CODE COMPLIANCE ALERT

COMPREHENSIVE GUIDE FOR NEW LUMINOUS EGRESS CODE COMPLIANCE REGULATIONS IN YOUR BUILDING

SECTION 1024 AND 1025 COMPLIANCE GUIDE

ecoglo®

ARIZONA, 2020 COMPLIANCE

The state of Arizona adheres strictly to 2018 National Building and Fire Code regulations

This document provides guidance to local building officials, architects, and contractors as to the requirements for luminous egress path markings in new and existing high-rise buildings located in the state of Arizona. Compliance with these code sections will ensure a safe evacuation of residents during emergency conditions – potentially saving lives in the process.

Contact Ecoglo today for your complimentary building audit of emergency egress compliance.

888-679-4022 info@ecoglo.us

MANDATORY LUMINOUS EGRESS MARKINGS

Requirements for luminous egress path markings became retroactive to existing high-rise buildings with the implementation of the 2018 International Building Code [see IFC 1104.25, 1025] in many municipalities across Arizona, such as Phoenix and Surprise, and other state agencies. As such, it is now mandatory for all new and existing high-rise commercial buildings in such municipalities to install luminous egress signage and path markings in stairwells and landings.

Improving the visibility of stair treads and handrails under emergency conditions is incredibly important and improves the safety for individuals navigating stairs during egress of a high-rise building. Unfortunately, secondary power systems that should engage in the event of an emergency can fail under certain conditions. This scenario is when luminous and photoluminescent marking systems can save lives.

PROVIDING A SAFE AND ILLUMINATED EGRESS PATH

Section 1025 provisions provide an additional level of safety to buildings' egress paths by requiring the installation of photoluminescent or self-illuminating marking systems that do not require electrical power and the associated wiring and circuits. This means that even if a building's power supply fails to operate, photoluminescent egress markings ensures occupants can safely egress a building via exit stairways. This is especially necessary in high-rise buildings, which feature a greater anticipated occupant load and occupants which way not be familiar with the emergency exit path.

ECOGLO'S ADVANCED PHOTOLUMINESCENT TECHNOLOGY

Ecoglo products are utilized across the United States by buildings to meet the requirements for luminous egress path markings and exit signs. Our products feature Ecoglo's advanced photoluminescent technology, which will glow brightly for 2.50 hours after just 5 minutes of exposure in a reasonably lit area. This ensures a safe and efficient pedestrian environment providing everyone the ability to navigate egress safely and efficiently in all emergency type environments.

Ecoglo photoluminescent products comply with every referenced standard for egress path markings (UL 1994 and ASTM E2072) and for signs (UL 924). As such, our luminous egress path markings will bring your building up to code and provide a safe emergency egress path for your building's patrons.

Compliance with these code sections will ensure a safe evacuation of residents during worst case conditions. Failure to enforce this retroactive requirement puts the lives of high-rise building occupants at risk as well as bringing liability on your jurisdiction and the building owner. We have attached Ecoglo's illustrated guidance to assist you in applying these code sections at a cost-effective price point.

For any questions, please contact Ecoglo for further assistance. We strive to provide building products that create a safer environment while meeting the demand for cost-effective and long-term solutions.

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2018 INTERNATIONAL BUILDING AND FIRE CODE

LUMINOUS EGRESS PATH MARKINGS

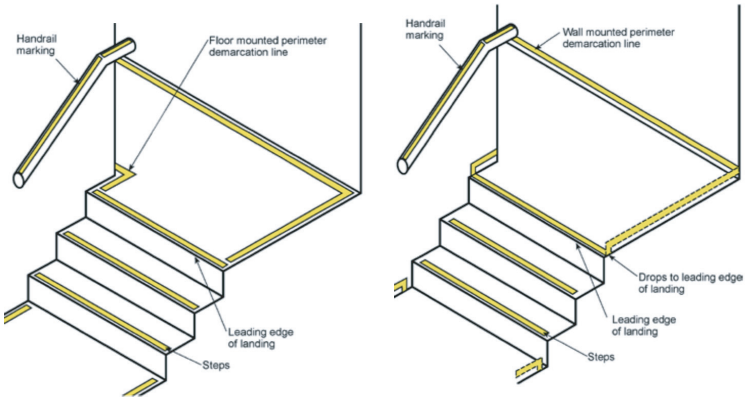
1025.1 GENERAL

Approved luminous egress path markings delineating the exit path shall be provided in high-rise buildings of Groups A, B, E, I-1, M or R-1 occupancies in accordance with this section.

Exception: . Luminous egress path markings shall not be required on the level of exit discharge in lobbies that serve as part of the exit path in accordance with Section 1028.1, Exception 1.

1025.2 MARKINGS WITHIN EXIT COMPONENTS

Egress path markings shall be provided in interior exit stairways, interior exit ramps and exit passageways, in accordance with Sections 1025.2.1 through 1025.2.6.



1025.2.1 STEPS

A solid and continuous 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 not more than 1/2 inch (12.7 mm) from the leading edge of the step and the stripe shall not overlap the leading edge of the step by not more than 1/2 inch (12.7 mm) down the vertical face of the step.

Exception: The minimum width of 1 inch (25 mm) shall not apply to outlining stripes listed in accordance with UL 1994.

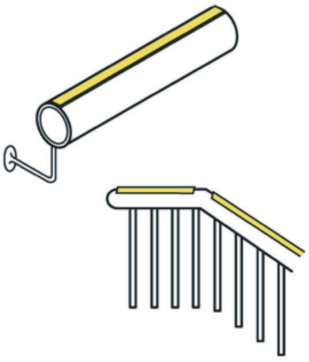
1025.2.2 LANDINGS

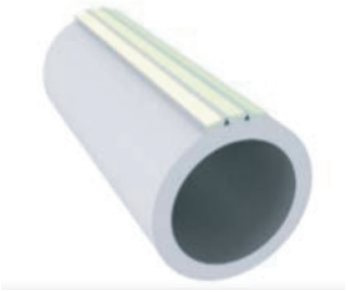
The leading edge of landings shall be marked with a stripe consistent with the dimensional requirements for steps.

1025.2.3 HANDRAILS

Handrails and handrail extensions shall be marked with a solid and continuous stripe having a minimum width of 1 inch (25 mm). 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).

Exception: The minimum width of 1 inch (25 mm) shall not apply to outlining stripes listed in accordance with UL 1994.





1025.2.4 PERIMETER DEMARCATION LINES

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

Exception: The minimum width of 1 inch (25 mm) shall not apply to outlining stripes listed in accordance with UL 1994.

1025.2.4.1 FLOOR-MOUNTED DEMARCATION LINES

Perimeter demarcation lines shall be placed within 4 inches (102 mm) 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 discharge doors that lead out of an exit and through which occupants must travel to complete the exit path.

1025.2.4.2 WALL-MOUNTED DEMARCATION LINES

Perimeter demarcation lines shall be placed on the wall with the bottom edge of the stripe not 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 door or transition to the floor and extend across the floor in front of such door.

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

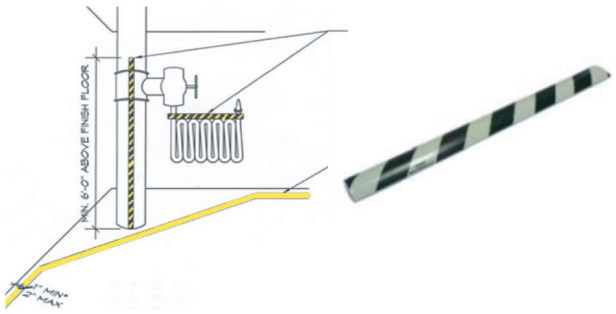
1025.2.4.3 TRANSITION

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.

1025.2.5 OBSTACLES

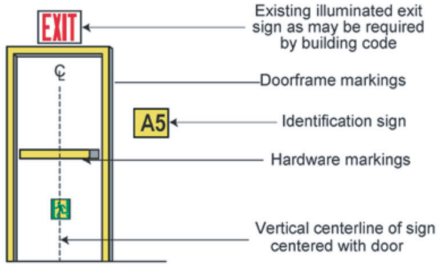
Obstacles at or below 6 feet 6 inches (1981 mm) in height and projecting more than 4 inches (102 mm) into the egress path shall be outlined with markings not less than 1 inch (25 mm) in width comprised of a pattern of alternating equal bands, of luminous material and black, with the alternating bands not more than 2 inches (51 mm) thick and angled at 45 degrees (0.79 rad). Obstacles shall include, but are not limited to, standpipes, hose cabinets, wall projections and restricted height areas.

However, such markings shall not conceal any required information or indicators including but not limited to instructions to occupants for the use of standpipes.



1025.2.6 DOORS WITHIN THE EXIT PATH

Doors through which occupants must pass in order to complete the exit path shall be provided with markings complying with Sections 1025.2.6.1 through 1025.2.6.3.



1025.2.6.1 EMERGENCY EXIT SYMBOL

The doors shall be identified by a low-location luminous emergency exit symbol complying with NFPA 170. The exit symbol shall be not less than 4 inches (102 mm) in height and shall be mounted on the door, centered horizontally, with the top of the symbol not higher than 18 inches (457 mm) above the finished floor.

1025.2.6.2 DOOR HARDWARE MARKINGS

Door hardware shall be marked with not less than 16 square inches (406 mm2) of luminous material. This marking shall be located behind, immediately adjacent to, or on the door handle or escutcheon. Where a panic bar is installed, such material shall not be less than 1 inch (25 mm) wide for the entire length of the actuating bar or touchpad.

1025.2.6.3 DOOR FRAME MARKINGS

The top and sides of the door frame shall be marked with a solid and continuous 1-inch- to 2-inch-wide (25 mm to 51 mm) stripe. Where the door molding does not provide sufficient flat surface on which to locate the stripe, the stripe shall be permitted to be located on the wall surrounding the frame.

1025.3 UNIFORMITY

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

1025.4 SELF-LUMINOUS AND PHOTOLUMINESCENT

Luminous egress 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 not be limited to, self-luminous materials and photoluminescent materials. Materials shall comply with either of the following standards:

1. UL 1994.

2. ASTM E2072, except that the charging source shall be 1 footcandle (11 lux) of fluorescent illumination for 60 minutes, and the minimum luminance shall be 30 milicandelas per square meter at 10 minutes and 5 milicandelas per square meter after 90 minutes.

1025.5 ILLUMINATION

Where photoluminescent exit path markings are installed, they shall be provided with not less than 1 footcandle (11 lux) of illumination for not less than 60 minutes prior to periods when the building is occupied and continuously during occupancy.

2018 IFC/IBC 1023.9 STAIRWAY IDENTIFICATION SIGNS

A sign shall be provided at each floor landing in an interior exit stairway and ramp connecting more than three stories designating the floor level, the terminus of the top and bottom of the interior exit stairway and ramp and the identification of the stairway or ramp. The signage shall state the story of and direction to the exit discharge, and the availability of roof access from the interior exit stairway and ramp for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. In addition to the stairway identification sign, a floor-level sign in visual characters, raised characters and braille complying with ICC A117.1 shall be located at each floor-level landing adjacent to the door leading from the interior exit stairway and ramp into the corridor to identify the floor level.

1023.9.1 SIGNAGE REQUIREMENTS

Stairway identification signs shall comply with all of the following requirements:

1. The signs shall be a minimum size of 18 inches (457 mm) by 12 inches (305 mm).

2. The letters designating the identification of the interior exit stairway and ramp shall be not less than 11/2 inches (38 mm) in height.

3. The number designating the floor level shall be not less than 5 inches (127 mm) in height and located in the center of the sign.

4. Other lettering and numbers shall be not less than 1 inch (25 mm) in height.

5. Characters and their background shall have a nonglare finish. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.

6. Where signs required by Section 1023.9 are installed in the interior exit stairways and ramps of buildings subject to Section 1025, the signs shall be made of the same materials as required by Section 1025.4.