

University Contact: Electrical Services, Maintenance &
Operations
(302) 831-1744

26 32 10_EMERGENCY SYSTEMS

PART 1 - DESIGN REQUIREMENTS

1.1 EMERGENCY SYSTEMS:

- A. All occupied buildings over 5,000 square feet shall be generator- equipped. Generator shall be a minimum of 25 kW and 125% of calculated load with a minimum of 12-hour fuel capacity at full load
- B. Provide separate services for each type of the following systems.

1.2 LEGALLY REQUIRED STANDBY SYSTEMS:

- A. The following items shall be connected to the generator set and a separate a separate Automatic Transfer Switch:
 - B. All emergency egress lighting.
 - C. All exit signs.
 - D. The Fire Alarm System.
- E. The following items shall be connected to the generator set and a separate a separate Automatic Transfer Switch:
 - 1. Fire Pump.
- E. Exhaust Fans in Laboratories deemed required for occupant safety and first responder safety.
- F. Gas detection systems.

1.3 OPTIONAL STANDBY SYSTEMS:

- A. All sump pumps.
- B. All sewer ejector pumps, unless approval received from the University.
- C. All heating system pumps and related control systems to maintain freeze protection for the entire building during power outages.
- D. Other lighting requested by the University.

1.4 CRITICAL OPERATIONS POWER SYSTEMS:

- A. Refrigeration and Freezers required to be kept operational during loss of power, to avoid loss of experiments or prevent hazardous conditions.
- B. Receptacles for experiments and processes required to be kept operational during loss of power, to avoid loss of experiments exceeding \$10,000 in value or prevent hazardous conditions.

1.5 OTHER REQUIREMENTS:

- A. Use natural gas fired generators. Use of diesel fueled generators must be approved by Environmental Health and Safety.
- B. Generators shall have auto exercise.
- C. A full tank of fuel is required prior to University acceptance.
- D. Provide UL 924 Switching devices where required.
- E. Emergency lighting shall be required in Transformer Vaults, Electrical Rooms and Elevator Machine Rooms.
- F. Provide three (3) sets of keys for all control cabinets, generator enclosures to the University.
- G. Minimize use of battery packs. Requires approval of Facilities Management Battery Packs, when used, shall be 12-volt 50 watt minimum.
- H. Approval from the University's Employee Health and Safety department is required.

1.6 PREFERRED MANUFACTURERS

- A. Generator Sets – Kohler, MTU, Onan
- B. Transfer switches - ASCO, Zenith.

1.7 DO'S AND DON'TS:

- A. DO'S:
 - 1. DO Refer to SPCC requirements applicable to fuel tanks
 - 2. DO Use single point inverter systems in buildings less than 5000 square feet
 - 3. DO Provide keys to cabinets to university
 - 4. DO Provide emergency lighting in all transformer vaults, switch gear rooms, and elevator machine rooms
 - 5. DO Natural gas-powered generators are preferred (underground storage tanks are not

permitted)

B. DON'TS:

1. DO NOT Use battery pack self-contained LED or fluorescent fixtures
2. DO NOT Install self-powered radioactive exit signs under any circumstances

PART 2 END OF SECTION