

# RAILROAD GRADE SEPARATIONS

LIVERNOIS AVE. NORTH OF INTERVALE  
 AVE. AT THE PENNSYLVANIA AND  
 DETROIT TERMINAL RAILROADS

PROJECT - G.S.R.R. - 13

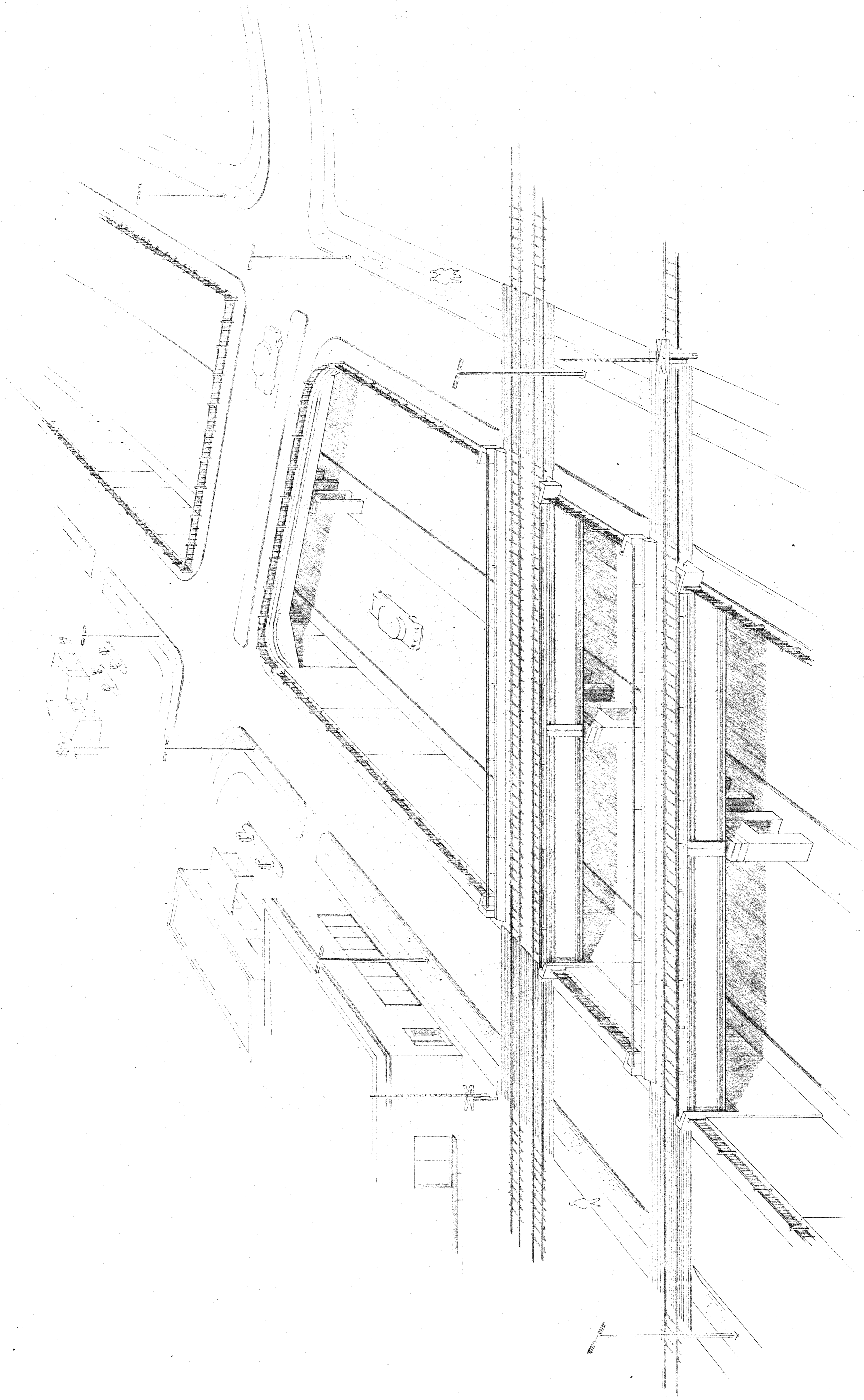
## GENERAL PLANS

### LIST OF PLANS

1. TITLE SHEET
2. PERSPECTIVE
3. SITE PLAN
4. GENERAL LOCATION PLAN
5. GENERAL PLAN -  
 PROFILE AND SECTIONS
6. CONSTRUCTION PROGRAM
7. SURVEY PLAN
8. GENERAL PLAN OF STRUCTURE -  
 RAILROAD BRIDGES
9. GENERAL DETAILS - RAILROAD BRIDGES
10. TRACK PLAN
11. GENERAL PLAN OF STRUCTURE -  
 LYNDON AVE. BRIDGE
12. UTILITY PLAN

*Proposed  
 BUT  
 APPARENTLY  
 NEVER  
 BUILT*


DESIGNED BY DRAWN BY TRACED BY CHECKED BY	APPROVED:	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS HIGHWAY & EXPRESSWAY DIVISION	LIVERNOIS AVE. NORTH OF INTERVALE AVE. AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS	SHEET 1 OF 1 SHEET JOB No. GS-RP-13 DRWG No. C-102 DATE NOV 1955				TITLE SHEET
<u>RAILROAD GRADE SEPARATIONS</u>								



SHEET 2 OF 12 SHEETS  
 JOB No. GS-RR-13  
 DRWG No. C-109  
 DATE NOV. 1955

LIVERNOIS AVE NORTH OF INTERVALLE AVE  
 AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS

CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 HIGHWAY & EXPRESSWAY DIVISION  
 RAILROAD GRADE SEPARATIONS

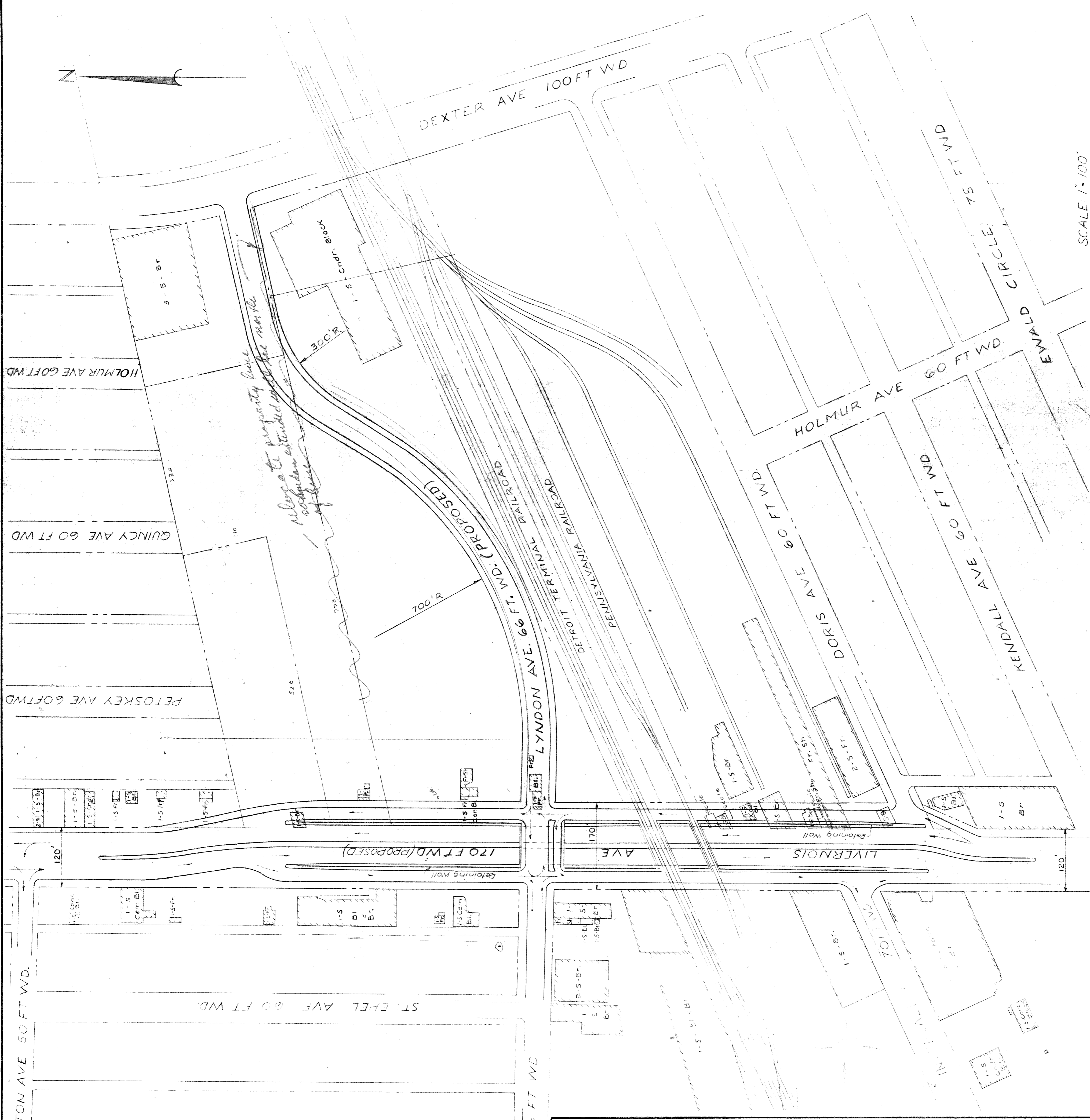
APPROVED:  
  
 HIGHWAY & EXPRESSWAY ENGINEER

DESIGNED BY	REFERENCE DRAWINGS
DRAWN BY TRACED BY CHECKED BY	M. J. GILBERT    

NO.	DESCRIPTION	DATE

REVISIONS LOCATED BY COORDINATES ON SHEET

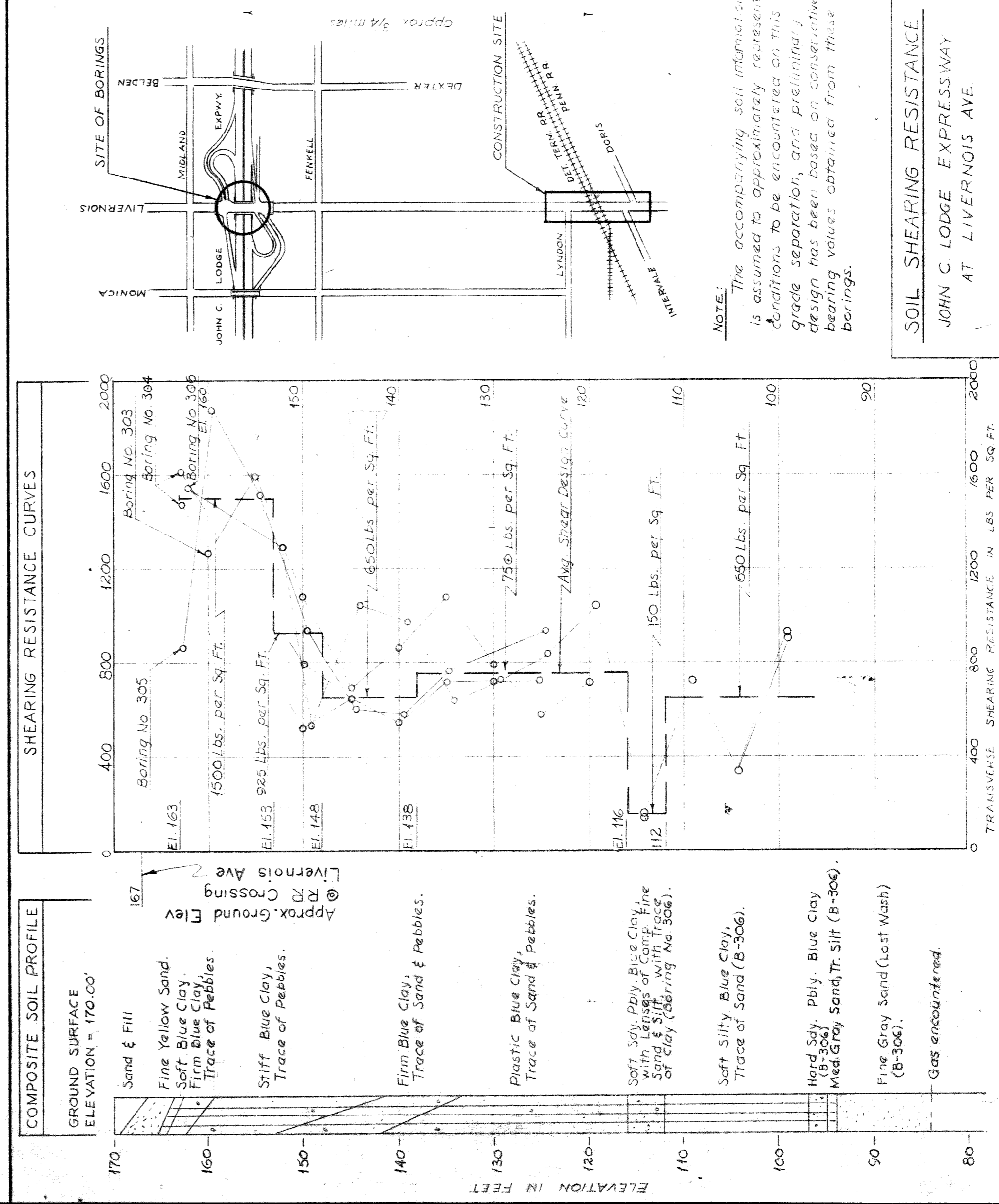
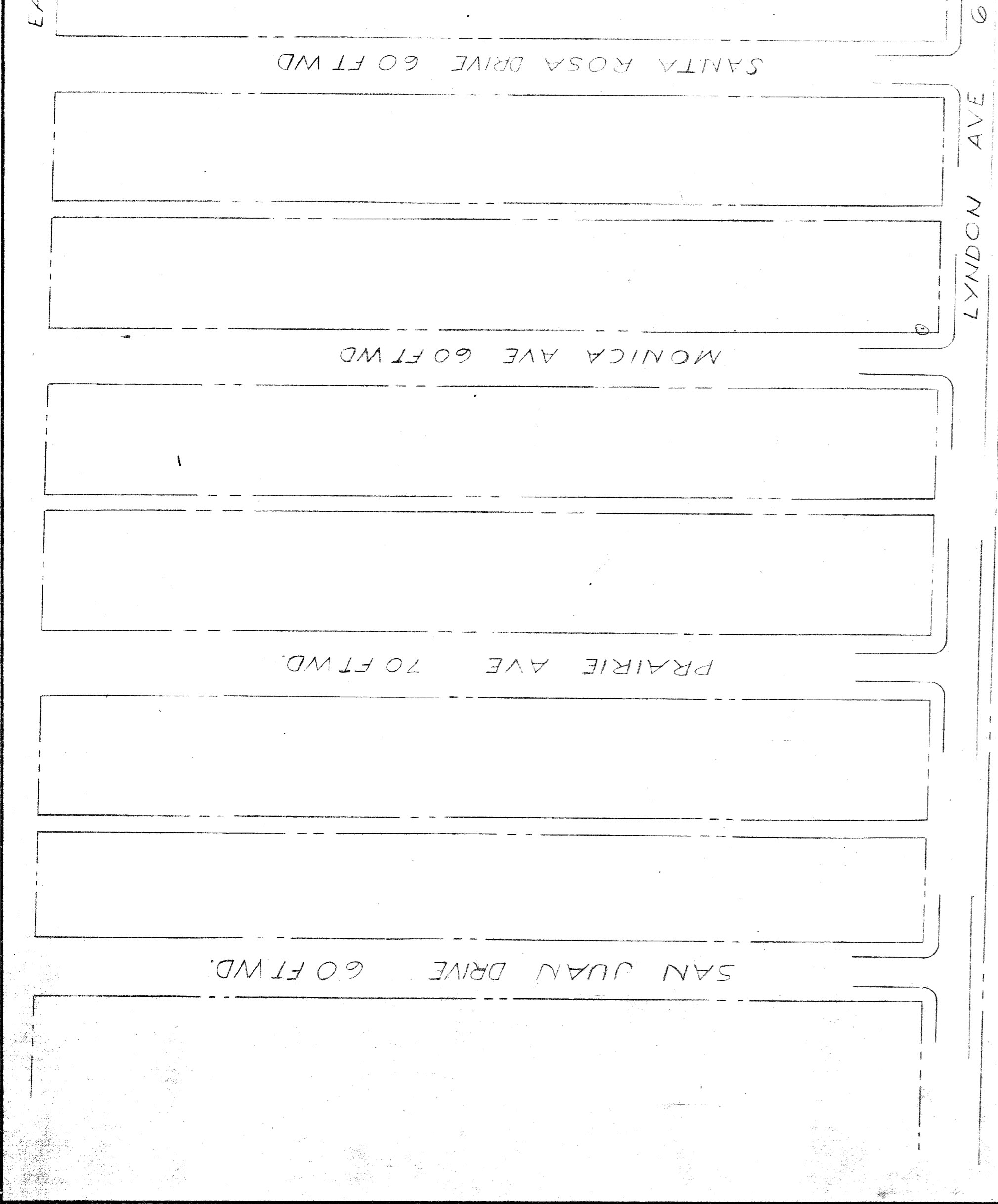


SHEET 4 OF 12 SHEETS  
 JOB No. GS-RR-13  
 DRWG No. C-102  
 DATE NOV. 1935

LIVERNOIS AVE NORTH OF INTERVALE AVE  
 AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS  
 GENERAL LOCATION PLAN

CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 HIGHWAY & EXPRESSWAY DIVISION  
 RAILROAD GRADE SEPARATIONS

SCALE: 1" = 100'



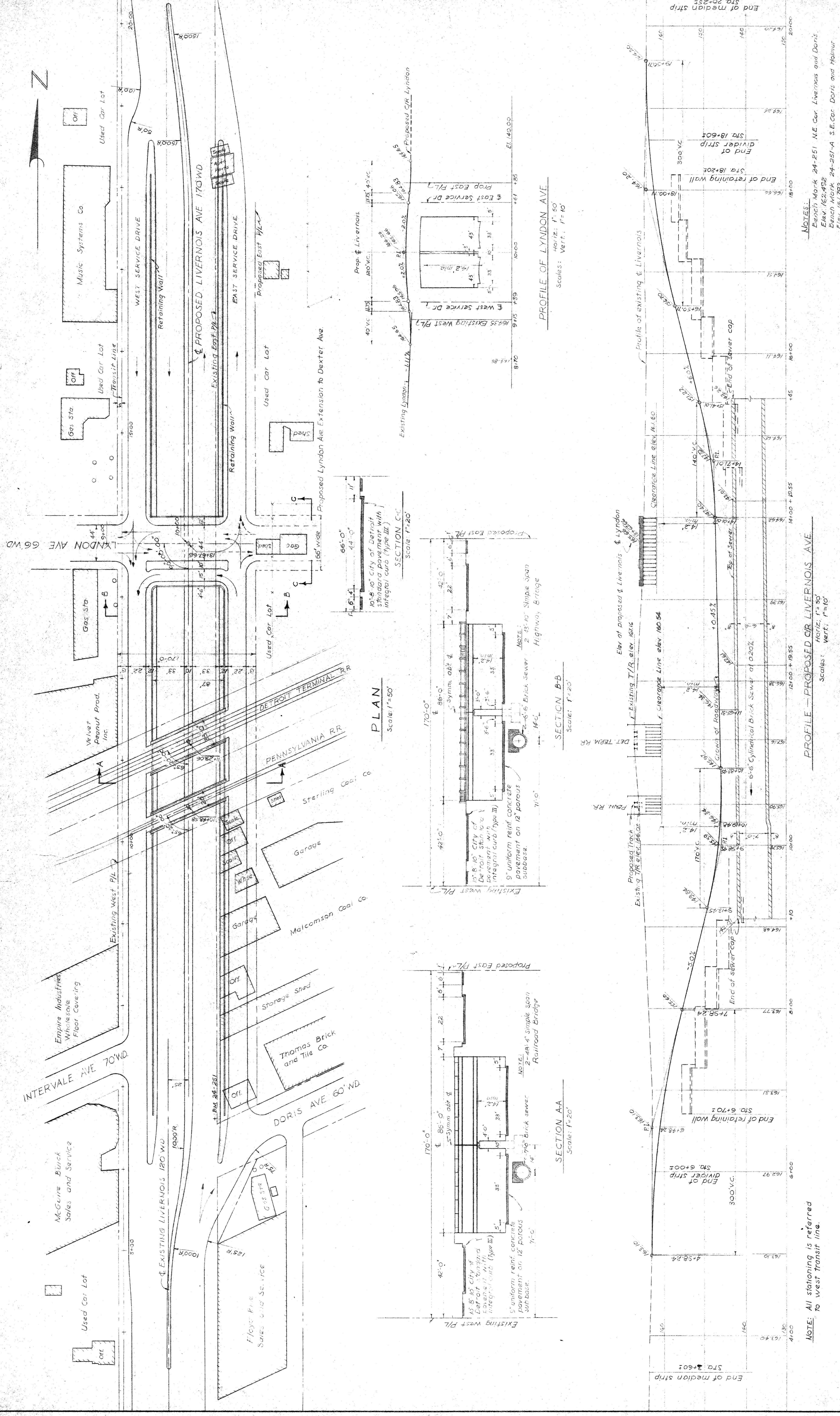
**NOTE:**  
 The accompanying soil information is assumed to be approximately representative conditions to be encountered on this grade separation, and preliminary design has been based on conservative bearing values obtained from these borings.

**SOIL SHEARING RESISTANCE**  
 JOHN C. LODGE EXPRESSWAY  
 AT LIVERNOIS AVE

NO.	DATE	DESCRIPTION

DESIGNED BY	G. McGinty
DRAWN BY	G. McGinty
TRACED BY	G. T. Satterly Jr.
CHECKED BY	G. T. Satterly Jr.

APPROVED: \_\_\_\_\_  
 HIGHWAY & EXPRESSWAY ENGINEER



PLAN  
Scale: 1"=50'

SECTION AA  
Scale: 1"=20'

SECTION BB  
Scale: 1"=20'

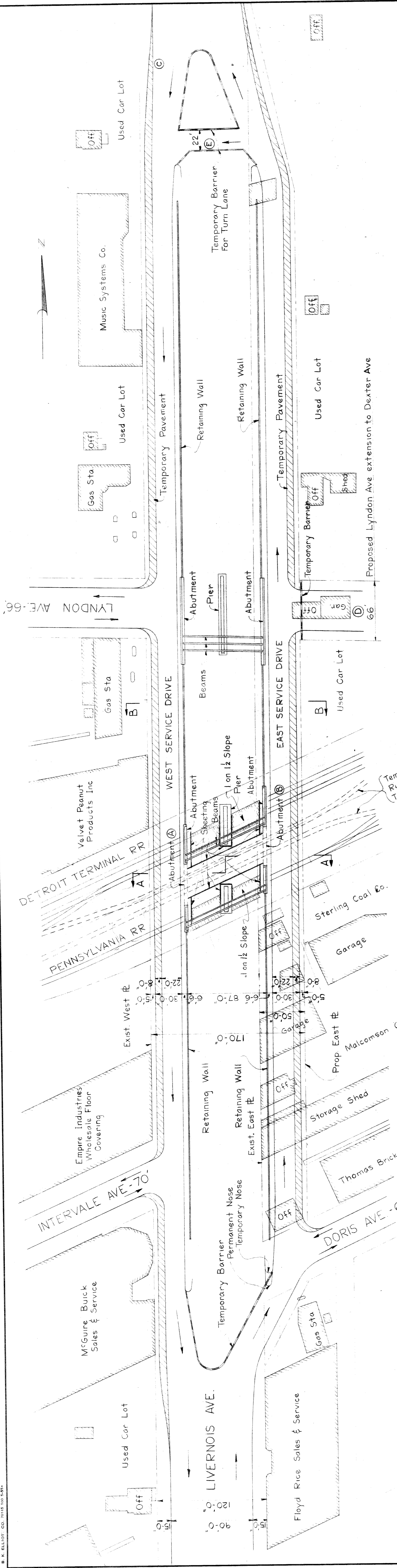
PROFILE OF LYNDON AVE  
Horiz.: 1"=50'  
Vert.: 1"=10'

NOTE: All stationing is referred to west transit line.

PROFILE - PROPOSED CR LIVERNOIS AVE  
Horiz.: 1"=50'  
Vert.: 1"=10'

NOTES:  
Bench Mark 24-251 N.E. Cor. Livernois and Doris  
Elev. 162.452  
Bench Mark 24-251-A S.E. Cor. Doris and Malheur  
Elev. 161.792

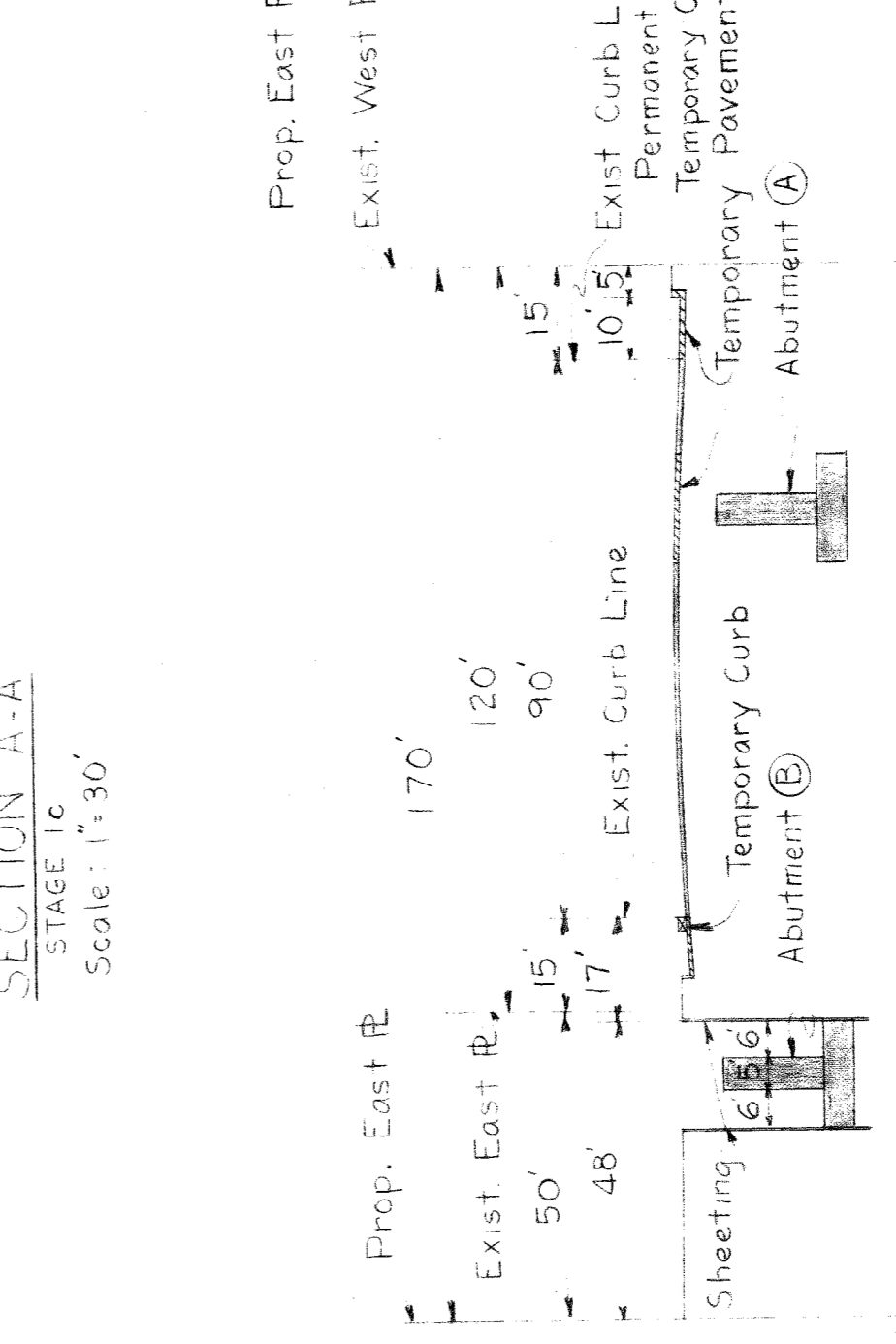
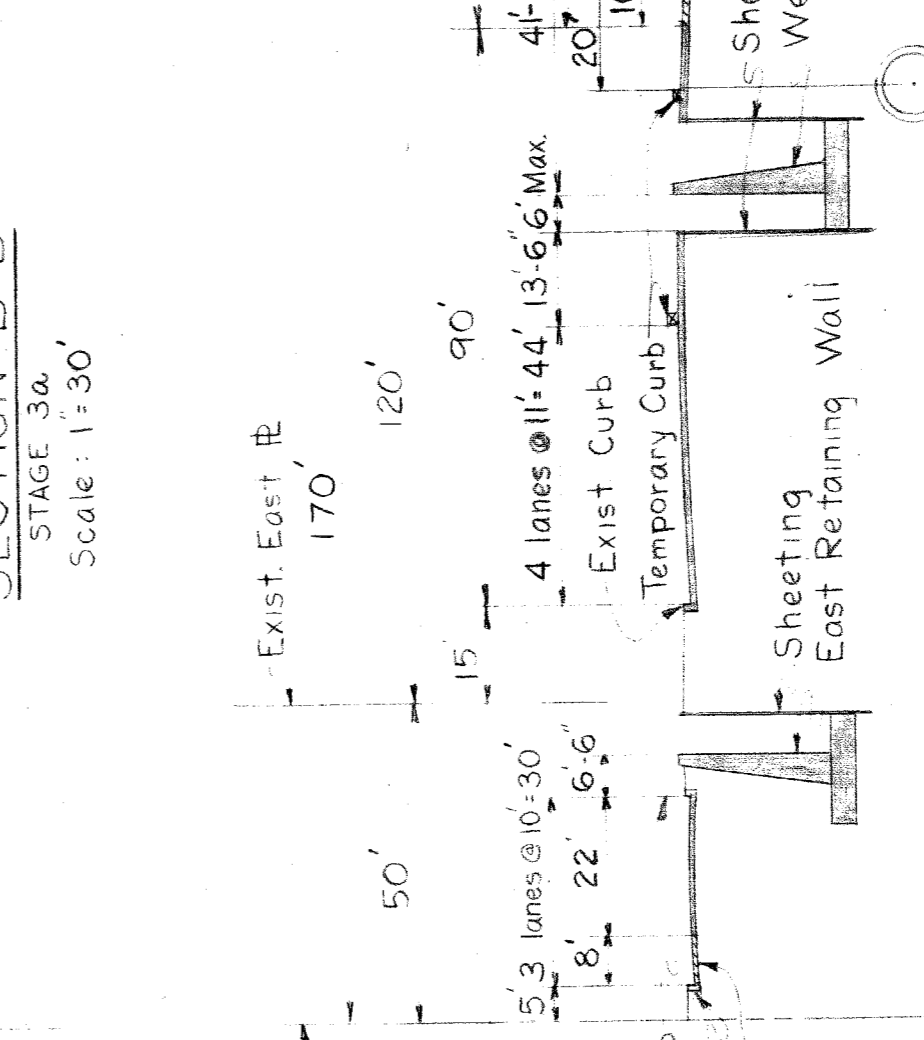
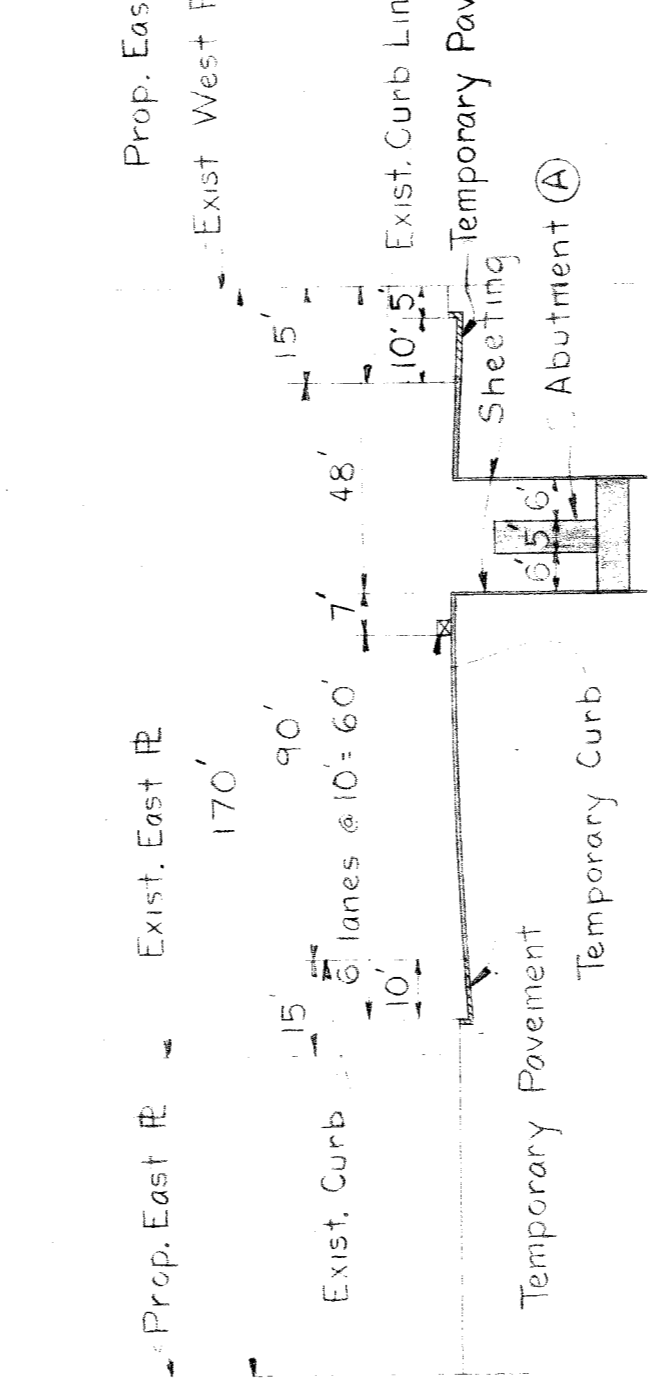
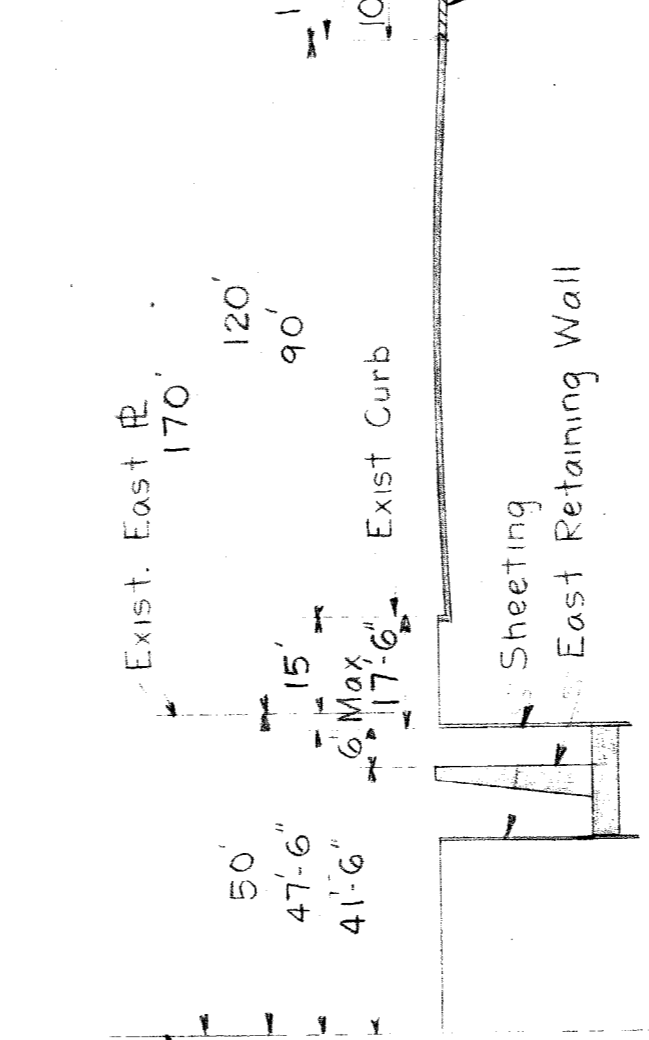
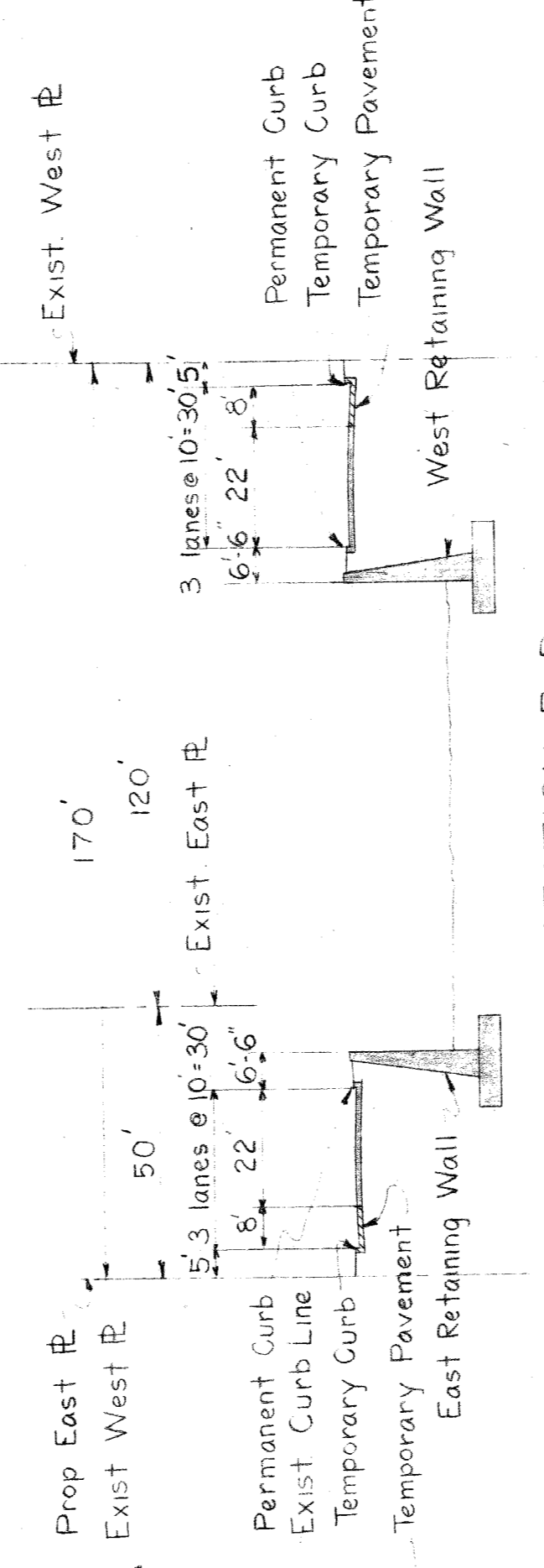
CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS HIGHWAY & EXPRESSWAY DIVISION		LIVERNOIS AVE NORTH OF INTERVALE AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS		SHEET 5 OF 12 SHEETS	
RAILROAD GRADE SEPARATIONS		GENERAL PLAN, PROFILES AND SECTIONS		JOB NO. GS - RR-13	
				DRWG NO. C-103	
				DATE NOV. 1955	
DESIGNED BY	S. E. SHORTER	APPROVED:			
DRAWN BY	G. I. SATTERLY JR.	DESIGNED BY	S. E. SHORTER		
TRACED BY	G. I. SATTERLY JR.	DRAWN BY	S. E. SHORTER		
CHECKED BY	G. I. SATTERLY JR.	TRACED BY	G. I. SATTERLY JR.		
DESCRIPTION	RAILROAD GRADE SEPARATIONS	CHECKED BY	G. I. SATTERLY JR.		
REVISIONS LOCATED BY COORDINATES ON SHEET					



**CONSTRUCTION PROGRAM**

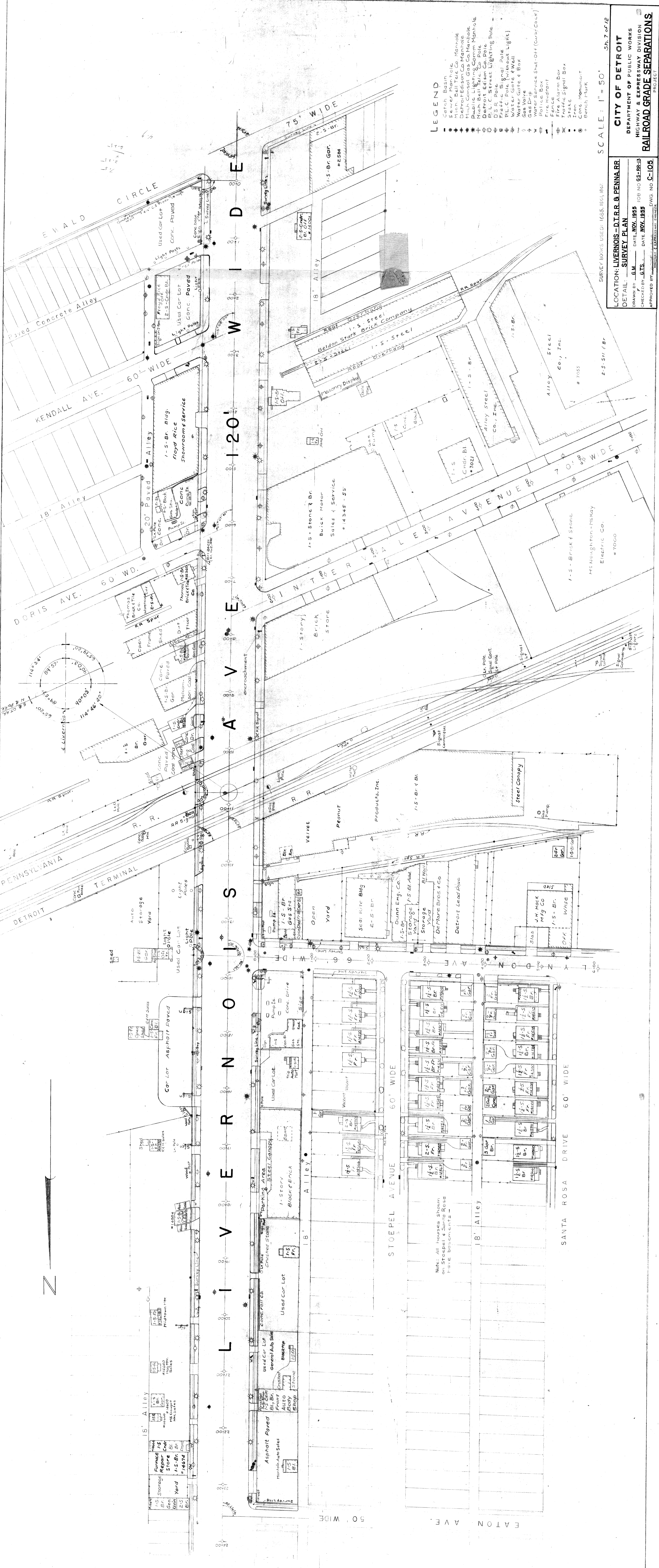
- Stage 1**
- Raise Penn RR to final elevation and build up existing Livernois.
  - Place 10' temporary roadway on east side of existing Livernois opposite abutment A so as to maintain 6-10' lanes on Livernois while abutment A is being constructed. Const. 10' temp. pavmt. on west side of exist. pavmt. on Livernois
  - Construct abutment A (abutment between railroad bridges) in sheeted trench to bridge seat level.
  - Backfill around abutment A to existing grade and place temporary pavement over the abutment so as to maintain 6 lanes of traffic on Livernois.
- Stage 2**
- Construct abutment B (abutment between railroad bridges) in sheeted trench to bridge seat level.
  - Backfill over abutment B to existing grade.
  - Place temporary runaround tracks and reroute train traffic on temporary tracks. 6 Lanes to remain open while temporary track is being constructed.
- Stage 3**
- Construct east retaining walls and abutments for both railroads and Lyndon Ave bridges in sheeted trench. Livernois traffic uses all of existing Livernois.
  - Backfill behind east retaining walls and abutments.
  - Construct East Service Drive (22' wide) and temporary 8' lane adjacent to East Service Drive so as to provide 3 lanes. Construct temporary nose at Doris and Livernois. Construct Lyndon extension to Dexter Ave.
  - Place northbound Livernois traffic on East Service Drive (3 lanes). Traffic turning left from Livernois on to Lyndon will use temporary turn lane C.
  - Place southbound Livernois traffic on eastern 44' of existing Livernois. Traffic turning right from Livernois on to Lyndon will use westernmost lane of existing Livernois.
- Stage 4**
- Construct west retaining walls and abutments for both railroad and Lyndon Ave bridges in sheeted trench.
  - Backfill behind west retaining walls and abutments.
  - Construct West Service Drive (22' wide). Construction should be so planned as to have two lanes open at all times for traffic turning right from Livernois on to Lyndon and for traffic turning right from Lyndon on to southbound Livernois.
- Stage 5**
- Place sheet piling adjacent to temporary track.
  - Construct center piers for all bridges, sheeting as indicated on Track Plan C-107
  - Excavate for bridges and roadway. See plan view. Construct all bridges.
  - Place train traffic on bridges.
  - Remove temporary tracks and pull sheet piling. Excavate between RR bridges.
  - Construct retaining wall stem on abutments A and B.
  - Construct new pavement on Livernois. Open Livernois to south and north bound traffic.
  - Construct permanent nose at Doris and Livernois.
- NOTE:**  
 Construction program does not include relocation of utilities or construction of sewer cap. Integrated program to be included in specifications.

**PLAN**  
 STAGE 5c  
 Scale: 1"=50'



**NOTE:**  
 Construction program does not include relocation of utilities or construction of sewer cap. Integrated program to be included in specifications.

CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS HIGHWAY & EXPRESSWAY DIVISION		LIVERNOIS AVE NORTH OF INTERVALE AVE AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS		SHEET 6 OF 12 SHEETS
RAILROAD GRADE SEPARATIONS		CONSTRUCTION PROGRAM		JOB No. GS-RR-13
DESIGNED BY	REFERENCE DRAWINGS	TRACED BY	CHECKED BY	DRWG No. C-104
DRAWN BY				DATE NOV. 1965
G. T. Satterly Jr.				
C. C. Lederer				
REVISIONS LOCATED BY COORDINATES ON SHEET				



**LEGEND**

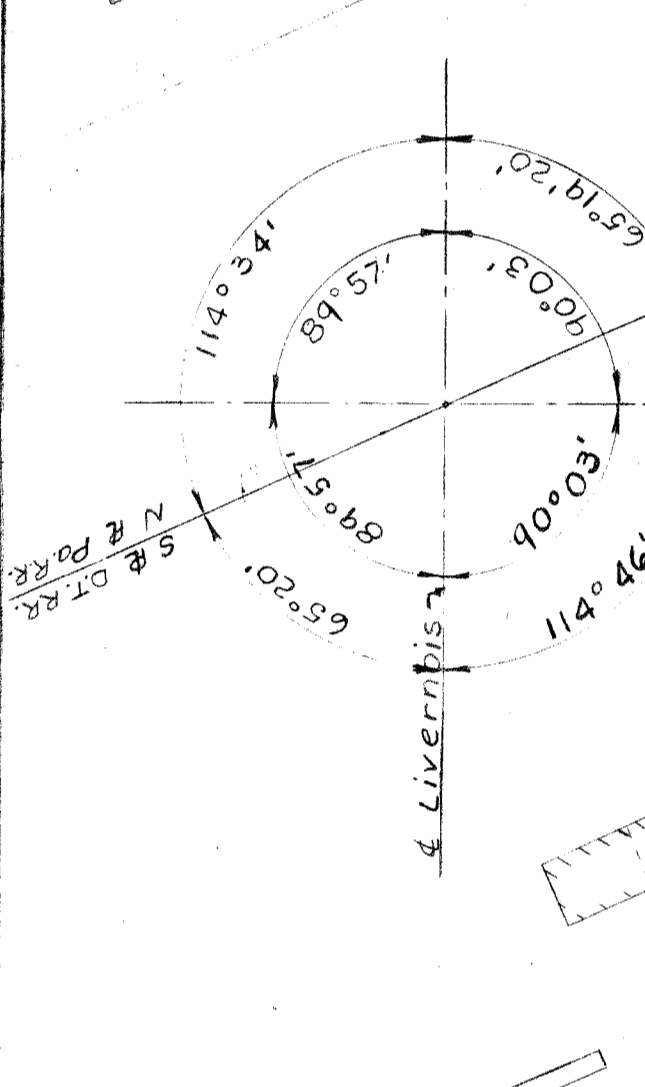
- Catch Basin
- Sewer Manhole
- Manhole
- Detroit Edison Co. Manhole
- Michigan Edison Co. Manhole
- Michigan Gas Co. Manhole
- Michigan Bell Co. Manhole
- Detroit Edison Co. Pole
- P.L.C. Street Lighting Pole
- D.S.R. Pole
- Traffic Signal Pole
- Traffic Signal Pole without Light
- Water Pole
- Water Valve
- Gas Valve
- Gas Drip
- W Water Service Shut Off (Curb/Back)
- Police Box
- Fire Hydrant
- Fire Alarm Box
- Traffic Signal Box
- Stake
- Iron
- Conc. Monument
- Bench Mark

SCALE: 1" = 50'

SURVEY BOOKS USED: 1625, 1624, 1627

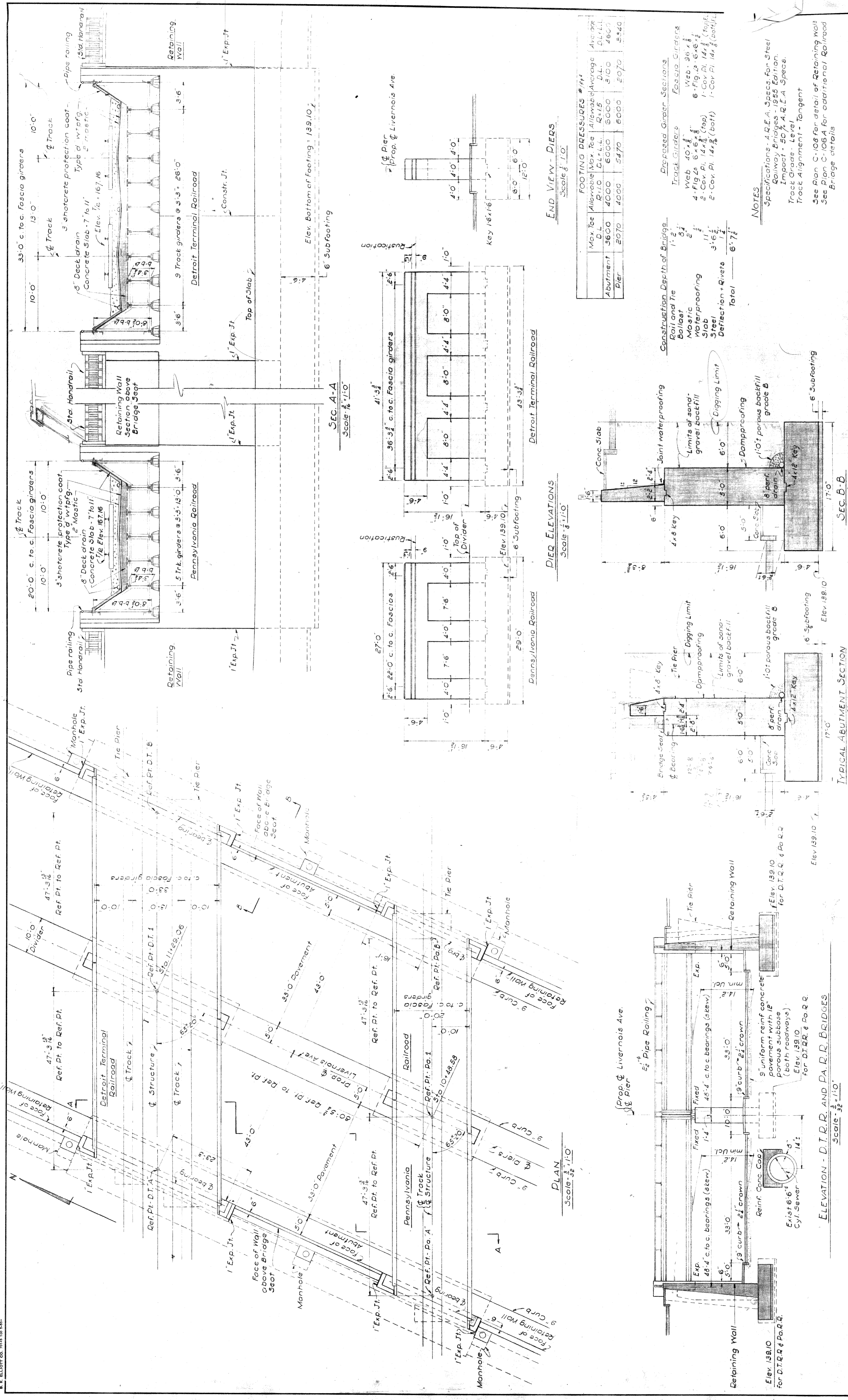
**CITY OF DETROIT**  
 DEPARTMENT OF PUBLIC WORKS  
 HIGHWAY & EXPRESSWAY DIVISION  
**RAILROAD GRADE SEPARATIONS**

LOCATION: LIVERNOIS-D.I.R.R. & PENNARRAIL  
 SURVEY PLAN  
 DRAWN BY: G.M. DATE: NOV. 1955 JOB NO: 68-BR-13  
 CHECKED BY: G.T.S. DATE: NOV. 1955  
 APPROVED BY: [Signature] DWG NO: C-105



Note: All houses shown on Stoepel & Santa Rosa have basements -

B. K. BLUMFELT CO. 2015 100 2451



PLAN Scale 3/8" = 1'-0"

ELEVATION - D.T.R. AND P.A.R.R. BRIDGES Scale 3/8" = 1'-0"

PIER ELEVATIONS Scale 3/8" = 1'-0"

END VIEW - PIERS Scale 1/2" = 1'-0"

SEC. A-A Scale 1/8" = 1'-0"

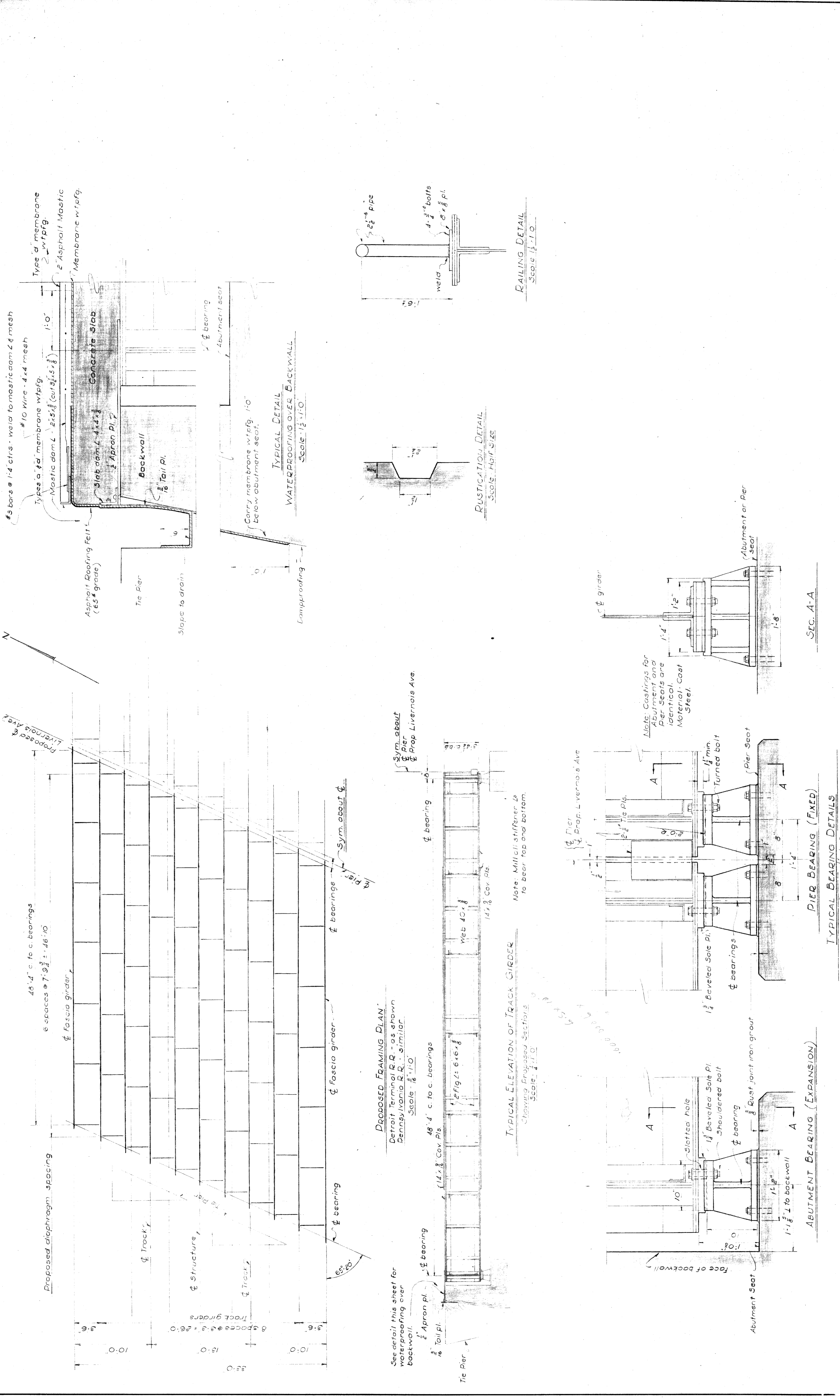
SEC. B-B Scale 3/8" = 1'-0"

FOOTING PRESSURES #/FT			Average
Max. Toe	Allowable	Max. Toe	D.L.L.
Abutment	3600	4000	3100
Pier	2070	4000	5070
			5940

Proposed Girder Sections		Fascia Girders
Track Girders	1'-2"	Web 40 x 1/2"
		4-Figs 6 x 6 x 1/2"
		2-Cov. Pl. 14 x 1/2" (top)
		1-Cov. Pl. 14 x 1/2" (bot)
		1-Cov. Pl. 14 x 1/2" (bot)

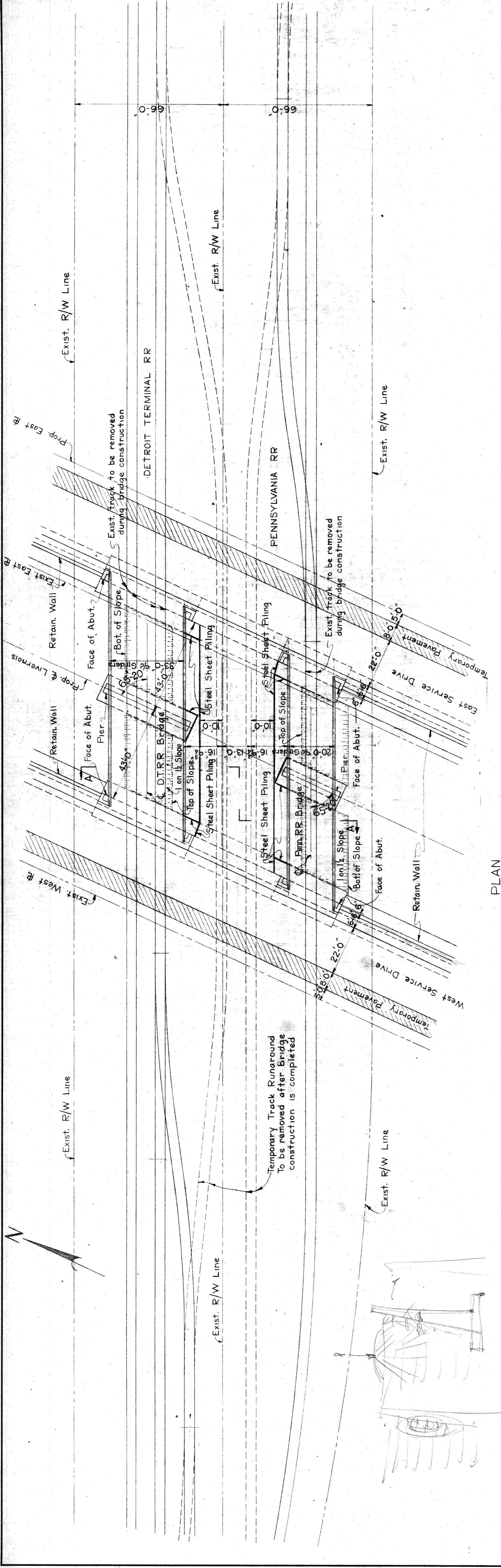
**NOTES**  
 Specifications - A.D.E.A. Specs for Steel Railway Bridges - 1955 Edition.  
 Impact - 50% A.R.E.A. Specs.  
 Track Grade - Level  
 Track Alignment - Tangent  
 See Plan C-108 for detail of Retaining Walls  
 See Plan C-106A for additional Railroad Bridge details

DESIGNED BY	APPROVED	SHEET 2 OF 12 SHEETS JOB No. GS-RR-13 DRWG No. C-106 DATE NOV. 1955
DRAWN BY		
TRACED BY		
CHECKED BY		
DESCRIPTION	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS HIGHWAY & EXPRESSWAY DIVISION RAILROAD GRADE SEPARATIONS	
REVISIONS LOCATED BY COORDINATES ON SHEET	LIVERNOIS AVE NORTH OF INTERVALE AVE AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS GENERAL PLAN OF STRUCTURE RAILROAD BRIDGE	

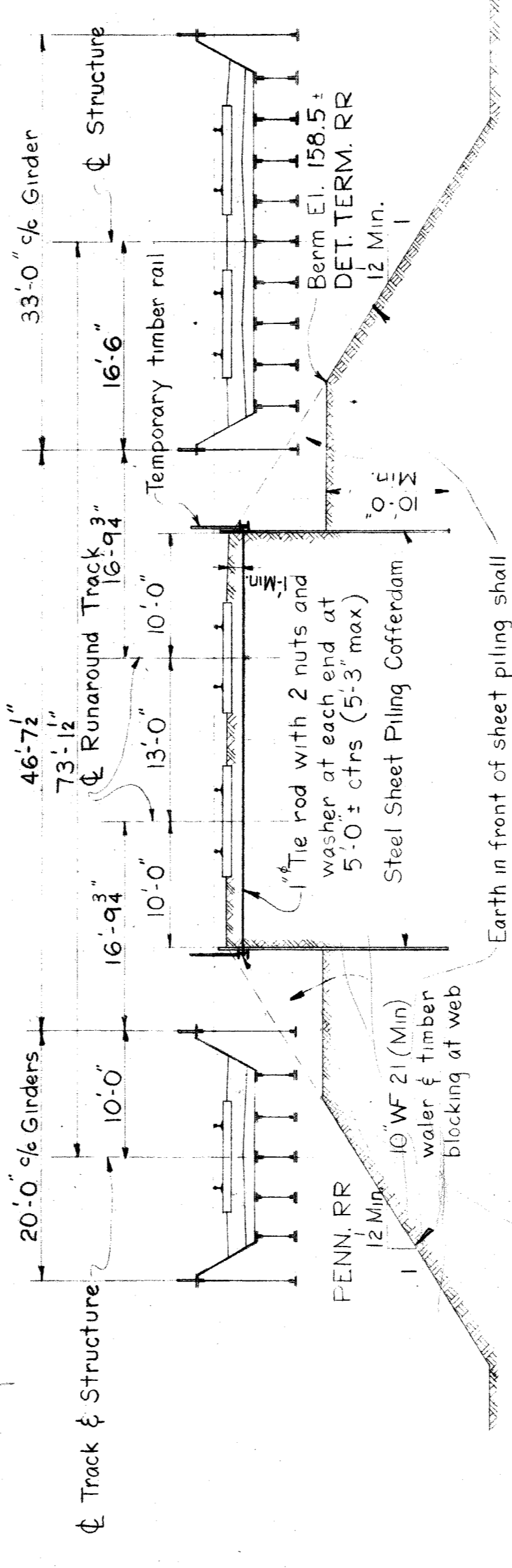


CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS HIGHWAY & EXPRESSWAY DIVISION		LIVERNOIS AVE NORTH OF INTERVALE AVE AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS		SHEET 2 OF 12 SHEETS
RAILROAD GRADE SEPARATIONS		GENERAL DETAILS - RAILROAD BRIDGES		JOB No. GS-RR-13
APPROVED:		DESIGNED BY		DRWG No. C-106 A
DRAWN BY C. Lederer		TRACED BY		DATE NOV. 1955
CHECKED BY R. HILKS		REVISIONS LOCATED BY COORDINATES ON SHEET		
HIGHWAY & EXPRESSWAY ENGINEER				





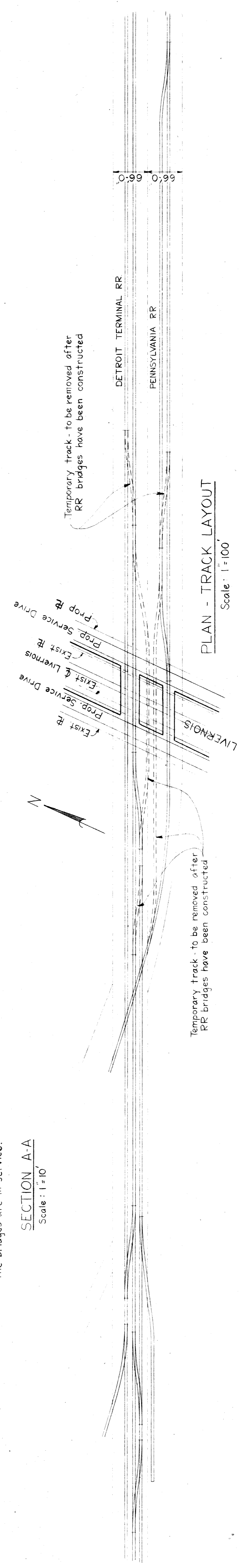
**PLAN**  
Scale: 1" = 20'



**SECTION A-A**  
Scale: 1" = 10'

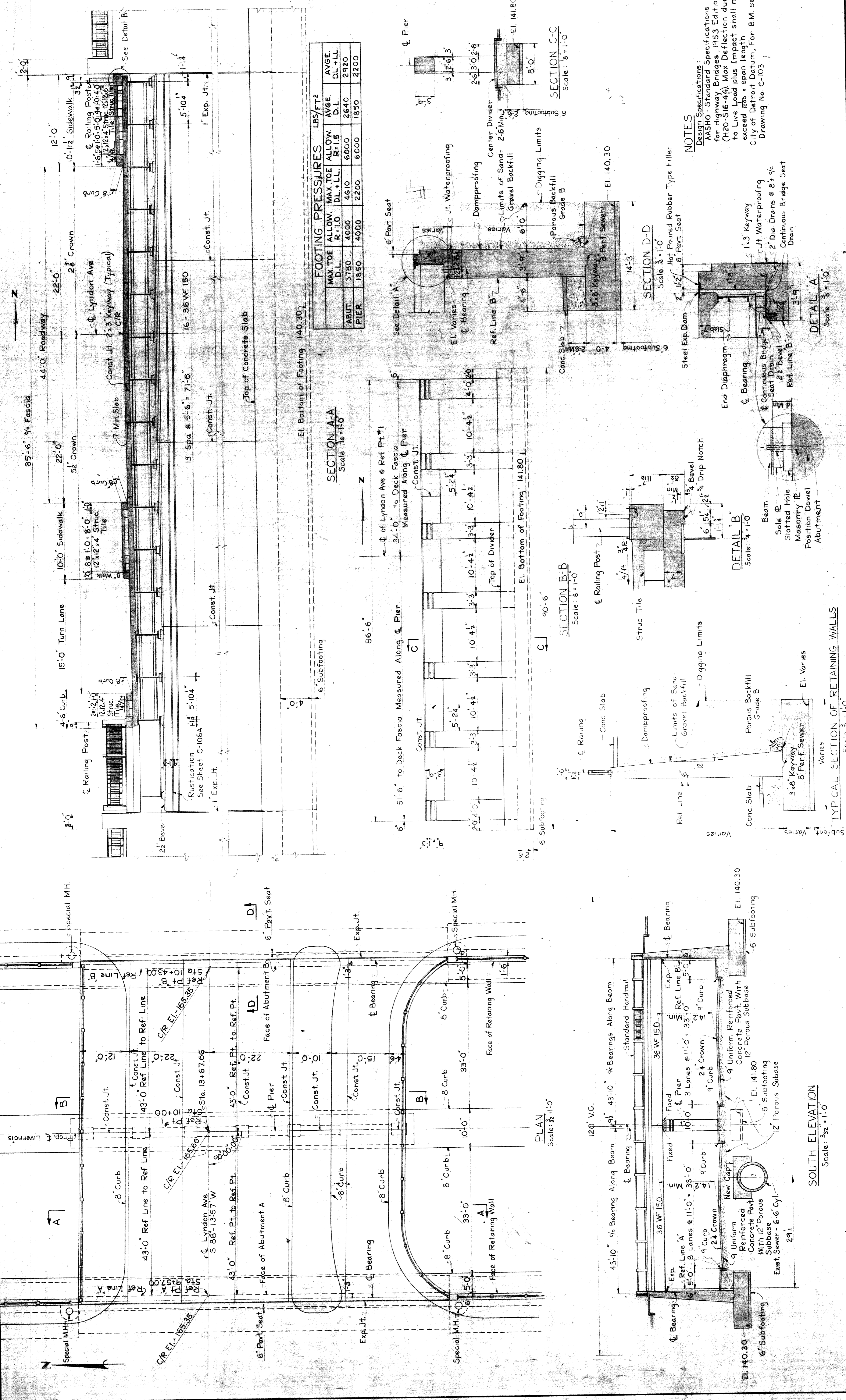
Excavation between these slopes must be deferred until after the permanent tracks on the bridges are in service.

**NOTE:**  
Minimum bracing sizes, slopes and sheet piling penetration are shown. These dimensions shall be increased as required to provide stable and safe conditions during entire construction operations.



**PLAN - TRACK LAYOUT**  
Scale: 1" = 100'

<p><b>CITY OF DETROIT</b> DEPARTMENT OF PUBLIC WORKS HIGHWAY &amp; EXPRESSWAY DIVISION</p>		<p><b>LIVERNOIS AVE NORTH OF INTERVALE AVE AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS</b></p>		<p>SHEET 10 OF 12 SHEETS</p>
<p><b>RAILROAD GRADE SEPARATIONS</b></p>		<p><b>TRACK PLAN</b></p>		<p>JOB No. 6S-RR-13</p>
<p>APPROVED:</p>		<p>DESIGNED BY</p>		<p>DRWG No. C-107</p>
<p>DESIGNED BY</p>		<p>DRAWN BY</p>		<p>DATE NOV. 1955</p>
<p>DRAWN BY</p>		<p>TRACED BY</p>		
<p>TRACED BY</p>		<p>CHECKED BY</p>		
<p>CHECKED BY</p>		<p>REVISIONS LOCATED BY COORDINATES ON SHEET</p>		
<p>DESCRIPTION</p>		<p>DATE</p>		
<p>REVISIONS LOCATED BY COORDINATES ON SHEET</p>		<p>DATE</p>		



**CITY OF DETROIT**  
 DEPARTMENT OF PUBLIC WORKS  
 HIGHWAY & EXPRESSWAY DIVISION

**LIVERNOIS AVE NORTH OF INTERVALE AVE**  
**AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS**  
**RAILROAD GRADE SEPARATIONS**  
**LYNDON AVE BRIDGE**

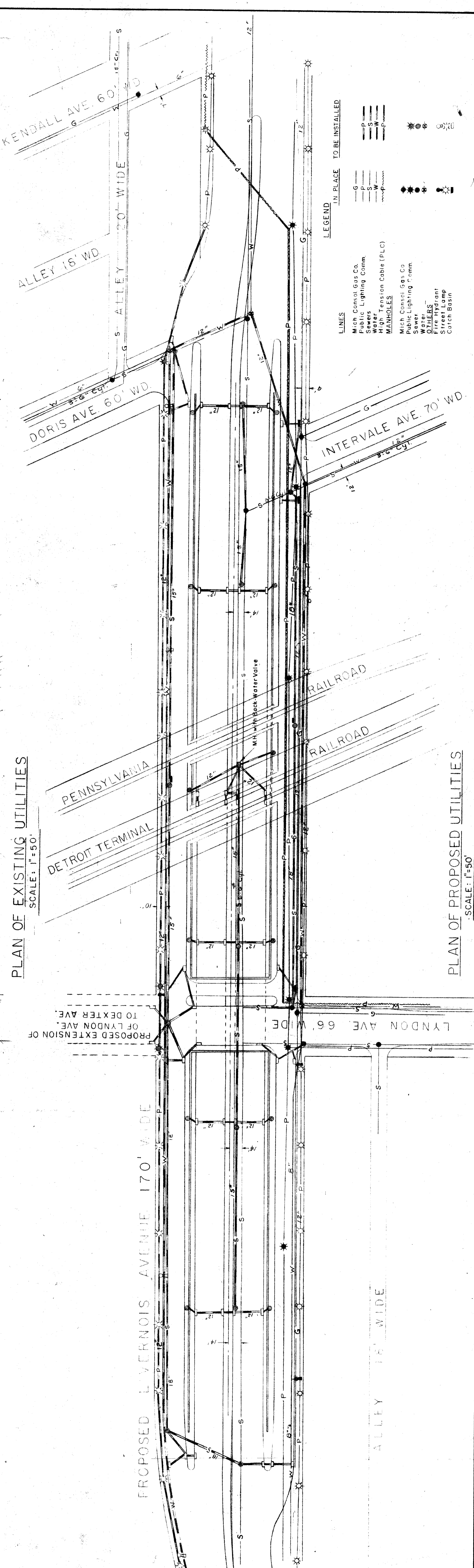
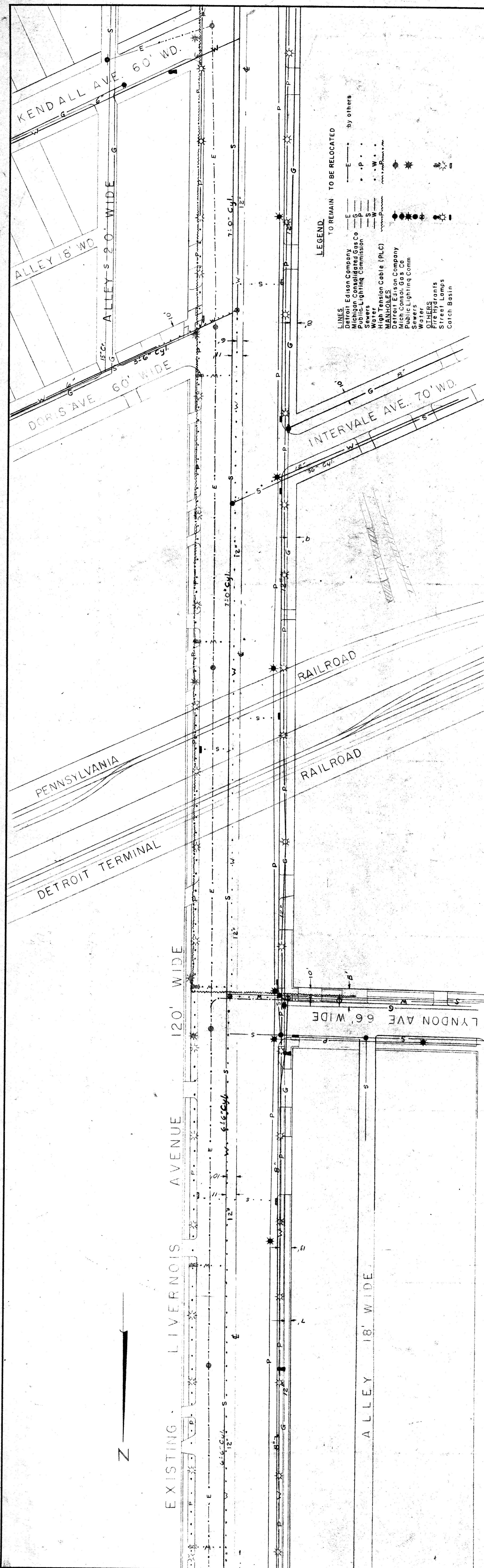
**GENERAL PLAN OF STRUCTURE**

DESIGNED BY: G.T. Satterly Jr.  
 DRAWN BY: G.T. Satterly Jr.  
 TRACED BY:  
 CHECKED BY: C.C. Lederer

APPROVED:

REVISIONS LOCATED BY COORDINATES ON SHEET

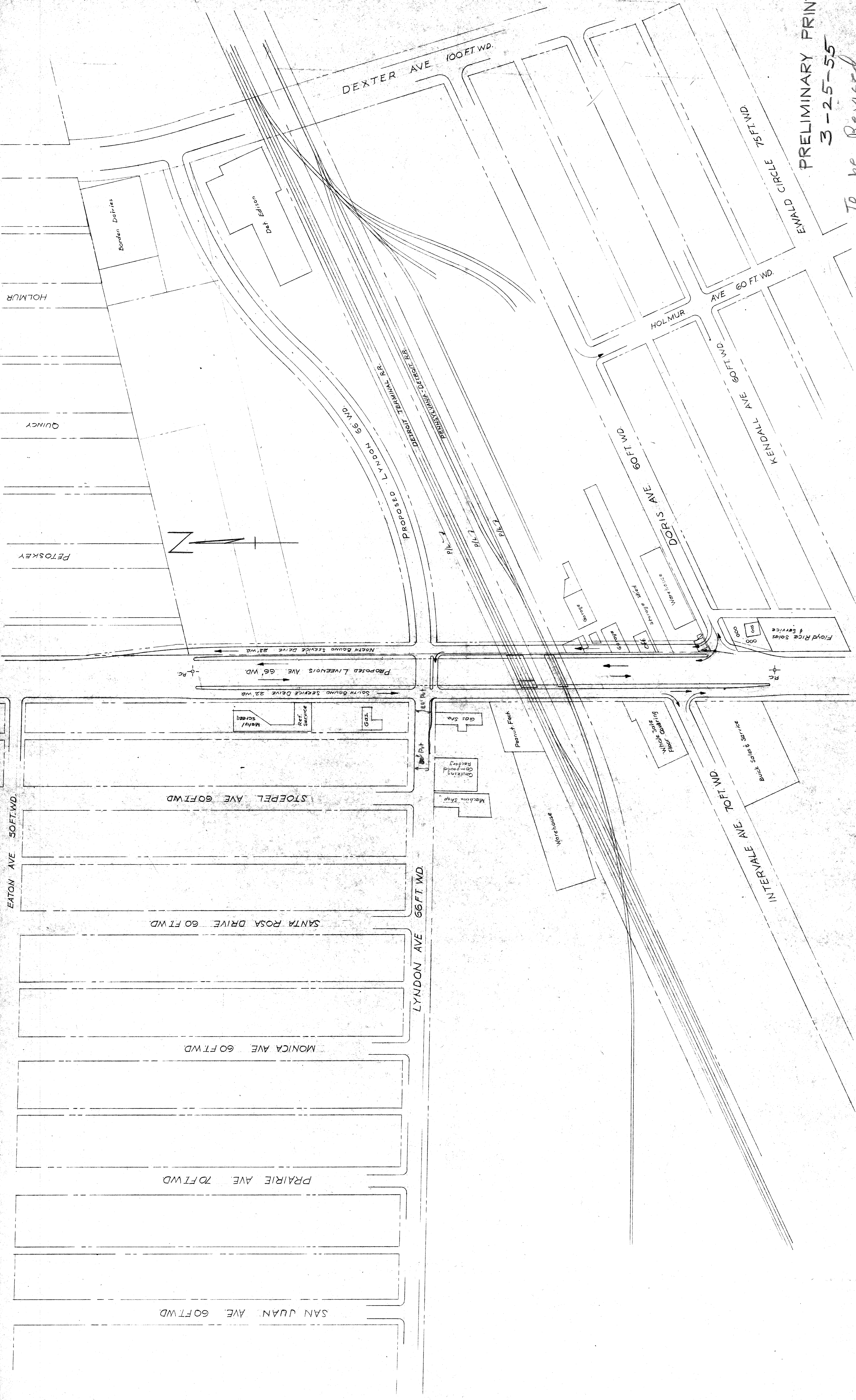
SHEET 11 OF 12 SHEETS  
 JOB No. GS-RR-13  
 DRWG No. C-108  
 DATE NOV. 1955



PLAN OF EXISTING UTILITIES  
 SCALE: 1" = 50'

PLAN OF PROPOSED UTILITIES  
 SCALE: 1" = 50'

SHEET 12 OF 12 SHEETS JOB No. GS-RR-13 DRWG No. C-110 DATE NOV. 1955	
<b>LIVERNOIS AVE NORTH OF INTERVALE AVE          AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS</b>	
<b>UTILITY PLAN</b>	
<b>CITY OF DETROIT</b> DEPARTMENT OF PUBLIC WORKS HIGHWAY & EXPRESSWAY DIVISION	
<b>RAILROAD GRADE SEPARATIONS</b>	
DESIGNED BY G. McGinty	APPROVED  HIGHWAY & EXPRESSWAY ENGINEER
DRAWN BY G. McGinty	
TRACED BY C.C. LeDeger	
CHECKED BY C.C. LeDeger	
REFERENCE DRAWINGS	
DESCRIPTION REVISIONS LOCATED BY COORDINATES ON SHEET	



PRELIMINARY PRINT  
 3-25-55  
 To be Revised

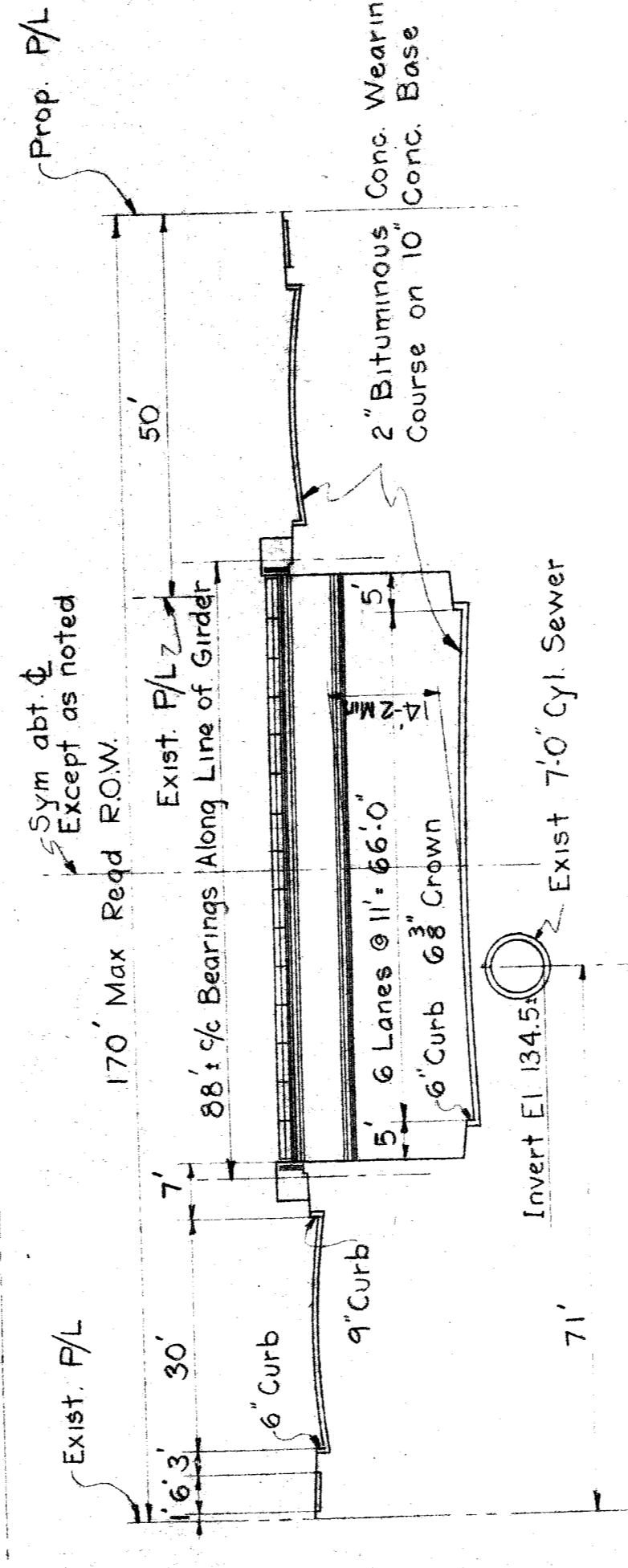
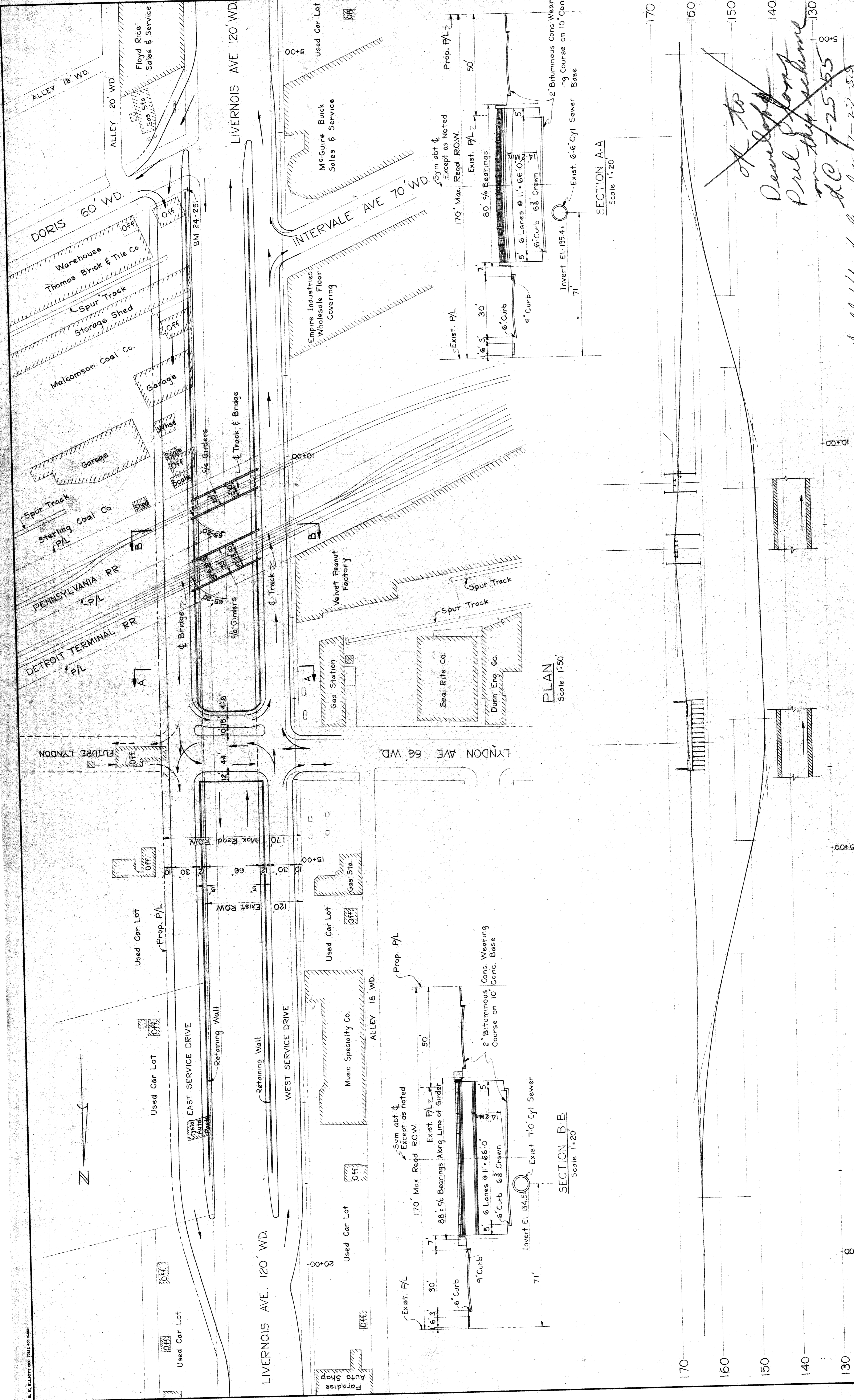
SHEET	OF	SHEETS
CONTRACT	NO.	
DRWG NO.		
DATE		

LOCATION PLAN  
 LIVERNOIS — PENN. RR. & D.T.R.R. GRADE SEPARATION  
 SCALE: 1" = 100'

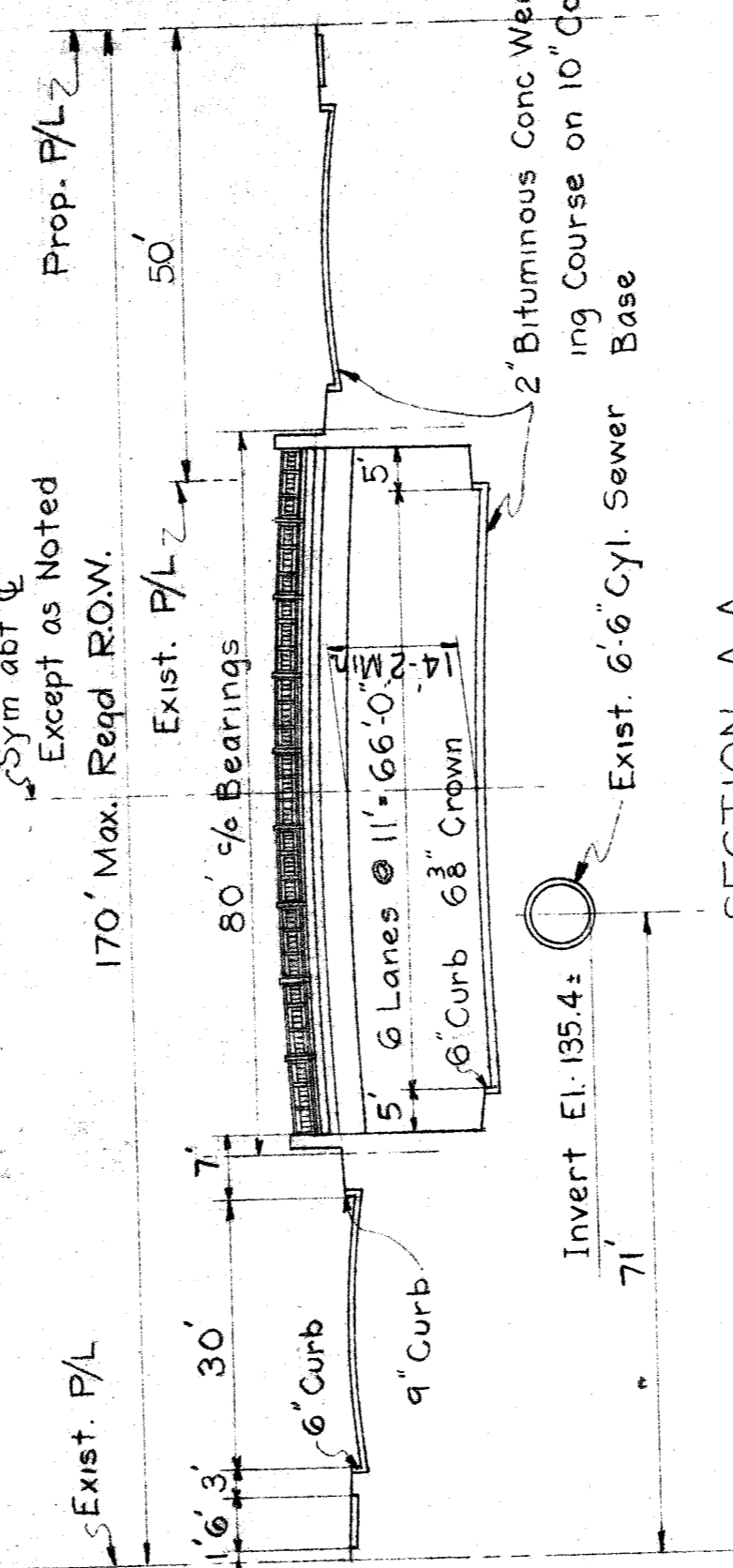
CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 HIGHWAY & EXPRESSWAY DIVISION

DESIGNED BY	APPROVED:
DRAWN BY	S. E. SHORTER
TRACED BY	
CHECKED BY	
REFERENCE DRAWINGS	
DESCRIPTION	
REVISIONS LOCATED BY COORDINATES ON SHEET	

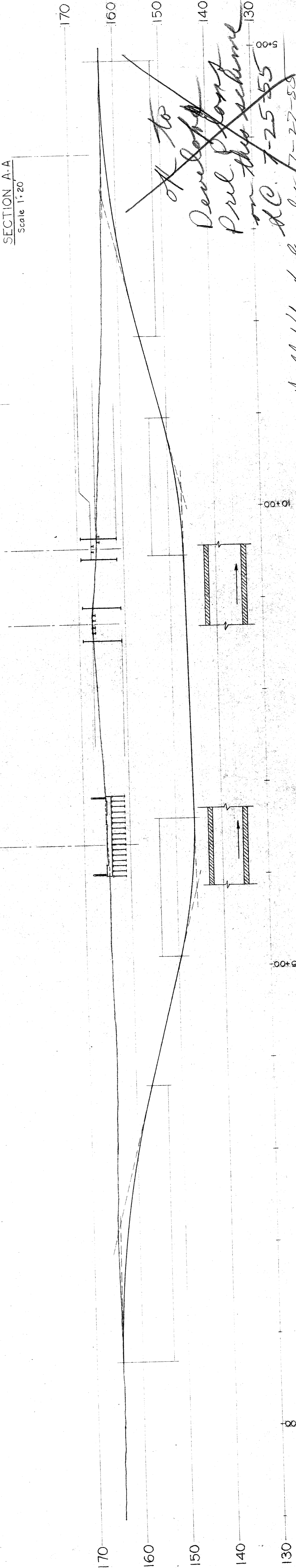
HIGHWAY & EXPRESSWAY ENGINEER



SECTION B-B  
Scale 1"=20'



SECTION A-A  
Scale 1"=20'

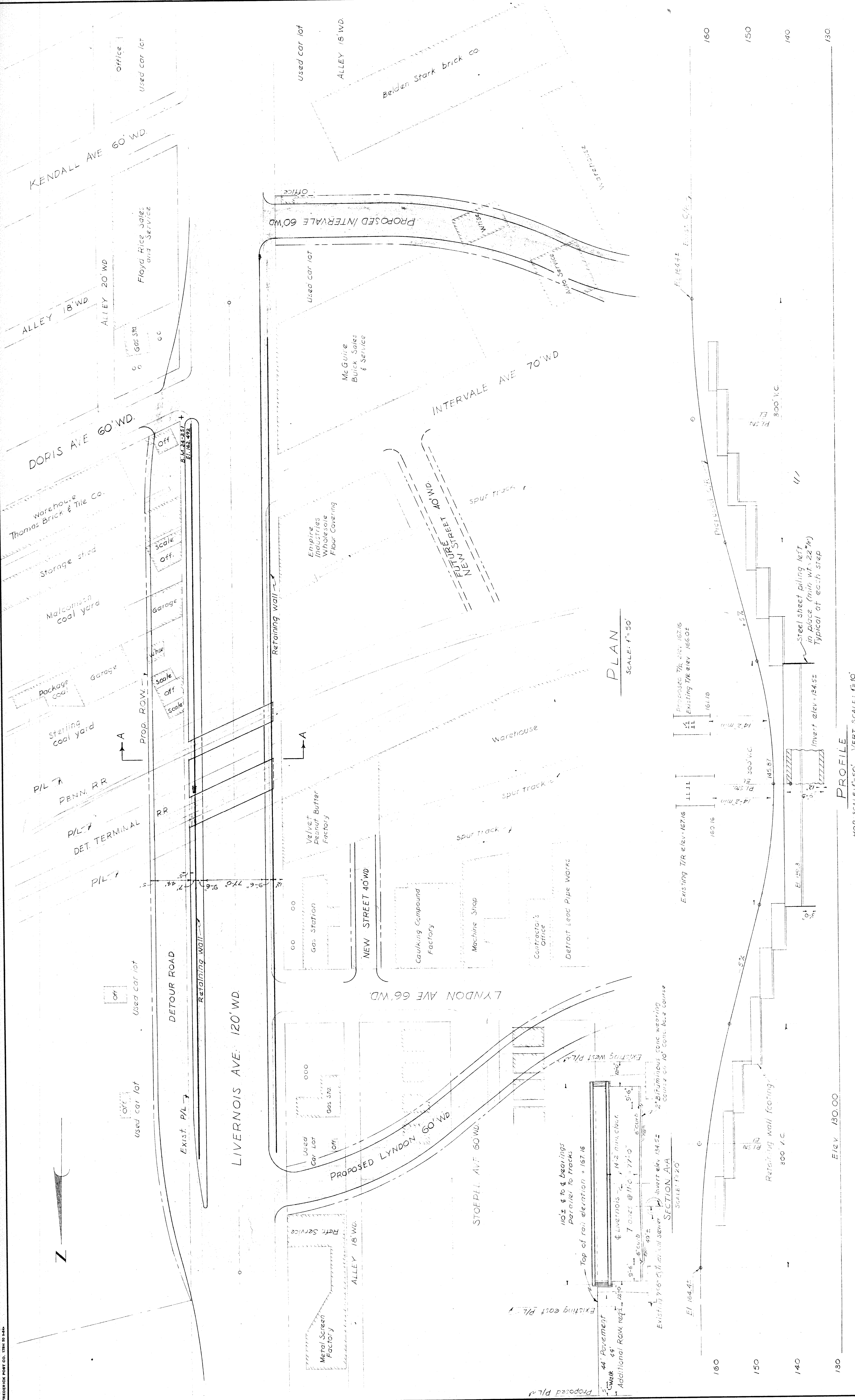


*Off to Developer  
Prud. Plant  
on this scheme  
R.C. 7-25-55  
Hold Up. & Survey 7-27-55*

LIVERNOIS N. of INTERVALLE  
Not USED

CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
HIGHWAY & EXPRESSWAY DIVISION

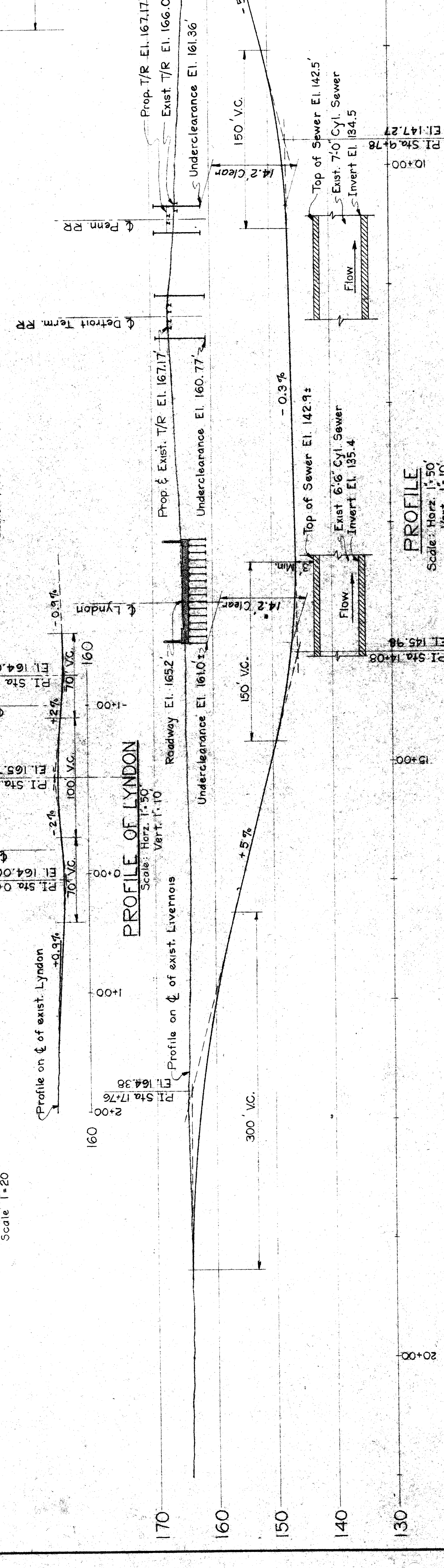
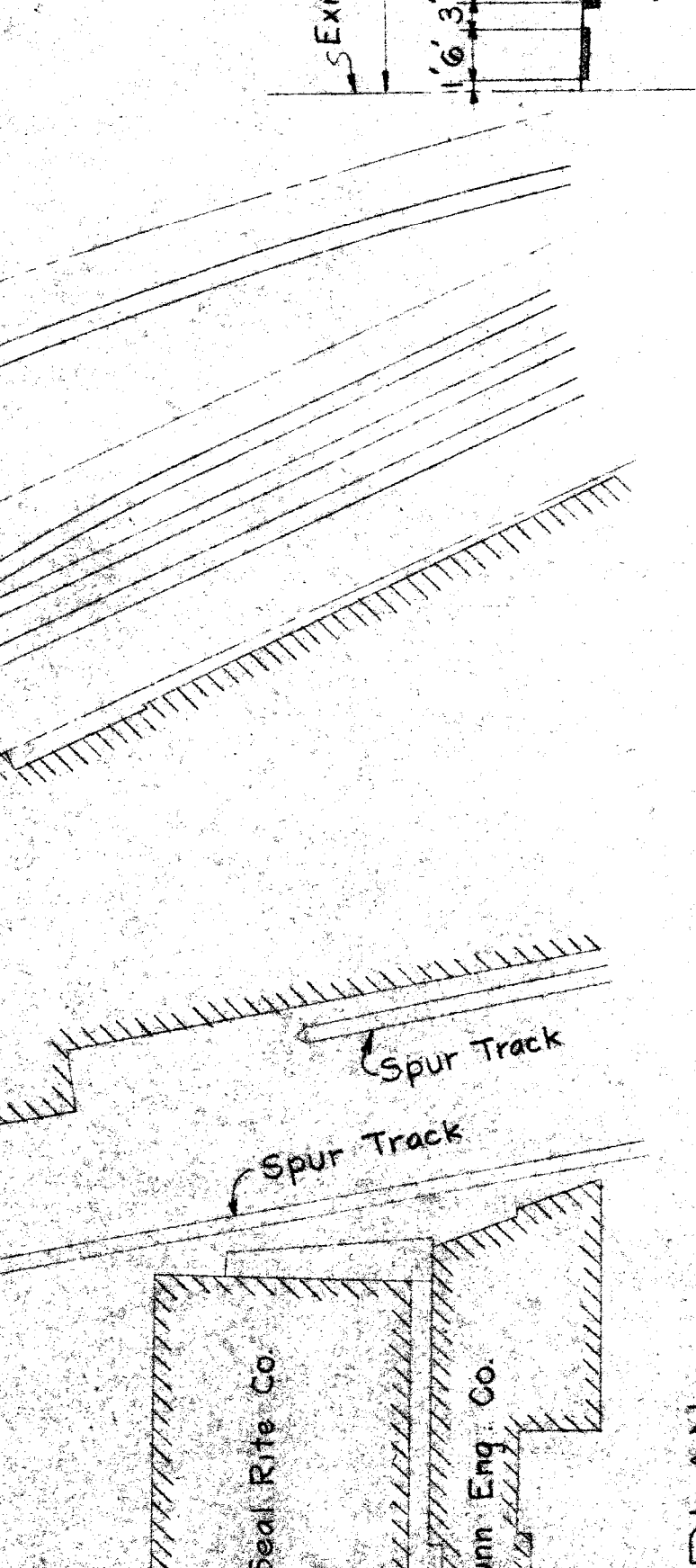
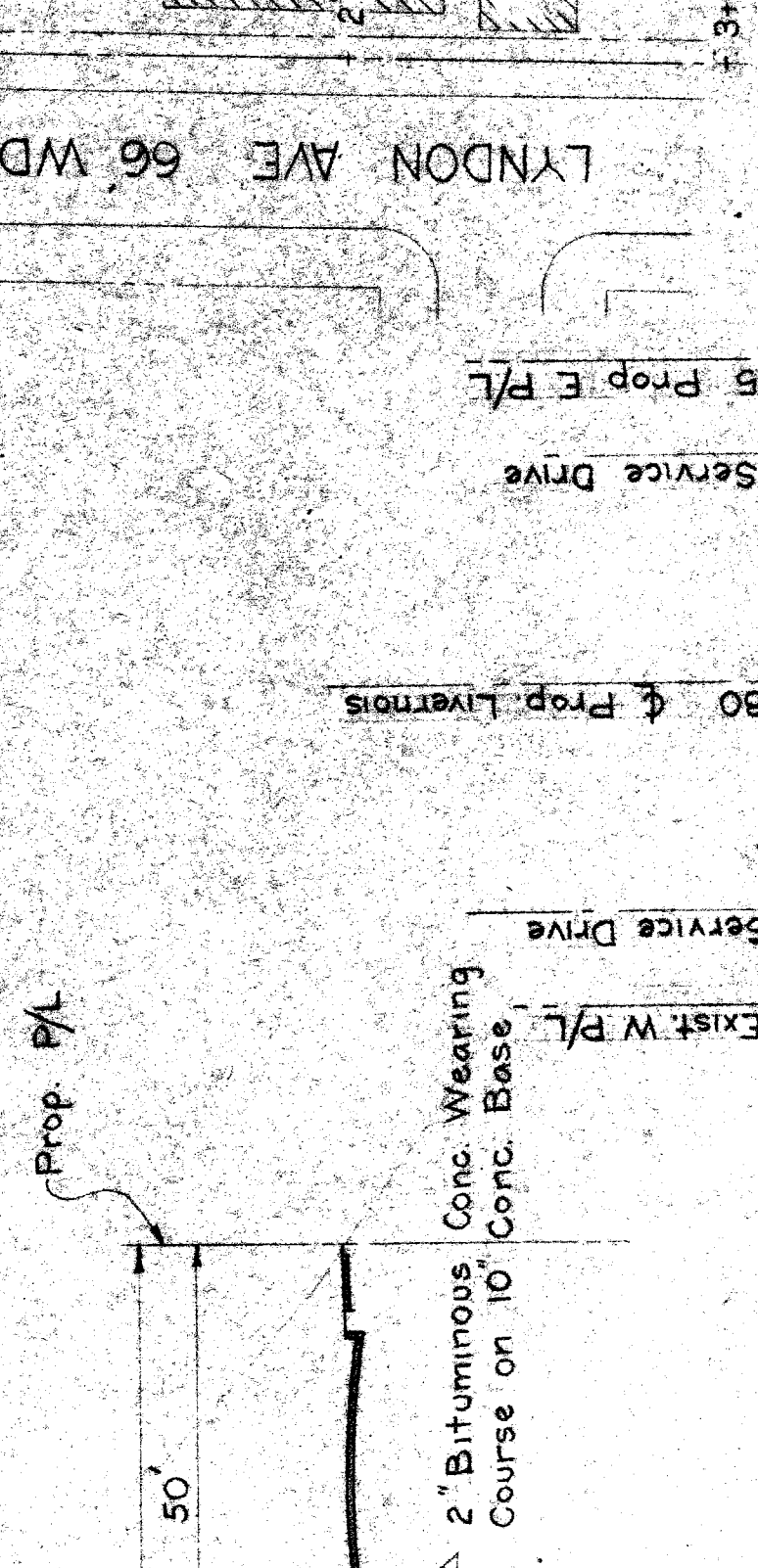
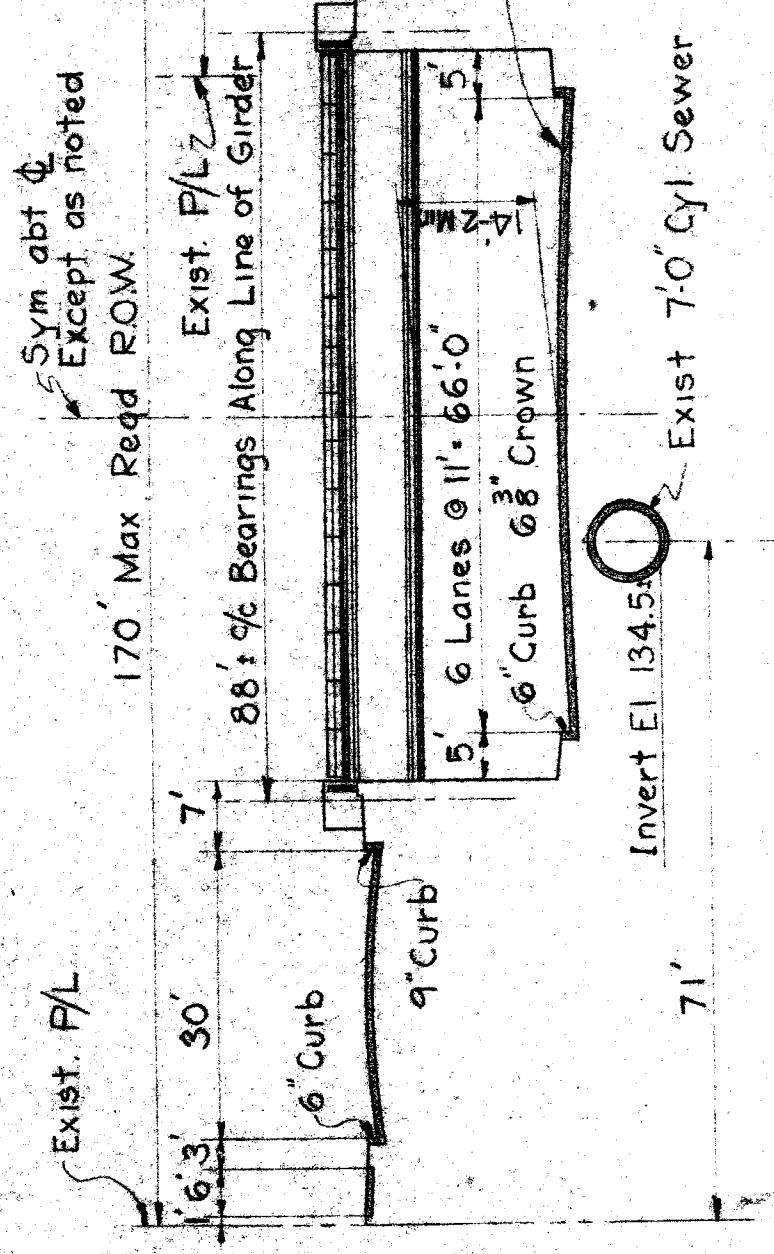
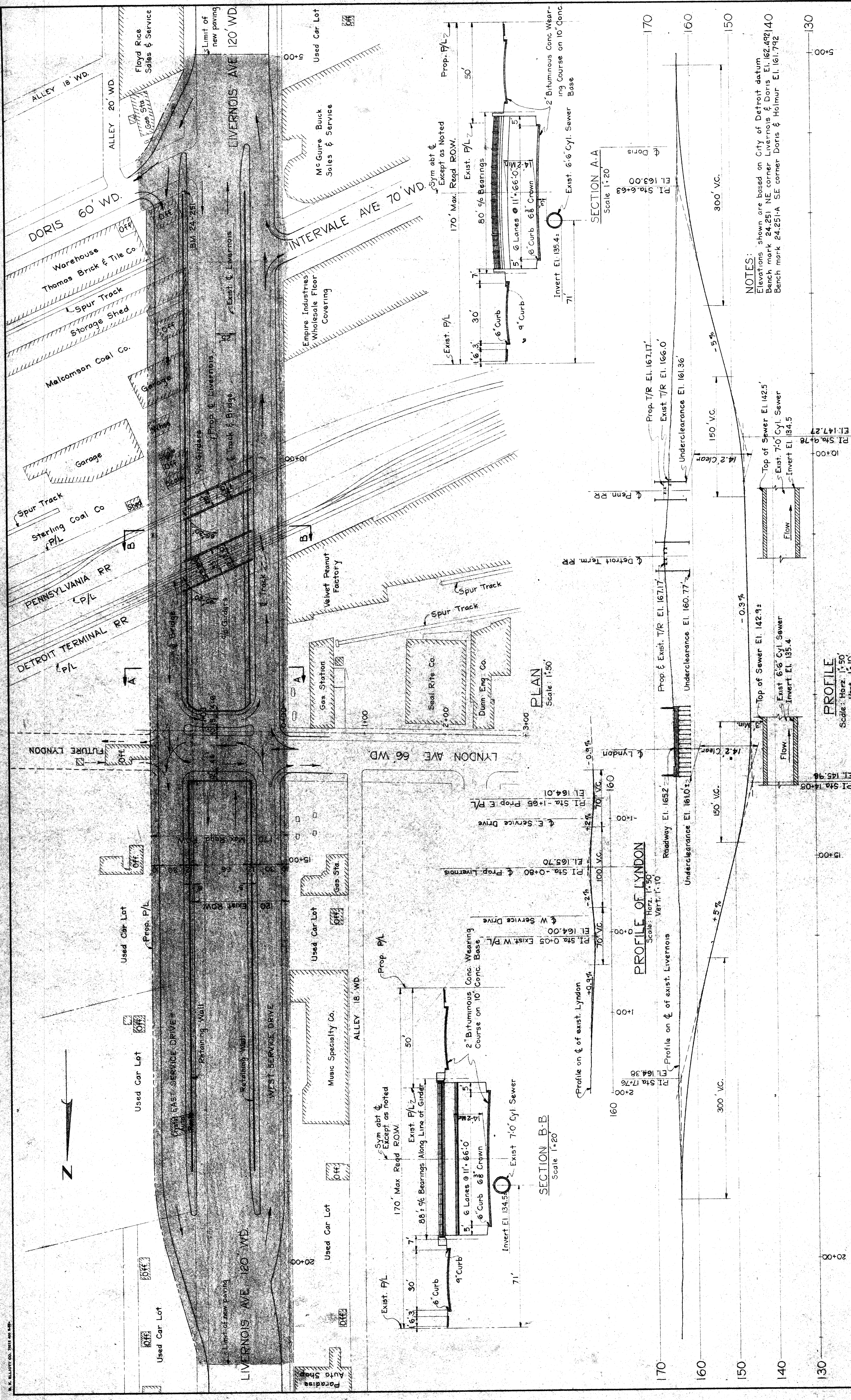
DESIGNATION	DATE	BY
DESIGNED BY		
DRAWN BY		
TRACED BY		
CHECKED BY		
APPROVED		



PLAN  
SCALE: 1" = 50'

PROFILE  
HOR. SCALE: 1" = 50' VERT. SCALE: 1" = 10'

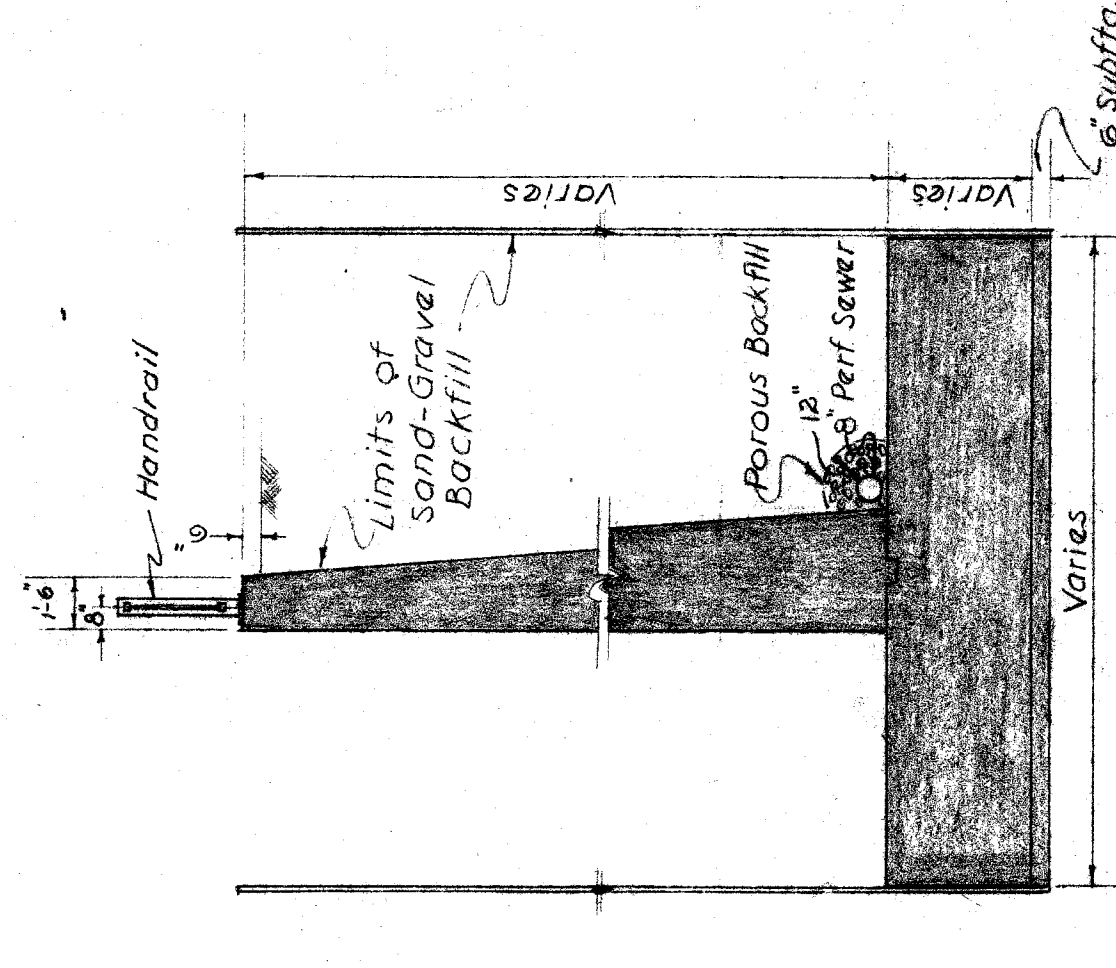
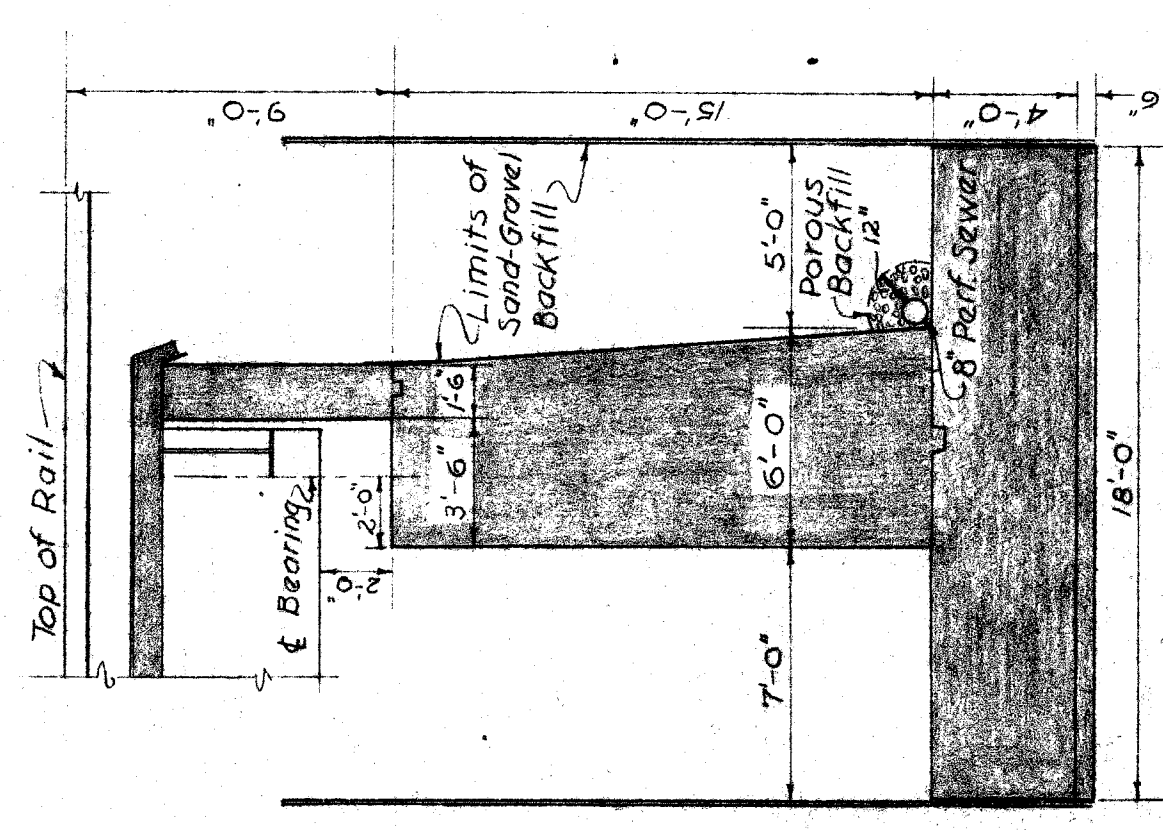
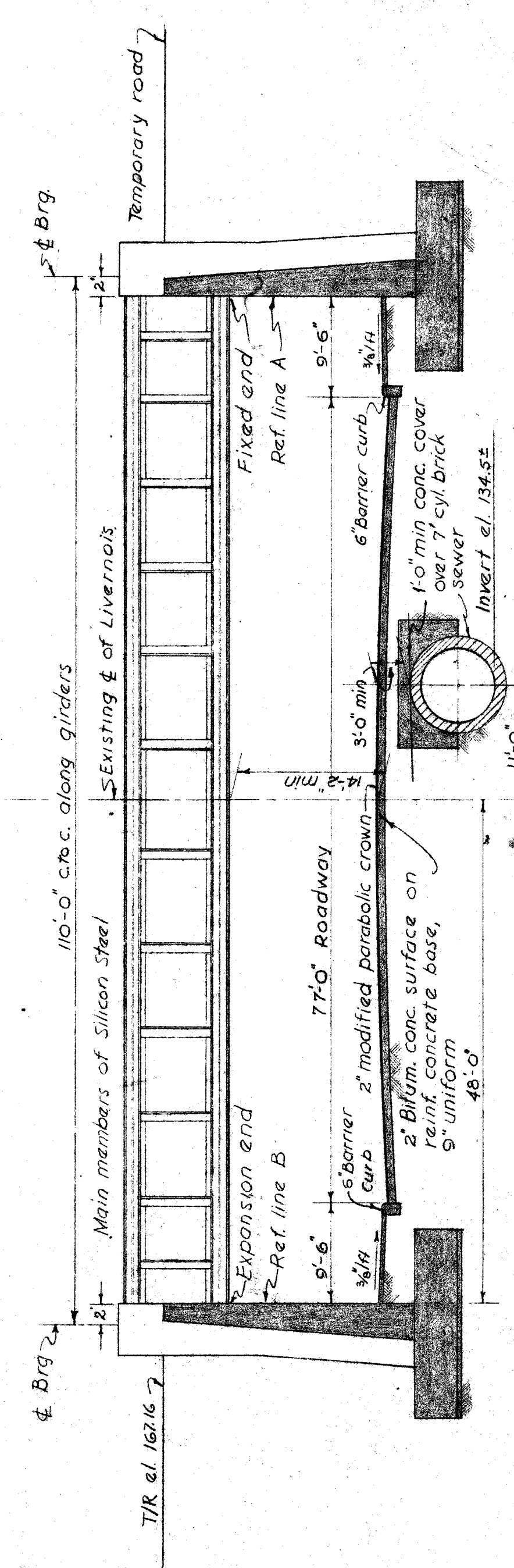
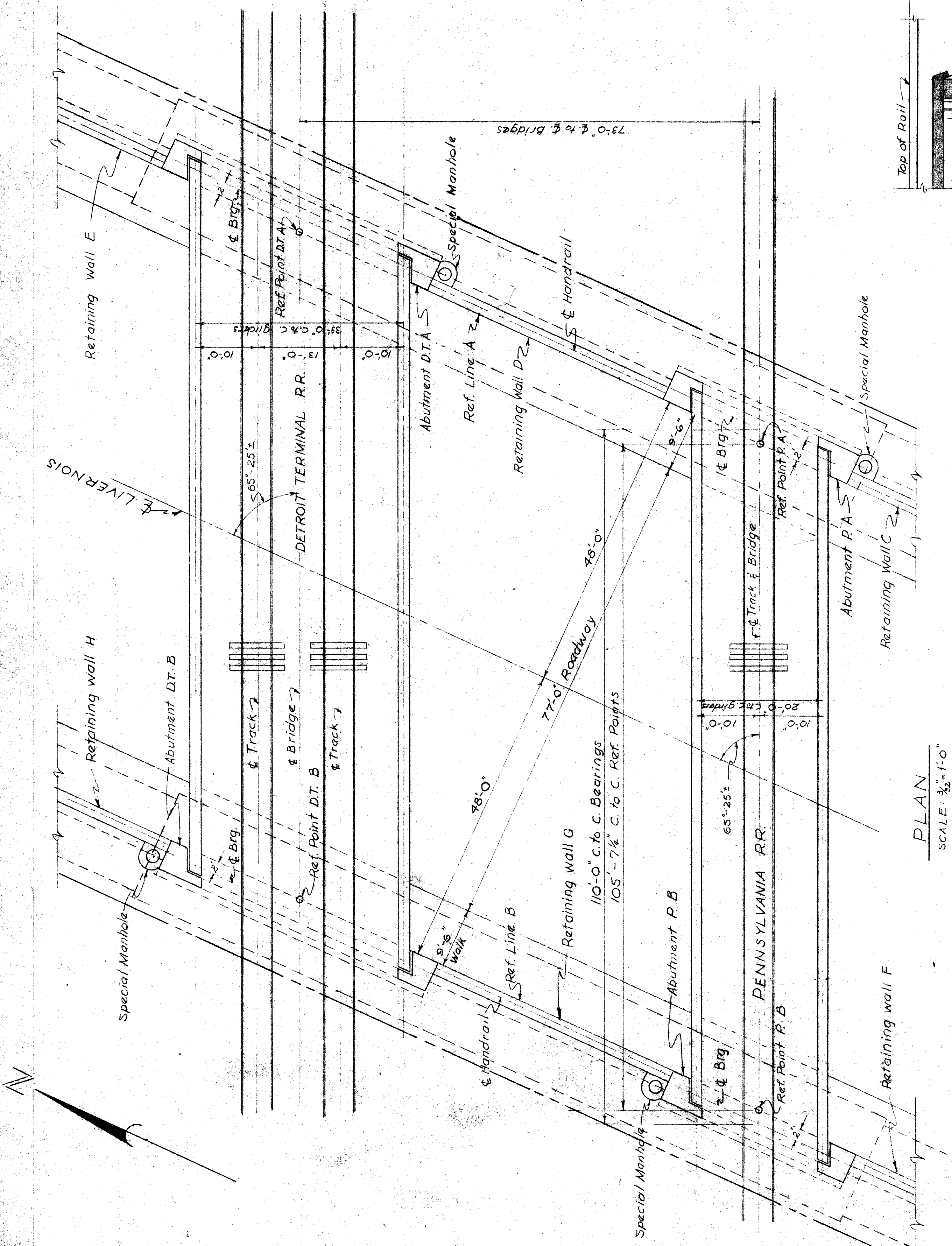
SHEET OF SHEETS JOB No. 65-RR-13 DRWG. No. C-1 DATE: 4-21-15 1955	
CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS HIGHWAY & EXPRESSWAY DIVISION RAILROAD GRADE SEPARATIONS	
LIVERNOIS AVE NORTH OF INTERVALE AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS	
GENERAL PLAN (continued)	
APPROVED:	
DESIGNED BY:	S.E. SHOFER
DRAWN BY:	
TRACED BY:	
CHECKED BY:	
DESCRIPTION:	
REVISIONS LOCATED BY COORDINATES ON SHEET:	



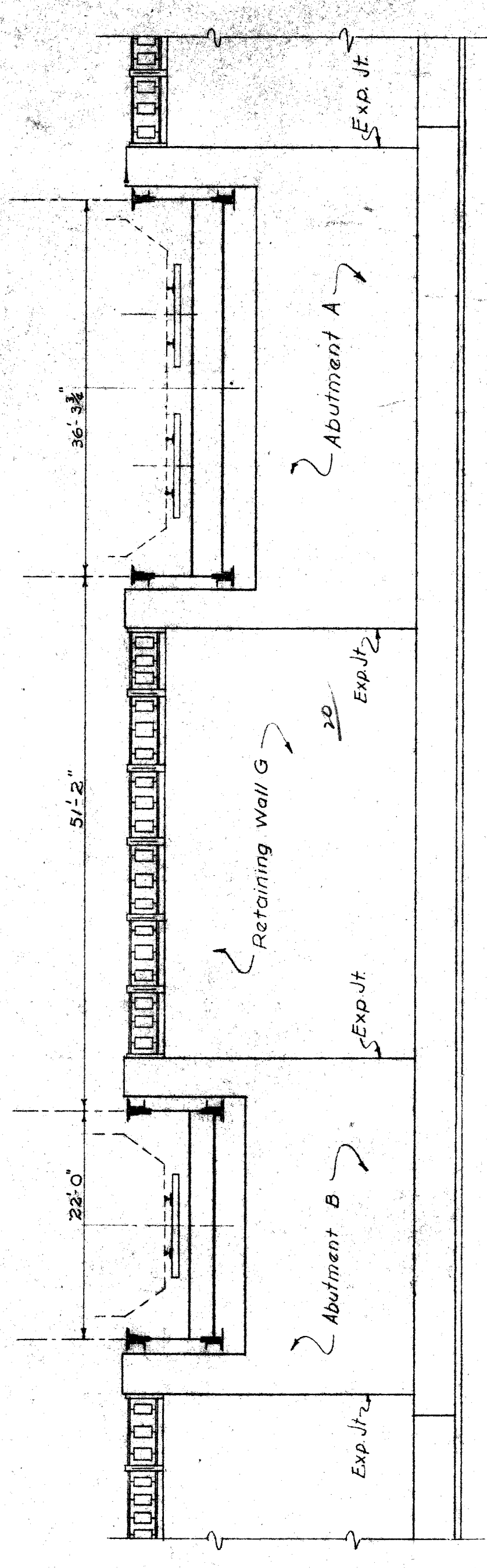
NOTES:  
Elevations shown are based on City of Detroit datum  
Bench mark 24.251 NE corner Livernois & Doris El. 162.492/140  
Bench mark 24.251-A SE corner Doris & Holm El. 161.792

CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS HIGHWAY & EXPRESSWAY DIVISION		LIVERNOIS AVE NORTH OF INTERVALE AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS GENERAL PLAN (SCHEME L)		SHEET — OF — SHEETS
DESIGNED BY		APPROVED		JOB No. GS-RR-13
DRAWN BY G.T. Satterly Jr.		DRAWING No. C-9		DATE JULY 27 1955
TRACED BY		HIGHWAY & EXPRESSWAY ENGINEER		
CHECKED BY				
DESCRIPTION	DATE	DATE	DATE	

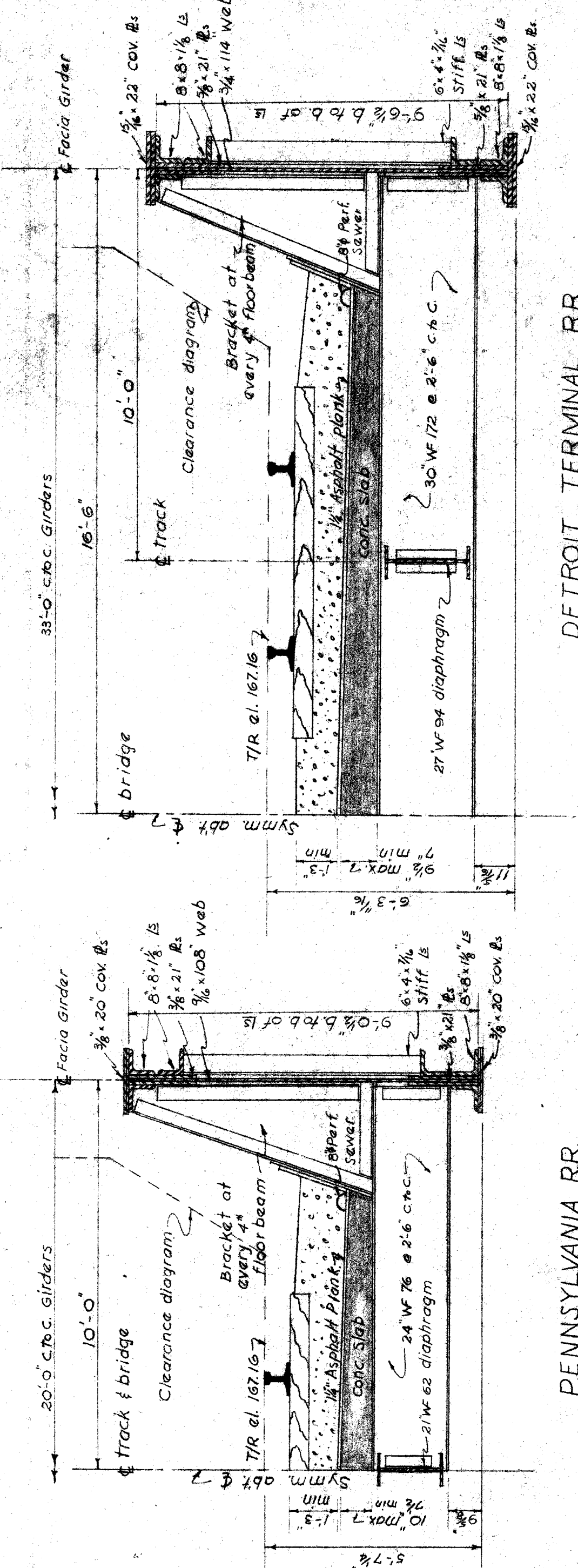
PUBLISHED FOR CO. 1955 BY S.P.A.



ELEVATION OF WEST ABUTMENT AND RETAINING WALL SCALE: 3/32" = 1'-0"



TYPICAL CROSS SECTIONS THRU BRIDGES SCALE: 3/32" = 1'-0"



GENERAL NOTES  
 Design - AREA Specifications, 1954 Edition  
 Cooper's E-72 Loading, 50% Specified Impact  
 Steel superstructure to be set level.

PREL

FOOTING PRESSURES		Lb./Sq. Ft.	Average
Max. Lb.	Average Lb.	Per Sq. Ft.	Per Sq. Ft.
ABUT.	4000	6/150	6000
	3520	6/150	3350
			4995

SHEET OF SHEETS  
 CONTRACT No. 10670 GS-RR-13  
 DRWG NO. C-4  
 DATE May 18, 1955

CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 HIGHWAY & EXPRESSWAY DIVISION  
 RAILROAD GRADE SEPARATIONS

LIVERNOIS AVE NORTH OF INTERVALLE  
 AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS  
 GENERAL PLAN OF STRUCTURE  
 (SCHEME G)

NO.	DESCRIPTION	DATE	BY	CHKD.

DESIGNED BY	APPROVED

REFERENCE DRAWINGS	DESIGNED BY	APPROVED

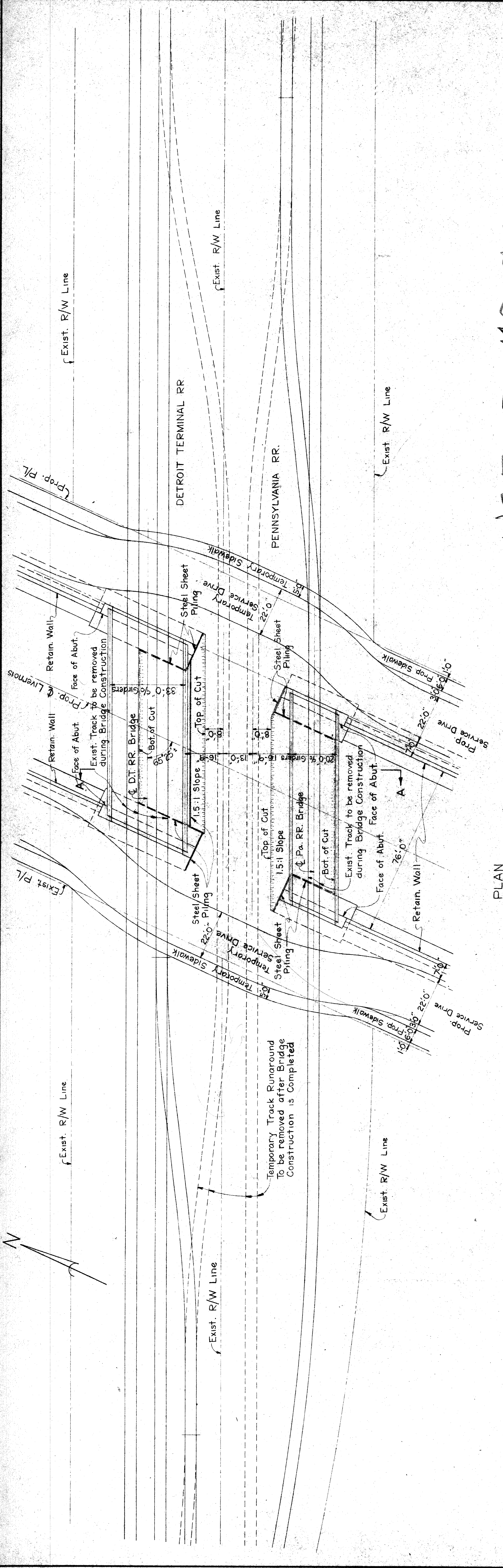
DESIGNED BY	DRAWN BY	TRACED BY	CHECKED BY
	S.E. SWOZTER		

REVISIONS LOCATED BY COORDINATES ON SHEET	DATE	BY	CHKD.

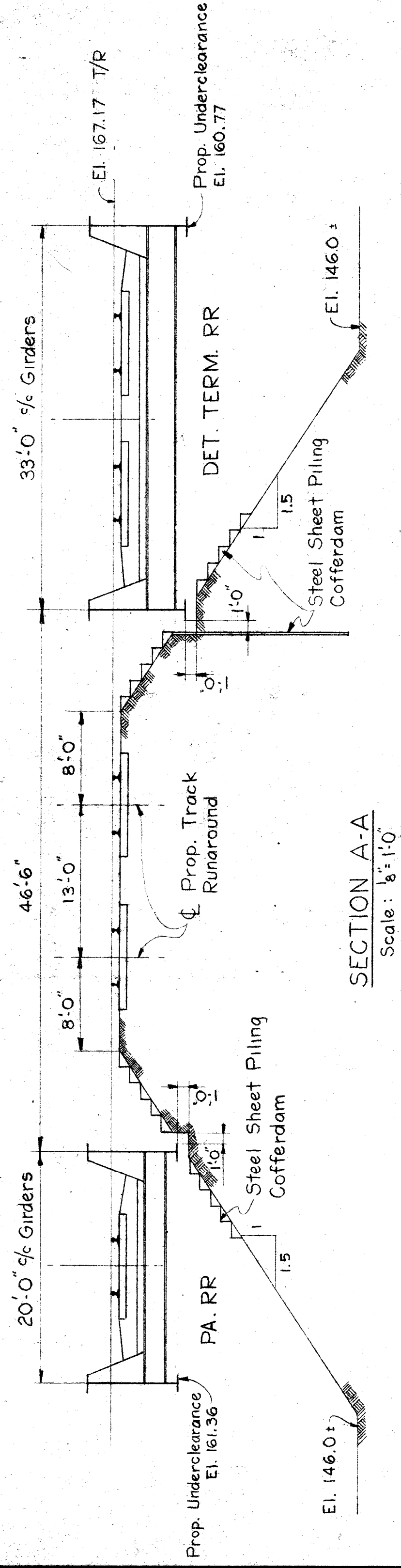


FREDERICK ROBT. CO. TRN 35 54-4



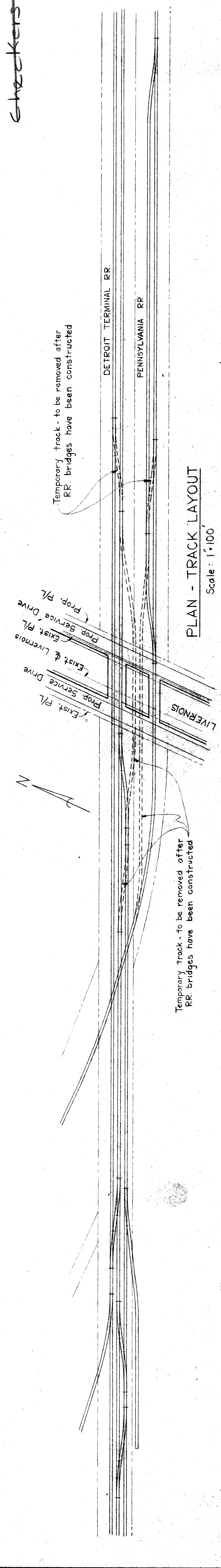
PLAN  
Scale: 1"=20'

USE TEMP. TRESSEL



SECTION A-A  
Scale: 1/8"=1'-0"

checkers print



PLAN - TRACK LAYOUT  
Scale: 1"=100'

<p>CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS HIGHWAY &amp; EXPRESSWAY DIVISION</p>		<p>LIVERNOIS AVE NORTH OF INTERVALLE AT THE PENNSYLVANIA AND DETROIT TERMINAL RAILROADS TRACK RUNAROUND PLAN (SCHEME H)</p>		<p>SHEET 3 OF SHEETS</p>
<p>RAILROAD GRADE SEPARATIONS</p>		<p>TEMPORARY TRACK - TO BE REMOVED AFTER RR BRIDGES HAVE BEEN CONSTRUCTED</p>		<p>CONTRACT No. JOB No. 65-RR-13</p>
<p>APPROVED:</p>		<p>DESIGNED BY</p>		<p>DRWG No. C-5</p>
<p>G.T. SATTERLY</p>		<p>DRAWN BY</p>		<p>DATE MAY 18 1955</p>
<p>TRACED BY</p>		<p>CHECKED BY</p>		
<p>REVISIONS LOCATED BY COORDINATES ON SHEET</p>		<p>DESCRIPTION</p>		
<p>DATE</p>		<p>BY</p>		
<p>DATE</p>		<p>BY</p>		
<p>DATE</p>		<p>BY</p>		
<p>DATE</p>		<p>BY</p>		
<p>DATE</p>		<p>BY</p>		

EATON AVE. 50' WIDE

SANTA ROSA DRIVE 60' WIDE

STOEREL AVENUE 60' WIDE

WILSON AVE 60' WIDE

EDWARDS AVE 60' WIDE

WILSON AVE 60' WIDE

EDWARDS AVE 60' WIDE

WILSON AVE 60' WIDE

EDWARDS AVE 60' WIDE

WILSON AVE 60' WIDE

EDWARDS AVE 60' WIDE

Notes: All houses shown on this map are shown on the original Survey Map of this block.



LOCATION: WILSON-EDWARDS RR  
 DETAIL: SURVEY PLAN - 8x8 1655/1661-65  
 DRAWN BY: G.A. DATE: 6-25-55  
 CHECKED BY: DATE: JOB NO: 1033-RH-13  
 APPROVED BY: DATE: PROJECT NO: M-8

SCALE: 1" = 50'  
 CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 HIGHWAY & EXPRESSWAY DIVISION  
 RAILROAD GRADE SEPARATION

- LEGEND**
- Catch Basin
  - Manhole
  - ◆ Bell Tied Co. Manhole
  - ◆ Mich Edison Gas Manhole
  - ◆ Mich Edison Gas Co Manhole
  - ◆ Double Lighted Comm Manhole
  - ◆ Mich Bell Tied Co Pole
  - ◆ D.S.R. Pole
  - ◆ P.L.C. Street Lighting Pole
  - ◆ P.L.C. Pole (Without Light)
  - ◆ Water Gas (Well)
  - ◆ Gas Valve
  - ◆ Gas Drip
  - ◆ Water Service Shut-Off (Curt. Cock)
  - ◆ Fire Hydrant
  - ◆ Fire Alarm Box
  - ◆ Traffic Signal Box
  - ◆ Stake
  - ◆ Iron
  - ◆ Conc. Monument

BOURKE AVE 50' WD

EATON AVE 50' WD

PETOSKEY AVE 60' WD

ALLEY 18' WD

ALLEY 18' WD

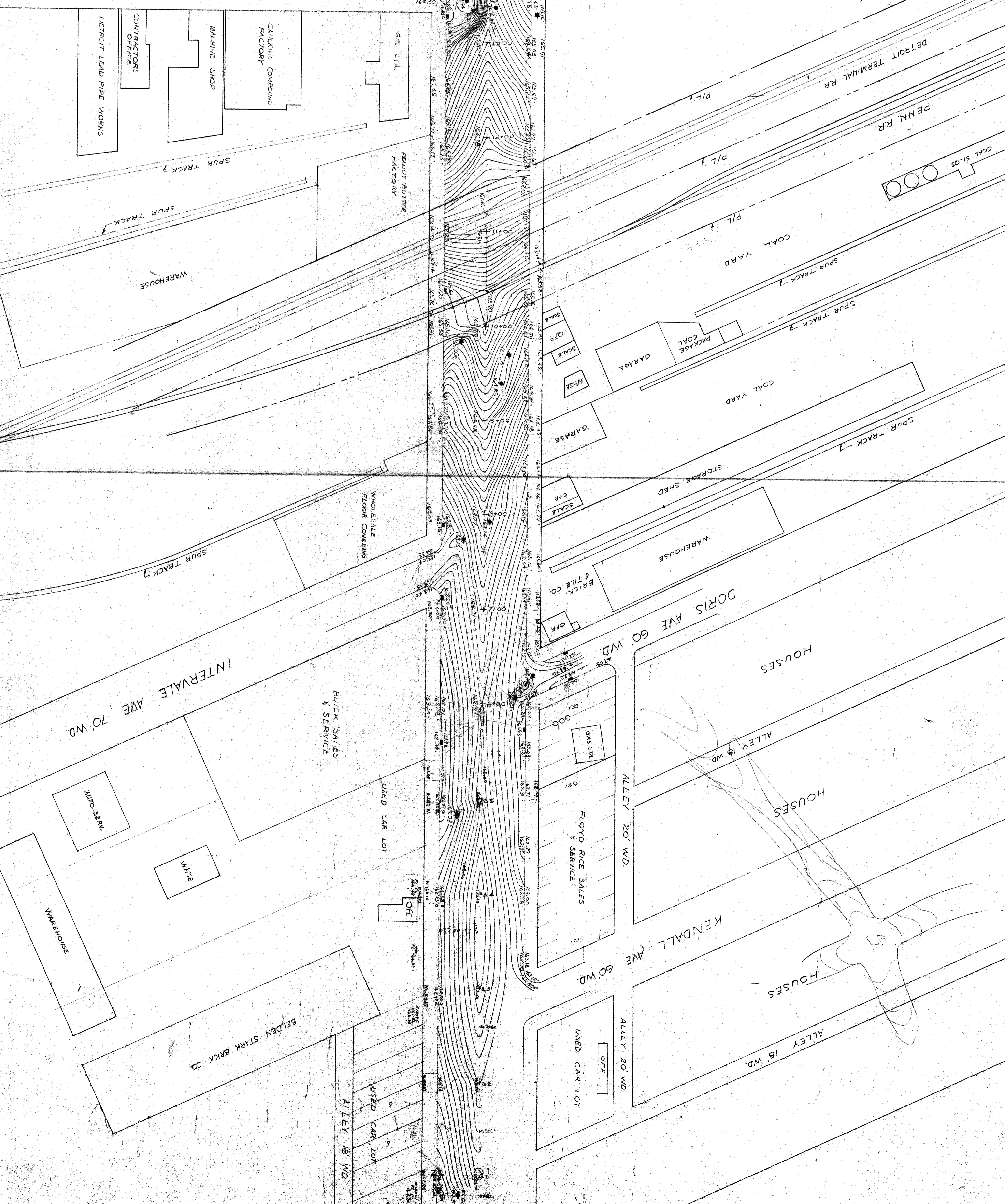
ALLEY 18' WD

STOEPPEL AVE 60' WD

ALLEY 18' WD

LYNDON AVE 66' WD

LIVERNOIS AVE 70' WD

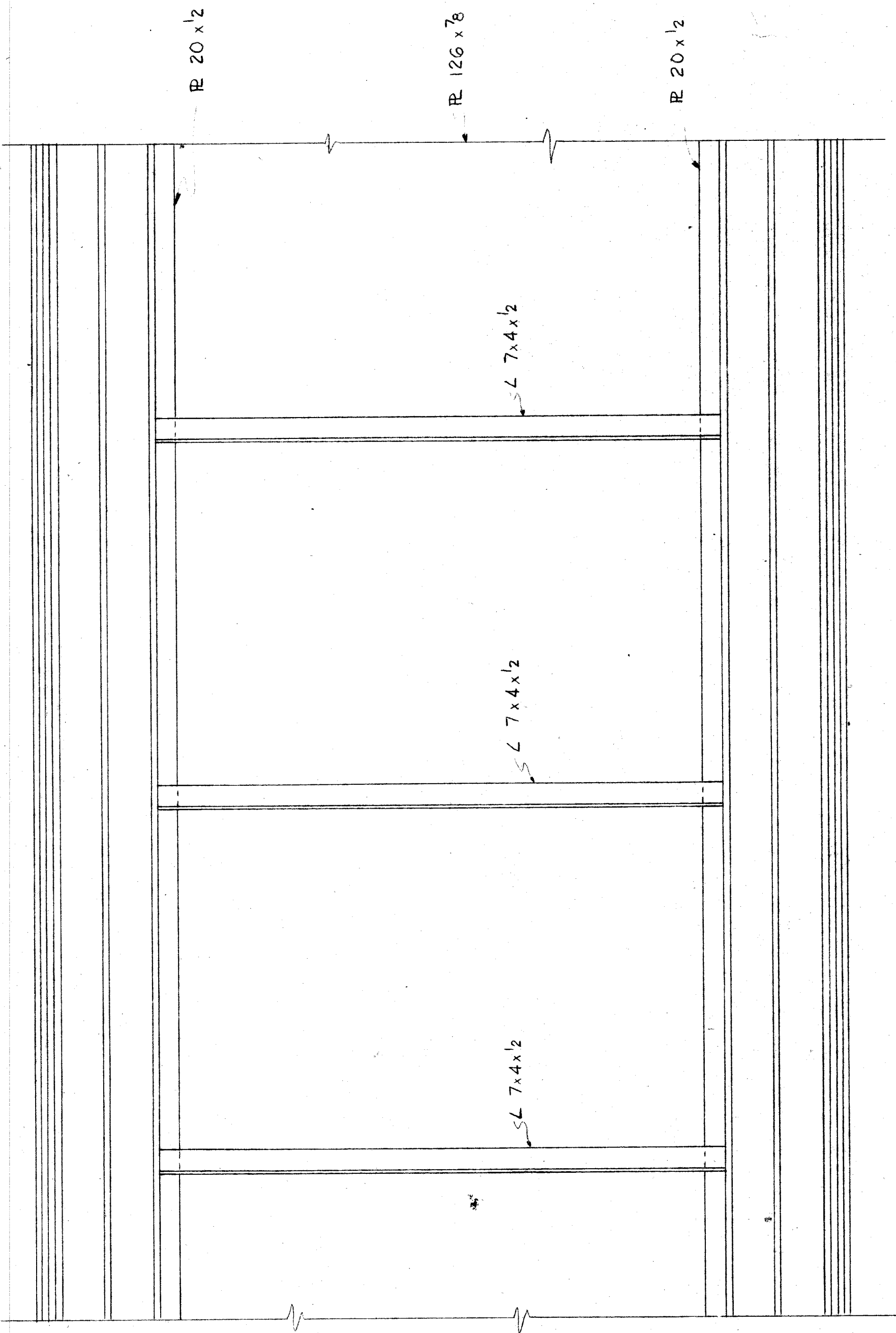


DESIGNED BY	TRACED BY	APPROVED
DRAWN BY	CHECKED BY	
HIGHWAY & EXPRESSWAY DEPARTMENT		

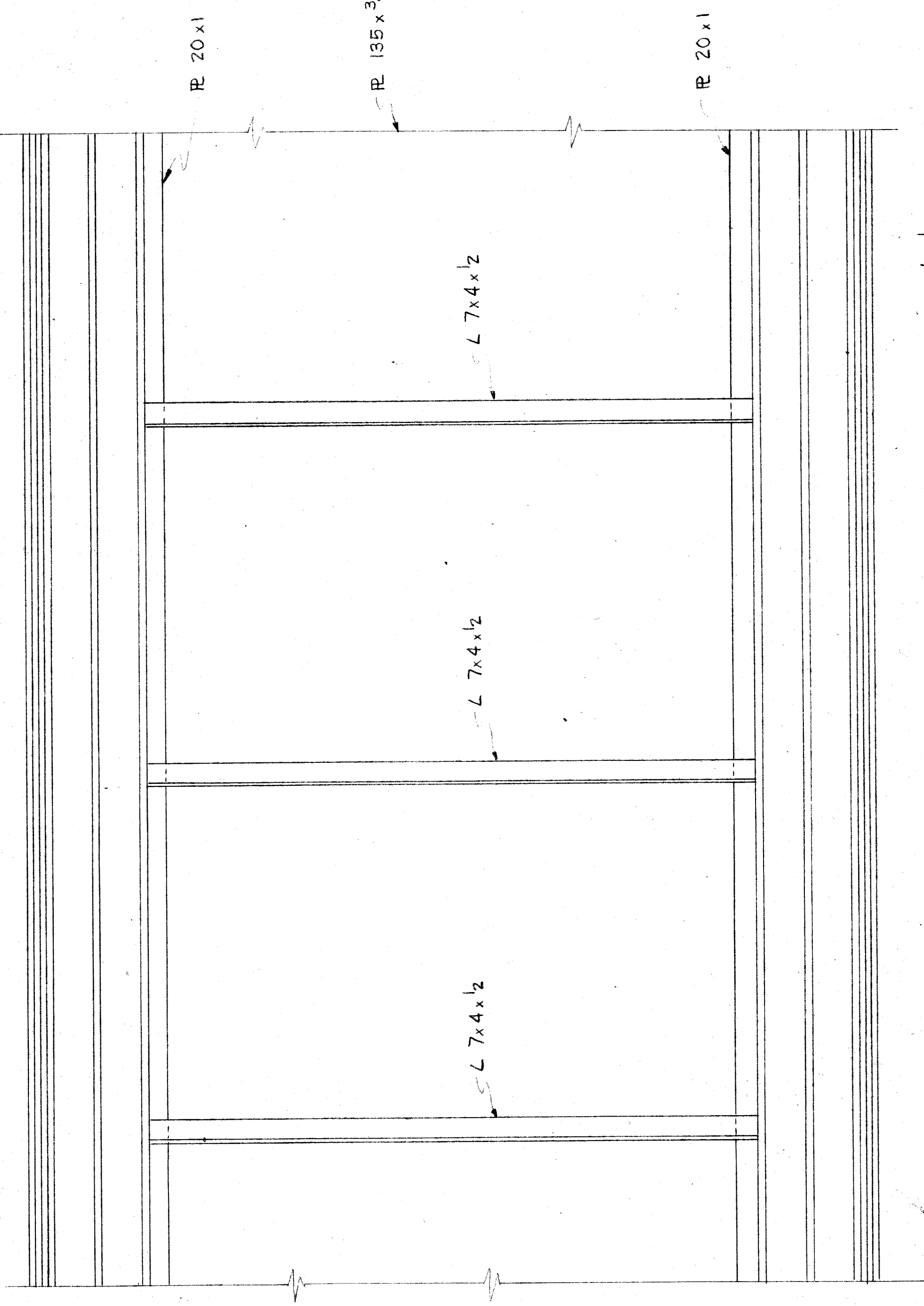
CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 HIGHWAY & EXPRESSWAY DEPARTMENT  
 65-RR-LIVERNOIS 13

LIVERNOIS-DIRR & PARR GRADE SEPARATION  
 SCALE: 1" = 50'

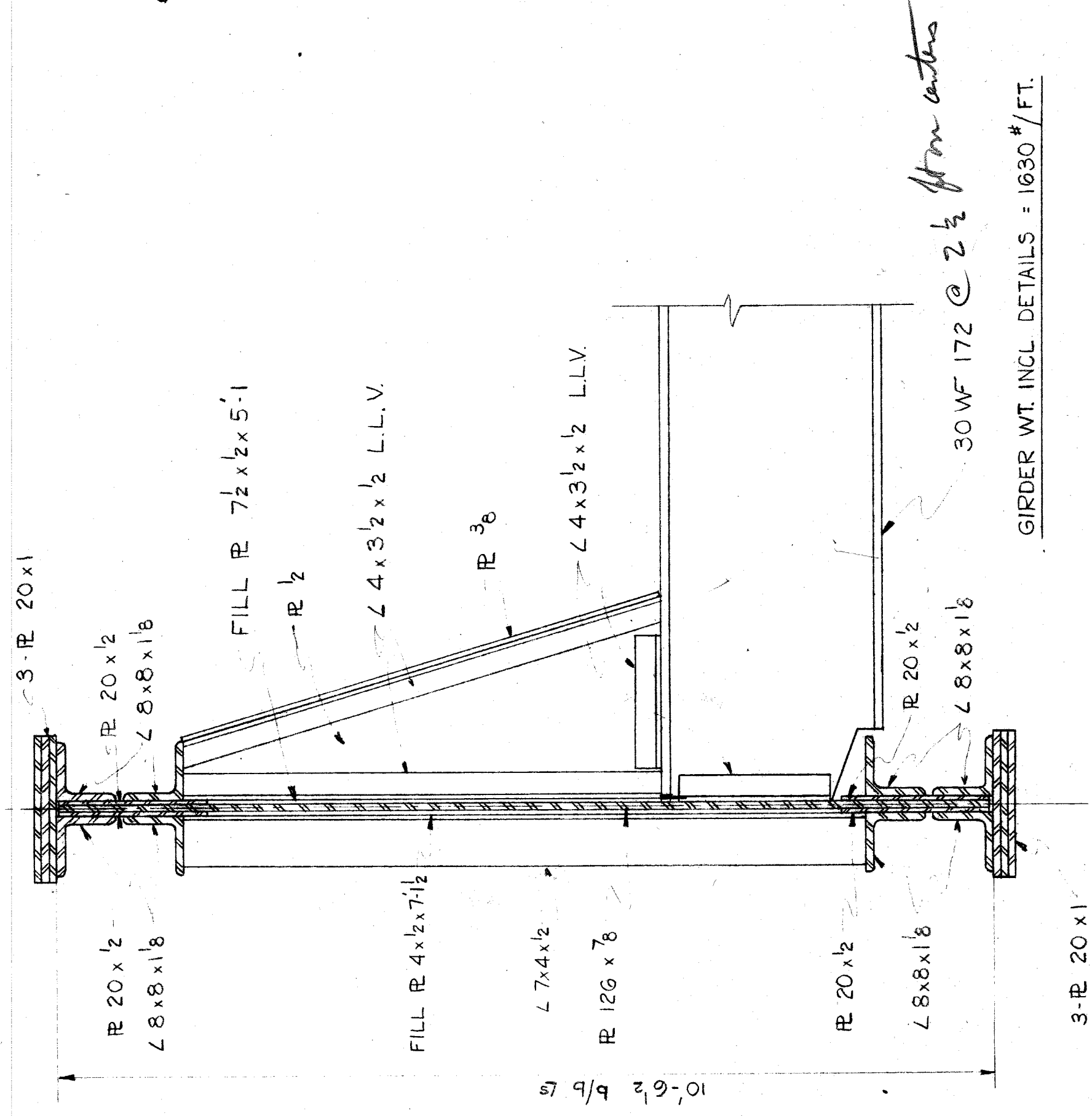
SHEET 1 OF SHEETS
JOB No. 65-RR-13
DATE February 22, 1955



10'-6 1/2" GIRDER FOR 99.5' SPAN  
Carbon Steel

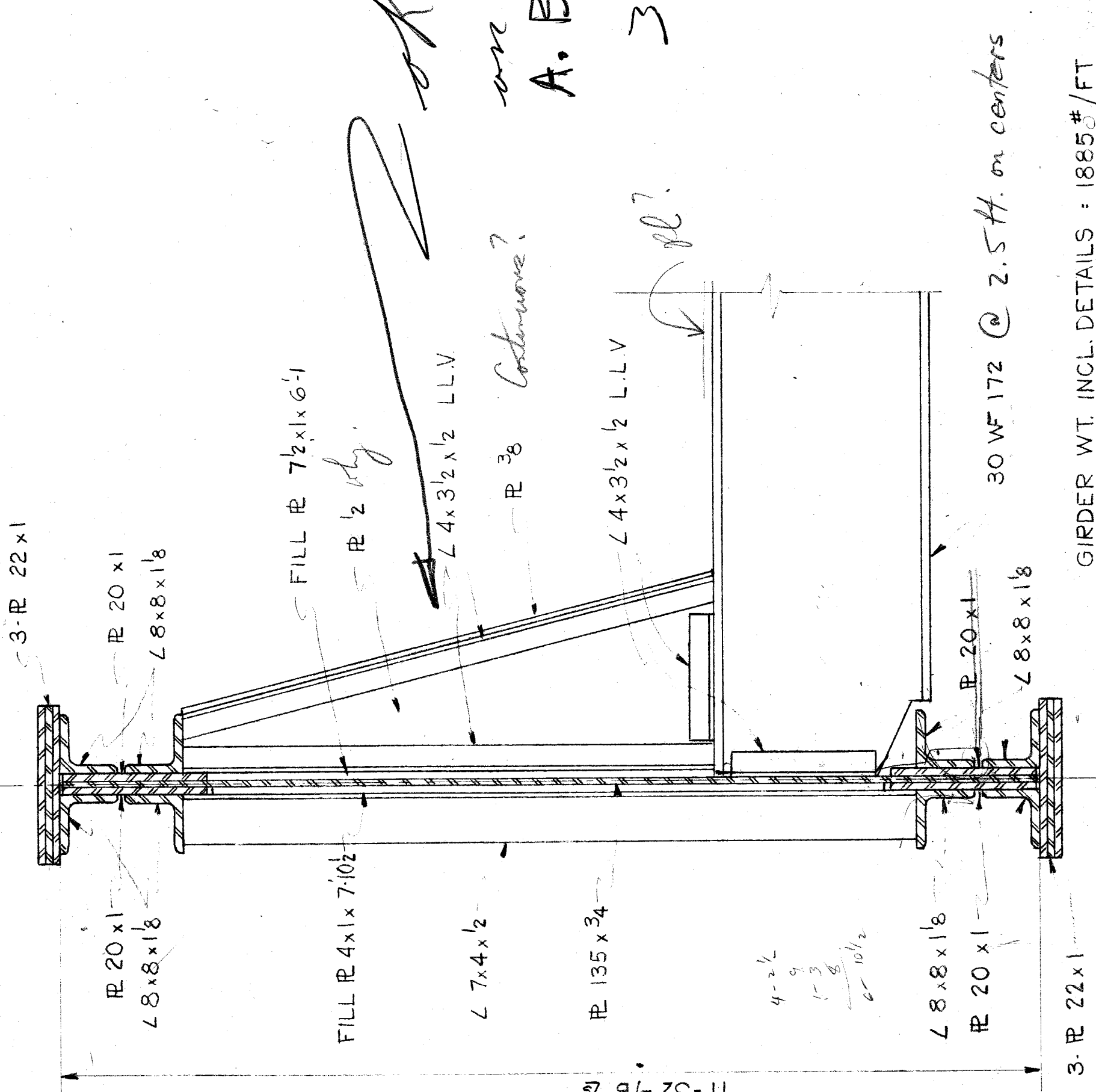


11'-3 1/2" GIRDER FOR 111' SPAN  
Carbon Steel



30 WF 172 @ 2 1/2' on centers  
GIRDER WT. INCL. DETAILS = 1630 #/FT.

14 more bridge included



30 WF 172 @ 2.5' on centers  
GIRDER WT. INCL. DETAILS = 1885 #/FT.

OK to go ahead  
on this scheme  
A. B. Per A.C.  
3-12-55  
Hicks