

**GENERAL NOTES**

- DO NOT SCALE DRAWINGS.
- THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND ALL OTHER PERTINENT CODES AND CONTRACT DOCUMENTS. IN THE EVENT OF A CONFLICT, THE MOST STRINGENT REQUIREMENT SHALL GOVERN.
- VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION.
- VERIFY WEIGHT AND LOCATION OF ALL EQUIPMENT ON OR IN THE STRUCTURE AND REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR PRIOR TO COMMENCING CONSTRUCTION.
- LOCATE UNDERGROUND SERVICES AND PROTECT THEM AT ALL TIMES DURING CONSTRUCTION.
- STRUCTURAL INTEGRITY OF EXISTING STRUCTURES TO BE MAINTAINED DURING CONSTRUCTION.
- REPORT ANY UNSOUND CONDITIONS OBSERVED OR CREATED IMMEDIATELY TO THE CONTRACT ADMINISTRATOR.
- STRUCTURAL DRAWINGS SHOWING THE COMPLETED STRUCTURE DO NOT INDICATE COMPONENTS WHICH MAY BE NECESSARY FOR SAFETY DURING CONSTRUCTION.

CEMENT TYPE: GU  
 CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS: 30 MPa  
 MAXIMUM AGGREGATE SIZE: 20 MM  
 MAXIMUM SLUMP: 100 MM  
 AIR CONTENT: 0% TO 3%  
 W/C RATIO: 0.45 MAXIMUM  
 CLASS OF SULPHATE AND CHLORIDE EXPOSURE: S-3 AND C-3

- THE USE OF ADDITIVES WITHIN THE CONCRETE MIX ONLY UPON WRITTEN APPROVAL OF THE CONTRACT ADMINISTRATOR PRIOR TO CONSTRUCTION.
- PVC WATERSTOPS TO BE PROVIDED FOR ALL POUR AND CONSTRUCTION JOINTS AS INDICATED ON DRAWINGS.
- ADVISE THE CONTRACT ADMINISTRATOR AT LEAST 48 HOURS IN ADVANCE OF CONCRETE POUR.
- FORMS SHALL NOT BE STRIPPED UNTIL 60% OF THE SPECIFIED CONCRETE STRENGTH HAS BEEN REACHED.

**SHOP DRAWINGS:**

- THE CONTRACTOR SHALL SUBMIT SPECIFIED SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR FOR REVIEW. ALL SUBMISSIONS MUST BE IN METRIC UNITS. WHERE DATA IS IN IMPERIAL UNITS, THE CORRECT METRIC EQUIVALENT SHALL ALSO BE SHOWN ON ALL SUBMISSIONS FOR REVIEW.
- ORIGINAL, PURPOSE-SPECIFIC SHOP DRAWINGS ARE TO BE PREPARED BY THE CONTRACTOR, FABRICATOR, SUBCONTRACTOR, SUPPLIER, DISTRIBUTOR, OR MANUFACTURER, TO ILLUSTRATE THE APPROPRIATE PORTIONS OF THE WORK SHOWING FABRICATION, LAYOUT, SETTING OR ERECTION DETAILS AS SPECIFIED IN APPROPRIATE SECTIONS.
- THE CONTRACTOR SHALL REVIEW SHOP DRAWINGS, PRODUCT DATA AND SAMPLES PRIOR TO SUBMISSION AND STAMP AND SIGN DRAWINGS INDICATING CONFORMANCE TO THE CONTRACT REQUIREMENTS. THE CONTRACTOR SHALL VERIFY  
  
FIELD MEASUREMENTS.  
FIELD CONSTRUCTION CRITERIA.  
CATALOGUE NUMBERS AND SIMILAR DATA.  
WEIGHTS AND LOADS.
- THE CONTRACTOR SHALL COORDINATE EACH SUBMISSION WITH REQUIREMENTS OF WORK AND CONTRACT DOCUMENTS. INDIVIDUAL SHOP DRAWINGS WILL NOT BE REVIEWED UNTIL ALL RELATED DRAWINGS ARE AVAILABLE.
- THE CONTRACTOR SHALL NOTIFY THE CONTRACT ADMINISTRATOR, IN WRITING AT TIME OF SUBMISSION, OF DEVIATIONS FROM REQUIREMENTS OF CONTRACT DOCUMENTS.
- THE CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SUBMISSION IS NOT RELIEVED BY THE CONTRACT ADMINISTRATOR'S REVIEW OF SUBMITTALS.
- NO DELAY OR CLAIMS WILL BE ALLOWED THAT ARISE BECAUSE OF DELAYS IN SUBMISSION, RE-SUBMISSION, AND REVIEW OF SHOP DRAWINGS.

**REINFORCING STEEL**

- ALL REINFORCING STEEL TO CONFORM TO CSA G30.12M, GRADE 400.
- ALL REINFORCING STEEL TO BE DETAILED IN ACCORDANCE WITH THE LATEST RSIC REINFORCING STEEL MANUAL OF STANDARD PRACTICE, CAN/CSA-A23.1 AND CAN/CSA-A23.3.
- THE SPECIFIED COVER FOR THE REINFORCING SHALL NOT BE LESS THAN 50MM (INTERIOR) OR 75MM (EXTERIOR), TWICE THE NOMINAL DIAMETER OF THE REINFORCEMENT, OR TWICE THE NOMINAL MAXIMUM AGGREGATE SIZE. UNPROTECTED METAL CHAIRS AND SUPPORTS, HARDWARE AND EMBEDDED ITEMS SHALL NOT BE PLACED CLOSER THAN 40MM OF THE CONCRETE SURFACE. FORM TIES AND BOLTS SHALL BE CUT BACK FROM THE SURFACE TO A MINIMUM DEPTH OF 25MM.
- SUBMIT TO THE CONTRACT ADMINISTRATOR SHOP DRAWINGS WHICH CLEARLY INDICATE BAR SIZES, GRADE, SPACING, HOOKS, BENDS, AND SUPPORTING / SPACING DEVICES, ETC., FOR REVIEW PRIOR TO THE FABRICATION OF REINFORCING STEEL.
- DO NOT PLACE REINFORCEMENT WITHOUT FIRST OBTAINING A COPY OF THE REVIEWED SHOP DRAWINGS FROM THE CONTRACT ADMINISTRATOR.
- ALL REINFORCING SHALL BE HELD IN PLACE AND TIED BY THE USE OF PROPER ACCESSORIES SUPPLIED BY THE REINFORCING STEEL FABRICATOR.
- ALL REINFORCING STEEL SHALL BE CLEANED OF ALL DIRT, GREASE AND OTHER DELETERIOUS MATERIALS PRIOR TO PLACING.
- REINFORCING STEEL SHALL NOT BE WELDED OR HEATED.
- IF REINFORCING STEEL IS LAPPED, BOTTOM STEEL SHALL ONLY BE LAPPED OVER SUPPORTS, TOP STEEL SHALL ONLY BE LAPPED AT MID-SPAN.

**GRATING:**

- UNLESS NOTED OTHERWISE, GRATING TO BE WELDED TYPE WITH 32MMX4.8MM BEARING BARS CONFORMING TO THE METAL BAR GRATING MANUAL OF THE NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS. SURFACE TO BE SERRATED FOR TRACTION.
- ALL GRATING SHALL BE FASTENED WITH SADDLE CLIPS. METHOD OF FIXING SHALL CONFORM TO THE METAL GRATING INSTITUTE RECOMMENDATIONS.
- ALL LOOSE EDGES AND REMOVABLE PANELS TO BE FULLY TRIM BANDED WITH 25MM BY 5MM PLATE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- PROVIDE BANDING AROUND ALL OPENINGS. KICK PLATES SHALL BE WELDED SIMILAR TO BANDING.
- GRATING SHALL BE CUT AND NEATLY FITTED AROUND COLUMNS, MACHINERY, PIPING, DUCTS AND OTHER INSTALLATION TO THE OWNER'S APPROVAL.

**DESIGN SPECIFICATIONS:**

- THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE LATEST EDITIONS AND ADDENDUM OF THE FOLLOWING CODES AND DOCUMENTS, WHICH ARE TO BE USED AND MADE AVAILABLE FOR REFERENCE ON SITE FOR THE DURATION OF THE WORK:  
  
NATIONAL BUILDING CODE OF CANADA (NBCC)  
CONCRETE CODE CAN/CSA A23.1, A23.2, A23.3  
CANADIAN FOUNDATION ENGINEERING MANUAL (CFEM)  
STEEL CODE CSA S16-01 AND CSA G40.21-350W  
UNITRUT GEN. ENGINEERING CATALOG NO. 16  
ALL SPECIFICATIONS COMPLETE WITH ADDENDA AND CHANGE ORDERS.  
DRAWINGS WITH THE LATEST REVISIONS AS THEY OCCUR.

**PILING**

- INSTALLATION OF CAST-IN-PLACE FRICTION PILES SHALL BE SUPERVISED BY QUALIFIED FIELD PERSONNEL. ACCURATE LOG RECORDS SHALL BE KEPT BY THE PILING CONTRACTOR, INCLUDING A RECORD OF ALL PROBLEMS ENCOUNTERED DURING DRILLING.
- NO DEVIATION FROM APPROVED CONTRACT DOCUMENTS IS PERMITTED WITHOUT WRITTEN PERMISSION FROM THE CONTRACT ADMINISTRATOR.

**CAST-IN-PLACE CONCRETE**

- ALL CONCRETE TO BE MIXED, PLACED, AND TESTED ACCORDING TO CSA A23.1 AND CSA A23.2.
- CONCRETE SHALL BE READY MIXED, CONFORMING TO CSA A23.1 (ALTERNATIVE 1), AND AS NOTED HEREIN:



NO.	REVISIONS	DATE	DESIGN	CHECK
00	ISSUED FOR TENDER, BID OPP. 545-2012	2012/11/12	KK	RB

**SNC-LAVALIN INC.**  
 148 Nature Park Way  
 Winnipeg, MB, Canada R3P 0X7  
 204-786-8080

DESIGNED BY: K. KOTYK  
 CHECKED BY: R. BEAN  
 DRAWN BY: M. TUGADE  
 APPROVED BY: C. REIMER  
 SCALE: 1 : 1  
 RELEASED FOR CONSTRUCTION BY: N. HARRINGTON  
 DATE: 2012/04/25  
 DATE: 2012/09/10  
 CONSULTANT NO.: 112577-0116-42DD-0001

ENGINEER'S SEAL

ORIGINAL DRAWING  
 SEALED BY:  
 K. K. KOTYK  
 SNC-LAVALIN  
 MEMBER #21950  
 2012/11/12  
 REV. 00

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

SOUTH END WATER POLLUTION CONTROL CENTRE  
 VENTILATION & MISC. UPGRADES  
 GENERAL NOTES  
 BOILER ROOM BACKUP PUMP PIT

CITY DRAWING NUMBER: 1-0102B-S0001  
 SHEET: 001  
 REV: 00  
 SIZE: A1