

**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/20182019/31538

DATE: 14/12/2018

From :

The Director

Fire Prevention Wing,

West Bengal Fire & Emergency Services.

To :

BHAIRAMAL GOPIRAM PROPERTIES LLP

13, Canal Street, Ward No – 55, Borough VI, Kolkata – 700014

Manicktala F.S., Entally,

Kolkata - 700014 .

Sub :Fire Safety Recommendation for proposed construction of 01 no. B+G+XI storied (termed as Block – 2) under group Residential Building and 01 no. III (03) storied (termed as Block – 1) under group Business Building, at the premises no. – 13, Canal Street, Ward No. – 55, Borough – VI under KMC, Kolkata – 700 014.

This is in reference to your Application No. IND/WB/FES/20182019/31538, dated 14/12/2018, regarding the Fire Safety Measure for proposed construction of 01 no. B+G+XI storied (termed as Block – 2) under group Residential Building and 01 no. III (03) storied (termed as Block – 1) under group Business Building, at the premises no. – 13, Canal Street, Ward No. – 55, Borough – VI under KMC, Kolkata – 700 014..

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. Construction:

1. The whole construction of the proposed Residential Building shall be carried out as per

approved plan drawings conforming the relevant building rules of local Municipal Body / competent authority.

2. Entire Occupancy in each floor level shall be suitably compartmented as specified in N. B. C. -Part - IV, 2016.

3. The interior finish decoration of the building shall be made low flame spread materials conforming I.S. specifications.

4. Provision of ventilation for the building shall be provided as specified in N. B. C. -Part - IV, 2016.

5. Arrangements shall have to be made for sealing of all the vertical & horizontal ducts by the materials of adequate Fire resisting capacity at each floor level.

2. Open Space & Approach:

1. The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and manoeuvrability of Fire appliance including Aerial Ladders with turning facility.

2. The approach roads, internal road / driveway and dedicated clear open space for Fire Service Aerial Ladder of areas 6 M X 15 M as shown shall be sufficiently strong to withstand the load of Fire Engine weighing up to 45 M.T.

3. The width and height of the access gate into the premises shall not be less than 5.4 M & 5.5 M respecting the abutting road (as shown / marked in plan drawing).

3. Refuge Area:

1. The Refuge area on calculating the area at the rate of 0.3 m²/ person on the basis of floors area shall be provided, as specified in the NBC - Part - IV, 2016, on the external wall for Residential Block as shown in plan drawings at the level of 24.7 M in each wing and area not less than 19.88 Sq. M. and 23.33 Sq. M.

2. Access to Fire Refuge Area from the stair landing for the 23.33 Sq. M and half landing through 1.25 M wide stair for 19.88 Sq. M.

3. The refuge area shall be of Fire resisting construction and protected with self-closing F.C.D. at the entrance from the corridor or the staircase landings.

4. The position of refuge Areas shall be such that they are negotiable by the Fire service Aerial Ladder from the ground floor.

4. STAIRCASE:

1. The Fire staircase of the building shall be enclosed type. Entire construction shall be made of bricks / R.C.C. type having Fire resisting capacity not less than 2 hours.

2. The staircase of the building shall have permanent vents at the top and openable sashes at each floor level in the external wall of the building.

3. The width of the staircases shall be made as marked in the plan. Corridors and the exit doors shall conforming the relevant building rules with up-to-date amendments.

4. All the staircase shall be extended up to terrace of the building and shall be negotiable to each other without entering into any occupied area.

5. Fire and smoke doors at the entrances of all the Staircase enclosures as marked in the plan at each floor level shall be provided. The F.C.D. shall be of at least 01 (one) hour Fire resisting wire glass window fitted with self-closing type openable in the direction of escape.

5. Multipurpose Hall, Gym & All Assembly Areas:

The doors/aisles/seating arrangement/corridors /Screen /Signage / Fire & Life Safety arrangements and Fire Protection measures shall be made as per provision of N. B. C. - Part-IV, 2016, relevant IS specification as well as the Indian Cinematography Act with up to date amendment.

6. Lift:

1. The walls of the lift enclosure of the building shall be at least two hours FIRE resisting type respectively marked in the plan with the event at top of area not less than 0.2m².

2. One of the lift in each wing of Block - 2 shall be designed for Fire Lift. The word "FIRE LIFT" shall conspicuously be written at ground floor.

3. The Electric power shall be from separate supply mains in the building and cables run with in the lift shafts, light and fans in the lift cars shall be operated from 24 volts supply on emergency. In case of failure of normal power supply, lift shall automatically trip over alternate power supply.

4. All other requirements shall conform the relevant IS specification including the communication facility in the lift cars shall be connected with the fire control room of the building.

7. Basement:

1. The Basement shall be adequately ventilated with aggregate cross sectional area of not

less than 2.5% of the area spread evenly round the perimeter of the basement shall be provided in the form of grills or shall have to be mechanically ventilated as per provision of NBC, Part - IV, 2016.

2. The exit from the basement shall be from open Air and from any points the travel distance shall not exceed the provision of NBC Part - IV, 2016, to reach any exit. Continuation of staircase from the basement to upper floor will not be allowed, i.e. all staircases shall be segregated on the ground floor level.

3. The basements shall be protected with Automatic Sprinkler System conforming to I.S. 3844-1989.

8. Fire Fighting Water:

1. Underground water reservoirs having total water capacity of not less than 1,00,000 ltr. As shown.

2. Overhead reservoirs of not less than 20,000 ltr. Capacity as shown / marked in the plan drawing exclusively for firefighting purpose shall be kept full at all time.

3. The water reservoirs shall have overflow arrangement with the domestic water reservoirs as well as to avoid stagnancy of water.

4. Provision of necessary manhole shall be made on the top of these reservoirs as per specification.

5. Provision of replenishment at the rate of at least 1000 ltr./min. from two separate sources of water supply shall be made.

6. The deep tube wells for the replenishment of the reservoirs shall be incorporated with auto starting facility with actuation of auto detection and suppression arrangement of the premises and shall also be connected with dual power supply units.

7. Provision of placing Fire Appliances near the underground water reservoir to be made to draw water in case of emergency.

9. Water Layout System:

1 Each Blocks shall be provided with separate Wet Risers system of 100 mm. internal diameter Pipe Line with provision of landing valves at the Staircase landings / half landings at the rate of one such riser for 1000 Sq. M. of floor area. The system shall be so designed that shall be kept charged with Water all the time under pressure and capable to discharge 2280 ltr./min. at the ground floor level outlet and minimum 900 ltr./min. at the top most and farthest outlet. In both cases the running pressure shall not be less than 3.5Kgs/Sq.cm. All other requirements shall conforming I.S. 3844 – 1989.

2 Provision for Hose Reel units on swiveling drum in conjunction with Wet Riser shall be made near each lading valves.

3Yard Hydrant / Ring Main Hydrant with provision of adequate numbers Hydrant shall be installed surrounding the building and AMLCP in accordance with relevant I.S. specifications.

4Provision of suitable Fire Service Inlet shall be made as per relevant I.S specification.

10. Sprinkler Installation:

The automatic Sprinkler installation shall be provided at all floor areas of entire Block -1 building and Basement, MLCP & assembly areas on 1st floor of the Block - 2, as per provision of NBC Part – IV, 2016 and relevant I.S. 9972 & alarm gong to be incorporated along with the sprinkler system.

11. Fire Pump:

Provision of the Fire Pumps shall have to be made to supply water at the rate-designed pressure and discharge into the Water based system which shall be installed in the building. One such pump of diesel driven type shall always be kept on stand-by.

Provision of separate Jockey Pump shall also have to be made to keep the Water based system under pressurized condition at all the time. All the pumps shall be incorporated with both manual and auto starting facilities. The suction of pumps shall preferably of positive type or in case of negative suction the system shall be wet riser-cum-down comer with suitable arrangement with overhead tank.

Arrangements of pumps shall be made as per provision of N. B. C. Part –IV, 2016.

The Number and type of fire pumps shall be as per provision of N. B. C. Part – IV, 2016.

12. AUTOMATED MULTI LAYER MECHANIZED CAR PARKING SYSTEM:

1. Structural design: - The M.L.C.P. shall be constructed of structural steel construction.

2.Vertical Deck Separation: - For M.L.C.P. having Multi Car parking level, vertical Fire separation between the upper and lower decks by using a non –perforated and non-combustible materials (Structural Steel plate) shall be provided. This is to minimize direct impingement of flame to the car in upper deck and also prevent dripping of any possible leaking fuel to the lower deck. Proper drainage system shall have to be provided for accidental leaking of oil from the car and sand bed shall be provided at the ground level.

3.Water based suppression system shall be provided in accordance with the provision of NBC Part IV 2016 and relevant IS specification.

4.Fire Engine Access way; - Access way shall be provided for the Fire Engine to gain access to the car park entrance and Exit.

5.Natural Ventilation: - Each car parking deck shall be provided with at least 50% external ventilation openings of the perimeter wall areas and uniformly distributed.

6.Sprinkler & Detection System: - Open Modular Type Sprinkler along with detector shall be provided in all M.L.C.P. areas as per relevant I.S. Specification.

7. Cross zone wise Sprinkler system shall have to be implemented.

8.Operating System: - Both Mechanical and Manual type operating system shall have to be

provided.

13. Electrical Installation & Distribution:

1The electrical installation including transformers, Switch Gears, L. T., H. T. Rooms, panel rooms, Main & Meters etc. and the distribution system of the premises shall be made satisfying the code of practice for Fire safety in general building as laid down in I.S. specification 1946 – 1982.

2The vertical & horizontal ducts shall be sealed at all floor level by approved fire resisting materials.

3The electrical installation shall be adequately protected with automatic fire detection and suppression system as per provision of N. B. C. Part– IV, 2016 and relevant I. S. specification.

4Alternative Power Supply:

Arrangements shall have to be made to supply power with the help of a generator to operate at least the Fire Pump, Pump for deep Tube-well, Fire Detection and Alarm System, signage etc. and also for illuminating the Staircase, corridors etc. and other places of assembly of the building in case of normal power failure.

14. Detection, Alarm and Suppression System:

1.Manually operated Electrical Fire Alarm system with at least two numbers of break glass type call boxes fitted with Hooters along with public address system at each floor connecting with audio-visual panel board shall be made in Control Room. The Control Room shall be located at the entrance of Ground Floor of the building, other requirements of the system shall be made conforming I.S. 2189 – 1988.

2.Auto fire detection system with the help of heat / smoke detector (as per suitability) shall be installed in all places of below and preferably above false ceiling of all floor areas of entire Block -1 building and Basement, MLCP & assembly areas on 1st floor of the Block - 2. The system shall also be made in places of rooms where valuable articles have been kept. The other requirements of the system shall be made in accordance with I.S. 2189-1988.

3.Hooter will be sounded in such a manner so that an operation of a Detector or Manual Call Point Hooters will sounded on the same floor and immediate alternate floor.

4.Public Address System:

Public address system linked between all floors and Control Room shall have to be established.

15. Air Conditioning System (If any):

- 1.The A.H.U. shall be separated for each floor with the system Air Ducts for individual floors.
- 2.Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the Air Conditioning system.
- 3.The system of auto shut down of A.H.U. shall be incorporated with the auto detection and alarm system.
- 4.The air handling units room shall not be used for storage of any combustible materials.

16. First Aid Fire Fighting System:

First Aid firefighting arrangement in the style of placing suitable type of portable Fire Extinguishers, Fire Buckets etc. in all floors and vulnerable locations of the premises shall be made in accordance with I.S. 2190 – 1992.

17. General Recommendations:

1Fire License shall have to be obtained for proposed storing and processing with L.P.G. and other highly combustible articles (if any).

2Necessary sanction and approval for such construction and occupancy of this project must be obtained from competent authorities.

3Processing of foods by using naked flame shall not be permitted in any Assembly areas.

4Suitable numbers of Disposable type B. A. Musk to be kept always for emergency fire situation.

5Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.

6Floor numbers and directional sign of escape route shall be displayed prominently.

7The occupants and security staff shall be conversant with installed Fire Fighting equipment's of the building and to operate in the event of Fire and Testing.

8Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire Safety installation and equipment's installed in the building to keep them in perfectly good working conditions at all times.

9A crew of trained Fireman under an experienced officer shall be maintained round the clock for safety of the building.

10 Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.

11 Each year a certificate is to be obtained from the Director General, West Bengal Fire & Emergency Services certifying about the satisfactory services, performance of all the Life and Fire Safety arrangements and installation of the building.

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 in the construction and 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 shall be treated as cancelled.

Director
West Bengal Fire & Emergency Services

Signature Not Verified
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PANDEY
Date: 2018.12.14 13:42:47 IST