



NFPA 3 and NFPA 4

By Paul Dunphy

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During a recent presentation on the subject of integrated testing, a member of the audience asked me if I lived in fantasy land. To the contrary, we live in the real world of testing fire protection and life safety systems in our buildings, especially new and renovated buildings.

Fantasy land belongs to folks who believe today's buildings actually work in an integrated fashion without taking them out for a test drive. It can be an eye-opening experience. Construction moves very fast and is driven by contract deadlines and move-in dates. Fast track is the name of the game.

Manufacturers are keeping up with the latest technology and installers must keep pace as well. Programmable building systems talk to each other, operation of mechanical and electrical hardware and equipment depend on reliable electronic handshakes. These individual systems are often programmed by technicians that are not exposed to the bigger picture. They may not understand what the design engineer had in mind for a particular building. There may be some collaboration between professional engineers in a consulting company or maybe not. Does the electrical engineer share information with the mechanical engineer or the fire protection engineer or the architect or the code consultant? Do each of these individuals meet to share information? We are finding some do and some don't meet often enough. The trades folks and technicians hardly ever get a real good understanding of how the various systems are designed to operate in an integrated fashion. Sure, many buildings



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hire commissioning agents to check individual systems but they don't provide integrated testing or commissioning services for integrated fire and life safety systems. I had one commissioning agent explain that fire alarm systems, elevators and emergency power systems were not the responsibility of the commissioning agent. Their services focus on mechanical system efficiency and comfort control. Commissioning companies do great work in those areas but they don't test the interaction between a mechanical system and a fire alarm system or an emergency power generator.

NFPA was asked to offer a solution to the problem of commissioning fire protection and life safety systems. A technical committee was formed and after some animated consensus building, NFPA 3 hit the streets as a Recommended Practice for Commissioning and Integrated Testing of Fire Protection and Life Safety Systems. The concept of integrated testing was included in one small chapter. The technical committee and the NFPA Standards Council viewed integrated testing as being important enough to develop as a Standard. A new NFPA 4 technical committee went to work and in 2015 rolled out the Standard for Integrated Fire Protection and Life Safety System Testing. **Both documents are in cycle for comments. Please consider participating in the process, your input is most welcome.**

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Paul Dunphy has been the Electrical Inspector and Compliance Coordinator at Harvard University, Cambridge, Massachusetts since 2001. He works closely with Cambridge and Boston building and fire officials on University building projects of all sizes. Previously employed at Stone and Webster Engineering Corp., Boston as a chief electrician and facility manager for 26 years.

Paul is a technical committee member for NFPA 3 and 4. He is an electrical inspector in his hometown on Hull, Massachusetts.

He has presented the subject of Integrated Testing of Fire and Life Safety Systems at the annual NFPA Conference, to fire and building officials in Massachusetts and to graduate students at WPI.

