

BILL OF MATERIAL (FOR EACH BRIDGE CONTROL PANEL)

ITEM	QTY	DESCRIPTION	MANUFACTURER	CATALOG NUMBER
1	6	TERMINAL END CLAMP WITH MARKING OPTION	PHOENIX CONTACT	3022218
2	7	FUSED TERMINAL BLOCK	PHOENIX CONTACT	3046142
3	7	FUSE PLUG	PHOENIX CONTACT	3036806
4	2	5x20 FUSE, 5 AMP	EATON	GMA-5-R
5	4	5x20 FUSE, 2 AMP	EATON	GMA-2-R
6	9	FEED THROUGH TERMINAL	PHOENIX CONTACT	3046184
7	3	TERMINAL END PLATE	PHOENIX CONTACT	3047141
8	2	KNIFE-DISCONNECT TERMINAL	PHOENIX CONTACT	3046139
9	8	POTENTIAL-EARTH TERMINAL	PHOENIX CONTACT	3046207
10	1	ANALOG INPUT MODULE, 4-20mA, 4 CHANNEL TERMINAL BLOCK, 20-PIN, SCREW CLAMP	SCHNEIDER ELECTRIC	BMX AMI 0410 BMX FTB 2010
11	2	PLUG-IN BRIDGE	PHOENIX CONTACT	FBS 4-6 BU
12	1	DIN RAIL, NS35/7.5, GALVANIZED	PHOENIX CONTACT	1206421
13	3	TERMINAL BLOCK GROUP MARKER	PHOENIX CONTACT	1004348
14	1	5x20 FUSE, 0.5 AMP	EATON	GMA-500-R

SUBSTITUTIONS SHALL BE IN ACCORDANCE WITH TENDER CLAUSE B7

BILL OF MATERIAL (FOR BRIDGE CONTROL PANELS 4 & 8)

ITEM	QTY	DESCRIPTION	MANUFACTURER	CATALOG NUMBER
15	1	DISCRETE INPUT MODULE, 120VAC, 16 CHANNEL TERMINAL BLOCK, 20-PIN, SCREW CLAMP	SCHNEIDER ELECTRIC	BMX DAI 1604 BMX FTB 2010

SUBSTITUTIONS SHALL BE IN ACCORDANCE WITH TENDER CLAUSE B7

DEMOLITION NOTES:

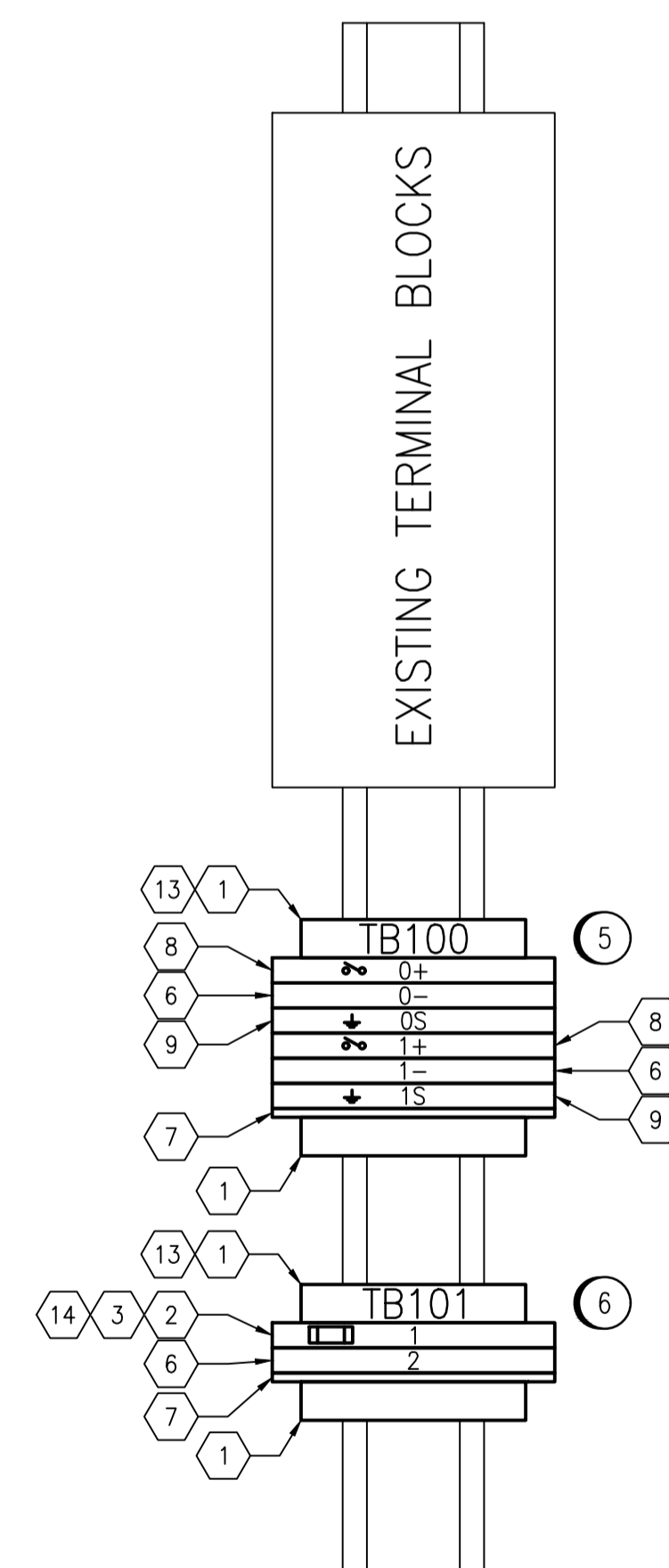
- (A) CONTRACTOR TO DISCONNECT EXISTING WIRING BETWEEN 24VDC POWER SUPPLY, UPS, AND THE PLC POWER SUPPLY.
- (B) CONTRACTOR TO DISCONNECT EXISTING WIRING BETWEEN 24VDC POWER SUPPLY AND TOUCHSCREEN HMI (NOT SHOWN).

CONSTRUCTION NOTES:

- (1) PROVIDE AND INSTALL NEW ANALOG 4-20mA INPUT MODULE INTO SLOT 7 IN THE EXISTING PLC RACK.
- (2) PROVIDE AND INSTALL NEW NS35 DIN RAIL EXTENSION ON LEFT SIDE OF EXISTING DIN RAIL, AS REQUIRED.
- (3) RELOCATE EXISTING 24V DC POWER SUPPLY AND UPS TO UPPER DIN RAIL, ADJACENT TO PLC CHASSIS. ONLY BRIDGE CONTROL PANELS 4 AND 8 CONTAIN A UPS. THE CONTRACTOR IS NOT REQUIRED TO SUPPLY A UPS FOR THE OTHER PANELS.
- (4) PROVIDE AND INSTALL NEW DIN RAIL MOUNTED TERMINALS, FUSES, WIRING, AND LABELING AS PER DRAWING 1-0101-ACBD-S002.
- (5) PROVIDE DIN RAIL MOUNTED TERMINALS FOR ANALOG 4-20mA SIGNALS. REFER TO LEVEL TRANSMITTER LOOP DIAGRAMS FOR CONNECTION DETAILS.
- (6) PROVIDE DIN RAIL MOUNTED TERMINALS FOR PROXIMITY SWITCH DISCRETE SIGNAL. REFER TO PROXIMITY SWITCH LOOP DIAGRAMS FOR CONNECTION DETAILS.
- (7) PROVIDE AND INSTALL NEW DISCRETE INPUT MODULE AND 20-PIN REMOVABLE SCREW CLAMP TERMINAL BLOCK INTO SLOT 3 OF THE EXISTING PLC RACK OF BRIDGE 4 AND BRIDGE 8 CONTROL PANEL.

LEGEND:

- EXISTING
- NEW
- (X) BILL OF MATERIALS ITEM REFERENCE
- (X) DEMOLITION NOTES / CONSTRUCTION NOTES



PARTIAL INTERNAL PANEL LAYOUT (BOTTOM-RIGHT SIDE PANEL)  
SCALE: NTS

GENERAL NOTES:

- THE MODIFICATIONS ARE ASSOCIATED WITH SECONDARY CLARIFIERS 11 TO 26 BRIDGE CONTROL PANELS. LOCATION OF HARDWARE (POWER SUPPLY, UPS, TERMINAL BLOCKS) MAY NOT BE AS PER SITE CONDITIONS AS NOT ALL PANELS ARE IDENTICAL.
- REFER TO AUTOMATION BILL OF MATERIAL 1-0101-ATLI-S002 FOR PLC INPUT MODULE QUANTITIES AND REQUIREMENTS.



NO.	REVISIONS	DATE	DESIGN	CHECK
00	ISSUED FOR CONSTRUCTION	2026/01/30	SW	BC

 148 Nature Park Way, Winnipeg, Manitoba Canada R3P 0X7 204-786-8080	
DESIGNED BY: S. WARNAKULASOORIYA	CHECKED BY: B. CLEVEN
DRAWN BY: S. WARNAKULASOORIYA	APPROVED BY: B. CLEVEN
SCALE: NTS	ISSUED FOR CONSTRUCTION BY: A. KIAYEE
DATE: 2025/05/14	DATE: 2026/01/30
CONSULTANT NO.:	

ENGINEER'S SEAL

**THE CITY OF WINNIPEG**  
 WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT  
 SECONDARY CLARIFIERS SLUDGE BLANKET LEVEL DETECTION  
 PANEL LAYOUT & BILL OF MATERIAL  
 CLARIFIER CONTROL PANEL  
 PANEL MODIFICATIONS

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-ACBD-S001	00	A1	

1-0101-AGAD-S001	INSTRUMENT LOCATION PLAN
1-0101-ACBD-S002	POWER DISTRIBUTION SCHEMATIC
DRAWING NUMBER	REFERENCE DRAWINGS