

Sprinklers Alone Won't Stop Fires
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If you were building a home that had an alarm system, wouldn't you still want to know that the front door had a secure lock? Of course you would. Alarm systems can increase security, but you wouldn't view them as a substitute for more basic and reliable protective measures such as locked doors.

Yet, when it comes to fire safety, why are sprinklers considered more important than more basic forms of fire protection such as fire-proofed steel columns, or doors and walls made of fire-resistant materials?

Americans have reason to be concerned about the state of fire safety in buildings in which they and their families work, live, shop, learn and play. Those who change building codes - the documents that establish the fire safety of all public and private buildings - have accepted the principle that sprinklers virtually never fail. Therefore, most building codes require a minimum of fire-resistant construction.

The issue is particularly relevant for Connecticut, which is considering adopting the International Building Code (IBC). The safety and property-protection provisions of the code will determine, to a large extent, how safe occupants of new buildings will be in a fire.

Virtually everyone agrees that sprinklers save lives

and property and, therefore, should be mandatory in certain types of buildings. However, even if one believes that sprinklers never fail, there is still cause for concern, because few deficiencies identified during inspections of sprinkler systems are corrected. San Francisco recently recorded more than 2,200 fire safety violations in one year, including sprinkler infractions, yet only 14 percent were ever corrected.

Another yardstick of our vulnerability to sprinkler failure is the recent product-recall record of sprinklers. During a three-year period beginning in 1999, the U.S. Consumer Product Safety Commission sought to recall 67 sprinkler models, representing more than 37 million sprinklers manufactured between 1961 and 2001. Most new sprinklers have electronic monitors to confirm that the system is working, but they don't detect whether the sprinklers are faulty or so clogged with corrosion that water cannot get through.

In recent years, the three national model building codes have allowed the use of more sprinklers while reducing requirements for fireproofing, fire-resistant doors, walls and ceilings, and other dependable, time-proven measures that slow the progress of flames and protect steel beams and columns from buckling in a fire.

In response to the growing reliance on sprinklers for fire protection, the new IBC under consideration in Connecticut allows for taller and wider buildings, with more open, flexible space and fewer fire-resistant separation walls to slow the progress of a fire. Moreover, the model code allows fire ratings to be reduced or eliminated for some interior partitions as well as for critical structural components such as columns and trusses.

Many code officials view fire-resistant construction as a costly excess, but firefighters and fire damage investigators see it as a lifesaver.

The more fireproofing and other fire-resistant construction designed into a structure, the less likely it is to collapse during a fire and trap, injure or kill its occupants. The need for adequate built-in protection becomes all the more critical when the sprinklers fail.

A case in point is the World Trade Center disaster. Although truly an extraordinary event, additional fireproofing of the steel columns might have allowed occupants and firefighters more time to escape the inferno before the towers collapsed.

In a less spectacular tragedy, clogged pipes - caused by corrosion from bacteria in the water supply - led to a sprinkler failure during a Pennsylvania nursing home fire last year that killed an 80-year-old woman and injured her sister. The system's pipes were so clogged that the full force of water couldn't reach the sprinkler heads.

Every building in Connecticut should have both sprinklers and fire-resistant construction for the safety of everyone who works or lives here.

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