

PROJECT BI82124-002

PART 2 - S03 OF 82124 A
- S27 OF 82194 L

NOTE
Where the following items are called for on the Plans, they are to be constructed according to the Standard Plan given below opposite each item, unless otherwise indicated.

STANDARD PLANS TO BE PRINTED

SHEET NO.	TITLE
R11 & R12	Bridge Railing, Drain Casting, Bar Chair, Molding & Bevel Details
R13 & R14	Bridge Railing, Drain Casting, Bar Chair, Molding & Bevel Details
SP2	Standard Slope Paving Details

STANDARD PLANS NOT TO BE PRINTED

SHEET NO.	TITLE

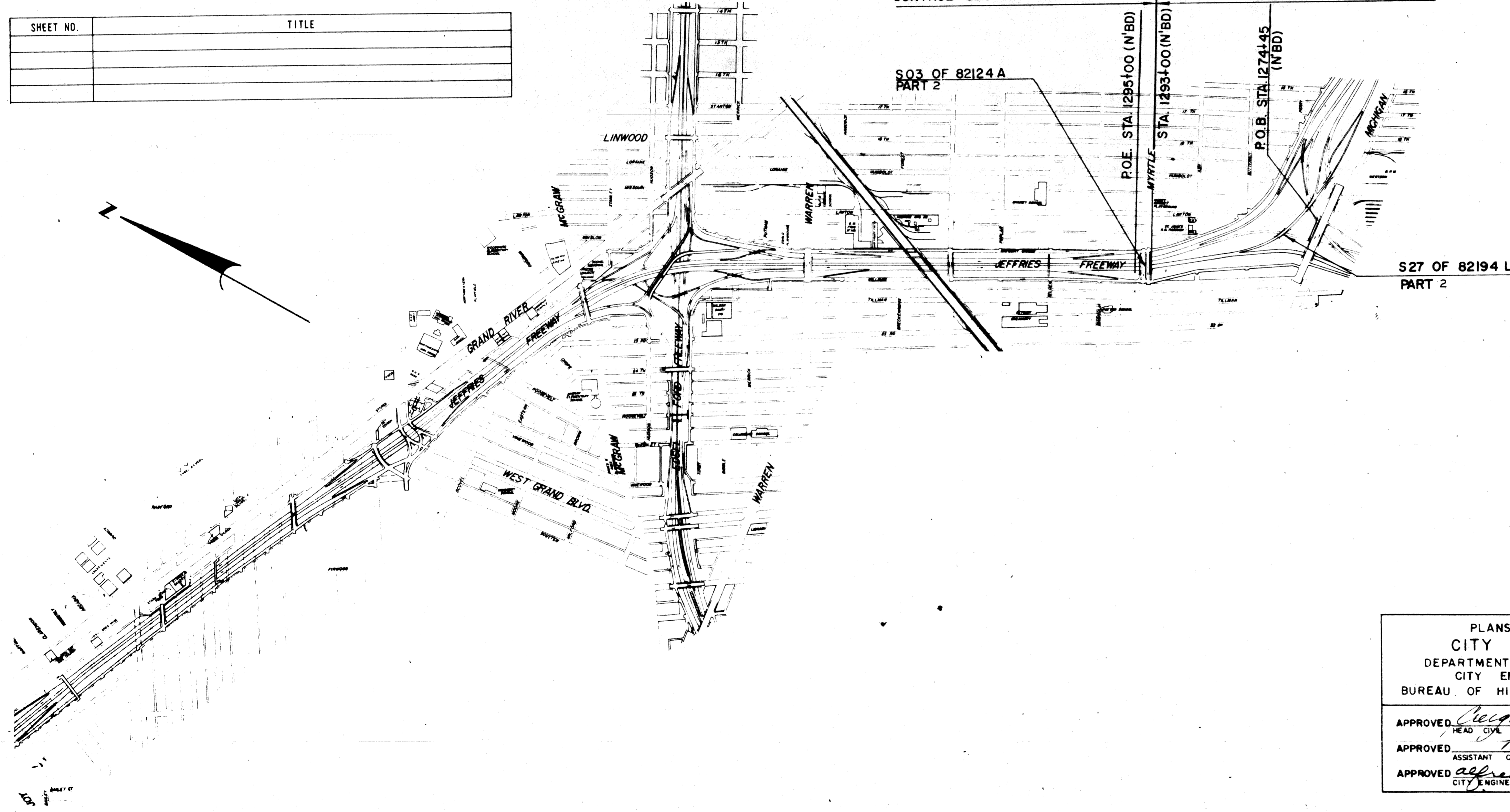
STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

PLANS OF PROPOSED BRIDGES

MICHIGAN PROJECT I-96-4(65)232
STATE PROJECT BI82124-002

JEFFRIES FREEWAY
WAYNE COUNTY
CITY OF DETROIT

MICHIGAN PROJECT I-96-4(65)232
STATE PROJECT BI82124-002
CONTROL SECTION 82124 A CONTROL SECTION 82194 L



GENERAL NOTES

Except where otherwise indicated on these Plans or in the Proposal and Supplemental Specifications contained therein, all materials and workmanship shall be in accordance with the Michigan Department of State Highways' Standard Specifications for Road and Bridge Construction, 1967 Edition.

The design of these structures is based on the Michigan Department of State Highways' Specifications for the Design of Highway Bridges, 1958 Edition and current AASHTO Standard Specifications for Highway Bridges, HS20-44 Loading. Live load plus impact deflection = 1/1000 of span length and 1/350 of cantilever arm. The character of all materials and the extent thereof as shown by borings has been obtained by methods and from sources believed to be reliable. The exactness of this information is, however, in no case guaranteed. Boring samples are on file in the Design Office at Lansing and are available for inspection.

All exposed concrete corners shown square on the Plans shall be beveled with 1/2" triangular moldings except as otherwise noted.

The stationing as shown on these Plans for the intersection of the centerline of bridge and roadway 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 out using the actual intersection of the centerline of bridge and roadway as the control point.

The contractor shall contact all Utility Companies regarding their facilities prior to starting work.

The following items shown in these plans are to be constructed with the road work: Bridge approach curb and gutter, catch basins, inlets, culverts, sewers, C.M.P. Temporary detours, Earth excavation and any other items not listed in the bill of materials.

The existing structures shall be checked at the time of starting construction to see that its relationship to the proposed work is as shown on these plans and any differences requiring changes in the new work shall be reported to the Design Office.

The grades and stresses of the structural materials used in these structures are as follows:

- Concrete - Grade A $f_c = 3,000$ psi.
 - Steel Reinforcement; Intermediate or Hard Grade $f_s = 20,000$ psi.
 - Structural Steel: A441 $f_s = 27,000$ psi, max. ⁸
- ⁸and as modified by design specifications

ITEM NO. 1091

CONTRACT FOR,
MYRTLE VEHICULAR BRIDGE S03
COLLECTOR DISTRIBUTOR BRIDGE S27

DIVISION APPROVAL

CHECKED FOR APPROVAL	ENGINEER OF DESIGN	DATE
RECOMMENDED FOR APPROVAL	DIRECTOR-DESIGN DIVISION	DATE
RECOMMENDED FOR APPROVAL	DIRECTOR-TRAFFIC DIVISION	DATE
RECOMMENDED FOR APPROVAL	DIRECTOR-CONSTRUCTION DIVISION	DATE
RECOMMENDED FOR APPROVAL	CHIEF-BUREAU OF ENGINEERING	DATE

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

APPROVED *Richard C. Adair*
HEAD CIVIL ENGINEER
APPROVED *R. R. Hicks*
ASSISTANT CITY ENGINEER
APPROVED *Alfred Berarducci*
CITY ENGINEER

DEPARTMENT OF STATE HIGHWAYS
HENRIK E. STAFSETH — STATE HIGHWAY DIRECTOR

APPROVED BY _____ DEPUTY STATE HIGHWAY DIRECTOR _____ DATE _____

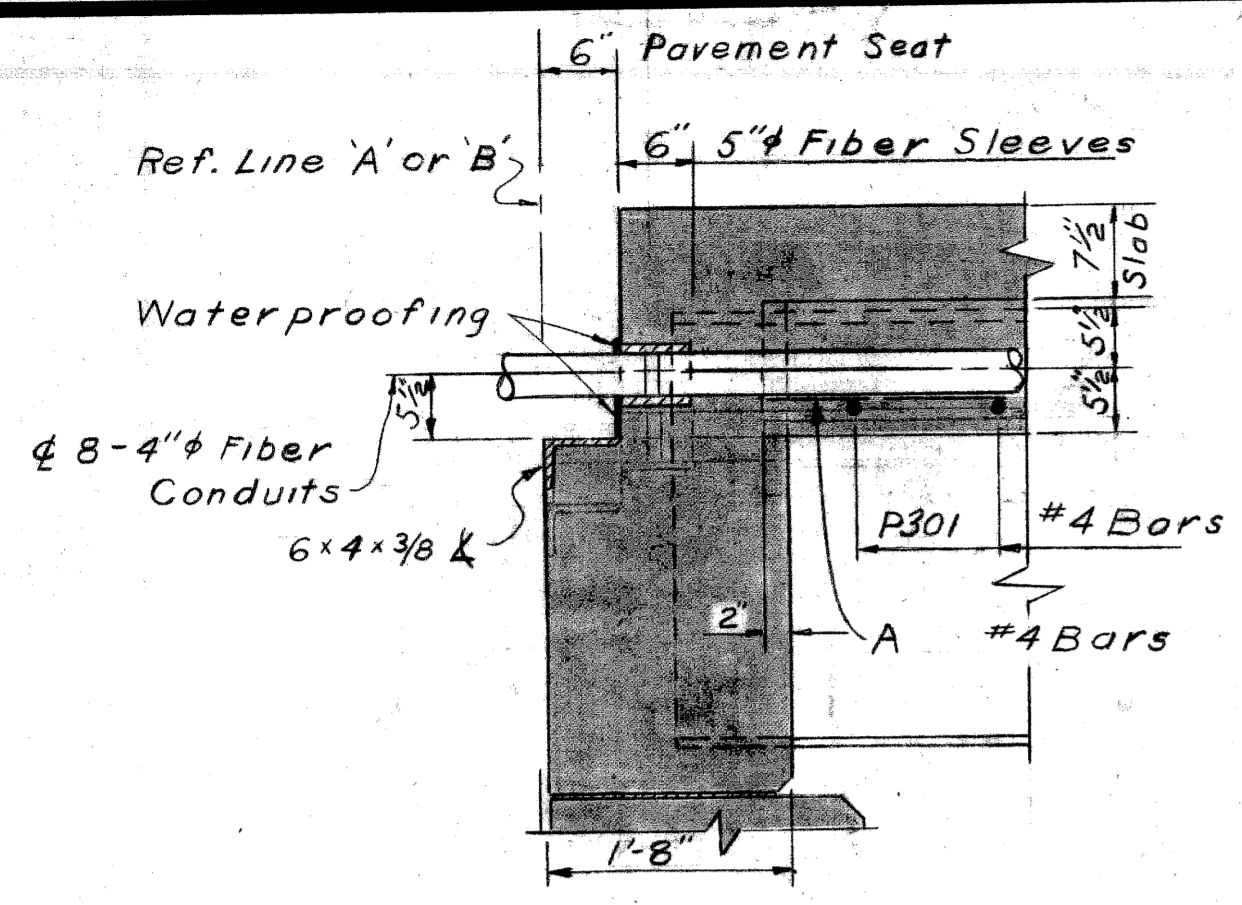
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

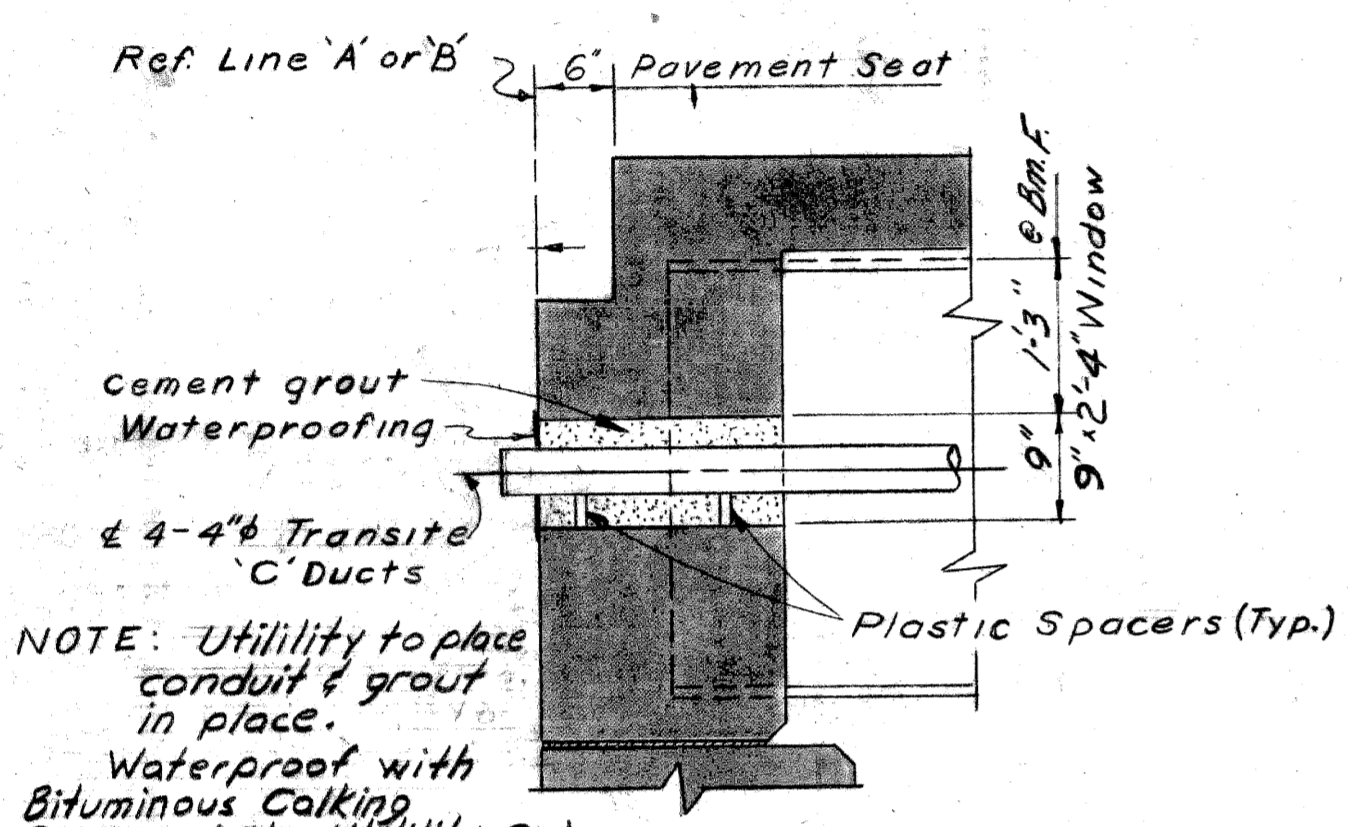
APPROVED _____
FOR THE DIVISION ENGINEER

S03 of 82124 A S27 of 82194 L	STATE PROJECT NO. BI82124-002	FEDERAL PROJECT NO. I-96-4(65) 232	SHEET NO. 1
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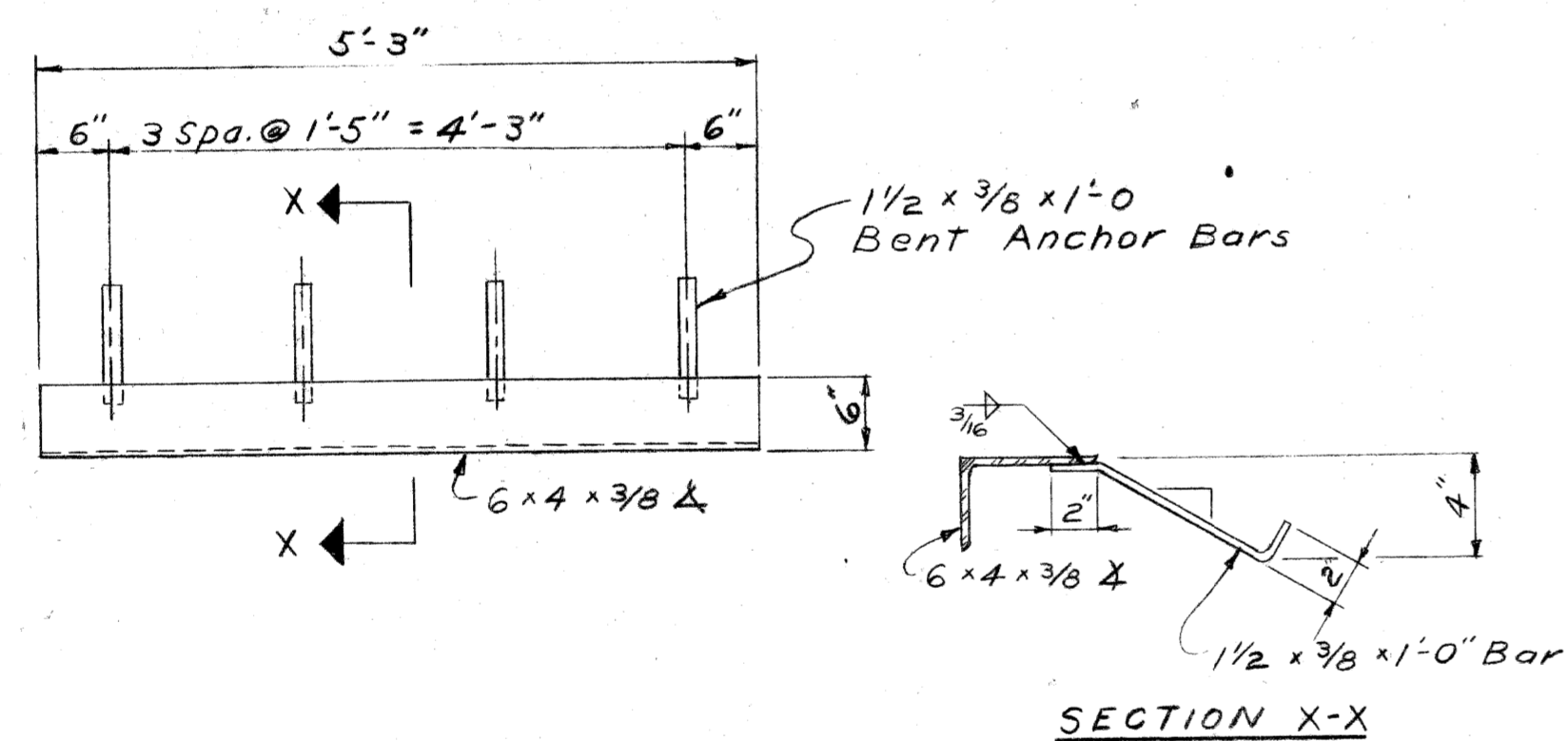
STATE PROJECT NO. BI82124-002



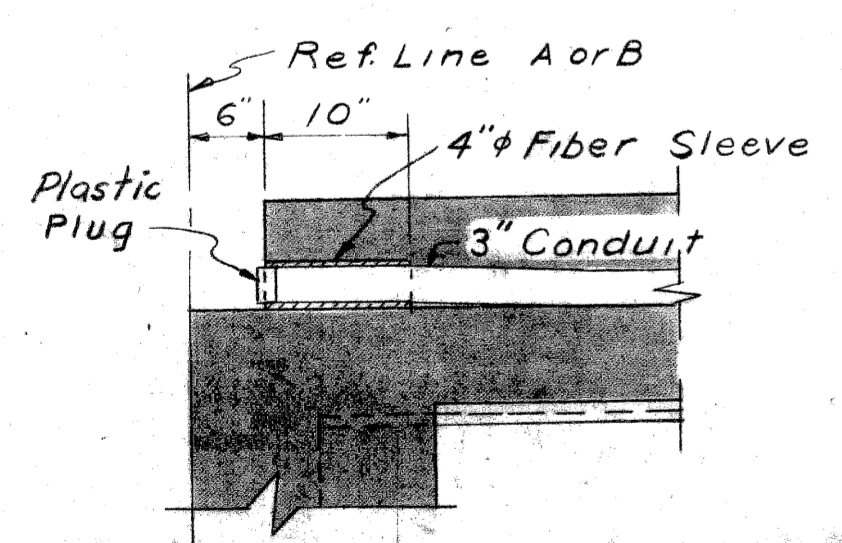
DETAIL AT BACKWALL-P.L.C.



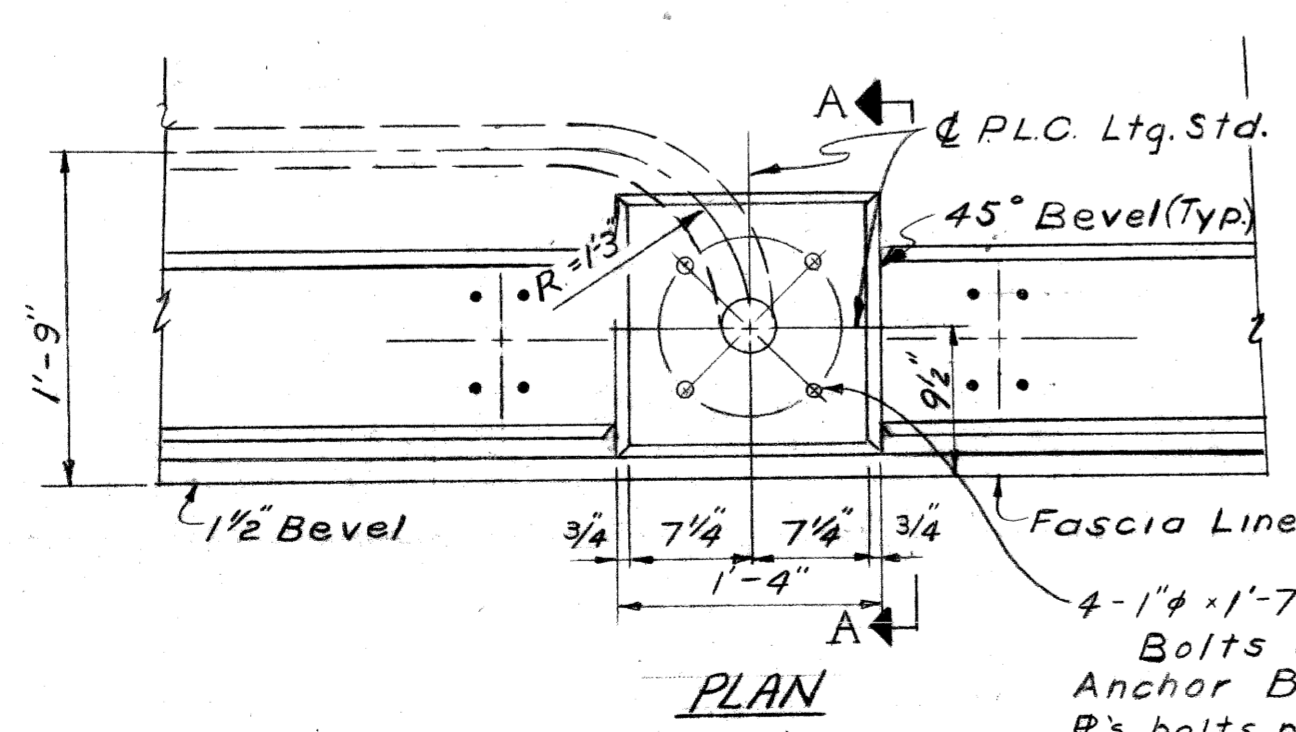
DETAIL AT BACKWALL-M.B.T.



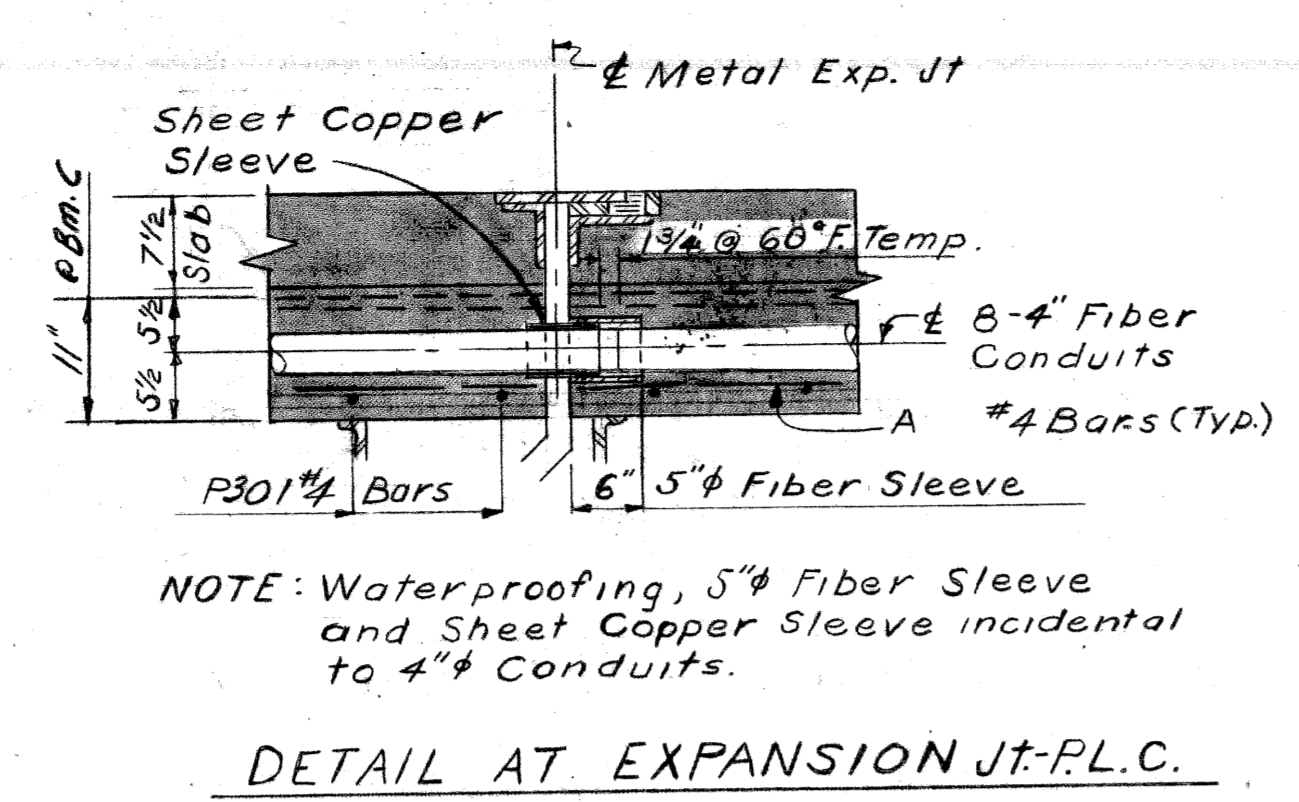
LEDGE ANGLE DETAILS



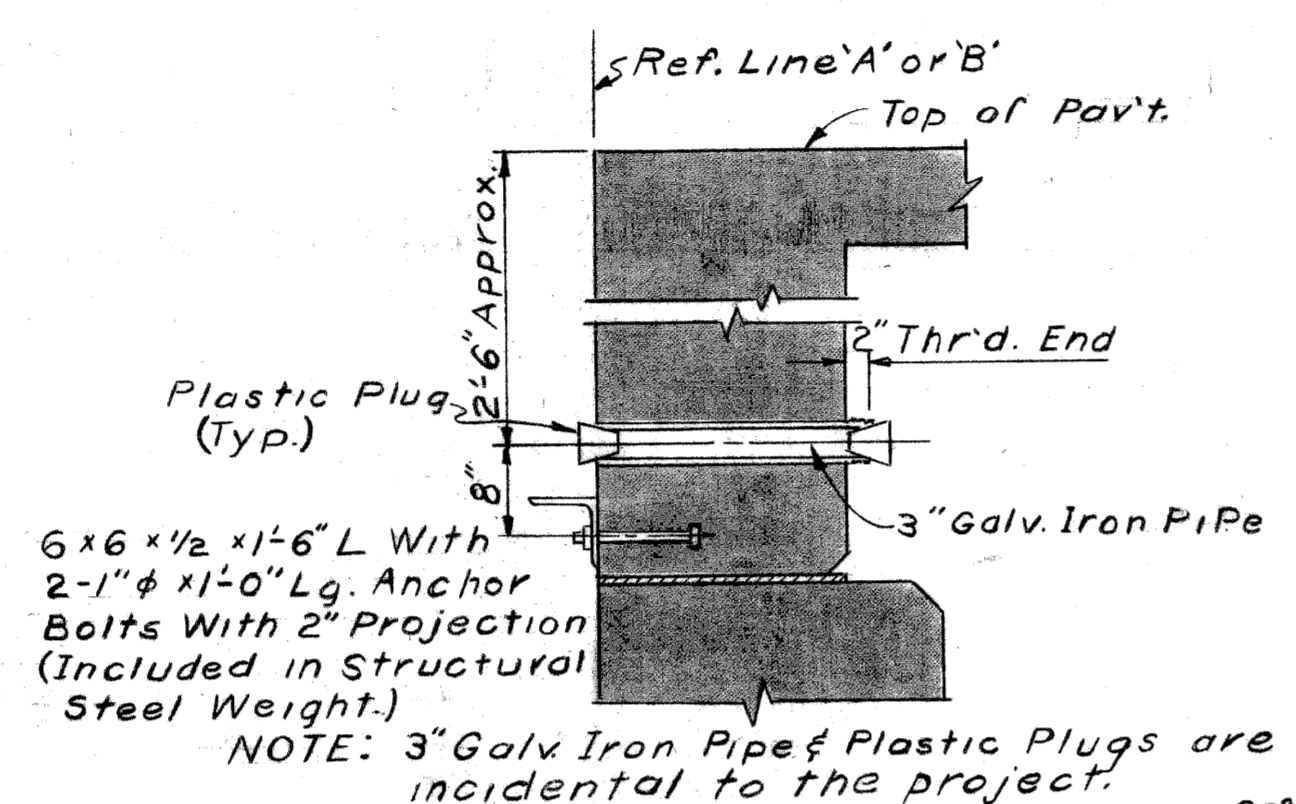
DETAIL THRU WALK AT BACKWALK-P.L.C.



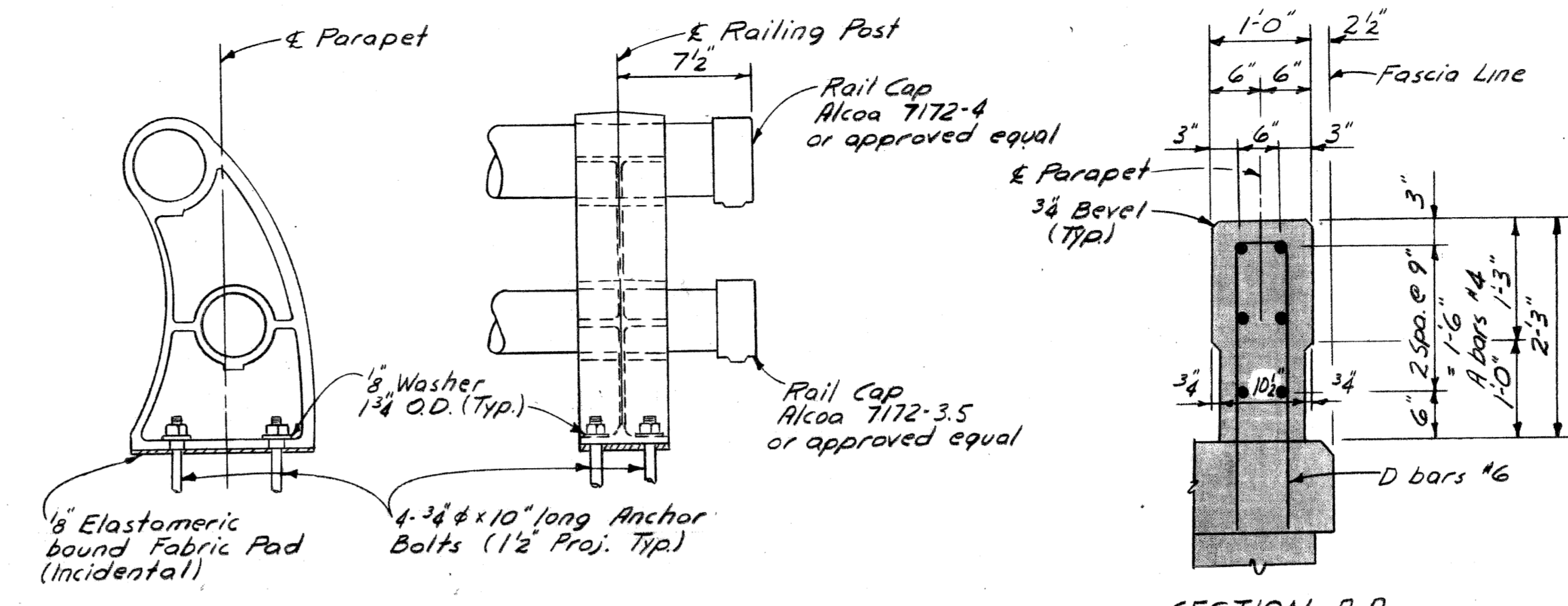
PLAN OF BRIDGE LIGHTING STD. BASE DETAIL



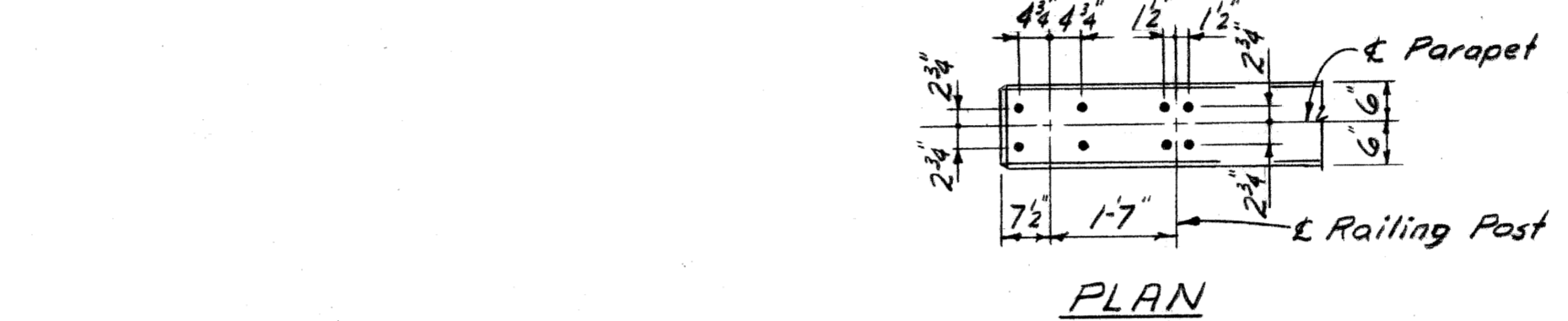
DETAIL AT EXPANSION JT-P.L.C.



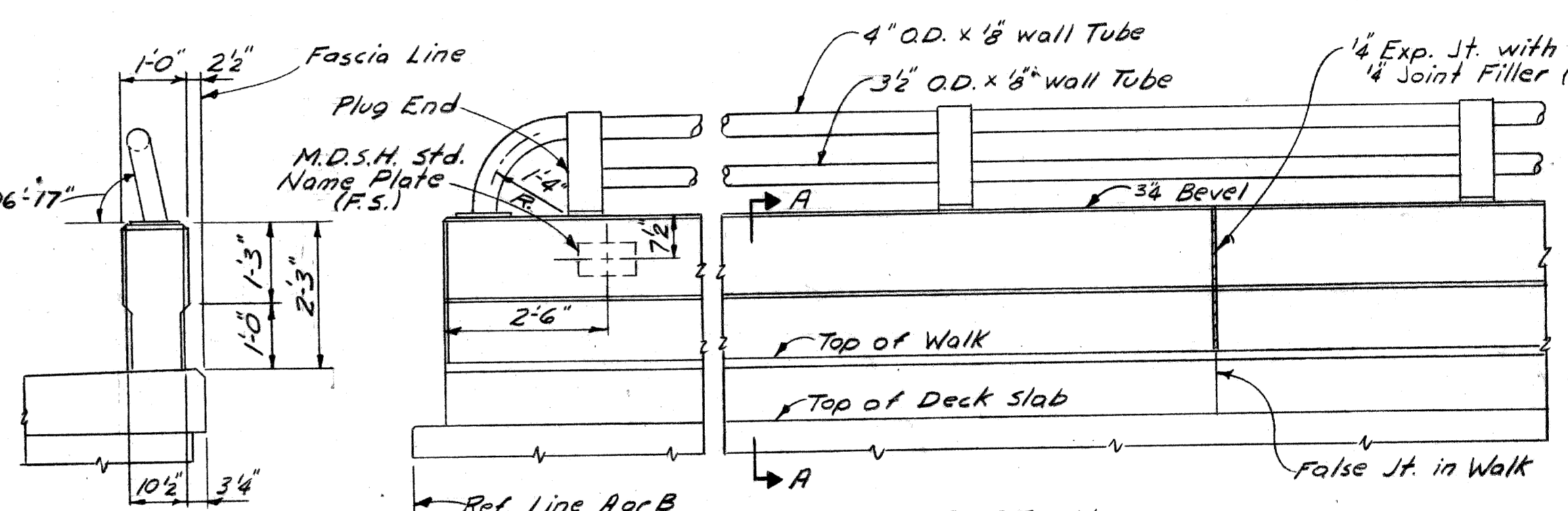
FUTURE UNDERBRIDGE LIGHTING DETAIL



RAILING POST Alcoa 2001 or approved equal



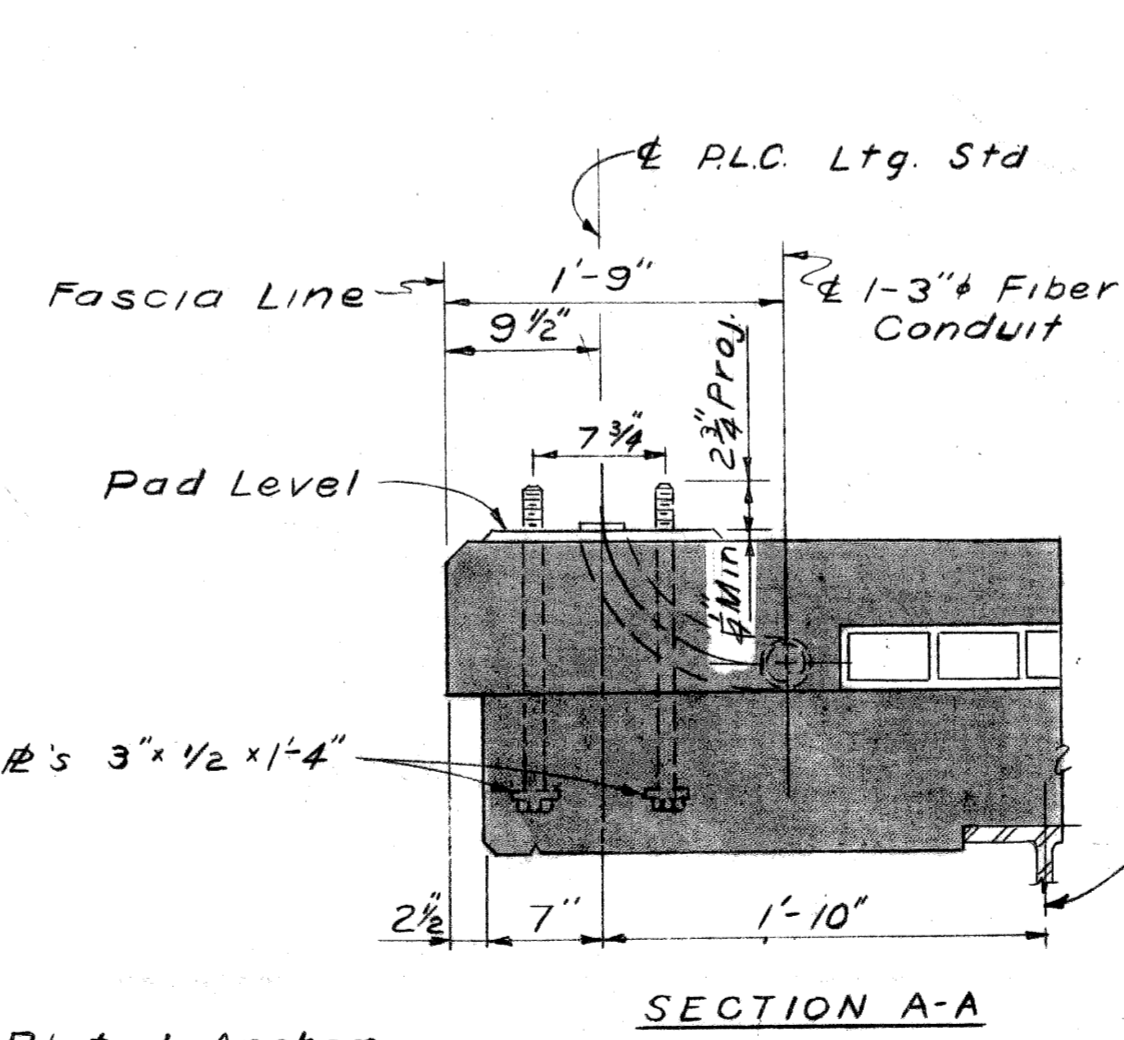
PLAN



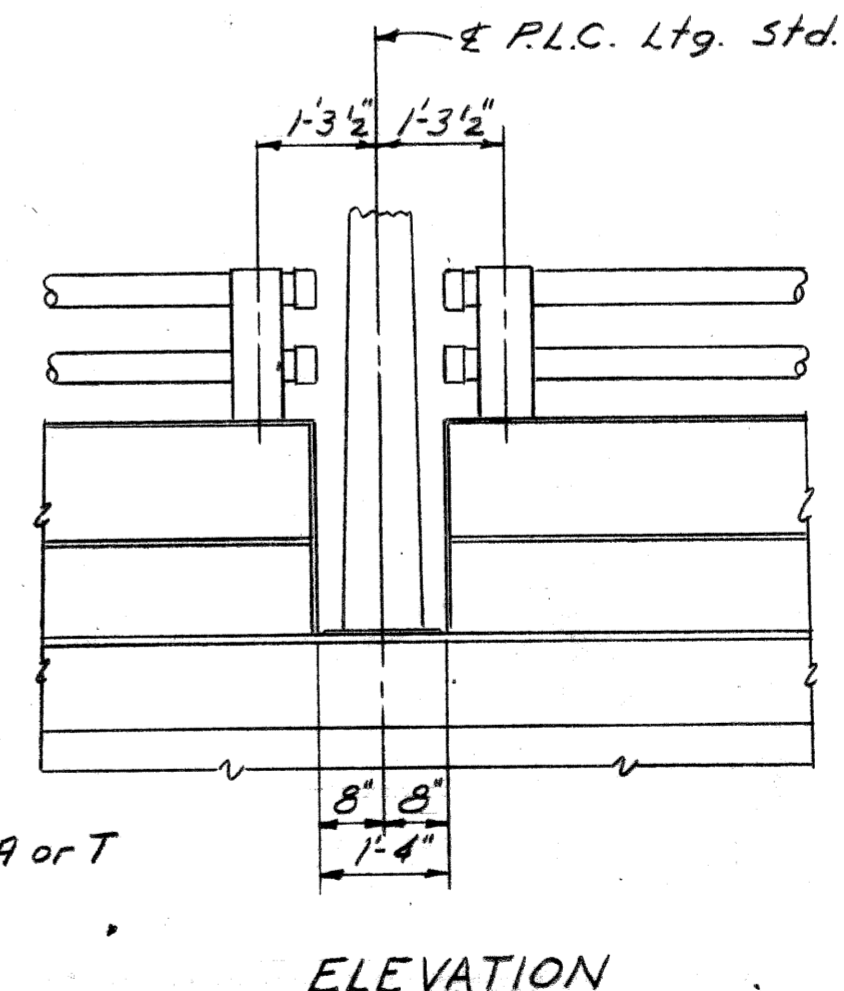
END VIEW

ELEVATION

DETAILS OF BRIDGE RAILING-SOLID PARAPET TYPE



SECTION A-A



ELEVATION

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 950(1)

CONCRETE QUANTITIES				
Description	Span 1		Span 2	
	North Half	South Half	North Half	South Half
Structural Slab	142.3	142.3	129.3	129.3
Sidewalk	21.5	21.4	19.7	19.6
Median	2.0	2.0	3.1	1.8
*P.L.C. Encasement		*15.5		*14.0
Total Gr. A(6AA) Conc. Superstructure	640.1 Cu. Yds.			
*Total Gr. XX			295 Cu. Yds.	

Parapet Concrete = 26.8 Cu. Yds. Grade A(6AA).
Incidental to Bridge Railing - Solid Parapet Type and not a pay item.

MISCELLANEOUS QUANTITIES		
Item	Amount	Unit
Joint Reducing Retarding Admixture	78	Gal.
Concrete Inserts	72	Each
Protective Treatment for Bridge Decks	20,254	Sq. Ft.
Structural Tile 4"x12"x12"	660	Each
Structural Tile 6"x12"x12"	1650	Each
3/4" Joint Filler	40	Sq. Ft.
1" Joint Filler	15	Sq. Ft.
3" Preformed Neoprene Jt. Sealer	174.5	Lin. Ft.
Hot Poured Rubber Asphalt Type Filler	120.0	Lin. Ft.
Joint Waterproofing	391	Sq. Ft.
Bridge Railing - Solid Parapet Type	340.4	Lin. Ft.
3" Fiber Conduit	54	Lin. Ft.
4" Fiber Conduit	1392	Lin. Ft.

GENERAL NOTES:

J.W.P. denotes Joint Waterproofing. E.A.N. denotes Except As Noted. N.M.W.S. denotes Non Metallic Waterstop.
H.P.R.A.T.F. denotes Hot-Poured Rubber Asphalt Type Filler. For details of bevel moldings, see Standard Sheet R11 and R12.
Edge or groove denotes edging or grooving with an approved tool.
Sidewalk Pours shall not be cast until slab Concrete has attained at least 50% of its original design strength as determined by Section 5.01.05 of the Standard Specification.
The Contractor is to provide a sawed joint 1/2" deep by 1/8" wide (min) in the top of slab over and parallel to the centerline of Pier. The joint is to be sawed before casting of sidewalks and is to be filled with H.P.R.A.T.F. Protective Treatment for Bridge Deck is to be applied to all concrete surfaces between fascias.
For details of M.D.S.H. Std. Name Plate, see Standard Sheet R11 and R12. For location of Name Plate, see General Plan of Structure Sheet.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
SQUAD BOSS: *[Signature]* 3-68
DRAWN BY: SPURGEON 1-68
TRACED BY: *[Signature]*
CHECKED BY: D.L.R. 2-68
SHEET 24 OF 26
503 of 82124 A

SHEET NO.	DESCRIPTION
1	TITLE SHEET
1a	INDEX SHEET
1b	QUANTITY SHEET
R11, R12, R13, R14	BRIDGE RAILING, DRAIN CASTING BAR CHAIR, MOLDING AND BEVEL DETAILS
SP2	STANDARD SLOPE PAVING DETAILS

MYRTLE VEHICULAR BRIDGE
(S03 of 82124A)

SHEET NO.	DESCRIPTION
2	GENERAL PLAN OF SITE
3	GENERAL DRAWING
4-5	GENERAL PLAN OF STRUCTURE
6	EXISTING UTILITIES AND PROPOSED ALTERATIONS
7	SUBBASE SLAB DETAILS
8-11	ABUTMENT DETAILS
12-13	PIER DETAILS
14-16	STRUCTURAL STEEL DETAILS
17	METAL EXPANSION JOINT DETAILS
18-25	SUPERSTRUCTURE DETAILS
26	STEEL REINFORCEMENT DETAILS

SOUTHBOUND TO EASTBOUND COLLECTOR DISTRIBUTOR BRIDGE
(S27 of 82194L)

SHEET NO.	DESCRIPTION
2	GENERAL PLAN OF SITE
3	LOG OF SOIL BORING
4	GENERAL DRAWING
5-6	GENERAL PLAN OF STRUCTURE
7	EXISTING UTILITIES AND PROPOSED ALTERATIONS
8-11	ABUTMENT DETAILS
12-13	PIER DETAILS
14-16	STRUCTURAL STEEL DETAILS
17	METAL EXPANSION JOINT DETAILS
18-23	SUPERSTRUCTURE DETAILS
24-25	STEEL REINFORCEMENT DETAILS

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

APPROVED: *H. East*
STRUCTURAL ENGINEER

JOB NO. 1-300

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
THE JEFFRIES FREEWAY IN DETROIT

INDEX SHEET

NO.	DESCRIPTION	DATE	BY

REVISIONS

SQUAD BOSS	RJ	P.G.B.
DRAWN BY	MH	
TRACED BY		
CHECKED BY	RJ	2-65

SHEET 12 OF 12

82124 A - 002

PLAN EXTRAS

ITEM	CODE NO	UNIT	S 03 of 82124A				S 27 of 82194L				PLAN EXTRAS							
			CONTR. QUANT.	FINAL QUANT.	UNIT PRICE	FINAL COST	CONTR. QUANT.	FINAL QUANT.	UNIT PRICE	FINAL COST	CONTR. QUANT.	FINAL QUANT.	UNIT PRICE	FINAL COST	DATE	DESCRIPTION	UNIT	QUANTITY ESTIMATE
LIGHTWEIGHT FILL (C.I.P.)	146	C.YD.	342.0			392.0				902								
UNCLASSIFIED EXCAVATION	6040	C.YD.	656.9			566.7												
STEEL SHEET PILING L.P.	6135	S.FT.	1700			1700												
TEMPORARY STEEL SHEET PILING	6140	S.FT.	1500			1500												
GRADE A(GA) CONCRETE - SUBBASE	6151	C.YD.	1333.2			1333.2												
GRADE A(GA) CONCRETE - SUBSTRUCTURE	6170	C.YD.	1002.1			751.3				249.8								
GRADE A(GAA) CONCRETE - SUBSTRUCTURE	6175	C.YD.	989.6			766.3				223.3								
GRADE A(GAA) CONCRETE - SUPERSTRUCTURE	6180	C.YD.	926.2			640.1				286.1								
GRADE XX CONCRETE	6188	C.YD.	29.5			29.5												
WATER REDUCING RETARDING ADMIXTURE	6194	GAL.	110			78				32								
CONCRETE INSERTS	6227	EACH	72			72												
LOW TEMPERATURE PROTECTION - SUBSTRUCTURE	6231	C.YD.	333.5			285.2				47.3								
PROTECTIVE TREATMENT FOR BRIDGE DECKS	6239	S.FT.	27339			20254				7335								
STEEL REINFORCEMENT	6245	LBS.	486128			364397				121731								
STRUCTURAL STEEL FURNISHED - FABRICATED	6250	LBS.	899800			703000				196800								
STRUCTURAL STEEL - ERECTION	6260	LBS.	899800			703000				196800								
SHEAR DEVELOPERS (S03)	6265	LUMP SUM				2.5				2.5								
SHEAR DEVELOPERS (S27)	6265	LUMP SUM				660												
STRUCTURAL TILE 4x12x12	6325	EACH	660			660												
STRUCTURAL TILE 6x12x12	6330	EACH	1650			1650												
1/2" JOINT FILLER	6345	S.FT.	580			358				222								
3/4" JOINT FILLER	6350	S.FT.	40			40												
1" JOINT FILLER	6355	S.FT.	185			111				74								
1 1/4" PREFORMED NEOPRENE JOINT SEALER	6368	L.FT.	66.9			66.9				66.9								
3" PREFORMED NEOPRENE JOINT SEALER	6374	L.FT.	174.5			174.5												
HOT POURED RUBBER ASPHALT TYPE - FILLER	6375	L.FT.	181			120				61								
4" PREFORMED NEOPRENE JOINT SEALER	6376	L.FT.	2.2							2.2								
JOINT WATERPROOFING	6390	S.FT.	753			451				302								
NON METALLIC WATER STOP	6401	S.FT.	305.5			264				41.5								
BRIDGE RAILING - SOLID PARAPET TYPE	6433	L.FT.	478.8			478.8												
BRIDGE RAILING - PARAPET TYPE	6421	L.FT.	397.1							397.1								
3" FIBER CONDUITS	6448	L.FT.	392			54				338								
4" FIBER CONDUITS	6454	L.FT.	1392			1392												
FOUNDATION DRAINS	6484	L.FT.	785			453				332								
SLOPE PROTECTION - CLASS A	6487	S.YD.	665			235				430								
SLOPE PROTECTION - HEADER	6493	L.FT.	451			276				175								
TOTAL																		

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
APPROVED: *[Signature]*
STRUCTURAL ENGINEER

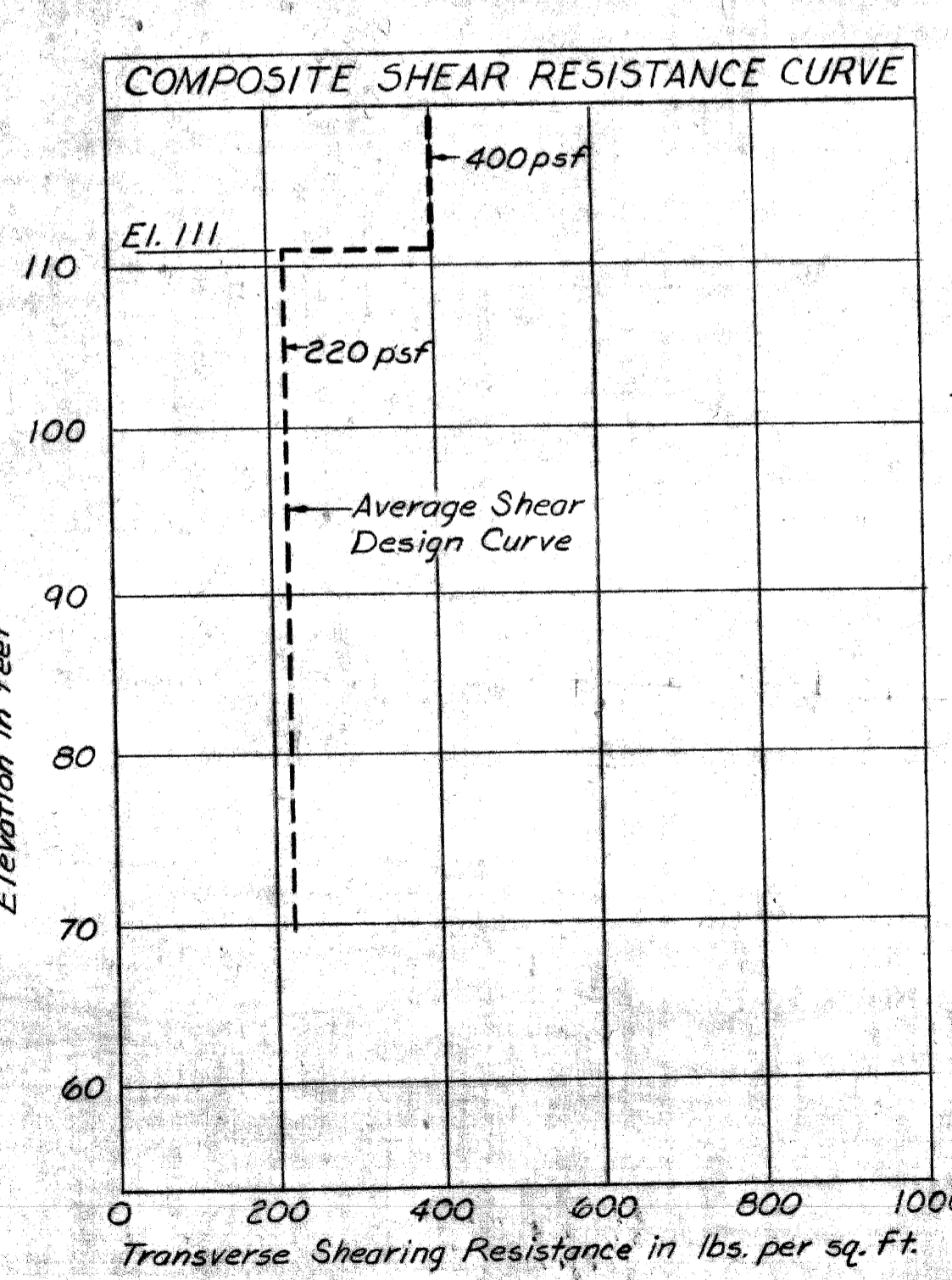
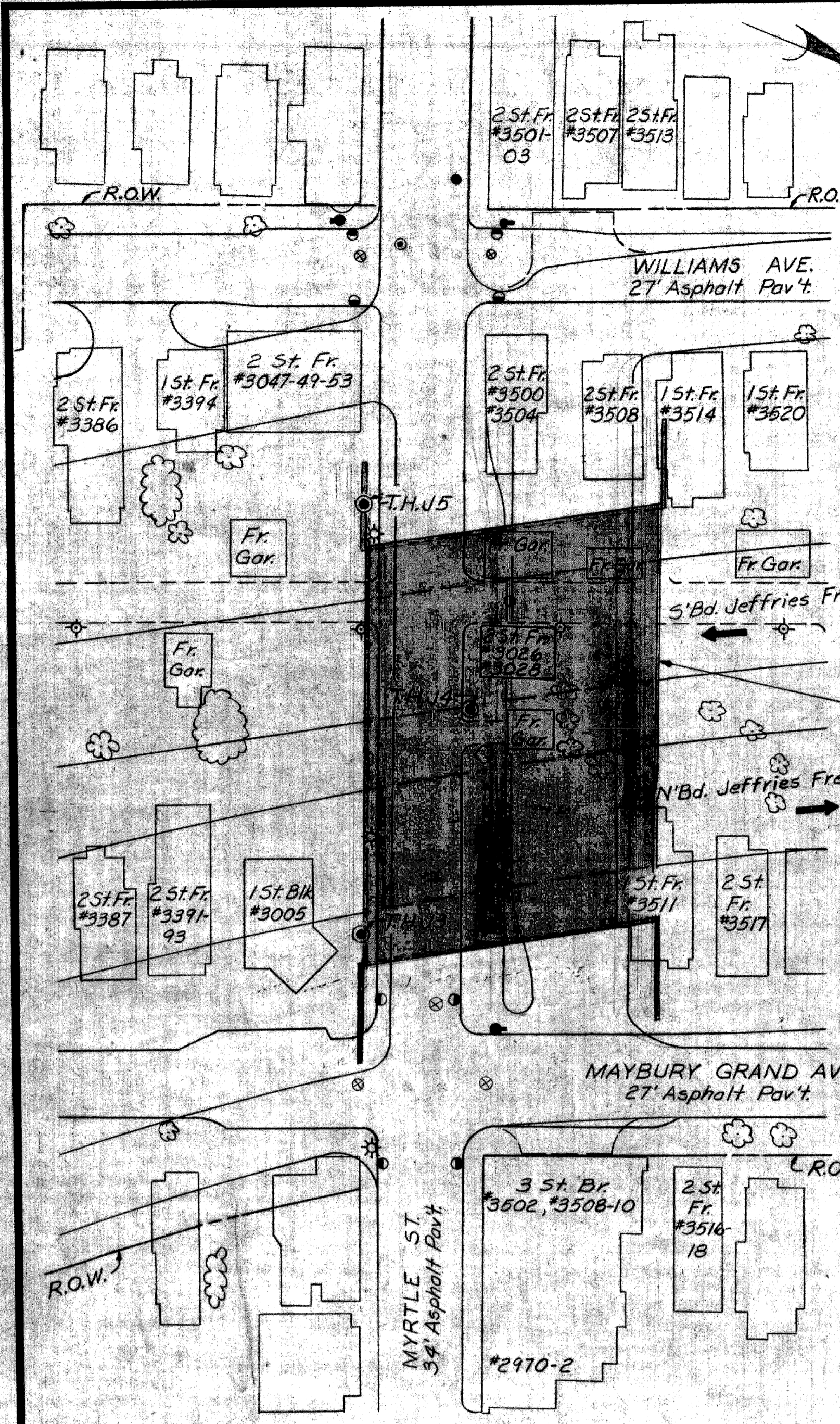
JOB No.
PW 990 (!)

MICHIGAN STATE HIGHWAY DEPARTMENT

QUANTITY SHEET
GENERAL PLAN D

CITY OF DETROIT
SQUAD BOSS: RJ 3-68
DRAWN BY: DS 3-68
TRACED BY:
CHECKED BY: RJ 3-68
SHEET 16 OF

I-96-4(65)232
BI 82124-002 PART 2 S03 of 82124A
S27 of 82194L



Notes:

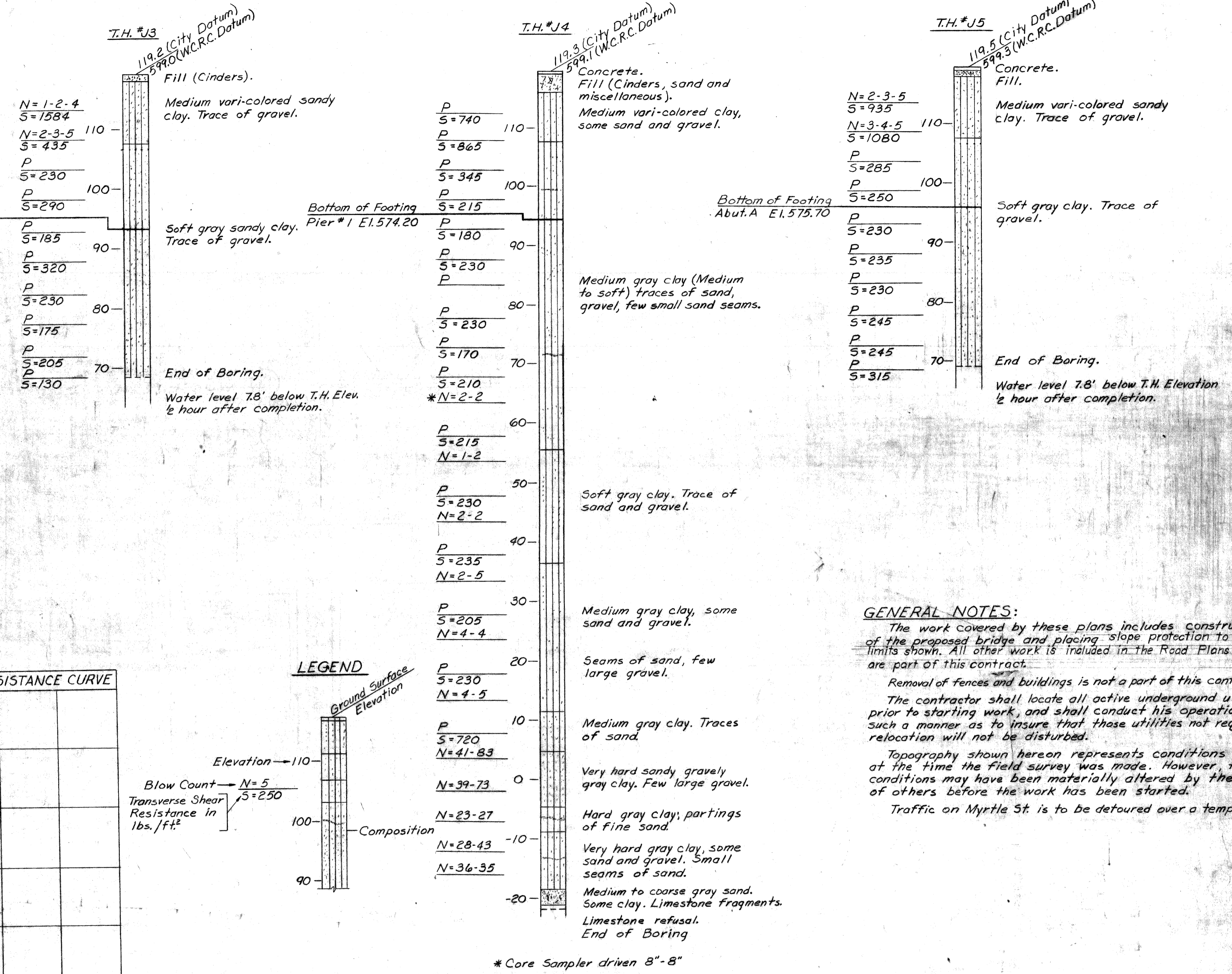
N Indicates number of blow required to drive a sampler 6" (or as noted) using a 140# hammer falling 30".

S Indicates Transverse Shearing Resistance in lbs./ft.² as determined by M.S.H.D. Standard Test

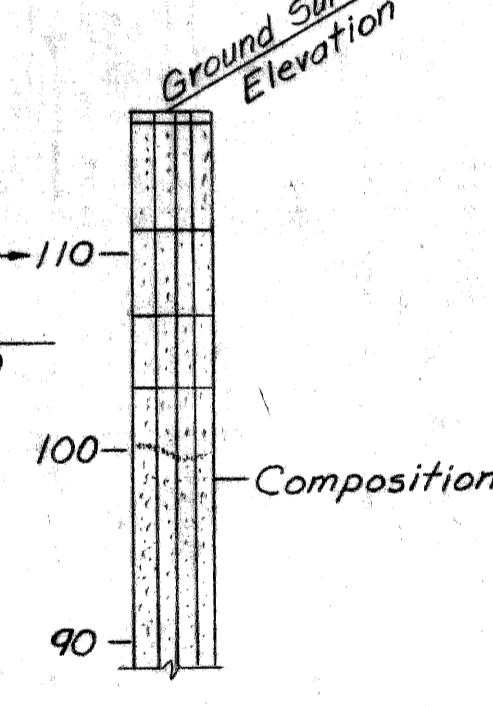
P Indicates sampler was pushed.

Soil Boring Elevations are based on City of Detroit Datum. All other elevations are based on U.S.C. and G.S. Datum. To convert elevations based on City of Detroit Datum to elevations based on U.S.C. and G.S. Datum, add 479.755'.

LOG OF SOIL BORINGS



LEGEND



GENERAL NOTES:

The work covered by these plans includes construction of the proposed bridge and placing slope protection to the limits shown. All other work is included in the Road Plans which are part of this contract.

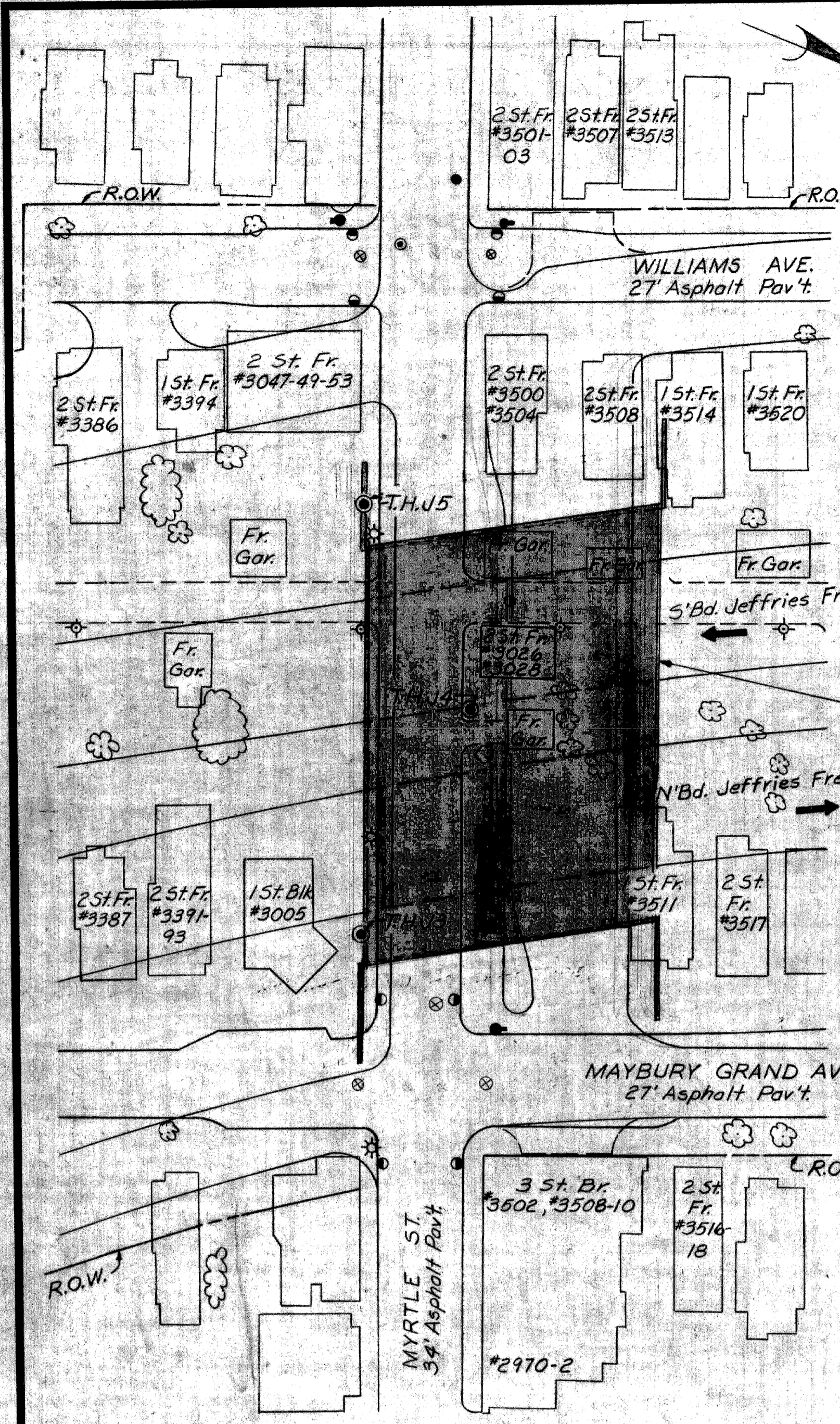
Removal of fences and buildings is not a part of this contract.

The contractor shall locate all active underground utilities prior to starting work, and shall conduct his operations in such a manner as to insure that these utilities not requiring relocation will not be disturbed.

Topography shown hereon represents conditions existing at the time the field survey was made. However, these conditions may have been materially altered by the operations of others before the work has been started.

Traffic on Myrtle St. is to be detoured over a temporary road.

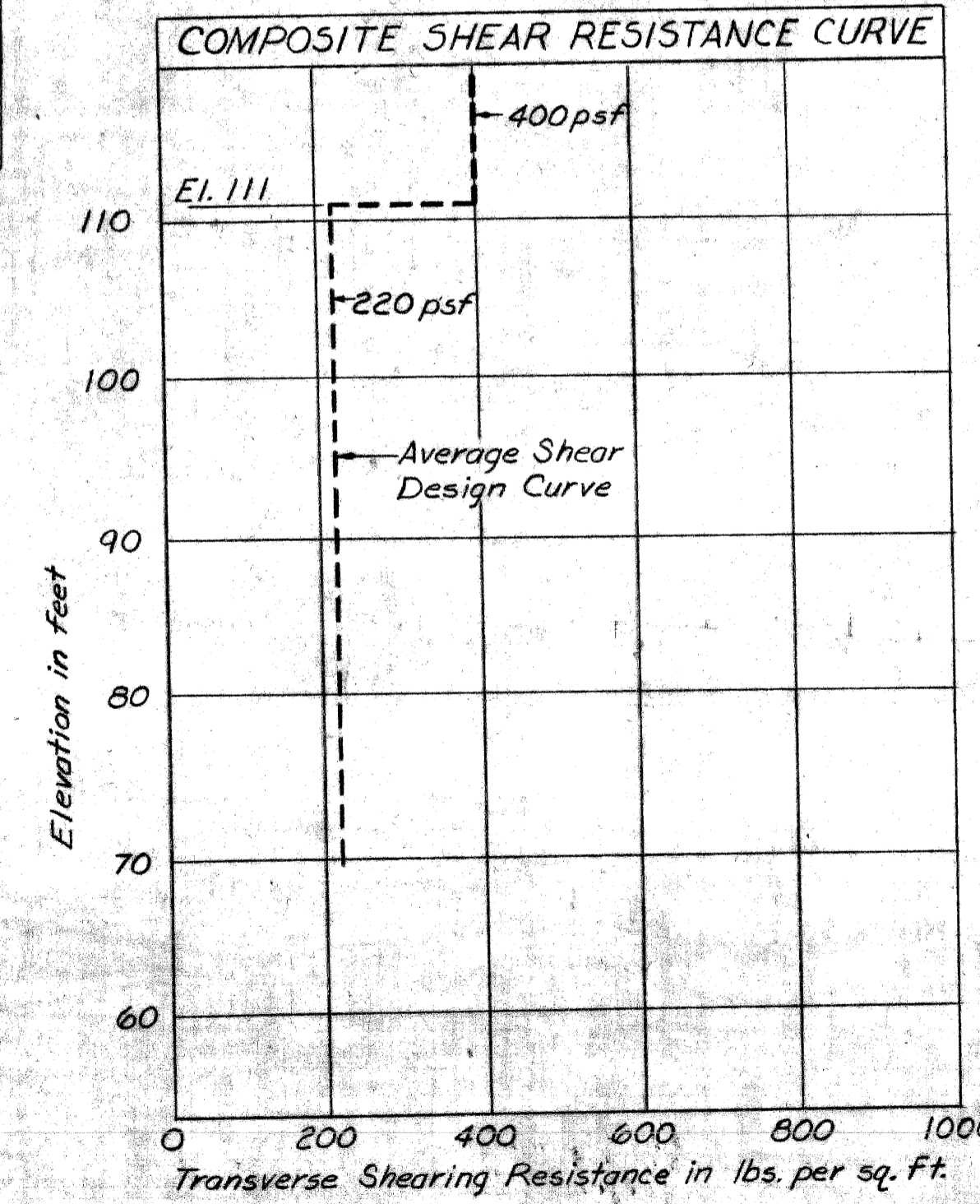
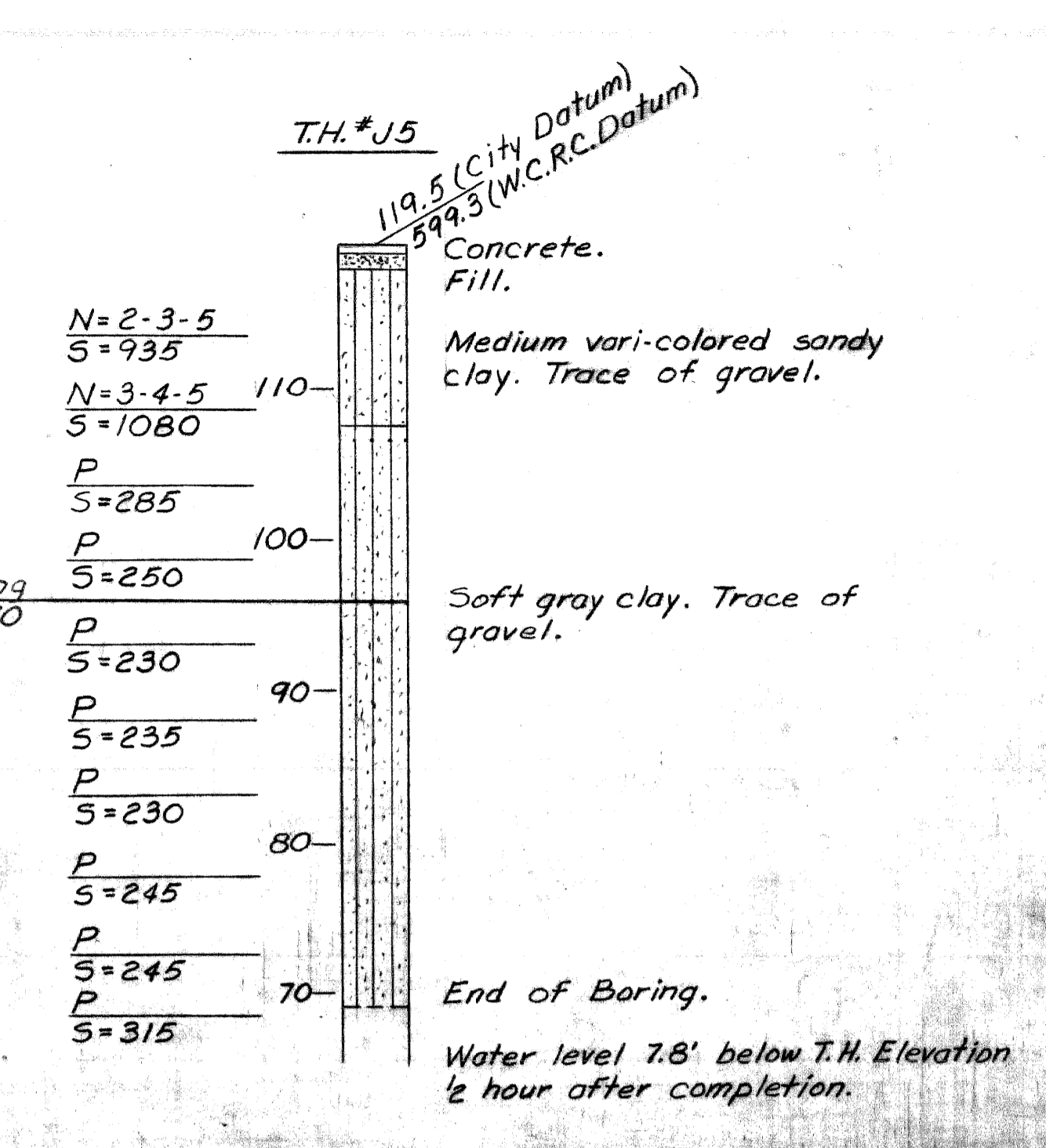
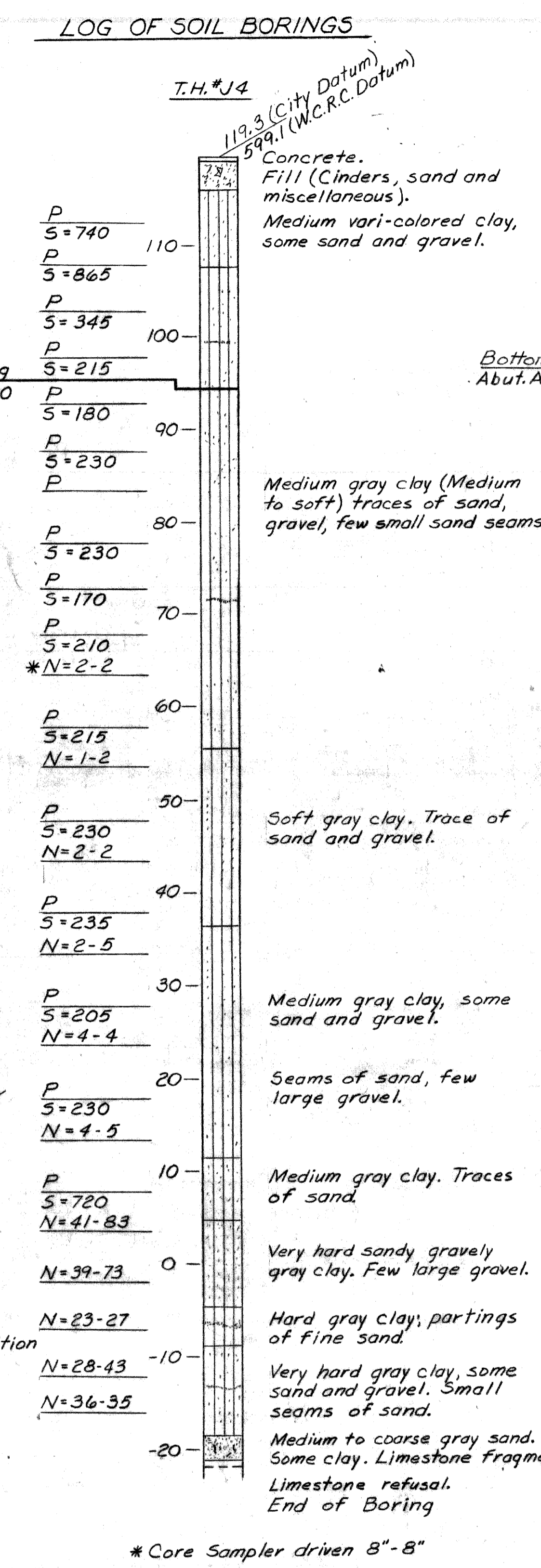
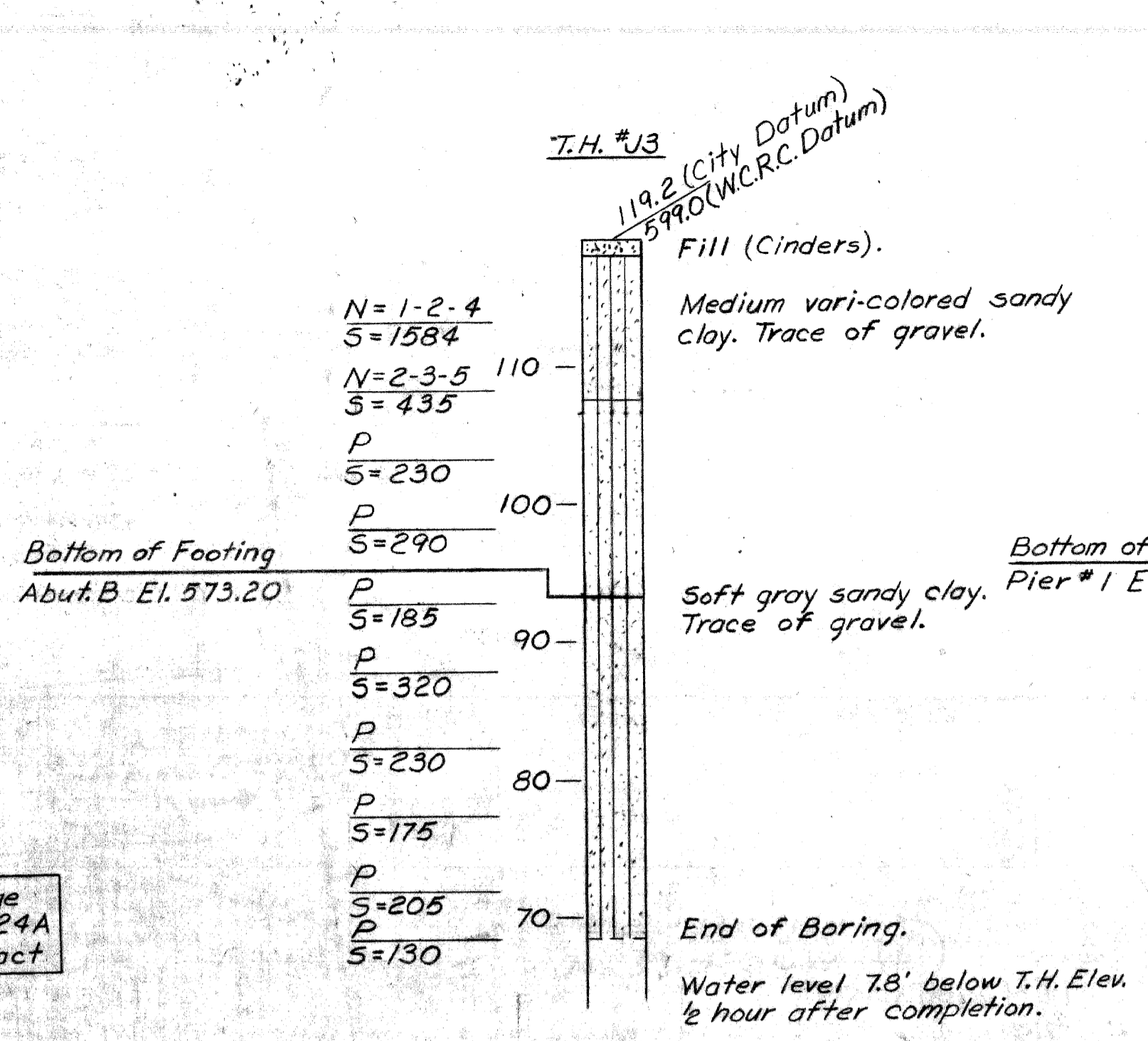
PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS		MICHIGAN DEPARTMENT OF STATE HIGHWAYS MYRTLE ST. CROSSING JEFFRIES FREEWAY IN DETROIT	
APPROVED: <i>H. Cook</i> STRUCTURAL ENGINEER	JOB No. PW 990(1)	GENERAL PLAN OF SITE	
NO. _____ DESCRIPTION _____ DATE _____ BY _____	APPROVED: <i>H. Cook</i> 3-15-68 DESIGN SUPERVISING ENGINEER	CHECKED BY: <i>A. Freiberg</i> 6-66 SHEET 2 of 26	CITY OF DETROIT SOIAD BOSS: <i>A. Freiberg</i> 6-66 DRAWN BY: <i>D. Roman</i> 5-66 CHECKED BY: <i>A. Freiberg</i> 6-66 SHEET 2 of 26 S03 of 82124 A



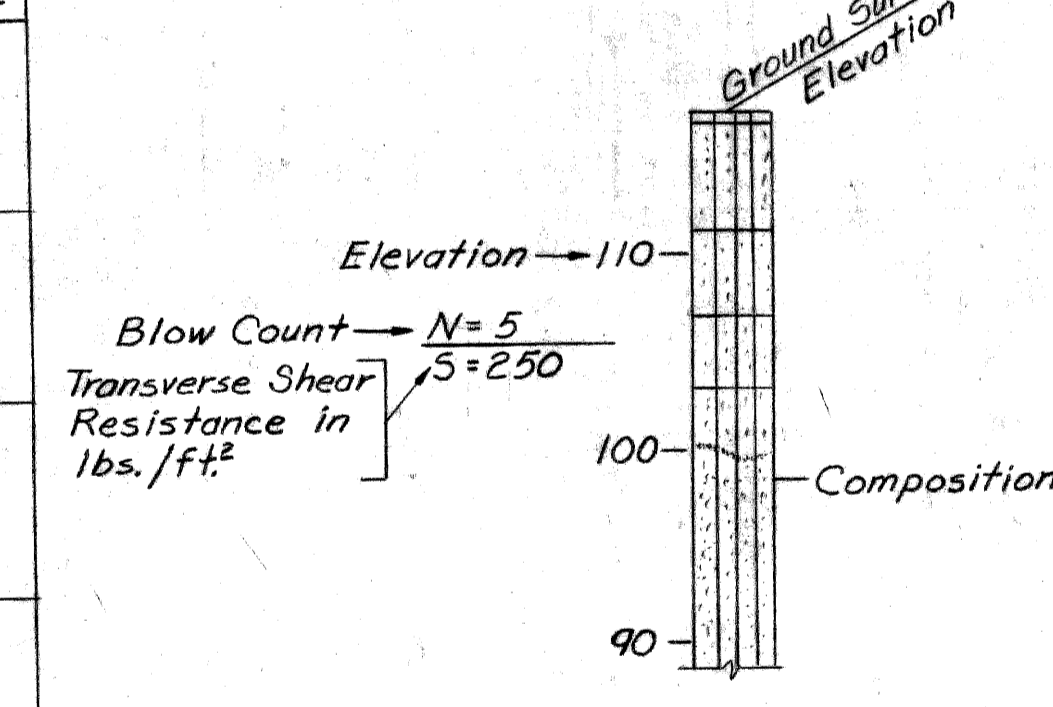
SURVEY PLAN
Scale: 1" = 40'

UTILITY LEGEND

- Sewer Inlet or Catchbasin
- Sewer Manhole
- PLC Manhole
- Detroit Edison Co. Manhole
- Water Gate Well and Valve
- Fire Hydrant
- Detroit Edison Co. Pole
- P.L.C. Lightpole
- Test Hole for Soil Profile
- Tree



LEGEND



Notes:

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

APPROVED: *H. Cook*
STRUCTURAL ENGINEER

REVISIONS

DATE

BY

JOB No.
PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

GENERAL PLAN OF SITE

APPROVED: *H. Cook* 3-15-68
DESIGN SUPERVISING ENGINEER

APPROVED: *George J. Walker* 3-18-68
ENGINEER OF DESIGN - CONSULTANTS

CITY OF DETROIT

SOIAD BOSS *A. Freberg* 6-66

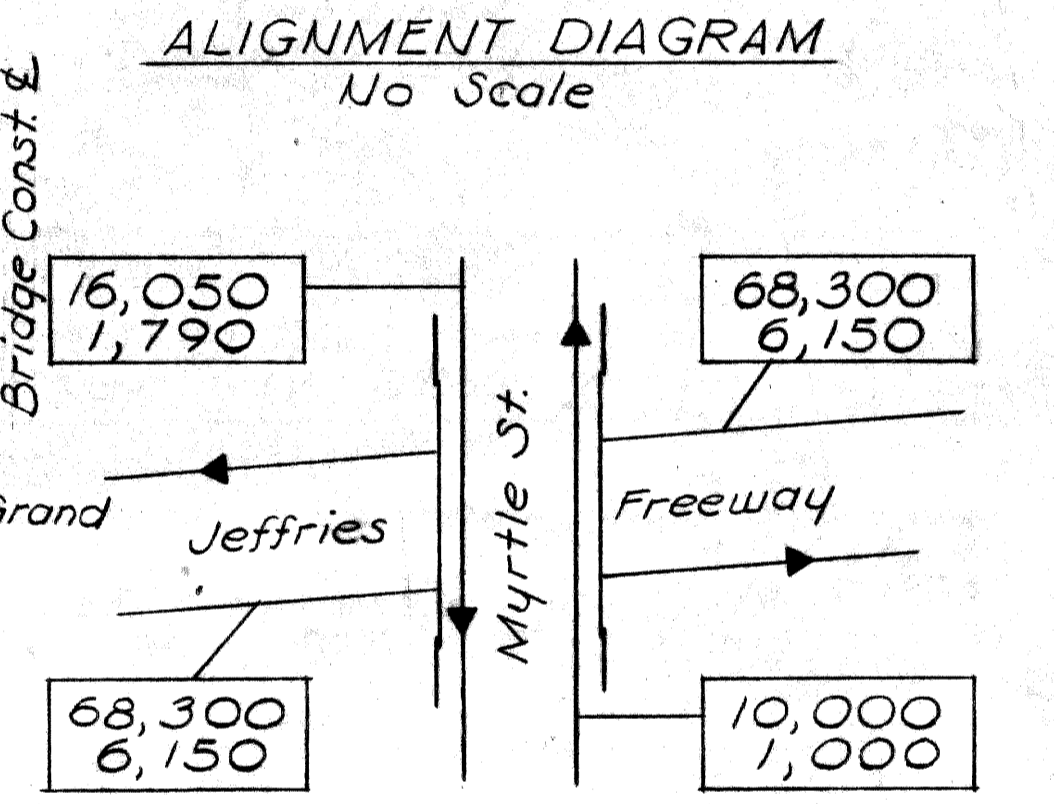
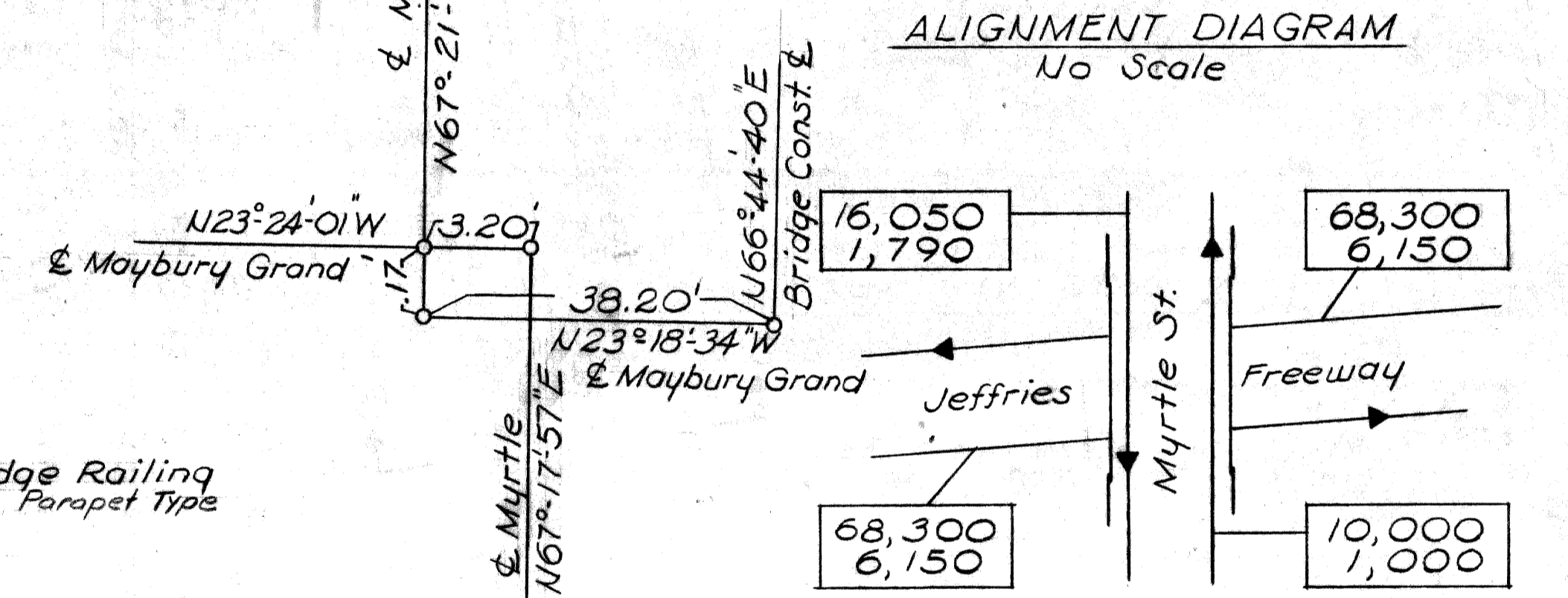
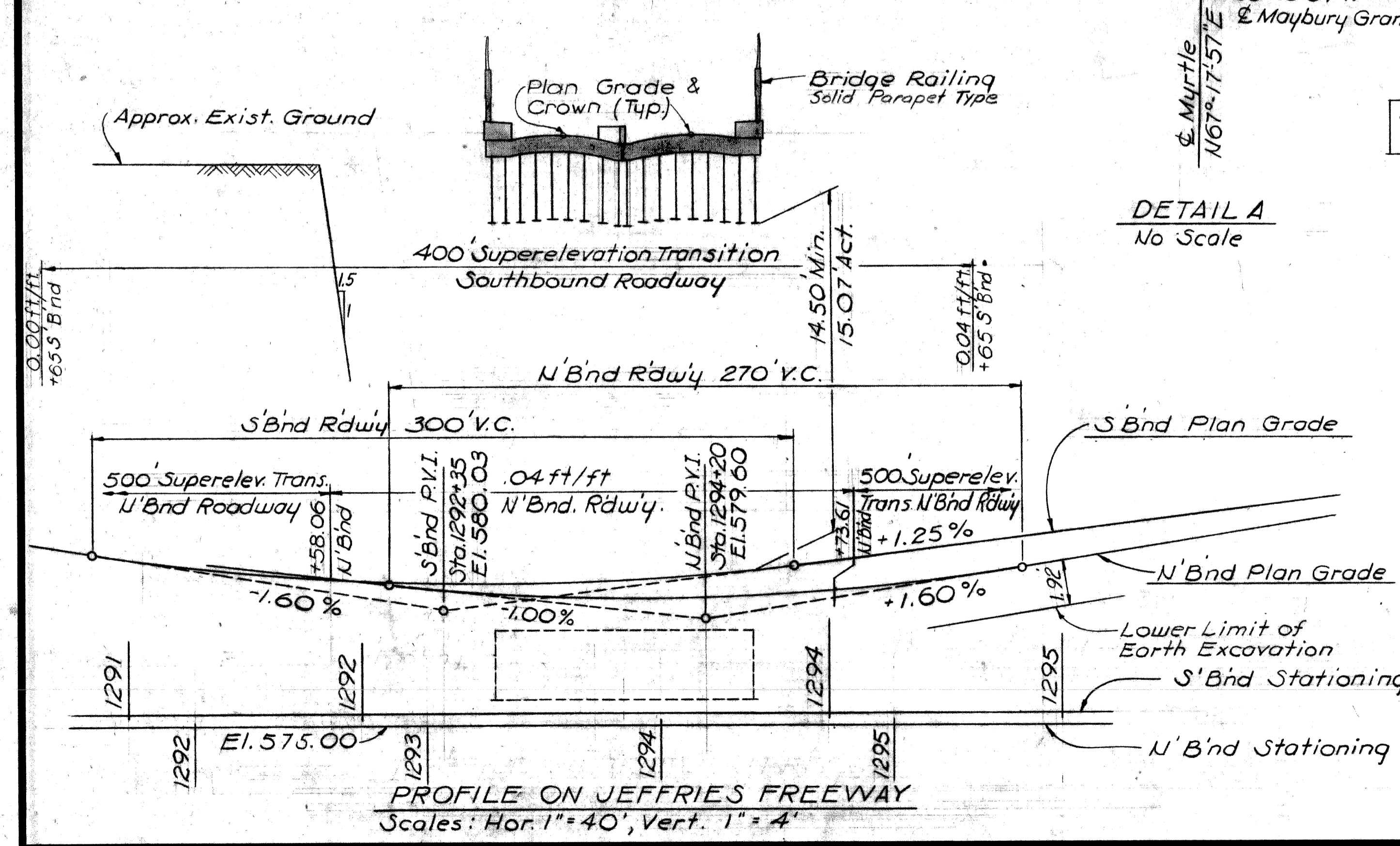
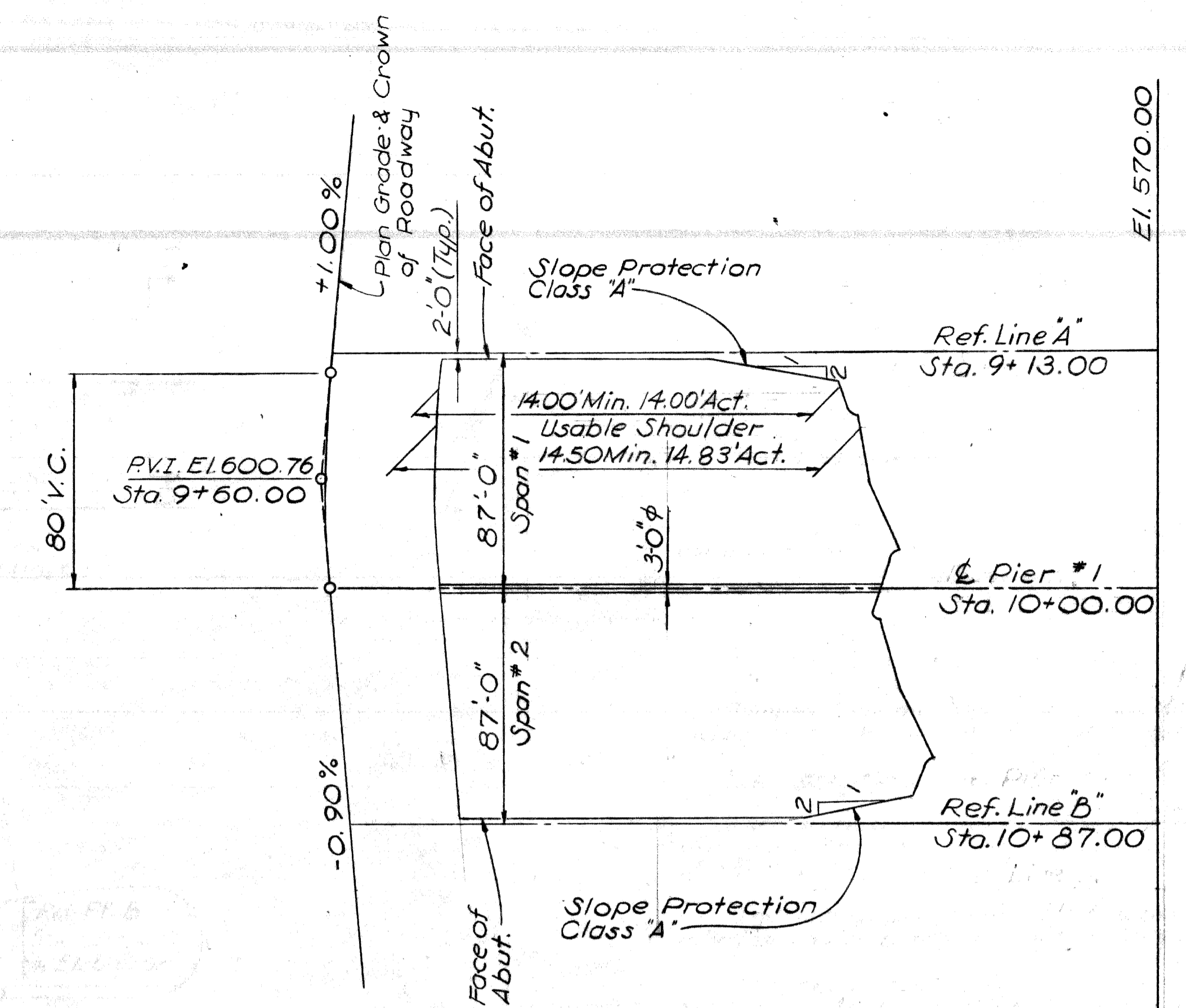
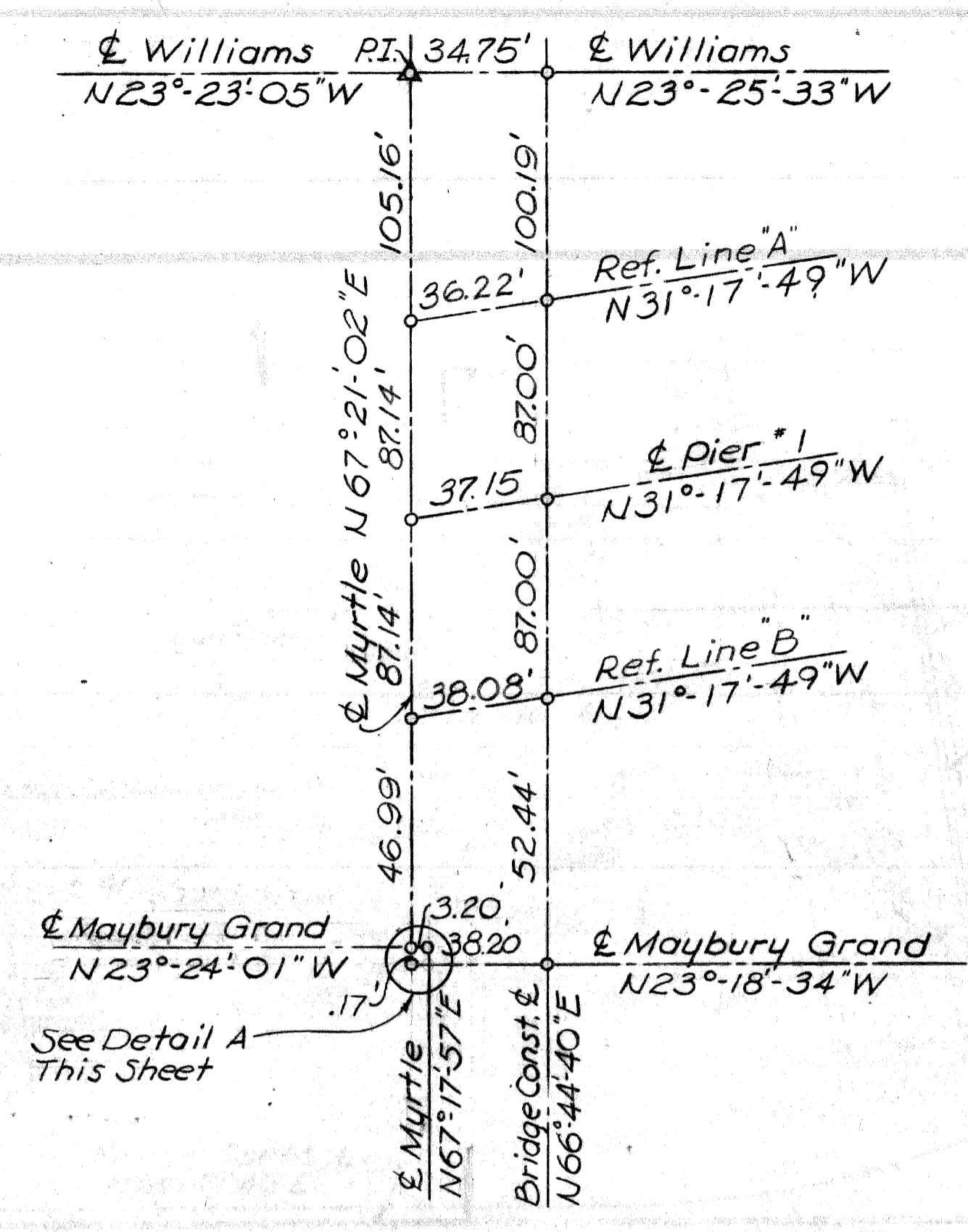
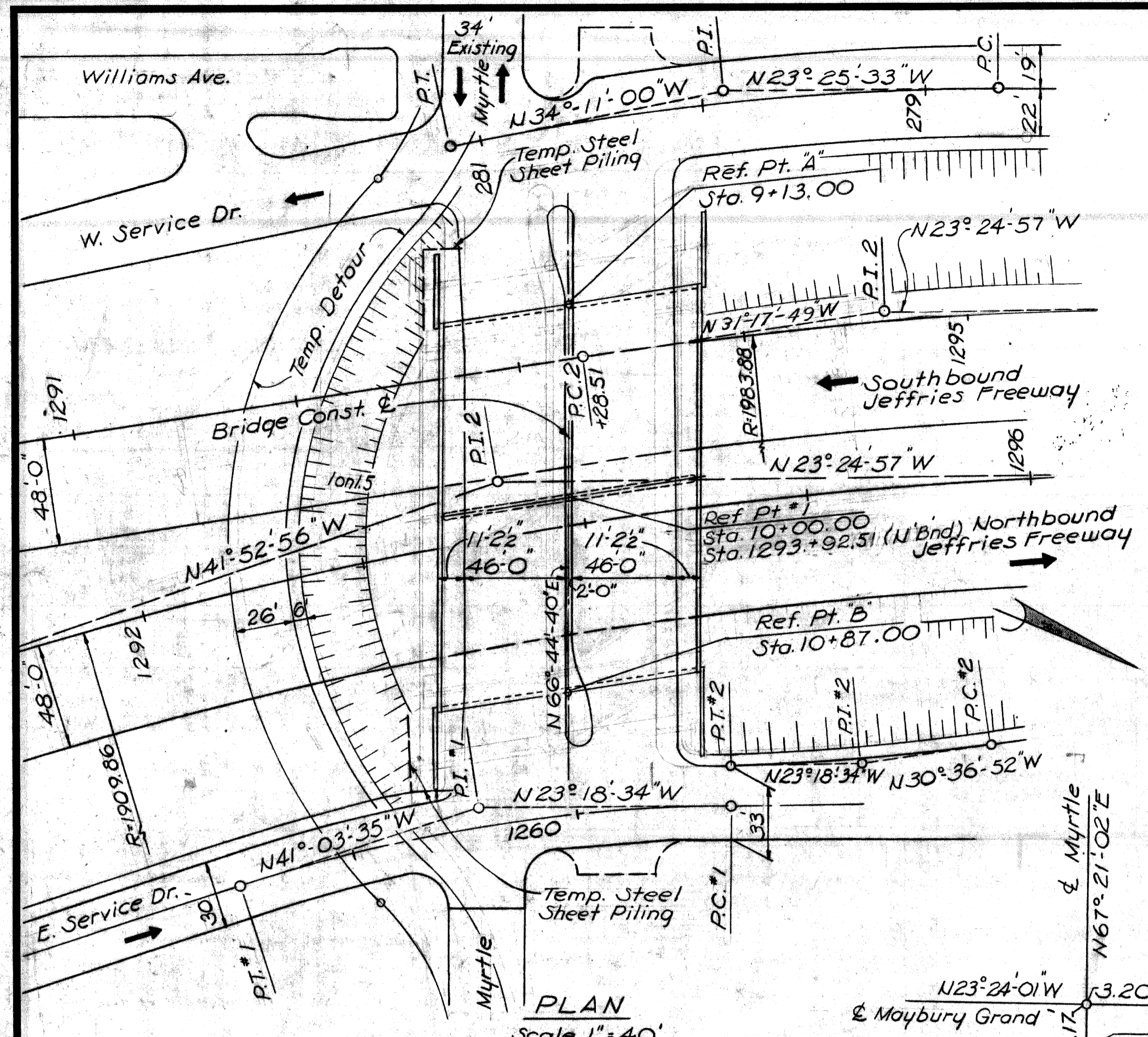
DRAWN BY *D. Roman* 5-66

TRACED BY

CHECKED BY *A. Freberg* 6-66

SHEET 2 of 26

S03 of 82124 A



CURVE DATA

N. Bnd Jeffries Curve*2		S. Bnd Jeffries Curve*2	
P.C. 2 Sta. 1290+58.06		P.C. Sta. 1293+28.51	
P.I. 2 Sta. 1293+68.53		P.I. Sta. 1294+65.17 (Fwd.)	
P.T. 2 Sta. 1296+73.61		P.T. Sta. 1296+01.40	
$\Delta = 18^{\circ}27'59''$		$\Delta = 7^{\circ}52'52''$	
$D = 3^{\circ}00'00''$		$D = 2^{\circ}53'17''$	
$R = 1909.86'$		$R = 1983.88'$	
$T = 310.47'$		$T = 136.66'$	
$L = 615.55'$		$L = 272.89'$	
$E = 25.07'$		$E = 4.70'$	

E. Service Dr. @ Myrtle Curve*1

P.C. Sta. 1259+29.93	P.C. Sta. 278+67.89
P.I. Sta. 1260+41.77	P.I. Sta. 279+91.36
P.T. Sta. 1261+51.81	P.T. Sta. 281+14.10
$\Delta = 17^{\circ}45'01''$	$\Delta = 10^{\circ}45'27''$
$D = 8^{\circ}00'00''$	$D = 4^{\circ}22'09''$
$R = 716.20'$	$R = 1311.38'$
$T = 111.84'$	$T = 123.47'$
$L = 221.88'$	$L = 246.22'$
$E = 5.70'$	$E = 5.80'$

- CONSTRUCTION BENCH MARKS**
- C.B.M. 7 DET on Flange of Hydrant S.W. Corner Myrtle & Williams: El. 601.64
 - C.B.M. 8 DET on Flange of Hydrant S.E. Corner Magnolia & Williams: El. 601.72
 - C.B.M. 9 DET on Flange of Hydrant N.W. Corner Magnolia & Maybury Grand: El. 602.13
- Notes:**
- C.B.M. denotes construction bench mark.
 - o denotes reference point or point of intersection.

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

APPROVED: [Signature] **STRUCTURAL ENGINEER**
 REVISIONS

JOB No.
 PW 990(1)

NO.	DESCRIPTION	DATE	BY

Work this sheet with sheets # 4 & 5

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 MYRTLE ST. CROSSING JEFFRIES FREEWAY
 IN DETROIT

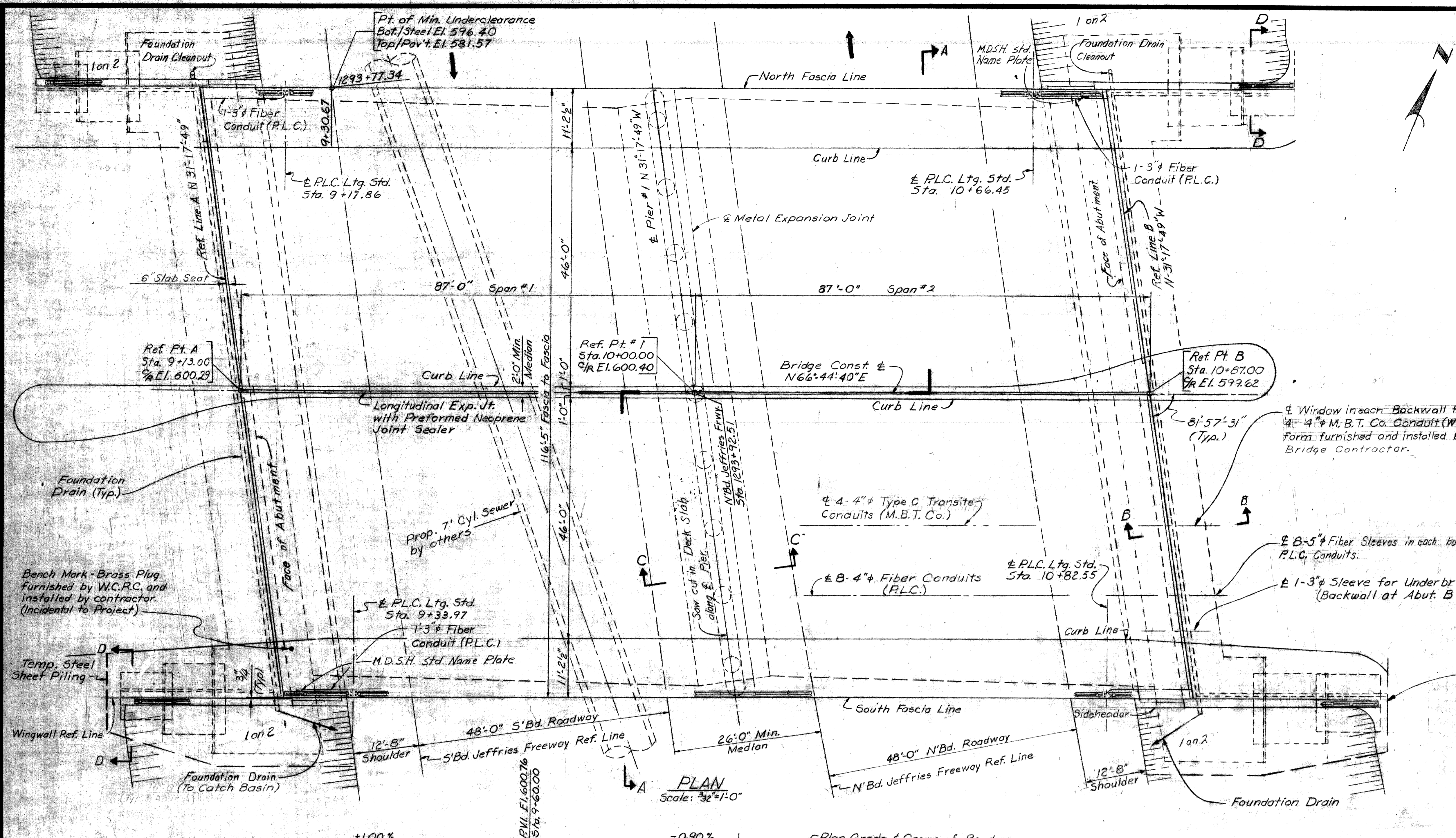
GENERAL DRAWING

CITY OF DETROIT

SQUAD BOSS: **H. Freiberg** 6-66
 DRAWN BY: **Roberts** 6/66
 TRACED BY: **Roberts** 6/66
 CHECKED BY: **H. Freiberg** 6-66
 SHEET 3 OF 26

APPROVED: [Signature] **DESIGN SUPERVISING ENGINEER** 3-15-68
 APPROVED: [Signature] **ENGINEER OF DESIGN CONSULTANTS** 3-18-68

503 of 82124 A



GENERAL NOTES:
 The design of this structure is based on M.S.H.D. Specifications for the design of Highway Bridges, 1958 edition and current AASHTO Standard Specifications for Highway Bridges HS-20-44 loading.
 Live load plus impact deflection = 1000 of span length = 350 of Cantilever arm.

The top of roadway slab and tops of curbs are parallel to the vertical curve and tangents.
 For details of Slope Protection - Class A, see Std. Sh. SP2.

Tamped Clay and Selected Excavated Material are incidental to Unclassified Excavation.

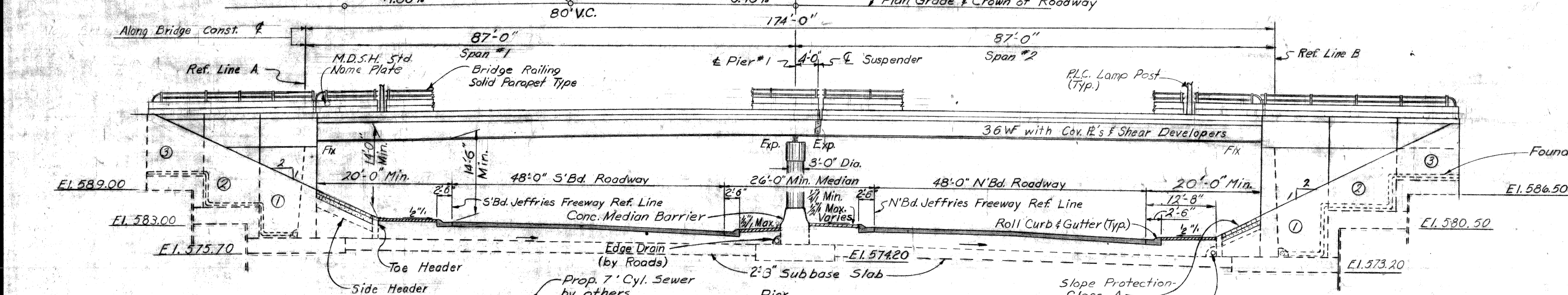
C/R denotes Crown of Roadway.

The vertical pay limits of temporary steel sheet piling are the top of retained earth and the bottom of footing.

The lateral pay limits of temporary steel sheet piling are as required and determined by the Engineer.

Temporary steel sheet piling is to be adequately supported to prevent bowing and tipping. Method and adequacy of support are subject to the approval of the Engineer.

Temporary steel sheet piling 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. Lode analysis and mill reports are not required for steel used in Sheet Piling.



MISCELLANEOUS QUANTITIES		
Item	Unit	Am't
Foundation Drain	Lin. Ft.	47
Slope Protection - Class A	Sq. Yd.	235
Slope Protection Header	Lin. Ft.	276
Temp. Steel Sheet Piling	Sq. Ft.	1500

Work this sheet with sheet nos. 3 & 5

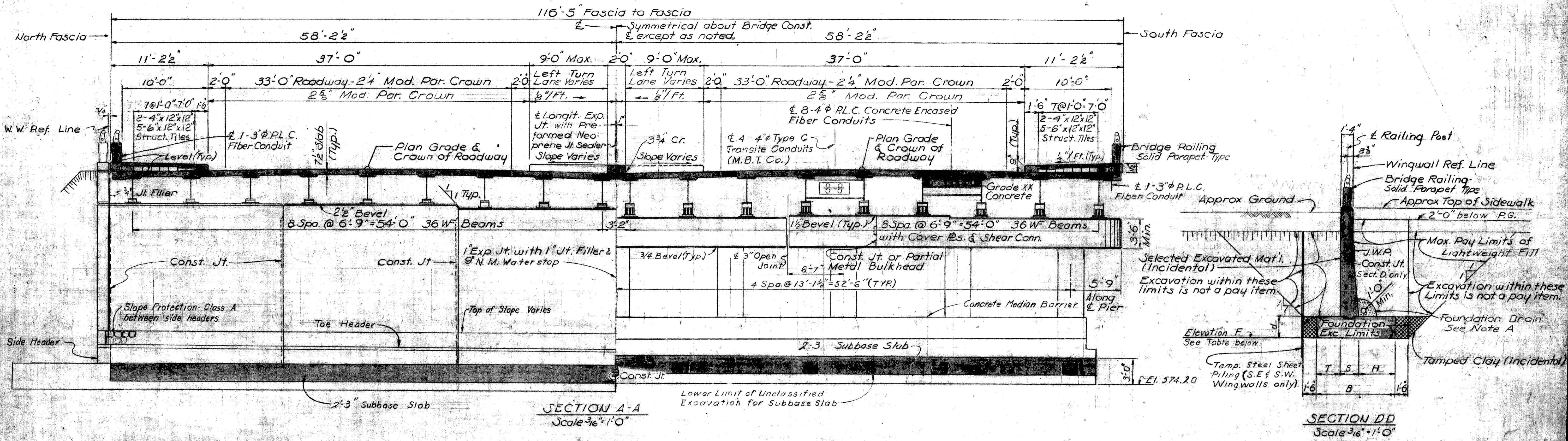
PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS
 APPROVED: *[Signature]* STRUCTURAL ENGINEER
 JOB No. PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 MYRTLE ST. CROSSING JEFFRIES FREEWAY
 IN DETROIT
GENERAL PLAN OF STRUCTURE

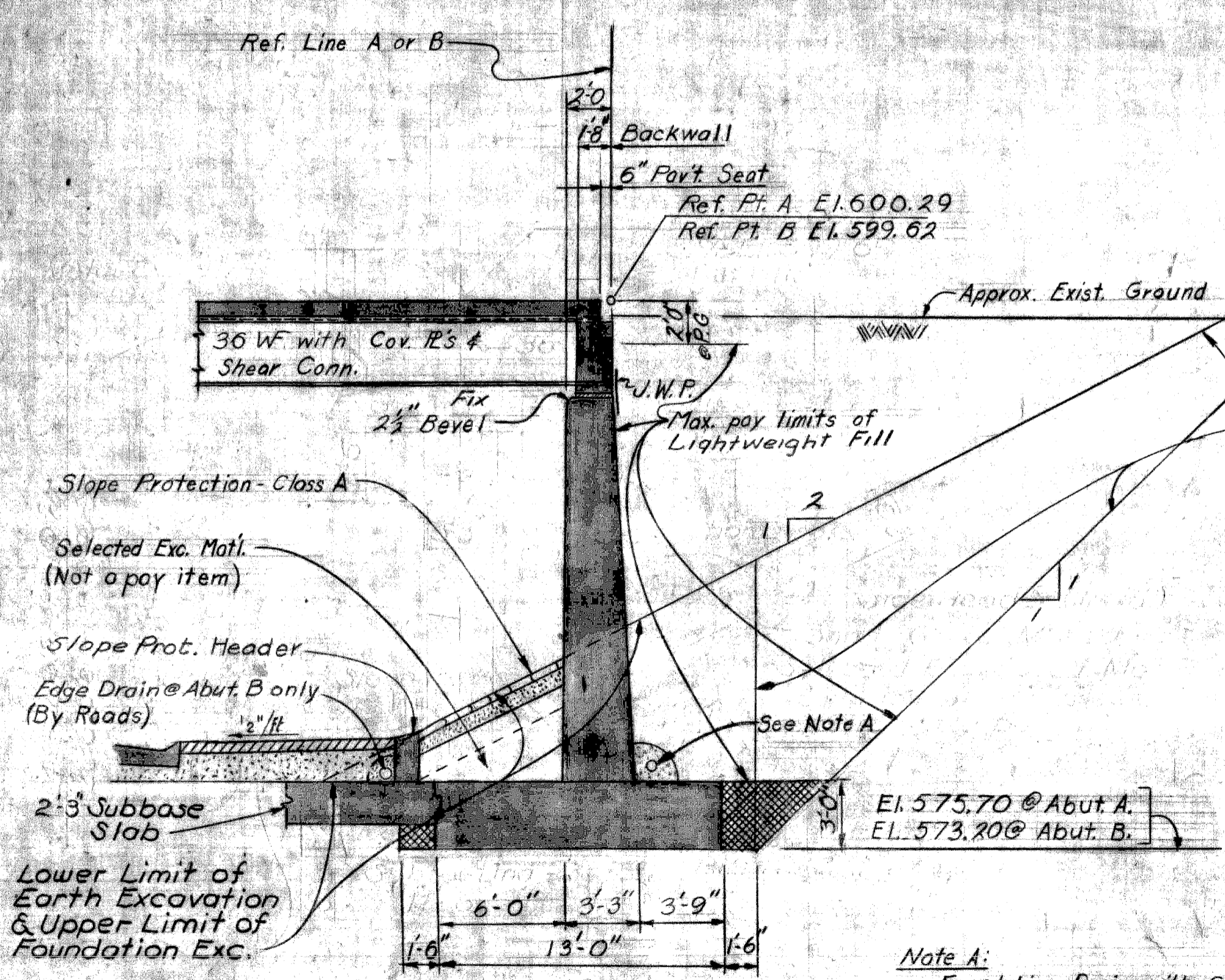
CITY OF DETROIT
 SQUAD BOSS: A. Freiberg 6-66
 DRAWN BY: D. Rome 6-66
 TRACED BY: A. Freiberg 6-66
 CHECKED BY: A. Freiberg 6-66
 SHEET 4 of 26
 S03 of 82124 A

REVISIONS			
NO.	DESCRIPTION	DATE	BY

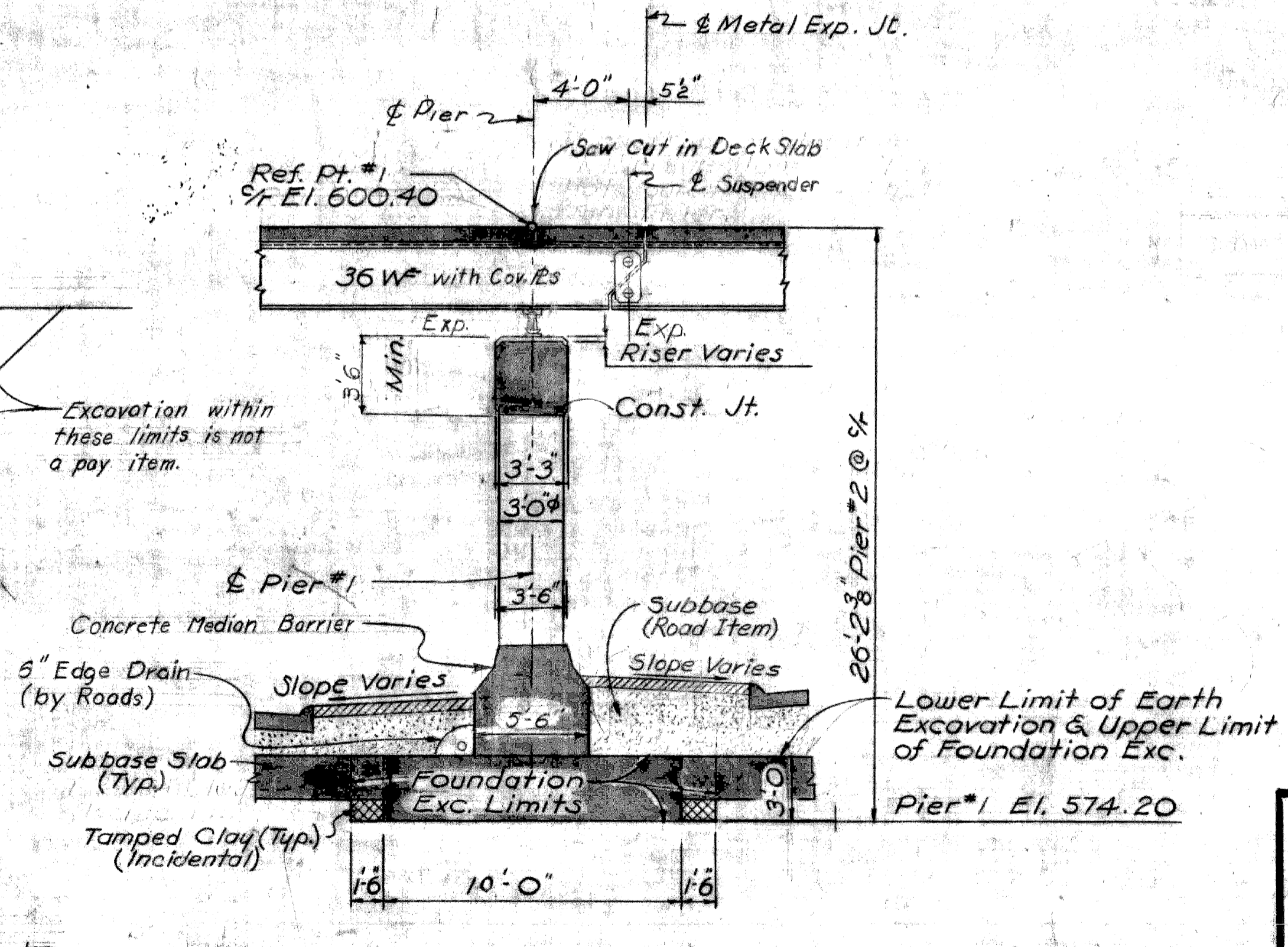
APPROVED: *[Signature]* 3-15-68
 DESIGN SUPERVISING ENGINEER
 APPROVED: *[Signature]* 3-16-68
 ENGINEER OF DESIGN CONSULTANTS



WINGWALL DIMENSIONS						
Section	T	S	H	B	d	Elevation F
1	10'-0"	3'-6"	6'-6"	20'-0"	3'-0"	573.70 @ Abut. A 573.20 @ Abut. B
2	6'-6"	3'-0"	5'-0"	14'-6"	3'-0"	580.30 Abut. B; 583.00 Abut. A
3	3'-6"	2'-0"	4'-6"	10'-0"	2'-6"	586.50 Abut. B; 589.00 Abut. A



Note A:
Foundation Drain with Granular Material - Class I incidental to Foundation Drain.



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BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: [Signature] STRUCTURAL ENGINEER REVISIONS

JOB No. PW 990(1)

NO.	DESCRIPTION	DATE	BY

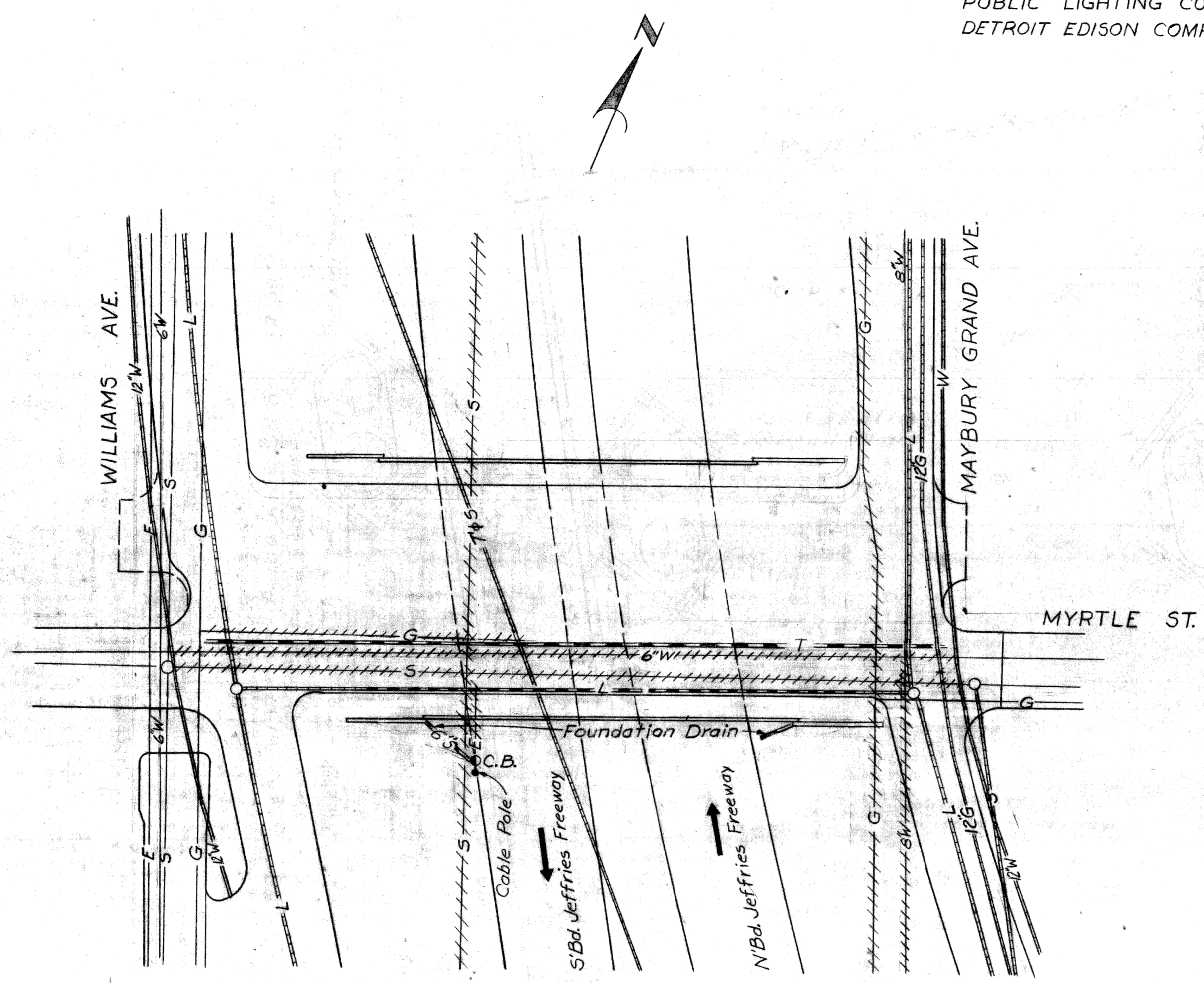
Work this sheet with sheets No. 3 & 4

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT
GENERAL PLAN OF STRUCTURE

APPROVED: [Signature] DESIGN SUPERVISING ENGINEER
[Signature] 3-18-66 ENGINEER OF DESIGN CONSULTANTS

SQUAD BOSS: [Signature] 6-66
DRAWN BY: [Signature] 6-66
TRACED BY: [Signature] 6-66
CHECKED BY: [Signature] 6-66
SHEET 5 of 26
903 of 82124 A

UTILITY	LEGEND			
	EXISTING	DELETED OR ABANDONED	NEW WORK BY OTHERS	NEW WORK BY CONTRACTOR
DETROIT WATER DEPARTMENT	— W —	////W/////	====W====	— W —
FREEMAN & CITY OF DETROIT SEWERS	— S —	////S/////	====S====	— S —
MICHIGAN CONSOLIDATED GAS CO.	— G —	////G/////	====G====	— G —
MICHIGAN BELL TELEPHONE CO.	— T —	////T/////	====T====	— T —
PUBLIC LIGHTING COMMISSION	— L —	////L/////	====L====	— L —
DETROIT EDISON COMPANY	— E —	////E/////	====E====	— E —



SITUATION PLAN
Scale: 1" = 40'

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

APPROVED: *J. J. Court*
STRUCTURAL ENGINEER

JOB No.
PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

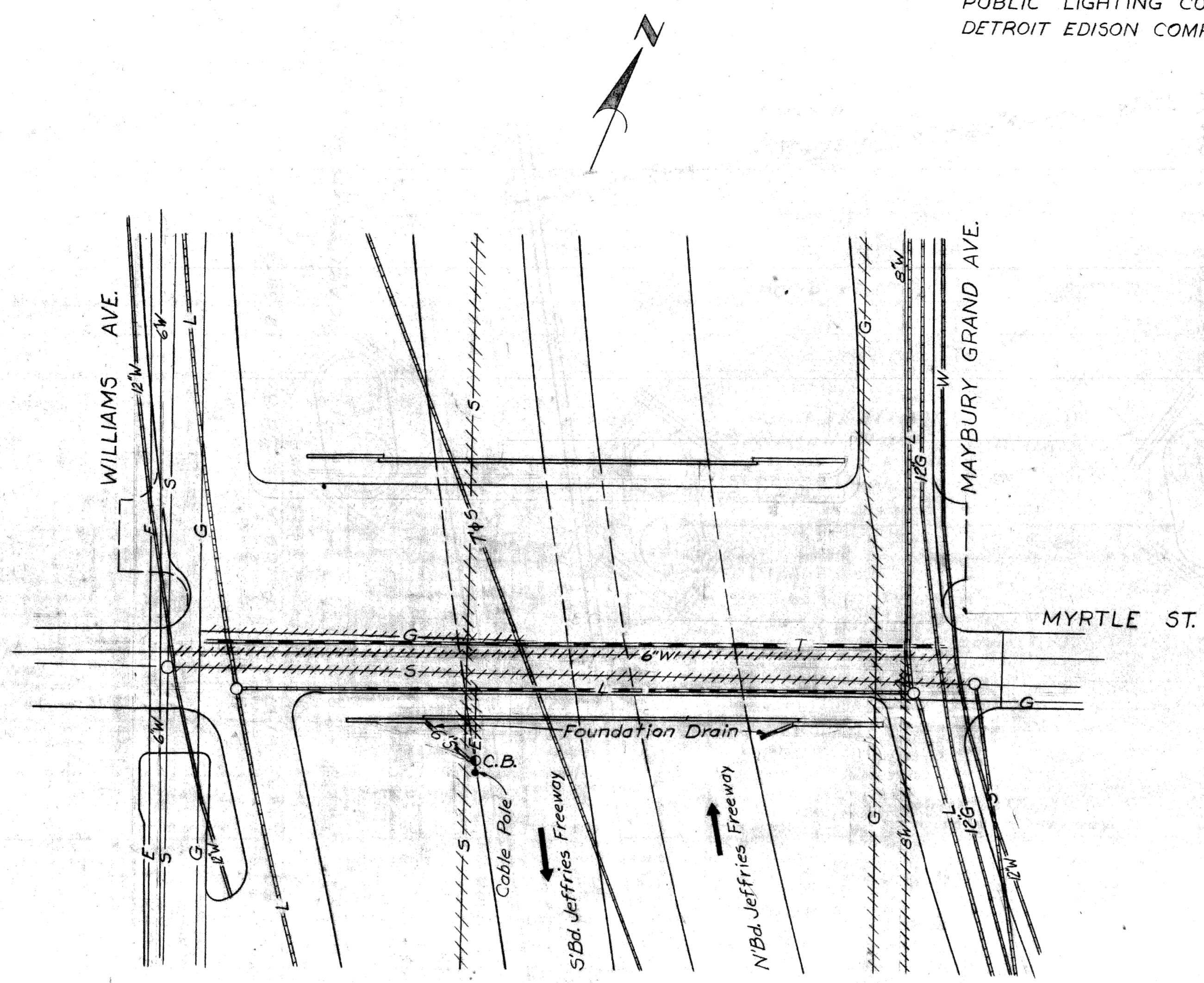
EXISTING UTILITIES AND PROPOSED ALTERATIONS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	A. Freiberg	6-66
DRAWN BY	D. Roman	6-66
CHECKED BY	A. Freiberg	6-66
SHEET	6	28

503 of 82124 A

UTILITY	LEGEND			
	EXISTING	DELETED OR ABANDONED	NEW WORK BY OTHERS	NEW WORK BY CONTRACTOR
DETROIT WATER DEPARTMENT	— W —	////W////	====W====	— W —
FREEMAN & CITY OF DETROIT SEWERS	— S —	////S////	====S====	— S —
MICHIGAN CONSOLIDATED GAS CO.	— G —	////G////	====G====	— G —
MICHIGAN BELL TELEPHONE CO.	— T —	////T////	====T====	— T —
PUBLIC LIGHTING COMMISSION	— L —	////L////	====L====	— L —
DETROIT EDISON COMPANY	— E —	////E////	====E====	— E —



SITUATION PLAN
Scale: 1" = 40'

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

APPROVED: *J. J. Court*
STRUCTURAL ENGINEER

JOB No.
PW 990(1)

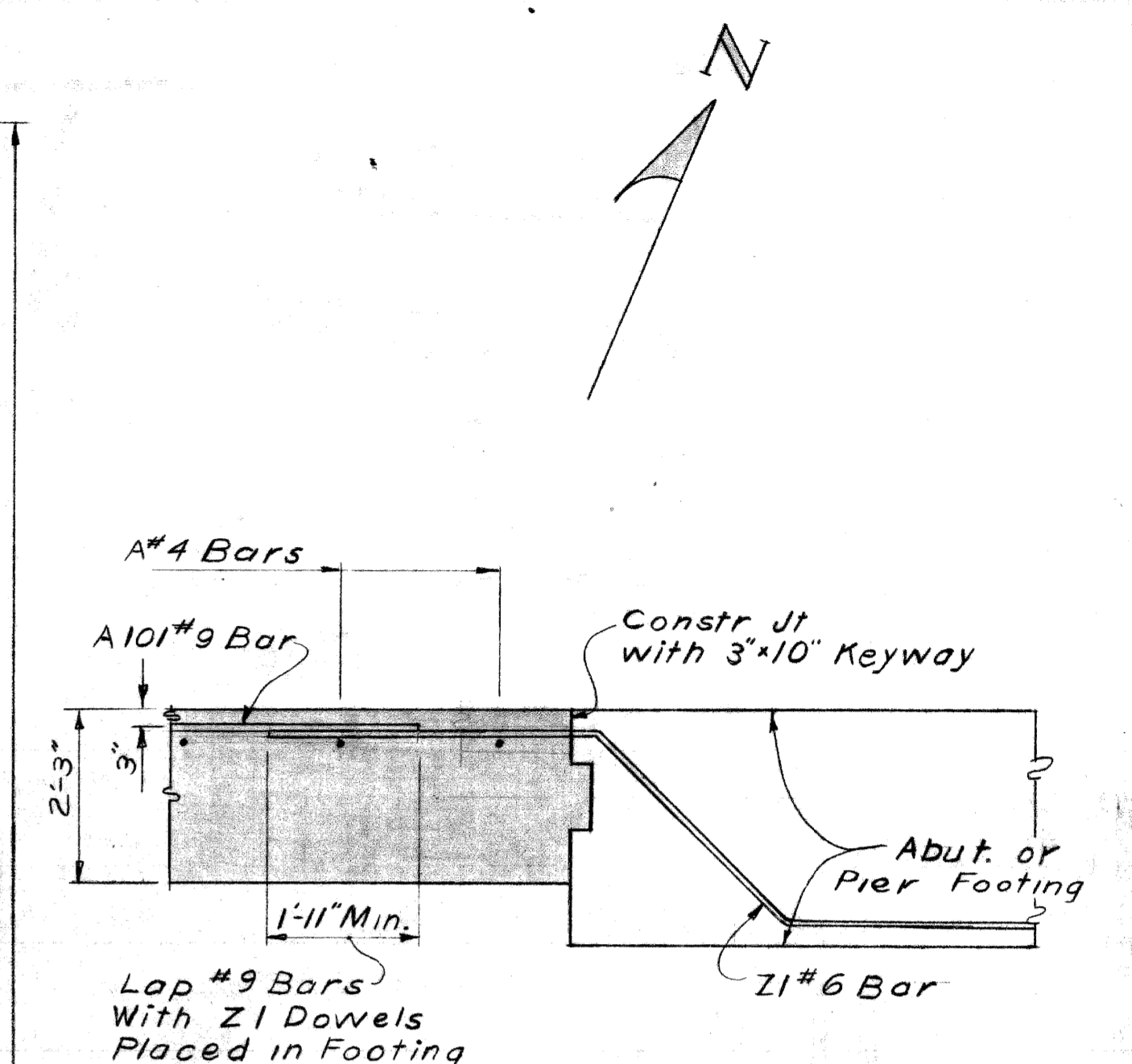
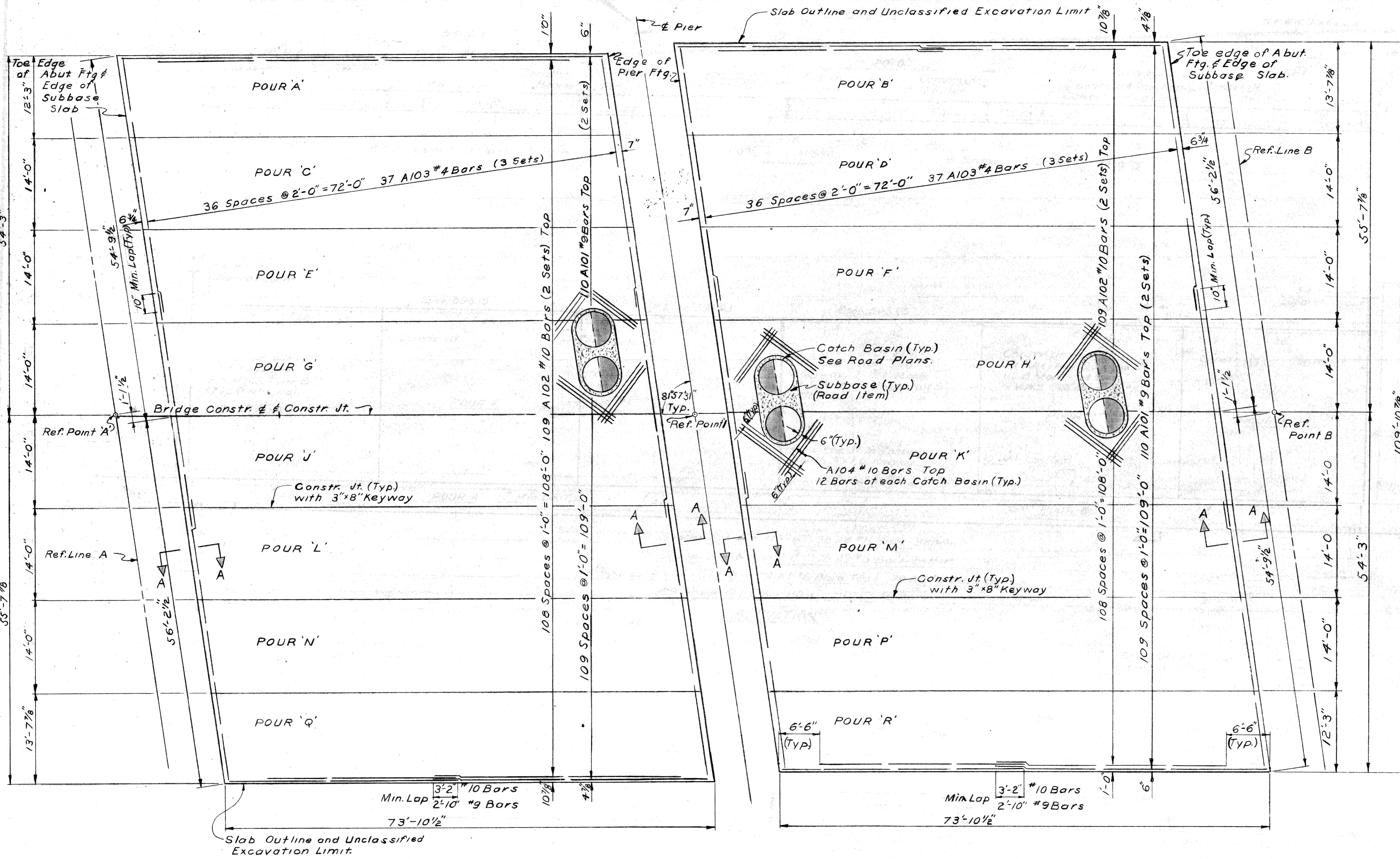
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

EXISTING UTILITIES AND PROPOSED ALTERATIONS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	A. Freiberg	6-66
DRAWN BY	D. Roman	6-66
CHECKED BY	A. Freiberg	6-66
SHEET	6	28

503 of 82124 A



SECTION A-A
(Typ. of Footings)

Grade A (6A) Concrete	
Pour	Cu. Yds.
A	75.4
B	84.1
C	86.2
D	86.2
E	85.5
F	86.2
G	80.3
H	77.0
J	86.2
K	81.8
L	86.2
M	86.2
N	86.2
P	86.2
Q	84.1
R	75.4
Total	1333.2

Miscellaneous Quantity.
Unclassified Excavation 1297 Cu. Yds.

NOTE:
Cut or bend reinforcement to avoid Catch Basins.

PLAN - SUBBASE SLAB

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

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUBBASE SLAB

NO.	REVISIONS	DATE	BY

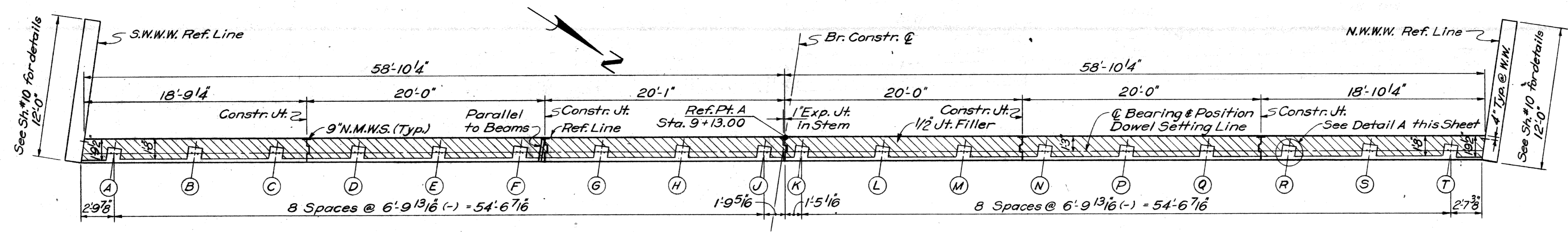
APPROVED: *[Signature]* STRUCTURAL ENGINEER

JOB No. PW 990(1)

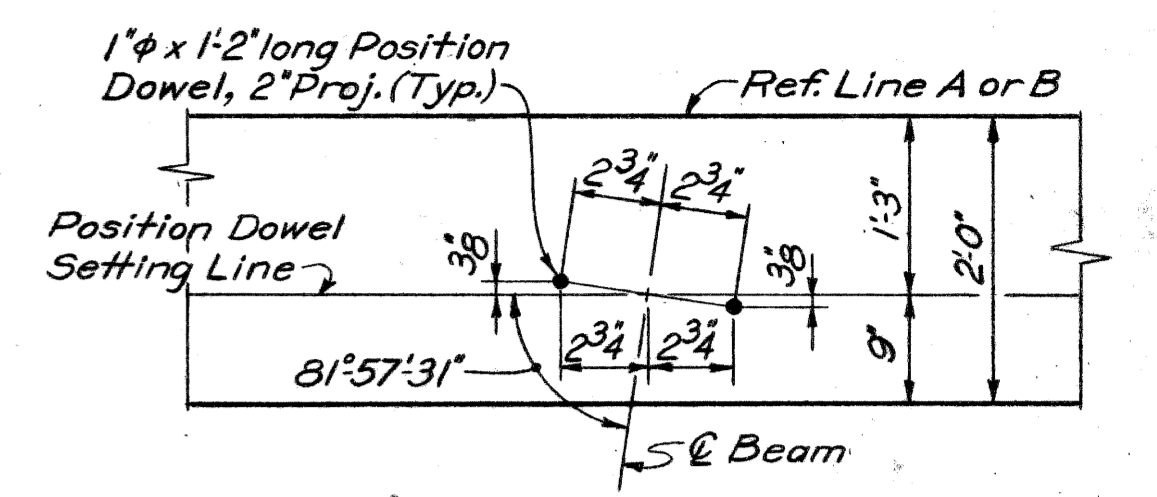
CITY OF DETROIT
SQUAD BOSS: *[Signature]* 3-68
DRAWN BY: *[Signature]* 2-68
CHECKED BY: *[Signature]* 2-68
SHEET 7 OF 26

S03 of 82124 A

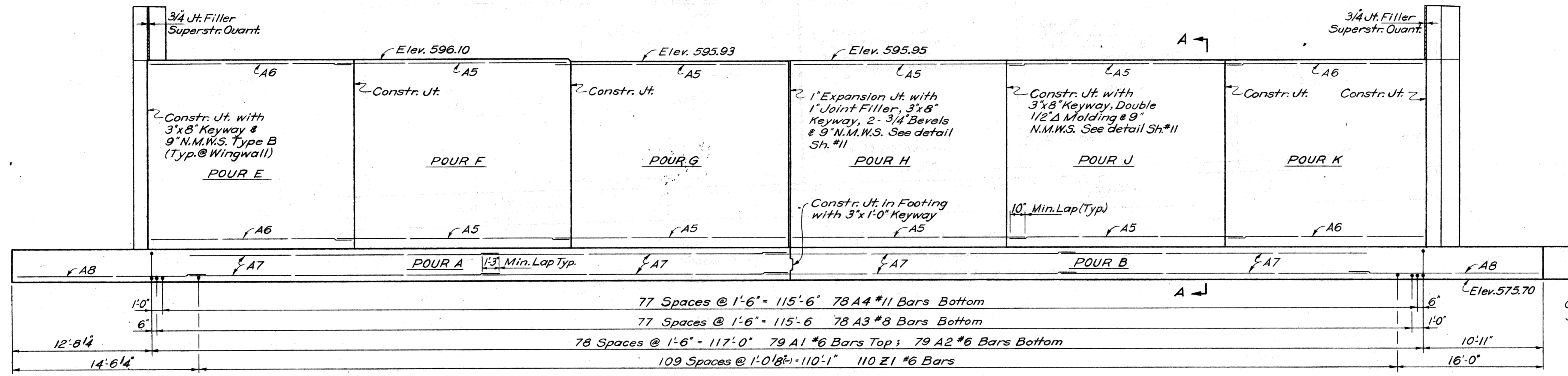
503 SUBBASE



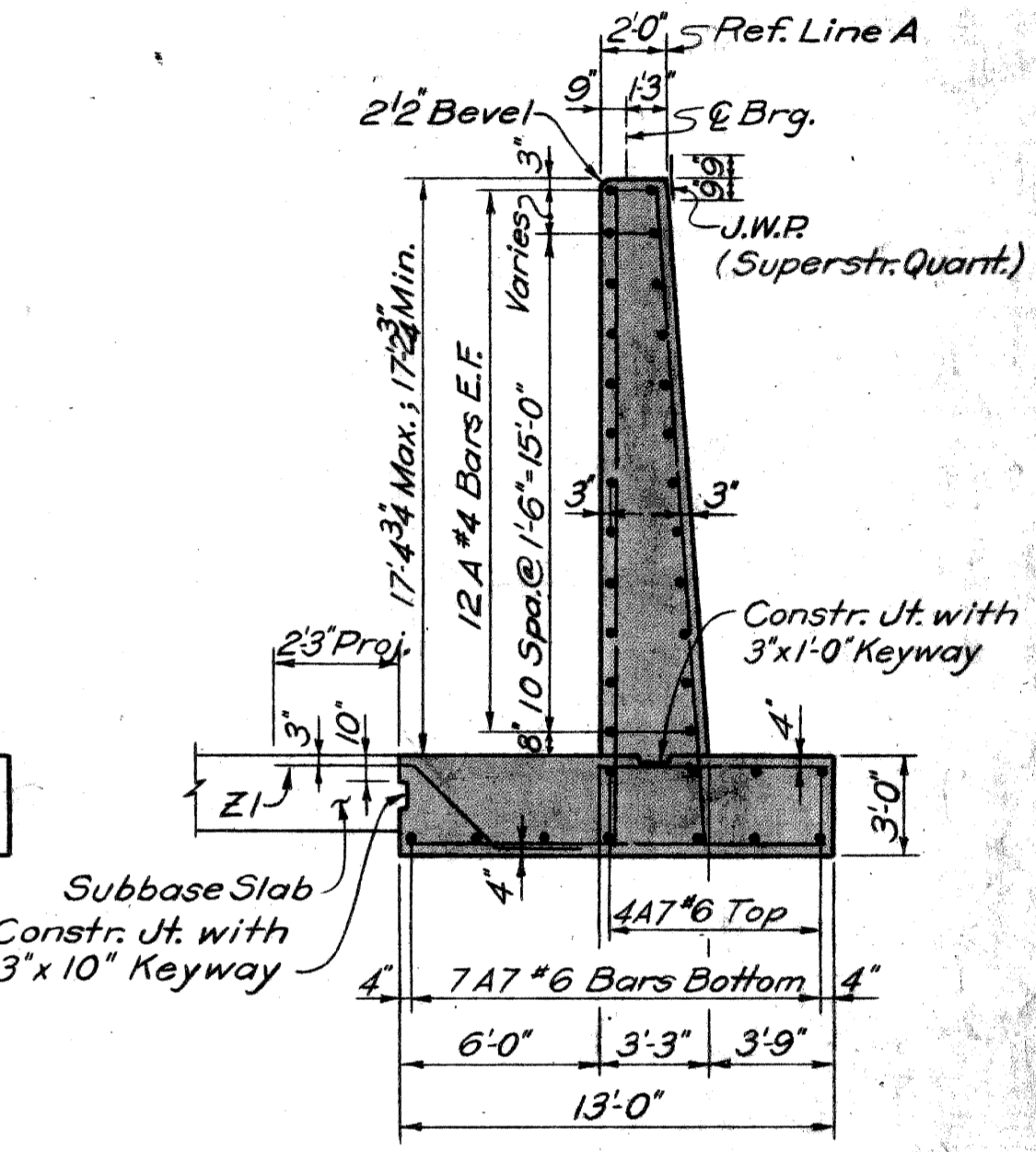
PLAN-ABUT. A



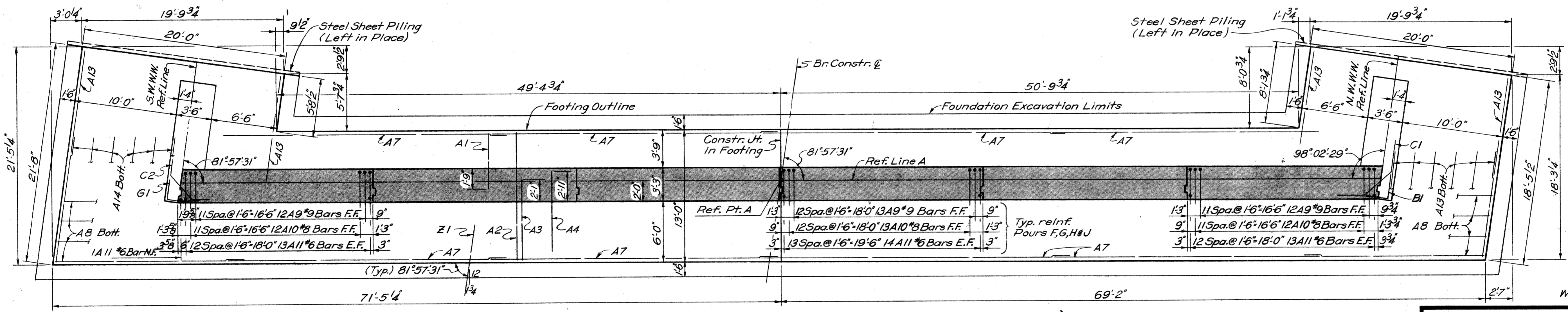
DETAIL A



ELEVATION



SECTION A-A



FOUNDATION PLAN

Work this Sheet with Sheets 9, 10 & 11

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT A DETAILS

NO.	DESCRIPTION	DATE	BY

REVISIONS

CITY OF DETROIT

SQUAD BOSS	K.J.	3-68
DRAWN BY	K.V.H.	1-68
TRACED BY	W.A.L.	2-68
CHECKED BY		
SHEET	8	of 20

303 of 82124 A

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

APPROVED: *H. Paul*
STRUCTURAL ENGINEER

JOB No.
PW 500(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT B DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY
1-68	K.M.H.		
2-68	M.A.L.		
3-68	K.M.H.		

DESIGNED BY M.A.L.
 CHECKED BY M.A.L.
 SHEET 9 OF 26
 S03 of 82124A

PLANS PREPARED BY

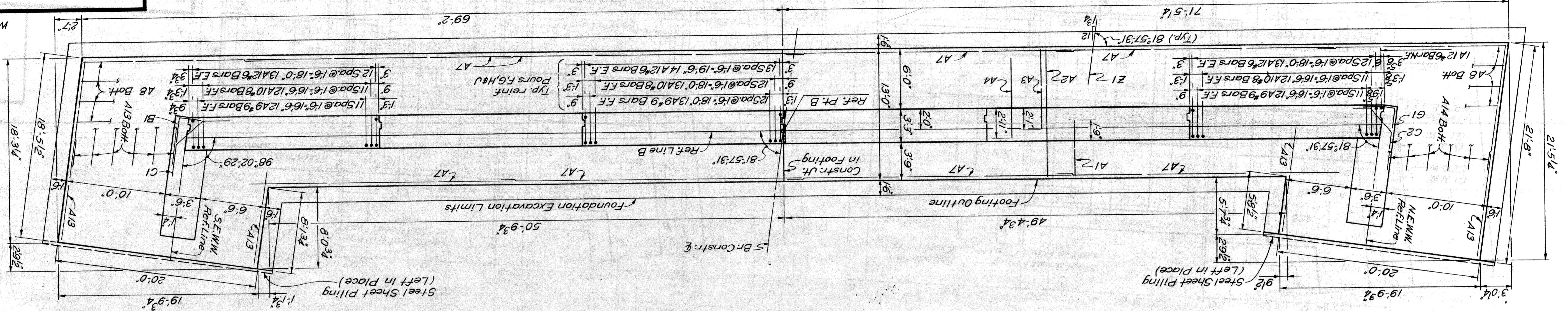
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CIVIL ENGINEER'S OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

JOB NO. PM 533(1)

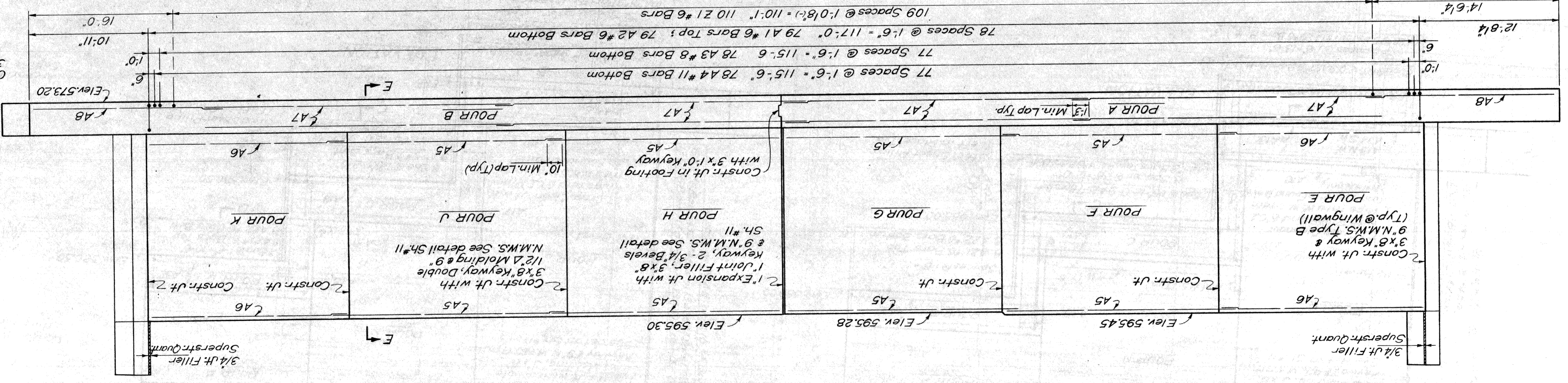
APPROVED

[Signature]
 STRUCTURAL ENGINEER

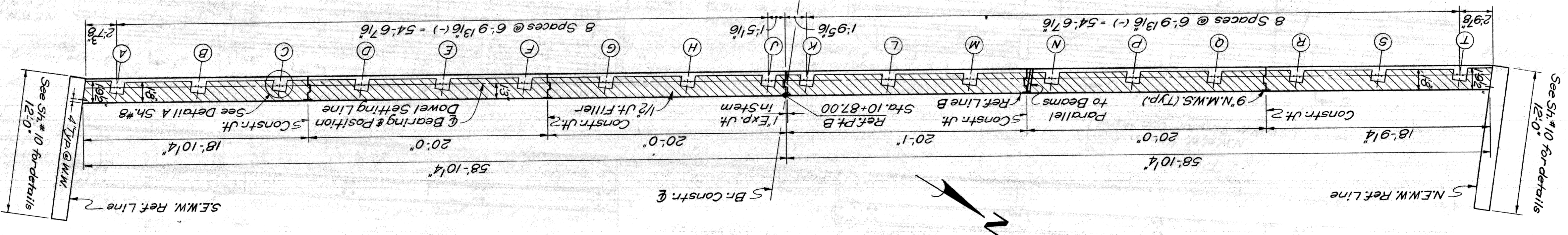
FOUNDATION PLAN



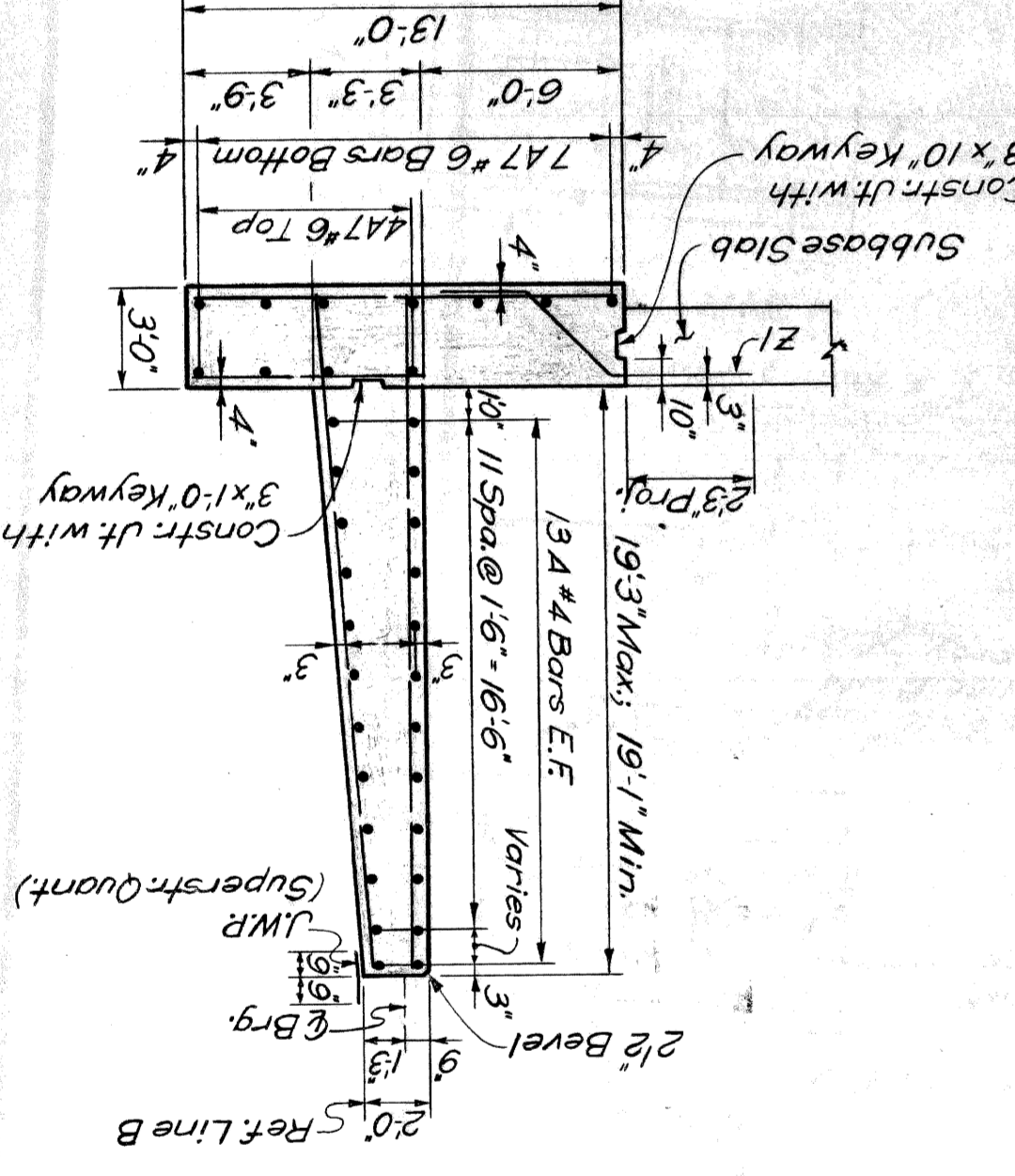
ELEVATION

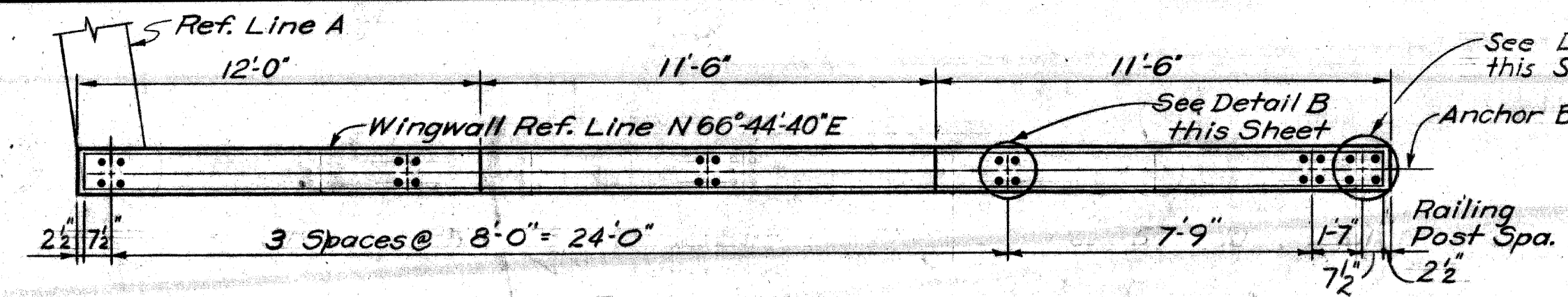


PLAN-ABUT. B

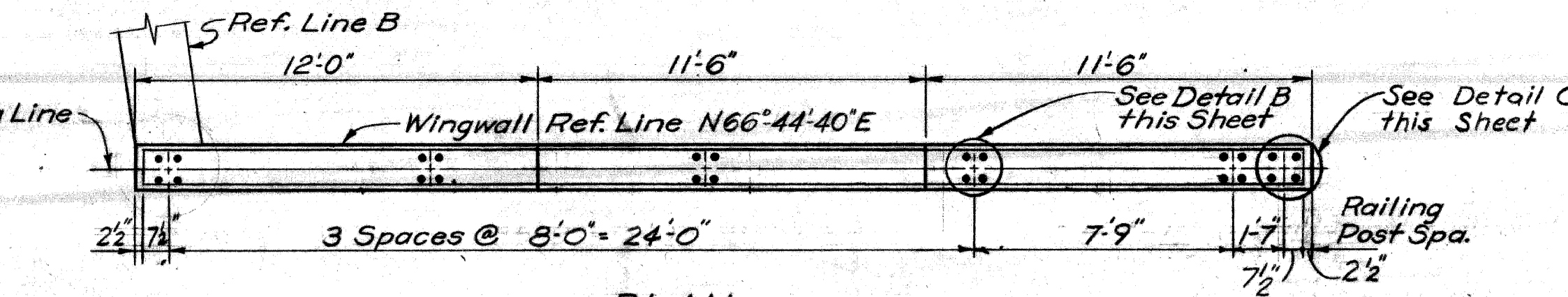


SECTION E-E

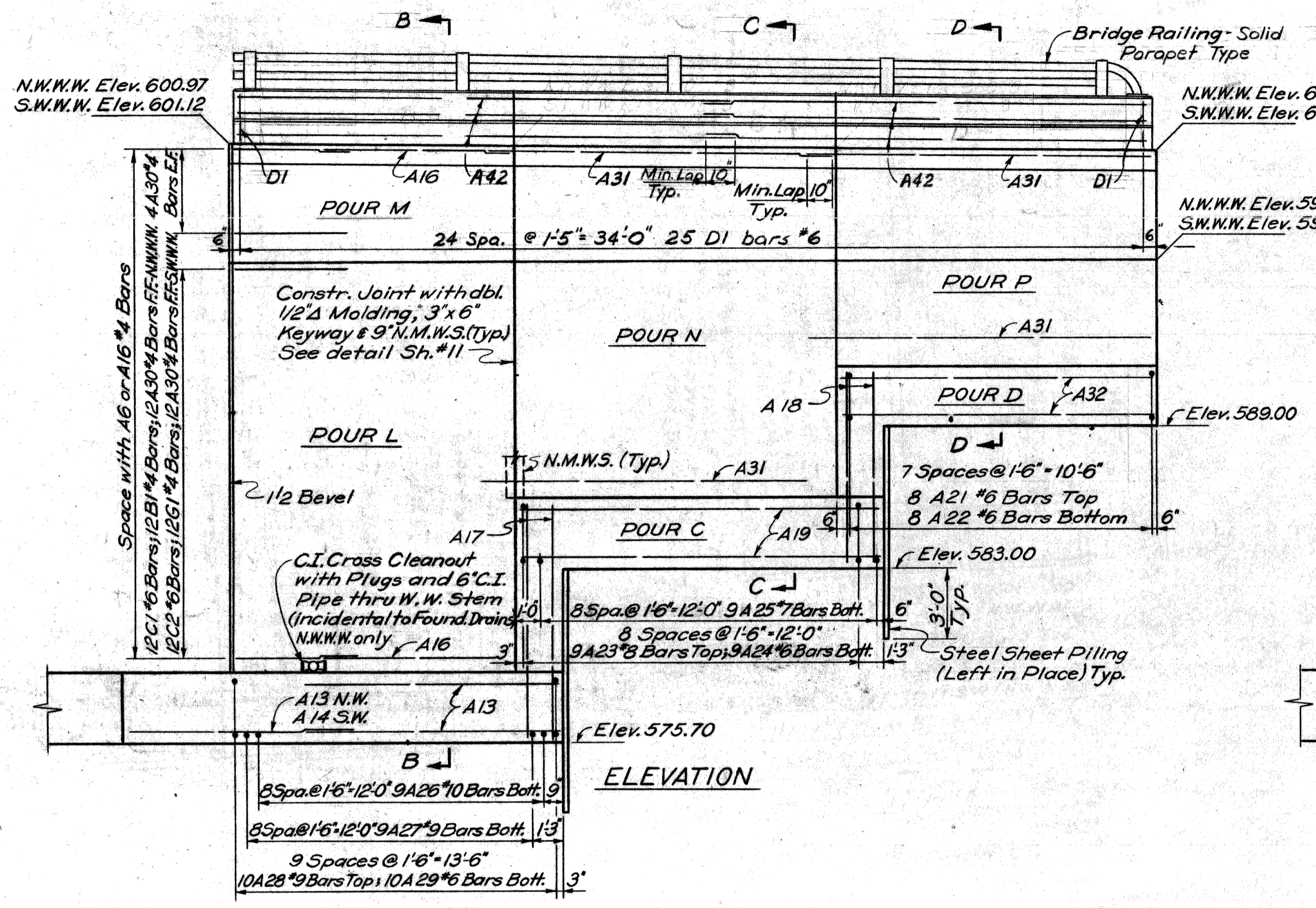




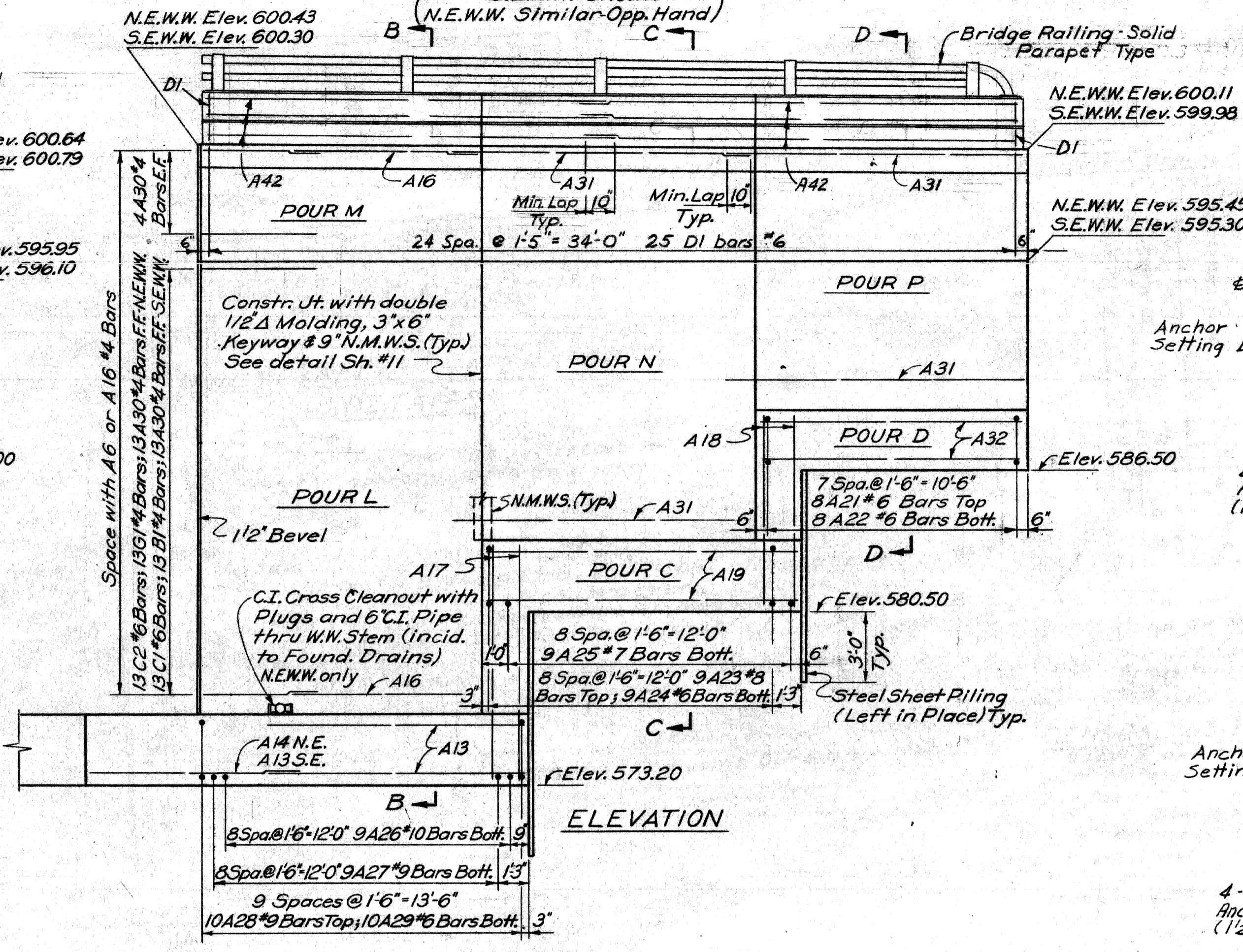
PLAN
N.W.W.W. Shown
(S.W.W.W. Similar-Opp. Hand)



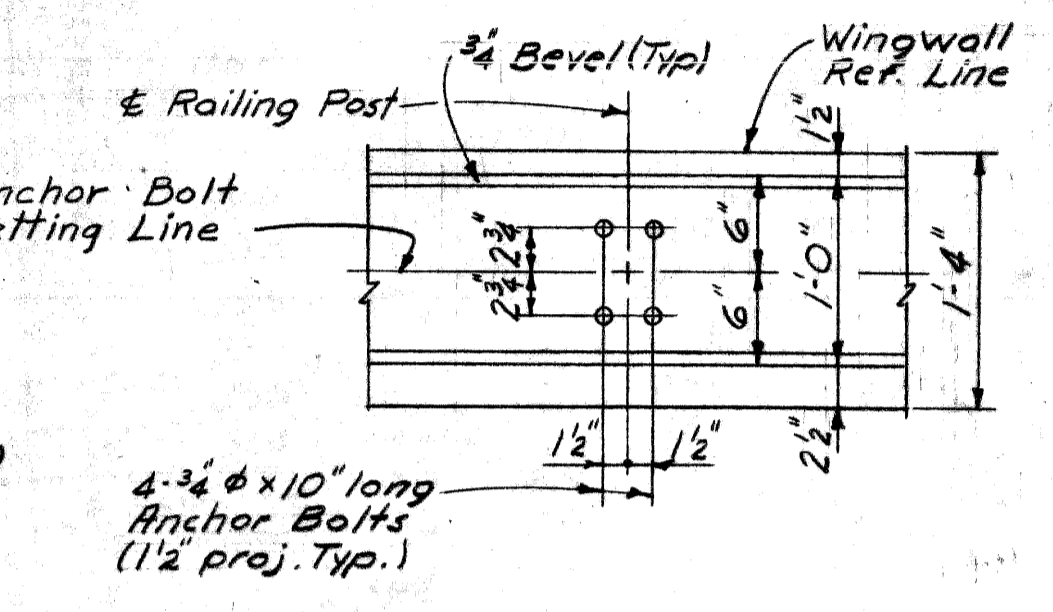
PLAN
S.E.W.W. Shown
(N.E.W.W. Similar-Opp. Hand)



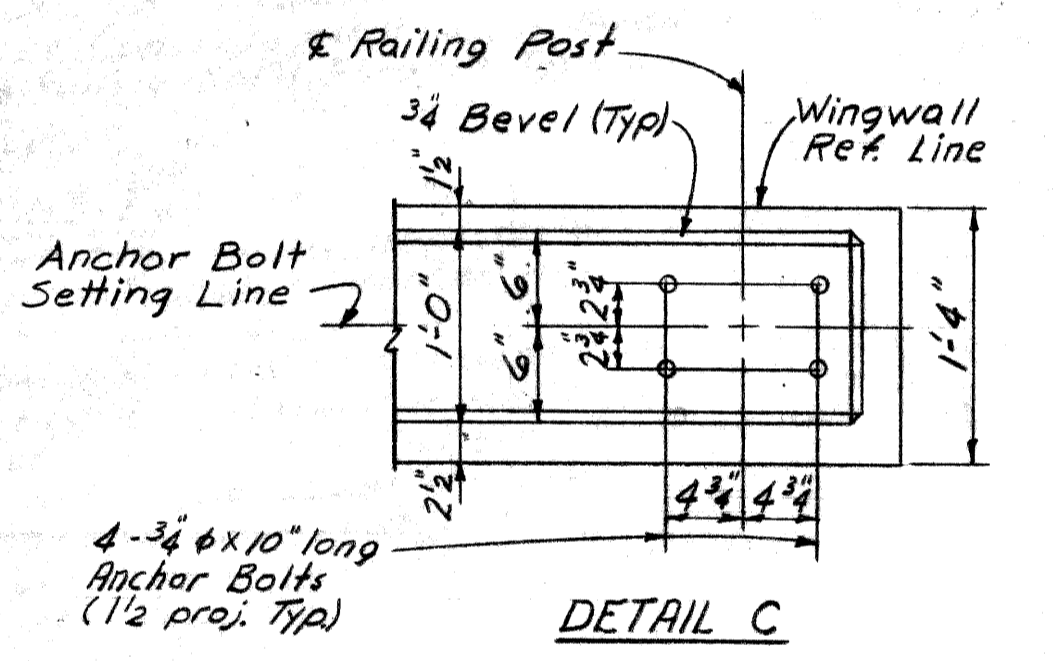
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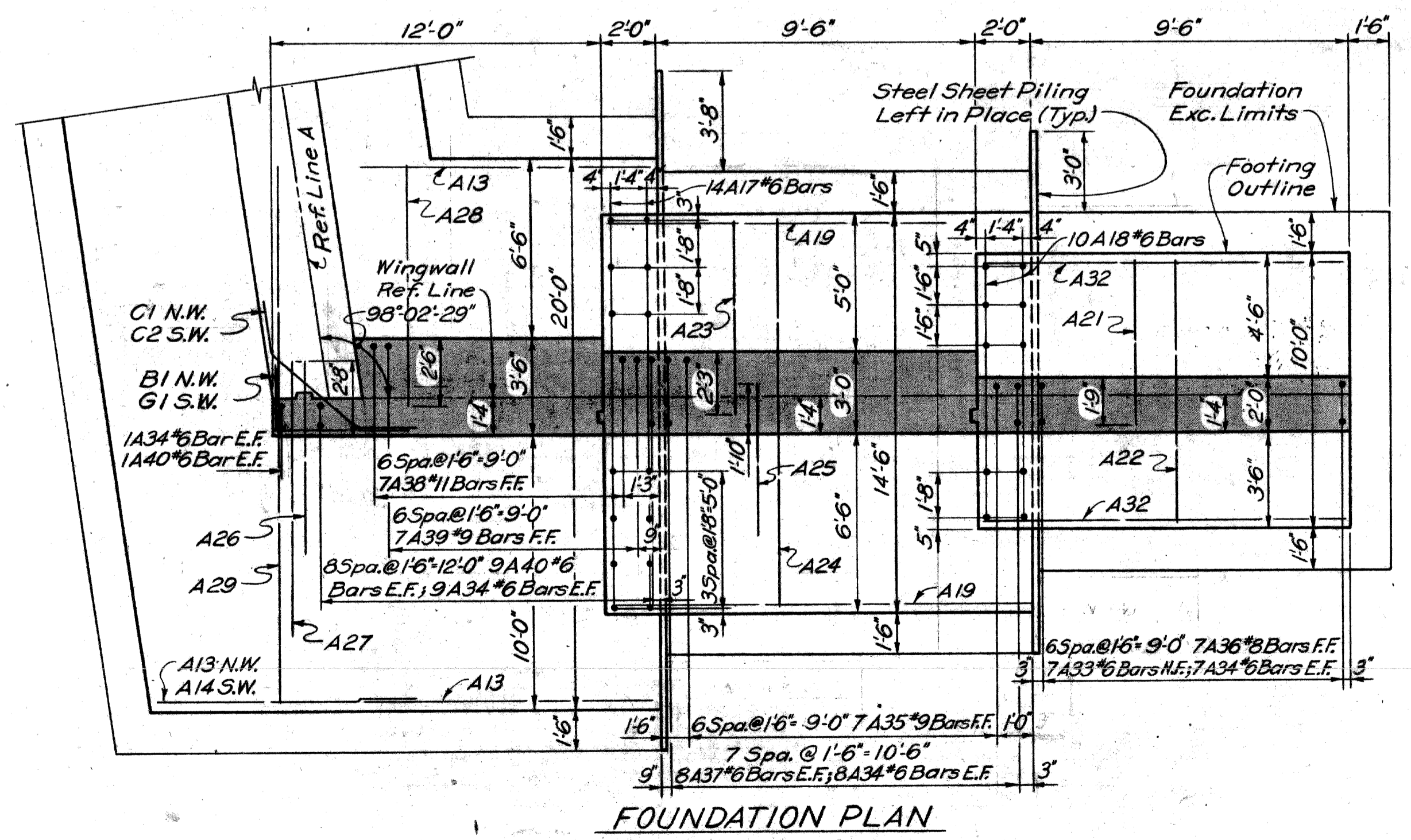
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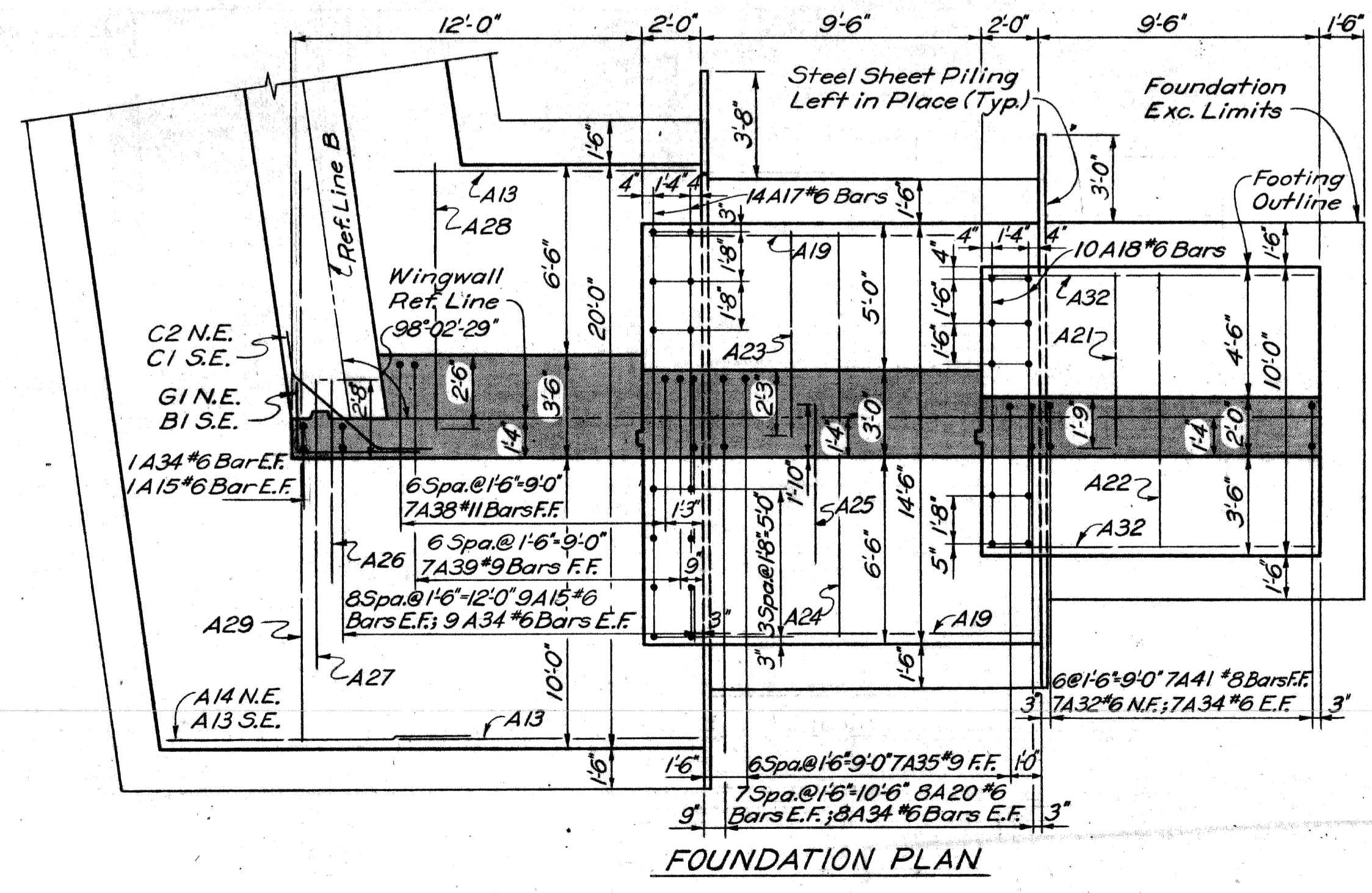
DETAIL B



DETAIL C



FOUNDATION PLAN



FOUNDATION PLAN

Work this Sheet with Sheets 8,9&11

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CITY OF DETROIT
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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
STRUCTURAL ENGINEER

JOB No. PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

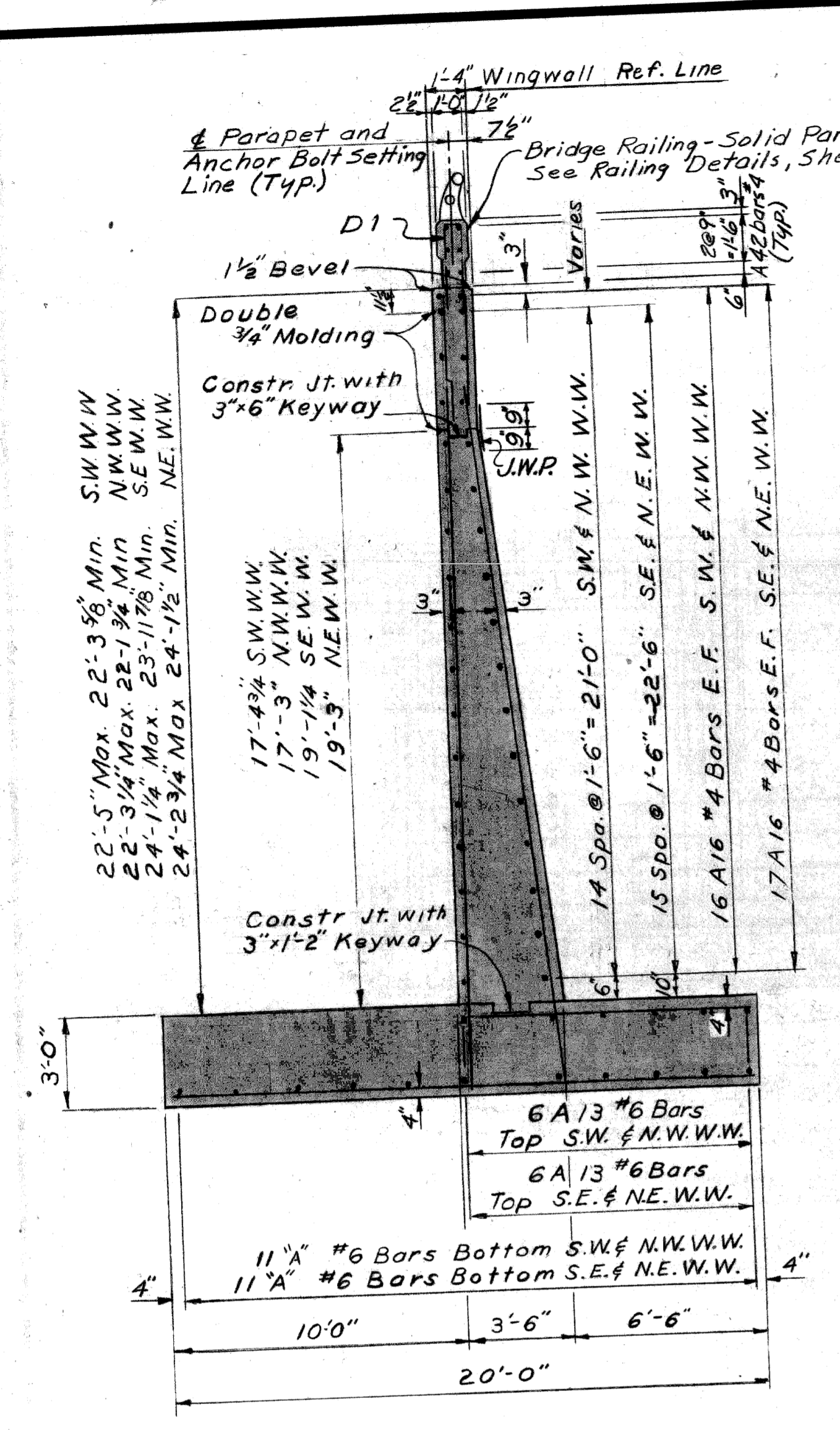
CITY OF DETROIT		
SQUAD BOSS	C.V.	3-68
DRAWN BY	K.K.H.	1-68
TRACED BY		
CHECKED BY	M.A.L.	2-68
SHEET	10	OF 26

MISCELLANEOUS QUANTITIES				
Item	Unit	Abut A	Abut B	Total
Unclassified Excavation	Cu.Yds	2184	2022	4206
Steel sheet Piling (Left in Place)	Sq.Ft.	850	850	1700
Low Temperature Protection	Cu.Yds	1255	1284	2539
1/2" Joint Filler	Sq.Ft.	179	179	358
1" Joint Filler	Sq.Ft.	46	50	96
Non Metallic Waterstop	Sq.Ft.	124	140	264
Bridge Railing-Solid Parapet Type	Lin.Ft.	692	692	1384
Joint Waterproofing	Sq.Ft.	30	30	60
Lightweight Fill	Cu.Yds	1594	1826	3420
Foundation Drains	Lin.Ft.	203	203	406

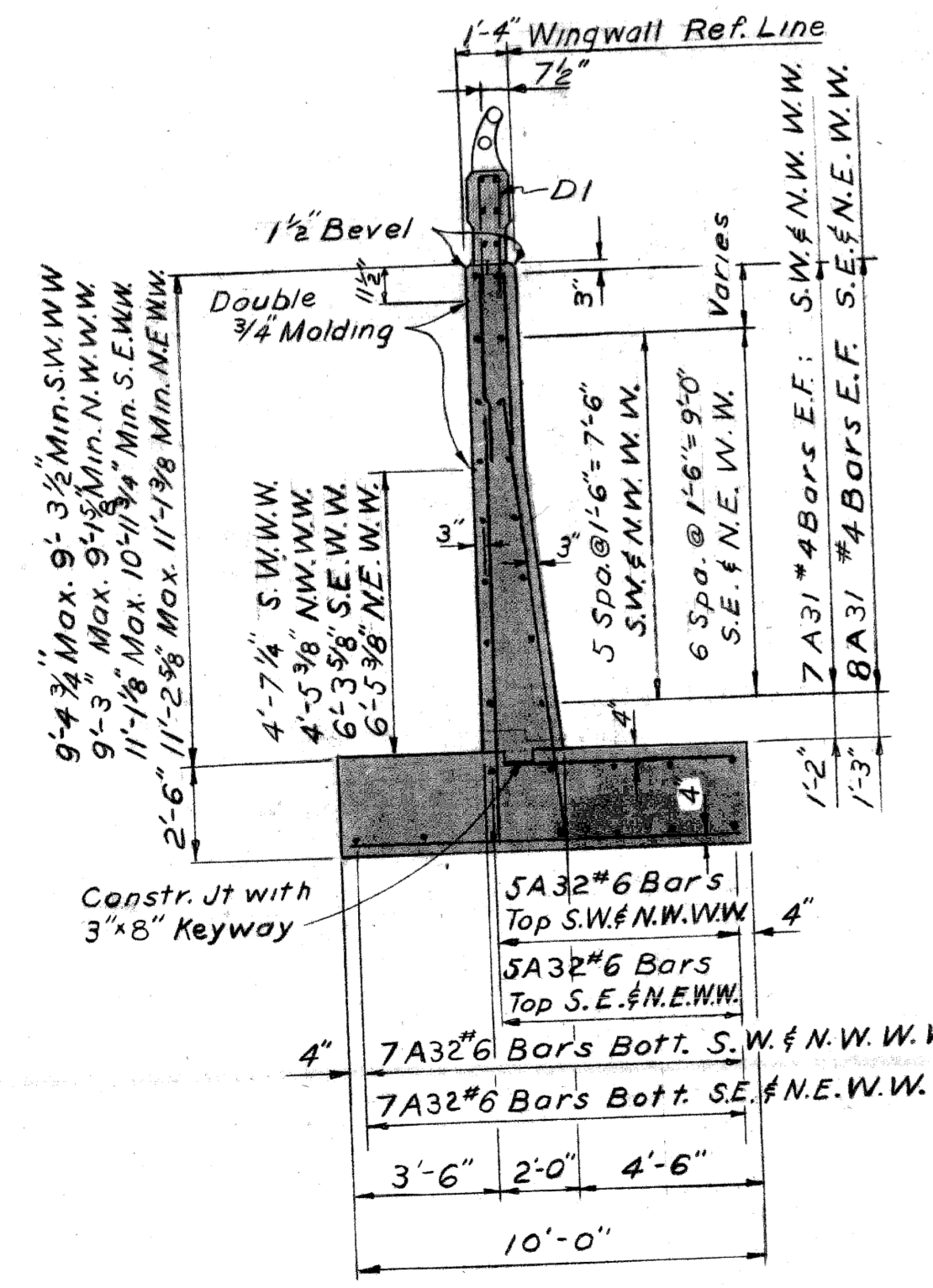
CONCRETE QUANTITIES								
ITEM	POUR	ABUT A	N.W.W.W.	S.W.W.W.	ABUT B	N.E.W.W.	E.W.W.	
								Gr. A(6A)
A(6A)	W.W. Abut	A	118.3	—	—	118.3	—	
	W.W. Ftg	B	116.8	—	—	116.8	—	
	Stem	C	—	26.8	26.8	—	26.8	26.8
		D	—	12.9	12.9	—	12.9	12.9
Gr. A(6A)	W.W. Abut	E	32.0	—	—	35.4	—	
		F	33.8	—	—	37.4	—	
	Stem	G	33.5	—	—	37.1	—	
		H	33.5	—	—	37.1	—	
	W.W. Stem	J	33.5	—	—	37.1	—	
		K	31.4	—	—	34.7	—	
	W.W. Stem	L	—	16.9	16.9	—	18.7	18.8
		M	—	2.9	2.9	—	2.9	2.9
		N	—	11.9	12.1	—	13.8	13.6
		P	—	5.9	6.0	—	7.9	7.2

Total Gr. A(6A) Concrete — Substruct. 629.0 Cu.Yds.
 Total Gr. A(6A) Concrete — Substruct. 577.2 Cu.Yds.
 Parapet Concrete = 10.9 cu. yds. Grade A(6AA). Incidental Bridge Railing-Solid Parapet Type and not a pay item.

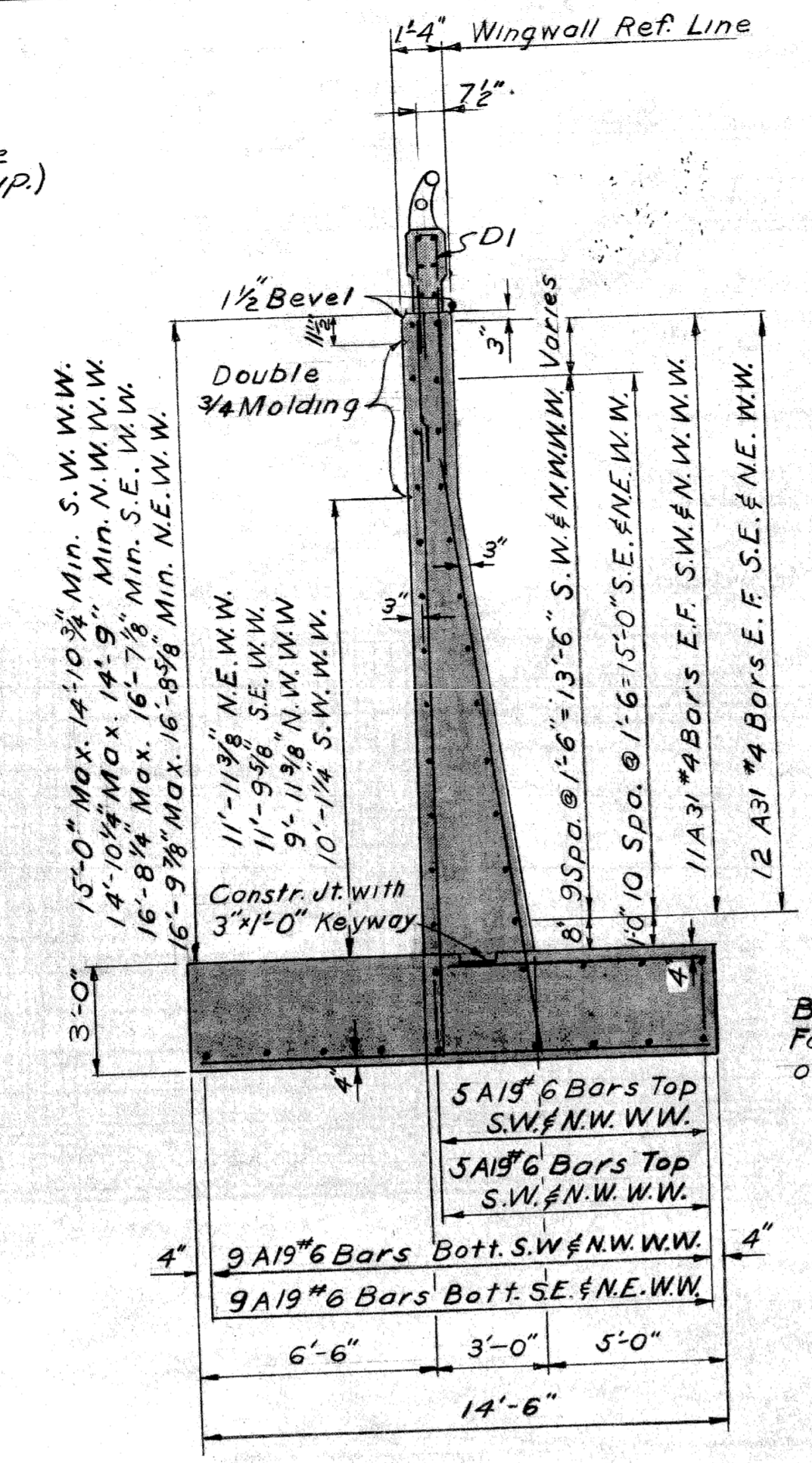
GENERAL NOTES:
 N.M.W.S. denotes Non-Metallic Waterstop; J.W.P. denotes Joint Waterproofing; N.F. denotes Near Face; F.F. denotes Far Face; E.F. denotes Each Face.
 Position Dowels shall be set accurately to a template and are to be furnished with Structural Steel.
 Steel Sheet Piling Left in Place shall 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.
 Pours 'M' shall not be cast until Superstructure is complete to Tops of Sidewalks.
 Contractor shall not place fill behind Abutments until Subbase Slab construction is complete.
 Maximum average foundation pressure D.L. only 1,750 #/Sq.Ft.
 Maximum foundation pressure D.L. + L.L. = 2,540 #/Sq.Ft.
 For Bevel and Molding Details see Std. Sh. R11 or R12.



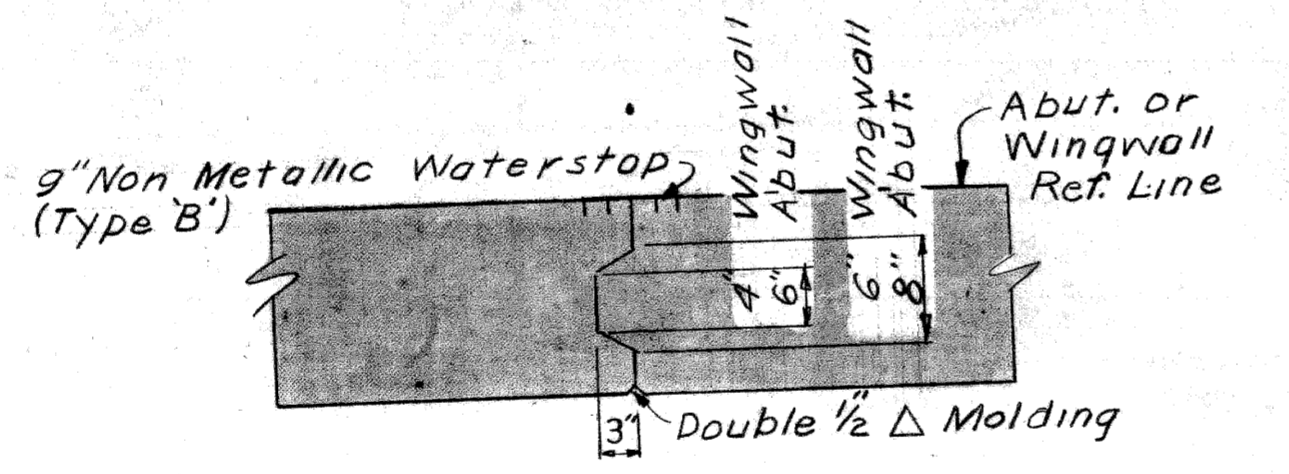
SECTION B-B



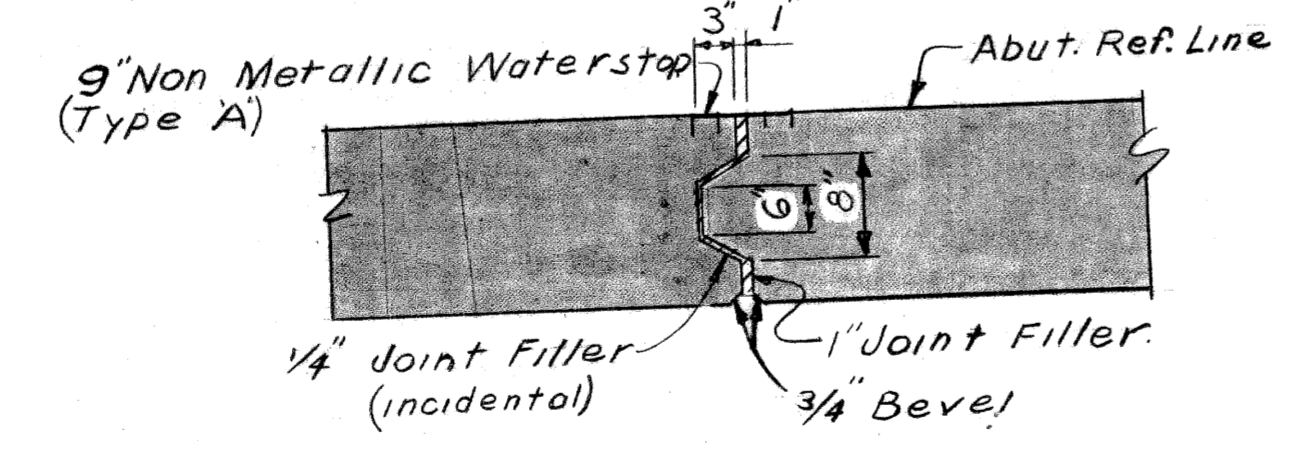
SECTION D-D



SECTION C-C

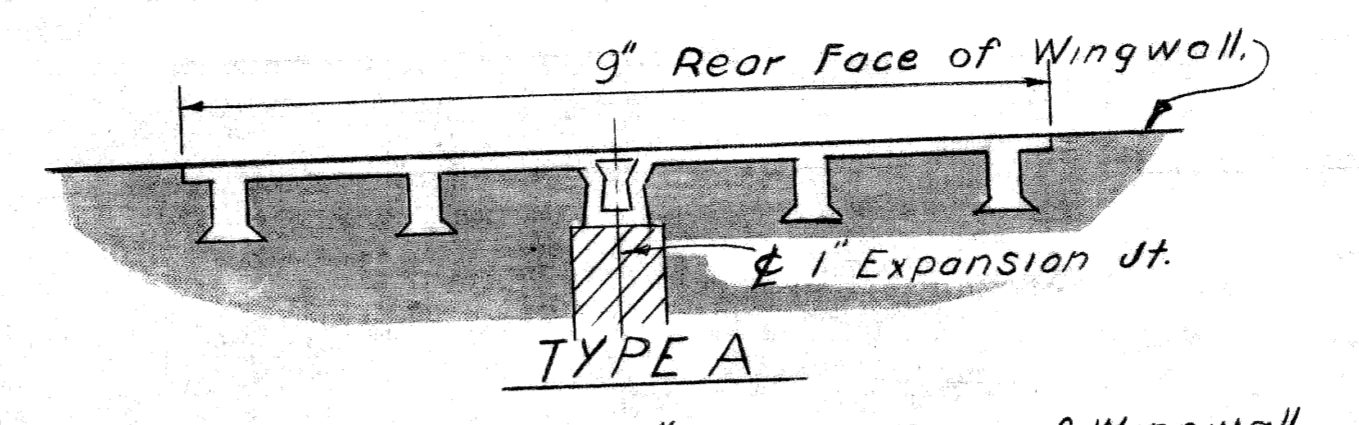


VERT. CONSTR. JOINT DETAILS

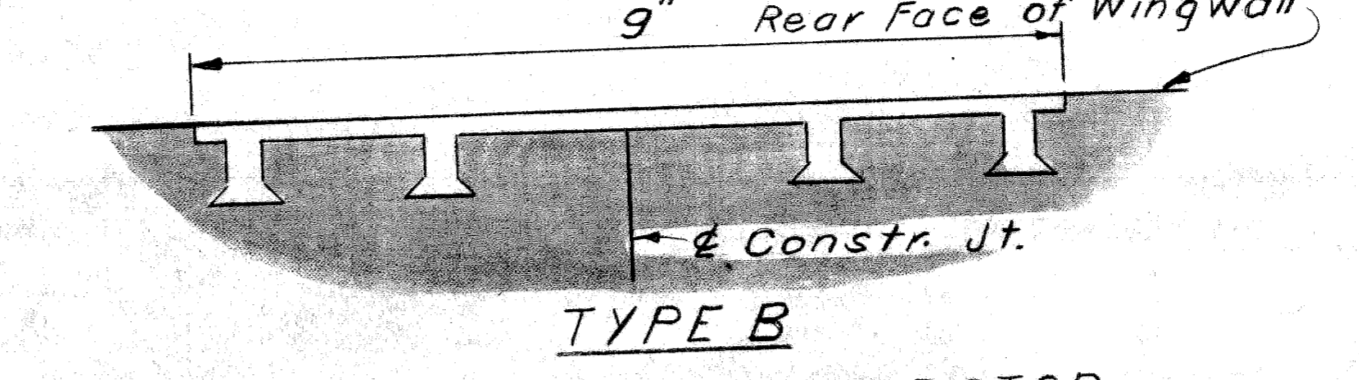


VERT. EXPANSION JOINT DETAILS

Notes:
 Stop all keyways 1'-0" below top of Wingwalls.
 Stop all N.M.W.S. 1'-0" below top of Wingwalls.
 Non-Metallic Waterstops & keyway are to be extended to the top of the abutment.
 Adjust rear face of Wingwall to match adjacent Section for type 'B' Waterstop.

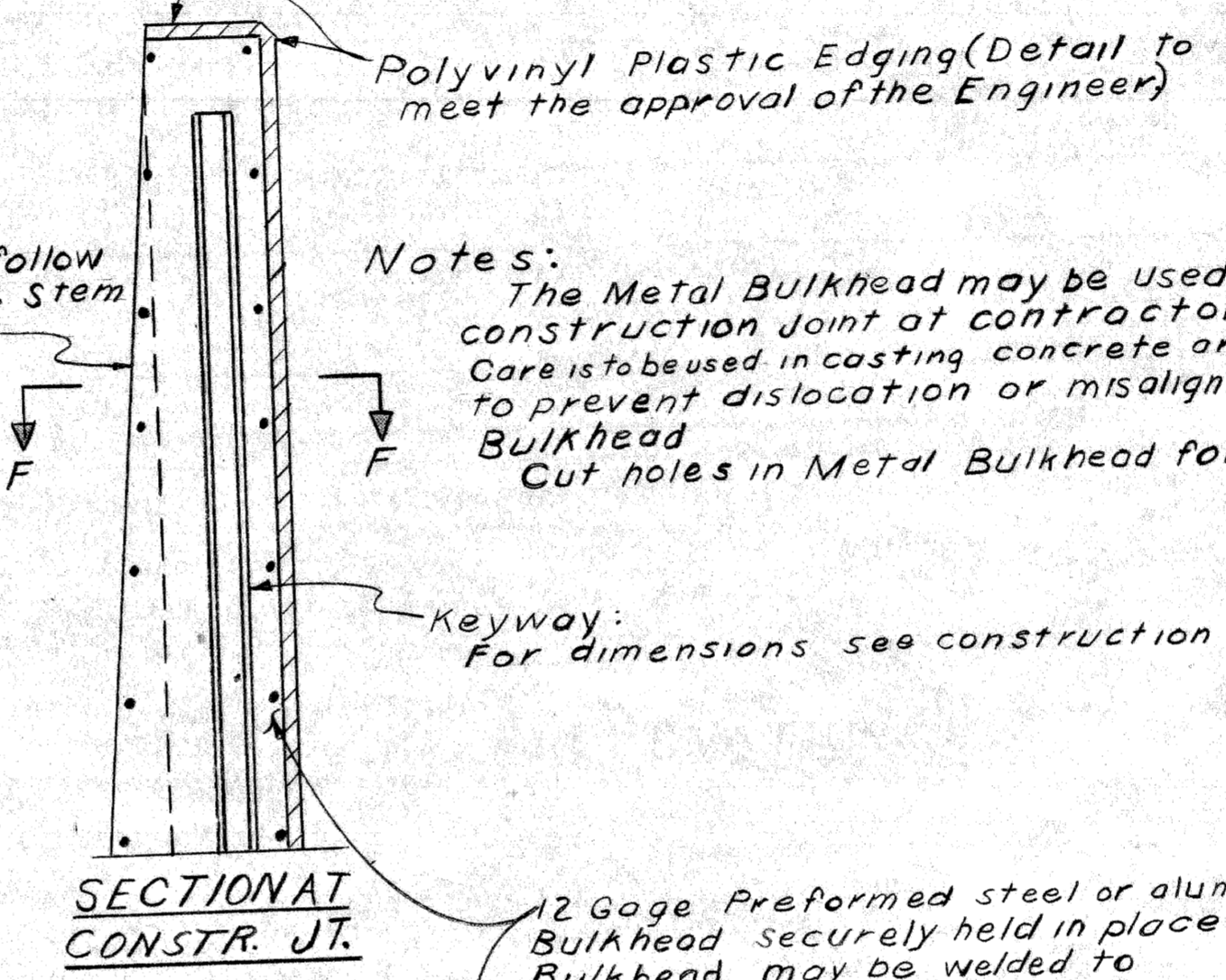


TYPE A

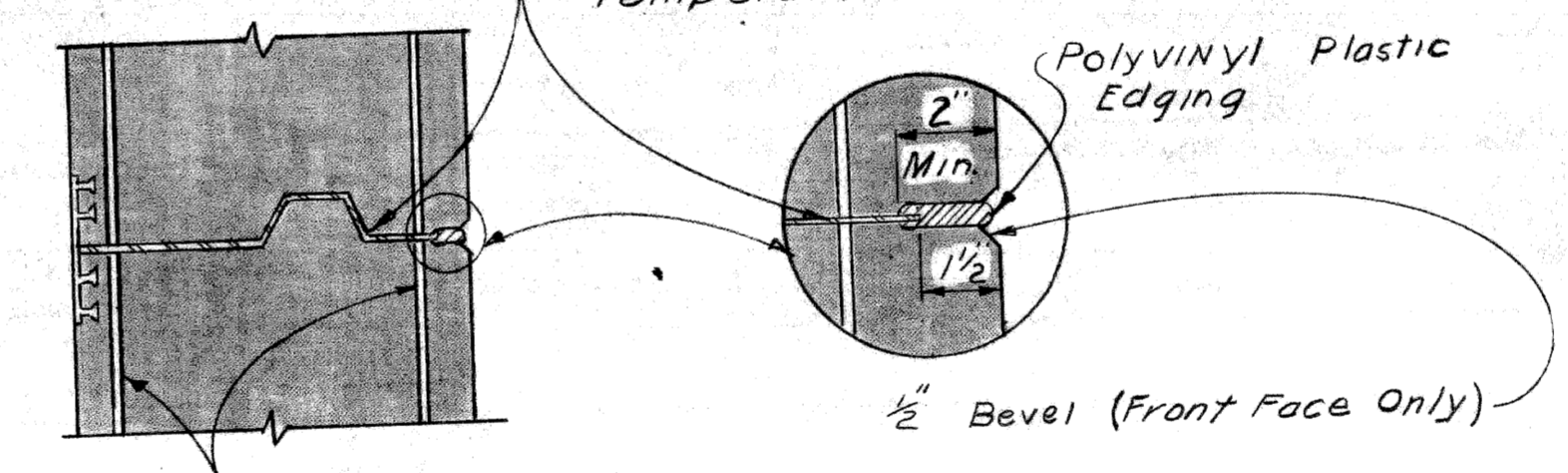


TYPE B

NON METALLIC WATERSTOP DETAILS



SECTIONAL CONSTR. JT.



SECTION F-F
 ALTERNATE-METAL BULKHEAD FOR CONSTRUCTION JOINTS

Notes:
 The Metal Bulkhead may be used as alternate construction joint at 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 reinf. steel.

Keyway: For dimensions see construction joint Details.

12 Gauge Preformed steel or aluminum Bulkhead securely held in place. Bulkhead may be welded to Temperature reinf.

1/2" Bevel (Front Face Only)

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 BUREAU OF HIGHWAYS AND EXPRESSWAYS
 APPROVED: [Signature] STRUCTURAL ENGINEER
 JOB No. PW 990(1)

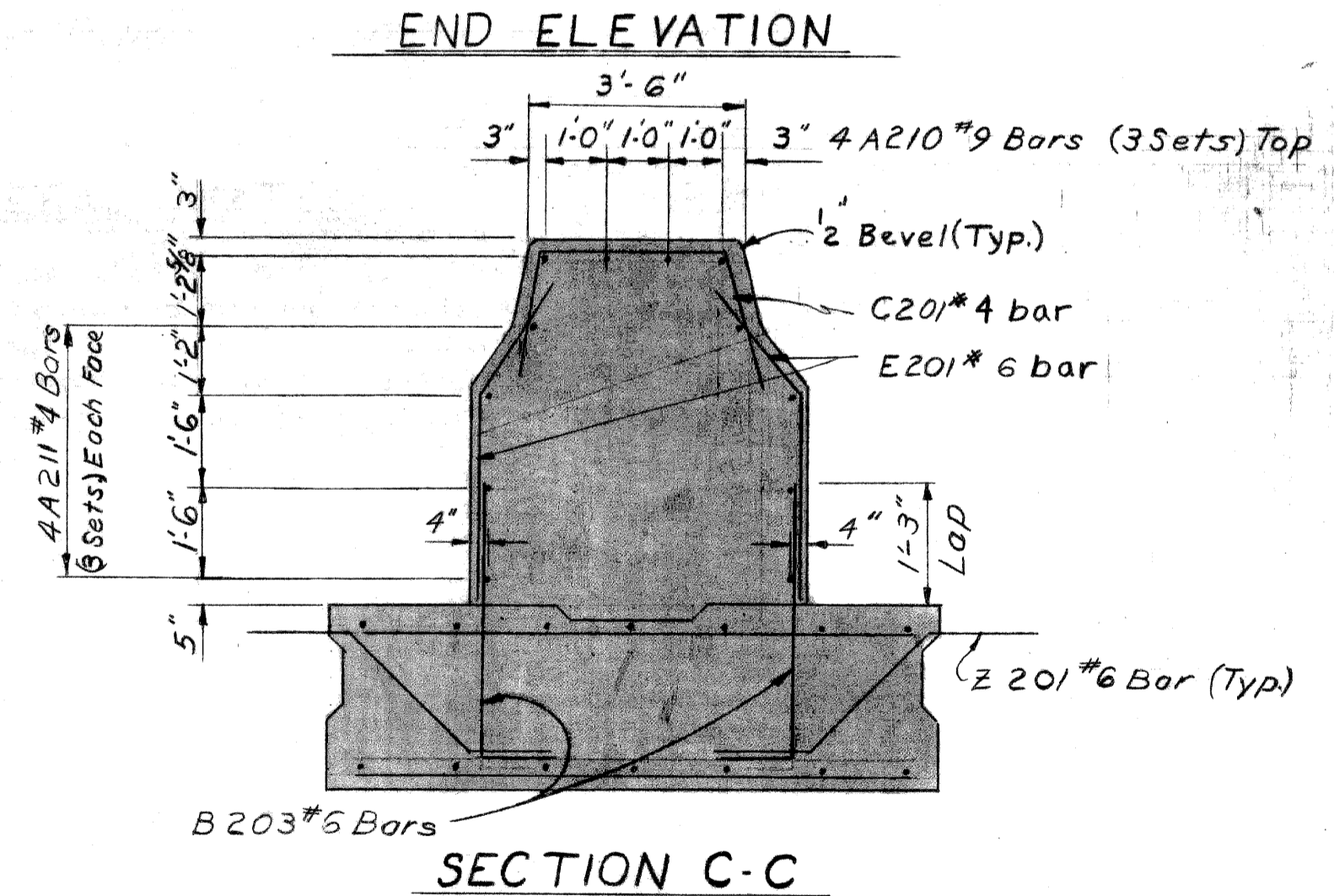
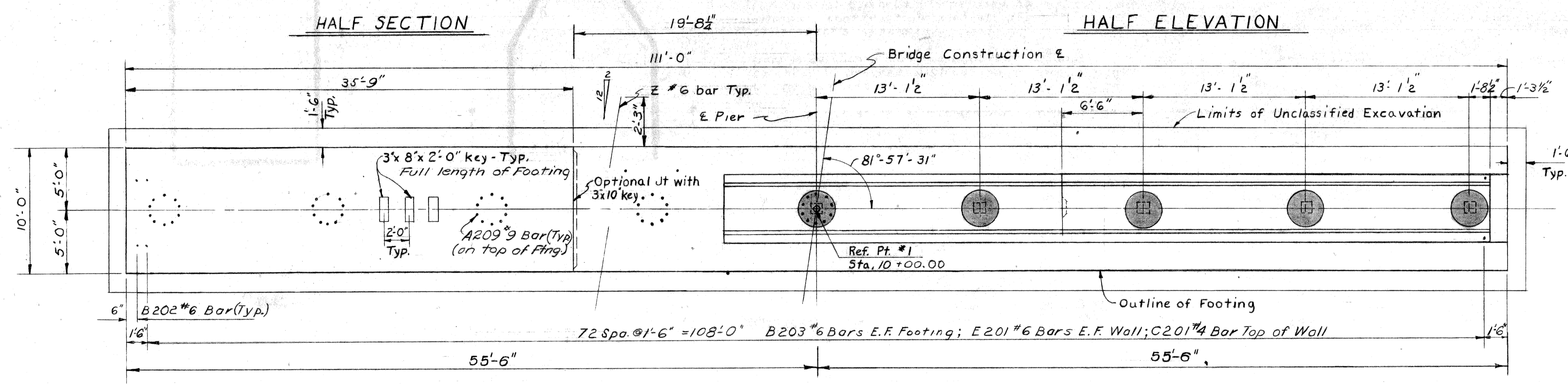
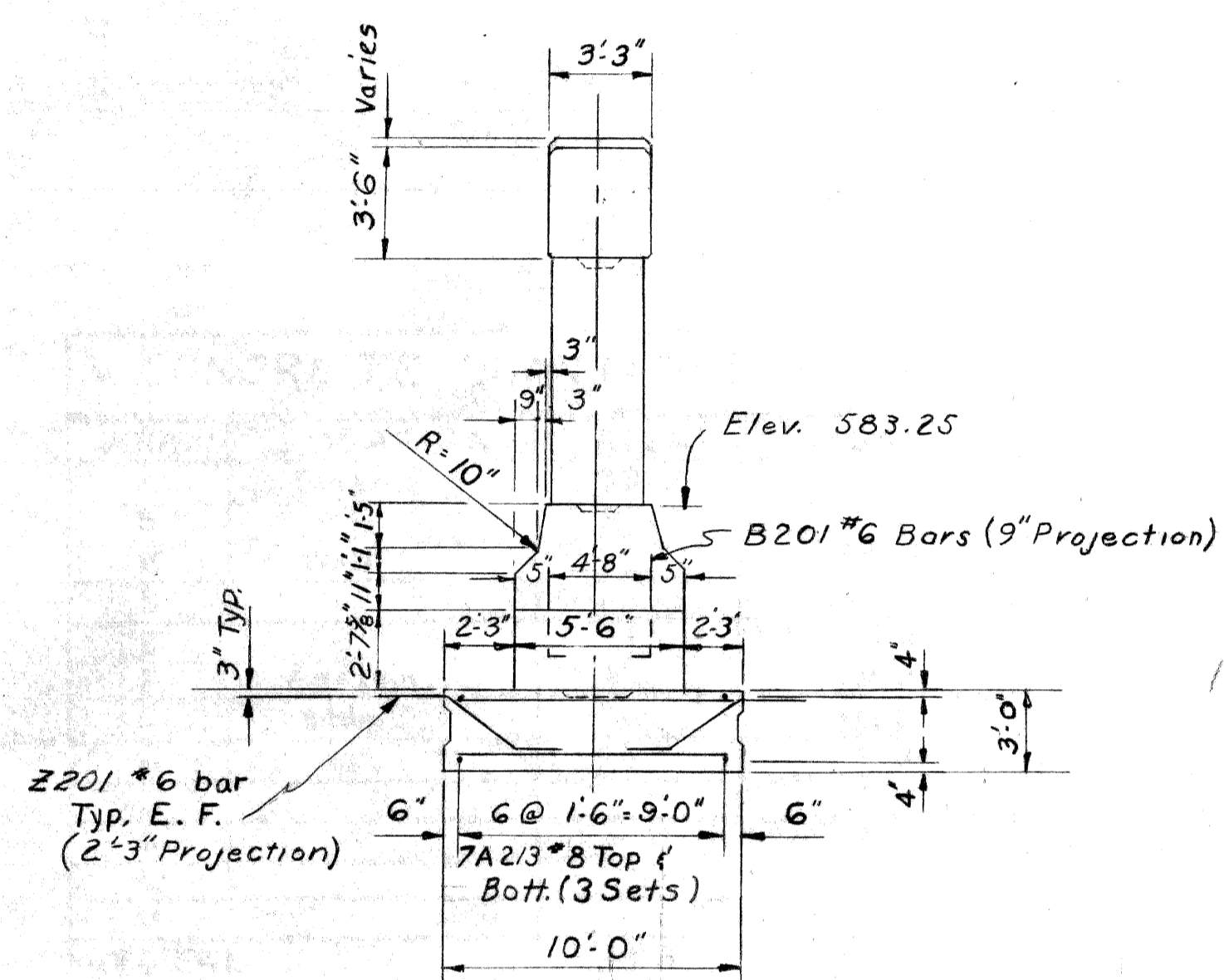
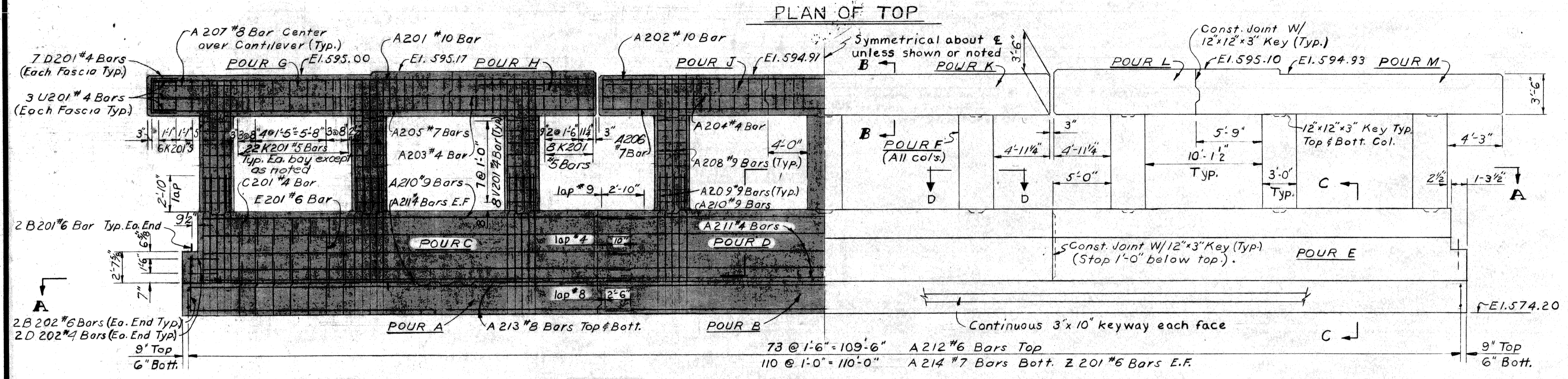
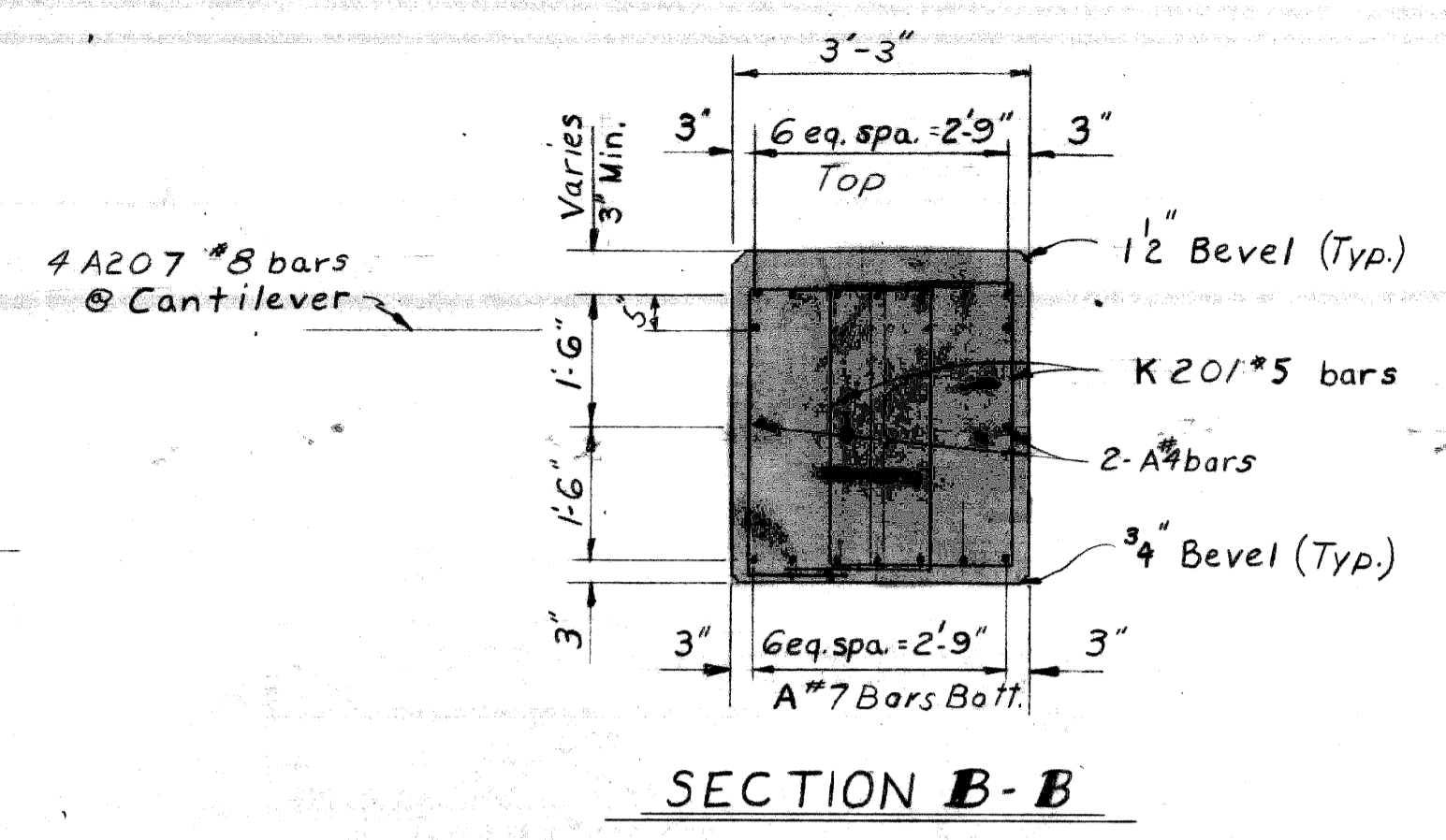
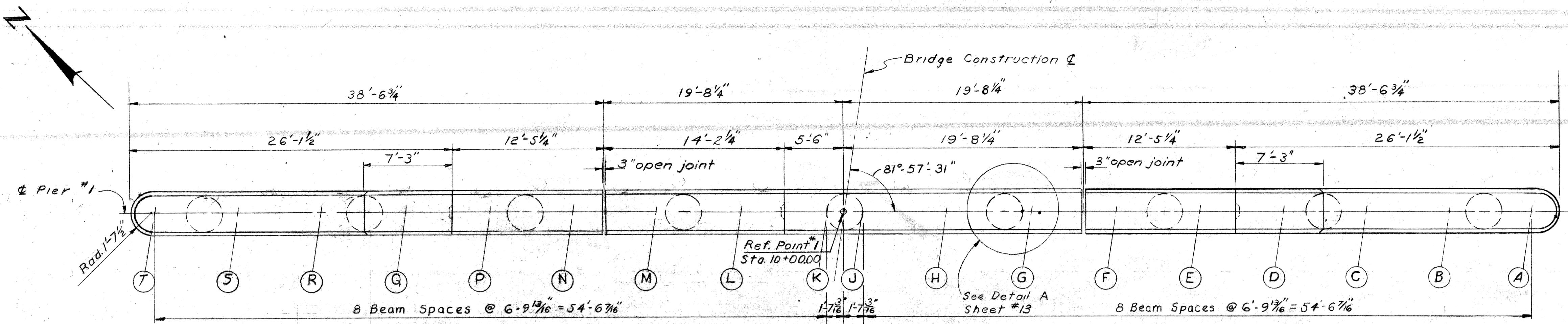
Work This Sheet with Sheets 8,9,10

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 DRAWN BY: E.J. SPURGEON 1-68
 TRACED BY: W.A.L. 2-68
 CHECKED BY: W.A.L. 2-68
 SHEET 11 OF 26
 503 of 82124 A



SECTION A-A

SECTION C-C

PLANS PREPARED BY
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 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *H. Conrad*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(1)

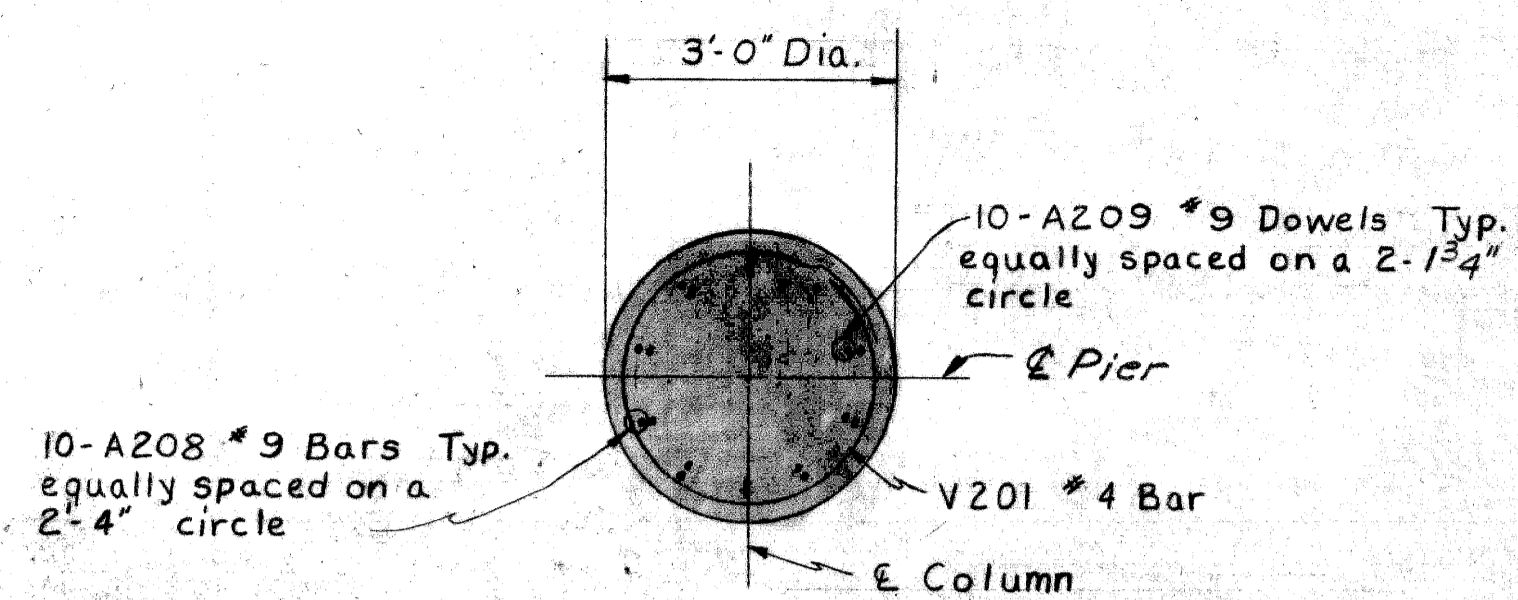
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PIER No. 1 DETAILS

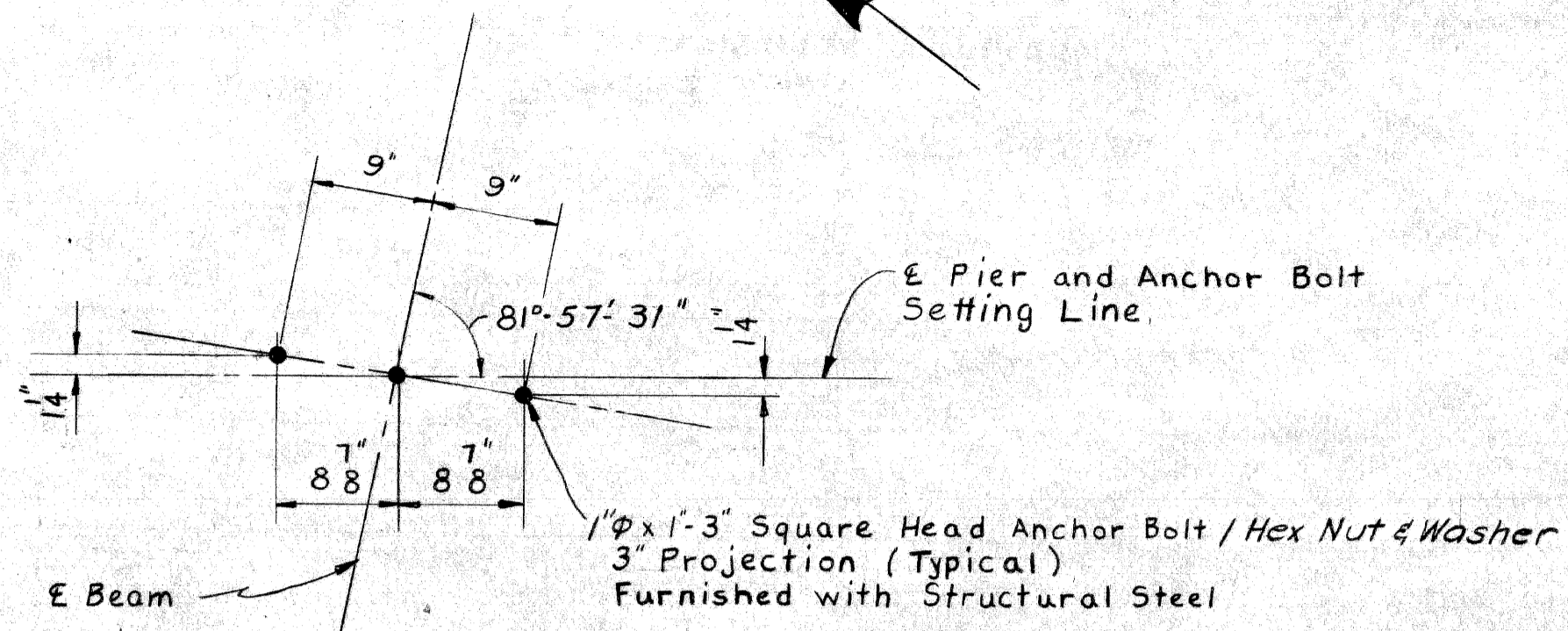
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT			
SQUAD BOSS	<i>E.J.</i>	3-68	
DRAWN BY	<i>U. Jones</i>	1-68	
TRACED BY			
CHECKED BY	<i>K.V.H.</i>	2-68	
SHEET 12 OF 26			

S03 of 82124 A



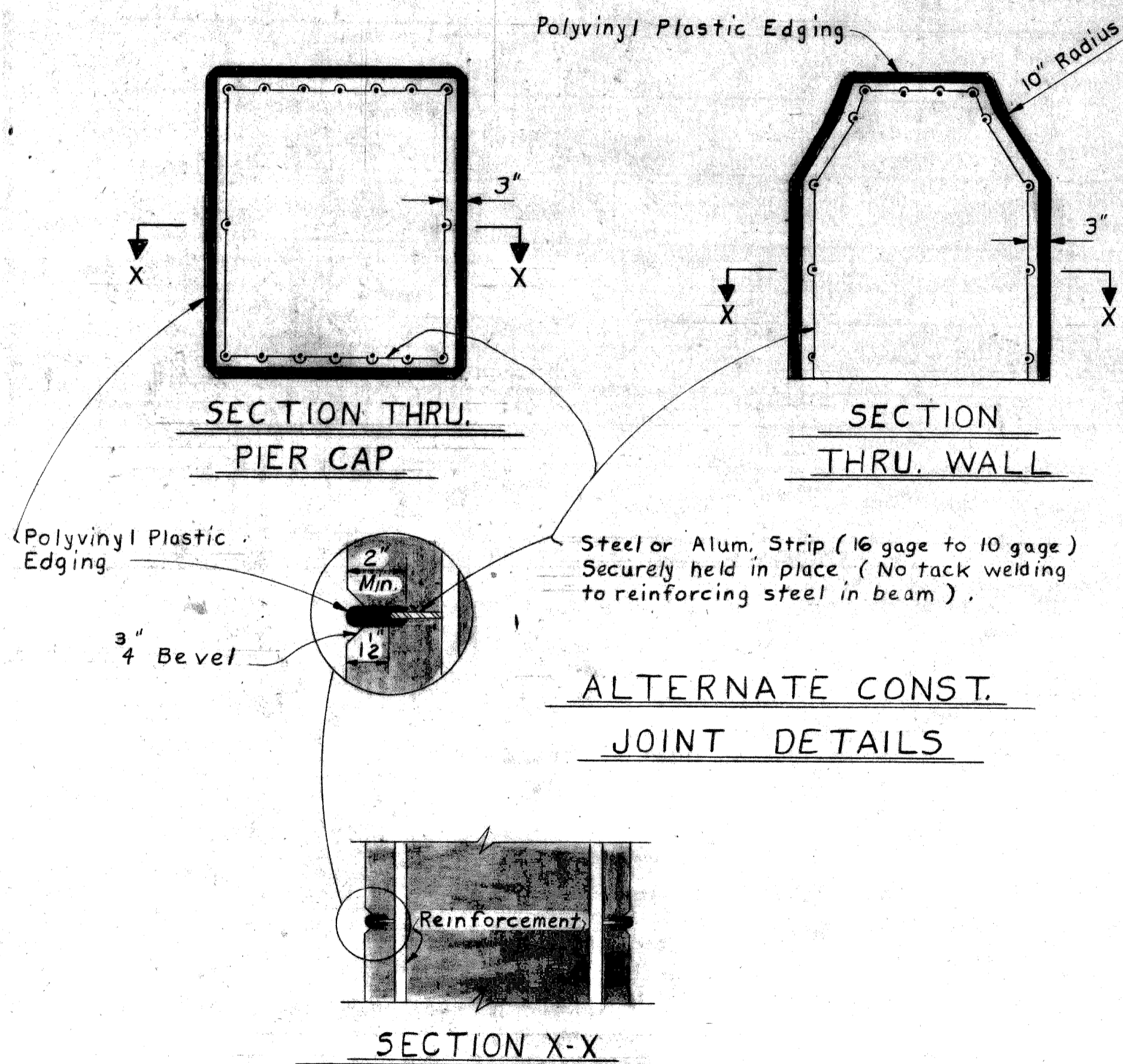
SECTION D-D



DETAIL A

MISCELLANEOUS QUANTITIES		
ITEM	UNITS	TOTAL
Unclassified Excavation	Cu. yds.	164
Low Temperature Protection	Cu. yds.	313

CONCRETE QUANTITIES (CU. YDS.)			
POUR	LOCATION	A(GA)	A(GAA)
A	Footing	39.8	
B	"	83.5	
C	Wall		38.4
D	"		43.7
E	"		38.4
F	Column		19.3
G	Beam		11.0
H	"		5.4
J	"		5.9
K	"		10.6
L	"		5.4
M	"		11.0
TOTAL		123.3	189.1



Notes:
 Partial metal bulkhead may be used as alternate construction joint at contractor's expense.
 Care is to be used in casting concrete around bulkhead to prevent dislocation or misalignment of the bulkhead.
 Notch metal strip to fit around reinforcing steel

GENERAL NOTES:

E.F. denotes each face.
 For bevel and molding details, see Standard Sheets R13 and R14.
 Anchor bolts shall be accurately set to a template.
 Maximum average foundation pressure D.L. only = 2000#/Sq.ft.
 Maximum foundation pressure D.L. and L.L. = 2400#/Sq.ft.

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JOB No.
 PW 990(1)

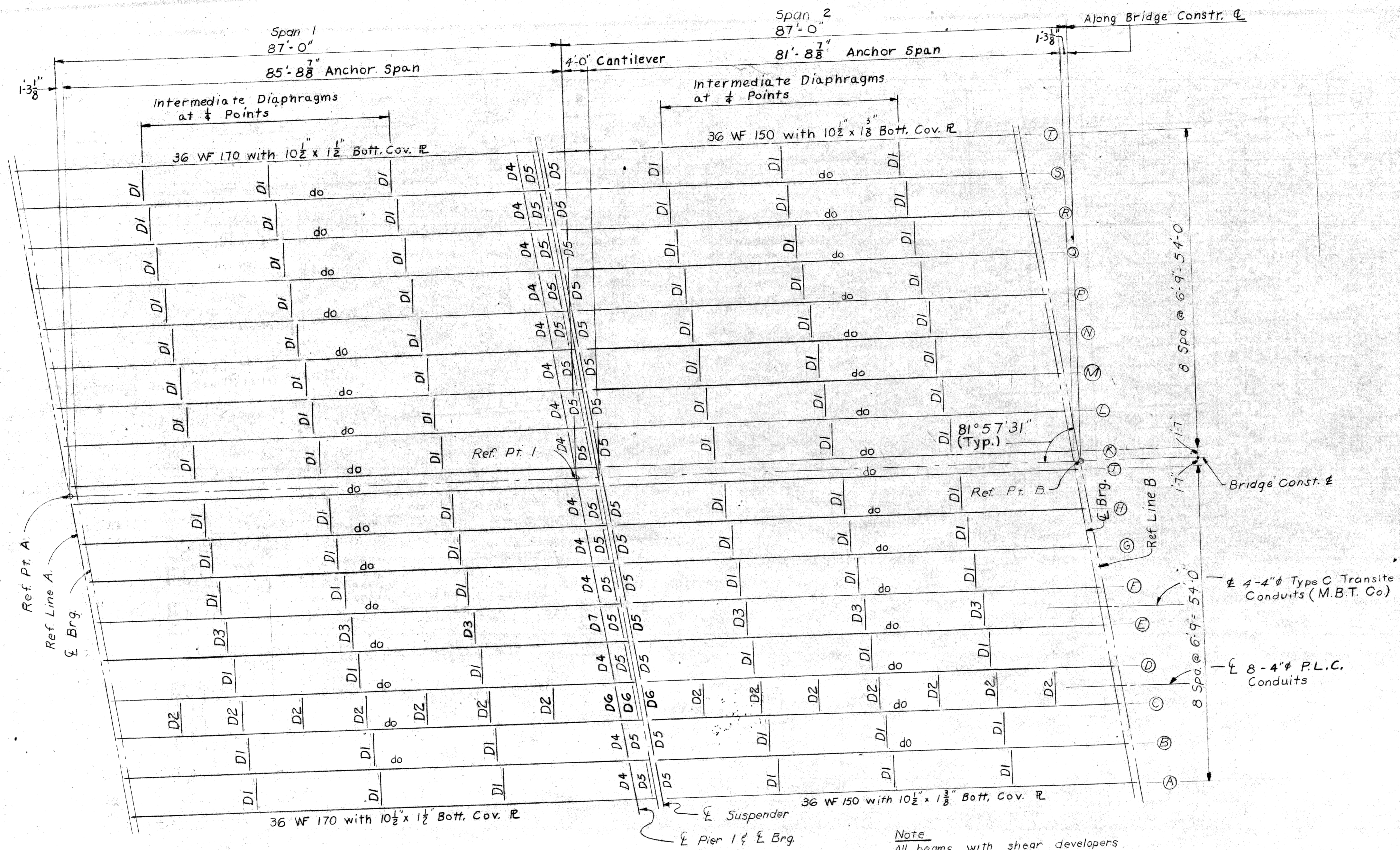
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PIER No. 1 DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	<i>P.J.</i>	2-68
DRAWN BY	<i>J. Jones</i>	1-68
CHECKED BY	<i>K.V.H.</i>	2-68
SHEET 13 OF 26		

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ERECTION DIAGRAM

STRUCTURAL STEEL NOTES

Design: Michigan State Highway Departments Specification for Design of Highway Bridges - 1958 edition and current AASHTO Standard Specifications for Highway Bridges (HS 20 Loading).

Fabrication: Michigan Department of State Highways Standard Specifications for Road and Bridge Construction - 1967 edition.

Shop Connections shall be welded as shown on the plans. All welding shall be in accordance with current AWS Specifications.

Field Connections shall be bolted with 3/4" high strength bolts except as noted.

Camber shall be measured with the beam lying on its side. Camber tolerance is ± 4". Heating shall be used if necessary, to assure permanent camber within the above limits. See sh. 15 for camber diagram. All steel shall be unpainted A441 Modified.

Sole plates 3" or more in thickness may be built up by welding together plates not less than 1/2" in thickness. Edges must be beveled 1/4" and welded with a continuous weld for the full perimeter. Welds shall be ground flush with faces of plates.

The bottom surfaces of sole plates, curved bearing surfaces of rockers and top surface of masonry plates shall be coated in accordance with the requirements for machine-finished surfaces. Welding on tension flanges of beams will not be permitted except as shown on the plans. Welding at other locations not shown on the plans may be permitted by written authorization provided the welding is to be performed in strict accordance with all specification requirements for structural welding.

Shear Developers may be spirals or studs at the contractors option.

Beam dimensions are horizontal and along beam.

Magnetic Particle Inspection of welds is required and shall consist of 100% inspection of not less than one fabricated section selected at random from each ten sections or fractions thereof.

QUANTITIES

Structural Steel* Furnishing and Fabricating	703,000*
Structural Steel* Erection	703,000*
Shear Developers	Lump Sum

* Includes weight of Metal Exp. Ut., sh. 17 and P.L.C. steel, sh. 24 and consist of:
 ASTM A-441 Steel (Modified) 702,760*
 Sheet Lead 240*

Work this sheet with sheets 15 & 16
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 APPROVED: *H. Cook*
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STRUCTURAL STEEL DETAILS

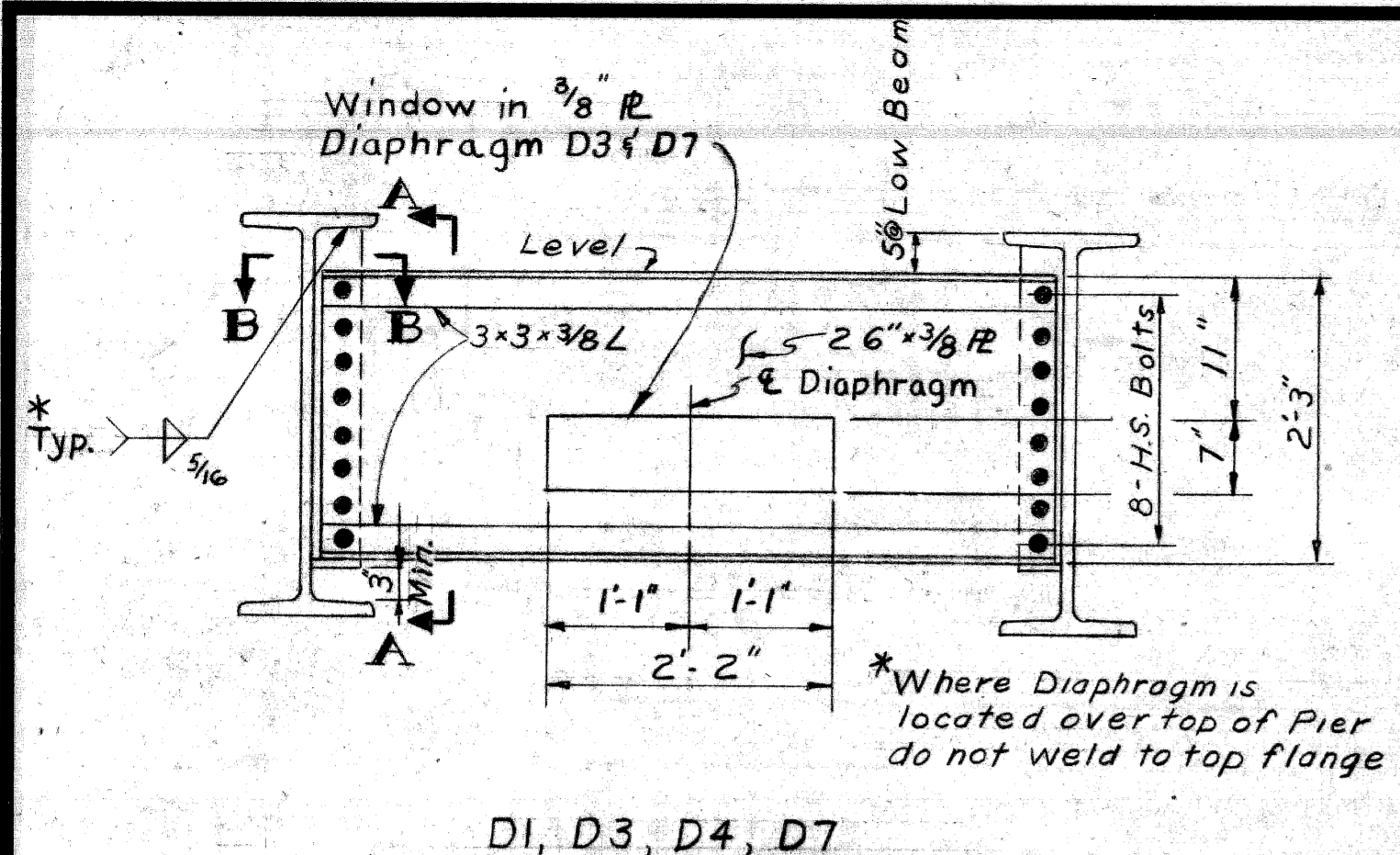
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NO.	DESCRIPTION	DATE	BY

JOB No. PW 990(1)

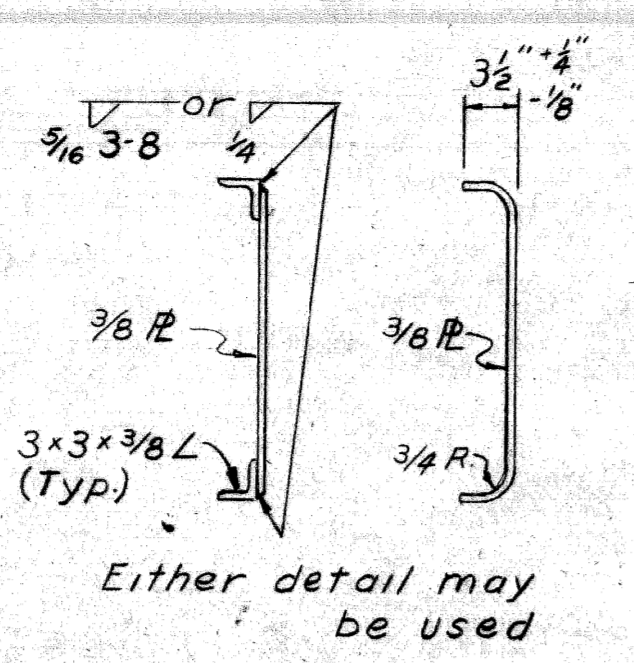
SQUAD BOSS	CITY OF DETROIT
DRAWN BY	SPURGEON
TRACED BY	
CHECKED BY	R. Goffas 2-7-68
SHEET	14 OF 26

S03 of 82124 A

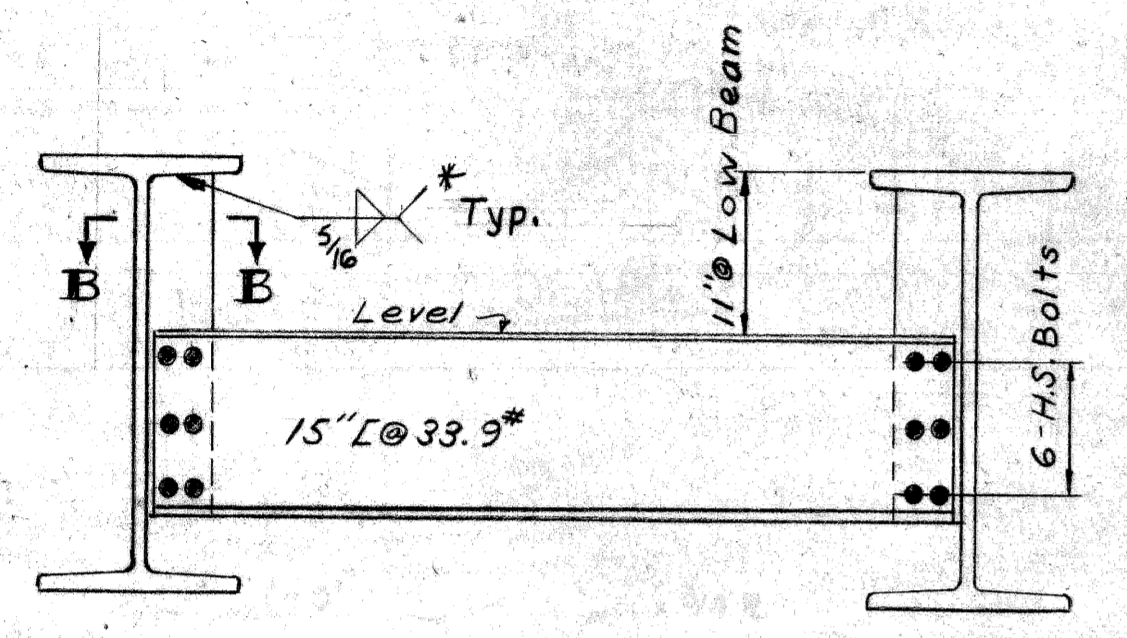
503 of 82124 A 990(1)



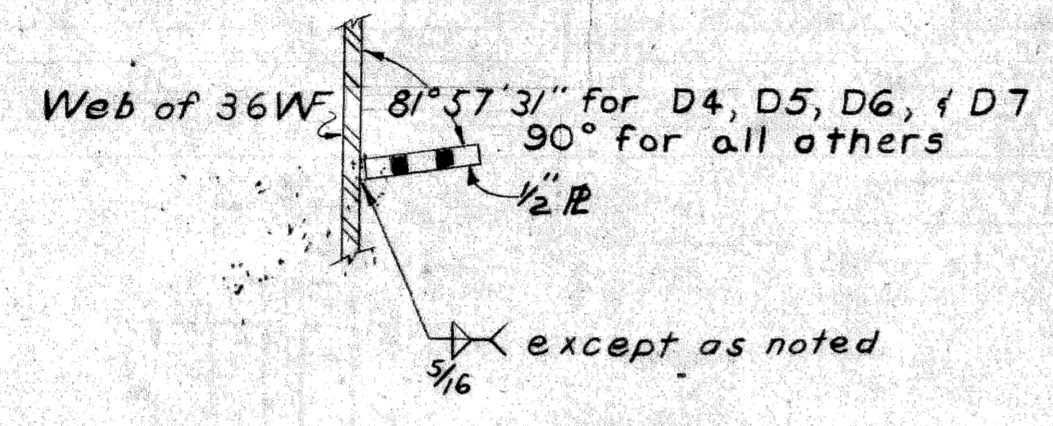
D1, D3, D4, D7



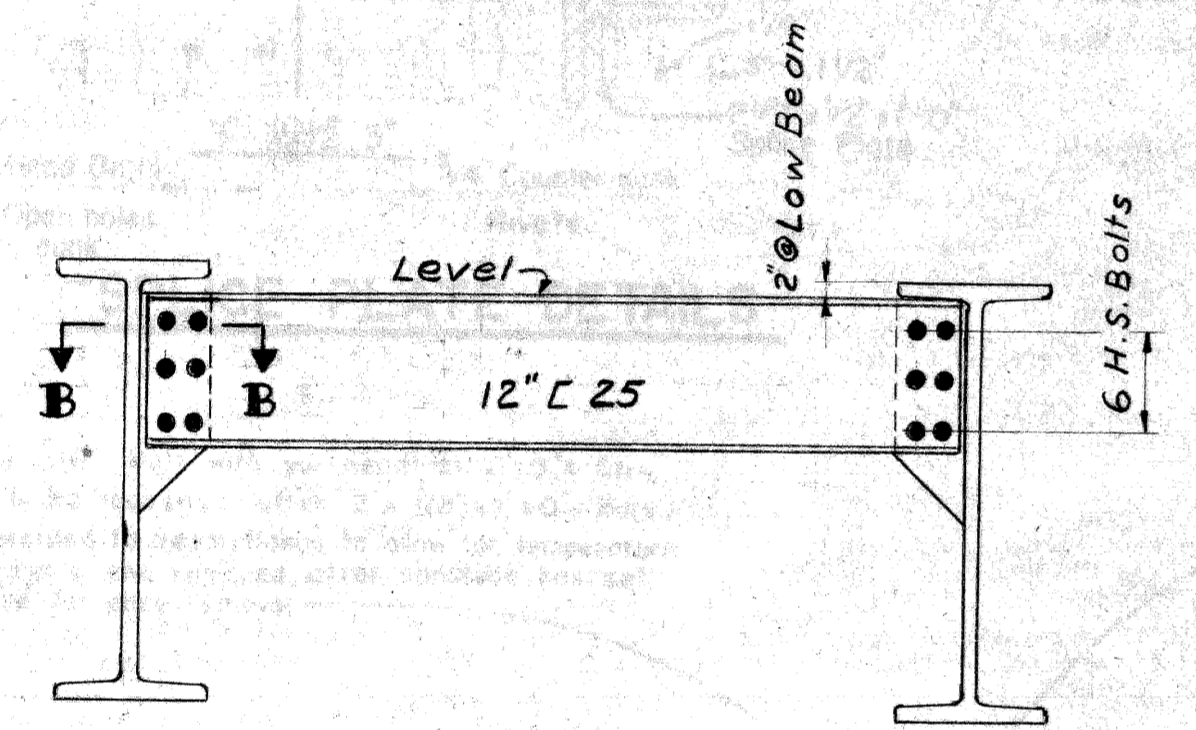
SECTION A-A



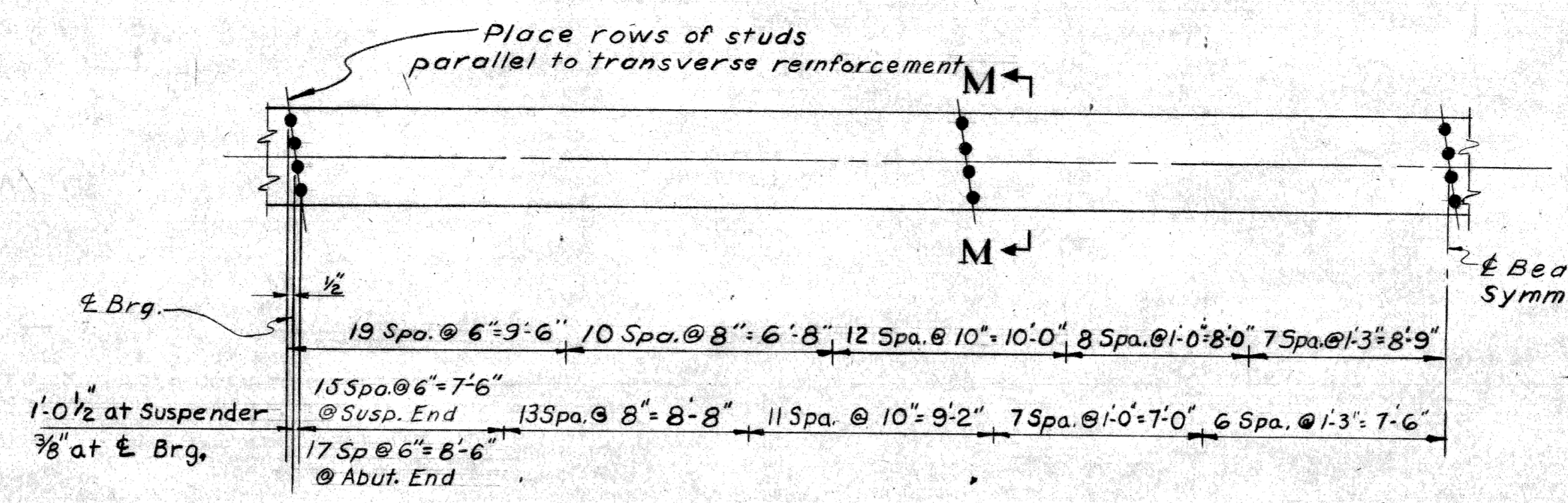
D2, D6



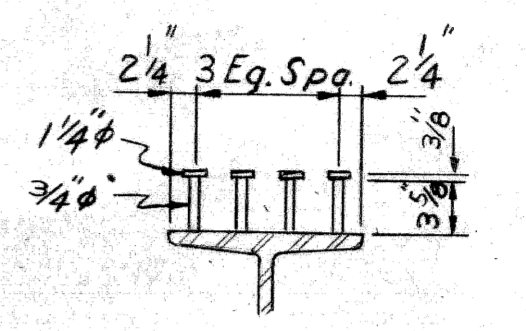
SECTION B-B



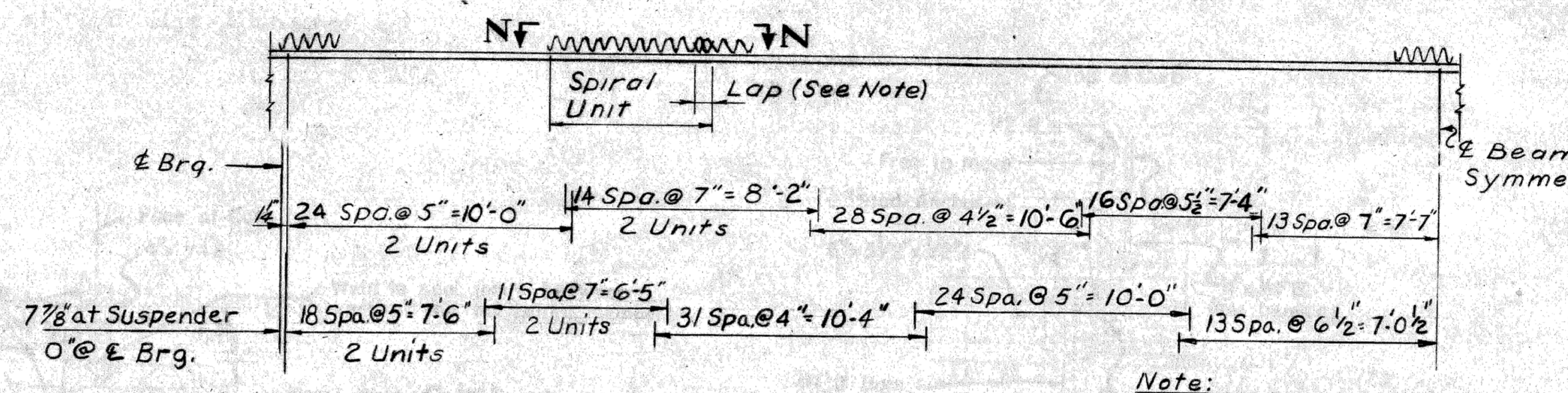
D5



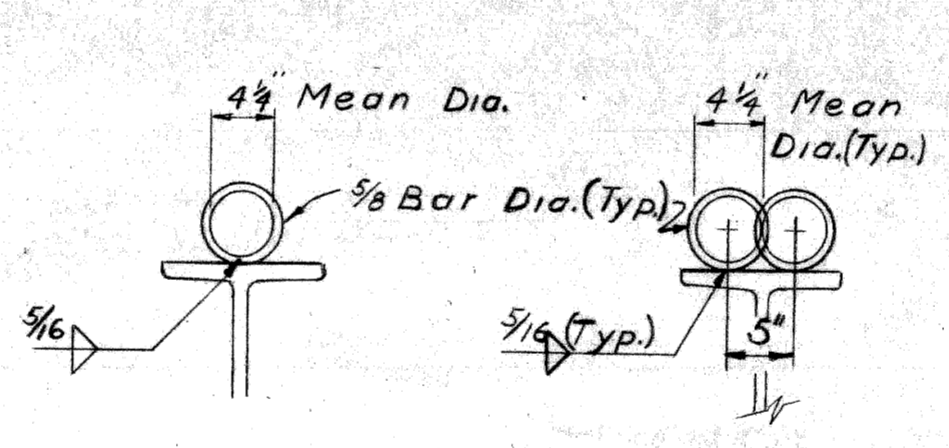
STUD SHEAR CONNECTORS



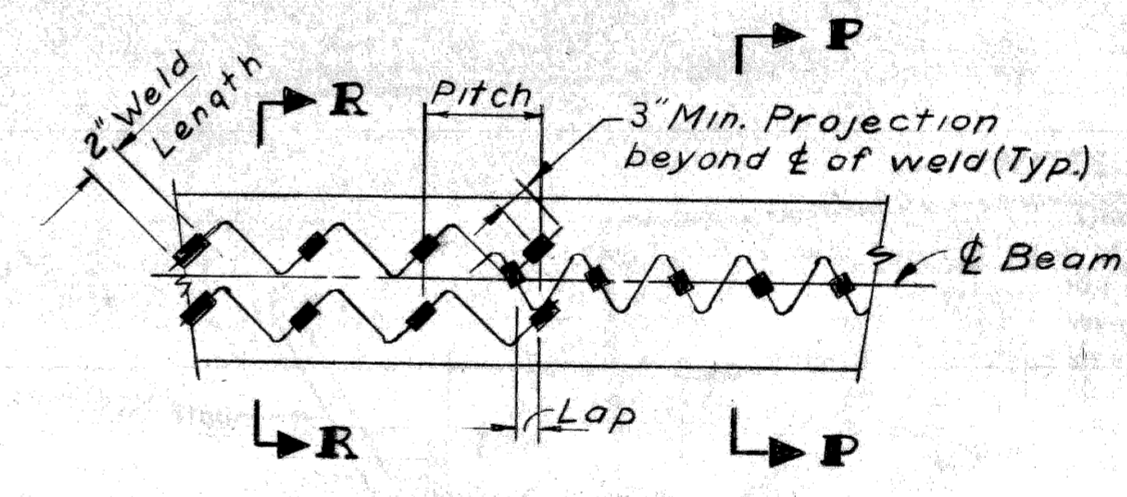
SECTION M-M



SPIRAL SHEAR CONNECTORS



SECTION P-P SECTION R-R



VIEW N-N

NOTE: Either Spiral or Stud Shear Developers may be used at the option of the contractor. The weight of Shear Developers is not included in the weight of structural steel. Welding of Shear Developers is incidental to "Shear Developers".

Work this sheet with sheets 14 & 15

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

STRUCTURAL STEEL DETAILS

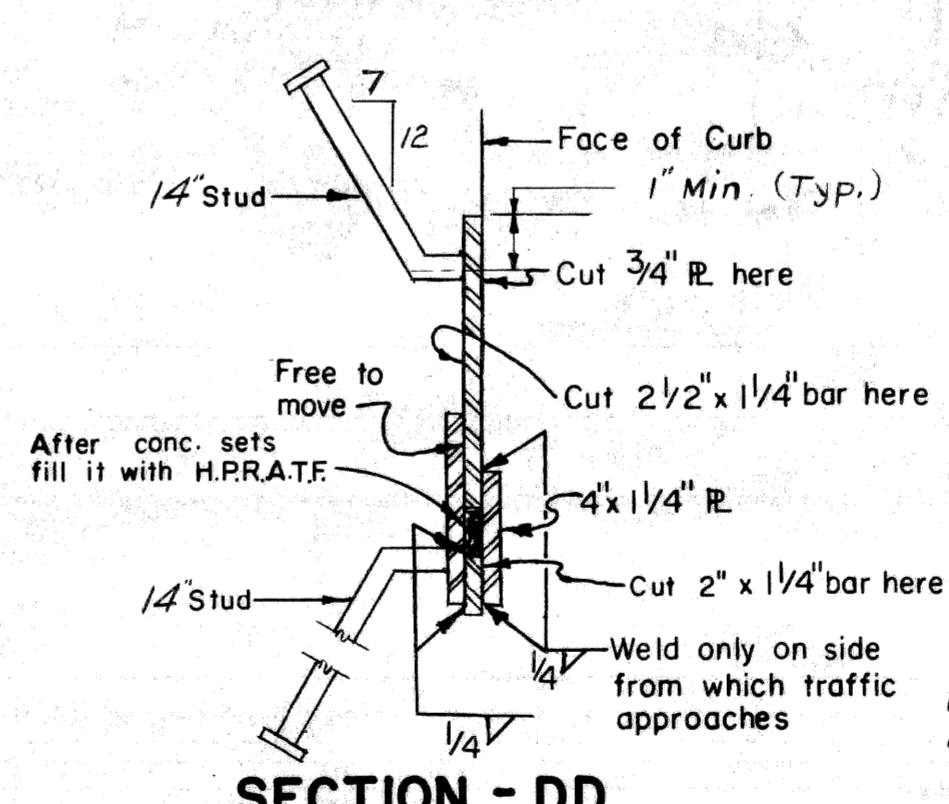
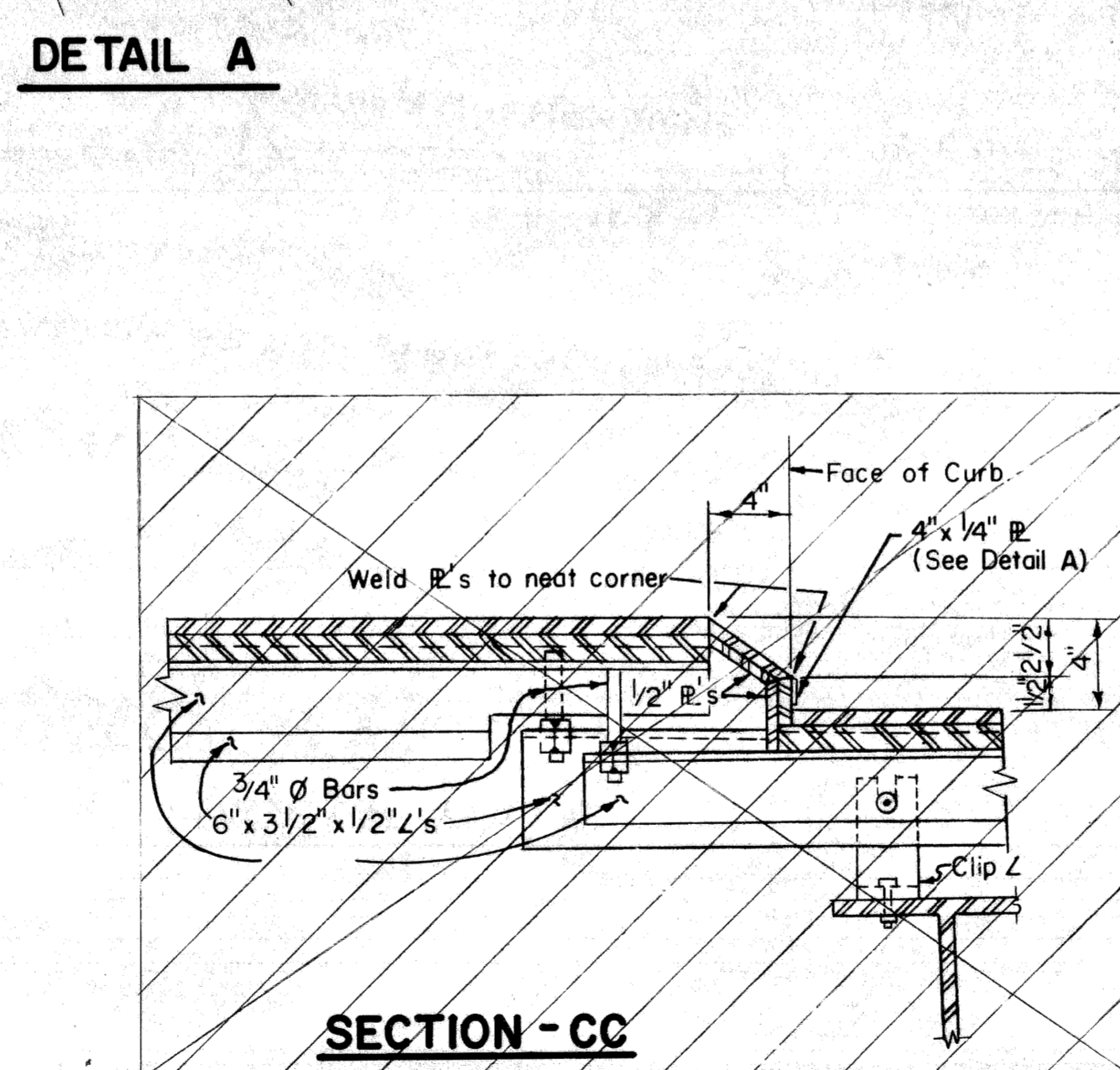
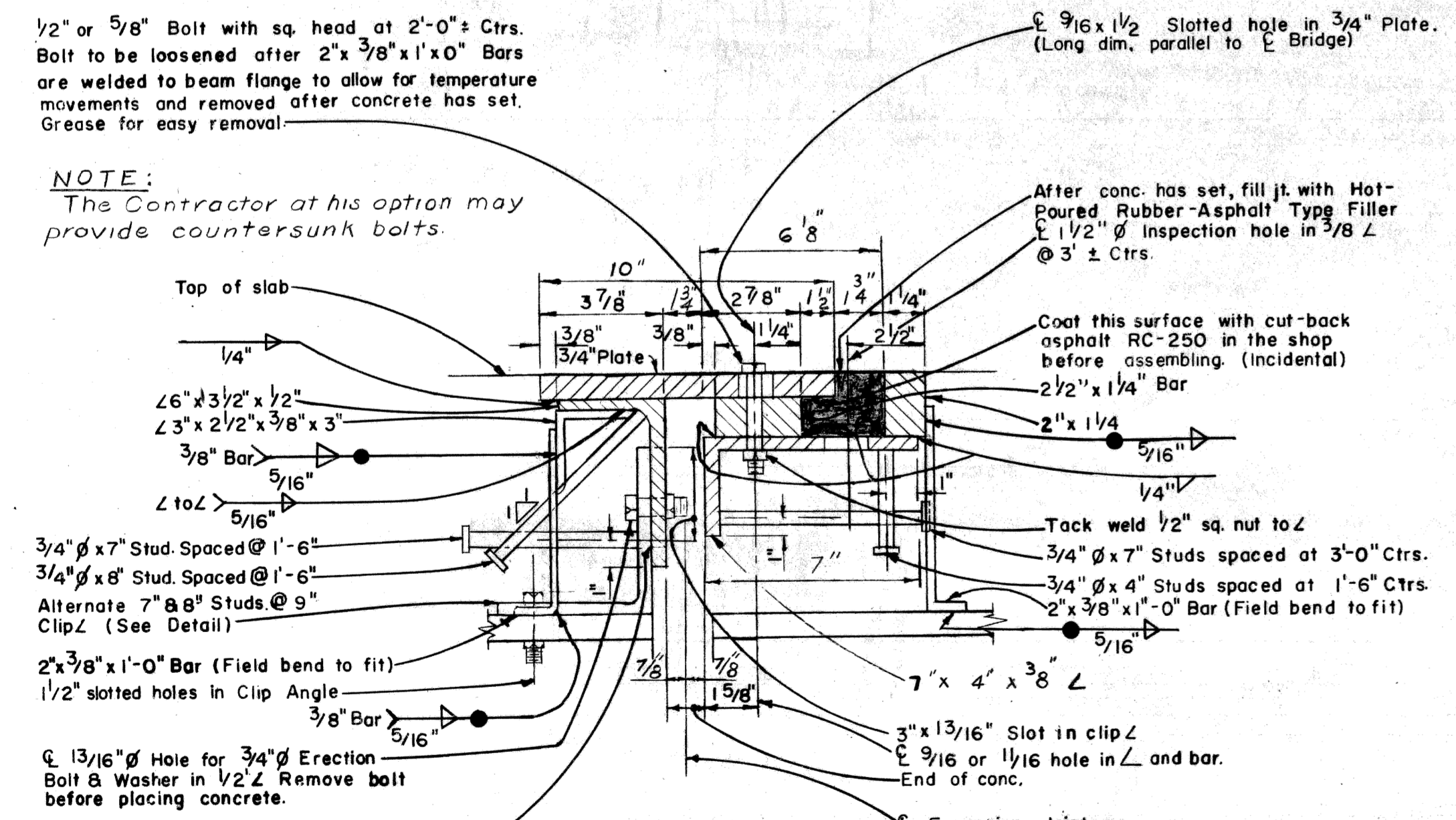
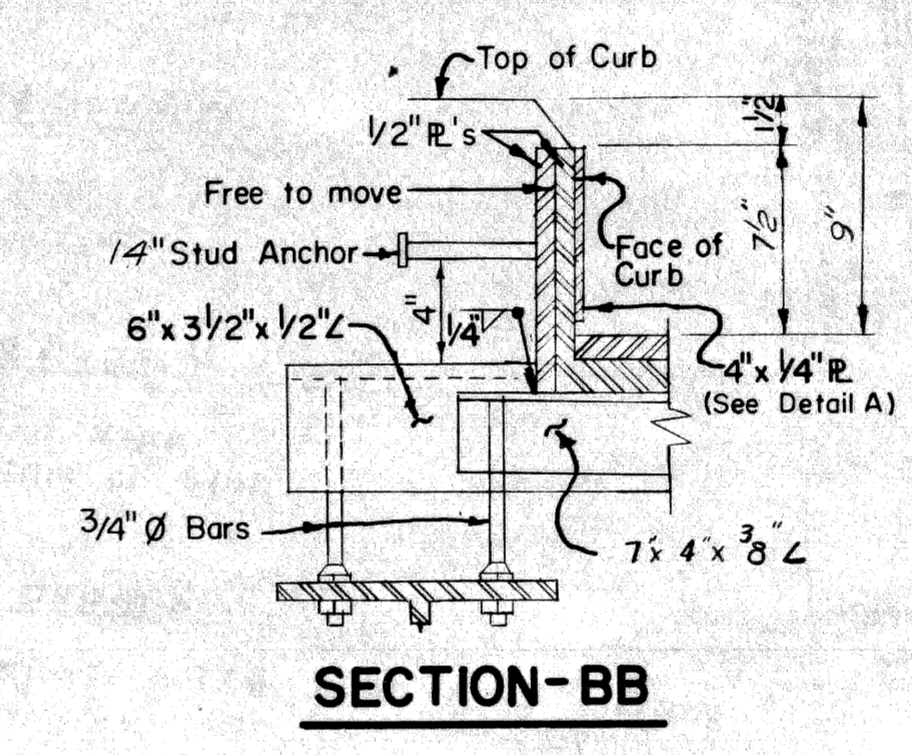
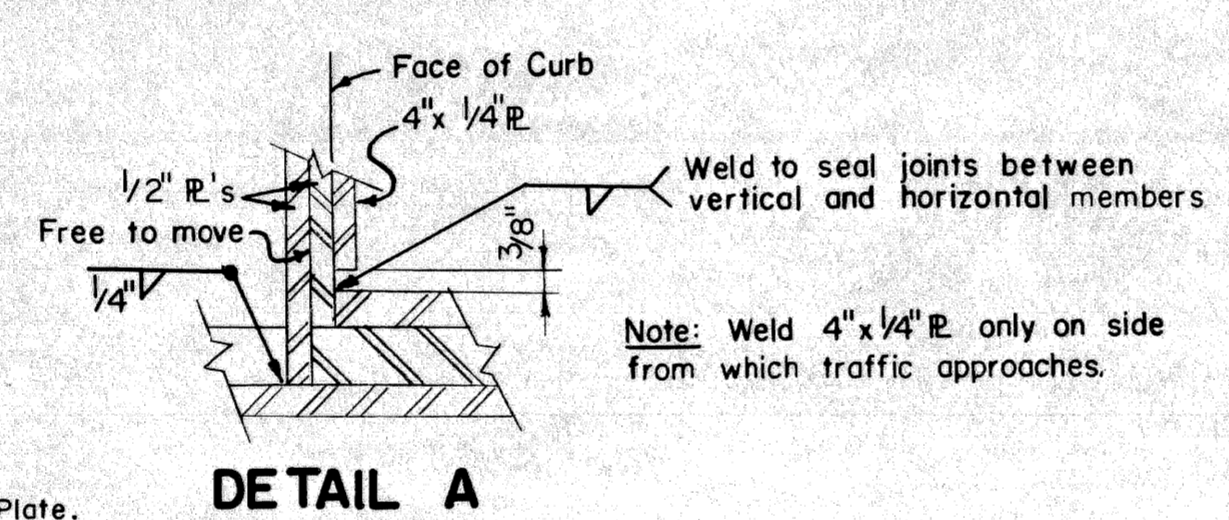
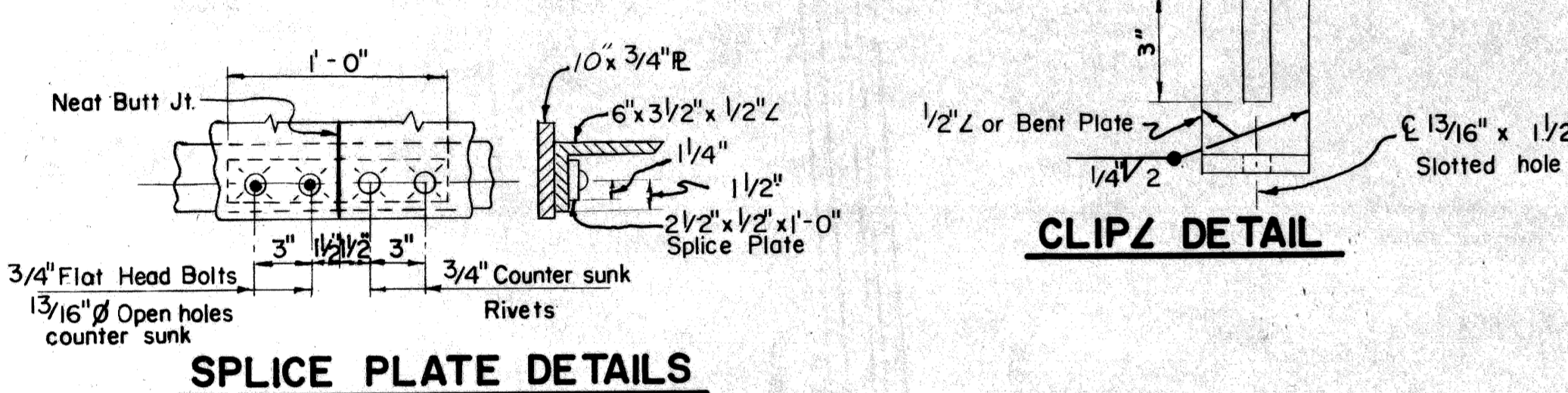
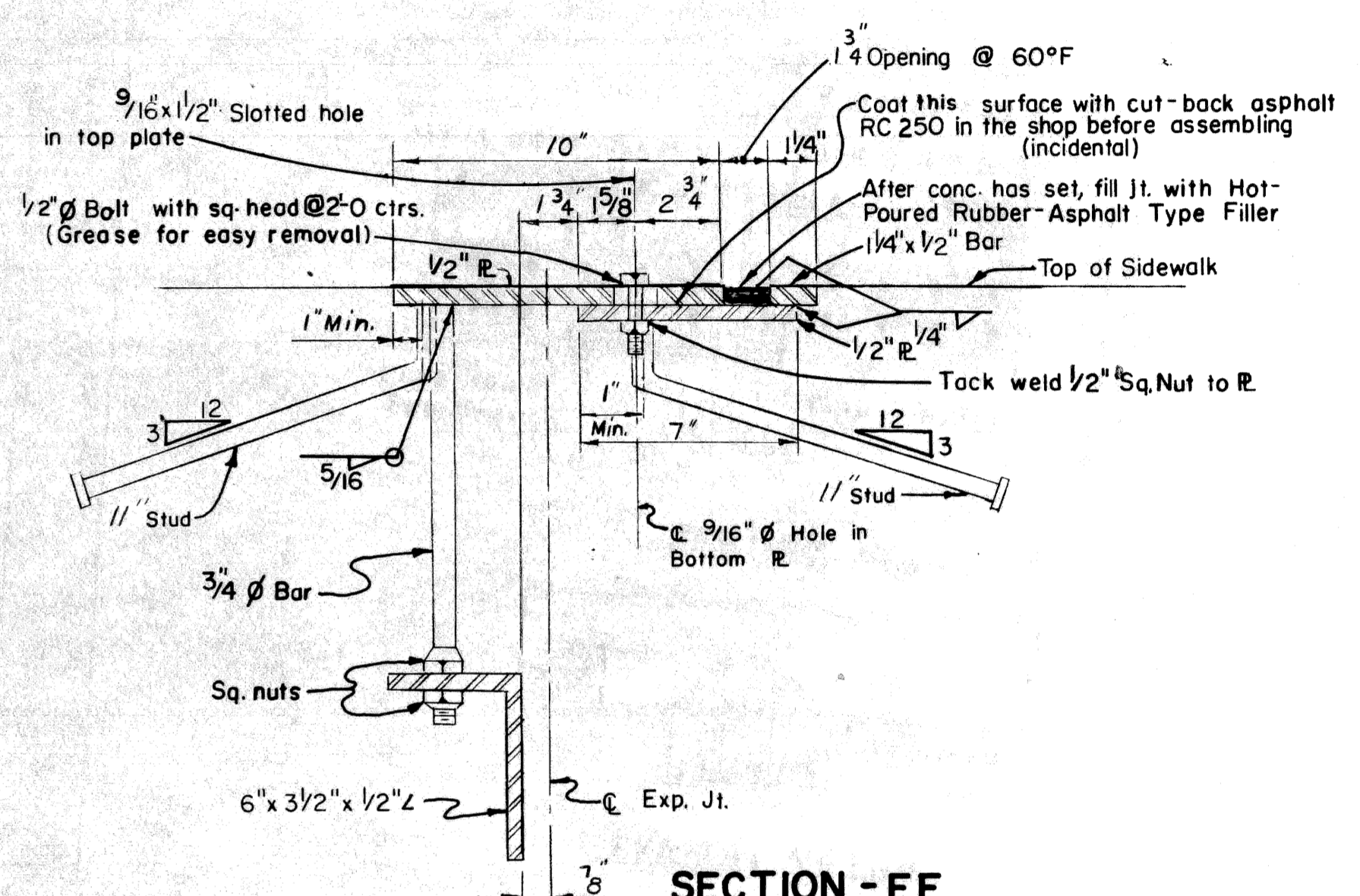
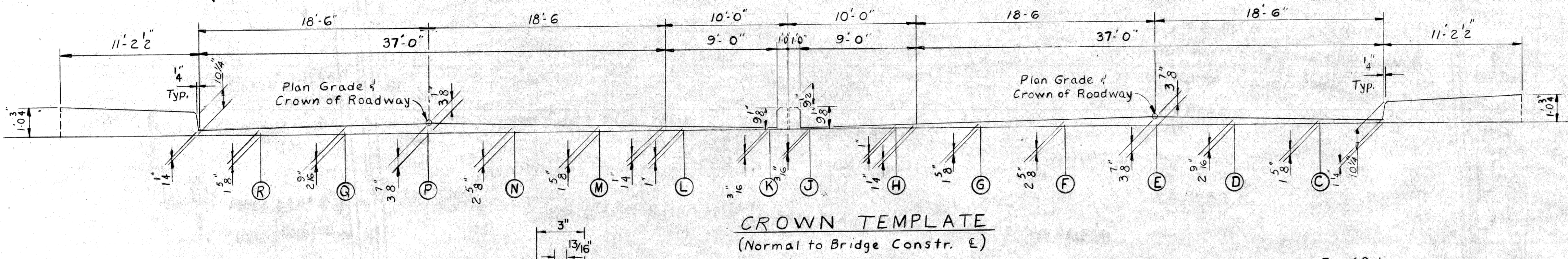
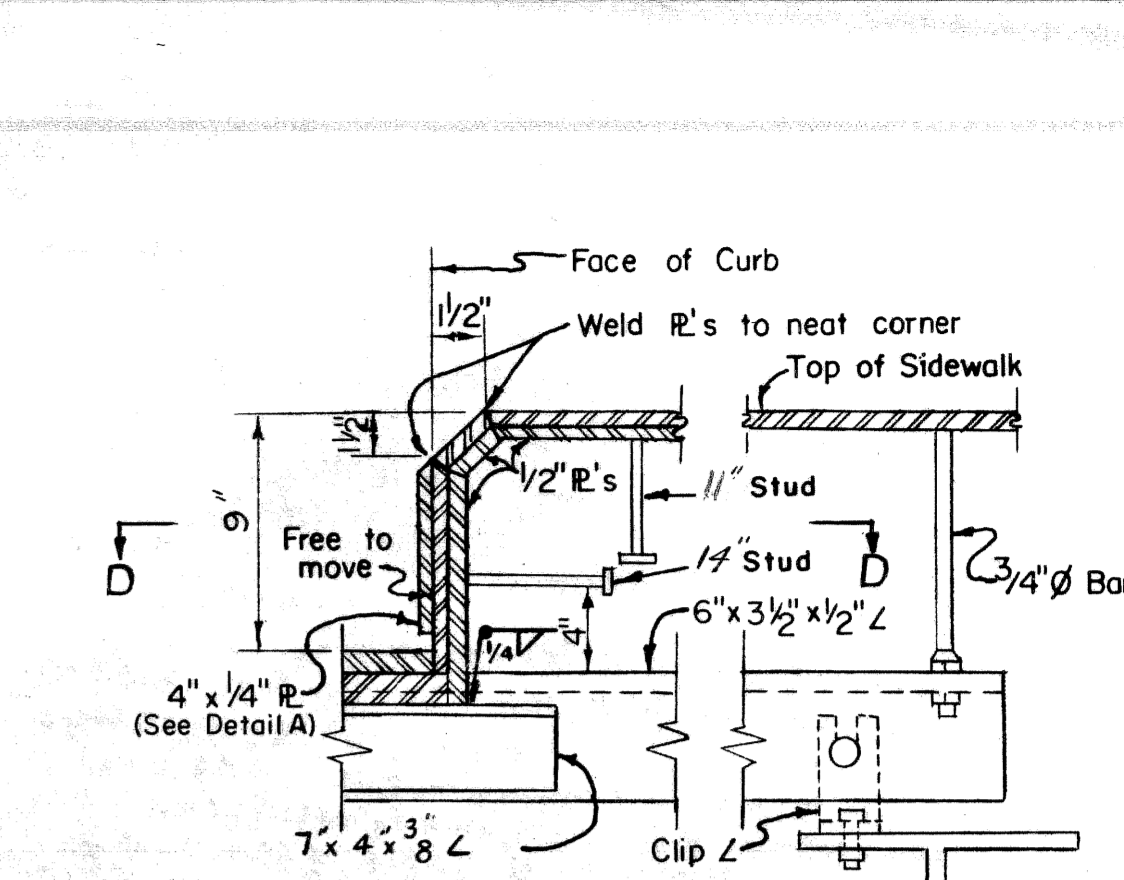
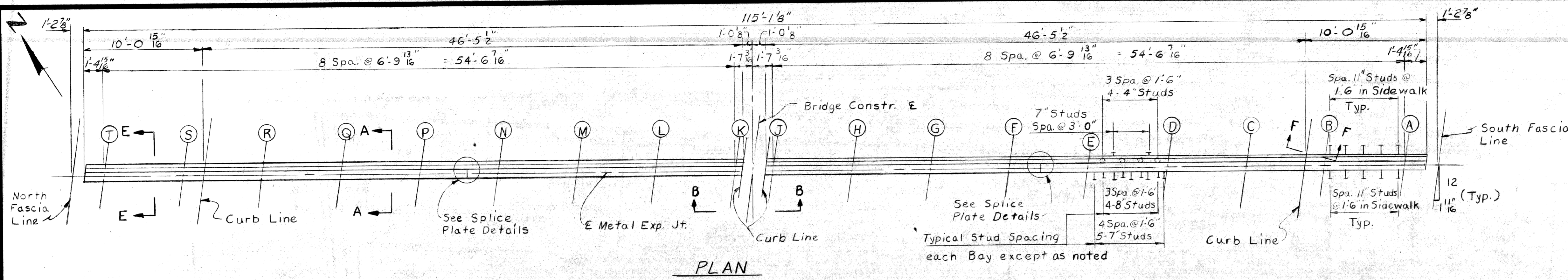
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BUREAU OF HIGHWAYS AND EXPRESSWAYS

JOB No.
PW 990(1)

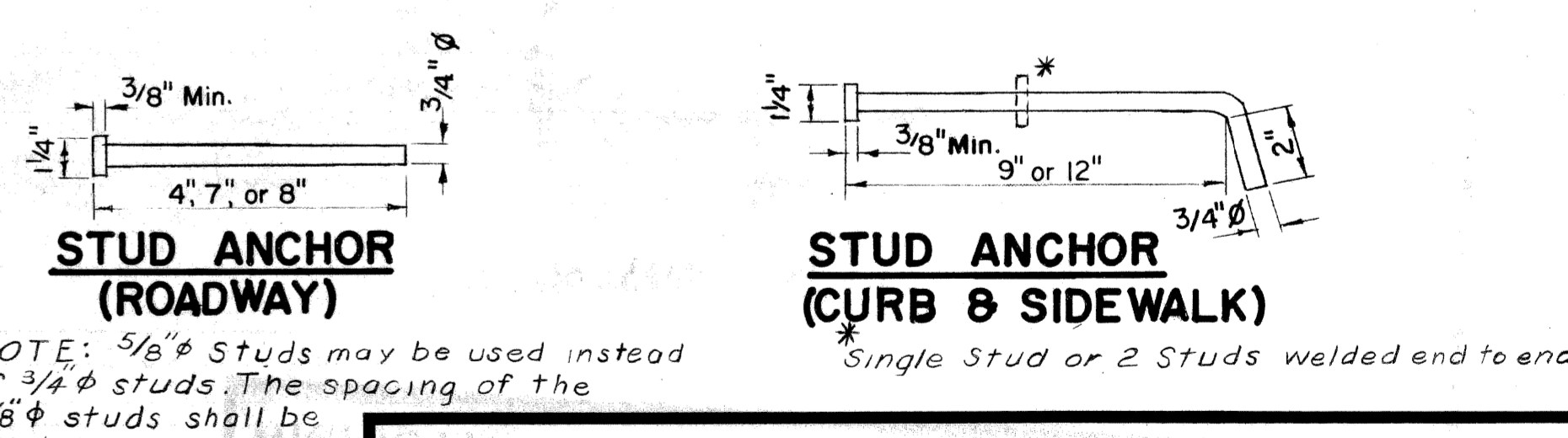
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
SQUAD BOSS
DRAWN BY
TRACED BY
CHECKED BY
SHEET 16 OF 26

303 of 82124 A



NOTES:
 The Metal Expansion Joint shall be bent in the shop to conform with the contour of the top of roadway slab.
 Hot-Poured Rubber-Asphalt Type Filler is included in the Superstructure Quantities on sheet # 24.
 Weight of Metal Expansion Joints 3500 lbs.
 Weight of Metal Expansion Joint is included in Structural Steel weight on sheet # 14.
 For Top of Metal Expansion Joint Elevations use Scream Template Elevations given for Line 2 - 2 on Sheet # 25.



SECTION-AA

SECTION-CC

SECTION-DD

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PLANS PREPARED BY
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 BUREAU OF HIGHWAYS AND EXPRESSWAYS

METAL EXPANSION JOINT DETAILS

REVISIONS	
NO.	DESCRIPTION

DESIGNED BY	A. Hopkins	2-68
DRAWN BY	P. Goffas	2-7-68
CHECKED BY	P. Goffas	2-7-68
SHEET	17	OF 26

APPROVED *H. Carst*
 STRUCTURAL ENGINEER

JOB No.
 PW 930(1)

SOS of 82124 A

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

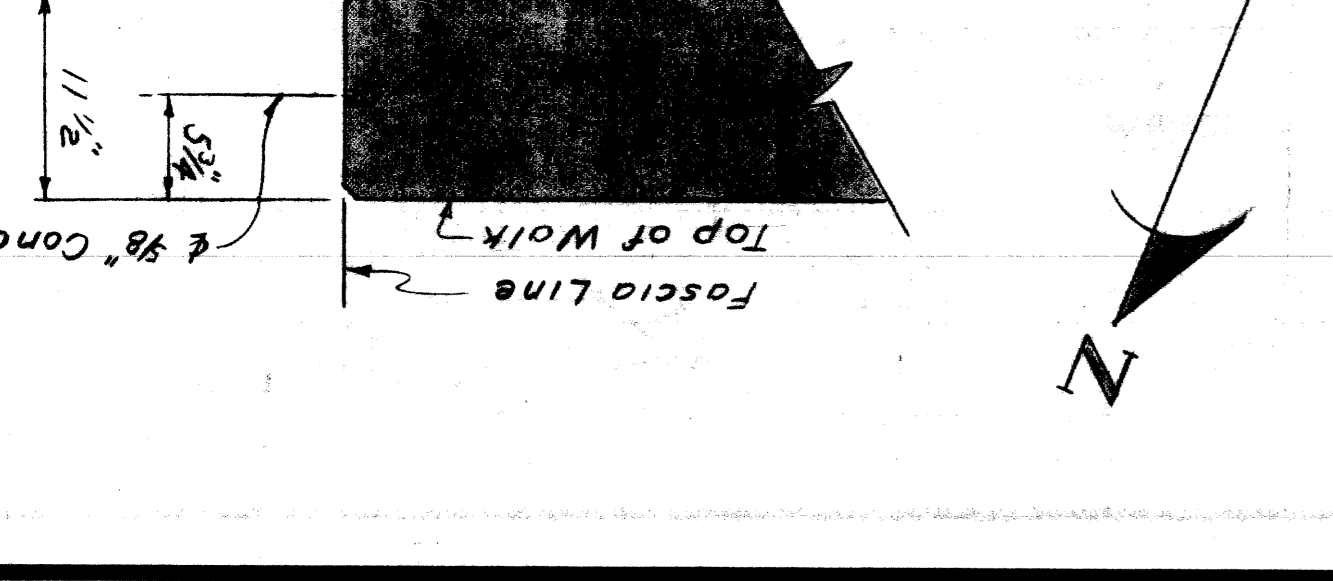
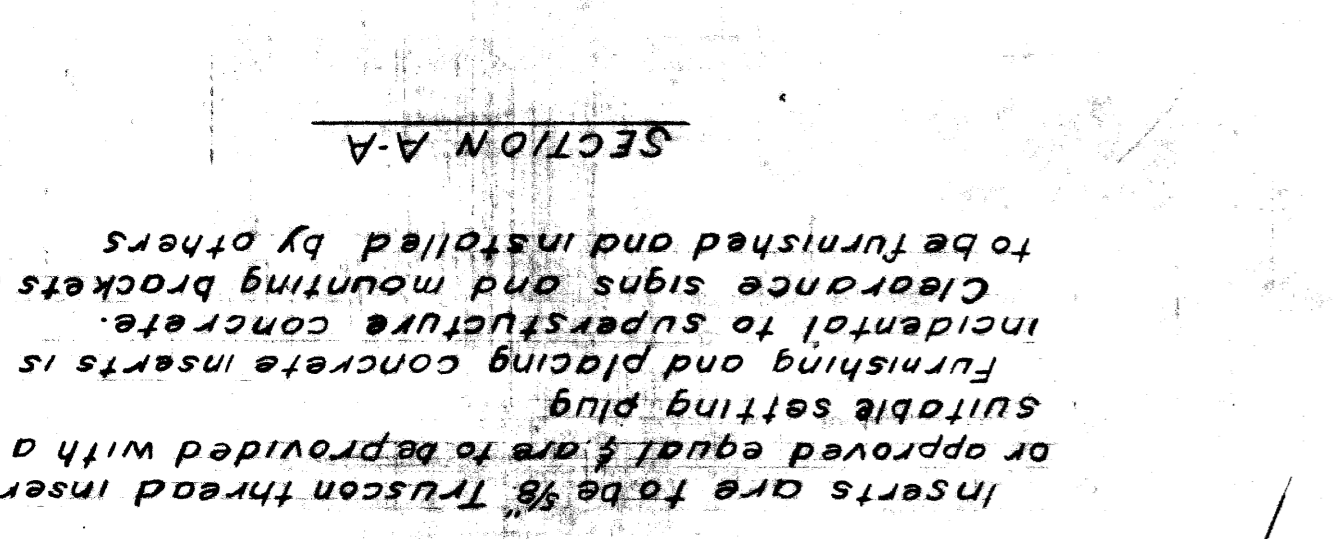
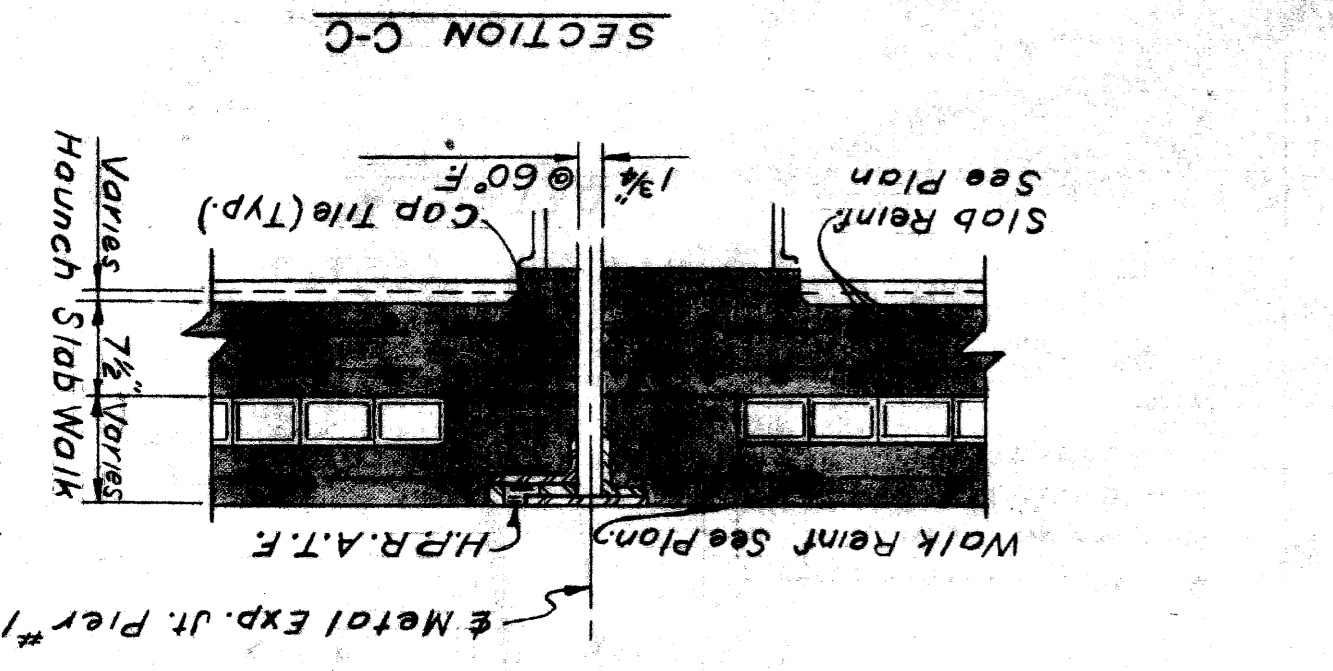
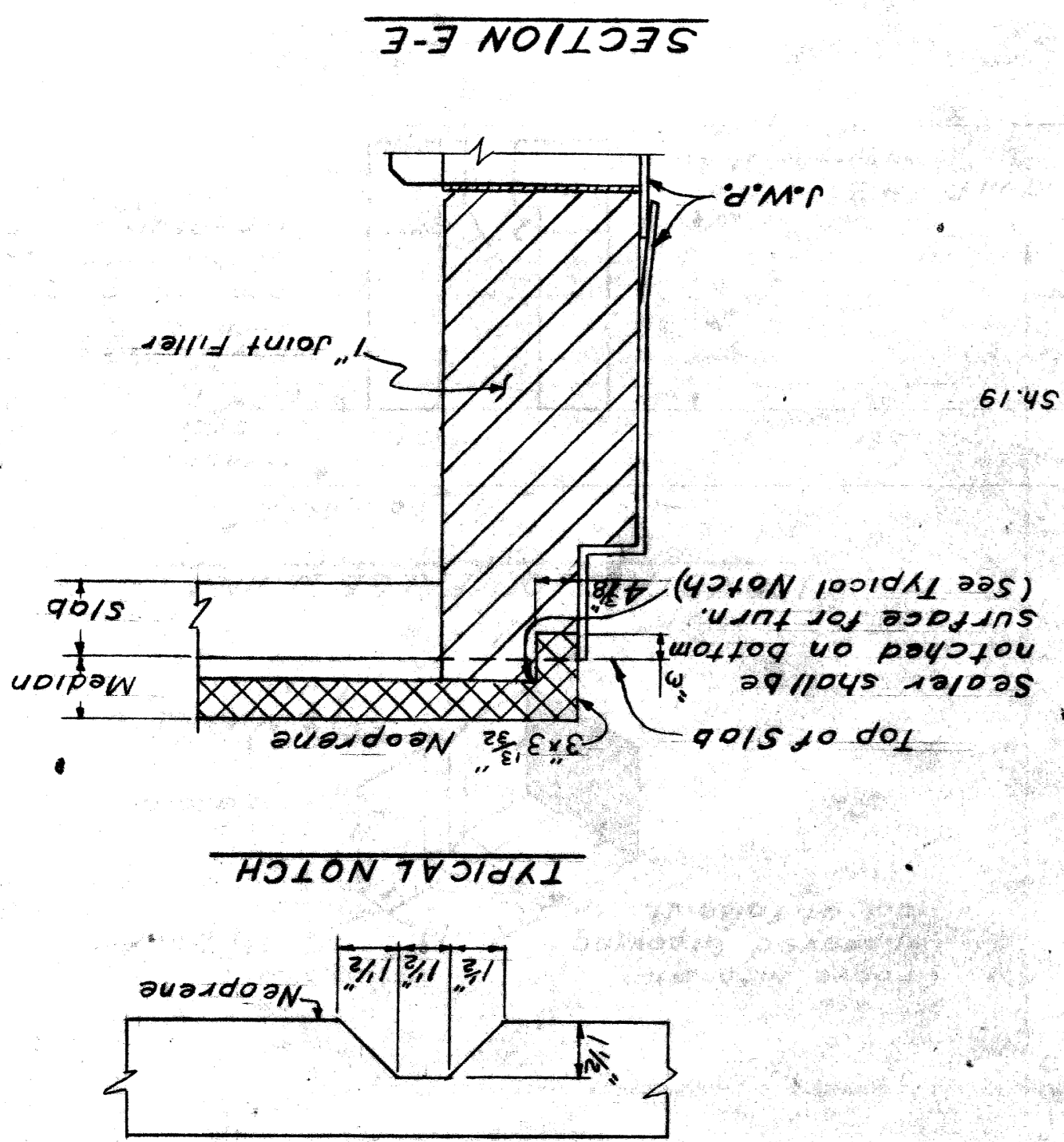
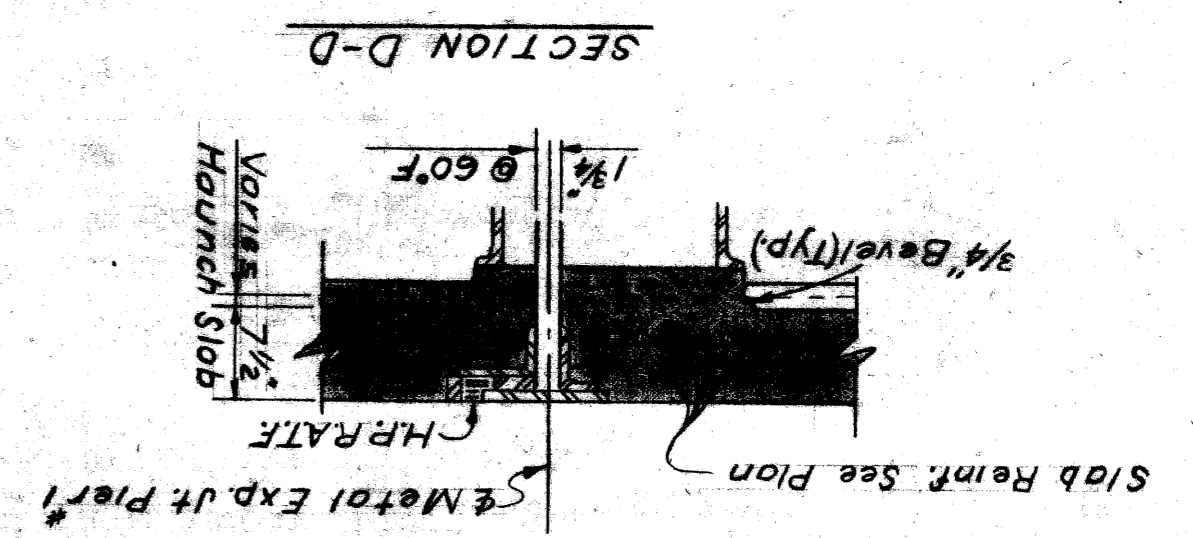
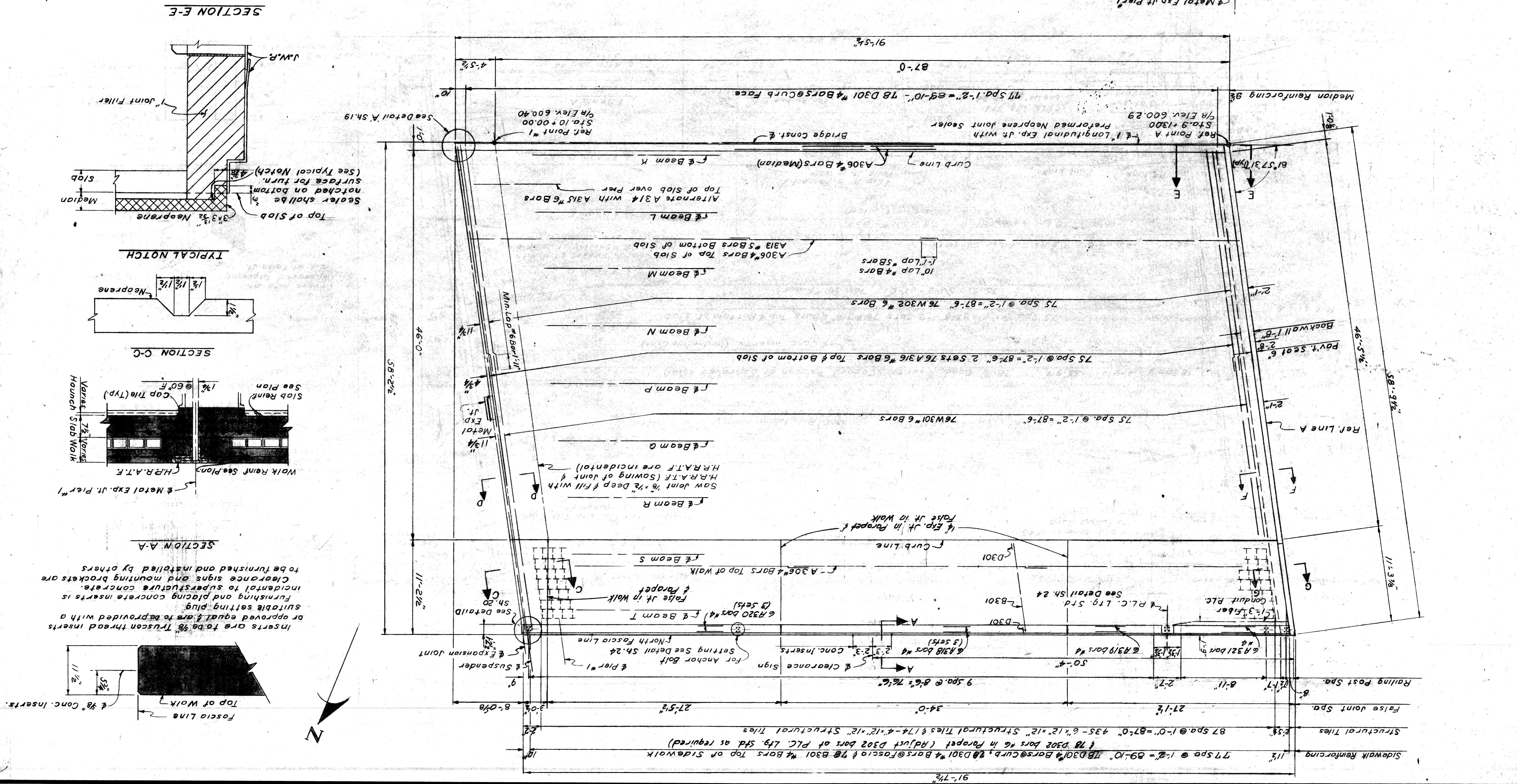
REVISIONS

NO.	DATE	DESCRIPTION

DRAWN BY: *S.P.*
 CHECKED BY: *D.J.R.*
 SHEET 18 OF 26
 JOB NO. 82124A

PLANS PREPARED BY: *H. Smith*
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS
 APPROVED: *H. Smith*
 STRUCTURAL ENGINEER
 JOB NO. PW 990(1)
 DATE: 1-2-28

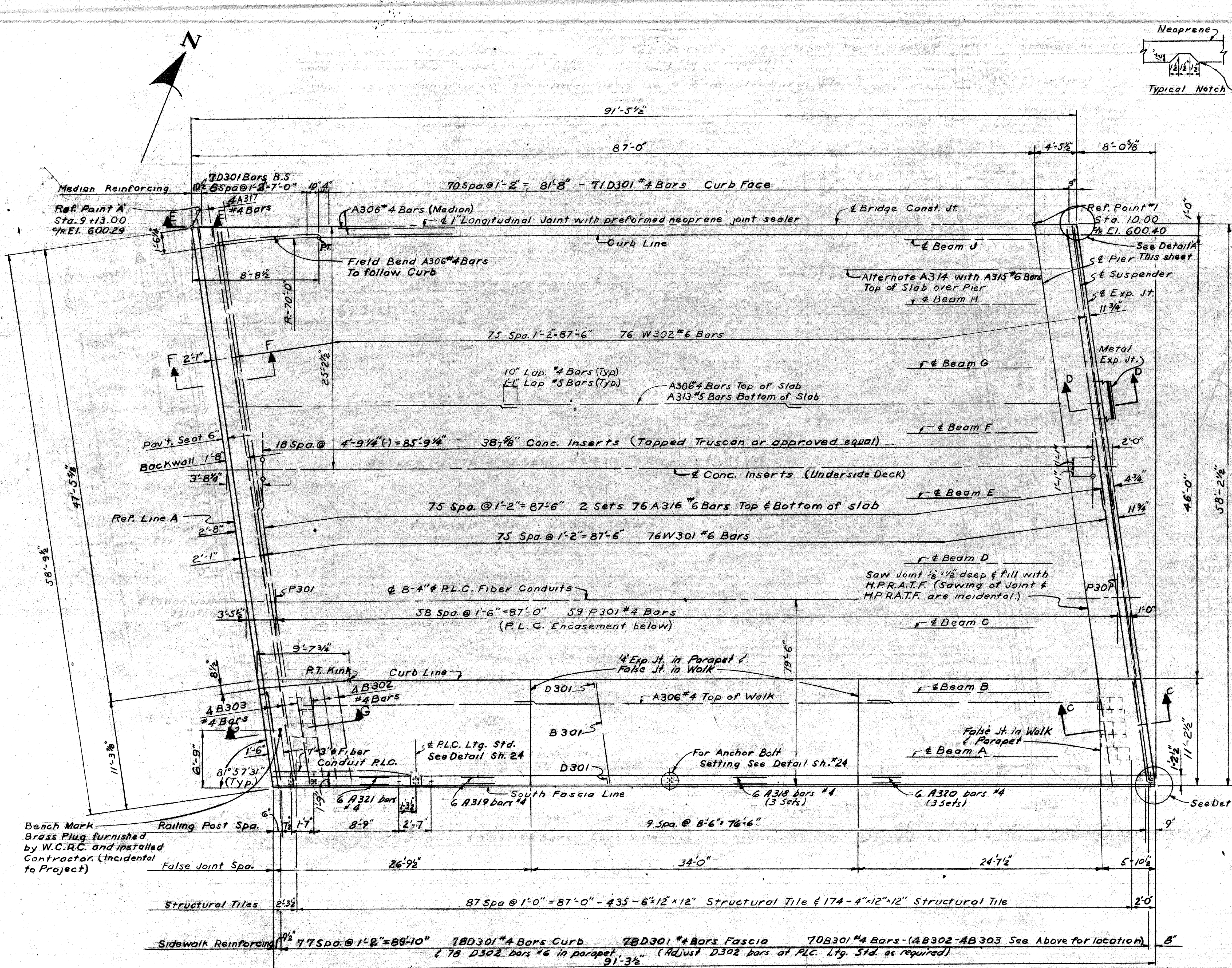
DECK PLAN
SPAN 1 NORTH HALF



Inserts are to be 5/8" Truscon thread inserts or approved equal to be provided with a suitable setting plug. Furnishing and placing concrete inserts incidental to superstructure concrete. Clearance signs and mounting brackets are to be furnished and installed by others.

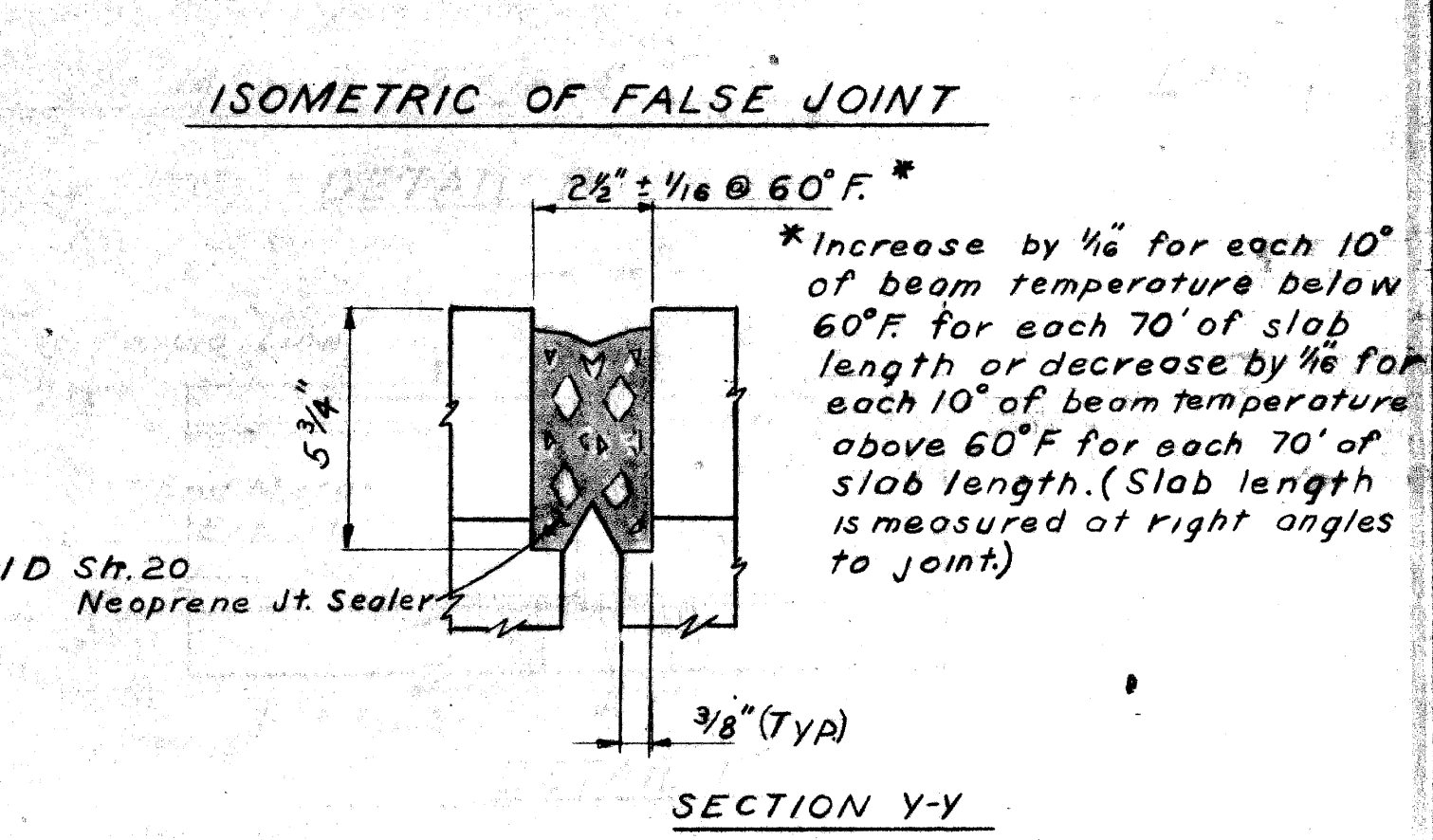
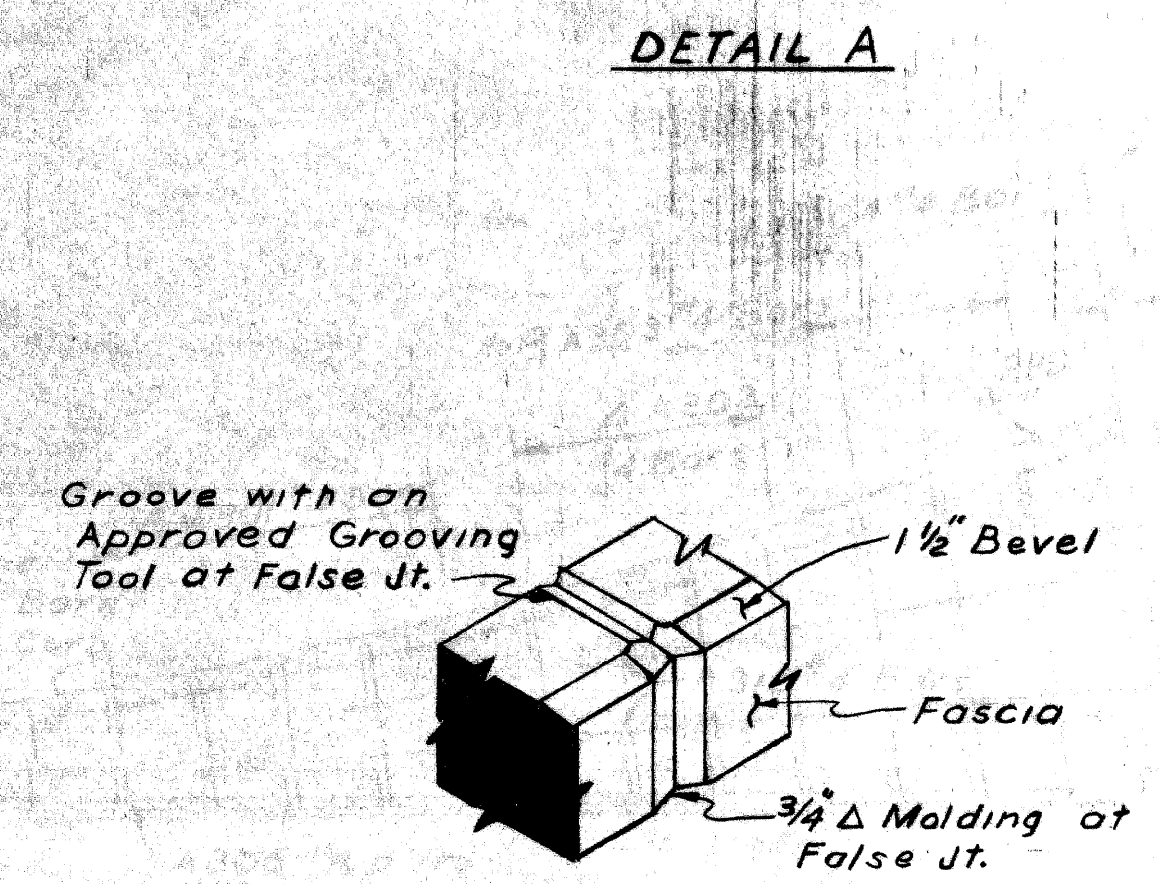
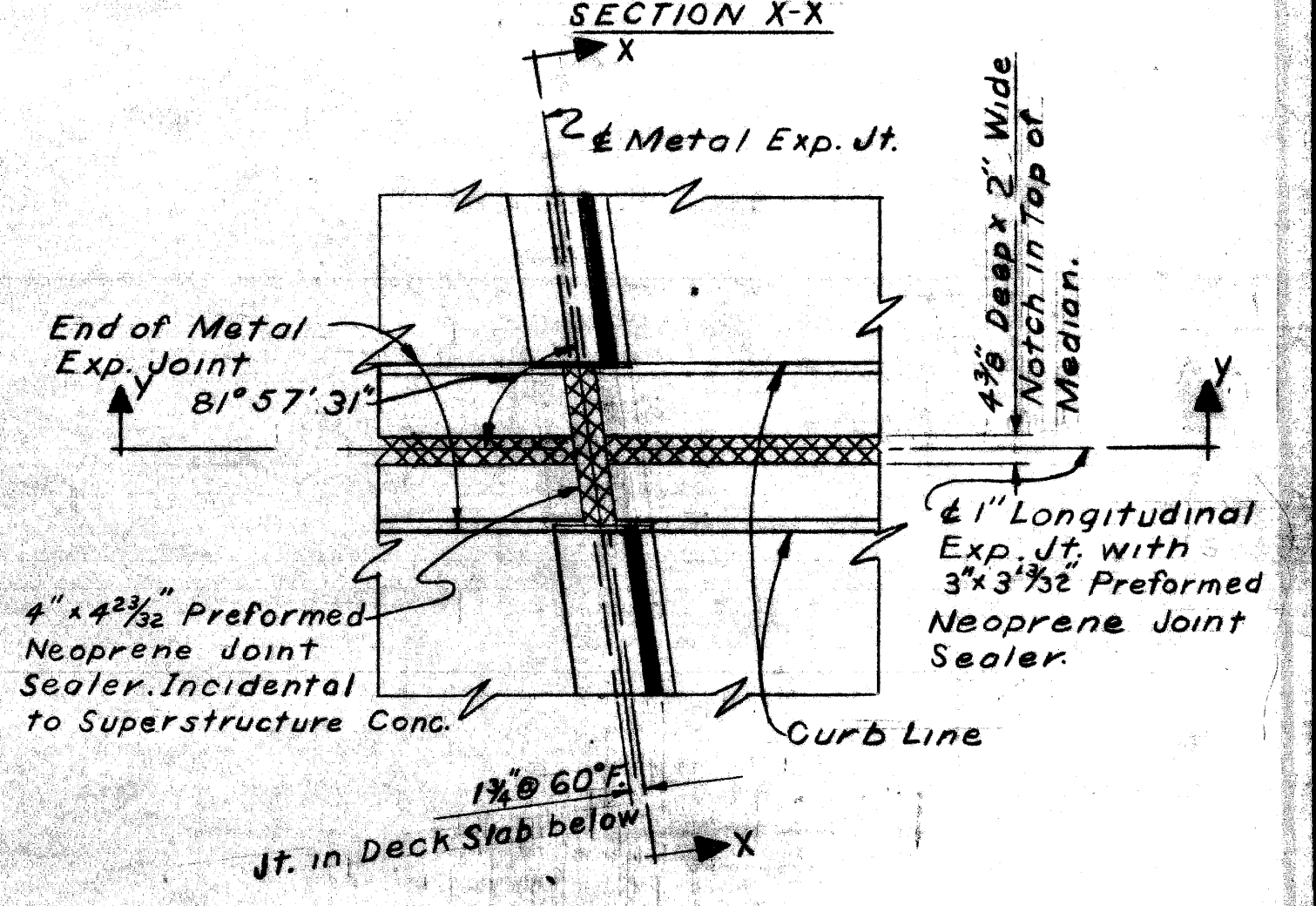
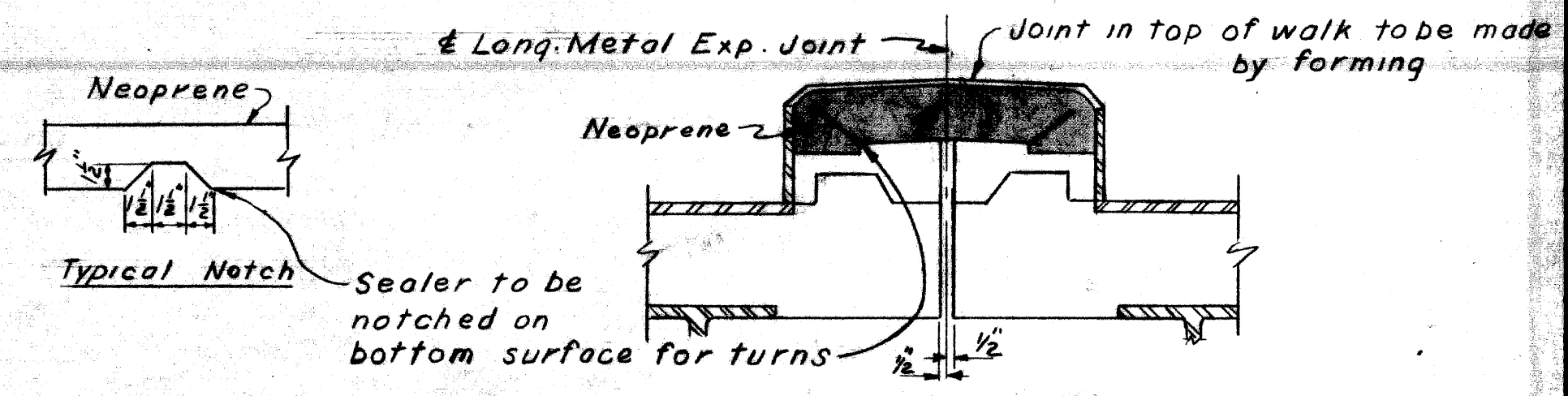
SECTION A-A

5/8" Conc. Inserts
 Top of Walk
 Fascia Line



Bench Mark
Brass Plug furnished
by W.C.R.C. and installed
Contractor. (Incidental
to Project)

DECK PLAN
SPAN #1 SOUTH HALF



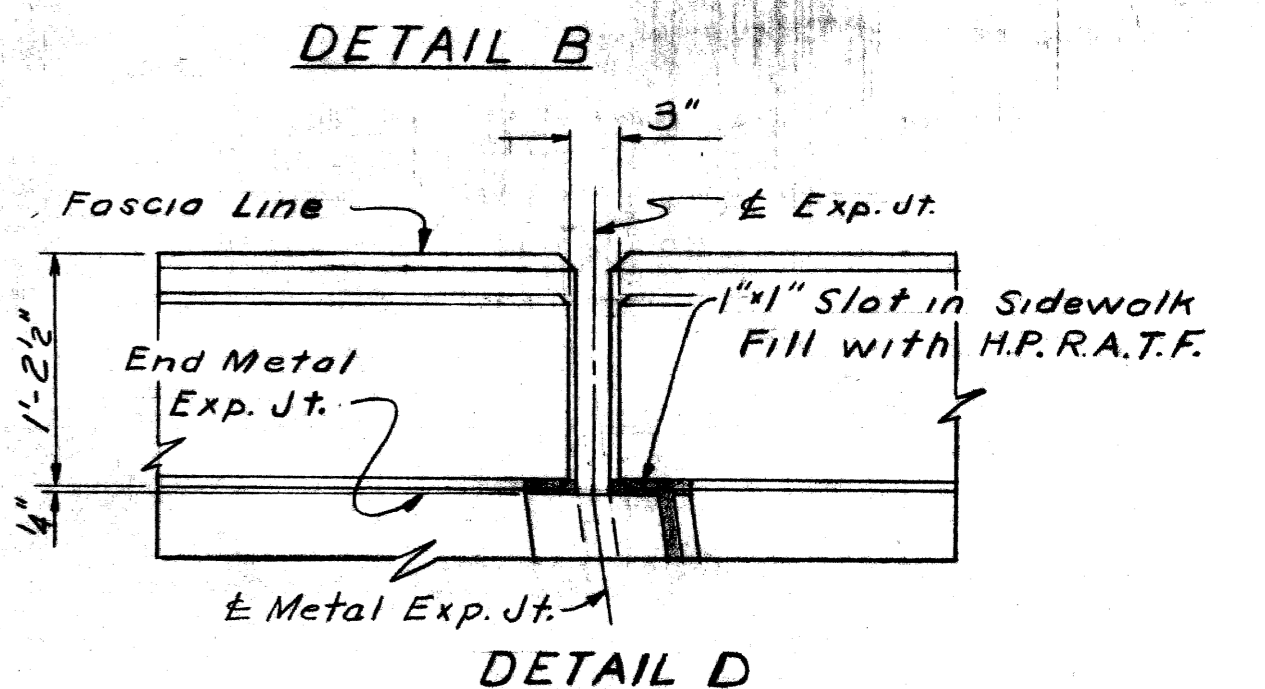
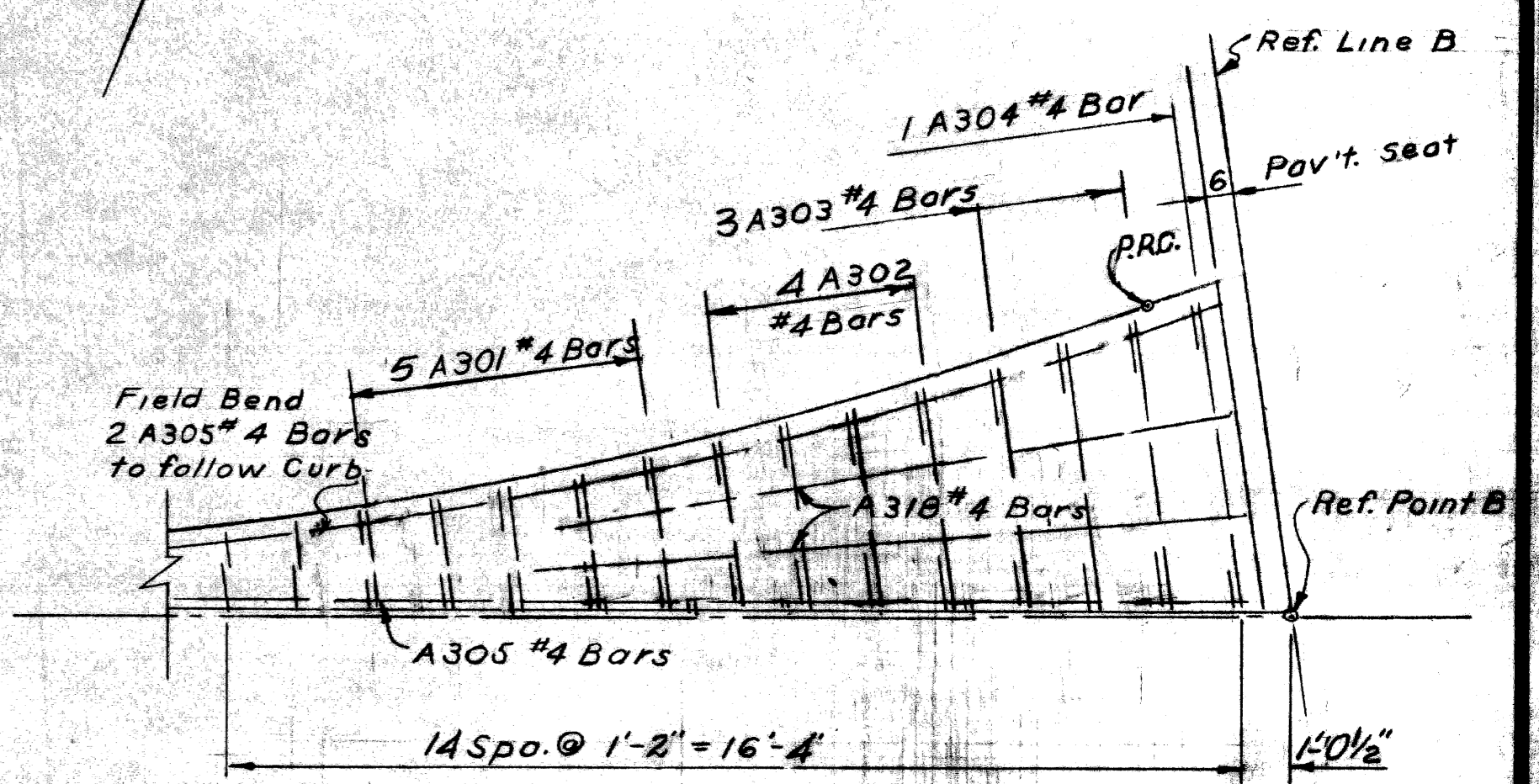
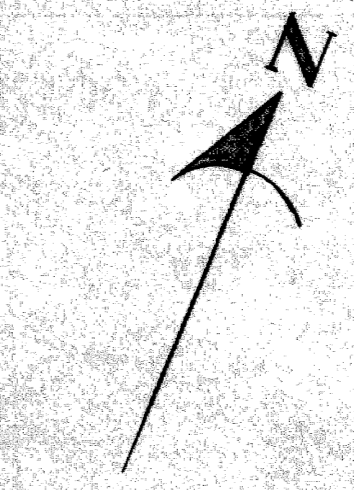
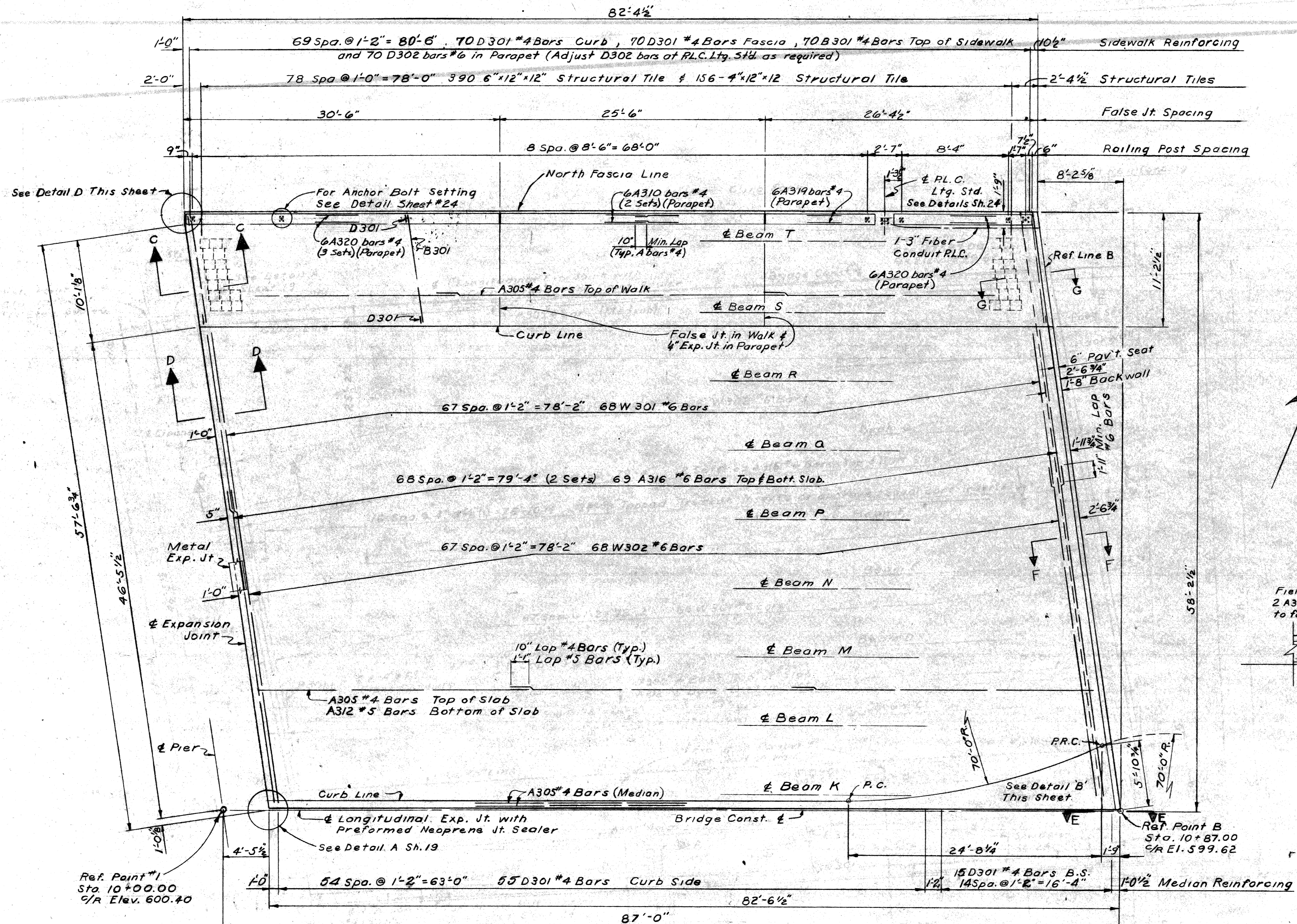
PLANS PREPARED BY
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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *H. Paul*
STRUCTURAL ENGINEER

JOB No.
PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS			
SUPERSTRUCTURE DETAILS			
REVISIONS			
NO.	DESCRIPTION	DATE	BY

DESIGNED BY	C.V.	5-68
DRAWN BY	SPURBEON	7-68
CHECKED BY	DJR	8-68
SHEET 19 OF 26		
S03 of 82124 A		



DECK PLAN
SPAN #2 NORTH HALF

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

PLANS PREPARED BY
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APPROVED: *H. Post* STRUCTURAL ENGINEER

JOB No.
PW 990(1)

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

SQUAD BOSS: *C.V.* 3-68

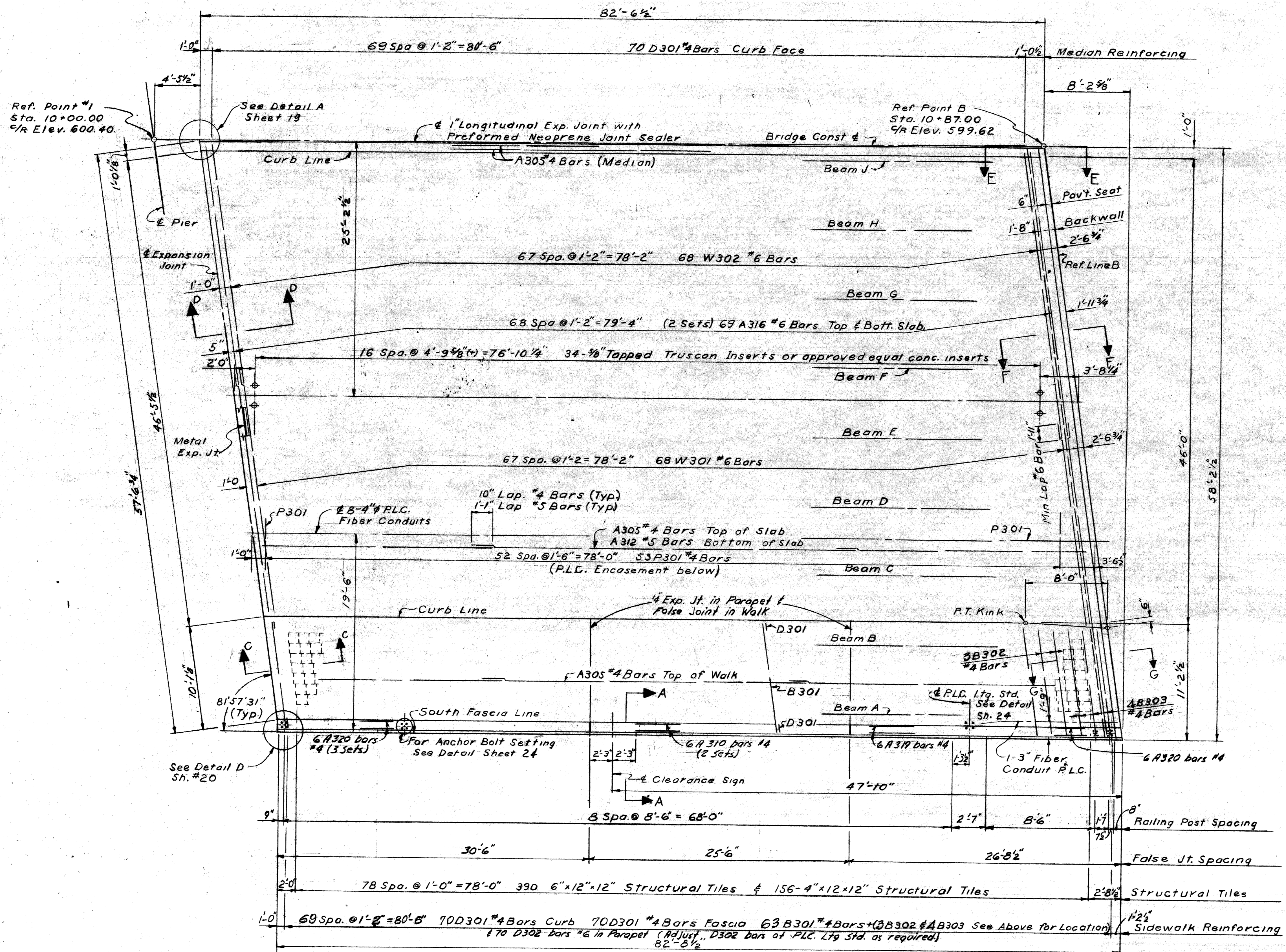
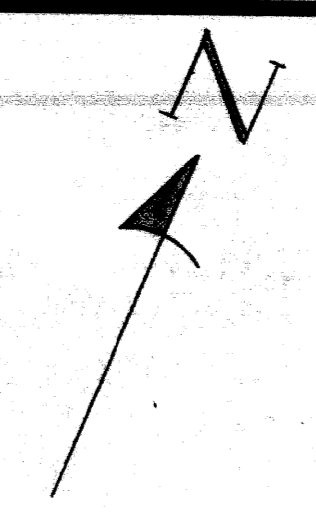
DRAWN BY: *SPURGEON* 1-68

TRACED BY: *DIR* 2-68

CHECKED BY: *DIR* 2-68

SHEET 20 of 26

S03 of 82124 A



DECK PLAN
SPAN #2 SOUTH HALF

PLANS PREPARED BY
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APPROVED: *H. Paul*
STRUCTURAL ENGINEER

JOB No.
PW 930(1)

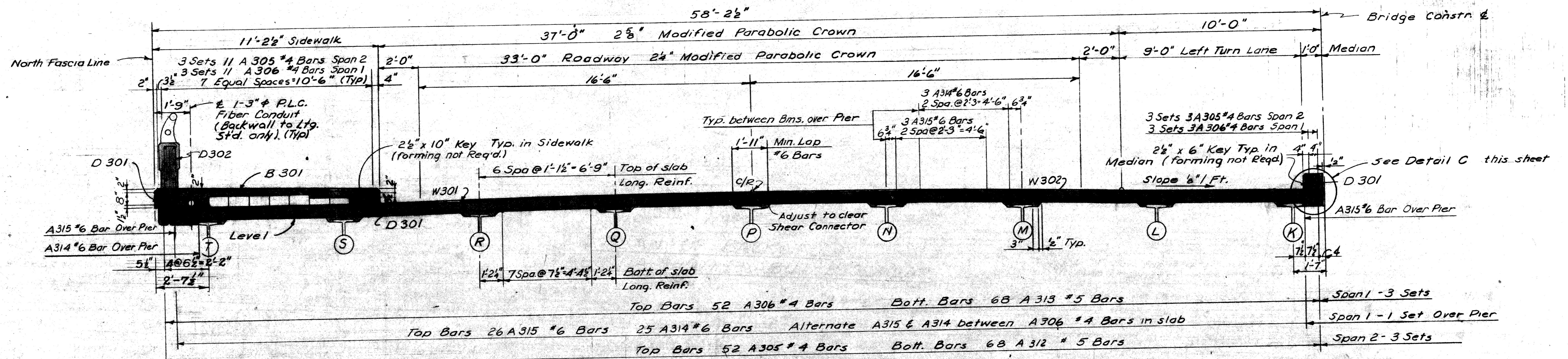
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

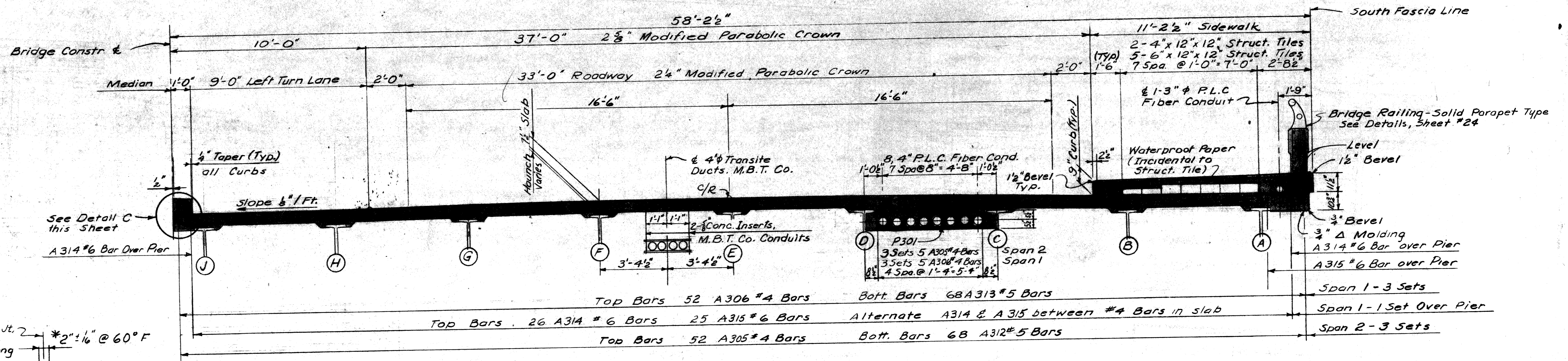
REVISIONS			
NO.	DESCRIPTION	DATE	BY

DESIGNED BY	SPURGEON	3-68
TRACED BY	DIR	2-68
CHECKED BY	DIR	2-68
SHEET 21 OF 26		

S03 of 82124 A

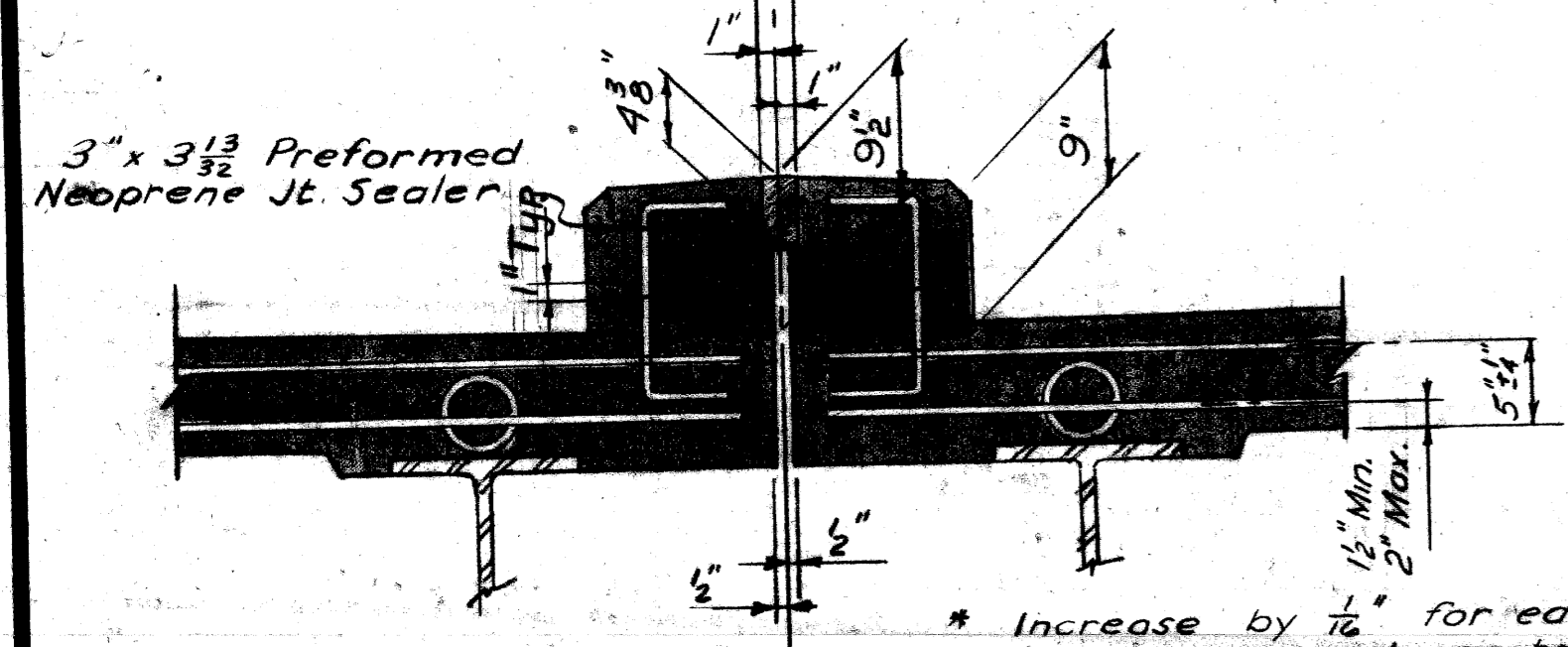


TYPICAL SECTION - NORTH HALF



TYPICAL SECTION - SOUTH HALF

1" Longitudinal Exp. Jt. 2" x 1/4" @ 60°F
 Note: Mate Joint by sawing



* Increase by 1/2" for each 10° of beam temperature below 60°F for each 70' of slab length, or decrease by 1/4" for each 10° of beam temperature above 60°F for each 70' of slab length. (Slab length is measured at right angles to joint.)

DETAIL C

PLANS PREPARED BY
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 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *H. Red*
 STRUCTURAL ENGINEER

JOB No. PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

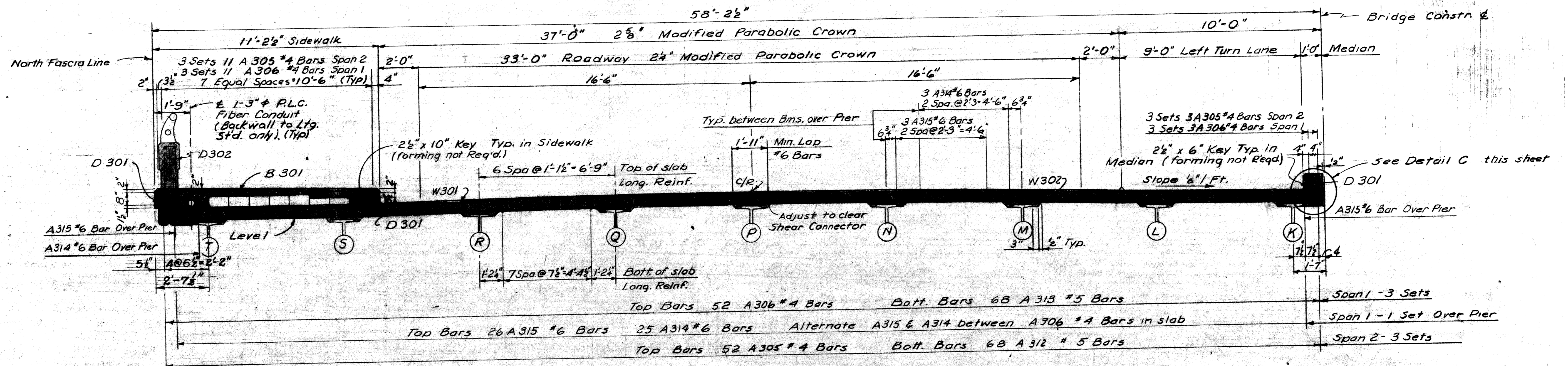
SUPERSTRUCTURE DETAILS

NO.	DESCRIPTION	DATE	BY

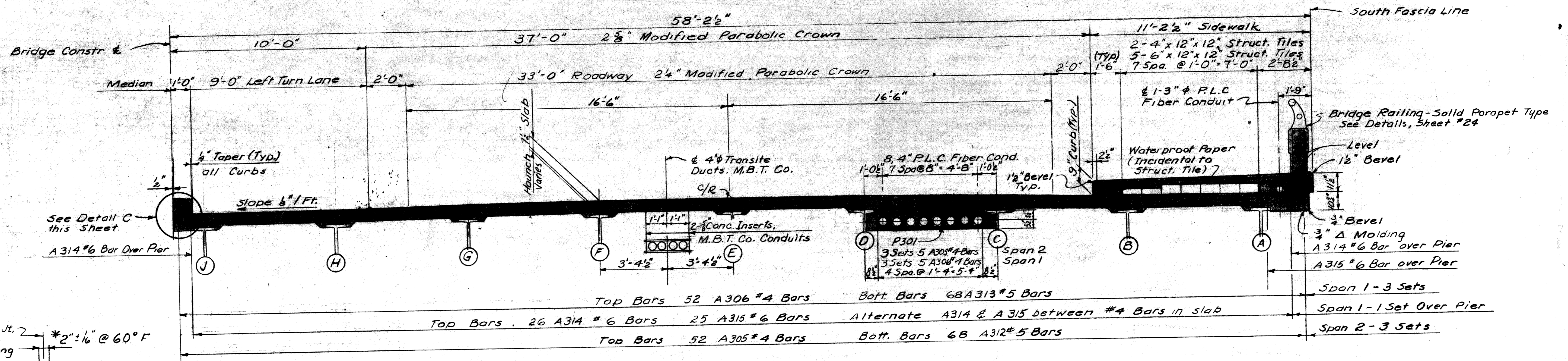
CITY OF DETROIT

DRAWN BY	WAL	2-68
CHECKED BY	D.J.R.	2-68
SHEET	22	26

S03 of 82124A



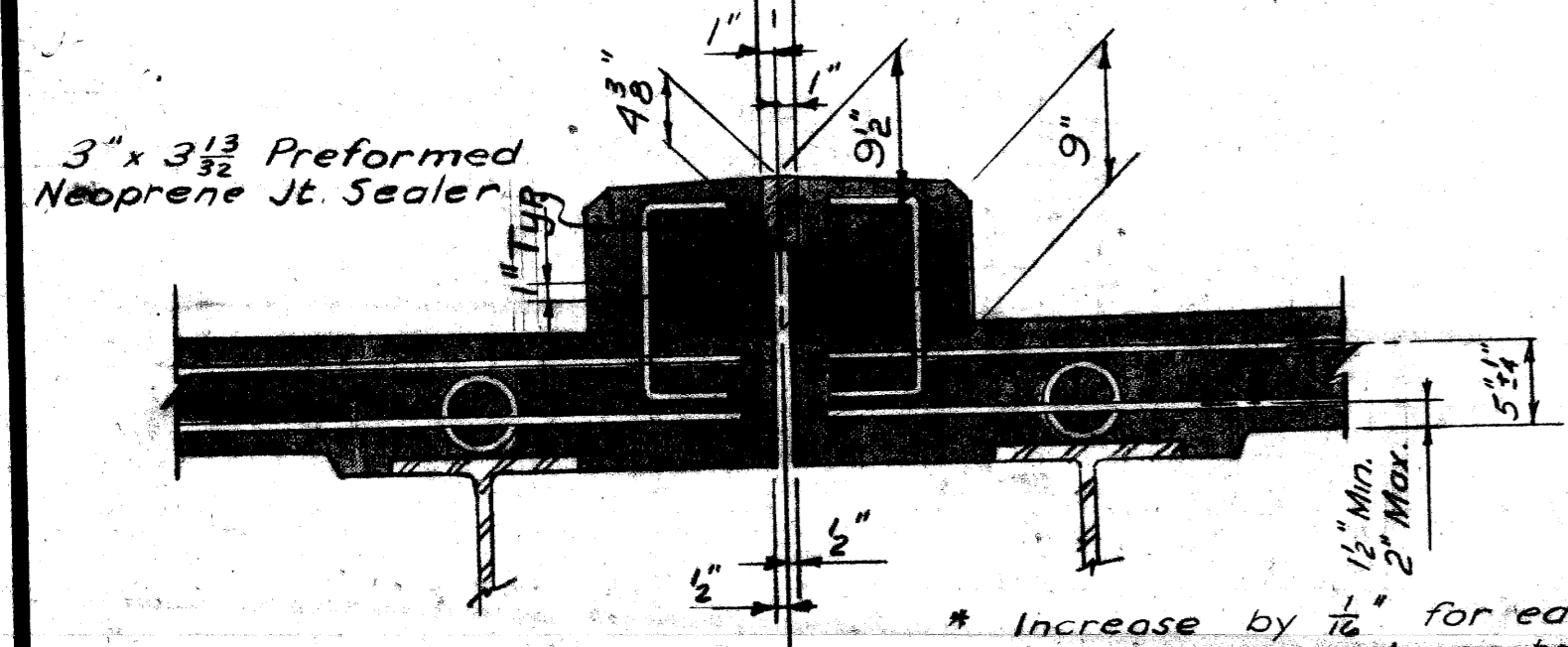
TYPICAL SECTION - NORTH HALF



TYPICAL SECTION - SOUTH HALF

1" Longitudinal Exp. Jt. 2" x 1/4" @ 60° F

Note: Mate Joint by sawing



DETAIL C

* Increase by 1/8" for each 10° of beam temperature below 60°F for each 70' of slab length, or decrease by 1/8" for each 10° of beam temperature above 60°F for each 70' of slab length. (Slab length is measured at right angles to joint.)

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

APPROVED: *H. Red*
 STRUCTURAL ENGINEER

JOB No. PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

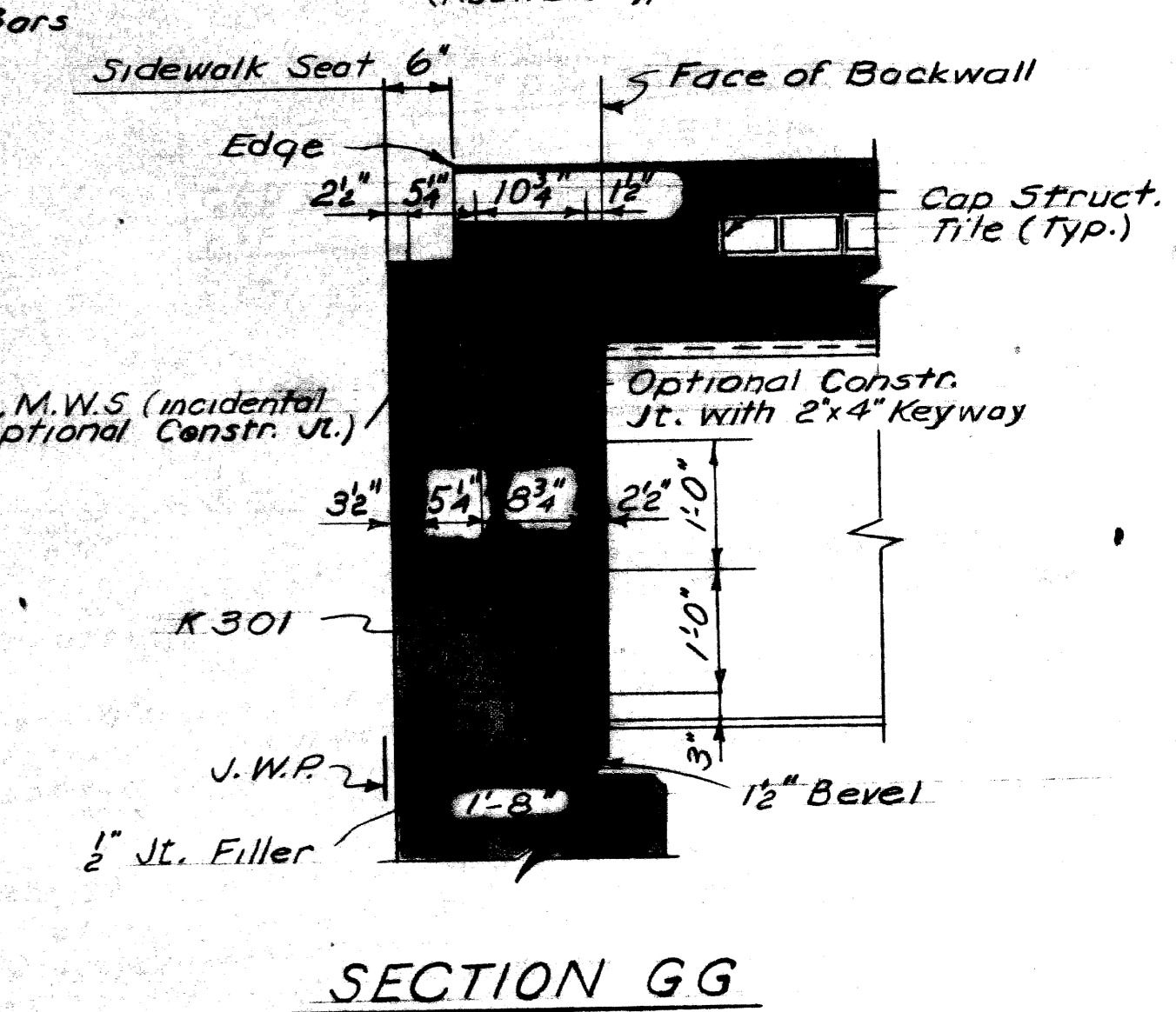
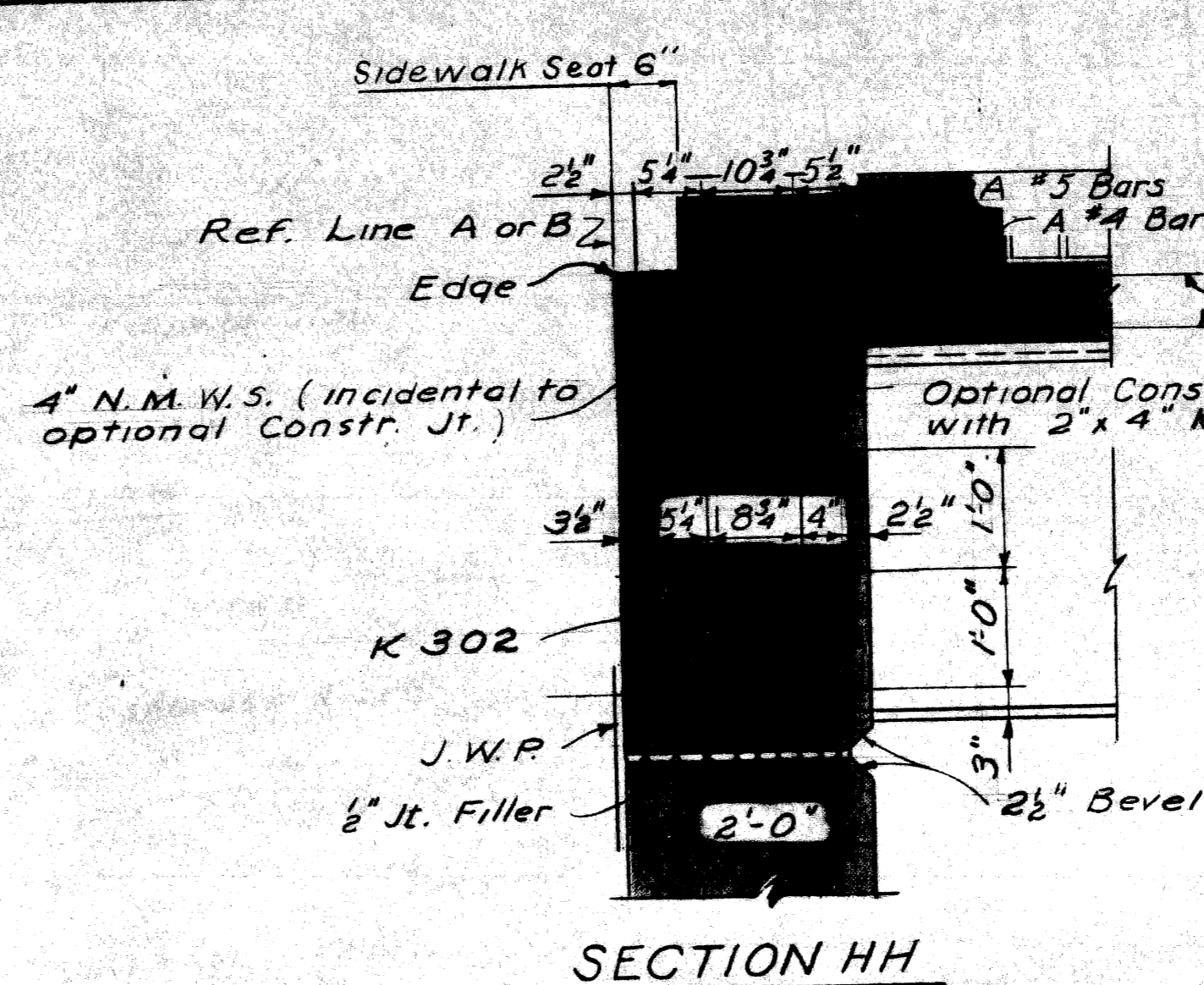
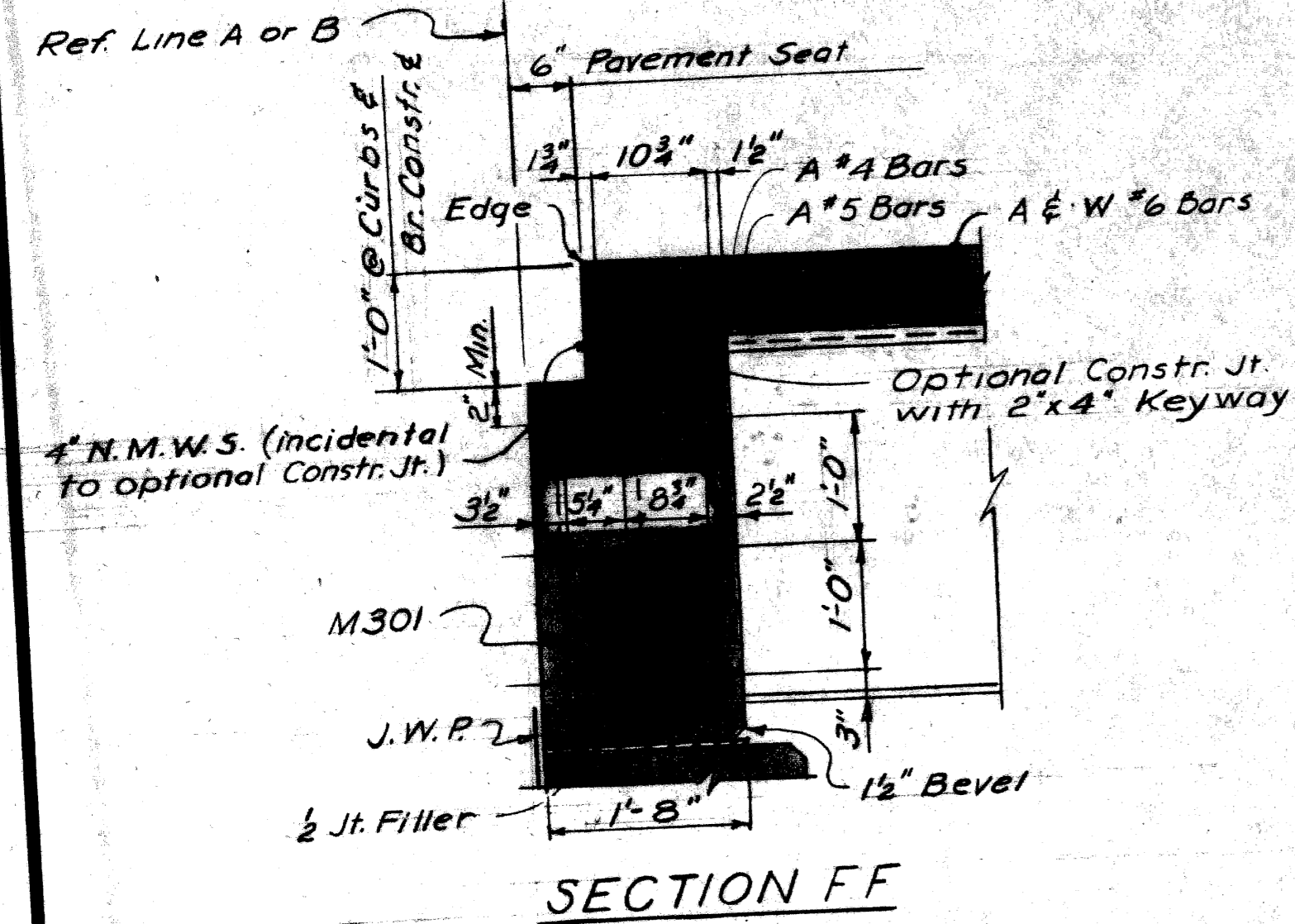
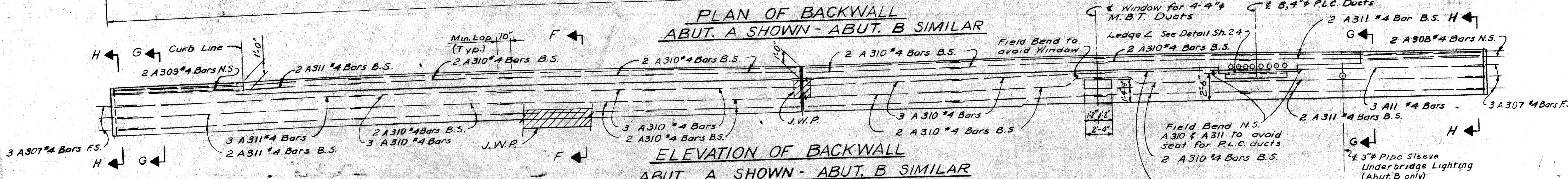
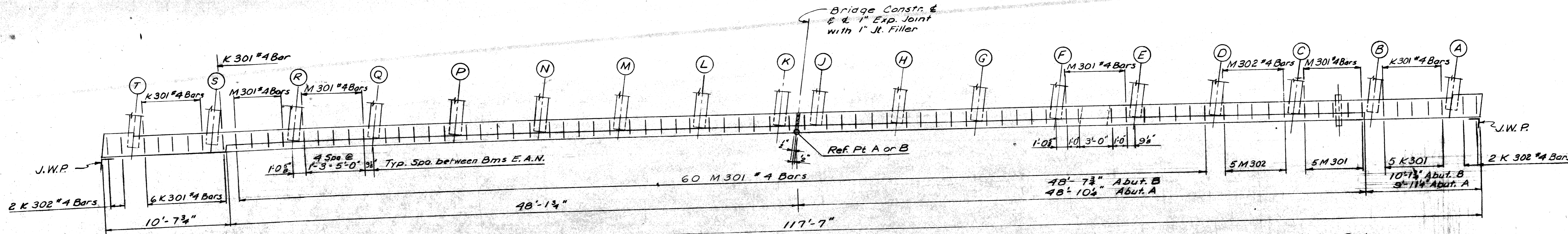
SUPERSTRUCTURE DETAILS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

DRAWN BY	WAL	2-68
CHECKED BY	D.J.R.	2-68
SHEET	22	26

S03 of 82124A



MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

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

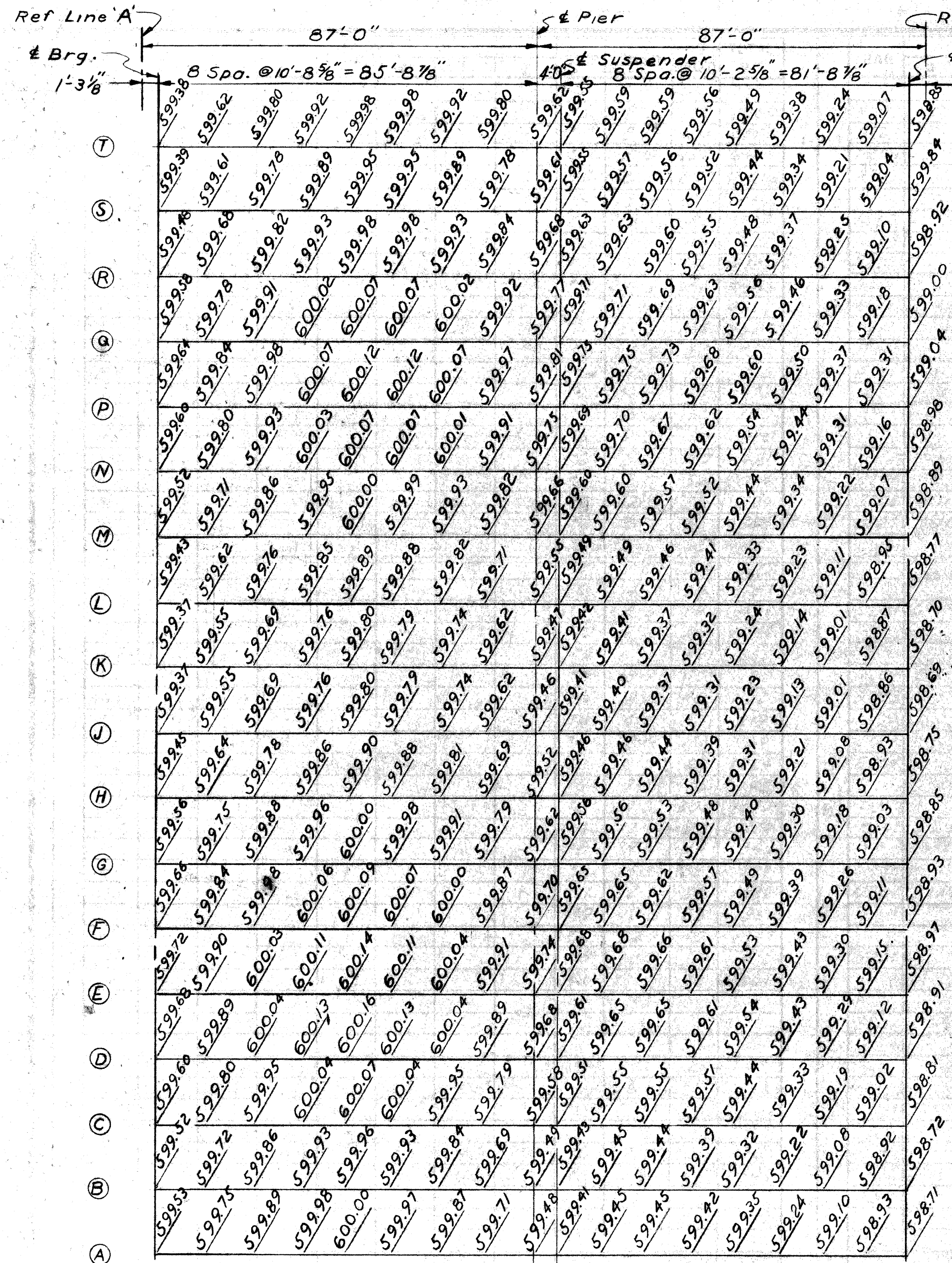
APPROVED: *[Signature]*
STRUCTURAL ENGINEER

JOB No.
PW 990(1)

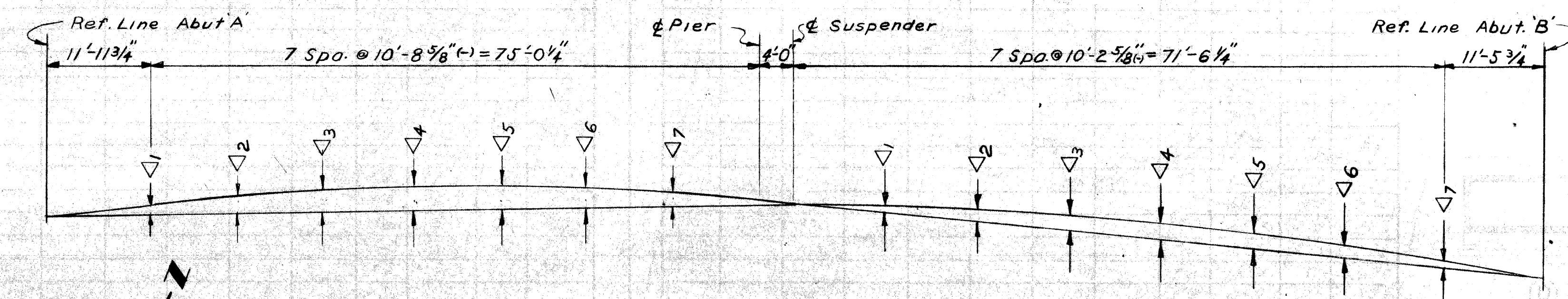
SQUAD BOSS	W.L.	5-68
DRAWN BY	W.L.	1-68
TRACED BY	D.J.R.	2-68
CHECKED BY	D.J.R.	2-68
SHEET	23	OF 26

S03 of 82124 A

S03 Superstructure



BOTTOM of SLAB ELEVATIONS
For Loading Case I



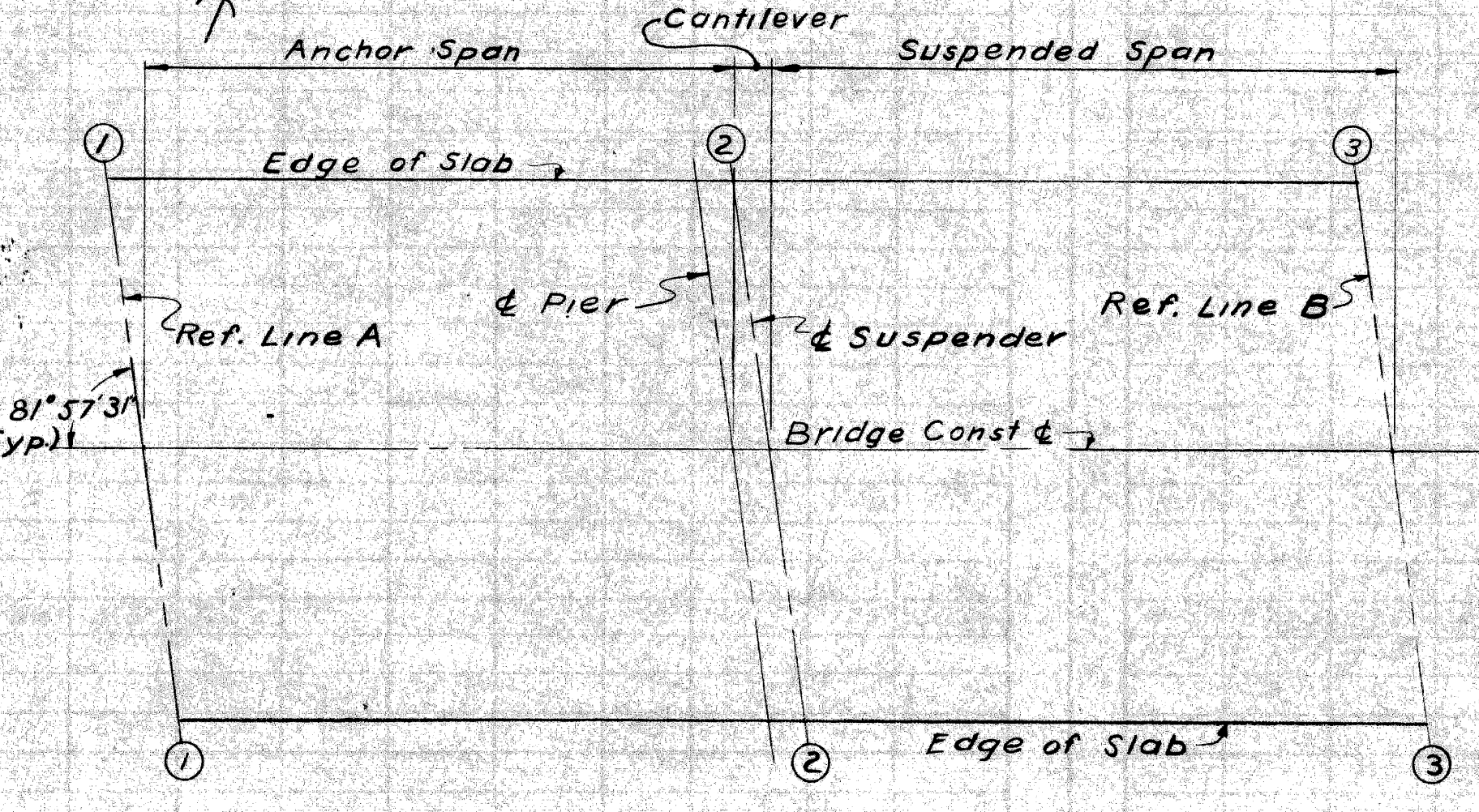
TOP of SLAB OFFSETS (Ft.)
For Loading Case III

Beam	Δ ₁	Δ ₂	Δ ₃	Δ ₄	Δ ₅	Δ ₆	Δ ₇
A	.15	.25	.32	.34	.32	.26	.17
B	.21	.21	.27	.29	.27	.22	.14
C	.11	.18	.23	.24	.23	.19	.12
D	.11	.18	.23	.24	.23	.19	.13
E	.11	.19	.23	.25	.23	.19	.13
F	.11	.18	.22	.24	.23	.19	.12
G	.11	.18	.22	.24	.23	.19	.13
H	.11	.18	.22	.24	.23	.19	.13
J	.11	.19	.24	.26	.24	.20	.13
K	.11	.19	.24	.26	.24	.20	.14
L	.11	.18	.22	.24	.23	.20	.13
M	.10	.18	.22	.24	.23	.19	.13
N	.10	.18	.22	.24	.23	.19	.13
P	.10	.17	.22	.24	.23	.19	.13
Q	.10	.17	.22	.24	.23	.19	.13
R	.10	.17	.22	.24	.23	.19	.13
S	.11	.20	.26	.28	.27	.22	.15
T	.13	.24	.31	.33	.32	.27	.17
A&T	.04	.07	.09	.10	.09	.07	.04
B	.01	.03	.04	.04	.04	.03	.02
C&D	0	0	0	0	0	0	0
J&K	.01	.01	.01	.01	.01	.01	.01
S	.02	.03	.04	.05	.04	.03	.02

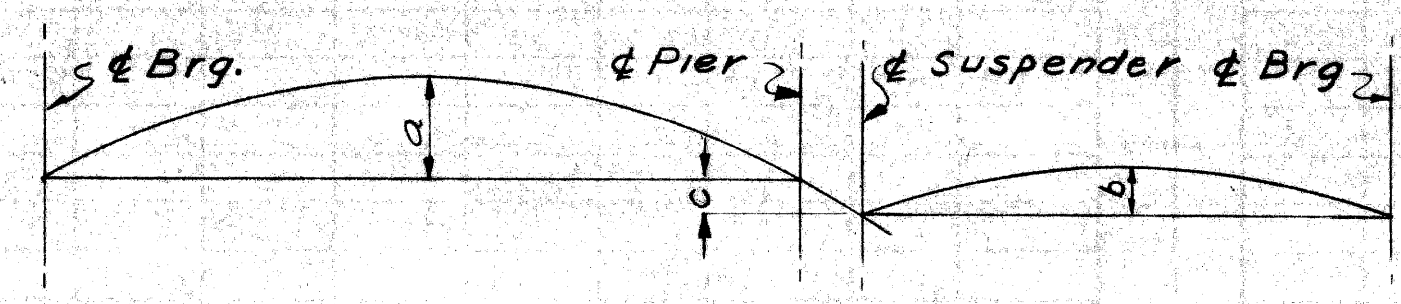
Dimension	CAMBER ORDINATES (inches)								
	SPAN 1			SPAN 2					
	"C"			"b"			"C"		
A	5 3/8	5 3/8	3 3/4	3 3/8	2 3/8	1 1/8	3/4	3/4	1/2
B&S	5 3/8	4 1/2	3 3/8	2 3/8	2 1/8	1/2	5/8	5/8	3/8
C&D	5 3/4	4 7/8	2 3/8	3 1/4	2 1/2	0	3/4	3/4	3/8
E&F	4 7/8	4	2 3/8	2 3/8	1 1/2	0	5/8	5/8	3/8
G,H,I,M	4 7/8	4	2 3/8	2 3/8	1 1/2	0	3/4	3/4	1/2
J&K	4 3/8	3 3/8	2 3/4	2 1/8	1 3/8	0	3/8	5/8	1/2
N,P,Q,R	4 3/4	3 3/8	2 1/2	2 3/8	1 1/2	0	3/4	3/4	1/2
T	5 3/4	5	3 3/8	3 3/8	2 3/8	1 1/8	3/8	3/8	5/8

Deflections* Due To Utilities		
Beam	Span 1	Span 2
C&D	3"	3"
E&F	8"	8"

* Deflections given are at mid point of Span.

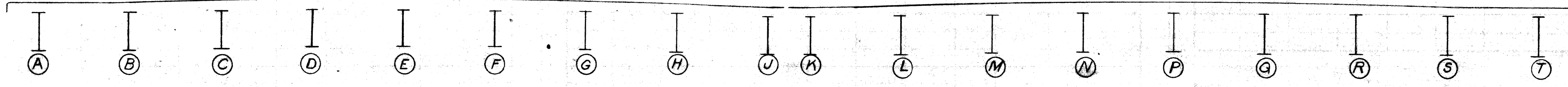


PLAN of SLAB



CAMBER DIAGRAM
For Loading Cases Shown in Table

NOTES:
Longitudinal strike-off finishing machine is to be used in placing deck concrete.
Screeds affected by loads in other spans are to be set to the elevations shown before casting any concrete. Concrete in the suspended span is to be cast before the concrete in the anchor span.
CASE I
Bottom of slab elevations are based on the condition that all structural steel has been erected, but no other loads applied. These elevations include allowances for deflections due to forms, steel reinforcement, shear developers in place, deck concrete, railing, utilities and sidewalk.
CASE II
Screed elevations are based on the condition that no slab concrete has been cast and that formwork, steel reinforcement and shear developers are in place.
CASE III
Shear developers, steel reinforcement and slab concrete in place on structural steel and no other load applied.



SCREED TEMPLATE

Line	Beam	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T
1-1		600.15	600.14	600.21	600.29	600.33	600.27	600.17	600.06	599.98	599.98	600.04	600.13	600.21	600.25	600.19	600.09	600.00	599.99
2-2		600.04	600.06	600.14	600.24	600.31	600.27	600.18	600.09	600.04	600.04	600.11	600.23	600.32	600.38	600.34	600.26	600.18	600.18
3-3		599.32	599.33	599.42	599.52	599.58	599.54	599.46	599.37	599.31	599.31	599.39	599.50	599.60	599.65	599.61	599.53	599.46	599.47

SCREED TEMPLATE ELEVATIONS For Loading Case II

PLANS PREPARED BY
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MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

CITY OF DETROIT

SQUAD BOSS: R.J. 8-68
DRAWN BY: SPURGEON 7-68
TRACED BY: [blank]
CHECKED BY: K.V.H. 2-68
SHEET 23 OF 26

REVISIONS

NO.	DESCRIPTION	DATE	BY
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JOB No. FW 590(1)

APPROVED: [Signature] STRUCTURAL ENGINEER

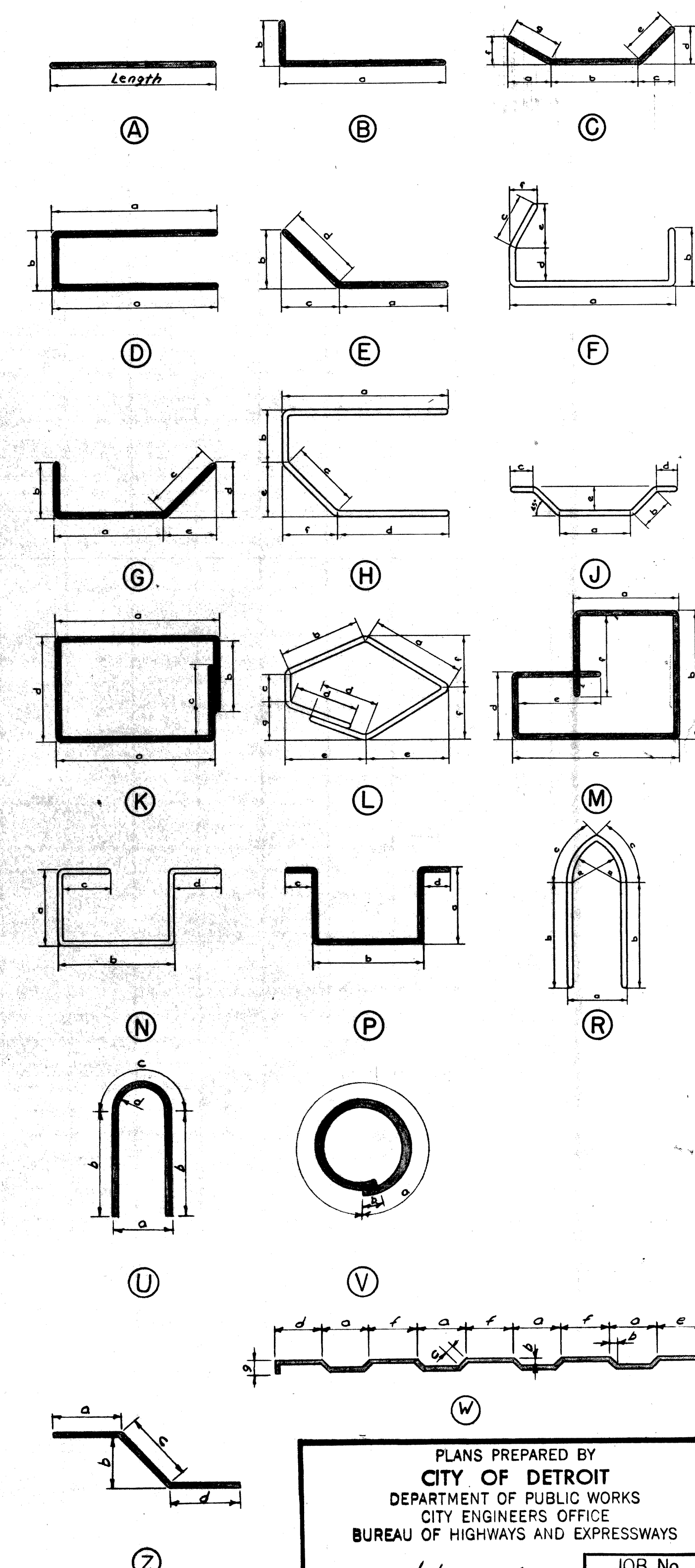
S03 of 82124 A

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A1								#6	5'-3"	158	1246
A2								#6	12'-6"	158	2967
A3								#8	8'-0"	156	3332
A4								#11	8'-0"	156	6631
A5								#4	21'-0"	200	2806
A6								#4	18'-6"	100	1236
A7								#6	28'-3"	88	3734
A8								#6	17'-6"	16	421
A9								#9	9'-3"	152	4780
A10								#8	14'-9"	152	5986
A11								#6	20'-0"	165	4957
A12								#6	21'-9"	165	5390
A13								#6	10'-6"	80	1262
A14								#6	12'-0"	12	216
A15								#6	24'-6"	40	1472
A16								#4	8'-6"	132	750
A17								#6	9'-9"	56	820
A18								#6	8'-0"	40	481
A19								#6	13'-0"	56	1094
A20								#6	17'-3"	32	829
A21								#6	6'-0"	32	289
A22								#6	9'-6"	32	457
A23								#8	7'-0"	36	673
A24								#6	14'-0"	36	757
A25								#7	5'-6"	36	405
A26								#10	7'-0"	36	1084
A27								#9	10'-3"	36	1255
A28								#9	8'-9"	40	1190
A29								#6	19'-6"	40	1172
A30								#4	4'-0"	82	219
A31								#4	12'-6"	152	1269
A32								#6	11'-0"	62	1024
A33								#6	9'-3"	14	185
A34								#6	4'-3"	200	1277
A35								#9	12'-9"	28	1214
A36								#8	9'-3"	14	346
A37								#6	15'-3"	32	733
A38								#11	12'-3"	28	1822
A39								#9	19'-6"	28	1856
A40								#6	22'-9"	40	1367
A41								#8	11'-0"	14	411
A42								#4	17'-6"	48	561
B1	4'-6"	2'-6"						#4	7'-0"	25	117
C1	1'-1 1/2"	4'-0"	1'-1 1/2"	0'-11 1/4"	1'-6"	0'-11 1/4"	1'-6"	#6	7'-0"	25	263
C2	0'-11 1/4"	3'-6"	0'-11 1/4"	1'-1 1/2"	1'-6"	1'-1 1/2"	1'-6"	#6	6'-6"	25	244
D1	3'-0"	7"						#6	6'-7"	100	989
G1	1'-2"	4'-6"	1'-4 1/2"					#4	7'-0"	25	117
Z1	2'-6 1/2"	2'-7 1/2"	3'-8"	2'-6 1/2"				#6	8'-9"	220	2891
Total Abutments-74,606											
A101								#9	38'-3"	440	57222
A102								#10	32'-3"	436	60504
A103								#4	37'-6"	222	5561
A104								#10	14'-0"	36	2169
Total Subbase - 125,456											

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A201								#10	36'-8"	14	2209
A202								#10	38'-8"	7	1165
A203								#4	36'-8"	4	98
A204								#4	38'-8"	2	52
A205								#7	36'-8"	14	1049
A206								#7	38'-8"	7	553
A207								#8	11'-0"	24	705
A208								#9	11'-5"	90	3493
A209								#9	8'-11"	90	2729
A210								#9	37'-8"	12	1537
A211								#4	36'-7"	24	586
A212								#6	9'-3"	74	1028
A213								#8	38'-6"	42	4317
A214								#7	9'-3"	111	2099
B201	1'-9"	0'-6 1/4"						#6	2'-3"	4	14
B202	4'-11"	0'-6 1/4"						#6	5'-5"	4	33
B203	3'-11"	0'-6 1/4"						#6	4'-5"	146	968
C201	0'-4 5/8"	3'-2"	0'-4 3/8"	2'-1"	2'-2"	2'-1"	2'-2"	#4	7'-6"	73	366
D201	2'-2"	3'-2"						#4	7'-5"	14	69
D202	2'-3"	4'-10"						#4	9'-3"	4	25
E201	3'-5"	1'-0"	1'-7"	1'-11"				#6	5'-4"	146	1170
K201	3'-2 1/2"	1'-6 1/2"	1'-6"	2'-0 1/2"				#5	11'-5"	176	2096
U201	2'-10 1/4"	1'-1"	4'-5"	1'-4 1/2"				#4	6'-7"	6	26
V201								#4	8'-7"	72	413
Z201	2'-6 1/2"	2'-7 1/2"	3'-8"	2'-6 1/2"				#6	8'-9"	222	2918
Total Pier- 29,718"											

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A301								#4	1'-6"	5	5
A302								#4	2'-9"	4	7
A303								#4	4'-0"	3	8
A304								#4	5'-0"	1	3
A305								#4	28'-0"	411	7687
A306								#4	31'-0"	411	8511
A307								#4	2'-3"	12	18
A308								#4	9'-6"	4	25
A309								#4	10'-3"	4	27
A310								#4	13'-3"	156	1381
A311								#4	21'-6"	44	632
A312								#5	28'-3"	408	12022
A313								#5	31'-3"	408	13298
A314								#6	8'-9"	51	670
A315								#6	10'-9"	51	823
A316								#6	30'-3"	1160	52705
A317								#4	1'-0"	4	3
A318								#4	12'-0"	38	305
A319								#4	12'-10"	24	206
A320								#4	10'-9"	84	603
A321								#4	11'-2"	12	90
B301	10'-9 1/2"	0'-9"						#4	11'-6"	281	2159
B302	10'-6 1/2"	0'-9"						#4	11'-3"	7	58
B303	10'-3 1/2"	0'-9"						#4	11'-0"	8	59
D301	0'-6"	1'-2"						#4	2'-1"	909	1265
D302	3'-0"	7"						#6	6'-7"	296	2927
K301	3'-4"	1'-0 1/2"	1'-1"	1'-3 1/2"				#4	10'-0"	22	147
K302	3'-4"	1'-4 1/2"	1'-5"	1'-7 1/2"				#4	11'-0"	8	59
M301	0'-10 1/4"	3'-4"	1'-3 1/2"	2'-5"	0'-11 1/4"	1'-5 1/2"		#4	10'-2"	130	883
M302	0'-10 1/4"	3'-4"	1'-3 1/2"	1'-11"	0'-11 1/4"	1'-11 1/2"		#4	10'-2"	10	68
P301	1'-1"	5'-5 1/2"	0'-9 1/4"	0'-9 1/4"				#4	9'-1"	112	680
W301	3'-4 1/4"	0'-3 1/2"	0'-5"	3'-8"	2'-5 1/2"	2'-10 1/2"	0'-5"	#6	31'-11"	288	13806
W302	3'-4 1/4"	0'-3 1/2"	0'-5"	2'-10"	2'-6 1/2"	2'-10 1/2"	0'-5"	#6	31'-2"	288	13482
Total Superstructure - 134,617"											

BAR BENDING DIAGRAM



PLANS PREPARED BY
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 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: [Signature] STRUCTURAL ENGINEER

JOB No. PW 990(1)

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL REINFORCEMENT DETAILS

Note:-
 All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.

Tolerances in cutting and bending bars are as established in Manual of Standard Practice of the Concrete Reinforcing Steel Institute and Detailing Manual of the American Concrete Institute

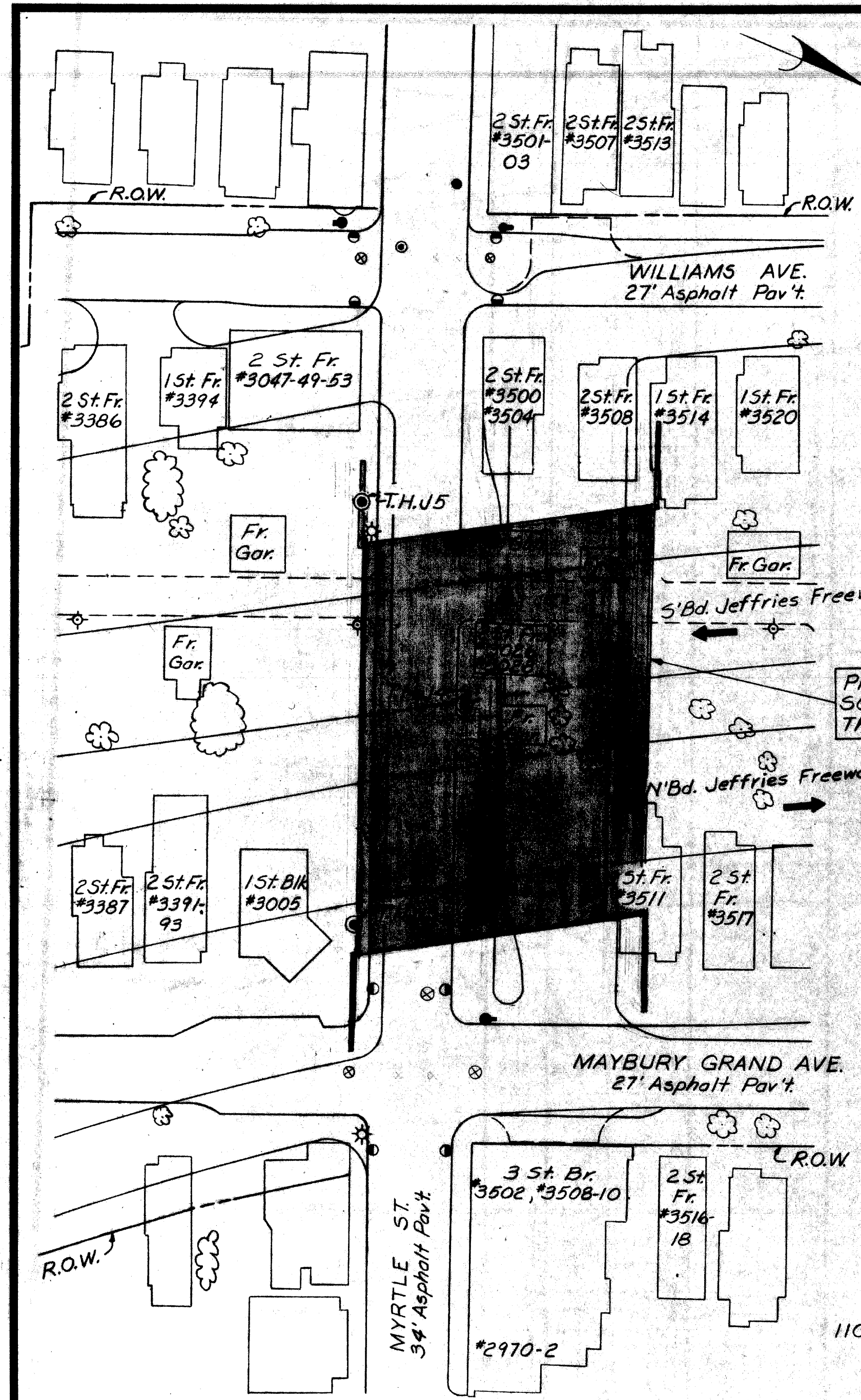
Grand Total Steel Reinforcement **364,397** *

All bar numbers shown on this sheet are to be prefixed

Steel for reinforcement shall be intermediate or hard grade only.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

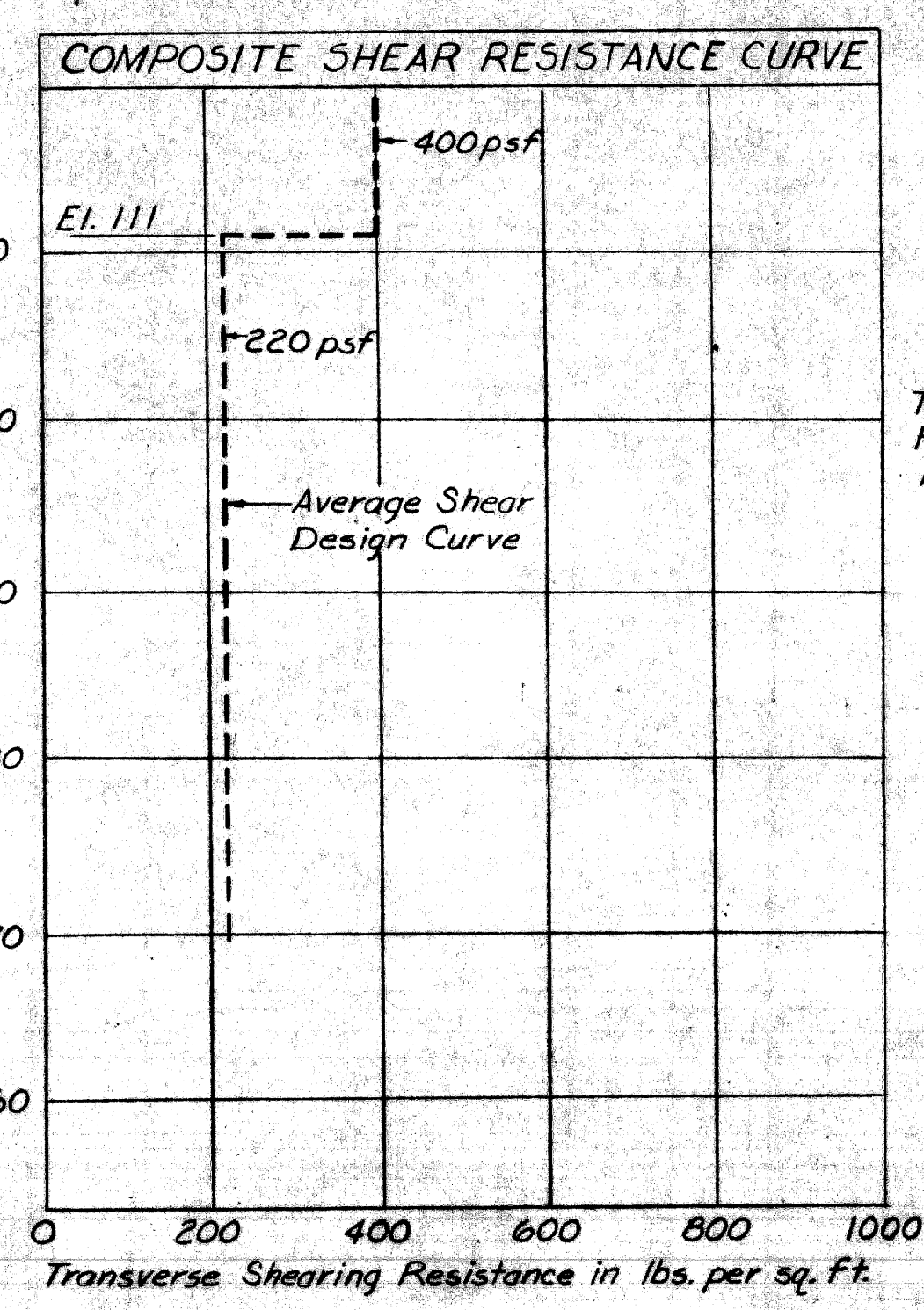
CITY OF DETROIT
 SQUAD BOSS: [Signature] 9-68
 DRAWN BY: [Signature] 2-68
 CHECKED BY: P. Goffas 2-68
 SHEET 26 of 26
 503 of 82124 A



SURVEY PLAN
Scale: 1" = 40'

UTILITY LEGEND

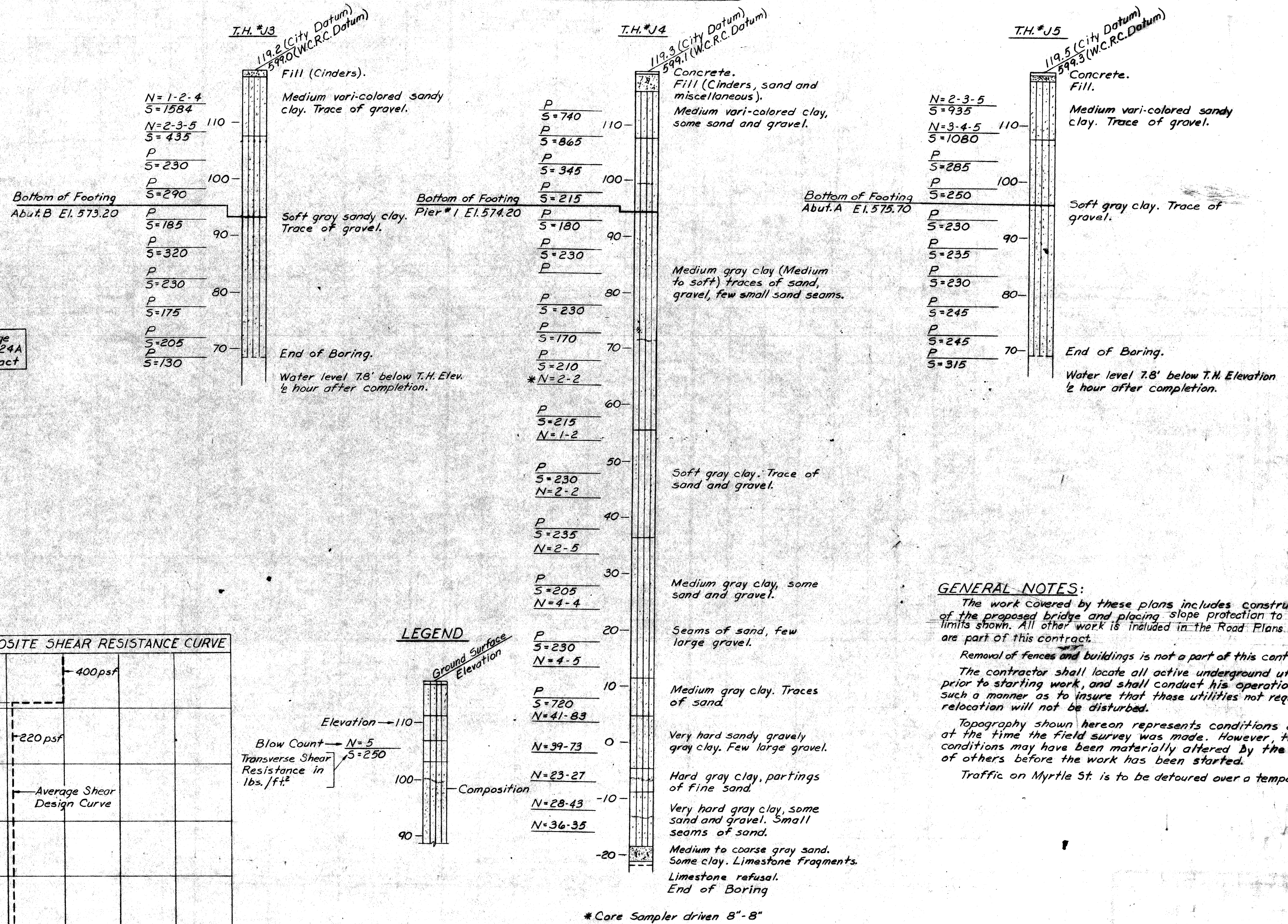
- Sewer Inlet or Catchbasin
- Sewer Manhole
- PLC Manhole
- Detroit Edison Co. Manhole
- Water Gate Well and Valve
- Fire Hydrant
- Detroit Edison Co. Pole
- PLC Lightpole
- Test Hole for Soil Profile
- Tree



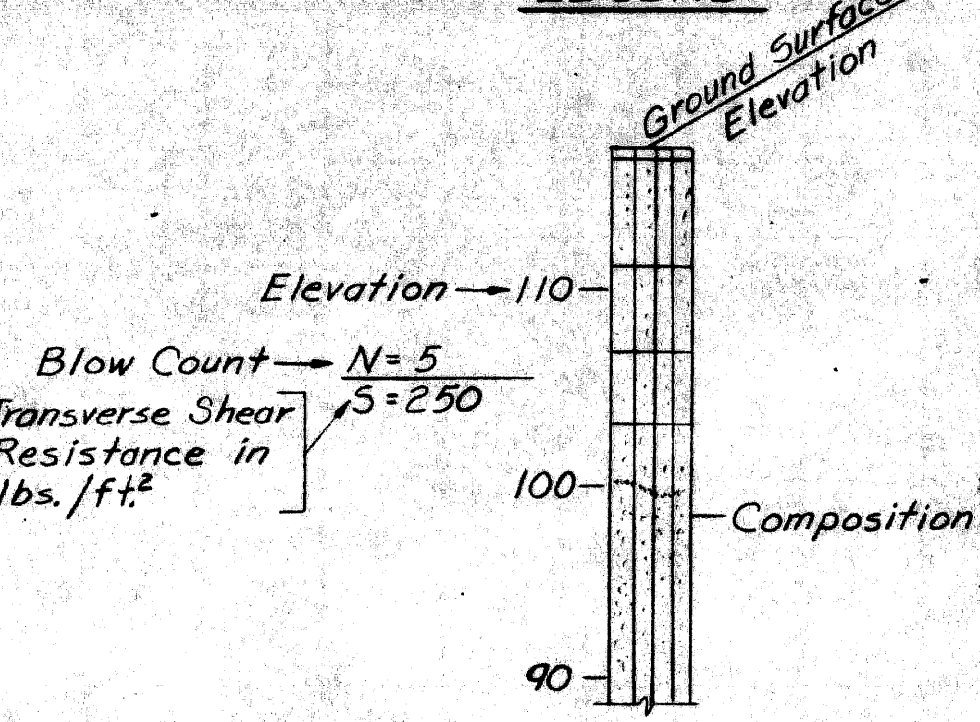
Notes:

N Indicates number of blow required to drive a sampler 6" (or as noted) using a 140# hammer falling 30".
 S Indicates Transverse Shearing Resistance in lbs./ft.² as determined by M.S.H.D. Standard Test.
 P Indicates sampler was pushed.
 Soil Boring Elevations are based on City of Detroit Datum. All other elevations are based on U.S.C. and G.S. Datum. To convert elevations based on City of Detroit Datum to elevations based on U.S.C. and G.S. Datum, add 479.755'.

LOG OF SOIL BORINGS



LEGEND



GENERAL NOTES:

The work covered by these plans includes construction of the proposed bridge and placing slope protection to the limits shown. All other work is included in the Road Plans which are part of this contract.
 Removal of fences and buildings is not a part of this contract.
 The contractor shall locate all active underground utilities prior to starting work, and shall conduct his operations in such a manner as to insure that these utilities not requiring relocation will not be disturbed.
 Topography shown hereon represents conditions existing at the time the field survey was made. However, these conditions may have been materially altered by the operations of others before the work has been started.
 Traffic on Myrtle St. is to be detoured over a temporary road.

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)

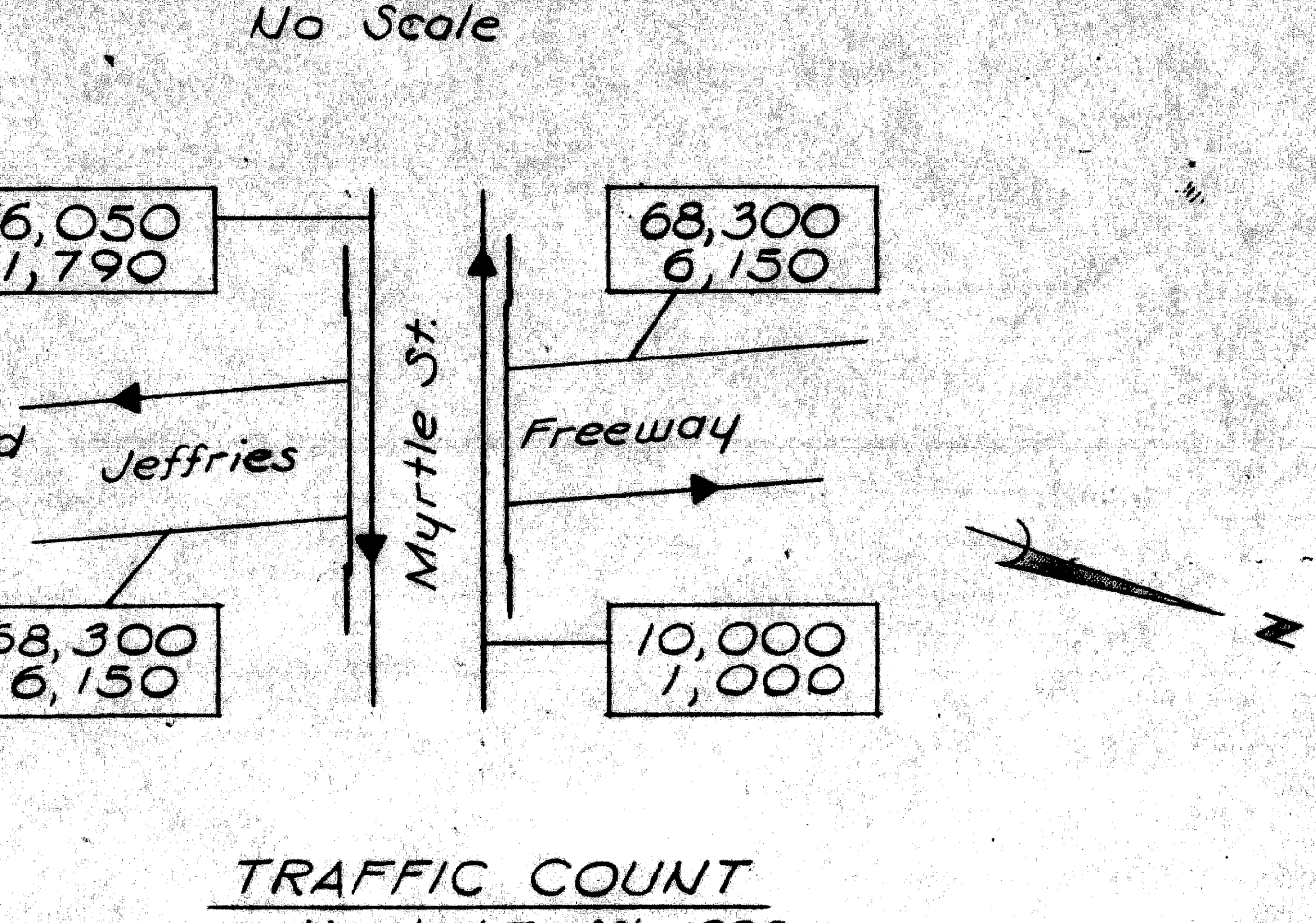
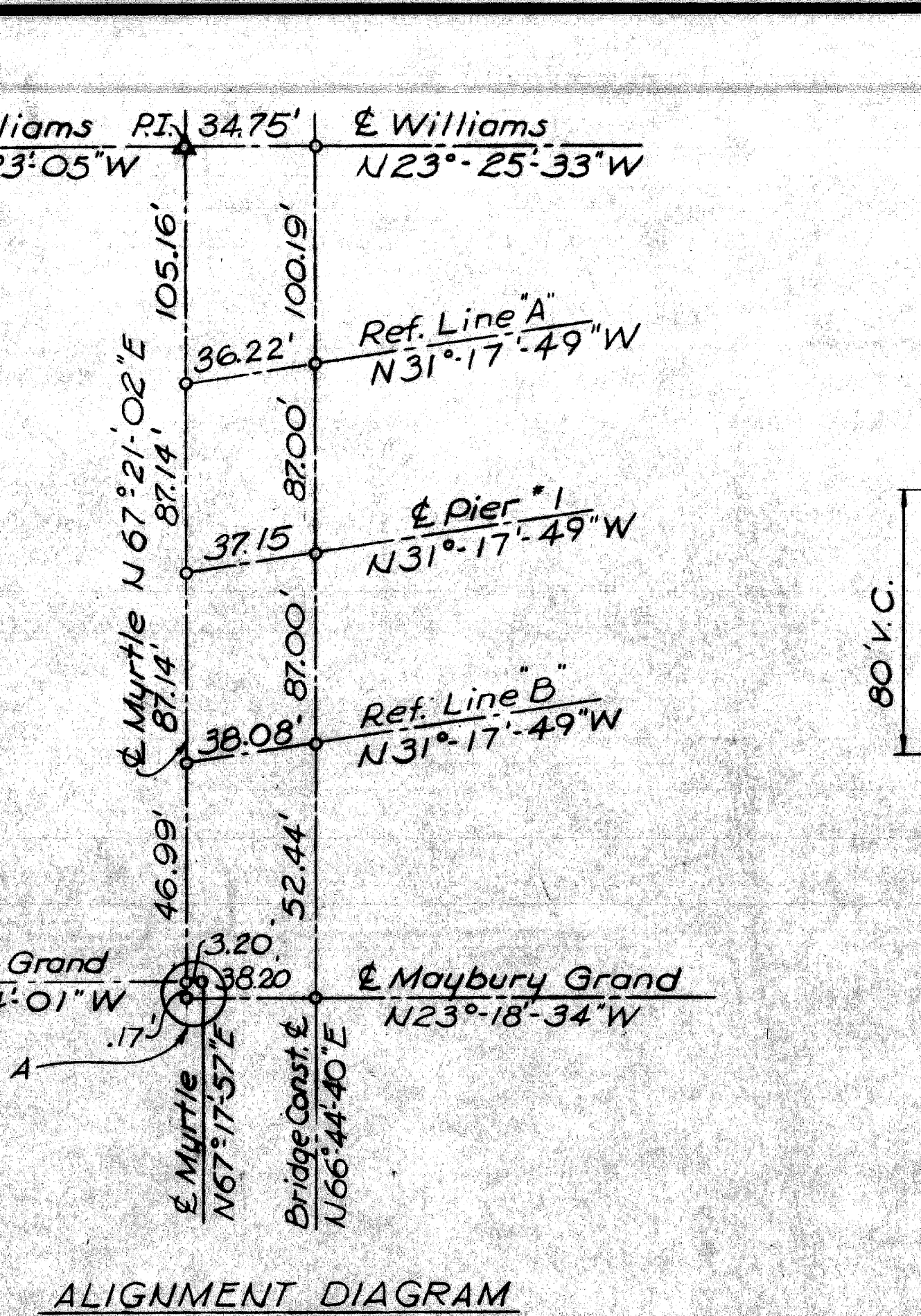
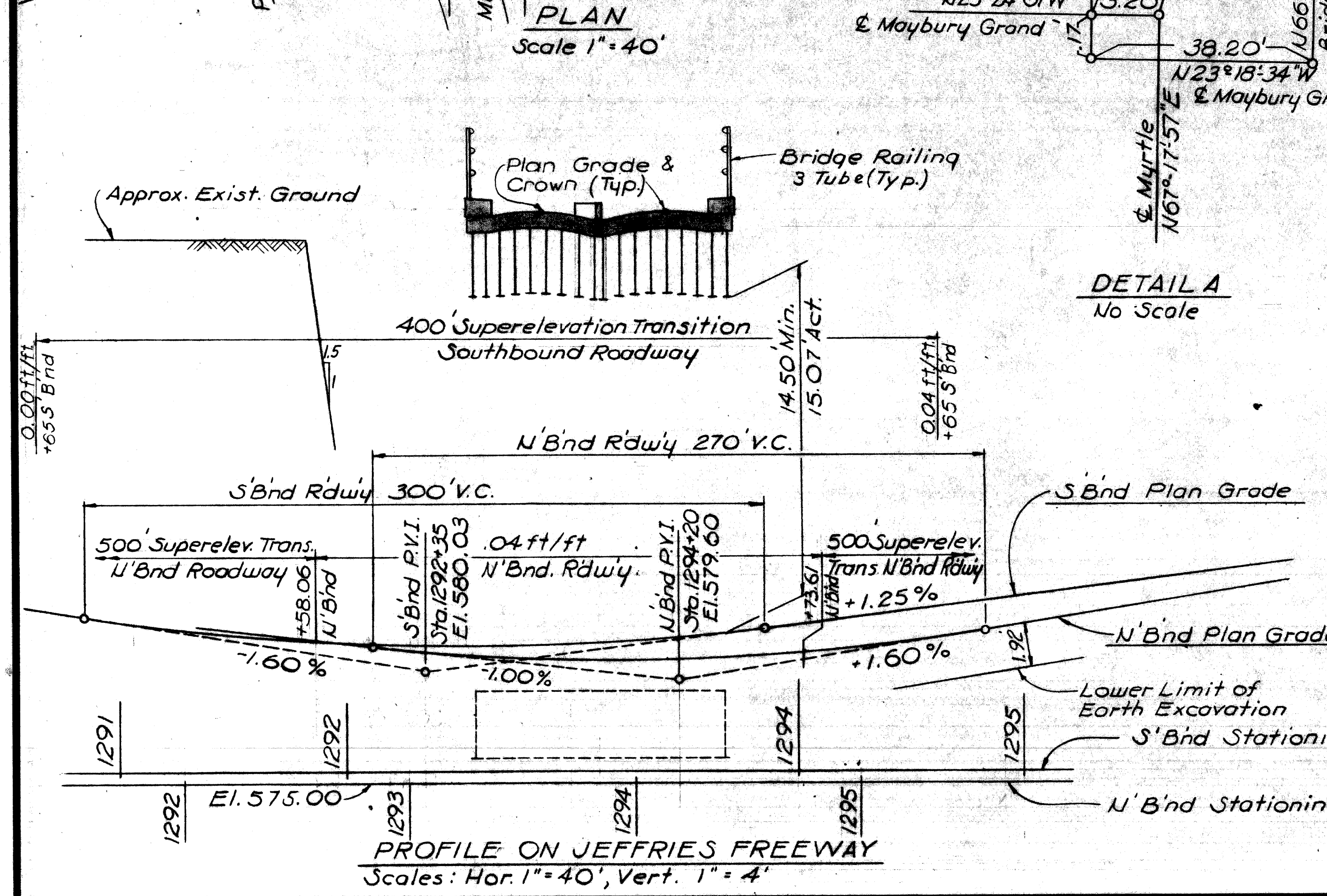
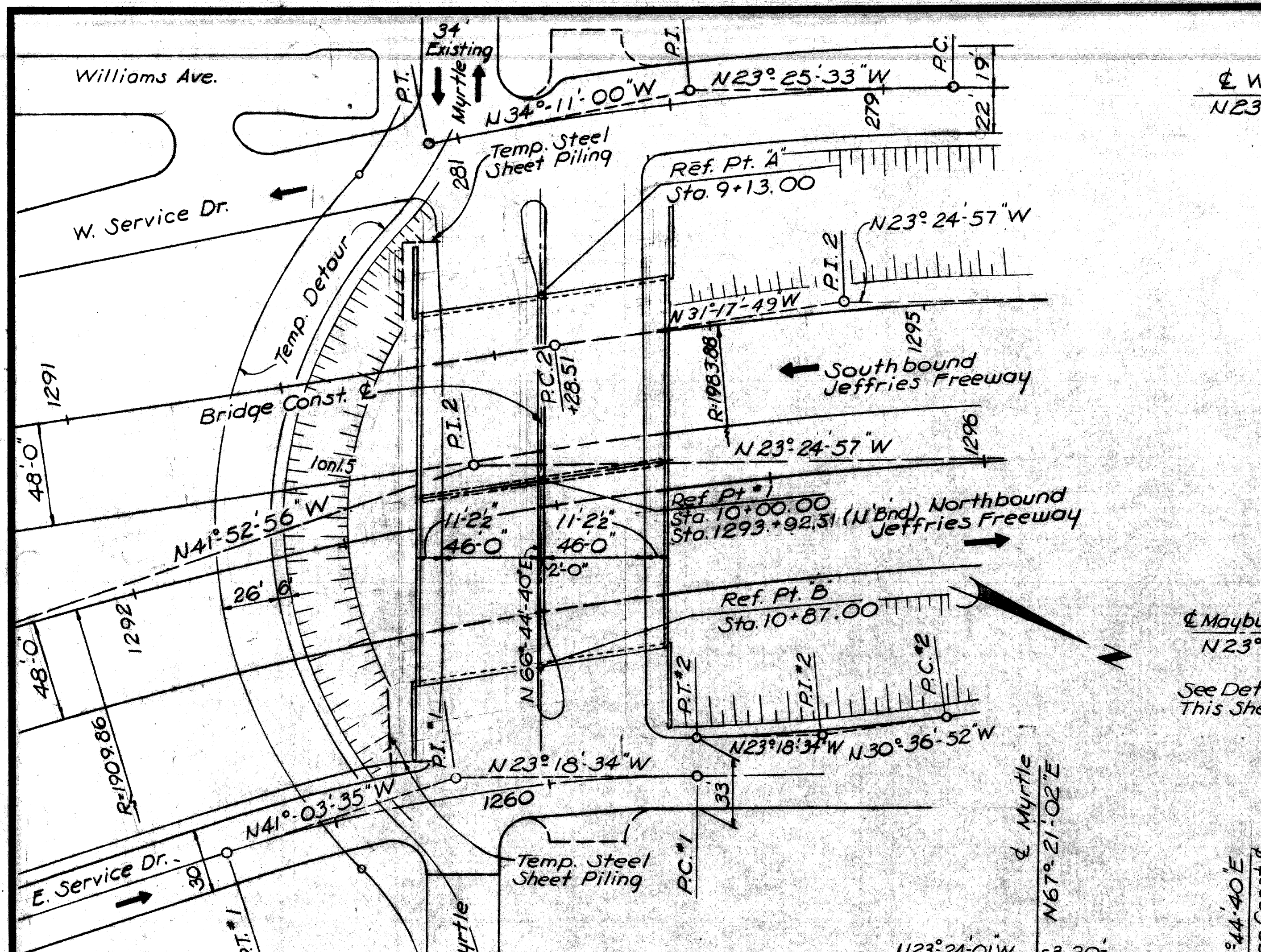
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 MYRTLE ST. CROSSING JEFFRIES FREEWAY
 IN DETROIT

GENERAL PLAN OF SITE

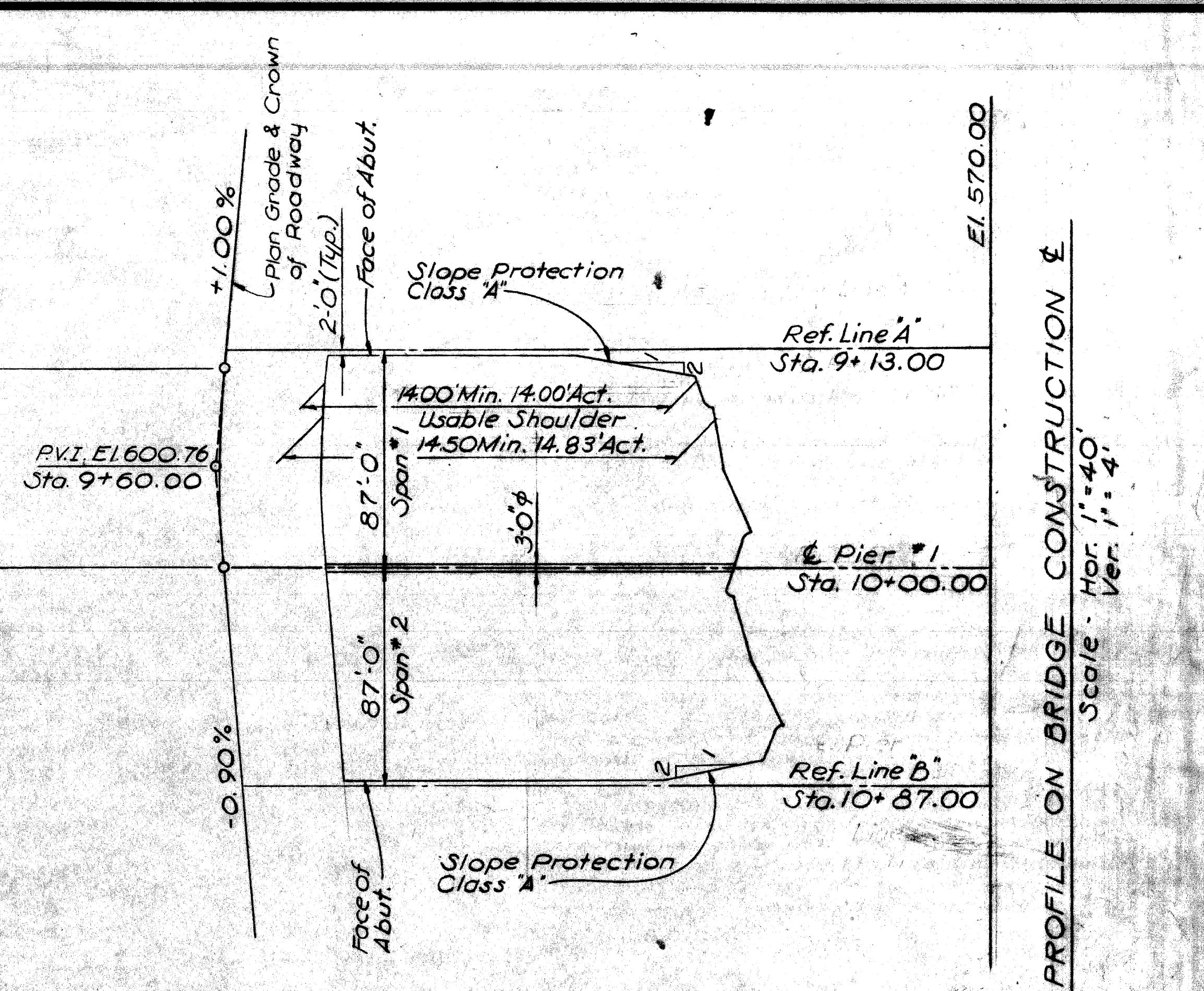
APPROVED: _____
 DESIGN SUPERVISING ENGINEER

APPROVED: _____
 ENGINEER OF DESIGN - CONSULTANTS

CITY OF DETROIT
 DRAWN BY: *[Signature]*
 CHECKED BY: *[Signature]*
 503 of 82124 A



- CONSTRUCTION BENCH MARKS**
- C.B.M - 7 DET on Flange of Hydrant S.W. Corner Myrtle & Williams: El. 601.64
 - C.B.M - 8 DET on Flange of Hydrant S.E. Corner Magnolia & Williams: El. 601.72
 - C.B.M - 9 DET on Flange of Hydrant N.W. Corner Magnolia & Maybury Grand: El. 602.13
- Notes:**
- C.B.M denotes construction bench mark.
 - o denotes reference point or point of intersection.



CURVE DATA

N. Bnd Jeffries Curve #2	S. Bnd Jeffries Curve #2
PC. 2 Sta. 1290+58.06	PC. Sta. 1293+28.51
PT. 2 Sta. 1293+68.53	PT. Sta. 1294+65.17 (Fwd.)
P.T. 2 Sta. 1296+73.61	P.T. Sta. 1296+01.40
Δ = 18°-27'-59"	Δ = 7°-52'-52"
D = 9°-00'-00"	D = 2°-53'-17"
R = 1909.86'	R = 1983.88'
T = 310.47'	T = 136.66'
L = 615.55'	L = 272.89'
E = 25.07'	E = 4.70'

E. Service Dr. @ Myrtle Curve #1	W. Service Dr. @ Myrtle
PC. Sta. 1259+29.93	PC. Sta. 278+67.89
PT. Sta. 1260+41.77	PT. Sta. 279+91.36
P.T. Sta. 1261+51.81	P.T. Sta. 281+14.10
Δ = 17°-45'-01"	Δ = 10°-45'-27"
D = 8°-20'-00"	D = 4°-22'-09"
R = 716.20'	R = 1311.38'
T = 111.84'	T = 123.47'
L = 221.88'	L = 246.22'
E = 8.70'	E = 5.80'

Work this sheet with sheets # 4 & 5

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

APPROVED: *H. Paul* (Structural Engineer)
REVISIONS:

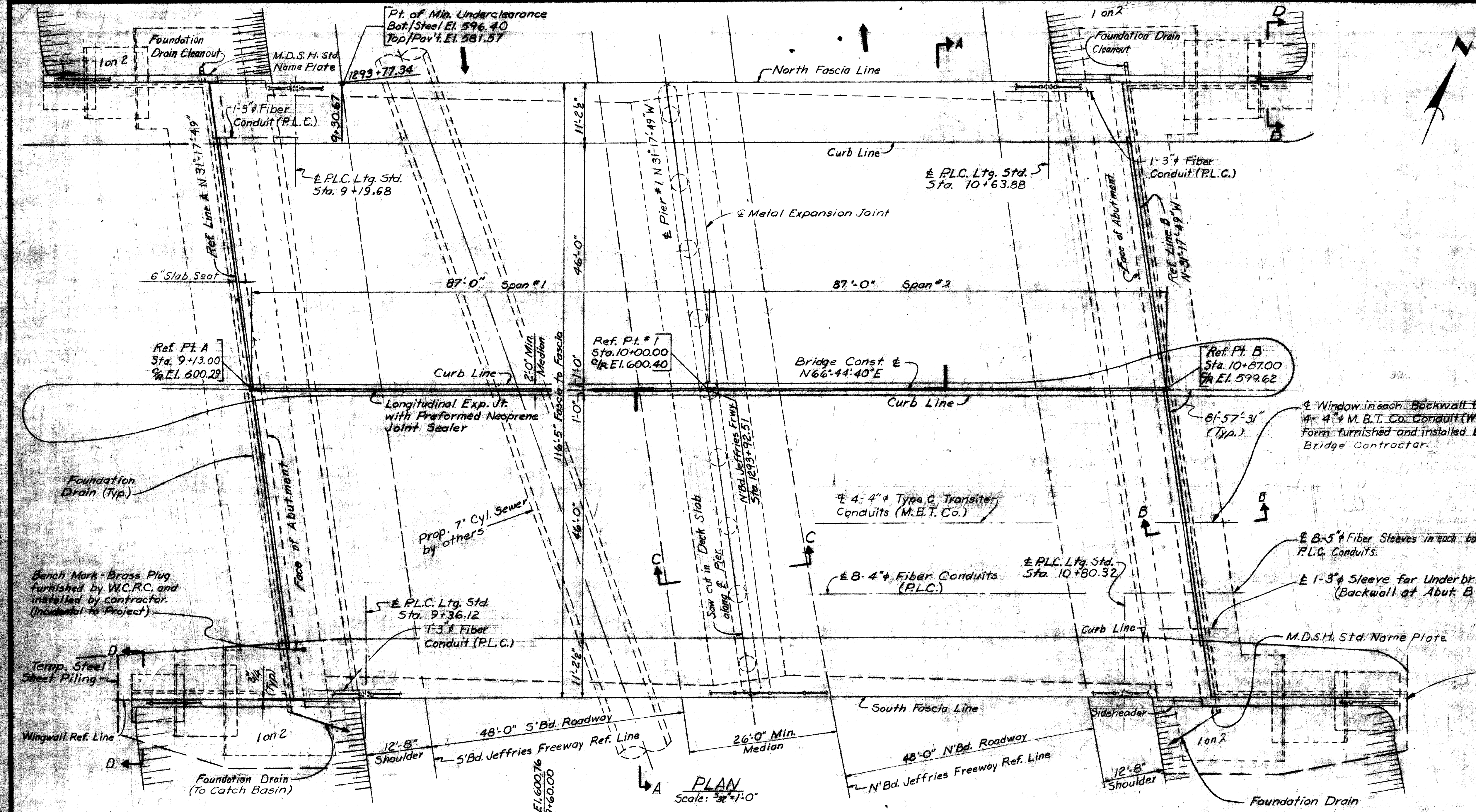
JOB No.
PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

GENERAL DRAWING

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

CITY OF DETROIT
SHEET 3 of 26
S03 of 82124 A



GENERAL NOTES:
 The design of this structure is based on M.S.H.D. Specifications for the design of Highway Bridges, 1958 edition and current AASHTO Standard Specifications for Highway Bridges MS-20-44 loading.
 Live load plus impact deflection = 1000 of span length = 330 of cantilever arm.

The top of roadway slab and tops of curbs are parallel to the vertical curve and tangents.

For details of Slope Protection - Class A, see Std. Sh. SP2.

Tamped Clay and Selected Excavated Material are incidental to Unclassified Excavation.

C/R denotes Crown of Roadway.

The vertical pay limits of temporary steel sheet piling are the top of retained earth and the bottom of footing.

The lateral pay limits of temporary steel sheet piling are as required and determined by the Engineer.

Temporary steel sheet piling is to be adequately supported to prevent bowing and tipping. Method and adequacy of support are subject to the approval of the Engineer.

Temporary steel sheet piling 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 Sheet Piling.

PLAN
 Scale: 3/32" = 1'-0"

MISCELLANEOUS QUANTITIES		
Item	Unit	Am't
Foundation Drain	Lin. Ft.	47
Slope Protection - Class A	Sq. Yd.	235
Slope Protection Header	Lin. Ft.	276
Temp. Steel Sheet Piling	Sq. Ft.	1500

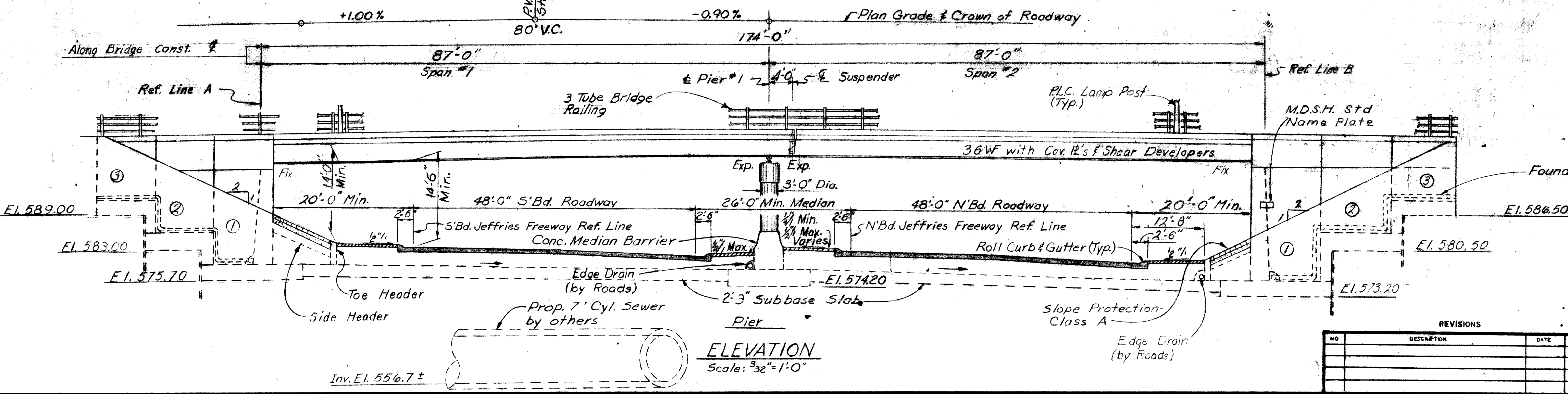
Work this sheet with sheet nos. 3 & 5

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

APPROVED: *H. Paul*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 MYRTLE ST. CROSSING JEFFRIES FREEWAY
 IN DETROIT
GENERAL PLAN OF STRUCTURE

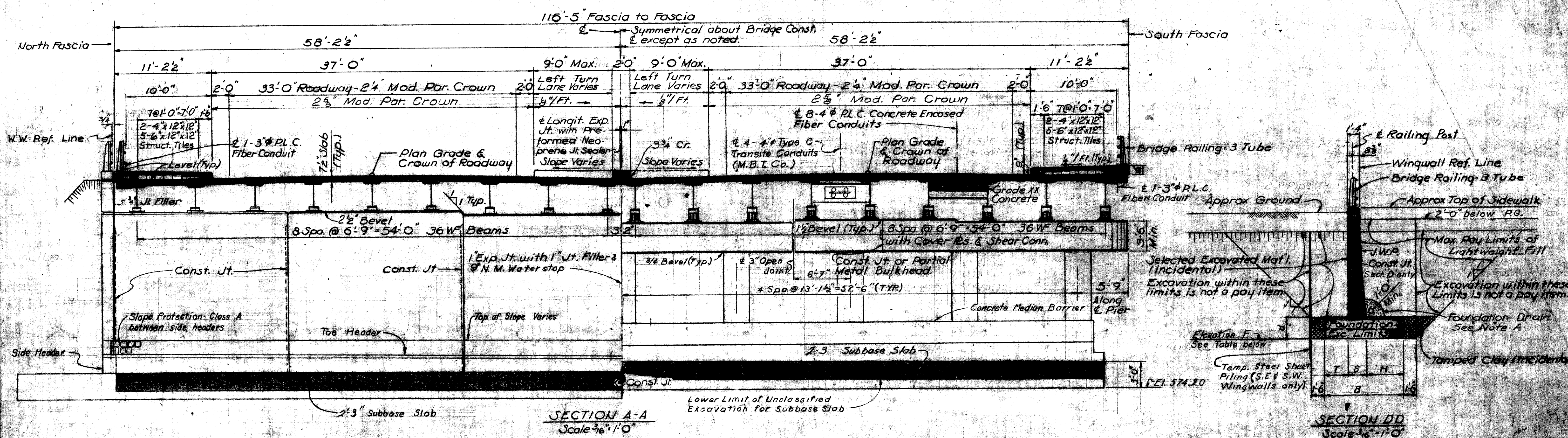


ELEVATION
 Scale: 3/32" = 1'-0"

REVISIONS			
NO.	DESCRIPTION	DATE	BY

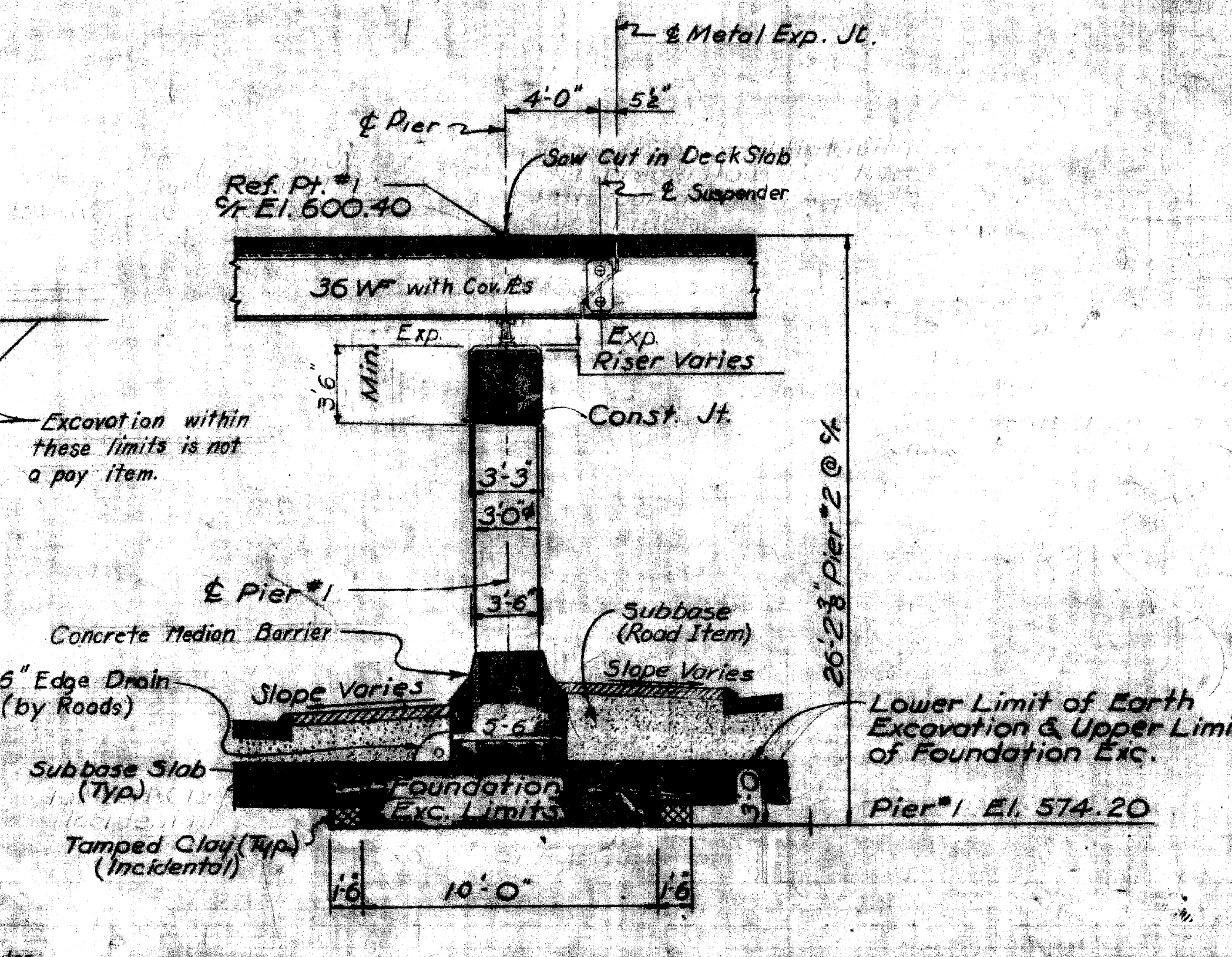
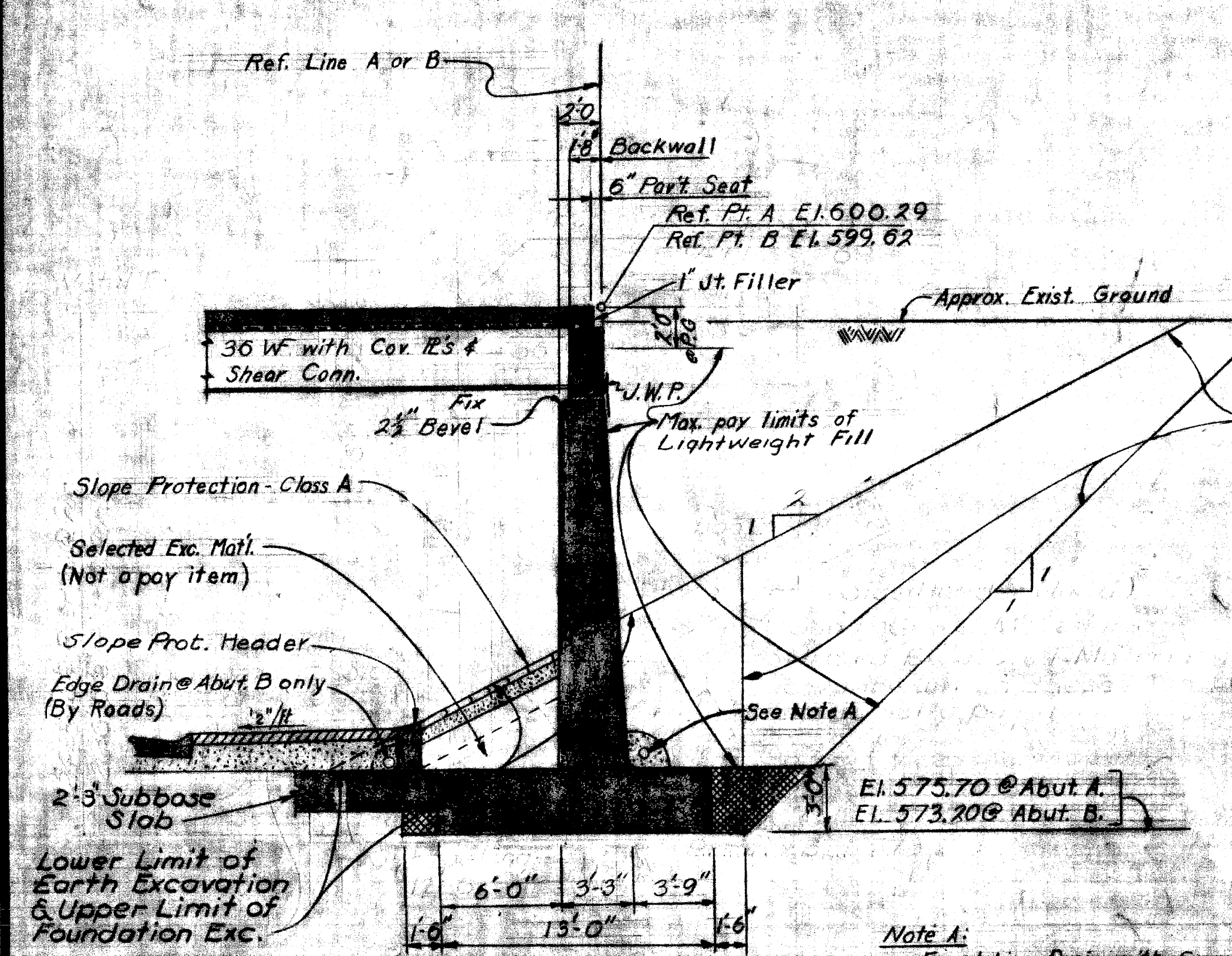
APPROVED: _____ DESIGN SUPERVISING ENGINEER
 APPROVED: _____ ENGINEER OF DESIGN CONSULTANTS

SHEET 4 OF 26
 S03 of 82124 A



WINGWALL DIMENSIONS

Section	T	S	H	B	d	Elevation
1	10'-0"	3'-6"	6'-6"	20'-0"	3'-0"	573.70 @ Abut. A
2	6'-6"	3'-0"	5'-0"	14'-6"	3'-0"	580.50 @ Abut. B; 583.00 @ Abut. A
3	3'-6"	2'-0"	4'-6"	10'-0"	2'-6"	586.50 @ Abut. B; 589.00 @ Abut. A



Note A:
Foundation Drain with Granular Material: Class I incidental to Foundation Drain.

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)

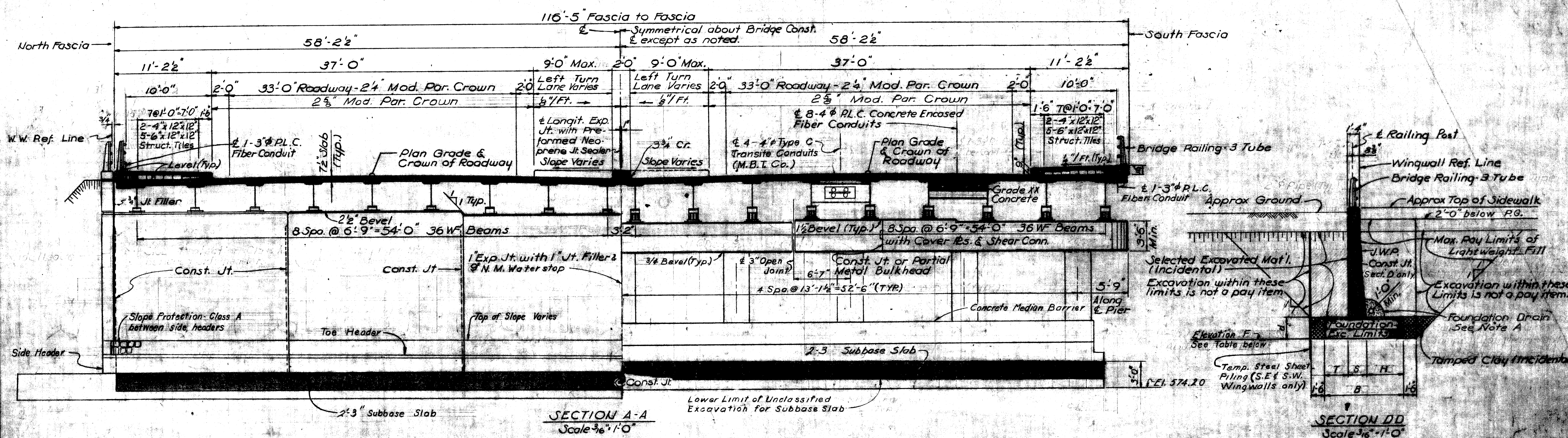
Work this sheet with sheets No. 3 & 4

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

GENERAL PLAN OF STRUCTURE

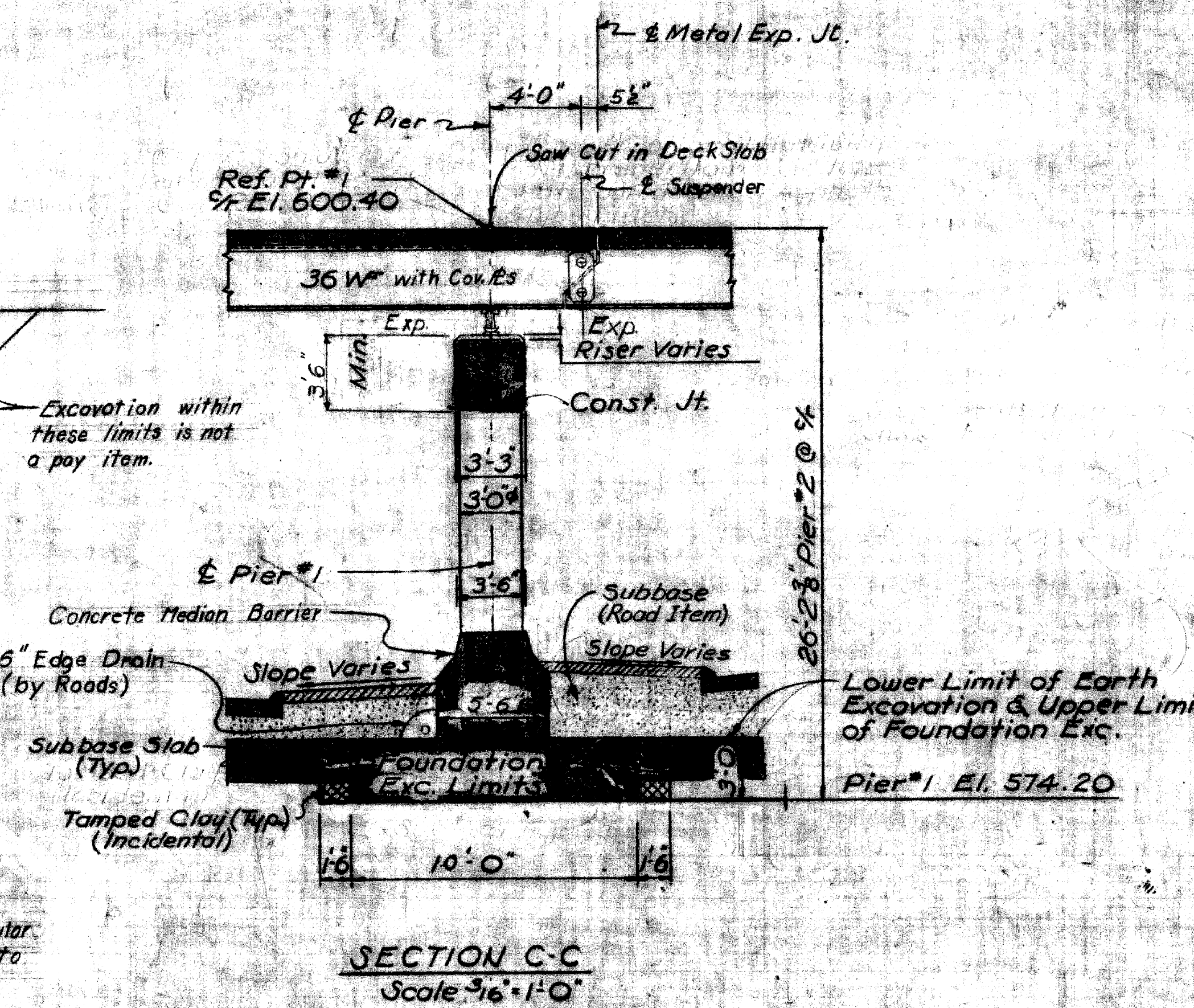
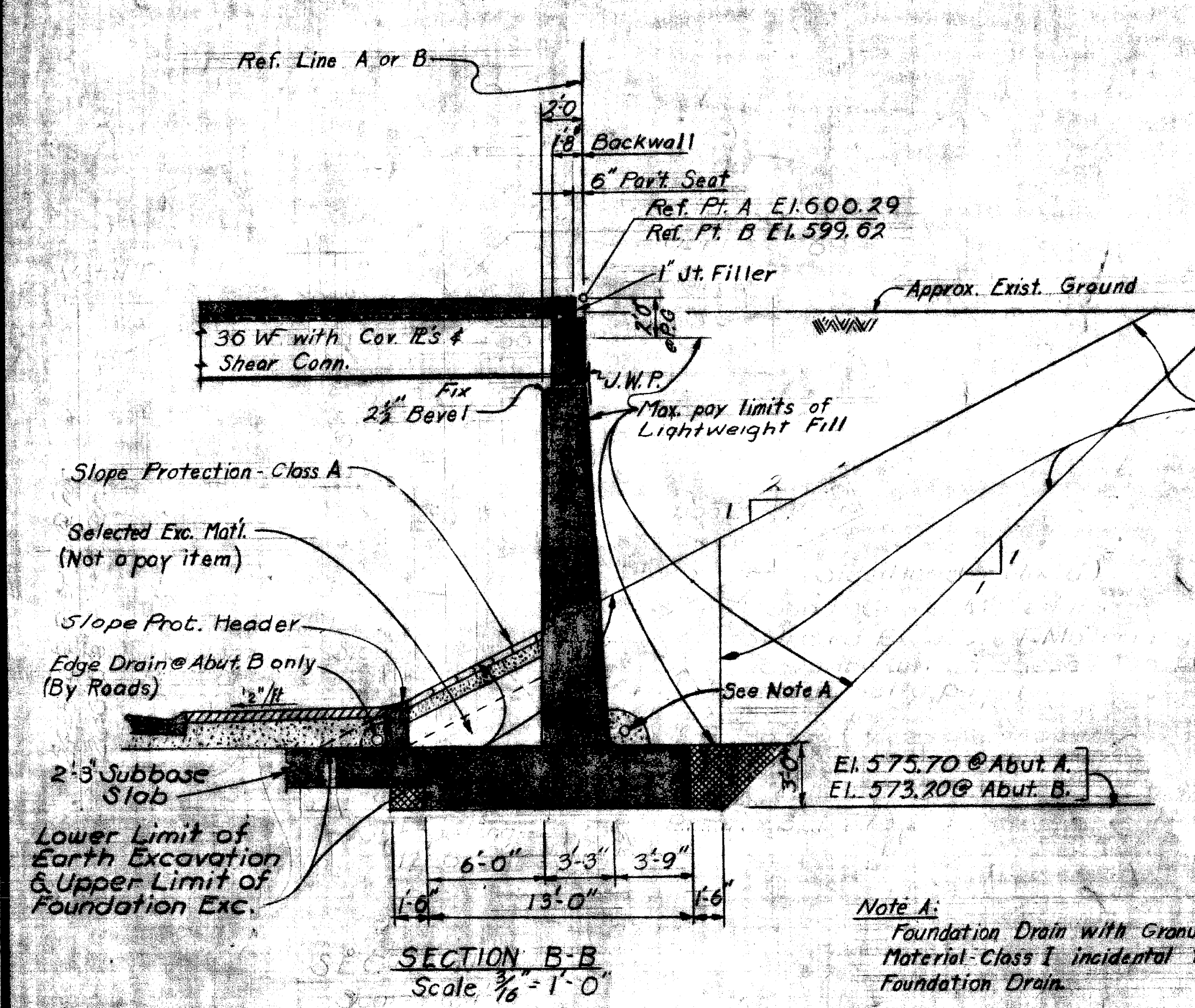
APPROVED: [Signature] DESIGN SUPERVISING ENGINEER
APPROVED: [Signature] ENGINEER OF DESIGN CONSULTANTS

NO. 3 of 82124 A



WINGWALL DIMENSIONS

Section	T	S	H	B	d	Elevation
1	10'-0"	3'-6"	6'-6"	20'-0"	3'-0"	573.70 @ Abut. A
2	6'-6"	3'-0"	5'-0"	14'-6"	3'-0"	580.50 @ Abut. B; 583.00 @ Abut. A
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Note A:
Foundation Drain with Granular Material: Class I incidental to Foundation Drain.

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)

Work this sheet with sheets No. 3 & 4

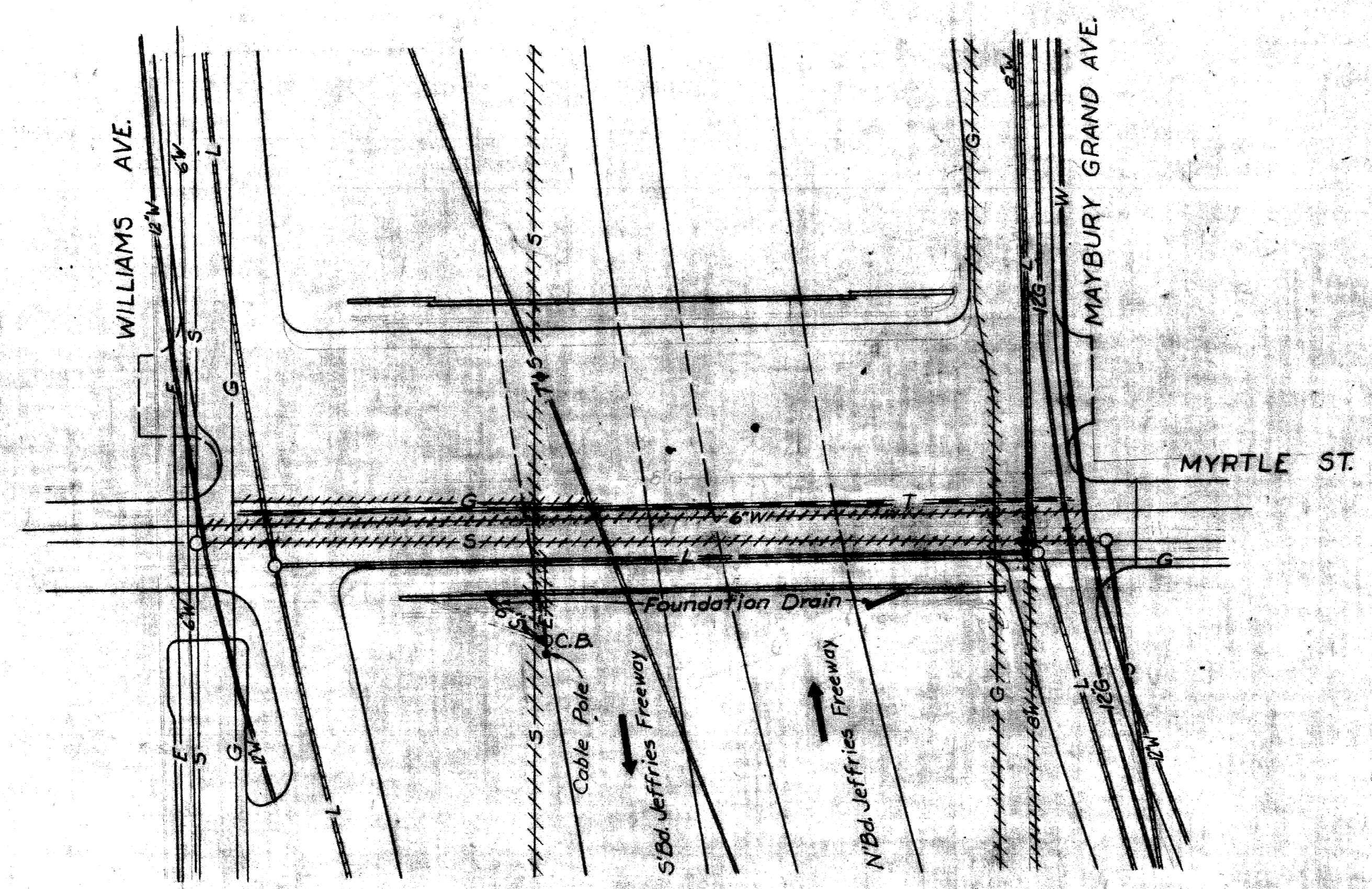
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

GENERAL PLAN OF STRUCTURE

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

NO. 303 of 82124 A

UTILITY	EXISTING	DELETED OR ABANDONED	NEW WORK BY OTHERS	NEW WORK BY CONTRACTOR
DETROIT WATER DEPARTMENT	W ———	////W////	====W====	W ———
FREEWAY & CITY OF DETROIT SEWERS	S ———	////S////	====S====	S ———
MICHIGAN CONSOLIDATED GAS CO.	G ———	////G////	====G====	G ———
MICHIGAN BELL TELEPHONE CO.	T ———	////T////	====T====	T ———
PUBLIC LIGHTING COMMISSION	L ———	////L////	====L====	L ———
DETROIT EDISON COMPANY	E ———	////E////	====E====	E ———



SITUATION PLAN
Scale: 1" = 40'

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

APPROVED: *H. Cant*
STRUCTURAL ENGINEER

JOB No.
PW 990(1)

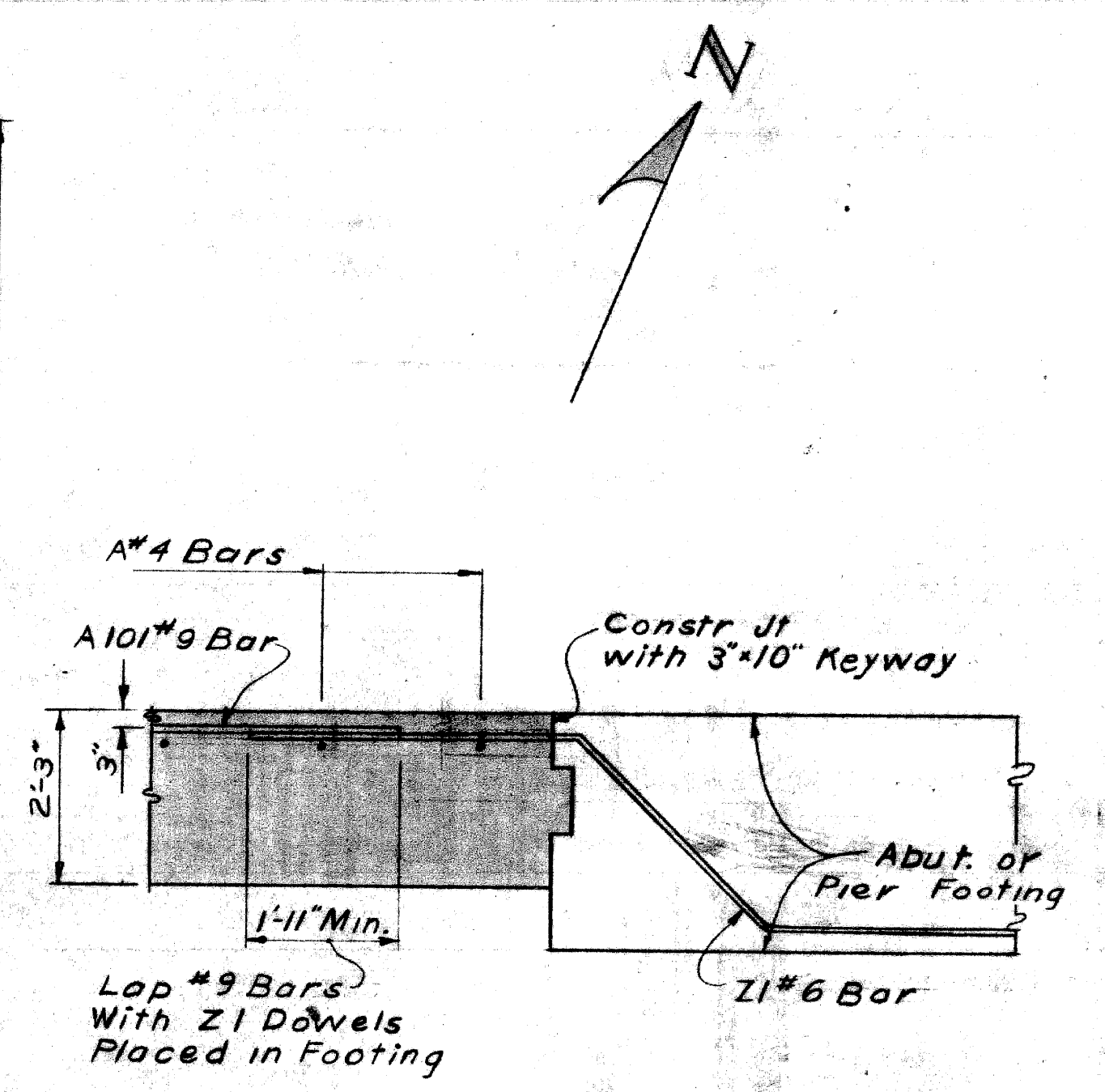
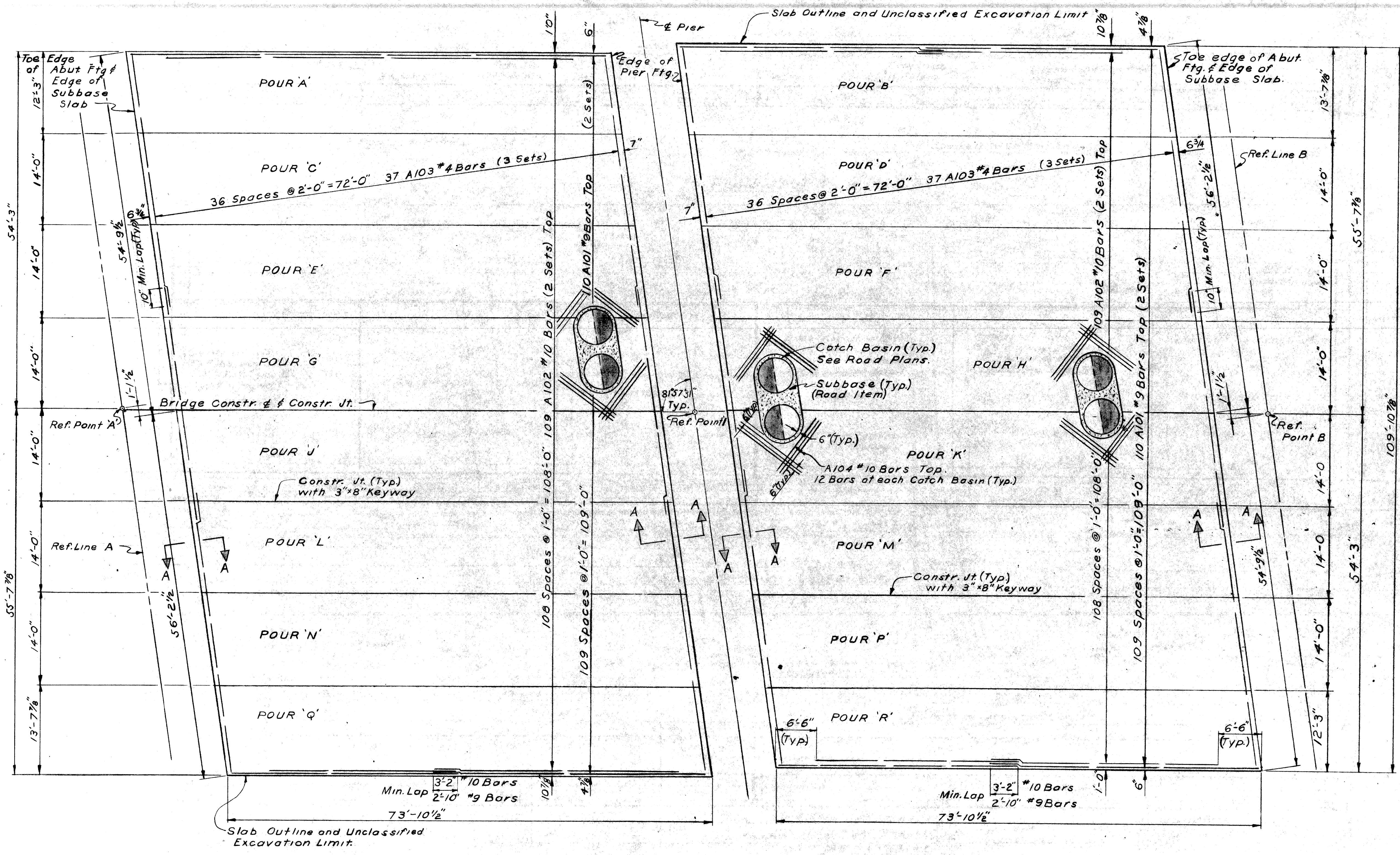
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

EXISTING UTILITIES AND PROPOSED ALTERATIONS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
DRAWN BY: *A. Frisberg* 6-66
CHECKED BY: *D. Norman* 6-66
DESIGNED BY: *A. Frisberg* 6-66
SHEET 5 OF 28

\$03 of 82124 A



SECTION A-A
(Typ. of Footings)

Grade A (GA) Concrete	
Pour	Cu. Yds.
A	75.4
B	84.1
C	86.2
D	86.2
E	85.5
F	86.2
G	80.3
H	77.0
J	86.2
K	81.8
L	86.2
M	86.2
N	86.2
P	86.2
Q	84.1
R	75.4
Total	1333.2

Miscellaneous Quantity:
Unclassified Excavation 1297 Cu. Yds.

NOTE:
Cut or bend reinforcement to avoid Catch Basins.

PLAN - SUBBASE SLAB

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

APPROVED: *H. Reed*
STRUCTURAL ENGINEER

JOB No.
PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUBBASE SLAB

NO.	DESCRIPTION	DATE	BY

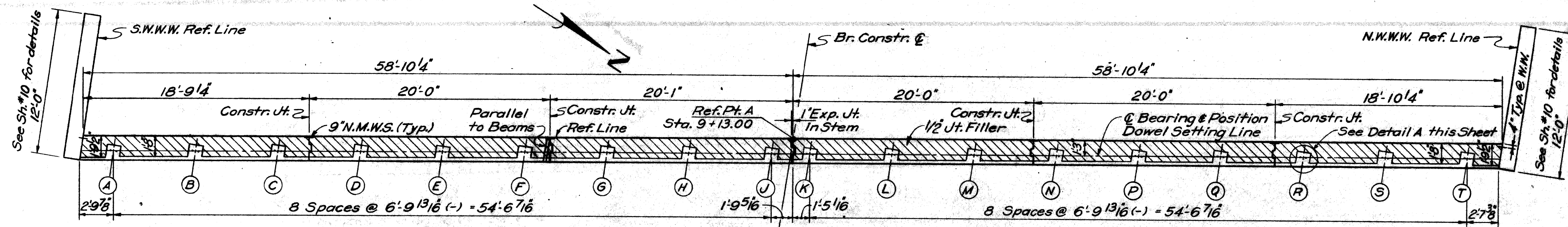
REVISIONS

NO.	DESCRIPTION	DATE	BY

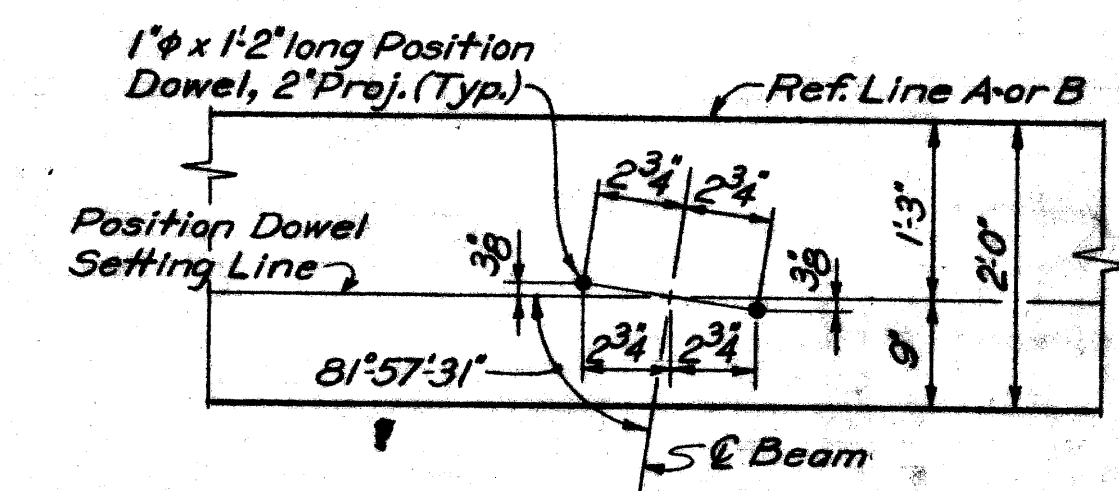
CITY OF DETROIT

DRAWN BY	2-1	3-68
TRACED BY	SPURDSON	2-68
CHECKED BY	T. Baker	2-68
SHEET	7	of 26

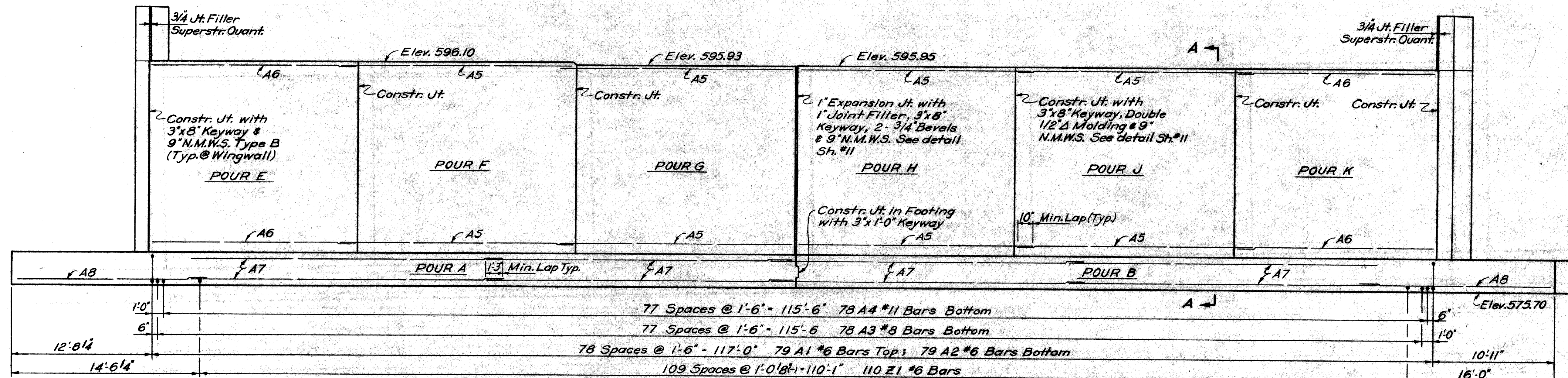
S03 of 82124 A



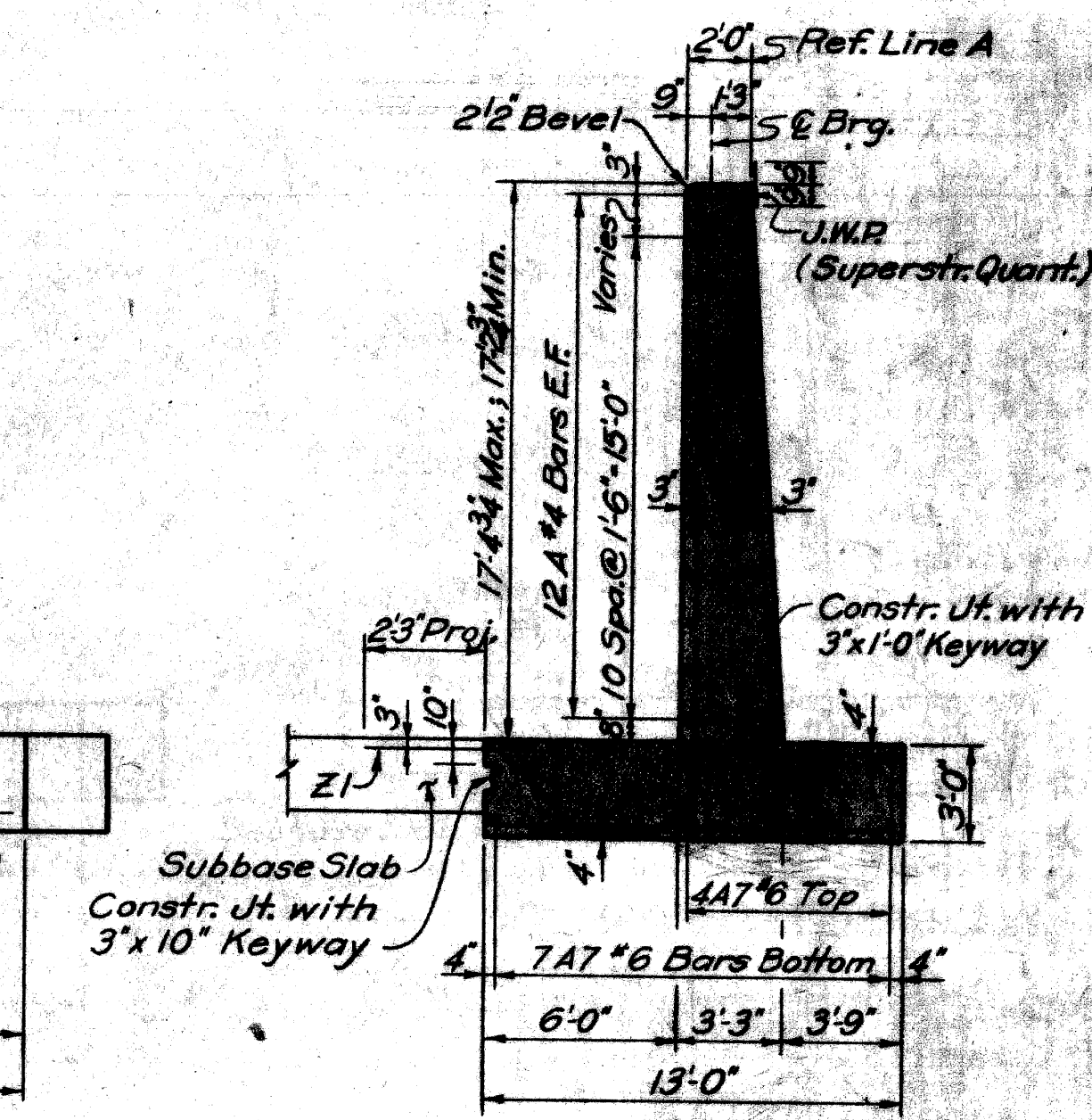
PLAN-ABUT. A



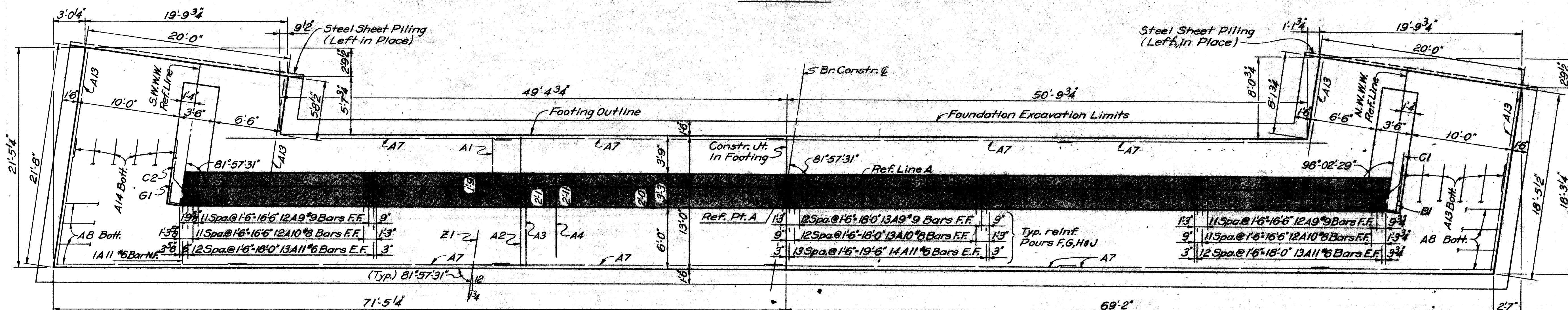
DETAIL A



ELEVATION



SECTION A-A



FOUNDATION PLAN

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT A DETAILS

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

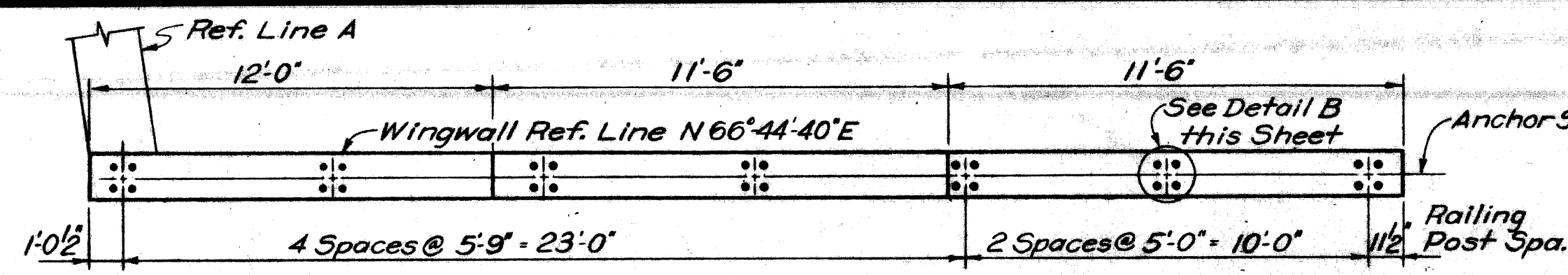
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT		
DESIGNED BY	CJ	3-68
DRAWN BY	K.M.H.	7-68
CHECKED BY	W.A.L.	2-68
SHEET 8 OF 26		

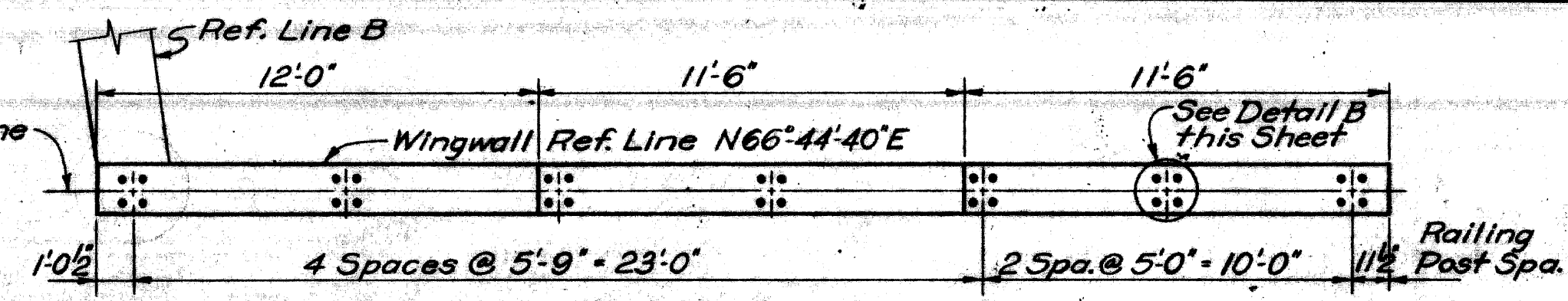
APPROVED: *H. Paul*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(1)

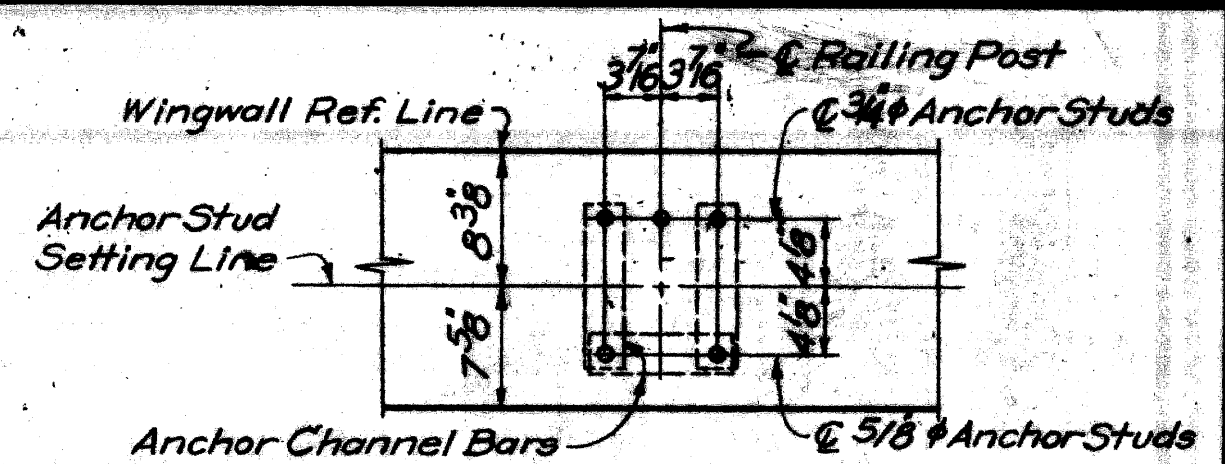
S03 of 82124 A



PLAN
N.W.W.W. Shown
(S.W.W.W. Similar-Opp. Hand)

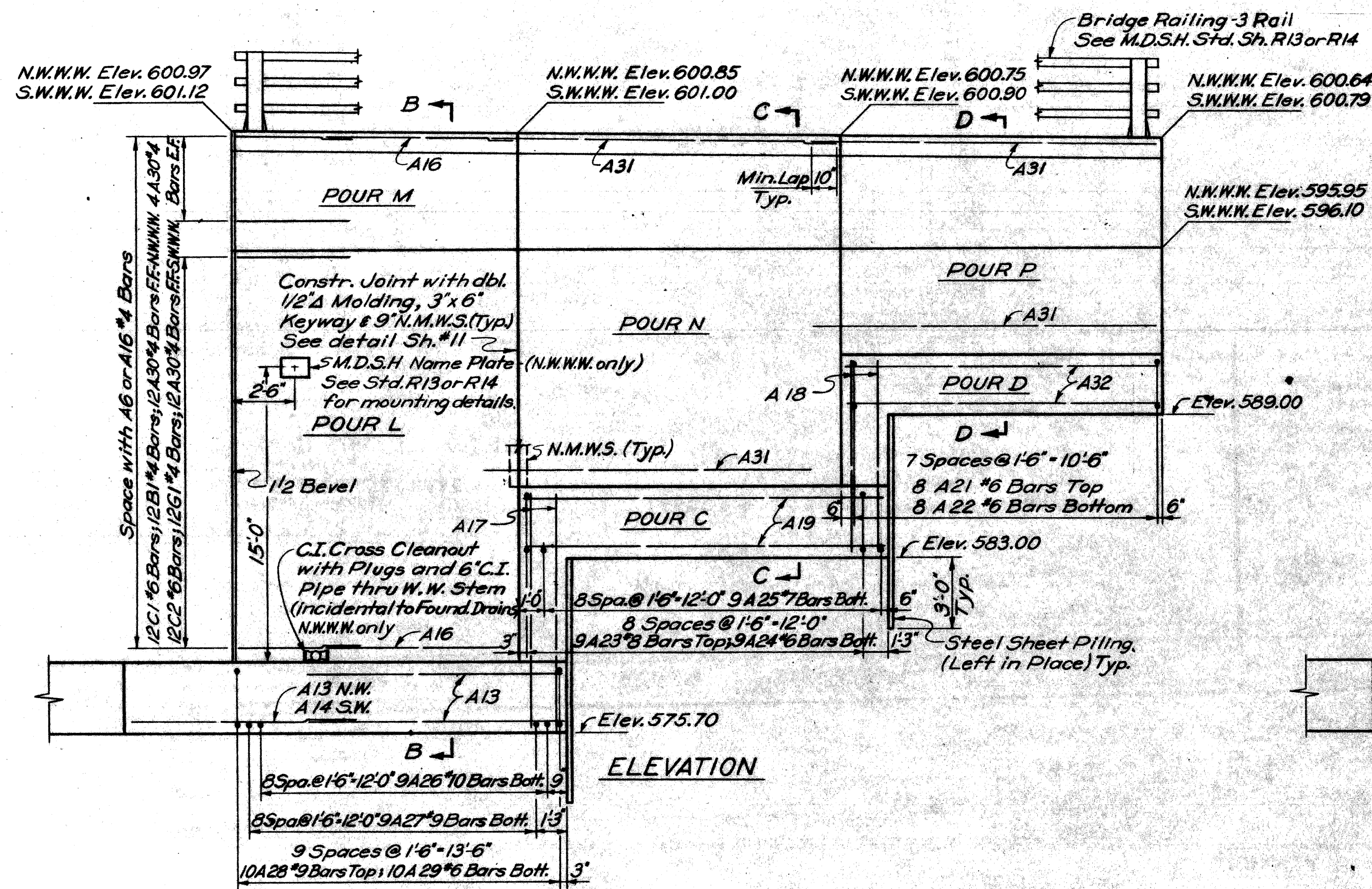


PLAN
S.E.W.W. Shown
(N.E.W.W. Similar-Opp. Hand)

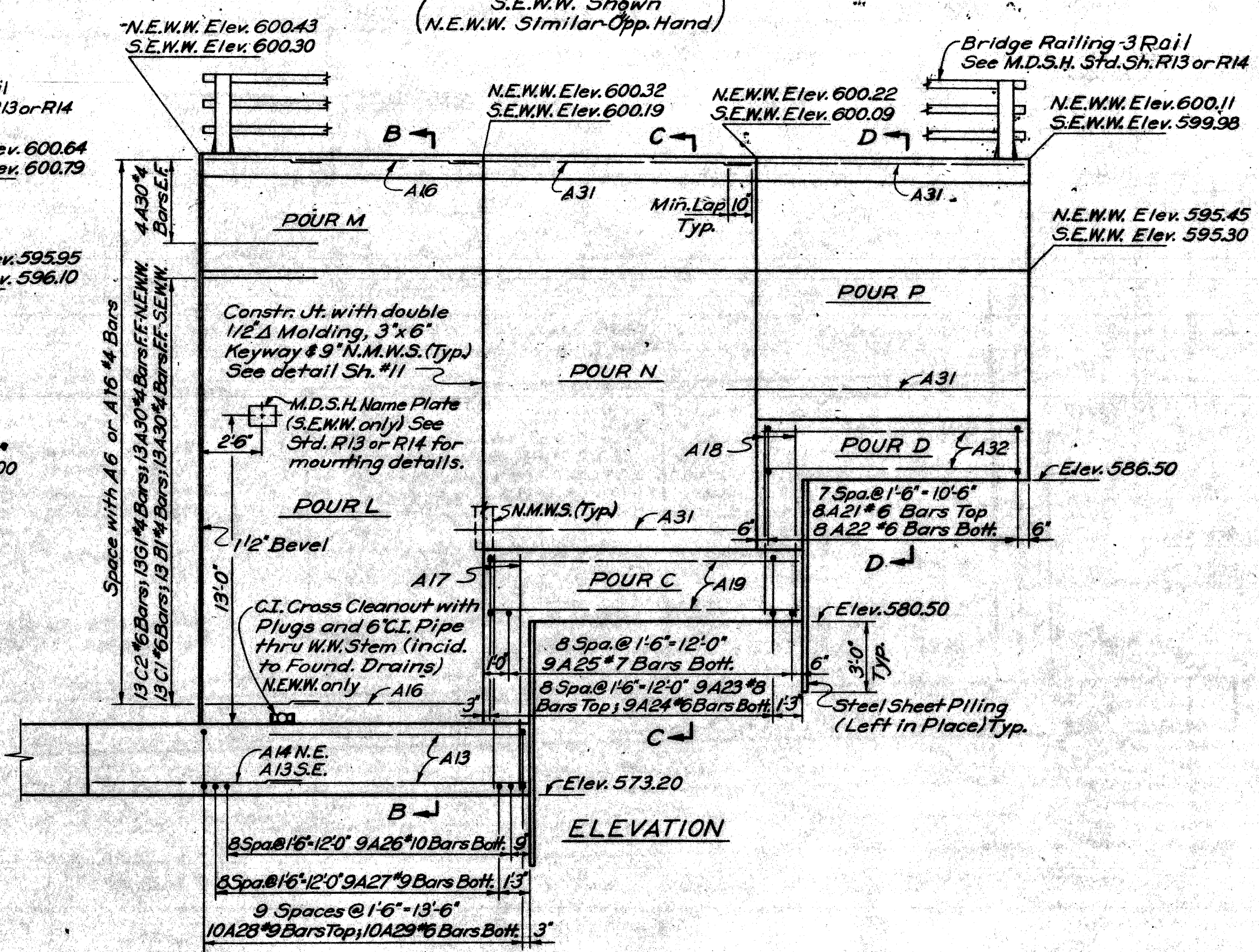


Note:
Anchor Studs and Anchor Channel Bars are to be preset in concrete and are incidental to railing.

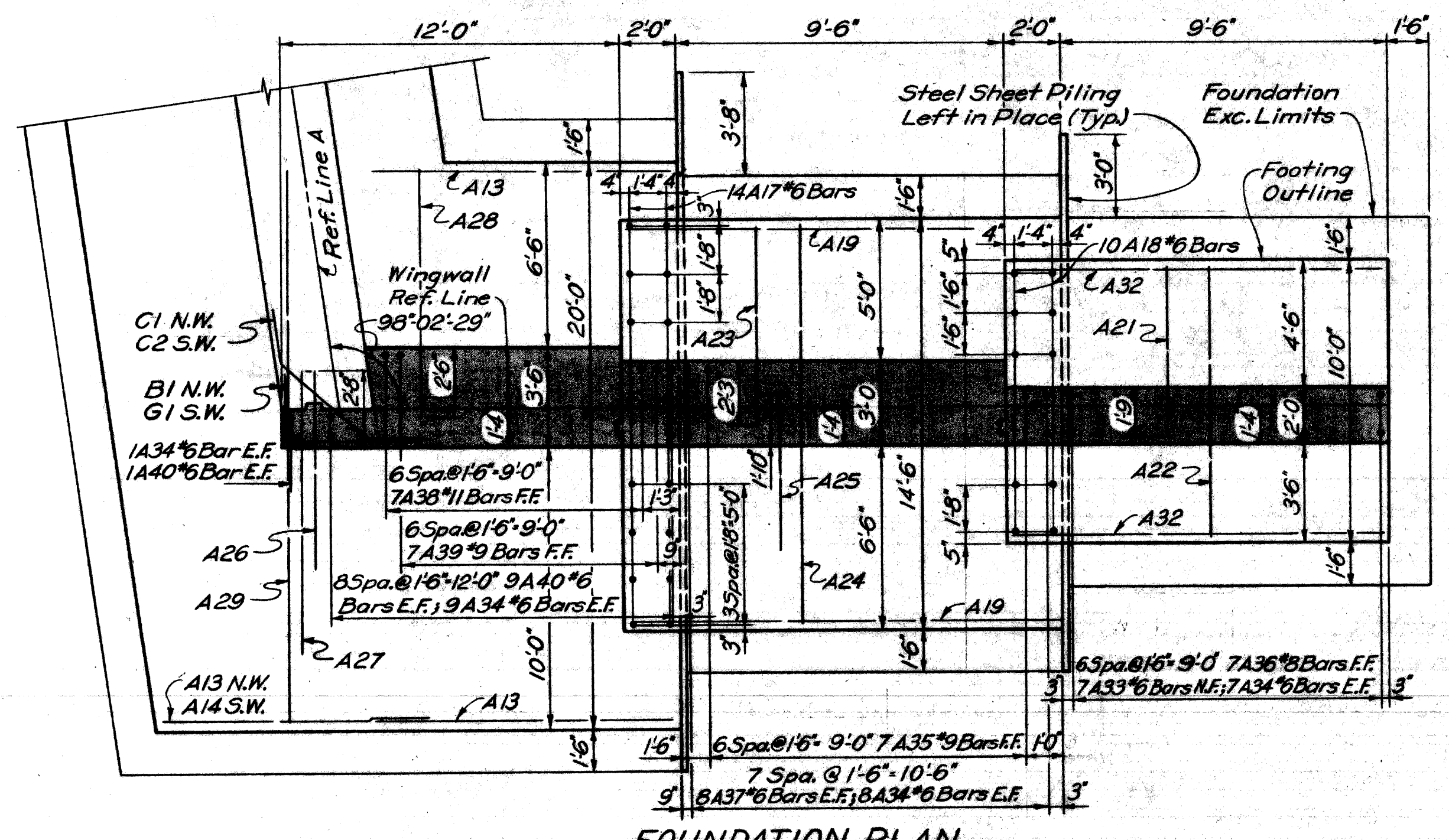
DETAIL B



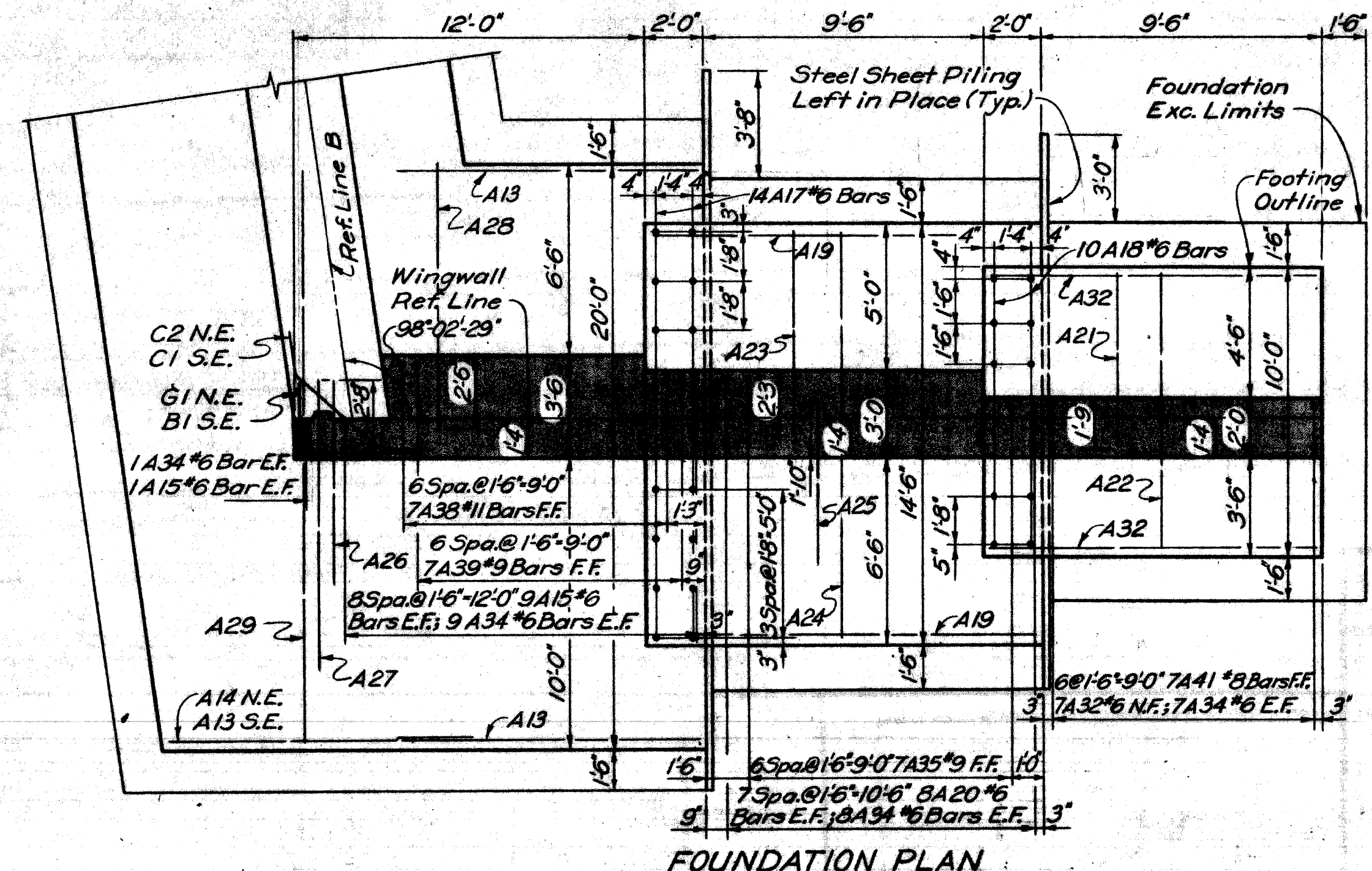
ELEVATION



ELEVATION



FOUNDATION PLAN



FOUNDATION PLAN

Work this Sheet with Sheets 8, 9 & 11

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

APPROVED: *[Signature]*
STRUCTURAL ENGINEER

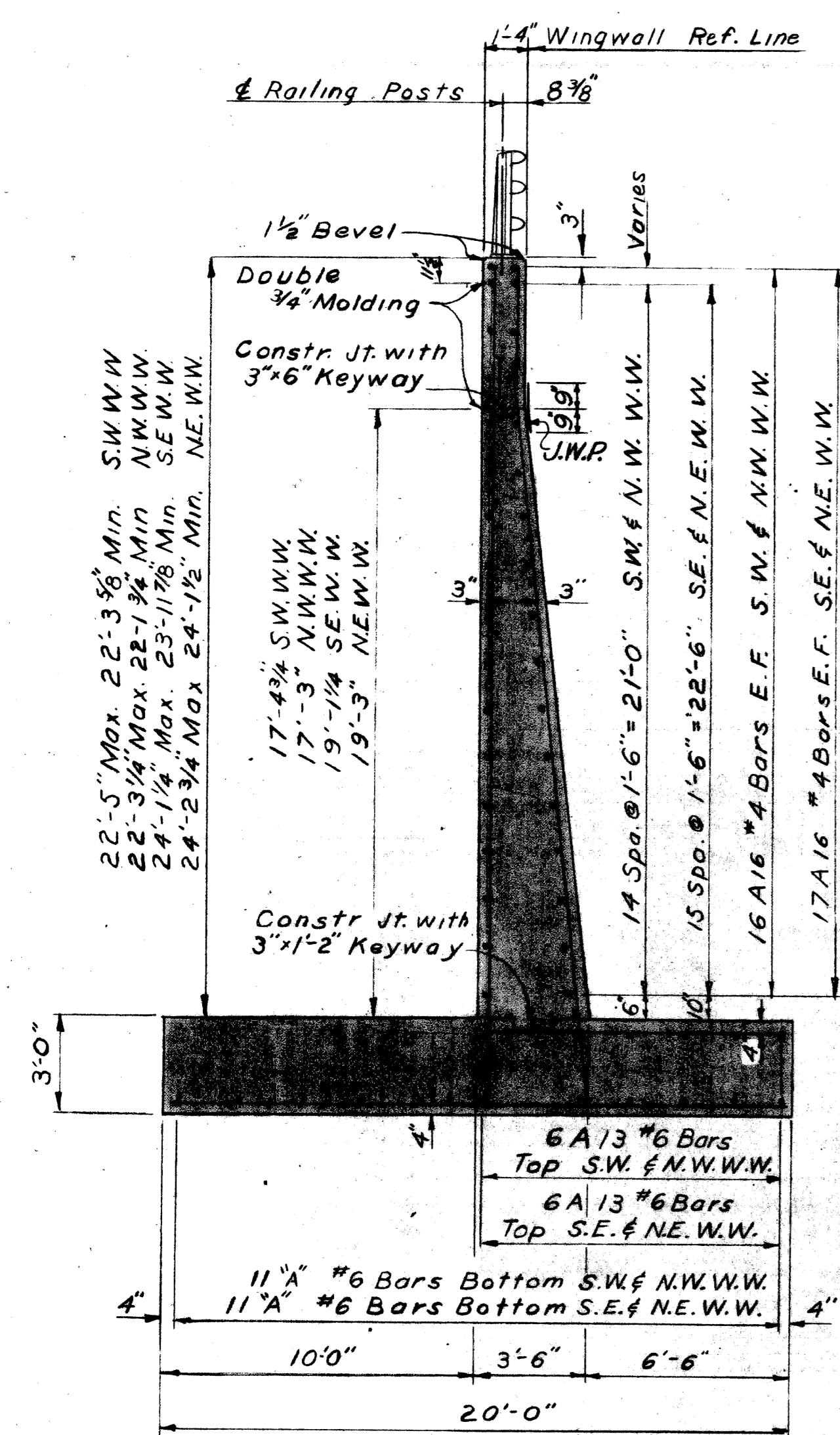
JOB No.
PW 990(11)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

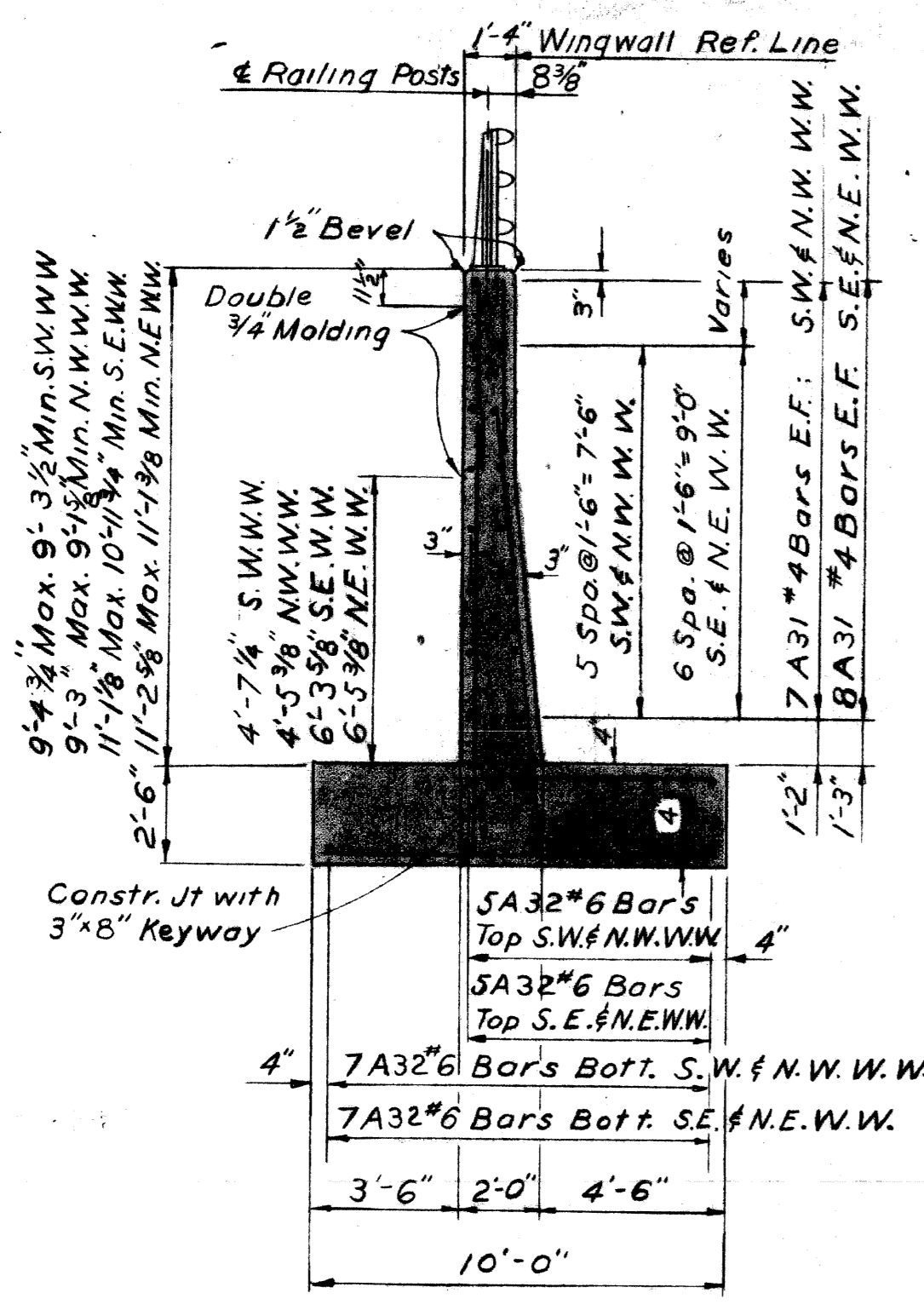
ABUTMENT DETAILS			
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	CV	3-68
DRAWN BY	R.V.H.	1-68
TRACED BY		
CHECKED BY	M.A.L.	2-68
SHEET 10 OF 26		

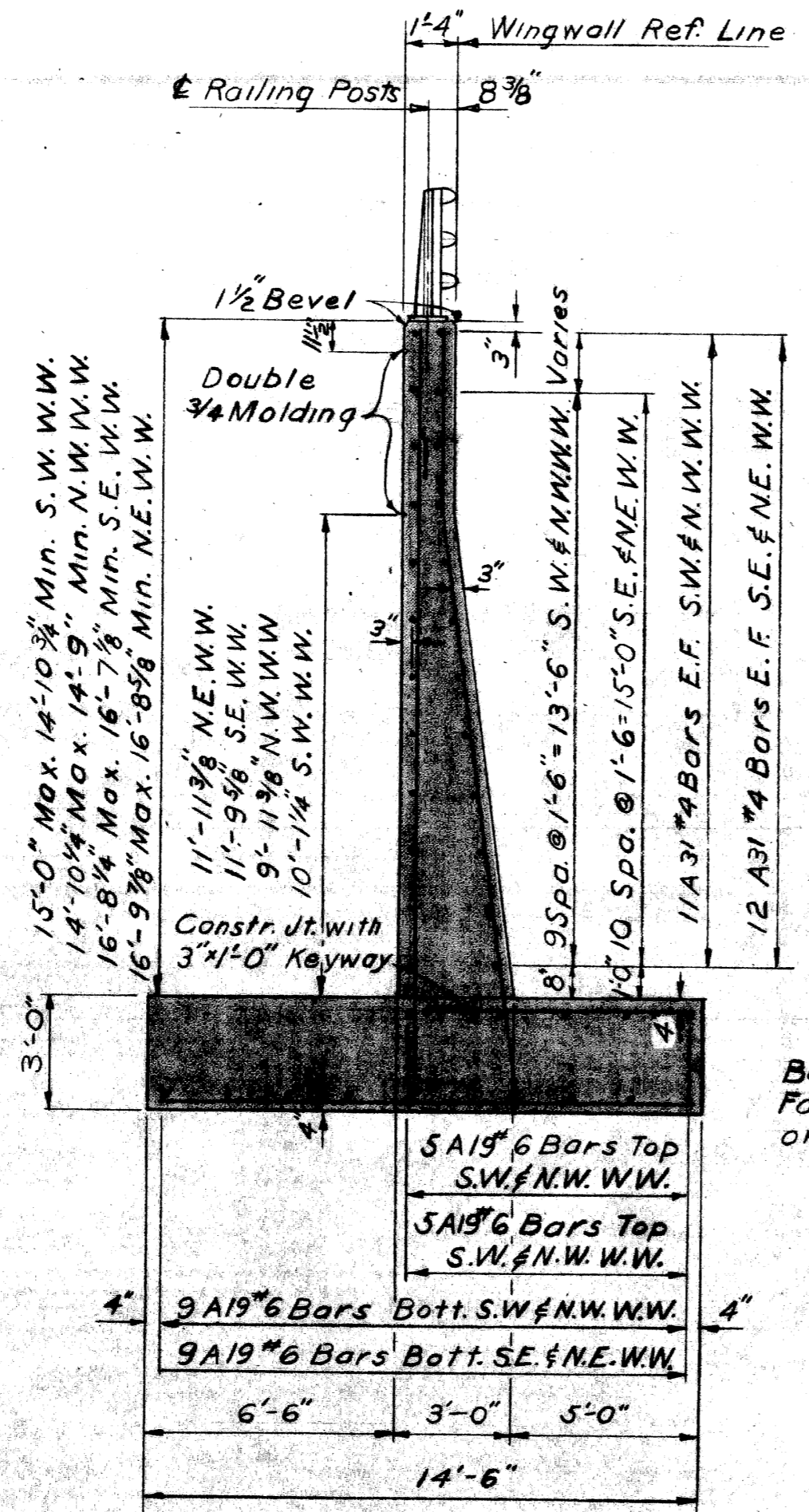
S03 of 82124 A



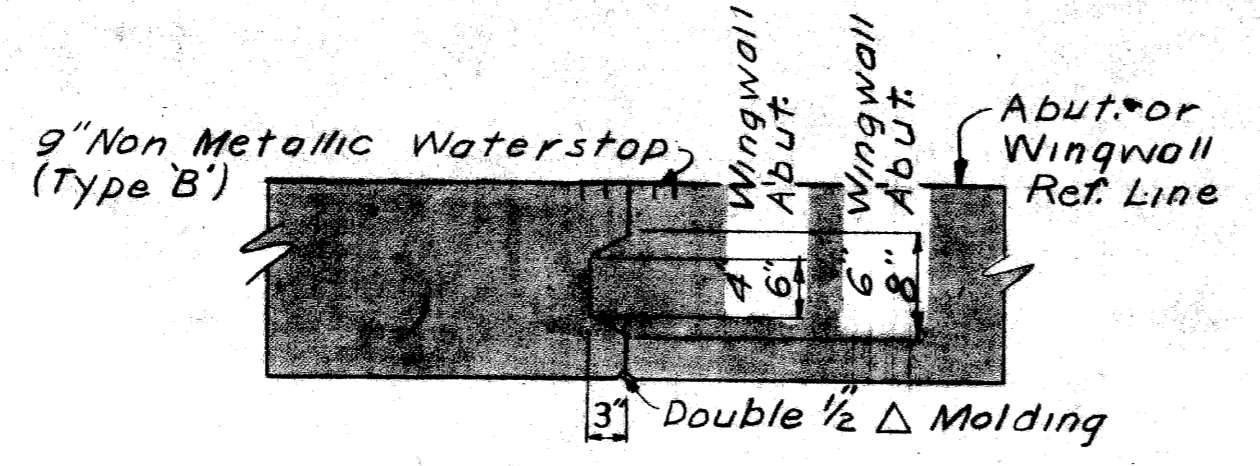
SECTION B-B



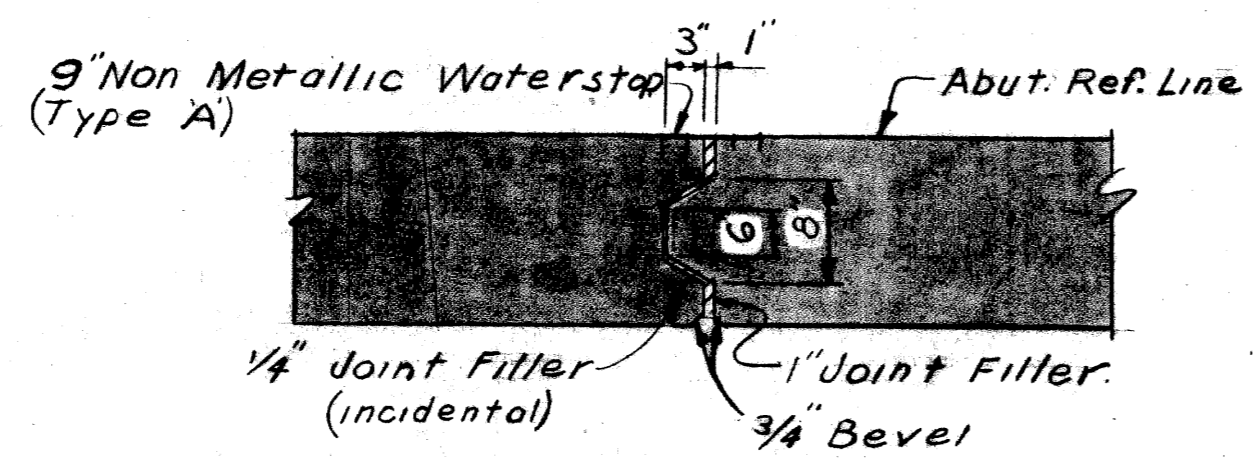
SECTION D-D



SECTION C-C

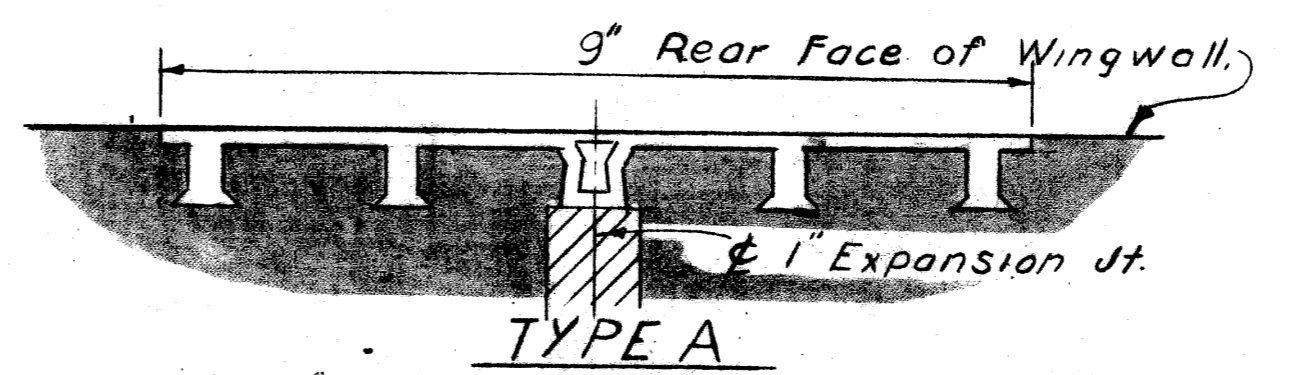


VERT. CONSTR. JOINT DETAILS

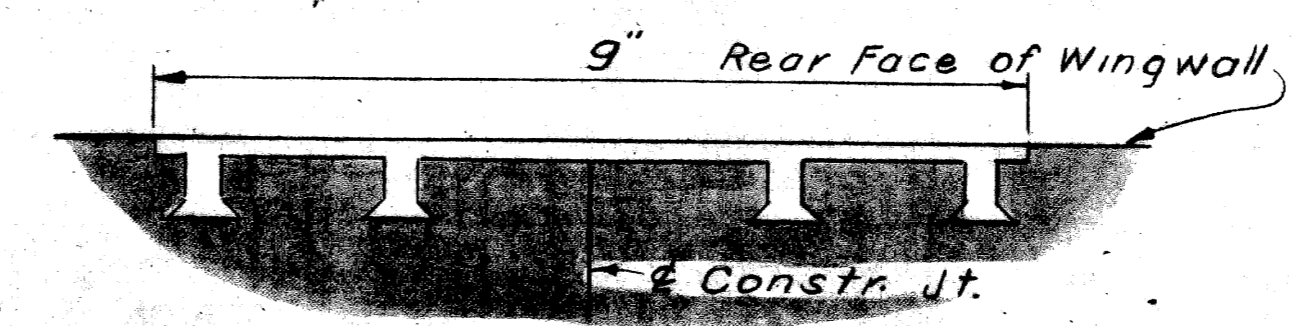


VERT. EXPANSION JOINT DETAILS

Notes:
 Stop all keyways 1'-0" below top of Wingwalls.
 Stop all N.M.W.S. 1'-0" below top of Wingwalls.
 Non-Metallic Waterstops & keyway are to be extended to the top of the abutment.
 Adjust rear face of Wingwall to match adjacent Section for type B Waterstop.

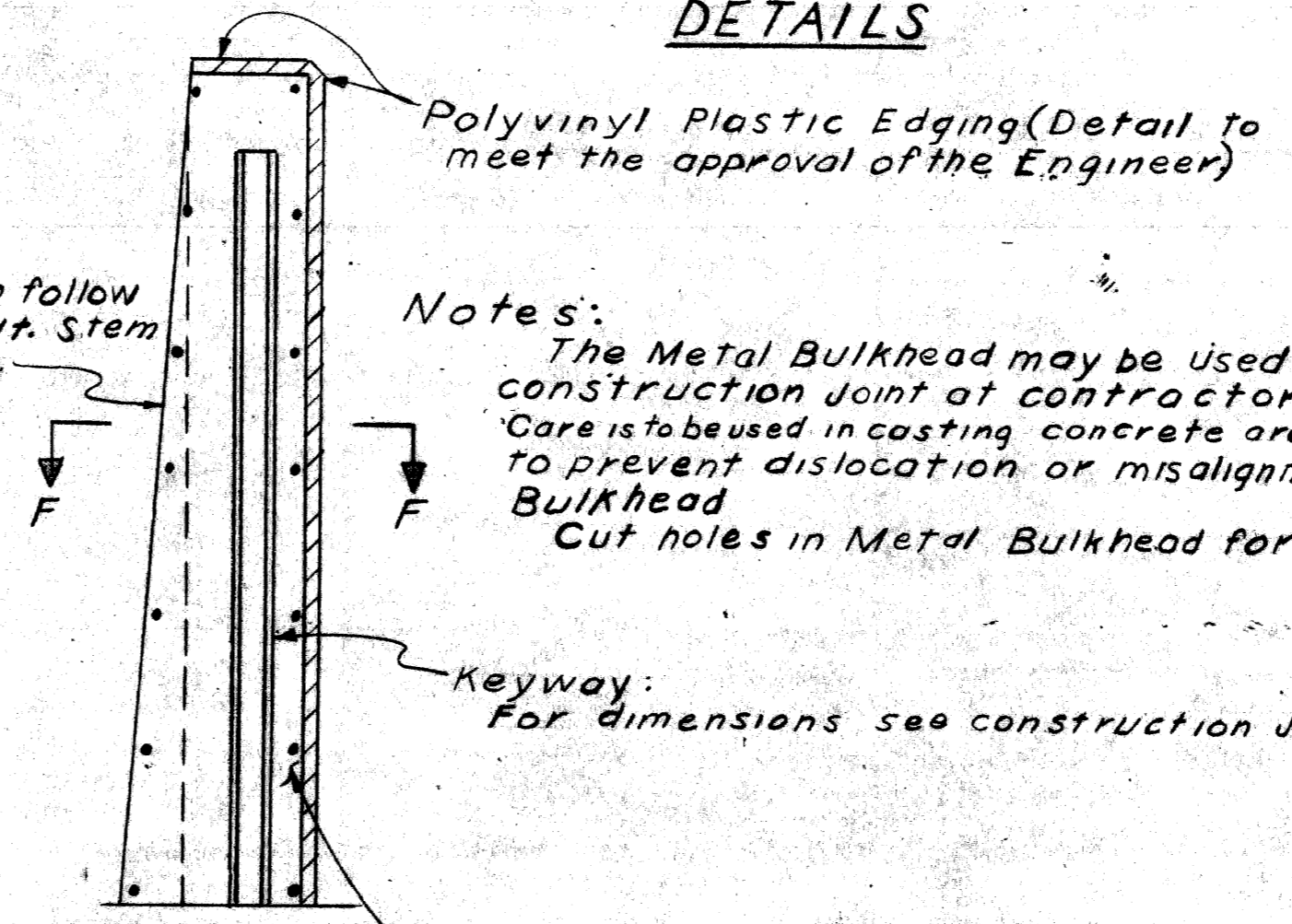


TYPE A

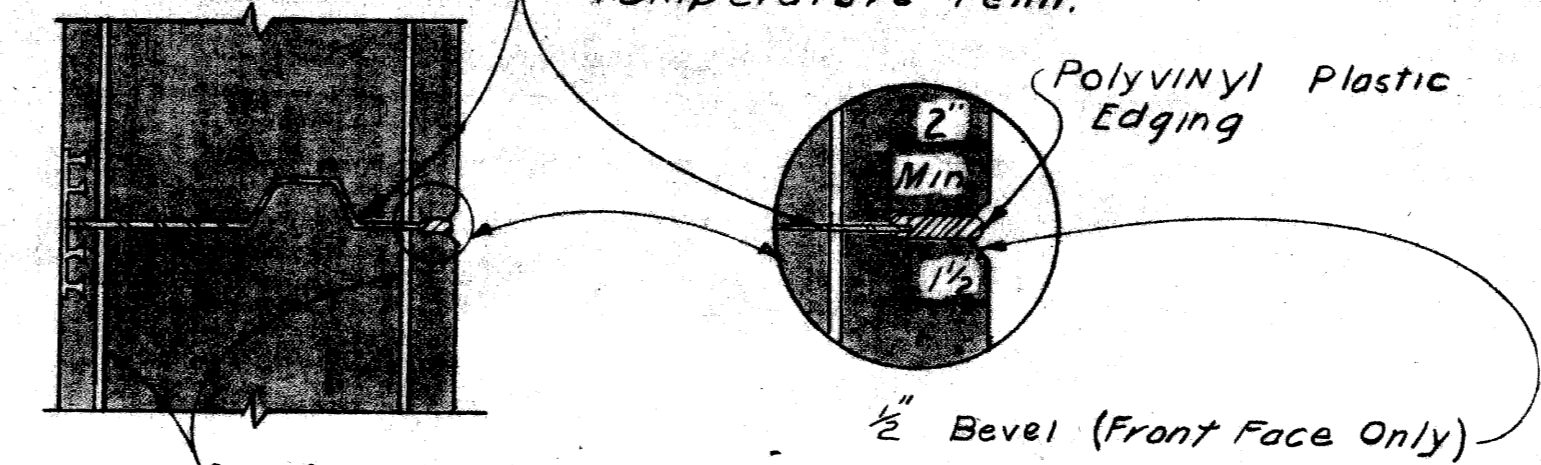


TYPE B

NON METALLIC WATERSTOP DETAILS



SECTION AT CONSTR. JT.



SECTION F-F

ALTERNATE METAL BULKHEAD FOR CONSTRUCTION JOINTS

Notes:
 The Metal Bulkhead may be used as alternate construction joint at 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 reinf. steel.

Keyway:
 For dimensions see construction joint details.

MISCELLANEOUS QUANTITIES				
Item	Unit	Abut A	Abut B	Total
Unclassified Excavation	Cu.Yds	2184	2022	4206
Steel sheet Piling (Left in Place)	Sq.Ft.	850	850	1700
Low Temperature Protection	Cu.Yds	1255	1284	2539
1/2" Joint Filler	Sq.Ft.	179	179	358
1" Joint Filler	Sq.Ft.	46	50	96
Non Metallic Waterstop	Sq.Ft.	124	140	264
Bridge Railing - 3 Rail-Fab. & Erect	Lin. Ft.	693	693	1386
Joint Waterproofing	Sq.Ft.	30	30	60
Light weight Fill	Cu.Yds	1594	1826	3420
Foundation Drains	Lin. Ft.	203	203	406

CONCRETE QUANTITIES						
	POUR	ABUT A	N.W.W.S.	SW.W.W.	ABUT B	N.E.W.S.E.W.W.
A(6A)	Abut.	A	1183	—	1183	—
	Stem	B	1168	—	1168	—
	Fig	C	—	26.8	—	26.8
		D	—	12.9	—	12.9
Gr. A(6A)	Stem	E	32.0	—	—	35.4
		F	33.8	—	—	37.4
		G	33.5	—	—	37.1
		H	33.5	—	—	37.1
		J	33.5	—	—	37.1
		K	31.4	—	—	34.7
	Stem	L	—	16.9	16.9	—
	M	—	2.9	2.9	—	2.9
	N	—	11.9	12.1	—	13.8
	P	—	5.9	6.0	—	7.3
Total Gr. A(6A) Concrete		—	Substruct. 629.0		Cu.Yds	
Total Gr. A(6A) Concrete		—	Substruct. 577.2		Cu.Yds	

GENERAL NOTES:
 N.M.W.S. denotes Non-Metallic Waterstop; U.W.P. denotes Joint Waterproofing; N.F. denotes Near Face; F.F. denotes Far Face; E.F. denotes Each Face.
 Position Dowels shall be set accurately to a template and are to be furnished with Structural Steel.
 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.
 Pours 'M' shall not be cast until Superstructure is complete to Tops of Sidewalks.
 Contractor shall not place fill behind Abutments until Subbase Slab construction is complete.
 Maximum average foundation pressure D.L. only 1750 #/Sq. Ft.
 Maximum foundation pressure D.L. + L.L. = 2,540 #/Sq. Ft.
 For Bevel and Molding Details see Std. Sh. R13 or R14

Work This Sheet with Sheets B, 9 & 10

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT DETAILS

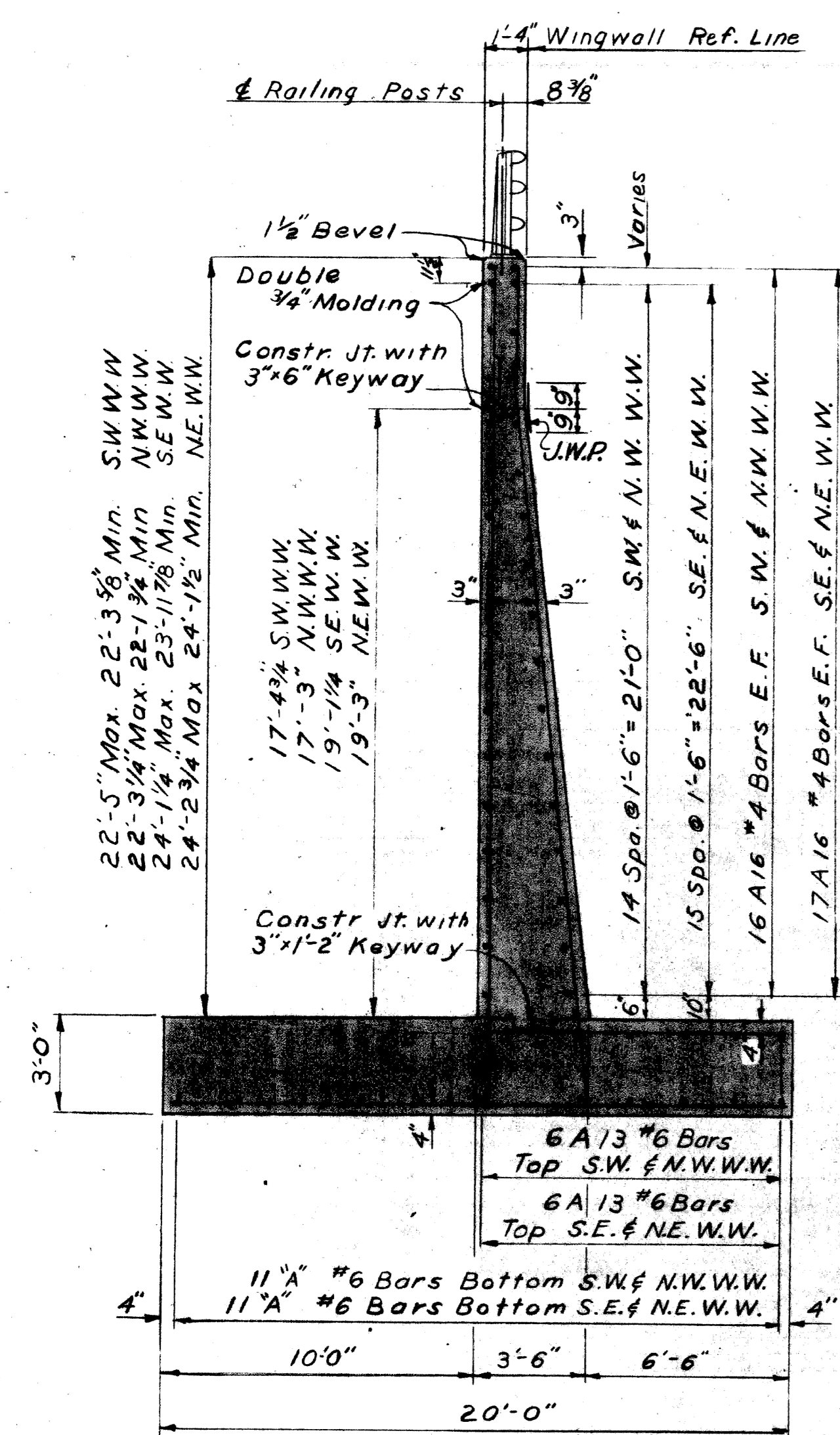
PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

JOB No.
 PW 990(1)

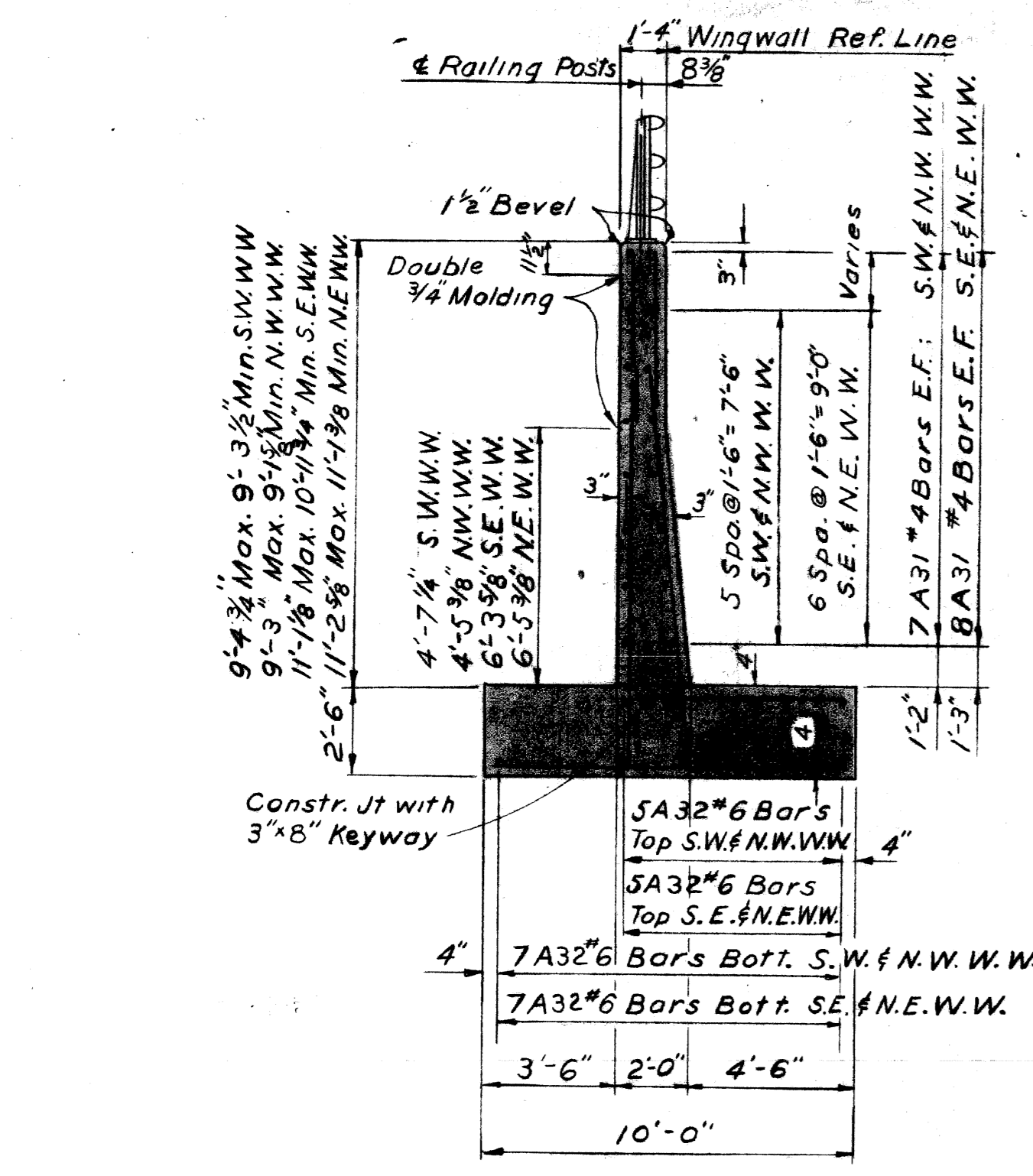
NO.	DESCRIPTION	DATE	BY

SQUAD BOOK	DATE	BY
E.J.	2-68	
SPURGEON	1-68	
W.A.L.	2-68	

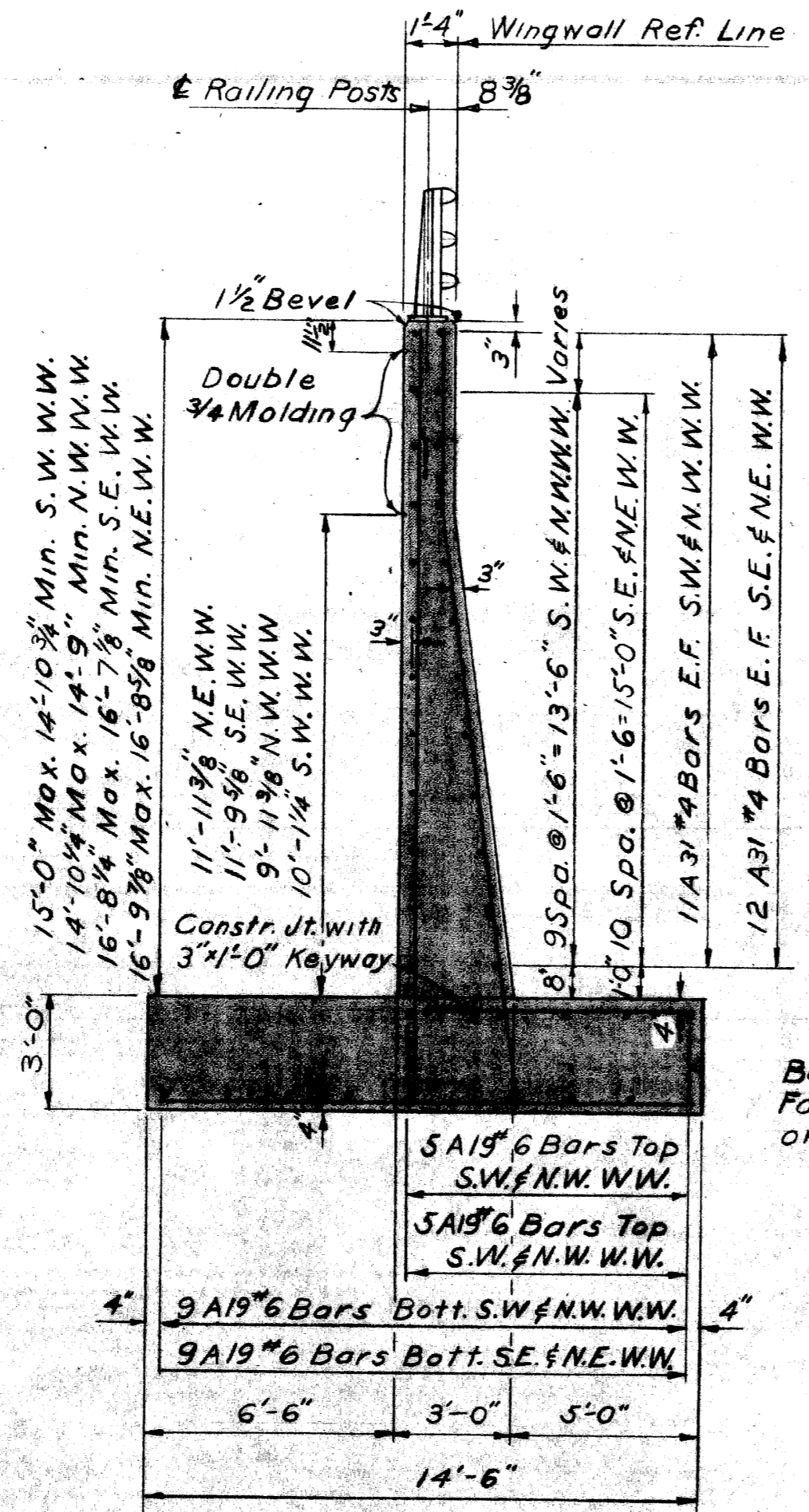
SHEET 11 of 26
 S03 of 82124 A



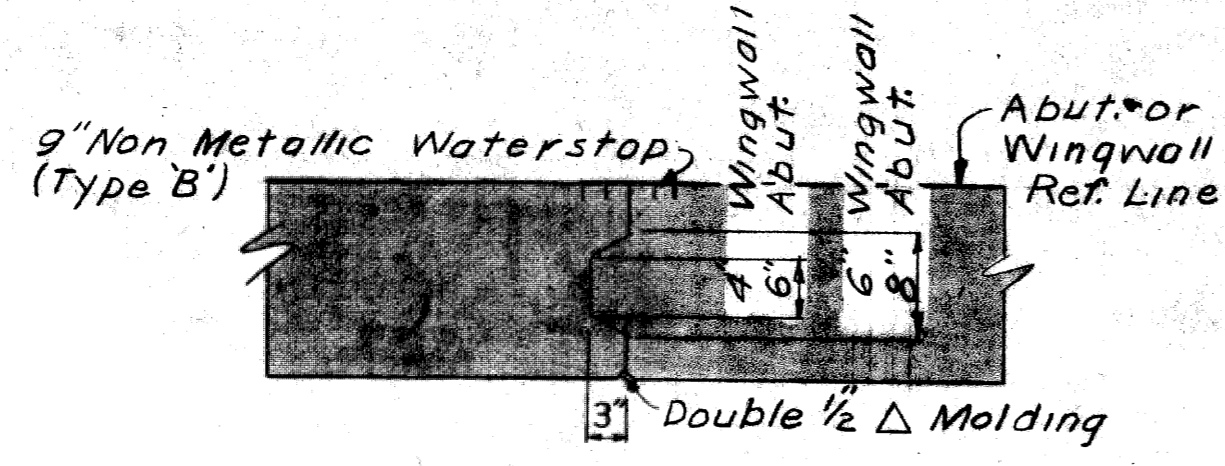
SECTION B-B



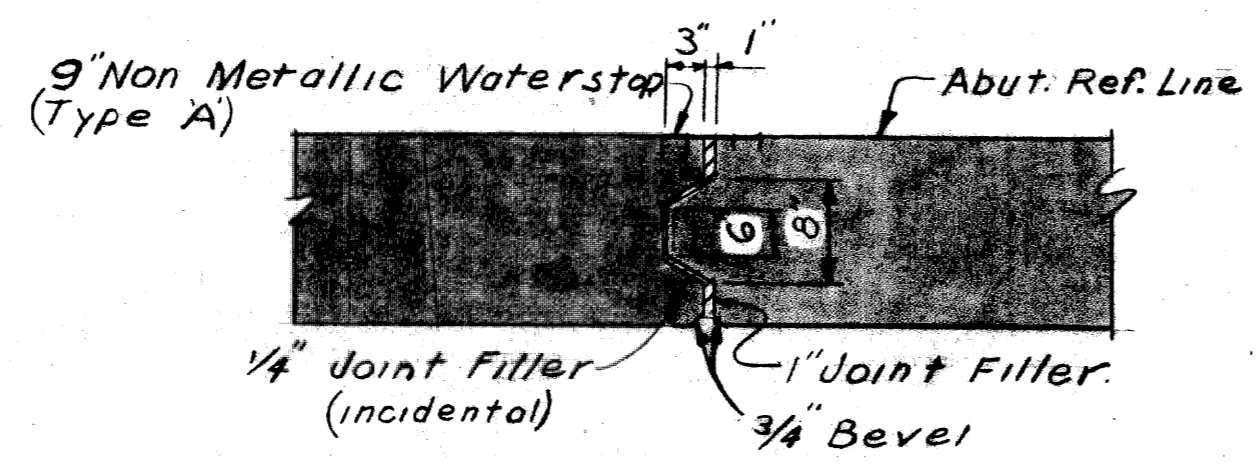
SECTION D-D



SECTION C-C

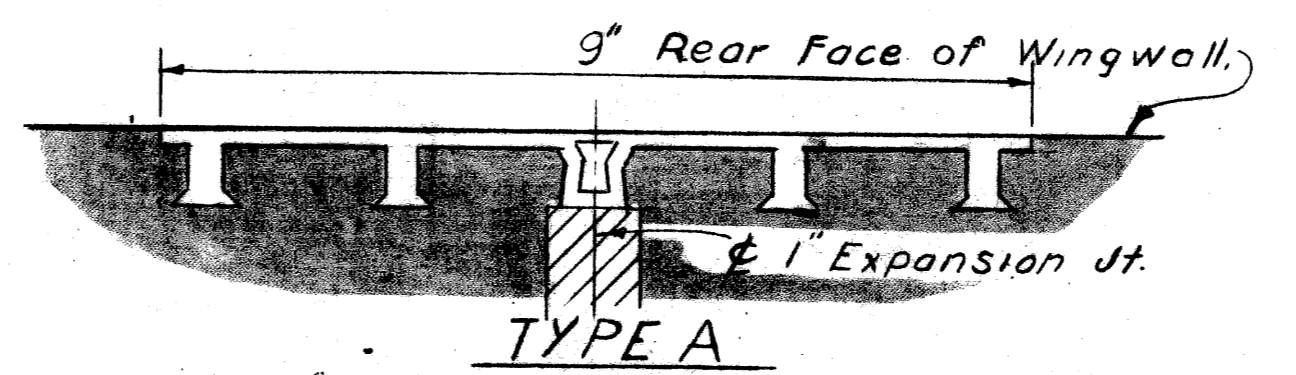


VERT. CONSTR. JOINT DETAILS

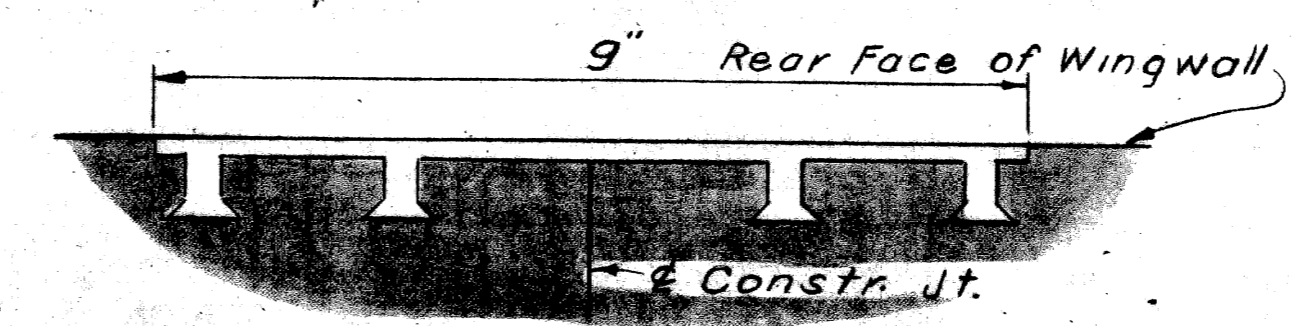


VERT. EXPANSION JOINT DETAILS

Notes:
 Stop all keyways 1'-0" below top of Wingwalls.
 Stop all N.M.W.S. 1'-0" below top of Wingwalls.
 Non-Metallic Waterstops & keyway are to be extended to the top of the abutment.
 Adjust rear face of Wingwall to match adjacent Section for Type B Waterstop.

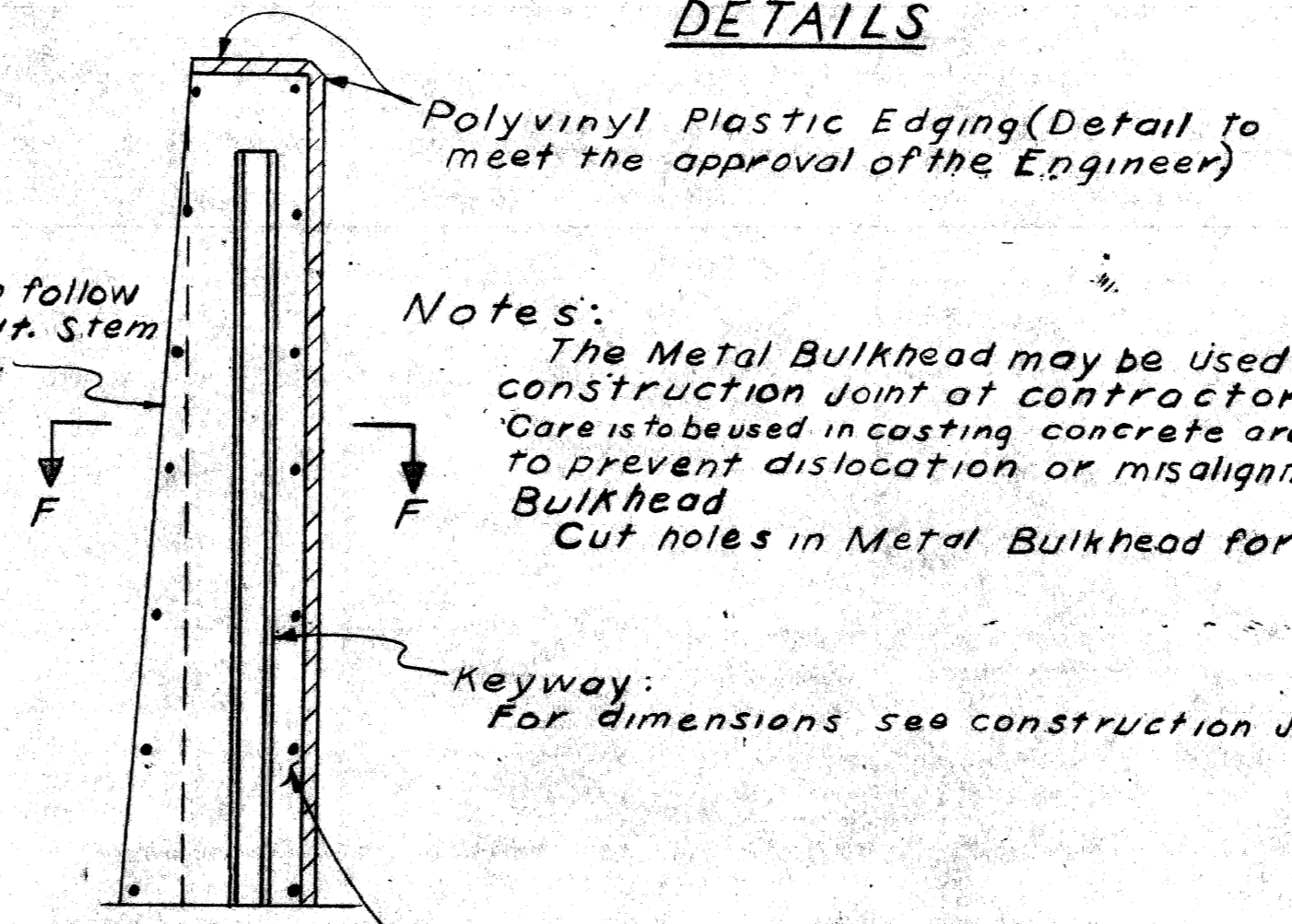


TYPE A

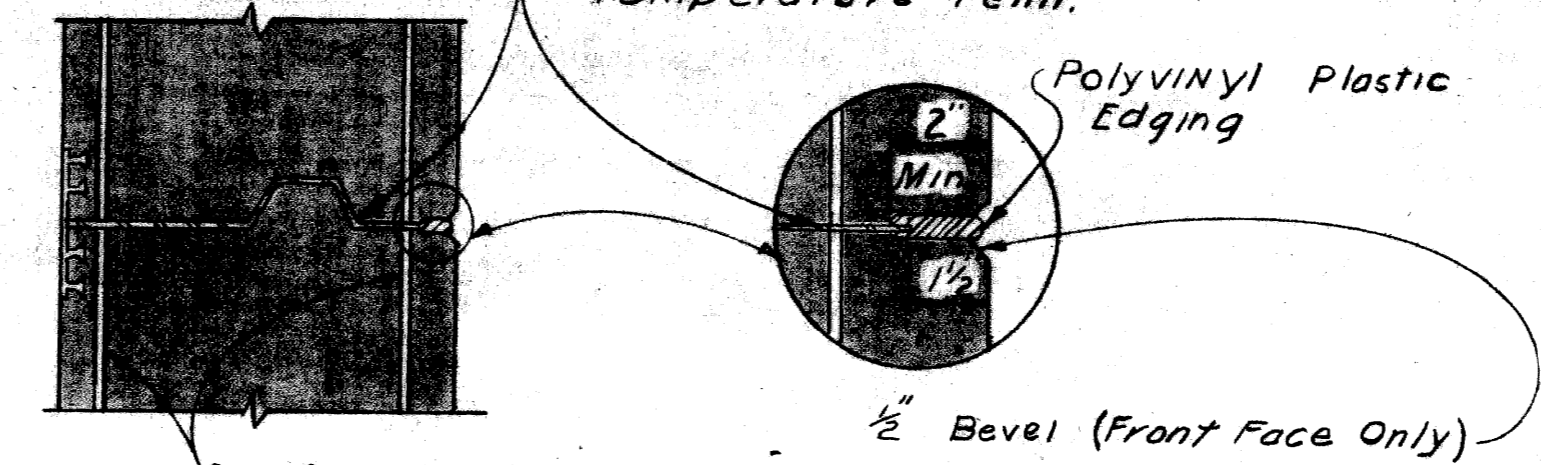


TYPE B

NON METALLIC WATERSTOP DETAILS



SECTION AT CONSTR. JT.



SECTION F-F

ALTERNATE METAL BULKHEAD FOR CONSTRUCTION JOINTS

Notes:
 The Metal Bulkhead may be used as alternate construction joint at 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 reinf. steel.

Keyway:
 For dimensions see construction joint details.

12 Gage Preformed steel or aluminum Bulkhead securely held in place. Bulkhead may be welded to Temperature reinf.

Polyvinyl Plastic Edging

1/2 Bevel (Front Face Only)

MISCELLANEOUS QUANTITIES				
Item	Unit	Abut A	Abut B	Total
Unclassified Excavation	Cu.Yds	2184	2022	4206
Steel sheet Piling (Left in Place)	Sq.Ft.	850	850	1700
Low Temperature Protection	Cu.Yds	1255	1284	2539
1/2" Joint Filler	Sq.Ft.	179	179	358
1" Joint Filler	Sq.Ft.	46	50	96
Non Metallic Waterstop	Sq.Ft.	124	140	264
Bridge Railing - 3 Rail-Fab. & Erect	Lin. Ft.	693	693	1386
Joint Waterproofing	Sq.Ft.	30	30	60
Light weight Fill	Cu.Yds	1594	1826	3420
Foundation Drains	Lin. Ft.	203	203	406

CONCRETE QUANTITIES							
	POUR	ABUT A	N.W.W.	SW.W.	ABUT B	N.E.W.	S.E.W.
A (6A)	Abut. Fig	A	1183	—	1183	—	—
	W.W. Fig	B	1168	—	1168	—	—
		C	—	26.8	26.8	—	26.8
		D	—	12.9	12.9	—	12.9
Gr. A (6A)	Abut. Stem	E	32.0	—	35.4	—	—
		F	33.8	—	37.4	—	—
		G	33.5	—	37.1	—	—
		H	33.5	—	37.1	—	—
		J	33.5	—	37.1	—	—
		K	31.4	—	34.7	—	—
	W.W. Stem	L	—	16.9	16.9	—	18.7
	M	—	2.9	2.9	—	2.9	
	N	—	11.9	12.1	—	13.8	
	P	—	5.9	6.0	—	7.3	

Total Gr. A (6A) Concrete — Substruct. 629.0 Cu.Yds
 Total Gr. A (6A) Concrete — Substruct. 577.2 Cu.Yds

GENERAL NOTES:

N.M.W.S. denotes Non-Metallic Waterstop; U.W.P. denotes Joint Waterproofing; N.F. denotes Near Face; F.F. denotes Far Face; E.F. denotes Each Face.
 Position Dowels shall be set accurately to a template and are to be furnished with Structural Steel.
 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.
 Pours 'M' shall not be cast until Superstructure is complete to Top of Sidewalks.
 Contractor shall not place fill behind Abutments until Subbase Slab construction is complete.
 Maximum average foundation pressure D.L. only 1750 #/Sq. Ft.
 Maximum foundation pressure D.L. + L.L. = 2,540 #/Sq. Ft.
 For Bevel and Molding Details see Std. Sh. R13 or R14

Work This Sheet with Sheets B, 9 & 10

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT DETAILS

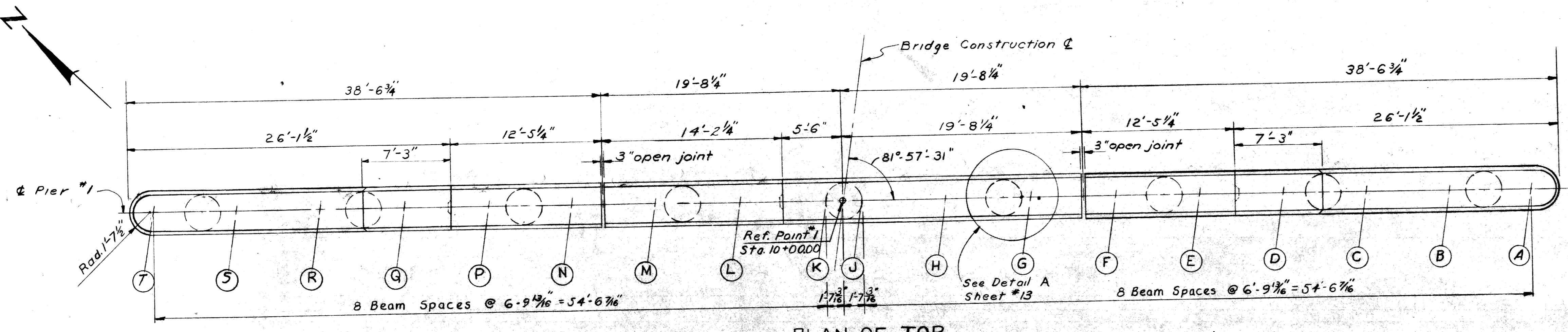
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JOB No.
 PW 990(1)

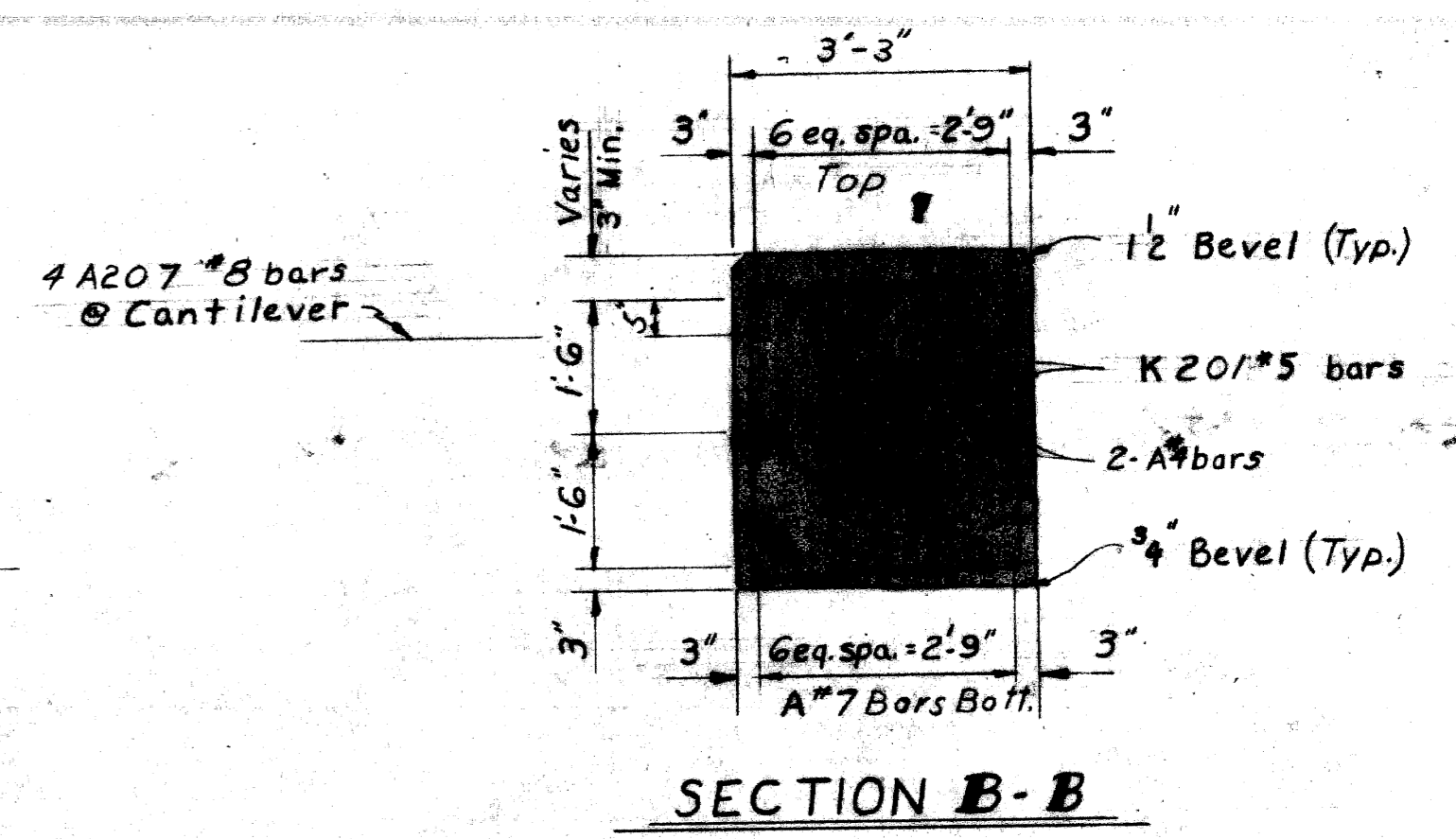
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT	
SQUAD BOSS	E.J. 2-68
DRAWN BY	SPURGEON 1-68
CHECKED BY	W.A.L. 2-68
SHEET 11 of 26	

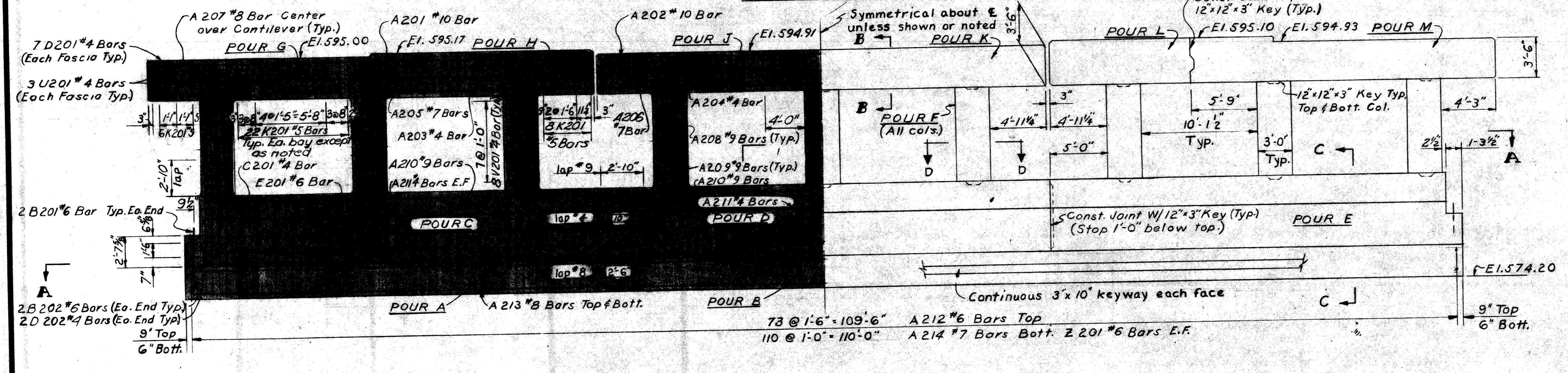
S03 of 82124 A



PLAN OF TOP

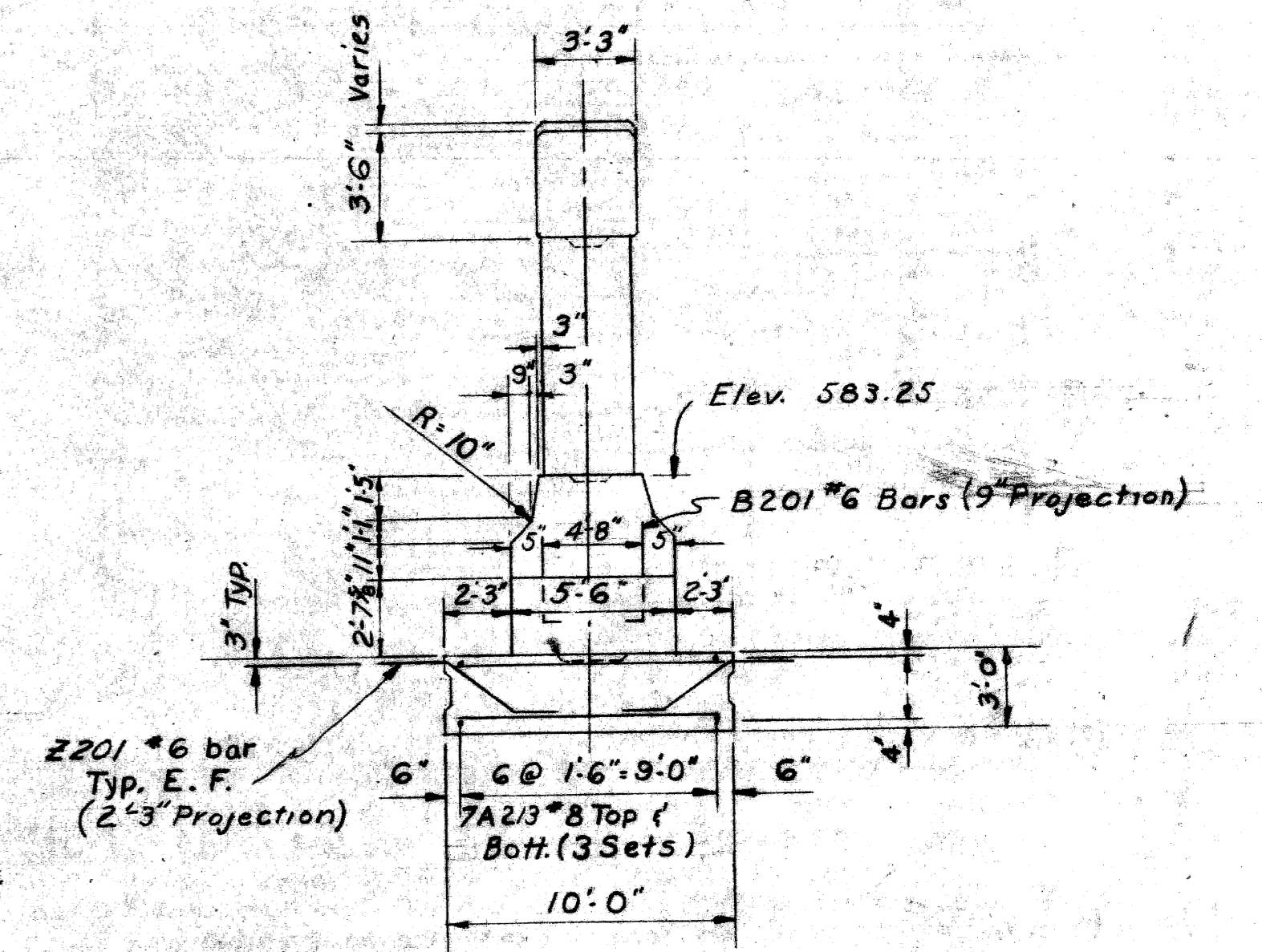


SECTION B-B

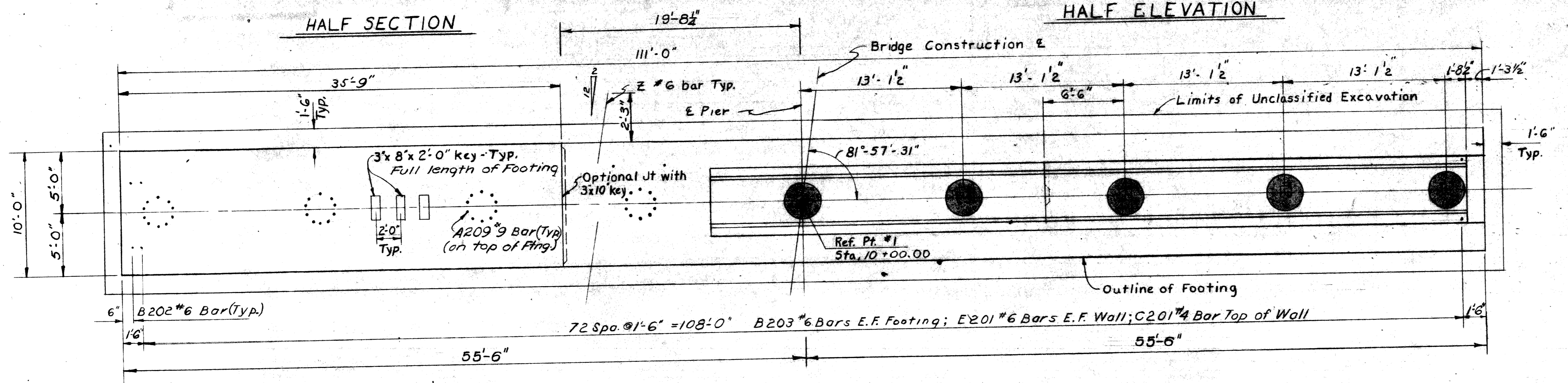


HALF SECTION

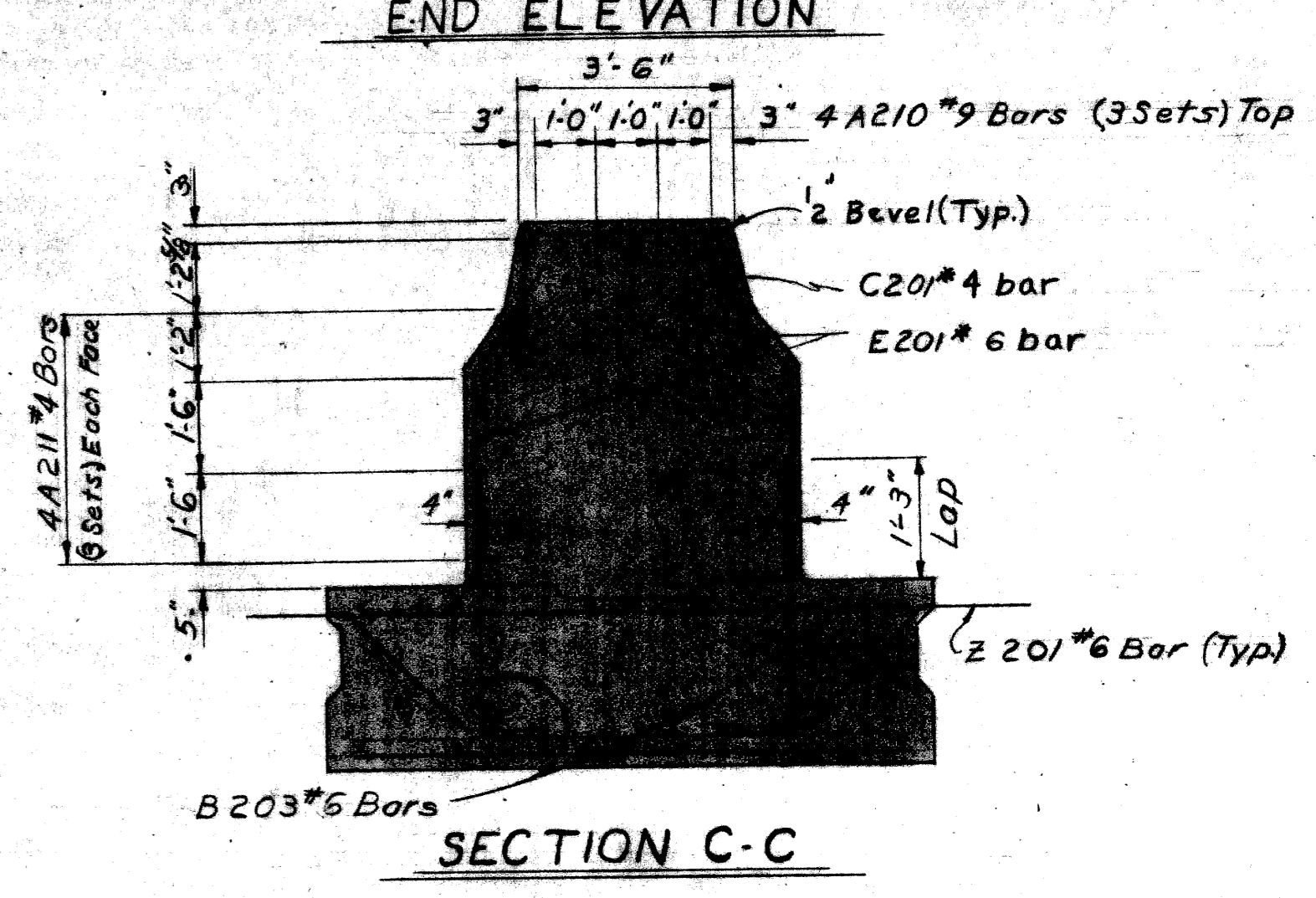
HALF ELEVATION



END ELEVATION



SECTION A-A



SECTION C-C

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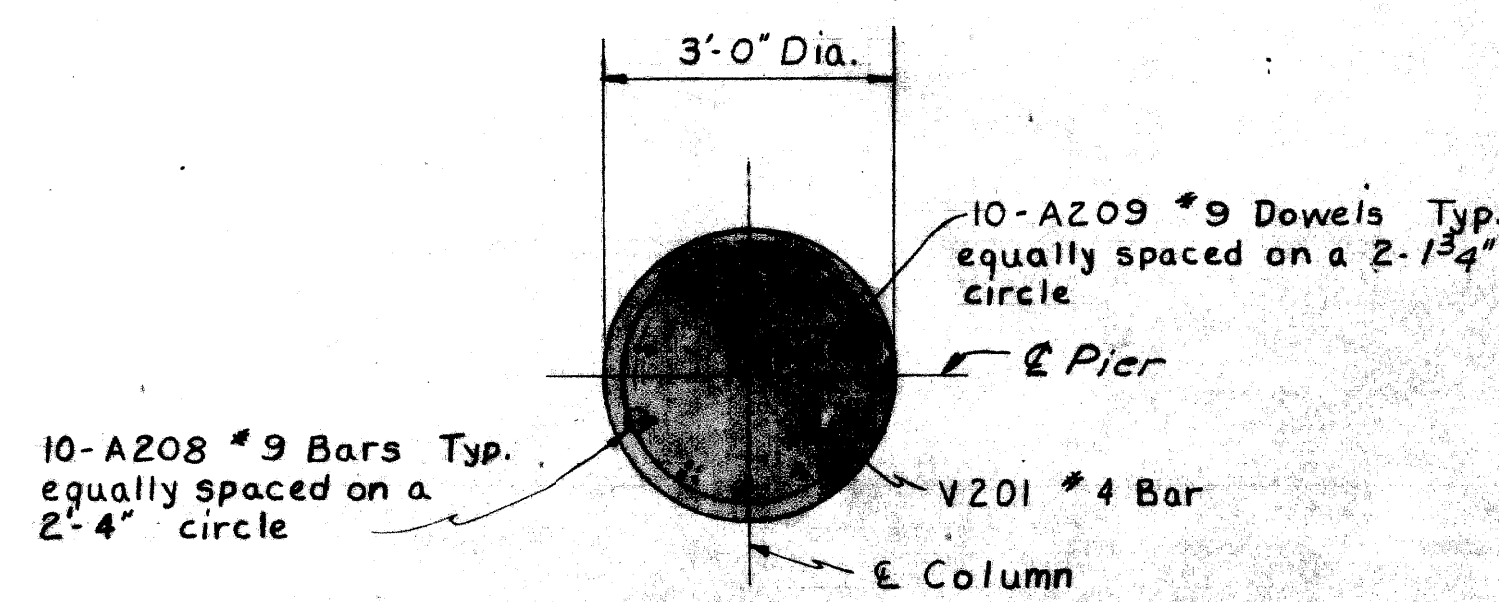
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 STRUCTURAL ENGINEER

JOB No.
 PW 990(1)

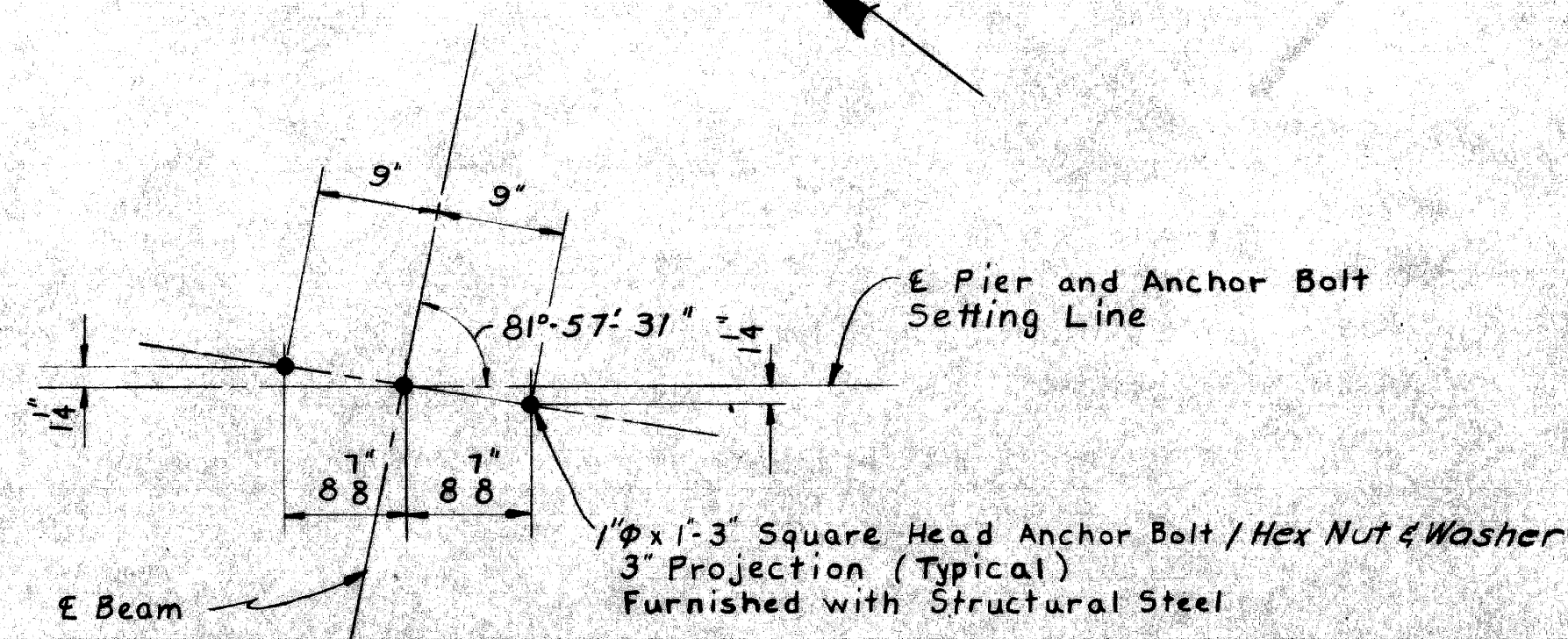
MICHIGAN DEPARTMENT OF STATE HIGHWAYS			
PIER No. 1 DETAILS			
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
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 TRACED BY: *[Signature]* 1-68
 CHECKED BY: *[Signature]* 3-68
 SHEET 12 of 36

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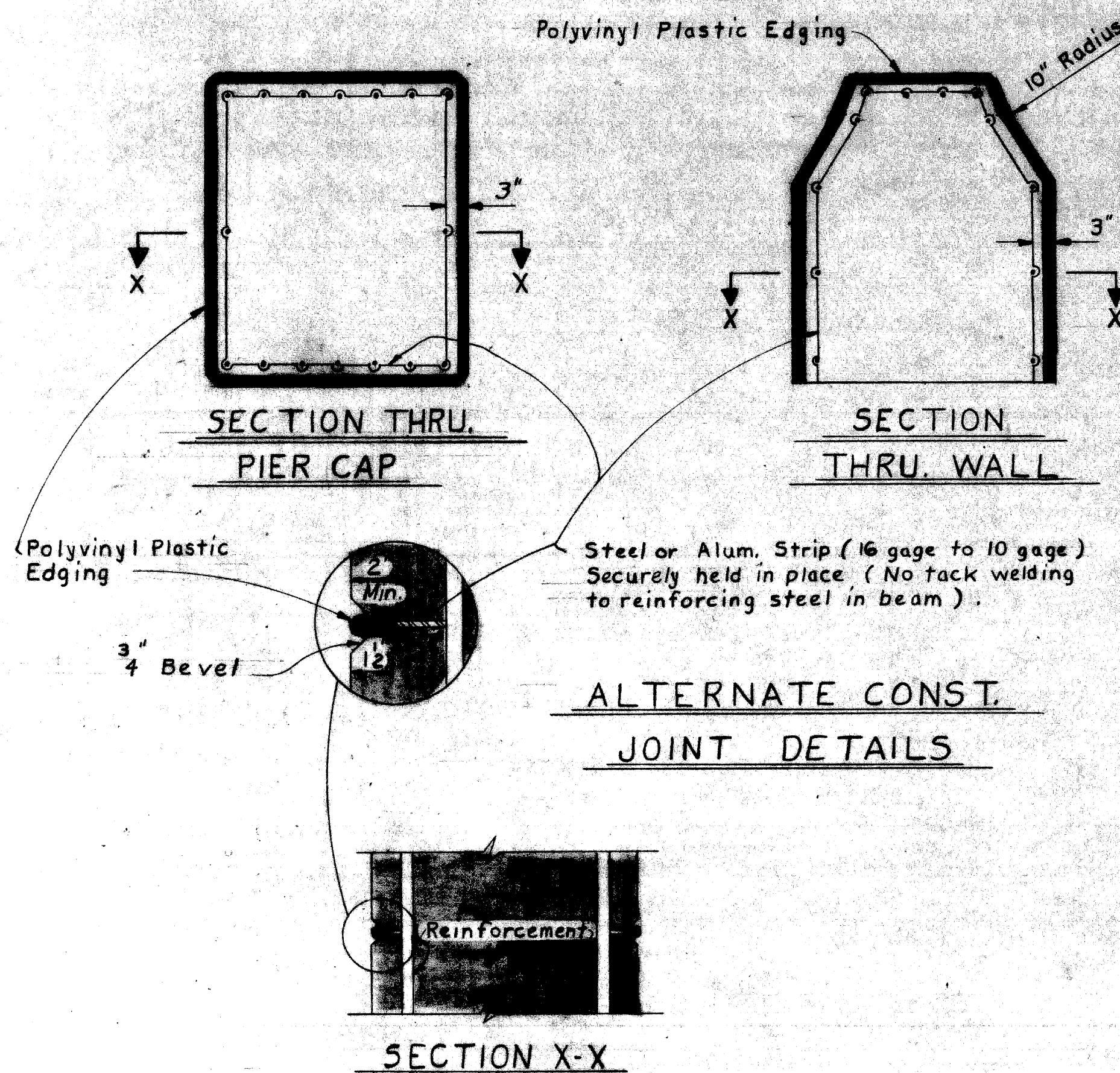
SECTION D-D



DETAIL A

MISCELLANEOUS QUANTITIES		
ITEM	UNITS	TOTAL
Unclassified Excavation	Cu. yds.	164
Low Temperature Protection	Cu. yds.	313

CONCRETE QUANTITIES (CU. YDS.)			
POUR	LOCATION	A (GA)	A (GAA)
A	Footing	39.8	
B	"	83.5	
C	Wall		38.4
D	"		43.7
E	"		38.4
F	Column		19.3
G	Beam		11.0
H	"		5.4
J	"		5.9
K	"		10.6
L	"		5.4
M	"		11.0
TOTAL		123.3	189.1



Notes:
 Partial metal bulkhead may be used as alternate construction joint at contractor's expense.
 Care is to be used in casting concrete around bulkhead to prevent dislocation or misalignment of the bulkhead.
 Notch metal strip to fit around reinforcing steel

GENERAL NOTES:
 E.F. denotes each face.
 For bevel and molding details, see Standard Sheets R13 and R14.
 Anchor bolts shall be accurately set to a template.
 Maximum average foundation pressure D.L. only = 2000#/Sq. ft.
 Maximum foundation pressure D.L. and L.L. = 2400#/Sq. ft.

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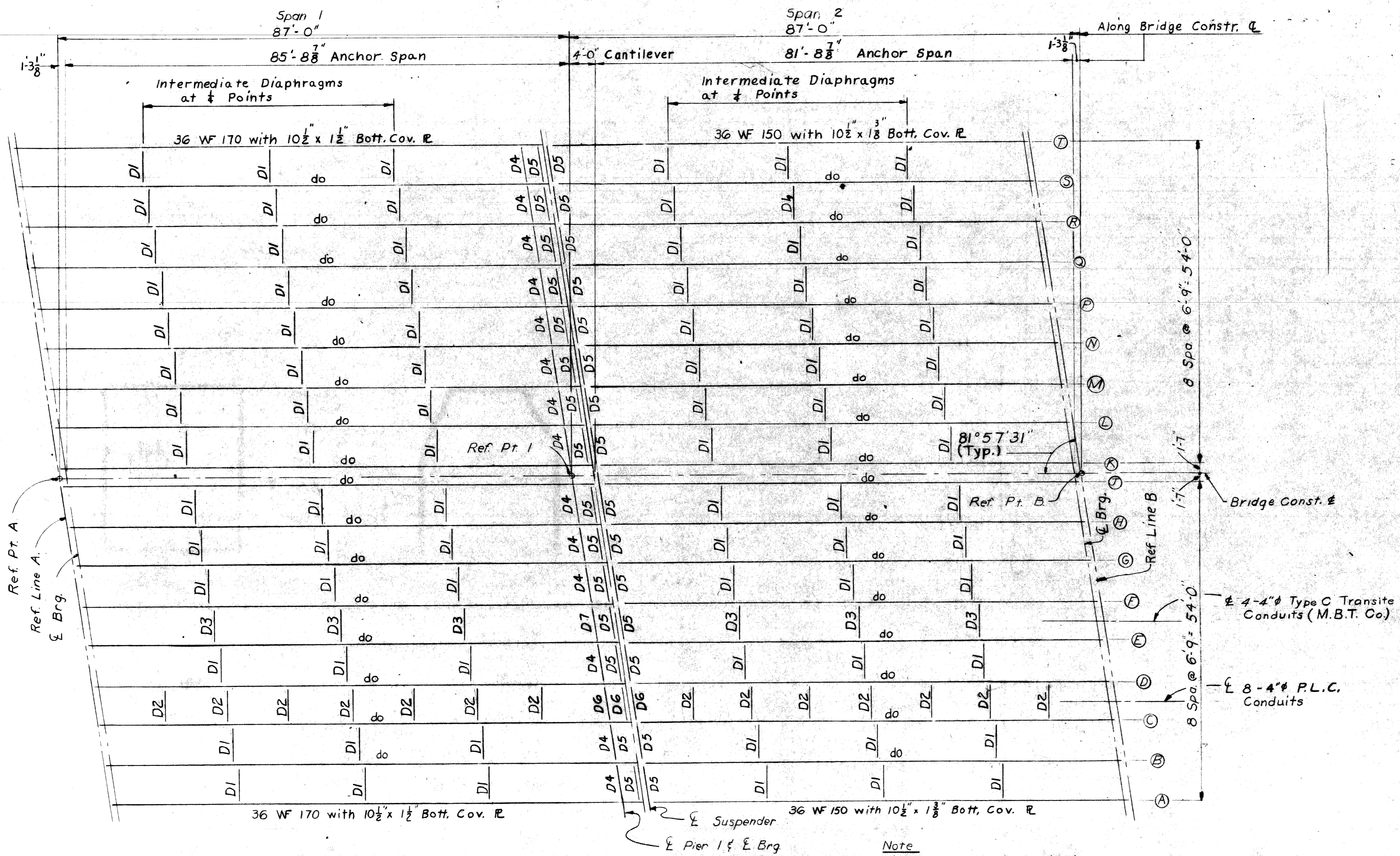
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DRAWN BY	J. Jones	8-68
CHECKED BY	K.V.H.	2-68
SHEET 13 OF 26		

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ERECTION DIAGRAM

STRUCTURAL STEEL NOTES

Design: Michigan State Highway Departments Specification for Design of Highway Bridges - 1958 edition and current AASHTO Standard Specifications for Highway Bridges. (HS 20 Loading).

Fabrication: Michigan Department of State Highways Standard Specifications for Road and Bridge Construction - 1967 edition.

Shop Connections shall be welded as shown on the plans. All welding shall be in accordance with current AWS Specifications.

Field Connections shall be bolted with 3/4" high strength bolts except as noted.

Camber shall be measured with the beam lying on its side. Camber tolerance is ± 4". Heating shall be used if necessary, to assure permanent camber within the above limits. See Sh. 15 for camber diagram. All steel shall be unpainted A 441 Modified.

Sole plates 3" or more in thickness may be built up by welding together plates not less than 1/2" in thickness. Edges must be beveled 1/4" and welded with a continuous weld for the full perimeter. Welds shall be ground flush with faces of plates.

The bottom surfaces of sole plates, curved bearing surfaces of rockers and top surface of masonry plates shall be coated in accordance with the requirements for machine-finished surfaces. Welding on tension flanges of beams will not be permitted except as shown on the plans. Welding at other locations not shown on the plans may be permitted by written authorization provided the welding is to be performed in strict accordance with all specification requirements for structural welding.

Shear Developers may be spirals or studs at the contractors option.

Beam dimensions are horizontal and along C beam.

Magnetic Particle Inspection of welds is required and shall consist of 100% inspection of not less than one fabricated section selected at random from each ten sections or fractions thereof.

QUANTITIES

Structural Steel* Furnishing and Fabricating	703,000*
Structural Steel* Erection	703,000*
Shear Developers	Lump Sum

* Includes weight of Metal Exp. Jt., sh. 17 and P.L.C. steel, sh. 24 and consist of:
 ASTM A-441 Steel (Modified) 702,760*
 Sheet Lead 240*

Work this sheet with sheets 15 & 16

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

STRUCTURAL STEEL DETAILS

CITY OF DETROIT

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APPROVED: *H. Conrad*
 STRUCTURAL ENGINEER

JOB No. PW 990(1)

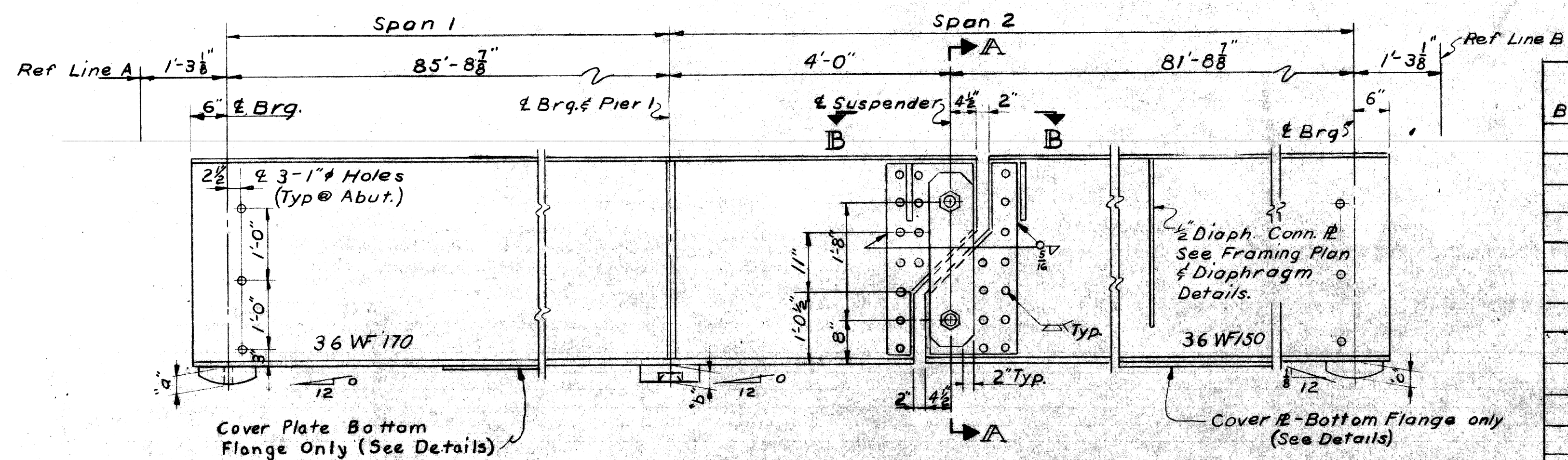
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REVISIONS

DRAWN BY: SPURBDM
 CHECKED BY: P. Goffes 2-7-68
 SHEET 14 of 26

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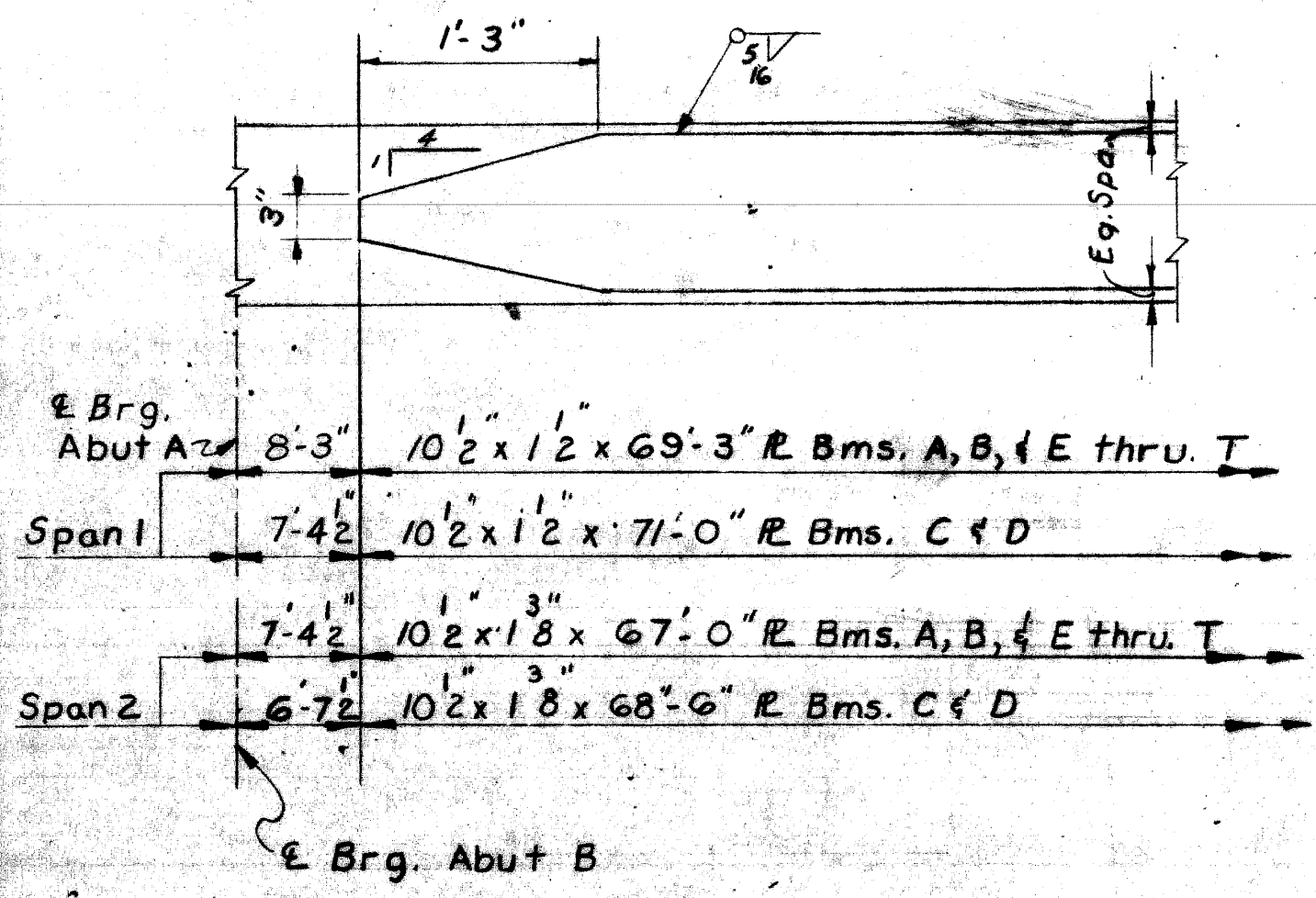
S03 of 82124 A 220(1)



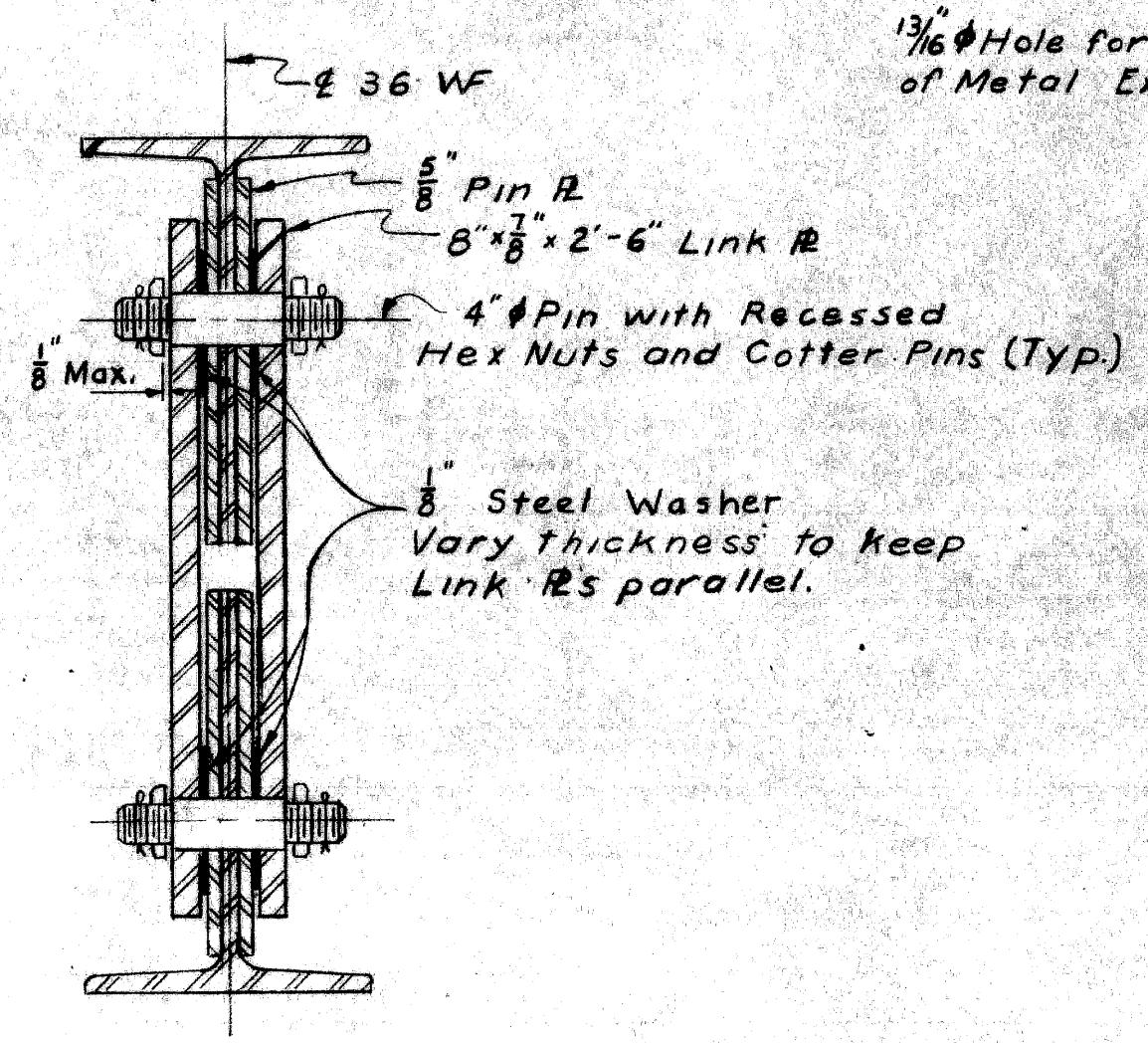
BEAM ELEVATION

Beam	Δ Steel Only*		Sole Plate Thickness			Camber		
	Span 1	Span 2	"a"	"b"	"c"	"d"	"e"	"f"
A	5/8"	9/16"	2"	3"	2 1/4"	6 1/2"	4"	7 8"
B	5/8"	9/16"	2"	3 1/4"	2 1/2"	6"	3 1/2"	3 4"
C	5/8"	9/16"	3"	4 1/4"	3 1/2"	6 3/8"	3 7/8"	7 8"
D	5/8"	9/16"	4"	3 1/2"	4 3/4"	6 3/8"	3 7/8"	7 8"
E	5/8"	9/16"	4 1/2"	4 1/4"	5 1/2"	5 1/2"	3"	3 4"
F	5/8"	9/16"	3 3/4"	3 3/4"	5"	5 1/2"	3"	3 4"
G	5/8"	9/16"	4 1/2"	5"	4"	5 1/2"	3"	7 8"
H	5/8"	9/16"	3 1/4"	3 3/4"	2 3/4"	5 1/2"	3"	7 8"
J	5/8"	9/16"	2 1/4"	3"	2"	5 1/4"	2 3/4"	3 4"
K	5/8"	9/16"	2"	3"	2 1/2"	5 1/4"	2 3/4"	3 4"
L	5/8"	9/16"	2 3/4"	4"	3 1/4"	5 1/2"	3"	7 8"
M	5/8"	9/16"	3 3/4"	5 1/2"	4 1/2"	5 1/2"	3"	7 8"
N	5/8"	9/16"	4 3/4"	3 1/2"	3 3/4"	5 3/8"	3"	7 8"
P	5/8"	9/16"	5 1/4"	4 1/4"	4 1/2"	5 3/8"	3"	7 8"
Q	5/8"	9/16"	4 1/2"	3 3/4"	4"	5 3/8"	3"	7 8"
R	5/8"	9/16"	3 1/4"	4 3/4"	3"	5 3/8"	3"	7 8"
S	5/8"	9/16"	2 1/4"	3 3/4"	2"	6"	3 1/2"	7 8"
T	5/8"	9/16"	2"	3 3/4"	2 1/4"	6 3/8"	4"	1"

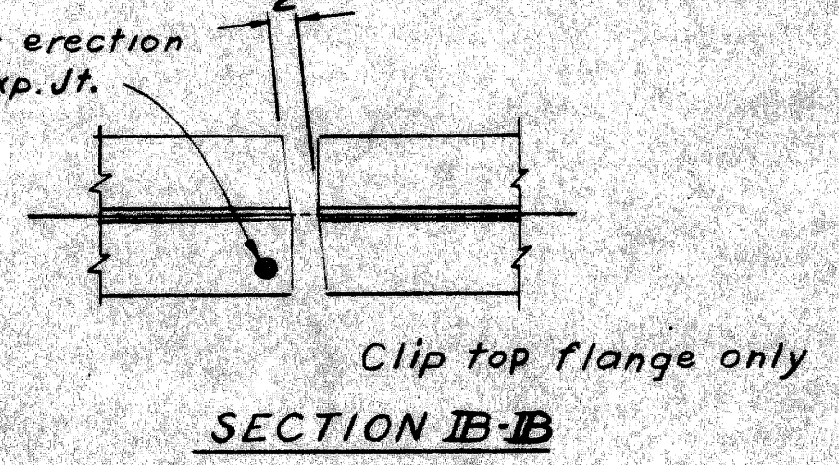
*Deflections of Steel Beams due to their own weight and weight of diaphragms. Deflections are given in inches at midpoint of beam.



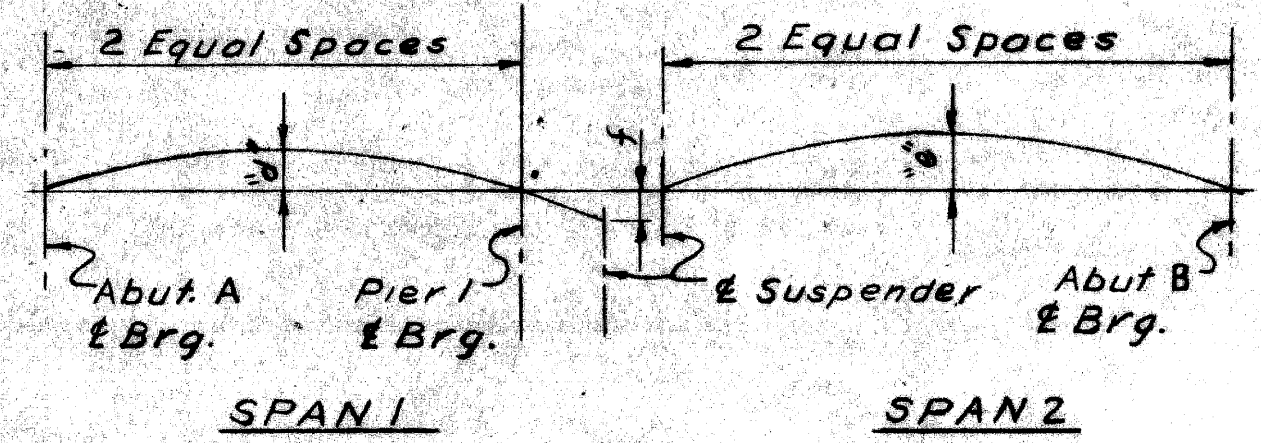
COVER PLATE DETAILS



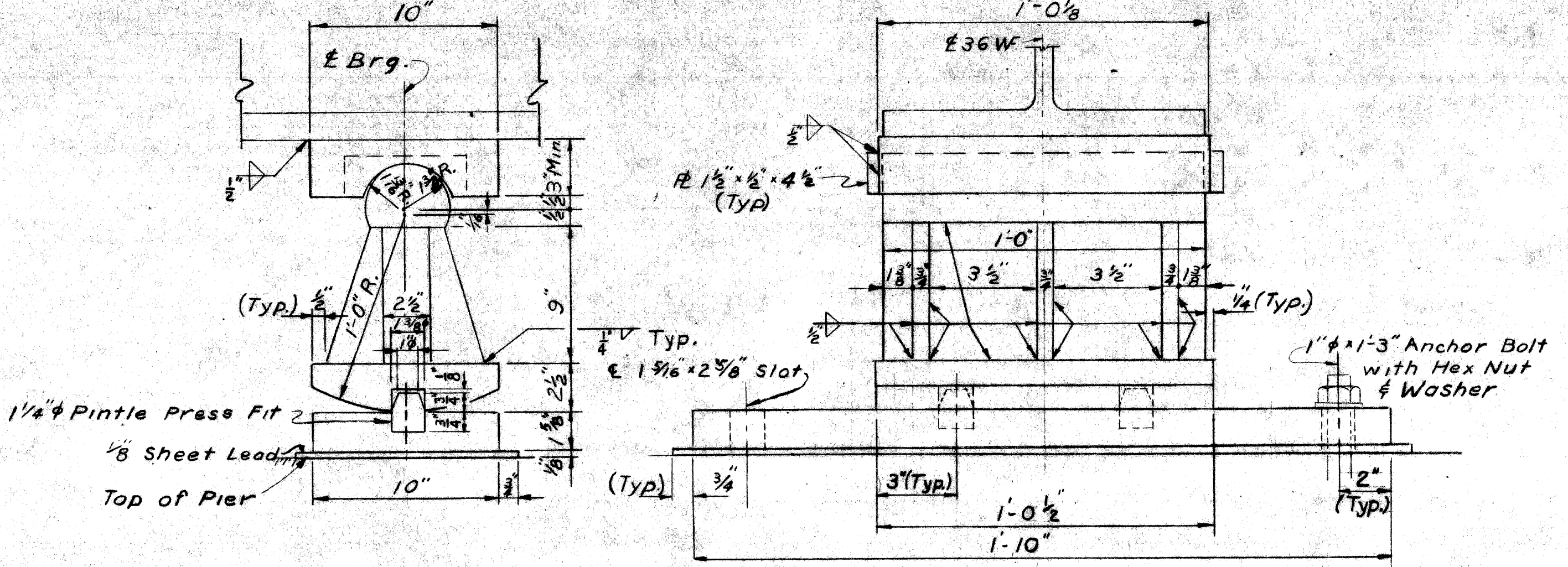
SECTION A-A



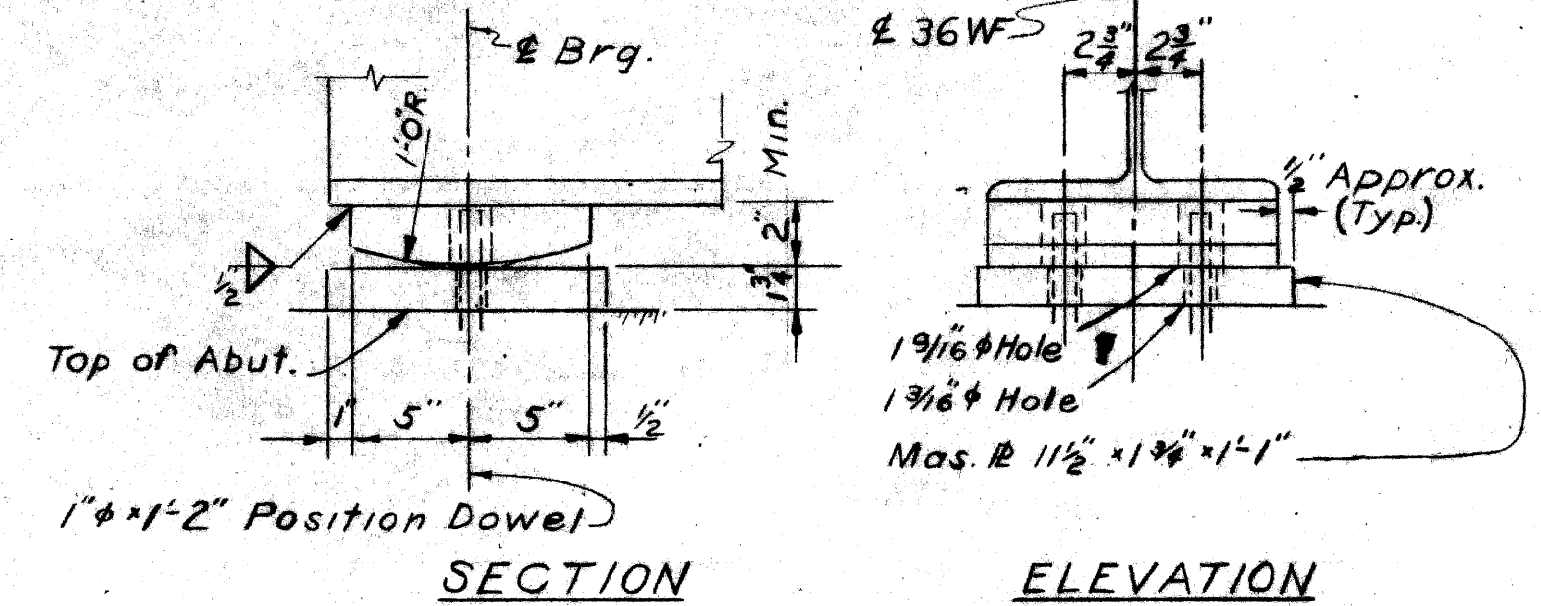
SECTION B-B



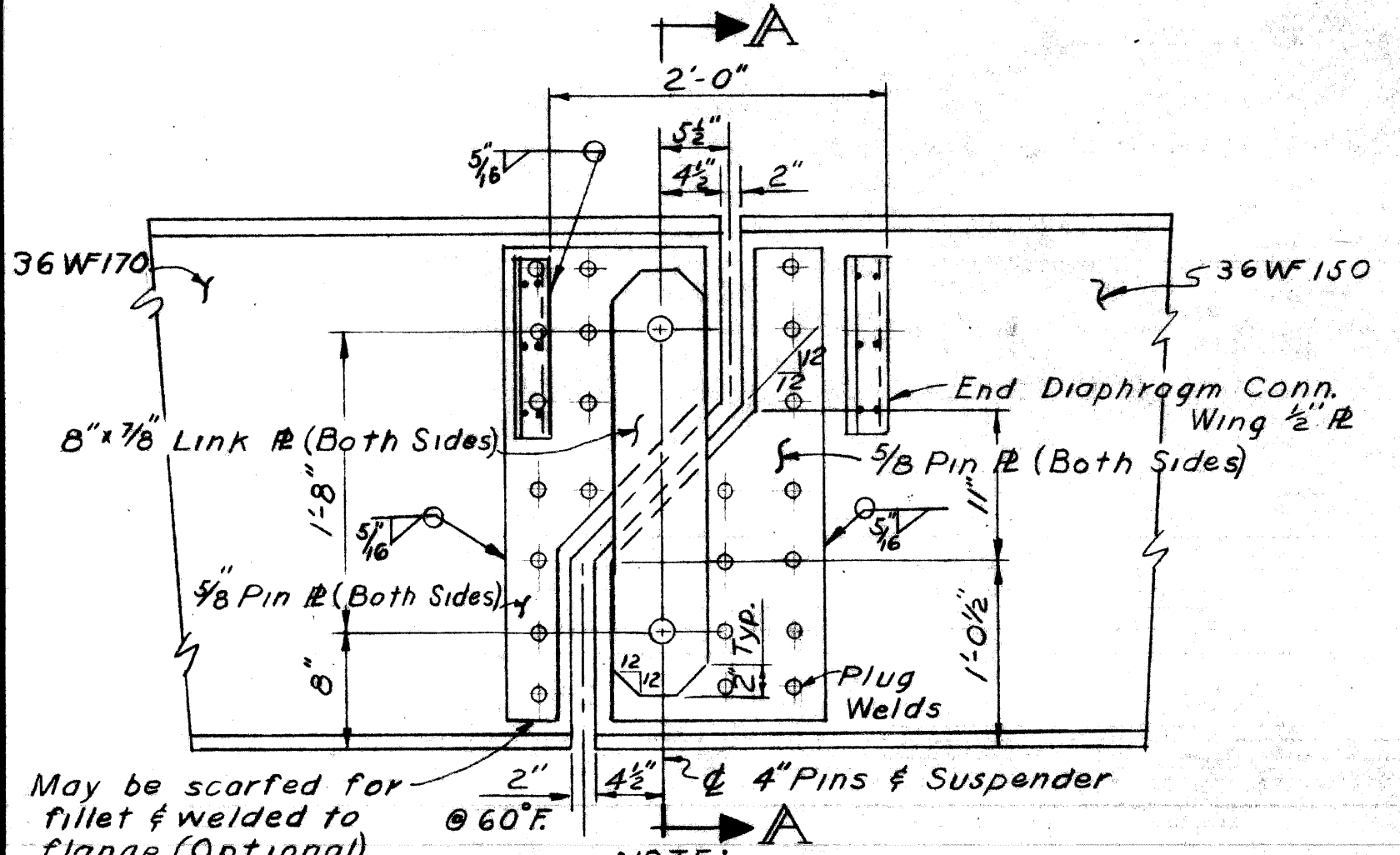
CAMBER DETAIL



PIER BEARING DETAILS



ABUTMENT BEARING DETAILS



SUSPENDER DETAILS

NOTE: Size and spacing of the plug welds shall be according to the A.W.S. current specifications

Work this Sheet with Sheets 14 & 16

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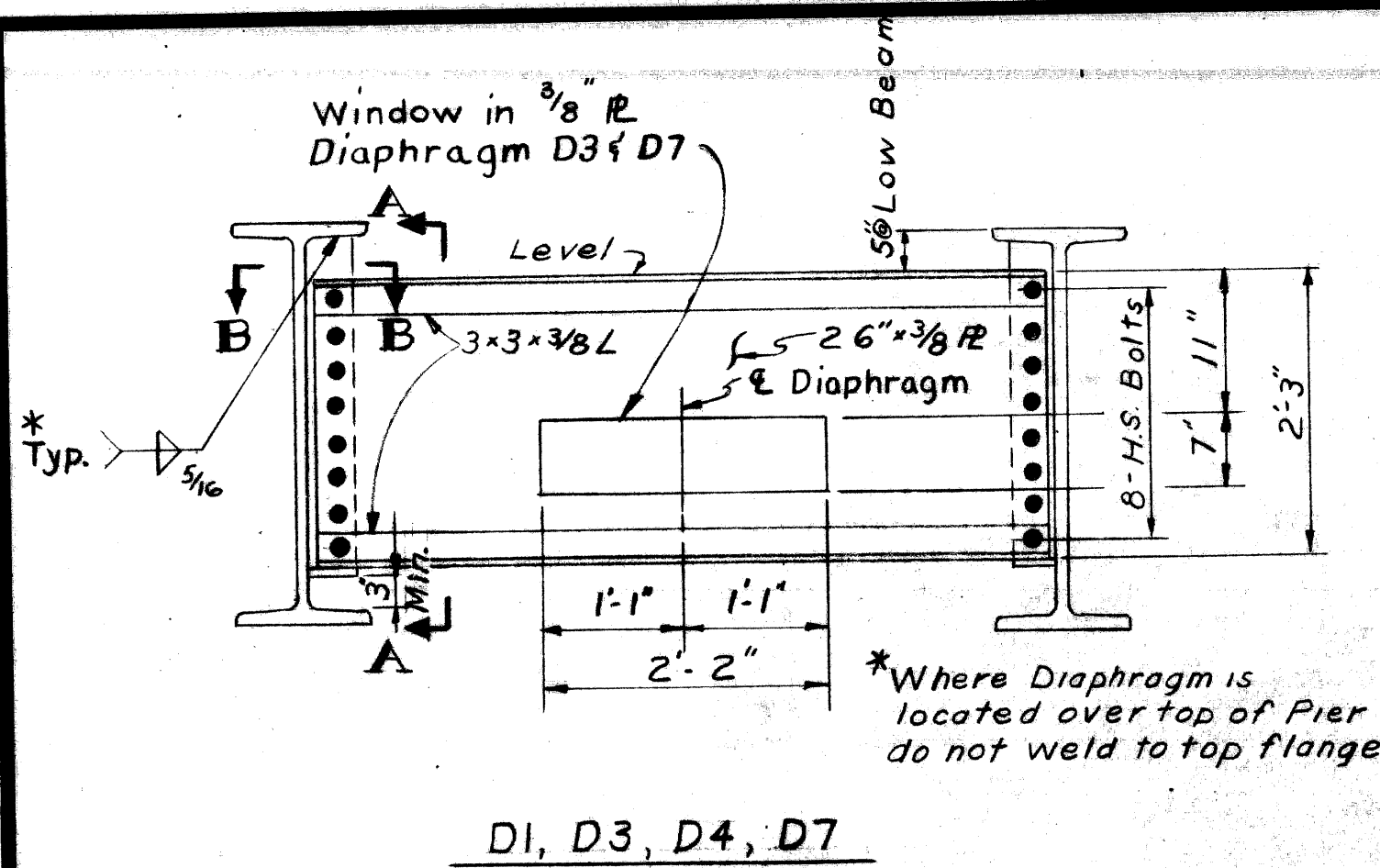
STRUCTURAL STEEL DETAILS

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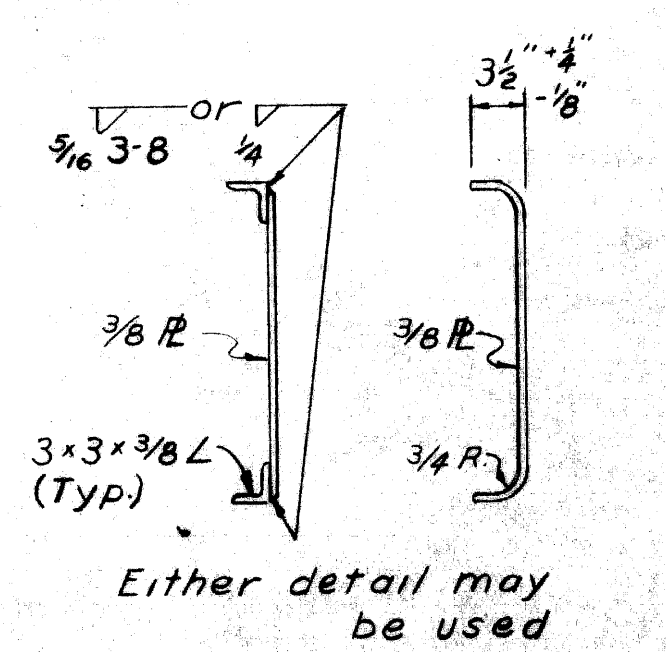
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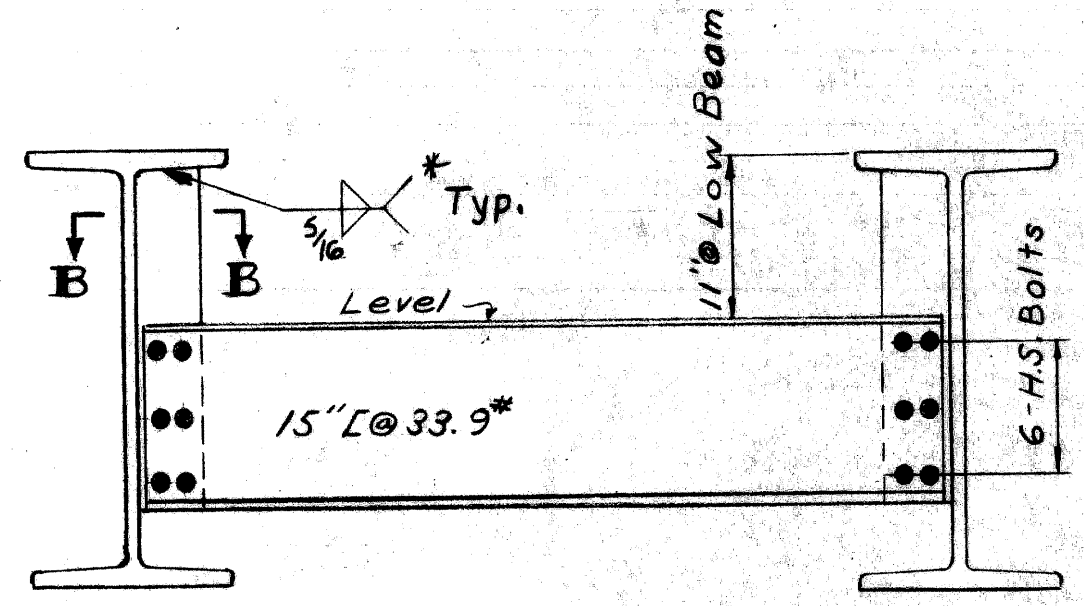
CITY OF DETROIT
 DRAWN BY: SPURGEON 12/18/67
 CHECKED BY: R. Goff 2-1-68
 SHEET 15 of 26
 S03 of 82124 A



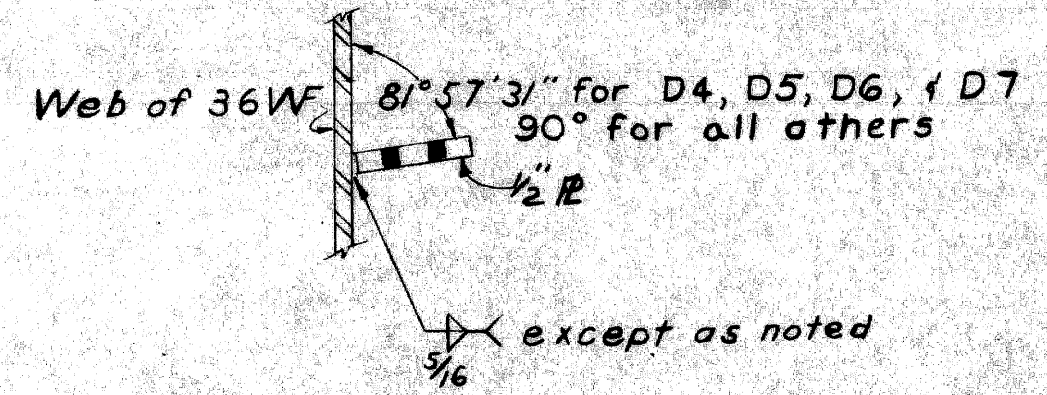
D1, D3, D4, D7



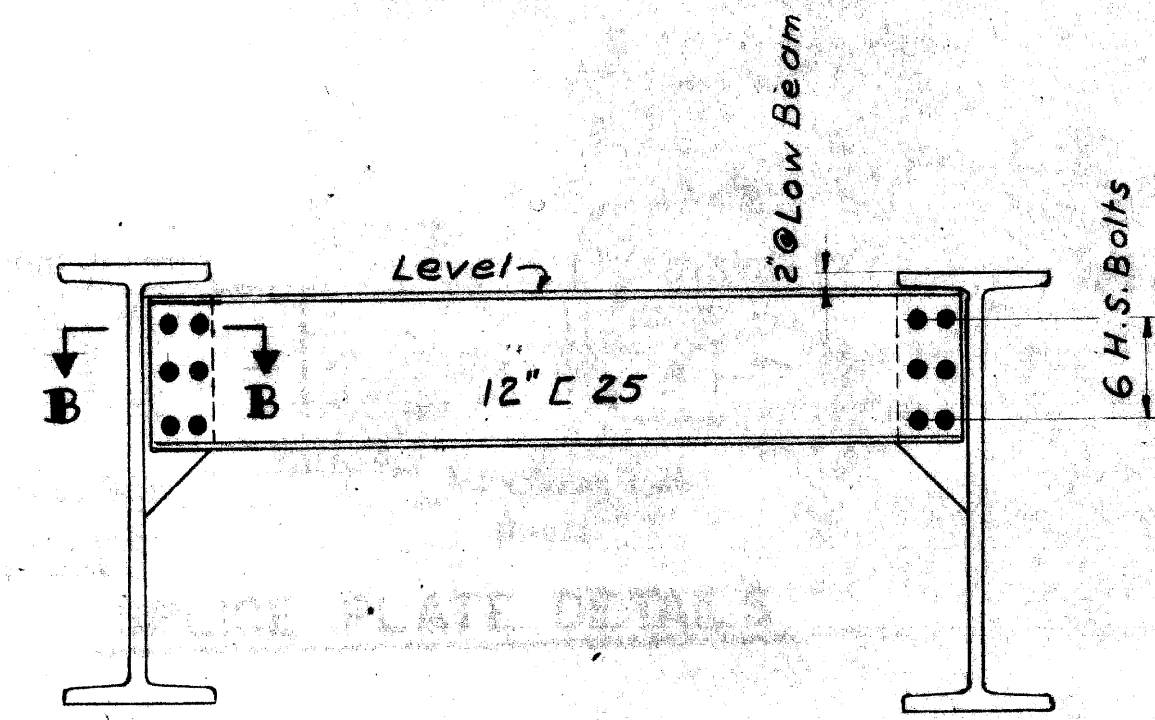
SECTION A-A



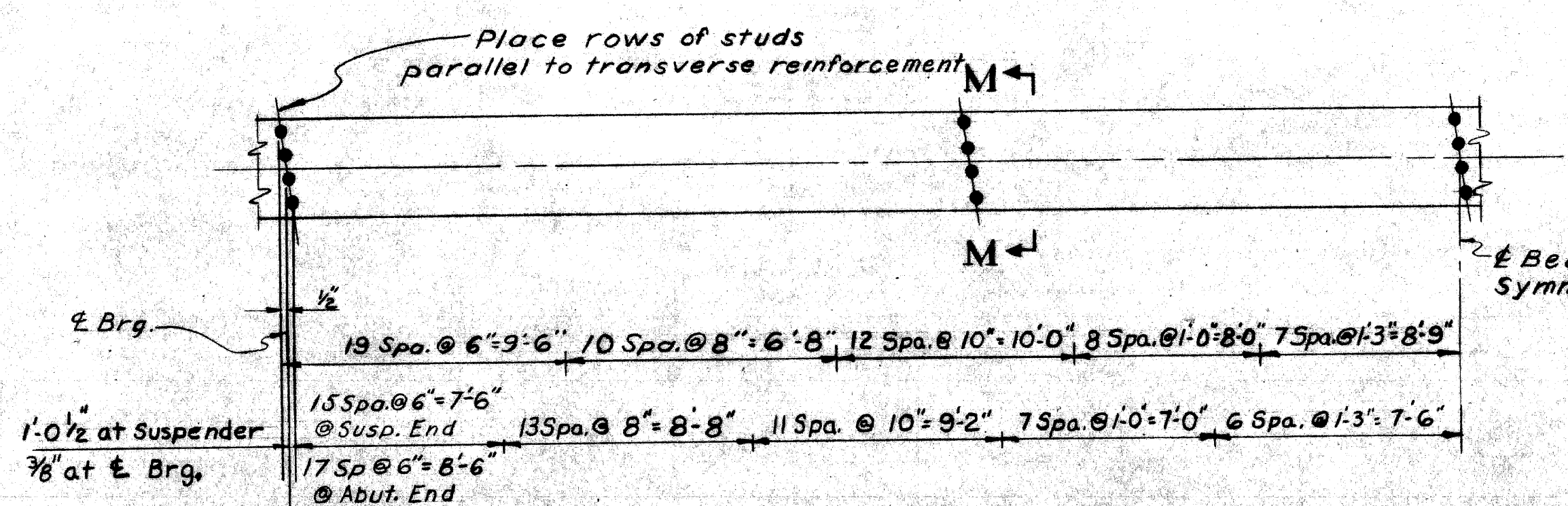
D2, D6



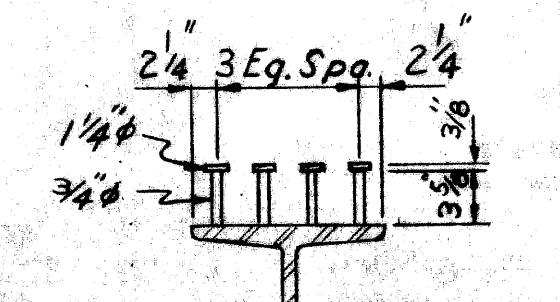
SECTION B-B



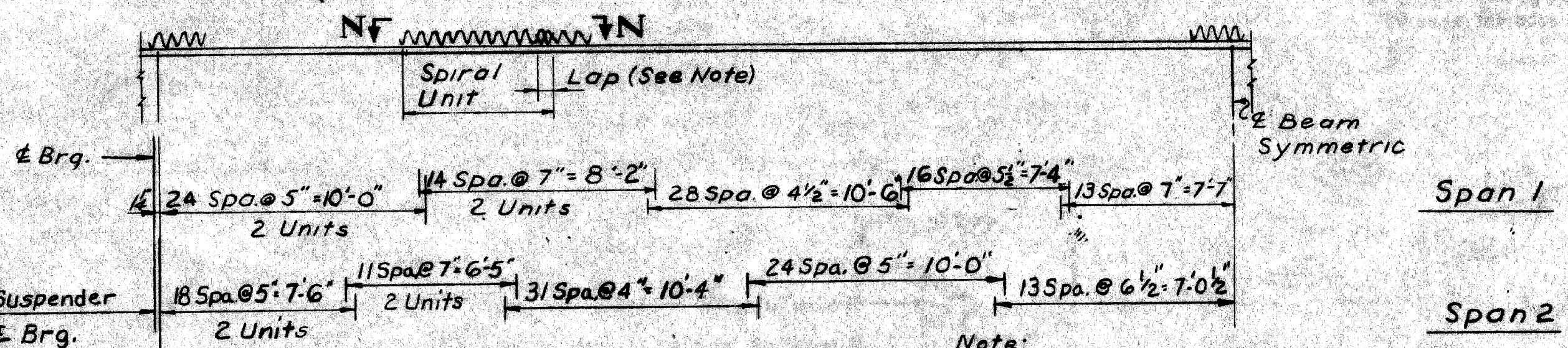
D5



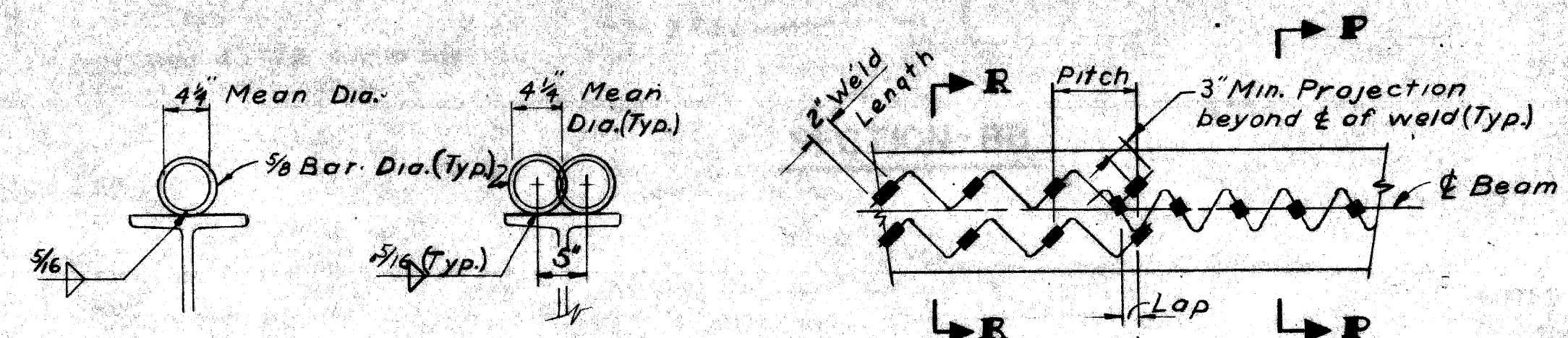
STUD SHEAR CONNECTORS



SECTION M-M



SPIRAL SHEAR CONNECTORS



SECTION P-P SECTION R-R VIEW N-N

NOTE: Either Spiral or Stud Shear Developers may be used at the option of the contractor. The weight of Shear Developers is not included in the weight of structural steel. Welding of Shear Developers is incidental to "Shear Developers".

Work this sheet with sheets 14 & 15

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

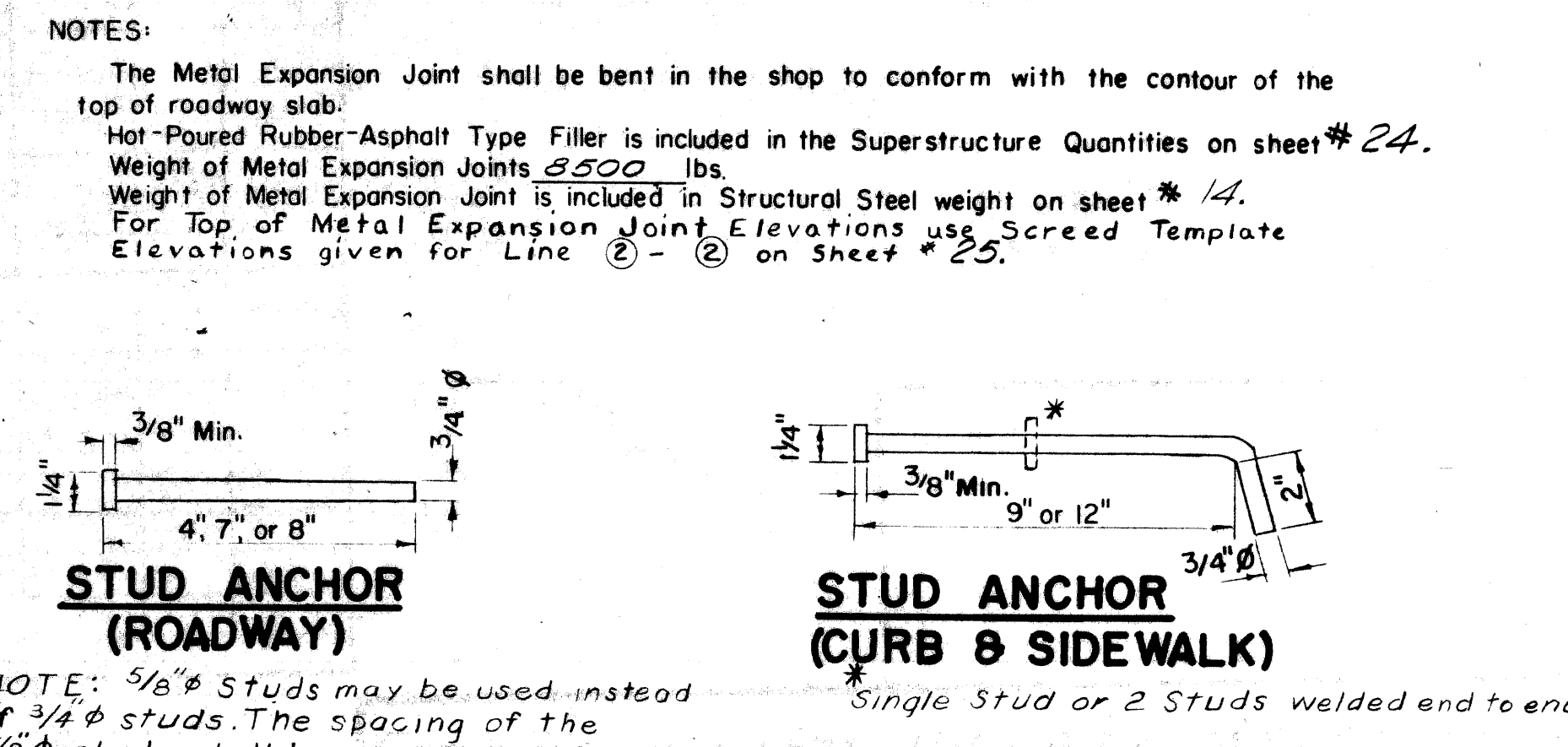
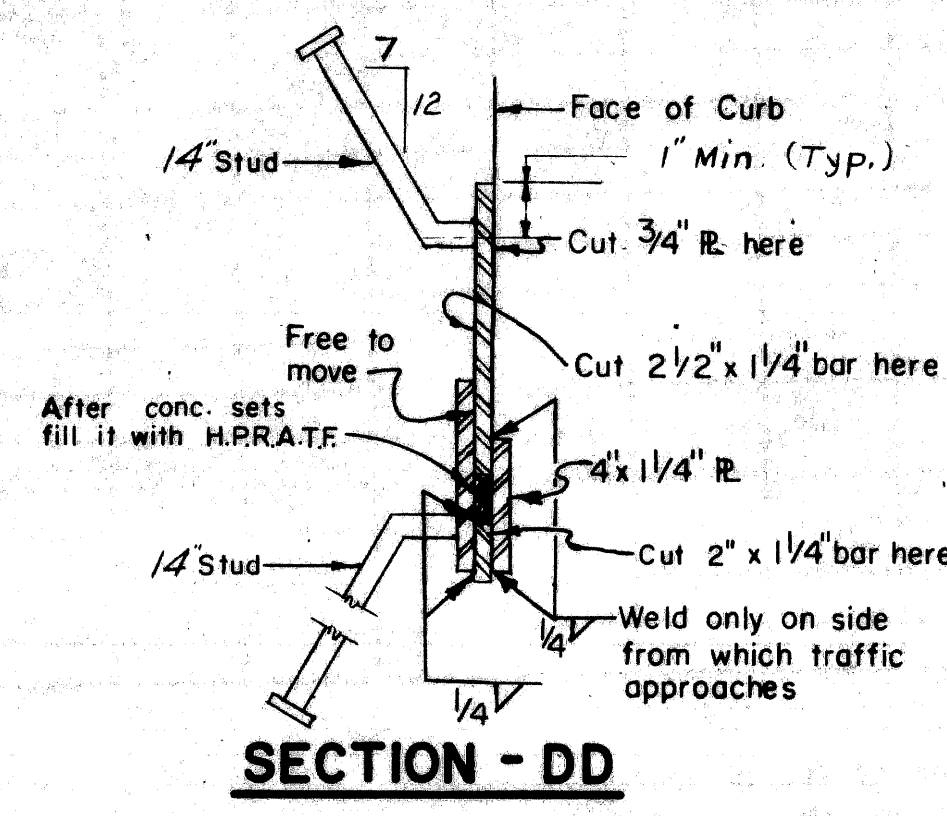
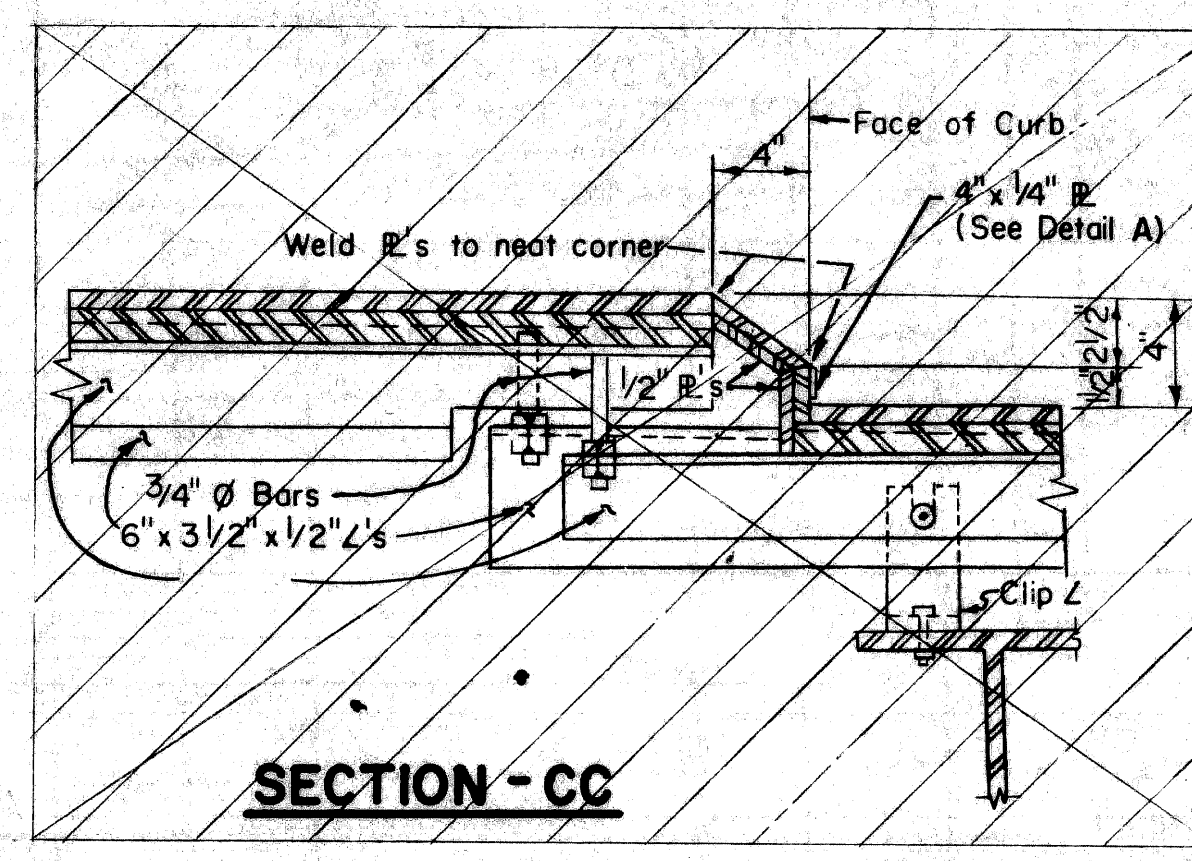
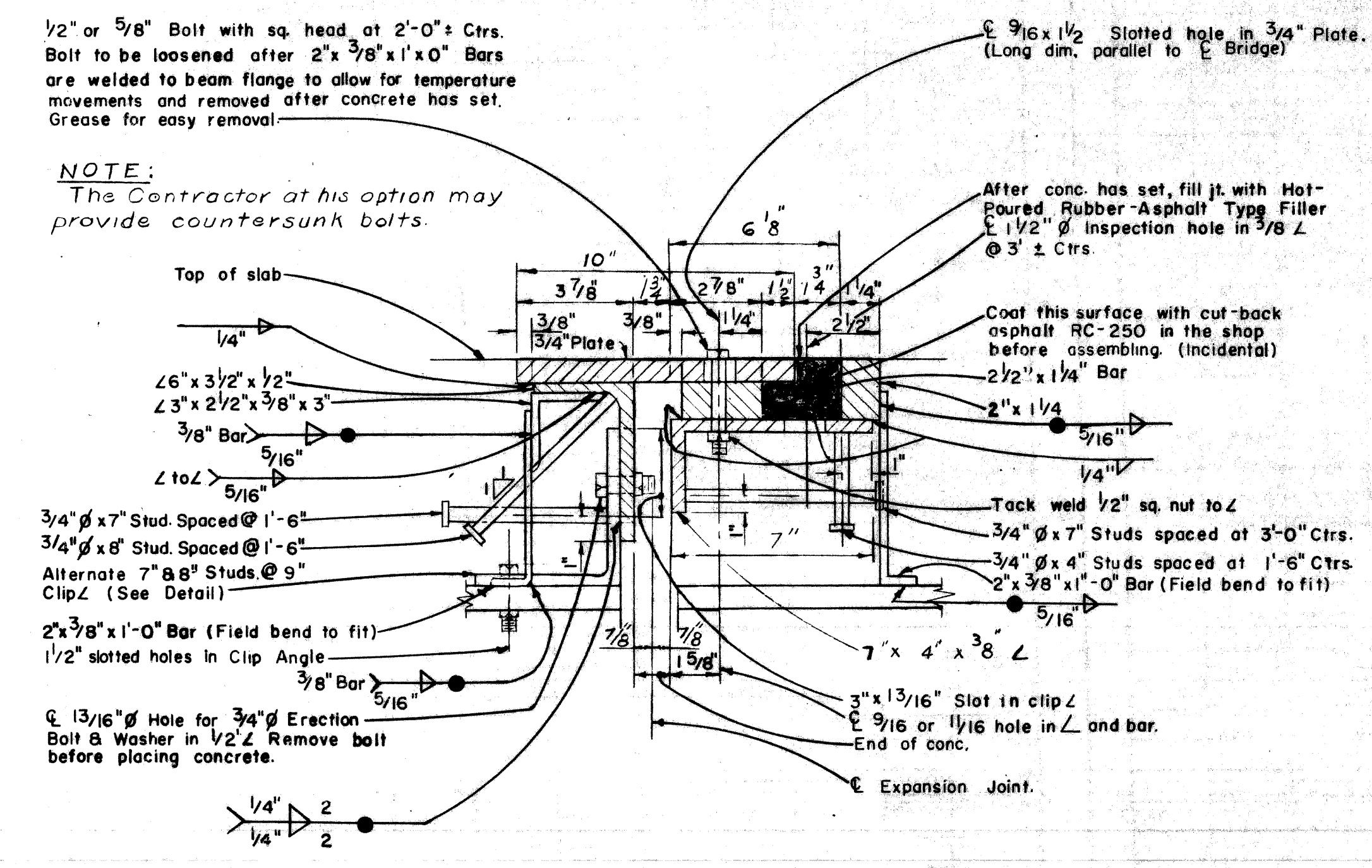
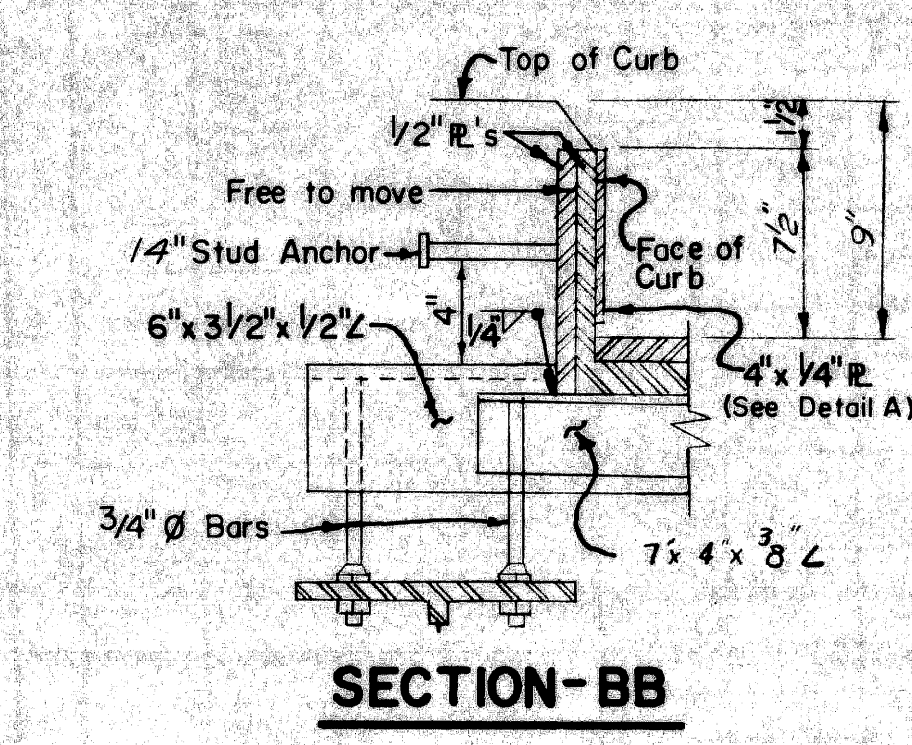
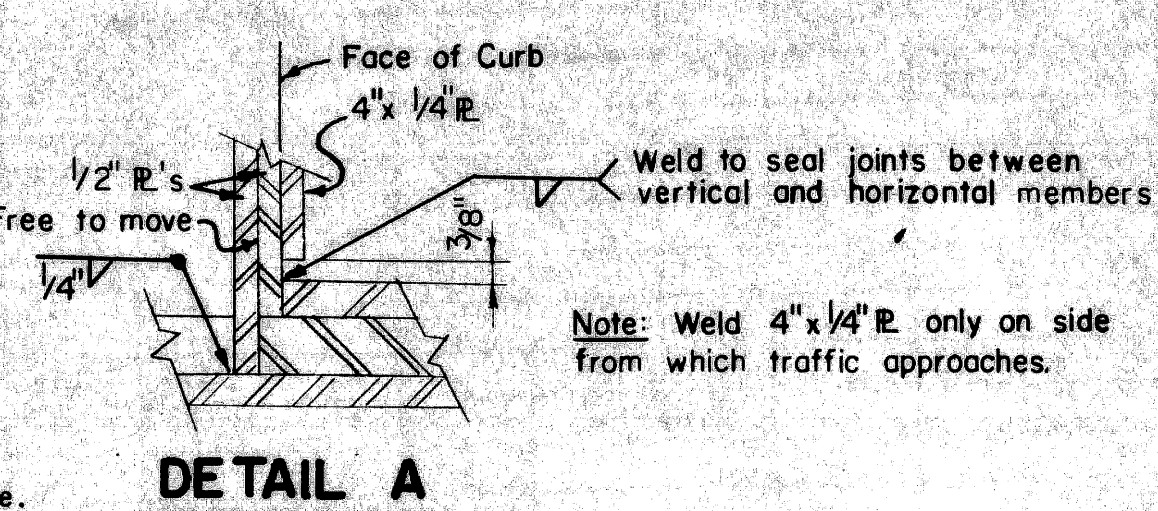
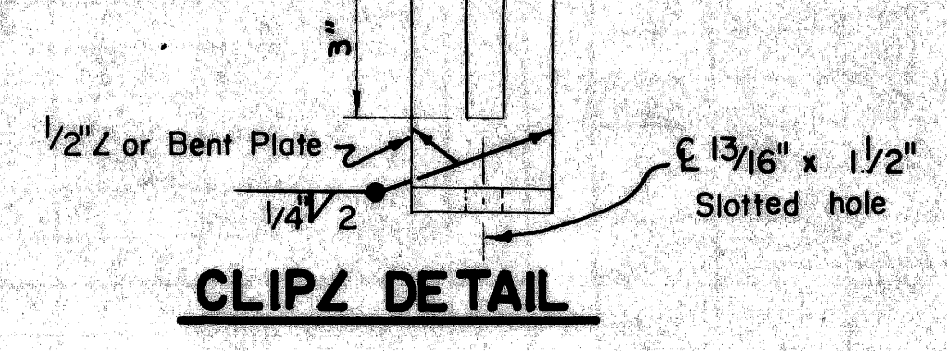
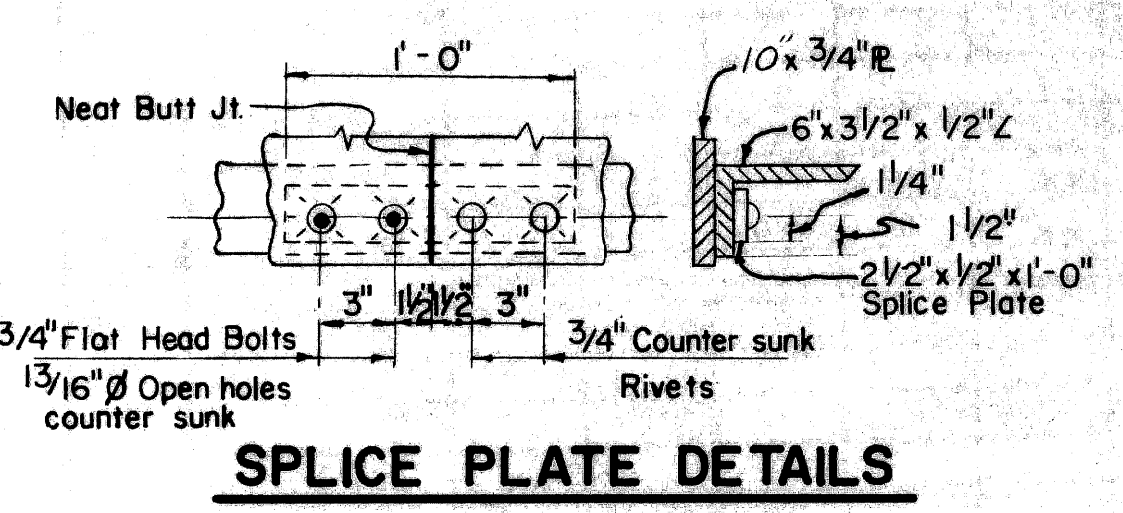
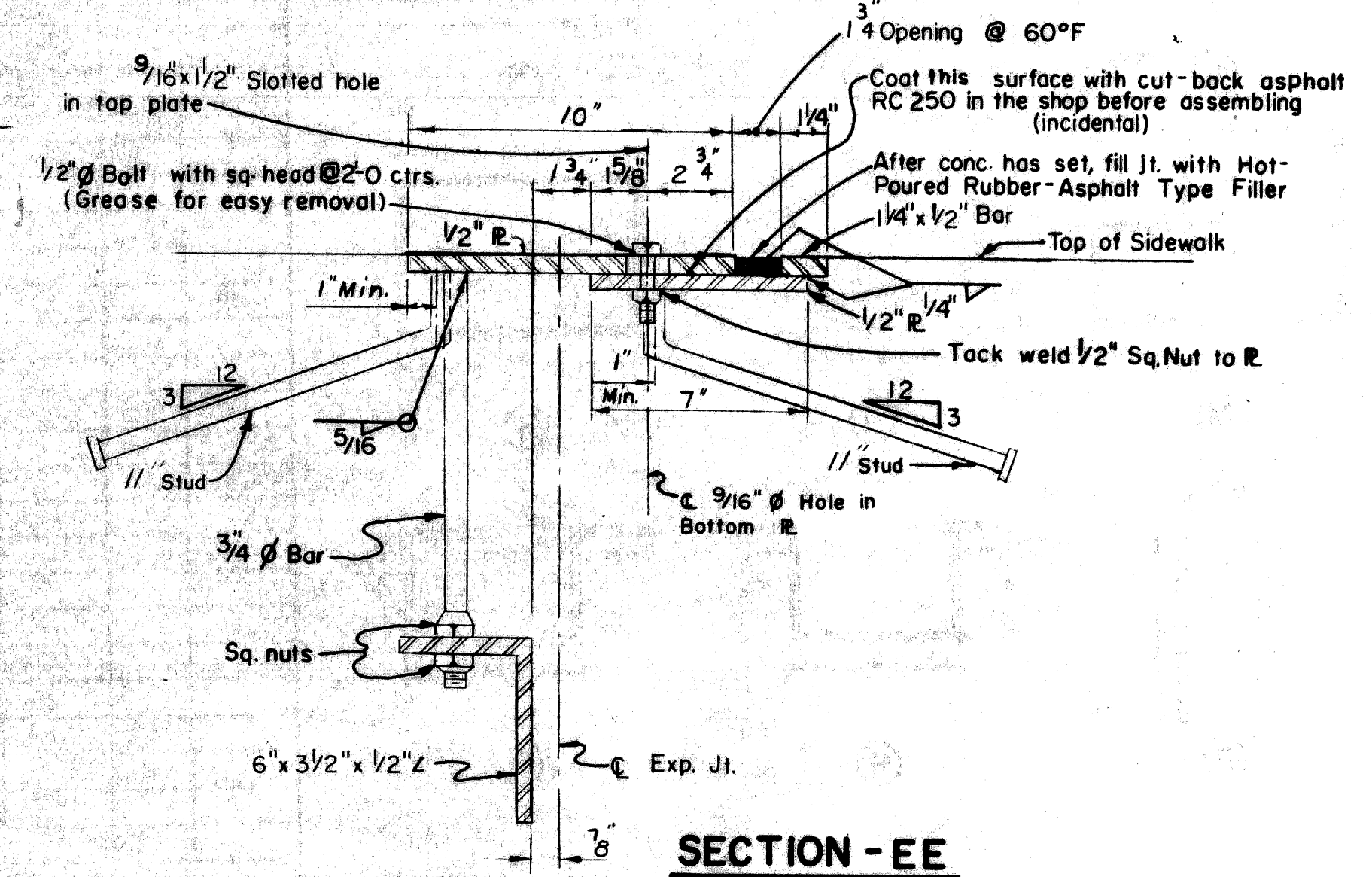
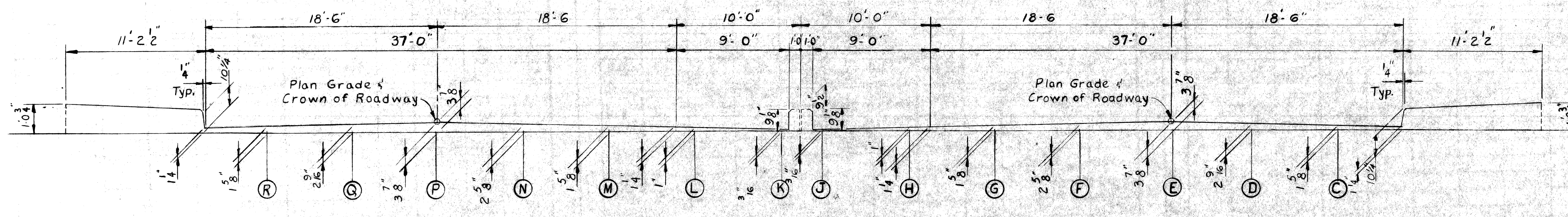
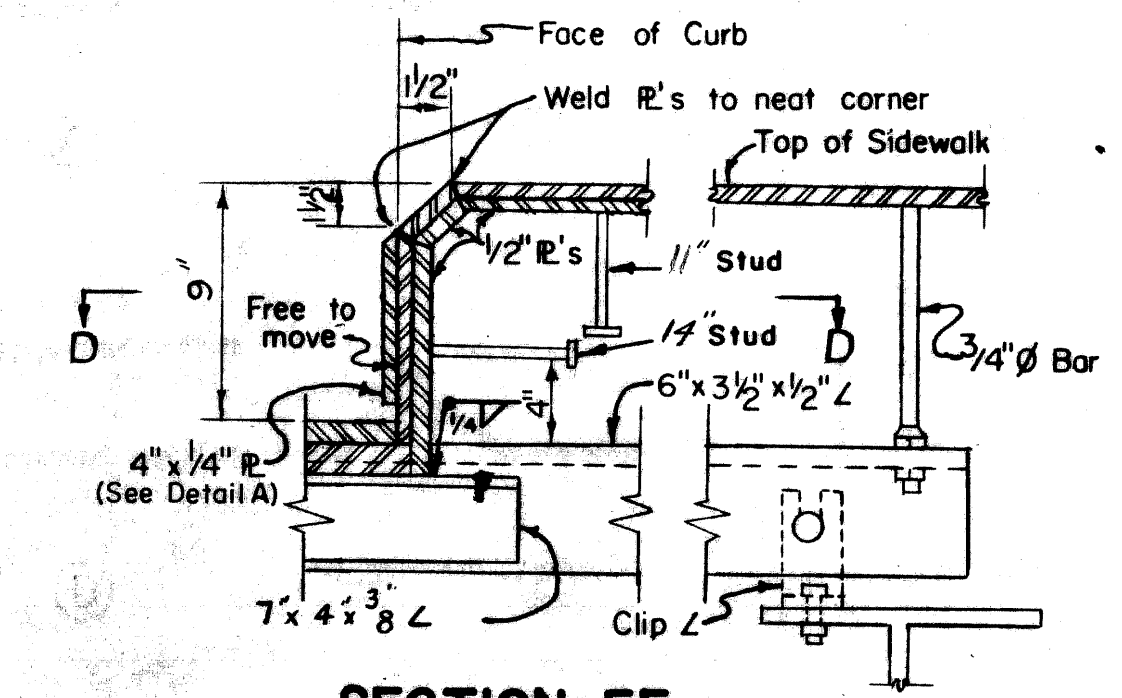
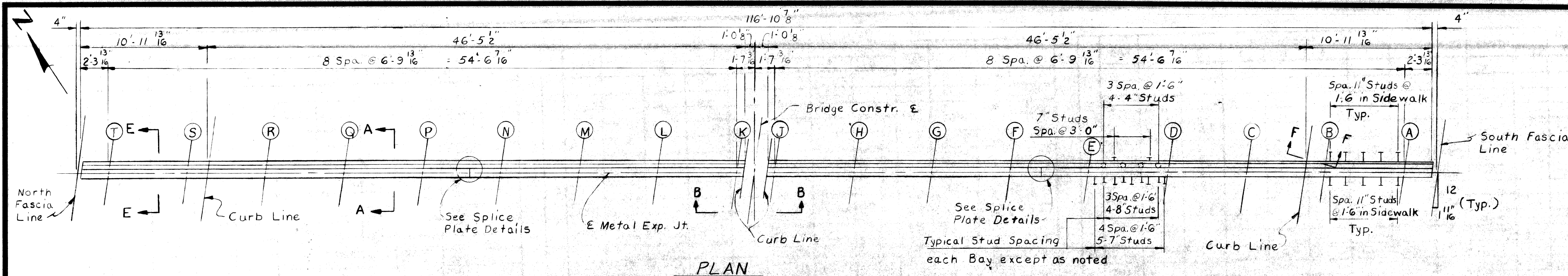
STRUCTURAL STEEL DETAILS

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JOB No.
PW 990(1)

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CITY OF DETROIT
SQUAD BOSS
DRAWN BY SPURGEON 1-68
CHECKED BY P. Goffas 2-7-68
SHEET 16 of 26
S03 of 82124 A



NOTE:
The Contractor at his option may provide countersunk bolts.

NOTES:
The Metal Expansion Joint shall be bent in the shop to conform with the contour of the top of roadway slab.
Hot-Poured Rubber-Asphalt Type Filler is included in the Superstructure Quantities on sheet # 24.
Weight of Metal Expansion Joints 6500 lbs.
Weight of Metal Expansion Joint is included in Structural Steel weight on sheet # 14.
For Top of Metal Expansion Joint Elevations use Scribed Template Elevations given for Line ② - ② on sheet # 25.

SECTION-AA

SECTION-CC

SECTION-DD

STUD ANCHOR (CURB & SIDEWALK)

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MICHIGAN DEPARTMENT OF STATE HIGHWAYS			
METAL EXPANSION JOINT DETAILS			
REVISIONS			
NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			

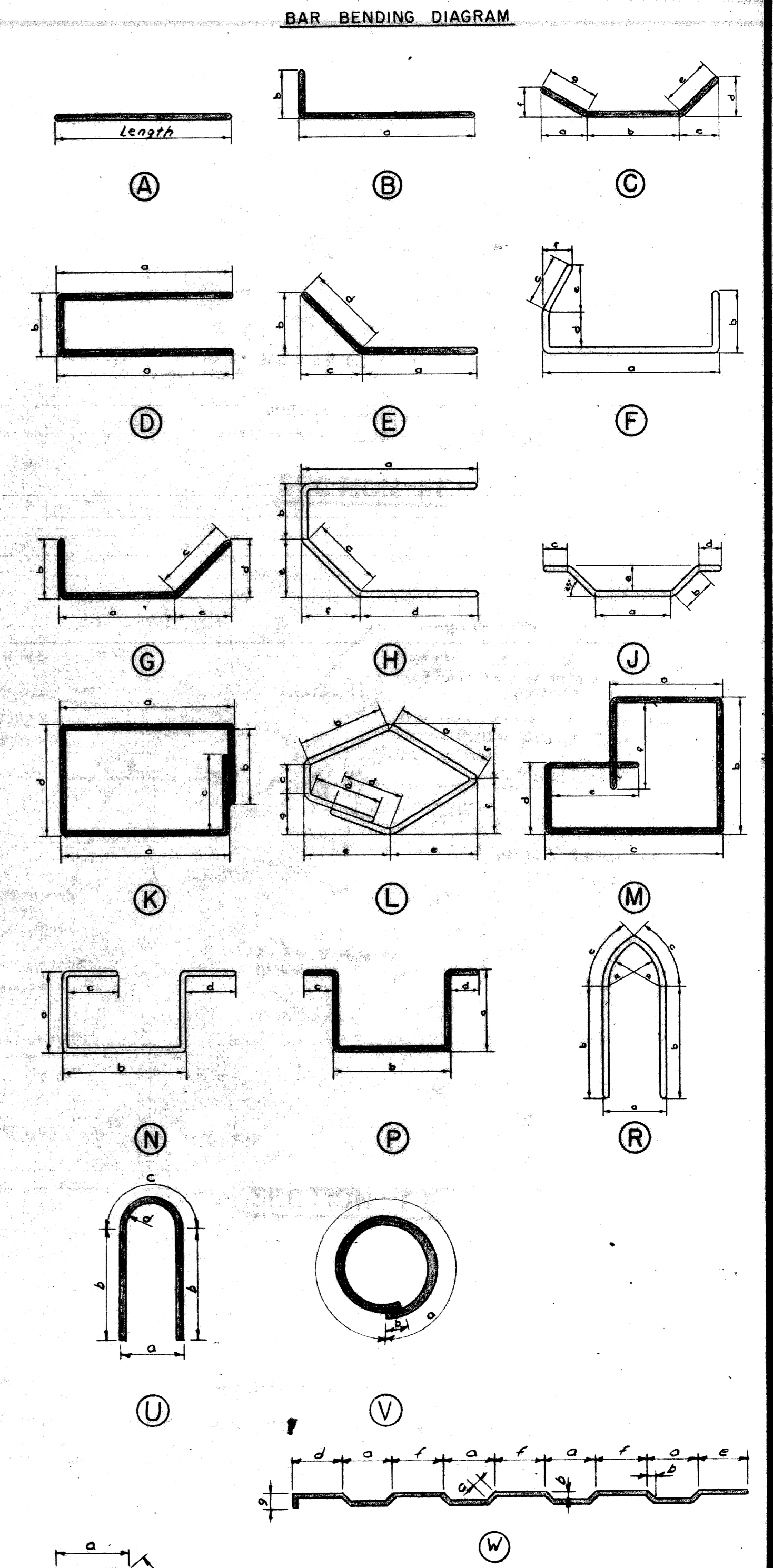
REVISIONS	
NO.	DESCRIPTION
1	
2	
3	
4	
5	

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BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A1								#6	5'-3"	158	1246
A2								#6	12'-6"	158	2967
A3								#8	8'-0"	156	3332
A4								#11	8'-0"	156	6631
A5								#4	21'-0"	200	2806
A6								#4	18'-6"	100	1236
A7								#6	28'-3"	88	3734
A8								#6	17'-6"	16	421
A9								#9	9'-3"	152	4780
A10								#8	14'-9"	152	5986
A11								#6	20'-0"	165	4957
A12								#6	21'-9"	165	5390
A13								#6	10'-6"	80	1262
A14								#6	12'-0"	12	216
A15								#6	24'-6"	40	1472
A16								#4	8'-6"	132	750
A17								#6	9'-9"	56	820
A18								#6	8'-0"	40	481
A19								#6	13'-0"	56	1094
A20								#6	17'-3"	32	829
A21								#6	6'-0"	32	288
A22								#6	9'-6"	32	457
A23								#8	7'-0"	36	673
A24								#6	14'-0"	36	757
A25								#7	5'-6"	36	405
A26								#10	7'-0"	36	1084
A27								#9	10'-3"	36	1255
A28								#9	8'-9"	40	1190
A29								#6	19'-6"	40	1172
A30								#4	4'-0"	82	219
A31								#4	12'-6"	152	1269
A32								#6	11'-0"	62	1024
A33								#6	9'-3"	14	195
A34								#6	4'-3"	200	1277
A35								#9	12'-9"	28	1214
A36								#8	9'-3"	14	346
A37								#6	15'-3"	32	733
A38								#11	12'-3"	28	1822
A39								#9	19'-6"	28	1856
A40								#6	22'-9"	40	1367
A41								#8	11'-0"	14	411
Total Abutments - 73,056											
B1	4'-6"	2'-6"						#4	7'-0"	25	117
C1	1'-1 1/2"	4'-0"	1'-1 1/2"	0'-11 1/4"	1'-6"	0'-11 1/4"	1'-6"	#6	7'-0"	25	263
C2	0'-11 1/2"	3'-6"	0'-11 1/4"	1'-1 1/2"	1'-6"	1'-1 1/2"	1'-6"	#6	6'-6"	25	244
G1	1'-2"	4'-6"	1'-4 1/2"					#4	7'-0"	25	117
Z1	2'-6 1/2"	2'-7 1/2"	3'-8"	2'-6 1/2"				#6	8'-9"	220	2891
Total Subbase - 125,456											
A101								#9	38'-3"	440	57222
A102								#10	32'-3"	436	60504
A103								#4	37'-6"	222	5561
A104								#10	14'-0"	36	2169

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A201								#10	36'-8"	14	2209
A202								#10	38'-8"	7	1165
A203								#4	36'-8"	4	98
A204								#4	38'-8"	2	52
A205								#7	36'-8"	14	1049
A206								#7	38'-8"	7	553
A207								#8	11'-0"	24	705
A208								#9	11'-5"	90	3493
A209								#9	8'-11"	90	2729
A210								#9	37'-8"	12	1537
A211								#4	36'-7"	24	586
A212								#6	9'-3"	74	1028
A213								#8	38'-6"	42	4317
A214								#7	9'-3"	111	2099
Total Pier - 29,718											
B201	1'-9"	0'-6 3/4"						#6	2'-3"	4	14
B202	4'-11"	0'-6 3/4"						#6	5'-5"	4	33
B203	3'-11"	0'-6 3/4"						#6	4'-5"	146	968
C201	0'-4 3/8"	3'-2"	0'-4 3/8"	2'-1"	2'-2"	2'-1"	2'-2"	#4	7'-6"	73	366
D201	2'-2"	3'-2"						#4	7'-5"	14	69
D202	2'-3"	4'-0"						#4	9'-3"	4	25
E201	3'-5"	1'-0"	1'-7"	1'-11"				#6	5'-4"	146	1170
K201	3'-2 1/2"	1'-6 1/2"	1'-6"	2'-0 1/2"				#5	11'-5"	176	2096
U201	2'-10 1/4"	1'-1"	4'-5"	1'-4 1/2"				#4	6'-7"	6	26
V201								#4	8'-7"	72	413
Z201	2'-6 1/2"	2'-7 1/2"	3'-8"	2'-6 1/2"				#6	8'-9"	222	2918

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A301								#4	1'-6"	5	5
A302								#4	2'-9"	4	7
A303								#4	4'-0"	3	8
A304								#4	5'-0"	1	3
A305								#4	28'-0"	411	7687
A306								#4	31'-0"	411	8511
A307								#4	2'-3"	12	18
A308								#4	9'-6"	4	25
A309								#4	10'-3"	4	27
A310								#4	13'-3"	132	1168
A311								#4	21'-6"	44	632
A312								#5	28'-3"	408	12022
A313								#5	31'-3"	408	13298
A314								#6	8'-9"	51	670
A315								#6	10'-9"	51	823
A316								#6	30'-3"	1160	52705
A317								#4	1'-0"	4	3
A318								#4	12'-0"	2	16
Total Superstructure - 130,289											
B301	10'-9 1/2"	0'-9"						#4	11'-6"	281	2159
B302	10'-6 1/2"	0'-9"						#4	11'-3"	7	58
B303	10'-3 1/2"	0'-9"						#4	11'-0"	8	59
D301	0'-6"	1'-2"						#4	2'-1"	909	1265
K301	3'-4"	1'-0 1/2"	1'-1"	1'-3 1/2"				#4	10'-0"	22	147
K302	3'-4"	1'-4 1/2"	1'-5"	1'-7 1/2"				#4	11'-0"	8	59
M301	0'-10 1/4"	3'-4"	1'-3 1/2"	2'-5"	0'-11 1/4"	1'-5 1/2"		#4	10'-2"	130	883
M302	0'-10 1/4"	3'-4"	1'-3 1/2"	1'-11"	0'-11 1/4"	1'-11 1/2"		#4	10'-2"	10	68
P301	1'-1"	5'-5 1/2"	0'-9 1/4"	0'-9 1/4"				#4	9'-1"	112	680
W301	3'-4 1/4"	0'-3 1/2"	0'-5"	3'-8"	2'-5 1/2"	2'-10 1/2"	0'-5"	#6	31'-11"	288	13806
W302	3'-4 1/4"	0'-3 1/2"	0'-5"	2'-10"	2'-6 1/2"	2'-10 1/2"	0'-5"	#6	31'-2"	288	13482



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

APPROVED: *H. East*
 STRUCTURAL ENGINEER

JOB No. **PW 93011**

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL REINFORCEMENT DETAILS

CITY OF DETROIT

SQUAD BOSS: *SV* 5-68
 DRAWN BY: *Goravayla* 2-68
 TRACED BY:
 CHECKED BY: *P. Goffas* 2-68
 SHEET 26 OF 26

NO. DESCRIPTION DATE BY

503 of 82124 A

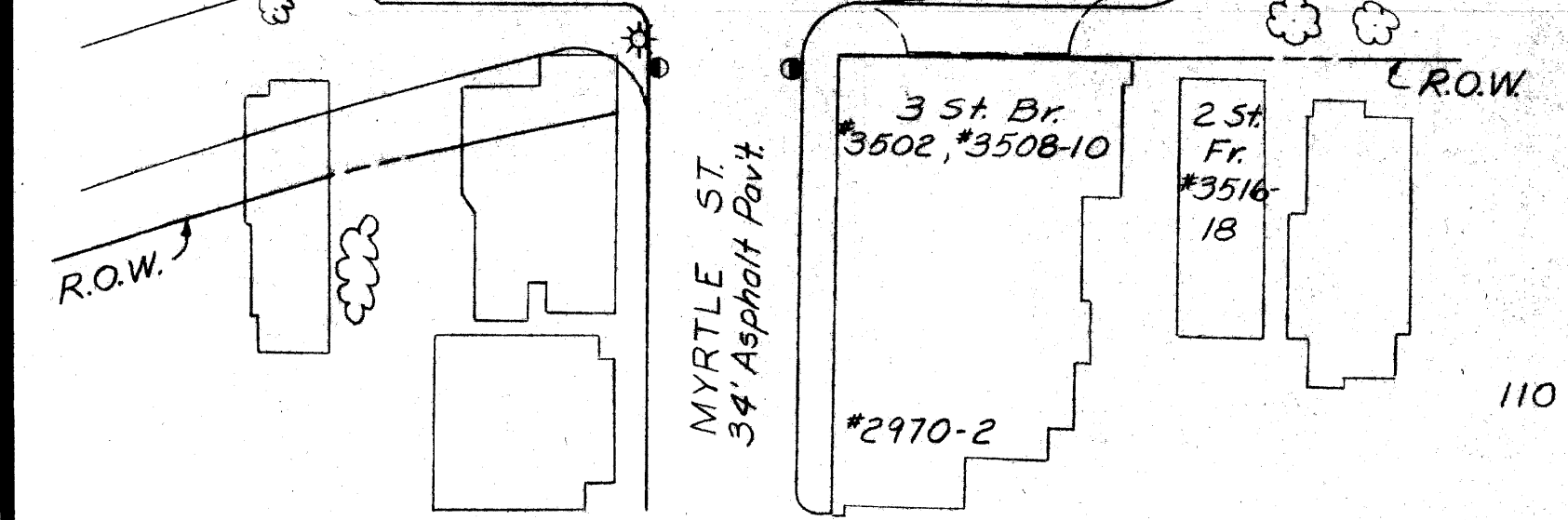
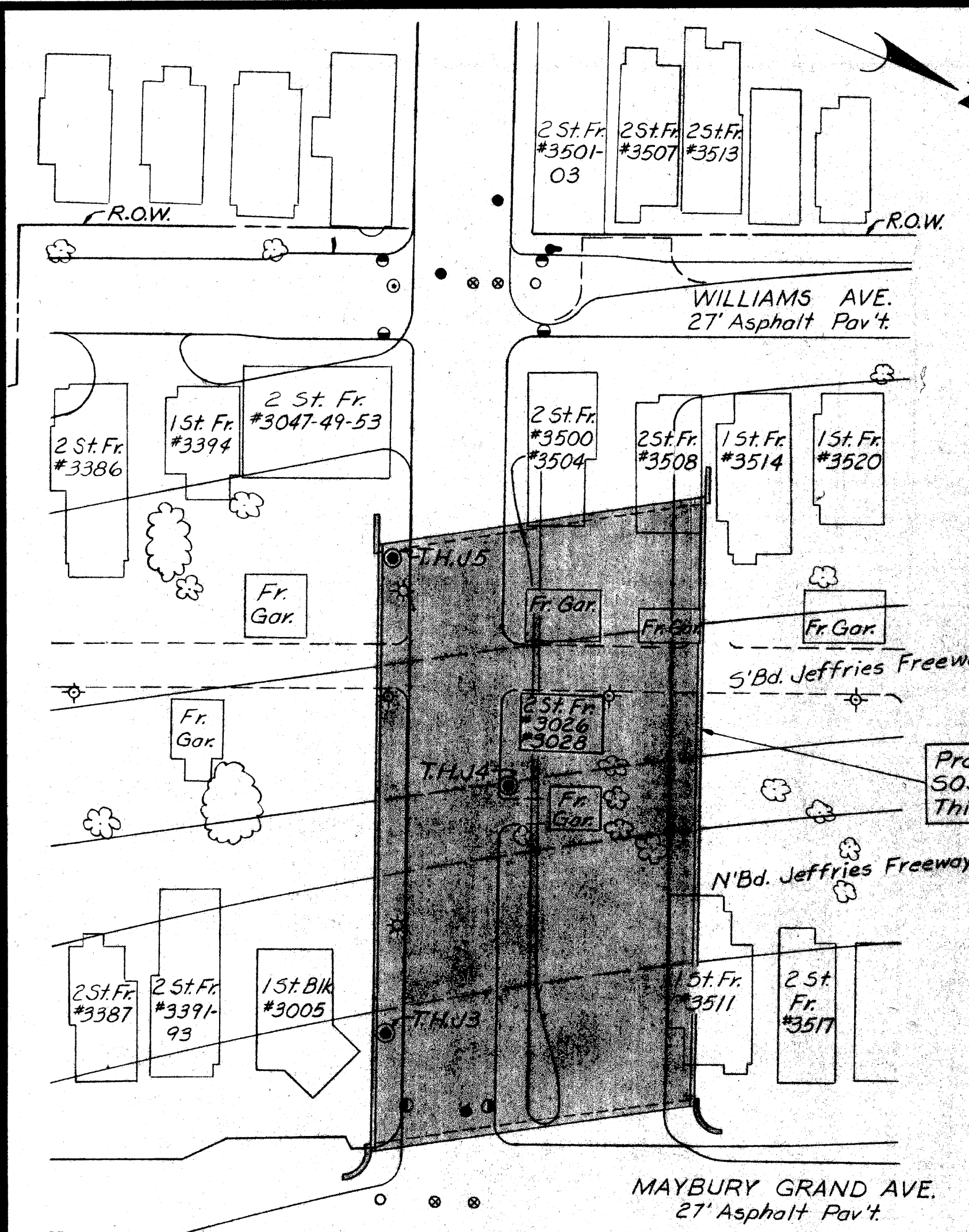
Note:—
 All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.

Tolerances in cutting and bending bars are as established in Manual of Standard Practice of the Concrete Reinforcing Steel Institute and Detailing Manual of the American Concrete Institute.

Grand Total Steel Reinforcement **358,519 #**

All bar numbers shown on this sheet are to be prefixed

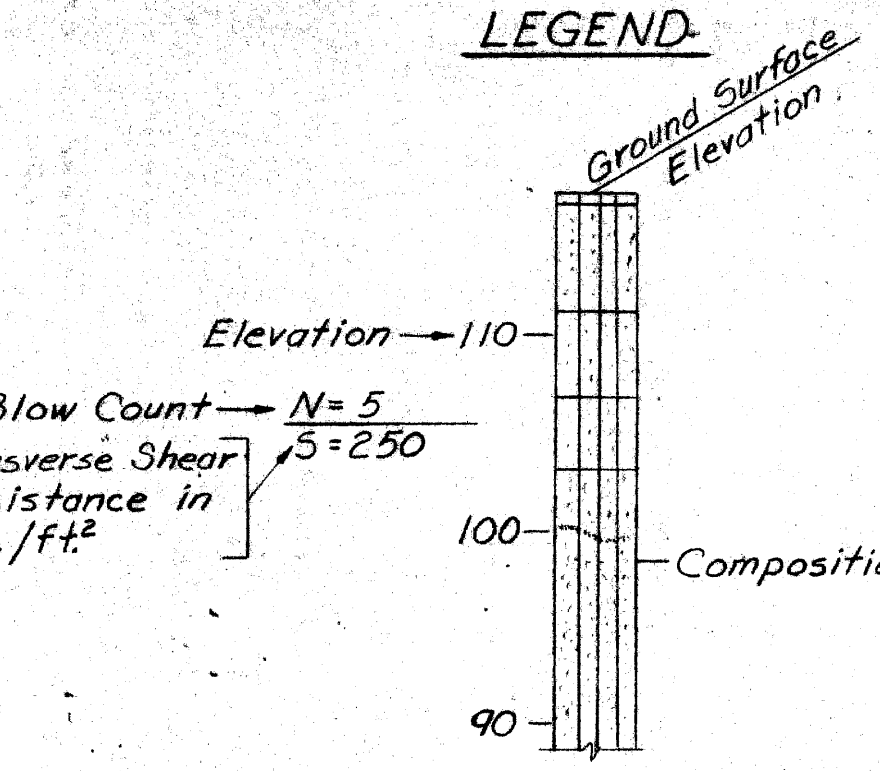
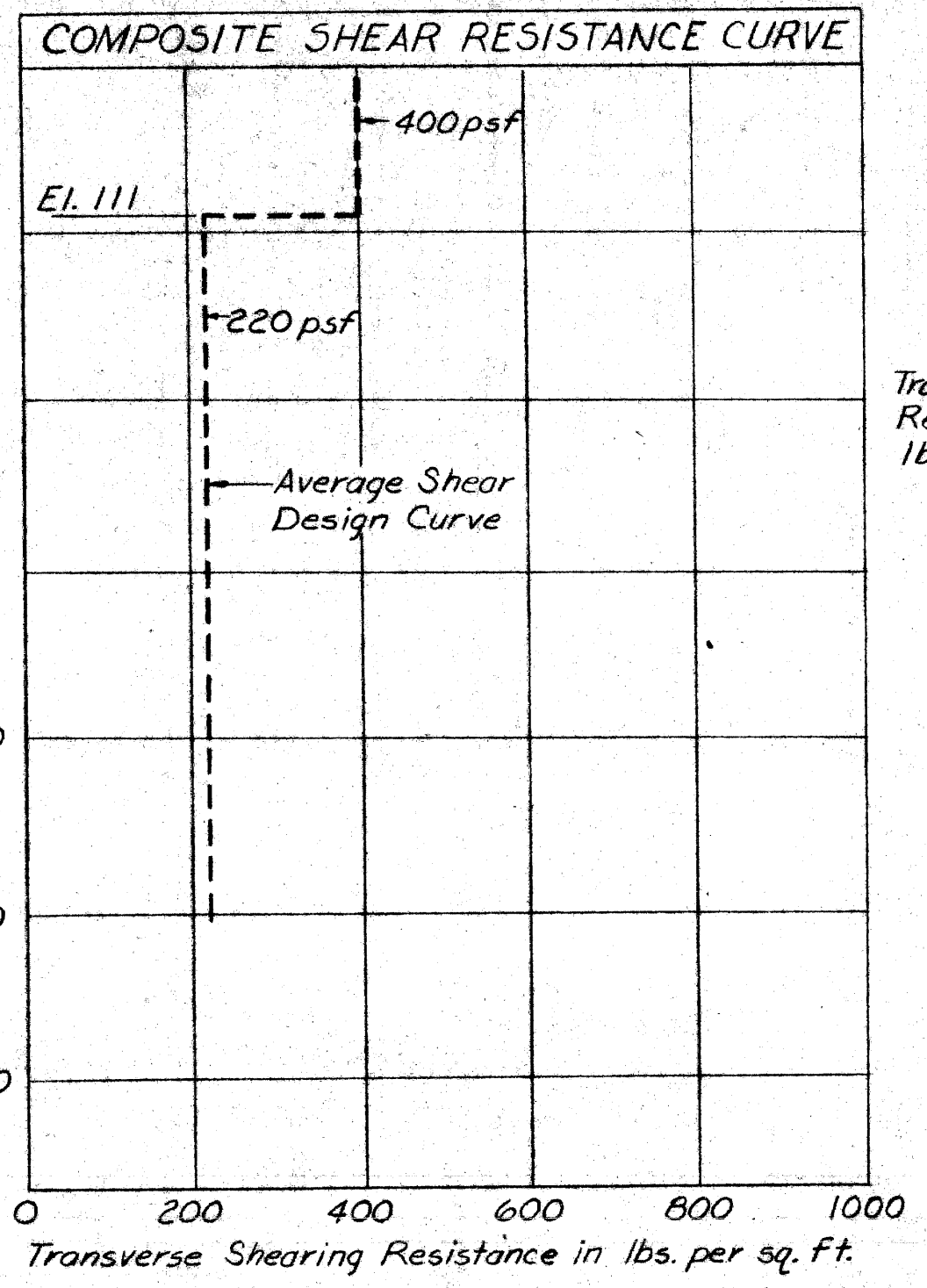
Steel for reinforcement shall be intermediate or hard grade only.



SURVEY PLAN
Scale: 1" = 40'

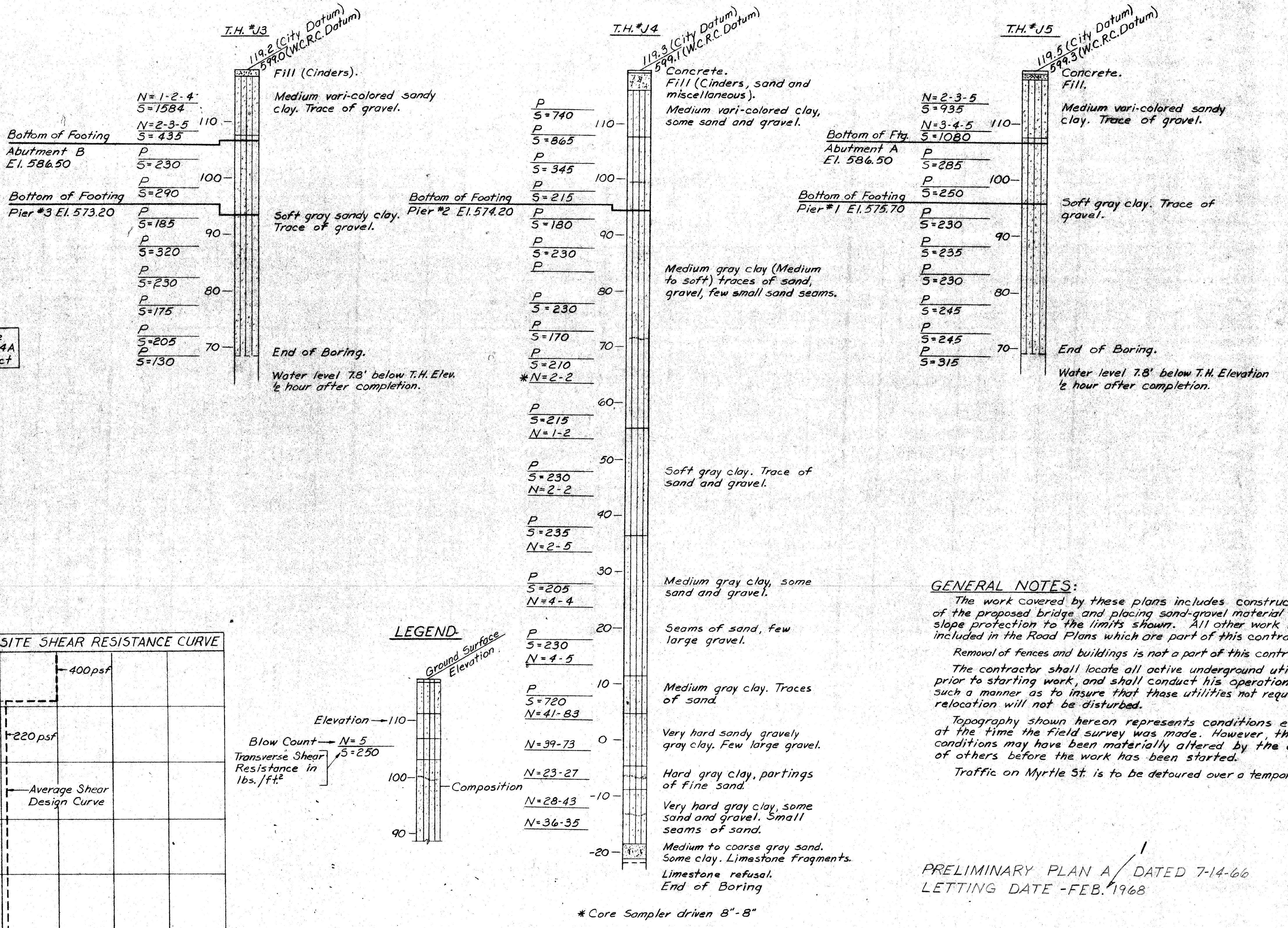
UTILITY LEGEND

- Sewer Inlet or Catchbasin
- Sewer Manhole
- P.L.C. Manhole
- Detroit Edison Co. Manhole
- Water Gate Well and Valve
- Fire Hydrant
- Detroit Edison Co. Pole
- P.L.C. Lightpole
- Test Hole for Soil Profile
- Tree



Notes:
 N Indicates number of blow required to drive a sampler 6" (or as noted) using a 140# hammer falling 30".
 S Indicates Transverse Shearing Resistance in lbs./ft.² as determined by M.S.H.D. Standard Test.
 P Indicates sampler was pushed.
 Soil Boring Elevations are based on City of Detroit Datum. All other elevations are based on Wayne County Precise Datum. To convert elevations based on City of Detroit Datum to elevations based on Wayne County Precise Datum, add 479.755'.

LOG OF SOIL BORINGS



GENERAL NOTES:

The work covered by these plans includes construction of the proposed bridge and placing sand-gravel material and slope protection to the limits shown. All other work is included in the Road Plans which are part of this contract.
 Removal of fences and buildings is not a part of this contract.
 The contractor shall locate all active underground utilities prior to starting work, and shall conduct his operations in such a manner as to insure that those utilities not requiring relocation will not be disturbed.
 Topography shown hereon represents conditions existing at the time the field survey was made. However, these conditions may have been materially altered by the operations of others before the work has been started.
 Traffic on Myrtle St. is to be detoured over a temporary road.

PRELIMINARY PLAN A DATED 7-14-66
 LETTING DATE - FEB. 1968

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

APPROVED: _____
 STRUCTURAL ENGINEER
 REVISIONS

JOB No.
 PW 990(1)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 MYRTLE ST. CROSSING JEFFRIES FREEWAY
 IN DETROIT

GENERAL PLAN OF SITE

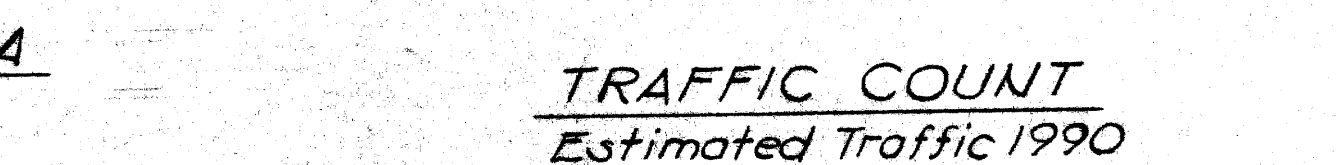
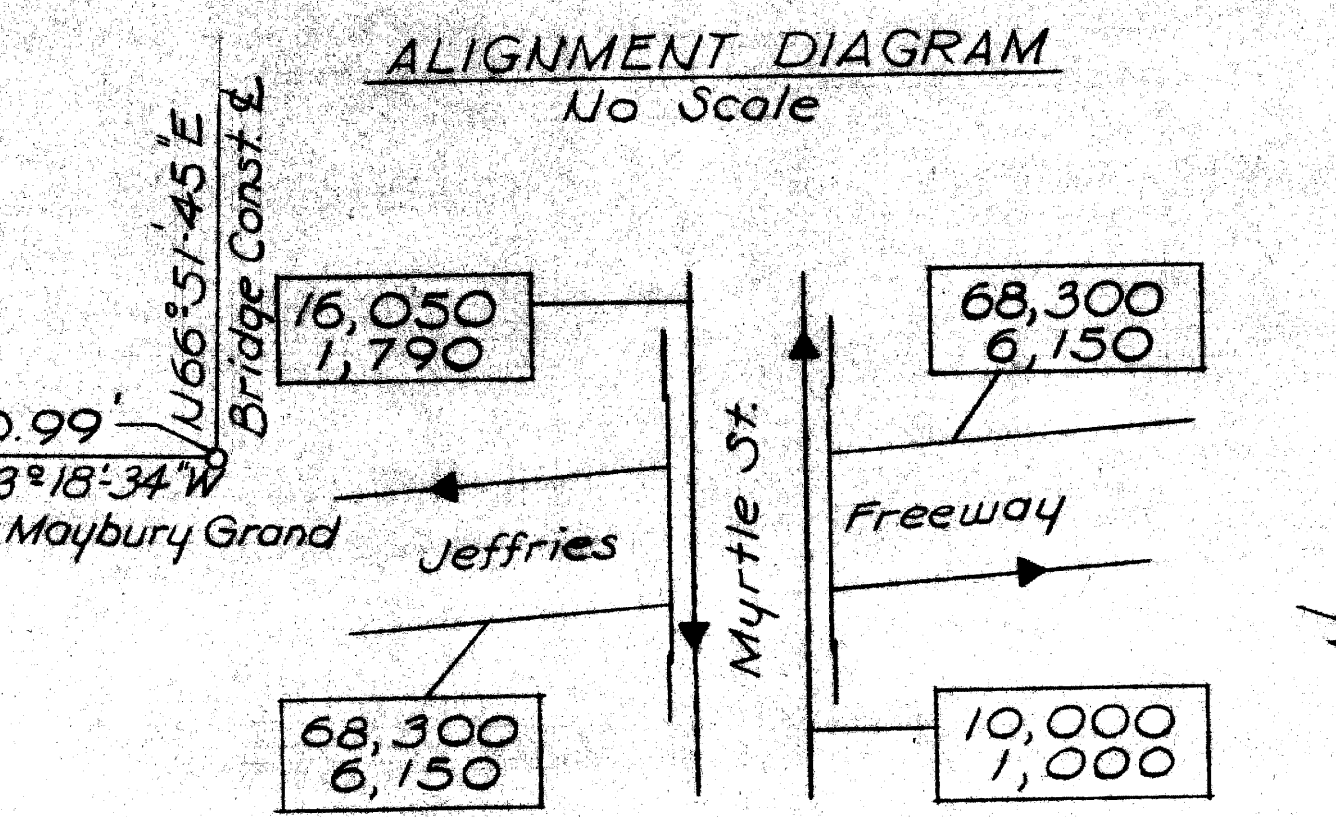
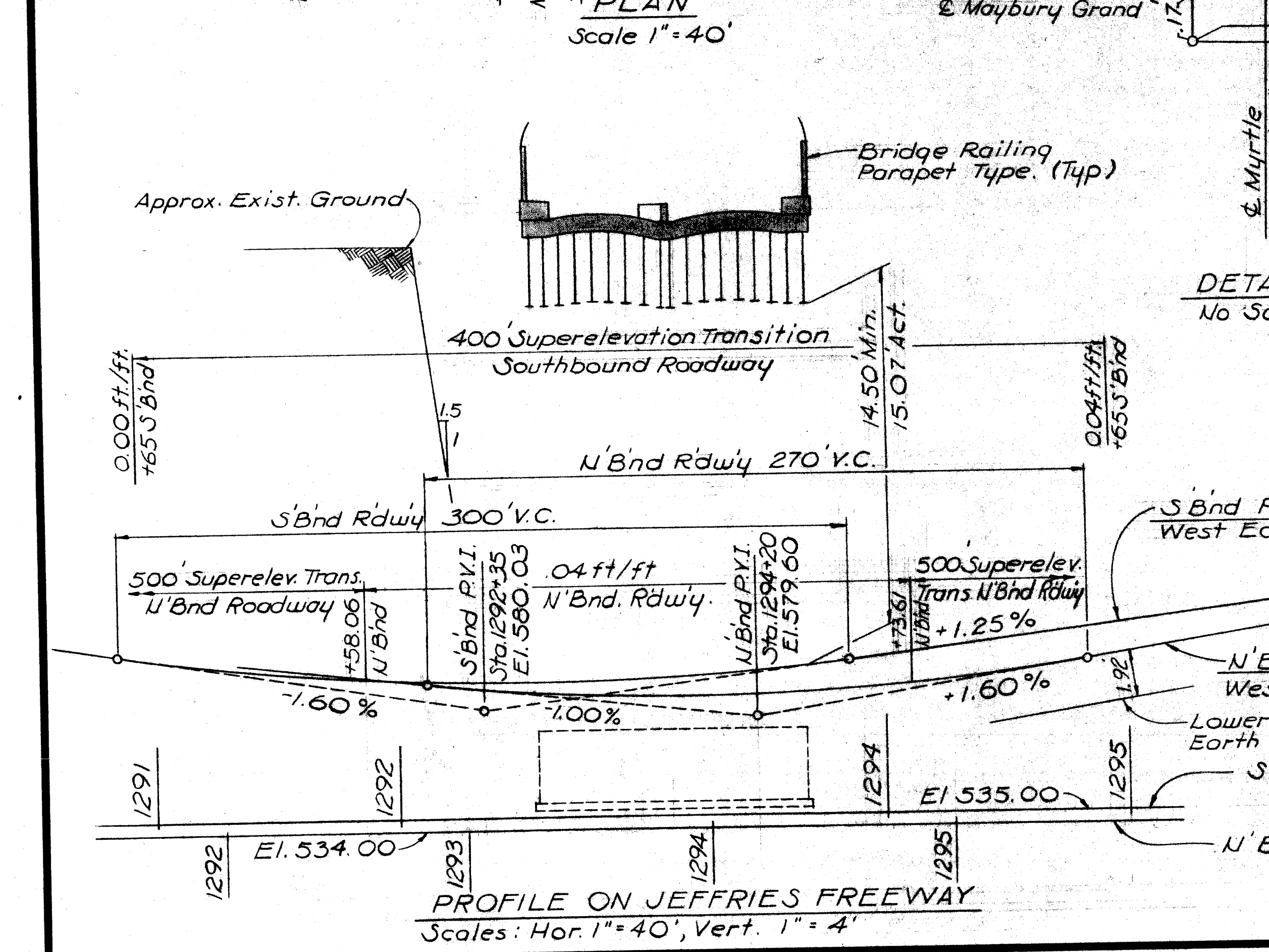
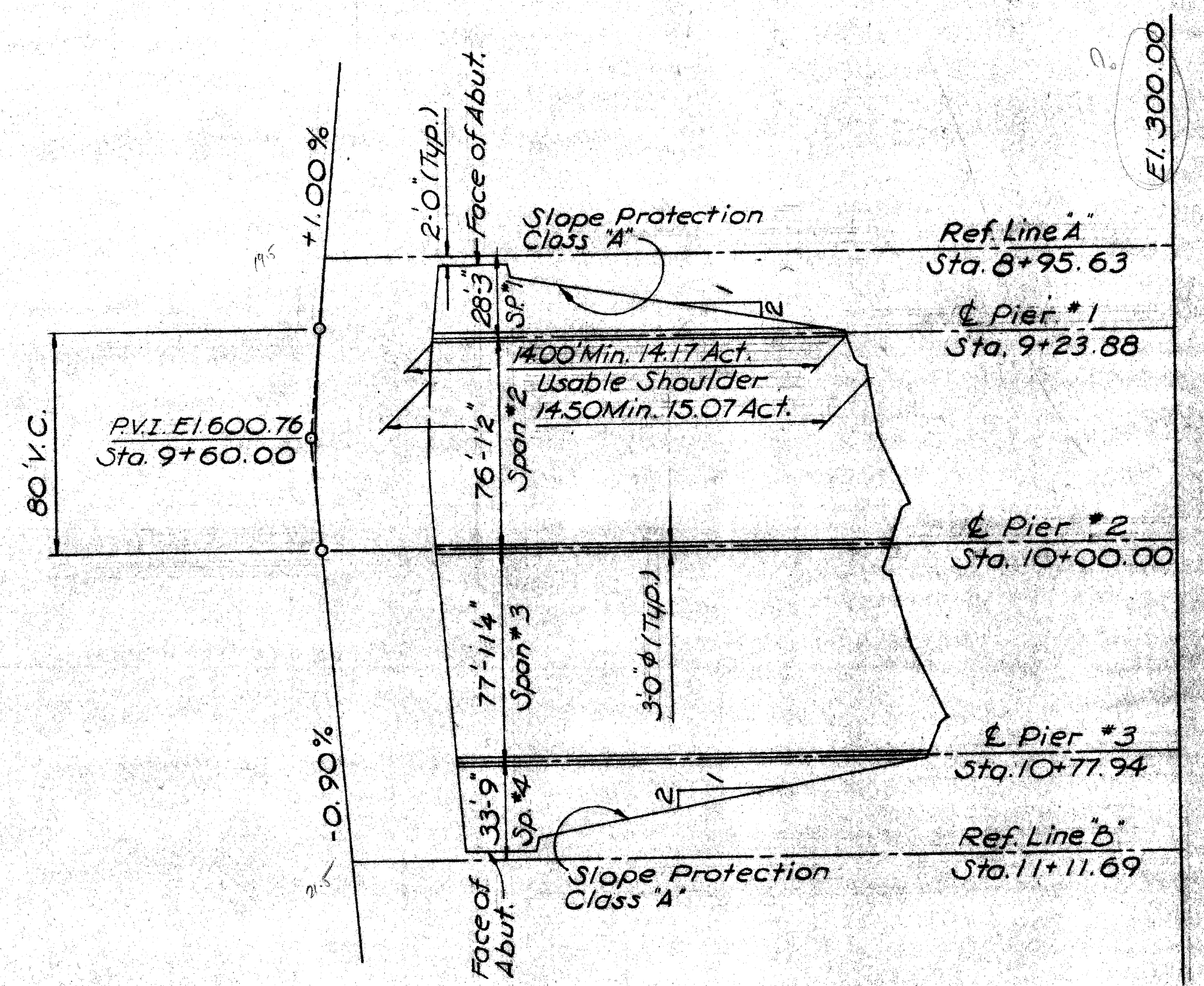
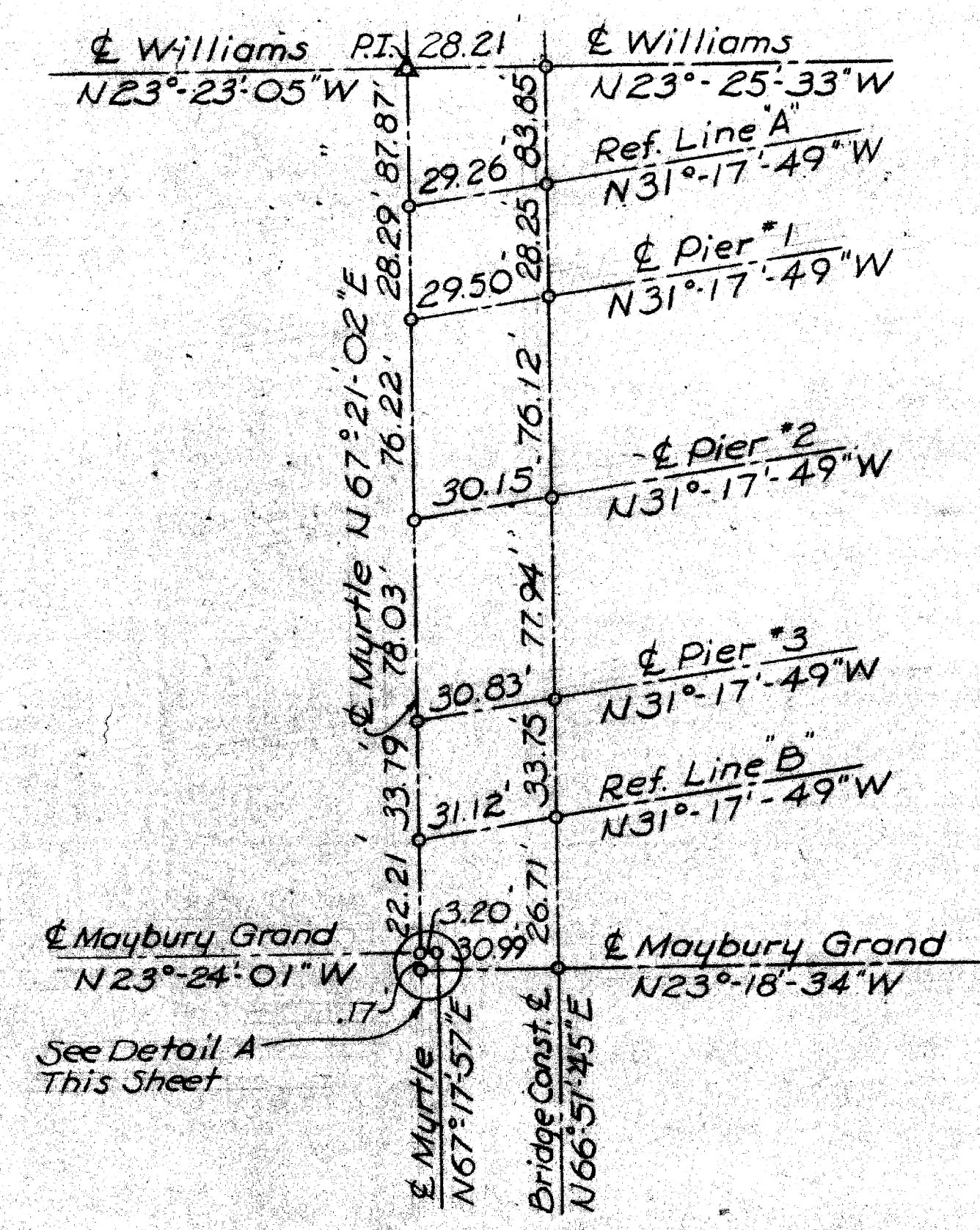
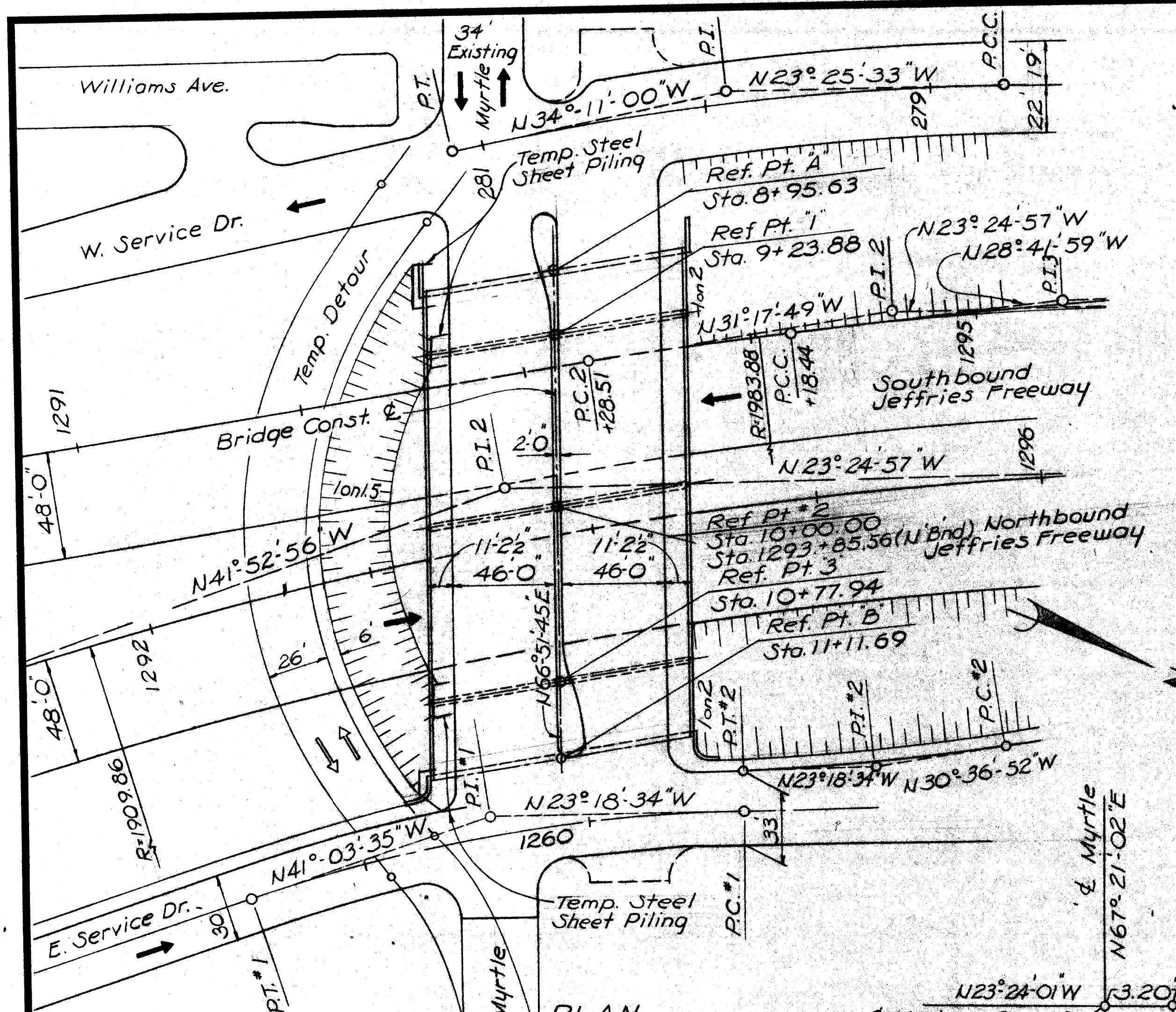
CITY OF DETROIT

SIGNAL BOSS	A. Freiberg	6-66
DRAWN BY	D. Roman	5-66
CHECKED BY	A. Freiberg	6-66
SHEET	7	5

APPROVED: _____
 DESIGN SUPERVISING ENGINEER

APPROVED: _____
 ASST. ENGINEER OF DESIGN

S03 of 82124 A



ALIGNMENT DIAGRAM
No Scale

TRAFFIC COUNT
Estimated Traffic 1990

CONSTRUCTION BENCH MARKS

- C.B.M - 7 Arrow on Hydrant S.W. Corner Myrtle & Williams: El. 601.64
- C.B.M - 8 Arrow on Hydrant S.E. Corner Magnolia & Williams: El. 601.72
- C.B.M - 9 Arrow on Hydrant N.W. Corner Magnolia & Maybury Grand: El. 602.13

Notes:
C.B.M denotes construction bench mark.
o denotes reference point or point of intersection.

CURVE DATA

N. Bnd Jeffries Curve #2	S. Bnd Jeffries Curve #2
PC 2 Sta. 1290+58.06	PC Sta. 1293+28.51
PI 2 Sta. 1293+68.53	PI Sta. 1294+65.17 (F'wd.)
PT 2 Sta. 1296+73.61	PT Sta. 1296+01.40
Δ = 18°-27'-59"	Δ = 7°-52'-52"
D = 3°-00'-00"	D = 2°-53'-17"
R = 1909.86'	R = 1983.88'
T = 310.47'	T = 136.66'
L = 615.55'	L = 272.89'
E = 25.07'	E = 4.70'

E. Service Dr. @ Myrtle Curve #1	W. Service Dr. @ Myrtle
PC Sta. 1259+29.93	PC Sta. 278+67.89
PI Sta. 1260+41.77	PI Sta. 279+91.36
PT Sta. 1261+51.81	PT Sta. 281+14.10
Δ = 17°-45'-01"	Δ = 10°-45'-27"
D = 8°-00'-00"	D = 4°-22'-09"
R = 716.20'	R = 131.38'
T = 111.84'	T = 123.47'
L = 221.88'	L = 246.22'
E = 8.70'	E = 5.80'

PRELIMINARY PLAN A DATED 7-14-66
Work this sheet with sheets # 4 & 5

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

PROVED _____
STRUCTURAL ENGINEER
REVISIONS

JOB No.
PW 990(1)

NO.	DESCRIPTION	DATE	BY

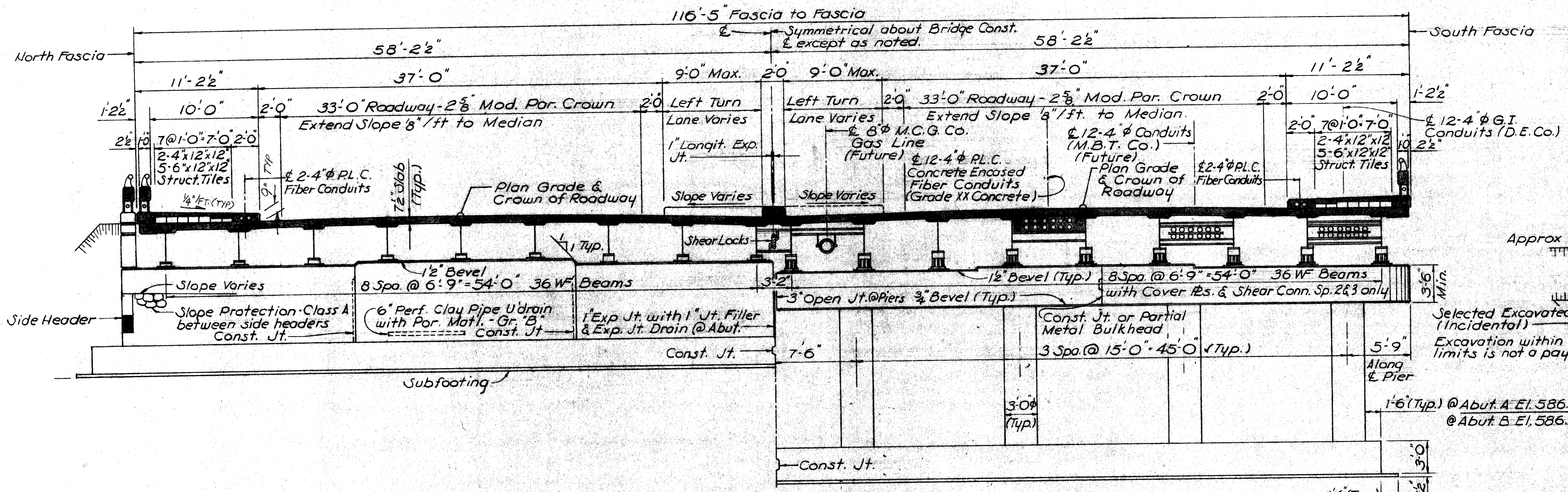
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

GENERAL DRAWING

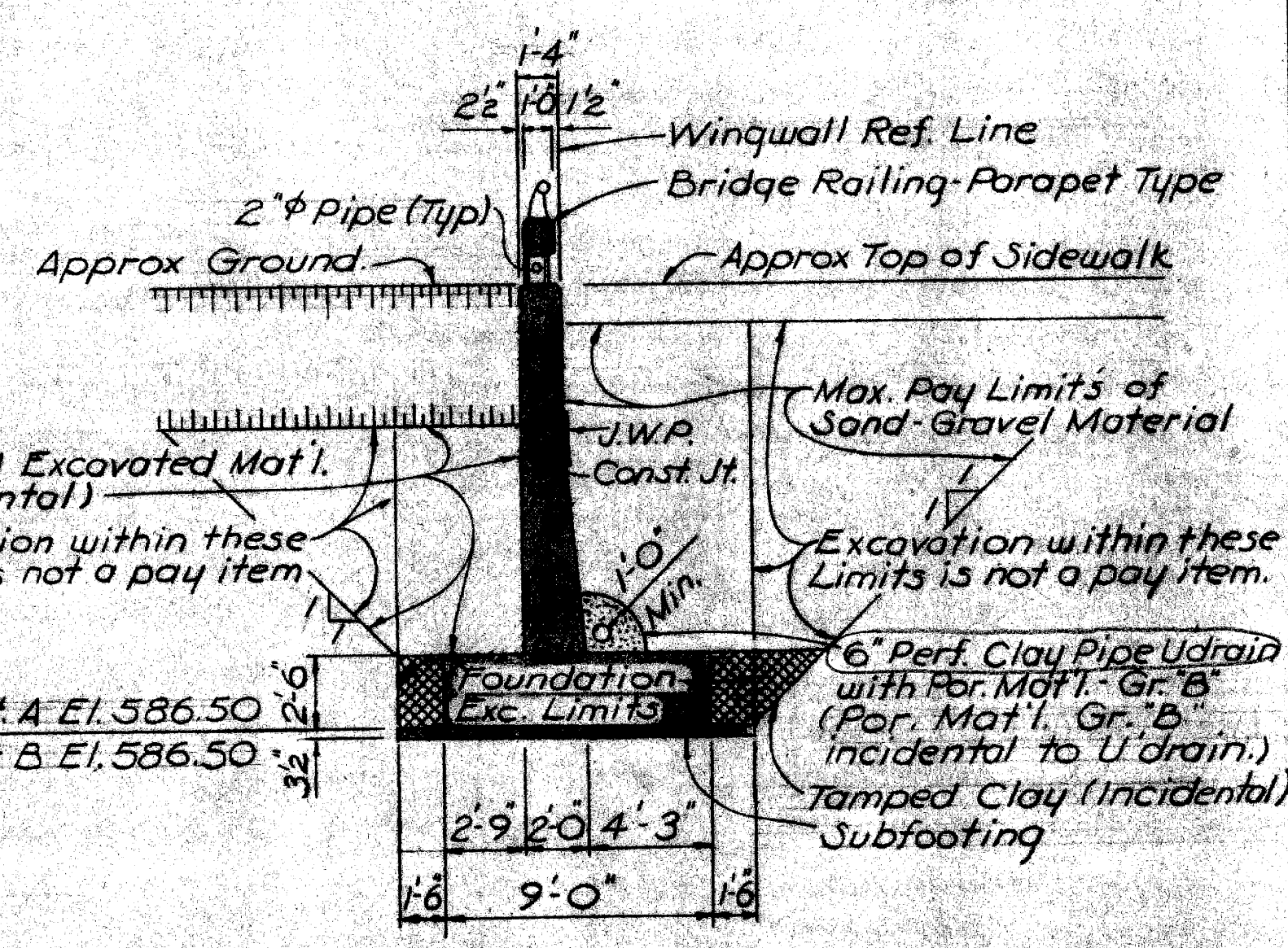
APPROVED _____
DESIGN SUPERVISING ENGINEER

APPROVED _____
ENGINEER OF DESIGN CONSULTANTS

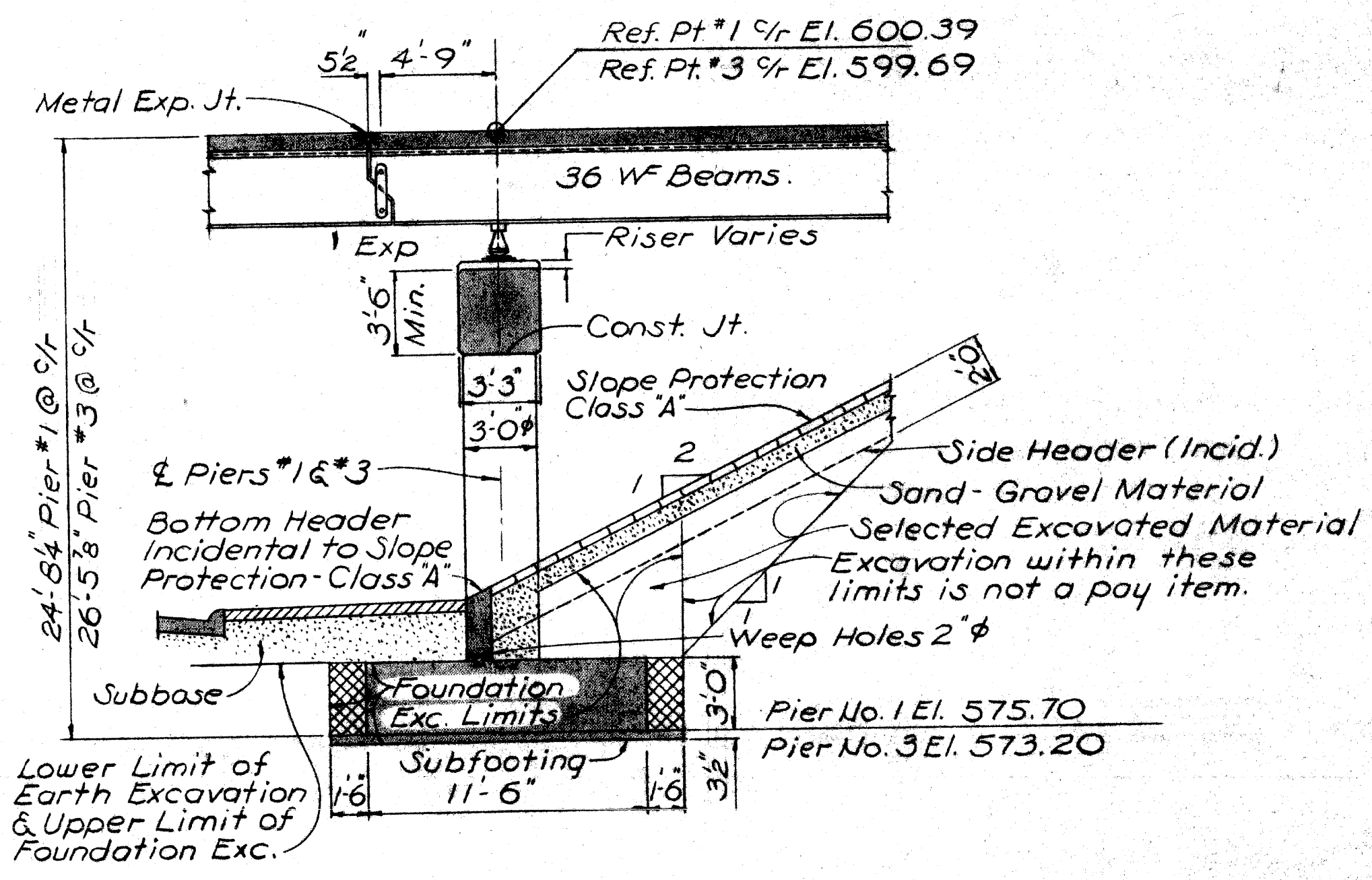
CITY OF DETROIT
SQUAD BOSS: A. Freiberg 6-66
DRAWN BY: Roberts 6/66
TRACED BY: Roberts 6/66
CHECKED BY: AFJ 6-66
SHEET 2 OF 5
S03 of 82124 A



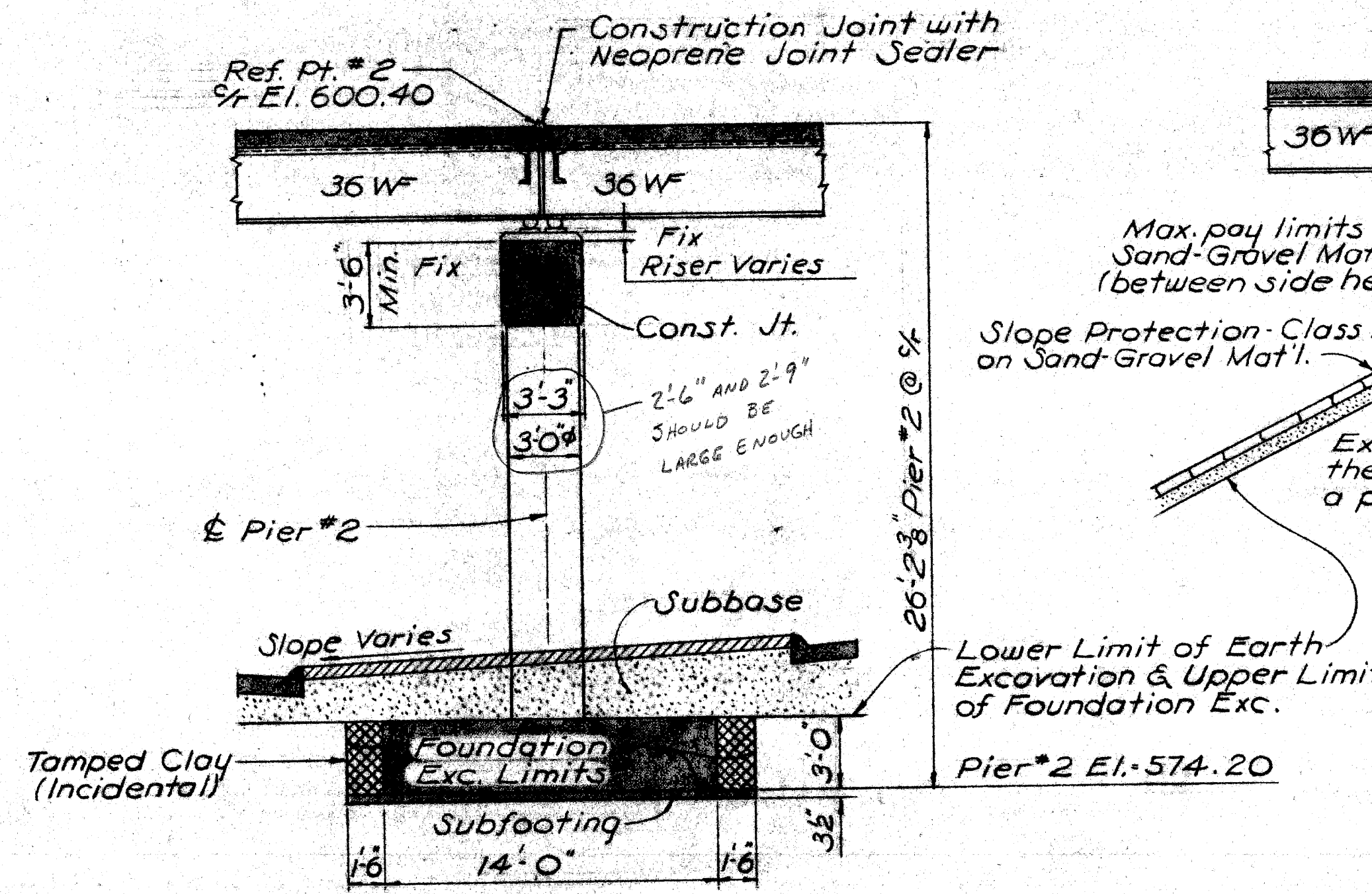
SECTION A-A
Scale 3/16" = 1'-0"



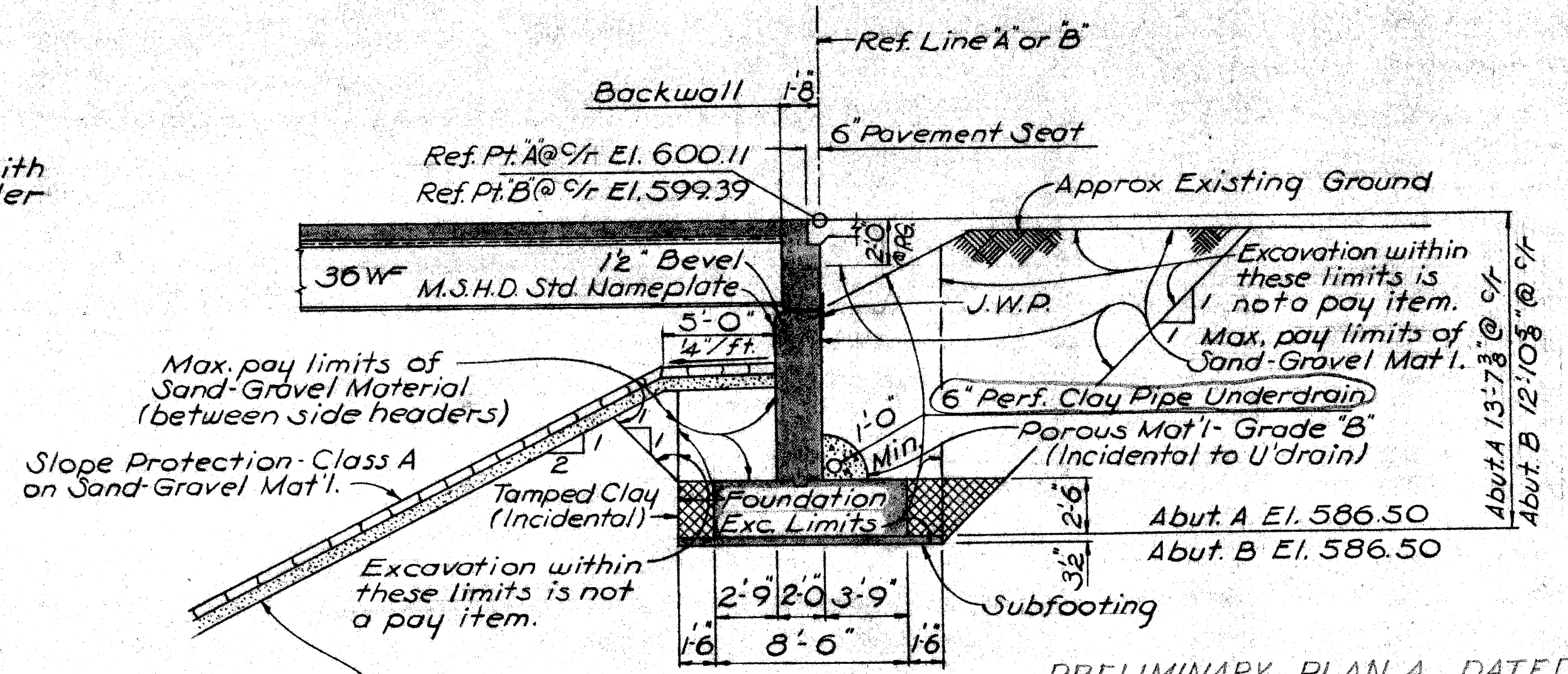
SECTION E-E
Scale 3/16" = 1'-0"



SECTION B-B
Scale 3/16" = 1'-0"



SECTION C-C
Scale 3/16" = 1'-0"



SECTION D-D
Scale 3/16" = 1'-0"

PRELIMINARY PLAN A DATED 7-14-66

Work this sheet with sheets No. 2 & 3

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

APPROVED _____
STRUCTURAL ENGINEER REVISIONS

JOB No.
PW 990(1)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

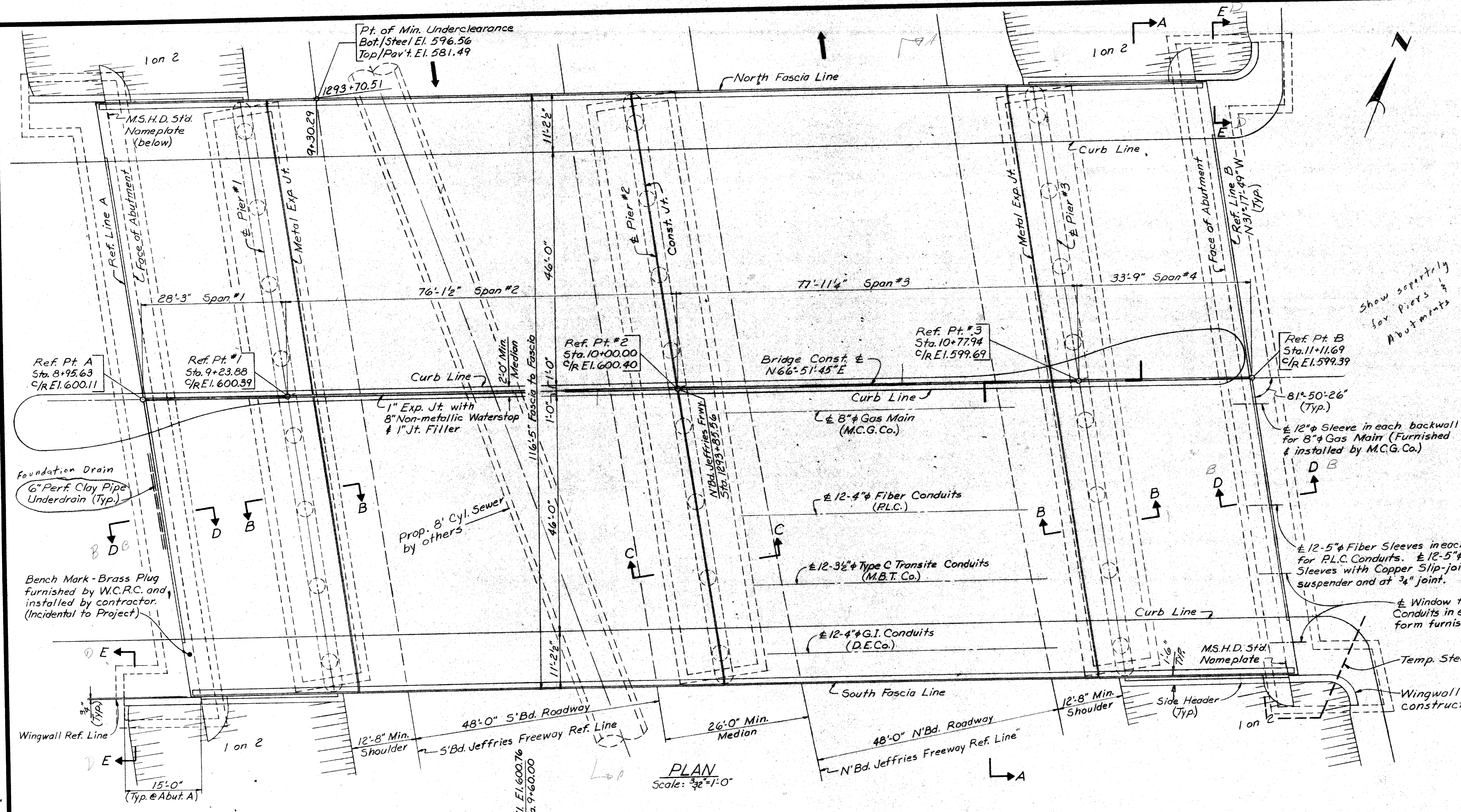
GENERAL PLAN OF STRUCTURE

APPROVED _____
DESIGN SUPERVISING ENGINEER

APPROVED _____
ENGINEER OF DESIGN CONSULTANTS

SQUAD BOSS: A. Freiberg 6-66
DRAWN BY: Roberts 6-66
CHECKED BY: A. Freiberg 6-66
SHEET 4 of 5

503 of 82124 A



GENERAL NOTES:

The design of this structure is based on M.S.H.D. Specifications for the design of Highway Bridges, 1958 edition (H520-44) Loading.

Live load plus impact deflection = 1000 of span length and 350 of cantilever arm.

The top of roadway slab and tops of curbs are parallel to the vertical curve and tangents.

Grouted Riprap as Slope Protection-Class A is not to be used on this project.

For details of Slope Protection-Class A, see Std. Sh. 5P2.

Tamped Clay and Selected Excavated Material are incidental to Unclassified Excavation.

This design is based on a maximum foundation pressure of 2600 pounds per square foot based on DL+LL and a maximum average foundation pressure of 2000 pounds per square foot based on DL only.

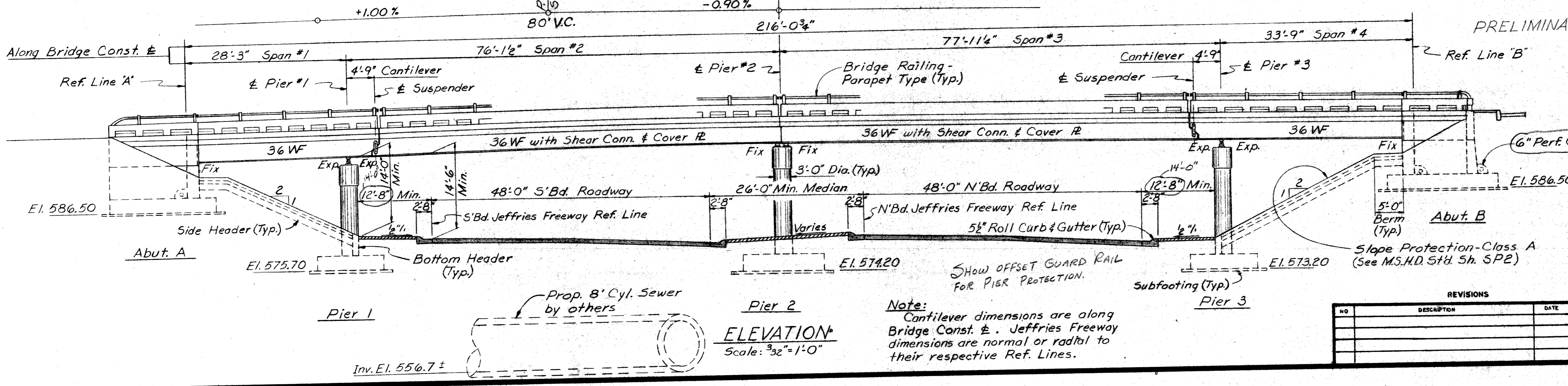
C/R denotes crown of roadway.

Show separately for Piers & Abutments

PLAN Scale: 3/32"=1'-0"

MISCELLANEOUS QUANTITIES		
Item	Unit	Am't.
6" Class A Sewer	Lin. Ft.	
Slope Protection-Class A	Sq. Yd.	
Sand Gravel Material (C.I.P.)	Cu. Yd.	
Temp. Steel Sheet Piling	Sq. Ft.	

PRELIMINARY PLAN A DATED 7-14-60 Work this sheet with sheet nos. 2 & 4.



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
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

GENERAL PLAN OF STRUCTURE

CITY OF DETROIT

APPROVED _____
DESIGN SUPERVISING ENGINEER

APPROVED _____
ENGINEER OF DESIGN CONSULTANTS

SHEET 3 OF 5
S03 of 82124 A

REVISIONS			
NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 MYRTLE ST. CROSSING JEFFRIES FREEWAY
 IN DETROIT
**EXISTING UTILITIES AND
 PROPOSED ALTERATIONS**

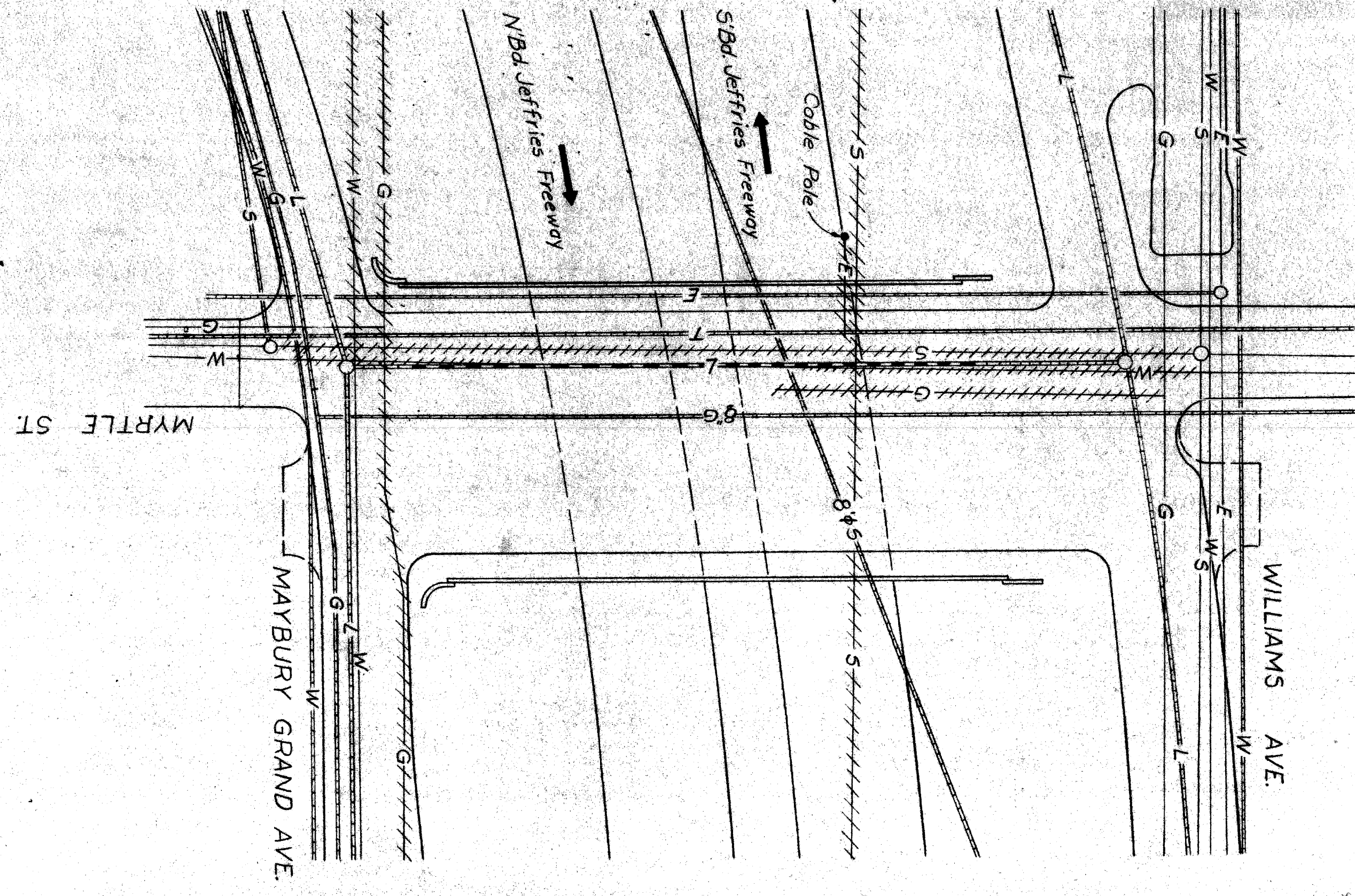
NO.	DATE	DESCRIPTION

DESIGNED BY: H. F. King 6-66
 CHECKED BY: S. J. 5
 SHEET 3
 S03 of 82124A

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 BUREAU OF HIGHWAYS AND EXPRESSWAYS
 JOB NO. PW 99011
 APPROVED STRUCTURAL ENGINEER

PRELIMINARY PLAN A DATED 7-14-66

SITUATION PLAN
 Scale: 1" = 40'



UTILITY	—	EXISTING	—
DETROIT WATER DEPARTMENT	— W —	DELETED OR	— W —
FREEWAY & CITY OF DETROIT SEWERS	— S —	ABANDONED	— S —
MICHIGAN CONSOLIDATED GAS CO.	— G —	NEW WORK	— G —
MICHIGAN BELL TELEPHONE CO.	— T —	BY OTHERS	— T —
PUBLIC LIGHTING COMMISSION	— L —	BY CONTRACTOR	— L —
DETROIT EDISON COMPANY	— E —		— E —

LEGEND

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT
EXISTING UTILITIES AND
PROPOSED ALTERATIONS

DATE	DESCRIPTION	NO.

DESIGNED BY	DATE
H. F. King 6-26	
CHECKED BY	DATE
D. R. King 6-26	
SCALE	DATE
AS SHOWN	

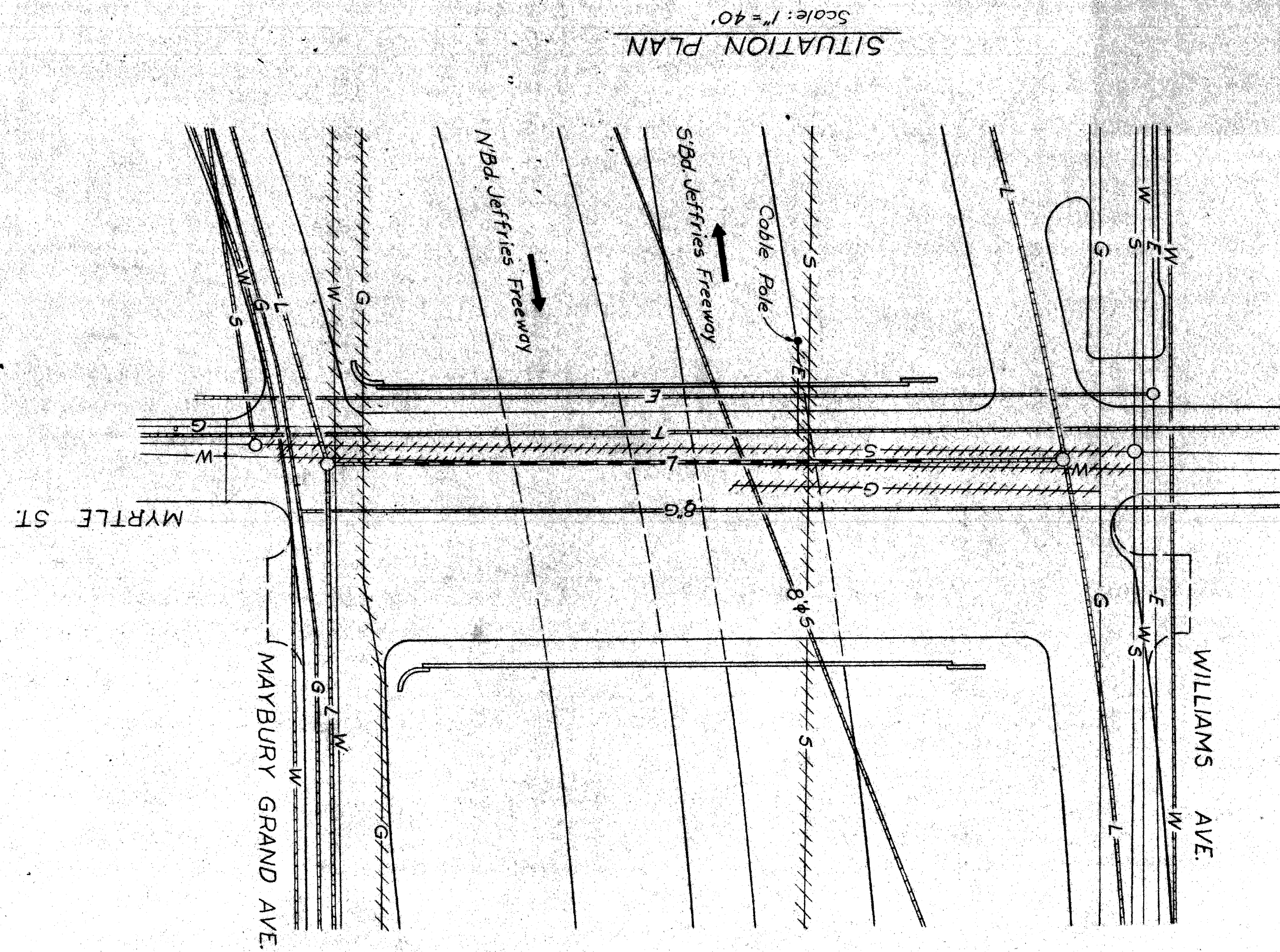
S03 of 82124A

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

JOB NO. PW 99011

APPROVED
 STRUCTURAL ENGINEER

PRELIMINARY PLAN A DATED 7-14-66

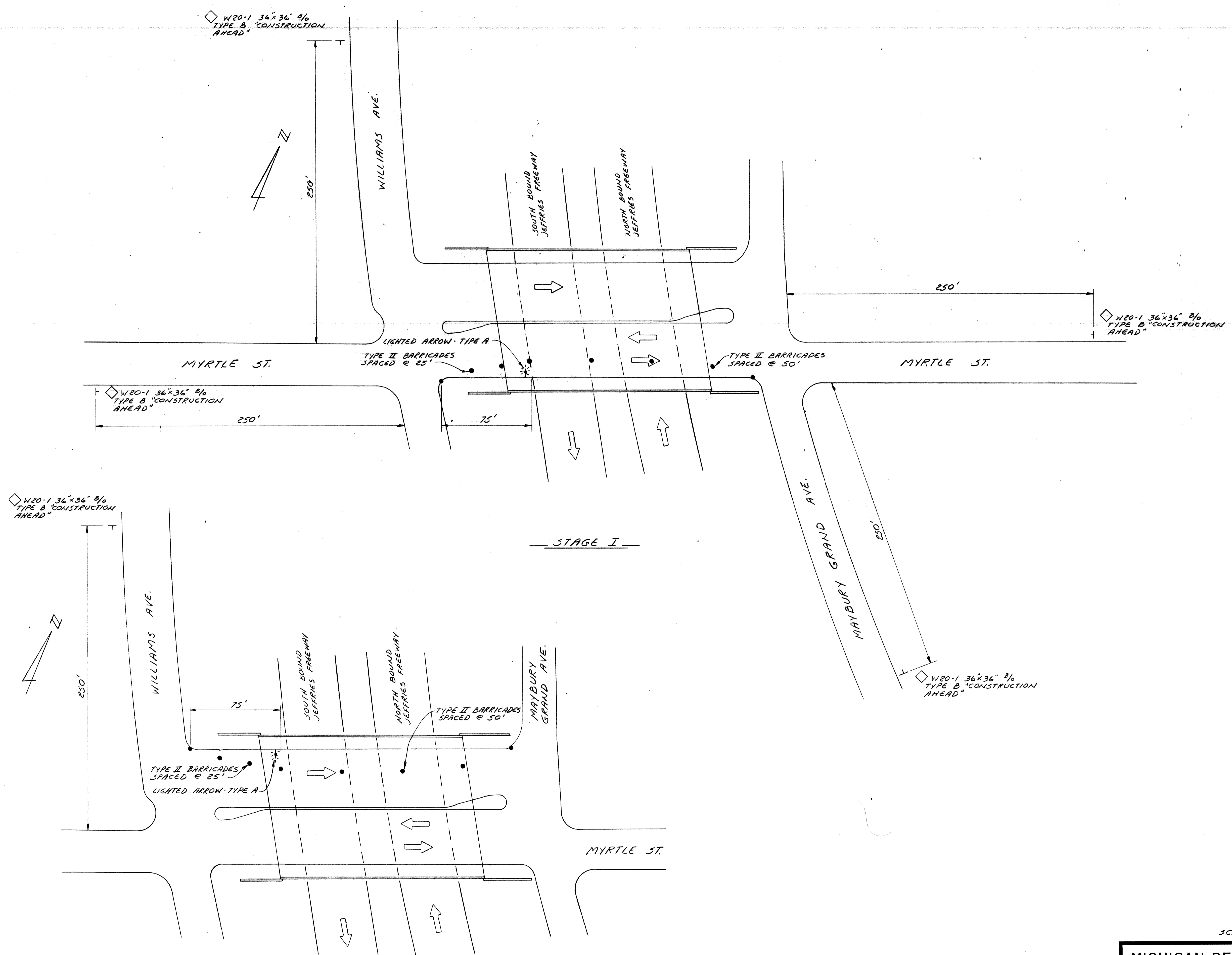


UTILITY

DETROIT WATER DEPARTMENT
 FREEWAY & CITY OF DETROIT SEWERS
 MICHIGAN CONSOLIDATED GAS CO.
 MICHIGAN BELL TELEPHONE CO.
 PUBLIC LIGHTING COMMISSION
 DETROIT EDISON COMPANY

LEGEND

EXISTING	—	W	=====	W	=====
DELETED OR	---	S	====	S	====
ABANDONED	- - -	G	====	G	====
BY OTHERS	- - -	T	====	T	====
NEW WORK	—	L	====	L	====
BY CONTRACTOR	—	E	====	E	====



SCALE: 1" = 40'

MICHIGAN DEPARTMENT OF TRANSPORTATION
 MYRTLE ST. OVER I-96
 SCREENING
 STAGING AND CONSTRUCTION SIGNING

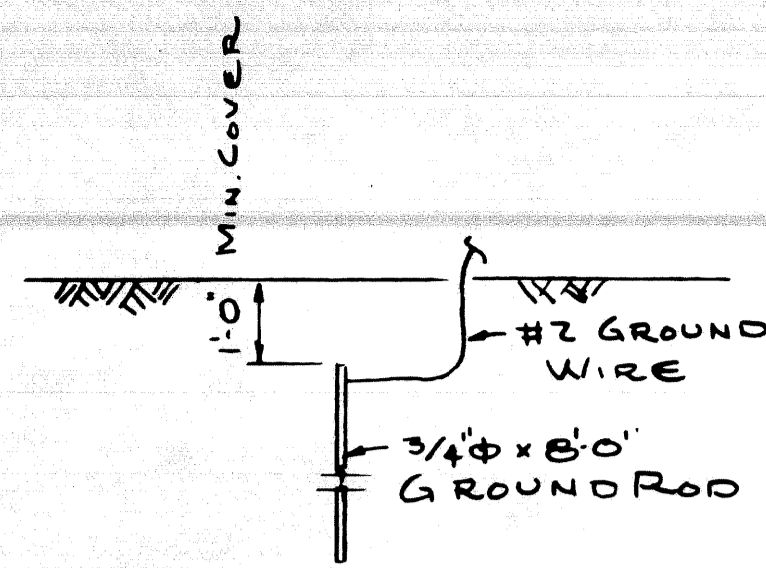
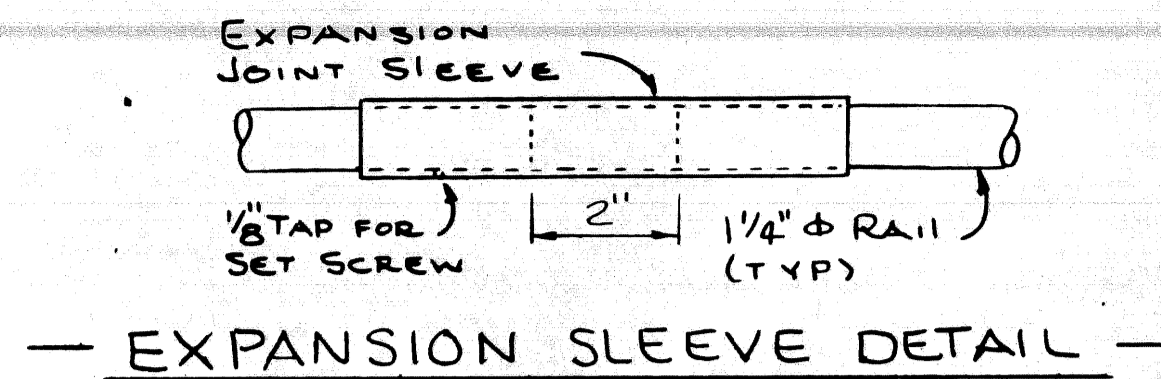
PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED *T. E. McLaughlin*
 STRUCTURAL ENGINEER

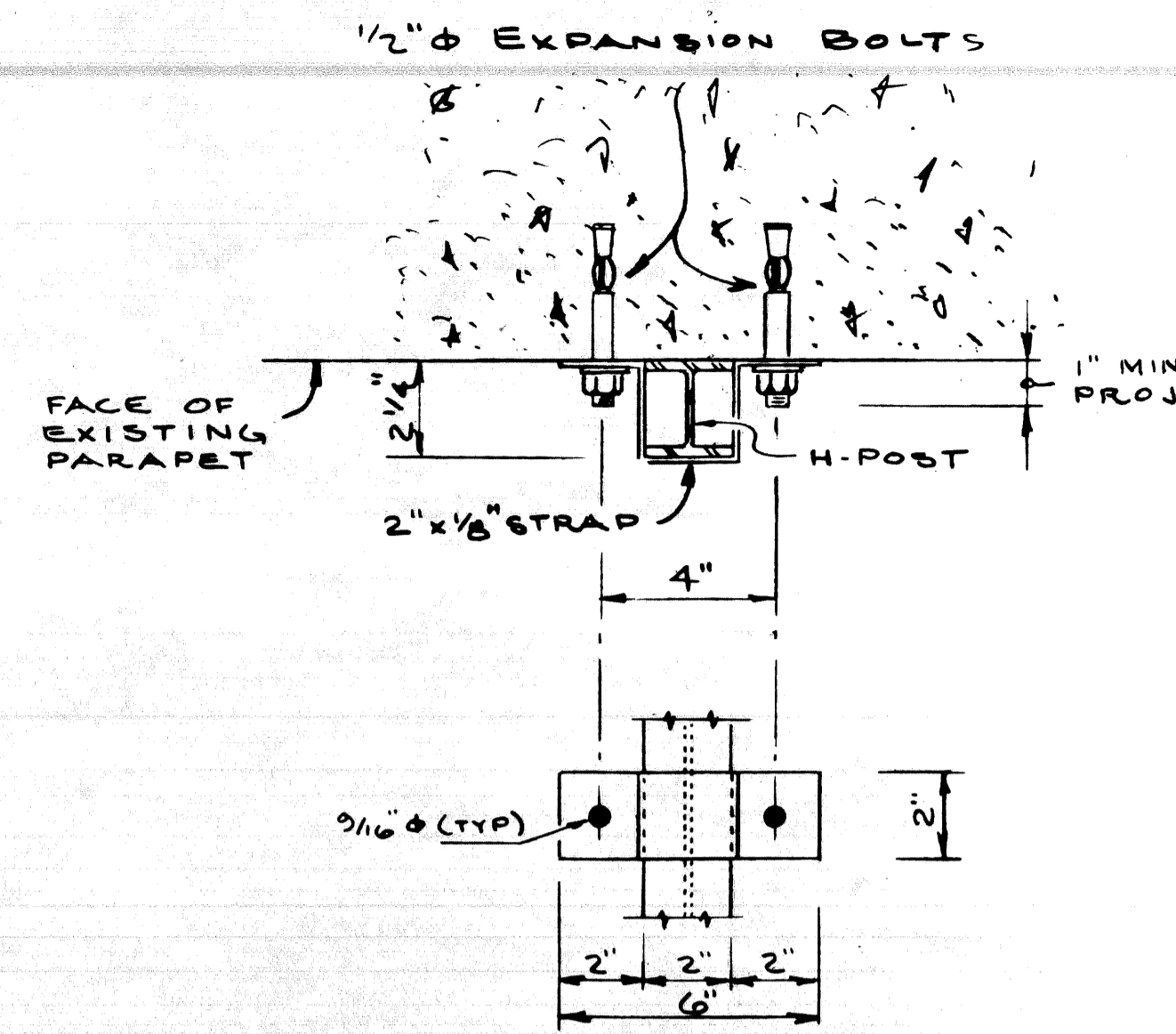
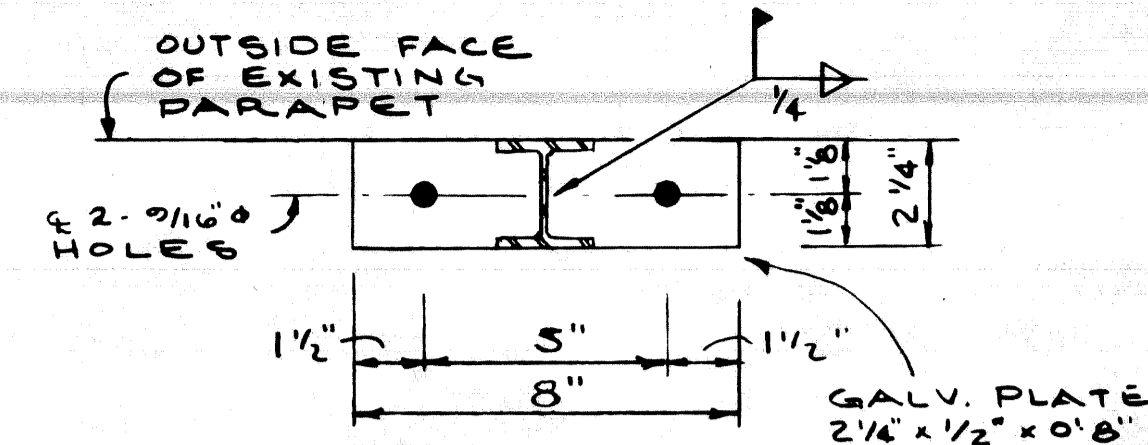
JOB No.
 79-22-26 G

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	<i>[Signature]</i>	1-29-81
DRAWN BY	<i>A.G.</i>	1-29-81
TRACED BY	<i>[Signature]</i>	1-29-81
CHECKED BY	<i>[Signature]</i>	1-29-81
SHEET		
OF		
S03 OF 82124A		

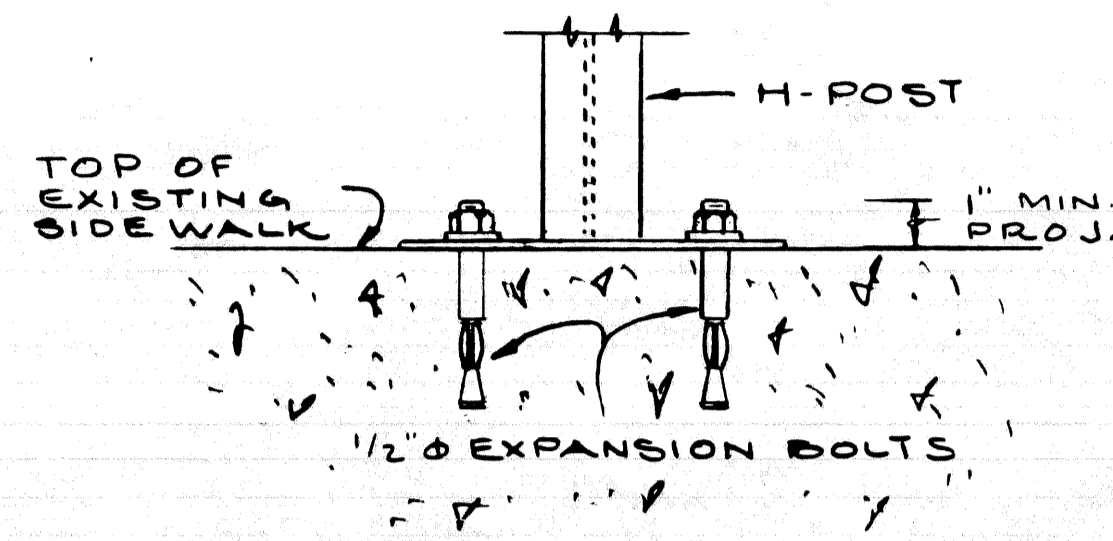


1. All underground connections shall be coldweld, thermite weld, gas or arc weld.
2. Exposed connections may be split bolt or clamp type.
3. Ground wire shall be #2 AWG stranded soft drawn copper wire.
4. Resistance to ground for any continuous section of fence shall not exceed 25 ohms per ground rod.



QUANTITIES		
ITEM	UNIT	AMOUNT
PEDESTRIAN FENCING, STRUCTURES	S.F.	2765
ELECTRICAL GROUNDING SYSTEM	EA	2

— GROUNDING DETAIL —



— BASE PLATE DETAILS —

— BRACKET DETAILS —

FENCING NOTES

All work shall conform to MDOT Standard Specifications for Construction, 1979 Edition.

All fence fabric shall be galvanized, #9 gage with a 2" mesh and with knuckling at the bottom selvage.

The posts shall be 2 1/4" x 2" galvanized H-posts weighing 4.1 p.l.f. Round posts having a 2 7/8" o.d. weighing 5.79 p.l.f. galvanized may be used with similar connection details.

The nominal 1/4" diameter braces shall be 1 5/8" o.d. steel pipe or tubing weighing 2.27 p.l.f. galvanized.

All posts and tubing shall be furnished with the manufacturer's standard connections and its minimum weight shall be within 5% of that specified.

Posts and tubing shall be bent in the shop as shown on the plans.

All components are to be galvanized. Bolts, nuts and washers are to be galvanized in accordance with ASTM A 153.

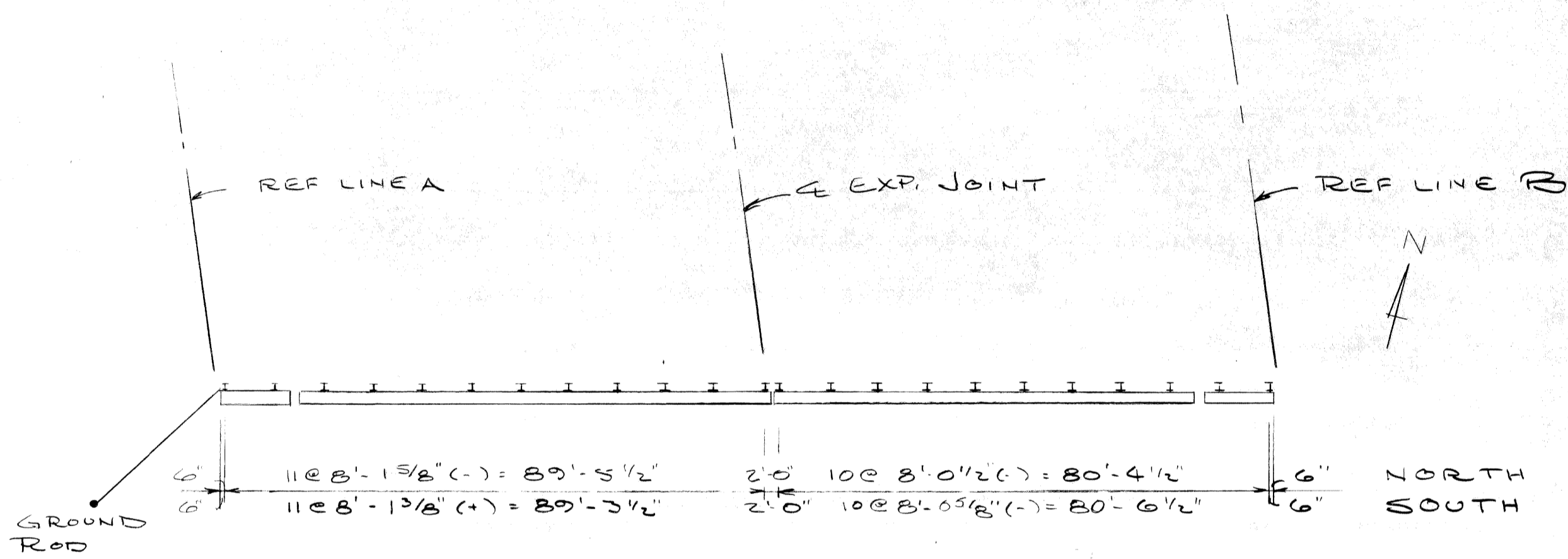
Tension bars shall be 3/4" x 1/4" galvanized steel.

Contractor shall verify field conditions before fabrication.

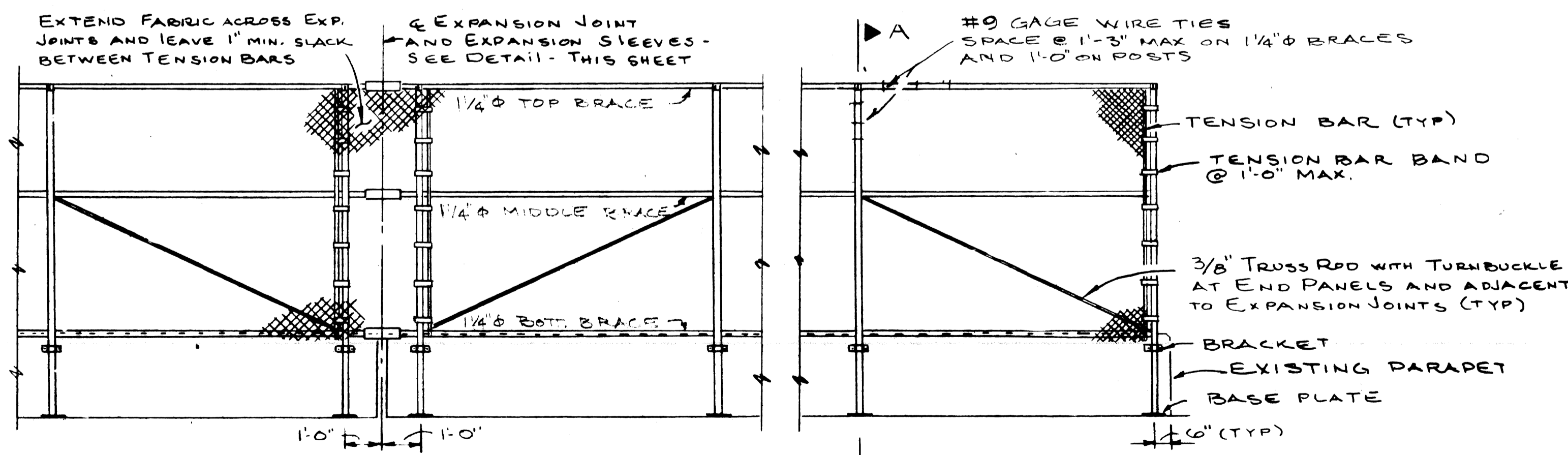
Care is to be taken in placing expansion bolts and brackets so as to insure that the brackets hold the posts firmly against concrete, shim if necessary.

PEDESTRIAN FENCING STRUCTURES shall include the fabric, posts, braces, expansion bolts, brackets and all suitable connections and fittings.

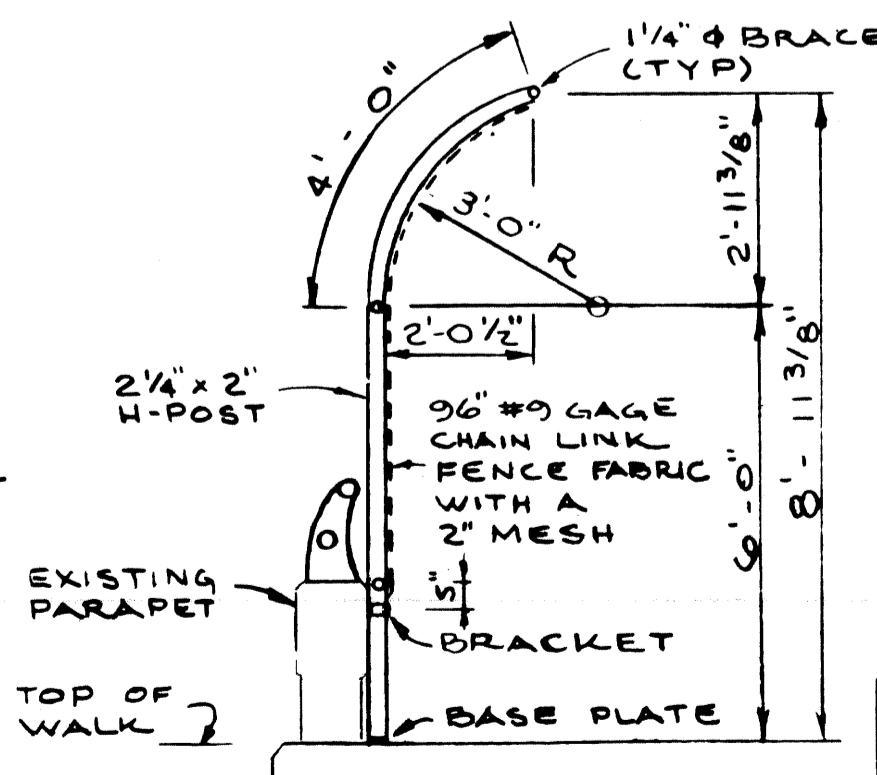
1/2" diameter expansion bolts shall be Phillips red head galvanized wedge anchors WS 1242 G or approved equal.



— PLAN —



TYPICAL ELEVATION



SECTION A-A

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE

APPROVED: *J.E. McQuinn*
STRUCTURAL ENGINEER

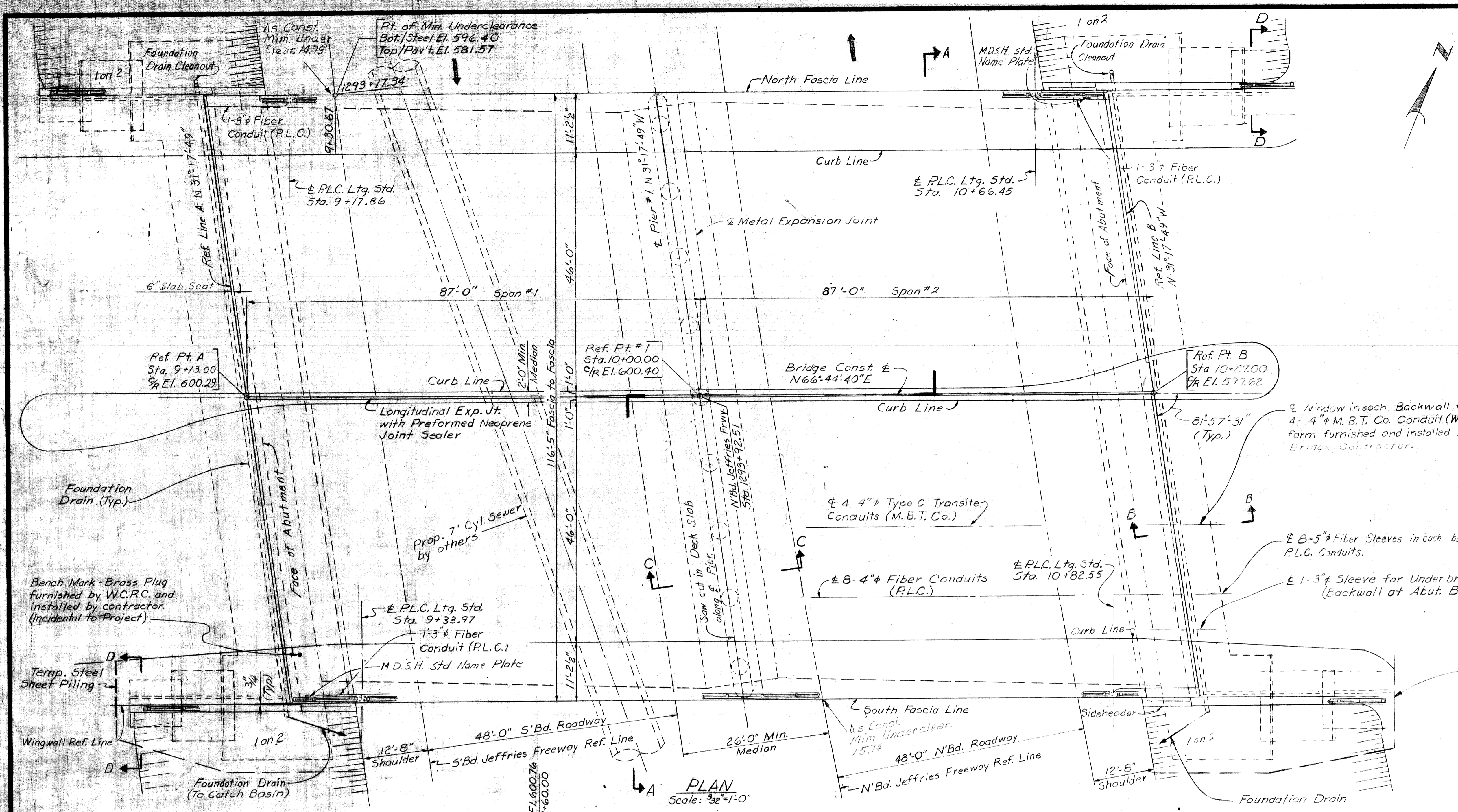
JOB NO.
79-22-26 G

MICHIGAN DEPARTMENT OF TRANSPORTATION
MYRTLE AVE OVER I-96
PROTECTIVE SCREENING DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	<i>RAK</i>	1-29-81
DRAWN BY	<i>RAK</i>	1-29-81
CHECKED BY	<i>OS</i>	1-29-81

SHEET OF
S03 OF 82124



GENERAL NOTES:
 The design of this structure is based on M.S.H.D. Specifications for the design of Highway Bridges, 1958 edition and current AASHTO Standard Specifications for Highway Bridges HS-20-44 loading.
 Live load plus impact deflection = $\frac{1000}{330}$ of span length.
 $\frac{1}{330}$ of Cantilever arm.

The top of roadway slab and tops of curbs are parallel to the vertical curve and tangents.

For details of Slope Protection-Class A, see Std. Sh. 5P2.

Tamped Clay and Selected Excavated Material are incidental to Unclassified Excavation.

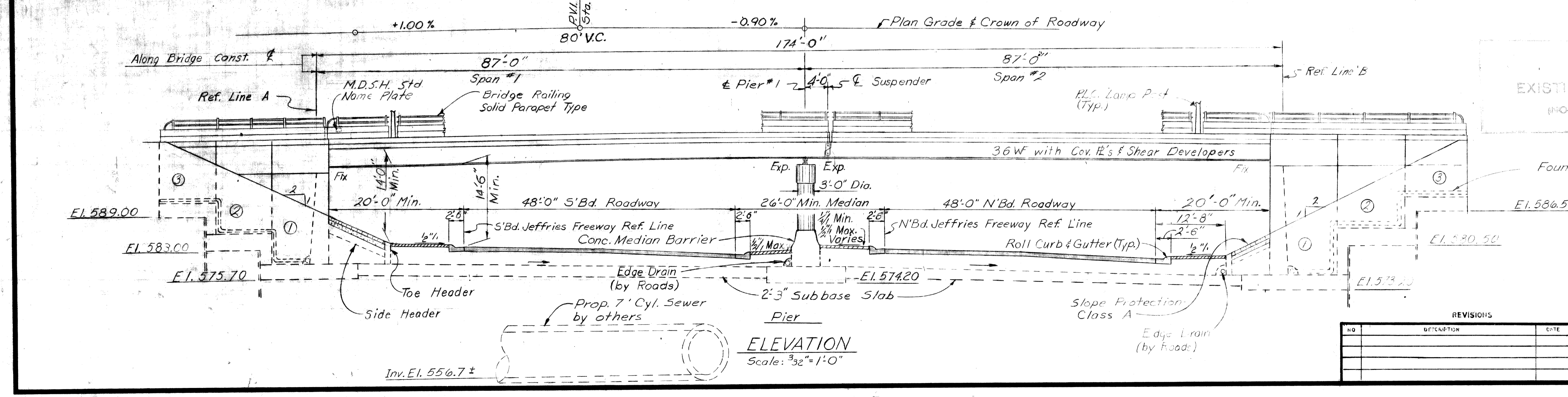
C/R denotes Crown of Roadway.

The vertical pay limits of temporary steel sheet piling are the top of retained earth and the bottom of footing.

The lateral pay limits of temporary steel sheet piling are as required and determined by the Engineer.

Temporary steel sheet piling is to be adequately supported to prevent bowing and tipping. Method and adequacy of support are subject to the approval of the Engineer.

Temporary steel sheet piling 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 Sheet Piling.



MISCELLANEOUS QUANTITIES		
Item	Unit	Am't
Foundation Drain	Lin. Ft.	47
Slope Protection-Class A	Sq. Yd.	235
Slope Protection Header	Lin. Ft.	276
Temp. Steel Sheet Piling	Sq. Ft.	1500

Work this sheet with sheet nos. 3 & 5

COPY
 EXISTING BRIDGE DETAILS
 (NOT FOR CONSTRUCTION)

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

APPROVED: *H. Cant*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(1)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 MYRTLE ST. CROSSING JEFFRIES FREEWAY
 IN DETROIT

GENERAL PLAN OF STRUCTURE

APPROVED: *J. Coon* 3-15-68
 DESIGN SUPERVISING ENGINEER

APPROVED: *Donald Hillier* 2-16-68
 ENGINEER OF DESIGN CONSULTANTS

SHEET 4 of 26
 S03 of 82174 A

REVISIONS			
NO.	DESCRIPTION	DATE	BY