By Julie Ruth

Reduced Requirements for EEROs

With regard to the 2018 International Codes, one of the biggest disappointments for the fenestration industry is a reduction in the number of emergency escape and rescue openings required for sleeping rooms in the basements of multifamily buildings and single-family homes.

The 2015 International Building Code and 2015 International Residential Code required EEROs from sleeping rooms in multifamily buildings (Use Group R-2) and single-family homes (Use Group R-3). They are not required from sleeping rooms in hotels and motels (Use Group R-1) or hospitals (Use Group I-2) due to the additional required life safety features provided in these buildings. (These additional features include access to an exit in at least two different directions, and require the building be equipped with a fire protection system that complies with National Fire Protection Association 13.)

What is new in the 2018 IBC and the 2018 IRC is that a less-stringent version of the exemption for hotels, motels and hospitals has been extended to sleeping rooms in the basement of multifamily buildings and single-family homes. Specifically, EEROs will not be required in a basement sleeping room if the building is fully sprinklered in accordance with NFPA 13, NFPA 13R or NFPA 13D, and the basement has at least two means of egress, or one means of egress and one EERO.

Proponents of this change argued it was consistent with the current provisions for hotels, motels and hospitals. While the sprinklering requirements for multifamily buildings are just as stringent as they are for hotels, motels and hospitals, the exit requirements are not. Access to at least two exits must be provided for any hotel space that has an occupant load of 10 or more. In multifamily buildings, however, up to four dwelling units—with no limit on the maximum occupancy of each dwelling unit—can rely upon one exit.

Both the exit and sprinkler requirements for single-family homes are even less stringent. If a single-family home is sprinklered, a system that complies with NFPA 13R or 13D can be used. The requirements for these systems are extremely less stringent than they are for a NFPA 13 system. Differences include a reduction in the required number of sprinkler heads, the spaces required to be sprinklered, requirements for water supply and reserve, and equipment inspection and calibration. Single-family homes are also only required to have one exit.

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Potential industry impact

The overall impact of this new change will be a reduction in the number of required EEROs in single-family homes and multifamily buildings.

The potential impact on single-family homes may not be very great. Most sleeping rooms in single-family homes tend to be above grade, and these new provisions only apply if at least two MOE, or one MOE and one EERO, are provided. At least one MOE would be required from the basement level, even if no sleeping rooms were located there. If one bedroom is provided below grade, an EERO or MOE from that bedroom would also be required. Therefore, the reduction in EERO would only come into play if a second bedroom were placed below grade.

The impact is likely to be greater in multifamily buildings, particularly in those parts of the country where the placement of apartments below grade is common. In those buildings, the total number of openings available to escape from a basement in a fire scenario could be drastically reduced.

For example, consider an apartment building with four three-bedroom apartments below grade. Previously 12 EEROs, along with one MOE, would have been required from that basement level. Now, either a second MOE or one EERO would be required, along with the sprinkler system and the first MOE. This would reduce the total number of EEROs from the basement from 12 to either one or none.

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