

APPENDI X ‘ O ’

T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS (1984 RECORD DRAWINGS)



THE CITY OF WINNIPEG
 WORKS AND OPERATIONS DIVISION
 STREETS AND TRANSPORTATION DEPARTMENT

**TRANS-CANADA HIGHWAY NO. 1 EAST BRIDGE
 OVER SEINE RIVER**

DECK REHABILITATION,
 SUPERSTRUCTURE STRENGTHENING
 AND RELATED WORKS

P. D. NO. 84-23

RELEASED FOR CONSTRUCTION BY:

Small signature
 MANAGER OF STREETS AND TRAFFIC

04-04-80
 DATE

REVISED AS CONSTRUCTED
 DATE SEPT. 1984 BY *JKS*
 CHECKED BY *JKS*



LOCATION PLAN



THE CITY OF WINNIPEG

WORKS AND OPERATIONS DIVISION

STREETS AND TRANSPORTATION DEPARTMENT

DESIGN DATA

DESIGN SPECIFICATIONS	- AASHTO 1977, 1978, 1979, 1980 & 1981 INTERIMS & CSA CAN3-S6-M78 FOR GIRDERS
LIVE LOADING	- HSS 25-44 TRUCK LOADING HS25-44 LANE LOADING
CONCRETE	- $f'_c = 30 \text{ MPa}$ MINIMUM
REINFORCING STEEL	- CSA G30.12 M-77 GRADE 400
STRUCTURAL STEEL	- CSA CAN3-G40.21-M81 • NEW COVERPLATES GRADE 300 WT. • ALL OTHER STEEL GRADE 300 W.
HIGH DENSITY CONCRETE	- 75 mm DECK TOPPING ON BRIDGE DECK SLAB
CLEAR COVER TO REINFORCING STEEL	- 50mm SHOULDER TRAFFIC BARRIER, APPROACH & STRUCTURAL SLABS - OTHERS AS NOTED ON THE DRAWINGS

DRAWING LIST

GENERAL

B118-84-01	COVER SHEET
B118-84-02	DESIGN DATA AND DRAWING LIST
B118-84-03	GENERAL ARRANGEMENT AND LOCATION OF PROPOSED WORKS

BRIDGE DRAWINGS

B118-84-04	GENERAL ELEVATION AND CROSS-SECTIONS OF EXISTING AND PROPOSED BRIDGE
B118-84-05	DEMOLITION - PLANS AND DETAILS, DECK AND GIRDERS
B118-84-06	NEW WORKS - PLANS AND DETAILS, DECK AND GIRDERS & MISCELLANEOUS DETAILS
B118-84-07	BEARING DETAILS
B118-84-08	DIAPHRAGM DETAILS
B118-84-09	EXPANSION JOINT DETAILS - MEDIAN & SHOULDER TRAFFIC BARRIER
B118-84-10	EXPANSION JOINT DETAILS - DECK AND SIDEWALK
B118-84-11	CONCRETE AND REINFORCING DETAILS - APPROACH SLAB AND WINGWALL SIDEWALK
B118-84-12	REINFORCING DETAILS - DECK SLAB
B118-84-13	CONCRETE AND REINFORCING DETAILS - SHOULDER TRAFFIC BARRIER AND BACKWALLS
B118-84-14	DETAILS OF ALUMINUM BRIDGE RAIL POSTS
B118-84-15	REINFORCING STEEL SCHEDULE

ROAD DRAWINGS

B118-84-16	EASTBOUND AND WESTBOUND ROADWAY RECONSTRUCTION
B118-84-17	LAYOUT OF BALANCED ALUMINUM SHOULDER BARRIER AND DETAILS
B118-84-18	BALANCED ALUMINUM SHOULDER BARRIER STANDARD DETAILS

B-5549

REVISED AS CONSTRUCTED
DATE SEPT 1986 BY L.G.
CHECKED BY [Signature]

NO.	REVISIONS	DATE	APP.
1	AS CONSTRUCTED		



W. L. WARDROP & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

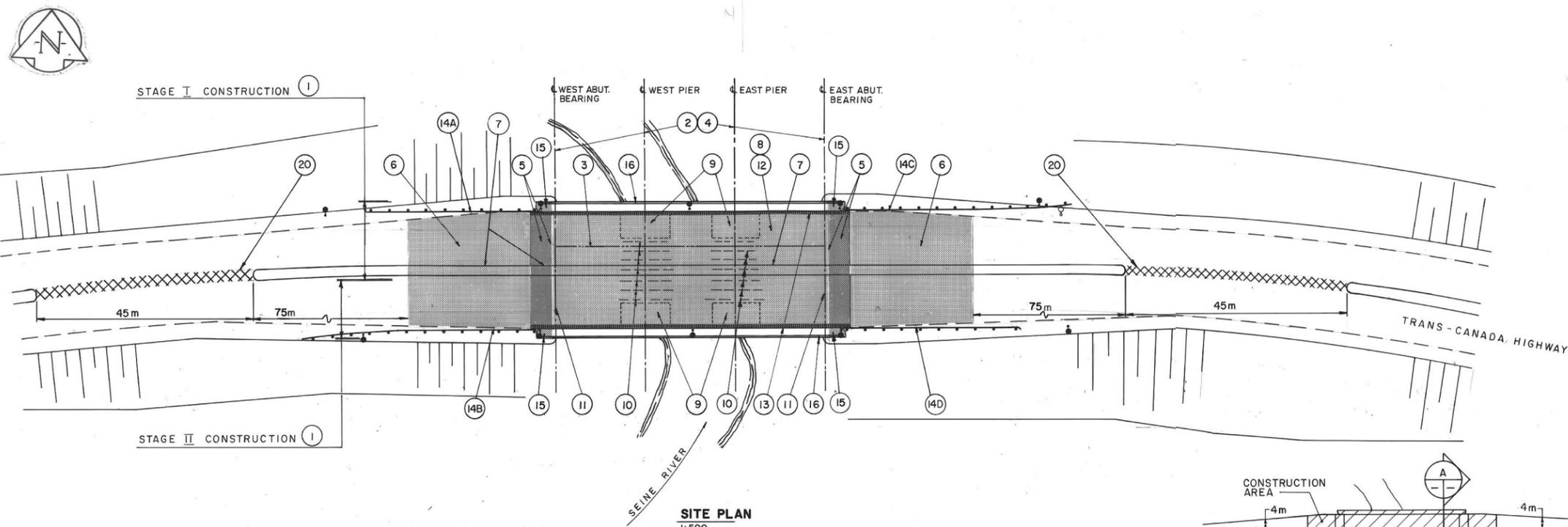
DESIGNED BY: B.W.G. DRAWN BY: T.O.
CHECKED BY: B.W.G. DATE: 84-04-06
APPROVED BY: [Signature] DATE: 84.04.10



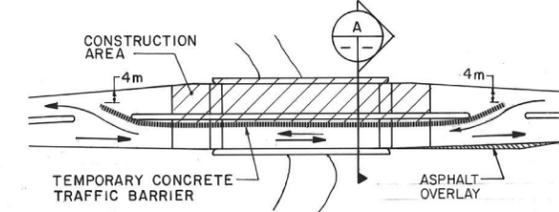
T.C.H. NO.1 EAST BRIDGE OVER SEINE RIVER
DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS

DESIGN DATA AND DRAWING LIST

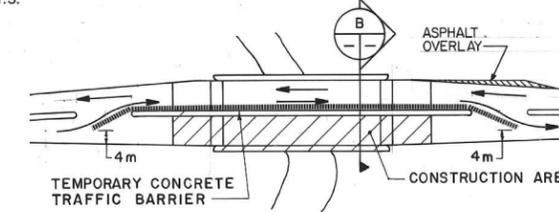
AUTHORIZED BY: [Signature] DATE: 1984-04-18
ACCEPTED BY: [Signature] DATE: 1984-04-10
SCALE: DRAWING NO. **B118-84-02**



SITE PLAN
1:500



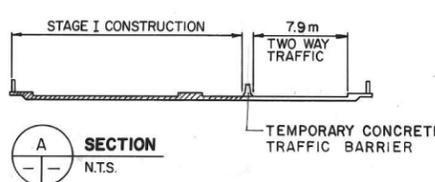
STAGE I CONSTRUCTION - CLOSURE OF NORTH ROADWAY
N.T.S.



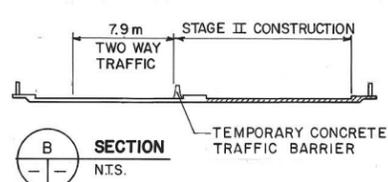
STAGE II CONSTRUCTION - CLOSURE OF SOUTH ROADWAY
N.T.S.

TRAFFIC CONTROL REQUIREMENTS
THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL DEVICES IN STRICT ACCORDANCE TO THE CITY OF WINNIPEG "MANUAL OF TEMPORARY TRAFFIC CONTROL IN WORK AREAS ON CITY STREETS."

SCOPE OF PROPOSED WORKS	REFERENCE DRAWING NUMBERS	SCOPE OF PROPOSED WORKS	REFERENCE DRAWING NUMBERS
1 ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED THROUGH THE SITE DURING CONSTRUCTION. STAGE I CONSTRUCTION WILL INVOLVE DETOURING TRAFFIC TO THE SOUTH HALF OF THE ROADWAY, AND STAGE II TO THE NORTH HALF. CONSTRUCT TEMPORARY MEDIAN CROSSOVERS.	B118-84-03	11 REMOVE EXISTING DECK JOINTS AT ABUTMENTS AND INSTALL NEW EXPANSION JOINT AND DECK JOINT	B118-84-05,09,10
2 JACK UP BRIDGE GIRDERS AT PIERS AND ABUTMENTS	B118-84-05	12 REMOVE TOP SURFACE OF THE BRIDGE DECK SLAB AND INSTALL EPOXY COATED REBAR AND HIGH DENSITY CONCRETE TOPPING.	B118-84-05,06,12
3 PROVIDE TEMPORARY SUPPORTS FOR MTS CONDUITS DURING JACKING AND MODIFY HANGERS FOR PERMANENT SUPPORT.	B118-84-05	13 CONSTRUCT CONCRETE SHOULDER TRAFFIC BARRIERS COMPLETE WITH ALUMINUM TRAFFIC BARRIER.	B118-84-13,14,18
4 REMOVE EXISTING BEARINGS AND INSTALL NEW BEARINGS AT ALL PIERS AND ABUTMENTS.	B118-84-07	14 INSTALL BALANCED ALUMINUM SHOULDER BARRIERS. A & D = 34.96m B & C = 45.78m	B118-84-17, 18
5 REMOVE EXISTING APPROACH SLABS AND TOP PART OF ABUTMENT BACKWALLS AND RECONSTRUCT.	B118-84-05,11,13	15 BUILD UP EXISTING SIDEWALK SURFACE AT WING WALLS.	B118-84-11
6 REMOVE EXISTING ROADWAY PAVEMENT AND CONSTRUCT NEW 250 mm PAVEMENT.	B118-84-16	16 REFINISH PEDESTRIAN RAILING AND REPAIR CONCRETE POSTS.	B118-84-04,05,06
7 REMOVE EXISTING MEDIAN AND CONSTRUCT NEW MEDIAN ON BRIDGE, BRIDGE APPROACH SLABS AND APPROACH ROADWAYS.	B118-84-05,06,16	17 INSTALL BRIDGE MONITORING DEVICES. (NOT SHOWN).	B118-84-06
8 REMOVE EXISTING ASPHALT DECK TOPPING.	B118-84-05	18 TOUCH UP PAINTING OF STEEL GIRDERS. (NOT SHOWN).	B118-84-06
9 REMOVE PORTION OF DECK SLAB OVER PRECAST CONCRETE GIRDERS INCLUDING EXPANSION JOINTS, DIAPHRAGMS AT PIERS AND ABUTMENTS. CONSTRUCT MONOLITHIC DIAPHRAGM AND DECK SLABS UP TO LEVELS INDICATED.	B118-84-05,06,07,08	19 TAPECRETE SHOULDER TRAFFIC BARRIER & RAIL POSTS.	B118-84-04,11,13
10 MAKE STEEL GIRDERS CONTINUOUS AT THE PIERS BY PROVIDING SPLICE	B118-84-06	20 UPON COMPLETION OF ALL CONSTRUCTION RESTORE MEDIANS AT DETOURS.	B118-84-03



A SECTION
N.T.S.



B SECTION
N.T.S.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

B-5550

REVISED AS CONSTRUCTED
DATE: 11/10/06 BY: L.S.
CHECKED BY: [Signature]

NO.	REVISIONS	DATE	APP.
1	AS CONSTRUCTED		



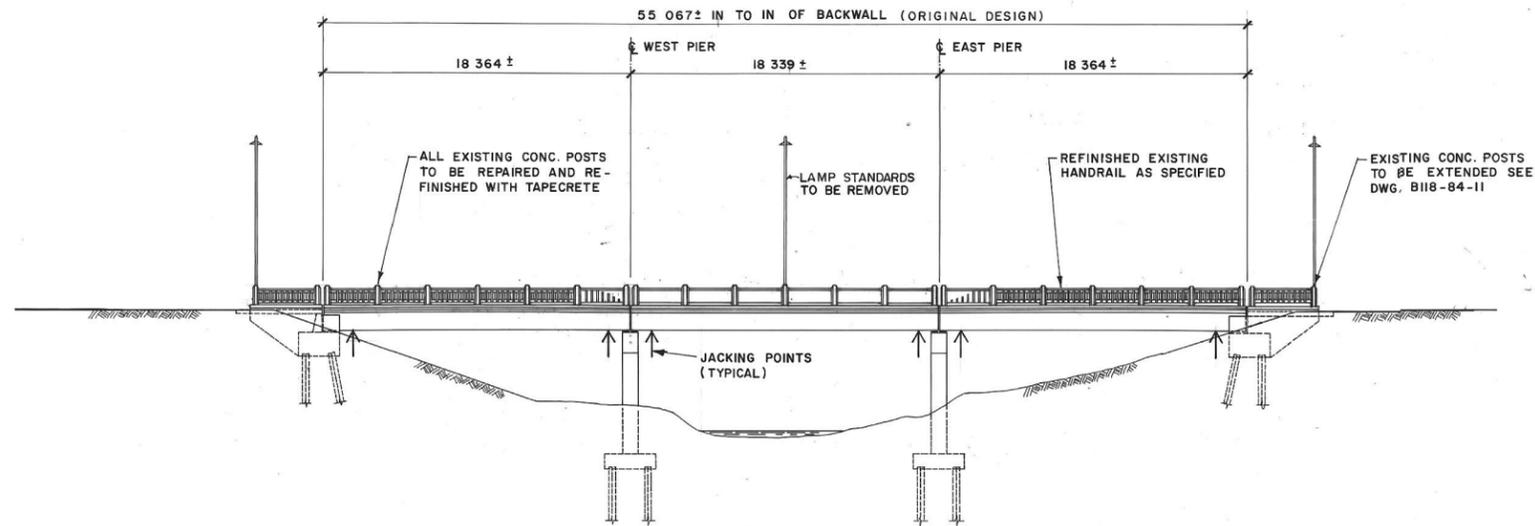
W. L. WARDROP & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

DESIGNED BY: B.W.G. DRAWN BY: T.O.
CHECKED BY: B.W.G. DATE: 84-04-06
APPROVED BY: [Signature] DATE: 04.10

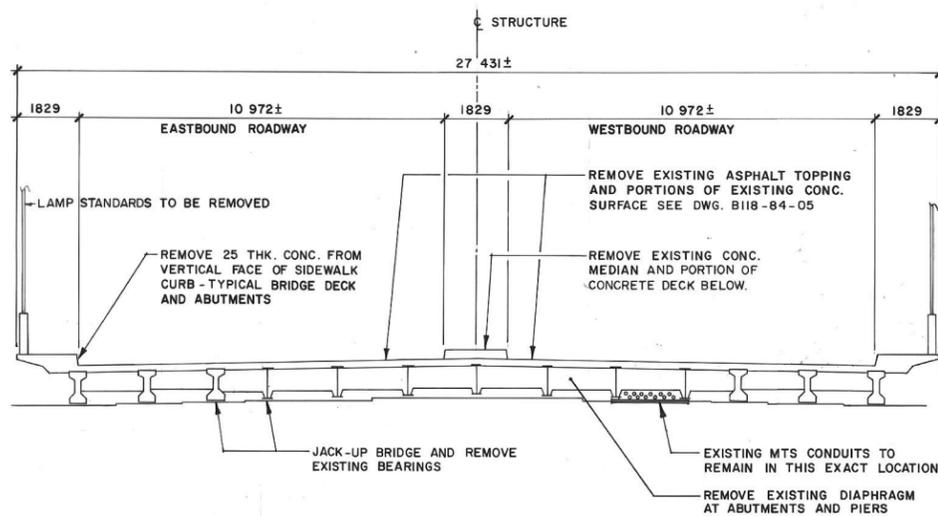
THE CITY OF WINNIPEG
WORKS & OPERATIONS DIVISION
STREETS & TRANSPORTATION DEPARTMENT

T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER
DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS
GENERAL ARRANGEMENT AND LOCATION OF PROPOSED WORKS

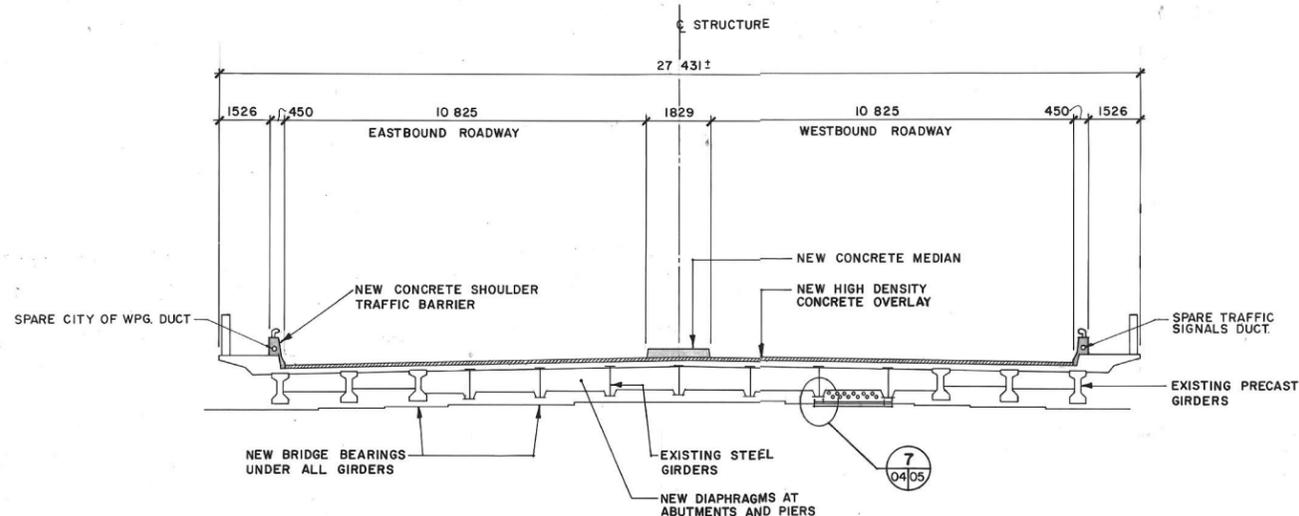
AUTHORIZED BY: [Signature] P. Eng. 1589-04-18
ACCEPTED BY: [Signature] 11/04/10
SCALE AS SHOWN DRAWING NO. **B118-84-03**



1 GENERAL ELEVATION (LOOKING NORTH)
 1:200 BALANCED ALUMINUM SHOULDER BARRIER NOT SHOWN



2 TYPICAL CROSS-SECTION-- EXISTING
 1:100



3 TYPICAL CROSS-SECTION-- NEW WORKS
 1:100

B-5551

REVISED AS CONSTRUCTED
 DATE: SEPT. 1986 BY: L.S.
 CHECKED BY: [Signature]

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

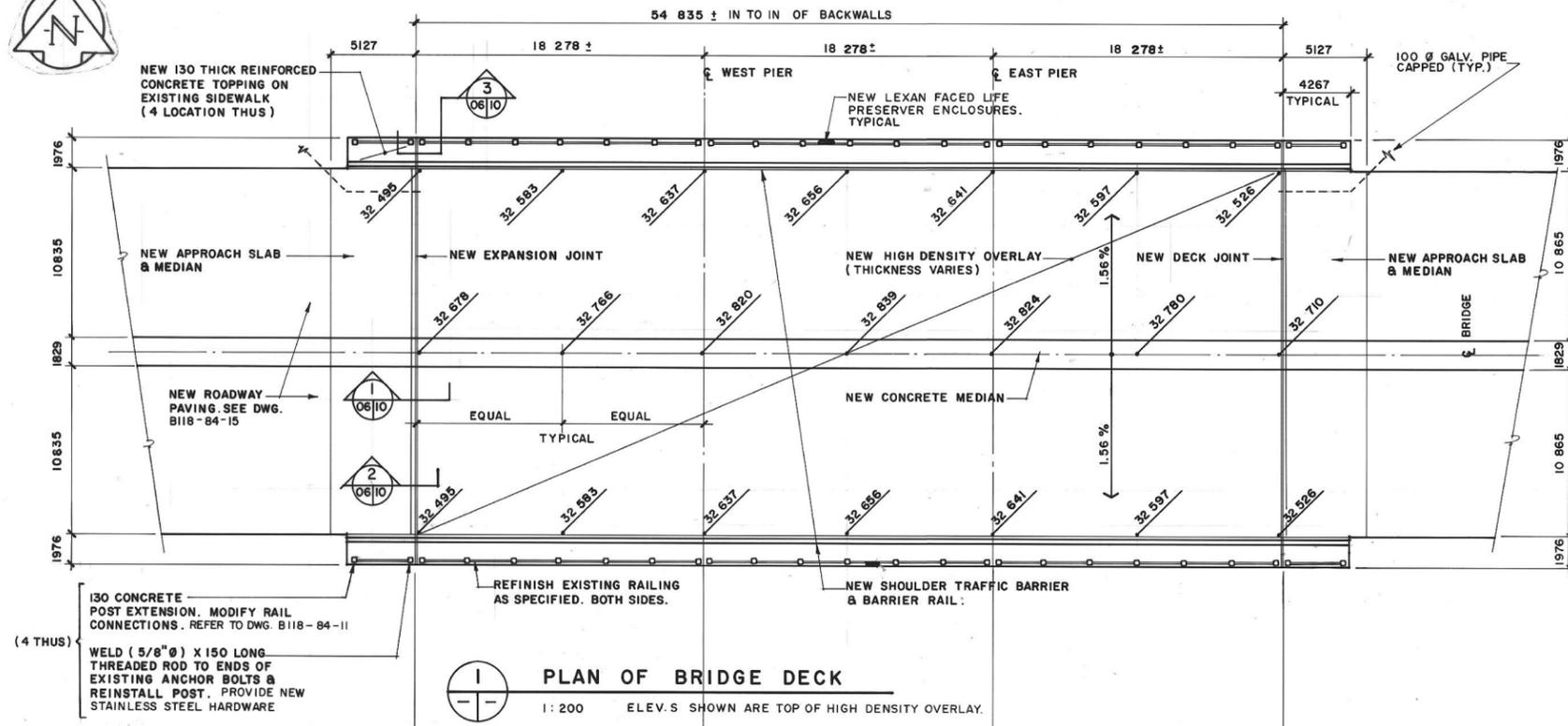
NO.	REVISIONS	DATE	APP.
1	AS CONSTRUCTED		



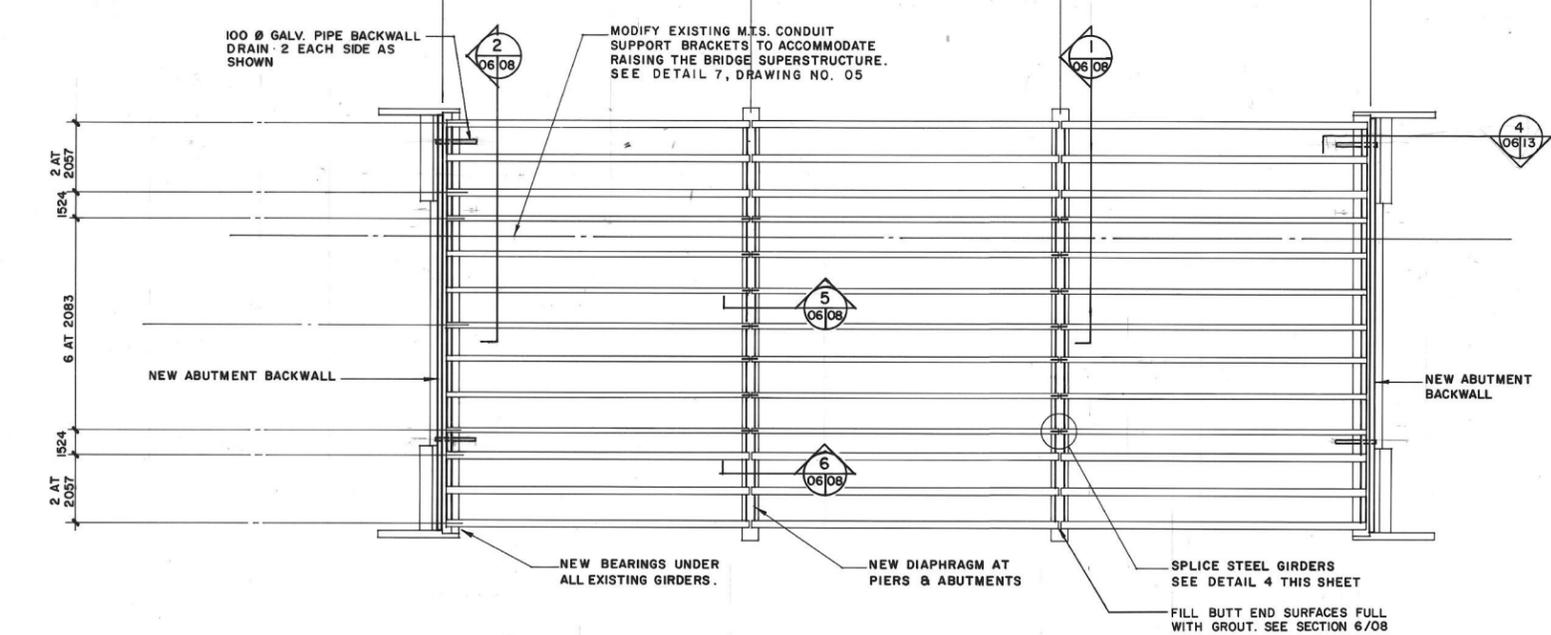
DESIGNED BY: C.D.S.		DRAWN BY: KB	
CHECKED BY: B.W.G.		DATE: 84-04-06	
APPROVED BY: [Signature]		DATE: 84.04.10	

THE CITY OF WINNIPEG
 WORKS & OPERATIONS
 DIVISION
 STREETS & TRANSPORTATION
 DEPARTMENT

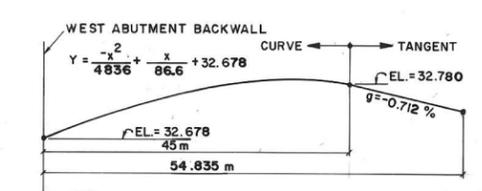
T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER
 DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS
 GENERAL ELEVATION AND CROSS-SECTIONS
 AUTHORIZED BY: [Signature] DATE: 84-04-18
 ACCEPTED BY: [Signature] DATE: 1984-04-10
 SCALE: AS NOTED DRAWING NO. B118-84-04



1 PLAN OF BRIDGE DECK
1:200 ELEV. S SHOWN ARE TOP OF HIGH DENSITY OVERLAY.

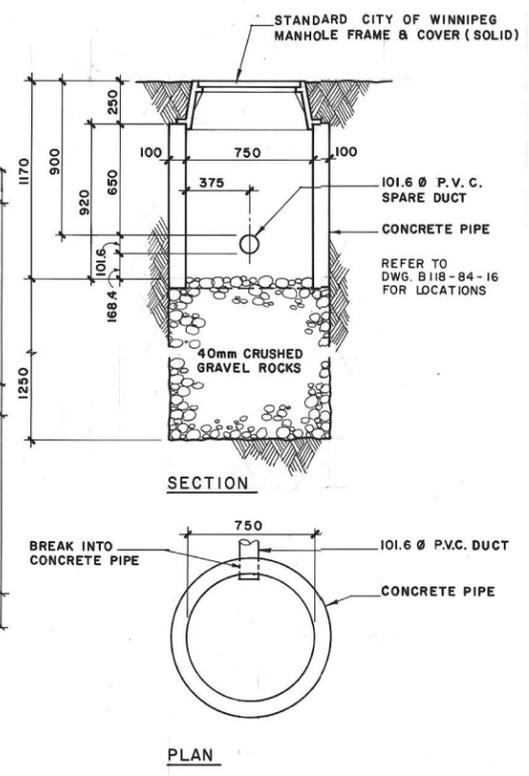


2 PLAN - GIRDERS & SUBSTRUCTURE
1:200

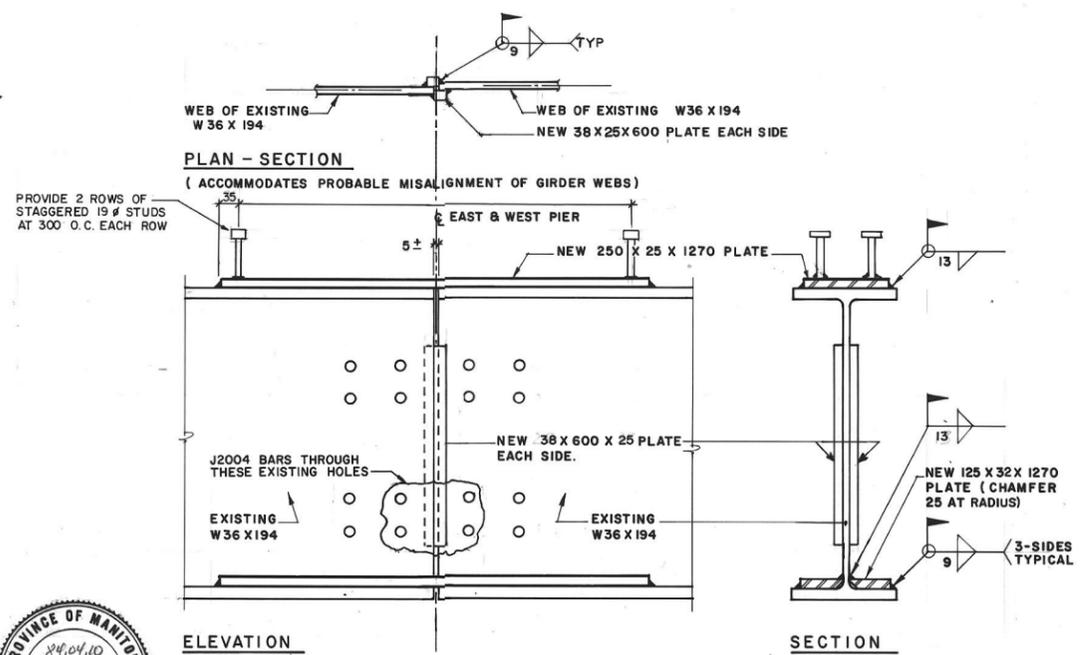


5 DECK FINAL CURVATURE
N.T.S.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



3 SPLICE PIT
1:20 (4 THUS)



4 DETAIL - SPLICING STEEL GIRDERS
1:10 14 REQUIRED AS SHOWN

B-5553
REVISED AS CONSTRUCTED
DATE 05/19/86 BY L.G.
CHECKED BY



NO.	REVISIONS	DATE	APP.
1	AS CONSTRUCTED		

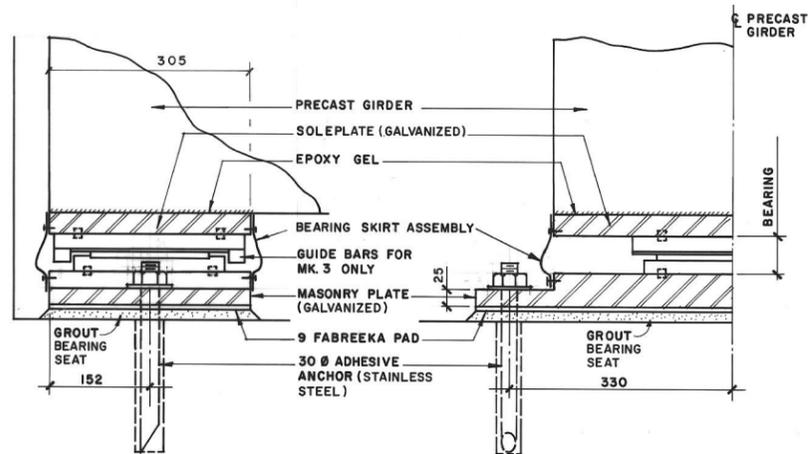
W. L. WARDROP & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

DESIGNED BY: C.D.S. DRAWN BY: R.N.
CHECKED BY: B.W.G. DATE: 84-04-06
APPROVED BY: [Signature] DATE: 84-04-10

THE CITY OF WINNIPEG
WORKS & OPERATIONS DIVISION
STREETS & TRANSPORTATION DEPARTMENT

T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER
DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS
PLANS SHOWING LIMIT OF NEW WORKS

AUTHORIZED BY: [Signature] DATE: 1984-04-18
ACCEPTED BY: [Signature] DATE: 1984-04-10
SCALE: NOTED DRAWING NO. B118-84-06



ELEVATION

HALF SECTION

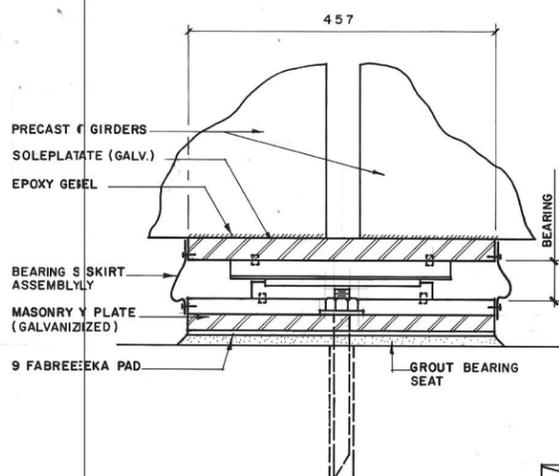


DETAIL - GUIDED & FREE SLIDING BEARINGS

UNDER EXISTING PRECAST GIRDERS AT ABUTMENTS

BEARING MARKS: MK1 & MK3

1:5



ELEVATION

FOR SECTION SEE DETAIL ①

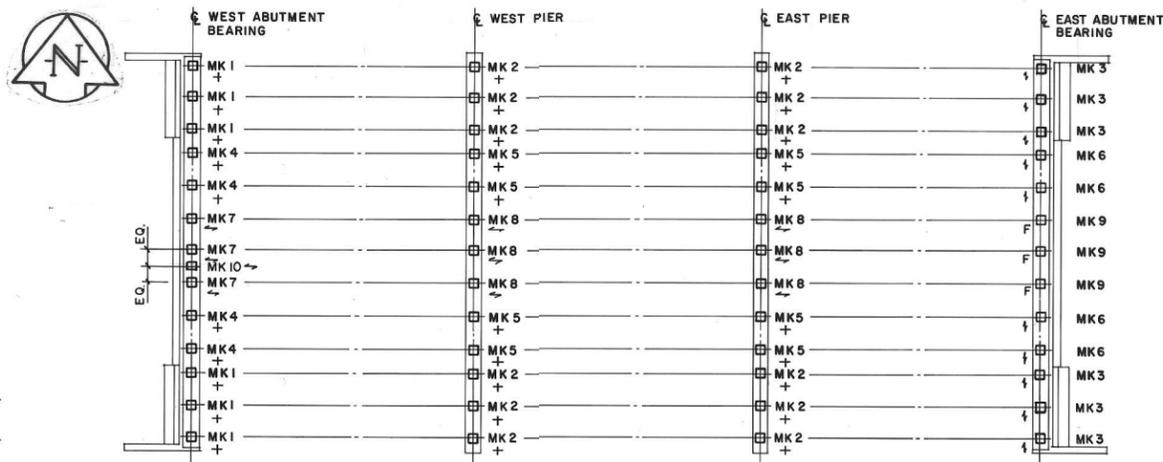


DETAIL - FREE SLIDING BEARINGS

UNDER EXISTING PRECAST GIRDERS AT PIERS

BEARING MARKS: MK2

1:5



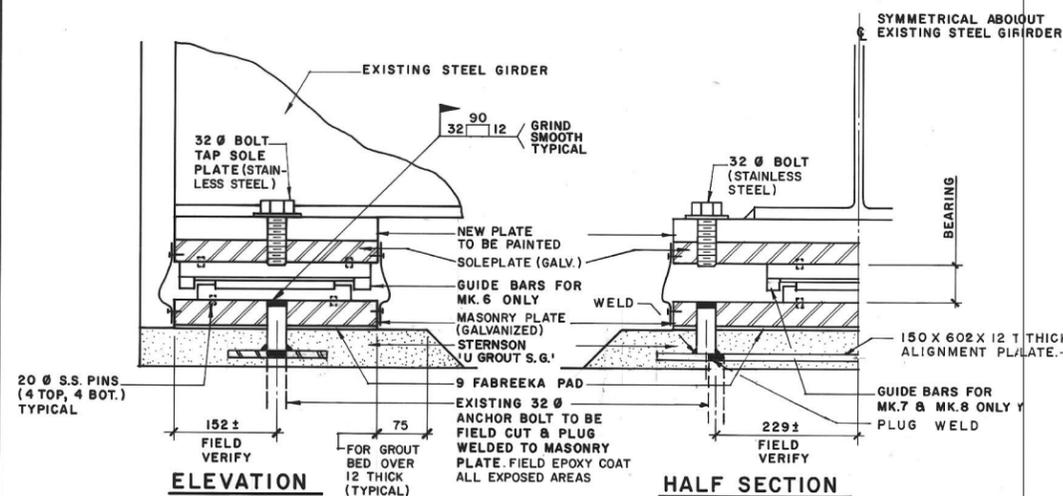
LAYOUT OF BEARINGS

1:200

N GUIDED BEARINGS
F FIXED BEARINGS
+ FREE SLIDING BEARINGS

BEARING DESIGN DATA

BEARING MARK	MK 1	MK 2	MK 3	MK 4	MK 5	MK 6	MK 7	MK 8	MK 9	MK 10
GLACIER BEARING MODEL NO.	50/230/75/25	70/265/75/25	50/230/25/C	50/230/75/25	70/265/75/25	50/230/25/C	50/230/75/C	70/265/75/C	—	11K75
QUANTITY REQUIRED	6	12	6	4	8	4	3	6	3	1
BEARING HEIGHT (mm)	55	55	55	55	55	55	55	55	N/A	112
DEAD LOAD (KN)	210	450	210	190	400	190	190	400	190	—
DEAD LOAD + LIVE LOAD (KN)	420	680	420	400	630	400	400	630	400	—
LONGITUDINAL LOAD (KN)	—	—	20	—	—	20	—	—	—	—
LATERAL LOAD (KN)	—	—	—	—	—	—	20	50	—	31.5
LONGIT. MOVEMENT ± (mm)	37.5	37.5	CONSTRAINED	37.5	37.5	CONSTRAINED	37.5	37.5	FIXED	37.5
LATERAL MOVEMENT ± (mm)	12.5	12.5	12	12.5	12.5	12.5	CONSTRAINED	CONSTRAINED	FIXED	CONSTRAINED
SOLE PLATE (mm)	305 X 533 X 32	457 X 533 X 32	305 X 533 X 32	305 X 559 X 32	457 X 559 X 32	305 X 559 X 32	305 X 559 X 32	457 X 559 X 32	—	25 X 300 X 400
MASONRY PLATE (mm)	305 X 762 X 50 MODIFIED	457 X 762 X 50 MODIFIED	305 X 762 X 50 MODIFIED	305 X 559 X 38	457 X 559 X 38	305 X 559 X 38	305 X 559 X 38	457 X 559 X 38	—	25 X 300 X 400
GROUT THICKNESS ± (mm)	12	12	12	2@25, 2@60	4@25, 4@60	2@31, 2@66	2@25, 1@56	4@25, 2@56	2@150, 1@181	375 ±



ELEVATION

HALF SECTION

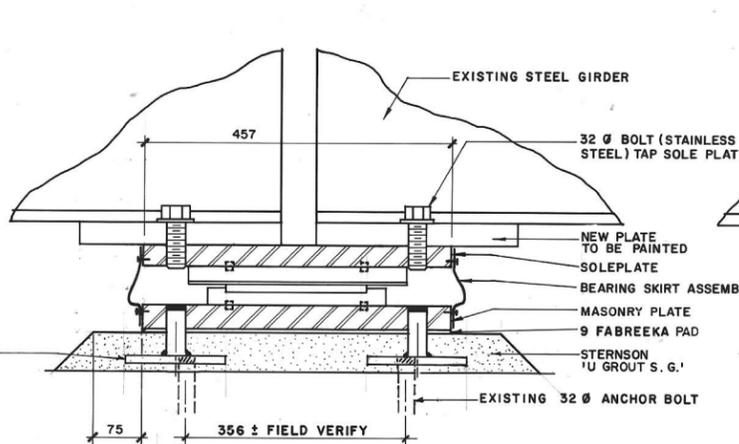


DETAIL - GUIDED & FREE SLIDING BEARINGS

UNDER EXISTING STEEL GIRDERS AT ABUTMENTS

BEARING MARKS: MK4, MK6 & MK7

1:5



ELEVATION

FOR SECTION SEE DETAIL ③

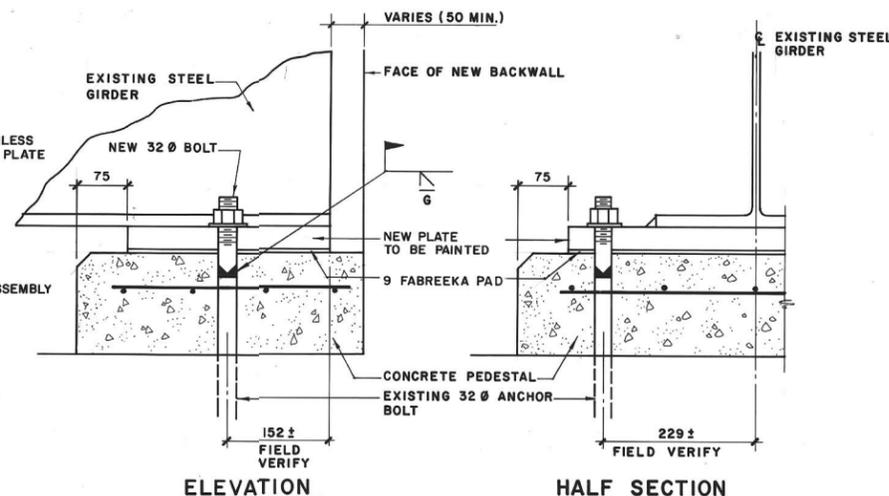


DETAIL - GUIDED & FREE SLIDING BEARINGS

UNDER EXISTING STEEL GIRDERS AT PIERS

BEARING MARKS: MK5 & MK8

1:5



ELEVATION

HALF SECTION



DETAIL - FIXED BEARINGS

UNDER EXISTING STEEL GIRDERS AT EAST ABUTMENT

BEARING MARK: MK9

1:5

NOTE:

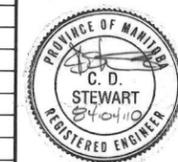
PROVIDE A 25mm RADIUS AT ALL CORNERS OF SOLE & MASONRY PLATES TO ACCOMMODATE THE RUBBER SKIRT GRIND SMOOTH ALL EDGES IN CONTACT WITH THE BEARING SKIRT ASSEMBLY



METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

NO.	REVISIONS	DATE	APP.
1	AS CONSTRUCTED		



ENGINEER'S SEAL

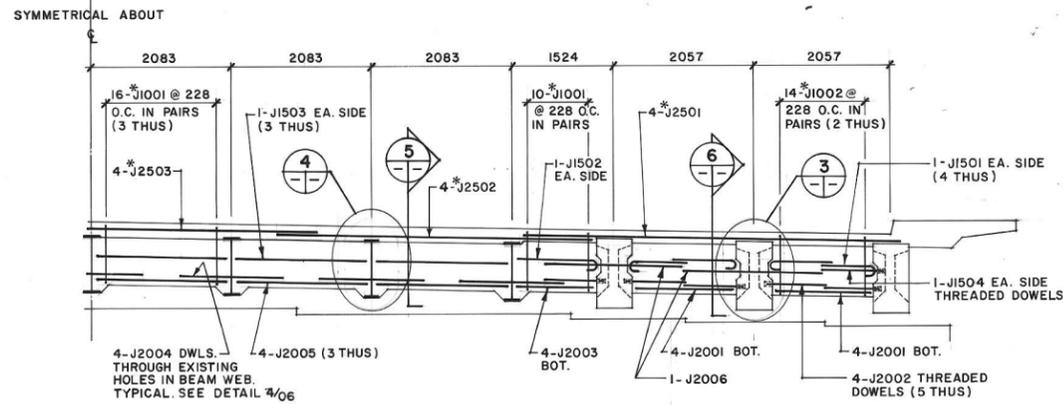
W. L. WARDROP & ASSOCIATES LTD. ENGINEERING CONSULTANTS	
DESIGNED BY: C.D.S.	DRAWN BY: R.N.
CHECKED BY: B.W.G.	DATE: 84-04-06
APPROVED BY: B.W. Gulay	DATE: 24.04.10

THE CITY OF WINNIPEG
WORKS & OPERATIONS DIVISION
STREETS & TRANSPORTATION DEPARTMENT

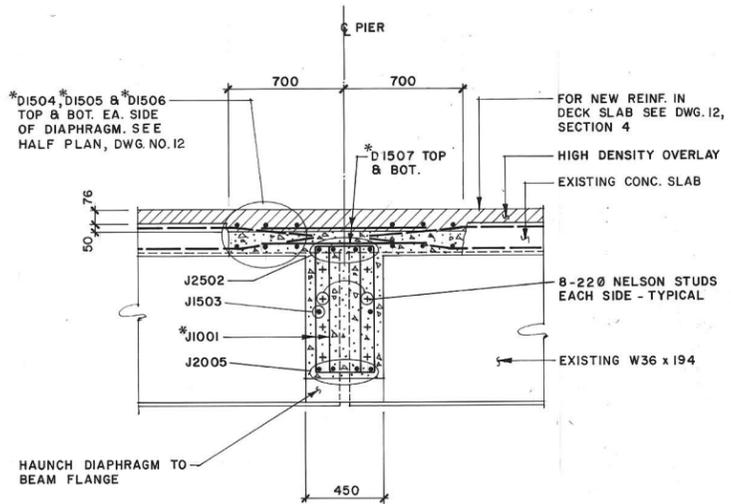
T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER
DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS
BEARING DETAILS
AUTHORIZED BY: [Signature] P. Eng. 1584-04-18
ACCEPTED BY: [Signature] Bridge Engineer 1984-04-10
SCALE: NOTED DRAWING NO. B 118-84-07

B-5554

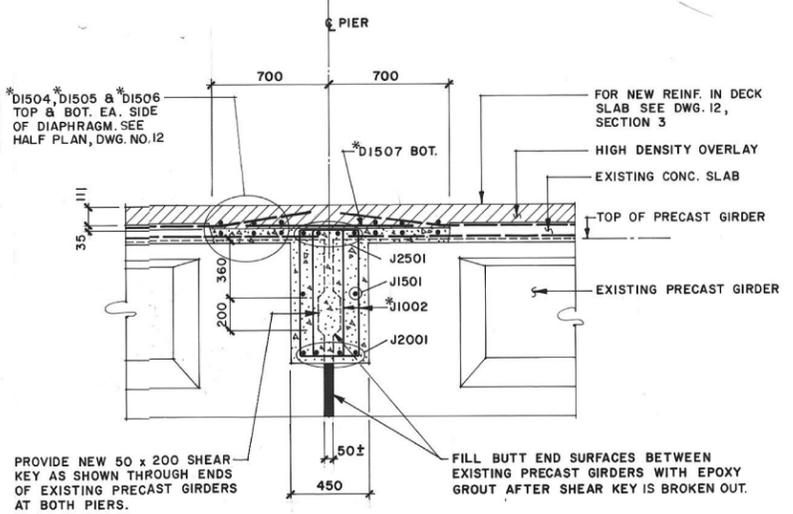
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DATE SEPT. 1988 BY: [Signature]
CHECKED BY: [Signature]



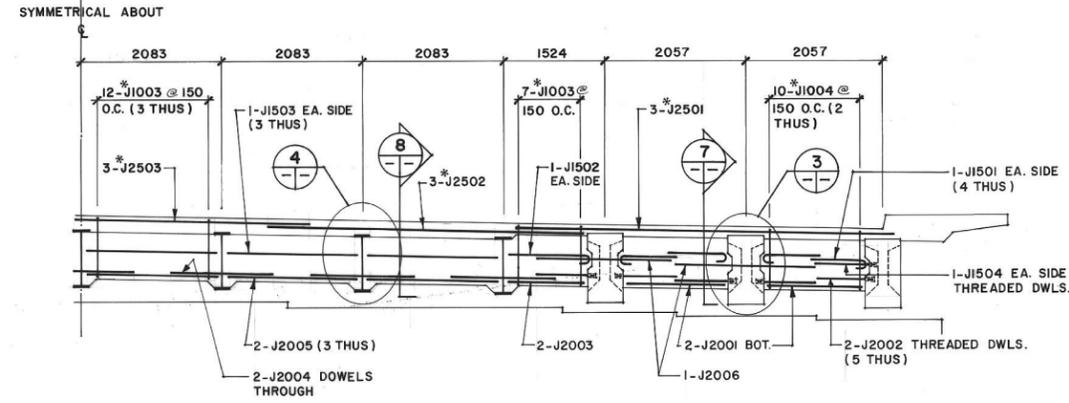
1 HALF ELEVATION - NEW DIAPHRAGM AT PIERS
 1:50 2 THUS NELSON STUDS NOT SHOWN



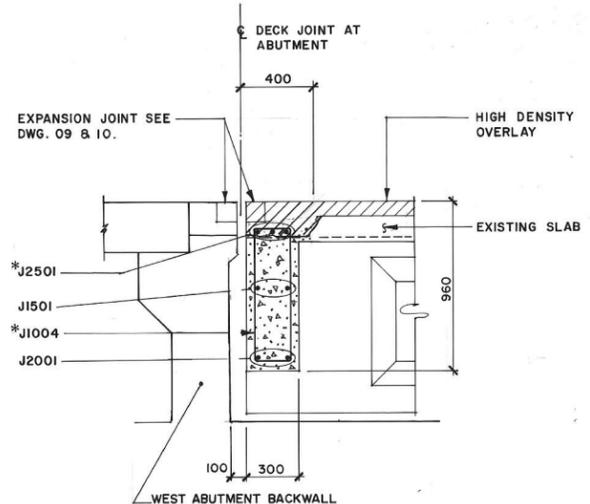
5 SECTION
 08/08 1:20 AT STEEL GIRDERS
 STEEL SPLICE PLATES NOT SHOWN



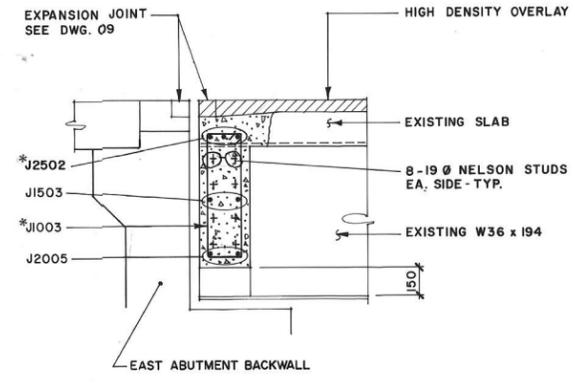
6 SECTION
 08/08 1:20 AT PRECAST GIRDERS



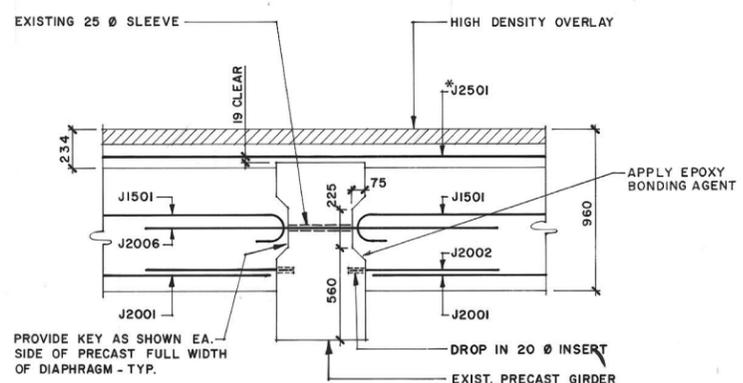
2 HALF ELEVATION - NEW DIAPHRAGM AT ABUTMENTS
 1:50 2 THUS NELSON STUDS NOT SHOWN



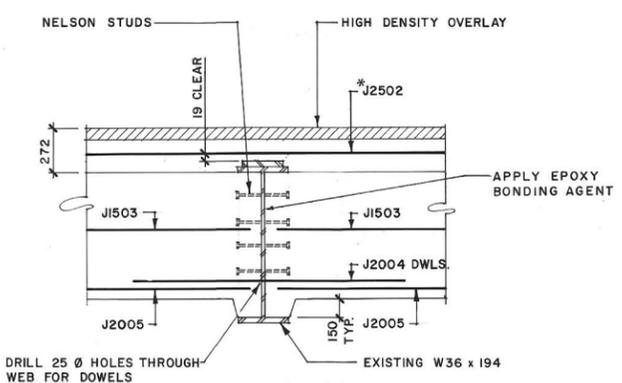
7 SECTION - AT ABUTMENT
 1:20 AT PRECAST GIRDERS



8 SECTION - AT ABUTMENT
 1:20 AT STEEL GIRDERS



3 DETAIL
 1:20 STIRRUPS NOT SHOWN



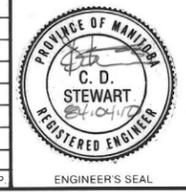
4 DETAIL
 1:20 STIRRUPS NOT SHOWN

NOTE
 * INDICATES EPOXY COATED REINFORCING.

B-5555
 REVISED AS CONSTRUCTED
 DATE 08/21/08 BY LIG
 CHECKED BY [Signature]

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

NO	AS CONSTRUCTED	REVISIONS	DATE	APP



W. L. WARDROP & ASSOCIATES LTD.
 ENGINEERING CONSULTANTS

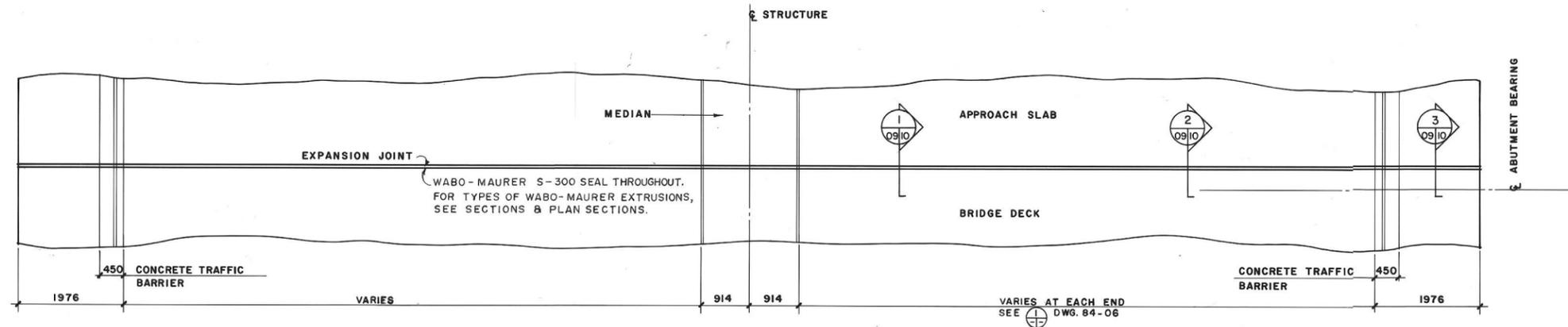
DESIGNED BY: C.D.S. DRAWN BY: KB
 CHECKED BY: B.W.G. DATE: 04-04-06
 APPROVED BY: [Signature] DATE: 04-04-10

THE CITY OF WINNIPEG
 WORKS & OPERATIONS DIVISION
 STREETS & TRANSPORTATION DEPARTMENT

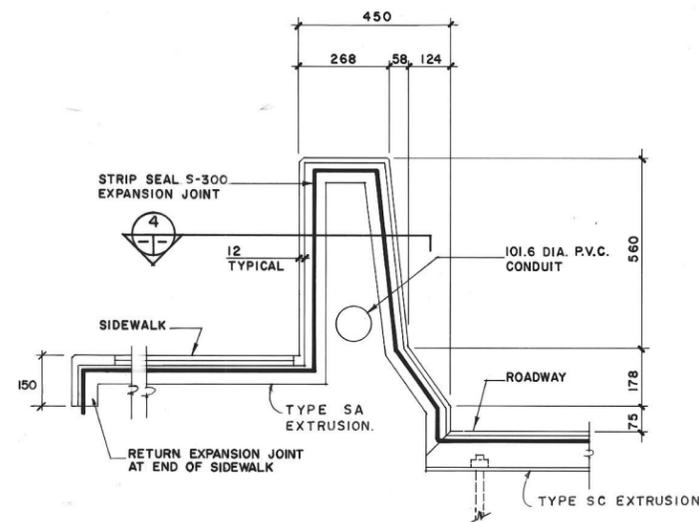
T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER
 DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS

DIAPHRAGM DETAILS

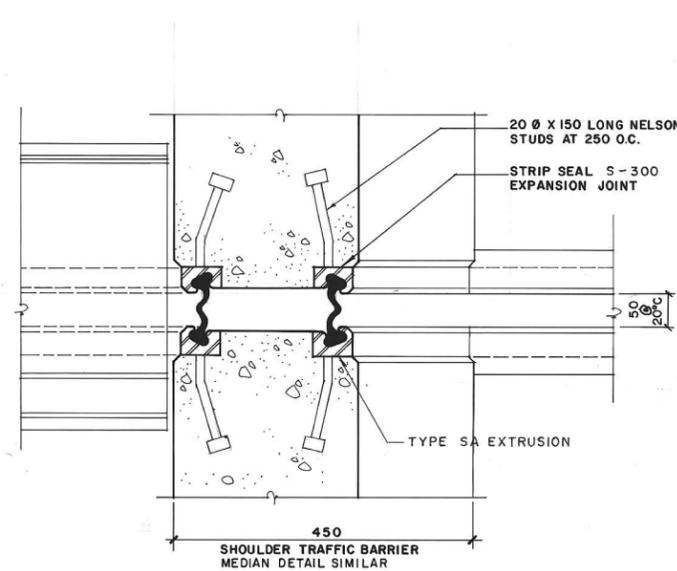
AUTHORIZED BY: [Signature] DATE: 04-04-10
 ACCEPTED BY: [Signature] DATE: 04-04-10
 SCALE: AS NOTED DRAWING NO: B118-84-08



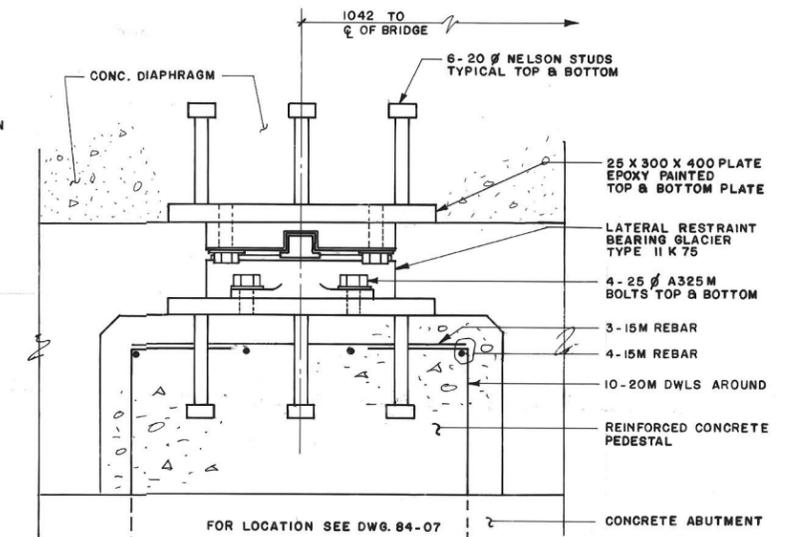
1 PLAN OF EXPANSION JOINT - EAST ABUTMENT
 1:50 SIMILAR AT WEST ABUTMENT



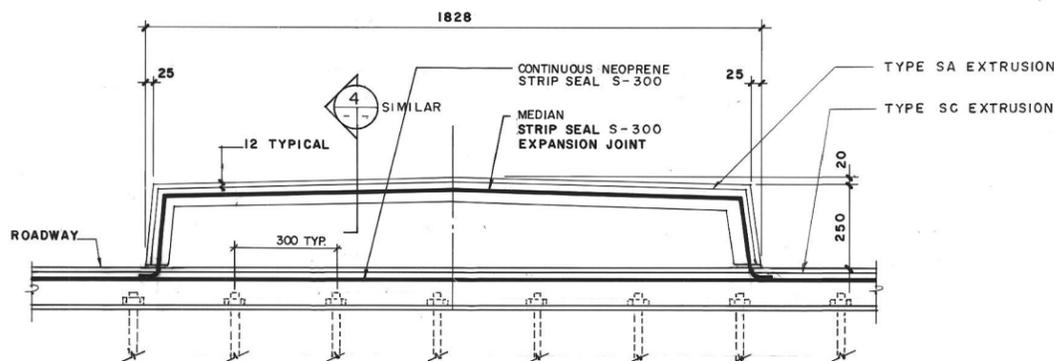
2 SECTION AT CONCRETE TRAFFIC BARRIER
 1:10



4 PLAN SECTION AT CONCRETE SHOULDER, TRAFFIC BARRIER AND ON MEDIAN
 1:5

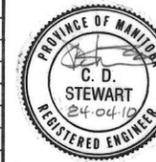


5 LATERAL RESTRAINT BEARING MK 10
 1:5



3 SECTION AT MEDIAN
 1:10

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES



NO	REVISIONS	DATE	APP
1	AS CONSTRUCTED		

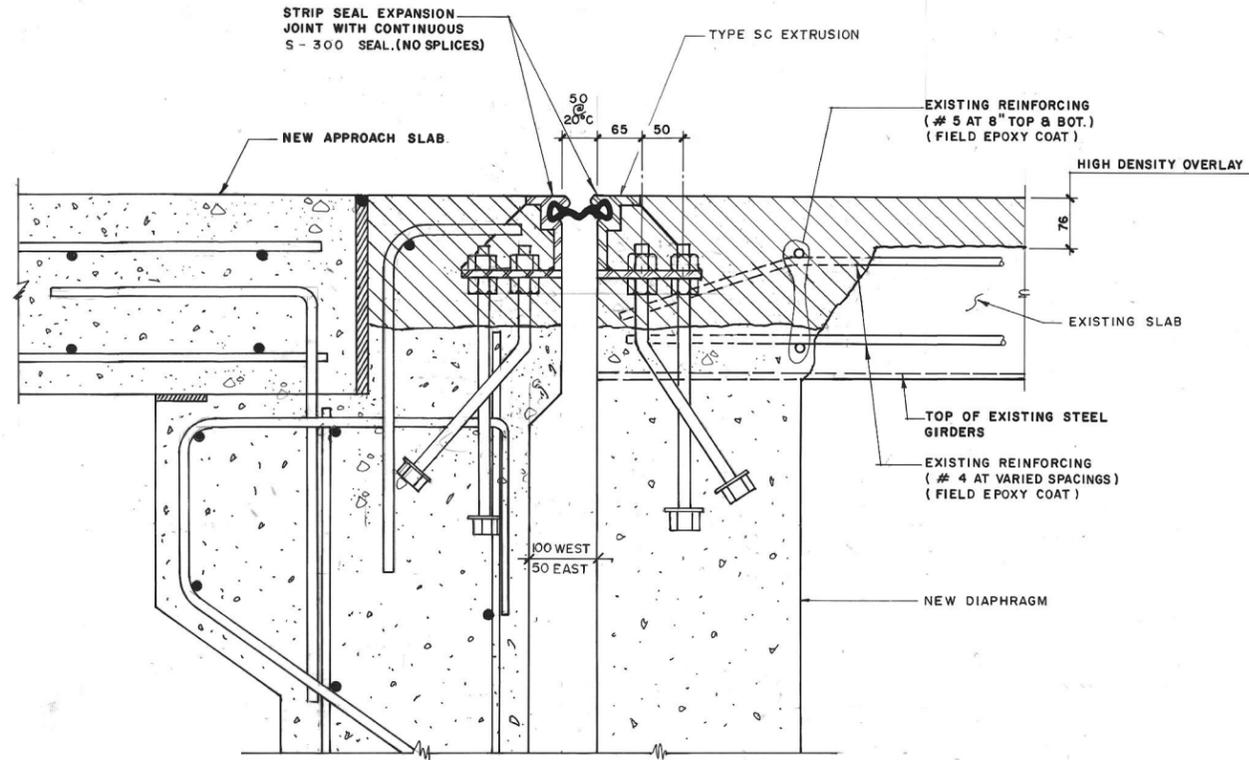
W. L. WARDROP & ASSOCIATES LTD. ENGINEERING CONSULTANTS	
DESIGNED BY: C.D.S.	DRAWN BY: R.N.
CHECKED BY: B.W.G.	DATE: 84-04-06
APPROVED BY: B.W.G.	DATE: 84-04-10

THE CITY OF WINNIPEG
 WORKS & OPERATIONS DIVISION
 STREETS & TRANSPORTATION DEPARTMENT

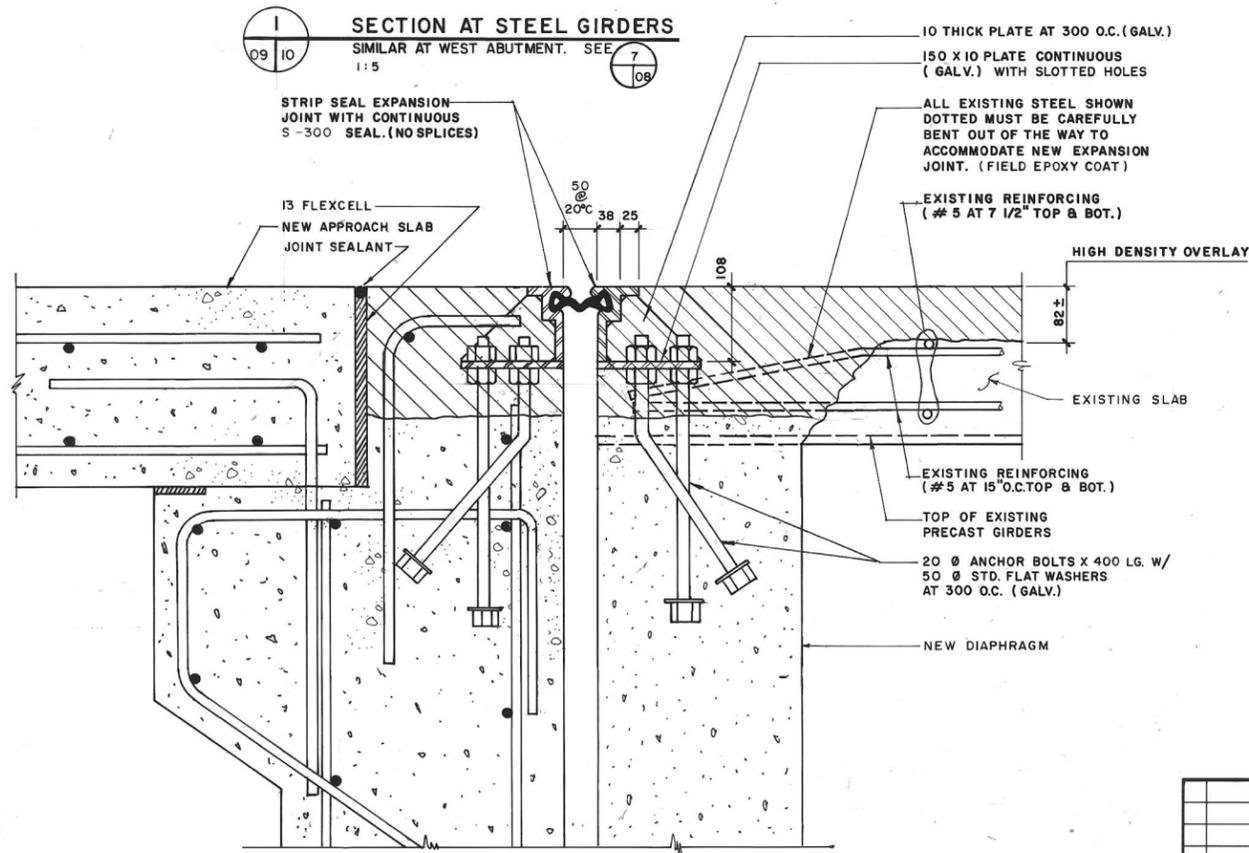
T.C.H. NO.1 EAST BRIDGE OVER SEINE RIVER	
DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS	
EXPANSION JOINT DETAILS MEDIAN & CONCRETE SHOULDER BARRIER	
AUTHORIZED BY: C.D. Stewart, P.Eng., 1984-04-18	DATE
ACCEPTED BY: B.W.G., 1984-04-10	DATE
SCALE: NOTED	DRAWING NO: B118-84-09

B-5556

REVISED AS CONSTRUCTED
 DATE SEPT. 1988 BY [Signature]
 CHECKED BY [Signature]

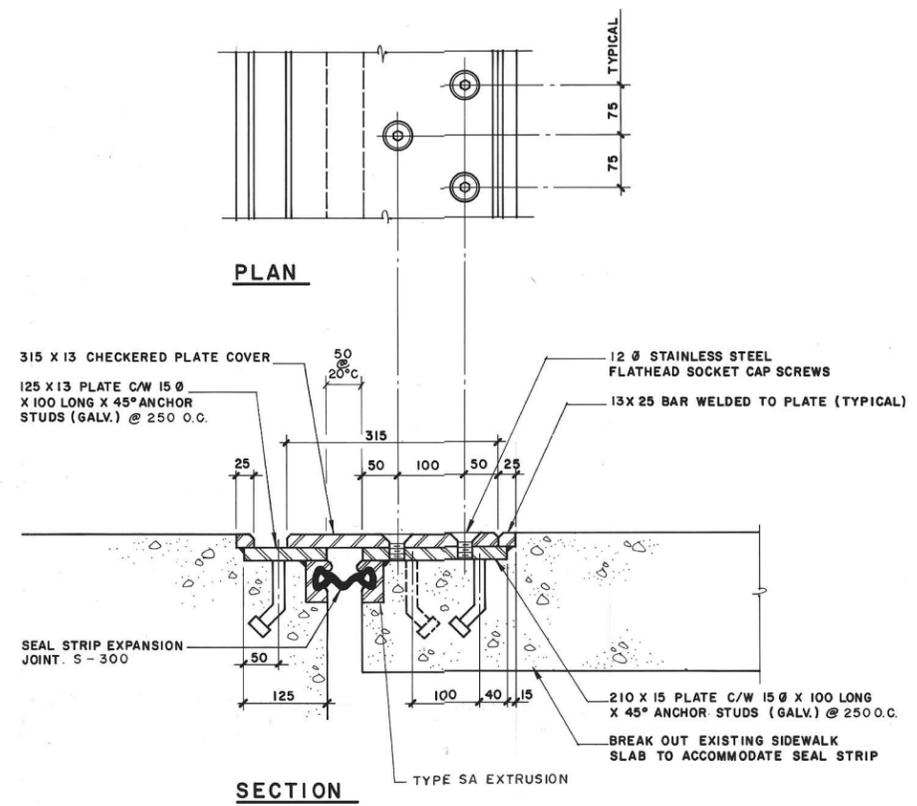


1 SECTION AT STEEL GIRDERS
 09 10 SIMILAR AT WEST ABUTMENT. SEE 7 09
 1:5



2 SECTION AT PRECAST GIRDERS
 09 10 SIMILAR AT WEST ABUTMENT. SEE 7 09
 1:5

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES



3 SIDEWALK SEAL STRIP EXPANSION JOINT GALVANIZED COVER PLATE
 09 10 SAME AT EAST ABUTMENT
 1:5



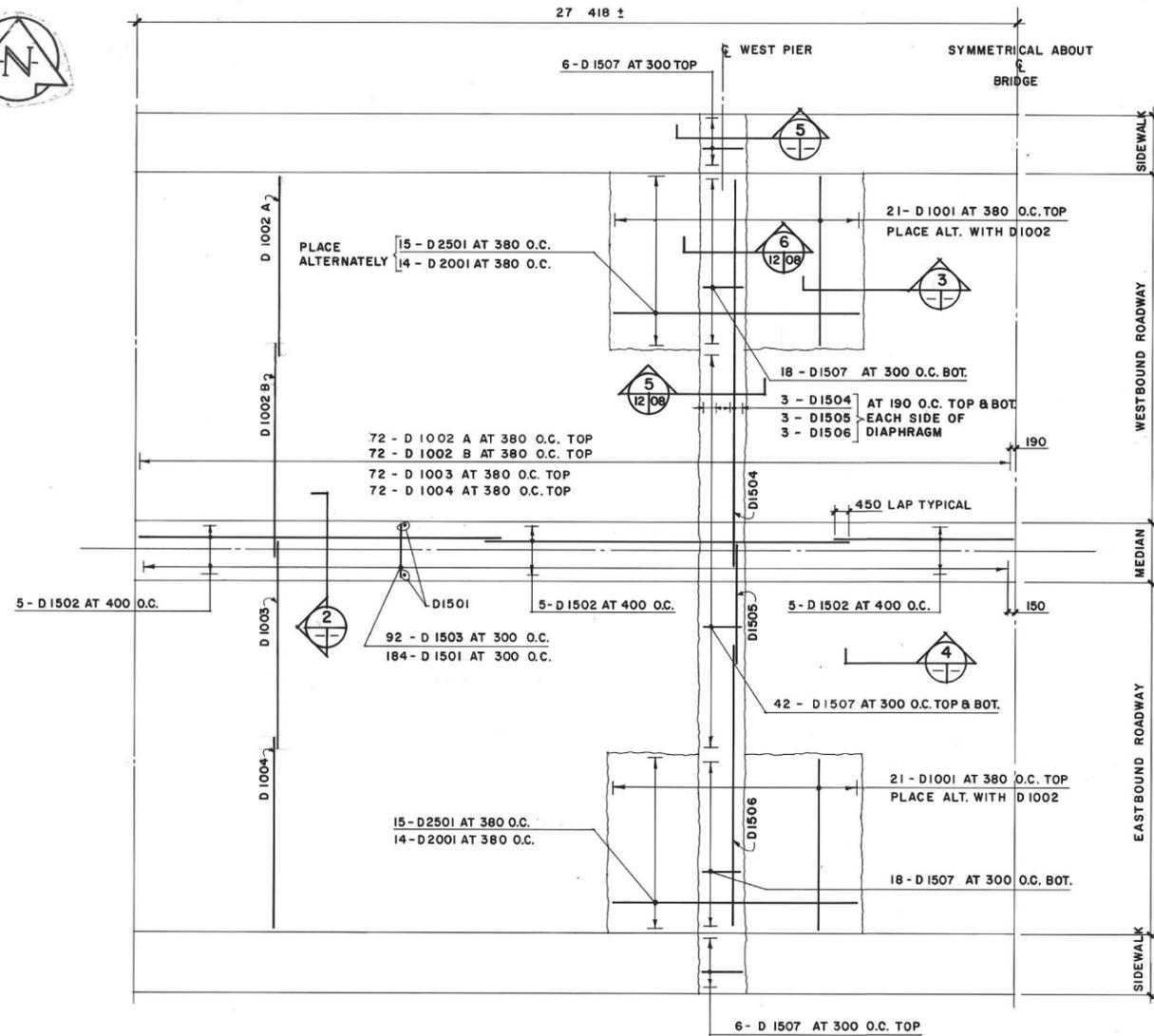
NO.	AS CONSTRUCTED	REVISIONS	DATE	APP.

DESIGNED BY: C.D.S.		DRAWN BY: R.N.	
CHECKED BY: B.W.G.		DATE: 84-04-06	
APPROVED BY: <i>B.W.G.</i>		DATE: 84.04.10	

THE CITY OF WINNIPEG
 WORKS & OPERATIONS DIVISION
 STREETS & TRANSPORTATION DEPARTMENT

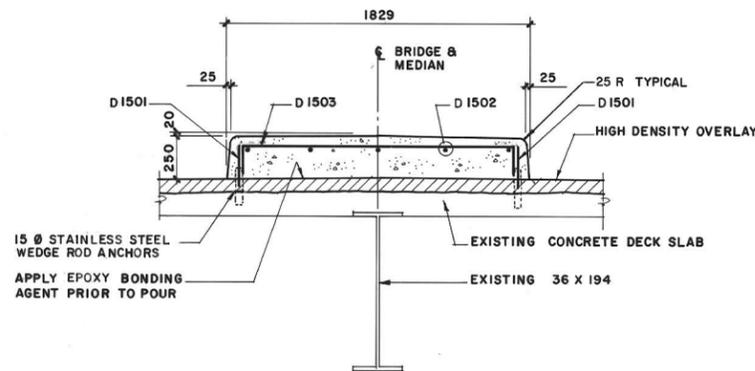
T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER
 DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS
 EXPANSION JOINT DETAILS DECK & SIDEWALK
 AUTHORIZED BY: *Levinson, P. Eng.* 1984-04-18
 ACCEPTED BY: *Smith, P. Eng.* 1984-04-10
 SCALE: 1:5 DRAWING NO. **B118-84-10**

B-5557
 REVISED AS CONSTRUCTED
 DATE SEPT. 1986 BY *W.C.*
 CHECKED BY *W.C.*

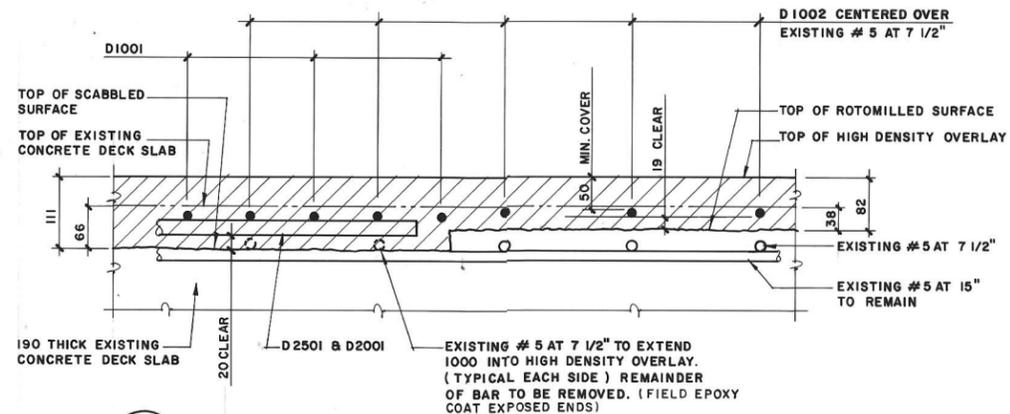


1 HALF PLAN - DECK SLAB & SIDEWALK
1:100 (CONCRETE SHOULDER TRAFFIC BARRIERS NOT SHOWN)

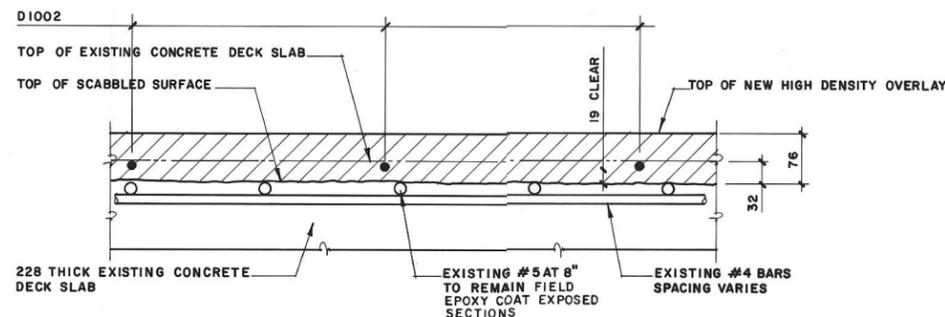
NOTE: ALL NEW BARS IN SLAB & MEDIAN ARE EPOXY COATED



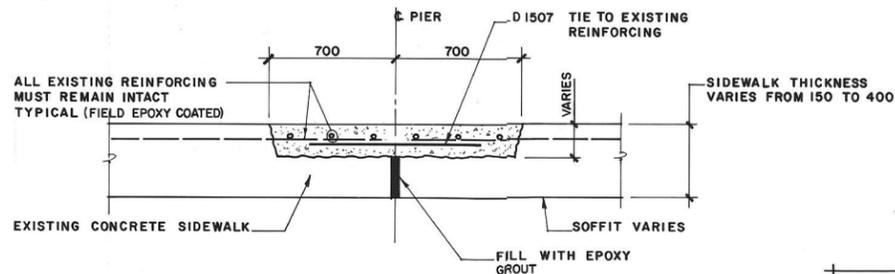
2 SECTION THROUGH MEDIAN
1:20



3 SECTION
DECK SLAB OVER PRECAST GIRDERS
1:5



4 SECTION
DECK SLAB OVER STEEL GIRDERS
1:5



5 SECTION
1:20

ALL REINFORCING STEEL ON THIS DRAWING IS EPOXY COATED.

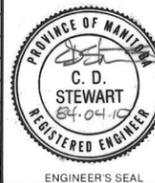
B-5559

REVISED AS CONSTRUCTED
DATE SEPT. 1988 BY C.G.
CHECKED BY



METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

NO.	REVISIONS	DATE	APP.
1	AS CONSTRUCTED		



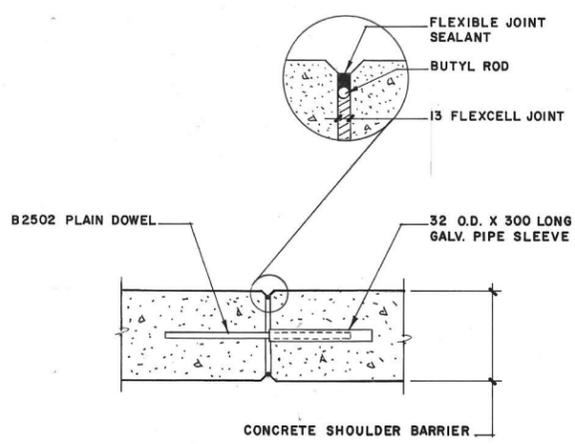
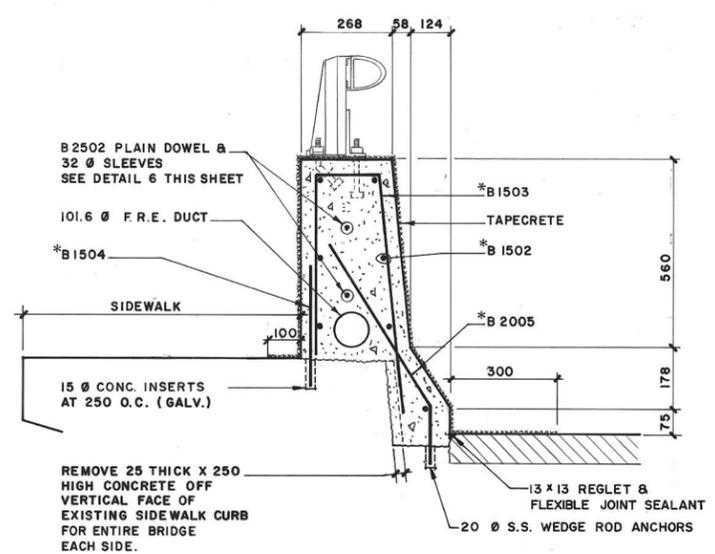
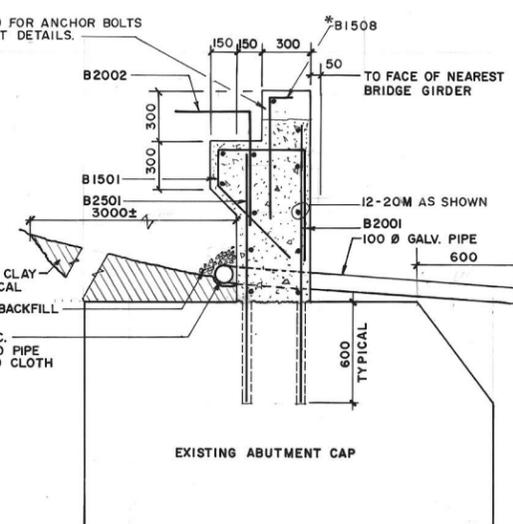
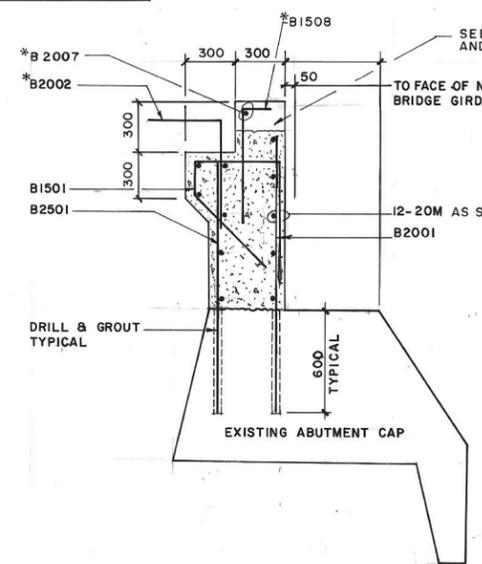
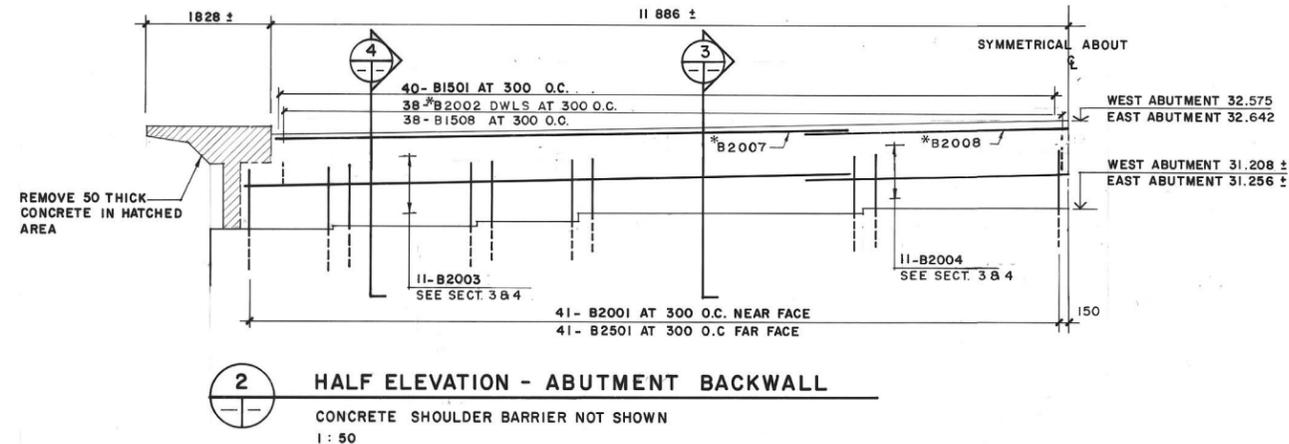
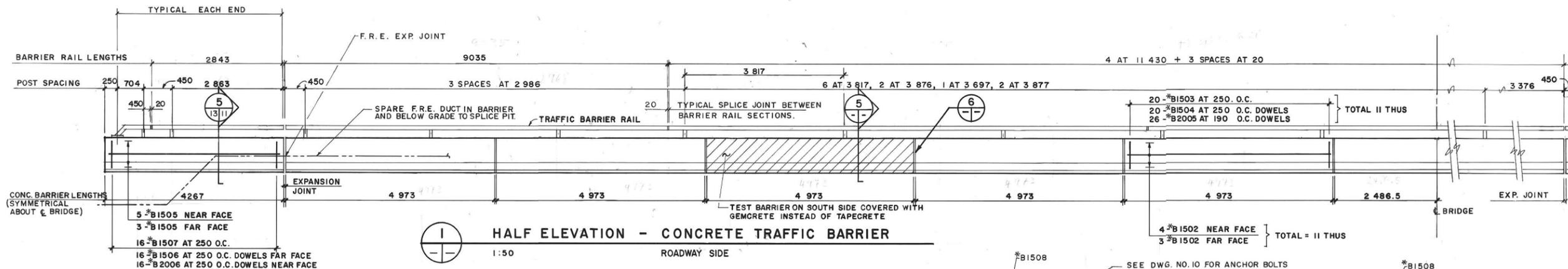
W. L. WARDROP & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

DESIGNED BY: C.D.S. DRAWN BY: R.N.
CHECKED BY: B.W.G. DATE: 84-04-06
APPROVED BY: B.W.G. DATE: 84.04.10

THE CITY OF WINNIPEG
WORKS & OPERATIONS DIVISION
STREETS & TRANSPORTATION DEPARTMENT

T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER
DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS
REINFORCING DETAILS DECK SLAB

AUTHORIZED BY: W.L. Wardrop, P. Eng. DATE: 1988-04-18
ACCEPTED BY: B.W.G. DATE: 1988-04-10
SCALE: DRAWING NO. B118-84-12



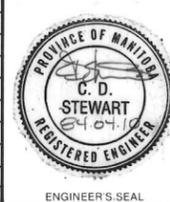
ALUMINUM TRAFFIC BARRIER BILL OF MATERIALS

R.H. RAIL END SECTIONS	2
L.H. RAIL END SECTIONS	2
11430 RAIL SECTION	8
9168 RAIL SECTION	2
EXPANSION SPLICE BARS	4
STANDARD SPLICE BARS	12
2843 RAIL SECTIONS	4
RAIL CLAMP BARS	72
TRAFFIC BARRIER RAIL POSTS	36
CAPSCREWS	200
WASHERS	200
SHIMS	AS REQUIRED

NOTE

* INDICATES EPOXY COATED REINFORCING

XXXXXXXXX INDICATES TAPECRETE SURFACE



DESIGNED BY:	C.D.S.	DRAWN BY:	T.O./R.N.
CHECKED BY:	B.W.G.	DATE:	84-04-06
APPROVED BY:	B.W. Gulay	DATE:	84.04.10

THE CITY OF WINNIPEG

WORKS & OPERATIONS DIVISION

STREETS & TRANSPORTATION DEPARTMENT

T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER

DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS

CONCRETE & REINFORCING DETAILS

SHOULDER TRAFFIC BARRIER & BACKWALLS

AUTHORIZED BY: [Signature] DATE: 1984-04-18

ACCEPTED BY: [Signature] DATE: 1984-04-10

SCALE: [Blank] DRAWING NO. **B118-84-13**

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

NO.	AS CONSTRUCTED	REVISIONS	DATE	APP.

B-5560

REVISED AS CONSTRUCTED

DATE SEPT. 1986 BY [Signature]

CHECKED BY [Signature]

NOTES

THE 25.4 x 31.8 SLOTS (5) IN THE BASE OF BRIDGE RAIL POSTS TYPE D, BR2 AND BR3A, ARE DESIGNED TO ACCOMMODATE 20mm Ø ANCHOR BOLTS. THE 19mm Ø HOLES (4) IN THE BASE OF BRIDGE RAIL POST BR1 TYPE C ARE DESIGNED TO ACCOMMODATE 16mm Ø RAIL POST ANCHOR BOLTS.

COMBINATION OF 1.5mm, 3.0mm OR 6.0mm ALUMINUM SHIMS TO BE USED AS REQUIRED TO SET BRIDGE RAIL POSTS TO THE SPECIFIED HEIGHT. A MINIMUM 3.0mm SHIM IS REQUIRED AT EACH POST.

SPECIFICATIONS

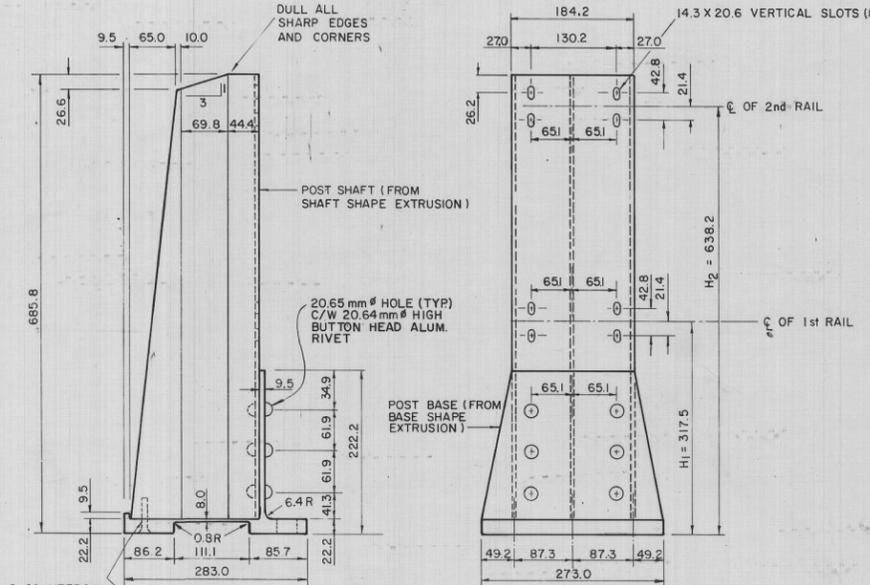
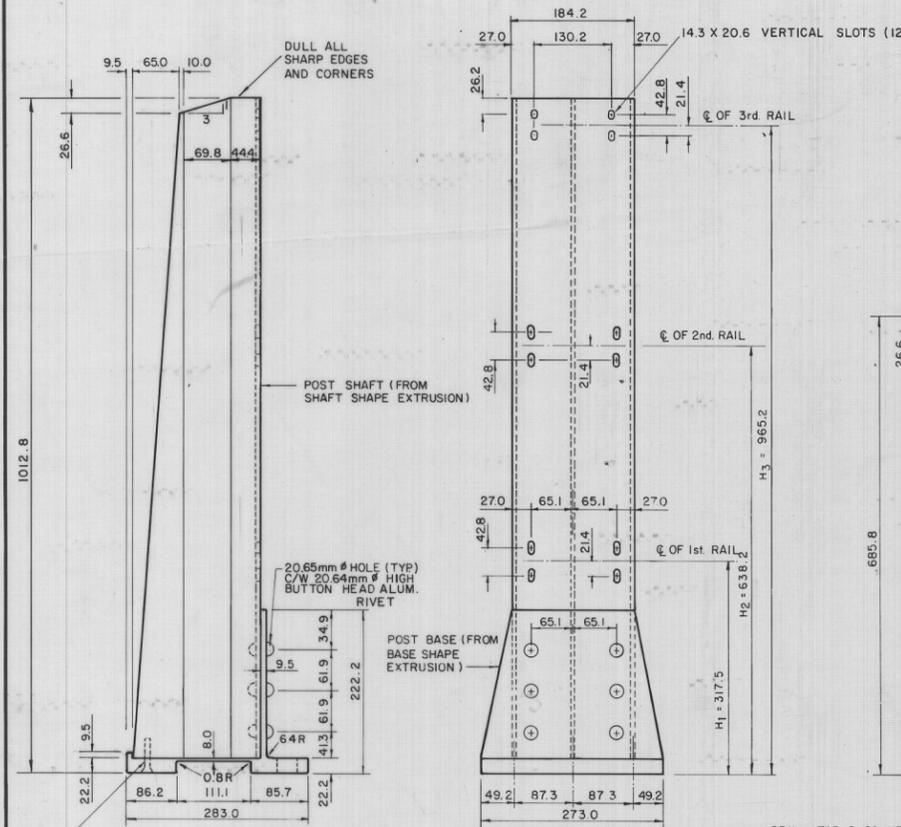
EXTRUDED ALUM. SHAPES SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. B221, ALLOY 6061-T6 OR ALLOY 6351-T5 (MINIMUM ELONGATION 10%)

CAP SCREW SHALL MEET THE REQUIREMENTS OF A.S.T.M. A276, TYPE 430 AND THE DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.3.

RIVET MATERIAL SHALL MEET THE REQUIREMENTS OF A.S.T.M. B316 OR B221, ALLOY 6061-T6. RIVETS SHALL HAVE MANUFACTURED HIGH BUTTON HEADS MEETING THE DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.4, SHALL HAVE DRIVEN CONE POINT HEADS, AND SHALL MEET THE REQUIREMENTS OF SECTION 6.5 OF THE ALUMINUM ASSOCIATION'S SPECIFICATIONS FOR ALUMINUM BRIDGE AND OTHER HIGHWAY STRUCTURES.

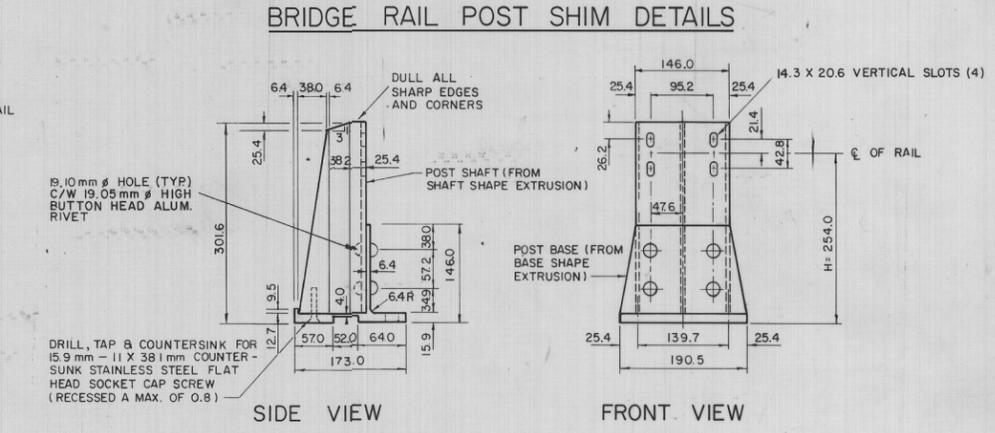
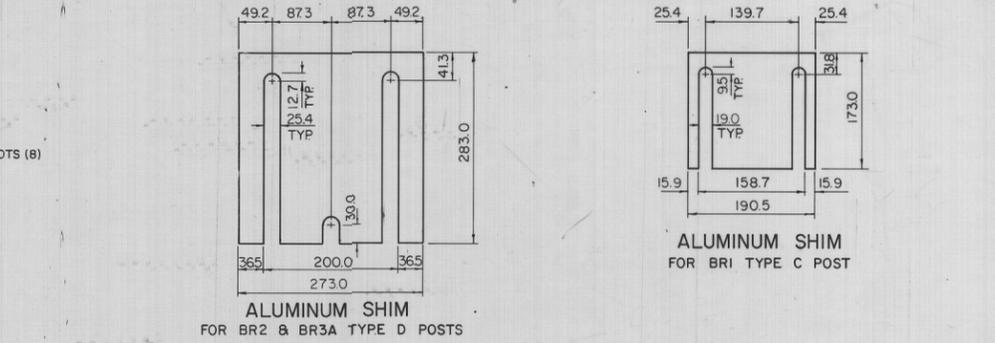
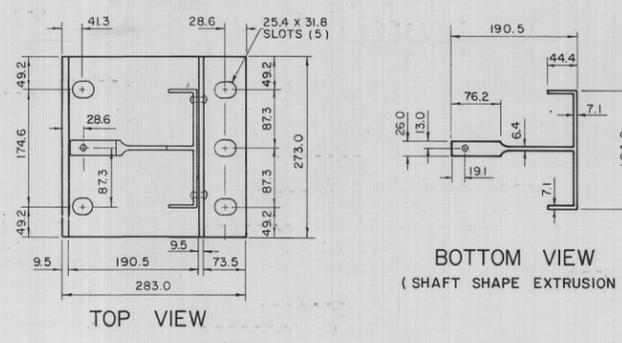
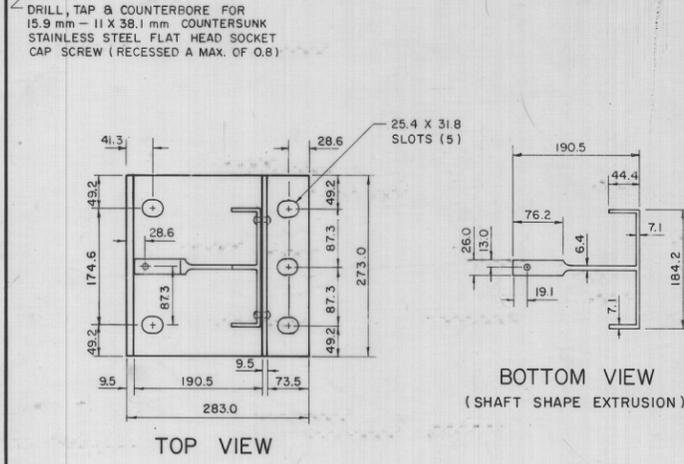
THE POST BASE SHALL BE MADE FROM A SINGLE BASE SHAPE EXTRUSION SIMILARLY, THE POST SHAFT SHALL BE MADE FROM A SINGLE SHAFT SHAPE EXTRUSION. THE POST BASE AND POST SHAFT SHALL BE CONNECTED USING THE HIGH BUTTON HEAD ALUMINUM RIVETS AND THE STAINLESS STEEL CAP SCREW TO FORM A BRIDGE RAIL POST.

DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE AND ACCEPTED MANUFACTURING PRACTICES.



DRILL, TAP & COUNTERBORE FOR 15.9mm - 11 X 38.1mm COUNTERSUNK STAINLESS STEEL FLAT HEAD SOCKET CAP SCREW (RECESSED A MAX. OF 0.8)

DRILL, TAP & COUNTERSINK FOR 15.9mm - 11 X 38.1mm COUNTERSUNK STAINLESS STEEL FLAT HEAD SOCKET CAP SCREW (RECESSED A MAX. OF 0.8)



DRILL, TAP & COUNTERSINK FOR 15.9mm - 11 X 38.1mm COUNTERSUNK STAINLESS STEEL FLAT HEAD SOCKET CAP SCREW (RECESSED A MAX. OF 0.8)

BRIDGE RAIL POST
BR3A TYPE D (ALUMINUM)

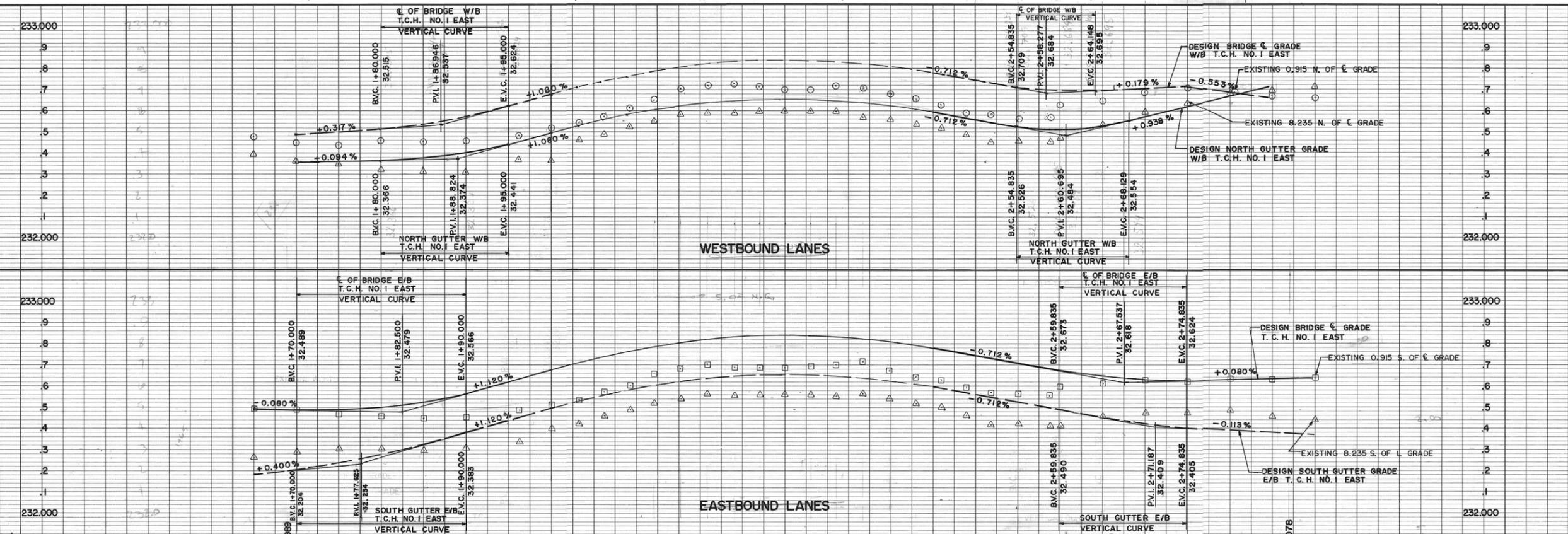
BRIDGE RAIL POST
BR 2 TYPE D (ALUMINUM)

BRIDGE RAIL POST
BR1 TYPE C (ALUMINUM)
(FOR USE ON CONCRETE TRAFFIC BARRIER)

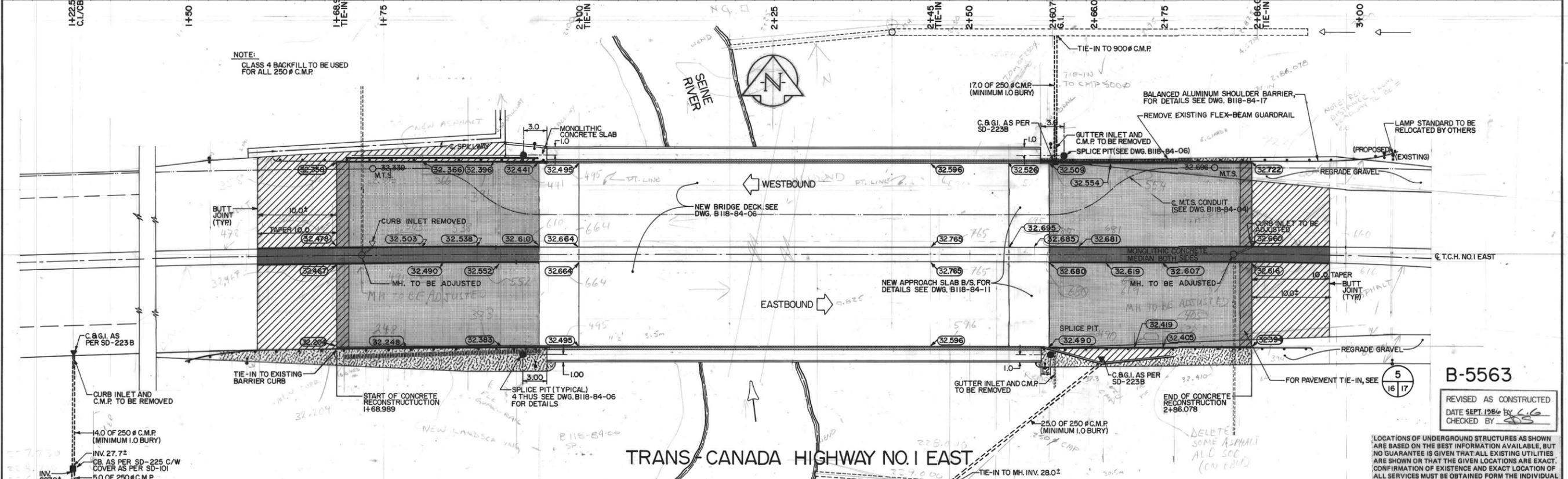
B-5561
REVISED AS CONSTRUCTED
DATE SEPT. 1984 BY *LG*
CHECKED BY *AS*

METRIC
ALL DIMENSIONS ARE IN MILLIMETRES

<p>W. L. WARDROP & ASSOCIATES LTD. ENGINEERING CONSULTANTS</p>		<p>THE CITY OF WINNIPEG WORKS & OPERATIONS DIVISION</p>	<p>T.C.H. NO.1 EAST BRIDGE OVER SEINE RIVER DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS DETAILS OF ALUMINUM BRIDGE RAIL POSTS</p>
<p>DESIGNED BY: N A</p>	<p>DRAWN BY: HN</p>		
<p>CHECKED BY: G.R.S. 82-03-19</p>	<p>DATE: 80-11-28</p>	<p>SCALE: N.T.S.</p>	<p>STANDARD DETAIL No. CW-305-RI</p>
<p>R-2 AS CONSTRUCTED</p>	<p>APPROVED BY: <i>Shankar, P. L.</i></p>	<p>DATE: 82 05 13</p>	<p>ENGINEER'S SEAL</p>
<p>R-1 NOTES ON SHIMS</p>	<p>NO. REVISIONS</p>	<p>DATE</p>	<p>APP.</p>



NOTE:
CLASS 4 BACKFILL TO BE USED
FOR ALL 250# C.M.P.

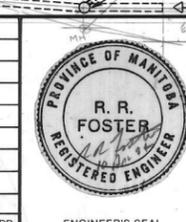


TRANS-CANADA HIGHWAY NO. 1 EAST

B-5563
REVISED AS CONSTRUCTED
DATE SEPT. 1986 BY C.G.
CHECKED BY [Signature]

LOCATIONS OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

ITEM	EXISTING	PROPOSED
LIGHT STANDARD	••	
NEW CONCRETE BARRIER	—	—
NEW ALUMINUM BARRIER	—	—
NEW MONOLITHIC CONC.	—	—
NEW ASPHALT OVERLAY	—	—
FLEX-BEAM GUARDRAIL (TO BE REMOVED)	—	—
EDGE OF PAVEMENT	—	—
NO CURB	—	—
CURBED	—	—
CURB & GUTTER	—	—
ELEVATIONS	32.400	(32.400)
REINF. CONC. PAV'T.	—	—
CATCHBASIN	□	■
MANHOLE	○	●
C. & G. INLET	▽	▼
C.M.P.	—	—



W. L. WARDROP & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

DESIGNED BY: J.D. DRAWN BY: G.G.P.
CHECKED BY: W.R.D. DATE: 84-03-30
APPROVED BY: [Signature] DATE: [Signature]

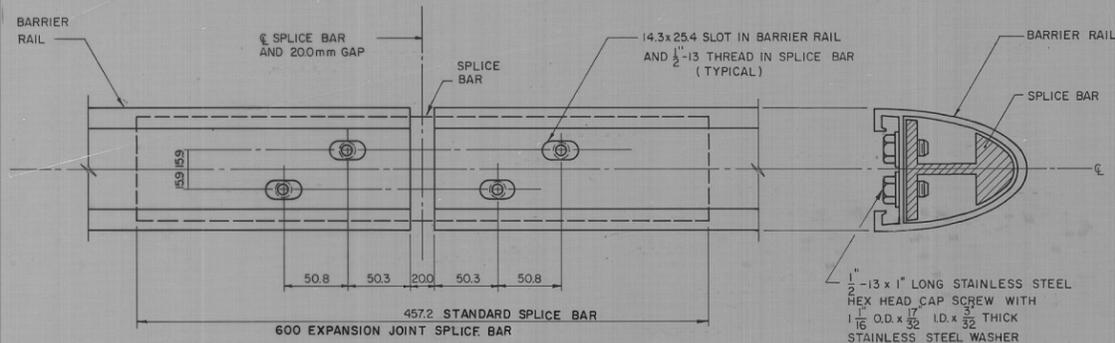
THE CITY OF WINNIPEG
WORKS & OPERATIONS DIVISION
STREETS & TRANSPORTATION DEPARTMENT

T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER
DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS
EASTBOUND AND WESTBOUND PAVEMENT RECONSTRUCTION

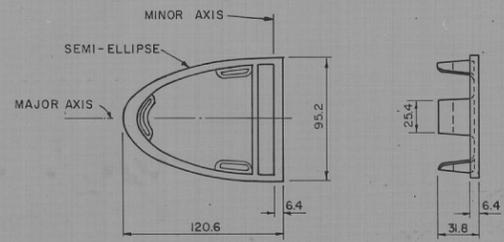
AUTHORIZED BY: [Signature] DATE: 1984-09-18
ACCEPTED BY: [Signature] DATE: 1984-09-10

SCALE: HORIZ: 1:250 VERT: 1:10 DRAWING NO. B118-84-16

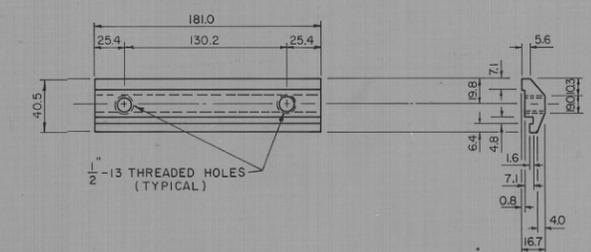
SEINE RIVER



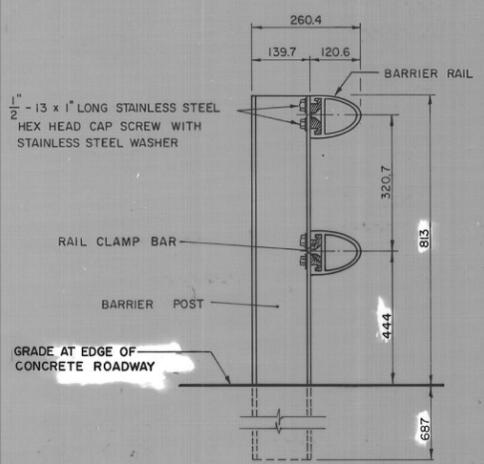
SPlice BAR TO RAIL ASSEMBLY DETAIL



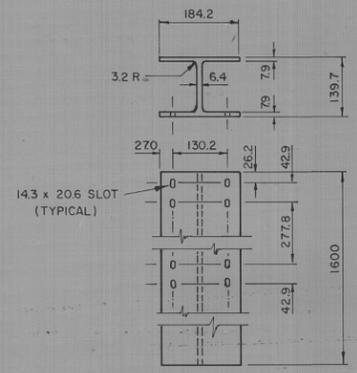
RAIL END CAP



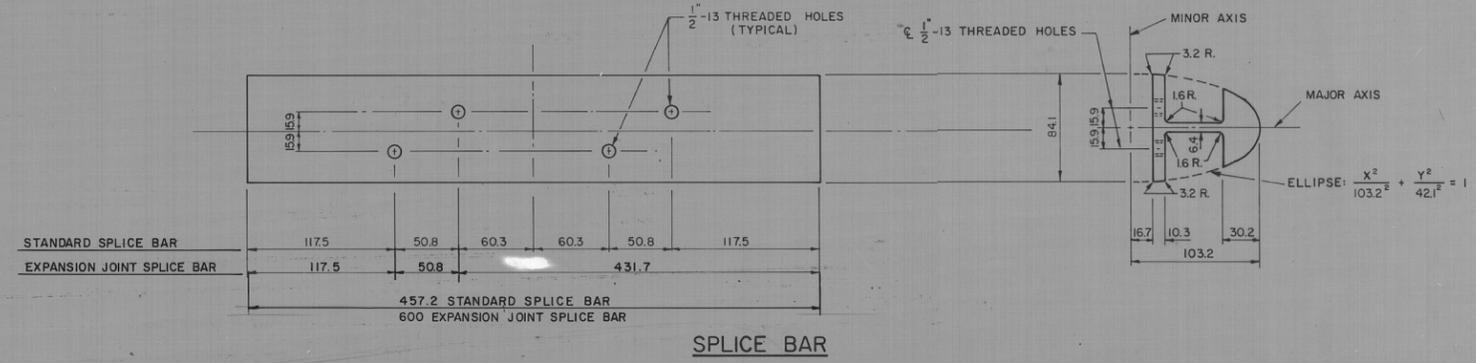
RAIL CLAMP BAR



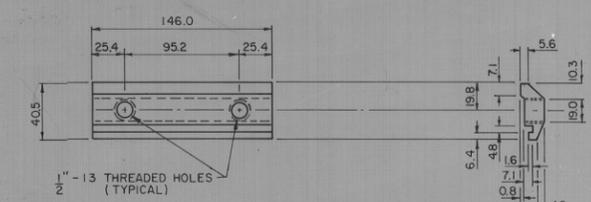
RAIL TO POST ASSEMBLY DETAIL



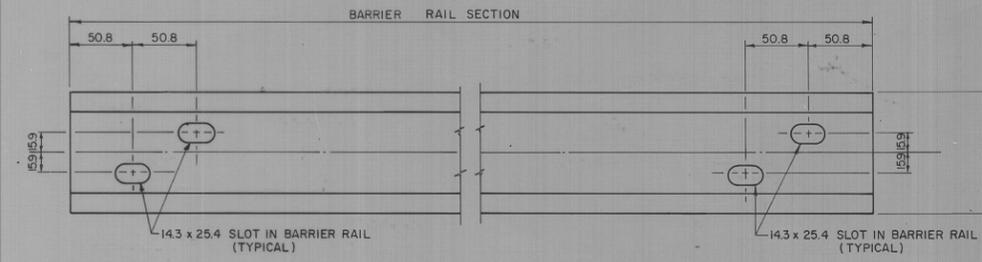
1600m POST
(0800m POST SIMILAR EXCEPT WITH ONLY FOUR SLOTS AT TOP OF POST)



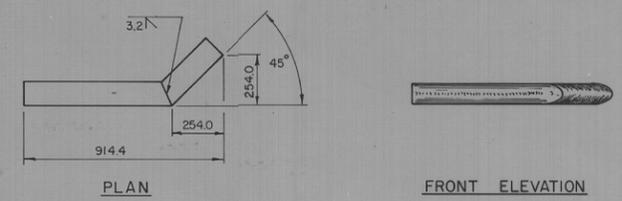
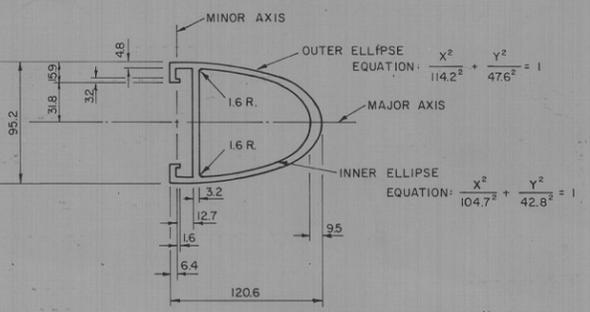
SPlice BAR



RAIL CLAMP BAR
(FOR BR 1 C BRIDGE RAIL POST)



BARRIER RAIL



TERMINAL END
(FABRICATED FROM BARRIER RAIL)

B-5565
REVISED AS CONSTRUCTED
DATE SEPT. 1980 BY [Signature]
CHECKED BY [Signature]

MATERIAL SPECIFICATIONS

- ALUMINUM RAILS, POSTS, SPLICE BARS, CLAMP BARS, AND END CAPS SHALL CONFORM TO ASTM B221, ALLOY 6061-T6, OR ALLOY 6351-T6.
- STAINLESS STEEL WASHERS SHALL CONFORM TO ASTM A296.
- CAP SCREWS SHALL CONFORM TO ASTM A276, TYPE 430 STAINLESS STEEL.
- NOTE THAT ALL FASTENERS ARE SPECIFIED IN IMPERIAL UNITS.

METRIC
ALL DIMENSIONS SHOWN ON THIS PLAN ARE IN MILLIMETRES EXCEPT AS OTHERWISE INDICATED

NO	REVISIONS	DATE	APP
R3	AS CONSTRUCTED		
R2	RE-DRAWN	83-12-21	
R1	BRIDGE RAIL CLAMP BAR ADDED	83-6-16	

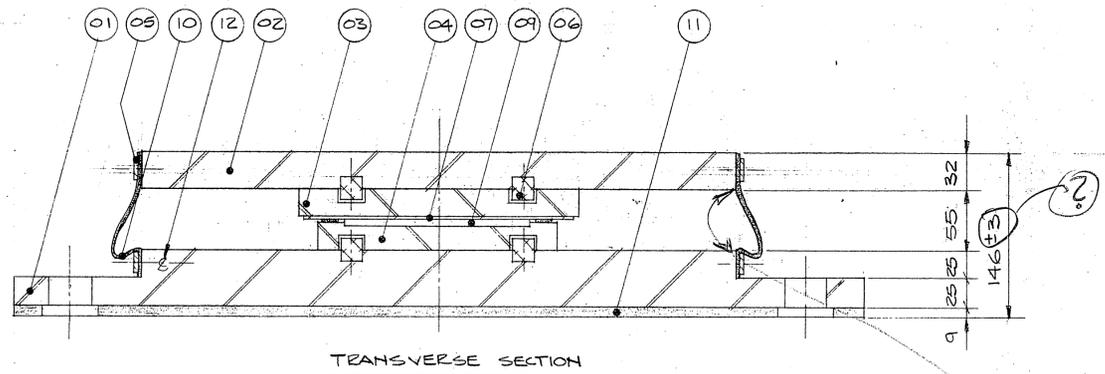
W. L. WARDROP & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

DESIGNED BY: N.A. DRAWN BY: GFN
CHECKED BY: ZVK DATE: 80-03-18
APPROVED BY: [Signature] DATE: 83-12-22

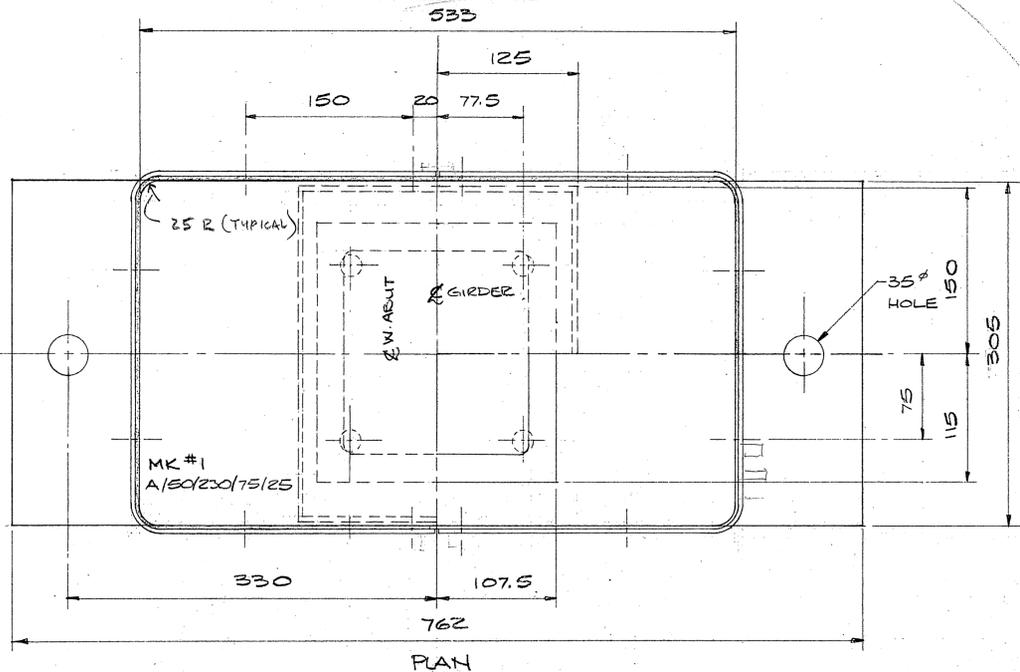
THE CITY OF WINNIPEG
WORKS & OPERATIONS DIVISION
STREETS & TRANSPORTATION DEPARTMENT

T.C.H. NO.1 EAST BRIDGE OVER SEINE RIVER
DECK REHABILITATION, SUPERSTRUCTURE STRENGTHENING AND RELATED WORKS
BALANCED ALUMINUM SHOULDER BARRIER STANDARD DETAILS

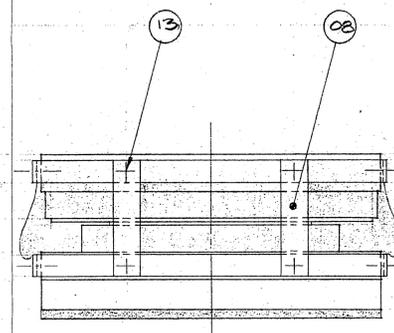
AUTHORIZED BY: [Signature] 1983-12-23
ACCEPTED BY: [Signature] 1983-12-22
SCALE: N.T.S. DRAWING NO: B118-84-18



TRANSVERSE SECTION



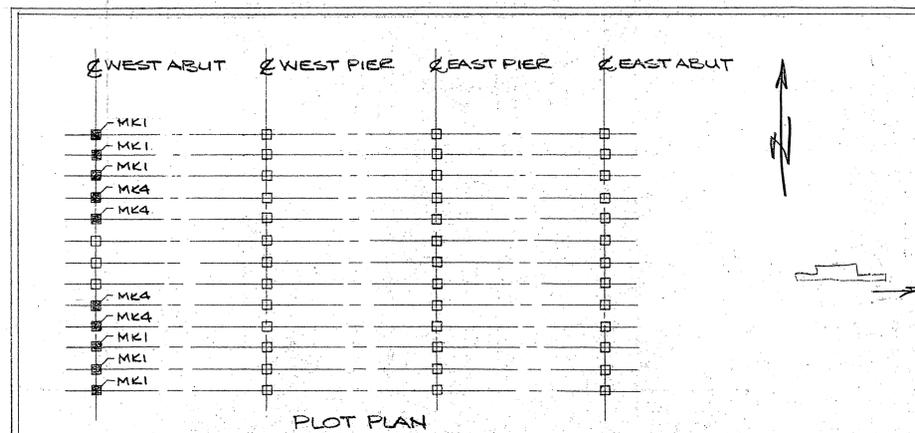
PLAN



LONGITUDINAL ELEVATION

BEARING DATA.

BEARING TYPE — A/50/230/75/25 -MK 1
 QUANTITY — 6
 MAX. V. LOAD — 420 KN
 MAX. H. LOAD — 0
 LONG. MOVNT — ±37.5 mm
 TRAN. MOVNT — ±12.5 mm



PLOT PLAN

GENERAL NOTES.

- STEEL COMPONENTS TO CONFORM TO S40.21 GR 300W
- STAINLESS STEEL TO CONFORM TO ASTM STD A-167, TYPE 304 WITH A 2B MIRROR FINISH ONE SIDE. (SEAM WELDED TO SLIDING R.)
- PTFE SHALL BE 100% VIRGIN POLYMER, DIMPLED, LUBRICATED, RECESSED INTO BEARING R. AND CONFORM TO A.A.SHTO. D-1706-59T, D-638 & D-792.
- ALL WELDING TO CONFORM TO CSA W59.1
- SLIDING AND BEARING PLATES TO BE BLAST CLEANED TO SSPC-SP6 (EXCEPT IN MACHINED RECESS) THEN PAINTED WITH ONE COAT OF COLTURIET EPOXY PRIMER. ALL EXPOSED SURFACES TO ALSO RECEIVE ONE COAT OF BROWN COLTURIET TEN-300 TOP COAT.
- SOLE AND MASONRY R'S TO BE HOT-DIP GALVANIZED IN ACCORDANCE WITH CSA STD. G164 M1901 (2002/14)

ITEM	QTY.	DESCRIPTION	MK #
15			
14			
13	8PCS	BLACK HEX HD SCREWS 1/4" x 3/4" LG.	
12	24PCS	S/S HEX HD SCREWS 1/4" x 1/2" LG.	
11	1PC	FABREEKA PAD 12" x 3/8" x 30"	
10	1PC	SILICONE RUBBER SHEET 6" x 1/16" x 70"	
09	1PC	PTFE 6" x 3/16" x 6"	
08	4PCS	STEEL TRANSIT BRKTS. 1/4" x 1" x 4" LG (PAINTED)	
07	1PC	S/S SHEET 9 1/2" x 1/16" x 11 3/8"	
06	8PCS	S/S PINS 3/4" x 1/2" LG	
05	4PCS	S/S BAR 1/8" x 3/4" x 33" LG BENT IN 'U' SHAPE	
04	1PC	STEEL BEARING R. 8 1/2" x 1" x 9" (EPOXY COATED)	
03	1PC	STEEL SLIDING R. 10" x 1" x 11 3/8" (EPOXY COATED)	
02	1PC	STEEL SOLE R. 12" x 1/4" x 21" (GALVANIZED)	
01	1PC	STEEL MASONRY R. 12" x 2" x 30" (GALVANIZED)	

LIST OF MATERIALS / BRS.

ITEM	QTY.	DESCRIPTION	MK #
15			
14	2PCS	S/S HEX HD SCREWS 1/4" x 2 3/4" LG 1/16" WASH	
13	8PCS	BLACK HEX HD SCREWS 1/4" x 3/4" LG	
12	24PCS	S/S HEX HD SCREWS 1/4" x 1/2" LG.	
11	1PC	FABREEKA PAD 12" x 3/8" x 32"	
10	1PC	SILICONE RUBBER SHEET 6" x 1/16" x 72"	
09	1PC	PTFE 6" x 3/16" x 6"	
08	4PCS	STEEL TRANSIT BRKTS. 1/4" x 1" x 4 1/4" (PAINT RED)	
07	1PC	S/S SHEET 9 1/2" x 1/16" x 11 3/8"	
06	8PCS	S/S PINS 3/4" x 1/2" LG	
05	4PCS	S/S BAR 1/8" x 3/4" x 34" LG BENT IN 'U' SHAPE	
04	1PC	STEEL BEARING R. 8 1/2" x 1" x 9" (EPOXY COATED)	
03	1PC	STEEL SLIDING R. 10" x 1" x 11 3/8" (EPOXY COATED)	
02	1PC	STEEL SOLE R. 12" x 1/4" x 22" (GALVANIZED)	
01	1PC	STEEL MASONRY R. 12" x 1/2" x 22" (GALVANIZED)	

LIST OF MATERIALS / BRS.

ITEM	QTY.	DESCRIPTION	MK #
15			
14			
13			
12			
11			
10			
09			
08			
07			
06			
05			
04			
03			
02			
01			

W.G. BEARINGS INC.
 BURLINGTON, ONTARIO

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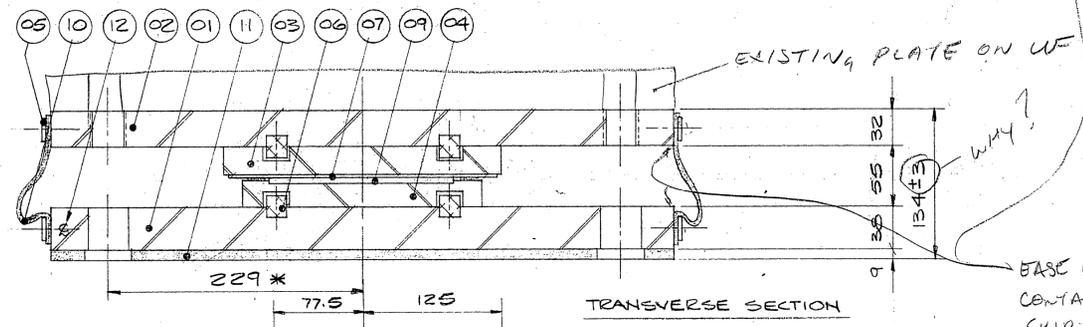
JOB TITLE: T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER.

SYSTEM: GLACIER TYPE 'A' BEARINGS

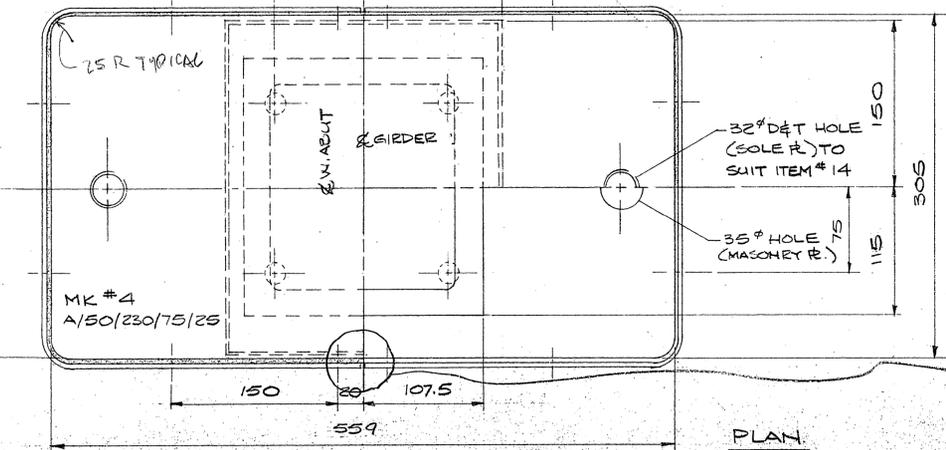
DRAWN BY: B. CONNOR PROJECT NO: P642-84 DRAWING NO: W84-256 REV: 1 OF 4
 CHECKED BY: DATE: MAY 1984

* TO BE CONFIRMED BY CONTRACTOR

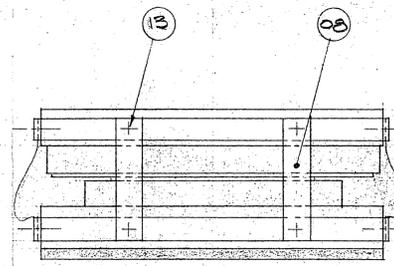
890136-03-00



TRANSVERSE SECTION



PLAN



LONGITUDINAL ELEVATION

BEARING DATA.

BEARING TYPE — A/50/230/75/25 -MK 4
 QUANTITY — 4
 MAX. V. LOAD — 400 KN
 MAX. H. LOAD — 0
 LONG. MOVNT. — ±37.5 mm
 TRAN. MOVNT. — ±12.5 mm

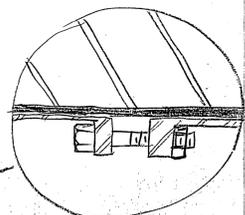
SHOP DRAWING REVIEW

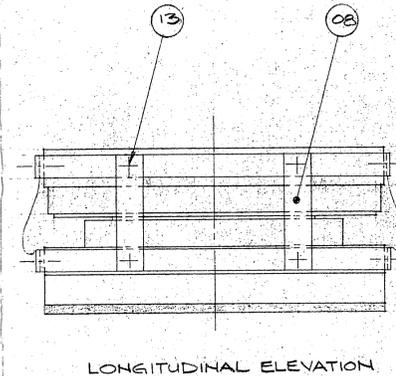
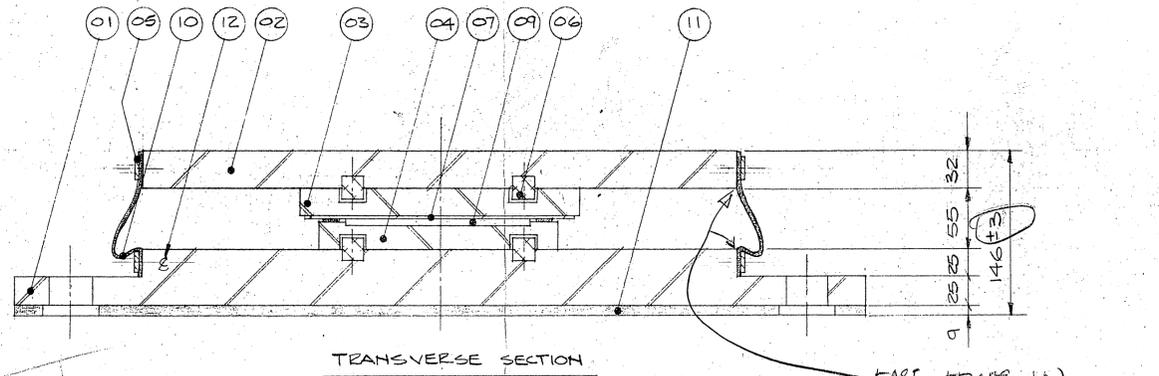
Review is for conformity to the design concept and for general arrangement only and does not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the Contract Documents. Deviations or changes from the Contract Documents are not accepted.

No exceptions taken
 No exceptions taken, except as noted.
 Check notations and resubmit for review
 Rejected - See remarks

W. L. WARDROP & ASSOCIATES LTD. By: TO Date: 04/05/83

CONSIDER CLAMPING SKIRT WITHOUT DRILLING HOLES IN THE STEEL PL'S

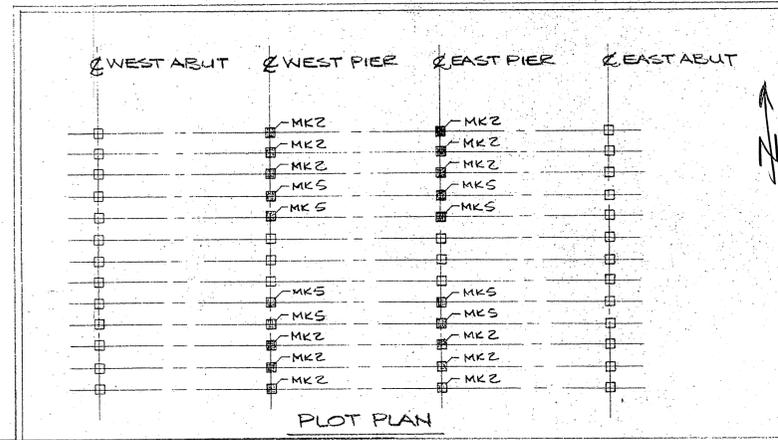
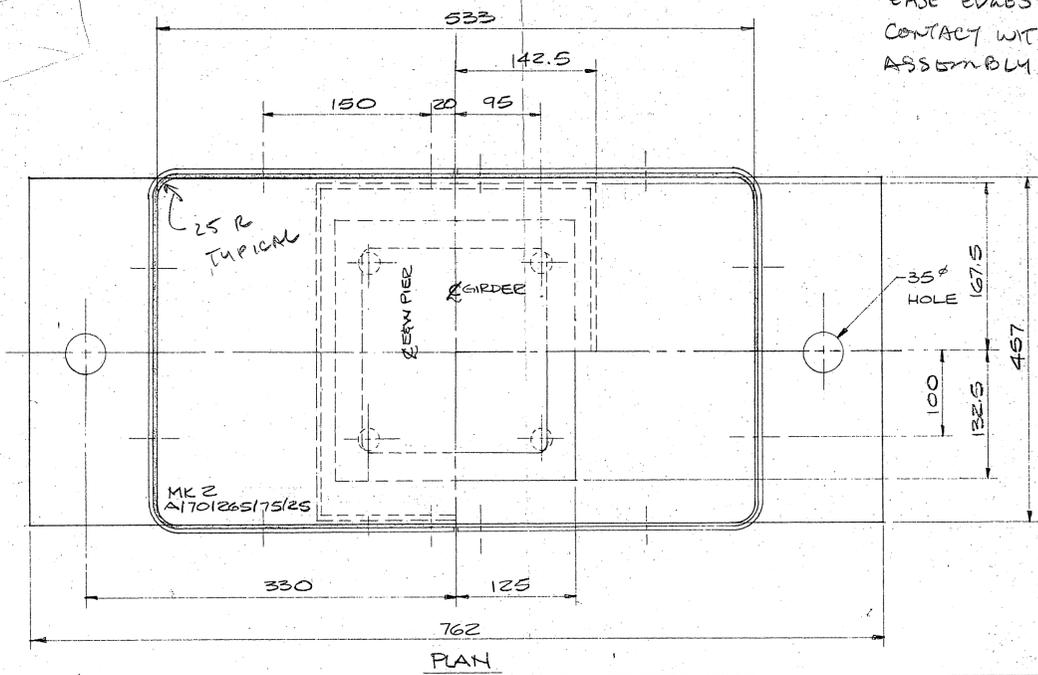




BEARING DATA

BEARING TYPE	A/70/265/75/25 - MK 2
QUANTITY	12
MAX. V. LOAD	680 KN
MAX. H. LOAD	Ø
LONG. MOVNT	±37.5 mm
TRAN. MOVNT	±12.5 mm

CONTINUOUS BAND



ITEM	QTY	DESCRIPTION	MK #
15			
14			
13	8PCS	BLACK HEX HD SCREWS 1/4" x 3/4" LG	
12	24PCS	S/S HEX HD SCREWS 1/4" x 1/2" LG	
11	1PC	FABREEKA PAD 18" x 3/8" x 30"	
10	1PC	SILICONE RUBBER SHEET 6" x 1/16" x 82" LG	
09	1PC	PTFE 6 7/8" x 3/16" x 6 7/8"	
08	4PCS	STEEL TRANSIT BRKTS 1/4" x 1" x 4" LG (PAINTED)	
07	1PC	S/S SHEET 10 3/4" x 1/16" x 12 5/8"	
06	8PCS	S/S PINS 3/4" x 1/2" LG	
05	4PCS	S/S BAR 1/8" x 3/4" x 39" LG BENT IN 'L' SHAPE	
04	1PC	STEEL BEARING 10" x 1" x 10 1/2" (EPOXY COATED)	
03	1PC	STEEL SLIDING 11 1/4" x 1" x 13 1/8" (EPOXY COATED)	
02	1PC	STEEL SOLE 18" x 1 1/4" x 21" LG (GALVANIZED)	
01	1PC	STEEL MASONRY 18" x 2" x 30" LG (GALVANIZED)	

LIST OF MATERIALS / BRG

ITEM	QTY	DESCRIPTION	MK #
15			
14	4PCS	S/S HEX HD SCREWS 1/4" x 2 3/4" LG W/WASH	
13	8PCS	BLACK HEX HD SCREWS 1/4" x 3/4" LG	
12	24PCS	S/S HEX HD SCREWS 1/4" x 1/2" LG	
11	1PC	FABREEKA PAD 18" x 3/8" x 22" LG	
10	1PC	SILICONE RUBBER SHEET 6" x 1/16" x 84" LG	
09	1PC	PTFE 6 7/8" x 3/16" x 6 7/8"	
08	4PCS	STEEL TRANSIT BRKTS 1/4" x 1" x 4 1/4" LG (PAINT RED)	
07	1PC	S/S SHEET 10 3/4" x 1/16" x 12 5/8"	
06	8PCS	S/S PINS 3/4" x 1/2" LG	
05	4PCS	S/S BAR 1/8" x 3/4" x 40" LG BENT IN 'L' SHAPE	
04	1PC	STEEL BEARING 10" x 1" x 10 1/2" (EPOXY COATED)	
03	1PC	STEEL SLIDING 11 1/4" x 1" x 13 1/8" (EPOXY COATED)	
02	1PC	STEEL SOLE 18" x 1 1/4" x 22" (GALVANIZED)	
01	1PC	STEEL MASONRY 18" x 1 1/2" x 22" (GALVANIZED)	

LIST OF MATERIALS / BRG

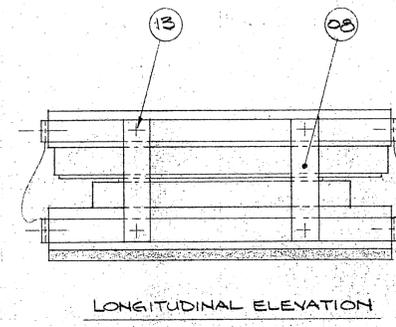
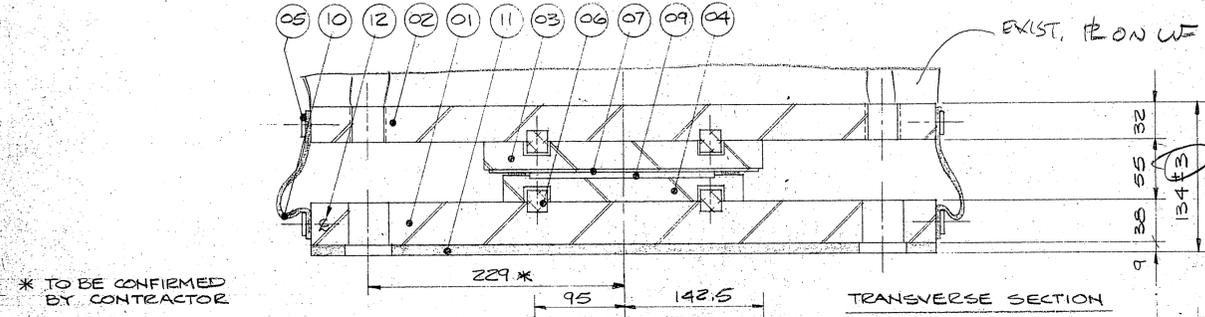
ITEM	QTY	DESCRIPTION	MK #
15			
14			
13			
12			
11			
10			
09			
08			
07			
06			
05			
04			
03			
02			
01			

GLACIER

W.G. BEARINGS INC.

BURLINGTON ONTARIO

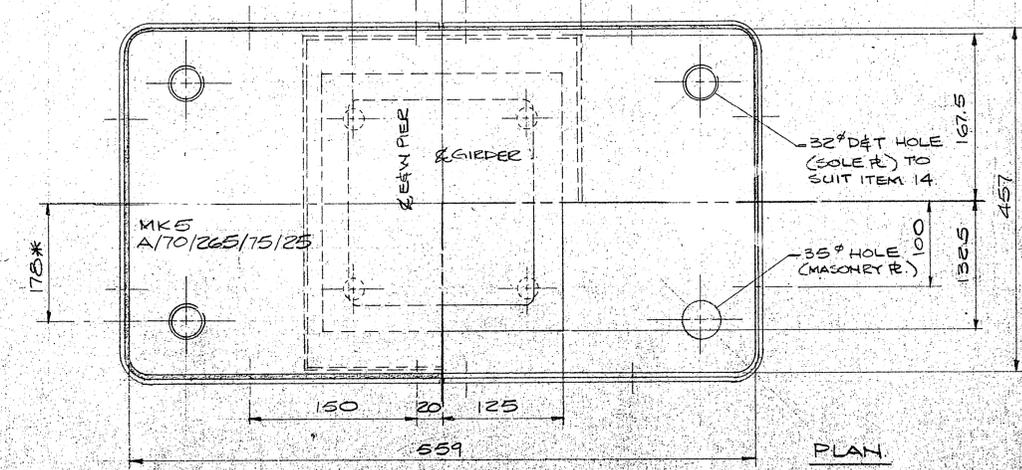
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BEARING DATA

BEARING TYPE	A/70/265/75/25 - MK 5
QUANTITY	8
MAX. V. LOAD	630 KN
MAX. H. LOAD	Ø
LONG. MOVNT	±37.5 mm
TRAN. MOVNT	±12.5 mm

CONTINUOUS BAND
MOLDED



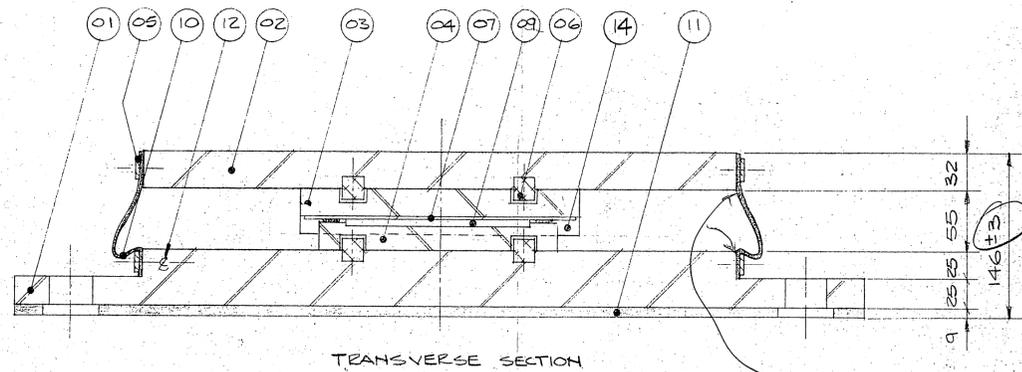
SHOP DRAWING REVIEW

Review is for conformity to the design concept and for general arrangement only and does not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the Contract Documents. Deviations or changes from the Contract Documents are not accepted.

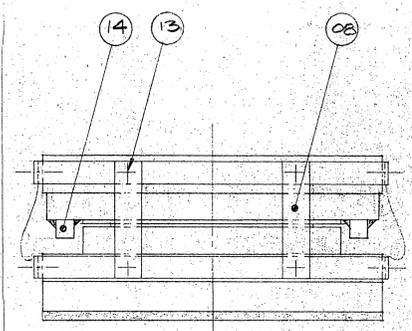
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<input type="checkbox"/>	Check notations and resubmit for review
<input type="checkbox"/>	Rejected - See remarks

W. L. WARDROP & ASSOCIATES LTD. By: *TO* Date: 04.05.23

JOB TITLE: T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER	
SYSTEM: GLACIER TYPE 'A' BEARINGS	
DRAWN BY: B. CONNOR	PROJECT NO: P 642-84
CHECKED BY: <i>[Signature]</i>	DATE: MAY 1984
DRAWING NO: W84-256	REV: 2
SHT: 21	



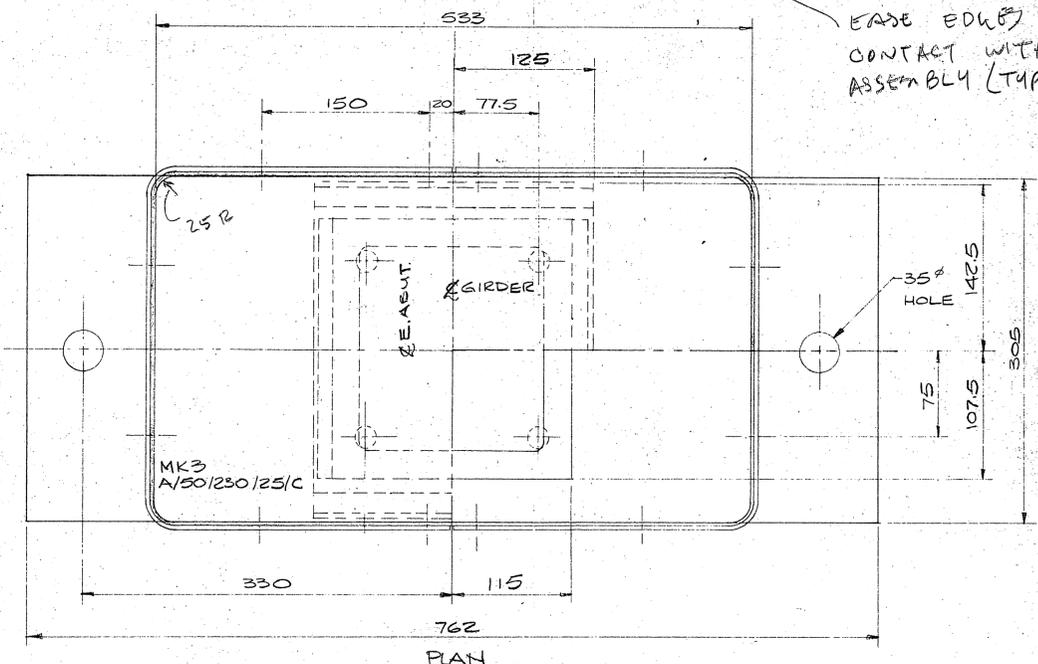
TRANSVERSE SECTION



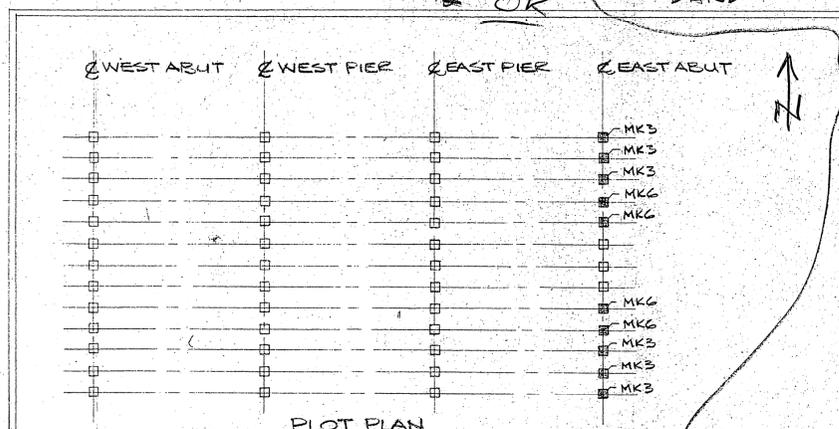
LONGITUDINAL ELEVATION

BEARING DATA

BEARING TYPE — A/50/230/25/C - MK 3
 QUANTITY — 6
 MAX V. LOAD — 420 KN **42 KN SP 13.3**
 MAX H. LOAD — 20 KN
 LONG. MOVNT. — CONSTRAINED
 TRAN. MOVNT. — ±12 mm



PLAN



PLOT PLAN

ITEM	QTY.	DESCRIPTION	MK # 3
15			
14	2PCS	STEEL GUIDES 5/8" x 5/8" x 10" LG	
13	8PCS	BLACK HEX HD SCREWS 1/4" x 3/4" LG	
12	24PCS	S/S HEX HD. SCREWS 1/4" x 1/2" LG	
11	1PC	FABREEKA PAD 12" x 3/8" x 30"	
10	1PC	SILICONE RUBBER SHEET 6" x 1/16" x 70"	
09	1PC	PTFE 6" x 3/16" x 6"	
08	4PCS	STEEL TRANSIT BRKTS 1/4" x 1" x 4" (PAINTED)	
07	1PC	S/S SHEET 8 1/2" x 1/16" x 9 1/2"	
06	8PCS	S/S PINS 3/4" x 1/2" LG	
05	4PCS	S/S BAR 1/8" x 3/4" x 33" LG BENT IN 'L' SHAPE	
04	1PC	STEEL BEARING 8 1/2" x 1" x 9" (EPOXY COATED)	
03	1PC	STEEL SLIDING R. 11 1/4" x 1" x 10" (EPOXY COATED)	
02	1PC	STEEL SOLE R. 12" x 1 1/4" x 21" (GALVANIZED)	
01	1PC	STEEL MASONRY R. 12" x 2" x 30" (GALVANIZED)	

LIST OF MATERIALS / BEG

ITEM	QTY.	DESCRIPTION	MK # 3
15			
14	2PCS	STEEL GUIDES 5/8" x 5/8" x 10"	
13	8PCS	BLACK HEX HD SCREWS 1/4" x 3/4" LG	
12	24PCS	S/S HEX HD. SCREWS 1/4" x 1/2" LG	
11	1PC	FABREEKA PAD 12" x 3/8" x 22" LG	
10	1PC	SILICONE RUBBER SHEET 6" x 1/16" x 72"	
09	1PC	PTFE 6" x 3/16" x 6"	
08	4PCS	STEEL TRANSIT BRKTS 1/4" x 1" x 4 1/4" (PAINT RED)	
07	1PC	S/S SHEET 8 1/2" x 1/16" x 9 1/2"	
06	8PCS	S/S PINS 3/4" x 1/2" LG	
05	4PCS	S/S BAR 1/8" x 3/4" x 34" LG BENT IN 'L' SHAPE	
04	1PC	STEEL BEARING 8 1/2" x 1" x 9" (EPOXY COATED)	
03	1PC	STEEL SLIDING R. 11 1/4" x 1" x 10" (EPOXY COATED)	
02	1PC	STEEL SOLE R. 12" x 1 1/4" x 22" LG (GALVANIZED)	
01	1PC	STEEL MASONRY R. 12" x 1 1/2" x 22" (GALVANIZED)	

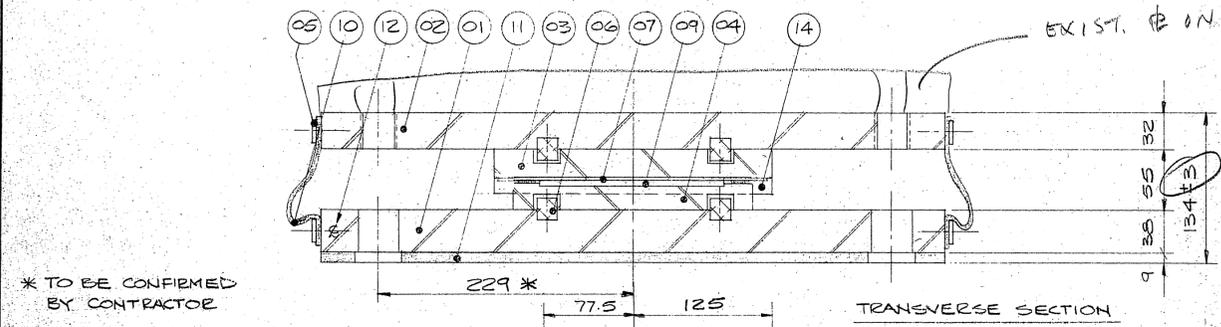
LIST OF MATERIALS / BEG

W.G. BEARINGS INC.

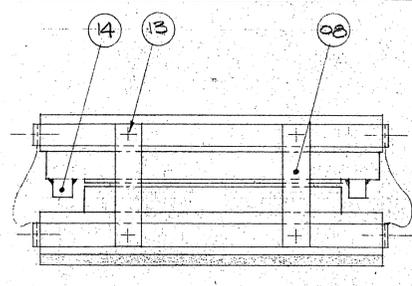
BURLINGTON ONTARIO

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JOB TITLE: T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER			
SYSTEM: GLACIER TYPE 'A' BEARINGS			
DRAWN BY: E. CONNOR	PROJECT NO: P 642-84	DRAWING NO:	REV
CHECKED BY: [Signature]	DATE: MAY 1984	W84-256	3 OF 4



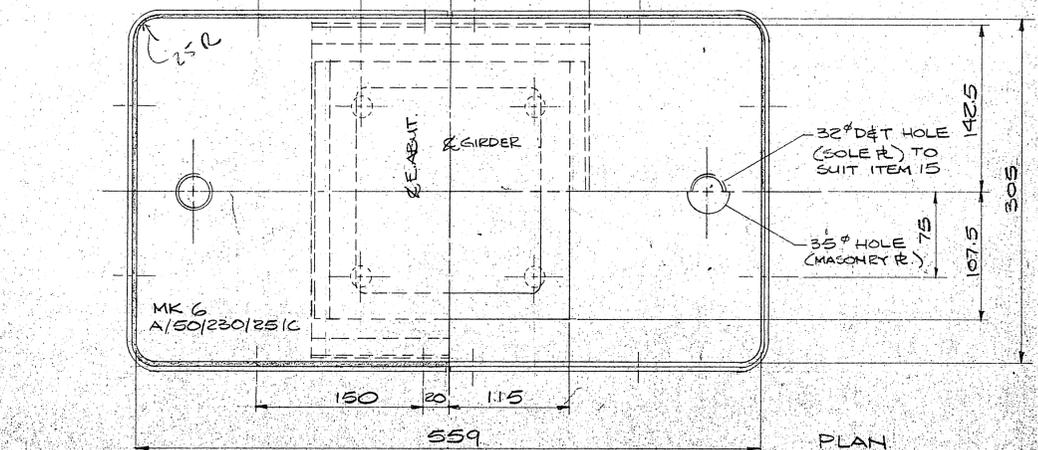
TRANSVERSE SECTION



LONGITUDINAL ELEVATION

BEARING DATA

BEARING TYPE — A/50/230/25/C - MK 6
 QUANTITY — 4
 MAX V. LOAD — 400 KN **20 KN**
 MAX H. LOAD — 20 KN **2540 KN**
 LONG. MOVNT. — CONSTRAINED
 TRAN. MOVNT. — ±2.5 mm



PLAN

SHOP DRAWING REVIEW

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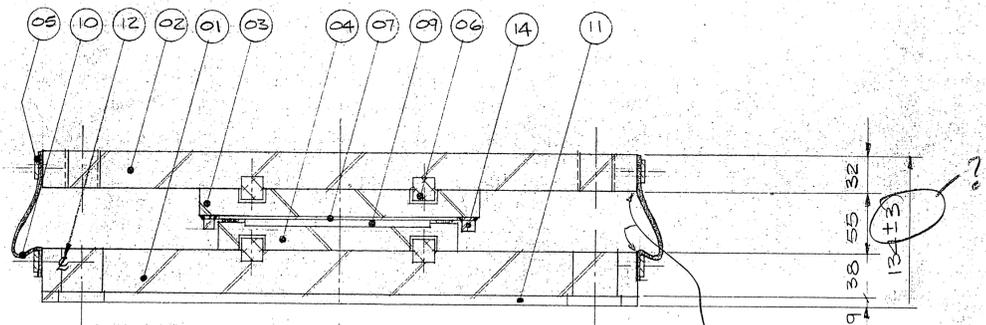
No exceptions taken

No exceptions taken, except as noted.

Check notations and resubmit for review

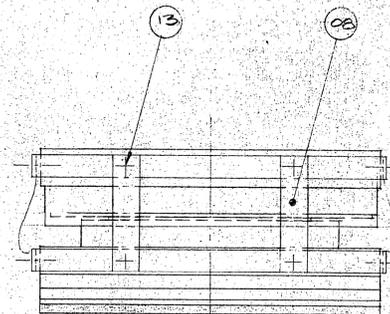
Rejected - See remarks

W. L. WARDROP & ASSOCIATES LTD. By: TO Date: 24-05-84



TRANSVERSE SECTION

EASE EDGES (TYPICAL)
IN CONTACT WITH
SKIRT ASSEMBLY



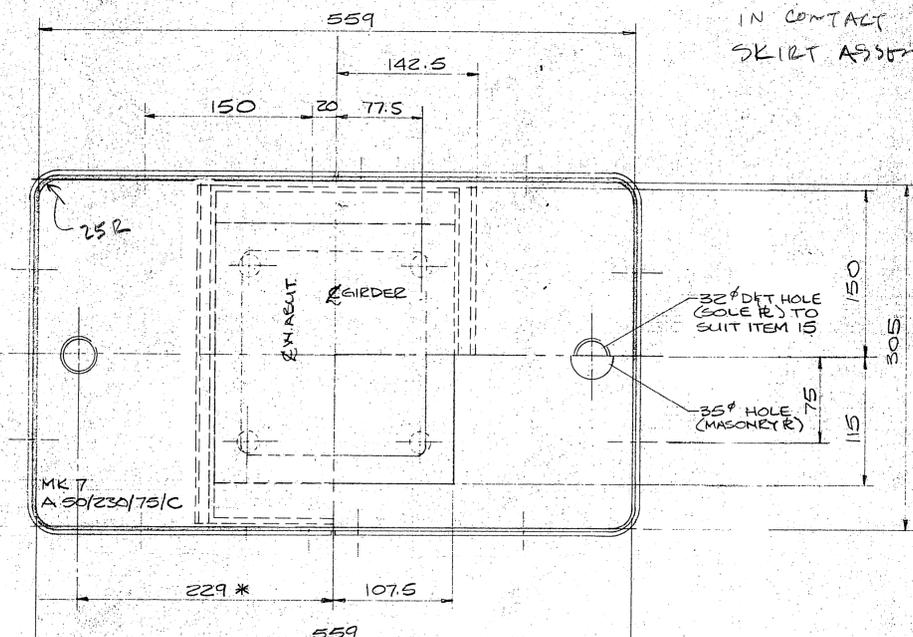
LONGITUDINAL ELEVATION

BEARING DATA

BEARING TYPE — A/50/230/75/C - MK7
 QUANTITY — 3
 MAX. V. LOAD — 400 KN
 MAX. H. LOAD — 20 KN
 LONG. MOVNT. — 37.5 mm
 TRAN. MOVNT. — CONSTRAINED

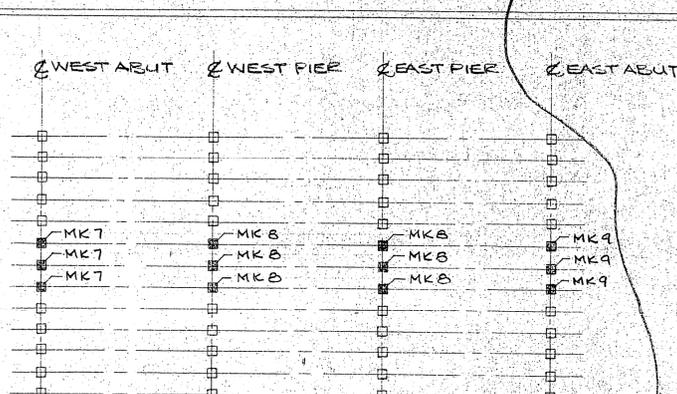
400 KN SP 13.3

CONTINUOUS BAND

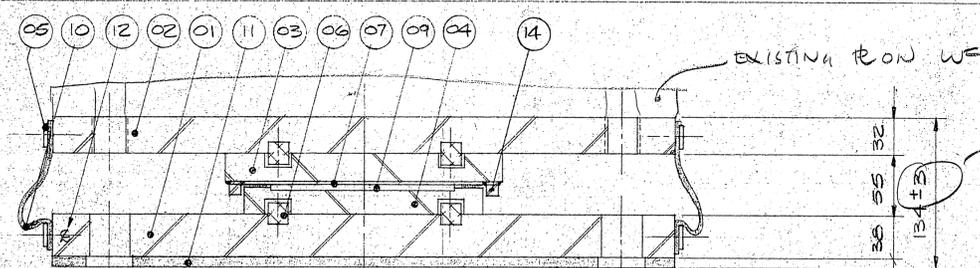


PLAN

* TO BE CONFIRMED BY CONTRACTOR

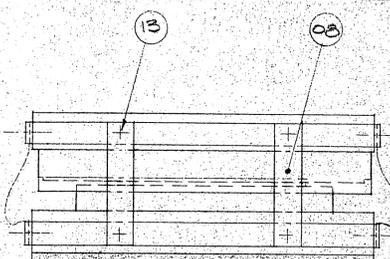


PLOT PLAN



TRANSVERSE SECTION

* TO BE CONFIRMED BY CONTRACTOR



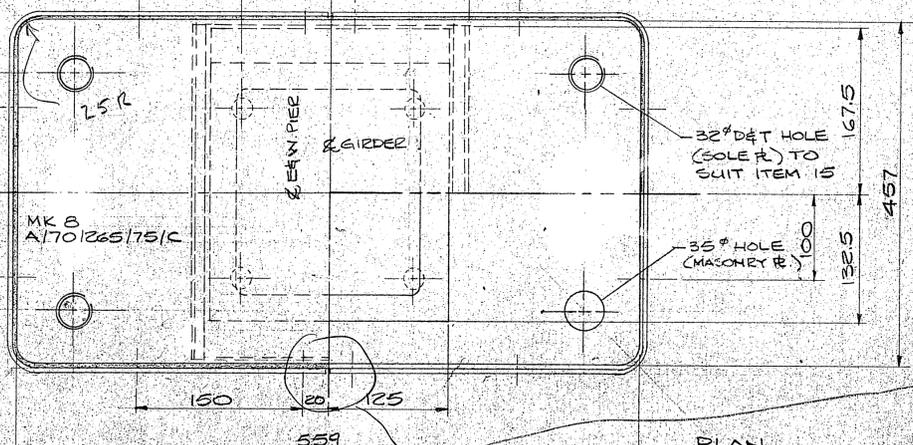
LONGITUDINAL ELEVATION

BEARING DATA

BEARING TYPE — A/70/265/75/C - MK8
 QUANTITY — 6
 MAX. V. LOAD — 630 KN
 MAX. H. LOAD — 50 KN
 LONG. MOVNT. — 37.5 mm
 TRAN. MOVNT. — CONSTRAINED

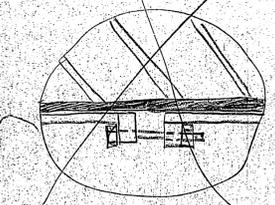
630 KN

CONTINUOUS BAND



PLAN

CONSIDER CLAMPING WITHOUT DRILLING HOLES IN THE STEEL PLATE



SHOP DRAWING REVIEW

Review is for conformity to the design concept and for general arrangement only and does not relieve the Contractor of responsibility for errors or omissions in the shop drawings or for materials not recommended by the Contractor. Documented drawings or changes from the Contract Documents are not included.

No exceptions taken

No exceptions taken, except as noted

Shop's notations and requests for review

Selected - See remarks

W. L. WARDROP & ASSOCIATES LTD. BY TO Date 8/10/84

ITEM	QTY	DESCRIPTION	MK #9
1	3PCS	FABREEKA PAD 12"x3/8"x22" LG	HOLES IN PAD SAME AS BRG. MK 7
LIST OF MATERIALS / BRG			
15	2PCS	S/S HEX HD. SCREWS 1/4"x2 3/4" LG 9W WASH	
14	2PCS	STEEL GUIDE BARS 5/8"x5/8"x1 1/8" LG	
13	8PCS	BLACK HEX HD SCREWS 1/4"x3/4" LG	
12	24PCS	S/S HEX HD SCREWS 1/4"x1/2" LG	
11	1PC	FABREEKA PAD 12"x3/8"x22" LG	
10	1PC	SILICONE RUBBER SHEET 6"x1/16"x72"	
09	1PC	PTFE 6"x3/16"x6"	
08	4PCS	STEEL TRANSIT BRKTS 1/4"x1"x4 1/4" (PAINTED)	
07	1PC	S/S SHEET 8 1/2"x1/16"x11 3/8"	
06	8PCS	S/S PINS 3/4"x1/2" LG	
05	4PCS	S/S BAR 1/8"x3/4"x34" BENT IN U SHAPE	
04	1PC	STEEL BEARING R 8 1/2"x1"x9" (EPOXY COATED)	
03	1PC	STEEL SLIDING R 1 1/8"x1"x1 1/4" (EPOXY COATED)	
02	1PC	STEEL SOLE R 12"x1 1/4"x22" (GALVANIZED)	
01	1PC	STEEL MASONRY R 12"x1 1/2"x22" (GALVANIZED)	
ITEM	QTY	DESCRIPTION	MK #7

ITEM	QTY	DESCRIPTION	MK #8
15	4PCS	S/S HEX HD. SCREWS 1/4"x2 3/4" LG 9W WASH	
14	2PCS	STEEL GUIDE BARS 5/8"x5/8"x1 3/8" LG	
13	8PCS	BLACK HEX HD SCREWS 1/4"x3/4" LG	
12	24PCS	S/S HEX HD SCREWS 1/4"x1/2" LG	
11	1PC	FABREEKA PAD 18"x3/8"x22"	
10	1PC	SILICONE RUBBER SHEET 6"x1/16"x84"	
09	1PC	PTFE 6 7/8"x3 1/16"x6 7/8"	
08	4PCS	STEEL TRANSIT BRKTS 1/4"x1"x4 1/4" (PAINT RED)	
07	1PC	S/S SHEET 10"x1/16"x12 5/8" LG	
06	8PCS	S/S PINS 3/4"x1/2" LG	
05	4PCS	S/S BAR 1/8"x3/4"x40" LG, BENT IN U SHAPE	
04	1PC	STEEL BEARING R 10"x1"x10 1/2" (EPOXY COATED)	
03	1PC	STEEL SLIDING R 1 1/2"x1"x1 3/8" (EPOXY COATED)	
02	1PC	STEEL SOLE R 18"x1 1/4"x22" (GALVANIZED)	
01	1PC	STEEL MASONRY R 18"x1 1/2"x22" (GALVANIZED)	
ITEM	QTY	DESCRIPTION	MK #8

GLACIER

W.G. BEARINGS INC.

BURLINGTON, ONTARIO

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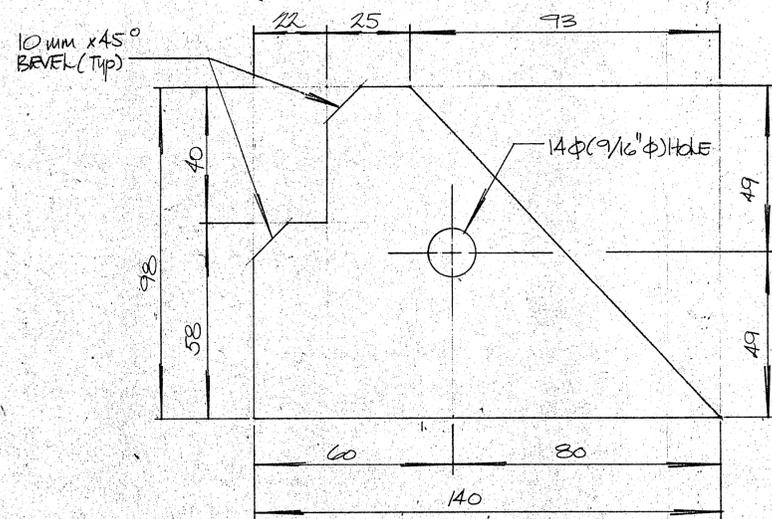
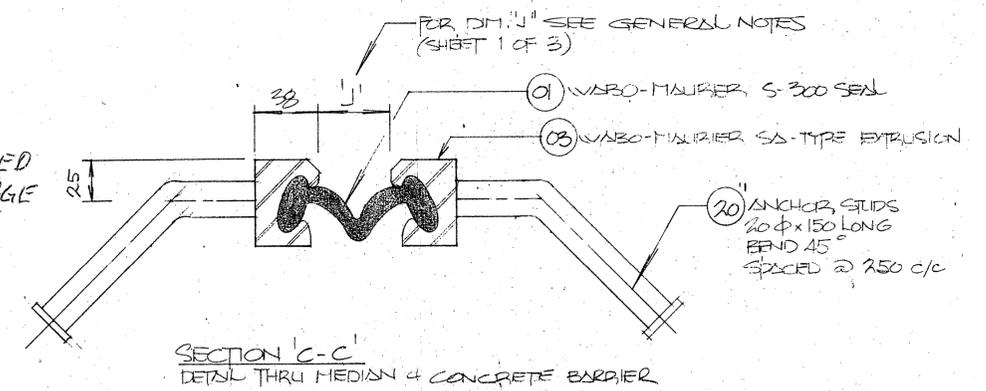
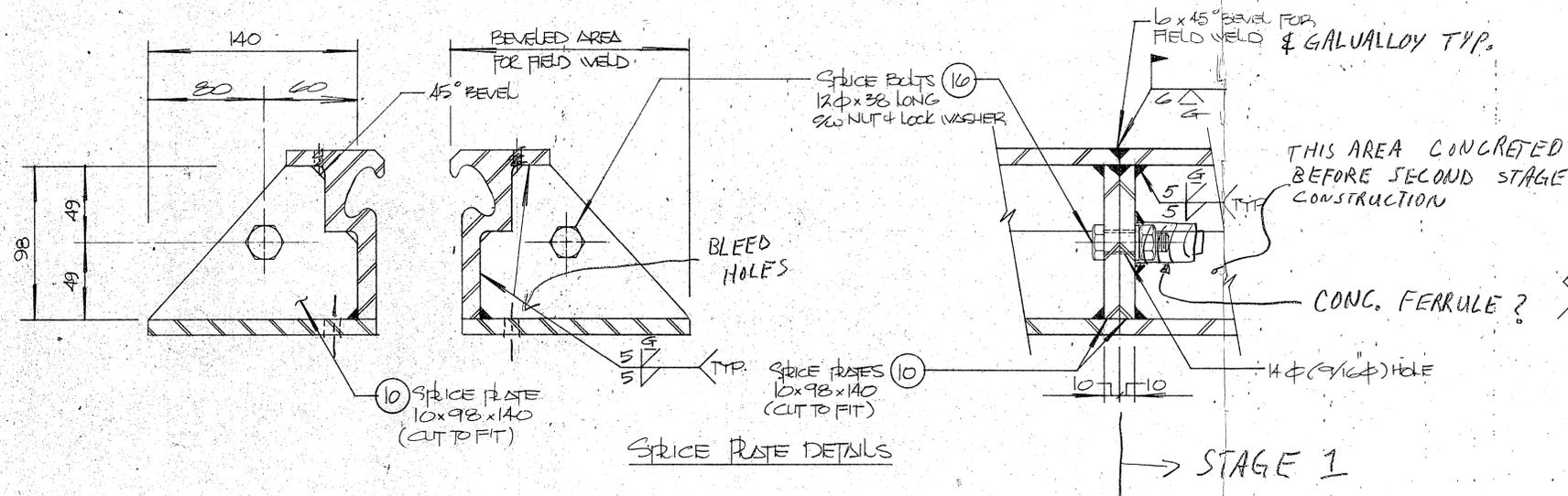
JOB TITLE: T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER.

SYSTEM: GLACIER TYPE 'A' BEARINGS

DRAWN BY: E. CONNOR PROJECT NO: P642-84 DRAWING NO: W84-256 REV: 4

CHECKED BY: DATE: MAY 1984

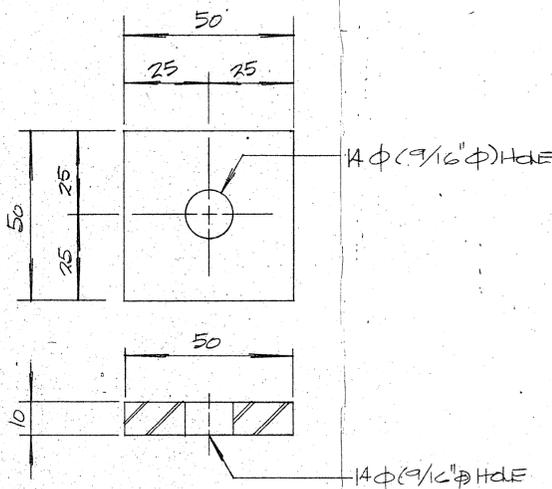
SHT: 4 OF 4



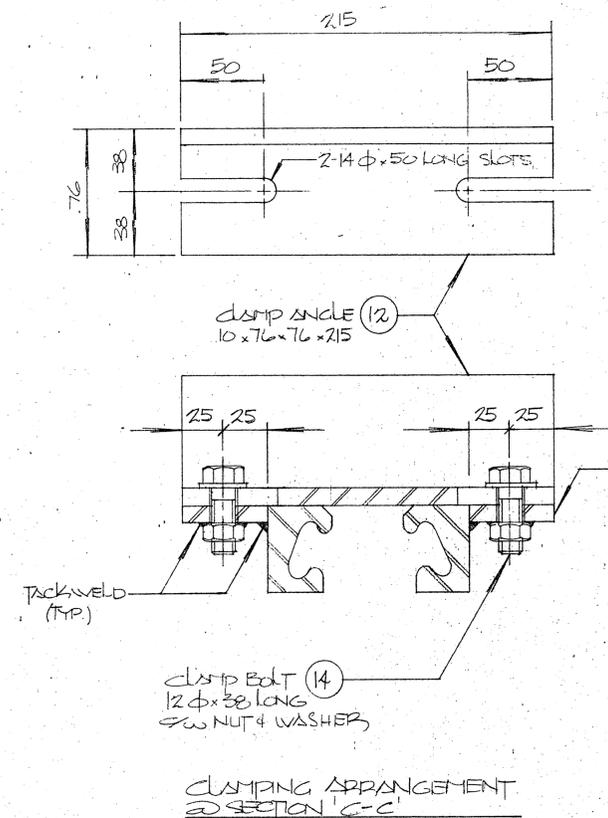
18 CUSSET PLATE (10x98x140)

10 SPRICE PLATE SW 14φ(9/16"φ) HOLE (10x98x140)

* NOTE: 14mm φ HOLE AS SHOWN IS REQ'D @ SPRICE PLATES (ITEM NO. 10) ONLY



22 TAB PLATE (10x50x50) SW 14φ(9/16"φ) HOLE



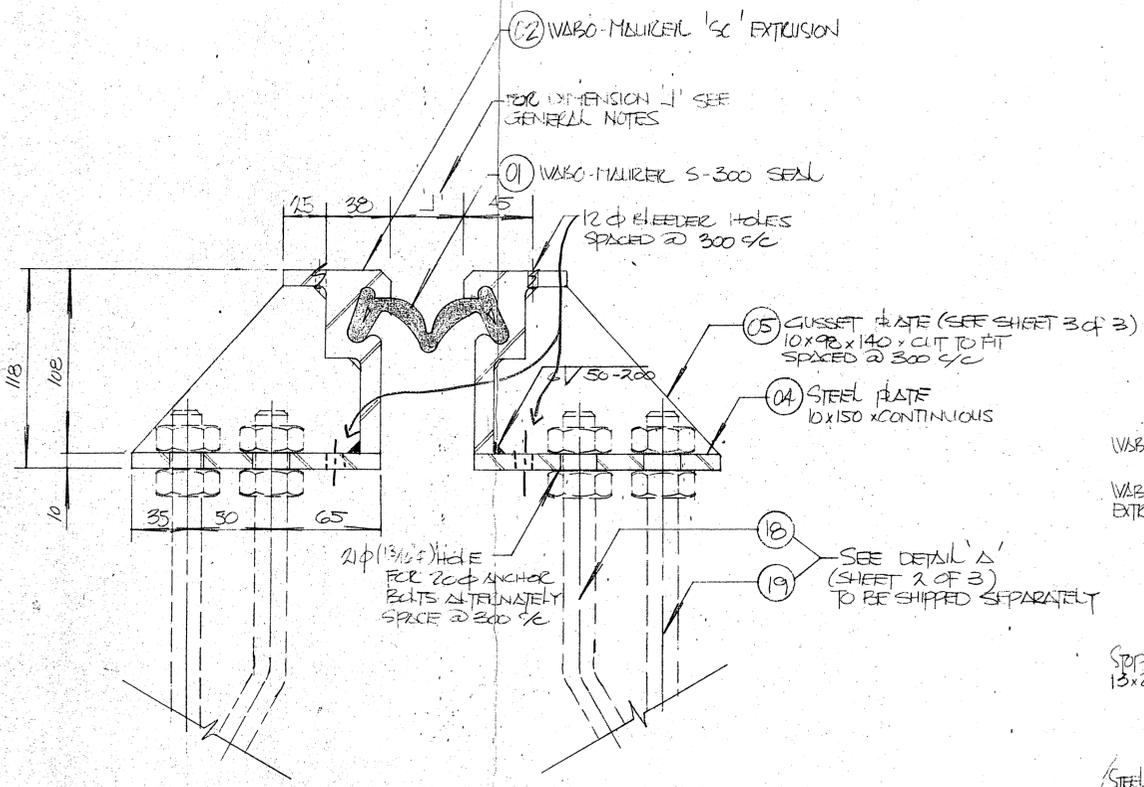
SHOP DRAWING REVIEW	
Review is for conformity to the design concept and for general arrangement only and does not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the Contract Documents. Deviations or changes from the Contract Documents are not accepted.	<input type="checkbox"/> No exceptions taken <input checked="" type="checkbox"/> No exceptions taken, except as noted. <input type="checkbox"/> Check notations and resubmit for review <input type="checkbox"/> Rejected - See remarks
W. L. WARDROP & ASSOCIATES LTD.	By: ATK Date: 27-06-22

84 0007 03 S

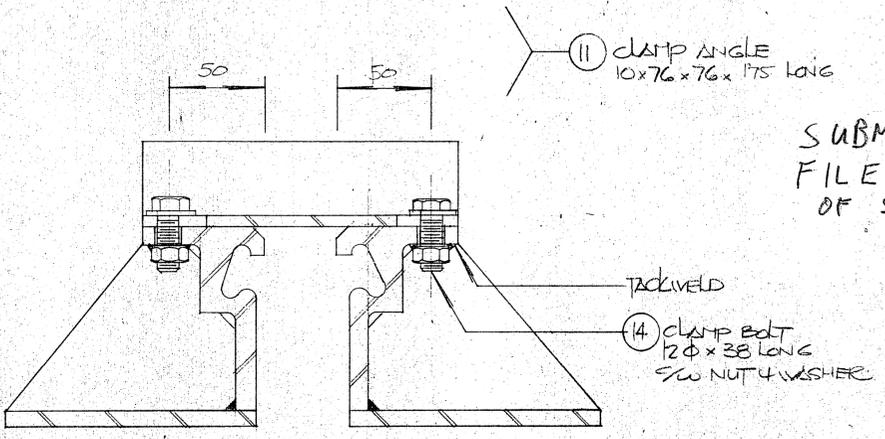
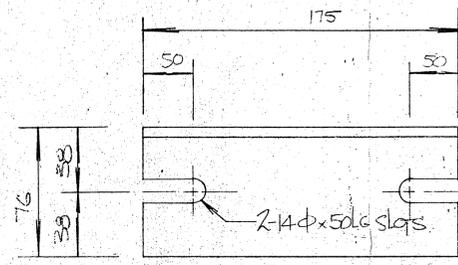
REVISIONS			DATE	SCALE	DRAWN	CHECKED	APPROVED	PROJECT	SHEET
5			JUNE 84	N.T.S.	E.P.J.R.			PROJECT TRANS-CANADA HWY NO. 1 EAST BRIDGE OVER SEINE RIVER	3 OF 3
4							WABO-MAURER S-300 + S-300 SYSTEM		
3									
2									
1									



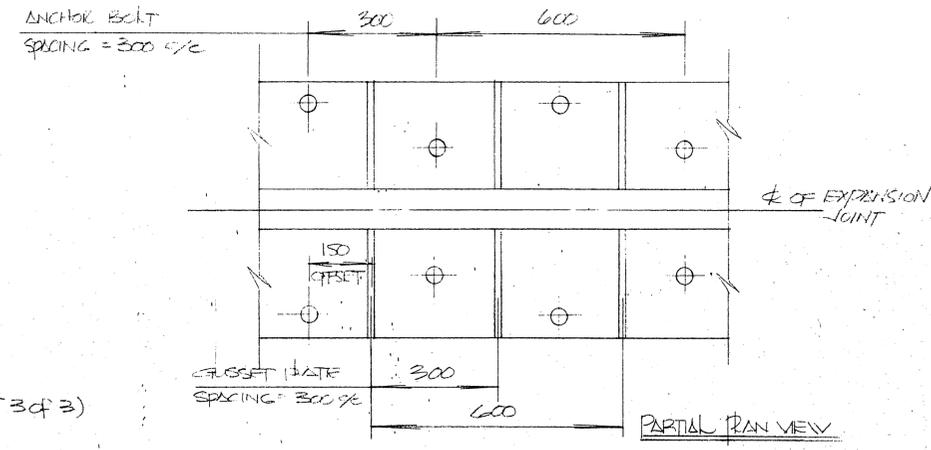
PROJECT NO. 2175-84
DRAWING NO. E3595
SHEET 3 OF 3



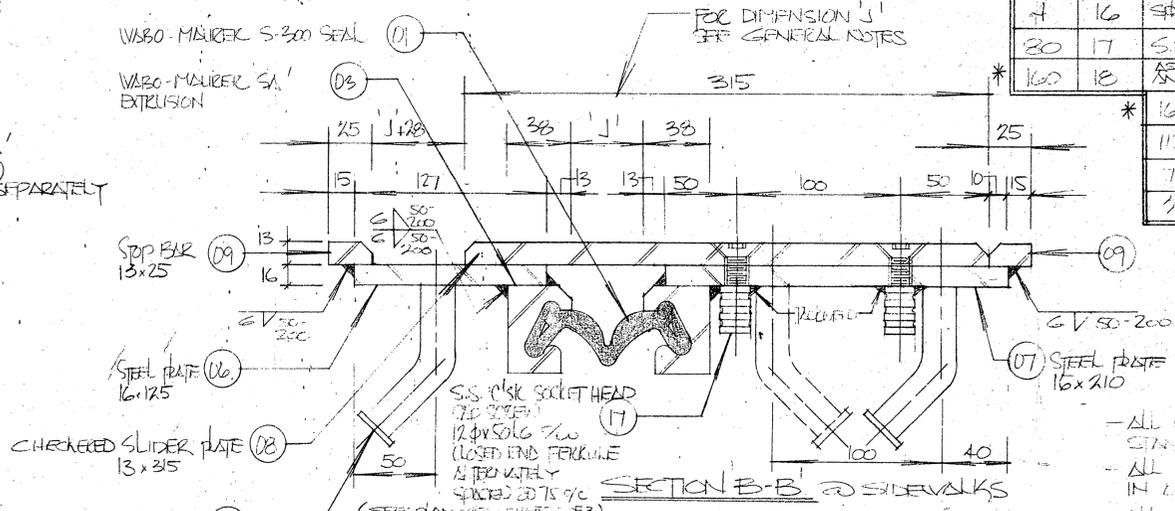
SECTION A-A @ ROADWAY



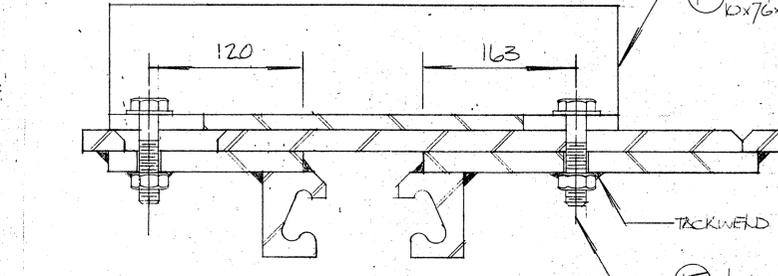
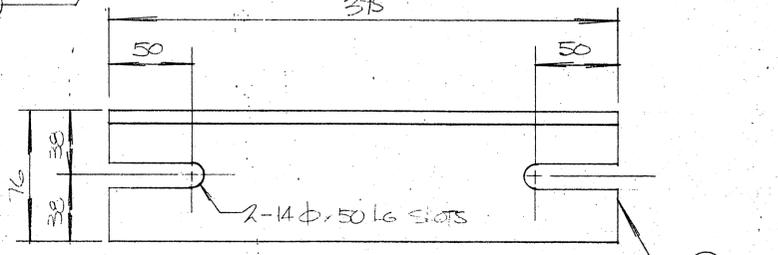
CLAMP ARRANGEMENT @ SECTION A-A



PARTIAL PLAN VIEW



SECTION B-B @ SIDEWALKS



CLAMP ARRANGEMENT @ SECTION B-B

QTY	ITEM	MATERIAL LIST
4	01	WABO-MAUERL 'SC' EXTRUSION 300 x 250 x 1000 LONG
4	02	WABO-MAUERL 'SA' EXTRUSION 300 x 250 x 1000 LONG
12	03	WABO-MAUERL 'S-300' SEAL 300 x 250 x 1000 LONG
4	04	STEEL PLATE 10 x 150 x 23700 LONG
320	05	GUSSET PLATE 10 x 98 x 140 x CUT TO FIT
4	06	STEEL PLATE 16 x 127 x 1500 LONG
4	07	STEEL PLATE 16 x 210 x 1500 LONG
4	08	CHECKERED SLIDER PLATE 13 x 315 x 500 LONG
8	09	STOP BAR 13 x 25 x 1500 LONG
8	10	SPICE PLATE 10 x 98 x 140 x CUT TO FIT
56	11	CLAMP ANGLE 10 x 76 x 76 x 175 LONG
12	12	CLAMP ANGLE 10 x 76 x 76 x 375 LONG
8	13	CLAMP ANGLE 10 x 76 x 76 x 375 LONG
136	14	CLAMP BOLTS 12 Ø x 38 LG 9/16 NUT + WASHER
16	15	CLAMP BOLTS 12 Ø x 57 LG 9/16 NUT + WASHER
4	16	SPICES BOLTS 12 Ø x 38 LG 9/16 NUT + WASHER
20	17	SS 'RISK' SOCKET HEAD 12 Ø x 50 LG 9/16 NUT + WASHER
160	18	ANCHOR BOLTS 20 Ø x 100 LG BENT 45° + 2 NUTS (GALV.)
160	19	ANCHOR BOLTS 20 Ø x 100 LG BENT 45° + 2 NUTS (GALV.)
112	20	ANCHOR STUDS 20 Ø x 50 LG BENT 45°
72	21	ANCHOR STUDS 20 Ø x 100 LG BENT 45°
32	22	DB PLATE 10 x 50 x 50 9/16 Ø HOLE

GENERAL NOTES

- ALL STEEL SHALL BE IN ACCORDANCE WITH C.S.A. STANDARD G40-21M GRADE 500W
- ALL STEEL SURFACES SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH C.S.A. STD G16-1981 INCLUDING ALL ANCHORAGE
- ALL WELDING SHALL BE IN ACCORDANCE WITH C.S.A. STD W59.1
- SEAL SHALL BE PERFORMED NEOPRENE AND SHALL BE INSTALLED IN ONE CONTINUOUS LENGTH IN THE FIELD
- EXPANSION JOINT ASSEMBLY SHALL BE SET TO THE GRADE AND ELEVATION OF THE BRIDGE DECK.
- FINAL WIDTH ADJUSTMENTS SHALL BE MADE AND CLAMP ANGLES TIGHTENED, JUST PRIOR TO THE PLACING OF CONCRETE IN THE BLOCKOUT.
- AFTER REMOVAL OF CLAMP ANGLES AND CLAMP BOLTS, BOLT AND BLEEDER HOLES TO BE FILLED WITH AN APPROVED EPOXY.
- EXPANSION JOINT ASSEMBLY SHALL BE SHOP ASSEMBLED IN STAGES AND PRESET TO DIMENSION 'J' ± 38mm (1 1/2" TEMP) ± 1.5% CONTRACT DIMS PRIOR TO SHIPMENT
- MINIMUM 'J' DIMENSION FOR INSTALLATION IS TO BE 38mm (1 1/2")
- ANCHOR STUDS SHALL BE 'NELSON' USING FUSION WELD PROCESS
- * ANCHOR BOLTS (ITEMS NO 18 & 19) SHALL CONFORM TO ASTM A-307 AND SHALL BE GALVANIZED AND SHIPPED LOOSE
- ALL GALVANIZING DAMAGED BY FIELD WELDING SHALL BE PAINTED WITH GALVALLOY

SUBMIT 3 FILE COPIES OF SET

SHOP DRAWING REVIEW

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W. L. WARDROP & ASSOCIATES LTD. By: *DJR* Date: *84.06.22*

No exceptions taken

No exceptions taken, except as noted.

Check notations and resubmit for review

Rejected - See remarks

NO.	DATE	DESCRIPTION	NAME
1			
2			
3			
4			

REVISIONS

NOTE: INFORMATION AND KNOWHOW ON THIS DRAWING IS THE PROPERTY OF ELASTOMETAL LTD. USE OR REPRODUCTIONS IS PROHIBITED WITHOUT WRITTEN PERMISSION.

DATE: *JUNE 84*

SCALE: *N.T.S.*

DRAWN: *E.P.J.R.*

CHECKED: *le*

APPROVED: *[Signature]*

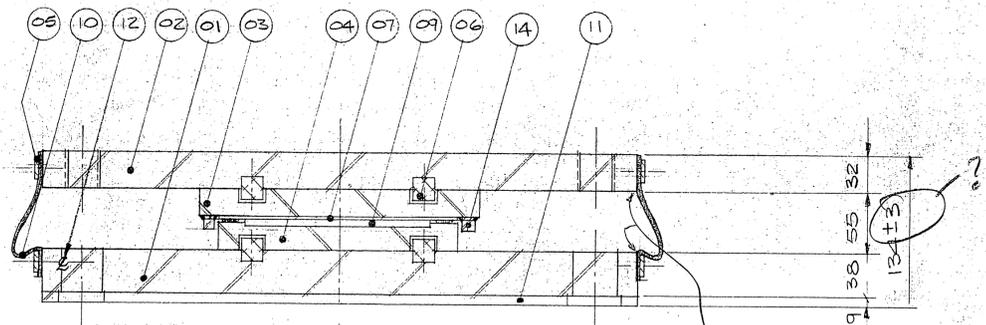
PROJECT: **TRANS CANADA HWY NO 1 EAST BRIDGE OVER SEINE RIVER**

WABO-MAUERL 'SC' 300 x 250 SYSTEM

PROJECT NO. *E175-24*

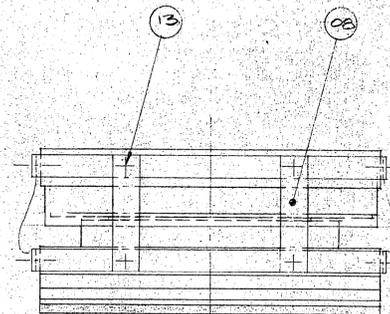
DRAWING NO. *E3595*

SHEET *1* OF *3*



TRANSVERSE SECTION

EASE EDGES (TYPICAL)
IN CONTACT WITH
SKIRT ASSEMBLY



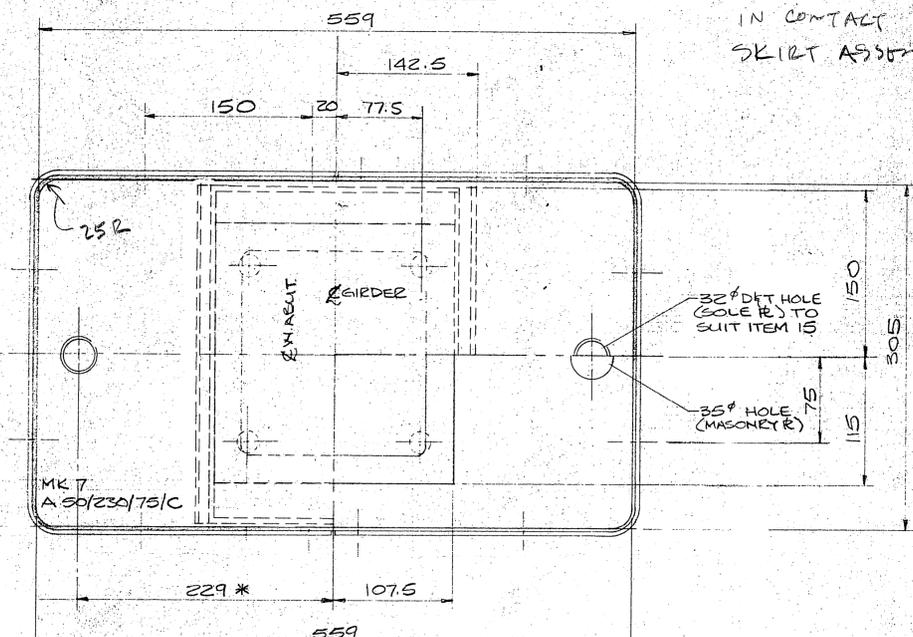
LONGITUDINAL ELEVATION

BEARING DATA

BEARING TYPE — A/50/230/75/C — MK7
 QUANTITY — 3
 MAX. V. LOAD — 400 KN
 MAX. H. LOAD — 20 KN
 LONG. MOVNT. — 37.5 mm
 TRAN. MOVNT. — CONSTRAINED

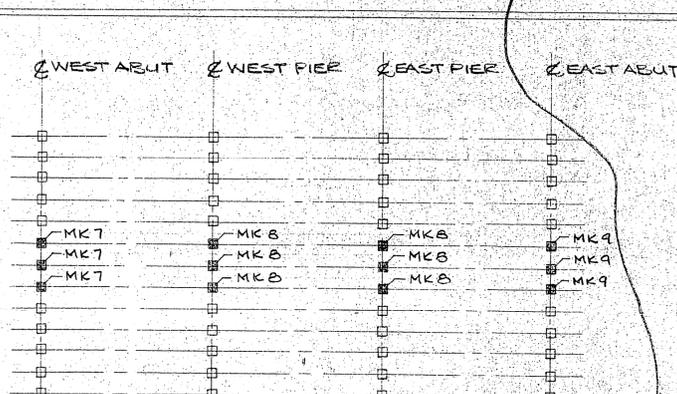
400 KN SP 13.3

CONTINUOUS BAND

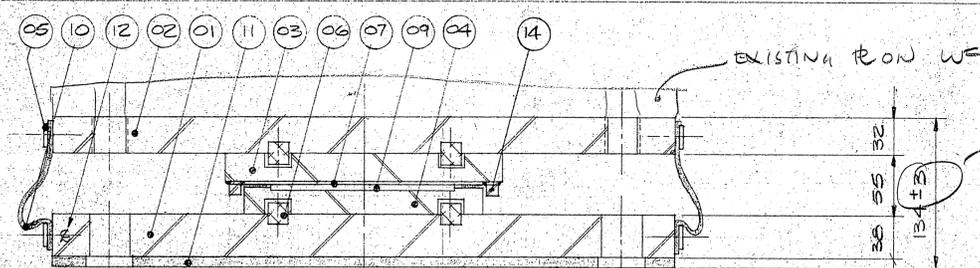


PLAN

* TO BE CONFIRMED BY CONTRACTOR

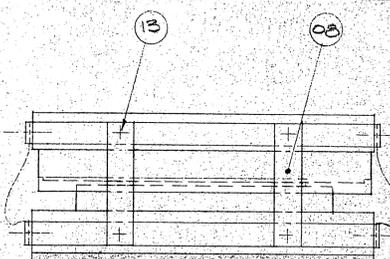


PLOT PLAN



TRANSVERSE SECTION

* TO BE CONFIRMED BY CONTRACTOR



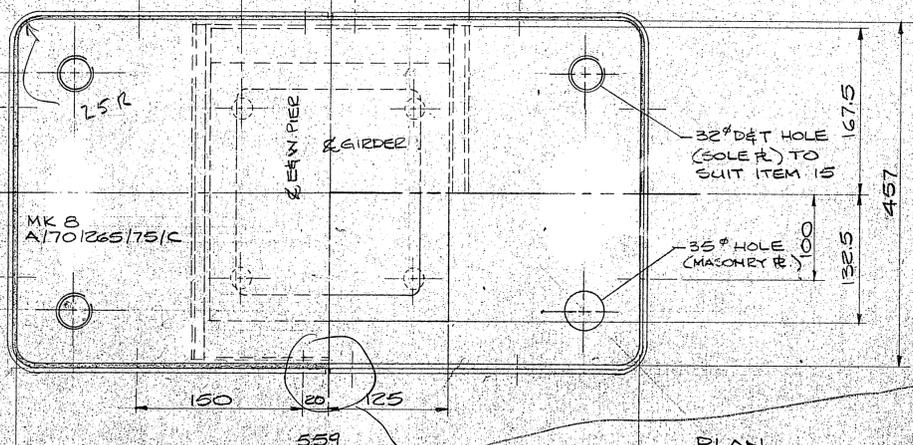
LONGITUDINAL ELEVATION

BEARING DATA

BEARING TYPE — A/70/265/75/C — MK8
 QUANTITY — 6
 MAX. V. LOAD — 630 KN
 MAX. H. LOAD — 50 KN
 LONG. MOVNT. — 37.5 mm
 TRAN. MOVNT. — CONSTRAINED

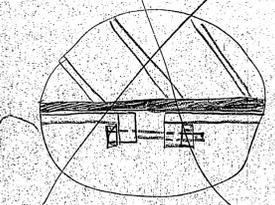
63 KN

CONTINUOUS BAND



PLAN

CONSIDER CLAMPING WITHOUT DRILLING HOLES IN THE STEEL PLATE



SHOP DRAWING REVIEW

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No exceptions taken

No exceptions taken, except as noted

Shop's notations and requests for review

Selected - See remarks

W. L. WARDROP & ASSOCIATES LTD. BY TO Date 8/10/84

ITEM	QTY	DESCRIPTION	MK #9
1	3PCS	FABREEKA PAD 12"x3/8"x22" LG	HOLES IN PAD SAME AS BRG. MK 7
LIST OF MATERIALS / BRG			
15	2PCS	S/S HEX HD. SCREWS 1/4"x2 3/4" LG 9W WASH	
14	2PCS	STEEL GUIDE BARS 5/8"x5/8"x11 3/8" LG	
13	8PCS	BLACK HEX HD SCREWS 1/4"x3/4" LG	
12	24PCS	S/S HEX HD SCREWS 1/4"x1/2" LG	
11	1PC	FABREEKA PAD 12"x3/8"x22" LG	
10	1PC	SILICONE RUBBER SHEET 6"x1/16"x72"	
09	1PC	PTFE 6"x3/16"x6"	
08	4PCS	STEEL TRANSIT BRKTS 1/4"x1"x4 1/4" (PAINTED)	
07	1PC	S/S SHEET 8 1/2"x1/16"x11 3/8"	
06	8PCS	S/S PINS 3/4"x1/2" LG	
05	4PCS	S/S BAR 1/8"x3/4"x34" BENT IN U SHAPE	
04	1PC	STEEL BEARING R 8 1/2"x1"x9" (EPOXY COATED)	
03	1PC	STEEL SLIDING R 11 3/8"x1"x1 1/4" (EPOXY COATED)	
02	1PC	STEEL SOLE R 12"x1 1/4"x22" (GALVANIZED)	
01	1PC	STEEL MASONRY R 12"x1 1/2"x22" (GALVANIZED)	

ITEM	QTY	DESCRIPTION	MK #7
LIST OF MATERIALS / BRG			
15	4PCS	S/S HEX HD. SCREWS 1/4"x2 3/4" LG 9W WASH	
14	2PCS	STEEL GUIDE BARS 5/8"x5/8"x13 1/8" LG	
13	8PCS	BLACK HEX HD SCREWS 1/4"x3/4" LG	
12	24PCS	S/S HEX HD SCREWS 1/4"x1/2" LG	
11	1PC	FABREEKA PAD 18"x3/8"x22"	
10	1PC	SILICONE RUBBER SHEET 6"x1/16"x84"	
09	1PC	PTFE 6 7/8"x3 11/16"x6 7/8"	
08	4PCS	STEEL TRANSIT BRKTS 1/4"x1"x4 1/4" (PAINT RED)	
07	1PC	S/S SHEET 10"x1/16"x12 5/8" LG	
06	8PCS	S/S PINS 3/4"x1/2" LG	
05	4PCS	S/S BAR 1/8"x3/4"x40" LG, BENT IN U SHAPE	
04	1PC	STEEL BEARING R 10"x1"x10 1/2" (EPOXY COATED)	
03	1PC	STEEL SLIDING R 12 1/2"x1"x13 1/8" (EPOXY COATED)	
02	1PC	STEEL SOLE R 18"x1 1/4"x22" (GALVANIZED)	
01	1PC	STEEL MASONRY R 18"x1 1/2"x22" (GALVANIZED)	

GLACIER

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JOB TITLE: T.C.H. NO. 1 EAST BRIDGE OVER SEINE RIVER.

SYSTEM: GLACIER TYPE 'A' BEARINGS

DRAWN BY: E. CONNOR	PROJECT NO: P642-84	DRAWING NO: W84-256	REV: 4
CHECKED BY: [Signature]	DATE: MAY 1984		SHT: 4