A dvancements in mobile communication technology have made “staying connected” an integral part of day-to-day business operations for many of us. Making sure your fire protection and life safety systems are properly connected is equally important. Fire protection and life safety systems often rely on one another to enhance the level of safety provided for building occupants. This enhancement is of no value if the systems do not communicate as intended by the system designers.

In some buildings, these integrated systems are fairly simple. They may include an automatic sprinkler communicating with a fire alarm system through a waterflow alarm device (flow switch). Other buildings may have more complex interconnections for systems, including smoke management systems, special suppression systems, fire doors and dampers, and elevator systems. No matter how simple or complicated the systems are that are integrated, confirmation of the functionality of these interconnections is critical.

MANDATES AND LEGALLY ENFORCEABLE STANDARDS

One of the problems that many members of the fire protection and construction industries have become all too familiar with is the lack of a mandate to confirm this functionality prior to building occupancy. Some model codes may require an integrated test for specific systems, such as atrium smoke control systems, however there is no across-the-board mandate that other integrated systems must also go through an integrated system test. Many owners and contractors look to the individual system design and installation standards for some sort of requirement that will make sure that integrated tests are conducted.

Unfortunately, the scopes of these documents typically prohibit them from requiring or addressing testing on a different system. For example, NFPA 13, the Standard for the Installation of Automatic Sprinkler Systems, cannot require a test of a fire alarm or system component. Similarly, NFPA 72, the National Fire Alarm and Signaling Code, cannot mandate the testing of other systems or components, such as fire dampers or fire doors, even if these components are tied into the fire alarm system.

This lack of a mandate often leaves the building owner and their facilities maintenance personnel wondering if everything is properly interconnected. Wondering if they got what they paid for when the building was constructed. Unfortunately, the lack of connection between these systems—or simply the improper sequencing of connections—is often found once the construction warranty has expired, taxing the maintenance budget for an item that should have been caught prior to the issuance of the certificate of occupancy.

As a means for detecting these deficient connections at the appropriate time, NFPA's Technical Committee on Commissioning and Integrated Testing, with approval from NFPA's Standards Council, initiated a new project, NFPA 4, tentatively titled “The Standard for Integrated Fire Protection and Life Safety System Testing” (see sidebar on next page.) The goal of this standard is to provide direction on the structure and execution of integrated fire protection and life safety system tests within a legally enforceable document.

INITIAL VS. PERIODIC INTEGRATED SYSTEM TESTS

Although this document is only in its infant stages of development, an initial draft was approved by the Standards Council in March 2012. The draft, which is open to the public until October 17, 2012, 5PM (EST), includes concepts that will most likely be included in the inaugural edition of the document. One of the major concepts is the separation between the initial integrated system test that occurs prior to building occupancy, and the periodic integrated...
The continued development of these concepts and this standard will be based upon the work of the technical committee, as well as code change proposals from the general public. To review the draft and propose a change to this standard, please go to www.nfpa.org/4 and click on the Next Edition tab.

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