1. This section provides guidelines for the basic materials and methods for backup power generator installation and operations.

2. General design guidelines
   a. All University buildings and spaces shall be connected to an emergency power system as outlined in this section. Systems and equipment requiring backup power that is not legally required (optional backup) are at the discretion of Facilities Management (FM), but are not connected to emergency power systems unless the system has been designed for handling optional loads.
   b. Emergency power systems shall be designed and tested with adherence to NEC 700, NEC 701, NFPA 70, NFPA 101, NFPA 110, and our local Authority Having Jurisdiction (AHJ).
   c. Circuits shall be connected to generator power systems via labeled electrical X panels.

3. Systems and devices to be connected to an emergency power source are those that support life safety and are generally as follows:
   a. Stair & exit lighting, egress illumination, electrical rooms, mechanical rooms, and corridor and selected lights in public assembly areas.
   b. Fire alarm systems.
   c. Electronic door access as designated.
   d. BAC (Building Automation Control) systems.
   e. IT equipment as designated (coordinate with EIS).
   f. Fire and jockey pumps.
   g. Sump and ejector pumps as designated.
   h. Domestic water pressure booster systems.
   i. BMS air compressors.
   j. Exhaust fans for critical ventilation.
   k. Lighting for electrical and mechanical rooms

4. Systems and devices that do not support life safety, but are critical to other functions shall be considered for support by a backup power source, if available. These systems generally include:
   a. Computer facilities
   b. Server rooms
   c. Telecom equipment rooms
   d. UPS systems
   e. Lab equipment
   f. Refrigerators

5. New generator systems must be designed based on maximum reliability, longer service intervals, best acoustics, best emissions and ease of maintenance together with adequate capacity to handle future loads.

6. Automatic transfer switches (ATS) and load shedding modules shall be tested as per design for full demand operation and demonstrated for operation to representatives of FM personnel upon completion of installation prior to signing off substantial completion. ATS is to be tested for transfer to generator power source. Any corrections required must be completed before signing substantial completion.
7. Monitoring and remote control operation are required through BAC at FM. Coordinate with BAC points that will be required for the application.

End