

## Residential High-Rise Fires & Sprinklers

Residential fire deaths account for the vast majority of the deaths according to the National Incident Reporting System (NIFIRS) where all fire departments nationwide send in their fire reports. This study show that the most vulnerable are the very old and the very young in residential.

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There has never been a multiple loss of life in a sprinkler protected building<sup>1</sup>. Fire sprinklers control or suppress a fire 97% of the time<sup>2</sup>. Only the sprinkler that is heated by the fire activates controlling the fire and keeping the products of combustion.

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‘Quick Response’ sprinkler technology allows a sprinkler to activate 4 times faster than commercial types. Thus, in addition to property protection there is now life safety. Flashover can now be stopped before it occurs! Residential Times: 30 seconds – 2:00 minutes vs Standard times: 2:00 – 4:00 minutes.

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Federal Emergency Management Agency (FEMA) and United States Fire Administration (USFA) in their American Burning Revisited 1999 report states that the United States still has the most fires of any industrialized country, and in its #2 recommendation it states that fire sprinklers should be a communities #1 choice for fire defense and that no tactic or strategy should detract from its efforts.

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The Chicago High-Rise Commission findings state that Chicago had 3.5 times the high-rise fire deaths than the National Average in their 1999 report.

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Virtually all Chicago high-rises have the basic infrastructure in place for the installation of fire sprinkler which should reduce the cost estimates being quoted. The underground water main connection to the hydrant system is in place, as well as a fire pump, and a standpipe system in the stairwells. Therefore, only the cross main and branch lines need to be put in on the floors to install the fire sprinklers.

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Once installed, that building’s common area fire insurance can be reduced 20 -60%, reducing your assessments, depending on the policy.

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<sup>1</sup> (Source – NFPA National Fire Protection Association)

<sup>2</sup> (Source – NFPA National Fire Protection Association)

Partial hallway protection or other alternative methods promoted will not provide reduced insurance.

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Also, the homeowner's policy for the individual occupants can be reduced by 5 – 20%

In theory which of a buildings fire protection safe element can be taken away and yet be safe from fire. Protected stairs will not extinguish a fire. Pressurized stairs will not control or extinguish a fire. Door lock releases will not control or extinguish a fire. Compartmentation will not extinguish a fire; it may merely hold it to a certain unit, thus effectively “writing off” the occupants of that unit. Voice alarm announcements will not control or extinguish a fire. Smoke towers will not control or extinguish a fire. **Only fire sprinklers will control or extinguish a fire while the fire is still small!**

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A comprehensive high-rise package will start with sprinklers first, and include detectors where needed, manual pull station alarms, voice alarm and announcements, protected stairs, fire doors and customized fire evacuation plan that is practiced by all tenants on a regular basis.

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Retrofitting price reports are \$2.50 - \$4.50 a square foot on file; actual costs for a high-rise, new construction would be \$1.50 - \$2.50 a square foot.

<b><u>Job Name</u></b>	<b><u>Price</u></b>	<b><u>Square Foot</u></b>	<b><u>Price/Square foot</u></b>	<b><u># of Units</u></b>	<b><u>Price/Unit</u></b>	<b><u>Notes</u></b>
910 S. Michigan Avenue	950,000	609,218	1.50	262	3,492	Gutted Floors
N. Park Village Apartments	686,730	235,100	2.92	180	3,815	Existing/Occupied
332 S. Michigan Avenue (Condo Floors)	220,880	145,560	1.52	76	2,906	Gutted Floors
(Office Floors)	56,525	24,260	2.33			Existing/Occupied

For an example on a tragic fire and its economic impact see the Philadelphia Meridian Plaza NFPA 1991 report where 3 firefighters were killed in an uncontrollable high-rise fire. To request a copy, contact NIFSA at 708.403.4468.

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For a copy of a contractor cost study after the 6007 N. Sheridan Road Fire, contact NIFSAB.

For more information go to [www.firesprinklerassoc.org](http://www.firesprinklerassoc.org)