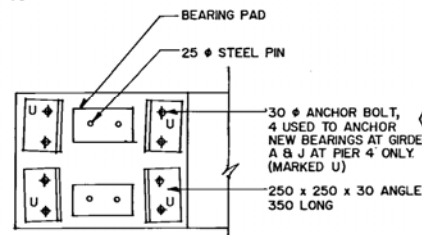


**BEARING DESIGN DATA TABLE**

	WEST ABUT.	PIERS											EAST ABUT.	
		10	9	8-WEST	8-EAST	7	6	5	4	3-WEST	3-EAST	2		1
DEAD LOAD	287	567	567	287	318	643	632	632	643	318	287	567	567	287
DEAD LOAD & LIVE LOAD	620	1000	1000	620	650	1080	1070	1070	1080	650	620	1000	1000	620
LATERAL LOAD *	65	-	-	65	65	-	-	-	110	65	65	-	-	65
LONGITUDINAL MOVEMENT	+8mm -19mm	-	-	+8mm -19mm	+16mm -44mm	-	-	-	+16mm -44mm	+24mm -66mm	+8mm -19mm	-	-	+8mm -19mm

\* LOADS EXPRESSED IN KILONEWTONS  
 ▲ AT SETTING TEMPERATURE OF 15°C.  
 Ⓛ LATERAL LOAD APPLIES ONLY TO GUIDED EXPANSION BEARINGS



**TYPICAL EXISTING HOLD DOWN DETAIL AT EXPANSION BEARINGS (OUTSIDE GIRDERS ONLY)**

**NOTES:**

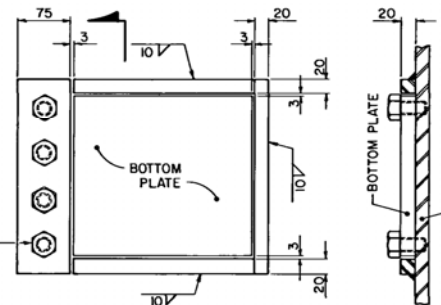
- ALL STRUCTURAL STEEL SHALL CONFORM TO CSA G40.21 GRADE 300W AND SHALL BE GALVANIZED IN ACCORDANCE WITH CSA G164.
- ALL WELDING SHALL CONFORM TO CSA W59.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE BEARINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
- BEARINGS MUST BE MODIFIED TO FIT AS SHOWN. TAKE FIELD MEASUREMENTS BEFORE FABRICATION TO ENSURE PROPER FIT.
- PLATE MODIFICATIONS: ANCHOR PLATE EXTENSIONS FABRICATED BY WELDING EXTENSION TO THE DIMENSIONED PLATES OR FABRICATED AS ONE PIECE. WELDS FOR PLATE EXTENSIONS; 20mm PENETRATION WELDS FOR GUIDED BEARINGS AND 15mm PENETRATION WELDS FOR FREE BEARINGS.

**CONSTRUCTION SEQUENCE (EXPANSION BEARINGS ONLY)**

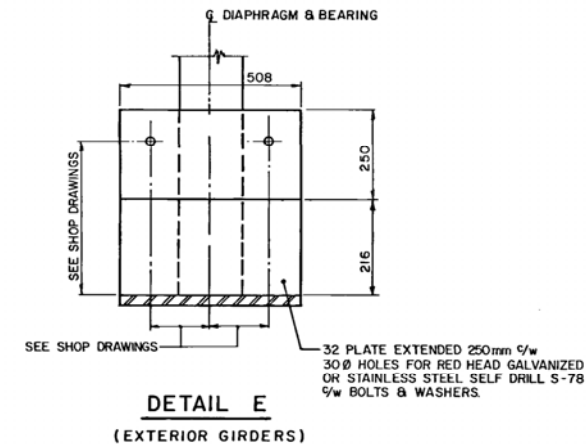
- REMOVE EXISTING HOLD DOWN ANGLES.
- LIFT GIRDERS 16mm MAXIMUM AND SUPPORT GIRDERS.
- REMOVE EXISTING CONCRETE PEDESTAL DOWN TO TOP OF PIER OR ABUTMENT.
- CUT OFF EXISTING PINS, FLUSH WITH EXISTING CONCRETE. (PINS OCCUR AT ALL GIRDERS)
- REMOVE ANCHOR BOLTS 40mm INTO THE EXISTING CONCRETE SURFACES (20mm FOR CONCRETE GIRDER SURFACES) AND PATCH THE HOLE FLUSH UTILIZING PATCHING MORTAR. (ANGLES AND ANCHOR BOLTS OCCUR AT OUTSIDE GIRDERS ONLY)
- INSTALL SELF-DRILL ANCHORS.
- DRILL HOLES FOR ANCHOR BARS AND GROUT ANCHOR BARS.
- INSTALL NEW EXPANSION BEARINGS AND LEVEL WITH SHIMS OR WEDGES.
- INSTALL GROUT UNDER BEARINGS.
- LOWER GIRDER AFTER GROUT HAS REACHED MINIMUM COMPRESSIVE STRENGTH OF 30MPa. ENSURE THE GIRDERS SIT AT EXACTLY THE SAME ELEVATION AS EXISTING.
- INSTALL ANCHOR PLATES TO ABUTMENTS, PIERS, GIRDERS AND DIAPHRAGM.

**CONSTRUCTION SEQUENCE (FIXED BEARINGS ONLY)**

- SUPPORT GIRDERS.
- REMOVE EXISTING BEARING PADS.
- CUT OFF EXISTING STEEL BARS AT CONCRETE FACES.
- RAISE GIRDERS 16mm MAXIMUM.
- INSTALL NEW BEARING PADS.
- LOWER GIRDERS TO SIT ON NEW BEARING PADS.
- INSTALL FIXING ANCHORS AND PLATES (SEE SECTION D ON DWG. B121-85-06).

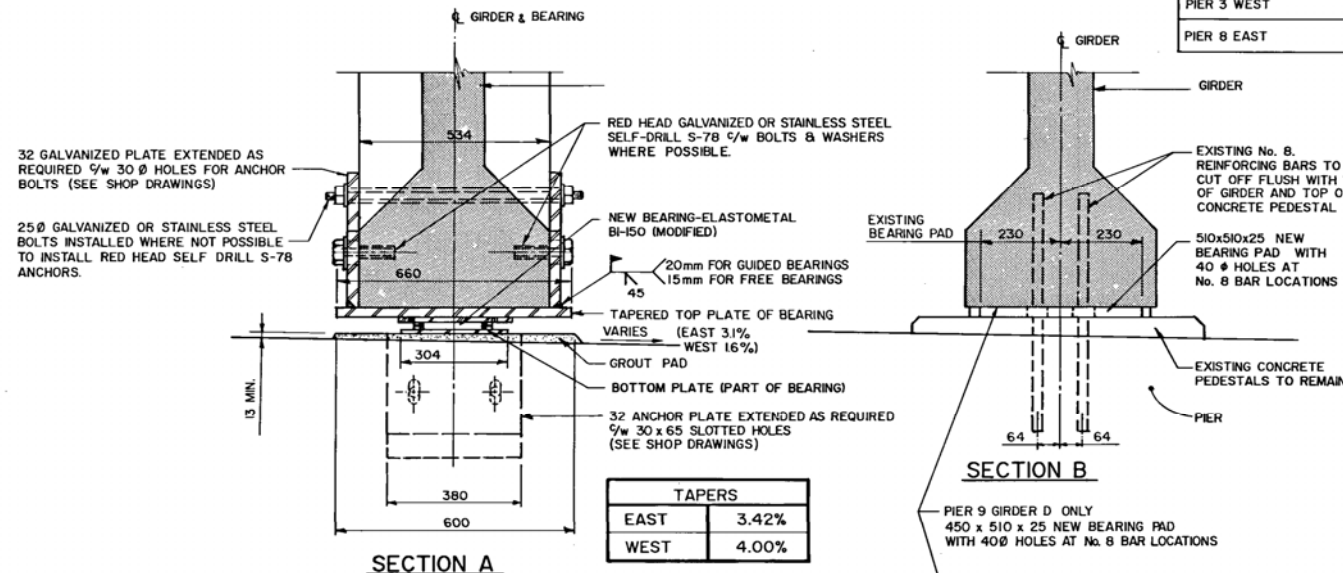


**DETAIL F SCALE 1:5**

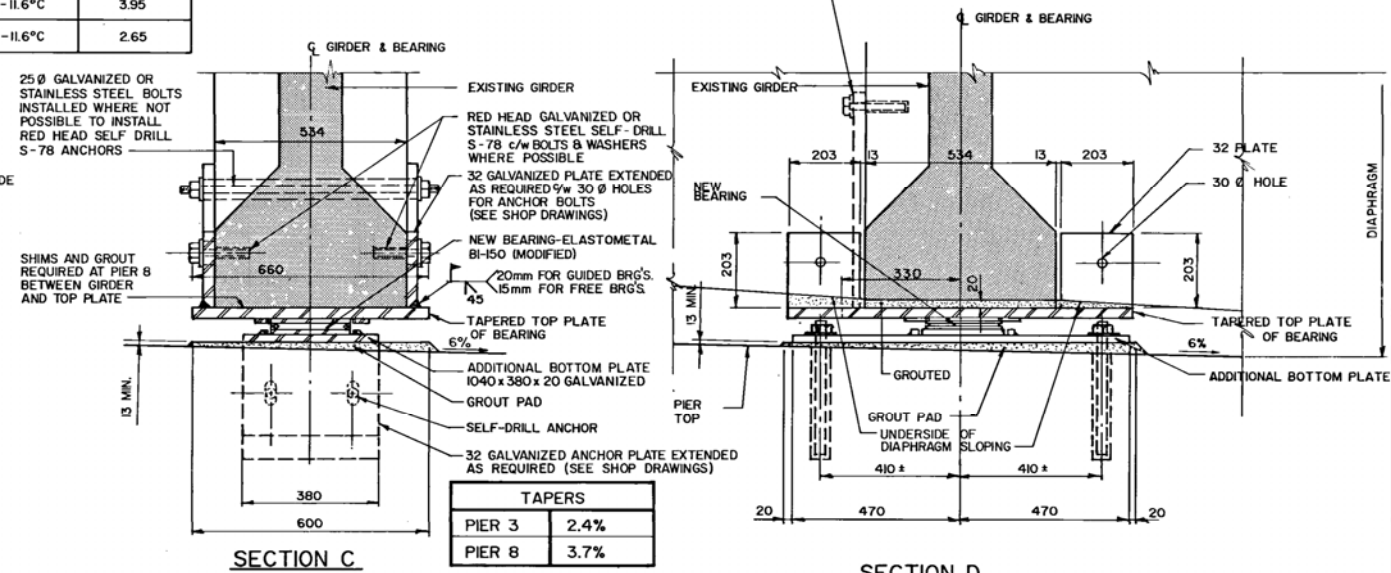


**DETAIL E (EXTERIOR GIRDERS)**

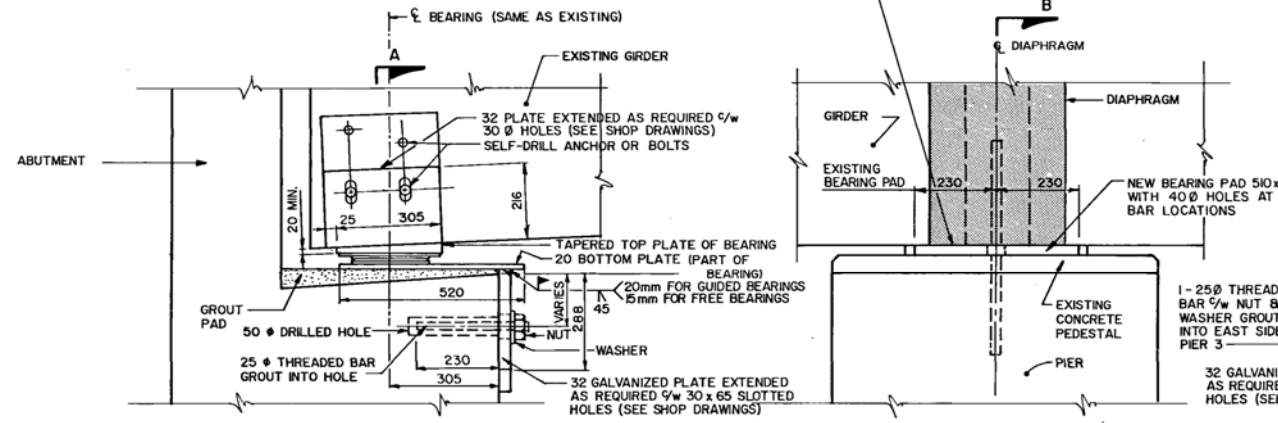
LOCATION	ZERO OFFSET TEMPERATURE	ADJUSTMENT mm/°C
ABUTMENTS, PIER 3 EAST AND PIER 8 WEST	-10°C	1.70
PIER 3 WEST	-11.6°C	3.95
PIER 8 EAST	-11.6°C	2.65



TAPERS	
EAST	3.42%
WEST	4.00%

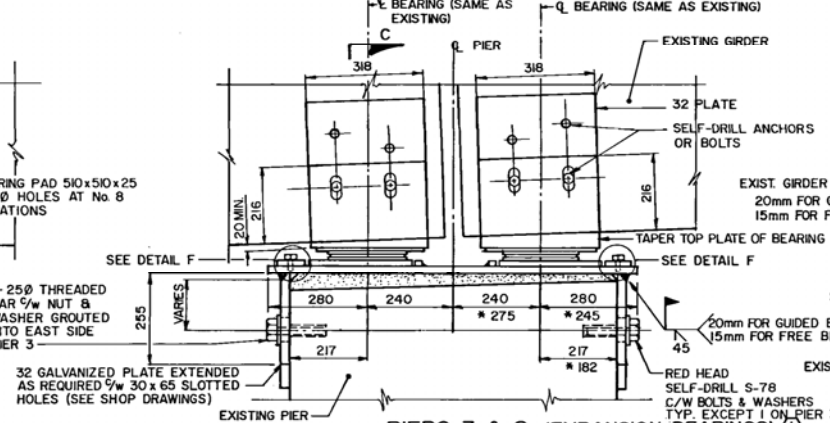


TAPERS	
PIER 3	2.4%
PIER 8	3.7%

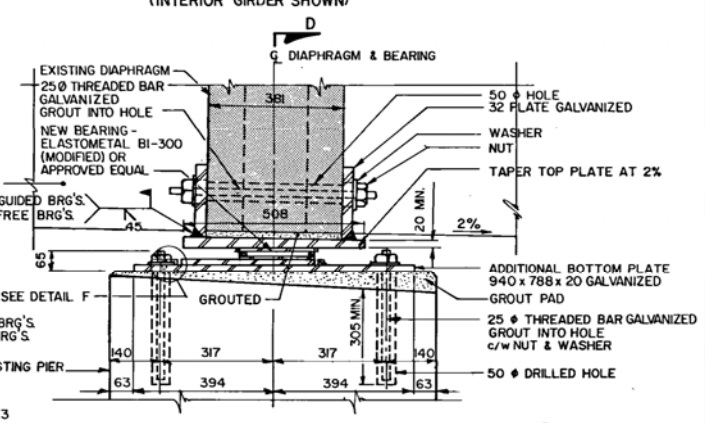


Ⓛ GUIDED EXPANSION BEARINGS MODIFIED ELASTOMETAL TYPE BI-150 (8 REQUIRED, 4 CENTRAL BEARINGS ON EACH ABUTMENT)  
 Ⓛ FREE EXPANSION BEARINGS MODIFIED ELASTOMETAL TYPE B2-150 (10 REQUIRED)

**PIERS 1, 2, 5, 7, 9 & 10 (FIXED BEARINGS)**



Ⓛ GUIDED EXPANSION BEARINGS MODIFIED ELASTOMETAL TYPE BI-150 (16 REQUIRED, 4 CENTRAL BEARINGS ON EACH BEARING LINE)  
 Ⓛ FREE EXPANSION BEARINGS MODIFIED ELASTOMETAL TYPE B2-150 (20 REQUIRED)  
 \* EAST SIDE PIER 3 AND WEST SIDE PIER 8

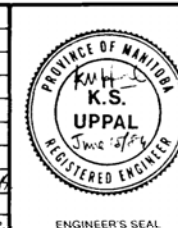


Ⓛ GUIDED EXPANSION BEARINGS MODIFIED ELASTOMETAL TYPE BI-300 (4 CENTRAL BEARINGS)  
 Ⓛ FREE EXPANSION BEARINGS MODIFIED ELASTOMETAL TYPE B2-300 (5 REQUIRED)

**B-5575**

**RECORD DRAWING METRIC**  
 WHOLE NUMBERS INDICATE MILLIMETRES  
 DECIMALIZED NUMBERS INDICATE METRES

NO	REVISIONS	DATE	APP.
2	RECORD DRAWING	NOV-86	
1	ADDENDUM NO. 1 & 2	MAY-85	



**the umc group** Underwood McLellan Ltd. Consulting Engineers and Planners

DESIGNED BY: K.U. DRAWN BY: J.R.C.  
 CHECKED BY: J.T. DATE: APRIL 1985  
 APPROVED BY: [Signature] DATE: [Signature]

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

**NAIRN AVENUE OVERPASS**  
 DECK REHABILITATION, STRUCTURAL STRENGTHENING AND RELATED WORKS.

**BEARING DETAILS**

AUTHORIZED BY: [Signature] DATE: 1985-04-16  
 ACCEPTED BY: [Signature] DATE: 1985-04-16  
 SCALE: 1:10 DRAWING NO: B121-85-09