Fire Safe North America Commentary

on

Grenfell Tower Fire in London England

June 28, 2017

The details of the Grenfell Tower fire in London England continue to unfold as the investigation progresses. While not all details have been confirmed, the cladding materials and design of the façade is being widely cited as a factor that caused the fire to spread so rapidly. Everyone who lives or works in a high-rise building is asking "Could it happen here"?

Fire Safe North America is an advocate for fire safety, and an active participant in the codes and standards development process through the National Fire Protection Association and the International Code Council, advocating that every precaution is being taken to protect human life in all our buildings. Balanced fire protection is necessary to achieve the life safety objectives of the built environment; detection for early warning, containment to limit fire and smoke spread , and suppression such as automatic sprinkler systems. They work together to save lives and protect property.

The risk of fire spread in multi-storey buildings has been an issue of concern in North America since the 1970's, and recent fires have focused more attention on the danger of fire spread on the building exterior. Since the external cladding system of the building offers one potential route for fire spread through a multi-storey building, fire testing of exterior wall assemblies using combustible materials is an important part of providing balanced fire protection in buildings. Fire can originate inside the building (in the case of Grenfell Tower) or outside from some other source (in the case of Marina Torch Building fire in Dubai, February 21, 2015). If a façade system contains combustible components that could potentially allow the flame to spread vertically on the surface and/or within air spaces inside the exterior wall system, it must be designed to withstand the exposures used in rigorous fire testing standards.

The International Building Code, which is adopted by most States, requires cladding for tall buildings to pass the acceptance criteria of NFPA 285. This is a standard test developed by the National Fire Protection Association that simulates the wall assemblies' fire performance.

The US has not experienced the kinds of catastrophic fire loss like those in the Middle East, Europe and Asia where the fire regulations of facades has been weaker. However, it would be unwise to conclude that the existing balanced fire protection measures are somehow excessive, or that fire safety measures can be relaxed, or traded-off in lieu of automatic sprinklers. Fires can propagate along

exterior walls without contribution from the building contents. Consequently, the installation of sprinklers does not ensure that fire will not propagate from floor to floor. In the US, for example, some States have suggested that providing an automatic fire sprinkler system inside of a building should be considered as an alternative to the NFPA 285 test requirement for exterior walls with combustible components. The history of combustible exterior wall fires shows that, in the majority of cases, the provision of sprinklers would not have had a significant impact on the magnitude of the exterior wall fires. In January 2016, Fire Safe North America sent a letter to all 50 governors in the United States advising them that a reduction of the requirements for the protection against vertical fire spread on building exteriors, including compliance with NFPA 285, should not be permitted in their State Code. Sadly, it often takes a tragedy of this proportion to enact change.

It is important in construction, especially in high rise structures, to ensure that the right products are used in the right applications. The need to improve the energy performance of a building should never compromise fire safety, especially when there are building materials and construction methods available today that allow buildings to be renovated and constructed to be both energy efficient and fire safe.