

**GOVERNMENT OF WEST BENGAL  
OFFICE OF THE DIRECTOR GENERAL  
WEST BENGAL FIRE & EMERGENCY SERVICES  
13-D Mirza Ghalib Street, Kolkata- 700 016**

Memo No : IND/WB/FES/20182019/45858

DATE: 18/06/2019

**From :**  
**The Director**  
**Fire Prevention Wing,**  
**West Bengal Fire & Emergency Services.**

**To :**  
**AMAR NATH GARAI ALOKE KUMAR GARAI RANA GARAI**  
**2/1B/1,BIDHAN NAGAR ROAD,KOLKATA-700067**  
**Manicktala F.S., Ultadanga,**  
**Kolkata - 700067 .**

**Sub :Fire Safety Recommendation for a proposed construction of G + 7 storied building under group Residential at the premises no.- 2/1B/1,BIDHAN NAGAR ROAD,KOLKATA-700067, Ultadanga, Kolkata - 700067**

This is in reference to your Application No. IND/WB/FES/20182019/45858,dated 18/06/2019, regarding the Fire Safety Measure for a proposed construction of G + 7 storied building under group Residential at the premises no.- 2/1B/1,BIDHAN NAGAR ROAD,KOLKATA-700067, Ultadanga, Kolkata - 700067.

The plan submitted by you was scrutinized and marked as found necessary from Fire Safety point of view. In returning one set of plan with recommendation, this is issuing Fire Safety Recommendation in favour of the aforesaid building subject to the compliance of the following fire safety measure.

Recommendation:

1. A)Construction part:

- i)The whole construction of the building shall be carried out as per approved plan and conforming by the relevant building rules of local authority.
- ii)All the compartment walls up to ceiling level having at least four hours fire resisting

capacity.

iii) All construction materials should be of four hrs. fire resisting capacity.

iv) Doors and windows should be of at least two hrs. fire resisting type..

vi) The interior finish decoration of the building shall be made low flame spread materials conforming IS specification.

v) The roads and Side Open Spaces are to be minimum 45 MT withstand capacity.

#### B. Staircases:

1. Both Staircases shall be naturally ventilated.

2. Staircases shall not be obstructed anywhere by any means and negotiating on every floor.

3. FCDs shall be installed as per the approved plan.

#### C. Lift :

1. Collapsible gates shall not be permitted with the lift cars & shall have solid doors.

2. Lift cannot be used as a means of escape during fire situation.

3. Fire lift

Fire lift shall be provided & in case normal power failure, it shall automatically trip over to alternate power supply. The word "fire lift" shall be conspicuously displayed in fluorescent paints on lift landing door at each floor level.

#### D. Service ducts/ shaft :

Service ducts & shaft shall be enclosed by walls of 2 hrs. & door of 1 hr fire rating. All such ducts shall be properly sealed & fire stopped .at all floor level, vent opening at the top of the service ducts shall also to be provided .

#### E. Electricity :

1. The electric distribution cable/ wiring shall be laid in separate duct .The duct shall be sealed at every floor with non combustible materials.

2. Telephone lines, water mains, gas pipes or any other service lines shall not be laid out in the duct for electrical cables /wires.

3. The electrical installation including Transformer, switch gear, main & meter of the premises shall be provided in separate enclosures apart from main building in accordance with IS 1946:1982.

4. Separate circuit for fire fighting, fire lift, stairs case & corridor lighting etc. shall be provided.

#### F. Alternative power backup system :

A stand by diesel generator of suitable capacity shall be installed to supply powers to staircases & corridor lighting , fire lifts ,illuminating escape routes , stand by fire pump, etc. in case of normal power failure .

#### G. Alarm & Detection system :

M.C.P shall be installed connected with hooters near staircases, escape route and at all

strategic locations of all floors.

H. Fire Fighting (Protection) :

i) Fire fighting water:

The building shall be provided with 30,000 liters capacity of underground water reservoir with replenishing arrangement @ 1000 liters per minutes. The underground water reservoir location should be such so that fire service vehicle may get access and draw water from the said reservoir.

ii) Small gears: IS:903-1993:-

Hose box, 15 meter length permoline delivery hose, gunmetal short branch of half inch dia. one set at each pillar hydrants should be installed.

iii) External Hydrant System:- IS-13039:1991-

The whole area of the building is to be protected by adequate no. of pillar type hydrants system or Ring Main Hydrant (at 150 mm internal dia. Pipe line) i.e. one pillar hydrant per 1000 sq. meter of area or as per the vulnerability of the place.

iv) Internal Hydrant/ Wet Riser System IS-3844:1989:-

The building shall be provided with Wet Riser of 150 mm internal diameter pipeline with provision of landing valves at the staircase landings/ half landings at the rate of one such riser for 1000 Sq.mtr. of floor area. The system shall be so designed that kept charged with water all the time under pressure and capable of discharge 2850 ltrs./min. at the ground floor level outlet and minimum 900 ltrs./ min. at the top most furthest outlet. In both cases the running pressure shall not be less than 3.5 kgs./ Sq.mtr.. All other requirement shall conform I.S. 3844-1989.

v) Hose reel system (IS:844-1985):

The building should be equipped with Hose Reel Hose system as per IS code of practice. The internal dia. of the said hose reel shall be 19 mm to 32 mm and the discharge capacity not less than 22.5 LPM. While the length of the hose reel not more than 36.5 meters. The distance of such installation should be in such a way that no part of floor is more than 6 meters distance from a nozzle when fully extended.

vi) Sprinkler Protection IS- 15105:2002: -

The automatic sprinkler system shall be installed covering only car parking area. Alarm gong to be incorporated along with the sprinkler system.

vii) Pumps for fire fighting installation IS-12469:1988:-

- One Main Fire Pumps (for Hydrant ) and one diesel driven pump of capacity 2850 litre/min and one electric pump (Jockey for hydrant and sprinkler) of capacity 180 litre/min shall be installed and arranged in such a manner so that it will start automatically due to fall in pressure.
- All pumps shall be designed so as to supply water 900 LPM at a pressure 3.5 kg/cm<sup>2</sup> at the furthest point.
- Only Diesel driven arrangement for stand by fire pump shall be ensured.

#### viii)First Aid Fire Fighting System:-

First Aid Fire fighting arrangement in the style of placing suitable type of portable fire extinguisher, Fire buckets etc. in all floors and vulnerable locations (e.g. pump house etc.) of the premises shall be made in accordance with IS 2190-1992.

#### I. General Recommendations :

- 1.Telephone nos. of all emergency services, fire notice / fire order shall be pasted at all strategic locations on each floor of the building.
- 2.Floor number & directional sign towards the routes of escape during emergency shall be provided at all conspicuous places on each floor.
- 3.All Occupants & security staff shall be conversant with the installed fire fighting system & equipments & to operate them efficiently in case of any fire emergency.
- 4.Mock Fire & Evacuation drill shall be conducted at least twice in a year with the participation of all concerned.
- 5.Arrangement shall be made for checking, testing & proper maintenance of all inbuilt fire & life safety system & equipments at recommended periodical intervals by competent agency.
- 6.Good housekeeping to eliminate fire hazards both inside & outside the building shall be strictly maintained. Under no circumstances the corridors, routes of escape, lobbies of staircases and landings be blocked by waste / refused materials in order to ensure easy & smooth evacuation of the occupants as well as free access / movement of fire fighting team during fire emergency.
- 7.Lightening arrestor shall be installed on the roof top to protect the building from thunder crash.

This shall be treated as Fire Safety Recommendation. On compliance of all the above Fire and Life safety recommendations, the Director General, West Bengal Fire & Emergency Services shall be approached for necessary inspection and testing of the installation, Fire safety Certificate in favour of the occupancy shall be issued on being satisfied with the tests and performances of safety aspects of installation of the building.

N.B.:Any deviation and changes the nature of use of the building in respect of the approved

plan drawing, without obtaining prior permission from this office, this Fire safety recommendation will be treated as cancelled.

**Director**  
**West Bengal Fire & Emergency Services**