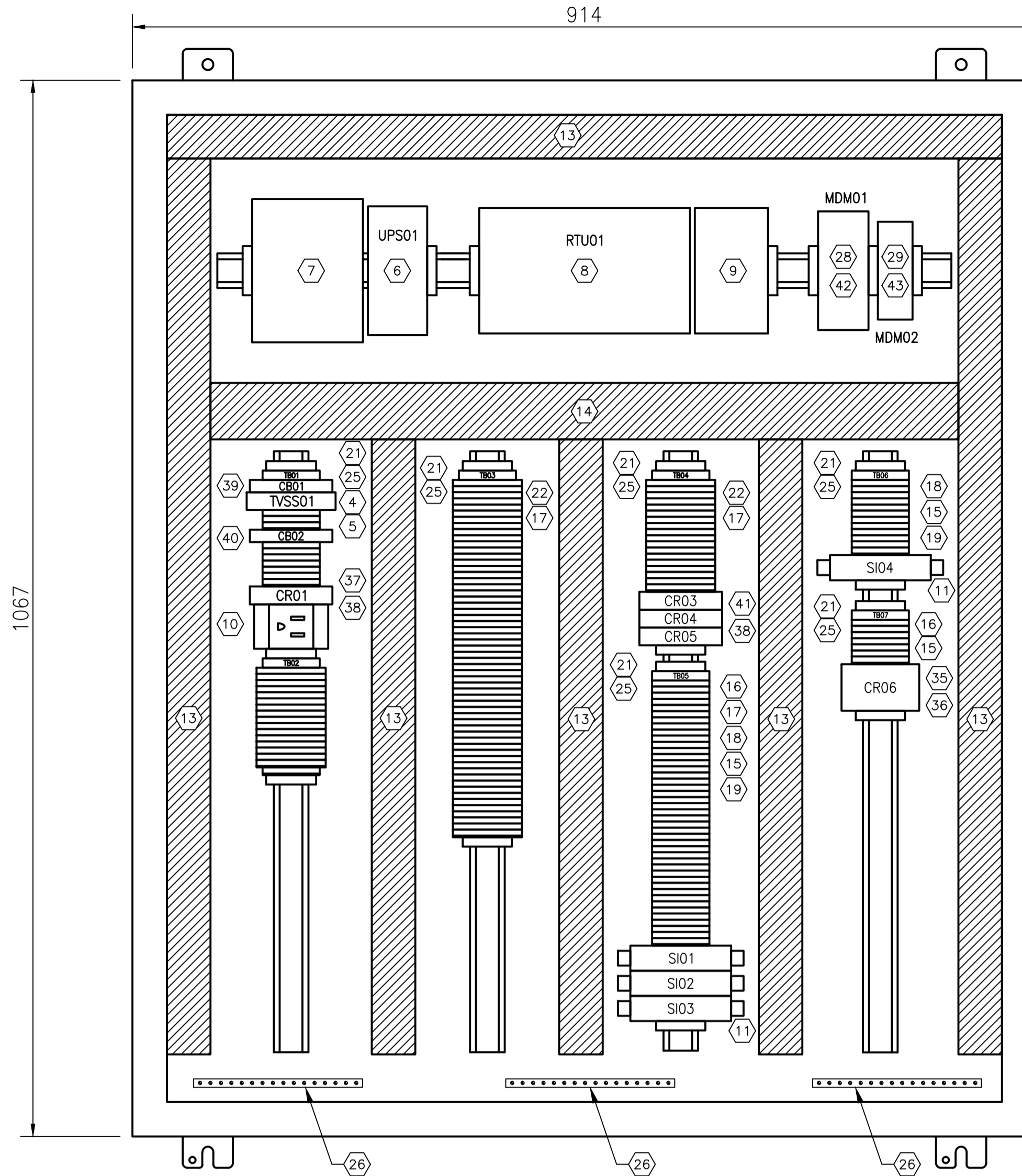


EXTERIOR PANEL VIEW

SCALE: 1:4



INTERIOR PANEL VIEW

SCALE: 1:4

BILL OF MATERIAL				
ITEM	QTY	DESCRIPTION	MANUFACTURER	CATALOG NUMBER
1	1	SINGLE-DOOR TYPE 12 & 13 WALL-MOUNTED ENCLOSURE	HOFFMAN	A423610LP
2	1	BACKPAN	HOFFMAN	A42P36
3	1	ULTRASONIC LEVEL TRANSMITTER	SIEMENS	7ML5033-1CB00-2A
4	1	SURGE ARRESTER MODULE, 120V	PHOENIX CONTACT	PLT-SEC-T3-120-P (2905234)
5	1	SURGE ARRESTER BASE	PHOENIX CONTACT	PT-BE/FM (2839282)
6	1	24VDC POWER SUPPLY/UPS	PHOENIX CONTACT	TRIO-UPS/1AC/24DC/5 (2866611)
7	1	RECHARGEABLE BATTERY MODULE, 3.4Ah	PHOENIX CONTACT	QUINT-BAT/24DC/3.4Ah (2866349)
8	1	SCADAPACK 357E RTU	SCHNEIDER ELECTRIC	TBUP357-EA55-AB20
9	1	DISCRETE INPUT MODULE, 16 POINT, 24V	SCHNEIDER ELECTRIC	TBUX297378 (5414-24)
10	1	RECEPTACLE, 125V, 15A, DIN RAIL MOUNTED	PHOENIX CONTACT	SD-US/SC/LA/GY (2963860)
11	4	SIGNAL ISOLATOR, 4-20mA INPUT, 4-20mA OUTPUT, 4 CHANNEL	MOORE INDUSTRIES	MIX/4X4-20mA/4X4-20mA/12-42DC/DIN
12	AS REQ'D	35mm DIN RAIL	PHOENIX CONTACT	0801733
13	AS REQ'D	NARROW SLOT WIRING DUCT, 1.75" x 3.12", GREY	PANDUIT	-
14	AS REQ'D	NARROW SLOT WIRING DUCT, 2.25" x 3.12", GREY	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	AS REQ'D	TERMINAL BLOCK MARKER	PHOENIX CONTACT	0800310
26	3	GROUND BAR, 14 TAPS	ILSCO	D167-14
27	1	CELLULAR ANTENNA (SUPPLIED BY CITY)	-	-
28	1	CELLULAR MODEM (SUPPLIED BY CITY)	SIXNET	BT-6801
29	1	PSTN MODEM	PHOENIX CONTACT	PSI-DATA/BASIC-MODEM/RS232 (2313067)
30	1	ANNUNCIATOR PANEL	IDEC	SLC30N0310-D02FB-A(2)G(5)R(18)S(1)
31	1	PUSHBUTTON, 22mm, 1 N.O., RED	SCHNEIDER ELECTRIC	ZB4BA4
			SCHNEIDER ELECTRIC	ZB4BZ009
			SCHNEIDER ELECTRIC	ZBE101
32	1	PUSHBUTTON, 22mm, 1 N.O., BLUE	SCHNEIDER ELECTRIC	XB4BA61
			SCHNEIDER ELECTRIC	ZB4BA5
			SCHNEIDER ELECTRIC	ZB4BZ009
			SCHNEIDER ELECTRIC	ZBE102
33	1	PUSHBUTTON, 22mm, 1 N.C., YELLOW	SCHNEIDER ELECTRIC	ZB4BA5
			SCHNEIDER ELECTRIC	ZB4BZ009
			SCHNEIDER ELECTRIC	ZBE102
34	1	SELECTOR SWITCH, 2 POS'N, MAINTAINED, 1 N.O., 1 N.C.	SCHNEIDER ELECTRIC	XB4BD25
35	1	RELAY, 24VDC, 4PDT, LED	OMRON	LY4N-DC24
36	1	RELAY BASE, 4PDT	OMRON	PTF14A
37	1	RELAY, 120VAC, SPDT, LED, DIODE	OMRON	G2R-1-SND-AC120(S)
38	4	RELAY BASE, SPDT	OMRON	P2RF-05
39	1	MOULDED CASE CIRCUIT BREAKER, 10 AMP, DIN RAIL MOUNTED	PHOENIX CONTACT	TMC 1 F1 100 10,0A (0914167)
40	1	MOULDED CASE CIRCUIT BREAKER, 5 AMP, DIN RAIL MOUNTED	PHOENIX CONTACT	TMC 1 F1 100 5,0A (0914138)
41	3	RELAY, 24VDC, SPDT, LED, DIODE	OMRON	G2R-1-SND-DC24(S)
42	1	ETHERNET PATCH CORD, CAT 6, RJ45	-	-
43	1	SERIAL RS-232 COMMUNICATION CABLE, RJ45 TO 9 PIN D-SHELL CONNECTOR	-	-
44	AS REQ'D	LAMACOID WHITE WITH BLACK TEXT	-	-

NOTES:

- WHERE MANUFACTURER AND MODEL ARE SPECIFIED, SUBSTITUTIONS MUST BE APPROVED.
- ALL 120VAC POWER WIRING TO BE TEW/MTW 600V, 105°C INSULATION, STRANDED COPPER, 14 AWG OR LARGER WHERE CURRENT REQUIREMENTS DICTATE AS PER CEC REQUIREMENTS.
- ALL 24VDC 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.
- AC WIRING TO BE RED IN COLOUR. DC WIRING TO BE BLUE.
- ALL ANALOG TWISTED PAIR WIRING TO BE 18 AWG SHIELDED, 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 LABELLED WITH LAMACOIDS IN ACCORDANCE WITH MAJOR DESCRIPTIONS ON THE DRAWINGS.
- PROVIDE WIRE BARREL FERULES FOR ALL WIRING, EXCEPT ON THE SIGNAL ISOLATORS WHERE TWO WIRES ARE REQUIRED ON ONE SIGNAL ISOLATOR TERMINAL.
- ALL TERMINAL BLOCKS SHALL BE NUMBERED AS SHOWN IN THE DRAWINGS, COMPLETE WITH GROUP LABELING.
- CLEARLY LABEL DEVICE IDENTIFIERS ON THE DOOR INTERIOR USING COMPUTER-GENERATED ADHESIVE LABELS OR LAMACOIDS.

1-0310U-A0031	NETWORK DIAGRAM
1-0310U-A0012	ANNUNCIATOR PANEL LAMP LAYOUT
DRAWING NUMBER	REFERENCE DRAWINGS



<p>SNC-LAVALIN INC. 148 Nature Park Way Winnipeg, MB, Canada R3P 0X7 204-786-8080</p>		ENGINEER'S SEAL
DESIGNED BY: B. CLEVEN	CHECKED BY: F. ATAEI	ORIGINAL DRAWING SEALED BY: B. J. CLEVEN SNC-LAVALIN INC. MEMBER #31479 2016-08-29 REV. 00
DRAWN BY: Y. KONIG	APPROVED BY: I. PARKINSON	
SCALE: 1:4	ISSUED FOR CONSTRUCTION BY: K. ZUREK	
DATE: 2016/03/23	DATE: 2016-08-29	
CONSULTANT NO.:		
00 ISSUED FOR TENDER, BID OPP. 767-2016	2016/08/23	BJC FA
NO. REVISIONS	DATE	DESIGN/CHECK

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ROUTE 90 UNDERPASS PUMPING STATION
 2016 UPGRADES
 PANEL LAYOUT
 CONTROL PANEL CP-U81
 CITY DRAWING NUMBER: 1-0310U-A0001
 SHEET: 001
 REV: 00
 SIZE: A1