

## FIRE PROTECTION HISTORY-PART 251: 1918 (EGRESS CAPACITY FACTORS-DEPARTMENT STORES)

By Richard Schulte

The twenty-second Annual Meeting of the National Fire Protection Association was held in Chicago in May 1918. Part of the Committee Report on Fire Resistive Construction included the topic of egress for department stores. The following excerpt addresses the egress capacity factors to be utilized for purpose of sizing stairs and horizontal exits:

*“The occupants of every story above the first, shall be provided with exits computed on the basis of **at least 22 inches of width for every twenty-one persons and five square feet per person on landings for stair exits, 22 inches of width for every fifty persons for horizontal exits, allowing not more than four units of 22 inches each for horizontal exits. At least one of the exits provided for every such floor area shall be a stair exit.**”*

The width of the stairs determined using the factor indicated above was based upon the assumption that the stair enclosure would be utilized as an area of refuge, rather than assuming that occupants would flow through the stairs to the exterior of the building.

The egress capacity factor for stairs indicated above is approximately 1 (1.048) inch per person. The egress capacity factor utilized for stairs in the current codes used in the United States is 0.3 inches per person. In other words, the stair width required by this proposal from 1918 is roughly 3.5 times the stair width required by current codes utilized in the United States.

\* \* \* \* \*

**Source:** *“Proceedings of the Twenty-Second Annual [NFPA] Meeting”*, Chicago, Illinois, 1918.

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