



MAIN FLOOR FRAMING PLAN
 1/8" = 1'-0"
 - EXPOSE ALL BASES OF EXISTING STEEL COLUMNS FOR REVIEW (INCLUDING BASE PLATE)
 - REPAIR COLUMNS UNDER UNIT PRICE ITEMS AS DIRECTED BY CONTRACT ADMINISTRATOR

GENERAL NOTES

- STRUCTURAL DESIGN BASED ON THE MANITOBA BUILDING CODE 2011 EDITION.
- DO NOT SCALE DRAWINGS.
- ALL DIMENSIONS ARE TO BE VERIFIED WITH THE EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
- THESE STRUCTURAL DRAWINGS SHOW THE COMPLETED STRUCTURE AND DO NOT INDICATE ALL COMPONENTS NECESSARY FOR SAFETY DURING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY ON AND AROUND THE JOBSITE DURING CONSTRUCTION.

CAST-IN-PLACE CONCRETE

I CONCRETE

- ALL CONCRETE IS TO BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF CSA-A23.1-14 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION" AND CSA-A23.2-14 "METHOD OF TEST FOR CONCRETE".
- PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF QUALITY, YIELD AND STRENGTH AS SPECIFIED IN CONCRETE MIXES, AND WILL COMPLY WITH CSA-A23.1. CERTIFICATION LETTER TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.
- PROVIDE CERTIFICATION THAT PLANT, EQUIPMENT, AND MATERIALS TO BE USED IN CONCRETE COMPLY WITH REQUIREMENTS OF CSA-A23.1. CERTIFICATION LETTER TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.
- CONCRETE PROPERTIES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

CURBS:
 25 MPa MIN. AT 28 DAYS
 CLASS OF EXPOSURE: N
 ENTRAINED AIR/CATEGORY: NONE (LESS THAN 3%)
 AGGREGATE MAX. 20 mm
 CURING TYPE: TYPE 2 - ADDITIONAL

UNLESS INDICATED OTHERWISE THE CONTRACTOR SHALL SPECIFY CONCRETE SLUMP APPROPRIATE WITH PLACEMENT METHODS AND SITE CONDITIONS. THE CONTRACTOR SPECIFIED SLUMP MUST BE SHOWN ON THE CERTIFICATION LETTER AND CONCRETE DELIVERY TICKET.

- UNLESS NOTED OTHERWISE CONCRETE CURING TO CONFORM TO THE LATEST EDITION OF CSA-A23.1-14 AS FOLLOWS:
 A) TYPE 1 - BASIC: 3 DAYS ≥ 10°C AND FOR A TIME NECESSARY TO ATTAIN 40% OF THE SPECIFIED STRENGTH.
 B) TYPE 2 - ADDITIONAL: 7 DAYS ≥ 10°C AND FOR A TIME NECESSARY TO ATTAIN 70% OF THE SPECIFIED STRENGTH.
 C) TYPE 3 - EXTENDED: 7 DAYS WET CURING ≥ 10°C.

- AIR ENTRAINING ADMIXTURES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C260/C260M-10a "STANDARD SPECIFICATION FOR AIR ENTRAINING ADMIXTURES FOR CONCRETE". SUPERPLASTICIZING ADMIXTURES SHALL CONFORM TO ASTM C494/C494M "STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE" OR ASTM C1017/C1017M "STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR USE IN PRODUCING FLOWING CONCRETE" WHEN FLOWING CONCRETE IS APPLICABLE. AIR ENTRAINING ADMIXTURES TO HAVE A DURABILITY FACTOR GREATER THAN 75, WHEN TESTED TO ASTM STANDARDS C666/C666M PROCEDURE A. SPACING FACTOR FOR ANY AIR ENTRAINING ADMIXTURE MUST BE 0.17mm OR LESS WHEN TESTED IN ACCORDANCE WITH ASTM C457 "STANDARD TEST METHOD FOR MICROSCOPICAL DETERMINATION OF PARAMETERS OF THE AIR-VOID SYSTEM IN HARDENED CONCRETE".

II REINFORCING STEEL

- ALL REINFORCING STEEL TO BE CSA-G30.18M-09 GRADE 400R DEFORMED BARS EXCEPT COLUMN TIES AND BEAM STIRRUPS WHICH SHALL BE GRADE 400W STEEL.
- ALL REINFORCING IS TO BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE REINFORCING STEEL INSTITUTE OF CANADA - MANUAL OF STANDARD PRACTICE, EXCEPT OTHERWISE NOTED.
- REINFORCING STEEL COVER IS TO CONFORM TO CAN/CSA A23.3-14 "DESIGN OF CONCRETE STRUCTURES FOR BUILDINGS" AND AS FOLLOWS:

CURBS:
 EXPOSURE CLASS: N 1 1/4 IN. BOTTOM TO TIES 1 1/4 IN. SIDES AND TOP TO TIES.

- ALL REINFORCING TO BE HELD IN PLACE, AND TIED BY THE USE OF PROPER ACCESSORIES, SUCH AS HI-CHAIRS, SPACERS, ETC. TO BE SUPPLIED BY THE REINFORCING STEEL FABRICATOR. HI-CHAIRS TO HAVE 4 LEGS AND TO BE STAPLED OR NAILED TO THE FORMWORK.

STRUCTURAL STEEL

- THE STRUCTURAL STEEL FABRICATOR'S ENGINEER SHALL BE RESPONSIBLE FOR LOCATING AND DESIGNING PROVISIONS FOR ALL TEMPORARY FALL PROTECTION SYSTEMS REQUIRED DURING CONSTRUCTION TO MEET MANITOBA WORKPLACE HEALTH AND SAFETY REGULATIONS.
- STRUCTURAL STEEL TO CONFORM TO CSA-G40.21, "STRUCTURAL QUALITY STEELS" AND CSA-G40.20 "GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL".
- ALL ROLLED OR STEEL STRUCTURAL SECTIONS SHALL BE G40.21-350W. ALL HOLLOW STRUCTURAL SECTIONS TO BE G40.21-350W CLASS C OR ASTM A500-C. ALL ANGLES, CHANNELS AND PLATES SHALL BE G40.21-300W.
- FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE PERFORMED IN ACCORDANCE WITH CSA S16-14, "DESIGN OF STEEL STRUCTURES".
- ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF CSA W59, "WELDED STEEL CONSTRUCTION". FABRICATORS SHALL BE PROPERLY CERTIFIED IN ACCORDANCE WITH CSA W47.1, "CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL STRUCTURES".
- ALL BOLTED CONNECTIONS TO USE A325 HIGH STRENGTH BOLTS. MINIMUM CONNECTION SHALL CONSIST OF 2 BOLTS.
- ALL STRUCTURAL STEEL IS TO RECEIVE SHERWIN WILLIAMS MACROPOX 646 EPOXY (PRE STRIPE ALL WELDS) FOLLOWED BY ACRYLON 218 ACRYLIC POLYURETHANE TOP COAT AS PER MANUFACTURER'S WRITTEN SPECIFICATIONS. COLOUR TO MATCH EXISTING.
- STRUCTURAL STEEL SUPPLIER TO PROVIDE 1 1/2 IN. X 3/16 IN. MASONRY ANCHORS BY 16 IN. LONG WITH 2 IN. HOOK AT 32 IN. O/C. ON ALL COLUMNS AND BEAMS IN CONTACT WITH MASONRY.
- ANCHOR BOLTS TO BE ASTM A307 GRADE C OR ASTM F1554 GRADE 36, WELDABLE, PROVIDED BY STEEL SUPPLIER AND SET BY THE GENERAL CONTRACTOR. WHERE ASTM F1554 GRADE 55 ANCHOR BOLTS ARE USED, BOLTS TO BE WELDABLE GRADE STEEL.
- FABRICATOR TO NOTIFY ENGINEER OF ANY PROPOSED MEMBER SUBSTITUTIONS AND CHANGED CONNECTION DETAILS.
- THE STRUCTURAL STEEL SUPPLIER SHALL PROVIDE AND BE RESPONSIBLE FOR ALL HOLES IN STEEL SECTIONS REQUIRED BY OTHER TRADES. SECTION SHALL BE STRENGTHENED WHERE REQUIRED TO GUARANTEE THE ORIGINAL STRENGTH OF THE BEAM. ANY CUTTING OF STEEL AT THE JOB SITE SHALL BE DONE ONLY AS DIRECTED AND APPROVED BY THE CONTRACT ADMINISTRATOR.
- STRUCTURAL STEEL SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA COVERING THE DESIGN OF CONNECTIONS, TO THE CONTRACT ADMINISTRATOR FOR REVIEW PRIOR TO FABRICATION. CONNECTION DESIGN TO INCLUDE FOR ALL ADJUSTABLE CONNECTIONS REQUIRED TO SUITE FABRICATION AND ERECTION PROCEDURES AND TOLERANCES.

The General Contractor shall check & verify all dimensions and report any errors or omissions to the designers.

No.	Date	Issue/Revision	By
0	2018-06-15	ISSUED FOR BID OPPORTUNITY	SMC

NOTE:
 PRELIMINARY
 DRAWING
 DO NOT USE FOR
 CONSTRUCTION

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 CONSULTING STRUCTURAL ENGINEERS

Project
ST. JAMES CENTENNIAL POOL
 STEEL COLUMNS REPAIR

644 PARKDALE
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Sheet Title
POOL COLUMN LAYOUT AND GENERAL NOTES

File	2018-0383	Date	2018-06-15
Design	SMC	Drawn	LL/MAH

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0	S1.1