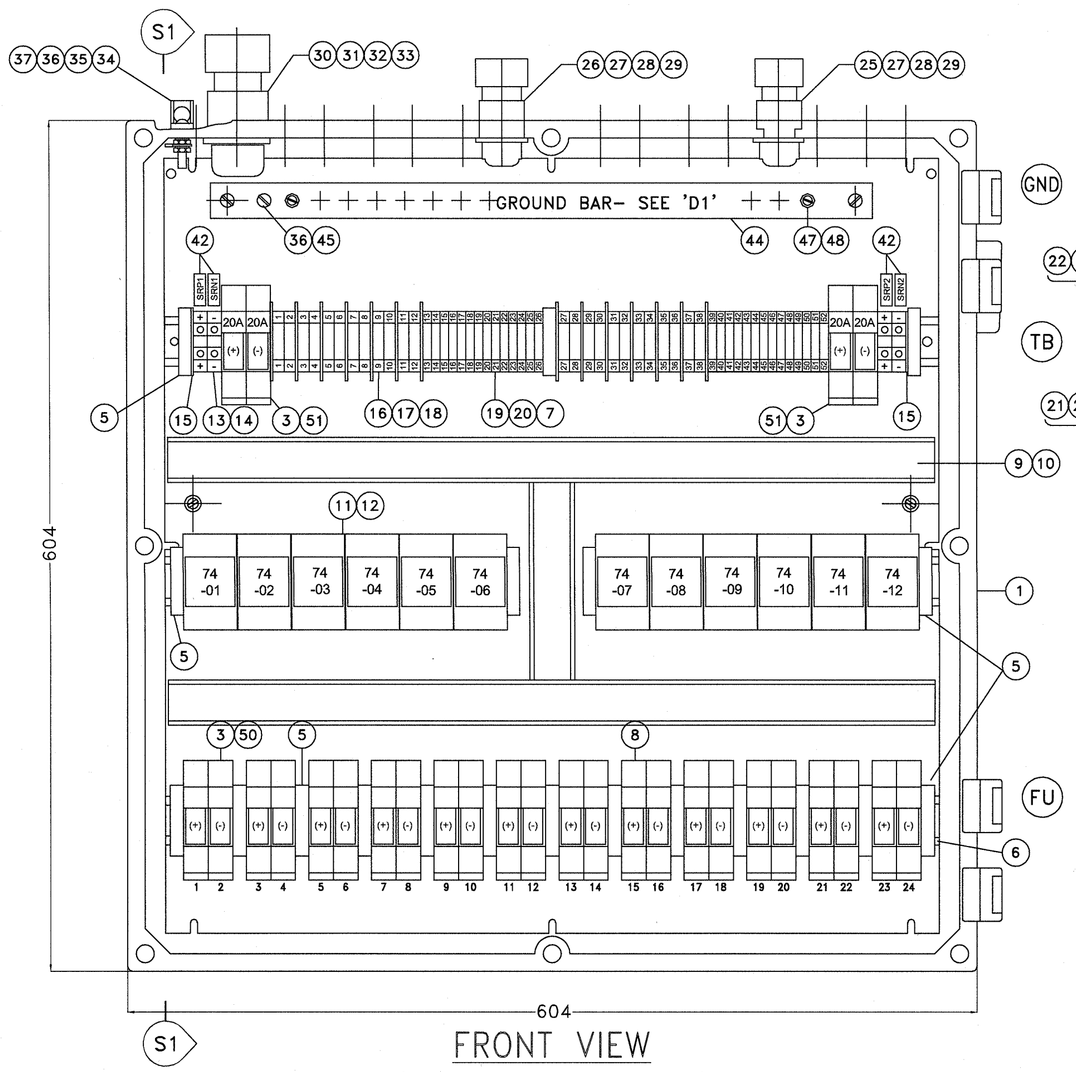
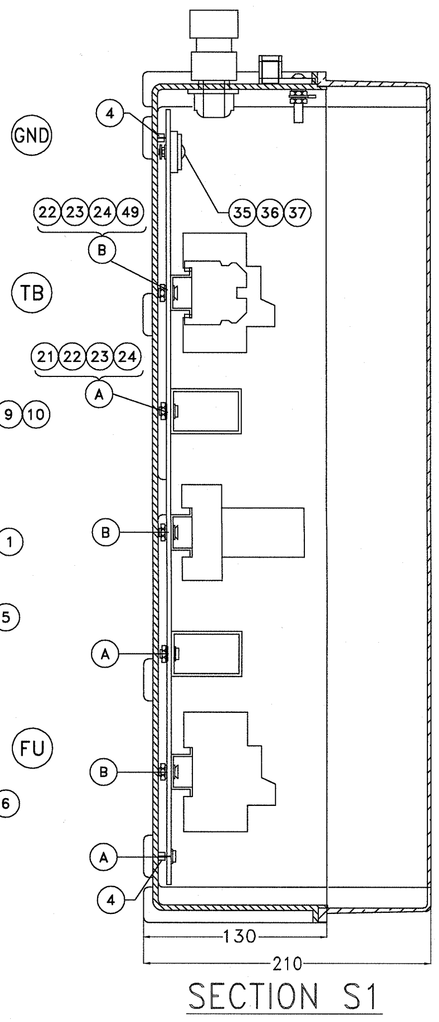


FRONT VIEW

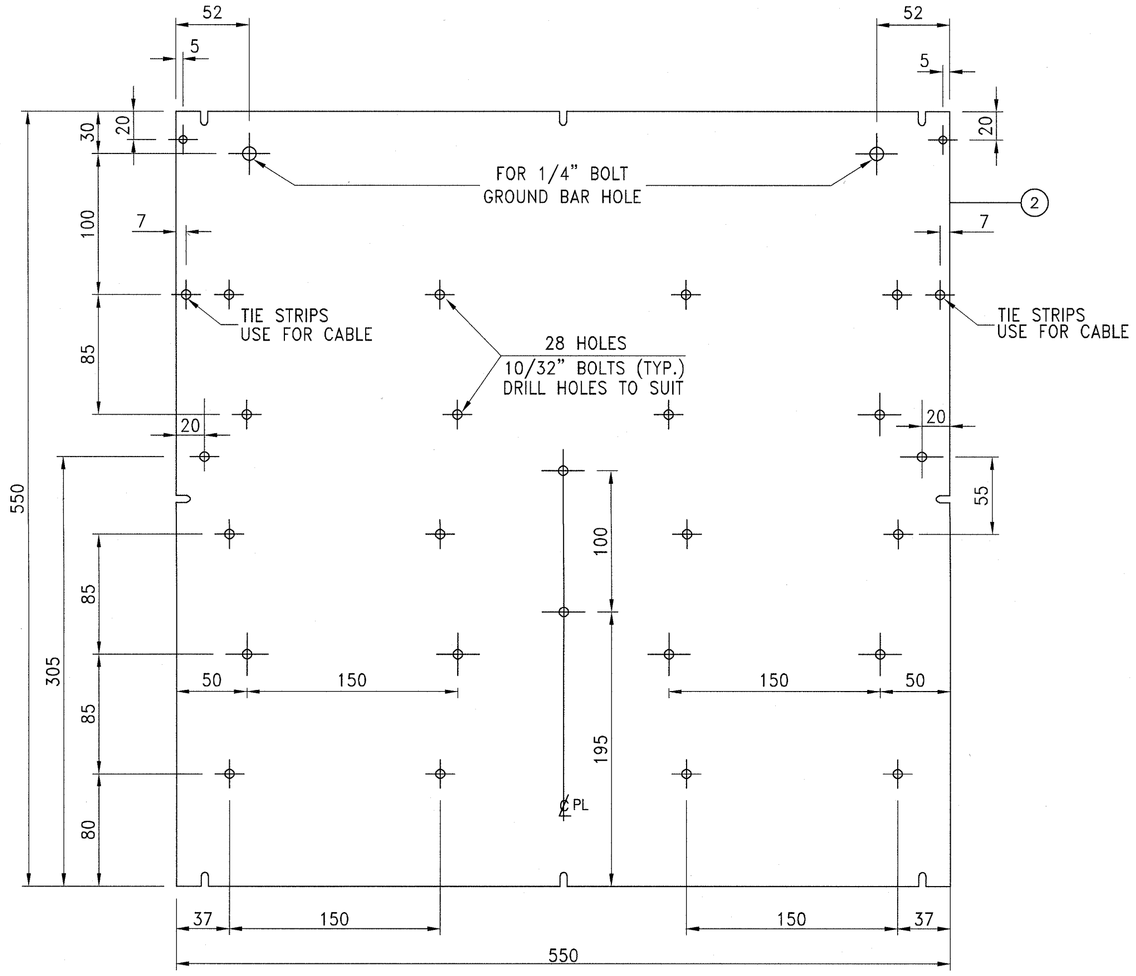
(NOT ALL CONNECTORS ARE SHOWN)

N.T.S.



SECTION S1
SIDE VIEW

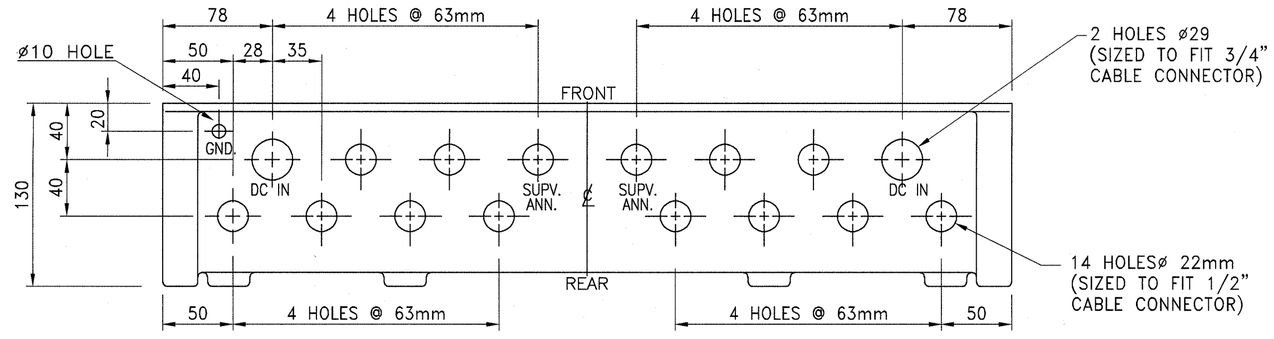
N.T.S.



BACK PLATE DRILL PLAN

SEE NOTE #14

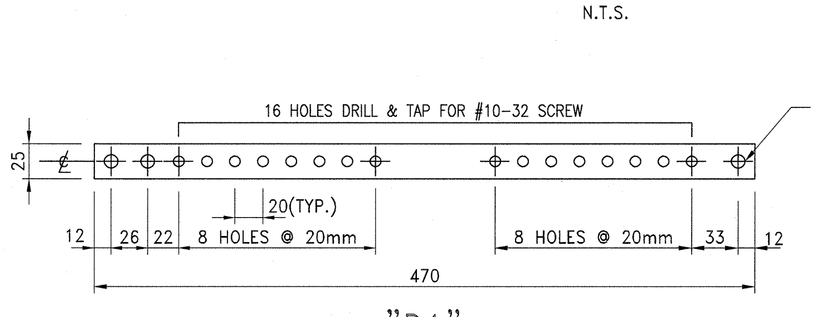
N.T.S.



OUTSIDE VIEW

(CABINET DRILL PLAN TOP)

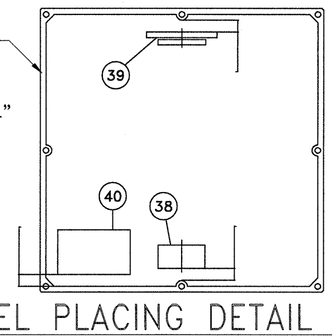
N.T.S.



"D1"

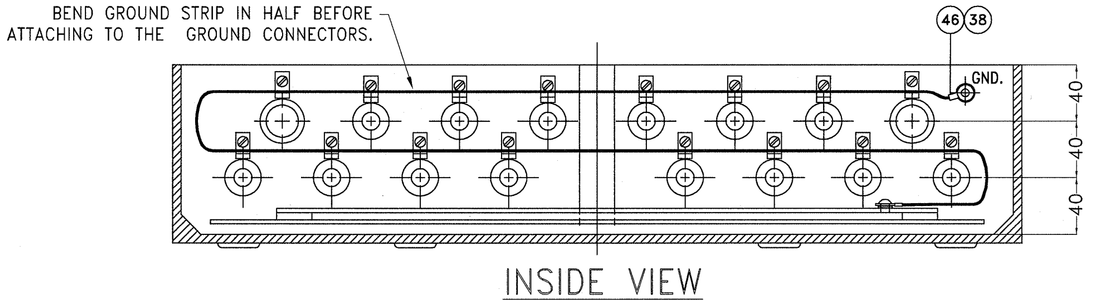
(GROUND BAR DRILL PLAN)

N.T.S.



LABEL PLACING DETAIL "D2"

N.T.S.



INSIDE VIEW

GROUND WIRE ROUTING (TOP OF THE CABINET)

N.T.S.

BILL OF MATERIAL FOR 125V DC DISTRIBUTION AND MONITORING CABINET

ITEM#	QTY.	MATERIAL DESCRIPTION	PART NUMBER	SUPPLIER	REMARKS
1	1	ENCLOSURE-GEC TYPE APO (VYNCKIER APO CT)	A12-2424 CTH	FERRAZ	SEE NOTE #4
2	1	BACK PLATE	BP2424N	FERRAZ	NON-METALLIC
3	14	FUSE HOLDER- ITC DBL. 400.102/ PHOENIX UK10,3 HESI-2P	205085DF38-1/551604	ITC / PHOENIX	
4	7	BRASS PLATE MOUNTING INSERTS	-	FERRAZ	SEE NOTE #15
5	20	UNIVERSAL END HOLDER - E/NS35N	08 00 88 6	PHOENIX	
6	1	NS 35/15 PERFORATED MOUNTING RAIL	12 01 73 0	PHOENIX	SUPPORTS FUSE HOLDERS, TERMINALS & RELAYS
7	40m	WIRE, #14 AWG FLUOROPOLYMER INSULATED	M22759/16/14	ANIXTER	ALL ALARMS
8	5m	WIRE, #12 AWG FLUOROPOLYMER INSULATED	M22759/16/12	ANIXTER	ALL FUSED CIRCUITS
9	1	CABLE DUCT, 1 1/4" x 2"	C1LG6	PANDUIT	
10	1	CABLE DUCT COVER	F1X2LG6	PANDUIT	
11	12	RELAY, RELECO	C2A20X/125V DC	CHARTWELL	SEE NOTE #3 & #6
12	12	RELAY SOCKET, RELECO	S-2B	CHARTWELL	
13	4	TERMINAL BLOCK, UK10N	30 05 07 3	PHOENIX	
14	8	MARKERS, ZB 10	10 53 00 1	PHOENIX	
15	2	END COVER, D-UK 4/10	30 03 02 0	PHOENIX	
16	24	TERMINAL BLOCK, UK6N	30 04 52 4	PHOENIX	
17	48	MARKERS, ZB 6	10 51 02 9	PHOENIX	
18	14	PARTITION PLATE, ATP-UK	30 03 22 4	PHOENIX	
19	28	TERMINAL BLOCK, UK5N	30 04 36 2	PHOENIX	
20	56	MARKERS, ZB 5	10 50 02 0	PHOENIX	FOR BACK PLATE & CABLE DUCT
21	17	BOLT PLATED, 10/32"x3/8"		BRAFASCO	
22	29	FLAT WASHER PLATED, #10		BRAFASCO	
23	29	TOOTH WASHER PLATED, #10		BRAFASCO	
24	29	NUT PLATED, #10/32		BRAFASCO	
25	12	BOX CONNECTOR, 1/2", T&B STO50-464		NEDCO	SEE NOTE #8, #9 & #10 (FUSED DC OUTPUT)
26	2	BOX CONNECTOR, 1/2", T&B STO50-466		NEDCO	SEE NOTE #8, #9 & #10 (SUPV. ANNUNCIATION)
27	14	LOCK NUT, 1/2", T&B		NEDCO	
28	14	GROUND BUSHING, 1/2", T&B	3870-TB	THOMAS&BETTS	WITH LAY-IN-LUG & WIRE CLAMPING SCREW
29	14	BOX CONNECTOR STEEL DISK, 1/2", T&B ____		NEDCO	SEE NOTE #9 & #10
30	2	BOX CONNECTOR, 3/4", T&B, STO75-467		NEDCO	SEE NOTE #7, #9 & #10
31	2	LOCK NUT, 3/4", T&B		NEDCO	
32	2	GROUND BUSHING, 3/4", T&B	3871-TB	THOMAS&BETTS	WITH LAY-IN-LUG & WIRE CLAMPING SCREW
33	2	BOX CONNECTOR STEEL DISK, 3/4", T&B 816		NEDCO	SEE NOTE #9 & #10
34	1	GROUNDING 'UNIVERSAL TERMINAL'	KA26U	FCI BURNDY,FRAMATOME GRP.	
35	3	BRASS BOLTS, 1/4"x1 "LG.		BRAFASCO	
36	5	BRASS LOCK WASHERS, 1/4"		BRAFASCO	
37	4	BRASS NUTS, 1/4"		BRAFASCO	
38	1	GRD. WIRE, TINNED COPPER FLAT BRAID 1/2" WIDE	1233/2-100	ALPHA WIRE CO.	
39	1	2"x3" LABEL, 'CABINET No. ____'		HYDRO ONE	SEE DETAIL 'D2'
40	1	12mm LABEL, LINE 1: 125V DC DISTRIBUTION AND MONITORING CABINET, LINE 2: '__' BATTERY		HYDRO ONE	SEE DETAIL 'D2'
41	1	6"x4" SELF ADHESIVE TAB HOLDER C/W INSTALLATION MANUAL		BARON LOOSELEAF	SEE DETAIL 'D2'
42	4	TRANSPARENT TERMINAL COVER EA5 C/W PRINTED LABEL AND DESCRIPTION AS SHOWN.	10 24 01 4	PHOENIX	USE LAMINATED TAPE 5mm WIDE, BLACK ON WHITE
43	1m	WIRE, #8 AWG FLUOROPOLYMER INSULATED	-		INPUT FUSE INCOMMING MAIN SR TERMINALS & SUPPLY FUSES
44	1	GROUND BAR, COPPER BAR 25x3x470	-	DL CUSTOM	
45	1	BRASS BOLTS, 1/4"x3/8"LG.	-	BRAFASCO	
46	2	RING TERMINALS FOR GRD. WIRE FOR 1/4"SCREWS	-	ANIXTER	
47	16	BRASS SCREWS, 10-32 3/8"	-	BRAFASCO	
48	16	BRASS EXT. TOOTH WASHER, #10	-	BRAFASCO	
49	12	FLAT BOLT PLATED, 10/32"x3/8"		BRAFASCO	FOR MOUNTING RAILS
50	24	600VAC/600VDC, 10A FAST-ACTING MIDGET FUSES	ATM10	FERRAZ SHAWMUT	TO BE ORDERED BY DESIGN
51	4	71290 NEUTRAL LINKS	MNL30	FERRAZ SHAWMUT	TO BE ORDERED BY DESIGN

NOTES:

1. THE EQUIPMENT USED TO BE CSA OR ESA APPROVED.
2. DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.
3. THE INDICATING LAMP IS ON WHEN THE RELAY IS ENERGIZED.
4. ENCLOSURE GEC. APO TYPE A12-2424CTH (C/N 741C5255) FIBERGLASS BASE, TRANSPARENT (LEXAN) COVER COMES WITH NON-METALLIC BACK PLATE, HINGES, TWO VENTILATORS(NEMA3,3R,3S) 4 WALL MTG NON-METALLIC FEET AND THUMB SCREW INSERTS (41520-155)- FOR THE COVER SCREWS.
5. STICK LABELS ON FUSE HOLDERS TO SHOW FUSE RATING OF ACTUAL FUSE IN USE.
6. ATTACH LABELS WITH RELAYS IDENTIFICATION.
7. USE TWO 3/4" BOX CONNECTORS FOR DC FEEDS INTO THE CABINET.
8. USE 12 OF 1/2" BOX CONNECTORS FOR FUSED DC OUTPUTS AND 2 FOR LOCAL & SUPERVISORY ANNUNCIATIONS.
9. INST. STEEL DISKS (T&B CAT. ID 816) INSIDE THE BOX CONNECTORS FOR FIRE & RODENT CONTROL BEFORE SHIPPING.
10. STEEL DISKS TO BE REMOVED IN THE FIELD BEFORE CABLE INSTALLATION.
11. MOUNTING OF THE MONITORING CABINET TO BE DETERMINED BY FIELD.
12. FUSE HOLDER ACCOMMODATES HRC MIDGET FUSE. THE RECOMMENDED TYPES ARE LITTELFUSE KLK AND KLKD SERIES OF STANDARD SIZE 10.3x38mm.
13. FUSE COORDINATION SHALL BE PROVIDED WITH UPSTREAM FUSE/PROTECTION DEVICES.
14. THE EXACT DRILLING DIM. ALLOWS FOR A SLIGHT ADJUSTMENT TO ACCOM. THE BACK PLATE & MOUNTING RAILS CUTOUT POSITIONS.
15. POSITION PLATE MOUNTING INSERTS UNDER EACH HOLE WHERE REQUIRED.

N°	DATE	TRANSMISSION	BY ENG

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Y.Lessard
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PROVINCE OF ONTARIO

CLIENT :

PROJECT :

MCMASTER UNIVERSITY-NF91

TITLE :

13.8kV AREA E-HOUSE MONITORING CABINET ELECTRICAL ARRANGEMENT

PREPARED BY : M.GUAY	DATE : 2018/07/15
DRAWN BY : M.GUAY	SCALE : AS SHOWN
VERIFIED BY : M.LAROCQUE	DISCIPLINE : ELECTRICAL ARRANGEMENT
APPROVED BY : Y.LESSARD	CAD FILE NAME : F1731664-300-EA007.dwg

PROJECT No:	LOT:	DWG. #	REV:	PAGE :
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