

KEYED NOTES (THIS SHEET ONLY):

1. PROVIDE SPARE CONDUITS FROM EACH FIRST FLOOR ELECTRICAL ROOM TO THE CRAWL SPACE AND CAP FOR FUTURE USE. PROVIDE THE FOLLOWING QUANTITY OF SPARES FOR EACH ROOM: (2) 1-1/2", (1) 2-1/2" (2) 3-1/2".

2. PROVIDE 1" CONDUIT AND CONDUCTORS FOR GENERATOR START CONTROL AND ATS ANNUNCIATORS, TYPICAL.

3. RE-CIRCUIT EXISTING LOADS FROM THE EQUIPMENT SYSTEM TO THE APPROPRIATE EMERGENCY SYSTEM BRANCH PANEL AS REQUIRED BY NFPA 70 ARTICLE 517 AND NFPA 99. SEE "ESSENTIAL SYSTEM BRANCH SEPARATION" ON SHEET ES.002.

CIRCUITS FROM THE LIFE SAFETY AND CRITICAL BRANCH SHALL BE ENCLOSED IN RACEWAYS SEPARATE FROM EACH OTHER AND ALL OTHER SYSTEMS. WHERE EXISTING LOADS ARE INSTALLED IN SHARED CONDUITS WITH CIRCUITS FROM OTHER SYSTEMS, PROVIDE NEW CONDUITS AND CONDUCTORS SEPARATE FROM THE OTHER SYSTEMS.

4. REPLACE RATING PLUG IN EXISTING CUTLER-HAMMER SPB100 3000 A BREAKER FOR A 1600 A TRIP RATING. ADJUST LONG TIME SETTING FOR A MAXIMUM OF LONG TIME TRIP OF 1000 A.

5. WHERE A PROPOSED PANEL REPLACES DEMOLISHED PANELS, PROVIDE PERMANENT LABEL INDICATING FORMER PANEL(S) DESIGNATION(S) SERVING BRANCH CIRCUITS THAT ARE EXISTING TO REMAIN. EXAMPLE: "PANEL FEEDS FORMER PANELS 205SR AND 205G CIRCUITS".

6. RE-CIRCUIT ALL EXISTING LOADS FED FROM CENTRAL PANEL TO THE NEAREST APPROPRIATE PANEL IN THE REPLACEMENT NORTH OR SOUTH ELECTRICAL ROOM. THE DIVIDING LINE BETWEEN SHALL BE THE DOUBLE EGRESS DOORS ADJACENT TO THE ELEVATORS.

7. PROVIDE K-13 RATED TRANSFORMER WITH 200% NEUTRAL CONDUCTORS TO PANEL.

8. CIRCUIT TO EXISTING 150A/3P BREAKER MADE AVAILABLE BY DEMOLITION.
9. CIRCUIT TO EXISTING 100A/3P BREAKER MADE AVAILABLE BY DEMOLITION.

10. PROVIDE NEMA 3R ENCLOSURE WITH LOCKABLE DOOR CONTAINING CAM-LOCKS TO ALLOW CONNECTION OF PORTABLE GENERATOR SET OR LOAD BANK. PROVIDE A SHUNT TRIP BREAKER IN GENERATOR DISTRIBUTION PANEL TO FEED CAM-LOCKS. SHUNT TRIP SHALL BE 24 VDC FED FROM THE GENERATOR BATTERIES WITH A KEYSWITCH. THE SWITCH SHALL INTERRUPT THE SHUNT TRIP VOLTAGE TO THE BREAKER TO DISABLE SHUNT TRIP WHEN A PORTABLE GENERATOR SET IS CONNECTED. THE SHUNT TRIP SHALL BE CONNECTED IN PARALLEL TO EACH AUTOMATIC TRANSFER SWITCH FED FROM THE GENERATOR SET. EACH ATS FED FROM THE GENERATOR SHALL HAVE AN ACCESSORY THAT CLOSSES A CONTACT

WHEN THE NORMAL POWER SOURCE IS UNAVAILABLE, REGARDLESS OF SWITCH POSITION, PROVIDE THIS ACCESSORY ADDED TO ALL EXISTING TRANSFER SWITCHES THAT ARE FED FROM THIS GENERATOR SET. WHEN SIGNAL IS SENT FROM ANY ATS CONNECTED TO THE GENERATOR, THE SHUNT TRIP SHALL AUTOMATICALLY OPEN THE BREAKER AND SHED THE LOAD BANK. PROVIDE A PERMANENT LABEL AT KEYSWITCH READING "CAM LOCK SHUNT TRIP CONTROL". AT THE TOP, AT THE OPEN POSITION IT SHALL READ "SHUNT TRIP DISABLED, USE FOR CONNECTION OF PORTABLE GENERATOR SET", AND AT THE CLOSED POSITION IT SHALL READ "SHUNT TRIP ENABLED, REQUIRED FOR LOAD BANK TESTING".

11. CONTRACTOR SHALL PROVIDE ALL FUEL FOR GENERATOR. START-UP TESTING AND A FULL FUEL TANK AT THE DATE OF SUBSTANTIAL COMPLETION.

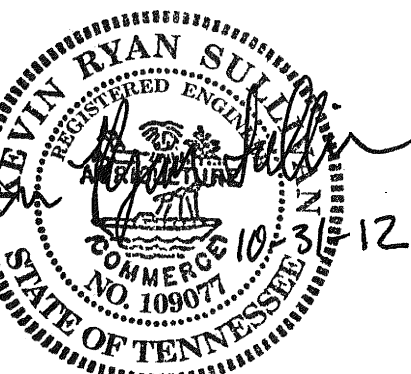
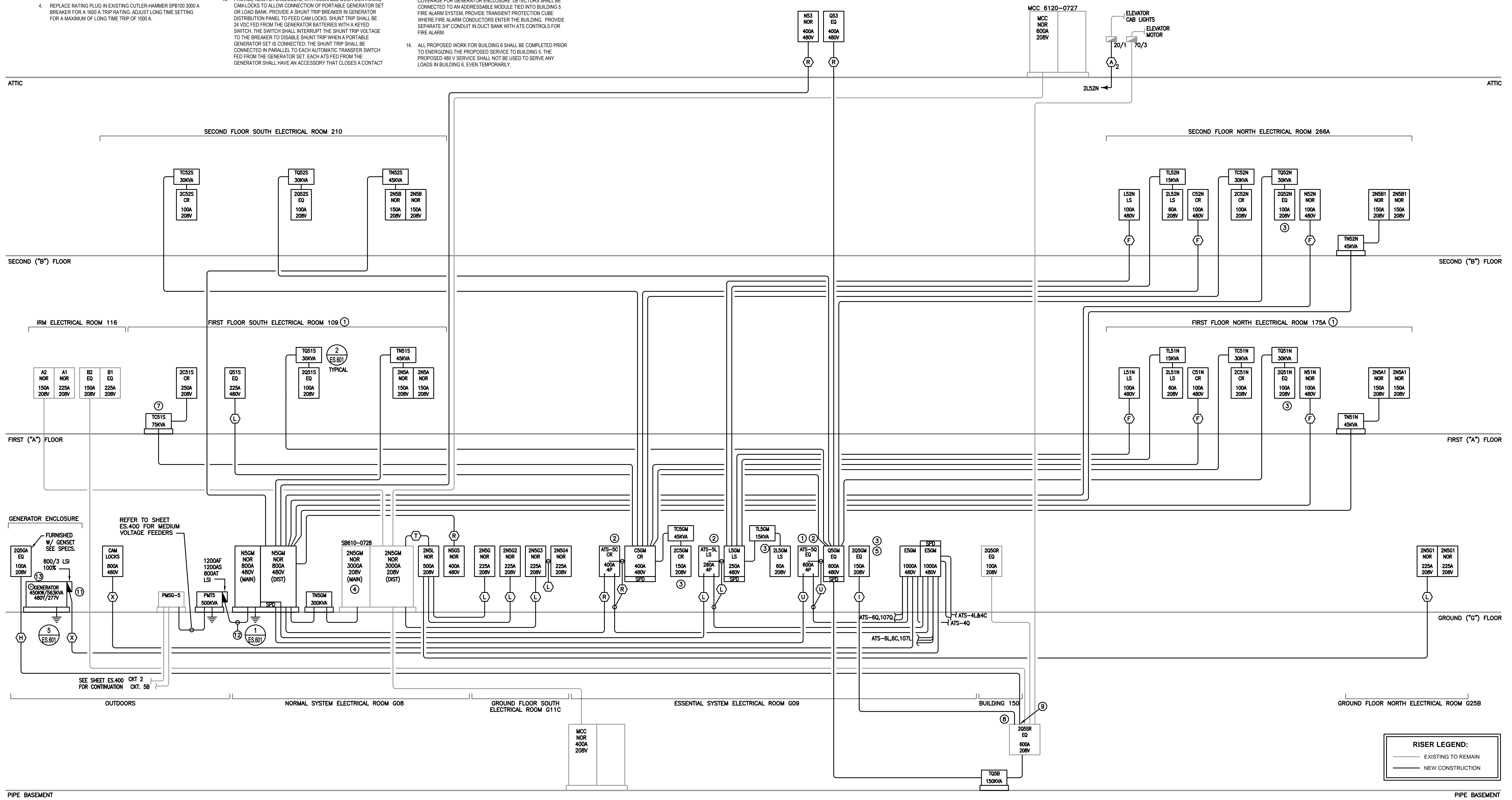
12. FEEDER IS TWO SETS FOUR #600 KCMIL WITH #20 GROUND IN 4" CONDUIT WITH TWO SPARE 4" CONDUITS.

13. PROVIDE FULL 200°F FIXED AND RATE OF RISE HEAT DETECTOR COVERAGE FOR GENERATOR ENCLOSURE. DETECTORS SHALL BE CONNECTED TO AN ADDRESSABLE MODULE TIED INTO BUILDING 5 FIRE ALARM SYSTEM. PROVIDE TRANSIENT PROTECTION CUBE WHERE FIRE ALARM CONDUCTORS ENTER THE BUILDING. PROVIDE SEPARATE 3/4" CONDUIT IN DUCT BANK WITH ATS CONTROLS FOR FIRE ALARM.

14. ALL PROPOSED WORK FOR BUILDING 6 SHALL BE COMPLETED PRIOR TO ENERGIZING THE PROPOSED SERVICE TO BUILDING 5. THE PROPOSED 480 V SERVICE SHALL NOT BE USED TO SERVE ANY LOADS IN BUILDING 6, EVEN TEMPORARILY.

GENERAL NOTES:

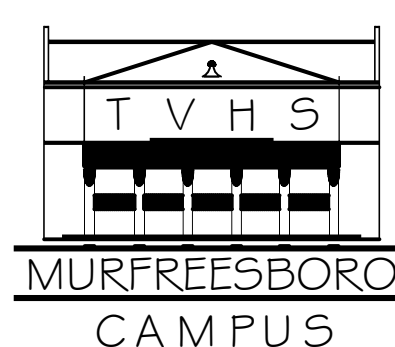
- A. ALL FEEDER BREAKERS (SERVING A TRANSFORMER OR PANEL) SHALL HAVE BUILT-IN PADLOCKING PROVISIONS TO LOCK THE BREAKER IN THE OPEN POSITION.



Revisions	Date



Tennessee Valley Healthcare System



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Project Title : UPGRADE ELECTRICAL DISTRIBUTION  
PHASE 3  
Drawing Title : ELECTRICAL RISER DIAGRAM BUILDING 5 NEW CONSTRUCTION  
Approved By :  
Building Number : 5  
Checked By : R. STR.  
Drawn By : R. SULL.

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Drawing No. : 5-ES.400  
Dwg. : B1 of 97

Department of  
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