

LEGEND:
 ——— EXISTING
 ——— NEW WORK
 - - - - - FUTURE

GENERAL NOTES:

- ALL EQUIPMENT AND CABLES SHOWN ARE NEW AND ARE TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS INDICATED AS EXISTING OR NOTED OTHERWISE.
- NO DE-RATING HAS BEEN APPLIED. THE ELECTRICAL CONTRACTOR SHALL UP-SIZE CABLES AND CONDUITS IN ACCORDANCE WITH CEC REQUIREMENTS.
- ALL BREAKERS AND STARTERS TO HAVE AN INTERRUPTING RATING OF 25KAIC OR HIGHER (SERIES RATED EQUIPMENT IS NOT ACCEPTABLE).
- THIS DRAWING SUPERSEDES PART OF DRAWING 1-0640M-E0004.
- SET MOTOR CIRCUIT PROTECTORS ACCORDING TO THE CORRESPONDING FLA OF THE FEEDER LOAD.

CONSTRUCTION NOTES:

- PROVIDE A SEPARATE 6 AWG RW90, GREEN INSULATED CONDUCTOR RUN IN CONDUIT FROM THE TRANSFORMER XFMR-M721 XO TERMINAL TO THE EQUIPMENT GROUNDING SYSTEM CONDUCTOR. REFER TO DRAWING 1-0640M-E044 FOR DETAILS.
- PROVIDE NEW CABLING AND CONNECT NEW/EXISTING EQUIPMENT TO THE NEW MCC-M720.
- PROVIDE KIRK KEY INTERLOCK BETWEEN MCC MAIN BREAKER MCC-M720.MCB AND THE BREAKER ALONG WITH MCC-M710.MCB TO PREVENT THE SYSTEM FROM BEING FED FROM 2 SEPARATE SOURCES AT THE SAME TIME.
- PROVIDE NEW POWER CABLING FOR NEW POWER METER FROM PNL-M22U, CCT.22. REFER TO PANEL SCHEDULE DRAWING 1-0640M-E0042-002
- PROVIDE NEW DUCT HEATER PACKAGED UNIT, HCE-M601. IT SHOULD BE NOTED THAT DUCT HEATERS, UNIT HEATERS, AND CONVECTION HEATERS NEED TO BE OPERATIONAL FOR WINTER (ALL BUILDINGS).
- PROVIDE NEW WELDING RECEPTACLE WITH INTEGRAL DISCONNECT.
- PROVIDE NEW 45kVA TRANSFORMER, XFMR-M721 AND 120/208V, 3φ, PNL-M721.
- REFER TO DRAWING 1-0640M-E0025 FOR TRANSFER SWITCH ATS-M2E WIRING DETAILS.
- REUTILIZE EXISTING CABLE FROM PANEL B IN AQUEDUCT VALVE CHAMBER TO NEW MCC-M720. EXTEND EXISTING CABLE AS REQUIRED.
- WIRE CONTROLS FOR UNIT HEATER UH1 AS PER EXISTING CONTROL STRATEGY. PROVIDE EQUIPMENT AS REQUIRED TO COMPLETE UNIT HEATER CONTROL CIRCUIT.

BREAKER PROTECTION SETTINGS								
CIRCUIT BREAKER	MODEL	FRAME	SENSOR/TRIP UNIT	LTPU (tr)	LTD (tr)	STPU (tsd)	STD (tsd)	INST (ti)
MCC-M720.MCB	SQUARE D POWERPACT L SERIES, 5.3A/E & 6.3A/E SERIES, LSI TYPE	600	600	1 (600A)	4	4 (2400A)	0.1	6 (3600A)
CB-ATS-M2E	SQUARE D POWERPACT J SERIES, 3.2S SERIES, LSI TYPE	250	250	1 (250A)	FIXED	6 (1500A)	FIXED	6 (1500A)

DRAWING NUMBER	REFERENCE DRAWINGS
1-0640M-A0078	LOOP DIAGRAM, MCC-M720 VOLTAGE PRESENT
1-0640Y-E0001	ELECTRICAL SINGLE LINE DIAGRAM, AQUEDUCT VALVE CHAMBER
1-0640M-E0044	ELECTRICAL GROUNDING, RISER DIAGRAM
1-0640M-E0042-002	PANELBOARD AND LUMINAIRE SCHEDULE
1-0640M-E0036	ELECTRICAL SINGLE LINE DIAGRAM, PUMPHOUSE, MCC-M730E
1-0640M-E0035	MCC-M720 LAYOUT AND SCHEDULE
1-0640M-E0032	ELECTRICAL SINGLE LINE PUMPHOUSE MCC-M710
1-0640M-E0030	ELECTRICAL SINGLE LINE DIAGRAM, OVERVIEW
1-0640M-E0025	CONNECTION DIAGRAM AND DETAILS ATS-M2E TRANSFER SWITCH
1-0640M-E0002	SINGLE LINE DIAGRAM, 4160V DIST.
1-0640C-E0003	ELECTRICAL SINGLE LINE DIAGRAM, MCC-C710/MCC-C720E

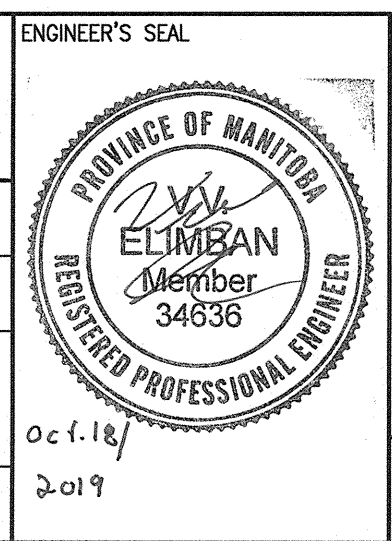


NO.	REVISIONS	DATE	DESIGN	CHECK
00	ISSUED FOR TENDER AND CONSTRUCTION	2019/10/18	SB	KS

SNC-LAVALIN INC.
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 SCALE: NTS
 ISSUED FOR CONSTRUCTION BY: A. WEISS
 DATE: 2018/12/21
 DATE: 2019/10/18

CONSULTANT NO.:



THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

MCPHILLIPS PUMPING STATION
 ELECTRICAL AND HVAC UPGRADES, MCC REPLACEMENT
 ELECTRICAL SINGLE LINE DIAGRAM
 PUMPHOUSE
 MCC-M720

CITY DRAWING NUMBER: 1-0640M-E0034
 SHEET: 001
 REV: 00
 SIZE: A1