

Fire, Life Safety, and Emergency Code Updates

by Richard Roberts

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Change is the only constant when it comes to updates to the various codes, standards, legislation and research activities relating to fire, life safety and emergency communications systems. The intent is to continually enhance the safety of emergency responders and the public. While not all state and local jurisdictions adopt these codes and standards, it is important to be aware of changes and updates that could affect your institution.

Let's look at some recent changes:

Building Notification

- Emergency Responder Communications Enhancement Systems (ERCES):
 - a.
 - Florida 2022 Legislative Session: Two bills were filed ([SB-1190/HB-785](#)) that seek to exempt apartment buildings that are 75 ft. or less in height from complying with the minimum emergency responder radio strength requirements in Section [633.202\(18\)](#) of the Florida Statutes. If these bills are signed into law, they will jeopardize the safety of emergency responders and building occupants and could have national implications.
 - a. Michigan Bill: [HB-5561](#) was filed and seeks to require bi-directional amplifiers/emergency radio communication enhancement systems (BDA/ERCES) to be installed in all new and existing K-12 schools. As currently written, the bill requires an ERCES to be installed in *all* buildings even though acceptable coverage may already exist. This requirement violates Federal Communications

Commission (FCC) rules. The Safer Buildings Coalition (SBC) has taken the position to **only** advocate for measures that require BDA/ERCES to be installed only when needed. There is an SBC letter supporting the bill's intent, while still pointing out the legal flaw in the bill.

- b. SBC No-Noise Task Force (NNTF): The goal of the NNTF is to eliminate interference to a jurisdiction's public safety macro system caused by improperly deployed in-building signal boosters. Improperly deployed ERCES-using signal boosters that cause interference with public safety radio frequency (RF)/wireless systems are becoming a major problem across the United States and are jeopardizing the safety of emergency responders and the public. Members of the NNTF consist of stakeholders from code enforcement authorities, licensees, integration companies, first responders and radio networks.
 - c. Underwriters Laboratories (UL) ERCES Certification Program: UL formed a work group to develop a new certification program for companies to declare that they have the technical expertise to design, install and maintain code-compliant ERCES. This new program is meant to raise the level of competency of companies installing, servicing and maintaining ERCES systems. The new ERCES program will be modeled after the UL **Fire Alarm System Certification Program**. All UL certificate services programs are designed to give code authorities and stakeholders the assurance that the installation or service company is delivering code-compliant services through regular audit, assessment and oversight at no cost to jurisdictions. Many—but not all—jurisdictions require fire alarm companies to be certificated by UL.
- In-Building Fire Alarm Emergency Voice/Alarm Communications (EVAC) System: The Education Committee approved a Public Input (PI) for the 2024 edition of NFPA 101, *Life Safety Code*, that seeks to require an EVAC system to be used for occupant notification when an **existing** fire alarm control unit or system unit is replaced in K-12 schools. The proposed EVAC system is only required where the occupant load is greater than 100 people. The next stage in the process is the official ballot of the committee action and then the public comment phase.

Detection

- Carbon Monoxide (CO) Detection:
 - a. 2024 Edition of NFPA 101, *Life Safety Code* (NFPA: National Fire Protection Association): Numerous committees approved various PIs seeking to require carbon monoxide (CO) detection in existing educational occupancies (K-12 schools), new or existing daycare facilities, existing daycare homes, new or existing detention facilities, and existing apartment buildings. Another committee approved a PI that seeks to prohibit duct-mounted CO detectors from being installed in lieu of “open-area” CO detectors. The next stage in the process is the official ballot of the committee actions and then the public comment phase. NFPA 101 is adopted by several U.S. states and is adopted globally by many countries.
 - b. 2024 Edition of the International Fire Code (IFC): The International Code Council (ICC) members attending the in-person Public Comment Hearing (PCH) approved a public

comment seeking to expand the requirements beyond new or existing hotels, apartment buildings, university dormitories, K-12 schools, hospitals, nursing homes, and assisted living facilities to include *all* occupancies having a permanently installed fuel-burning appliance or an attached garage. The next step in the process is the online governmental consensus vote (OGCV). The OGCV is an opportunity for the ICC members who did not attend the in-person PCH to vote on public comments.

Research

- Fire Protection Research Foundation (FPRF): The following projects seek to enhance life safety:
 - a. ERCES: A project that seeks to determine the temperature at which critical voice messages being transmitted by the public safety ERCES backbone cables or connectors will be impacted from fire to the point where messages are no longer intelligible. The project is needed because the 2016 and 2019 edition of NFPA 1221 require riser or backbone cables to be installed within a fire-rated enclosure or protected area or use a two-hour fire-rated cable. The fire rating requirement adds considerable cost to the installation of an ERCES and is unsubstantiated, as there is no technical data to justify installing ERCES cables or connectors in a two-hour fire-rated enclosure or protected area.
 - b. Intelligent Evacuation Lighting (IEL): The FPRF decided against funding a project to identify peer-reviewed behavioral studies to determine if IEL improves occupant evacuation and ascertain if there are any product listing or installation standards.

The above activities are intended to provide that alarm signals are successfully transmitted from the protected premises to the appropriate emergency responder agency; that emergency responders can use their radios to communicate inside buildings during all types of emergencies; and that students and faculty in existing K-12 schools can receive voice instructions during all types of emergencies. They are also intended to protect building occupants from any liquified petroleum explosions and to protect building occupants from CO poisoning.

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