2009 IBC – Section 1024
Approved Luminous Egress Path Markings

Where Required

Buildings of Groups A (Assembly), B (Business), E (Education), I (Institutional), M (Mercantile) and R-1 (Residential transient i.e. hotels, motels & boarding houses) having occupied floors located more than 75 feet above the lowest level of fire department vehicle access.

Exceptions:
1. 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 1027.1, Exception 1.
2. Luminous egress path markings shall not be required in areas of open parking garages that serve as part of the exit path in accordance with Section 1027.1, Exception 3.

Egress path markings shall be provided in exit enclosures, including vertical exit enclosures and exit passageways.

EXIT ENCLOSURE
An exit component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a vertical or horizontal direction to the exit discharge or the public way.

EXIT PASSAGEWAY
An exit component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a horizontal direction to the exit discharge or the public way.

What is Required

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 are not limited to, self-luminous (radioactive) materials and photoluminescent (non-radioactive) materials.

Materials shall comply with either:
or
2. E 2072-04 Standard Specification for Photoluminescent (Phosphorescent) Safety Markings, except that the charging source shall be 1 foot-candle 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.

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 and a maximum width of 2 inches.
Mounting: The leading edge of the stripe shall be placed at a maximum of $\frac{1}{2}$ inch from the leading edge of the step and the stripe shall **NOT** overlap the leading edge of the step by **not** more than $\frac{1}{2}$ inch down the vertical face of the step.

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

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

**Bidding info:**
- a. Number of stair steps per flight X number of stair flights per stairwell X number of stairwells in building.
- b. Width dimensions of steps.
- c. Is building new or existing.
- d. If existing, type of stair construction.
- e. If new, opportunity to work with architect to specify PL materials.
- f. If NFPA 101 applies to the building (hospital), the following applies:
  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. *(Commentary: For stair nosing marking, surface-applied material, such as adhesive-backed tape and magnetic strips, should not be used as it is not durable under the scuffing from users’ feet and, in coming loose, it creates a tripping hazard. While a carefully applied and consistently maintained coating is acceptable, contrasting color or photoluminescent material integral with the nosings is preferable because of its permanence. See also 7.1.6.4 and 7.2.2.3.3 for slip resistance uniformity requirements, as well as prohibition of projections on the treads.)*
  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).

Handrails
All handrails and handrail extensions shall be marked with a solid and continuous stripe having a minimum width of 1 inch.

**Mounting:** 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.

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

**Bidding info:**
- a. Number of handrails per flight X number of stair flights per stairwell X number of stairwells in building.
- b. Is building new or existing.
- c. If existing, type of handrail construction.
- d. If new, opportunity to work with architect to specify PL materials.
Perimeter Demarcation Lines
Stair landings and other floor areas within exit enclosures, 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 wide with interruptions not exceeding 4 inches.
   Exception: The minimum width of 1 inch shall not apply to outlining stripes listed in accordance with UL 1994.

Floor-mounted Demarcation Lines
Mounting: Perimeter demarcation lines shall be placed within 4 inches of the wall and shall extend to within 2 inches 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.

Bidding info:
   a. Number of stair landings per flight X number of stair flights per stairwell X number of stairwells in building.
   b. Is building new or existing.
   c. If existing, type of stair landing construction.
   d. If new, opportunity to work with architect to specify PL materials.
Wall-mounted Demarcation Lines

Mounting: Perimeter demarcation lines shall be placed on the wall with the bottom edge of the stripe no more than 4 inches above the finished floor. At the top or bottom of the stairs, demarcation lines shall drop vertically to the floor within 2 inches 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 doors that lead out of an exit enclosure and through which occupants must travel to complete the exit path.
**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 complementary extension of the floor-mounted demarcation line, thus forming a continuous marking.

**Obstacles**

**Mounting:** Obstacles at or below 6 feet 6 inches in height and projecting more than 4 inches into the egress path shall be outlined with markings no less than 1 inch in width comprised of a pattern of alternating equal bands, of luminescent luminous material and black, with the alternating bands no more than 2 inches thick and angled at 45 degrees. 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.
Bidding info:
   a. Number of stair obstacles per flight X number of stair flights per stairwell X number of stairwells in building.
   b. Is building new or existing.

Exit Doors from Exit Enclosures
Doors through which occupants within an exit enclosure must pass in order to complete the exit path shall be provided with emergency exit symbols, door hardware markings and door frame markings.

The exit doors shall be identified by a low-location luminous emergency exit symbol complying with NFPA 170.

Mounting: The exit symbol shall be a minimum of 4 inches in height and shall be mounted on the door, centered horizontally, with the top of the symbol no higher than 18 inches above the finished floor.

A photoluminescent tactile sign stating EXIT and complying with ICC A117.1 (Tactile & Braille) shall be provided adjacent to the exit discharge (That portion of a means of egress system between the termination of an exit and a public way).

Mounting: Tactile characters shall be 48 inches minimum above the floor, measured to the baseline of the lowest tactile character and 60 inches maximum above the floor, measured to the baseline of the highest tactile character.

Door Hardware Markings
Door hardware shall be marked with no less than 16 square inches of luminous material.

Mounting: Located behind, immediately adjacent to or on the door handle and/or escutcheon. Where a panic bar is installed, such material shall be no less than 1 inch wide for the entire length of the actuating bar or touchpad.

Door Frame Markings
Mounting: The top and sides of the door frame shall be marked with a solid and continuous 1 inch to 2 inch wide 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.

Bidding info:
   a. Number of exit doors per stairwell X number of stairwells in building.
   b. Is building new or existing.
   c. If existing, will door frame markings go on door frame or wall around door frame.
   d. If new, opportunity to work with architect to specify PL materials.
Floor Identification Signs
A sign shall be provided at each floor landing in exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the exit enclosure and the identification of the stair or ramp. The signage shall also state the story of, and the direction to, the exit discharge and the availability of roof access from the enclosure for the fire department.

**Mounting:** The sign shall be located 5 feet above the floor landing in a position that is readily visible when the doors are in the open and closed positions.

Floor level identification signs in tactile characters complying with ICC A117.1 shall be located at each floor level landing adjacent to the door leading from the enclosure into the corridor to identify the floor level.

1. The signs shall be a minimum size of 18 inches by 12 inches.
2. The letters designating the identification of the stair enclosure shall be a minimum of 11/2 inches in height.
3. The number designating the floor level shall be a minimum of 5 inches in height and located in the center of the sign.
4. All other lettering and numbers shall be a minimum of 1 inch 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. When signs are installed in interior exit enclosures of buildings subject to Section 1024, the signs shall be made of the same materials as required by Section 1024.4.

**Bidding info:**
- a. Number of stair flights per stairwell X number of stairwells in building.
- b. Determine stair designation for each stair enclosure.
- c. Determine floor of exit discharge & whether there is roof access.
- d. Is building new or existing.
- e. If existing, sign must be same material as rest of luminous stair markings.
- f. If new, opportunity to work with architect to specify PL materials.

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

**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.

Copyright © 2009
Manny Muniz Associates, LLC, 265 Mount Arter Loop, Lander, WY 82520

All rights reserved. No part of the material protected by this copyright notice may be reproduced or utilized in any form without the written permission from the copyright owner nor may it be used in any form for resale without written permission from the copyright owner.