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Conseil national de recherches Canada

Associate Committee on the  
**NATIONAL BUILDING CODE**  
of Canada

Comité associé du  
**CODE NATIONAL DU BATIMENT**  
du Canada

Ottawa

## **ERRATA AND REVISIONS**

**TO THE**

**MEASURES FOR FIRE SAFETY IN HIGH BUILDINGS**

**1973**

**ARCHIVES**

**OTTAWA**

**MARCH 1975**

## PREFACE

The errata and revisions contained in this pamphlet are mainly of an editorial nature and are intended to clarify certain portions of the original document, "Measures for Fire Safety in High Buildings 1973", which were apparently subject to misinterpretation.

The original document, together with the changes included in this pamphlet constitute the material to be used in association with Subsection 3.2.6. of the National Building Code 1975, which deals with fire safety in high buildings. A new edition containing these changes will be issued with the 1977 National Building Code.

Readers are invited to send comments on the updated document and on Subsection 3.2.6. to the Secretary, Associate Committee on the National Building Code, National Research Council of Canada, Ottawa, Ontario K1A 0R6, for consideration during the Code review process.

ERRATA AND REVISIONS TO THE  
MEASURES FOR FIRE SAFETY  
IN HIGH BUILDINGS 1973

The Associate Committee on the National Building Code recommends that the following changes be inserted in all copies of the 1973 edition of "Measures for Fire Safety in High Buildings".

<u>Page</u>	<u>Reference</u>	<u>Changes</u>
1	Table of Contents	Opposite Section 2 (f) Change "Measures I and J - Building Core Pressurized" to read "Measures I and J - Partially Pressurized Buildings".
5	Second Para.	In the third line, add a comma after "smokeshaft".
6	Measure A, Item 2	Delete and substitute:  "2. Elevator shaft terminates not lower than the first floor below the lowest exit storey or has elevator vestibules in every storey below the lowest exit storey (2A(5))."
7	Measure B, Item 2	Delete and substitute:  "2. Elevator shaft terminates not lower than the first floor below the lowest exit storey or has elevator vestibules in every storey below the lowest exit storey (2B(4))."
8	Measure C, Item 2	Delete and substitute:  "2. Elevator shaft terminates not lower than the first floor below the lowest exit storey or has elevator vestibules in every storey below the lowest exit storey (2C(4))."
9	Measure D, Item 2	Delete and substitute:  "2. Elevator shaft terminates not lower than the first floor below the lowest exit storey or has elevator vestibules in every storey below the lowest exit storey (2D(13))."
9	Measure D, Item 3	In the second line after "fire emergency" add the words "if the vestibule protection is by pressurization".
10	Measure E, Item 2	Delete first three lines and substitute:  "2. Elevator shaft terminates not lower than the first floor below the lowest exit storey or has elevator vestibules in every storey below the lowest exit storey (2E(11))."

<u>Page</u>	<u>Reference</u>	<u>Changes</u>
14	Title of Measure I	Change title to read "MEASURE I. PARTIALLY PRESSURIZED BUILDING".
15	Title of Measure J	Change title to read "MEASURE J. PARTIALLY PRESSURIZED BUILDING".
18	Measure L, Item 4	Delete the first 3 lines and substitute:  "4. Firefighters' elevator shaft terminates not lower than the first floor below the lowest exit storey or has elevator vestibules in every storey below the lowest exit storey (2L(12))."
19	Measure L, Item 3	Delete the first 4 lines and substitute:  "3. Firefighters' elevator shaft terminates not lower than the first floor below the lowest exit storey or has elevator vestibules in every storey below the lowest exit storey (2L(12))."
20	Measure M, Item 3	Delete the first 3 lines and substitute:  "3. Elevator shaft terminates not lower than the first floor below the lowest exit storey or has elevator vestibules in every storey below the lowest exit storey (2M(4))."
22-23	Measure A, Sentence (3)	Change Clause (a) to read  "(a) has a vent or door to the outdoors at or near the top of the stairshaft that has an openable area of at least 1.25 sq ft for each storey served by the stairway, less 0.1 sq ft for each weatherstripped door and 0.2 sq ft for each non-weatherstripped door opening into the stairshaft."  In the last line of Clause (b), after "fire separation", add "having a fire-resistance rating not less than that required for the shaft enclosure".
23		In the third line of Clause (c) delete the words "at least".
23	Measure A, Sentence (5)	Delete and substitute:  "(5) Any elevator shaft that passes through the floor above the lowest exit storey does not penetrate the floor of the storey immediately below the lowest exit storey, except where there is a vestibule between the shaft and each below-grade floor area as is described in Sentence (3) of Measure D (p.36)."

<u>Page</u>	<u>Reference</u>	<u>Changes</u>
23	Measure A, Sentence (6)	In the last line change "2F(10)" to read "2(D)(10)".
25	Section 2(b)	In the sixth paragraph, add to the end of the paragraph "in buildings exceeding 120 ft in height".
28	Measure B, Sentence (3)	Delete and substitute:  "(3) A stairway serving storeys below the lowest exit level is protected as described in Sentence (3) of Measure A (p.22)."
29	Measure B, Sentence (4)	Delete and substitute:  "(4) Any elevator shaft that passes through the floor above the lowest exit storey does not penetrate the floor of the storey immediately below the lowest exit storey, except where there is a vestibule between the elevator door or doors and each below-grade floor area as described in Sentence (3) of Measure D (p.36)."
30	Measure C, Sentence (3)	Delete and substitute:  "(3) A stairway serving storeys below the lowest exit level is protected as described in Sentence (3) of Measure A (p.22)."
30-31	Measure C, Sentence (4)	Delete and substitute:  "(4) Any elevator shaft that contains a firefighters' elevator and passes through the floor above the lowest exit storey does not penetrate the floor of the storey immediately below the lowest exit storey, except where there is a vestibule between the elevator door or doors and each below-grade floor area as described in Sentence (3) of Measure D (p.36)."
37	Measure D, Sentence (3)	In the last line of Clause (b), delete "and".  Delete Clause (c) and substitute the following two new Clauses:  "(c) a fire separation is provided between a stair or elevator enclosure and the vestibule that has a fire-resistance rating not less than that required for an exit in NBC Article 3.4.5.1., and  (d) a door in the fire separation described in (a), (b) or (c), except for an elevator door, is provided with a self-closing device as required by NBC Subsection 3.1.7., and opens in the direction of travel from the floor area to the exit stairway."

<u>Page</u>	<u>Reference</u>	<u>Changes</u>
37-38	Measure D, Sentence (8)	Delete and substitute:  "(8) A stairway serving storeys below the lowest exit level is protected as described in Sentence (3) of Measure A (p.22)."
38	Measure D, Sentence (13)	In the first line, change "(16)" to read "(14)".
39	Measure D, Sentence (16)	In the fourth line, change "Sentence (5)" to "(15)".
39	Measure D, Sentence (18)	In the last line of Clause (b) change "(6) and (7)" to read "(15) and (16)".
40-41	Measure E, Sentence (7)	Delete and substitute:  "(7) A stairway serving storeys below the lowest exit level is protected as described in Sentence (3) of Measure A (p.22)."
41	Measure E, Sentence (11)	Delete and substitute:  "(11) Any elevator shaft that contains a firefighters' elevator and passes through the floor above the lowest exit storey does not penetrate the floor of the storey immediately below the lowest exit storey, except where there is a vestibule between the elevator door or doors and each below-grade floor area as described in Sentence (3) of Measure D (p.36)."
47	Measure F, Sentence (2)	In the first line of Clause (a), change "bottom" to read "lowest exit level".
47	Measure F, Sentence (3)	Delete and substitute:  "(3) A stairway serving storeys below the lowest exit level is protected as described in Sentence (3) of Measure A (p.22)."
48	Measure F, Sentence (6)	Change first 5 lines to read  "Any elevator shaft that contains a firefighters' elevator and passes through the floor above the lowest exit storey does not penetrate the floor of the storey immediately below the lowest exit storey, except where each floor area below the lowest exit storey is provided with a vent to the outdoors that"  Change Clause numbers "(i), (ii) and (iii)" to read "(a), (b) and (c)" respectively.

<u>Page</u>	<u>Reference</u>	<u>Changes</u>
48	Measure F, Sentence (10)	Delete Clause (a) and substitute:  "(a) if it is in a vertical service space other than an elevator shaft described in (b) in a building in which other shafts are not mechanically pressurized, has an openable area that is not less than that obtained from Graph 1 in Appendix A, or if it is in a building in which other shafts are mechanically pressurized, has an openable area that is not less than that obtained from Graph 2 in Appendix A,"  Change the fourth line of Clause (c) to read  "or near the foot of the shaft at or near the exit level where the top of the shaft is".
49	Measure F, Sentence (11)	Change last 2 lines to read  "rooms and bathrooms in dwelling units, air-moving fans in an air handling system that serves more than 2 storeys are capable of being stopped as provided in (14)".
49	Measure F, Sentence (12)	In fourth line change "(12)" to read "(11)".
49	Measure F, Sentence (14)	In the second line of Clause (a) change "(12) and (13)" to read "(11), (12) and (13)".
50	Measure G, Sentence (2)	In the first line of Clause (a), change "bottom" to read "lowest exit level".
50	Measure G, Sentence (3)	Delete and substitute:  "(3) A stairway serving storeys below the lowest exit level is protected as described in Sentence (3) of Measure A (p.22)."
51	Measure G, Sentence (6)	Change first 4 lines to read  "(6) Any elevator shaft that contains a firefighters' elevator and passes through the floor above the lowest exit storey does not penetrate the floor of the storey immediately below the lowest exit storey, except where each floor area below the lowest exit storey is provided with a vent to the outdoors that,"
51	Measure G, Sentence (7)	Change the last 2 lines to read  "washrooms and bathrooms in dwelling units, air moving fans in an air handling system that serves more than 2 storeys are capable of being stopped as provided in (9)".

<u>Page</u>	<u>Reference</u>	<u>Changes</u>
55	Measure H, Sentence (1)	In last line change "Sentences (2) to (8)" to read "Sentences (2) to (9)".
55	Measure H	After Sentence (2) add new Sentence (3) as follows and renumber remaining sentences and the references therein accordingly:  "(3) Exit stairs shall discharge to the outdoors through a vestibule described in Sentence (3) of Measure D and provided with a mechanical air supply of not less than 200 cfm per weatherstripped door and 400 cfm per non-weatherstripped door in the vestibule, except that the vestibule may be a corridor, lobby or other space."
57	Section 2(f)	Change the title to read "Partially Pressurized Building".
59	Measure I	In the title, delete "(Compartmented Floor Area)".
59	Measure I, Sentence (2)	In the third and fourth lines change "stairs, elevator shafts and corridors" to read "all required exit stairs, all shafts containing firefighters' elevators and public corridors".
59	Measure I, Sentence (3)	In the third line, change "corridors" to read "public corridors".  In the last line, change "(9)" to "(10)".
61	Measure I Sentence (10)	Delete Clause (d) and substitute:  "(d) opening closures in vents referred to in (4), individually or in groups limited to one floor at a time, and"
62	Measure J	In the title delete "(Compartmented Floor Area)".
62	Measure J Sentence (2)	In the third and fourth lines change "stairs, elevator shafts and corridors" to read "all required exit stairs, all shafts containing firefighters' elevators and public corridors".
62	Measure J Sentence (3)	In the fourth line, change "corridors" to read "public corridors".
67	Measure K, Sentence (11)	In the fourth line of Clause (a) delete "and will open as provided in (17)".
71	Measure L	After Sentence (2), add new Sentence (3) and renumber existing Sentences (3) to (20) and the references therein accordingly.



<u>Page</u>	<u>Reference</u>	<u>Changes</u>
71	Measure L (cont'd)	"(3) On any floor area, any area of refuge that has a door to an exit stair may also have a door to a fire-fighters' elevator but two exit stairs may not open on to the same area of refuge provided no other vertical shaft is common to the two independent systems described in Sentence (2)."
72	Measure L, Sentence (12)	Delete and substitute:  "(13) Any elevator shaft that contains a firefighters' elevator or opens into an area of refuge and passes through the floor above the lowest exit storey does not penetrate the floor of the storey immediately below the lowest exit storey, except where there is a vestibule between the elevator door or doors and each below grade floor area as described in Sentence (3) of Measure D (p.36)."
72	Measure L, Sentence (14)	Delete and substitute:  "(15) A stairway serving storeys below the lowest exit level is protected as described in Sentence (3) of Measure A (p.22)."
75	Section 2(i)	In the last line of the second paragraph delete "over the voice communication system".
76	Measure M, Sentence (3)	Delete and substitute:  "(3) A stairway serving storeys below the lowest exit level is protected as described in Sentence (3) of Measure A (p.22)."
76	Measure M, Sentence (4)	Delete and substitute:  "(4) Any elevator shaft that passes through the floor above the lowest exit storey does not penetrate the floor of the storey immediately below the lowest exit storey, except where there is a vestibule between the elevator door or doors and each below-grade floor area as described in Sentence (3) of Measure D (p.36)."
79	Measure N, Sentence (2)	In the second line change "Article 3.2.1.1." to read "Subsection 3.1.8."
79	Measure N, Sentence (3)	In the fourth line of Clause (a) add after the word "vestibule" "or if the perimeter of doors exceeds 20 ft, the value of "d" is increased in direct proportion to the increase in the perimeter".
81	Table 2	In the third column, fifth line from the bottom change "99.4" to read "9.9".

<u>Page</u>	<u>Reference</u>	<u>Changes</u>
82	Table 4	Insert the notation "(2)" after heading of first column.  Change "Note (1) to Table 4" to read "Notes to Table 4".  Remove brackets from existing Note and insert "(1)" before Note. Add new Note (2) as follows:  "(2) These leakage data contemplate clearances applicable to approved fire dampers which have been tested in accordance with ULC-S112-1973, 'Fire Dampers'."
90	Notes to Graph 3	In line 7 of Note (1) change "c" in the formula explanation to read "e".  At the end of Note (1) add "The quantity $F_3 d + 150e + 200s$ represents the total leakage from the vestibule."
92	Notes to Graph 4	At the end of Note (3) add "The expression $(0.25d_4 + 0.0014a_4)$ represents the total leakage area in the walls of the shaft."
94	Notes to Graph 5	At the end of Note (1) add  "The expression $(0.25d_5 + 0.0014a_5)$ represents the total leakage area in the walls of the shaft."
95	Graph 6	Extend lower limits of all curves as a horizontal line terminating at Factor $F_6 = 0.500$ , and show this horizontal line as a darker line.
96	Notes to Graph 6	In the first line of Note (5) change "If Measure I is used" to read "If Measure I or J is used".
110	Appendix B	In the fourth line from the bottom change explanation "a" to read "rate of diluent air flow in number of air changes per minute".