US Army Corps
of Engineers
Savannah District

RICHARD B. RUSSELL POWERPLANT
SAVANNAH RIVER, GEORGIA AND SOUTH CAROLINA

15kV SF6 GENERATOR CIRCUIT BREAKER AND STATIC STARTING SYSTEM INSTALLATION

VOLUME 1: CONTRACT DRAWINGS

SOLICITATION NO. DACW21–03–B–0011

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SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
INDEX OF CONTRACT DRAWINGS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

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SCALE: SHEET 001

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RBR-107	R-80	C100D8	CLEAVELAND/PRICE - LCG-C OPERATOR & SWITCH OUTLINE ASSEMBLY
RBR-107			

FILE NO.	PLATE NO.	DRAWING NO.	TITLE
			EXISTING CABLE ROUTING AND CABLE TRAY DETAIL DRAWINGS
RBR-107	R-81	RR5E-308	CABLE ROUTING - SHEET 1
RBR-107	R-82	RR5E-309	CABLE ROUTING - SHEET 2
RBR-107	R-83	RR5E-310	CABLE ROUTING - SHEET 3
RBR-107	R-84	RR5E-311	CABLE ROUTING - SHEET 4
RBR-107	R-85	RR5E-312	CABLE ROUTING - SHEET 5
RBR-107	R-86	RR5E-313	CABLE TRAYS - ARRANGEMENT - SHEET 1
RBR-107	R-87	RR5E-321	CABLE TRAYS - SECTIONS AND DETAILS - SHEET 3
RBR-107	R-88	RR5E-1302	CABLE ROUTING - SH. 1
RBR-107	R-89	RR5E-1303	CABLE ROUTING - SH. 2
RBR-107	R-90	RR5E-1304	CABLE ROUTING - SH. 3
RBR-107	R-91	RR5E-1305	CABLE ROUTING - SH. 4
			EXISTING CONTROL BOARD SHOP DRAWINGS
RBR-107	R-92	E-10060 SHT 1 OF 4	CENTRAL SWBD - UNIT 5 ANNUNCIATOR & TRANSF. NO. 3 ANNUNCIATOR SCHEMATIC DIAGRAM
RBR-107	R-93	E-10062 SHT 1 OF 35	CENTRAL SWBD - MAIN SWITCHBOARD PANEL 12F, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-94	E-10062 SHT 2 OF 35	CENTRAL SWBD - MAIN SWITCHBOARD PANEL 12R, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-95	E-10062 SHT 9 OF 35	CENTRAL SWBD - MAIN SWITCHBOARD PANEL 13F, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-96	E-10062 SHT 10 OF 35	CENTRAL SWBD - MAIN SWITCHBOARD PANEL 13R, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-97	E-10062 SHT 20 OF 35	CENTRAL SWBD - MAIN SWITCHBOARD PANEL 15F, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-98	E-10062 SHT 21 OF 35	CENTRAL SWBD - MAIN SWITCHBOARD PANEL 15R, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-99	E-10062 SHT 28 OF 35	CENTRAL SWBD - MAIN SWITCHBOARD PANEL 16F, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-100	E-10062 SHT 29 OF 35	CENTRAL SWBD - MAIN SWITCHBOARD PANEL 16R, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-101	E-10063 SHT 1 OF 19	CENTRAL SWBD - AUX. SWITCHBOARD PANEL 12AUXF, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-102	E-10063 SHT 5 OF 19	CENTRAL SWBD - AUX. SWITCHBOARD PANEL 13AUXF, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-103	E-10063 SHT 9 OF 19	CENTRAL SWBD - AUX. SWITCHBOARD PANEL 14AUXF, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-104	E-10063 SHT 12 OF 19	CENTRAL SWBD - AUX. SWITCHBOARD PANEL 15AUXF, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-105	E-10063 SHT 16 OF 19	CENTRAL SWBD - AUX. SWITCHBOARD PANEL 16AUXF, TERMINAL BLOCK LAYOUT AND EXTERNAL CONNECTIONS
RBR-107	R-106	R-43085 SHT 1 OF 8	CONTROL POWER - GENERATOR NO. 1 ANNUNCIATOR
RBR-107	R-107	R-43546	CONTROL POWER - MAIN BOARD EXTERNAL CABLING, PANEL 7F
RBR-107	R-108	R-43548	CONTROL POWER - MAIN BOARD EXTERNAL CABLING, PANEL 7R
RBR-107	R-109	R-43550	CONTROL POWER - MAIN BOARD EXTERNAL CABLING, PANEL 8F
RBR-107	R-110	R-43552	CONTROL POWER - MAIN BOARD EXTERNAL CABLING, PANEL 8R
RBR-107	R-111	R-43558	CONTROL POWER - MAIN BOARD EXTERNAL CABLING, PANEL 10F
RBR-107	R-112	R-43560	CONTROL POWER - MAIN BOARD EXTERNAL CABLING, PANEL 10R
RBR-107	R-113	R-43562	CONTROL POWER - MAIN BOARD EXTERNAL CABLING, PANEL 11F
RBR-107	R-114	R-43564	CONTROL POWER - MAIN BOARD EXTERNAL CABLING, PANEL 11R
RBR-107	R-115	R-43587	CONTROL POWER - AUXILIARY BOARD EXTERNAL CABLING, PANEL 7AUXF
RBR-107	R-116	R-43591	CONTROL POWER - AUXILIARY BOARD EXTERNAL CABLING, PANEL 8AUXF
RBR-107	R-117	R-43595	CONTROL POWER - AUXILIARY BOARD EXTERNAL CABLING, PANEL 9AUXF
RBR-107	R-118	R-43599	CONTROL POWER - AUXILIARY BOARD EXTERNAL CABLING, PANEL 10AUXF
RBR-107	R-119	R-43603	CONTROL POWER - AUXILIARY BOARD EXTERNAL CABLING, PANEL 11AUXF
RBR-107	R-120	170-583-01-1 2/2	MARINE IND - STATIC EXCITATION WTA-300 CUST. CKT. IDENT. AND TERM. LIST
RBR-107	R-121	9973-208 SH 4 OF 9	WOODWARD - DIAGRAM-WIRING FOR U.S. ARMY CORPS OF ENGINEERS RICHARD B. RUSSELL UNITS 1&4
RBR-107	R-122	9973-210 SH 4 OF 9	WOODWARD - DIAGRAM-WIRING FOR U.S. ARMY CORPS OF ENGINEERS RICHARD B. RUSSELL UNITS 2&3
RBR-107	R-123	9973-688 SH 8 OF 13	WOODWARD - DIAGRAM-WIRING FOR U.S. ARMY CORPS OF ENGINEERS RICHARD B. RUSSELL UNITS 5&7
RBR-107	R-124	9973-728 SH 8 OF 13	WOODWARD - DIAGRAM-WIRING FOR U.S. ARMY CORPS OF ENGINEERS RICHARD B. RUSSELL UNITS 6&8
			GFE ISOPHASE BUS AND CIRCUIT BREAKER SHOP DRAWINGS
RBR-107	R-125	1HDP80 0803 SH 1	ABB - GENERATOR CIRCUIT BREAKER AND ISOLATED PHASE BUS SUPPLY - UNIT 1-4
RBR-107	R-126	1HDP80 0803 SH 2	ABB - GENERATOR CIRCUIT BREAKER AND ISOLATED PHASE BUS SUPPLY - UNIT 1-4
RBR-107	R-127	1HDP80 0804 SH 1	ABB - GENERATOR CIRCUIT BREAKER AND ISOLATED PHASE BUS SUPPLY - UNIT 5/7
RBR-107	R-128	1HDP80 0804 SH 2	ABB - GENERATOR CIRCUIT BREAKER AND ISOLATED PHASE BUS SUPPLY - UNIT 6/8
RBR-107	R-129	1HDP80 0804 SH 3	ABB - GENERATOR CIRCUIT BREAKER AND ISOLATED PHASE BUS SUPPLY - UNIT 6/8
RBR-107	R-130	995D676	ABB - TERMINATION CABINET WITH STAND - OUTLINE
RBR-107	R-131	995D685 SH 1	ABB - TERMINATION CABINET AND CABLE TROUGH - LAYOUT DRAWING
RBR-107	R-132	995D685 SH 2	ABB - TERMINATION CABINET AND CABLE TROUGH - LAYOUT DRAWING
RBR-107	R-133	1HC0012968	ABB - GENERATOR CIRCUIT BREAKER HG OUTLINE DRAWING TYPE HGC 3 - UNITS 1-4
RBR-107	R-134	1HC0012969	ABB - GENERATOR CIRCUIT BREAKER HG OUTLINE DRAWING TYPE HGC 3 - UNITS 5&7
RBR-107	R-135	1HC0012970	ABB - GENERATOR CIRCUIT BREAKER HG OUTLINE DRAWING TYPE HGC 3 - UNITS 6&8

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

101RRP_G02_INDEX2.DGN
101RRP_TBLK.DGN

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
INDEX OF REFERENCE DRAWINGS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	G-2

SCALE: SHEET 002

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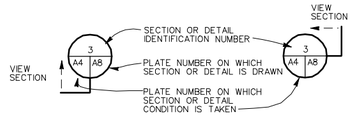
GRAPHIC SYMBOLS LEGEND

- ELECTRICALLY-OPERATED DRAWOUT SF6 CIRCUIT BREAKER
- 90 — AIR CIRCUIT BREAKER, NUMBER INDICATES TRIP RATING IN AMPERES.
- DISCONNECT SWITCH
- DISCONNECTING DEVICE, DISCONNECTING CONTACT
- (3) 4000:5 — CURRENT TRANSFORMER, NUMBER OF UNITS AND CURRENT RATIO AS INDICATED
- (3) 14,400-120 — POTENTIAL OR CONTROL TRANSFORMER, NUMBER OF UNITS AND VOLTAGE RATIO AS INDICATED
- POWER TRANSFORMER
- OR — SURGE ARRESTER
- SURGE CAPACITOR
- GROUND CONNECTION
- M — MOTOR OPERATED DISCONNECT SWITCH (M.O.D.)
- FUSE
- CONTACTS (NORMALLY CLOSED)
- CONTACTS (NORMALLY OPEN)
- R — INDICATING LIGHT, LETTER INDICATES COLOR
- TB & TS — TEST BLOCK & TEST SWITCH
- AS — AMMETER SWITCH
- VS — VOLTMETER SWITCH
- SS — SYNCHRONIZING SWITCH
- V — PANEL METER, LETTER(S) INDICATE FUNCTION
- EQUIPMENT ENCLOSURE
- 27 — RELAY, COIL OR METER (NUMBER INDICATES DEVICE)
- RES OR — RESISTOR
- OR — TERMINAL BLOCK AT MAIN SWITCHBOARD
- OR — TERMINAL BLOCK AT AUXILIARY SWITCHBOARD
- WIRE CONNECTED
- WIRE CROSSING (NOT CONNECTED)
- WITHDRAWABLE POTENTIAL TRANSFORMER AND FUSE
- GENERATOR NUETRAL GROUNDING UTILIZING DISTRIBUTION TRANSFORMER & RESISTOR.
- PUSH BUTTON SWITCH
- RESET/STOP PUSH BUTTON
- COIL ELEMENT
- 3 — CABLE REFERENCE WITH LEGEND MEMBER (OR MATERIAL REF. NO.)

MATERIAL INDICATIONS

- CONCRETE
- MASONRY OR CONCRETE
- GRAVEL
- MORTAR - CEMENT - PLASTER - STUCCO

SECTION SYMBOLS



SYMBOL WHERE SECTION IS TAKEN

SECTION/DETAIL 3 A4 A8

TITLE WHERE SECTION IS DRAWN

CONDUIT AND GROUNDING LEGEND

- CONDUIT EXPOSED, CABLE OR BUS
- CONDUIT EMBEDDED IN FLOOR, WALL OR UNDERGROUND CONDUIT/CABLE
- CONDUIT TURNED TOWARD OBSERVER
- CONDUIT TURNED AWAY FROM OBSERVER

STANDARD ABBREVIATIONS

ABCB	AIR BLAST CIRCUIT BKR.
ACB	AIR CIRCUIT BREAKER
AMP, A	AMPERES
APPROX.	APPROXIMATELY
B.C.T.	BUSHING CURRENT TRANSF.
BKR.	BREAKER
CB	CIRCUIT BREAKER
CKT.	CIRCUIT
℄	CENTER LINE
CONC.	CONCRETE
CONT.	CONTINUED, CONTINUOUS
CT, C.T.	CURRENT TRANSFORMER
DET.	DETAIL
DIA.	DIAMETER
DISC.	DISCONNECT
DN.	DOWN
DWG.(S)	DRAWING(S)
EA.	EACH
EL., ELEV.	ELEVATION
FL.	FLOOR
FT.	FOOT, FEET
GA.	GAGE
GCB	GENERATOR CIRCUIT BKR.
GALV.	GALVANIZED
GEN.	GENERATOR
GFE, G.F.E.	GOV'T FURNISHED EQUIP.
GND.	GROUND
H.P.	HORSE POWER
HVAC	HEAT/VENT/AIR COND.
IN.	INCHES
KA	KILOAMPERE
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
LB.,#	POUND
LTG.	LIGHTING
MAX.	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.D.	MOTOR OPERATED DISC. SW.
MTD.	MOUNTED
N.I.C.	NOT IN CONTRACT
O.C.	ON CENTER
OCB	OIL CIRCUIT BREAKER
PF	POWER FACTOR
PNL.	PANEL
PRESS.	PRESSURE
PSF	POUNDS/SQUARE FOOT
PSI	POUNDS/SQUARE INCH
PT, P.T.	POTENTIAL TRANSFORMER
RAD.	RADIUS
SCH, SCHED	SCHEDULE
SECT.	SECTION
SF6	SULPHER HEXAFLUORIDE
SH., SHT.	SHEET
SQ. FT.	SQUARE FEET
SW.	SWITCH
TEMP.	TEMPERATURE, TEMPORARY
TRANSF.	TRANSFORMER
TYP.	TYPICAL
V	VOLT
W/	WITH
W/O	WITHOUT
XFMR	TRANSFORMER

NOTES:

1. ON ALL DRAWINGS: UNLESS NOTED OTHERWISE, BLACK INDICATES EXISTING CONDITIONS, GREEN INDICATES REMOVAL, RED OR BLUE INDICATES NEW WORK (BLUE IDENTIFIES SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES). ALL NEW WORK (BOTH RED AND BLUE) IS CONTRACTOR FURNISHED AND INSTALLED, UNLESS NOTED AS GOVERNMENT-FURNISHED EQUIPMENT TO BE INSTALLED (GFE). ON SOME CONTROL DIAGRAMS AS NOTED, GFE MAY BE INDICATED IN BLACK FOR CLARITY.
2. SYMBOLS, DEVICE NUMBERS AND LEGEND SHOWN ON THIS DRAWING ARE APPLICABLE FOR ALL DRAWINGS, HOWEVER, IF SYMBOLS, DEVICE NUMBERS AND LEGEND APPEAR ON AN INDIVIDUAL DRAWING AND DIFFERS FROM THIS DRAWING, THE INFORMATION ON THE INDIVIDUAL DRAWING SHALL GOVERN.
3. CONDUIT ROUTING SHOWN ON THESE DRAWINGS MAY NOT ABSOLUTELY BE THE MOST PRACTICAL ROUTING; THEREFORE, SLIGHT MODIFICATION MAY BE MADE TO FACILITATE A BETTER INSTALLATION AFTER PERMISSION FROM THE CONTRACTING OFFICER'S REPRESENTATIVE HAS BEEN GRANTED.
4. THE ELECTRICAL DRAWINGS ARE BASED ON DRAWINGS PREPARED FOR THE PROCUREMENT OF GOVERNMENT-FURNISHED EQUIPMENT AND MAY BE SUPERCEDED BY MANUFACTURER'S SHOP DRAWINGS WHEN AVAILABLE.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

101RRP_G03_LEGEND.DGN
101RRP_TBLK.DGN

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
SYMBOL LEGEND AND ABBREVIATIONS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	G-3

SCALE: SHEET 003

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	DEVICE	DESCRIPTION	LOCATION
1	1	CONTROL SWITCH	*
	1AB	UNIT AIR BREAK CONTROL SWITCH	A
	1ACF	AIR CONDITIONING SUPPLY FAN CONTROL SW	L
	1AGL	ADJUSTABLE GATE LIMIT CONTROL SWITCH	S
	1ASR	ANNUNCIATIOR SILENCE AND RESET CONTROL SWITCH	S
	1AS	AUTOMATIC SYNCHRONIZER CONTROL SWITCH	S
	1AT	ANNUNCIATOR TEST CONTROL SWITCH	S
	1ESP	ELEVATOR SUMP PUMP CONTROL SWITCH	L
	1CM	SYNCHRONOUS CONDENSING MODE CONTROL	S
	1SSP	SANITARY SUMP PUMP CONTROL SWITCH	L
	1EFR	EXCITER FIELD RHEOSTAT CONTROL SWITCH	S
	1EF	EXHAUST FAN CONTROL SWITCH	L, M, C
	1EP	EFFLUENT PUMP CONTROL SWITCH	L
	1ES	UNIT EMERGENCY SHUTDOWN CONTROL	S
	1FP	TRANSFORMER FIRE PUMP CONTROL SWITCH	L
	1GH	GENERATOR HEATERS CONTROL SWITCH	A
	1HPO	GENERATOR HIGH PRESSURE THRUST BEARING OIL PUMP	A
	1HVF	HEATING AND VENTILATING CONTROL SWITCH	L
	1IGE	INTAKE GATE EMERGENCY SHUTDOWN C.S.	S
	1PP	PUMP PRIME CONTROL SWITCH	S
	1QA	GOVERNOR AIR COMPRESSOR CONTROL SWITCH	M
	1QPA	GOVERNOR OIL PUMP "A" CONTROL SWITCH	A
	1SL	SLUDGE PUMP FORWARD - REVERSE SWITCH	L
	1SAM	SPEED ADJUSTING MOTOR CONTROL SWITCH	S
	1SR	SPINNING RESERVE MODE CONTROL SWITCH	S
	1SD	STATION DRAINAGE PUMPS CONTROL SWITCH	L
	1SSA	STATION AIR COMPRESSOR CONTROL SWITCH	L
	1TDA	TAILWATER AIR COMP CONTROL SWITCH	L
	1TWD	TAILWATER DEPRESSING CONTROL SWITCH	S
	1U	UNIT START - STOP CONTROL SWITCH	A, S
	1UCW	UNIT COOLING WATER CONTROL SWITCH	A
	1UW	UNWATERING PUMP CONTROL SWITCH	L
	1E	UNIT EXCITER FIELD BREAKER CONTROL SWITCH	S
	1-128	OCB 128 CONTROL SWITCH (OCB 138, 148, 228, 238, 248,	S
		328, 338, 348, 428, 438, 448 SIMILAR)	
	1-300	M.O.D. 300 CONTROL SWITCH (M.O.D. 400 SIMILAR)	S
	1-501	UNIT 5 PHASE REVERSAL CONTROL SWITCH	S
		(UNIT 6, 7, AND 8 SIMILAR)	
	1-710	UNIT OCB 710 CONTROL SWITCH	S
		(OCB 720, 730-780 SIMILAR)	
	1-722	STARTING BUS BREAKER 722 CONTROL SWITCH	S
		(BREAKER 732 SIMILAR)	
	1-757	STARTING BUS DISCONNECT SWITCH 757 CONTROL SWITCH	S
		(767, 777, 787 SIMILAR)	
	1-810	ACB 810 CONTROL SWITCH (ACB 820 SIMILAR)	S
	1-812	ACB 812 CONTROL SWITCH	S
		(ACB 814, 822, 824, 830 SIMILAR)	
	1UC	UNIT COOLER CONTROL SWITCH	L
	1CWP	COOLING WATER PUMP CONTROL SWITCH	L
	1WP	WELL PUMP CONTROL SWITCH	L

	DEVICE	DESCRIPTION	LOCATION
2	2AD	FISHERMAN'S WARNING AUDIO DETECTOR TIMER	S
	2AS1, 2	AUTOMATIC SYNCHRONIZER TIMING RELAY	S
	2AWD	ABNORMAL WATER DEPRESSING TIMER	S
	2CM	CONDENSING MODE TIME DELAY RELAY	S
	2CMX	AUXILIARY RELAY FOR 2CM	S
	2FWSF	FISHERMAN'S WARNING SIREN FAILURE TIMER	S
	2PP	PUMP PRIME TIMER	S
	2TWD	TAILWATER DEPRESSING TIMER	S
	2U	UNIT START TIMER	S
	2UX 1, 2	AUXILIARY RELAY FOR 2U	S
	2PRI	UTILITY LINE PRIMARY RECLOSER INITIATE RELAY	X
	2SRI	UTILITY LINE SECONDARY	S

	DEVICE	DESCRIPTION	LOCATION
3	3	START INTERLOCK RELAY	*
	3CD	CREEP DETECTION INTERLOCK RELAY	S
	3PR	PUMPING UNIT READY RELAY	S
	3SR	STARTING UNIT READY RELAY	S
	3SX	STARTING UNIT AUXILIARY RELAY	S
	3UA	UNIT AUXILIARY INTERLOCK RELAY	S
			S

	DEVICE	DESCRIPTION	LOCATION
4	4	MASTER START - STOP RELAY	X
	4DP	GEN/MTR. DIFF. LEADS REVERSING RELAY	X
	4DG	GEN/MTR. DIFF. LEADS REVERSING RELAY	X
	4GM1-3	GENERATOR MODE RELAY	S
	4P1-3	MASTER START - STOP RELAY - PUMP MODE	S
	4PM1-4	PUMP MODE RELAY	S
	4PS1-4	PUMP SELECT RELAY	S
	4SA, B, C, D	SECOND ATTEMPT STARTING RELAYS	S
	4SM1-6	START MODE RELAY	S
	4UA1,2	UNIT AUXILIARIES START RELAY	S
	4UX1,2	AUXILIARY RELAY FOR 3U	S

	DEVICE	DESCRIPTION	LOCATION
5	5	STOPPING DEVICE	*
	5E	ELECTRICAL SHUTDOWN HAND RESET RELAY	X
	5M	MECHANICAL SHUTDOWN HAND RESET RELAY	X

	DEVICE	DESCRIPTION	LOCATION
12	12	OVERSPEED SWITCH	*
	12a-LR5	OPEN BELOW 5% ABOVE LOAD REJECTION, CLOSE ABOVE	G

	DEVICE	DESCRIPTION	LOCATION
14	14	UNDERSPEED SWITCH	*
	14a-15	OPEN BELOW 15%, CLOSE ABOVE	A
	14a-95	OPEN BELOW 95%, CLOSE ABOVE	A
	14a-95X	AUXILIARY RELAY FOR 14a-95	S
	14a-95Y	AUXILIARY RELAY FOR 14a-95	S
	14b-15	OPEN ABOVE 15%, CLOSE BELOW	A
	14b-20	OPEN ABOVE 20%, CLOSE BELOW	A
	14b-50	OPEN ABOVE 50%, CLOSE BELOW	A
	14b-45	OPEN ABOVE 45%, CLOSE BELOW	A

	DEVICE	DESCRIPTION	LOCATION
15	15L	SPEED MATCHING LOWER RELAY (AUTO SYNC.)	S
	15LX1, 2	AUXILIARY RELAYS FOR 15L	S
	15R	SPEED MATCHING RAISE RELAY (AUTO SYNC.)	S
	15RX1, 2	AUXILIARY RELAYS FOR 15R	S
	15S	SPEED MATCHING EQUIPMENT (AUTO SYNC.)	S

	DEVICE	DESCRIPTION	LOCATION
20	20	SOLENOID VALVE	*
	20DA	DRAFT TUBE WATER DEPRESSING AUXILIARY AIR VALVE	L
	20DM	DRAFT TUBE WATER DEPRESSING MAIN AIR SOLENOID V.	L
	20GTW	GEN. - THRUST BRG. COOLING WATER VALVE	L
	20GCW	GENERATOR COOLING WATER VALVE	L
	20PBW	TURBINE PACKING BOX SOLENOID	T
	20PP	PUMP PRIMING D.T. AIR RELEASE SOLENOID VALVE	L
	20QUA(B)	GOVERNOR UNLOADING VALVE PUMP A (PUMP B)	A
	20RBDV	RUNNER BAND DRAIN VALVE SOLENOID	L
	20SA	SMOOTHING AIR SOLENOID	L
	20SSA	STA. SER. AIR COMP. COOLING WATER SOLENOID	L
	20TDV	TRANSFORMER DELUGE VALVE SOLENOID	L
	20TBW	TURBINE BEARING OIL COOLING WATER VALVE	T
	20UB	UNIT BRAKE SOLENOID	A
	20WR	WEAR RING COOLING WATER VALVE	T
	20TDA	TAILWATER DEPRESSING AIR COMP. SOLENOID	L

	DEVICE	DESCRIPTION	LOCATION
21	21	DIRECTIONAL DISTANCE RELAY (PRI.)	X
	21-1, 2, 3	DIRECTIONAL DISTANCE RELAY (SEC.) ZONE 1-2-3	S
	21G	GROUND DISTANCE RELAY	S,X
	21GX	UTILITY LINE AUXILIARY RELAY	S
	21G-1.2	UTILITY LINE ZONE 1 OR 2 GROUND DISTANCE RELAY	S
	21S	DIRECTIONAL DISTANCE RELAY CARRIER START	X
	21X	UTILITY LINE TIMING RELAY (21X-1 SIMILAR)	X,S
	21P	DIRECTIONAL DISTANCE RELAY CARRIER PILOT	X

	DEVICE	DESCRIPTION	LOCATION
25	25	SYNCHRONIZING OR SYNCHRONISM CHECK DEVICE	*
	25A1,2	AUTOMATIC SYNCHRONIZER	S
	25-1	SEQUENTIAL SYNCHRONIZING RELAY	S
	25LO	AUTO. SYNC. LOCKOUT RELAY	S
	25SA1-2	SYNCHRO ACCEPTOR	S
	25SC	SYNCHRONISM CHECK RELAY	S
	25X	AUXILIARY RELAY FOR 25-1	S
	25X1,2	SYNCHRONIZER CONTROL RELAYS	S
	25Y1,2	AUTO. SYNC. INTERLOCK RELAYS	S
	25Z1,2	AUXILIARY RELAYS FOR 25SA	S

	DEVICE	DESCRIPTION	LOCATION
26	26	TRANSFORMER OIL INDICATING THERMAL DEVICE	P
	26F	TRANSFORMER DELUGE THERMOSTAT	L
	26FX	AUXILIARY RELAY FOR 26F	S

	DEVICE	DESCRIPTION	LOCATION
27	27	UNDERVOLTAGE RELAY	X, L
	27AC	125V ESSENTIAL AC UNDERVOLTAGE RELAY	X
	27E	EXCITER UNDERVOLTAGE RELAY	E
	27E	TRANSFORMER EMERGENCY FEEDER UV RELAY	P
	27EX	AUXILIARY RELAY FOR 27E	S
	27CF	CO2 - FLAMMABLE STORAGE ROOM	L
	27CS	CO2 - OIL STORAGE ROOM	L
	27CP	CO2 - OIL PURIFICATION ROOM	L
	27L1	UTILITY LINE NO. 1 UNDERVOLTAGE RELAYS	S
		(UTILITY LINES 2, 3, 4, AND 5 SIMILAR)	
	27N	TRANSFORMER NORMAL FEEDER UV RELAY	P
	27PL1	POWERHOUSE LINE NUMBER 1 UNDERVOLTAGE RELAY	S
		(POWERHOUSE LINES 2 AND 3 SIMILAR)	
	27R	GENERATOR OR GENERATOR MOTOR REGULATOR	X
	27RX	AUXILIARY RELAY FOR 27R	S
	27SI	AUTOMATIC SYNCHRONIZER VOLTAGE CHECK RELAY-	S
		INCOMING	
	27SS1	STATION SERVICE NUMBER 1 UNDERVOLTAGE RELAY	X
	27SS2	STATION SERVICE NUMBER 2 UNDERVOLTAGE RELAY	X
	27SR	AUTOMATIC SYNCHRONIZER VOLTAGE CHECK RELAY-RUN	S
	27CU	CO2 - UNIT UNDERVOLTAGE RELAY	L
	27X	AUXILIARY RELAY FOR 27	S
	27X/S1A	AUXILIARY RELAY FOR 27SS1	S
	27X/S2A	AUXILIARY RELAY FOR 27SS1	S
	27X/S1B	AUXILIARY RELAY FOR 27SS2	S
	27X/S2B	AUXILIARY RELAY FOR 27SS2	S
	27FP	FIRE PUMP UNDERVOLTAGE RELAY	L

	DEVICE	DESCRIPTION	LOCATION
29	29	ISOLATING DEVICE	*
	29GB	UNIT SHUTDOWN ON MAN. GEN. TRIP	S

	DEVICE	DESCRIPTION	LOCATION
30	30R1-3	ANN. RESET AUX. RELAY	S
	30S1-3	ANN. SILENCE AUX. RELAY	S
	30T1-3	ANN. TEST AUX. RELAY	S
	30AS	ANN. AUDIBLE SIGNAL AUX. RELAY	S

	DEVICE	DESCRIPTION	LOCATION
33	33	TURBINE WICKET GATE POSITION SWITCH	*
	33a-0	OPEN AT 0% GATE OPENING, CLOSE ABOVE	A
	33a-15	OPEN AT 15% GATE OPENING AND BELOW, CLOSE ABOVE	A
	33a-25	OPEN AT 25% GATE OPENING AND BELOW, CLOSE ABOVE	A
	33a-30	OPEN AT 30% GATE OPENING AND BELOW, CLOSE ABOVE	A
	33b-0	OPEN ABOVE 0% GATE OPENING, CLOSE BELOW	A
	33b-5	OPEN AT 5% GATE OPENING, CLOSE BELOW	A
	33b-95	OPEN AT 95% GATE OPENING, CLOSE BELOW	A
	33b-SNL	OPEN ABOVE SNL AND ABOVE, CLOSE BELOW	A
	33-CO	GATE LIMIT COINCIDENCE SWITCH	A
	33a	STARTING SWITCH NORMALLY OPEN AUX. CONTACT	L
	33aX	AUXILIARY RELAY FOR 33a	S
	33b	STARTING SWITCH NORMALLY CLOSED AUX. CONTACT	L

	DEVICE	DESCRIPTION	LOCATION
38	38GG	GEN. GUIDE BEARING TEMPERATURE RELAY	G
	38GT	GEN. THRUST BEARING TEMPERATURE RELAY	G
	38TG	TURBINE BEARING TEMPERATURE RELAY	T

	DEVICE	DESCRIPTION	LOCATION
39	39WO	WATER IN OIL DETECTOR (6/M)	G

LOCATION SYMBOLS

- A ACTUATOR
- E EXCITATION EQUIPMENT
- G GENERATOR
- H 13.8 KV SWITCHGEAR
- L LOCAL
- F 480V. SWITCHGEAR
- N NEUTRAL CUBICLE
- S MAIN CONTROL SWITCHBOARD
- X AUXILIARY SWITCHBOARD
- T TURBINE
- P TRANSFORMER (MAIN POWER)
- M MOTOR CONTROL CENTER
- V SUPERVISORY EQUIPMENT
- C HVAC CONTROL PANEL
- * FOR DEVICE DESIGNATION ONLY

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

101RRP_G04_DEVICE_1.DGN
101RRP_TBLK.DGN

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CONTROL DEVICE SCHEDULE
SHEET 1 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	G-4

SCALE: NO SCALE SHEET 004

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	DEVICE	DESCRIPTION	LOCATION
40	40	GENERATOR OR GENERATOR-MOTOR FIELD FAILURE RELAY	X
	40X	AUXILIARY RELAY FOR 40	S

	DEVICE	DESCRIPTION	LOCATION
41	41	EXCITER FIELD BREAKER	E
	41PC	EXCITER FIELD BREAKER-PUMP-MODE CLOSING RELAY	S
	41TP	PUMPING UNIT READY FOR STARTING TIMER	S
	41TS	STARTING UNIT READY FOR STARTING PUMP TIMER	S

	DEVICE	DESCRIPTION	LOCATION
42	42	STARTER	*
	42ACF	AIR CONDITIONING SUPPLY FAN	M
	42AX	AUX RELAY FOR 42ACF	M
	42CH	PACKAGE CHILLER	L
	42CWP	CHILLED WATER PUMP	M
	42ESP	ELEVATOR SUMP PUMP	M
	42TE	TRANSFORMER COOLING EMERGENCY	L
	42EF	EXHAUST FAN	M
	42ED	ERECTION BAY DOOR (O-OPEN-C-CLOSED)	L
	42EP	EFFLUENT PUMP	M
	42FP	FIRE PUMP	L
	42GH	UNIT SPACE HEATER	M
	42TDA	TAILWATER DEPRESSING AIR COMPRESSOR	M
	42HJ	JACKING OIL PUMP	M
	42HP	HIGH PRESSURE THRUST BEARING OIL PUMP	L
	42HVF	HEATING AND VENTILATING SUPPLY FAN	M
	42SSP	SANITARY SUMP PUMP	M
	42TO	TRANSFORMER OIL PUMP	M
	42LO	LUBE OIL PUMP	M
	42TN	TRANSFORMER COOLING - NORMAL	P
	42QA	GOVERNOR AIR COMPRESSOR	M
	42RBC	RUNNER BAND DRAIN VALVE - CLOSE	L
	42RBO	RUNNER BAND DRAIN VALVE - OPEN	L
	42SSA	STATION AIR COMPRESSOR	M
	42SD	STATION DRAINAGE PUMP	M
	42SL	SLUDGE PUMP	M
	42SP	UNWATERING SUMP PUMP	M
	42WP	WELL PUMP	L
	42UC	UNIT COOLER	M
	42UW	UNWATERING PUMP	M
	42WO	WASTE OIL PUMP	M
	42QPA,B	GOVERNOR OIL PUMP	M
	42HVX	AUXILIARY RELAY FOR 42HVF	M

	DEVICE	DESCRIPTION	LOCATION
43	43	TRANSFER SWITCH	*
	43AS	AUTO. SYNCHRONIZER TRANSFER SWITCH	S
	43DG	DIESEL GEN. PERMISSIVE SWITCH	S
	43GP	UNIT MODE SELECTION SWITCH (UNITS 5-8)	A, S
	43GPS	UNIT MODE SELECTION SWITCH (UNITS 2 AND 3)	A, S
	43QT	GOV. CONTROL TRANSFER SWITCH	A
	43QLP	GOVERNOR "LEAD" OIL PUMP TRANSFER SW.	A
	43SS	13.8 KV STATION SERVICE TRANSFER SW.	S
	43ST	STATION SERVICE SELECTOR SWITCH	S
	43SYD	SWITCHYARD LOCAL-REMOTE TRANSFER SW.	S
	43UW	UNWATERING PUMP TRANSFER SWITCH	L
	43U	UNIT CONTROL TRANSFER SWITCH	S
	43VR	VOLTAGE REGULATOR TRANSFER SWITCH	S
	43CV	REGULATOR CURRENT-VOLTAGE	S

	DEVICE	DESCRIPTION	LOCATION
46	46	PHASE - BALANCE CURRENT RELAY	X
	46-51VX	COMMON AUXILIARY RELAY FOR 46 AND 51V	S

	DEVICE	DESCRIPTION	LOCATION
48	48TPB	INC. SEQ. - FAILURE OF PUMP UNIT TO BECOME READY	S
	48TPC	INC. SEQ. - FAILURE OF PUMP TO START ROTATION	S
	48TPP	INCOMPLETE SEQUENCE PUMP PRIME TIMER	S
	48TSB	INC. SEQ. - FAILURE OF START UNIT TO BECOME READY	S
	48TSC	INC. SEQ. - FAILURE OF START UNIT TO START	S
	48TSR	INC. SEQ - TIMER FOR SYNC.	S
	48X	AUX RELAY FOR INC. SEQ. TIMERS	S
	48T	INC. SEQ. GEN. MODE - FAIL TO SYNC	S
		START MODE - AUX FAIL TO START	
		PUMP MODE - AUX FAIL TO START	
		- START UNIT NOT SELECTED	
	48TPD	PUMP MODE - PUMP TO RATED SPEED	S
	48RS	ROTATION SENSOR	A

	DEVICE	DESCRIPTION	LOCATION
49	49-1	TRANSFORMER TEMPERATURE RELAYS CONTACT (START FAN)	P
	49-1X	AUXILIARY RELAY FOR 49-1	P
	49-2	TRANSFORMER TEMP. - RELAY CONTACT (ANN.)	P
	49-3	TRANSFORMER TEMP - RELAY CONTACT SHUTDOWN	P
	49-3X	AUXILIARY RELAY FOR 49-3	S

	DEVICE	DESCRIPTION	LOCATION
50	50	UTILITY LINE PHASE OVERCURRENT RELAY	S
	50BF	UNIT OR UTILITY LINE OCB FAILURE OVERCURRENT RELAY	X
	50GC	CARRIER INSTANTANEOUS OVERCURRENT GROUND RELAY	X
	50P	UTILITY LINE FAULT DETECTOR RELAY (PRIMARY)	X
	50P1	UTILITY LINE FAULT DETECTOR RELAY (SECONDARY)	S
	50E	EXCITER SUPPLY OC RELAY	E
	50EX	AUXILIARY RELAY FOR 50EX	S

	DEVICE	DESCRIPTION	LOCATION
30/51	50/51	UTILITY LINE INSTANTANEOUS AND TIME OVERCURRENT	S
		RELAY	
	50G/51G	UTILITY LINE INSTANTANEOUS AND TIME OVERCURRENT	S
		GROUND RELAY	
	50/51SS1	STATION SERVICE TIME-OVERCURRENT RELAY	X
		(SS2 SIMILAR)	
	50-51X	AUXILIARY RELAY FOR 50/SS1, 2 AND 51/SS1, 2	S

	DEVICE	DESCRIPTION	LOCATION
51	51	GENERATOR OR GENERATOR-MOTOR TIME OVERCURRENT RELAY	X
	51E	EXCITER OVERCURRENT RELAY	E
	51EX	EXCITER OVERCURRENT AUXILIARY RELAY	S
	51G	UTILITY LINE TIME-OVERCURRENT GROUND RELAY	S
	51N	TRANSFORMER NEUTRAL OVERCURRENT RELAY	X
	51V	GENERATOR OR GENERATOR MOTOR VOLTAGE RESTRAINT	X
		OVERCURRENT RELAY	

	DEVICE	DESCRIPTION	LOCATION
52	52	OIL OR AIR CIRCUIT BREAKER	L
	52a	CIRCUIT BREAKER NORMAL OPEN AUX. CONTACT	L
	52b	CIRCUIT BREAKER NORMAL CLOSE AUX. CONTACT	L
	52CC	OIL OR AIR CIRCUIT BREAKER CLOSING COIL	L
	52TCX	AUXILIARY TRIP COIL	L
	52E	MAIN TRANSF. EMERGENCY SUPPLY 480V. ACB	P
	52N	MAIN TRANSF. NORMAL SUPPLY 480V. ACB	P
	52TC	OIL OR AIR CIRCUIT BREAKER TRIP COIL	L
	52X	BREAKER CLOSING RELAY	L
	52Y	BREAKER CLOSING CUTOFF RELAY	L
	52aX	AUXILIARY RELAY FOR 52a	S
	52bX	AUXILIARY RELAY FOR 52b	S

	DEVICE	DESCRIPTION	LOCATION
59	59	GENERATOR OR GENERATOR-MOTOR OR TRANSFORMER	X
		OVERVOLTAGE RELAY	
	59X	AUXILIARY RELAY FOR 59	S

	DEVICE	DESCRIPTION	LOCATION
60	60L 1,2	VOLTAGE BALANCE LOWER RELAY	S
	60LX1,2	AUXILIARY RELAY FOR 60L	S
	60R 1,2	VOLTAGE BALANCE RAISE RELAY	S
	60RX1, 2	AUXILIARY RELAY FOR 60R	S
	60S 1,2	VOLTAGE BALANCE EQUIPMENT	S

	DEVICE	DESCRIPTION	LOCATION
62	62	TIME DELAY STOPPING OR OPENING RELAY	*
	62AS	ANN. AUDIBLE SIGNAL TIME RELAY	S
	62BAF	BREAK AIR FAILURE RELAY	S
	62BF	BREAKER FAILURE TIME DELAY RELAY	S
	62CD	UNIT CREEP DETECTOR TIME DELAY RELAY	S
	62CDX	AUXILIARY RELAY FOR 62CD	S
	62DBX	AUXILIARY TIMING RELAY FOR 71DBX	S
	62FW	FISHERMAN'S WARNING TIMER	S
	62P	INCOMPLETE SEQUENCE TIMER	S
	62UA	STOP UNIT AUXILIARIES TIMER	S
	62CDY	AUXILIARY RELAY FOR 62CDX	S
	62BFX	AUXILIARY RELAY FOR 62BF	S
	62BFY	AUXILIARY RELAY FOR 62BF	S
	62PD	PUMP DIRECTION	S
	62PS	PUMP SPEED	S

	DEVICE	DESCRIPTION	LOCATION
63	63	LIQUID OR GAS PRESSURE DEVICE	*
	63BAS	BRAKE AIR SUPPLY PRESSURE SWITCH	A
	63A	OCB AIR PRESSURE SWITCH	L
	63BC	BRAKE CYLINDER AIR PRESSURE DEVICE	A
	63CF	CO2 PRESSURE SWITCH, FLAMMABLE STORAGE ROOM	L
	63CS	CO2 PRESSURE SWITCH, OIL STORAGE ROOM	L
	63CP	CO2 PRESSURE SWITCH, OIL PURIFICATION ROOM	L
	63CU	CO2 PRESSURE SWITCH, UNITS	L
	63DA	DEPRESSED AIR PRESSURE SWITCH	L
	63DAX1,2,3	DEPRESSED AIR PRESSURE SWITCH AUXILIARY RELAY	S
	63GT	GENERATOR HIGH PRESSURE THRUST BEARING OIL	G
		PRESSURE SWITCH	
	63GTX	AUXILIARY RELAY FOR 63GT	S
	63PP	PUMP PRIMING PRESSURE SWITCH	T
	63SPX	AUXILIARY RELAY FOR 63SP	S
	63PPX	AUXILIARY RELAY FOR 63PP	S
	63Q	GOVERNOR OIL PUMP LEAD OR LAG PRESSURE SWITCH	A
	63QA	GOVERNOR AIR PRESSURE SWITCH	L
	63Q1	GOVERNOR LOW OIL PRESSURE ALARM SWITCH	A
	63Q1X	AUXILIARY RELAY FOR 63Q1	S
	63Q2	GOVERNOR LOW OIL PRESSURE SHUTDOWN SWITCH	A
	63SP	TRANSFORMER SUDDEN PRESSURE DEVICE	T
	63SSA	STATION SEVICE AIR PRESSURE SWITCH	L
	63TG	TURBINE GUIDE BEARING OIL PRESSURE SWITCH	T
	63TIG	TRANSFORMER INERT GAS PRESSURE SWITCH AT TRANSF.	P
	63TL	TURBINE GREASE PUMP PRESSURE SWITCH	S
	63TSP	TURBINE SHEAR PIN PRESSURE SWITCH	S
	63WP	STATION WELL PUMP	L
	63FP	FIRE PUMP	L
	63AT	BREATHER TRIP (LOW AIR)	L
	63AC	BLOCK BKR. CLOSE (LOW AIR)	L

	DEVICE	DESCRIPTION	LOCATION
64	64	GROUND PROTECTIVE RELAY	*
	64AC	125V ESSENTIAL A.C. GROUND RELAY	X
	64B	125V D.C. MAIN BUS GROUND RELAY	X
	64E	STATIC EXCITATION GROUND RELAY	E
	64EX	AUXILIARY RELAY FOR 64E	S
	64F	FIELD GROUND RELAY	X
	64FX	AUXILIARY RELAY FOR 64F	S
	64N	GROUND RELAY	X
	64NX	AUXILIARY RELAY FOR 64N	S
	64S2/B1	STATION SERVICE SWITCHGEAR 2 BUS 1 GROUND RELAY	X
	64S2/B2	STATION SERVICE SWITCHGEAR 2 BUS 2 GROUND RELAY	X
	64X/B1	ACB 822 125V DC GROUND AUXILIARY RELAY	S
	64X/B2	ACB 824 125V DC GROUND AUXILIARY RELAY	S

	DEVICE	DESCRIPTION	LOCATION
65	65	TURBINE GOVERNOR OR ACTUATOR	*
	65AGL	ADJUSTABLE GATE LIMIT MOTOR	A
	65AGLa-0	OPEN AT 0% OF "LIMIT" TRAVEL AND BELOW, CLOSE ABOVE	A
	65AGLb-BA	OPEN AT "BREAK-AWAY" AND ABOVE, CLOSE BELOW	A
	65AGLb-95	OPEN AT 95% OF "LIMIT" TRAVEL AND ABOVE, CLOSED BELOW	A
	65GC	UNIT GAIN CONTROL DEVICE	A
	65GLS	GATE LOCK RELEASE PILOT VALVE SOLENOID	A
	65MS	GOVERNOR SOLENOID	A
	65PLD	GATE POSITION LOCKING DEVICE	A
	65S	GOVERNOR SHUTDOWN SOLENOID	A
	65SAM	TURBINE SPEED LEVEL ADJUSTING MOTOR	A
	65SAMa-0	OPEN AT 0% TRAVEL, CLOSE ABOVE	A
	65SAMa-SNL	OPEN AT SNL AND BELOW, CLOSE ABOVE	A
	65SAMb-100	OPEN AT 100% TRAVEL, CLOSED BELOW	A
	65AGLb-100	OPEN AT 100% OF "LIMIT" TRAVEL, CLOSE BELOW	A
	65NH	GOVERNOR NET HEAD PERMISSIVE RELAY	A
	65AGLXb-100	OPEN AT 100% OF "LIMIT" TRAVEL, CLOSED BELOW	A

	DEVICE	DESCRIPTION	LOCATION
67	67	DIRECTIONAL OVERCURRENT RELAY	*
	67GC	UTILITY LINE GROUND DIRECTIONAL OVERCURRENT RELAY CARRIER	X
	67N	UTILITY LINE GROUND DIRECTIONAL OVERCURRENT RELAY	S

	DEVICE	DESCRIPTION	LOCATION
68	68	CARRIER STARTING OR BLOCKING RELAY	*
	68CB	CARRIER STARTING RELAY	X
	68SB	UTILITY LINE PRIMARY OUT-OF-STEP BLOCKING RELAY	X
	68SB-1	UTILITY LINE SECONDARY OUT-OF-STEP BLOCKING RELAY	S

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CONTROL DEVICE SCHEDULE
SHEET 2 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	G-5

SCALE: NO SCALE SHEET 005

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101RRP_TBLK.DGN

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	DEVICE	DESCRIPTION	LOCATION
69	69	PERMISSIVE MANUAL CONTROL SWITCH OR DEVICE	*
	69AP	SYNCHRONIZER AUTO. PERMISSIVE SWITCH	S
	69GC	UNIT GAIN CONTROL PERMISSIVE SWITCH	S
	69PRO	PILOT RELAY RECLOSE OFF SWITCH	S
	69RCO	RECLOSURE CUT-OUT SWITCH	S
	69S	OCB SYNC. SWITCH	S

	DEVICE	DESCRIPTION	LOCATION
71	71	LIQUID OR GAS LEVEL DEVICE	*
	71DA	FLOAT SWITCH (DRAFT TUBE WATER DEPRESSING SYSTEM)	L
		CLOSED ABOVE ELEV. 291.0 & OPEN BELOW ELEV. 290.0	
	71DAX	AUXILIARY RELAY FOR 71DA	S
	71DB	FLOAT SWITCH (DRAFT TUBE WATER DEPRESSING SYSTEM)	L
		CLOSED BELOW ELEV. 290.0 & OPEN ABOVE ELEV. 291.0	
	71DBX	AUXILIARY RELAY FOR 71DB	S
	71DC	FLOAT SWITCH (DRAFT TUBE WATER DEPRESSING SYSTEM)	L
		CLOSED ABOVE ELEV. 291.5 & OPEN BELOW ELEV. 291.5	
	71DCX	AUXILIARY RELAY FOR 71DC	S
	71GTH	GENERATOR THRUST BEARING OIL RESERVOIR HI-LEVEL	G
		FLOAT SWITCH	
	71GTL	GENERATOR THRUST BEARING OIL RESERVOIR LO-LEVEL	G
		FLOAT SWITCH	
	71PG	PENSTOCK GALLERY HI-WATER LEVEL FLOAT SWITCH	L
	71QSH	GENERATOR GOVERNOR SUMP OIL HI-LEVEL FLOAT SWITCH	A
	71QSL	FLOAT SWITCHES GOVERNOR SUMP OIL LO-LEVEL	A
	71QTH	GENERATOR GOVERNOR PRESS TANK OIL HI-LEVEL FLOAT	L
		SWITCH	
	71QTL	GENERATOR GOVERNOR PRESS TANK OIL LO-LEVEL	L
		FLOAT SWITCH	
	71SDS	STATION DRAINAGE HIGH-LEVEL FLOAT SW.	L
	71TGH	TURBINE BEARING HI-LEVEL FLOAT SW.	T
	71TGL	TURBINE BEARING LO-LEVEL FLOAT SW.	T
	71TGLX	AUXILIARY RELAY FOR 71TGL	S
	71TOL	TRANSFORMER OIL LEVEL GAUGE CONTACT	P
	71TP	TURBINE PIT HI-WATER LEVEL SWITCH	T
	71US	UNWATERING SUMP HIGH LEVEL FLOAT SWITCH	L
	71WO	WASTE OIL SUMP FLOAT SWITCH	L
	71DS	DAM SUMP	L
	71ES	EFFLUENT SUMP HIGH LEVEL	L
	71USX	AUXILIARY RELAY FOR 71US	L

	DEVICE	DESCRIPTION	LOCATION
72	72	DC CIRCUIT BREAKER	*
	72BC	DC CIRCUIT BREAKER ALARM CONTACT	X

	DEVICE	DESCRIPTION	LOCATION
74	74AD	FISHERMAN'S WARNING FAILURE ALARM RELAY	S
	74GAD	GEN. COOLER DISCHARGE AIR	G
	74DD	DAM INTRUSION ALARM DOOR SWITCH	L
	74I	INVERTER FAILURE ALARM RELAY	L
	74M	MICROWAVE SYSTEM FAILURE	L
	74PABX	PABX TELEPHONE FAILURE (A-MAJOR, T-MINOR)	L
	74PD	POWERHOUSE INTRUSION ALARM DOOR SWITCH	L
	74S	UNIT START UP ALARM RELAY	S
	74SS	SCADA SYSTEM FAILURE	L
	74VD	VISITOR INTRUSION ALARM	L
	74E	EXCITER TROUBLE RELAY	E
	74/812	STATION SERVICE NO. 2 MAIN BREAKER 812 TRIP	S
		ALARM RELAY	
	74/814	STATION SERVICE NO. 1 MAIN BREAKER 814 TRIP	S
		ALARM RELAY	
	74/822	STATION SERVICE NO. 2 MAIN BREAKER 822 TRIP	S
		ALARM RELAY	
	74/824	STATION SERVICE NO. 2 MAIN BREAKER 824 TRIP	S
		ALARM RELAY	
	74TC	BREAKER TRIP COIL TROUBLE RELAY	S

	DEVICE	DESCRIPTION	LOCATION
78	78	SLIP DETECTOR DEVICE FOR SYNCHRONOUS START	E
	78X	AUXILIARY DEVICE FOR 78	S

	DEVICE	DESCRIPTION	LOCATION
79	79	OCB 138, 148, 238, 248, 338, 348, 438, 448	S
		RECLOSING RELAY	

	DEVICE	DESCRIPTION	LOCATION
80	80BRV	BATTERY ROOM VENTFLOW SWITCH	L
	80GCW	GENERATOR AIR COOLER COOLING WATER FLOW SWITCH	L
	80FSR	FLAMMABLE STORAGE RM. VENT FLOW SWITCH	L
	80GTW	GENERATOR THRUST BEARING WATER FLOW SWITCH	L
	80PBW	TURBINE PACKING BOX WATER FLOW SWITCH	T
	80PBWX	AUXILIARY RELAY FOR 80PBW	S
	80TBW	TURBINE BEARING COOLING WATER FLOW SWITCH	T
	80TBWX	AUXILIARY RELAY FOR 80TBW	S
	80WR	TURBINE WEAR RING WATERFLOW SWITCH	T
	80WRX	AUXILIARY RELAY FOR 80WR	S

	DEVICE	DESCRIPTION	LOCATION
81	81	UNDERFREQUENCY RELAY	*
	81EB	230KV EAST BUS UNDERFREQUENCY RELAY	X
	81EW1, 2, 3	AUX. RELAY FOR 81EB AND 81WB	S
	81WB	230 KV WEST BUS UNDERFREQUENCY RELAY	X
	81TX	UNDERFREQUENCY TIME DELAY RELAY	S

	DEVICE	DESCRIPTION	LOCATION
85	85	CARRIER AUXILIARY RELAY	X
	85X	CARRIER AUXILIARY RELAY	X

	DEVICE	DESCRIPTION	LOCATION
86	86	LOCKOUT HAND RESET RELAY	X
	86EB	230 KV EAST BUS DIFFERENTIAL RELAY	X
	86PL3	POWERHOUSE LINE NO. 3 LOCKOUT RELAY	X
	86WB	230 KV WEST BUS DIFFERENTIAL RELAY	X
	86X	AUXILIARY RELAY FOR 86	S
	86Y	AUXILIARY RELAY FOR 86	S
	86SB	STARTING BUS LOCKOUT	X
	86T	TRANSFORMER LOCKOUT	X

	DEVICE	DESCRIPTION	LOCATION
87	87	DIFFERENTIAL RELAY	X
	87EB	230 KV EAST BUS DIFFERENTIAL RELAY	X
	87PL3	POWERHOUSE LINE NO. 3 DIFFERENTIAL RELAY	X
	87WB	230 KV WEST BUS DIFFERENTIAL RELAY	X
	87SB	STARTING BUS	X

	DEVICE	DESCRIPTION	LOCATION
89	89	DISCONNECT SWITCH	*
	89C	CLOSING RELAY ON MOTOR OPERATED DISCONNECT SWITCH	L
	89G	GEN. POSITION RELAY ON PHASE REVERSAL SW.	L
	89O	OPENING RELAY ON MOTOR OPERATED DISCONNECT SWITCH	L
	89P	PUMP POSITION RELAY ON PHASE REVERSAL SW.	L

	DEVICE	DESCRIPTION	LOCATION
93	93	FIELD CHANGING CONTACTOR	E

	DEVICE	DESCRIPTION	LOCATION
94	94	CIRCUIT BREAKER TRIPPING RELAY	*
	94A	UTILITY LINE TRIPPING RELAY (PRI.)	X
	94B	UTILITY LINE TRIPPING RELAY (SEC.)	S

DEVICE	DESCRIPTION	LOCATION
AGLX	AUXILIARY RELAY FOR 1AGL SWITCH	S
BCAF	BATTERY CHARGER AC FAILURE ALARM RELAY	L
BCDF	BATTERY CHARGER DC FAILURE ALARM RELAY	L
BFX	BREAKER FAILURE AUXILIARY RELAY FOR UTILITY LINE	S
BGS	BREAK GLASS STATION	L
CTS	UTILITY LINE CARRIER TEST SWITCH	X
CCS	UTILITY LINE CARRIER CUTOFF SWITCH	X
CDX	CREEP DETECTION AUXILIARY RELAY	A
CMX1, 2	CONDENSING MODE AUXILIARY RELAY	S
CS-27B	UTILITY LINE CARRIER TRANSCEIVER	X
CS-TC	UTILITY LINE CARRIER TRANSCEIVER	X
CLF	CURRENT LIMITING FUSE	E
DVWS	DELUGE VALVE WEIGHT SWITCH	L
DM	DAMPER MOTOR	L
FW	FISHERMAN'S WARNING	*
GHT	GENERATOR HEATER THERMOSTAT	L
HJ/LS	HYDRAULIC JACK LIMIT SWITCH	L
LCO	LAMP CUT OUT	*
IGC	INTAKE GATE CLOSE	S
IGGL	INTAKE GATE GREEN LIGHT RELAY	S
IGRL	INTAKE GATE RED LIGHT RELAY	S
PFM	POWER FAILURE MONITOR	S

DEVICE	DESCRIPTION	LOCATION
R	RUN	*
RBDV	RUNNER BAND DRAIN VALVE RELAY	S
RBDV(LS)	RUNNER BAND DRAIN VALVE (LIMIT SW)	T
RCT	REPEAT CYCLE TIMER	S
RE	REMOTE CONTROL CONTACT	V
REC	RECORDER	*
RPM	REVOLUTIONS PER MINUTE	*
RCTX	AUXILIARY RELAY FOR RCT	S
RST	RESERVE SIGNAL TEST	X
SSG	SPEED SIGNAL GENERATOR	G
SRX	SPINNING RESERVE AUXILIARY RELAY	S
TDDO	TIME DELAY DROP OUT	*
TDPU	TIME DELAY PICK UP	*
UDX	AUX RELAY FOR UNIT DIRECTION INDICATION	A
URX	UNIT RUN AUXILIARY RELAY	S
TU	TIMING UNIT	S, X

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CONTROL DEVICE SCHEDULE
SHEET 3 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	G-6

SCALE: NO SCALE SHEET 006

101RRP_G06_DEVICE_3.DGN
101RRP_TBLK.DGN

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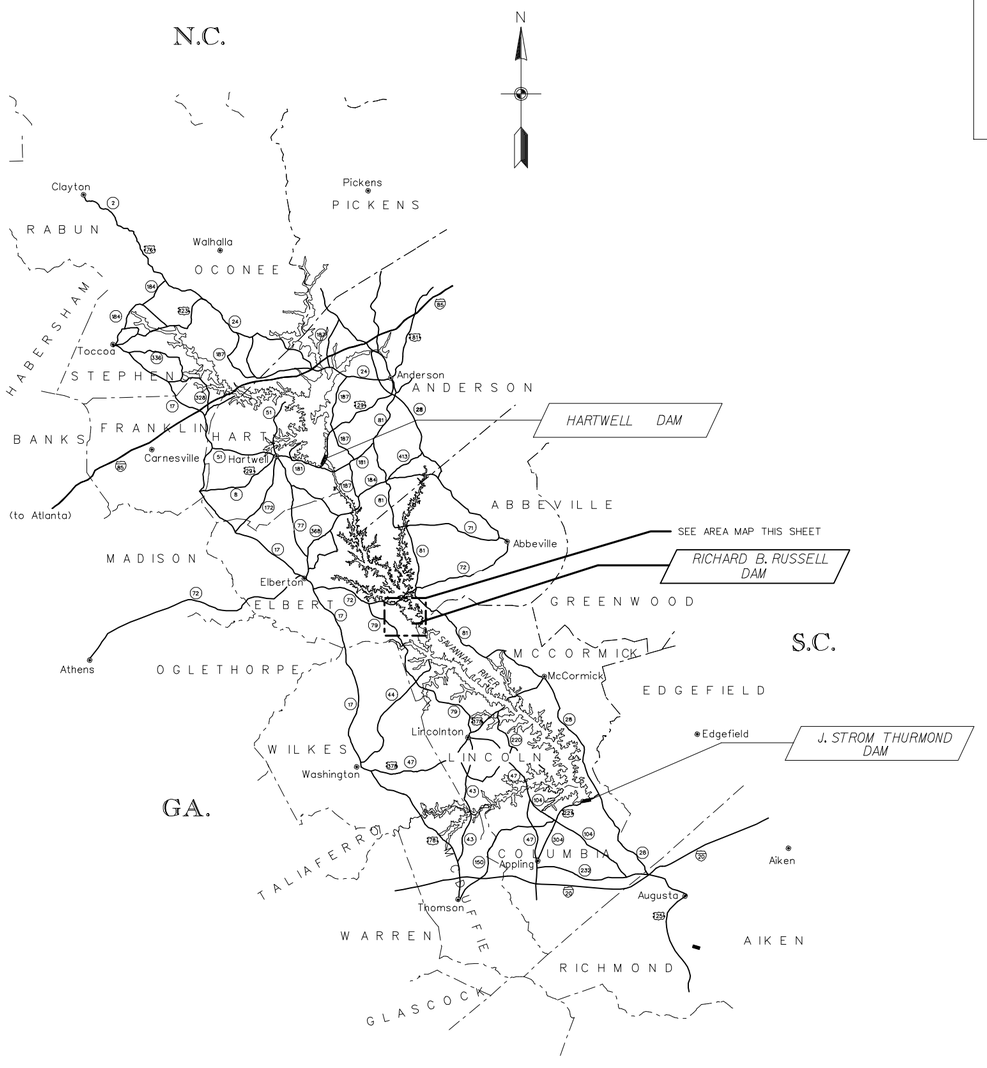
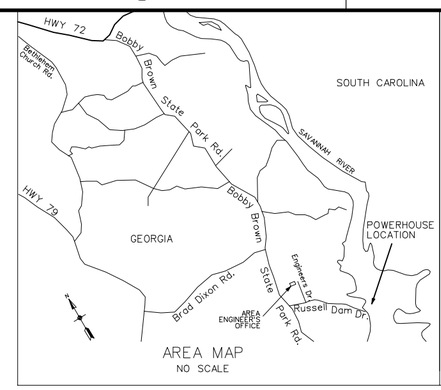


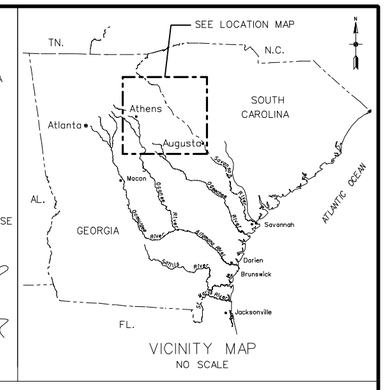
LOCATION MAP

SCALE: 1" = APPROX. 8 MI.

10 5 0 10 20 30 40



AREA MAP
NO SCALE



VICINITY MAP
NO SCALE

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

101RRP_C01_VICINITYMAP.DGN
101RRP_TBLK.DGN

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
PROJECT AREA, LOCATION
AND VICINITY MAP
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	C-1

SCALE: SHEET 007

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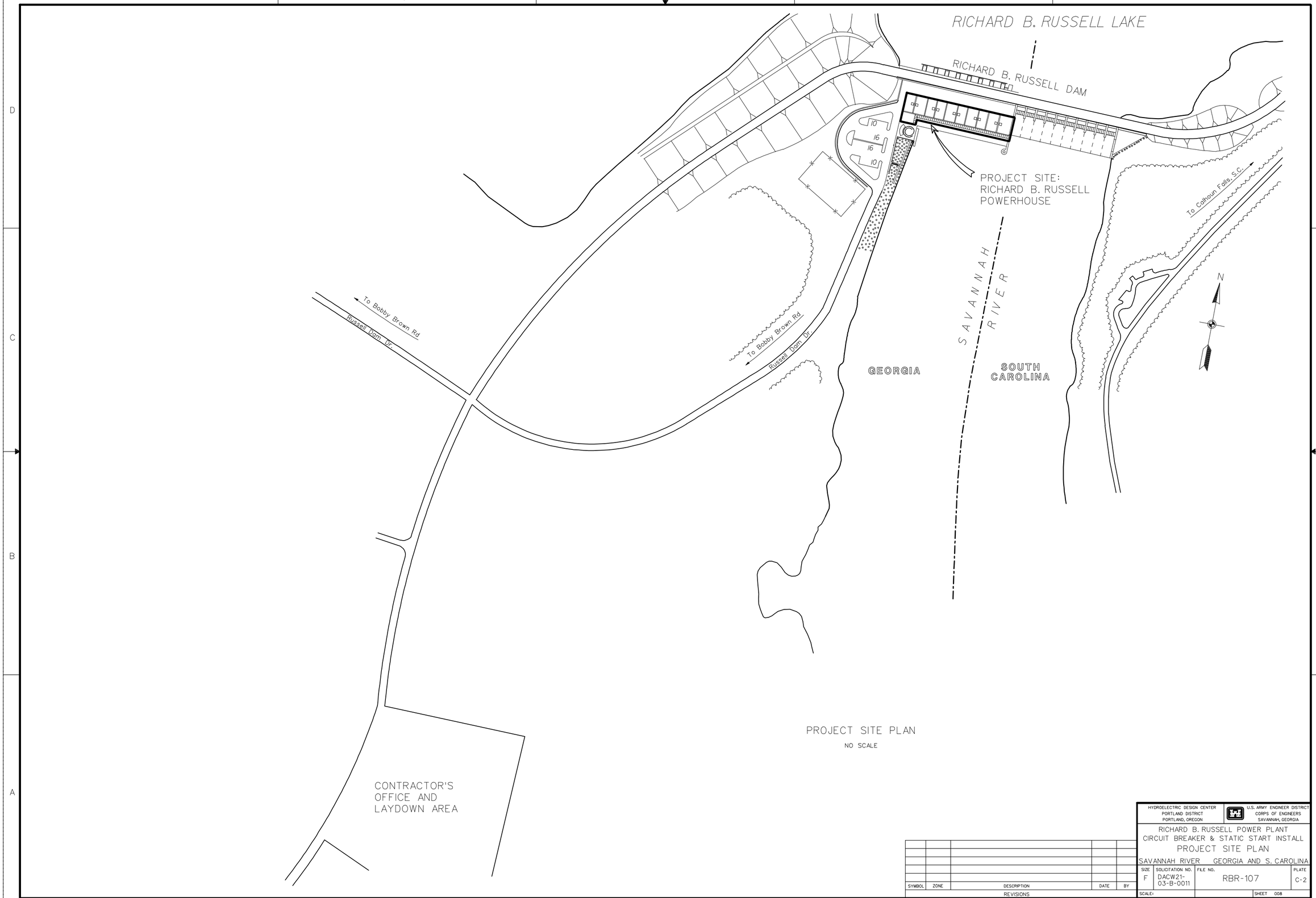

PROJECT SITE PLAN

NO SCALE

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
PROJECT SITE PLAN

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	C-2

SCALE: SHEET 008

101RRP_C02_SITEPLAN.DGN
101RRP_TBLK.DGN

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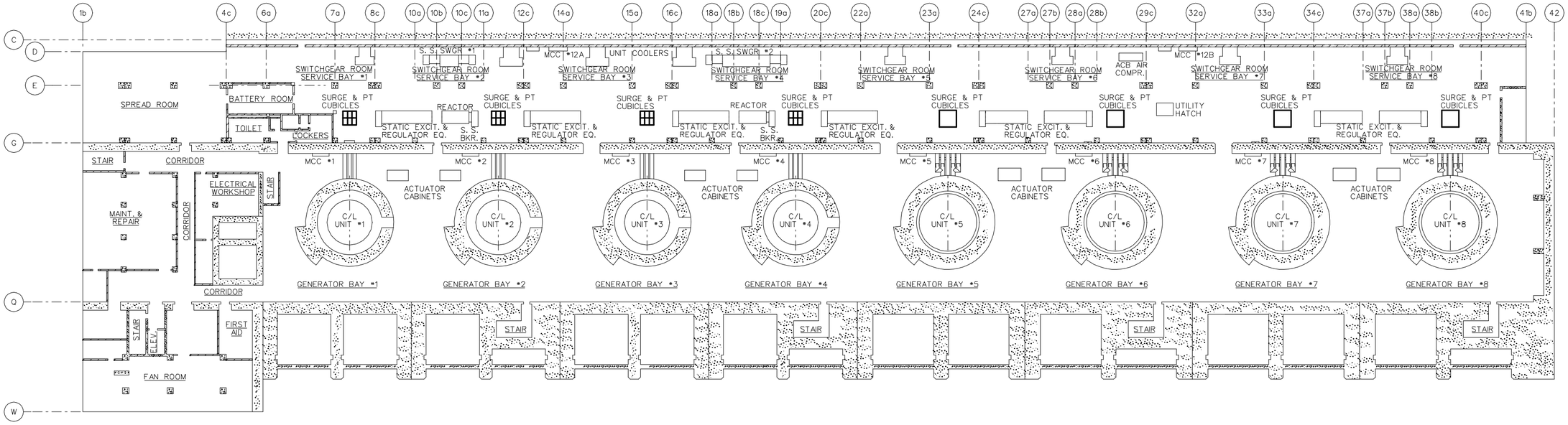
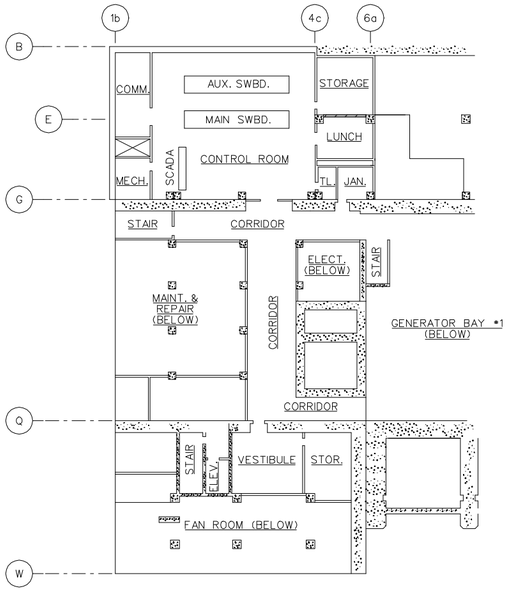


ARRANGEMENT PLAN, EL. 322.0

SCALE: 1" = 20'

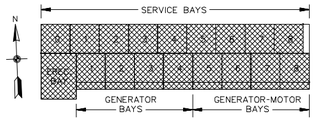


ARRANGEMENT PLAN, EL. 332.5

SCALE: 1" = 20'

NOTES:

1. EQUIPMENT SHOWN IS EXISTING. CABLE TRAYS AND ISOPHASE BUS NOT SHOWN. SURGE AND P.T. CUBICLES ARE SHOWN IN HEAVIER LINES FOR CLARITY.



KEY PLAN

COMPANION DRAWINGS:

A-2 ARRANGEMENT PLAN EL. 350.0

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
ARRANGEMENT PLAN
EL. 322.0, 332.5
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	A-1

SCALE= SHEET 009

101RRP_A01_ARRANGE322.DGN
101RRP_TBLK.DGN

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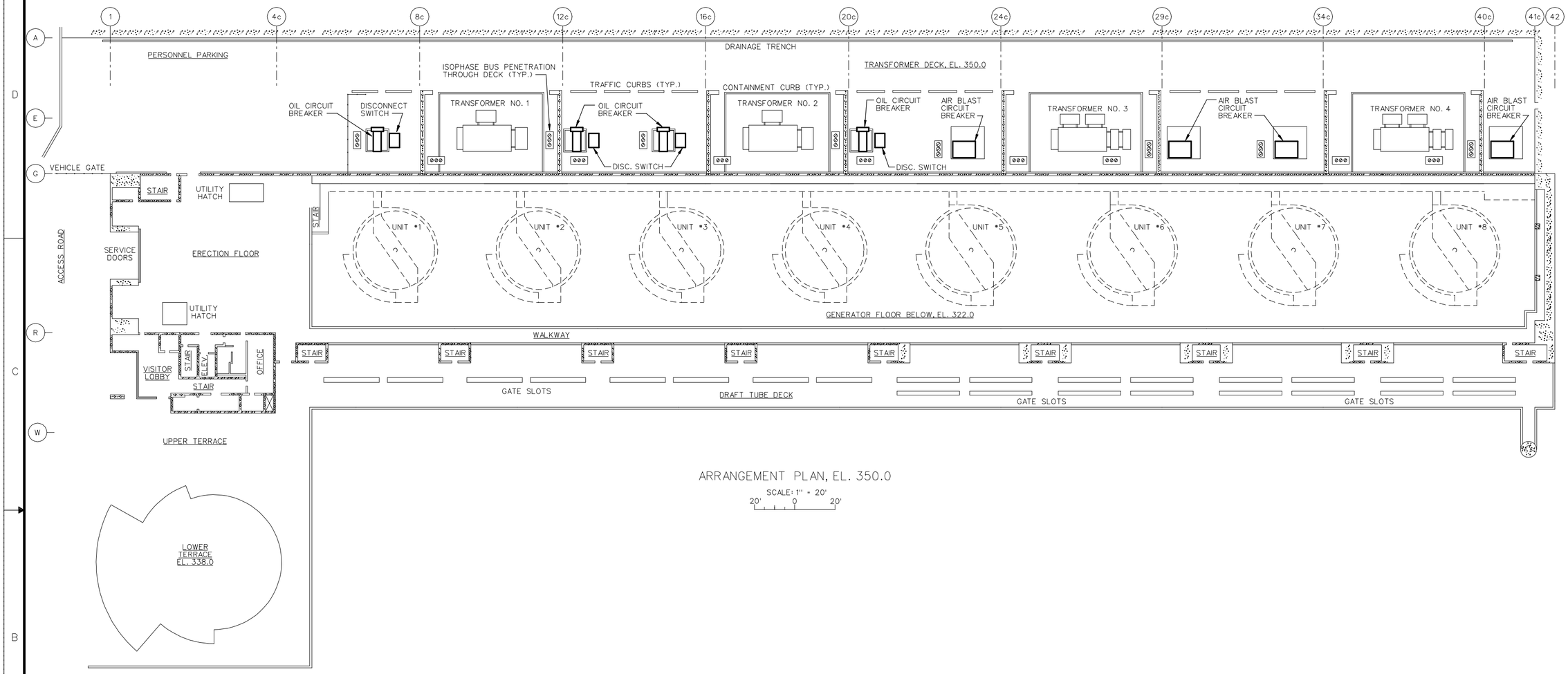


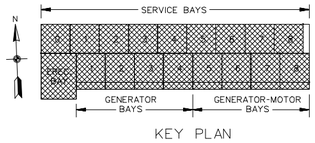
ARRANGEMENT PLAN, EL. 350.0

SCALE: 1" = 20'

20' 0 20'

NOTES:

1. EQUIPMENT SHOWN IS EXISTING. ISOPHASE BUS NOT SHOWN. CIRCUIT BREAKERS AND DISCONNECTS ARE SHOWN IN HEAVIER LINES FOR CLARITY.



KEY PLAN

COMPANION DRAWINGS:

A-1 ARRANGEMENT PLAN EL. 322.0, 332.5

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
ARRANGEMENT PLAN EL. 350.0

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	A-2

SCALE: SHEET 010

101RRP_A02_ARRANGE350.DGN
101RRP_TBLK.DGN

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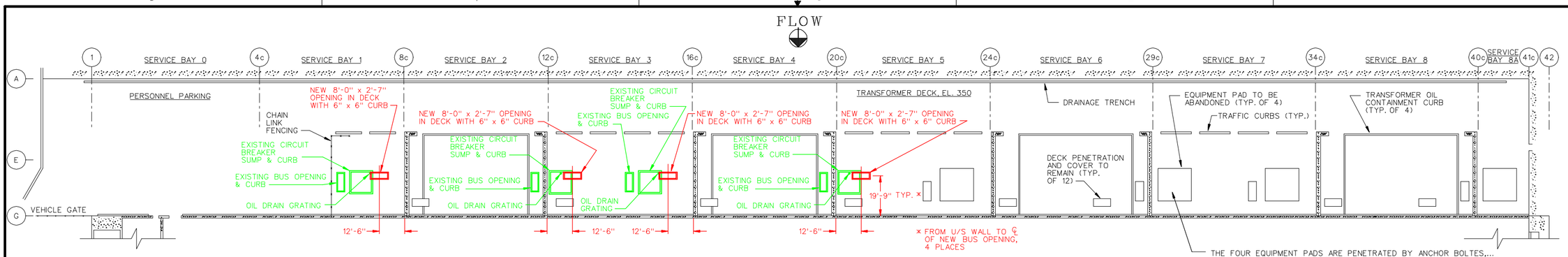
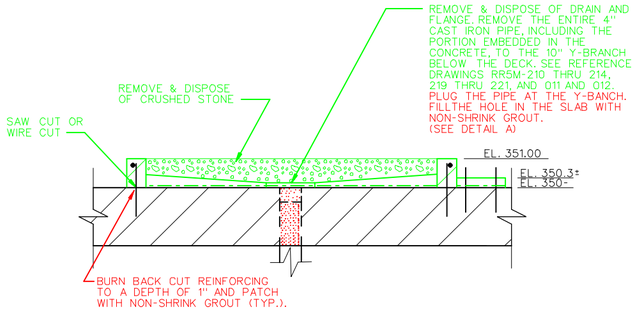


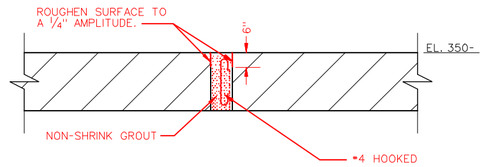
SERVICE BAYS STRUCTURAL WORK KEY
PLAN, EL. 350.0

SEE SHEET TWO FOR LOCATION OF PEDESTAL TO BE REMOVED.

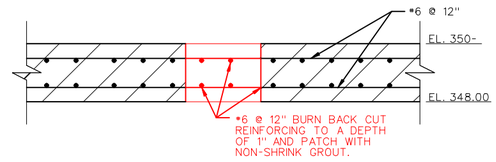
SCALE: 1" = 20'
20' 0 20'



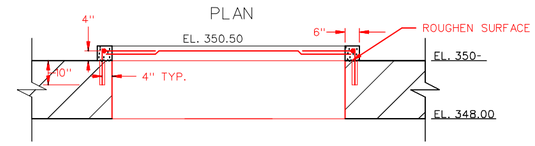
SECTION A-A



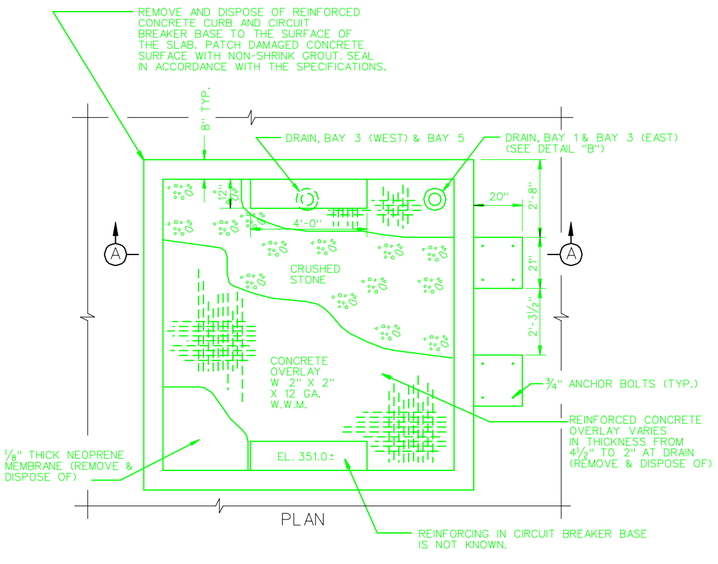
DETAIL A



SECTION B-B



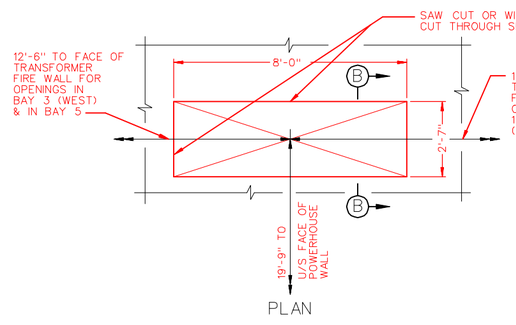
SECTION C-C



EXISTING CIRCUIT BREAKER SUMP & CURB

4 TOTAL, 1 IN BAY 1, 2 IN BAY 3, 1 IN BAY 4

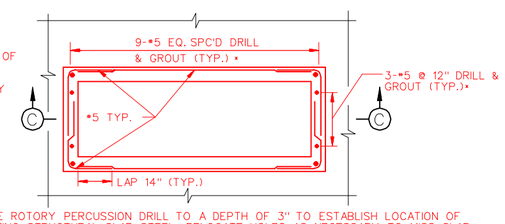
SCALE: 1/2" = 1'-0"
12" 0 1' 2' 3' 4'



NEW BUS OPENING
REINFORCED CONCRETE REMOVAL

4 TOTAL, 1 IN BAY 1, 2 IN BAY 3, 1 IN BAY 5

SCALE: 1/2" = 1'-0"
12" 0 1' 2' 3' 4'



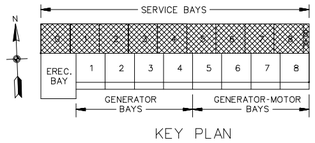
NEW BUS OPENING
COMPLETION

4 TOTAL, 1 IN BAY 1, 2 IN BAY 3, 1 IN BAY 5

SCALE: 1/2" = 1'-0"
12" 0 1' 2' 3' 4'

NOTES:

1. EXISTING STRUCTURAL FEATURES NOT TO BE MODIFIED OR REMOVED ARE SHOWN IN BLACK. HEAVIER RED LINES OR RED TEXT INDICATES NEW WORK OR FEATURES TO BE PROVIDED. HEAVIER GREEN LINES OR GREEN TEXT INDICATES REMOVAL OR DEMOLITION. ELECTRICAL EQUIPMENT IS NOT SHOWN FOR CLARITY.
2. THE EXISTING DECK IS SEALED WITH WATERPROOFING MATERIAL. SEALANT MATCHING THE EXISTING SHALL BE APPLIED WHERE THE EXISTING MATERIAL IS DAMAGED OR REMOVED, WHERE CONCRETE, STEEL, AND PIPE REMOVAL EXPOSES UNSEALED SURFACES, AND WHERE NEW CONCRETE IS PLACED. SEE SPECIFICATIONS.



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
STRUCTURAL MODIFICATIONS
SHEET 1 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	S-1

SCALE: SHEET 011

101RRP_S01_WORKPLAN350.DGN
101RRP_TBLK.DGN

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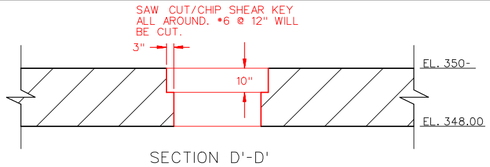
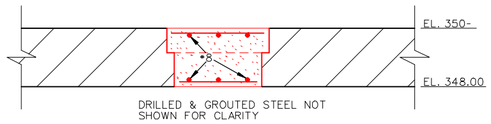
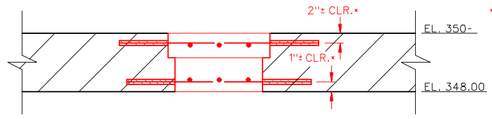


SECTION D'-D'

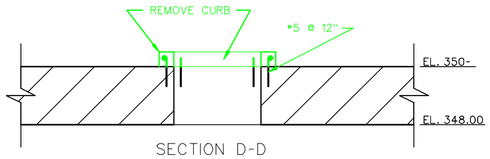


SECTION E-E

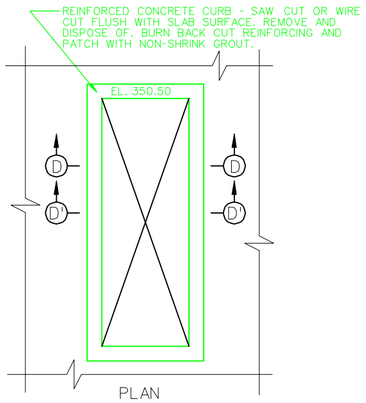


SECTION E'-E'

* CLR: SHEAR KEY CUT WILL EXPOSE EXISTING TOP FACE LONGITUDINAL #6 REINFORCING. EXISTING TRANSVERSE REINFORCING WILL BE JUST BELOW THOSE BARS. THE DRILL HOLES SHALL BE LOCATED BELOW THE TRANSVERSE BARS JUST ENOUGH TO AVOID DAMAGING THE EXISTING STEEL. THE BOTTOM FACE DRILL HOLE SHALL BE LOCATED ABOVE THE TRANSVERSE BARS ENOUGH TO AVOID DAMAGING THEM.



SECTION D-D

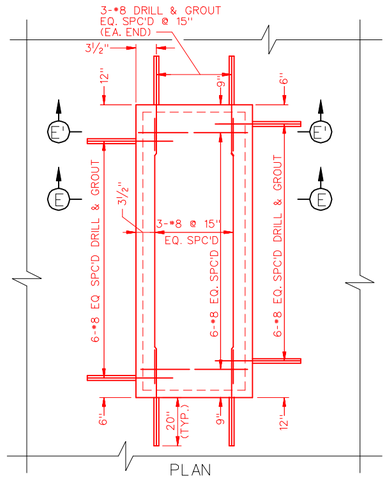


PLAN

EXISTING 8'-6" X 3'-0" BUS OPENING & CURB

4 TOTAL, 1 EACH, BAYS 1 THRU 4.

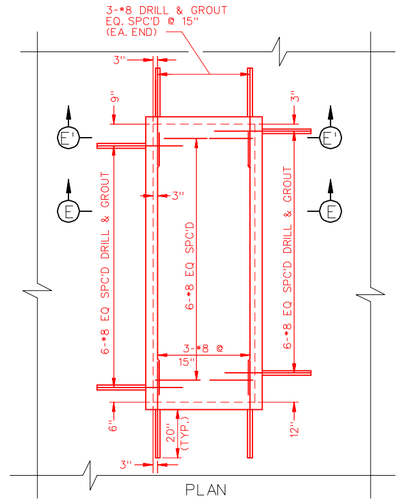
SCALE: 1/2"= 1'-0"



PLAN

TOP FACE REINFORCING

SCALE: 1/2"= 1'-0"

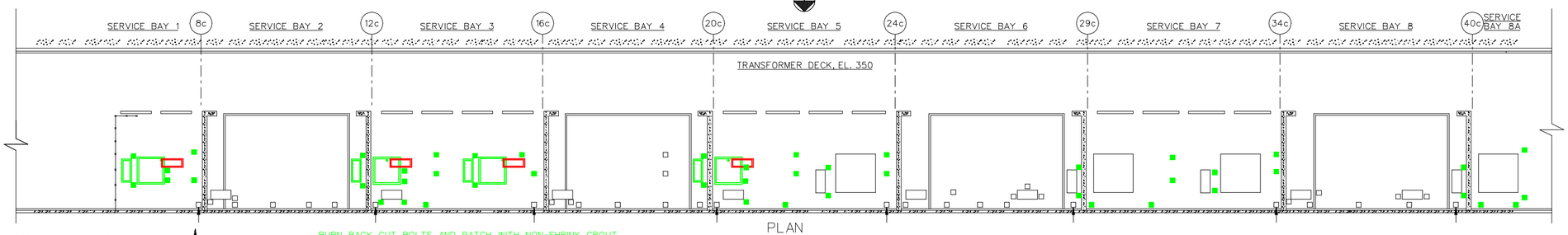


PLAN

BOTTOM FACE REINFORCING

SCALE: 1/2"= 1'-0"

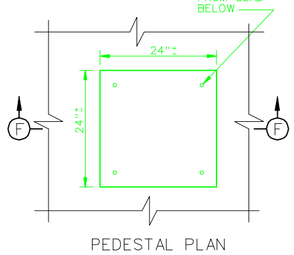
FLOW



NOTE: PEDESTALS DESIGNATED WITH "↑" MAY BE REQUIRED TO BE REMOVED, DEPENDING ON THE REQUIREMENTS OF THE BUS MANUFACTURER.

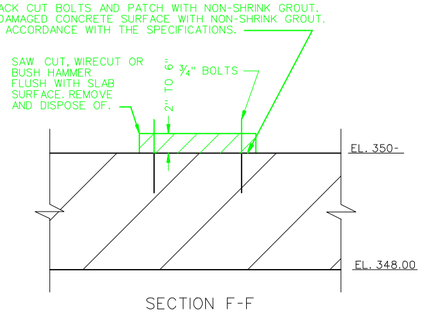
PLAN
PEDESTAL REMOVAL

SCALE: 1" = 20'



PEDESTAL PLAN

SCALE: 1" = 1'-0"



SECTION F-F

SCALE: 1" = 1'-0"

NOTES:

1. THE LOCATION OF PEDESTALS SHOWN ON THIS DRAWING ARE APPROXIMATE.
2. SEE NOTES 1 & 2 ON SHEET S-1.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

101RRP_S02_WORKPLAN350.DGN
101RRP_TBLK.DGN

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
STRUCTURAL MODIFICATIONS
SHEET 2 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	S-2

SCALE: SHEET 012

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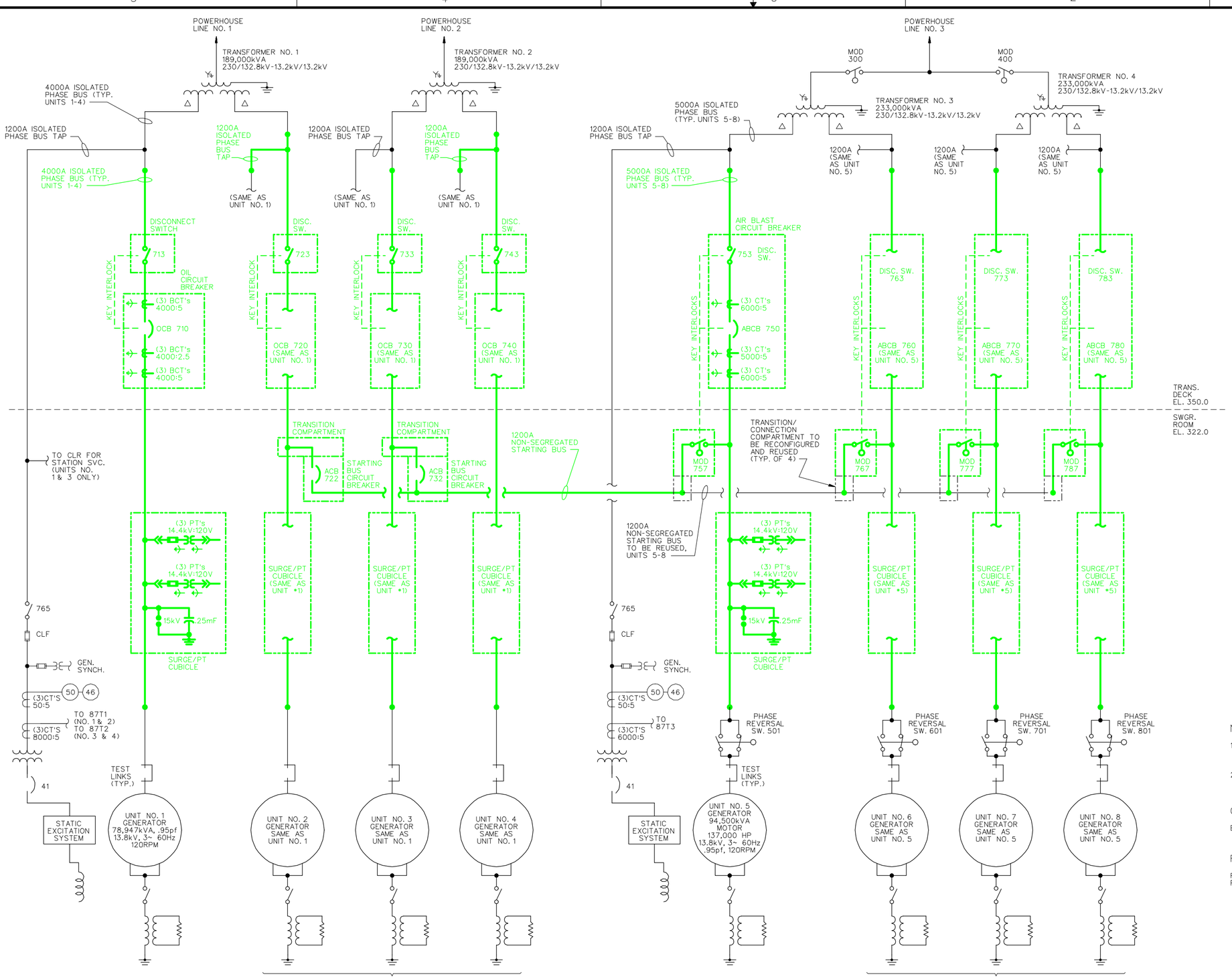

NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED.
2. STATION SERVICE 1200A ISOPHASE BUS AND EQUIPMENT NOT SHOWN. SOME MAIN UNIT INSTRUMENTATION NOT SHOWN.

COMPANION DRAWINGS:

E-2 MAIN UNITS ONE-LINE DIAGRAM REVISED CONFIGURATION

REFERENCE DRAWINGS:

RR5E-1001 MAIN ONE-LINE DIAGRAM - SH 1
RR5E-1002 MAIN ONE-LINE DIAGRAM - SH 2

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN UNITS ONE-LINE DIAGRAM
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-1

SCALE: NO SCALE SHEET 013

101RRP_E001_OLDONELINE.DGN
101RRP_TBLK.DGN

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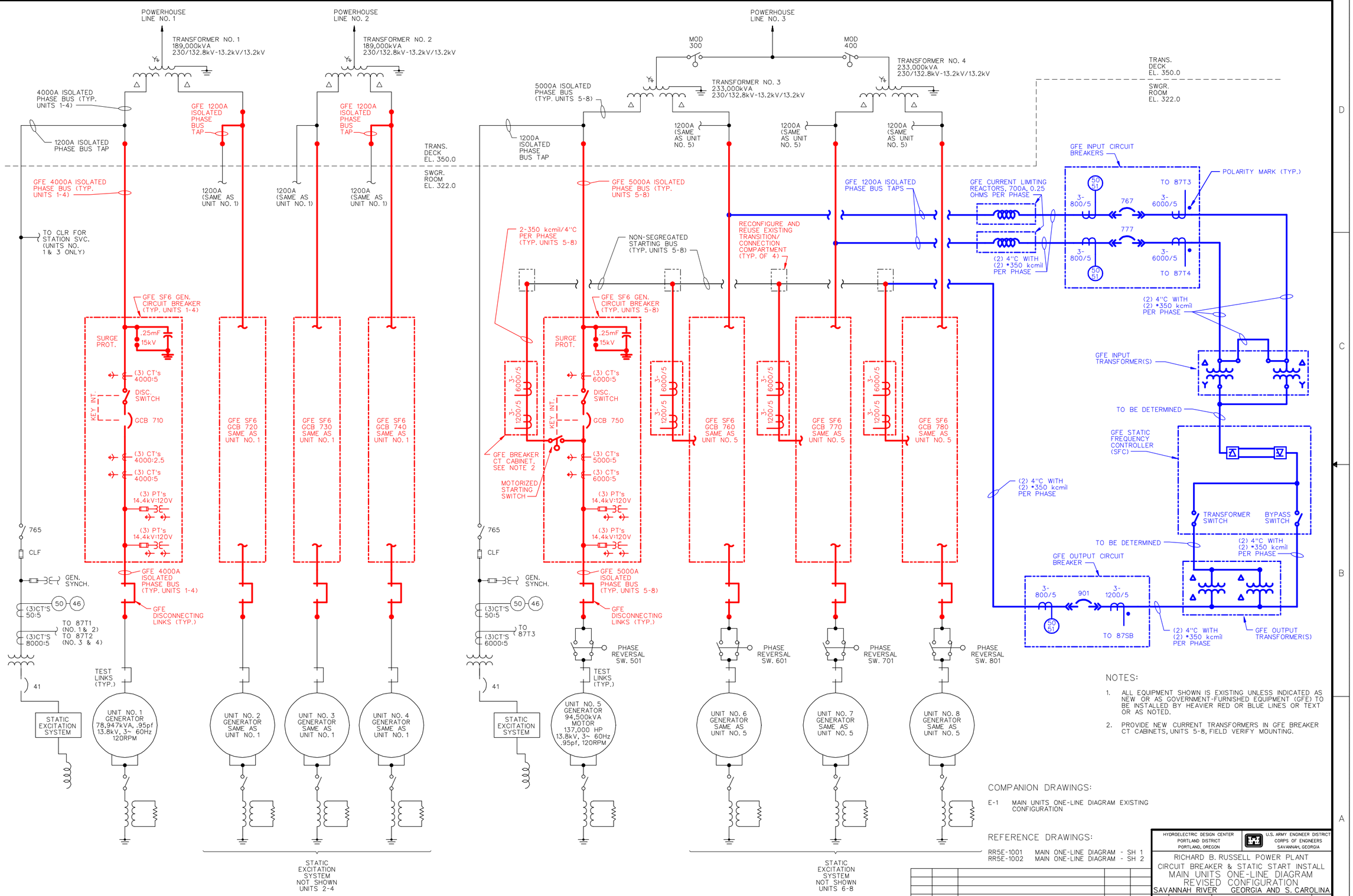

NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING UNLESS INDICATED AS NEW OR AS GOVERNMENT-FURNISHED EQUIPMENT (GFE) TO BE INSTALLED. BY HEAVIER RED OR BLUE LINES OR TEXT OR AS NOTED.
2. PROVIDE NEW CURRENT TRANSFORMERS IN GFE BREAKER CT CABINETS, UNITS 5-8, FIELD VERIFY MOUNTING.

COMPANION DRAWINGS:

E-1 MAIN UNITS ONE-LINE DIAGRAM EXISTING CONFIGURATION

REFERENCE DRAWINGS:

RR5E-1001 MAIN ONE-LINE DIAGRAM - SH 1
RR5E-1002 MAIN ONE-LINE DIAGRAM - SH 2

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
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PORTLAND, OREGON

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN UNITS ONE-LINE DIAGRAM
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-2

SCALE: NO SCALE SHEET 014

101RRP_E002_NEWONELINE.DGN
101RRP_TBLK.DGN

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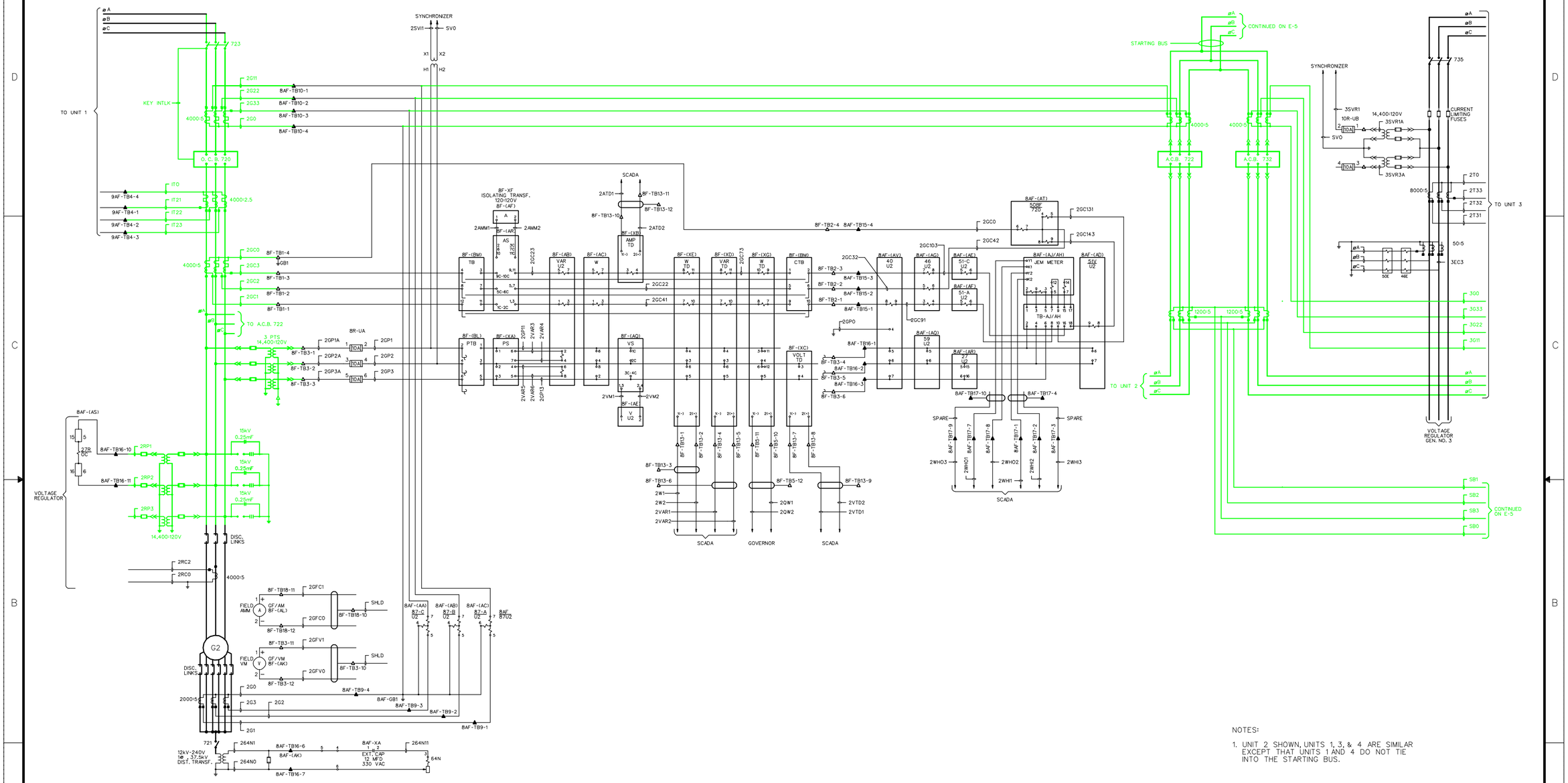

NOTES:

1. UNIT 2 SHOWN, UNITS 1, 3, & 4 ARE SIMILAR EXCEPT THAT UNITS 1 AND 4 DO NOT TIE INTO THE STARTING BUS.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 THREE-LINE DIAGRAM
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-3

SCALE: NONE SHEET 015

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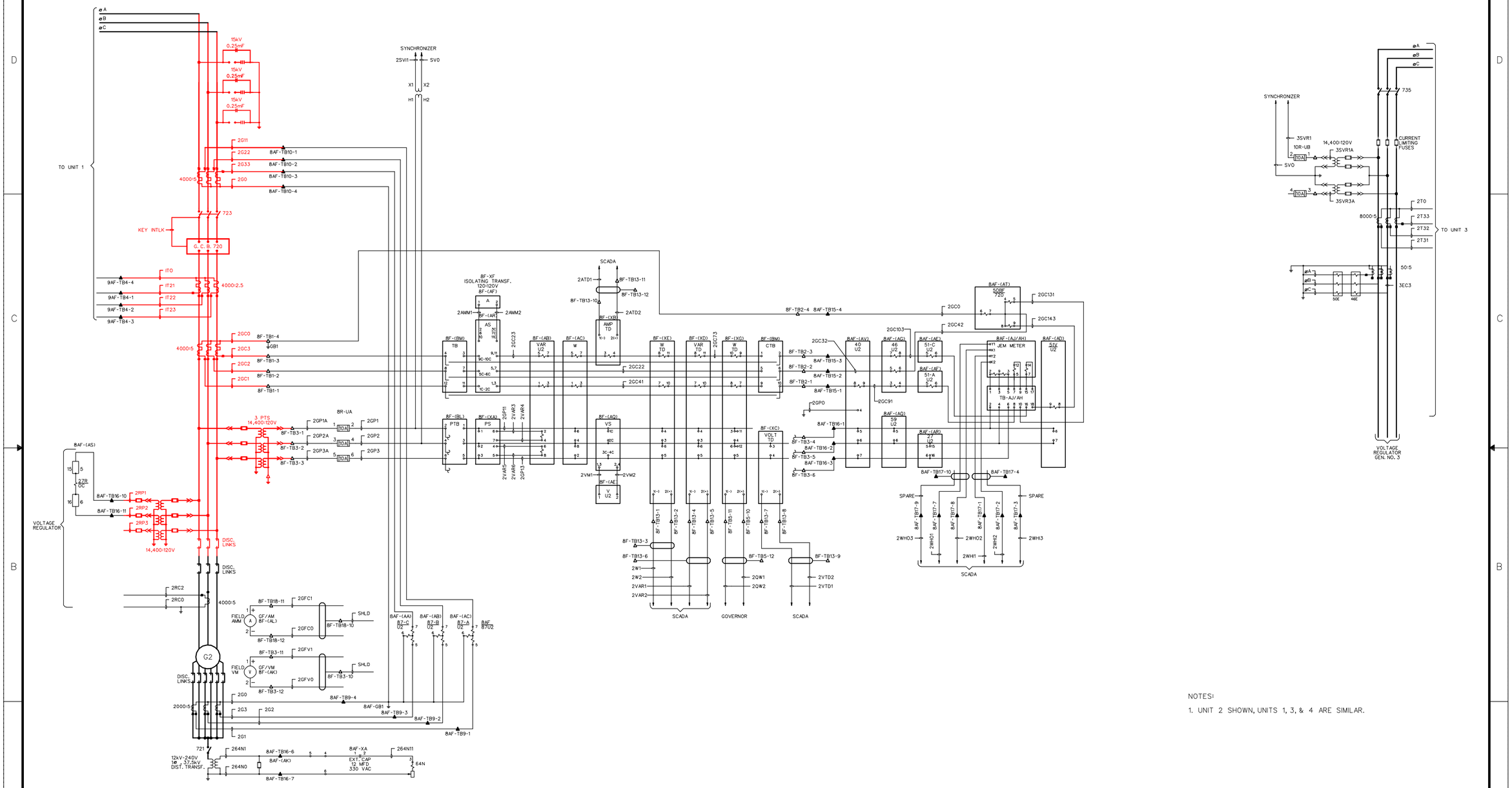

NOTES:

1. UNIT 2 SHOWN, UNITS 1, 3, & 4 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 THREE-LINE DIAGRAM
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-4

SCALE: NONE SHEET 016

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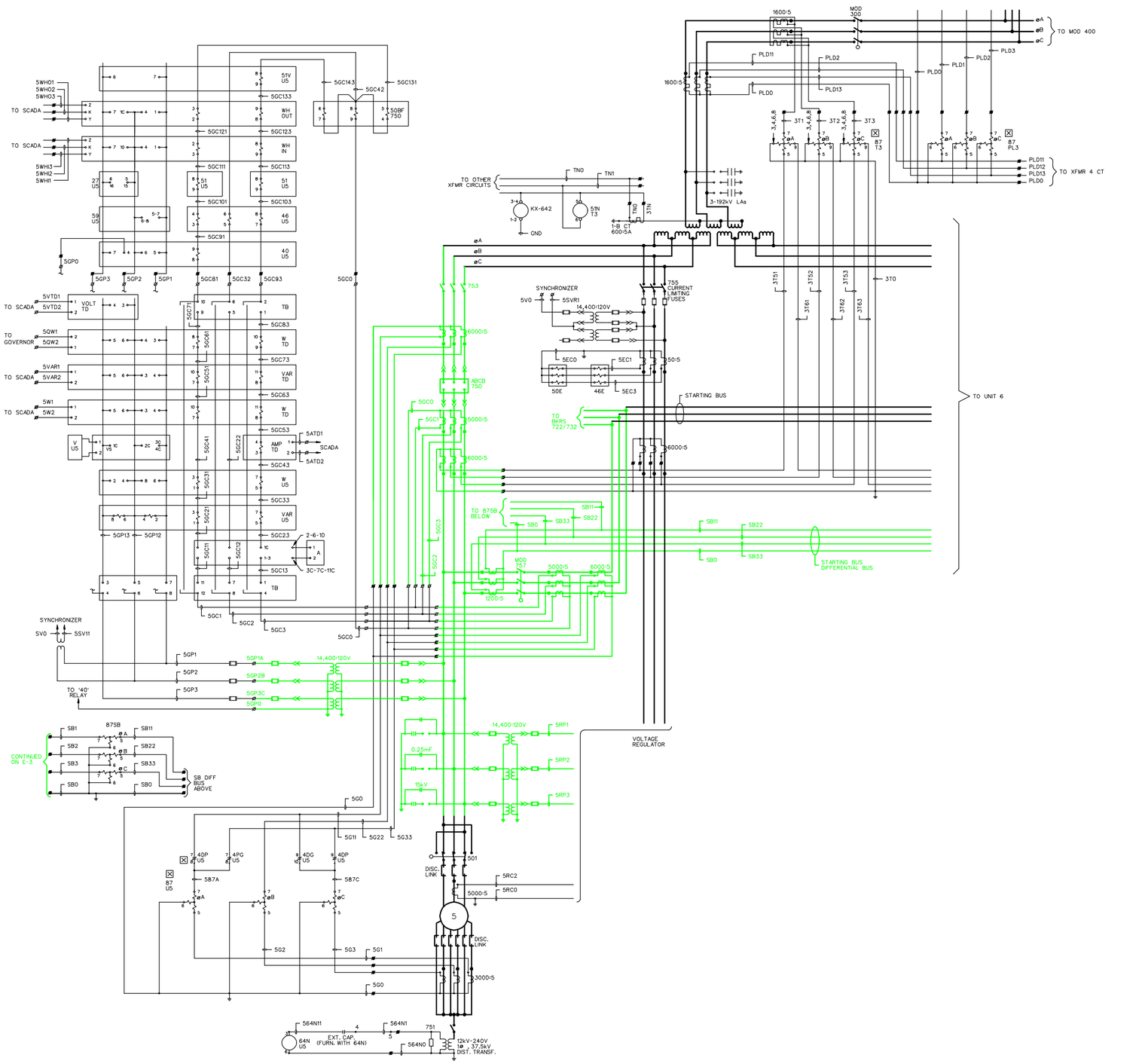

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 THREE-LINE DIAGRAM
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-5

SCALE: NONE SHEET 017

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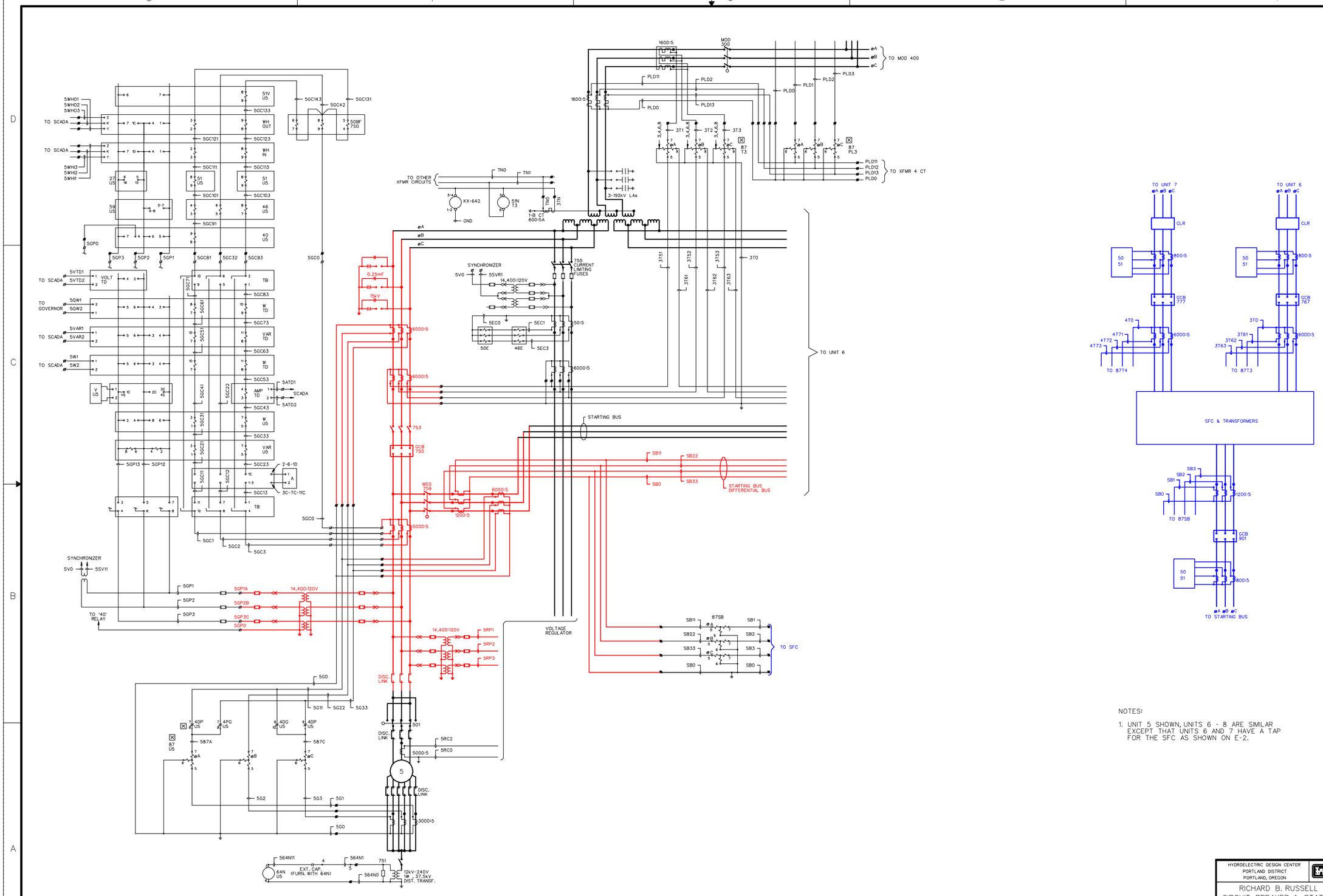

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR EXCEPT THAT UNITS 6 AND 7 HAVE A TAP FOR THE SFC AS SHOWN ON E-2.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 THREE-LINE DIAGRAM
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-6

SCALE: NONE SHEET 018

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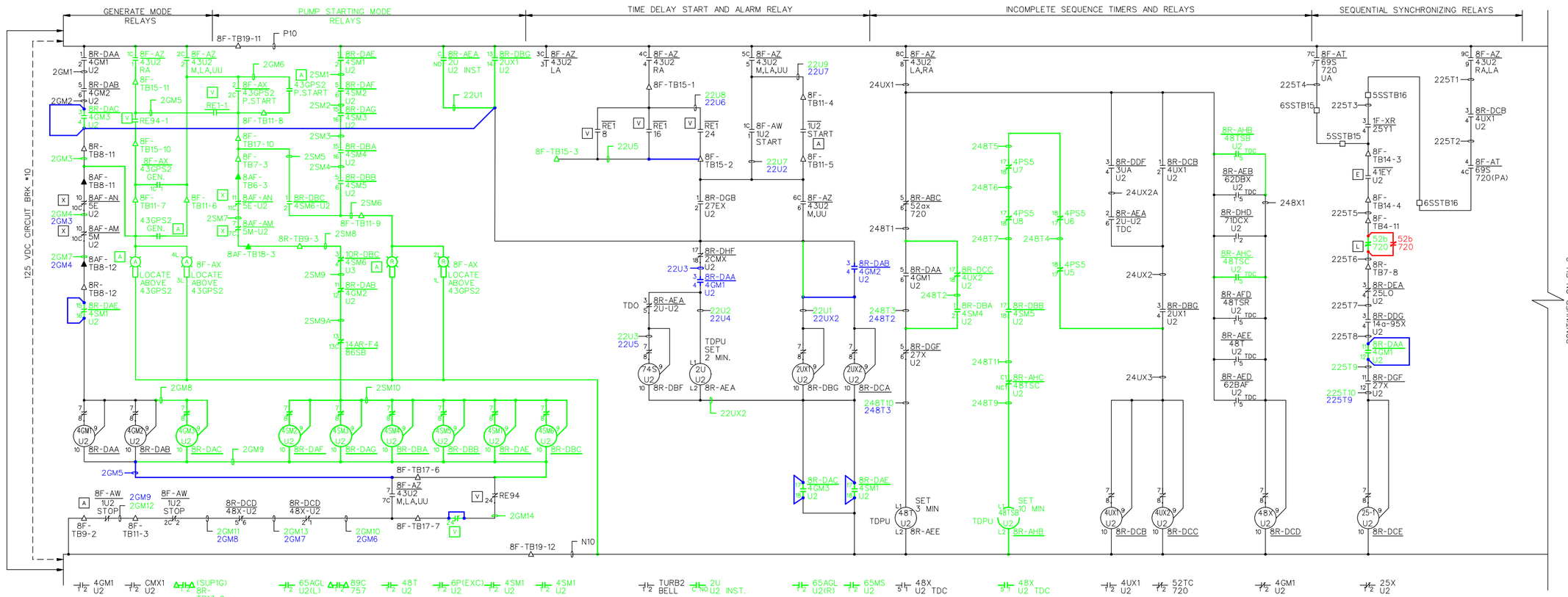

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

GENERATOR AND TURBINE CONTROLS

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 GEN. & TURBINE CONTROLS
SH. 1 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-7

SCALE: NONE SHEET 019

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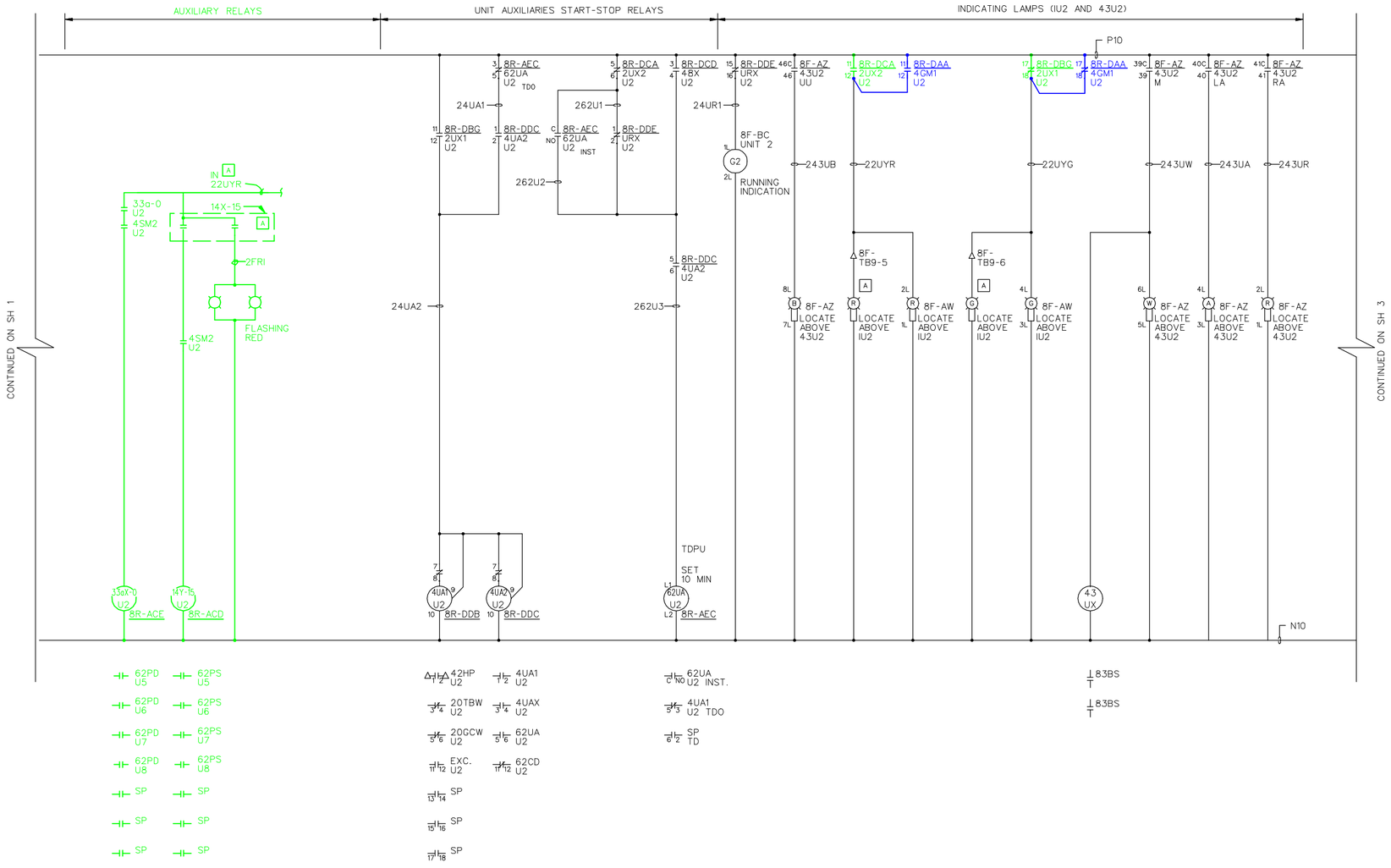

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

GENERATOR AND TURBINE CONTROLS

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 GEN. & TURBINE CONTROLS
SH. 2 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-8

SCALE: NONE SHEET 020

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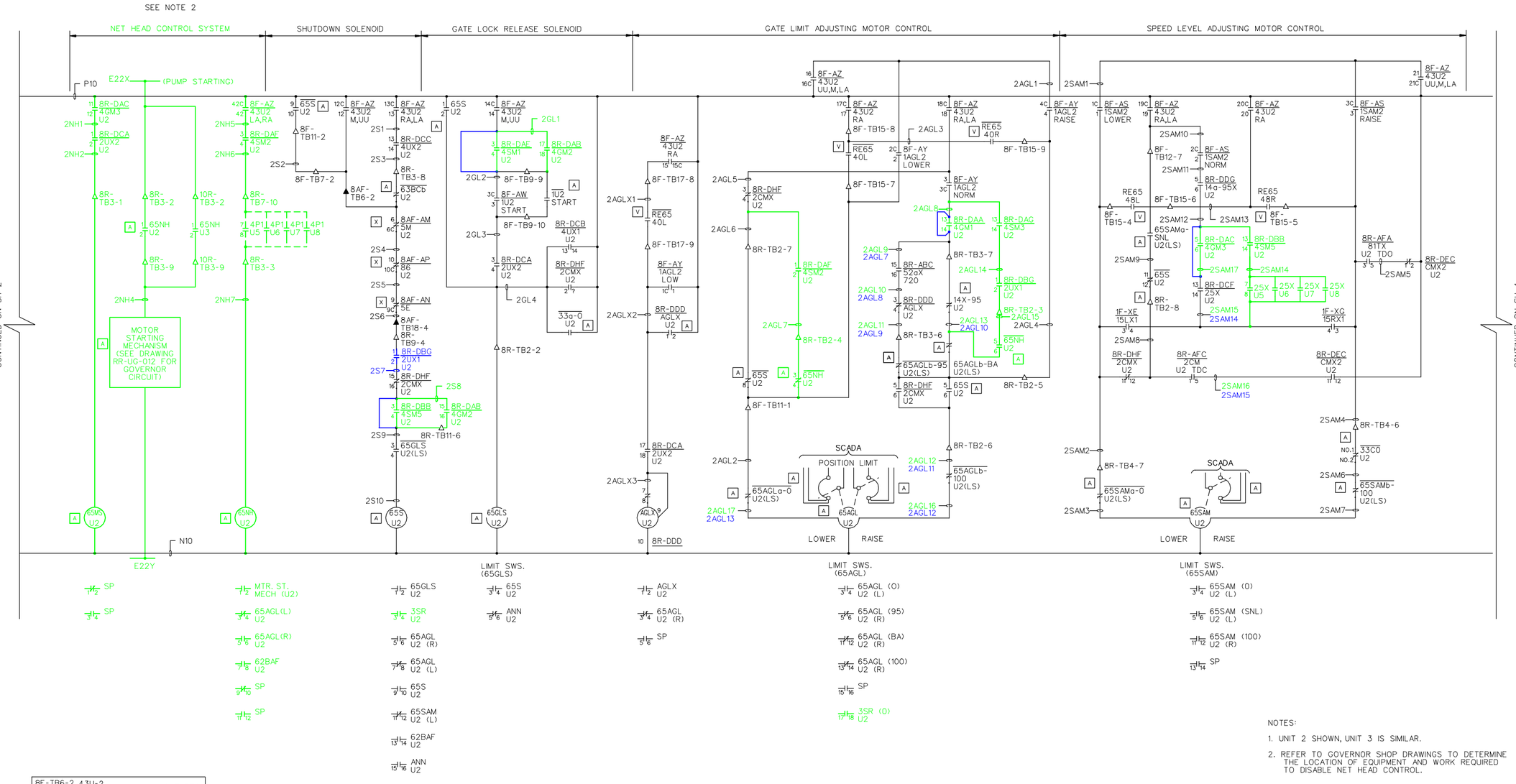

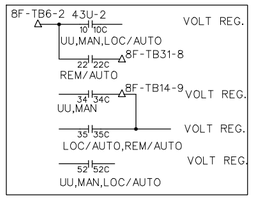

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.
2. REFER TO GOVERNOR SHOP DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT AND WORK REQUIRED TO DISABLE NET HEAD CONTROL.

GENERATOR AND TURBINE CONTROLS

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 GEN. & TURBINE CONTROLS
SH. 3 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-9

SCALE: NONE SHEET 021

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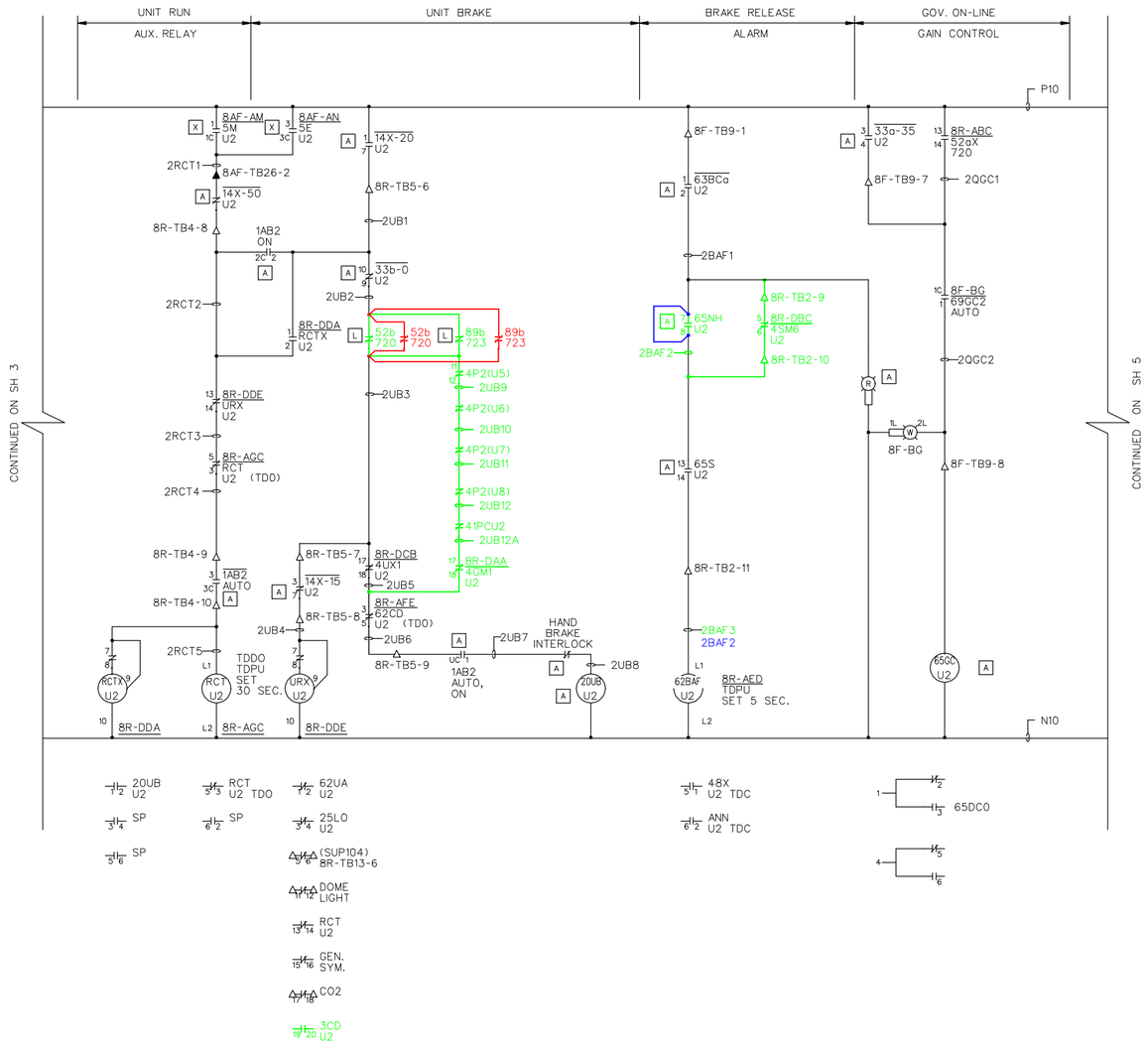

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

GENERATOR AND TURBINE CONTROLS

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 GEN. & TURBINE CONTROLS
SH. 4 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-10

SCALE: NONE SHEET 022

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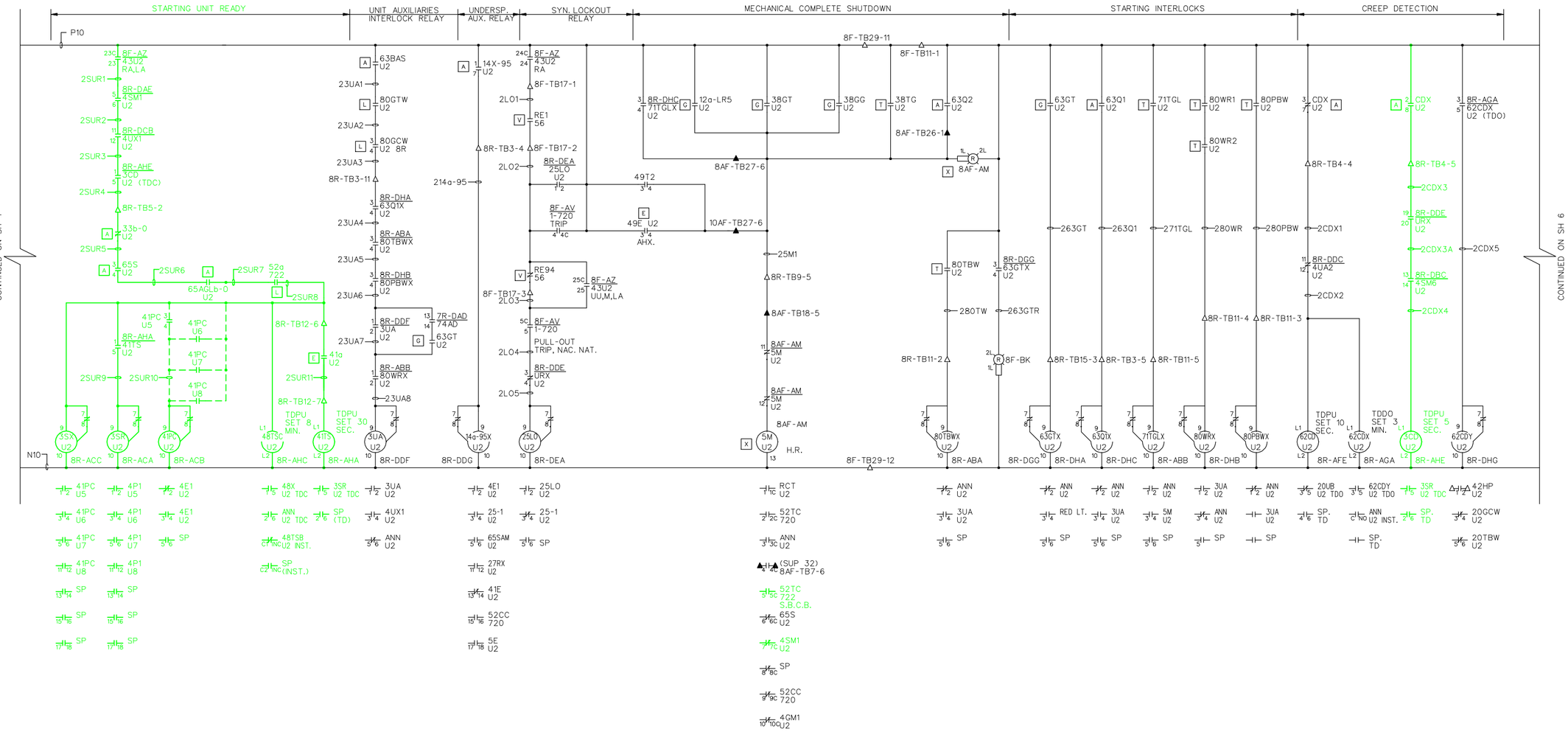

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 GEN. & TURBINE CONTROLS
SH. 5 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-11

SCALE: NONE SHEET 023

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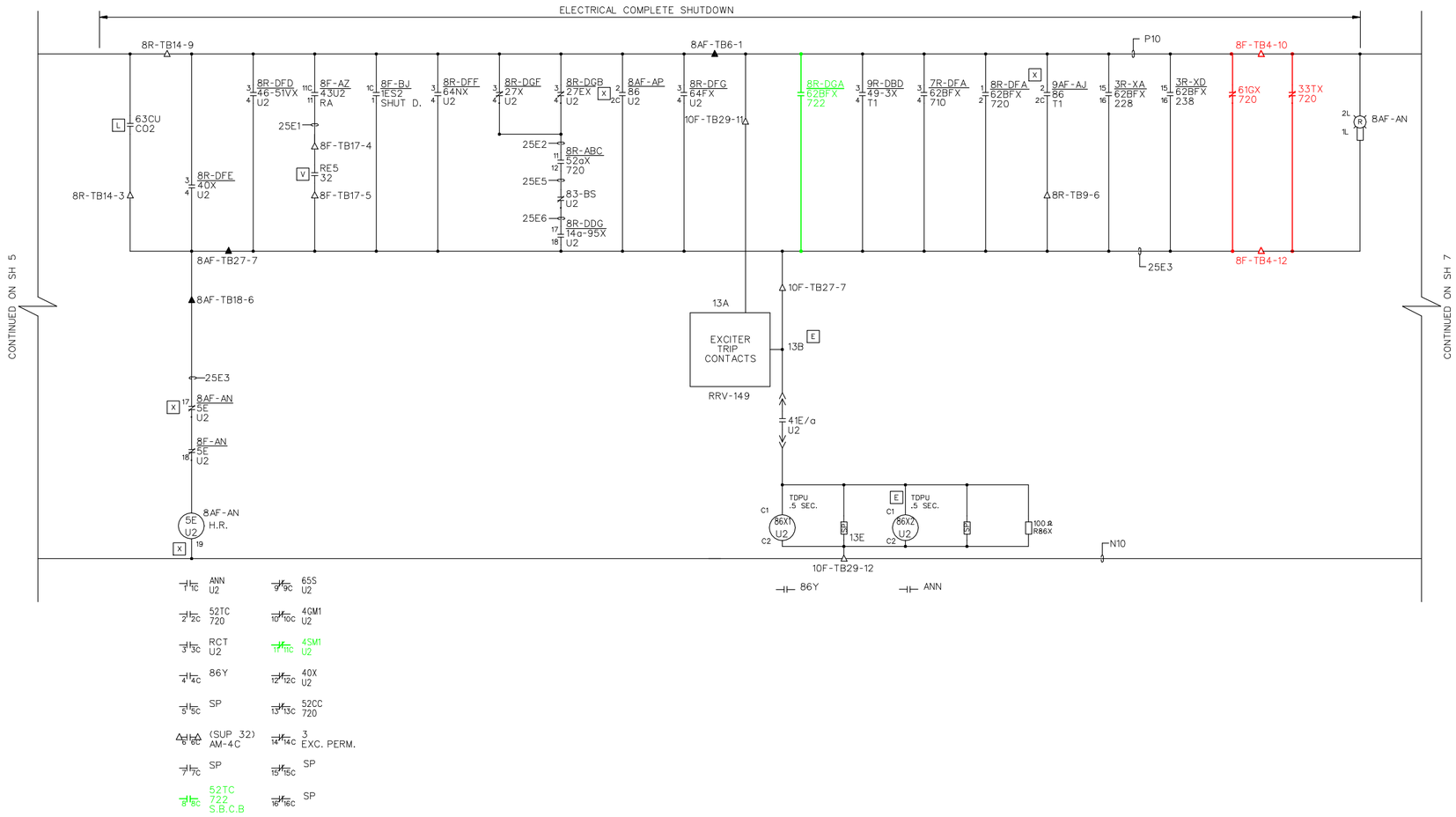

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

GENERATOR AND TURBINE CONTROLS

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 GEN. & TURBINE CONTROLS
SH. 6 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-12

SCALE: NONE SHEET 024

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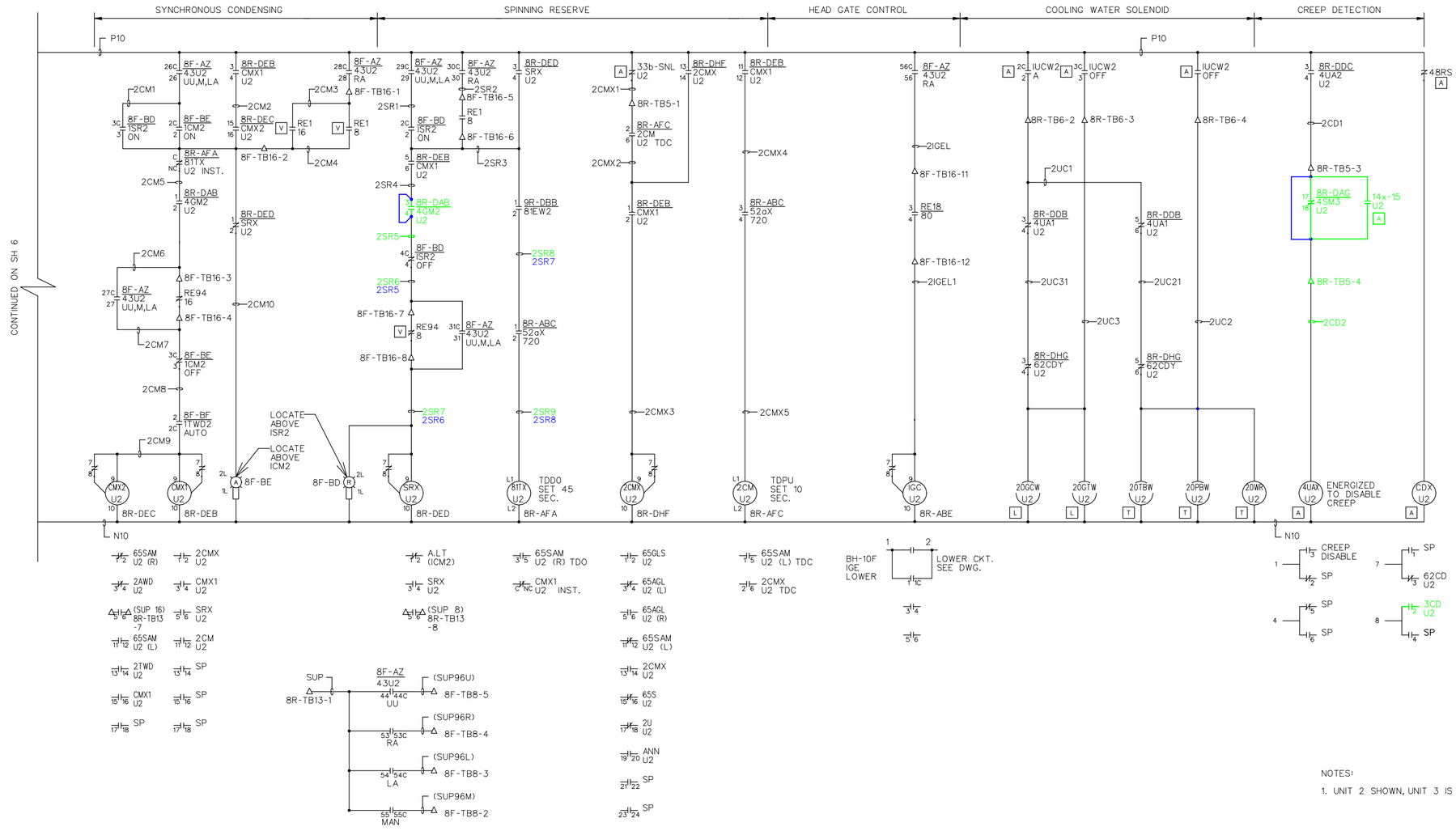

GENERATOR AND TURBINE CONTROLS

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 GEN. & TURBINE CONTROLS
SH. 7 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-13

SCALE: NONE SHEET 025

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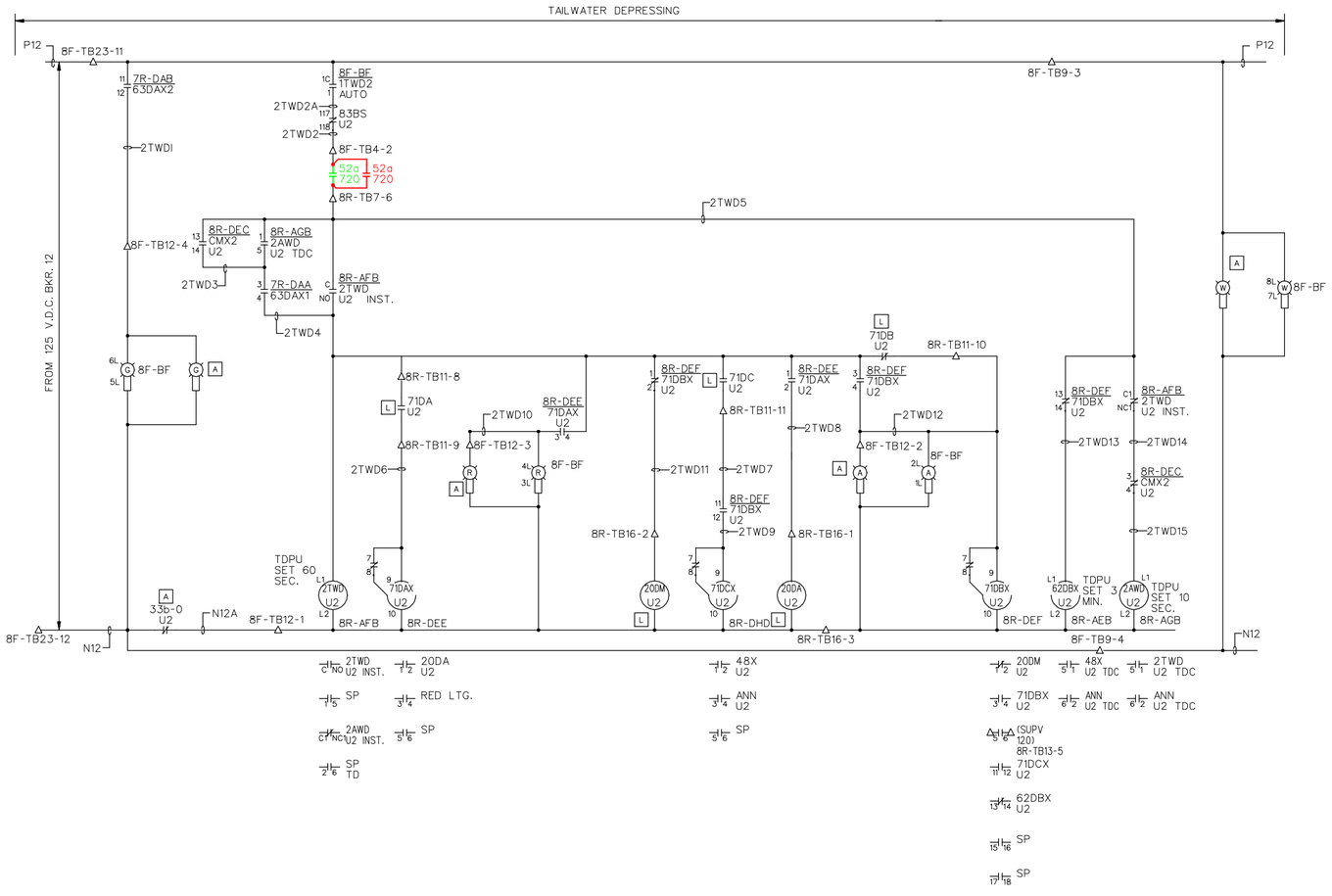

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

GENERATOR AND TURBINE CONTROLS

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 GEN. & TURBINE CONTROLS
SH. 8 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-14

SCALE: NONE SHEET 026

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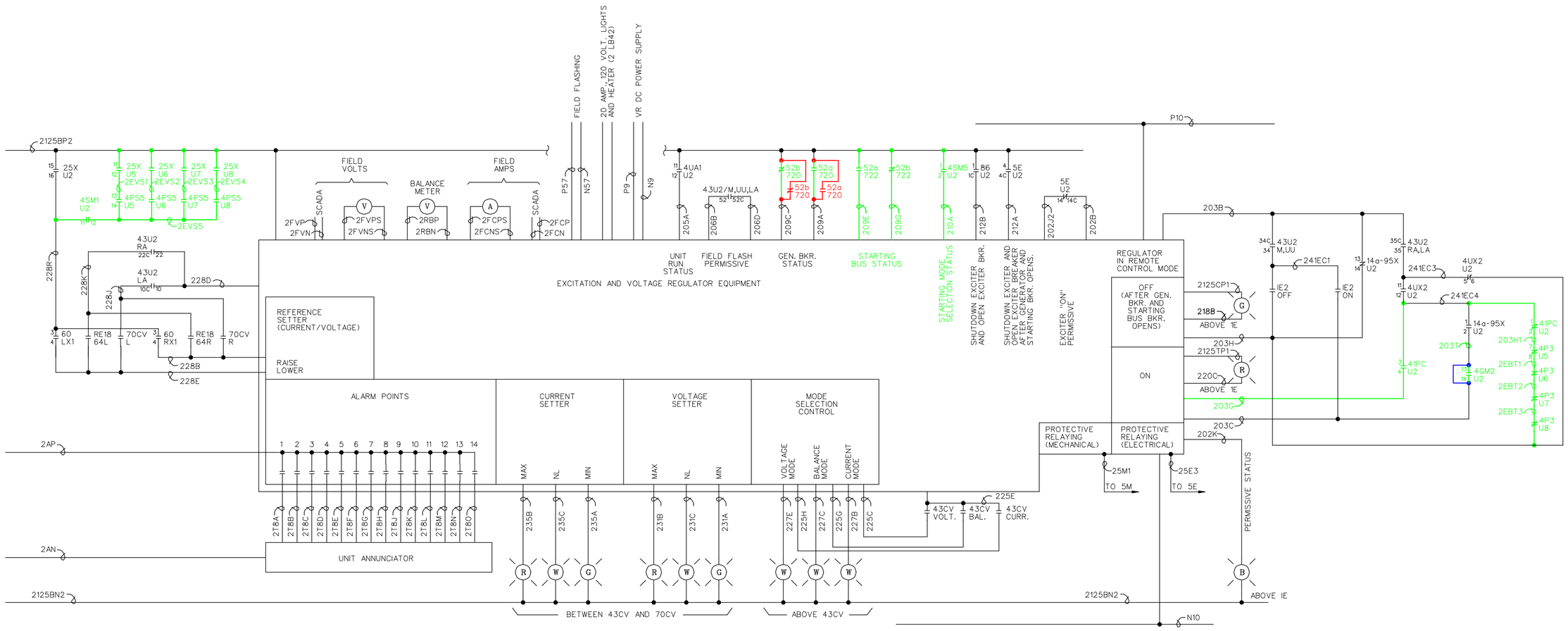

MISC. EXCITATION EQUIPMENT UNIT 2

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

ALARM POINTS

1. -EXCITER HIGH TEMP.
2. -VOLTAGE REGULATOR FAILURE
3. -FIELD FLASHING ON
4. -FIRST SCR FAILURE
5. -TRANSFORMER HIGH TEMP.
6. -OVER EXCITATION LIMIT
7. -UDER EXCITATION WARNING
8. -UNDER EXCITATION LIMIT
9. -EXCITER ANN. FAILURE
10. -ABNORMAL ALARM
11. -CRITICAL ALARM
12. -POWER STABILIZER TROUBLE
13. -INCOMPLETE NORMAL STOP
14. -INCOMPLETE START SEQUENCE.

DEVICE	TITLE	CONT.	POSITIONS (FRONT VIEW)				HANDLE	ENGRAVING (FRONT VIEW)
			CURR MODE	BALANCE IN	BALANCE OUT	VOLT MODE		
43CV		1	X				BLACK OVAL	CONT.
		2			X			
		3				X		BALANCE
		4	X			X		CURR MODE / VOLT MODE
		5						
		6						

SPRING RETURN TO "BALANCE" (IN) FROM "CURRENT MODE", "VOLTAGE MODE" AND BALANCE (OUT).

SYMBOL	ZONE	DESCRIPTION	DATE	BY
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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 EXCITATION EQUIPMENT

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-15

SCALE: NONE SHEET 027

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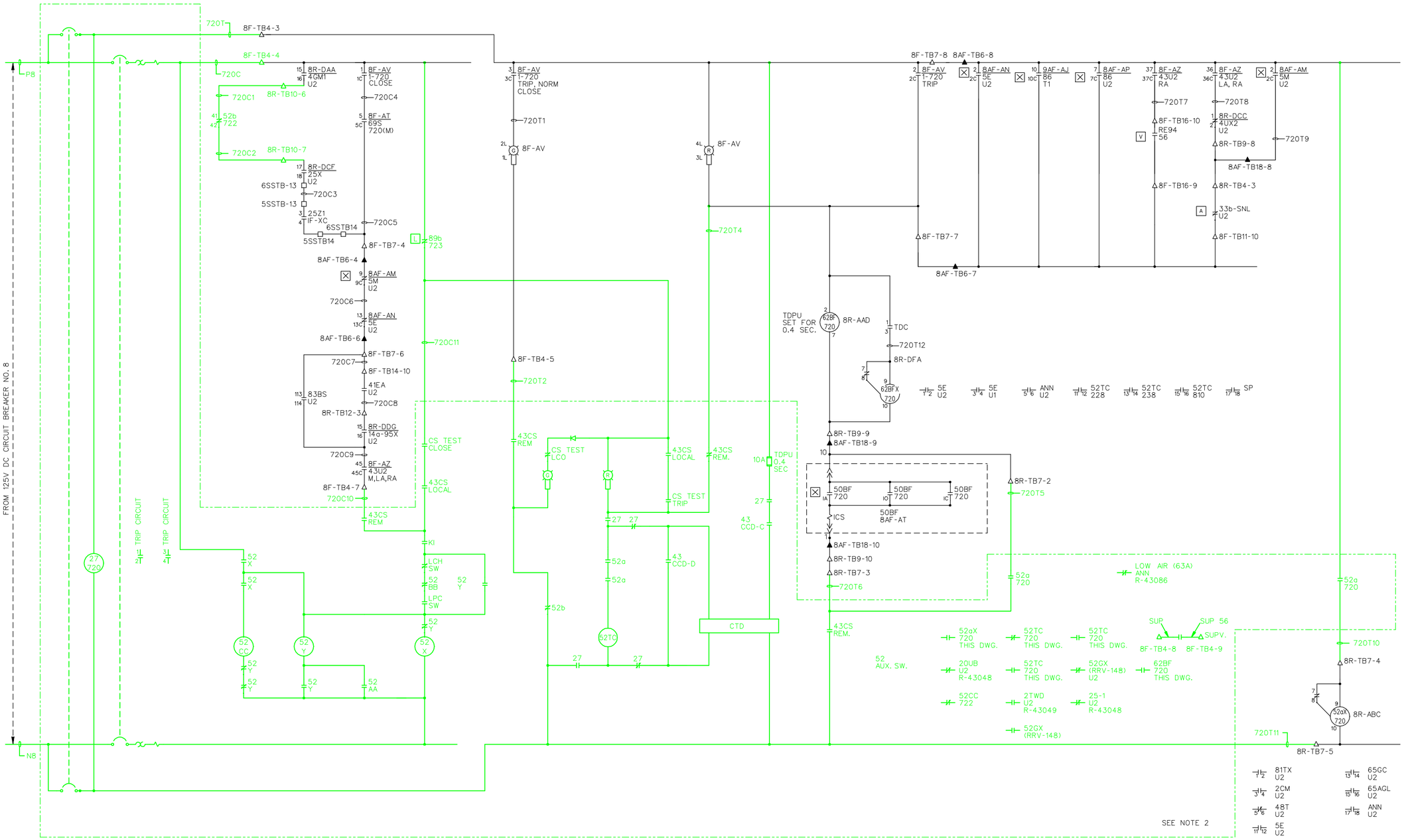

NOTES:

1. UNIT 2 BREAKER 720 SHOWN, UNIT BREAKERS 710, 730, & 740 ARE SIMILAR.
2. EQUIPMENT WITHIN DASHED AREA IS LOCATED IN BREAKER CABINET.

OCB 720 CONTROLS

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 OCB 720 CONTROLS
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-16

SCALE: NONE SHEET 028

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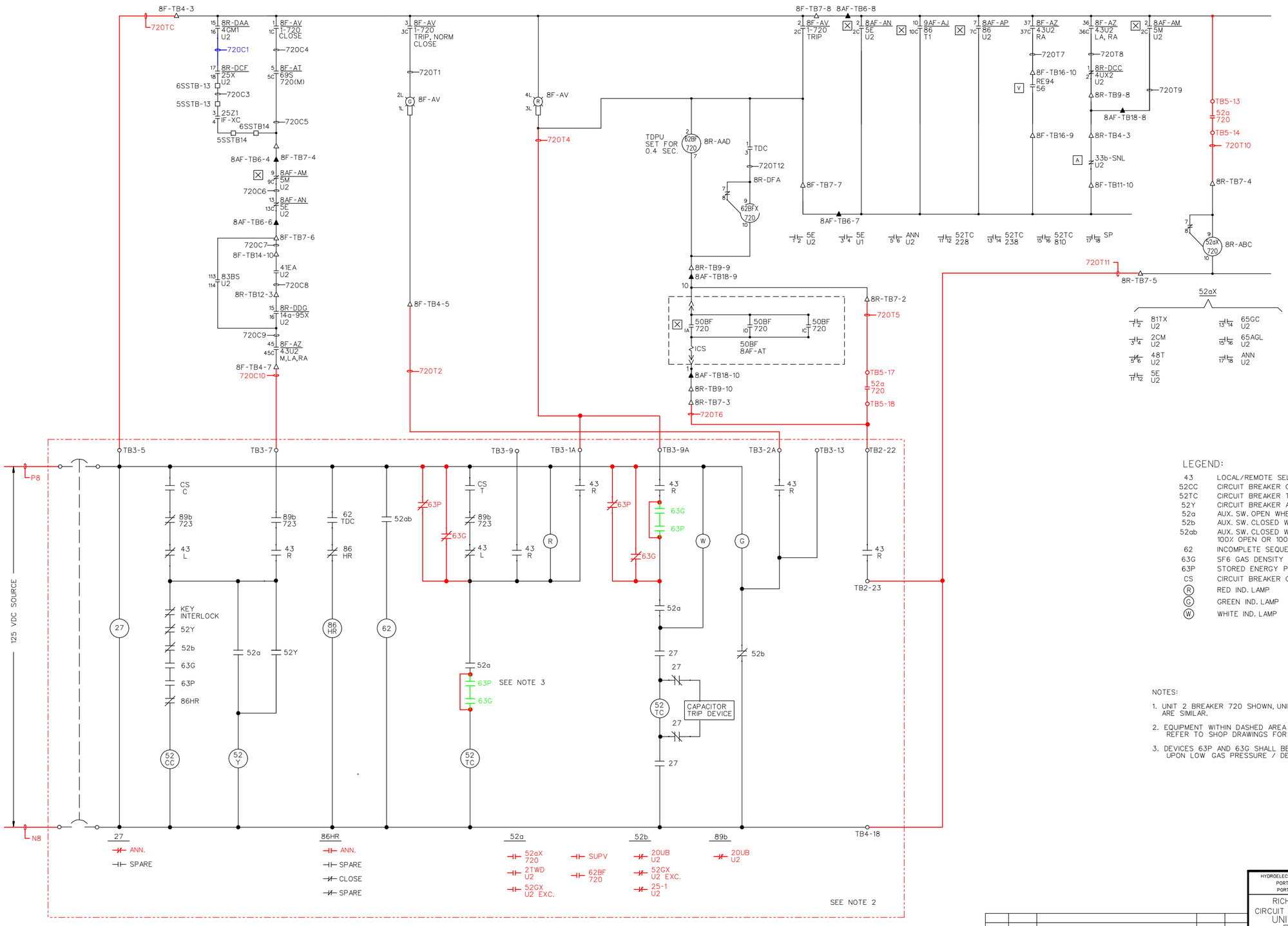

GCB 720 CONTROLS

LEGEND:

43	LOCAL/REMOTE SELECTOR SWITCH
52CC	CIRCUIT BREAKER CLOSE RELAY
52TC	CIRCUIT BREAKER TRIP RELAY
52Y	CIRCUIT BREAKER ANTI-PUMPING RELAY
52a	AUX. SW. OPEN WHEN MAIN CONTACTS OPEN
52b	AUX. SW. CLOSED WHEN MAIN CONTACTS OPEN
52ab	AUX. SW. CLOSED WHEN BREAKER IS NOT 100% OPEN OR 100% CLOSED
62	INCOMPLETE SEQUENCE TIMER
63G	SF6 GAS DENSITY
63P	STORED ENERGY PRESSURE
CS	CIRCUIT BREAKER CONTROL SWITCH
(R)	RED IND. LAMP
(G)	GREEN IND. LAMP
(W)	WHITE IND. LAMP

NOTES:

1. UNIT 2 BREAKER 720 SHOWN, UNIT BREAKERS 710, 730, & 740 ARE SIMILAR.
2. EQUIPMENT WITHIN DASHED AREA IS LOCATED IN BREAKER CABINET. REFER TO SHOP DRAWINGS FOR ADDITIONAL INFORMATION.
3. DEVICES 63P AND 63G SHALL BE RE-WIRED TO TRIP BREAKER UPON LOW GAS PRESSURE / DENSITY.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 GCB 720 CONTROLS
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-17

SCALE: NONE SHEET 029

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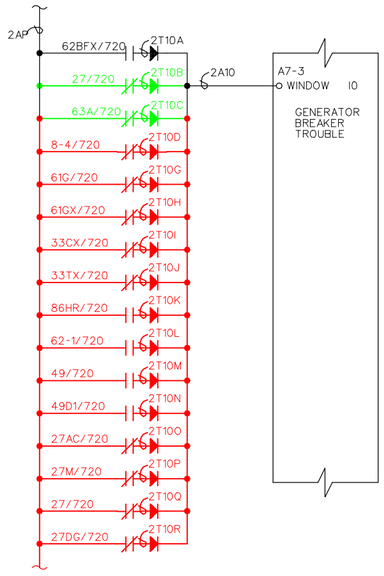

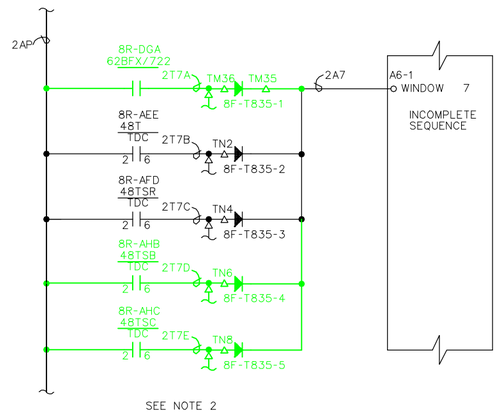

NOTES:

1. UNIT 2 SHOWN, UNITS 1, 3, & 4 ARE SIMILAR.
2. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

101RRP_E018_U2_ANN.DGN
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PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 ANNUNCIATOR

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-18

SCALE: NONE SHEET 030

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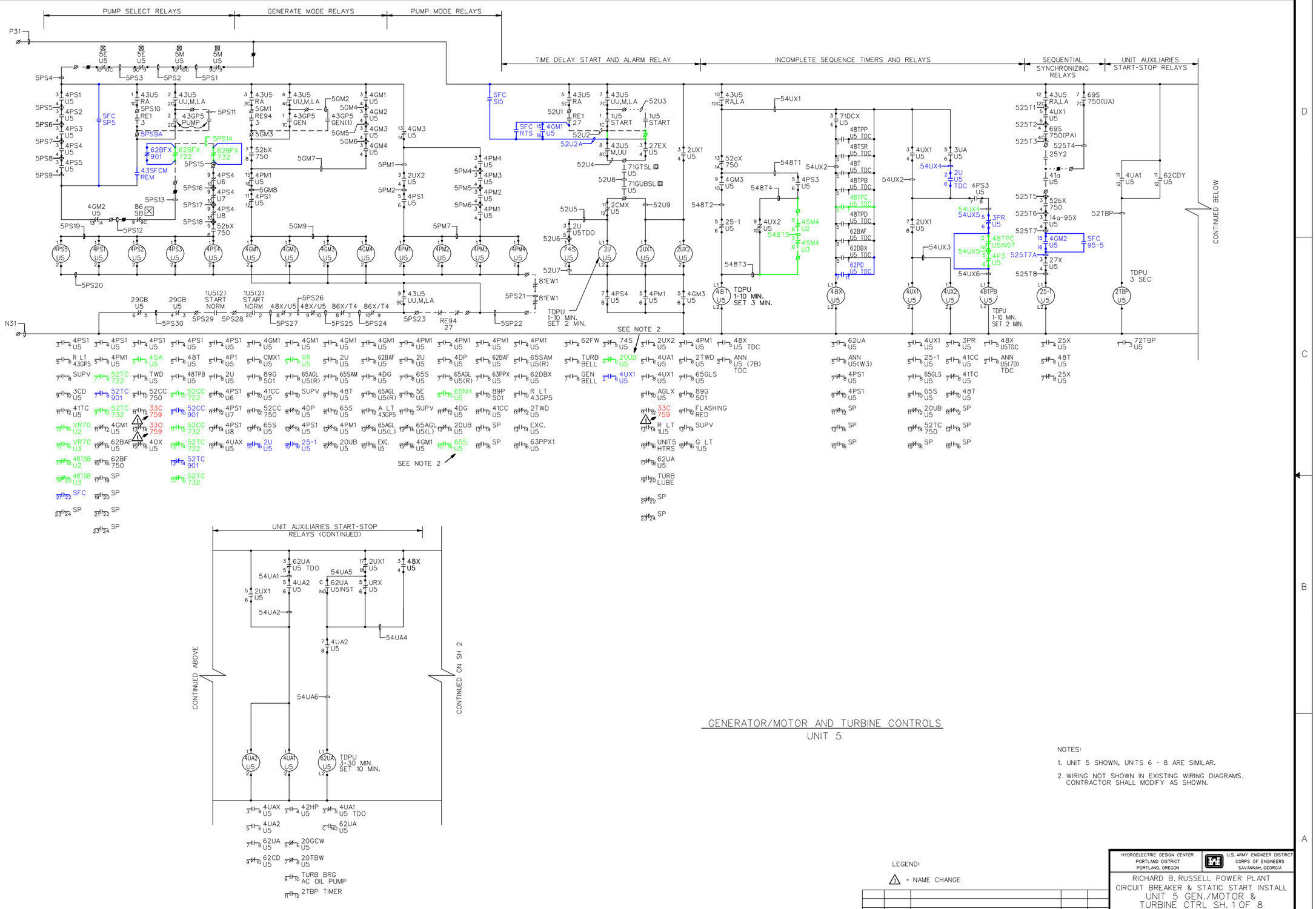

GENERATOR/MOTOR AND TURBINE CONTROLS
UNIT 5

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.
2. WIRING NOT SHOWN IN EXISTING WIRING DIAGRAMS. CONTRACTOR SHALL MODIFY AS SHOWN.

LEGEND:

△1 - NAME CHANGE

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 GEN./MOTOR & TURBINE CTRL SH. 1 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-19

SCALE: NONE SHEET 031

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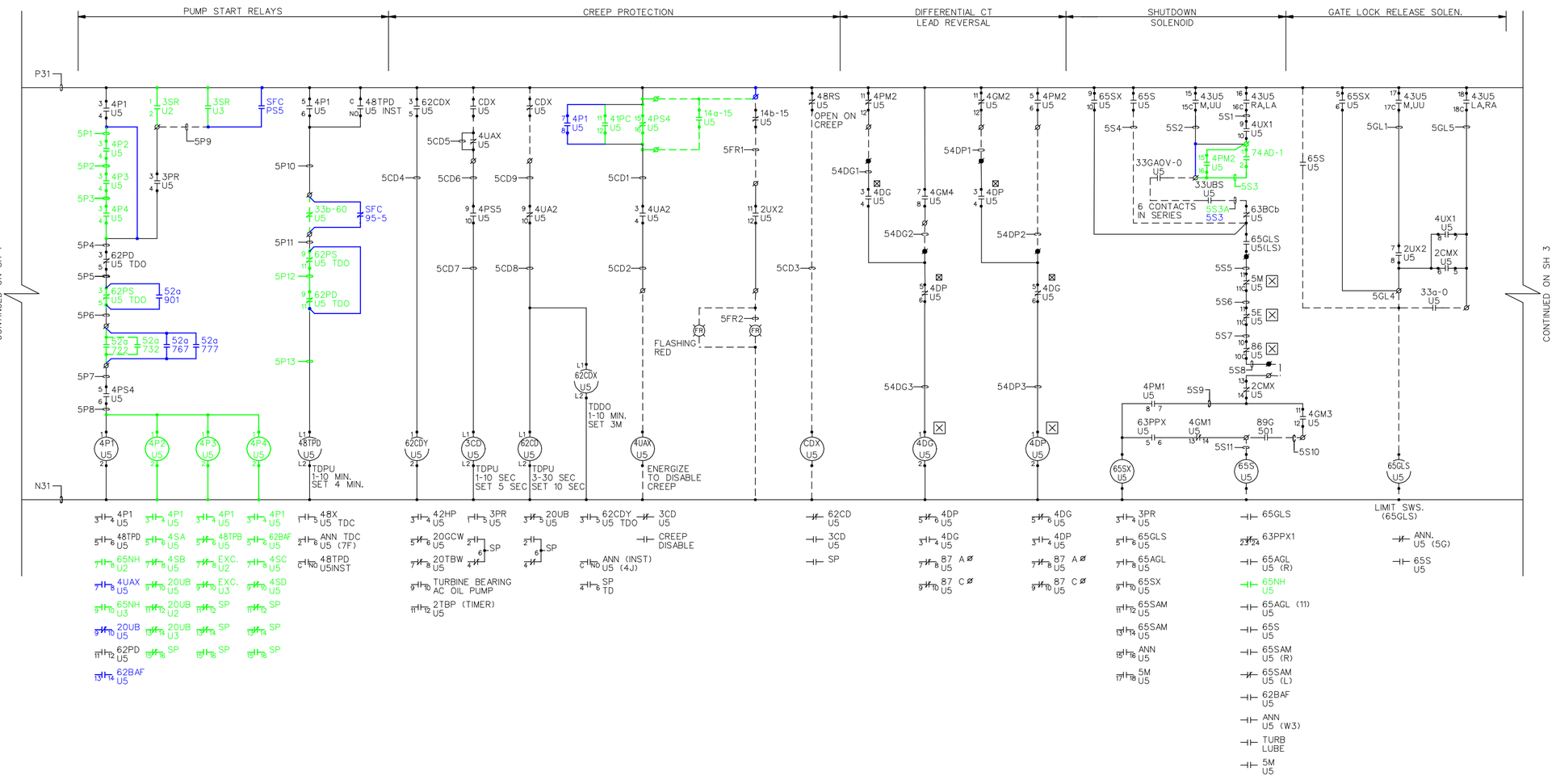

GENERATOR/MOTOR AND TURBINE CONTROLS
UNIT 5

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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PORTLAND DISTRICT
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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 GEN./MOTOR &
TURBINE CTRL SH. 2 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-20

SCALE: NONE SHEET 032

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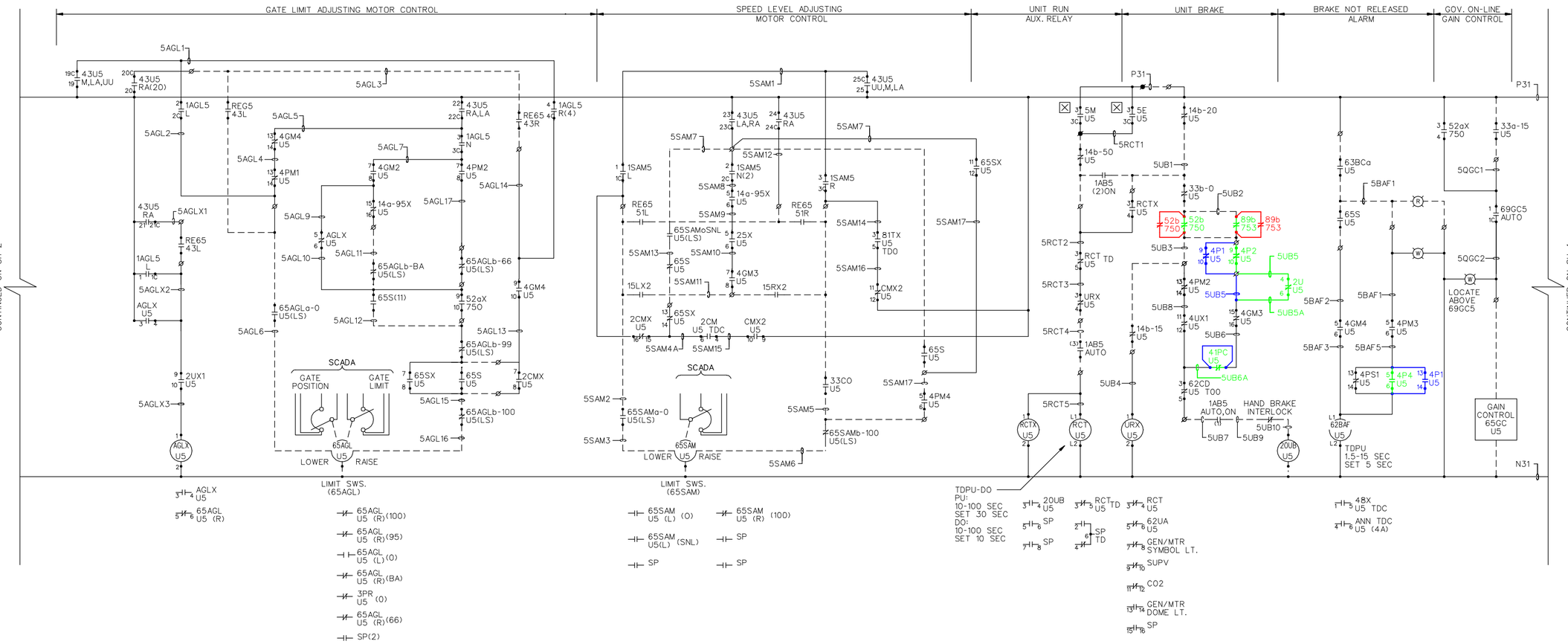

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

GENERATOR/MOTOR AND TURBINE CONTROLS

UNIT 5

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 GEN./MOTOR & TURBINE CTRL SH. 3 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-21

SCALE: NONE SHEET 033

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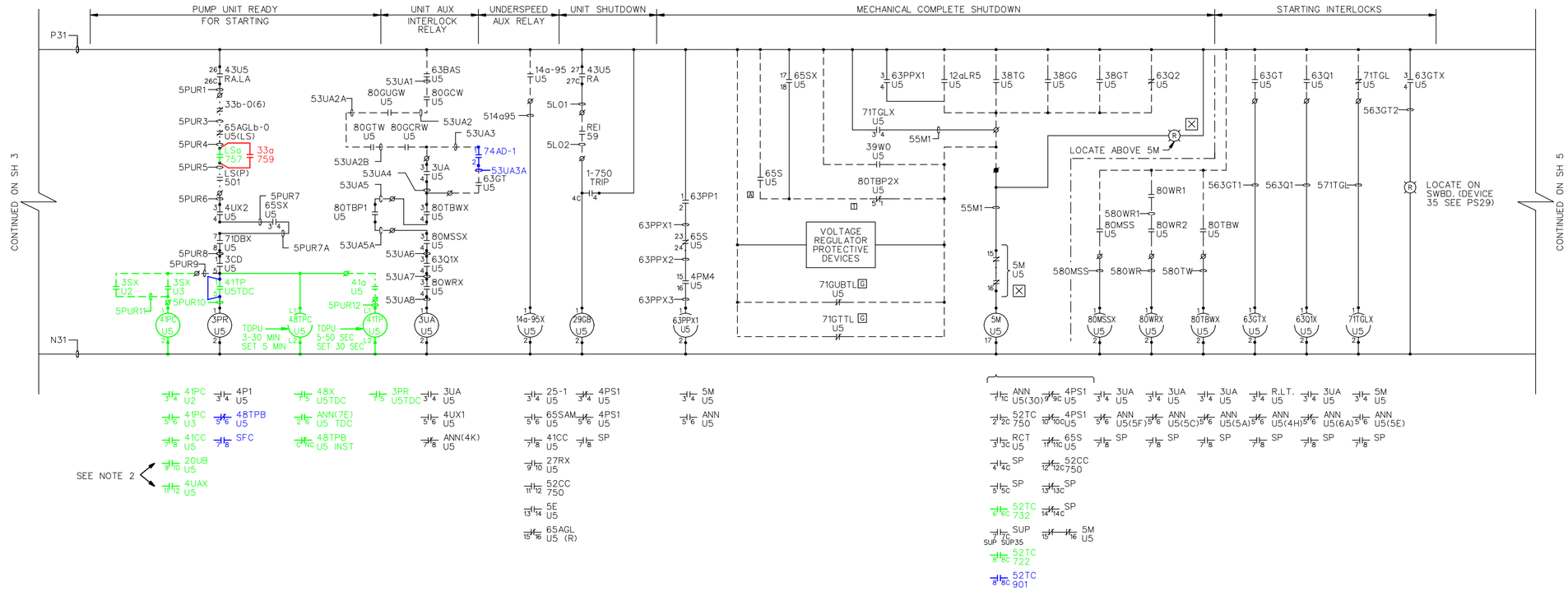

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.
2. WIRING NOT SHOWN IN EXISTING WIRING DIAGARAMS. CONTRACTOR SHALL MODIFY AS SHOWN.

GENERATOR/MOTOR AND TURBINE CONTROLS
UNIT 5

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 GEN./MOTOR &
TURBINE CTRL SH. 4 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-22

SCALE: NONE SHEET 034

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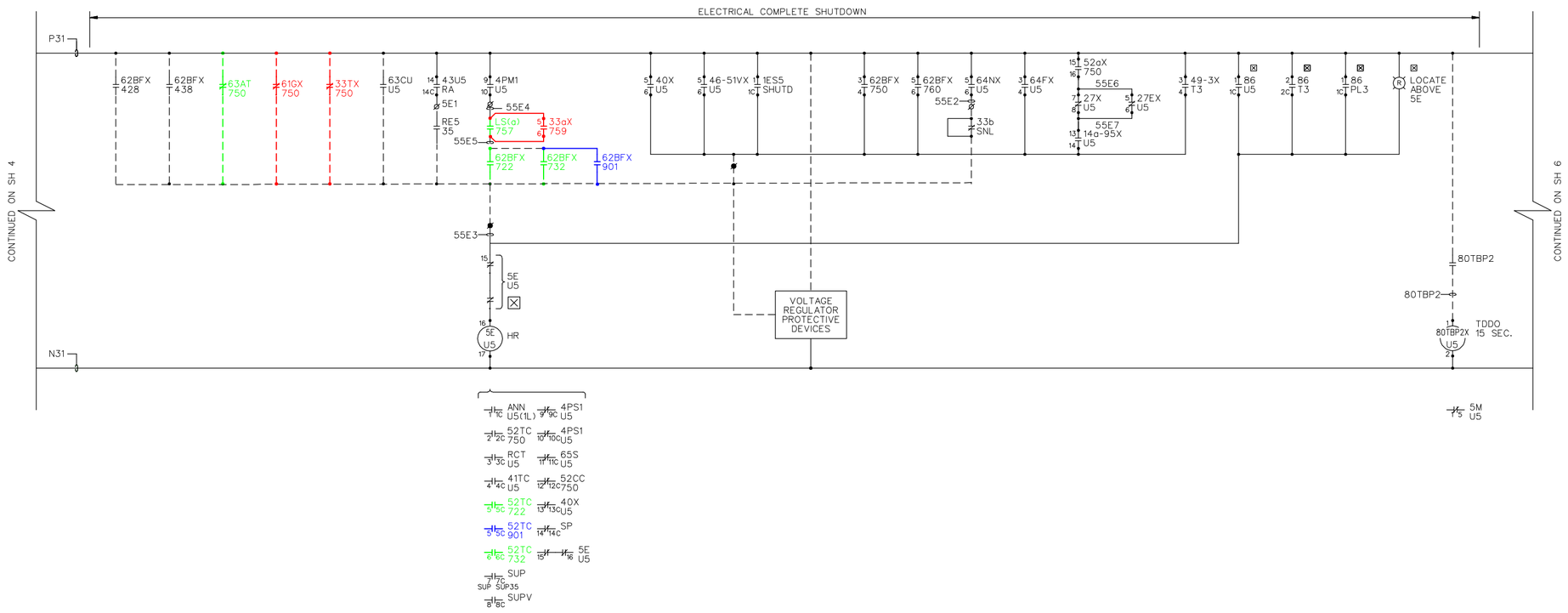

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

GENERATOR/MOTOR AND TURBINE CONTROLS
UNIT 5

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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PORTLAND, OREGON

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 GEN./MOTOR &
TURBINE CTRL SH. 5 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-23

SCALE: NONE SHEET 035

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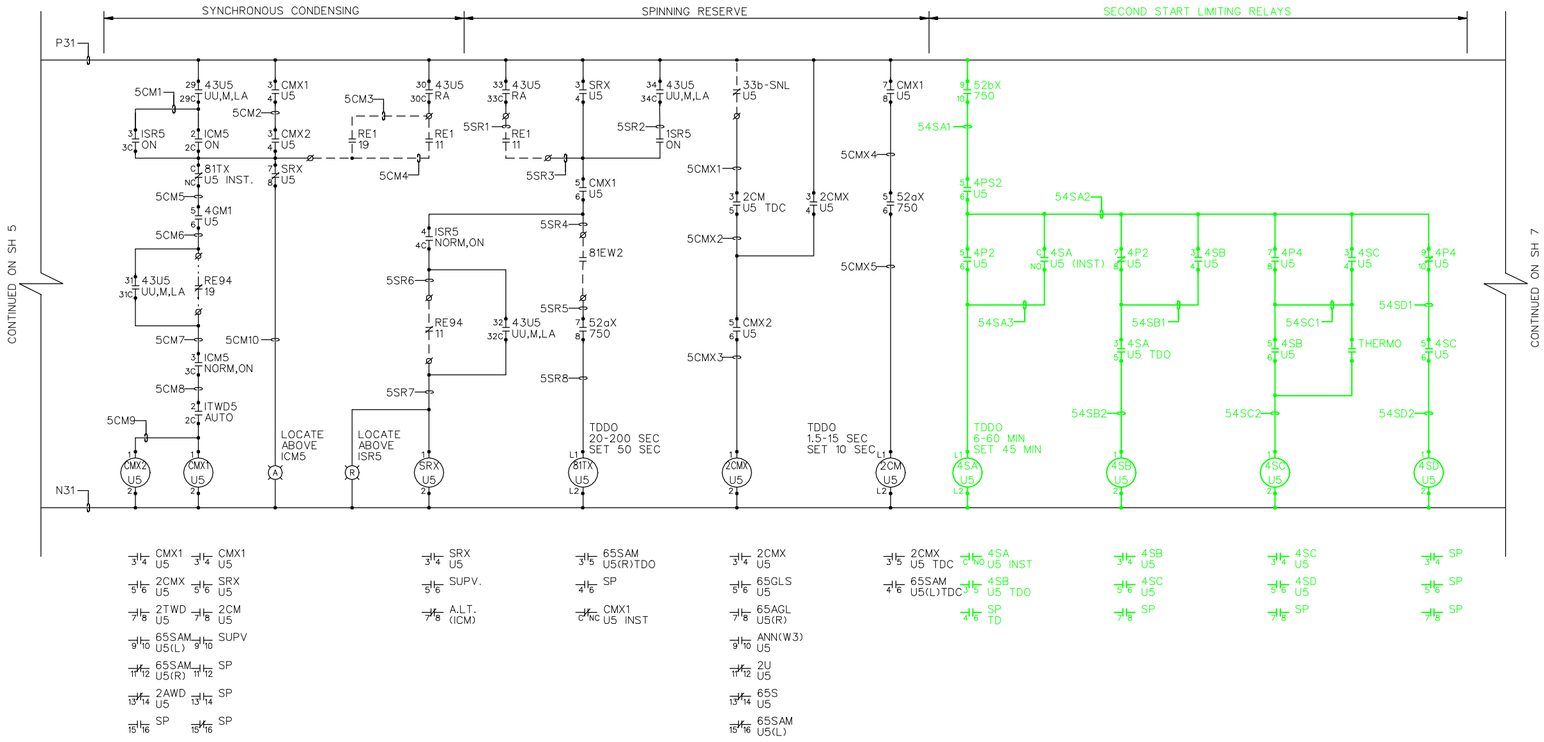

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

GENERATOR/MOTOR AND TURBINE CONTROLS

UNIT 5

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 GEN./MOTOR &
TURBINE CTRL SH. 6 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-24

SCALE: NONE SHEET 036

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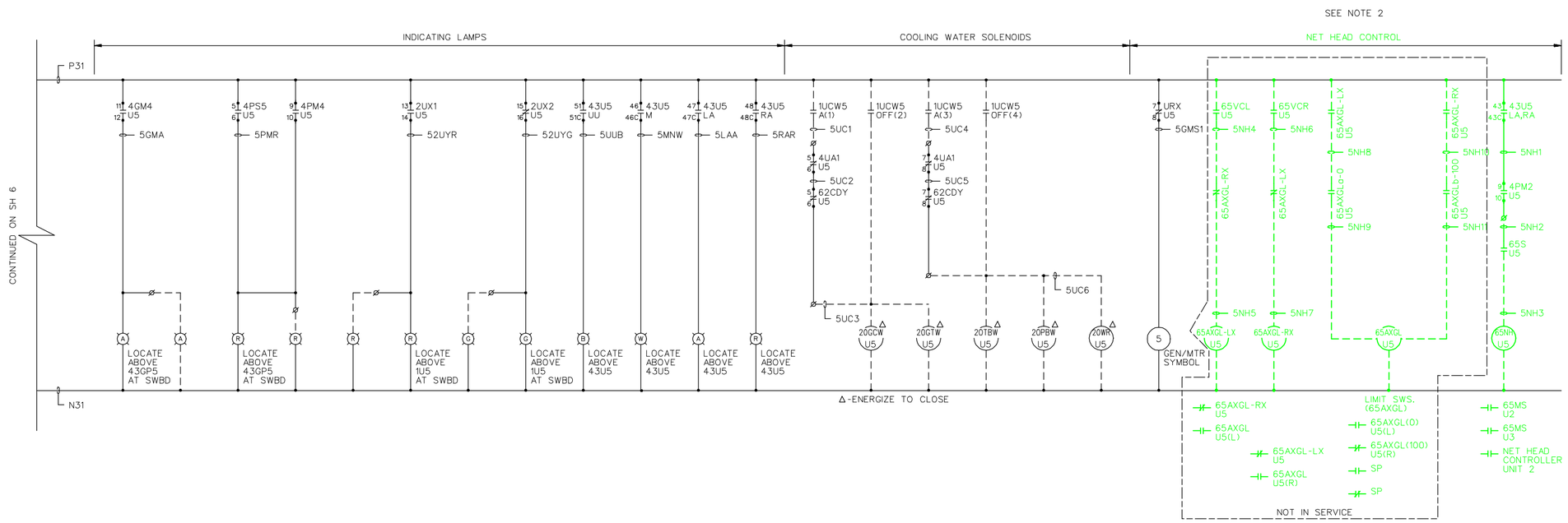

GENERATOR/MOTOR AND TURBINE CONTROLS
UNIT 5

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.
2. REFER TO GOVERNOR SHOP DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT AND WORK REQUIRED TO DISABLE NET HEAD CONTROL.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 GEN./MOTOR &
TURBINE CTRL SH. 7 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-25

SCALE: NONE SHEET 037

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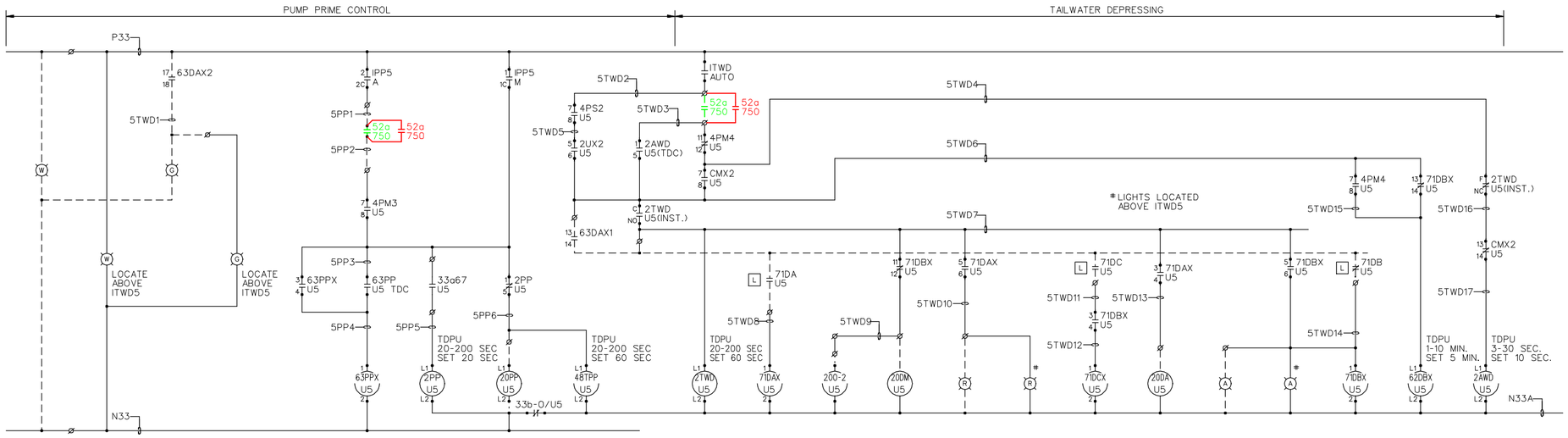

GENERATOR/MOTOR AND TURBINE CONTROLS

UNIT 5

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 GEN./MOTOR &
TURBINE CTRL SH. 8 OF 8
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-26

SCALE: NONE SHEET 038

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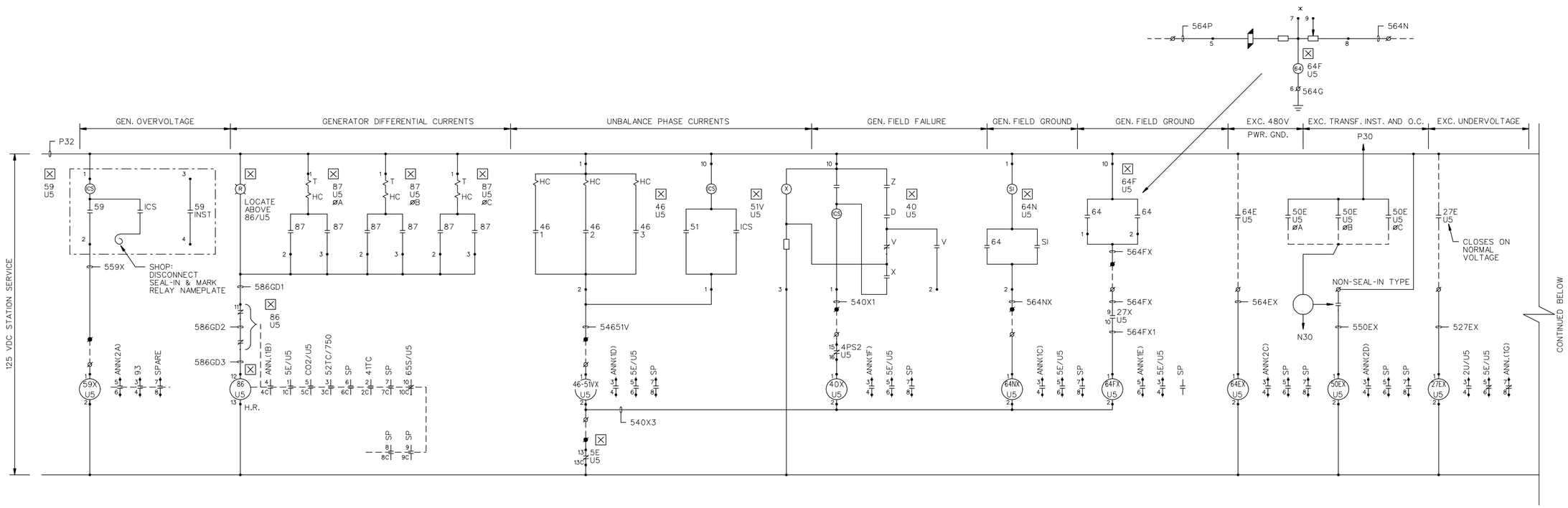
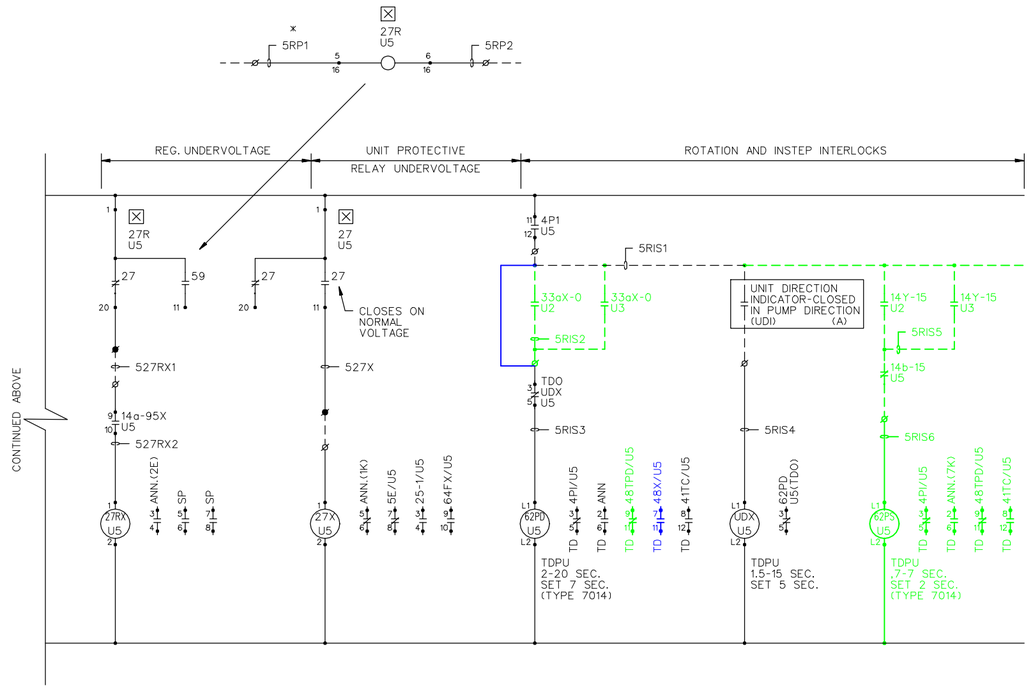


GENERATOR & EXCITER PROTECTIVE RELAYS
UNIT 5



NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5
GEN. & EXCITER PROT. RELAYS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-27

SCALE: NONE SHEET 039

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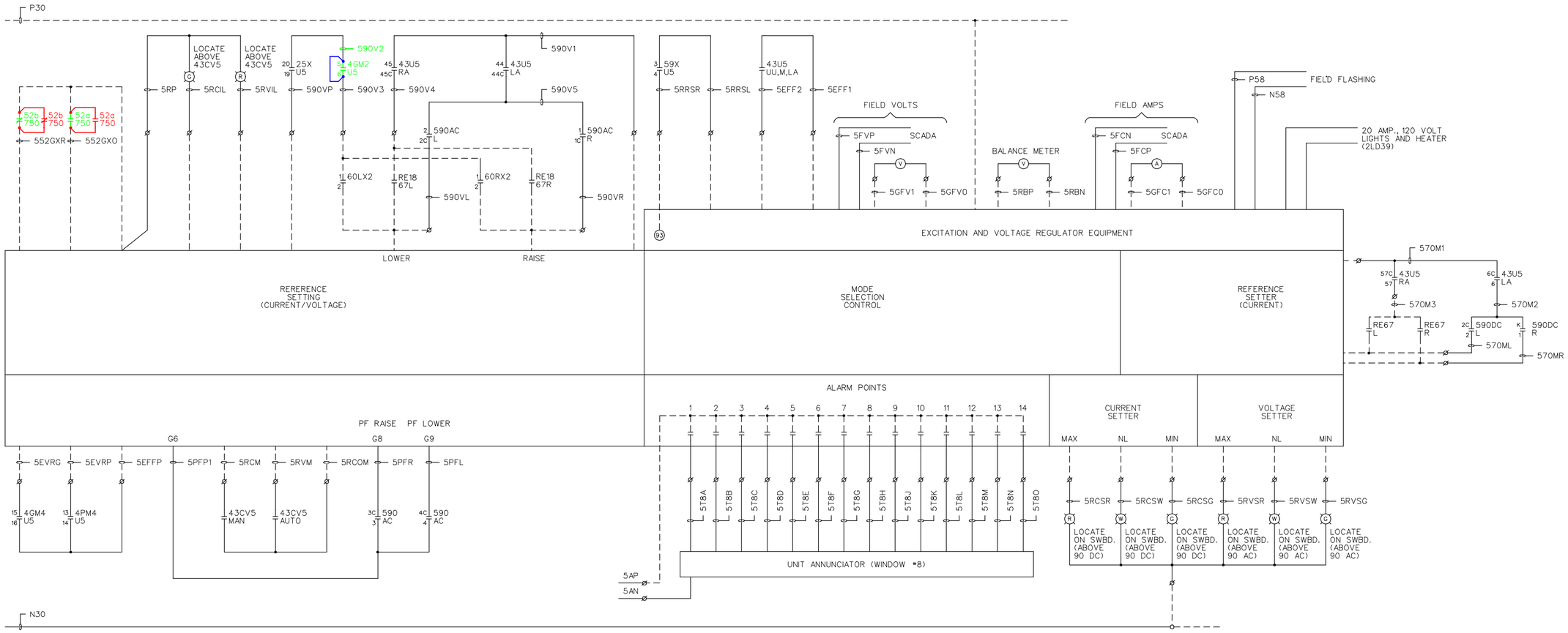
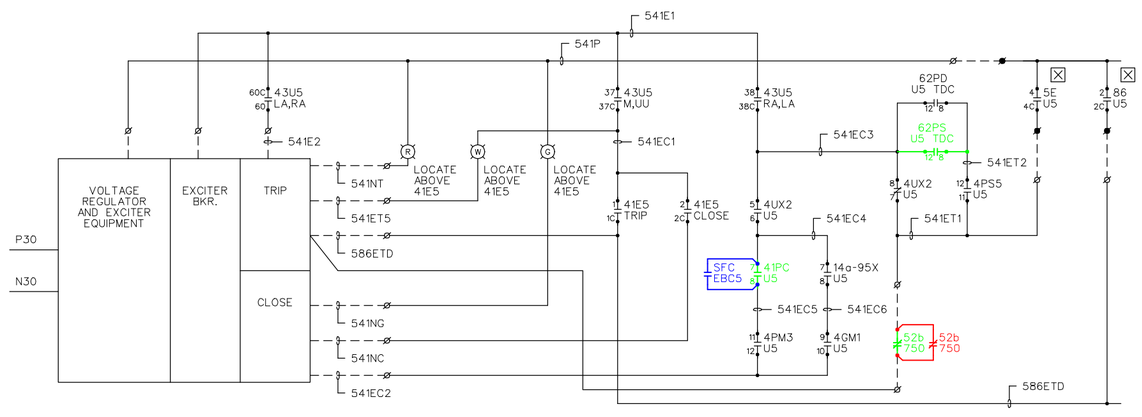


MISCELLANEOUS EXCITATION EQUIPMENT
UNIT 5



EXCITER AC SUPPLY BREAKER
UNIT 5

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5
EXCITATION EQUIPMENT
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-28

SCALE: NONE SHEET 040

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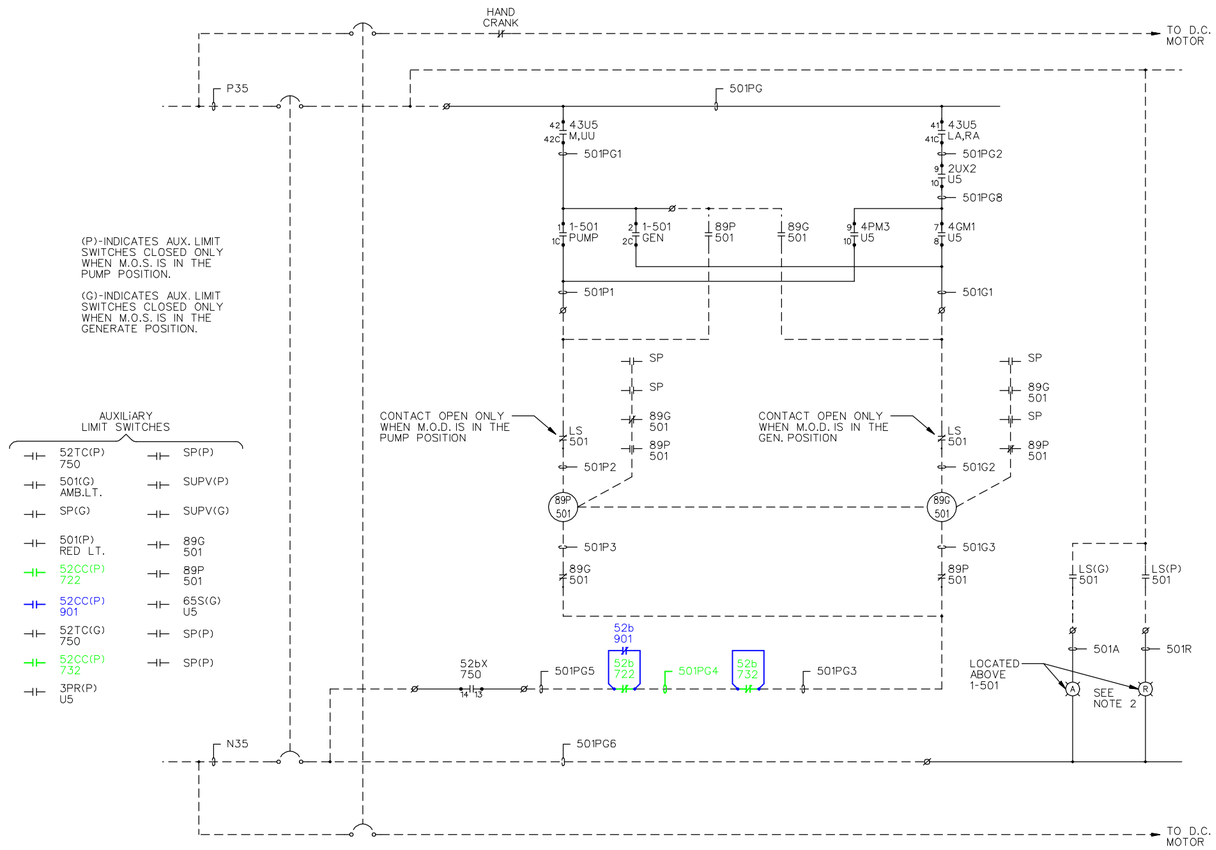

13.8kV MOTOR OPER. PHASE REVERSAL SWITCH NO. 501

NOTES:

1. UNIT 5 SWITCH 501 SHOWN, UNIT SWITCHES 601, 701, & 801 ARE SIMILAR.
2. THE CAM LIMIT SW'S ARE ADJUSTED TO ENERGIZE BOTH RED AND AMBER LIGHTS DURING THE PHASE TRANSITIONAL PERIOD (1P A ø TO C ø) AFTER THE COMPLETION OF THE TRANSITION FROM A ø TO C ø THE RESPECTIVE LIGHT IS ENERGIZED, DEPENDING ON THE SELECTED GEN/PUMP MODE.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5
PHASE REVERSAL SWITCH
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-29

SCALE: NONE SHEET 041

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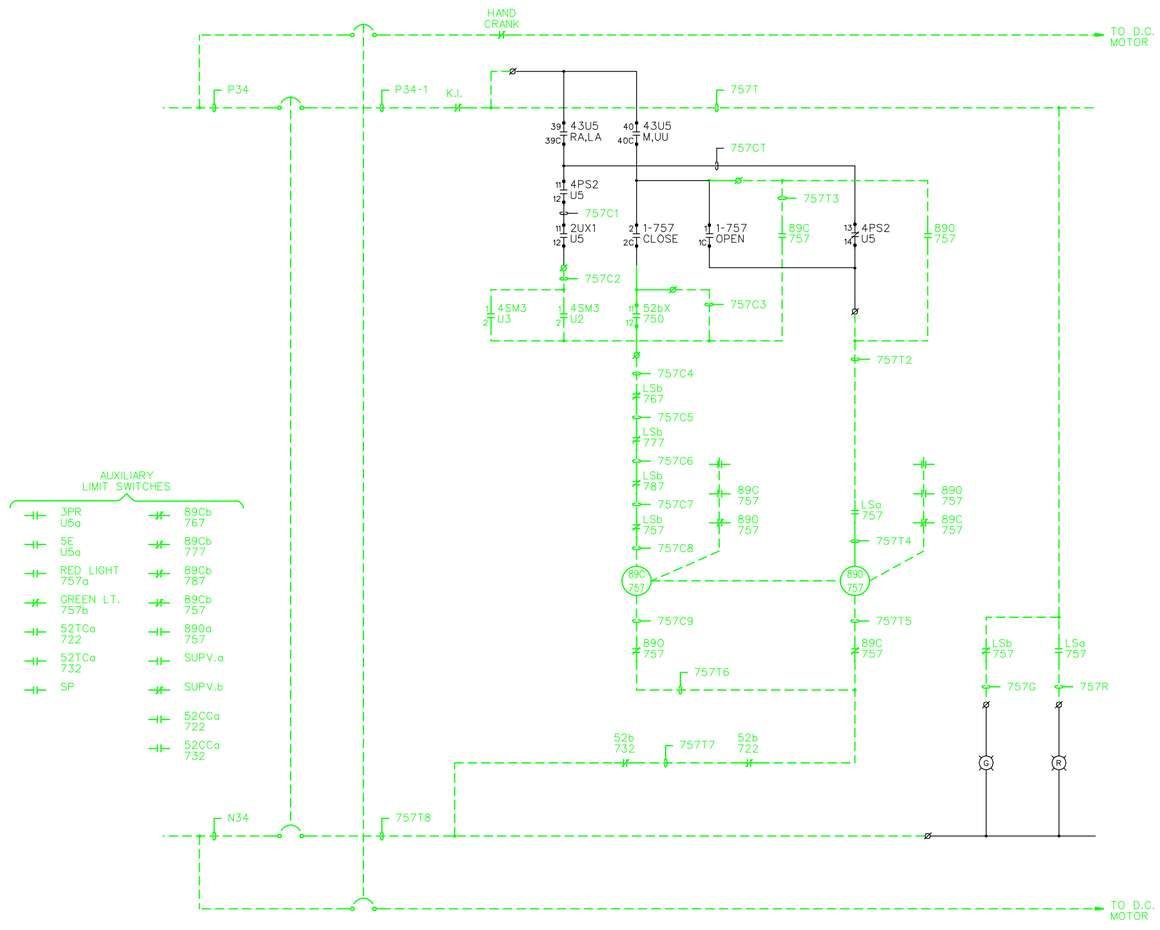
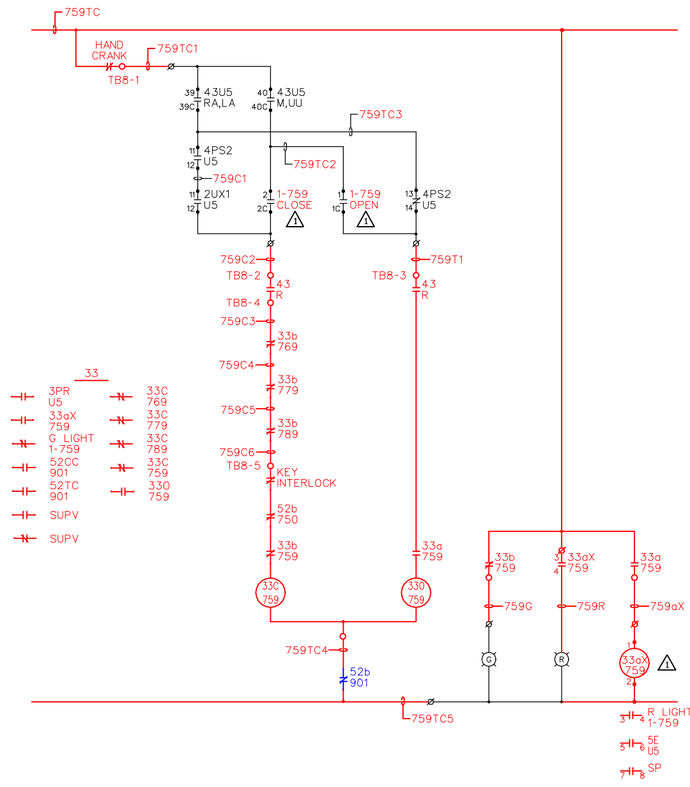


STARTING BUS M.O.D. SWITCH NO. 757



MOTORIZED STARTING SWITCH 759

NOTES:

1. UNIT 5 SWITCH 757 SHOWN, UNIT SWITCHES 767, 777, & 787 ARE SIMILAR.
2. NEW UNIT BREAKERS WILL INCORPORATE STARTING SWITCHES FOR UNITS 5 - 8. THEY WILL BE DESIGNATED 759, 769, 779, AND 789 RESPECTIVELY.

LEGEND:

△1 - NAME CHANGE

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5
STARTING BUS SWITCH
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-30

SCALE: NONE SHEET 042

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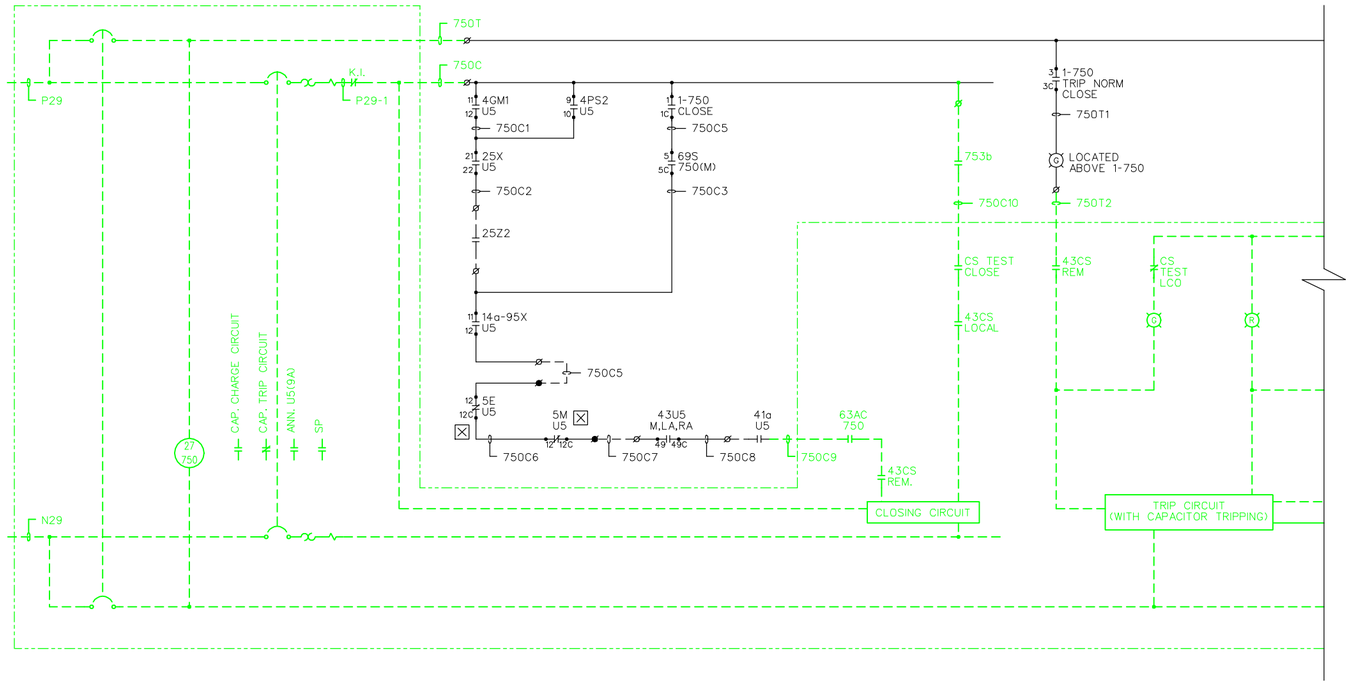

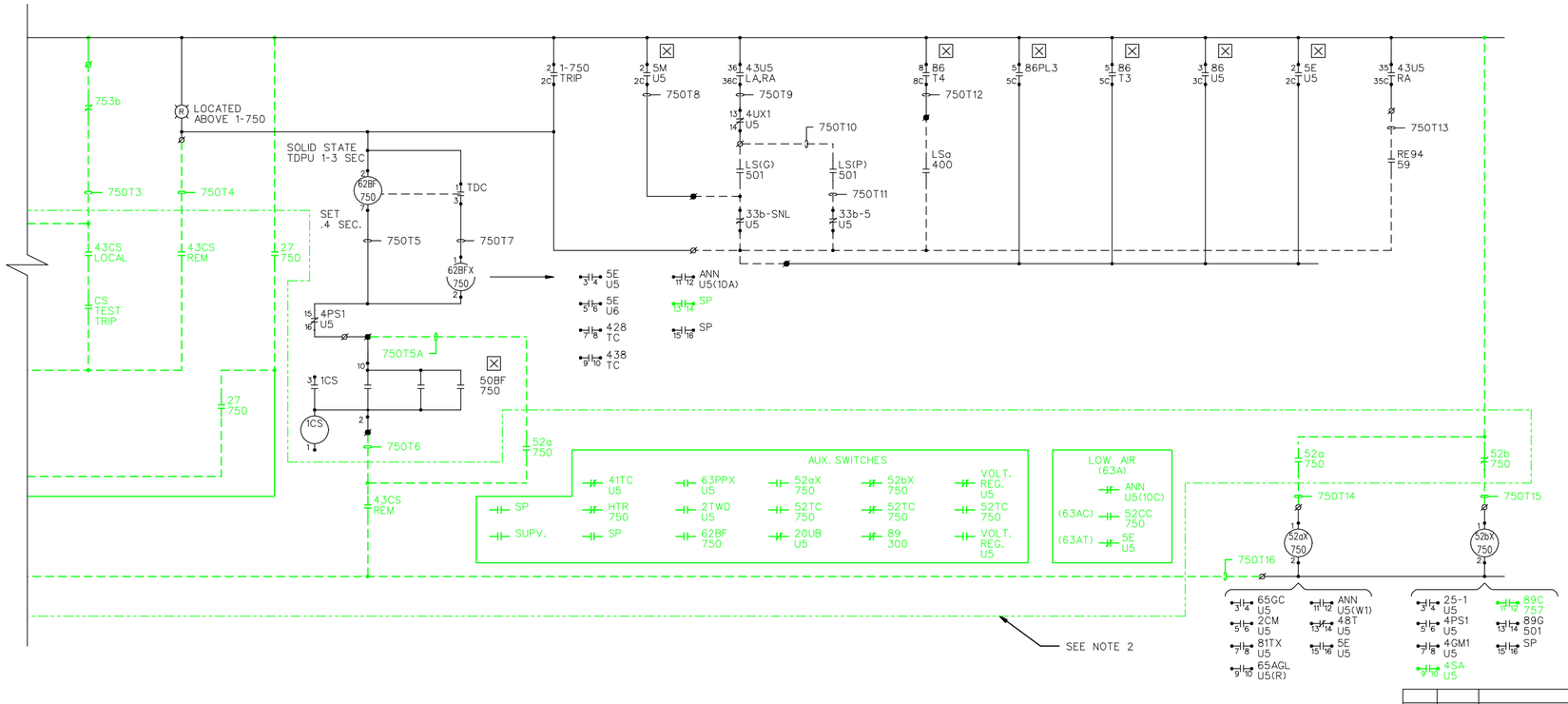

NOTES:

1. UNIT 5 BREAKER 750 SHOWN, UNIT BREAKERS 760, 770, & 780 ARE SIMILAR.
2. EQUIPMENT WITHIN DASHED AREA IS LOCATED IN BREAKER CABINET.

ABCB 750 CONTROLS

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 ABCB 750 CONTROLS
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-31

SCALE: NONE SHEET 043

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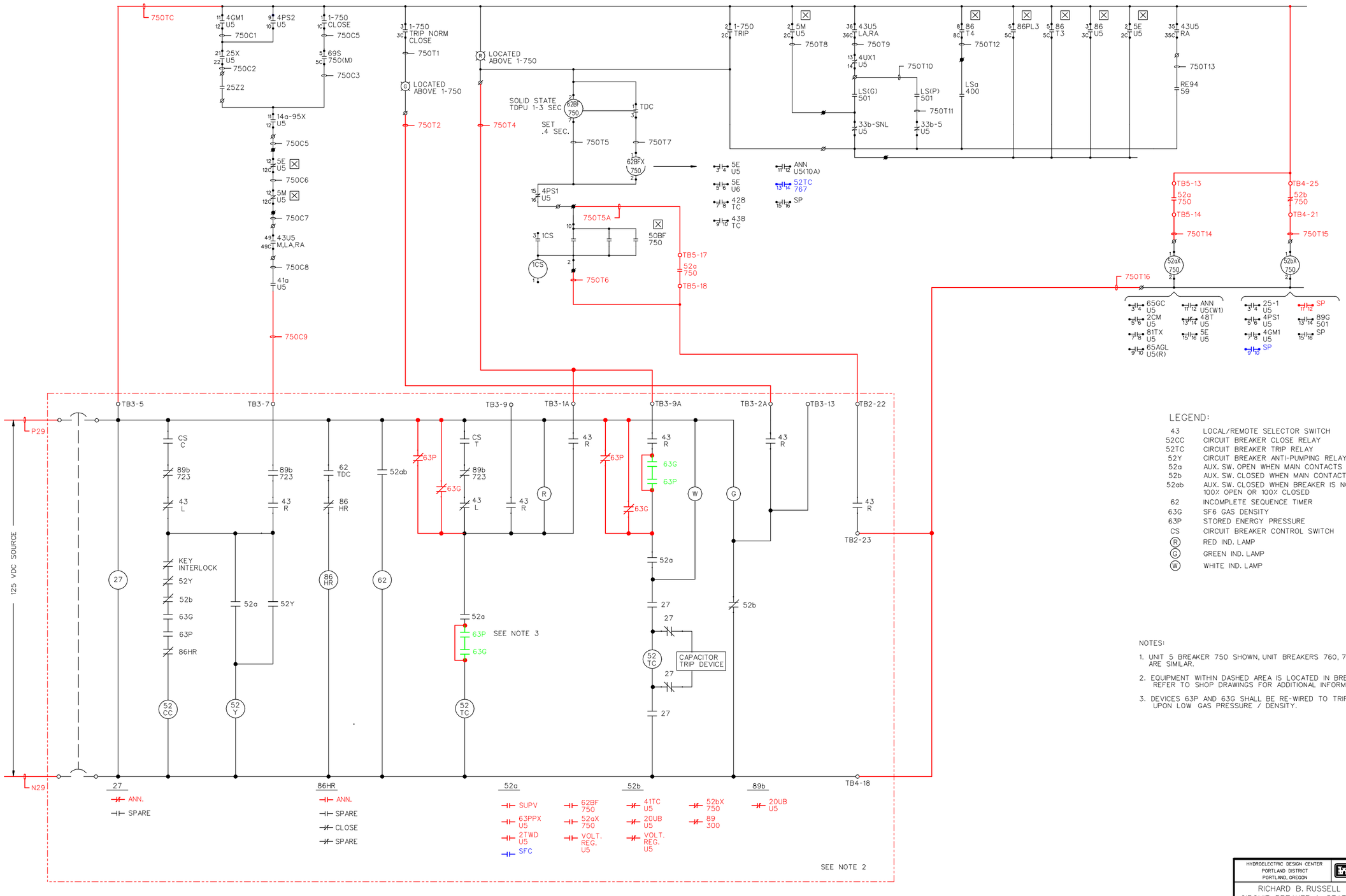

GCB 750 CONTROLS

LEGEND:

43	LOCAL/REMOTE SELECTOR SWITCH
52CC	CIRCUIT BREAKER CLOSE RELAY
52TC	CIRCUIT BREAKER TRIP RELAY
52Y	CIRCUIT BREAKER ANTI-PUMPING RELAY
52a	AUX. SW. OPEN WHEN MAIN CONTACTS OPEN
52b	AUX. SW. CLOSED WHEN MAIN CONTACTS OPEN
52ab	AUX. SW. CLOSED WHEN BREAKER IS NOT 100% OPEN OR 100% CLOSED
62	INCOMPLETE SEQUENCE TIMER
63G	SF6 GAS DENSITY
63P	STORED ENERGY PRESSURE
CS	CIRCUIT BREAKER CONTROL SWITCH
(R)	RED IND. LAMP
(G)	GREEN IND. LAMP
(W)	WHITE IND. LAMP

NOTES:

1. UNIT 5 BREAKER 750 SHOWN, UNIT BREAKERS 760, 770, & 780 ARE SIMILAR.
2. EQUIPMENT WITHIN DASHED AREA IS LOCATED IN BREAKER CABINET. REFER TO SHOP DRAWINGS FOR ADDITIONAL INFORMATION.
3. DEVICES 63P AND 63G SHALL BE RE-WIRED TO TRIP BREAKER UPON LOW GAS PRESSURE / DENSITY.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 GCB 750 CONTROLS
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-32

SCALE: NONE SHEET 044

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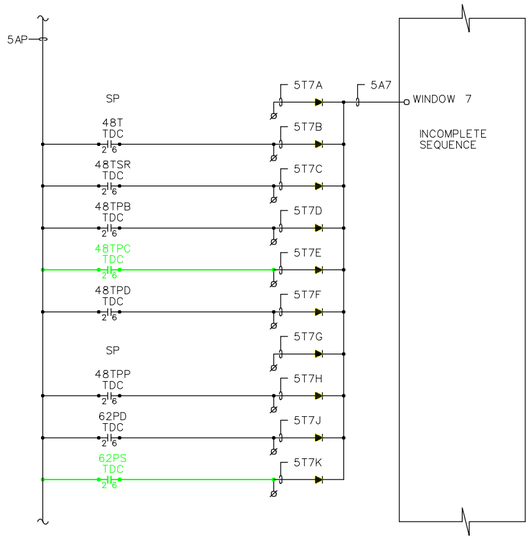

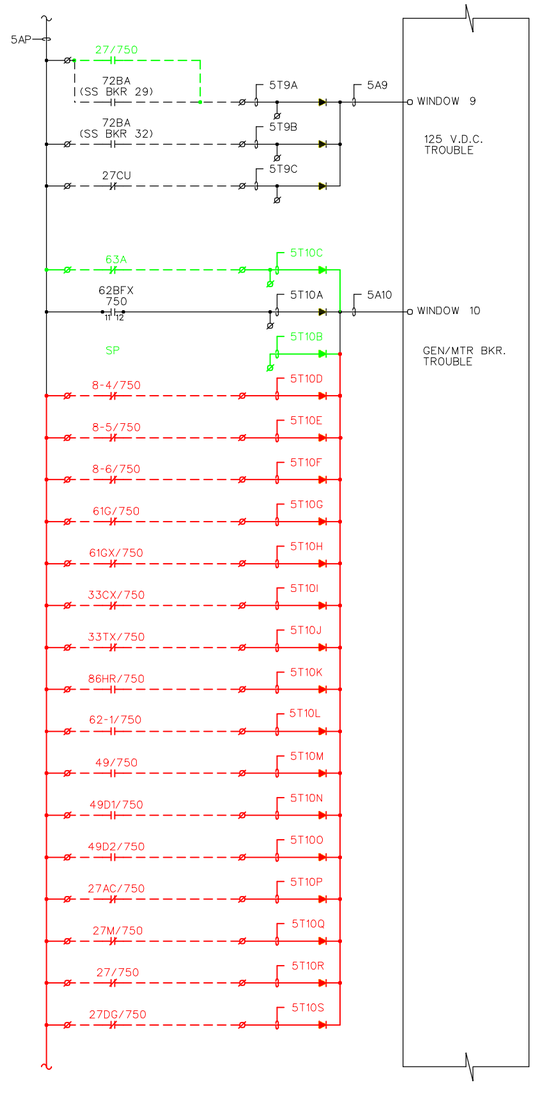

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

101RRP_E033_U5_ANN.DGN
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CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 ANNUNCIATOR

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-33

SCALE: NONE SHEET 045

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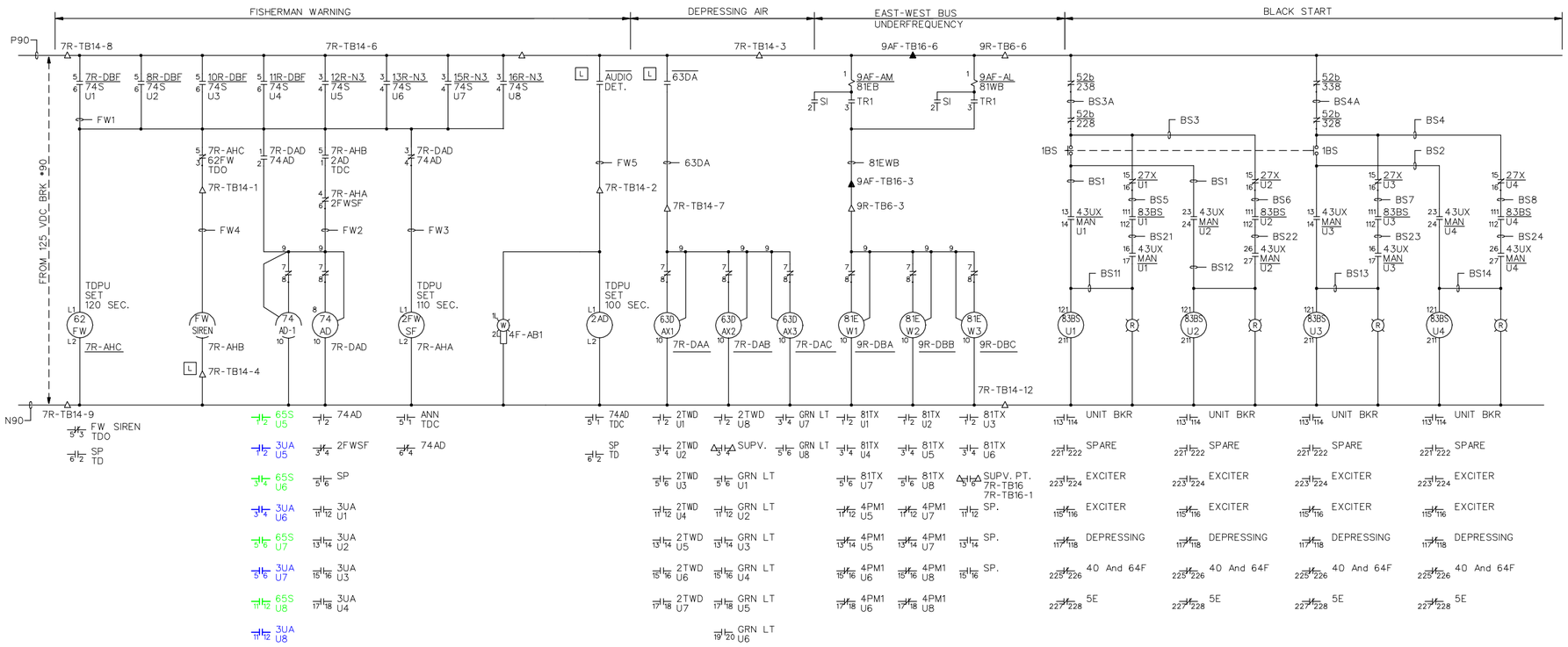
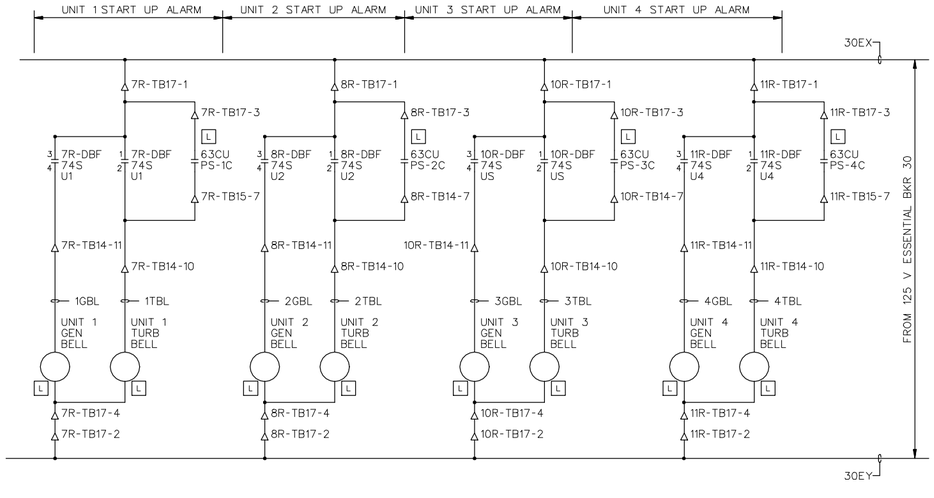


COMMON UNIT CONTROL



SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
COMMON UNIT CONTROLS
SHEET 1 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-34

SCALE: NONE SHEET 046

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101RRP_TBLK.DGN

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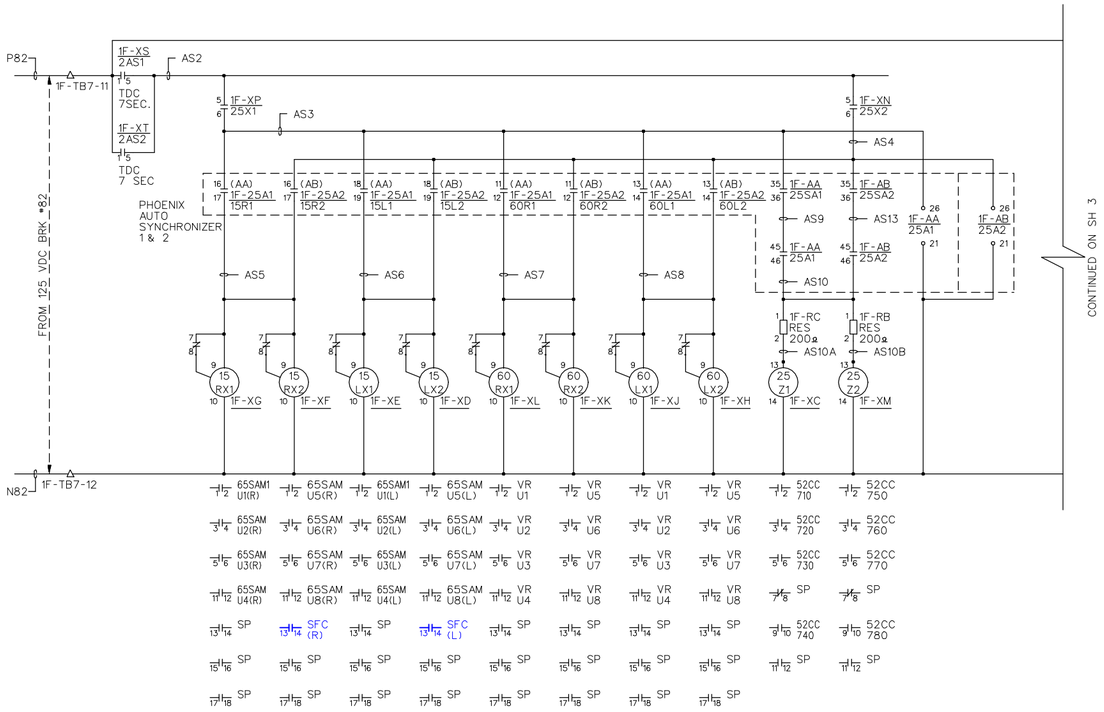

AUTOMATIC SYNCHRONIZERS NO. 1 AND 2 D.C. CONTROL

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
COMMON UNIT CONTROLS
SHEET 2 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-35

SCALE: NONE SHEET 047

101RRP_E035_UC_CTL_2.DGN
101RRP_TBLK.DGN

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k6enxndt

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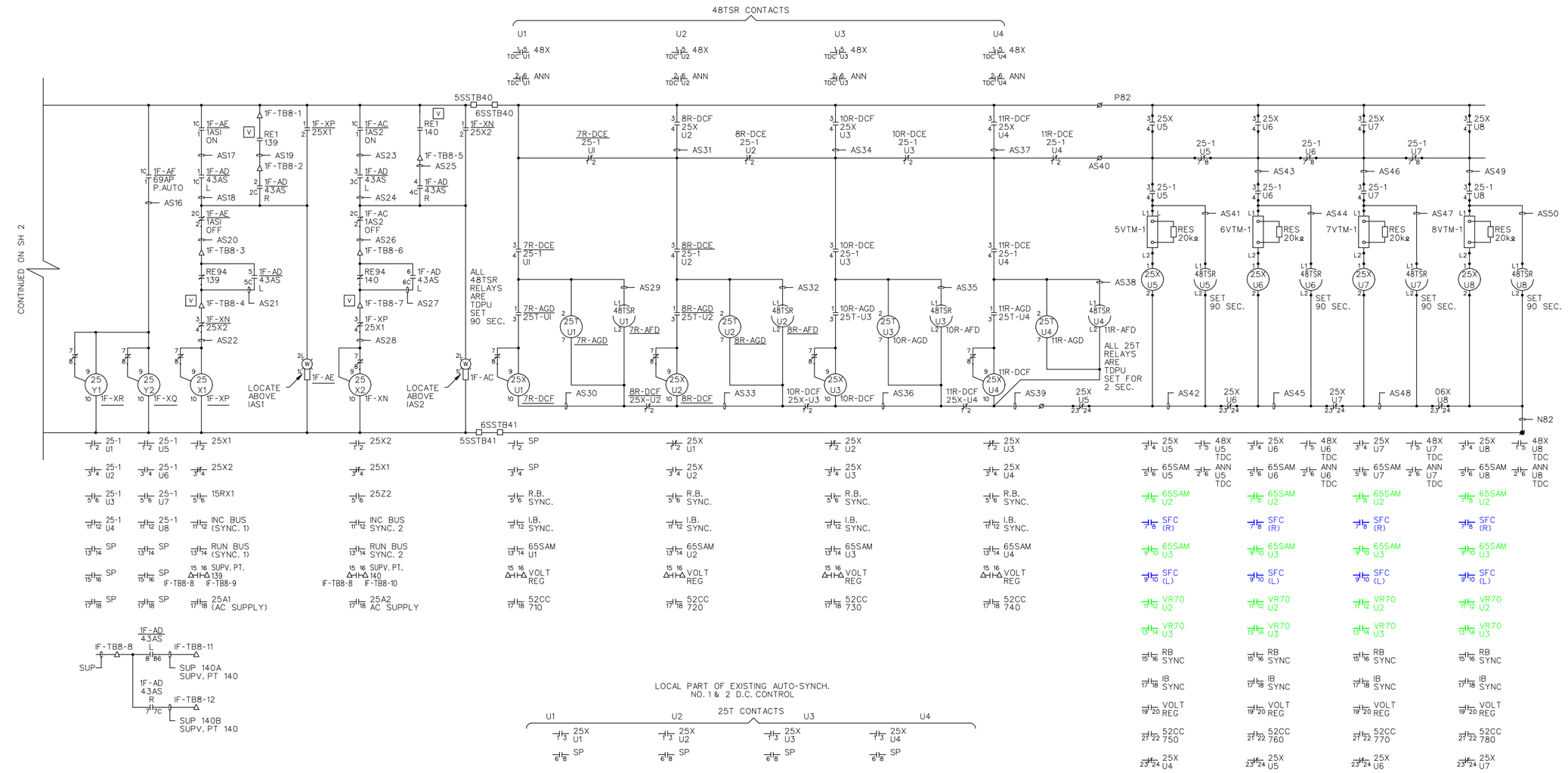

AUTOMATIC SYNCHRONIZERS NO. 1 AND 2 D.C. CONTROL

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
COMMON UNIT CONTROLS
SHEET 3 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-36

SCALE: NONE SHEET 048

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101RRP_TBLK.DGN

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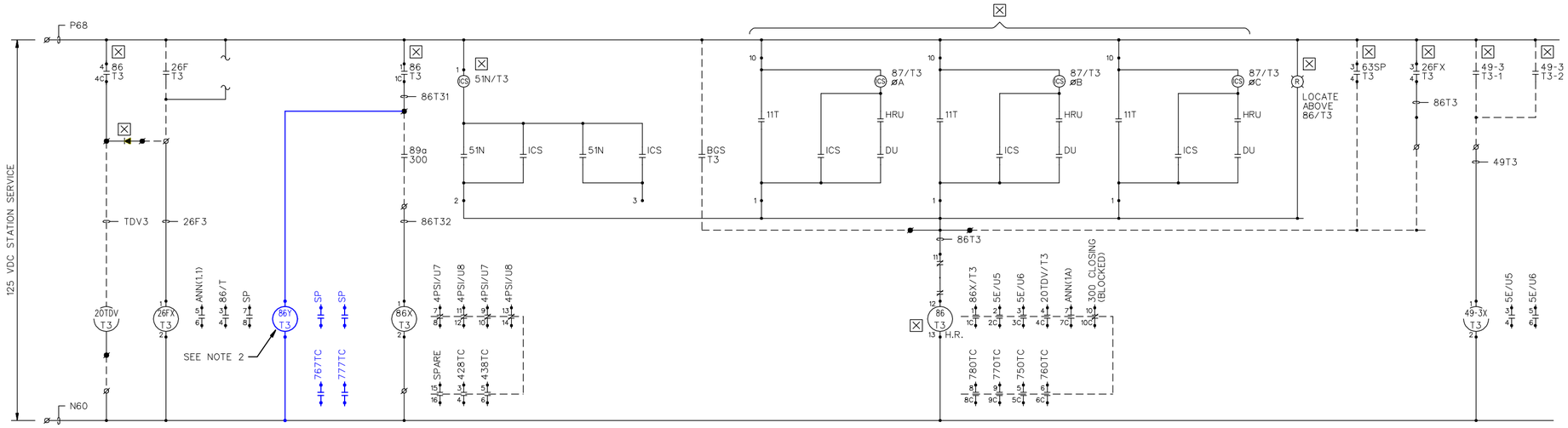
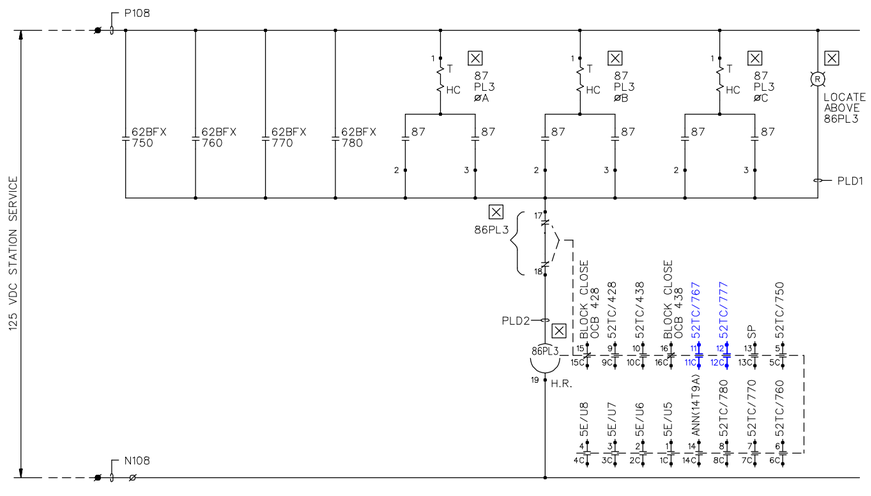
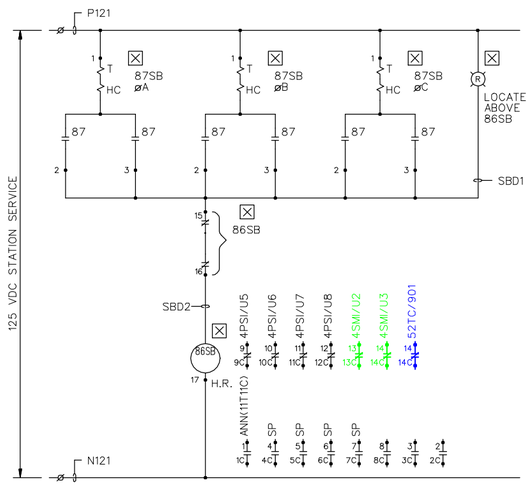


TRANSFORMER T3 RELAYS



230 kV POWERHOUSE LINE 3 DIFFERENTIAL RELAY



STARTING BUS DIFFERENTIAL RELAY

NOTES:

1. TRANSFORMER T3 SHOWN, TRANSFORMER T4 IS SIMILAR.
2. CONTRACTOR SHALL PROVIDE NEW 86Y RELAYS.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
PROTECTIVE RELAYS

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-37

SCALE: NONE SHEET 049

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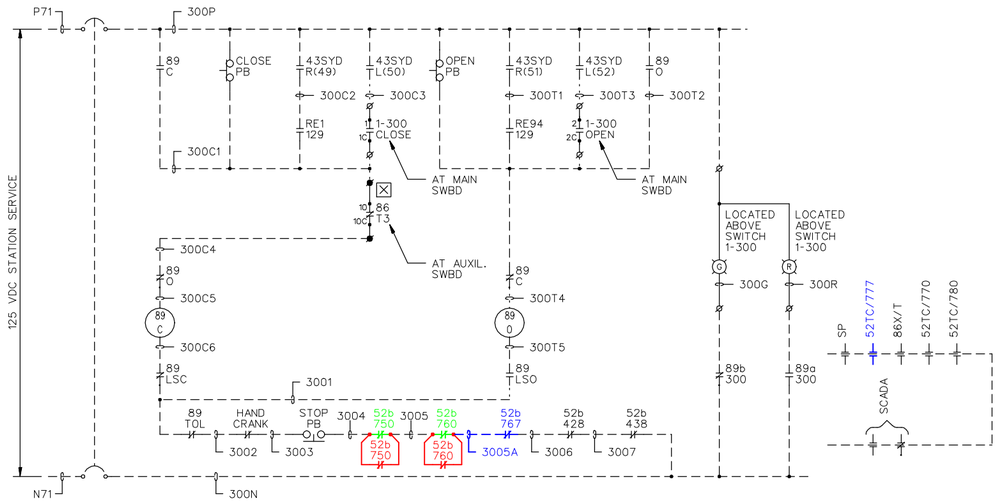

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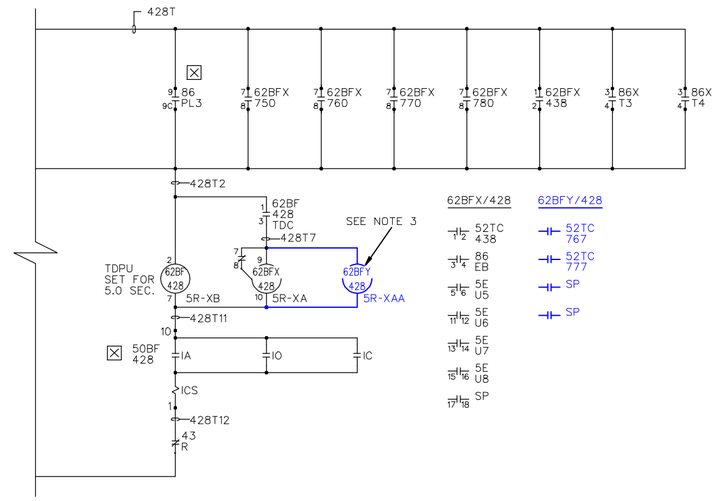

230 KV OCB 428

NOTES:

1. M.O.D. 300 SHOWN, M.O.D. 400 IS SIMILAR.
2. 230 KV BREAKER 428 SHOWN, 230 KV BREAKER 438 IS SIMILAR.
3. CONTRACTOR SHALL PROVIDE NEW 62BFY RELAYS.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
SWITCHYARD CONTROLS

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-38

SCALE: NONE SHEET 050

101RRP_E038_SWYD_CTL.DGN
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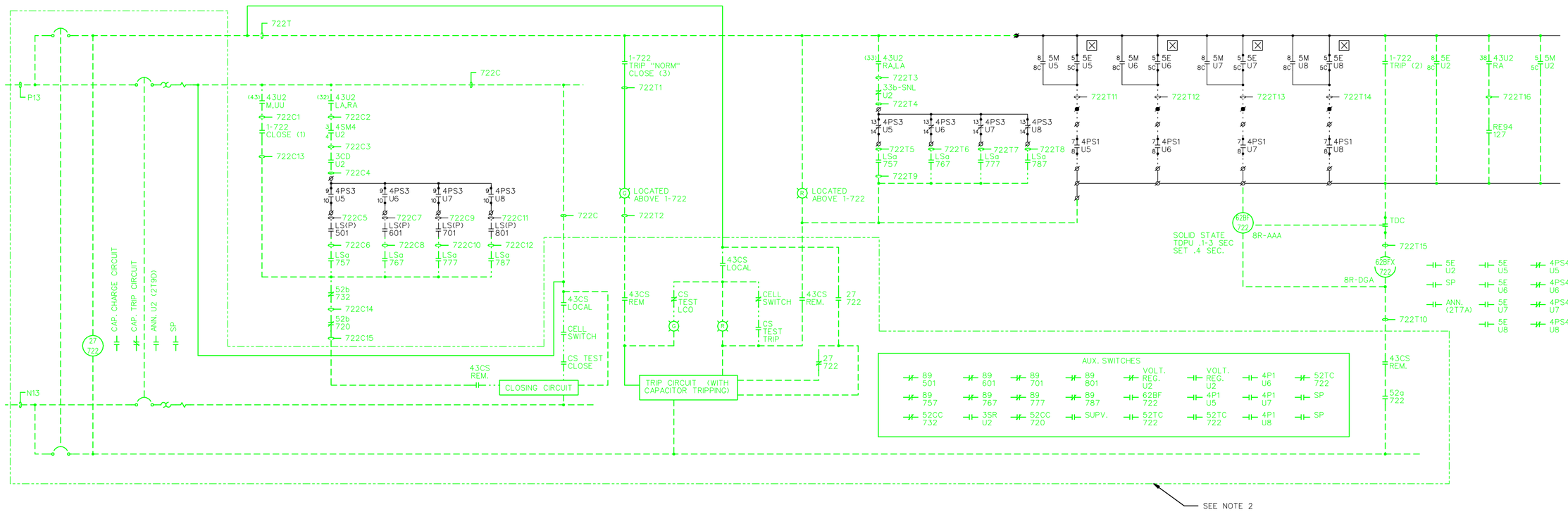

13.8 kV STARTING BUS BREAKER NO. 1 A.C.B. 722

NOTES:

1. STARTING BUS BREAKER 722 SHOWN, STARTING BUS BREAKER 732 IS SIMILAR.
2. EQUIPMENT WITHIN DASHED AREA IS LOCATED IN BREAKER CABINET.
3. BREAKERS ARE TO BE REPLACED WITH NEW STARTING BUS BREAKER 901. ALL WIRE NAMES SHALL BE CHANGED TO REFLECT NEW BREAKER NAME.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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101RRP_E039_722_BKR.DGN
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CIRCUIT BREAKER & STATIC START INSTALL
STARTING BUS BKR. 722 CONTROLS

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-39

SCALE: NONE SHEET 051

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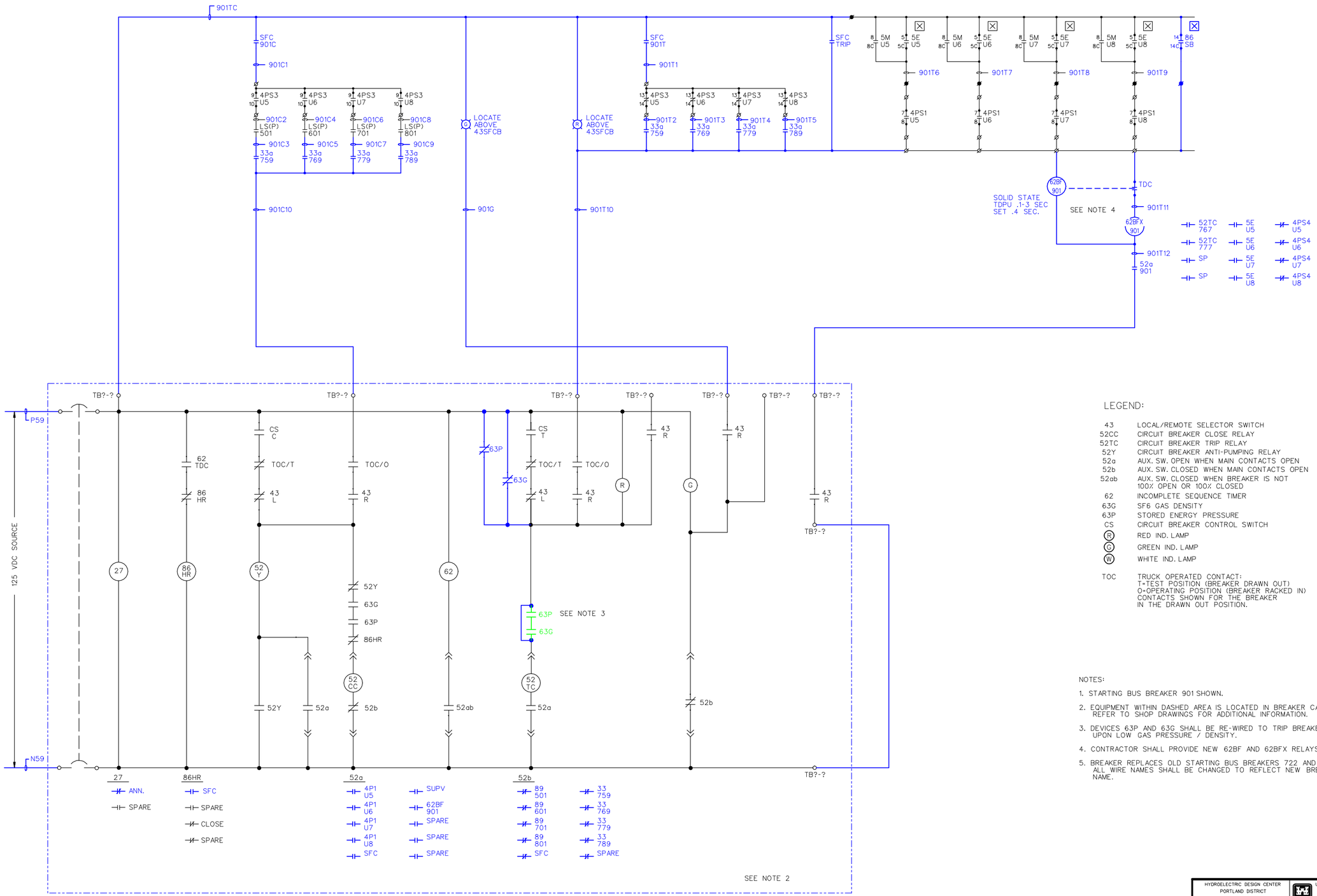

GCB 901 CONTROLS

LEGEND:

43	LOCAL/REMOTE SELECTOR SWITCH
52CC	CIRCUIT BREAKER CLOSE RELAY
52TC	CIRCUIT BREAKER TRIP RELAY
52Y	CIRCUIT BREAKER ANTI-PUMPING RELAY
52a	AUX. SW. OPEN WHEN MAIN CONTACTS OPEN
52b	AUX. SW. CLOSED WHEN MAIN CONTACTS OPEN
52ab	AUX. SW. CLOSED WHEN BREAKER IS NOT 100% OPEN OR 100% CLOSED
62	INCOMPLETE SEQUENCE TIMER
63G	SF6 GAS DENSITY
63P	STORED ENERGY PRESSURE
CS	CIRCUIT BREAKER CONTROL SWITCH
(R)	RED IND. LAMP
(G)	GREEN IND. LAMP
(W)	WHITE IND. LAMP
TOC	TRUCK OPERATED CONTACT: T=TEST POSITION (BREAKER DRAWN OUT) O=OPERATING POSITION (BREAKER RACKED IN) CONTACTS SHOWN FOR THE BREAKER IN THE DRAWN OUT POSITION.

NOTES:

1. STARTING BUS BREAKER 901 SHOWN.
2. EQUIPMENT WITHIN DASHED AREA IS LOCATED IN BREAKER CABINET. REFER TO SHOP DRAWINGS FOR ADDITIONAL INFORMATION.
3. DEVICES 63P AND 63G SHALL BE RE-WIRED TO TRIP BREAKER UPON LOW GAS PRESSURE / DENSITY.
4. CONTRACTOR SHALL PROVIDE NEW 62BF AND 62BFX RELAYS.
5. BREAKER REPLACES OLD STARTING BUS BREAKERS 722 AND 732. ALL WIRE NAMES SHALL BE CHANGED TO REFLECT NEW BREAKER NAME.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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CIRCUIT BREAKER & STATIC START INSTALL
STARTING BUS BKR. 901 CONTROLS

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-40

SCALE: NONE SHEET 052

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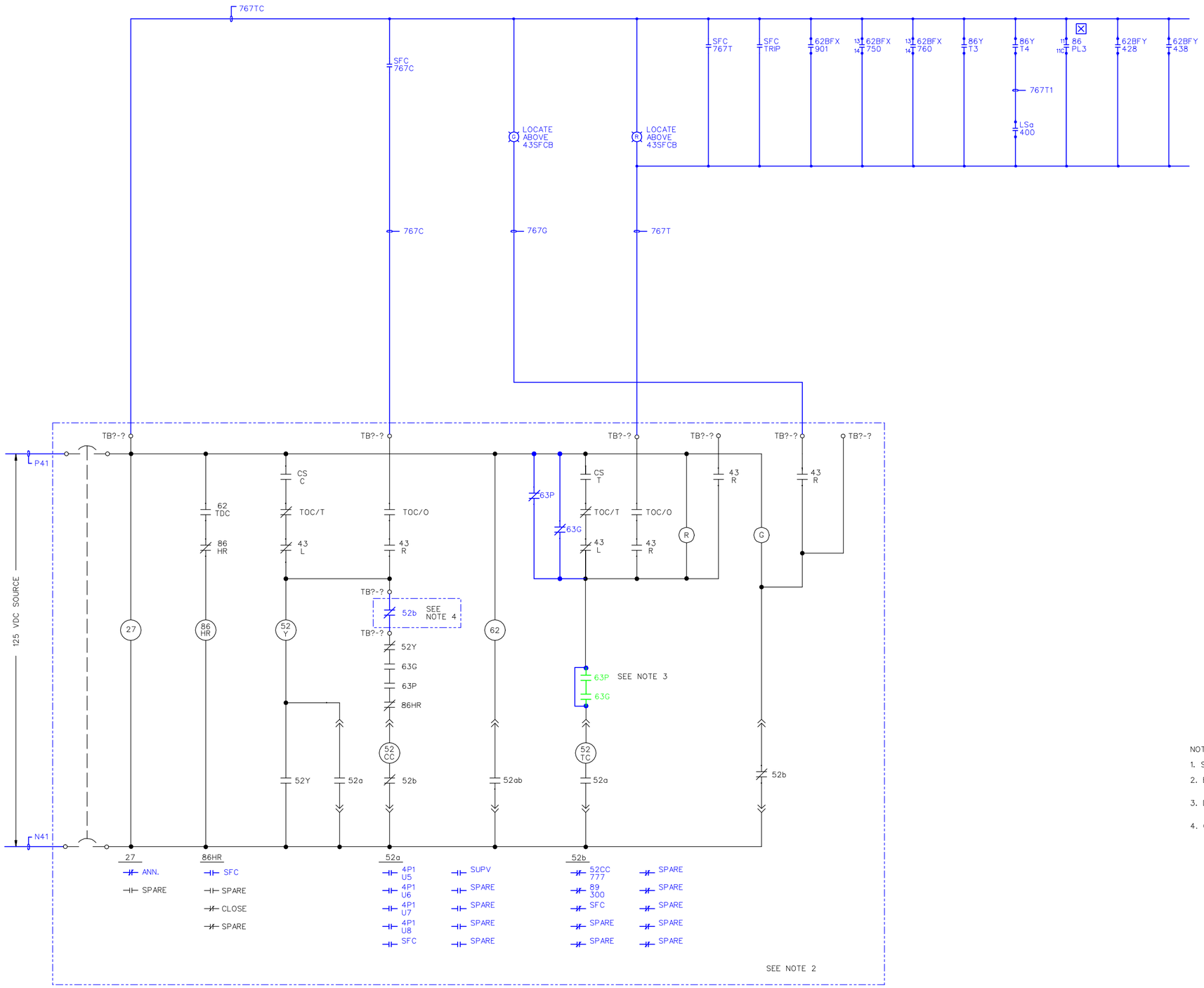

GCB 767 CONTROLS

LEGEND:

43	LOCAL/REMOTE SELECTOR SWITCH
52CC	CIRCUIT BREAKER CLOSE RELAY
52TC	CIRCUIT BREAKER TRIP RELAY
52Y	CIRCUIT BREAKER ANTI-PUMPING RELAY
52a	AUX. SW. OPEN WHEN MAIN CONTACTS OPEN
52b	AUX. SW. CLOSED WHEN MAIN CONTACTS OPEN
52ab	AUX. SW. CLOSED WHEN BREAKER IS NOT 100% OPEN OR 100% CLOSED
62	INCOMPLETE SEQUENCE TIMER
63G	SF6 GAS DENSITY
63P	STORED ENERGY PRESSURE
CS	CIRCUIT BREAKER CONTROL SWITCH
(R)	RED IND. LAMP
(G)	GREEN IND. LAMP
(W)	WHITE IND. LAMP
TOC	TRUCK OPERATED CONTACT: T=TEST POSITION (BREAKER DRAWN OUT) O=OPERATING POSITION (BREAKER RACKED IN) CONTACTS SHOWN FOR THE BREAKER IN THE DRAWN OUT POSITION.

NOTES:

1. SFC INPUT BREAKER 767 SHOWN, SFC INPUT BREAKER 777 IS SIMILAR.
2. EQUIPMENT WITHIN DASHED AREA IS LOCATED IN BREAKER CABINET. REFER TO SHOP DRAWINGS FOR ADDITIONAL INFORMATION.
3. DEVICES 63P AND 63G SHALL BE RE-WIRED TO TRIP BREAKER UPON LOW GAS PRESSURE / DENSITY.
4. CIRCUIT BREAKERS 767 AND 777 SHALL BE INTERLOCKED SUCH THAT 767 CANNOT BE CLOSED IF 777 IS ALREADY CLOSED (52b IN 777) AND 777 CANNOT BE CLOSED IF 767 IS ALREADY CLOSED (52b IN 767).

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

101RRP_E041_767_BKR.DGN
101RRP_TBLK.DGN

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CIRCUIT BREAKER & STATIC START INSTALL
SFC INPUT BKR. 767 CONTROLS

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-41

SCALE: NONE SHEET 053

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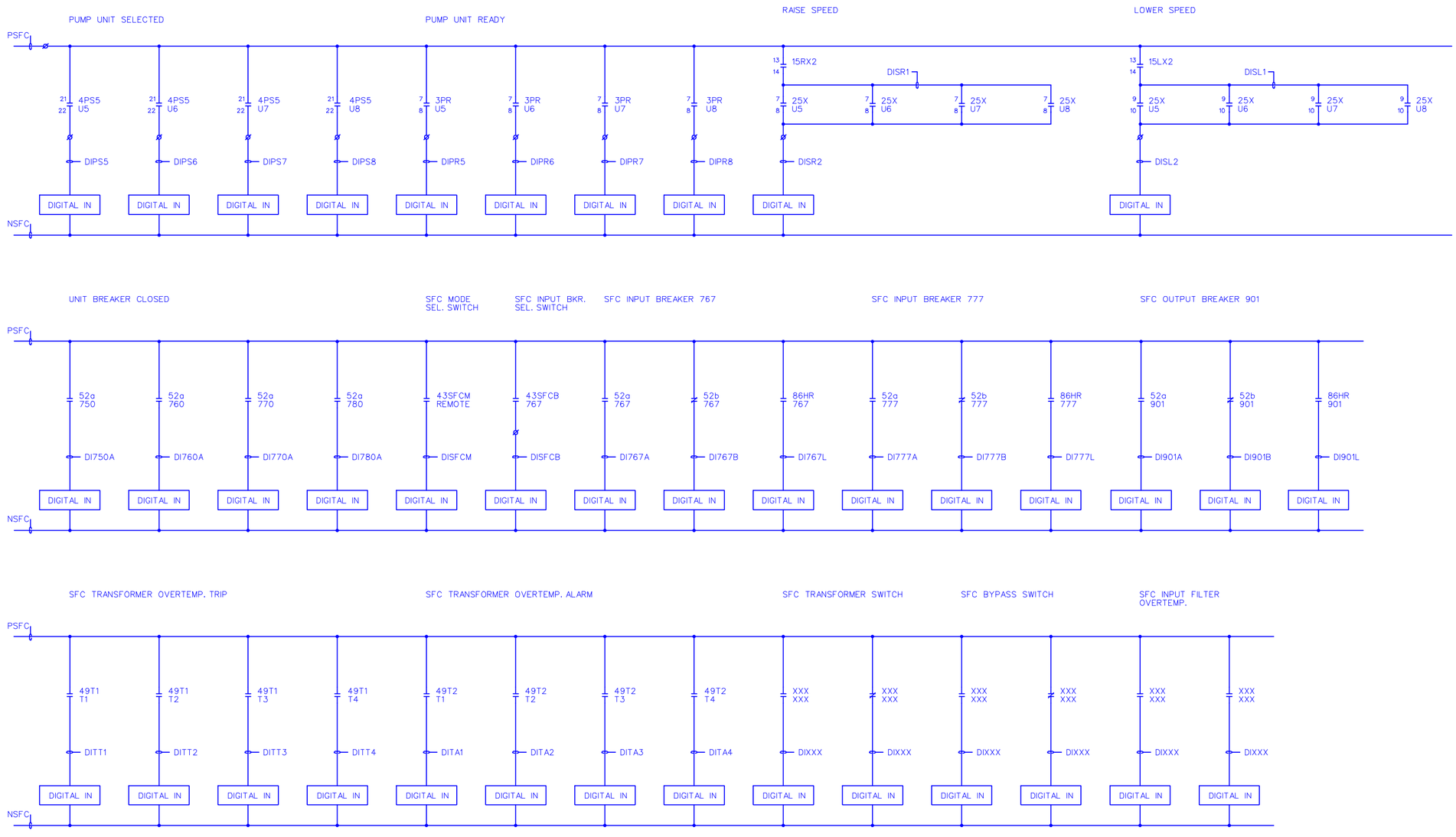

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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101RRP_E042_SFC_DI.DGN
101RRP_TBLK.DGN

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
SFC DIGITAL INPUTS

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-42

SCALE: NONE SHEET 054

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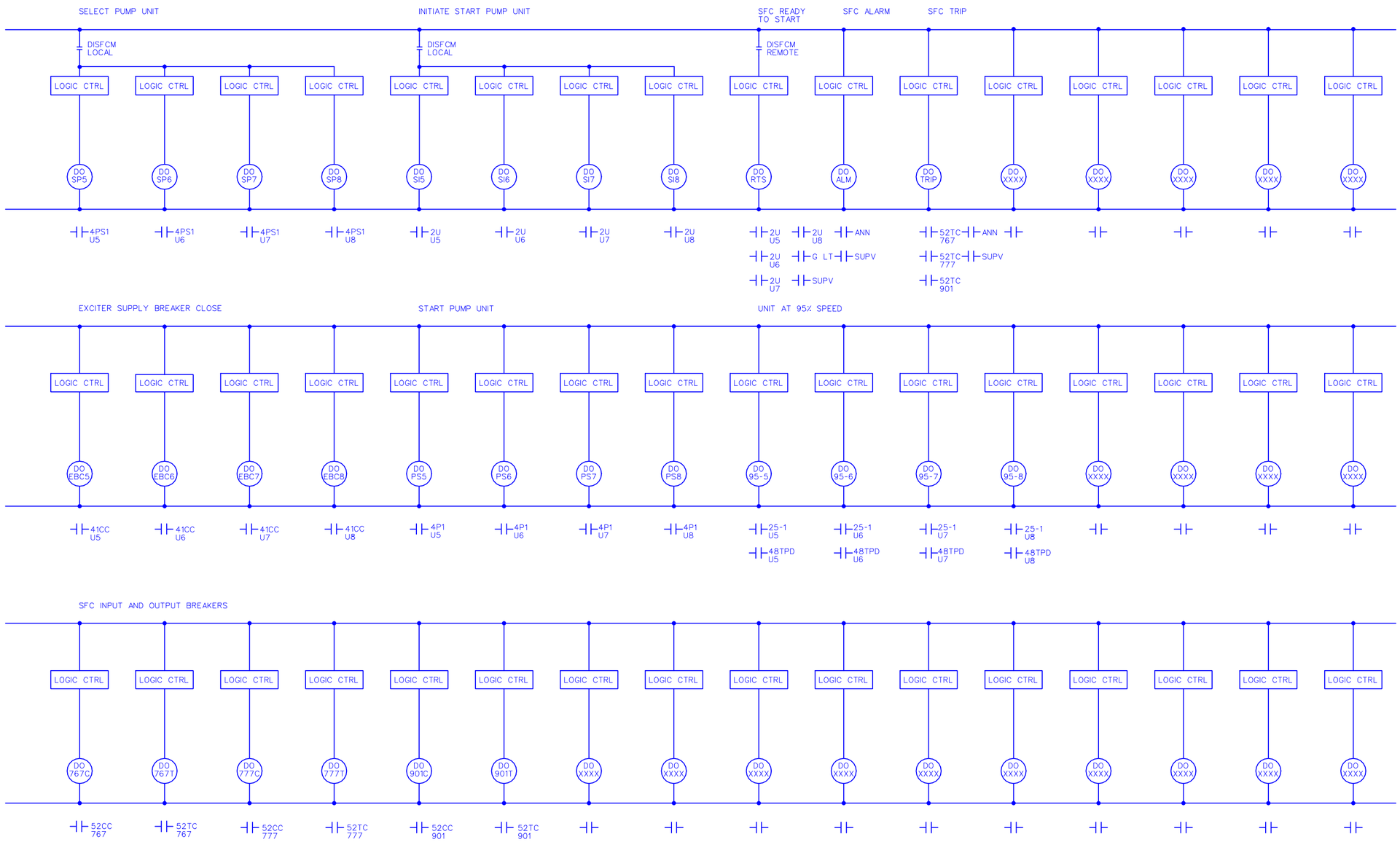

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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CIRCUIT BREAKER & STATIC START INSTALL
SFC DIGITAL OUTPUTS

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-43

SCALE: NONE SHEET 055

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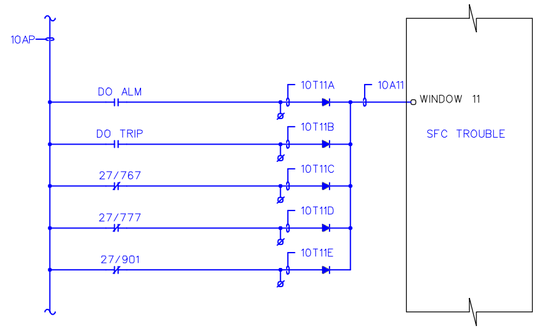

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
XFMRS 3 & 4 ANNUNCIATOR

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-44

SCALE= NONE SHEET 056

101RRP_E044_T3&4_ANN.DGN
101RRP_TBLK.DGN

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DEVICE	TITLE	CONT	GEN	NORM	PUMP			HANDLE	ENGRAVING (FRONT VIEW)	REMARKS
43GPS2	UNIT 2 OPERATING MODE SELECTOR SWITCH	1	X				4GMI	BLACK OVAL	NORM / GEN / PUMP / START	SPRING RETURN TO NORM FROM GEN AND PUMP A. R. ¤ ¤ □ *
		2			X		4SM1			

SEE NOTES 2, 3, & 7

DEVICE	TITLE	CONT	PULL OUT	TRIP	TARGET	CLOSE		HANDLE	ENGRAVING (FRONT VIEW)	REMARKS
1 - 722	UNIT 2 STARTING BUS BREAKER CONTROL SWITCH	1				X	722CC	BLACK PISTOL	□ / TRIP / CLOSE / PULL TO LOCK	SEE NOTE 6 G. R. ¤ ¤ □ *
		2		X			722TC			
		3		X	X	X	G. LT.			

SEE NOTES 7 & 9

DEVICE	TITLE	CONT	OPEN	NORM	CLOSE			HANDLE	ENGRAVING (FRONT VIEW)	REMARKS
1 - 759 ⚠1	UNIT 5 STARTING BUS DISCONNECT SWITCH	1	X				33O/759	BLACK PISTOL	NORM / OPEN / CLOSE	SPRING RETURN TO NORM FROM OPEN OR CLOSE
		2			X		33C/759 ⚠1			
		3	X				SP			
		4			X		SP			

SEE NOTE 4

DEVICE	TITLE	CONT	767	777				HANDLE	ENGRAVING (FRONT VIEW)	REMARKS
43SFCB	SFC INPUT BREAKER SELECTOR SWITCH	1	X				SFCDI		767 / 777	ALL POSITIONS MAINTAINED
		2		X						

SEE NOTE 8

DEVICE	TITLE	CONT	LOCAL	REMOTE				HANDLE	ENGRAVING (FRONT VIEW)	REMARKS
43SFCM	SFC MODE SELECTOR SWITCH	1		X			SFCDI		LOCAL / REMOTE	ALL POSITIONS MAINTAINED
		2		X			4PS1/U5			
		3		X			4PS1/U6			
		4		X			4PS1/U7			
		5		X			4PS1/U8			

SEE NOTE 5

DEVICE	TITLE	CONT	UNIT UNAVAIL	MAN	LOCAL AUTO	REMOTE AUTO		HANDLE	ENGRAVING (FRONT VIEW)	REMARKS
43U2	UNIT 2 TRANSFER SWITCH	1				X	4GM1	BLACK OVAL	LOCAL AUTO / MAN / REM. AUTO / UNIT UNAVAIL	ALL POSITIONS MAINTAINED
		2	X	X	X		4GM1			
		3			X		2U			
		4				X	2U			
		5	X	X	X		2U			
		6	X	X			2U			
		7	X	X	X		4GMI			
		8			X	X	48T			B. W. A. R. ¤ ¤ ¤ ¤ □ *
		9			X	X	25-1			
		10	X	X	X		V. REG.			
		11				X	5E			
		12	X	X			65S			
		13			X	X	65S			
		14	X	X			65GLS			
		15				X	AGLX			
		16	X	X	X		65AGL			
		17				X	65AGL			
		18			X	X	65AGL			
		19			X	X	65SAM			
		20				X	65SAM			
		21	X	X	X		65SAM			
		22				X	V. REG.			
		23			X	X	3SR			
		24				X	25LO			
		25	X	X	X		25LO			
		26	X	X	X		CMXI			
		27	X	X	X		CMXI			
		28				X	CMXI			
		29	X	X	X		SRX			
		30				X	SRX			
		31	X	X	X		SRX			
		32			X	X	722CC			
		33			X	X	722TC			
		34	X	X			41			
		35			X	X	41			
		36			X	X	720TC			
		37				X	720TC			
		38				X	722TC			
		39		X			W. LT.			
		40			X		A. LT.			
		41				X	R. LT.			
		42			X	X	65NH			
		43	X	X			722CC			
		44	X				SUPV			
		45		X	X	X	720CC			
		46	X				B. LT.			
		47		X	X	X	SPARE			
		48		X	X	X	SPARE			
		49		X	X	X	SPARE			
		50		X	X	X	SPARE			
		51			X	X	SPARE			
		52	X	X	X		V. REG.			
		53				X	SUPV			
		54			X		SUPV			
		55		X			SUPV			
		56				X	IGC			
		57	X	X	X		SPARE			
		58				X	SPARE			

SEE NOTES 3 & 7

DEVICE	TITLE	CONT	UNIT UNAVAIL	MAN	LOCAL AUTO	REMOTE AUTO		HANDLE	ENGRAVING (FRONT VIEW)	REMARKS
43U5	UNIT 5 TRANSFER SWITCH	1				X	4PSI	BLACK OVAL	LOCAL AUTO / MAN / REM. AUTO / UNIT UNAVAIL	ALL POSITIONS MAINTAINED
		2	X	X	X		4PSI			
		3				X	4GMI			
		4	X	X	X		4GMI			
		5				X	2U			
		6			X		SPARE			
		7	X	X	X		2U			
		8	X	X			2U			B. W. A. R. ¤ ¤ ¤ ¤ □ *
		9	X	X	X		4PSI			
		10			X	X	48T			
		11			X	X	SPARE			
		12			X	X	25-1			
		13			X	X	SPARE			
		14				X	5E			
		15	X	X			65S			
		16			X	X	65S			
		17	X	X			65GLS			
		18			X	X	65GLS			
		19	X	X	X		65AGL			
		20				X	65AGL			
		21				X	AGLX			
		22			X	X	65AGL			
		23			X	X	65SAM			
		24				X	65SAM			
		25	X	X	X		65SAM			
		26			X	X	3PR			
		27				X	29GB			
		28	X	X	X		SPARE			
		29	X	X	X		CMXI			
		30				X	CMXI			
		31	X	X	X		CMXI			
		32	X	X	X		SRX			
		33				X	SRX			
		34	X	X	X		SRX			
		35				X	750TC			
		36			X	X	750TC			
		37	X	X			41			
		38			X	X	41			
		39			X	X	759 ⚠1			
		40	X	X			759 ⚠1			
		41			X	X	501			
		42	X	X			501			
		43			X	X	NETHD.			
		44			X		V..R.			
		45			X	X	V.R.			
		46		X			W. LT.			
		47			X		A. LT.			
		48				X	R. LT.			
		49		X	X	X	750CC			
		50	X				SUPV			
		51	X				B. LT.			
		52			X	X	SPARE			
		53				X	IGC			
		54				X	SUPV			
		55			X		SUPV			
		56		X			SUPV			
		57				X	SPARE			
		58	X	X	X		SPARE			
		59	X	X			SPARE			
		60			X	X	SPARE			

SEE NOTES 4 & 7

NOTES:

1. ALL SWITCHES LOCATED AT MAIN SWITCHBOARD UNLESS NOTED.
2. SWITCHES LOCATED AT ACTUATOR AND MAIN CONTROL SWITCHBOARD.
3. UNIT 3 IS SIMILAR.
4. UNITS 6 - 8 ARE SIMILAR.
5. SWITCH LOCATED AT SFC CONTROL CABINET.
6. SPRING RETURN TO "NORM" FROM "TRIP" OR "CLOSE", MAINTAINED IN "PULLOUT". PULLOUT IN "TRIP" POSITION ONLY.
7. * INDICATES REQUIRED LAMP COLOR AND ARRANGEMENT ABOVE SWITCH.
8. PROVIDE NEW SWITCH TO BE APPROVED BY GOVERNMENT. SWITCH SHALL MATCH EXISTING SIMILAR SWITCHES.
9. 1 - 732 IS SIMILAR.

LEGEND:

⚠1 = NAME CHANGE

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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101RRP_E045_SWITCH.DGN
101RRP_TBLK.DGN

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
SWITCH DEVELOPMENT

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-45

SCALE: NONE SHEET 057

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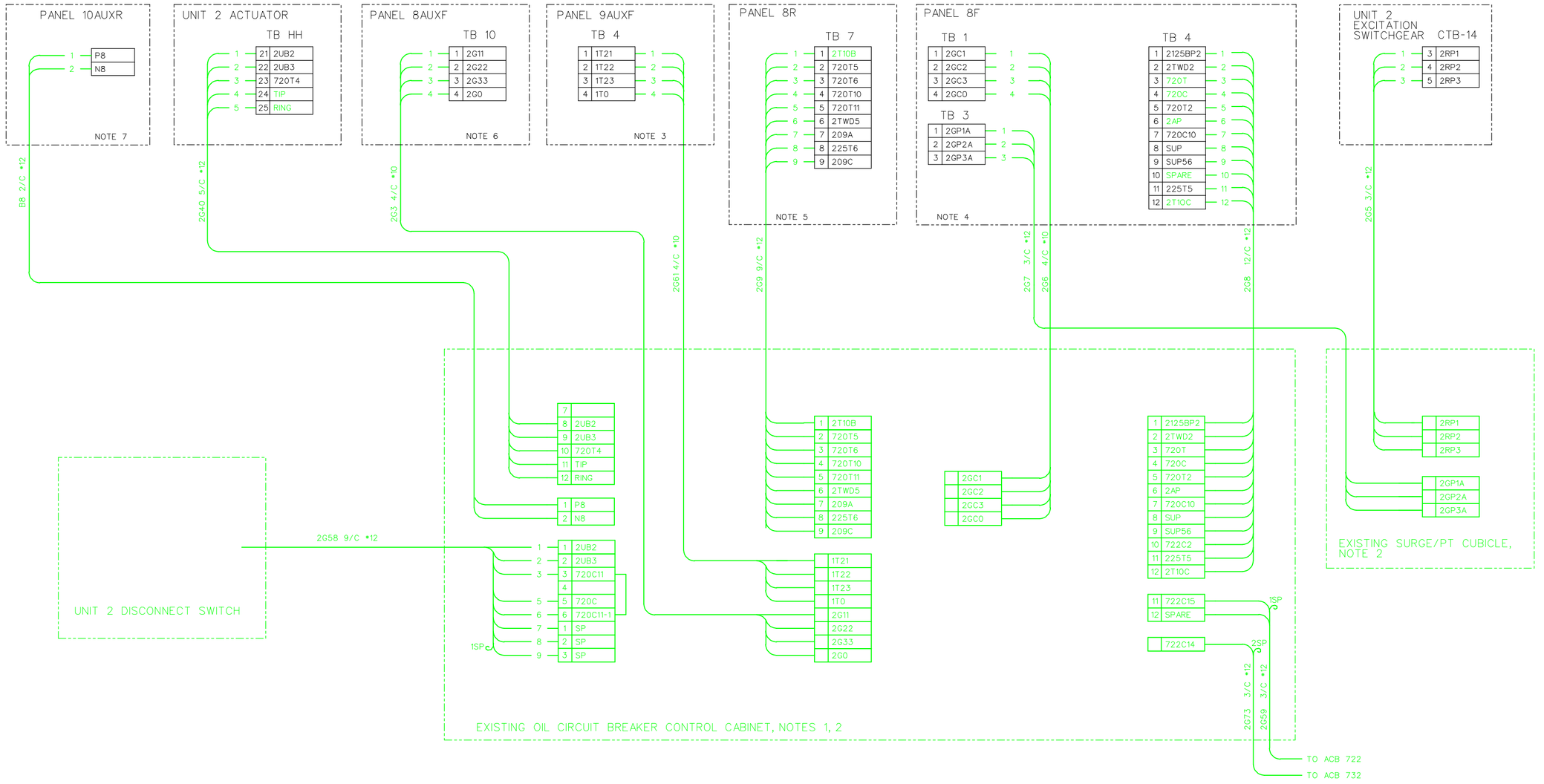

CORRESPONDING SIGNAL NAMES FOR CABLE WIRES ARE SHOWN BELOW (PREFIXES ONLY ARE SHOWN UNLESS ADDITIONAL NUMBERS ARE REQUIRED TO DEFINE THE SIGNAL NAME)

UNIT 1	UNIT 2	UNIT 3	UNIT 4
109	209	309	409
125	225	325	425
710	720	730	740
1AP	2AP	3AP	4AP
1G	2G	3G	4G
1R	2R	3R	4R
1T0	1T0	2T0	2T0
1T10	2T10	3T10	4T10
1T11	1T21	2T31	2T41
1T12	1T22	2T32	2T42
1T13	1T23	2T33	2T43
1T9	2T9	3T9	4T9
1TW	2TW	3TW	4TW
1U	2U	3U	4U
N2	N8	N14	N21
P2	P8	P14	P21
RING	RING	RING	RING
SUP	SUP	SUP	SUP
SUP55	SUP56	SUP57	SUP58
T1P	T1P	T1P	T1P

NOTES:

1. WIRING SHOWN REPRESENTS QUANTITY AND SIGNAL NAMES OF WIRES. ACTUAL LOCATION OF WIRE CONNECTION POINTS INSIDE CIRCUIT BREAKER CONTROL CABINET IS SHOWN IN REFERENCE DRAWINGS.
2. CABLE NUMBERS FOR UNIT 2 SHOWN. UNITS 1, 3, & 4 ARE SIMILAR WITH CHANGES AS FOLLOWS: CABLE PREFIX 2G FOR UNIT 2 BECOMES 1G FOR UNIT 1, 3G FOR UNIT 3, 4G FOR UNIT 4.
3. UNIT 1 IS TB1 ON 9AUXF, UNIT 3 IS TB7 ON 9AUXF, UNIT 4 IS TB10 ON 9AUXF.
4. UNIT 1 IS PANEL 7F, UNIT 3 IS PANEL 10F, UNIT 4 IS PANEL 11F. PANELS ARE ON MAIN CONTROL SWITCHBOARD.
5. UNIT 1 IS PANEL 7R, TB6; UNIT 3 IS PANEL 10R, TB7; UNIT 4 IS PANEL 11R, TB6. PANELS ARE ON MAIN CONTROL SWITCHBOARD.
6. UNIT 1 IS PANEL 7AUXF, UNIT 3 IS PANEL 10AUXF, UNIT 4 IS PANEL 11AUXF.
7. UNITS 1, 3, & 4 ARE ALSO ON 10AUXR AND WIRES ARE AS SHOWN ON TABLE OF CORRESPONDING SIGNAL NAMES.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 BKR. CONNECTION DIAGRAM
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-51

SCALE: NONE SHEET 063

101RRP_E051_U2_BKRTB_OLD.DGN
101RRP_TBLK.DGN

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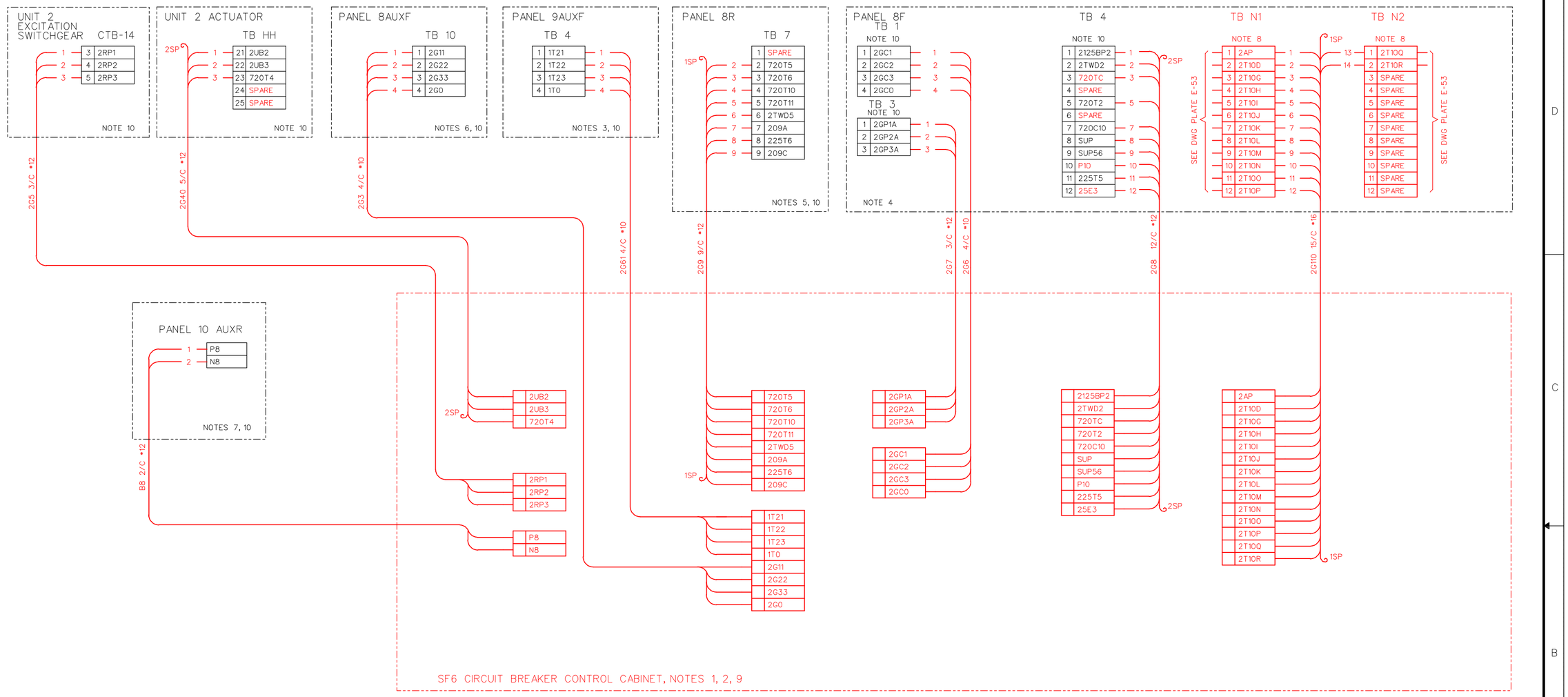

CORRESPONDING SIGNAL NAMES FOR CABLE WIRES ARE SHOWN BELOW (PREFIXES ONLY ARE SHOWN UNLESS ADDITIONAL NUMBERS ARE REQUIRED TO DEFINE THE SIGNAL NAME)

UNIT 1	UNIT 2	UNIT 3	UNIT 4
15	25	35	45
109	209	309	409
125	225	325	425
710	720	730	740
1AP	2AP	3AP	4AP
1G	2G	3G	4G
1R	2R	3R	4R
1T0	1T0	2T0	2T0
1T10	2T10	3T10	4T10
1T11	1T21	2T31	2T41
1T12	1T22	2T32	2T42
1T13	1T23	2T33	2T43
1T9	2T9	3T9	4T9
1TW	2TW	3TW	4TW
1U	2U	3U	4U
N2	N8	N14	N21
P2	P8	P14	P21
P4	P10	P16	P23
RING	RING	RING	RING
SUP	SUP	SUP	SUP
SUP55	SUP56	SUP57	SUP58
TIP	TIP	TIP	TIP

NOTES:

1. WIRING SHOWN REPRESENTS QUANTITY AND SIGNAL NAMES OF WIRES. ACTUAL LOCATION OF WIRE CONNECTION POINTS INSIDE CIRCUIT BREAKER CONTROL CABINET IS SHOWN IN BREAKER SUPPLIER'S SHOP DRAWINGS WHICH WILL BE PROVIDED AFTER INSTALLATION CONTRACT AWARD.
2. CABLE NUMBERS FOR UNIT 2 SHOWN. UNITS 1, 3, & 4 ARE SIMILAR WITH CHANGES AS FOLLOWS: CABLE PREFIX 2G FOR UNIT 2 BECOMES 1G FOR UNIT 1, 3G FOR UNIT 3, 4G FOR UNIT 4.
3. UNIT 1 IS TB1 ON 9AUXF, UNIT 3 IS TB7 ON 9AUXF, UNIT 4 IS TB10 ON 9AUXF.
4. UNIT 1 IS PANEL 7F, UNIT 3 IS PANEL 10F, UNIT 4 IS PANEL 11F. PANELS ARE ON MAIN CONTROL SWITCHBOARD.
5. UNIT 1 IS PANEL 7R, TB 6; UNIT 3 IS PANEL 10R, TB 7; UNIT 4 IS PANEL 11R, TB 6. PANELS ARE ON MAIN CONTROL SWITCHBOARD.
6. UNIT 1 IS PANEL 7AUXF, UNIT 3 IS PANEL 10AUXF, UNIT 4 IS PANEL 11AUXF.
7. UNITS 1, 3, & 4 ARE ALSO ON 10AUXR AND WIRES ARE AS SHOWN ON TABLE OF CORRESPONDING SIGNAL NAMES.
8. CONTRACTOR PROVIDED TERMINAL BLOCK.
9. TERMINAL BLOCKS PROVIDED BY OTHERS.
10. EXISTING TERMINAL BLOCKS.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 2 BKR. CONNECTION DIAGRAM
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-52

SCALE: NONE SHEET D64

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101RRP_TBLK.DGN

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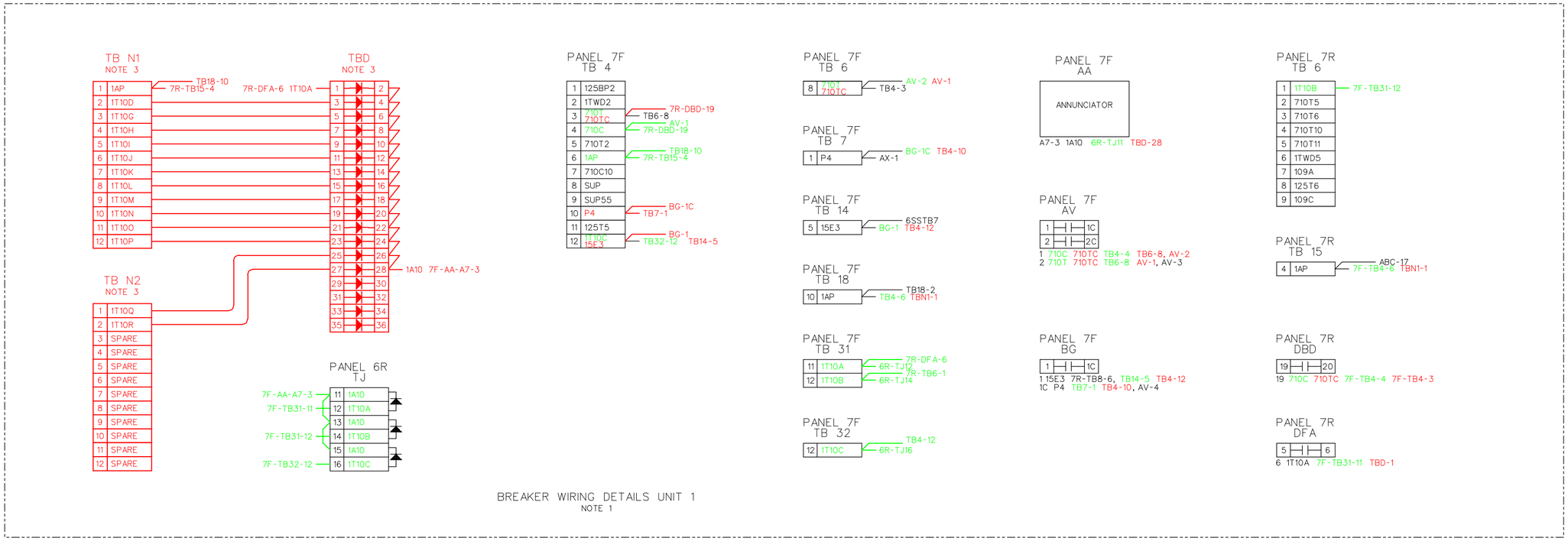

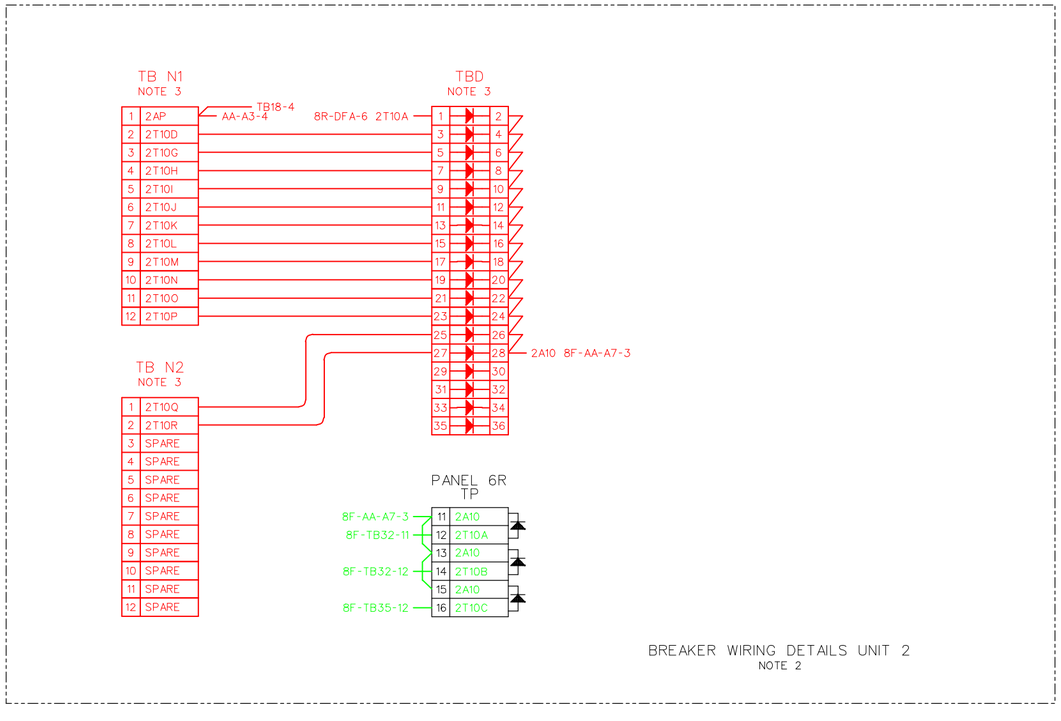

NOTES:

1. UNIT 1 SHOWN, UNIT 4 IS SIMILAR.
2. UNIT 2 SHOWN, UNIT 3 IS SIMILAR. SEE ALSO DWG. PLATES E-54 THROUGH E-60.
3. LOCATE NEW TERMNAL BLOCKS ADJACENT TO EXISTING TERMINAL BLOCKS ON PANEL 7 FOR UNIT 1, 8 FOR UNIT 2, 10 FOR UNIT 3, AND 11 FOR UNIT 4. SPACE TO MOUNT THE TERMINAL BLOCKS IS EXTREMELY SCARCE. CONTRACTOR SHALL COORDINATE WITH PROJECT PERSONNEL AND DESIGN AND PROVIDE MOUNTING HARDWARE AS REQUIRED TO MOUNT THE EQUIPMENT WITHOUT LIMITING ACCESS TO EXISTING SWITCHBOARD EQUIPMENT.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
UNITS 1-4 WIRING DETAILS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-53

SCALE: NONE SHEET 065

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101RRP_TBLK.DGN

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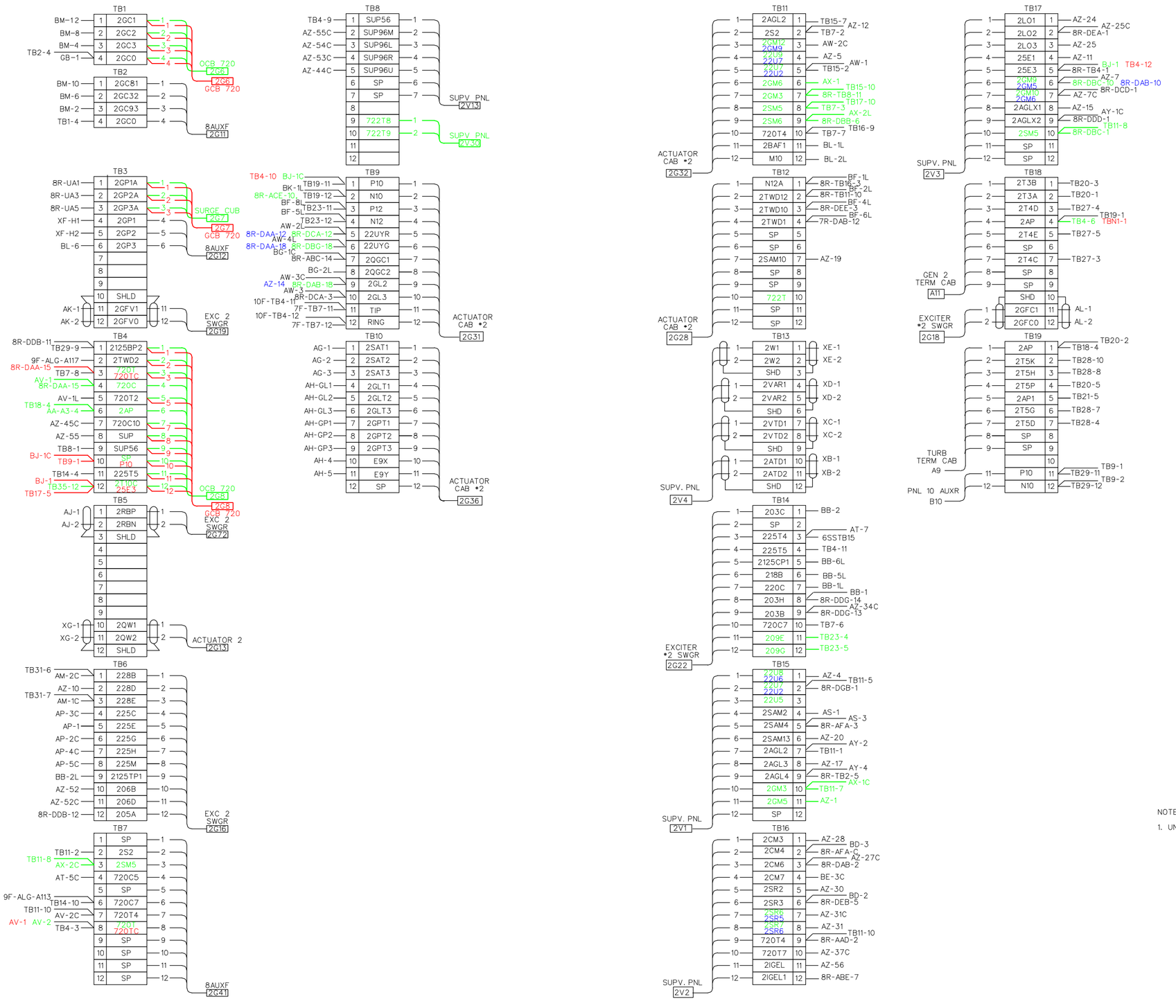

PANEL 8F LEFT SIDE

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 8F TB SH. 1 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-54

SCALE: NONE SHEET 066

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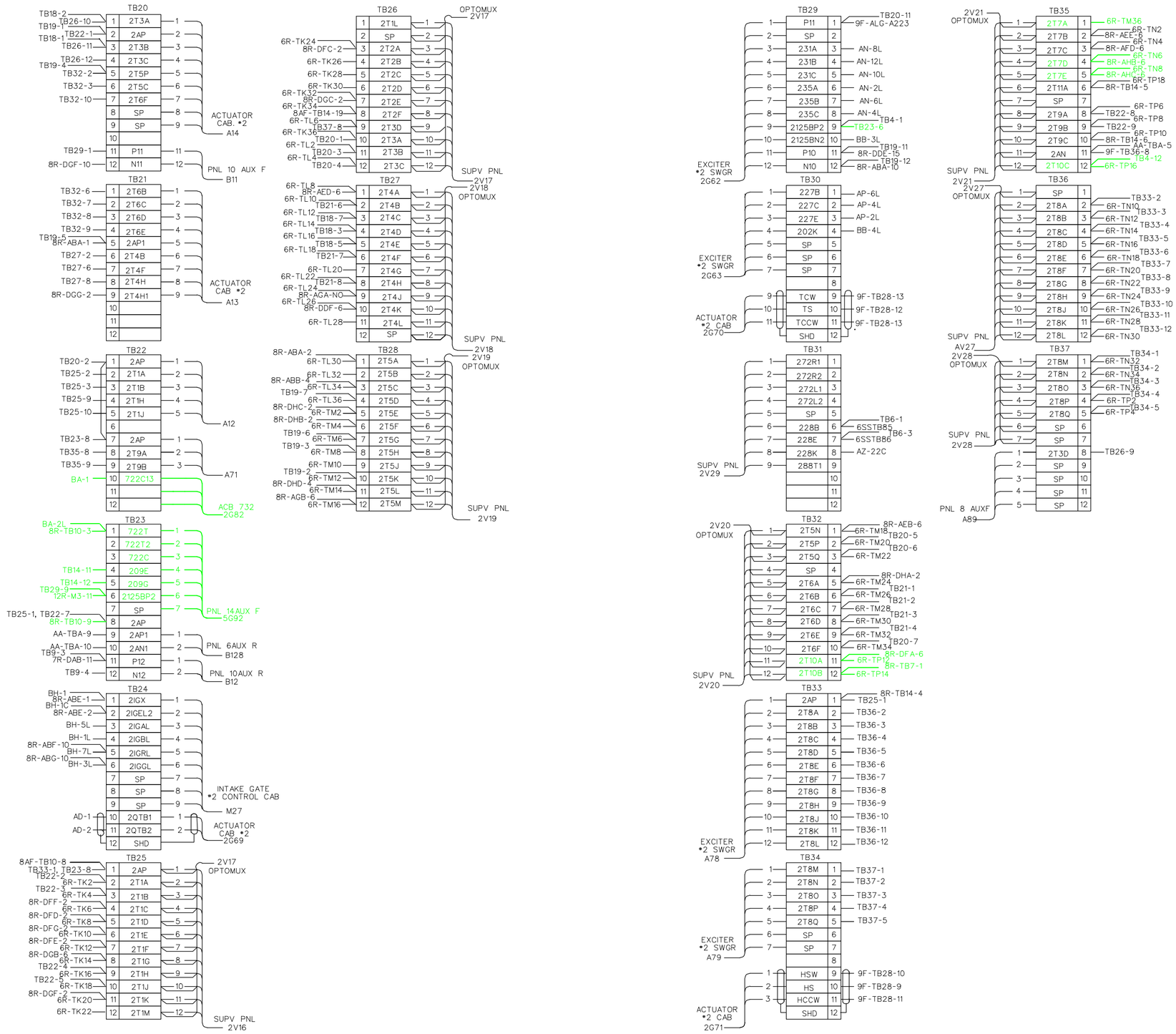

PANEL 8F RIGHT SIDE

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 8F TB SH. 2 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-55

SCALE: NONE SHEET 067

101RRP_E055_SWBD_8FTB_2.DGN
101RRP_TBLK.DGN

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NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

PANEL 8F INTERIOR

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 8F INTERIOR
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-56

SCALE: NONE SHEET 068

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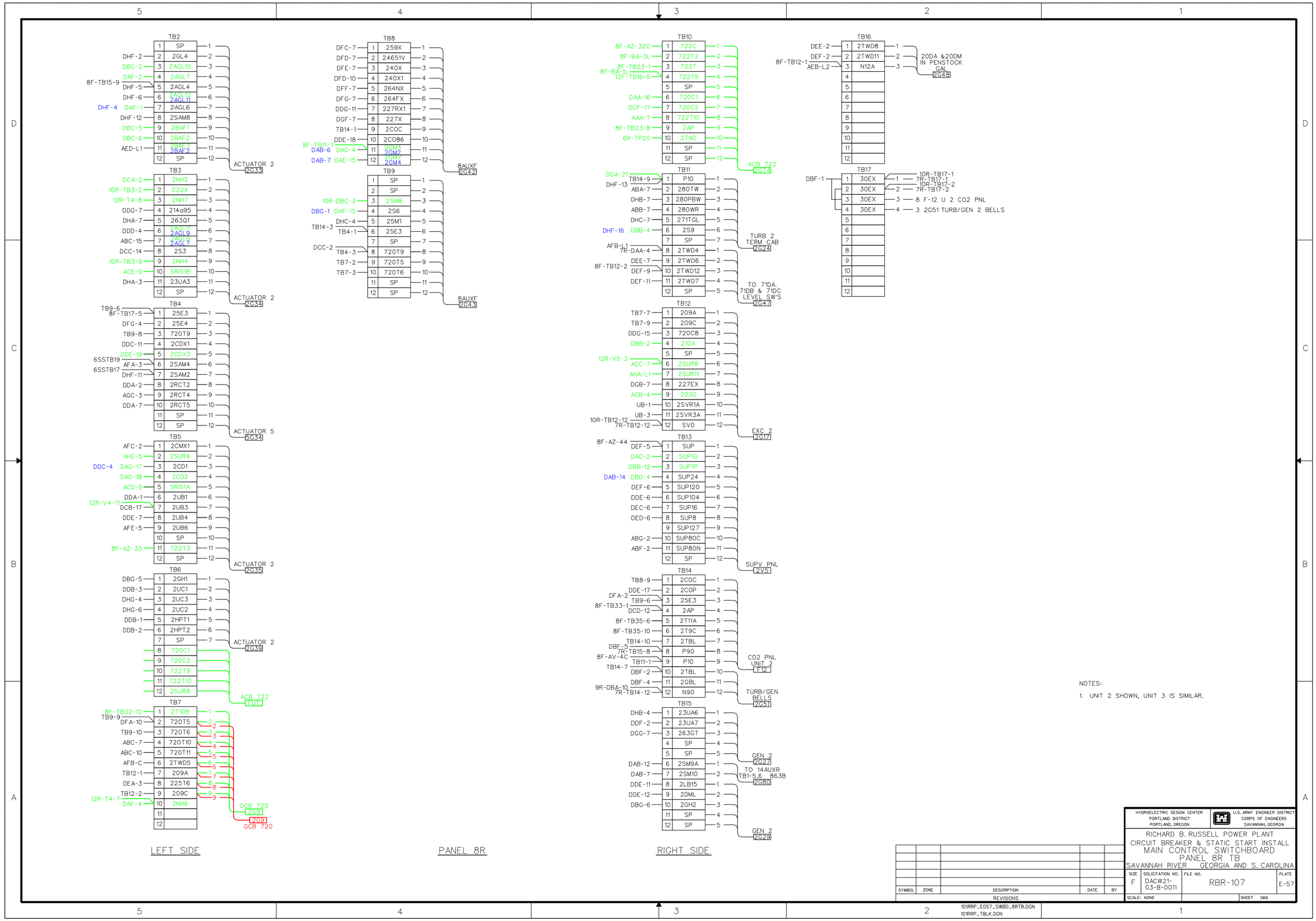

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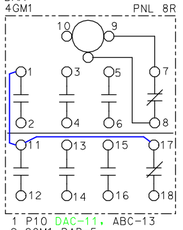
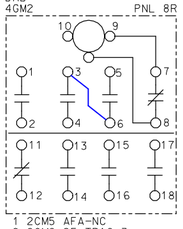
DAA
4GM1 PNL 8R



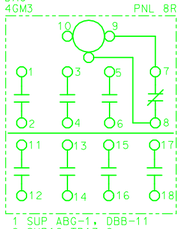
1 P10 DAC-11, ABC-13
2 2GM1 DAB-5
3 22U5
3 22U3 DHF-18
4 22U7
4 22U4 AEA-3
5 248T1 ABC-6, DCC-17
6 248T3 248T2 DBA-2
DGF-5
7 2GM8 2GM4 DAB-9
10 2GM9 2GM5 DAB-10
11 225T8 DDG-4
12 225T9 DGF-11
12 22UYR 8F-TB9-5
13 2AGL8 8F-AY-3C, DAG-13
14 2AGL9 ABC-15
15 72OC 72OTC 8F-TB4-4
8F-TB4-3
16 72OC1 DCF-17
17 2UB12A
17 P10 DBG-11
18 2UB5 DCB-18
18 22UYG 8F-TB9-6

DAB
4GM2 PNL 8R



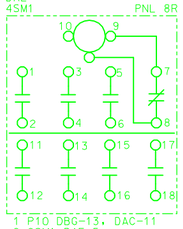
1 2CM5 AFA-NC
2 2CM6 8F-TB16-3
3 2SR4 DEB-6
3 2GM2 DGB-2
4 2SR5 8F-BD-4C
4 22UX2 DBG-7
5 2GM1 DAA-2
6 2GM2 DAC-3 TB8-11
7 2GM8 2GM4 DAC-9
TB8-12
9 2GM8 2GM4 DAA-7
10 2GM9 2GM5 DAA-10,
DAC-10 8F-TB17-6
11 2SM9 10R-DBC-4
12 2SM10 DAE-7
13 2031 DDG-2
13 SUP ABG-1, DDE-5
14 203C 8F-BB-2
14 SUP24 TB13-4
15 2S8 DBB-3
16 2S9 DBB-4
17 2GL1 DAE-3, 8F-AZ-14
18 2GL2 8F-TB9-9, DAE-4

DAC
4GM3 PNL 8R



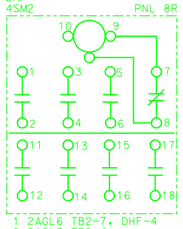
1 SUP ABG-1, DBB-11
2 SUP16 TB13-2
3 2GM2 DAB-6
4 2GM3 TB8-11
5 2SAM12 DBB-13
6 2SAM7 DCF-13
7 2GM8 DAE-16
9 2GM8 DAB-7
10 2GM9 DAB-10, DAE-10
11 P10 DAA-1, DAE-1
12 2NH1 DCA-1
17 22UX2 AEA-L2, DAE-17
18 N10 AHE-L2, DAE-18

DAE
4SM1 PNL 8R



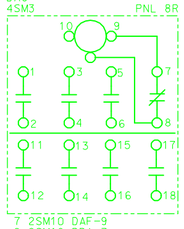
1 P10 DBG-13, DAC-11
2 2SM1 DAF-5
3 2GL1 DAB-17
4 2GL2 DAB-18
5 2SUR1 8F-AZ-23
6 2SUR2 DCB-11
7 2SM10 DAB-12
9 2SM10 DAF-7
10 2GM9 DAC-10, DAF-10
15 2GM7 TB8-12
16 2GM8 DAC-7
17 22UX2 DAC-17, DBF-10
18 N10 DAC-18, DCB-10

DAF
4SM2 PNL 8R



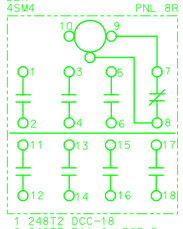
1 2AGL6 TB2-7, DHF-4
2 2AGL7 TB2-4
3 2NH5 8F-AZ-42
4 2NH6 TB7-10
5 2SM1 DAE-2
6 2SM2 DAG-15
7 2SM10 DAE-9
9 2SM10 DAG-7
10 2GM9 DAE-10, DAG-10

DAG
4SM3 PNL 8R



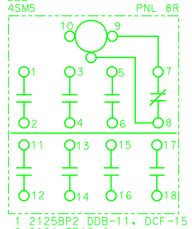
7 2SM10 DAF-9
9 2SM10 DBA-7
10 2GM9 DAF-10, DBA-10
13 2AGL8 DAA-13
14 2AGL14 DBG-1
15 2SM2 DAF-6
16 2SM3 DBA-15
17 2CD1 DDC-4, TB5-3
18 2CD2 TB5-4

DBA
4SM4 PNL 8R



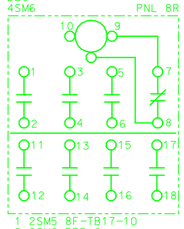
1 248T2 DCC-18
2 248T3 DAA-6, DGF-5
7 2SM10 DAG-9
9 2SM10 DBB-7
10 2GM9 DAG-10, DBB-10
15 2SM3 DAG-16
16 2SM4 DBB-5

DBB
4SM5 PNL 8R



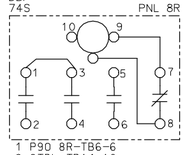
1 2125BP2 DDB-11, DCF-15
2 210A TB12-4
3 2S8 DAB-15, DHF-16
4 2S9 DAB-16, TB11-6
5 2SM4 DBA-16
6 2SM6 8F-TB11-9, DBC-2
7 2SM10 DBA-9
9 2SM10 DBC-7
10 2GM9 DBA-10, DBC-10
11 SUP DAC-1, DDE-5
12 SUP1P TB13-3
13 2SAM12 DAC-5, DDG-6
14 2SAM14
17 248T7
18 248T11 AHC-C1

DBC
4SM6 PNL 8R



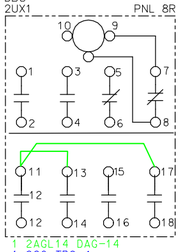
1 2SM5 8F-TB17-10
2 2SM6 DBB-6
3 3SM8 10R-TB9-3
4 3SM9 10R-DAB-11
5 2BAF1 TB2-9
6 2BAF2 TB2-10
7 2SM10 DBB-9
10 2GM9 DBB-10, 8F-TB17-6
13 2CDX3A DDE-20
14 2CDX4 AHE-L1

DBF
74S PNL 8R



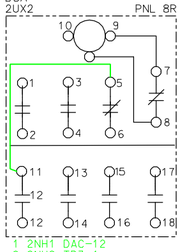
1 P90 8R-TB6-6
2 2TBL TB14-10
4 2GBL TB14-11
5 P90 TB14-8
6 FW1 7R-DAD-1, 10R-DDF
7 22U3 22U5 AEA-5
10 22UX2 N10 DBG-10, DAE-17
AGC-L2

DBG
2UX1 PNL 8R



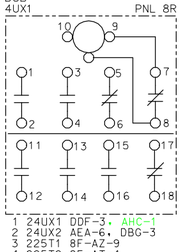
1 2AGL14 DAG-14
1 2S6 TB9-4
2 2AGL15 TB2-3
2 2S7 DHF-15
3 24UX2 DCB-2
4 24UX3 DCB-7
5 2GH1 TB6-1
6 2GH2 TB15-10
7 22U1 22UX2 AEA-NO
DAB-4
9 22U1 22UX2 DCA-7
10 22UX2 N10 DBF-10,
DCA-10
11 P10 DAA-17, DCA-5
12 24UA2 DDB-9
13 P10 DAE-1
14 22U1 DGB-2
17 P10 DCA-11
18 22UYG 8F-TB9-6

DCA
2UX2 PNL 8R



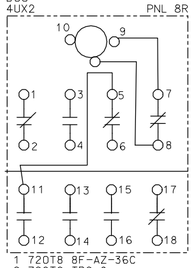
1 2NH1 DAC-12
2 2NH2 TB3-1
3 2GL3 8F-TB9-10
4 2GL4 DCB-13
5 P10 DBG-11, DCB-14
6 262U1 DDE-1
7 22U1 22UX2 DBG-9
9 22U1 22UX2
10 22UX2 N10 DBG-10,
DCB-10
11 P10 DBG-17
12 22UYR 8F-TB9-5
13 SUP ABF-1
14 SUP24 TB13-4
17 2AGLX2 DDD-1
18 2AGLX3 DDD-7

DCB
4UX1 PNL 8R



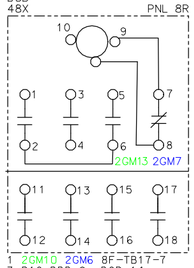
1 24UX1 DDF-3, AHC-1
2 24UX2 AEA-6, DBG-3
3 225T1 8F-AZ-9
4 225T2 8F-AT-4
7 24UX3 DBG-4
9 24UX3 DCC-7
10 N10 DCA-10, DCC-10,
DAE-18
11 2SUR2 DAE-6
12 2SUR3 AHE-1
13 2GL4 DCA-4, DHF-2
14 P10 DCD-3, DCA-5
17 2UB3 TB5-7
18 2UB5 AFE-3, DAA-18

DCC
4UX2 PNL 8R



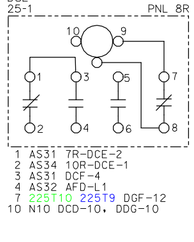
1 72OT8 8F-AZ-36C
2 72OT9 TB9-8
5 241EC3 8F-AZ-35
6 203H 8F-BB-1
7 24UX3 DCB-9
10 N10 DCB-10, DCD-10
12 241EC4 DDG-1
13 2S1 8F-AZ-13
14 2S3 TB3-8
17 248T1 DAA-5
18 248T2 DBA-1

DCD
48X PNL 8R



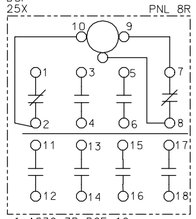
1 2GM10 2GM6 8F-TB17-7
3 P10 DDD-2, DCB-14
4 262U2 AEC-NO, DDC-5
5 2GM11 2GM8 8F-AW-2
7 248X1 AHC-5 AFD-5
9 248X1 DHD-2
10 N10 DCC-10, DCE-10
11 2AP1 ABB-3, DDF-5
12 2AP DFC-1, TB14-4

DCE
25-1 PNL 8R



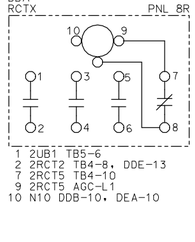
1 AS31 7R-DCE-2
2 AS34 10R-DCE-1
3 AS31 DCF-4
4 AS32 AFD-L1
7 225T10 225T9 DGF-12
10 N10 DCD-10, DDG-10

DCF
25X PNL 8R



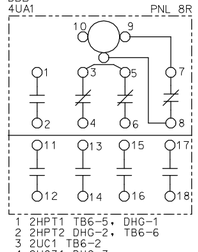
1 AS30 7R-DCF-10
2 AS33 AFD-12
3 P82 10R-DCF-3, 7R-DCE-3
4 AS31 DCE-3
5 SVR 7R-DCF-5, 10R-DCF-5
6 2SVR1 UB-2, 8F-AT3
7 AS32
9 AS32A AGD-3
10 AS33 10R-DCF-1
11 SV1 7R-DCF-11, 10R-DCF-11
12 2SV11 8F-AT1
13 2SAM17 2SAM12 DAC-6
DDG-6
14 2SAM15 2SAM14 6SSTB18
15 2125BP2 DBB-1 DDB-11
16 228R 6SSTB84
17 72OC1 DAA-16
18 72OC3 6SSTB13

DDA
RCTX PNL 8R



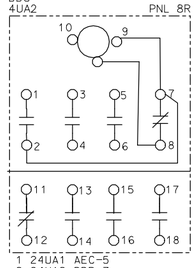
1 2UB1 TB5-6
2 2RCT2 TB4-8, DDE-13
7 2RCT5 TB4-10
9 2RCT5 AGC-L1
10 N10 DDB-10, DEA-10

DDB
4UA1 PNL 8R



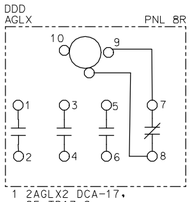
1 2HPT1 TB6-5, DHG-1
2 2HPT2 DHG-2, TB6-6
3 2UC1 TB6-2
4 2UC31 DHG-3
5 2UC21 DHG-5
7 24UA2 DDC-2
9 24UA2 DBG-12
10 N10 DDC-10, DDA-10
11 2125BP2 10F-TB4-1,
DBB-1 DCF-15
12 205A 8F-TB6-12

DDC
4UA2 PNL 8R



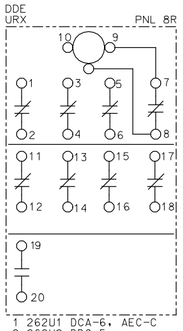
1 24UA1 AEC-5
2 24UA2 DDB-7
3 P10 DDE-15, 9R-DED-3
4 2CD1 DAC-17 TB5-3
5 262U2 DCD-4, DDE-2
6 262U3 AEC-L1
10 N10 DDD-10, DDB-10
11 2CDX1 TB4-4
12 2CDX2 AGA-L1

DDD
AGLX PNL 8R



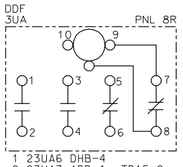
1 2AGLX2 DCA-17,
8F-TB17-9
2 P10 DED-3, DCD-3
3 2AGL10 2AGL8 ABC-16
4 2AGL11 2AGL9 TB3-6
7 2AGLX3 DCA-18
10 N10 DDE-10, DDC-10

DDE
URX PNL 8R



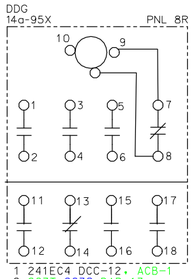
1 262U1 DCA-6, AEC-C
2 262U2 DDC-5
3 2LO4 8F-AV-5
4 2LO5 DEA-7
5 SUP DEC-5, DBB-11
DAB-13
6 SUP104 TB13-6
7 2UB4 TB5-8
10 N10 DDF-10, DDD-10
11 2LB15 TB15-8
12 2DML TB15-9
13 2RCT2 DDA-2
14 2RCT3 AGC-5
15 P10 8F-TB29-11, DDC-3
16 24UR1 8F-BC-1L
17 2COD TB14-2
18 2CO86 TB8-10
19 2CDX3 TB4-5
20 2CDX3A DBC-13

DDF
3UA PNL 8R



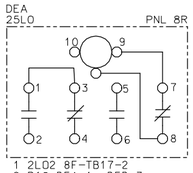
1 23UA6 DHB-4
2 23UA7 ABB-1, TB15-2
3 24UX1 DCB-1, DHD-1
4 24UX5 AEA-2
5 2AP1 DCD-11, DGG-1
6 2T4K TB27-10
7 23UA8 ABB-2
10 N10 DDG-10, DDE-10

DDG
14g-95X PNL 8R



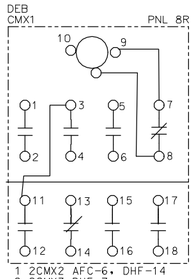
1 241EC4 DCC-12, ACB-1
2 203T 203C DAB-13
8F-BB-2
3 225T7 DEA-4
4 225T8 DAA-11 DGF-11
5 2SAM11 8F-AS-2
6 2SAM12 DBB-13 DCF-13
7 214g95 TB3-4
10 N10 DCE-10, DDF-10
11 227RX1 TB8-7
12 227PX2 9F-ALG-A115
13 203B 8F-TB14-9
14 203H 8F-TB14-8
15 72OC8 TB12-3
16 72OC9 8F-AZ-45, 9F-ALG-A114
17 25E6 9F-ALG-A228
18 25E3 DFG-4, 9R-DBD-4

DEA
25LO PNL 8R



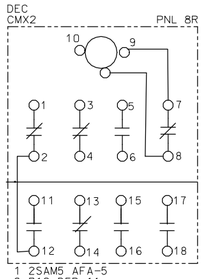
1 2LD2 8F-TB17-2
2 P10 DFA-1, DEB-3
3 225T6 TB7-8
4 225T7 DDG-3
7 2LO5 DDE-4
10 N10 DDA-10, DEB-10

DEB
CMX1 PNL 8R



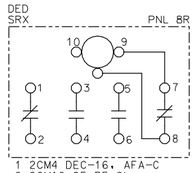
1 2CMX2 AFC-6, DHF-14
2 2CMX3 DHF-7
3 P10 DEA-2
4 2CM2 DEC-15
5 2SR3 8F-TB16-6, DED-4
6 2SR4 DAB-3 8F-BD-4C
7 2CM9 8F-BF-2C
9 2CM9 DEC-7
10 N10 DEA-10, DEC-10
11 P10 DEC-2
12 2CMX4 ABC-3

DEC
CMX2 PNL 8R



1 2SAM5 AFA-5
2 P10 DEB-11
3 2TWD14 AFB-NC1
4 2TWD15 AGB-L1
5 SUP DDE-5, DED-5
6 SUP16 TB13-7
7 2CM9 DEB-9
10 N10 DEB-10, DED-10
11 2SAM16 2SAM15 AFC-5
12 P10 DED-3
13 2TWD5 AGB-1, DEF-13
14 2TWD3 AGB-5
15 2CM2 DEB-4
16 2CM4 DED-1

DED
SRX PNL 8R



1 2CM4 DEC-16, AFA-C
2 2CM10 8F-BE-2L
3 P10 DEC-12, DDD-2
4 2SR3 DEB-5, 9R-DBB-1
5 SUP DEC-5, DEF-5
6 SUP8 TB13-8
7 2SR7 2SR6 8F-BD-2L
10 N10 DEC-10, DGG-10

PANEL 8R INTERIOR

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

101RRP_E058_SWBD_8RI_1.DGN
101RRP_TBLK.DGN

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 8R INTERIOR SH. 1 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-58

SCALE: NONE SHEET 070

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11/03/2003
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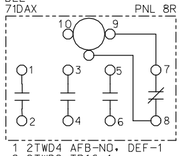
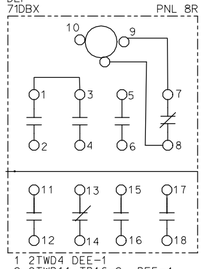
DEE
71DAX
PNL 8R



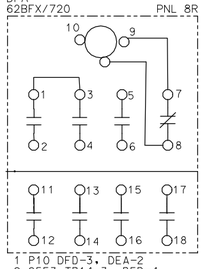
1 2TWD4 AFB-ND, DEF-1
2 2TWD8 TB16-1
3 2TWD10 8F-TB12-3
4 2TWD11 DEF-2
7 2TWD6 TB11-9
10 N12A AGB-L2, DEF-10

DEF
71DBX
PNL 8R



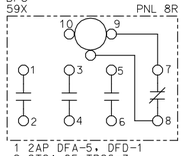
1 2TWD4 DEE-1
2 2TWD11 TB16-2, DEE-4
4 2TWD12 DEF-7
5 SUP DED-5, TB13-1
6 SUP12O TB13-5
7 2TWD12 DEF-4
9 2TWD12 TB11-10
10 N12A DEE-10, DHD-10
11 2TWD7 TB11-11
12 2TWD9 DHD-7
13 2TWD5 DEC-13
14 2TWD13 AEB-L1

DFA
62BFX/720
PNL 8R



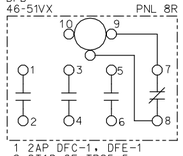
1 P10 DFD-3, DEA-2
2 25E3 TB14-3, DFD-4
3 P4 6SSTB?, ?-1
4 15E3 6SSTB-7, ?D-2
5 2AP DGB-5, DFC-1
6 2T10A 8F-TB32-11 TBD-1
7 T2OT12 AAD-3
10 T2OT5 AAD-7, TB7-2
11 228T 7R-DFA-11
12 228T2 7R-DFA-12
13 238T 7R-DFA-13
14 238T2 7R-DFA-14
15 81OT 7R-DFA-15
16 81OT1 7R-DFA-16

DFC
59X
PNL 8R



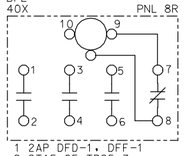
1 2AP DFA-5, DFD-1
2 2T2A 8F-TB26-3
7 259X TB8-1
10 N11 DGB-10

DFD
46-51VX
PNL 8R



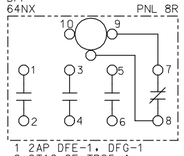
1 2AP DFC-1, DFE-1
2 2T1D 8F-TB25-5
3 P10 DFE-3, DFA-1
4 25E3 DFA-2, DFE-4
7 24651V TB8-2
10 240X1 TB8-4, DFF-10

DFE
40X
PNL 8R



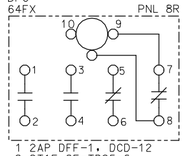
1 2AP DFD-1, DFF-1
2 2T1F 8F-TB25-7
3 P10 DFF-3, DFD-3
4 25E3 DFD-4, DFF-4
7 240X TB8-3
10 240X2 DFG-10,
9F-ALG-A226

DFF
64NX
PNL 8R



1 2AP DFE-1, DFG-1
2 2T1C 8F-TB25-4
3 P10 DFG-3, DFE-3
4 25E3 DFE-4, DFG-4
7 264NX TB8-5
10 240X1 DFD-10,
9F-ALG-A225

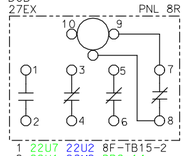
DFG
64FX
PNL 8R



1 2AP DFF-1, DCD-12
2 2T1E 8F-TB25-6
3 P10 DGG-3, DFF-3
4 25E3 DDG-18, DFF-4
7 264FX TB8-6
10 240X2 DFE-10

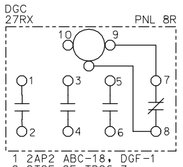
DGA
62BFX/722
PNL 8R

DGB
27EX
PNL 8R



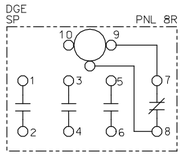
1 22U7 22U2 8F-TB15-2
2 22U1 2GM2 DBG-14
DAB-3, DHF-17
3 P10 DHC-3, DGF-3
4 25E2 DGF-4, ABC-11
5 2AP DHF-20, DFA-5
6 2T1G 8F-TB25-8
7 227EX TB12-8,
9F-ALG-A224
10 N11 DFC-10, DGC-10

DGC
27RX
PNL 8R

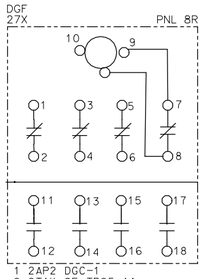


1 2AP2 ABC-18, DGF-1
2 2T2E 8F-TB26-7
7 227RX2 9F-ALG-A116
10 N11 DGB-10, DGF-10

DGE
SP
PNL 8R

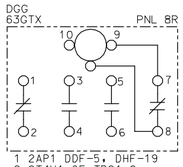


DGF
27X
PNL 8R



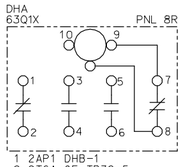
1 2AP2 DGC-1
2 2T1K 8F-TB25-11
3 P10 DGB-3, DGG-3
4 25E2 DGB-4
5 248T3 248T2 DBA-2 DAA-6
6 248T10 248T3 AEE-L1
7 227X TB8-8, 9F-ALG-A22
10 N11 DGC-10, 8F-TB20-12
11 225T9 225T8 DAA-12
DDG-4
12 225T10 225T9 DCE-7

DGG
63GTX
PNL 8R



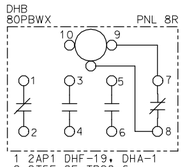
1 2AP1 DDF-5, DHF-19
2 2T4H1 8F-TB21-9
3 P10 DGF-3, DFG-3
4 263GTR 8F-BK-2L
7 263GT TB15-3
10 N10 DED-10, DHG-10

DHA
63Q1X
PNL 8R



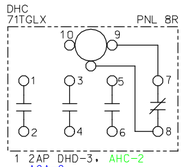
1 2AP1 DHB-1
2 2T6A 8F-TB32-5
3 23UA3 TB3-11
4 23UA4 ABA-3
7 26301 TB3-5
10 N10 DHB-10, 8F-BC-2L

DHB
80PBWX
PNL 8R



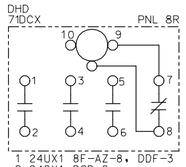
1 2AP1 DHF-19, DHA-1
2 2T5F 8F-TB28-6
3 23UA5 ABA-4
4 23UA6 DDF-1,
7R-DAD-14
7 28QPBW TB11-3
10 N10 DHC-10, DHA-10

DHC
71TGLX
PNL 8R



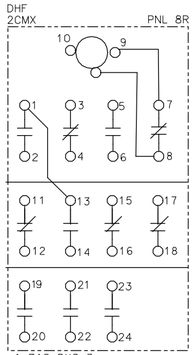
1 2AP DHD-3, AHC-2
AGA-C
2 2T5E 8F-TB29-5
3 P10 DHF-1, DGB-3
4 25M1 TB9-5
7 2T1TGL TB11-5
10 N10 DHF-10, DHB-10

DHD
71DCX
PNL 8R



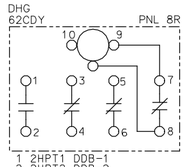
1 24UX1 8F-AZ-8, DDF-3
2 248X1 DCD-9
3 2AP DHC-1, DHF-20
4 2T5L 8F-TB28-11
7 2TWD9 DEF-12
10 N12A DEF-10

DHF
2CMX
PNL 8R



1 P10 DHC-3
2 2GL4 DCB-13, TB2-2
3 2AGL5 8F-AZ-18
4 2AGL6 DAF-1 TB2-7
5 2AGL4 TB2-5
6 2AGL12 2AGL11 TB2-6
7 2CMX3 DEB-2
10 N10 DHG-10, DHC-10
11 2SAM2 TB4-7, 8F-AS-1
12 2SAM8 AFC-1, TB2-8
13 P10 TB11-1
14 2CMX2 DEB-1
15 2S6 2S7 TB9-4 DBG-2
16 2S8 2S9 DBB-3 TB11-6
17 22U1 2GM2 DGB-2,
8F-AZ-6
18 22U2 22U3 AEA-3 DAA-3
19 2AP1 DGG-1, DHB-1
20 2AP DHD-3, DGB-5

DHG
62CDY
PNL 8R



1 2HPT1 DDB-1
2 2HPT2 DDB-2
3 2UC31 DDB-4
4 2UC3 TB6-3
5 2UC21 DDB-6
6 2UC2 TB6-4
7 2CDX5 AGA-5
10 N10 DGG-10, DHF-10

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

PANEL 8R INTERIOR

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

101RRP_E059_SWBD_8RI_2.DGN
101RRP_TBLK.DGN

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 8R INTERIOR SH. 2 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-59

SCALE: NONE SHEET 071

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11/03/2003
k6enxndt

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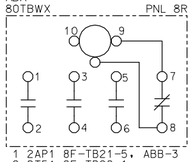
AAA
62BF/722 PNL 8R

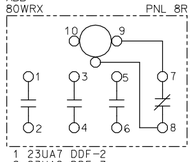
AAD
62BF/720 PNL 8R

ABA
80TBWX PNL 8R



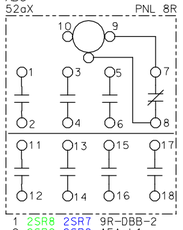
1 2AP1 8F-TB21-5, ABB-3
2 2T5A 8F-TB28-1
3 23UA4 DHA-4
4 23UA5 DHB-3
7 28OTW TB11-2
10 N10 8F-TB29-12, ABB-10

ABB
80WRX PNL 8R



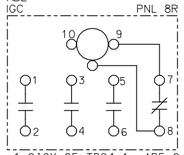
1 23UA7 DDF-2
2 23UA8 DDF-7
3 2AP1 ABA-1, DCD-11
4 2T5C 8F-TB28-3
7 28OWR TB11-4
10 N10 ABA-10, ABE-10

ABC
52oX PNL 8R



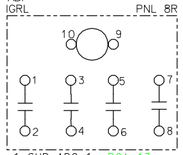
1 2SR8 2SR7 9R-DBB-2
2 2SR9 2SR8 AFA-L1
3 2CMX4 DEB-12
4 2CMX5 AFC-L1
5 24UX1 8F-AZ-8, AEB-1
6 248T1 DAA-5
7 72OT10 TB7-4
10 72OT11 TB7-5
11 25E2 DGB-4
12 25E5 9F-ALG-A227
13 P10 AEA-C AEC-3, DAA-1
14 2OGC1 8F-TB9-7
15 2AGL9 2AGL7 TB3-7,
DAA-14 8F-AY-3C
16 2AGL10 2AGL8 DDD-3
17 2AP AEB-2
18 2AP2 DGC-1

ABE
IGC PNL 8R



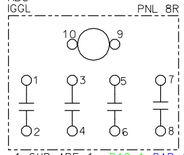
1 2IGX 8F-TB24-1, ABF-9
2 2IGEL2 8F-TB24-2
7 2IGEL1 8F-TB16-12
10 N10 ABB-10, ACA-10
AEA-L2

ABF
IGRL PNL 8R



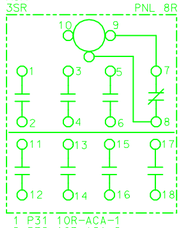
1 SUP ABG-1, DCA-13
2 SUP80N TB13-11
9 2IGX ABG-9, ABE-1
10 2IGRL 8F-TB24-5

ABG
IGGL PNL 8R



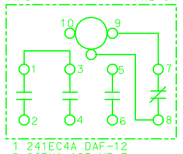
1 SUP ABF-1, DAC-1 DAB-13
2 SUP80C TB13-10
9 2IGX ABF-9
10 2IGGL 8F-TB24-6

ACA
3SR PNL 8R



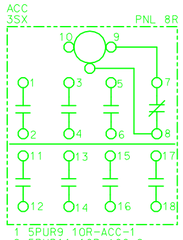
1 P31 10R-ACA-1
2 5P9 10R-ACA-2
3 P38 10R-ACA-3,
5R-XA-11
4 6P9 10R-ACA-4
5 P45 10R-ACA-5
6 7P9 10R-ACA-6
7 2SUR9 AHA-5
10 N10 ABE-10, ACB-10
11 P52 10R-ACA-11
12 8P9 10R-ACA-12

ACB
4IPC PNL 8R



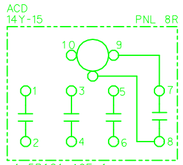
1 241EC4A DAF-12
2 203H1 12R-N5-7
4 203G TB12-9
7 2SUR10 12R-V5-4
10 N10 ACA-10, ACC-10

ACC
3SX PNL 8R



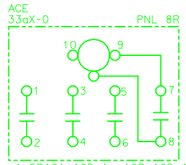
1 5PUR9 10R-ACC-1
2 5PUR11 10R-ACC-2
3 6PUR9 10R-ACC-3
4 6PUR11 10R-ACC-4
7 2SUR8 TB12-6
9 2SUR8 AHA-1
10 N10 ACB-10, AEC-L2

ACD
14Y-15 PNL 8R



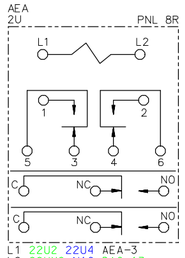
1 5R1S1 ACE-1
2 5R1S5 10R-ACD-2
3 6R1S1 ACE-3
4 6R1S5 10R-ACD-4
9 5R1S1A TB5-5
10 N10 ACE-10

ACE
33oX-0 PNL 8R



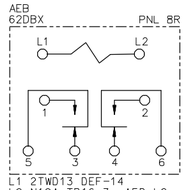
1 5R1S1 ACD-1, 10R-ACD-1
2 5R1S2 10R-ACE-2
3 6R1S1 ACD-3, 10R-ACD-3
4 6R1S2 10R-ACE-4
9 5R1S1B TB3-10
10 N10 ACD-10, 8F-TB9-2

AEA
2U PNL 8R



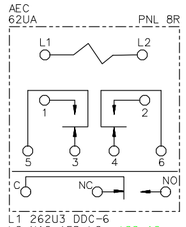
L1 22U2 22U4 AEA-3
L2 22UX2 N10 DAC-17
ABE-10, AEC-L2
2 24UX5 DDF-4
3 22U2 22U4 AEA-L1,
DHF-18 DAA-4
5 22U3 22U5 DBF-7
6 24UX2 DCB-2
C P10 ABC-13, AEC-3
NO 22U1 DBG-7

AEB
62DBX PNL 8R



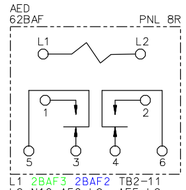
L1 2TWD13 DEF-14
L2 N12A TB16-3, AFB-L2
1 24UX1 ABC-5, AED-1
2 2AP ABC-17, AED-2
5 248X1 AED-5
6 2T5U 8F-TB32-1

AEC
62UA PNL 8R



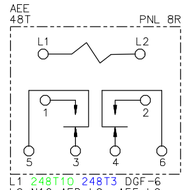
L1 262U3 DDC-6
L2 N10 AED-L2, ACC-10
AEA-L2
3 P10 AEA-C ABC-13,
AGA-3
5 24UA1 DDC-1
C 262U1 DDE-1
NO 262U2 DCD-4

AED
62BAF PNL 8R



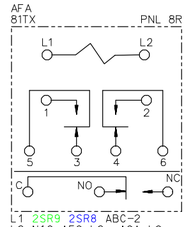
L1 2BAF3 2BAF2 TB2-11
L2 N10 AEC-L2, AEE-L2
1 24UX1 AEB-1, AEE-1
2 2AP AEB-2, AEE-2
5 248X1 AEB-5, AEE-5
6 2T4A 8F-TB27-1

AEE
48T PNL 8R



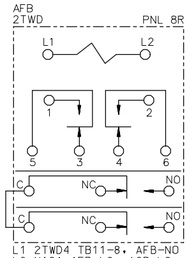
L1 248T10 248T3 DGF-6
L2 N10 AED-L2, AFE-L2
1 24UX1 AED-1, AFD-1
2 2AP AED-2, AFD-2
5 248X1 AED-5, AFD-5
6 2T7B 8F-TB35-2

AFA
81TX PNL 8R



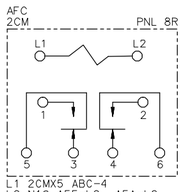
L1 2SR9 2SR8 ABC-2
L2 N10 AFC-L2, AGA-L2
3 2SAM4 8F-TB15-5, TB4-6
5 2SAM5 DEC-1
C 2CM4 DED-1, 8F-TB16-2
NC 2CM5 DAB-1

AFB
2TWD PNL 8R



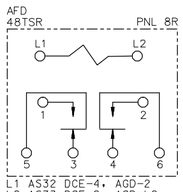
L1 2TWD4 TB11-8, AFB-NO
L2 N12A AEB-L2, AGB-L2
C 2TWD5 TB7-6
NO 2TWD4 AFB-L1, DEE-1
C1 2TWD5 AGB-1
NC1 2TWD14 DEC-3

AFC
2CM PNL 8R



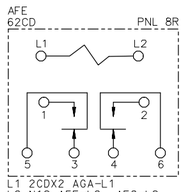
L1 2CMX5 ABC-4
L2 N10 AFE-L2, AFA-L2
1 2SAM8 DHF-12
2 2CMX1 TB5-1
5 2SAM16 2SAM15 DEC-11
6 2CMX2 DEB-1

AFD
48TSR PNL 8R



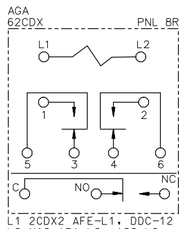
L1 AS32 DCE-4, AGD-2
L2 AS33 DCF-2, AGD-L2
1 24UX1 AEE-1, AHB-1
2 2AP AEC-2, AGB-2
5 248X1 AEE-5, AHB-5
DCD-7
6 2T7C 8F-TB35-3

AFE
62CD PNL 8R



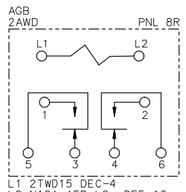
L1 2CDX2 AGA-L1
L2 N10 AEE-L2, AFC-L2
3 2UB5 DCB-18
5 2UB6 TB5-9

AGA
62CDX PNL 8R



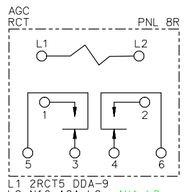
L1 2CDX2 AFE-L1, DDC-12
L2 N10 AFA-L2, AGC-L2
3 P10 AEC-3
5 2CDX5 DHG-7
C 2AP AGB-2, AHB-2 DHC-1
NO 2T4J 8F-TB27-9

AGB
2AWD PNL 8R



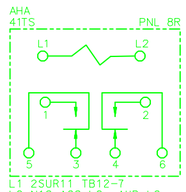
L1 2TWD15 DEC-4
L2 N12A AFB-L2, DEE-10
1 2TWD5 AFB-C1, DEC-13
2 2AP AFD-2, AGA-C
5 2TWD3 DEC-14, 7R-DAA-3
6 2T5M 8F-TB28-12

AGC
RCT PNL 8R



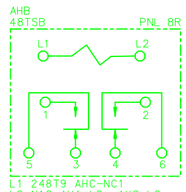
L1 2RCT5 DDA-9
L2 N10 AGA-L2, AHA-L2
DBF-10
3 2RCT4 TB4-9
5 2RCT3 DDE-14

AHA
41TS PNL 8R



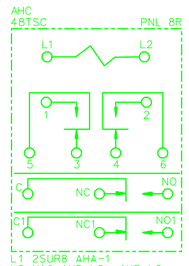
L1 2SUR11 TB12-7
L2 N10 AGC-L2, AHB-L2
1 2SUR8 ACC-9, AHC-L1
5 2SUR9 ACA-7

AHB
48TSB PNL 8R



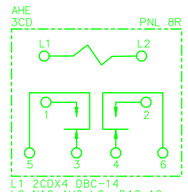
L1 248T9 AHC-NC1
L2 N10 AHA-L2, AHC-L2
1 24UX1 AFD-1
2 2AP AGA-C, AHC-2
5 248X1 AHC-5, AFD-5
6 2T7D 8F-TB35-4

AHC
48TSC PNL 8R



L1 2SUR8 AHA-1
L2 N10 AHB-L2, AHE-L2
1 24UX1 DCB-1
2 2AP AHB-2, DHC-1
5 248X1 AHB-5, DCD-7
6 2T7E 8F-TB35-5
C1 248T11 DBB-18
NC1 248T9 AHB-L1

AHE
3CD PNL 8R



L1 2CDX4 DBC-14
L2 N10 AHC-L2, DAC-18
1 2SUR3 DCB-12
5 2SUR4 TB5-2

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

PANEL 8R INTERIOR

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 8R INTERIOR SH. 3 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-60

SCALE: NONE SHEET 072

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101RRP_TBLK.DGN

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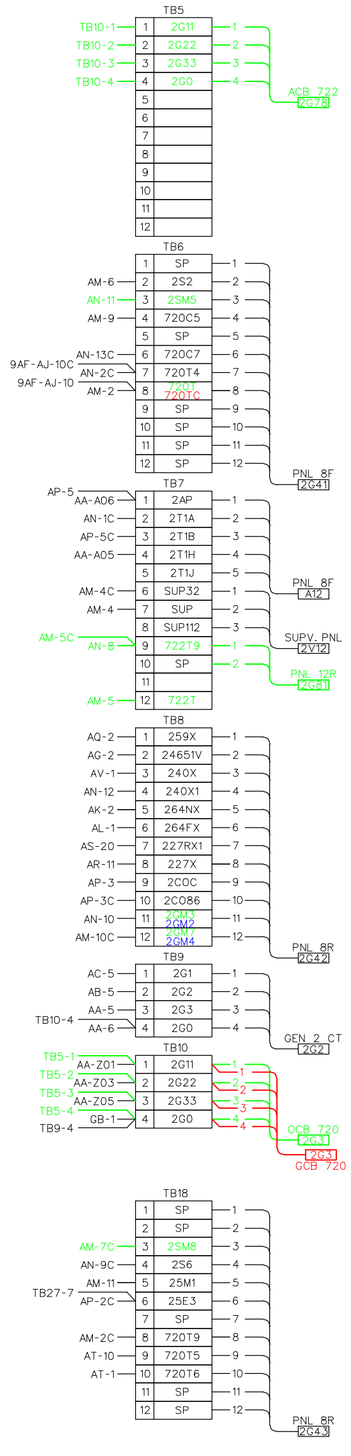

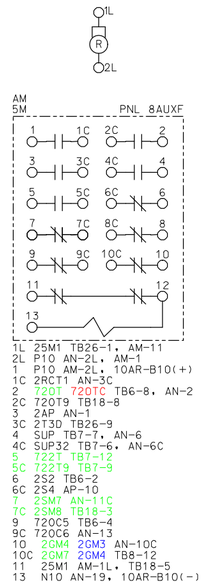

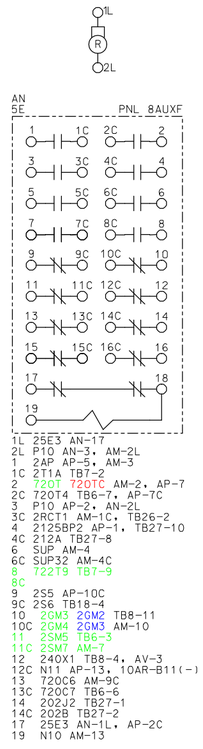

NOTES:

1. UNIT 2 SHOWN, UNIT 3 IS SIMILAR.

PANEL 8AUXF

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
AUXILIARY CONTROL SWITCHBOARD
PANEL 8AUXF
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-61

SCALE: NONE SHEET 073

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101RRP_TBLK.DGN

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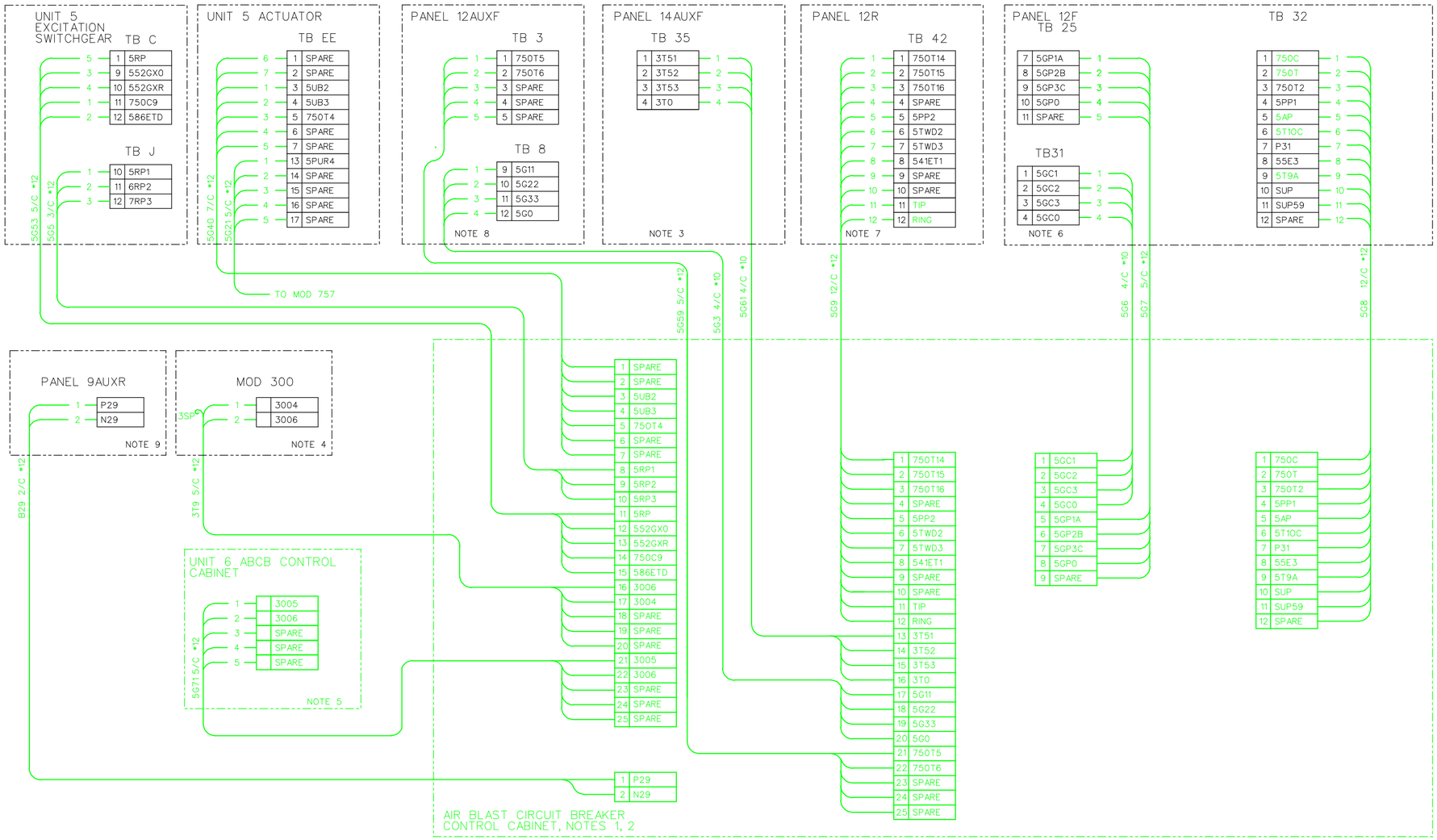

CORRESPONDING SIGNAL NAMES FOR CABLE WIRES ARE SHOWN BELOW (PREFIXES ONLY ARE SHOWN UNLESS ADDITIONAL NUMBERS ARE REQUIRED TO DEFINE THE SIGNAL NAME)

UNIT 5	UNIT 6	UNIT 7	UNIT 8
54	64	74	84
55	65	75	85
552	652	752	852
586	686	786	886
750	760	770	780
3004	3005	4004	4005
3005	3006	4005	4006
3006		4006	
3T0	3T0	4T0	4T0
3T51	3T61	4T71	4T81
3T52	3T62	4T72	4T82
3T53	3T63	4T73	4T83
5AP	6AP	7AP	8AP
5G	6G	7G	8G
5P	6P	7P	8P
5R	6R	7R	8R
5T	6T	7T	8T
5U	6U	7U	8U
N29	N36	N43	N50
P29	P36	P43	P50
P31	P38	P45	P52
RING	RING	RING	RING
SUP	SUP	SUP	SUP
SUP59	SUP60	SUP61	SUP62
T1P	T1P	T1P	T1P

6. UNIT 6 IS PANEL 13F, UNIT 7 IS PANEL 15F, UNIT 8 IS PANEL 16F.
7. UNIT 6 IS PANEL 13R, UNIT 7 IS PANEL 15R, UNIT 8 IS PANEL 16R.
8. UNIT 6 IS PANEL 13AUXF, UNIT 7 IS PANEL 15AUXF, UNIT 8 IS PANEL 16AUXF.
9. UNITS 6 - 8 ARE ALSO ON 9AUXR AND WIRES ARE AS SHOWN ON TABLE OF CORRESPONDING SIGNAL NAMES.

NOTES:

1. WIRING SHOWN REPRESENTS QUANTITY AND SIGNAL NAMES OF WIRES. ACTUAL LOCATION OF WIRE CONNECTION POINTS INSIDE CIRCUIT BREAKER CONTROL CABINET IS SHOWN IN REFERENCE DRAWINGS.
2. CABLE NUMBERS FOR UNIT 5 SHOWN. UNITS 6 - 8 ARE SIMILAR WITH CHANGES AS FOLLOWS: CABLE PREFIX 5G FOR UNIT 5 BECOMES 6G FOR UNIT 6, 7G FOR UNIT 7, 8G FOR UNIT 8.
3. UNIT 6 IS TB36 ON 14AUXF, UNIT 7 IS TB8 ON 14AUXF, UNIT 8 IS TB9 ON 14AUXF.
4. CORRESPONDING LOCATION FOR UNIT 7 IS MOD 400 AND CABLE IS 4T7. THERE IS NO CORRESPONDING CONNECTION FOR UNITS 6 AND 8.
5. CORRESPONDING LOCATION FOR UNIT 7 IS UNIT 8 ABCB CONTROL CABINET AND CABLE IS 7G71.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 BKR. CONNECTION DIAGRAM
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-66

SCALE: NONE SHEET 078

101RRP_E066_U5_BKRTB_OLD.DGN
101RRP_TBLK.DGN

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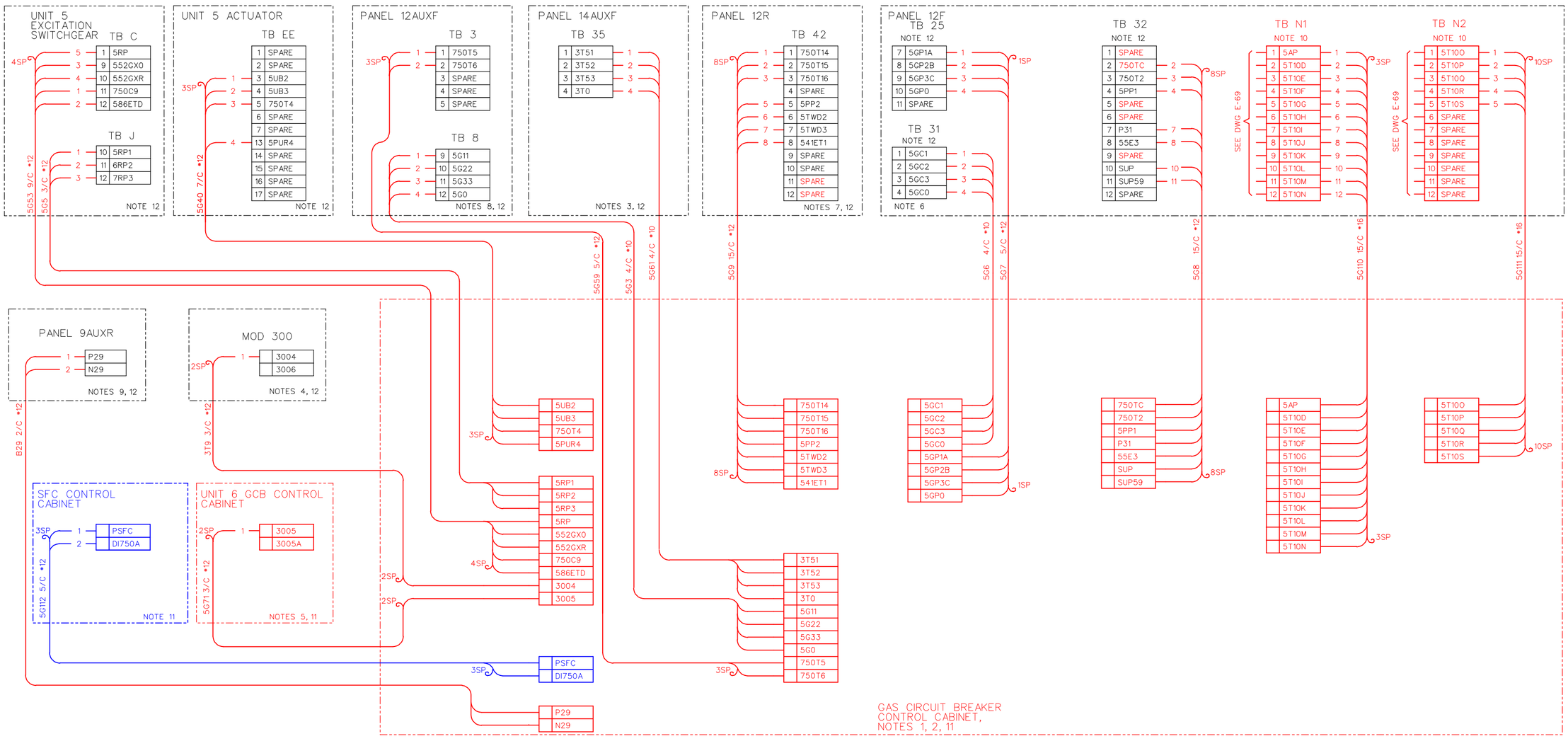

CORRESPONDING SIGNAL NAMES FOR CABLE WIRES ARE SHOWN BELOW (PREFIXES ONLY ARE SHOWN UNLESS ADDITIONAL NUMBERS ARE REQUIRED TO DEFINE THE SIGNAL NAME)

UNIT 5	UNIT 6	UNIT 7	UNIT 8
54	64	74	84
55	65	75	85
552	652	752	852
586	686	786	886
750	780	770	780
3004	3005	4004	4005
3005	3006	4005	4006
3006		4006	
3T0	3T0	4T0	4T0
3T51	3T61	4T71	4T81
3T52	3T62	4T72	4T82
3T53	3T63	4T73	4T83
5AP	6AP	7AP	8AP
5G	6G	7G	8G
5P	6P	7P	8P
5R	6R	7R	8R
5T	6T	7T	8T
5U	6U	7U	8U
N29	N36	N43	N50
P29	P36	P43	P50
P31	P38	P45	P52
RING	RING	RING	RING
SUP	SUP	SUP	SUP
SUP59	SUP60	SUP61	SUP62
T1P	T1P	T1P	T1P

NOTES:

1. WIRING SHOWN REPRESENTS QUANTITY AND SIGNAL NAMES OF WIRES. ACTUAL LOCATION OF WIRE CONNECTION POINTS INSIDE CIRCUIT BREAKER CONTROL CABINET IS SHOWN IN BREAKER SUPPLIER'S SHOP DRAWINGS, WHICH WILL BE PROVIDED AFTER INSTALLATION CONTRACT AWARD.
2. CABLE NUMBERS FOR UNIT 5 SHOWN. UNITS 6 - 8 ARE SIMILAR WITH CHANGES AS FOLLOWS: CABLE PREFIX 5G FOR UNIT 5 BECOMES 6G FOR UNIT 6, 7G FOR UNIT 7, 8G FOR UNIT 8.
3. UNIT 6 IS TB36 ON 14AUXF, UNIT 7 IS TB8 ON 14AUXF, UNIT 8 IS TB9 ON 14AUXF.
4. CORRESPONDING LOCATION FOR UNIT 7 IS MOD 400 AND CABLE IS 4T7. CORRESPONDING LOCATION FOR UNIT 6 IS UNIT 5 GCB CONTROL CABINET AND CABLE IS 5G71. CORRESPONDING LOCATION FOR UNIT 8 IS UNIT 7 GCB CONTROL CABINET AND CABLE IS 7G71.
5. CORRESPONDING LOCATION FOR UNIT 7 IS UNIT 8 GCB CONTROL CABINET AND CABLE IS 7G71. CORRESPONDING LOCATION FOR UNIT 6 IS GCB 767 CONTROL CABINET AND WIRE IS 3005A. CORRESPONDING LOCATION FOR UNIT 8 IS GCB 777 CONTROL CABINET AND WIRE IS 4005A.
6. UNIT 6 IS PANEL 13F, UNIT 7 IS PANEL 15F, UNIT 8 IS PANEL 16F.
7. UNIT 6 IS PANEL 13R, UNIT 7 IS PANEL 15R, UNIT 8 IS PANEL 16R.
8. UNIT 6 IS PANEL 13AUXF, UNIT 7 IS PANEL 15AUXF, UNIT 8 IS PANEL 16AUXF.
9. UNITS 6 - 8 ARE ALSO ON 9AUXR AND WIRES ARE AS SHOWN ON TABLE OF CORRESPONDING SIGNAL NAMES.
10. CONTRACTOR PROVIDED TERMINAL BLOCK.
11. TERMINAL BLOCKS PROVIDED BY OTHERS.
12. EXISTING TERMINAL BLOCKS.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 BKR. CONNECTION DIAGRAM
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-67

SCALE: NONE SHEET 079

101RRP_E067_U5_BKRTB_NEW.DGN
101RRP_TBLK.DGN

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STARTING BUS M.O.D. SW. NO.757
(767, 777, AND 787 SIMILAR EXCEPT AS SHOWN IN INSETS)

Terminal	Wire
TO PNL 9AUXR B34 1	P34
2	N34
TO SW 501 5G64 1	5PUR5
2	722C6
3	732C6
4	SPARE
5	SPARE
TO ACB 722 5G75 1	757T6
2	732C13 △
3	SPARE
4	SPARE
5	SPARE
TO ACB 732 5G77 1	757T8
2	722C13 △
3	SPARE
4	SPARE
5	SPARE

△ SPARES IN M.O.D. SWS 777 AND 787

Terminal	Wire
TO PNL 12R 5G78 1	757T
2	757T3
3	757C3
4	757T2
5	757G
6	757R
7	757T8
8	722T5
9	722T9
10	732T5
11	732T9
12	SPARE
TO PNL 12R 5G79 1	55E4
2	55E5
3	SPARE
4	SPARE
5	SPARE
6	SPARE
7	SPARE
8	SPARE
9	SPARE
*	
TO PNL 12F 5G80 1	5GC1
2	5GC2
3	5GC3
4	5GC0
TO PNL 12AUXF 5G81 1	5G11
2	5G22
3	5G33
4	5G0
TO PNL 14AUXR 5G82 1	SB11
2	SB22
3	SB33
4	SB0
TO ACTUATOR NO. 5 5G21 1	5PUR4
2	SPARE
3	SPARE
4	SPARE
5	SPARE
TO SW 767 5G84 1	767C8
2	722C13
3	732C13
4	SPARE
5	SPARE

Terminal	Wire
TO SW 777 5G85 1	777C8
2	SPARE
3	SPARE
TO SW 787 5G86 1	757C7
2	767C7
3	777C7
4	787C7
5	787C8
6	SPARE
7	SPARE
TO SUPV PNL 5V32 1	SUP131a
2	SUP131b
3	SUP
4	SPARE
5	SPARE

M.O.D. SW. NO. 777 INSET

Terminal	Wire
TO SW 757 5G85 1	777C8
2	SPARE
3	SPARE
TO SW 767 6G84 1	722C13
2	732C13
3	757C5
4	767C5
5	777C5
6	787C5
7	SPARE
8	SPARE
9	SPARE
TO SW 787 7G84 1	722C13
2	732C13
3	757C6
4	767C6
5	777C6
6	787C6
7	SPARE
8	SPARE
9	SPARE

M.O.D. SW. NO. 767 INSET

Terminal	Wire
TO ACB 722 6G75 1	767T6
2	722T9
3	SPARE
4	SPARE
5	SPARE
TO ACB 732 6G77 1	767T8
2	732T9
3	SPARE
4	SPARE
5	SPARE
TO PNL 13R 6G79 1	65E4
2	65E5
3	SPARE
4	SPARE
5	SPARE
6	757C4
7	767C4
8	777C4
9	787C4
TO SW 757 5G84 1	767C8
2	722C13
3	732C13
4	SPARE
5	SPARE
TO SW 777 6G84 1	722C13
2	732C13
3	757C5
4	767C5
5	777C5
6	787C5
7	SPARE
8	SPARE
9	SPARE

M.O.D. SW. NO. 787 INSET

Terminal	Wire
TO SW 757 5G86 1	757C7
2	767C7
3	777C7
4	787C7
5	787C8
6	SPARE
7	SPARE
TO SW 777 7G84 1	722C13
2	732C2
3	757C6
4	767C6
5	777C6
6	787C6
7	SPARE
8	SPARE
9	SPARE

CORRESPONDING CABLE NUMBERS			
SW. NO. 757	SW. NO. 767	SW. NO. 777	SW. NO. 787
B34	B41	B48	B55

CORRESPONDING WIRE AND CABLE NUMBERS WITH PREFIX "5" WILL CHANGE TO "6", "7", AND "8" RESPECTIVELY FOR SWITCHES 767, 777, AND 787.

CORRESPONDING WIRE NUMBERS			
SW. NO. 757	SW. NO. 767	SW. NO. 777	SW. NO. 787
P34	P41	P48	P55
N34	N41	N48	N55
SUP131a	SUP132a	SUP133a	SUP134a
SUP131b	SUP132b	SUP133b	SUP134b
722C6	722C8	722C10	722C12
732C6	732C8	732C10	732C12
722T5	722T6	722T7	722T8
732T5	732T6	732T7	732T8

WIRE NUMBERS WITH PREFIX "757" WILL CHANGE TO "767", "777", AND "787" RESPECTIVELY FOR SWITCHES 767, 777, AND 787.

MOTORIZED STARTING SW. 759
(769, 779, AND 789 SIMILAR EXCEPT AS SHOWN IN INSETS)

Terminal	Wire
TO SUPV PNL 5V32 1	SUP131a
2	SUP131b
3	SUP
4	SPARE
5	SPARE
TO SW 501 5G64 1	5PUR5
2	901C3
3	SPARE
4	SPARE
5	SPARE
TO GCB 901 5G75 1	759TC4
2	759TC5
3	901C10
4	SPARE
5	SPARE

△ SPARES IN SWS 769, 779, AND 789

Terminal	Wire
TO PNL 12R 5G78 1	759TC1
2	759TC
3	759C2
4	759T1
5	759G
6	759aX
7	759TC5
8	901T2
9	901T10
10	SPARE
11	SPARE
12	SPARE
*	
TO PNL 12AUXF 5G81 1	5G11
2	5G22
3	5G33
4	5G0
TO PNL 14AUXR 5G82 1	SB11
2	SB22
3	SB33
4	SB0
TO SW 769 5G84 1	759C3
2	769C3
3	779C4
4	789C4
5	901C10
6	SPARE
7	SPARE
TO SW 779 5G85 1	769C4
2	779C3
3	SPARE
4	SPARE
5	SPARE
TO SW 789 5G86 1	759C6
2	789C3
3	SPARE
4	SPARE
5	SPARE

MOTORIZED STARTING SW. 769 INSET

Terminal	Wire
TO SW 759 5G84 1	759C3
2	769C3
3	779C4
4	789C4
5	901C10
6	SPARE
7	SPARE
TO SW 779 6G84 1	759C4
2	789C5
3	901C10
4	SPARE
5	SPARE
TO SW 789 6G85 1	769C6
2	779C5
3	SPARE
4	SPARE
5	SPARE

MOTORIZED STARTING SW. 779 INSET

Terminal	Wire
TO SW 759 5G85 1	769C4
2	779C3
3	SPARE
4	SPARE
5	SPARE
TO SW 769 6G84 1	759C4
2	789C5
3	901C10
4	SPARE
5	SPARE
TO SW 789 7G84 1	759C5
2	769C5
3	779C5
4	789C5
5	901C10
6	SPARE
7	SPARE

MOTORIZED STARTING SW. 789 INSET

Terminal	Wire
TO SW 759 5G86 1	759C6
2	789C3
3	SPARE
4	SPARE
5	SPARE
TO SW 769 6G85 1	769C6
2	779C5
3	SPARE
4	SPARE
5	SPARE
TO SW 779 7G84 1	759C5
2	769C5
3	779C6
4	789C6
5	901C10
6	SPARE
7	SPARE

CORRESPONDING WIRE NUMBERS			
SW. NO. 759	SW. NO. 769	SW. NO. 779	SW. NO. 789
SUP131a	SUP132a	SUP133a	SUP134a
SUP131b	SUP132b	SUP133b	SUP134b
901C3	901C5	901C7	901C9
901T2	901T3	901T4	901T5

CORRESPONDING WIRE AND CABLE NUMBERS WITH PREFIX "5" WILL CHANGE TO "6", "7", AND "8" RESPECTIVELY FOR SWITCHES 769, 779, AND 789.

WIRE NUMBERS WITH PREFIX "759" WILL CHANGE TO "769", "779", AND "789" RESPECTIVELY FOR SWITCHES 769, 779, AND 789.

NOTES:

1. WIRING SHOWN REPRESENTS QUANTITY AND SIGNAL NAMES OF WIRES, NOT ACTUAL LOCATION.
2. THE NEW MOTORIZED STARTING SWITCHES ARE LOCATED IN THE GCB CABINETS. THE NEW SHORTING TYPE TERMINAL BLOCKS ARE LOCATED IN THE GCB CT CABINETS.

* SHORTING TYPE TERMINAL BLOCK.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 5 STARTING BUS SWITCH
CONNECTION DIAGRAM
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-68

SCALE: NONE SHEET 080

101RRP_E068_U5_SBSW_TB.DGN
101RRP_TBLK.DGN

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11/03/2003
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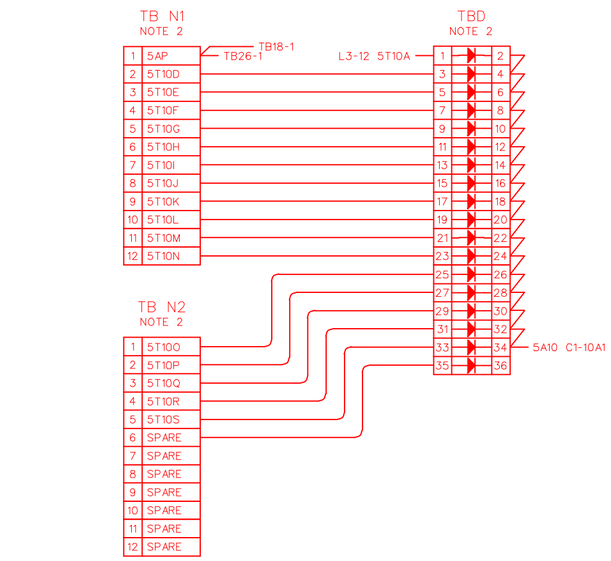
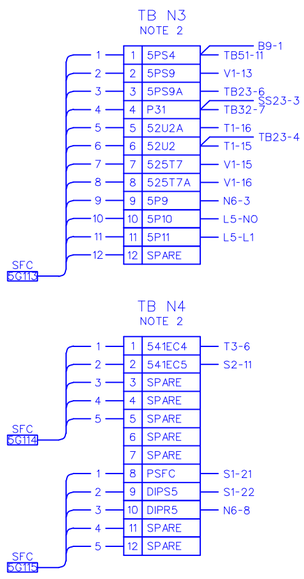


BREAKER WIRING DETAILS UNIT 5
NOTE 1



SFC WIRING DETAILS UNIT 5
NOTE 1

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR. SEE ALSO DWG. PLATES E-70 THROUGH E-77.

2. LOCATE NEW TERMINAL BLOCKS ADJACENT TO EXISTING TERMINAL BLOCKS ON PANEL 12 FOR UNIT 5, 13 FOR UNIT 6, 15 FOR UNIT 7, AND 16 FOR UNIT 8. SPACE TO MOUNT THE TERMINAL BLOCKS IS EXTREMELY SCARCE. CONTRACTOR SHALL COORDINATE WITH PROJECT PERSONNEL AND DESIGN AND PROVIDE MOUNTING HARDWARE AS REQUIRED TO MOUNT THE EQUIPMENT WITHOUT LIMITING ACCESS TO EXISTING SWITCHBOARD EQUIPMENT.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
UNITS 5-8 WIRING DETAILS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-69

SCALE: NONE SHEET 081

101RRP_E069_SWBD_58_DTL.DGN
101RRP_TBLK.DGN

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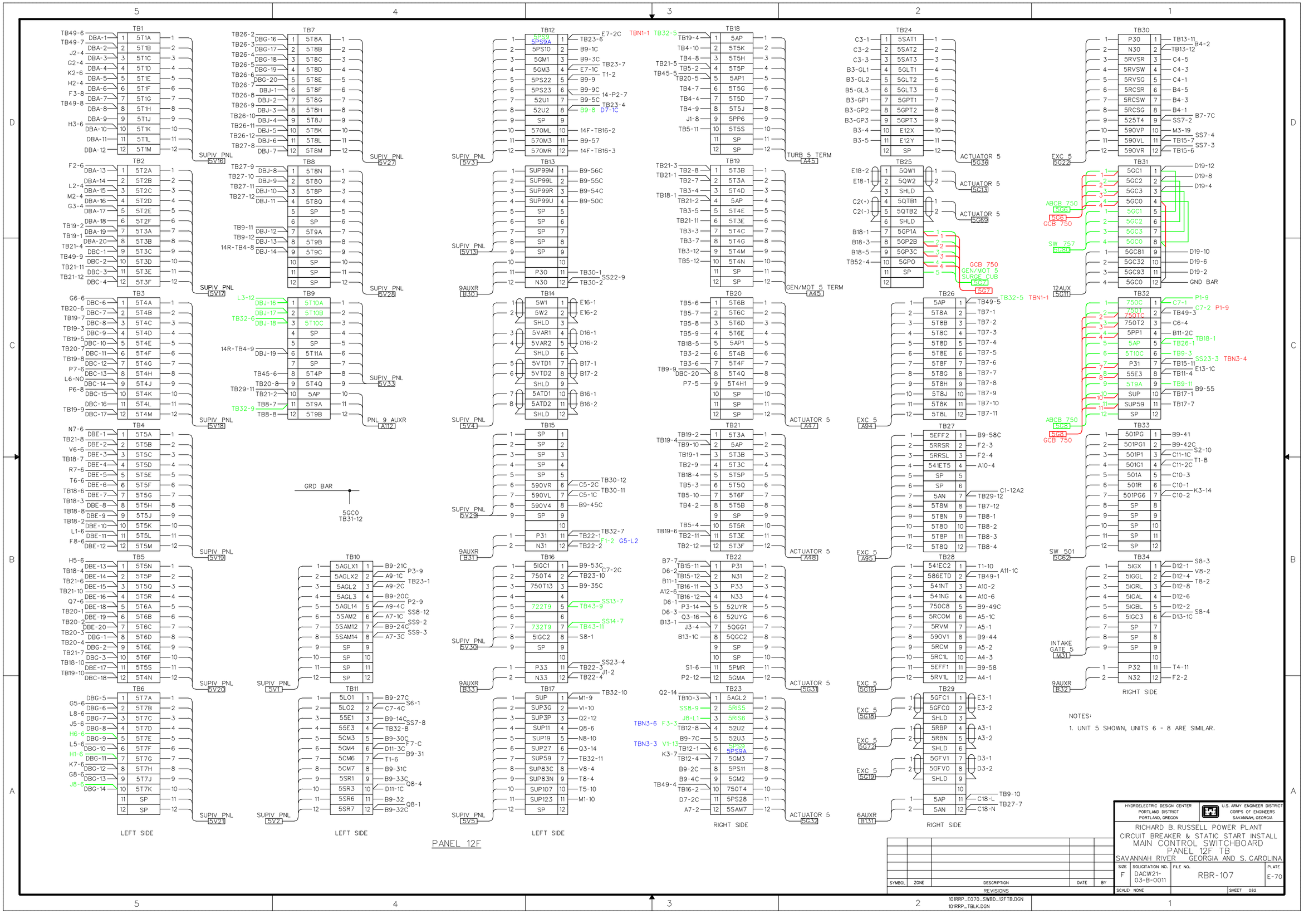

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 12F TB
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-70

SCALE: NONE SHEET 082

101RRP_E070_SWBD_12FTB.DGN
101RRP_TBLK.DGN

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k6enxndt

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NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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PORTLAND, OREGON

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 12R TB
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-71

SCALE: NONE SHEET 083

101RRP_E071_SWBD_12RTB.DGN
101RRP_TBLK.DGN

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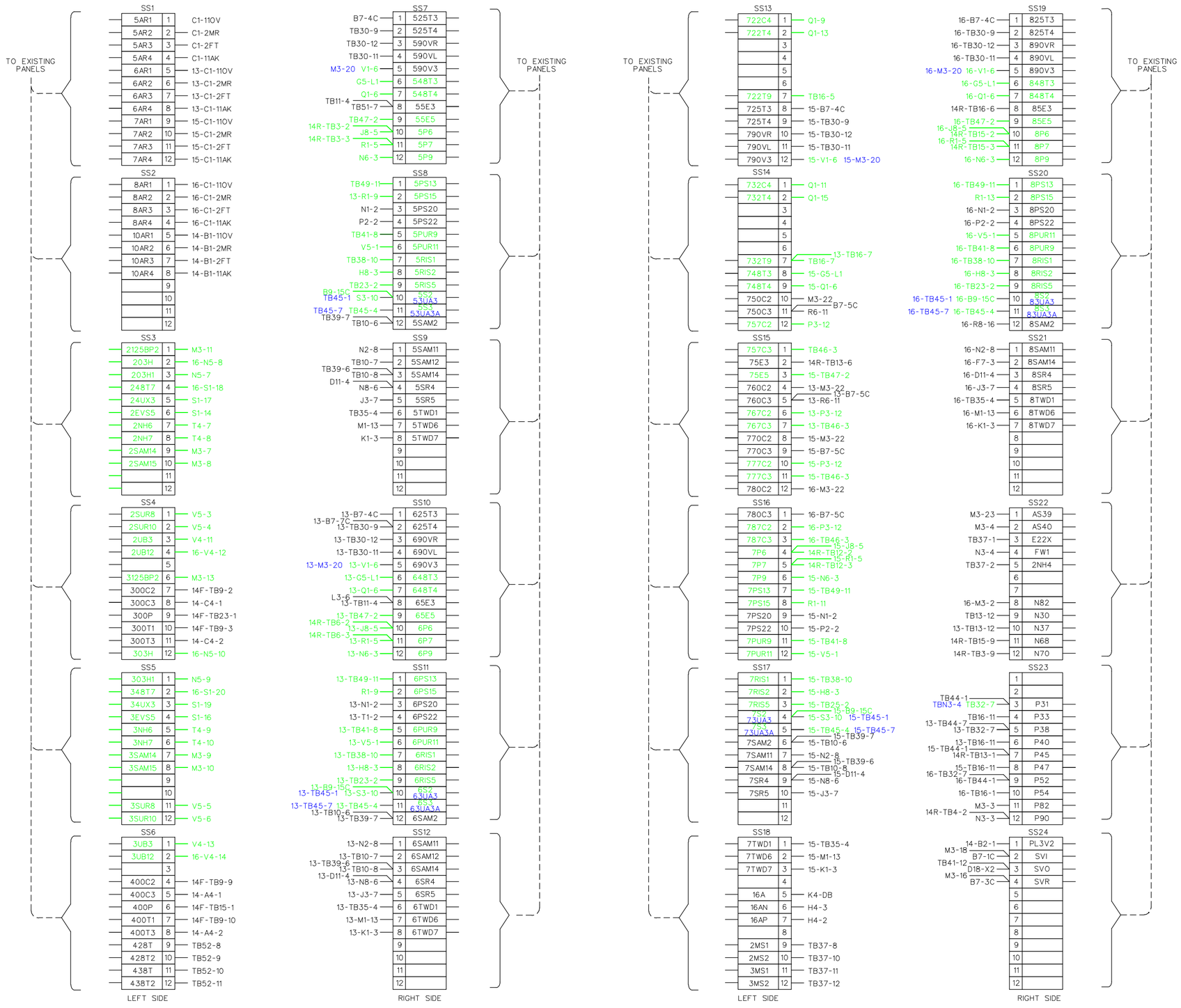

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 12 TB
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-72

SCALE: NONE SHEET 084

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101RRP_TBLK.DGN

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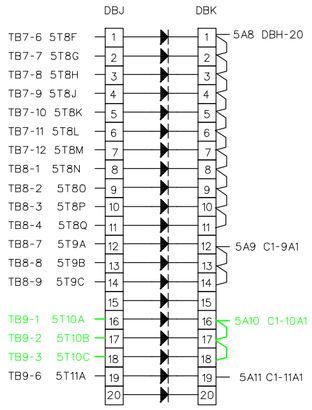
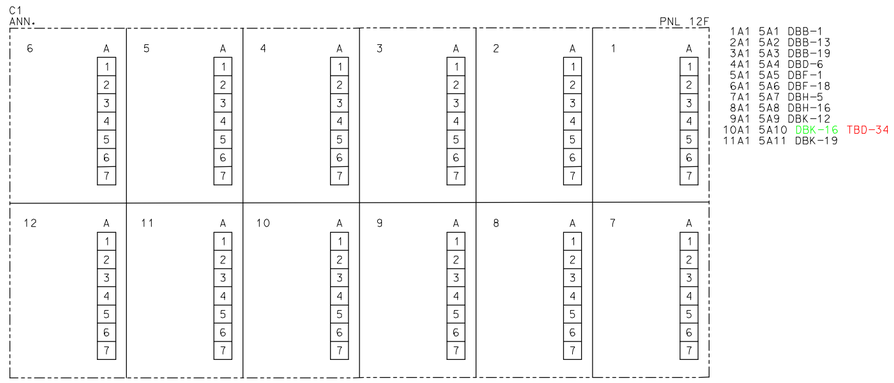
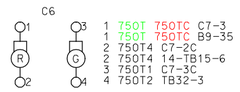
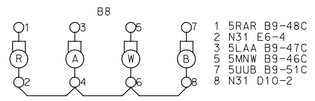
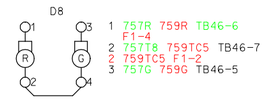
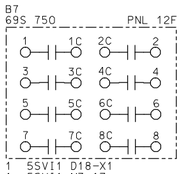


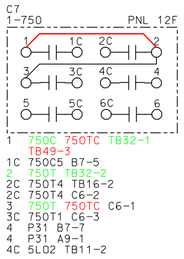


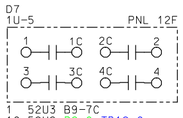


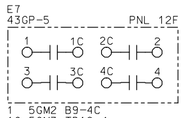


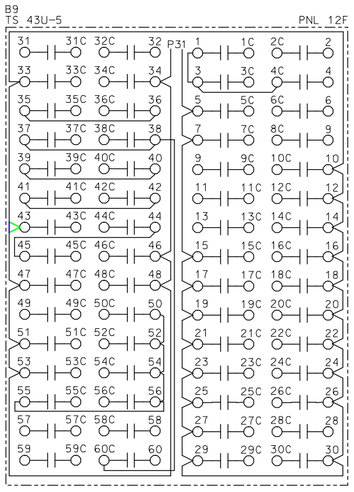






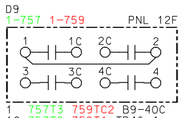






1 5PS4 TB51-11 TBN3-1
1C 5PS10 TB12-2
2C 5PS11 E7-2, TB23-8
3C 5GM1 TB12-3
4C 5GM2 TB23-9, E7-1
5 P31 A9-1
5C 52U1 TB12-7
6 570M2 B5-1C
6C 570M1 B9-57C
7C 52U3 TB23-5, D7-1
8 52U2 52U2A D7-1C, TB12-8 F3-3
8C 52U4 F3-4
9 5PS22 TB12-5
9C 5PS23 TB12-6
10C 54UX1 L1-3
12C 525T1 S3-5
14C 55E1 TB11-3
15C 5S2 SS8-10 S3-10
16C 5S1 S3-9
17C 5GL1 Q3-7
18C 5GL5 TB37-9
19C 5AGL1 A9-2
20C 5AGL3 TB10-4
21C 5AGLX1 TB10-1
22C 5AGL5 A9-3
23C 5SAM7 A7-2
24C 5SAM12 TB10-7
25C 5SAM1 A7-1
26C 5PUR1 TB38-2
27C 5LO1 TB11-1
29C 5CM1 D11-3
30C 5CM3 TB11-5
31 5CM6 TB11-7
31C 5CM7 TB11-8, E11-3
32 5SR6 D11-4C, TB11-11
32C 5SR7 D10-1, TB11-12

33C 5SR1 TB11-9
34 P31 E13-1
34C 5SR2 D11-1
35 750T 750TC C6-1
35C 750T13 TB16-3
36C 750T9 S3-13
37 541E1 14F-TB16-7
37C 541EC1 A11-1
38C 541EC3 Q8-12
39 757T 759TC1 TB46-1
39C 757CT 759TC3 P1-11
40C 757T3 759TC2 TB46-2, D9-1
41 501PG TB33-1
41C 501PG2 Q3-9
42C 501PG1 TB33-2, C11-1
43C 5NH1 R2-9
44 590V1 TB28-8
44C 590V5 C5-1
45C 590V4 TB15-8
46C 5MNW B8-5
47C 5LAA B8-3
48C 5RAR B8-1
49 750C7 TB49-2
49C 750C8 TB28-5
50C SUP99U TB13-4
51C 5UUB B8-7
53C 51GC1 TB16-1
54C SUP99R TB13-3
55C SUP99L TB13-2
55 SUP TB32-10
56C SUP99M TB13-1
57 570M3 TB12-11
57C 570M1 14F-TB16-1, B9-6C
58 5EFF1 TB28-11
58C 5EFF2 TB27-1
60 541E2 14F-TB16-8



NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

PANEL 12F INTERIOR

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 12F INTERIOR
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-73

SCALE: NONE SHEET 085

101RRP_E073_SWBD_12FI.DGN
101RRP_TBLK.DGN

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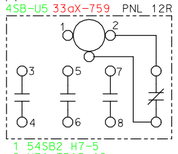
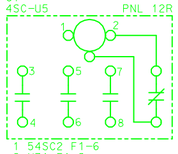
F1
4SB-U5 33aX-759 PNL 12R



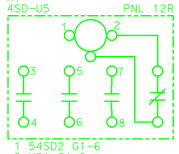
1 54SB2 H7-5
2 N31 TB15-12
2 N31 G1-2
3 54SA2 P1-6
3 54SA2 G1-3
4 54SB1 H7-3
5 54SC1 G1-4
5 54SC1 TB40-11
6 54SC2 TB40-12
6 54SC2 G1-1
1 759aX TB46-6
2 759TC5 D8-2
3 759TC TB46-2
4 759R D8-1
5 55E4 Q2-10
6 55E5 TO 62BFX/901

G1
4SC-U5 PNL 12R



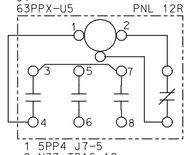
1 54SC2 F1-6
2 N31 F1-2
2 N31 H1-2
3 54SA2 F1-3
3 54SA2 H7-C
4 54SC1 P5-8
4 54SC1 F1-5
5 54SD1 P5-10
6 54SD2 H1-1

H1
4SD-U5 PNL 12R



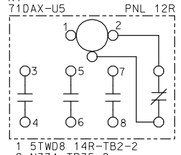
1 54SD2 G1-6
2 N31 G1-2
2 N31 G5-L2
3 P31 TB44-1
3 P31 G2-5
4 55E3 TB39-1
4 55E3 G2-6
5 5AP TB49-5
5 5AP L1-5
6 5T7G TB6-7

J1
63PPX-U5 PNL 12R



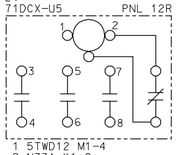
1 5PP4 J7-5
2 N33 TB16-12
3 5PP3 TB44-10
5 5AGL8 R2-8
6 5AGL17 TB39-12
7 5PP3 J7-1
8 5PP6 TB18-9
8 5PP6 K7-L1

K1
71DAX-U5 PNL 12R



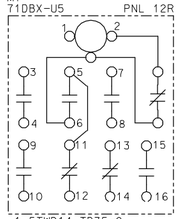
1 5TWD8 14R-TB2-2
2 N33A TB35-8
2 N33A L1-2
3 5TWD7 M1-5
3 5TWD7 SS9-8
4 5TWD13 TB44-12
5 5TWD9 TB44-9
5 5TWD9 M1-12
6 5TWD10 TB35-3

L1
71DCX-U5 PNL 12R



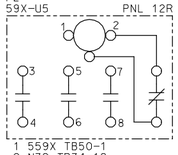
1 5TWD12 M1-4
2 N33A K1-2
2 N33A M1-2
3 54UX1 B9-10C
3 54UX1 J3-13
4 54UX2 G5-5
4 54UX2 R3-1
5 5AP H1-5 TB49-5
5 5AP F2-5
6 5T5L TB4-11

M1
71DBX-U5 PNL 12R



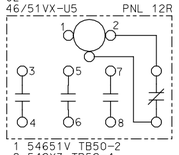
1 5TWD14 TB35-2
2 N33A L1-2
2 N33A H5-L2
3 5TWD11 14R-TB2-3
4 5TWD12 L1-1
5 5TWD7 K1-3
5 5TWD7 L7-L1
7 5PUR7 T3-4
8 5PUR8 T7-1
9 5UP TB17-1
9 5UP V1-9
10 SUP123 TB17-11
12 5TWD9 K1-5
13 5TWD6 SS9-7
13 5TWD6 L7-C2
14 5TWD15 H5-L1

F2
59X-U5 PNL 12R



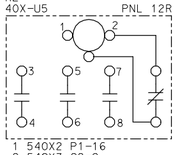
1 559X TB50-1
2 N32 TB34-12
2 N32 L2-2
3 5RRSR TB27-2
4 5RRSL TB27-3
5 5AP L1-5
5 5AP G2-3
6 5T2A TB2-1

G2
46/51VX-U5 PNL 12R



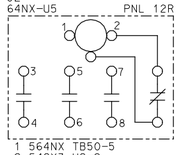
1 54651V TB50-2
2 540X3 TB50-4
2 540X3 H2-2
3 5AP F2-5
3 5AP H2-3
4 5T1D TB1-4
5 P31 H1-3 TB44-1
5 P31 H2-5
6 55E3 H1-4 TB39-1
6 55E3 H2-6

H2
40X-U5 PNL 12R



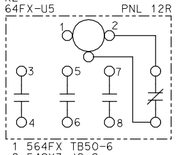
1 540X2 P1-16
2 540X3 G2-2
2 540X3 J2-2
3 5AP G2-3
3 5AP J2-3
4 5T1F TB1-6
5 P31 G2-5
5 P31 J2-5
6 55E3 G2-6
6 55E3 K2-4

J2
64NX-U5 PNL 12R



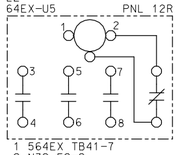
1 564NX TB50-5
2 540X3 H2-2
2 540X3 K2-2
3 5AP H2-3
3 5AP K2-5
4 5T1C TB1-3
5 P31 H2-5
5 P31 K2-3
6 55E2 TB39-2

K2
64FX-U5 PNL 12R



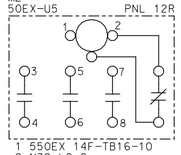
1 564FX TB50-6
2 540X3 J2-2
3 P31 J2-5
3 P31 J3-3
4 55E3 H2-6
4 55E3 L3-4
5 5AP J2-3
5 5AP L2-3
6 5T1E TB1-5

L2
64EX-U5 PNL 12R



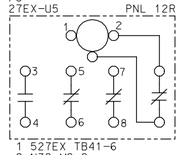
1 564EX TB41-7
2 N32 F2-2
2 N32 M2-2
3 5AP K2-5
3 5AP M2-3
4 5T2C TB2-3

M2
50EX-U5 PNL 12R



1 550EX 14F-TB16-10
2 N32 L2-2
2 N32 F3-2
3 5AP L2-3
3 5AP F3-7
4 5T2D TB2-4

F3
27EX-U5 PNL 12R



1 527EX TB41-6
2 N32 M2-2
2 N32 G3-2
3 52U2 52U2A TB23-4
B9-8
3 52U2A T1-16
4 52U4 TB45-8
4 52U4 B9-8C
5 55E6 H3-7
6 55E7 H3-8
6 55E7 R6-13
7 5AP M2-3
7 5AP J3-11
8 5T1G TB1-7

G3
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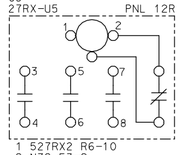
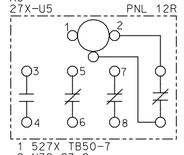


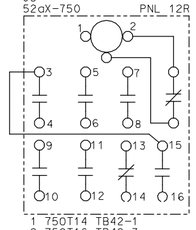
1 527RX2 R6-10
2 N32 F3-2
2 N32 H3-2
3 5AP2 H3-5
4 5T2E TB2-5

H3
27X-U5 PNL 12R



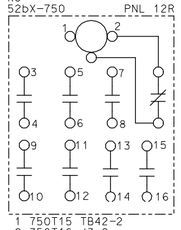
1 527X TB50-7
2 N32 G3-2
2 N32 G8-L2
3 525T7 525T7A R6-4
V1-16
4 525T8 N4-1
5 5AP2 J3-12
5 5AP2 G3-3
6 5T1K TB1-10
7 55E6 J3-16
7 55E6 F3-5
8 55E7 F3-6

J3
52aX-750 PNL 12R



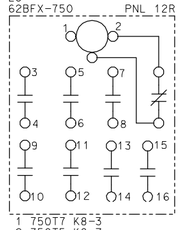
1 750T14 TB42-1
2 750T16 TB42-3
2 750T16 K3-2
3 P31 K2-3
4 50GC1 TB22-7
5 5CMX4 N8-8
6 5CMX5 G7-L1
7 5SR5 SS9-5
8 5SR8 F7-L1
9 5AGL10 R5-6
9 5AGL10 TB39-11
10 5AGL12 TB36-7
11 5AP F3-7
11 5AP L3-11
12 5AP2 H3-5
13 54UX1 L1-3
13 54UX1 G5-1
14 54BT1 Q1-5
15 P31 K3-9 L3-3
16 55E6 H3-7

K3
52bX-750 PNL 12R



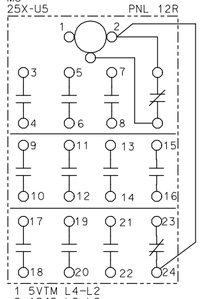
1 750T15 TB42-2
2 750T16 J3-2
3 525T5 TB41-3
4 525T6 R6-3
5 5PS18 16-R1-10
6 5P519 N1-1
7 5GM3 TB23-7
8 5GM7 Q2-15
9 P31 J3-15
9 P31 L3-3
10 54SA1 P1-5
11 757C3 D9-2C
12 757C4 TB47-6
13 501PG5 14R-TB3-1
14 501PG6 TB33-7

L3
62BFX-750 PNL 12R



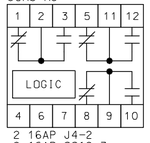
1 750T7 K8-3
2 750T5 K8-7
2 750T5 TB50-9
3 P31 K3-9 J3-15
3 P31 K5-3
4 55E3 K2-4
4 55E3 R6-14
5 P38 14R-TB7-1
6 65E3 13-R6-14
6 65E3 SS10-8
7 428T TB52-8
7 428T 13-L3-7
8 428T2 TB52-9
8 428T2 13-L3-8
9 438T TB52-10
9 438T 13-L3-9
10 438T2 TB52-11
10 438T2 13-L3-10
11 5AP J3-11
11 5AP G5-2
12 5T10A TB9-1 TBD-1
13 767TC 13-L3-13
14 767T 13-L3-14

M3
25X-U5 PNL 12R



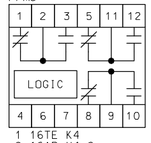
1 5VTM L4-L2
2 AS42 L8-L2
3 P82 13-M3-3
3 P82 SS23-11
4 AS40 SS22-2
4 AS40 N4-3
5 5SAM9 R6-6
6 5SAM10 N2-7
7 2SAM14 13-M3-7
7 2SAM14 SS3-9
8 2SAM15 SS3-10
8 2SAM15 13-M3-8
9 3SAM14 13-M3-9
9 3SAM14 SS5-7
10 3SAM15 SS5-8
10 3SAM15 13-M3-10
11 2125BP2 13-M3-11
11 2125BP2 SS3-1
12 2EVS1 S1-13
13 3125BP2 13-M3-13
13 3125BP2 SS4-6
14 3EVS1 S1-15
15 5SVR1 TB41-10
16 SVR 13-M3-16
16 SVR SS24-4
17 5SVI1 B7-1
18 SVI 13-M3-18
18 SVI SS24-2
19 590VP TB30-10
20 590V2 590V3 V1-5
SS7-5
21 750C1 P1-10
22 750C2 SS14-10
23 AS39 SS22-1
24 AS42 13-M3-23

H4
30AS-A5



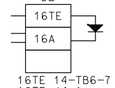
2 16AP J4-2
2 16AP SS18-7
3 16AN 13-H4-3
3 16AN SS18-6
4 5AR6 C1-11D7
6 5AR5 J4-6
7 5AR1 J4-7

J4
PFM5



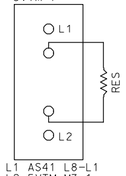
1 16TE K4
2 16AP H4-2
2 16AP 13-H4-2
4 5AR7 C18-FC
6 5AR5 C18-24
6 5AR5 H4-6
7 5AR1 H4-7
7 5AR1 C18-OV

K4
DB



16TE 14-TB6-7
16TE J4-1
16A SS18-5
16A 13-K4

L4
5VTM-1



L1 AS41 L8-L1
L2 5VTM M3-1

PANEL 12R INTERIOR

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 12R INTERIOR SH. 1 OF 4
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-74

SCALE: NONE SHEET 086

101RRP_E074_SWBD_12RI_1.DGN
101RRP_TBLK.DGN

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11/03/2003
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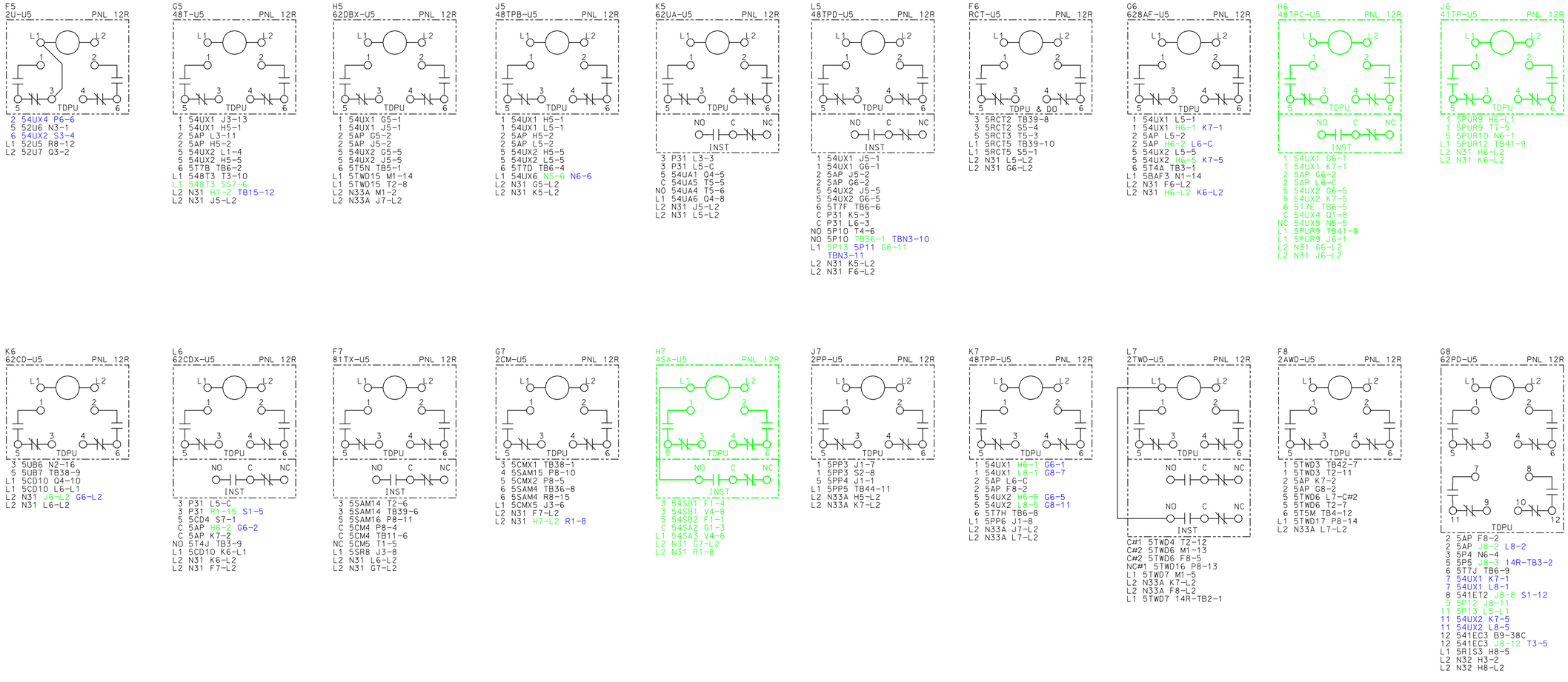

PANEL 12R INTERIOR

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 12R INTERIOR SH. 2 OF 4
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-75

SCALE: NONE SHEET 087

101RRP_E075_SWBD_12RI_2.DGN
101RRP_TBLK.DGN

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11/03/2003
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NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 12R INTERIOR SH. 3 OF 4
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-76

SCALE: NONE SHEET 088

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101RRP_TBLK.DGN

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11/03/2003
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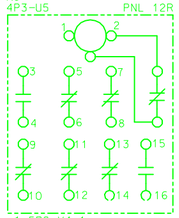
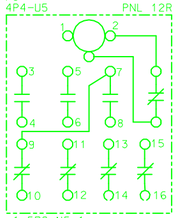
N5
4P3-U5 PNL 12R



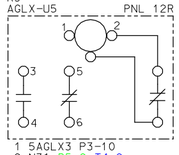
1 5P8 V4-1
1 5P8 P5-1
2 N31 V4-2
2 N31 P5-2
3 5P2 V4-4
4 5P3 P5-3
5 54UX5 H6-NC
6 54UX6 J5-L1
7 2O3H1 SS3-3
8 2EBT1 13-N5-7
9 3O3H1 SS5-1
10 3EBT1 13-N5-9

P5
4P4-U5 PNL 12R



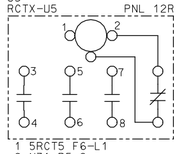
1 5P8 N5-1
2 N31 N5-2
2 N31 R5-2
3 5P3 N5-7
4 5P4 N6-4
5 5BAF5 S2-6
6 5BAF3 P2-6
7 54SA2 V4-7
8 54SC1 G1-4
10 54SD1 G1-5

R5
AGLX-U5 PNL 12R



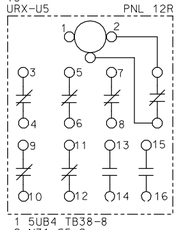
1 5AGLX3 P3-10
2 N31 P5-2 T4-2
2 N31 S5-2
3 P31 T4-5 T4-7
3 P31 T5-7
4 5AGLX2 P3-9
5 5AGL9 V1-8
5 5AGL9 R6-15
6 5AGL10 J3-9

S5
RCTX-U5 PNL 12R



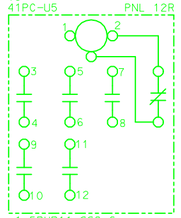
1 5RCT5 F6-L1
2 N31 R5-2
2 N31 T5-2
3 5UB1 TB38-6
4 5RCT2 F6-3

T5
URX-U5 PNL 12R



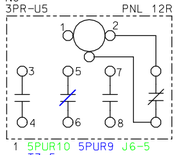
1 5UB4 TB38-8
2 N31 S5-2
2 N31 V5-2 N6-2
3 5RCT3 F6-5
4 5RCT4 TB39-9
5 54UA5 P3-18
5 54UA5 K5-C
6 54UA4 K5-ND
6 54UA4 R3-4
7 P31 R5-3
7 P31 P7-3
8 5GM51 C14-1
9 SUP N8-9
9 SUP Q3-13
10 SUP107 TB17-10
11 5CDP 14R-TB4-5
12 5CO86 TB51-9
13 2LD7 TB48-1
14 5DML TB48-2

V5
41PC-U5 PNL 12R



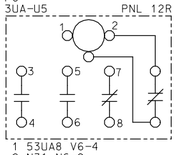
1 5PUR11 SS8-6
2 N31 T5-2
2 N31 N6-2
3 2SUR8 SS4-1
3 2SUR8 13-V5-3
4 2SUR10 SS4-2
4 2SUR10 13-V5-4
5 3SUR8 SS5-11
5 3SUR8 13-V5-5
6 3SUR10 SS5-12
6 3SUR10 13-V5-6
7 541EC4 T3-6
7 541EC4 R6-7
8 541EC5 S2-11

N6
3PR-U5 PNL 12R



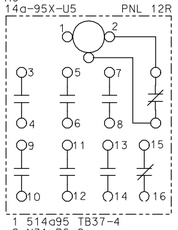
1 5PUR10 5PUR9 J6-5
T7-5
2 N31 V5-2 T5-2
2 N31 P6-2
3 5P9 SS7-12 TBN3-9
4 5P4 G8-3
4 5P4 P5-4 T4-4
5 54UX5 Q1-8
6 54UX6 J5-L1
7 PSFC S1-21
8 DIPR5 TBN4-5

P6
3UA-U5 PNL 12R



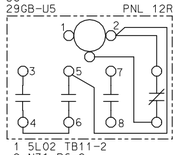
1 53UA8 V6-4
2 N31 N6-2
2 N31 R6-2
3 53UA3 TB45-1
4 53UA4 TB45-2
4 53UA4 N7-3
5 54UX1 S3-3
6 54UX2 54UX4 S3-4
F5-2
7 5AP1 R3-6
7 5AP1 T6-5
8 5T4K TB3-10

R6
14q-95X-U5 PNL 12R



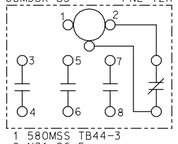
1 514q95 TB37-4
2 N31 P6-2
2 N31 S6-2
3 525T6 K3-4
4 525T7 H3-3 V1-15
5 5SAM8 A7-2C
6 5SAM9 M3-5
7 541EC4 V5-7 T3-6
8 541EC6 T1-9
9 527RX1 TB51-1
10 527RX2 Q3-1
11 750C3 SS14-11
12 750C5 TB50-8
13 55E7 F3-6
14 55E3 L3-4
14 55E3 13-L3-6
15 5AGL9 R5-5
16 5AGL11 TB37-7

S6
29GB-U5 PNL 12R



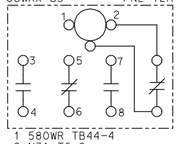
1 5LO2 TB11-2
2 N31 R6-2
3 5PS29 TB35-7
5 N31 T6-2

T6
80MSSX-U5 PNL 12R



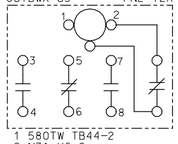
1 580MSS TB44-3
2 N31 S6-5
2 N31 V6-2
3 53UA5A TB44-7
4 53UA6 Q7-3
5 5AP1 P6-7
5 5AP1 V6-5
6 5T5F TB4-6

V6
80WRX-U5 PNL 12R



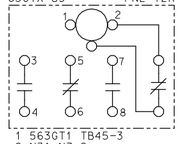
1 580WR TB44-4
2 N31 T6-2
2 N31 N7-2
3 53UA7 Q7-4
4 53UA8 P6-1
5 5AP1 T6-5
5 5AP1 N7-5
6 5T5C TB4-3

N7
80TBWX-U5 PNL 12R



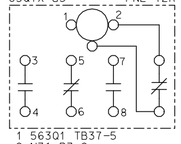
1 580TW TB44-2
2 N31 V6-2
2 N31 P7-2
3 53UA4 P6-4
4 53UA5 TB44-6
5 5AP1 V6-5
5 5AP1 Q7-5
6 5T5A TB4-1

P7
63GTX-U5 PNL 12R



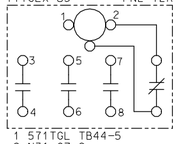
1 563GT1 TB45-3
2 N31 N7-2
2 N31 Q7-2
3 P31 T5-7
3 P31 R7-3
4 563GT2 E15-1
5 5T4H1 TB2O-9
6 5T4H TB3-8

Q7
6301X-U5 PNL 12R



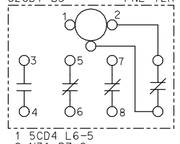
1 56301 TB37-5
2 N31 P7-2
2 N31 R7-2
3 53UA6 T6-4
4 53UA7 V6-3
5 5AP1 N7-5
5 5AP1 R8-10
6 5T6A TB5-5

R7
71TGLX-U5 PNL 12R



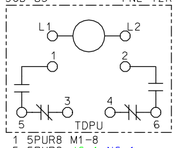
1 571TGL TB44-5
2 N31 Q7-2
2 N31 S7-2
3 P31 P7-3
3 P31 N8-3
4 55M1 TB51-8
5 5AP R3-5
5 5AP R8-9
6 5T5E TB4-5

S7
62CDY-U5 PNL 12R



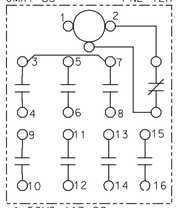
1 5CD4 L6-5
2 N31 R7-2
2 N31 T7-L2
3 5HPT1 P4-3
4 5HPT2 P4-4
5 5UC2 P4-6
6 5UC3 TB40-3
7 5UC5 P4-8
8 5UC6 TB40-4

T7
3CD-U5 PNL 12R



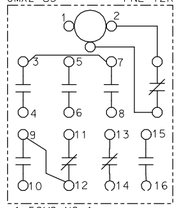
1 5PUR8 M1-8
5 5PUR9 J6-1 N6-1
L1 5CD7 S1-10
L2 N31 S7-2
L2 N31 N8-2

N8
CMX1-U5 PNL 12R



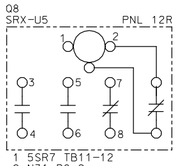
1 5CM9 A13-2C
1 5CM9 P8-1
2 N31 T7-L2
2 N31 P8-2
3 P31 R7-3
4 5CM2 P8-3
5 5SR3 Q8-4
6 5SR4 SS9-4
7 P31 P8-9
8 5CMX4 J3-5
9 SUP T5-9
9 SUP Q8-5
10 SUP19 TB17-5

P8
CMX2-U5 PNL 12R



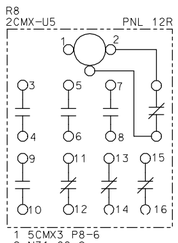
1 5CM9 N8-1
2 N31 N8-2
2 N31 Q8-2
3 5CM2 N8-4
4 5CM4 F7-C
4 5CM4 Q8-7
5 5CMX2 G7-5
5 5CMX2 R8-4
6 5CMX3 R8-1
7 5TWD4 T2-12
8 5TWD6 Q3-6
9 P31 N8-7
10 5SAM15 G7-4
11 5SAM16 F7-5
12 P31 Q8-3
13 5TWD16 L7-NC
14 5TWD17 F8-L1

Q8
SRX-U5 PNL 12R



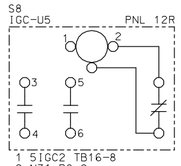
1 5SR7 TB11-12
2 N31 P8-2
2 N31 R8-2
3 P31 P8-12
3 P31 R8-3
4 5SR3 TB11-10
4 5SR3 N8-5
5 SUP N8-9
5 SUP T8-3
6 SUP11 TB17-4
7 5CM4 P8-4
8 5CM10 E10-1

R8
2CMX-U5 PNL 12R



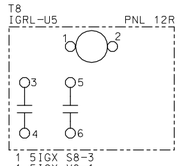
1 5CMX3 P8-6
2 N31 Q8-2
2 N31 S8-2
3 P31 13-L3-5
3 P31 Q8-3
4 5CMX2 P8-5
5 5GL5 S3-7
6 5GL4 S3-8
7 5AGL13 P2-10
8 5AGL15 TB36-3
9 5AP R7-5
9 5AP 14R-TB4-7
10 5AP1 Q7-5
11 52U9 Q3-1
12 52U5 F5-L1
13 5S8 TB51-6
14 5S9 N2-11
15 5SAM4 G7-6
16 5SAM2 TB39-7

S8
IGC-U5 PNL 12R



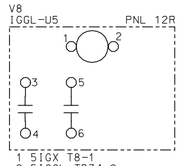
1 5IGC2 TB16-8
2 N31 R8-2
3 5IGX TB34-1
3 5IGX T8-1
4 5IGC3 TB34-6

T8
IGRL-U5 PNL 12R



1 5IGX S8-3
1 5IGX V8-1
2 5IGRL TB34-3
3 SUP Q8-5
3 SUP V8-3
4 SUP83N TB17-9

V8
IGGL-U5 PNL 12R



1 5IGX T8-1
2 5IGGL TB34-2
3 SUP T8-3
3 SUP S1-7
4 SUP83C TB17-8

PANEL 12R INTERIOR

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 12R INTERIOR SH. 4 OF 4
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-77

SCALE: NONE SHEET 089

101RRP_E077_SWBD_12RI_4.DGN
101RRP_TBLK.DGN

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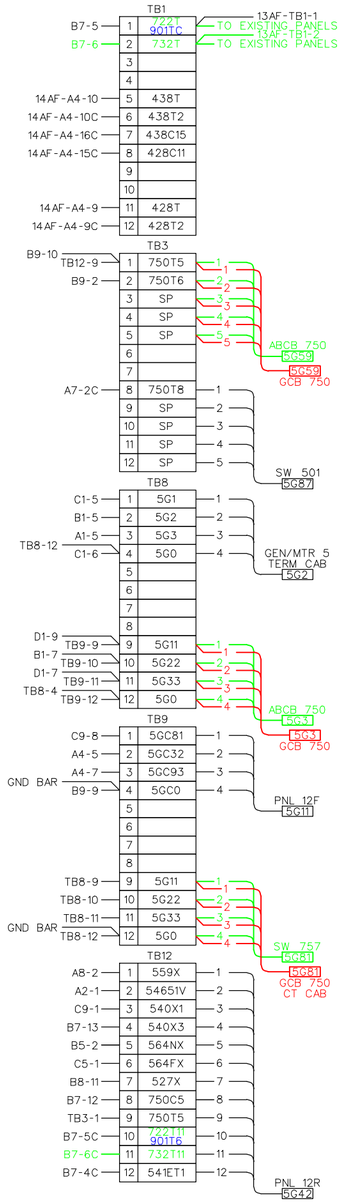

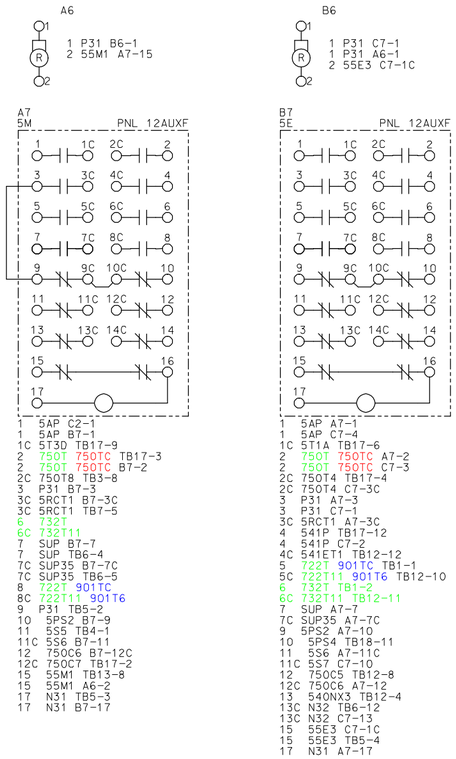

NOTES:

1. UNIT 5 SHOWN, UNITS 6 - 8 ARE SIMILAR.

PANEL 12AUXF

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
AUXILIARY CONTROL SWITCHBOARD
PANEL 12AUXF
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-78

SCALE: NONE SHEET 090

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101RRP_TBLK.DGN

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PANEL 14F

TB 1

TO SFC X15

1	PSFC
2	DISFCB
3	DISR2
4	DISL2
5	SPARE
6	
7	
8	
9	
10	
11	
12	

TB 5

TO GCB 901 X25

1	901TC
2	901G
3	901T10
4	901T12
5	10AP
6	10T11E
7	SPARE
8	SPARE
9	SPARE
10	
11	
12	

TB 2

TO SFC X16

1	901C1
2	901T1
3	10AP
4	10T11A
5	10T11B
6	PXX
7	SFRTSG
8	SPARE
9	SPARE
10	
11	
12	

TB 15

TO MOD 400 4T5

1	400P	
2	400G	
3	400R	
4	400C1	
5	400T2	
6	750T4	
7	760T4	
8	86T42	
9	767T1	TO 86Y/T4
10	767T	TO 86Y/T3
11	SPARE	
12	SPARE	

TB 3

TO GCB 767 X23

1	767TC
2	767G
3	767T
4	SPARE
5	10AP
6	10T11C
7	SPARE
8	SPARE
9	SPARE
10	
11	
12	

TB 23

TO MOD 300 3T5

1	300P	
2	300G	
3	300R	
4	300C1	
5	300T2	
6	770T4	
7	780T4	
8	86T32	
9	777T1	TO 86Y/T3
10	777T	TO 86Y/T4
11	SPARE	
12	SPARE	

TB 4

TO GCB 777 X24

1	777TC
2	777G
3	777T
4	SPARE
5	10AP
6	10T11D
7	SPARE
8	SPARE
9	SPARE
10	
11	
12	

PANEL 14R

TB 3

TO GCB 901 5G73
TO ACB 722 5G73

1	501PG5	12-K3-13
2	5P6 5P5	12-SS7-10 12-G8-5
3	5P7	12-SS7-11 12-R1-5
4	SPARE	
5	SPARE	

TB 6

TO GCB 901 6G73
TO ACB 722 6G73

1	601PG5	13-K3-13
2	6P6 6P5	12-SS10-10 13-G8-5
3	6P7	12-SS10-11 13-R1-5
4	SPARE	
5	SPARE	

TB 12

TO GCB 901 7G73
TO ACB 722 7G73

1	701PG5	15-K3-13
2	7P6 7P5	12-SS16-4 15-G8-5
3	7P7	12-SS16-5 15-R1-5
4	SPARE	
5	SPARE	

TB 15

TO GCB 901 8G73
TO ACB 722 8G73

1	801PG5	16-K3-13
2	8P6 8P5	12-SS19-10 16-G8-5
3	8P7	12-SS19-11 16-R1-5
4	SPARE	
5	SPARE	

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
PANEL 14 TB MODIFICATIONS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-81

SCALE: NONE SHEET 093

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101RRP_TBLK.DGN

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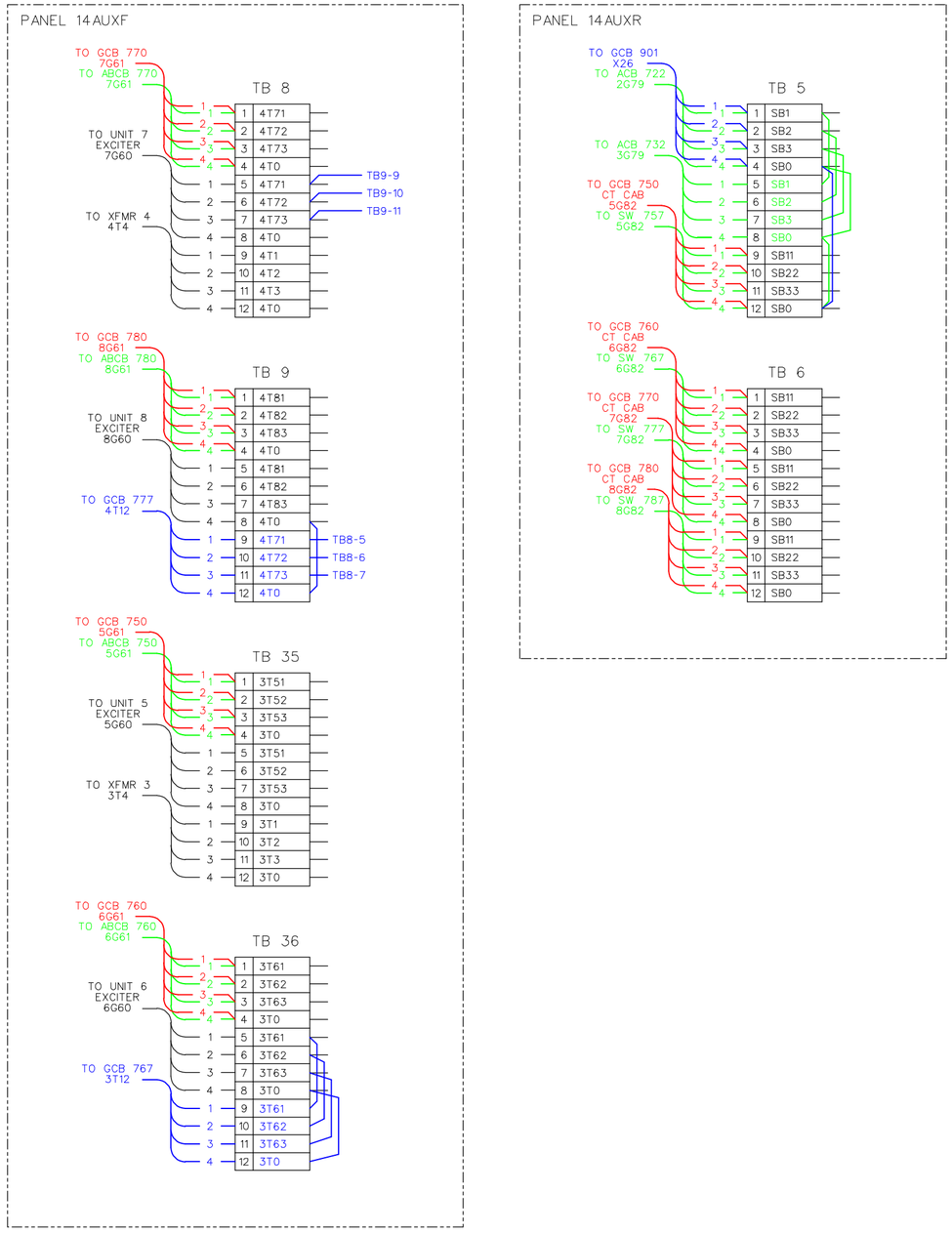

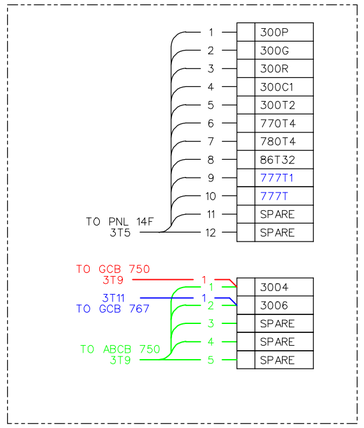

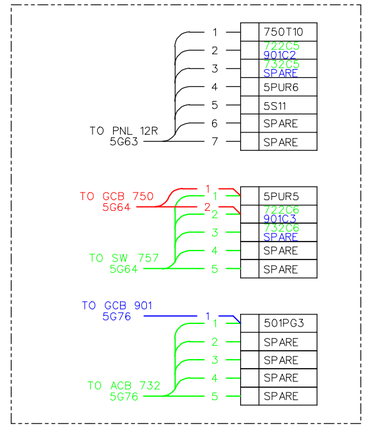

CORRESPONDING WIRE DESIGNATION		CABLE DESIGNATION	
M.O.D. 300	M.O.D. 400	M.O.D. 300	M.O.D. 400
P71	P72	B71	B72
N71	N72	V66	V67
86T31	86T41		
SUP129D	SUP130D		
SUP129C	SUP130C		
428T4	428T5		
86T32	86T42		
438T4	438T5		

CORRESPONDING WIRE AND CABLE NUMBERS WITH PREFIX "3" WILL CHANGE TO "4" REPSPECTIVELY FOR M.O.D. 400.

WIRE NUMBERS WITH PREFIX "770", "780", AND "777" WILL CHANGE TO "750", "760", AND "767" RESPECTIVELY FOR M.O.D. 400.

CORRESPONDING CABLE NUMBERS			
SW. NO. 501	SW. NO. 601	SW. NO. 701	SW. NO. 801
B35	B42	B49	B56

CORRESPONDING WIRE AND CABLE NUMBERS WITH PREFIX "5" WILL CHANGE TO "6", "7", AND "8" RESPECTIVELY FOR SWITCHES 601, 701, AND 801.

CORRESPONDING WIRE NUMBERS			
SW. NO. 501	SW. NO. 601	SW. NO. 701	SW. NO. 801
P35	P42	P49	P56
N35	N42	N49	N56
SUP135P	SUP136P	SUP137P	SUP138P
SUP135G	SUP136G	SUP137G	SUP138G
750T10	760T10	770T10	780T10
722C5	722C7	722C9	722C11
732C5	732C7	732C9	732C11
722C6	722C8	722C10	722C12
732C6	732C8	732C10	732C12

NOTES:

1. WIRING SHOWN REPRESENTS QUANTITY AND SIGNAL NAMES OF WIRES, NOT ACTUAL LOCATION.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

101RRP_E082_MISC_TB.DGN
101RRP_TBLK.DGN

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PORTLAND, OREGON

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MISCELLANEOUS
TB MODIFICATIONS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-82

SCALE: NONE SHEET 094

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AIR CIRCUIT BREAKER 722

Terminal	Wire
TO PNL 10AUXR B13 1	P13
2	N13
TO SUPV PNL V86 1	SUP
2	SUP127
TO OCB 720 2G59 1	722C15
2	SPARE
3	SPARE
TO PNL 8R 2G74 1	722C
2	722T2
3	722T
4	722T9
5	SPARE
6	720C1
7	720C2
8	722T10
9	2AP
10	2T9D
11	SPARE
12	SPARE
TO EXCITER NO 2 2G75 1	2SUR7
2	2SUR8
3	209E
4	2125BP2
5	209G
TO OCB 730 3G73 1	732C14
2	SPARE
3	SPARE
TO PNL 10F 3G76 1	732C13
2	SPARE
3	SPARE
TO ACB 732 2G76 1	501PG4
2	601PG4
3	701PG4
4	801PG4
5	757T7
6	767T7
7	777T7
8	787T7
9	SPARE
10	SPARE
11	SPARE
12	SPARE
TO ACB 732 2G77 1	5P7
2	5P6
3	6P7
4	6P6
5	7P7
6	7P6
7	8P7
8	8P6
9	SPARE
10	SPARE
11	SPARE
12	SPARE
TO PNL 8AUXF 2G78 1	2G11 *
2	2G22
3	2G33
4	2G0
TO PNL 14AUXR 2G79 1	SB1
2	SB2
3	SB3
4	SB0
TO PNL 14R 5G73 1	501PG5
2	5P6
3	5P7
4	SPARE
5	SPARE
TO SW 757 5G75 1	757T6
2	732C13
3	SPARE
4	SPARE
5	SPARE
TO PNL 14R 6G73 1	601PG5
2	6P6
3	6P7
4	SPARE
5	SPARE
TO SW 767 6G75 1	767T6
2	722T9
3	SPARE
4	SPARE
5	SPARE
TO PNL 14R 7G73 1	701PG5
2	7P6
3	7P7
4	SPARE
5	SPARE
TO SW 777 7G75 1	777T6
2	SPARE
3	SPARE
4	SPARE
5	SPARE
TO PNL 14R 8G73 1	801PG5
2	8P6
3	8P7
4	SPARE
5	SPARE
TO SW 787 8G75 1	787T6
2	SPARE
3	SPARE
4	SPARE
5	SPARE

AIR CIRCUIT BREAKER 732

Terminal	Wire
TO PNL 10AUXR B20 1	P20
2	N20
TO SUPV PNL V87 1	SUP
2	SUP128
TO OCB 720 2G73 1	722C14
2	SPARE
3	SPARE
TO ACB 722 2G76 1	501PG4
2	601PG4
3	701PG4
4	801PG4
5	757T7
6	767T7
7	777T7
8	787T7
9	SPARE
10	SPARE
11	SPARE
12	SPARE
TO ACB 722 2G77 1	5P7
2	5P6
3	6P7
4	6P6
5	7P7
6	7P6
7	8P7
8	8P6
9	SPARE
10	SPARE
11	SPARE
12	SPARE
TO OCB 730 3G59 1	732C15
2	SPARE
3	SPARE
TO PNL 10R 3G74 1	732C
2	732T2
3	732T
4	732T9
5	SPARE
6	730C1
7	730C2
8	732T10
9	3AP
10	3T9D
11	SPARE
12	SPARE
TO EXCITER NO 3 3G75 1	3SUR7
2	3SUR8
3	309E
4	3125BP2
5	309G
TO PNL 8F 2G82 1	722C13
2	SPARE
3	SPARE
TO PNL 10AUXF 3G78 1	3G11 *
2	3G22
3	3G33
4	3G0
TO PNL 14AUXR 3G79 1	SB1
2	SB2
3	SB3
4	SB0
TO SW 501 5G76 1	501PG3
2	SPARE
3	SPARE
4	SPARE
5	SPARE
TO SW 757 5G77 1	757T8
2	722C13
3	SPARE
4	SPARE
5	SPARE
TO SW 601 6G76 1	601PG3
2	SPARE
3	SPARE
4	SPARE
5	SPARE
TO SW 767 6G77 1	767T8
2	732T9
3	SPARE
4	SPARE
5	SPARE
TO SW 701 7G76 1	701PG3
2	SPARE
3	SPARE
4	SPARE
5	SPARE
TO SW 777 7G77 1	777T8
2	SPARE
3	SPARE
4	SPARE
5	SPARE
TO SW 801 8G76 1	801PG3
2	SPARE
3	SPARE
4	SPARE
5	SPARE
TO SW 787 8G77 1	787T8
2	SPARE
3	SPARE
4	SPARE
5	SPARE

NOTES:

1. WIRING SHOWN REPRESENTS QUANTITY AND SIGNAL NAMES OF WIRES, NOT ACTUAL LOCATION.

* SHORTING TYPE TERMINAL BLOCK.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
STARTING BUS BKRS. 722 & 732
CONNECTION DIAGRAM
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-83

SCALE: NONE SHEET 095

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GAS CIRCUIT BREAKER 767

Terminal	Wire
TO PNL 9AUXR B41 1	P41
TO PNL 9AUXR B41 2	N41
TO SUPV PNL V86 1	SUP
TO SUPV PNL V86 2	SUP767
TO SFC X1 1	PSFC
TO SFC X1 2	DI767A
TO SFC X1 3	DI767B
TO SFC X1 4	DI767L
TO SFC X1 5	SPARE
TO PNL 14F X23 1	767TC
TO PNL 14F X23 2	767G
TO PNL 14F X23 3	767T
TO PNL 14F X23 4	SPARE
TO PNL 14F X23 5	10AP
TO PNL 14F X23 6	10T11C
TO PNL 14F X23 7	SPARE
TO PNL 14F X23 8	SPARE
TO PNL 14F X23 9	SPARE
TO GCB 777 X21 1	5P7
TO GCB 777 X21 2	5P6
TO GCB 777 X21 3	6P7
TO GCB 777 X21 4	6P6
TO GCB 777 X21 5	7P7
TO GCB 777 X21 6	7P6
TO GCB 777 X21 7	8P7
TO GCB 777 X21 8	8P6
TO GCB 777 X21 9	767C1
TO GCB 777 X21 10	767C2
TO GCB 777 X21 11	777C1
TO GCB 777 X21 12	777C2
TO SFC X2 1	767TC
TO SFC X2 2	767C
TO SFC X2 3	767T
TO SFC X2 4	SPARE
TO SFC X2 5	SPARE
TO GCB 760 6G71 1	3005A
TO GCB 760 6G71 2	SPARE
TO GCB 760 6G71 3	SPARE
TO MOD 300 3T11 1	3006
TO MOD 300 3T11 2	SPARE
TO MOD 300 3T11 3	SPARE
TO PNL 14AUXF 3T12 1	3T61 *
TO PNL 14AUXF 3T12 2	3T62
TO PNL 14AUXF 3T12 3	3T63
TO PNL 14AUXF 3T12 4	3T0

GAS CIRCUIT BREAKER 777

Terminal	Wire
TO PNL 9AUXR B48 1	P48
TO PNL 9AUXR B48 2	N48
TO SUPV PNL V87 1	SUP
TO SUPV PNL V87 2	SUP777
TO SFC X3 1	PSFC
TO SFC X3 2	DI777A
TO SFC X3 3	DI777B
TO SFC X3 4	DI777L
TO SFC X3 5	SPARE
TO PNL 14F X24 1	777TC
TO PNL 14F X24 2	777G
TO PNL 14F X24 3	777T
TO PNL 14F X24 4	SPARE
TO PNL 14F X24 5	10AP
TO PNL 14F X24 6	10T11D
TO PNL 14F X24 7	SPARE
TO PNL 14F X24 8	SPARE
TO PNL 14F X24 9	SPARE
TO GCB 767 X21 1	5P7
TO GCB 767 X21 2	5P6
TO GCB 767 X21 3	6P7
TO GCB 767 X21 4	6P6
TO GCB 767 X21 5	7P7
TO GCB 767 X21 6	7P6
TO GCB 767 X21 7	8P7
TO GCB 767 X21 8	8P6
TO GCB 767 X21 9	767C1
TO GCB 767 X21 10	767C2
TO GCB 767 X21 11	777C1
TO GCB 767 X21 12	777C2
TO GCB 901 X22 1	5P7
TO GCB 901 X22 2	5P6
TO GCB 901 X22 3	6P7
TO GCB 901 X22 4	6P6
TO GCB 901 X22 5	7P7
TO GCB 901 X22 6	7P6
TO GCB 901 X22 7	8P7
TO GCB 901 X22 8	8P6
TO GCB 901 X22 9	SPARE
TO GCB 901 X22 10	SPARE
TO GCB 901 X22 11	SPARE
TO GCB 901 X22 12	SPARE
TO SFC X4 1	777TC
TO SFC X4 2	777C
TO SFC X4 3	777T
TO SFC X4 4	SPARE
TO SFC X4 5	SPARE
TO GCB 780 8G71 1	4005A
TO GCB 780 8G71 2	SPARE
TO GCB 780 8G71 3	SPARE
TO MOD 400 4T11 1	4006
TO MOD 400 4T11 2	SPARE
TO MOD 400 4T11 3	SPARE
TO PNL 14AUXF 4T12 1	4T71 *
TO PNL 14AUXF 4T12 2	4T72
TO PNL 14AUXF 4T12 3	4T73
TO PNL 14AUXF 4T12 4	4T0

GAS CIRCUIT BREAKER 901

Terminal	Wire
TO PNL 9AUXR B59 1	P59
TO PNL 9AUXR B59 2	N59
TO SUPV PNL V88 1	SUP
TO SUPV PNL V88 2	SUP901
TO SFC X5 1	PSFC
TO SFC X5 2	DI901A
TO SFC X5 3	DI901B
TO SFC X5 4	DI901L
TO SFC X5 5	SPARE
TO PNL 14F X25 1	901TC
TO PNL 14F X25 2	901G
TO PNL 14F X25 3	901T10
TO PNL 14F X25 4	901T12
TO PNL 14F X25 5	10AP
TO PNL 14F X25 6	10T11E
TO PNL 14F X25 7	SPARE
TO PNL 14F X25 8	SPARE
TO PNL 14F X25 9	SPARE
TO SW 501 5G76 1	501PG3
TO SW 501 5G76 2	SPARE
TO SW 501 5G76 3	SPARE
TO SW 601 6G76 1	601PG3
TO SW 601 6G76 2	SPARE
TO SW 601 6G76 3	SPARE
TO SW 701 7G76 1	701PG3
TO SW 701 7G76 2	SPARE
TO SW 701 7G76 3	SPARE
TO SW 801 8G76 1	801PG3
TO SW 801 8G76 2	SPARE
TO SW 801 8G76 3	SPARE
TO GCB 777 X22 1	5P7
TO GCB 777 X22 2	5P6
TO GCB 777 X22 3	6P7
TO GCB 777 X22 4	6P6
TO GCB 777 X22 5	7P7
TO GCB 777 X22 6	7P6
TO GCB 777 X22 7	8P7
TO GCB 777 X22 8	8P6
TO GCB 777 X22 9	SPARE
TO GCB 777 X22 10	SPARE
TO GCB 777 X22 11	SPARE
TO GCB 777 X22 12	SPARE
TO SFC X6 1	901TC
TO SFC X6 2	901T10
TO SFC X6 3	SPARE
TO SFC X6 4	SPARE
TO SFC X6 5	SPARE
TO PNL 14R 5G73 1	501PG5
TO PNL 14R 5G73 2	5P5
TO PNL 14R 5G73 3	5P7
TO PNL 14R 5G73 4	SPARE
TO PNL 14R 5G73 5	SPARE
TO PNL 14R 6G73 1	601PG5
TO PNL 14R 6G73 2	6P5
TO PNL 14R 6G73 3	6P7
TO PNL 14R 6G73 4	SPARE
TO PNL 14R 6G73 5	SPARE
TO PNL 14R 7G73 1	701PG5
TO PNL 14R 7G73 2	7P5
TO PNL 14R 7G73 3	7P7
TO PNL 14R 7G73 4	SPARE
TO PNL 14R 7G73 5	SPARE
TO PNL 14R 8G73 1	801PG5
TO PNL 14R 8G73 2	8P5
TO PNL 14R 8G73 3	8P7
TO PNL 14R 8G73 4	SPARE
TO PNL 14R 8G73 5	SPARE
TO GCB 750 5G75 1	759TC4
TO GCB 750 5G75 2	759TC5
TO GCB 750 5G75 3	901C10
TO GCB 750 5G75 4	SPARE
TO GCB 750 5G75 5	SPARE
TO GCB 760 6G75 1	769TC4
TO GCB 760 6G75 2	769TC5
TO GCB 760 6G75 3	SPARE
TO GCB 760 6G75 4	SPARE
TO GCB 760 6G75 5	SPARE
TO GCB 770 7G75 1	779TC4
TO GCB 770 7G75 2	779TC5
TO GCB 770 7G75 3	SPARE
TO GCB 770 7G75 4	SPARE
TO GCB 770 7G75 5	SPARE
TO GCB 780 8G75 1	789TC4
TO GCB 780 8G75 2	789TC5
TO GCB 780 8G75 3	SPARE
TO GCB 780 8G75 4	SPARE
TO GCB 780 8G75 5	SPARE
TO PNL 14AUXR X26 1	SB1 *
TO PNL 14AUXR X26 2	SB2
TO PNL 14AUXR X26 3	SB3
TO PNL 14AUXR X26 4	SB0

NOTES:

1. WIRING SHOWN REPRESENTS QUANTITY AND SIGNAL NAMES OF WIRES, NOT ACTUAL LOCATION.
2. TERMINAL BLOCKS PROVIDED BY OTHERS.

* SHORTING TYPE TERMINAL BLOCK.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
BREAKERS 767, 777, & 901
CONNECTION DIAGRAM
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-84

SCALE: NONE SHEET 096

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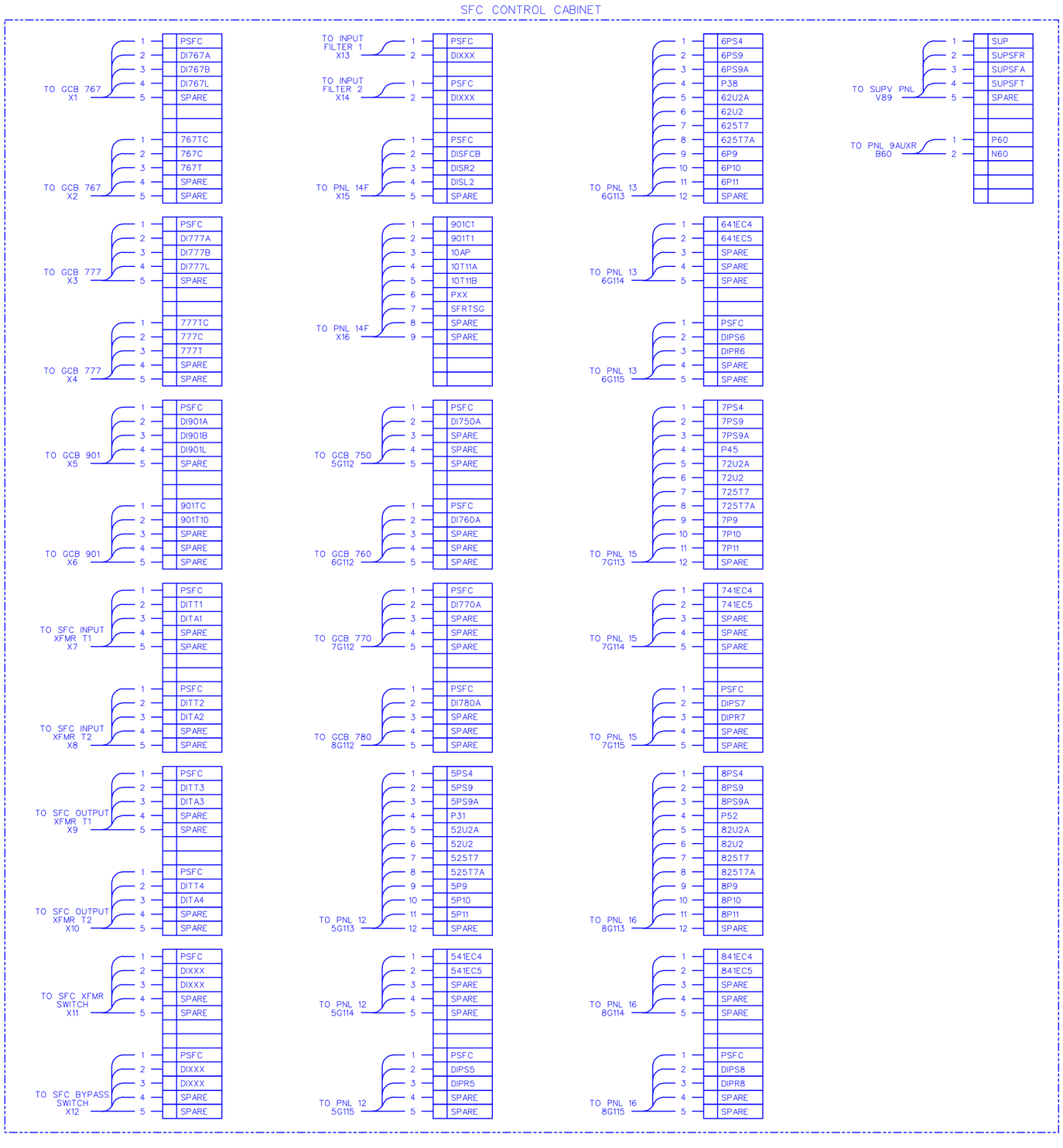

NOTES:

1. WIRING SHOWN REPRESENTS APPROXIMATE QUANTITY AND SIGNAL NAMES OF WIRES, NOT ACTUAL LOCATION.

2. TERMINAL BLOCKS PROVIDED BY OTHERS.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
STATIC FREQUENCY CONTROLLER
CONNECTION DIAGRAM
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-85

SCALE: NONE SHEET 097

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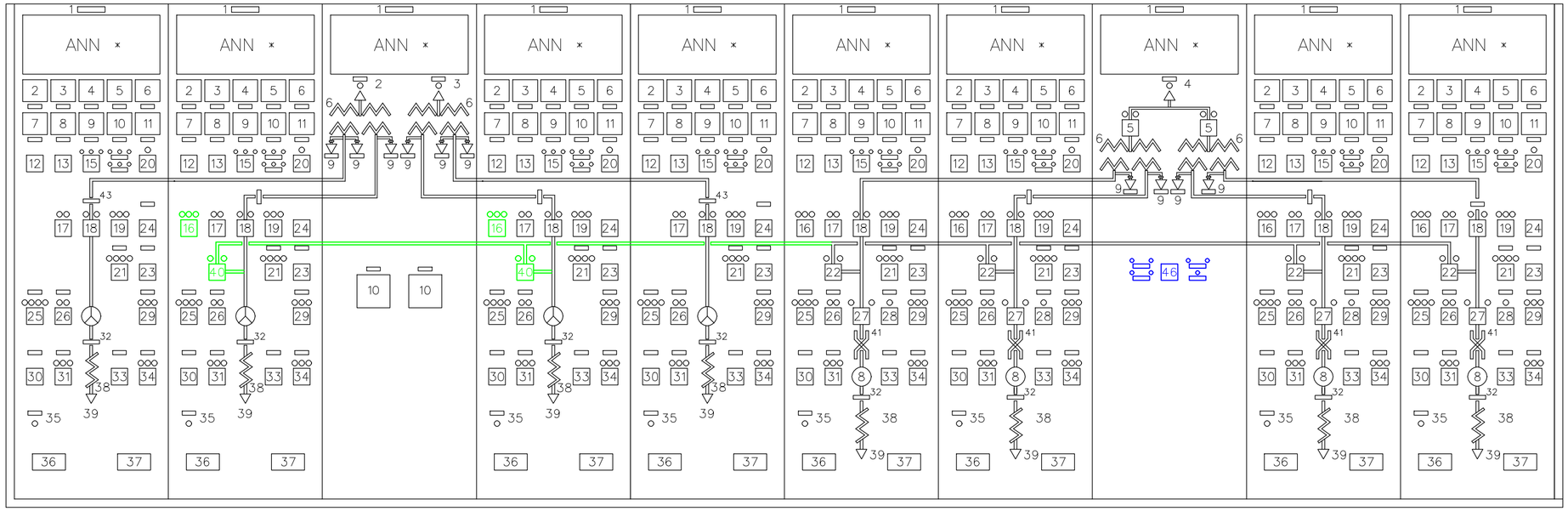

FRONT VIEW

SCALE: NTS

ENGRAVING SCHEDULE

UNITS 1-8
PANELS 7, 8, 10, 12, 13, 15, AND 16F

NO.	FIRST LINE	SECOND LINE	DET.	DEVICE NO.
1	UNIT 1, 2, 3,..., OR 8	INSTRUMENT PANEL	1	
2	GEN.-MTR.	AMMETER	2	
3	GEN.-MTR.	VOLTMETER	2	
4	UNIT SPEED	INDICATOR	2	
5	GEN.-MTR.	WATTMETER	2	
6	GEN.-MTR.	VARMETER	2	
7	GEN.-MTR.	AMMETER	2	
8	GEN.-MTR.	VOLTMETER	2	
9	REGULATOR BALANCE	METER	2	
10	GATE POSITION AND	LIMIT INDICATOR	2	
11	SPEED LEVEL	ADJUSTMENT INDICATOR	2	
12	AMMETER	TRANSFER SWITCH	2	
13	VOLTMETER	TRANSFER SWITCH	2	
14				
15	VOLTAGE REGULATOR	TRANSFER SWITCH	2	43CV
16	UNIT 2 & 3 MODE SELECTION	CONTROL SWITCH	2	43GPS
	(UNIT 5-8 MODE SELECT)	CONTROL SWITCH	2	43GP
17	UNIT 1, 2,..., OR 8	START-STOP SWITCH	2	1U
18	GEN.-MTR. ABCB 710, 720,...,	CONTROL SWITCH	2	1-710
	OR 780			THRU 780
19	GEN.-MTR. ABCB 710, 720,...,	SYNC. SWITCH	2	69S/710
	OR 780			THRU 780
20	REFERENCE SETTING	CONTROL SWITCH	2	70CV
21	UNIT 1, 2, 3,..., OR 8	TRANSFER SWITCH	2	43U
22	STARTING BUS MOD. 757-787	CONTROL SWITCH	2	1-757
23	GATE LIMIT MOTOR	CONTROL SWITCH	2	1-AGL
24	SPEED ADJUST. MOTOR	CONTROL SWITCH	2	1-SAM
25	CONDENSING MODE	CONTROL SWITCH	2	1CM

ENGRAVING SCHEDULE (CONT)

UNITS 1-8 (CONTINUED):
PANELS 7, 8, 10, 12, 13, 15, AND 16F

NO.	FIRST LINE	SECOND LINE	DET.	DEVICE NO.
26	SPINNING RESERVE	CONTROL SWITCH	2	1SR
27	UNIT 5, 6, 7, OR 8 PHASE	CONTROL SWITCH	2	1-501-
	REVERSAL SWITCH			1-801
28	PUMP PRIME (U5-U8)	CONTROL SWITCH	2	IPP
29	REGULATOR ON-OFF	CONTROL SWITCH	2	I-E
30	UNITS 1, 2,..., OR 8 EMER.	CONTROL SWITCH	2	IES
	SHUTDOWN			
31	INTAKE GATE EMER. CLOSE	CONTROL SWITCH	2	1-1GE
32	(GENERATOR SYMBOL, LIGHTED)		*	
33	UNIT GAIN CONTROL	PERMISSIVE SWITCH	2	69GC
34	TAIL WATER DEPRESSING	CONTROL SWITCH	2	I-TWD
35	H.P. THRUST BRG.	OIL PUMP ON - IND. LAMP	2	
36	CURRENT	TEST BLOCK	2	
37	POTENTIAL	TEST BLOCK	2	
38	(NEUTRAL GROUNDING TRANS-		*	
	FORMER SYMBOL)			
39	(GROUND SYMBOL)		*	
40	STARTING BUS BKR. U2 & U3	CONTROL SWITCH	2	I-722-
41	(PHASE REVERSAL SYMBOL)	U5-U8 SYMBOL	*	I-732
43	UNITS 1-8 OCB	ISOLATING SW. 713-783	2	
44	CURRENT REFER. SETTER	LIMIT IND. LAMP	2	
45	VOLT REFER. SETTER	LIMIT IND. LAMP	2	
46	SFC INPUT BREAKER	SELECTOR SWITCH		43SFCB

* NO NAMEPLATE REQUIRED.

SEE NOTE 1

NOTES:

1. SWITCH 1-757 SHALL BE RENAMED 1-759.

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
SHEET 1 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-97

SCALE: NONE SHEET 109

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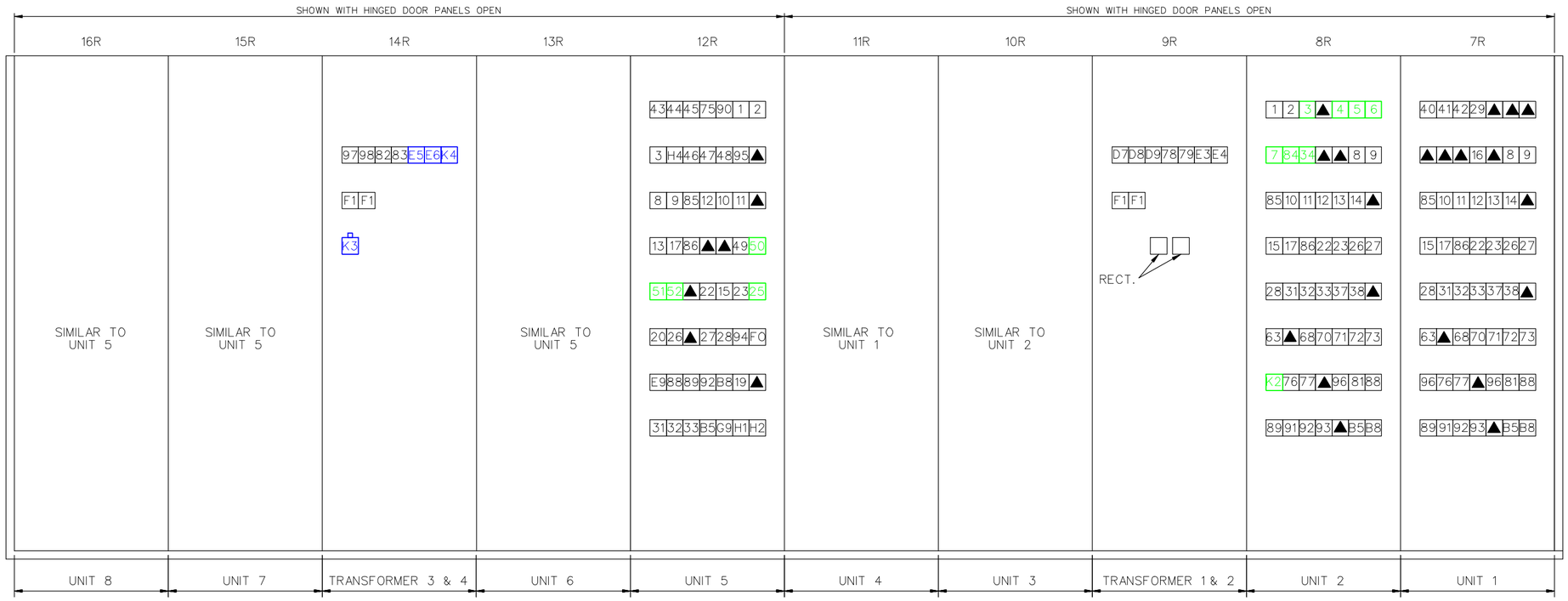

REAR VIEW

SCALE: NTS

AUXILIARY RELAY SCHEDULE

ITEM NO.	DEVICE	ITEM NO.	DEVICE
1	4GM1	26	3UA
2	4GM2	27	14a-95X
3	4GM3	28	25L0(U1-4), 29GB(U5-8)
4	4SM1	29	74AD
5	4SM2	30	3SX
6	4SM3	31	CMX1
7	4SM4	32	CMX2
8	74S	33	SRX
9	2UX1	34	4SM6
10	4UX1	35	2SRI/L1,L2,L3, OR L4
11	4UX2	36	14a-95Y
12	48X	37	71DAX
13	25-1	38	71DBX
14	25X	39	
15	RCTX	40	63DAX1
16	4GM	41	63DAX2
17	4UA1	42	63DAX3
18	RCT	43	4PS1
19	3CD	44	4PS2
20	3PR	45	4PS3
21		46	4PM1
22	AGLX	47	4PM2
23	URX	48	4PM3
24	3SR	49	4P1
25	41PC	50	4P2

AUXILIARY RELAY SCHEDULE

ITEM NO.	DEVICE	ITEM NO.	DEVICE
51	4P3	76	27EX
52	4P4	77	27RX
53	4SA	78	49-3X/T1
54	14Y-15	79	49-3X/T2
55	33aX-0	80	64EX
56	63PPX	81	27X
57	74/822	82	49-3X/T3
58		83	49-3X/T4
59	64X/B1	84	4SM5
60	64X/B2	85	2UX2
61	74/812	86	4UA2
62	74/814	87	4D
63	62BFX	88	63GTX
64	27X/S1A	89	63Q1X
65	27X/S2A	90	4PS5
66	27X/S1B	91	80PBWX
67	27X/S2B	92	71TGLX
68	59X	93	71DCX
69		94	80MSSX
70	46-51VX	95	4PM4
71	40X	96	SP
72	64NX	97	86X/T3
73	64FX	98	86X/T4
74	51EX	99	
75	4PS4		

AUXILIARY RELAY SCHEDULE

ITEM NO.	DEVICE	ITEM NO.	DEVICE
A0	2U	C4	2AWD
A1	62DBX	*C5	62BF/148
A2	27A	*C6	62BF/248
A3	62UA	*C7	62BF/348
A4	62BAF	*C8	62BF/448
A5	41TP	*C9	62BF/138
A6	48T	*D0	62BF/238
A7	2PP	*D1	62BF/338
A8	2FWSF	*D2	62BF/438
A9	2AD	*D3	62BF/128
B0	41TS	*D4	62BF/228
B1	81TX	*D5	62BF/328
B2		*D6	62BF/428
B3	2TWD	D7	81EW1
B4	2CM	D8	81EW2
B5	2CMX	D9	81EW3
B6	48TPB	*E0	62BF/710 THRU 780
B7	48TPC	E1	50-51X/SS1
B8	62CDY	E2	50-51X/SS2
B9	48TPP	E3	63SPX/T1
C0	62FW	E4	63SPX/T2
C1	48TSR	E5	86Y/T3
C2	62CD	E6	86Y/T4
C3	62CDX	E7	48TSB
		E8	48TSC
		E9	80TBWX
		F0	80WRX

*SOLID STATE TIMER

AUXILIARY RELAY SCHEDULE

ITEM NO.	DEVICE	ITEM NO.	DEVICE
F1	26FX	J0	62PD
F2	BFX/138, 148	J1	UDX
F3	BFX/238, 248	J2	62PS
F4	BFX/338, 348	J3	4SB
F5	BFX/438, 448	J4	4SC
F6	62P	J5	4SD
F7	52aX	J6	50EX
F8	SP	J7	33aX/759 THRU 789
F9	30S1	J8	52bX
G0	30S2	J9	4DG
G1	30S3	K0	4DP
G2	30R1	K1	62BF/722, 732
G3	30R2	K2	62BFX/722, 732
G4	30R3	K3	62BF/901
G5	30T1	K4	62BFX/901
G6	30T2		
G7	30T3		
G8	62AS		
G9	IGC		
H1	IGRL (AC COIL)		
H2	IGGL (AC COIL)		
H3	PFMX		
H4	4GM4		
H5			
H6	48T		
H7	SP		
H8	48TPD		
H9			

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
SHEET 2 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-98

SCALE: NONE SHEET 110

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101RRP_TBLK.DGN

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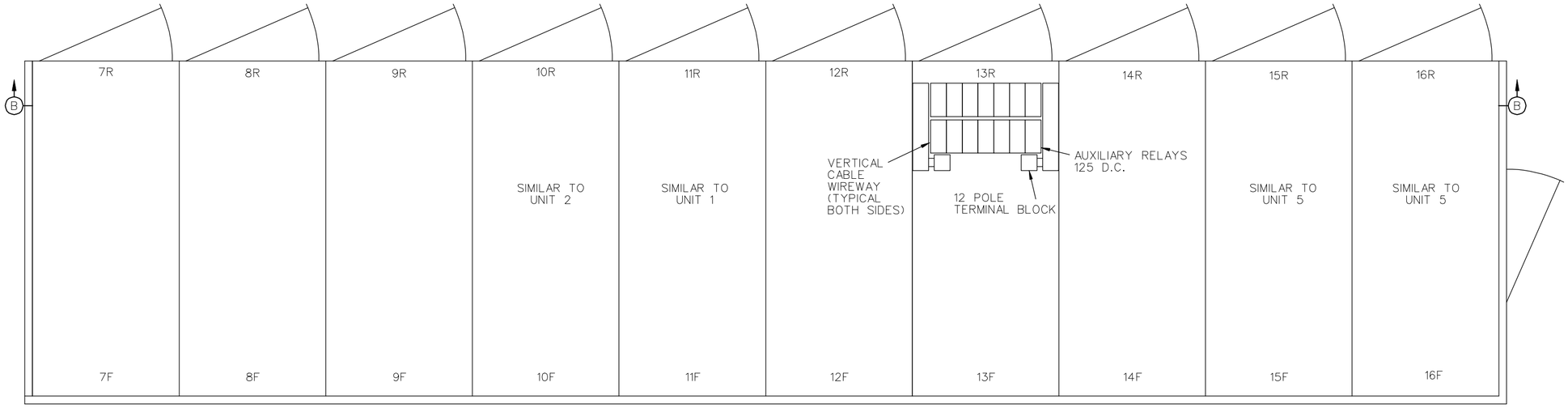
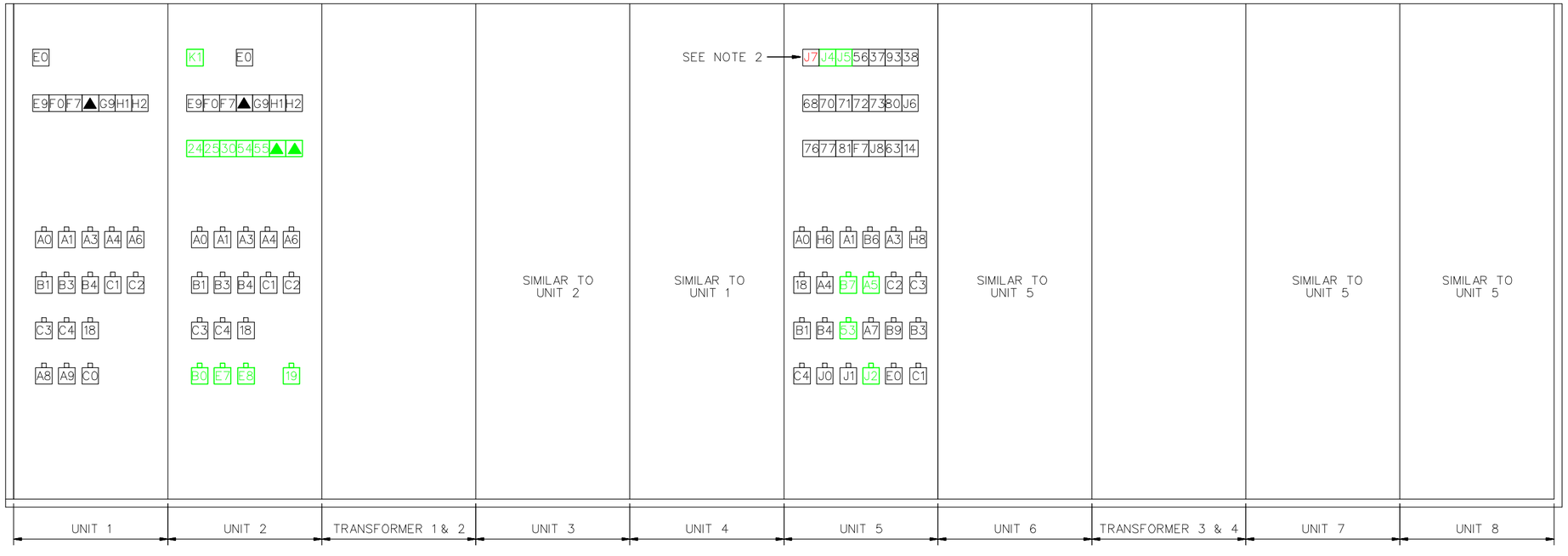


TOP VIEW

SCALE: NTS



SECTION B-B

SCALE: NTS

NOTES:

1. REFER TO AUXILIARY RELAY SCHEDULE ON SHEET 2.
2. THE EXISTING 4SB RELAY (J3) SHALL BE RE-USED AND NAMED 33aX/759 (J7).

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
MAIN CONTROL SWITCHBOARD
SHEET 3 OF 3
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-99

SCALE: NONE SHEET 111

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101RRP_TBLK.DGN

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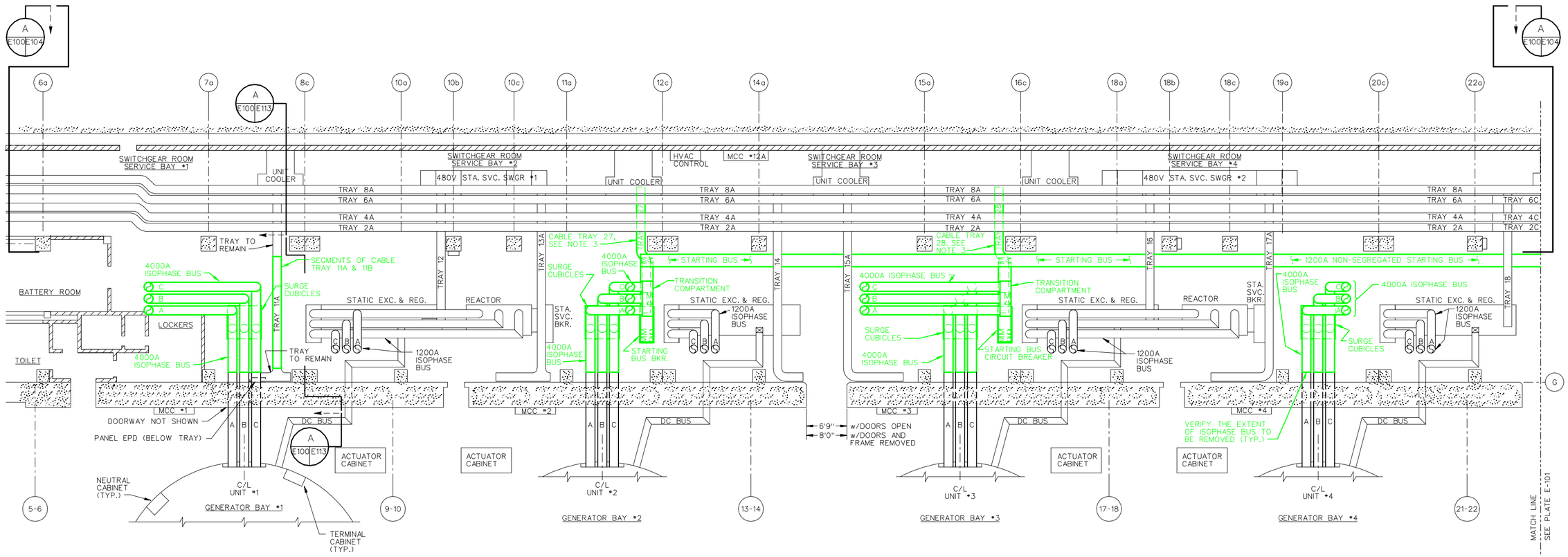


PARTIAL PLAN, EL. 322.0, UNITS 1-4

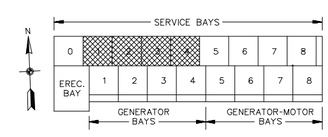
SCALE: 1/8" = 1'-0"

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. 4000A BUS IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. THE EXTENT OF 4000A ISOPHASE BUS TO BE REMOVED IS APPROXIMATE, VERIFY WITH GFE ISOPHASE BUS DRAWINGS. ISOPHASE BUS SUPPORTS TO BE REMOVED AS REQUIRED, NOT SHOWN. SEE REFERENCE DRAWINGS R-25 THRU R-30, R-34 THRU R-36, R-61 THRU R-64, AND R-68.
2. EMBEDDED CONDUITS, LIGHTING, ISOPHASE BUS SUPPORTS, HVAC, PIPING, CABLES NOT SHOWN FOR CLARITY.
3. REMOVE CABLE TRAYS 27 & 28, INCLUDING SUPPORTING BRACKETS TO CEILING (NOT SHOWN).

COMPANION DRAWINGS:

E-101 EL. 322.0 UNITS 5-8 EXISTING CONFIGURATION
E-106 EL. 322.0 UNITS 1-4 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
EL. 322.0 UNITS 1-4
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-100

SCALE: SHEET 112

101RRP_E100_OLD322_1TO4.DGN
101RRP_TBLK.DGN

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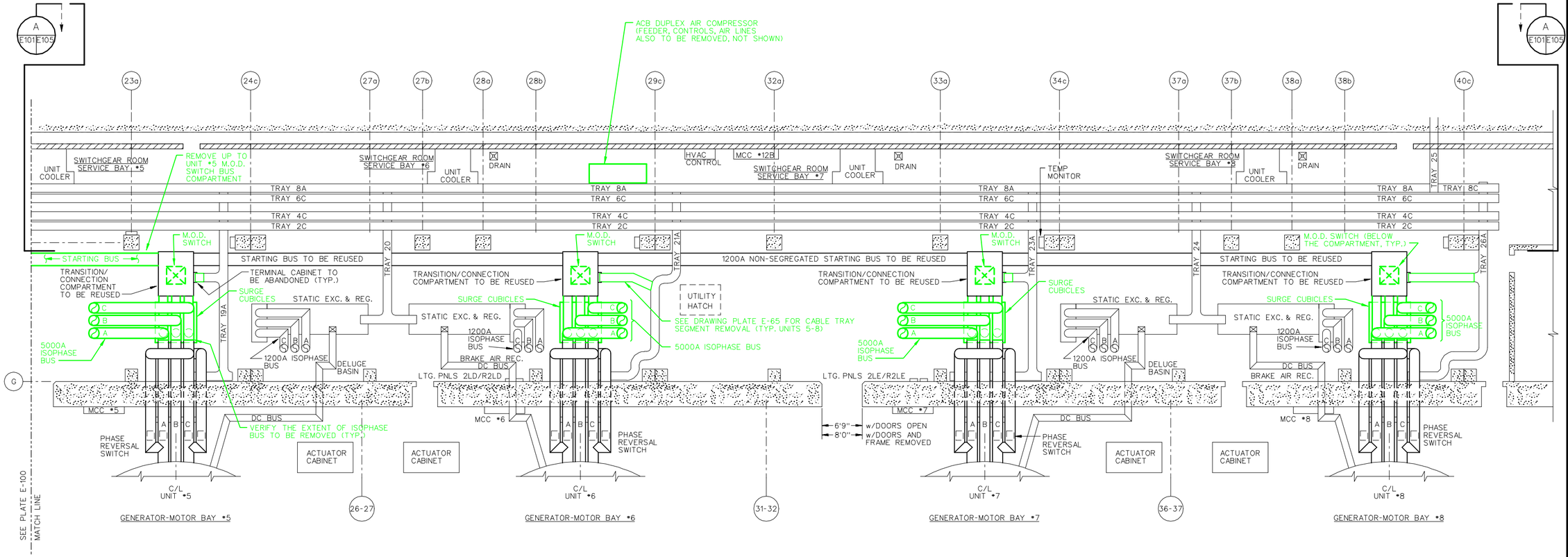


PARTIAL PLAN, EL. 322.0, UNITS 5-8

SCALE: 1/8" = 1'-0"

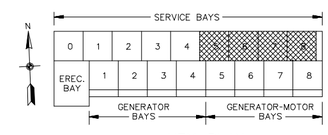
NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. 5000A BUS AND THE STARTING BUS TO BE REUSED IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. THE EXTENT OF 5000A ISOPHASE BUS TO BE REMOVED IS APPROXIMATE, VERIFY WITH GFE ISOPHASE BUS DRAWINGS. ISOPHASE BUS SUPPORTS TO BE REMOVED AS REQUIRED, NOT SHOWN. SEE REFERENCE DRAWINGS R-24, R-41 THRU R-50, R-53 THRU R-60, R-65 THRU R-67, R-69 THRU R-80.

2. EMBEDDED CONDUITS, LIGHTING, ISOPHASE BUS SUPPORTS, HVAC, PIPING, CABLES NOT SHOWN FOR CLARITY.

COMPANION DRAWINGS:

E-100 EL. 322.0 UNITS 1-4 EXISTING CONFIGURATION
E-107 EL. 322.0 UNITS 5-8 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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101RRP_TBLK.DGN

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
EL. 322.0 UNITS 5-8
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-101

SCALE: SHEET 113

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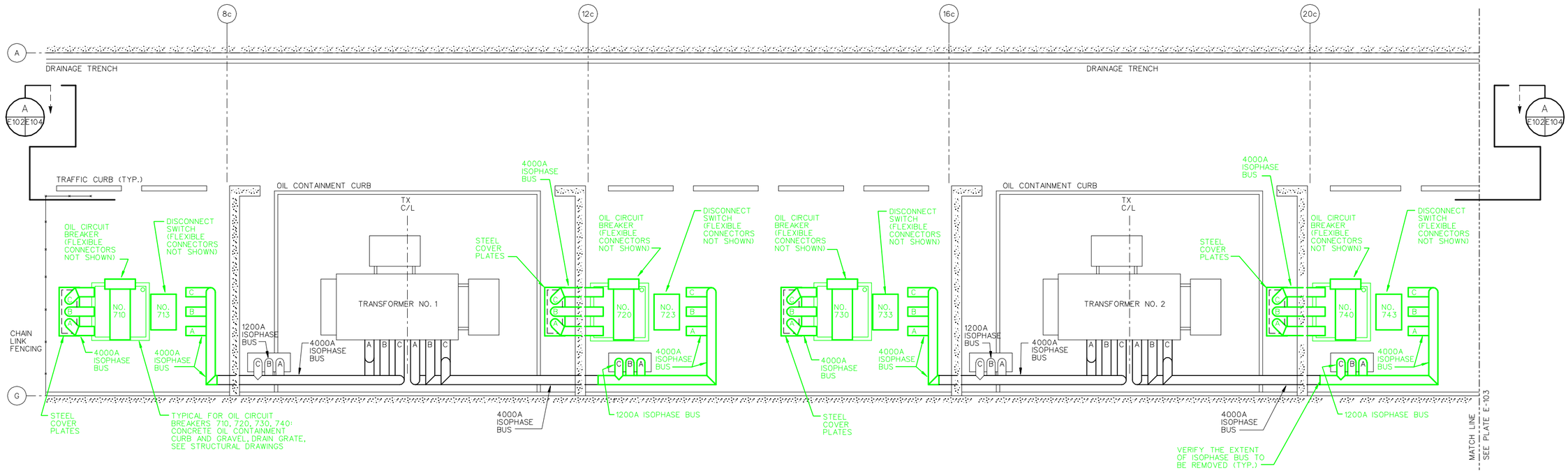


PARTIAL PLAN, EL. 350.0, UNITS 1-4

SCALE: 1/8" = 1'-0"
12'0 5' 10' 15'

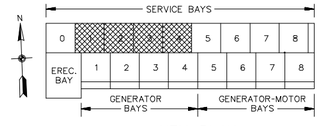
NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. 4000A BUS IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. THE EXTENT OF 4000A ISOPHASE BUS TO BE REMOVED IS APPROXIMATE, VERIFY WITH GFE ISOPHASE BUS DRAWINGS. ISOPHASE BUS SUPPORTS TO BE REMOVED AS REQUIRED, NOT SHOWN. SEE REFERENCE DRAWINGS R-3 THRU R-11, R-31 THRU R-33, R-37 THRU R-40.

2. EMBEDDED CONDUITS, ISOPHASE BUS SUPPORTS, CONTROL CABLES, FLEXIBLE CONNECTORS NOT SHOWN FOR CLARITY.

COMPANION DRAWINGS:

E-103 EL. 350.0 UNITS 5-8 EXISTING CONFIGURATION
E-108 EL. 350.0 UNITS 1-4 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
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PORTLAND, OREGON

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
EL. 350.0 UNITS 1-4
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-102

SCALE: SHEET 114

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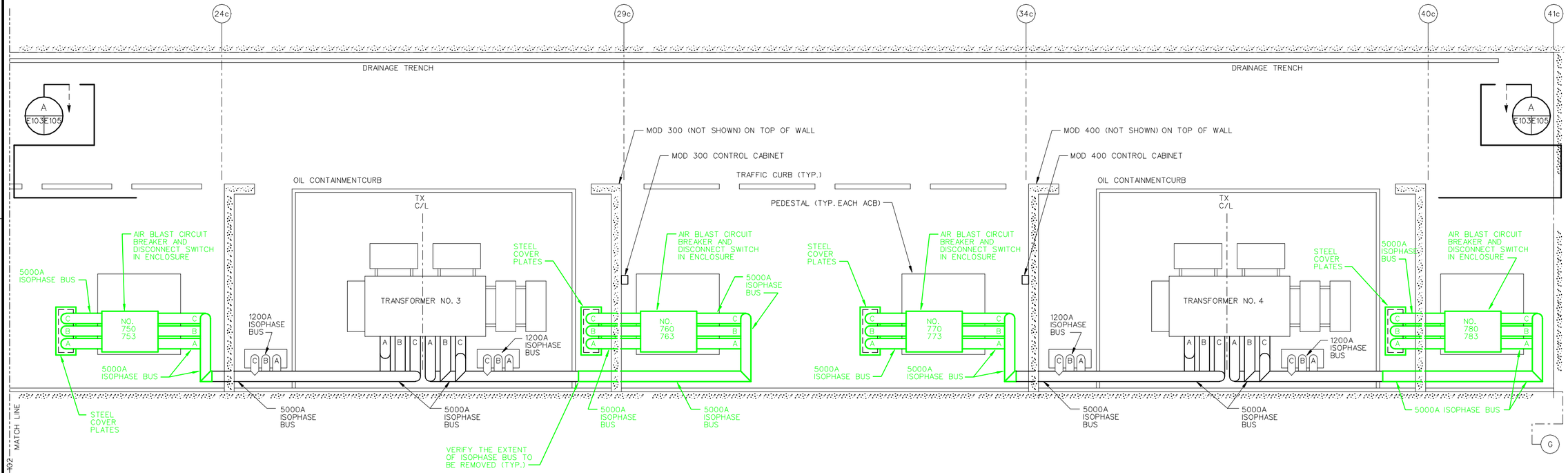


PARTIAL PLAN, EL. 350.0, UNITS 5-8

SCALE: 1/8" = 1'-0"
12"0 5' 10' 15'

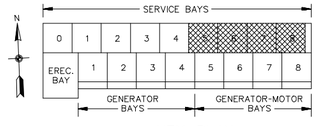
NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. 5000A BUS IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. THE EXTENT OF 5000A ISOPHASE BUS TO BE REMOVED IS APPROXIMATE, VERIFY WITH GFE ISOPHASE BUS DRAWINGS. ISOPHASE BUS SUPPORTS TO BE REMOVED AS REQUIRED, NOT SHOWN. SEE REFERENCE DRAWINGS R-12 THRU R-23, R-41 THRU R-50.

2. EMBEDDED CONDUITS, ISOPHASE BUS SUPPORTS, CONTROL CABLES, AIR LINES NOT SHOWN FOR CLARITY.

COMPANION DRAWINGS:

E-102 EL. 350.0 UNITS 1-4 EXISTING CONFIGURATION
E-109 EL. 350.0 UNITS 5-8 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
EL. 350.0 UNITS 5-8
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-103

SCALE: SHEET 115

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101RRP_TBLK.DGN

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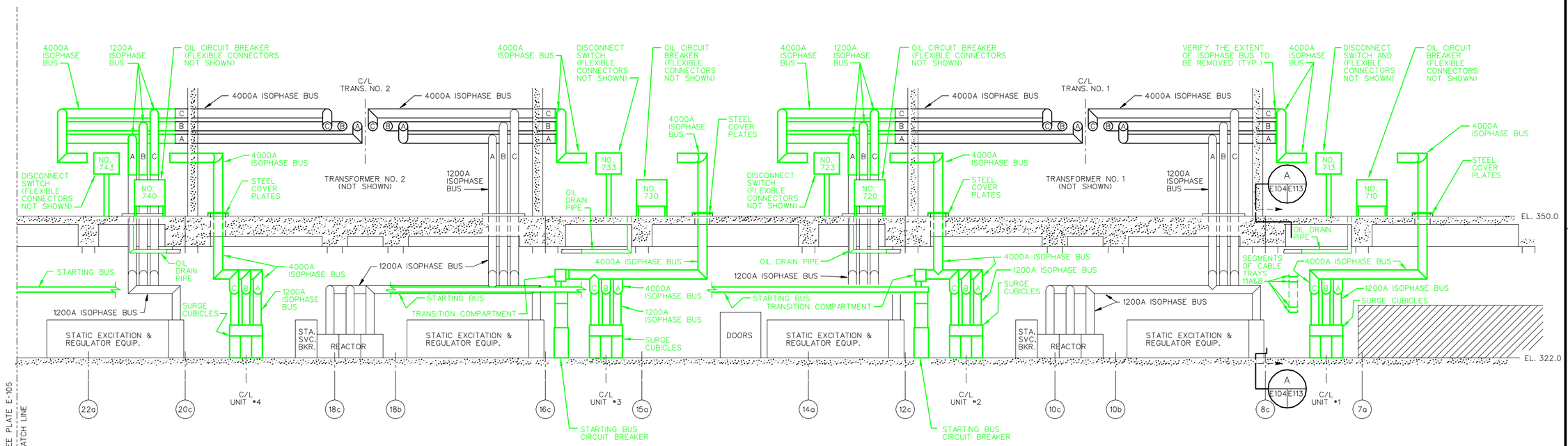


SECTION A E100 E104 A E102 E104

PARTIAL LONGITUDINAL SECTION, UNITS 1-4

SCALE: 1/8" = 1'-0"
12"0 5' 10' 15'

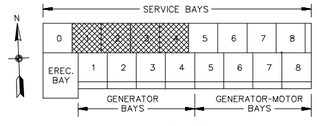
NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. 4000A BUS IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. THE EXTENT OF 4000A ISOPHASE BUS TO BE REMOVED IS APPROXIMATE, VERIFY WITH GFE ISOPHASE BUS DRAWINGS. ISOPHASE BUS SUPPORTS TO BE REMOVED AS REQUIRED. NOT SHOWN. SEE REFERENCE DRAWINGS R-3 THRU R-11, R-25 THRU R-40, R-61 THRU R-64, AND R-68.

2. ISOPHASE BUS SUPPORTS, OIL CONTAINMENT CURBS, TRANSFORMERS, EMBEDDED CONDUITS, FLEXIBLE CONNECTORS, CABLE TRAYS, CONTROL CABLES, LIGHTING, SOME DOORS, AND PORTIONS OF CIRCUIT BREAKER OIL DRAIN PIPING NOT SHOWN FOR CLARITY.

COMPANION DRAWINGS:

E-105 SECTION UNITS 5-8 EXISTING CONFIGURATION
E-110 SECTION UNITS 1-4 REVISED CONFIGURATION



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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
SECTION UNITS 1-4
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-104

SCALE: SHEET 116

101RRP_E104_OLDSEC_1TO4.DGN
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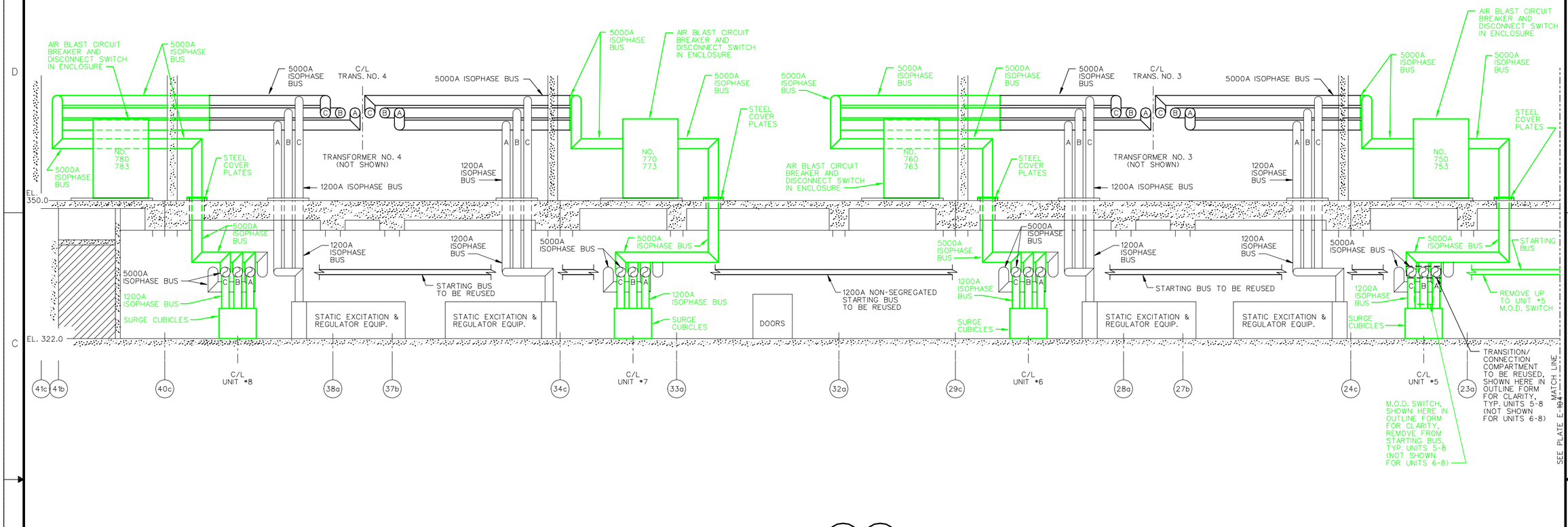


SECTION A E101 E105 / A E103 E105

PARTIAL LONGITUDINAL SECTION, UNITS 5-8

SCALE: 1/8" = 1'-0"
12"0 5' 10' 15'

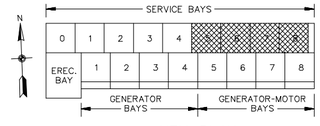
NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. SOME 5000A BUS AND THE STARTING BUS TO BE REUSED IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. THE EXTENT OF 5000A ISOPHASE BUS TO BE REMOVED IS APPROXIMATE, VERIFY WITH GFE ISOPHASE BUS DRAWINGS. ISOPHASE BUS SUPPORTS TO BE REMOVED AS REQUIRED, NOT SHOWN. SEE REFERENCE DRAWINGS R-12 THRU R-23, R-41 THRU R-50, R-65 THRU R-67, R-69 THRU R-80.

2. ISOPHASE BUS SUPPORTS, OIL CONTAINMENT CURBS, TRANSFORMERS, EMBEDDED CONDUITS, CABLE TRAYS, CONTROL CABLES, STARTING BUS M.O.D. SWITCHES, STARTING BUS, LIGHTING, AIR COMPRESSOR LINES, AND SOME DOORS NOT SHOWN FOR CLARITY.

COMPANION DRAWINGS:

E-104 SECTION UNITS 1-4 EXISTING CONFIGURATION
E-111 SECTION UNITS 5-8 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
SECTION UNITS 5-8
EXISTING CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-105

SCALE: SHEET 117

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101RRP_TBLK.DGN

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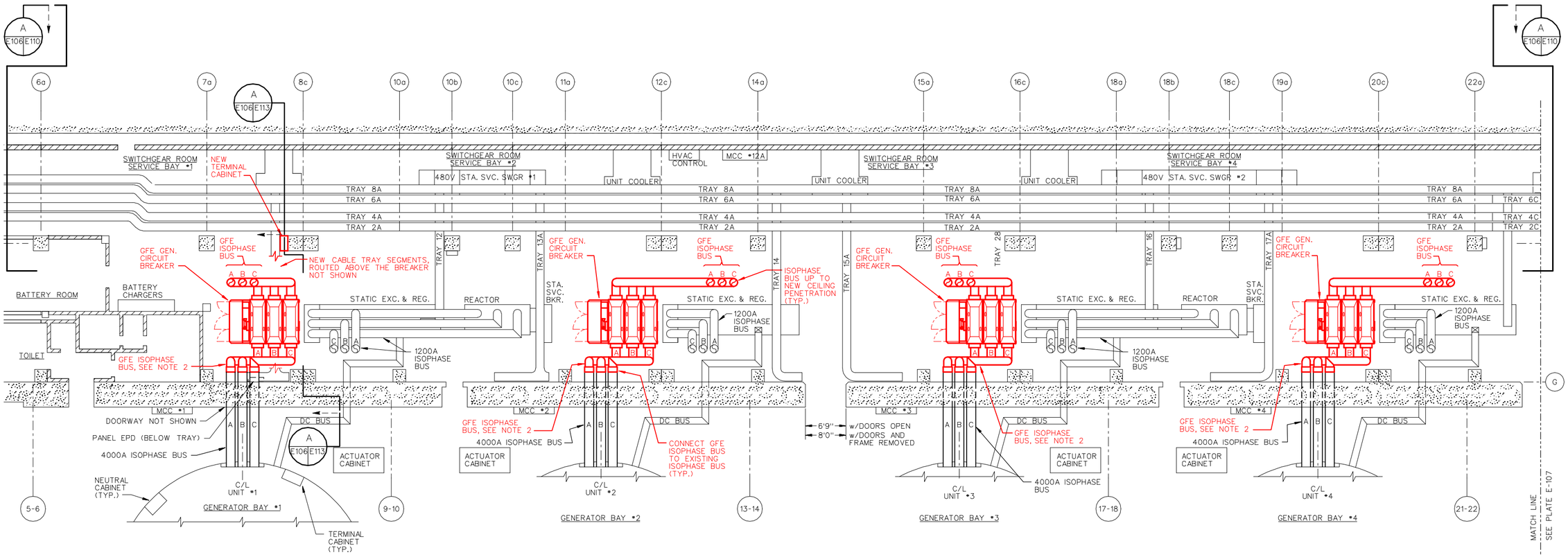


PARTIAL PLAN, EL. 322.0, UNITS 1-4

SCALE: 1/8" = 1'-0"

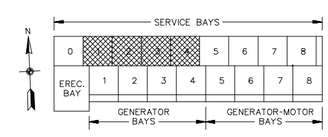
NEW CABLE TRAYS TO BREAKER CONTROL CABINETS NOT SHOWN FOR CLARITY, SEE DRAWING PLATE E-64

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW OR AS GOVERNMENT-FURNISHED EQUIPMENT (GFE) TO BE INSTALLED BY HEAVIER RED LINES OR RED TEXT, OR AS NOTED. EXISTING 4000A BUS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. SEE REFERENCE DRAWINGS FOR GFE ISOPHASE BUS FOR ALL DIMENSIONS AND MEASUREMENTS REGARDING INSTALLATION OF THE BREAKERS AND BUS. GFE ISOPHASE BUS SUPPORTS NOT SHOWN. SEE REFERENCE DRAWINGS R-125, R-126, AND R-133.
2. ON THE SOURCE SIDE OF THE CIRCUIT BREAKER, THE GFE ISOPHASE BUS HAS DISCONNECTING LINKS.
3. RELOCATE EXISTING LIGHT FIXTURES AS REQUIRED (NOT SHOWN, FIELD VERIFY) TO AVOID CONFLICT WITH ISOPHASE BUS. EXISTING FIXTURES ARE PENDANT-MOUNTED 48" INDUSTRIAL FLUORESCENTS.

COMPANION DRAWINGS:

E-100 EL. 322.0 UNITS 1-4 EXISTING CONFIGURATION
E-107 EL. 322.0 UNITS 5-8 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
EL. 322.0 UNITS 1-4
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-106

SCALE: SHEET 118

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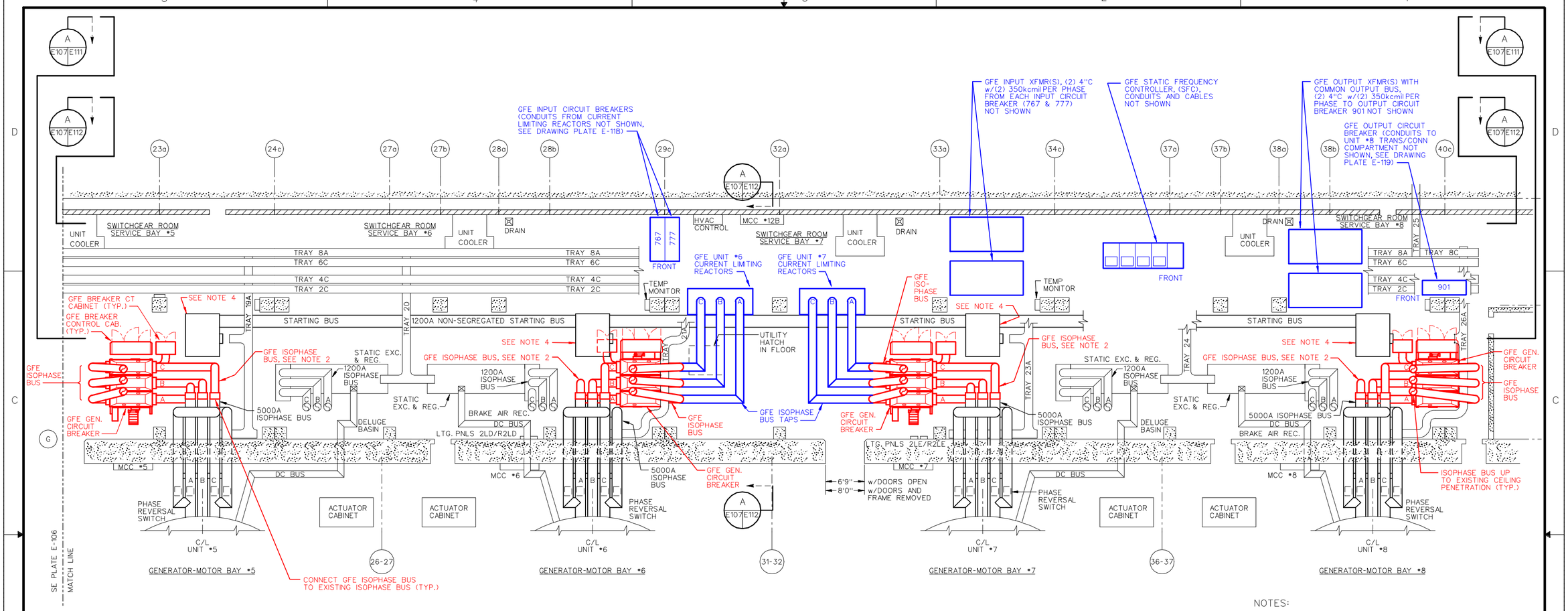


PARTIAL PLAN, EL. 322.0, UNITS 5-8

SCALE: 1/8" = 1'-0"
12"0 5' 10' 15'

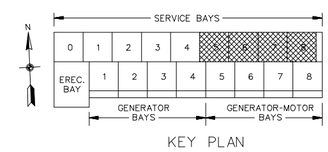
NEW CONDUITS AND CABLE TRAYS TO BREAKER CONTROL CABINETS NOT SHOWN FOR CLARITY, SEE DRAWING PLATES E-65 AND E-68

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW OR AS GOVERNMENT-FURNISHED EQUIPMENT (GFE) TO BE INSTALLED BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. EXISTING 5000A BUS AND THE STARTING BUS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. SEE REFERENCE DRAWINGS FOR GFE ISOPHASE BUS FOR ALL DIMENSIONS AND MEASUREMENTS REGARDING INSTALLATION OF THE BREAKERS AND BUS. GFE ISOPHASE BUS SUPPORTS NOT SHOWN. SEE REFERENCE DRAWINGS R-127 THRU R-132, R-134, AND R-135.
2. ON THE SOURCE SIDE OF THE CIRCUIT BREAKER, THE GFE ISOPHASE BUS HAS DISCONNECTING LINKS.
3. RELOCATE EXISTING LIGHT FIXTURES AS REQUIRED (NOT SHOWN, FIELD VERIFY) TO AVOID CONFLICT WITH ISOPHASE BUS. EXISTING FIXTURES ARE PENDANT-MOUNTED 48" INDUSTRIAL FLUORESCENTS.
4. RECONFIGURE EXISTING TRANSITION/CONNECTION COMPARTMENT, TO BE REUSED FOR NEW CONDUIT AND CABLE CONNECTIONS (NOT SHOWN) BETWEEN THE EXISTING STARTING BUS AND THE STARTING SWITCHES ON THE GENERATOR CIRCUIT BREAKERS. SEE DRAWING PLATES E-116 AND E-117.

COMPANION DRAWINGS:

E-101 EL. 322.0 UNITS 5-8 EXISTING CONFIGURATION
E-106 EL. 322.0 UNITS 1-4 REVISED CONFIGURATION
E-118 INPUT CIRCUIT BREAKER CONDUIT & CABLE TRAY DETAILS
E-119 OUTPUT CIRCUIT BREAKER CONDUIT & CABLE TRAY DETAILS



KEY PLAN

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES

SYMBOL	ZONE	DESCRIPTION	DATE	BY
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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
EL. 322.0 UNITS 5-8
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-107

SCALE: SHEET 119

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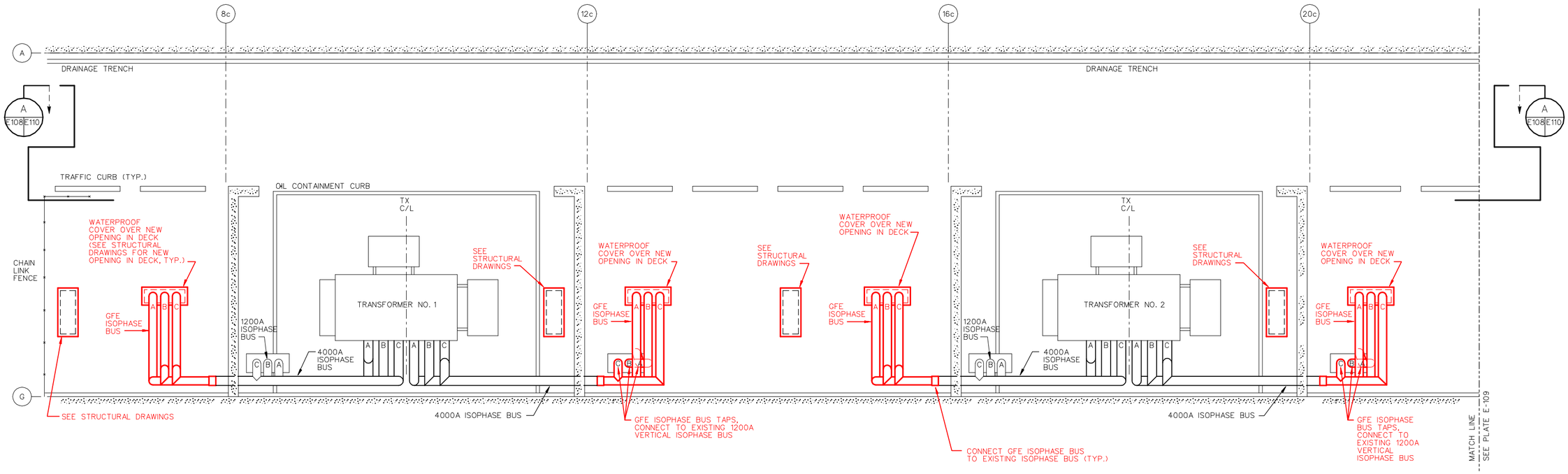


PARTIAL PLAN, EL. 350.0, UNITS 1-4

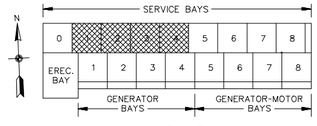
SCALE: 1/8" = 1'-0"
12" 0 5' 10' 15'

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW OR AS GOVERNMENT-FURNISHED EQUIPMENT (GFE) TO BE INSTALLED BY HEAVIER RED LINES OR RED TEXT, OR AS NOTED. EXISTING 4000A ISOPHASE BUS IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. SEE REFERENCE DRAWINGS FOR GFE ISOPHASE BUS FOR ALL DIMENSIONS AND MEASUREMENTS REGARDING INSTALLATION OF THE BREAKERS AND BUS. GFE ISOPHASE BUS SUPPORTS NOT SHOWN. SEE REFERENCE DRAWINGS R-125 AND R-126.

COMPANION DRAWINGS:

E-102 EL. 350.0 UNITS 1-4 EXISTING CONFIGURATION
E-109 EL. 350.0 UNITS 5-8 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
EL. 350.0 UNITS 1-4
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-108

SCALE: SHEET 120

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101RRP_TBLK.DGN

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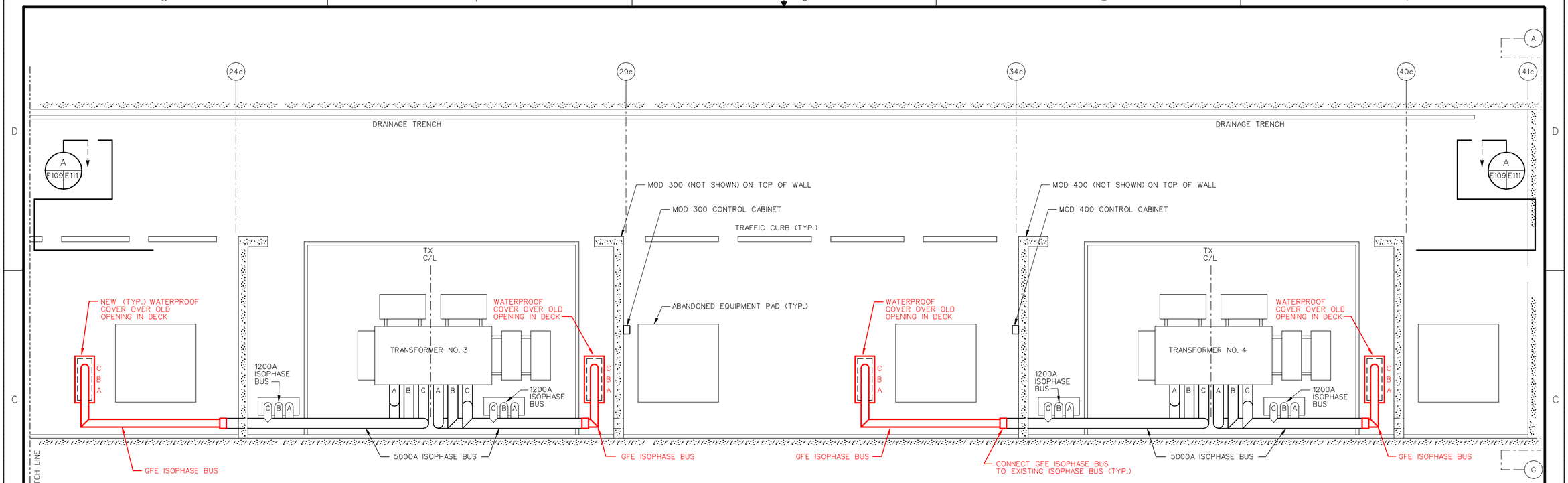


PARTIAL PLAN, EL. 350.0, UNITS 5-8

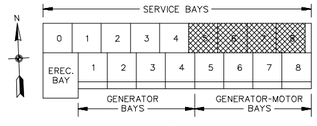
SCALE: 1/8" = 1'-0"
12" 0 5' 10' 15'

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW OR AS GOVERNMENT-FURNISHED EQUIPMENT (GFE) TO BE INSTALLED BY HEAVIER RED LINES OR RED TEXT, OR AS NOTED. EXISTING 5000A ISOPHASE BUS IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. SEE REFERENCE DRAWINGS FOR GFE ISOPHASE BUS FOR ALL DIMENSIONS AND MEASUREMENTS REGARDING INSTALLATION OF THE BREAKERS AND BUS. GFE ISOPHASE BUS SUPPORTS NOT SHOWN. SEE REFERENCE DRAWINGS R-127 THRU R-129.

COMPANION DRAWINGS:

E-103 EL. 350.0 UNITS 5-8 EXISTING CONFIGURATION
E-108 EL. 350.0 UNITS 1-4 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
EL. 350.0 UNITS 5-8
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-109

SCALE: SHEET 121

101RRP_E109_NEW350_5TO8.DGN
101RRP_TBLK.DGN

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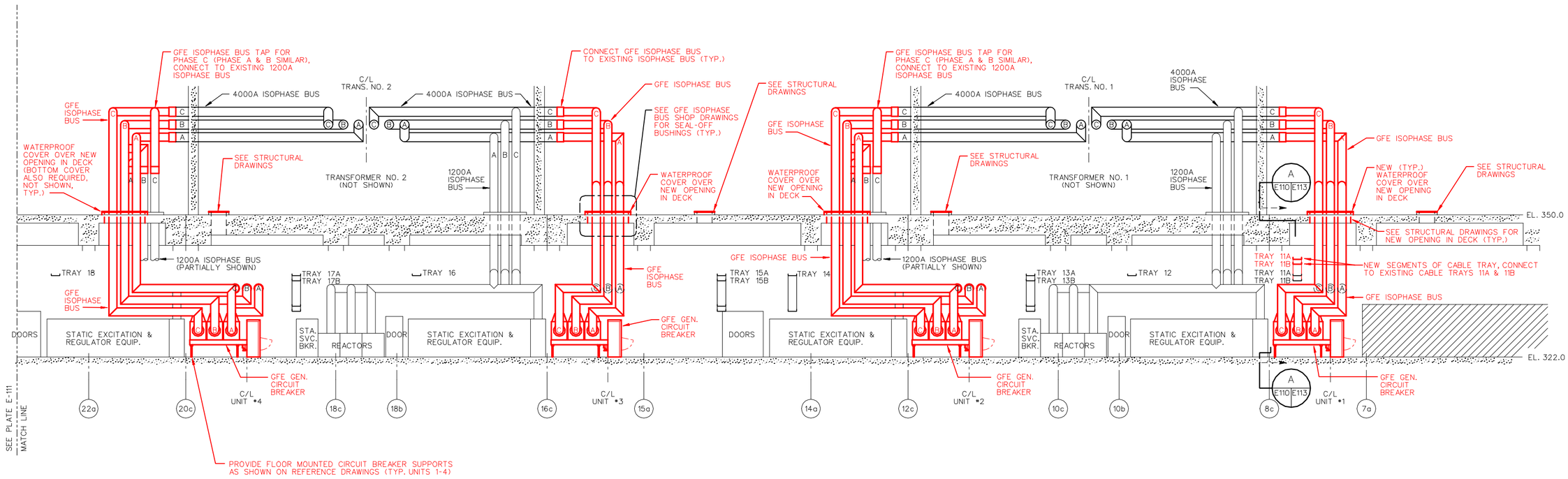


PARTIAL LONGITUDINAL SECTION, UNITS 1-4

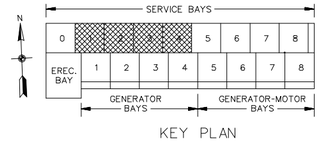
SCALE: 1/8" = 1'-0"
12" 0 5' 10' 15'

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW OR AS GOVERNMENT-FURNISHED EQUIPMENT (GFE) TO BE INSTALLED BY HEAVIER RED LINES OR RED TEXT, OR AS NOTED. EXISTING 4000A ISOPHASE BUS IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. SEE REFERENCE DRAWINGS FOR GFE ISOPHASE BUS FOR ALL DIMENSIONS AND MEASUREMENTS REGARDING INSTALLATION OF THE BREAKERS AND BUS. GFE ISOPHASE BUS SUPPORTS NOT SHOWN. SEE REFERENCE DRAWINGS R-125, R-126, AND R-133.

COMPANION DRAWINGS:

E-104 SECTION UNITS 1-4 EXISTING CONFIGURATION
E-111 SECTION UNITS 5-8 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
SECTION UNITS 1-4
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-110

SCALE: SHEET 122

101RRP_E110_NEWSEC_1TO4.DGN
101RRP_TBLK.DGN

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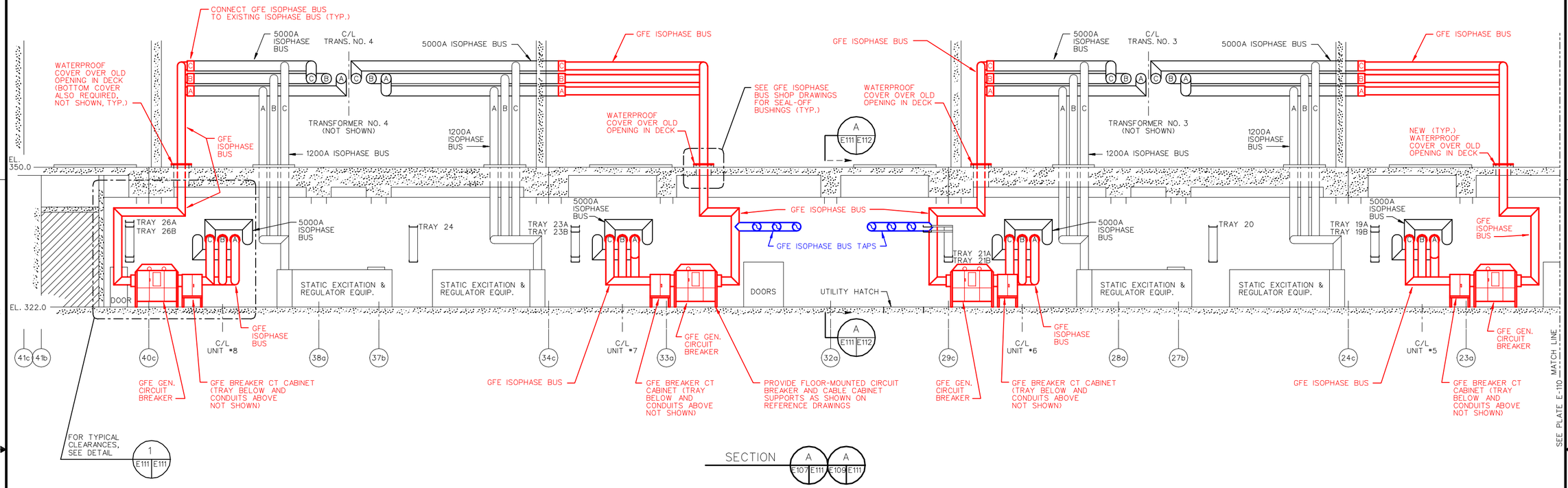
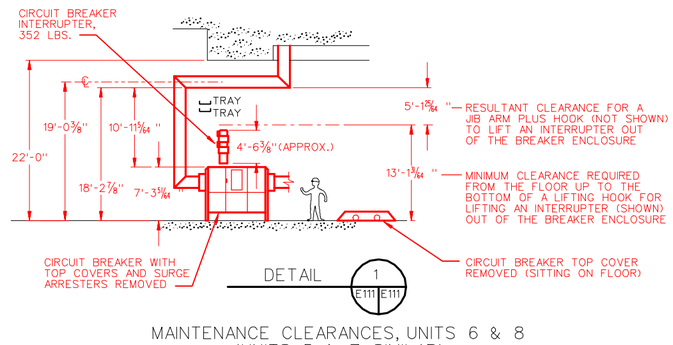


SECTION A E107 E111 A E109 E111

PARTIAL LONGITUDINAL SECTION, CIRCUIT BREAKERS, UNITS 5-8

SCALE: 1/8" = 1'-0"
12" 0 5' 10' 15'



DETAIL 1 E111 E111

MAINTENANCE CLEARANCES, UNITS 6 & 8
(UNITS 5 & 7 SIMILAR)

SCALE: 1/8" = 1'-0"
12" 0 5' 10' 15'

CABLE TRAYS NOT SHOWN FOR CLARITY

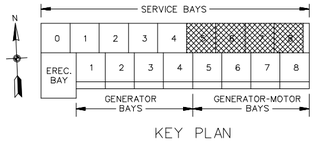
BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW OR AS GOVERNMENT-FURNISHED EQUIPMENT (GFE) TO BE INSTALLED BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. EXISTING 5000A ISOPHASE BUS IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. SEE REFERENCE DRAWINGS FOR GFE ISOPHASE BUS FOR ALL DIMENSIONS AND MEASUREMENTS REGARDING INSTALLATION OF THE BREAKERS AND BUS. GFE ISOPHASE BUS SUPPORTS NOT SHOWN. SEE REFERENCE DRAWINGS R-127 THRU R-132, R-134, AND R-135.

COMPANION DRAWINGS:

E-105 SECTION UNITS 5-8 EXISTING CONFIGURATION
E-110 SECTION UNITS 1-4 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

101RRP_E111_NEWSEC_5TO8.DGN
101RRP_TBLK.DGN

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
BREAKER SECTION UNITS 5-8
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-111

SCALE: SHEET 123

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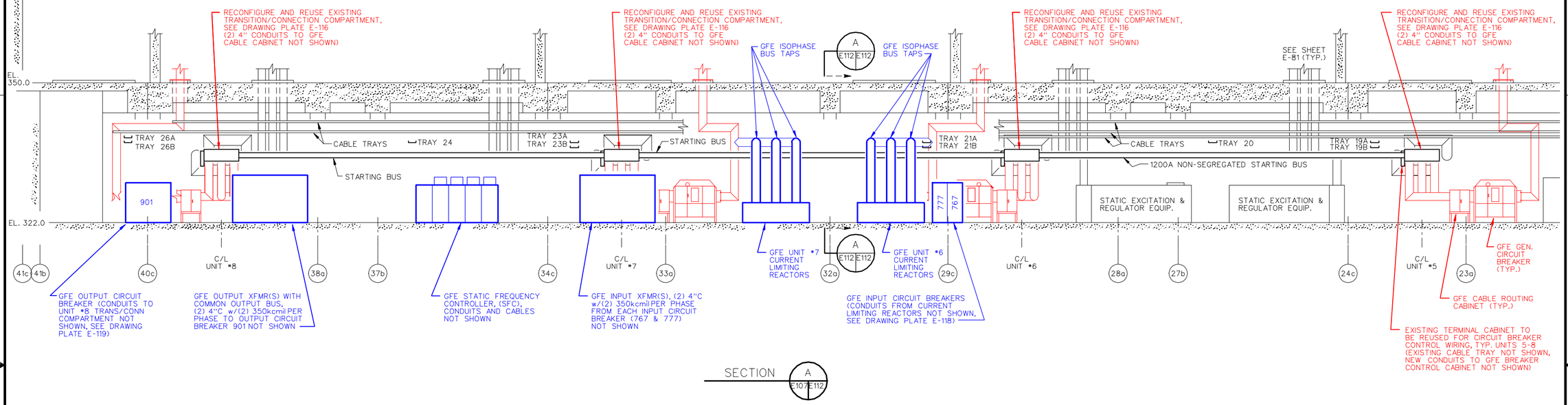
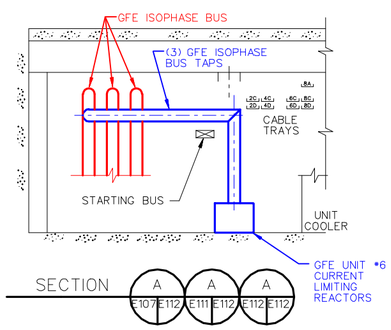


PARTIAL LONGITUDINAL SECTION, STATIC START, UNITS 5-8

SCALE: 1/8" = 1'-0"
12"0 5' 10' 15'

STRUCTURAL COLUMNS NOT SHOWN FOR CLARITY, CONDUITS AND CABLE TRAYS TO INPUT & OUTPUT CIRCUIT BREAKERS NOT SHOWN FOR CLARITY



ISOPHASE BUS TAP PARTIAL TRANSVERSE SECTION
(UNIT 6 SHOWN, UNIT 7 SIMILAR)

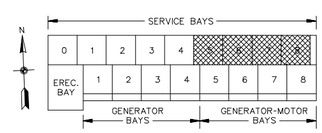
SCALE: 1/8" = 1'-0"
12"0 5' 10' 15'

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW OR AS GOVERNMENT-FURNISHED EQUIPMENT (GFE) TO BE INSTALLED BY HEAVIER RED LINES OR RED TEXT, OR AS NOTED. EXISTING STARTING BUS IS SHOWN IN SLIGHTLY HEAVIER BLACK LINES FOR CLARITY. GFE ISOPHASE BUS AND BREAKERS THAT ARE SHOWN ON SHEET E-61 ARE SHOWN HERE IN LIGHTWEIGHT RED LINES FOR CLARITY. SEE REFERENCE DRAWINGS FOR GFE ISOPHASE BUS AND STATIC START SYSTEM FOR ALL DIMENSIONS AND MEASUREMENTS REGARDING INSTALLATION OF THE EQUIPMENT.

COMPANION DRAWINGS:

E-105 SECTION UNITS 5-8 EXISTING CONFIGURATION
E-107 EL. 322.0 UNITS 5-8 REVISED CONFIGURATION
E-111 BREAKER SECTION UNITS 5-8 REVISED CONFIGURATION
E-116 UNITS 5-8 TRAYS & TRANS./CONN. COMPARTMENT DETAILS
E-118 INPUT CIRCUIT BREAKER CONDUIT & CABLE TRAY DETAILS
E-119 OUTPUT CIRCUIT BREAKER CONDUIT & CABLE TRAY DETAILS



KEY PLAN

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
STATIC START SECTION UNITS 5-8
REVISED CONFIGURATION
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-112

SCALE: SHEET 124

101RRP_E112_NEWSEC2_5TO8.DGN
101RRP_TBLK.DGN

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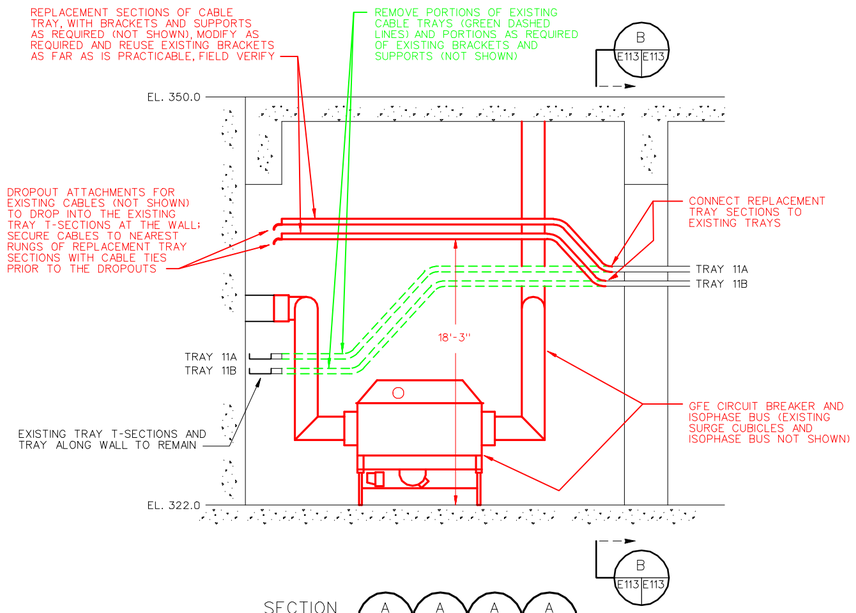
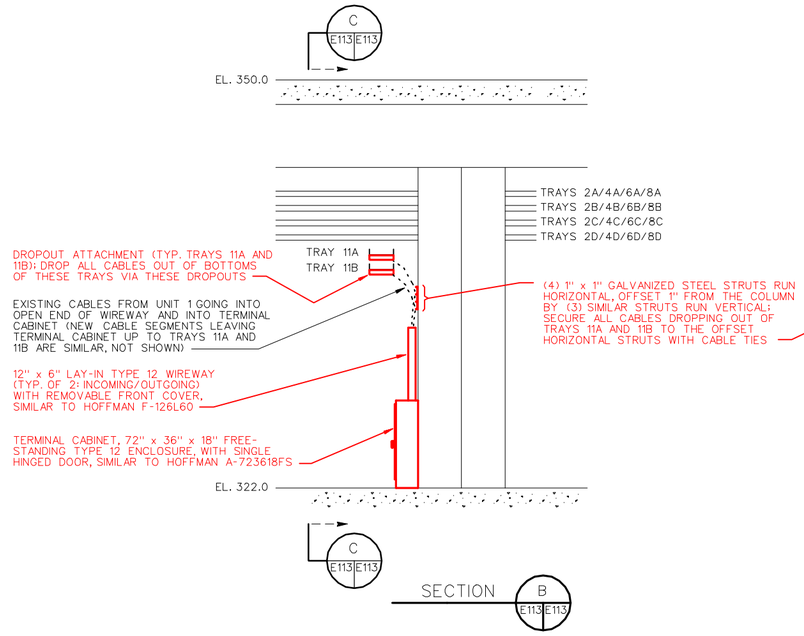


CABLE TRAY RELOCATION, UNIT 1

SCALE: 1/4"= 1'-0"
12" 0 5'

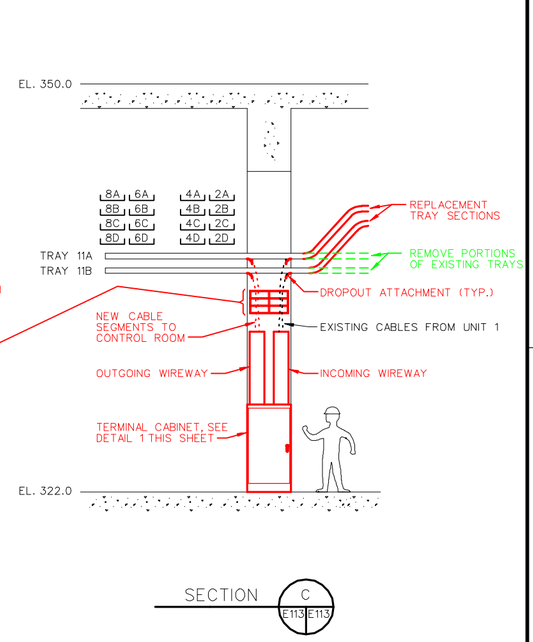
EXISTING CABLE TRAY BRACKETS AND SUPPORTS NOT SHOWN
NEW TRAY EXTENSION (TRAY 31) TO CONTROL CABINET NOT SHOWN



TERMINAL CABINET SIDE VIEW

SCALE: 1/4"= 1'-0"
12" 0 5'

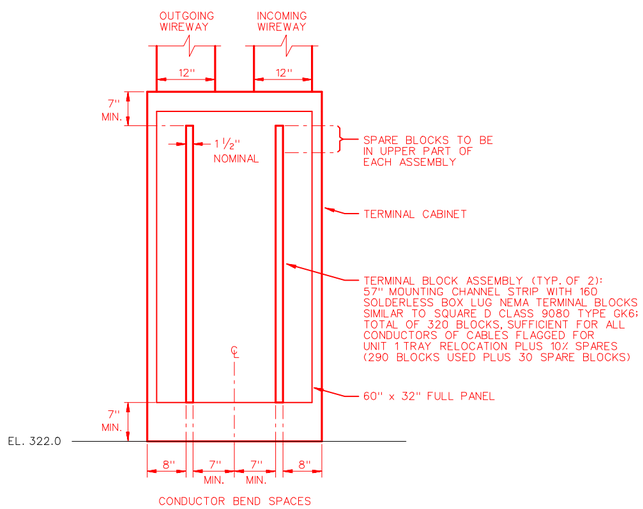
EXISTING CABLE TRAY BRACKETS AND SUPPORTS NOT SHOWN



TERMINAL CABINET FRONT VIEW

SCALE: 1/4"= 1'-0"
12" 0 5'

EXISTING CABLE TRAY BRACKETS AND SUPPORTS NOT SHOWN



DETAIL 1 E113 E113

TERMINAL CABINET INTERIOR VIEW

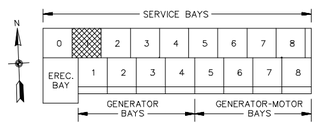
NO SCALE

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW OR AS GOVERNMENT-FURNISHED EQUIPMENT (GFE) TO BE INSTALLED BY HEAVIER RED LINES OR RED TEXT, OR AS NOTED. GREEN INDICATES REMOVAL OR AS NOTED. SEE REFERENCE DRAWINGS R-86 AND R-87.

COMPANION DRAWINGS:

E-100 EL. 322.0 UNITS 1-4 EXISTING CONFIGURATION
E-104 SECTION UNITS 1-4 EXISTING CONFIGURATION
E-106 EL. 322.0 UNITS 1-4 REVISED CONFIGURATION
E-110 SECTION UNITS 1-4 REVISED CONFIGURATION



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNIT 1 CABLE TRAY AND
TERMINAL CABINET DETAILS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-113

SCALE: SHEET 125

101RRP_E113_UNIT1DETAIL.DGN
101RRP_TBLK.DGN

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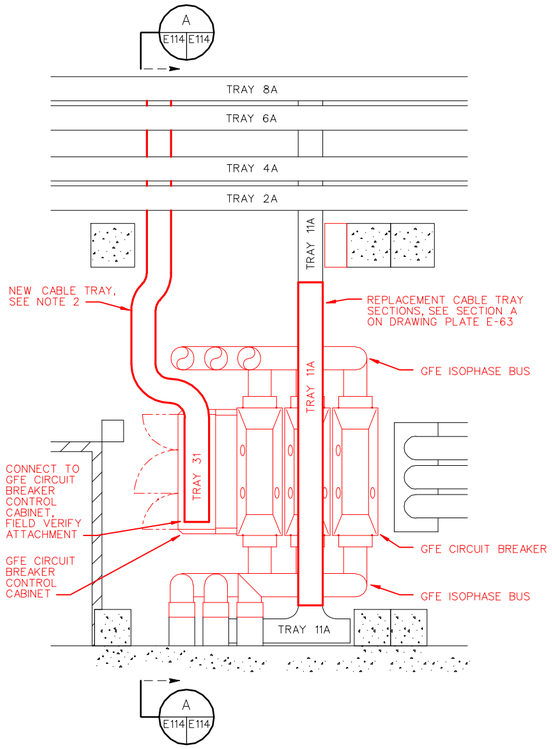
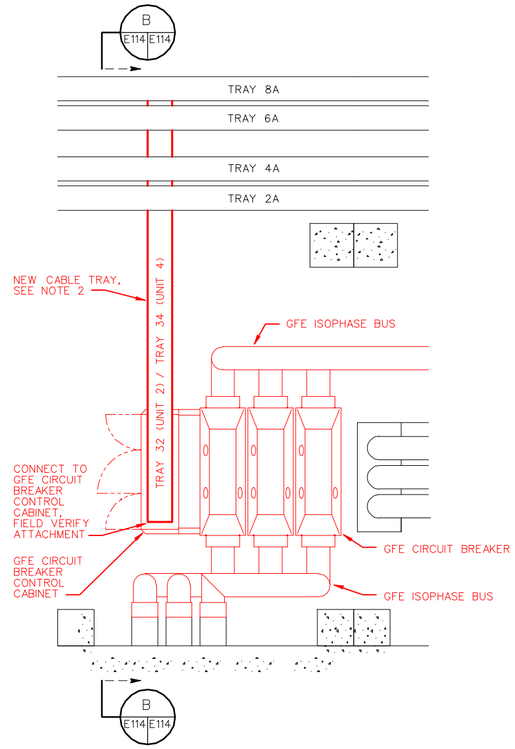


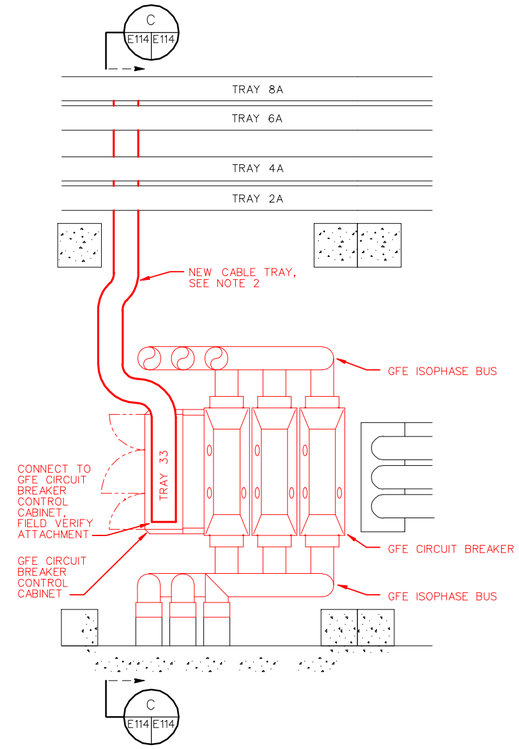
PARTIAL PLAN
UNIT 1 BREAKER CONTROL CABLE TRAY

SCALE: 1/4"= 1'-0"
12" 0 5'



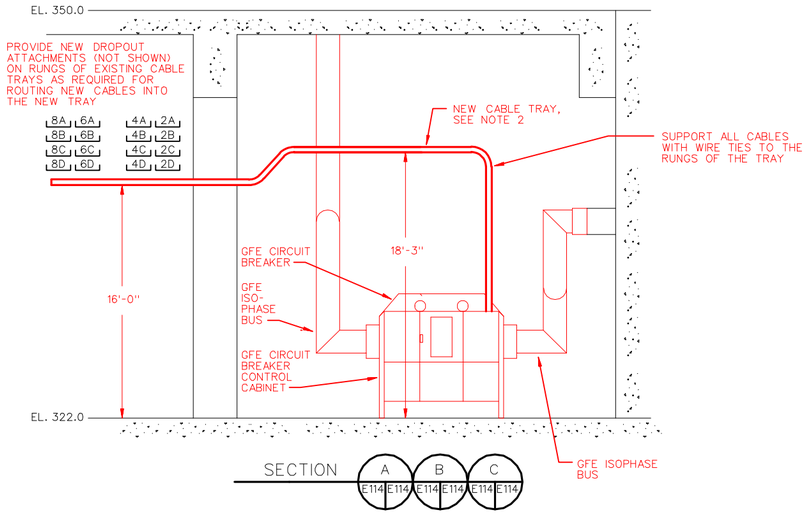
PARTIAL PLAN
UNITS 2 & 4 BREAKER CONTROL CABLE TRAY

SCALE: 1/4"= 1'-0"
12" 0 5'



PARTIAL PLAN
UNIT 3 BREAKER CONTROL CABLE TRAY

SCALE: 1/4"= 1'-0"
12" 0 5'



UNITS 2 & 4 BREAKER CONTROL CABINET CABLE TRAY
(UNITS 1 & 3 SIMILAR)

SCALE: 1/4"= 1'-0"
12" 0 5'

TRAYS 11A/B NOT SHOWN FOR UNIT 1

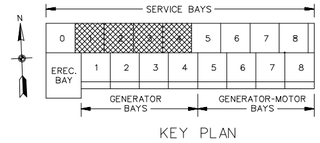
NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED LINES OR RED TEXT, OR AS NOTED. GREEN INDICATES REMOVAL OR AS NOTED. EXISTING ISOPHASE BUS AND STARTING BUS TO BE REMOVED ARE SHOWN IN LIGHTWEIGHT GREEN LINES FOR CLARITY. GFE BREAKER CONTROL CABINET AND CABLE CABINET ARE SHOWN IN LIGHT WEIGHT RED LINES FOR CLARITY.

2. PROVIDE BRACKETS AND STRUTS AS REQUIRED (NOT SHOWN) TO SUPPORT CABLE TRAY FROM POWERHOUSE CEILING.

COMPANION DRAWINGS:

E-106 EL. 322.0 UNITS 1-4 REVISED CONFIGURATION
E-113 UNIT 1 CABLE TRAY AND TERMINAL CABINET DETAILS



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNITS 1-4 CABLE TRAY DETAILS

SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-114

SCALE: SHEET 126

101RRP_E114_UNIT14TRAYS.DGN
101RRP_TBLK.DGN

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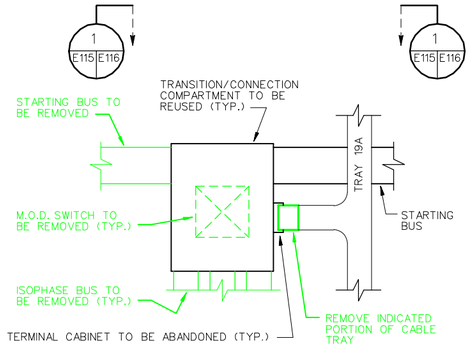
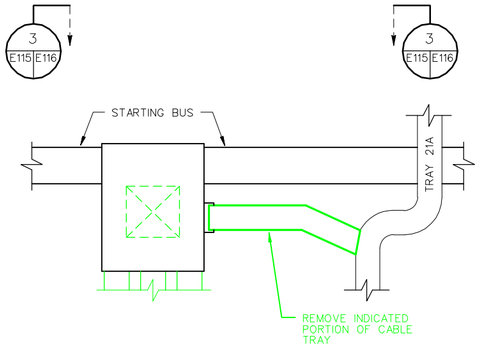


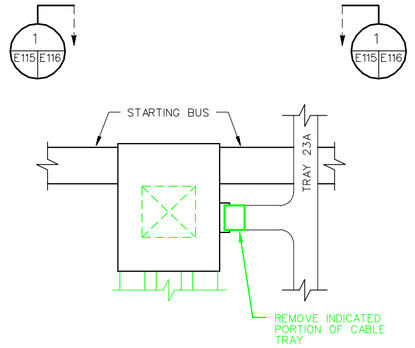
PARTIAL PLAN
UNIT 5 CABLE TRAY REMOVAL

SCALE: 1/4"= 1'-0"
12"0 5'



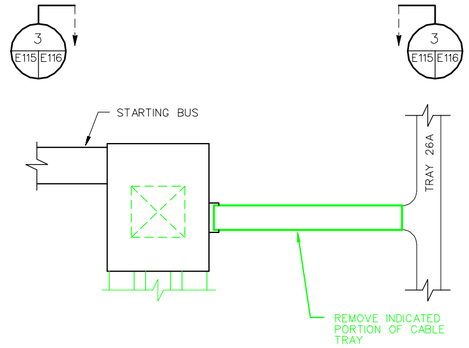
PARTIAL PLAN
UNIT 6 CABLE TRAY REMOVAL

SCALE: 1/4"= 1'-0"
12"0 5'



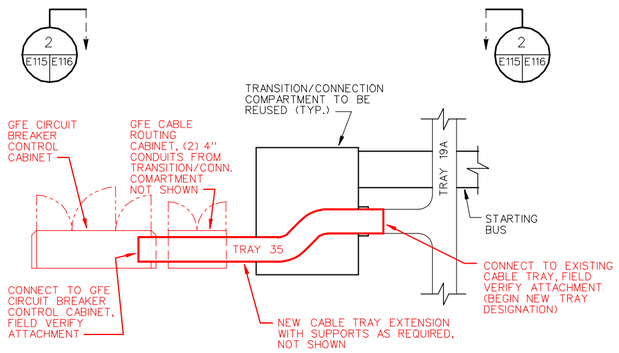
PARTIAL PLAN
UNIT 7 CABLE TRAY REMOVAL

SCALE: 1/4"= 1'-0"
12"0 5'



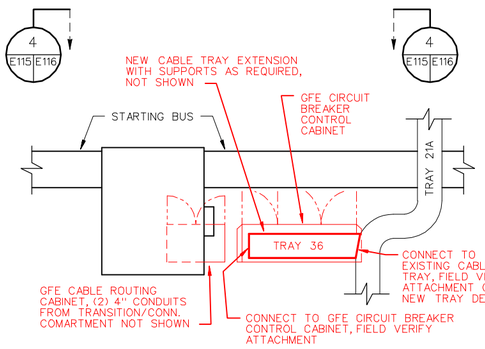
PARTIAL PLAN
UNIT 8 CABLE TRAY REMOVAL

SCALE: 1/4"= 1'-0"
12"0 5'



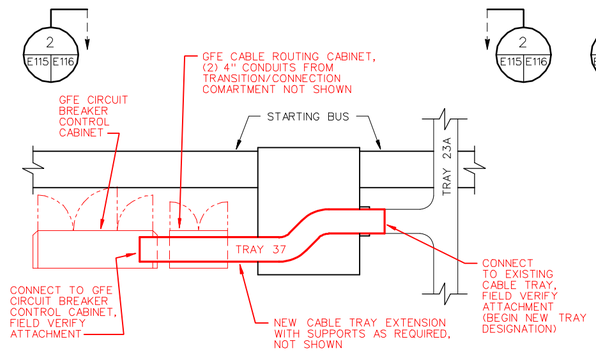
PARTIAL PLAN
UNIT 5 CABLE TRAY MODIFICATIONS

SCALE: 1/4"= 1'-0"
12"0 5'



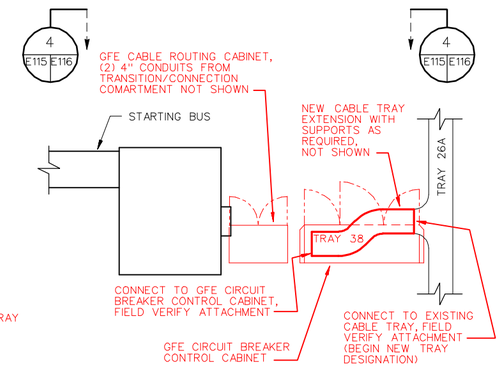
PARTIAL PLAN
UNIT 6 CABLE TRAY MODIFICATIONS

SCALE: 1/4"= 1'-0"
12"0 5'



PARTIAL PLAN
UNIT 7 CABLE TRAY MODIFICATIONS

SCALE: 1/4"= 1'-0"
12"0 5'



PARTIAL PLAN
UNIT 8 CABLE TRAY MODOFICATIONS

SCALE: 1/4"= 1'-0"
12"0 5'

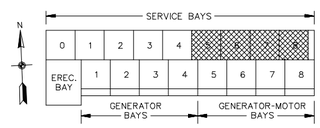
NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED LINES OR RED TEXT, OR AS NOTED. GREEN INDICATES REMOVAL OR AS NOTED. EXISTING ISOPHASE BUS AND STARTING BUS TO BE REMOVED ARE SHOWN IN LIGHTWEIGHT GREEN LINES FOR CLARITY. GFE BREAKER CONTROL CABINET AND CABLE CABINET ARE SHOWN IN LIGHT WEIGHT RED LINES FOR CLARITY.

2. PROVIDE BRACKETS AND STRUTS AS REQUIRED (NOT SHOWN) TO SUPPORT CABLE TRAY FROM POWERHOUSE CEILING.

COMPANION DRAWINGS:

E-116 UNITS 5-8 TRAYS & TRANS./CONN. COMPARTMENT DETAILS



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNITS 5-8 CABLE TRAY
MODIFICATIONS, PLAN VIEWS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

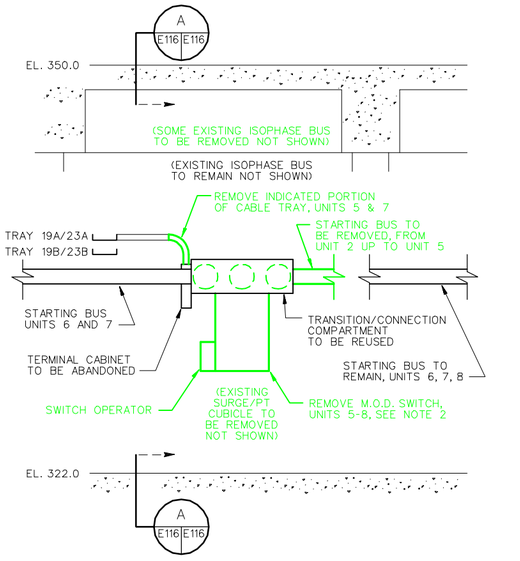
SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-115

SCALE: SHEET 127

101RRP_E115_UNIT58TRAYS.DGN
101RRP_TBLK.DGN

i:\ebs_dgn\RBR0107\03B11W\Contract Drawings\101rrp_e115_unit58trays.dgn
11/03/2003
keenxndt

...\101rrp_e115_unit58trays.dgn 11/03/2003 12:56:02 PM

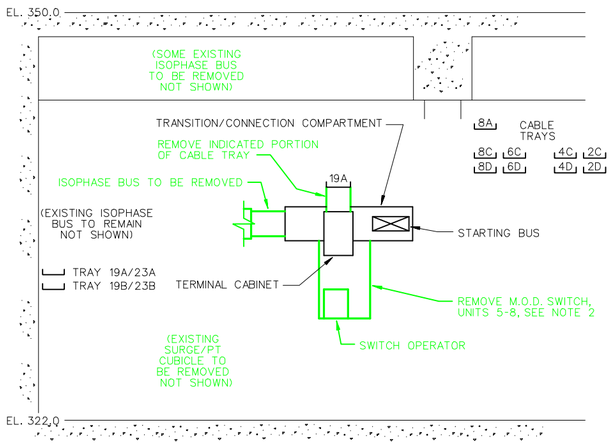


ELEVATION 1 E115 E116

M.O.D. AND CABLE TRAY REMOVAL

SCALE: 1/4"= 1'-0"
12"0 5'

UNITS 5 & 7 SHOWN, UNITS 6 & 8 SIMILAR FOR TRANSITION/CONNECTION COMPARTMENT
SEE ELEVATION 3 THIS SHEET FOR CABLE TRAY AT UNITS 6 & 8

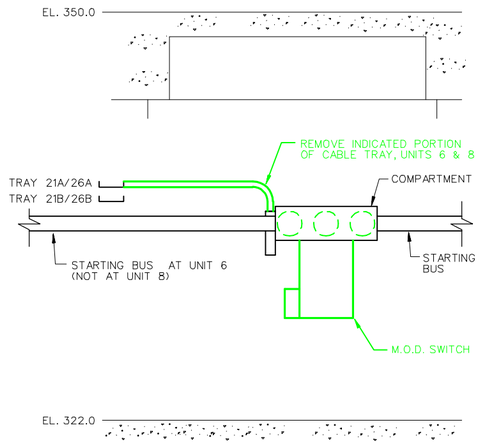


SECTION A E116 E116

REMOVAL, SIDE VIEW

SCALE: 1/4"= 1'-0"
12"0 5'

UNIT 5 SHOWN, UNITS 6, 7, & 8 SIMILAR



ELEVATION 3 E115 E116

CABLE TRAY REMOVAL UNIT 6
(UNIT 8 SIMILAR)

SCALE: 1/4"= 1'-0"
12"0 5'

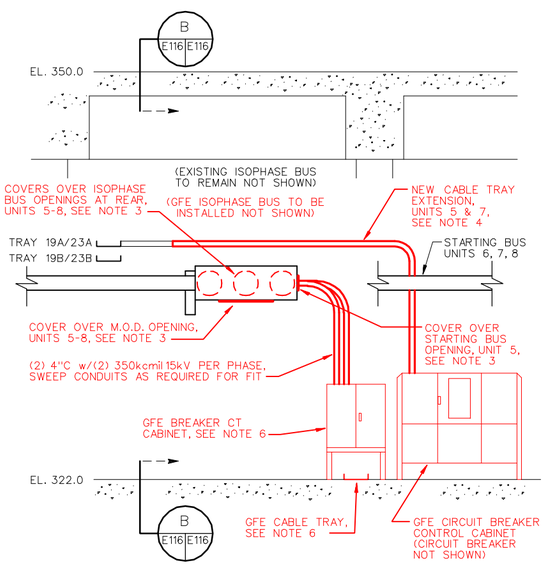
SEE ELEVATION 1 THIS SHEET FOR TRANSITION/CONNECTION COMPARTMENT MODIFICATIONS

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. GREEN INDICATES REMOVAL OR AS NOTED. GFE ISOPHASE BUS, CIRCUIT BREAKER, BREAKER CONTROL CABINET, AND CABLE CABINET ARE SHOWN IN LIGHT WEIGHT RED LINES FOR CLARITY. SEE REFERENCE DRAWINGS R-61 THRU R-80.
2. THE M.O.D. HOUSING IS WELDED TO THE TRANSITION/CONNECTION COMPARTMENT AND WILL HAVE TO BE CUT OFF.
3. OPENINGS LEFT AFTER REMOVAL OF EQUIPMENT SHALL BE COVERED WITH 11 MSG GALVANIZED SHEET STEEL, PRIMED AND PAINTED TO MATCH EXISTING, FASTENED AROUND PERIMETER WITH SHEET METAL SCREWS AT 4" INTERVALS.
4. PROVIDE BRACKETS AND STRUTS AS REQUIRED (NOT SHOWN) TO SUPPORT CABLE TRAY FROM POWERHOUSE CEILING. SECURE ALL CABLES WITH WIRE TIES TO THE RUNGS OF THE TRAY.
5. SEE DRAWING PLATE E-117 FOR VIEWS OF INTERIOR MODIFICATIONS TO THE TRANSITION/CONNECTION COMPARTMENTS.
6. (6) 350kcmil 15kV CABLES (NOT SHOWN) SHALL PASS THROUGH THE CABINET TO GFE FLOOR-MOUNTED CABLE TRAY FOR ROUTING UNDER THE BREAKER. PROVIDE OPENINGS AS REQUIRED IN THE CABINET TOP AND BOTTOM COVERS FOR CONDUIT CONNECTION AND CABLE PASSAGE. CABLES SHALL THEN RUN UP INTO THE BREAKER FOR CONNECTION.

COMPANION DRAWINGS:

E-115 UNITS 5-8 CABLE TRAY MODIFICATIONS, PLAN VIEWS
E-117 TRANSITION/CONNECTION COMPARTMENT INTERIOR DETAILS

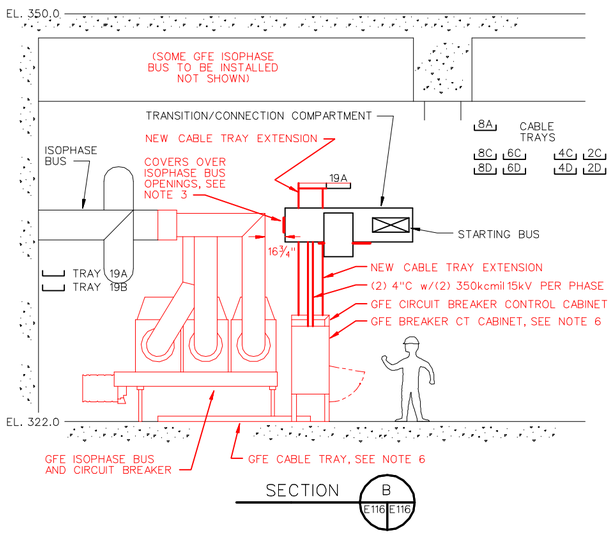


ELEVATION 2 E115 E116

COMPARTMENT, CABLE TRAY AND CONDUIT MODIFICATIONS

SCALE: 1/4"= 1'-0"
12"0 5'

UNITS 5 & 7 SHOWN, UNITS 6 & 8 SIMILAR FOR TRANSITION/CONNECTION COMPARTMENT
SEE ELEVATION 4 THIS SHEET FOR CABLE TRAY AND CONDUITS AT UNITS 6 & 8

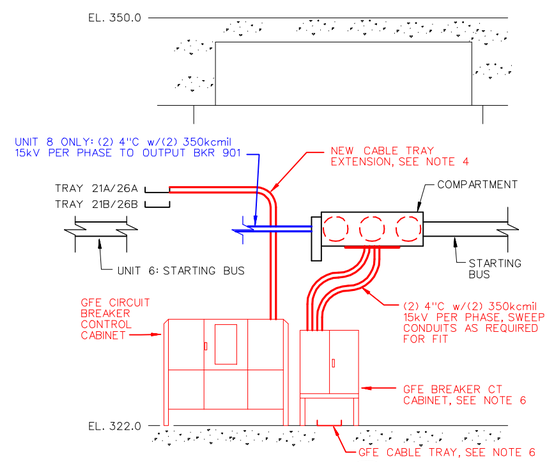


SECTION B E116 E116

MODIFICATIONS, SIDE VIEW

SCALE: 1/4"= 1'-0"
12"0 5'

UNIT 5 SHOWN, UNIT 7 SIMILAR
UNITS 6 & 8 SIMILAR FOR TRANSITION/CONNECTION COMPARTMENT
SEE ELEVATION 4 THIS SHEET FOR CABLE TRAY AND CONDUITS AT UNITS 6 & 8

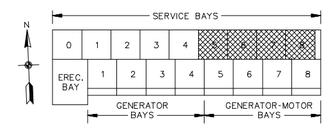


ELEVATION 4 E115 E116

CABLE TRAY AND CONDUIT MODIFICATIONS UNIT 6
(UNIT 8 SIMILAR)

SCALE: 1/4"= 1'-0"
12"0 5'

SEE ELEVATION 2 THIS SHEET FOR TRANSITION/CONNECTION COMPARTMENT MODIFICATIONS



KEY PLAN

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
UNITS 5-8 TRAYS & TRANS./CONN. COMPARTMENT DETAILS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-116

SCALE: SHEET 128

101RRP_E116_COMPARTMENT.DGN
101RRP_TBLK.DGN

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11/03/2003
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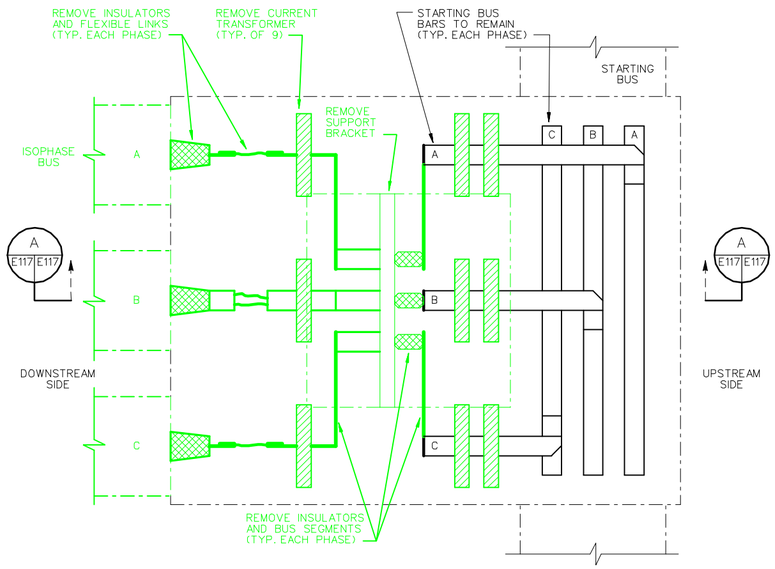
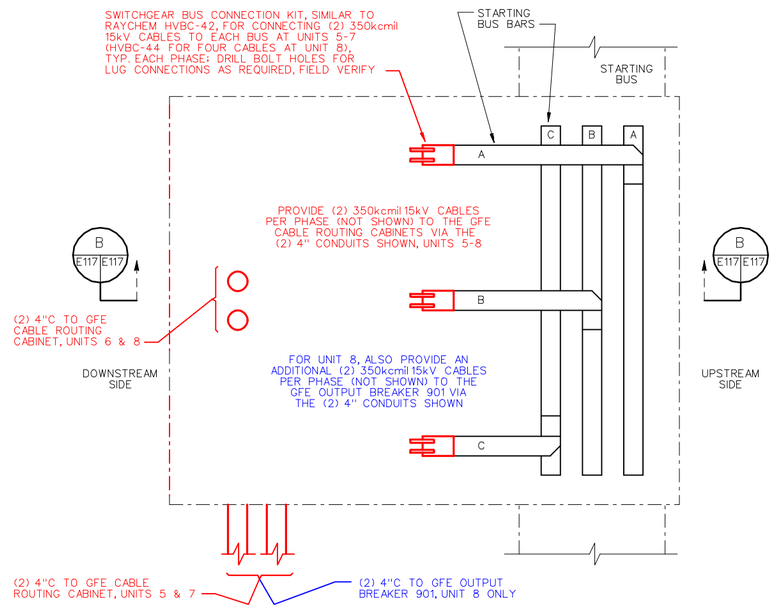


PARTIAL PLAN, INTERIOR VIEW
REMOVAL (TYP. UNITS 5-8)

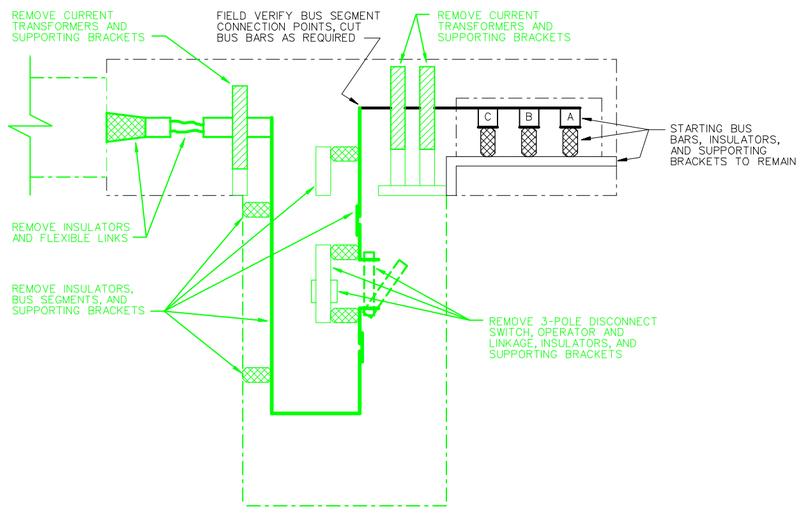
SCALE: 1" = 1'-0"

REMOVE CONTROL WIRING (NOT SHOWN) FROM CT's AND FROM DISCONNECT SWITCH OPERATOR



PARTIAL PLAN, INTERIOR VIEW
MODIFICATIONS (TYP. UNITS 5-8)

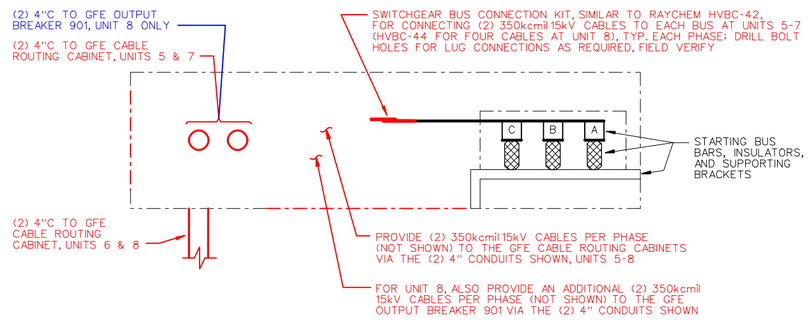
SCALE: 1" = 1'-0"



SECTION A

SCALE: 1" = 1'-0"

REMOVE CONTROL WIRING (NOT SHOWN) FROM CT's AND FROM DISCONNECT SWITCH OPERATOR



SECTION B

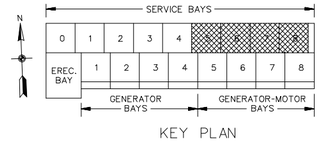
SCALE: 1" = 1'-0"

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. GREEN INDICATES REMOVAL OR AS NOTED. EQUIPMENT ENCLOSURE OUTLINES ARE SHOWN IN LIGHT WEIGHT DASHED LINES FOR CLARITY. SEE REFERENCE DRAWINGS R-66, R-67, R-70, R-76, AND R-80.
2. FIELD VERIFY ALL LAYOUTS, CONNECTIONS, AND REQUIREMENTS PRIOR TO STARTING THIS WORK. BRING DISCREPANCIES TO THE ATTENTION OF THE COR AND MAKE ADJUSTMENTS TO THE WORK ACCORDINGLY.

COMPANION DRAWINGS:

E-116 UNITS 5-8 TRAYS & TRANS./CONN. COMPARTMENT DETAILS



KEY PLAN

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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PORTLAND DISTRICT
PORTLAND, OREGON

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
TRANSITION/CONNECTION
COMPARTMENT INTERIOR DETAILS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-117

SCALE: SHEET 129

101RRP_E117_COMP_INTERIOR.DGN
101RRP_TBLK.DGN

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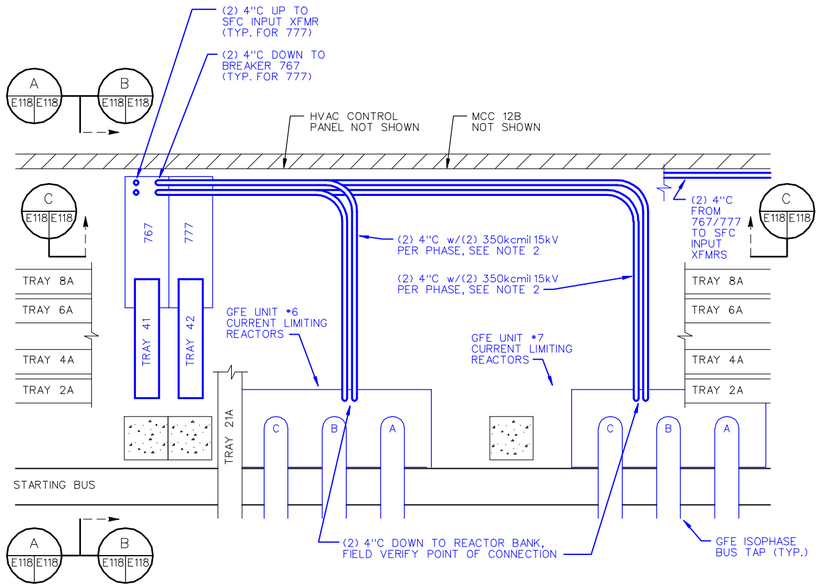
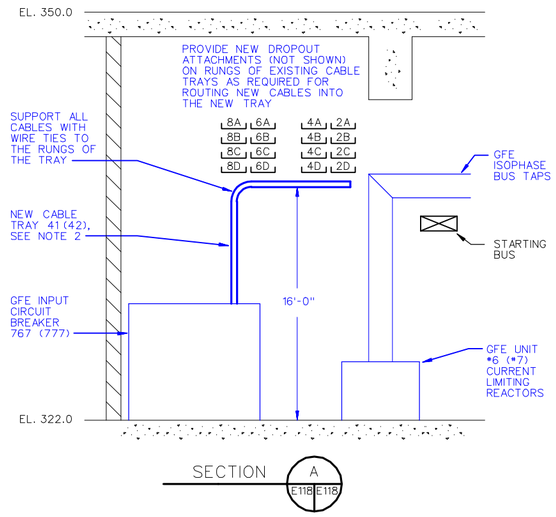
11/03/2003
k6enxndt



PARTIAL PLAN
INPUT CIRCUIT BREAKER 767/777
CONDUITS AND CABLE TRAYS

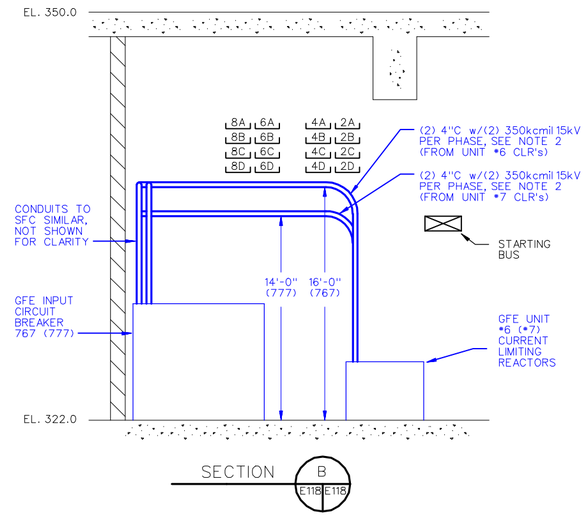
SCALE: 1/4"= 1'-0"
12" 0 5'



INPUT CIRCUIT BREAKER 767 CABLE TRAY (777 SIMILAR)

SCALE: 1/4"= 1'-0"
12" 0 5'

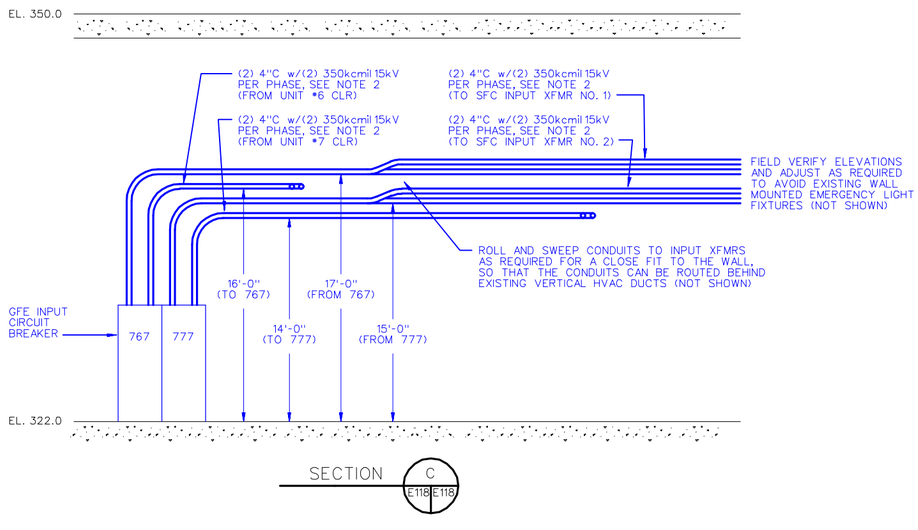
STRUCTURAL COLUMN AND TRAYS 21A/B NOT SHOWN FOR CLARITY
NEW CONDUITS NOT SHOWN FOR CLARITY



INPUT CIRCUIT BREAKER 767 CONDUITS (777 SIMILAR)

SCALE: 1/4"= 1'-0"
12" 0 5'

STRUCTURAL COLUMN AND TRAYS 21A/B NOT SHOWN FOR CLARITY
NEW CABLE TRAYS AND GFE ISOPHASE BUS NOT SHOWN FOR CLARITY
NEW CONDUITS TO SFC INPUT TRANSFORMERS NOT SHOWN FOR CLARITY



INPUT CIRCUIT BREAKER 767 & 777 CONDUITS

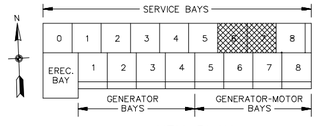
SCALE: 1/4"= 1'-0"
12" 0 5'

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. GFE BREAKERS, REACTORS, AND ISOPHASE BUS ARE SHOWN IN LIGHT WEIGHT RED OR BLUE LINES FOR CLARITY.
2. PROVIDE BRACKETS AND STRUTS AS REQUIRED (NOT SHOWN) TO SUPPORT CONDUITS AND CABLE TRAY FROM POWERHOUSE CEILING.
3. THE LAYOUTS AND CONFIGURATIONS SHOWN FOR INPUT BREAKERS 767 & 777 AND THE CURRENT LIMITING REACTORS FOR UNITS #6 & #8 ARE PRELIMINARY AND WILL BE SUPERCEDED BY MANUFACTURER'S SHOP DRAWINGS WHEN AVAILABLE. COORDINATE AND ADJUST THE CONFIGURATIONS SHOWN FOR THE CONDUITS AND CABLE TRAYS ACCORDINGLY.

COMPANION DRAWINGS:

E-107 EL. 322.0 UNITS 5-8 REVISED CONFIGURATION
E-119 STATIC FREQUENCY CONTROLLER CONDUIT & CABLE TRAY DETAILS
E-120 OUTPUT CIRCUIT BREAKER CONDUIT & CABLE TRAY DETAILS



KEY PLAN

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, SHOP DRAWINGS WILL BE FURNISHED WHEN AVAILABLE, CONDUIT LAYOUT SHOWN IS TENTATIVE

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

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PORTLAND, OREGON

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SAVANNAH, GEORGIA

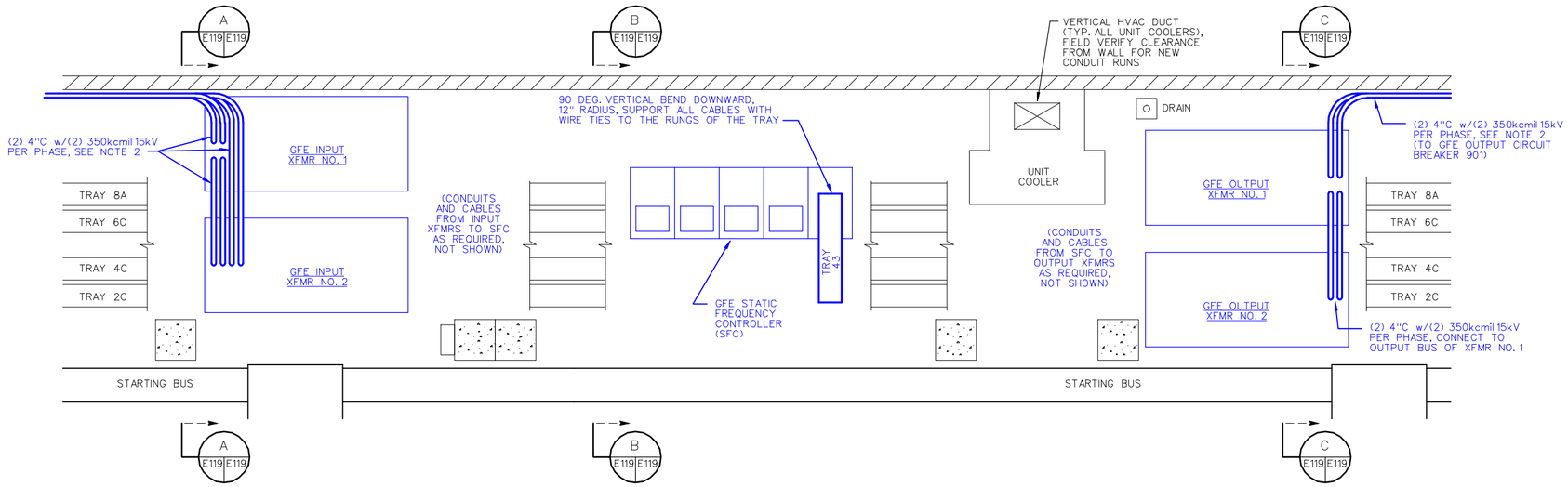
RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
INPUT CIRCUIT BREAKER
CONDUIT & CABLE TRAY DETAILS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-118

SCALE: SHEET 130

101RRP_E118_INPUTBKRTRAYS.DGN
101RRP_TBLK.DGN

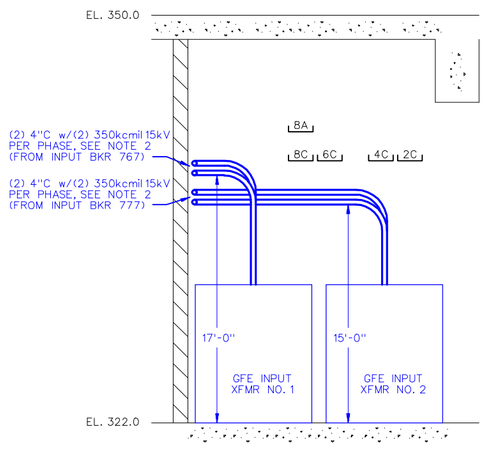
I:\ebs_dgn\RBR0107\03B11W\Contract Drawings\101rrp_e118_inputbkrtrays.dgn
11/03/2003
k6enxndt



PARTIAL PLAN
SFC AND INPUT/OUTPUT XFMRS
CONDUITS AND CABLE TRAYS

SCALE: 1/4"= 1'-0"
12"0 5'

SEE NOTE 3

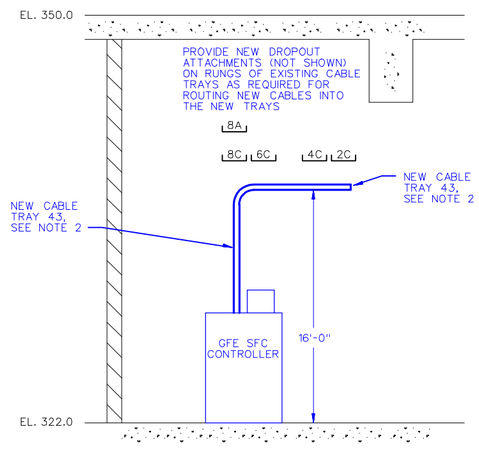


SECTION A
E119 E119

INPUT XFMR CONDUITS

SCALE: 1/4"= 1'-0"
12"0 5'

STRUCTURAL COLUMN, START BUS, TRAYS 23A/B NOT SHOWN FOR CLARITY
SEE NOTE 3

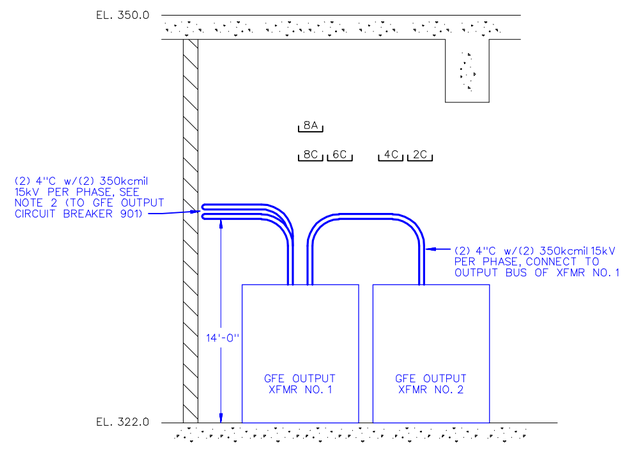


SECTION B
E119 E119

SFC CONTROLLER CABLE TRAYS

SCALE: 1/4"= 1'-0"
12"0 5'

STRUCTURAL COLUMN, START BUS, TRAY 24 NOT SHOWN FOR CLARITY
SEE NOTE 3



SECTION C
E119 E119

OUTPUT XFMR CONDUITS

SCALE: 1/4"= 1'-0"
12"0 5'

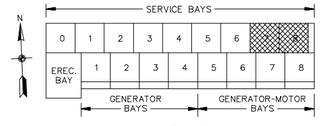
STRUCTURAL COLUMN, START BUS
NOT SHOWN FOR CLARITY
SEE NOTE 3

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. OTHER GFE EQUIPMENT IS SHOWN IN LIGHT WEIGHT RED OR BLUE LINES FOR CLARITY.
2. PROVIDE BRACKETS AND STRUTS AS REQUIRED (NOT SHOWN) TO SUPPORT CONDUITS AND CABLE TRAY FROM POWERHOUSE CEILING.
3. THE LAYOUTS AND CONFIGURATIONS SHOWN FOR THE STATIC FREQUENCY CONTROLLER AND INPUT/OUTPUT TRANSFORMERS ARE PRELIMINARY AND WILL BE SUPERCEDED BY MANUFACTURER'S SHOP DRAWINGS WHEN AVAILABLE. COORDINATE AND ADJUST THE CONFIGURATIONS SHOWN FOR NEW CONDUITS AND CABLE TRAYS ACCORDINGLY.

COMPANION DRAWINGS:

E-107 EL. 322.0 UNITS 5-8 REVISED CONFIGURATION
E-118 INPUT CIRCUIT BREAKER CONDUIT & CABLE TRAY DETAILS
E-120 OUTPUT CIRCUIT BREAKER CONDUIT & CABLE TRAY DETAILS



KEY PLAN

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, SHOP DRAWINGS WILL BE FURNISHED WHEN AVAILABLE, CONDUIT LAYOUT SHOWN IS TENTATIVE

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

101RRP_E119_SFCTRAYS.DGN
101RRP_TBLK.DGN

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
STATIC FREQUENCY CONTROLLER
CONDUIT & CABLE TRAY DETAILS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-119

SCALE: SHEET 131

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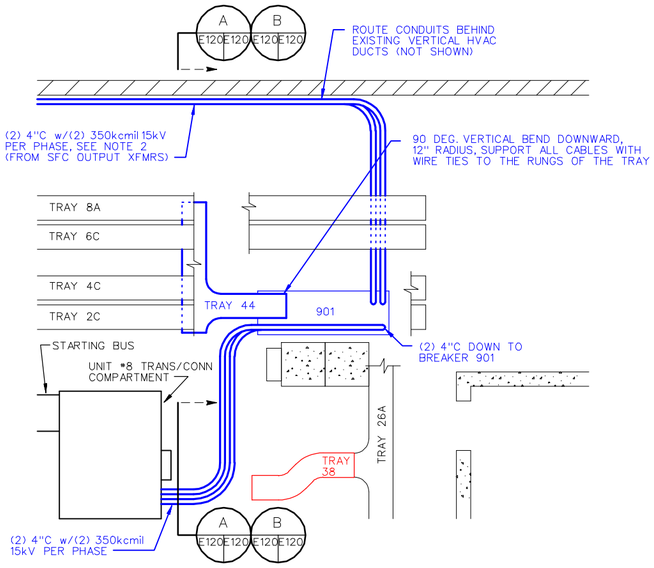
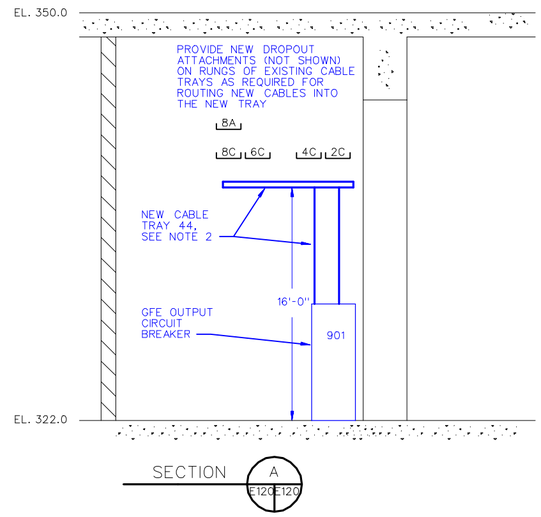
11/03/2003
k6enxndt



PARTIAL PLAN
OUTPUT CIRCUIT BREAKER 901
CONDUITS AND CABLE TRAYS

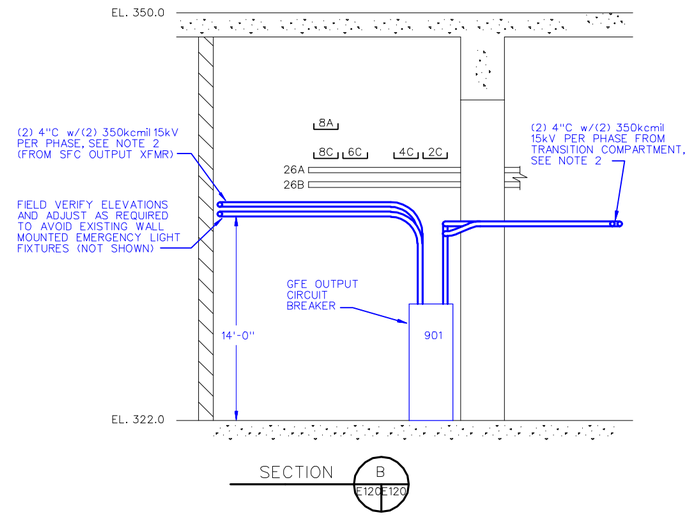
SCALE: 1/4"= 1'-0"
12" 0 5'



OUTPUT CIRCUIT BREAKER 901 CABLE TRAY

SCALE: 1/4"= 1'-0"
12" 0 5'

TRAYS 26A/B NOT SHOWN FOR CLARITY
NEW CONDUITS NOT SHOWN FOR CLARITY



OUTPUT CIRCUIT BREAKER 901 CONDUITS

SCALE: 1/4"= 1'-0"
12" 0 5'

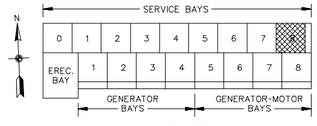
NEW CABLE TRAY 44 NOT SHOWN FOR CLARITY

NOTES:

1. EQUIPMENT IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. GFE BREAKERS ARE SHOWN IN LIGHT WEIGHT RED OR BLUE LINES FOR CLARITY.
2. PROVIDE BRACKETS AND STRUTS AS REQUIRED (NOT SHOWN) TO SUPPORT CONDUITS AND CABLE TRAY FROM POWERHOUSE CEILING.
3. THE LAYOUT AND CONFIGURATION SHOWN FOR OUTPUT BREAKER 901 ARE PRELIMINARY AND WILL BE SUPERCEDED BY MANUFACTURER'S SHOP DRAWINGS WHEN AVAILABLE. COORDINATE AND ADJUST THE CONFIGURATIONS SHOWN FOR THE NEW CONDUITS AND CABLE TRAYS ACCORDINGLY.

COMPANION DRAWINGS:

E-107 EL. 322.0 UNITS 5-8 REVISED CONFIGURATION
E-118 INPUT CIRCUIT BREAKER CONDUIT & CABLE TRAY DETAILS
E-119 STATIC FREQUENCY CONTROLLER CONDUIT & CABLE TRAY DETAILS



KEY PLAN

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, SHOP DRAWINGS WILL BE FURNISHED WHEN AVAILABLE, CONDUIT LAYOUT SHOWN IS TENTATIVE

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
OUTPUT CIRCUIT BREAKER
CONDUIT & CABLE TRAY DETAILS
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-120

SCALE: SHEET 132

101RRP_E120_OUTPUTBKRTRAYS.DGN
101RRP_TBLK.DGN

I:\ebs_dgn\RBR0107\03B11W\Contract Drawings\101rrp_e120_outputbkrtrays.dgn
11/03/2003
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CABLE OPENING (CHASE) IN FLOOR, DOWN TO CABLE TRAYS IN SPREAD ROOM (TYP. MAIN AND AUX. BOARDS)

1AUXR	2AUXR	3AUXR	4AUXR	5AUXR	6AUXR	7AUXR	8AUXR	9AUXR	10AUXR	11AUXR	12AUXR	13AUXR	14AUXR	15AUXR	16AUXR
					B150 ✳✳	E8 ✳		B43 B48 B50 B55 B29 B34 B36 B41	B2 B8 B14 B21 B13 B20				2G79 3G79 7G82 8G82 5G82 6G82		
1AUXF	2AUXF	3AUXF	4AUXF	5AUXF	6AUXF	7AUXF	8AUXF	9AUXF	10AUXF	11AUXF	12AUXF	13AUXF	14AUXF	15AUXF	16AUXF
						1G2 ✳ 1G3 1G10 ✳ 1G30 ✳	2G3 2G78	1G61 2G61 3G61 4G61	3G3 3G78	4G3	5G3 5G59 5G81	6G3 6G59 6G81	5G61 6G61 7G61 8G61	7G3 7G59 7G81	8G3 8G59 8G81

AUXILIARY CONTROL SWITCHBOARD PLAN

NO SCALE

FIELD VERIFY PANELS IN THE SCADA (SUPERVISORY) BOARD IN WHICH THE CABLES TERMINATE

V86
V87

1V6 ✳
1V7 ✳
1V8 ✳
1V9 ✳
1V10 ✳
1V11 ✳
1V22 ✳
1V24 ✳
1V25 ✳

5V32
6V32

7V32
8V32

SCADA BOARD PLAN

NO SCALE

1R	2R	3R	4R	5R	6R	7R	8R	9R	10R	11R	12R	13R	14R	15R	16R
						1G9 1G24 ✳ 1G27 ✳ 1G29 ✳ 1G33 ✳ 1G34 ✳ 1G37 ✳ 1G39 ✳ 1G47 ✳ 1G51 ✳	2G9		3G9	4G9	5G9 5G79 5G73	6G9 6G79 6G73		7G9 7G79 7G73	8G9 8G79 8G73
1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
						1G6 1G7 1G8 1G13 ✳ 1G28 ✳ 1G31 ✳ 1G32 ✳ 1G36 ✳ A1 ✳ A2 ✳ A5 ✳ A6 ✳	2G6 2G7 2G8 2G74 2G82		3G6 3G7 3G8 3G74 3G76	4G6 4G7 4G8	5G6 5G7 5G8 5G78 5G80 5G74	6G6 6G7 6G8 6G78 6G80 6G74		7G6 7G7 7G8 7G78 7G80 7G74	8G6 8G7 8G8 8G78 8G80 8G74 A116

MAIN CONTROL SWITCHBOARD PLAN

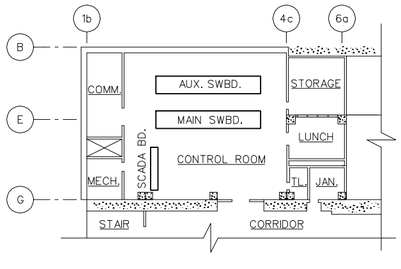
NO SCALE

NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. SEE REFERENCE DRAWINGS R-81 AND R-88.

COMPANION DRAWINGS:

E-124 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 2
E-129 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 1



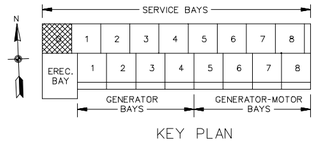
PARTIAL PLAN, EL. 332.5

NO SCALE

☐ SYMBOL SIGNIFIES REMOVAL OF THE INDICATED CABLE(S) FROM THE PANELS SHOWN, IN CHASE(S) DOWN TO CABLE TRAYS IN THE SPREAD ROOM, EL. 322.0, SEE PLATE E-124 (SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION)

✳ SYMBOL SIGNIFIES PARTIAL REMOVAL OF CABLES REQUIRED TO ACCOMMODATE THE TRAY 11A/B RELOCATION, IN ADDITION TO THOSE CABLES BEING REMOVED DUE TO CIRCUIT BREAKER REPLACEMENT (SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION)

✳✳ CABLE B150 IS ALSO BEING REMOVED DUE TO TRAY 11A/B RELOCATION, BUT WILL BE REMOVED IN ITS ENTIRETY



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
REMOVAL SHEET 1 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-123

SCALE: NO SCALE SHEET 135

101RRP_E123_CABLERT_REM1.DGN
101RRP_TBLK.DGN

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11/03/2003
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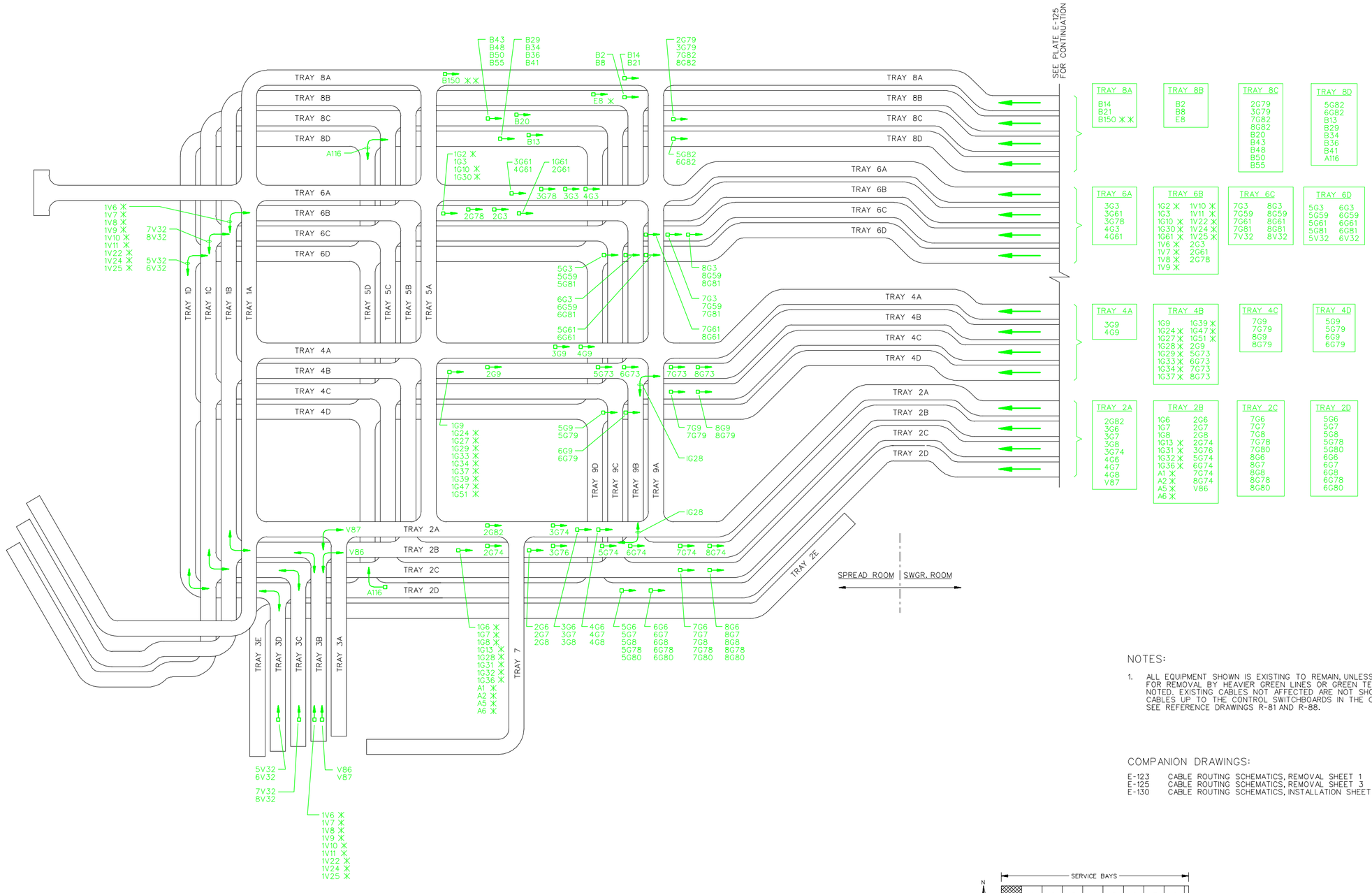
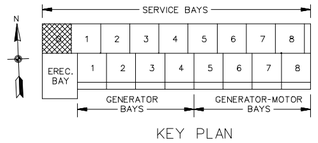


NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN. REMOVE CABLES UP TO THE CONTROL SWITCHBOARDS IN THE CONTROL ROOM. SEE REFERENCE DRAWINGS R-81 AND R-88.

COMPANION DRAWINGS:

E-123 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 1
E-125 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 3
E-130 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 2



KEY PLAN

✕ SYMBOL SIGNIFIES PARTIAL REMOVAL OF CABLES REQUIRED TO ACCOMMODATE THE TRAY 11A/B RELOCATION, IN ADDITION TO THOSE CABLES BEING REMOVED DUE TO CIRCUIT BREAKER REPLACEMENT (SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION)

✕✕ CABLE B150 IS ALSO BEING REMOVED DUE TO TRAY 11A/B RELOCATION, BUT WILL BE REMOVED IN ITS ENTIRETY

DIRECTION OF CABLE(S) RUN IN THE TRAY

CABLE(S) GOING UP IN CHASE(S) TO BOARDS IN CONTROL ROOM, EL. 332.5, SEE PLATE E-123 (RELATIVE LOCATIONS SHOWN ARE APPROXIMATE, FIELD VERIFY)

SYMBOL SIGNIFIES REMOVAL OF THE INDICATED CABLE(S), SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
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PORTLAND, OREGON

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
REMOVAL SHEET 2 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-124

SCALE: NO SCALE SHEET 136

101RRP_E124_CABLERT_REM2.DGN
101RRP_TBLK.DGN

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11/03/2003
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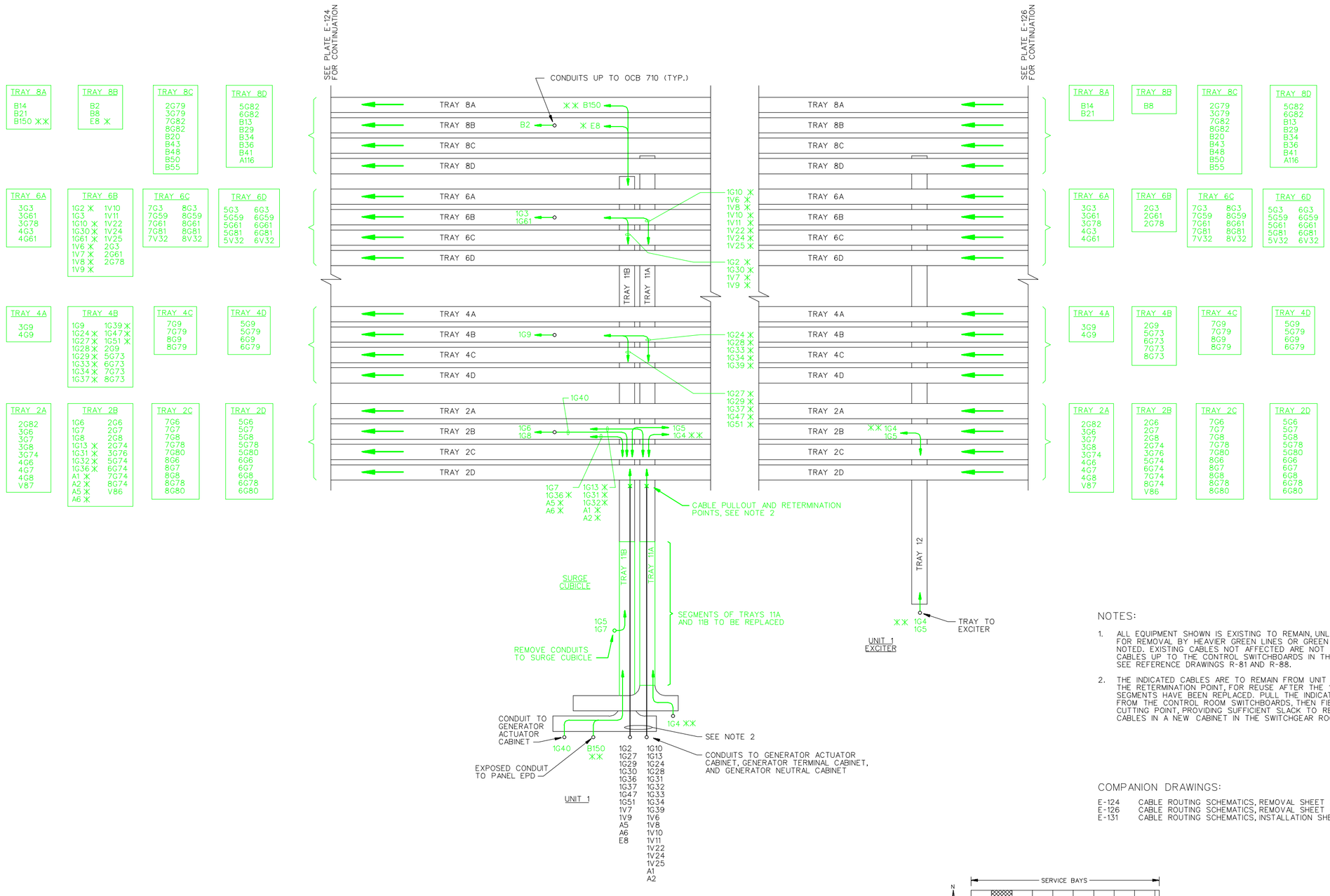


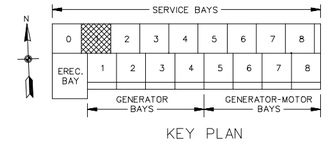
NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN. REMOVE CABLES UP TO THE CONTROL SWITCHBOARDS IN THE CONTROL ROOM. SEE REFERENCE DRAWINGS R-81 AND R-88.

2. THE INDICATED CABLES ARE TO REMAIN FROM UNIT 1 AS SHOWN, UP TO THE RETERMINATION POINT, FOR REUSE AFTER THE 11A AND 11B TRAY SEGMENTS HAVE BEEN REPLACED. PULL THE INDICATED CABLES OUT FROM THE CONTROL ROOM SWITCHBOARDS, THEN FIELD VERIFY A CABLE CUTTING POINT, PROVIDING SUFFICIENT SLACK TO RETERMINATE THE CABLES IN A NEW CABINET IN THE SWITCHGEAR ROOM.

COMPANION DRAWINGS:

E-124 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 2
E-126 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 4
E-131 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 3



KEY PLAN

✕ SYMBOL SIGNIFIES PARTIAL REMOVAL OF CABLES REQUIRED TO ACCOMMODATE THE TRAY 11A/B RELOCATION, IN ADDITION TO THOSE CABLES BEING REMOVED DUE TO CIRCUIT BREAKER REPLACEMENT (SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION)

✕✕ CABLES B150 AND 1G4 ARE ALSO BEING REMOVED DUE TO TRAY 11A/B RELOCATION, BUT WILL BE REMOVED IN THEIR ENTIRETY

DIRECTION OF CABLE(S) RUN IN THE TRAY

CABLE(S) GOING UP OR DOWN, IN CONDUIT(S) OR IN TRAY AS INDICATED

SYMBOL SIGNIFIES REMOVAL OF THE INDICATED CABLE(S), SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
REMOVAL SHEET 3 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-125

SCALE: NO SCALE SHEET 137

101RRP_E125_CABLERT_REM3.DGN
101RRP_TBLK.DGN

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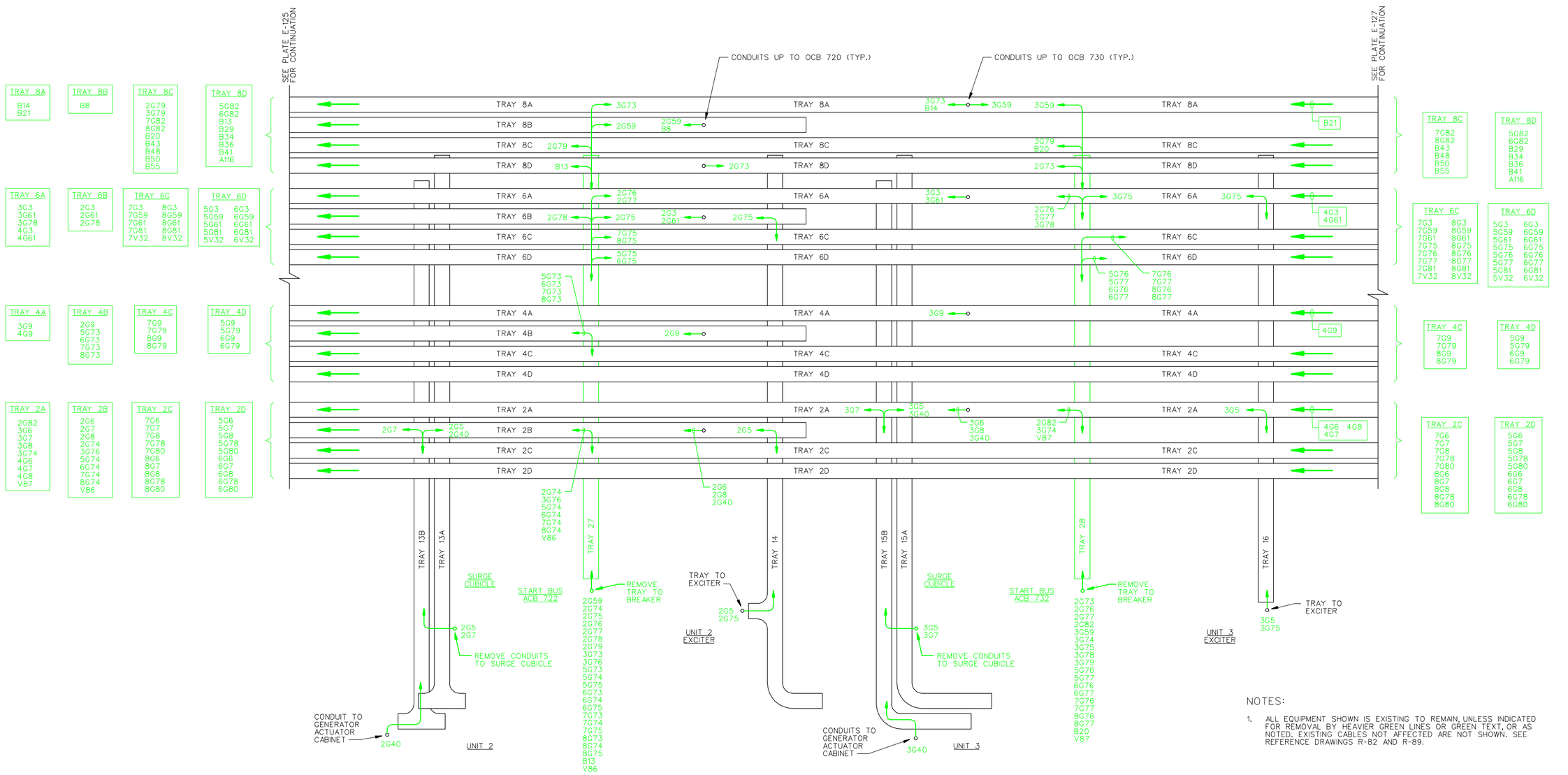
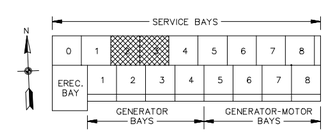


NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN. SEE REFERENCE DRAWINGS R-82 AND R-89.

COMPANION DRAWINGS:

E-125 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 3
E-127 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 5
E-132 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 4



KEY PLAN

DIRECTION OF CABLE(S) RUN IN THE TRAY

CABLE(S) GOING UP OR DOWN, IN CONDUIT(S) OR IN TRAY AS INDICATED

SYMBOL SIGNIFIES REMOVAL OF THE INDICATED CABLE(S), SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
REMOVAL SHEET 4 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-126

SCALE: NO SCALE SHEET 138

101RRP_E126_CABLERT_REM4.DGN
101RRP_TBLK.DGN

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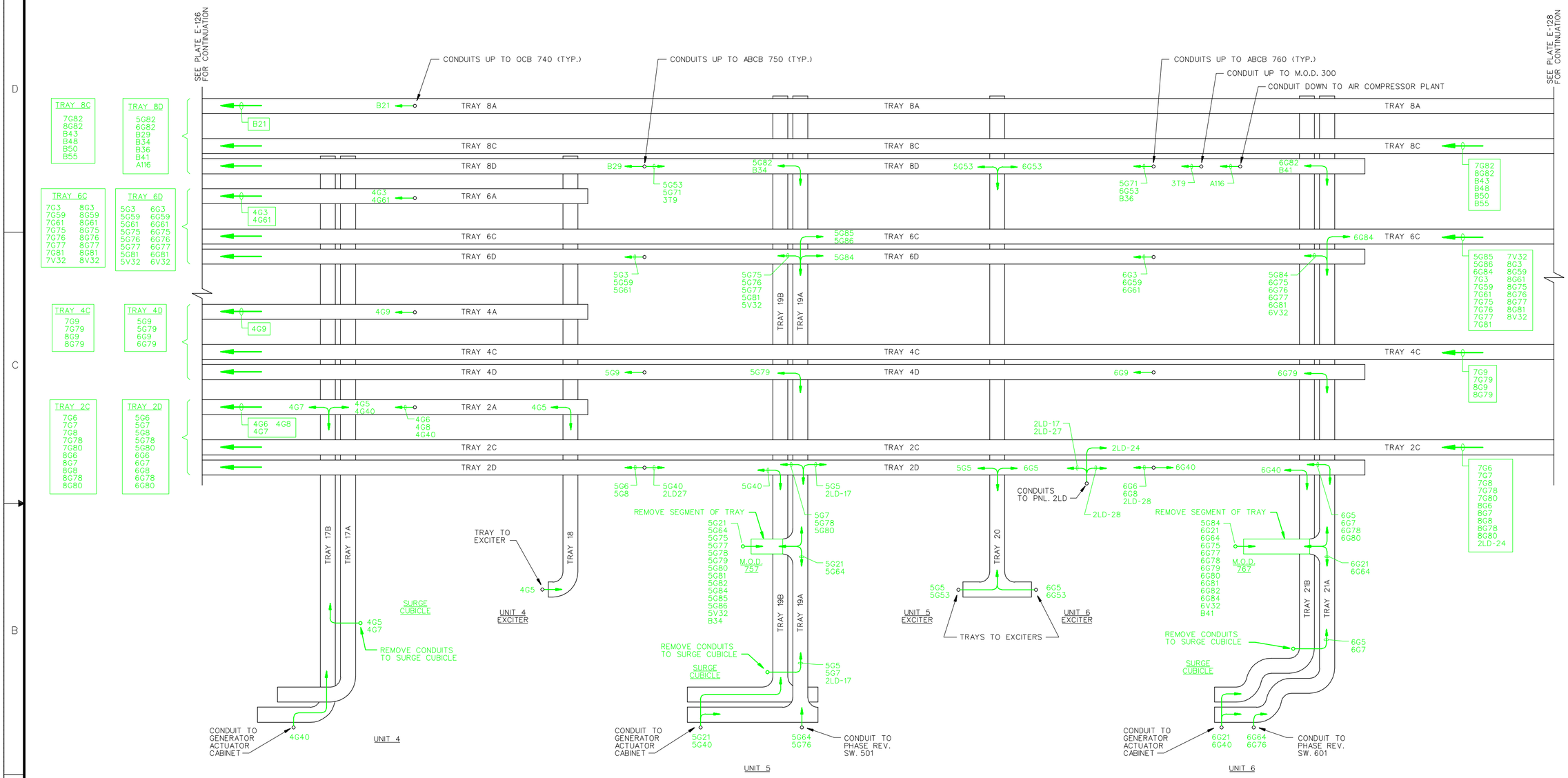
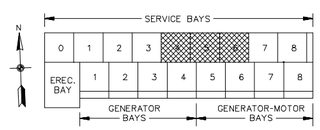


NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN. SEE REFERENCE DRAWINGS R-83 AND R-90.

COMPANION DRAWINGS:

E-126 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 4
E-128 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 6
E-133 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 5



KEY PLAN

DIRECTION OF CABLE(S) RUN IN THE TRAY

CABLE(S) GOING UP OR DOWN, IN CONDUIT(S) OR IN TRAY AS INDICATED

SYMBOL SIGNIFIES REMOVAL OF THE INDICATED CABLE(S), SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
REMOVAL SHEET 5 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-127

SCALE: NO SCALE SHEET 139

101RRP_E127_CABLERT_REM5.DGN
101RRP_TBLK.DGN

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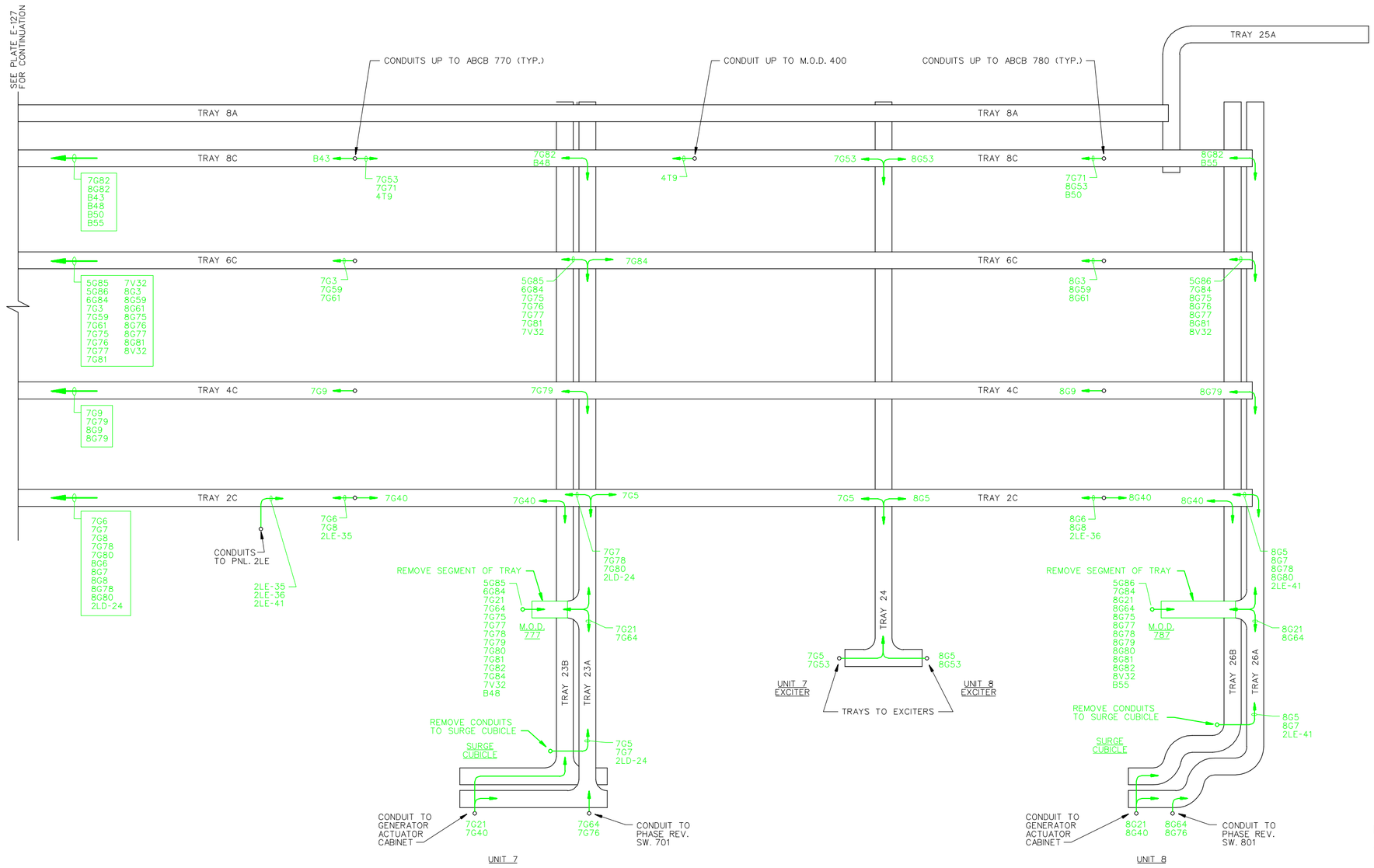
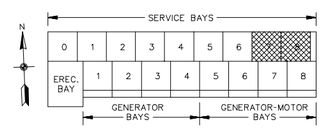


NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED FOR REMOVAL BY HEAVIER GREEN LINES OR GREEN TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN SEE REFERENCE DRAWING R-91.

COMPANION DRAWINGS:

E-127 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 5
E-134 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 6



KEY PLAN

DIRECTION OF CABLE(S) RUN IN THE TRAY

CABLE(S) GOING UP OR DOWN, IN CONDUIT(S) OR IN TRAY AS INDICATED

SYMBOL SIGNIFIES REMOVAL OF THE INDICATED CABLE(S), SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
REMOVAL SHEET 6 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-128

SCALE: NO SCALE SHEET 140

101RRP_E128_CABLERT_REM6.DGN
101RRP_TBLK.DGN

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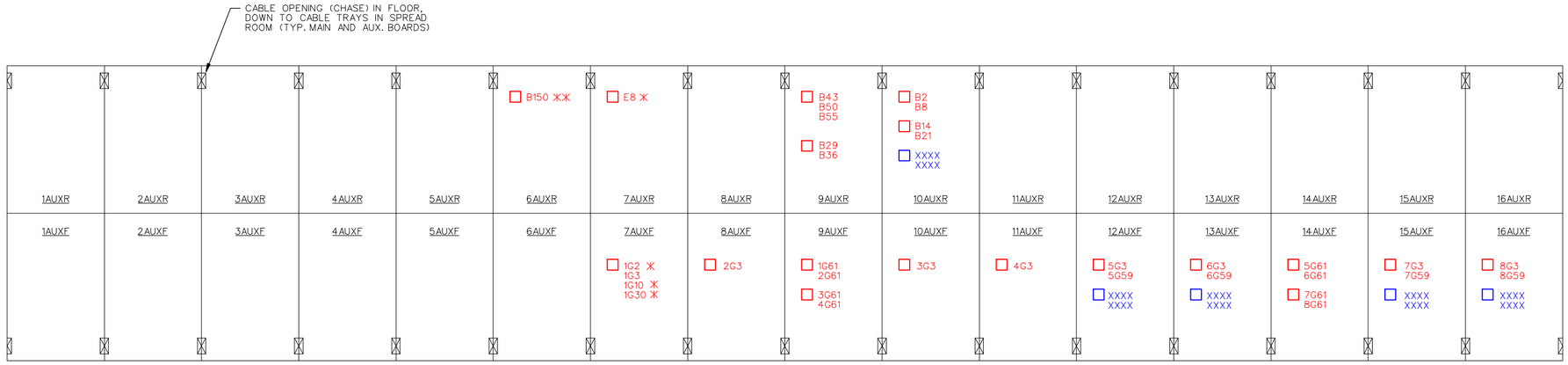
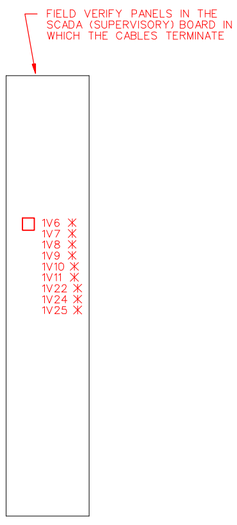


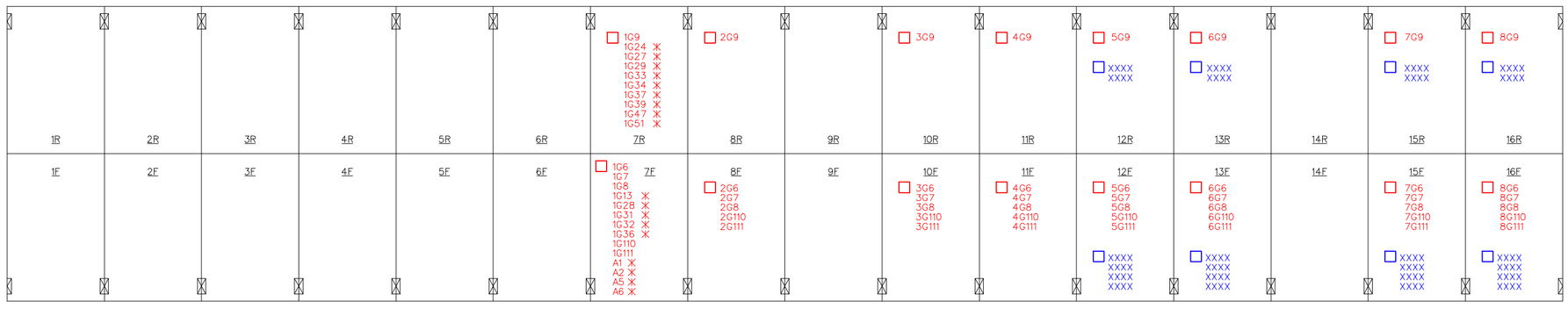
AUXILIARY CONTROL SWITCHBOARD PLAN

NO SCALE



SCADA BOARD PLAN

NO SCALE



MAIN CONTROL SWITCHBOARD PLAN

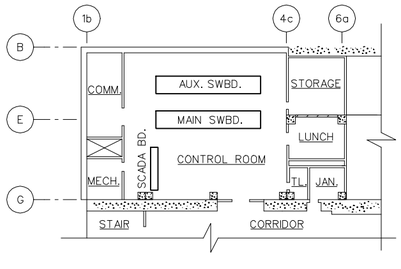
NO SCALE

NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN.

COMPANION DRAWINGS:

E-123 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 1
E-130 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 2



PARTIAL PLAN, EL. 332.5

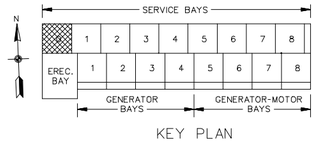
NO SCALE

☐ SYMBOL SIGNIFIES INSTALLATION OF THE INDICATED CABLE(S) FROM THE PANELS SHOWN, IN CHASE(S) DOWN TO CABLE TRAYS IN THE SPREAD ROOM, EL. 322.0, SEE PLATE E-130 (SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION)

✳ SYMBOL SIGNIFIES INSTALLATION OF NEW CABLE SEGMENTS TO ACCOMMODATE THE TRAY 11A/B RELOCATION, IN ADDITION TO THOSE CABLES BEING REMOVED DUE TO CIRCUIT BREAKER REPLACEMENT (SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION)

✳✳ CABLE B150 IS ALSO BEING REPLACED DUE TO TRAY 11A/B RELOCATION, BUT WILL BE INSTALLED IN ITS ENTIRETY

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FURNISHED LATER



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

REVISIONS

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
INSTALLATION SHEET 1 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-129

SCALE: NO SCALE SHEET 141

101RRP_E129_CABLERT_INS1.DGN
101RRP_TBLK.DGN

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11/03/2003
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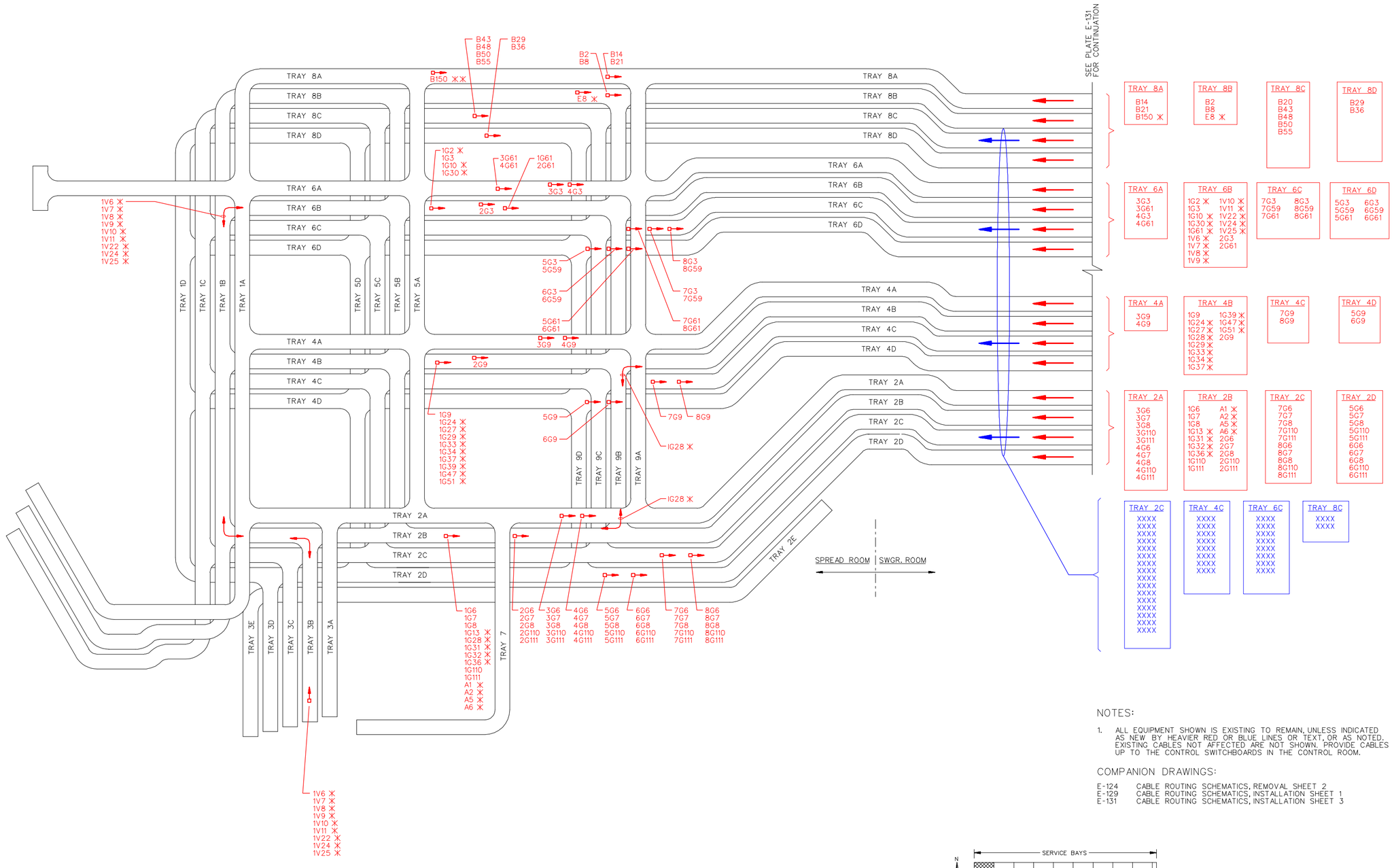
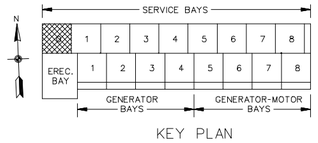


NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN. PROVIDE CABLES UP TO THE CONTROL SWITCHBOARDS IN THE CONTROL ROOM.

COMPANION DRAWINGS:

E-124 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 2
E-129 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 1
E-131 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 3



KEY PLAN

✳ SYMBOL SIGNIFIES INSTALLATION OF NEW CABLE SEGMENTS TO ACCOMMODATE THE TRAY 11A/B RELOCATION, IN ADDITION TO THOSE CABLES BEING REMOVED DUE TO CIRCUIT BREAKER REPLACEMENT (SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION)

✳✳ CABLE B150 IS ALSO BEING REPLACED DUE TO TRAY 11A/B RELOCATION, BUT WILL BE INSTALLED IN ITS ENTIRETY

DIRECTION OF CABLE(S) RUN IN THE TRAY

CABLE(S) GOING UP IN CHASE(S) TO BOARDS IN CONTROL ROOM, EL. 332.5, SEE PLATE E-129 (RELATIVE LOCATIONS SHOWN ARE APPROXIMATE, FIELD VERIFY)

SYMBOL SIGNIFIES INSTALLATION OF THE INDICATED CABLE(S), SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FURNISHED LATER

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
INSTALLATION SHEET 2 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-130

SCALE: NO SCALE SHEET 142

101RRP_E130_CABLERT_INS2.DGN
101RRP_TBLK.DGN

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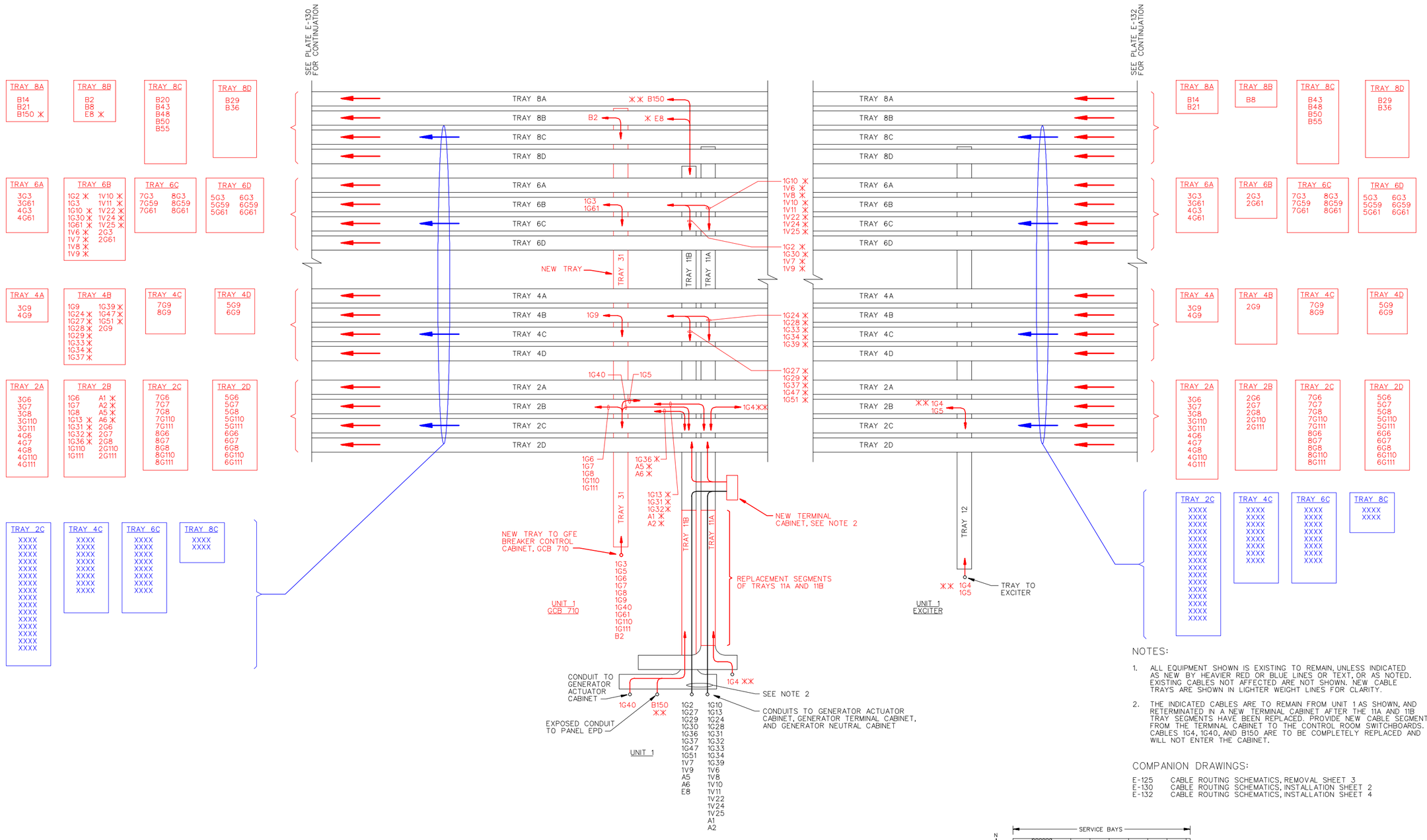


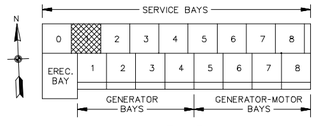
NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN. NEW CABLE TRAYS ARE SHOWN IN LIGHTER WEIGHT LINES FOR CLARITY.

2. THE INDICATED CABLES ARE TO REMAIN FROM UNIT 1 AS SHOWN, AND RETERMINATED IN A NEW TERMINAL CABINET AFTER THE 11A AND 11B TRAY SEGMENTS HAVE BEEN REPLACED. PROVIDE NEW CABLE SEGMENTS FROM THE TERMINAL CABINET TO THE CONTROL ROOM SWITCHBOARDS. CABLES 1G4, 1G40, AND B150 ARE TO BE COMPLETELY REPLACED AND WILL NOT ENTER THE CABINET.

COMPANION DRAWINGS:

E-125 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 3
E-130 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 2
E-132 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 4



KEY PLAN

✱ SYMBOL SIGNIFIES INSTALLATION OF NEW CABLE SEGMENTS TO ACCOMMODATE THE TRAY 11A/B RELOCATION, IN ADDITION TO THOSE CABLES BEING REMOVED DUE TO CIRCUIT BREAKER REPLACEMENT (SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION)

✱✱ CABLES B150 AND 1G4 ARE ALSO BEING REPLACED DUE TO TRAY 11A/B RELOCATION, BUT WILL BE INSTALLED IN THEIR ENTIRETY

DIRECTION OF CABLE(S) RUN IN THE TRAY

CABLE(S) GOING UP OR DOWN, IN CONDUIT(S) OR IN TRAY AS INDICATED

SYMBOL SIGNIFIES INSTALLATION OF THE INDICATED CABLE(S), SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FURNISHED LATER

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
INSTALLATION SHEET 3 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-131

SCALE: NO SCALE SHEET 14.3

101RRP_E131_CABLERT_INS3.DGN
101RRP_TBLK.DGN

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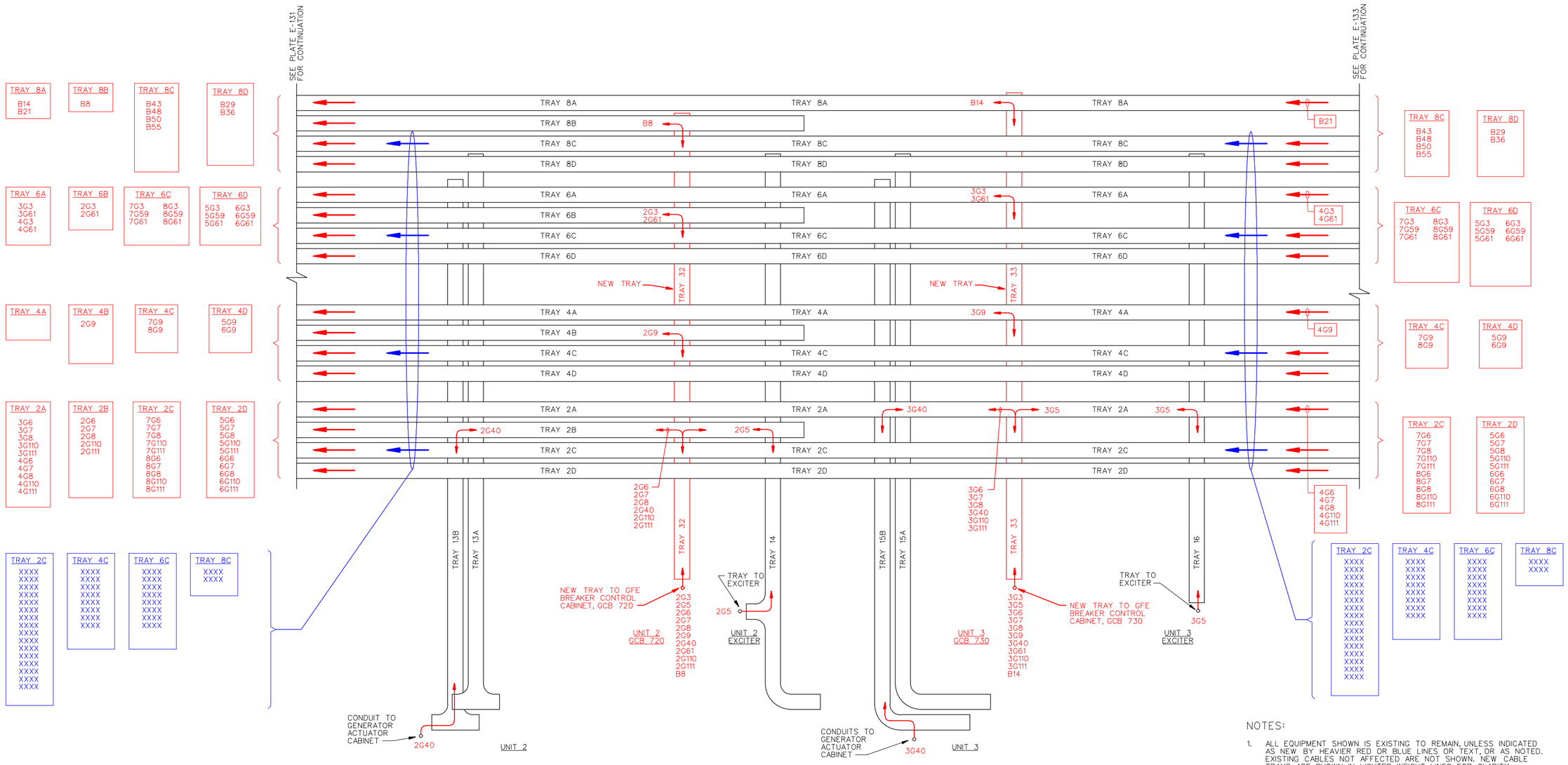
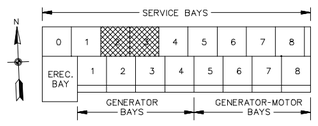


NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN. NEW CABLE TRAYS ARE SHOWN IN LIGHTER WEIGHT LINES FOR CLARITY.

COMPANION DRAWINGS:

E-126 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 4
E-131 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 3
E-133 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 5



KEY PLAN

DIRECTION OF CABLE(S) RUN IN THE TRAY

CABLE(S) GOING UP OR DOWN, IN CONDUIT(S) OR IN TRAY AS INDICATED

SYMBOL SIGNIFIES INSTALLATION OF THE INDICATED CABLE(S), SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FURNISHED LATER

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
INSTALLATION SHEET 4 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-132

SCALE: NO SCALE SHEET 14.4

101RRP_E132_CABLERT_INS4.DGN
101RRP_TBLK.DGN

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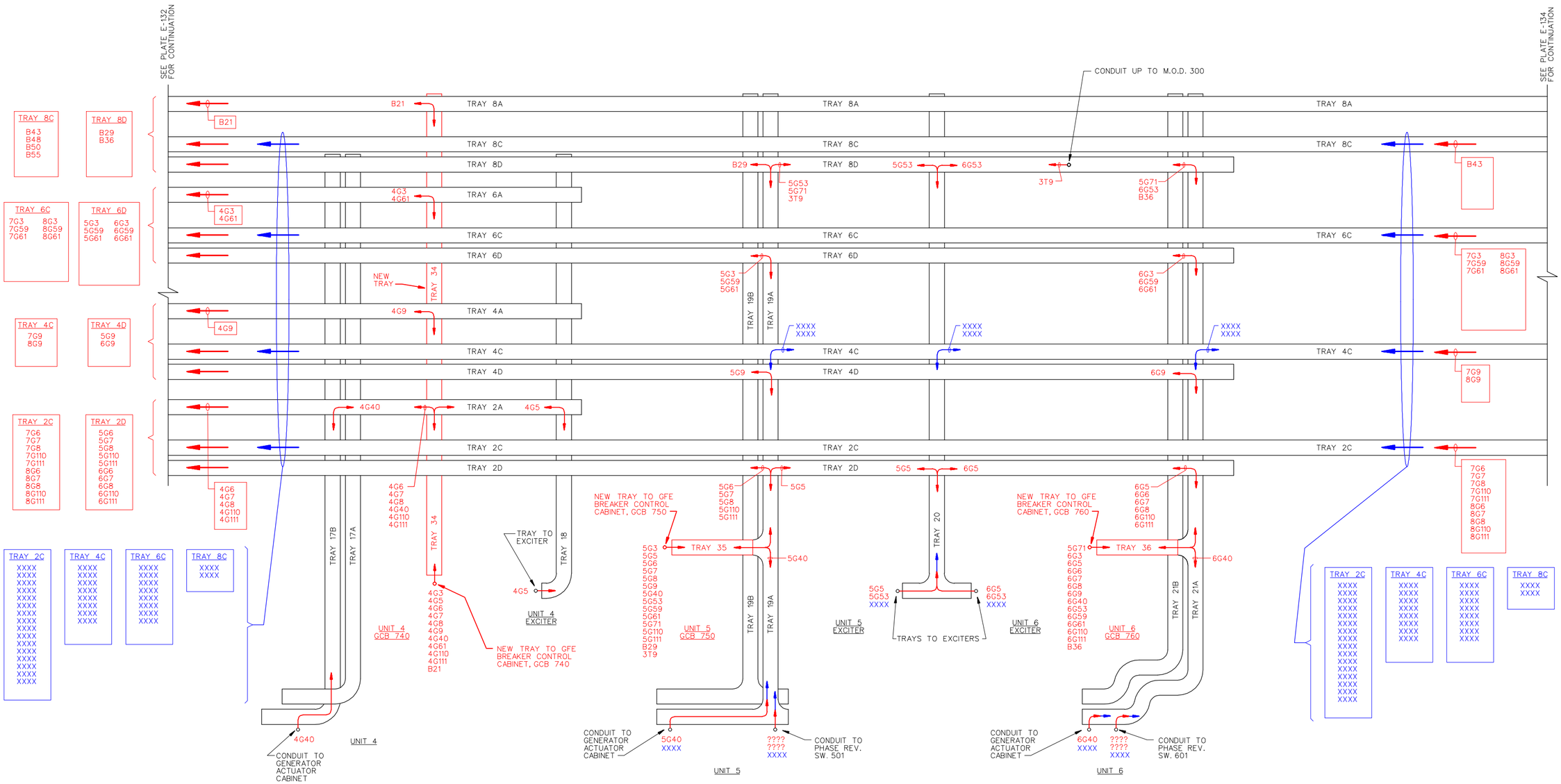


NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN. NEW CABLE TRAYS ARE SHOWN IN LIGHTER WEIGHT LINES FOR CLARITY.

COMPANION DRAWINGS:

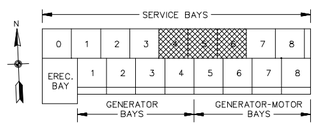
E-127 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 5
E-132 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 4
E-134 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 6

DIRECTION OF CABLE(S) RUN IN THE TRAY

CABLE(S) GOING UP OR DOWN, IN CONDUIT(S) OR IN TRAY AS INDICATED

SYMBOL SIGNIFIES INSTALLATION OF THE INDICATED CABLE(S), SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FURNISHED LATER



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
INSTALLATION SHEET 5 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-133

SCALE: NO SCALE SHEET 145

101RRP_E133_CABLERT_INS5.DGN
101RRP_TBLK.DGN

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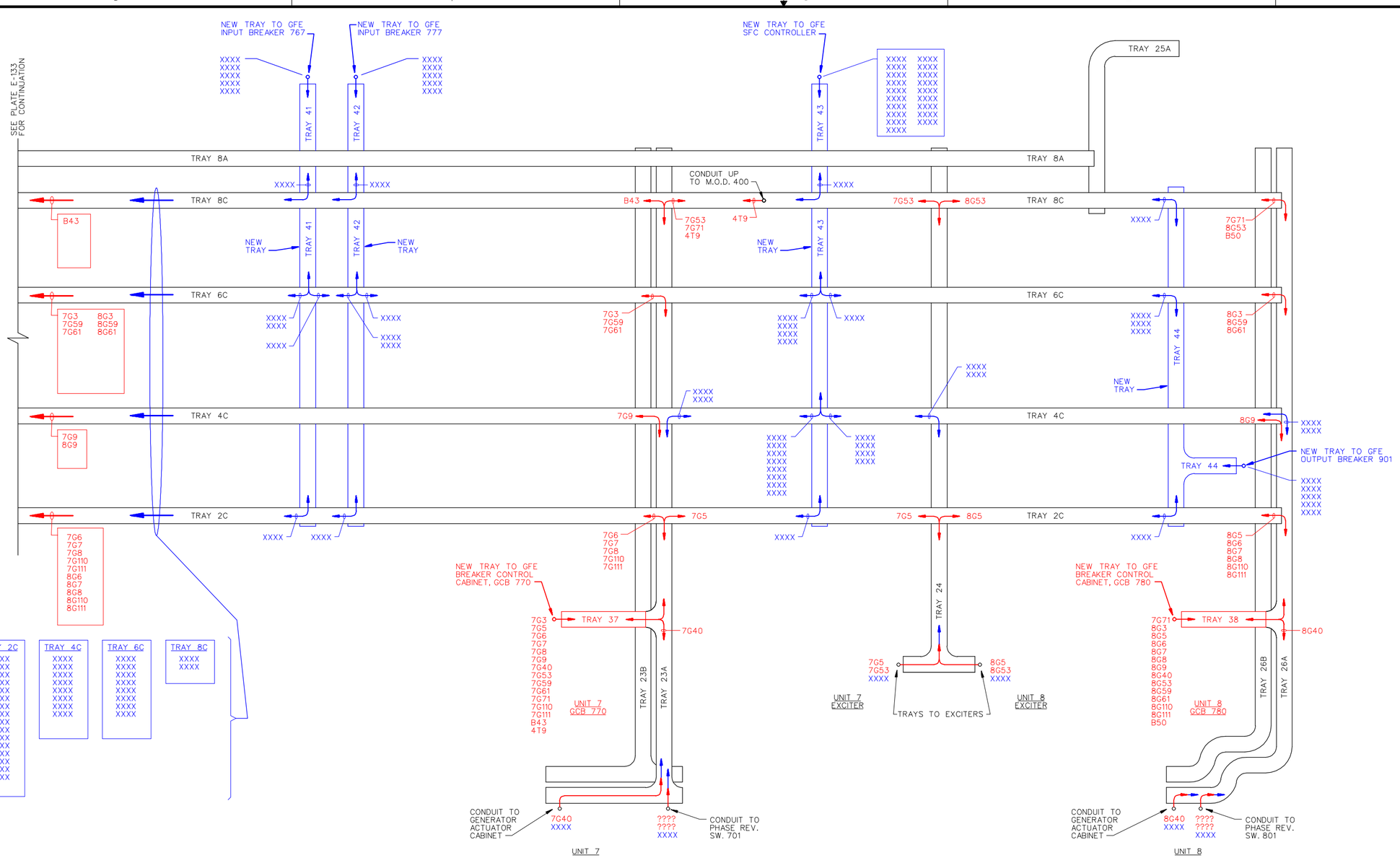


NOTES:

1. ALL EQUIPMENT SHOWN IS EXISTING TO REMAIN, UNLESS INDICATED AS NEW BY HEAVIER RED OR BLUE LINES OR TEXT, OR AS NOTED. EXISTING CABLES NOT AFFECTED ARE NOT SHOWN. NEW CABLE TRAYS ARE SHOWN IN LIGHTER WEIGHT LINES FOR CLARITY.

COMPANION DRAWINGS:

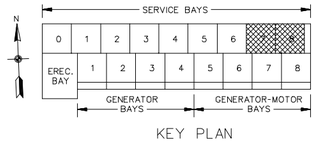
E-128 CABLE ROUTING SCHEMATICS, REMOVAL SHEET 6
E-133 CABLE ROUTING SCHEMATICS, INSTALLATION SHEET 5

DIRECTION OF CABLE(S) RUN IN THE TRAY

CABLE(S) GOING UP OR DOWN, IN CONDUIT(S) OR IN TRAY AS INDICATED

SYMBOL SIGNIFIES INSTALLATION OF THE INDICATED CABLE(S), SEE CABLE AND CONDUIT SCHEDULES FOR MORE COMPLETE INFORMATION

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FURNISHED LATER



KEY PLAN

SYMBOL	ZONE	DESCRIPTION	DATE	BY

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE ROUTING SCHEMATIC
INSTALLATION SHEET 6 OF 6
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-134

SCALE: NO SCALE SHEET 146

101RRP_E134_CABLERT_INS6.DGN
101RRP_TBLK.DGN

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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
* 1G2	4/c	#10	205'				GEN. 1 DIFF. RELAYS	GEN. 1 TERM. CAB. - CT (3)	AUX. SWBD. PNL. 7AUXF	1G2 - TRAYS 11B, 6B
				1G2	1 1/4"	38'		GEN. 1 TERM. CAB.	TRAY 11B	
1G3	4/c	#10	145'				GEN. 1 DIFF. RELAYS	GEN. 1 OCB 710 - CT (3)	AUX. SWBD. PNL. 7AUXF	1G3 - TRAY 6B
				1G3	1 1/4"	28'		GEN. 1 OCB 710	TRAY 6B	
1G4	2/c	#10	140'				GEN. 1 VOLTAGE REGULATOR	GEN. 1 TERM. CAB. - CT (3)	GEN. 1 EXCITATION SWGR.	1G4 - TRAYS 11A, 2B, 12 **
				1G4	1"	38'		GEN. 1 TERM. CAB.	TRAY 11A	
1G5	3/c	#12	105'				GEN. 1 VOLTAGE REGULATOR PT's	GEN. 1 SURGE CUBICLE - PT(3)	GEN. 1 EXCITATION SWGR.	1G5 - TRAYS 11B, 2B, 12
				1G5	1 1/4"	15'		GEN. 1 SURGE CUBICLE	TRAY 11B	
1G6	4/c	#10	140'				GEN. 1 METERS AND RELAYS	GEN. 1 OCB 710 - CT (3)	MAIN CNTL. SWBD. PNL. 7F	1G6 - TRAY 2B
				1G6	1 1/4"	22'		GEN. 1 OCB 710	TRAY 2B	
1G7	3/c	#12	170'				GEN. 1 METERS AND RELAYS	GEN. 1 SURGE CUBICLE - PT(3)	MAIN CNTL. SWBD. PNL. 7F	1G7 - TRAYS 11B, 2B
				1G7	1 1/4"	15'		GEN. 1 SURGE CUBICLE	TRAY 11B	
1G8	12/c	#12	140'				GEN. 1 OCB 710 CONTROL	GEN. 1 OCB 710	MAIN CNTL. SWBD. PNL. 7F	1G8 - TRAY 2B
				1G8	2"	22'		GEN. 1 OCB 710	TRAY 2B	
1G9	9/c	#12	140'				GEN. 1 OCB 710 INTERLOCK	GEN. 1 OCB 710	MAIN CNTL. SWBD. PNL. 7R	1G9 - TRAY 4B
				1G9	2"	22'		GEN. 1 OCB 710	TRAY 4B	
* 1G10	2/c	#12	210'				GEN. 1 NEUTRAL GROUND RELAY	GEN. 1 NEUTRAL CUBICLE	AUX. SWBD. PNL. 7AUXF	1G10 - TRAYS 11A, 6B
				1G10	1"	42'		GEN. 1 NEUTRAL CUBICLE	TRAY 11A	
* 1G13	2/c SHD	#18	210'				GEN. 1 WATTS TO GOV. ELECT.	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7F	1G13 - TRAYS 11A, 2B
				1G13	3/4"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	ALSO HAS 1G9, FIELD VERIFY
* 1G24	7/c	#12	235'				STARTING INTERLOCK	TURBINE 1 TERMINAL CAB.	MAIN CTRL. SWBD. PNL. 7R	1G24 - TRAYS 11A, 4B
				1G24	1 1/2"	58'		TURBINE 1 TERMINAL CAB.	TRAY 11A	
* 1G27	5/c	#12	215'				UNIT AUXILIARIES	GEN. 1 TERMINAL CAB.	MAIN CTRL. SWBD. PNL. 7R	1G27 - TRAYS 11B, 4B
				1G27	1 1/4"	38'		GEN. 1 TERMINAL CAB.	TRAY 11B	
* 1G28	12/c	#12	220'				TWD INDICATOR LTS. & INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CTRL. SWBD. PNL. 7F	1G28-TRAYS 11A, 4B, 9B, 2B
				1G28	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	
* 1G29	5/c	#12	215'				DOME LT. & GEN. HTR. INTERLOCK	GEN. 1 TERMINAL CAB.	MAIN CTRL. SWBD. PNL. 7R	1G29 - TRAYS 11B, 4B
				1G29	1 1/4"	38'		GEN. 1 TERMINAL CAB.	TRAY 11B	
* 1G30	5/c	#12	220'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	AUX. SWBD. PNL. 7AUXF	1G30 - TRAYS 11B, 6B
				1G30	1 1/4"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11B	
* 1G31	12/c	#12	220'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7F	1G31 - TRAYS 11A, 2B
				1G31	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	
* 1G32	12/c	#12	220'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7F	1G32 - TRAYS 11A, 2B
				1G32	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	
* 1G33	12/c	#12	220'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7R	1G33 - TRAYS 11A, 4B
				1G33	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
* 1G34	12/c	#12	220'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7R	1G34 - TRAYS 11A, 4B
				1G34	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	
* 1G36	12/c	#12	220'				GOVERNOR SELSYNS	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7F	1G36 - TRAYS 11B, 2B
				1G36	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11B	
* 1G37	12/c	#12	220'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7R	1G37 - TRAYS 11B, 4B
				1G37	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11B	
* 1G39	7/c	#12	220'				OIL PUMP, HTR. & COOLER CTRL.	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7R	1G39 - TRAYS 11A, 4B
				1G39	1 1/2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	
1G40	5/c	#12	130'				UNIT 1 OCB 710 INTERLOCK	UNIT 1 ACTUATOR	GEN. 1 OCB 710	1G40- TRAYS 11B,2B- 1G40A
				1G40	1 1/4"	45'		UNIT 1 ACTUATOR	TRAY 11B	
				1G40A	1 1/4"	22'		TRAY 2B	GEN. 1 OCB 710	
* 1G47	5/c	#12	220'				UNIT 1 TAILWATER DEPRESS. SYS.	TAILWATER DEPR. ELECTRODES	RELAY CAB. (MB 7R, VERIFY)	1G47-TRAYS 11B, 4B- 1G47-1
				1G47	1 1/4"	80'		TAILWATER DEPR. ELECTRODES	TRAY 11B	
				1G47-1	1 1/4"	17'		RELAY CAB. (MB 7R, VERIFY)	TRAY 4B	
* 1G51	3/c	#12	250'				TURBINE & GEN. BELL CTRL.	GEN. BELL JUNCTION BOX	MAIN CTRL. SWBD. PNL. 7R	1G51-TRAYS 11B, 4B
				1G51	1 1/4"	47'		GEN. BELL JUNCTION BOX	TRAY 11B	
1G58	9/c	#12	20'	1G58	1 1/2"	13'	DISC. SW. 713 INTERLOCK	GEN. 1 OCB 710	DISC. SW. 713	
1G61	4/c	#10	145'				TRANSF. NO. 1 DIFF. RELAYING	GEN. 1 OCB 710	AUX. SWBD. PNL. 9AUXF	1G61 - TRAY 6B
				1G61	1 1/4"	28'		GEN. 1 OCB 710	TRAY 6B	

NOTES:

1. HEAVIER GREEN TEXT INDICATES REMOVAL OF EXISTING CABLES AND EXPOSED CONDUIT. BLACK INDICATES EXISTING CONDUIT TO BE REUSED, ABANDONED, OR CUT OFF AS SHOWN ON THE PLANS. HEAVIER RED OR BLUE TEXT INDICATES NEW CABLES AND EXPOSED CONDUIT.
2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

* SYMBOL SIGNIFIES PARTIAL REMOVAL OF CABLES REQUIRED TO ACCOMMODATE THE TRAY 11A/B RELOCATION, IN ADDITION TO THOSE CABLES BEING REMOVED DUE TO CIRCUIT BREAKER REPLACEMENT; REMOVE CABLES FROM THE CONTROL ROOM SWITCHBOARDS TO A CUT POINT NEAR THE SPREAD ROOM. FIELD VERIFY LOCATION TO PROVIDE SUFFICIENT SLACK FOR RETERMINATION; TOTAL CABLE LENGTH IS SHOWN, FIELD VERIFY LENGTH OF CABLE TO BE REMOVED

** CABLE 1G4 IS ALSO BEING REMOVED DUE TO TRAY 11A/B RELOCATION, BUT WILL BE REMOVED IN ITS ENTIRETY

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

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PORTLAND, OREGON

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CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 1G, SHEET 1 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-137

SCALE: NONE SHEET 149

101RRP_E137_CC_1G1.DGN
101RRP_TBLK.DGN

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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
✳ 1G2	4/c	#10	225'				GEN. 1 DIFF. RELAYS	GEN. 1 TERM. CAB. - CT (3)	AUX. SWBD. PNL. 7AUXF	1G2 - TRAYS 11B, 6B
				1G2	1 1/4"	38'		GEN. 1 TERM. CAB.	TRAY 11B	
1G3	4/c	#10	145'				GEN. 1 DIFF. RELAYS	GEN. 1 GCB 710 - CT (3)	AUX. SWBD. PNL. 7AUXF	TRAYS 31, 6B
1G4	2/c	#10	140'				GEN. 1 VOLTAGE REGULATOR	GEN. 1 TERM. CAB. - CT (3)	GEN. 1 EXCITATION SWGR.	1G4 - TRAYS 11A, 2B, 12 ✳✳
				1G4	1"	38'		GEN. 1 TERM. CAB.	TRAY 11A	
1G5	3/c	#12	105'				GEN. 1 VOLTAGE REGULATOR PT's	GEN. 1 GCB 710 - PT(3)	GEN. 1 EXCITATION SWGR.	TRAYS 31, 2B, 12
1G6	4/c	#10	140'				GEN. 1 METERS AND RELAYS	GEN. 1 GCB 710 - CT (3)	MAIN CNTL. SWBD. PNL. 7F	TRAYS 31, 2B
1G7	3/c	#12	170'				GEN. 1 METERS AND RELAYS	GEN. 1 GCB 710 - PT(3)	MAIN CNTL. SWBD. PNL. 7F	TRAYS 31, 2B
1G8	12/c	#12	140'				GEN. 1 GCB 710 CONTROL	GEN. 1 GCB 710	MAIN CNTL. SWBD. PNL. 7F	TRAYS 31, 2B
1G9	9/c	#12	140'				GEN. 1 GCB 710 INTERLOCK	GEN. 1 GCB 710	MAIN CNTL. SWBD. PNL. 7R	TRAYS 31, 4B
✳ 1G10	2/c	#12	230'				GEN. 1 NEUTRAL GROUND RELAY	GEN. 1 NEUTRAL CUBICLE	AUX. SWBD. PNL. 7AUXF	1G10 - TRAYS 11A, 6B
				1G10	1"	42'		GEN. 1 NEUTRAL CUBICLE	TRAY 11A	
✳ 1G13	2/c SHD	#18	230'				GEN. 1 WATTS TO GOV. ELECT.	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7F	1G13 - TRAYS 11A, 2B
				1G13	3/4"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	ALSO HAS 1G9, FIELD VERIFY
✳ 1G24	7/c	#12	255'				STARTING INTERLOCK	TURBINE 1 TERMINAL CAB.	MAIN CTRL. SWBD. PNL. 7R	1G24 - TRAYS 11A, 4B
				1G24	1 1/2"	58'		TURBINE 1 TERMINAL CAB.	TRAY 11A	
✳ 1G27	5/c	#12	235'				UNIT AUXILIARIES	GEN. 1 TERMINAL CAB.	MAIN CTRL. SWBD. PNL. 7R	1G27 - TRAYS 11B, 4B
				1G27	1 1/4"	38'		GEN. 1 TERMINAL CAB.	TRAY 11B	
✳ 1G28	12/c	#12	240'				TWD INDICATOR LTS. & INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CTRL. SWBD. PNL. 7F	1G28-TRAYS 11A, 4B, 9B, 2B
				1G28	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	
✳ 1G29	5/c	#12	235'				DOME LT. & GEN. HTR. INTERLOCK	GEN. 1 TERMINAL CAB.	MAIN CTRL. SWBD. PNL. 7R	1G29 - TRAYS 11B, 4B
				1G29	1 1/4"	38'		GEN. 1 TERMINAL CAB.	TRAY 11B	
✳ 1G30	5/c	#12	240'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	AUX. SWBD. PNL. 7AUXF	1G30 - TRAYS 11B, 6B
				1G30	1 1/4"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11B	
✳ 1G31	12/c	#12	240'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7F	1G31 - TRAYS 11A, 2B
				1G31	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	
✳ 1G32	12/c	#12	240'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7F	1G32 - TRAYS 11A, 2B
				1G32	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	
✳ 1G33	12/c	#12	240'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7R	1G33 - TRAYS 11A, 4B
				1G33	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
✳ 1G34	12/c	#12	240'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7R	1G34 - TRAYS 11A, 4B
				1G34	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	
✳ 1G36	12/c	#12	240'				GOVERNOR SELSYNS	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7F	1G36 - TRAYS 11B, 2B
				1G36	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11B	
✳ 1G37	12/c	#12	240'				STARTING INTERLOCK	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7R	1G37 - TRAYS 11B, 4B
				1G37	2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11B	
✳ 1G39	7/c	#12	240'				OIL PUMP, HTR. & COOLER CTRL.	GEN. 1 ACTUATOR CAB.	MAIN CNTL. SWBD. PNL. 7R	1G39 - TRAYS 11A, 4B
				1G39	1 1/2"	45'		GEN. 1 ACTUATOR CAB.	TRAY 11A	
1G40	5/c	#12	130'				UNIT 1 GCB 710 INTERLOCK	UNIT 1 ACTUATOR	GEN. 1 GCB 710	1G40- TRAYS 11B,2B, 31
				1G40	1 1/4"	45'		UNIT 1 ACTUATOR	TRAY 11B	
✳ 1G47	5/c	#12	240'				UNIT 1 TAILWATER DEPRESS. SYS.	TAILWATER DEPR. ELECTRODES	RELAY CAB. (MB 7R, VERIFY)	1G47-TRAYS 11B, 4B- 1G47-1
				1G47	1 1/4"	80'		TAILWATER DEPR. ELECTRODES	TRAY 11B	
				1G47-1	1 1/4"	17'		RELAY CAB. (MB 7R, VERIFY)	TRAY 4B	
✳ 1G51	3/c	#12	270'				TURBINE & GEN. BELL CTRL.	GEN. BELL JUNCTION BOX	MAIN CTRL. SWBD. PNL. 7R	1G51-TRAYS 11B, 4B
				1G51	1 1/4"	47'		GEN. BELL JUNCTION BOX	TRAY 11B	
1G61	4/c	#10	145'				TRANSF. NO. 1 DIFF. RELAYING	GEN. 1 GCB 710	AUX. SWBD. PNL. 9AUXF	TRAYS 31, 6B
1G110	15/c	#16	145'				BREAKER STATUS	GEN. 1 GCB 710	MAIN CTRL. SWBD. PNL. 7F	TRAYS 31, 2B

NOTES:

1. HEAVIER GREEN TEXT INDICATES REMOVAL OF EXISTING CABLES AND EXPOSED CONDUIT. BLACK INDICATES EXISTING CONDUIT TO BE REUSED, ABANDONED, OR CUT OFF AS SHOWN ON THE PLANS. HEAVIER RED OR BLUE TEXT INDICATES NEW CABLES AND EXPOSED CONDUIT.
2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

✳ SYMBOL SIGNIFIES REINSTALLATION OF EXISTING CABLES AND INSTALLATION OF NEW CABLE SEGMENTS REQUIRED TO ACCOMMODATE THE TRAY 11A/B RELOCATION; ROUTE EXISTING CABLES FROM THE UNIT 1 EQUIPMENT IN THE NEW TRAY 11A/B SEGMENTS AND TERMINATE ON BLOCKS IN A NEW CABINET NEAR THE SPREAD ROOM; PROVIDE NEW CABLES FROM THE CONTROL ROOM SWITCHBOARDS TO THE NEW TERMINAL CABINET; TOTAL CABLE LENGTH (NEW + EXISTING) IS SHOWN, FIELD VERIFY LENGTH OF NEW CABLE SEGMENTS

✳✳ CABLE 1G4 IS ALSO BEING REPLACED DUE TO TRAY 11A/B RELOCATION, BUT WILL BE INSTALLED IN ITS ENTIRETY

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 1G, SHEET 2 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-138

SCALE: NONE SHEET 150

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101RRP_TBLK.DGN

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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
2G3	4/c	#10	245'				GEN. 2 DIFF. RELAYS	GEN. 2 OCB 720 - CT (3)	AUX. SWBD. PNL. 8AUXF	2G3 - TRAY 6B
				2G3	1 1/4"	28'		GEN. 2 OCB 720	TRAY 6B	
2G5	3/c	#12	140'				GEN. 2 VOLTAGE REGULATOR PT's	GEN. 2 SURGE CUBICLE - PT(3)	GEN. 2 EXCITATION SWGR.	2G5 - TRAYS 13B, 2B, 14
				2G5	1 1/4"	20'		GEN. 2 SURGE CUBICLE	TRAY 13B	
2G6	4/c	#10	245'				GEN. 2 METERS AND RELAYS	GEN. 2 OCB 720 - CT (3)	MAIN CNTL. SWBD. PNL. 8F	2G6 - TRAY 2B
				2G6	1 1/4"	22'		GEN. 2 OCB 720	TRAY 2B	
2G7	3/c	#12	235'				GEN. 2 METERS AND RELAYS	GEN. 2 SURGE CUBICLE - PT(3)	MAIN CNTL. SWBD. PNL. 8F	2G7 - TRAYS 13B, 2B
				2G7	1 1/4"	20'		GEN. 2 SURGE CUBICLE	TRAY 13B	
2G8	12/c	#12	245'				GEN. 2 OCB 720 CONTROL	GEN. 2 OCB 720	MAIN CNTL. SWBD. PNL. 8F	2G8 - TRAY 2B
				2G8	2"	22'		GEN. 2 OCB 720	TRAY 2B	
2G9	9/c	#12	245'				GEN. 2 OCB 720 INTERLOCK	GEN. 2 OCB 720	MAIN CNTL. SWBD. PNL. 8R	2G9 - TRAY 4B
				2G9	2"	22'		GEN. 2 OCB 720	TRAY 4B	
2G40	5/c	#12	130'				GEN. 2 OCB 720 INTERLOCK	GEN. 2 ACTUATOR	GEN. 2 OCB 720	2G40-TRAYS 13B,2B-2G40A
				2G40	1 1/4"	30'		GEN. 2 ACTUATOR	TRAY 13B	
				2G40A	1 1/4"	22'		TRAY 2B	GEN. 2 OCB 720	
2G58	9/c	#12	20'	2G58	1 1/2"	13'	DISC. SW. 723 INTERLOCK	GEN. 2 OCB 720	DISC. SW. 723	
2G59	3/c	#12	90'				ACB 722 CONTROL (INTLK.)	ACB 722	GEN. 2 OCB 720	2G59 - TRAYS 28, 8B
				2G59	2"	28'		GEN. 2 OCB 720	TRAY 8B	
2G61	4/c	#10	245'				TRANSF. NO. 1 DIFF. RELAYING	GEN. 2 OCB 720	AUX. SWBD. PNL. 9AUXF	2G61 - TRAY 6B
				2G61	1 1/4"	28'		GEN. 2 OCB 720	TRAY 6B	
2G73	3/c	#12	140'				ACB 722 CONTROL	ACB 732	GEN. 2 OCB 720	2G59 - TRAYS 28, 8B
2G74	12/c	#12	280'				ACB 722 CONTROL	ACB 722	MAIN CNTL. SWBD. PNL. 8F	TRAYS 27, 2B
2G75	5/c	#12	100'				STARTING UNIT #2 CONTROL	ACB 722	EXCITATION CUBICLE #2	TRAYS 27, 6B, 8D
2G76	12/c	#12	140'				STARTING CONTROLS INTERLOCK	ACB 722	ACB 732	TRAYS 27, 6B, 8D
2G77	12/c	#12	140'				PUMP CONTROL	ACB 722	ACB 732	TRAYS 27, 6B, 8D
2G78	4/c	#10	280'				UNIT #2 DIFFERENTIAL	ACB 722	AUX. SWBD. PNL. 8AUXF	TRAYS 27, 6B
2G79	4/c	#10	265'				STARTING BUS DIFFERENTIAL	ACB 722	AUX. SWBD. PNL. 14AUXR	TRAYS 27, 8C
2G82	3/c	#12	350'				ACB 722 CONTROL	ACB 732	MAIN CNTL. SWBD. PNL. 8F	TRAYS 28, 2A

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
2G3	4/c	#10	245'				GEN. 2 DIFF. RELAYS	GEN. 2 GCB 720 - CT (3)	AUX. SWBD. PNL. 8AUXF	TRAYS 32, 6B
2G5	3/c	#12	140'				GEN. 2 VOLTAGE REGULATOR PT's	GEN. 2 GCB 720 - PT(3)	GEN. 2 EXCITATION SWGR.	TRAYS 32, 2B, 14
2G6	4/c	#10	245'				GEN. 2 METERS AND RELAYS	GEN. 2 GCB 720 - CT (3)	MAIN CNTL. SWBD. PNL. 8F	TRAYS 32, 2B
2G7	3/c	#12	235'				GEN. 2 METERS AND RELAYS	GEN. 2 GCB 720 - PT(3)	MAIN CNTL. SWBD. PNL. 8F	TRAYS 32, 2B
2G8	12/c	#12	245'				GEN. 2 GCB 720 CONTROL	GEN. 2 GCB 720	MAIN CNTL. SWBD. PNL. 8F	TRAYS 32, 2B
2G9	9/c	#12	245'				GEN. 2 GCB 720 INTERLOCK	GEN. 2 GCB 720	MAIN CNTL. SWBD. PNL. 8R	TRAYS 32, 4B
2G40	5/c	#12	130'				GEN. 2 GCB 720 INTERLOCK	GEN. 2 ACTUATOR	GEN. 2 GCB 720	2G40-TRAYS 13B,2B, 32
				2G40	1 1/4"	30'		GEN. 2 ACTUATOR	TRAY 13B	
2G61	4/c	#10	245'				TRANSF. NO. 1 DIFF. RELAYING	GEN. 2 GCB 720	AUX. SWBD. PNL. 9AUXF	TRAYS 32, 6B
2G110	15/c	#16	245'				BREAKER STATUS	GEN. 2 GCB 720	MAIN CNTL. SWBD. PNL. 8F	TRAYS 32, 2B

NOTES:

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2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 2G
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-139

SCALE: NONE SHEET 151

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101RRP_TBLK.DGN

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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
3G3	4/c	#10	285'				GEN. 3 DIFF. RELAYS	GEN. 3 OCB 730 - CT (3)	AUX. SWBD. PNL. 10AUXF	3G3 - TRAY 6A
				3G3	1 1/4"	28'		GEN. 3 OCB 730	TRAY 6A	
3G5	3/c	#12	140'				GEN. 3 VOLTAGE REGULATOR PT's	GEN. 3 SURGE CUBICLE - PT(3)	GEN. 3 EXCITATION SWGR.	3G5 - TRAYS 15B, 2A, 16
				3G5	1 1/4"	30'		GEN. 3 SURGE CUBICLE	TRAY 15B	
3G6	4/c	#10	280'				GEN. 3 METERS AND RELAYS	GEN. 3 OCB 730 - CT (3)	MAIN CNTL. SWBD. PNL. 10F	3G6 - TRAY 2A
				3G6	1 1/4"	22'		GEN. 3 OCB 730	TRAY 2A	
3G7	3/c	#12	300'				GEN. 3 METERS AND RELAYS	GEN. 3 SURGE CUBICLE - PT(3)	MAIN CNTL. SWBD. PNL. 10F	3G7 - TRAYS 15B, 2A
				3G7	1 1/4"	30'		GEN. 3 SURGE CUBICLE	TRAY 15B	
3G8	12/c	#12	280'				GEN. 3 OCB 730 CONTROL	GEN. 3 OCB 730	MAIN CNTL. SWBD. PNL. 10F	3G8 - TRAY 2A
				3G8	2"	22'		GEN. 3 OCB 730	TRAY 2A	
3G9	9/c	#12	280'				GEN. 3 OCB 730 INTERLOCK	GEN. 3 OCB 730	MAIN CNTL. SWBD. PNL. 10R	3G9 - TRAY 4A
				3G9	2"	22'		GEN. 3 OCB 730	TRAY 4A	
3G40	5/c	#12	150'				GEN. 3 OCB 730 INTERLOCK	GEN. 3 ACTUATOR	GEN. 3 OCB 730	3G40-TRAYS 15B,2A-3G40A
				3G40	1 1/4"	70'		GEN. 3 ACTUATOR	TRAY 15B	
				3G40A	1 1/4"	22'		TRAY 2A	GEN. 3 OCB 730	
3G58	9/c	#12	20'	3G58	1 1/2"	13'	DISC. SW. 733 INTERLOCK	OCB 730	DISC. SW. 733	
3G59	3/c	#12	85'				ACB 732 CONTROL (INTLK.)	ACB 732	GEN. 3 OCB 730	3G59 - TRAYS 28, 8A
				3G59	2"	28'		GEN. 3 OCB 730	TRAY 8B	
3G61	4/c	#10	285'				TRANSF. NO. 2 DIFF. RELAYING	GEN. 3 OCB 730	AUX. SWBD. PNL. 9AUXF	3G61 - TRAY 6A
				3G61	1 1/4"	28'		GEN. 3 OCB 730	TRAY 6A	
3G73	3/c	#12	130'				ACB 732 CONTROL	ACB 722	GEN. 3 OCB 730	3G59 - TRAYS 27, 8A
3G74	12/c	#12	345'				ACB 732 CONTROL	ACB 732	MAIN CNTL. SWBD. PNL. 10F	TRAYS 28, 2A
3G75	5/c	#12	100'				STARTING UNIT #3 CONTROL	ACB 732	EXCITATION CUBICLE #3	TRAYS 28, 6A, 16
3G76	12/c	#12	275'				ACB 732 CONTROL	ACB 722	MAIN CNTL. SWBD. PNL. 10F	TRAYS 27, 2B
3G78	4/c	#10	345'				UNIT #3 DIFFERENTIAL	ACB 732	AUX. SWBD. PNL. 10AUXF	TRAYS 28, 6A
3G79	4/c	#10	335'				STARTING BUS DIFFERENTIAL	ACB 732	AUX. SWBD. PNL. 14AUXR	TRAYS 28, 8C

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
3G3	4/c	#10	285'				GEN. 3 DIFF. RELAYS	GEN. 3 GCB 730 - CT (3)	AUX. SWBD. PNL. 10AUXF	TRAYS 33, 6A
3G5	3/c	#12	140'				GEN. 3 VOLTAGE REGULATOR PT's	GEN. 3 GCB 730 - PT(3)	GEN. 3 EXCITATION SWGR.	TRAYS 33, 2A, 16
3G6	4/c	#10	280'				GEN. 3 METERS AND RELAYS	GEN. 3 GCB 730 - CT (3)	MAIN CNTL. SWBD. PNL. 10F	TRAYS 33, 2A
3G7	3/c	#12	300'				GEN. 3 METERS AND RELAYS	GEN. 3 GCB 730 - PT(3)	MAIN CNTL. SWBD. PNL. 10F	TRAYS 33, 2A
3G8	12/c	#12	280'				GEN. 3 GCB 730 CONTROL	GEN. 3 GCB 730	MAIN CNTL. SWBD. PNL. 10F	TRAYS 33, 2A
3G9	9/c	#12	280'				GEN. 3 GCB 730 INTERLOCK	GEN. 3 GCB 730	MAIN CNTL. SWBD. PNL. 10R	TRAYS 33, 4A
3G40	5/c	#12	150'				GEN. 3 GCB 730 INTERLOCK	GEN. 3 ACTUATOR	GEN. 3 GCB 730	3G40-TRAYS 15B,2A, 33
				3G40	1 1/4"	70'		GEN. 3 ACTUATOR	TRAY 15B	
3G61	4/c	#10	285'				TRANSF. NO. 2 DIFF. RELAYING	GEN. 3 GCB 730	AUX. SWBD. PNL. 9AUXF	TRAYS 33, 6A
3G110	15/c	#16	245'				BREAKER STATUS	GEN. 3 GCB 730	MAIN CNTL. SWBD. PNL. 10F	TRAYS 33, 2A

NOTES:

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2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 3G
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-140

SCALE: NONE SHEET 152

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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
4G3	4/c	*10	385'				GEN. 4 DIFF. RELAYS	GEN. 4 OCB 740 - CT (3)	AUX. SWBD. PNL. 11AUXF	4G3 - TRAY 6A
				4G3	1 1/4"	28'		GEN. 4 OCB 740	TRAY 6A	
4G5	3/c	*12	135'				GEN. 4 VOLTAGE REGULATOR PT's	GEN. 4 SURGE CUBICLE - PT(3)	GEN. 4 EXCITATION SWGR.	4G5 - TRAYS 17B, 2A, 18
				4G5	1 1/4"	20'		GEN. 4 SURGE CUBICLE	TRAY 17B	
4G6	4/c	*10	380'				GEN. 4 METERS AND RELAYS	GEN. 4 OCB 740 - CT (3)	MAIN CNTL. SWBD. PNL. 11F	4G6 - TRAY 2A
				4G6	1 1/4"	22'		GEN. 4 OCB 740	TRAY 2A	
4G7	3/c	*12	365'				GEN. 4 METERS AND RELAYS	GEN. 4 SURGE CUBICLE - PT(3)	MAIN CNTL. SWBD. PNL. 11F	4G7 - TRAYS 17B, 2A
				4G7	1 1/4"	20'		GEN. 4 SURGE CUBICLE	TRAY 17B	
4G8	12/c	*12	380'				GEN. 4 OCB 740 CONTROL	GEN. 4 OCB 740	MAIN CNTL. SWBD. PNL. 11F	4G8 - TRAY 2A
				4G8	2"	22'		GEN. 4 OCB 740	TRAY 2A	
4G9	9/c	*12	380'				GEN. 4 OCB 740 INTERLOCK	GEN. 4 OCB 740	MAIN CNTL. SWBD. PNL. 11R	4G9 - TRAY 4A
				4G9	2"	22'		GEN. 4 OCB 740	TRAY 4A	
4G40	5/c	*12	140'				GEN. 4 OCB 740 INTERLOCK	GEN. 4 ACTUATOR	GEN. 4 OCB 740	4G40-TRAYS 17B,2A-4G40A
				4G40	1 1/4"	30'		GEN. 4 ACTUATOR	TRAY 17B	
				4G40A	1 1/4"	22'		TRAY 2A	GEN. 4 OCB 740	
4G58	9/c	*12	20'	4G58	1 1/2"	13'	DISC. SW. 743 INTERLOCK	GEN. 4 OCB 740	DISC. SW. 743	
4G61	4/c	*10	385'				TRANSF. NO. 2 DIFF. RELAYING	GEN. 4 OCB 740	AUX. SWBD. PNL. 9AUXF	4G61 - TRAY 6A
				4G61	1 1/4"	28'		GEN. 4 OCB 740	TRAY 6A	

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
4G3	4/c	*10	385'				GEN. 4 DIFF. RELAYS	GEN. 4 GCB 740 - CT (3)	AUX. SWBD. PNL. 11AUXF	TRAYS 34, 6A
4G5	3/c	*12	135'				GEN. 4 VOLTAGE REGULATOR PT's	GEN. 4 GCB 740 - PT(3)	GEN. 4 EXCITATION SWGR.	TRAYS 34, 2A, 18
4G6	4/c	*10	380'				GEN. 4 METERS AND RELAYS	GEN. 4 GCB 740 - CT (3)	MAIN CNTL. SWBD. PNL. 11F	TRAYS 34, 2A
4G7	3/c	*12	365'				GEN. 4 METERS AND RELAYS	GEN. 4 GCB 740 - PT(3)	MAIN CNTL. SWBD. PNL. 11F	TRAYS 34, 2A
4G8	12/c	*12	380'				GEN. 4 GCB 740 CONTROL	GEN. 4 GCB 740	MAIN CNTL. SWBD. PNL. 11F	TRAYS 34, 2A
4G9	9/c	*12	380'				GEN. 4 GCB 740 INTERLOCK	GEN. 4 GCB 740	MAIN CNTL. SWBD. PNL. 11R	TRAYS 34, 4A
4G40	5/c	*12	140'				GEN. 4 GCB 740 INTERLOCK	GEN. 4 ACTUATOR	GEN. 4 GCB 740	4G40-TRAYS 17B,2A, 34
				4G40	1 1/4"	30'		GEN. 4 ACTUATOR	TRAY 17B	
4G61	4/c	*10	385'				TRANSF. NO. 2 DIFF. RELAYING	GEN. 4 GCB 740	AUX. SWBD. PNL. 9AUXF	TRAYS 34, 6A
4G110	15/c	*16	245'				BREAKER STATUS	GEN. 4 GCB 740	MAIN CNTL. SWBD. PNL. 11F	TRAYS 34, 2A

NOTES:

1. HEAVIER GREEN TEXT INDICATES REMOVAL OF EXISTING CABLES AND EXPOSED CONDUIT. BLACK INDICATES EXISTING CONDUIT TO BE REUSED, ABANDONED, OR CUT OFF AS SHOWN ON THE PLANS. HEAVIER RED OR BLUE TEXT INDICATES NEW CABLES AND EXPOSED CONDUIT.
2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 4G
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-141

SCALE: NONE SHEET 153

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101RRP_TBLK.DGN

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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
5G3	4/c	#10	440'				GEN-MTR 5 DIFF. RELAYS	GEN-MTR 5 ABCB 750 - CT(3)	AUX. SWBD. PNL. 12AUXF	5G3 - TRAY 6D
				5G3	1 1/4"	25'		GEN-MTR 5 ABCB 750	TRAY 6D	
5G5	3/c	#12	110'				GEN-MTR 5 VOLTAGE REG. PT's	GEN-MTR 5 SURGE CUB.-PT(3)	GEN-MTR 5 EXCIT. SWGR.	5G5 - TRAYS 19A, 2D, 20
				5G5	1 1/4"	20'		GEN-MTR 5 SURGE CUB.	TRAY 19A	
5G6	4/c	#10	440'				GEN-MTR 5 METERS & RELAYS	GEN-MTR 5 ABCB 750 - CT(3)	MAIN CNTL. SWBD. PNL. 12F	5G6 - TRAY 2D
				5G6	1 1/4"	20'		GEN-MTR 5 ABCB 750	TRAY 2D	
5G7	3/c	#12	450'				GEN-MTR 5 METERS & RELAYS	GEN-MTR 5 SURGE CUB.-PT(3)	MAIN CNTL. SWBD. PNL. 12F	5G7 - TRAYS 19A, 2D
				5G7	1 1/4"	20'		GEN-MTR 5 SURGE CUB.	TRAY 19A	
5G8	12/c	#12	440'				GEN-MTR 5 ABCB 750 CONTROL	GEN-MTR 5 ABCB 750	MAIN CNTL. SWBD. PNL. 12F	5G8 - TRAY 2D
				5G8	2"	20'		GENMTR 5 ABCB 750	TRAY 2D	
5G9	12/c	#12	440'				GEN-MTR 5 ABCB 750 INTERLK.	GEN-MTR 5 ABCB 750	MAIN CNTL. SWBD. PNL. 12R	5G9 - TRAY 4D
				5G9	2"	20'		GEN-MTR 5 ABCB 750	TRAY 4D	
5G21	5/c	#12	95'				GEN-MTR 5 PUMP INTERLOCK	GEN-MTR 5 ACTUATOR	STARTING BUS SWITCH 757	5G21 - TRAY 19B
				5G21	1"	68'		GEN-MTR 5 ACTUATOR	TRAY 19B	
5G40	7/c	#12	140'				GEN-MTR 5 ABCB 750 INTERLK.	GEN-MTR 5 ACTUATOR	GEN-MTR 5 ABCB 750	5G40-TRAYS 19B,2D-5G40A
				5G40	1 1/4"	68'		GEN-MTR 5 ACTUATOR	TRAY 19B	
				5G40A	1 1/4"	28'		TRAY 2D	GEN-MTR 5 ABCB 750	
5G53	5/c	#12	140'				GEN-MTR 5 ABCB 750 CONTROL	GEN-MTR 5 ABCB 750	GEN-MTR 5 EXCIT. SWGR.	5G53 - TRAYS 8D, 20
				5G53	2"	25'		GEN-MTR 5 ABCB 750	TRAY 8A	
5G58	9/c	#12	20'	5G58	1 1/2"	13'	DISC. SW. 753 INTERLOCK	GEN-MTR 5 ABCB 750	DISC. SW. 753	
5G59	5/c	#12	440'				ABCB 750 CONTROL	GEN-MTR 5 ABCB 750	AUX. SWBD. PNL. 12AUXF	5G59 - TRAY 6D
				5G59	2"	25'		GEN-MTR 5 ABCB 750	TRAY 6D	
5G61	4/c	#10	435'				TRANSF. NO. 3 DIFF. RELAYING	GEN-MTR 5 ABCB 750	AUX. SWBD. PNL. 14AUXF	5G61 - TRAY 6D
				5G61	2"	25'		GEN-MTR 5 ABCB 750	TRAY 6D	
5G64	5/c	#12	75'				GEN-MTR 5 CONTROL	PHASE REV. SW. 501	SWITCH 757	5G64 - TRAY 19A
				5G64	1 1/2"	37'		PHASE REV. SW. 501	TRAY 19A	
5G71	5/c	#12	210'				MOD 300 CONTROL	GEN-MTR 5 ABCB 750	GEN-MTR 6 ABCB 760	5G59 - TRAY 8D - 6G59
5G73	5/c	#12	255'				PUMPING UNIT 5 CONTROL	ACB 722	MAIN CNTL. SWBD. PNL. 12R	TRAYS 27, 4B
5G74	5/c	#12	265'				PUMPING UNIT 5 CONTROL	ACB 722	MAIN CNTL. SWBD. PNL. 12F	TRAYS 27, 4B
5G75	5/c	#12	310'				SWITCH 757 & ACB 732 CNTL.	ACB 722	SWITCH 757	TRAYS 27, 6D, 19A
5G76	5/c	#12	270'				PHASE REV. SW. 501 CONTROL	ACB 732	PHASE REV. SW. 501	TRAYS 28, 6D, 19A - 5V23
5G77	5/c	#12	240'				SWITCH 757 & ACB 722 CNTL.	ACB 732	SWITCH 757	TRAYS 28, 6D, 19A
5G78	12/c	#12	440'				SWITCH 757 CONTROL	SWITCH 757	MAIN CNTL. SWBD. PNL. 12F	TRAYS 19A, 2D

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
5G79	9/c	#12	445'				UNIT 5 ELECT. SHUTDOWN CNTL.	SWITCH 757	MAIN CNTL. SWBD. PNL. 12R	TRAYS 19A, 4D
5G80	4/c	#10	440'				GEN-MTR 5 METERS & RELAYS	SWITCH 757	MAIN CNTL. SWBD. PNL. 12F	TRAYS 19A, 2D
5G81	4/c	#10	450'				GEN-MTR 5 DIFF. RELAYS	SWITCH 757	AUX. SWBD. PNL. 12AUXF	TRAYS 19A, 6D
5G82	4/c	#10	455'				STARTING BUS DIFF.	SWITCH 757	AUX. SWBD. PNL. 14AUXR	TRAYS 19A, 8D
5G84	5/c	#12	180'				STARTING BUS BKRS. & SW. CNTL.	SWITCH 757	SWITCH 767	TRAYS 19A, 6D, 21A
5G85	3/c	#12	240'				SWITCH 777 CONTROL	SWITCH 757	SWITCH 777	TRAYS 19A, 6C, 23A
5G86	7/c	#12	335'				STARTING BUS SWITCHES CNTL.	SWITCH 757	SWITCH 787	TRAYS 19A, 6C, 25A

NOTES:

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SYMBOL	ZONE	DESCRIPTION	DATE	BY
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101RRP_E142_CC_5G1.DGN
101RRP_TBLK.DGN

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 5G, SHEET 1 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-142

SCALE: NONE SHEET 154

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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
5G3	4/c	#10	440'				GEN-MTR 5 DIFF. RELAYS	GEN-MTR 5 GCB 750 - CT(3)	AUX. SWBD. PNL. 12AUXF	TRAYS 35, 19A, 6D
5G5	3/c	#12	110'				GEN-MTR 5 VOLTAGE REG. PT's	GEN-MTR 5 GCB 750 - PT(3)	GEN-MTR 5 EXCIT. SWGR.	TRAYS 35, 19A, 2D, 20
5G6	4/c	#10	440'				GEN-MTR 5 METERS & RELAYS	GEN-MTR 5 GCB 750 - CT(3)	MAIN CNTL. SWBD. PNL. 12F	TRAYS 35, 19A, 2D
5G7	5/c	#12	450'				GEN-MTR 5 METERS & RELAYS	GEN-MTR 5 GCB 750 - PT(3)	MAIN CNTL. SWBD. PNL. 12F	TRAYS 35, 19A, 2D
5G8	12/c	#12	440'				GEN-MTR 5 GCB 750 CONTROL	GEN-MTR 5 GCB 750	MAIN CNTL. SWBD. PNL. 12F	TRAYS 35, 19A, 2D
5G9	12/c	#12	440'				GEN-MTR 5 GCB 750 INTERLK.	GEN-MTR 5 GCB 750	MAIN CNTL. SWBD. PNL. 12R	TRAYS 35, 19A, 4D
5G40	7/c	#12	140'				GEN-MTR 5 GCB 750 INTERLK.	GEN-MTR 5 ACTUATOR	GEN-MTR 5 GCB 750	5G40-TRAYS 19B, 19A, 35
				5G40	1 1/4"	68'		GEN-MTR 5 ACTUATOR	TRAY 19B	
5G53	7/c	#12	140'				GEN-MTR 5 GCB 750 CONTROL	GEN-MTR 5 GCB 750	GEN-MTR 5 EXCIT. SWGR.	TRAYS 35, 19A, 8D, 20
5G59	5/c	#12	440'				GEN-MTR 5 GCB 750 CONTROL	GEN-MTR 5 GCB 750	AUX. SWBD. PNL. 12AUXF	TRAYS 35, 19A, 6D
5G61	4/c	#10	435'				TRANSF. NO. 3 DIFF. RELAYING	GEN-MTR 5 GCB 750	AUX. SWBD. PNL. 14AUXF	TRAYS 35, 19A, 6D
5G64	5/c	#12	XXX'				GEN-MTR 5 CONTROL	PHASE REV. SW. 501	GEN-MTR 5 GCB 750	TRAYS XX
5G71	3/c	#12	210'				MOD 300 CONTROL	GEN-MTR 5 GCB 750	GEN-MTR 6 GCB 760	TRAYS 35, 19A, 8D, 21A, 36
5G73	5/c	#12	XXX'				PUMPING UNIT 5 CONTROL	GCB 901	MAIN CNTL. SWBD. PNL. 14R	TRAYS XX
5G75	5/c	#12	XXX'				SWITCH 759 CONTROL	GCB 901	GEN-MTR 5 GCB 750	TRAYS XX
5G76	3/c	#12	XXX'				PHASE REV. SW. 501 CONTROL	GCB 901	PHASE REV. SW. 501	TRAYS XX
5G78	12/c	#12	XXX'				SWITCH 759 CONTROL	GEN-MTR 5 GCB 750	MAIN CNTL. SWBD. PNL. 12R	TRAYS XX
5G81	4/c	#10	XXX'				GEN-MTR 5 DIFF. RELAYS	GEN-MTR 5 GCB 750 CT CAB	AUX. SWBD. PNL. 12AUXF	TRAYS XX
5G82	4/c	#10	XXX'				STARTING BUS DIFF.	GEN-MTR 5 GCB 750 CT CAB	AUX. SWBD. PNL. 14AUXR	TRAYS XX
5G84	7/c	#12	XXX'				STARTING BUS SWITCHES CNTL.	GEN-MTR 5 GCB 750	GEN-MTR 6 GCB 760	TRAYS XX
5G85	5/c	#12	XXX'				STARTING BUS SWITCHES CNTL.	GEN-MTR 5 GCB 750	GEN-MTR 7 GCB 770	TRAYS XX
5G86	5/c	#12	XXX'				STARTING BUS SWITCHES CNTL.	GEN-MTR 5 GCB 750	GEN-MTR 8 GCB 780	TRAYS XX

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
5G110	15/c	#16	245'				BREAKER STATUS	GEN. 5 GCB 750	MAIN CNTL. SWBD. PNL. 12	TRAYS 35, 19A, 2D
5G111	15/c	#16	245'				BREAKER STATUS	GEN. 5 GCB 750	MAIN CNTL. SWBD. PNL. 12	TRAYS 35, 19A, 2D
5G112	5/c	#12	XXX'				GCB 750 STATUS	SFC	GEN-MTR 5 GCB 750	TRAYS XX
5G113	12/c	#12	XXX'				UNIT 5 CONTROL	SFC	MAIN CNTL. SWBD. PNL. 12	TRAYS XX
5G114	5/c	#12	XXX'				UNIT 5 CONTROL	SFC	MAIN CNTL. SWBD. PNL. 12	TRAYS XX
5G115	5/c	#12	XXX'				UNIT 5 STATUS	SFC	MAIN CNTL. SWBD. PNL. 12	TRAYS XX

NOTES:

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2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FINALIZED LATER

SYMBOL	ZONE	DESCRIPTION	DATE	BY
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HYDROELECTRIC DESIGN CENTER
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PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 5G, SHEET 2 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-14.3

SCALE: NONE SHEET 155

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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
6G3	4/c	*10	570'				GEN-MTR 6 DIFF. RELAYS	GEN-MTR 6 ABCB 760 - CT(3)	AUX. SWBD. PNL. 13AUXF	6G3 - TRAY 6D
				6G3	1 1/4"	21'		GEN-MTR 6 ABCB 760	TRAY 6D	
6G5	3/c	*12	180'				GEN-MTR 6 VOLTAGE REG. PT's	GEN-MTR 6 SURGE CUB.-PT(3)	GEN-MTR 6 EXCIT. SWGR.	6G5 - TRAYS 21A, 2D, 20
				6G5	1 1/4"	30'		GEN-MTR 6 SURGE CUB.	TRAY 21A	
6G6	4/c	*10	560'				GEN-MTR 6 METERS & RELAYS	GEN-MTR 6 ABCB 760 - CT(3)	MAIN CNTL. SWBD. PNL. 13F	6G6 - TRAY 2D
				6G6	1 1/4"	18'		GEN-MTR 6 ABCB 760	TRAY 2D	
6G7	3/c	*12	550'				GEN-MTR 6 METERS & RELAYS	GEN-MTR 6 SURGE CUB.-PT(3)	MAIN CNTL. SWBD. PNL. 13F	6G7 - TRAYS 21A, 2D
				6G7	1 1/4"	15'		GEN-MTR 6 SURGE CUB.	TRAY 21A	
6G8	12/c	*12	560'				GEN-MTR 6 ABCB 760 CONTROL	GEN-MTR 6 ABCB 760	MAIN CNTL. SWBD. PNL. 13F	6G8 - TRAY 2D
				6G8	2"	18'		GEN-MTR 6 ABCB 760	TRAY 2D	
6G9	12/c	*12	550'				GEN-MTR 6 ABCB 760 INTERLK.	GEN-MTR 6 ABCB 760	MAIN CNTL. SWBD. PNL. 13R	6G9 - TRAY 4D
				6G9	2"	18'		GEN-MTR 6 ABCB 760	TRAY 4D	
6G21	5/c	*12	125'				GEN-MTR 6 PUMP INTERLOCK	GEN-MTR 6 ACTUATOR	STARTING BUS SWITCH 767	6G21 - TRAY 21B
				6G21	1 1/4"	67'		GEN-MTR 6 ACTUATOR	TRAY 21B	
6G40	7/c	*12	140'				GEN-MTR 6 ABCB 760 INTERLK.	GEN-MTR 6 ACTUATOR	GEN-MTR 6 ABCB 760	6G40-TRAYS 21B,2D-6G40A
				6G40	1 1/4"	57'		GEN-MTR 6 ACTUATOR	TRAY 21B	
				6G40A	1 1/4"	18'		TRAY 2D	GEN-MTR 6 ABCB 760	
6G53	5/c	*12	165'				GEN-MTR 6 ABCB 760 CONTROL	GEN-MTR 6 ABCB 760	GEN-MTR 6 EXCIT. SWGR.	6G53 - TRAYS 8D, 20
				6G53	1 1/2"	23'		GEN-MTR 6 ABCB 760	TRAY 8D	
6G58	9/c	*12	20'	6G58	1 1/2"	13'	DISC. SW. 763 INTERLOCK	GEN-MTR 6 ABCB 760	DISC. SW. 763	
6G59	5/c	*12	440'				GEN-MTR 6 ABCB 760 CONTROL	GEN-MTR 6 ABCB 760	AUX. SWBD. PNL. 13AUXF	6G59 - TRAY 6D
				6G59	2"	23'		GEN-MTR 6 ABCB 760	TRAY 6D	
6G61	4/c	*10	435'				TRANSF. NO. 3 DIFF. RELAYING	GEN-MTR 6 ABCB 760	AUX. SWBD. PNL. 14AUXF	6G61 - TRAY 6D
				6G61	1 1/4"	23'		GEN-MTR 6 ABCB 760	TRAY 6D	
6G64	5/c	*12	70'				GEN-MTR 6 CONTROL	PHASE REV. SW. 601	SWITCH 767	6G64 - TRAY 21A
				6G64	1 1/2"	39'		PHASE REV. SW. 601	TRAY 21A	
6G73	5/c	*12	255'				PUMPING UNIT 6 CONTROL	ACB 722	MAIN CNTL. SWBD. PNL. 13R	TRAYS 27, 4D
6G74	5/c	*12	265'				PUMPING UNIT 6 CONTROL	ACB 722	MAIN CNTL. SWBD. PNL. 13F	TRAYS 27, 2D
6G75	5/c	*12	615'				SWITCH 767 & ACB 732 CNTL.	ACB 722	SWITCH 767	TRAYS 27, 6D, 21A
6G76	5/c	*12	555'				PHASE REV. SW. 601 CONTROL	ACB 732	PHASE REV. SW. 601	TRAYS 28, 6D, 21A - 6V23
6G77	5/c	*12	510'				SWITCH 767 & ACB 722 CNTL.	ACB 732	SWITCH 767	TRAYS 28, 6D, 21A
6G78	12/c	*12	550'				SWITCH 767 CONTROL	SWITCH 767	MAIN CNTL. SWBD. PNL. 13F	TRAYS 21A, 2D

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
6G79	9/c	*12	550'				UNIT 6 ELECT. SHUTDOWN CNTL.	SWITCH 767	MAIN CNTL. SWBD. PNL. 13R	TRAYS 21A, 4D
6G80	4/c	*10	550'				GEN-MTR 6 METERS & RELAYS	SWITCH 767	MAIN CNTL. SWBD. PNL. 13F	TRAYS 21A, 2D
6G81	4/c	*10	550'				GEN-MTR 6 DIFF. RELAYS	SWITCH 767	AUX. SWBD. PNL. 13AUXF	TRAYS 21A, 6D
6G82	4/c	*10	545'				STARTING BUS DIFF.	SWITCH 767	AUX. SWBD. PNL. 14AUXR	TRAYS 21A, 8D
6G84	5/c	*12	175'				STARTING BUS BKRS. & SW. CNTL.	SWITCH 767	SWITCH 777	TRAYS 21A, 6D, 23A

NOTES:

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2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

101RRP_E144_CC_6G1.DGN
101RRP_TBLK.DGN

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PORTLAND, OREGON

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 6G, SHEET 1 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-144

SCALE: NONE SHEET 156

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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
6G3	4/c	*10	570'				GEN-MTR 6 DIFF. RELAYS	GEN-MTR 6 GCB 760 - CT(3)	AUX. SWBD. PNL. 13AUXF	TRAYS 36, 21A, 6D
6G5	3/c	*12	180'				GEN-MTR 6 VOLTAGE REG. PT's	GEN-MTR 6 GCB 760 - PT(3)	GEN-MTR 6 EXCIT. SWGR.	TRAYS 36, 21A, 2D, 20
6G6	4/c	*10	560'				GEN-MTR 6 METERS & RELAYS	GEN-MTR 6 GCB 760 - CT(3)	MAIN CNTL. SWBD. PNL. 13F	TRAYS 36, 21A, 2D
6G7	5/c	*12	550'				GEN-MTR 6 METERS & RELAYS	GEN-MTR 6 GCB 760 - PT(3)	MAIN CNTL. SWBD. PNL. 13F	TRAYS 36, 21A, 2D
6G8	12/c	*12	560'				GEN-MTR 6 GCB 760 CONTROL	GEN-MTR 6 GCB 760	MAIN CNTL. SWBD. PNL. 13F	TRAYS 36, 21A, 2D
6G9	12/c	*12	550'				GEN-MTR 6 GCB 760 INTERLK.	GEN-MTR 6 GCB 760	MAIN CNTL. SWBD. PNL. 13R	TRAYS 36, 21A, 4D
6G40	7/c	*12	140'				GEN-MTR 6 GCB 760 INTERLK.	GEN-MTR 6 ACTUATOR	GEN-MTR 6 GCB 760	6G40 - TRAYS 21B, 21A, 36
				6G40	1 1/4"	57'		GEN-MTR 6 ACTUATOR	TRAY 21B	
6G53	7/c	*12	165'				GEN-MTR 6 GCB 760 CONTROL	GEN-MTR 6 GCB 760	GEN-MTR 6 EXCIT. SWGR.	TRAYS 36, 21A, 8D, 20
6G59	5/c	*12	440'				GEN-MTR 6 GCB 760 CONTROL	GEN-MTR 6 GCB 760	AUX. SWBD. PNL. 13AUXF	TRAYS 36, 21A, 6D
6G61	4/c	*10	435'				TRANSF. NO. 3 DIFF. RELAYING	GEN-MTR 6 GCB 760	AUX. SWBD. PNL. 14AUXF	TRAYS 36, 21A, 6D
6G64	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G71	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G73	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G75	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G76	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G78	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G81	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G82	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G84	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G85	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
6G110	15/c	*16	245'				BREAKER STATUS	GEN. 6 GCB 760	MAIN CNTL. SWBD. PNL. 13	TRAYS 36, 21A, 2D
6G111	15/c	*16	245'				BREAKER STATUS	GEN. 6 GCB 760	MAIN CNTL. SWBD. PNL. 13	TRAYS 36, 21A, 2D
6G112	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G113	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G114	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
6G115	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX

NOTES:

1. HEAVIER GREEN TEXT INDICATES REMOVAL OF EXISTING CABLES AND EXPOSED CONDUIT. BLACK INDICATES EXISTING CONDUIT TO BE REUSED, ABANDONED, OR CUT OFF AS SHOWN ON THE PLANS. HEAVIER RED OR BLUE TEXT INDICATES NEW CABLES AND EXPOSED CONDUIT.
2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FURNISHED LATER

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

101RRP_E145_CC_6G2.DGN
101RRP_TBLK.DGN

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PORTLAND, OREGON

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 6G, SHEET 2 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-145

SCALE: NONE SHEET 157

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11/03/2003
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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
7G3	4/c	#10	600'				GEN-MTR 7 DIFF. RELAYS	GEN-MTR 7 ABCB 770 - CT(3)	AUX. SWBD. PNL. 15AUXF	7G3 - TRAY 6C
				7G3	1 1/4"	25'		GEN-MTR 7 ABCB 770	TRAY 6C	
7G5	3/c	#12	110'				GEN-MTR 7 VOLTAGE REG. PT's	GEN-MTR 7 SURGE CUB.-PT(3)	GEN-MTR 7 EXCIT. SWGR.	7G5 - TRAYS 23A, 2C, 24
				7G5	1 1/4"	20'		GEN-MTR 7 SURGE CUB.	TRAY 23A	
7G6	4/c	#10	600'				GEN-MTR 7 METERS & RELAYS	GEN-MTR 7 ABCB 770 - CT(3)	MAIN CNTL. SWBD. PNL. 15F	7G6 - TRAY 2C
				7G6	1"	20'		GEN-MTR 7 ABCB 770	TRAY 2C	
7G7	3/c	#12	620'				GEN-MTR 7 METERS & RELAYS	GEN-MTR 7 SURGE CUB.-PT(3)	MAIN CNTL. SWBD. PNL. 15F	7G7 - TRAYS 23A, 2C
				7G7	1 1/4"	20'		GEN-MTR 7 SURGE CUB.-PT(3)	TRAY 23A	
7G8	12/c	#12	600'				GEN-MTR 7 ABCB 770 CONTROL	GEN-MTR 7 ABCB 770	MAIN CNTL. SWBD. PNL. 15F	7G8 - TRAY 2C
				7G8	1 1/4"	20'		GEN-MTR 7 ABCB 770	TRAY 2C	
7G9	12/c	#12	600'				GEN-MTR 7 ABCB 770 INTERLK.	GEN-MTR 7 ABCB 770	MAIN CNTL. SWBD. PNL. 15R	7G9 - TRAY 4C
				7G9	1 1/4"	20'		GEN-MTR 7 ABCB 770	TRAY 4C	
7G21	5/c	#12	95'				GEN-MTR 7 PUMP INTERLOCK	GEN-MTR 7 ACTUATOR	STARTING BUS SWITCH 777	7G21 - TRAY 23B
				7G21	1 1/4"	68'		GEN-MTR 7 ACTUATOR	TRAY 23B	
7G40	7/c	#12	140'				GEN-MTR 7 ABCB 770 INTERLK.	GEN-MTR 7 ACTUATOR	GEN-MTR 7 ABCB 770	7G40-TRAYS 23B,2C-7G40A
				7G40	1 1/4"	68'		GEN-MTR 7 ACTUATOR	TRAY 2C	
				7G40A	1 1/4"	20'		TRAY 2C	GEN-MTR 7 ABCB 770	
7G53	5/c	#12	160'				ABCB 770 CONTROL	GEN-MTR 7 ABCB 770	GEN-MTR 7 EXCIT. SWGR.	7G53 - TRAYS 8C, 24
				7G53	2"	25'		GEN-MTR 7 ABCB 770	TRAY 8C	
7G58	9/c	#12	20'	7G58	1 1/2"	13'	DISC. SW. 773 INTERLOCK	GEN-MTR 7 ABCB 770	DISC. SW. 773	
7G59	5/c	#12	605'				ABCB 770 CONTROL	GEN-MTR 7 ABCB 770	AUX. SWBD. PNL. 15AUXF	7G59 - TRAY 6C
				7G59	2"	35'		GEN-MTR 7 ABCB 770	TRAY 6C	
7G61	4/c	#10	610'				TRANSF. NO. 4 DIFF. RELAYING	GEN-MTR 7 ABCB 770	AUX. SWBD. PNL. 14AUXF	7G61 - TRAY 6C
				7G61	1 1/4"	25'		GEN-MTR 7 ABCB 770	TRAY 6C	
7G64	5/c	#12	75'				GEN-MTR 7 CONTROL	PHASE REV. SW. 701	SWITCH 777	7G64 - TRAY 23A
				7G64	1 1/2"	37'		PHASE REV. SW. 701	TRAY 23A	
7G71	5/c	#12	210'				MOD 400 CONTROL	GEN-MTR 7 ABCB 770	GEN-MTR 8 ABCB 780	VERIFY
7G73	5/c	#12	255'				PUMPING UNIT 7 CONTROL	ACB 722	MAIN CNTL. SWBD. PNL. 15R	TRAYS 27, 4C
7G74	5/c	#12	265'				PUMPING UNIT 7 CONTROL	ACB 722	MAIN CNTL. SWBD. PNL. 15F	TRAYS 27, 2C
7G75	5/c	#12	475'				SWITCH 777 & ACB 732 CNTL.	ACB 722	SWITCH 777	TRAYS 27, 6C, 23A
7G76	5/c	#12	435'				PHASE REV. SW. 701 CONTROL	ACB 732	PHASE REV. SW. 701	TRAYS 28, 6C, 23A - 7V23
7G77	5/c	#12	405'				SWITCH 777 & ACB 722 CNTL.	ACB 732	SWITCH 777	TRAYS 28, 6C, 23A
7G78	12/c	#12	575'				SWITCH 777 CONTROL	SWITCH 777	MAIN CNTL. SWBD. PNL. 15F	TRAYS 23A, 2C

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
7G79	9/c	#12	580'				UNIT 7 ELECT. SHUTDOWN CNTL.	SWITCH 777	MAIN CNTL. SWBD. PNL. 15R	TRAYS 23A, 4C
7G80	4/c	#10	575'				GEN-MTR 7 METERS & RELAYS	SWITCH 777	MAIN CNTL. SWBD. PNL. 15F	TRAYS 23A, 2C
7G81	4/c	#10	585'				GEN-MTR 7 DIFF. RELAYS	SWITCH 777	AUX. SWBD. PNL. 15AUXF	TRAYS 23A, 6C
7G82	4/c	#10	590'				STARTING BUS DIFF.	SWITCH 777	AUX. SWBD. PNL. 14AUXR	TRAYS 23A, 8C
7G84	5/c	#12	150'				STARTING BUS BKRS. & SW. CNTL.	SWITCH 777	SWITCH 787	TRAYS 23A, 6C, 26A

NOTES:

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2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

101RRP_E146_CC_7G1.DGN
101RRP_TBLK.DGN

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PORTLAND, OREGON

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 7G, SHEET 1 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-146

SCALE: NONE SHEET 158

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11/03/2003
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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
7G3	4/c	#10	600'				GEN-MTR 7 DIFF. RELAYS	GEN-MTR 7 GCB 770 - CT(3)	AUX. SWBD. PNL. 15AUXF	TRAYS 37, 23A, 6C
7G5	3/c	#12	110'				GEN-MTR 7 VOLTAGE REG. PT's	GEN-MTR 7 GCB 770 - PT(3)	GEN-MTR 7 EXCIT. SWGR.	TRAYS 37, 23A, 2C, 24
7G6	4/c	#10	600'				GEN-MTR 7 METERS & RELAYS	GEN-MTR 7 GCB 770 - CT(3)	MAIN CNTL. SWBD. PNL. 15F	TRAYS 37, 23A, 2C
7G7	5/c	#12	620'				GEN-MTR 7 METERS & RELAYS	GEN-MTR 7 GCB 770 - PT(3)	MAIN CNTL. SWBD. PNL. 15F	TRAYS 37, 23A, 2C
7G8	12/c	#12	600'				GEN-MTR 7 GCB 770 CONTROL	GEN-MTR 7 GCB 770	MAIN CNTL. SWBD. PNL. 15F	TRAYS 37, 23A, 2C
7G9	12/c	#12	600'				GEN-MTR 7 GCB 770 INTERLK.	GEN-MTR 7 GCB 770	MAIN CNTL. SWBD. PNL. 15R	TRAYS 37, 23A, 4C
7G40	7/c	#12	140'				GEN-MTR 7 GCB 770 INTERLK.	GEN-MTR 7 ACTUATOR	GEN-MTR 7 GCB 770	7G40 - TRAYS 23B, 23A, 37
				7G40	1 1/4"	68'		GEN-MTR 7 ACTUATOR	TRAY 2C	
7G53	7/c	#12	160'				GEN-MTR 7 GCB 770 CONTROL	GEN-MTR 7 GCB 770	GEN-MTR 7 EXCIT. SWGR.	TRAYS 37, 23A, 8C, 24
7G59	5/c	#12	605'				GEN-MTR 7 GCB 770 CONTROL	GEN-MTR 7 GCB 770	AUX. SWBD. PNL. 15AUXF	TRAYS 37, 23A, 6C
7G61	4/c	#10	610'				TRANSF. NO. 4 DIFF. RELAYING	GEN-MTR 7 GCB 770	AUX. SWBD. PNL. 14AUXF	TRAYS 37, 23A, 6C
7G64	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
7G71	3/c	#12	210'				MOD 400 CONTROL	GEN-MTR 7 GCB 770	GEN-MTR 8 GCB 780	TRAYS 37, 23A, 8C, 26A, 38
7G73	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
7G75	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
7G76	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
7G78	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
7G81	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
7G82	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
7G84	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
7G110	15/c	#16	245'				BREAKER STATUS	GEN. 7 GCB 770	MAIN CNTL. SWBD. PNL. 15	TRAYS 37, 23A, 2C
7G111	15/c	#16	245'				BREAKER STATUS	GEN. 7 GCB 770	MAIN CNTL. SWBD. PNL. 15	TRAYS 37, 23A, 2C
7G112	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
7G113	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
7G114	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
7G115	X/c	#X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX

NOTES:

1. HEAVIER GREEN TEXT INDICATES REMOVAL OF EXISTING CABLES AND EXPOSED CONDUIT. BLACK INDICATES EXISTING CONDUIT TO BE REUSED, ABANDONED, OR CUT OFF AS SHOWN ON THE PLANS. HEAVIER RED OR BLUE TEXT INDICATES NEW CABLES AND EXPOSED CONDUIT.
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BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FURNISHED LATER

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

101RRP_E147_CC_7G2.DGN
101RRP_TBLK.DGN

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PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 7G, SHEET 2 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-147

SCALE: NONE SHEET 159

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11/03/2003
k6enxndt

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
8G3	4/c	#10	600'				GEN-MTR 8 DIFF. RELAYS	GEN-MTR 8 ABCB 780 - CT(3)	AUX. SWBD. PNL. 16AUXF	8G3 - TRAY 6C
				8G3	1 1/4"	50'		GEN-MTR 8 ABCB 780	TRAY 6C	
8G5	3/c	#12	150'				GEN-MTR 8 VOLTAGE REG. PT's	GEN-MTR 8 SURGE CUB.-PT(3)	GEN-MTR 8 EXCIT. SWGR.	8G5 - TRAYS 26A, 2C, 24
				8G5	1 1/4"	20'		GEN-MTR 8 SURGE CUB.	TRAY 26A	
8G6	4/c	#10	695'				GEN-MTR 8 METERS & RELAYS	GEN-MTR 8 ABCB 780 - CT(3)	MAIN CNTL. SWBD. PNL. 16F	8G6 - TRAY 2C
				8G6	1 1/4"	40'		GEN-MTR 8 ABCB 780	TRAY 2C	
8G7	3/c	#12	710'				GEN-MTR 8 METERS & RELAYS	GEN-MTR 8 SURGE CUB.-PT(3)	MAIN CNTL. SWBD. PNL. 16F	8G7 - TRAYS 26A, 2C
				8G7	1 1/4"	20'		GEN-MTR 8 SURGE CUB.	TRAY 26A	
8G8	12/c	#12	695'				GEN-MTR 8 ABCB 780 CONTROL	GEN-MTR 8 ABCB 780	MAIN CNTL. SWBD. PNL. 16F	8G8 - TRAY 2C
				8G8	2"	40'		GEN-MTR 8 ABCB 780	TRAY 2C	
8G9	12/c	#12	685'				GEN-MTR 8 ABCB 780 INTERLK.	GEN-MTR 8 ABCB 780	MAIN CNTL. SWBD. PNL. 16R	8G9 - TRAY 4C
				8G9	2"	40'		GEN-MTR 8 ABCB 780	TRAY 4C	
8G21	5/c	#12	125'				GEN-MTR 8 PUMP INTERLOCK	GEN-MTR 8 ACTUATOR	STARTING BUS SWITCH 787	8G21 - TRAY 26B
				8G21	1"	57'		GEN-MTR 8 ACTUATOR	TRAY 26B	
8G40	7/c	#12	110'				GEN-MTR 8 ABCB 780 INTERLOCK	GEN-MTR 8 ACTUATOR	GEN-MTR 8 ABCB 780	8G40-TRAYS 26B,2C-8G40A
				8G40	1 1/4"	47'		GEN-MTR 8 ACTUATOR	TRAY 2C	
				8G40A	1 1/4"	40'		TRAY 2C	GEN-MTR 8 ABCB 780	
8G53	5/c	#12	165'				GEN-MTR 8 ABCB 780 CONTROL	GEN-MTR 8 ABCB 780	GEN-MTR 8 EXCIT. SWGR.	8G53 - TRAYS 8C, 24
				8G53	2"	50'		GEN-MTR 8 ABCB 780	TRAY 8C	
8G58	9/c	#12	20'	8G58	1 1/2"	13'	DISC. SW. 783 INTERLOCK	GEN-MTR 8 ABCB 780	DISC. SW. 783	
8G59	5/c	#12	730'				GEN-MTR 8 ABCB 780 CONTROL	GEN-MTR 8 ABCB 780	AUX. SWBD. PNL. 16AUXF	8G59 - TRAY 6C
				8G59	2"	50'	ABCB 780 CONTROL	GEN-MTR 8 ABCB 780	TRAY 6C	
8G61	4/c	#10	725'				TRANSF. NO. 4 DIFF. RELAYING	GEN-MTR 8 ABCB 780	AUX. SWBD. PNL. 14AUXF	8G61 - TRAY 6C
				8G61	1 1/4"	50'	TRANSF. NO. 4 DIFF. RELAYING	GEN-MTR 8 ABCB 780	TRAY 6C	
8G64	5/c	#12	70'				GEN-MTR 8 CONTROL	PHASE REV. SW. 801	SWITCH 787	8G64 - TRAY 26A
				8G64	1 1/2"	39'		PHASE REV. SW. 801	TRAY 26A	
8G73	5/c	#12	255'				PUMPING UNIT 8 CONTROL	ACB 722	MAIN CNTL. SWBD. PNL. 16R	TRAYS 27, 4C
8G74	5/c	#12	265'				PUMPING UNIT 8 CONTROL	ACB 722	MAIN CNTL. SWBD. PNL. 16F	TRAYS 27, 2C
8G75	5/c	#12	580'				SWITCH 787 & ACB 732 CNTL.	ACB 722	SWITCH 787	TRAYS 27, 6C, 26A
8G76	5/c	#12	540'				PHASE REV. SW. 801 CONTROL	ACB 732	PHASE REV. SW. 801	TRAYS 28, 6C, 26A - 8V23
8G77	5/c	#12	510'				SWITCH 787 & ACB 722 CNTL.	ACB 732	SWITCH 787	TRAYS 28, 6C, 26A
8G78	12/c	#12	655'				SWITCH 787 CONTROL	SWITCH 787	MAIN CNTL. SWBD. PNL. 16F	TRAYS 26A, 2C

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
8G79	9/c	#12	650'				UNIT 8 ELECT. SHUTDOWN CNTL.	SWITCH 787	MAIN CNTL. SWBD. PNL. 16R	TRAYS 26A, 4C
8G80	4/c	#10	655'				GEN-MTR 8 METERS & RELAYS	SWITCH 787	MAIN CNTL. SWBD. PNL. 16F	TRAYS 26A, 2C
8G81	4/c	#10	655'				GEN-MTR 8 DIFF. RELAYS	SWITCH 787	AUX. SWBD. PNL. 16AUXF	TRAYS 26A, 6C
8G82	4/c	#10	670'				STARTING BUS DIFF.	SWITCH 787	AUX. SWBD. PNL. 14AUXR	TRAYS 26A, 8C

NOTES:

1. HEAVIER GREEN TEXT INDICATES REMOVAL OF EXISTING CABLES AND EXPOSED CONDUIT. BLACK INDICATES EXISTING CONDUIT TO BE REUSED, ABANDONED, OR CUT OFF AS SHOWN ON THE PLANS. HEAVIER RED OR BLUE TEXT INDICATES NEW CABLES AND EXPOSED CONDUIT.
2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

101RRP_E148_CC_8G1.DGN
101RRP_TBLK.DGN

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SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 8G, SHEET 1 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-148

SCALE: NONE SHEET 160

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CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
8G3	4/c	*10	600'				GEN-MTR 8 DIFF. RELAYS	GEN-MTR 8 GCB 780 - CT(3)	AUX. SWBD. PNL. 16AUXF	TRAYS 38, 26A, 6C
8G5	3/c	*12	150'				GEN-MTR 8 VOLTAGE REG. PT's	GEN-MTR 8 GCB 780 - PT(3)	GEN-MTR 8 EXCIT. SWGR.	TRAYS 38, 26A, 2C, 24
8G6	4/c	*10	695'				GEN-MTR 8 METERS & RELAYS	GEN-MTR 8 GCB 780 - CT(3)	MAIN CNTL. SWBD. PNL. 16F	TRAYS 38, 26A, 2C
8G7	5/c	*12	710'				GEN-MTR 8 METERS & RELAYS	GEN-MTR 8 GCB 780 - PT(3)	MAIN CNTL. SWBD. PNL. 16F	TRAYS 38, 26A, 2C
8G8	12/c	*12	695'				GEN-MTR 8 GCB 780 CONTROL	GEN-MTR 8 GCB 780	MAIN CNTL. SWBD. PNL. 16F	TRAYS 38, 26A, 2C
8G9	12/c	*12	685'				GEN-MTR 8 GCB 780 INTERLK.	GEN-MTR 8 GCB 780	MAIN CNTL. SWBD. PNL. 16R	TRAYS 38, 26A, 4C
8G40	7/c	*12	110'				GEN-MTR 8 GCB 780 INTERLOCK	GEN-MTR 8 ACTUATOR	GEN-MTR 8 GCB 780	8G40 - TRAYS 26B, 26A, 38
				8G40	1 1/4"	47'		GEN-MTR 8 ACTUATOR	TRAY 2C	
8G53	7/c	*12	165'				GEN-MTR 8 GCB 780 CONTROL	GEN-MTR 8 GCB 780	GEN-MTR 8 EXCIT. SWGR.	TRAYS 38, 26A, 8C, 24
8G59	5/c	*12	730'				GEN-MTR 8 GCB 780 CONTROL	GEN-MTR 8 GCB 780	AUX. SWBD. PNL. 16AUXF	TRAYS 38, 26A, 6C
8G61	4/c	*10	725'				TRANSF. NO. 4 DIFF. RELAYING	GEN-MTR 8 GCB 780	AUX. SWBD. PNL. 14AUXF	TRAYS 38, 26A, 6C
8G64	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
8G71	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
8G73	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
8G75	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
8G76	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
8G78	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
8G81	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
8G82	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
8G110	15/c	*16	245'				BREAKER STATUS	GEN. 8 GCB 780	MAIN CNTL. SWBD. PNL. 16	TRAYS 38, 26A, 2C
8G111	15/c	*16	245'				BREAKER STATUS	GEN. 8 GCB 780	MAIN CNTL. SWBD. PNL. 16	TRAYS 38, 26A, 2C
8G112	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
8G113	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
8G114	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX
8G115	X/c	*X	XXX'				XXXXXXXX	XXXXXX	XXXXXX	TRAYS XX

NOTES:

1. HEAVIER GREEN TEXT INDICATES REMOVAL OF EXISTING CABLES AND EXPOSED CONDUIT. BLACK INDICATES EXISTING CONDUIT TO BE REUSED, ABANDONED, OR CUT OFF AS SHOWN ON THE PLANS. HEAVIER RED OR BLUE TEXT INDICATES NEW CABLES AND EXPOSED CONDUIT.
2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FURNISHED LATER

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES 8G, SHEET 2 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-149

SCALE: NONE SHEET 161

101RRP_E149_CC_8G2.DGN
101RRP_TBLK.DGN

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11/03/2003
k6enxrdt

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
✕ A1	9/c	#16	235'				TURBINE 1 TROUBLE CONTACTS	TURBINE 1 TERMINAL CABINET	MAIN CNTL SWBD PNL 7F	A1 - TRAYS 11A, 2B
				A1	1 1/4"	58'		TURBINE 1 TERMINAL CABINET	TRAY 11A	
✕ A2	9/c	#16	215'				GEN. 1 TROUBLE CONTACTS	GEN. 1 TERMINAL CABINET	MAIN CNTL SWBD PNL 7F	A2 - TRAYS 11A, 2B
				A2	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✕ A5	9/c	#16	220'				GOV. 1 SUMP TANK & GEN. COOL.	GEN. 1 ACTUATOR	MAIN CNTL SWBD PNL 7F	A5 - TRAYS 11B, 2B
				A5	1 1/4"	45'		GEN. 1 ACTUATOR	TRAY 11B	
✕ A6	9/c	#16	220'				GEN. 1 BEARING OIL TEMP. IND.	GEN. 1 ACTUATOR	MAIN CNTL SWBD PNL 7F	A6 - TRAYS 11B, 2B
				A6	1 1/4"	45'		GEN. 1 ACTUATOR	TRAY 11B	
A116	2/c	#16	545'				ABCB COMPRESSOR TROUBLE	ABCB AIR COMPRESSOR	MAIN CNTL SWBD PNL 15F	A116 - TRAYS 8D,5D,2D
				A116	3/4"	12'		ABCB AIR COMPRESSOR	TRAY 8D	
B2	2/c	#12	145'				UNIT #1 MAIN OCB 710 CONTROL	PNL 10 AUXR CIRCUIT 2	OCB 710 CONTROL CABINET	TRAY 8B - B2
				B2	1"	28'		TRAY 8B	OCB 710 CONTROL CABINET	
B8	2/c	#12	245'				UNIT #2 MAIN OCB 720 CONTROL	PNL 10 AUXR CIRCUIT 8	OCB 720 CONTROL CABINET	TRAY 8B - B8
				B8	1"	28'		TRAY 8B	OCB 720 CONTROL CABINET	
B13	2/c	#12	240'				STARTING BUS ACB 722 CNTL	PNL 10 AUXR CIRCUIT 13	ACB 722	TRAYS 8D, 27
B14	2/c	#12	285'				UNIT #3 MAIN OCB 730 CONTROL	PNL 10 AUXR CIRCUIT 14	OCB 730 CONTROL CABINET	TRAY 8A - B14
				B14	1"	28'		TRAY 8A	OCB 730 CONTROL CABINET	
B20	2/c	#12	325'				STARTING BUS ACB 732 CNTL	PNL 10 AUXR CIRCUIT 20	ACB 732	TRAYS 8C, 28
B21	2/c	#12	385'				UNIT #4 MAIN OCB 740 CONTROL	PNL 10 AUXR CIRCUIT 21	OCB 740 CONTROL CABINET	TRAY 8A - B21
				B21	1"	28'		TRAY 8A	OCB 740 CONTROL CABINET	
B29	2/c	#12	440'				UNIT #5 MAIN ABCB 750 CNTL	AUX SWBD PNL 9 AUXR	ABCB 750 CNTL CABINET	TRAY 8D - B29
				B29	1"	23'		TRAY 8A	ABCB 750 CNTL CABINET	
B34	2/c	#12	445'				STARTING BUS MOD 757 CNTL	AUX SWBD PNL 9 AUXR	MOD 757	TRAYS 8D, 19A
B36	2/c	#12	630'				UNIT #6 MAIN ABCB 760 CNTL	AUX SWBD PNL 9 AUXR	ABCB 760 CNTL CABINET	TRAY 8D - B36
				B36	1"	23'		TRAY 8D	ABCB 760 CNTL CABINET	
B41	2/c	#12	550'				STARTING BUS MOD 767 CNTL	AUX SWBD PNL 9 AUXR	MOD 767	TRAYS 8D, 21A
B43	2/c	#12	565'				UNIT #7 MAIN ABCB 770 CNTL	AUX SWBD PNL 9 AUXR	ABCB 770 CNTL CABINET	TRAY 8D - B43
				B43	1"	23'		TRAY 8D	ABCB 770 CNTL CABINET	
B48	2/c	#12	615'				STARTING BUS MOD 777 CNTL	AUX SWBD PNL 9 AUXR	MOD 777	TRAYS 8C, 23A
B50	2/c	#12	705'				UNIT #8 MAIN ABCB 780 CNTL	AUX SWBD PNL 9 AUXR	ABCB 780 CNTL CABINET	TRAY 8C - B50
				B50	1 1/2"	50'		TRAY 8C	ABCB 780 CNTL CABINET	
B55	2/c	#12	670'				STARTING BUS MOD 787 CNTL	AUX SWBD PNL 9 AUXR	MOD 787	TRAYS 8C, 26A
B150	2/c	350 kcmil	170'				EMERGENCY LIGHTING PANEL	AUX SWBD PNL 6AUXR	EMERGENCY LTG. PNL. EPD	TRAYS 8A, 11B - B150 ✕✕
				B150	3"	5'		TRAY 11B	EMERGENCY LTG. PNL. EPD	

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
✕ E8	2/c	#12	240'				ESSENTIAL 120VAC	GEN. 1 GOV. (VERIFY)	AUX. SWBD. PNL. 7 AUXR	E8-TRAYS 11B,8B
				E8	1"	38'		GEN. 1 GOV. (VERIFY)	TRAY 11B	
V86	2/c	#14	310'				START BUS ACB 722 STATUS	ACB 722	SUPV CNTL BD	TRAYS 27,2B,3B
V87	2/c	#14	385'				START BUS ACB 732 STATUS	ACB 732	SUPV CNTL BD	TRAYS 28,2A,3B
✕ 1V6	16/c 4QUAD	#18 SHD	260'				GEN. 1 STATOR RTD's PT. 1,2,3,4	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V6-TRAYS 11A,6B,1B,2B,3B
				1V6	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✕ 1V7	16/c 4QUAD	#18 SHD	260'				GEN. 1 STATOR RTD's PT. 5,6,7,8	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V7-TRAYS 11A,6B,1B,2B,3B
				1V7	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✕ 1V8	16/c 4QUAD	#18 SHD	260'				GEN. 1 STATOR RTD's PT.9,10,11,12	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V8-TRAYS 11A,6B,1B,2B,3B
				1V8	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✕ 1V9	16/c 4QUAD	#18 SHD	260'				GEN. 1 STATOR RTD's PT.13,14,15,16	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V9-TRAYS 11A,6B,1B,2B,3B
				1V9	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✕ 1V10	16/c 4QUAD	#18 SHD	260'				GEN. 1 OIL RES. & GUIDE BEARINGS	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V10-TRAYS 11A,6B,1B,2B,3B
				1V10	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✕ 1V11	16/c 4QUAD	#18 SHD	290'				TURBINE 1 RTD's	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V11-TRAYS 11A,6B,1B,2B,3B
				1V11	1"	58'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✕ 1V22	(F.V.)	(F.V.)	(F.V.)				GEN. 1 PIEZOMTRS. (FIELD VERIFY)	GEN. 1 PIEZOMETER MANIF. CAB.	SUPV. CONTROL BD. (SCADA)	1V22-TRAYS 11A,6B,1B,2B,3B
				1V22	(F.V.)	(F.V.)		GEN. 1 TERMINAL CABINET	TRAY 11A	
✕ 1V24	3 TRIAD	#18 SHD	270'				GEN. 1 GOVERNOR SLIDE WIRES	GEN. 1 ACTUATOR CABINET	SUPV. CONTROL BD. (SCADA)	1V24-TRAYS 11A,6B,1B,2B,3B
				1V24	1 1/4"	45'		GEN. 1 ACTUATOR CABINET	TRAY 11A	
✕ 1V25	2/c SHD	#18	270'				GEN. 1 RPM	GEN. 1 ACTUATOR CABINET	SUPV. CONTROL BD. (SCADA)	1V24-TRAYS 11A,6B,1B,2B,3B
										1V25 RUNS IN CONDUIT 1V24
5V32	5/c	#16	505'				START BUS MOD 757 STATUS	MOD SW 757	SUPV CNTL BD	TRAYS 19A,6D,1D,2D,3D
6V32	5/c	#16	60'				START BUS MOD 767 STATUS	MOD SW 767	SUPV CNTL BD	TRAYS 21A,6D,1D,2D,3D
7V32	5/c	#16	780'				START BUS MOD 777 STATUS	MOD SW 777	SUPV CNTL BD	TRAYS 23A,6C,1C,2C,3C
8V32	5/c	#16	785'				START BUS MOD 787 STATUS	MOD SW 787	SUPV CNTL BD	TRAYS 26A,6C,1C,2C,3C
12P96	3-1/c	#6	60'	12P96	1 1/2"	50'	ABCB COMPRESSOR FEEDER	MCC 12B	DUPLEX AIR COMPRESSOR	EXPOSED CONDUIT
3T9	5/c	#12	165'				MOD 300 CNTL	MOD 300	ABCB 750	B71 - TRAY 8D - 5G53
4T9	5/c	#12	90'				MOD 400 CNTL	MOD 400	ABCB 770	B72 - TRAY 8C - 7G53

NOTES:

1. HEAVIER GREEN TEXT INDICATES REMOVAL OF EXISTING CABLES AND EXPOSED CONDUIT. BLACK INDICATES EXISTING CONDUIT TO BE REUSED, ABANDONED, OR CUT OFF AS SHOWN ON THE PLANS. HEAVIER RED OR BLUE TEXT INDICATES NEW CABLES AND EXPOSED CONDUIT.
2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

✕ SYMBOL SIGNIFIES PARTIAL REMOVAL OF CABLES REQUIRED TO ACCOMMODATE THE TRAY 11A/B RELOCATION, IN ADDITION TO THOSE CABLES BEING REMOVED DUE TO CIRCUIT BREAKER REPLACEMENT; REMOVE CABLES FROM THE CONTROL ROOM SWITCHBOARDS TO A CUT POINT NEAR THE SPREAD ROOM. FIELD VERIFY LOCATION TO PROVIDE SUFFICIENT SLACK FOR RETERMINATION; TOTAL CABLE LENGTH IS SHOWN, FIELD VERIFY LENGTH OF CABLE TO BE REMOVED

✕✕ CABLE B150 IS ALSO BEING REMOVED DUE TO TRAY 11A/B RELOCATION, BUT WILL BE REMOVED IN ITS ENTIRETY

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES A, B, V, & MISC., SH. 1 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-150

SCALE: NONE SHEET 162

101RRP_E150_CC_ABV1.DGN
101RRP_TBLK.DGN

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11/03/2003
k6enxrdt

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
✳ A1	9/c	#16	255'				TURBINE 1 TROUBLE CONTACTS	TURBINE 1 TERMINAL CABINET	MAIN CNTL SWBD PNL 7F	A1 - TRAYS 11A, 2B
				A1	1 1/4"	58'		TURBINE 1 TERMINAL CABINET	TRAY 11A	
✳ A2	9/c	#16	235'				GEN. 1 TROUBLE CONTACTS	GEN. 1 TERMINAL CABINET	MAIN CNTL SWBD PNL 7F	A2 - TRAYS 11A, 2B
				A2	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✳ A5	9/c	#16	240'				GOV. 1 SUMP TANK & GEN. COOL.	GEN. 1 ACTUATOR	MAIN CNTL SWBD PNL 7F	A5 - TRAYS 11B, 2B
				A5	1 1/4"	45'		GEN. 1 ACTUATOR	TRAY 11B	
✳ A6	9/c	#16	240'				GEN. 1 BEARING OIL TEMP. IND.	GEN. 1 ACTUATOR	MAIN CNTL SWBD PNL 7F	A6 - TRAYS 11B, 2B
				A6	1 1/4"	45'		GEN. 1 ACTUATOR	TRAY 11B	
B2	2/c	#12	145'				UNIT #1 MAIN GCB 710 CONTROL	PNL 10 AUXR CIRCUIT 2	GCB 710 CONTROL CABINET	TRAYS 8B, 31
B8	2/c	#12	245'				UNIT #2 MAIN GCB 720 CONTROL	PNL 10 AUXR CIRCUIT 8	GCB 720 CONTROL CABINET	TRAYS 8B, 32
B14	2/c	#12	285'				UNIT #3 MAIN GCB 730 CONTROL	PNL 10 AUXR CIRCUIT 14	GCB 730 CONTROL CABINET	TRAYS 8A, 33
B21	2/c	#12	385'				UNIT #4 MAIN GCB 740 CONTROL	PNL 10 AUXR CIRCUIT 21	GCB 740 CONTROL CABINET	TRAYS 8A, 34
B29	2/c	#12	440'				UNIT #5 MAIN GCB 750 CNTL	AUX SWBD PNL 9 AUXR	GCB 750 CNTL CABINET	TRAYS 8D, 19A, 35
B36	2/c	#12	630'				UNIT #6 MAIN GCB 760 CNTL	AUX SWBD PNL 9 AUXR	GCB 760 CNTL CABINET	TRAYS 8D, 21A, 36
B41	2/c	#12	XXX'				GCB 767 CONTROL	AUX SWBD PNL 9 AUXR	GCB 767 CNTL CABINET	TRAYS XX
B43	2/c	#12	565'				UNIT #7 MAIN GCB 770 CNTL	AUX SWBD PNL 9 AUXR	GCB 770 CNTL CABINET	TRAYS 8D, 23A, 37
B48	2/c	#12	XXX'				GCB 777 CONTROL	AUX SWBD PNL 9 AUXR	GCB 777 CNTL CABINET	TRAYS XX
B50	2/c	#12	705'				UNIT #8 MAIN GCB 780 CNTL	AUX SWBD PNL 9 AUXR	GCB 780 CNTL CABINET	TRAYS 8C, 26A, 38
B59	2/c	#12	XXX'				GCB 901 CONTROL	AUX SWBD PNL 9 AUXR	GCB 901 CNTL CABINET	TRAYS XX
B60	2/c	#12	XXX'				SFC CONTROL	AUX SWBD PNL 9 AUXR	SFC CNTL CABINET	TRAYS XX
B150	2/c	350 kcmil	170'				EMERGENCY LIGHTING PANEL	AUX SWBD PNL 6AUXR	EMERGENCY LTG. PNL. EPD	TRAYS 8A, 11B - B150 ✳✳
				B150	3"	5'		TRAY 11B	EMERGENCY LTG. PNL. EPD	

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
✳ E8	2/c	#12	260'				ESSENTIAL 120VAC	GEN. 1 GOV. (VERIFY)	AUX. SWBD. PNL. 7 AUXR	E8-TRAYS 11B,8B
				E8	1"	38'		GEN. 1 GOV. (VERIFY)	TRAY 11B	
V86	2/c	#12	XXX'				GCB 767 STATUS	GCB 767	SUPV. CONTROL BD. (SCADA)	TRAYS XX
V87	2/c	#12	XXX'				GCB 777 STATUS	GCB 777	SUPV. CONTROL BD. (SCADA)	TRAYS XX
V88	2/c	#12	XXX'				GCB 901 STATUS	GCB 901	SUPV. CONTROL BD. (SCADA)	TRAYS XX
V89	5/c	#12	XXX'				SFC STATUS	SFC	SUPV. CONTROL BD. (SCADA)	TRAYS XX
✳ 1V6	16/c 4QUAD	#18 SHD	280'				GEN. 1 STATOR RTD's PT. 1,2,3,4	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V6-TRAYS 11A,6B,1B,2B,3B
				1V6	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✳ 1V7	16/c 4QUAD	#18 SHD	280'				GEN. 1 STATOR RTD's PT. 5,6,7,8	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V7-TRAYS 11A,6B,1B,2B,3B
				1V7	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✳ 1V8	16/c 4QUAD	#18 SHD	280'				GEN. 1 STATOR RTD's PT.9,10,11,12	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V8-TRAYS 11A,6B,1B,2B,3B
				1V8	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✳ 1V9	16/c 4QUAD	#18 SHD	280'				GEN. 1 STATOR RTD's PT.13,14,15,16	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V9-TRAYS 11A,6B,1B,2B,3B
				1V9	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✳ 1V10	16/c 4QUAD	#18 SHD	280'				GEN. 1 OIL RES. & GUIDE BEARINGS	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V10-TRAYS 11A,6B,1B,2B,3B
				1V10	1 1/4"	38'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✳ 1V11	16/c 4QUAD	#18 SHD	310'				TURBINE 1 RTD's	GEN. 1 TERMINAL CABINET	SUPV. CONTROL BD. (SCADA)	1V11-TRAYS 11A,6B,1B,2B,3B
				1V11	1"	58'		GEN. 1 TERMINAL CABINET	TRAY 11A	
✳ 1V22	(F.V.)	(F.V.)	(F.V.)				GEN. 1 PIEZOMTRS. (FIELD VERIFY)	GEN. 1 PIEZOMETER MANIF. CAB.	SUPV. CONTROL BD. (SCADA)	1V22-TRAYS 11A,6B,1B,2B,3B
				1V22	(F.V.)	(F.V.)		GEN. 1 TERMINAL CABINET	TRAY 11A	
✳ 1V24	3 TRIAD	#18 SHD	290'				GEN. 1 GOVERNOR SLIDE WIRES	GEN. 1 ACTUATOR CABINET	SUPV. CONTROL BD. (SCADA)	1V24-TRAYS 11A,6B,1B,2B,3B
				1V24	1 1/4"	45'		GEN. 1 ACTUATOR CABINET	TRAY 11A	
✳ 1V25	2/c SHD	#18	290'				GEN. 1 RPM	GEN. 1 ACTUATOR CABINET	SUPV. CONTROL BD. (SCADA)	1V24-TRAYS 11A,6B,1B,2B,3B
										1V25 RUNS IN CONDUIT 1V24
5V32	5/c	#16	XXX'				START BUS SWITCH 759 STATUS	GCB 750	SUPV. CONTROL BD. (SCADA)	TRAYS XX
6V32	5/c	#16	XXX'				START BUS SWITCH 769 STATUS	GCB 760	SUPV. CONTROL BD. (SCADA)	TRAYS XX
7V32	5/c	#16	XXX'				START BUS SWITCH 779 STATUS	GCB 770	SUPV. CONTROL BD. (SCADA)	TRAYS XX
8V32	5/c	#16	XXX'				START BUS SWITCH 789 STATUS	GCB 780	SUPV. CONTROL BD. (SCADA)	TRAYS XX
3T9	3/c	#12	165'				MOD 300 CNTL	MOD 300	GCB 750	B71 - TRAYS 8D, 19A, 35
3T11	3/c	#12	XXX'				MOD 300 CNTL	MOD 300	GCB 767	TRAYS XX
3T12	4/c	#10	XXX'				TRANSF. NO. 3 DIFF. RELAYING	GCB 767	AUX SWBD PNL 14AUXF	TRAYS XX
4T9	3/c	#12	90'				MOD 400 CNTL	MOD 400	GCB 770	B72 - TRAYS 8C, 23A, 37
4T11	3/c	#12	XXX'				MOD 400 CNTL	MOD 400	GCB 777	TRAYS XX
4T12	4/c	#10	XXX'				TRANSF. NO. 4 DIFF. RELAYING	GCB 777	AUX SWBD PNL 14AUXF	TRAYS XX

NOTES:

1. HEAVIER GREEN TEXT INDICATES REMOVAL OF EXISTING CABLES AND EXPOSED CONDUIT. BLACK INDICATES EXISTING CONDUIT TO BE REUSED, ABANDONED, OR CUT OFF AS SHOWN ON THE PLANS. HEAVIER RED OR BLUE TEXT INDICATES NEW CABLES AND EXPOSED CONDUIT.
2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

✳ SYMBOL SIGNIFIES REINSTALLATION OF EXISTING CABLES AND INSTALLATION OF NEW CABLE SEGMENTS REQUIRED TO ACCOMMODATE THE TRAY 11A/B RELOCATION; ROUTE EXISTING CABLES FROM THE UNIT 1 EQUIPMENT IN THE NEW TRAY 11A/B SEGMENTS AND TERMINATE ON BLOCKS IN A NEW CABINET NEAR THE SPREAD ROOM; PROVIDE NEW CABLES FROM THE CONTROL ROOM SWITCHBOARDS TO THE NEW TERMINAL CABINET; TOTAL CABLE LENGTH (NEW + EXISTING) IS SHOWN, FIELD VERIFY LENGTH OF NEW CABLE SEGMENTS

✳✳ CABLE B150 IS ALSO BEING REPLACED DUE TO TRAY 11A/B RELOCATION, BUT WILL BE INSTALLED IN ITS ENTIRETY

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FINALIZED LATER

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
CABLES A, B, V, & MISC. SH. 2 OF 2
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-151

SCALE: NONE SHEET 163

101RRP_E151_CC_ABV2.DGN
101RRP_TBLK.DGN

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11/03/2003
k6enxrdt

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
X1	5/c	#12	XXX'				GCB 767 STATUS	SFC	GCB 767	TRAYS XX
X2	5/c	#12	XXX'				GCB 767 CONTROL	SFC	GCB 767	TRAYS XX
X3	5/c	#12	XXX'				GCB 777 STATUS	SFC	GCB 777	TRAYS XX
X4	5/c	#12	XXX'				GCB 777 CONTROL	SFC	GCB 777	TRAYS XX
X5	5/c	#12	XXX'				GCB 901 STATUS	SFC	GCB 901	TRAYS XX
X6	5/c	#12	XXX'				GCB 901 CONTROL	SFC	GCB 901	TRAYS XX
X7	5/c	#12	XXX'				SFC INPUT XFMR T1 STATUS	SFC	SFC INPUT XFMR T1	TRAYS XX
X8	5/c	#12	XXX'				SFC INPUT XFMR T2 STATUS	SFC	SFC INPUT XFMR T2	TRAYS XX
X9	5/c	#12	XXX'				SFC OUTPUT XFMR T1 STATUS	SFC	SFC OUTPUT XFMR T1	TRAYS XX
X10	5/c	#12	XXX'				SFC OUTPUT XFMR T2 STATUS	SFC	SFC OUTPUT XFMR T2	TRAYS XX
X11	5/c	#12	XXX'				SFC XFMR SWITCH STATUS	SFC	SFC XFMR SWITCH	TRAYS XX
X12	5/c	#12	XXX'				SFC BYPASS SWITCH STATUS	SFC	SFC BYPASS SWITCH	TRAYS XX
X13	2/c	#12	XXX'				SFC INPUT FILTER 1 STATUS	SFC	INPUT FILTER 1	TRAYS XX
X14	2/c	#12	XXX'				SFC INPUT FILTER 2 STATUS	SFC	INPUT FILTER 2	TRAYS XX
X15	5/c	#12	XXX'				MISC. SFC STATUS	SFC	MAIN CNTL SWBD PNL 14F	TRAYS XX
X16	9/c	#12	XXX'				MISC. SFC CONTROL	SFC	MAIN CNTL SWBD PNL 14F	TRAYS XX

CABLE NO.	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUCTOR LENGTH	CONDUIT NO.	CONDUIT SIZE	CONDUIT LENGTH	FUNCTION	FROM	TO	ROUTINGS AND REMARKS
X21	12/c	#12	XXX'				PUMP CONTROL	GCB 767	GCB 777	TRAYS XX
X22	12/c	#12	XXX'				PUMP CONTROL	GCB 777	GCB 901	TRAYS XX
X23	9/c	#12	XXX'				GCB 767 CONTROL	GCB 767	MAIN CNTL SWBD PNL 14F	TRAYS XX
X24	9/c	#12	XXX'				GCB 777 CONTROL	GCB 777	MAIN CNTL SWBD PNL 14F	TRAYS XX
X25	9/c	#12	XXX'				GCB 901 CONTROL	GCB 901	MAIN CNTL SWBD PNL 14F	TRAYS XX
X26	4/c	#10	XXX'				STARTING BUS DIFFERENTIAL	GCB 901	AUX SWBD PNL 14AUXR	TRAYS XX

NOTES:

1. HEAVIER GREEN TEXT INDICATES REMOVAL OF EXISTING CABLES AND EXPOSED CONDUIT. BLACK INDICATES EXISTING CONDUIT TO BE REUSED, ABANDONED, OR CUT OFF AS SHOWN ON THE PLANS. HEAVIER RED OR BLUE TEXT INDICATES NEW CABLES AND EXPOSED CONDUIT.
2. ALL LENGTHS SHOWN ARE APPROXIMATE, FIELD VERIFY.

BLUE LINES AND TEXT IDENTIFY SFC-RELATED EQUIPMENT, FOR GOVERNMENT PURPOSES, CABLE DATA TO BE FINALIZED LATER

SYMBOL	ZONE	DESCRIPTION	DATE	BY
		REVISIONS		

HYDROELECTRIC DESIGN CENTER
PORTLAND DISTRICT
PORTLAND, OREGON

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

RICHARD B. RUSSELL POWER PLANT
CIRCUIT BREAKER & STATIC START INSTALL
CABLE AND CONDUIT SCHEDULES
STATIC FREQUENCY CONTROLLER
SAVANNAH RIVER GEORGIA AND S. CAROLINA

SIZE	SOLICITATION NO.	FILE NO.	PLATE
F	DACW21-03-B-0011	RBR-107	E-152

SCALE: NONE SHEET 164

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