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/20172018/2145 DATE: 16/05/2018

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

To :
Ashok Manaktala
Plot No. AA-IID/10,Premises No. IID-10,Kolkata
Bidhan Nagar F.S., New Town,
North 24 Parganas - 700156 .

Sub :Revised Fire safety Recommendation in respect of proposed B+G+XI storied under group Business building at the premises no. Plot No. AA-IID/10,Premises No. IID-10, Kolkata- 700156.

This is in reference to your Application No. IND/WB/FES/20172018/2145,dated 16/05/2018, regarding the Fire Safety Measureendation in respect of proposed B+G+XI storied under group Business building at the premises no. Plot No. AA-IID/10,Premises No. IID-10, Kolkata- 700156..

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.
v)Provision of ventilation of the central core duct shall be provided. .
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.Primary Requirements:

1.Selling of merchandise of highly hazardous nature shall never be allowed within the premises.
2.Mercantile operation shall be so arranged and constructed as to maintain free and unobstructed ways of travel at all times to permit prompt escape from any point of danger in case Fire or other emergencies.
3.Early discovery of any outbreak of Fire, speedy evacuation of visitors/ occupants and smoke venting with extreme rapidity shall be ensured.
D. Staircases:
1.The building having floor area of 500 sq.m. or more shall have 2 nos. of stairs cases (preferably enclosed type) up to the terrace level. 1 stair should be diagonally opposite end as remote as possible but must not exceed a total travel distance of 30 m.
2.The stairs cases shall be ventilated to the atmosphere at each landing & a vent at the top opening shall be of 0.5 sq.m in the external wall & at the top.
3.If the staircases cannot be ventilated because of location & other reasons, a positive pressure of 50 pa. Shall be maintained inside. The mechanism for pressurising of the staircases shall be operated either manually or automatically with fire alarm in accordance with I.S. 941:1985.

E. Lifts (if any):
1.Collapsible gates shall not be permitted with the lift cars & shall have solid doors.
2.If the lift bank or banks are provided in the core of the building positive pressure between 25 & 30 pa. Shall be maintained either mechanically or automatically with fire alarm.
3.Lift & escalator cannot be used as a means of escape during fire situation.
4.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.

2. F. Basement:
1.Each basement shall be separately ventilated. A system of air inlet & smoke outlet shall be provided at the basement ceiling level @ cross sectional area of 2.5% of the floor area round

the perimeter of the basement.
2.Mechanical extractor for smoke venting from lower basement level shall be provided an will operate on actuation of heat /smoke sensitive detector & it shall be so designed that it can permit 30 air change /hr. in case of fire or other distress .
3.Basement shall be protected by automatic sprinkler system & basement shall normally be used as a car parking lot.
G. Service ducts/ shaft :
Service ducts & shaft shall be enclosed by walls of 2 hrs. & door 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 .

H. Refuge area :
The refuge area shall be built on the periphery of the floor or preferably on a cantilever projection & open to the air protected by FCD and emergency lighting arrangement. Sufficient space shall be available underneath the Refuge area.

I. 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 & blowers for pressurization system shall be provided.

J. 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, pressurization fans /blowers ,smoke extraction system & damper system in case of normal power failure .
K. Central air conditioning system.(if any) :

1.A.H.U. & air duct shall be separated for each floor.
2.Escape routes like staircases, common corridors, lift lobbies etc. shall not be used as return air passages.
3.The path way of ducts to floor & openings around the ducts shall be sealed properly with fire resistant materials.
4.Fire dampers & air handling unit will automatically be switched off when the auto fire alarm

systems operates.

L. Alarm & Detection system :

1.Analogue addressable intelligent automatic detectors (multi grade type) with hotter along with response indicator above false ceiling in accordance with is 2189 or NFPA 72 shall be installed throughout the building.

2.M.C.P shall also be installed near staircases, escape route and at all strategic locations.

3. M. Fire Fighting (Protection) :

i)Fire fighting water:

The building shall be provided with 2,00,000 liters capacity of underground water reservoir and 25,000 ltrs. Overhead 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 2280 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 all floors including basements. Alarm gang to be incorporated along with the sprinkler system.

vii)Pumps for fire fighting installation IS-12469:1988:-
•Two electric (one for hydrant and one for sprinkler)and one diesel driven pump of capacity 2850 litre/min and Two electric pump (Jockey separately for hdrant and sprinkler)of capacity 180 litre/min should be installed and arranged in such a manner so that it will start automatically due to fall in pressure.
•All the pump shall be designed so as to supply water 900 LPM at a pressure 3.5 kg/cm2 at the furthest point.
•Only Diesel driven arrangement for stand by fire pump shall be ensured.

O)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.

N. 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.A fire control room on entrance of the ground floor with communication system (P.A system & talk back system) to all floors, details of floor plans, building management system shall be made. The control room shall have facilities to detect the fire on any floor through indicator board continuous .the control room shall be monitored round the clock basis.
4.There shall be a properly trained fire fighting crew under the supervision of a qualified & experienced fire officer. All crew members & security staff shall be conversant with the installed fire fighting system & equipments & to operate them efficiently in case of any fire emergency.
5.Mock Fire & Evacuation drill shall be conducted at least twice in a year with the participation of all concerned.
6.Arrangement shall be made for checking, testing & proper maintenance of all inbuilt fire &

life safety system & equipments at recommended periodical intervals by competent agency.
7.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.
8.Lightning 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

Signature Not Verified
Digitally signed by ABHIJIT PANDEY
Date: 2018.05.16 15:28:25 IST