

NAMEPLATE LIST					TEXT
NO.	FIRST LINE	SECOND LINE	THIRD LINE	SIZE	HEIGHT
N1	HHHKY PANEL XX	LINE - L111		1 1/2 X 10"	1/2"
N1A	LINE L111 VOLT			1 X 5"	1/2"
N2	87L - L111			1 X 5"	1/2"
N3	ALARM RECEIVED			1 X 5"	1/2"
N4	SEE DETAIL "B"	SHEET 2		1 1/2 x 5"	5/32"
N5	SEE DETAIL "C"	SHEET 2		1 1/2 x 5"	5/32"
N6	SEE DETAIL "D"	SHEET 2		1 1/2 x 5"	5/32"
N7	SEE DETAIL "E"	SHEET 2		1 1/2 x 5"	5/32"
N8	SEE DETAIL "F"	SHEET 2		1 1/2 x 5"	5/32"
N9	SEE DETAIL "G"	SHEET 2		1 1/2 x 5"	5/32"
N10	86BF - B1111			1 X 5"	1/2"
N11	52CS - B1111			1 X 5"	1/2"
N13	SEE DETAIL "H"	SHEET 2		1 1/2 x 5"	5/32"
N14	SEE DETAIL "I"	SHEET 2		1 1/2 x 5"	5/32"
N15	SEE DETAIL "J"	SHEET 2		1 1/2 x 5"	5/32"

UNLESS OTHERWISE NOTED:

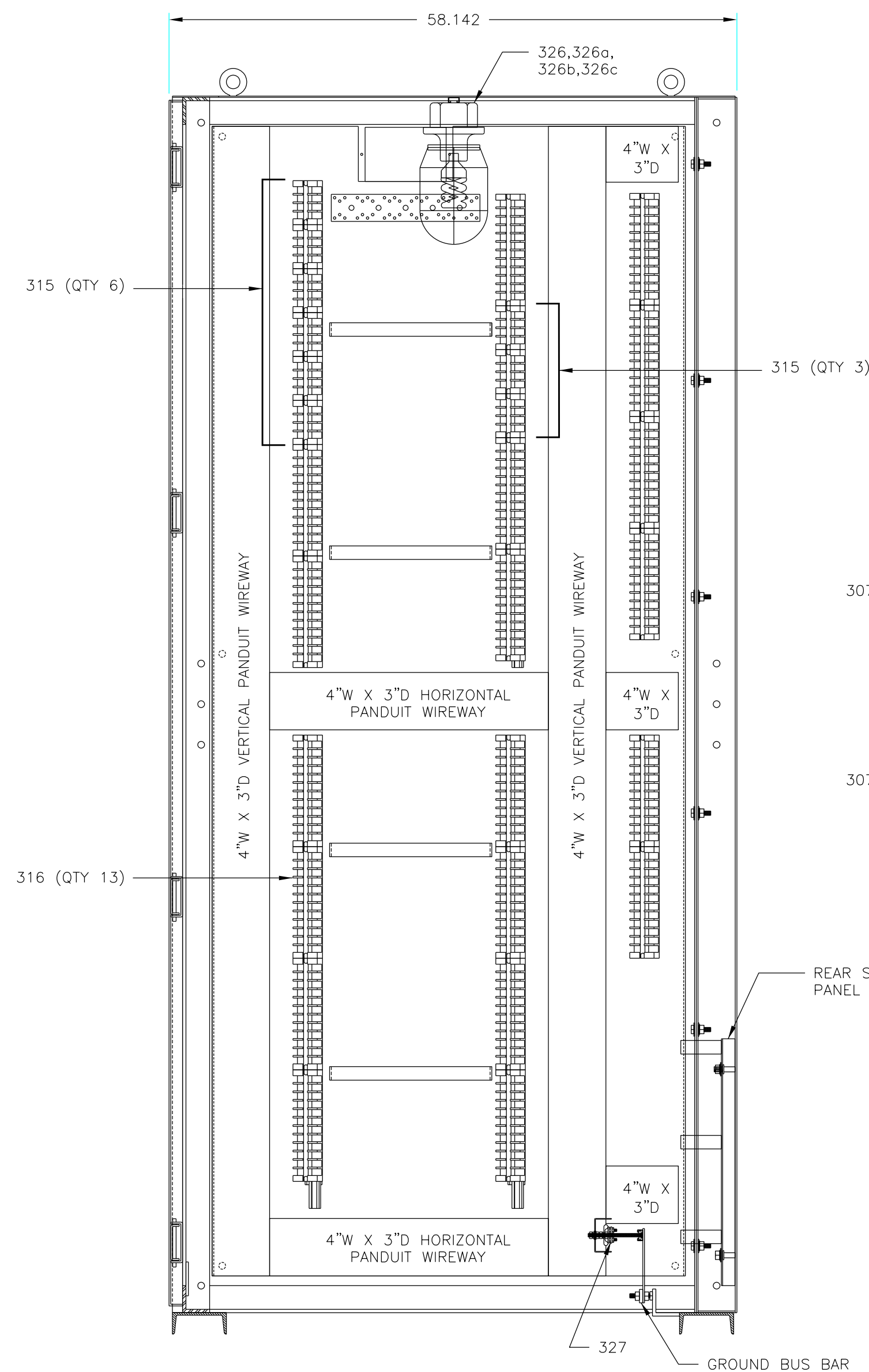
-NAMEPLATE MOUNTING SHALL BE VIA S/S PAN HEAD SCREWS.

-TEST SWITCH NAMEPLATES SHALL BE MOUNTED WITH DOUBLE ADHESIVE TAPE.

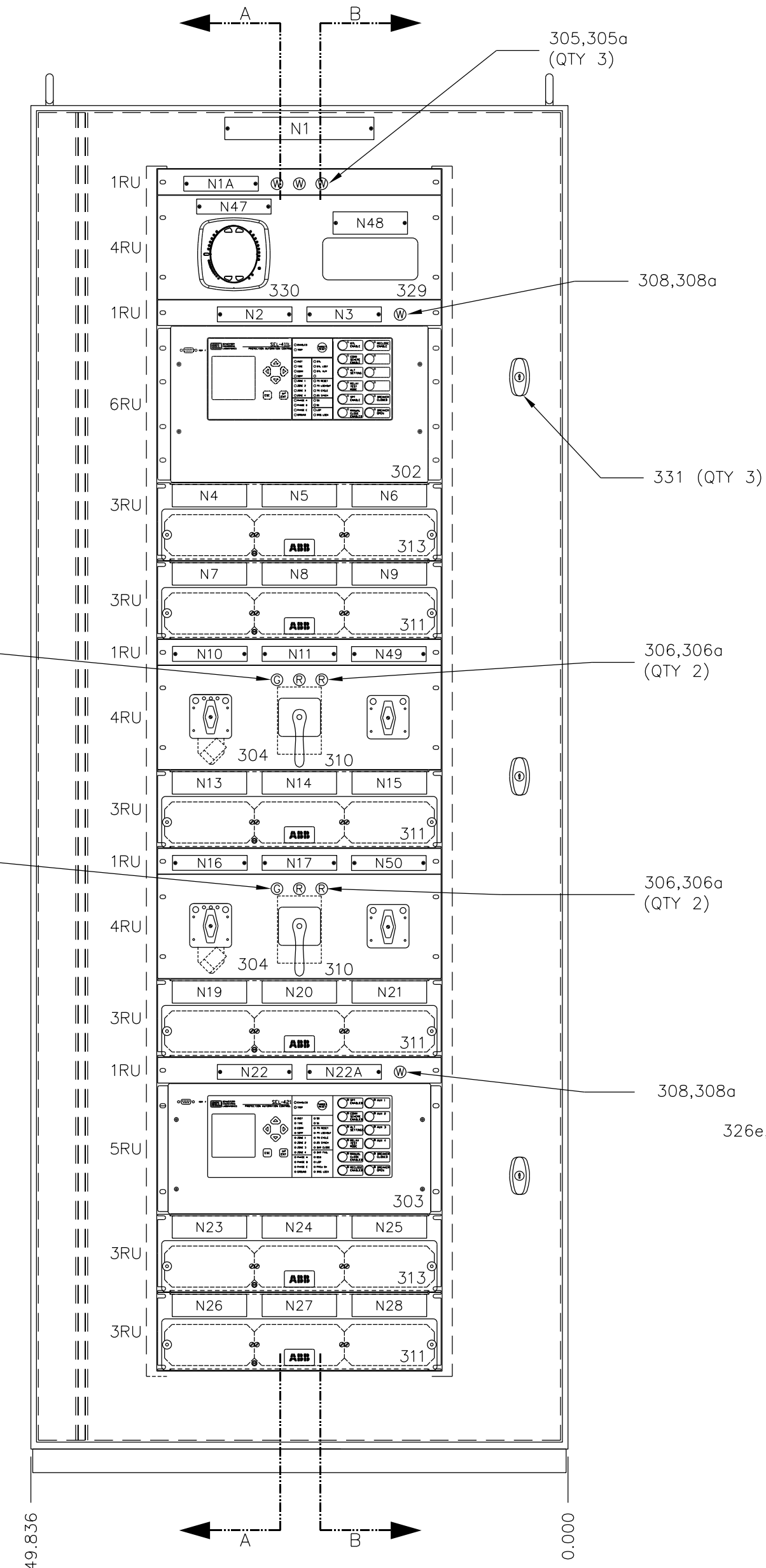
-COLOR SHALL BE BLACK WITH WHITE TEXT.

NAMEPLATE LIST - CONT.					TEXT
NO.	FIRST LINE	SECOND LINE	THIRD LINE	SIZE	HEIGHT
N16	86BF - B2222			1 X 5"	1/2"
N17	52CS - B2222			1 X 5"	1/2"
N19	SEE DETAIL "K"	SHEET 2		1 1/2 x 5"	5/32"
N20	SEE DETAIL "L"	SHEET 2		1 1/2 x 5"	5/32"
N21	SEE DETAIL "M"	SHEET 2		1 1/2 x 5"	5/32"
N22	21L - L111			1 X 5"	1/2"
N22A	ALARM RECEIVED			1 X 5"	1/2"
N23	SEE DETAIL "N"	SHEET 2		1 1/2 x 5"	5/32"
N24	SEE DETAIL "O"	SHEET 2		1 1/2 x 5"	5/32"
N25	SEE DETAIL "P"	SHEET 2		1 1/2 x 5"	5/32"
N26	SEE DETAIL "Q"	SHEET 2		1 1/2 x 5"	5/32"
N27	SEE DETAIL "R"	SHEET 2		1 1/2 x 5"	5/32"

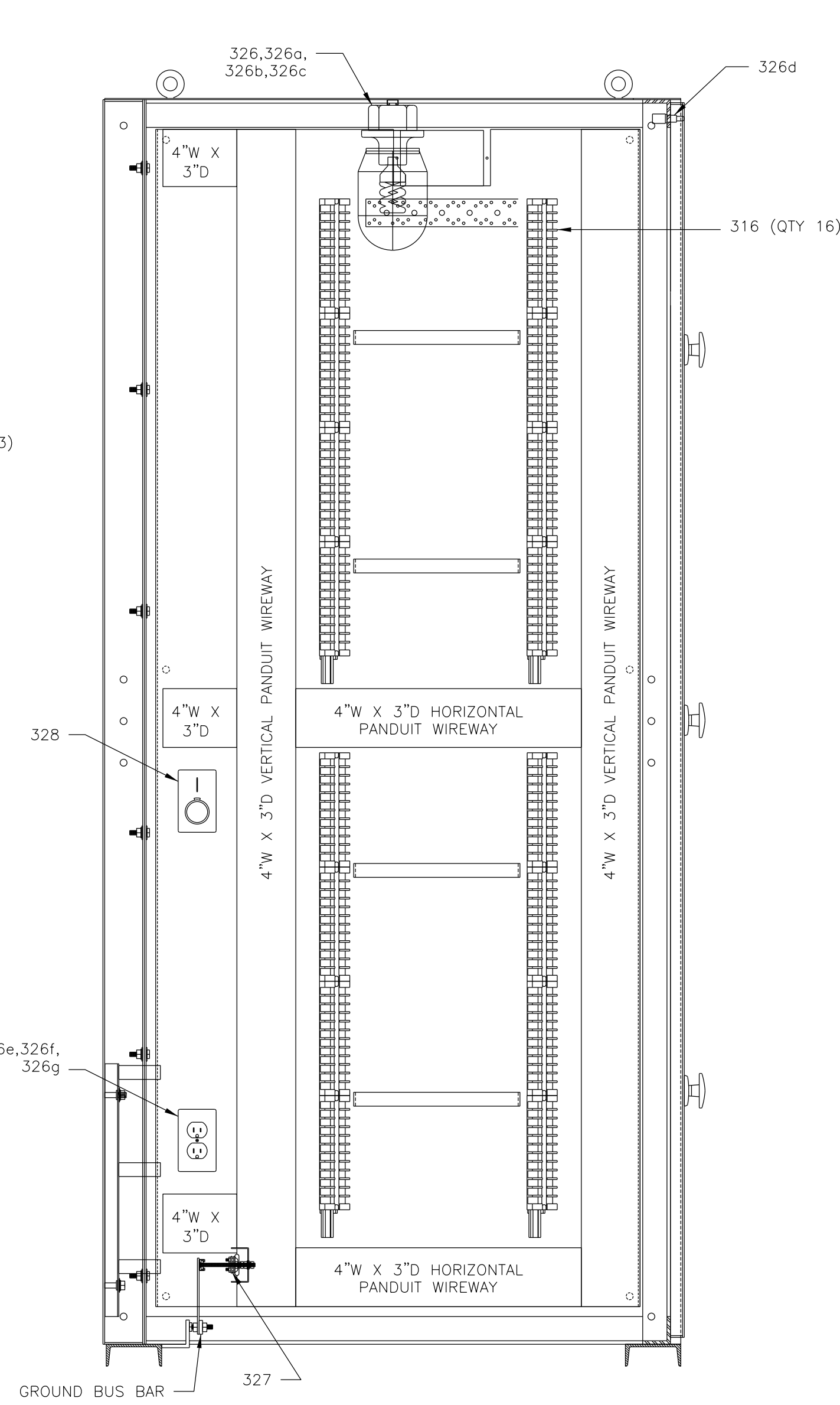
NAMEPLATE LIST - CONTINUED ON SHEET 2



SECTION A-A
INTERIOR - LEFT
SIDE VIEW



FRONT VIEW
☒ BLANK PLATE/COVERPLATE
 SEE SHEET 2
 FOR REAR VIEW



SECTION B-B
INTERIOR - RIGHT
SIDE VIEW

BILL OF MATERIALS					
ITEM	DEVICE	STYLE NUMBER	QTY	MFR	DESCRIPTION
301[1]	25/BF-B1111, 25/BF-B2222	04515615XC0X4 H78484XX	2	SEL	RELAY, SEL-451, STANDARD FIRMWARE, 125/250 VDC OR 120/240 VAC POWER SUPPLY, TWO 10/100BASE-T CONNECTORS, 125 VDC MAINBOARD INPUT VOLTAGE, HORIZONTAL RACK MOUNT, 5RU, KEY CODE 4802.
302[5]	87L- L111	041111X6S5C6CCX H624E4E4	1	SEL	RELAY, SEL-411, STANDARD PLUS SUB-CYCLE DISTANCE ELEMENTS, SERIES COMPENSATION LOGIC AND TRAVELING WAVE FAULT LOCATION FIRMWARE, 125/250 VDC OR 120/240 VAC POWER SUPPLY, FOUR 10/100BASE-T CONNECTORS, 125 VDC INPUT VOLTAGE, HORIZONTAL RACK MOUNT, 6RU, KEY CODE 7194.
303[6]	21L- L111	04214615XC0X4 H75SXXXX	1	SEL	RELAY, SEL-421, STANDARD FIRMWARE, 125/250 VDC OR 120/240 VAC POWER SUPPLY, TWO 10/100BASE-T CONNECTORS, 125 VDC MAINBOARD INPUT VOLTAGE, HORIZONTAL RACK MOUNT, 5RU, KEY CODE 5982.
304[13]	86BF-B1111, 86BF-B2222	78PB12D	2	ELECTRO SWITCH	LOCKOUT RELAY, SERIES 24, 125 VDC, 12 DECKS, WITH ONE RED AND ONE GREEN LED.

BILL OF MATERIALS CONTINUED					
ITEM	DEVICE	STYLE NUMBER	QTY	MFR	DESCRIPTION
305[15]		116B6708G7-C	0	G.E.	INDICATING LIGHT, TYPE ET-16, 70VAC, 750 OHM RESISTOR, WITH CLEAR LENS.
305a[15a]		BSD-1118-026	0	LEDTRONICS	BULB, LED BASED, WHITE.
306[16]		116B6708G3-R	4	G.E.	INDICATING LAMP, TYPE ET-16, 125-VDC, 2000-OHM RESISTOR WITH RED LENS CAP.
306a[16a]		BSD-1118-001	4	LEDTRONICS	BULB, LED BASED RED.
307[17]		116B6708G3-G	2	G.E.	INDICATING LAMP, TYPE ET-16, 125-VDC, 2000-OHM RESISTOR WITH GREEN LENS CAP.
307a[17a]		BSD-1118-006	2	LEDTRONICS	BULB, LED BASED GREEN.
308[18]		116B6708G3-C	2	G.E.	INDICATING LIGHT, TYPE ET-16, 125VDC, 2000 OHM RESISTOR, WITH CLEAR LENS
308a[18a]		BSD-1118-026	2	LEDTRONICS	BULB, LED BASED, WHITE,
309[19]		APP-601-D-09A-24E-4	0	APP ENGINEERING	
310[25]	CS/9265, CS/92627	376A1127G1X2	2	G.E.	CONTROL SWITCH, CIRCUIT BREAKER, TYPE SB10, TWO STAGES ROTARY CONTACTS AND TWO STAGES OF LATERAL CONTACTS, SPRING RETURN TO NORMAL FROM TRIP AND CLOSE, PULL OUT POSITION MAINTAINED, NO ROTARY MOVEMENT IN THE PULL-OUT POSITION, WITH TARGET ESCUTCHEON, LARGE PISTOL GRIP HANDLE. ENGRAVING INFO: CK PLT: PULL OUT FOR SUPV POS 1: TRIP POS 2: (BLANK) POS 3: CLOSE
311[30]		FRXG-001-001-001	5	ABB	TEST SWITCH, TYPE FT-19R, 3RU LO 30 POLE, 30 POTENTIAL, 6 CURRENT SHORTING, ARRANGED (P P P P P P P P P P) (P P P P P P P P P) (P P P P P P P P P P)
312[31]		FRXG-083-001-001	2	ABB	TEST SWITCH, TYPE FT-19R, 30 POLE, 22 POTENTIAL, 8 CURRENT SHORTING, ARRANGED AS FOLLOWS: (C-C C-C C-C C-C P P) (P P P P P P P P P P) + (P P P P P P P P P P)
313[32]		FRXG-014-014-001	0	ABB	TEST SWITCH, TYPE FT-19R, 3RU LO 30 POLE, 12 POTENTIAL 18 CURRENT SHORTING ARRANGED (P P P C C C C C C P) (P P P C C C C C P) (P P P P P P P P P P)
314[35]		C627-80	2	SEL	ETHERNET CABLE, RJ-45 CONNECTORS ON BOTH ENDS, 80 FEET.
315[36]		EB27B04S	9	G.E.	TERMINAL BLOCK, EB-27, 4 CIRCUIT SHORTING TYPE, 600 VOLT, 30 AMP.
316[37]		1512	29	MARATHON	TERMINAL BLOCK, 12 POLE, 600 VOLT, 30 AMP.
317[38]		C953-006	2	SEL	CABLE, SELC953, COAX RG58U, FOR CONNECTING SEL-2020 TO SYNC CLOCK.
318[39]		C953-25	2	SEL	CABLE, SELC953, COAX RG58, WITH BNC CONNECTORS ON BOTH ENDS, (25 FT)
320[41]		240-1801	2	SEL	CONNECTOR, BNC T, FEMALE, FEMALE, MALE.
321[42]		F30A1S	5	MARATHON	FUSE BLOCK, 1-POLE, 30AMP, 250 VOLT, CLASS H.
321a[42]		NON6	5	BUSSMAN	FUSE, TYPE NON, ONE-TIME, CLASS H, 6A.
322a[42]		F30A1S	1	MARATHON	FUSE BLOCK, 1-POLE, 30AMP, 250 VOLT, CLASS H.
322a[42a]		NON1S	1	BUSSMAN	FUSE, TYPE NON, ONE-TIME, 15A.
323[43]		F30A2S	6	MARATHON	FUSE BLOCK, 2-POLE, 30 AMP, 250 VOLT, CLASS H.
323a[43]		NON10	12	BUSSMAN	FUSE, TYPE NON, ONE-TIME, CLASS H, 10A.
324[44]		F30A2S	4	MARATHON	FUSE BLOCK, 2-POLE, 30 AMP, 250 VOLT, CLASS H.
324a[44]		NON30	8	BUSSMAN	FUSE, TYPE NON, ONE-TIME, 30 AMP.
325[45]		F30A3S	1	MARATHON	
325a[45]		NON6	3	BUSSMAN	FUSE, TYPE NON, ONE-TIME, CLASS H, 6A.
326[600]		RL8512	1	MFR.	LAMP HOLDER, PLASTIC KEYLESS TO FIT ON 4 X 4 HANDY BOX. FOR USE WITH LIGHT GUARD.
326a[600]		1465Y-SP	1	COOPER	GUARD, PLASTIC FOR LIGHT SOCKET.
326b[600]		FLE15HT3/2/827	1	MFR.	
326c[600]		QB0002	1	G.E.	HANDY BOX, GALVANIZED, 4 X 4, WITH 1/2" KNOCKOUTS, 1 1/2" DEEP. DRAWN
326d[600]		BZ-2RN702	1	HONEYWELL	DOOR SWITCH, PLUNGER TYPE, 15A @ 600 V.
326e[600]		CR151	1	HUBBELL	DUPLEX RECEPTACLE, 3-WIRE GROUNDING, 15A, 120 VAC, IVORY.
326f[600]		58361 1/2	1	T&B	HANDY BOX, DRAWN, GALVANIZED, 2 X 4, 1-7/8 DEPTH, WITH 1/2" KNOCKOUTS.
326g[600]		619	1	T&B	COVER PLATE, GALVANIZED FOR A SINGLE DUPLEX RECEPTACLE, TO FIT ON A 2 X 4 UTILITY BOX.
327[601]		OS1208-150B	1	VULCAN	STRIP HEATER, 150 WATTS, 8" LENGTH, 5/16" STEEL SHEATH, 240 VAC, 12.2 WATTS PER SQUARE INCH, GRAINGER STOCK NUMBER 4E259.
328[602]		4CZ52	1	HONEYWELL	THERMOSTAT, HEATING ONLY, SPST, CLOSES ON TEMPERATURE DROP, RANGE 50-80 DEGREES F, DUAL-DIAPHRAM TYPE, LINE VOLTAGE.
329[48]	TS1-MTR 926	129A514G01	0	ABB	TEST SWITCH, TYPE FT-1, 10-POLE, 4-POTENTIAL AND 6-CURRENT.
330[50]	LINE 926	100-60-10-V3-D2-485P-X	0	ELECIND	METER, DIGITAL DISPLAY, SHARK 100. WITH COMMUNICATION.
331	XXXX	T305 CW	3	MFR.	HANDLE, "T" TYPE, LOCKING, SATIN CHROME
332	XXXX	2424E	1	ELECTROSWITCH	CONTROL SWITCH, SERIES 24, MAINTAINED, 2 DECKS, REMOVABLE OVAL HANDLE IN POSITION 1. ENGRAVING CODE 11D-2517 (TITLE "SYNCHROSCOPE", POSITION 1 "OFF" POSITION 2 "ON")

UNLESS OTHERWISE NOTED:

- 1) ALL DIMENSIONS ARE IN INCHES.
- 2) PANELS SHALL BE FABRICATED FROM 11 GA CRS.
- 3) PANELS TO BE BRACED AS REQUIRED TO INSURE A SMOOTH AND LEVEL SURFACE. ALL EXPOSED WELDS TO BE GROUND SMOOTH.
- 4) INTERIOR FINISH TO BE - SATIN ANSI 61 GRAY.
EXTERIOR FINISH TO BE - SATIN ANSI 61 GRAY.

NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED	NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED	ENGINEERING	BY	DATE
										DESIGNED	SPCP	XX/XX/X
										CHECKED		
										APPROVED	DDH	XX/XX/X
										DRAFTING	BY	DATE
										PRELIMINARY		
										FINAL DESIGN		
										PLOTTED		

GREENLAND ENERGY CENTER SUBSTATION

230kV PANEL 18 LAYOUT

230kV LINE 909

SYSTEM PROTECTION & CONTROL PROJECTS 20413

	DESIGN FILENAME: SNFRONT.D
--	-------------------------------

DRAWING NO:
SNFRONT

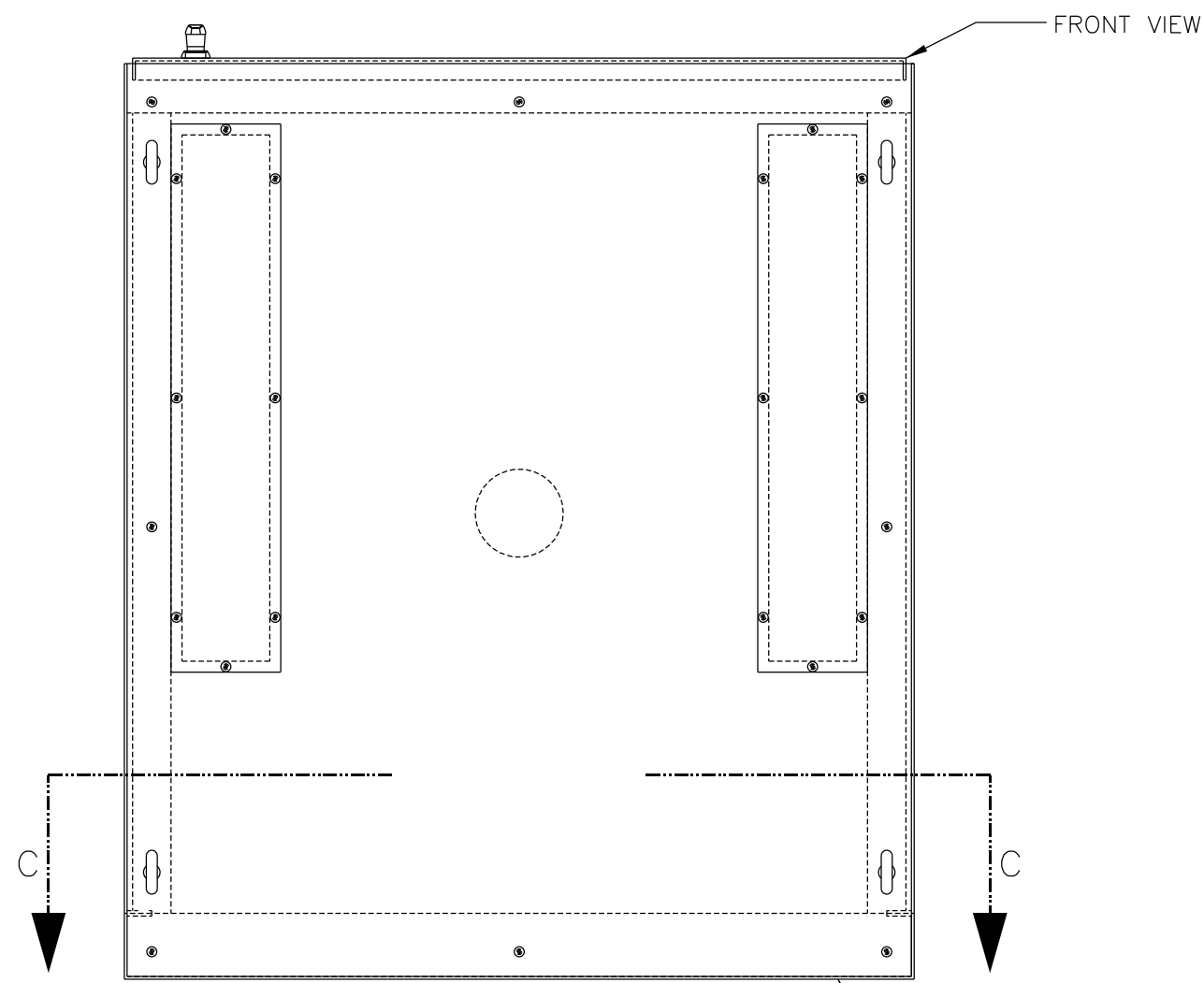
SHEET NO.:



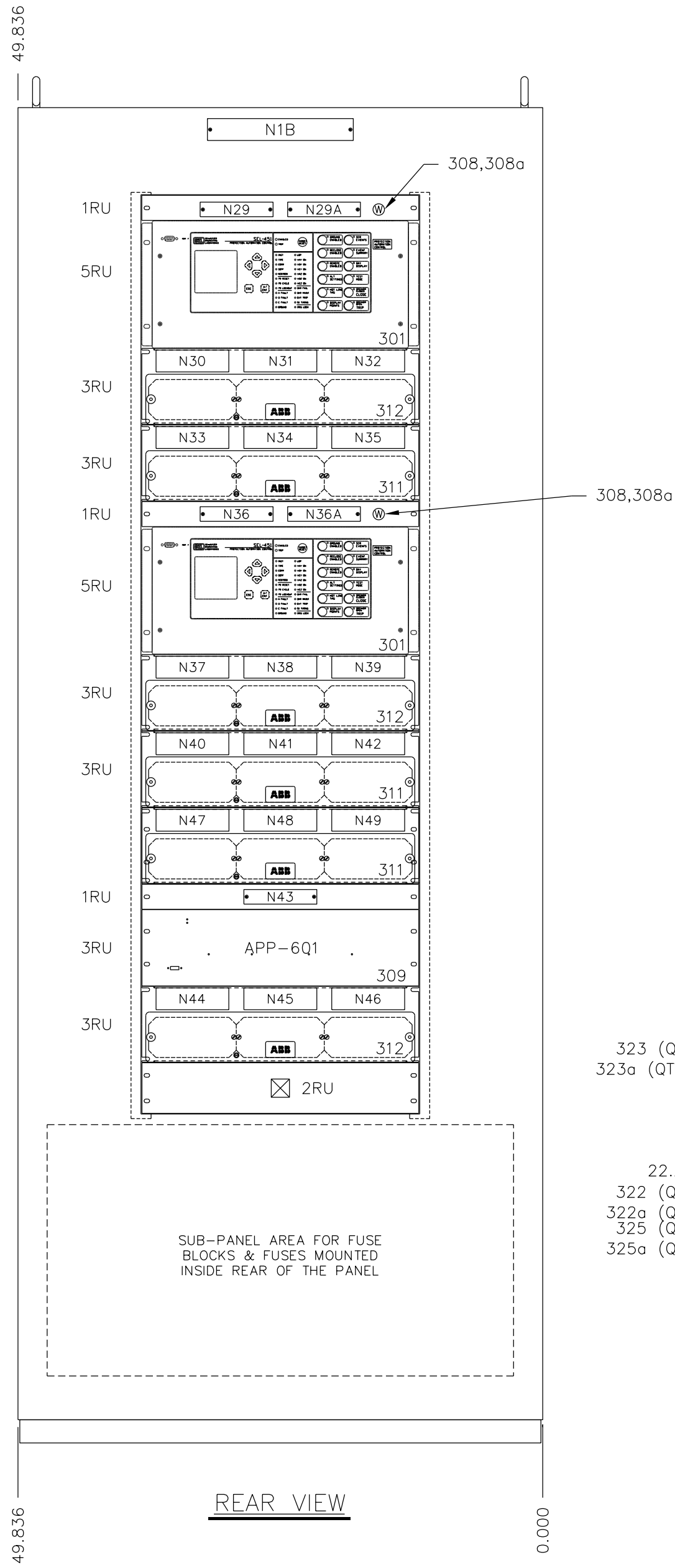
SCALE:

	NONE
--	------

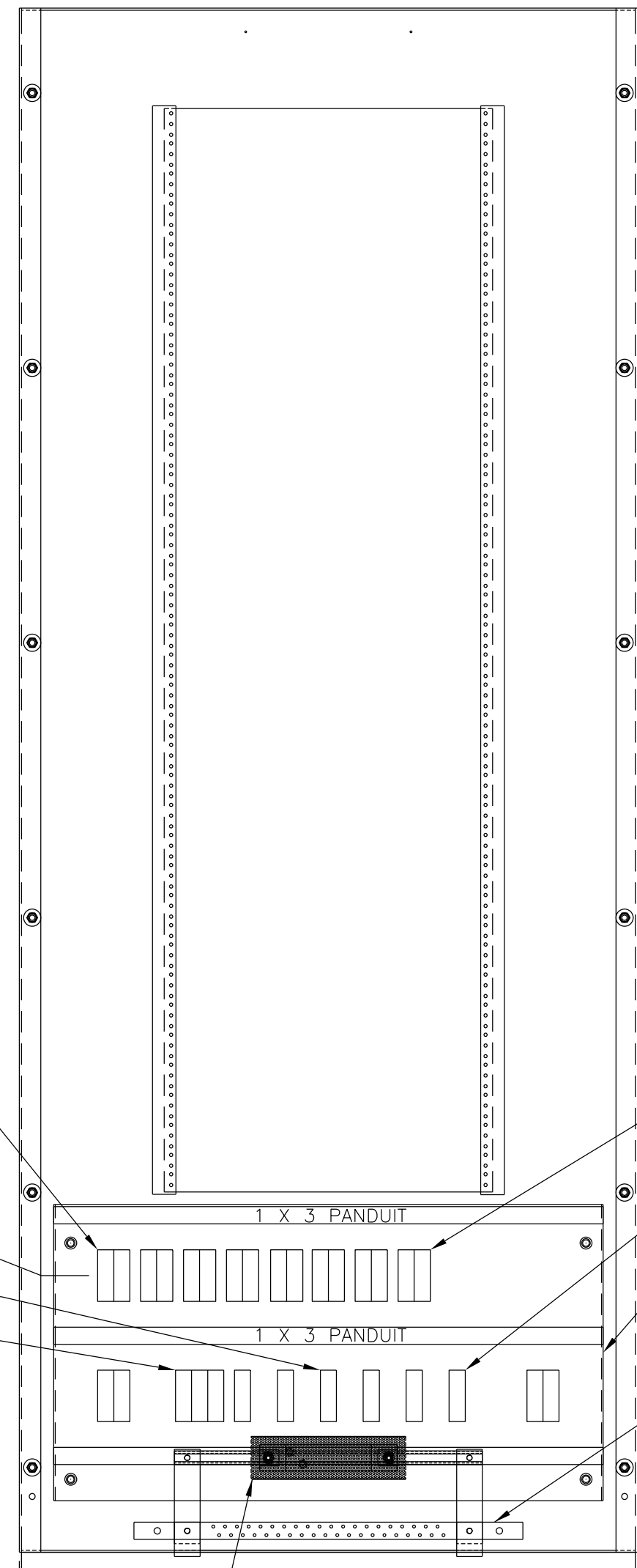
IFB NO:



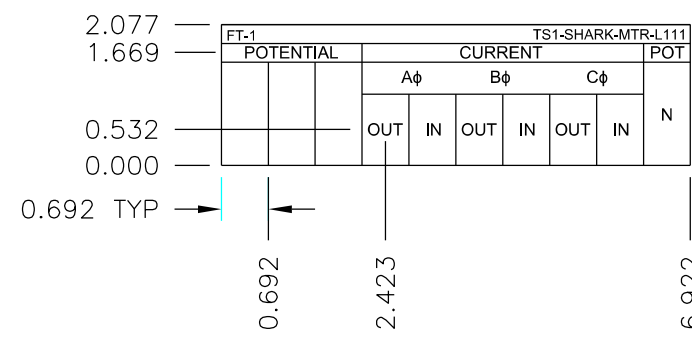
TOP VIEW



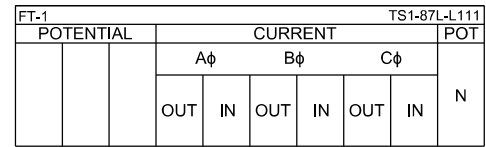
REAR VIEW



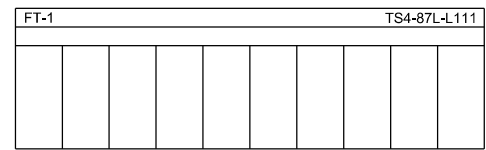
SECTION C-C
INTERIOR - REAR VIEW
RU DEVICES NOT SHOWN



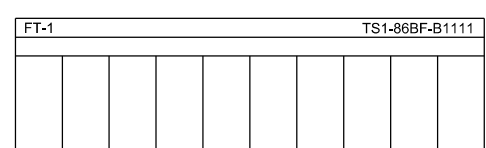
DETAIL 'A'
N48 SCALE 4:1



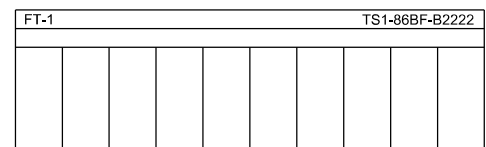
DETAIL 'B'
N4 SCALE 4:1



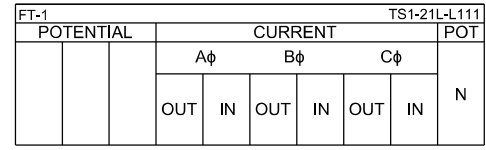
DETAIL 'E'
N7 SCALE 4:1



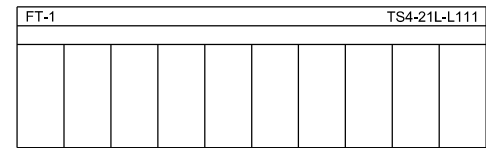
DETAIL 'H'
N13 SCALE 4:1



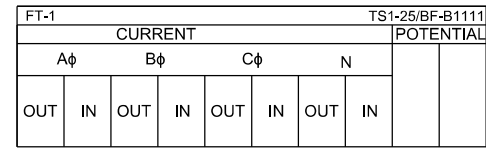
DETAIL 'K'
N19 SCALE 4:1



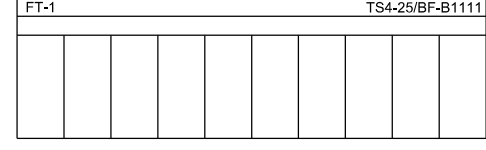
DETAIL 'N'
N23 SCALE 4:1



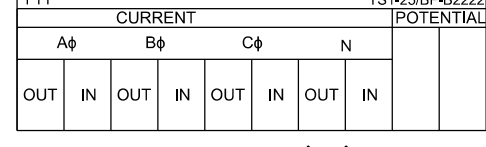
DETAIL 'Q'
N26 SCALE 4:1



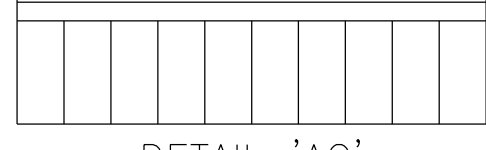
DETAIL 'T'
N30 SCALE 4:1



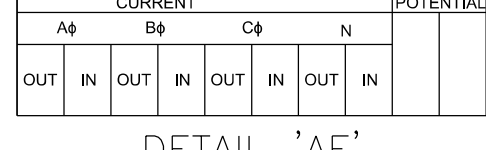
DETAIL 'W'
N33 SCALE 4:1



DETAIL 'Z'
N37 SCALE 4:1



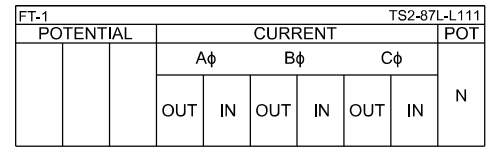
DETAIL 'AC'
N40 SCALE 4:1



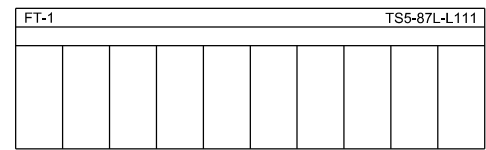
DETAIL 'AF'
N44 SCALE 4:1



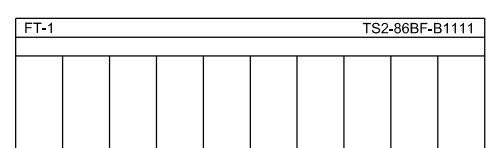
DETAIL 'AI'
N44 SCALE 4:1



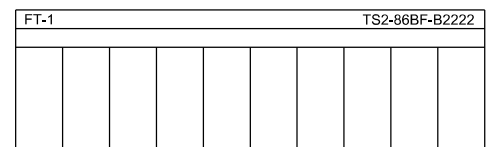
DETAIL 'C'
N5 SCALE 4:1



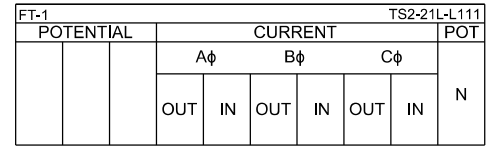
DETAIL 'F'
N8 SCALE 4:1



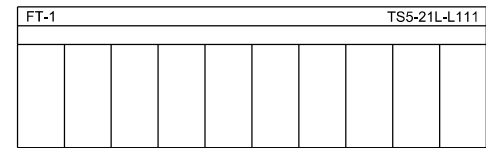
DETAIL 'I'
N14 SCALE 4:1



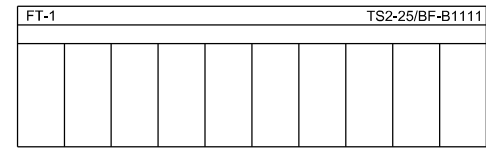
DETAIL 'L'
N20 SCALE 4:1



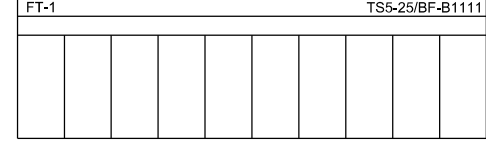
DETAIL 'O'
N24 SCALE 4:1



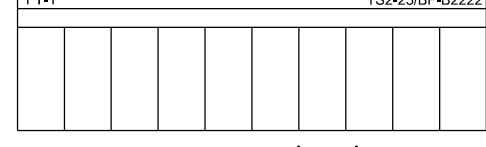
DETAIL 'R'
N27 SCALE 4:1



DETAIL 'U'
N31 SCALE 4:1



DETAIL 'X'
N34 SCALE 4:1



DETAIL 'AA'
N38 SCALE 4:1



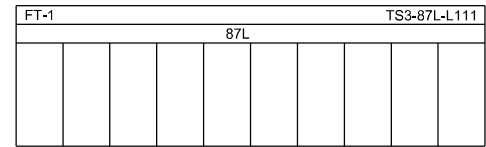
DETAIL 'AD'
N41 SCALE 4:1



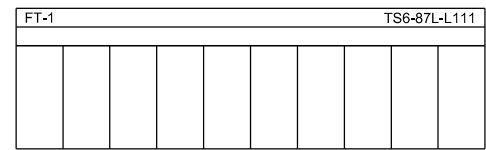
DETAIL 'AG'
N45 SCALE 4:1



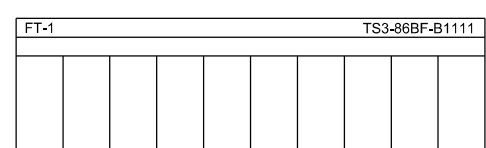
DETAIL 'AJ'
N45 SCALE 4:1



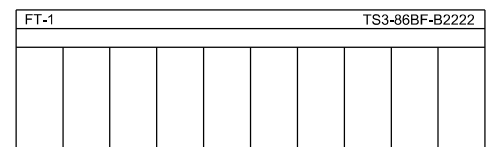
DETAIL 'D'
N6 SCALE 4:1



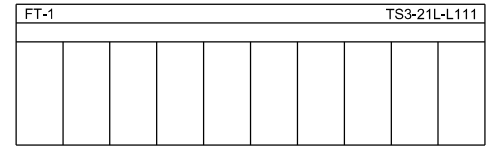
DETAIL 'G'
N9 SCALE 4:1



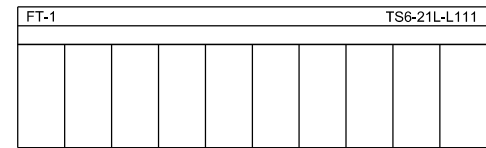
DETAIL 'J'
N15 SCALE 4:1



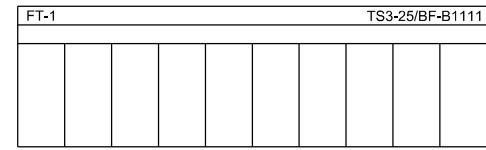
DETAIL 'M'
N21 SCALE 4:1



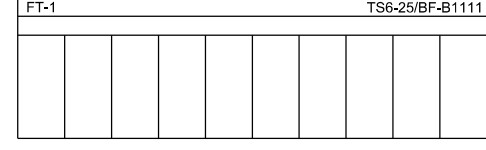
DETAIL 'P'
N25 SCALE 4:1



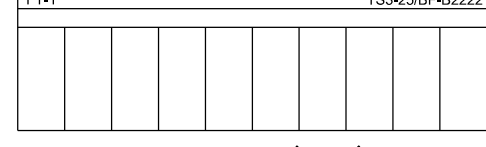
DETAIL 'S'
N28 SCALE 4:1



DETAIL 'V'
N32 SCALE 4:1



DETAIL 'Y'
N35 SCALE 4:1



DETAIL 'AB'
N39 SCALE 4:1



DETAIL 'AE'
N42 SCALE 4:1



DETAIL 'AH'
N46 SCALE 4:1



DETAIL 'AK'
N46 SCALE 4:1

NAMEPLATE LIST - CONT.					TEXT
NO.	FIRST LINE	SECOND LINE	THIRD LINE	SIZE	HEIGHT
N1B	HHHkV PANEL XX	LINE - L111		1 1/2 X 10"	3/8"
N29	25/BF - B1111			1 X 5"	5/32"
N29A	ALARM RECEIVED			1 X 5"	5/32"
N30	SEE DETAIL "T"	SHEET 2		1 1/2 x 5"	5/32"
N31	SEE DETAIL "U"	SHEET 2		1 1/2 x 5"	5/32"
N32	SEE DETAIL "V"	SHEET 2		1 1/2 x 5"	5/32"
N33	SEE DETAIL "W"	SHEET 2		1 1/2 x 5"	5/32"
N34	SEE DETAIL "X"	SHEET 2		1 1/2 x 5"	5/32"
N35	SEE DETAIL "Y"	SHEET 2		1 1/2 x 5"	5/32"
N36	25/BF - B2222			1 X 5"	5/32"
N36A	ALARM RECEIVED			1 X 5"	5/32"
N37	SEE DETAIL "Z"	SHEET 2		1 1/2 x 5"	5/32"
N38	SEE DETAIL "AA"	SHEET 2		1 1/2 x 5"	5/32"
N39	SEE DETAIL "AB"	SHEET 2		1 1/2 x 5"	5/32"
N40	SEE DETAIL "AC"	SHEET 2		1 1/2 x 5"	5/32"
N41	SEE DETAIL "AD"	SHEET 2		1 1/2 x 5"	5/32"
N42	SEE DETAIL "AE"	SHEET 2		1 1/2 x 5"	5/32"
N43	DFR - DAU - L111			1 X 5"	5/32"
N44	SEE DETAIL "AF"	SHEET 2		1 1/2 x 5"	5/32"
N45	SEE DETAIL "AG"	SHEET 2		1 1/2 x 5"	5/32"
N46	SEE DETAIL "AH"	SHEET 2		1 1/2 x 5"	5/32"
N47	SEE DETAIL "AI"	SHEET 2		1 1/2 x 5"	5/32"
N48	SEE DETAIL "AJ"	SHEET 2		1 1/2 x 5"	5/32"
N49	SEE DETAIL "AK"	SHEET 2		1 1/2 x 5"	5/32"
UNLESS OTHERWISE NOTED:					
-NAMEPLATE MOUNTING SHALL BE VIA S/S PAN HEAD SCREWS.					
-COLOR SHALL BE BLACK WITH WHITE TEXT.					

- UNLESS OTHERWISE NOTED:
- 1) ALL DIMENSIONS ARE IN INCHES.
 - 2) PANELS SHALL BE FABRICATED FROM 11 GA CRS.
 - 3) PANELS TO BE BRACED AS REQUIRED TO INSURE A SMOOTH AND LEVEL SURFACE. ALL EXPOSED WELDS TO BE GROUND SMOOTH.
 - 4) INTERIOR FINISH TO BE - SATIN ANSI 61 GRAY. EXTERIOR FINISH TO BE - SATIN ANSI 61 GRAY.
 - 5) SEE SHEET 1 FOR NAMEPLATE AND BILL OF MATERIAL INFORMATION.

NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED	NO.	REVISIONS TO DRAWING	BY	DATE	APPROVED	ENGINEERING	BY	DATE
										DESIGNED	SPCP	XX/XX/XX
										CHECKED		
										APPROVED	DDH	XX/XX/XX
										DRAFTING	BY	DATE
										PRELIMINARY		
										FINAL DESIGN		
										PLOTTED		

GREENLAND ENERGY CENTER SUBSTATION

230kV PANEL 18 LAYOUT

230kV LINE 909

SYSTEM PROTECTION & CONTROL PROJECTS 20413

DESIGN FILENAME:
SNREAR.DGN

DRAWING NO:
SNREAR

SHEET NO:



SCALE:
NONE

IFB NO: