
 3:445
 10
 0

Fill sand, bricks & clay.
 Firm brown fine & medium sand.
 Stiff vert.-colored sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Soft gray sandy clay, trace of gravel.
 Very compact fine gray sandy seams of sand and gravel.
 Refusal.

T.H. J-16

130 -
 5:16
 4:944-120
 5:1800
 3:445
 5:340
 4:6
 110
 5:205
 P 5:230
 P 5:140
 P 5:435
 P 5:320
 P 5:175
 P 5:260
 2:4
 3:445
 10
 0

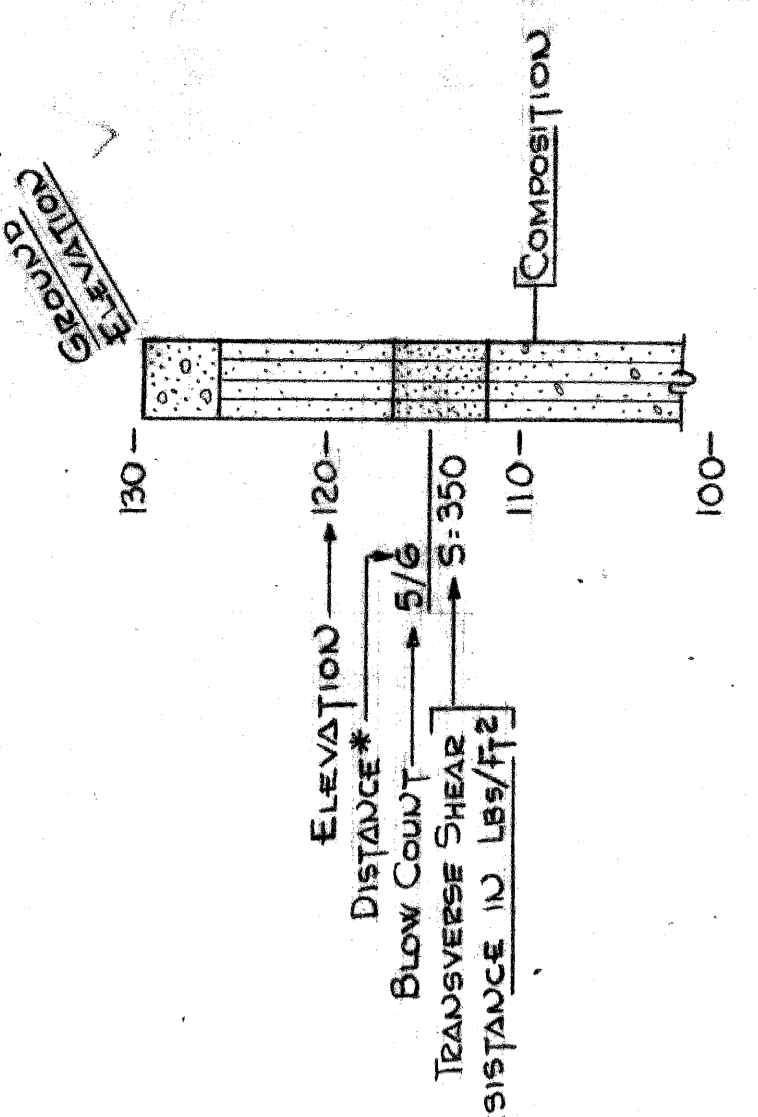
Fill sand, bricks & clay.
 Firm brown fine & medium sand.
 Stiff vert.-colored sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Soft gray sandy clay, trace of gravel.
 Very compact fine gray sandy seams of sand and gravel.
 Refusal.

T.H. J-17

130 -
 3:4
 3:47
 5:1080
 3:345
 P 5:350
 P 5:205
 P 5:290
 P 5:285
 2:43
 5:145
 P 5:165
 P 80
 End of boring.

Topsoil & fill.
 Loose brown fine & medium sand.
 Medium vert.-colored sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Medium gray sandy clay, seams of silty clay.
 End of boring.

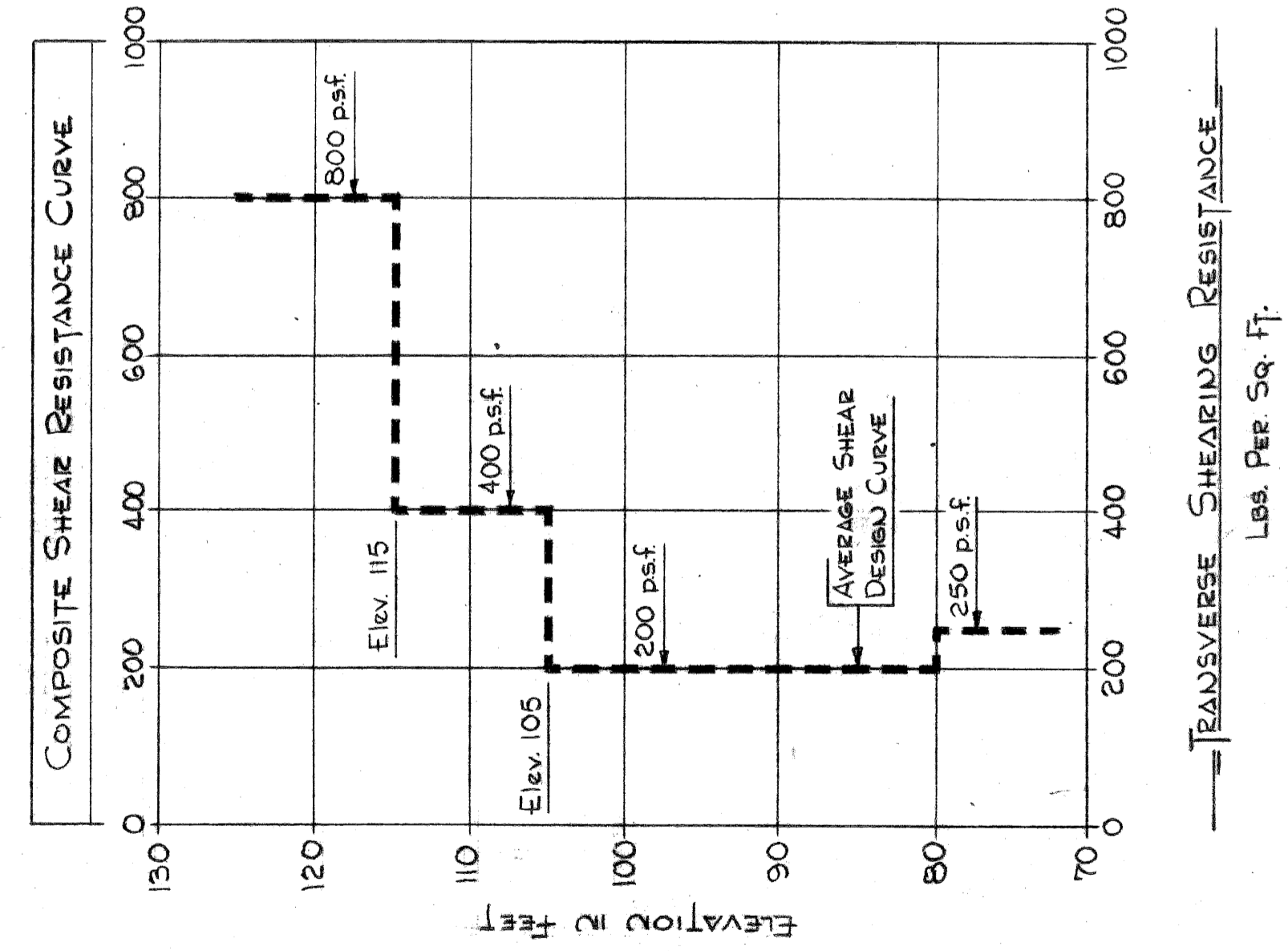
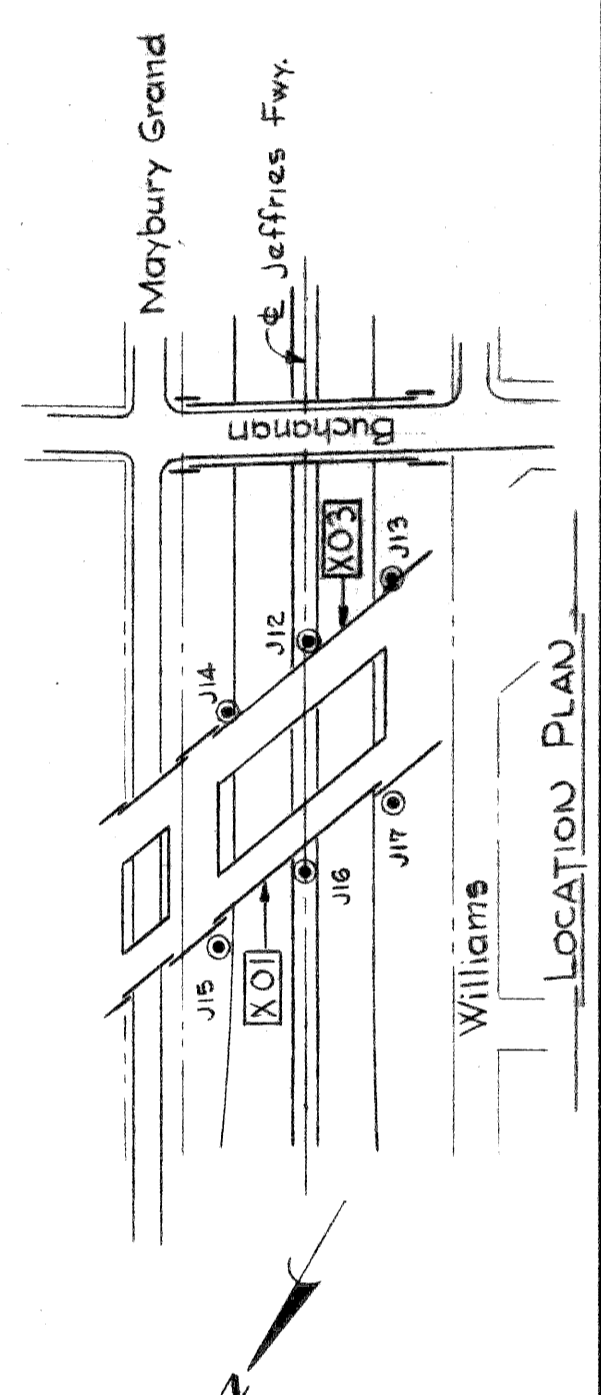
LEGEND



NOTES:
 Blow Count - Indicates number of blows required to drive a sampler 6" using a 140# hammer falling 30".
 P - Indicates sampler was pushed.
 S - Indicates Transverse Shearing Resistance in Lbs/sq. ft. as determined by MS&HD Standard Test.

* 6" if omitted, otherwise as noted.

Note:
 The terms "soft and medium" shown here correspond to the soft, plastic and lower firm classifications of the M.D.S.H. system. All piles are to be driven to or below elevation +10. Estimated bottom of piles, all substructure units, elevation -5.



MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

LOG OF SOIL BORINGS

PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS' OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

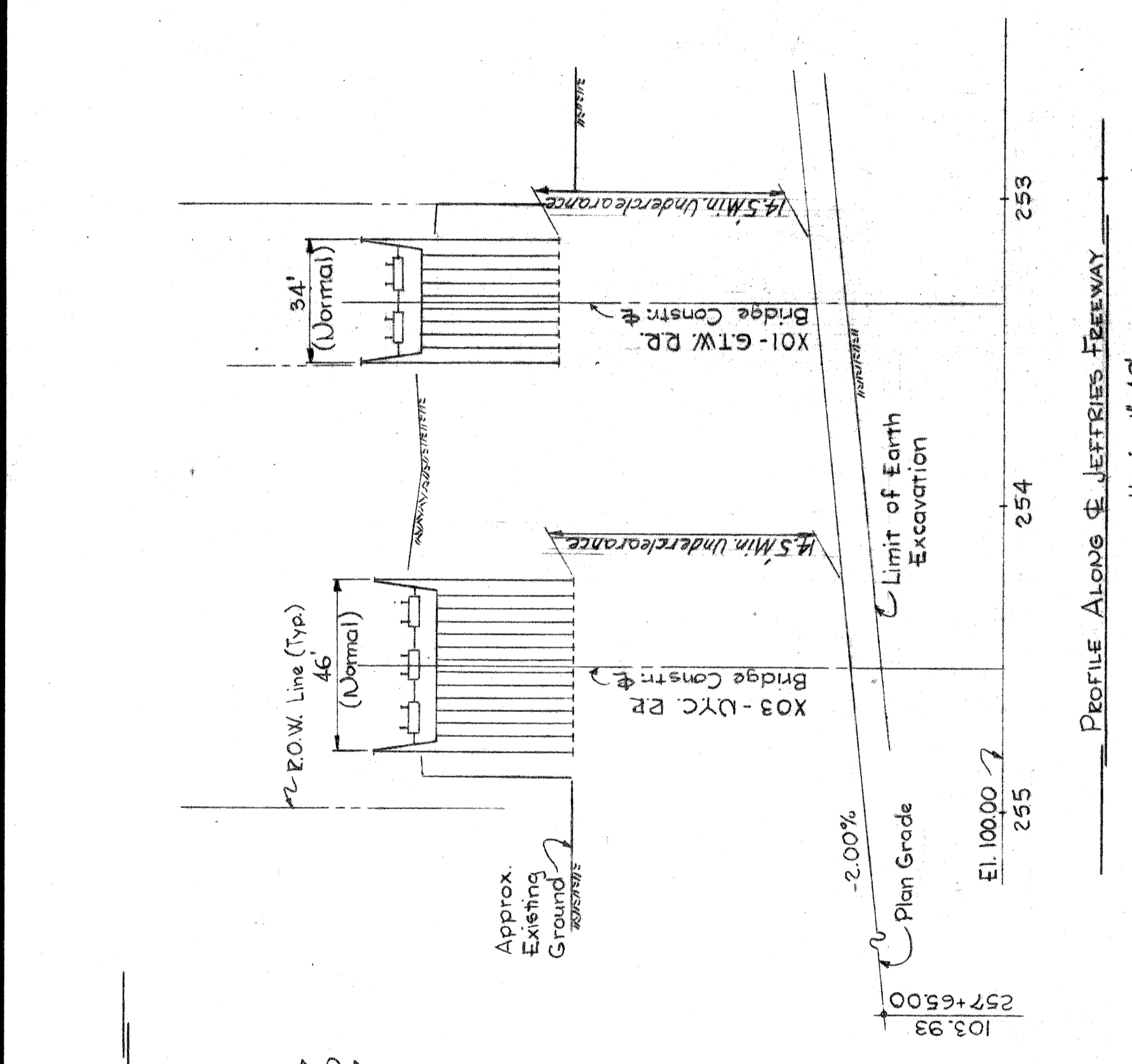
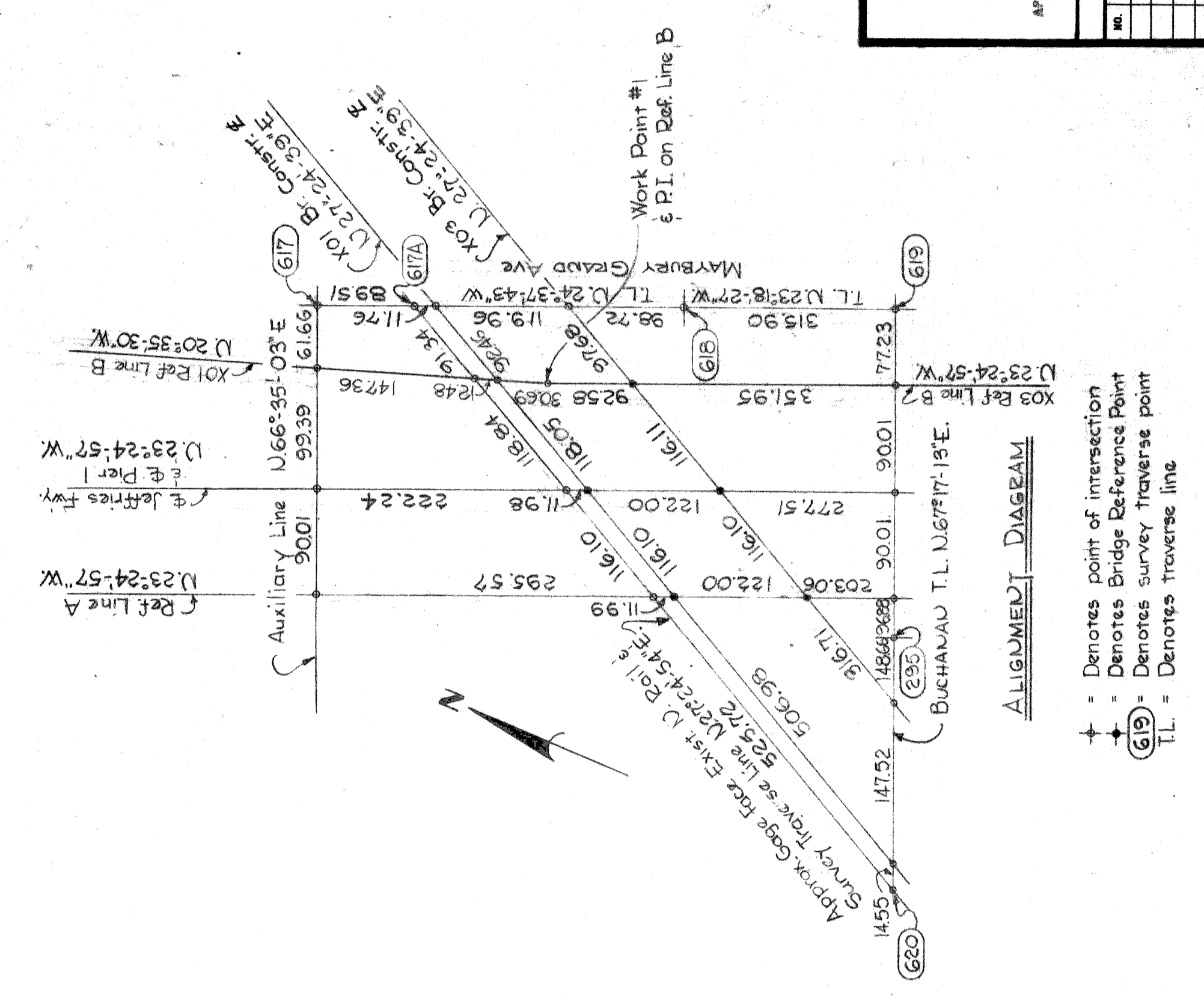
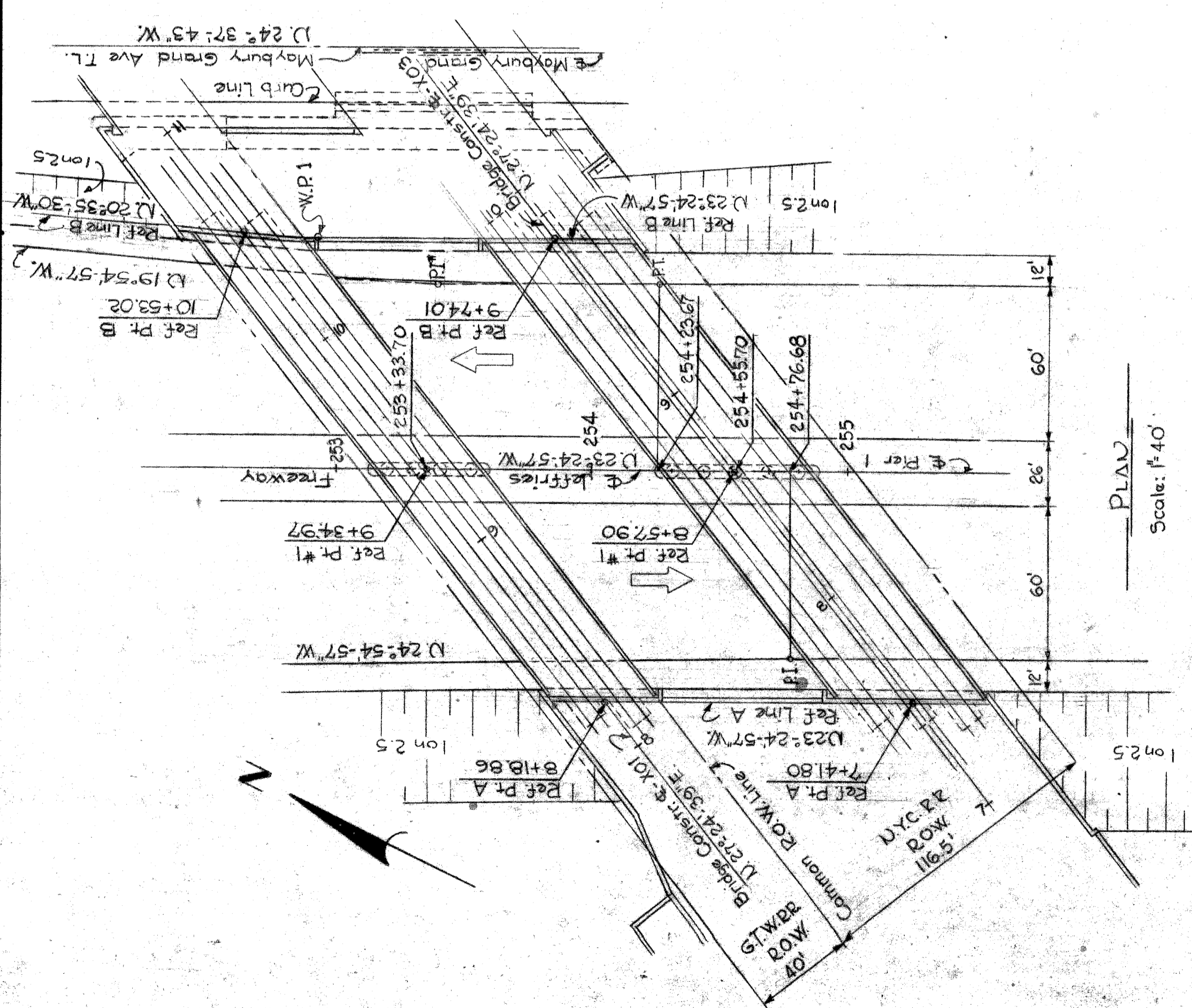
APPROVED: [Signature] STRUCTURAL ENGINEER
 DESIGN SUPERVISING ENGINEER: [Signature]
 ENGINEER OF DESIGN - CONSULTANTS: [Signature]

JOB No. PW 990(1)
 SHEET 3 OF 7

CITY OF DETROIT
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DESIGNED BY: [Signature]
 DATE: [Signature]

X03 of 82124A

Curve #1 Data
 A = 03°30'00"
 D = 06°00'00"
 E = 2864.79'
 T = 87.53'
 L = 175.00'
 PC = 252+48.67
 PI = 253+36.20
 PT = 254+23.67



RAILROAD TRAFFIC DATA

G.T.W.R.R. - 20 Freight movements per day at a maximum speed of 30 m.p.h.
 U.Y.C.R.R. - 48 Freight movements per day at a maximum speed of 40 m.p.h.
 The information concerning the movements of trains and speeds thereof does not represent any commitment on the part of the railroad to continue them unchanged, inasmuch as they are subject to change without notice.

CONSTRUCTION BRUSH MARKS
 P.B.M. 20-252A Elev. 12512 Cor D Monument N.E. corner of Hancock and Tillman.
 P.B.M. 20-253A Elev. 12178 Cor D Monument N.E. corner of Selden and Tillman.
 C.B.M. 15 Elev. 12768 Arrow on hydrant N.E. corner Poplar and Maybury Grand.
 C.B.M. 16 Elev. 12477 DELETED of hydrant S.W. corner Buchanan and Williams.
 C.B.M. 17 Elev. 13029 DELETED of hydrant S.E. corner Breckenridge and Williams.
 C.B.M. 18 Elev. 12926 DELETED of hydrant E. side of Maybury Grand 480 S. of Hancock.

Elevations are referred to City of Detroit datum, which is 479.755 Ft. above sea level.

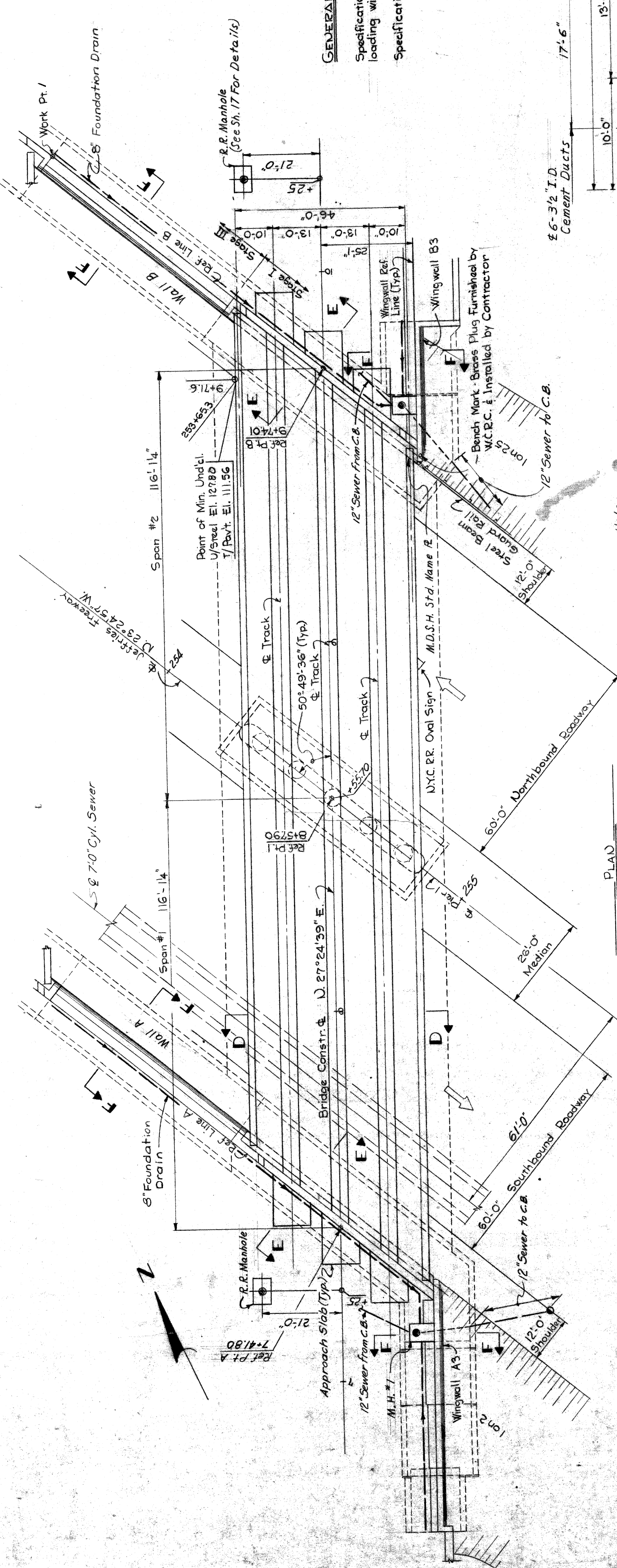
PLANS PREPARED BY		CITY OF DETROIT	
DEPARTMENT OF PUBLIC WORKS		CITY ENGINEERS OFFICE	
BUREAU OF HIGHWAYS AND EXPRESSWAYS		JOB NO. PW 990(1)	
APPROVED:	<i>[Signature]</i>	DESIGN SUPERVISING ENGINEER	APPROVED:
REVISIONS	DATE	BY	

MICHIGAN STATE HIGHWAY DEPARTMENT
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

GENERAL DRAWING

X03 of 82124A

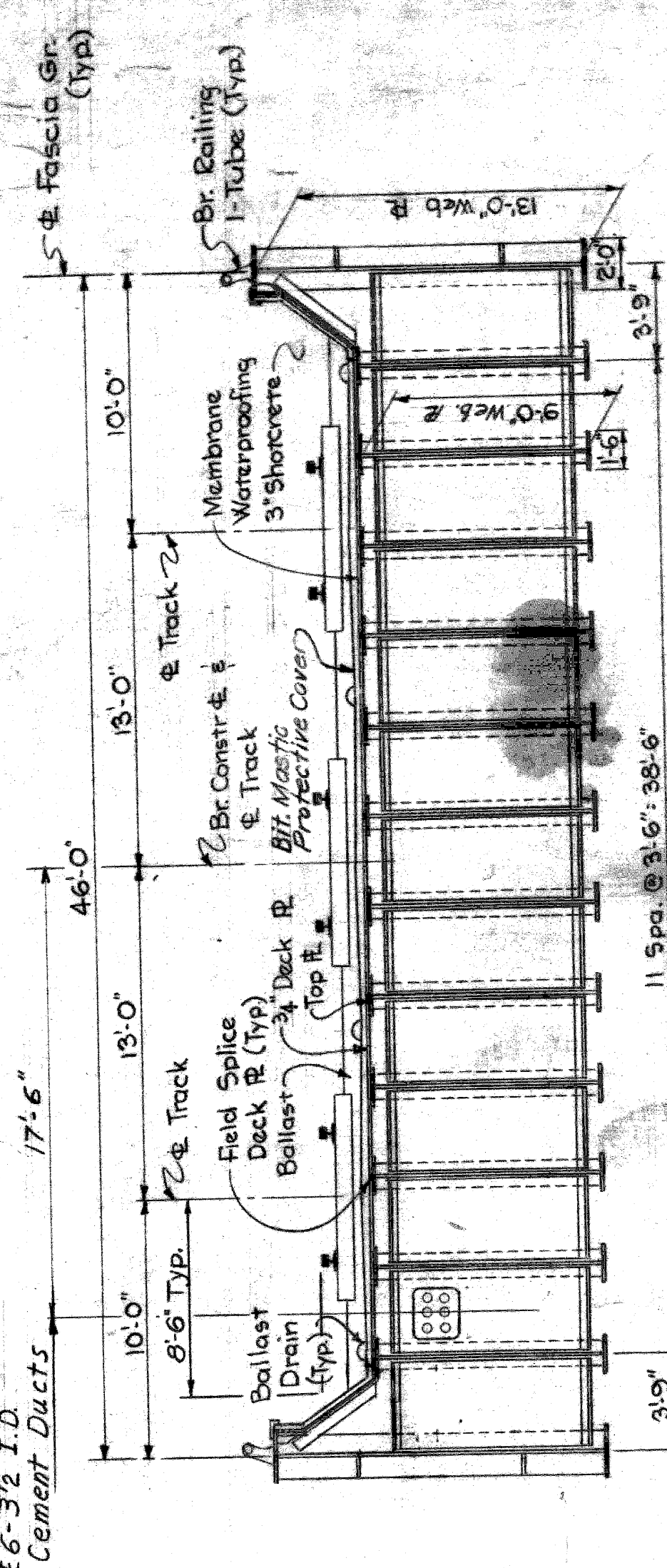
PROFILE OF BRIDGE CONSTRUCTION
 Scale: Horiz. 1" = 40'
 Vert. 1" = 8'



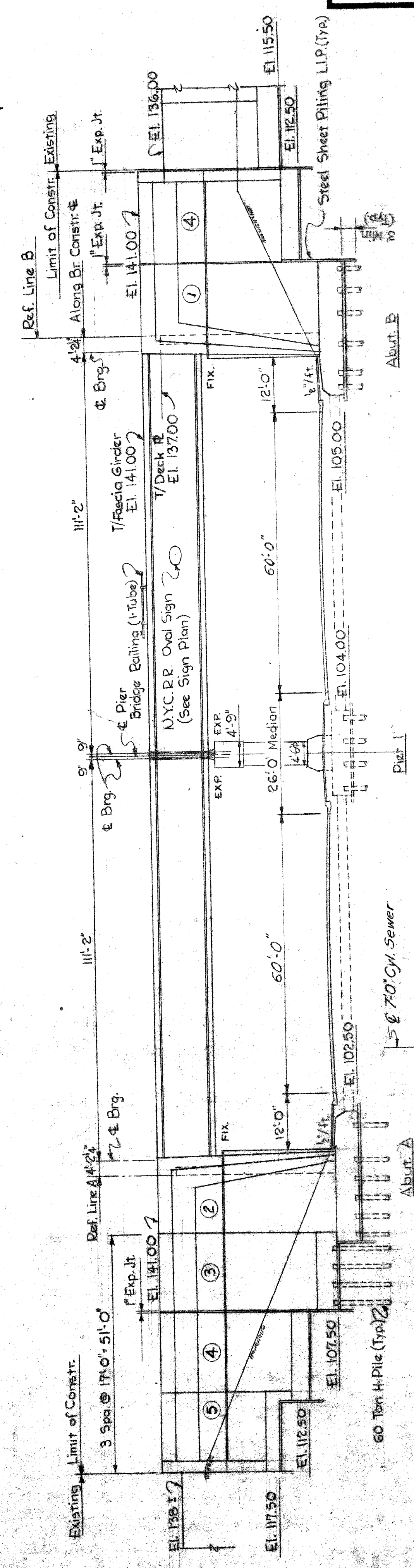
Note:
12" Sewer is detailed
and billed on road plans

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

GENERAL NOTES:
The design of the superstructure is based on the A.R.E.A. Specifications for Steel Railway Bridge, 1966 edition, using Cooper's E-72 loading with diesel impact plus 20% impact.
The design of the substructure is based on the M.S.H.D. Specifications for the Design of Highway Bridges, 1958 edition.



TYPICAL CROSS SECTION
Scale: 3/16" = 1'-0"



ELEVATION
Scale: 1/8" = 1'-0"

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
STRUCTURAL ENGINEER

JOB No.
PW 990(1)

NO.	REVISIONS	DATE	BY

DESIGN SUPERVISING ENGINEER
ENGINEER OF DESIGN - CONSULTANTS

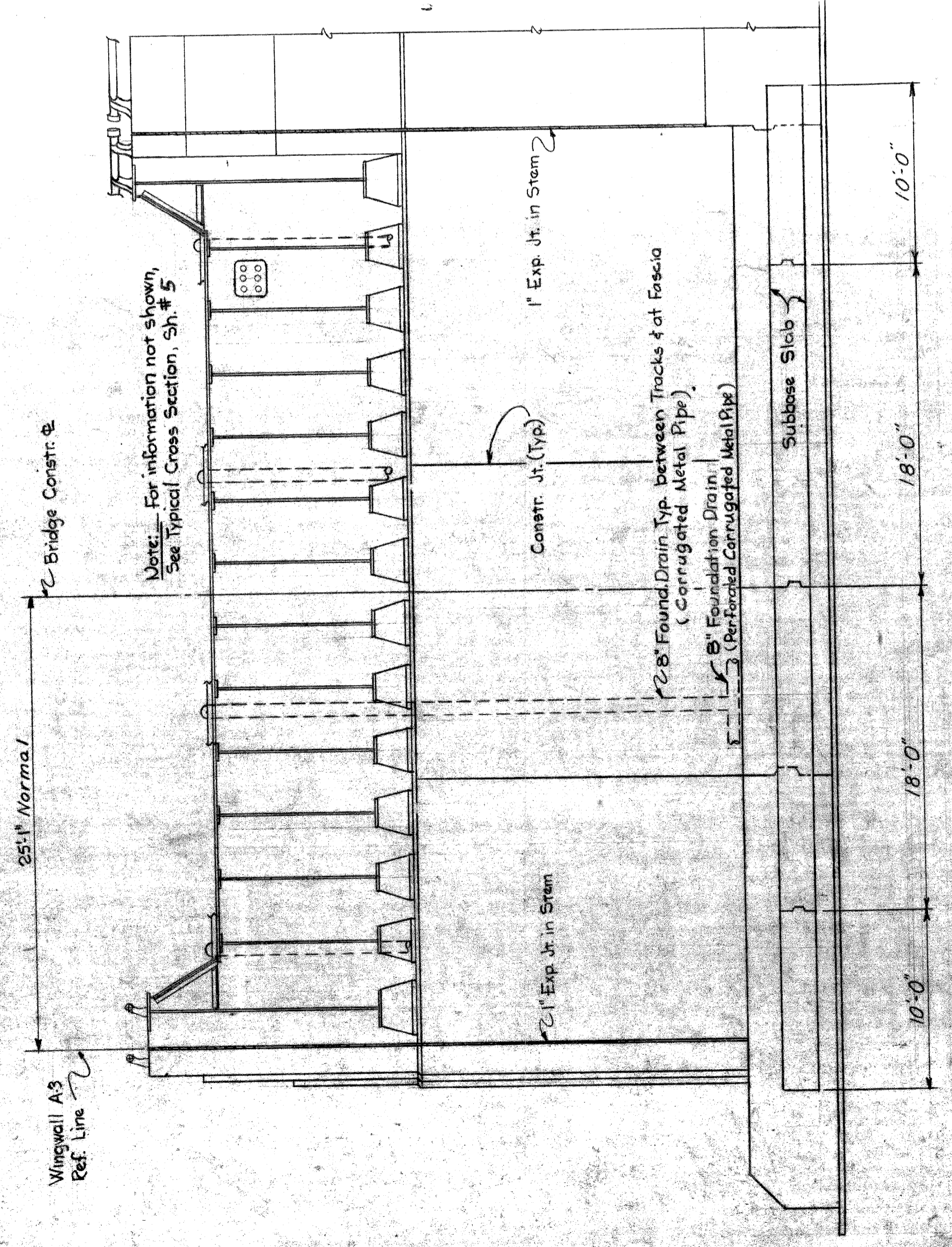
APPROVED: _____

MICHIGAN STATE HIGHWAY DEPARTMENT
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

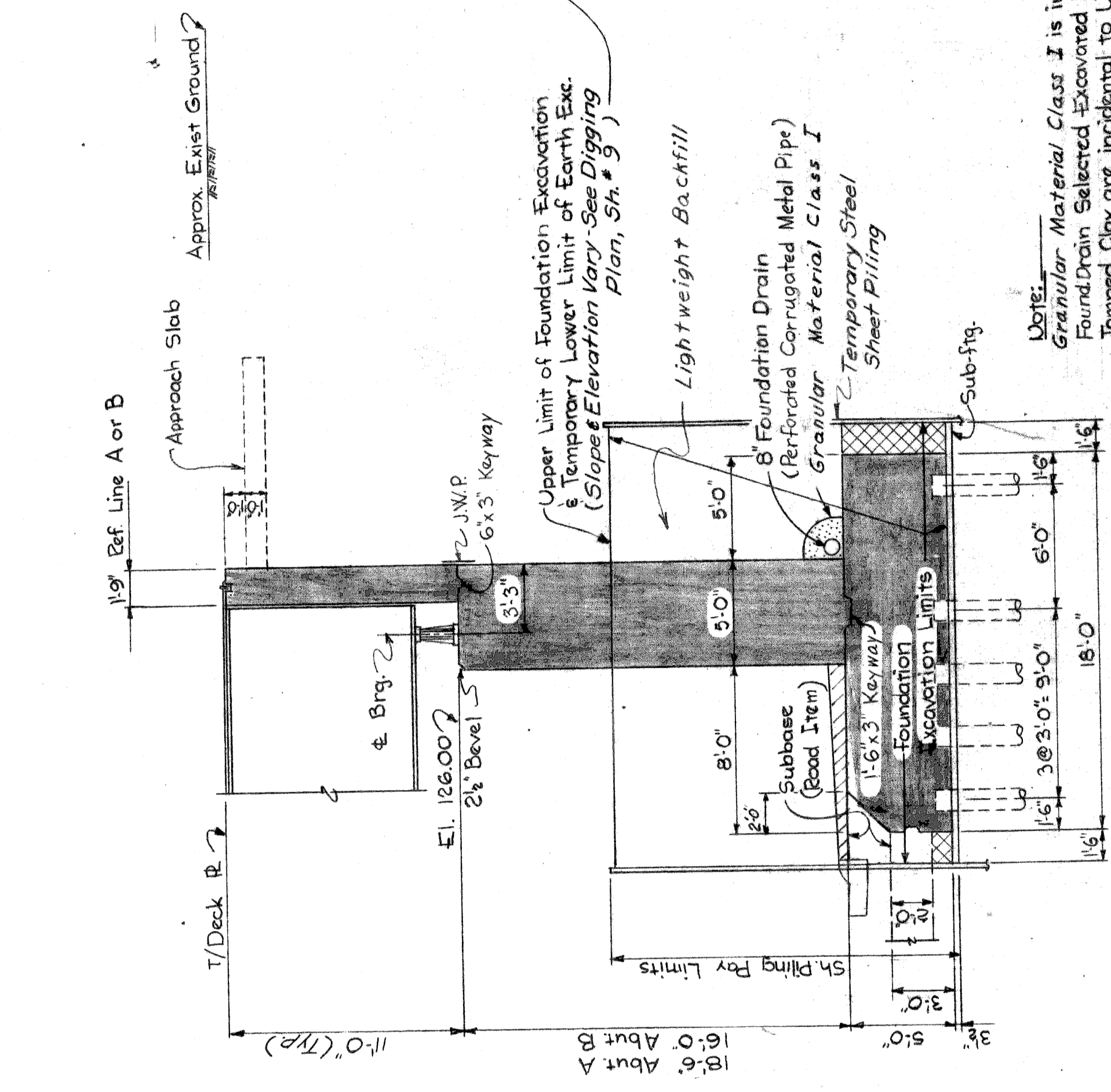
GENERAL PLAN OF STRUCTURE

CITY OF DETROIT
DRAWN BY: *[Signature]*
CHECKED BY: *[Signature]*
DESIGNED BY: *[Signature]*
DATE: 5/27/66

X03 of 82124A

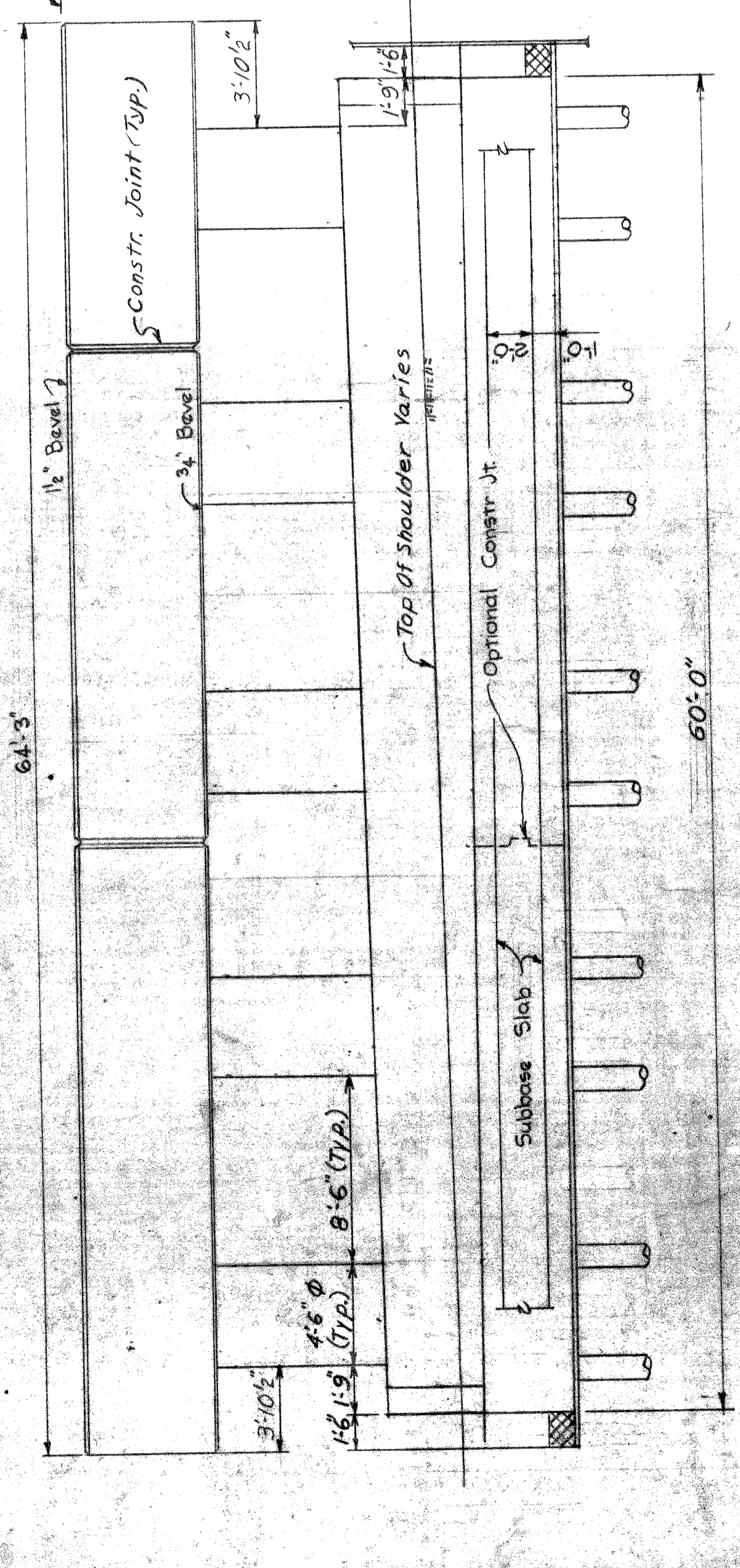


SECTION D-D
Scale: 3/8" = 1'-0"

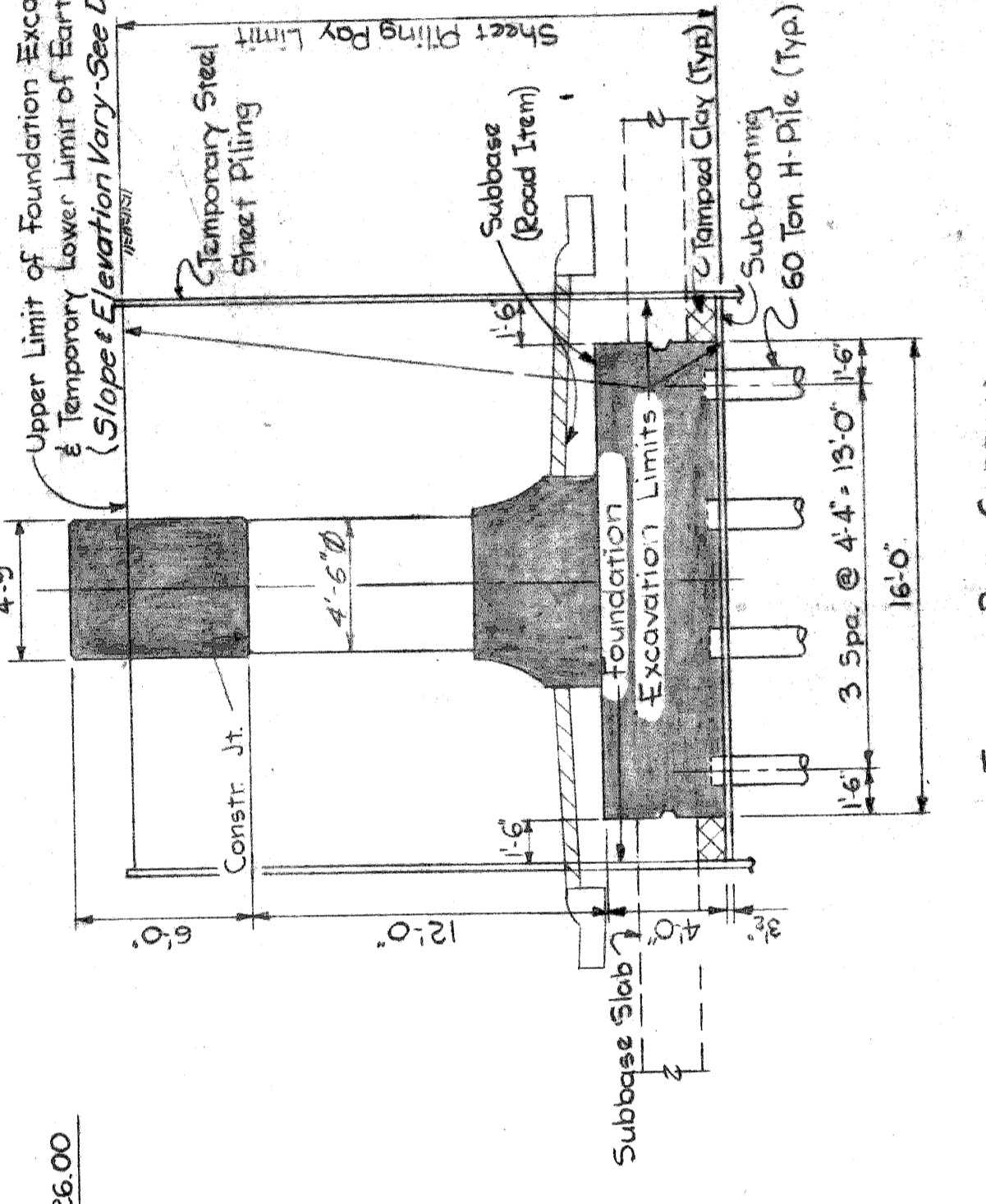


SECTION E-E
Scale: 3/8" = 1'-0"

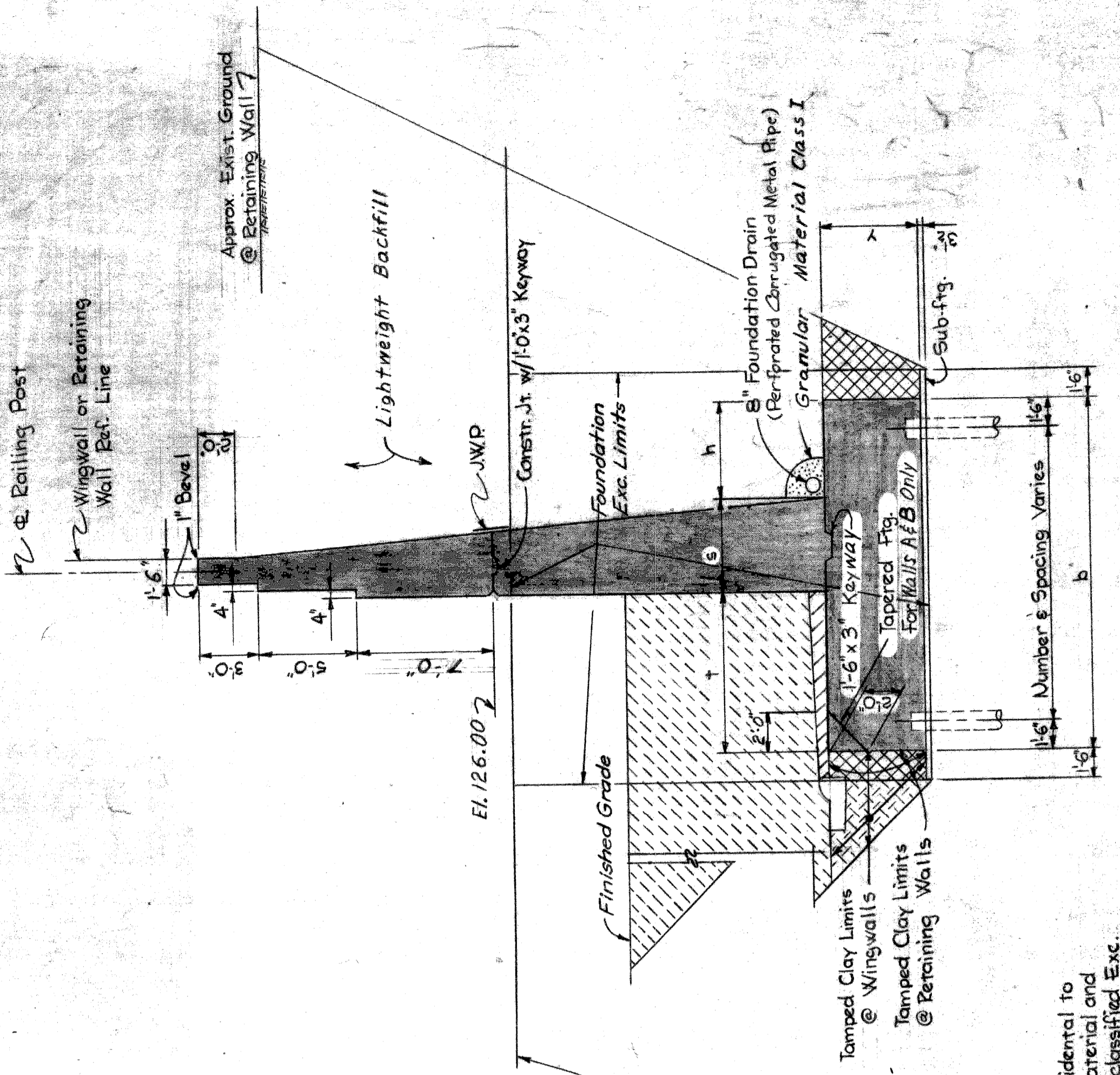
Note: Granular Material Class I is incidental to Found. Drain Selected Excavated Material and Tamped Clay are incidental to Unclassified Exc.



PIER ELEVATION
Scale: 3/8" = 1'-0"



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



SECTION F-F
Scale: 3/8" = 1'-0"

SECTION	b	t	e	h	y
1	-	7'-9"	5'-0"	-	5'-0"
2	20'-0"	7'-9"	5'-0"	7'-3"	5'-0"
3	20'-0"	7'-9"	4'-9"	7'-6"	5'-0"
4	20'-0"	7'-9"	4'-3"	8'-0"	3'-0"
5	15'-0"	4'-0"	4'-0"	7'-0"	3'-0"
6	-	-	-	5'-0"	5'-0"

Note: For Limits of Lightweight Backfill see Digging Plan, Sh. # 9

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
APPROVED: [Signature]
STRUCTURAL ENGINEER
JOB No. PW 990(1)

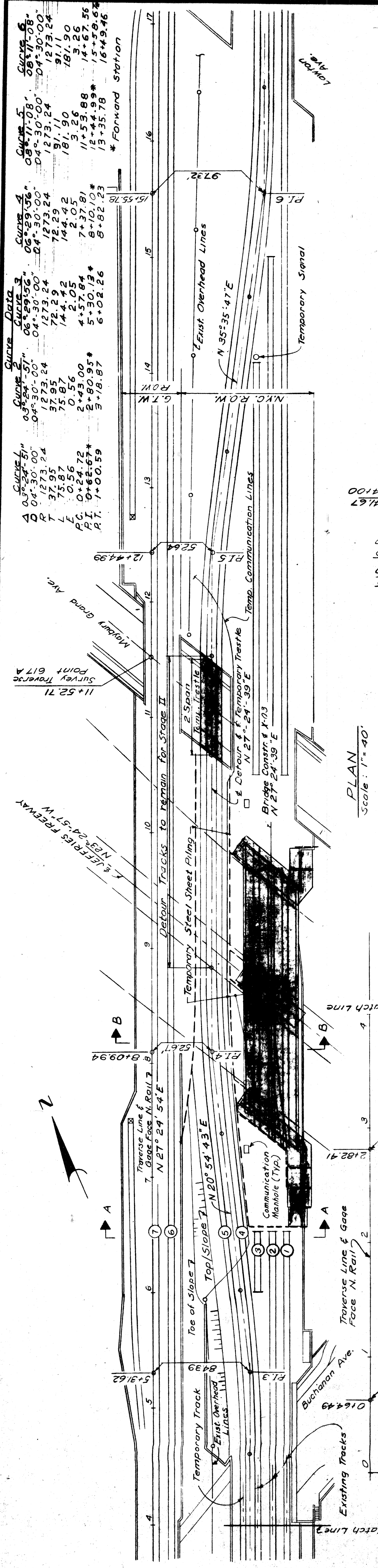
MICHIGAN STATE HIGHWAY DEPARTMENT
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

GENERAL PLAN OF STRUCTURE

CITY OF DETROIT
JOB No. PW 990(1)
X03 of 82124A

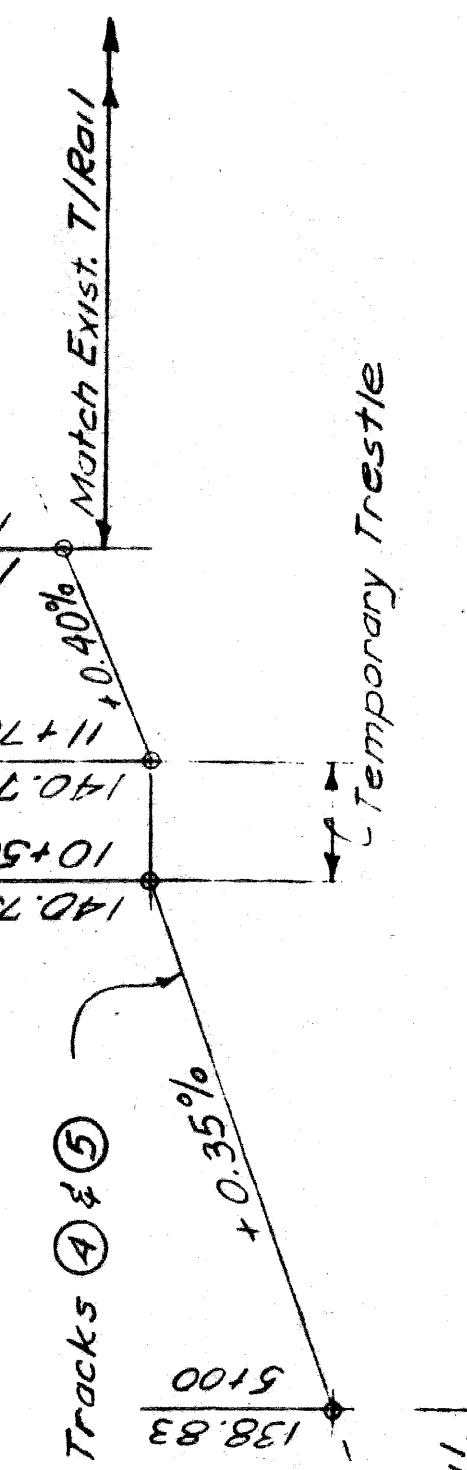
APPROVED: [Signature]
DESIGN SUPERVISING ENGINEER
APPROVED: [Signature]
ENGINEER OF DESIGN - CONSULTANTS

NO.	DATE	REVISIONS

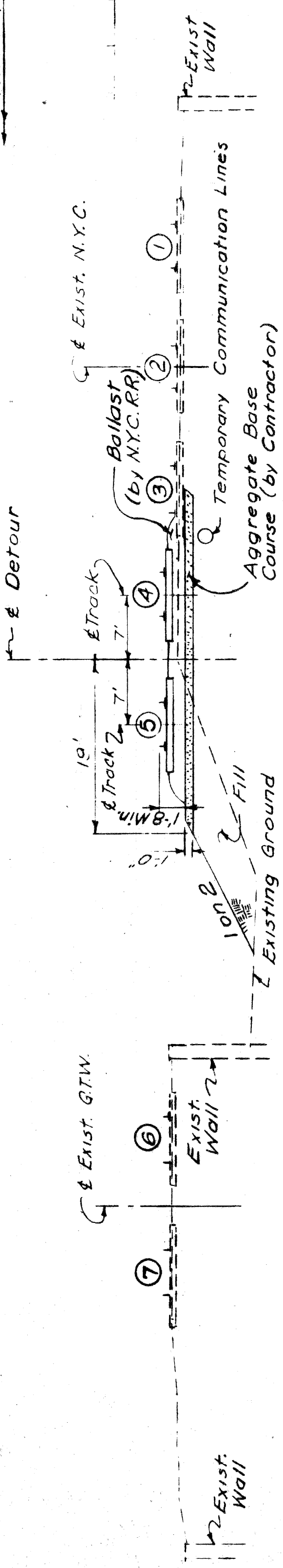


STAGE I

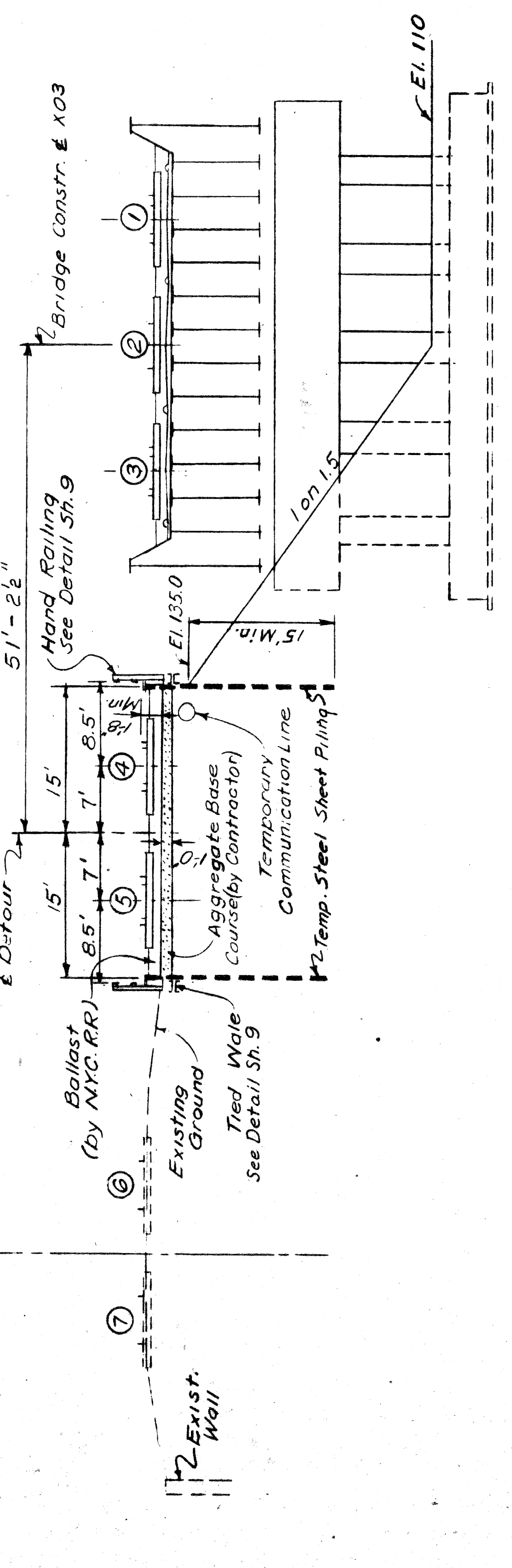
- To be done by Contractor:
Place temporary sheet piling and embankment.
Grade for detour tracks ④ & ⑤. Construct
Temporary Trestle over Moybury Grand.
- To be done by N.Y.C.R.R. Company:
Place temporary communication line & temporary
signal. Place ballast & detour tracks ④ & ⑤.
Make track connection as required outside of
construction area, & place rails on trestle.
Route Railroad traffic to tracks ④ & ⑤ over
new Bridge X 03
- To be done by Contractor:
Construct Bridge X 03
- To be done by N.Y.C.R.R. Company:
Place permanent communication line ballast
& tracks ①, ②, & ③ on new Bridge X 03
and approaches. Remove tracks ④ & ⑤
except parts required for Stage II. Remove
temporary signal, Route Railroad traffic to
normal operation on tracks ①, ② & ③ over
new Bridge X 03



PLAN
Scale: 1" = 40'



SECTION AA
Scale: 1" = 10'



SECTION BB
Scale: 1" = 10'

Note: Selected yellow clay fill required for detour and final grading (Section A-A, Sheets 7, 8, 11) is 1250 cu. yds., detour Stage I; 475 cu. yds., detour Stage 2; 575 cu. yds., final grading; 2300 cu. yds., total, and is shown as loss in road quantities.

MISCELLANEOUS QUANTITY - STAGES I & 2			
ITEM	UNIT	AMOUNT	
Aggregate Base Course 22A	Cu. Yds. (C.I.P.)	736	736
	X01	X03	

Work Sheets 7 Thru 11 Together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

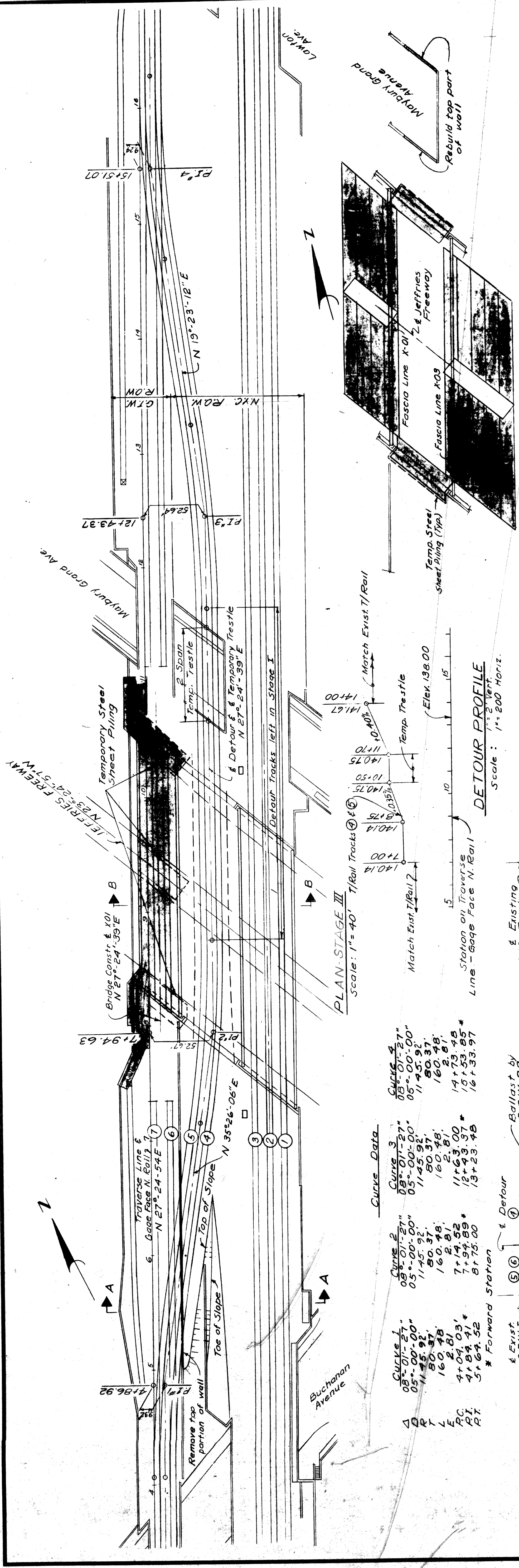
CONSTRUCTION SEQUENCE
STAGE I

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]* STRUCTURAL ENGINEER
JOB No. PW 99011

X03 of 82124A

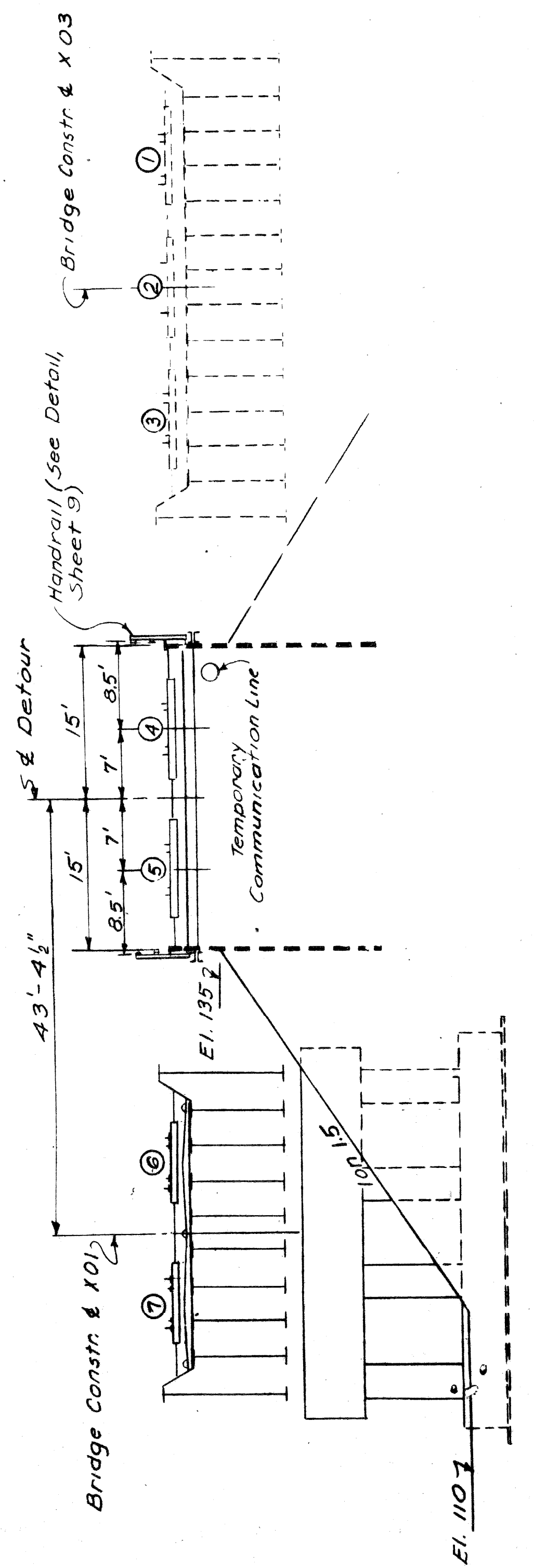


Curve Data

Curve	Bearing	Distance	Station
Curve 1	08°-01'-27"	05°-00'-00"	11+45.92
Curve 2	08°-01'-27"	05°-00'-00"	11+45.92
Curve 3	08°-01'-27"	05°-00'-00"	11+45.92
Curve 4	08°-01'-27"	05°-00'-00"	11+45.92
Curve 5	08°-01'-27"	05°-00'-00"	11+45.92
Curve 6	08°-01'-27"	05°-00'-00"	11+45.92
Curve 7	08°-01'-27"	05°-00'-00"	11+45.92
Curve 8	08°-01'-27"	05°-00'-00"	11+45.92
Curve 9	08°-01'-27"	05°-00'-00"	11+45.92
Curve 10	08°-01'-27"	05°-00'-00"	11+45.92
Curve 11	08°-01'-27"	05°-00'-00"	11+45.92
Curve 12	08°-01'-27"	05°-00'-00"	11+45.92
Curve 13	08°-01'-27"	05°-00'-00"	11+45.92
Curve 14	08°-01'-27"	05°-00'-00"	11+45.92
Curve 15	08°-01'-27"	05°-00'-00"	11+45.92
Curve 16	08°-01'-27"	05°-00'-00"	11+45.92
Curve 17	08°-01'-27"	05°-00'-00"	11+45.92
Curve 18	08°-01'-27"	05°-00'-00"	11+45.92
Curve 19	08°-01'-27"	05°-00'-00"	11+45.92
Curve 20	08°-01'-27"	05°-00'-00"	11+45.92
Curve 21	08°-01'-27"	05°-00'-00"	11+45.92
Curve 22	08°-01'-27"	05°-00'-00"	11+45.92
Curve 23	08°-01'-27"	05°-00'-00"	11+45.92
Curve 24	08°-01'-27"	05°-00'-00"	11+45.92
Curve 25	08°-01'-27"	05°-00'-00"	11+45.92
Curve 26	08°-01'-27"	05°-00'-00"	11+45.92
Curve 27	08°-01'-27"	05°-00'-00"	11+45.92
Curve 28	08°-01'-27"	05°-00'-00"	11+45.92
Curve 29	08°-01'-27"	05°-00'-00"	11+45.92
Curve 30	08°-01'-27"	05°-00'-00"	11+45.92
Curve 31	08°-01'-27"	05°-00'-00"	11+45.92
Curve 32	08°-01'-27"	05°-00'-00"	11+45.92
Curve 33	08°-01'-27"	05°-00'-00"	11+45.92
Curve 34	08°-01'-27"	05°-00'-00"	11+45.92
Curve 35	08°-01'-27"	05°-00'-00"	11+45.92
Curve 36	08°-01'-27"	05°-00'-00"	11+45.92
Curve 37	08°-01'-27"	05°-00'-00"	11+45.92
Curve 38	08°-01'-27"	05°-00'-00"	11+45.92
Curve 39	08°-01'-27"	05°-00'-00"	11+45.92
Curve 40	08°-01'-27"	05°-00'-00"	11+45.92
Curve 41	08°-01'-27"	05°-00'-00"	11+45.92
Curve 42	08°-01'-27"	05°-00'-00"	11+45.92
Curve 43	08°-01'-27"	05°-00'-00"	11+45.92
Curve 44	08°-01'-27"	05°-00'-00"	11+45.92
Curve 45	08°-01'-27"	05°-00'-00"	11+45.92
Curve 46	08°-01'-27"	05°-00'-00"	11+45.92
Curve 47	08°-01'-27"	05°-00'-00"	11+45.92
Curve 48	08°-01'-27"	05°-00'-00"	11+45.92
Curve 49	08°-01'-27"	05°-00'-00"	11+45.92
Curve 50	08°-01'-27"	05°-00'-00"	11+45.92

DETOUR PROFILE
Scale: 1" = 20' Vert. / 1" = 200' Horiz.

SECTION AA
Scale: 1" = 10'



SECTION BB
Scale: 1" = 10'

PLAN - STAGE III
Scale: 1" = 40'

- Stage II**
- To be done by Contractor: Remove top portion of wall where tracks cross, and place embankment to tracks.
 - To be done by G.T.W.R.R. Co.: Use Temporary Trestle & that part of Stage I. Route Railroad traffic to tracks.
 - To be done by Contractor: Build Bridge X01.
 - To be done by G.T.W.R.R. Co. & on new bridge X01 and approaches: Remove tracks except parts left by N.Y.C.R.R. in Stage I. Route Railroad traffic to normal operation on tracks over new Bridge X01.
 - To be done by N.Y.C.R.R. Company: Remove portion of tracks in Stage I. Remove temporary Communication Line.
- Stage III**
- Remove temporary trestle and rebuild top portion of walls removed for trestle.
 - Complete excavation and build Subbase Slab. (Excavate in a manner that allows no more than 30' of footing unrestrained at any time.)
 - Build retaining walls to connect abutments between Bridges X01 & X03.
 - Grade as Shown on The Grading & Utility Plan.

Note: All operations in Stage III to be done by the Contractor.

Work Sheets 7 Thru 11 Together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

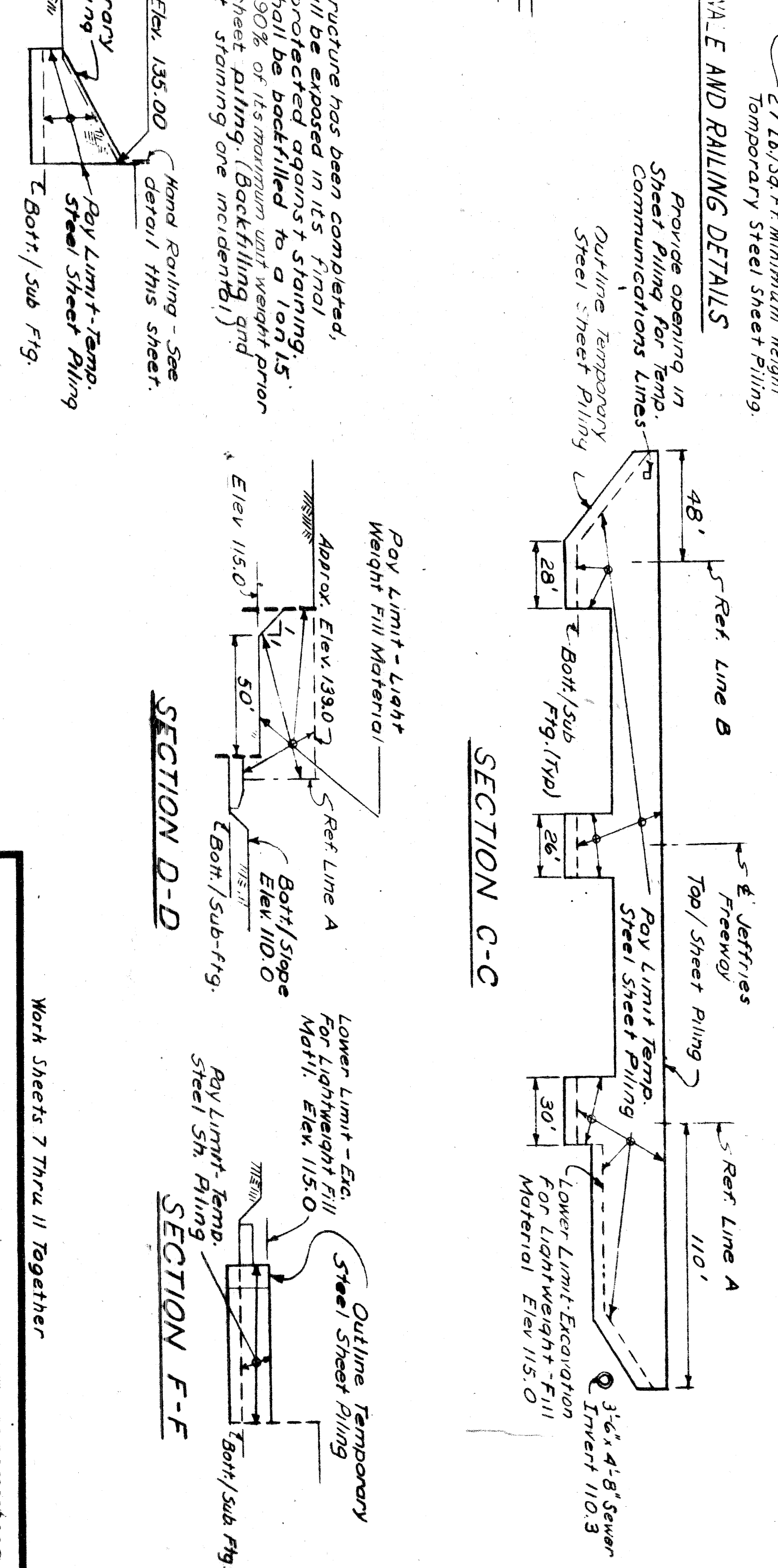
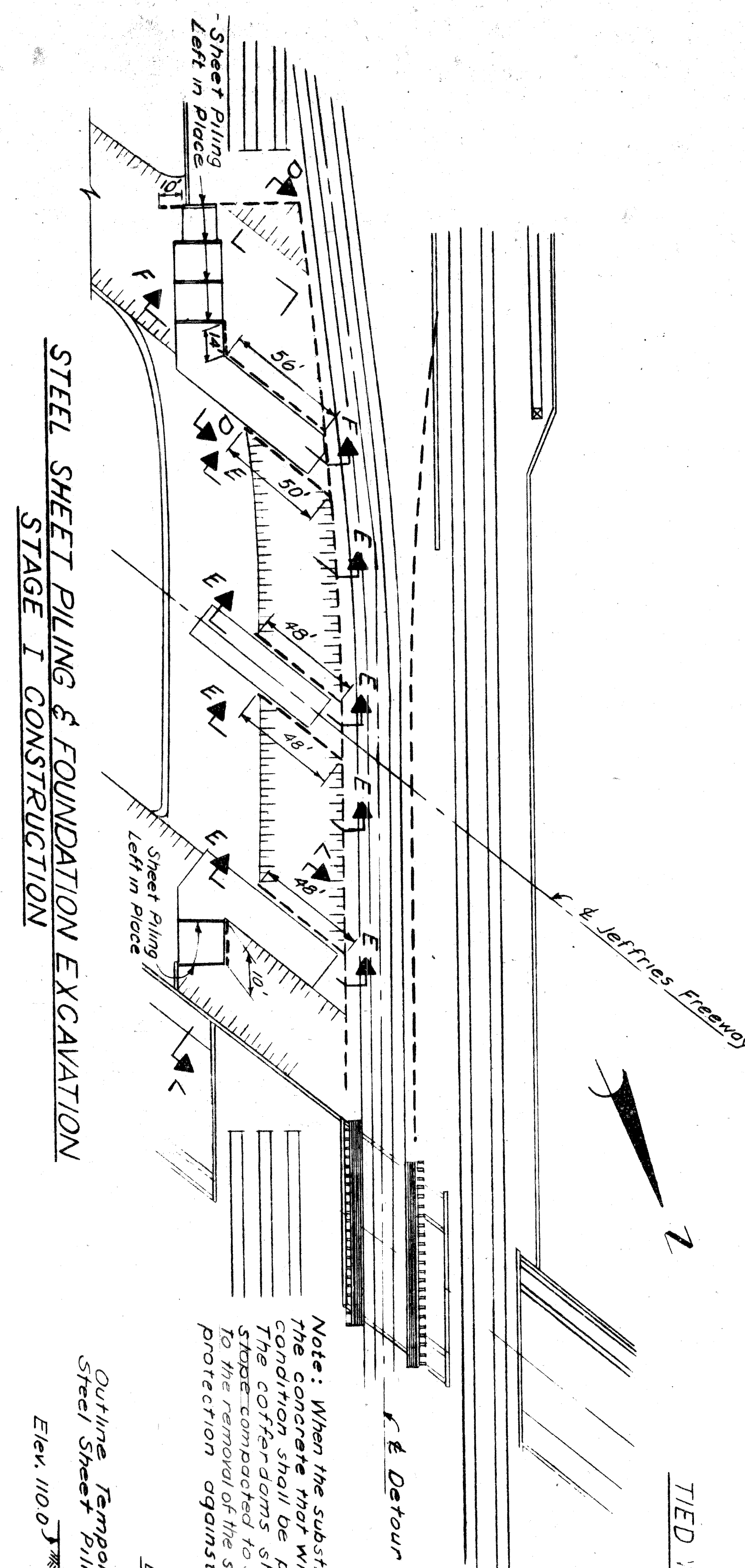
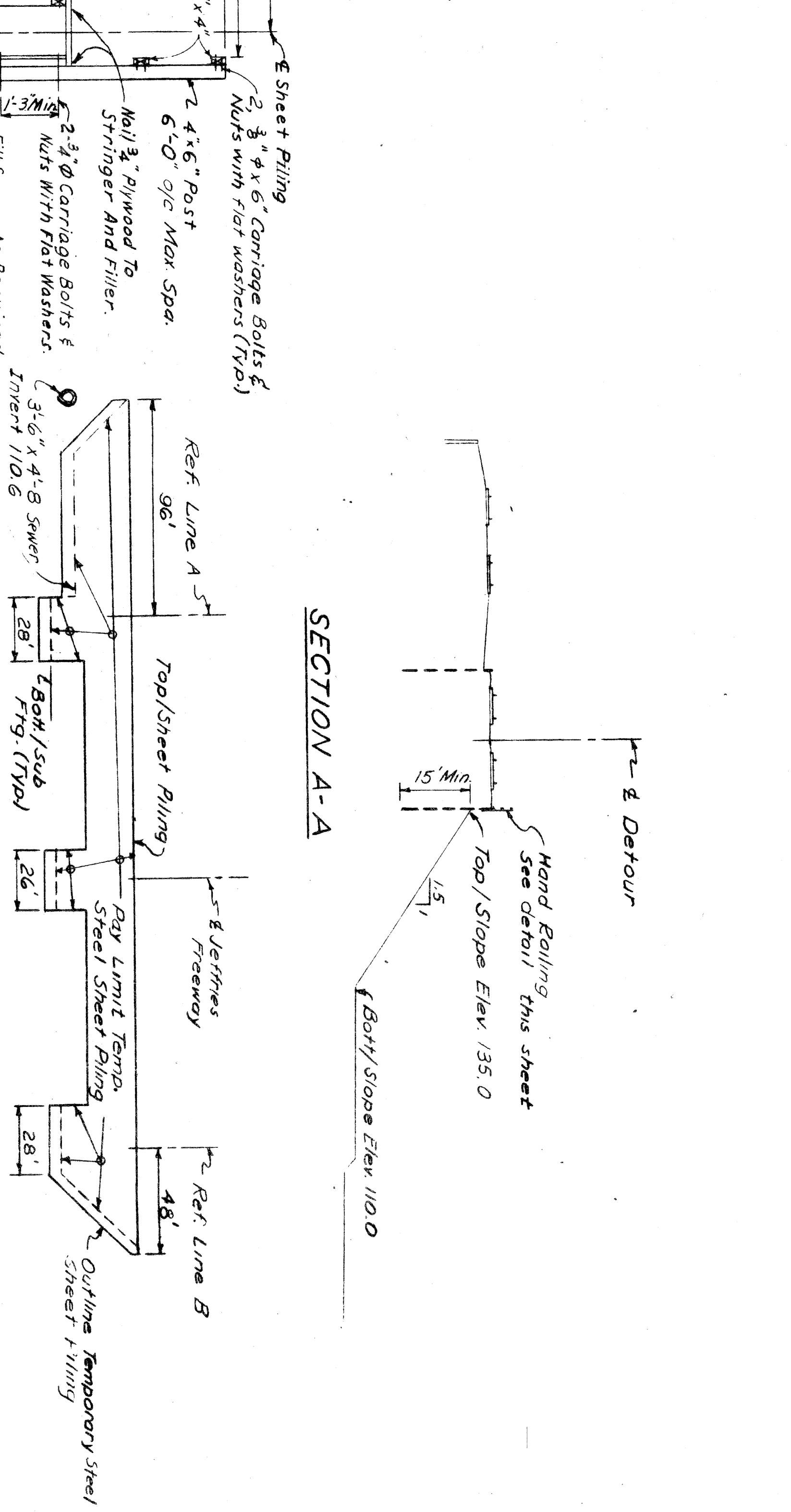
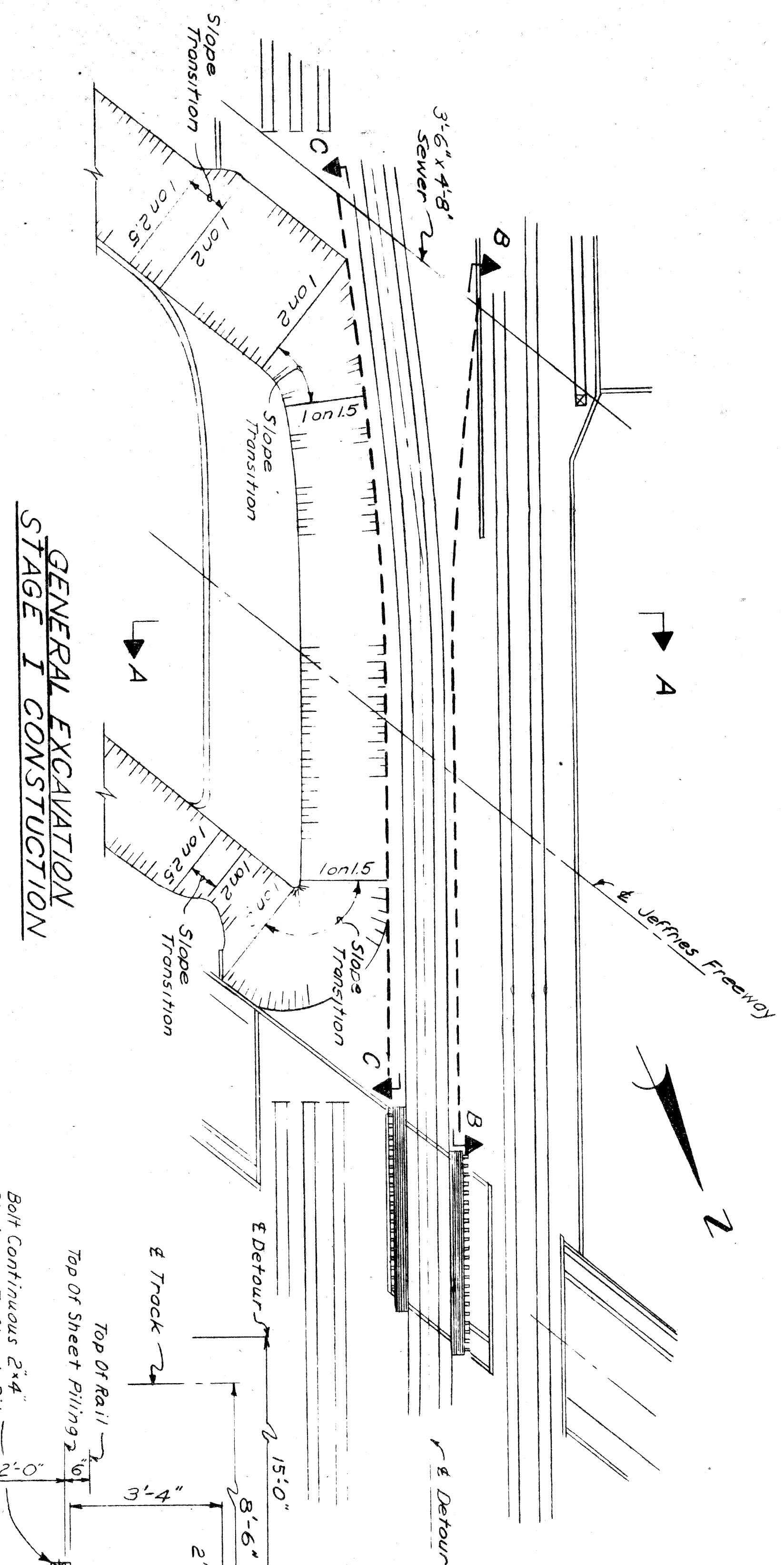
CONSTRUCTION SEQUENCE STAGES 2 & 3

NO.	REVISIONS	DATE	BY

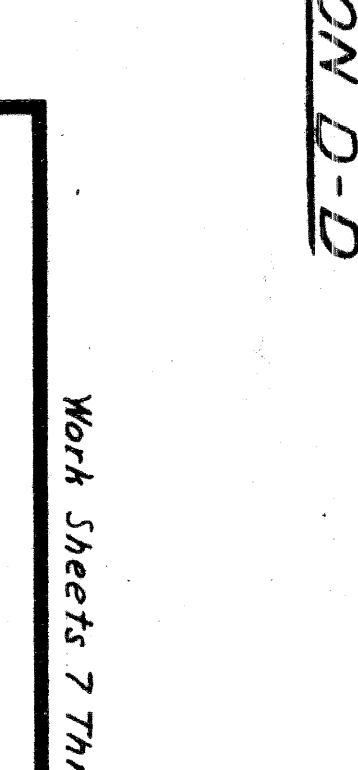
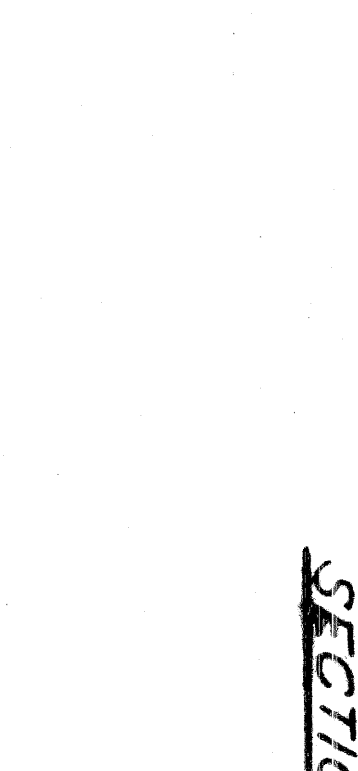
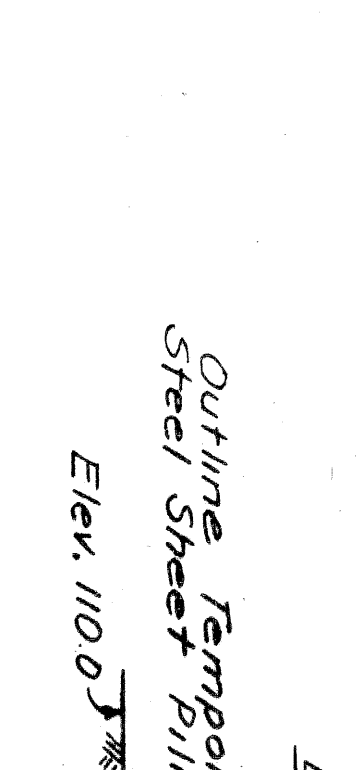
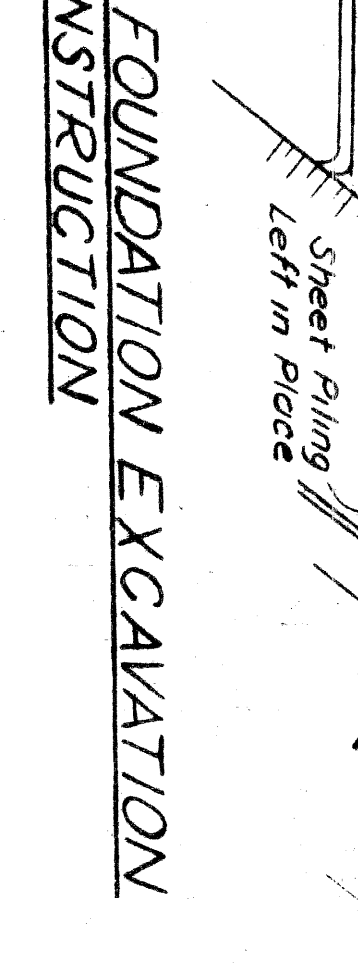
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]* STRUCTURAL ENGINEER
JOB NO. PW 990(1)

X03 of 82124A



Note: When the substructure has been completed, the concrete that will be exposed in its final condition shall be protected against staining. The coffers shall be backfilled to a 1 on 1.5 slope compacted to 90% of its maximum unit weight prior to the removal of the sheet piling. (Backfilling and protection against staining one incident.)



Work Sheets 7 Thru 11 Together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

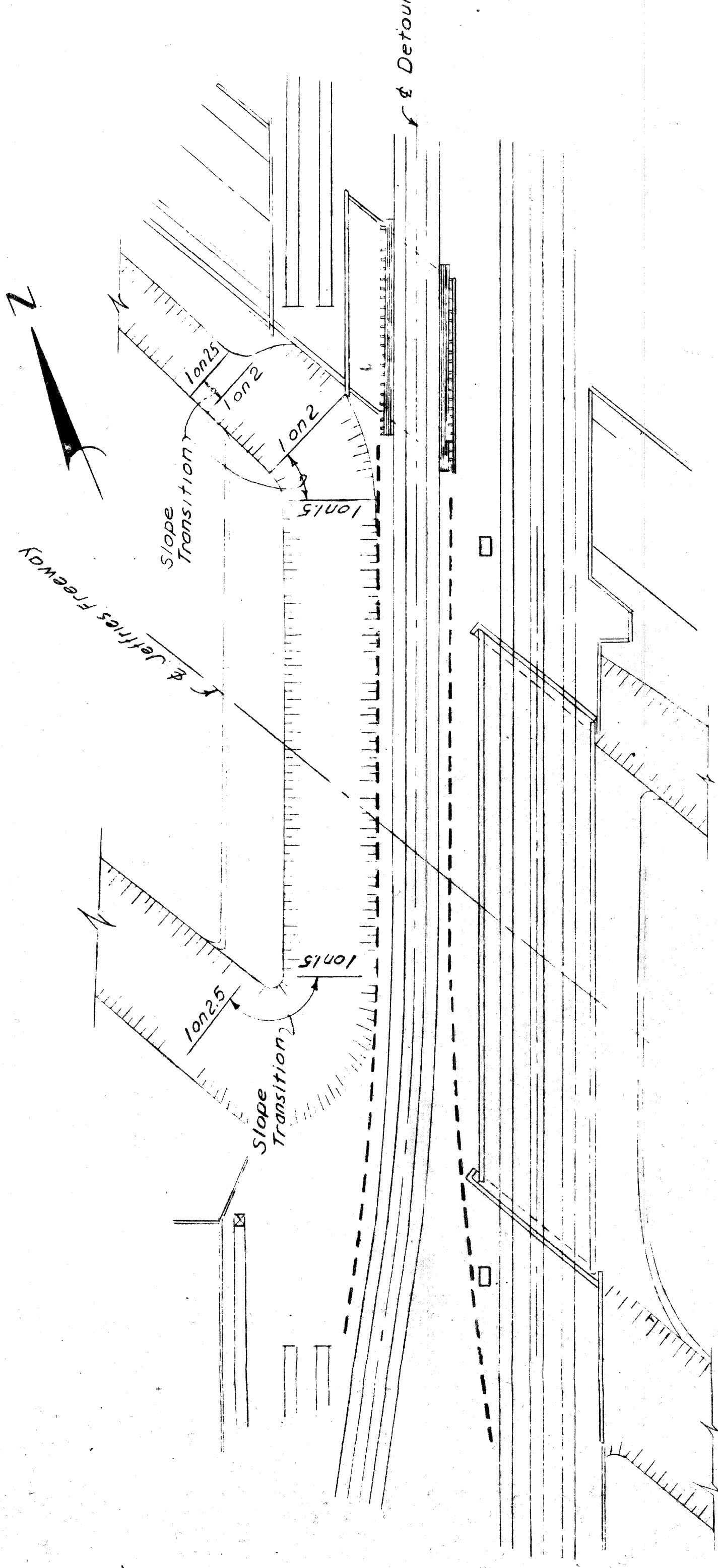
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

DIGGING PLAN

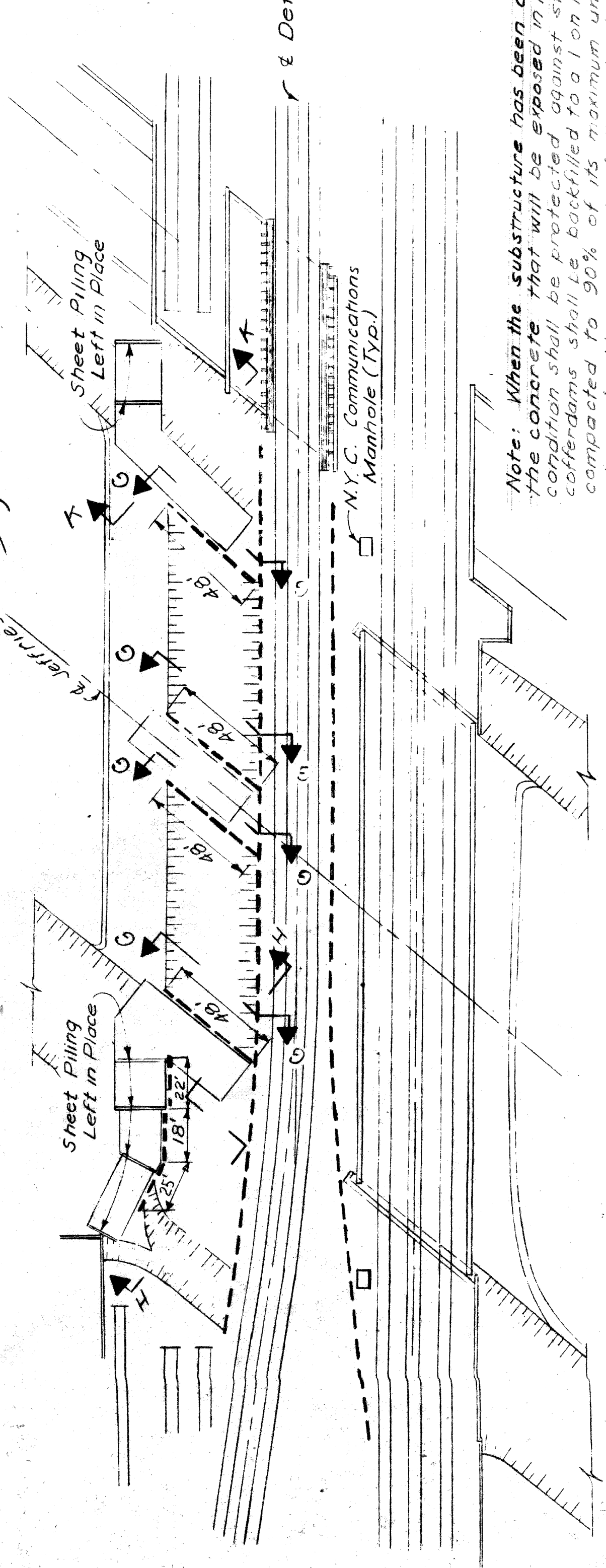
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

NO.	REVISIONS	DATE	BY

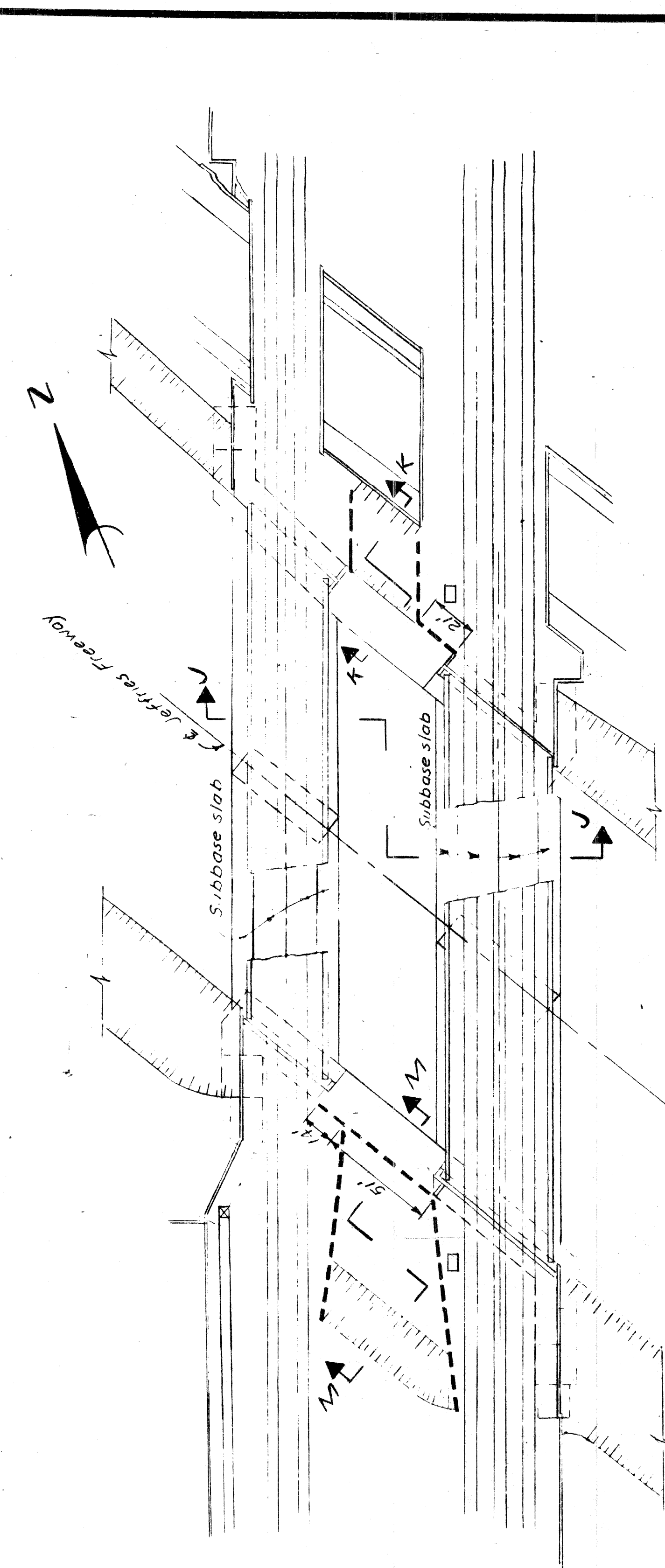
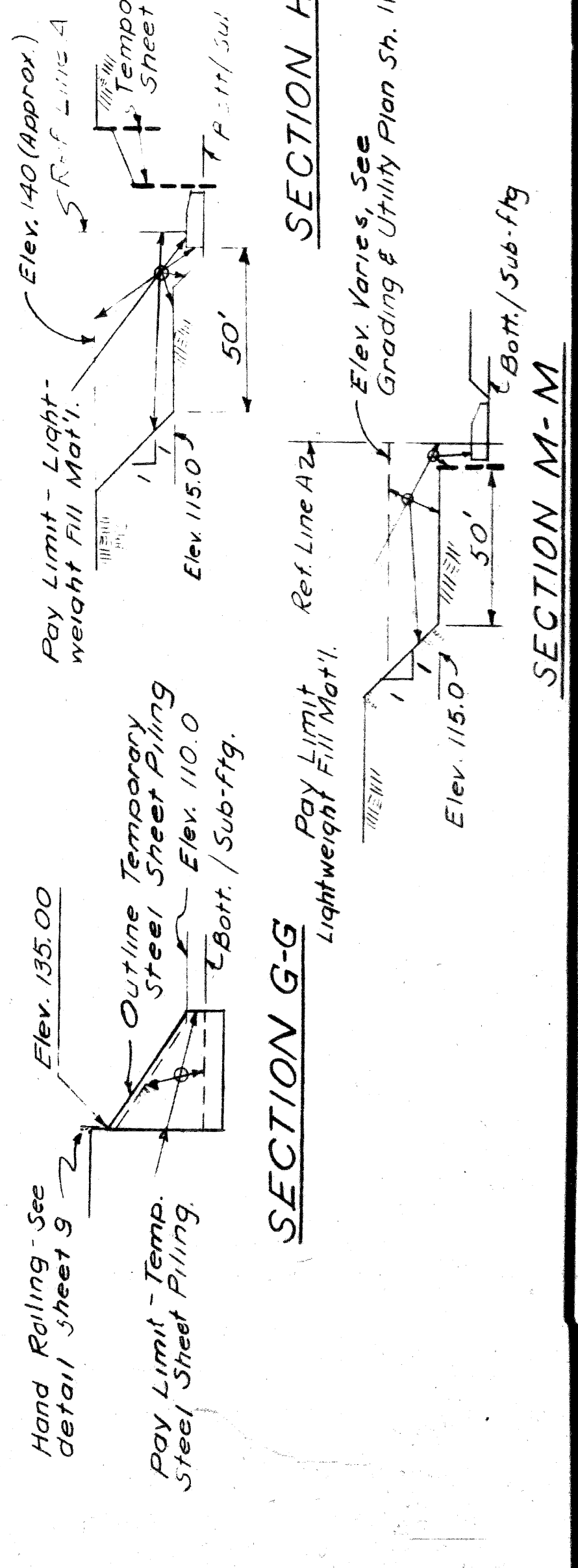
JOB No. PW 99011
DATE: 5/27/67
DRAWN BY: W.A.L.
CHECKED BY: K.V.H.
DATE: 5/27/67
X03 of 82124A



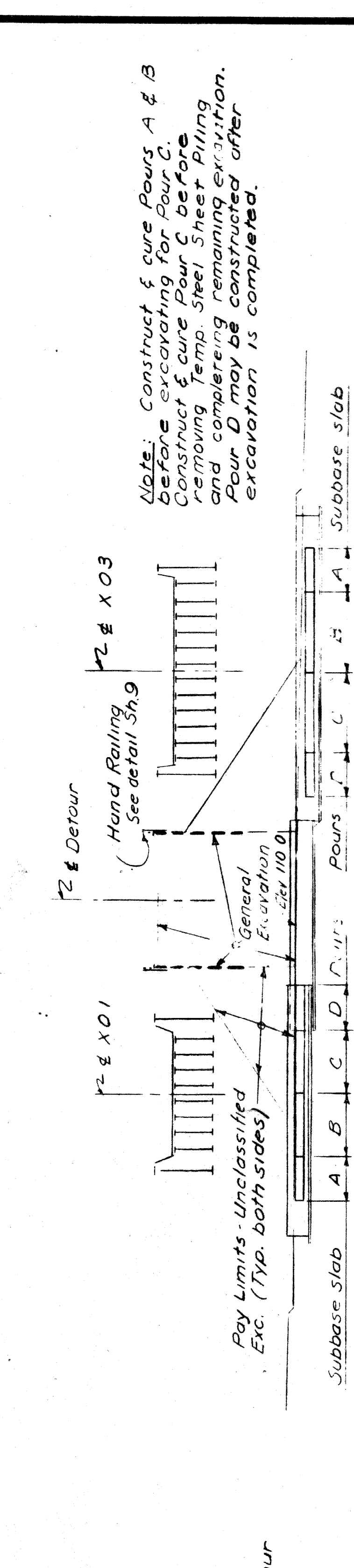
**GENERAL EXCAVATION
STAGE II CONSTRUCTION**



**STEEL SHEET PILING & FOUNDATION EXCAVATION
STAGE II CONSTRUCTION**



**STEEL SHEET PILING, FOUNDATION & GENERAL EXCAVATION
STAGE III CONSTRUCTION**



SECTION J-J

GENERAL NOTES:
Temporary Steel Sheet Piling shall be of the continuous interlock type, either new or used in good condition, weighing not less than 27 pounds per sq. Ft. of wall, and shall be furnished with suitable connecting and corner pieces. Lids, an analysis and mill reports are not required for steel used in Sheet Piling. Steel piling is to be adequately supported to prevent bowing & ridding. Method and adequacy of support are subject to the approval of the Engineer. The Contractor shall submit details of his proposed temporary sheeting and bracing plan for the railroad's approval. Steel for piling which meets the requirements of A.S.T.M. A 36 - C 2 T will be allowed.
The driving line for temporary steel sheet piling is to the neat outline of the subfooting.
Work sheets 7 thru 11 together

QUANTITIES X03

	Abut. A	Pier	Abut. B	Ref. Wall A	Ref. Wall B	Subbase	Total
Unclassified Excavation (Cu. Yds.)	3732	547	2903	3714	610	5934	17440
Temporary Steel Sheet Piling (Sq. Ft.)	2013	1502	761	1085	689	8900	14953
Lightweight Fill Material (Cu. Yds. C.I.P.)	3740	—	2141	3375	931	—	10187

QUANTITIES X01

	Abut. A	Pier	Abut. B	Ref. Wall A	Ref. Wall B	Subbase	Total
Unclassified Excavation (Cu. Yds.)	4455	433	953	482	10683	—	—
Temporary Steel Sheet Piling (Sq. Ft.)	1021	1382	667	8900	11,910	—	—
Lightweight Fill Material (Cu. Yds. C.I.P.)	3201	—	1686	—	4887	—	—

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

DIGGING PLAN

APPROVED: *[Signature]* STRUCTURAL ENGINEER
JOB No. PW 990(1)

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

REVISIONS

DATE

BY

NO.

NO. OF SHEETS 2 OF 4

DATE OF DESIGN

DESIGNED BY W.A.L. Jun. 1967

CHECKED BY K.V.H.

DRAWN BY

NO. 82124A

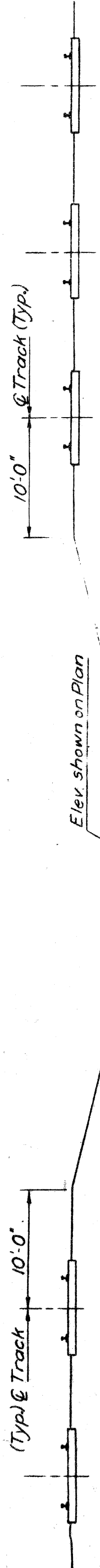
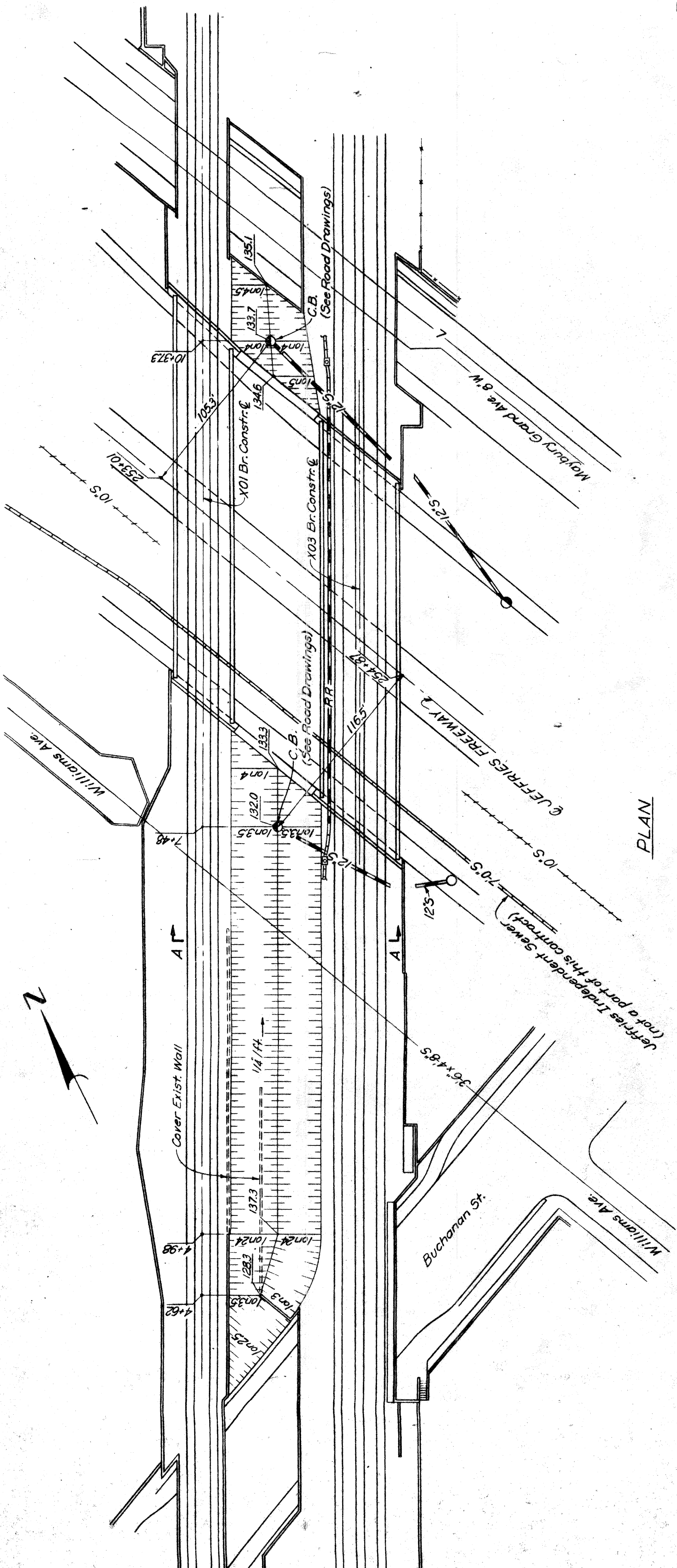
SECTION G-G
Pay Limit - Light-weight Fill Mat'l.
Elev. 115.0 J
Elev. 110.0
Elev. 115.0 J
Elev. 110.0

SECTION H-H
Pay Limit - Light-weight Fill Mat'l.
Elev. 140 (Approx.)
Elev. 115.0 J
Elev. 110.0
Elev. 115.0 J
Elev. 110.0

SECTION M-M
Pay Limit - Light-weight Fill Mat'l.
Elev. 115.0 J
Elev. 110.0
Elev. 115.0 J
Elev. 110.0

SECTION K-K
Pay Limit - Light-weight Fill Mat'l.
Elev. 110.0 J
Elev. 110.0
Elev. 110.0 J
Elev. 110.0

SECTION J-J
Pay Limit - Unclassified Exc. (Typ. both sides)
Elev. 110.0
Elev. 110.0
Elev. 110.0
Elev. 110.0



Note: Earthwork quantity for Final Grading shown on Sh. 7

LEGEND

UTILITY		DESIGNATION	
Public Lighting Commission	Existing	Deleted or Abandoned	New Work by Contractor
Detroit Water Department	L		
Freeway & City of Detroit Sewers	W		
Railroad Utility	S	+++St---	S
			RR

Note: Catch Basins and 12" Sewer are detailed and paid on road drawings

Work Sheets 7 thru 11 together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

GRADING & UTILITY PLAN

NO. _____ DATE _____ BY _____

REVISIONS

DATE _____ BY _____

DESCRIPTION

NO. _____ DATE _____ BY _____

CITY OF DETROIT
 DRAWN BY: J.M.A.
 CHECKED BY: J.M.A.
 SCALE: 1" = 40'

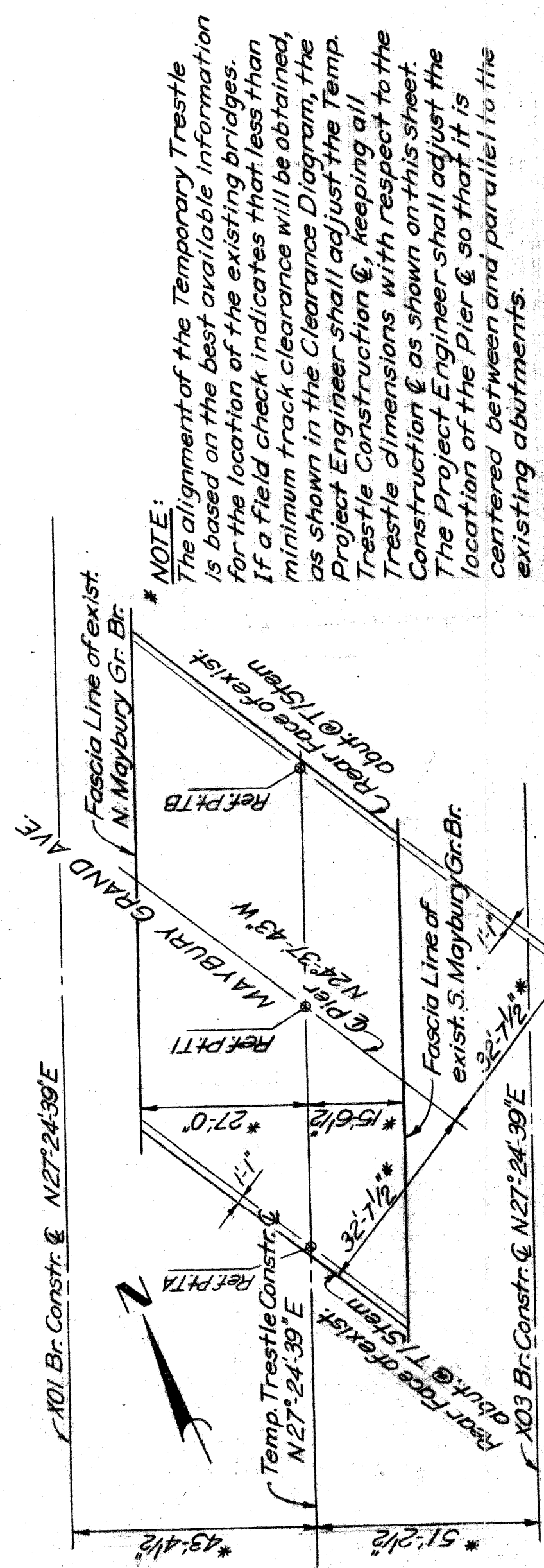
X03 of 82124A

PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

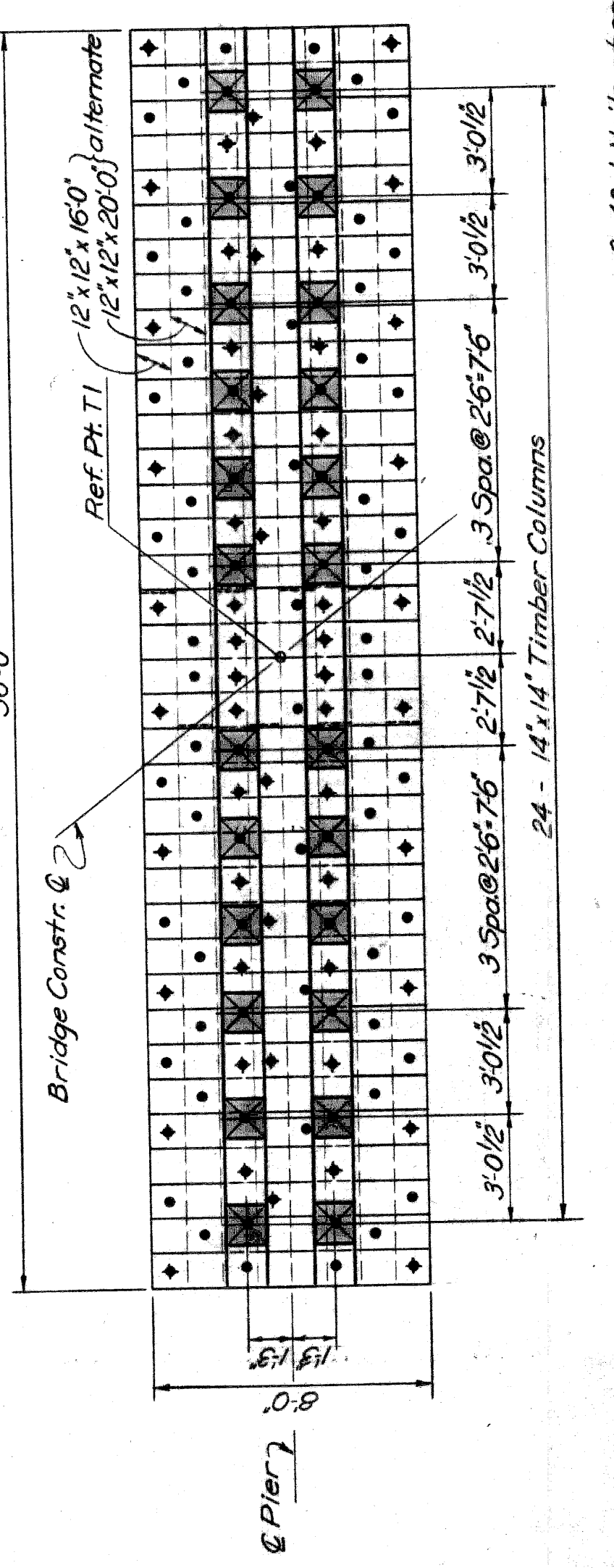
APPROVED: _____
 STRUCTURAL ENGINEER

JOB No. _____
 PW 990(1)

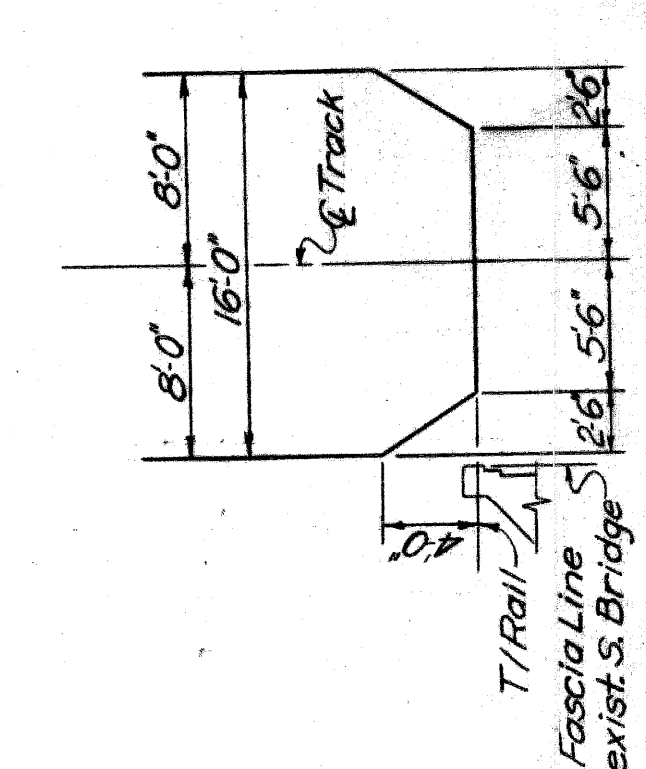
103 of 82124A



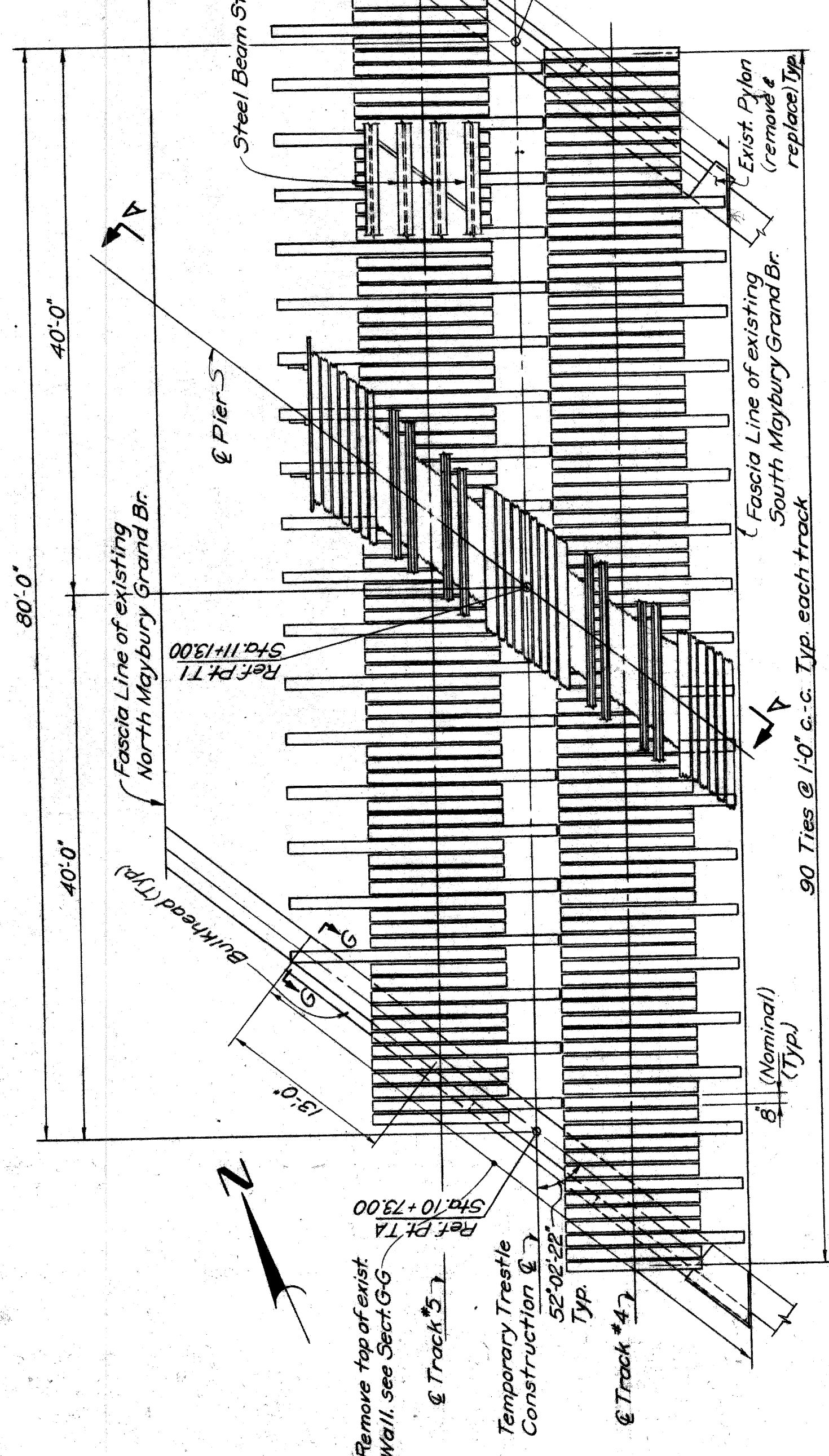
ALIGNMENT DIAGRAM



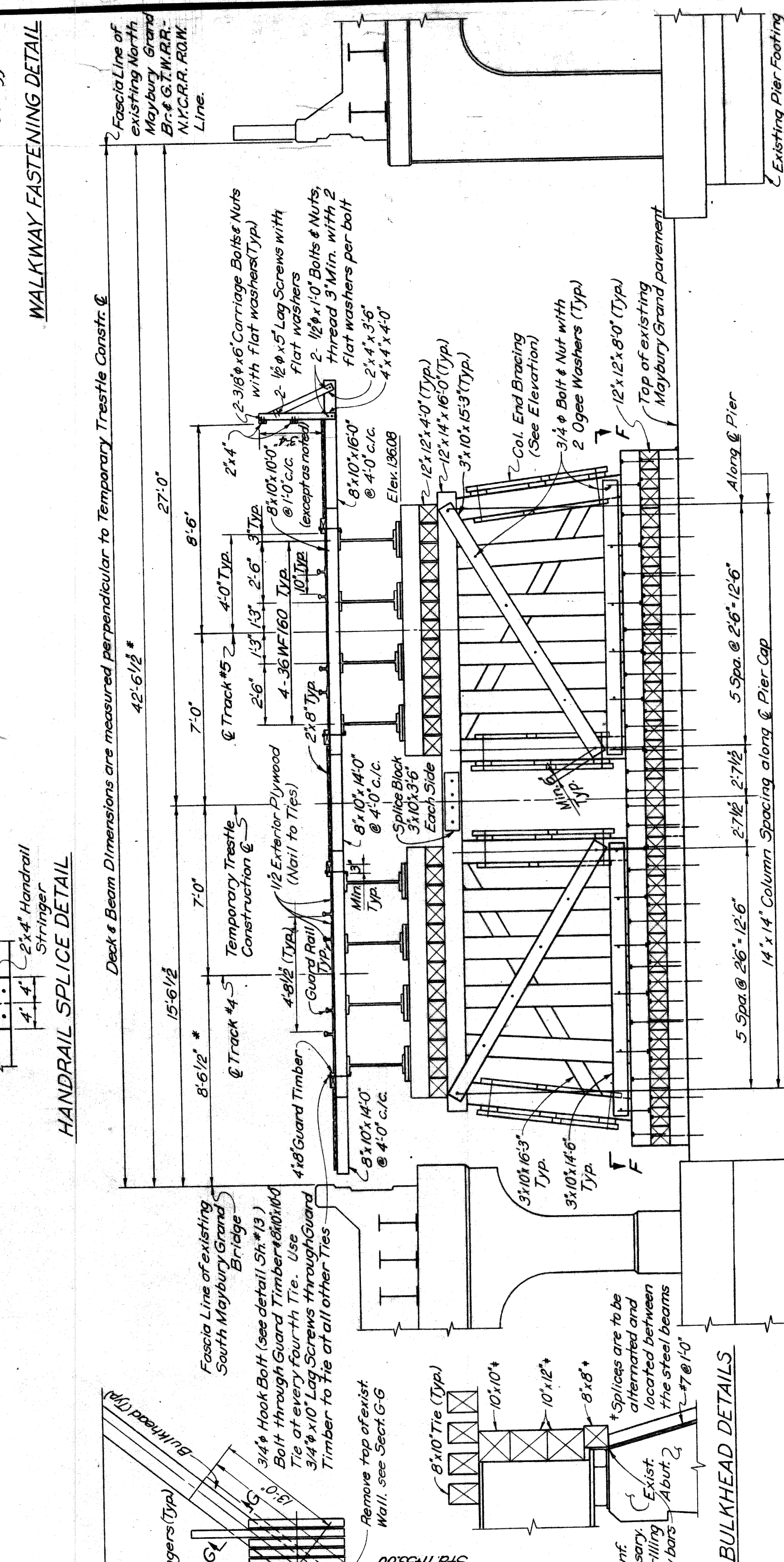
SECTION F-F



CLEARANCE DIAGRAM

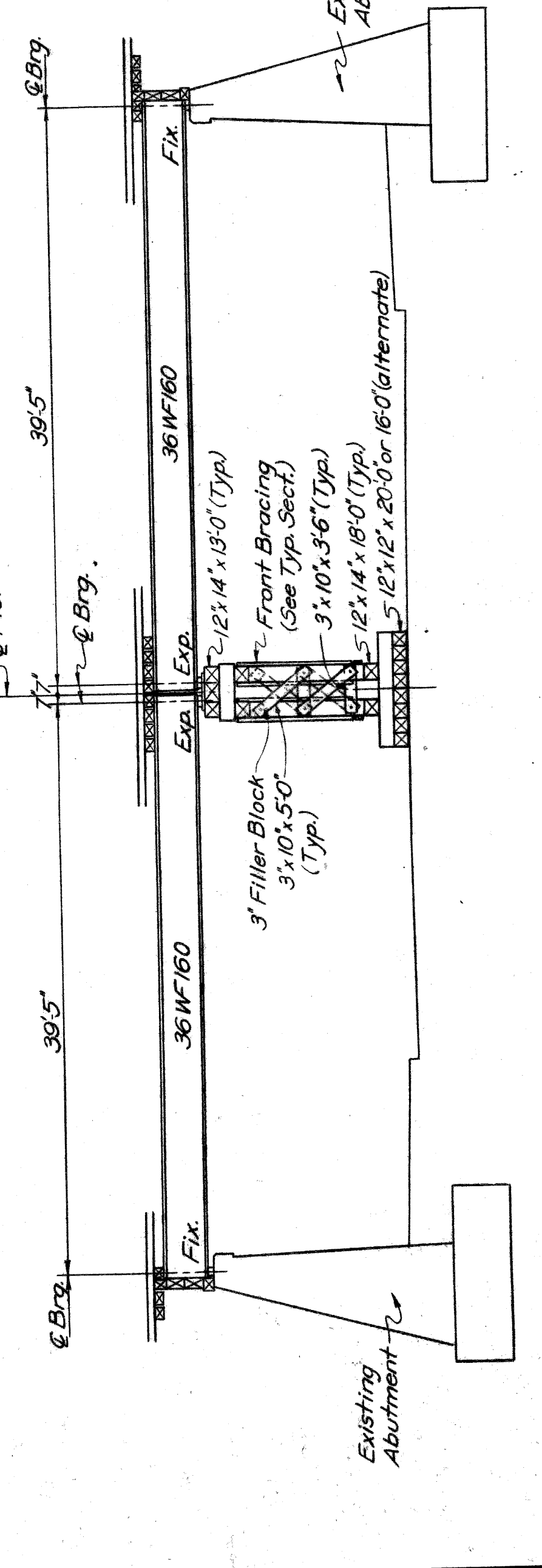


PLAN

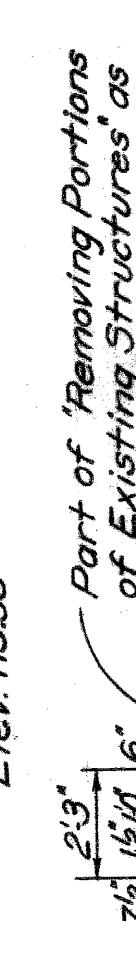


VIEW A-A

BULKHEAD DETAILS



ELEVATION



SECTION G-G

Work this sheet with sheet 13

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

TEMPORARY TRESTLE

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPERTS/WAYS

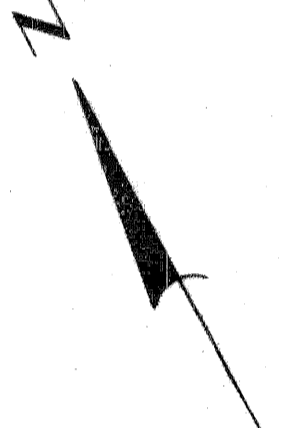
APPROVED: *[Signature]*
 CIVIL ENGINEER

JOB No. _____
 DATE _____
 REVISIONS _____

NO. _____ BY _____
 DESCRIPTION _____

CITY OF DETROIT
 DRAWN BY: S. J. M. 9-57
 CHECKED BY: S. J. M. 10-56
 DESIGNED BY: S. J. M. 7-56
 SHEET 12 OF 17

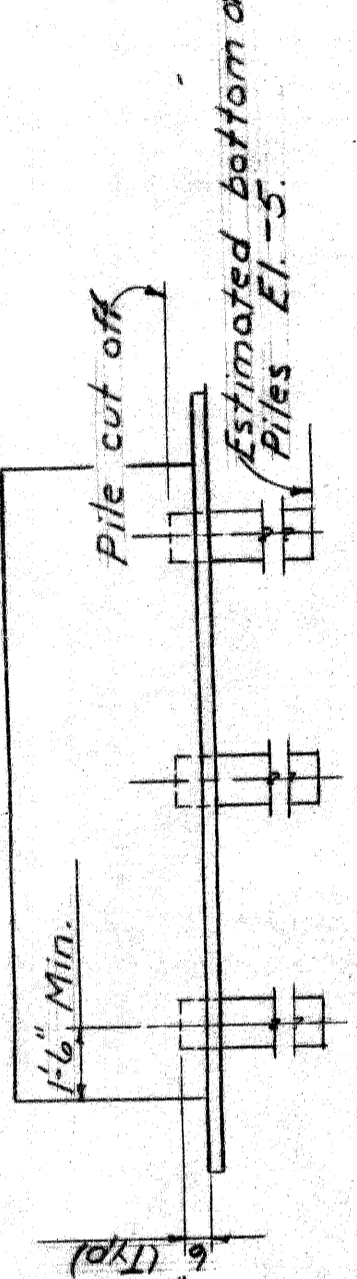
X03 of 82124A



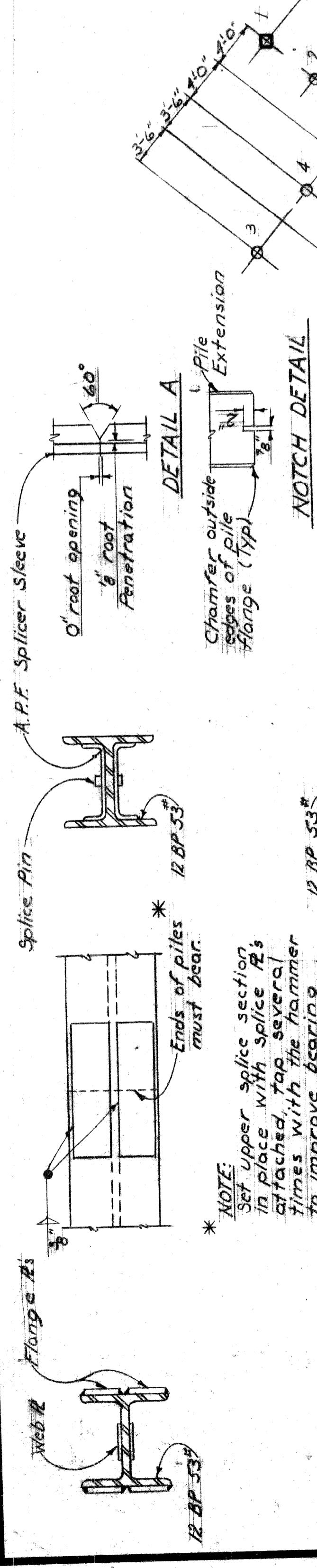
QUANTITIES		
ITEM	UNIT	AMOUNT
60 Ton Piles Furnished & Driven	Lin Ft	12900
Splices - 60 Ton Pile	Each	322
Test Piles - 60 Ton Pile	Each	3
Furnishing, Equipment For Driving Piles	Lump Sum	—
		Total
		28560

NOTE: Estimated length of each pile - furnished & driven is 110 Ft.
Estimated length of each test pile is 120 Ft.

PILE CUT-OFF TABLE	
Piles Numbered	Pile cut off Elevation
1-22	104.50
23-101	103.00
102-117	108.00
118-167	104.50
168-196	107.00
197-259	105.50

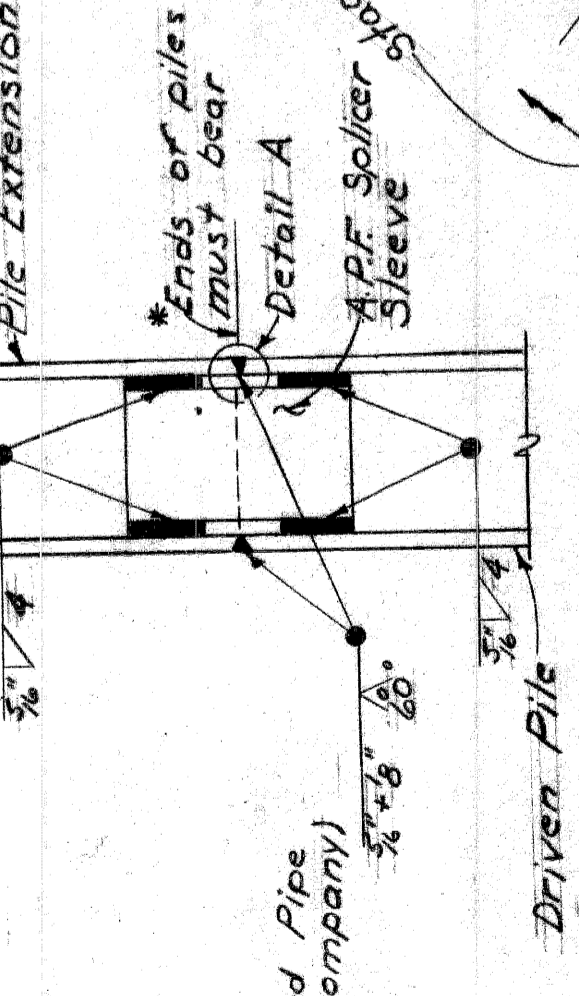


PILE CUT-OFF DETAIL



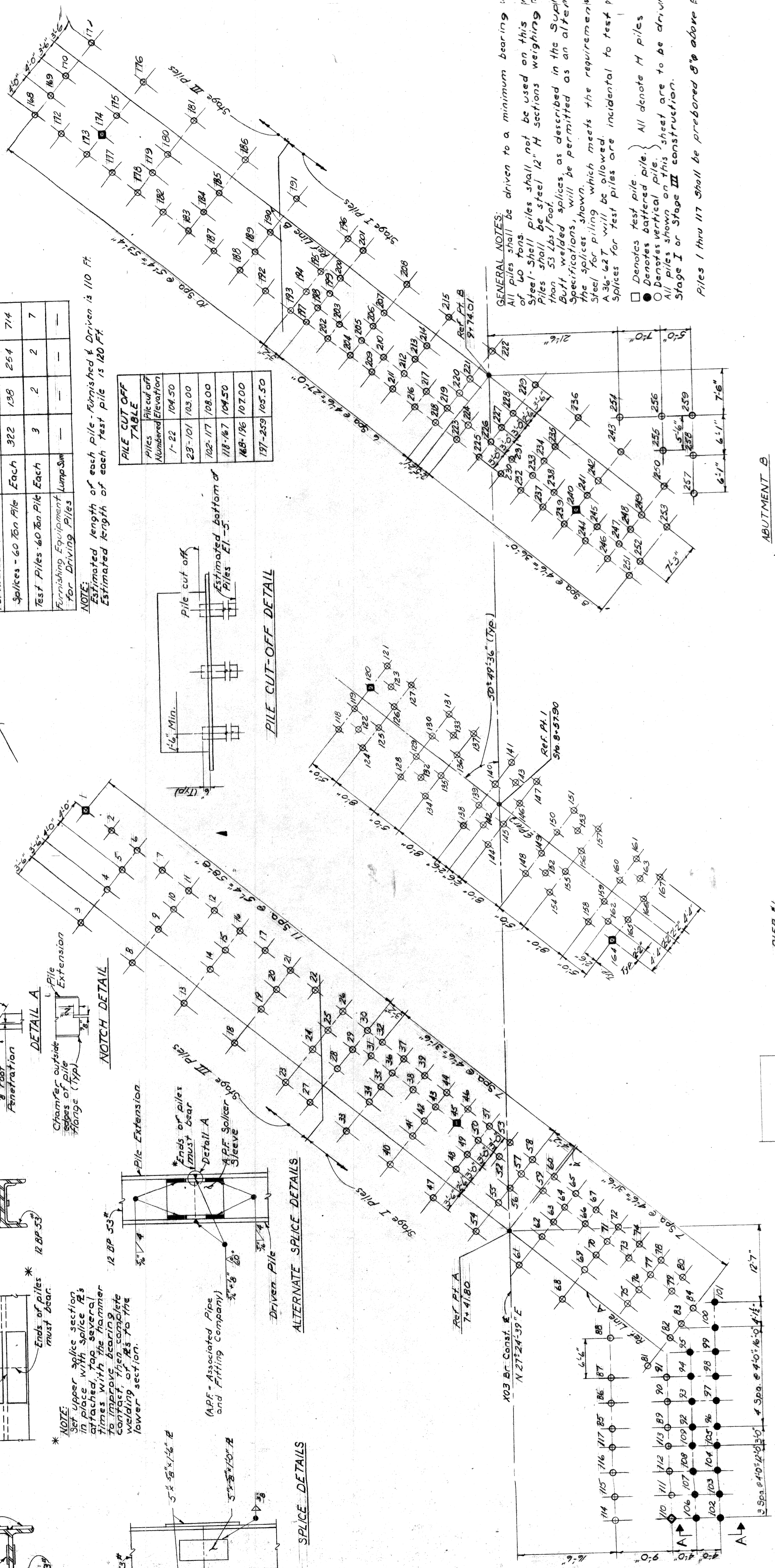
DETAIL A

NOTCH DETAIL



ALTERNATE SPLICE DETAILS

SPLICE DETAILS



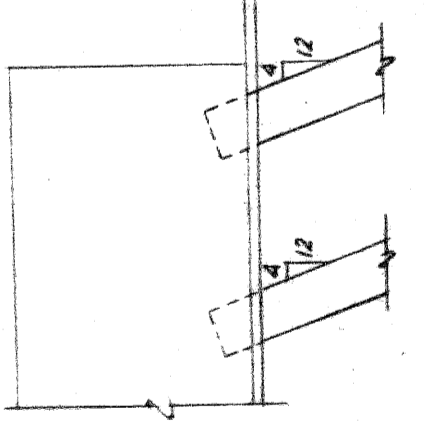
GENERAL NOTES:
All piles shall be driven to a minimum bearing capacity of 60 tons.
Steel shell piles shall not be used on this project.
Piles shall be steel 12" H sections weighing not less than 53 lbs/foot.
Butt welded splices, as described in the Supplemental Specifications, will be permitted as an alternate to the splices shown.
Steel for piling which meets the requirements or A 36-62T will be allowed.
Splices for test piles are incidental to test piles.
□ Denotes test pile.
● Denotes battered pile.
○ Denotes vertical pile.
All piles shown on this sheet are to be driven during Stage I or Stage III construction.
Piles 1 thru 117 shall be pre-bored 8" above Elev. 45.

ABUTMENT B

PIER 1

ABUTMENT A

PLAN OF PILE LOCATIONS - X03



VIEW A-A BATTERED PILES (Piles 92 thru 109 only)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

FOUNDATION PILING DETAILS

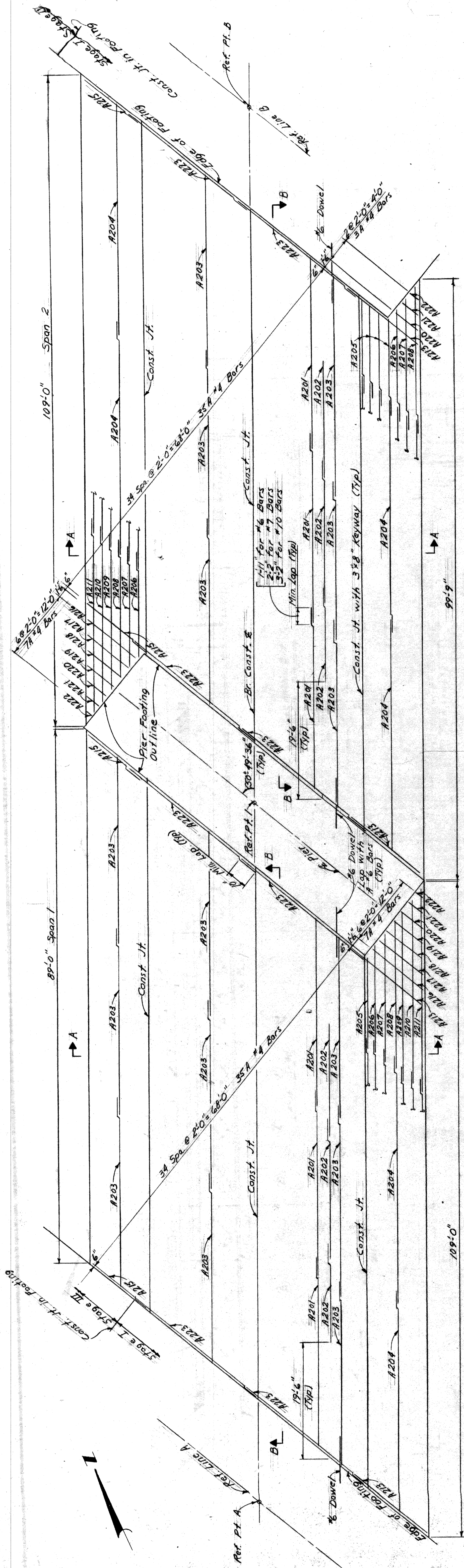
NO.	REVISIONS	DATE	BY

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

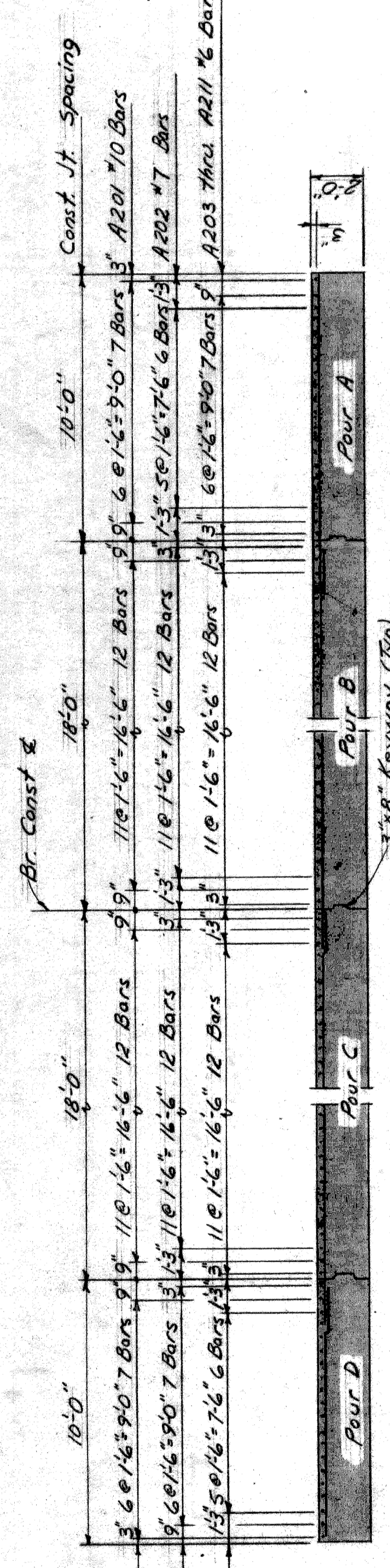
APPROVED: *[Signature]*
STRUCTURAL ENGINEER

JOB No. PW 50041

CITY OF DETROIT
DRAWN BY: A.J.G.
CHECKED BY: K.E.H.
DATE: 11-26-32
JOB No. X03 of 82124A

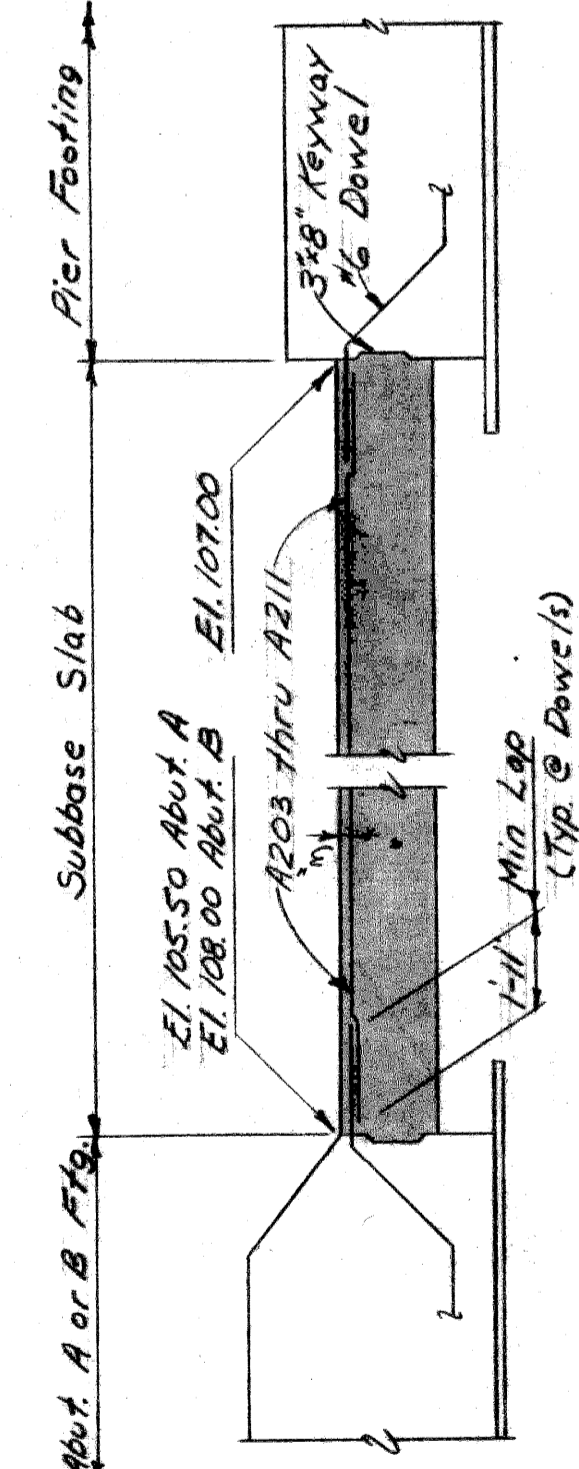


PLAN



SECTION A-A

CONCRETE QUANTITIES (Cu. Yds.)	
Pour	SPAN 1 SPAN 2
A	73.2 68.1
B	118.7 118.7
C	118.7 118.7
D	66.0 73.2
Total: Grade A (64) concrete subbase 755.3 cu. Yds.	



SECTION B-B

NOTE:
 All Subbase Slab pours are part of Stage III construction.
 See Digging Plan, Sh 12 for pour sequence & curing limitations.

Work this sheet with sheets 17, 20, 22 & 25

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

SUB-BASE SLAB DETAILS

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

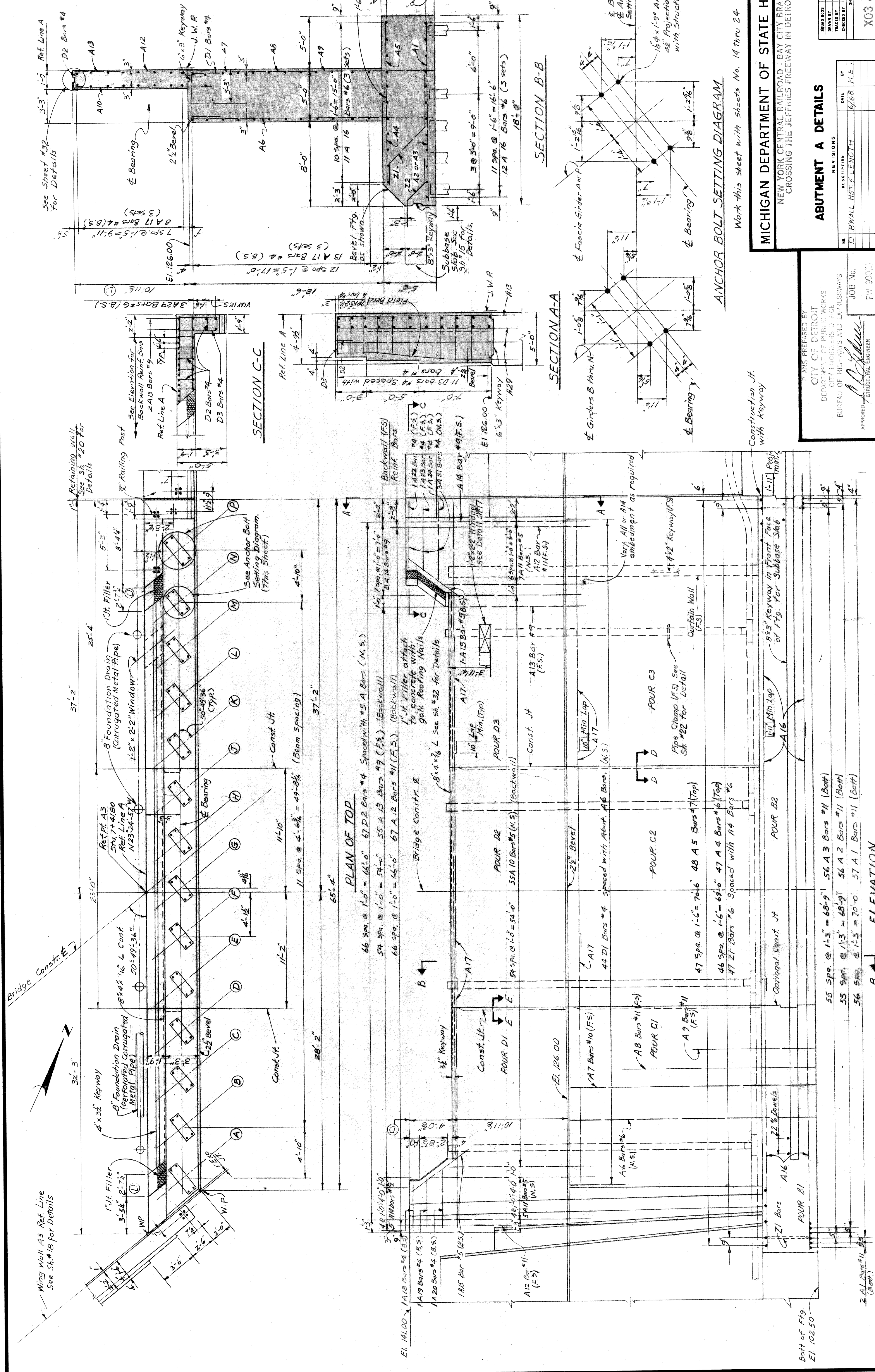
APPROVED: *[Signature]*
 BRIDGE ENGINEER

JOB NO. _____
 PW. _____

NO.	REVISIONS	DATE	BY

SHOWN BY: *[Signature]* 1-67
 DRAWN BY: *[Signature]* 1-67
 CHECKED BY: *[Signature]* 1-67
 SHEET 15 OF 41

X03 of 82124A



Wing Wall A3 Ref. Line
See Sh. #18 for Details

Retaining Wall
See Sh. #20 for Details

See Sheet #32
for Details

SECTION C-C

Ref. Line A

SECTION A-A

Ref. Line A

SECTION B-B

Ref. Line A

ANCHOR BOLT SETTING DIAGRAM

Work this sheet with Sheets No. 14 thru 24

Construction Jt.
with Keyway

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

ABUTMENT A DETAILS

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
STRUCTURAL ENGINEER

JOB No. PW 900(1)

NO.	DESCRIPTION	DATE	BY
1	REVISIONS		
2	DRAWING LENGTH	6/68	H.F.
3	DRAWING WIDTH		
4	DRAWING AREA		
5	DRAWING PERCENT		

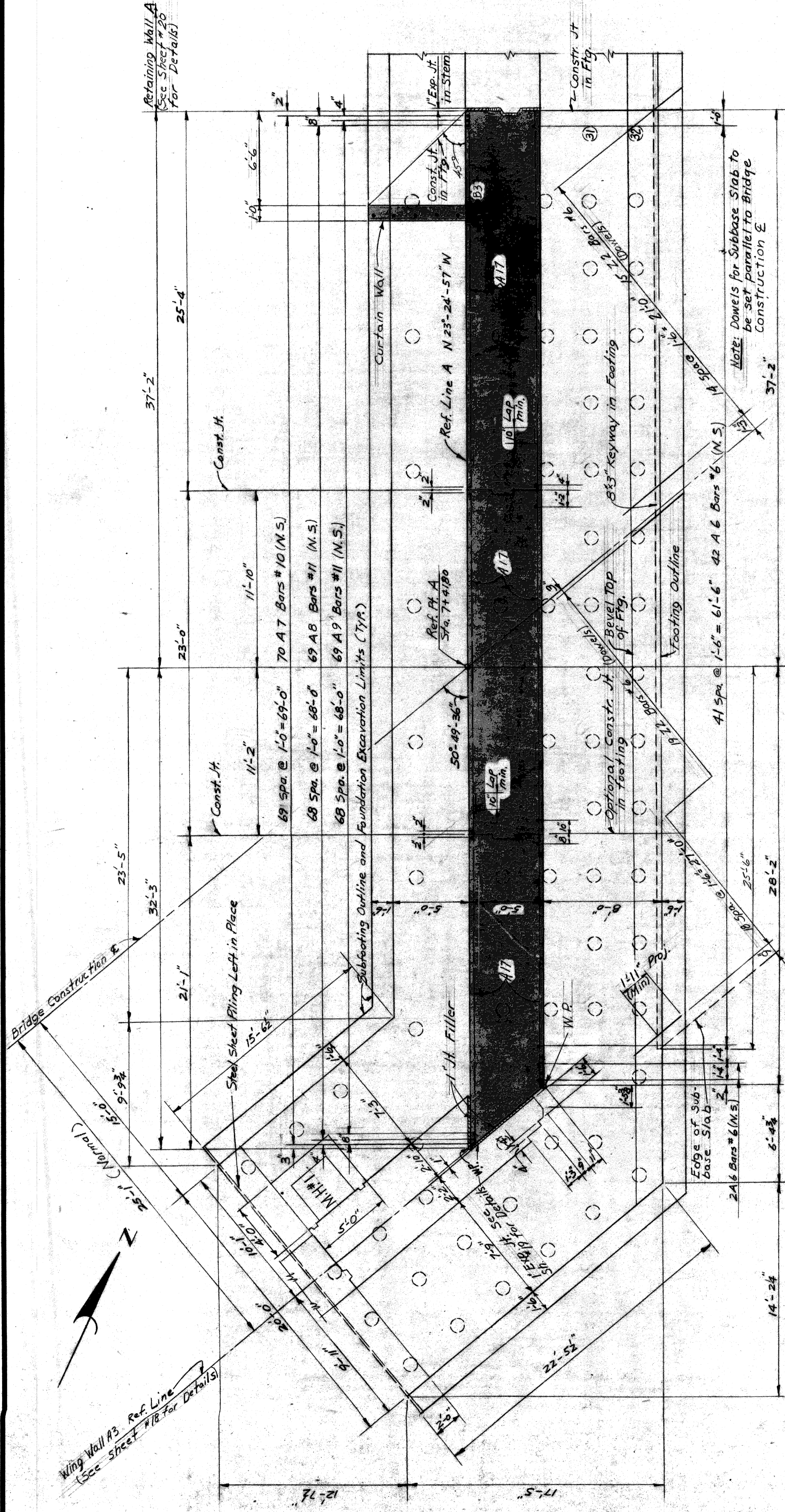
ELEVATION

X03 of 82124A

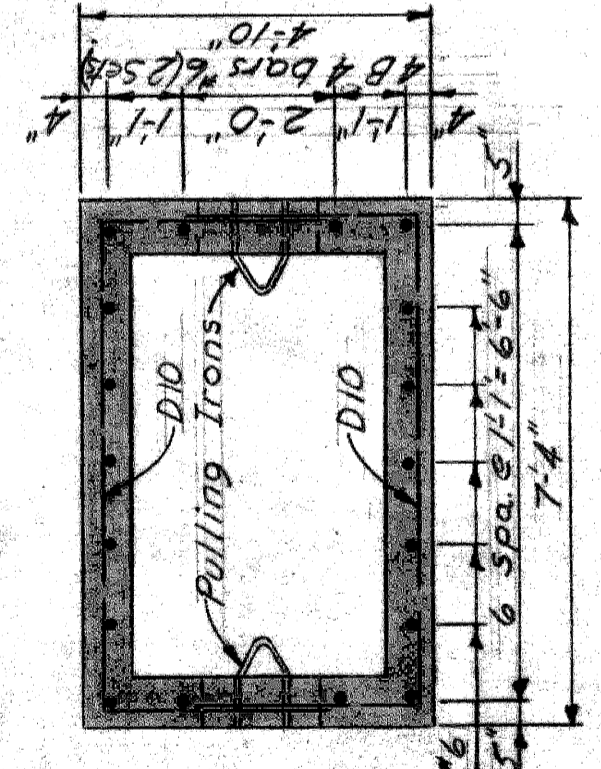
GENERAL NOTES

1. W.P. denotes Joint Waterproofing.
 N.M.S. denotes Non-Metallic Waterslop.
 M.S. denotes Metallic Waterslop.
 B.S. denotes Both Sides.
 2. For bevel, mounding and name plate mounting details, see Std. Sheet #112 for location of name plate, and Sh. #21, Anchor bolts shall be set accurately to a template. The Project Engineer shall adjust the spacing of the reinforcing steel as required to permit placing of anchor bolts.
 The tops of Abutment's shall be given an application of protective Sealant's Coating for concrete prior to placing bearing castings.
 Footing and subfooting concrete quantities are computed on the basis of an outline 3/4" outside of the footing outline where the concrete is poured against steel sheet piling left in place. No additional allowance will be made in concrete or excavation quantities regardless of the steel piling used.
 Steel sheet piling left in place shall be of the continuous interlock type, either new or used in good condition, weighing not less than 22 pounds per square foot of wall, and shall be furnished with suitable connecting and corner pieces. Lade analysis and mill reports are not required for steel used in steel sheet piling. Steel sheet piling left in place shall be driven to its final penetration before adjacent concrete is poured. If it is necessary to lower the top of sheeting after the concrete has been poured, the excess shall be removed by cutting. A 5/8" which meets the requirements of ASTM A36-62 will be allowed.
 Expansion Anchors of the size indicated shall be Bethlehem Mine Roof Expansion Type with X-1 Shell, Phillips Red Head Anchor, Chicago Expansion Bolt Co., Special Flush Self Drilling Anchor or approved equal.
 For pile quantities, pile layouts and notes pertaining to pile quantities, see Sh. #14.

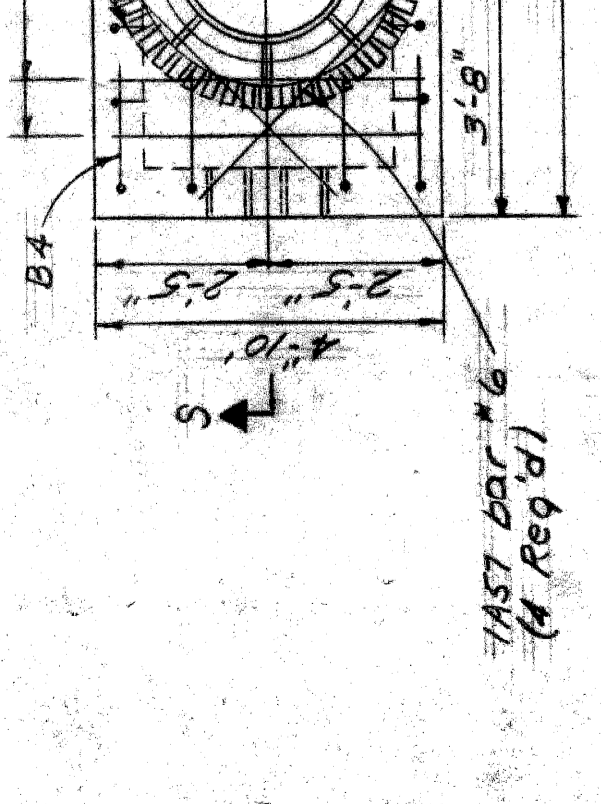
NOTES:
 The metal bulkhead may be used as alternate construction joint of contractor's expense. Care is to be used in casting concrete around bulkhead to prevent dislocation or misalignment of the bulkhead.
 Cut holes in metal bulkhead for reinforcing steel.



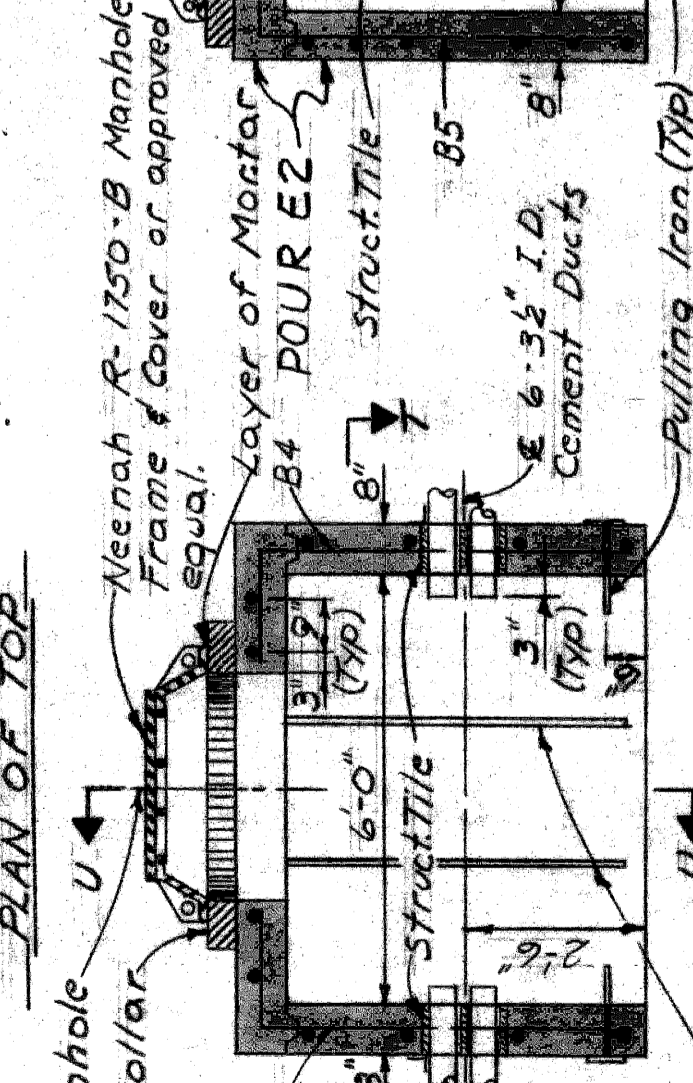
PLAN OF FOOTING



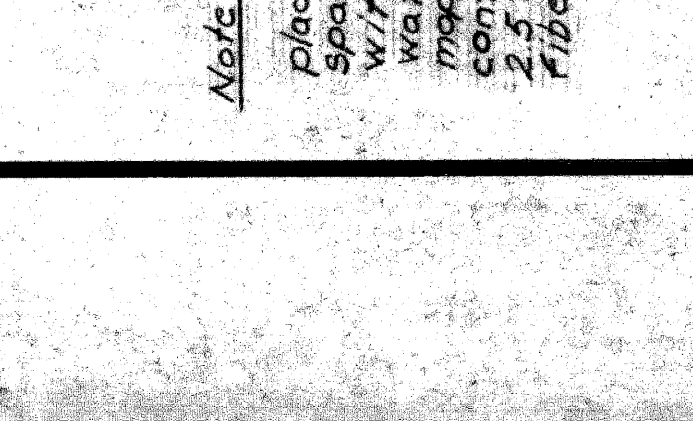
PLAN OF TOP



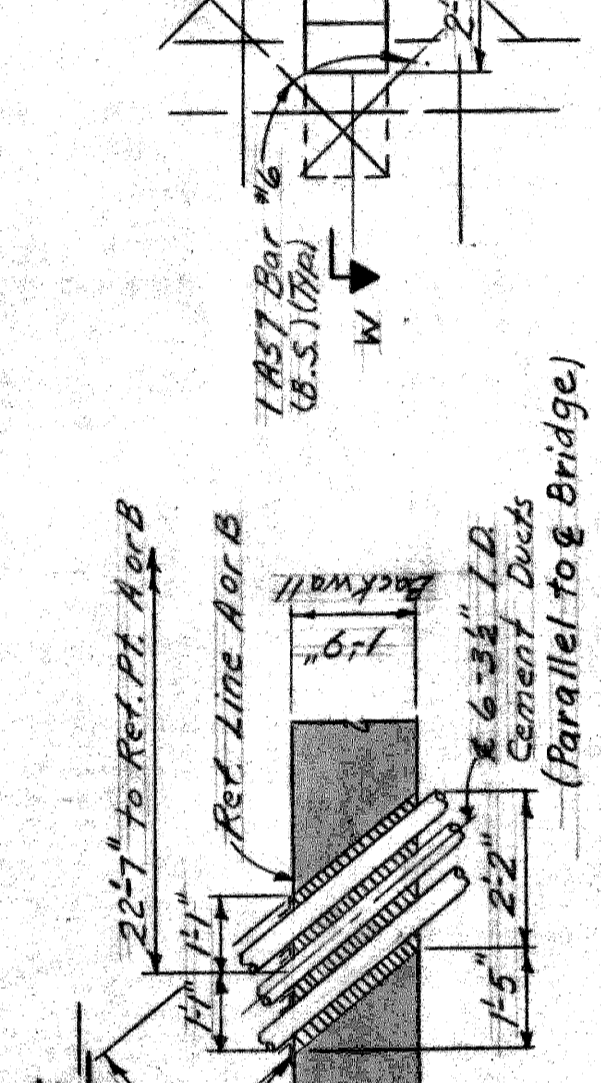
SECTION T-T



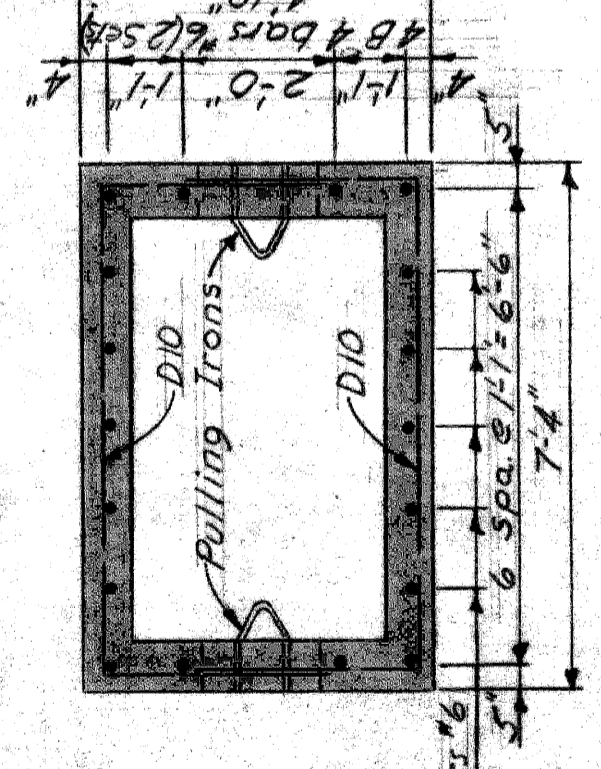
SECTION U-U



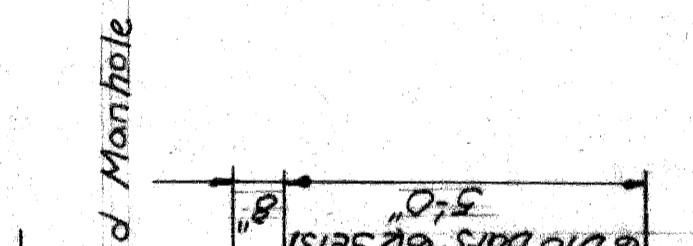
SECTION W-W



SECTION X-X



ELEVATION - BACK WALL



MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

ABUTMENT A DETAILS

NO.	REVISIONS	DATE	BY

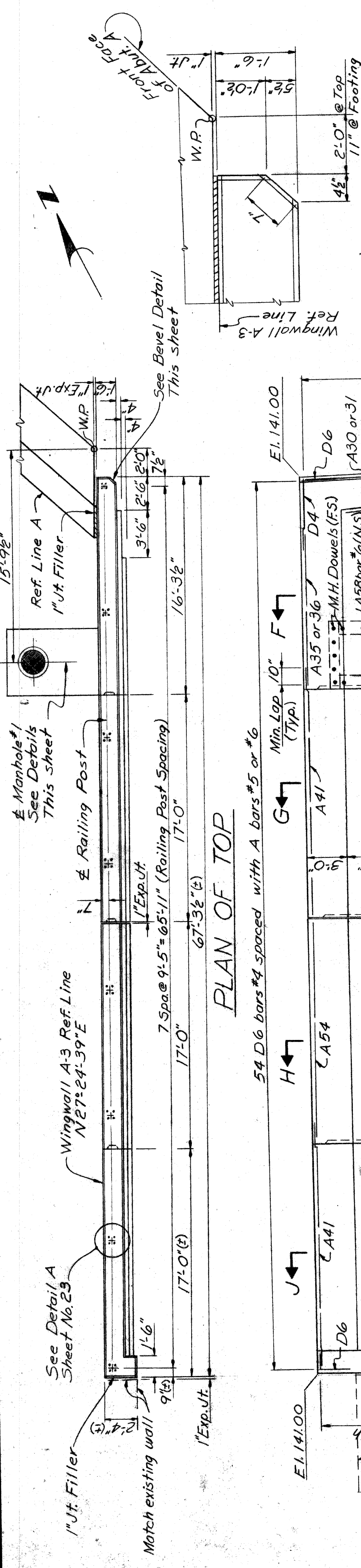
APPROVED: *[Signature]* STRUCTURAL ENGINEER
 JOB NO. PW 990(1)

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

Work this sheet with sheets #14-24

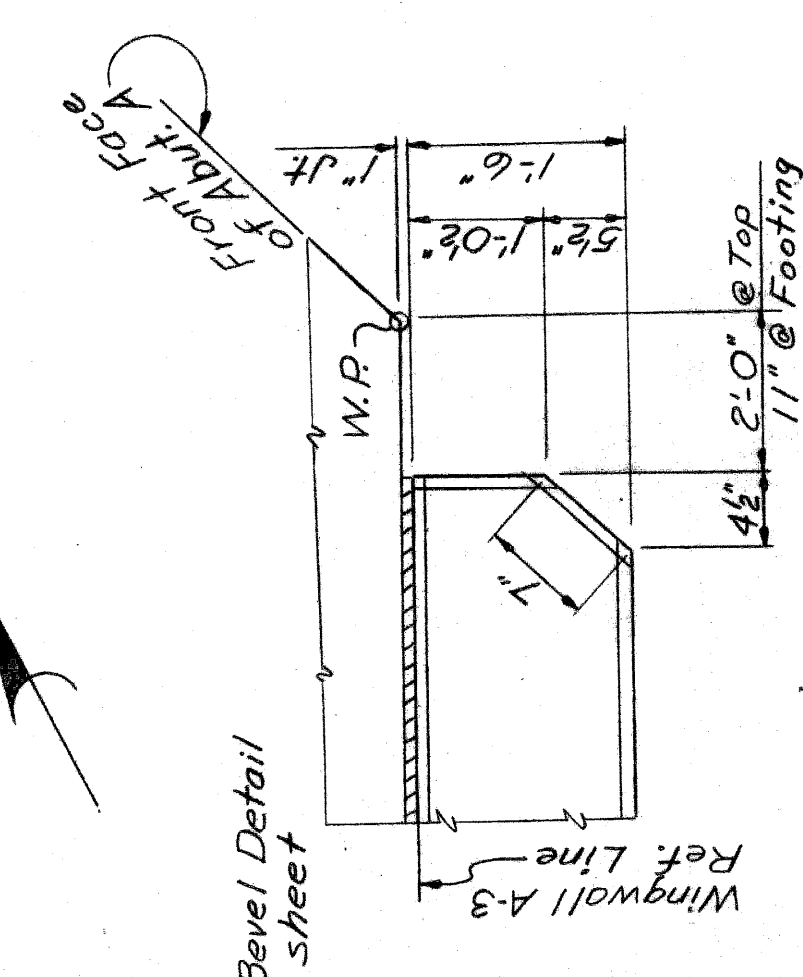
CITY OF DETROIT
 ROAD NO. 14-24
 DRAWN BY: A.P.C.
 CHECKED BY: A.F./D.R.
 SHEET 17 OF 41

X03 of 82124A

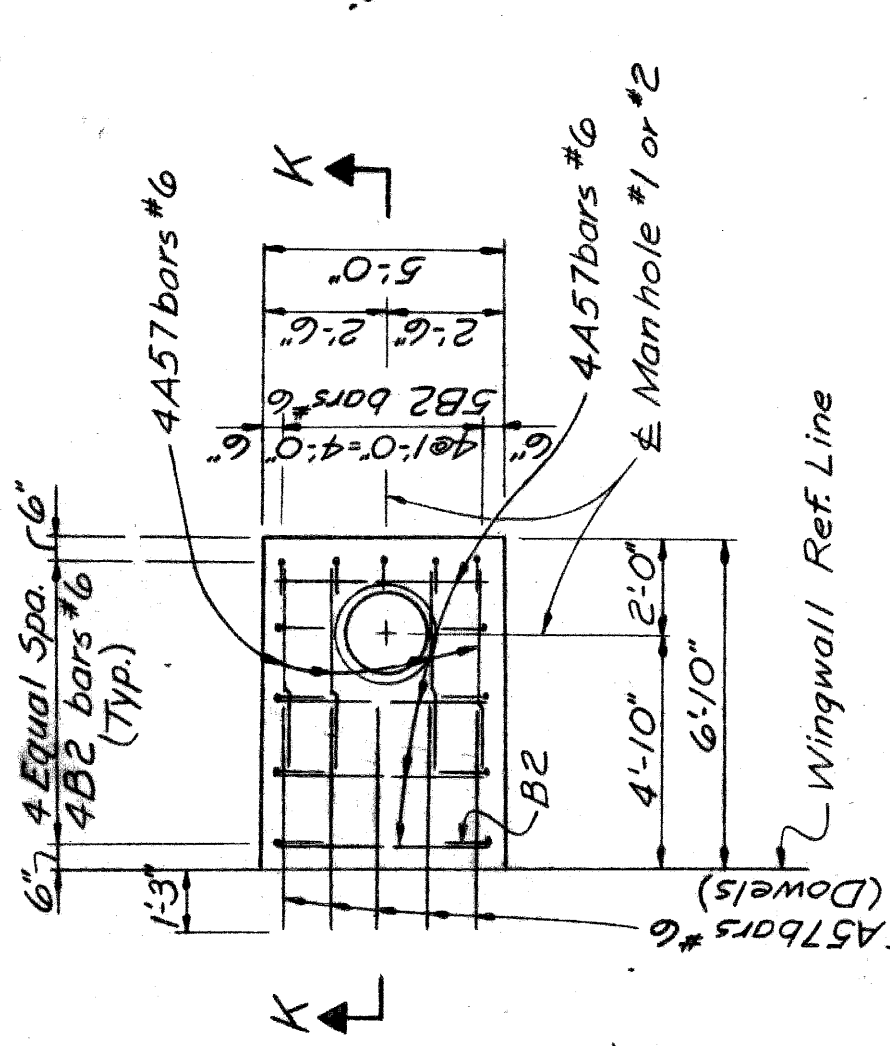


PLAN OF TOP

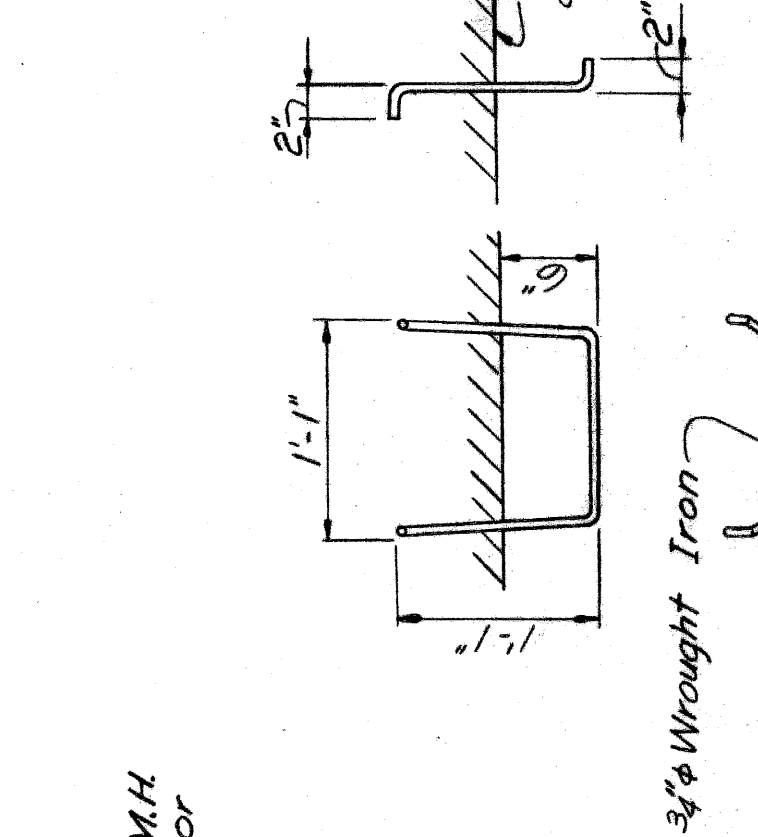
BEVEL DETAIL



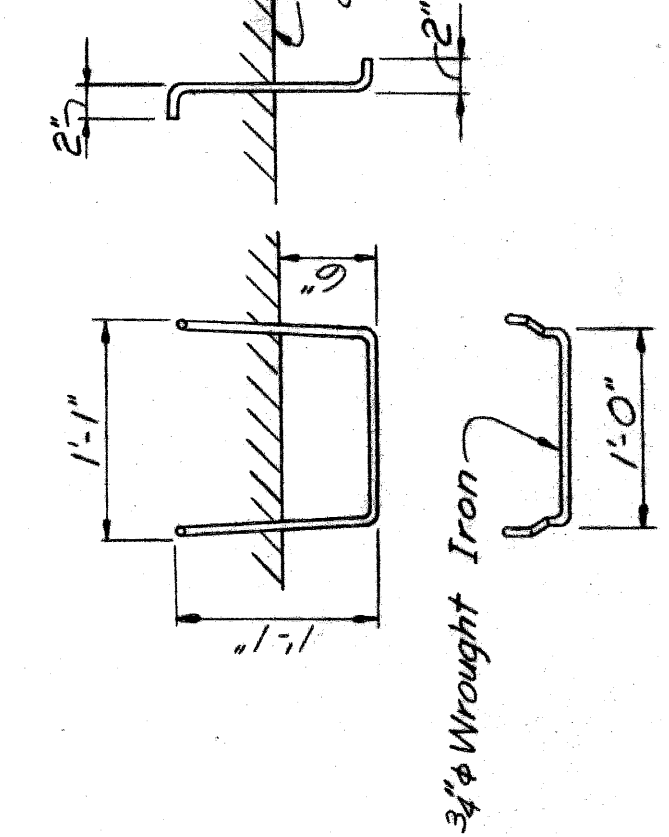
PLAN OF MANHOLE SLAB



SECTION LL

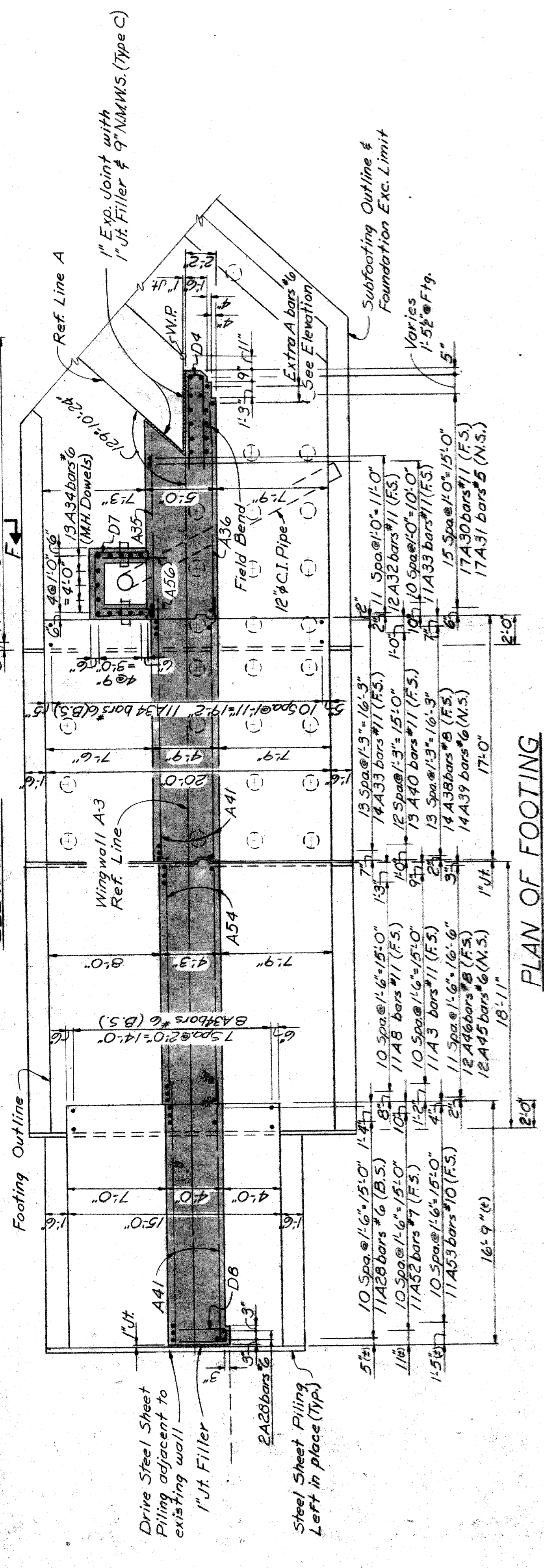


LADDER RUNG DETAILS



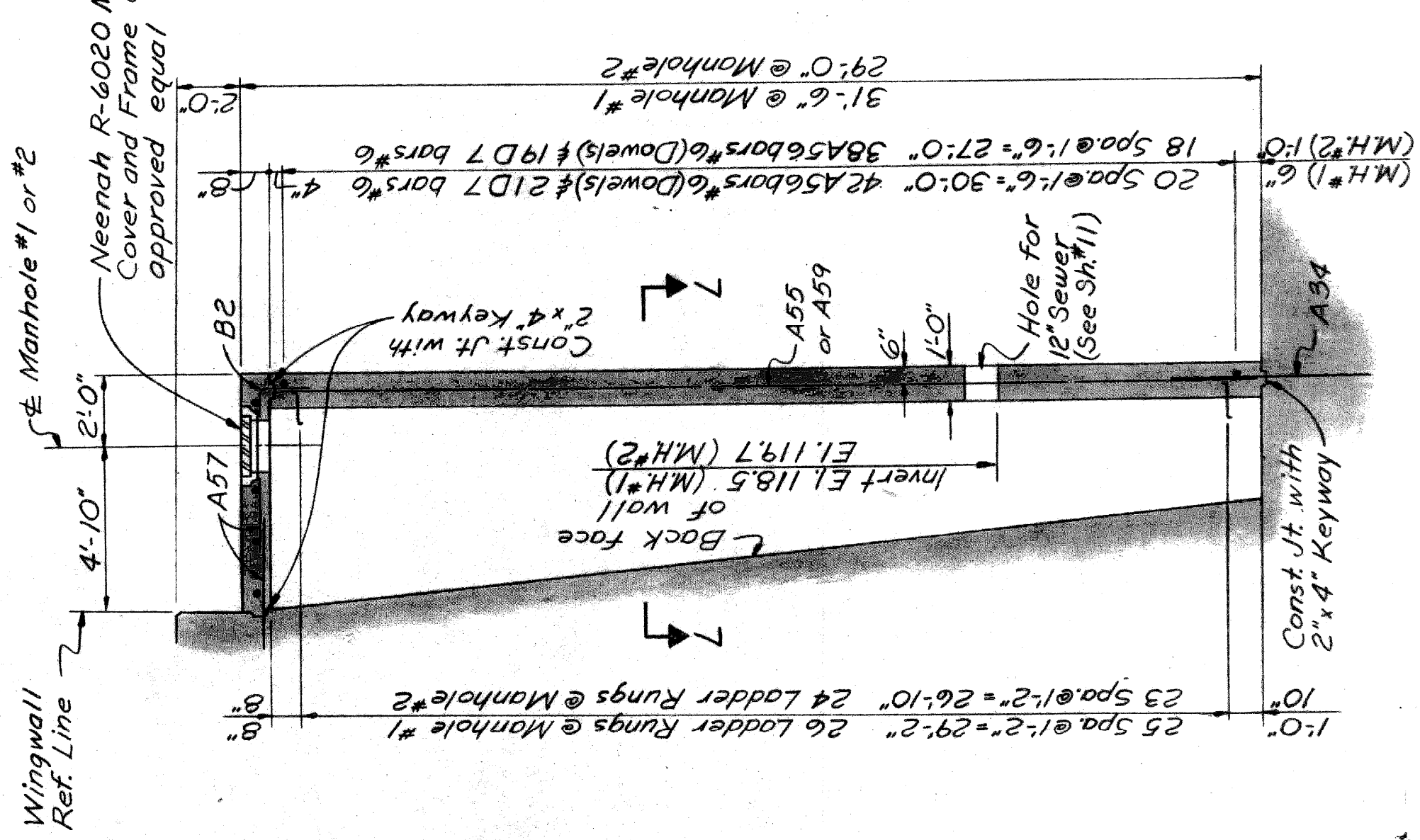
Note:
Dimensions pertaining to existing Retaining Walls are subject to field verification. Dimensions marked thus (±) may be adjusted by the Project Engineer.

ELEVATION



PLAN OF FOOTING

SECTION KK



Work this sheet with sheet nos. 16 thru 24.

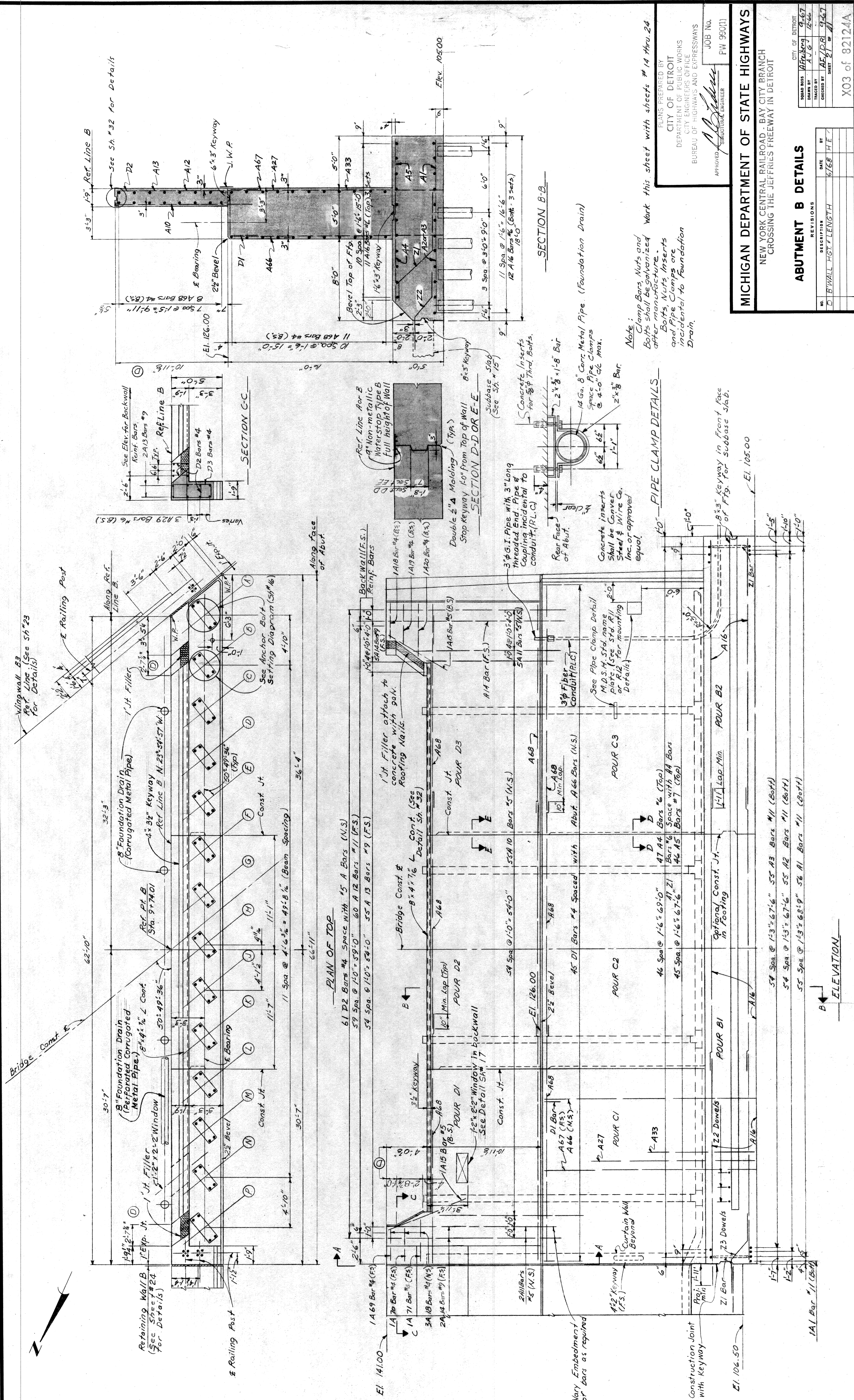
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFERIES FREEWAY IN DETROIT

PARIS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEER'S OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

ABUTMENT A DETAILS

NO.	REVISIONS	DATE	BY
1	As Shown	10-11-20	W. J. ...
2	As Shown	10-11-20	W. J. ...
3	As Shown	10-11-20	W. J. ...
4	As Shown	10-11-20	W. J. ...

APPROVED: [Signature] BIOLOGICAL ENGINEER
 JOB No. PW 990(1)



See Sh. #32 for Details

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS
 APPROVED: [Signature]
 STRUCTURAL ENGINEER
 JOB No. PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

ABUTMENT B DETAILS

NO.	DESCRIPTION	DATE	BY
1	B WALL HGT. LENGTH	6/68	H.E.

REVISIONS

CITY OF DETROIT
 DRAWN BY: [Signature] 9-67
 CHECKED BY: A.L.G. 12-68
 DESIGNED BY: A.E.P.R. 9-67
 SHEET 81 OF 11

X03 of 82124A

Note:
 Clamp Bars Nuts and Bolts shall be galvanized after manufacture.
 Bolts, Nuts, Inserts and Pipe Clamps are incidental to foundation Drain.

Concrete inserts shall be covered with Steel & Wire Co. Inc. or approved equal.

Concrete inserts shall be covered with Steel & Wire Co. Inc. or approved equal.

See Pipe Clamp Detail M.D.S. Std. name plates see Std. R.I. or A12 for mounting details

1'-0" Keyway in Front Face of Ftg. for Subbase Slab.

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

El. 105.00

El. 106.50

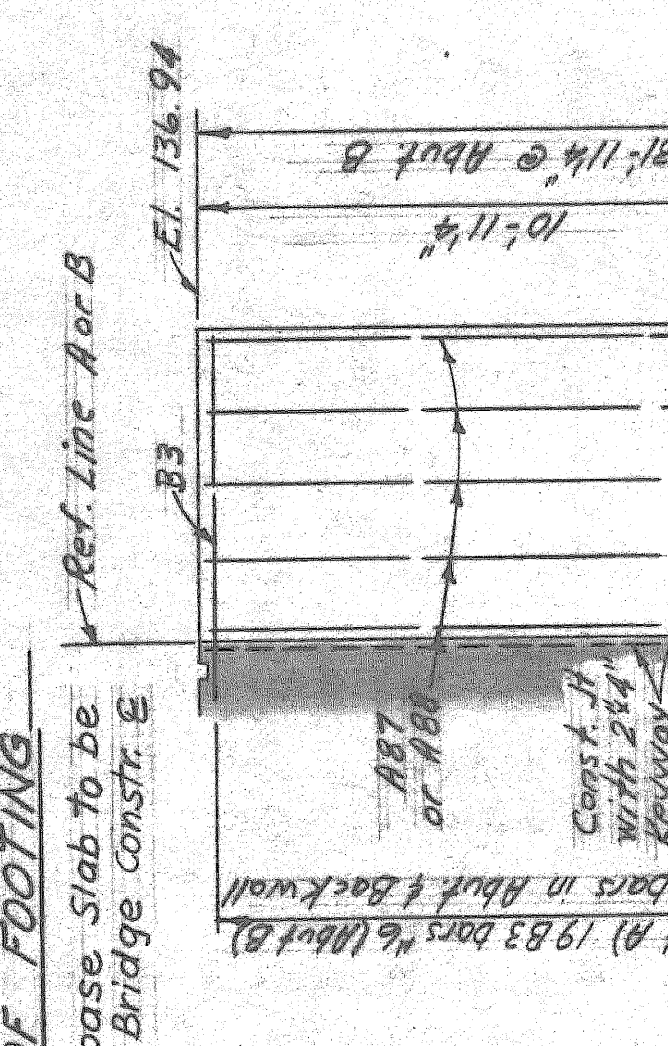
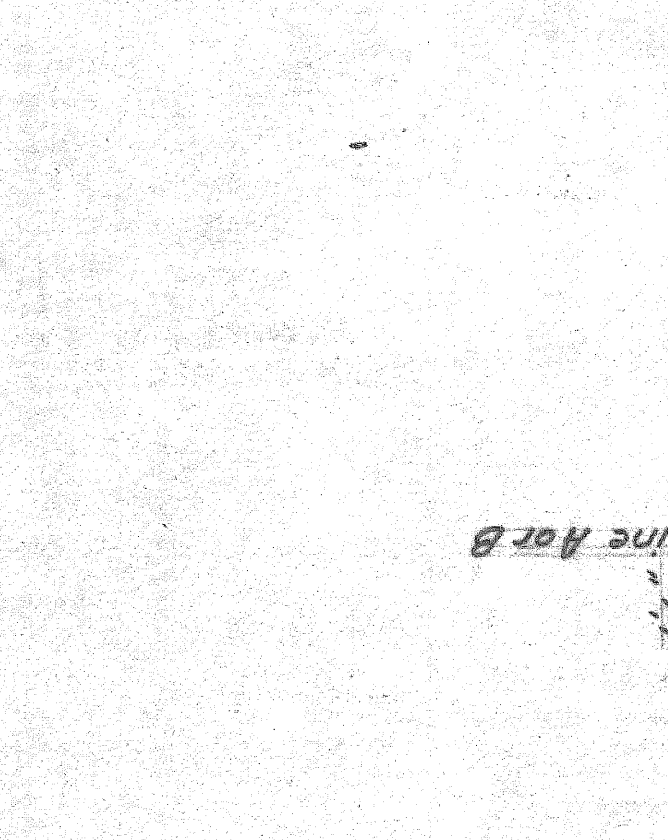
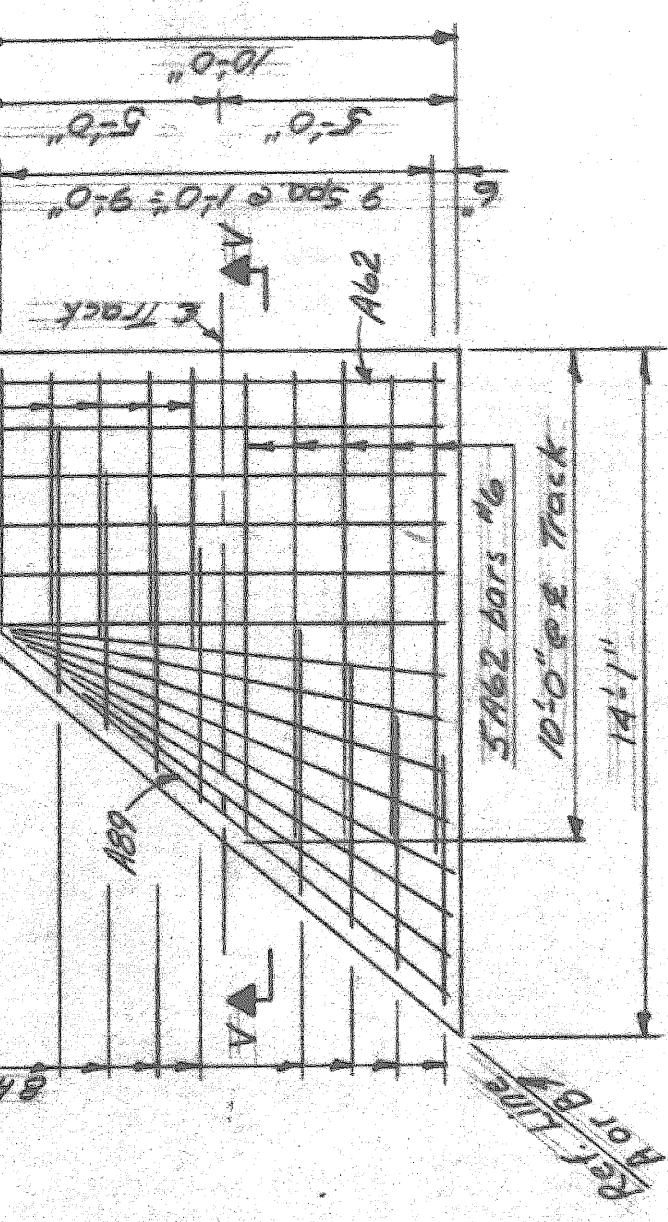
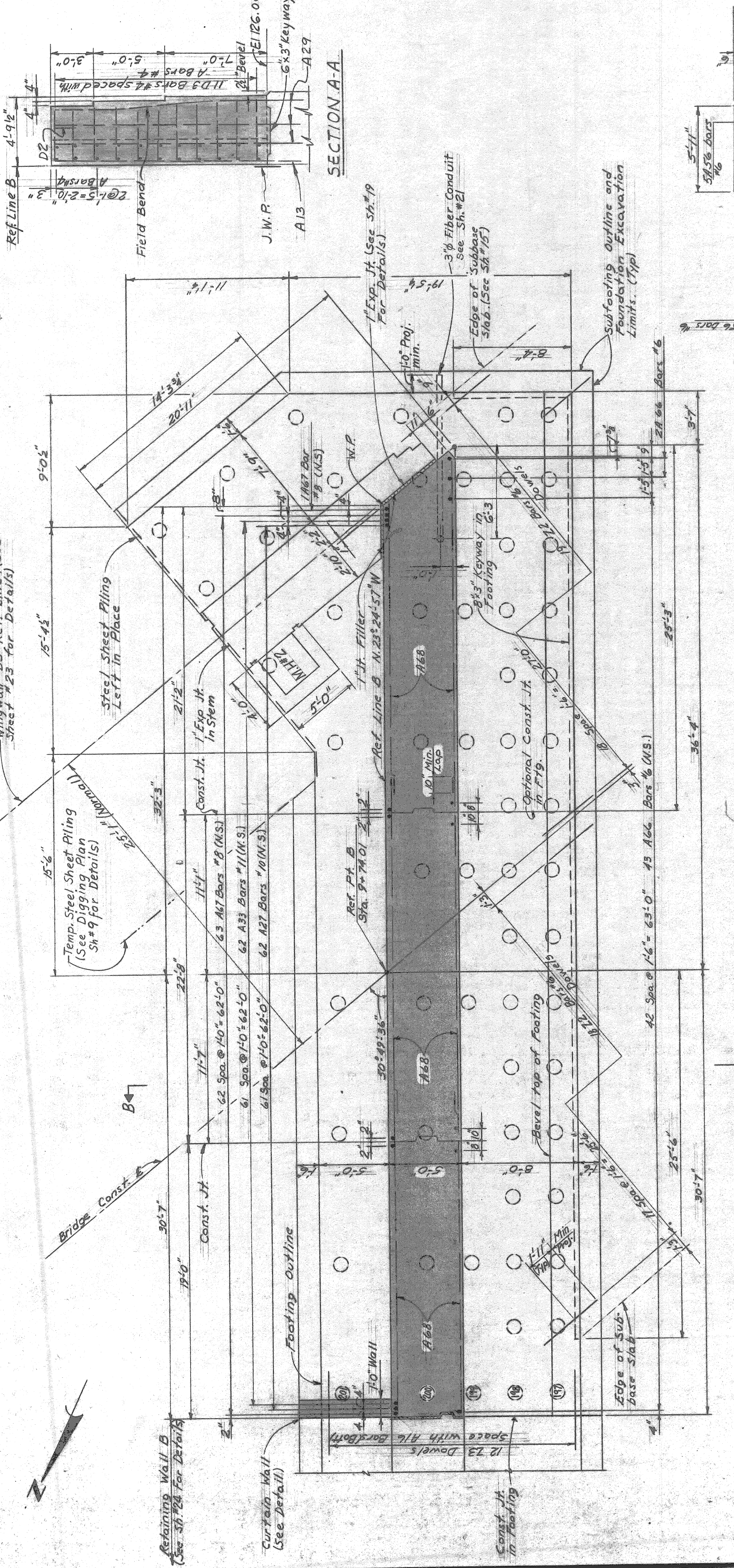
El. 105.00

El. 106.50

El. 105.00

CONCRETE QUANTITIES

POUR	LOCATION	Abutment A		Abutment B	
		Gr. Area (Gr. Area)	Gr. Area (Gr. Area)	Gr. Area (Gr. Area)	Gr. Area (Gr. Area)
A1	Abutment Sub-Footing	19.7	17.9	17.9	
B1	Abutment Footing	129.0	138.9	138.9	
B2	Abutment Footing	157.5	126.6	126.6	
C1	Abutment Wall		65.2		56.3
C2	Abutment Wall		78.8		67.2
C3	Abutment Wall		86.8		68.8
D1	Abutment Backwall		16.1		17.5
D2	Abutment Backwall		16.4		16.2
D3	Abutment Backwall		23.4		16.7
A2	Wingwall Sub-Footing	3.7			
A3	Wingwall Sub-Footing	4.7			
A4	Wingwall Sub-Footing	2.9			
B3	Wingwall Footing	64.0			
B4	Wingwall Footing	42.8			
B5	Wingwall Footing	30.6			
C4	Wingwall Stem		42.0		39.9
C5	Wingwall Stem		34.8		32.6
C6	Wingwall Stem		25.0		
C7	Wingwall Stem		35.8		
D4	Wingwall Upper Stem		20.5		23.2
D5	Wingwall Upper Stem		23.4		31.6
D6	Wingwall Upper Stem		22.9		
E1	Manhole, Bridge		16.6		15.4
A5	Retaining Wall Sub-Ftg	14.1			14.1
B6	Retaining Wall Footing	84.3			67.6
B7	Retaining Wall Footing	134.4			134.4
C8	Retaining Wall Stem		54.9		47.4
C9	Retaining Wall Stem		54.7		47.2
C10	Retaining Wall Stem		54.4		47.0
D7	Retaining Wall Upper Stem		25.8		25.7
D8	Retaining Wall Upper Stem		25.7		25.6
D9	Retaining Wall Upper Stem		25.6		25.6
E2	Railroad Manhole		3.4		3.4
F1	Curtain Wall		7.4		6.8
Totals		687.7	752.6	752.6	614.3



Notes: For location of Approach Slabs See Sheet No. 5.

Details shown @ Abut. B opposite hand @ Abut. A

APPROACH SLAB DETAILS

Work this sheet with sheets #14-24

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]* STRUCTURAL ENGINEER

JOB No. PW 99011

REVISIONS

NO.	DESCRIPTION	DATE	BY

SECTION A-A

SECTION V-V

SECTION Y-Y

ELEVATION OF CURTAIN WALL

Notes: For location of Curtain Walls see Plan of Footings.

Notes: Dowels for Subbase Slab to be set parallel to Bridge Const. E

Notes: For location of Footings.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

ABUTMENT B DETAILS

CITY OF DETROIT

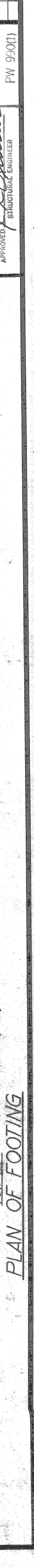
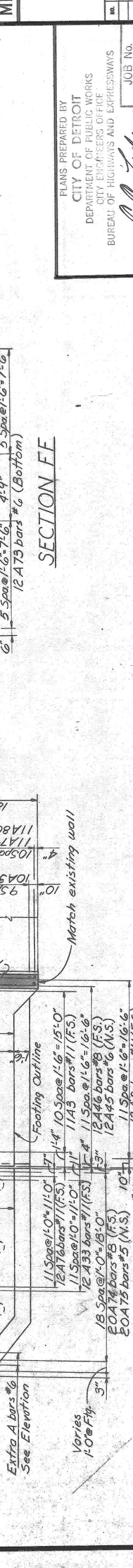
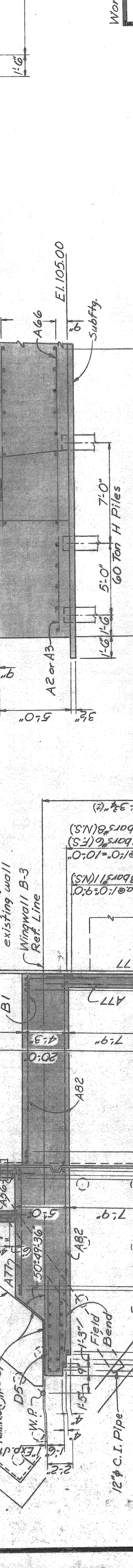
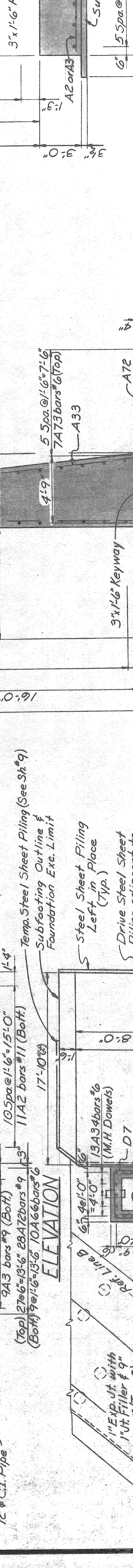
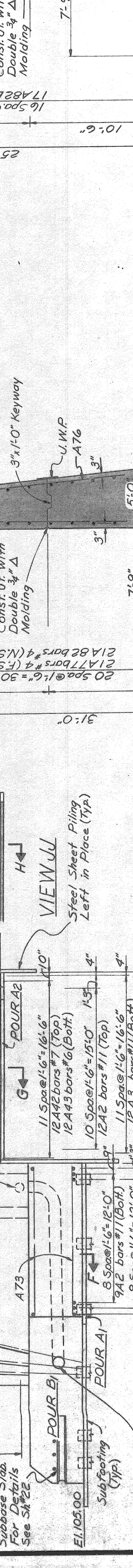
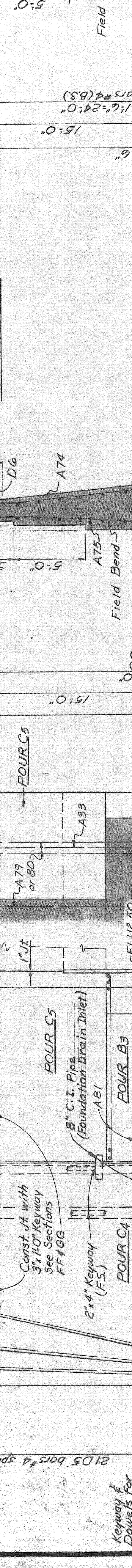
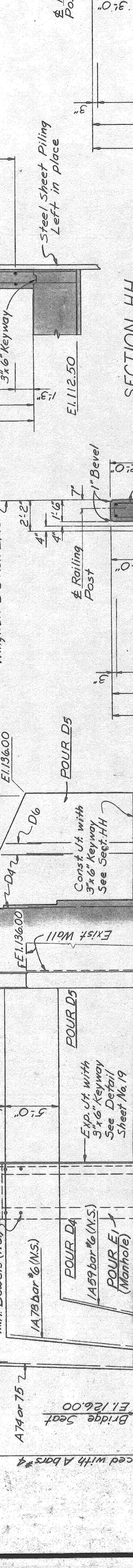
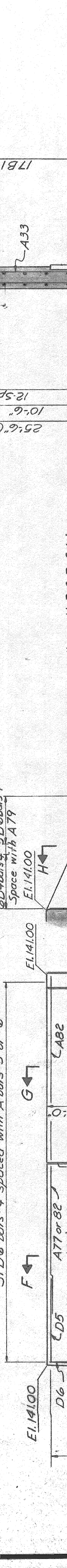
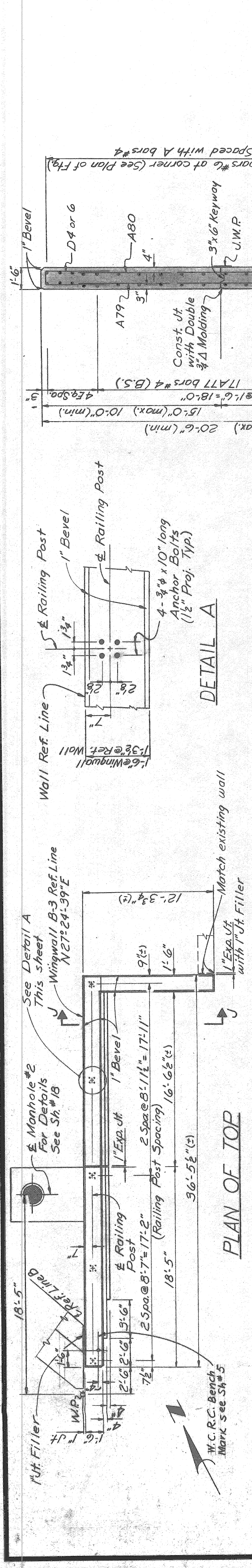
NO. 9-67
DRAWN BY: *[Signature]*
CHECKED BY: *[Signature]*
DATE: 12-2-66

X03 of 82124A

MISCELLANEOUS	QUANTITIES		
ITEM	UNIT	AMOUNT	TOTAL
Special Manhole Frame & Cover	Each	2	4
Steel Sheet Piling Left in Place	Sq. ft.	896	1406
Protective Sealant Coating for Conc.	Sq. ft.	211	419
Low Temp. Protection Substruct.	Cu. Yds.	1402	2325
1" Joint Filler	Sq. ft.	501	968
Joint Waterproofing	Sq. ft.	258	496
Non-Metallic Waterstop	Sq. ft.	193	335
8" Foundation Drain	Lin. ft.	256	574
Ladder Rungs	Each	26	50
3" Fiber Conduit	Lin. ft.	—	26
12" Cast Iron Pipe	Lin. Ft.	20	43

Note: 8" Cast Iron pipe is incidental to 8" Foundation Drain.

For Bridge Railing Quantities & Details See Sht #33



PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
 STRUCTURAL ENGINEER

JOB No. PW 95001

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFERIES FREEWAY IN DETROIT

ABUTMENT B DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
 STRUCTURAL ENGINEER

JOB No. PW 95001

Work this sheet with sheet nos. 16 thru 24.

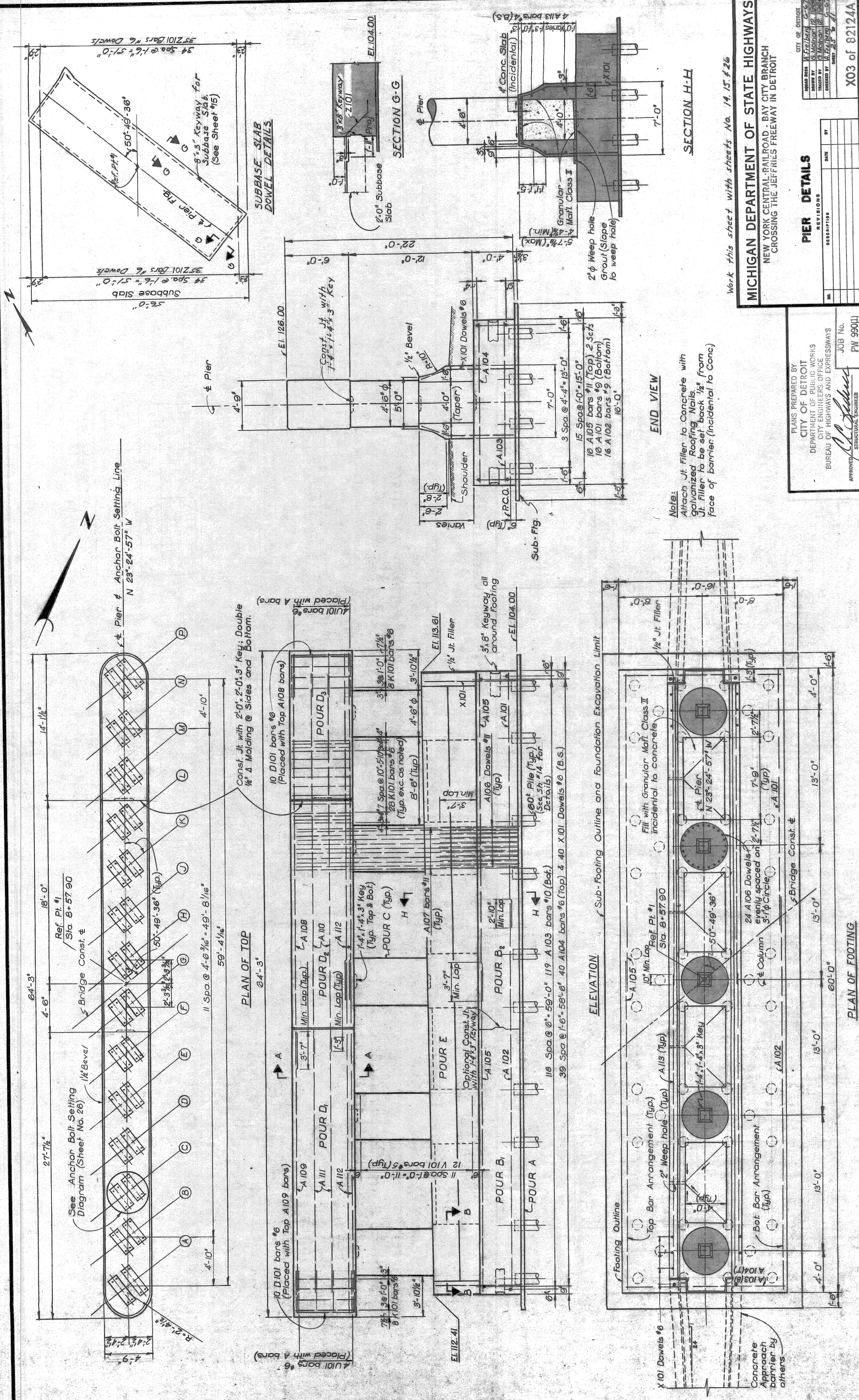
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFERIES FREEWAY IN DETROIT

ABUTMENT B DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

X03 of 82124A



END VIEW

Note: Attach Jt. Filler to Concrete with galvanized Roofing Nails. Jt. Filler to be set back 1/2" from face of barrier (Incidental to Conc.)

SECTION G-G

SECTION H-H

Work this sheet with sheets No. 14, 15, & 26

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL-RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

PIER DETAILS

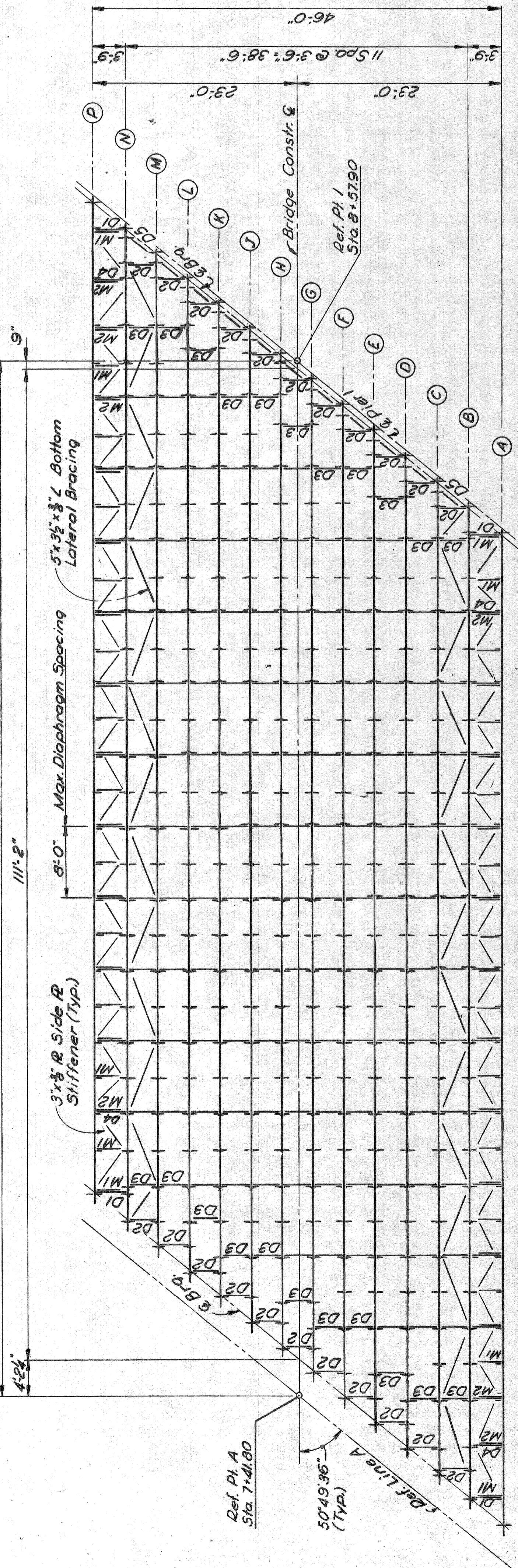
NO.	REVISIONS	DATE	BY

PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

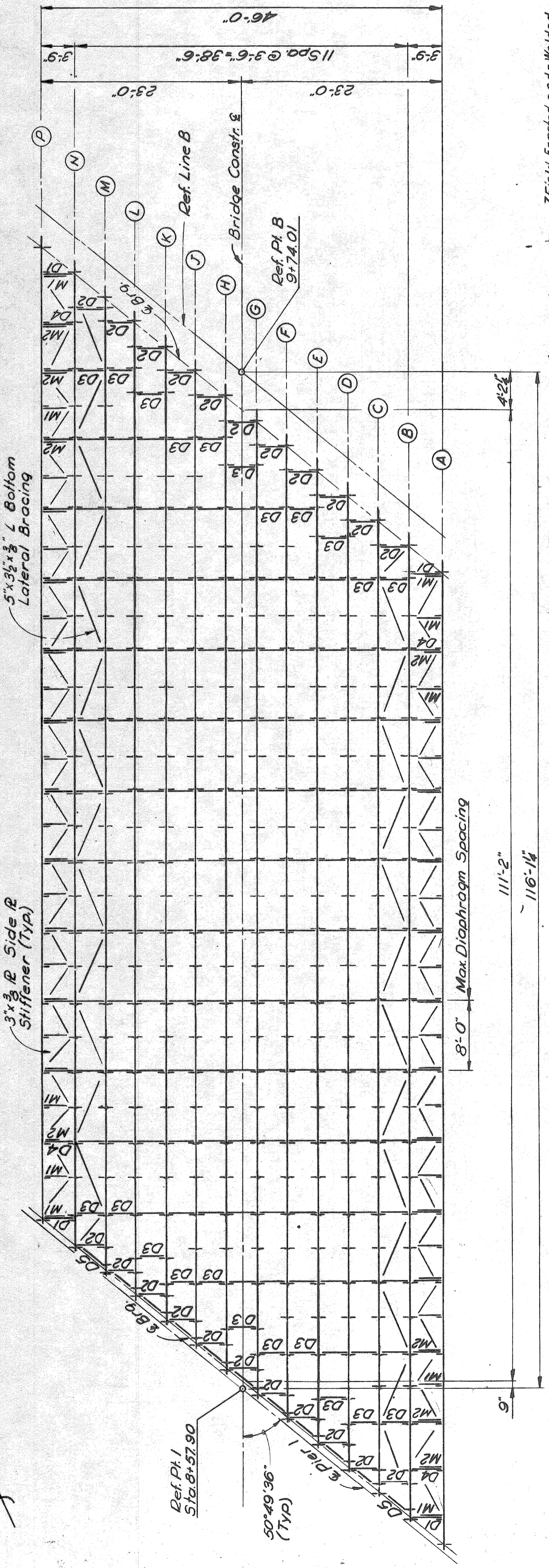
APPROVED: *[Signature]*
 STRUCTURAL ENGINEER

JOB No. PW 990(1)

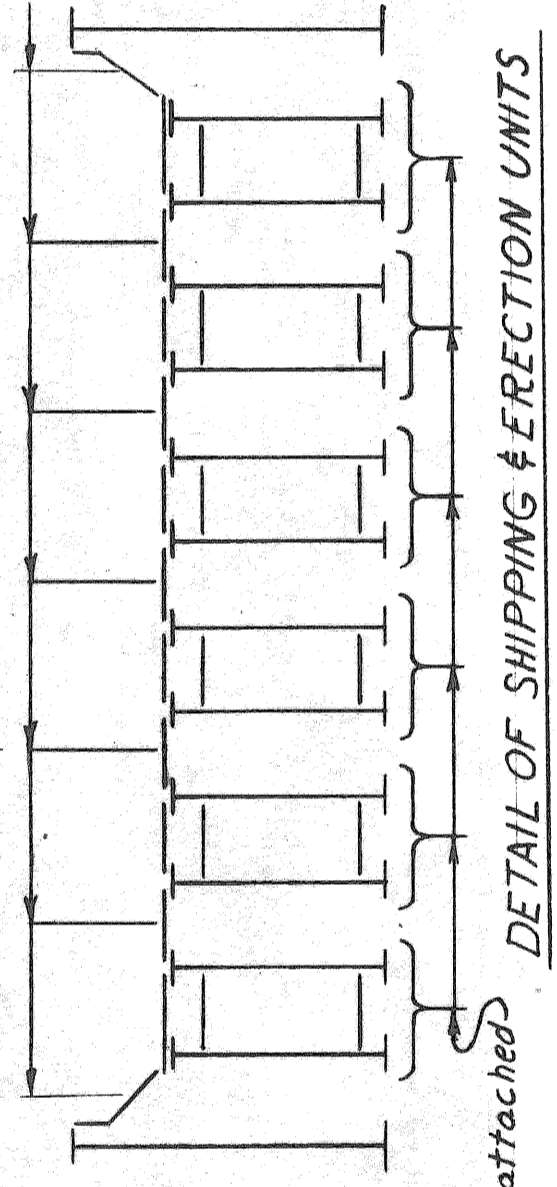
CITY OF DETROIT
 CHIEF ENGINEER: [Signature]
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: [Signature]
 SHEET NO. 14
X03 of 82124A



SPAN 1
Notes: Max. Interior Stiffener Spacing = 6'-0"



SPAN 2
ERECTION PLAN



GENERAL NOTES

DESIGN IS IN ACCORDANCE WITH CURRENT AREA SPECIFICATIONS FOR STEEL RAILWAY BRIDGES.
LOADING IS COOPER'S E-72 PLUS DIESEL IMPACT PLUS 20% OF LIVE LOAD.
FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE CURRENT AREA SPECIFICATIONS FOR STEEL RAILWAY BRIDGES. GIRDER BOTTOM FLANGE PLATES SHALL BE PERPENDICULAR TO WEB PLATES AT BEARINGS, WITH A MAXIMUM TOLERANCE OF ± 0.03 INCHES.
ALL STEEL SHALL BE ASTM A36 EXCEPT THAT STEEL IN ANCHOR BOLTS MAY BE ASTM A307, AND STEEL CASTINGS SHALL BE IN ACCORDANCE WITH CURRENT AREA SPECIFICATIONS.
SHOP CONNECTIONS, UNLESS OTHERWISE SHOWN, SHALL BE WELDED OR BOLTED WITH HIGH-STRENGTH BOLTS.
FIELD CONNECTIONS, UNLESS OTHERWISE SHOWN SHALL BE BOLTED WITH HIGH-STRENGTH BOLTS.
HIGH-STRENGTH BOLTS SHALL BE 7/8" Ø, A325 WITH ONE CASE-HARDENED WASHER.
NUTS FOR HIGH-STRENGTH BOLTS SHALL BE REAMED TO 15/16" Ø IN ACCORDANCE WITH AREA SPECIFICATIONS, AND SUBJECT TO THE FOLLOWING PROVISIONS:
SHOP BOLT HOLES IN END STIFFENERS, BENT PLATES, AND INTERMEDIATE STIFFENERS CONNECTED TO DIAPHRAGMS SHALL BE SUBPUNCHED OR SUBDRILLED 13/16" Ø AND REAMED TO SIZE WITH THE MEMBERS ASSEMBLED. FIELD-BOLT HOLES IN DIAPHRAGMS AND STIFFENERS SHALL BE SUBPUNCHED OR SUBDRILLED 11/16" Ø AND REAMED TO SIZE IN THE SHOP THROUGH A TEMPLATE.
WELDING SHALL BE IN ACCORDANCE WITH CURRENT AREA SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES, AAS D 2.0-86 AND CURRENT AREA SPECIFICATIONS FOR WELDED STEEL BRIDGES. ALL WELDS CONNECTING FLANGE PLATES TO WEB PLATES SHALL BE MADE BY AUTOMATIC SUBMERGED-ARC WELDING.
WELDING ON TENSION FLANGES OF GIRDERS WILL NOT BE PERMITTED UNLESS SUCH WELDING IS SHOWN ON THE PLANS OR SPECIFIED. WELDING AT OTHER LOCATIONS ON THE GIRDERS, EXCEPT WHERE SHOWN ON THE PLANS, MAY BE PERMITTED BY WRITTEN AUTHORIZATION PROVIDING THE WELDING IS TO BE PERFORMED IN STRICT ACCORDANCE WITH ALL SPECIFICATION REQUIREMENTS FOR STRUCTURAL WELDING.
FLANGE PLATES SHALL BE UNIVERSAL-MILLED. MILL SCALE SHALL BE GROUND OFF FLANGE PLATES AT FLANGE-TO-WEB WELD. ALL GRINDING SHALL BE DONE IN THE DIRECTION OF THE APPLIED STRESSES. TRANSVERSE TRACK WELDS WILL NOT BE PERMITTED.
ALL SPlice WELDS IN FLANGE PLATES AND WEBS SHALL BE RADIOGRAPHED. FLANGE SPlice WELDS ARE PROHIBITED EXCEPT AT LOCATIONS SHOWN ON THE DRAWINGS.
ONE FOOT OF EVERY TWO FEET OF FLANGE-TO-WEB WELD AND END STIFFENER-TO-WEB WELD SHALL BE SUBJECT TO MAGNETIC PARTICLE INSPECTION.
THE GIRDERS SHALL NOT BE CAMBERED.
PAINTING SHALL BE IN ACCORDANCE WITH THE MSD STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1967 EDITION. IN ADDITION, THE TOP SURFACES OF MASONRY PLATES AND THE CURVED BEARING SURFACES OF ROGERS AND PEDESTALS SHALL BE COATED IN ACCORDANCE WITH THE PROVISIONS FOR MACHINE-FINISHED SURFACES. FINISH COAT OF FIELD PAINT FOR STRUCTURAL STEEL IS TO BE GREY-GREEN (SEE SUPPLEMENTAL SPECIFICATIONS).

QUANTITIES
Structural Steel-Furnishing & Fabricating - 2,166,000 Lbs.
NOTE: The quantity Structural Steel-Furnishing & Fabricating includes:
Steel - A 36 - 2,164,200 Lbs.
Lead # - 1,800 Lbs.
Structural Steel-Erection - 2,166,000 Lbs.
Field Painting - LUMP SUM

* The quantity "Lead" includes bearing lead and deck plate flashings.

Work this sheet with sheets 28 thru 31

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD, BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

STRUCTURAL STEEL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

APPROVED: *[Signature]* STRUCTURE ENGINEER
JOB No. PW 990(1)

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]* STRUCTURE ENGINEER
JOB No. PW 990(1)

CITY OF DETROIT

DESIGNED BY	5/24/64	9/57
DRAWN BY	T. BAKER	10-66
CHECKED BY	5/24/64	9/57
DATE	27	of 41

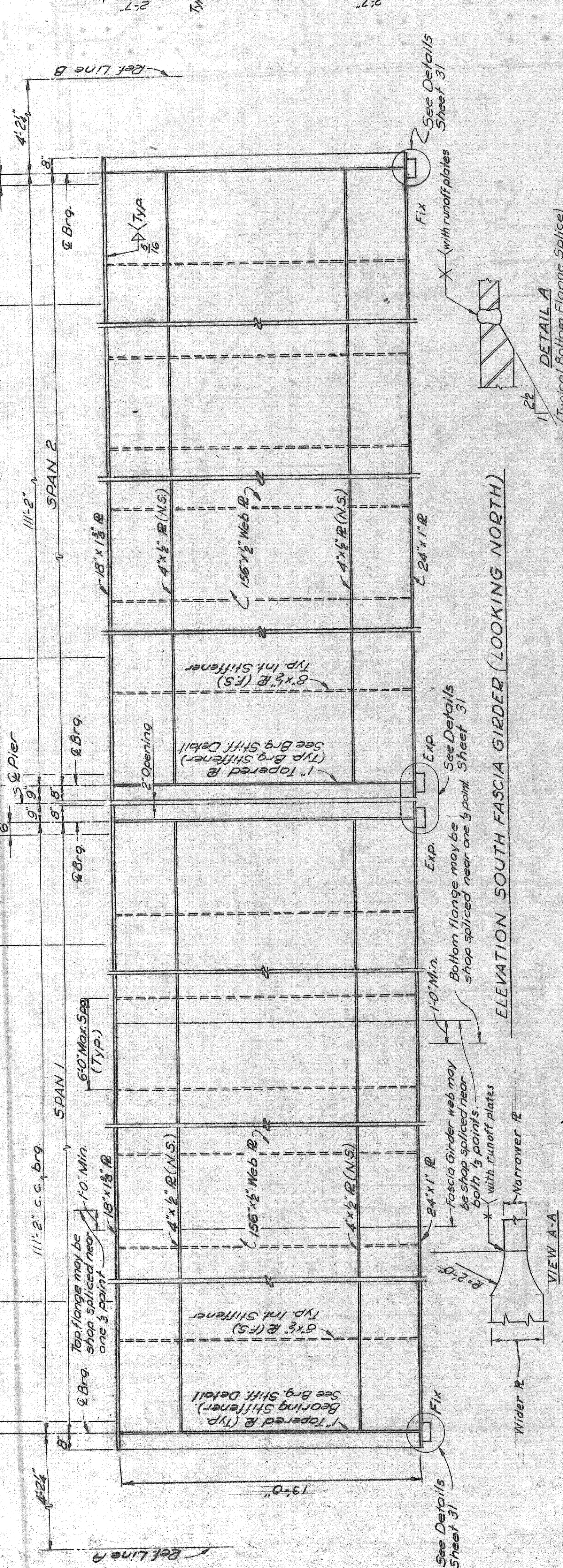
X03 of 82124A

c.to c. Railing Post Spc. See Sheet 33

12 Spc. @ 8'-0" = 96'-0"

12 Spc. @ 8'-0" = 96'-0"

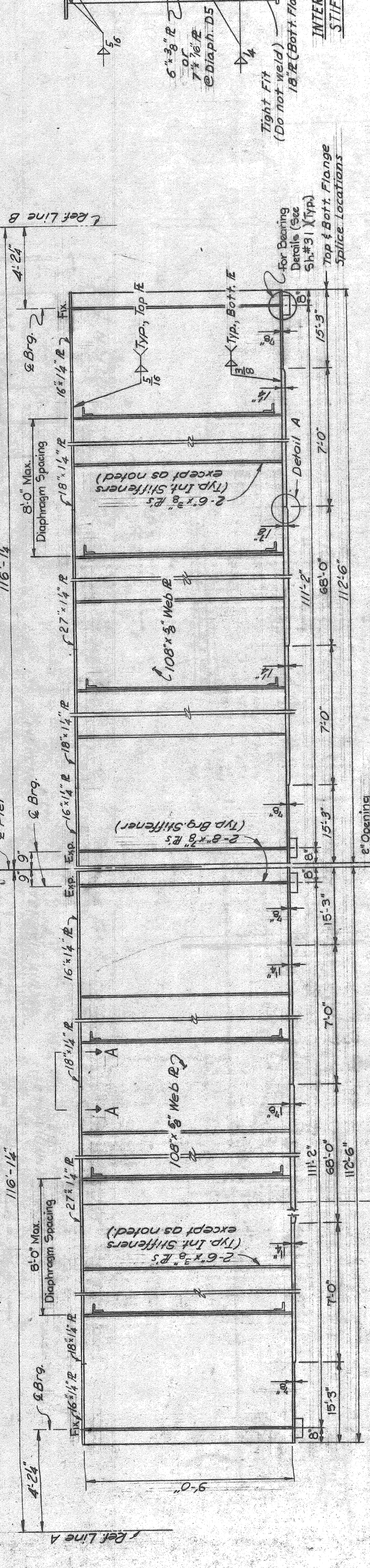
7'-1"



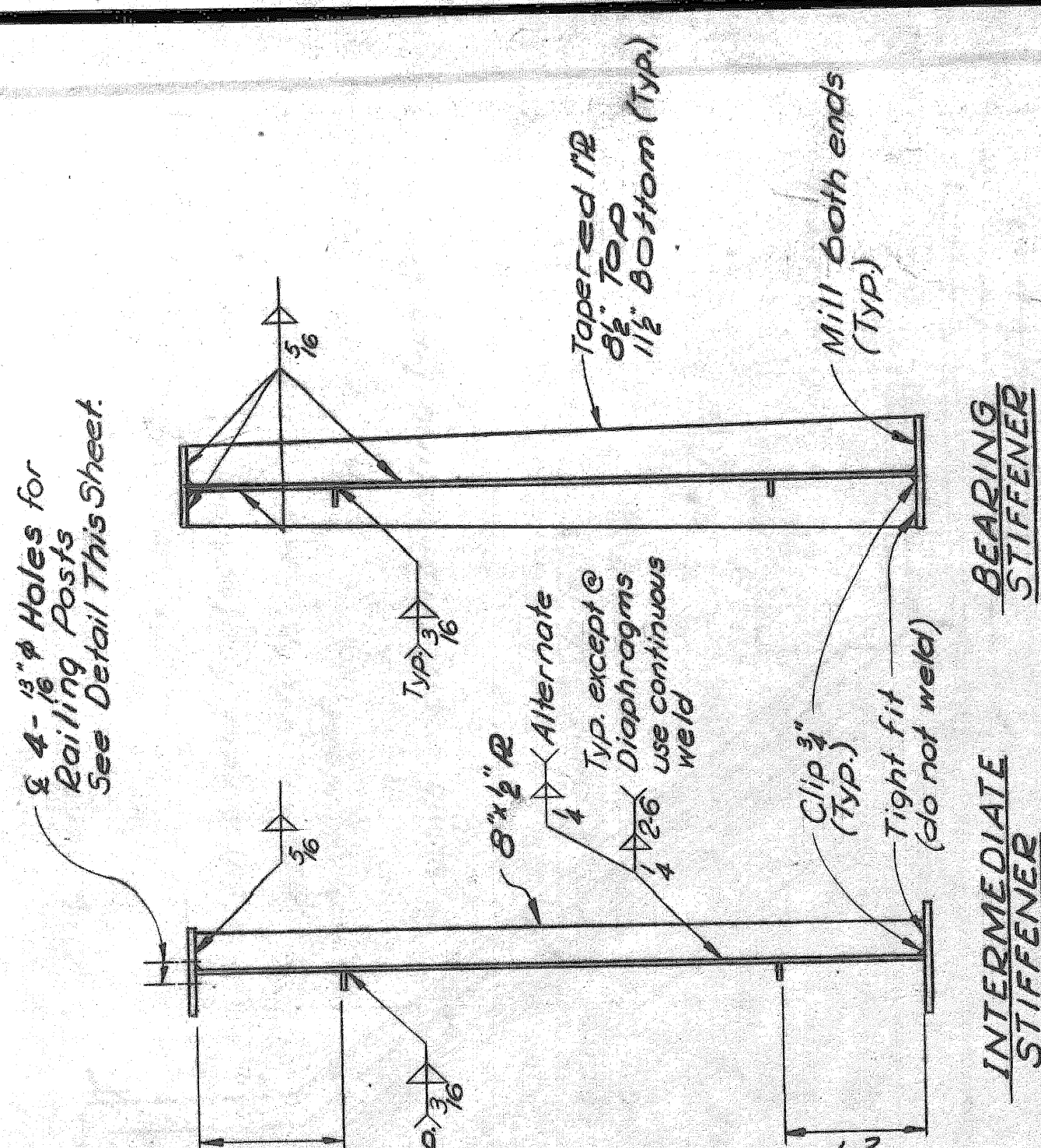
ELEVATION SOUTH FASCIA GIRDER (LOOKING NORTH)

VIEW A-A (Typical Top Flange Splice)

DETAIL A (Typical Bottom Flange Splice)



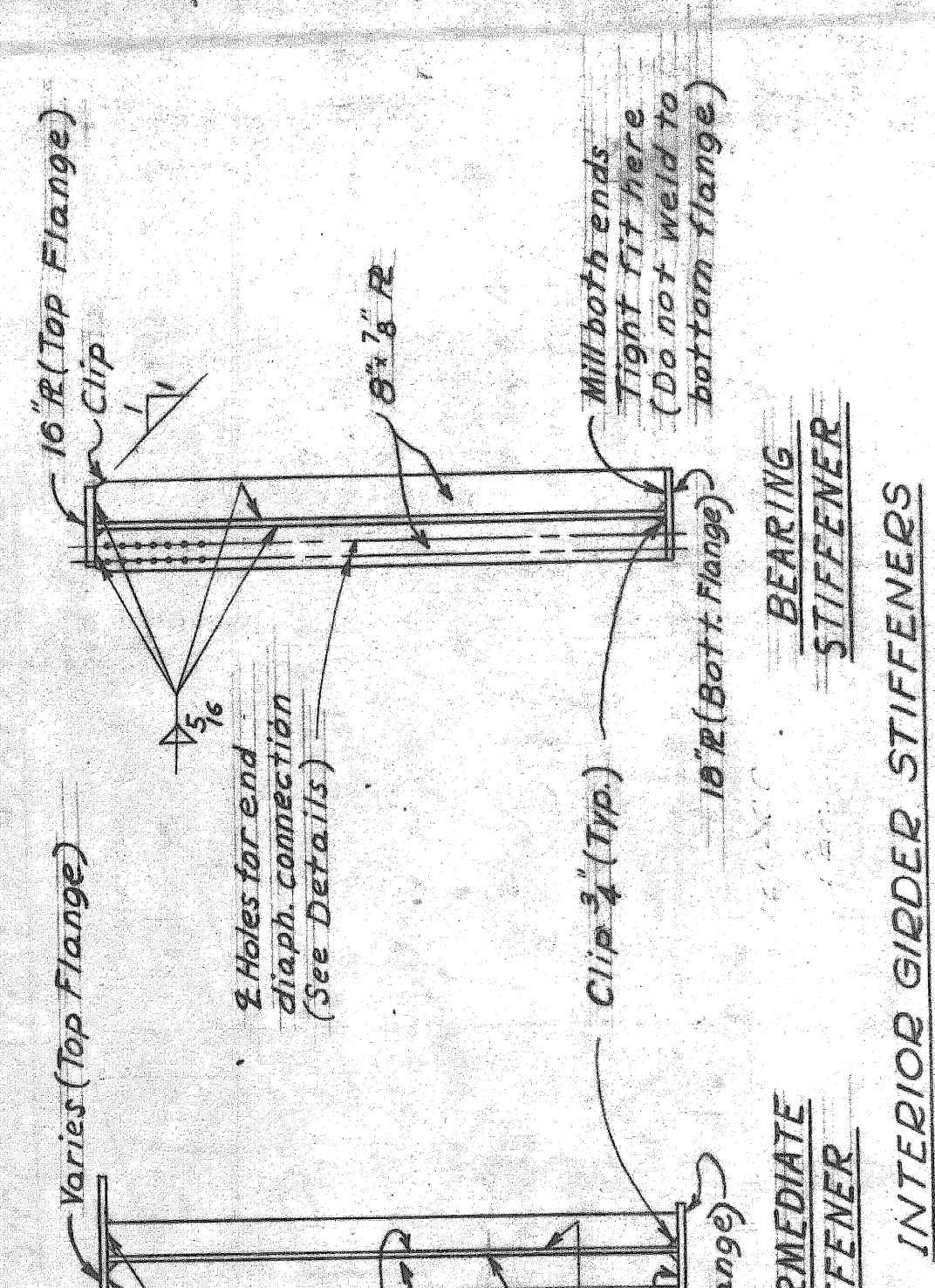
ELEVATION OF INTERIOR GIRDERS



INTERMEDIATE STIFFENER BEARING STIFFENER

NOTE: Cut intermediate stiffeners to loose fit, push tightly against tension flange, weld to web, weld to compression flange. Ends of bearing stiffeners to be milled or ground to even bearing on flange.

FASCIA GIRDER STIFFENERS



INTERMEDIATE STIFFENER BEARING STIFFENER

INTERIOR GIRDER STIFFENERS

NOTE: For location and spacing of stiffeners and diaphragms see Erection Plan. For Sole plate and Bearing Details see Sheet 31. For Diaphragm Details see Sheet 29. Clip top flange parallel to pier & for all interior girders.

Work This Sheet with Sheets 27, 29, 30 & 31

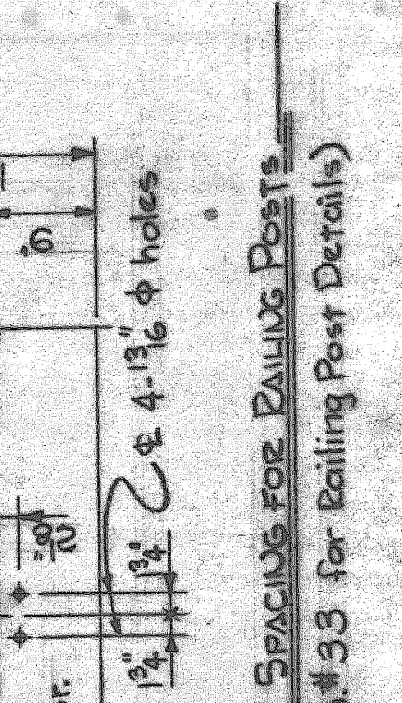
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFERIES FREEWAY IN DETROIT

STRUCTURAL STEEL DETAILS

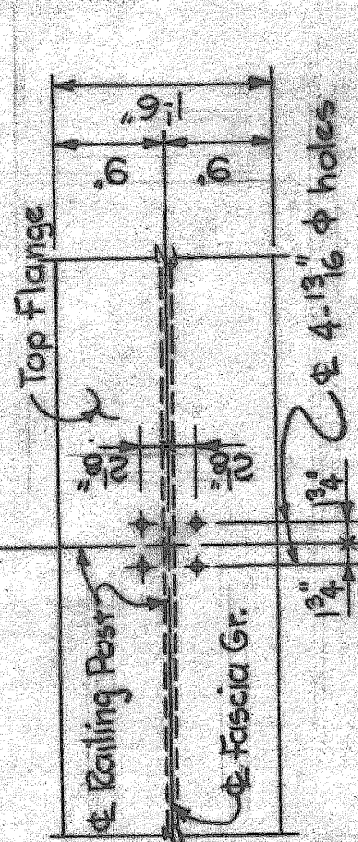
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
JOB No. PIW 9900(1)

NO.	REVISIONS	DATE	BY

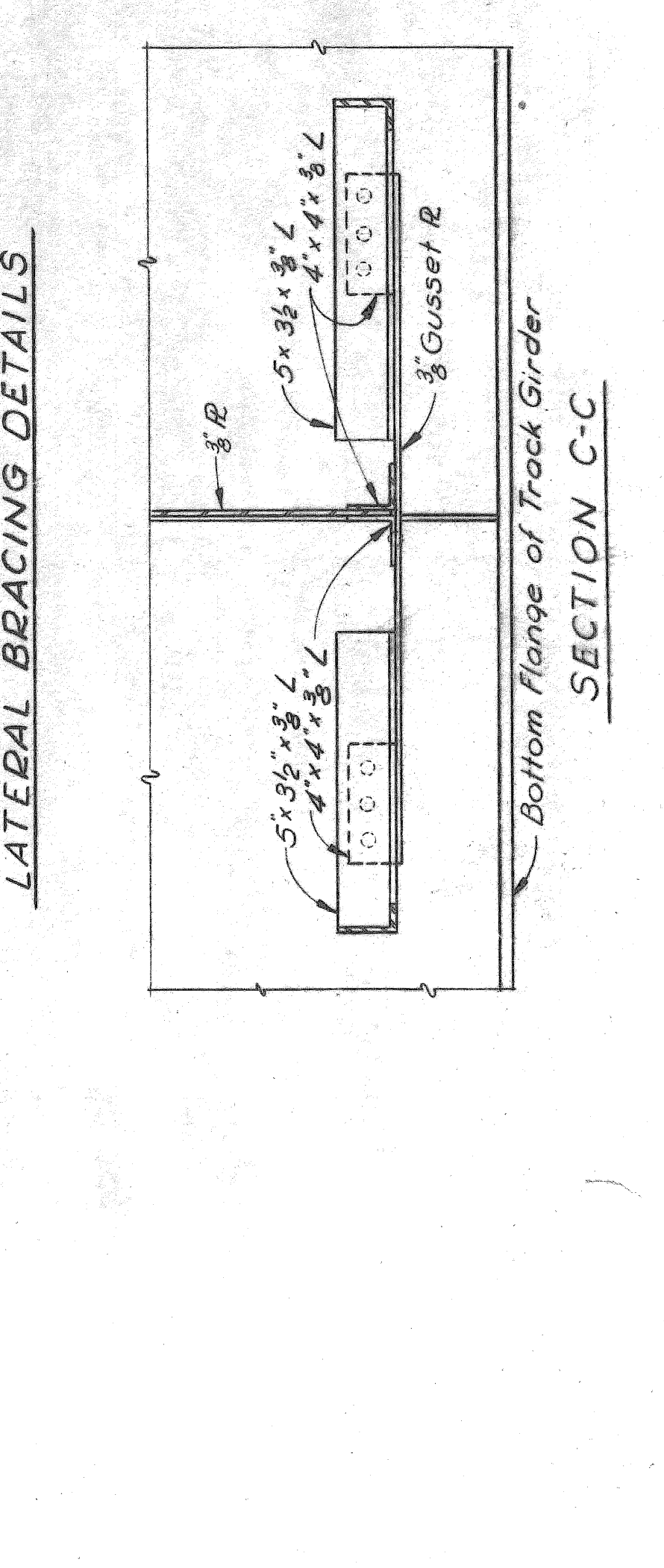
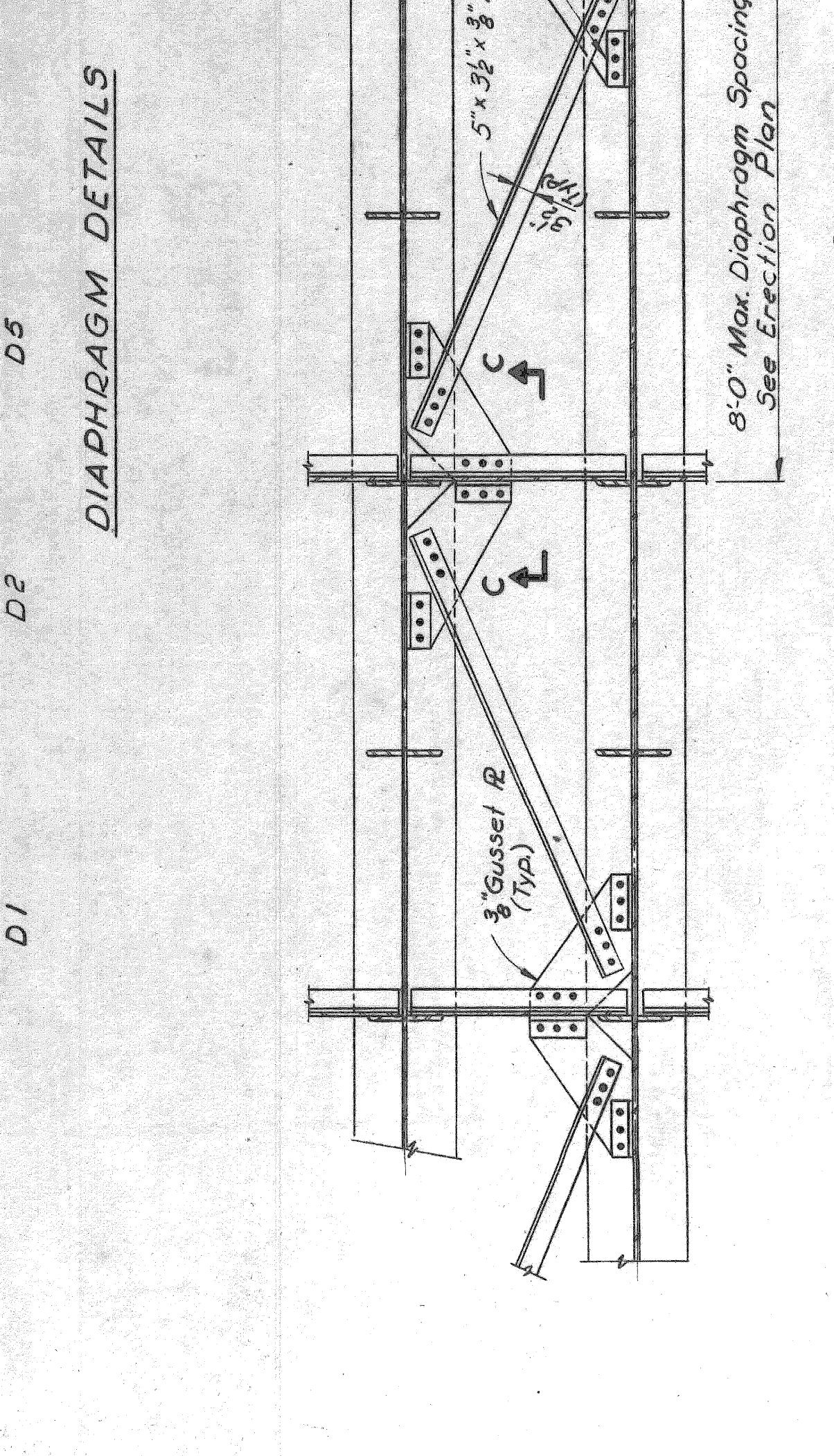
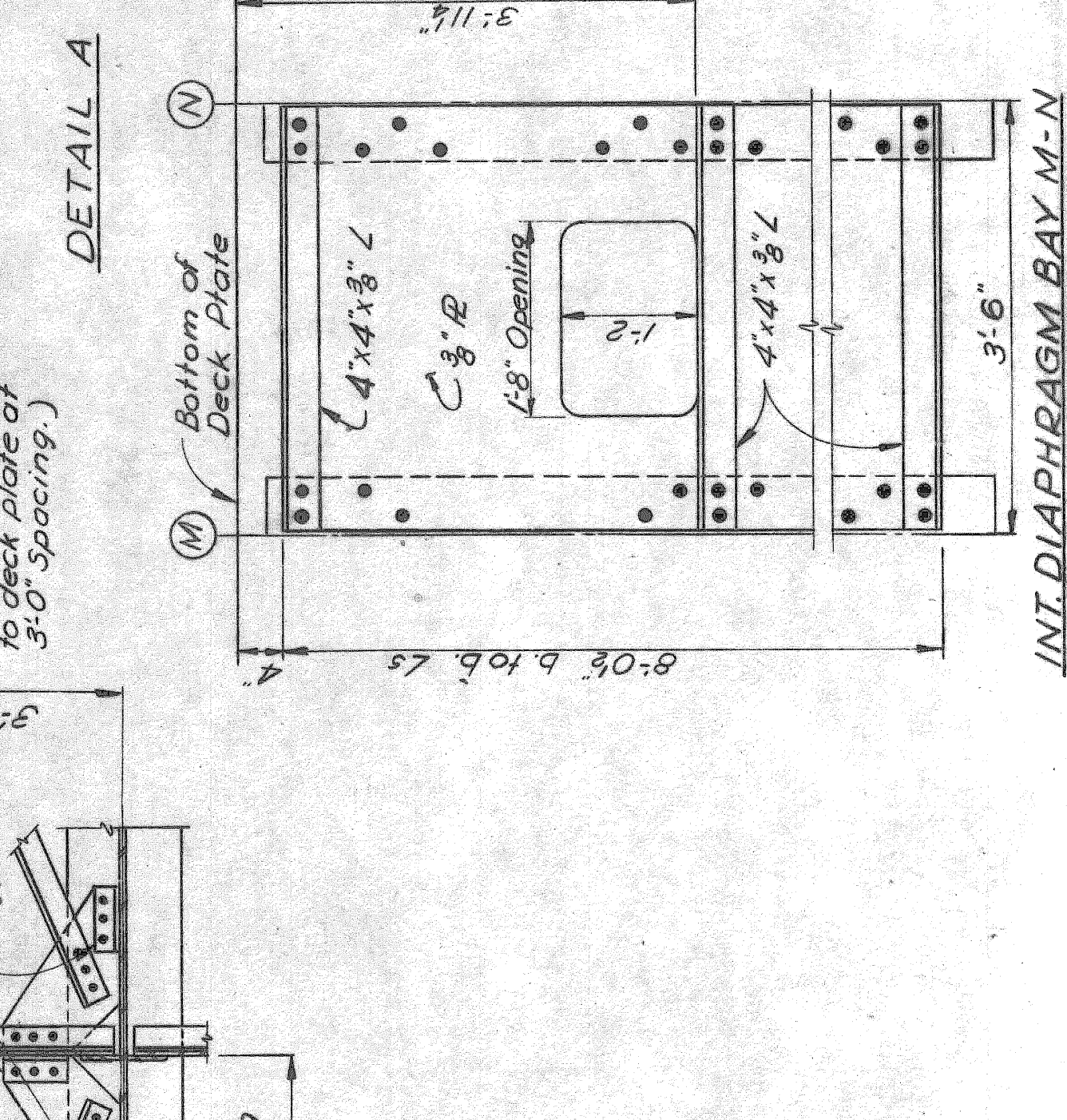
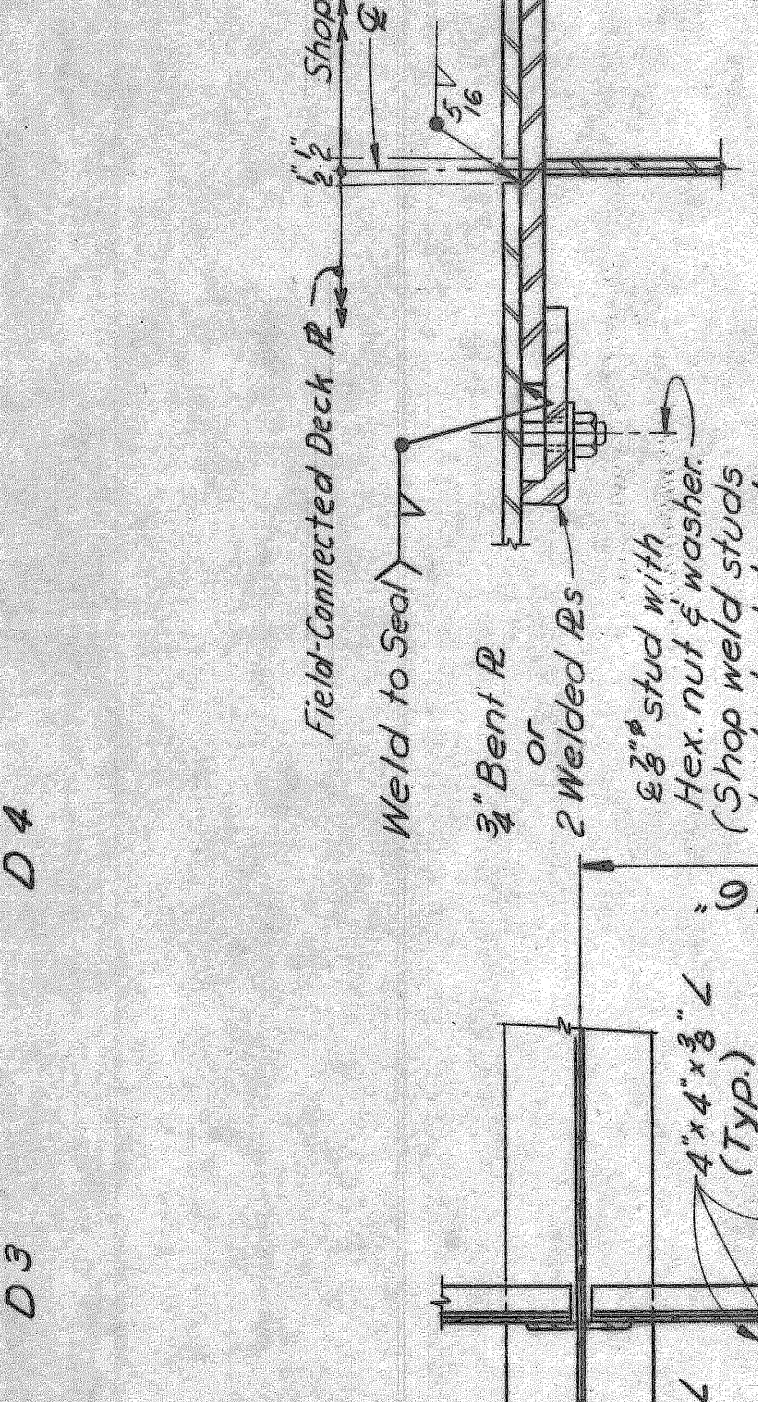
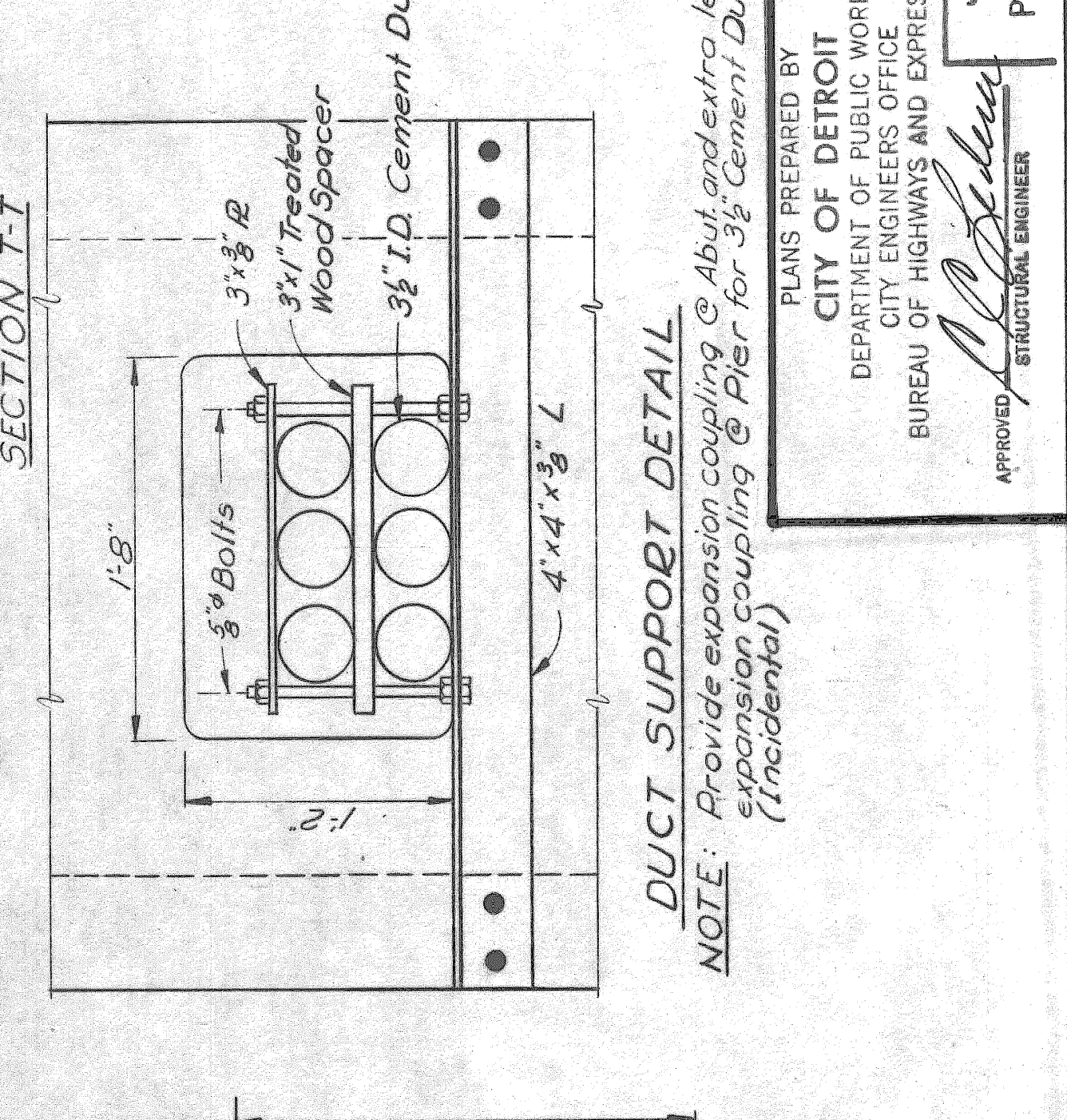
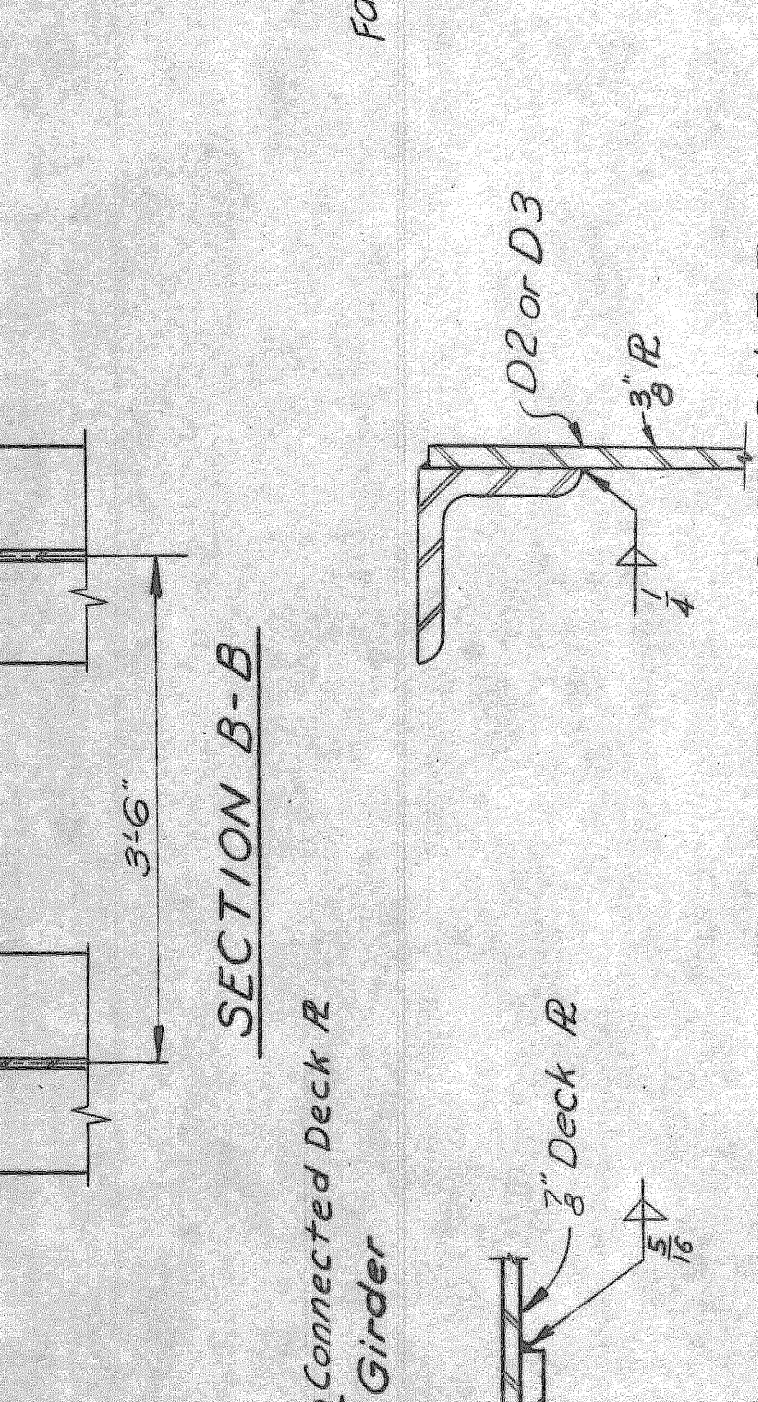
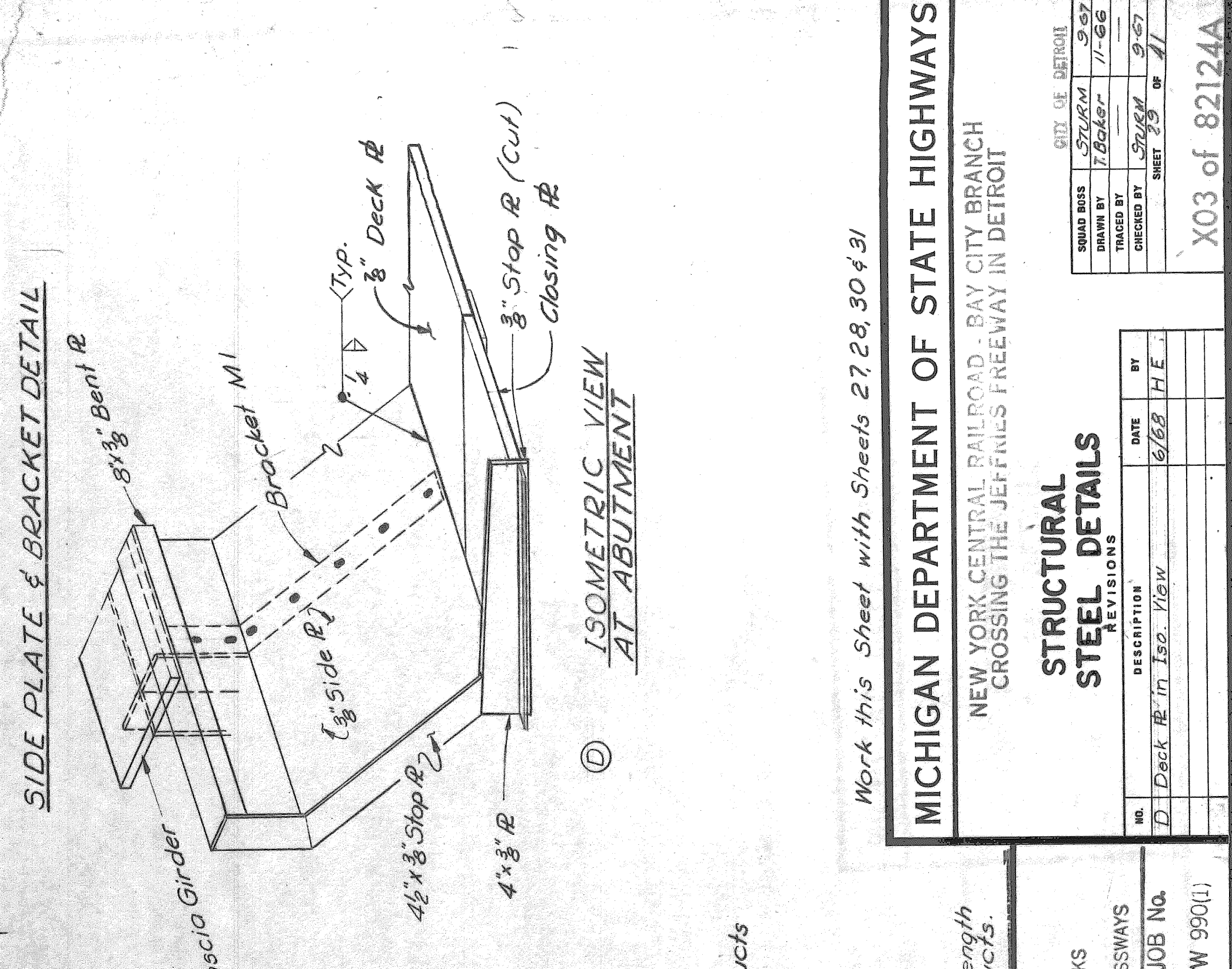
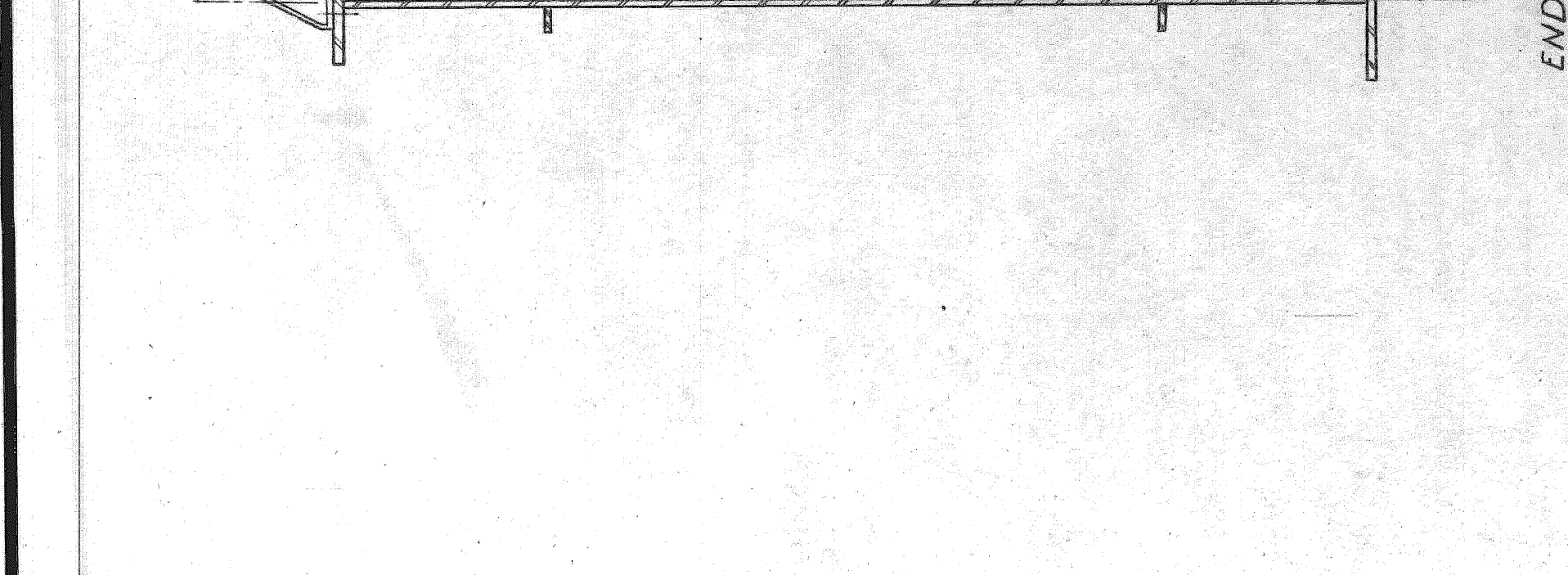
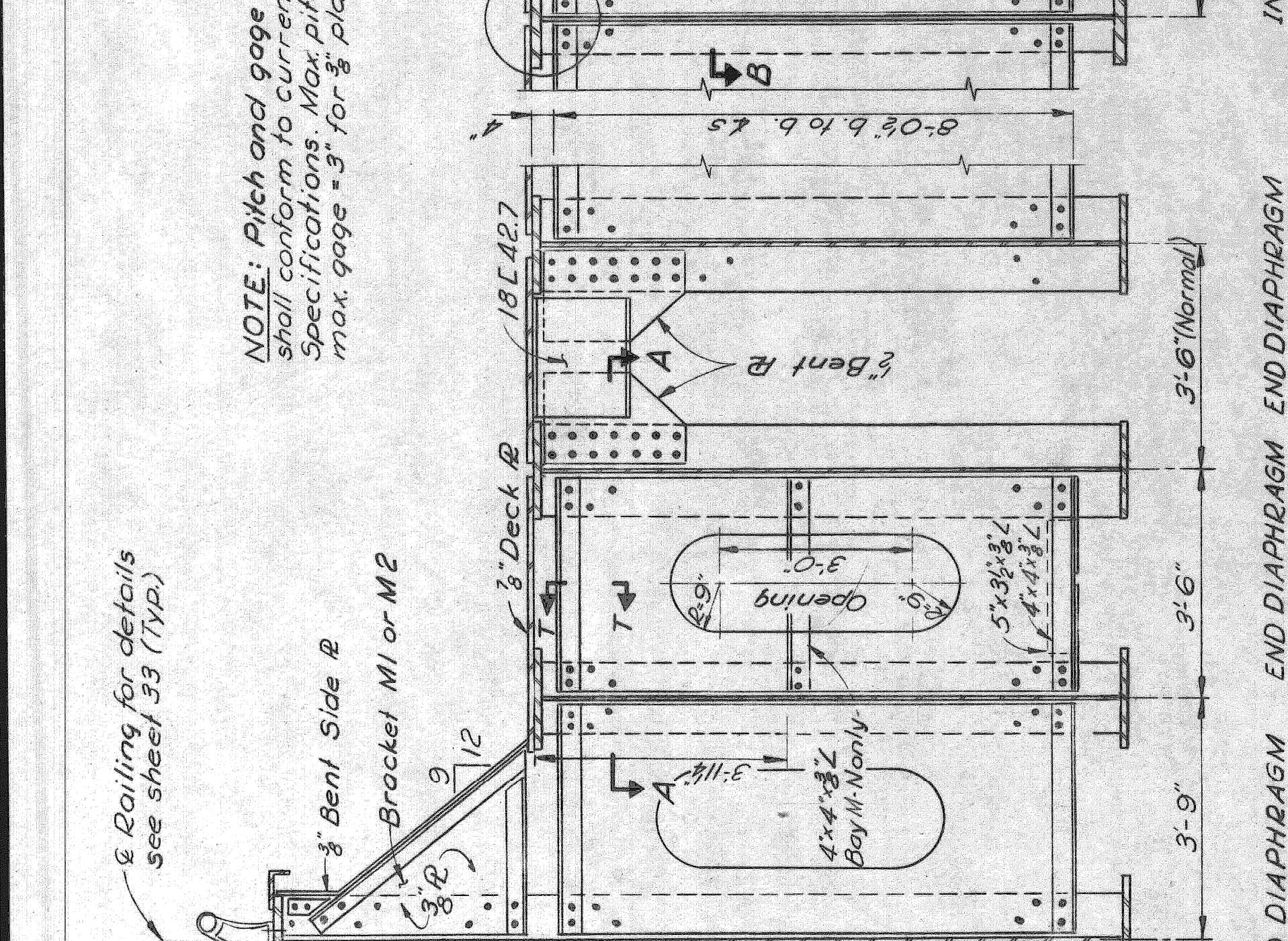
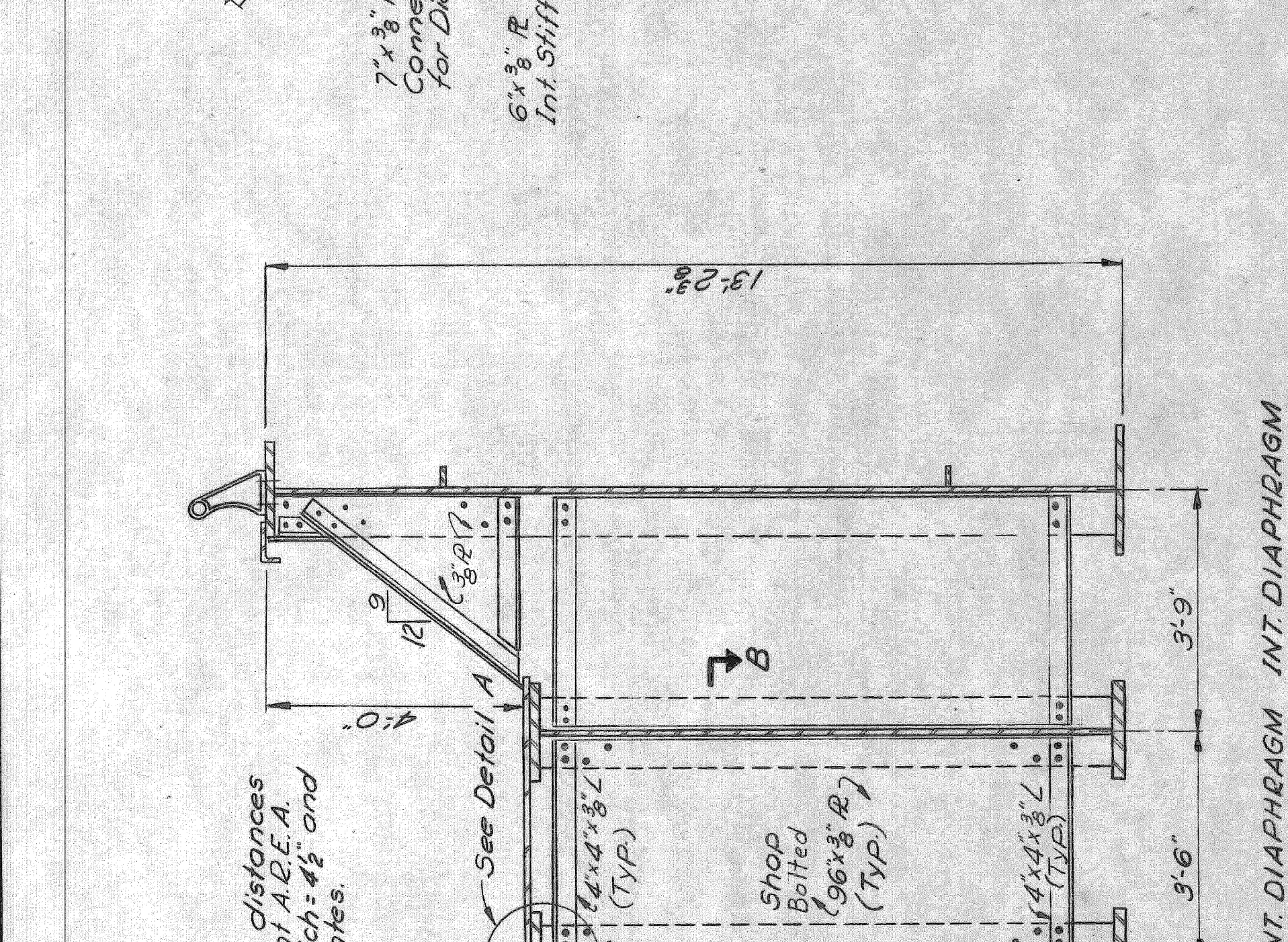
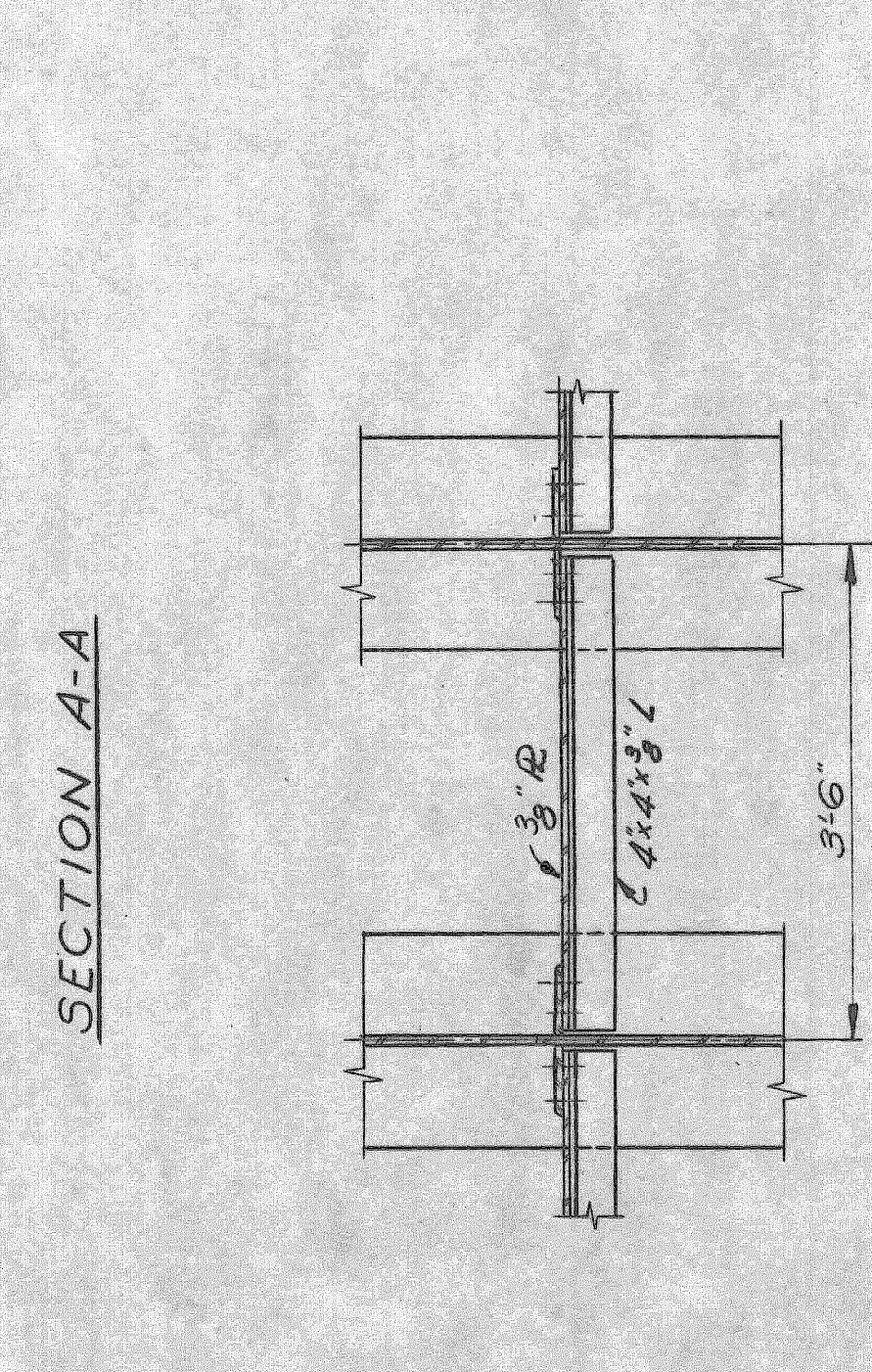
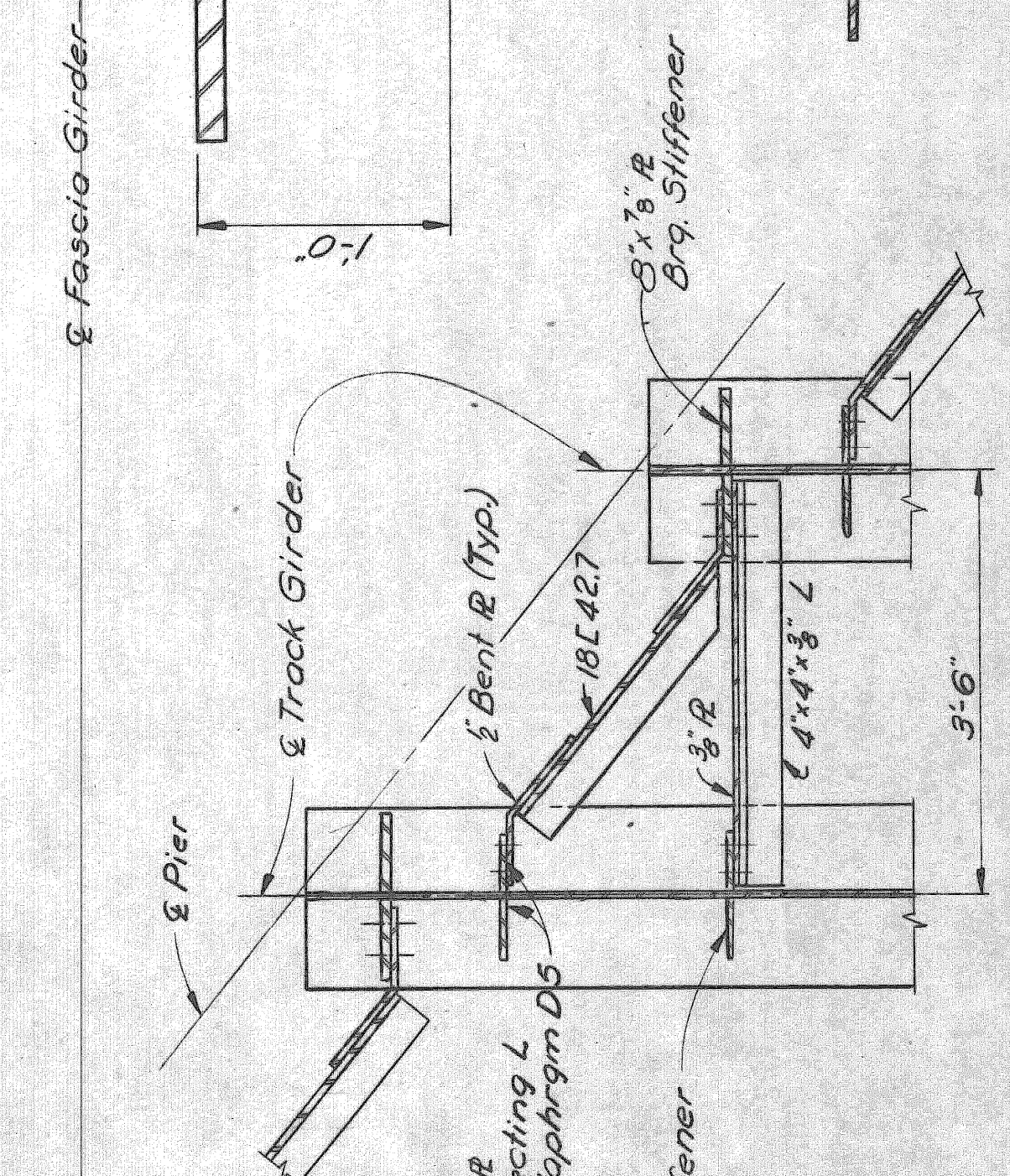
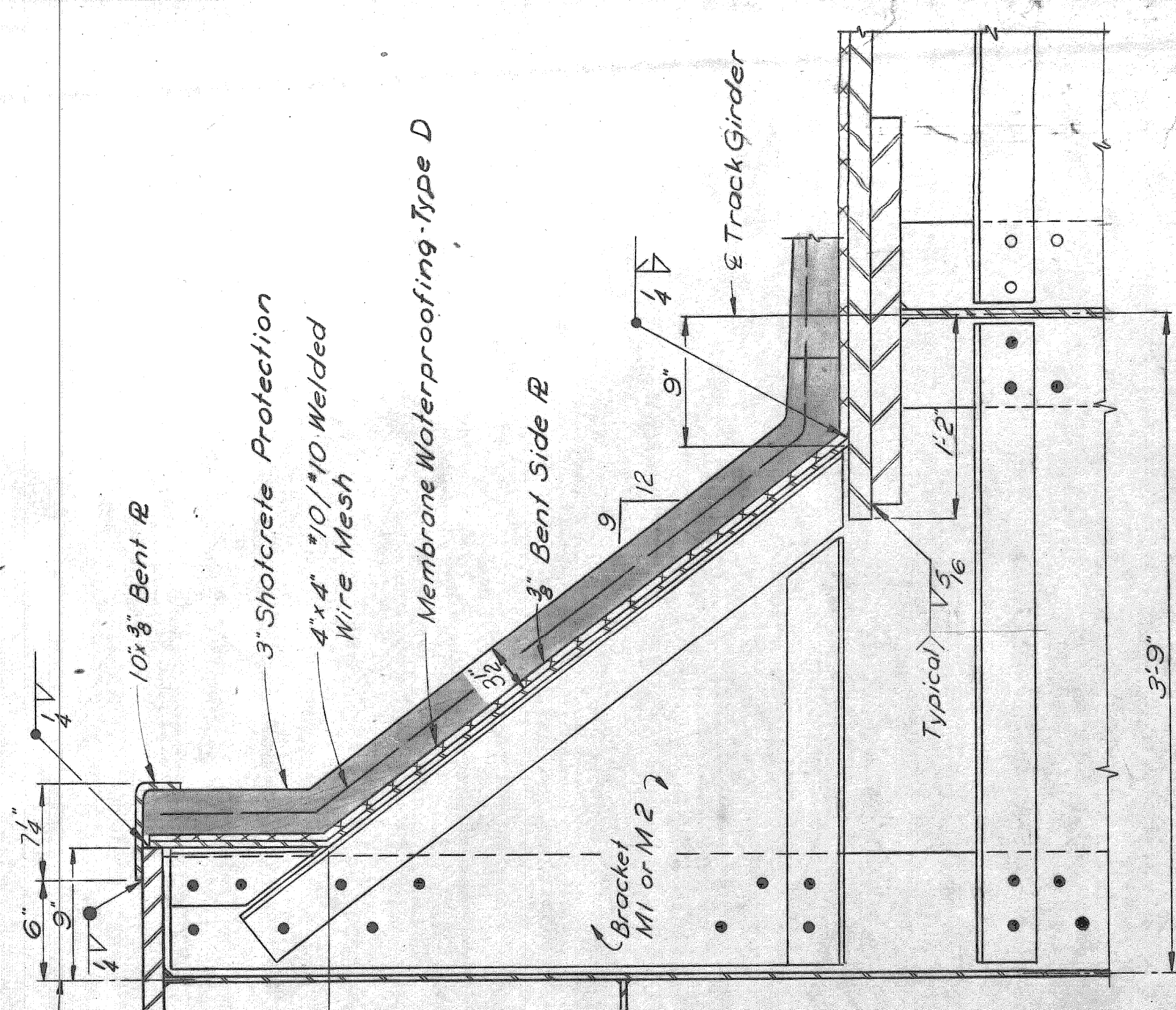


TOP FLANGE DETAIL @ PIER



Bolt Hole Spacing for Railing Posts (See Sheet 33 for Railing Post Details)

CITY OF DETROIT
DRAWN BY: *[Signature]* 9-57
CHECKED BY: *[Signature]* 12-66
DESIGNED BY: *[Signature]* 9-57
SHEET 28 OF 31
X03 of 82121A



NOTE: Pitch and gage distances shall conform to current A.R.E.A. Specifications. Max. pitch = 4 1/2" and max. gage = 3" for 3/8 plates.

Railing for details see sheet 33 (Typ.)

Work this Sheet with Sheets 27, 28, 30 & 31

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

STRUCTURAL STEEL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	D Deck R in Iso. Draw	9/69	H.E.

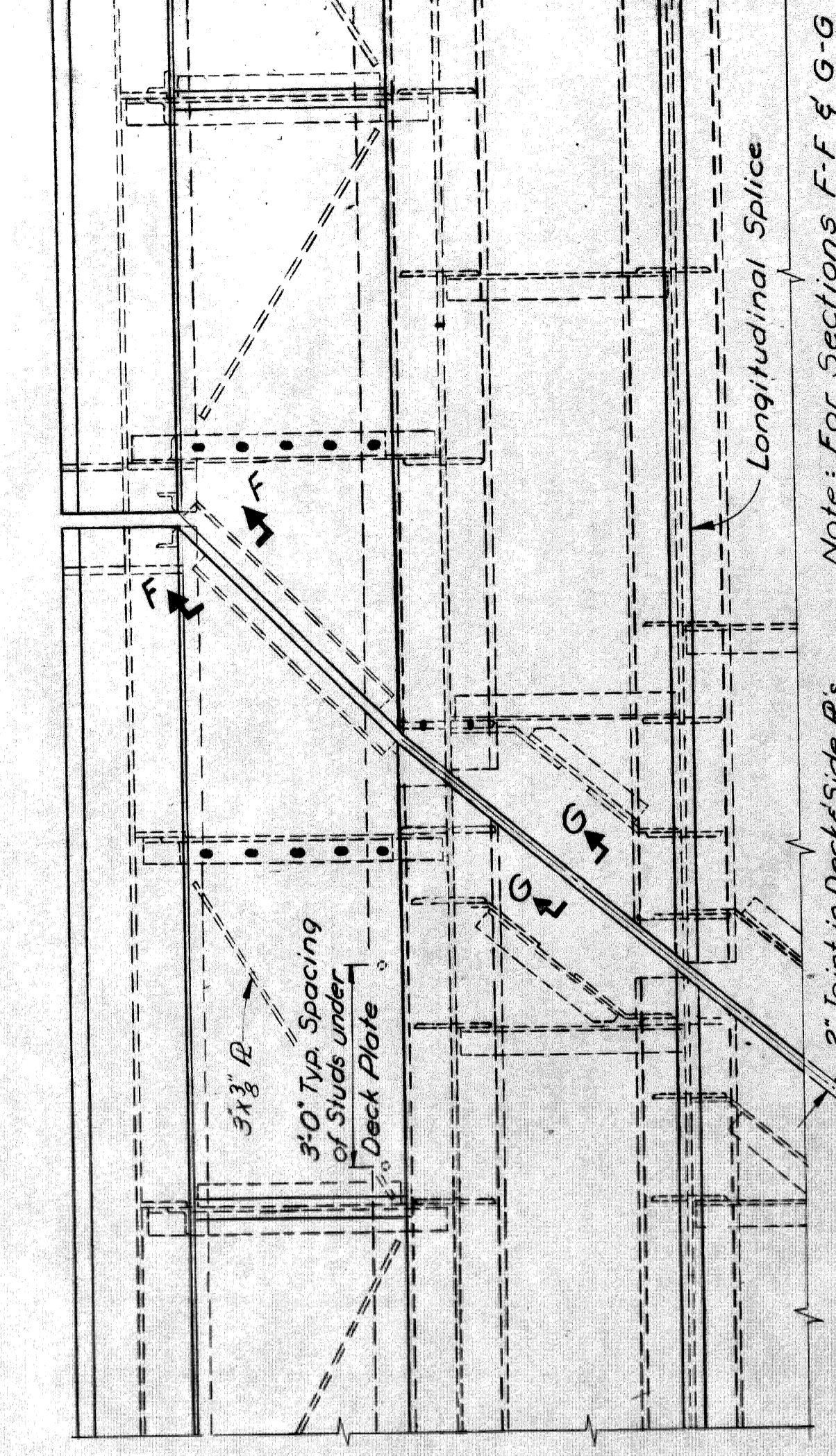
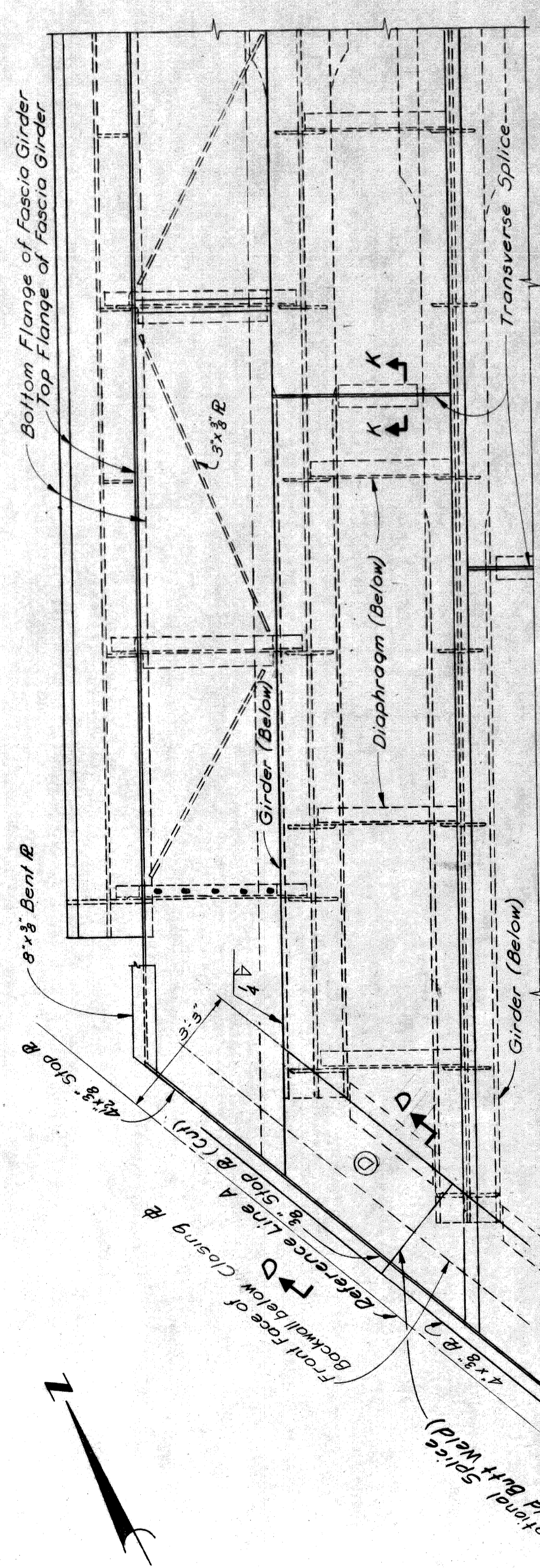
APPROVED: [Signature] STRUCTURAL ENGINEER

JOB No. PW 990(1)

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS AND EXPRESSWAYS

PLANS PREPARED BY: [Signature]

NOTE: Provide expansion coupling @ Abut. and extra length expansion coupling @ Pier for 3/8 Cement Ducts. (Incidental)



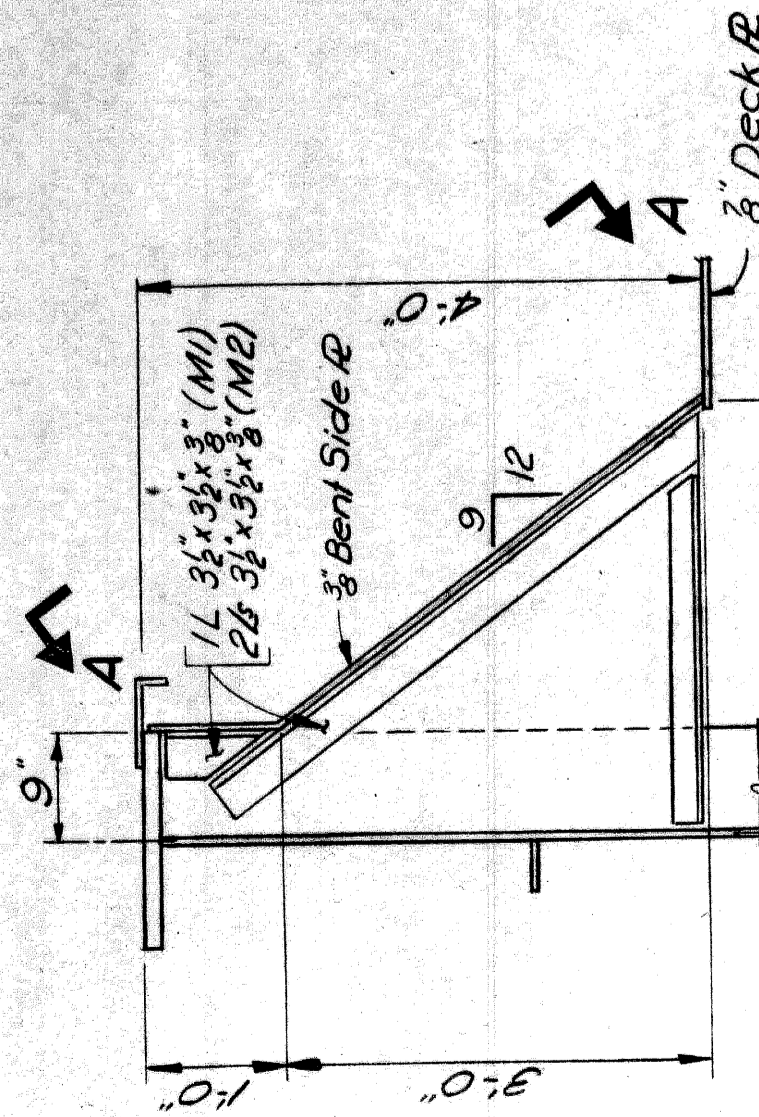
NOTE - Field Erected Deck Plates
Deck plates shall be provided in lengths not to exceed 30'-0".
Plates are to be securely tack-welded in place
prior to making longitudinal welds. Transverse
splices shall not be made until all longitudinal
welding has been completed.

DECK PLATE AT ABUTMENT

PARTIAL DECK PLAN

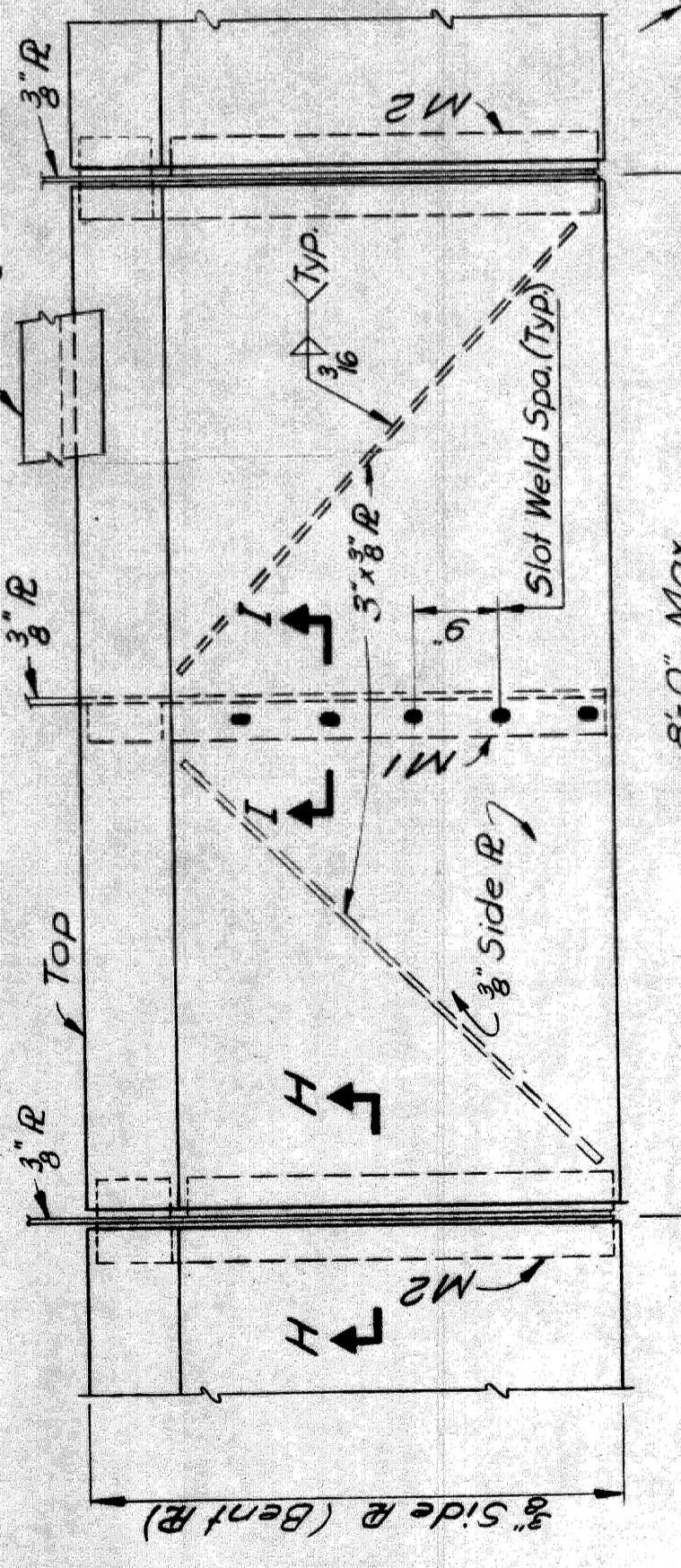
DECK PLATE AT PIER

Note: For Sections F-F & G-G
See Sheet 32



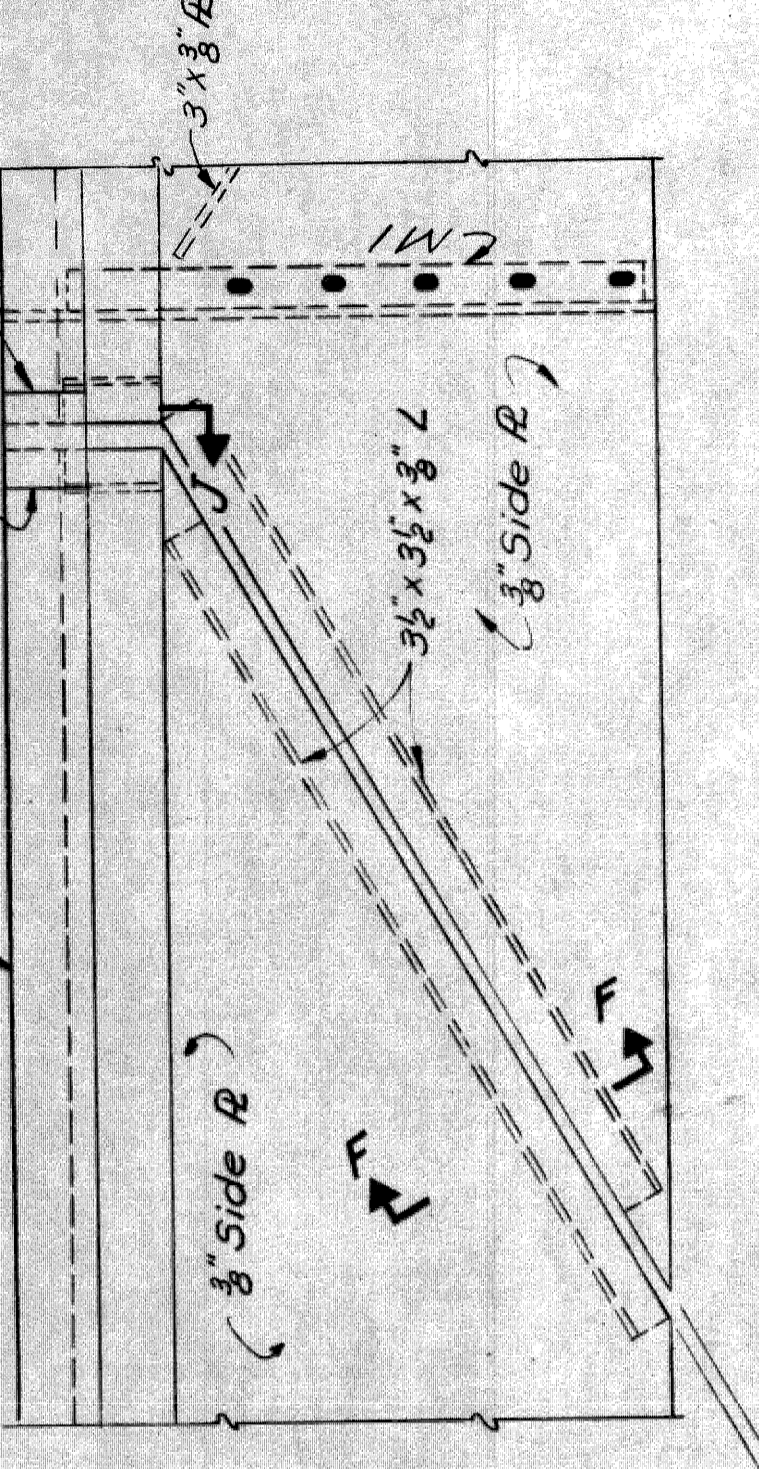
Note: For details not shown see
Side Plate & Bracket Detail Sh. 29

DETAIL OF SIDE PLATE & BRACKETS M1 & M2

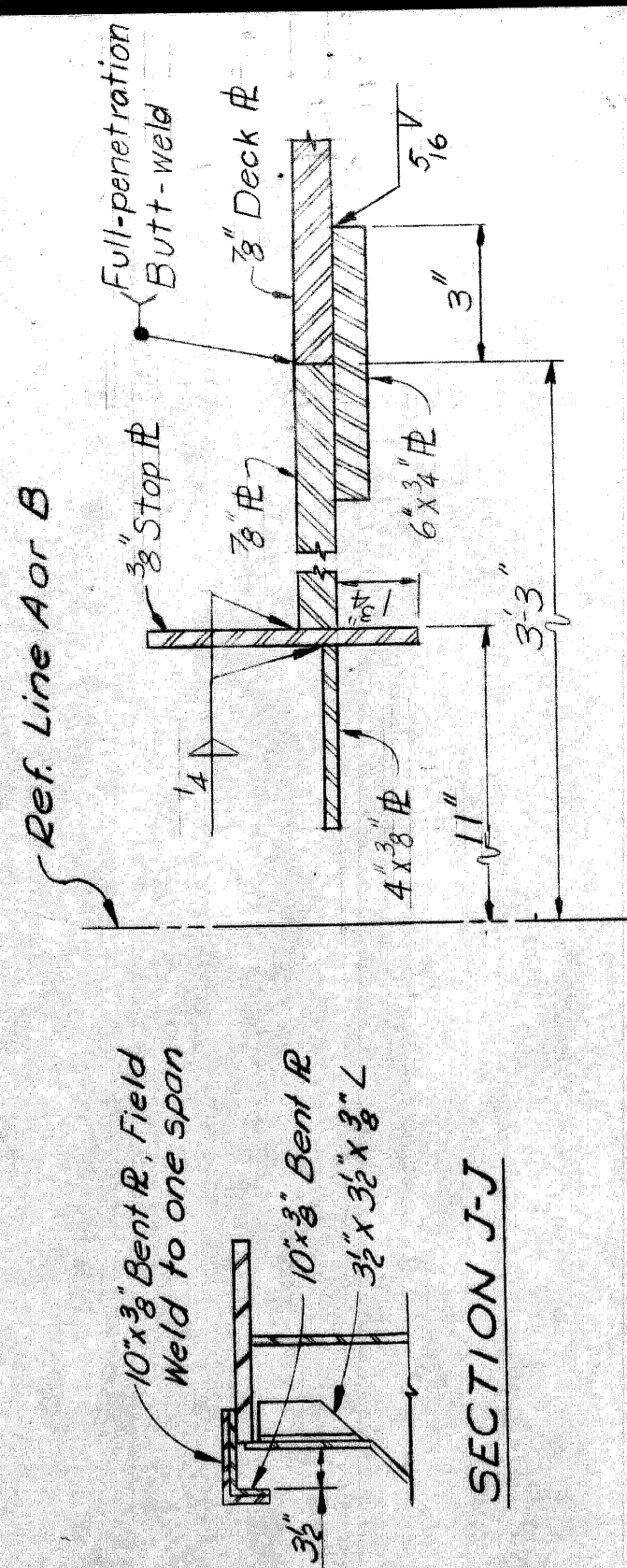


SIDE PLATE INTERIOR PANEL

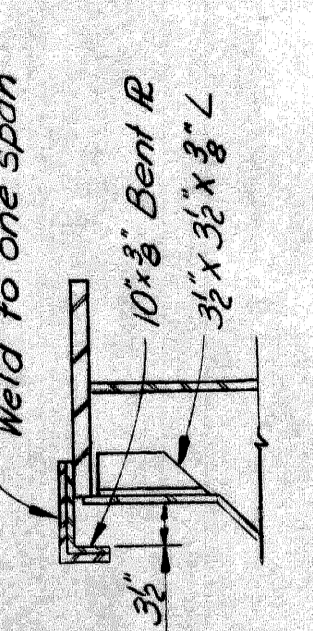
VIEW A-A



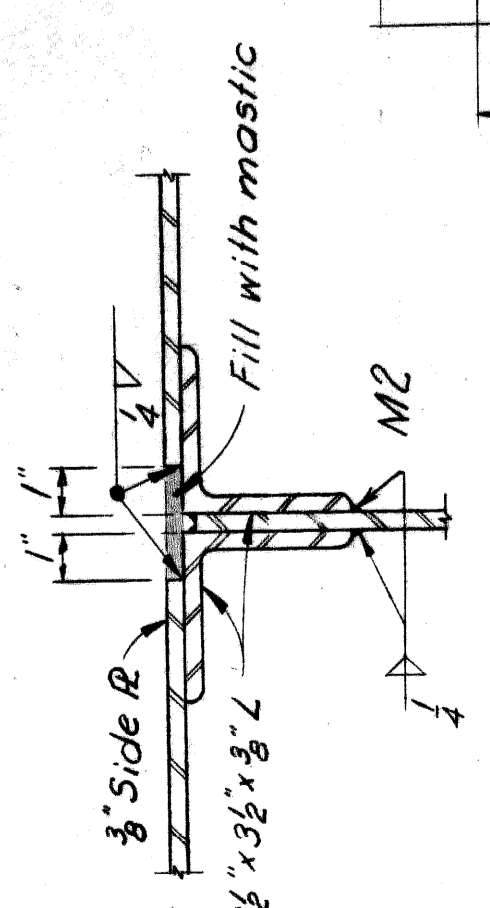
SIDE PLATE PIER PANEL



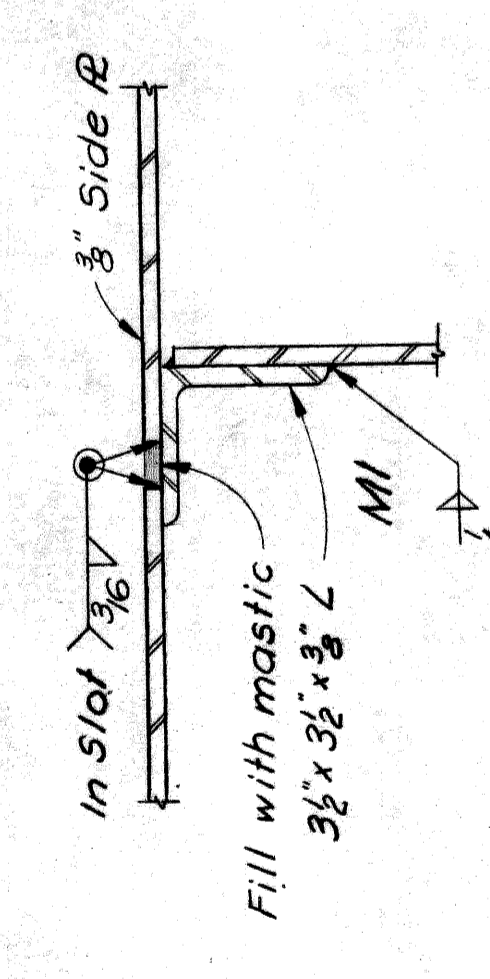
SECTION D-D



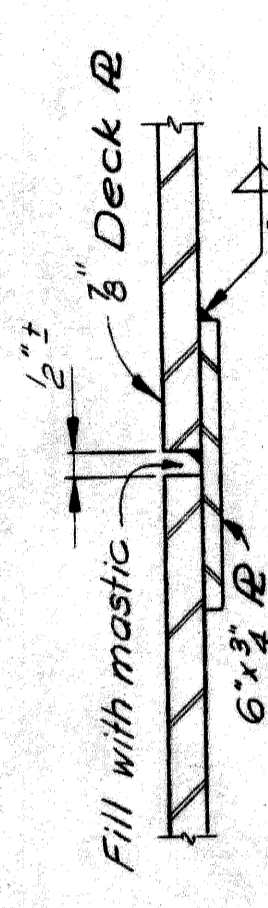
SECTION J-J



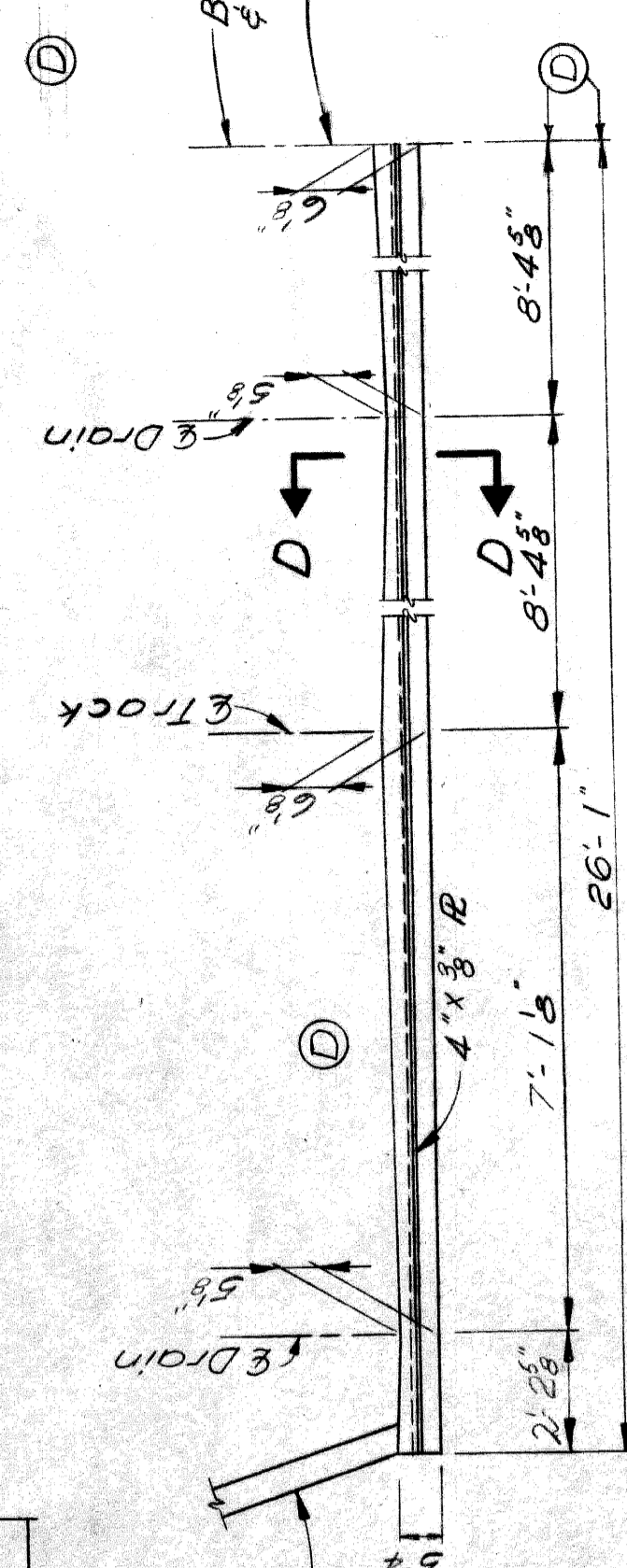
SECTION H-H



SECTION I-I



SECTION K-K



ELEVATION OF STOP R AT ABUTMENT

Work this sheet with sheets 27, 28, 29 & 31

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFERIS FREEWAY IN DETROIT

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

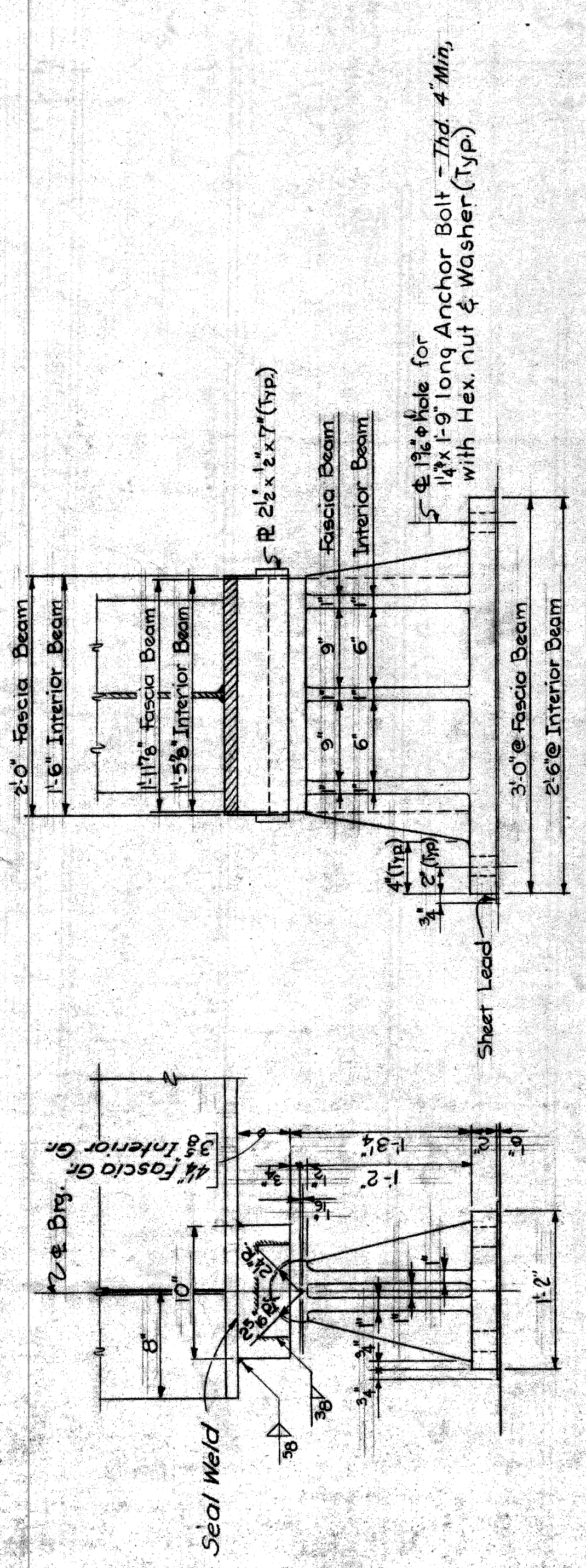
APPROVED: *[Signature]* CIVIL ENGINEER
JOB No. PW 990(1)

STRUCTURAL
STEEL DETAILS

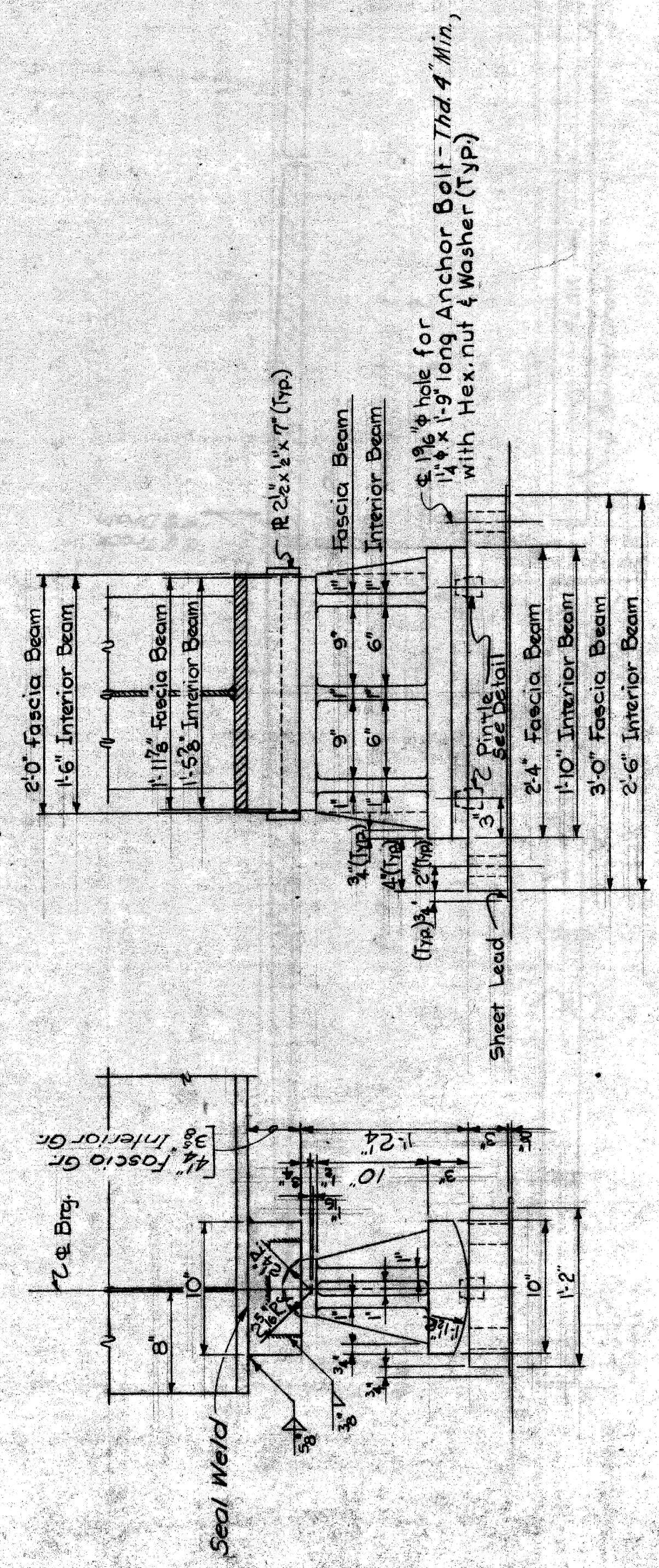
NO.	REVISION	DATE	BY
1	Revised Deck Plate Splice	4/28/48	J.F.E.
2	Section D-D Stop R Elev.	4/28/48	J.F.E.

DATE OF DESIGN: 9-48
DRAWN BY: T. Baker 11-48
CHECKED BY: J. Baker 11-48
SCALE: AS SHOWN

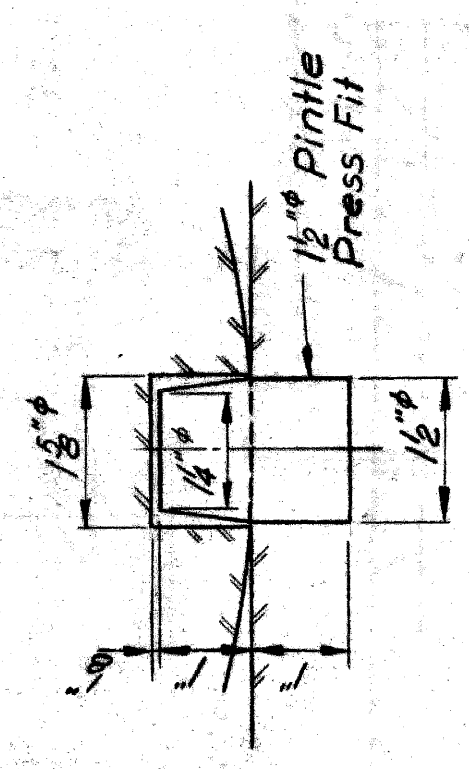
X03 of 82124A



FIXED PEDESTAL



EXPANSION ROCKER



PINTLE DETAIL

5- ϕ 1 1/2" hole for 1 1/2" x 1-9" long Anchor Bolt = Thd. 4 Min. with Hex. nut & Washer (Typ)

5- ϕ 1 1/2" hole for 1 1/2" x 1-9" long Anchor Bolt = Thd. 4 Min. with Hex. nut & Washer (Typ)

NOTES:
 Rockers & Pedestals shall be cast steel.
 All castings shall have inside corners filleted and outside corners rounded.
 Steel castings shall conform to the current AREA Specifications.
 Sheet lead is included in weight of Structural Steel.

Work this sheet with sheets 27 thru 30

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

STRUCTURAL STEEL DETAILS

NO.	REVISIONS	DATE	BY

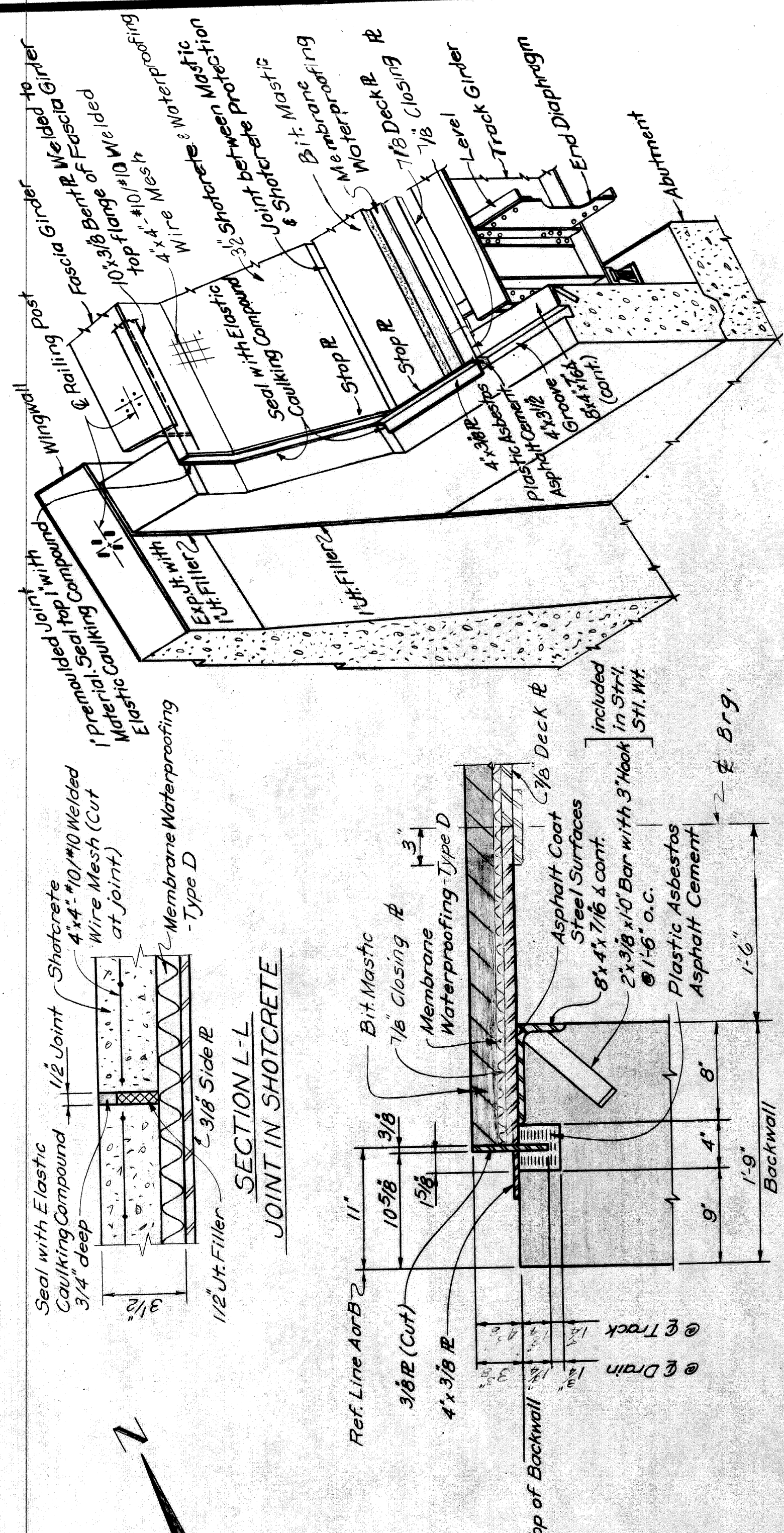
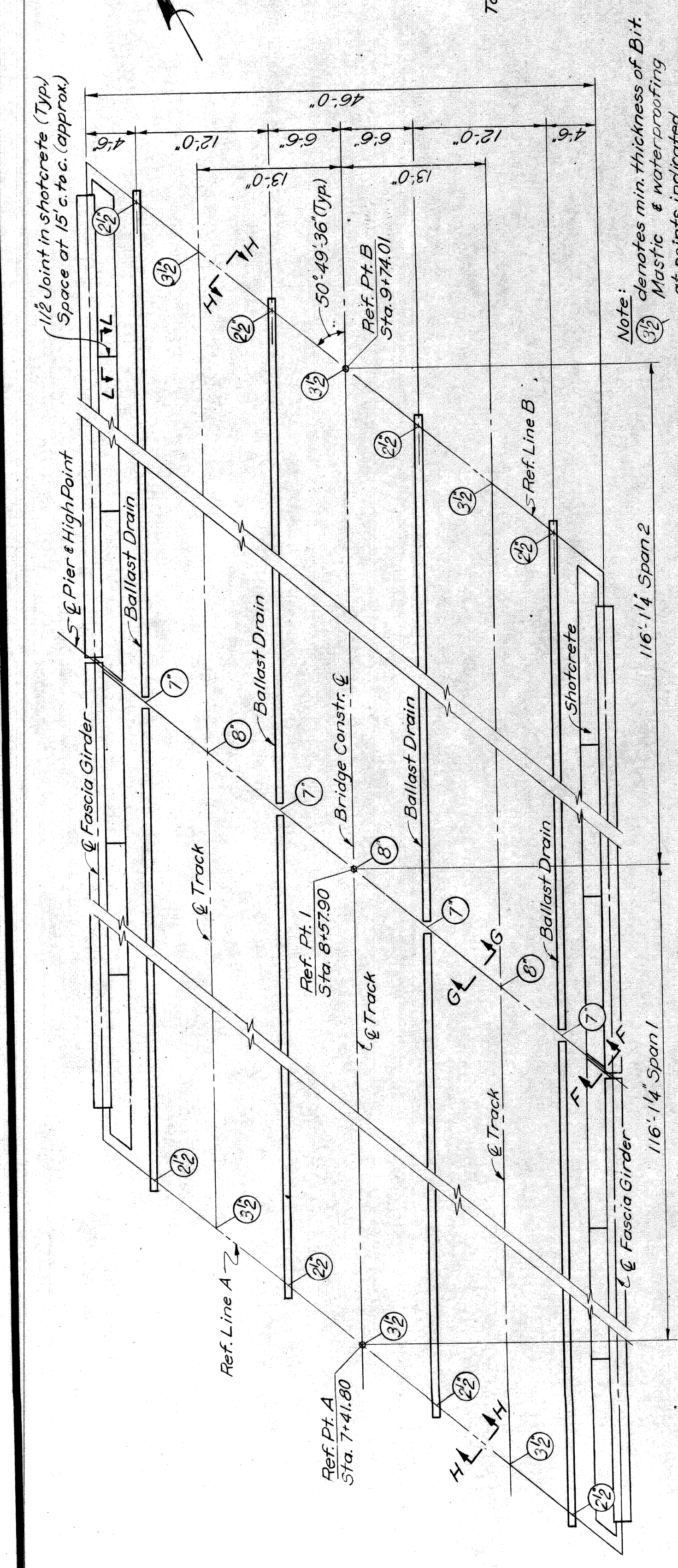
PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]* STRUCTURAL ENGINEER

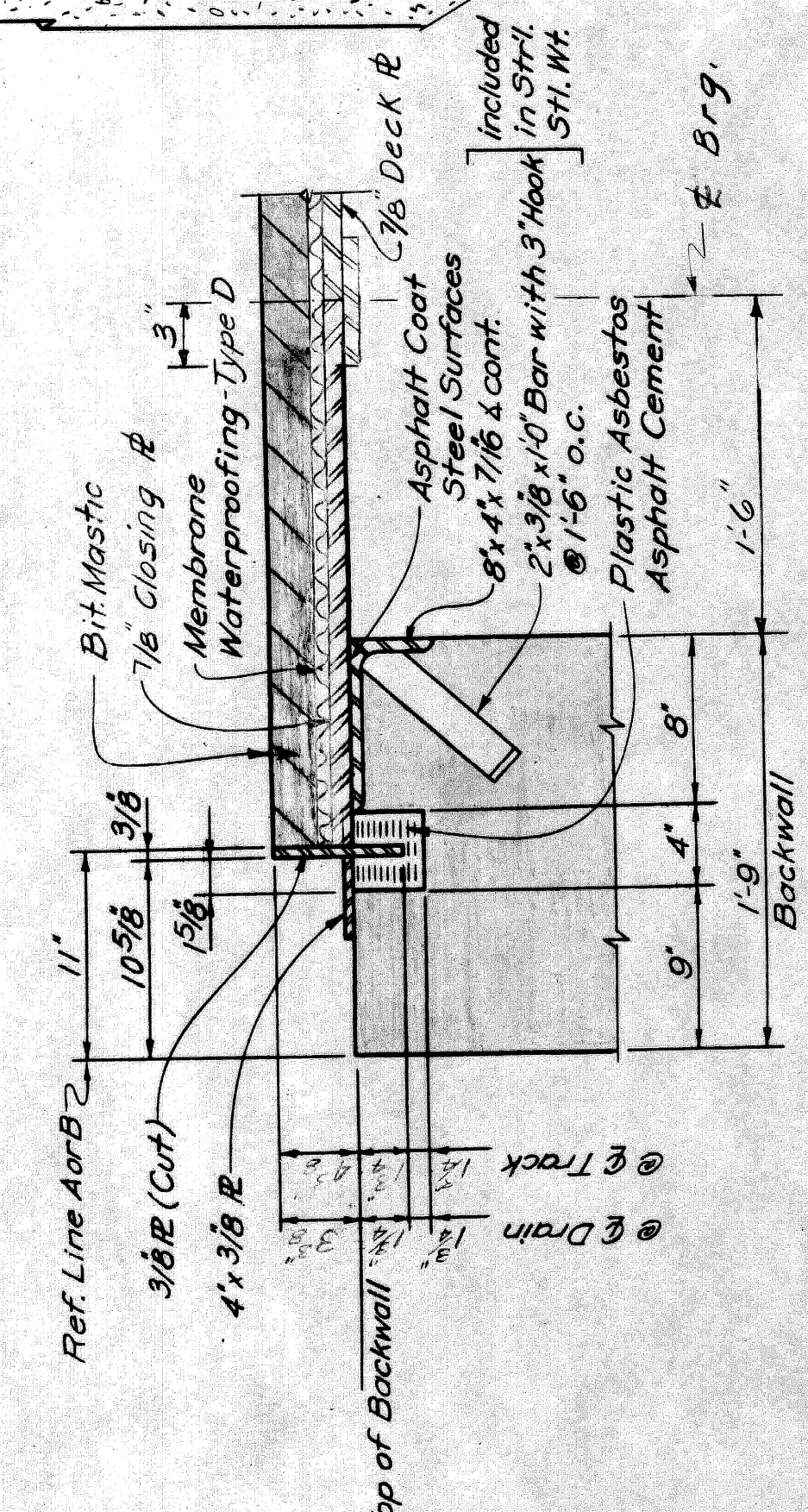
JOB No. PW 990(1)

CITY OF DETROIT
 DESIGNED BY: *[Signature]*
 CHECKED BY: *[Signature]*
 ORDERED BY: *[Signature]*
 SHEET NO. 27 OF 31

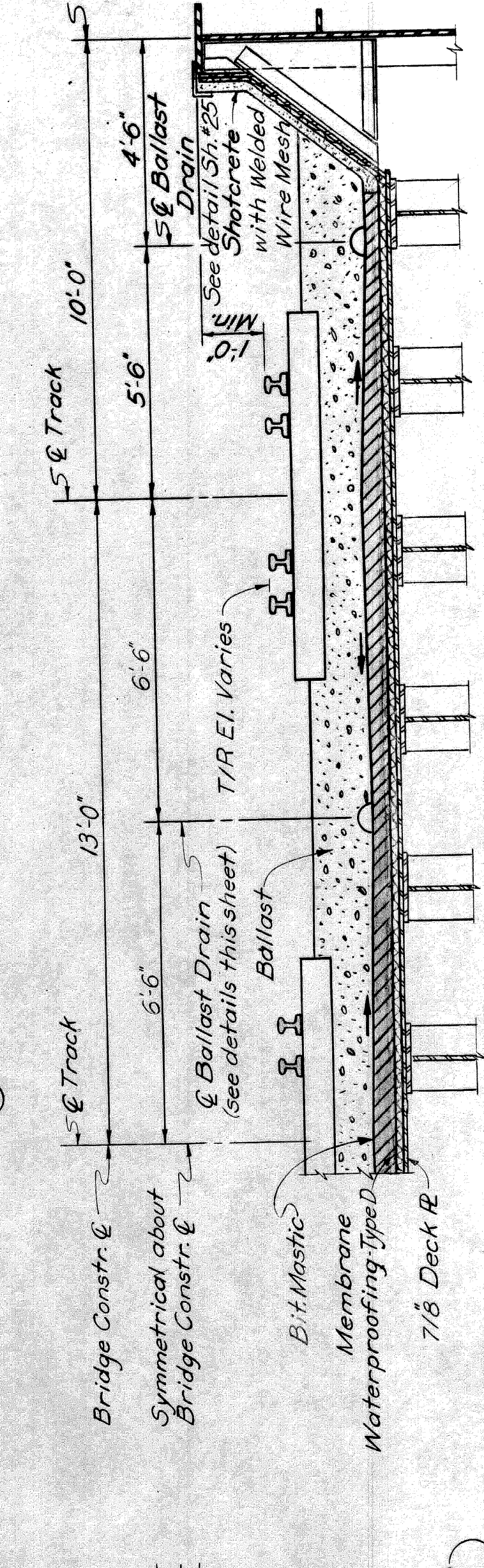
X03 of 82124A



SECTION L-L
JOINT IN SHOTCRETE



SECTION H-H



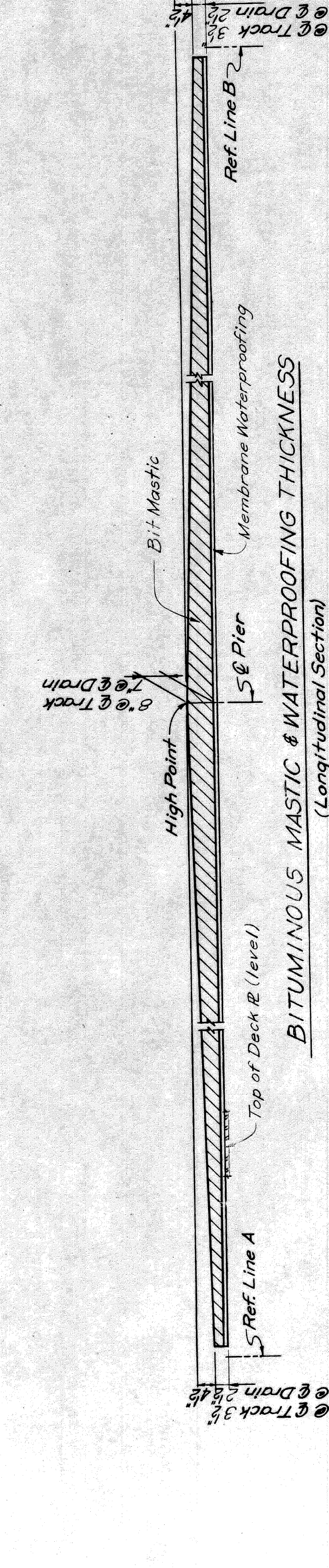
MISCELLANEOUS QUANTITIES

Item	Amount	Unit
Bituminous Mastic Protective Cover	251	Tons
3/2" Cement Ducts	1773	Lin. Ft.
Shotcrete	16.1	Cu. Yds.
Welded Wire Mesh, 4x4" #10	11,221	Sq. Ft.
1/2" Joint Filler	18	Sq. Ft.
1" Joint Filler	9	Sq. Ft.
Hot Poured Rubber Asphalt Type Filler	64	Lin. Ft.
Membrane Water-proofing Type D	11,519	Sq. Ft.
5" Ballast Drains	934	Lin. Ft.

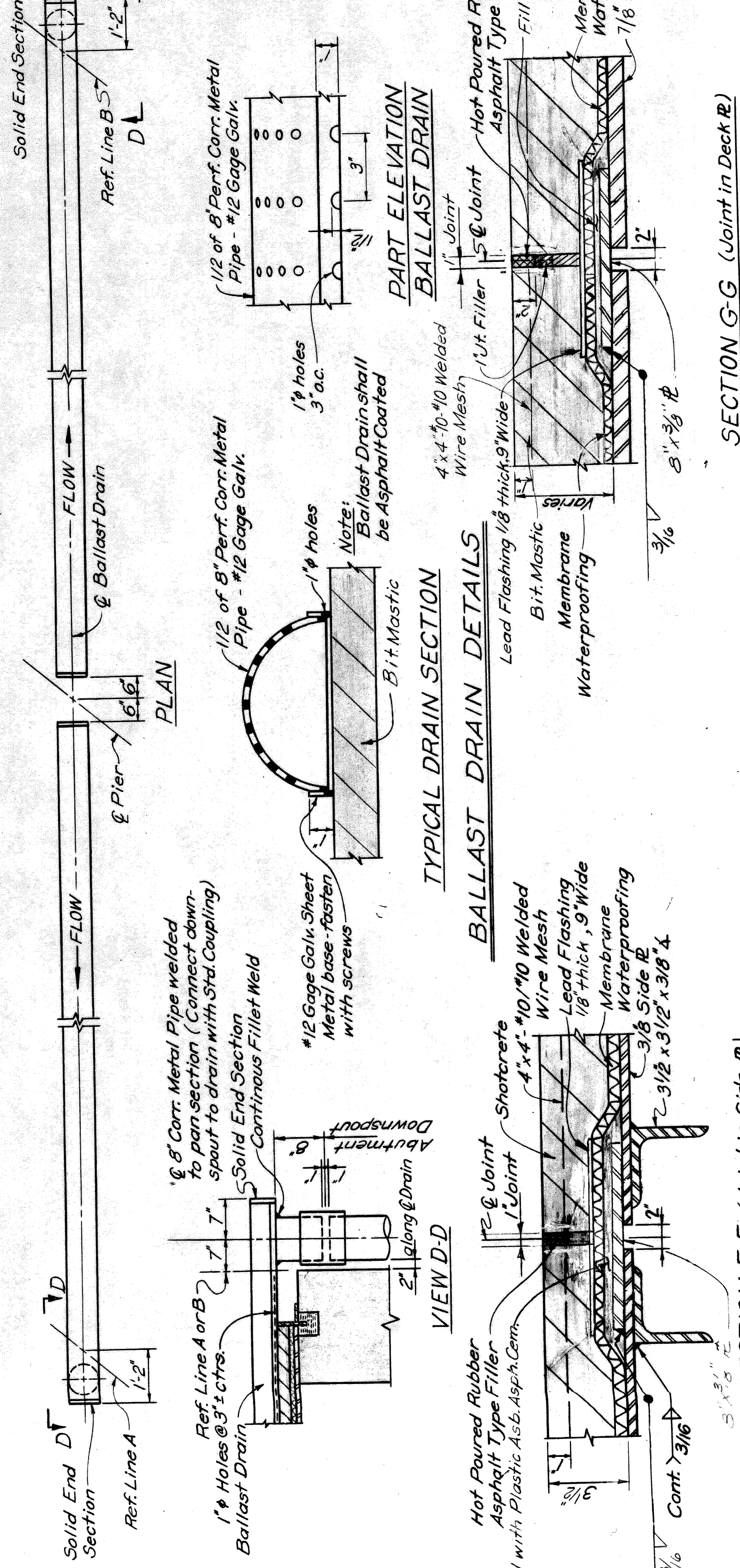
NOTES:
Membrane Water-proofing Type D consists of four layers of asphalt treated felt, one layer of asphalt treated cotton fabric and six mappings of asphalt.
Welded Wire Mesh shall be lapped a minimum of 6".
Non-metallic Waterstop shall be lapped a minimum of 6".
Elastic caulking compound & plastic asbestos asphalt cement is incidental to Membrane Water-proofing Type D.

Note:
Lead Flashing is included in Structural Steel Sh. 27

DECK DRAINAGE PLAN



TYPICAL DRAIN DETAILS



MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD, BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

DECK & DRAINAGE DETAILS

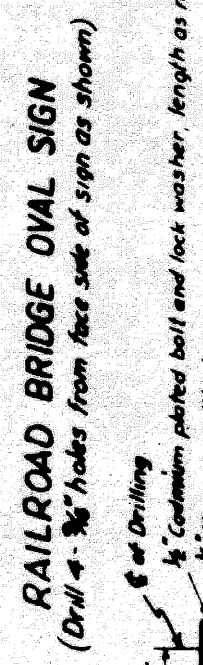
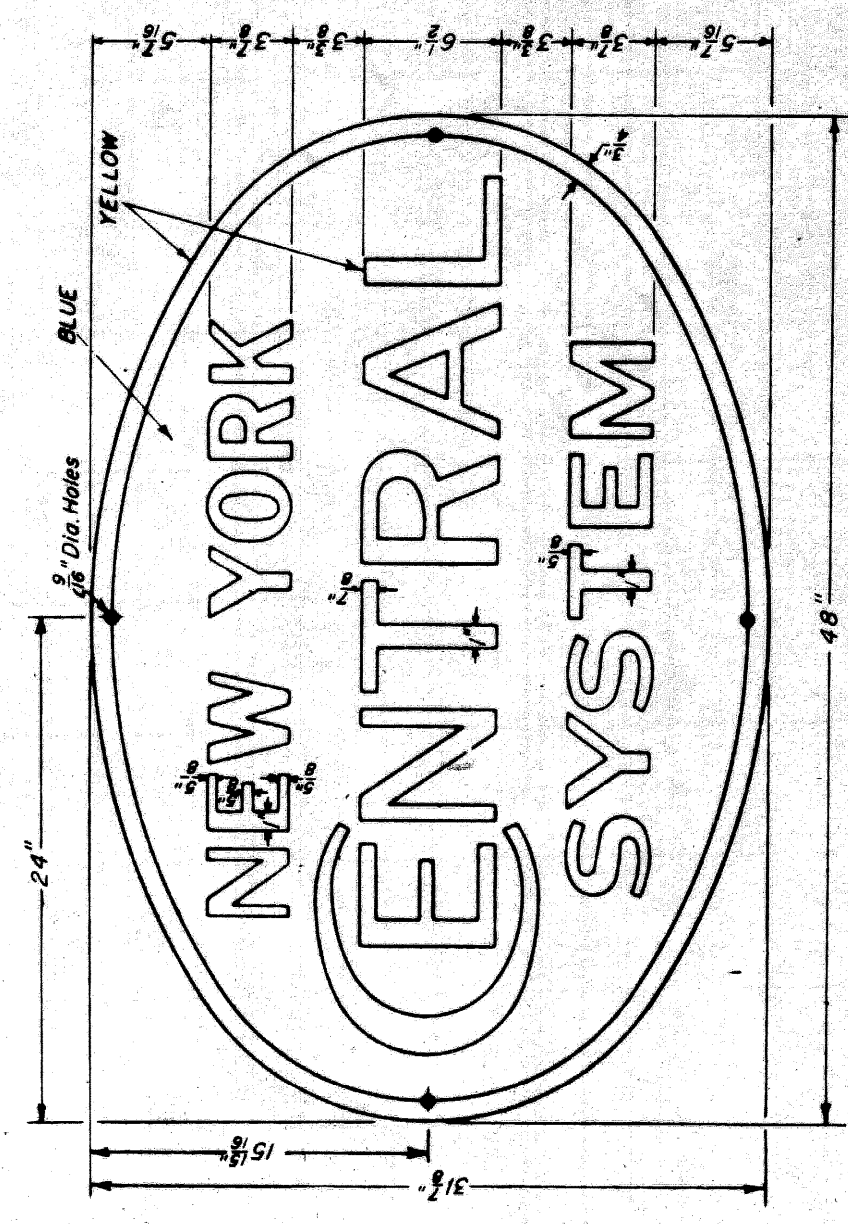
REVISIONS

NO.	DESCRIPTION	DATE	BY
1	Revised Sect. F-F, G-G	5/24/64	A.F.B.
2	Revised Sect. H-H, I-I	5/24/64	A.F.B.
3	Revised Sect. J-J, K-K	5/24/64	A.F.B.
4	Revised Sect. L-L, M-M	5/24/64	A.F.B.
5	Revised Sect. N-N, O-O	5/24/64	A.F.B.
6	Revised Sect. P-P, Q-Q	5/24/64	A.F.B.
7	Revised Sect. R-R, S-S	5/24/64	A.F.B.
8	Revised Sect. T-T, U-U	5/24/64	A.F.B.
9	Revised Sect. V-V, W-W	5/24/64	A.F.B.
10	Revised Sect. X-X, Y-Y	5/24/64	A.F.B.
11	Revised Sect. Z-Z, AA-AA	5/24/64	A.F.B.
12	Revised Sect. BB-BB, CC-CC	5/24/64	A.F.B.
13	Revised Sect. DD-DD, EE-EE	5/24/64	A.F.B.
14	Revised Sect. FF-FF, GG-GG	5/24/64	A.F.B.
15	Revised Sect. HH-HH, II-II	5/24/64	A.F.B.
16	Revised Sect. JJ-JJ, KK-KK	5/24/64	A.F.B.
17	Revised Sect. LL-LL, MM-MM	5/24/64	A.F.B.
18	Revised Sect. NN-NN, OO-OO	5/24/64	A.F.B.
19	Revised Sect. PP-PP, QQ-QQ	5/24/64	A.F.B.
20	Revised Sect. RR-RR, SS-SS	5/24/64	A.F.B.
21	Revised Sect. TT-TT, UU-UU	5/24/64	A.F.B.
22	Revised Sect. VV-VV, WW-WW	5/24/64	A.F.B.
23	Revised Sect. XX-XX, YY-YY	5/24/64	A.F.B.
24	Revised Sect. ZZ-ZZ, AA-AA	5/24/64	A.F.B.
25	Revised Sect. BB-BB, CC-CC	5/24/64	A.F.B.
26	Revised Sect. DD-DD, EE-EE	5/24/64	A.F.B.
27	Revised Sect. FF-FF, GG-GG	5/24/64	A.F.B.
28	Revised Sect. HH-HH, II-II	5/24/64	A.F.B.
29	Revised Sect. JJ-JJ, KK-KK	5/24/64	A.F.B.
30	Revised Sect. LL-LL, MM-MM	5/24/64	A.F.B.
31	Revised Sect. NN-NN, OO-OO	5/24/64	A.F.B.
32	Revised Sect. PP-PP, QQ-QQ	5/24/64	A.F.B.
33	Revised Sect. RR-RR, SS-SS	5/24/64	A.F.B.
34	Revised Sect. TT-TT, UU-UU	5/24/64	A.F.B.
35	Revised Sect. VV-VV, WW-WW	5/24/64	A.F.B.
36	Revised Sect. XX-XX, YY-YY	5/24/64	A.F.B.
37	Revised Sect. ZZ-ZZ, AA-AA	5/24/64	A.F.B.
38	Revised Sect. BB-BB, CC-CC	5/24/64	A.F.B.
39	Revised Sect. DD-DD, EE-EE	5/24/64	A.F.B.
40	Revised Sect. FF-FF, GG-GG	5/24/64	A.F.B.
41	Revised Sect. HH-HH, II-II	5/24/64	A.F.B.
42	Revised Sect. JJ-JJ, KK-KK	5/24/64	A.F.B.
43	Revised Sect. LL-LL, MM-MM	5/24/64	A.F.B.
44	Revised Sect. NN-NN, OO-OO	5/24/64	A.F.B.
45	Revised Sect. PP-PP, QQ-QQ	5/24/64	A.F.B.
46	Revised Sect. RR-RR, SS-SS	5/24/64	A.F.B.
47	Revised Sect. TT-TT, UU-UU	5/24/64	A.F.B.
48	Revised Sect. VV-VV, WW-WW	5/24/64	A.F.B.
49	Revised Sect. XX-XX, YY-YY	5/24/64	A.F.B.
50	Revised Sect. ZZ-ZZ, AA-AA	5/24/64	A.F.B.

APPROVED: [Signature] STRUCTURAL ENGINEER
JOB NO. PW 990(1)

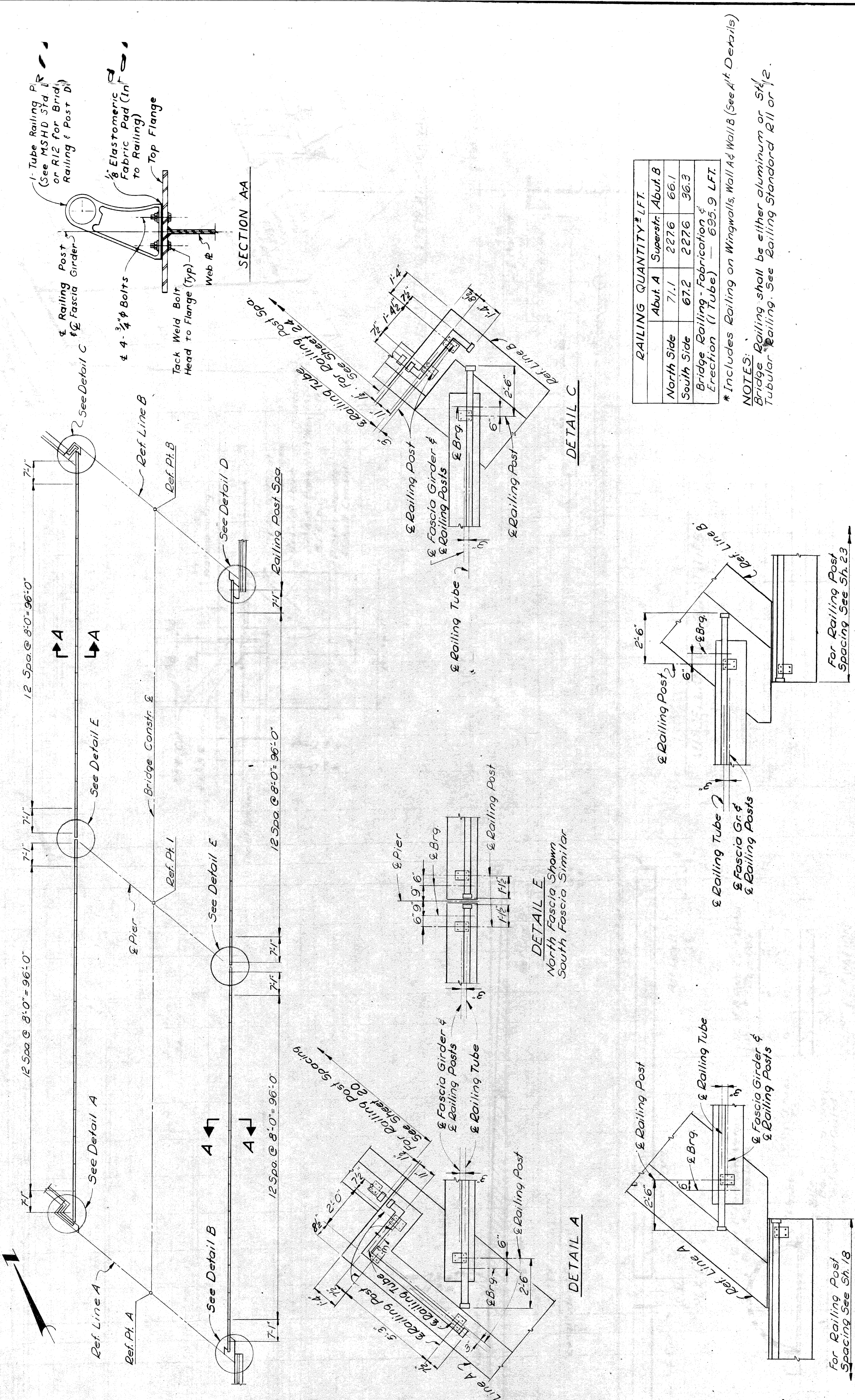
CITY OF DETROIT
DRAWN BY: M.L.H. 9-59
CHECKED BY: M.L.H. 12-66
DATE: 5-24-64
SHEET 32 OF 47

X03 of 821244



TYPICAL SECTION

General Notes:
 The New York Central Railroad will furnish for job site - signs and bolt assemblies.
 Sign Construction - The sign shall be made of 6061-T6 aluminum sheet. The background of the sign shall be covered with N9275 wide angle flat-top, Blue Scotchlite. The letters and border shall be N9221 wide angle flat-top, Yellow Scotchlite. Additional details of the oval and letters are shown on Engineer N.1 of NY System plan N.535-L
 Sign Installation - Typical installation detail shown for plate girder bridge. If girder stiffeners interfere with placing of sign as shown, provide structural steel brackets for bolt connections. Bridges on a skew with highway should have brackets so that sign will be at right angles to highway.
 Sign shall be furnished by NYC Railroad and installed by Bridge Contractor. Installation is incidental to Structural Steel-Erection. Project Engineer will arrange with NYC Railroad for delivery to job site.



RAILING QUANTITIES - L.F.T.

	Abut. A	Superstr.	Abut. B
North Side	71.1	227.6	66.1
South Side	67.2	227.6	36.3
Bridge Railing - Fabrication & Erection (1 Tube)	895.9 L.F.T.		

NOTES:
 * Includes Railing on Wingwalls, Wall A & Wall B (See A & B Details)
 Bridge Railing shall be either aluminum or Steel Tubular Railing. See Railing Standard R11 or R12.

MICHIGAN STATE HIGHWAY DEPARTMENT
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

RAILING & SIGN DETAILS

APPROVED: *[Signature]* STRUCTURAL ENGINEER
 JOB No. PW 990(1)

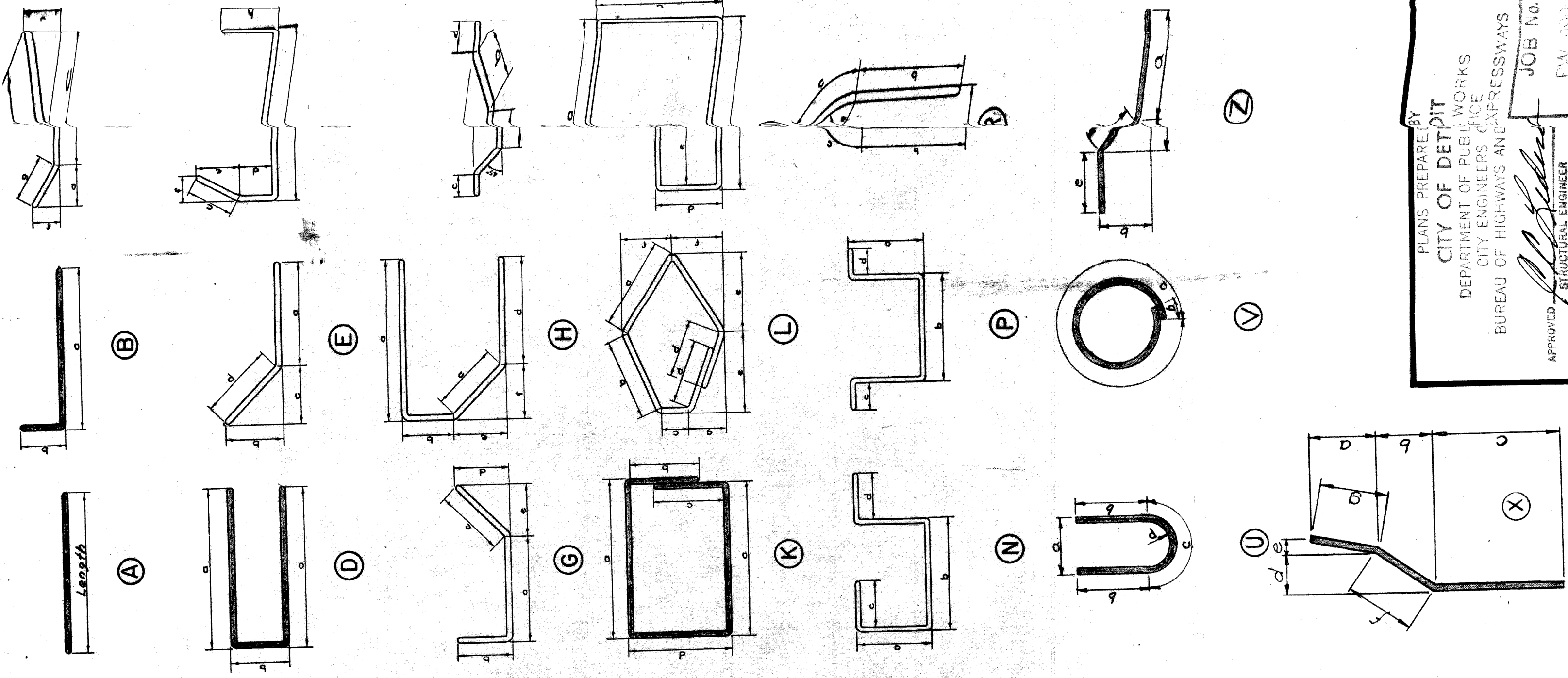
PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

REVISIONS

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

CITY OF DETROIT
 DRAWN BY: [Signature] 12-66
 CHECKED BY: [Signature] 12-66
 DESIGNED BY: [Signature] 12-66
 X03 of 82124A

BAR BENDING DIAGRAM



PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
 STRUCTURAL ENGINEER

JOB NO. *[Blank]*
 P.W. 35041

MICHIGAN STATE HIGHWAY DEPARTMENT
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT
 STEEL REINFORCEMENT DETAILS

SCALE: AS SHOWN
 DRAWN BY: *[Signature]*
 CHECKED BY: *[Signature]*
 DATE: 5/10/34
 SHEET 34 OF 41

CITY OF DETROIT
 JOB NO. 82124A

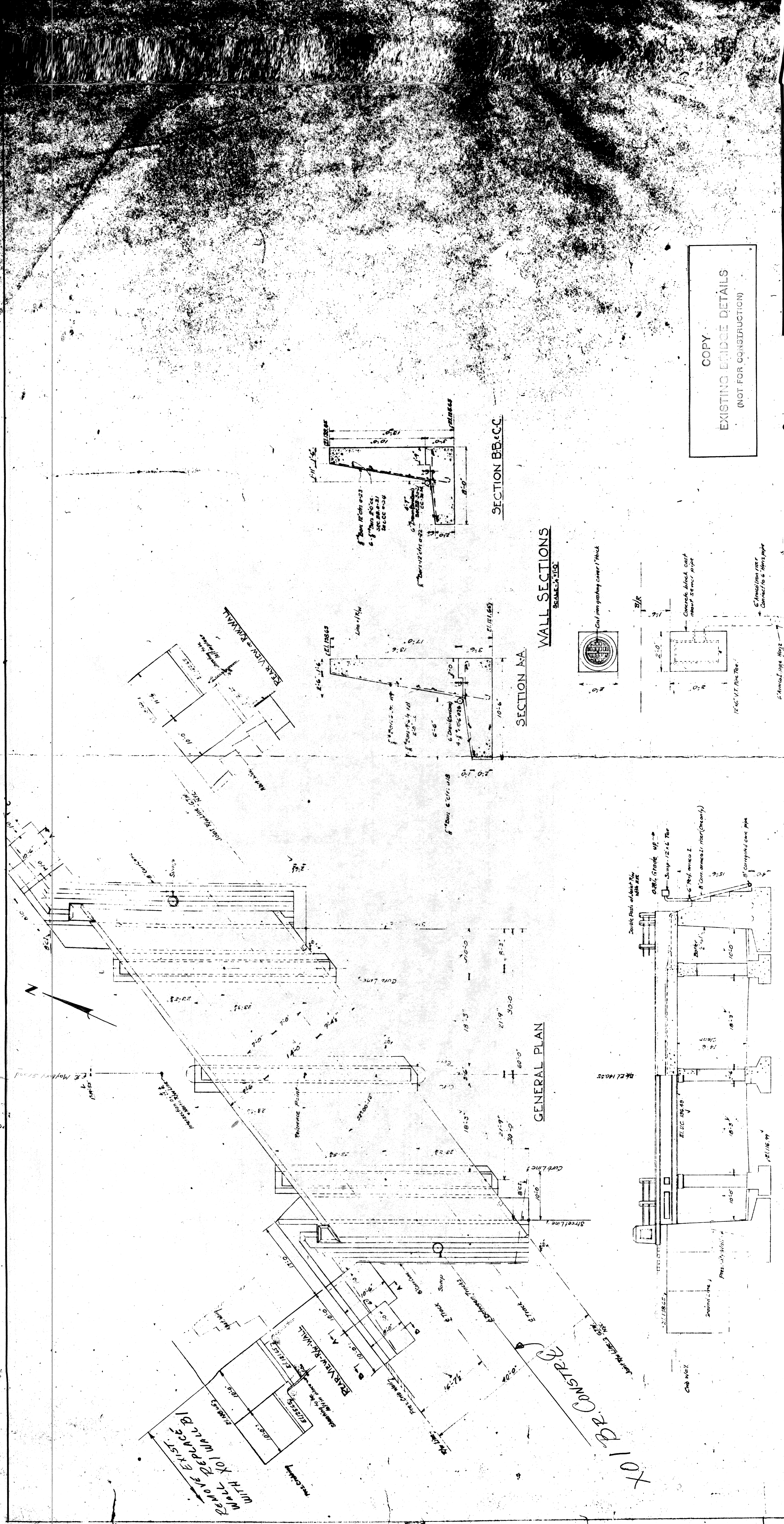
BAR	a	b	c	d	e	f	g	SIZE	LENGTH REQ'D	NO.	TOTAL WT.
A201								#10	32'-6"	228	31885
A202								#7	18'-3"	222	8281
A203								#6	31'-0"	162	7543
A204								#6	39'-0"	40	2343
A205								#6	16'-0"	5	120
A206								#6	19'-0"	3	86
A207								#6	22'-0"	3	99
A208								#6	25'-0"	3	113
A209								#6	28'-0"	2	84
A210								#6	31'-0"	2	93
A211								#6	34'-0"	2	108
A212								#4	13'-9"	70	643
A213								#4	12'-6"	70	585
A214								#4	11'-6"	2	15
A215								#4	9'-9"	2	13
A216								#4	8'-3"	2	11
A217								#4	6'-6"	2	9
A218								#4	4'-9"	3	10
A219								#4	3'-3"	3	7
A220								#4	2'-6"	3	5
A221								#4	24'-0"	140	2844
A222											
A223											
Total Subbase Slab - 54289*											

SUBBASE SLAB

BAR	a	b	c	d	e	f	g	SIZE	LENGTH REQ'D	NO.	TOTAL WT.
A19								#6	23'-3"	11	384
A20								#6	23'-3"	11	383
A21								#6	17'-0"	17	438
A22								#4	17'-0"	55	625
A23								#5	32'-6"	62	2102
A24								#6	32'-6"	68	3087
A25								#6	24'-0"	62	2403
A26								#6	12'-6"	61	3281
A27								#4	33'-0"	5	110
A28								#4	31'-9"	5	106
A29								#6	12'-3"	1	18
B1	6'-0"	3'-0"						#6	9'-0"	17	230
B2	1'-6"	6'-4"						#6	2'-0"	26	78
B3	7'-9"	1'-6"						#6	9'-3"	40	556
B4	5'-3"	1'-9"						#6	7'-0"	16	168
B5	5'-3"	6'-4"						#6	5'-9"	20	173
D1	2'-0"	4'-8"						#4	8'-7"	89	570
D2	2'-0"	1'-5"						#4	5'-4"	130	463
D3	3'-9"	7'-5"						#4	8'-0"	22	130
D4	6'-9"	1'-2"						#4	14'-7"	29	282
D5	8'-0"	1'-2"						#4	17'-7"	21	270
D6	3'-6"	1'-2"						#4	8'-1"	90	486
D7	3'-7"	4'-2"						#6	11'-3"	40	676
D8	2'-0"	1'-1"						#4	4'-0"	14	45
D9	3'-6"	1'-1"						#4	7'-0"	124	699
D10	3'-0"	6'-8"						#6	12'-7"	24	453
Z1	6'-4"	3'-8"	3'-8"	5'-2"	1'-0"			#6	12'-6"	75	1408
Z2	1'-6"	1'-9"	2'-6"	2'-0"				#6	6'-0"	38	342
Z3	3'-0"	1'-0"	1'-0"	1'-5"	3'-0"			#6	7'-5"	12	134
Total Abutment & Wingwall - 201802*											
A101								#9	24'-9"	16	1346
A102								#9	37'-9"	16	2054
A103								#10	15'-6"	119	7937
A104								#6	15'-6"	40	931
A105								#11	31'-9"	32	5328
A106								#11	7'-9"	120	4941
A107								#11	17'-6"	120	1157
A108								#11	40'-0"	10	2125
A109								#11	27'-0"	10	1435
A110								#6	35'-0"	4	215
A111								#6	25'-0"	4	150
A112								#11	33'-9"	28	5021
A113								#4	29'-0"	16	310
D101	4'-0"	5'-12"						#6	13'-1"	20	393
K101	5'-7"	2'-0"	2'-0"	2'-11"				#6	18'-0"	128	3461
U101	4'-12"	2'-0"	6'-3"	2'-0"				#6	10'-3"	8	123
V101	12'-9"	1'-1"						#5	13'-0"	60	865
X101	1'-2-3/4"	1'-0-3/4"	5'-11"	2'-11"	1'-9"	1'-9"		#6	2'-5"	80	1028
Z101	1'-6"	1'-9"	1'-9"	2'-6"	2'-0"			#6	6'-0"	70	631
Total Pier - 49505*											

PIER

BAR	a	b	c	d	e	f	g	SIZE	LENGTH REQ'D	NO.	TOTAL WT.
A1								#11	17'-0"	16	1077
A2								#11	12'-0"	197	12360
A3								#6	15'-3"	94	1455
A4								#7	7'-0"	94	1345
A5								#6	23'-3"	53	1857
A6								#10	23'-3"	70	7003
A7								#11	18'-9"	92	9165
A8								#5	12'-4"	110	1415
A9								#5	16'-4"	19	324
A10								#9	13'-9"	114	5330
A11								#9	17'-9"	20	1207
A12								#6	6'-0"	8	50
A13								#4	23'-9"	126	1999
A14								#4	3'-6"	4	9
A15								#4	4'-3"	4	11
A16								#4	6'-6"	3	73
A17								#4	8'-0"	1	5
A18								#4	8'-6"	1	6
A19								#4	9'-3"	1	6
A20								#6	17'-6"	14	368
A21								#10	9'-9"	13	545
A22								#6	19'-6"	94	7887
A23								#6	21'-6"	35	1130
A24								#6	16'-6"	43	1066
A25								#5	34'-6"	79	3007
A26								#11	20'-9"	12	1323
A27								#6	13'-0"	109	7529
A28								#6	7'-0"	64	673
A29								#4	11'-0"	23	169
A30								#10	17'-6"	14	1054
A31								#8	3'-6"	14	1177
A32								#6	3'-6"	61	2886
A33								#11	21'-9"	13	1502
A34								#4	18'-0"	66	794
A35								#7	12'-0"	25	673
A36								#6	19'-6"	25	732
A37								#6	18'-6"	17	472
A38								#6	24'-6"	24	955
A39								#6	26'-6"	24	1698
A40								#6	10'-6"	11	173
A41								#10	10'-6"	11	497
A42								#8	6'-0"	11	176
A43								#6	16'-3"	14	342
A44								#7	15'-0"	11	337
A45								#10	11'-0"	11	521
A46								#6	16'-6"	14	641
A47								#6	5'-4"	93	745
A48								#6	35'-6"	63	3359
A49								#6	28'-0"	14	589
A50								#7	9'-6"	84	1631
A51								#11	17'-6"	186	17294
A52								#6	9'-6"	27	385
A53								#11	26'-9"	62	8812
A54								#11	13'-9"	61	4456
A55								#4	31'-6"	168	3535
A56								#6	20'-6"	55	1694
A57								#8	20'-6"	64	3503
A58								#4	22'-6"	38	571
A59								#4	1'-5"	1	1
A60								#4	2'-0"	1	1
A61											



COPY
EXISTING BRIDGE DETAILS
(NOT FOR CONSTRUCTION)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFERIS FREEWAY IN DETROIT

EXISTING BRIDGE DETAILS

NO.	REVISIONS	DATE	BY

CITY OF DETROIT
 DRAWN BY: S. J. ...
 CHECKED BY: ...
 DATE: 3/5/47
 SHEET 35 OF 47
 X03 of 82124A

PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
 STRUCTURAL ENGINEER

JOB No. PW 990(1)

DETAIL OF SURFACE PUMP
 SCALE: 1/4" = 1'-0"

WALL SECTIONS
 SCALE: 1/4" = 1'-0"

SECTION BB & CC

SECTION AA

GENERAL PLAN

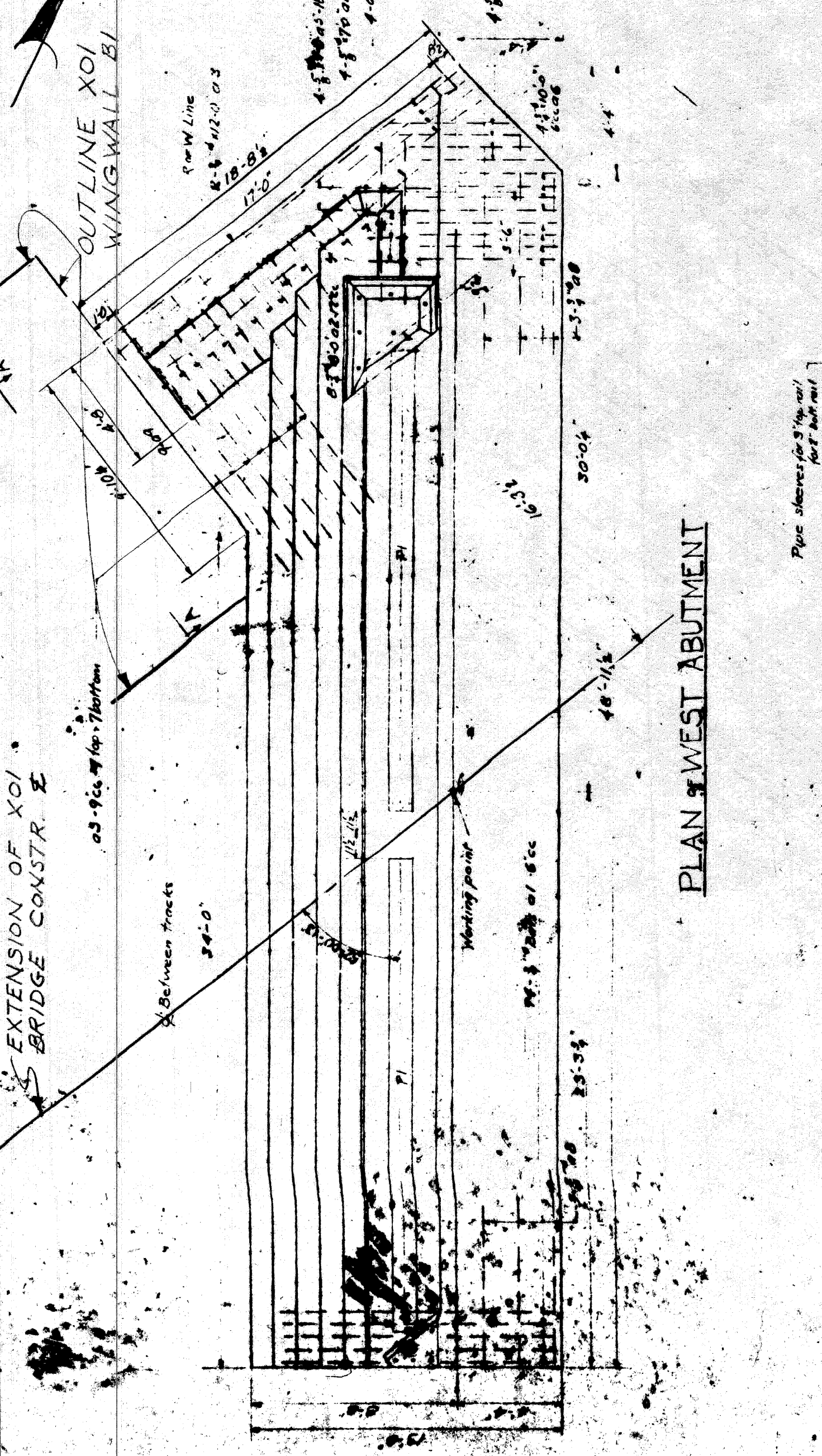
HALF SECTION

SCALE: 1/4" = 1'-0"

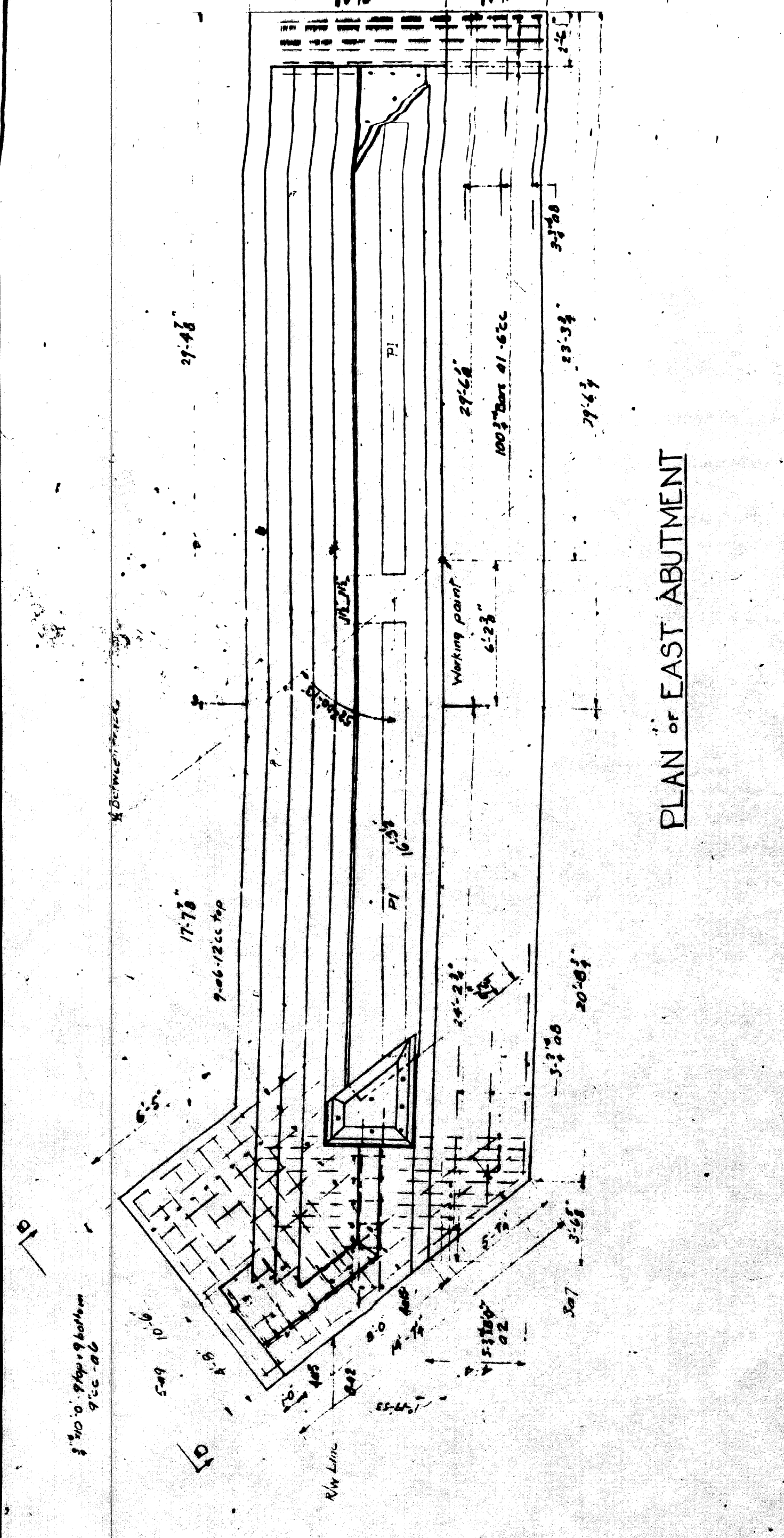
REMOVE EXIST. WALL REPLACE WITH X01 WALL B1

X01 BR CONSTR B1

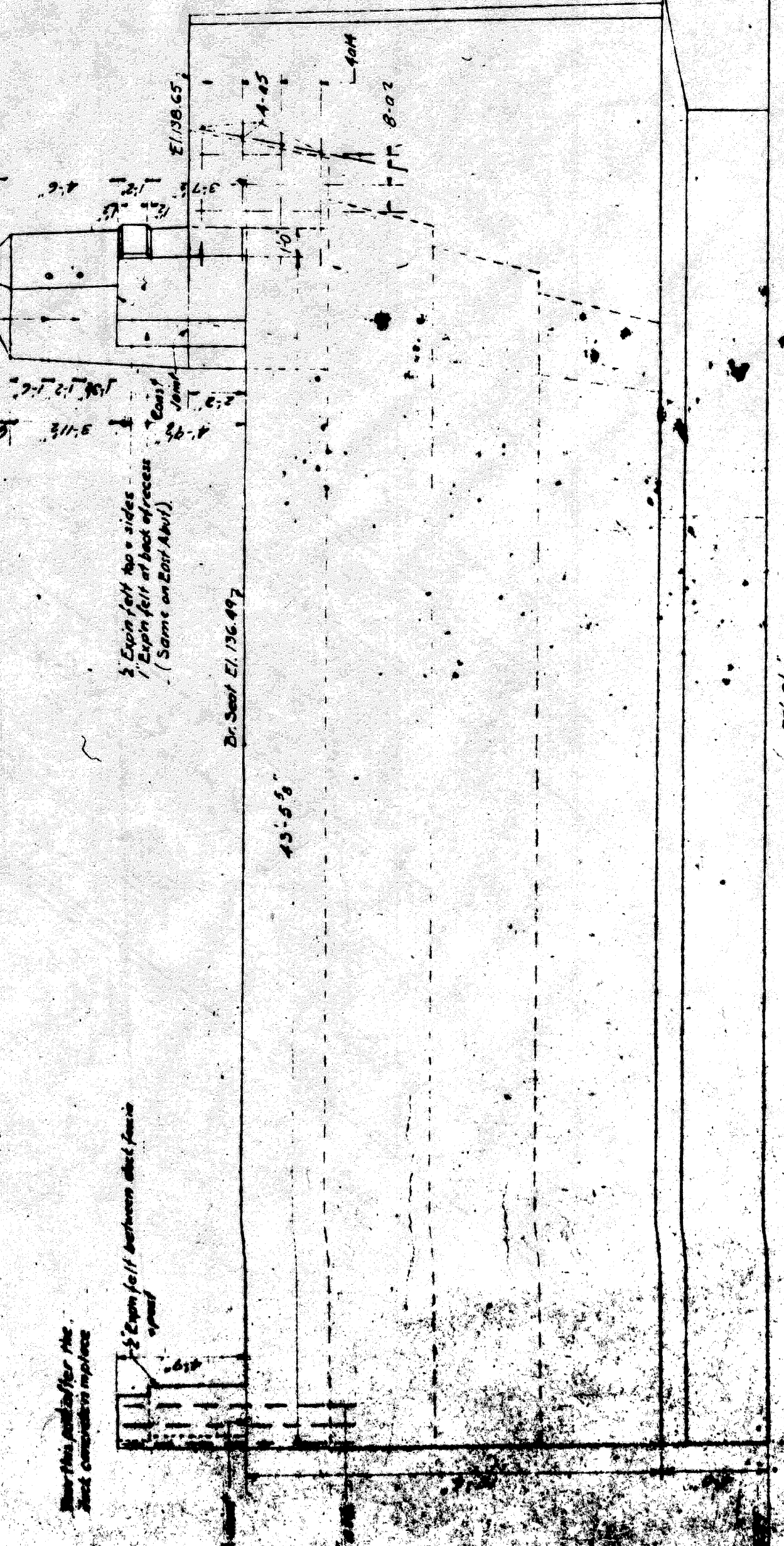
EXTENSION OF X01 BRIDGE CONSTR. E



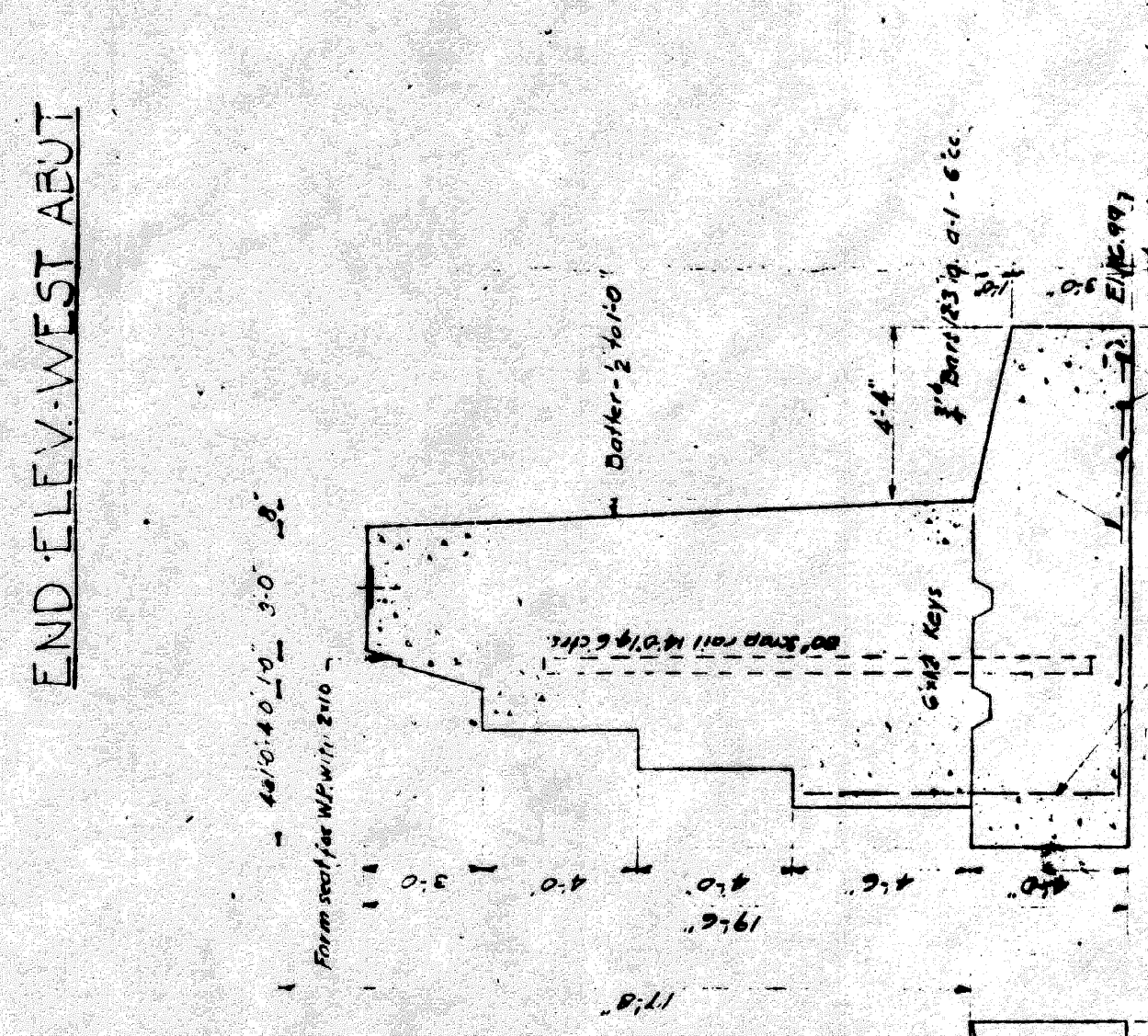
PLAN WEST ABUTMENT



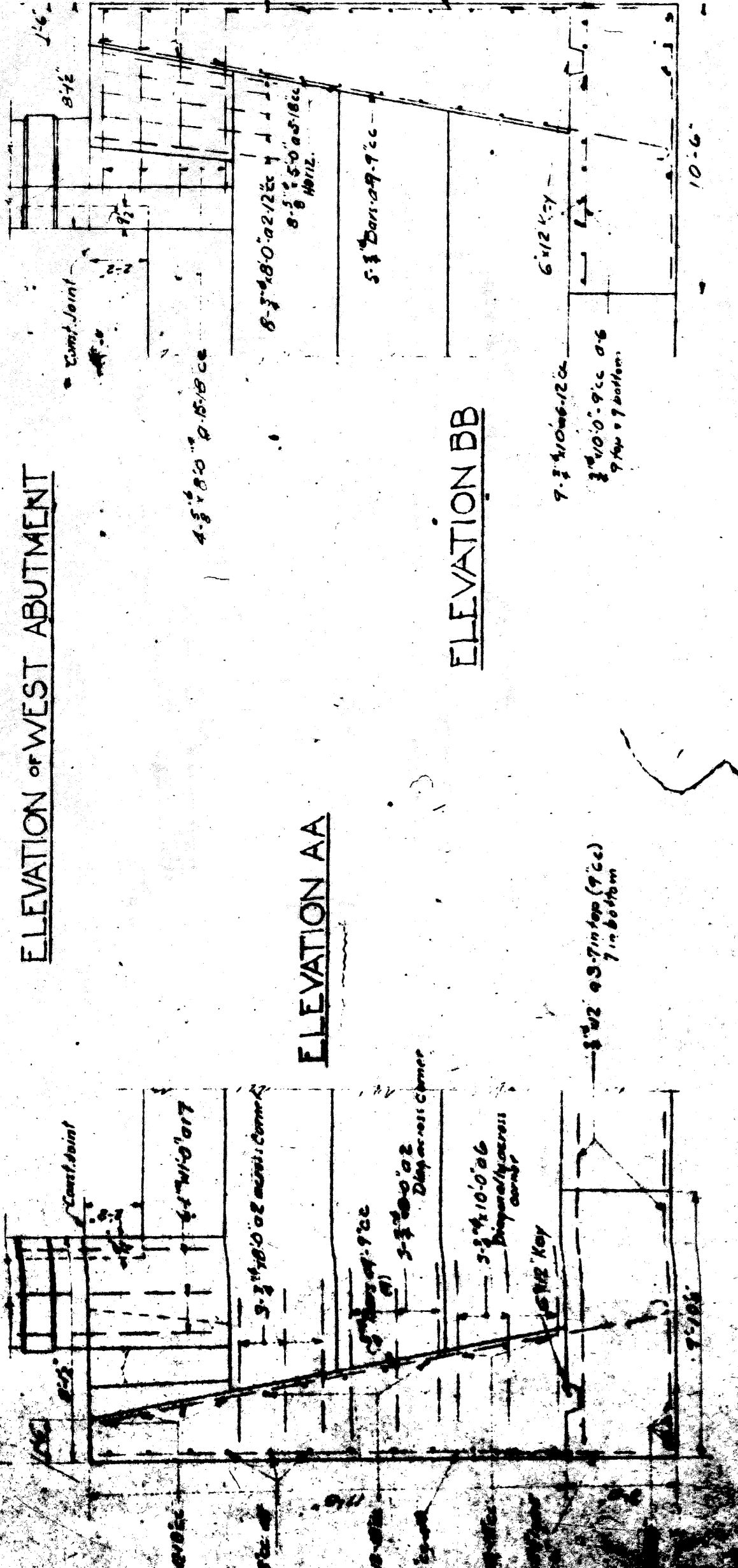
PLAN OF EAST ABUTMENT



ELEVATION OF WEST ABUTMENT

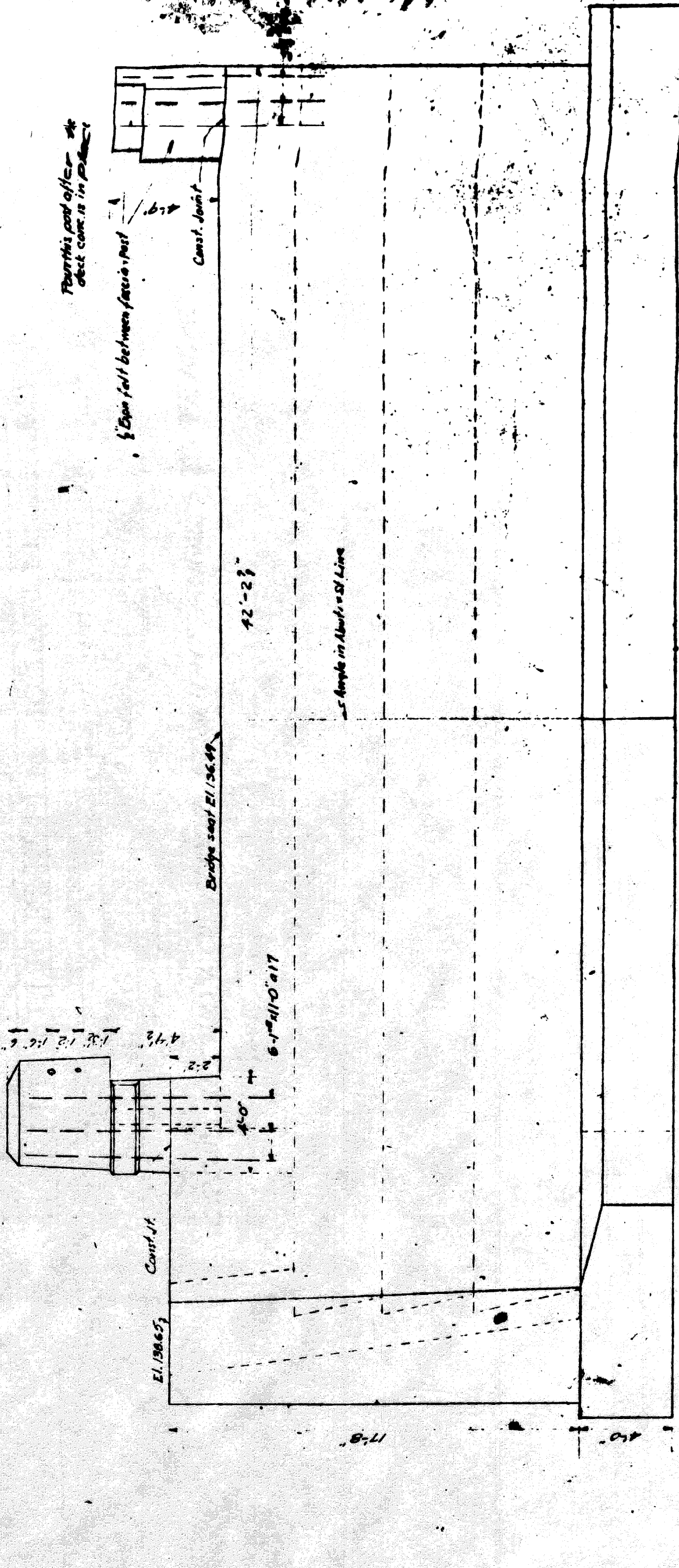


END ELEV. WEST ABUT



ELEVATION AA

ELEVATION BB



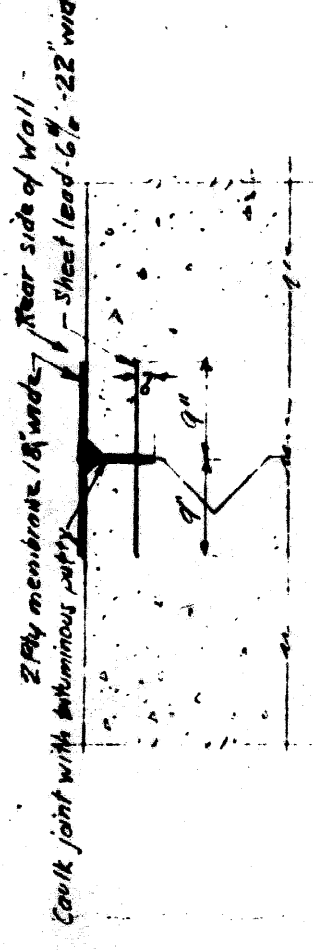
ELEVATION OF EAST ABUTMENT

TYPICAL CROSS SECTION



COPY
EXISTING BRIDGE DETAILS
(NOT FOR CONSTRUCTION)

NOTE -
SEAL PAINT 2022 - 2022 80 RAIL 14' 0"



DETAIL VERTICAL JOINTS
IN ABUTMENT RETAINING WALLS
NOT TO SCALE

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFERSONS FREEWAY IN DETROIT

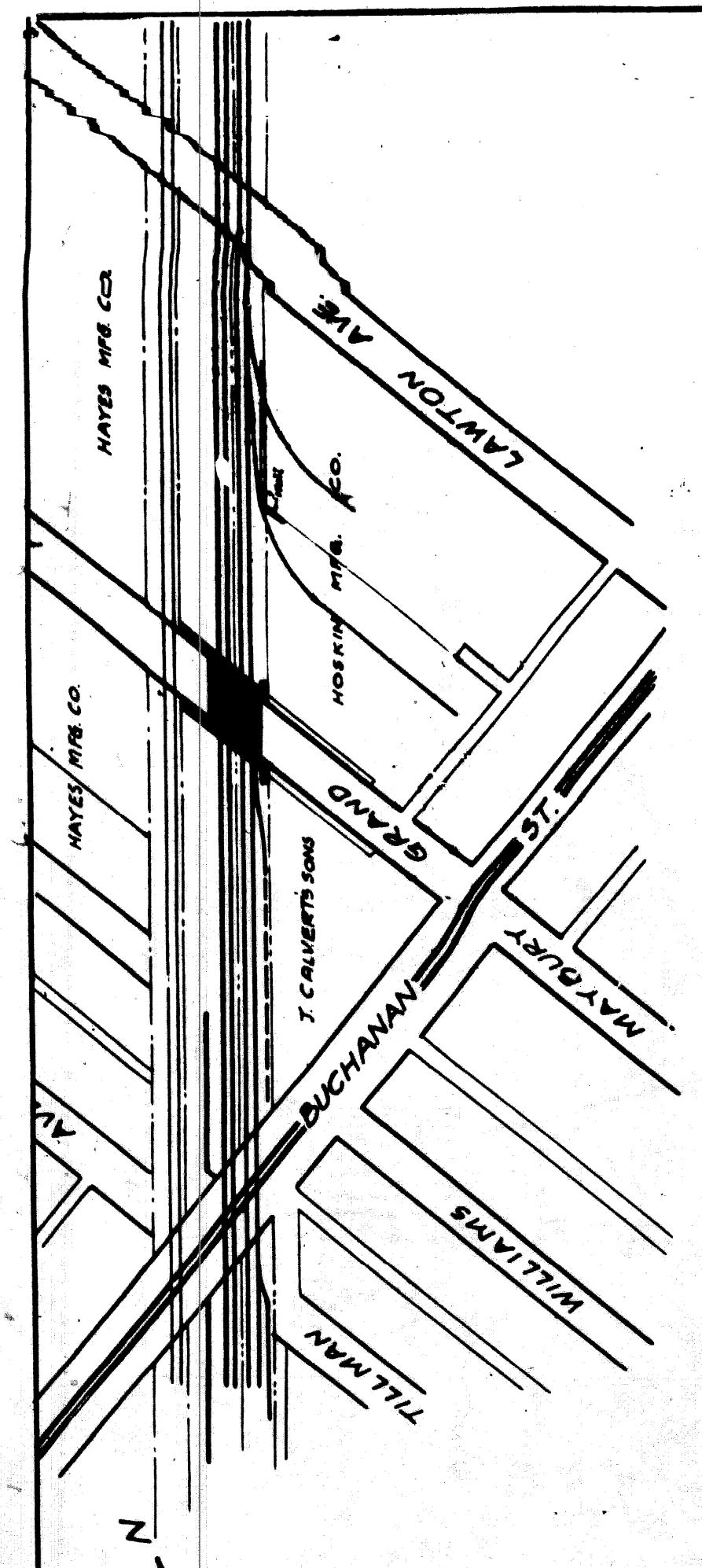
EXISTING BRIDGE DETAILS

NO.	REVISIONS	DATE	BY

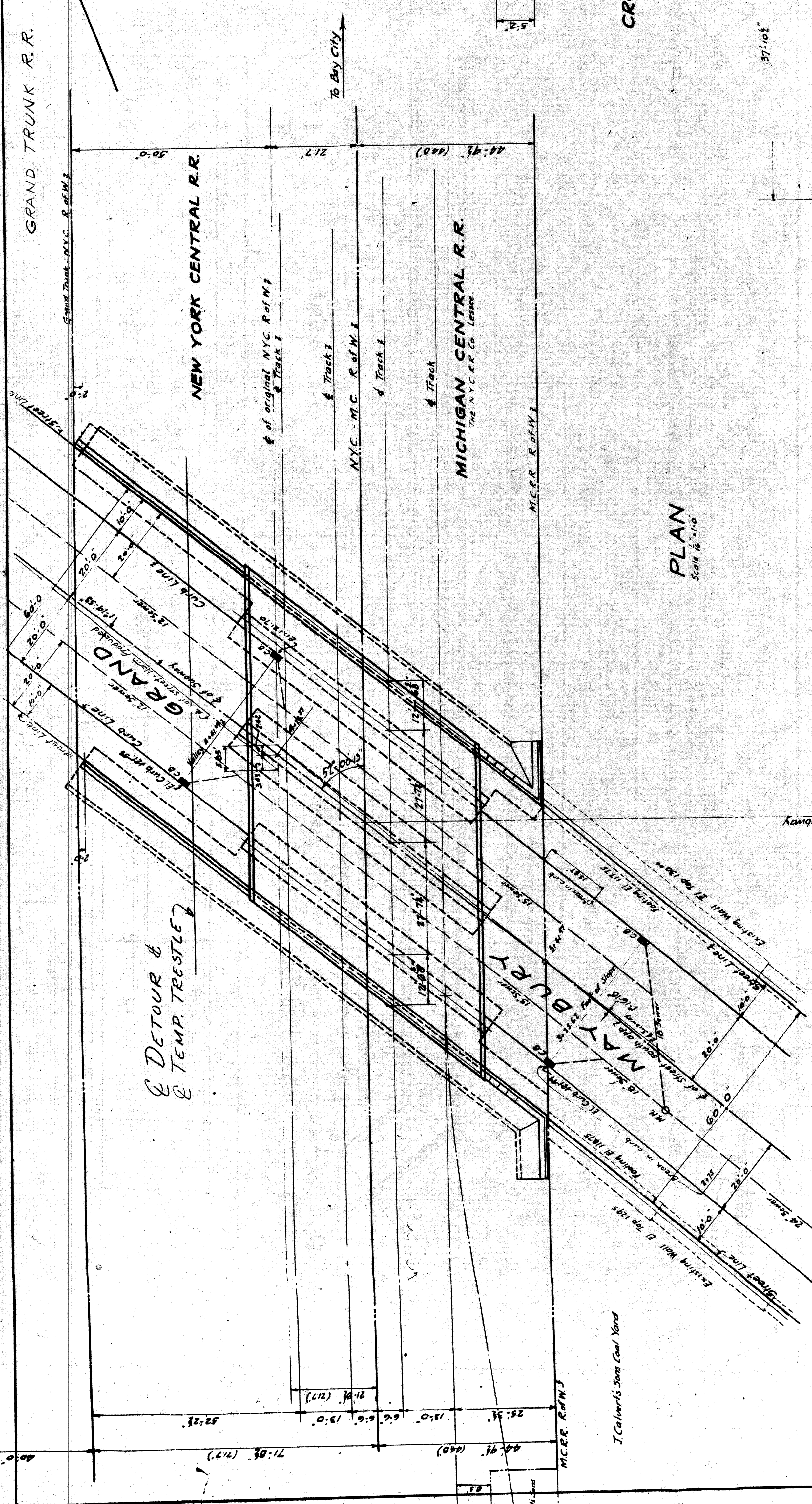
APPROVED: *[Signature]* STRUCTURE ENGINEER
JOB No. PW 990(1)

CITY OF DETROIT
ROAD DIST. 5262.41
DRAWN BY 9-67
CHECKED BY
DESIGNED BY
UNIT 26 OF 41
X03 of 82124A

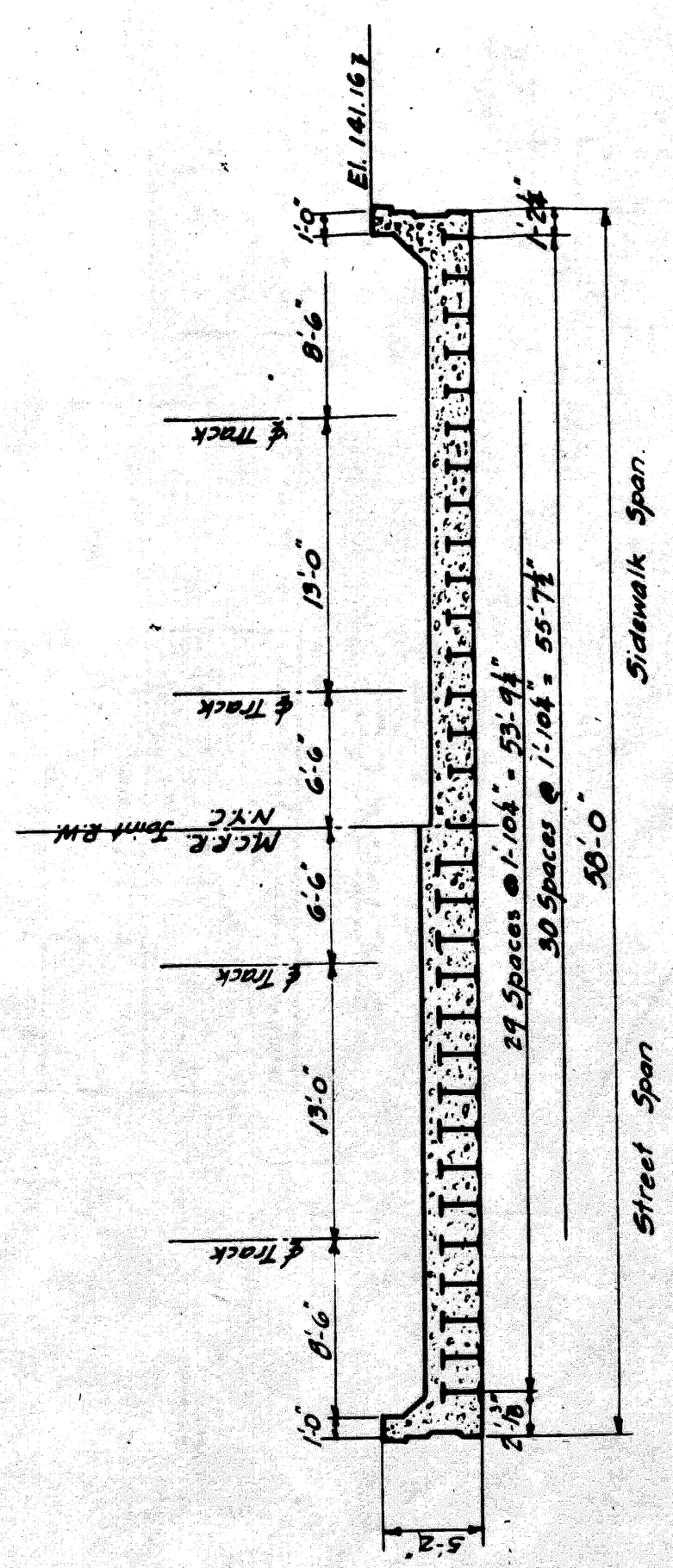
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS



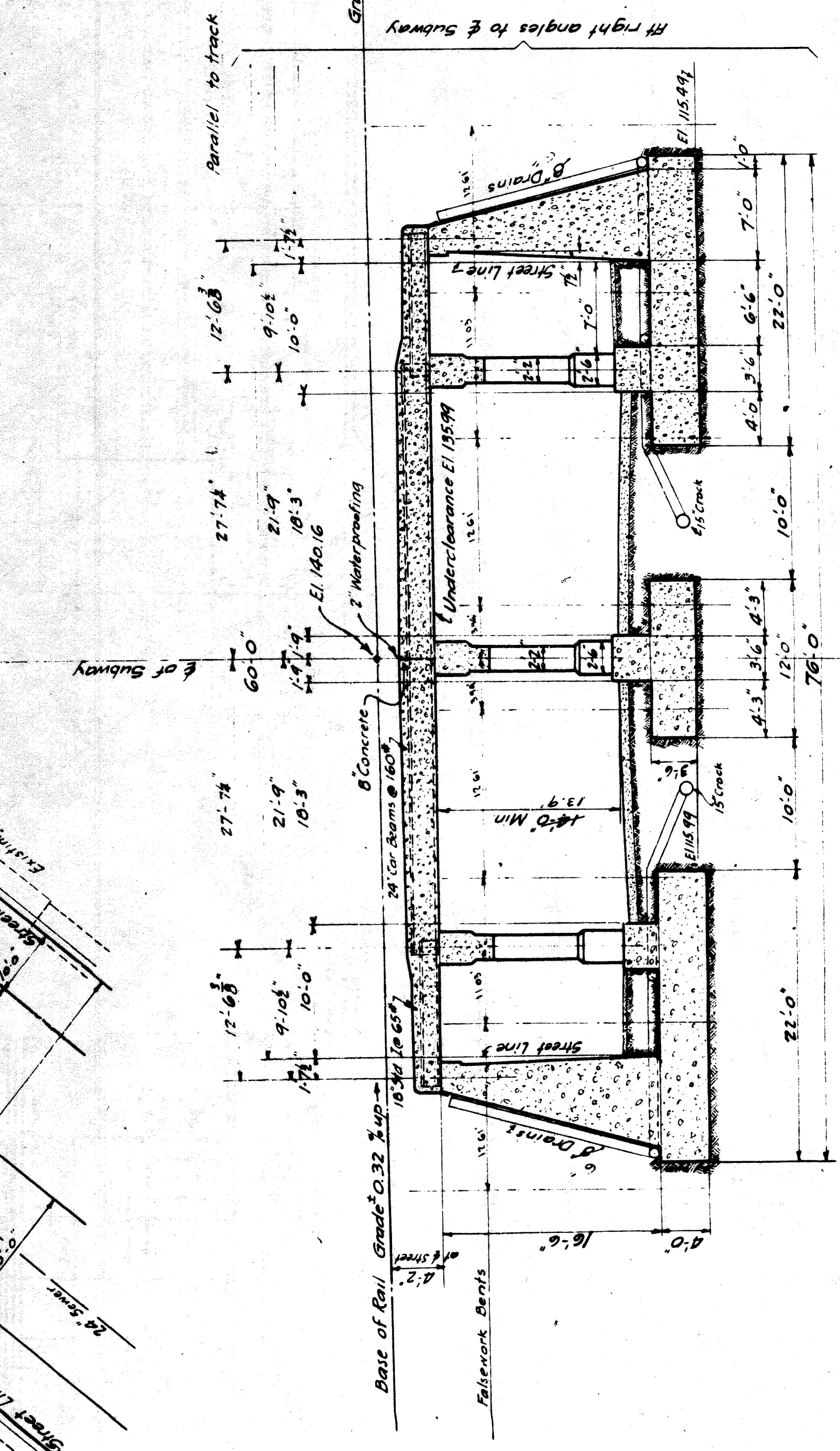
LOCATION PLAN
Scale 1"=200'



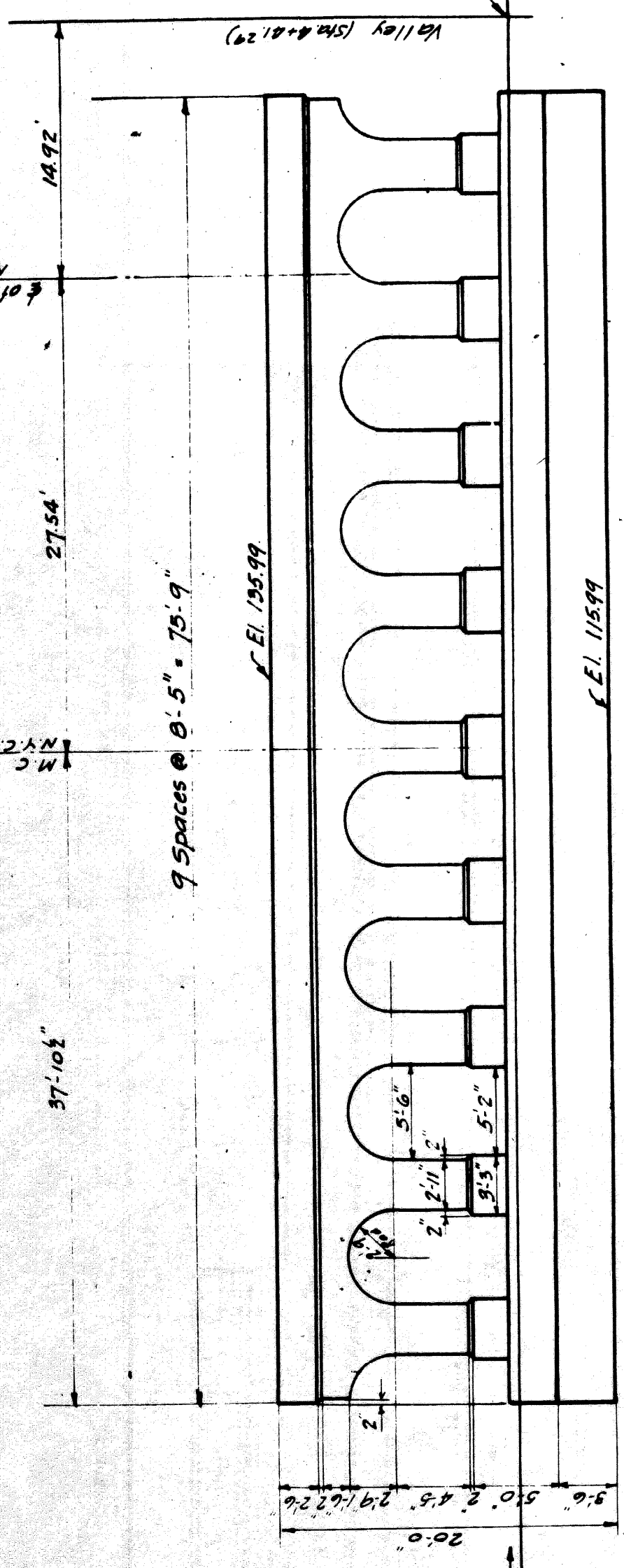
PLAN
Scale 1/8"=1'-0"



CROSS SECTION OF FLOOR AT RIGHT ANGLES TO TRACKS
Scale 5"=1'-0"



LONGITUDINAL SECTION
Scale 5"=1'-0"



ELEVATION OF CENTER PIER
Scale 1/2"=1'-0"

COPY
EXISTING BRIDGE DETAILS
(NOT FOR CONSTRUCTION)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

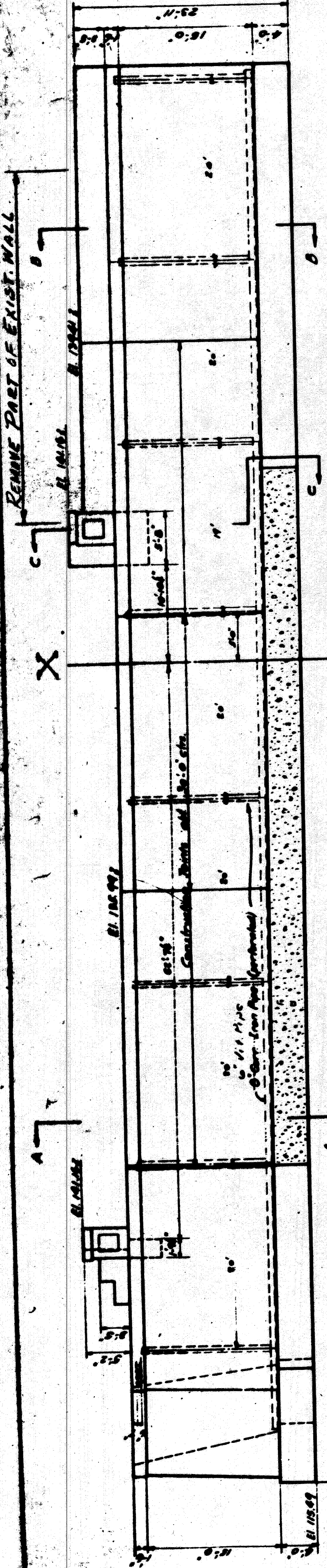
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

EXISTING BRIDGE DETAILS

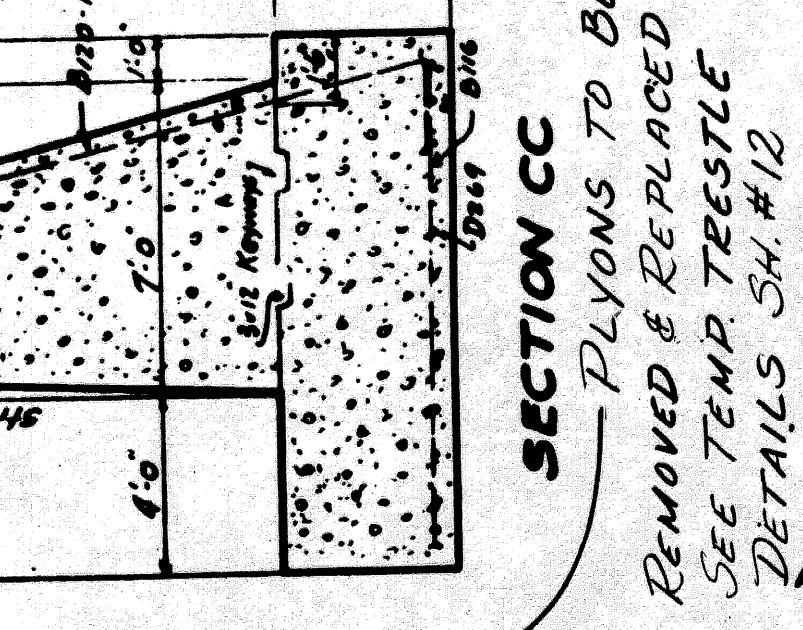
NO.	REVISIONS	DATE	BY

CITY OF DETROIT
JOB No. PW 990(1)
APPROVED: *[Signature]*
STRUCTURE ENGINEER

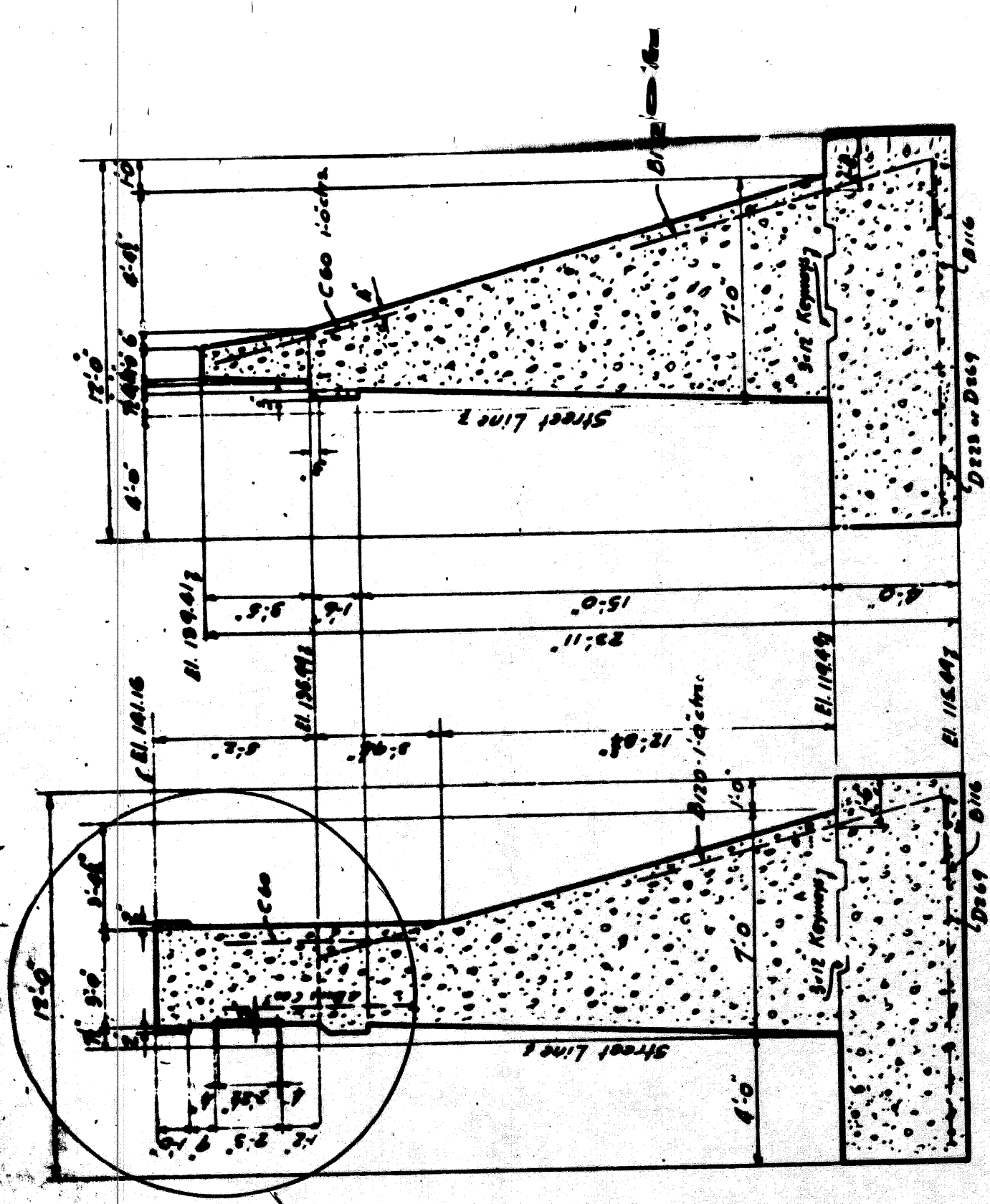
X03 of 82124A



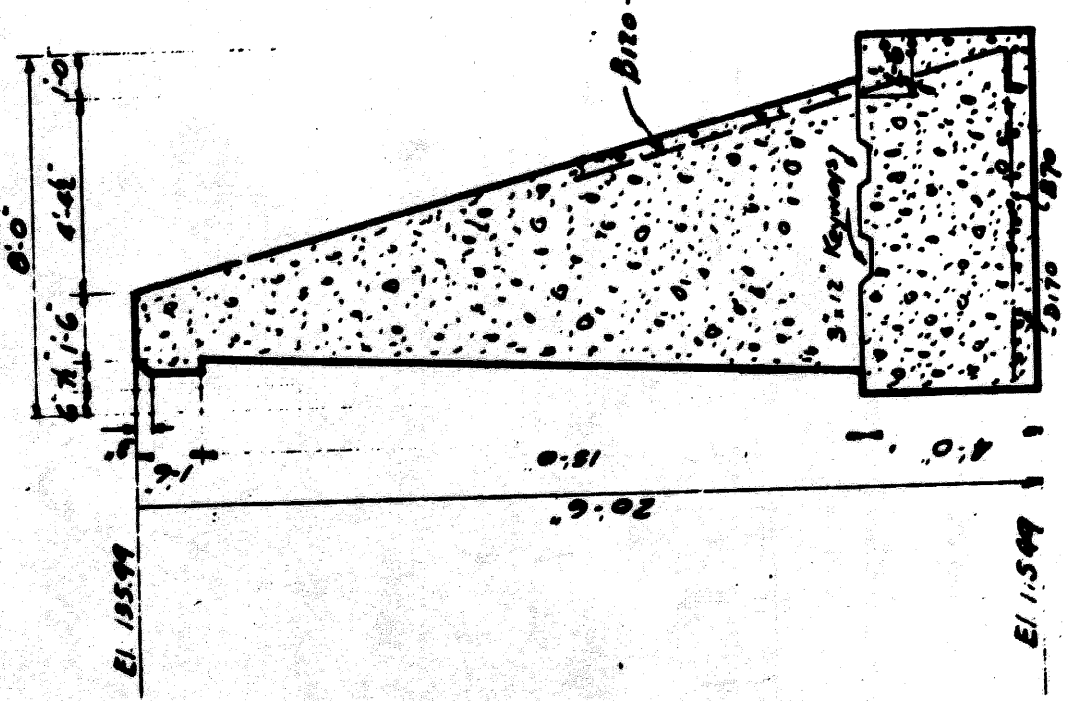
FRONT ELEVATION OF WEST ABUTMENT



SECTION CC
PIERS TO BE REMOVED & REPLACED BY TEMP. TRETTLES SEE DETAILS SH.#12



SECTION BB



SECTION DD
EXIST. VIEW EE SIMILAR

COPY
EXISTING BRIDGE DETAILS
(NOT FOR CONSTRUCTION)

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: [Signature]

JOB No. PW 990(1)

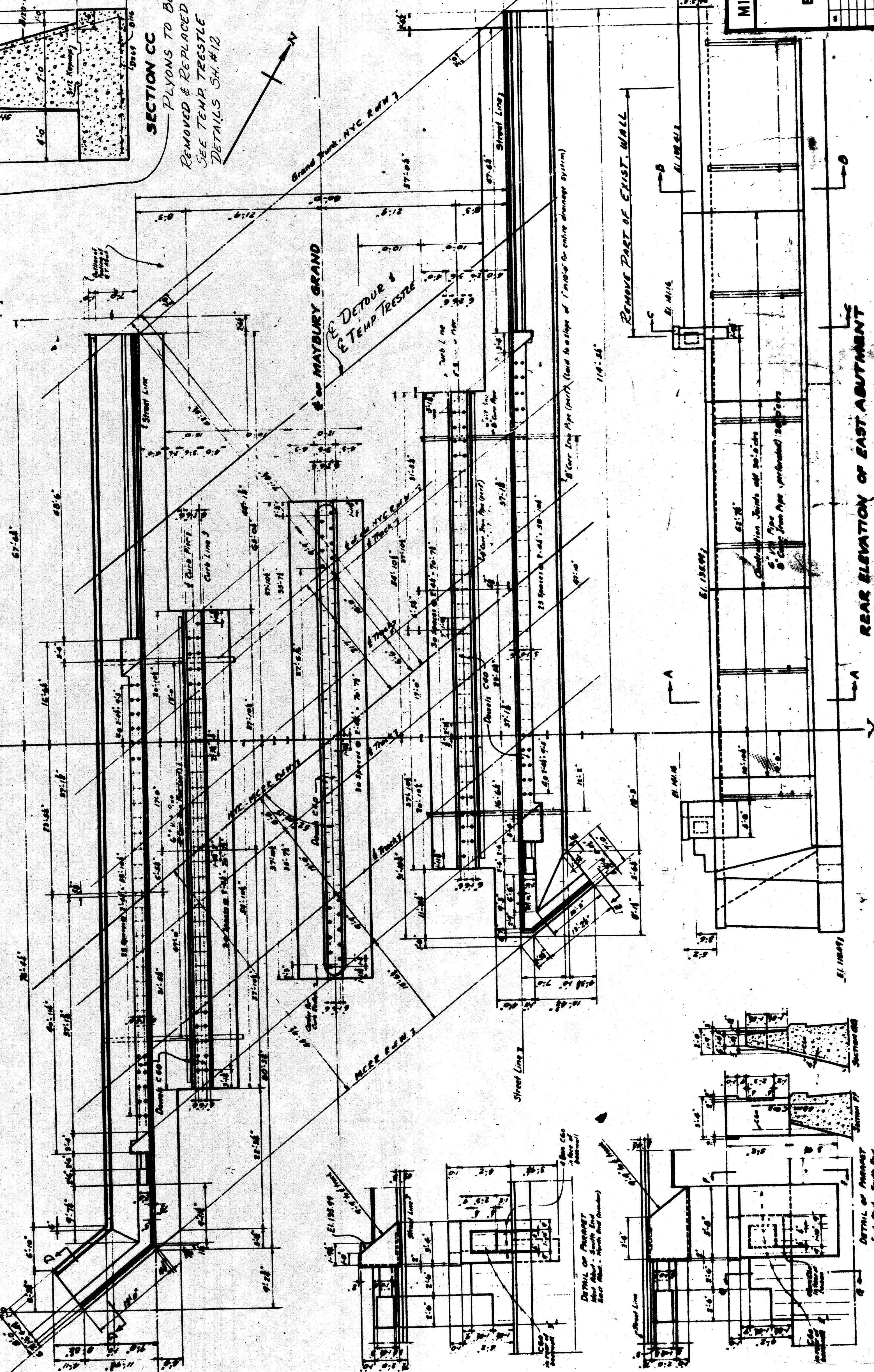
MICHIGAN STATE HIGHWAY DEPARTMENT

NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFERIS FREEWAY IN DETROIT

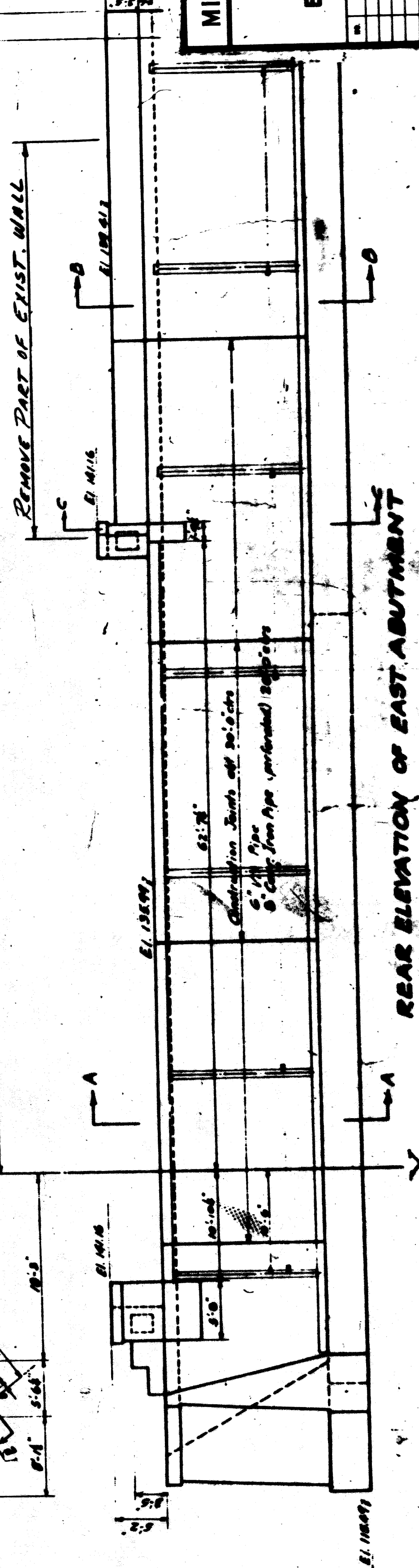
EXISTING BRIDGE DETAILS

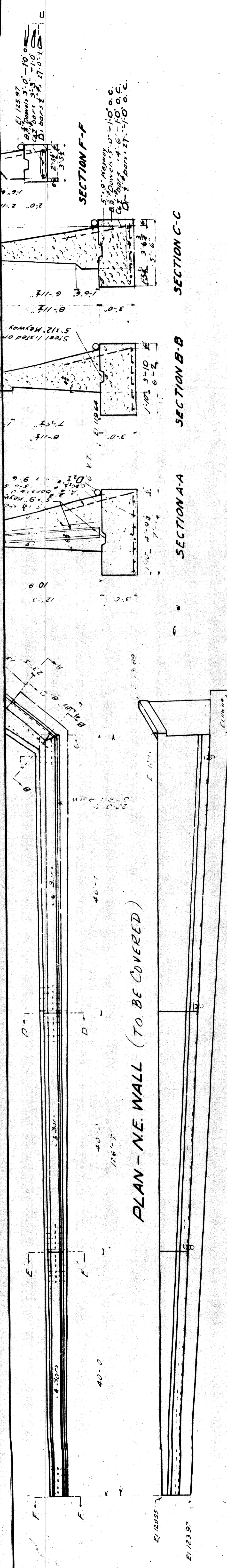
NO.	REVISIONS

X03 of 82124A



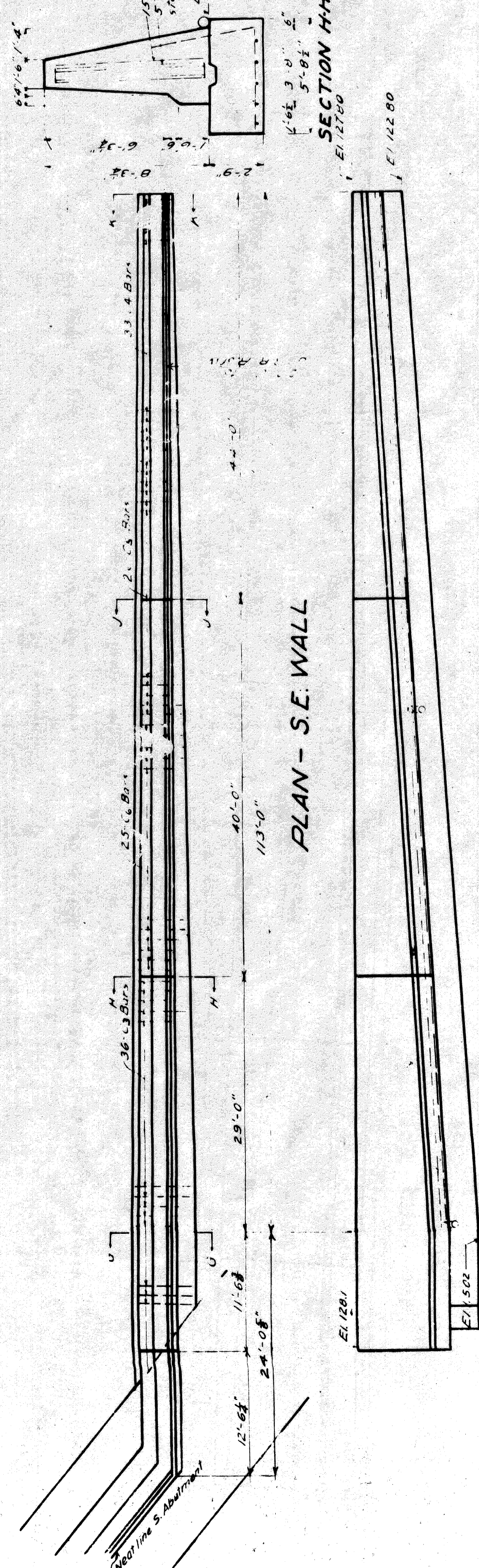
REAR ELEVATION OF EAST ABUTMENT





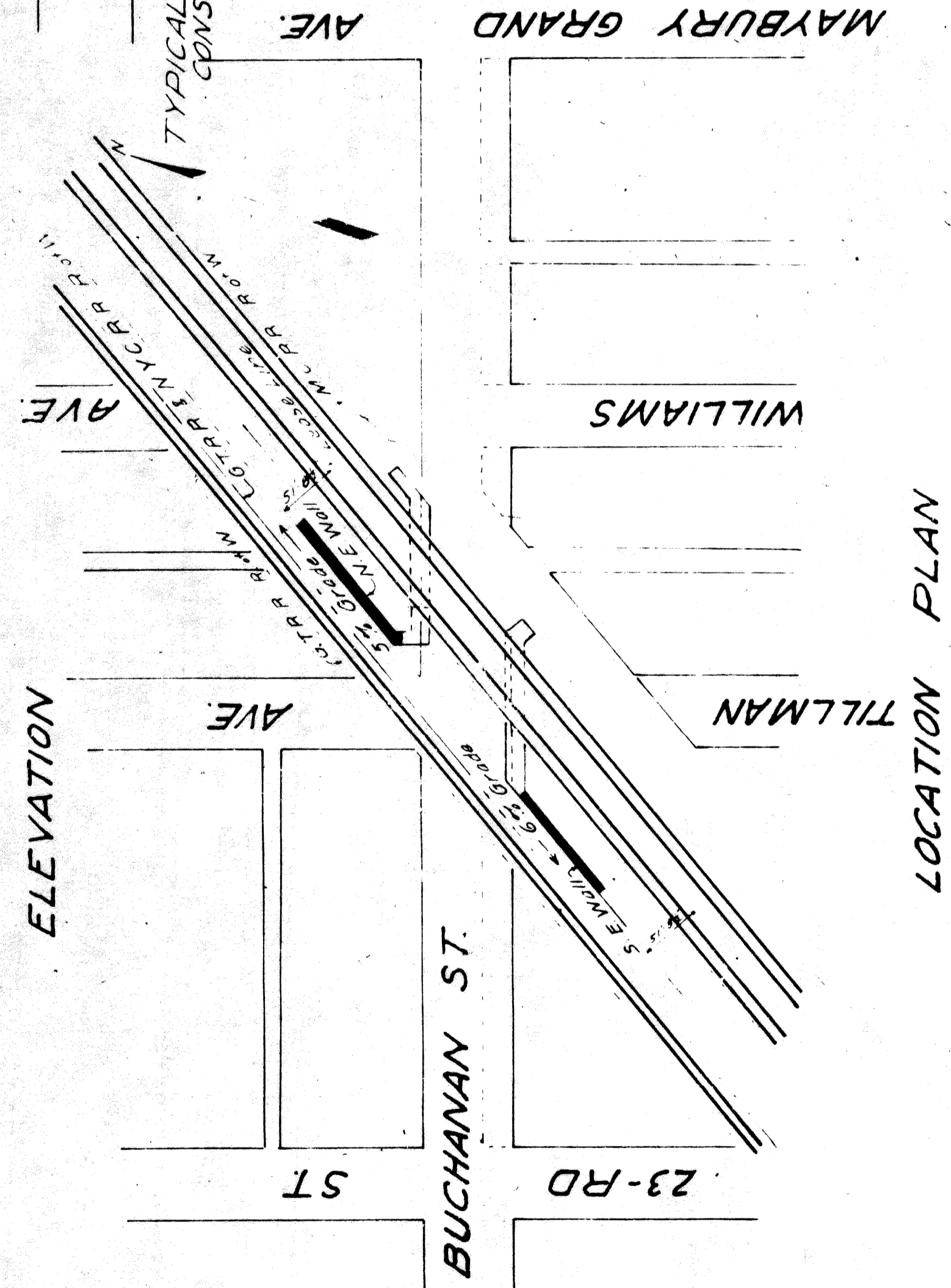
PLAN - NE WALL (TO BE COVERED)

ELEVATION

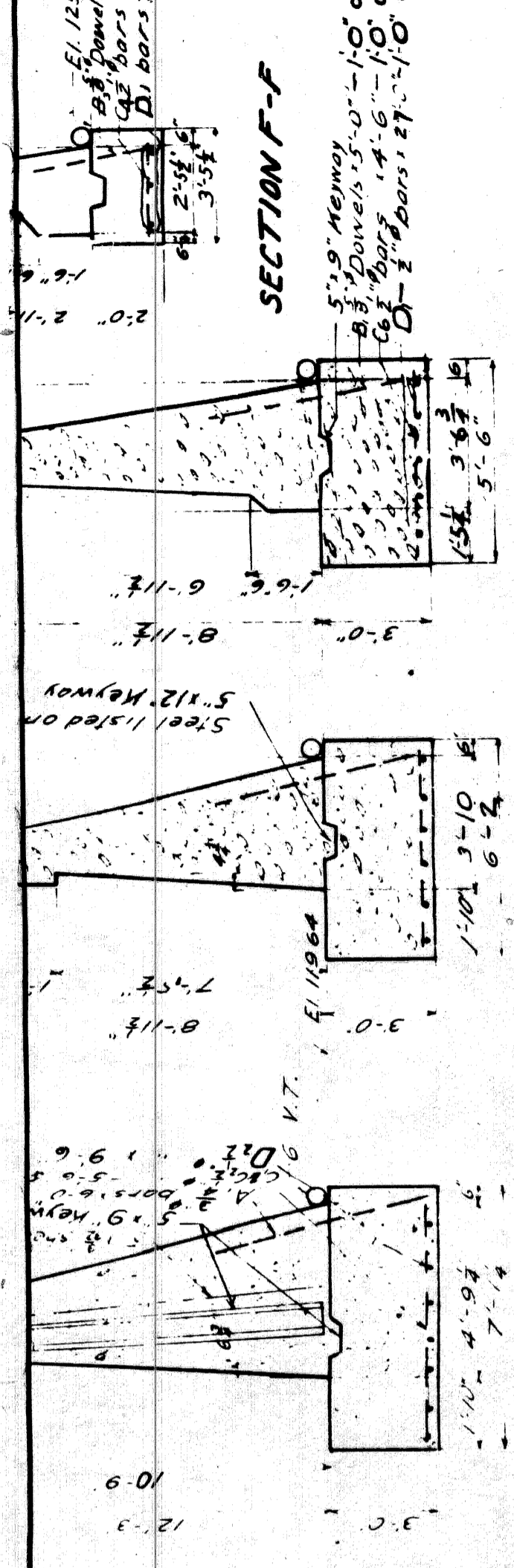


PLAN - SE WALL

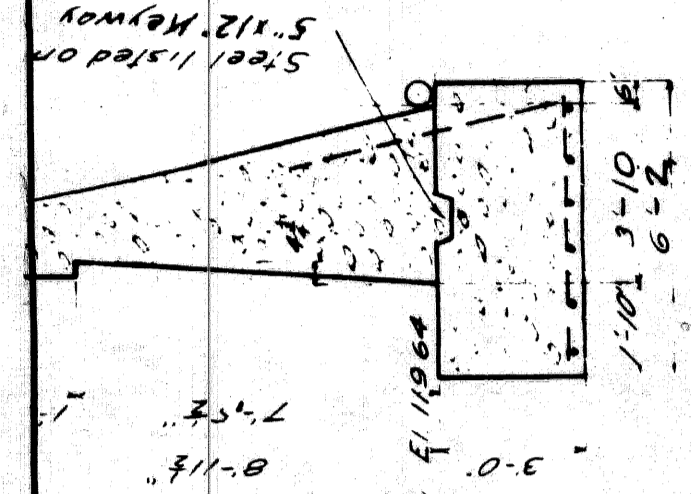
ELEVATION



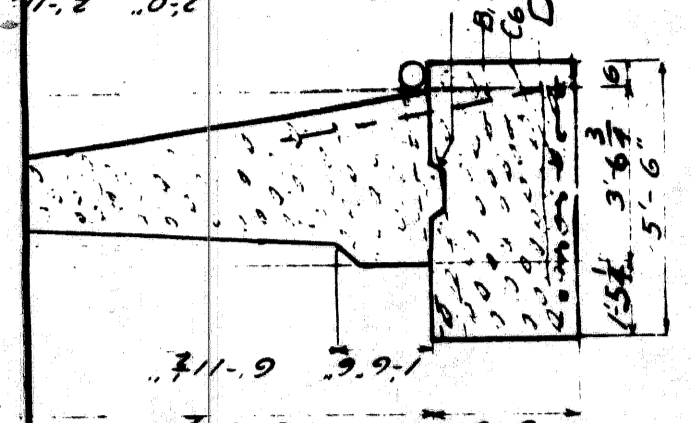
LOCATION PLAN



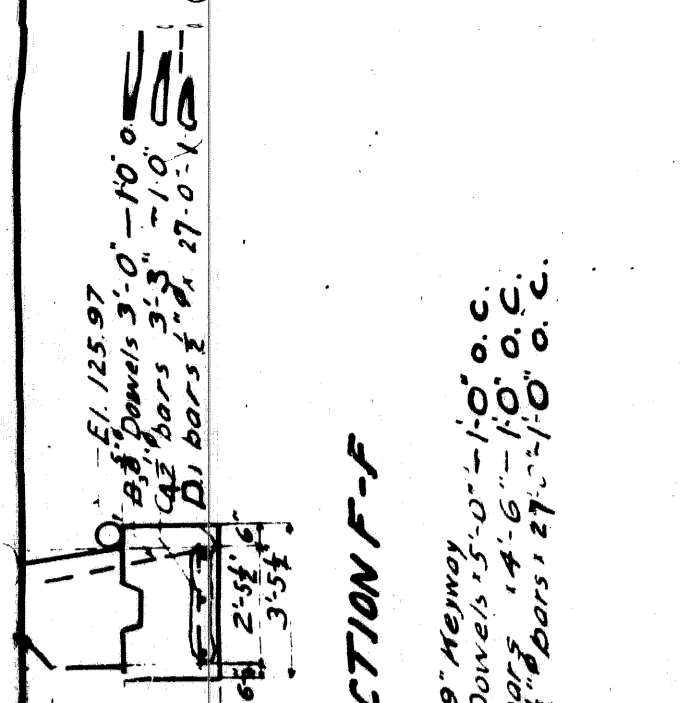
SECTION A-A



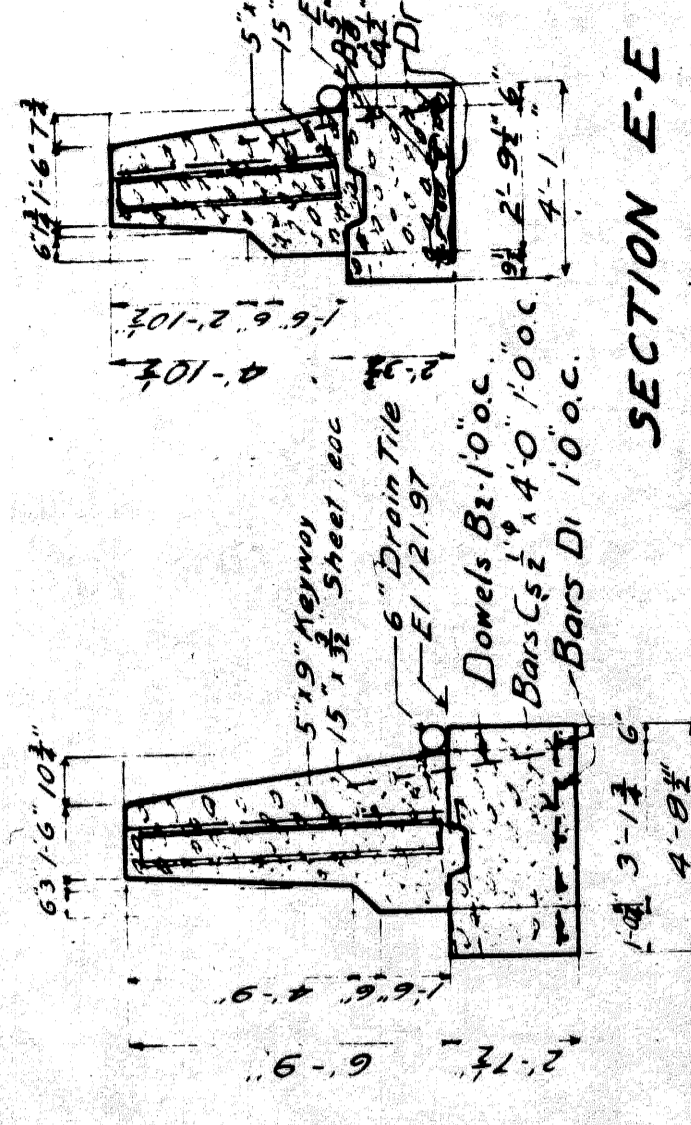
SECTION B-B



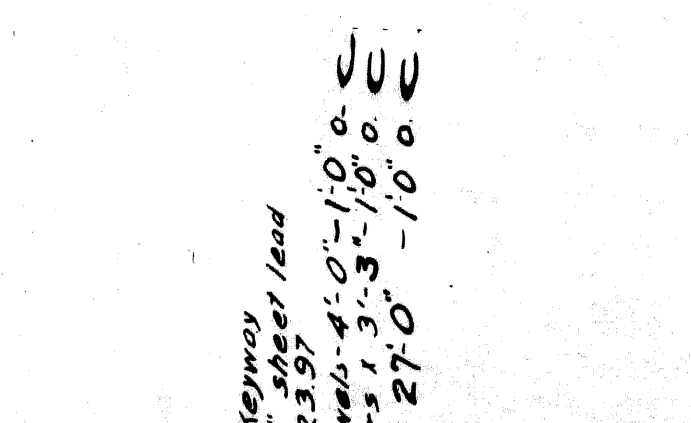
SECTION C-C



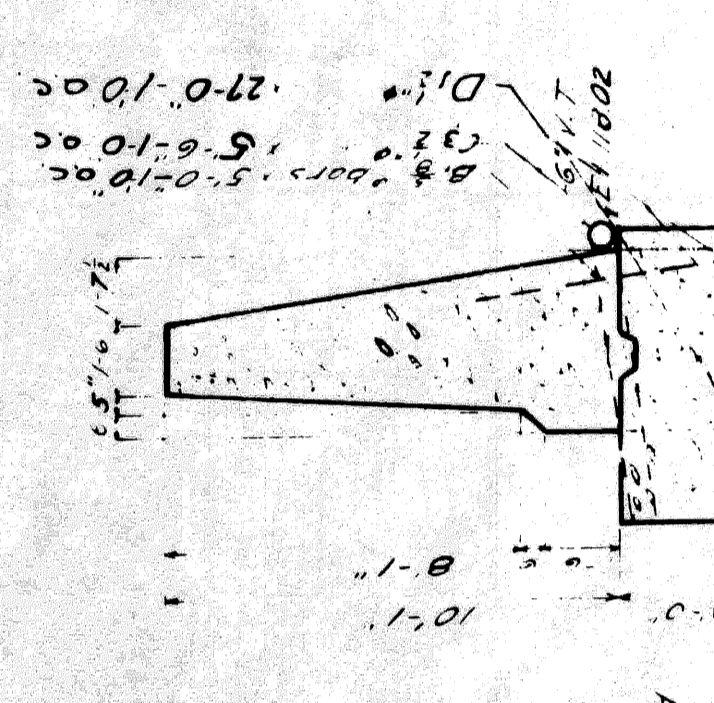
SECTION F-F



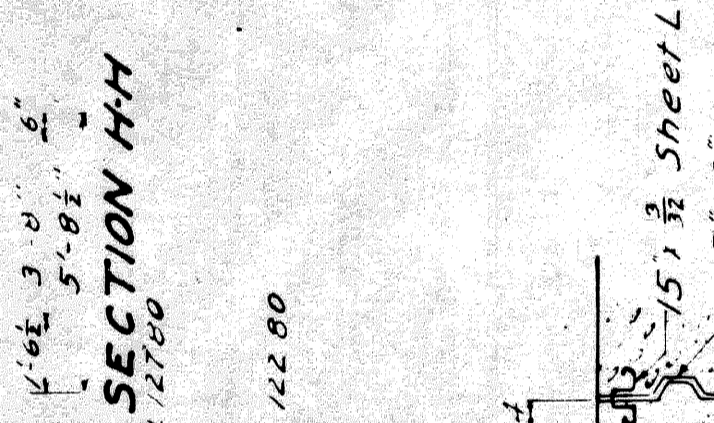
SECTION D-D



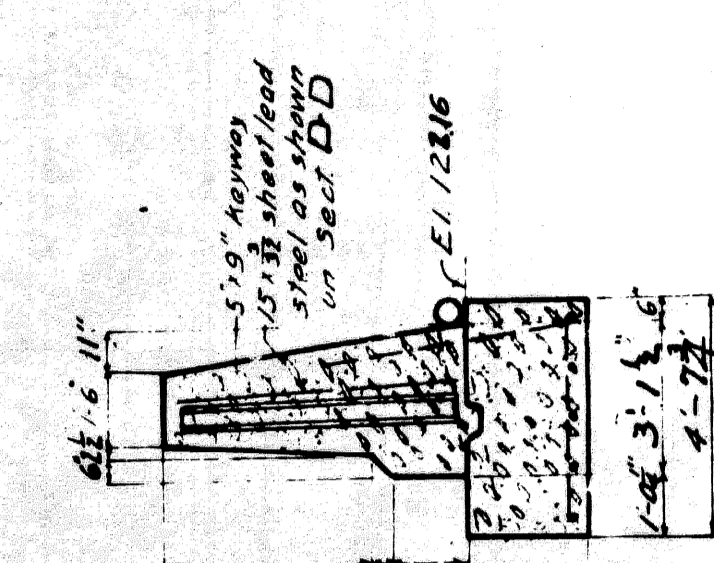
SECTION E-E



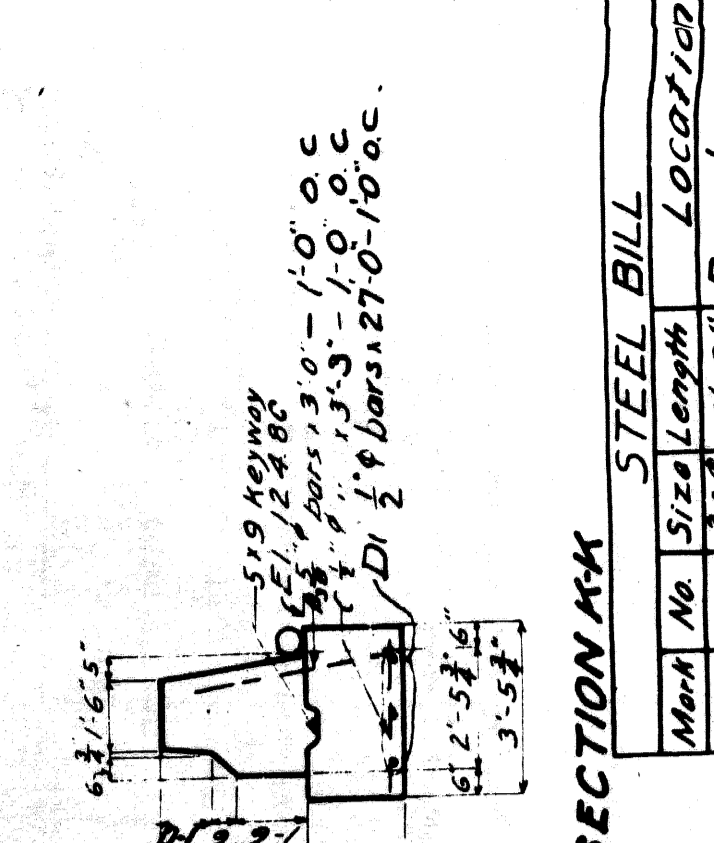
SECTION G-G



SECTION H-H



SECTION J-J



SECTION K-K

SPECIFICATIONS
 CONCRETE: Mix - 1 part cement, 2 parts sand, and 4 parts pebbles. Bevel all exposed corners $\frac{1}{4}$ " unless otherwise shown. Top surfaces to have sidewalk finish. No horizontal construction joint, except at top of footing.
 STEEL: Bars shall be securely wired together at each end of each section. Splices shall lap 24 diameters and be securely wired.
 WATERPROOFING: Back of walls shall be painted with two coats of asphaltic waterproofing.

Item No.	Size	Length	Location
A	9	6'-0"	Dowels
B	122	5'-0"	"
B ₁	40	4'-0"	"
B ₂	84	3'-0"	"
C	5	5'-6"	Transverse footing
C ₁	5	6'-6"	"
C ₂	36	5'-6"	"
C ₃	73	3'-3"	"
C ₄	66	4'-0"	"
C ₅	72	4'-6"	"
D ₁	40	2'-0"	Longitudinal
D ₂	6	9'-6"	"

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFERIES FREEWAY IN DETROIT

EXISTING BRIDGE DETAILS

QUANTITIES
 CONCRETE NE Wall 603
 Footing Above footing 810

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: [Signature] ENGINEER
 JOB NO. [Blank]
 DATE [Blank]

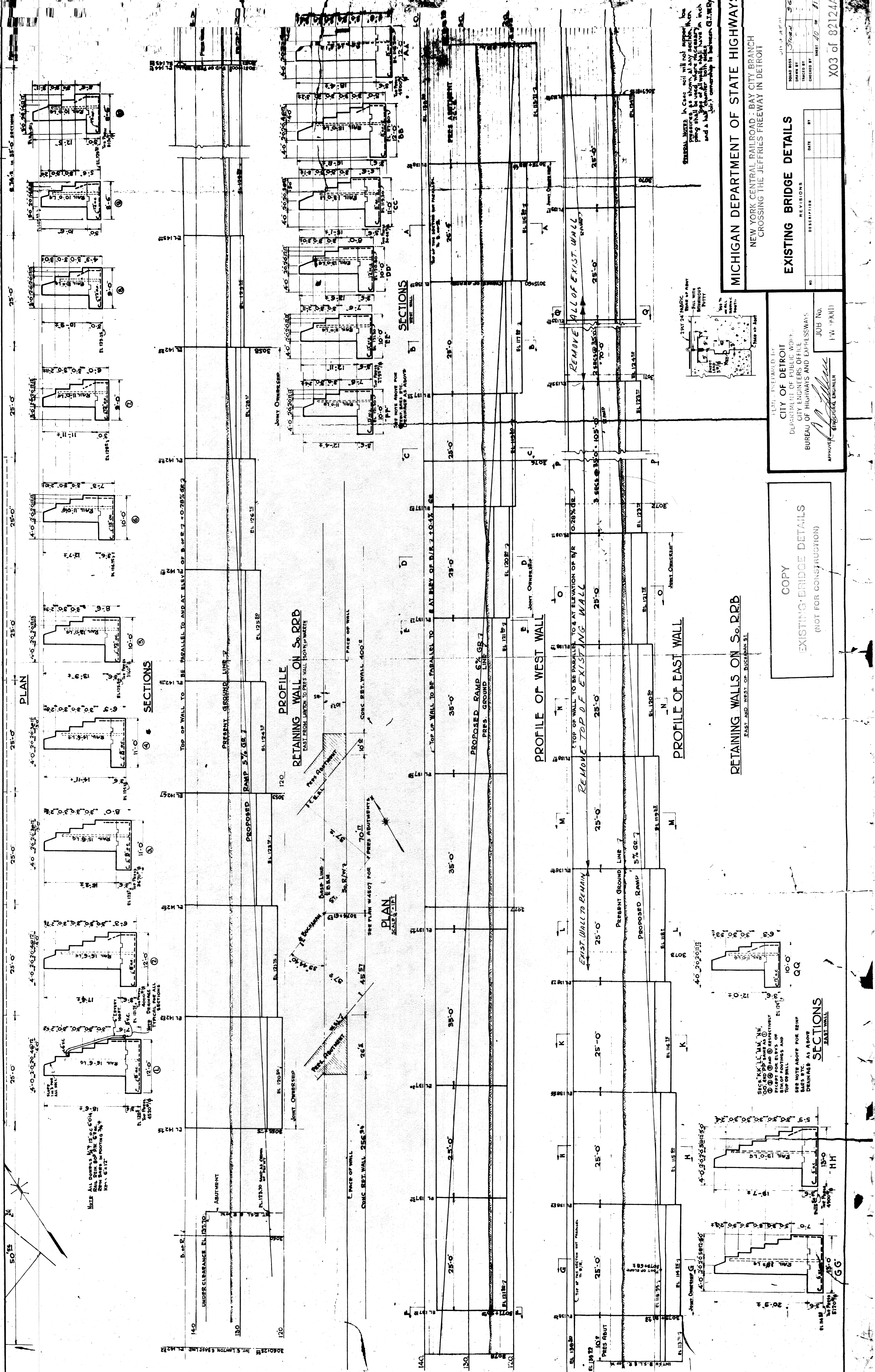
REVISIONS [Blank]

NO. [Blank] DESCRIPTION [Blank] DATE [Blank]

SHOWN WITH [Blank] DRAWN BY [Blank] CHECKED BY [Blank] SHEET 39 OF 41

X03 of 82124A

COPY
 EXISTING BRIDGE DETAILS
 (NOT FOR CONSTRUCTION)



MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

APPROVED: *[Signature]*
 CIVIL ENGINEER
 JOB NO. FW-99011

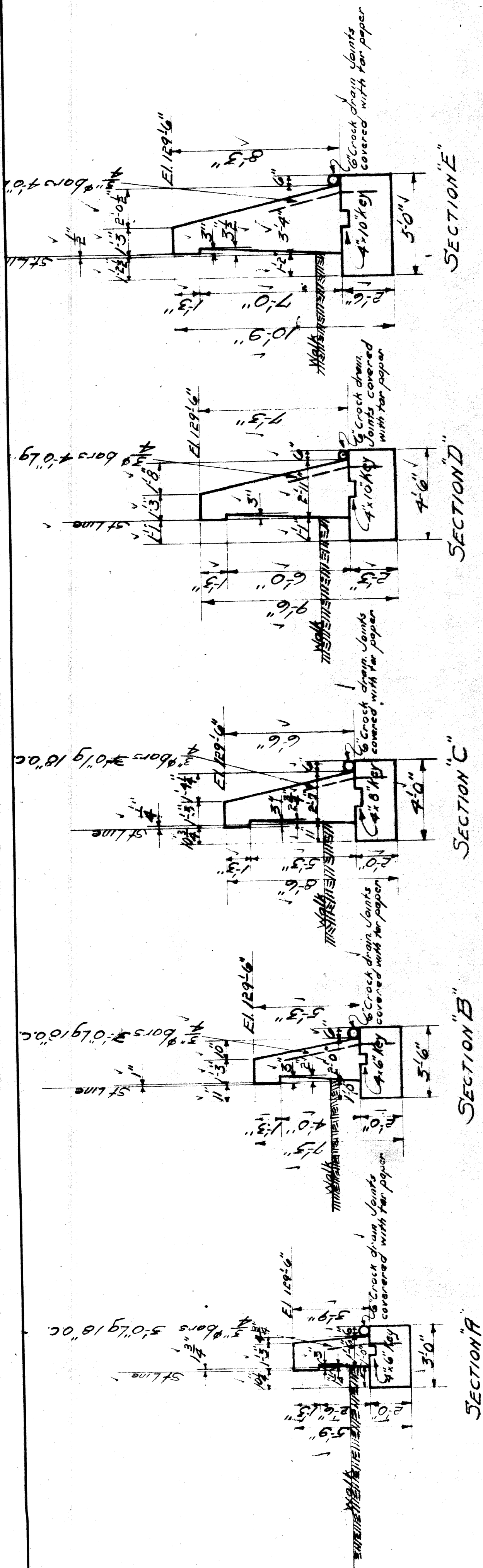
COPY
 EXISTING BRIDGE DETAILS
 (NOT FOR CONSTRUCTION)

REVISIONS

NO.	DESCRIPTION	DATE	BY
1			

GENERAL NOTES: In case soil will not support, the pressures as shown at any section, the filling shall be used where necessary, and a 14" diameter pipe shall be placed in the joint between the concrete and the soil.

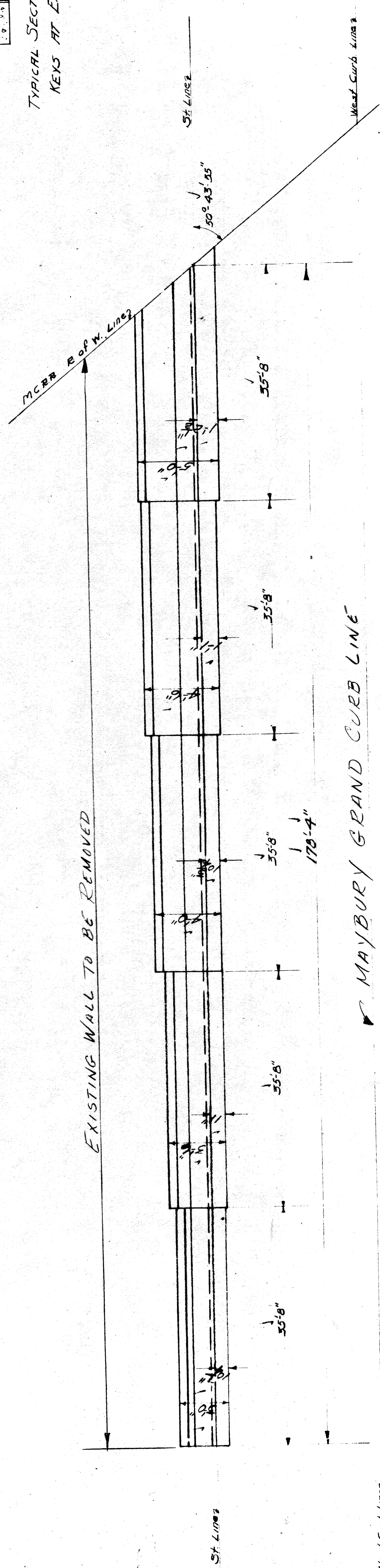
NOTE: ALL DONKEYS, WY. 12000, 14000, 16000, 18000, 20000, 22000, 24000, 26000, 28000, 30000, 32000, 34000, 36000, 38000, 40000, 42000, 44000, 46000, 48000, 50000, 52000, 54000, 56000, 58000, 60000, 62000, 64000, 66000, 68000, 70000, 72000, 74000, 76000, 78000, 80000, 82000, 84000, 86000, 88000, 90000, 92000, 94000, 96000, 98000, 100000.



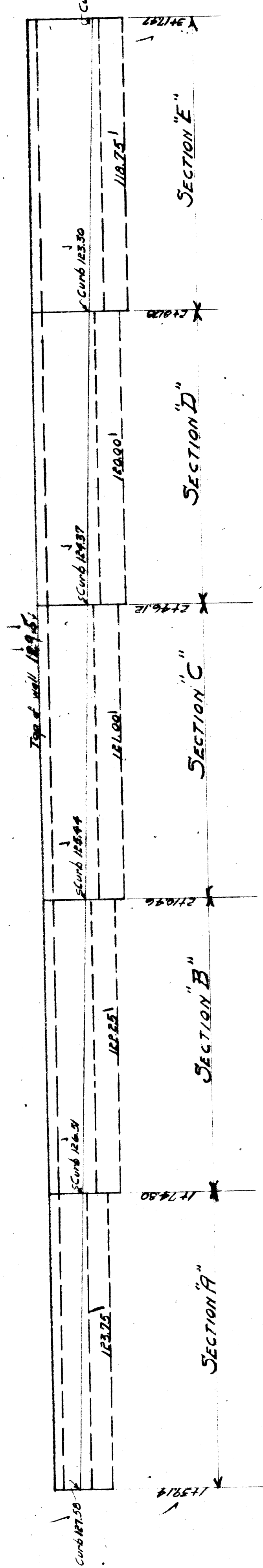
TYPICAL SECTION FOR VERTICAL KEYS AT EXPANSION JOINTS

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

QUANTITIES
 Concrete 138 Cu Yds
 Reinforcing steel 683#
 6" P. curb 178.33 FT



MAYBURY GRAND CURB LINE
 PLAN
 Scale: 1/4" = 1'-0"



ELEVATION
 Scale: 1/4" = 1'-0"

COPY
 EXISTING BRIDGE DETAILS
 (NOT FOR CONSTRUCTION)

MICHIGAN STATE HIGHWAY DEPARTMENT
 NEW YORK CENTRAL RAILROAD - RAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

EXISTING BRIDGE DETAILS

NO.	REVISIONS	DATE	BY

DESIGNED BY: [Signature]
 CHECKED BY: [Signature]
 DATE: []/ []/ []

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEER OFFICE
 BUREAU OF HIGHWAYS AND FREEWAYS
 APPROVED: [Signature]
 CIVIL ENGINEER
 JOB No. []
 DRAWING No. []

X03 of 82124A

GENERAL NOTES:
DESIGN: Current A.R.E.A. Specifications for Steel Railway Bridges.
LOADING: Coopers E-72, with Impact & rolling effect - $[(\frac{600}{L} + 16) + 20]\%$.
FABRICATION & ERECTION: Current A.R.E.A. Specifications for Steel Railway Bridges.

WELDING: All welding shall conform to M.S.H.D. Standard Specifications and to the current A.W.S. Specifications for Welded Highway and Railway Bridges. Radiographs and Magnetic Particle Inspection will be required. (See Supplemental Specifications).
SHOP CONNECTIONS: All shop connections shall be riveted and welded as shown on the plans. Rivets shall be $\frac{3}{4}$ " and shall conform to current A.R.E.A. Specifications.
FIELD CONNECTIONS: Field connections shall be bolted with $\frac{3}{4}$ " diameter high strength bolts, unless otherwise shown. Two washers are required for all high strength bolts.

OPEN HOLES: Open holes shall be $\frac{1}{8}$ " unless otherwise shown. Drilling, punching and reaming shall be done in accordance with the current A.R.E.A. Specifications.

SHOP PAINT: Shop painting shall be in accordance with M.S.H.D. Standard Specifications. In addition, the top surfaces of masonry plates and the curved bearing surfaces of rockers & pedestals shall be coated in accordance with the requirements for machine finished surfaces.

SOLE PLATES: Sole plates $\frac{3}{4}$ " or more in thickness may be built up by welding together plates not less than $\frac{1}{8}$ " in thickness. Edges must be beveled, and welded with a continuous weld for the full perimeter. Welds shall be ground flush with faces of plates.
FIELD PAINTING: Field Painting shall be according to M.S.H.D. Standard Specifications. Field painting for structural steel shall be one complete coat of paint No. 2A(2) and one complete coat of paint No. 5B.

SPLICING: The top flange plate in spans 1 & 2 may be spliced, at the midpoint of the girder and one foot from any web splice. The location of the flange splice shall be alternated on adjacent girders.

STRUCTURAL STEEL MATERIALS: Deck and side plates shall be either wrought iron or a steel which conforms to the current ASTM Specification for weatherable atmospheric corrosion resistant A 242 steel. The steel for these plates shall have 4 to 6 times the corrosion resistance of ASTM-A7 steel and shall be suitable for welding in accordance with Section 4(d) of ASTM designation A 242. Steel for girders, diaphragms and bracing shall be ASTM A-36. Steel in anchor bolts may be ASTM A-307.

CAMBER: The girders shall not be cambered.

REAMING: Holes for shop rivets at end stiffeners, bent plates connecting end diaphragms and intermediate stiffeners connected to diaphragms must be sub-punched or subdrilled $\frac{1}{16}$ inch less and reamed to size with the members assembled. Holes for high strength field bolts connecting diaphragms must sub-punched or subdrilled $\frac{1}{16}$ inch less and reamed to a template or with parts assembled. All intermediate stiffeners holes in stiffeners will be punched full size; holes in web will be sub-punched $\frac{1}{16}$ inch less and reamed assembled.

QUANTITIES
 Structural Steel - Furnishing & Fabricating
 Note: The quantity "Structural Steel" -
 Furnishing & Fabricating includes:
 Steel - A 36
 Lead * A 542
 Lbs.

Structural Steel - Erection
 Field Painting for Structural Steel is to be Lump Sum

* The quantity "Lead" includes bearing lead and deck plate flashings.

Work this sheet with sheets 28 thru 31

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD, BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

STRUCTURAL STEEL DETAILS

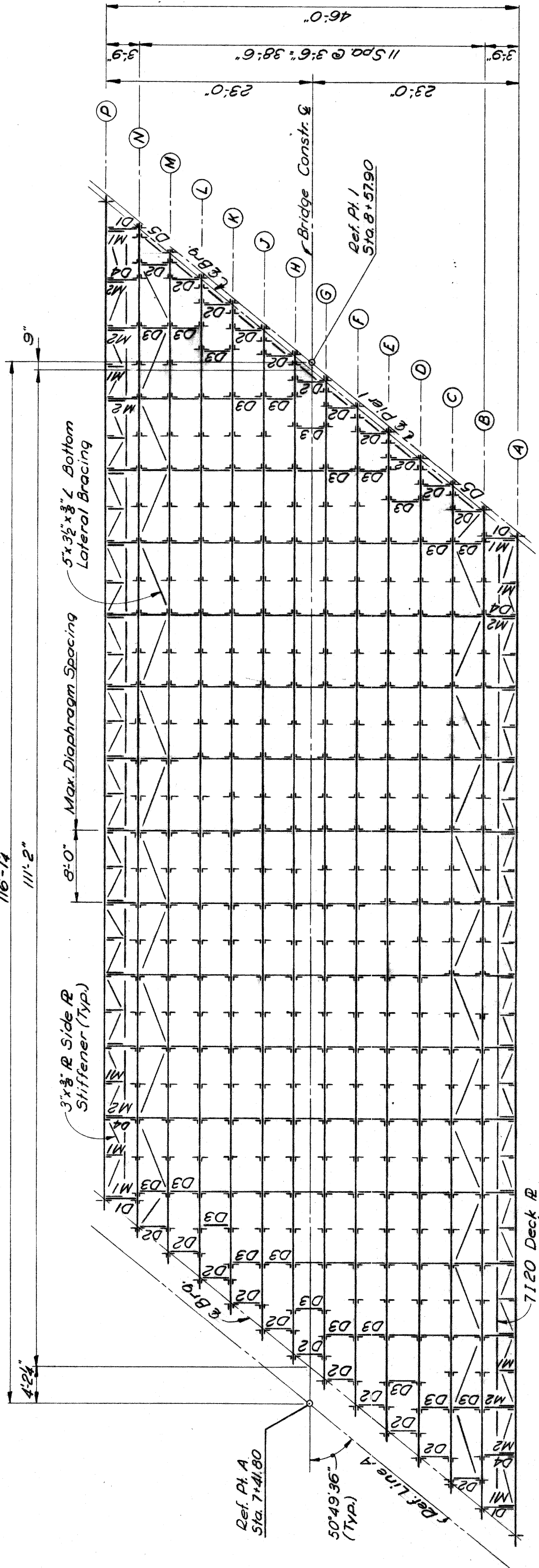
NO.	REVISIONS	DATE	BY

APPROVED: _____
 STRUCTURAL ENGINEER

PLANS PREPARED BY:
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

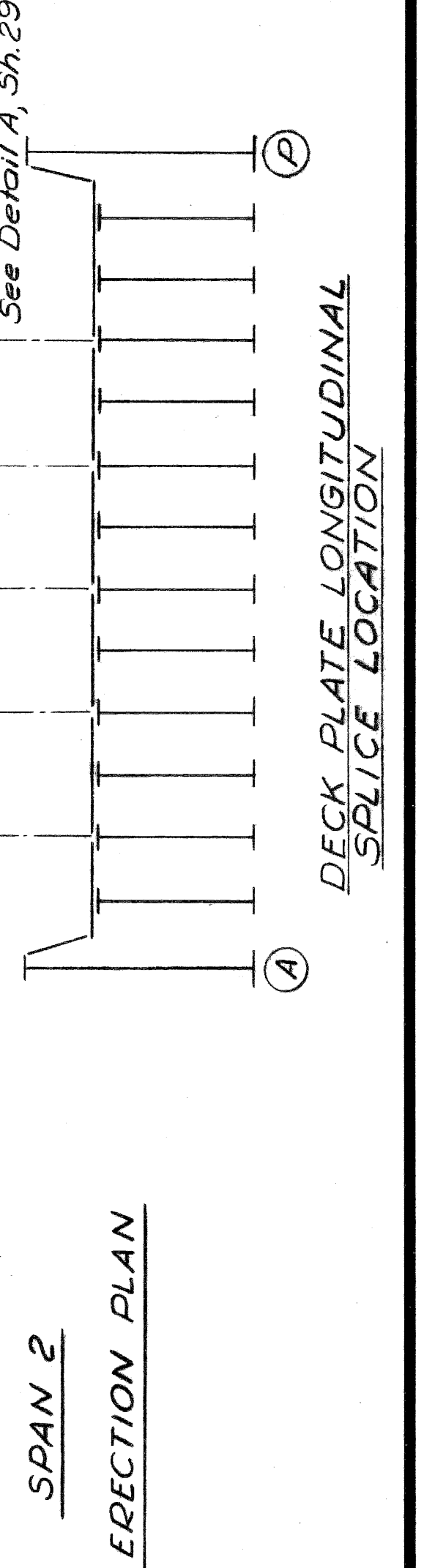
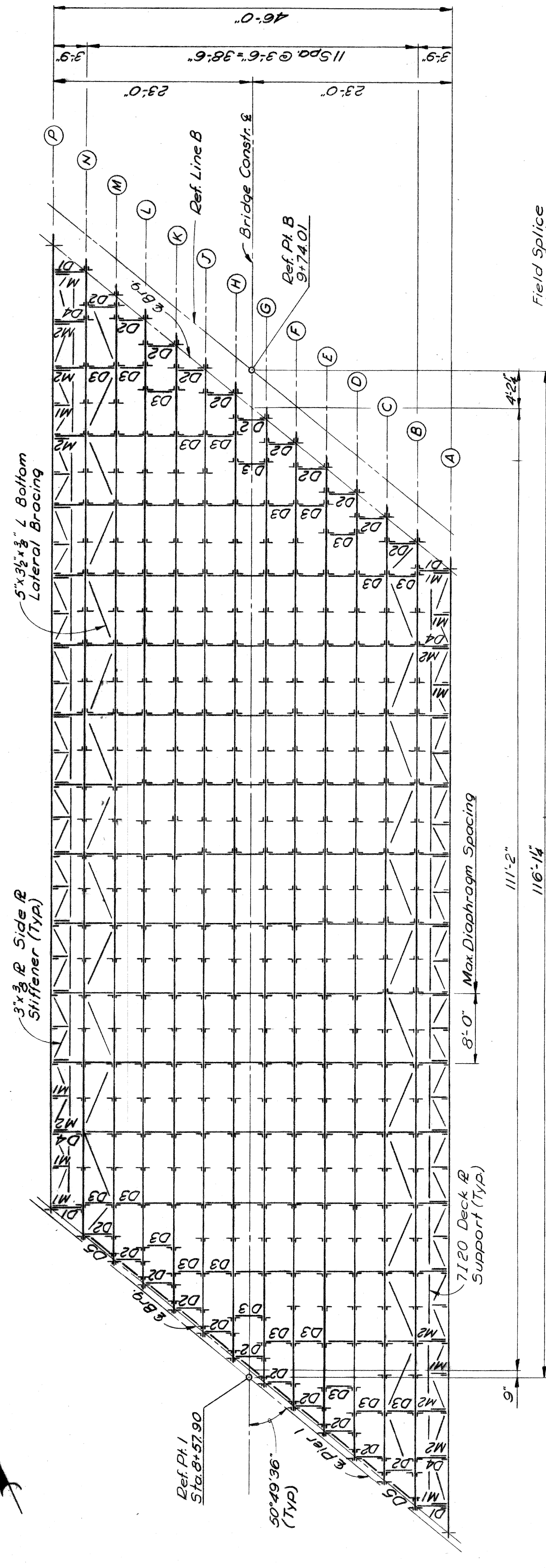
JOB NO. _____
 PW 990(1)

CITY OF DETROIT
 ROAD DISTRICT 7
 DRAWN BY T. Baker
 CHECKED BY
 SHEET 27 OF 41
 X03 of 82124A

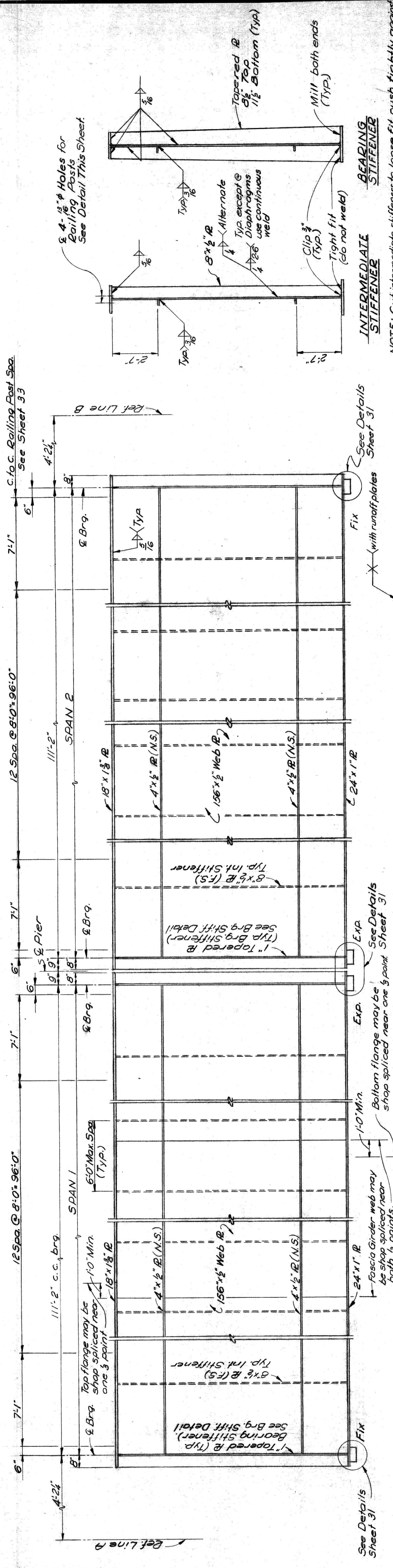


SPAN 1

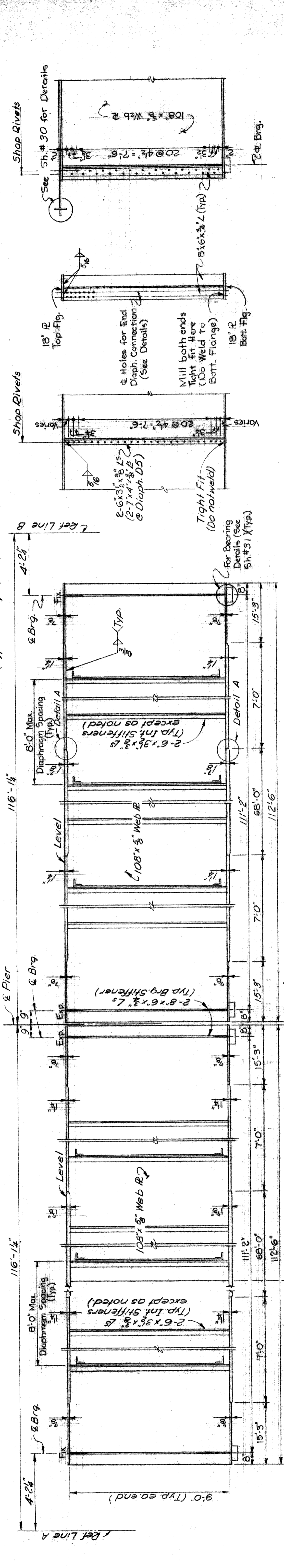
Note: Max. Interior Stiffener Spacing = 6'-0"
 The Fabricator may orient the interior stiffeners in the direction which is convenient to him.



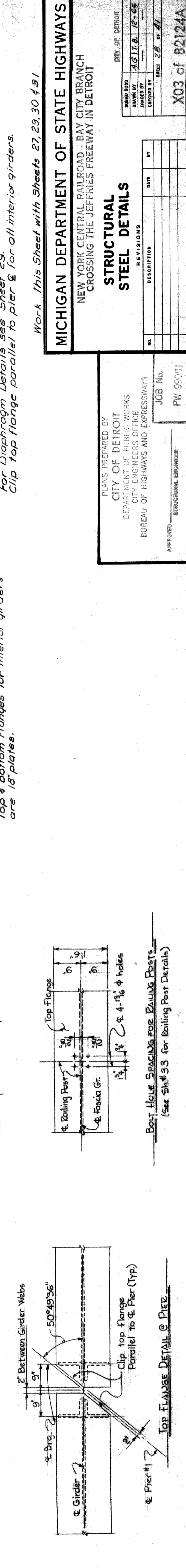
DECK PLATE LONGITUDINAL
 SPLICE LOCATION



ELEVATION SOUTH FASCIA GIRDER (LOOKING NORTH)



ELEVATION OF INTERIOR GIRDERS



Work This Sheet with Sheets 27, 29, 30 & 31

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

STRUCTURAL STEEL DETAILS

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____
 STRUCTURAL ENGINEER

JOB No. PW 99001

REVISIONS

NO.	DESCRIPTION	DATE	BY

DESIGNED BY: A.S.T.B. 12-66
 CHECKED BY: SHEET 28 OF 41
 CITY OF DETROIT

X03 of 82124A

NOTE: Interior girder intermediate stiffeners & Diaphragm D5 are to be 2-5 1/4 x 8. Top & Bottom Flanges for interior girders are 18" plates.

NOTE: For location and spacing of stiffeners and diaphragms see Erection Plan. For Sole Plate and Bearing Details see Sheet 31. For Diaphragm Details see Sheet 29. Clip top flange parallel to pier & for all interior girders.

NOTE: Cut intermediate stiffeners to loose fit, push tightly against tension flange, weld to web, weld to compression flange. Ends of bearing stiffeners to be milled or ground to even bearing on flange.

FASCIA GIRDER STIFFENERS

BEARING STIFFENER

INTERMEDIATE STIFFENER

NOTE: Interior girder intermediate stiffeners & Diaphragm D5 are to be 2-5 1/4 x 8. Top & Bottom Flanges for interior girders are 18" plates.

NOTE: For location and spacing of stiffeners and diaphragms see Erection Plan. For Sole Plate and Bearing Details see Sheet 31. For Diaphragm Details see Sheet 29. Clip top flange parallel to pier & for all interior girders.

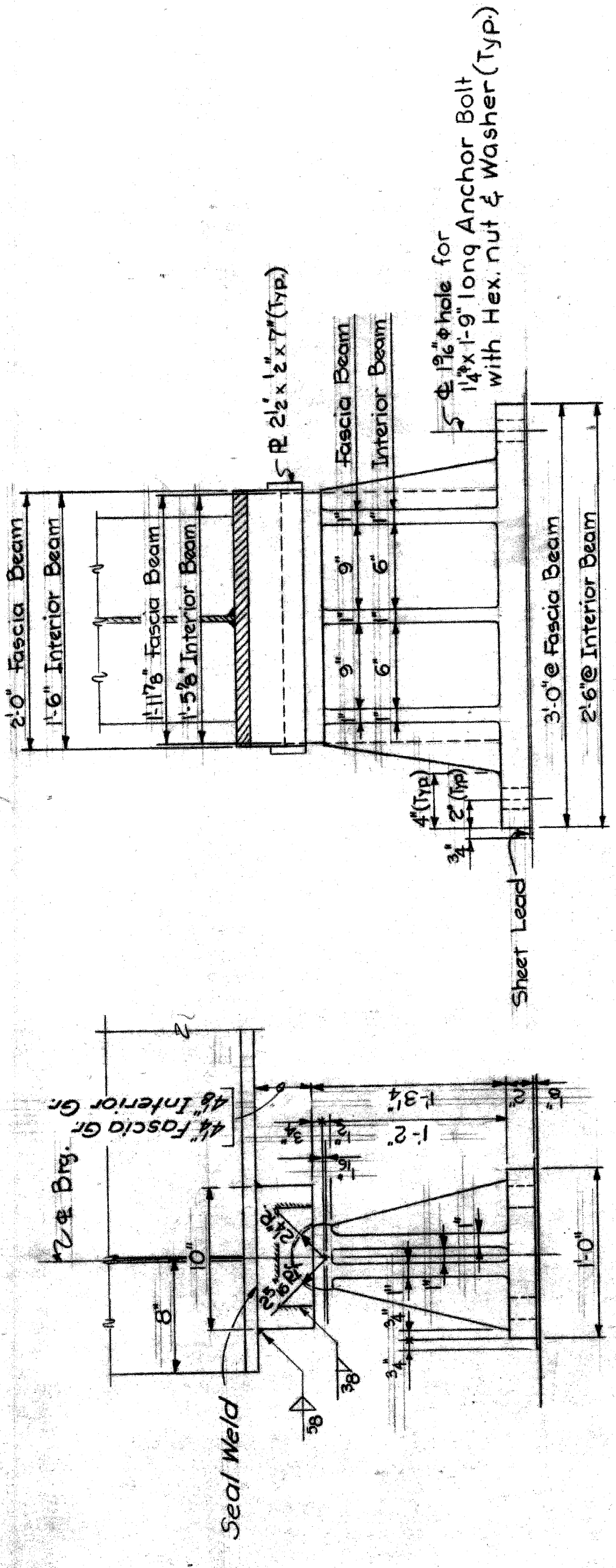
NOTE: Cut intermediate stiffeners to loose fit, push tightly against tension flange, weld to web, weld to compression flange. Ends of bearing stiffeners to be milled or ground to even bearing on flange.

FASCIA GIRDER STIFFENERS

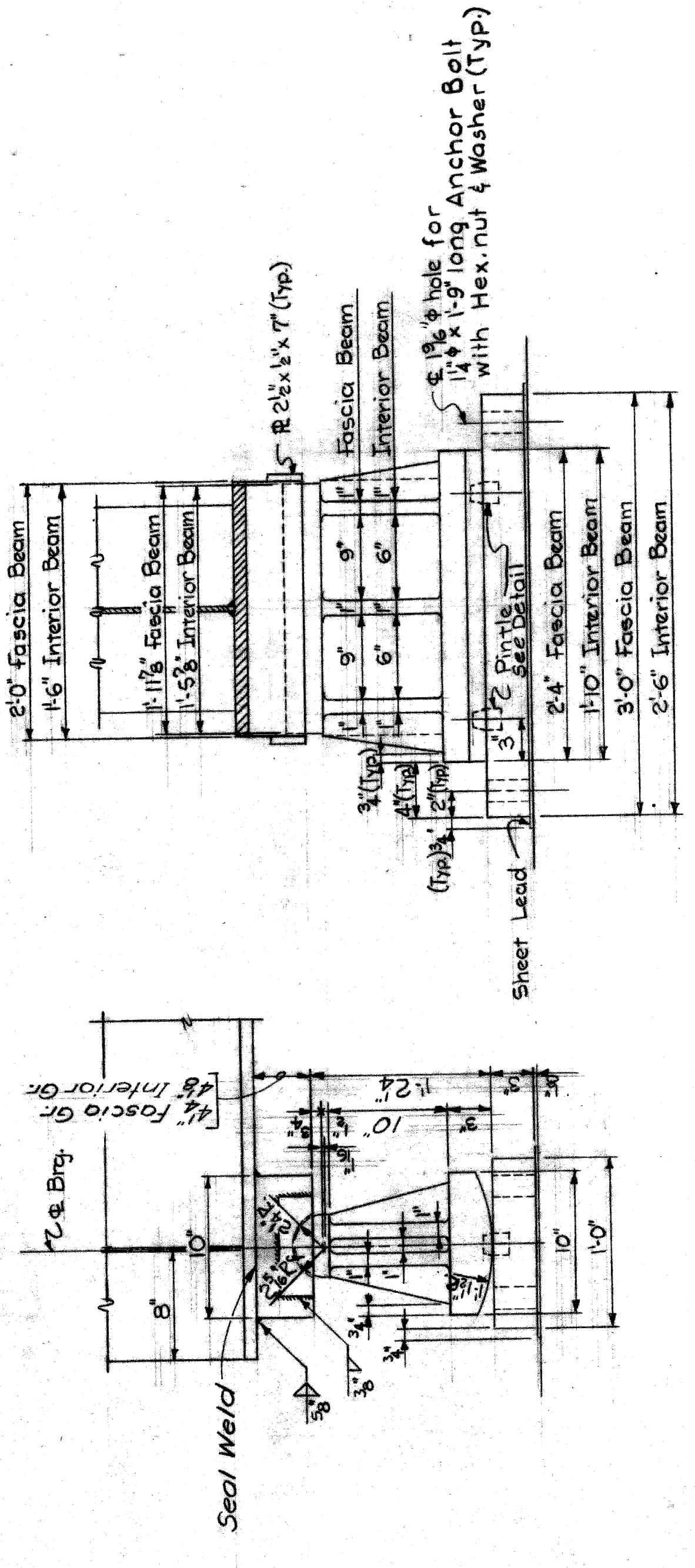
BEARING STIFFENER

INTERMEDIATE STIFFENER

CORRECTIONS FOR AT THE BUREAU OF HIGHWAYS TO BE CHECKED AND APPROVED

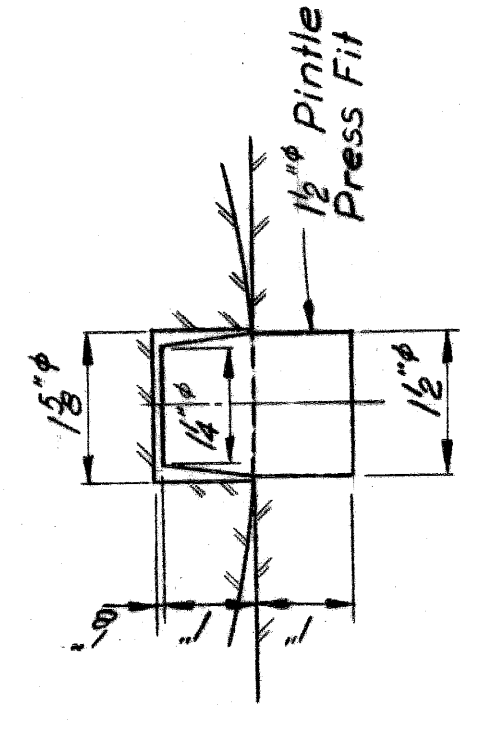


FIXED PEDESTAL



EXPANSION ROCKER

NOTES:
 Rockers & Pedestals shall be cast steel.
 All castings shall have inside corners filleted
 and outside corners rounded.
 Steel castings shall conform to the current AREA Specifications.
 Sheet lead is included in weight of Structural Steel.



PINTLE DETAIL

Work this sheet with sheets 27 thru 30

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

**STRUCTURAL
 STEEL DETAILS**

CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____
 STRUCTURAL ENGINEER

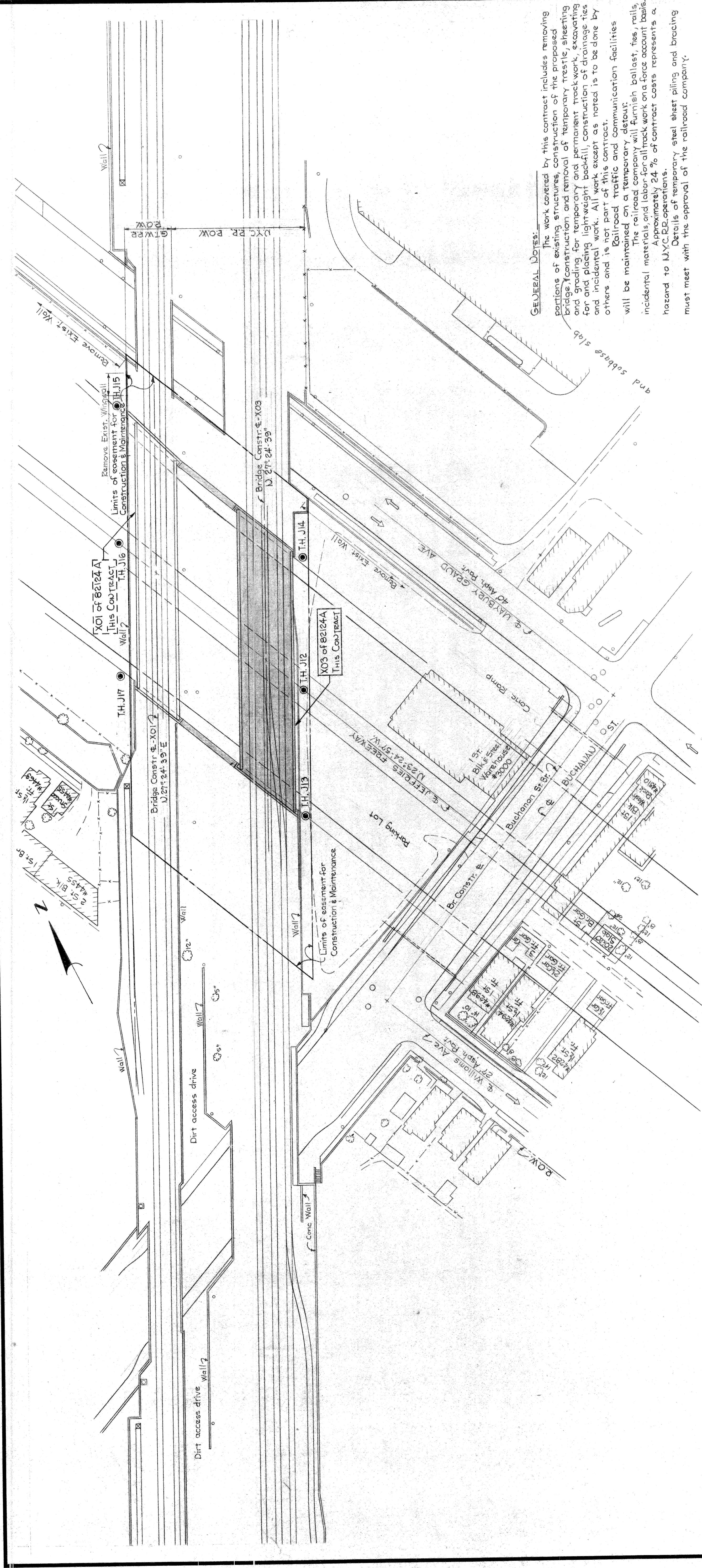
JOB No. PW 9901

REVISIONS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 DRAWN BY **AG** 12-26
 CHECKED BY _____
 SHEET **31** OF **41**

X03 of 82124A



GENERAL NOTES:
 The work covered by this contract includes removing portions of existing structures, construction of the proposed bridge construction and removal of temporary trestle, sheeting and grading for temporary and permanent track work, excavating for and placing light-weight back-fill, construction of drainage ties and incidental work. All work except as noted is to be done by others and is not part of this contract.
 Railroad traffic and communication facilities will be maintained on a temporary detour.
 The railroad company will furnish ballast, ties, rails, incidental materials, and labor for all track work on a force account basis. Approximately 24% of contract costs represents a hazard to N.Y.C.R.R. operations.
 Details of temporary steel sheet piling and bracing must meet with the approval of the railroad company.

LETTING DATE - Oct. 67
 4
 PRELIMINARY PLAN A - DATED JULY 14, 1966

MICHIGAN STATE HIGHWAY DEPARTMENT
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

GENERAL PLAN OF SITE

APPROVED: _____ DESIGN SUPERVISING ENGINEER
 APPROVED: _____ ENGINEER OF DESIGN - CONSULTANTS

CITY OF DETROIT
 PLANS PREPARED BY: _____
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: _____ STRUCTURAL ENGINEER
 JOB No. PW 990(1)
 REVISIONS: _____
 DESCRIPTION: _____ DATE: _____ BY: _____

CITY OF DETROIT
 DRAWN BY: STANLEY ALEXANDER
 CHECKED BY: W.A.L.
 SHEET: 1 OF 7
 JULY 66

X03 of 82124A

SURVEY PLAN
 Scale: 1"=40'-0"

LOG OF SOIL BORINGS

T.H. J-12

130 -
 5-1120
 5-1126
 5-1368
 5-1110
 5-405
 5-210
 5-290
 5-260
 5-260
 5-215
 5-160
 5-350
 2-83
 P
 2-83
 P
 1-83
 P
 3-84
 P
 5-315
 4-84
 2-821 10
 4-836
 4-836
 5-850 0
 5-870
 5-850-10
 5-872

Fill (cinders, concrete, wood, clay & miscellaneous).
 Stiff vari-colored clay, some sand, trace of gravel.
 Medium gray clay, some sand, few gravel, few large gravel.
 Medium to soft gray clay, trace of sand, few gravel, small seams, and partings.
 Medium gray clay, some sand, gravel, small seams of sand.
 Compact medium to fine gray sand, seams of clay.
 Very compact coarse to medium gray clay, large gravel.
 Very hard sandy gravelly gray clay, large gravel, partings, small boulders & seams of fine sand.
 Broken limestone fragments, some clay, sand & gravel.
 Refusal

Bott. Fig. Pier #1
 X03 Elev. 104.00

T.H. J-13

130 -
 4-83
 5-1014 120
 5-1224
 4-832
 P
 5-540
 P
 5-345
 P
 5-220
 P
 5-240
 P
 5-240
 P
 5-205
 P
 5-160
 P
 5-160

Fill (cinders, clay, bricks and concrete).
 Medium, vari-colored sandy clay, trace of gravel.
 Stiff brown sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Soft gray sandy clay, trace of gravel.
 Soft gray sandy clay, trace of gravel.
 End of boring.

Bott. Fig. Abut. A
 X03 Elev. 102.50

T.H. J-14

130 -
 12-83
 5-1320
 2-818 120
 5-1182
 3-814
 P
 5-650
 P
 5-285
 P
 100
 5-205
 P
 5-290
 P
 5-315
 P
 5-175
 P
 5-345
 P
 5-260
 P
 5-260

Fill (cinders, sandy clay, bricks & concrete).
 Soft vari-colored sandy clay, trace of gravel.
 Medium, vari-colored sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Soft gray sandy clay, trace of gravel.
 Soft gray sandy clay, trace of gravel.
 Medium gray sandy clay, some silty seams.
 End of boring.

Bott. Fig. Abut. B
 X03 Elev. 105.00

T.H. J-15

130 -
 3-85
 5-740 120
 2-815
 P
 5-315
 P
 5-205
 P
 100
 5-195
 P
 5-290
 P
 5-315
 P
 5-175
 P
 5-345
 P
 5-260
 P
 5-260

Fill sand, bricks & clay.
 Loose brown fine & medium sand.
 Medium, vari-colored sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Soft gray sandy clay, trace of gravel.
 Very compact fine gray sandy seams of sand and gravel.
 Refusal

Bott. Fig. Abut. B
 X01 Elev. 107.50

T.H. J-16

130 -
 5-86
 4-814 120
 5-1800
 3-415
 4-810
 5-205
 P
 5-230
 P
 100
 5-140
 P
 5-435
 P
 5-350
 P
 5-175
 P
 5-260
 P
 5-260
 2 Av.
 5-338 Av.
 32-849
 10
 0 -

Fill sand, bricks & clay.
 Firm brown fine & medium sand, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Soft gray sandy clay, trace of gravel.
 Very compact fine gray sandy seams of sand and gravel.
 Refusal

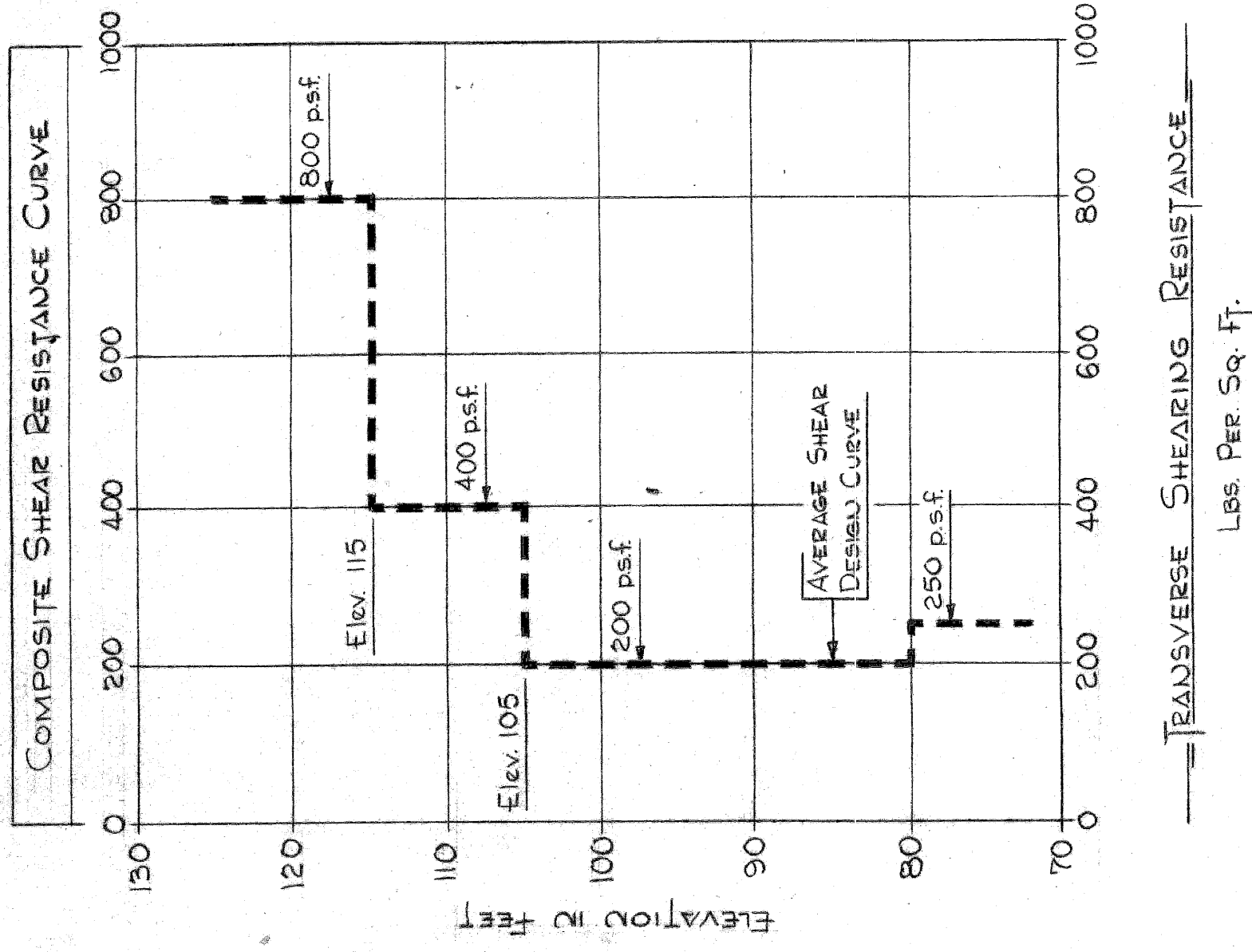
Bott. Fig. Pier #1
 X01 Elev. 106.50

T.H. J-17

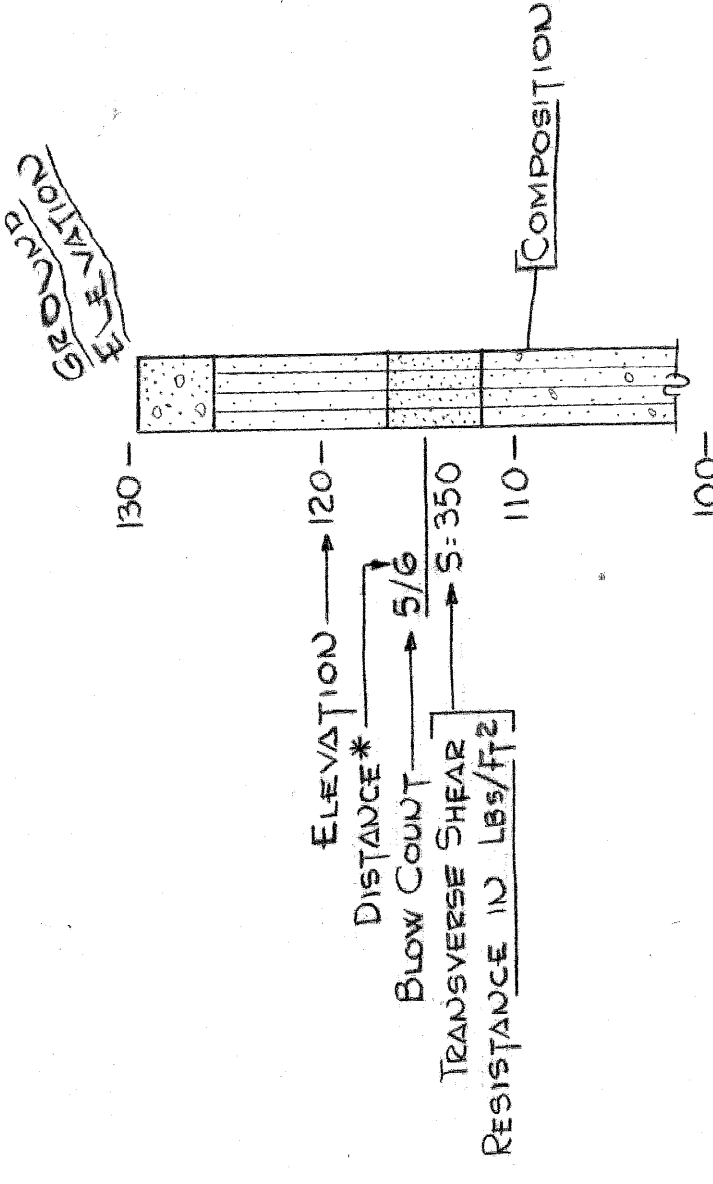
130 -
 3-84
 3-87 120
 5-1080
 3-815
 P
 5-350
 P
 5-205
 P
 5-290
 P
 5-285
 P
 2-813 90
 5-145
 P
 5-165
 P
 80
 End of boring.

Topsoil & fill.
 Loose brown fine & medium sand.
 Medium, vari-colored sandy clay, trace of gravel.
 Medium gray sandy clay, trace of gravel.
 Medium gray sandy clay, seams of silty clay.
 End of boring.

Bott. Fig. Abut. A
 X01 Elev. 105.00



LEGEND D



NOTES:
 Blow Count - Indicates number of blows required to drive a sampler 6" using a 140# hammer falling 30".
 P - Indicates sampler was pushed.
 S - Indicates Transverse Shearing Resistance in Lbs/sq. ft. as determined by MSHD Standard Test.

PRELIMINARY PLAN A - DATED JULY 14, 1966

* 6" if omitted, other-w/size as noted.

PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: _____
 STRUCTURAL ENGINEER

DESIGN SUPERVISING ENGINEER
 APPROVED: _____

ENGINEER OF DESIGN - CONSULTANTS

JOB No. PW 990(1)

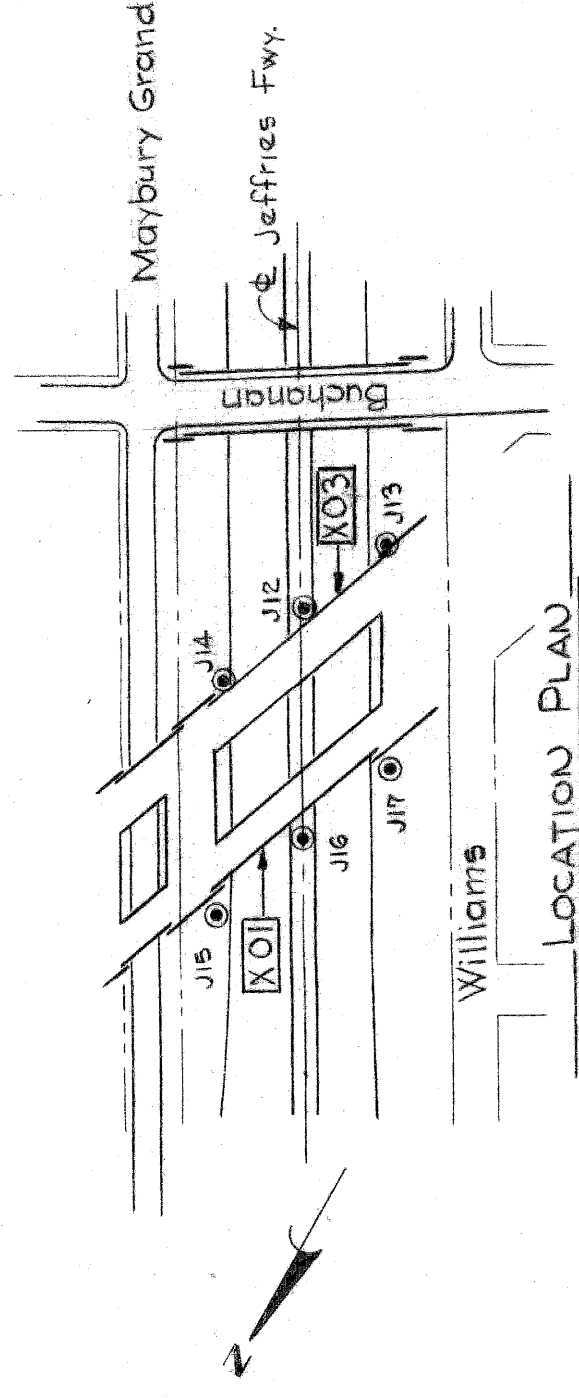
NO.	REVISIONS	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 NEW YORK CENTRAL RAILROAD, BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

LOG OF SOIL BORINGS

CITY OF DETROIT
 DRAWN BY: S. J. M. / 4/66
 CHECKED BY: W. A. L. / 4/66
 SHEET 2 OF 6

X03 of 82124A



GENERAL NOTES:

The stationing as shown on these plans for the intersection of the Bridge Construction and the E of the Jeffries Freeway is believed to be correct. It shall however, be checked at the time of starting construction and if the stationing shown on the plans is incorrect it shall be reported to the Design Office at Lansing and the structure shall be staked using the actual intersection of the Bridge Construction and the E of the Jeffries Freeway control.

Elevations are referred to City of Detroit datum, which is 473.755 Ft. above sea.

RAILROAD TRAFFIC DATA

G.T.W.R.R. - 20 Freight movements per day at a maximum speed of 30 m.p.h.
 N.Y.C.R.R. - 48 Freight movements per day at a maximum speed of 40 m.p.h.

The information concerning the movements of trains and speeds thereof does represent any commitment on the part of the railroad to continue them unchanged inasmuch as they are subject to change without notice.

CONSTRUCTION BEACH MARKS
 P.B.M. 20-252A Elev. 123.12 Cor D Monument NE corner of Hancock and Tillman.
 P.B.M. 20-253A Elev. 121.78 Cor D Monument NE corner of Selden and Tillman.
 C.B.M. 15 Elev. 127.68 Arrow on hydrant NE corner Poplar and Maybury Grand.
 C.B.M. 16 Elev. 124.71 Arrow on hydrant SW corner Buchanan and Williams.
 C.B.M. 17 Elev. 130.23 Arrow on hydrant SE corner Breckenridge and Williams.
 C.B.M. 18 Elev. 128.26 Arrow on hydrant E side of Maybury Grand 430' S. of Hancock.

PRELIMINARY PLAN A - DATED JULY 14, 1966

MICHIGAN STATE HIGHWAY DEPARTMENT
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

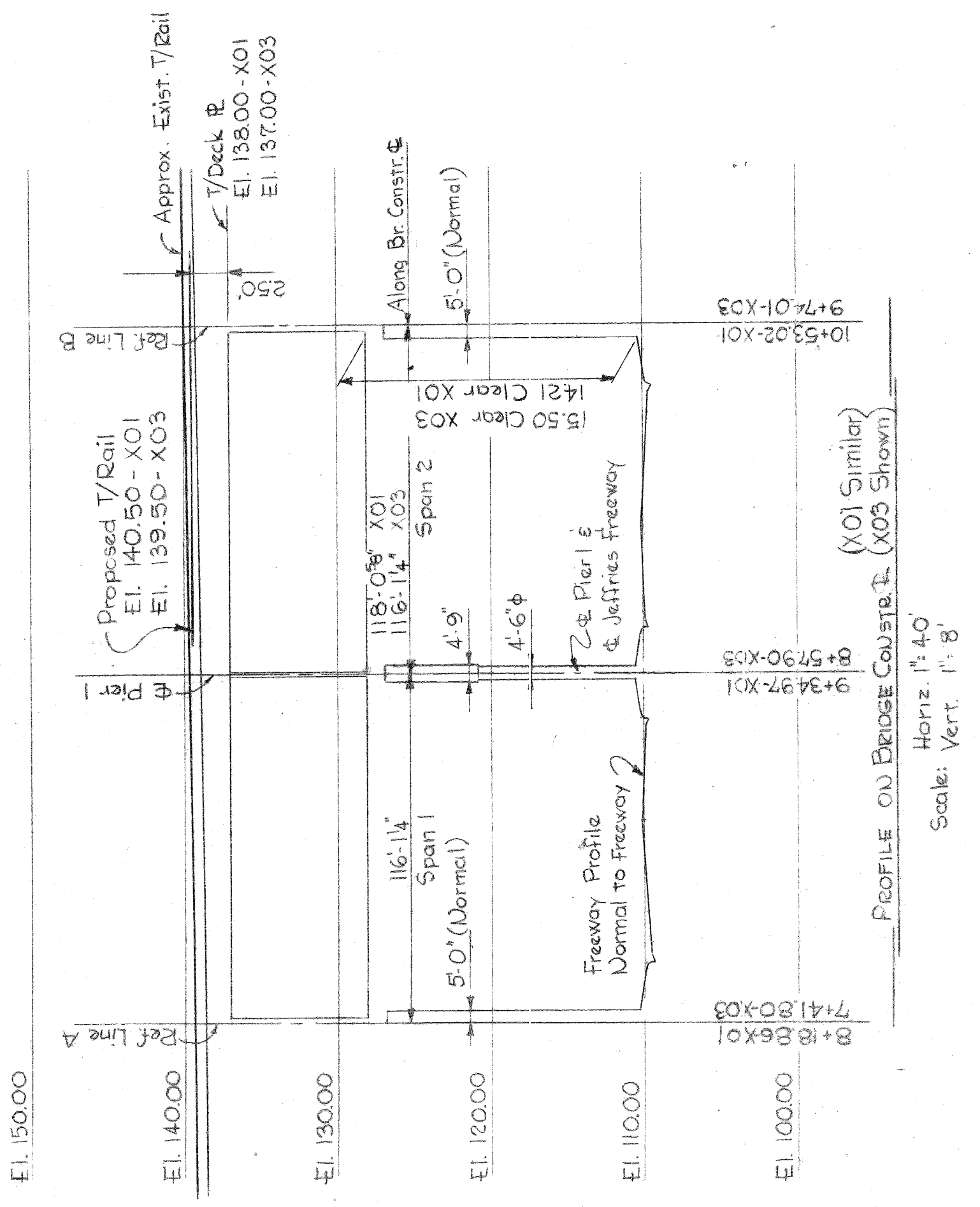
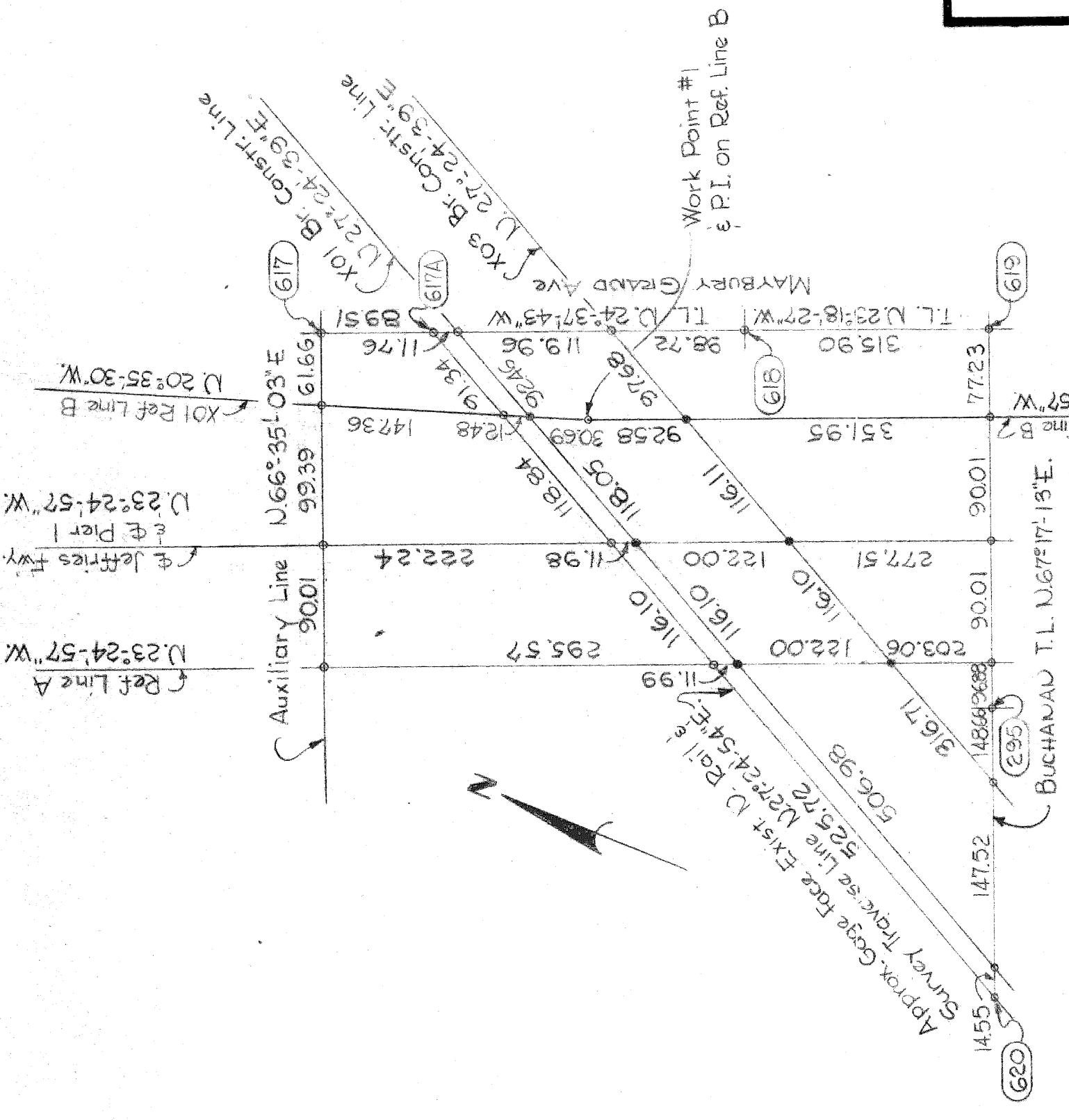
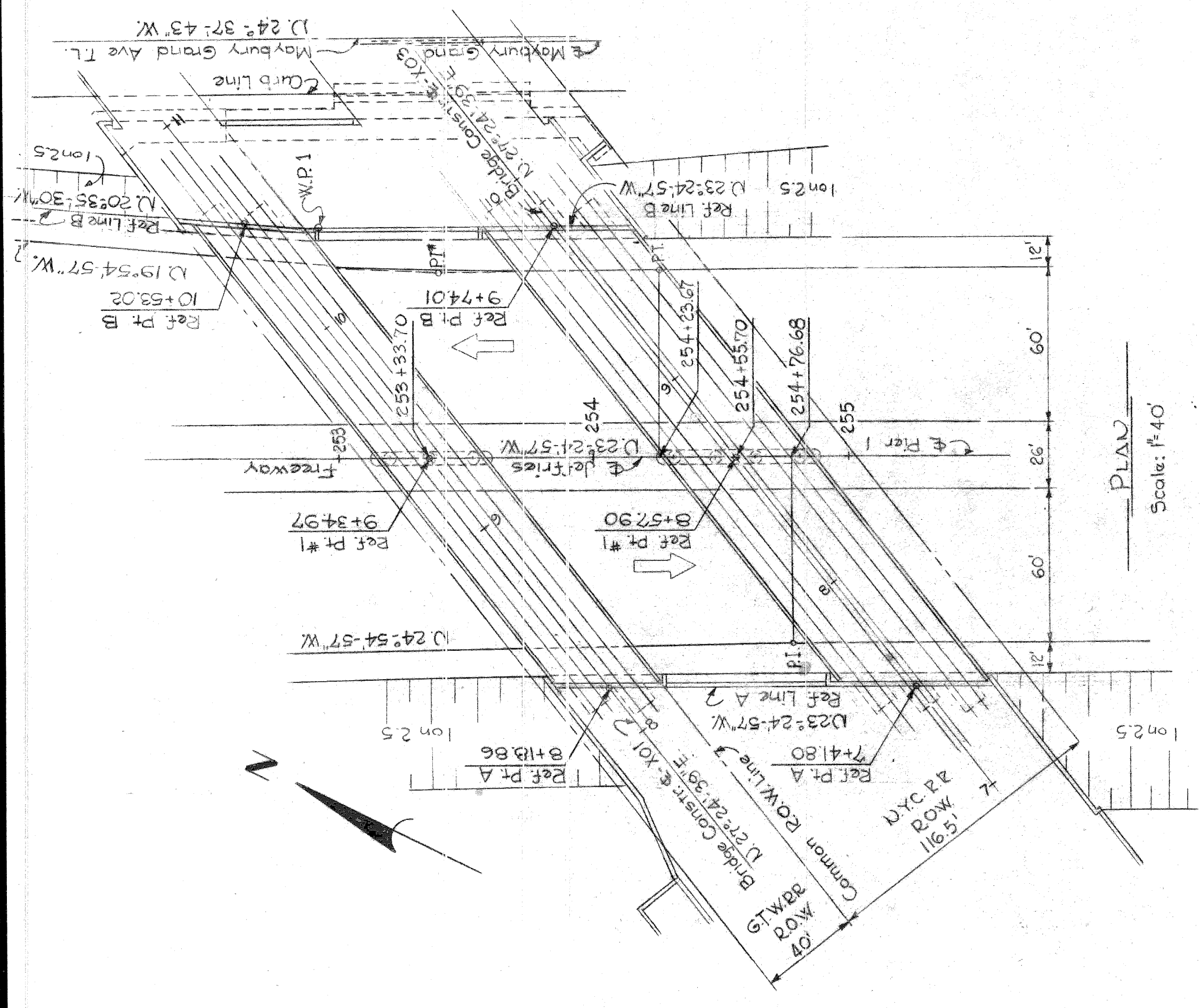
PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

CITY OF DETROIT	SHEET	X03 of 82124A
DESIGNED BY	DATE	
CHECKED BY	DATE	
APPROVED	DATE	

GENERAL DRAWING
 DESIGN SUPERVISING ENGINEER
 ENGINEER OF DESIGN - CONSULTANTS

APPROVED	DATE	
APPROVED	DATE	
REVISIONS	DESCRIPTION	
NO.	DESCRIPTION	DATE

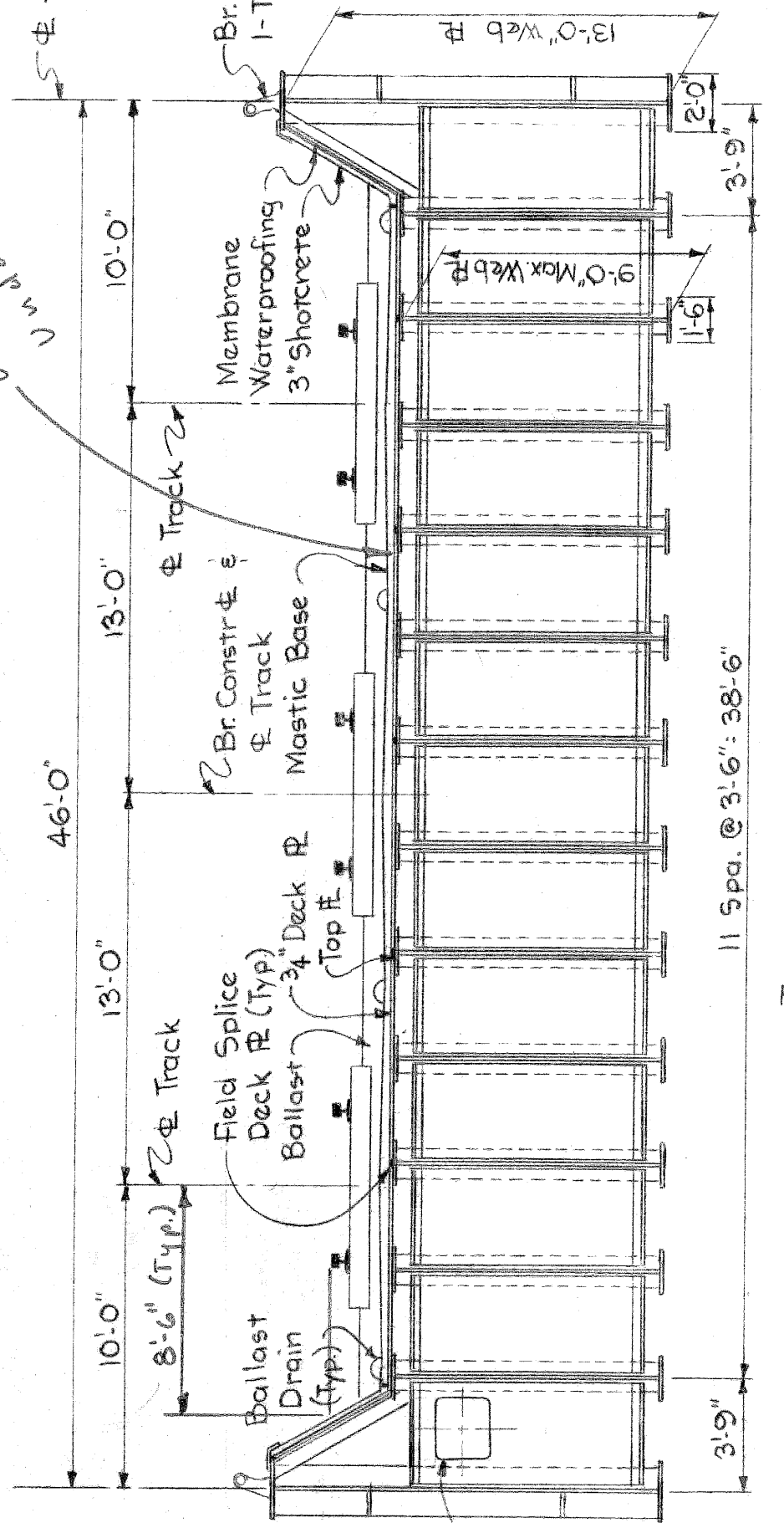
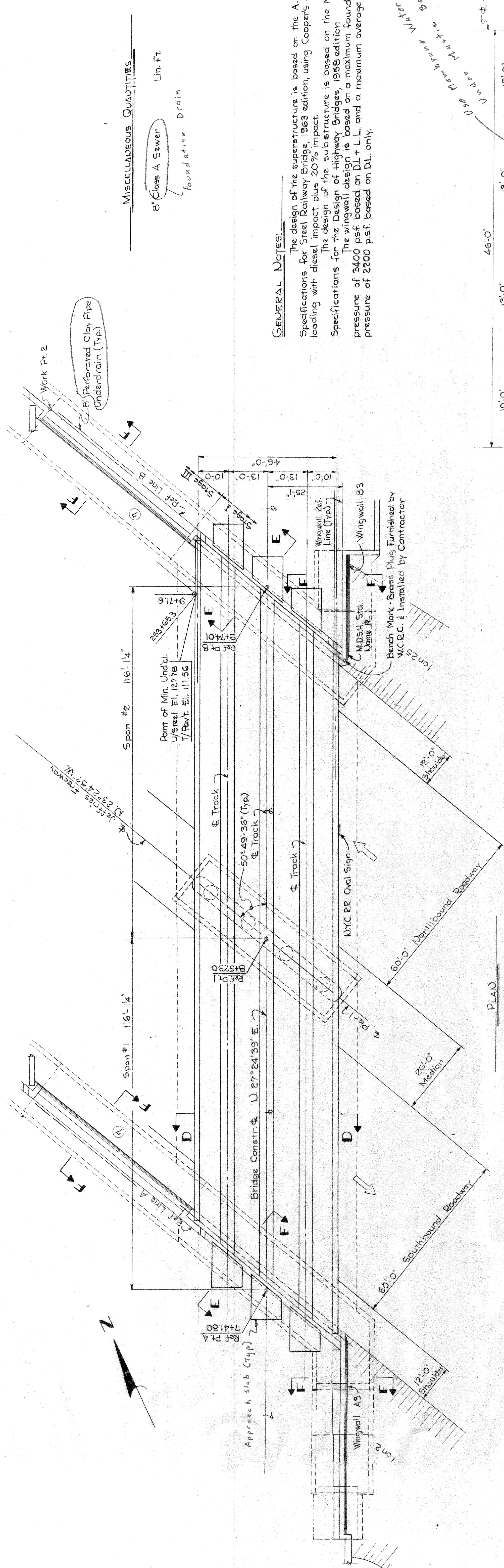
Curve #1 Data
 Δ = 03°30'00"
 D = 02°00'00"
 E = 2864.79
 F = 87.53
 L = 175.00'
 PC = 252 + 48.67
 PT = 253 + 36.20
 P.T. = 254 + 23.67



ALIGNMENT DIAGRAM

+ = Denotes point of intersection
 + = Denotes Bridge Reference Point
 (G) = Denotes survey traverse point
 T.L. = Denotes traverse line

PROFILE ON BRIDGE CONSTRUCTION (X01 Similar)
 Scale: Horiz. 1" = 40'
 Vert. 1" = 8'



Scale: 3/16" = 1'-0"
 Plan on using A 242
 for all steel but do
 not show on Prelim Plan

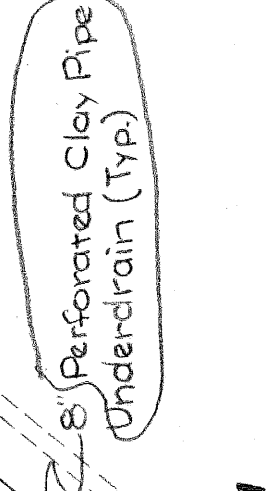
PRELIMINARY PLAN A - DATED JULY 14, 1966

GENERAL NOTES:

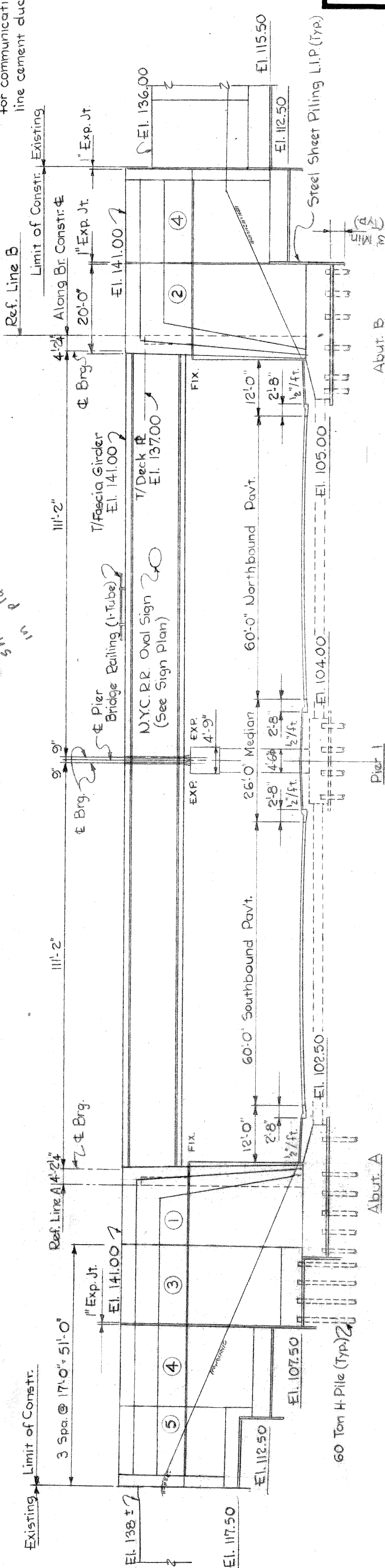
The design of the superstructure is based on the A.R.E.A. Specifications for Steel Railway Bridge, 1963 edition, using Cooper's E-72 loading with diesel impact plus 20% impact.
 The design of the substructure is based on the M.S.H.D. Specifications for the Design of Highway Bridges, 1958 edition.
 The wingwall design is based on a maximum foundation pressure of 2400 psf based on DL + L.L. and a maximum average foundation pressure of 2200 psf based on DL only.

MISCELLANEOUS QUANTITIES

- 8" Class A Sewer Lin. Ft.
- Foundation Drain



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



ELEVATION
 Scale: 1/8" = 1'-0"

PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

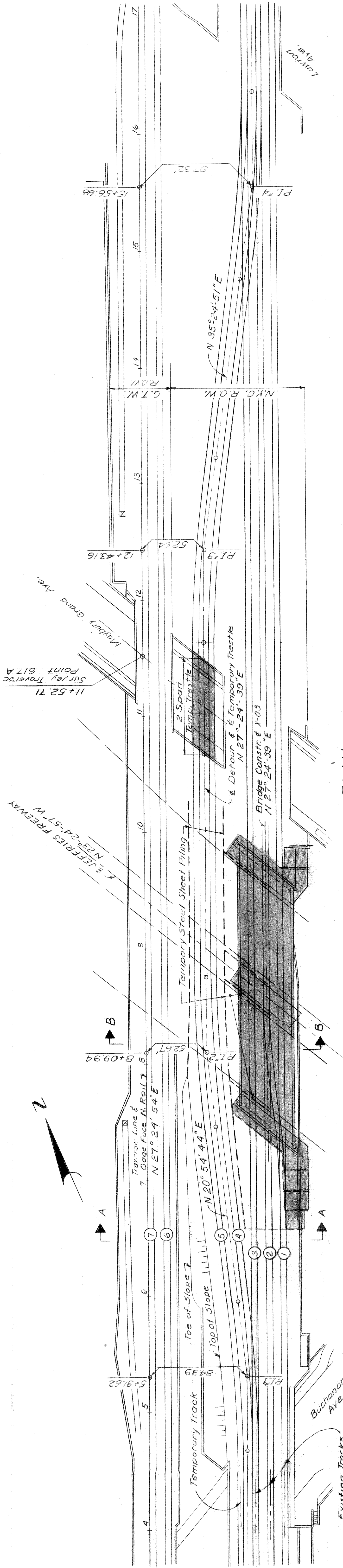
APPROVED: STRUCTURAL ENGINEER
 DATE: _____ BY: _____
 REVISIONS
 DESCRIPTION

JOB NO.
 PW 990(1)

MICHIGAN STATE HIGHWAY DEPARTMENT
 NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
 CROSSING THE JEFFRIES FREEWAY IN DETROIT

GENERAL PLAN OF STRUCTURE

APPROVED: DESIGN SUPERVISING ENGINEER
 APPROVED: ENGINEER OF DESIGN - CONSULTANTS



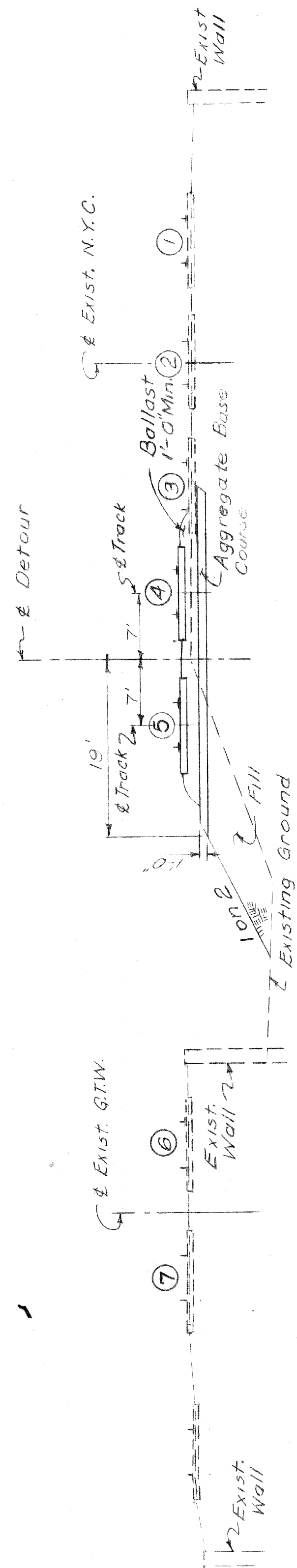
PLAN
Scale: 1"=40'

	Curve 1	Curve 2	Curve 3	Curve 4
A	6'-29'-55"	6'-29'-55"	8'-00'-12"	8'-00'-12"
D	5'-00'-00"	5'-00'-00"	5'-00'-00"	5'-00'-00"
P	1145.916'	1145.916'	1145.916'	1145.916'
T	65.056'	65.056'	80.164'	80.164'
L	129.971'	129.975'	160.067'	160.067'
E	1.845'	1.845'	2.801'	2.801'
RC	4+65.06	7+45.03	11+63.00	14+73.07
RT	5+30.11*	8+10.09*	12+43.16*	15+53.23*
	5+35.03	8+15.00	13+23.07	16+33.13

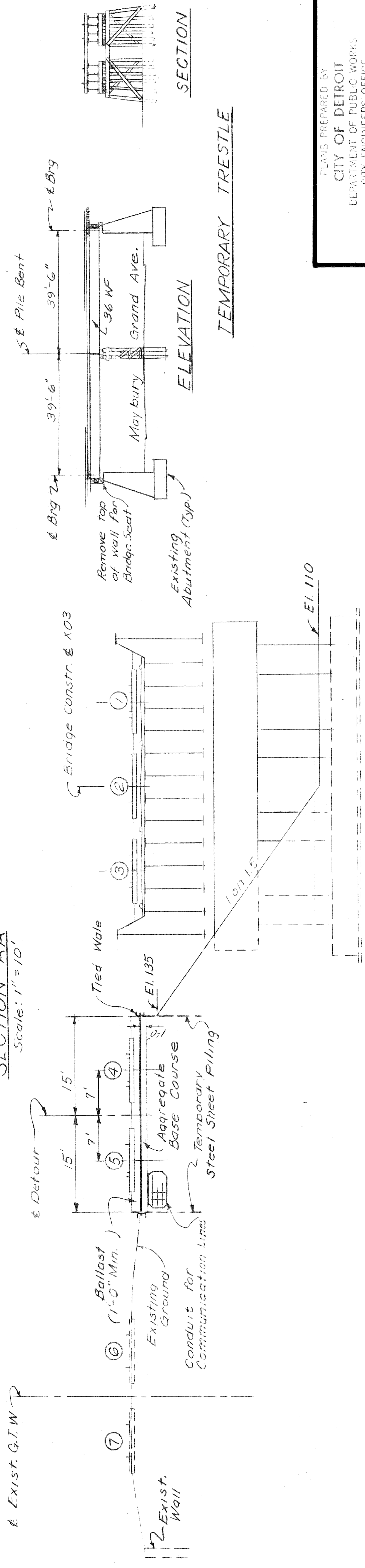
* Forward Station

- STAGE I**
- To be done by Contractor: Place temporary sheet piling and embankment. Grade for detour tracks. Construct Temporary Trestle over Maybury Grand.
 - To be done by Railroad Company: Place detour tracks ④ & ⑤ and crossovers as required outside of construction area.
 - To be done by Contractor: Construct Bridge X03 on detour tracks ④ & ⑤.
 - To be done by Railroad Company: Remove tracks ② & ③ except parts required for Stage II (Railroad traffic in normal operation on tracks 1, 2 & 3 over new Bridge X03).

On Work done by R.R. specify which R.R. is doing it



SECTION AA
Scale: 1"=10'



SECTION BB
TEMPORARY TREESTLE
Scale: 1"=10'

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD - BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

CONSTRUCTION SEQUENCE STAGE I

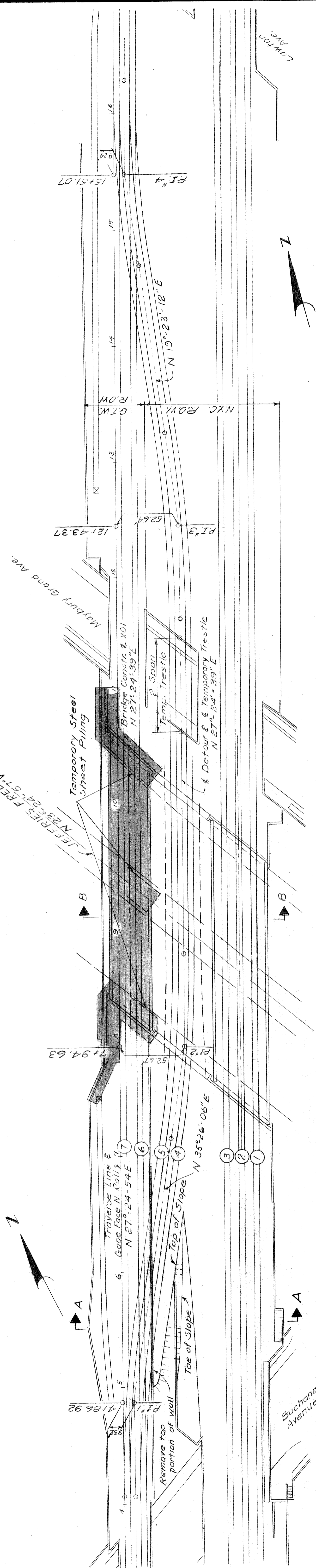
NO.	DESCRIPTION	DATE	BY

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

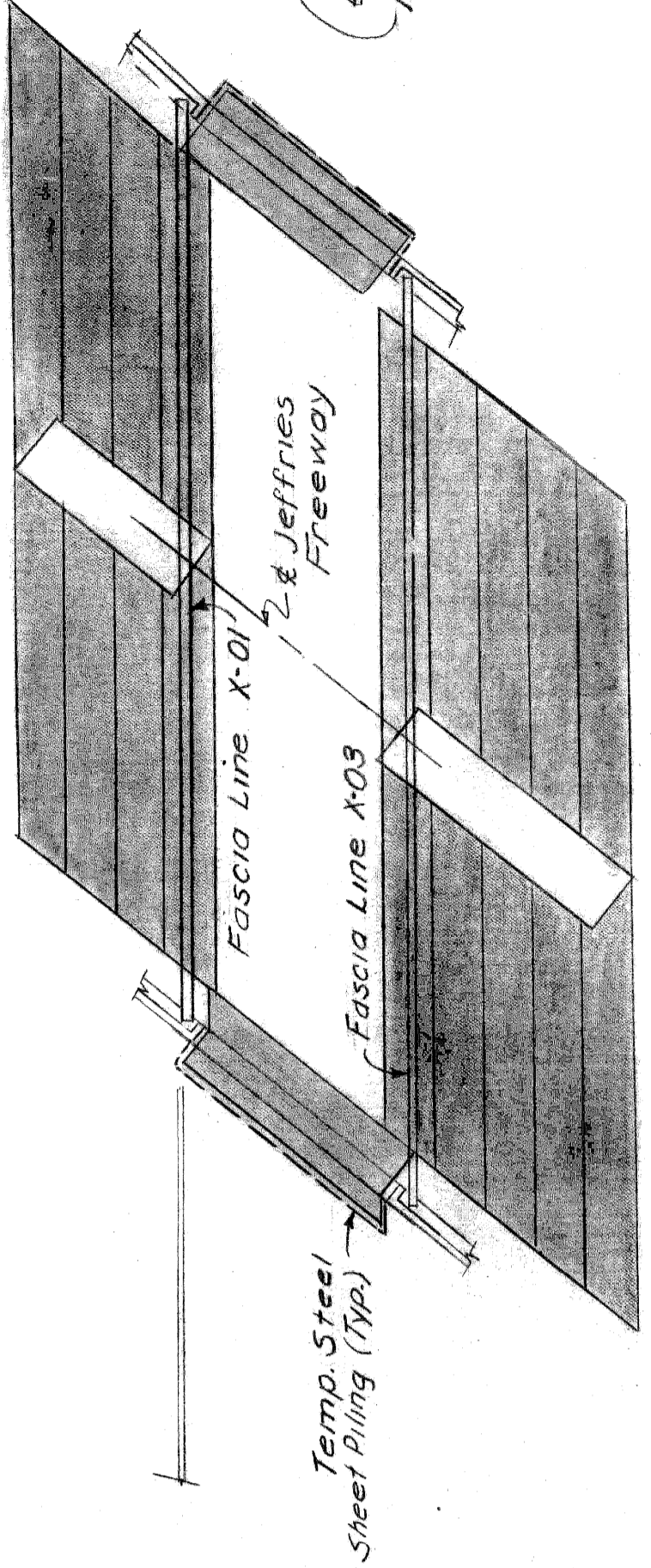
APPROVED: _____
STRUCTURAL ENGINEER

JOB No.
PW 99011

CITY OF DETROIT
SOLID BISS
DRAWN BY: W.A.L.
CHECKED BY: S.Z.G.M.
SHEET 6 OF 7
7/66
7/66
X03 of 82124A



PLAN - STAGE II
Scale: 1" = 40'

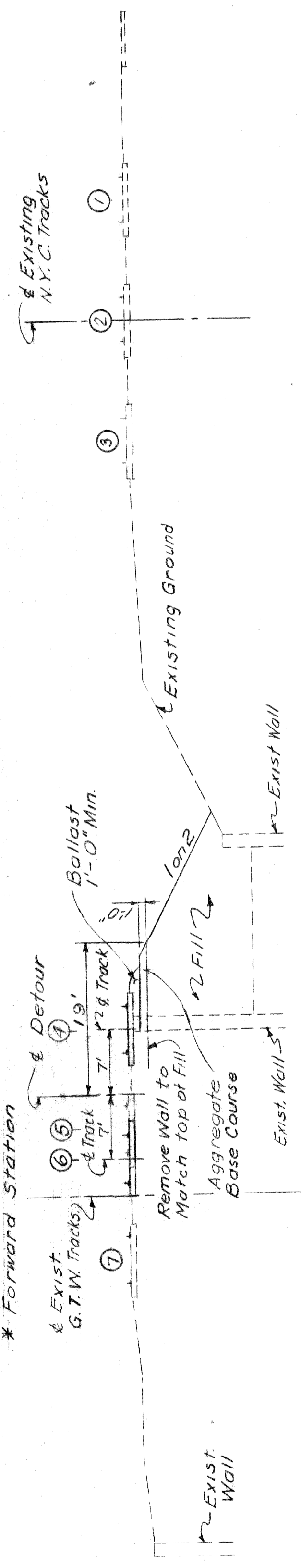


PLAN - STAGE III
Scale: 1" = 40'

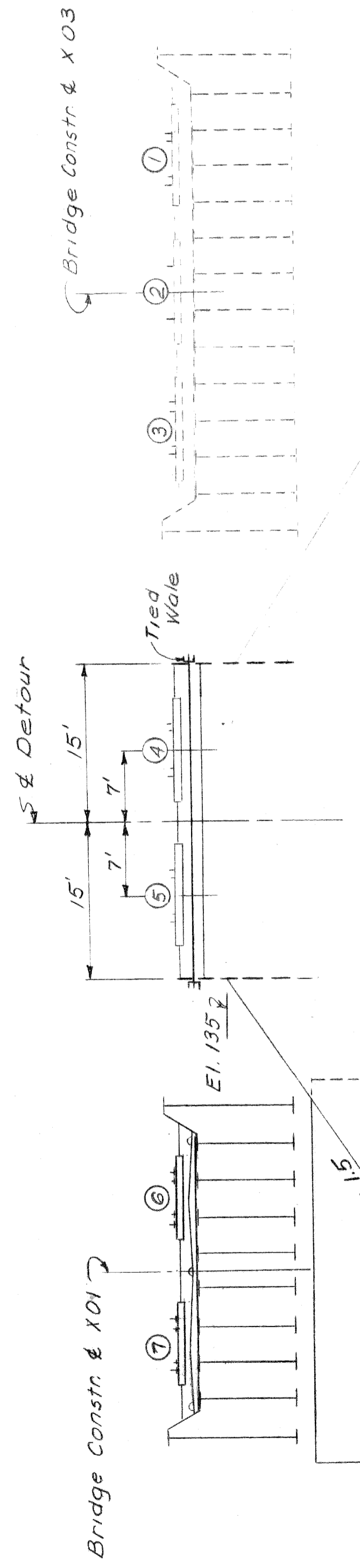
Curve Data

Curve	Curve 1	Curve 2	Curve 3	Curve 4
Δ	8° 01' 27"	8° 01' 27"	8° 01' 27"	8° 01' 27"
R	5° 00' 00"	5° 00' 00"	5° 00' 00"	5° 00' 00"
T	1145.916'	1145.916'	1145.916'	1145.916'
L	80.372'	80.372'	80.372'	80.372'
E	160.483'	160.483'	160.483'	160.483'
PC	2.815'	2.815'	2.815'	2.815'
PT	4+04.031	7+14.52	11+63.00	14+73.48
PT	4+84.41*	7+94.89*	12+43.37*	15+53.85*
	5+64.52	8+75.00	13+23.48	16+33.97

* Forward Station



SECTION AA
Scale: 1" = 10'



SECTION BB
Scale: 1" = 10'

- Stage II**
- To be done by Contractor:
Remove top portion of wall where tracks cross, and place embankment top tracks (4) & (5).
 - To be done by Railroad Co.:
Place detour tracks (4) & (5). Use Temporary Trestle & that part of temporary detour remaining from Stage I.
 - To be done by Contractor:
Build Bridge X01. (Railroad Traffic on detour tracks (4) & (5)).
 - To be done by Railroad Co.:
Remove tracks 4 & 5 (Railroad traffic in normal operation on tracks (6) & (7) over new bridge X01).
 - To be done by Contractor:
Rebuild portion of wall that was removed in Item 1.

- Stage III**
- Remove temporary trestle and rebuild top portion of walls removed for trestle.
 - Build walls to connect Abuts. between Bridges X01 & X03.
 - Complete excavation and build Subbase Slab.

Notes:
All operations in Stage III to be done by Contractor.
30' increments, see comments of MASH soils division.

PRELIMINARY PLAN A - DATED JULY 14, 1966

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
NEW YORK CENTRAL RAILROAD, BAY CITY BRANCH
CROSSING THE JEFFRIES FREEWAY IN DETROIT

CONSTRUCTION SEQUENCE STAGES 2 & 3

NO.	REVISIONS	DESCRIPTION	DATE	BY

APPROVED: _____
STRUCTURAL ENGINEER

JOB No. _____
PW 99011

REVISIONS

NO.	DATE	BY

SHOULDER: SPURWAY 7/66
DRAWN BY: KALL 7/66
CHECKED BY: LST-2434 7/66
SHEET 7 OF 7

X03 of 82124A