



TAMIL NADU FIRE AND RESCUE SERVICES DEPARTMENT

From
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Director General of Police (Railway)/
Director Fire and Rescue Services (FAC),
No.17, Rukmani Lakshmipathi Salai,
Egmore,
Chennai – 600 008.

To
The Member Secretary,
Chennai Metropolitan Development
Authority,
No.1, Gandhi Irwin Road,
Egmore,
Chennai – 600 008.

R.Dis.No.16044/C1/2020

Dated.26.02.2021

PP NOC.No.24/2021

Sir,

Sub : Tamil Nadu Fire and Rescue Services – Directorate – High Rise Building – Issue of Planning Permission NOC requested - Inspection at M/s. Tamil Nadu Housing Board, Old No.249/1, 3, 4, 5, 250/1, 2, 3, 4, 5, 6, 251, 252/2A, T.S.No.2, Block No.4 of Arumbakkam Village, Aminjikarai Taluk, Poonamallee High Road, Chennai - Reg.

Ref : 1) The applicant letter received dated:25.12.2020.
2) The Joint Director, Northern Region, Report Rc.No.256/C/2021, Dated:23.02.2021.

With reference to the letter cited above, the MSB Inspection committee of Northern Region has inspected the site of M/s. Tamil Nadu Housing Board, Old No.249/1, 3, 4, 5, 250/1, 2, 3, 4, 5, 6, 251, 252/2A, T.S.No.2, Block No.4 of Arumbakkam Village, Aminjikarai Taluk, Poonamallee High Road, Chennai for which PP NOC has been requested and the committee has made certain observations as regards Fire and Life Safety, which are reproduced below:-

Observation:-

It is a request for revised planning proposal for the construction of Commercial & Residential Building consisting of 3 Towers. **Tower - 1 (Commercial Building)** consisting of Double Basement + Ground Floor + 19 Floors with the height of 78 meters up to Terrace level. **Tower 2 & 3 (Residential Building)** consists of Combined Basement + Combined Stilt Floor cum Ground Floor + 19 Floors with the equal height of 60.00 meters up

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Fire escape staircase should be pressurized as per the clause 4.4.2.5 of the requirements of National Building Code of India.

For Commercial Building:-

As per clause 4.4.2.4.3.2 of the National Building Code of India part IV Fire and Life safety 2016 – At least 2 staircases should be provided with each block. All the staircases shall have minimum width of 1.50 meters without railing. The minimum width of tread without nosing shall be 300 mm for Business Building and the tread shall be constructed and maintained in a manner to prevent slipping. The maximum height of riser shall be 150 mm for Business Building and the number shall be limited to 12 per flights.

For Residential Building:-

As per clause 4.4.2.4.3.2 of the National Building Code of India part IV Fire and Life safety 2016 – At least 2 staircases should be provided with each block. All The staircases shall have minimum width of 1.25 meters without railing. The minimum width of tread without nosing shall be 250 mm for residential Building and the tread shall be constructed and maintained in a manner to prevent slipping. The maximum height of riser shall be 150 mm for Residential Building and the number shall be limited to 12 per flights.

Every exit, exit access or exit discharge shall be continuously maintained free of all obstructions or impediments to full use in the case of fire or other emergency.

All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.
Exits shall be so arranged that they may be reached without passing through another occupied unit.

As per clause 4.4.2.4.3.4 of the National Building Code of India part IV fire and life safety 2016- All external stairs shall be directly connected to the ground.


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Entrance to the external stairs shall be separate and remote from the internal staircase.

Care shall be taken to ensure that no wall opening or window opens on to or close to an external stairs.

The route to the external stairs shall be free of obstructions at all times.

The external stairs shall be constructed of non-combustible materials and any doorway leading to it shall have the required fire resistance.

No external staircase, used as a fire escape, shall be inclined at an angle greater than 45° from the horizontal.

❖ Fire lifts:

Fire lifts shall be provided with a minimum capacity for 8 passengers and fully automated with emergency switch on ground level. In general, buildings 15m in height or above shall be provided with fire lifts.

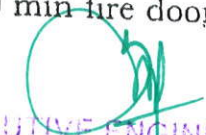
In case of fire, only fireman shall operate the fire lifts. In normal course, it may be used by other persons.

Each fire lift shall be equipped with suitable inter-communications equipment for communicating with the control room on the ground floor of the buildings.

The number and location of fire lifts in a building shall be decided after taking into consideration various factors like building population, floor area, compartmentation, etc.,

12. Firefighting Shaft (Fire Tower):

An enclosed shaft having protected area of 120 min fire resistance rating comprising protected lobby, staircase and fireman's lift, connected directly to exit discharge or through exit passageway with 120 min fire resistant wall at the level of exit discharge to exit discharge. These shall also serve the purpose of exit requirement / strategy from the occupants. The respective floors shall be approachable from Firefighting shaft enable the Fire fighters to access the floor and also enabling the Fire fighters to assist in evacuation through fireman's lift. The firefighting shaft shall be equipped with 120 min fire doors. The


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- b) In multi-level basements, independent air intake and smoke exhaust shafts (masonry or reinforced concrete) for respective basement level and compartments therein shall be planned with its make-up air and exhaust air fans located on the respective level and in the respective compartment. Alternatively, in multi-level basements, common intake masonry (or reinforced cement concrete) shaft may serve respective compartments aligned at all basement levels. Similarly, common smoke exhaust / outlet masonry (or reinforced cement concrete) shafts may also be planned to serve such compartments at all basement levels. All supply air fans on respective levels shall be installed in fire resisting level shall be installed in fire resisting room of 120 min. Exhaust fans at the respective level shall be provided with back draft damper connection to the common smoke exhaust shafts ensuring complete isolation and compartmentation of floor isolation to eliminate spread of fire and smoke to the other compartments / floors.
- c) Due consideration shall be taken for ensuring proper drainage of such shafts to avoid insanitation condition. Inlets and extracts may be terminated at ground level with stall board or pavement lights as before. Stall board and pavements lights should be in positions easily accessible to the fire brigade and clearly marked 'AIR INLET' or 'SMOKE OUTLET' with an indication or area served at or near the opening.
- d) Smoke from any fire in the basement shall not obstruct any exit serving the ground and upper floor of the building.
- e) The smoke exhaust fans in the mechanical ventilation system shall be fire rated, that is 250° C for 120 min.
- f) The smoke ventilation of the basement car parking areas shall be through provision of supply and exhaust air ducts duly installed with its support and connected to supply air and exhaust fans. Alternatively, a system of impulse fans (jet fans)

electric pump of adequate capacity (flow and head) with piping / riser for the water supply to the nozzles.

18. Fire Fighting pump house

As per clause 5.1.2.2 of the National Building Code of India part IV fire and life safety – 2016.

- a) It is preferable to install the pump house at ground level. Pump house shall be situated so as to be directly accessible from the surrounding ground level.
- b) Pump housing shall be installed not lower than the First basement. When installed in the basement, staircase with direct accessibility (or through enclosed passageway with 120 min fire rating) from the ground, shall be provided. Access to the pump room shall not require to negotiate through other occupancies within the basement.
- c) Pump house shall be separated by fire walls all around and doors shall be protected by fire doors (120 min rating).
- d) Pump house shall be well ventilated and due care shall be taken to avoid water stagnation.
- e) No other utility equipment shall be installed inside the fire pump room.
- f) Insertions like flexible couplings, bellows, etc., in the suction and delivery piping shall be suitably planned and installed.
- g) Installation of negative suction arrangement and submersible pumps shall not be allowed.
- h) Pump house shall be sufficiently large to accommodate all pumps and their accessories like PRVs, installation control valves, valves, diesel tank and electrical panel.
- i) Battery of diesel engine operated fire pump shall have separate charger from emergency power supply circuit.
- j) Exhaust pipe of diesel engine shall be insulated as per best engineering practice and taken to a safe location at ground level, considering the back pressure.


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- k) Fire pumps shall be provided with soft starter or variable frequency drive starter.

19. **Refuge area for Commercial Building**

- a) Refuge area shall be provided in buildings of height more than 24 m. Refuge area provided shall be planned to accommodate the occupants of two consecutive floors (this shall consider occupants of the floor where refuge is provided and occupants of the floor above) by considering area of 0.3 m² per person for the calculated number of occupants and shall include additionally to accommodate one wheelchair space of an area of 0.9 m² for every 200 occupants load served by the area of refuge or a minimum of 15 m² whichever is higher shall be provided as under.
- 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.
 - Refuge area (s) shall be provided at / or immediately above 24 m and thereafter at every 15 m or so.
- b) A prominent sign bearing the words 'REFUGE AREA' shall be installed at the entry of the refuge area, having height of letters of minimum 75 mm and also containing information about the location of refuge area on the floor above and below this floor. The same signage shall also be conspicuously located within the refuge area.
- c) Each refuge area shall be ventilated and provided with first aid box, fire extinguishers, public address speaker, fireman talk back and adequate emergency lighting as well as drinking water facility.
- d) Refuge area shall be approachable from the space they serve by an accessible means of egress.
- e) Refuge area shall connect to fire fighting shaft (comprising fireman's lift, lobby and staircase) without having the occupants requiring to return to the building spaces through which travel to the area of refuge occurred.