



SCDF
The Life Saving Force
... for a safer Singapore

SINGAPORE CIVIL DEFENCE FORCE

Your Ref :

Our Ref: CD/04/05/01/01

Date : 1 Mar 2024

Registrar, Board of Architects
Registrar, Professional Engineers Board
President, Singapore Institute of Architects
President, Institution of Engineers, Singapore
President, Association of Consulting Engineers, Singapore

Dear Sir/ Mdm,

AMENDMENTS TO FIRE CODE 2023 – 1st BATCH OF AMENDMENTS

SCDF would like to issue the 1st batch of amendments to the Code of Practice for Fire Precautions in Buildings 2023 (Fire Code 2023). The amendments which were deliberated and accepted by the Fire Code Review Committee are attached as Annexes A & B of this circular.

2. Amendments stipulated in Annexes A & B shall take effect from the date specified therein. Qualified Persons who wish to comply with the requirements in this Circular for any proposed plans of fire safety works for new buildings or existing buildings to be submitted during the 6-month grace period (i.e. 1 March 2024 to 31 August 2024) can do so and are not required to apply for waivers. Such plans that are submitted to SCDF for approval on or after the effective date shall be subjected to the amendments made to the Fire Code.

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



SCDF – A member of the Home Team

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4. For general queries, you may contact Mr Randy Tan at DID: 68481461 or Mr Tan Yi Yang at DID: 68481734. However, for specific queries relating to edits for:

- a. Fire-smoke damper, please contact LTC Cheong Yew Dong at 68481255, or email: Cheong_Yew_Dong@scdf.gov.sg; and
- b. Regulated fire safety products & materials, please contact CPT Foo Ce Yi at 68481417, or email: scdf_pls@scdf.gov.sg.

Yours faithfully

(transmitted via email)

LTC Tan Chung Yee
for Commissioner
Singapore Civil Defence Force

Distribution list

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S/N	Amendment Date	Effective Date	Clause Status	Clause Before Amendment	Clause After Amendment
1	1 Mar 2024	1 Sep 2024	Relaxation	<p>2.2.11 Number of exit staircases or exits per storey</p> <p>.....</p> <p>Exception:</p> <p>a.</p> <p>b.</p> <p>c.</p>	<p>2.2.11 Number of exit staircases or exits per storey</p> <p>.....</p> <p>Exception:</p> <p>a.</p> <p>b.</p> <p>c.</p> <p>d. For green roofs which are accessible for maintenance purposes only, the means of access shall comply with <i>Cl.10.2.1b.(1)(a)</i>.</p>
2	1 Mar 2024	1 Sep 2024	Relaxation	<p>2.4.1a. The following buildings/ usages are exempted from these requirements:</p> <p>(1)</p> <p>(2)</p> <p>(3) industrial buildings/ usages that are exempted from barrier-free accessibility compliance, as required by the authority having jurisdiction on accessibility in the built environment;</p> <p>(4) non-residential buildings/ usages, such as car parks, clubhouses and gardens/ terraces located within residential developments and which are intended for ancillary use, are not</p>	<p>2.4.1a. The following buildings/ usages/ areas are exempted from these requirements:</p> <p>(1)</p> <p>(2)</p> <p>(3) industrial buildings/ usages/ areas that are exempted from barrier-free accessibility compliance, as required by the authority having jurisdiction on accessibility in the built environment;</p> <p>(4) non-residential buildings/ usages/ areas, such as car parks, clubhouses and gardens/ terraces located within residential developments and which are intended for ancillary use, are not</p>

				<p>required to comply with these requirements; and</p> <p>(5)</p>	<p>required to comply with these requirements; and</p> <p>(5)</p>
3	1 Mar 2024	1 Sep 2024	Relaxation	<p>3.15.15 Walls, ceilings, roof covering and finishes</p> <p>Walls, ceilings, floor, roof and finishes shall not contain any plastic material, unless the plastic material complies with the requirements stipulated in <i>Cl.3.15.19</i>.</p>	<p>3.15.15 Walls, ceilings, roof covering and finishes</p> <p>Walls, ceilings, floor, roof and finishes shall not contain any plastic material, unless the plastic material complies with the requirements stipulated in <i>Cl.3.15.19</i>.</p> <p>Exception:</p> <p>a. Use of plastic materials as vertical screening/ divider of telecommunication equipment at non-habitable open-to-sky roof is permitted, provided the materials meet at least Class 2 rating classified under <i>BS 476: Part 7</i> or equivalent.</p>
4	1 Mar 2024	1 Sep 2024	Relaxation	<p>4.2.2a.(3) PG II buildings exceeding 10m habitable height</p> <p>(b) A fire engine accessway of at least ¼ length of perimeter (minimum 15m), whichever is greater, shall be provided to access at least one façade of each block and shall be located at a distance of at least 2m and at most 10m away from the façade of the building. This is to facilitate rescue with direct access to unit windows (excluding exit staircase, smoke-free approach to exit staircase). For the purpose of computing the extent of perimeter for fire engine accessway, only the external</p>	<p>4.2.2a.(3) PG II buildings exceeding 10m habitable height</p> <p>(b) A fire engine accessway of at least ¼ length of perimeter (minimum 15m), whichever is greater, shall be provided to access at least one façade of each block and shall be located at a distance of at least 2m and at most 10m away from the façade of the building. This is to facilitate rescue with direct access to unit windows (excluding exit staircase, smoke-free approach to exit staircase). For the purpose of computing the extent of perimeter for fire engine accessway, only the external</p>

				facade perimeters of residential units are required to be included. Common areas such as corridors/ lobbies, lift/ service shafts, exit staircase, landscape areas, etc. can be omitted from the computation.	facade perimeters of residential units are required to be included. Common areas such as corridors/ lobbies, lift/ service shafts, exit staircase, landscape areas, etc., can be omitted from the computation.
5	1 Mar 2024	1 Sep 2024	Relaxation	<p>4.2.2c. Location</p> <p>The fire engine accessway shall be positioned so that the nearer edge shall be at least 2m or at most 10m from the centre position of the fire access opening, measured horizontally.</p>	<p>4.2.2c. Location</p> <p>The fire engine accessway shall be positioned so that the nearer edge shall be at least 2m or at most 10m from the centre position of the fire access opening, measured horizontally.</p> <p>Exception:</p> <p>(1) The horizontal distance can be extended to at most 13m, provided the height between the fire engine accessway and centre position of the following is not more than 20m:</p> <p>(a) fire access openings, or</p> <p>(b) windows of PG II residential units.</p>
6	1 Mar 2024	1 Sep 2024	Relaxation	<p>4.2.3d. Size</p> <p>Fire access openings shall not be less than 850mm wide by 1m high with sill height of not more than 1.1m, and head height not less than 1.8m above the inside floor level.</p>	<p>4.2.3d. Size</p> <p>Fire access openings shall not be less than 850mm wide by 1m high with sill height of not more than 1.1m, and head height not less than 1.8m above the inside finished floor level.</p> <p>Exception:</p>

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					(1) The sill height can be extended to at most 1.25m for those fire access openings that are located at roof garden/ terrace.
7	1 Mar 2024	1 Sep 2024	Relaxation	<p>6.1.2a. Fire extinguishers shall be provided in all buildings except the following:</p> <p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p> <p>(5)</p>	<p>6.1.2a. Fire extinguishers shall be provided in all buildings except the following:</p> <p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p> <p>(5)</p> <p>(6) Green roofs which are accessible for maintenance purposes only and which comply with Cl.10.2.1b.(1)(a).</p>
8	1 Mar 2024	1 Sep 2024	Relaxation	<p>6.2.8a.(3)(c) Other standalone buildings as follows:</p> <p>(i) ...</p> <p>(ii) ...</p> <p>(iii) ...</p> <p>(iv) ...</p> <p>(v) ...</p> <p>(vi) ...</p> <p>(vii) ...</p>	<p>6.2.8a.(3)(c) Other standalone buildings as follows:</p> <p>(i) ...</p> <p>(ii) ...</p> <p>(iii) ...</p> <p>(iv) ...</p> <p>(v) ...</p> <p>(vi) ...</p> <p>(vii) ...</p>

					(viii) Green roofs which are accessible for maintenance purposes only and which comply with Cl.10.2.1b.(1)(a).
9	1 Mar 2024	1 Sep 2024	Relaxation	<p>6.6.4c. Accessibility and coverage</p> <p>(1) A fire lift shall be located such that the travel distance between the nearest edges of the lift landing door and exit staircase door is not more than 5m. In addition, the exit staircase shall be approached through a fire lift lobby at each storey.</p> <p>Exception:</p> <p>(a) For the final discharge of exit staircase at ground level for PG II buildings, the travel distance between the nearest edge of the fire lift landing door and exit staircase door can be extended to at most 10m. Where the travel distance between the nearest edge of the fire lift landing door and exit staircase door exceeds 5m, additional signage shall be displayed prominently at the fire lift lobby to indicate the location of exit staircase door. This exception is not applicable to PG II mixed occupancy buildings.</p>	<p>6.6.4c. Accessibility and coverage</p> <p>(1) A fire lift shall be located such that the travel distance between the nearest edges of the lift landing door and exit staircase door is not more than 5m. In addition, the exit staircase shall be approached through a fire lift lobby at each storey.</p> <p>Exception:</p> <p>(a) For The final discharge of exit staircase at ground level for PG II all buildings, the travel distance between the nearest edge of the fire lift landing door and exit staircase door can be extended to at most 10m. Where the travel distance between the nearest edge of the fire lift landing door and exit staircase door exceeds 5m, additional signage shall be displayed prominently at the fire lift lobby to indicate the location of exit staircase door. This exception is not applicable to PG II mixed occupancy buildings.</p>
10	1 Mar 2024	1 Sep 2024	New	<p>7.4.5o. Fire dampers</p> <p>(1) Fire dampers shall not be fitted in the smoke ventilation system, except where used in an engineered smoke control</p>	<p>7.4.5o. Fire dampers</p> <p>(1) Fire dampers shall not be fitted in the smoke ventilation system, except where used in an engineered smoke control</p>

Annex A

				<p>system. In such a situation, a combination of fire and smoke dampers shall be constructed in accordance with <i>SS 333</i>, and its electric actuator shall be tested in accordance with the requirements of <i>UL 555S</i> for at least 2 hours at 250°C.</p> <p>(2)</p>	<p>system. In such a situation, a combination of fire and the fire-smoke dampers shall be constructed in accordance with <i>SS 333</i>, and its electric actuator shall be tested in accordance with the requirements of <i>UL 555S</i> for at least 2 hours at 250°C.</p> <p>(2)</p>
11	1 Mar 2024	1 Sep 2024	Relaxation	<p>9.1.1b. Structural fire precautions</p> <p>(2) Floor over a basement</p> <p>For PG I building which has four or more levels (including the basement storeys and attics), the floor immediately over the basement storeys shall be compartmented by compartment walls/ floors. Where there is an internal connection between the basement storeys and upper levels, it shall be compartmented by a fire-rated door at the 1st storey landing.</p>	<p>9.1.1b. Structural fire precautions</p> <p>(2) Floor over a basement</p> <p>For PG I building which has four or more levels (including the basement storeys and attics), the floor immediately over the basement storeys shall be compartmented by compartment walls/ floors. Where there is an internal connection between the basement storeys and upper levels, it shall be compartmented by a fire-rated door at the 1st storey landing or basement landing.</p>
12	1 Mar 2024	1 Sep 2024	Relaxation	Existing <u>Table 2.2A</u>	See <u>Annex B</u> (affected portions of <u>Table 2.2A</u>)
13	1 Mar 2024	1 Sep 2024	Relaxation	Existing <u>Table 4.2A</u>	See <u>Annex B</u> (affected portions of <u>Table 4.2A</u>)
14	1 Mar 2024	1 Sep 2024	New	Existing <u>Table 11A</u>	See <u>Annex B</u> (affected portions of <u>Table 11A</u>)

TABLE 2.2A: DETERMINATION OF EXIT REQUIREMENT

Type of Occupancy	Max Travel Distance (m)				Capacity No of persons per unit of width ^(c)				Min Width (m)		Max Dead End (m)	
	One-way Travel		Two-way Travel		Door Opening ^{(c), (d), & (e)}		Staircases ^(f)	Ramps corridors Exits Passageways	Staircases/ Exit Passageways	Corridor ^(g)	Corridors	
	Non-sprinklered	Sprinklered	Non-sprinklered	Sprinklered	Exit to outdoors at ground level	Other exit & corridor doors					Non-sprinklered	Sprinklered
High hazard	10	20	20	35	50	40	30	50	1	1.2	15	20
Industrial buildings (factories, workshops, godown/ warehouse)	15	25	30	60	100	80	60	100	1	1.2	15	20
Shops, healthcare facility (outpatient)	15	25	45	60	100	80	60	100	1	1.2	15	20
Offices	15	30	45	75	100	80	60	100	1	1.2	15	20
Places of public resort & carparks	15	25	45	60	100	80	60	100	1 ^(h)	1.2 ^(h)	15	20
Schools & educational buildings	15	25	45	60	100	80	60	100	1	1.5 ⁽ⁱ⁾	15	20
Healthcare facility (inpatient)	15	25	30	45	30	30	15	30	1	2 ^(j)	15	20
Hotels, Boarding Houses, Serviced Apartments, Hostels, Backpackers Hotel, Dormitories	15	20	30	60	60	50	45	50	1	1.2	15	20
Blocks of flats/ maisonettes ^(k)	15 ^(l)	30 ^(l)	30	75	50	40	30	50	1 ^(l)	1.2	15	20
Detached, semi-detached & terrace house, including townhouses	NR	NR	NR	NR	NR	NR	NR	NR	0.9	0.9	NR	NR

Note:

NR = No requirements.

(x) = Unit of width 500mm

(a) = Applies to corridors serving classrooms. Other corridors shall have a minimum width of 1.2m

(b) = Applies to corridors serving patients. Other corridors shall have a minimum width of 1.2m

(c) = See Cl.2.3.9

(d) = See Cl.2.3.8

(e) = Where a door opening is divided by mullions into two or more openings, each such opening shall be measured separately in computing the number of units of exit width

(f) = See Cl.2.2.15 regarding reduction of exit provision

(g) = For travel distance in single staircase flats (see Cl.9.2.1a(8))

(h) = Refer to Cl.9.7.3a.

(i) = Staircase within maisonette serving as an internal access to be at least 900mm in width

(j) = Applies to external corridor (see Cl.2.3.10)

(k) = Measurement of travel distance is from residential unit door to exit (see Cl.9.2.1a(5))

(l) = For buildings/ usages/ areas that are exempted from barrier-free accessibility compliance, as required by the authority having jurisdiction on accessibility in the built environment, any corridor solely serving those buildings/ usages/ areas can be reduced to 1m. This is not applicable to Note (a) corridor serving classrooms, Note (b) corridor serving patient wards, and/ or PG I buildings

TABLE 4.2A: FIRE ENGINE ACCESSWAY/FIRE ENGINE ACCESS ROAD FOR PG II BUILDINGS

Details	Habitable Height (m)		
	≤ 10	> 10 & ≤ 50	> 50
Width of fire engine access road		≥ 4m	
Width of fire engine accessway*	Not required	≥ 6m	≥ 7m
Length of fire engine accessway*	-	≥ 15m	≥ 15m
Type of firefighting appliance	Pump ladder	CPL 34 & AL 56	AL 56, CPL 60 & HLA 90
Loading capacity of fire engine road #	≥ 24 tonnes	≥ 30 tonnes	≥ 50 tonnes
Loading capacity of fire engine accessway #	-	≥ 30 tonnes	≥ 50 tonnes
Axle/ Jack loading	-	See Table 4.2D & Table 4.2E	
Turning facility		See Diagram 4.2.e.	
U-turn radii		See Diagram 4.2.e.	

Note:

- The appended figures for loading capacity of fire engine accessway/ fire engine access road are characteristic values

* - A fire engine accessway/ fire engine access road of at least ¼ length of perimeter (minimum 15m), whichever is greater, shall be provided to access at least one façade of each block and shall be located at a distance of at least 2m and at most 10m away from the façade of the building

S/N	Products / Materials	Acceptable Standards	Certification Scheme	Surveillance Regime		
				Testing	Factory/Site Inspection	
19.	Fire damper	<p>19.1 Fire damper</p> <p>To conduct full test comprising:</p> <ol style="list-style-type: none"> 1. fire resistance test; 2. air leakage test; 3. closing reliability test; and 4. spring closing force test (if applicable). <p>For fire-resistance test:</p> <p>(a) SS 333 Clause 6.3 or AS 1530-4 (The damper shall be tested with the damper at open position at the start of fire test and be able to completely close during the first 90 sec of the test. Acceptance criteria shall be according to SS 333 Cl.6.3.2) or ISO 834-8 & ISO 834-9 (The damper shall be tested with the damper at open position at the start of fire test and be able to completely close during the first 90 sec of the test. Acceptance criteria shall be according to SS 333 Cl.6.3.2)</p> <p>For air leakage test:</p> <p>(a) SS 333 Clause 6.4 or ISO 5167 & ISO 7244 or EN 1751 Clause 5.2.1 to 5.2.4 (Note: The requirements for sub-items 2, 3 & 4 shall be as specified in SS 333 Clause 6.4) or AMCA 500-D Clause 6.2 (Requirements shall be as specified in SS 333 Clause 6.4)</p> <p>For closing reliability test:</p> <p>(a) SS 333 Clause 6.5 or UL 555 Clause 11.2</p> <p>For spring closing force test</p> <p>(a) SS 333 Clause 6.6 or UL 555 Clause 13</p>	Scheme 1b (Labels issued)	Full test over 3 years:	<ol style="list-style-type: none"> 1. Fire resistance test and 2. Air leakage test and 3. Closing reliability test and 4. Spring closing force test (if applicable) 	Batch inspection ⁽¹¹⁾ and Site inspection triggered by certification body for each batch ⁽¹⁰⁾

Annex B

S/N	Products / Materials	Acceptable Standards	Certification Scheme	Surveillance Regime	
				Testing	Factory/Site Inspection
		<p>19.2 Fire-smoke damper</p> <p>To conduct full test comprising:</p> <ol style="list-style-type: none"> 1. Fire-resistance test 2. Cycling test 3. Temperature degradation test 4. Operation test 5. Air leakage test <p>For fire-resistance test:</p> <p>(a) SS 333 Clause 6.3 or AS 1530-4 (The damper shall be tested with the damper at open position at the start of fire test and be able to completely close during the first 90 sec of the test. Acceptance criteria shall be according to SS 333 Cl.6.3.2) or ISO 834-8 & ISO 834-9 (The damper shall be tested with the damper at open position at the start of fire test and be able to completely close during the first 90 sec of the test. Acceptance criteria shall be according to SS 333 Cl.6.3.2)</p> <p>For cycling test:</p> <p>(a) SS 333 Clause 6.5</p> <p>For temperature degradation test:</p> <p>(a) SS 333 Clause 6.8</p> <p>For operation test:</p> <p>(a) SS 333 Clause 6.7</p> <p>For air leakage test:</p> <p>(a) SS 333 Clause 6.4 or ISO 5167 or EN 1751 Clause 5.2.1 to 5.2.4 (Note: The requirements for sub-items 2, 3 & 4 shall be as specified in SS 333 Clause 6.4). or AMCA 500-D Clause 6.2 (Requirements shall be as specified in SS 333 Clause 6.4)</p>	Scheme 1b (Labels issued)	<p>Full test over 3 years:</p> <ol style="list-style-type: none"> 1. Fire-resistance test and 2. Cycling test and 3. Temperature degradation test and 4. Operation test and 5. Air leakage test 	<p>Batch inspection⁽¹¹⁾ and Site inspection triggered by certification body for each batch⁽¹⁰⁾</p>