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Materials and Equipment Acceptance Division

January 27, 2006

QUESTIONS and ANSWERS regarding the application of RS6-1.

All excerpts from the *Building Code of the City of New York* in this FAQ are for reference in understanding the questions and answers only and should not be considered as complete. Local Law 26/04, Reference Standard 6-1 and 6-1A and other relevant publications should always be consulted.

[1. Door-mounted Door Signs \(§ 2.1.1.1\) - direction of runningman symbol](#)

Q. Does the "runningman" need to be facing a particular direction on a door-mounted sign?

A. The runningman should always be running towards the half of the door containing the latch for safety reasons. However, because the direction of the runningman is not properly shown in RS 6-1 figure 1, DOB will not issue violations if installed incorrectly on a door-mounted sign per § 2.1.1.1.

[2. Wall-mounted Door Signs \(§ 2.1.1.2\) - direction of arrow](#)

Q. Should the arrow on the wall mounted signs be pointing towards the handle?

A. Yes, on a wall-mounted sign, the arrow should point towards the latch as shown in RS 6-1 Figure 2.

[3. Step Markings \(§ 2.2.1\) - winding stairs](#)

Q. How do I mark winding stairs in an older, existing building?

A. Winders cannot physically be marked with side edge markers owing to the geometry of the steps. Therefore, the winders must be marked for the full leading edge per § 2.2.1 exception 1. Additionally, if the winders steps are preceded or followed by straight run steps, then the straight run steps cannot be marked with side edge markers because the result would not be "consistent and uniform throughout the same exit" as required by § 2.2.1. Therefore, the straight run steps in the same exit must also be marked for the full leading edge per § 2.2.1 exception 1.

[4. Leading Edges of Landings \(§ 2.2.2\)](#)

Q. Is it permissible to use a 50/50 black/glow strip on the leading edge of the landings?

A. The leading edge of the landing cannot be accomplished with a 50/50 black/glow strip. This issue was carefully considered by the RS 6-1 Task Force. The Task Force tested a mock up of such an installation and reached the decision to require a solid and

continuous line across the top of every landing for safety reasons, as is reflected in the text of § 2.2.2.

5. Perimeter Demarcation Lines (§ 2.2.4) - wall vs. floor

Q. If a wall mounted option for perimeter demarcation is installed due to poor conditions on any given floor, must the entire exit be treated uniformly?

A. It is preferable that the installation be uniform, but RS 6-1 anticipates unusual situations, so § 2.2.4 clearly states that the "demarcation lines shall be located on the floor, on the walls/vertical surfaces, or a combination of the two." So you are free to change in the same exit, although it is not as desirable as being uniform.

6. Obstacles (§ 2.2.5) - fire hose bags

Q. Do fabric or canvas hose bags, as part of a fire hose assembly, require horizontal photoluminescent markings?

A. If the hose bags project more than 4" into the egress path, then bags require obstacle markings per § 2.2.5. Interestingly, we have been told by many installers that they have chosen to place bags on the hoses to make it easier to install the PL obstacle markings, because the UL listing plate would otherwise be the only location on which to place the markings, and placing the markings on the UL plate would invalidate the hose apparatus' listing.

7. Obstacles (§ 2.2.5) - limited height areas

Q. Is a horizontal stripe required across the face of a low-hanging ceiling in a limited height area?

A. Yes. Whether the stripe goes solely on the vertical face but near the lowest edge (typical), or folded around the corner (not as typical due to activating illumination issues), this would be determined by site conditions, direction of egress travel, and what makes the most sense for the particular installation.

8. Upon Entering an Exit (§ 2.2.6) - subgrade spaces Where Egress Direction Is Not Clear (§ 2.2.7) - mid-level landings

Q. Are directional signs required for each landing and half-landing (mid-landing) below grade or just the landing with an egress door? When would a mid-landing be required to have a sign?

A. The directional signs that may be required for subgrade spaces come from two different sections of the RS 6-1. First, below grade locations are not excluded from § 2.2.6, which requires the marking ONLY upon entering the exit (therefore § 2.2.6 does not apply at the half-landings). The other place where a directional sign MIGHT be required at a half-landing is when the egress direction "is not clear" per § 2.2.7. This is not a precise term, but takes into account the geometry of egress configuration. In most cases, a half-landing would not be unclear, so a half-landings would typically not require a § 2.2.7 sign. However, if directional signs are voluntarily installed on the half-landings, then they must be placed so that the top edge is no more than 18" above the finished floor in accordance with § 2.2.7. Additional voluntary signs may be added higher than 18" only when supplementing a low-location sign already installed at the same place.

9. Intermediate and Final Exit Doors (§ 2.2.9) - doors signs

Q. Must intermediate and final doors signs always be wall-mounted?

A. Yes, this is made clear by the text of § 2.2.9.1 as well as the figures. However, it is permitted to place a (supplemental) door-mounted intermediate/final exit sign on the door, provided the required wall-mounted sign is also provided.

10. Intermediate and Final Exit Doors (§ 2.2.9) - door hardware

Q. Is it permissible to apply any additional verbiage, or a shape larger than 16 square inches of PL material, to exit door hardware pursuant to § 2.2.9.2?

A. Yes, § 2.2.9.2 states the minimum - - i.e. enough for a person in the dark to be able to find where to grab/push. You will notice that the MEA-approved model numbers that include extra verbiage, or arrows/etc., follow certain conventions. For instance, when the word "exit" or "push" or other similar are added to the door hardware marking, the MEA approvals require ANSI safety green, etc. When these products are reviewed by MEA, it is the total amount of photoluminescent portions of the sign (i.e. excluding the green portions) that are counted. But the 16 square inches is the minimum.

11. Intermediate and Final Exit Doors (§ 2.2.9) -doors frames

Q. The text of § 2.2.9.3 says that the door frame stripes shall be "solid and continuous." But figures 13 and 14 appear to show a zebra-striped marking. Which one is it?

A. The door frame markings must be solid photoluminescent materials (zebra-striping is not permitted). The shading in Figures 13 and 14 are intended to differentiate between the photoluminescent materials and the door frame, and are not intended to suggest a zebra striping. If there is a potential or apparent conflict between the text and the figures, the text governs as per § 2.3.4. And the text clearly states that door frame markings are to be solid and continuous.

12. Intermediate and Final Exit Doors (§ 2.2.9) - re-entry doors

Q. How do I mark re-entry doors?

A. LL 26/04 does not mandate the upgrading or replacement of existing signs previously required pursuant to LL 5/73 or LL 16/84. Therefore, "re-entry" signs and "no re-entry" signs may remain as is. If you choose to replace them with photoluminescent signs, then these signs must be MEA-approved pursuant to § 2.5. Similarly, RS 6-1 does not mandate door hardware or door frame markings for re-entry doors - however, if you voluntarily mark the door frame or hardware of a re-entry door, then the re-entry signage must be replaced with an MEA-approved re-entry sign pursuant to § 2.5.

13. Freight Lobbies and Other Passages (§ 2.2)

Q. Is a freight lobby located just before entering the stairs considered an "exit" (marked per § 2.2) or a corridor (exempted from § 2.2)?

A. The short answer is that you should treat the freight lobby vestibule, and similar extensions of egress path, as "exits." Doing so requires marking the door leading into the freight lobby with a § 2.1 sign, and marking the inside of the freight lobby per § 2.2, including perimeter markings, directional signage where the egress direction is not clear, obstacle markings, intermediate exit door markings leading to the stairs, etc. However, below is provided a more detailed analysis to provide the analysis for this answer:

"Corridors" are defined in the building code to mean a public (i.e. multi tenant floor) passage providing a means of access from rooms or spaces to an "exit." In the RS 6-1, corridors are specifically excluded, unless the passage also serves as an "exit." An "exit" is the means of egress itself.

In most cases, the doors leading out of the tenant spaces do not require marking under § 2.1 since the passages just outside the tenant spaces are "corridors" and not "exits." Also, in most cases, the passages themselves will not require markings under § 2.2 since, again, these are "corridors" and not "exits." There may be some cases where the tenant space leads directly to an "exit." But this determination is not simple, as it depends on how the building layout is designed.

For your example of a small passageway (sometimes containing a cargo elevator) that one enters from the tenant space, from which passageway one then goes through another door to the exit stair, the minimum code requirements for photoluminescent placement depend on whether the passageway is an "exit" per code.

It is clear that the stair is an "exit." Whether the extension passageway is an exit, or unnecessary partitions, depends on the design and layout of the building, the date that the building was constructed or substantially altered, the travel distances on the floor (which is sometime different for above- and below-grade locations). If there is ever a particular building which is a question, the owners could ask their architect or engineer to designate for them whether the questionable passages are "exits."

If the architectural/engineering analysis reveals that the passageway (e.g. with the cargo elevator) is indeed an extension of the "exit" (for travel distance reasons or otherwise), then the door leading into the passageway gets a § 2.1 sign, and the passageway itself gets marked with § 2.2 (perimeter, etc.), and the door to the stairs is an intermediate exit door.

However, IF in a particular building, the analysis reveals that the passageway (with the cargo elevator) is NOT an extension of the "exit," then the door leading into the passageway, from a technical reading of the text of RS 6-1, would not require a § 2.1 sign, and the passageway would not require markings per § 2.2. But this could create dangerous situation since, then, none of the office tenants will be able to find the exit if there is pitch darkness. So the pitfalls of not treating the passageway as an exit are considerable. And an inspector might not agree with an interpretation that the extension is not an exit, subjecting the owner to violations. Common sense would dictate treating the short passageway as an exit. So, if an applicant wishes to present a reconsideration application (Form LL 26/04-2) for an interpretation, and shows this Department a layout that has a short passageway leading to the exit for our opinion, this Department would typically consider such passageways as extension to the exit and thus subject to § 2.2, unless an architect does the analysis and proves in writing that it is not an exit.

14. Unenclosed stairs (§ 2.2)

Q. How do I properly mark unenclosed stairwells (i.e. a stairwell that is open at every floor to the hallways/passages)?

A. When there is no intervening door between the stairs and the hallways/passageways, the hallways/passageways are considered part of the "exit," and all exits get marked per

RS 6-1 § 2.2. Therefore, in accordance with RS 6-1, the doors from the tenant spaces leading to the "exit" require a § 2.1 sign. Then, once inside this "exit"/passageway/hallway, the perimeters require marking per § 2.2.4, signage may be required where the egress direction is not clear per § 2.2.7, obstacles shall be marked per § 2.2.5, etc.

15. Outdoor Landings for Fire Towers (§ 2.1 and 2.2)

Q. How do I properly mark outdoor landings between the building and egress stairs in a fire tower? Is there a lighting requirement in addition to the photoluminescence requirement?

A. The doors leading from the interior of the building to the exterior balconies are required to have a marking complying with RS 6-1 § 2.1 (i.e. a simple sign), unless of course this door to the balcony is already an intermediate exit door, in which case you follow § 2.2.9.1. The exterior balcony is NOT required to have any § 2.2 markings as per the exception under § 2.2 for exterior stairs or balconies. Voluntary markings on the exterior balcony are required to be UV-rated, uniform, etc. However, the door leading from the exterior balcony to the fire tower stairs is not exempt from § 2.1, so it needs, at a minimum, a § 2.1 marking (i.e. a simple sign), and since it will be exposed to exterior weather, etc., it needs to be UV-rated. The enclosed stair must receive § 2.2 markings throughout the stair, and this of course has no direct unfiltered UV or exterior exposure, so markings in the enclosed stairs itself do not require UV-rating. In buildings in constructed prior to the 2 foot-candle requirement of the 1968 building code, the lighting required on the exterior balcony, if any, would be described in the 1938 code, the 1916 code, or the 1898 code, depending on when the building was constructed. But please see the answers to questions #21 below, on grandfathered lighting levels.

16. Street Floor Lobbies (§ 2.2)

Q. Are the PL requirements applicable to "elegant lobbies" (i.e. lobbies of facilities open to the public, with luxury finishes)?

A. The standard states that "street level lobbies" are excluded from § 2.2. The term "street level lobby" is deemed equivalent to the Building Code term "street floor lobby."

Street floor lobbies permitted to be used to complete the egress from the stairs as per Building Code 27-370(h) - - even allowing more than one distinct stairs to "merge" into a common lobby under certain restrictions.

The important factor is the definition of "street floor" in Building Code § 27-232. If more than one-half a story is above or below the outside grade, then it's no longer the "street floor."

So if the lobby is less than one 1/2 a story from outside grade, then it can be a street floor lobby and does not require photoluminescent markings. If it is more than 1/2 away, then markings are required. Therefore, if there are any exit stairs leading into a street floor lobby, then the door leading into the lobby from the stairs gets a "final exit door" sign (although the appropriate text would likely be "exit through lobby," because "final exit" might be misleading). But the street floor lobby itself requires no markings.

17. Rooftop Work Spaces (§ 2.1)

Q. How do I mark the egress path from enclosed spaces on the roof that are accessible only from the exterior portions of the roof?

A. The Department does not consider the doors that lead into the stairs from the roofs as "doors opening to exits" per § 2.1 if the only occupancy on the roof is mechanical equipment rooms, elevator machine rooms, etc. However, if the roof is utilized for recreation, assemblies, offices in a penthouse, etc., then we would consider those doors as "doors opening to exits" and we would require a UV-rated sign per § 2.1. Note that enclosed cellar spaces with only mechanical spaces are treated differently - in the cellars, all exits and doors leading to exits must be marked per RS 6-1.

18. UV-rated materials (§ 1.2)

Q. Are UV-rated materials required in indoor installations under skylights or near windows?

A. As per § 1.2, a UV-resistant rating is not required for markings unless the markings are subjected to unfiltered sunlight or exterior weather conditions. So markings that are inside a building, filtered by glass, do not require UV-resistance. However, owners may voluntarily install UV-resistant materials where windows or skylights are present for the longevity of the materials.

19. Paints - using paints for signage.

Q. Are painted signs, applied with ISO 7010 compliant stencils and MEA approved paint, permitted?

A. MEA-approved paint, pursuant to RS 6-1A and complying with brightness and other tests, is permitted for perimeter markings. For application in signs, several issues must be considered:

First, strict compliance with the ISO 7010 graphics is mandatory, as are the requirements for the minimum sizes of letters, etc. The installations must be carefully performed so as not to create fuzzy images or images that are non-compliant. DOB does not permit any minor deviations from the ISO graphics - - which may cause challenges depending on how you make your stencils (for instance the centers of the letters "o" in "through lobby"). In the end, it is the finished product that will have to comply with the graphics.

Second, you must apply the paint in the same manner as approved in the instructions, which for most MEA-approved paints requires a white primer coat. But the signs also require a contrasting green portion of the sign. So you need to devise a way to paint the PL portions, as well as the green portions - - this may require masking the same area twice, which can have quality control issues, or it may require painting the PL first (unstenciled) and then green would be applied with a stencil.

Third, the green paint must be "safety green." You will need to purchase a US DOT color chart to ensure in-the-field compliance and quality control. See the FAQs for PL manufacturers (Item # 11, at http://www.nyc.gov/html/dob/downloads/pdf/rs6-1_testing_lab.pdf) for information on how to purchase a green color chart.

Fourth, the person certifying compliance to DOB by signing the Form LL26/04-1

(available at <http://www.nyc.gov/html/dob/downloads/pdf/ll-26-04-1.pdf>) cannot be the contractor, but must be an architect, engineer, building owner, or the building's management company that is responsible for the operation of the building. This person needs to certify that he/she has inspected the work during the installation process. So it is recommended to identify such person early in the process (i.e. before the start of the installation), and ensure that such person inspects the work everyday. Otherwise, no one will be able to sign off on the installation, and the work will have to be performed again.

Fifth, Form LL 26/04-1, note that a special box is required to be checked when in situ painting is performed to comply with any of the necessary egress elements.

20. Paints - using paints for obstacle markings

Q. If I use an MEA-approved paint for obstacle markings, do I need to paint the black lines, or can I just paint solid photoluminescent stripes of the paint?

A. First, please review the relevant answers to the previous question (#19) which are applicable here. Again, the most important thing is precision. Because if you want to do the obstructions in paint, then you must paint the alternating 45-degree black lines as per RS 6-1 - which means that you must be very precise to ensure that the alternating bands are crisp. The only exception that MIGHT be allowed without the alternating black bands is by reconsideration (i.e. site specific), perhaps a proposal to paint the entire surface area of the obstruction - - for instance, if you proposed to paint the entire surface area of a vertical pipe, then even in the pitch darkness, it would clearly be a pipe and would not be mistaken for something else. But if you only painted a 2" solid stripe up and down the pipe, and if this did not contain the alternating black marks, then in the darkness it would not be perceived as an obstacle but could look like a door frame. Finally opting to paint the entire object would require a reconsideration each time (with Form LL 26/04-2).

21. Lighting Levels - installations in grandfathered lighting environments

Q. How are the minimum installation requirements treated in existing buildings that require less than 2 foot-candles of illumination?

A. The explanatory materials in RS 6-1 state that some buildings may legally have lighting levels below the current code requirement of 2 foot-candles. RS 6-1 does not mandate higher-performing PL products for such grandfathered lighting environments (i.e. as long as it has an MEA approval it satisfies DOB requirements), but the explanatory materials state that building owners are encouraged to conduct lighting surveys so that they can make informed decisions. RS 6-1 does not mandate increasing lighting levels in grandfathered environments, either.

As an additional consideration, some manufacturers claim to have tested their products at 1 foot-candle of fluorescent illumination, while still achieving a minimum brightness rating required per RS 6-1.

22. Affidavit/Report (§ 3.1.1 & 3.2.1) - owner's inspection

Q. How do I do properly perform on-site luminance tests of the PL materials? Does this require measuring light levels or luminance readings using instrumentation?

A. There is no requirement in the RS 6-1 for on-site testing of luminance measurement

using instruments. The minimum "test" required by § 3.1.1 or 3.2.1 to certify compliance to the Buildings Department is a simple visual test to notice for problems in the installation, missing PL components, etc. Any types of tests performed that are beyond this code minimum would be up to the owner.

23. Inspections

Q. Who will be inspecting these installations?

A. The initial inspection is made by the person certifying the completed installation on the Form LL 26/04-1 (i.e.: the building owner or the owner's architect, engineer, or managing agent). Subsequent inspection will be performed by the FDNY and/or DOB.

If you are concerned about the installation in a particular location in your building that may be open to interpretation, you may submit a reconsideration form (Form LL26/04-02), and request an official reconsideration for this particular building. This reconsideration form will be attached to the Form LL 26/04-1 so that the final report that is available to the inspectors will include documentation of this determination.

24. Penalties

Q. What are the penalties for not complying by July 1, 2006?

A. For buildings that do not file the required report by July 1, 2006, these building owners will receive DOB violations for non-filing of the report. This is an administrative violation that follows the Department's standard enforcement/adjudication procedures for violations and fines. However, when a DOB inspector makes a site visit and witnesses that the work was not completed or that the work was improperly installed, the inspector will issue a violation with penalties for non-compliance beginning as low as \$500 or up to \$5,000 for the first violation, and go up from there for subsequent inspection, as per the stepped-up penalties of Local Law 26 of 2004 and NYC Building Code § 26-248.g.4(q). Additionally, the FDNY has joint jurisdiction to issue violations under the New York City Fire Prevention Code, and the FDNY has its own penalty schedules.

25. Product Limitations

Q. How can I find out if there is any limitation on MEA's acceptance of the photoluminescent products that I have purchased/installed?

A. You may view the MEA Acceptance Report for each product by clicking on its respective MEA number in the online MEA Index. Each acceptance report identifies the terms and conditions under which the materials are accepted for use in New York City.

26. Stick-on Labels

Q. Is it permissible for the MEA numbers to be applied with stick-on labels?

A. While the installation of photoluminescent products with stick-on labels is not explicitly prohibited by RS 6-1, this brings up additional considerations.

In accordance with Building Code Reference Standard RS 6-1 § 1.4 and the terms of the MEA acceptance reports, all approved non-paint product are required to be identified with printed identifying information in a minimum of 6-point type directly on the face of the product. In addition, the manufacturers of all photoluminescent products are required

to provide a written certification with the delivery of each shipment to attest to the authenticity of the products. This requirement is found in the MEA acceptance reports, which reads, "All shipments and deliveries of photoluminescent exit path markings shall be provided with a certification from the manufacturer, certifying that the materials shipped or delivered are equivalent to those tested and accepted for use, as provided for in section 27-131 of the Building Code."

Where products with stick-on labels are installed, the person certifying compliance on [Form LL 26/04-1](#) must retain records including the above-mentioned copy of the manufacturers' certification to prove authenticity of product installed. In addition, the building owner must retain a copy of such certification. Additionally, if labels later come loose or are found to be missing, this would be a violation pursuant to RS 6-1 § 4.0.

27. Genuine Products

Q. How can I be sure that the photoluminescent products that I have purchased/installed are genuine?

A. If you suspect that the photoluminescent products that you have purchased/installed are not the ones that match the MEA information printed on them, you may send a sample to the manufacturer to request a confirmation. The manufacturer's contact information is printed on the MEA Acceptance Report, available on the MEA website.

28. Actual Brightness

Q. How can I be sure that the photoluminescent products that I have purchased/installed were manufactured to meet the brightness rating printed on the products?

A. Each manufacturer is required to submit samples of its materials to testing laboratories to demonstrate compliance with the mandatory tests for brightness, flammability, toxicity, etc. It is the manufacturer that certifies that the products sold to building owners are identical to the test specimens that were tested in the laboratories. The manufacturer does this by imprinting the MEA # on the product and by providing a mandatory certification that the materials shipped or delivered are equivalent to those tested and accepted for use with all shipments and deliveries. The responsibility for quality control is that of the manufacturer. If you want to verify the brightness, you may retain the services of an MEA-approved laboratory to perform the same brightness test on the samples that you have purchased.

The above questions have been submitted by members of the public, and the answers provided are here for your convenience. If you have additional questions, please email Mr. James P. Colgate at jamescol@buildings.nyc.gov

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