**NOTES:**

- TWO (2) BEARINGS TO BE REFURBISHED OR REPLACED. EXISTING BEARINGS CAPACITY ARE 3720 kN (836 KIPS). SEE TABLE BELOW FOR BEARING DATA OBTAINED FROM CITY OF WINNIPEG SUPPLIED SHOP DRAWINGS. ONLY MK10 BEARING DETAILS ARE SHOWN.
- BEARING REPLACEMENT PROCEDURE:
  - RAISE STRUCTURE WITH JACKS AT TEMPORARY JACK LOCATIONS JUST ENOUGH TO REMOVE EXISTING BEARINGS. DO NOT OVERLOAD ADJACENT BEARINGS.
  - INSTALL TEMPORARY BEARINGS (MAY BE STEEL SHIMS C/W NEOPRENE PAD AGAINST CONCRETE).
  - REMOVE JACKS.
  - REFURBISH BEARINGS
  - INSTALL REFURBISHED BEARINGS OR NEW BEARINGS REVERSING ABOVE REMOVAL SEQUENCE C/W NEW HOT DIP GALVANIZED A325 BOLTS.
  - THE ABOVE REPLACEMENT PROCEDURE IS FOR THE MK10 BEARING ONLY. SEE THE SPECIFICATION FOR THE SUGGESTED DETAILS FOR REPLACEMENT PROCEDURE FOR THE MK8 BEARING.
- TYPICAL BEARING REFURBISHMENT PROCEDURE - 2 REQUIRED:
  - REMOVE ALL RUST AND LOOSE GALVANIZING BY GRIT BLASTING.
  - REPLACE P.T.F.E SHEETS ON MALE AND FEMALE SPHERES
  - POLISH ALUMINUM MALE SPHERE.
  - REPLACE STAINLESS STEEL PLATE C/W TIG WELD ALL AROUND.
  - REFINISH ALL NON STAINLESS STEEL METAL PARTS BY METALLIZING.
- AS AN ALTERNATIVE TO REFURBISHMENT, THE CONTRACTOR MAY SUPPLY AND INSTALL A NEW BEARING. ADDITIONAL BEARING DESIGN INFORMATION WILL BE SUPPLIED TO THE CONTRACTOR IF A NEW BEARING SUPPLY OPTION IS CHOSEN.

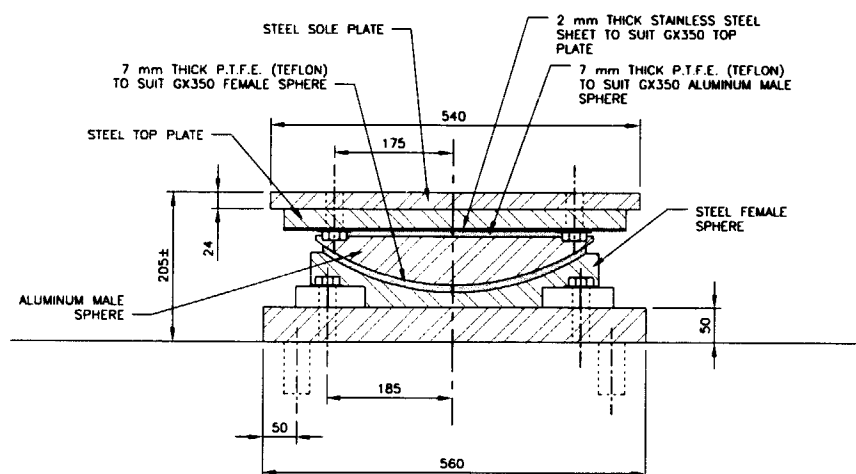
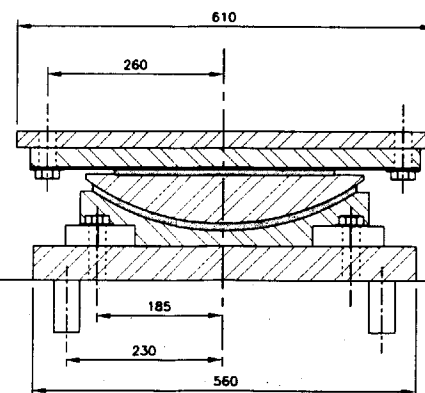
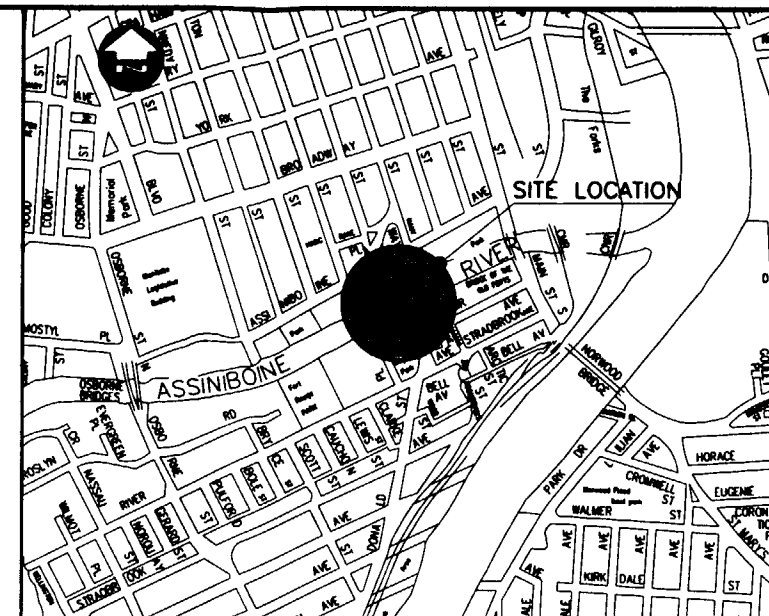
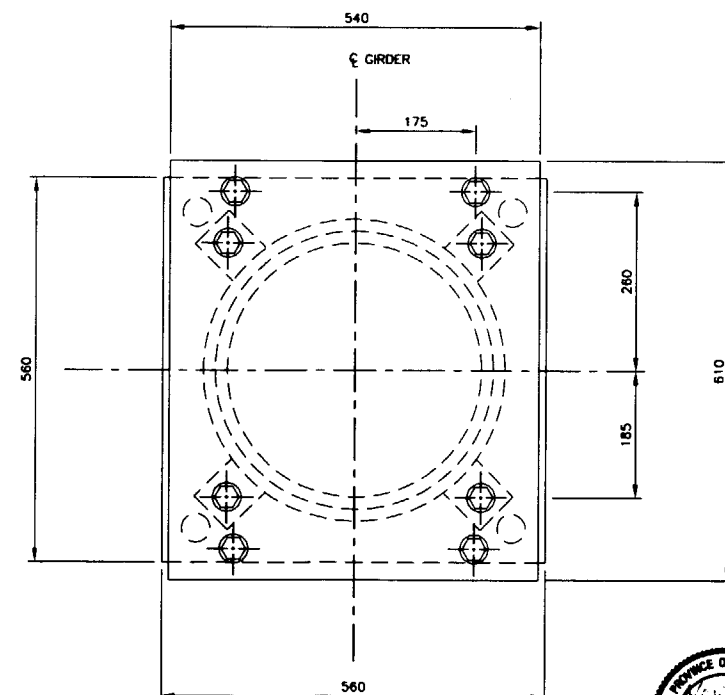
**BEARING DATA**

BEARING MANUFACTURER  
BEARING TYPE

DEAD LOAD  
MAX. VERTICAL LOAD  
MAX. ROTATION  
LONGITUDINAL MOVEMENT  
TRANSVERSE MOVEMENT  
LATERAL LOAD  
LONGITUDINAL LOAD

**MK10 ON PIER 1**  
GLACIER  
GX'C'350 - FREE  
(MULTIDIRECTIONAL)  
2640 kN  
3720 kN  
0.085 RADIAN  
±50 MM  
±10 MM  
N/A  
N/A

**MK8 ON PIER 2**  
GLACIER  
G2'C'350 - FIXED  
2640 kN  
3720 kN  
UNKNOWN  
N/A  
240 kN  
235 kN

**DETAIL**  
N.T.S.**LONGITUDINAL ELEVATION**  
N.T.S.**LOCATION PLAN****PLAN**  
N.T.S.

BID OPPORTUNITY NO. 663-2005

**THE CITY OF WINNIPEG**  
PUBLIC WORKS DEPARTMENT

2005 BRIDGE MAINTENANCE  
MIDTOWN BRIDGE

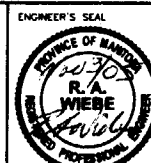
BEARING REFURBISHMENT

PLAN, ELEVATION, AND DETAILS

CITY DRAWING NUMBER  
8114-05-01  
SHEET 1 OF 1

DESIGNED BY: R.A.W.	10/31/05 M.R.D.
DRAWN BY: M.R.D.	10/31/05 M.R.D.
CHECKED BY: R.A.W.	10/31/05 M.R.D.
REVIEWED BY: S.S.R.	10/31/05 M.R.D.
SCALE: HORIZ. AS SHOWN	DATE: OCT 2005
DATE: OCT 2005	
2 ISSUED FOR BIDDING	10/31/05 M.R.D.
1 ISSUED FOR CITY REVIEW	10/31/05 M.R.D.
NO. REVISIONS	DATE

**DILLON**  
CONSULTING



CONSULTANT PROJECT NO.  
05-4421-1000