

GOVERNMENT OF TELANGANA

ABSTRACT

Municipal Administration & Urban Development Department – Amendments to 'Fire Prevention and Safety Measures in High-Rise Hospital Buildings Rules, 2011' - Orders – Issued.

MUNICIPAL ADMINISTRATION & URBAN DEVELOPMENT (PLG.III) DEPARTMENT

G.O.Ms.No.162

Dated:16.08.2023

Read the following:-

1. G.O.Ms.No.2, MA&UD Dept., Dated:03.01.2011.
2. G.O.Rt.No.286, MA&UD Dept., Dated 10.05.2023
3. Recommendations of Expert Committee dt.22.06.2023

ORDER:-

In the GO 1st read above, Government have issued "Fire Prevention and Safety Measures in High-Rise Hospital Buildings Rules – 2011".

2. In the reference 2nd read above, Government have constituted an Expert Committee with Special Chief Secretary (MA&UD Department) as Chairman; Principal Secretary (HM&FW Department); Principal Secretary (Home Department); Director General (State Disaster Response & Fire Services Department); Senior Professor (JNTU Hyderabad); Engineer-in-Chief (R&B Department); Engineer-in-Chief (Public Health Department); Dr.T Gangadhar (OSD to Hon'ble CM); MD., TSMSIDC; MD., KIMS Hyderabad; Director & President - Continental Hospital and Director (State Disaster Response & Fire Services Department) as Members to study the requirements of Fire & Life safety measures in Hospital Buildings of above 60 mtrs height and submit necessary recommendations to Government After elaborate discussions, the Expert Committee has recommended to make certain amendments to G.O.Ms.No.2, MA&UD Department, dt.03.01.2011 for fire prevention and safety measures in High-Rise Hospital Buildings above 45 mts height.

3. Government after careful examination of the matter have considered the recommendations made by Expert Committee and accordingly hereby issue the following notification making certain amendments to Fire Prevention and Safety Measures in High-Rise Hospital Buildings Rules – 2011.

NOTIFICATION

In exercise of the powers conferred by section 585 read with section 592 of the Greater Hyderabad Municipal Corporation Act. 1955; provision under sub-section (1) read with sub-section (2) of sections 14, 32, 46 and 58 of the Telangana Urban Areas (Development) Act, 1975, section 56(1) of the Hyderabad Metropolitan Development Authority Act. 2008, section 18 of the Telangana Municipal Corporations Act, 1994, section 238 of the Telangana Municipalities Act, 2019, the Government of Telangana hereby makes the following amendments to Fire Prevention and Safety Measures in High-Rise Hospital Buildings Rules – 2011.

AMENDMENT

In G.O.Ms.No.2, MA&UD Dept., Dated:03.01.2011 following amendments are made to the rules mentioned under Annexure of said G.O:

Rule	Existing provision as per G.O.Ms.No.2, MA&UD Dept., Dated:03.01.2011 (under Annexure)	Amendment
1.	OPEN SPACES: In order to facilitate fire fighting operations and also prevent fire exposure to adjacent buildings, it is essential to have adequate open spaces around the building.	OPEN SPACES: In order to facilitate fire fighting operations and also to prevent fire exposure to adjacent buildings, it is essential to have adequate open spaces around
	Open spaces around the building shall be as	

	per section 8.2.3.1 Table 2 NBC Part-III	the building.
	Height of the Building (in m) & Minimum open space on all sides (in m)	Minimum open space on all sides (in m)
	Above 30m & up to 35m	11
	Above 35m & up to 40m	12
	Above 40m & up to 45m	13
	Above 45m & up to 50m	14
	Above 50m & up to 55m	15
	Above 55m & up to 60m -	16
	Above 60m & up to 130m	G.O.Ms.No.168
	a) The Maximum permissible height of Hospital Buildings shall be 60 meters.	a) The maximum permissible height of the hospital buildings shall be limited to 130mts.
	c) No relaxation in the above mentioned open spaces in any case including road widening shall be allowed.	deleted.
	d) Hard, levelled, motor able open-to-sky drive away around the building for the operation of specialised fire vehicles	For Buildings upto 54 metres height after all relaxations in setbacks as per Building Rules, minimum 7 meters wide hard, levelled, motorable, open to sky drive way with 9 metres turning radius shall be provided. For building above 54 metres height after all relaxations in setbacks as per Building Rules, minimum 11 metres wide hard, levelled, motorable, open to sky drive way with 14 metres turning radius shall be provided for the operation of specialised vehicles.
2.2.3	Suites The patient sleeping room is provided with a total coverage smoke detection system per NFPA 101 Sections 9.6.2.8 and 18.3.4	Suites The patient sleeping room shall be provided with a total coverage smoke detection system per NFPA 101, 2021 Sections 9.6.2.9 and 18.3.4
2.2.4.3	Glazing Vision panels consisting of fire rated glazing or wired glass panels in approved frames shall be fire rated in accordance with the provisions for opening protection and shall be smoke-tight. Glazing in fire rated assemblies shall also comply with NFPA 101, Section 8.3.3. Fire window assemblies shall not be permitted in fire barriers having a fire resistance rating of 2 hours or greater (see NFPA 5000, Table 8.7.2).	Glazing Vision panels consisting of fire rated glazing or wired glass panels in approved frames shall be fire rated in accordance with the provisions for opening protection and shall be smoke-tight. Glazing in fire rated assemblies shall also comply with NFPA 101, Section 8.3.3. Fire window assemblies shall not be permitted in fire barriers having a fire resistance rating of 2 hours or greater NFPA 5000-2021, Table 8.7.2.2
2.2.5.4	Penetrations and Joints: Penetrations through a smoke partition shall be protected by a system or material that is capable of limiting the transfer of smoke and shall be fire resistance rated per NFPA 5000,	Penetrations and Joints: Penetrations through a smoke partition shall be protected by a system or material that is capable of limiting the transfer

	<p>Table 8.7.2 based on the rating of the penetrated assembly unless otherwise specified herein.</p>	<p>of smoke and shall be fire resistance rated per NFPA 5000-2021, Table 8.7.2.2 based on the rating of the penetrated assembly unless otherwise specified herein.</p>
<p>2.2.5.5.</p>	<p>Ducts and Air Transfer Openings Air-transfer openings in smoke partitions shall be provided with approved combination fire and smoke dampers designed and tested in accordance with the requirements of UL Standards 555 and 555S or ISO equivalent. Dampers shall limit the transfer of smoke and be fire resistance rated based on the rating of the wall assembly having the opening in accordance with NFPA 5000, Table 8.7.2, unless otherwise specified herein. Where the installation of dampers will interfere with the operation of a smoke control system, approved alternative protection shall be utilized.</p>	<p>Ducts and Air Transfer Openings Air-transfer openings in smoke partitions shall be provided with approved combination fire and smoke dampers designed and tested in accordance with the requirements of UL Standards 555 and 555S or ISO equivalent. Dampers shall limit the transfer of smoke and be fire resistance rated based on the rating of the wall assembly having the opening in accordance with NFPA 5000-2021, Table 8.7.2.2, unless otherwise specified herein. Where the installation of dampers will interfere with the operation of a smoke control system, approved alternative protection shall be utilized.</p>
<p>2.2.5.6.</p>	<p>Opening Protectives Opening protectives for smoke partitions shall comply with NFPA 5000, Section 8.10.3. Doors shall be fire resistance rated based on the rating of the wall assembly having the opening in accordance with NFPA 5000, Table 8.7.2, unless otherwise specified herein. Doors shall limit the transfer of smoke and shall not include transfer grilles. Doors that are normally required to be kept closed shall be automatic-closing or self-closing per NFPA 5000, Section 11.2.1.8.1. Fire window assemblies, where provided, shall have a minimum fire resistance rating of 20 minutes per Table 8.7.2.</p>	<p>Opening Protectives Opening protectives for smoke partitions shall comply with NFPA 5000, Section 8.10.3. Doors shall be fire resistance rated based on the rating of the wall assembly having the opening in accordance with NFPA 5000, Table 8.7.2, unless otherwise specified herein. Doors shall limit the transfer of smoke and shall not include transfer grilles. Doors that are normally required to be kept closed shall be automatic-closing or self-closing per NFPA 5000-2021, Table 8.7.2.2.</p>
<p>2.2.6.2</p>	<p>The fire protection rating for opening protectives in horizontal exits (fire barriers), shall be 1-1/2 hours in accordance with Table 8.7.2, NFPA 5000. Fire window assemblies shall not be permitted in wall openings unless as part of the door assembly.</p>	<p>The fire protection rating for opening protectives in horizontal exits (fire barriers), shall be 1-1/2 hours in accordance with Table 8.7.2.2 NFPA 5000-2021. Fire window assemblies shall not be permitted in wall openings unless as part of the door assembly.</p>
<p>2.2.7.3</p>	<p>Penetrations shall also be prohibited between adjacent exit enclosures. Electrical conduits serving the enclosure, required exit doors, ductwork and equipment necessary for independent stair pressurization, water and steam piping necessary for the heating or cooling of the exit</p>	<p>Penetrations shall also be prohibited between adjacent exit enclosures. Electrical conduits serving the enclosure, required exit doors, ductwork and equipment necessary for independent stair</p>

	enclosure, sprinkler piping, standpipes, fire alarm circuits that are protected in accordance with NFPA 101, Section 8.3.5.	pressurization, water and steam piping necessary for the heating or cooling of the exit enclosure, sprinkler piping, standpipes, fire alarm circuits that are protected in accordance with NFPA 2021 Section 8.3.4
2.2.8.2.	<p>Opening Protectives:</p> <p>Smoke barrier doors shall have a minimum 45-minute fire rating. Fire window assemblies shall have a minimum fire resistance rating of 45 minutes per Table 8.7.2, NFPA 5000. Doors shall be automatic-closing or self-closing. Cross-corridor openings in the means of egress shall be protected by a pair of swinging doors or a horizontal sliding door per NFPA 101, Section 18.3.7.7. Corridor openings not in the means of egress shall be permitted to use single leaf doors. Where, a pair of opposite swinging doors are installed, they shall be without a center mullion. Vision panels shall also be provided, as for horizontal sliding doors and vision panels shall consist of fire-rated glazing materials in approved frames, the area of which should not exceed that tested. The doors shall be close fitting within operational tolerances, and shall not have undercuts, louvers or grilles. The doors shall have head and jamb stops, astragals or rabbets at meeting edges and shall be automatic closing by smoke detection or self-closing.. Positive-latching devices shall not be required. Air leakage criteria and installation requirements shall be per NFPA 101, Section 8.5.2.</p>	<p>Opening Protectives:</p> <p>Smoke barrier doors shall have a minimum 45-minute fire rating. Fire window assemblies shall have a minimum fire resistance rating of 45 minutes per Table 8.7.2.2, NFPA 5000-2021. Doors shall be automatic-closing or self-closing. Cross-corridor openings in the means of egress shall be protected by a pair of swinging doors or a horizontal sliding door per NFPA 101, Section 18.3.7.6. Corridor openings not in the means of egress shall be permitted to use single leaf doors.</p>
2.5.	<p>ROOFS AND ROOF-CEILINGS:</p> <p>Roof-Ceiling assemblies shall have a minimum 1-½ hour fire resistance rating. Roofing systems shall be permitted to include combustible supports, decking, or roofing in accordance with NFPA 101, Sections 18.1.6.5 and 18.1.6.6.</p>	<p>ROOFS AND ROOF-CEILINGS:</p> <p>Roof-Ceiling assemblies shall have a minimum 1-½ hour fire resistance rating. Roofing systems shall be permitted to include combustible supports, decking, or roofing in accordance with NFPA 101, 2021 Sections 18.1.6.2 & 18.1.6.3</p>
2.6.1	<p>Vertical Openings:</p> <p><u>Exception No. 1:</u> pneumatic tube conveyors protected in accordance with NFPA 101, 8.3.5.1.</p> <p><u>Exception No. 3:</u> convenience openings protected in accordance with NFPA 101, 8.6.8.</p> <p><u>Exception No. 4:</u> escalators and moving walks protected in accordance with NFPA 101, 8.6.8.</p> <p>Note: Unprotected openings in accordance with NFPA 101, Section 8.6.6, Communicating Space, shall not be permitted.</p>	<p>Vertical Openings:</p> <p><u>Exception No. 1:</u> pneumatic tube conveyors protected in accordance with NFPA 2021, Section 8.3.4.2</p> <p><u>Exception No. 3:</u> convenience openings protected in accordance with NFPA, 2021, 8.6.9</p> <p><u>Exception No. 4:</u> escalators and moving walks protected in accordance with NFPA 101-2021, 8.6.9</p>
2.6.2.5.1.	<p>Refuse and Laundry Chutes:</p> <p>Access Rooms:</p> <p>Access openings for refuse and laundry</p>	<p>Refuse and Laundry Chutes:</p> <p>Access Rooms:</p> <p>Access openings for refuse and</p>

	<p>chutes shall be located in rooms or compartments enclosed by a fire barrier that has a fire-resistance rating of not less than 1 hour. Openings into the access rooms shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour. Doors shall be self- or automatic-closing upon the detection of smoke in accordance with IBC Section 715.4.7.3.</p>	<p>laundry chutes shall be located in rooms or compartments enclosed by a fire barrier that has a fire-resistance rating of not less than 1 hour. Openings into the access rooms shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour. Doors shall be self- or automatic-closing upon the detection of smoke in accordance with IBC 2021, Section 716.2.6.6</p>
2.7.1	<p>Fire Rated Assemblies: Fire stop systems and devices protecting through-penetrations and membrane-penetrations of fire resistance rated walls and horizontal assemblies shall be protected in accordance with NFPA 101, Section 8.3.5. Where required per NFPA 5000, Section 8.8.8, fire dampers shall have minimum damper ratings as follows:</p> <ul style="list-style-type: none"> • 3 hours for fire resistance rated assemblies of 3 hours or greater. • 1-1/2 hours for fire resistance rated assemblies of less than 3 hours <p>Fire dampers shall also comply with NFPA 101, Section 8.3.5 for penetrations</p>	<p>Fire Rated Assemblies: Fire stop systems and devices protecting through-penetrations and membrane-penetrations of fire resistance rated walls and horizontal assemblies shall be protected in accordance with NFPA 101, 2021 Section 8.3.4</p> <p>Fire dampers shall also comply with NFPA 101, 2021 Section 8.3.4 for penetrations</p>
2.7.2.	<p>Smoke Resistant Assemblies:</p> <p>Penetrations passing through smoke barrier or smoke partition assemblies shall be protected by a system or material capable of restricting the transfer of smoke per NFPA 101, Section 8.5.6.</p> <p>Where a smoke resistant assembly is also constructed to have a fire resistance rating, penetrations shall also comply with the requirements in NFPA 101, Section 8.3.5 for purposes of limiting the spread of fire for a time period equal to the fire resistance rating of the assembly. Where smoke dampers are provided, they shall be designed and tested in accordance with the requirements of UL 555S, Standard for Smoke Dampers. Where combination fire/smoke dampers are required, they shall be designed and tested in accordance with the requirements of UL 555, Standard for Fire Dampers.</p>	<p>Smoke Resistant Assemblies:</p> <p>Penetrations passing through smoke barrier or smoke partition assemblies shall be protected by a system or material capable of restricting the transfer of smoke per NFPA 101, Section 8.5.6. Where a smoke resistant assembly is also constructed to have a fire resistance rating, penetrations shall also comply with the requirements in NFPA 101, 2021 Section 8.3.4 for purposes of limiting the spread of fire for a time period equal to the fire resistance rating of the assembly. Where smoke dampers are provided, they shall be designed and tested in accordance with the requirements of UL 555S, Standard for Smoke Dampers. Where combination fire/smoke dampers are required, they shall be designed and tested in accordance with the requirements of UL 555, Standard for Fire Dampers</p>

3.1.12	<p>Kitchens: Kitchens shall have a minimum 2-hour barrier fire resistance rating. Separate exhaust ducting for all kitchens/Cafeteria in the building shall be provided to discharge the smoke and hot gases outside the building. Kitchen and cafeteria/ dining shall not be located in basement. They shall be located at Ground, first or second floor.</p>	<p>Kitchens: Kitchens shall have a minimum 2-hour barrier fire resistance rating. Separate exhaust ducting for all kitchens/Cafeteria in the building shall be provided to discharge the smoke and hot gases outside the building. Kitchen and cafeteria/ dining shall not be located in basement. Kitchen fire safety shall comply Annexure-G of part-4 NBC of India 2016</p>
3.2.	<p>LOCATION OF CRITICAL SERVICES:</p> <p>All critical services such as Operation theatres, ICU, ICCU etc. shall be located at lower floors in the Ground to 4th floor only</p>	<p>LOCATION OF CRITICAL SERVICES</p> <p>All critical patients and those incapable of self-preservation and having physical impairment shall be housed within 54metres. OTs should be separated from other building spaces using fire rated construction.</p>
5.2.1.	<p>Corridor Access:</p> <p>a. Every habitable room shall have an exit access door leading directly to an exit access corridor unless otherwise specified herein and NFPA 101, Section 18.2.5.5.1.</p>	<p>Corridor Access:</p> <p>a. Every habitable room shall have an exit access door leading directly to an exit access corridor unless otherwise specified herein and NFPA 101, 2021 Section 18.2.5.6.1</p>
5.2.1	<p>Exception: Rooms with exit doors opening directly to the outside at ground level per NFPA 101, Section 18.2.5.5.3</p>	<p>Exception: Rooms with exit doors opening directly to the outside at ground level per NFPA 101, 2021 Section 18.2.5.6.3</p>
5.2.3.	<p>Maximum Allowable Exit Access Travel Distances The maximum travel distance of 45.0 meters is only allowed according to clause 4.5 Table (22) Part (4) of NBC, 2005</p>	<p>Maximum travel distance shall comply Clauses 4.4.2.1 & 4.4.2.2, Part (4) of NBC of India, 2016</p>
5.2.4.	<p>Travel through Intervening Rooms Exiting from any portion of the building shall be directly to an exit or a corridor. <u>Exceptions:</u> a. Access to exits shall be permitted to occur through foyers, lobbies and reception rooms when constructed as required for corridors (IBC 1017.5). b. Access from rooms or spaces shall be permitted to be through adjoining or intervening rooms, provided that such adjoining rooms are accessory to the areas served and are of less or equal hazard, or as permitted herein for Suites in the section on Maximum Allowable Travel Distances. c. Patient sleeping rooms shall be permitted to have one intervening room if the intervening room is not used as an exit access for more than eight patient beds. d. Special nursing suites shall be permitted to have one intervening room where the</p>	<p>Access to exits shall be permitted to occur through foyers, lobbies and reception rooms when constructed as required for corridors IBC 2021, 1020.7</p>

	<p>arrangement allows for direct and constant visual supervision by nursing personnel.</p> <p>e. For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through one intervening room where the travel distance to the exit access door is not greater than 30.48 m.</p> <p>f. For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through two intervening rooms where the travel distance to the exit access door is not greater than 15.24 m.</p>	
5.2.5	<p>Exit Access Components</p> <p>Corridors:</p> <p>ii. Dead Ends - Maximum of 9.14m</p>	<p>ii. Dead End corridor length in exit access shall not exceed 6m as per clause 4.4.2.2 of part 4 NBC of India 2016.</p>
	<p>iv. Other Special doors - Special doors, such as revolving doors or sliding doors, may be used as egress doors per NFPA 101, Section 18.2.2.2.9</p>	<p>Other Special doors - Special doors, such as revolving doors or sliding doors, may be used as egress doors per NFPA 101, 2021, Section 18.2.2.2.11</p>
	<p>Where egress doors are used in pairs, approved automatic flush bolts may be used, provided that the door leaf having the automatic flush bolts has no doorknob from the inside or surface-mounted hardware. (IBC 1008.1.8.3)</p>	<p>Where egress doors are used in pairs, approved automatic flush bolts may be used, provided that the door leaf having the automatic flush bolts has no doorknob from the inside or surface-mounted hardware. IBC-2021, 1010.2.4</p>
	<p>Manually operated flush bolts or surface bolts are only allowed where a pair of doors serves a storage or equipment room. In these cases, the manually operated edge- or surface-mounted bolts are permitted on the inactive leaf. (IBC 1008.1.8.3)</p>	<p>Manually operated flush bolts or surface bolts are only allowed where a pair of doors serves a storage or equipment room. In these cases, the manually operated edge- or surface-mounted bolts are permitted on the inactive leaf. IBC-2021, 1010.2.4</p>
5.3.1	<p>Exit Width and Capacity: For exit stairways, a factor of 7.6 mm per occupant shall be applied. For other exit components, a factor of 5.0 mm per occupant shall be applied.</p>	<p>Exit Width and Capacity: For exit stairways, a factor of 15 mm per occupant shall be applied. For other exit components, a factor of 5.0 mm per occupant shall be applied.</p> <p>Fire Fighting shafts (Fire tower) shall be provided as per clause 2.24 and E-2 of Part 4 NBC of India 2016.</p>
	<p>g. Stairway identification - Shall be provided per NFPA 101, Section 7.3.3.5.4.</p>	<p>g. Stairway identification - Shall be provided per NFPA 101, 2021 Section 7.2.2.5.4</p>
	<p>j. Exterior exit stairways: Not permitted as a required means of egress per IBC 1023.2 for Group I-2 occupancies or for any occupancies in high-rise buildings.</p>	<p>j. Exterior exit stairways: Not permitted as a required means of egress per IBC, 2021, 1027.2 for Group I-2 occupancies or for any occupancies in high-rise buildings</p>

5.3.4.	<p>Ramps</p> <p>a) Ramp (a) from Ground floor to the critical areas (b) from terrace to the refuge floor shall be provided.</p> <p>b) The open external ramp with fire doors on each floor in the mandatory side and rear open space may also be considered after leaving clear 7.0 meters driveway.</p>	<p>Ramps</p> <p>1. Ramps Not Compulsory from Ground to Terrace Level. However ramps may be provided up to a height of 54m by the management if required.</p> <p>2. Occupant Evacuation Elevators as per Section 3008 of IBC 2021 shall be provided.</p>
5.3.6.	<p>Horizontal Exits:</p> <p>Horizontal exits shall comply with NFPA 101, Section 7.2.4 unless otherwise modified herein or by NFPA 101, Section 18.2.2.5. Accumulation space shall be provided on each side of the horizontal exit as follows:</p> <ul style="list-style-type: none"> • Not less than 2.8 (net) sq m per patient in a hospital or nursing home, or not less than 1.4 (net) sq m per resident in a limited care facility, shall be provided within the aggregated area consisting of corridors, patient rooms, treatment rooms, lounge or dining areas, and other similar areas • On stories not housing bed or litterborne patients, not less than 0.56 (net) sq m per occupant shall be provided for the total number of occupants in adjoining compartments. <p>Horizontal exits shall be permitted for substitution of other exits to the extent that the total exit capacity shall not be reduced by more than 1/3 for healthcare or more than 50 percent for other occupancies A single door shall be permitted across a corridor of a horizontal exit if all of the following conditions are met:</p> <ul style="list-style-type: none"> • The exit serves one direction only. • Such door is a swinging door or a horizontal-sliding door complying with 7.2.1.14. • The door is not less than 41 1/2 in. (1055 mm) in clear width. <p>Horizontal exits serving as a means of egress from both sides shall be permitted to be protected by a pair of swinging doors that swing in opposite directions from each other and each having a clear width as follows:</p> <ul style="list-style-type: none"> • Not less than 1055 mm for corridor widths of 2440 mm or greater, and, • Not less than 810 mm for corridor widths of 1830 mm but less than 2440 mm.. 	<p>Horizontal Exits:</p> <p>Horizontal exits shall comply with NFPA 101, Section 7.2.4 unless otherwise modified herein or by NFPA 101, Section 18.2.2.5.</p> <p>Accumulation space shall be provided on each side of the horizontal exit as follows:</p> <ul style="list-style-type: none"> • Not less than 2.8 (net) sq m per patient in a hospital or nursing home, or not less than 1.4 (net) sq m per resident in a limited care facility, shall be provided within the aggregated area consisting of corridors, patient rooms, treatment rooms, lounge or dining areas, and other similar areas • On stories not housing bed or litterborne patients, not less than 0.56 (net) sq m per occupant shall be provided for the total number of occupants in adjoining compartments. <p>Horizontal exits shall be permitted for substitution of other exits to the extent that the total exit capacity shall not be reduced by more than 1/3 for healthcare or more than 50 percent for other occupancies A single door shall be permitted across a corridor of a horizontal exit if all of the following conditions are met:</p> <ul style="list-style-type: none"> • The exit serves one direction only. • Such door is a swinging door or a horizontal-sliding door complying with 7.2.1.13. • The door is not less than 41 1/2 in. (1055 mm) in clear width. <p>Horizontal exits serving as a means of egress from both sides shall be permitted to be protected by a pair of swinging doors that swing in opposite directions from each other and each having a clear width as</p>

		<p>follows:</p> <ul style="list-style-type: none"> • Not less than 1055 mm for corridor widths of 2440 mm or greater, and, • Not less than 810 mm for corridor widths of 1830 mm but less than 2440 mm..
5.3.6.	<p>Exception: Openings shall be permitted to be protected by horizontal sliding doors complying with NFPA 101 Section 7.2.1.14 that provide clear widths as follows:</p> <ul style="list-style-type: none"> • Not less than 2110 mm for corridor widths of 2440 mm or greater, and, • Not less than 1625 mm for corridor widths of 1830 mm but less than 2440 mm 	<p>Exception: Openings shall be permitted to be protected by horizontal sliding doors complying with NFPA 101, 2021 Section 7.2.1.13</p>
5.4.1	<p>THE EXIT DISCHARGE:</p> <p>Termination Exits shall be permitted to terminate at the following:</p> <ul style="list-style-type: none"> • directly at a public way, exterior exit discharge, yard, court, open space, or other portions of the exit discharge that are of adequate width and size to provide occupants with a safe and unobstructed access to a public way, • to an interior exit discharge in accordance with NFPA 101, Section 7.7.2, • to a rooftop exit discharge in accordance with NFPA 101, Section 7.7.6, or, • to a vestibule or foyer in accordance with NFPA 101, Section 7.7.2.5. 	<p>THE EXIT DISCHARGE:</p> <p>Termination Exits shall be permitted to terminate at the following:</p> <ul style="list-style-type: none"> • directly at a public way, exterior exit discharge, yard, court, open space, or other portions of the exit discharge that are of adequate width and size to provide occupants with a safe and unobstructed access to a public way, • to an interior exit discharge in accordance with NFPA 101, Section 7.7.2, • to a rooftop exit discharge in accordance with NFPA 101, Section 7.7.6, or, • to a vestibule or foyer in accordance with NFPA 101, 2021 Section 7.7.2.4(b)
5.5.5	<p>Platform Lifts Shall not be part of an accessible means of egress except where allowed as part of a required accessible route in IBC Section 1109.7. Standby power shall be provided and the lift should not be enclosed.</p>	<p>Platform Lifts Shall not be part of an accessible means of egress except where allowed as part of a required accessible route in IBC Section 1009.5</p>
5.5.8	<p>Exterior area for Assisted Rescue shall be open to the outside air and meet the requirements of IBC Section 1007.6.1. Separation walls shall comply with the requirements for exterior walls. Where walls or openings between the area for assisted rescue and the interior of the building, the building exterior walls within 3.048 m. horizontally of a non-rated wall or unprotected opening should have a fire-resistance rating of not less than 1 hour. Openings within such exterior walls should be protected by opening protectives having a fire protection rating of not less than ¾ hour. This construction should extend vertically from the ground to a point 3.048m. above the floor level of the area for assisted rescue or to the roof line, whichever is lower.</p> <p>a. Openness Shall be at least 50 percent open.</p> <p>b. Exterior exit stairway Not permitted in a Group I-2 occupancy.</p>	<p>Exterior area for Assisted Rescue shall be open to the outside air and meet the requirements of IBC 2021 Section 1009.6.3</p>

	c. Identification Shall be provided.	
9.3.	ALARM ANNUNCIATION AND ZONING Alarm annunciation and zoning shall be per NFPA 101, Section 9.6.7 unless modified as follows. Alarm zones shall be permitted to coincide with the areas of compliant smoke compartments.	Alarm annunciation and zoning shall be per NFPA 101, 2021 Section 9.6.8 unless modified as follows. Alarm zones shall be permitted to coincide with the areas of compliant smoke compartments.
10.1	EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS: EMERGENCY VOICE/ALARM SYSTEM: An emergency voice/alarm communication system shall be required. The operation of any automatic fire detection, sprinkler water-flow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information on a minimum of the alarming floor, the floor above and the floor below in accordance with Section 404 of the International Fire Code. Speakers shall be provided throughout the building by paging zones. As a minimum, paging zones shall be provided as follows: 1. Elevator groups 2. Exit stairways 3. Each floor 4. Areas of refuge as defined in IBC Section 1002.1 In Group I-2 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification should be broadcast over the overhead page.	Areas of refuge as defined in IBC 2021, Section 1009.6.3
13.1	BASEMENT PROTECTION General: i) Basements shall comply with the IBC for S-2 Storage occupancies. Exception: Means of Egress shall be in accordance with NFPA 5000 and NFPA 101. ii) Basements shall not be used for any other purpose except parking and building services Exception: Specialized medical facilities/services compliant with NFPA 99 shall be permitted in the second level basement.	BASEMENT PROTECTION General: i) Means of Egress shall be in accordance with NFPA 5000 and NFPA 101 and part 4 NBC of India 2016. ii) Basements shall not be used for any other purpose except parking and building services as per clause 12.9.2.1 (C) of part 3 NBC of India 2016 and services like radiation facility, PET-CT Scan, MRI and such other radiation related services may be permitted as per relevant norms / good practice. iii) Basement shall not be used to store flammables or for pathological or other laboratories particularly those involving usage of chemicals as per clause 6.3 (g) of part 4 NBC of India 2016.
13.2	VENTILATION AND SMOKE MANAGEMENT Basements Ventilation shall be provided as below: (NBC Part-4 (C.1.6). i) The building shall be provided with the ventilation strictly in accordance with Part-VIII	VENTILATION AND SMOKE MANAGEMENT: C 1.6 of Part 4 NBC of India shall be replaced by Clause 4.6.2 of Part 4 NBC of India

<p>Section-I and Clause C-1.6.1 to C — 1.6.6 of Part-IV of National Building Code of India. The smoke control/extraction system shall be designed as per NBC Part-4/IBC Section 909 and NFPA-92. Where conflicts exist, the most stringent provisions shall apply.</p> <p>ii) Each basement shall be separately ventilated. Vents with cross-sectional area (aggregate) not less than 2.5 percent of the floor area spread evenly round the perimeter of the basement shall be provided in the form of grills, or breakable stall board lights or pavement lights or by way of shafts. Alternatively, a system of air inlets shall be provided at basement floor level and smoke outlets at basement ceiling level. Inlets and extracts may be terminated at ground level with stall board or pavement lights should be in position easily accessible to the fire brigade and clearly marked 'SMOKE OUTLET' or "AIR INLET" with an indication of area served at or near the opening. (NBC Part-4 (C.1.6.1).</p> <p>iii) The staircase serving basements shall be of enclosed type with a fire resistance the greater of not less than 2 hours or the floor/ceiling construction that it is penetrating, and shall be situated at the periphery of the basement to be entered at ground level only from the open air and in such positions that smoke from any fire in the basement shall not obstruct any exit serving the ground and upper stories of the building and shall communicate with basement through a lobby provided with fire resisting self closing doors of 1 hour resistance. (NBC Part-4 (C.1.6.2), or as otherwise specified herein.</p> <p>iv) In multi-storey basements, intake ducts may serve all basements levels, but each-basement level shall have separate smoke outlet duct or ducts. Ducts so provided shall have the same fire resistance rating as the compartment itself. (NBC Part-4 (C.1.6.3) or as otherwise specified herein.</p> <p>v) Mechanical extractors for smoke venting system from lower basement levels shall also be provided. The system shall be of such design as to automatically operate on activation of heat/smoke sensitive defectors or sprinklers. It shall also have an arrangement to be capable of a manual start. (NBC Part-4 (C.1.6.4).</p> <p>vi) Mechanical extractors shall have an internal locking arrangement, so that extractors shall continue to operate and supply fans shall stop automatically with actuation of fire detectors. (NBC Part-4 (C.1.6.4.1).</p> <p>vii) Mechanical extractors shall be designed to permit 30 air changes per hour in case of fire or distress call. (NBC Part-4 (C.1.6.4.2).</p> <p>viii) Mechanical extractor shall have an alternative source of supply. (NBC Part-4 (C.1.6.4.3).</p> <p>ix) Ventilating ducts shall be integrated with the structure and made out of brick masonry or reinforced cement concrete as far as</p>	2016
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	<p>possible and when this duct crosses the transformer area or electrical switchboard, fire dampers shall be provided. (NBC Part-4 (C.1.6.4.4).</p> <p>x) If cutouts are provided from basements to the upper floors, these openings shall be protected by sprinkler head at close spacing so as to form a water curtain in the event of fire. (NBC Part-4 (C.1.6.6).</p>	
14.0	<p>SMOKE COMPARTMENTATION:</p> <p>i) For every storey used by patient for sleeping or treatment, or other stories with an occupant load of 50 or more persons, floors shall be divided into separate fire/ smoke compartments with areas not exceeding 500 m² and enclosing construction having a minimum 2 hour fire rating, unless otherwise specified herein.</p> <p>ii) The services, standby generator and store must be segregated from others by erecting fire-resistant wall of not less than 2 hours rating. Each of the compartments must be individually ventilated and the opening for entry into each of these compartments must be fitted with self-closing fire / smoke check doors of not less than 1-1/2 hour fire rating.</p> <p>iii) All electric cables shall be laid in separate shafts and shall be sealed at every floor with fire resistant material of similar rating. The wall in between and all around the shafts shall also be of minimum two hours fire rating. (clause 6.3 and C-9 Part-4 NBC, 2005).</p>	<p>SMOKE COMPARTMENTATION</p> <p>i) For every storey used by patient for sleeping or treatment, or other stories with an occupant load of 50 or more persons, floors shall be divided into separate fire/ smoke compartments with areas not exceeding 500 m² and enclosing construction having a minimum 2 hour fire rating, unless otherwise specified herein.</p> <p>ii) The services, standby generator and store must be segregated from others by erecting fire-resistant wall of not less than 2 hours rating. Each of the compartments must be individually ventilated and the opening for entry into each of these compartments must be fitted with self-closing fire / smoke check doors of not less than 1-1/2 hour fire rating.</p> <p>iii) All electric cables shall be laid in separate shafts and shall be sealed at every floor with fire resistant material of similar rating. The wall in between and all around the shafts shall also be of minimum two hours fire rating. (clause 4.5, 4.6 and clause 6.3 of Part-4 NBC of India 2016).</p>
	<p>iv) The entry to the staircase from all levels shall be segregated with a self-closing fire / smoke check door of not less than a 1-1/2 hour fire rating. All vertical and horizontal openings at each floor level throughout the building shall be sealed properly with the non-combustible material in order to maintain the rating of the barrier element. Wherever false ceiling / suspended ceiling is provided, it shall be of one hour fire rated material. The compartmentation shall be extended up to ceiling level. (clause 6.3 and C-9 Part-4 NBC, 2005). Fire rated compartments shall extend slab to slab when a suspended ceiling is used.</p> <p>v) The maximum travel distance to a smoke compartment door within a smoke compartment shall be 45.0 m.</p> <p>vi) The smoke compartment shall be sized to accommodate occupants of the compartment</p>	<p>iv) The entry to the staircase from all levels shall be segregated with a self-closing fire / smoke check door of not less than a 1-1/2 hour fire rating. All vertical and horizontal openings at each floor level throughout the building shall be sealed properly with the non-combustible material in order to maintain the rating of the barrier element. Wherever false ceiling / suspended ceiling is provided, it shall be of one hour fire rated material. The compartmentation shall be extended up to ceiling level. (clause 4.5, 4.6 and clause 6.3 of Part-4 NBC of India 2016)</p>

	plus occupant from adjacent compartments using 2.8 m ² per non-ambulatory occupants and 0.56 m ² for others.	
	<p>x) Where ducts penetrate smoke compartments, a listed smoke damper designed to resist the passage of smoke shall be provided at each point a duct or air transfer opening penetrates a smoke barrier. Smoke dampers and smoke damper actuation methods shall comply with IBC Section 716.3.2.1.</p> <p>Exception: Smoke dampers are not required where the openings in ducts are limited to a single smoke compartment and the ducts are constructed of steel.</p> <p>xi) Buildings containing health care facilities shall be subdivided by smoke barriers into compartments as follows:</p> <p>(1) To divide every story used by inpatients for sleeping or treatment into not less than two smoke compartments,</p> <p>(2) To divide every story having an occupant load of 50 or more persons, regardless of use, into not less than two smoke compartments,</p> <p>(3) To limit the size of each smoke compartment required by (1) and (2) to an area not exceeding 2100m², unless the area is an atrium separated in accordance with NFPA 101 Section 8.6.7, in which case no limitation in size is required, and,</p> <p>(4) To limit the travel distance from any point to reach a door in the required smoke barrier to a distance not exceeding 45.0 m. xii) The smoke barrier subdivision requirement in Item xi) herein shall not apply to the following:</p> <p>(1) Stories that do not contain a health care occupancy located directly above the health care occupancy,</p> <p>(2) Areas that do not contain a health care occupancy and that are separated from the health care occupancy by a fire barrier complying with NFPA 101, Section 7.2.4.3,</p> <p>(3) Stories that do not contain a health care occupancy and that are more than one story below the health care occupancy, and,</p> <p>(4) Open-air parking structures protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.</p>	<p>Where ducts penetrate smoke compartments, a listed smoke damper designed to resist the passage of smoke shall be provided at each point a duct or air transfer opening penetrates a smoke barrier. Smoke dampers and smoke damper actuation methods shall comply with IBC 2021, Section 717.3.3.2</p>
16.0	<p>DECORATIVE MATERIALS AND FURNISHINGS:</p> <p>i) All the fabric used for seats, curtain, covering on sidewall, matting/ carpeting etc. shall also have Class-I rating as prescribed in NBC Part-IV/NFPA,99.</p> <p>ii) Draperies, curtains, furnishings and decorations shall comply with Chapter 10 – Interior Finish, Contents and Furnishings, NFPA 101.</p> <p>iii) Only flame retardant material shall be used for interior decoration and upholstery to prevent generation of toxic smoke / fumes. (NBC Part-4 (3.4.15) See NFPA 101 Section 18.7.5 for additional requirements.</p>	<p>DECORATIVE MATERIALS AND FURNISHINGS:</p> <p>Only flame retardant material shall be used for interior decoration and upholstery to prevent generation of toxic smoke / fumes NBC of India 2016, Part-4 (3.4.11)</p>

18.0	<p>REFUGE FLOOR/AREA:</p> <p>a) One refuge floor at a height of 30.0 meters shall be provided for safe evacuation with maximum of 2.5 meters floor height.</p> <p>b) Refuge areas as per clause 4.12.3 part 4 of NBC 2005, i.e., 0.3m² per person of two consecutive floors at the height of 24m, 39m and 54m levels shall be provided.</p> <p>c) Refuge area - definition: An area of refuge is a location in a building designed to hold occupants during a fire or other emergency, when evacuation may not be safe or possible. Occupants can wait there until rescued by firefighters. This can apply to the following:</p> <ul style="list-style-type: none"> • any persons who cannot access a safe escape route • any persons assisting another person who is prevented from escaping • patients in a hospital • sick people • people with disabilities • old people • very young children or infants • Medical personnel who may be operating on a patient at the time of the emergency. <p>d) Technical requirements: An Area of refuge is typically equipped with a steady supply of fresh outside air. The ducting that must supply such fresh air is referred to as pressurization ductwork. Such ductwork are items of passive fire protection, subject to fire testing, product certification, and listing and approval use and compliance. The idea is that the ductwork must remain operable even while exposed to fire for a duration of two hours. The electrical equipment supplying power must also be equipped with approved circuit integrity measures. (NFPA 70 & 99)</p> <p>e) Refuge area shall not be utilized for any other purpose and shall be kept vacant for the assembly of occupants in case of any emergency.</p>	<p>REFUGE FLOOR/AREA:</p> <p>a) deleted.</p> <p>b) Refuge Area: Annex E, E-4 (d) Refuge area(s) shall be provided at/or immediately above 24 m and thereafter at every 15 m or so. considering area of 0.6 m² per person for the actual number of occupants and shall include additionally to accommodate one wheelchair space of an area of 0.6 m² for every 200 occupants, portion thereof, OR 0.3 m² per person for occupants of two consecutive floors, whichever is higher. The refuge area shall be provided on the periphery of the floor and open to air at least on one side, protected with suitable railings. Minimum refuge area shall be 15 m². (Clause E-4 of part 4 NBC of India 2016).</p> <p>Compartmentation: All floors shall be compartmented / zoned. Each compartment (see clause 4.5.2 of NBC Part 4 of 2016) shall be able to accommodate, in addition to its own, the patients from adjoining compartment also considering 3.5 m² per person. If patients are not bed-ridden, a factor of 0.6 m² per person is recommended (see clause 6.3.2 (g) (2) of NBC Part 4 of 2016). Areas or spaces permitted to be included in this regard are corridors, sleeping areas, treatment rooms, lounge or Dining areas and other low hazard areas within the compartment.</p>
19.0	<p>Other Requirements</p> <p>Provision for Helipad should be made on the terrace floor (roof) according to the guidelines issued by the Director General, Civil Aviation, Government of India, New Delhi in Section (4) series 'B' Part -II dt: 21-12-2005. NFPA 418 shall be used as guidance</p>	<p>Other Requirements</p> <p>Not compulsory. May be provided by the management as per requirement.</p>
21.0	<p>FIRE MANAGEMENT:</p> <p>a) FIRE CONTROL ROOM: - Fire control room shall be established on the ground floor, near the entrance and shall be manned round the clock.</p> <p>b (i) The world class integrated building management system (BMS) shall have to be established with most modern automatic fire</p>	<p>FIRE MANAGEMENT:</p> <p>(i) The world class integrated building management system (BMS) shall have to be established with most modern automatic fire safety and life safety systems and equipments.</p> <p>ii) The builder shall contribute</p>

	<p>safety and life safety systems and equipments.</p> <p>(ii) the builder has to contribute 25% cost of the establishment and strengthening of the jurisdiction of fire station under private and public partnership model.</p> <p>(iii) the Fire Service and Disaster Management Department will evolve a public private model code within 2 months on ratification by the Government of [Telangana] it will be part of this clause and will be binding on all Hospital.</p>	<p>25% cost for establishment and strengthening of the jurisdiction Fire Station for procurement of sophisticated Fire/ rescue vehicles and equipment.</p> <p>iii) The Director General, Telangana State Disaster Response and Fire Services shall utilise the above fund for procurement of sophisticated Fire/ rescue vehicles and equipment for conducting effective fire fighting and rescue operations in the high rise Hospitals.</p>
	<p>e) BUILDING EVACUATION SUPERVISOR: The Owner / Occupier shall appoint a Building Evacuation Supervisor for conducting and documenting results of periodical Fire Drills for compliance of timed egress provisions in the NBC.</p> <p>f) FIRE DRILLS : Fire drills shall be conducted once in every 3 month for first two years and there after at least once in every 6 months and shall include the employees and staff members of all shifts. Fire Drills shall include assignment of staff to close doors where necessary to prevent spread of smoke or fire, to search the lavatories or other rooms, to account for all occupants, to achieve prompt, quiet, orderly evacuation of the building or relocation to area of refuge, (refer Annexure – D-3 of part - 4 of NBC of India, 2016).</p>	<p>Fire drills shall be conducted once in every 3 month for first two years and there after at least once in every 6 months and shall include the employees and staff members of all shifts. Fire Drills shall include assignment of staff to close doors where necessary to prevent spread of smoke or fire, to search the lavatories or other rooms, to account for all occupants, to achieve prompt, quiet, orderly evacuation of the building or relocation to area of refuge as per clause D-8.6 of part - 4 of NBC of India, 2016</p>
Following are inserted after Rule 23 of Annexure		
24.0	Review of Fire Life Safety (FLS) design	Third Party empanelled agencies by Fire Services Department or NFPA certified third party auditor with minimum of 5 years of similar experience to be engaged by the applicant for review and approval of proposed FLS design, for testing and inspection during installation stage, and shall certify regarding compliance of the approved FLS design while applying for Occupancy No Objection Certificate.
25.0	Applicability to Existing buildings	Existing buildings may come under the purview of these rules, subject to compliance of the fire and life safety norms as laid down above.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF TELANGANA)

ARVIND KUMAR
SPECIAL CHIEF SECRETARY TO GOVERNMENT

To

The Commissioner and Director, Printing, Stationery and Stores Purchase Telangana Hyderabad (in duplicate, with a request to publish the Notification in the Extraordinary Gazette of Telangana, and furnish 100 copies to Government)

The Medical, Health & Family Welfare Department

The Metropolitan Commissioner, Hyderabad Metropolitan Development Authority, Hyderabad.

The Commissioner, Greater Hyderabad Municipal Corporation, Hyderabad

The Commissioner and Director of Municipal Administration, Telangana .Hyderabad.

The Director of Town and Country Planning, Telangana, Hyderabad.

The Director General, Fire Serves Department, Hyderabad

The Commissioners of all Municipal Corporations/ Municipalities in the State, through CDMA.

The Vice chairman of all Urban Development Authorities in the State through DMA

All Departments of Secretariat

Copy to:

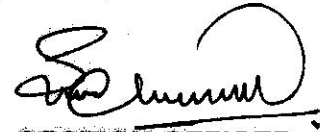
The Principal Secretary to Chief Minister

The OSD to Minister (MA&UD).

The P.S. to Principal Secretary to Government, MA&UD Department.

SF/SC

//FORWARDED :: BY ORDER//


SECTION OFFICER

8/7