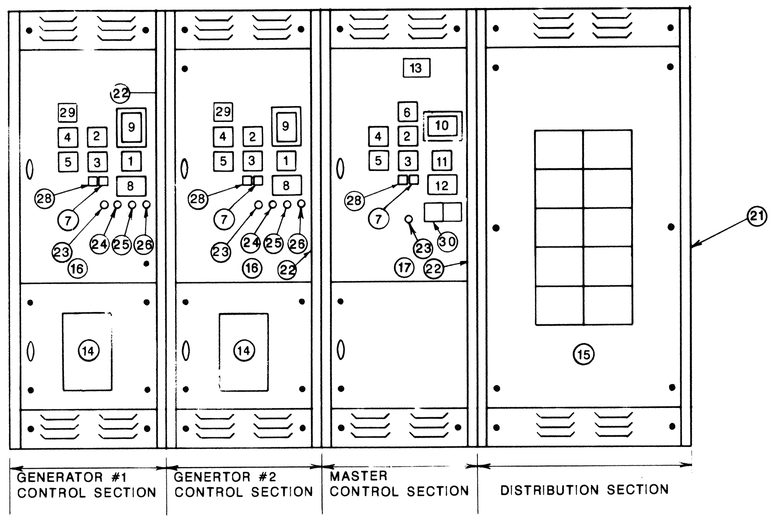
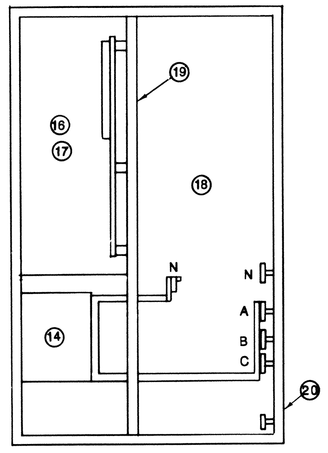


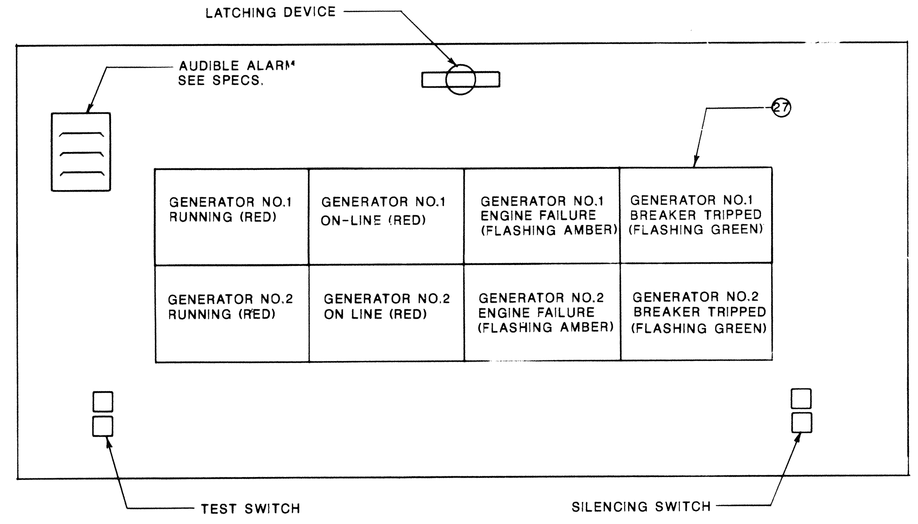
SYNCHRONIZING SWITCHBOARD "ES" FRONT ELEVATION
NO SCALE



SIDE ELEVATION

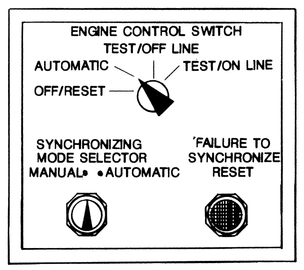
ESSENTIAL ELECTRICAL SYSTEM DETAIL LEGEND

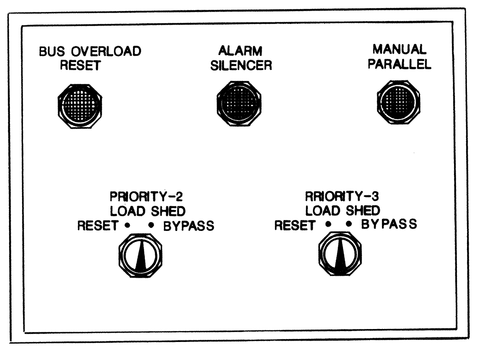
NO.	ITEM
1.	RUNNING TIME METER
2.	AMMETER (GEN) 1000A (MASTER) 2000A
3.	VOLTMETER 600V
4.	WATTMETER (GEN) 500 KW (MASTER) 1000 KW
5.	FREQUENCY METER 55-65 HZ
6.	SYNCHROSCOPE
7.	VOLTMETER SWITCH L-L (3 PHASE) L-N (3 PHASE)
8.	GEN. CONTROL STATION-SEE DETAIL THIS SHEET
9.	GEN. STATUS PANEL-SEE DETAIL THIS SHEET
10.	SYSTEM STATUS PANEL-SEE DETAIL THIS SHEET
11.	SYNCHROSCOPE SW.
12.	SYSTEM CONTROL STATION-SEE DETAIL THIS SHEET
13.	ALARM HORN
14.	DRAWOUT TYPE PARALLELING CIRCUIT BREAKER (QUICK CLOSE)
15.	MOLDED CASE-CIRCUIT BREAKER DISTRIBUTION SECTION
16.	GENERATOR CONTROL SECTION
17.	MASTER SYNCHRONIZING CONTROL SECTION
18.	BUSSING & CABLING COMPARTMENT
19.	STEEL BARRIER
20.	GROUND BUS
21.	REMOVABLE SIDE PANELS
22.	PIANO HINGE
23.	EMERGENCY STOP-MUSHROOM HEAD-RED P.B.
24.	COOLANT TEMPERATURE GAUGE
25.	LUBE OIL PRESSURE GAUGE
26.	FUEL PRESSURE GAUGE
27.	BACKLIGHTED INDICATORS
28.	AMMETER SELECTOR
29.	TACHOMETER 0-2500 RPM
30.	GENERATOR CIRCUIT BREAKER CONTROLS SWITCHES



NOTE: LOCATED AT THE BOILER PLANT-BLDG.108

REMOTE DERANGEMENT PANEL
NO SCALE



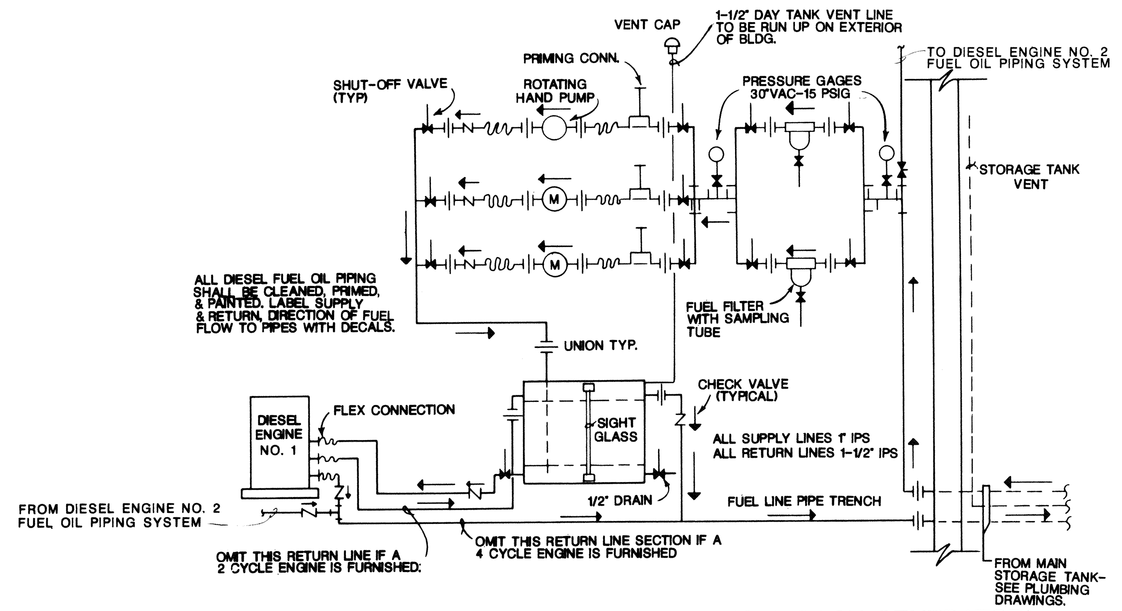


ITEM NO. 8
GENERATOR CONTROL STATION (2-THUS)
NO SCALE

ITEM NO. 12
SYSTEM CONTROL STATION
NO SCALE

E/G 1 RUNNING (GREEN)	E/G 1 ON LINE (GREEN)	E/G 1 LOCKOUT (RED)	E/G 1 REVERSE POWER SHUTDOWN (RED)	E/G 1 CB TRIP SHUTDOWN (RED)
E/G 2 RUNNING (GREEN)	E/G 2 ON LINE (GREEN)	E/G 2 LOCKOUT (RED)	E/G 2 REVERSE POWER SHUTDOWN (RED)	E/G 2 CB TRIP SHUTDOWN (RED)
MANUAL PARALLEL AVAILABLE (GREEN)	BUS UNDERFREQ. ALARM (AMBER)	PRIORITY 2 LOAD SHED (AMBER)	PRIORITY 3 LOAD SHED (AMBER)	ATS 'LS' CONNECTED TO NORMAL (AMBER)
E/G 1 NOT IN AUTOMATIC (RED)	E/G 2 NOT IN AUTOMATIC (RED)	PRIORITY 2 LOAD SHED BYPASS (AMBER)	PRIORITY 3 LOAD SHED BYPASS (AMBER)	ATS 'LS' CONNECTED TO EMERGENCY (GREEN)
● LAMP TEST	ATS 'EQ' CONNECTED TO NORMAL (AMBER)	ATS 'EQ' CONNECTED TO EMERGENCY (GREEN)	ATS 'C' CONNECTED TO NORMAL (AMBER)	ATS 'C' CONNECTED TO EMERGENCY (GREEN)

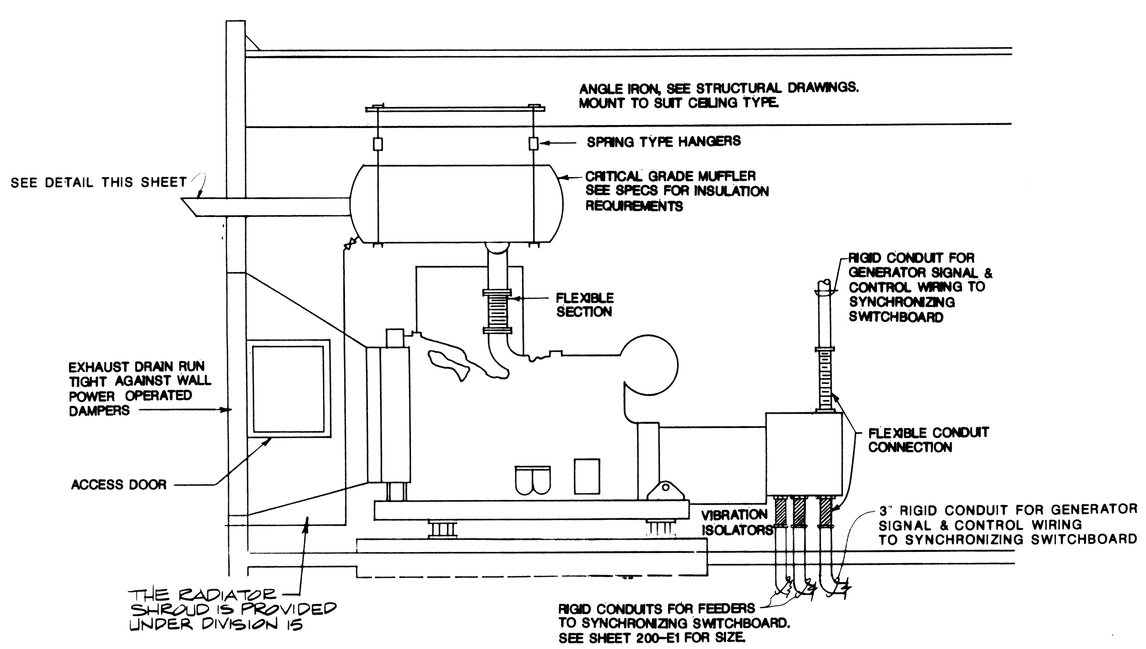
ITEM NO. 10
SYSTEM STATUS PANEL
NO SCALE



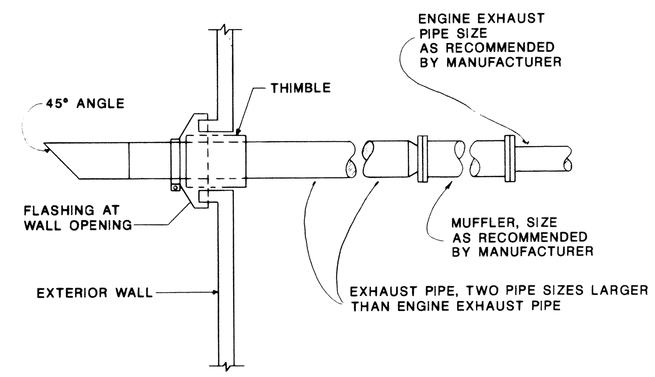
FUEL OIL PIPING SCHEMATIC DETAIL (TYPICAL EACH GENERATOR)
NO SCALE

ENGINE RUNNING (GREEN)	CIRCUIT BREAKER OPEN (AMBER)	CIRCUIT BREAKER CLOSED (GREEN)	CIRCUIT BREAKER TRIP SHUTDOWN (RED)	GEN. CONNECTED TO BUS (GREEN)
OVER CRANK SHUTDOWN (RED)	OVER SPEED SHUTDOWN (RED)	LOW OIL PRESSURE SHUTDOWN (RED)	HIGH COOLANT TEMP SHUTDOWN (RED)	REVERSE POWER SHUTDOWN (RED)
LOW FUEL DAY TANK (AMBER)	LOW FUEL MAIN TANK (AMBER)	LOW OIL PRESSURE PRE-ALARM (AMBER)	HIGH COOLANT TEMP PRE-ALARM (AMBER)	BATTERY CHARGER FAILURE (AMBER)
CONTROL NOT IN AUTOMATIC (RED)	LOW COOLANT TEMP ALARM (AMBER)	SPARE	SPARE	SPARE
● LAMP TEST	SPARE	FAILURE TO SYNCH.	SPARE	SPARE

ITEM NO. 9
GENERATOR STATUS PANEL (2-THUS)
NO SCALE



EMERGENCY GENERATOR ELEVATION (2-THUS)
NO SCALE



EMERGENCY GENERATOR EXHAUST DETAIL (TYPICAL EACH GENERATOR)
NO SCALE

7-4-2-0490

D. NASH, JR. REGISTERED ENGINEER 10,900 STATE OF TENNESSEE

GRESHAM, SMITH AND PARTNERS
310 Vaart End Avenue, Post Office Box 1625
Nashville, Tennessee 37202-1625

AREAS OF NEW CONSTRUCTION ARE FULLY PROTECTED BY AN AUTOMATIC FIRE EXTINGUISHMENT SYSTEM

PROJECT TITLE: BED TOWERS/ RENOVATION PHASE 2
LOCATION: VAMC MOUNTAIN HOME, TN.
BLDG NO.: 200
DRAWN BY: MSM
DRAWING TITLE: ESSENTIAL ELECTRICAL SYSTEM DETAILS/ BLDG.200
PROJECT DIRECTOR APPROVAL
PROJECT NO: 621-064
DATE: 01 13 86
DRAWING NO.: 200-E27

RECORD DRAWING 09/25/90

Veterans Administration