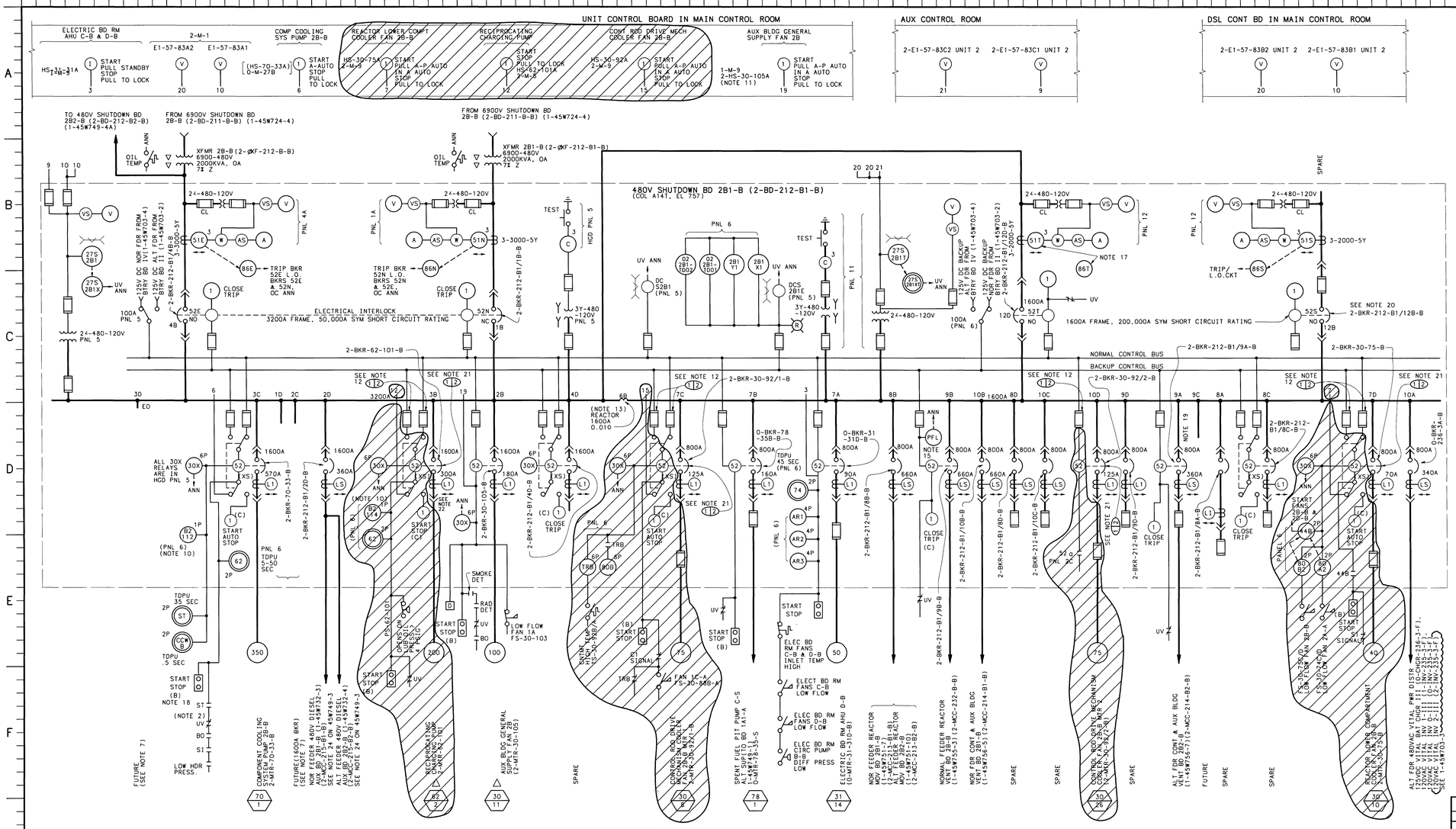

NOTES:

1. ALL 800A FRAME BREAKERS WITH INSTANTANEOUS OVERCURRENT TRIP DEVICES HAVE AN INTERRUPTING RATING OF 30,000 RMS SYMMETRICAL AMPERES. AND 800A BREAKERS WITH SELECTIVE OVERCURRENT TRIP DEVICES HAVE A MINIMUM INTERRUPTING RATING OF 22,000 RMS SYMMETRICAL AMPERES.
2. THESE CONTACTS ARE ON SEQUENTIAL TIMER (LOCATED ON SHUTDOWN BD LOGIC RELAY PANEL) THAT APPLIES LOAD SEQUENTIALLY TO THE DIESEL GENERATOR.
3. LOAD SHEDDING IS ACCOMPLISHED BY RELAYS LOCATED ON SHTDN BD LOGIC RELAY PANEL (SEE 1-45W724-4 & 1-45W760-211-SERIES).
4. ALL FUSES IN DC CIRCUITS ARE BUSSMAN.
5. EQUIPMENT DESIGNATIONS FOR EQUIP SHARED BY BOTH UNITS WILL HAVE A PREFIX (O).
6. CLASS 1E LS AMPTECTORS ON DS-206 AND DS-416 BREAKERS THAT ARE REQUIRED TO COORDINATE WITH DOWNSTREAM CLASS 1E LOAD BREAKERS MUST HAVE THE DISCRIMINATOR CIRCUIT DISABLED (SEE TABLE).
7. ALL FUTURE BREAKERS MARKED EQ ARE WIRED TO ACCOMMODATE ELECTRICALLY OPERATED BREAKERS. ALL OTHERS ARE TO BE MANUALLY OPERATED.
8.
9. CONTROL SWITCH(C) REPRESENTS BACKUP CONTROL, (B) REPRESENTS LOCAL CONTROL. (XS) REPRESENTS NOR TO AUX TRANSFER SWITCH.
10. RELAYS B2-112 & B2-114 (COMPTS 3B & 3C) ARE NOT SUPPLIED BY THE BD MFR. FIELD TO INSTALL.
11. UNIT 2. 2-HS-30-105A IS LOCATED ON UNIT 1 PNL 1-M-9.
12. (1)(2) IDENTIFIES U1/U2 INTERFACE POINTS. CONTROL POWER FUSES ARE REMOVED IN COMPARTMENTS 3B, 7C, 7D, & 10D.
13. CURRENT LIMITING REACTORS FOR 480V SHUTDOWN BOARD (TVA CONTRACT 90NNQ-75767A).
14. THE CURRENT LIMITING REACTOR BYPASS BREAKER SHALL BE MANUALLY TRIPPED PRIOR TO CLOSING OF THE 6.9KV SHUTDOWN BOARD SUPPLY BREAKERS FROM CSST C, CSST D OR THE 6.9KV UNIT BOARDS.
15. POWER FAILURE RELAY 2-74-212-9BB-B.
16. FOR LOSS OF VOLTAGE OR A BOARD UNDERVOLTAGE CONDITION, THE TARGET ON UNDERVOLTAGE RELAY 27S2B1T WILL OPERATE BUT THE TARGET ON UNDERVOLTAGE RELAY 27S2B1 MAY OR MAY NOT OPERATE.
17. DEVICES 51T AND 86T ARE ABANDONED IN-PLACE. NO PERIODIC MAINTENANCE AND SURVEILLANCE TESTS ARE REQUIRED.
18. CABLE DISCONNECTED - NOT CURRENTLY USED.
19. DUE TO THE POTENTIAL FOR MULTIPLE HIGH IMPEDANCE FAULTS DURING AN APPENDIX R FIRE, THE BREAKER IDENTIFIED BY THIS NOTE SHALL BE OPEN. HOWEVER, IF FOR OPERATIONAL NEEDS, THE BREAKER MUST BE TEMPORARILY CLOSED, SEE THE FIRE PROTECTION REPORT, PART II, OPERATING REQUIREMENT (OR) SECTIONS 14.10.2 AND B14.10.2 FOR ACCEPTABLE OPERATING DURATION AND CONDITIONS. AS A SEPARATE ALTERNATE FEEDER ISSUE, SEE DRAWING 1-15E500-2 FOR ADDITIONAL RESTRICTIONS WHICH MAY RESULT IN A TECHNICAL SPECIFICATION ACTION.
20. SPARE BREAKER IS NOT TO BE USED AS A SUBSTITUTE FOR THE TIE BREAKER.
21. (1)(2) IDENTIFIES U1/U2 INTERFACE POINTS. THE BREAKER IS EITHER "REMOVED" OR LOCKED IN THE OPEN POSITION.
22. IN COMPARTMENT 3B THE LOAD CABLE IS DETERMINATED.

REFERENCE DRAWINGS:
1-45W760-SYSTEM NO----SHEET NO-----480V SHTDN BD SCHEMATICS.

(W)6947D71-D79
(W)618F940,941
9277D69
9277D70
} 480V SHTDN BD INTERNAL CONNECTIONS (TVA CONTRACT NO. 74-84647)

45W2748 SERIES-----480V SHUTDOWN BD EXTERNAL CONNECTIONS

(W)618F905-1 - VENDOR ONE LINE DWG
6946D28-1 - FRONT VIEW DWG
6946D29-1 - SECTION DWG
6946D32-1 - BILL OF MATERIAL
} (TVA CONTRACT 90NNQ-75767A)

6503C91-1 THRU C97-1
6504C02-1, 6504C24-1
} BUS CONNECTION AND REACTOR MOUNTING DETAIL

SYMBOLS:

(L1) SOLID STATE OVERCURRENT TRIP DEVICE WITH LONG DELAY AND INSTANTANEOUS TRIP RANGES, BREAKER TRIP SETTING IS INDICATED

(LS) SOLID STATE OVERCURRENT TRIP DEVICE WITH LONG DELAY AND SHORT DELAY TRIP RANGES, BREAKER TRIP SETTING IS INDICATED

△ -----EQUIP MARKED IN THIS MANNER IS NOT SAFETY RELATED

(30) -----EQUIPMENT SYSTEM NUMBER
(1) -----SCHEMATIC SHEET NUMBER IN SERIES 1-45W760

(PFL) -----POWER FAILURE RELAY

✱ -----BREAKER DISCRIMINATOR DEVICE HAS BEEN DISABLED (NC09200D4003)

LOW VOLTAGE AIR CIRCUIT BKR TYPE	TRIP DEVICE SENSOR RATING (IN AMPS)	SETTINGS P.U. IN I SEN RATE LONG DELAY	SHORT DELAY	INST	TIME DELAY LONG D IN SEC.	SHORT D IN SEC.	BKR LOCATION
DS-632	NON-AUTO	-	-	-	-	-	1B, 4B
DS-416	200	88	-	800	4	-	2B
✱	600	60	600	-	8	0.18	2D
DS-416	400	75	-	1000	20	-	3B
DS-416	600	95	-	800	4	-	3C
			-			-	4D(SP)
DS-206	100	90	-	800	6	-	7A
	200	80	-	700	4	-	7B
	200	60	-	900	12	-	7C
	100	70	-	1000	12	-	7D
DS-206			-	-			8A(SP)
✱	600	110	600	-	6	0.18	8B
			-			-	8C(SP)
				-			8D(SP)
✱✱	600	60	600	-	8	0.18	9A
✱✱	600	110	600	-	6	0.18	9B
			-			-	9D(SP)
✱✱	400	85	800	-	6	0.18	10A
✱✱	600	110	600	-	6	0.18	10B
				-			10C(SP)
	200	60	-	900	12	-	10D
DSL-416	NON-AUTO	-	-	-	-	-	12B(SP)
DSL-416	NON-AUTO	-	-	-	-	-	12D

FSAR FIG 8.3-22A

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
38	52285	ESJ	JEW		10-7-09

REVISED PER DCA 52285-109-0.

SCALE: NTS — EXCEPT AS NOTED

PROJECT FACILITY
AUXILIARY BUILDING
UNIT 2

TITLE
WIRING DIAGRAMS 480V SHUTDOWN BD 2B1-B SINGLE LINE

1 — WATTS BAR NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY

DESIGN		INITIAL ISSUE	ENGINEERING APPROVAL
DRAFTER C.N.CLABOUGH	CHECKER E.H.BUSH	RO ISSUE PER DCN W-21353-A DCA W21353-6-0	1 NR
DESIGNER M.L.CHAPMAN	REVIEWER NR		2 NR
			3 C.C.LYKE FOR MCB

ISSUED BY: G.E.GIBSON

DATE 1-29-93 | 85 | E | 1-45W749-3A | R38

PRINTS REQ'D R ____ PRINT SIZE F BR OR PROJ AB CE EE ME NE FE HE SE TE BL BF WB SQ — PRINT SIZE H BR OR PROJ AB CE EE ME NE FE HE SE TE BL BF WB SQ

CAD MAINTAINED DRAWING

CONFIGURATION CONTROL DRAWING