

**SINGAPORE CIVIL DEFENCE FORCE
FIRE SAFETY & SHELTER BUREAU**

**HQ Singapore Civil Defence Force
91 Ubi Ave 4 Singapore 408827 Fax : 6848 1488
Website : <http://www.scdf.gov.sg>**



Please quote our ref. no. in all future correspondences

Our Ref: CD/FSSD/12/01/03/04

DID: 68481409

FAX: 68481493

25 August 2005

Registrar, Board of Architects (BOA)
Registrar, Professional Engineers Board (PEB)
President, Singapore Institute of Architects (SIA)
President, Institution of Engineers, Singapore (IES)
President, Association of Consulting Engineers, Singapore (ACES)

Dear Sirs

Omission of Fire Rated Doors to Exit Staircases in Multi-Storey Car Park Buildings

The Housing & Development Board (HDB) has recently raised to FSSD Standing Committee the issue of omitting fire rated doors to exit staircases that are sited at the external of a multi-storey car park. The reasons cited for the omission are: the car park floors are well cross ventilated with generous provision of low parapet walls all round the car park building, the fact that there are very few people in the car park floors at any one time, and that these doors cause inconvenience to some users and are often found wedged open.

2. FSSD conducted a series of fire safety engineering simulations, using a typical model of a 3-storey car park building and surfaced its recommendations to the FSSD Standing Committee for deliberation. The Committee agreed to the omission of the fire rated doors to exit staircases in car park buildings, subject to certain conditions. These conditions are stipulated in two new clauses 2.3.3(a)(iv) and 2.3.3(b)(iv) in the Code Of Practice for Fire Precautions in Buildings 2002 (Vol. 8) and shall take immediate effect for any new building plans that are submitted to the FSSD for approval. The two new clauses are reproduced in **Annex A**.

3. Please convey the contents of this circular to members of your Institution/Association/Board. The circular is also available in CORENET-einfo: <http://www.corenet.gov.sg/einfo>.

4. For any enquiry or clarification, please contact Cpt Ng Kok Leong (DID: 68481452).

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Yours faithfully

(Signed on Original)
Teo Lim Teck
Secretary, FSSD Standing Committee
for Commissioner
Singapore Civil Defence Force

cc
All members of FSSD Standing Committee
President, REDAS
President, IFE
President, SISV
President, Fire Safety Managers Association
President, Singapore Hotel Association (Attn: Ms Margaret Heng)
Group President, PSA Corp
CEO, BCA
CEO, URA
CEO, HDB
CEO, JTC
CE, LTA – (Attn : Dr. Chin Kian Keong)
CE, PSB – (Attn : Ms Tan Chiew Wan/Mr. Lau Keong Ong)
GM, SPRING Singapore – (Attn : Mr. Teo Nam Kuan)

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Annex A

Omission of Fire Rated Doors to Exit Staircases in Multi-Storey Car Park Buildings

2.3.3 Exit Staircase

(a) Internal Exit Staircase

New Sub-Clause 2.3.3(a)(iv) - Exception

Doors to exit staircases of standalone car park buildings that are without any commercial activities or ancillary usage can be omitted, provided the following conditions are fully complied with:

- (a) At least two exit staircases shall be provided to serve every upper storey. The two staircases shall be located as remotely from one another as practicable. The exit openings to the staircases at each storey shall have a clear width of not wider than 1000 mm or less than 850mm and a clear height of not more than 2200 mm. The staircases shall be ventilated by fixed openings in the external walls, such openings being of area not less than 10 per cent of the floor area per floor of the staircase. Exit staircase and occupancy area shall not share the same air-well or void for lighting and ventilation;
- (b) The car park building shall not exceed 5 storeys above ground. It shall not consist of any basement storey, and shall not be connected to other building, except by open-sided covered linkway;
- (c) Every storey shall be provided with cross ventilation. The building shall be open sided having not less than 50% of the sides (front, rear and sides elevations) permanently open, and such openings being evenly distributed around the perimeter walls, excluding perimeter walls to air-well, so as to provide effective cross ventilation to all parts of the car parking decks;
- (d) No part of the floor space shall be more than 12 m from the openings on the perimeter walls of the building or air-well. Air-well where provided for this purpose shall have a superficial plan area of not less than 10 sq m, and have a minimum dimension on plan of 1.8m, open vertically to the sky for its full height;

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- (e) Travel distances within each car parking deck shall comply with Table 2.2A. For upper storeys, the travel distance requirement shall be measured to a position where the exit door to the staircase would be installed if otherwise required; and
- (f) The separation distance between the nearest edge of exit opening to exit staircase and the nearest edge of any vehicle parking lot shall not be less than 3m.

(b) External Exit Staircase

New sub-clause 2.3.3 (b)(iv) - Exception

Doors to the external exit staircases can be omitted, if the conditions given in sub-clause 2.3.3(a)(iv) are fully complied with.