



**NOTE:**  
 MAXIMUM LIMIT OF CONSTRUCTION YARDS.  
 CONTRACTOR TO ERECT TEMPORARY  
 CONSTRUCTION FENCING AND RESTORE  
 ALL DAMAGED SURFACE WORKS TO AN EQUAL  
 OR BETTER CONDITION THAN THAT WHICH  
 EXISTED PRIOR TO CONSTRUCTION.

WEST STRUCTURE (SOUTHBOUND)  
 REHABILITATED AND WIDENED  
 OCTOBER 2005

EAST STRUCTURE (NORTHBOUND)  
 PROPOSED BRIDGE DECK  
 REHABILITATION AND WIDENING

**PLAN**  
 1: 500

**NOTE 1:**  
 INSTALL ELECTRONIC CONCRETE REINFORCEMENT  
 MONITORING (BY OTHERS). CONTRACTOR TO  
 ALLOW FULL ACCESS AND SCHEDULE TIME TO  
 AND COOPERATE WITH OTHERS FOR THE  
 INSTALLATION OF CONDUIT IN THE DECK,  
 MONITORING GAUGES ON THE REINFORCING, AND  
 A MONITORING STATION ON THE SUBSTRUCTURE.  
 COORDINATE SCHEDULING THROUGH THE  
 CONTRACT ADMINISTRATOR. THE INSTALLATION OF  
 THE REINFORCING MONITORING WILL INCLUDE THE  
 INSTALLATION BY OTHERS OF 33.4 mm O.D.  
 (26.64 mm I.D.) PVC CONDUIT. WHERE THERE  
 IS NOT ENOUGH SPACE UNDER THE REINFORCING  
 FOR THE CONDUIT, THE CONTRACTOR IS TO  
 CREATE A SLIGHT VALLEY IN THE CONCRETE  
 DECK TO CREATE THE SPACE. THE APPROXIMATE  
 TOTAL LENGTH OF THE CONDUIT TO BE INSTALLED  
 ON THE DECK IS 72 m.

**LEGEND:**  
 CONSTRUCTION YARD

SECURE CONSTRUCTION  
 FENCING C/W GATES  
 (SOUTH END)

SEE NOTE AT SOUTH END  
 REGARDING FENCING  
 & RESTORATION

**DESIGN DATA**

- DESIGN SPECIFICATIONS**
- AASHTO STANDARD SPECIFICATIONS 1996 (16TH EDITION) AND INTERIMS
  - CAN/CSA-S6-00 CANADIAN HIGHWAY BRIDGE DESIGN CODE AND DRAFT REVISIONS—ONLY SECTION 12 (BARRIER AND HIGHWAY ACCESSORY SUPPORTS) AND SECTION 16 (FIBRE-REINFORCED STRUCTURES) USED FOR DESIGN.
- LIVE LOADING**
- **DECK:**  
 AASHTO MSS 22.5 (HSS 25) TRUCK AND  
 MS 22.5 (HS 25) LANE LOADING
  - **GIRDERS:**  
 AASHTO MS 18.0 (HS 20) TRUCK  
 AND LANE LOADING
- CONCRETE**
- $f_c' = 35 \text{ MPa}$  MINIMUM
- CONCRETE REINFORCEMENT**
- MICROCOMPOSITE REINFORCING STEEL (MMFX-2) TO ASTM A615 & AASHTO M31, GRADE 75 (520 MPa)
  - GFRP REINFORCEMENT SHALL BE PULTRALL V.ROD OR ASLAN 100 GFRP REBAR. SPECIFIED TENSILE STRENGTH OF GFRP BARS SHALL CONFORM TO CAN/CSA-S6-00 SECTION 16.5.2
- CLEAR COVER TO REINFORCEMENT**
- DECK** - TOP 60mm  $\pm 5$
  - SIDEWALK** - TOP 60mm  $\pm 5$
  - CONCRETE BARRIER** - FRONT FACE 50mm  $\pm 5$  (UNO)
  - ALL OTHER SURFACES** - 50mm  $\pm 5$

| PROPOSED WORKS   | REFERENCE DRAWING NUMBER   |
|--|----------------------------|
| 1 CONSTRUCT DETOUR WORKS AND RESTORE AT END OF PROJECT   | B108-06-03, 04, 05, 06     |
| 2 INSTALL FALSEWORK PLATFORM (BY CONTRACTOR)   | N/A                        |
| 3 DEMOLISH AND REMOVE EXISTING PRECAST BRIDGE RAIL AND EXISTING REINFORCED CONCRETE APPROACH SIDEWALK              | B108-06-22, 23, 24         |
| 4 DEMOLISH AND REMOVE EXISTING PRECAST BRIDGE RAIL AND EXISTING REINFORCED CONCRETE BRIDGE SIDEWALK                | B108-06-10, 13, 17, 18     |
| 5 REMOVE AND REPLACE EXISTING UTILITY CONDUITS   | B108-06-07, 08, 09         |
| 6 REMOVE EXISTING LAMP STANDARDS (BY OTHERS)   | B108-06-10                 |
| 7 DEMOLISH AND REMOVE EXISTING ASPHALT AND UPPER CONCRETE BRIDGE DECK INCLUDING EXISTING TOP MAT REINFORCING       | B108-06-10, 13, 14, 17, 18 |
| 8 EXPOSE, INSPECT, AND REPAIR EXISTING DAMAGED POST-TENSIONING STRANDS IN DUCT                                     | B108-06-15                 |
| 9 REMOVE AND REPLACE EXISTING CONCRETE MEDIAN TRAFFIC BARRIER AND REINSTALL EXISTING ALUMINUM TRAFFIC BARRIER RAIL | B108-06-13, 17, 18, 28, 29 |
| 10 REMOVE EXISTING AND PLACE NEW DECK EXPANSION JOINTS   | B108-06-19, 20, 21         |
| 11 CONSTRUCT NEW CONCRETE APPROACH SIDEWALK  | B108-06-22, 23, 24         |
| 12 REMOVE EXISTING NAVIGATION LIGHTS AND INSTALL NEW NAVIGATION LIGHTS   | B108-06-10, 31             |
| 13 CONSTRUCT NEW CONCRETE BRIDGE SIDEWALK  | B108-06-11, 17, 18         |
| 14 CONSTRUCT NEW LAMP STANDARD BASE (LAMP STANDARDS BY OTHERS)   | B108-06-16                 |
| 15 CONSTRUCT NEW UPPER REINFORCED CONCRETE BRIDGE DECK   | B108-06-11, 16, 17, 18     |
| 16 CONSTRUCT NEW CONCRETE SHOULDER TRAFFIC BARRIER   | B108-06-27                 |
| 17 INSTALL NEW ALUMINUM PEDESTRIAN HANDRAIL  | B108-06-25, 26             |
| 18 INSTALL NEW ALUMINUM BALANCED BARRIER   | B108-06-30                 |
| 19 ASPHALT RESURFACING AND RELATED WORKS   | B108-06-04, 05, 06, 36     |
| 20 LANDSCAPE RESTORATION   | B108-06-02                 |
| 21 ELECTRONIC CONCRETE REINFORCEMENT MONITORING (BY OTHERS) (SEE NOTE 1)   | N/A                        |
| 22 TEMPORARY OVERHEAD SIGN STRUCTURE   | B108-06-38                 |

|     |                        |          |        |
|-----|------------------------|----------|--------|
| 2   | ISSUED FOR TENDER      | 02/02/06 | N.B.G. |
| 1   | ISSUED FOR CITY REVIEW | 12/14/05 | N.B.G. |
| NO. | REVISIONS              | DATE     | BY     |

|             |           |
|-------------|-----------|
| DESIGNED BY | R.A.W.    |
| DRAWN BY    | N.B.G.    |
| CHECKED BY  | R.A.W.    |
| REVIEWED BY | R.A.W.    |
| HOR. SCALE  | AS NOTED  |
| VERTICAL    | AS NOTED  |
| DATE        | DEC. 2005 |

ENGINEER'S SEAL

**DILLON CONSULTING**

R.A. WIEBE  
 REGISTERED PROFESSIONAL ENGINEER

CONSULTANT PROJECT NO.  
 05-5069-1000

**THE CITY OF WINNIPEG**  
 PUBLIC WORKS DEPARTMENT

Winnipeg

**MARYLAND TWIN BRIDGES  
 REHABILITATION PROJECT**  
 EAST BRIDGE REHABILITATION

GENERAL ARRANGEMENT AND  
 LOCATION OF PROPOSED WORKS

CITY DRAWING NUMBER  
**B108-06-02**  
 SHEET 02 OF 38