

# ST. JAMES CIVIC CENTRE ARENA CRAWLSPACE RESTORATION

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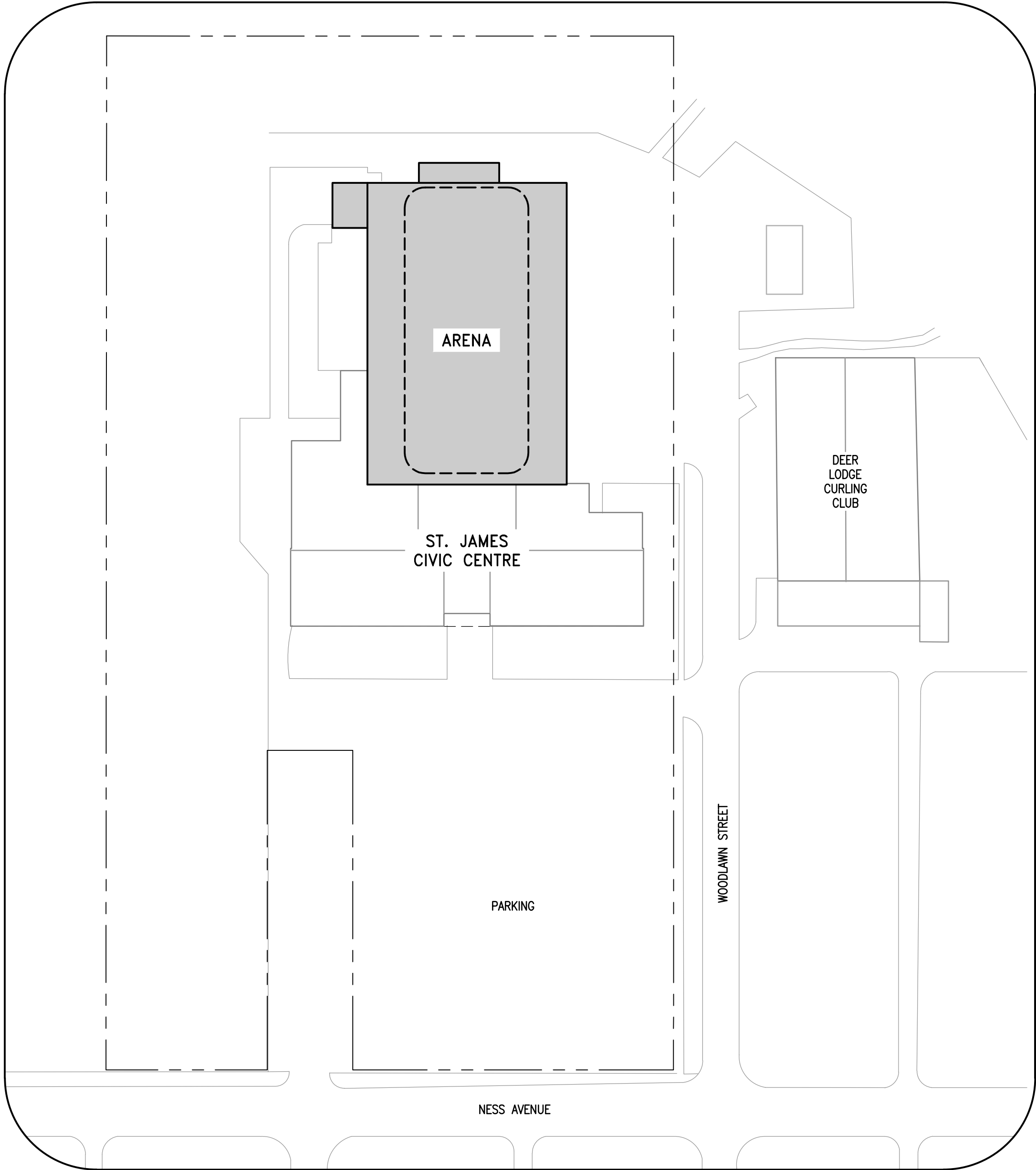
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## ABBREVIATIONS

Ø	AT (THE RATE OF)	DBL	DOUBLE	GALV	GALVANIZED	MO	MASONRY OPENING	SL	SLAB ON GRADE
AB	ANCHOR BOLT	DEFL	DEFLECTION	GEN	GENERAL	MM	MOMENT	SOG	SLAB ON GRADE
ADJ	ADJUSTABLE	DEMO	DEMOLITION	GR	GRADE	MPa	MEGAPASCAL	SPEC	SPECIFICATIONS
AFT	ABOVE FINISHED FLOOR	DEPR	DEPRESSION	GRAN	GRANULAR	NIC	NOT IN CONTRACT	SPF	SPECIFICATIONS
ALT	ALTERNATE	HC	HOLLOW CORE	HEX	HEXAGON	NF	NEAR FACE	SO	SQUARE
ARCH	ARCHITECTURAL	DEV	DEVELOPMENT	HT	HEIGHT	N	NUMBER	STD	STANDARD
BOT	BOTTOM	DIA	DIAMETER	HORIZ	HORIZONTAL	NO.	NUMBER	STIFF	STIFF
B PL	BASE (BEARING) PLATE	DIR	DIRECTION	HI	HORIZONTAL FORCE	NOM	NOMINAL	STIFFER	STIFFER
BC	BOTTOM CHORD	DL	DEAD LOAD	HTS	HOLLOW METAL	N-S	NORTH-SOUTH	STIR	STIRRUP
BD	BOARD	DN	DOWN	IC	IN CENTRE	O/C	ON CENTRE	STL	STEEL
BTWN	BETWEEN	DP	DEEP	ID	INSIDE DIAMETER	OUT TO OUT	OUT TO OUT	STRUCT	STRUCTURAL
BUILDG	BUILDING	DFIR	DOUGLAS FIR	IF	INSIDE FACE	JO TO O	JOINT TO JOINT	SYM	SYMMETRICAL
BLK	BLOCK	DWG	DRAWING(S)	INSUL	INSULATION	OF	OUTSIDE FACE	T	TOP
BLM	BOTTOM LOWER LAYER	DWL	DOWEL(S)	INT	INTERIOR	OH	OVERHANG	T/O	TOP OF
BM	BEAM	EA	EACH	JOIST	JOIST	OPNG	OPENING	TAB	TOP & BOTTOM
BRDG	BRIDGING	EJ	EXPANSION JOINT	KIP	KILOPASCAL	OWSI	OPEN WEB STEEL JOIST	TEMP	TEMPERATURE
BRG	BEARING	EE	EACH END	KT	KILOTON	Po	PASCAL	TH	TENSION FORCE
BS	BOTH SIDES	EF	EACH FACE	Kg	KILOGRAM	PC	PRECAST	THRU	THROUGH
BSMT	BASEMENT	EJ	EXPANSION JOINT	KIP	KILOPASCAL	PERP	PERPENDICULAR	TI	TIE JOIST
BUL	BOTTOM UPPER LAYER	EL	ELEVATION	KN	KILONEWTON	PL	PLATE	TLL	TOP LOWER LAYER
C TO C	CENTRE TO CENTRE	ELEV	ELEVATOR	KO	KNOCKOUT	PLF	POUNDS PER FOOT	TOS	TOP OF STEEL
C/W	COMPLETE WITH	ELEC	ELECTRICAL	KPA	KILOPASCAL	PLYWD	PLYWOOD	TRANS	TRANSVERSE
CL	CENTRE LINE	ENG	ENGINEER	KSF	KIP(S) PER SQUARE FOOT	PREFAB	PREFABRICATION	TS	TEMPERATURE STEEL
CANT	CANTILEVER	EQ	EQUAL	KSI	KIP(S) PER SQUARE INCH	PROJ	PROJECTION	TUL	TOP UNDER LAYER
CAP.	CAPACITY	EQUIP	EQUIPMENT	LB	POUNDS	PSF	POUNDS PER SQUARE FOOT	TYP	TYPICAL
CEM	CEMENT	ES	EACH SIDE	LL	LONG LEG VERTICAL	PSI	POUNDS PER SQUARE INCH	UN	UNDER LAYER
CHAN	CHANNEL	E-W	EAST-WEST	LL	LIVE LOAD	PT	POINT	UN	UNLESS OTHERWISE NOTED
CI	CAST IRON	EW	EAST-WEST	LL	LOWER LAYER	R	RADIUS, REACTION	U/S	UNDERSIDE
CIP	CAST IN PLACE	EXIST	EXISTING	LLV	LONG LEG VERTICAL	REF	REFERENCE	VERT	VERTICAL
CJ	CAST JOINT	EXP	EXPANSION	LLH	LONG LEG HORIZONTAL	REIN	REINFORCEMENT	VT	VERTICAL SHEAR
CLR	CLEAR	EXT	EXTERIOR	m	METRE	REM	REMAINDER	W	WIDE
COL	COLUMN	FDN	FOUNDATION	mm	MILLIMETER	REQ	REQUIRE	W/O	WITHOUT
COMP	COMPOSITE, COMPOSITION	FF	FAR FACE	MAS	MASONRY	REV	REVISION, REVISED	WD	WOOD
CONC	CONCRETE	FIN	FINISHED	MAX	MAXIMUM	RO	ROUGH OPENING	WP	WORK POINT
CONN	CONNECT, CONNECTION	FL	FLOOR	MECH	MECHANICAL	R/W	REINFORCED WITH	WT	WEIGHT
CONSTR	CONSTRUCTION	FS	FAR SIDE	MEZZ	MEZZANINE	SCHED	SCHEDULE	WIM	WELDED WIRE MESH
CONT	CONTINUOUS	FT	FOOT/FEET	MIN	MINIMUM	SECT	SECTION	XBR	CROSS BRACING
CORR	CORRIDOR	FTG	FOOTING	MISC	MISCELLANEOUS	SIM	SIMILAR		
		GA	GAUGE	MK	MARK	SJ	STRUT JOIST		

## GENERAL NOTES

- STRUCTURAL DESIGN BASED ON THE MANITOBA BUILDING CODE 2011 EDITION.
- DO NOT SCALE DRAWINGS.
- ALL DIMENSIONS ARE TO BE VERIFIED WITH THE PROJECT DRAWINGS AND 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 GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY ON AND AROUND THE JOBSITE DURING CONSTRUCTION.

## CAST-IN-PLACE CONCRETE

- CONCRETE
- ALL CONCRETE IS TO BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF CSA-A23.1-09 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION" AND CSA-A23.2-09 "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.	
CONCRETE REPAIRS:	35 MPA MIN. AT 28 DAYS CLASS OF EXPOSURE: C-1 ENTRAINED AIR/CATEGORY: 1 (5% TO 8%) AGGREGATE MAX. 20 MM CURING TYPE: TYPE 2 - ADDITIONAL

UNLESS INDICATED OTHERWISE THE GENERAL CONTRACTOR SHALL SPECIFY CONCRETE SLUMP APPROPRIATE WITH PLACEMENT METHODS AND SITE CONDITIONS. THE GENERAL 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-A23.1-09 AS FOLLOWS:  
A) TYPE 1 - BASIC: 3 DAYS  $\geq 10^{\circ}\text{C}$  AND FOR A TIME NECESSARY TO ATTAIN 40% OF THE SPECIFIED STRENGTH.  
B) TYPE 2 - ADDITIONAL: 7 DAYS  $\geq 10^{\circ}\text{C}$  AND FOR A TIME NECESSARY TO ATTAIN 70% OF THE SPECIFIED STRENGTH.  
C) TYPE 3 - EXTENDED: 7 DAYS WET CURING  $\geq 10^{\circ}\text{C}$ .

- 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".

- ALL CONCRETE TOPPINGS TO BE BONDED AND SHALL HAVE A TENSILE BOND STRENGTH BETWEEN THE TOPPING AND BASE COURSE CONCRETE OF NOT LESS THAN 0.9 MPA AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH CSA A23.2-08 AT A FREQUENCY OF NOT LESS THAN ONE TEST PER 100 M<sup>2</sup> 1,000 SQ.FT. 200 M<sup>2</sup> 2,000 SQ.FT. PRIOR TO CONSTRUCTION SUBMIT DOCUMENTATION DEMONSTRATING MINIMUM PERFORMANCE REQUIREMENT WILL BE MET.
- CONCRETE TO RECEIVE BONDED TOPPINGS SHALL BE INTENTIONALLY ROUGHENED TO ACHIEVE A SURFACE PROFILE OF ICRI-CSP-6 OR GREATER.

## REINFORCING STEEL

- ALL REINFORCING STEEL TO BE CSA-C30.18M-92 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. ALL LAPPED SPLICES TO BE CLASS B SPLICES, UNLESS NOTED.
- REINFORCING STEEL COVER IS TO CONFORM TO CAN/CSA A23.3-09 "DESIGN OF CONCRETE STRUCTURES FOR BUILDINGS" AND AS FOLLOWS:  
INTERIOR STRUCTURAL SLABS:  
EXPOSURE CLASS: C-1 3/4 IN. TOP 1 1/2 IN. BOTTOM
- 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.
- ALL OPENINGS IN CAST-IN-PLACE CONCRETE FLATWORK TO BE TRIMMED WITH 2-15M ALL AROUND ON BOTH FACES, EXCEPT AS NOTED.

## LANDSCAPING

- CONTRACTOR TO RESTORE ALL LANDSCAPING, SIDEWALKS AND BUILDING FINISHES ETC TO MATCH PRE-CONSTRUCTION CONDITION UNLESS OTHERWISE INDICATED BY DRAWINGS AND/OR CONSULTANT.
- PROVIDE PRE-CONSTRUCTION PHOTOGRAPHS TO CONSULTANT & OWNER PRIOR TO MOBILIZATION.

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

0	2020-10-30	ISSUED FOR CONSTRUCTION	DJM
No.	Date	Issue/Revision	By

**ENGINEERS  
GEOSCIENTISTS  
MANITOBA**  
Certificate of Authorization  
Crosier Kilgour & Partners Ltd.  
No. 235

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Project

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ARENA CRAWLSPACE RESTORATION

2055 NESS AVENUE  
WINNIPEG, MANITOBA

Sheet Title

**SITE PLAN, DRAWING INDEX  
AND GENERAL NOTES**

File	2020-0197	Date	2020-10-30
Design	DJM	Drawn	LOL
Revision	0	Sheet No.	S0.1