

TRACTION  
BRACING

LIFT SPAN FLOOR

STRINGERS																					
RAILWAY		HIGHWAY				SIDEWALK				FLOOR BEAMS				SIDEWALK CANT BRACKETS				CROSSBEAMS			
		INNER		OUTER		INNER		OUTER		INT		END		INT		END		SIDEWALK			
		SHEAR K	MOM IN	SHEAR K	MOM IN	SHEAR K	MOM IN	SHEAR K	MOM IN	SHEAR K	MOM IN	SHEAR K	MOM IN	SHEAR K	MOM IN	SHEAR K	MOM IN	SHEAR K	MOM IN		
DEAD LOAD		10.8	83	2.7	21.1	6.0	56.4	8.0	2.06	5.76	32	62	366.8	50.2	527	9.9	48.99	6.34	31.99	1.00	5.37
LIVE LOAD		96.8	650	22.5	133.0	21.0	181.8	2.14	5.54	6.11	62	251.54	2584.9	140.9	802	16.5	74.45	10.51	51.00	2.47	8.62
IMPACT	DIRECT	36.4	380	6.8	39.9	4.4	26.1					136.16	1341.4	31.5	883						
	ROLLING	12.1	81									2.6	95.0	7.8	2						
TOTAL		176.8	1198	32.0	194.0	31.4	234.0	2.94	7.6	9.87	84	451.3	4788.1	230.4	2214	26.4	123.44	16.85	82.99	3.47	11.99
MOMENT AT CONNECTION																					
WEB REQUIRED IN <sup>2</sup>		16.0		2.9		2.86		0.27		0.90		41		21.0		2.4		1.53		0.32	
S.M. REQUIRED (GROSS)		752.11		12.3		148.3		4.6		50.3		3020.3		139.81		6.17		4.15		7.5	
S.M. PROVIDED (GROSS)		855.3		196.3		196.3		16.0		126.4		3542.3		269.4						16.0	
SECTION	WEB	36 WF 230	24 WF 84	24 WF 84	8 I 23	21 WF 62				1. R 71 x 7 1/2	1. R 71 x 7 1/2	4 L 3 x 8 x 7/8	4 L 3 x 8 x 7/8	4 L 3 x 8 x 7/8	4 L 3 x 8 x 7/8	4 L 3 x 8 x 7/8	4 L 3 x 8 x 7/8	4 L 3 x 8 x 7/8	4 L 3 x 8 x 7/8	4 L 3 x 8 x 7/8	
	ANGLES																				
	COVER PL																				

NOTES

- FOR GENERAL NOTES SEE SHEETS Nos. 2 AND 3.
- CAMBER : FLOOR BEAMS SHALL BE CAMBERED FOR FULL DEAD LOAD PLUS HALF LIVE LOAD.  
END CONNECTIONS OF FLOOR BEAMS SHALL BE SEVELLED FOR END ROTATION FROM FULL DEAD LOAD PLUS HALF LIVE LOAD
- 7/8" RIVETS SHALL BE USED UNLESS OTHERWISE NOTED. CONNECTIONS BETWEEN TRUSSES AND FLOOR BEAMS SHALL BE 1" RIVETS
- ALL STRESSES IN KIPS (+ COMP) (- TENSION)  
ALL MOMENTS IN FOOT KIPS.
- STRINGERS SHALL BE FABRICATED WITH INITIAL CAMBER, IF ANY, UPWARD

NO.	REVISIONS	BY	DATE
DEPARTMENT OF PUBLIC WORKS CANADA DEVELOPMENT ENGINEERING BRANCH STRUCTURES DIVISION			
C C PARKER & ASSOCIATES LTD CONSULTING ENGINEERS HAMILTON ONTARIO			
BURLINGTON CANAL LIFT BRIDGE LIFT SPAN FLOOR AND BRACING SYSTEMS			

- NOTES**
- FOR GENERAL NOTES SEE SHEETS Nos. 2 AND 3.
  - CAMBER: FLOOR BEAMS SHALL BE CAMBERED FOR FULL DEAD LOAD PLUS HALF LIVE LOAD. END CONNECTIONS OF FLOOR BEAMS SHALL BE BEVELLED FOR END ROTATION FROM FULL DEAD LOAD PLUS HALF LIVE LOAD.
  - 7/8" RIVETS SHALL BE USED UNLESS OTHERWISE NOTED. CONNECTIONS BETWEEN TRUSSES AND FLOOR BEAMS SHALL BE 1" RIVETS.
  - ALL STRESSES IN KIPS (+COMP) (-TENSION) ALL MOMENTS IN FOOT KIPS.
  - STRINGERS SHALL BE FABRICATED WITH INITIAL CAMBER, IF ANY, UPWARD.



RECOMMENDED	DATE 1-12-56	DESIGN A.T.	CHKD G.W.A.	APPROVED	DATE 12-11-57	DEPARTMENT PROJECT NO.
		DRAWN B.W.	CHKD A.T.			SD6-4-77
		TRACED J.N.W.	CHKD G.W.A.			
		JOB NO H-538				
C.C. Parker & Associates Ltd			CONTRACT NO. 2			
SHEET 4 OF 62						





C.C. PARKER CONSULTANTS LIMITED  
CONSULTING PROFESSIONAL ENGINEERS  
HAMILTON ONTARIO

revisions date

A detail no.  
no. du détail  
B drawing no. - where detail required  
dessin no. - où détail exigé  
C drawing no. - where detailed  
dessin no. - où détaillé

project title  
titre du projet

MODIFICATIONS OF  
BURLINGTON CHANNEL  
VERTICAL LIFT BRIDGE  
AND APPROACHES

drawing title  
titre du dessin

FRAMING PLAN -  
LIFT SPAN

designed by  
conçu par P.K. TANDON

drawn by  
dessiné par W.G.M.

reviewed by  
examiné par

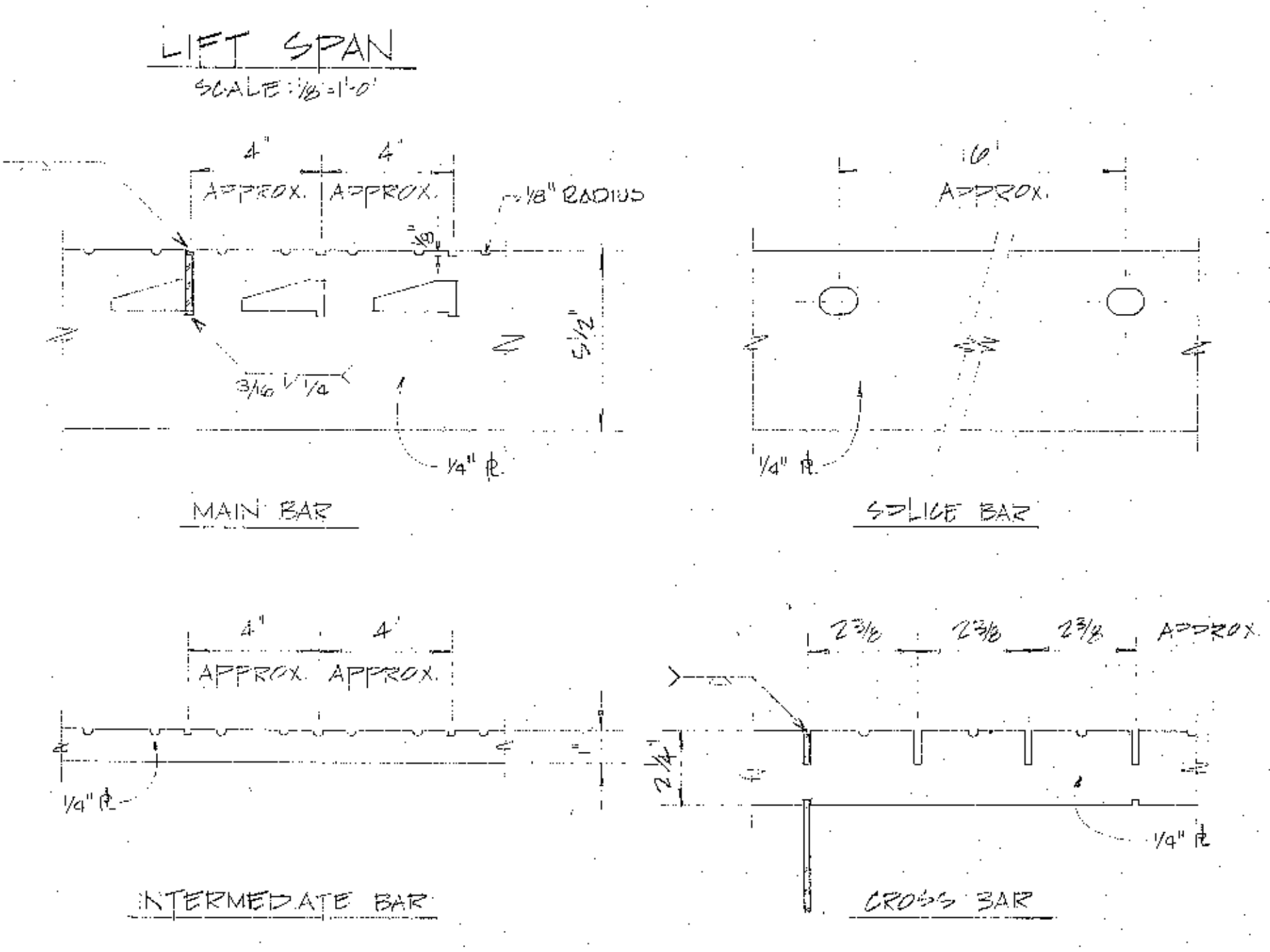
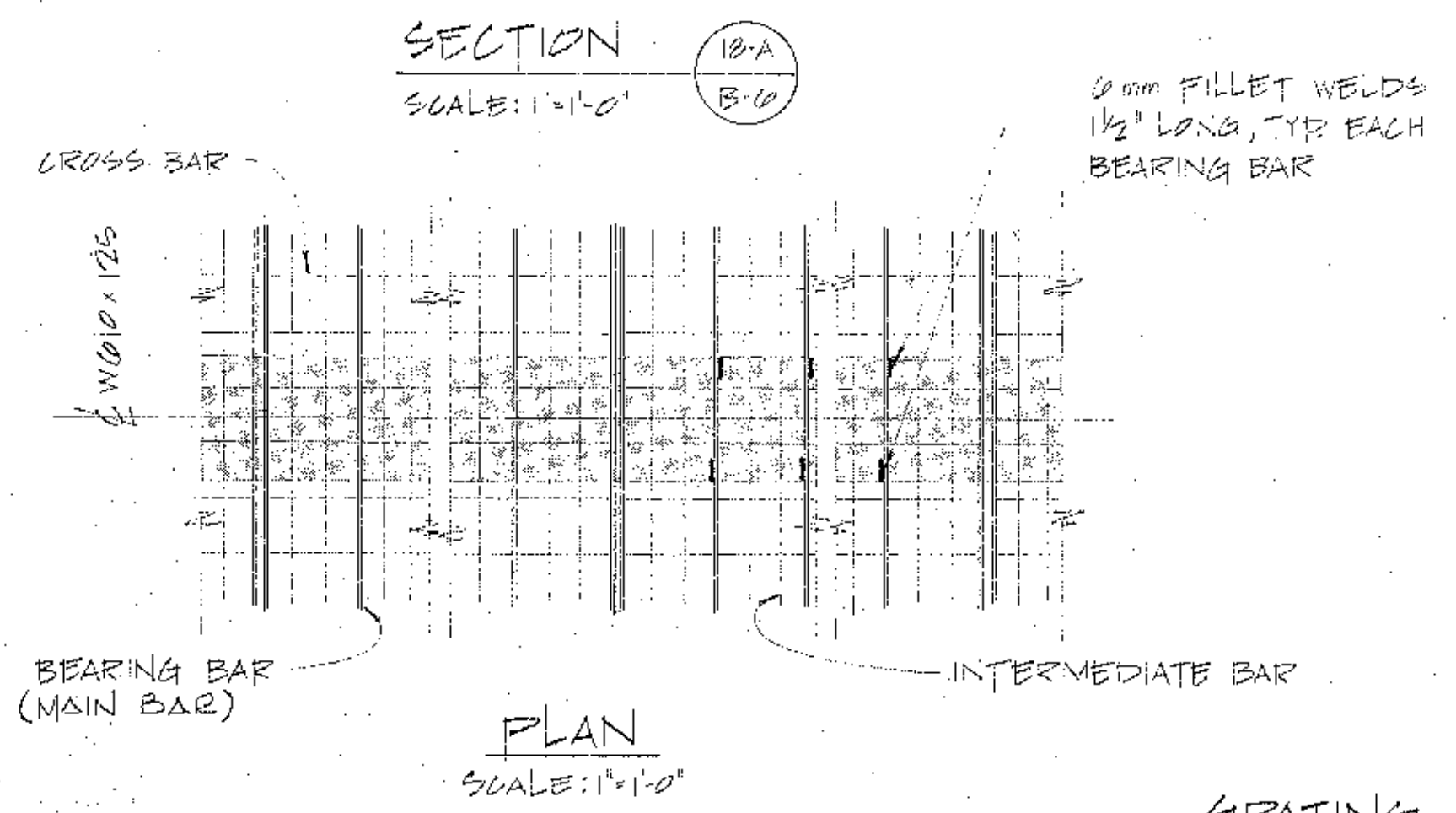
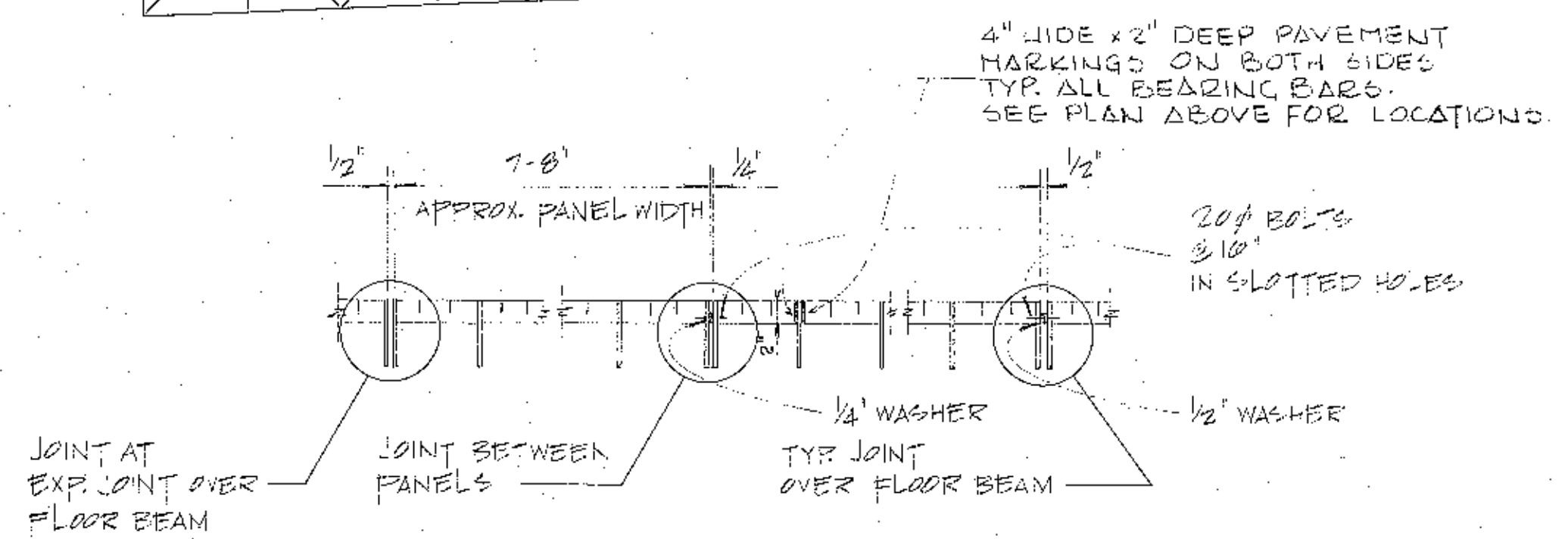
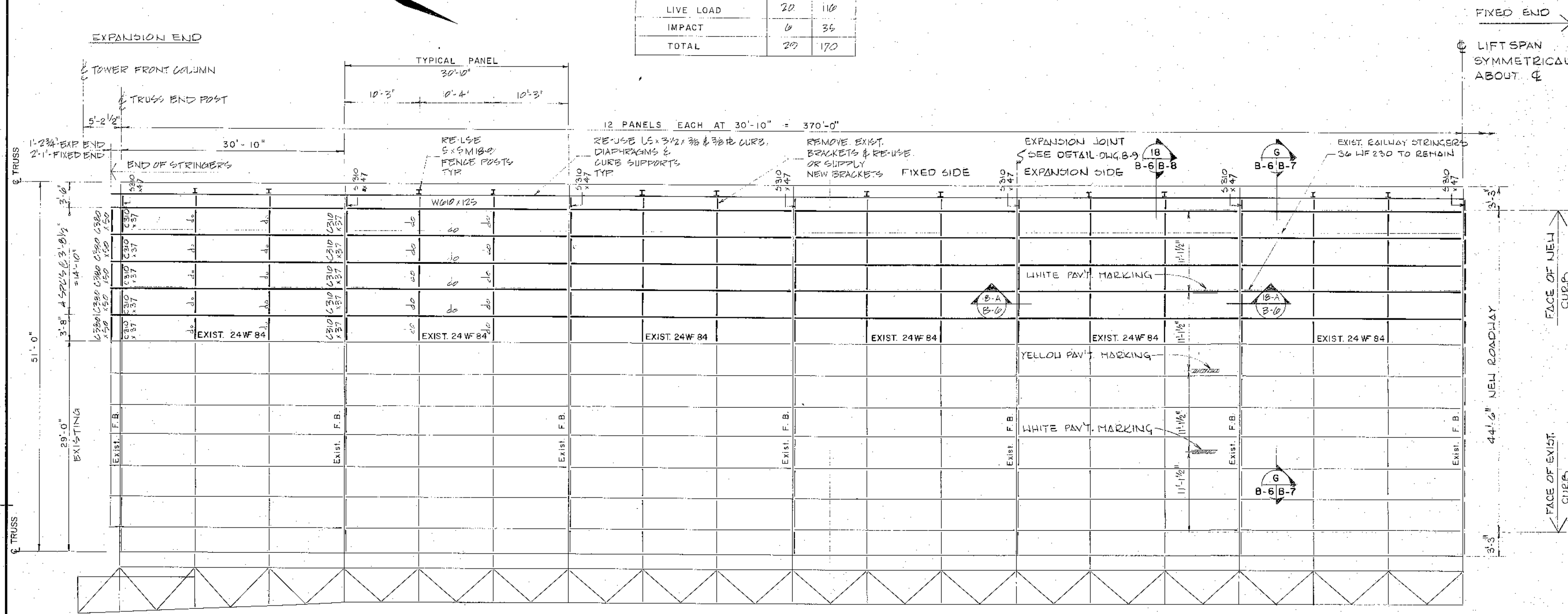
approved by  
approuvé par D.C. Gamm

project date  
date du projet APRIL 23, 1982

project no.  
no. de projet 041412

drawing no.  
dessin no. B-6

TABLE OF MOMENTS AND SHEARS		
LIFT SPAN STRINGERS	SHEAR K	MOM. 1K
DEAD LOAD	3	13
LIVE LOAD	20	110
IMPACT	0	36
TOTAL	23	170



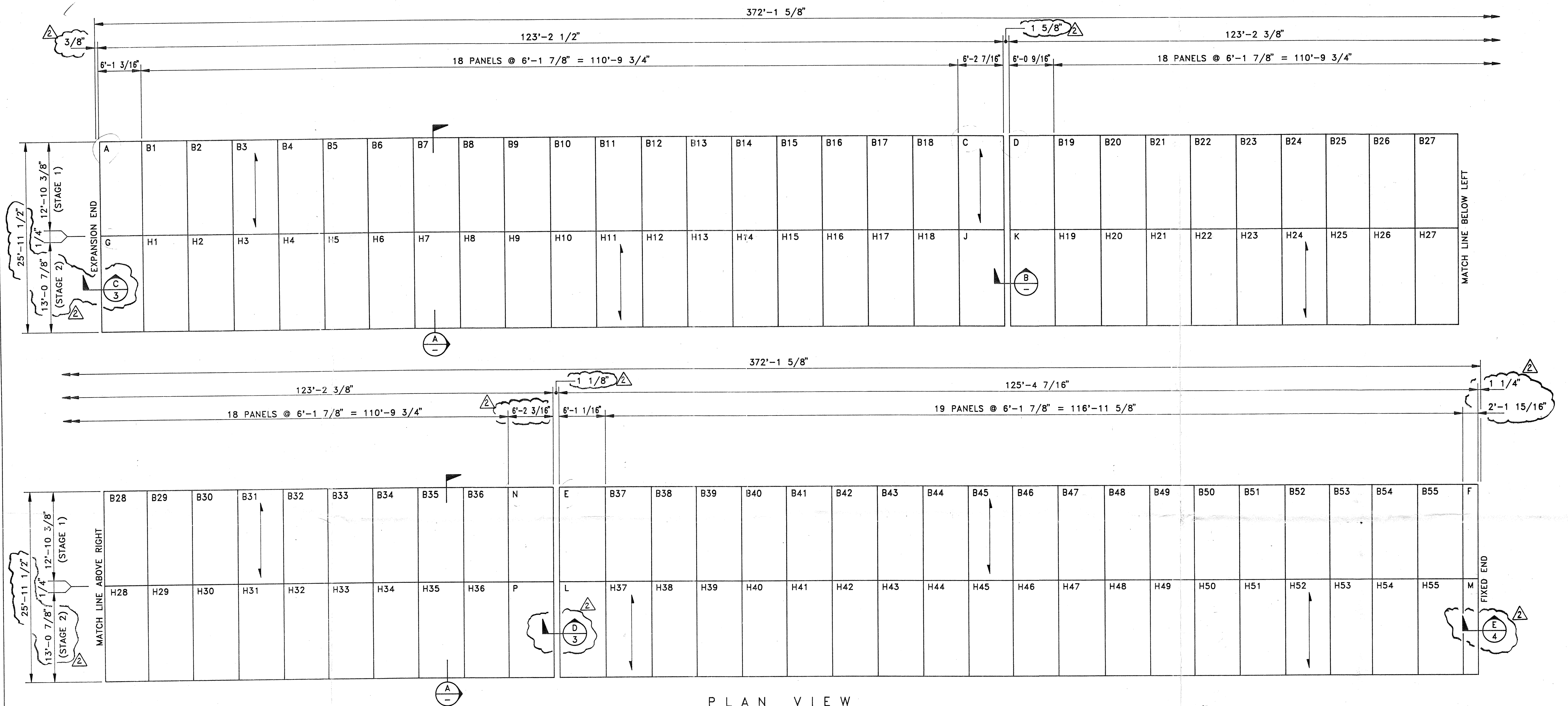
### STEEL GRATING NOTES

1. WHEEL LOAD DISTRIBUTION ACCORDING TO AASHTO INTERIM SPEC. 1981.
2. ALL BARS SHALL BE SECURELY INTERLOCKED & WELDED AT THEIR INTERSECTIONS
3. TOP SURFACE OF GRATING SHALL BE ALL IN ONE PLANE.
4. FOR ADDITIONAL DETAILS SEE DWG. B-8.
5. PLUG WELD AT ALL INTERSECTIONS OF 1/4" BARS.
6. BARS AT INTERSECTION TO BE NOTCHED 1/8"
7. WELDS TO BE APPROXIMATELY FLUSH WITH TOP OF BARS.

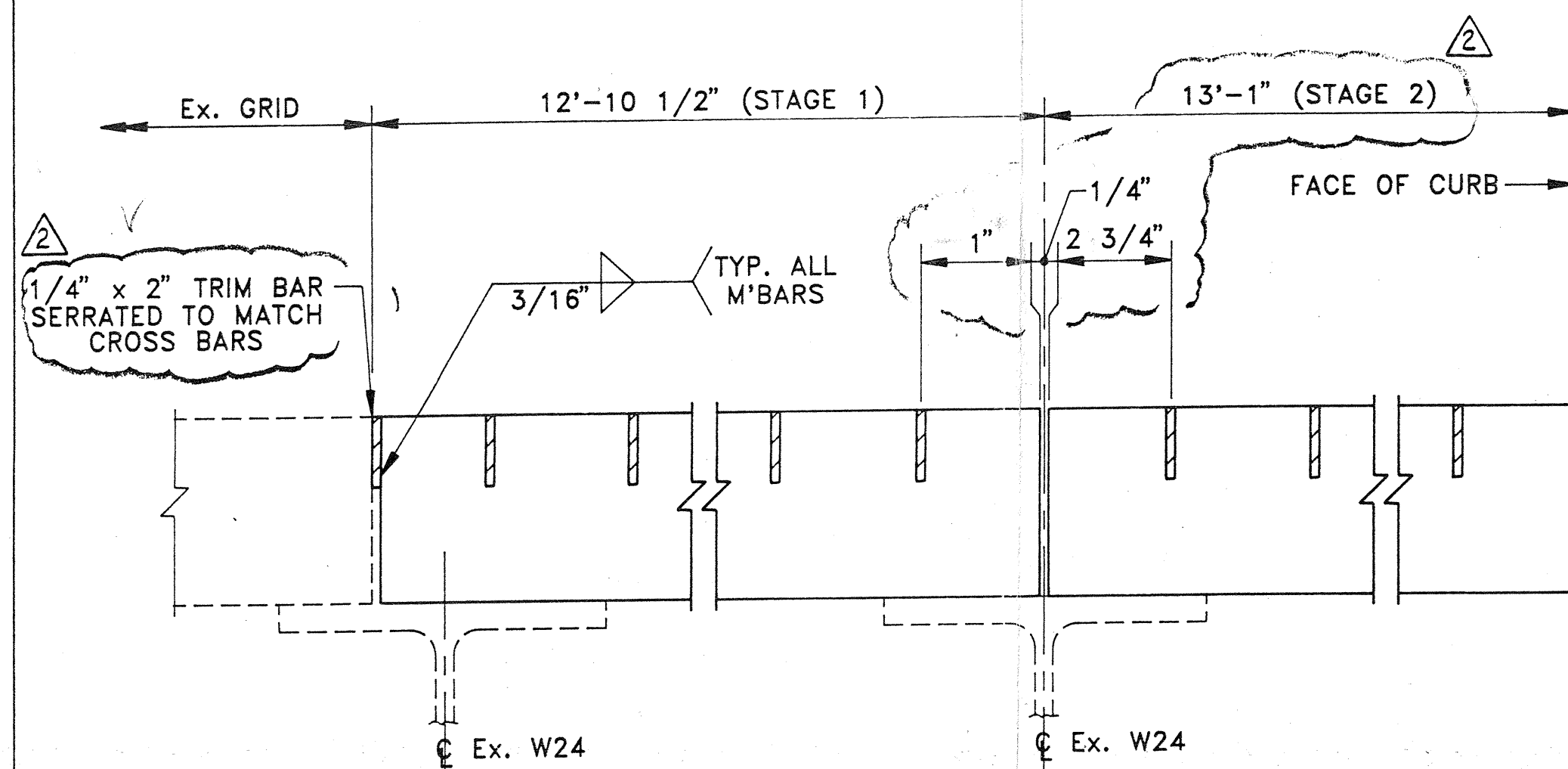
All dimensions in feet and inches  
unless otherwise noted.





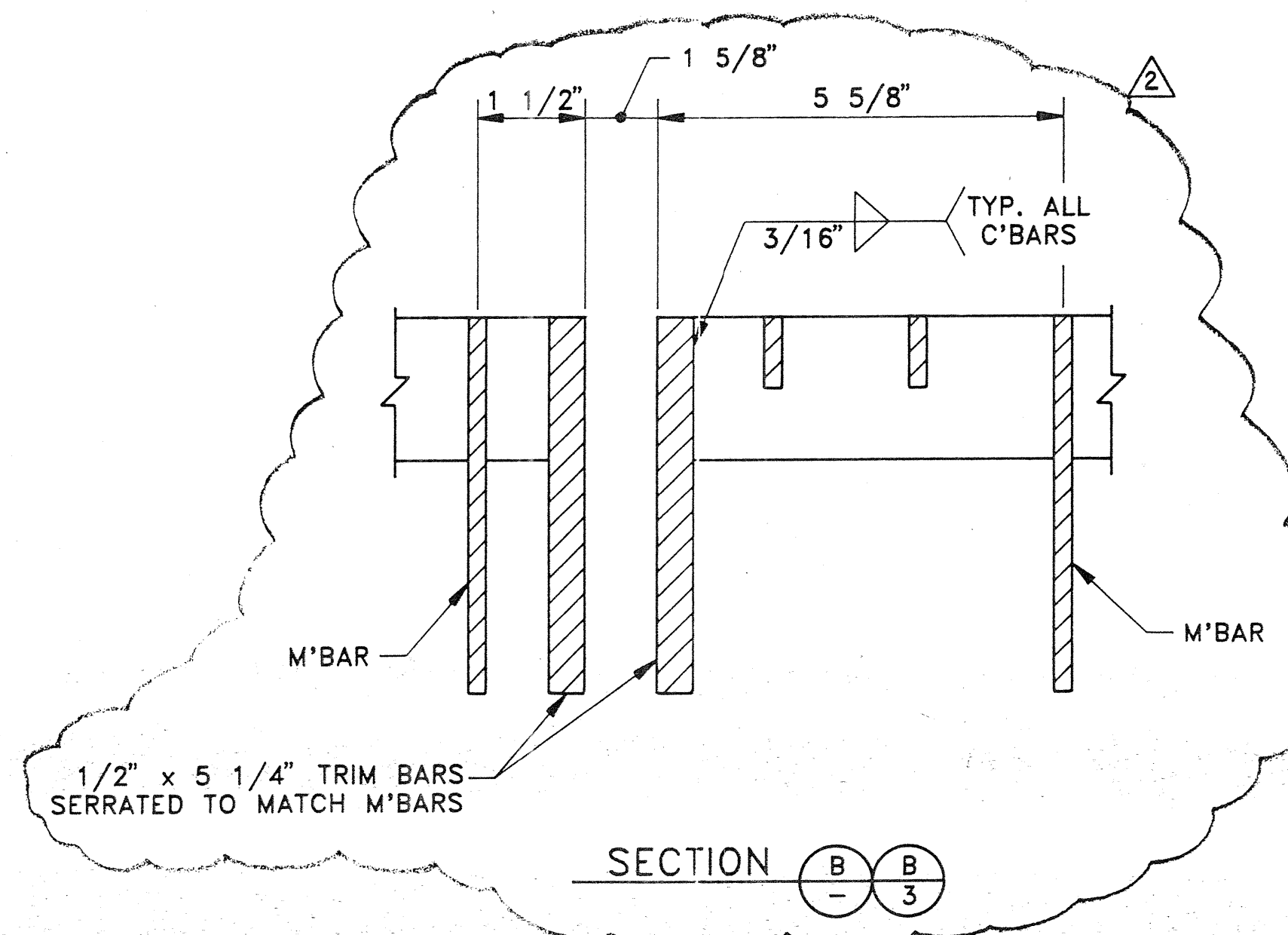


PLAN VIEW



SECTION A-A

SERRATIONS NOT SHOWN IN SECTIONS FOR CLARITY.



SECTION B-B

NOTES:

1. ALL DIMENSIONS ARE PER CUSTOMER FIELD MEASUREMENTS.
2. SHOP MARK PANELS A, C, D, E, F, G, J, K, M, N & P ONLY IN UPPER LEFT HAND CORNER WITH METAL TAGS READABLE AFTER GALVANIZING. THESE PANELS SHOULD ALSO BE SHIPPED STACKED SEPARATE FROM PANELS B & H.
3. SERRATIONS: STANDARD ENTIRE DECK INCLUDING TRIM.
4. ——— DENOTES M'BAR DIRECTION.

FOR APPROVAL

IKG/GREULICH

DATE MAY 20 1994

PROJECT NO.: 686202	BRIDGE FLOORING SYSTEMS
B.I.N.:	A Division of Harsco Corporation
P.I.N.:	R.D. #2 Route 910, P.O. Box 295, Cheswick, Pennsylvania 15024
GRID: ARMAGRID 'A' INTERLOCK	Telephone: (412) 828-2223 Fax: (412) 828-4103 Shop: (412) 828-6444
REVISED PER CUSTOMER/APPROVER COMMENT 5/19/94	CUSTOMER: LOUIS W. BRAY CONST. LIMITED
REVISED PER CUSTOMER FIELD MEASURE 3/22/94	FOR: PUBLIC WORKS CANADA
REVISIONS DATE	ENG.: PUBLIC WORKS CANADA
CAD FILE: BURL.DWG DISC #: PJC40	PROJ.: BURLINGTON CANAL LIFT BRIDGE
CONTRACT DWGS.: PUBLIC WORKS CANADA	LOCATION: BURLINGTON, ONTARIO
DWG. S-1, REV. 0	PLAN AND SECTIONS
REL. TO FABRICATION:	CUST./P.O. NO. 1803
DRAWN: 3/2/94	IKG JOB NO. G-4-0
CHECKED: PJC 3/7/94	DWG. NO. TOTAL REV. 1 4

DRAWING NOT TO SCALE UNLESS NOTED  
DRAWING AND CONTENTS PROPERTY OF IKG/GREULICH

## WELDING PROCESS

ALL WELDING TO BE DONE IN ACCORDANCE WITH CSA-W59-M1989

## MATERIAL SPECIFICATIONS

M'BARS (1/4" x 5 1/4")  
C'BARS (1/4" x 2")  
SUPP'L BARS (1/4" x 1")  
TRIM/FILL BARS (SEE DWGS.)  
BOLTS TO BE A.S.T.M. A325 TYPE I - HOT DIP GALVANIZED.

CSA G40.1 GRADE 350AT WITH SHARP IMPACTS TO CATEGORY I

## FINISH SPECIFICATIONS

- HOT-DIP GALVANIZED UNPASSIVATED AFTER FABRICATION PER CAN/CSA-G164-M92, MIN. 600g/M<sup>2</sup>
- PREP: SP-7 SWEEP-BLAST
- PAINT: 3 COAT PORTER INTERNATIONAL SYSTEM

PRIME: (1) COAT INTERNATIONAL INTERZINC BP 175M GREY (3 MILS D.F.T.)

INTERMEDIATE: (1) COAT INTERNATIONAL INTERVINUX HB-503-211 GREEN (3 MILS D.F.T.)

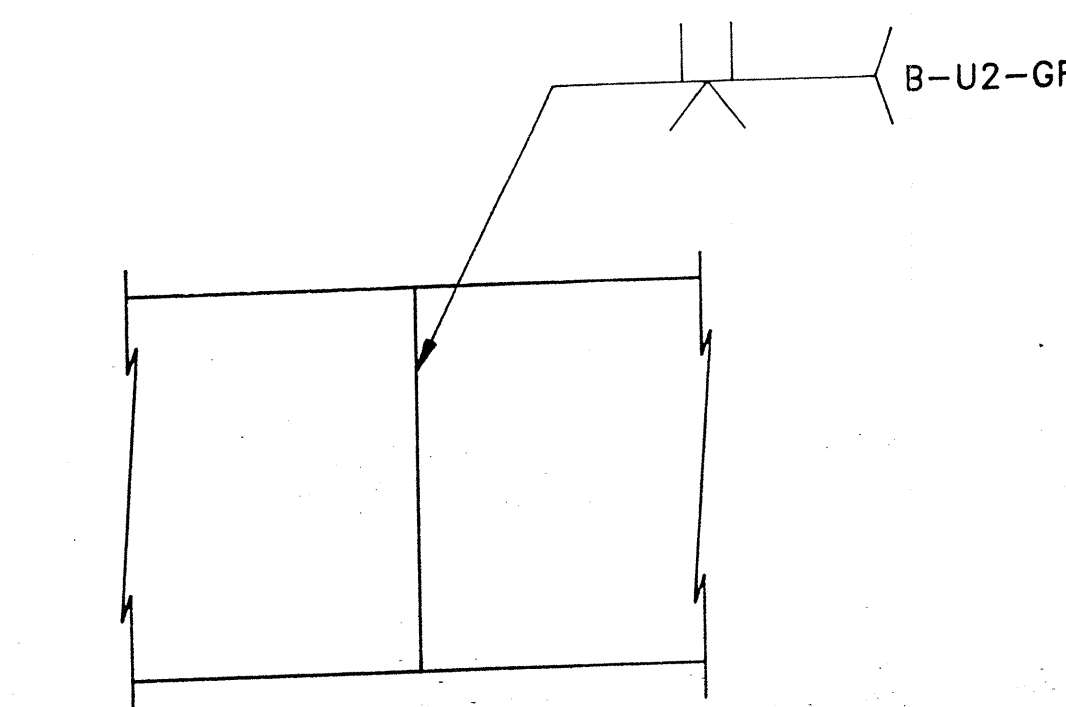
FINISH: (1) COAT INTERNATIONAL INTERVINUX HB-501-107 GREY (3 MILS D.F.T.)

FIELD NOTE: ANY GALVANIZING DAMAGE DUE TO FIELD WELDING OR OTHERWISE, SHALL BE CLEANED AND PAINTED WITH (2) COATS OF GALVAPLATE ZINC PAINT.

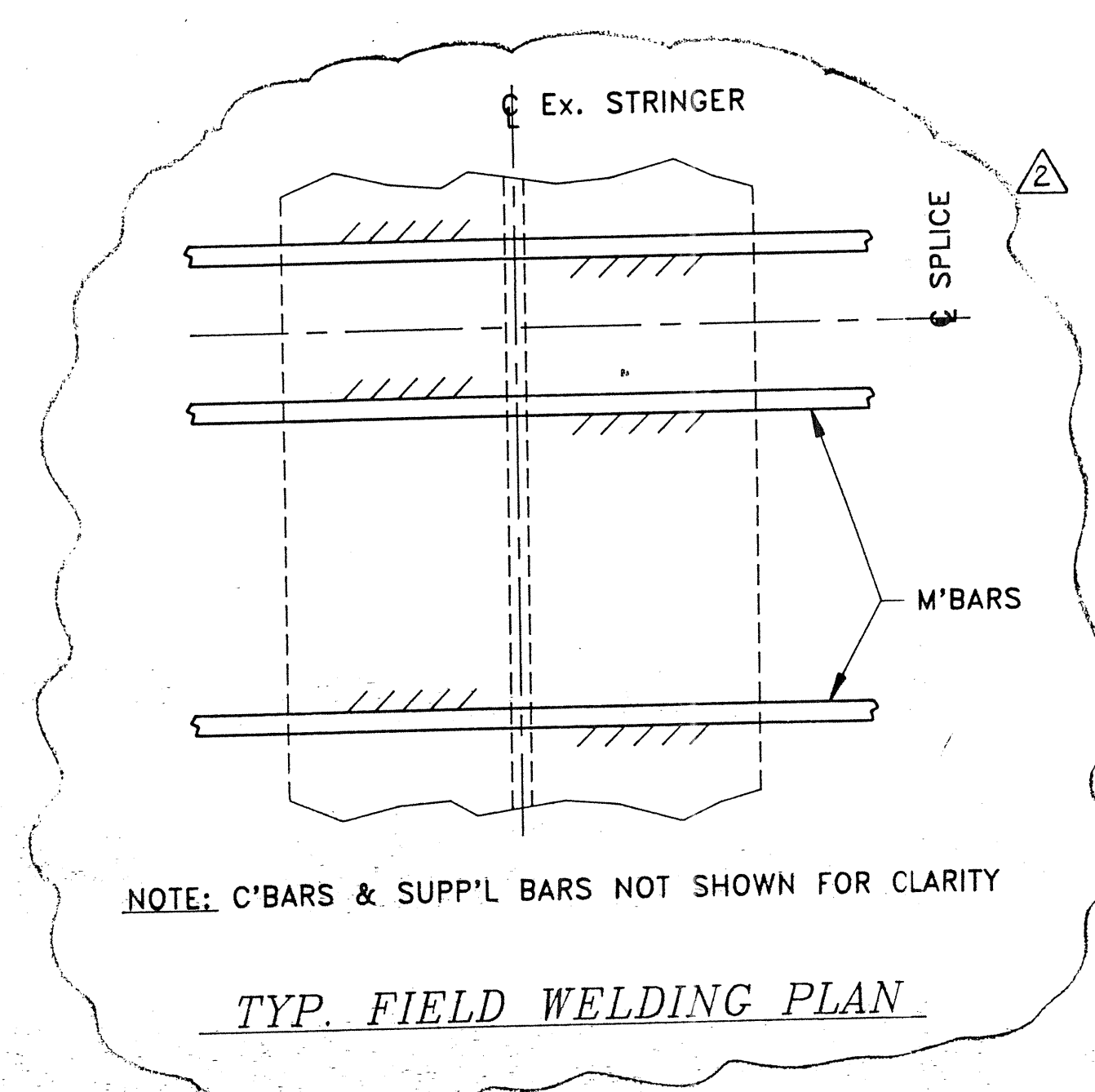
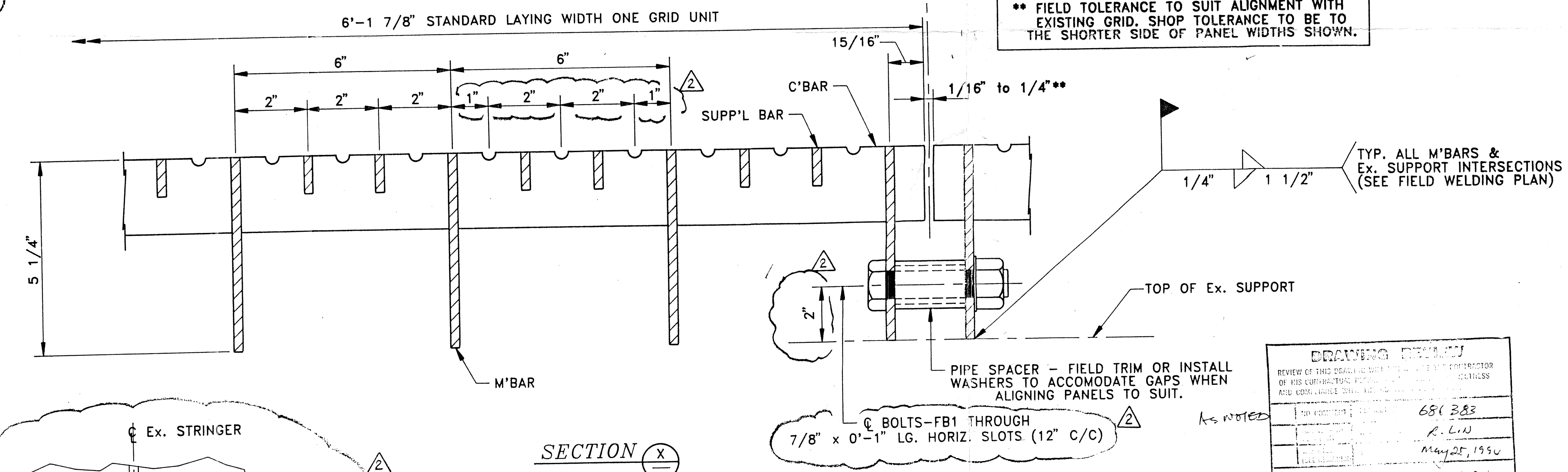
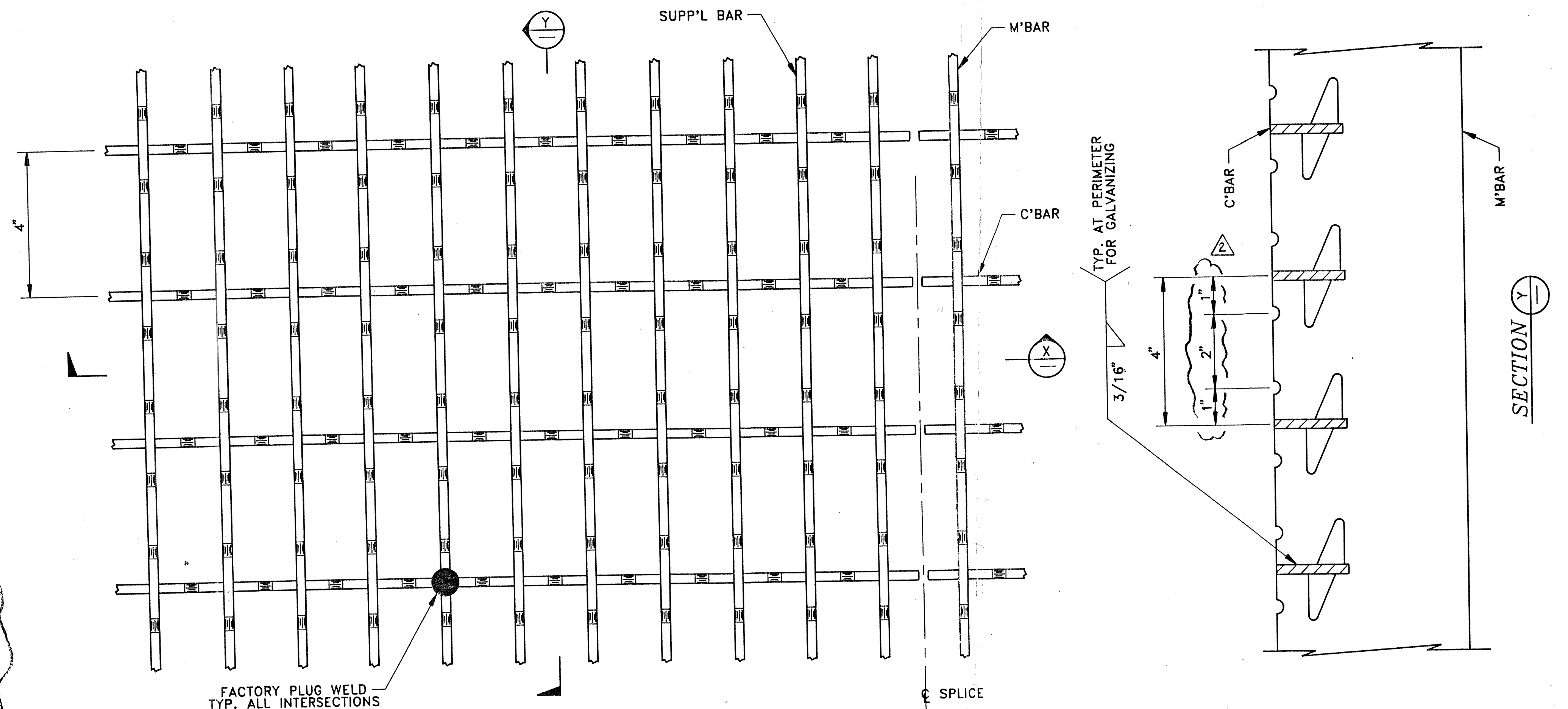
## CUSTOMER NOTES

SERRATIONS TO BE APPROXIMATELY 3/16" DEEP BY 3/8" WIDE.

WHEN THIS PRODUCT IS USED ON A MOVEABLE BRIDGE OR OTHER WEIGHT CRITICAL APPLICATION, ACTUAL FINISH WEIGHT TO BE DETERMINED BY THE CONTRACTOR PRIOR TO INSTALLATION.



TYP. SHOP TRIM SPLICE  
(WHERE REQ'D)



TYP. FIELD WELDING PLAN

DRAWING DETAILS	
REVIEW OF THIS DRAWING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY ERRORS AND FOR THE PROTECTION OF THE DRAWING.	651 383
DATE	14/25/1994
PROJECT	Burlington Canal Lift Bridge
LOCATION	Burlington, Ontario

FOR APPROVAL

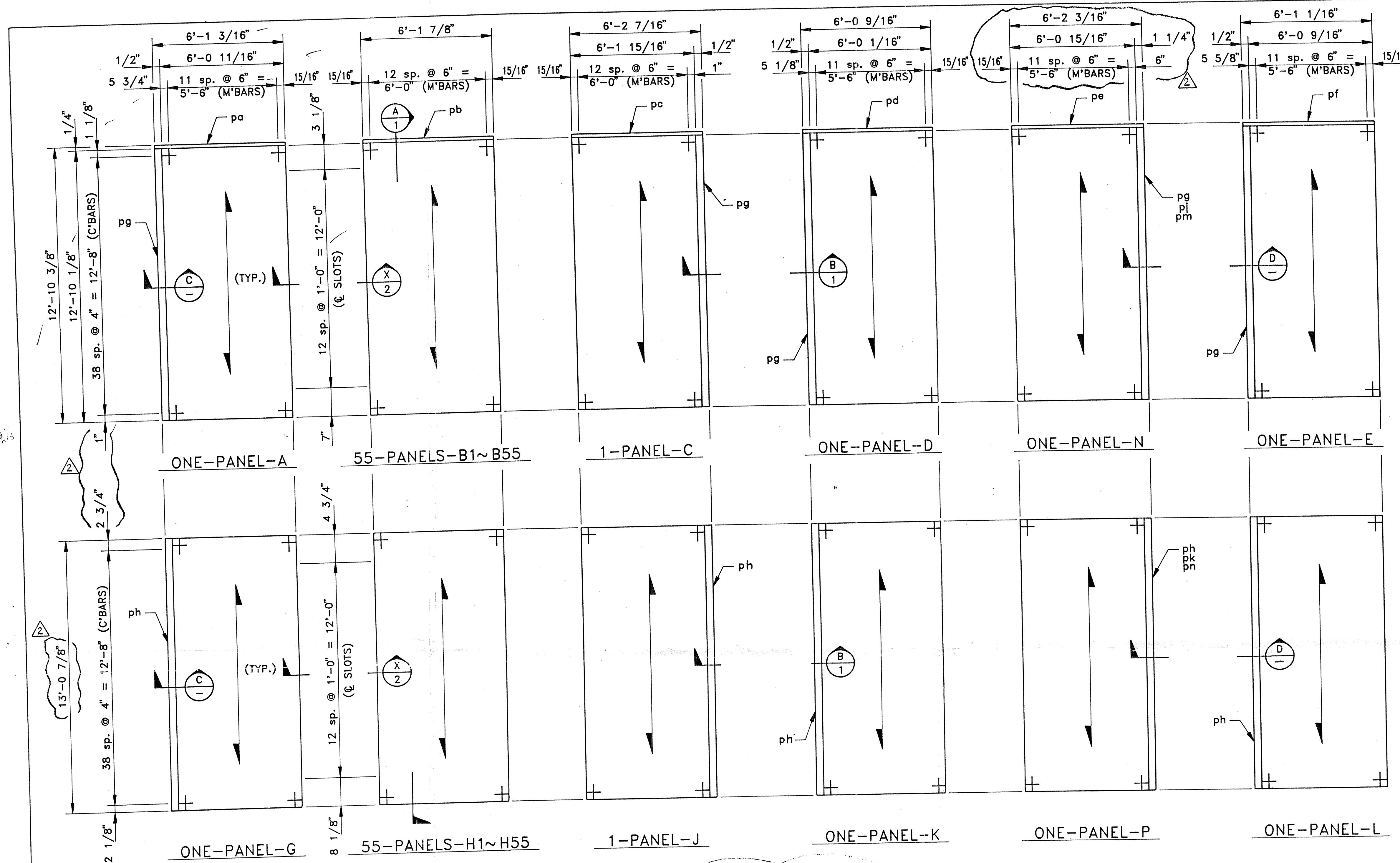
IKG/GREULICH

DATE MAY 20 1994

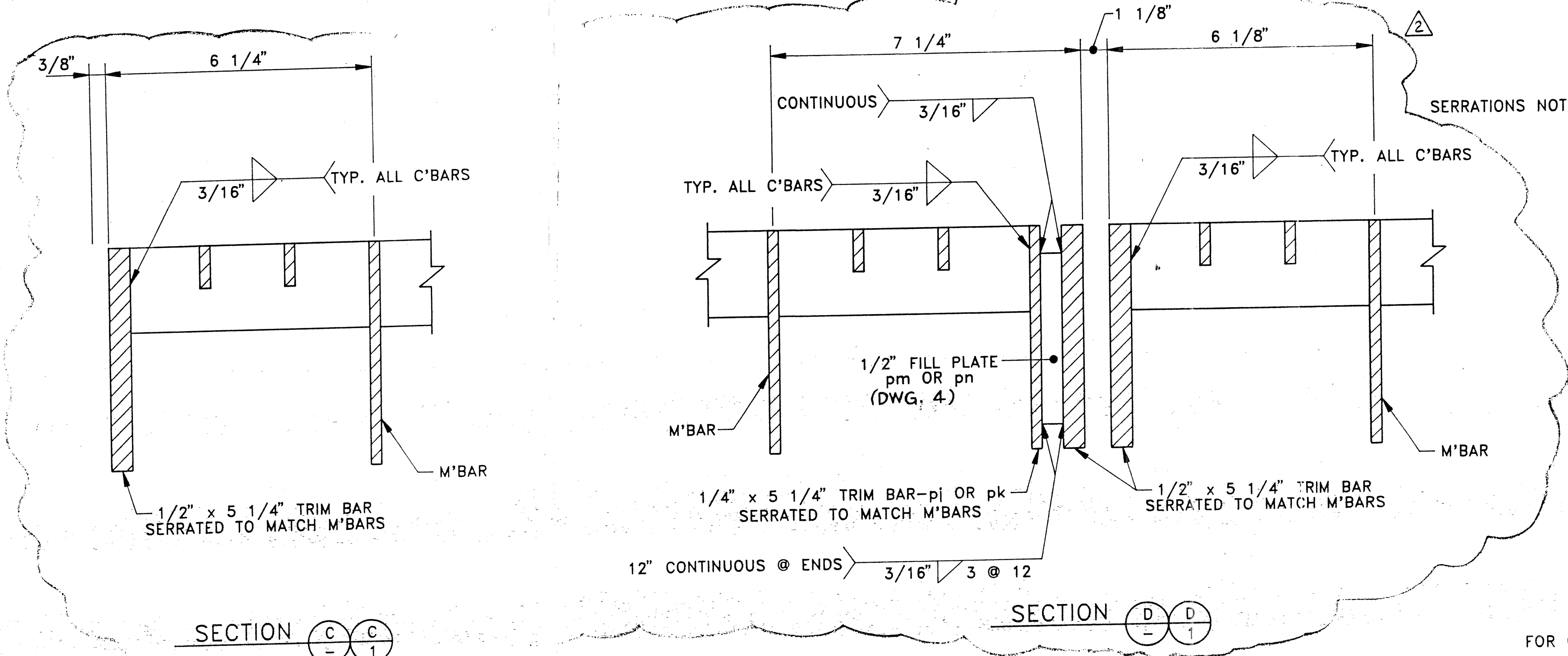
FOR GENERAL NOTES, SEE DWG. 1.

PROJECT NO.: 686202	B.L.N.:	CUSTOMER: LOUIS W. BRAY CONST. LIMITED
P.I.N.:	GRID: ARMAGRID 'A' INTERLOCK	
REVISOR: 5/19/94	DATE: 5/20/94	FOR: PUBLIC WORKS CANADA
REVISOR: 3/22/94	DATE: 5/20/94	ENG.: PUBLIC WORKS CANADA
CAD FILE: BURL2.DWG	DISC #: PJC40	PROJ.: BURLINGTON CANAL LIFT BRIDGE
CONTRACT DWGS.:	APPROVED: AS NOTED	LOCATION: BURLINGTON, ONTARIO
REL. TO FABRICATION:	3/4/94	STANDARD DWG.
DRAWN: 3/4/94	CUST./P.O. NO. 1803	IKG JOB NO. C-4-0
CHECKED: PJC 3/7/94		DWG. NO. 2
		TOTAL 4





BILL OF MATERIAL				
MK	QTY	DESCRIPTION	MATERIAL	SQ. FT.
A	1	PANEL A		78.46
12		M'BARS x 12'-10 1/8" LG.		
39		C'BARS x 6'-0 11/16" LG.		
24		SUPP'L BARS x 12'-10 1/8" LG.		
B	55	PANELS B1 thru B55		4355.87
715		M'BARS x 12'-10 1/8" LG.		
2145		C'BARS x 6'-1 7/8" LG.		
1320		SUPP'L BARS x 12'-10 1/8" LG.		
C	1	PANEL C		79.80
13		M'BARS x 12'-10 1/8" LG.		
39		C'BARS x 6'-1 15/16" LG.		
24		SUPP'L BARS x 12'-10 1/8" LG.		
D	1	PANEL D		77.79
12		M'BARS x 12'-10 1/8" LG.		
39		C'BARS x 6'-0 1/16" LG.		
24		SUPP'L BARS x 12'-10 1/8" LG.		
E	1	PANEL E		78.33
12		M'BARS x 12'-10 1/8" LG.		
39		C'BARS x 6'-0 9/16" LG.		
24		SUPP'L BARS x 12'-10 1/8" LG.		
N	1	PANEL N		79.59
12		M'BARS x 12'-10 1/8" LG.		
39		C'BARS x 6'-0 15/16" LG.		
24		SUPP'L BARS x 12'-10 1/8" LG.		
G	1	PANEL G		79.73
12		M'BARS x 13'-0 7/8" LG.		
39		C'BARS x 6'-0 11/16" LG.		
24		SUPP'L BARS x 13'-0 7/8" LG.		
H	55	PANELS H1 thru H55		4426.41
715		M'BARS x 13'-0 7/8" LG.		
2145		C'BARS x 6'-1 7/8" LG.		
1320		SUPP'L BARS x 13'-0 7/8" LG.		
J	1	PANEL J		81.09
13		M'BARS x 13'-0 7/8" LG.		
39		C'BARS x 6'-1 15/16" LG.		
24		SUPP'L BARS x 13'-0 7/8" LG.		
K	1	PANEL K		79.05
12		M'BARS x 13'-0 7/8" LG.		
39		C'BARS x 6'-0 1/16" LG.		
24		SUPP'L BARS x 13'-0 7/8" LG.		
L	1	PANEL L		79.59
12		M'BARS x 13'-0 7/8" LG.		
39		C'BARS x 6'-0 9/16" LG.		
24		SUPP'L BARS x 13'-0 7/8" LG.		
P	1	PANEL P		80.82
12		M'BARS x 13'-0 7/8" LG.		
39		C'BARS x 6'-0 15/16" LG.		
24		SUPP'L BARS x 13'-0 7/8" LG.		
TRIM BARS				
pa	1	1/4" x 2" x 6'-1 3/16" LG.		
pb	55	1/4" x 2" x 6'-1 7/8" LG.		
pc	1	1/4" x 2" x 6'-2 7/16" LG.		
pd	1	1/4" x 2" x 6'-0 9/16" LG.		
pe	1	1/4" x 2" x 6'-2 3/16" LG.		
pf	1	1/4" x 2" x 6'-1 1/16" LG.		
pg	5	1/2" x 5 1/4" x 12'-10 1/8" LG.		
ph	5	1/2" x 5 1/4" x 13'-0 7/8" LG.		
pi	1	1/4" x 5 1/4" x 12'-10 1/8" LG.		
pk	1	1/4" x 5 1/4" x 13'-0 7/8" LG.		
FIELD BOLTS (GALV.) (SHIP LOOSE)				
FB1	1600	BOLT 3/4" x 0'-3 1/2" LG. W/(1) H.N. & W.		% ADDED
	1600	PIPE SPACER 1" SCH. 40 x 0'-1 1/2" LG.	A.S.T.M. A53	
	3500	OVERSIZE WASHER (SHIMS) FOR 3/4" BOLT		
TOTAL SQUARE FEET THIS DWG.				9576.47

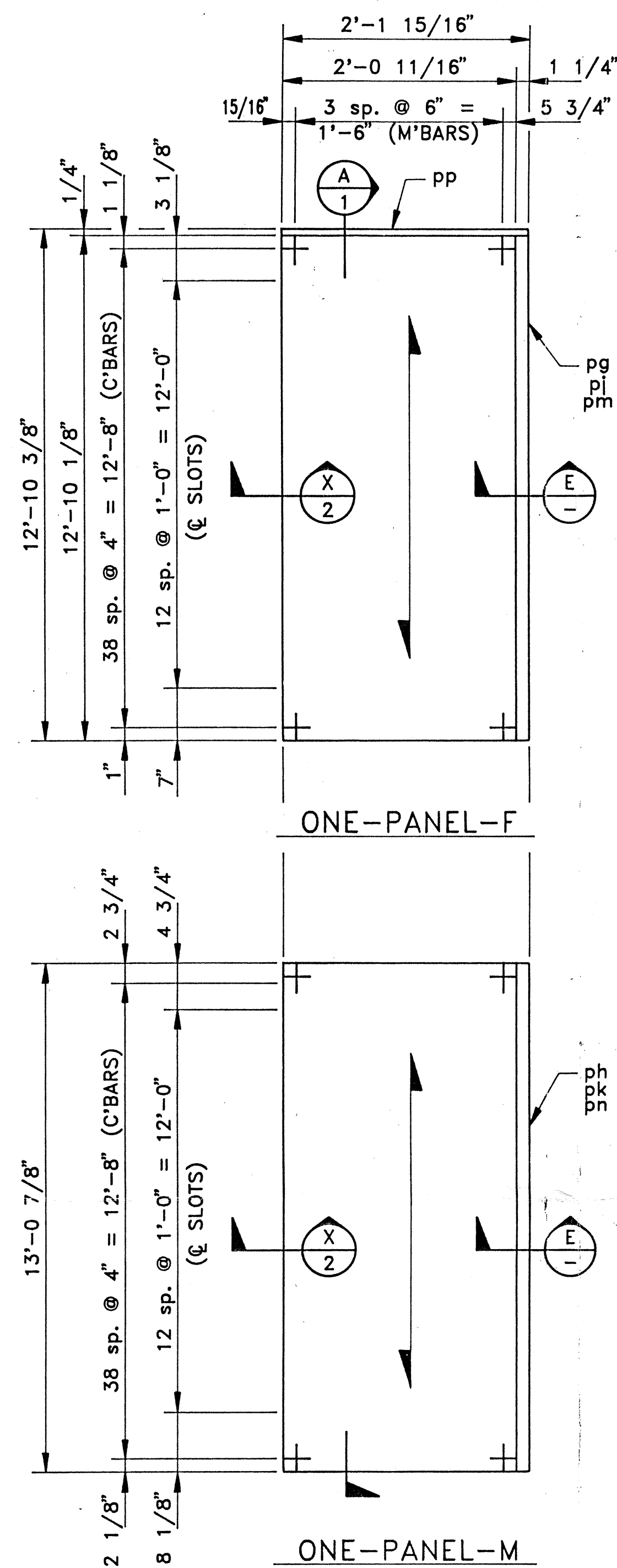


FOR APPROVAL  
IKG/GREULICH  
DATE MAY 20 1994

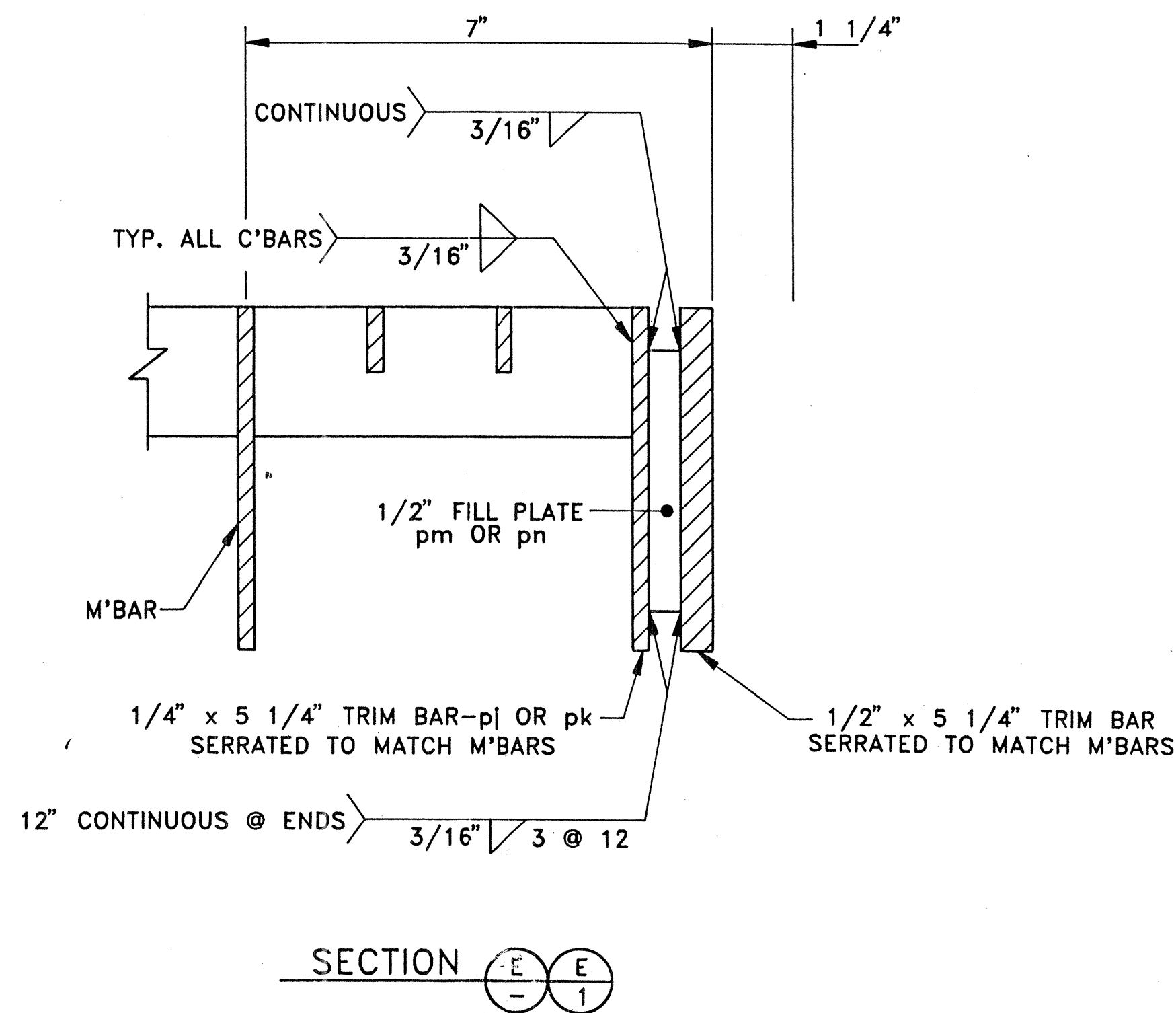
DRAWING REVIEW  
REVIEW OF THIS DRAWING  
BY: [Signature]  
DATE: 4/14/94

PROJECT NO: 686202		B.I.N.:	
P.I.N.:		GRID: ARMAGRID 'A' INTERLOCK	
REVISED PER CONTRACTOR/APPROVER COMMENT	5/19/94	SEE STD. DWG. No. 2	
REVISIONS	DATE	SUBMITTALS	1st 3/7/94 2nd 5/20/94
CAD FILE: BURL3.DWG	DISC #: PJ40	APPROVED:	AS NOTED FINAL
REL. TO FABRICATION:		PANEL DETAILS	
DRAWN:	3/3/94	CUST./P.O. NO.	1803
CHECKED:	PJC 3/7/94	IKG JOB NO.	G-4-0
DWG. NO. TOTAL		REV.	
3 4		A	

FOR GENERAL NOTES SEE DWG. No. 1

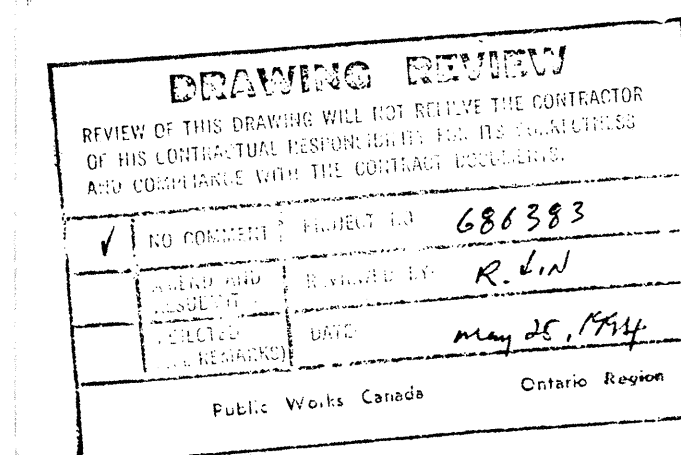


SERRATIONS NOT SHOWN IN SECTIONS FOR CLARITY



DRAWING & CONTENTS NEW PER  
REVISIONS TO DRAWINGS 1-3

BILL OF MATERIAL				
MK	QTY	DESCRIPTION	MATERIAL	SQ. FT.
F	1	PANEL F		27.81
	4	M'BARs x 12'-10 1/8" LG.		
	39	C'BARs x 2'-0 11/16" LG.		
	8	SUPP'L BARs x 12'-10 1/8" LG.		
M	1	PANEL M		28.26
	4	M'BARs x 13'-0 7/8" LG.		
	39	C'BARs x 2'-0 11/16" LG.		
	8	SUPP'L BARs x 13'-0 7/8" LG.		
		TRIM BARS		
pg	1	1/2" x 5 1/4" x 12'-10 1/8" LG.		
ph	1	1/2" x 5 1/4" x 13'-0 7/8" LG.		
pl	1	1/4" x 5 1/4" x 12'-10 1/8" LG.		
pk	1	1/4" x 5 1/4" x 13'-0 7/8" LG.		
pp	1	1/4" x 2" x 2'-1 15/16" LG.		
		FILL PLATES		
pm	2	1/2" x 4" x 12'-10 1/8" LG.		
pn	2	1/2" x 4" x 13'-0 7/8" LG.		
TOTAL SQUARE FEET THIS DWG.				56.07
TOTAL SQUARE FEET				9632.54

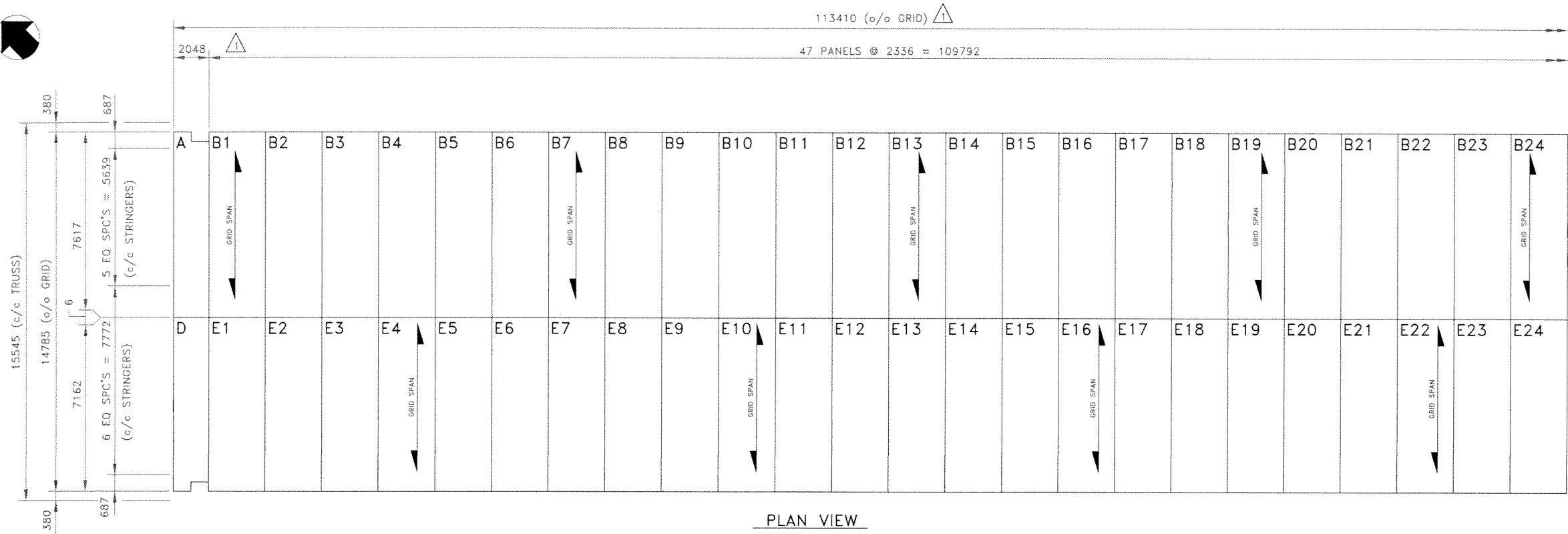


FOR APPROVAL  
IKG/GREULICH  
DATE MAY 20 1994

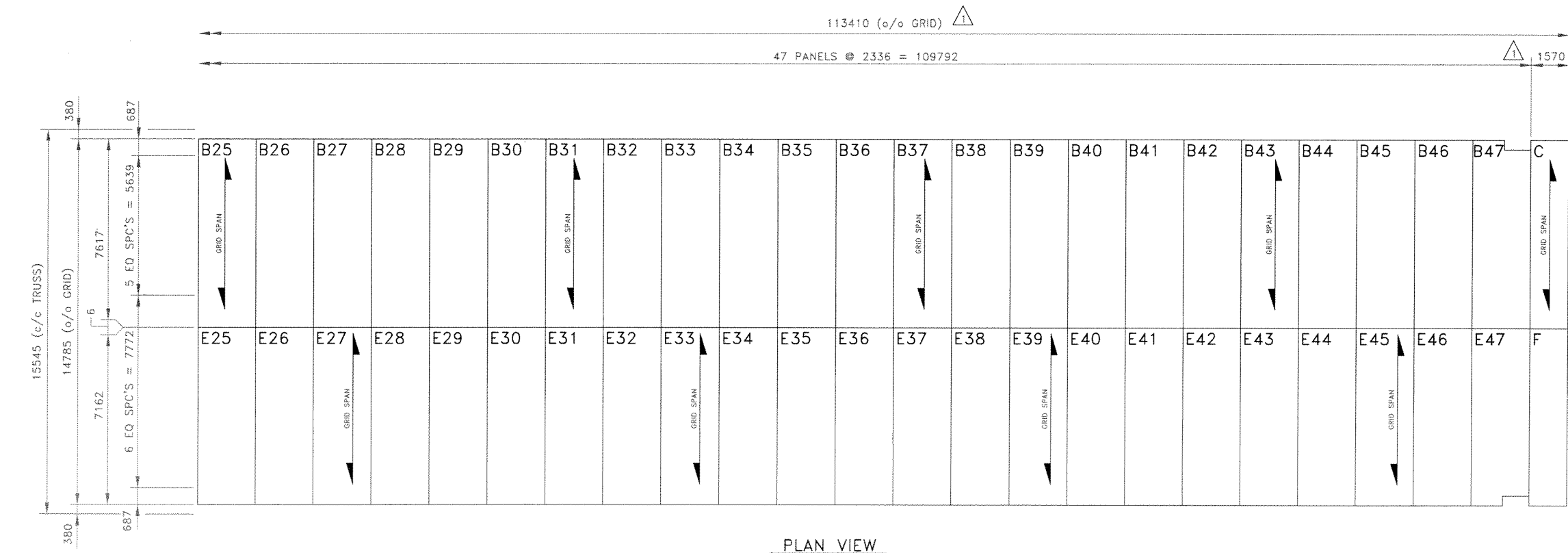
FOR GENERAL NOTES SEE DWG. No. 1

PROJECT NO.: 686202		<b>IKG GREULICH</b> BRIDGE FLOORING SYSTEMS A Division of Harsco Corporation R.D. #2 Route 910, P.O. Box 295, Cheswick, Pennsylvania 15024 Telephone: (412) 828-2223 Fax: (412) 828-4103 Shop: (412) 828-6444	
B.I.N.:			
P.I.N.:			
GRID: ARMAGRID 'A' INTERLOCK			
SEE STD. DWG. No. 2		CUSTOMER: LOUIS W. BRAY CONST. LIMITED	
SUBMITTALS: 1st 5/20/94 2nd		FOR: PUBLIC WORKS CANADA	
DATE: 5/20/94		ENG.: PUBLIC WORKS CANADA	
APPROVED: AS NOTED FINAL		PROJ.: BURLINGTON CANAL LIFT BRIDGE	
CONTRACT DWGS.:		LOCATION: BURLINGTON, ONTARIO	
REL. TO FABRICATION:		PANEL DETAILS	
DRAWN: 5/19/94		CUST./P.O. NO. 1803	IKG JOB NO. G-4-0
CHECKED: PJC 5/20/94		DWG. NO. 4	REV. 4





PLAN VIEW



PLAN VIEW

FOR APPROVAL STAMP

REVISIONS		DATE	SUBMITTALS	1st	2nd
CAD FILE: G080007-1.DWG DISC # SM 110			APPROVED:	AS NOTED	FINAL
CONTRACT DWGS.: PUBLIC WORKS DWG'S			REL. TO FABRICATION:	1/19/00	
1, 2, & 3 of 3, 0 REV.			DRAWN:	SM 12/15/99	
DRAWING NOT TO SCALE UNLESS NOTED			CHECKED:	CMS 12/15/99	
DRAWING AND CONTENTS PROPERTY OF IKG/GREULICH					

CONTRACT NO.:				FOR GREULICH USE ONLY	
B.I.N.:					
P.I.N.: 104365					
GRID: 5" 4WAY OPEN					
SEE STD. DWG. No. 2					
PER APPROVER COMMENTS					
REVISIONS					
DATE					
SUBMITTALS					
1/11/00					
APPROVED:					
1/19/00					
REL. TO FABRICATION:					
1/19/00					
DRAWN:					
SM 12/15/99					
CHECKED:					
CMS 12/15/99					

IKG GREULICH					
BRIDGE FLOORING SYSTEMS					
A Division of Harsco Corporation					
Route 910, P.O. Box 295, Cheswick, Pennsylvania 15024-9401					
Telephone: (412) 828-2223 Fax: (412) 828-4103 Shop: (412) 828-8444					
CUSTOMER: LOUIS BRAY CONSTRUCTION					
FOR: PUBLIC WORKS CANADA					
ENG.: PUBLIC WORKS CANADA					
PROJ.: BURLINGTON LIFT BRIDGE-NEW GRID DECK					
LOCATION: HAMILTON, ONTARIO					
TITLE: PLAN VIEW					
CUST./P.O. NO.		IKG JOB NO.		DWG. NO. TOTAL	
		G-080007		1 3	
				REV.	
				1	



WELDING PROCESS

ALL WELDING TO BE DONE IN ACCORDANCE WITH AASHTO HIGHWAY AND BRIDGE SPEC. A.W.S.D1.5-95.

MATERIAL SPECIFICATIONS

- M'BEAMS (7.8 kg/m) TO BE A.S.T.M. A588
- C'BAR (6.35 x 50.80) TO BE A.S.T.M. A588
- SUPP'L BARS (6.35 x 25.40) TO BE A.S.T.M. A588
- DIAG. BARS (6.35 x 25.40) TO BE A.S.T.M. A588

FINISH SPECIFICATIONS

- PREP.: NO SANDBLASTING BY IKG INDUSTRIES
- PAIN:

GALVANIZING SPECIFICATIONS

WHEN REQUIRED, MATERIAL TO BE HOT-DIP GALVANIZED AFTER FABRICATION AS PER A.S.T.M. A123 LATEST REVISION. PANELS NOT TO EXCEED 2337 WIDE WHEN GALVANIZING.

CUSTOMER NOTES

IKG DRAWINGS MUST BE REVIEWED BY THE CONTRACTOR FOR CONFORMITY, WORKABILITY & COMPATIBILITY WITH THE EXISTING STRUCTURE PRIOR TO AUTHORIZING FABRICATION.

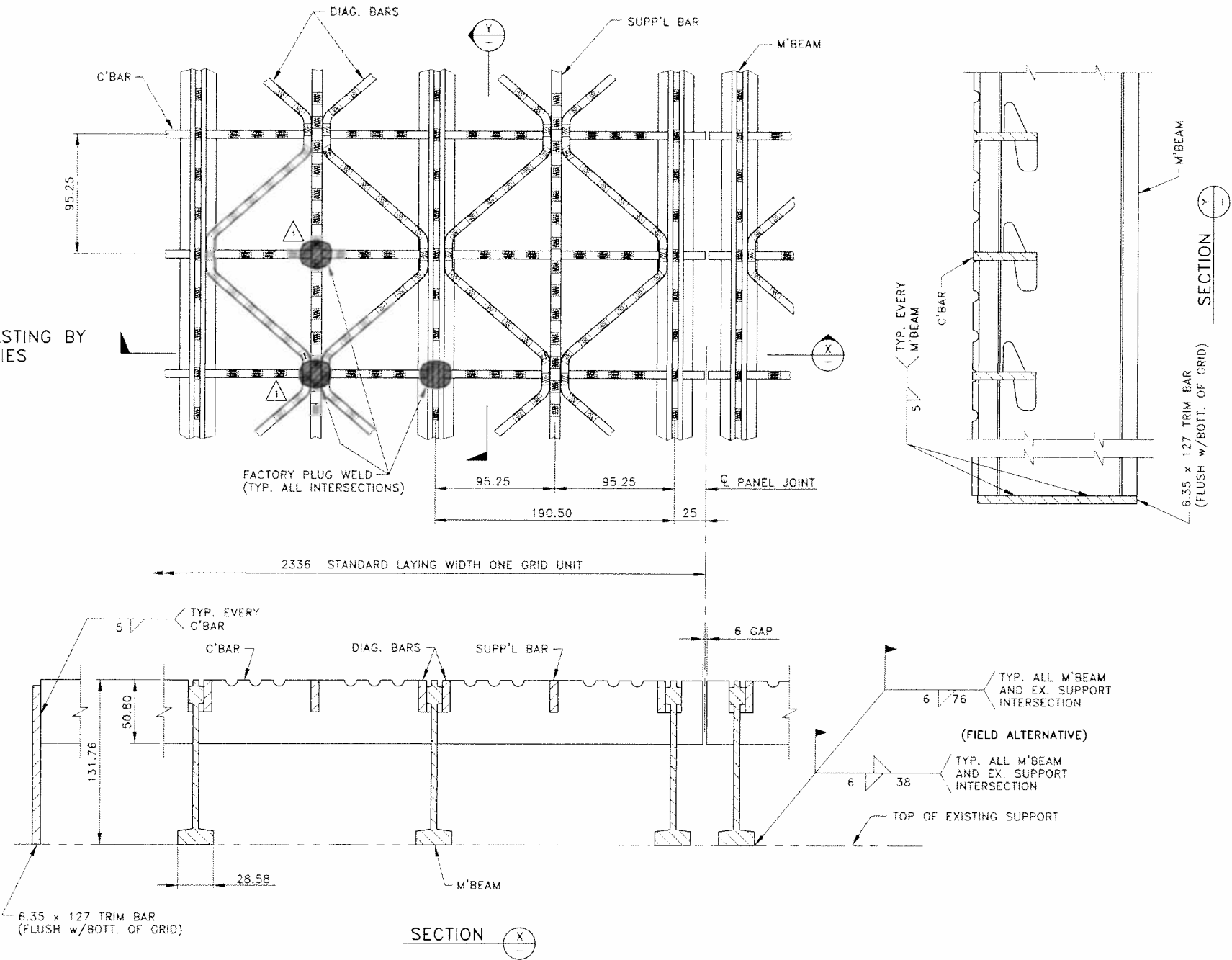
SHOP MARK EACH PANEL IN UPPER LEFT HAND CORNER AND FIELD MATCH AT INSTALLATION.

ALL MATERIAL SUBJECT TO SHOP/MILL TOLERANCES.

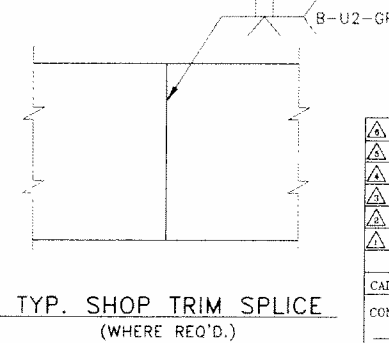
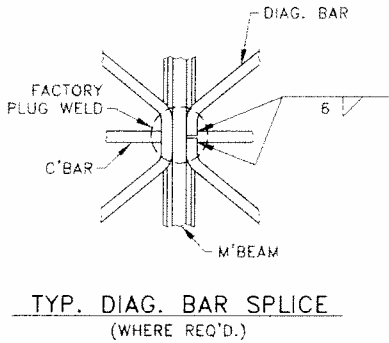
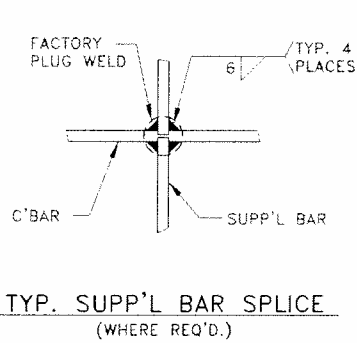
MANUFACTURER RESERVES THE RIGHT TO MAKE MINOR CHANGES FOR PRODUCT IMPROVEMENT.

WHEN REQUIRED SERRATIONS TO BE APPROXIMATELY 4.76 DEEP x 9.53 WIDE AND SPACED AT RANDOM.

WHEN THIS PRODUCT IS USED ON A MOVEABLE BRIDGE OR OTHER WEIGHT CRITICAL APPLICATION, ACTUAL FINISH WEIGHT TO BE DETERMINED BY THE CONTRACTOR PRIOR TO INSTALLATION.

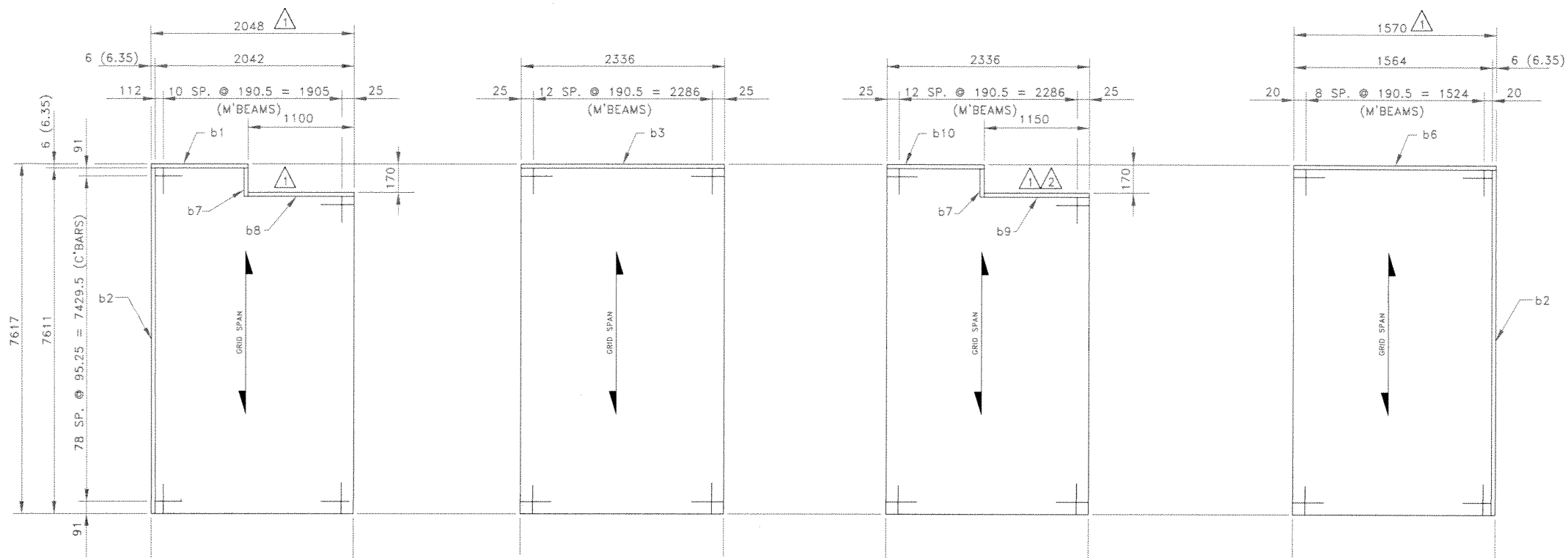


IKG STANDARD PANEL TOLERANCES	
PANEL WIDTH	+0mm -3mm
PANEL LENGTH	±6mm
SQUARENESS	±12mm MEASURED DIAGONALLY
TRANSVERSE CAMBER (WIDTH)	.005 x WIDTH
LONGITUDINAL CAMBER (LENGTH)	.003 x LENGTH
SIDE BOW (SWEEP)	±3mm PER 1000 LINEAL mm
MAIN BAR VERTICALITY	±3mm
CROSS BAR VERTICALITY	±2mm



CONTRACT NO.	BRIDGE FLOORING SYSTEMS
P.L.N.	A Division of Harsco Corporation
P.I.N. 104365	Route 910, P.O. Box 295, Cheswick, Pennsylvania 15024-9401
GRID 5" 4way OPEN (METRIC)	Telephone: (412) 828-2223 Fax: (412) 828-4103 Shop: (412) 828-6444
SEE STD. DWG.	CUSTOMER: LOUIS BRAY CONSTRUCTION
PER APPROVER COMMENTS 1/19/00	FOR: PUBLIC WORKS CANADA
REVISIONS DATE SUBMITTALS 1st 1/11/00 2nd	ENG.: PUBLIC WORKS CANADA
CAD FILE: G080007-2.DWG DISC # SM 110	PROJ.: BURLINGTON LIFT BRIDGE-NEW GRID DECK
APPROVED: 1/19/00	LOCATION: HAMILTON, ONTARIO
CONTRACT DWGS.	TITLE: STANDARD (METRIC)
REL TO FABRICATION: 1/19/00	CUST/P.O. NO.
DRAWN: SM 12/15/99	IKG JOB NO. G-080007
CHECKED: CMS 12/15/99	DWG. NO. 2
	TOTAL REV. 3



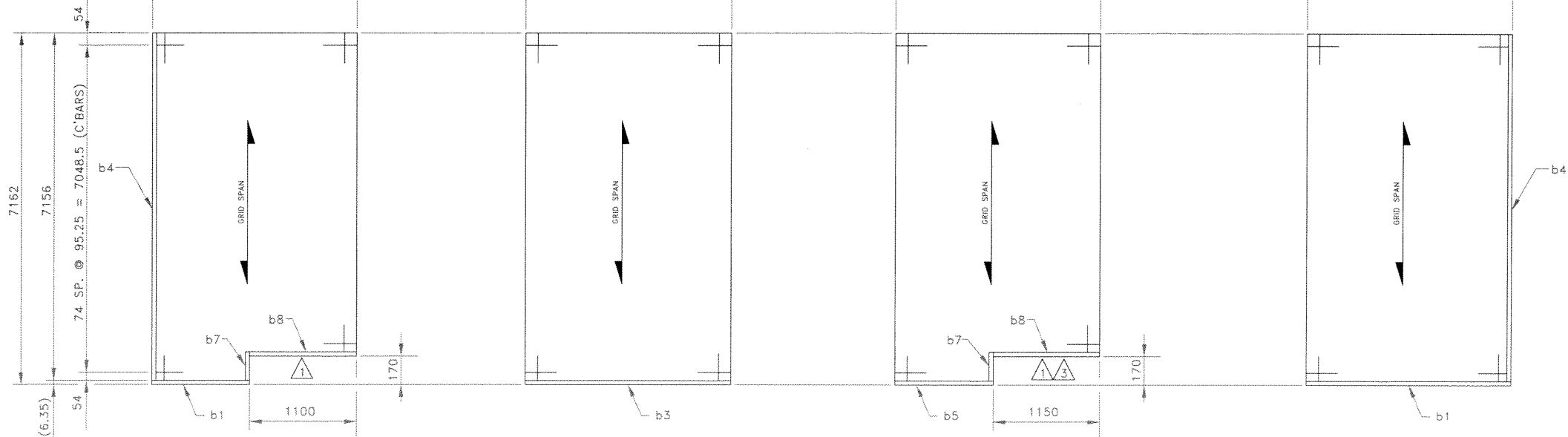


ONE PANEL A  
15.41 S.M.

46 PANELS B1 thru B46  
818.49 S.M.

ONE PANEL B47  
17.60 S.M.

ONE PANEL C  
11.96 S.M.



ONE PANEL D  
14.48 S.M.

46 PANELS E1 thru E46  
769.60 S.M.

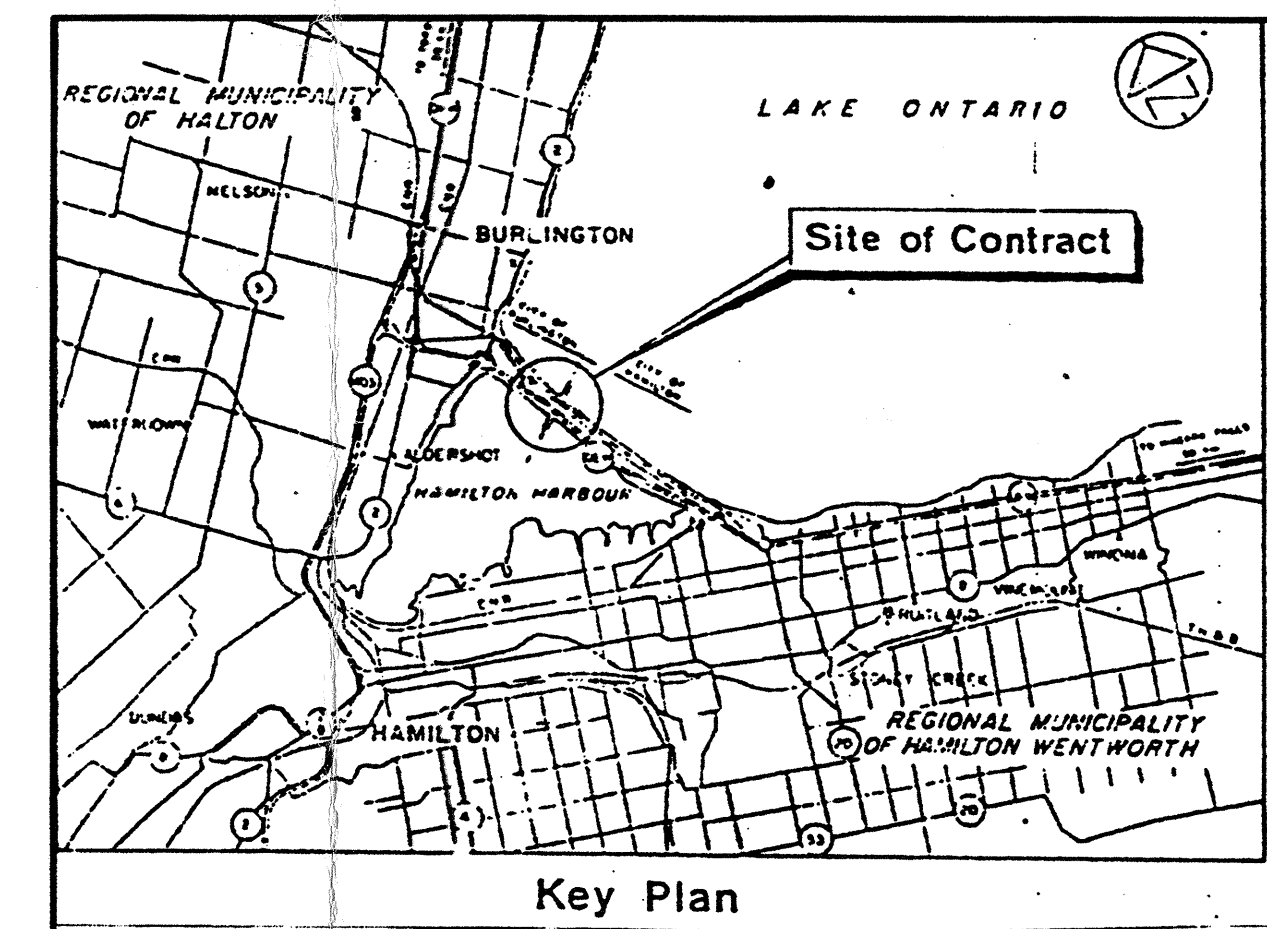
ONE PANEL E47  
16.54 S.M.

ONE PANEL F  
11.24 S.M.

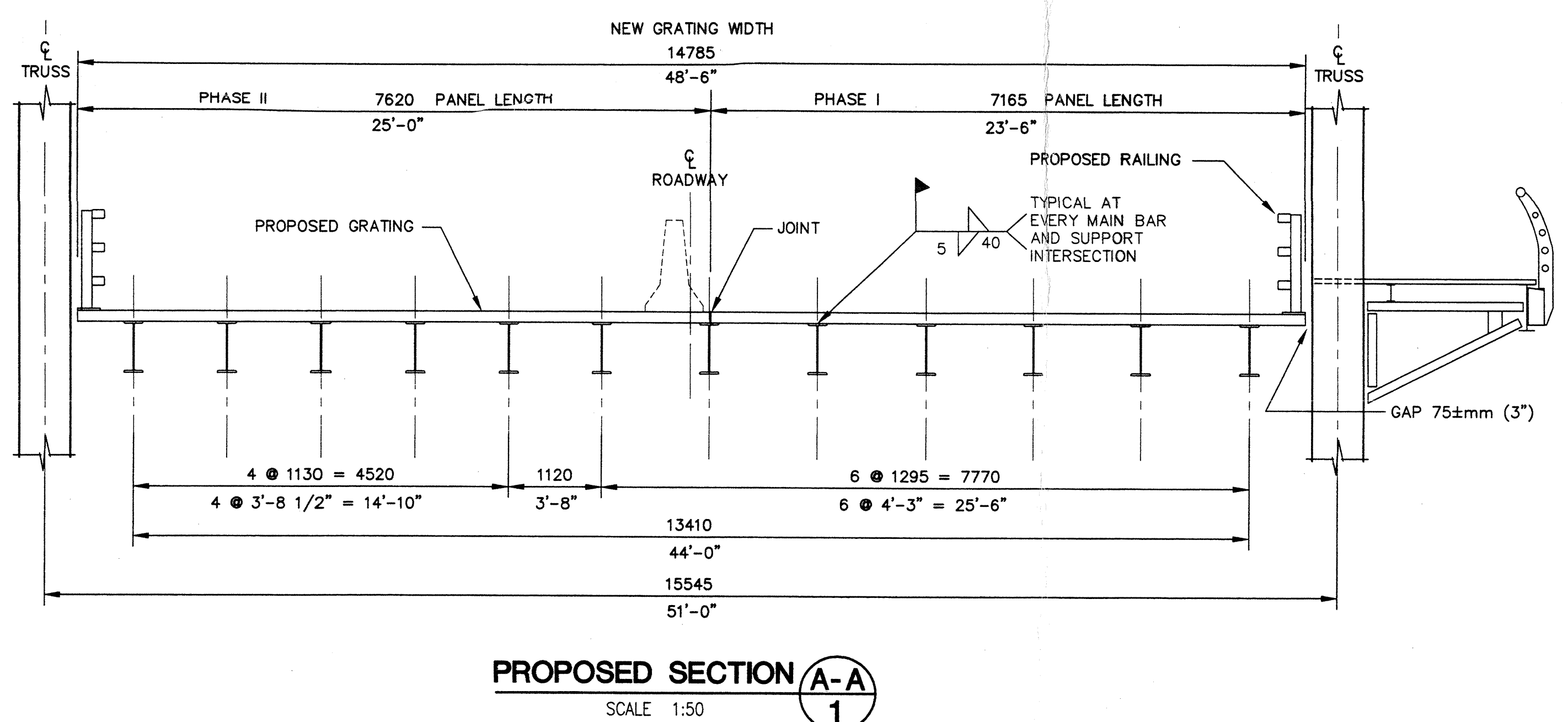
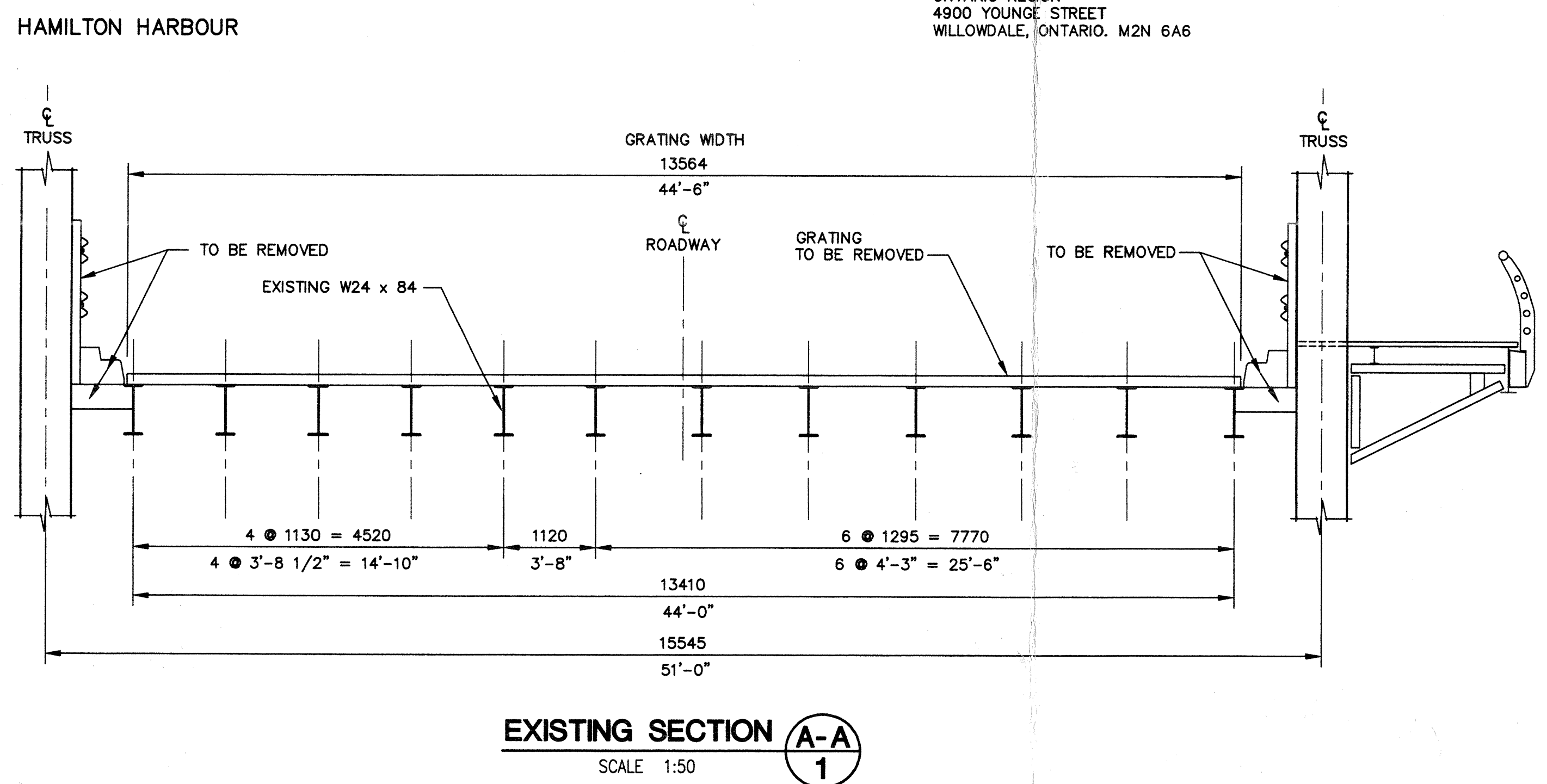
MATERIAL SPECIFICATION CHART			
MK	DESCRIPTION	SIZE	MATERIAL
b1 to b10	TRIM BARS	6.35 x 127	A.S.T.M. A588
TOTAL SQUARE METERS			1671.10

FOR APPROVAL STAMP		CONTRACT NO.:		<b>IKG GREULICH</b> BRIDGE FLOORING SYSTEMS A Division of Harsco Corporation Route 910, P.O. Box 295, Cheswick, Pennsylvania 15024-9401 Telephone: (412) 828-2223 Fax: (412) 828-4103 Shop: (412) 828-8444	
		P.I.N.: 104365			
		GRID: 5" 4WAY OPEN			
		SEE STD. DWG. No. 2			
PER CUSTOMER REQUEST 2/3/00		SUBMITTALS: 1st 1/11/00 2nd 1/19/00		CUSTOMER: LOUIS BRAY CONSTRUCTION	
PER CUSTOMER REQUEST 1/28/00		APPROVED: AS NOTED 1/19/00		FOR: PUBLIC WORKS CANADA	
PER APPROVER COMMENTS 1/19/00		DATE		ENG.: PUBLIC WORKS CANADA	
CAD FILE: G080007-3.DWG DISC # SM 110		CONTRACT DWGS.:		PROJ.: BURLINGTON LIFT BRIDGE-NEW GRID DECK	
DRAWING NOT TO SCALE UNLESS NOTED		REL. TO FABRICATION: 1/19/00		LOCATION: HAMILTON, ONTARIO	
DRAWING AND CONTENTS PROPERTY OF IKG/GREULICH		DRAWN: SM 12/15/99		TITLE: PANEL DETAILS	
		CHECKED: CMS 12/15/99		CUST./P.O. NO. IKG JOB NO. DWG. NO. TOTAL REV.	
				G-080007 3 3	

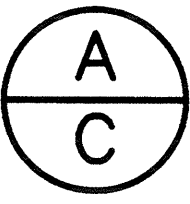
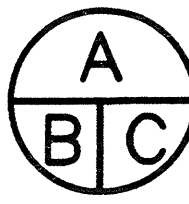




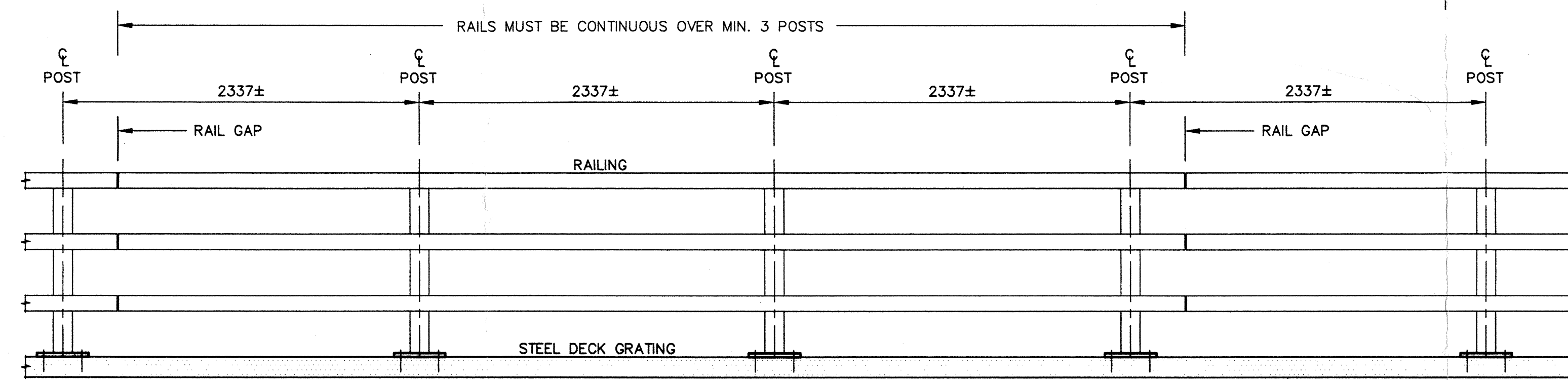
1. SPECIFICATIONS, PROJECT SPECIFICATIONS (HEREINAFTER THESE WILL BE REFERRED TO AS SPEC'S) AASHTO SPECIFICATIONS, CSA STANDARDS AND AS NOTED.
2. DESIGN CODE: CAN/CSA S6, UNLESS NOTED OTHERWISE.
3. DESIGN LOAD: CAN/CSA S6, CS600.
4. UNITS: 1. CHAINAGES AND ELEVATIONS IN m.  
2. DIMENSIONS IN mm.  
3. STEEL SECTIONS: IMPERIAL UNITS.
5. STRUCTURAL STEEL: TO CSA CAN3-G40.21, GRADE 300W. UNLESS NOTED OTHERWISE.
6. WELDING: TO CSA W59, UNLESS NOTED OTHERWISE.
7. DIMENSIONS OF EXISTING STRUCTURE TO BE VERIFIED BY CONTRACTOR IN FIELD, BEFORE COMMENCEMENT OF WORK.
8. INFORMATION AND BENCH MARKS, EXISTING STRUCTURE, LOCATION AND ORIENTATION TO BE OBTAINED FROM:  
PUBLIC WORKS AND GOVERNMENT SERVICES CANADA  
ONTARIO REGION  
4900 YOUNG STREET  
WILLOWDALE, ONTARIO, M2N 6A6



**PROPOSED SECTION** **A-A**  
SCALE 1:50

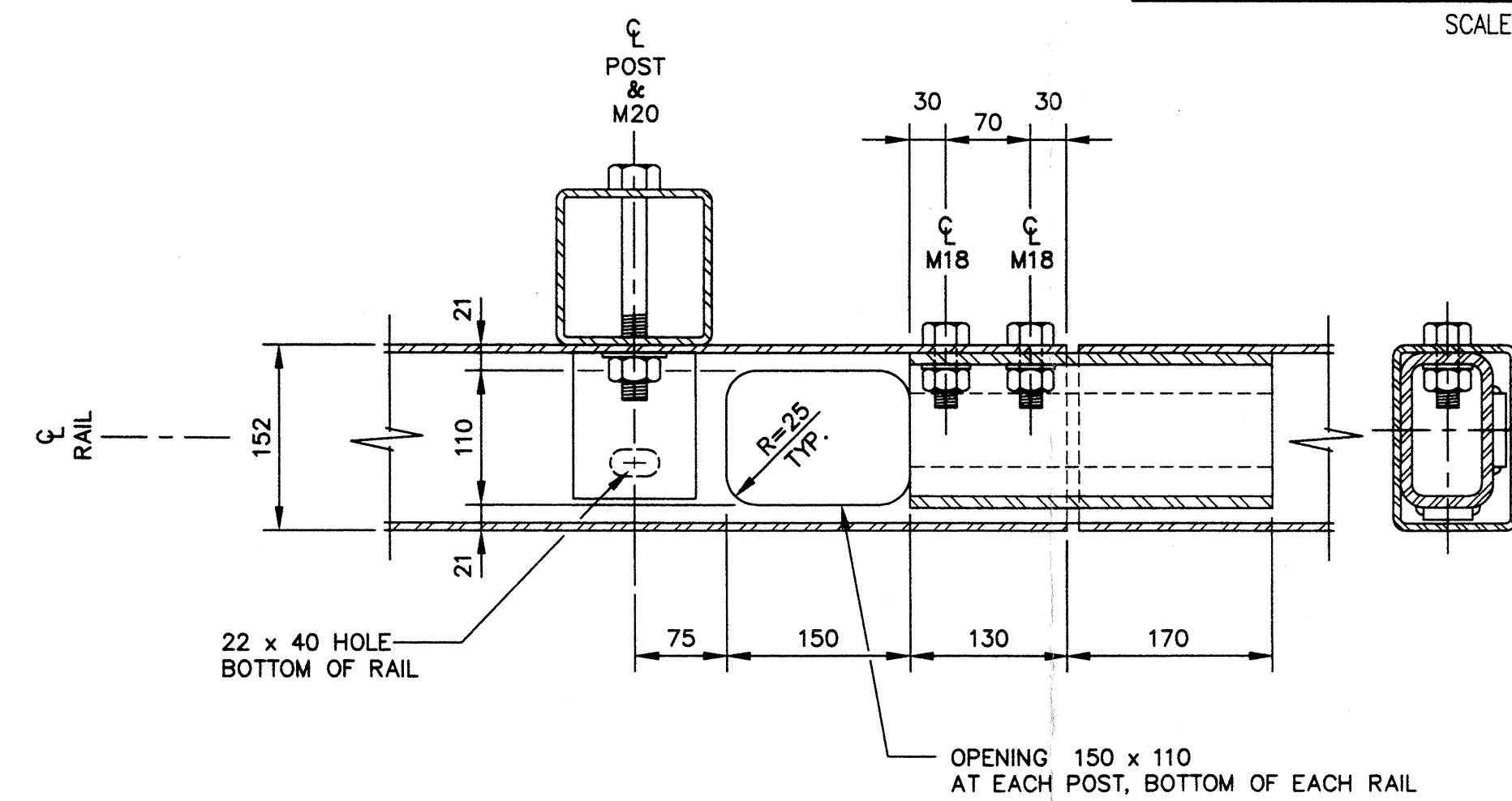
revisions		date
 <p>A detail no. no. du detail</p>  <p>B location drawing no. sur dessin no.</p> <p>C drawing no. dessin no.</p>		
project		project
<b>BURLINGTON CANAL LIFT BRIDGE</b>		
drawing		
<b>NEW DECK GRATING</b>		
designed date	R.H. PION	conçu
drawn date	G.E. ROBERTS	dessiné 99-10-29
reviewed date	R.H. PION	examine
approved date		approuvé
Tender	ENN LEESTI	Soumission
Project Manager	Administrateur de projets	
project no.	104365	no. du projet
drawing no.	1 / 3	no. du dessin





**ELEVATION - RAIL POST SPACING**

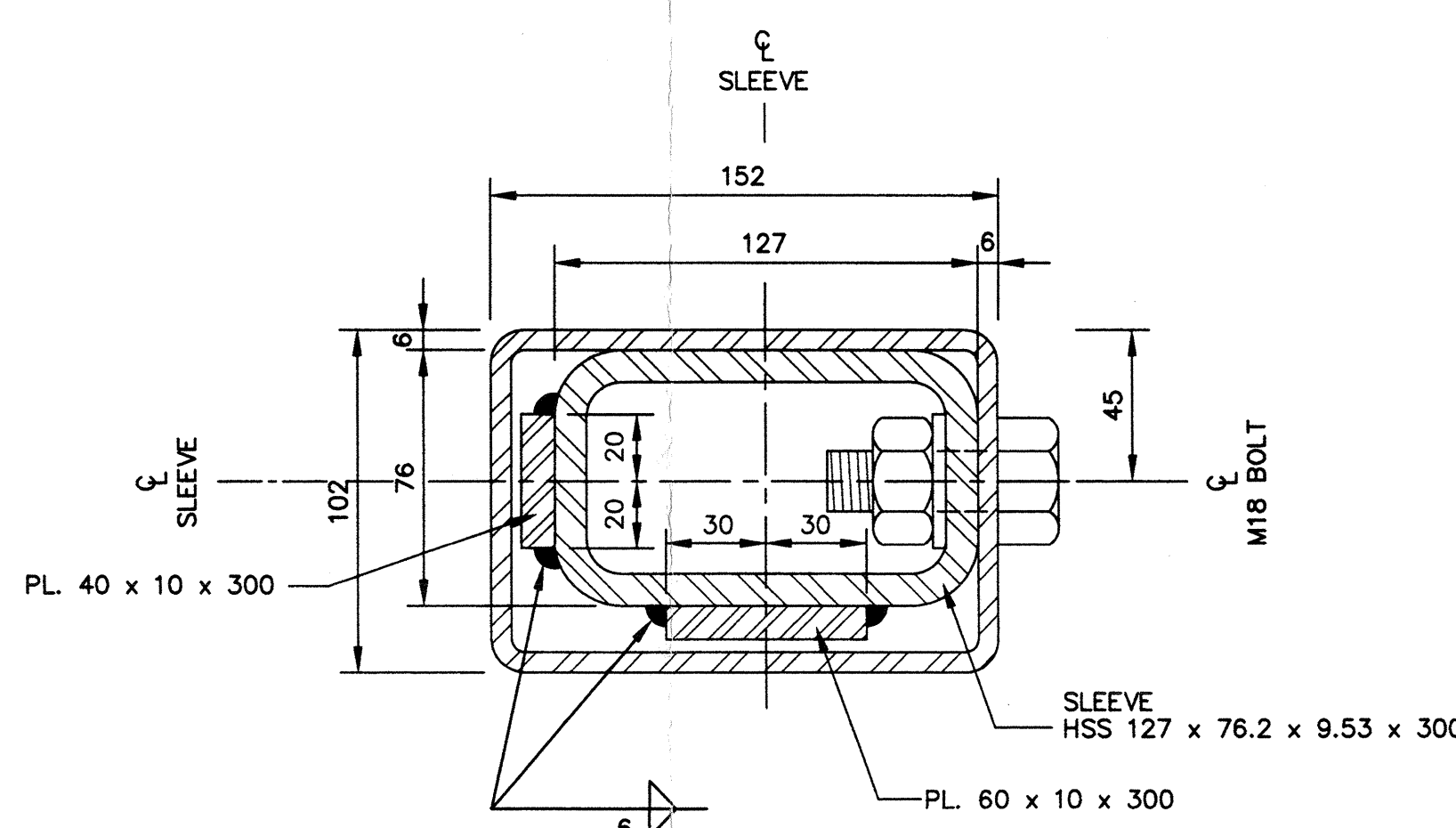
SCALE 1:2



**SECTION B**

SCALE 1:2

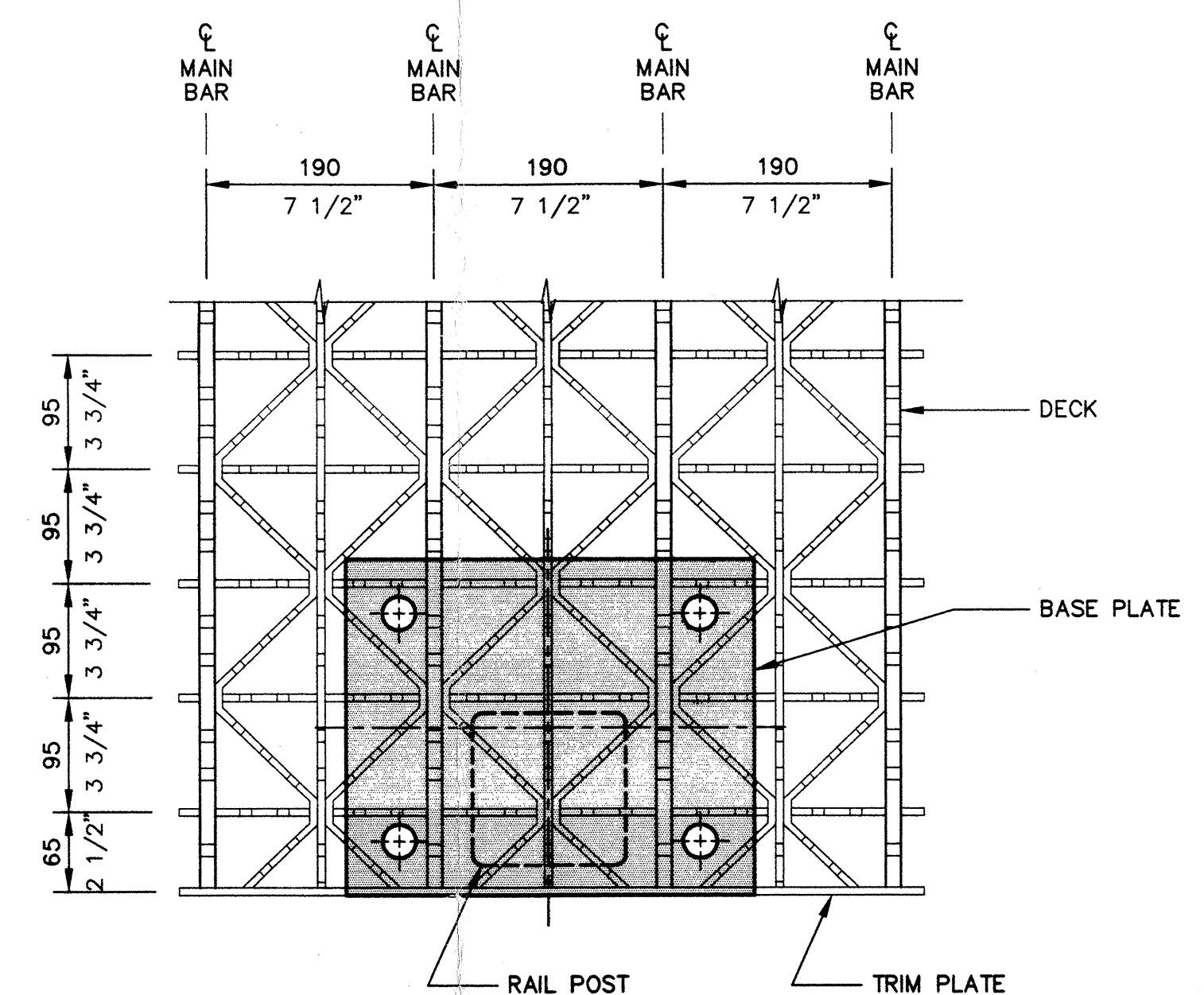
2/2



**SECTION C**

SCALE 1:2

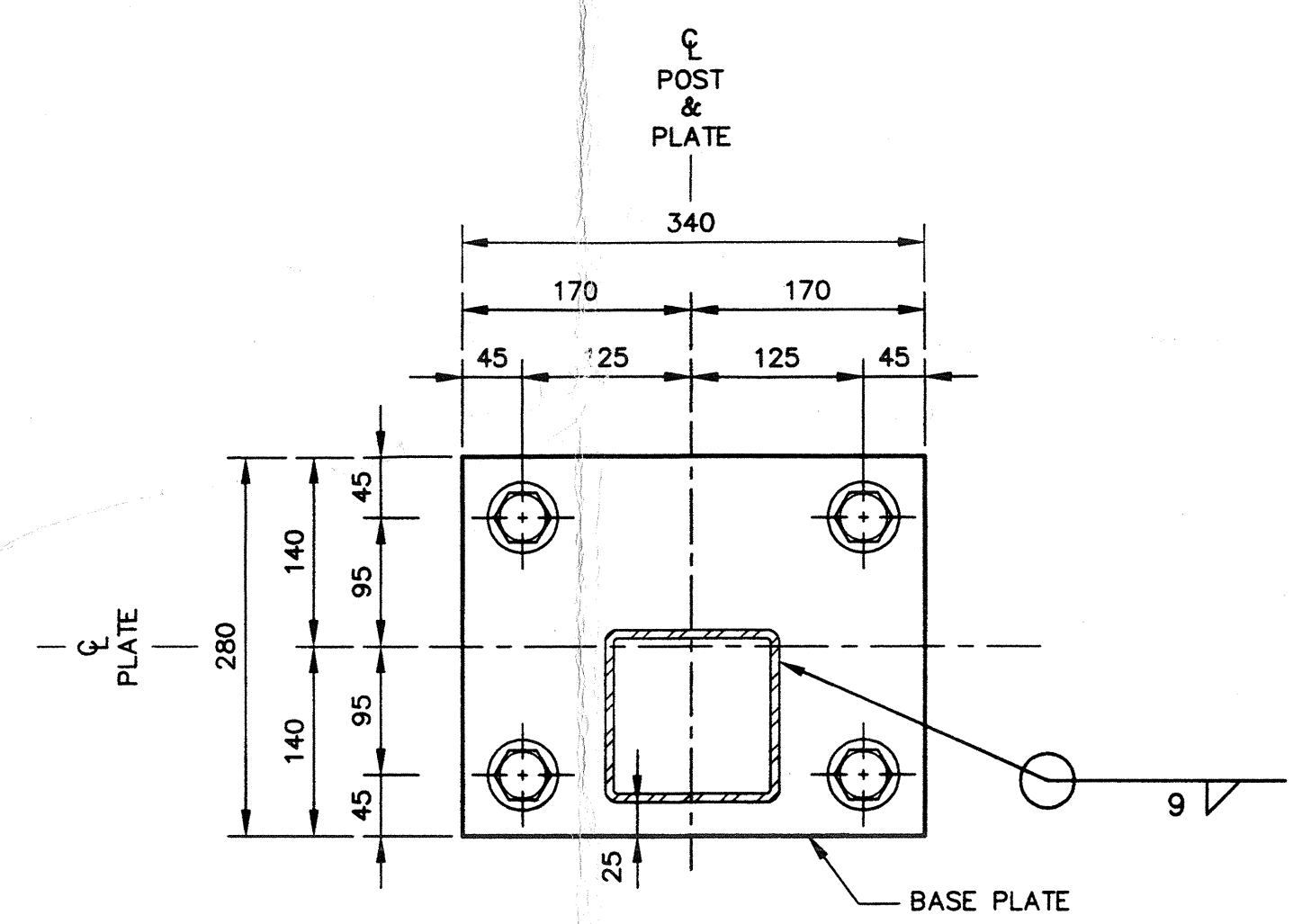
2/2



**PLATE LOCATION DETAIL**

SCALE 1:5

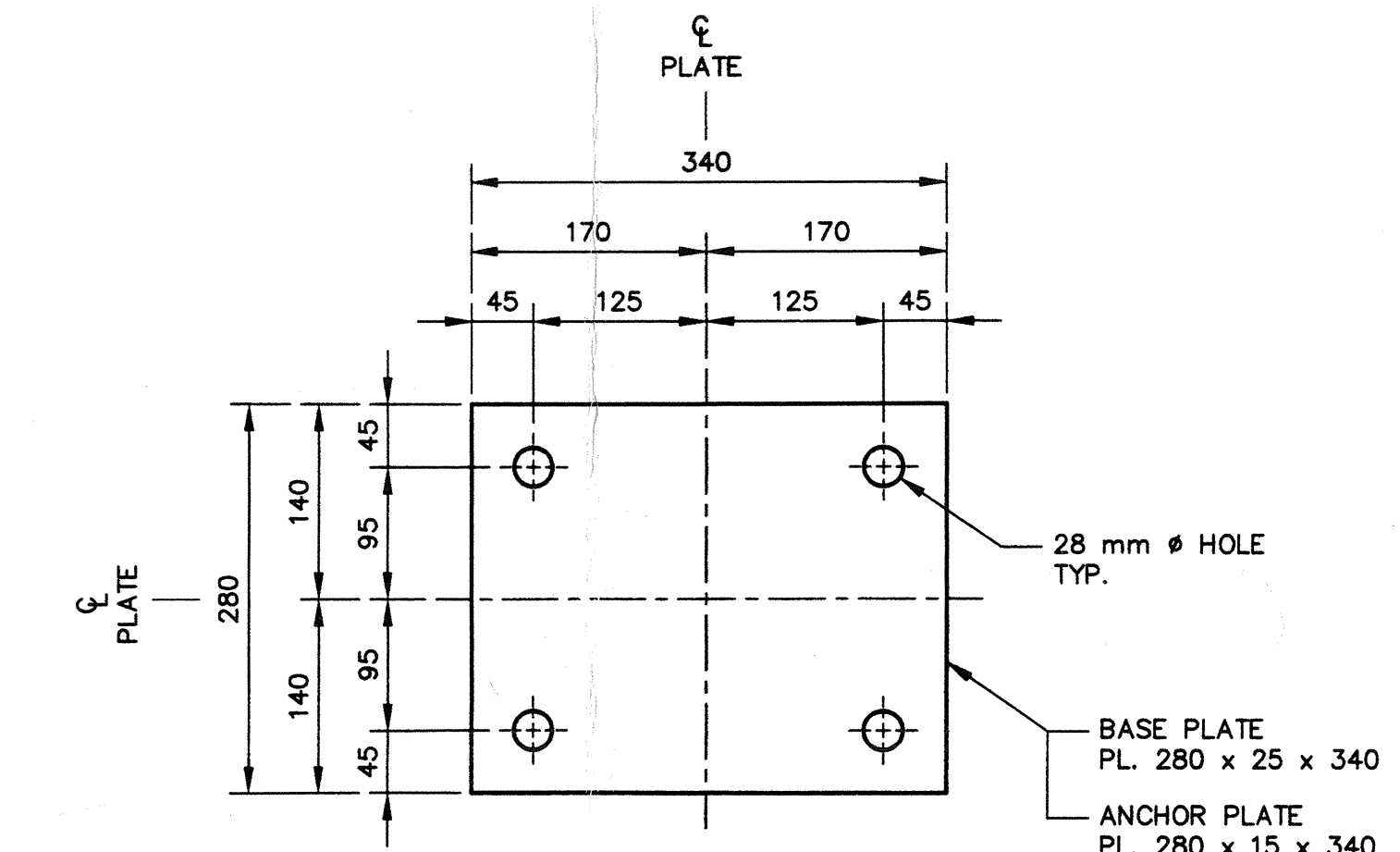
D 2/2



**POST AND BASE PLATE SECTION E**

SCALE 1:5

E 2/2



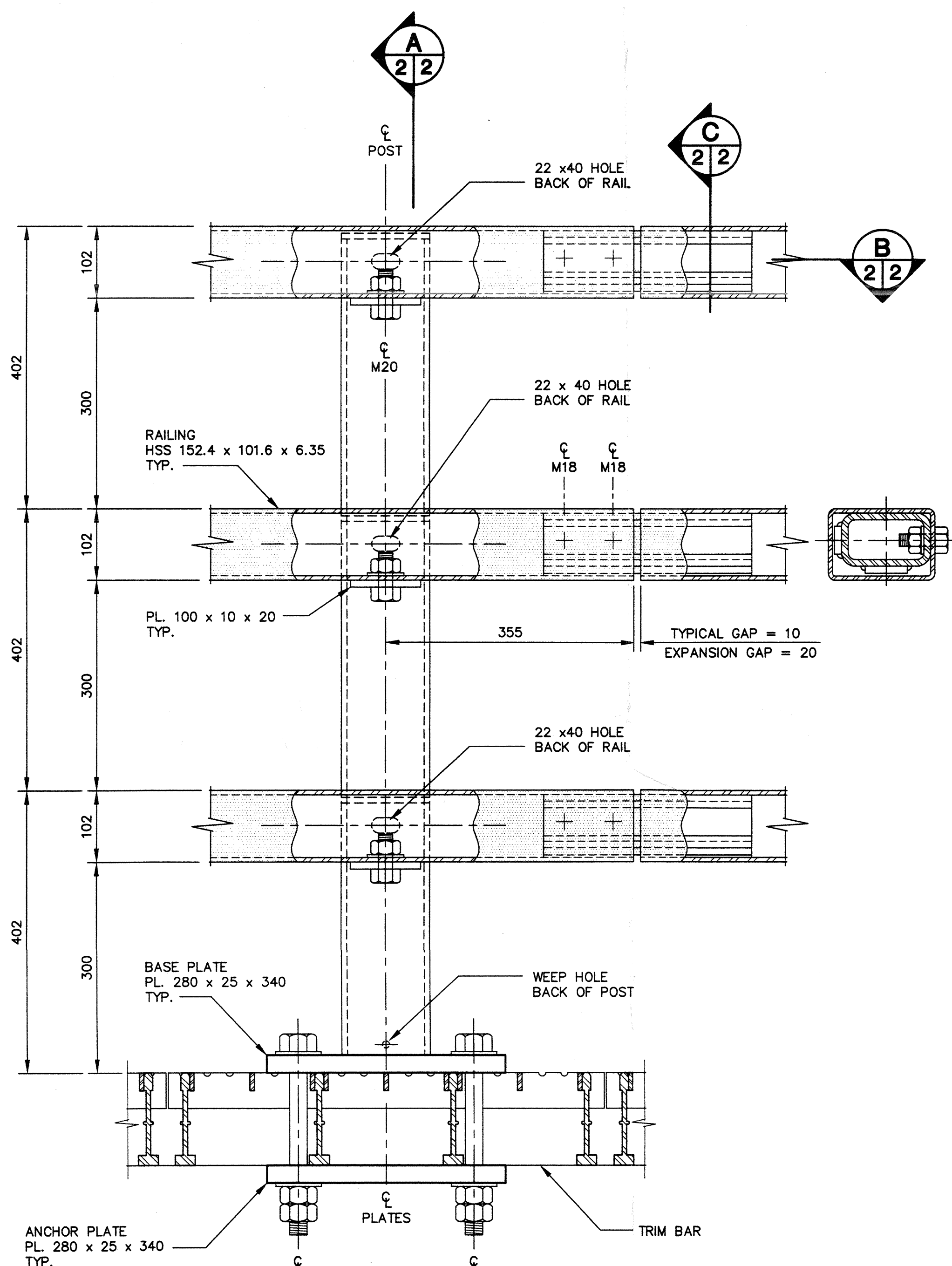
**ANCHOR PLATE DETAIL F**

SCALE 1:5

F 2/2

**NOTES:**

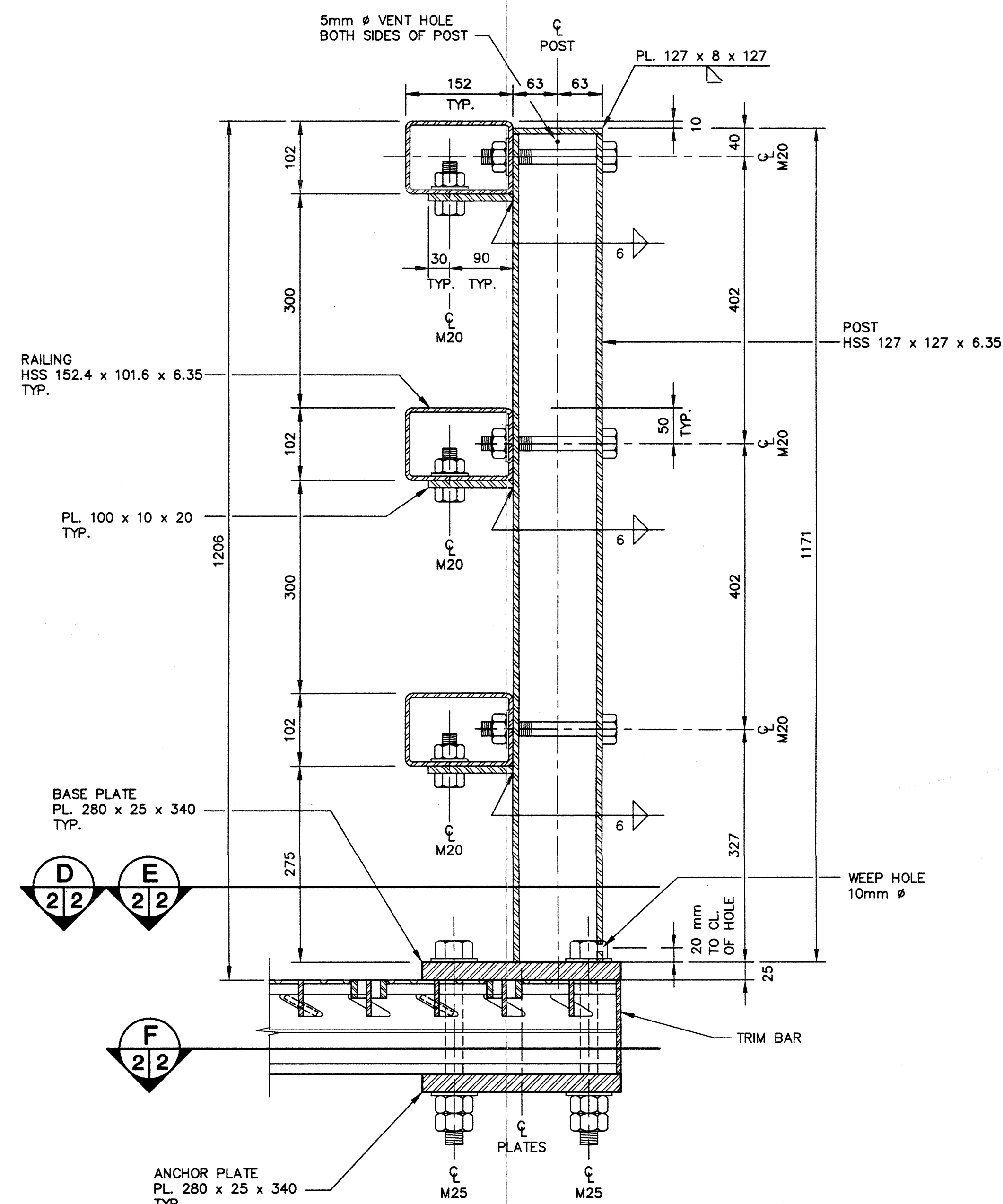
- FOR GENERAL NOTES SEE DWG. NO. 1
- SCALE AS NOTED.
- INSTALL RAIL POSTS PERPENDICULAR TO HIGHWAY GRADE. ERECT RAILING TO LINE AND GRADE INDICATED. DO NOT FOLLOW UNEVENNESS IN SUPERSTRUCTURE. ALIGN AND ADJUST RAILING PRIOR TO FIXING IN PLACE TO ENSURE MATCHING OF JOINTS, CORRECT ALIGNMENT AND CAMBER THROUGHOUT ENTIRE LENGTH.
- H.S.S. : TO CSA G40.21, GRADE 350W. TO BE GALVANIZED.
- PLATES: TO CSA G40.21, GRADE 300 W. TO BE GALVANIZED.
- BOLTS: TO ASTM A 325, TYPE 1. TO BE GALVANIZED.
- HOT-DIP GALVANIZING: TO CSA G164, MINIMUM THICKNESS 90 µm AFTER FABRICATION.
- POST SPACING: MAY VARY TO ENSURE FIT OF POST ANCHORAGE.



**ELEVATION 1**

SCALE 1:5

1 2/2



**SECTION A**

SCALE 1:5

A 2/2

National Centre of Expertise  
Centre d'expertise national

National Center of Expertise  
Architectural and Engineering Services  
Real Property Services Branch  
Centre d'expertise national  
Services d'architecture et génie  
Direction générale des services immobiliers



revisions date

A detail no. no. du détail  
B location drawing no. sur dessin no.  
C drawing no. dessin no.

project project

**BURLINGTON CANAL  
LIFT BRIDGE**

drawing dessin

**RAILING**

designed R.H. PION conçu  
date  
drawn G.E. ROBERTS dessiné  
date 99-10-29  
reviewed R.H. PION examiné  
date  
approved R.H. PION approuvé  
date  
Tender ENN LEESTI Soumission  
Project Manager Administrateur de projets  
project no. 104365 no. du projet

drawing no. no. du dessin



National Centre of Expertise  
Centre d'expertise nationale

National Center of Expertise  
Architectural and Engineering Services  
Real Property Services Branch  
Centre d'expertise nationale  
Services d'architecture et génie  
Direction générale des services immobiliers



revisions

A detail no.  
no. du détail  
B location drawing no.  
sur dessin no.  
C drawing no.  
dessin no.

project

**BURLINGTON CANAL  
LIFT BRIDGE**

drawing

**REFERENCE  
DRAWING**

designed R.H. PION concu

date

drawn G.E. ROBERTS 99-10-29 dessin

date

reviewed R.H. PION examine

date

approved

date

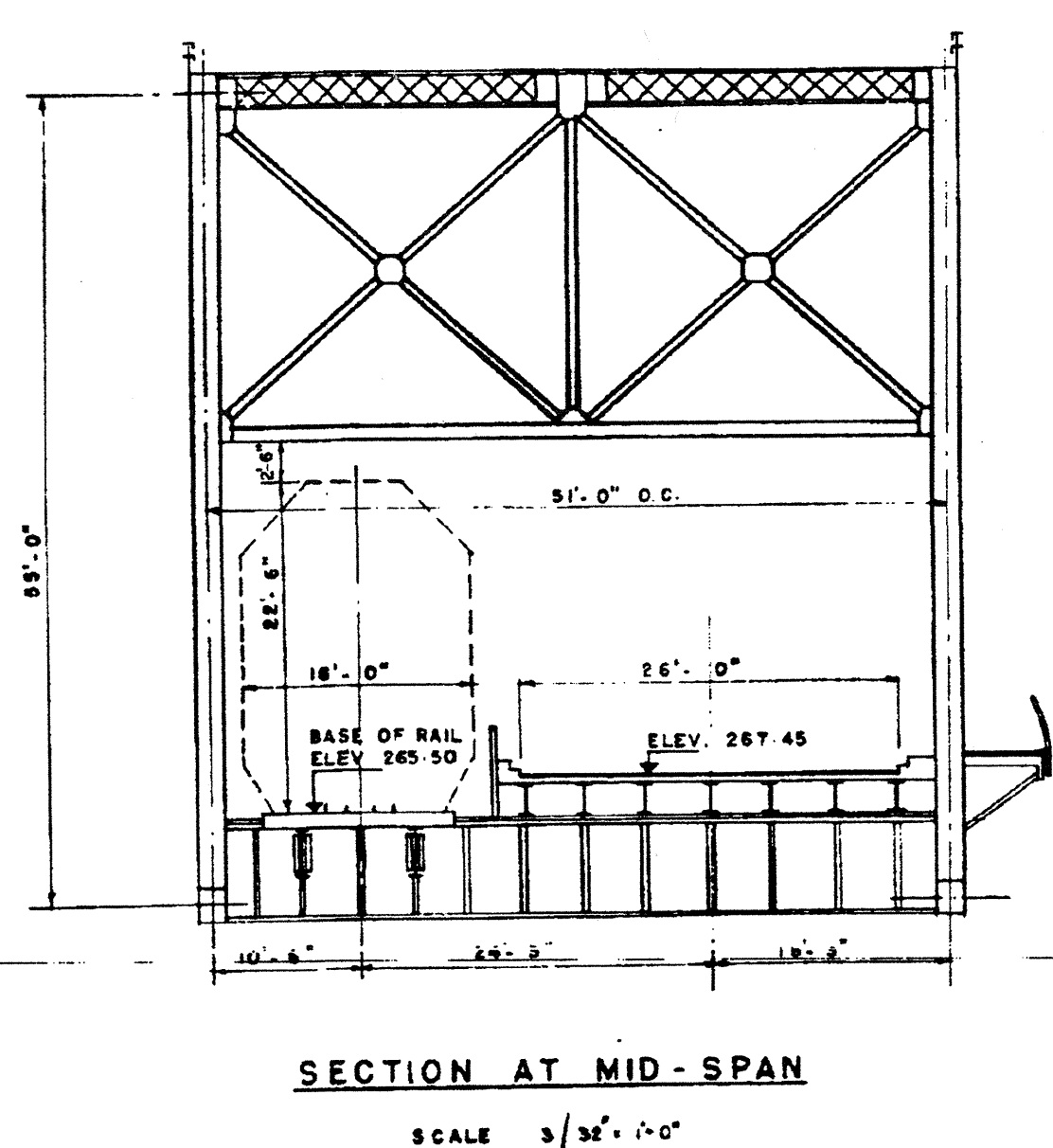
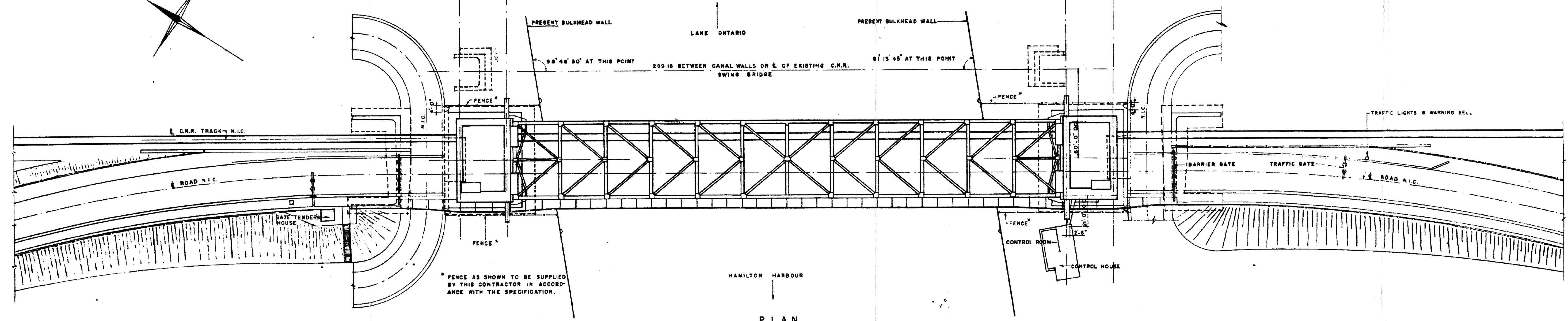
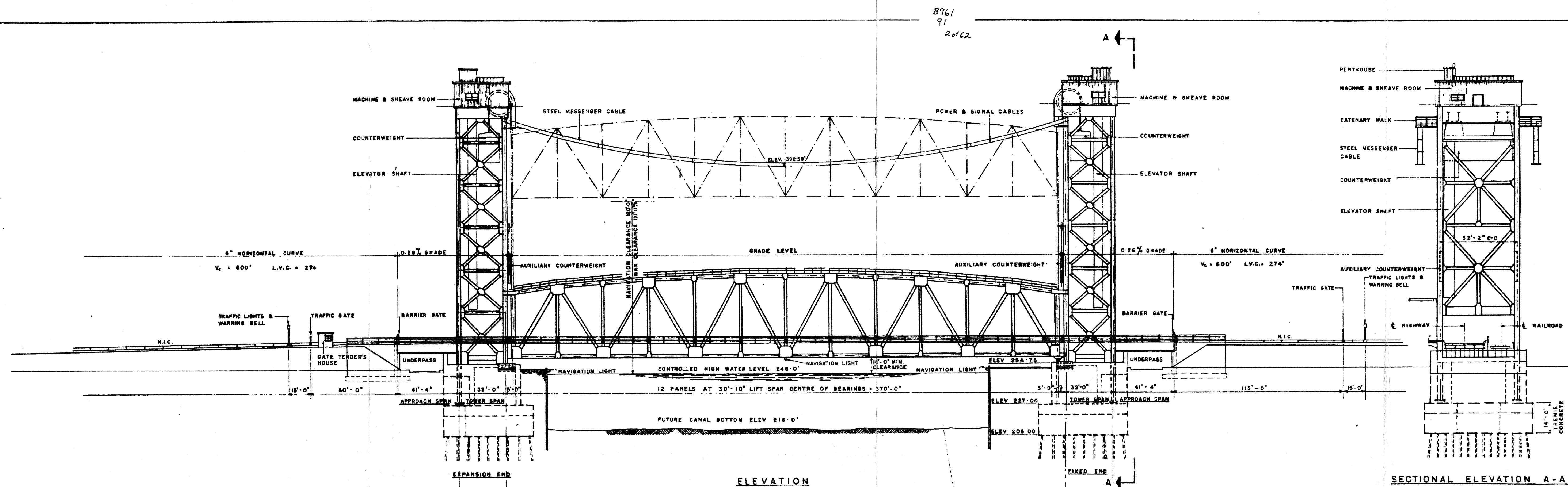
tender ENN LEESTI Soumission

Project Manager Administrateur de projets

project no. 104365 no. du projet

drawing no. 3 / 3 no. du dessin

PLOT SCALE 1:1



# GENERAL NOTES

- SPECIFICATIONS  
THE FOLLOWING SPECIFICATIONS GOVERNING DESIGN AND WORKMANSHIP ARE TO BE ADHERED TO  
FOR ALL MOVABLE PARTS AND STRUCTURAL PARTS WHICH SUPPORT MOVABLE PARTS - AREA PART 2 1956 - SPECIFICATIONS FOR MOVABLE RAILWAY BRIDGES.  
FOR ALL OTHER STRUCTURAL PARTS - CSA - S1 - 1950 SPECIFICATIONS FOR STEEL RAILWAY BRIDGES AND CSA - S6 - 1952, SPECIFICATIONS FOR STEEL HIGHWAY BRIDGES
- LIVE LOADS  
RAILWAY - COOPERS E-60  
HIGHWAY - H20-S16
- IMPACT  
HIGHWAY - CSA - S6-1952  
RAILWAY - CSA - S1-1950  
TOWER - AREA SPECIFICATION FOR MOVABLE RAILWAY BRIDGES-1956
- WIND  
AREA SPECIFICATION FOR MOVABLE RAILWAY BRIDGES-1956
- TEMPERATURE  
NORMAL + 60° F  
RANGE - 30° F TO + 120° F

- BENCH MARK  
GEODETIC BM NO. MMCCCKXXVII ELEV. 252.74, BASCULE BRIDGE OVER BURLINGTON CANAL ON BEACH BOULEVARD 1 1/2 MILES SOUTH OF BRANT INN, EAST FACE OF SOUTH CONCRETE ABUTMENT 1 FOOT FROM NORTH FACE AND 3 FEET ABOVE TOP OF RETAINING WALL ALONG CANAL BANK, BOLT SET HORIZONTALLY
- FOR MATERIALS REFER TO THE VARIOUS DIVISIONS OF CONTRACT SPECIFICATIONS.

RECOMMENDED DATE 12-1-58  
DESIGN J.B. CHKD O.L.  
DRAWN J.B. CHKD O.L.  
TRACED J.N.W. CHKD O.L.  
JOB NO. H-538

NO.	REVISIONS	BY	DATE
DEPARTMENT OF PUBLIC WORKS CANADA DEVELOPMENT ENGINEERING BRANCH STRUCTURES DIVISION			
C.C. PARKER & ASSOCIATES LTD CONSULTING ENGINEERS HAMILTON ONTARIO			
BURLINGTON CANAL LIFT BRIDGE			
GENERAL PLAN AND ELEVATIONS			
APPROVED	DATE 12/1/58	DEPARTMENT PROJECT NO	
<i>W. Thompson</i>		SD6-4-77	
CHIEF STRUCTURES DIVISION	DATE 10-11-58	CONTRACT NO 2	
<i>W. Thompson</i>		SHEET 2	NO. 62