FIRE PREVENTION AND BUILDING SAFETY COMMISSION Department of Homeland Security

Written Interpretation of the State Building Commissioner

Interpretation #: CEB-2021-25-2014 IBC-717.5.5-Exc

Building or Fire Safety Law Interpreted 675 IAC 13-2.6 2014 Indiana Building Code

Section 717.5.5 Smoke Barriers. A *listed smoke damper* designed to resist the passage of smoke shall be provided at each point a duct or air transfer opening penetrates a *smoke barrier*. *Smoke dampers* and *smoke damper* actuation methods shall comply with Section 717.3.3.2.

Exception: Smoke dampers shall not be required in duct penetrations of smoke barriers in fully ducted heating, ventilating, and air conditioning systems in smoke compartments protected throughout with quick response sprinklers.

Issue

Does the phrase "protected throughout" in the exception provided for Section 717.5.5 of the 2014 Indiana Building Code (IBC) mean that sprinkler heads must be installed in areas where the applicable sprinkler standard otherwise does not require them?

Interpretation of the State Building Commissioner

The phrase "protected throughout" in the exception to Section 717.5.5 of the 2014 IBC does not mean that sprinkler heads must be installed in areas where the applicable sprinkler standard otherwise does not require them.

Rationale

The phrase "protected throughout" appears many times in IBC sections that discuss sprinkler systems, the protection they provide, and the regulatory implications of that protection. The phrase is not specifically defined in the code, yet it is instrumental in applying many code requirements, requirements which are often reduced in the presence of such systems when they are installed as the code directs. The key to the meaning of the phrase "protected throughout" is found in understanding the standards themselves, and the way in which the code references and applies them.

The various National Fire Protection Association (NFPA) standards for sprinkler systems are adopted by reference in Chapter 9 of the 2014 IBC. These Chapter 9 sections act as scoping statements for the standards, occasionally modifying them. The standards themselves are also sometimes modified by state amendment. Those modifications – the amendments and the Chapter 9 scoping sections – are typically the limit of changes made to the standards; they are usually not altered in any other locations in the code.

This has two specific implications: first, that when the code discusses the use of sprinkler systems in structures, it is with the understanding that the system must be designed and installed in accordance with the applicable standard as it is adopted (including modifications), and second, other descriptive language in the code's discussion of the use or effect of sprinkler systems (such as in the use of phrases like "protected throughout," "installed throughout," or "provided throughout") typically describes how broadly within the building or area the standard's requirements apply. The phrase is not intended to modify the standards' requirements in any way. It is never a requirement to go beyond the standard as adopted in providing sprinkler protection.

To illustrate this, let us consider a purely hypothetical example. A 60,000 square foot building is planned, but because of its construction type and occupancy group, Chapter 5 of the code only allows that size building if it is "protected throughout" by a sprinkler system that complies with the adopted "Standard XYZ." Standard XYZ specifically allows closets smaller than 12 square feet to be non-sprinklered, and that provision is intact, having not been modified, either by amendment or Chapter 9 scoping section. The code's use of the phrase "protected throughout" as a qualification for allowing the building to be 60,000 square feet in size does not mean that sprinkler heads must be provided in those small closets. To do so, Chapter 5 would be modifying the adopted standard, and it does not do that. Rather, all it means is that the entire building must be sprinklered in compliance with the applicable standard.

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