

SCHULTE & ASSOCIATES

Building Code Consultants
880D Forest Avenue
Evanston, IL 60202
fpeschulte@aol.com
847/866-7479

THE AGGREGATE COST OF BUILDING FIRE PROTECTION IN THE UNITED STATES

By Richard Schulte

How much does the United States spend annually on building fire protection? In other words, what amount of capital do we expend on building fire protection to protect the public from fire?

It appears that we have at least a partial answer to that question from the Office of Applied Economics of the Building and Fire Research Laboratory at the National Institute of Standards and Technology. Based upon the data developed by NIST, collectively we spent **\$0.3 trillion** on building fire protection in the 7 years between 2002 and 2008. (See the table below.)

Add to that total the cost of providing public fire protection and the cost of increases in the size of water supply systems for fire protection purposes and we have an estimate of the total cost of providing fire protection for the United States.

Year	Aggregate Cost of Building Fire Protection in the United States
2002	\$35.435 billion
2003	\$35.990 billion
2004	\$39.885 billion
2005	\$43.905 billion
2006	\$48.057 billion
2007	\$51.551 billion
2008	\$51.673 billion
Total (2002-2008):	\$306.496 billion

Source: NIST Special Publication 1109, Office of Applied Economics, Building and Fire Research Laboratory, National Institute of Standards and Technology, U.S. Department of Commerce

According to the National Fire Protection Association (NFPA), structures fires caused an estimated \$10.842 billion of property damage (not including business interruption) in the United States in 2009. The NFPA also estimates that structure fires caused 2,695 civilian fire fatalities in 2009, with 105 fire fatalities occurring in commercial (non-residential structures) and 2,590 fire fatalities occurring in residential structures.

Given the annual estimates of fire losses, is it really necessary for the United States to devote so much capital to the “fire problem”? \$40 billion annually is a lot of money to spend on building fire protection. Perhaps, we could reduce the national fire safety/fire protection budget without having any effect on the level of fire protection provided.

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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.*