



SCDF

The Life Saving Force

... for a safer Singapore

SINGAPORE CIVIL DEFENCE FORCE



Date : 30 July 2020

Our Ref: CD/FSSD/12/02/03/01

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 2018 - 4TH BATCH OF AMENDMENTS

SCDF would like to issue the 4th batch of amendments to the Code of Practice for Fire Precautions in Buildings 2018 (Fire Code 2018). The amendments which were deliberated and accepted by the Fire Code Review Committee are attached as Annex A of this circular.

2. Amendments stipulated in Annex A of this letter, shall take effect from the dates specified therein. For those amendments that are to take effect at future dates as specified in Annex A, Qualified Persons are encouraged to comply with the requirements at any time before the effective dates. Any proposed plans of fire safety works for new buildings or existing buildings that are submitted to SCDF for approval on or after the effective dates 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 any queries, you may contact Mr Randy Tan at DID: 68481461 or Mr Tan Yi Yang at DID: 68481734.

Yours faithfully

(transmitted via email)

LTC Tan Chung Yee
for Commissioner
Singapore Civil Defence Force

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Annex A

S/N	Clause No	Amendment Date	Effective Date	Clause Status	Clause Before Amendment	Clause After Amendment
1	9.3.3	30 July 2020	1 Feb 2021	Revised	<p>Workers' dormitory</p> <p>Workers' dormitories shall comply with the following additional requirements:</p> <p>a. Size</p> <p>Each dormitory bedroom shall not exceed 120m² and an occupant load of 40 persons.</p> <p>b. Occupant load</p> <p>The occupant load shall be based on accessible floor area on the basis of 3m² per person.</p> <p>c.</p>	<p>Workers' dormitory</p> <p>Workers' dormitories shall comply with the following additional requirements:</p> <p>a. Size</p> <p>Each dormitory bedroom shall not exceed 120m² and an occupant load of 4020 persons.</p> <p>b. Occupant load</p> <p>The occupant load shall be based on accessible floor area on the basis of 3m²6m² per person.</p> <p>c.</p>
2	9.3.4	30 July 2020	30 July 2020	Reinstatement of past requirement	<p>Temporary workers' quarter in uncompleted permanent buildings on construction sites</p> <p>a. General</p> <p>(1) The temporary workers' quarters shall not be located higher than 10m above the</p>	<p>Temporary workers' quarter in uncompleted permanent buildings on construction sites</p> <p>a. General</p> <p>(1) The temporary workers' quarters shall not be located higher than 10m above the</p>

					<p>fire engine access road level of the uncompleted building and shall not be lower than first basement level.</p> <p>(2) The temporary workers' quarters shall only be used for housing workers working within the construction site.</p> <p>(3) Hot work is not allowed in the basement(s) where the temporary workers' quarters are located.</p> <p>b. Means of escape</p> <p>(1) For above ground levels, provision of only one exit staircase is permitted provided that the one-way travel distance is complied with and the occupant load does not exceed 20 persons on any storey. The exit staircase shall discharge directly to exterior open space.</p> <p>(2) At least two independent exit staircases shall be provided for the temporary workers' quarters located in basement</p>	<p>fire engine access road level of the uncompleted building and shall not be lower than first basement level.</p> <p>(2) The temporary workers' quarters shall only be used for housing workers working within the construction site.</p> <p>(3) Hot work is not allowed in the basement(s) where the temporary workers' quarters are located.</p> <p>b. Means of escape</p> <p>(1) For above ground levels, provision of only one exit staircase is permitted provided that the one-way travel distance is complied with <u>Table 2.2A</u> and the occupant load does not exceed 20 persons on any storey. The exit staircase shall discharge directly to exterior open space.</p> <p>(2) At least two independent exit staircases shall be provided for the temporary</p>
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					<p>levels or when the occupant load exceeds more than 20 persons on any storey.</p> <p>c. Compartmentation</p> <p>(1) Cooking is only allowed at a designated kitchen area, including basement(s). Such kitchen, shall be enclosed with at least 1-hr fire-rated compartment wall and at least ½-hr fire-rated door and shall not be located within the dormitory unit.</p> <p>(2) Office and storage are allowed in the basement(s) where the temporary workers' quarters are located. They shall be compartmented from the accommodation areas with at least 1-hr fire-rated compartment wall and at least ½-hr fire-rated door.</p> <p>d. Fire engine access</p> <p>(1) Provision of fire engine access road shall be provided in accordance with the requirements for the</p>	<p>workers' quarters located in basement levels or when the occupant load exceeds more than 20 persons on any aboveground storey.</p> <p>(3) Every storey shall be provided with exit facilities for its occupant load. Only those exits designated for escape of the workers shall be included in the exit capacity calculations.</p> <p>c. Compartmentation</p> <p>(1) Cooking is only allowed at a designated kitchen area, including basement(s). Such kitchen, shall be enclosed with at least 1-hr fire-rated compartment wall and at least ½-hr fire-rated door and shall not be located within the dormitory unit.</p> <p>(2) Office and storage are allowed in the basement(s) where the temporary workers' quarters are located. They shall be compartmented from the</p>
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					<p>development. Only the portion of the fire engine access road serving the temporary workers' quarters shall be made available.</p> <p>(2) Where the remotest temporary workers' quarter is located not more than 100m away from the site entrance at the public road, provision of working private fire hydrant is exempted.</p> <p>(3) A temporary "dry" fire hydrant is allowed. The "dry" fire hydrant shall be connected to a 150mm diameter pipe, which shall be connected the other end to a 4-way breeching inlet. This breeching inlet shall be within 18m from any fire engine accessway or fire engine access road having minimum 4m width and within 50m from any wet fire hydrant.</p> <p>e. Emergency power supply</p>	<p>accommodation areas with at least 1-hr fire-rated compartment wall and at least ½-hr fire-rated door.</p> <p>(3) Only non-combustible materials shall be used for the construction of temporary workers' quarters.</p> <p>(4) The floor area of each worker bedroom or the total floor area of a group of small worker bedrooms shall not exceed 120m². Compartment wall of having fire resistance rating of at least 1-hr shall be provided to separate the bedrooms so as to limit each compartment size to a maximum of 120m².</p> <p>(5) The worker bedrooms shall be separated from the internal corridor by a wall having fire resistance rating of at least 1-hr. Doors opening into the internal corridor shall have fire</p>
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					<p>Emergency power supply lasting at least 2-hr shall be provided for all systems requiring it.</p> <p>f. Firefighting systems</p> <p>(1) Where dry riser system is required for the main development, they shall be commissioned and made operable for the storeys housing the temporary workers' quarters during the accommodation period.</p> <p>(2) Provision of automatic sprinkler system and smoke control system is exempted for basement provided all of the following requirements are complied with:</p> <p>(a) The basement is effectively cross-ventilated as follows:</p> <p>(i) no point within the basement(s) is more than 12m from any vertical opening or void for spaces that are</p>	<p>resistance rating of at least half an hour.</p> <p>(6) The worker bedrooms shall be separated from the external corridor by a wall having fire resistance rating of at least 1-hr, except that ventilation openings of non-combustible construction can be fixed at or above a level of 1.1m, measured from the finished floor level of the external corridor to the sill height of the opening. Doors opening into the external corridor are not required to have fire resistance rating.</p> <p>d. Fire engine access</p> <p>(1) Provision of fire engine access road shall be provided in accordance with the requirements for the development. Only the portion of the fire engine access road serving the temporary workers'</p>
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					<p>in between two openings or voids;</p> <p>(ii) no point shall be more than 6m from any opening or void for spaces that are ventilated by such opening or void on only one side;</p> <p>(iii) all ventilation openings shall be at least 1000 x 600mm; and</p> <p>(iv) the total aggregate area of these voids and vertical openings shall be at least 20% of the total basement floor area.</p> <p>(b) The occupant load is computed based on 6m² per person.</p>	<p>quarters shall be made available.</p> <p>(2) Every part of the required fire engine access road shall be within an unobstructed distance of 50m from the nearest working fire hydrant. Where the remotest temporary workers' quarter is located not more than 100m away from the site entrance at the public road, provision of working private fire hydrant is exempted.</p> <p>(3) A temporary "dry" fire hydrant is allowed. The "dry" fire hydrant shall be connected to a 150mm diameter pipe, which shall be connected the other end to a 4-way breeching inlet. This breeching inlet shall be within 18m from any fire engine accessway or fire engine access road having minimum 4m width and within 50m from any wet fire hydrant.</p>
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					<p>(3) An automatic fire alarm system shall be provided if provision of automatic fire sprinkler system is exempted for the temporary workers' quarters located in the basement(s).</p> <p>(4) For temporary workers' quarters located above ground level, fire alarm system shall be provided as stipulated under <i>Table 6.3A</i>.</p> <p>(5) Connection of fire protection systems to the approved alarm monitoring company is not required.</p> <p>g. Engineered smoke control system</p> <p>Engineered smoke control and sprinkler systems shall be required for the basement levels where the workers' quarters are located, if the provision of cross ventilation stipulated in <i>Cl.9.3.4.f</i>. cannot be fulfilled.</p> <p>h. Storage of hazardous materials</p>	<p>e. Emergency power supply</p> <p>(1) Emergency power supply lasting at least 2-hr shall be provided for all firefighting systems serving the temporary workers' quarters.</p> <p>(2) The location, arrangement, control and installation of electrical wiring of the secondary source of power supply, be it in the form of battery, standby generator, inverter or other accepted equipment, shall be in accordance with Chapter 5.</p> <p>f. Firefighting systems</p> <p>(1) Where dry riser system is required for the main development, they shall be commissioned and made operable for the storeys the temporary workers' quarters during</p>
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					<p>All stores of highly flammable substances shall be sited in open space at a minimum distance of 5m away from the building where the temporary workers' quarters are located and shall comply with the relevant standards.</p>	<p>the accommodation period.</p> <p>(2) Provision of automatic sprinkler system and smoke control system is exempted for basement provided the basement is effectively cross-ventilated as follows:</p> <ul style="list-style-type: none">(a) no point within the basement(s) is more than 12m from any vertical opening or void for spaces that are in between two openings or voids;(b) no point shall be more than 6m from any opening or void for spaces that are ventilated by such opening or void on only one side;(c) all ventilation openings shall be at least 1000 x 600mm; and
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						<p>(d) the total aggregate area of these voids and vertical openings shall be at least 20% of the total basement floor area.</p> <p>(3) An automatic fire alarm system shall be provided if provision of automatic fire sprinkler system is exempted for the temporary workers' quarters located in the basement(s).</p> <p>(4) For temporary workers' quarters located above ground level, fire alarm system shall be provided as stipulated under <u>Table 6.3A</u>.</p> <p>(5) Connection of fire protection systems to the approved alarm monitoring company is not required.</p> <p>(6) Standby fire hoses can be installed in lieu of the dry</p>
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						<p>riser system, on condition that the temporary workers' quarters are adequately covered by fire hose reel(s).</p> <p>(7) Provision of fire extinguishers shall be in accordance with <i>Cl.6.1.</i></p> <p>(8) Provision of fire hose reels shall be in accordance with <i>Cl.6.2.8.</i></p> <p>g. Engineered smoke control system</p> <p>Engineered smoke control and sprinkler systems shall be required for the basement levels where the workers' quarters are located, if the provision of cross ventilation stipulated in <i>Cl.9.3.4.f.</i> cannot be fulfilled.</p> <p>h. Storage of hazardous materials</p> <p>(1) All stores of highly flammable substances shall be sited in open space at a minimum distance of 5m away from the building where the</p>
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						<p>temporary workers' quarters are located and shall comply with the relevant standards.</p> <p>(2) All LPG cylinder installations serving the temporary workers' quarters shall be in accordance with <i>Cl.10.1.</i></p> <p>i. Occupant load</p> <p>The occupant load shall be based on the floor area of the temporary workers' quarters on the basis of 3m² per person, excluding non-simultaneous areas such as toilets, kitchens etc., or the actual number of occupants for which each occupied space of the floor is designed as shown on the plan, whichever is greater.</p> <p>j. Emergency lighting and exit signs</p> <p>Emergency lightings and exit signs serving the temporary workers' quarters shall be in accordance with <i>Cl.8.1.</i></p>
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Annex A

3	9.3.4i.	30 July 2020	1 Feb 2021	Revised	<p>Occupant load</p> <p>The occupant load shall be based on the floor area of the temporary workers' quarters on the basis of 3m² per person, excluding non-simultaneous areas such as toilets, kitchens etc., or the actual number of occupants for which each occupied space of the floor is designed as shown on the plan, whichever is greater.</p>	<p>Occupant load</p> <p>The occupant load shall be based on the floor area of the temporary workers' quarters on the basis of 3m²6m² per person, excluding non-simultaneous areas such as toilets, kitchens etc., or the actual number of occupants for which each occupied space of the floor is designed as shown on the plan, whichever is greater.</p>
4	Table 1.4B	30 July 2020	1 Feb 2021	Revised	<p>Occupant load factor for dormitory - 3m²/person (bed room area only)</p>	<p>Occupant load factor for dormitory - 3m²6m²/person (bed room area only)</p>