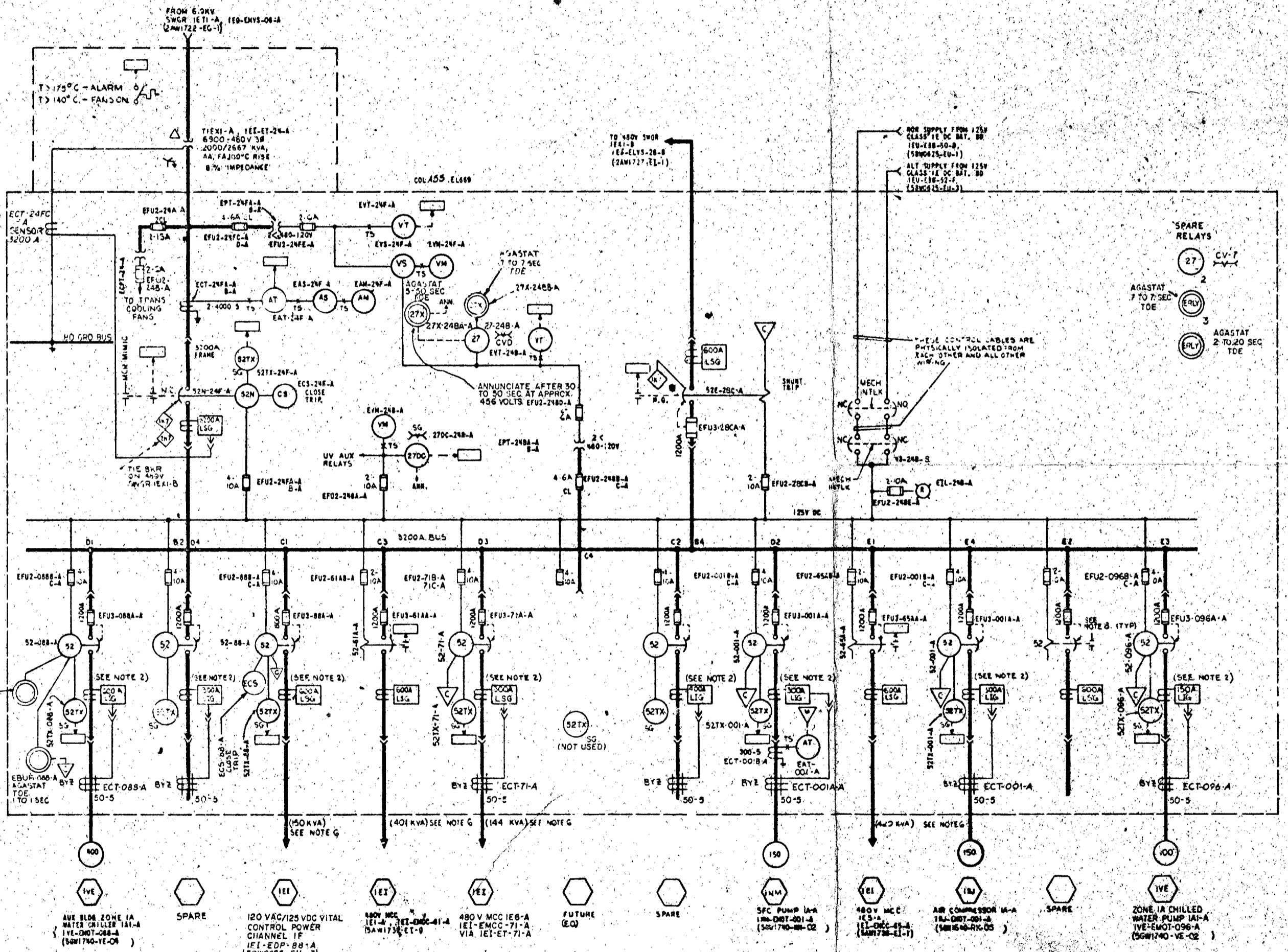


REFERENCE DESIGN	
DESIGN NUMBER	PLANT 40 AUXILIARY POWER SYSTEM SIMULA 1100
REV	50W170-EC-2
DATE	5/25/83

- NOTES:
- 400V SWGR PROVIDED ON CONTRACT NO. TGN-3-8552C
  - ALL CBT SWGR ARE 3-POLE, 600A FR WITH REAR MOUNTED CURRENT LIMITING FUSE ON LINE SIDE OF EACH POLE, EXCEPT AS NOTED.  
600A FR DEVS HAVE 200,000 RMS SYM INTERRUPTING RATING AT 400V.  
3000A FR DEVS HAVE 60,000 RMS SYM INTERRUPTING RATING AT 400V.  
AS NOTED, DEVS ARE EQUIPPED WITH AN ELECTRICAL LOCK-OUT ATTACHMENT ACTIVATED WHEN BARR IS TRIPPED AUTOMATICALLY BY THE AMPACTOR.
  - RELAYS SHALL BE THE TYPES SHOWN ON THIS DRAWING OR TYP APPROVED EQUAL.



- THIS SWGR IS SUBJECT TO ALL REQUIREMENTS FOR CLASS 1E ELEC. EQPT.
- EACH DEVICE ASSOCIATED WITH THE SWGR BUS, TRANSFORMER, AND THE NORMAL OR TIE CBT, BARR, IS PART OF THE 400V CLASS 1E AC AUX PWR DISTRIBUTION SYS WITH UNIT AND SYS DESIGNATION, I.E., THE DEVICE UNIT IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWG. WITH 1E1, EXCEPT AS NOTED. ALL OTHER DEVS WITH THEIR ASSOCIATED DEVICES ARE PART OF THE SYS WHICH THEY SUPPLY. THE UNIT IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWG WITH THE UNIT AND SYS DESIGNATION SHOWN IN THE HEADON SYMBOL, EXCEPT AS NOTED. THE SWGR FR NO. AND DESIGNATIONS ARE FORMED AS FOLLOWS USING THE FR NO. (EX), AND THE FRAM DESIGNATION (VIA OR B - 1E1-ELVS-248X-Y).

- KVA LOADS SHOWN ARE ESTIMATED MAXIMUM
- SEE DWS 2307014-R7 FOR LOADS THAT REQUIRE DIESEL PWR
- BLOWN FUSE TAPS BREAKER.

- SYMBOLS:
- (with LSG) SOLID STATE TRIP DEVICE WITH SENSOR RATING SHOWN
  - ⊖ LONG TIME DELAY (OVERLOAD)
  - ⊖ (with LSG) SHORT TIME DELAY (SELECTIVE TRIP)
  - ⊖ (with LSG) INSTANTANEOUS (FAULT CURRENT)
  - ⊖ (with LSG) GROUND (FAULT CURRENT)
  - ⊖ INTERFACE FOR STATUS, ENVIRONMENTAL SYSTEM DEVS.
  - ▽ CONNECTION TO REMOTE METER (UNIT CONTROL ROOM)
  - ⊖ INTERFACE FOR REMOTE CONTROL
  - ⊖ PRIMARY CONTAINMENT PENETRATION
  - ⊖ KEY INTERLOCK
  - ⊖ (with LSG) UNIT AND SYS DESIGNATION (SEE NOTE 3)
  - ⊖ (with LSG) RED INDICATING LIGHT
  - AMB. THIS FUNCTION TO BE MONITORED BY ONE OR MORE ANNUNCIATION OR ALARM SYSTEMS.
  - ⊖ WHEN BREAKER IS IN RACKED OUT (DISCONNECTED) POSITION USE SHIPPING BRACKETS TO INSURE STABILITY. DO NOT LEAVE BREAKER IN TEST POSITION.

Control # 50-436  
8344050536  
Date 5-25-83  
REGULATORY DOCKET FILE

PRC  
APERTURE  
CARD

REV	DATE	DESCRIPTION	BY	CHKD
1	5-25-83	GEN REV PER ECN 51 - VARIOUS UNDISCONNECTED UNDERVOLTAGE LOAD-SHEDDING RELAYS PER ECN 345		
2	5-25-83	REDESIGNED SWGR PER ECN 345 - VARIOUS METER CAP PER ECN 345		
3	5-25-83	ADDED COOLING FANS TO 480V SWGR TRANSFORMERS		
4	5-25-83	CHG 480V DISTR. SYS FROM DELTA TO GRD WYE AND ADDED 480V FAULT PROT PER ECN 12, REV LOADS PER ECN 20 ADDED 480V MCC IES A PER ECN 18		

AUXILIARY BUILDING  
UNIT 1

SINGLE LINE DIAGRAM  
480V SWITCHGEAR 1E1-A  
1E1-ELVS-24-A

BELLEFONTE NUCLEAR PLANT  
TENNESSEE VALLEY AUTHORITY  
DIVISION OF ENGINEERING DESIGN

SUBMITTED: [Signature]  
RECOMMENDED: [Signature]  
APPROVED: [Signature]

DESIGN PROJECT NUMBER: 2AW1726-EI-1  
45 W 719 FSAR

PRINTED ON 20# 50 LB PAPER

REV	DATE	DESCRIPTION
1	5-25-83	GEN REV PER ECN 51 - VARIOUS UNDISCONNECTED UNDERVOLTAGE LOAD-SHEDDING RELAYS PER ECN 345
2	5-25-83	REDESIGNED SWGR PER ECN 345 - VARIOUS METER CAP PER ECN 345
3	5-25-83	ADDED COOLING FANS TO 480V SWGR TRANSFORMERS
4	5-25-83	CHG 480V DISTR. SYS FROM DELTA TO GRD WYE AND ADDED 480V FAULT PROT PER ECN 12, REV LOADS PER ECN 20 ADDED 480V MCC IES A PER ECN 18