

GENERAL NOTES:

- DESIGN IS IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA, 2005 EDITION PLUS 1988 MANITOBA AMENDMENTS. CONCRETE WALLS ARE DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN ACI 350R FOR WATERTIGHT STRUCTURES.

CAST IN PLACE CONCRETE:

- TO BE READ IN CONJUNCTION WITH CW 2160 AND AS AMENDED IN ACCORDANCE WITH THESE NOTES.
- CONCRETE MIX WAS IN ACCORDANCE WITH ALTERNATIVE 1, AND POSSESSED THE FOLLOWING PROPERTIES:
  - CLASS OF EXPOSURE: S-1
  - MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 35MPa
  - MAXIMUM SLUMP: 80mm  $\pm$  20mm
  - AIR CONTENT: 5 - 8%
  - MAXIMUM WATER/CEMENT RATIO: 0.40
- CONCRETE COVER = 50mm.
- ALL EXTERIOR CORNERS CHAMFERED 20mm.

REINFORCING STEEL:

- TO BE READ IN CONJUNCTION WITH CW 2160 AND AS AMENDED IN ACCORDANCE WITH THESE NOTES.
- ALL REINFORCING STEEL CONFORMS TO CSA G30.18M, GRADE 400W.
- ALL CONCRETE REINFORCING WORK PERFORMED IN ACCORDANCE WITH CSA A23.1.
- LAPS AT LEAST 40 BAR DIAMETERS, REINFORCING SPLICES NOT INDICATED IN THE DRAWINGS LOCATED AT POINTS OF MINIMUM STRESS.
- BEFORE PLACING CONCRETE, REINFORCING WAS CLEAN, FREE OF LOOSE SCALE, DIRT OR OTHER FOREIGN MATTER THAT WOULD REDUCE OR PREVENT BOND TO THE CONCRETE.

METRIC  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

**APEGM**  
Certificate of Authorization  
MMM Group Limited  
No. 4531

LOCATIONS APPROVED  
UNDERGROUND STRUCTURES

SIGNED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
SUPV U/G STRUCTURES

LOCATION 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 EXISTANCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING

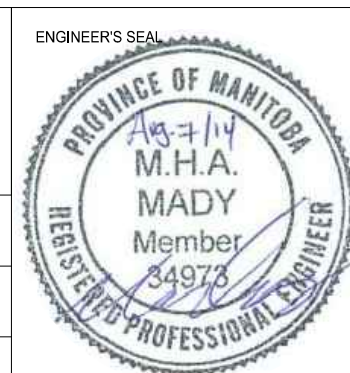
G.B.M. -  
ELEV. -

NO. REVISIONS  
DATE BY

**MMM GROUP**

DESIGNED BY JH/MM  
CHECKED BY MM  
DRAWN BY JH/MS  
APPROVED BY WC  
HOR. SCALE AS NOTED  
VERTICAL AS NOTED  
DATE JUL 29/14

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CONSULTANT ACAD DWG. NO.  
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THE CITY OF WINNIPEG  
PUBLIC WORKS DEPARTMENT  
ENGINEERING SERVICES DIVISION

CITY OF WINNIPEG

NORTH EAST EXCHANGE DISTRICT ENGINEERING STUDY

BERTHA & JOHN HIRSCH STAIR & RAMP

CITY DRAWING NUMBER

BID NO.  
742-2014