

### FIRE PROTECTION HISTORY-PART 274: 1918 (GENERAL EGRESS REQUIREMENTS FOR FIRE RESISTIVE BUILDINGS)

By Richard Schulte

The twenty-second Annual Meeting of the National Fire Protection Association was held in Chicago in May 1918. The Committee on Fire-Resistive Construction presented a report at this meeting. Included in the Committee's Report were provisions which addressed general egress requirements for fire resistive buildings. The following is an excerpt of the portion of the Committee's Report addressing general egress requirements:

***“Exits.—See "General Definitions." In case of horizontal exits, each of the connected areas shall provide not less than 5 square feet of unobstructed floor space for each person.***

*Every floor area shall have at least two separate exits, and whenever any floor area exceeds 10,000 square feet, at least one additional exit shall be provided.*

*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 fourteen persons for stair exits, or 22 inches in width for every fifty persons for horizontal exits. At least one of the exits provided for every such floor area shall be a stair exit.*

*No width of exit stairway or passageway required by these rules shall be reduced at any subsequent point in the direction of exit travel.*

*Exits shall be remote from each other, and no point of any floor area shall be more than 100 feet distant from an exit. Whenever any building is more than four stories high, and has an occupancy greater than twenty-five people above the fourth floor, then each floor area of such building shall be connected either directly to a smoke-proof tower, or indirectly through a horizontal exit to such smokeproof tower.”*

Of particular interest is the establishment of 22 inches as the basic “unit of egress width” and the egress capacity factor of 14 occupants for each 22 inches of exit stair width and 50 occupants for each 22 inches of horizontal exit width.

Both the Life Safety Code and the International Building Code now indicate that an egress capacity factor of 0.3 inches per person be utilized to determine the egress capacity of stairs. An egress stair capacity factor of 22 inches for 14 occupants is roughly 1.6 inches of stair per person. Hence, the exit stair width proposed to be utilized in 1918 was roughly 5 times the exit stair width presently required (for buildings with a large number of occupants).

Obviously, the egress capacity factors proposed in 1918 were extremely conservative when compared with the egress capacity factors utilized in egress system design today.

\* \* \* \* \*

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

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