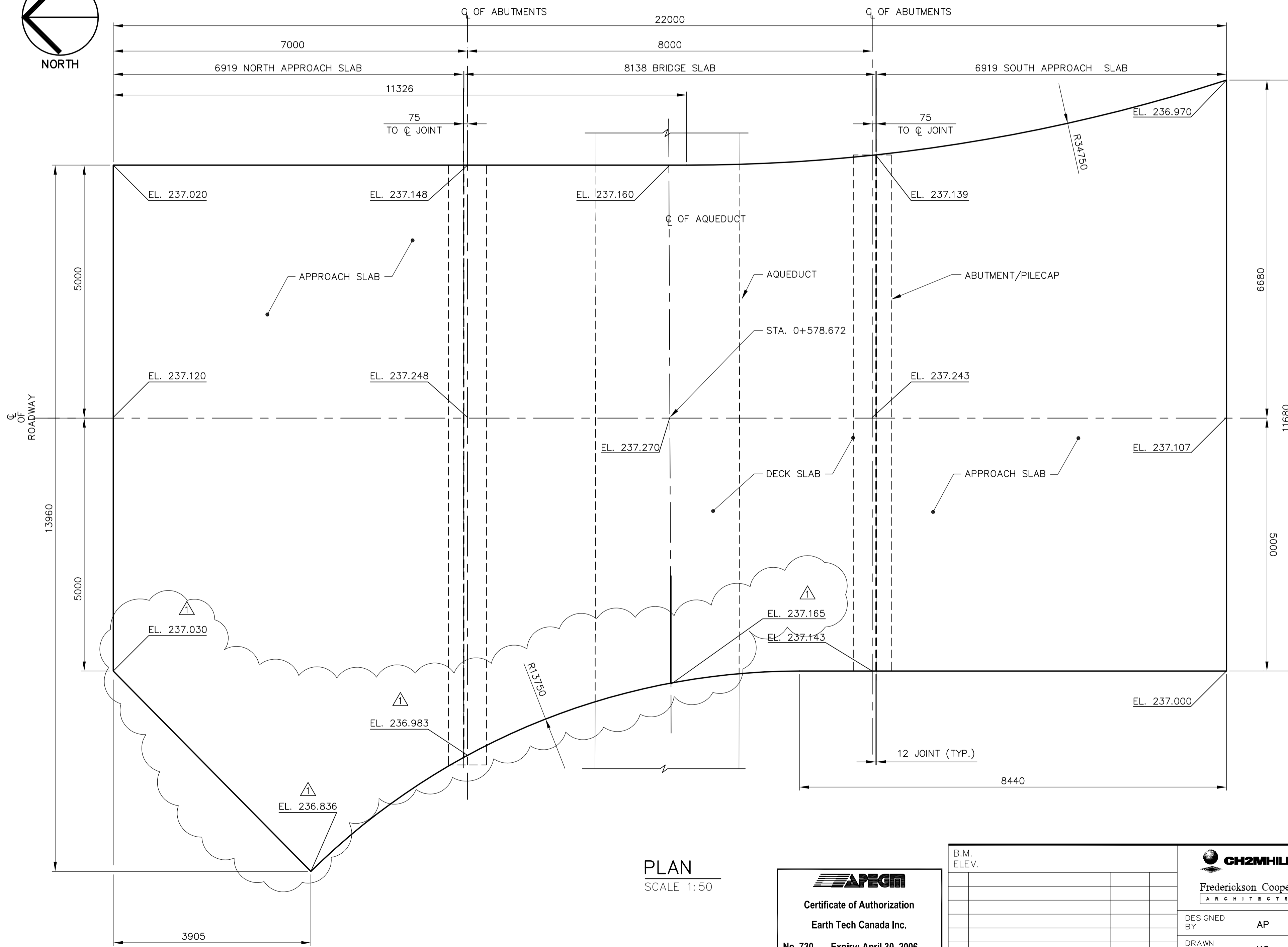
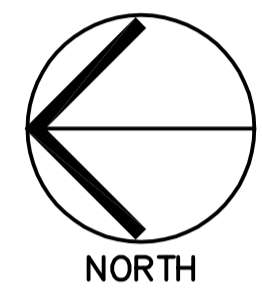
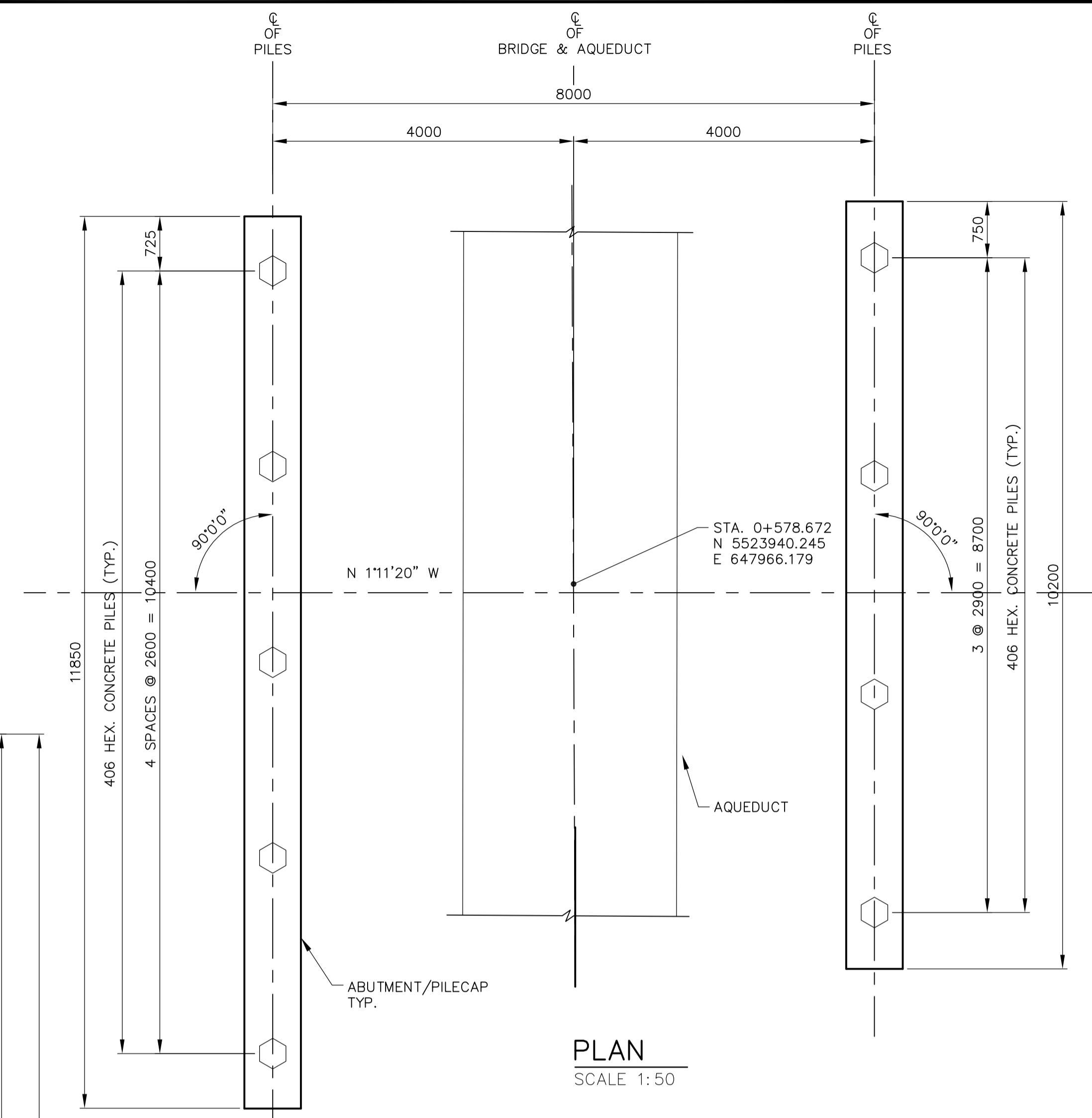


**ELEVATION**  
SCALE 1:50



**PLAN**  
SCALE 1:50



**PLAN**  
SCALE 1:50

**NOTES:**

- THE CONTRACTOR TO CONFIRM LOCATION OF Q OF AQUEDUCT PIPE BY PROBING PRIOR TO CONSTRUCTION
- THE CONTRACTOR IS TO EXERCISE EXTREME CARE TO PREVENT DAMAGE TO THE GWWD AQUEDUCT. ANY DAMAGE TO THE GWWD AQUEDUCT SHALL BE REPORTED TO THE CITY OF WINNIPEG WATER & WASTE DEPARTMENT 24 HOUR EMERGENCY LINE (204) 986-2626.
- ALL EXCAVATION SHALL BE LUMP SUM EXCAVATION.
- HIGH DENSITY INSULATION SHALL BE PLACED BY THE CONTRACTOR AS SHOWN
  - INSULATION SHALL BE 100 mm THICK EXTRUDED POLYSTYRENE CONFORMING TO CAN/CGSB 51.20-M TYPE 4 WITH A MINIMUM COMPRESSIVE STRENGTH OF 275 kPa
  - INSULATION SHALL BE COMPLETELY ENCLOSED IN 6 MIL POLYETHYLENE WITH ALL JOINTS POLY-VINYL TAPED
- WORKING BASE SHALL BE 75mm THICK LEAN MIX CONCRETE.
- CELLULAR CORRUGATED PAPER VOID FORM FOR DECK SLAB AND ABUTMENT CONSTRUCTION SHALL BE VOIDFORM AS MANUFACTURED BY TECHNICOAT LTD., OR EQUIVALENT, AS APPROVED BY THE CONTRACT ADMINISTRATOR. THE VOID FORM SHALL HAVE SUFFICIENT LOAD CAPACITY TO WITHSTAND ALL CONSTRUCTION LOADS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE VOID FORM SHALL BE PROTECTED WITH 3mm HARDBOARD OR AS OTHERWISE SPECIFIED BY THE MANUFACTURER.
- SPOT ELEVATIONS SHOWN ARE AT TOP OF ROADWAY SURFACE FOR FINAL STAGE CORRESPONDING TO ASPHALT THICKNESS OF 100 MM. THE CONTRACTOR SHALL PLACE 50 MM OF ASPHALT FOR THE INITIAL STAGE WHERE THE BRIDGE WILL BE IN SERVICE DURING CONSTRUCTION OF THE WATER TREATMENT FACILITIES.
- BRIDGE IS ON 0°11'27" SKEW TO AQUEDUCT.
- SEE SITE PLAN SHEET FOR THE LOCATION OF THIS BORING TEST HOLE.
- SEE GEOTECHNICAL REPORT FOR BORING LOGS OF NEARBY TEST HOLES AND OTHER AVAILABLE SOIL INFORMATION.

**DESIGN DATA**

- SPECIFICATIONS:**  
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, THIRD EDITION 2004.
- DESIGN LIVE LOAD:**  
1. AASHTO HSS25  
2. AASHTO HL93
- STRUCTURAL CONCRETE:**  
STRUCTURAL SLAB AND APPROACH SLABS  
f<sub>c</sub> = 35 MPa  
WATER/CEMENTING MATERIALS RATIO: 0.40 MAXIMUM  
CAN/CSA-A5-93 TYPE 10 NORMAL PORTLAND CEMENT.  
SUBSTRUCTURE INCLUDING CIP CONCRETE PILES:  
f<sub>c</sub> = 35 MPa  
WATER/CEMENTING MATERIALS RATIO: 0.45 MAXIMUM  
CAN/CSA-A5-93 TYPE 50 SULPHATE RESISTANT PORTLAND CEMENT.
- REINFORCING STEEL:**  
DEFORMED REINFORCEMENT: CAN/CSA-G30.18-M92 GRADE 400W
- FOUNDATION DATA:**  
PILE LOADING ABUTMENTS:  
406# HEX PRECAST CONCRETE PILE  
ULTIMATE LRFD PILE CAPACITY = 1600 kN  
MAXIMUM PILE LOAD (SERVICE 1 LOAD COMBINATION) = 660 kN  
MAXIMUM PILE LOAD (STRENGTH 1 LOAD COMBINATION) = 1030 kN



B.M. ELEV.	DATE	BY	DATE	BY
	06/03/09	KC	2005/08/29	EBL
	06/02/03	KC	2006/02/06	D.J. TANIGUCHI
				R. SOROKOWSKI

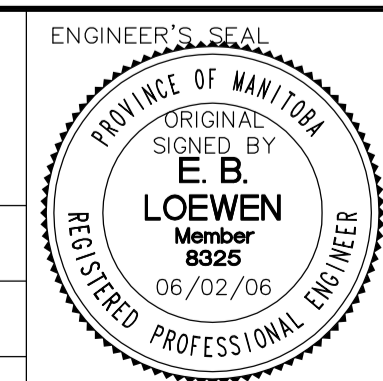
**CH2MHILL**  
Frederickson Cooper ARCHITECTS

**EarthTech**  
A Tyco International Ltd. Company

DESIGNED BY: AP  
DRAWN BY: KC  
SCALE: AS NOTED

CHECKED BY: EBL  
APPROVED BY: D.J. TANIGUCHI  
RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI

CONSULTANT DRAWING NO. WN-S0180



**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT  
ENGINEERING DIVISION

WATER TREATMENT PLANT  
AQUEDUCT BRIDGES  
FOUNDATIONS & CONCRETE STRUCTURES

STRUCTURAL  
MIDDLE BRIDGE  
BRIDGE LAYOUT AND ELEVATION

CITY FILE NUMBER  
SHEET 1 OF 7  
CITY DRAWING NUMBER  
1-060N-A-S0180-001-0D