

HOW MUCH BUILDING FIRE PROTECTION IS ENOUGH?

By Richard Schulte

According to a report issued by the National Fire Protection Association (NFPA) titled "*The Total Cost of Fire in the United States*" authored by Dr. John R. Hall, Jr., and dated March 2010, building owners in the United States spent an estimated \$61.5 billion to provide fire protection in 2007. This report further indicates that the cost to taxpayers of providing paid municipal fire protection was an estimated additional \$36.8 billion in 2007. In other words, the cost of providing both public and private fire protection in the United States in 2007 exceeded \$100 billion (when other costs not included above are taken into account).

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According to a report issued by the National Institute of Standards and Technology (NIST) titled "*Economics of Egress Alternatives and Life-Safety Costs*" (referred to as **NIST Special Publication 1109**) authored by Robert E. Chapman, David T. Butry, Allison L. Huang, and Douglas S. Thomas of the Office of Applied Economics at the Building and Fire Research Laboratory at NIST, dated September 2010, building owners in the United States spent an estimated \$35.435 billion to provide fire protection in 2002 and an estimated \$51.673 billion in 2008. Based upon the data provided in this report, building owners in the US spent a total of \$306.496 billion (\$0.3 trillion in round numbers) to provide building fire protection in the years between 2002 and 2008.

One hundred billion dollars on both public and private fire protection in 2007 alone—that's a lot of capital. Three hundred billion on private fire protection in the 7 years between 2002 and 2008—that's also a lot of capital.

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The number of Americans who died as a result of fire in both commercial and residential buildings provided with sprinkler protection in 2009 was no more than a handful. Not only does the installation of sprinkler protection reduce the number of civilian fire fatalities to close to zero, but sprinkler protection also reduces the number of fire fighter fatalities to close to zero.

Given the above, it seems reasonable to ask: how much building fire protection is enough? Can we reduce our expenditures on both public and private fire protection and still achieve the same results?

In my mind, there is no doubt that much of the capital expended on fire protection in the United States is wasted with unnecessary duplication. In fact, it is my opinion that we could reduce our capital expenditures on public and private fire protection and achieve even better results with the increased use of sprinkler protection.

Better fire protection for the American public and lower cost-what a concept!

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Obviously, providing better fire protection for the American public at a lower cost is “a better mouse trap”, but is the fire protection field really interested in providing better fire protection for the public at a lower cost or is fire protection really just a “goose that lays golden eggs” to be tapped (until the goose is finally killed)?

Unfortunately, the answer to that question seems to be that there is really not a whole lot of interest protecting the public's pocketbook. It is my opinion that the public is being “fleeced” and that many in field look at building fire protection as that proverbial “goose”.

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Editor's Note: *Richard Schulte is a 1976 graduate of the fire protection and safety engineering program at the Illinois Institute of Technology (IIT) in Chicago. Schulte worked as the fire protection engineer for the San Jose (California) Fire Department from 1980-1982. Schulte was named as one of ENR's "Top 25 Newsmakers of 2004" by Engineering News-Record for his work on critiquing the National Institute of Standards and Technology (NIST) investigation into the collapse of the World Trade Center towers on 9/11.*