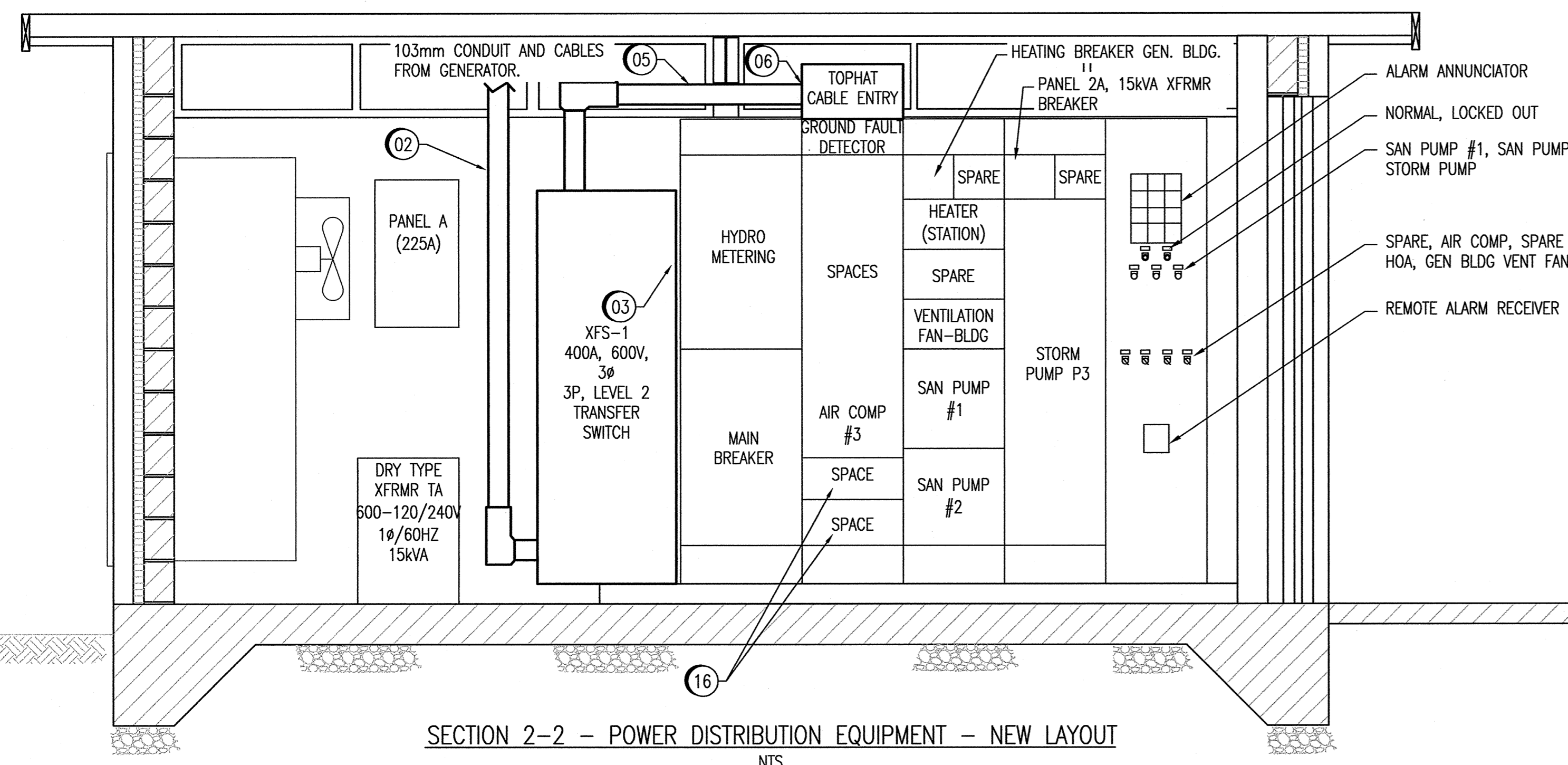


PLAN VIEW - NEW LAYOUT
1:20



SECTION 2-2 - POWER DISTRIBUTION EQUIPMENT - NEW LAYOUT
NTS

GENERAL NOTES:

- PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE (CEC), LATEST EDITION OF THE MANITOBA ELECTRICAL CODE, AND THE CITY OF WINNIPEG ELECTRICAL BY-LAWS. OBTAIN AND PAY ALL APPLICABLE CERTIFICATES AND PERMITS. ARRANGE ALL NECESSARY INSPECTIONS AND CORRECT ANY DEFICIENCIES THAT MAY ARISE.
- AT THE COMPLETION OF THE WORK AND PRIOR TO ENERGIZATION, MEGGAR ALL NEW CIRCUITS TO CONFIRM INSULATION INTEGRITY.
- PROVIDE ALL NECESSARY CIRCUIT GROUNDING AND EQUIPMENT BONDING AS PER CEC.
- ALL CONDUITS USED SHALL BE RIGID GALVANIZED STEEL FOR INTERCONNECTIONS BETWEEN THE GENERATOR, TRANSFER SWITCH, AND MCC AND TRANSFER SWITCH. OTHER MISCELLANEOUS BRANCH CIRCUIT SHALL BE RUN IN EMT CONDUIT.
- ALL CONDUCTORS SHALL BE COPPER, STRANDED, RW90 RUN IN CONDUIT, COMPLETE WITH 1000V 90°C XLPE INSULATION. ALL CABLE OR CONDUIT FITTINGS SHALL BE WATER TIGHT TYPE.
- CO-ORDINATE SITE SERVICE SHUTDOWN AND SERVICE WORK WITH THE CITY OF WINNIPEG AND MANITOBA HYDRO. THE CITY OF WINNIPEG HAS STRICT GUIDELINES REGARDING DOWNTIME FOR THIS STATION.
- CO-ORDINATE EXCAVATION WORK WITH ALL UTILITIES, AND WITH THE CITY OF WINNIPEG TO ENSURE THAT DAMAGE TO EXISTING SERVICES, OR SYSTEMS DOES NOT OCCUR. MAKE GOOD AND REPAIR ANY DAMAGES.
- SUBCONTRACT THE SERVICES OF J.R. STEPHENSON TO PERFORM ALL MCC MEDICATIONS. ALL MODIFICATIONS SHALL BE DEPARTMENT OF LABOUR CERTIFIED. THE FOLLOWING WORK SHALL BE SUB-CONTRACTED TO J.R. STEPHENSON (RICHARD EARDLEY - 775-8561):

MCC SECTION 1:

- REMOVE BUS ON SECONDARY OF HYDRO C.TS
- REMOVE WIREWAY
- SUPPLY AND INSTALL NEUTRAL
- SUPPLY AND INSTALL TWIN LUGS ON C.TS
- SUPPLY AND INSTALL BLANKING PLATES

MCC SECTION 2:

- SUPPLY AND INSTALL TOP HAT
- REMOVE ROBOCNIC TRANSFER SWITCH
- SUPPLY AND INSTALL BUS (VERTICAL BUS) FOR STARTER IN BOTTOM OF CELL TO MAIN BUS
- MODIFY MAIN BUS
- SUPPLY AND INSTALL TWIN MAIN LUGS
- SUPPLY AND INSTALL BLANKING PLATE(S)
- REPAIR GROUND INDICATING LIGHTS.
- CONNECT AIR COMP #3 STARTER BUS AND SPACES TO MCC BUS

SPECIFIC NOTES:

- PROVIDE NEW 400A, LEVEL 2 EMERGENCY POWER TRANSFER SWITCH. IF REQUIRED, PROVIDE NEW HOUSEKEEPING PAD.
- PROVIDE NEW 103mm RIGID GALVANIZED STEEL CONDUIT (C/A CABLING - REFER TO SINGLE LINE) FROM THE TRANSFER SWITCH TO THE GENERATOR. CONDUIT SHALL BE RUN ALONG THE CEILING, AND SHALL BE RUN DOWN FROM THE CEILING TO THE GENERATOR.
- PROVIDE NEW 103mm RIGID GALVANIZED STEEL CONDUIT AND CABLES FROM MCC TO TRANSFER SWITCH - NORMAL POWER INCOMING (REFER TO SINGLE LINE DRAWING).
- REMOVE EXISTING BREAKER. PROVIDE NEW BREAKER, SIZE AS SHOWN, TO MATCH THE EXISTING BREAKER TYPES, KAIC RATING, AND MANUFACTURER. THE EXISTING PANEL 2A IS A WESTINGHOUSE, NQB / NBA TYPE.
- PROVIDE NEW 103mm RIGID GALVANIZED STEEL CONDUIT AND CABLES FROM MCC TO TRANSFER SWITCH - MCC POWER (REFER TO SINGLE LINE DRAWING).
- PROVIDE MCC TOP HAT FOR POWER CABLE ENTRY INTO SECTION 2 OF THE EXISTING MCC. RE-CONFIGURE AND MODIFY EXISTING GROUND FAULT INDICATING LIGHTS.
- MODIFICATIONS TO THE EXISTING PANEL SCHEDULE IS SHOWN. PROVIDE NEW, COMPLETE, UPDATED TYPED PRINTED PANEL DIRECTORY IN EXISTING PANELBOARD EXISTING SCHEDULES ARE TO REMAIN UNDERNEATH THE NEW SCHEDULE FOR FUTURE REFERENCE. TYPICAL.
- PROVIDE AN EMERGENCY BATTERY PACK COMPLETE WITH TWO REMOTE HEADS, LUMACELL RGS72-120V/2MT-9-AT. MOUNT BATTERY PACK ABOVE DOOR. PROVIDE DUPLEX RECEPTACLE ABOVE DOOR, AND PLUG BATTERY PACK INTO RECEPTACLE. RECEPTACLE SHALL BE CONNECTED TO THE LOCAL LIGHTING CIRCUIT.
- PROVIDE NEW BATTERIES, AND BATTERY CHARGER FOR NEW GENERATOR. PROVIDE NEW WIRING AND CONDUIT FROM PANEL 'A'.
- WIRE AND CONNECT NEW ELECTRIC MOTORIZED DAMPERS. TYPICAL.
- PROVIDE ELECTRICAL CABLING, CONDUIT, CONNECTIONS, ETC. FOR GENSET. REFER TO PANEL SCHEDULE, AND BLOCK DIAGRAM TO ELECTRICAL CONNECTION INFORMATION. CONNECTIONS AND INSTALLATION SHALL BE AS PER THE MANUFACTURER RECOMMENDATIONS.
- NEW LOCATION OF UNIT HEATER TO SUIT MECHANICAL SYSTEMS.
- WIRE AND CONNECT NEW THERMOSTAT.
- PROVIDE 50 WATT, 120 VAC : 24VAC POWER SUPPLY TRANSFORMER IN NEMA 4 BOX FOR POWER SUPPLY TO THE NATURAL GAS DETECTOR. PROVIDE ALL WIRING AND MATERIALS FOR THE NATURAL GAS DETECTION SYSTEM AS REQUIRED FOR A COMPLETE AND FUNCTIONING INSTALLATION.
- NATURAL GAS SENSOR MOUNTED AT HIGH LEVEL, 300mm FROM THE CEILING.
- FUTURE SPACE FOR TWO SIZE 1 STARTERS.

PANEL 2A: (EXISTING)				VOLTAGE: 120/240 BUS: 225A, COPPER BUS		PHASE: 1 WIRE: 3		
DESCRIPTION	CABLE NO	LOAD WATTS	BKR SIZE	CIRCUIT	BKR SIZE	LOAD WATTS	CABLE NO	DESCRIPTION
BUILDING LIGHTING			15	1	2	15		RECEPTACLE LEFT OF PANEL
WATER PIPE HEATER			15	3	4	15	04	BATTERY CHARGER
RECEPTACLE NORTH WALL			15	5	6	15		REFRIGERANT DRYER
SPARE			15	7	8	15		PUMPS 1, 2, & 3 CONTROL
SPARE			15	9	10	15		ALARM PANEL
SUMP PUMP			15	11	12	15	04	VENTILATION CONTROL
VENT FAN 2 SPEED #105			15	13	14	15		VENT FAN 106
WET WELL LIGHTS			15	15	16	2P		
SPARE - TEMP-GEN-BLOCK HEATER			30	17	18	15		STATION LIGHTS
ENGINE EXERCISER			15	19	20	15		STATION HATCH HEATER
SPARE			15	21	22	15		INTERCOM PLUG
SPARE			15	23	24	15	04	GENSET ALTERNATOR HEATER
RECEPTACLE - TELEPHONE PLUG			15	25	26	15	04	GENSET COOLANT HEATER
SPACE				27	28	15	04	GENSET BAT. HEATER
SPACE				29	30	15	04	NATURAL GAS DETECTOR PNL
SPACE				31	32			SPACE
SPACE				33	34			SPACE
SPACE				35	36			SPACE
SPACE				37	38			SPACE
SPACE				39	40			SPACE
SPACE				41	42			SPACE
HTG.	-							
LTG.	-							
MTR.	-							
MISC.	-							
TOTAL	-							- kW

1044, 1046, 1048	SUPERCEDED DRAWING SET
06053	STRUCTURAL DRAWING SET
06051-06052	MECHANICAL DRAWING SET
06090-06092	ELECTRICAL DRAWING SET
06044-06049	ELECTRICAL DRAWING SET
DRAWING NUMBER	REFERENCE DRAWINGS



B.M. ELEV.	FIELD BOOK #:		SNC-Lavalin Inc. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080	ENGINEER'S SEAL
POSTED TO LBIS				
DESIGNED BY D. BECKER	CHECKED BY C. ASMUNDSON	DATE 07/04/12	RELEASED FOR CONSTRUCTION	DATE
DRAWN BY D. BECKER	APPROVED BY C. ASMUNDSON			
HOR. SCALE 1:20	VERTICAL 1:20	FILENAME: 113049-47DD-0000-0003.dwg		
00 ISSUED FOR CONSTRUCTION	08/01/18 AEO	BID OPPORTUNITY No. 66-2008		
NO. REVISIONS	DATE BY	CITY DRAWING NUMBER 06046 SHEET 001 REV. 00 D		

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 WINDSOR PARK WASTEWATER PUMPING STATION
 GENERATOR UPGRADE
 PLAN AND SECTION
 ELECTRICAL BUILDING LAYOUT
 CITY DRAWING NUMBER 06046 SHEET 001 REV. 00 D