PART 1  GENERAL

1.01 Statements of Intent:

A. In addition to areas required by applicable codes, provide emergency egress lighting:

1. Where the exit path may not be obvious.

2. Where hazardous materials are used.

3. Where illumination is required to allow safe cessation of a process or project.

4. Where hazardous machinery operates. Hazardous machinery does not include machinery where protective guards are installed over hazardous parts, such as rotating gears, as in a HVAC room, or cutting edges, as in a machine shop.

5. In maintenance areas, such as electrical and mechanical rooms, to provide lighting for:

   a. Egress from areas where equipment obstructs the egress path.

   b. Emergency activities, such as inspecting equipment.

B. Provide illumination levels sufficient to guide individuals to an exit path. Alternate methods of illumination, such as self-luminescent tape, are acceptable on a case-by-case basis.

1.02 Provide additional emergency light circuits for:

A. Bathrooms having multiple stalls or are handicapped-accessible.

B. Publicly-accessible special-use rooms, such as locker rooms, music practice, or rooms having risers or elevated walking surfaces, or similar occupancies.

C. Hazardous areas such as machine shops, labs, or chemical storage.

D. At least one emergency light at central emergency power systems. These light(s) will not be nightlights and will be on a normally off circuit or switched. Where these lights are switched, provide a three-way switch with one pole connected to a normally on EPS circuit and one pole connected to a normally off EPS circuit. A Generator Transfer Device may be used on a case by case basis as approved by UAF/FS.

E. At least one emergency light in main electrical distribution rooms and large mechanical rooms for egress lighting. These lights will not be nightlights and will be on a normally off circuit or switched. Where these lights are switched, provide a three-way switch with one pole connected to a normally on EPS circuit and one pole connected to a normally off EPS circuit.

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1.03 The emergency lighting system SHALL be designed so that the yearly 90 minute load test of the buildings EPS or Emergency Generator can be conducted during normal working hours (M-F 8 am - 4:30 pm) without interruption to the building or the activities of its occupants.

1.04 Provide a battery-powered central inverter power source.

PART 2 PRODUCTS

2.01 Refer to Division 26 Static Uninterruptable (Emergency) Power Supply Systems - Inverter Type for central inverter type emergency power supply systems.

2.02 Where a central emergency power supply is not utilized, use stand alone battery powered, with local or remote heads emergency lighting units:

A. Microprocessor controlled testing and diagnostics.

B. Automatic 1-minute self-test at least every 28 days and 30 minute self-test every 6 months.

C. Manual initiation of test with selectable 1, 5, 30, or 60 minute test duration.

D. Possess visual indication of:

1. AC power status.

2. Self-diagnostic test cycles.

3. Unit malfunctions, including at least faults on battery, charger, transfer, and lamp.

E. Maintenance-free lead-calcium batteries with 10 year life or other acceptable battery with same life as a minimum.

2.03 Not Acceptable:

A. Fluorescent emergency ballasts (such as Bodine B50ST Fluorescent Emergency Ballast).

B. Recessed, flip-out-when-activated type fixtures.

2.04 Photoluminescent materials used to mark egress paths:

A. Resistant to solvents, hydrocarbons, detergents, and corrosive liquids.

B. Non-combustible.
C. Indoor service life expected to be at least 25 years.

D. Accepted for safety markings by AHJ.

E. Non-electric.

F. Not radioactive.

PART 3 EXECUTION

3.01 Where lights must be dimmed or turned off for presentations, emergency egress lights may be connected to a normally-off emergency power circuit.

A. For an emergency luminaire that is connected to a normally-off circuit, label: “Emergency Light, Normally Off”.

3.02 It is intended that large facilities have a central emergency power supply. Therefore, it is preferred that where a central emergency power supply is not utilized, fixtures be laid out as though there were such a supply. Run the conductors supplying “Future Emergency Lights” to a central location where they can be connected to a central emergency power supply when it is installed.

3.03 Testing method: Create a building-wide outage such as opening the building's main breaker(s) followed by a building wide walk-through with lighting asbuilt drawings to verify the entire emergency lighting system, including the EPS, performs as intended. FS maintenance staff and DDC staff will participate in this test and walk-through.

END OF SECTION