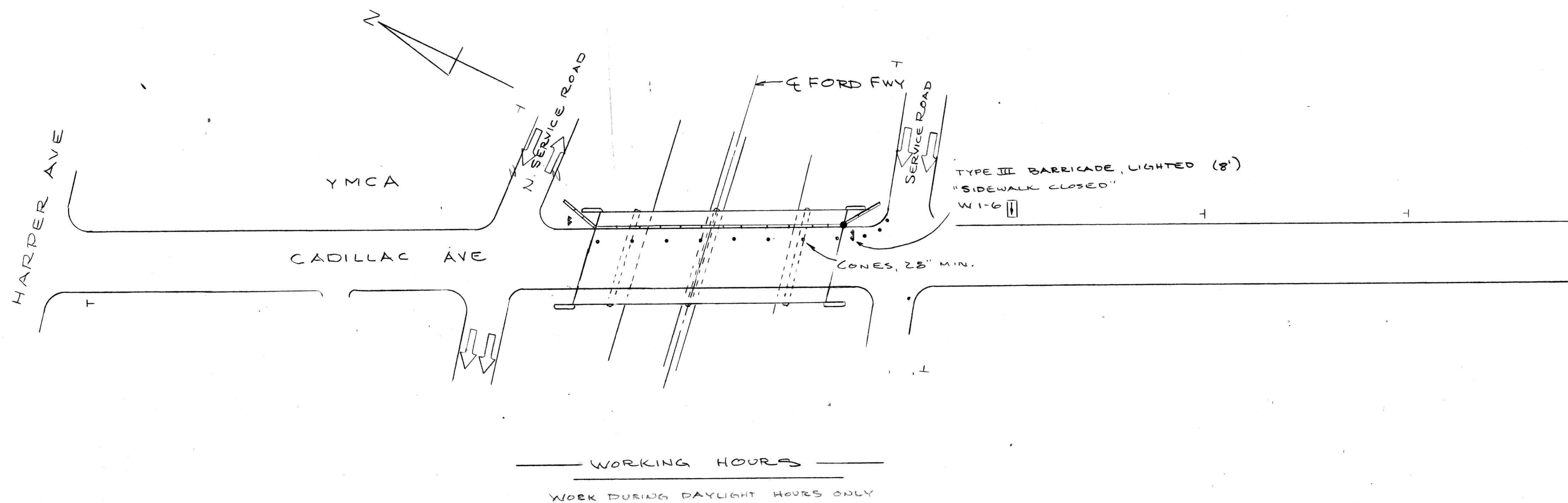


NOTE: MAINTAIN A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES.  
 REVERSE PROCEDURE FOR OPP. SIDE.



SCALE: 1"=50'

MICHIGAN DEPARTMENT OF TRANSPORTATION  
 CADILLAC AVE OVER I-94  
 SCREENING AND RAILING REPLACEMENT  
 STAGING AND CONSTRUCTION SIGNING

PLANS PREPARED BY  
 CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 CITY ENGINEERS OFFICE

APPROVED: *T.E. McElroy*  
 STRUCTURAL ENGINEER

JOB No.  
 79-22-26B

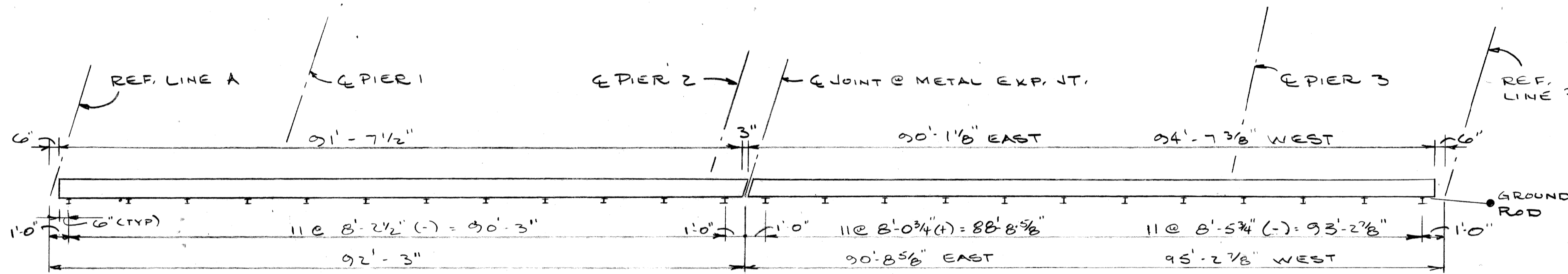
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	(Signature)	1-25-81
DRAWN BY	(Signature)	2-25-81
CHECKED BY	(Signature)	2-25-81
SHEET	5	OF

S 02 OF 82025

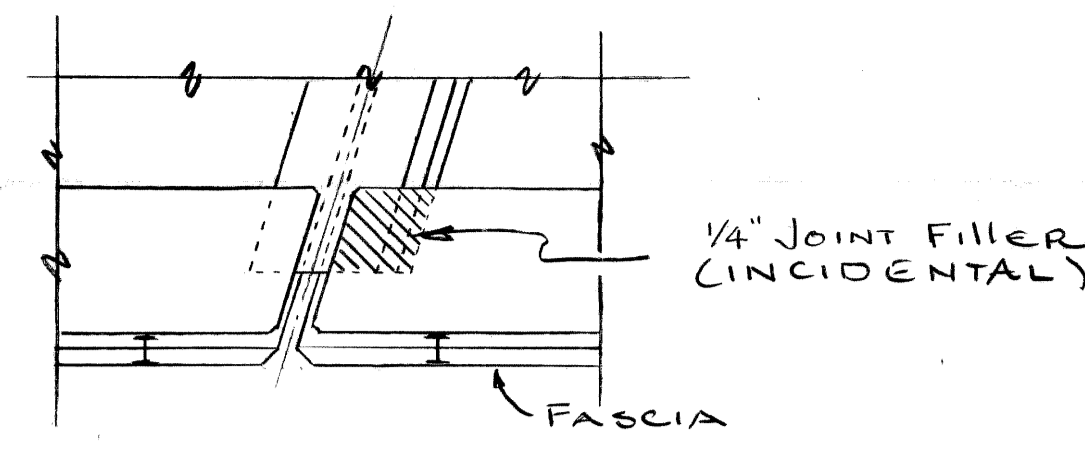
QUANTITIES		
ITEM	UNIT	AMOUNT
BRIDGE RAILING-SOLID PARAPET TYPE (MODIFIED)	L.F.	368
PEDESTRIAN FENCING STRUCTURES	SF	2932
ELECTRICAL GROUNDING SYSTEM	EA	2
EPOXY ANCHORED BARS	EA	498

STEEL REINF. - EPOXY COATED					
LOCATION	MARK	SIZE	LENGTH	NO. REQ'D	TOTAL
ALL SPANS	A 101	#6	2'-6"	249	935
ALL SPANS	A 102	#6	2'-9"	249	1028
SPANS 1 & 2 EAST & WEST	A 103	#6	32'-0"	36	1170
SPANS 3 & 4 EAST	A 104	#6	31'-6"	18	852
SPANS 3 & 4 WEST	A 105	#6	33'-0"	18	892
					5437

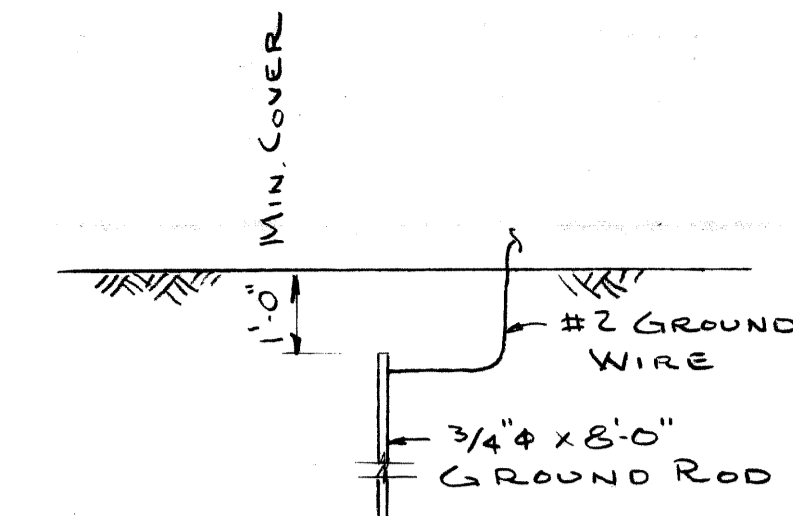


PLAN  
N.T.S.

NOTES: WEST SIDE SHOWN - EAST SIDE IS SIMILAR. DIMENSIONS ARE ALONG THE OUTSIDE FACE OF THE NEW PARAPET.

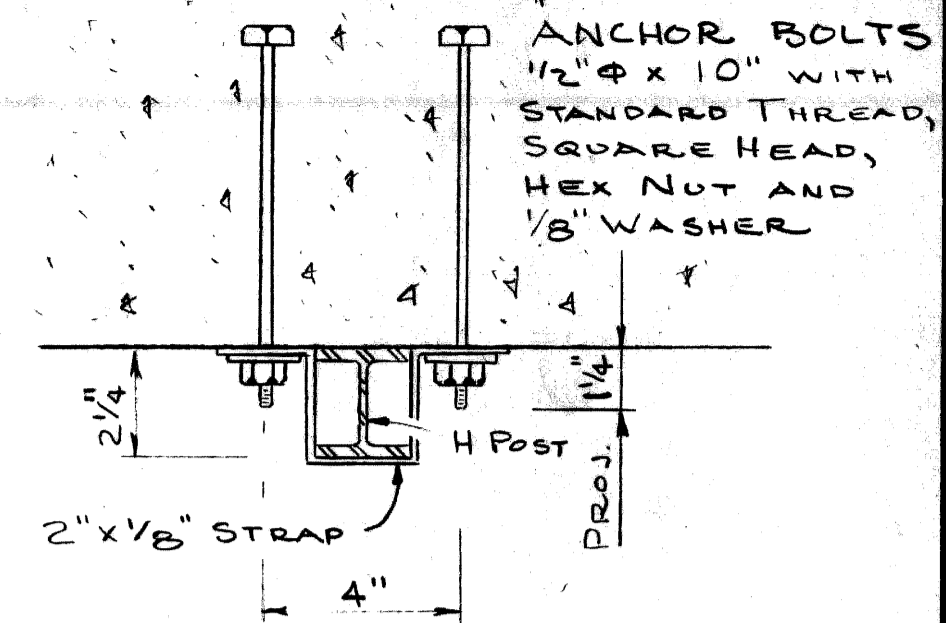


DETAIL AT EXPANSION JOINT

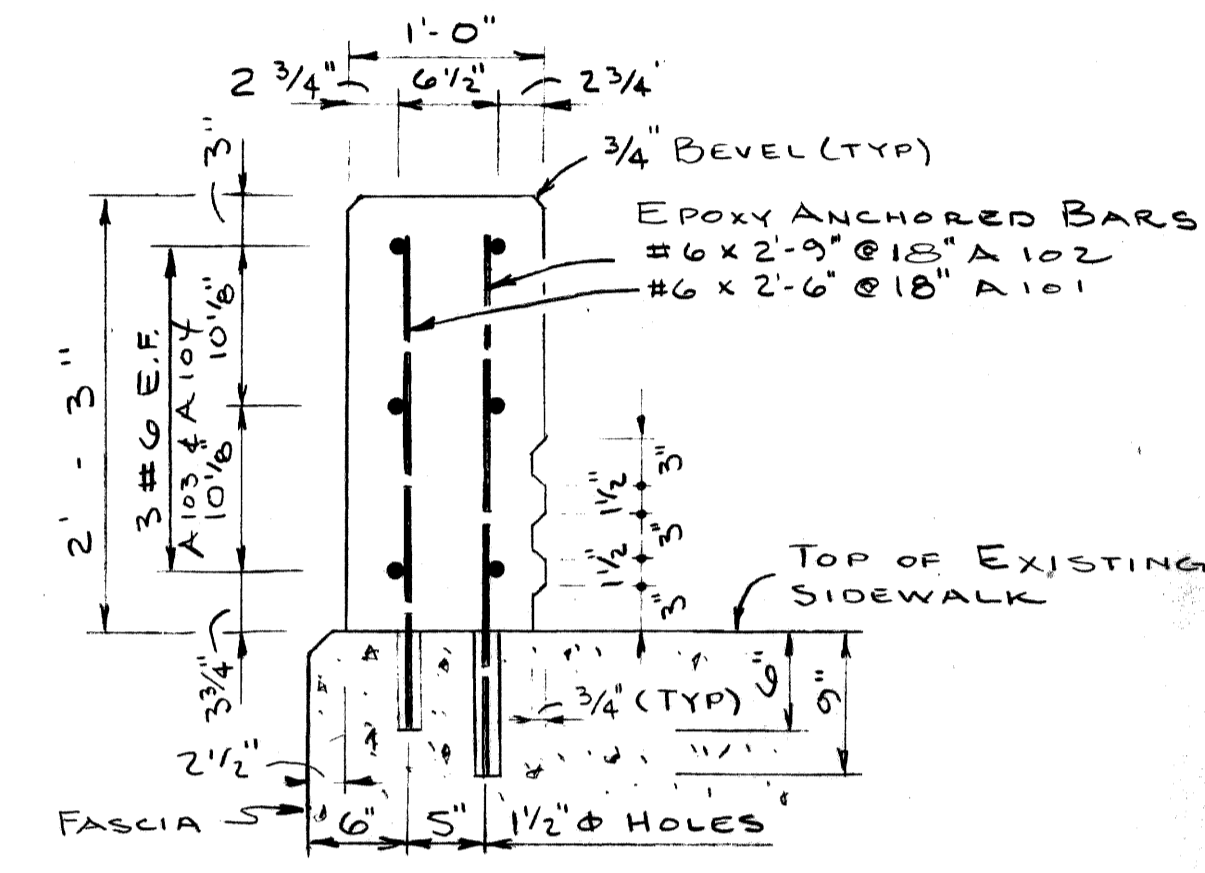


1. ALL UNDERGROUND CONNECTIONS SHALL BE CALDWELL THERMITE WELD, GAS OR ARC WELD.
2. EXPOSED CONNECTIONS MAY BE SPLIT BOLT OR CLAMP TYPE.
3. GROUND WIRE SHALL BE #2 AWG STRANDED SOFT DRAWN COPPER WIRE.

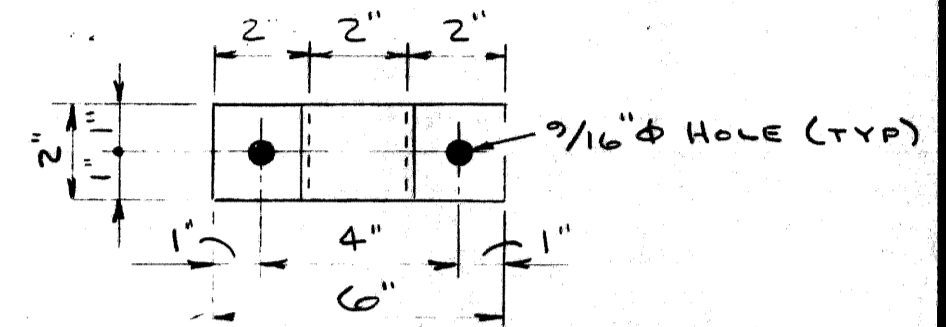
GROUNDING DETAIL



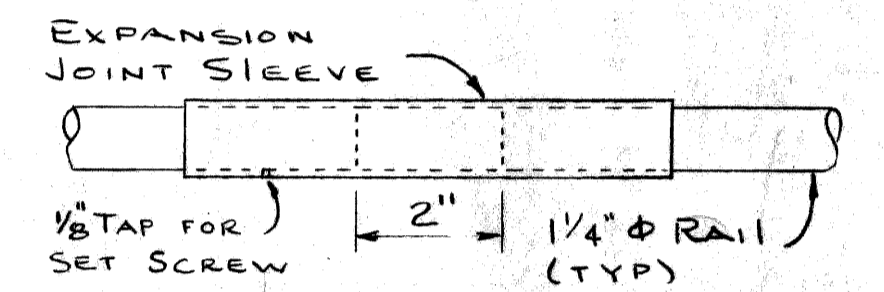
BRACKET DETAIL



BRIDGE RAILING - SOLID PARAPET TYPE (MODIFIED)



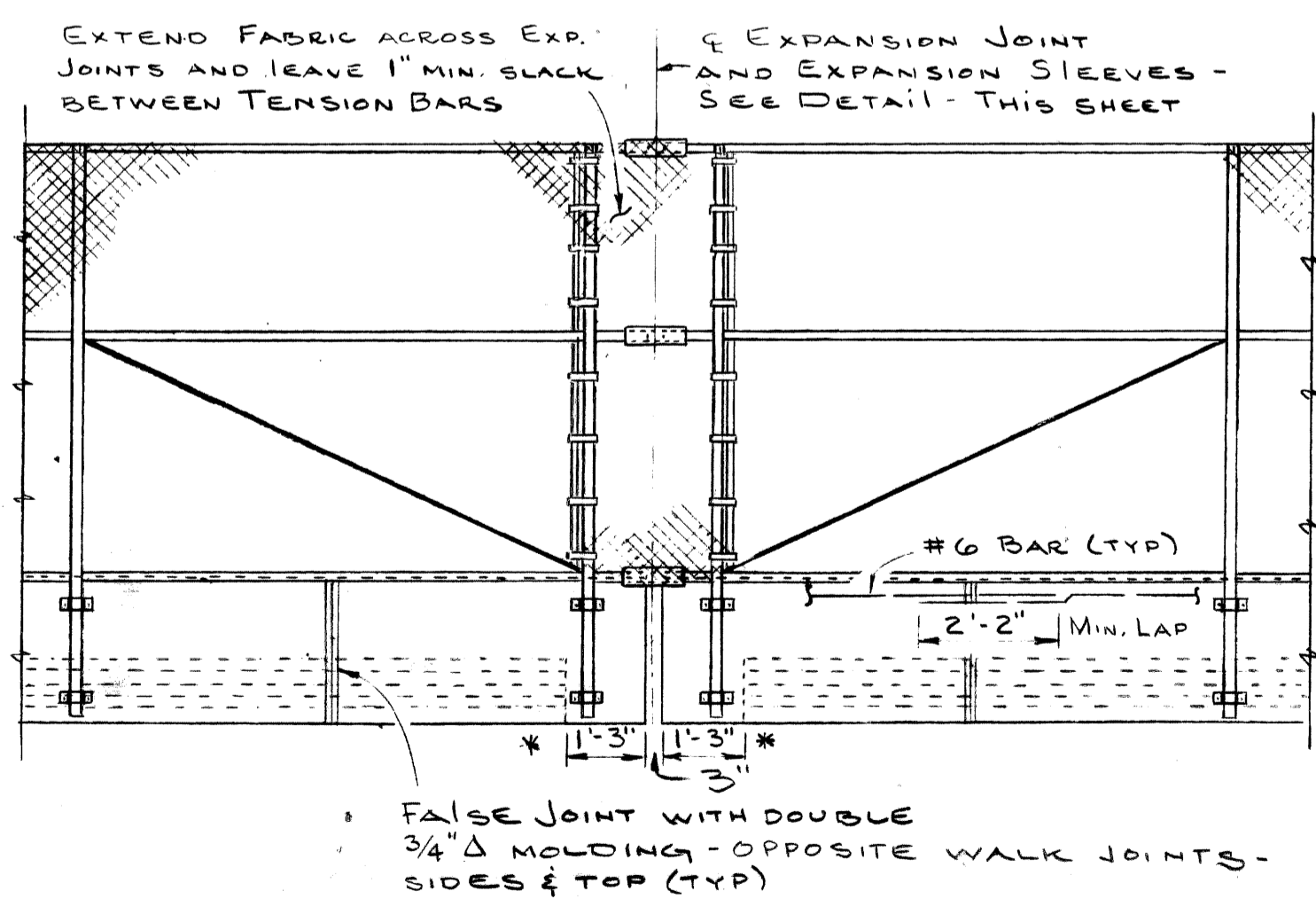
STRAP DETAIL



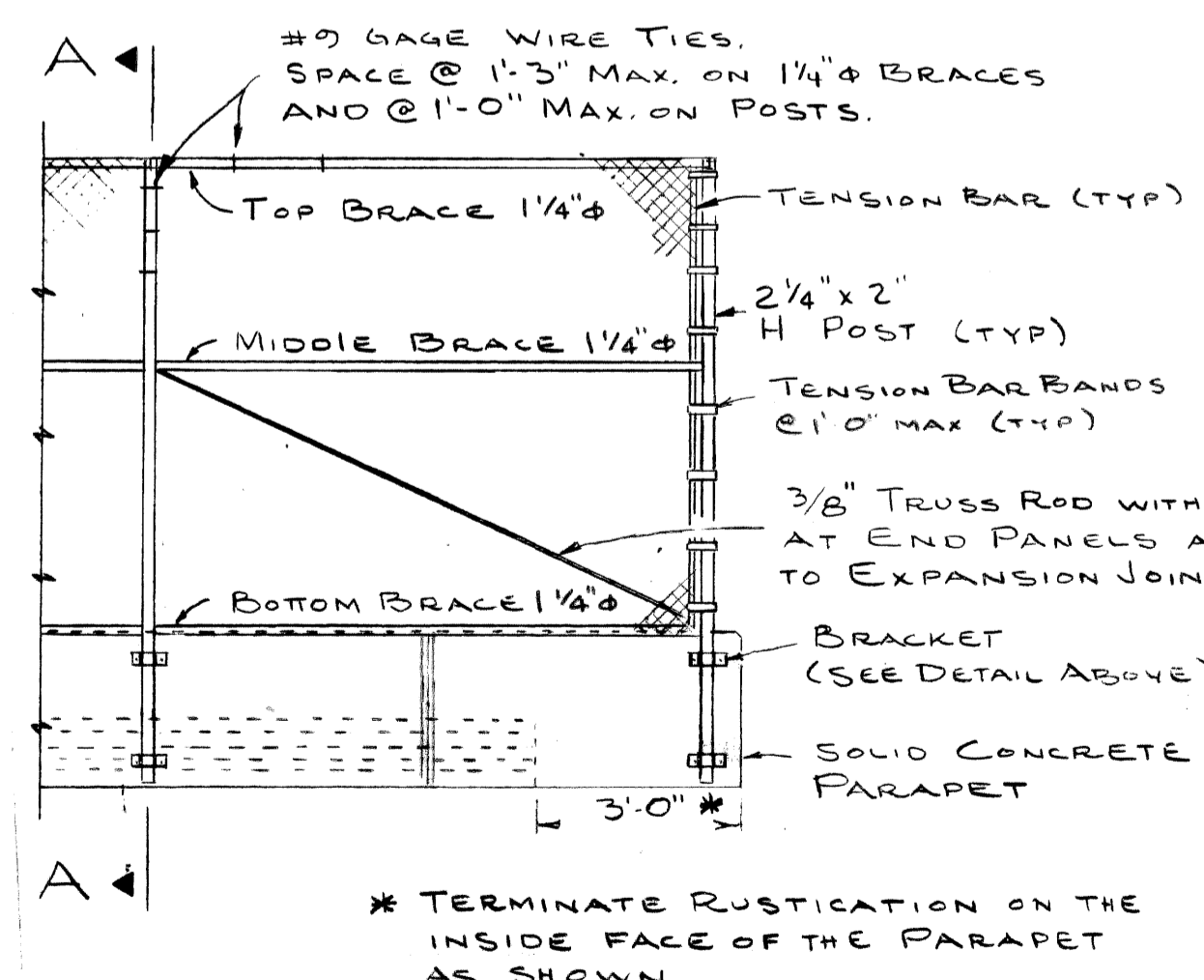
EXPANSION SLEEVE DETAIL

RAILING AND FENCING NOTES

- All work shall conform to MDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 1979 EDITION.
- All fabric for chain link fence shall be furnished with knuckling at both selvages.
- The posts shall be 2 1/4" x 2" GALVANIZED H POSTS WEIGHING 4.1 P.L.F. Round Posts Having a 2 1/8" O.D. WEIGHING 5.79 P.L.F. GALVANIZED MAY BE USED WITH SIMILAR CONNECTION DETAILS.
- The nominal 1 1/4" 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.
- Fence fabric shall be galvanized, #9 GAGE with a 2" MESH.
- CONTRACTOR SHALL VERIFY FIELD CONDITIONS BEFORE FABRICATION.
- CARE IS TO BE TAKEN IN PLACING ANCHOR 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, ANCHOR BOLTS, BRACKETS AND ALL SUITABLE CONNECTIONS AND FITTINGS.
- BRIDGE RAILING-SOLID PARAPET TYPE (MODIFIED) SHALL INCLUDE ALL MATERIALS FOR THE CONC. PARAPET INCLUDING CONCRETE, REINF. STEEL AND REMOVAL OF EXISTING RAILINGS.
- WHERE SIGNS MOUNTED ON BRIDGE FASCIAS INTERFERE WITH CONSTRUCTION, THEY MAY BE REMOVED AND RESET AT THE CONTRACTORS EXPENSE.



TYPICAL ELEVATION



SECTION A-A

PLANS PREPARED BY  
CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
CITY ENGINEERS OFFICE  
T. E. McElroy  
STRUCTURAL ENGINEER

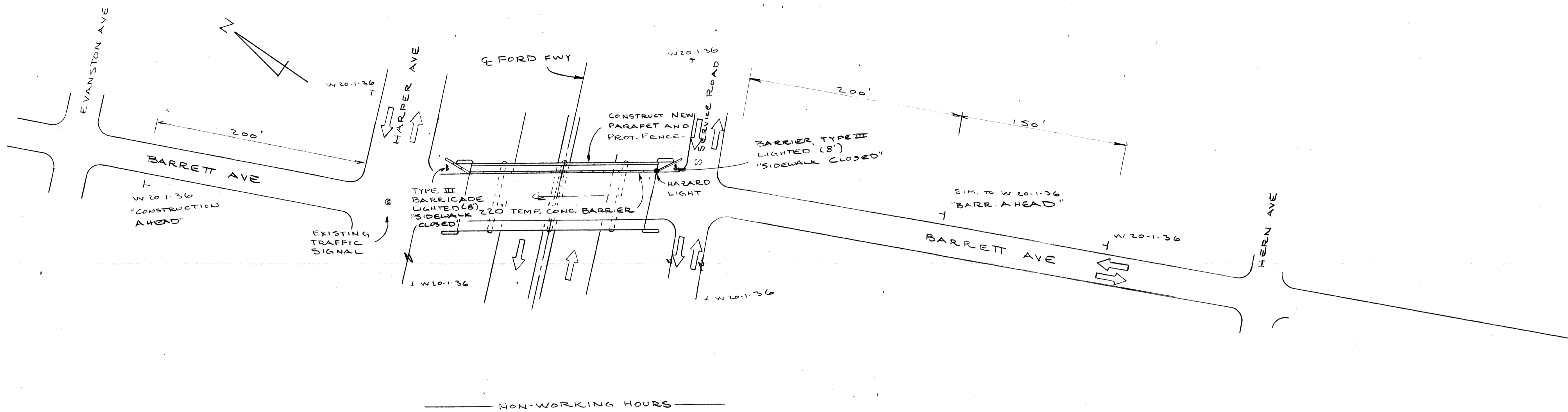
JOB No.  
79-22-26 B

MICHIGAN DEPARTMENT OF TRANSPORTATION  
CADILLAC AVE OVER I-94  
SCREENING AND RAILING REPLACEMENT  
SOLID PARAPET AND SCREENING DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

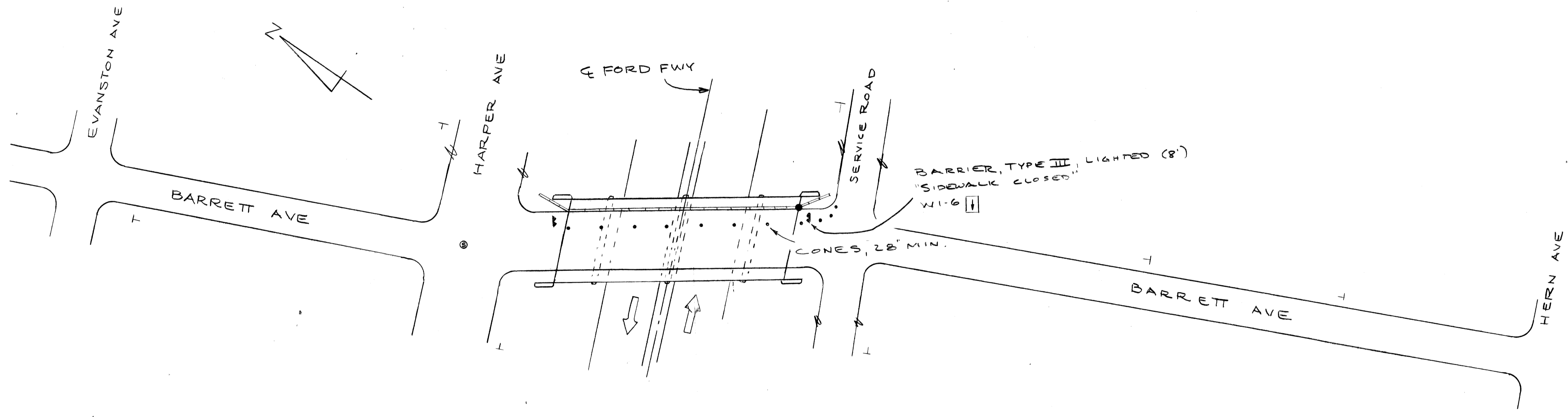
SQUAD BOSS: [Signature] 2-25-81  
DRAWN BY: RAK 2-25-81  
CHECKED BY: [Signature] 2-25-81  
SHEET 6 OF 6  
S 02 OF 82025





NON-WORKING HOURS

NOTE: MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES.  
REVERSE PROCEDURE FOR OPP. SIDE.



WORKING HOURS  
WORK DURING DAYLIGHT HOURS ONLY

SCALE: 1" = 50'

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BARRETT AVE OVER I-94  
SCREENING AND RAILING REPLACEMENT  
STAGING AND CONSTRUCTION SIGNING

PLANS PREPARED BY  
CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
CITY ENGINEERS' OFFICE  
  
APPROVED: *T. E. McLowen*  
STRUCTURAL ENGINEER

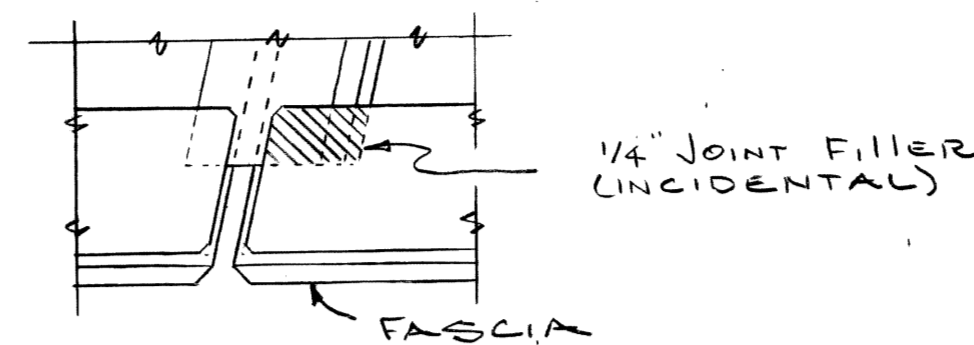
JOB No.  
79-22-26 C

REVISIONS			
NO.	DESCRIPTION	DATE	BY

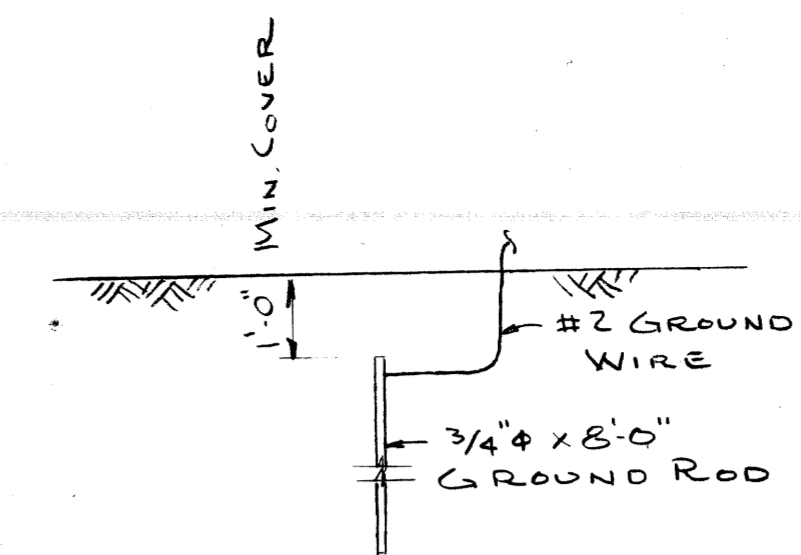
SQUAD BOSS	<i>A. Weber</i>	7-25-81
DRAWN BY	<i>RAK</i>	2-25-81
TRACED BY		
CHECKED BY	<i>JE</i>	2-15-81
SHEET 5 OF 5		

S 06 OF 82025

QUANTITIES		
ITEM	UNIT	AMOUNT
BRIDGE RAILING - SOLID PARAPET TYPE (MODIFIED)	L.F.	340
PEDESTRIAN FENCING - STRUCTURES	S.F.	2707
ELECTRICAL GROUNDING SYSTEM	EA	2
EPOXY ANCHORED BARS	EA	462

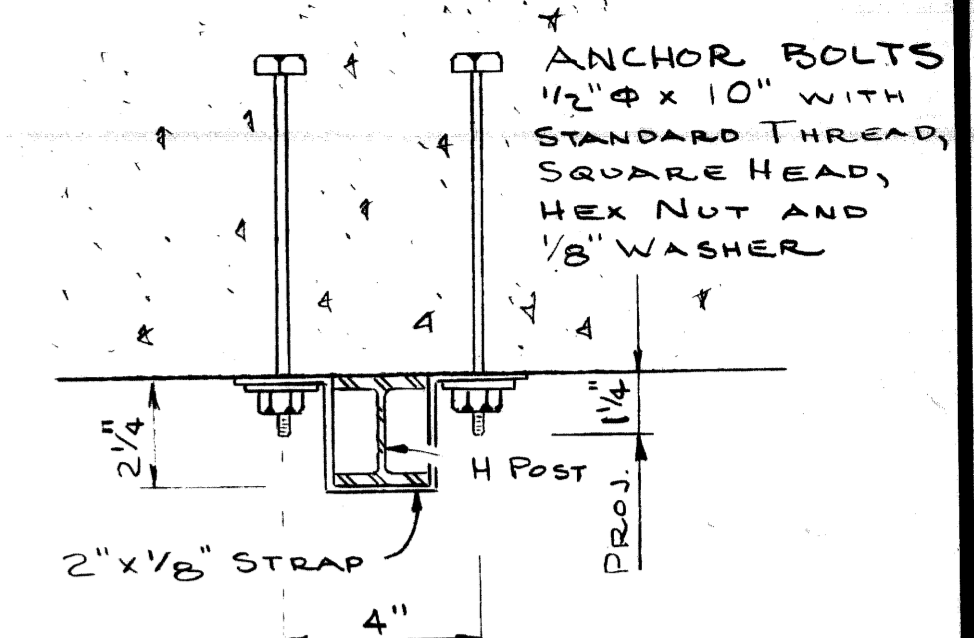


DETAIL AT EXPANSION JOINT

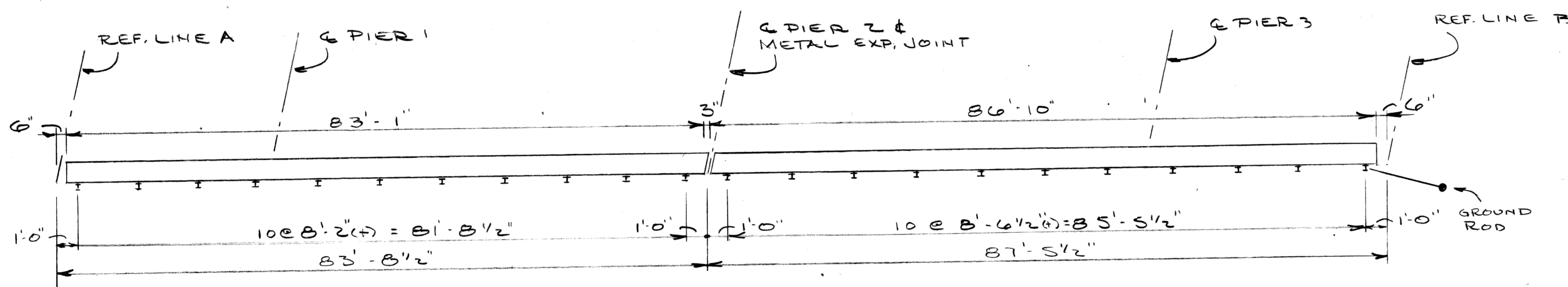


1. All underground connections shall be coldweld, thermite weld, gas or arc weld.
2. Exposed connections may be split bolt or clamp type.
3. Ground wire shall be #2 AWG stranded soft drawn copper wire.

GROUNDING DETAIL

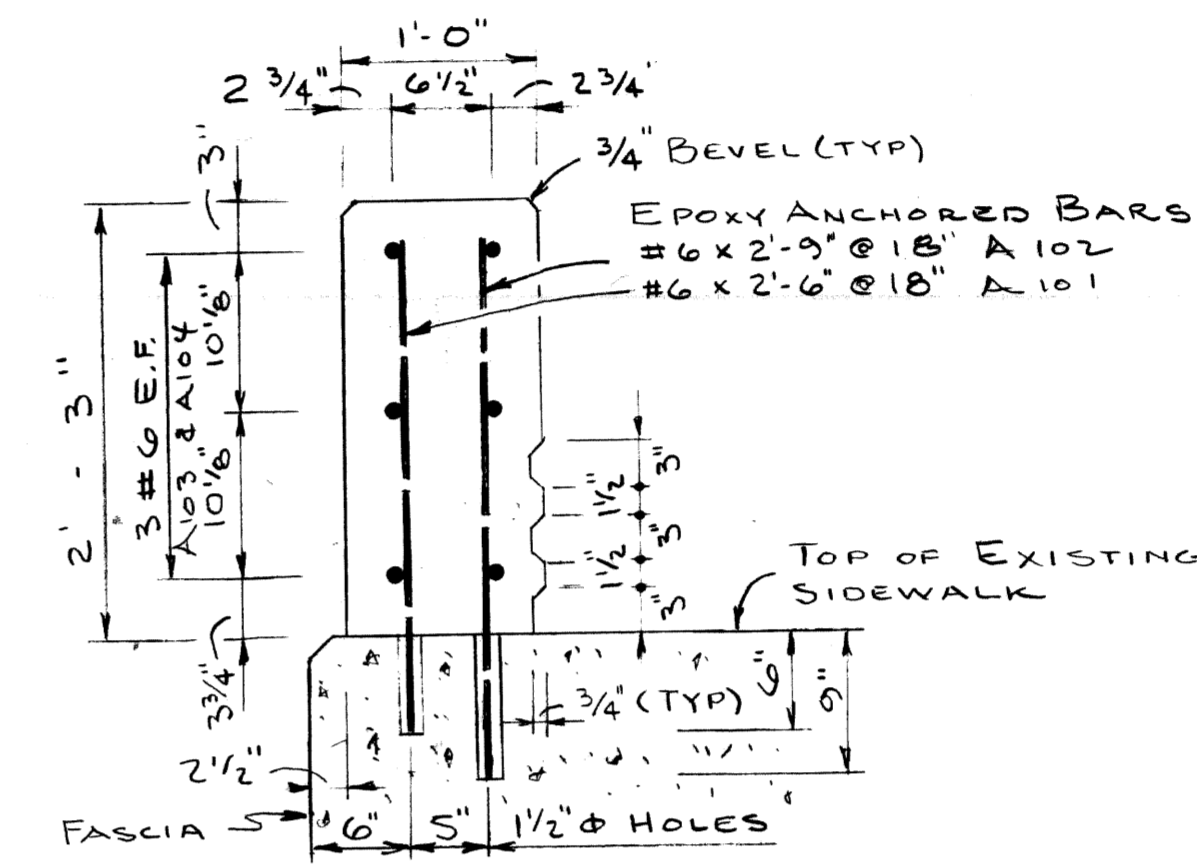


BRACKET DETAIL

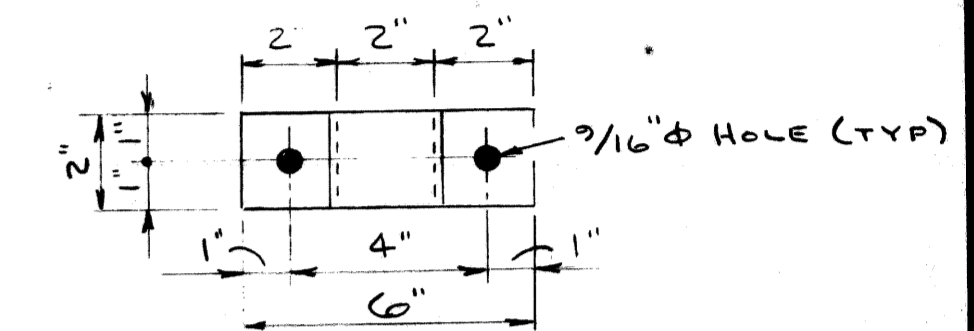


PLAN  
N.T.S.

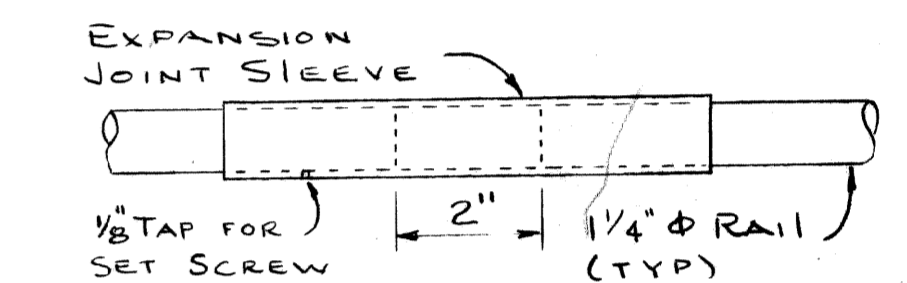
NOTE: WEST SIDE SHOWN - EAST SIDE IS SIMILAR. DIMENSIONS ARE ALONG THE OUTSIDE FACE OF THE NEW PARAPET.



BRIDGE RAILING - SOLID PARAPET TYPE (MODIFIED)



STRAP DETAIL

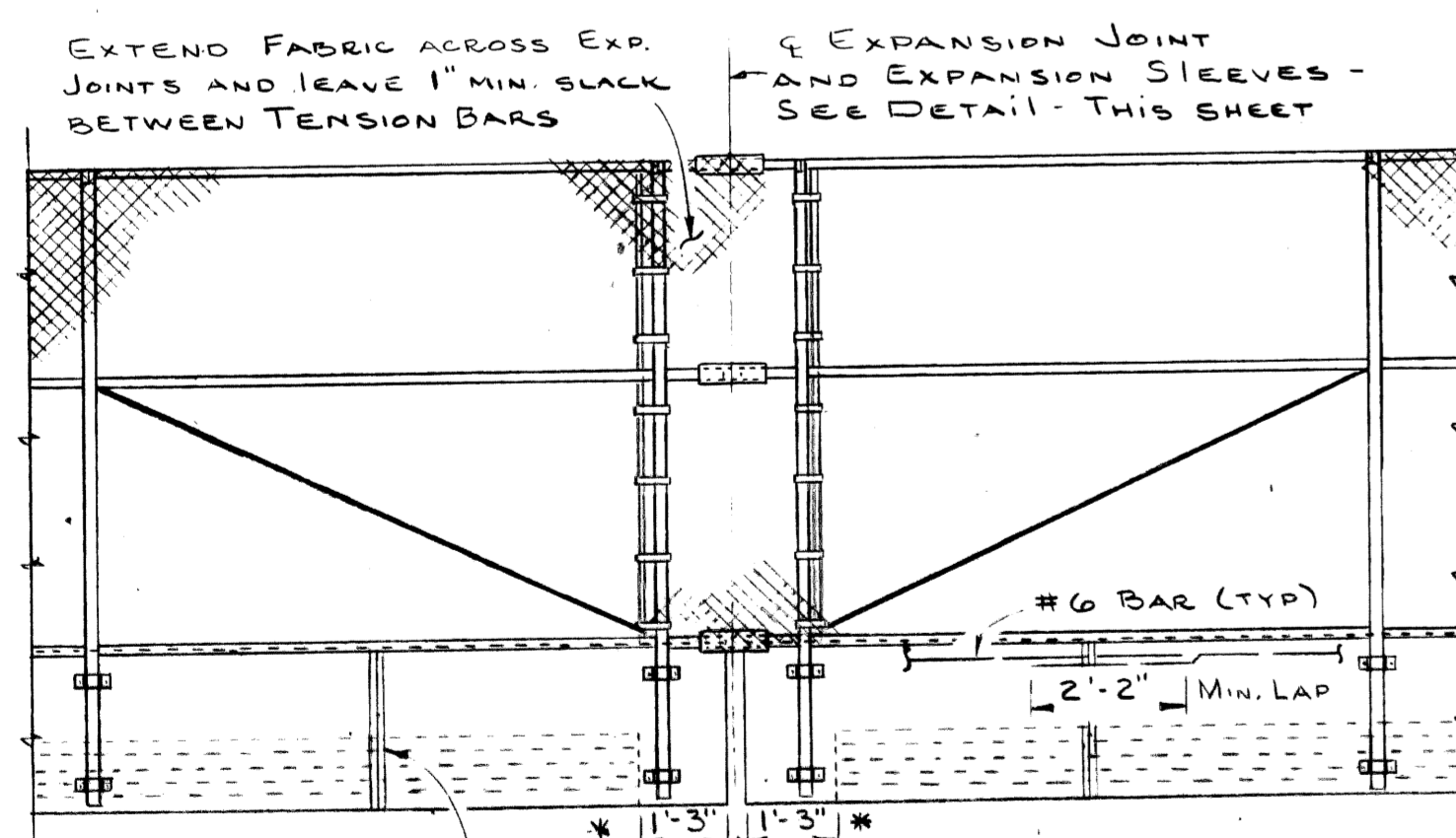


EXPANSION SLEEVE DETAIL

STEEL REINF - EPOXY COATED					
LOCATION	MARK	SIZE	LENGTH	#	WT
ALL SPANS	A101	#6	2'-6"	231	867
ALL SPANS	A102	#6	2'-9"	231	954
SPANS 1&2	A103	#6	29'-0"	36	1568
SPANS 3&4	A104	#6	30'-3"	36	1636
					SQFTS

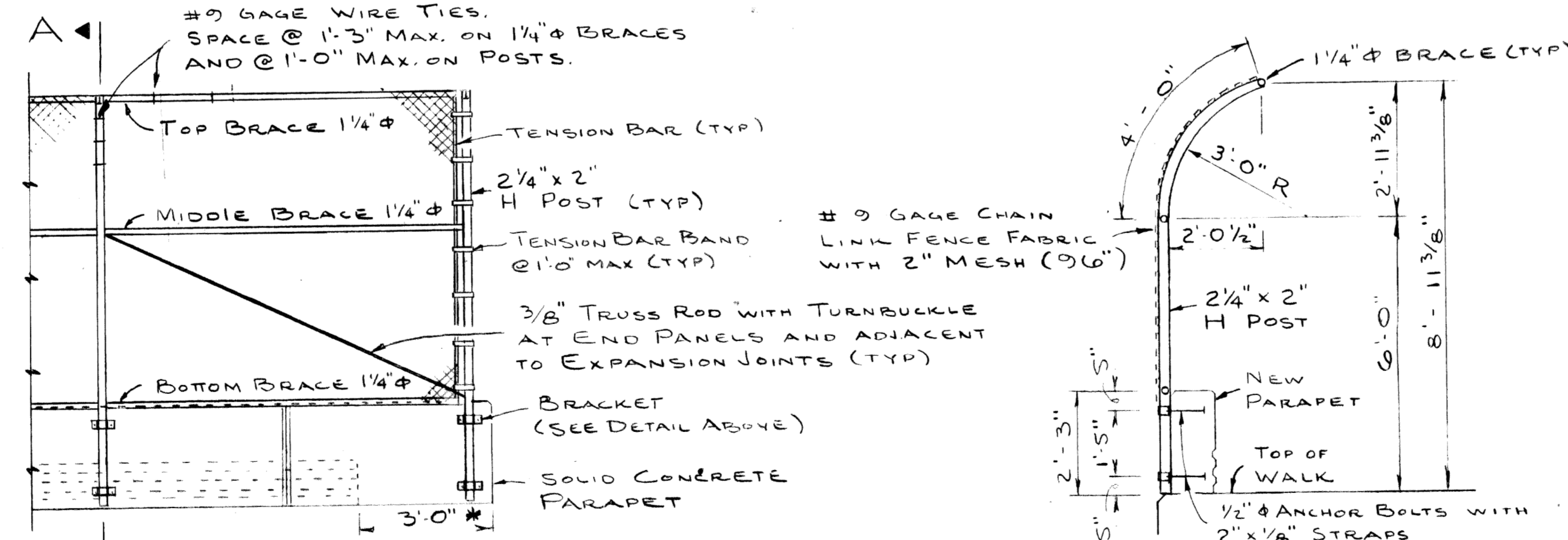
RAILING AND FENCING NOTES

- All work shall conform to MDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 1979 EDITION.
- All fabric for chain link fence shall be furnished with knuckling at both selvages.
- The posts shall be 2 1/4 x 2" galvanized H posts weighing 4.1 PLF. Round posts having a 2 1/8" O.D. weighing 5.79 PLF. Galvanized may be used with similar connection details.
- The nominal 1 1/4" braces shall be 1 5/8" O.D. steel pipe or tubing weighing 2.27 PLF. 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.
- Fence fabric shall be galvanized, #9 gage with a 2" mesh.
- Contractor shall verify field conditions before fabrication.
- Care is to be taken in placing anchor 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, anchor bolts, brackets and all suitable connections and fittings.
- BRIDGE RAILING - SOLID PARAPET TYPE (MODIFIED) shall include all materials for the conc. parapet including concrete, reinf. steel and removal of existing railings.
- WHERE SIGNS MOUNTED ON BRIDGE FASCIAS INTERFERE WITH CONSTRUCTION, THEY MAY BE REMOVED AND RESET AT THE CONTRACTORS EXPENSE.



FALSE JOINT WITH DOUBLE 3/4" MOLDING - OPPOSITE WALK JOINTS - SIDES & TOP (TYP)

TYPICAL ELEVATION



SECTION A-A

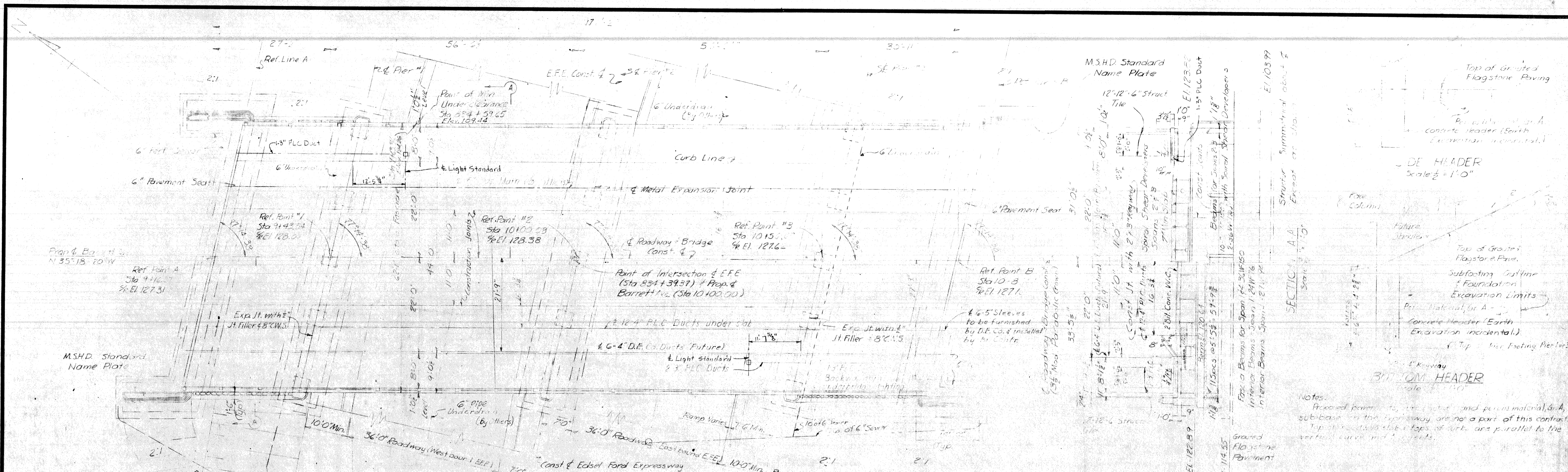
PLANS PREPARED BY  
 CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 CITY ENGINEERS' OFFICE  
 APPROVED: T.E.M. Gowan  
 STRUCTURAL ENGINEER  
 JOB No. 79-22-26C

MICHIGAN DEPARTMENT OF TRANSPORTATION  
 BARRETT AVE OVER I-94  
 SCREENING AND RAILING REPLACEMENT  
 SOLID PARAPET AND SCREENING DETAILS

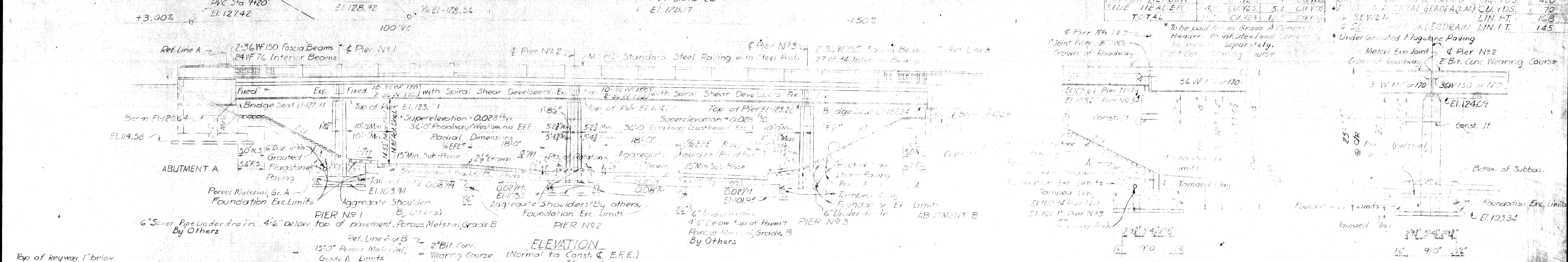
REVISIONS			
NO	DESCRIPTION	DATE	BY

DESIGNED BY	J. Furberg	2-25-81
DRAWN BY	RAK	2-25-81
CHECKED BY		
DATE		

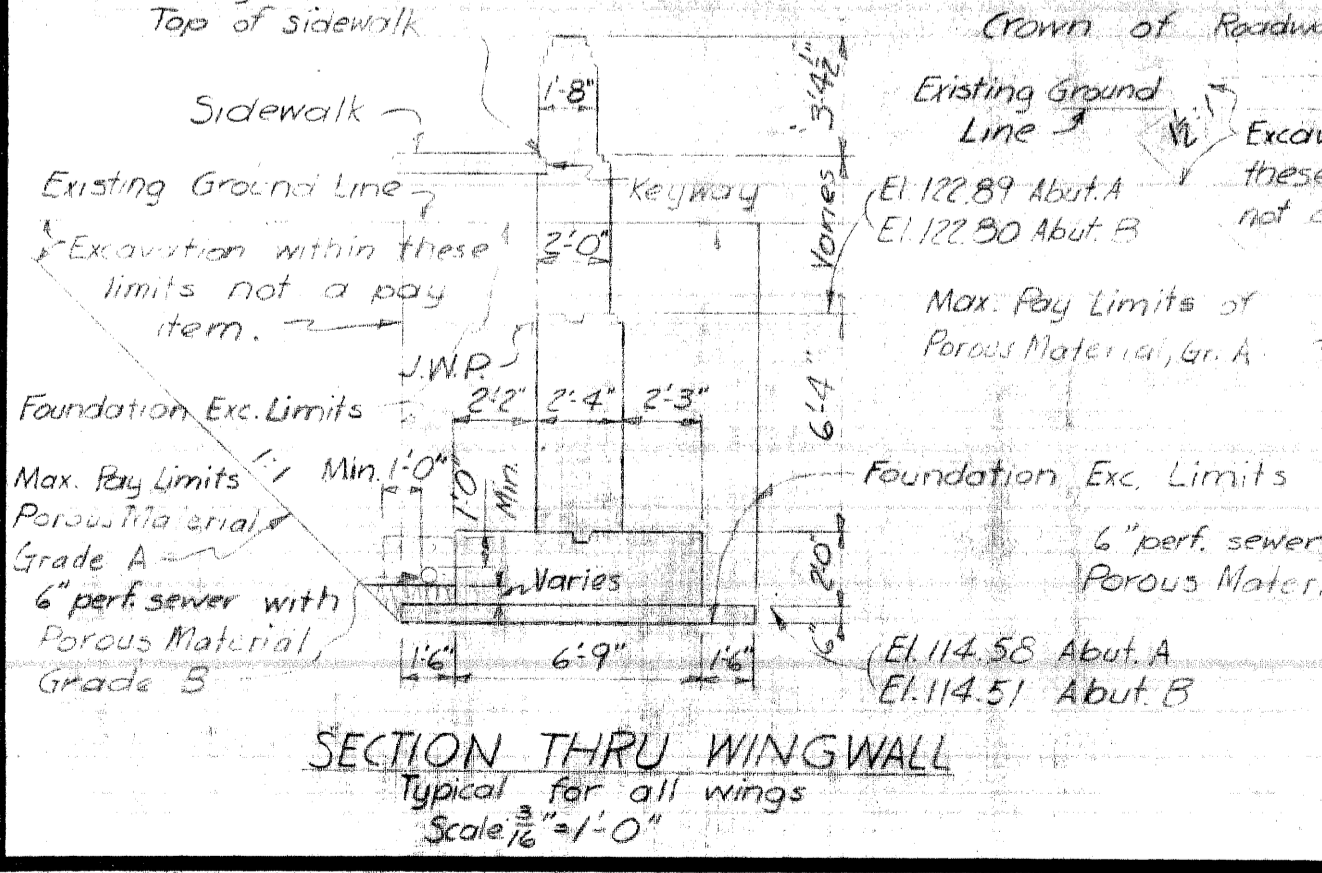
SHEET 5 OF 5  
 S 06 OF 82025



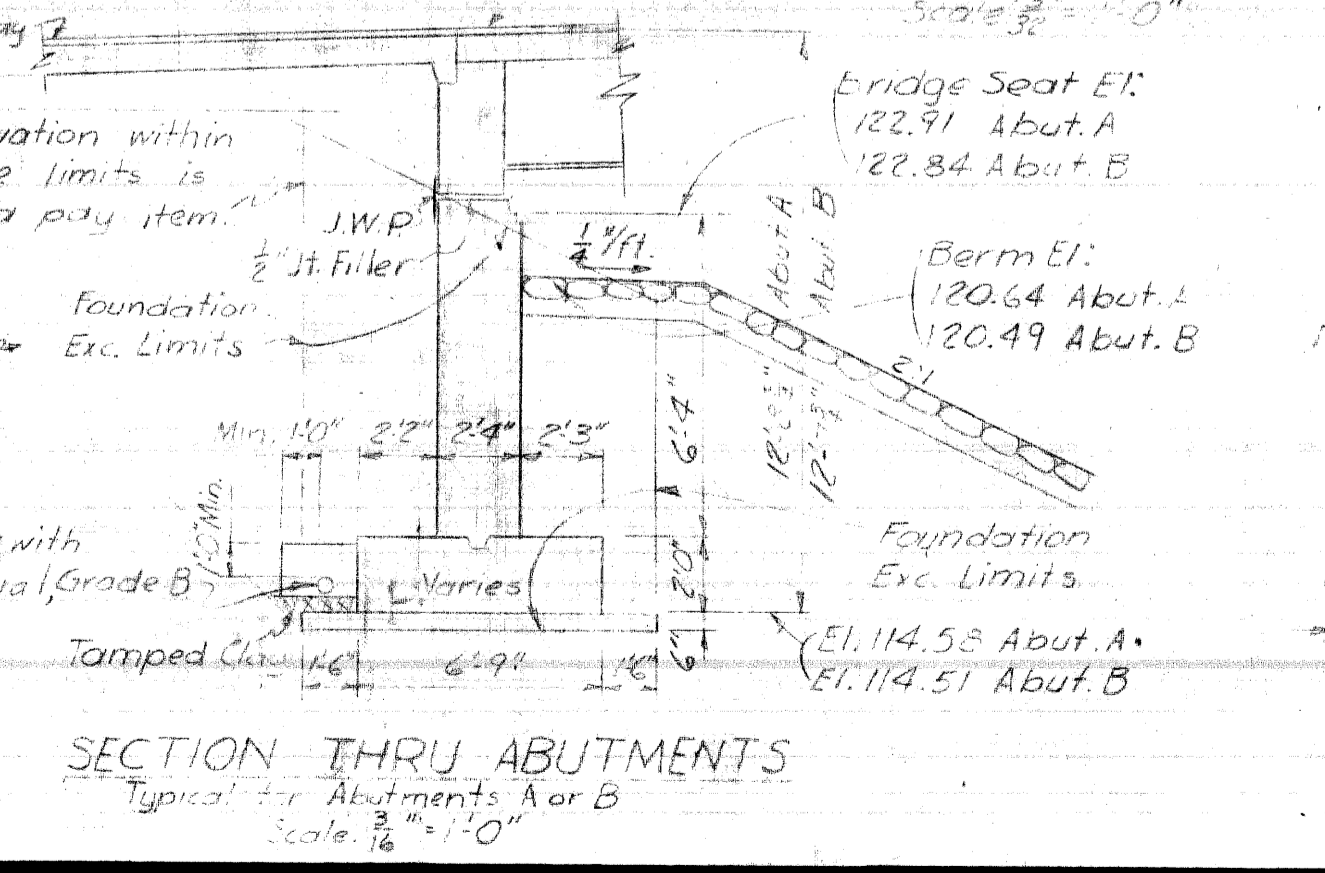
PLAN Scale: 1/8" = 1'-0"



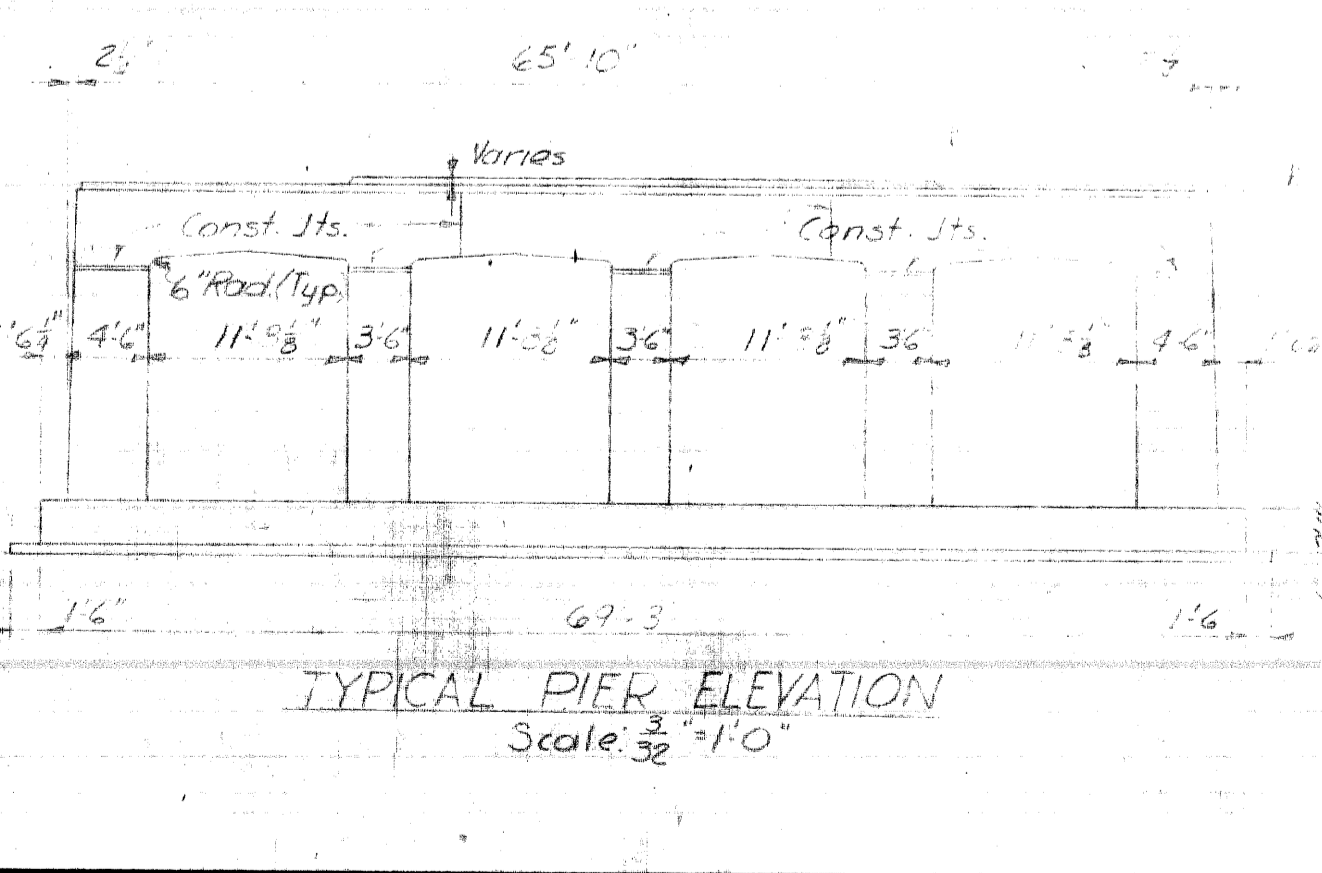
ELEVATION (Normal to Const. & E.F.E.) Scale: 1/8" = 1'-0"



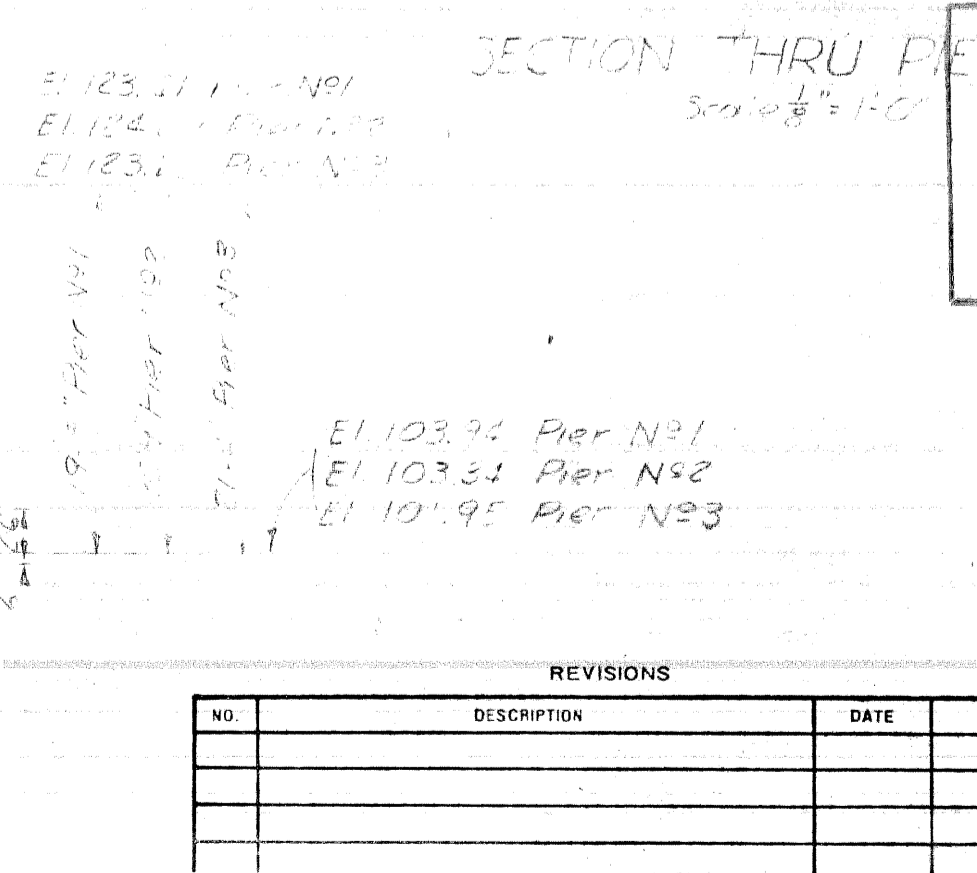
SECTION THRU WINGWALL Typical for all wings Scale: 1/8" = 1'-0"



SECTION THRU ABUTMENTS Typical for Abutments A or B Scale: 1/8" = 1'-0"



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



SECTION THRU PIER NO 1 & 2 Scale: 1/8" = 1'-0"

GRADE A CONCRETE QUANTITIES			
LOCATION	PIER #1	PIER #2	PIER #3
BOTTOM HEADER	4.0	5.4	5.4
SIDE HEADER	1.5	1.5	1.5
TOTAL	5.5	6.9	6.9

MISCELLANEOUS STRUCTURAL QUANTITIES			
ITEM	UNIT	AMOUNT	
GRADE A CONCRETE PAVING	SQ. YDS.	420	
GRADE A MATERIAL GRADE A (L.M.)	CU. YDS.	70	
SEWER	LIN. FT.	168	
SEWER MANHOLE DRAIN	LIN. FT.	145	

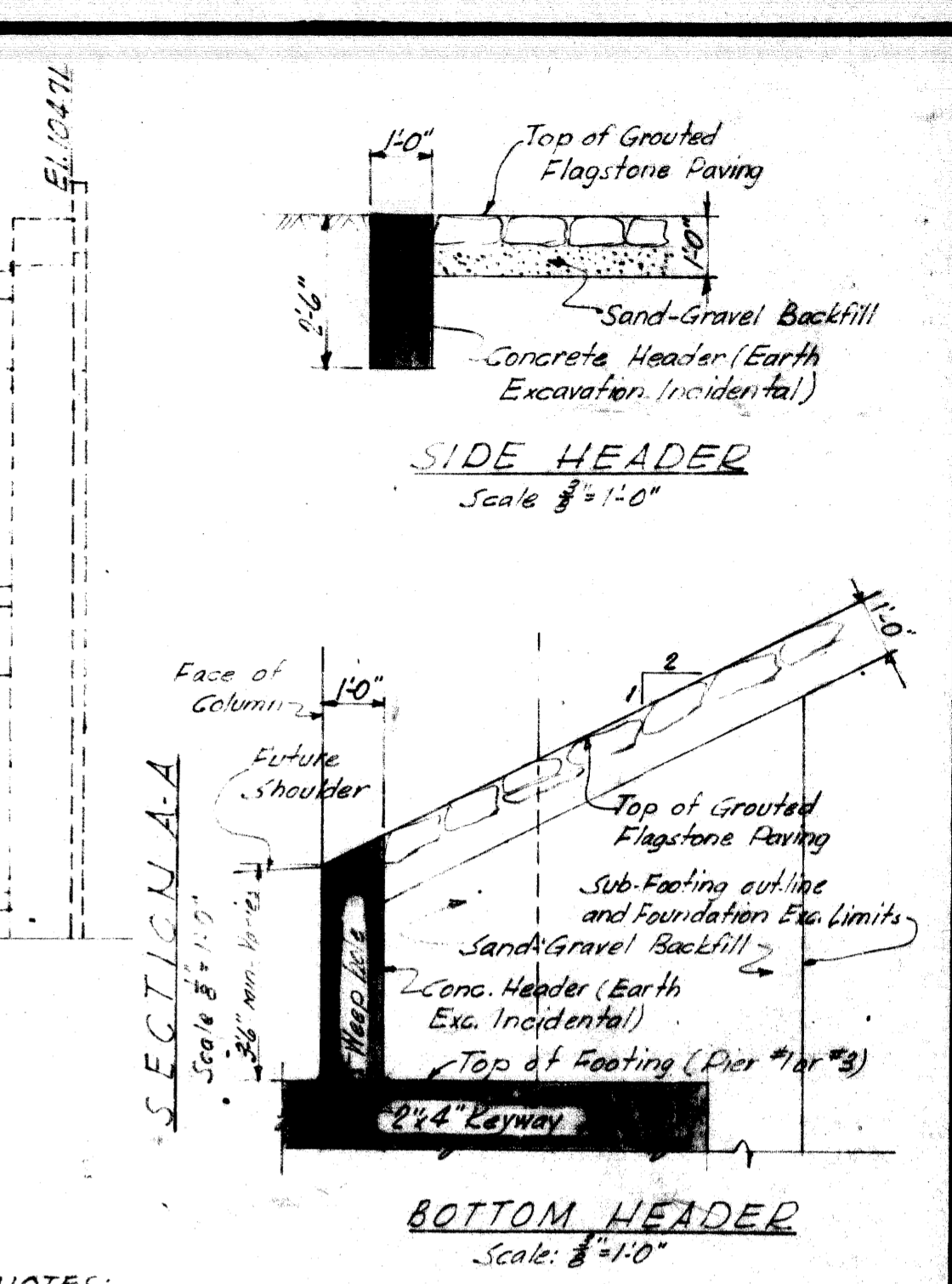
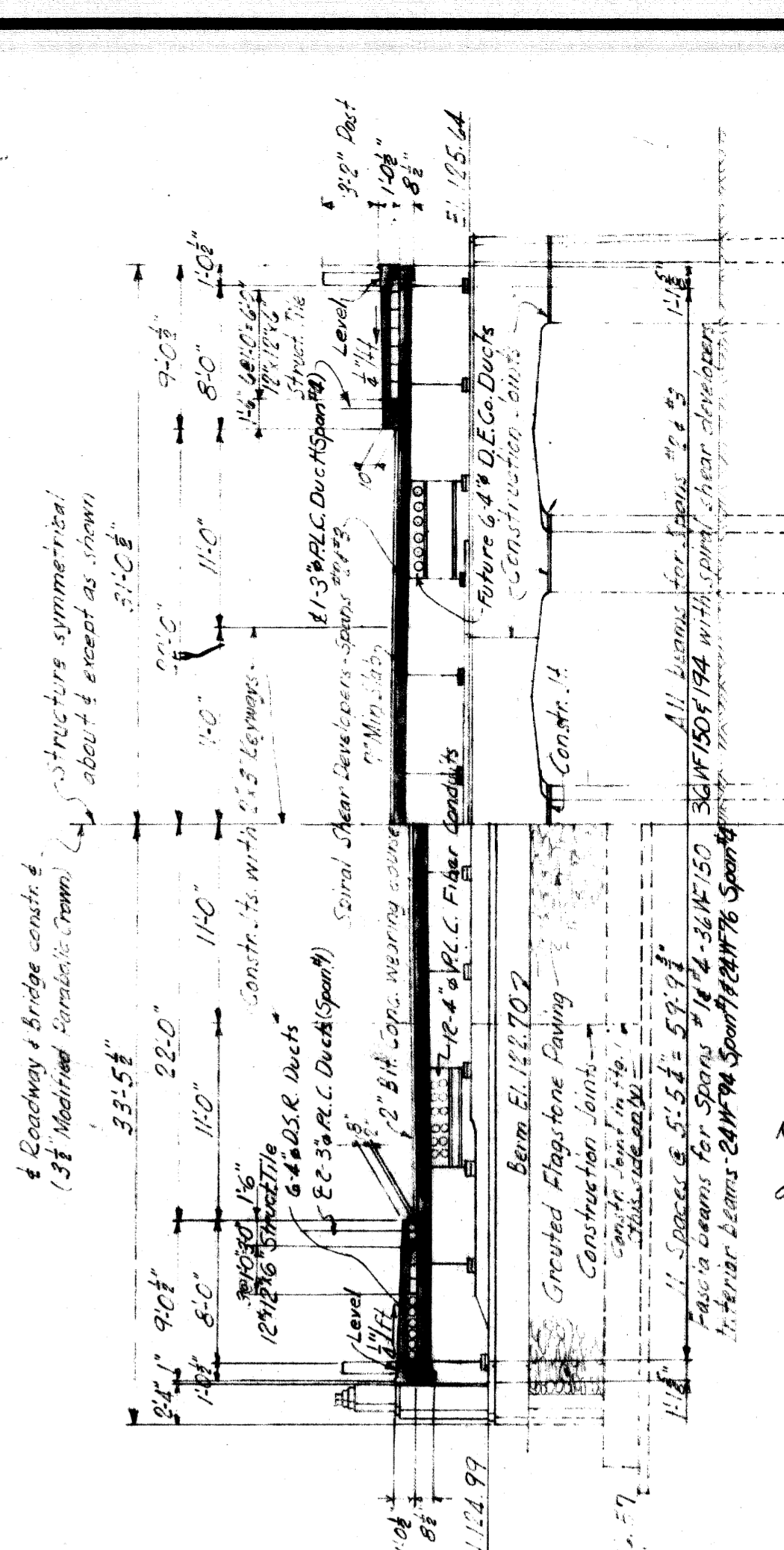
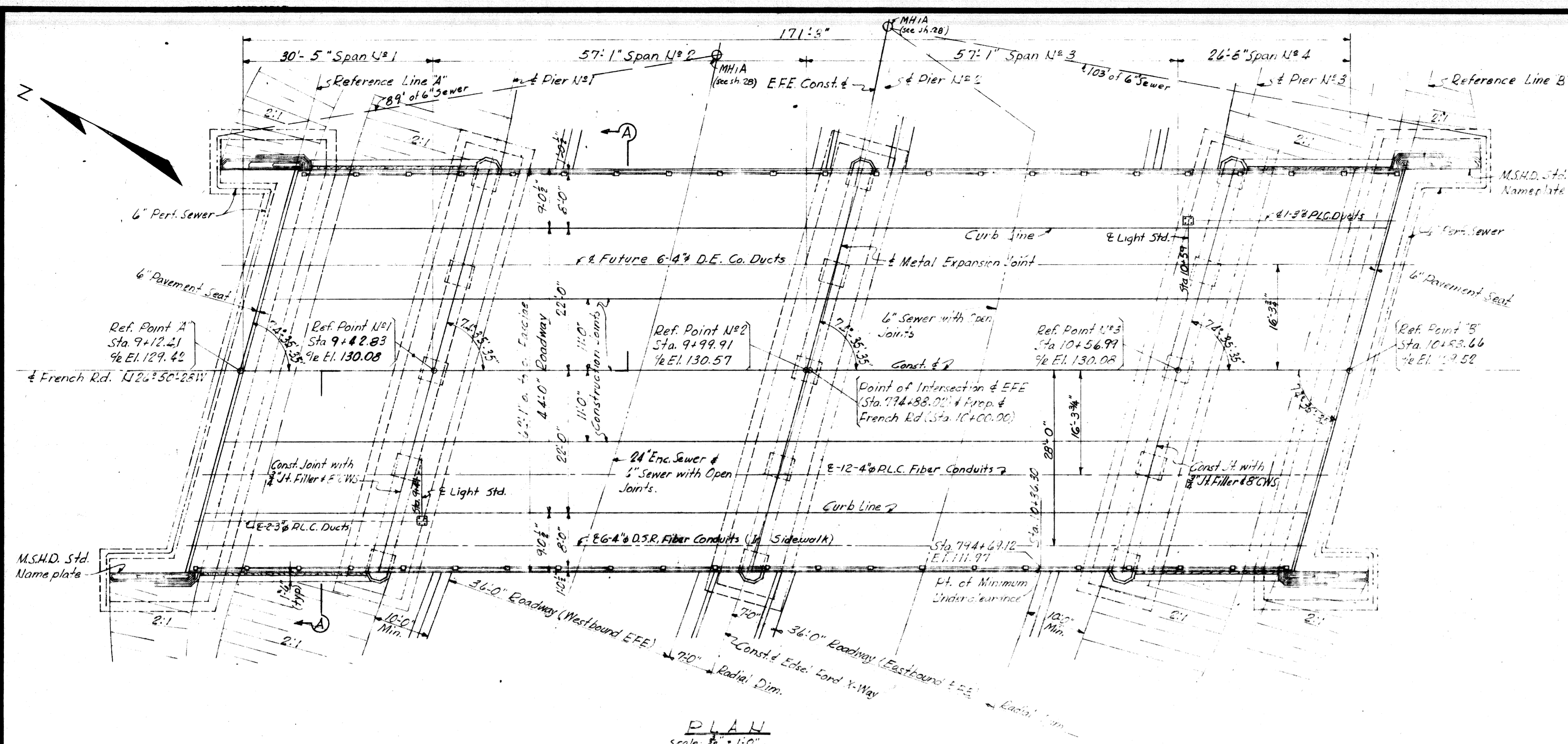
**COPY**  
**EXISTING BRIDGE DETAILS**  
 (NOT FOR CONSTRUCTION)

**MICHIGAN STATE HIGHWAY DEPARTMENT**  
 BARRETT AVE. CROSSING THE EDEL FORD EXPRESSWAY IN THE CITY OF DETROIT  
**GENERAL PLAN OF STRUCTURE**  
 HAZELET & ERDAL CONSULTING ENGINEERS- FILE NO 799  
 APPROVED: *J.C. Traker* 5-7-57  
 APPROVED: *J.P. Jones* 8-2-57  
 APPROVED: \_\_\_\_\_  
 BRIDGE ENGINEER

NO	DESCRIPTION	DATE	BY

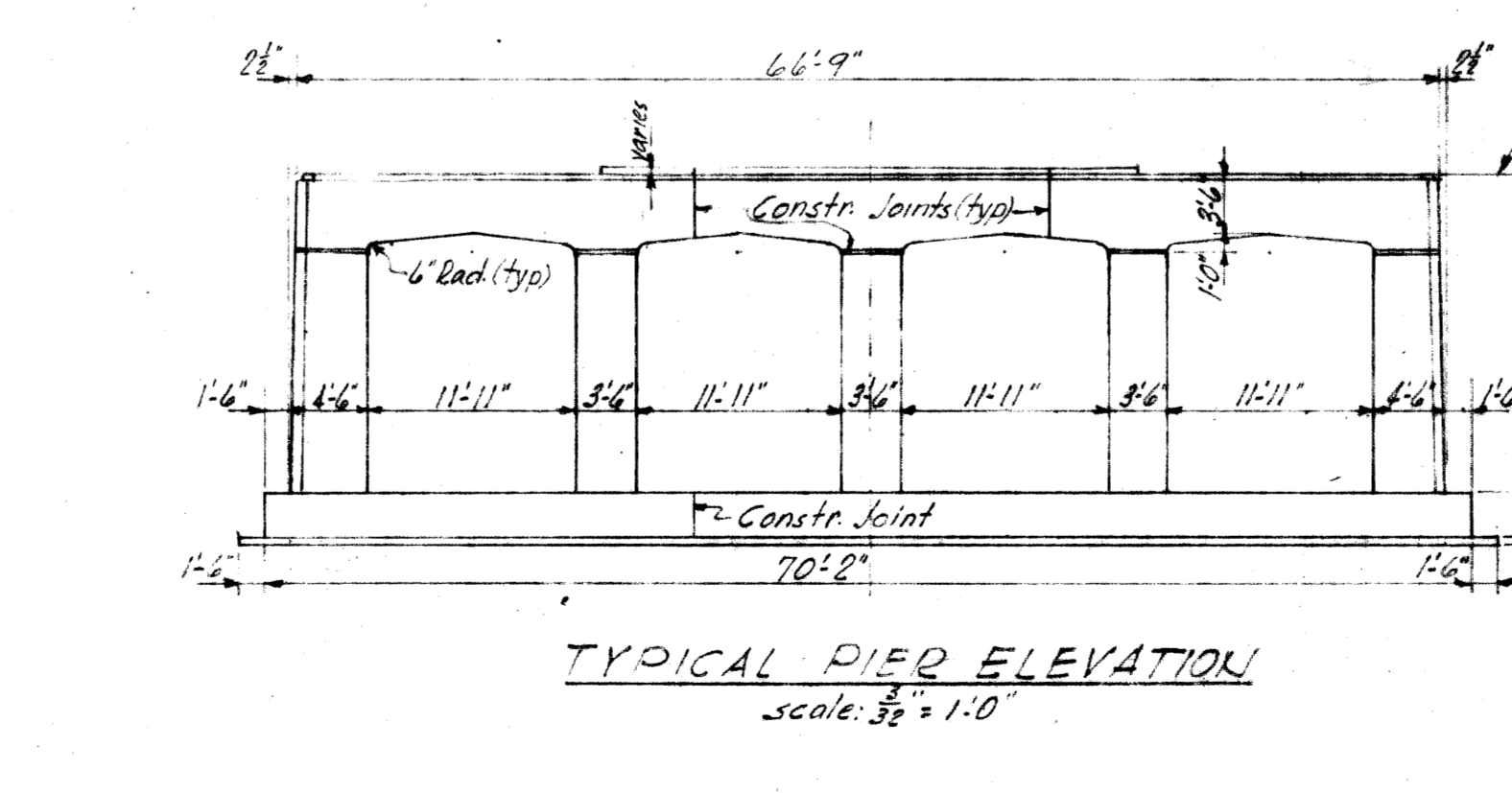
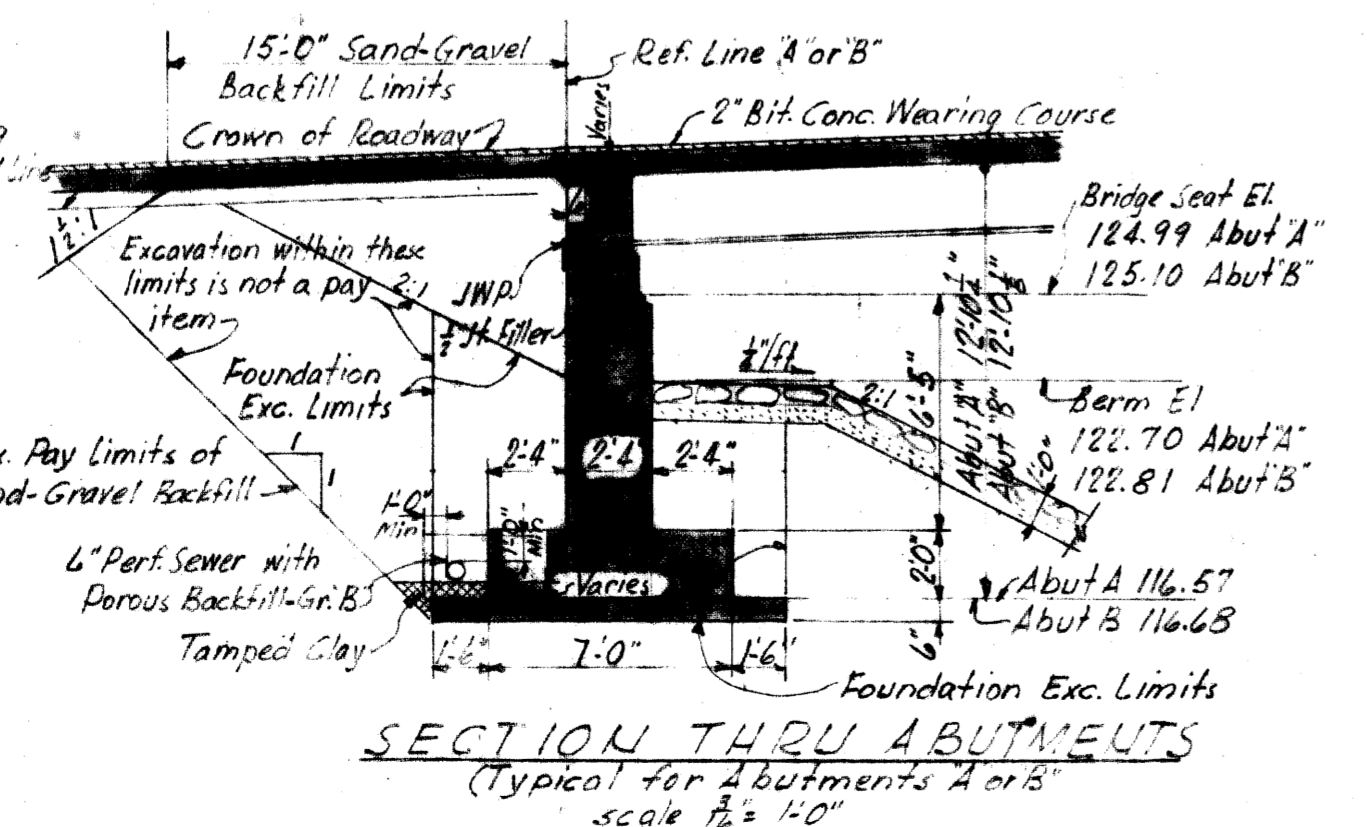
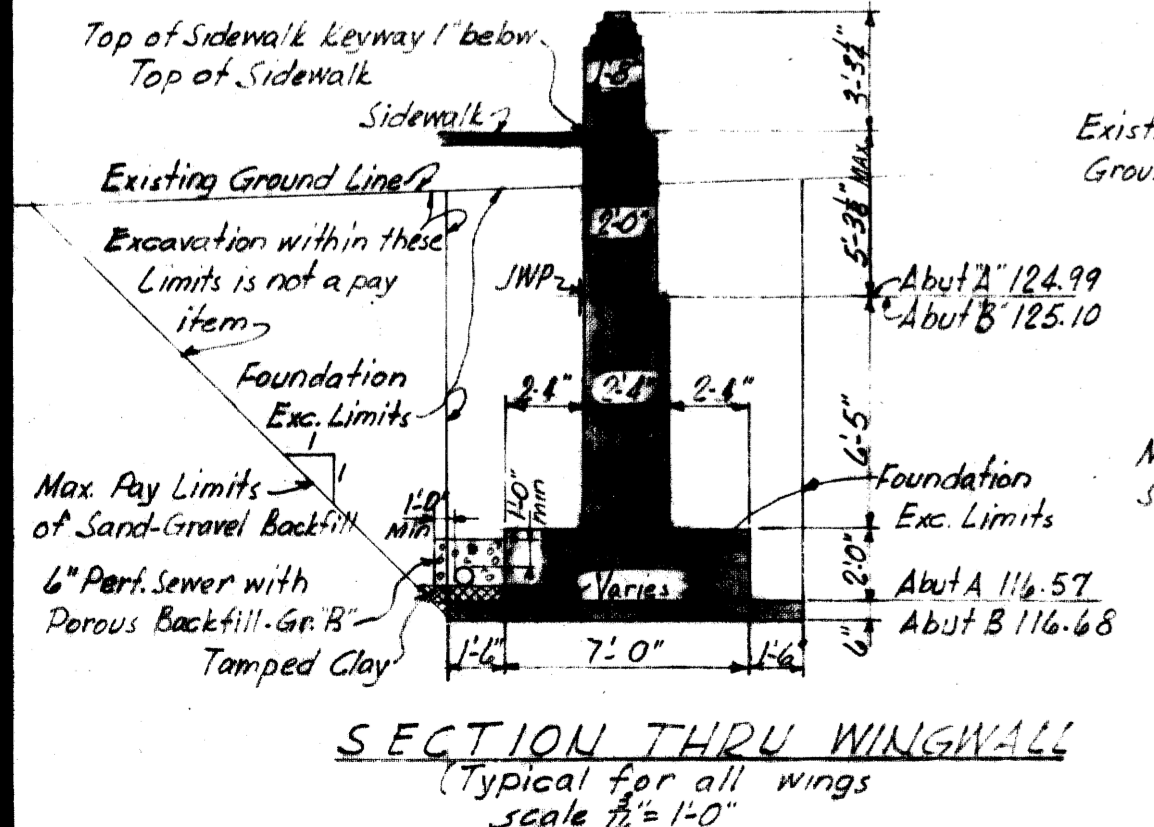
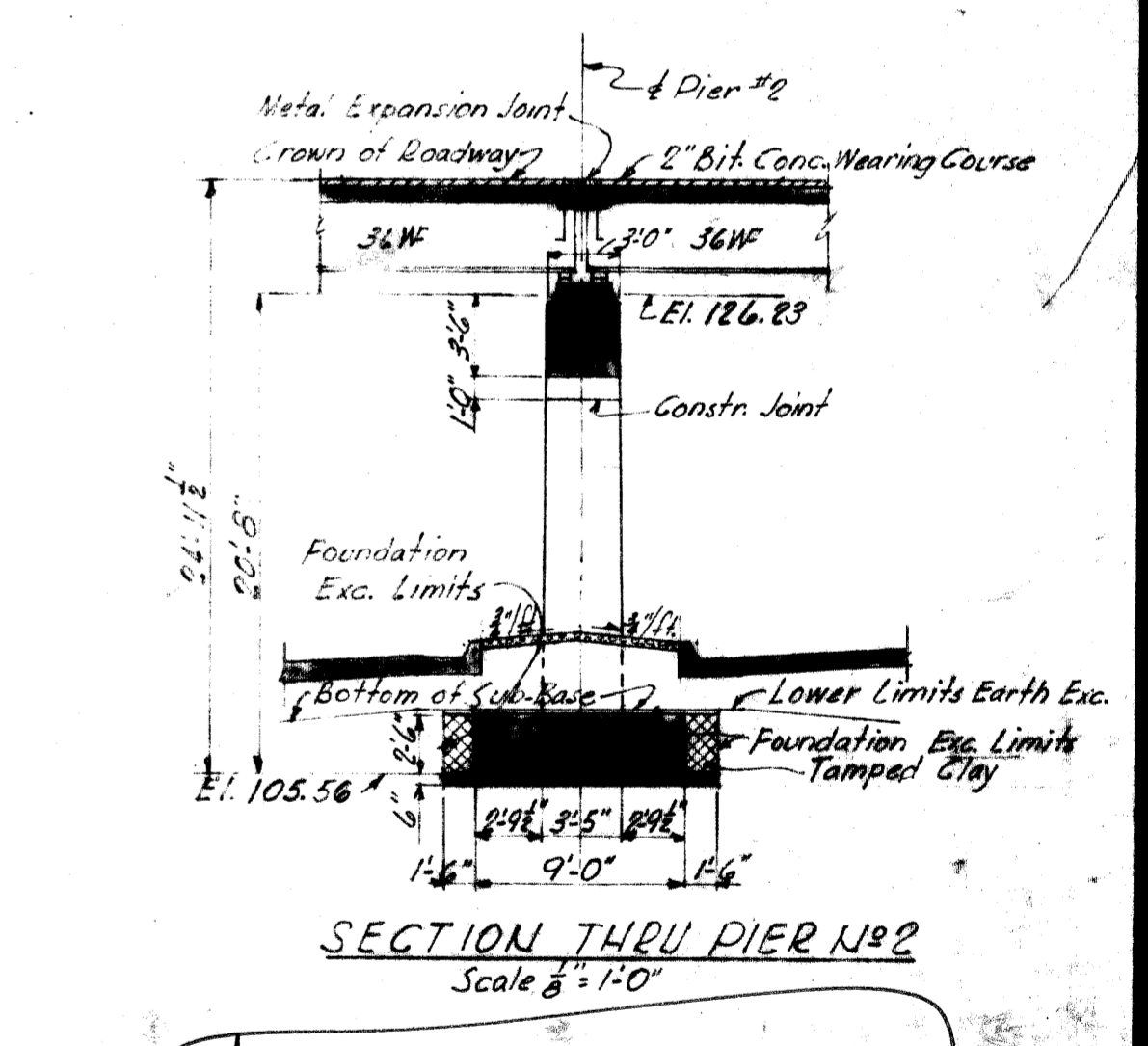
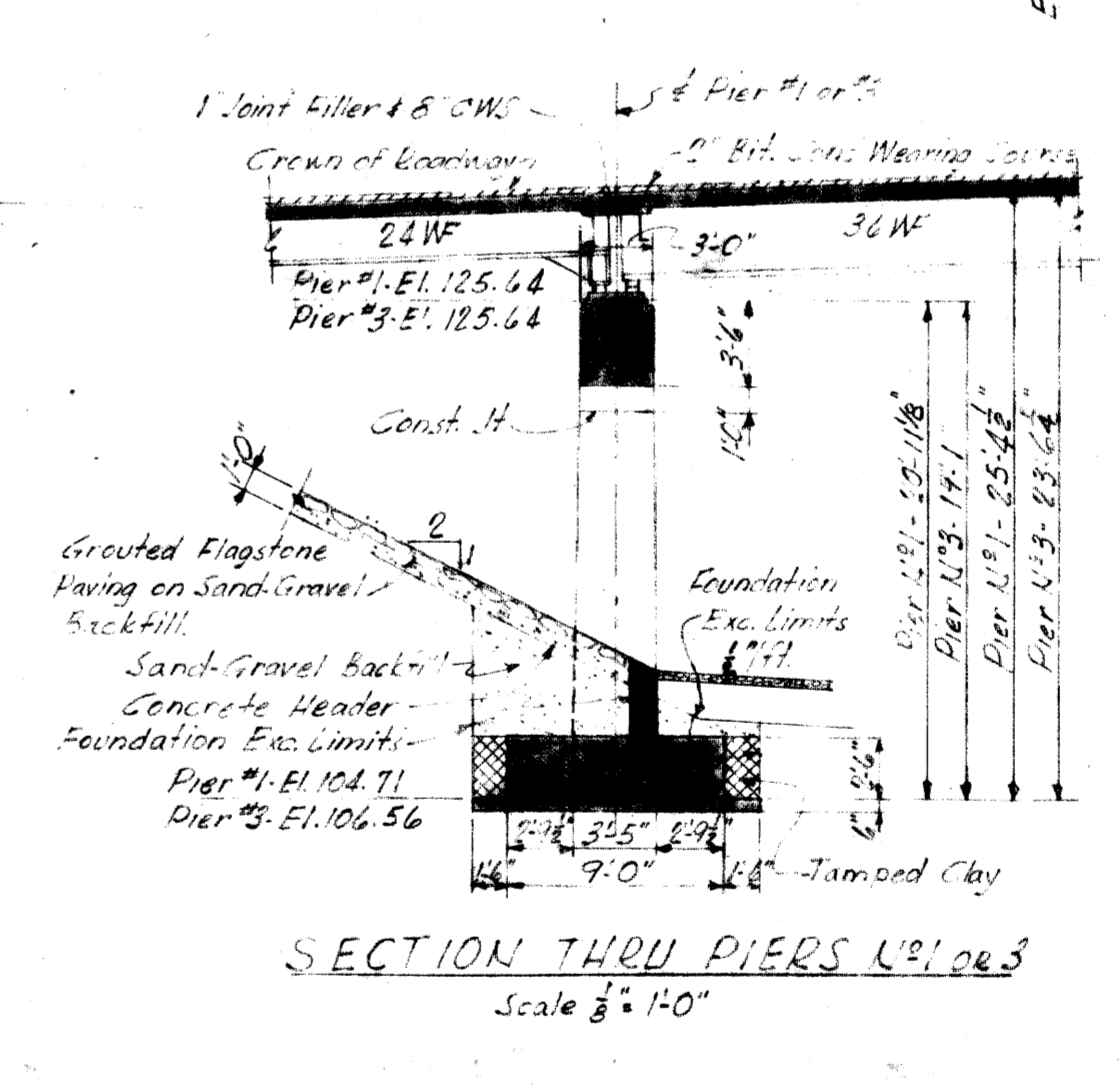
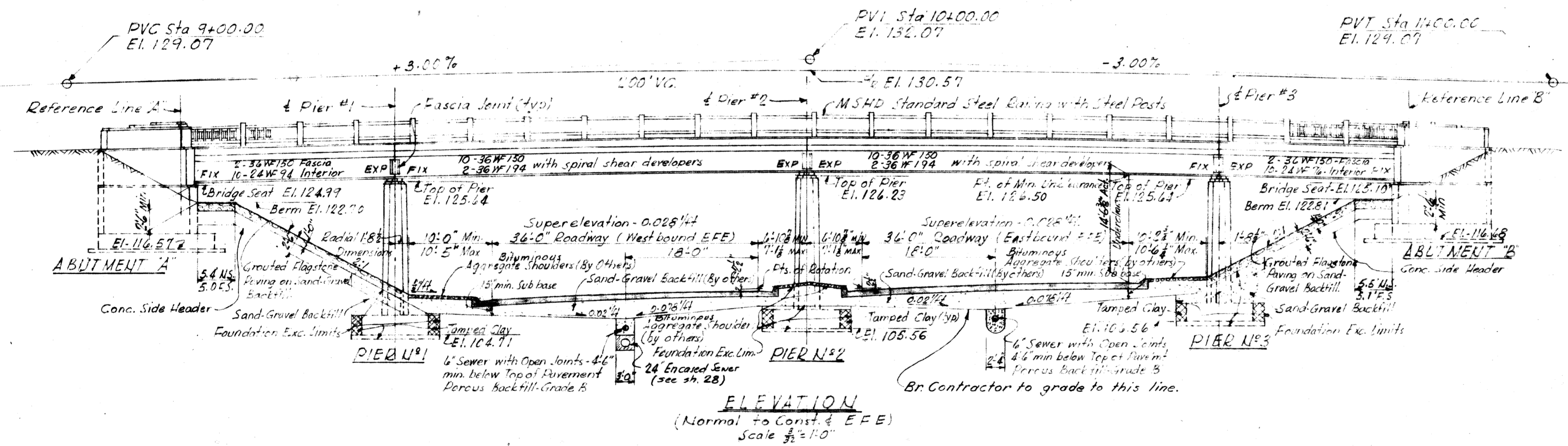
SQUAD BOSS	DATE
<i>J.P. Jones</i>	4-11-56
<i>J.P. Jones</i>	3-27-56
<i>J.P. Jones</i>	2-7-56

SHEET 2 OF 50  
**B78 OF 82-22-10**



NOTES:  
Proposed pavements, curb & gutter and sand-gravel sub-base on the Expressway are not a part of this contract.

MISCELLANEOUS STRUCTURE QUANTITIES			
ITEMS	UNIT	AMOUNT	
GROUTED FLAGSTONE PAVING	SQ. YDS.	410	
SAND-GRAVEL BACKFILL (LM)	CU. YDS.	115	
6\"/>			



**MICHIGAN STATE HIGHWAY DEPARTMENT**  
**CHARLES M. ZIEGLER**  
 STATE HIGHWAY COMMISSIONER  
 THE EDESEL FORD EXPRESSWAY CROSSING FRENCH ROAD IN THE CITY OF DETROIT  
**GENERAL PLAN OF STRUCTURE**

HAZLET & ENDAL - CONSULTING ENGINEERS - FILE NO. 788

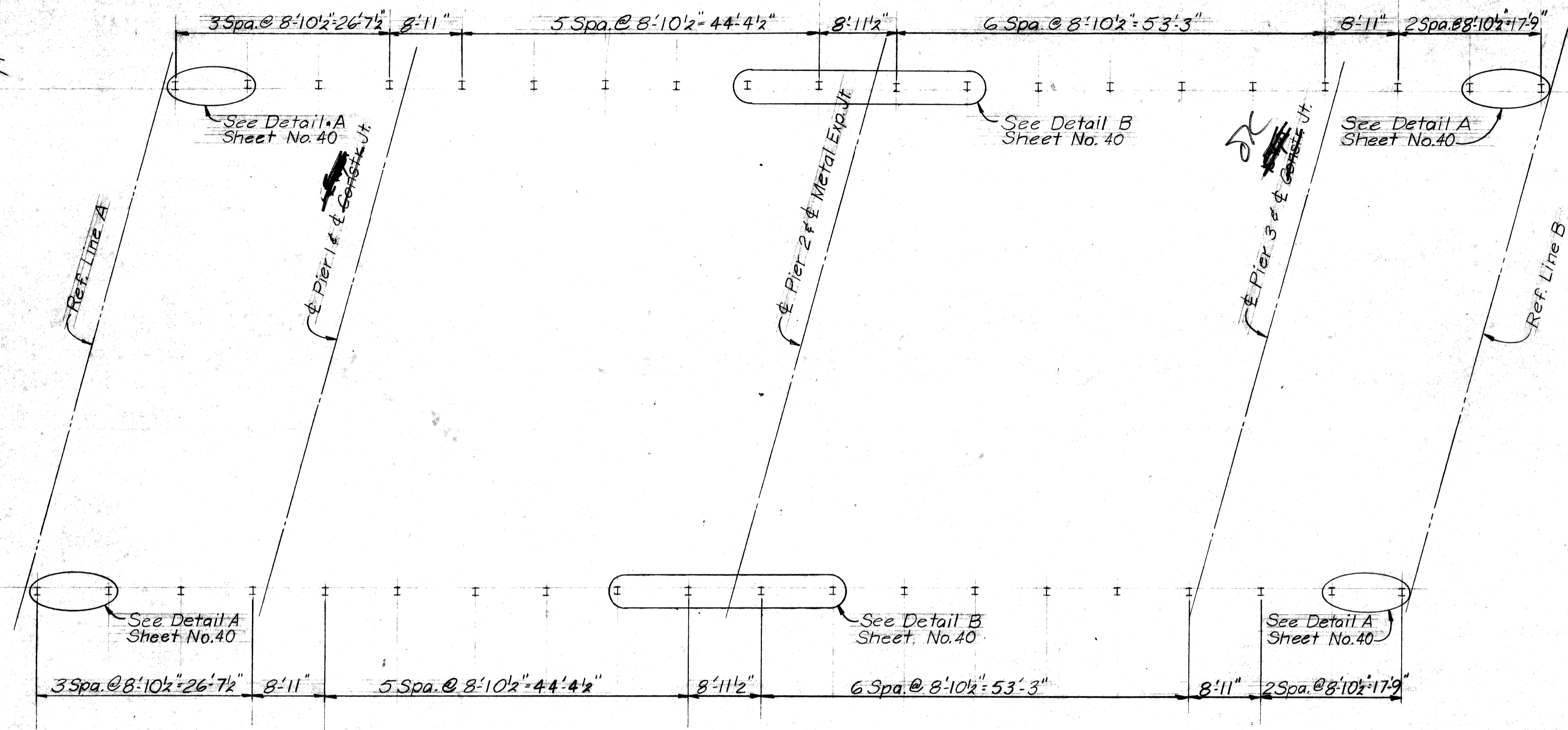
APPROVED: *[Signature]* 4.23.56  
 CHIEF BRIDGE DRAFTSMAN

APPROVED: *[Signature]* 4.23.56  
 ENGINEER OF BRIDGE DESIGN

APPROVED: \_\_\_\_\_  
 BRIDGE ENGINEER

NO.	DESCRIPTION	DATE	BY

872 of 82-22-0



PLAN

120" Chain Link Fence and Framing 338 Lin. Ft. Estimated

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

FRENCH ROAD OVER EDSEL FORD FREEWAY

PLANS PREPARED BY  
**CITY OF DETROIT**  
 DEPARTMENT OF PUBLIC WORKS  
 CITY ENGINEERS OFFICE

APPROVED \_\_\_\_\_  
 STRUCTURAL ENGINEER

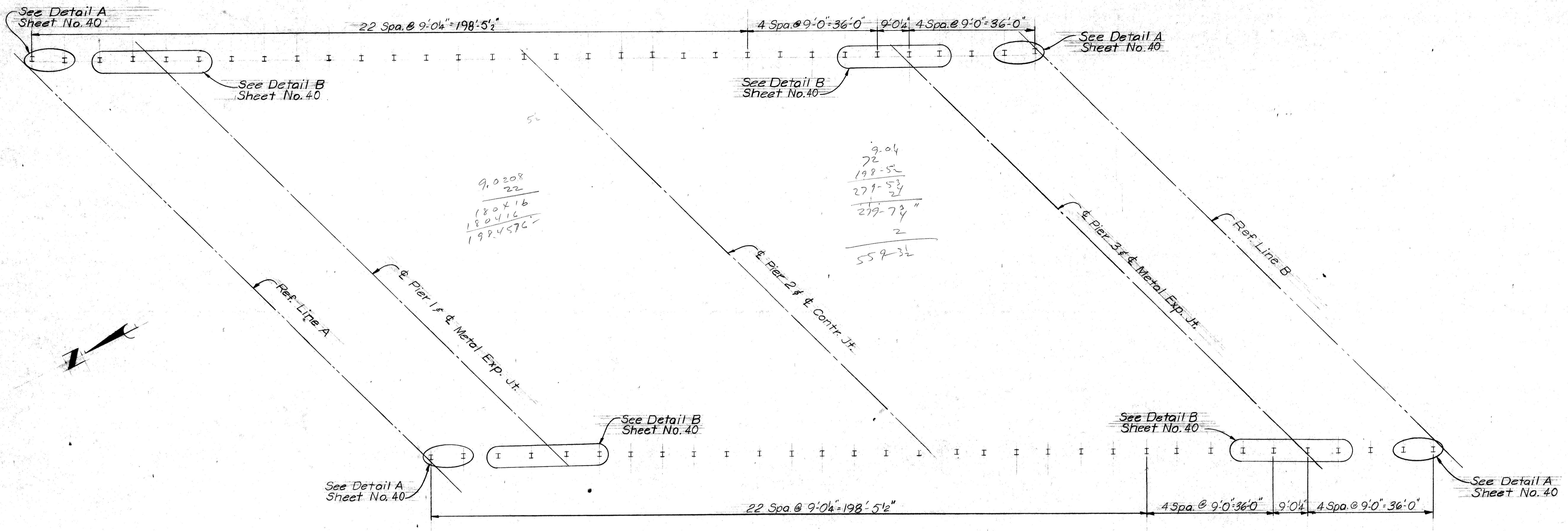
JOB No.  
 05167 *JK*

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS		
DRAWN BY	L.G.	4-73
TRACED BY		
CHECKED BY		
SHEET 25 OF 40		
S03 of 82024 5		







PLAN

120" Chain Link Fence and Framing 559 Lin. Ft. Estimated

MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
GRATIOT AVENUE OVER EDSSEL FORD FREEWAY

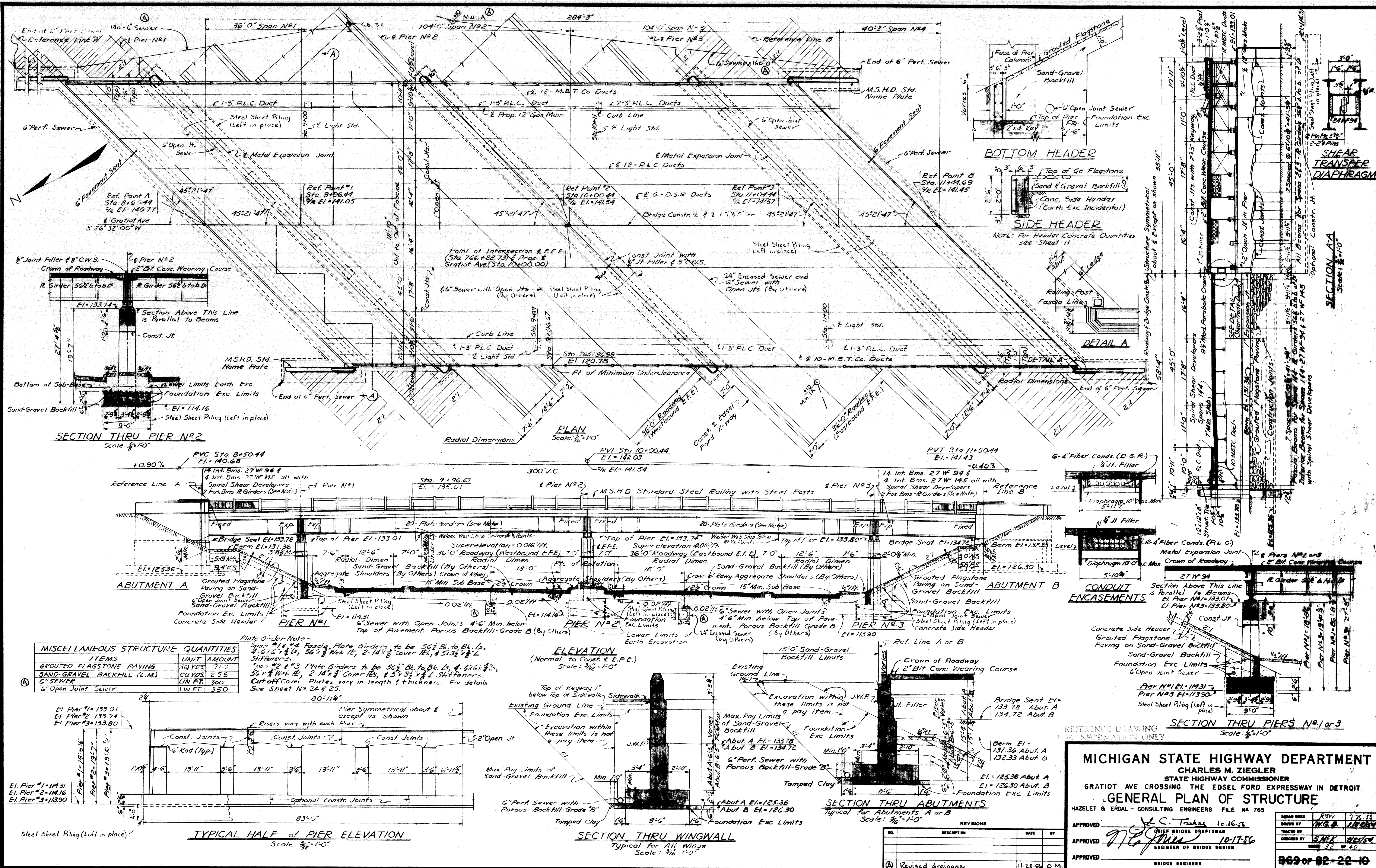
PLANS PREPARED BY  
CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
CITY ENGINEERS OFFICE

APPROVED \_\_\_\_\_  
STRUCTURAL ENGINEER

JOB No.  
05167

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS		
DRAWN BY	L.G.	4-73
TRACED BY		
CHECKED BY		
SHEET 33 OF 40		
SOI of 82025		



MISCELLANEOUS STRUCTURE QUANTITIES	
ITEMS	UNIT AMOUNT
GRAUDED FLAGSTONE PAVING	SQ.YDS. 710
SAND-GRAVEL BACKFILL (L.M.)	CU.YDS. 255
6" SEWER	LIN.FT. 300
6" Open Joint Sewer	LIN.FT. 350

Plate Girder Note -  
Span #1 & #4 Fascade Plate Girders to be 56" Bl. to Bl. Ls, 4" x 6" Web Ls, 36" x 3/8" Cover Ls, & 5" x 3/8" L Stiffeners.  
Span #2 & #3 Plate Girders to be 56" Bl. to Bl. Ls, & 6" x 6" x 3/8" Web Ls, 2" x 14" x 3/8" Cover Ls, & 5" x 3/8" L Stiffeners.  
Cut off cover plates vary in length & thickness. For details see sheet N# 24 & 25.

**MICHIGAN STATE HIGHWAY DEPARTMENT**  
**CHARLES M. ZIEGLER**  
 STATE HIGHWAY COMMISSIONER  
 GRATIOT AVE CROSSING THE EDEL FORD EXPRESSWAY IN DETROIT  
**GENERAL PLAN OF STRUCTURE**

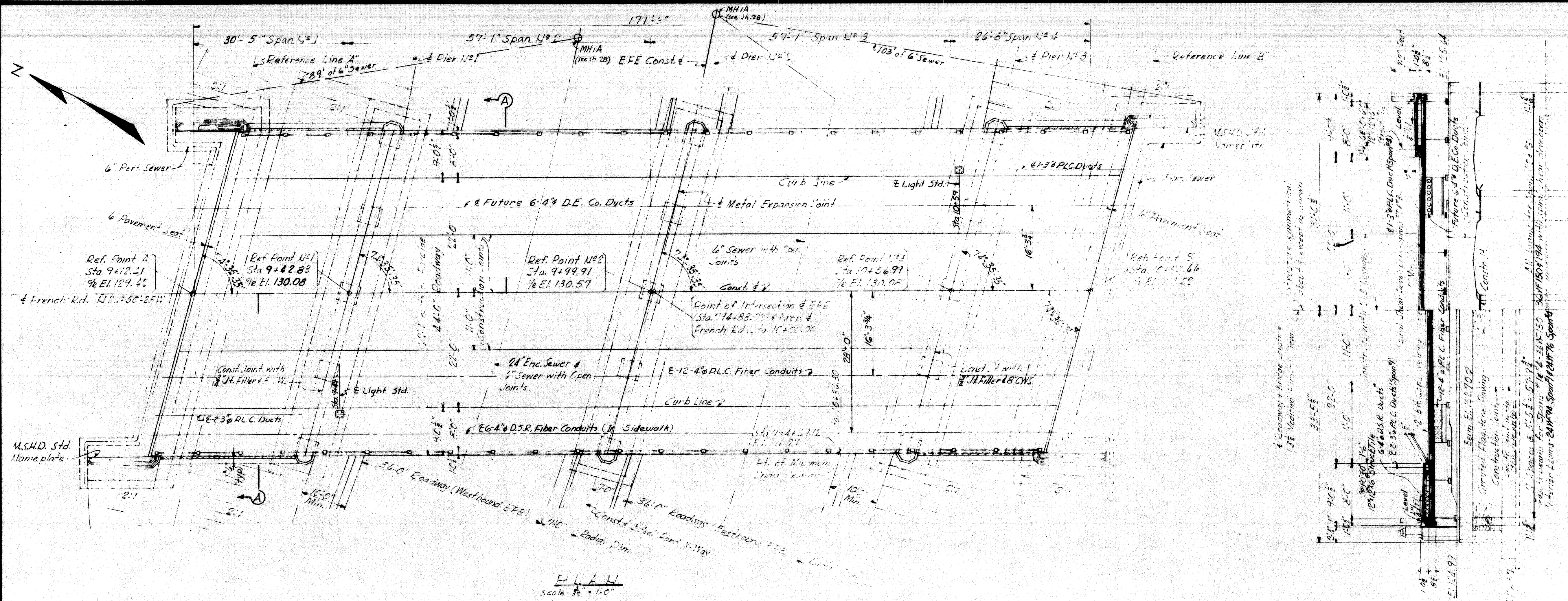
HAZLET & ERDAL - CONSULTING ENGINEERS FILE NO 765

APPROVED	<i>J.C. Trakas</i> 10-16-56	BRIDGE ENGINEER
APPROVED	<i>M.G. Jones</i> 10-17-56	ENGINEER OF BRIDGE DESIGN
APPROVED		

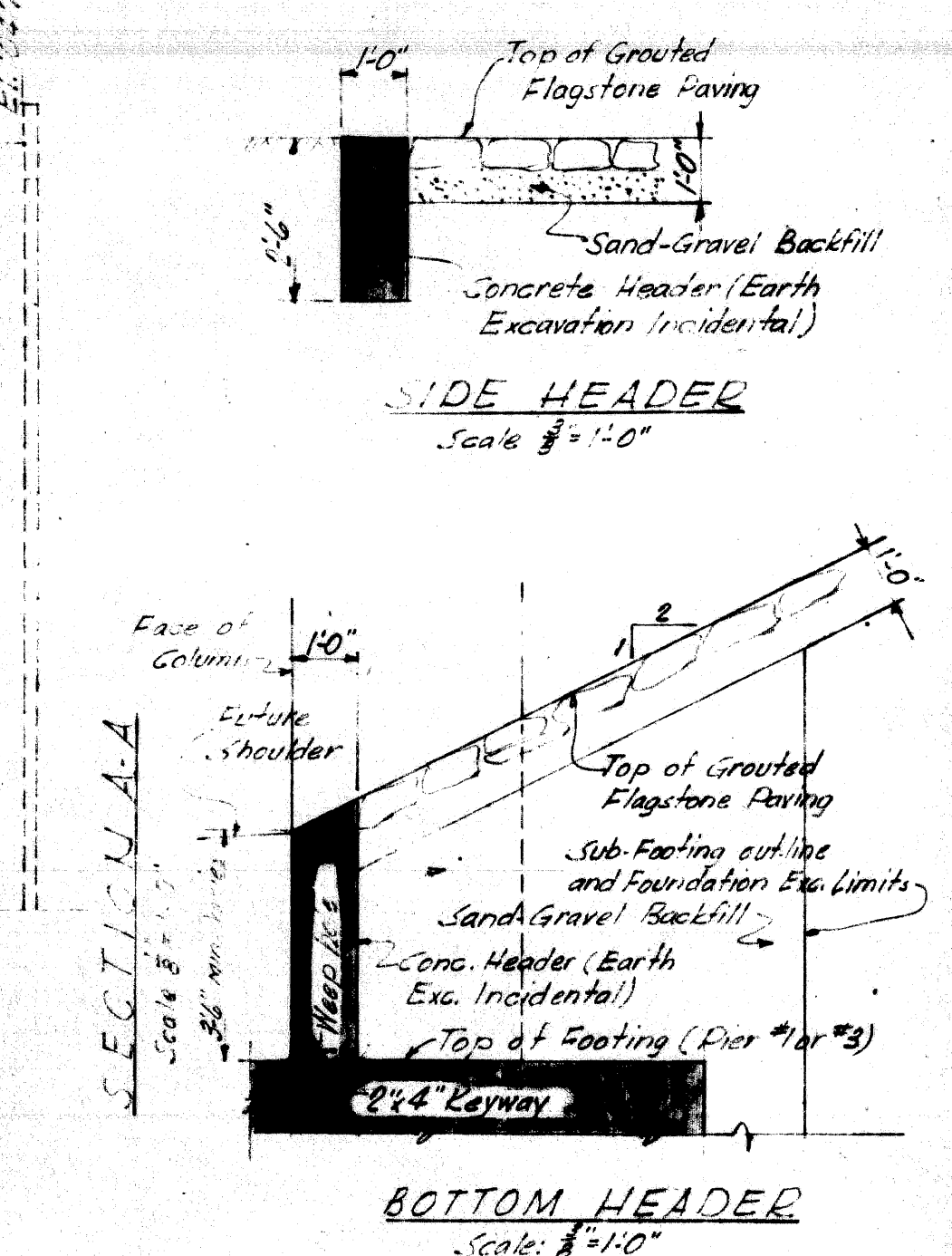
REVISIONS

NO.	DESCRIPTION	DATE	BY
1	Revised drainage	11-28-56	O.M.

ROAD DISTRICT 10th 7.76.55  
 DRAWN BY *TRG* 12/20/55  
 CHECKED BY *S.M.K.* 12/20/55  
 DATE 32 20  
**869 of 82-22-10**  
 SOI of 82025

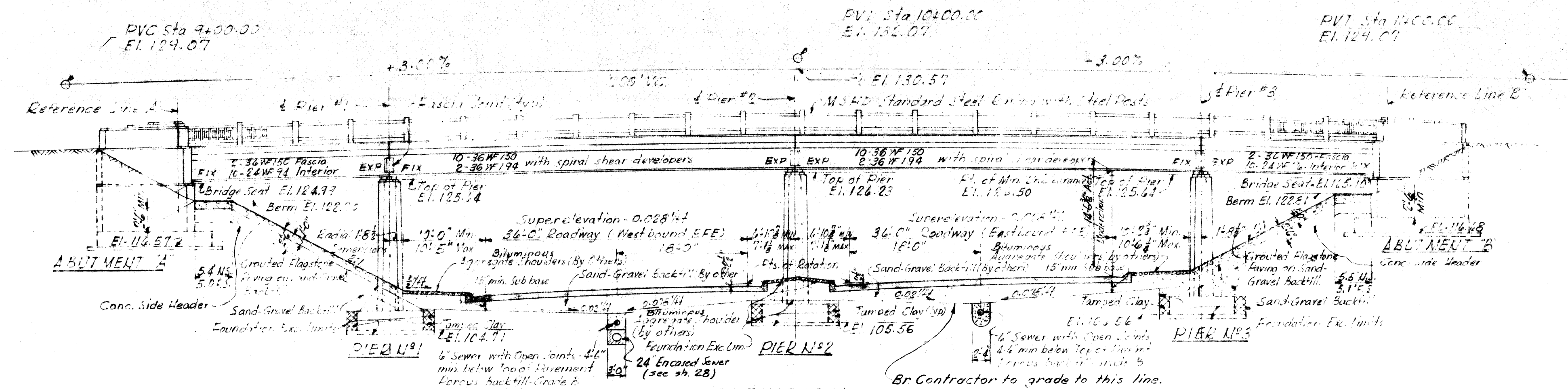


PLAN  
Scale 3/8" = 1'-0"

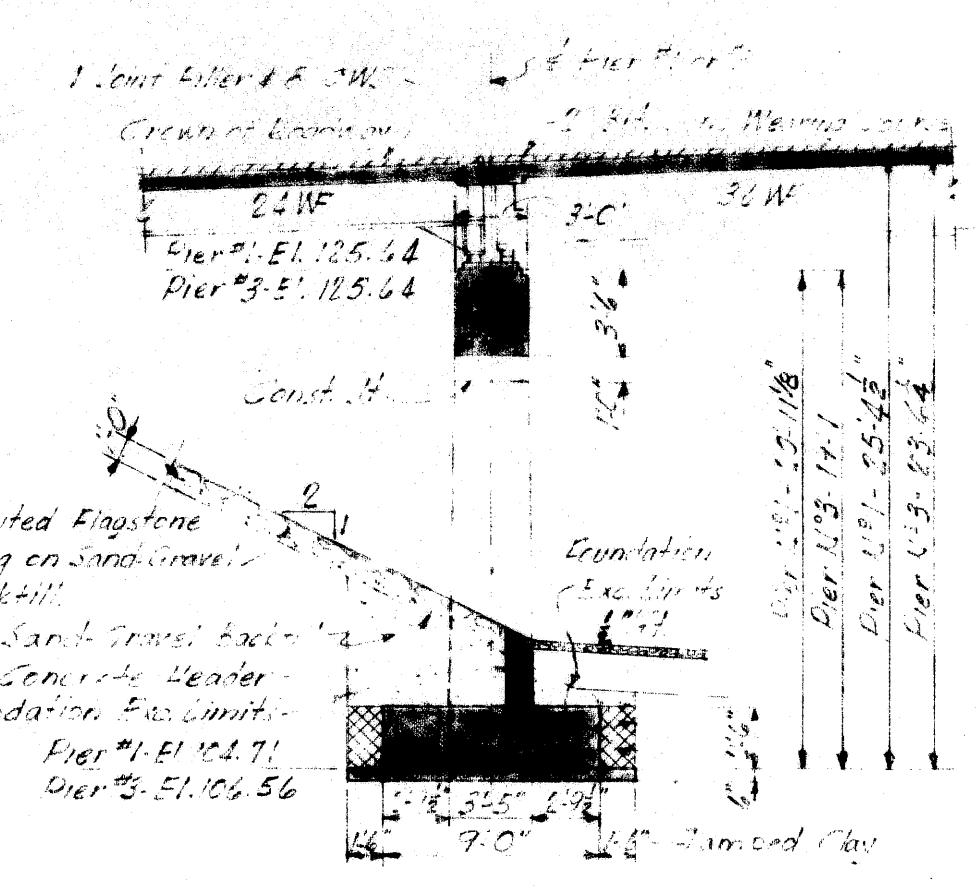


NOTES:  
Proposed pavements, curb & gutter and sand-gravel sub-base on the Expressway are not a part of this contract.

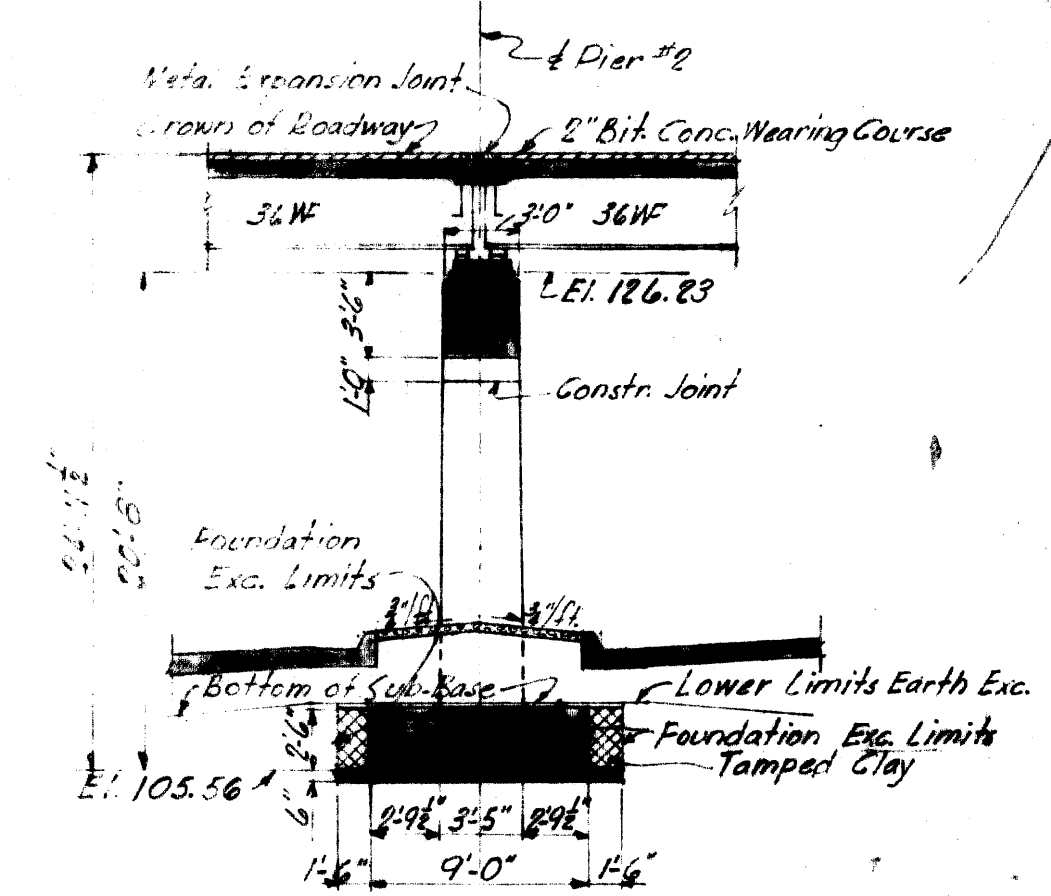
MISCELLANEOUS STRUCTURE QUANTITIES		
ITEMS	UNIT	AMOUNT
GROUTED FLAGSTONE PAVING	SQ. YDS.	410
SAND-GRAVEL BACKFILL (LM)	CU. YDS.	115
6" SEWER	LIN. FT.	192



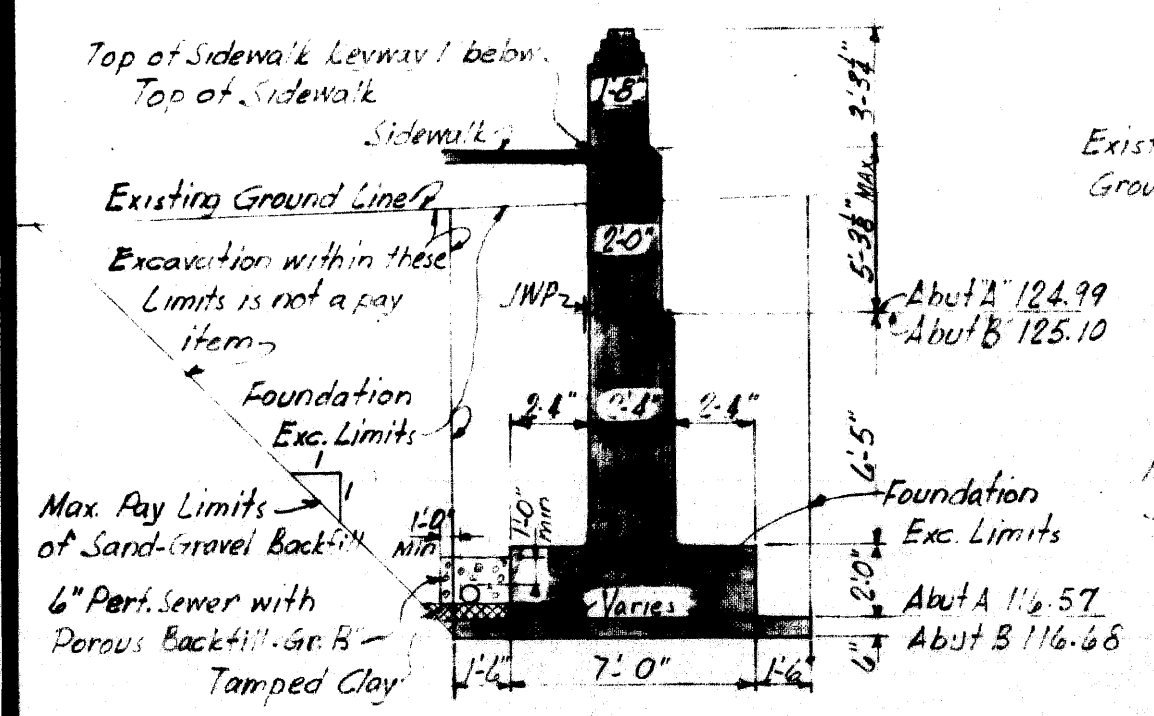
ELEVATION  
(Normal to Const. & E.F.E.)  
Scale 3/8" = 1'-0"



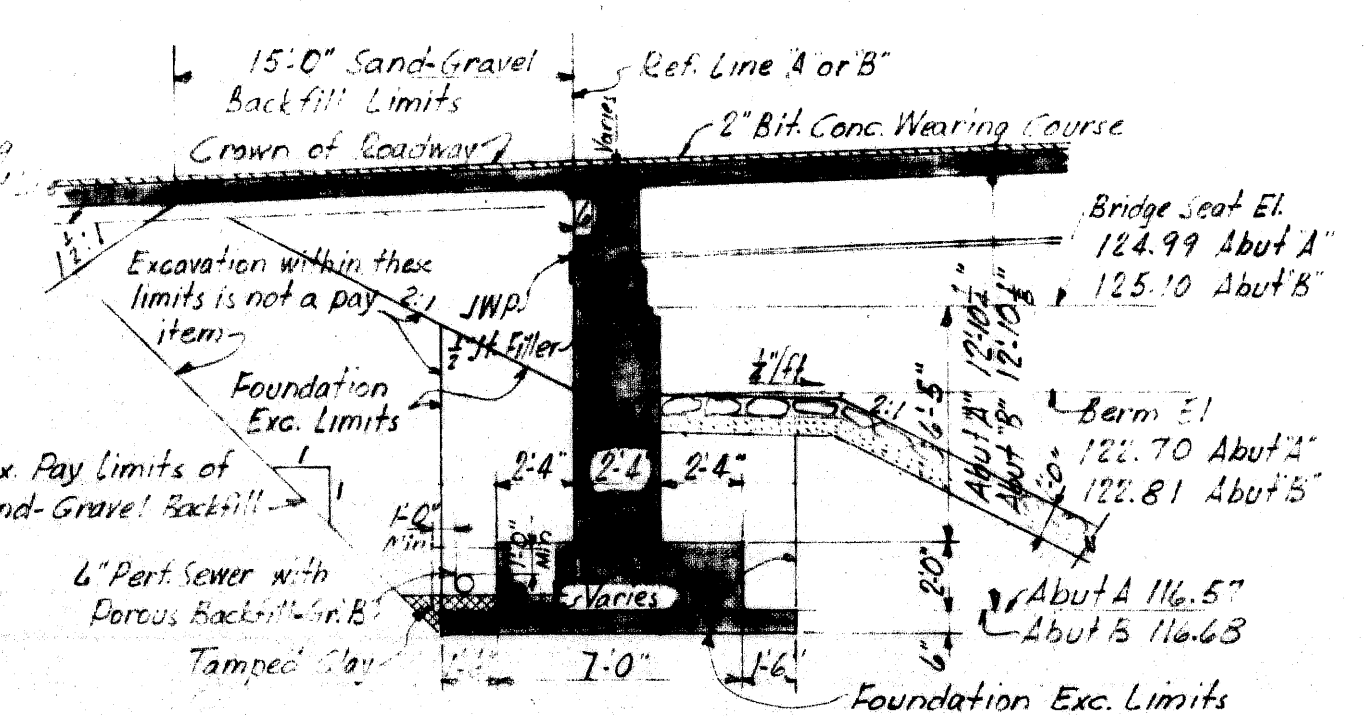
SECTION THRU PIERS 1 & 2  
Scale 3/8" = 1'-0"



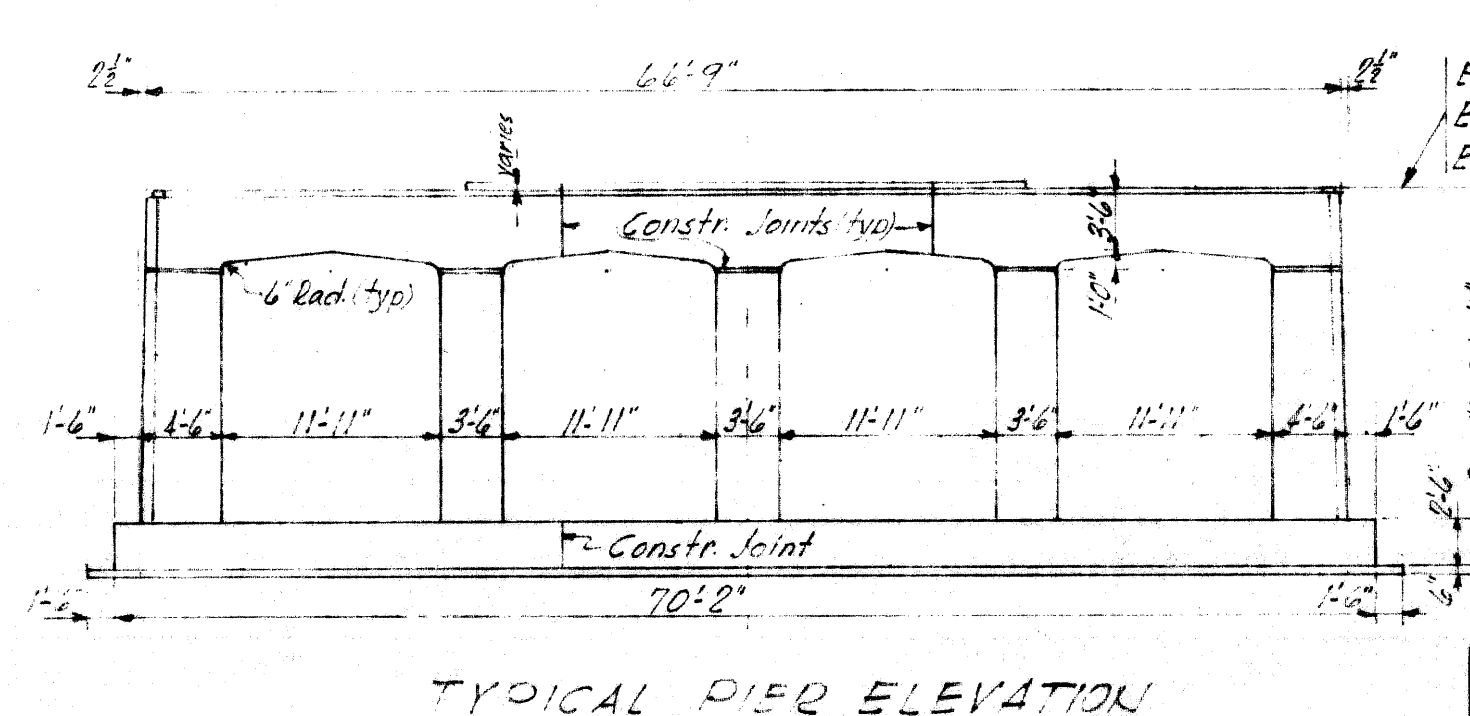
SECTION THRU PIER NO. 2  
Scale 3/8" = 1'-0"



SECTION THRU WINGWALL  
Typical for all wings  
Scale 3/8" = 1'-0"



SECTION THRU ABUTMENTS  
Typical for Abutments A & B  
Scale 3/8" = 1'-0"



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

REFERENCE DRAWING FOR INFORMATION ONLY

**MICHIGAN STATE HIGHWAY DEPARTMENT**  
**CHARLES M. ZIEGLER**  
 STATE HIGHWAY COMMISSIONER  
 THE EDSSEL FORD EXPRESSWAY CROSSING FRENCH ROAD IN THE CITY OF DETROIT  
**GENERAL PLAN OF STRUCTURE**  
 HAZLET & ERDAL-CONSULTING ENGINEERS-FILE NO 788

APPROVED: *[Signature]* 4.23.56  
 CHIEF BRIDGE DRAFTSMAN  
 APPROVED: *[Signature]* 4.23.56  
 ENGINEER OF BRIDGE DESIGN  
 APPROVED: \_\_\_\_\_  
 BRIDGE ENGINEER

REVISIONS

NO.	DESCRIPTION	DATE	BY

872 or 82-22-10  
503 of 82025