

THE 2008 NEW YORK CITY FIRE CODE: ...ARE YOU READY?

by Robert D. Greenberg, AICP

One of the positive aftereffects of the disaster of 9-11 has been a thorough and careful examination of what went right and what went wrong on that tragic day. Few people could have imagined that an impact would occur that would shatter the layers of insulation protecting the structural steel that supported the core of the building, allowing them to literally melt in the cauldron of flaming aviation fuel. As the core supports melted, it was the 'crown' that tied in the building's external structural columns that bought precious time as people escaped, including 98% of those on floors below the impact locations. And 98% of the people above those locations tragically lost their lives.

Adding to the urgency, in March, 2007, a fire ripped through a two-family home on Woodycrest Avenue in the Bronx, killing 10 people, including nine children. It was the largest loss of life in a fire since the Happy Land nightclub tragedy in 1990. Investigators cited a number of factors that contributed to the horrific event: a wooden staircase, the lack of a sprinkler system, and smoke detectors without batteries. Still the house complied with the city's building code, the regulations meant to ensure the safety of New York's 950,000 structures.

In response, Mayor Michael Bloomberg took what many view as a significant step toward preventing future tragedies by proposing a massive overhaul of the city's building and fire codes, the first in nearly 40 years. Mayor Bloomberg has structured a plan to take life safety, security and fire safety to a much higher level with proper enforcement that everyone will adhere to.

EMERGENCY ACTION PLANS

Ray Weinstein, President/CEO of Croker Fire Drill Corp., believes that as a result of these tragedies the City has become very proactive "in redefining life safety issues, learning how to protect the occupants of the increasing number of tall buildings, and increasing the use and effectiveness of code enforcement inspectors." Weinstein states that our government officials and experts in the field of design, construction and fire safety "have taken the proper time to analyze specific sectors and building types and create new standards to follow that will better safeguard our residents and workers. If another 9-11 type event should occur, New York City will be better prepared."

Weinstein points out that Emergency Action Plans (EAPs) for high-rise office buildings are now much more thoroughly crafted and formal and are reviewed carefully by the NYC Fire

Department. His firm's Emergency Action Plan (EAP) training programs consist of a FDNY-accredited EAP Director course (F-59), which is a seven-hour training program for EAP Directors. The EAP drills are required to be conducted twice a year in the initial year upon FDNY acceptance of the Plan, and once a year thereafter with regular fire drills being conducted semi-annually. "Once in place, fire and EAP drills collectively ensure that everyone knows exactly what to do in an emergency." Occupants are also trained on Sheltering-in-Place, In-Building Relocation, Partial Evacuation and Full Building Evacuation. "The new EAP plans are expandable, proactive and progressive," declares Weinstein, "and the quality of the inspection and enforcement process has been carefully considered. With taller buildings, new technologies, increasing density and new threats the bar has been raised so much higher."



Rendering of 7 World Trade Center

THE NEW FIRE CODE

All 50 states and Washington, D.C. have adopted the International Building Code at the state or local level. The International Mechanical Code is adopted in 47 states, The International Residential and Fuel Gas Codes are adopted in 46 states, the International Fire Code is adopted in 41 states and the International Plumbing Code is adopted in 35 states.

Under the new regulations, all new buildings over 55 feet tall, which would include the Bronx home, would be required to have a more fire-resistant stairway, automatic sprinkler systems, and hardwired smoke alarms that sound in every room. "If the house on Woodycrest had been built today under the new code," the City reports on the NYC Building Department website (www.nyc.gov), "the residents probably would have escaped alive."

There may be some unintended consequences of the new regulations. The changes may drive up the cost of construction and increase the cost of housing. "I have concerns about mandating that two- and three-family houses have sprinklers and how much it will cost," said City Councilmember Erik Dilan, who chairs the Housing and Building Committee.

In its revised building code, the Bloomberg administration tried to strike a tenuous balance between safety and cost. It sought the help of 400 professionals—architects, union leaders, contractors, developers, and safety advocates—who volunteered more than 300,000 hours to help draft the 1,300 page document. "Nobody ever wants to deal with the details," the Mayor said, "but these are the things that make this city affordable and livable and safe." The new code has taken effect as of July 1, 2008.

CREATING SAFER BUILDINGS

The primary goal of the building code is to ensure safety of New Yorkers by mandating how each new building is constructed. The new code, according to the NYC Building Department, requires:

- Automatic sprinklers in more residential structures
- Hardwired smoke detectors in most residences
- New pipe systems and secondary water supplies to help firefighters get water to taller buildings.

In response to the World Trade Center collapse, new skyscrapers will include:

- Wider stairways
- Fireproof, pressurized stairways
- Stronger walls around stairs and elevator shafts
- Photo-luminescent exits signs
- Construction materials and techniques designed and built to withstand high winds and other extreme events

"There's a lot in this code that's going to make the town a lot safer," said Fire Commissioner Nicholas Scoppetta at the press conference announcing the revisions.

Still, some critics say that there should be additional safety measures. For instance, the steel joists which did not hold fireproofing in the World Trade Center would continue to be allowed in tall apartment buildings. Even though the City learned valuable lessons from the Woodycrest Avenue fire in the Bronx, the proposed changes still fall short of the fire safety standards in some other large cities. For example, in many locations across the country, a two-family house like the one that burned in the Bronx must have two exits; in New York City, many two-family houses are allowed to have only one exit.

WHAT'S NEXT?

"Costs will definitely go up, particularly for high rise residential buildings, and somewhat for everyone," says Marolyn Davenport, Sr. Vice President, Real Estate Board of New York. "What we are expecting to hear that, even though costs will go up, the benefit of the overall safety will be worth the extra investment." For instance, the code adds two-way communication systems for the Fire Department in both stairwells and units, backup generators in apartment buildings, slightly increased handicapped accessibility and wider stairways plus a dedicated water supply for fire use, wider stairways, impact apartment design, and more inspections as well. "We anticipate that the increased cost for office buildings will center predominantly on structural issues and inspections... a percentage of increased cost is hard to predict until actual figures become available."

Everyone seems to agree that the new Fire Code will enhance safety for all New Yorkers and increase the confidence that people in charge will be properly trained to handle the next emergency. With a participatory process in creating the new code and an open invitation to participate going forward, the tools are in place to ensure that our City's safety will continue to improve. ■