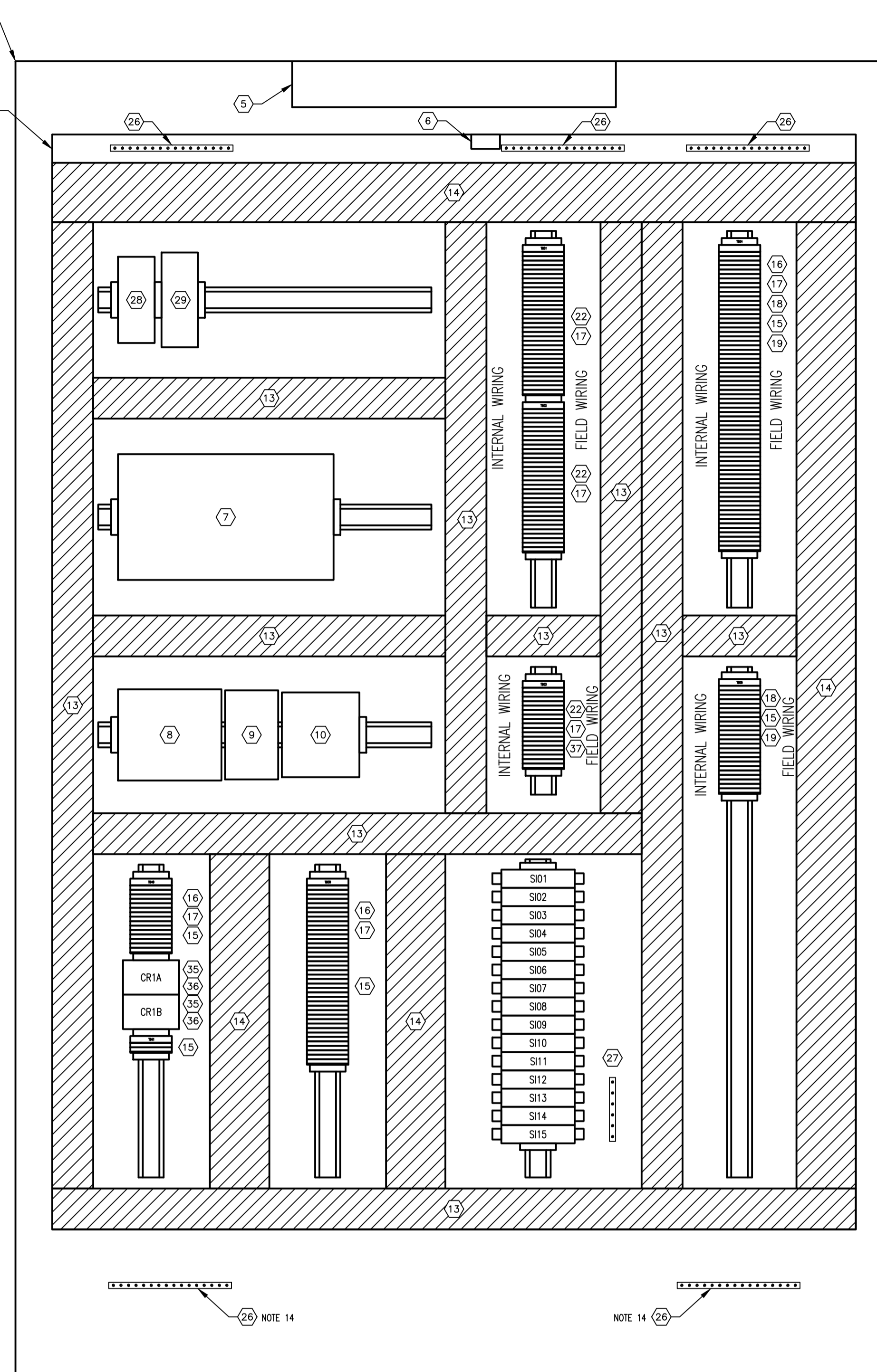


EXTERIOR PANEL VIEW

SCALE: 1:5



INTERIOR PANEL VIEW

SCALE: 1:5

BILL OF MATERIAL

ITEM	QTY	DESCRIPTION	MANUFACTURER	CATALOG NUMBER
1	1	SINGLE-DOOR TYPE 12 & 13 WALL-MOUNTED ENCLOSURE	HOFFMAN	A724818FSD
2	1	BACKPAN	HOFFMAN	A72P48F1
3	1	PROCESS METER	PRECISION DIGITAL	PD6000-7R4
4	1	FOLDING SHELF	HOFFMAN	AASHLF1818
5	1	PANEL LIGHT	-	-
6	1	DOOR SWITCH, METAL ENCLOSED	-	-
7	1	SCADAPACK ES RTU	SCHNEIDER ELECTRIC	P500-1A00-0A11
8	1	DISCRETE INPUT MODULE, 32 POINT, 24V	SCHNEIDER ELECTRIC	5405-24
9	1	ANALOG INPUT MODULE, 8 CHANNEL, 4-20mA	SCHNEIDER ELECTRIC	5506
10	1	ANALOG OUTPUT MODULE	SCHNEIDER ELECTRIC	5304
11	15	SIGNAL ISOLATOR, 0-10VDC/4-20mA INPUT, 4-20mA OUTPUT	MOORE INDUSTRIES	MIX/2XPRC/2X4-20mA/12-42DC/DIN
12	AS REQ'D	35mm DIN RAIL	PHOENIX CONTACT	0801733
13	AS REQ'D	NARROW SLOT WIRING DUCT, 2.25" x 3.12"	PANDUIT	-
14	AS REQ'D	NARROW SLOT WIRING DUCT, 3.25" x 3.12"	PANDUIT	-
15	AS REQ'D	FEED-THROUGH TERMINAL	PHOENIX CONTACT	3046184
16	AS REQ'D	FUSED TERMINAL	PHOENIX CONTACT	3046142
17	AS REQ'D	FUSE CONNECTOR	PHOENIX CONTACT	3036806
18	AS REQ'D	KNIFE-DISCONNECT TERMINAL	PHOENIX CONTACT	3046139
19	AS REQ'D	POTENTIAL-EARTH TERMINAL	PHOENIX CONTACT	3046207
20	AS REQ'D	TERMINAL END PLATE	PHOENIX CONTACT	3047141
21	AS REQ'D	TERMINAL END CLAMP	PHOENIX CONTACT	1201442
22	AS REQ'D	DOUBLE LEVEL FUSED TERMINAL	PHOENIX CONTACT	3044720
23	AS REQ'D	DOUBLE LEVEL TERMINAL END PLATE	PHOENIX CONTACT	3047293
24	AS REQ'D	PLUG-IN BRIDGE	PHOENIX CONTACT	3030365
25	1	LIGHTNING SURGE ARRESTOR (SUPPLIED BY CITY)	-	-
26	5	GROUND BAR, 14 TAPS	ILSCO	D167-14
27	1	GROUND BAR, 6 TAPS	ILSCO	D167-6
28	1	CELLULAR MODEM/ROUTER/SWITCH (SUPPLIED BY CITY)	SIXNET	SN-6621
29	1	PPP MODEM	SIXNET	SLX-5MS-MDM
30	1	12" TOUCHSCREEN HMI	SCHNEIDER ELECTRIC	XBT GT 6330
31	1	PILOT LIGHT, GREEN, LED, 24VDC	ALLEN-BRADLEY	800T-QH24G
32	1	PILOT LIGHT, GREEN, LED, 24VDC	ALLEN-BRADLEY	800T-QH24R
33	2	PUSH BUTTON, MOMENTARY, 1 N.O.	ALLEN-BRADLEY	800T-A2D1
34	1	SELECTOR SWITCH, 3 POS'N, MAINTAINED, 1 N.O., 1 N.C.	ALLEN-BRADLEY	800T-J2A
35	2	RELAY, 24VDC, 4PDT, LED, 5A	OMRON	LY4N 24 VDC
36	2	RELAY BASE, 4PDT	OMRON	PTF14A-E
37	2	DOUBLE LEVEL TERMINAL	PHOENIX CONTACT	3044814

NOTES:

- WHERE MANUFACTURER AND MODEL ARE SPECIFIED, SUBSTITUTIONS MUST BE APPROVED.
- ALL POWER WIRING TO BE TEW/MTW 600V, 105°C INSULATION, STRANDED COPPER, 12 AWG OR LARGER WHERE CURRENT REQUIREMENTS DICTATE AS PER CEC REQUIREMENTS.
- ALL CONTROL WIRING TO BE TEW/MTW 300V, 105°C INSULATION, STRANDED COPPER, 16 AWG.
- ALL ANALOG WIRING TO BE 18 AWG SHIELDED TWISTED PAIR, WITH INSULATION RATED AT 300V.
- EXTERNAL COMPONENTS ARE TO BE LABELLED AS SHOWN ON THE DRAWINGS.
- ALL FUSES ARE TO BE PROVIDED. IN ADDITION, TWO SPARES OF EACH FUSE SIZE ARE TO BE PROVIDED.
- TEST ALL WIRING AND COMPONENTS FOR FUNCTIONAL OPERATION, CORRECT CONNECTION, CONTINUITY AND INSULATION INTEGRITY. THREE COPIES OF CERTIFIED TEST DOCUMENTATION ARE TO BE PROVIDED.
- ALL MAJOR COMPONENTS INSIDE THE PANEL ARE TO BE LABELED WITH LAMACOIDS IN ACCORDANCE WITH MAJOR DESCRIPTIONS ON THE DRAWINGS.
- PROVIDE WIRE BARREL FERULES FOR ALL WIRING.
- ALL TERMINAL BLOCKS SHALL BE NUMBERED AS SHOWN IN THE DRAWINGS, COMPLETE WITH GROUP LABELING.
- ALL WIRES SHALL BE MARKED AS INDICATED ON THE DRAWINGS.
- ALL ETHERNET CABLING IS TO BE ATTACHED TO THE SIDE WALLS OF THE ENCLOSURE AND KEPT AS FAR AS POSSIBLE FROM 120VAC WIRING.
- CLEARLY LABEL DEVICE IDENTIFIERS ON THE DOOR INTERIOR USING PERMANENT MARKER OR LAMACOIDS.
- SEAL PENETRATIONS FOR GROUND BAR.
- PROVIDE EMT AND FLEXIBLE CONDUIT FOR ALL 120 VAC WIRING. PROVIDE EXTERNAL HUB FOR FIELD CONDUIT CONNECTION.



SNC-Lavalin Inc.
No. 4489



MONTCALM WASTEWATER PUMPING STATION
2011 UPGRADES
PANEL LAYOUT
CONTROL PANEL CP-L1

CITY DRAWING NUMBER: 1-0164L-A0001
SHEET: 001
REV: 00
SIZE: A1

NO.	REVISIONS	DATE	DESIGN	CHECK
PA	ISSUED FOR TENDER, BID OPP: 907-2011	2012/02/09	BC	CJR

		SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080	
DESIGNED BY:	B. CLEVEN	CHECKED BY:	C. REIMER
DRAWN BY:	B. CLEVEN	APPROVED BY:	C. REIMER
SCALE:	1:5	RELEASED FOR CONSTRUCTION BY:	K. R. ZUREK
DATE:	2011/10/25	DATE:	2012/02/23
CONSULTANT NO.:	508042-0000-48DD-0001		

ENGINEER'S SEAL
ORIGINAL DRAWING
SEALED BY:
C. J. REIMER
SNC-LAVALIN
MEMBER #21968
2012/02/23
REV. 00