

Section 6 – Provision of Emergency Vehicular Access

Subsection D22 - EVA to Virgin Sites

Clause D22.1

For the purpose of the Building (Planning) Regulation 41D, this Subsection specifies the design and construction requirements of EVA serving buildings erected or to be erected on virgin sites. For the avoidance of doubt, the requirements in this Subsection should also apply to all subsequent redevelopments on virgin sites.

Clause D22.2

Every EVA to which this Subsection applies should be designed and constructed complying with the following requirements, unless otherwise specified in this Subsection:

- (a) the width of an EVA in the form of a carriageway should not be less than 7.3m. An EVA that is not in the form of a carriageway should be hard-paved, not less than 6m wide and well demarcated on site;
- (b) if there is any overhead structure over any part of the EVA, a clear headroom of not less than 4.5m should be maintained;
- (c) the gradient of the EVA should not be steeper than 1:10. For such portion of the EVA that is not serving any major façade of any building, the gradient may be increased to not steeper than 1:6. Wherever there is a change in gradient, the EVA should be designed and constructed in compliance with the requirements illustrated in Diagram D5 so as not to cause any obstruction to the vehicles of the Fire Services Department;
- (d) the EVA should allow safe and unobstructed access and safe operation of a vehicle of the Fire Services Department having the following specifications :
 - (i) Gross weight 30,000 kg
 - (ii) Turning circle 26m
 - (iii) Length 12m

Turning space for vehicles of the Fire Services Department should be provided at all deadend EVA;

- (e) the EVA should serve at least one major facade of the building. For this purpose, a major facade of a building is the facade having not less than one-fourth of the total length of all the perimeter walls of the building. In case the major facade is less than one-fourth of the total length of all the perimeter walls of the building, the EVA should serve this major facade and, in addition, other facades of the building such that the aggregate length of the facades served is not less than one-fourth of the total length of all the perimeter walls of the building. A part of the building facade is deemed to be served by the EVA if the horizontal distance between the EVA and such part of the facade does not exceed 10m. This requirement on horizontal distance from the EVA shall not apply to the level of the building facade more than 60m high measuring from the level of the EVA serving the facade. The part of the EVA serving a building facade should not be covered.

Clause D22.3

Subject to Clause D22.2 above, every EVA should comply with the following requirements according to the Use Classification of the building it serves:

- (a) for Use Classification 6, EVA should be provided to serve two opposite facades that are remote from each other and each having a length of not less than one-fourth of the total length of all perimeter walls of the building. If access to the site from more than one street is available, the EVA serving the two facades should gain access from different street. The EVA should be in the form of a two-way carriageway and the width of the carriageway should be not less than 13.5m if there is no central divider. If there is a central divider, the width of each carriageway should not be less than 7.3m. If any such EVA is outside the site, a reserve area of not less than 6m wide measured from the building boundary alongside that EVA should be provided as an additional EVA (see illustration in Diagram D6);
- (b) for Use Classification 5a, the EVA should comply with the requirements of thoroughfares stipulated in Subsection B20;
- (c) for a building with mixed Use Classifications, the EVA should comply with the most stringent requirements for any particular Use Classification in this Clause.

Clause D22.4

For an EVA which is not normally used as access for other vehicles to the building, an emergency crash gate conforming to or equivalent to the Highways Department standards as illustrated in Diagram D7 should be provided perpendicular to the centre line of the EVA. A clear space should be provided in front of the crash gate in accordance with the illustration in Diagram D8.

Subsection D23 - EVA to Redevelopment Sites

Clause D23.1

For the purpose of the Building (Planning) Regulation 41D, this Subsection specifies the design and construction requirements of EVA serving buildings erected or to be erected on redevelopment sites, i.e. not virgin sites.

Clause D23.2

Every EVA to which this Subsection applies should be designed and constructed complying with the requirements in Clause D22.2(b), (c) and (d). An EVA that is not in the form of a carriageway should be hard-paved and well demarcated on site.

Clause D23.3

Subject to Clause D23.2 above, every EVA should comply with the following requirements according to the Use Classification of the building it serves:

- (a) for Use Classification 6, the EVA should serve at least one major façade of the building complying with Clause D22.2(e). Such EVA should have a minimum width of 7.3m;
- (b) for Use Classification 5a, the EVA should comply with the requirements of thoroughfares in Clause B20;
- (c) for a building of any other types of Use Classifications, the EVA should serve at least one major façade of the building complying with Clause D22.2(e). Such EVA should have a minimum width of 6m;
- (d) for a building with mixed Use Classifications, the EVA should comply with the more stringent requirements for any particular Use Classification in this Clause.

Clause D23.4

Emergency crash gates should be provided to the EVA complying with Clause D22.4.

Subsection D24 - EVA Signs

Clause D24.1

For the purpose of the Building (Planning) Regulation 41D, this Subsection specifies the requirements of signage for EVA to indicate the extent of the designated EVA within a site.

Clause D24.2

For an EVA in the form of a carriageway:

- (a) a sign showing the layout of the EVA should be erected at the entrance of the EVA (see Diagram D9);
- (b) EVA indication signs should be erected at an interval of not more than 100m along the EVA (see Diagram D10); and
- (c) "No Parking" signs conforming to the standards stipulated in the Road Traffic (Parking on Private Roads) Regulations and the Code of Practice for Private Roads issued by the Transport Department should be erected at an interval of not more than 50m along the EVA except where designated carparks are marked (see Diagram D11).

Clause D24.3

For an EVA which is not in the form of a carriageway:

- (a) a sign showing the layout of the EVA should be erected at the entrance of the EVA (see Diagram D9); and
- (b) EVA indication signs should be provided complying with Clause D24.2(b) above. Alternatively, emergency route signs should be fixed to kerbstones, planters, or other similar objects as appropriate at an interval of not more than 100m to mark the EVA. Such signs should be painted or engraved and should be made of durable materials such as metal (see Diagram D12).

Subsection D25 - Exemption and Modification

Clause D25.1

A building may be exempted from any or all of the design and construction requirements of EVA stipulated in Subsections D22, D23 and D24 and under the Building (Planning) Regulation 41D(3) in the following cases:

- (a) where the purpose for which the building is to be used constitutes a low fire risk; or
- (b) where the site is situated in an area the topographical features of which make the provision of an EVA or the compliance with requirements in Subsections D22, D23 and D24 above impracticable.

Clause D25.2

Where the circumstances in Clause D25.1 arise that an EVA will not be provided or where the EVA provided cannot comply with the standards as stipulated in this Section, an application for exemption from the Building (Planning) Regulation 41D(1) or (2) should be submitted for consideration by the Building Authority, justified by a fire safety assessment report (FSAR). Part G provides the details on the preparation of the FSAR.

Commentary

The submission of the FSAR to the Building Authority under Clause D25.2 should assess the probability of occurrence and the likely consequence of a fire incident. Factors such as fire load, spread of fire and density of population in different parts of the building, the behaviour of the occupants in case of panic and the impact of topographical constraints (in case of Clause D25.1 (b) only) to the ingress and escape to and from the building should be analysed. The Building Authority in consultation with the Director of Fire Services will consider such an application on its individual merits, aiming to comply with the relevant Performance Requirement in Part A.

Examples of buildings that may be considered as having low fire risk under Clause D25.1(a) include a microwave transmitter station, an unmanned transposer station, a beach house or a pylon supporting cables. Factors mentioned above should be analysed to determine whether a building is of low fire risk.

Examples of sites that may be considered as having topographical constraints under Clause D25.1(b) include a site abutting a stepped street or abutting a road or street that is not up to the standards in this Part and the owner of the site has no control over such road or street. For sites located in remote areas or in outlying islands where the vehicles of the Fire Services Department of smaller size can be deployed, the access requirements will be specified by the Building Authority in consultation with the Director of Fire Services on a case-by-case basis.

Subsection D26 - Enhanced Fire Safety Provisions

Clause D26.1

Under the Building (Planning) Regulation 41D(4), the Building Authority may require to enhance the fire safety provisions to compensate for the non-provision or deficiency of EVA when exemption is granted as stipulated under Subsection D25. The enhanced fire safety provisions so required may include enhanced provisions of means of escape, means of access, fire resisting constructions, fire service installations or a combination of these fire safety provisions.

Commentary

Based on the consideration to protection of means of escape and adequacy of water supply for fire suppression, additional fire service installations in pursuance of the Code of Practice for Minimum Fire Service Installations and Equipment may be required as enhanced fire safety provisions for the building in case of non-provision or deficient provision of EVA. The following typical enhancements on fire safety provisions may vary according to special circumstances of each case:

- (a) sprinkler system for light hazard group designed and installed to the satisfaction of the Director of Fire Services should be provided to protect all common areas of domestic buildings including lift lobbies, staircases, common corridors and all exit routes leading to ground storey. An independent sprinkler tank of appropriate capacity should be provided. For composite (domestic and commercial) buildings, sprinkler system for the appropriate hazard group should be provided to protect the entire commercial portion (irrespective of floor area) and all common areas of the domestic portion. Sprinkler heads should be of the approved fast response type;
- (b) pressurization of staircase or natural venting of staircase should be provided in accordance with the standards and specifications as laid down in the Code of Practice for Minimum Fire Service Installations and Equipment;
- (c) a direct line to the Fire Services Communication Centre should be provided and connected to the sprinkler alarm system and manual fire alarm system. Despite the provision of such direct line, the capacity of the sprinkler water tank, with both ends fed water supply, is not allowed to be reduced to 2/3;
- (d) enhanced size of water tank/inflow rate for sprinkler or fire hydrant/hose reel system tank;
- (e) any combination of the above items.