PART 1  GENERAL

1.01   General Description: The emergency power supply (EPS) includes: AC inverter, storage battery with rectifier/charger, transfer switch, bypass switch, control circuitry, output circuit breakers, monitoring and alarms, cabinet(s), microprocessor controller, fax/modem, alpha-numeric display, dry alarm contacts and the necessary wiring and components for a complete system.

1.02   The EPS is to supply a trouble alarm to the building’s DDC system, transmit test and status reports via email, and allow remote access of status via Ethernet.

1.03   Provide built-in display and keypad located inside the system cabinet for user initiated on site viewing of operational status.

1.04   Power EPS networking equipment from the EPS unless networking equipment has other backup power source.

PART 2  PRODUCTS

2.01   Acceptable vendors are limited to the following:

   A. Dual-Lite "Spectron LSN" System
   B. Liebert
   C. Manufacturer identified by consultant meeting the basis of design
   D. No Substitutions

2.02   Communications: Ethernet connection.

2.03   Load transfer switch rated for transfer of full system load and be "no break" type.

2.04   Battery: Maintenance-free sealed lead-calcium cells with a minimum 10-year life.

2.05   Construction and installation for local seismic conditions.

2.06   Electronic controls shall have password security. User is able to set own password.

2.07   Size the system for at least a 20% increase in size of load after the time of installation.

2.08   EPS capable of handling mixed loads of lighting, electronics, and motors.

2.09   Provide a maintenance bypass switch.

2.10   When circuit breakers integrated into unit, provide at least 2 normally off (NOFF) circuits.
2.11 Output compatible with all types lighting systems, such as incandescent, fluorescent, HID, LED and analog and electronic drivers/ballasts.

2.12 Factory startup.

PART 3 EXECUTION

3.01 Each ungrounded conductor will have a separate associated grounded conductor. Label grounded conductors with associated ungrounded conductor circuit number.

3.02 Supply the system load from the highest priority campus feeder available.

3.03 Thoroughly clean cabinets, batteries, controls, etc. of system of dust and debris before energizing system.

3.04 FS/DDC shall witness installation of barriers in all battery-powered EPS systems.

3.05 In addition to (or in conjunction with) manufacturer's acceptance tests, perform a simulated 90-minute power outage for verification by FS/DDC of operation of each emergency luminaire, exit sign, and other supplied equipment.

A. Prior to test, the contractor is to provide an as-built drawing of the reflected ceiling plan that includes the emergency lighting system and exit signs.

1. Use the reflected ceiling plan to verify operation of each emergency egress luminaire and exit sign.

2. Verify the circuit supplying each emergency luminaries and exit sign matches supplied as-built drawing.

B. Create a building-wide outage such as opening the building's main breaker(s) followed by a building wide walk-through with lighting as-built drawings to verify the entire system performs as intended. FS maintenance staff and DDC staff will participate in this test and walk-through.

3.06 Telecommunication:

A. Provide two data connections: one for outgoing messages, one for future local interface CPU.

B. Fixed IP address. Coordinate with owner.

C. Program email addresses for status notifications: Contact Owner.
3.07 Leave as-built drawing of equipment powered by the EPS with the EPS at the time of final acceptance, as there may be delays in as-built information being delivered to UAF, This will allow UAF maintenance to have this life-safety information if an event occurs.

END OF SECTION