903.3.1.2

NFPA 13R Sprinkler Protection

CHANGE TYPE: Modification

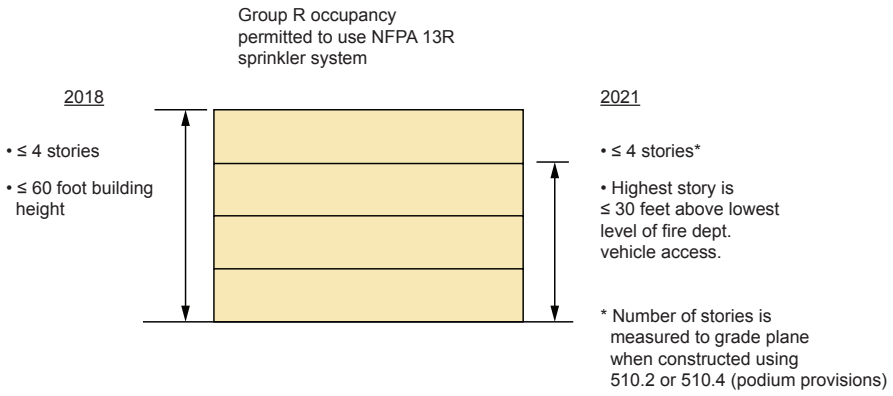
CHANGE SUMMARY: The maximum building height where an NFPA 13R sprinkler system is permitted has been reduced. In addition, where the podium provisions of Section 510 are applied, the story height measuring point has been changed to grade plane.

2021 CODE TEXT: **903.3.1.2 NFPA 13R sprinkler systems.** Automatic sprinkler systems in Group R occupancies ~~up to and including four stories in height in buildings not exceeding 60 feet (18 288 mm) in height above grade plane~~ shall be permitted to be installed throughout in accordance with NFPA 13R where the Group R occupancy meets all of the following conditions:.

1. Four stories or fewer above grade plane.
2. The floor level of the highest story is 30 feet (9114 mm) or less above the lowest level of fire department vehicle access.
3. The floor level of the lowest story is 30 feet (9114 mm) or less below the lowest level of fire department vehicle access.

The number of stories of Group R occupancies constructed in accordance with Sections 510.2 and 510.4 shall be measured from ~~the horizontal assembly creating separate buildings~~ grade plane.

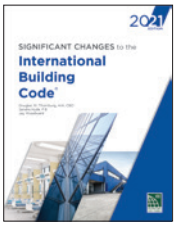
CHANGE SIGNIFICANCE: An NFPA 13R sprinkler system is intended as a life safety system and is not expected to address all of the property protection concerns. As such, the sprinklers are allowed to be installed only in the occupied areas of the building and are not required to be installed within the attic or other concealed combustible spaces. While the IBC and the NFPA 13R standard both generally allow these systems to be installed in buildings "up to…four stories in height," the IBC has historically allowed measurement from the podium building's "horizontal assembly creating separate buildings." Although the overall height in feet remains consistent, counting the permitted number of stories starting at the podium deck has essentially made the residential sprinkler



Limits for using a 13R sprinkler system.

system now applicable to what is seen from the ground as being a five-or six-story building. This allowance places the unsprinklered attic area of combustible construction at a higher and more difficult level for the fire department to reach or defend. Because of these concerns, the permissible use of an NFPA 13R sprinkler system has been modified to require the story height limit for podium buildings to be made from grade plane instead of from the horizontal assembly separating the upper and lower buildings.

In addition, the 60-foot building height limitation that was measured from "grade plane," has been replaced with a 30-foot maximum height measured to the floor level of the highest story from the lowest level of fire department vehicle access. This modification will be more restrictive than what has been previously allowed. The 30-foot floor level height and other triggers were selected based on the standpipe requirements found within Section 905.3.1. Using a single scoping limit for both the standpipe and the NFPA13 sprinkler systems makes for a logical point at which additional fire protection is warranted.



This excerpt is taken from ***Significant Changes to the International Building Code®, 2021 Edition***. The Significant Changes series takes you directly to the most important changes that impact projects. Key changes are identified then followed by in-depth discussion of how the change affects real-world application. Photos, tables and illustrations are included to further clarify application. Available for the IBC, IRC, IFC, IECC and IPC/IMC/IFGC, the Significant Changes publications are very useful training and review tools for transitioning to a new code edition.