



EXIT PATH MARKING

Recent Code Changes

In August 2007, ICC published supplements to the 2006 editions of their IBC and IFC model codes. These updates in the codes are a direct result of changes approved by the voting membership of the ICC at the conclusion of the 2006/2007 Code Development Cycle.

The ICC now requires non-electrical exit path marking- self-luminous (radioluminescent or tritium powered), photoluminescent or other technology- in high rise buildings and it must be tested and evaluated to the UL1994 performance standard or the ASTM E 2072 luminance standard. Prior to this revision, there was no general requirement for exit path marking or a performance standard specified by the International Codes.



INTERNATIONAL BUILDING CODE INTERNATIONAL FIRE CODE EXCERPT FROM THE 2007 SUPPLEMENT

Section 1027 Add new section to read as shown: (E84-06/07)

SECTION 1027 EXIT PATH MARKINGS

1027 EXIT PATH MARKINGS

1027.1 General. Approved luminous markings delineating the exit path shall be provided in exit enclosures, including vertical exit enclosures and exit passageways, of buildings of Group A, B, E, I, M, and R-1 having occupied floors greater located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access and shall comply with Sections 1027.1.1 through 1027.1.7.

Exception: Exit path markings shall not be required in lobbies or areas of open parking garages, where such lobby or area is located on the level of exit discharge and complies with the exception to Section 1023.1.

1027.1.1 Steps: A stripe shall be applied to the horizontal leading edge of each step and shall extend for the full length of the step. Outlining stripes shall have a minimum horizontal width of 1 inch (25 mm) and a maximum width of 2 inches (51 mm). The leading edge of the stripe shall be placed at a maximum of ½ inch (13 mm) from the leading edge of the step and the stripe shall not overlap the leading edge of the step by not more than ½ inch (13 mm) down the vertical face of the step.

1027.1.2 Landings: The leading edge of landings shall be marked with outlining stripes consistent with the dimensional requirements for steps.

1027.1.3 Handrails: All handrails and handrail extensions shall be marked with a stripe having a minimum width of 1 inch (25mm). The stripe shall be placed on the top surface of the handrail for the entire length of the handrail, including extensions and newel post caps. Where handrails or handrail extensions bend or turn corners, the stripe shall not have a gap of more than 4 inches (102 mm).

1027.1.4 Perimeter demarcation lines: Stair landings and other floor areas within exit enclosures, with the exception of the sides of steps, shall be provided with demarcation lines on the floor or on the walls or a combination of both. The stripes shall be 1 (25 mm) to 2 inches (51 mm) wide with interruptions not exceeding 4 inches (102 mm).

1027.1.4.1 Floor mounted demarcation lines: Perimeter demarcation lines shall be placed within 4 inches of the wall and shall extend to within 2 inches (51 mm) of the markings on the leading edge of landings. The demarcation lines shall continue across the floor in front of all doors.

Exception: Demarcation lines shall not extend in front of exit doors that lead out of an exit enclosure and through which occupants must travel to complete the exit path.



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1027.1.4.2 Wall mounted demarcation lines: Perimeter demarcation lines shall be placed on the wall with the bottom edge of the stripe wall no more than 4 inches (102 mm) above the finished floor. At the top or bottom of the stairs, demarcation lines shall drop vertically to the floor within 2 inches (51 mm) of the step or landing edge. Demarcation lines on walls shall transition vertically to the floor and then extend across the floor where a line on the floor is the only practical method of outlining the path. Where the wall line is broken by a door, demarcation lines on walls shall continue across the face of the all doors or may transition to the floor and extend across the floor in front of such doors.

Exception: Demarcation lines shall not extend in front of exit doors that lead out of an exit enclosure and through which occupants must travel to complete the exit path.

1027.1.4.3 Transition. Where a wall mounted demarcation line transitions to a floor mounted demarcation line, or vice-versa, the wall mounted demarcation line shall drop vertically to the floor to meet a complimentary extension of the floor mounted demarcation line, thus forming a continuous marking.

1027.1.5 Uniformity. Placement and dimensions of markings shall be consistent and uniform throughout the same exit enclosure.

1027.1.6 Materials. Luminescent exit path markings shall be permitted to be made of any material, including paint, provided that an electrical charge is not required to maintain the required luminance. Such materials shall include, but are not limited to, self-luminous materials and photoluminescent materials. Materials shall comply with either:

1. UL 1994, or
2. ASTM E 2072, except that the charging source shall be 1 fc (10 lux) of fluorescent illumination for 60 minutes, and the minimum luminance shall be 5 millicandelas per square meter after 90 minutes.

1027.1.7 Illumination. Exit enclosures where photoluminescent exit path markings are installed shall be provided with the minimum means of egress illumination required by Section 1006 for at least 60 minutes prior to periods when the building is occupied.

Chapter 35 (IFC Chapter 45):

UL

UL 1994-04 Luminous Egress Path Marking Systems, with revisions through February, 2005

ASTM

ASTM E 2072-04 Standard Specification for Photoluminescent (Phosphorescent) Safety Markings



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NFPA, in the 2006 Edition of the Life Safety Code (NFPA 101), Uniform Fire Code (NFPA 1) and the Building Construction and Safety Code (NFPA 5000), added language specifying how Contrasting Marking should be applied to stairs (on the nose) and where Floor Proximity Egress Path Marking should be applied (within 18 inches of the floor). More recently, as a direct result of changes approved by the voting membership of the NFPA during the current Code Development Cycle, additional language will be added to these codes in 2009. This language will not require markings; but there will be a menu of best practices for the installation of Exit Path Marking within the exits of many different types of occupancies.



NFPA 1®: Uniform Fire Code®, 2006 Edition®

NFPA 101®: Life Safety Code®, 2006 Edition®

NFPA 5000®: Building Construction and Safety Code®, 2006 Edition®

NFPA 101, 2006 Edition:

7.2.2.5.4 Stairway Marking.

7.2.2.5.4.8 Where new contrasting marking is applied to stairs, such marking shall comply with the following:

- 1) The marking shall include a continuous strip as a coating on, or as a material integral with, the full width of the leading edge of each tread.
- 2) The marking shall include a continuous strip as a coating on, or as a material integral with, the full width of the leading edge of each landing nosing.
- 3) The marking strip width, measured horizontally from the leading vertical edge of the nosing, shall be consistent at all nosings.
- 4) The marking strip width shall be 1 in. to 2 in. (25 mm to 51 mm).

(NFPA 5000: 11.2.2.6.8)

(NFPA 1: 14.6.4.8)

7.10 Marking of Means of Egress.

7.10.1.7 **Floor Proximity Egress Path Marking.** Where floor proximity egress path marking is required in Chapter 11 through Chapter 42, a listed and approved floor proximity egress path marking system that is internally illuminated shall be installed within 18 in. (455 mm) of the floor. The system shall provide a visible delineation of the path of travel along the designated exit access and shall be essentially continuous, except as interrupted by doorways, hallways, corridors, or other such architectural features. The system shall operate continuously or at any time the building fire alarm system is activated. The activation, duration, and continuity of operation of the system shall be in accordance with 7.9.2. The system shall be maintained in accordance with the product manufacturing listing.

(NFPA 5000: 11.10.1.6)

(NFPA 1: 14.14.1.7)

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