

CITY OF DETROIT  
 COLEMAN A. YOUNG — MAYOR  
 CITY ENGINEERING DEPARTMENT

PLANS FOR PROPOSED BRIDGE RECONSTRUCTION IN COOPERATION WITH  
 MICHIGAN DEPARTMENT OF TRANSPORTATION  
 AND  
 FEDERAL HIGHWAY ADMINISTRATION  
 FEDERAL AID URBAN PROJECT NO.  
 CONTROL SECTION JOB NO.



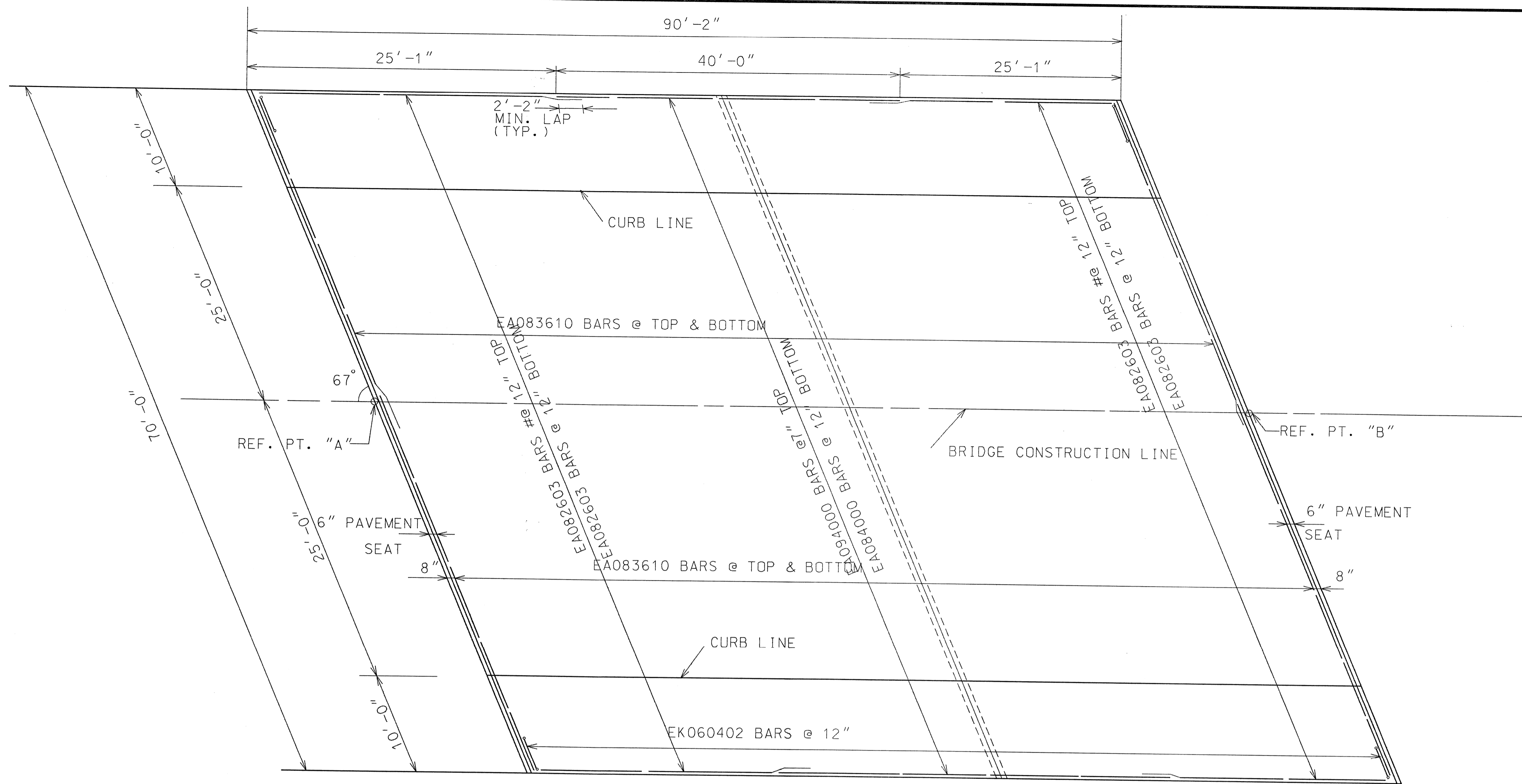
**INDEX OF SHEETS**

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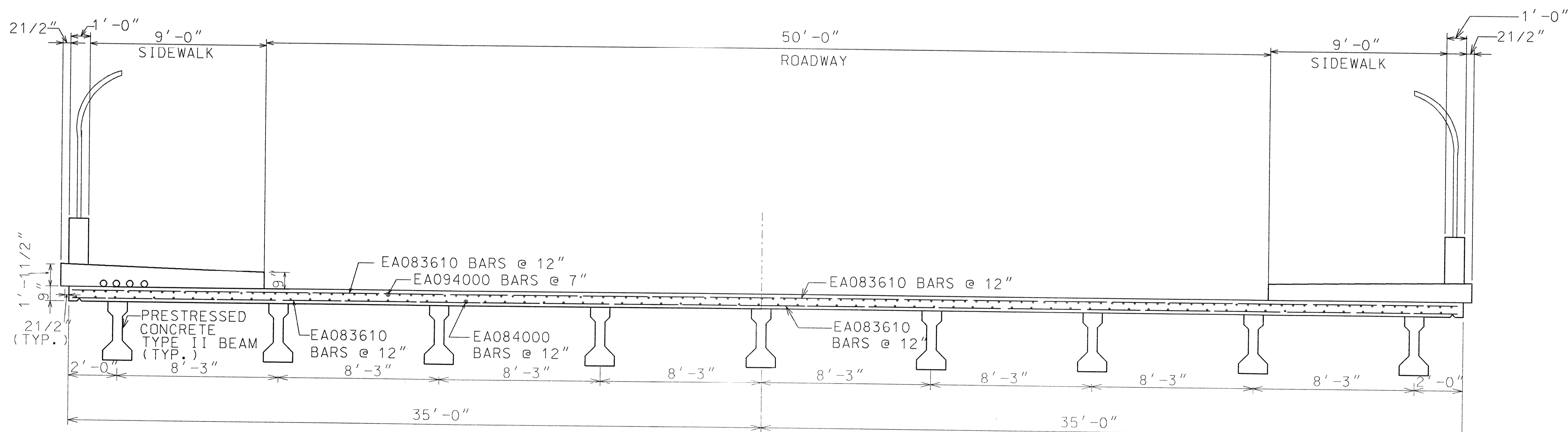
<b>PROJECT:</b> TIREMAN AVENUE BRIDGE BW-265 TITLE SHEET	<b>CONTRACT NO.</b>
<b>PLANS PREPARED BY</b> <b>CITY ENGINEERING DEPARTMENT</b>	
RECOMMENDED FOR APPROVAL _____	DATE _____
RECOMMENDED FOR APPROVAL _____	DATE _____
APPROVED _____	DATE _____
APPROVED _____ <small>DIRECTOR</small>	DATE _____
DATE 03/94	DRWG. NO. S-1







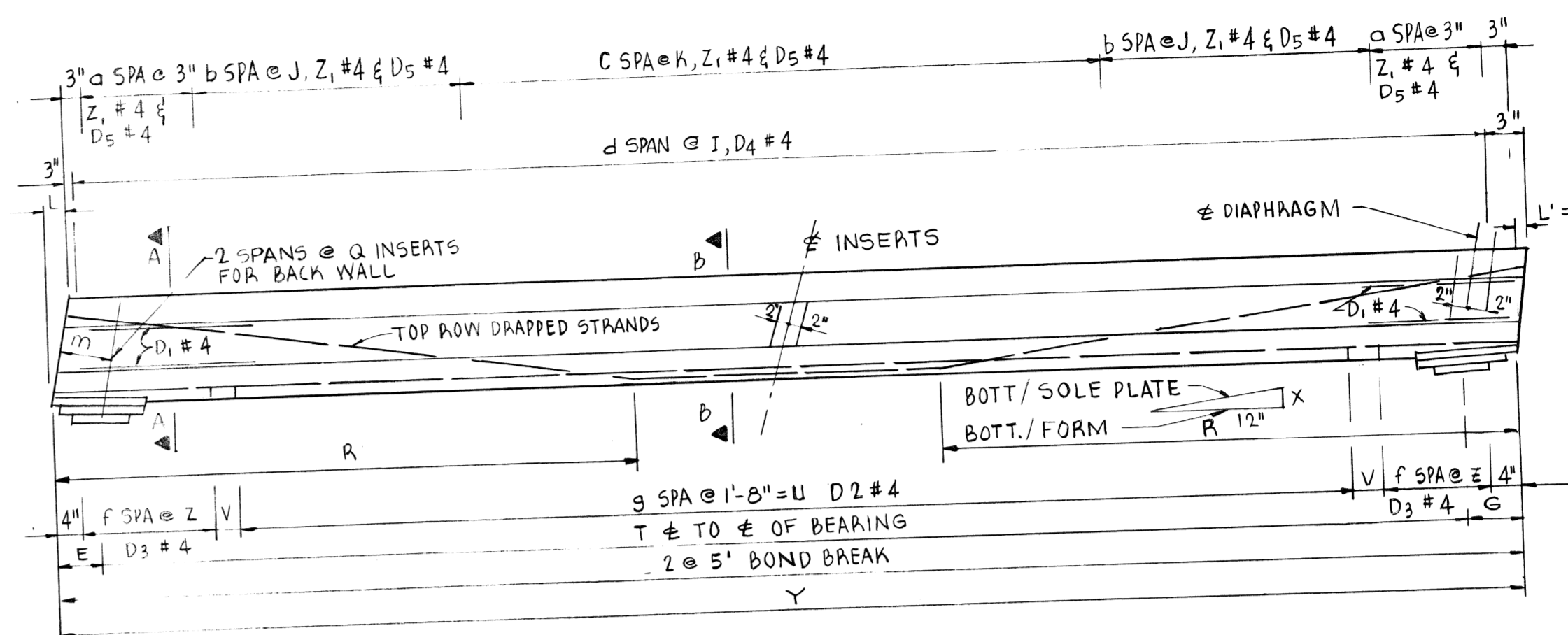
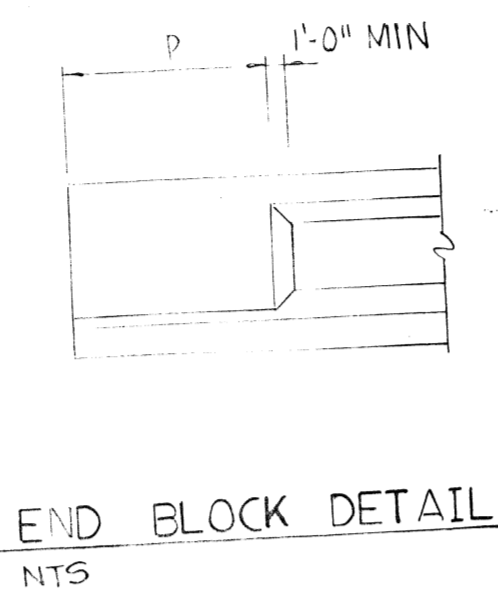
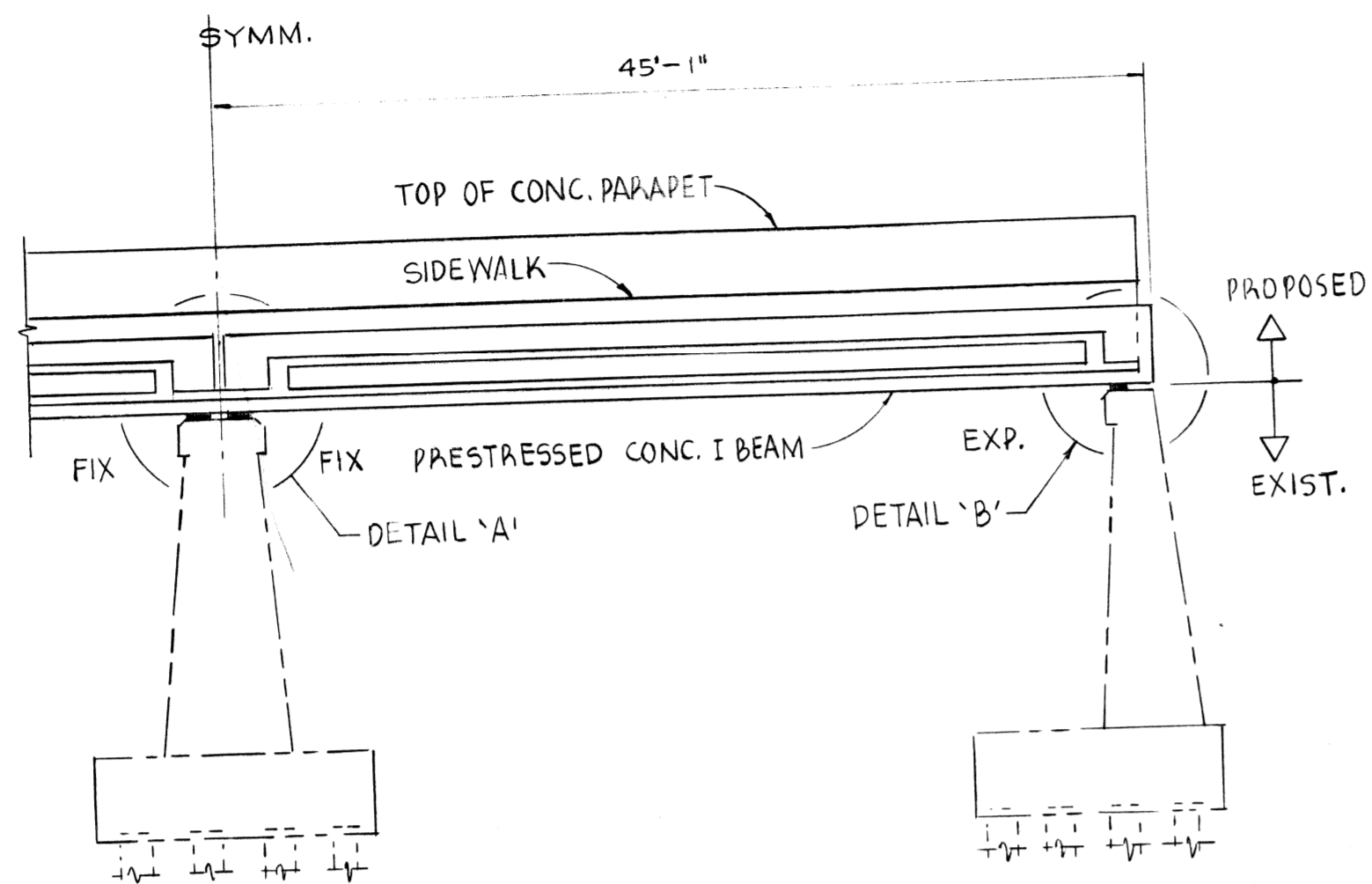
DECK PLAN



CROSS SECTION OF DECK AT MIDSPAN

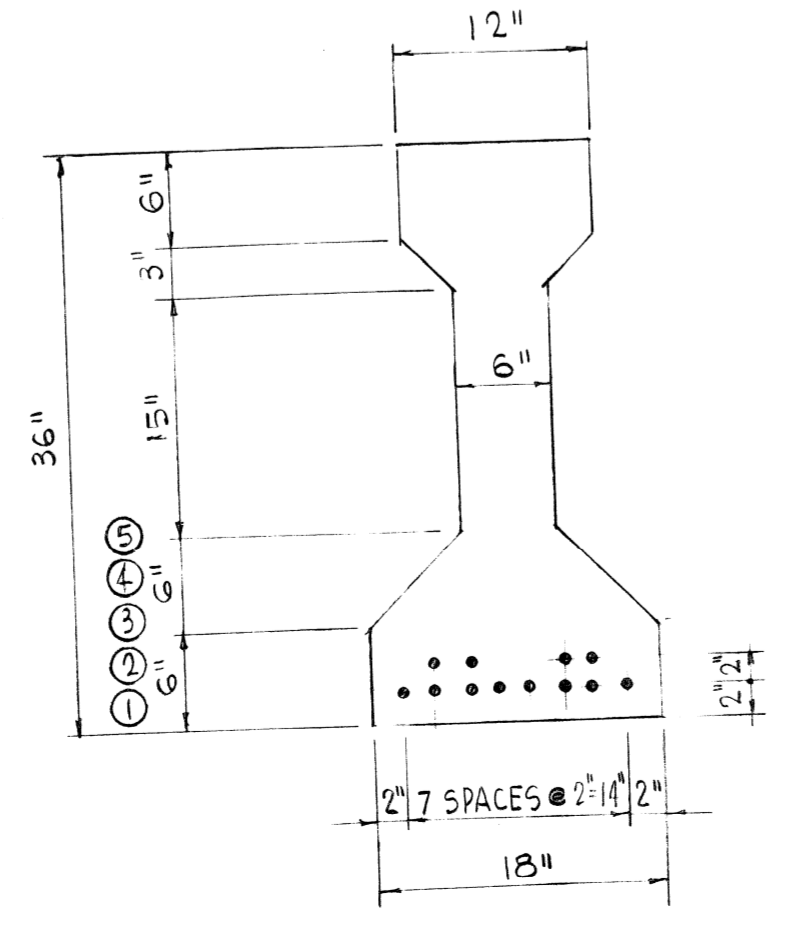
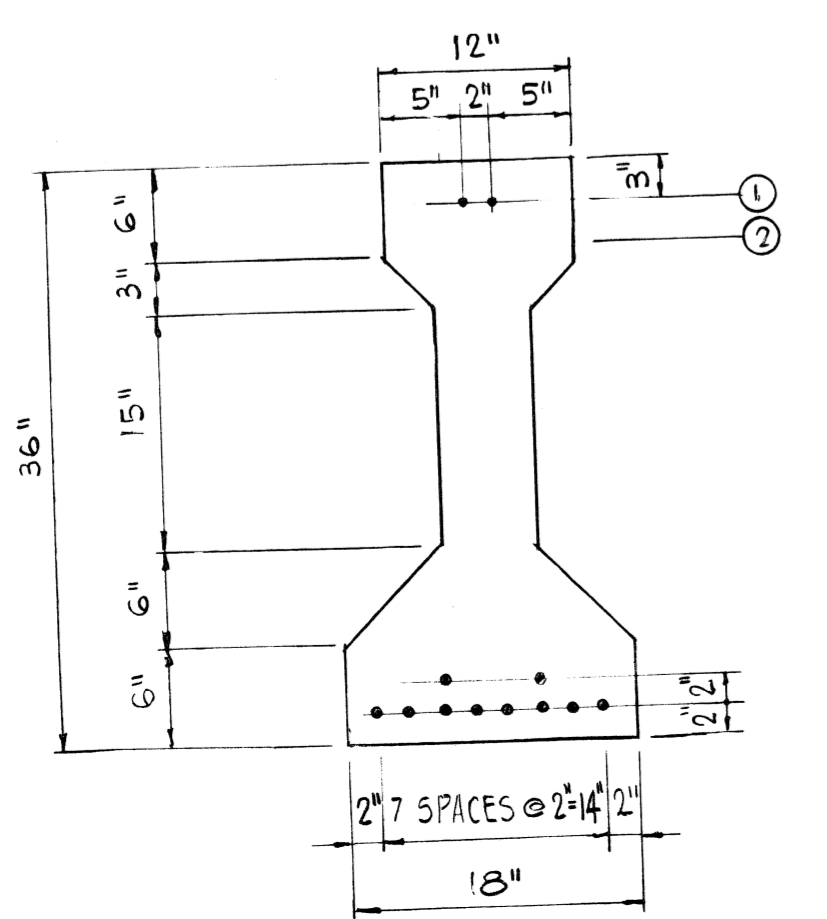
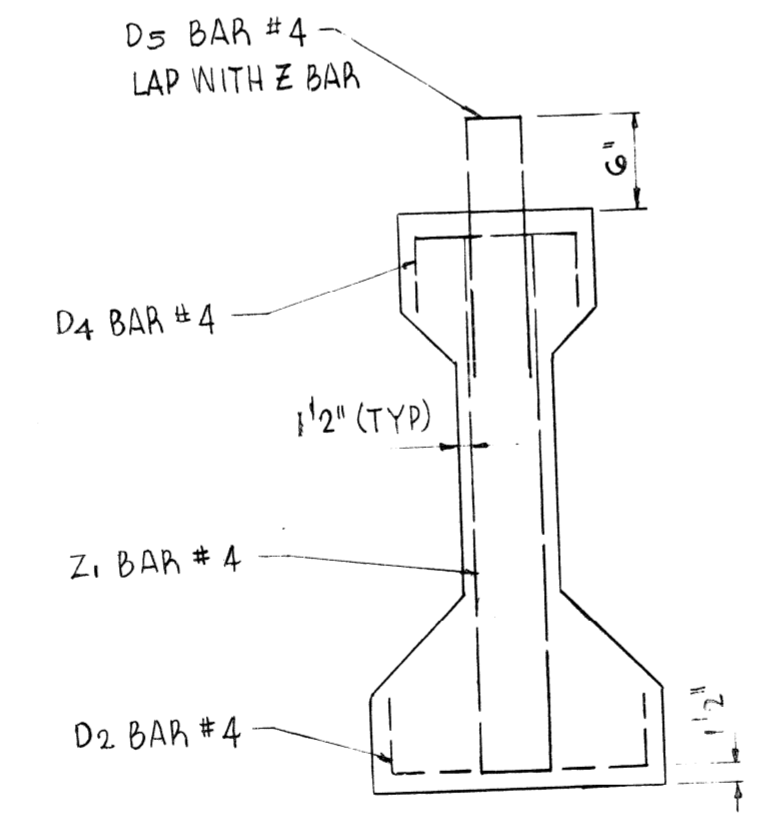
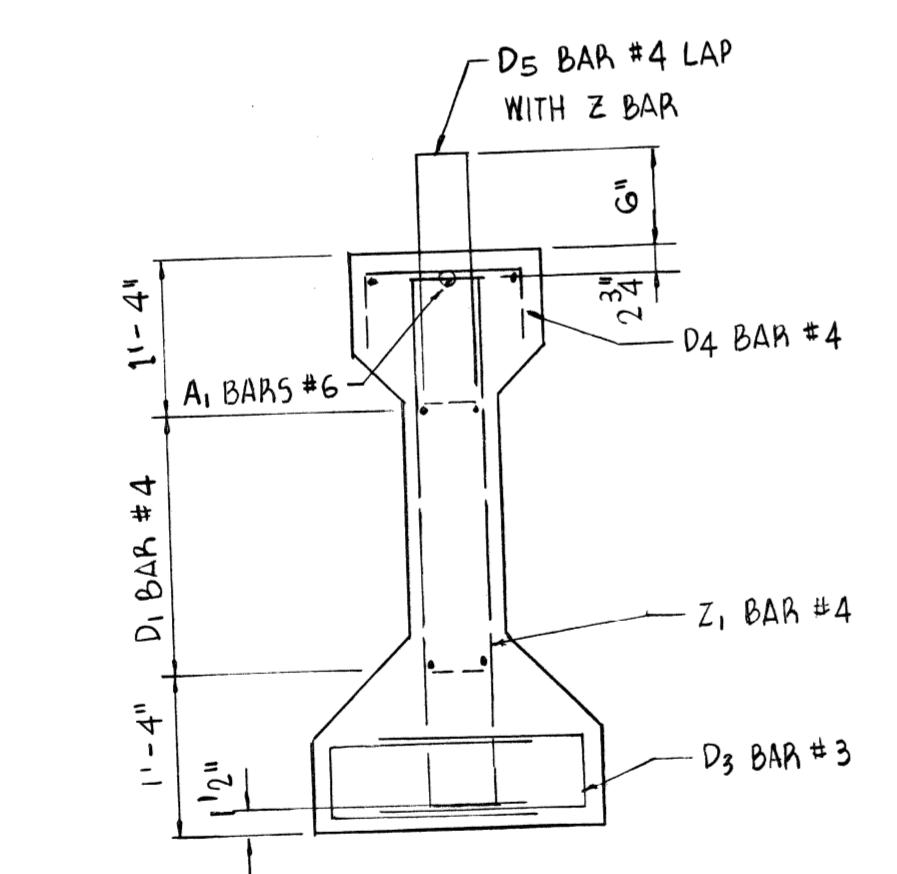
PRELIMINARY

P. SHOW PLAN GRADE ESTIMATE DESCRIPTION REVISIONS		BY CHECKED BY APPROVED:	CITY OF DETROIT CITY ENGINEERING DEPARTMENT STRUCTURAL BUREAU FOR MICHIGAN DEPARTMENT OF TRANSPORTATION	TIREMAN AVENUE BRIDGE BW - 265 PLAN OF SLAB AND CROSS SECTION	SHEET 5-3 OF SHEETS CONTRACT NO. ASSIGNMENT NO. DATE 03/94
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ELEVATION  
1/4" = 1' = 0"

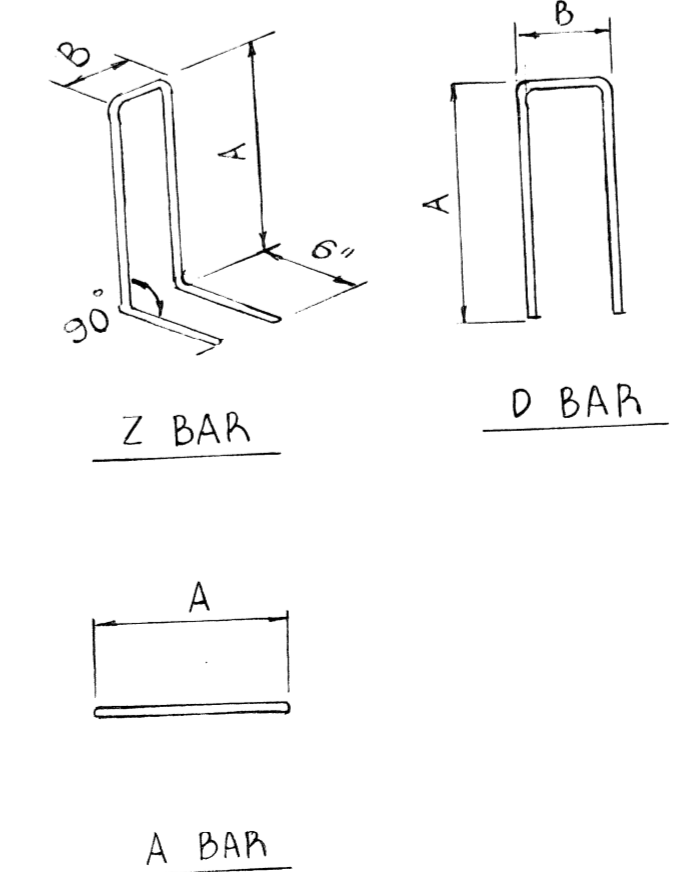
ELEVATION  
1/8" = 1' = 0"



BEAM DIMENSIONS	
MARK	TYPICAL
TYPE	II
NO. REQ	
a	4
b	14
c	13
d	29
e	6"
f	1
g	20
h	6"
i	1'-6"
j	7"
k	1'-4"
l	0'-8"
m	1'-4"
p	2'-0"
q	1'-1"
r	17'-3"
t	48'-2"
u	34'-0"
v	3"
x	
y	44'-2"
z	12"

APPRO. WEIGHT = 7670 LBS

BAR DIMENSIONS		
BAR	DIM.	
A1 #6	A	Y'-3"
D1 #4	A	4'-3"
	B	3"
D2 #4	A	4"
	B	1'-3"
D3 #4	A	1'-2"
	B	5"
D4 #4	A	4"
	B	9"
D5 #4	A	1'-8"
	B	4"
Z1 #4	A	2'-9"
	B	4"



NOTES:

- ALL STEEL IN THE BEARING SHALL MEET THE REQUIREMENTS OF ASTM A36.
- ALL STEEL IN THE BEARING IS INCIDENTAL TO "PRESTRESSED CONCRETE I-BEAM".
- TACK WELDING OF STEEL REINFORCEMENT IS PROHIBITED.
- ELASTOMER FOR ELASTOMERIC BEARING PAD SHALL BE NOMINAL 50 DUROMETER HARDNESS FOR LAMINATED BEARINGS.
- PRESTRESSING STRAND SHALL BE 1/2" DIAMETER WITH AN AREA OF 0.153 SQUARE INCHES AND SHALL BE GRADE 270 IN ACCORDANCE WITH ASTM A416 AND SUPPLEMENT. LOW RELAXATION STRANDS SHALL BE USED.
- END BLOCKS ARE REQUIRED.
- TOTAL ESTIMATED CHANGE OF LENGTH OF BOTTOM FLANGE AT TRANSFER OF PRESTRESS FORCE IS 3/4".
- LIFTING OF BEAM SHALL BE BY EQUAL LOADS TO EACH PAIR OF LIFTING DEVICES.
- THE TOP FLANGE TOP SURFACE SHALL BE INTENTIONALLY ROUGHENED.
- ALL EXPOSED SURFACES OF CONCRETE TO BE RUBBED AS SOON AS FORMS ARE REMOVED. NO CEMENT GROUT TO BE USED ON EXPOSED SURFACES.
- ALL REINFORCING BARS SECURELY WIRED AT ALL INTERSECTIONS.

PRELIMINARY

NO.	DATE	BY	CHK'D	APP'D	REVISIONS

designed by P. SHAH  
 drawn by AF  
 checked by  
 approved:

CITY OF DETROIT

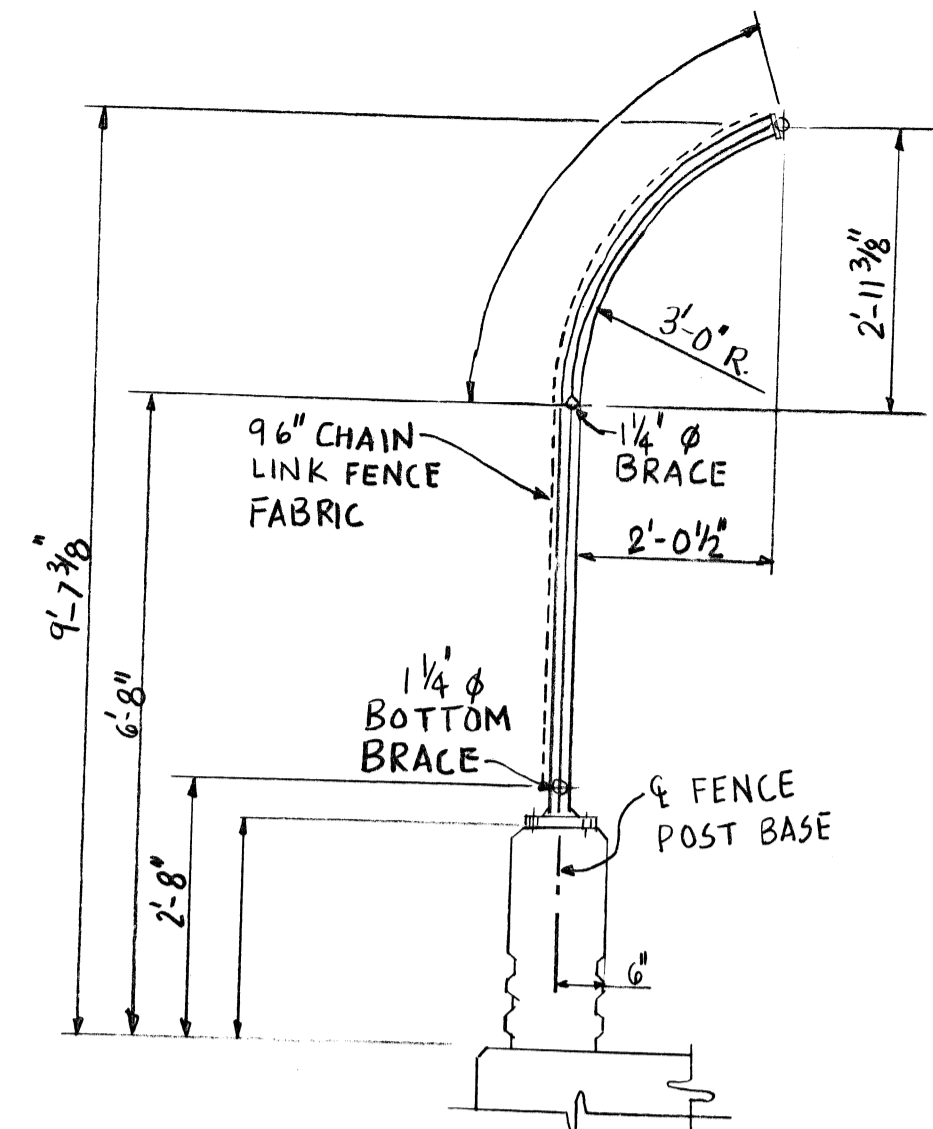
city engineering department

for

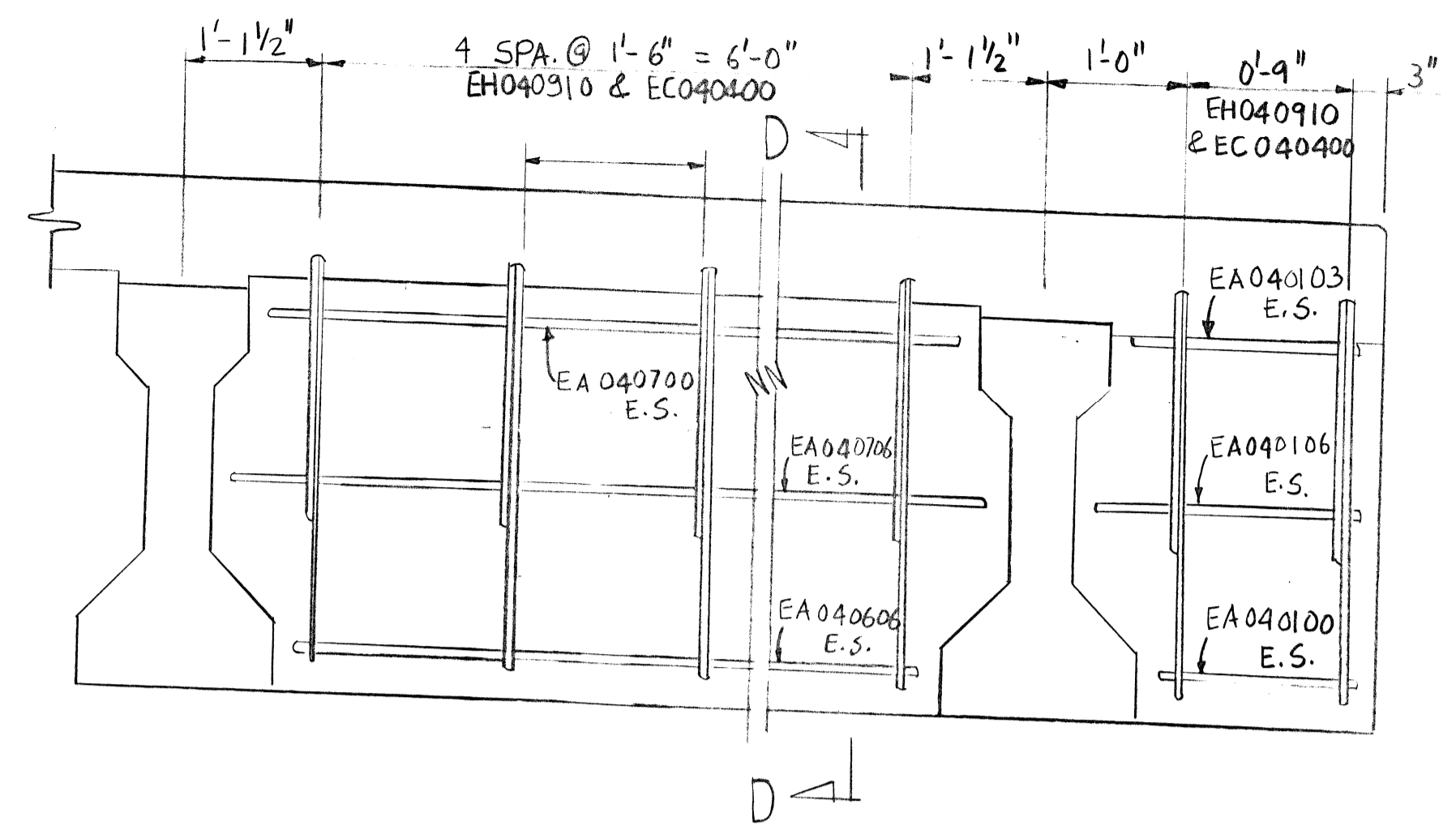
TIREMAN AVENUE BRIDGE  
 BIV-265  
 PRESTRESSED BEAMS DETAILS

a.o.  
 contract no.  
 sheet 4  
 of 10  
 drawing no.  
 date 3/94

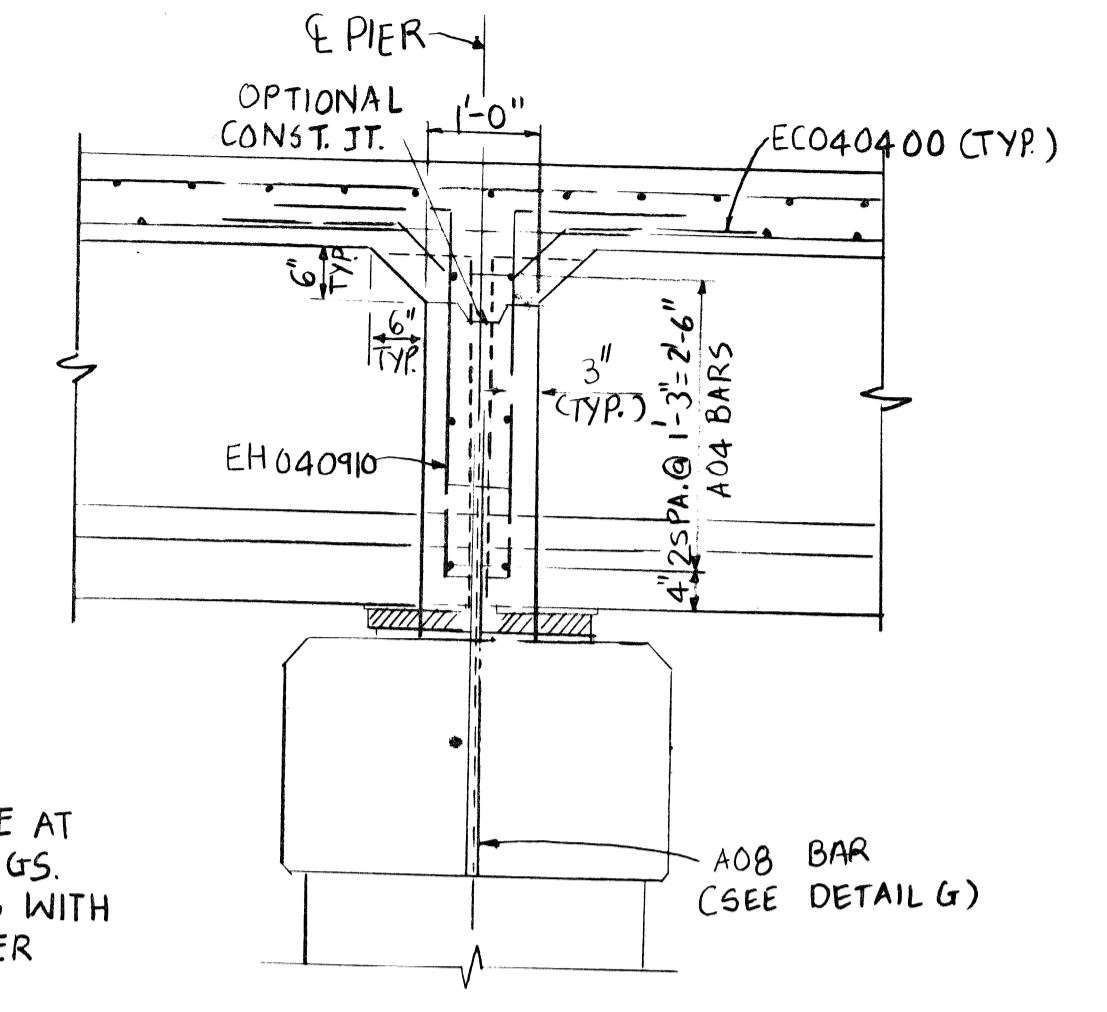




FENCING DETAILS

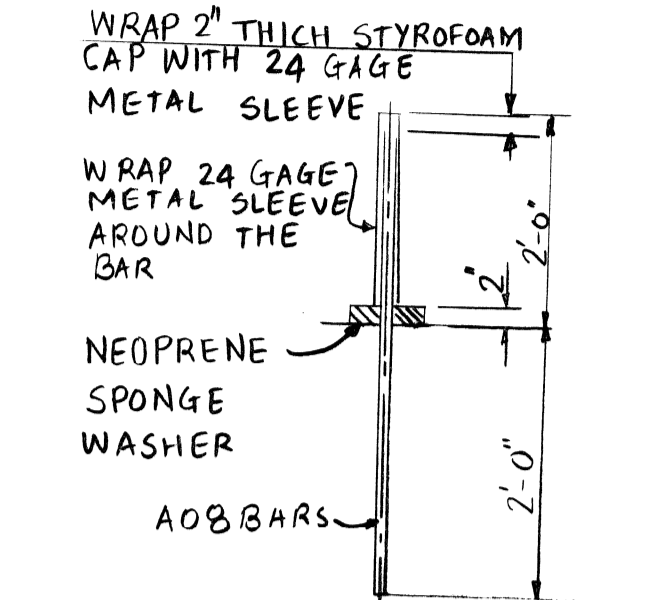


PARTIAL PIER DIAPHRAGM ELEVATION

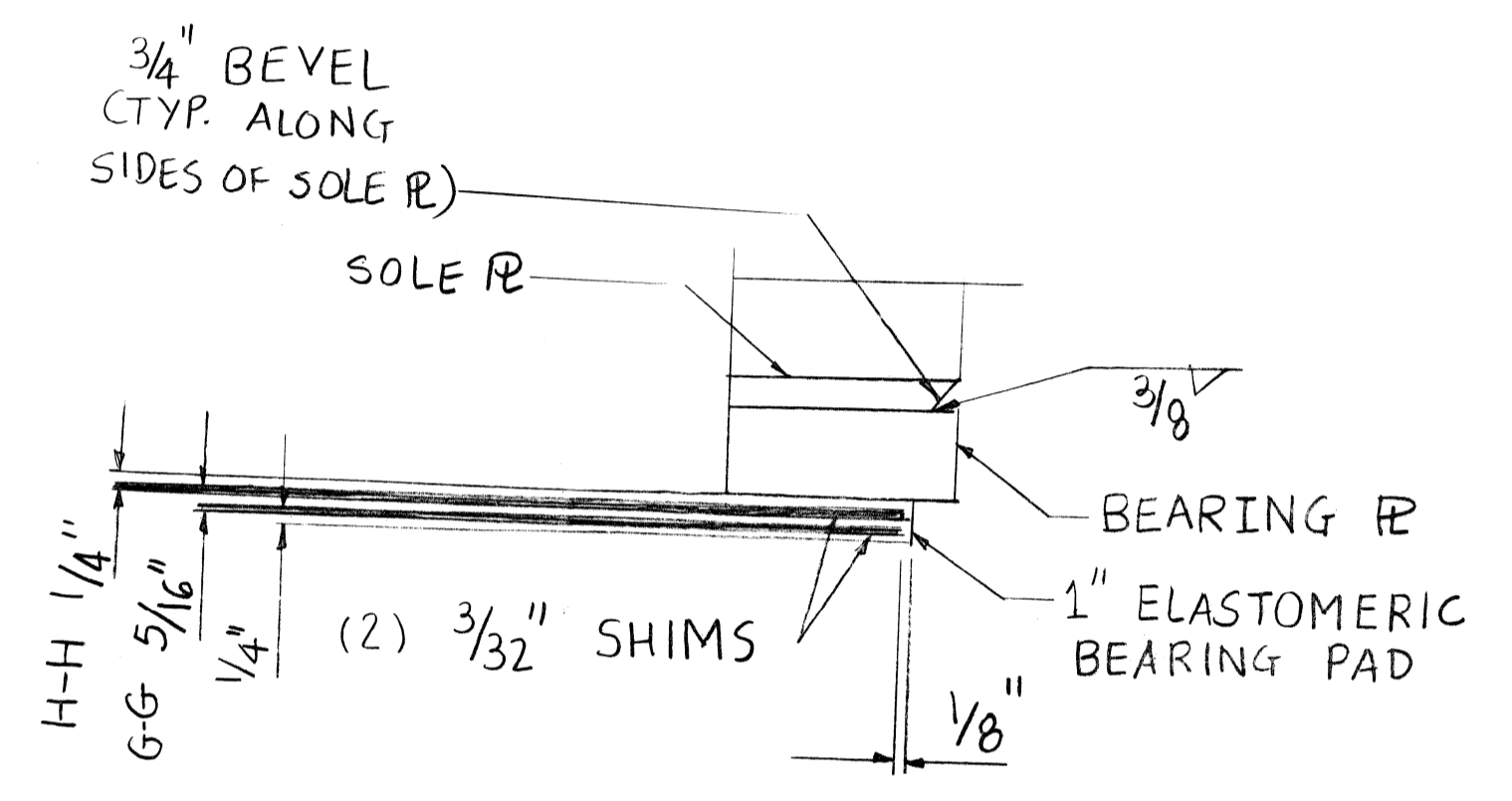


SECTION D-D

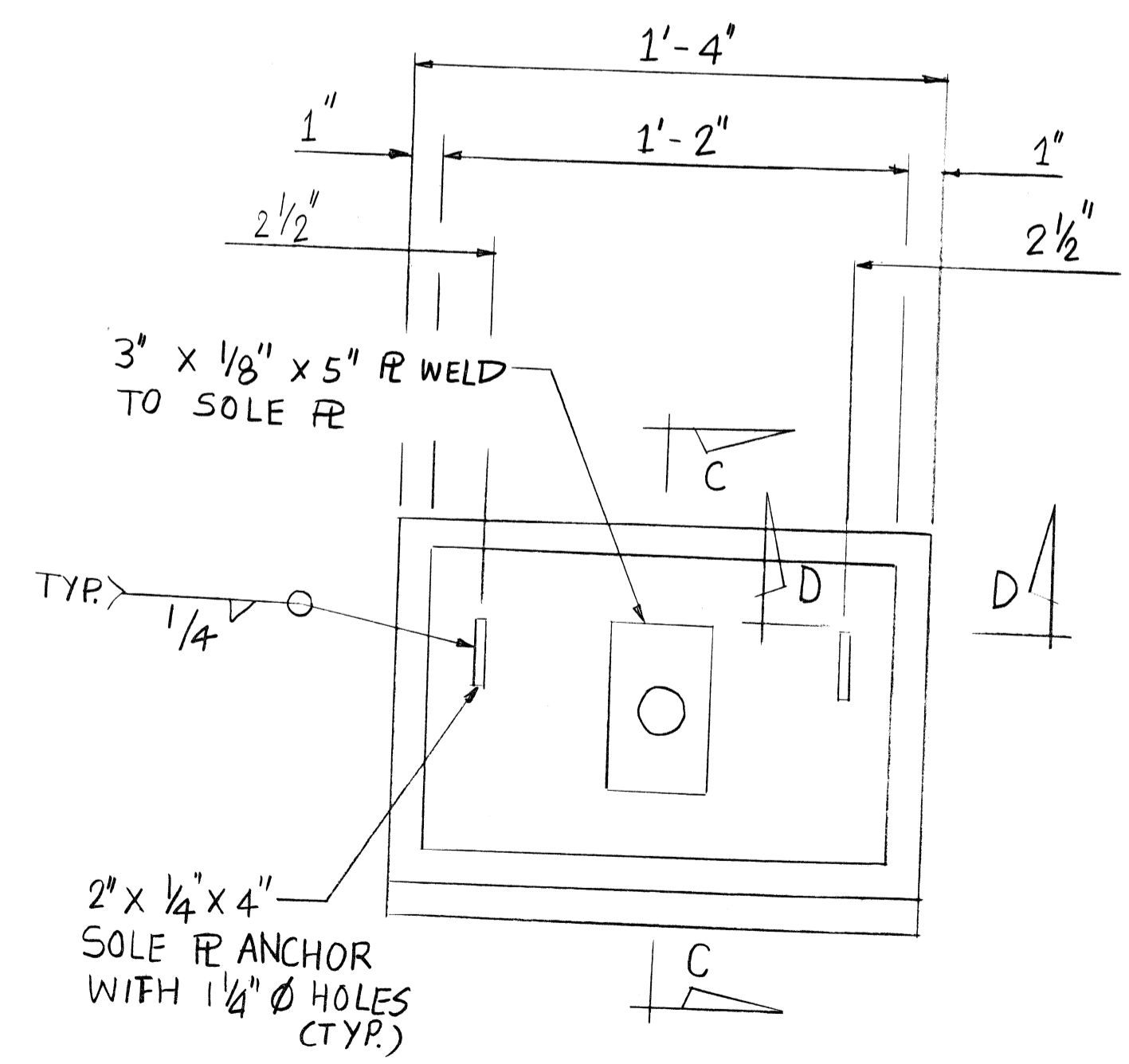
NOTE:  
BLOCK OUT CONCRETE AT ELASTOMERIC BEARINGS. COAT SIDES OF BEAMS WITH PARAFFIN WAX AT PIER DIAPHRAGM. ALL LABOR AND MATERIALS ARE INCLUDED IN THE BID ITEM "SUPERSTRUCTURE CONCRETE".



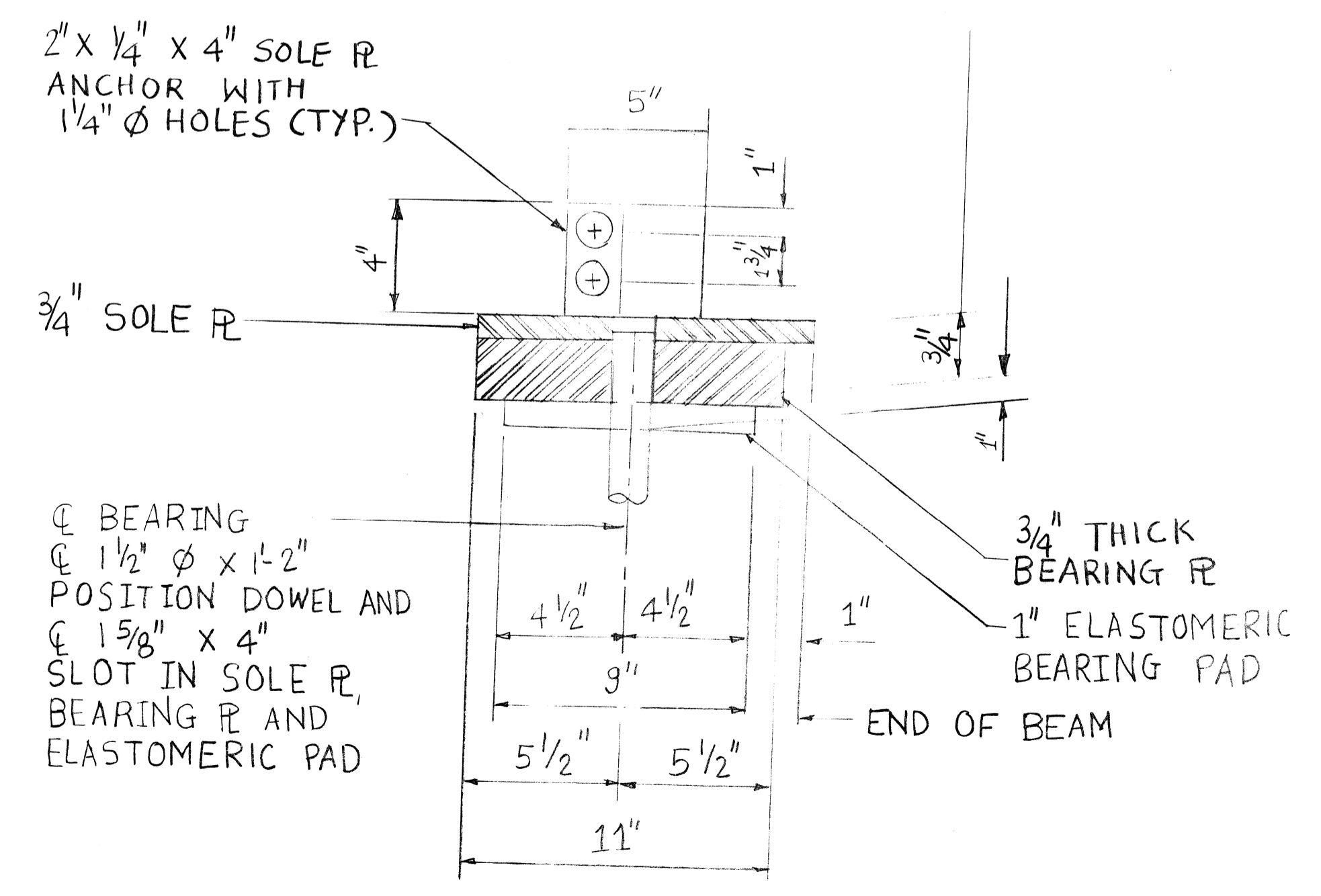
DETAIL G  
CALL WORK AND MATERIAL FOR THE STYROFOAM 24 GAGE METAL SLEEVE AND NEOPRENE SPONGE WASHER SHALL BE INCLUDED IN THE BID ITEM "SUPERSTRUCTURE CONCRETE".



SECTION D-D



PLAN



SECTION C-C

BEARING DETAILS

GENERAL NOTES:

THE DESIGN OF THIS STRUCTURE IS BASED ON THE 1990 EDITION OF AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES HS-20 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/1000 OF SPAN LENGTH. THE WORKING STRESS METHOD OF DESIGN WAS USED FOR THIS STRUCTURE. ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE 1/2" BEVELED EXCEPT AS OTHERWISE NOTED. THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIAL OF THE FOLLOWING STRESSES:  
REINF. CONCRETE:  $f_c' = 4,000$  PSI      STEEL REINF.:  $f_s = 60,000$  PSI  
PRESTR. CONCRETE:  $f_c' = 5,000$  PSI      STRUCT. STEEL A36:  $f_s = 36,000$  PSI  
THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED. FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL DIAL 800-482-7171 A MINIMUM OF 48 HOURS PRIOR TO EXCAVATING IN THE VICINITY OF UTILITY LINES. ALL "MISS DIG" PARTICIPATING MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM. WATER LEVEL IS SUBJECT TO CHANGE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF WATER LEVELS THAT WILL EXIST DURING CONSTRUCTION. PROTECTIVE TREATMENT FOR BRIDGE DECK IS TO BE APPLIED TO ALL SUPERSTRUCTURE CONCRETE SURFACES BETWEEN INSIDE FACES OF BARRIER. SIDEWALK AND BARRIER POURS SHALL NOT BE CAST UNTIL SLAB CONCRETE HAS ATTAINED AT LEAST 70% OF ITS DESIGN STRENGTH.

PRELIMINARY

NO.	DATE	BY	REVISIONS

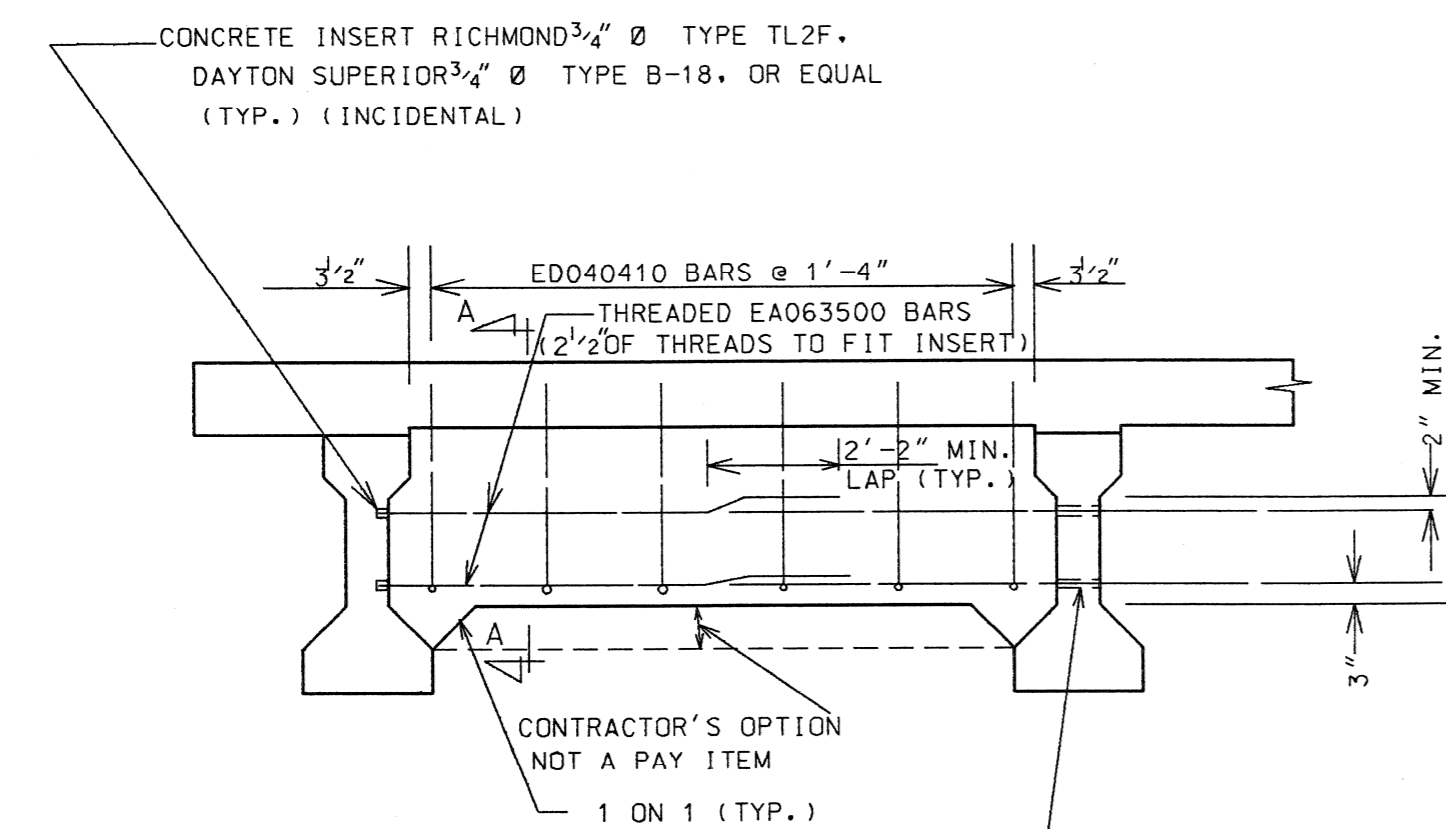
designed by P. SHAH  
drawn by P. SHAH  
checked by  
approved:

CITY OF DETROIT  
city engineering department  
for

TIREMAN AVENUE BRIDGE  
BW-265  
DIAPHRAGM AND BEARING DETAILS

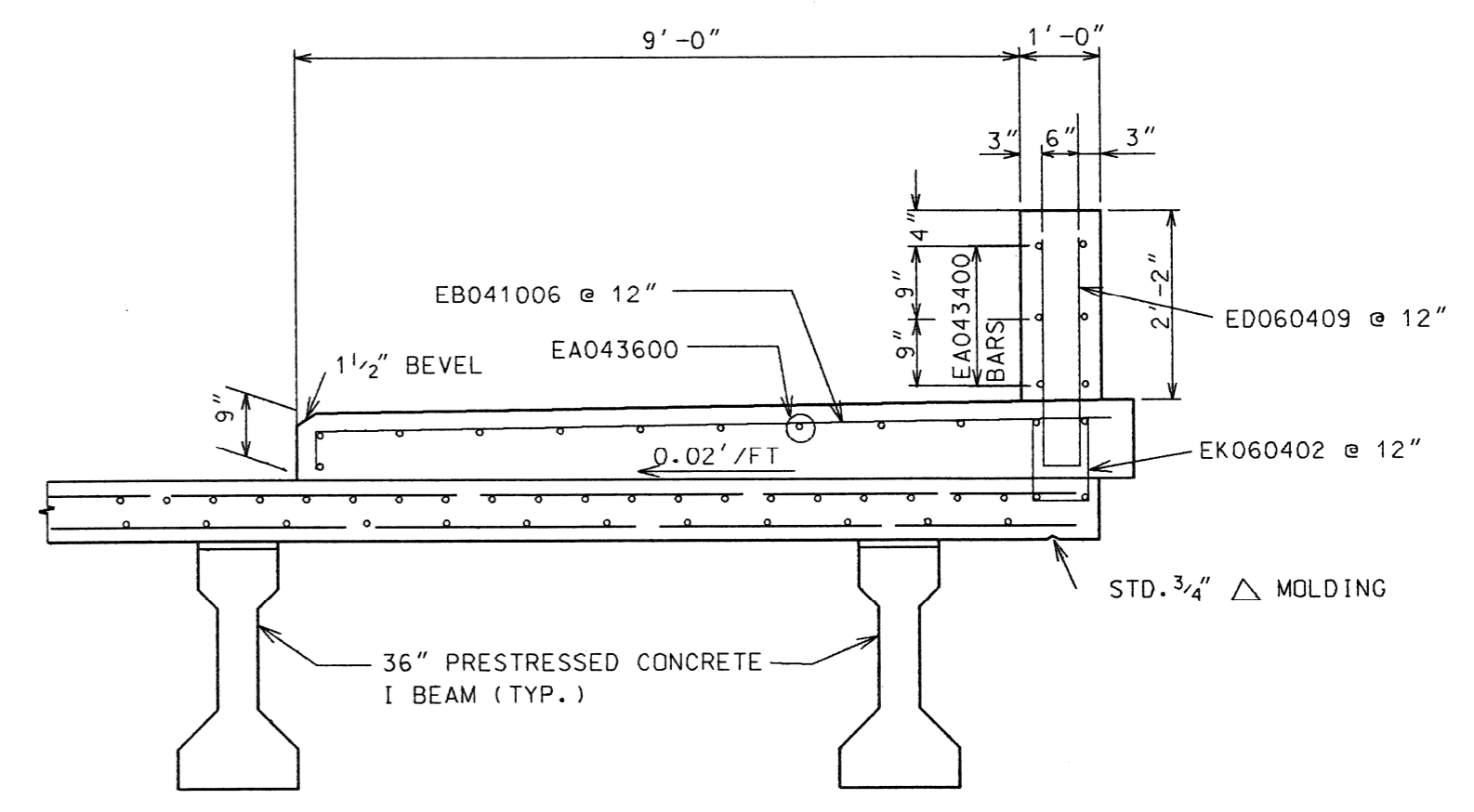
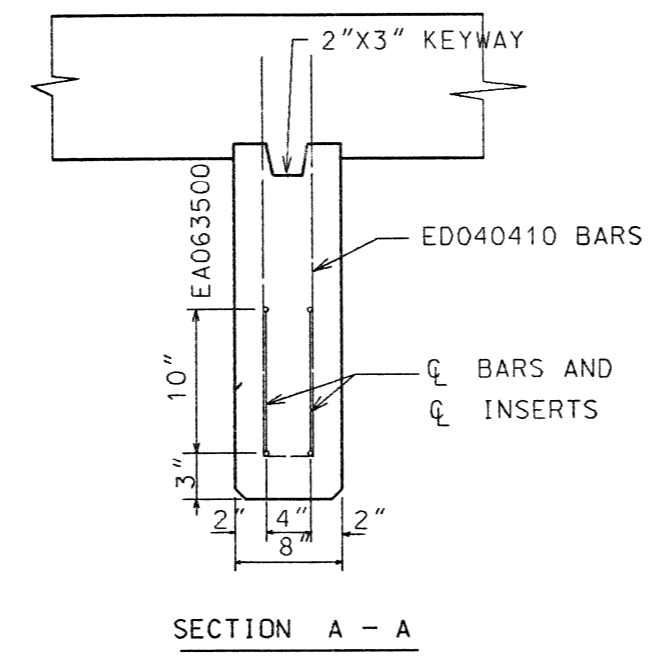
a.o.  
contract no.  
sheet S-5  
of  
drawing no.  
date 03/94



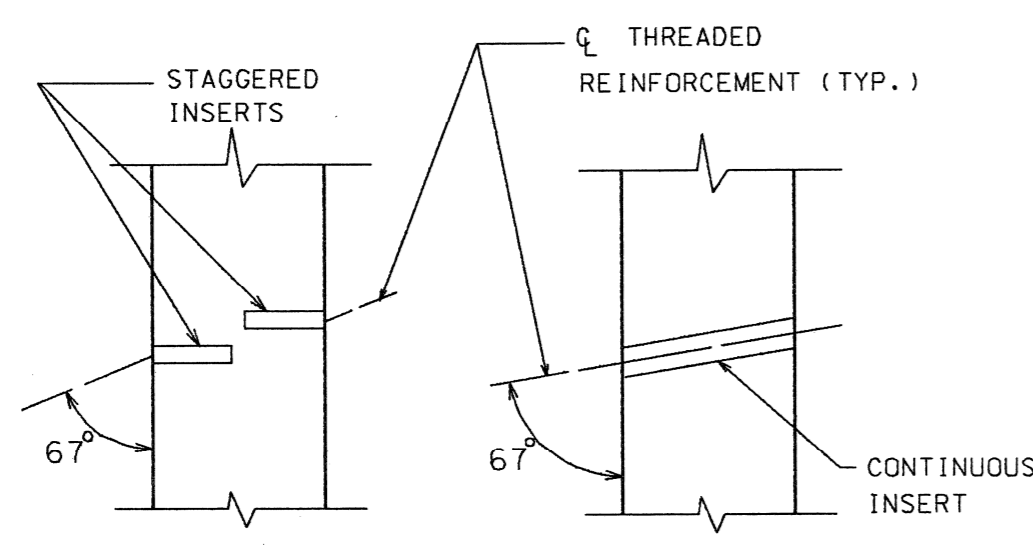


CONCRETE INSERT RICHMOND  $\frac{3}{4}$ "  $\emptyset$  TYPE T2 OR TYPE TL2F, DAYTON SUPERIOR  $\frac{3}{4}$ "  $\emptyset$  TYPE B-1 HEAVY OR TYPE B-18, OR EQUAL. INSERTS AT ENDS OF BEAM SHALL BE STAGGERED AND AT MIDSPAN MAY BE CONTINUOUS OR STAGGERED. THREADED REINFORCEMENT SHALL BE BENT TO THE REQUIRED ANGLE PRIOR TO INSTALLATION. BENT REINFORCEMENT MAY REQUIRE INSTALLATION BEFORE BEAM IS ERECTED. (TYP.) (INCIDENTAL)

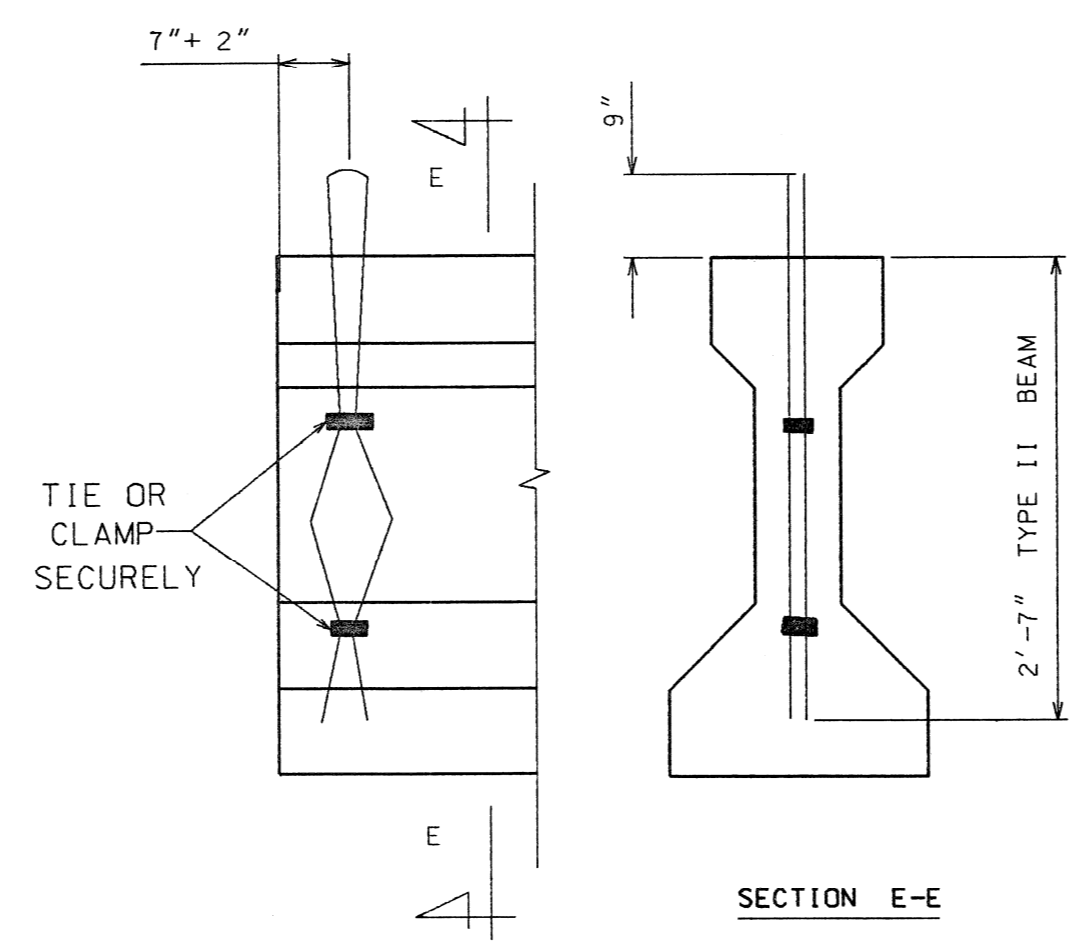
**DIAPHRAGM ELEVATION**  
 USE ONE DIAPHRAGM AT MID POINT.  
 DIAPHRAGM CONCRETE QUANTITIES ARE INCLUDED WITH SUPERSTRUCTURE QUANTITIES



TYPICAL SIDEWALK SECTION



**CONCRETE INSERT DETAILS**  
 CONCRETE INSERTS AT ENDS OF BEAM SHALL BE STAGGERED AND AT MIDSPAN MAY BE CONTINUOUS OR STAGGERED. THREADED REINFORCEMENT FOR STAGGERED INSERTS SHALL BE BENT TO THE REQUIRED  $\emptyset$  ANGLE PRIOR TO INSTALLATION. BENT REINFORCEMENT MAY REQUIRE INSTALLATION BEFORE BEAM IS ERECTED.

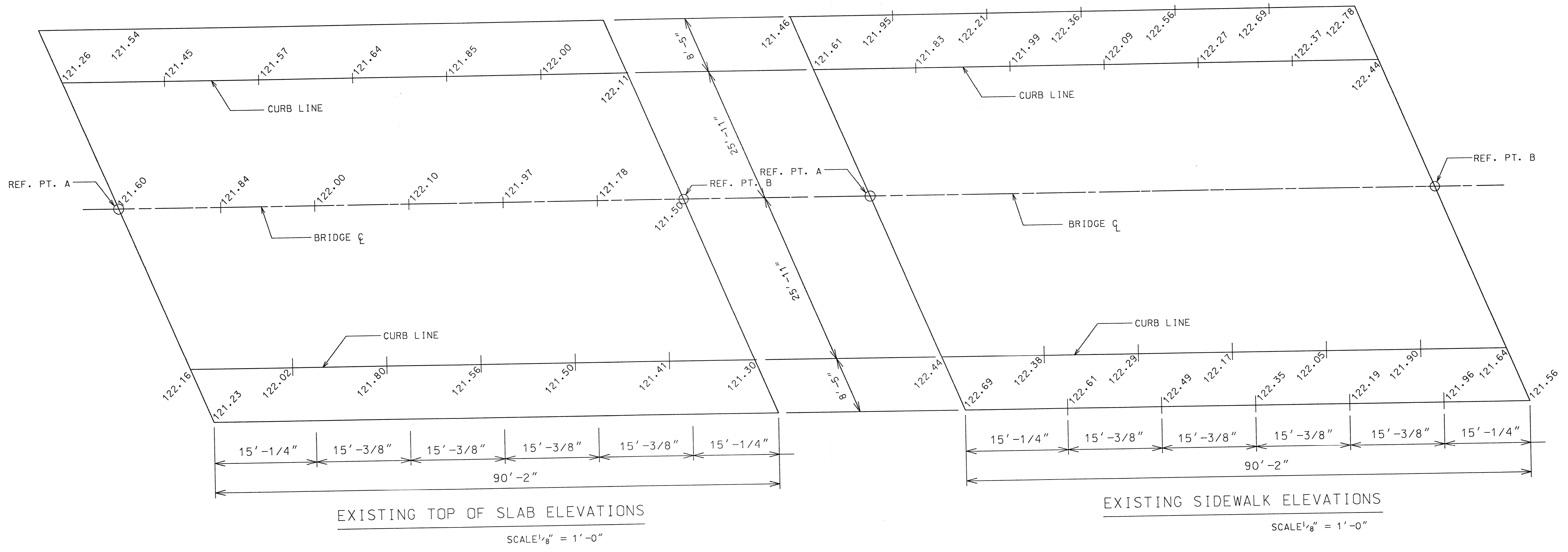


LIFTING DEVICE

**PRELIMINARY**

P. SHW REVISIONS	BY	CHECKED BY	APPROVED:	CITY OF DETROIT CITY ENGINEERING DEPARTMENT STRUCTURAL BUREAU FOR MICHIGAN DEPARTMENT OF TRANSPORTATION	TIREMAN AVENUE BRIDGE BW - 265 SUPERSTRUCTURE DETAILS	SHEET 5-6 OF SHEETS
	PLAN					CONTRACT NO.
	GRADE					ASSIGNMENT NO.
	ESTIMATE					DATE 03/94





**PRELIMINARY**

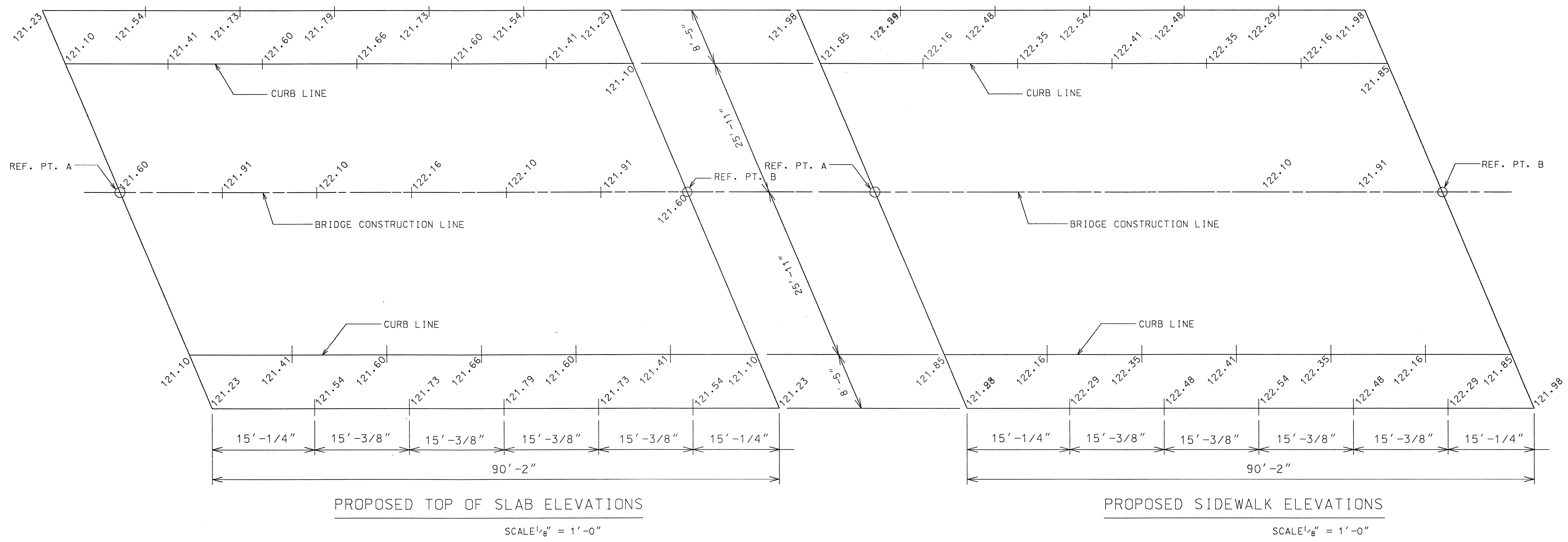
DESCRIPTION REVISIONS	DR	CHK	DATE	DATE
PLAN	BY	CHECKED BY	APPROVED	
GRADE				
ESTIMATE				
FINAL				

**CITY OF DETROIT**  
 CITY ENGINEERING DEPARTMENT  
 STRUCTURAL BUREAU  
 FOR  
 MICHIGAN DEPARTMENT OF TRANSPORTATION

**TIREMAN AVENUE BRIDGE**  
 BW - 265  
 EXISTING SLAB AND SIDEWALK ELEVATIONS

SHEET 5-7 OF SHEETS
CONTRACT NO.
ASSIGNMENT NO.
DATE 03/94





1. ALL ELEVATIONS ARE BASED ON CITY OF DETROIT DATUM.
2. SIDEWALK POUR SHALL NOT BE CAST UNTIL SLAB CONCRETE HAS ATTAINED AT LEAST 75% OF ITS DESIGN STRENGTH.

**PRELIMINARY**

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