



Government Of West Bengal  
Office Of The Director General  
West Bengal Fire & Emergency Services  
13D, Mirza Ghalib Street, Kolkata - 16

Memo no. FSR/0125186211300378

Date: 16-12-2021

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

To: Unique Shopping Mall  
RS Dag No 2476 LR Dag No 2708 LRKH No 5234 Mouza Bikhakhola, JL No. 18, PS Panchla Dist Howrah

Sub: Fire Safety Recommendation for Proposed B+G+V storied under group Mercantile Building, at the premises no. LR Dag No. 2708, LR Khatian No. 5234, Mouza – Bikhakhola, JL No. 18, PS – Panchla, Dist. Howrah.

This is in reference to your application no. 0125186211300378 dated 02-09-2021 regarding the Fire Safety Recommendation for Proposed B+G+V storied under group Mercantile Building, at the premises no. LR Dag No. 2708, LR Khatian No. 5234, Mouza – Bikhakhola, JL No. 18, PS – Panchla, Dist. Howrah.

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 favor of the aforesaid building subject to the compliance of the following fire safety measure.

**Recommendation:**

**CONSTRUCTION**

- 1 The whole construction of the proposed building shall be carried out as per approved plan drawings conforming the relevant building rules of local Municipal Body
- 2 The floor area exceeds 750 m<sup>2</sup> shall be suitably compartmented by separation walls up to ceiling level having at least two hours Fire resisting capacity
- 3 The interior finish decoration of the building shall be made low flame spread materials conforming I.S. specifications.
- 4 Provision of ventilation at the crown of the central core-duct of the building shall be provided.
- 5 Arrangements shall have to be made for sealing all the vertical & horizontal ducts by the materials of adequate Fire resisting capacity

**OPEN SPACE & APPROACH**

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1. The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and manoeuvrability of Fire appliance.

2. The approach roads, internal road / driveway shall be sufficiently strong to withstand the load of Fire Engine weighing up to 20 M.T.

3. The width and height of the access gates into the premises shall not be less than 5M & 5.5 M respecting the abutting road.

4. Internal passage way shall be maintained according to the approved plan all the Passage way should be kept clear for free access.

#### STAIRCASE:

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

2. The Staircases of the building shall have permanent vents at the top and openable sashes at the 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 conform the relevant building rules, with up-to-date amendments.

4. All the staircases shall be extended upto 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 staircases enclosures as marked in the plan at each floor level shall be provided. The F.C.D. shall be of at least two hours Fire resisting wire glass window fitted with self-closing type, openable in the direction of escape.

6. Considering the staircases are only means of evacuation, emergency lighting arrangement directional, exit, sign etc. shall be made conforming the relevant I.S. Code in this regards.

#### Lift :

1. The walls of the lift enclosure of the buildings shall be at least two hours FIRE resisting type and the lift lobbies and shafts shall be pressurized as per existing norms and provision of NBC Part IV, 2016.

2. Collapsible gate shall not be permitted.

3. The word "FIRE LIFT" shall conspicuously written at ground floor.

4. In case of failure of normal electric supply, it shall automatically trip to alternate supply and also shall have manually operated change over facility. The lift shall be so wired that in case of power failure, it comes down at the ground level stands still with door open.

5. Emergency and Alternate arrangements (in case of failure of pressurization system) shall be provided for extraction of smoke in all the lift shaft & Lobbies by incorporation smoke venting system designed to permit 30 Air changes per hour in case of Fire and shall be of such design as to operate on actuation of Sprinkler or Fire Alarm. In case of failure of normal electric supply, it shall automatically trip to alternate supply.

6. All other requirements shall conform relevant I.S. specification including the communication facility in the lift cars which shall be connected with the Fire Control Room of the building.

#### BASEMENT:

1. Mechanical smoke venting arrangements shall be provided to the basements conforming the I.S. Specification.



2. The exit from the basement shall be from open Air and from any points the travel distance shall not exceeds 15.5 M to reach any exit.
3. The entire basement shall be protected with Automatic Sprinkler System with Hydrants and Hose Reel Hoses conforming to I.S. 3844-1989.
4. Mechanical extractors shall have an alternative source of supply.
5. Mechanical extractor shall have an internal locking arrangement so that extracting shall continue to operate and supply fans shall stop automatically with the actuation of Fire Detectors.

#### FIRE FIGHTING WATER:

1. Underground water reservoir having water capacity of 1,12,000 ltr. and overhead reservoir of 22,080 ltr. as marked in the plan, exclusively for Fire Fighting purpose with replenishing arrangements @ 1000 ltrs. /min. preferably from two different sources of water supply shall be provided. The water reservoir shall have overflow arrangement with the domestic water reservoir as well as to avoid stagnancy of water. The water reservoir shall be kept full at all time.
2. 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.
3. Provision of placing Fire Appliances on the underground water reservoir to be made to draw water in case of emergency.

#### WATER LAYOUT SYSTEM:

1. The building shall be provided with Wet Riser 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 ltrs/min. at the ground floor level outlet and minimum 900 ltrs/min. at the top most and furthest outlet. In both cases the running pressure shall not be less than 3.5 Kgs/Sq.cm. All other requirements shall conforming I.S. 3844 – 1989.
2. Provision for Hose Reel units on swivelling drum in conjunction with Wet Riser shall be made near each landing valves.
3. Yard Hydrant / Ring Main Hydrant with provision of adequate numbers Pillar type Hydrant shall be installed surrounding the buildings in accordance with relevant I.S. specifications.
4. Provision of three way collecting head for uses of Fire Services must be provided at the entrance of the building.

#### FIRE PUMP:

1. Provision of the Fire Pump 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 respective pump room.
2. One such pump shall always be kept on stand-by preferably be of diesel driven type.
3. Provision of separate pump for sprinkler system to be made to keep the Water based system under pressurized condition at all the time and shall be installed.
4. Provision of 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 terrace pump with overhead tank.

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

#### SPRINKLER INSTALLATION:

The automatic Sprinkler installation shall be provided in the Basement and in all floor areas of the building, as per I.S. 9972 and alarm gong to be incorporated along with the sprinkler system.

#### ELECTRICAL INSTALLATION & DISTRIBUTION:

1. The 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.

2. Electrical distribution system of the building shall be made in the form of concealed wiring or in heavy gauge M.S. conduit continuously bonded to earth. Cables shall be I.S. marked and be of F.R.L.S. categories.

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

4. The 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.

5. Alternative 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, pressurization, ventilation, signage etc. and also for illuminating the Staircases, corridors etc. and other places of assembly of the building in case of normal power failure.

#### INTELLIGENCE ANALOGUE SYSTEM:

1. Auto Fire Alarm System with analogue addressable smoke / heat detectors as per suitability shall be installed in all floor area and including basement of the building.

2. Addressable analogue manual call boxes incorporating with sounders shall be installed in all floors area including basement of the building.

3. Fire alarm panel shall be installed and all shall also be connected with main panel at the Fire Control Room of the premises having direct dialling facility to the local fire service unit.

4. Both way public address systems linked between all floors and Control Room. Shall have to be established.

5. All the installations shall also satisfy the I.S. specifications 2189 (as amended) and the code of practice as laid down in the N.B.C. Part-IV, 2016.

6. C. C. Camera & Public Address System :-

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

Fire Control Room:

i. A well designed Fire Control Room with C.C.T.V. and Fire Control Panel and monitoring 24X7.

Preparation of Emergency Evacuation:

i. There is need to have a clear policy for emergency evacuation plan.

#### 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.
5. Escape route like staircase, common corridors, lift lobby etc. shall not be used as return air passage.
6. Wherever the ducts pass through Fire wall of floors, the opening a rounding the ducts shall be sealed with Fire resisting materials such as asbestos rope vermiculite concrete etc.
7. The materials used for Insulating the duct system (inside or outside) shall be of non- combustible materials glass wool shall not be wrapped or secured by any materials of combustible nature.

#### FIRST AID FIRE FIGHTING SYSTEM:

First Aid Fire fighting 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.

#### GENERAL RECOMMENDATIONS:

1. Fire License shall have to be obtained for proposed storing and processing with L.P.G. and other highly combustible articles (if any).
2. Necessary sanction and approval for such construction and occupancy of this project must be obtained from competent authorities.
3. Lightning arrestor shall have to be installed as per existing norms and relevant IS specification.
4. Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.
5. Floor numbers and directional sign of escape route shall be displayed prominently.
6. Smoke Venting arrangement for the entire building including basement shall be provided, as per relevant IS specification & provision of NBC Part 4, 2016.
7. The employees and security staff shall be conversant with installed Fire Fighting equipments of the building and to operate in the event of Fire and Testing.
8. The Department of Fire & Emergency Services, Government of West Bengal, shall not take any responsibility in respect of any legal dispute if pending or arises about the title of land / property.
9. This Fire Safety Recommendation cannot be treated in any case of regularizations of any unauthorized construction.
10. The management of the organization / building, as the case may be, shall maintain the fire prevention and safety measures in good repair and in efficient condition at all the times, which are installed in the building for use at the time of fire or other emergencies.
11. A crew of trained Fireman under an experienced officer shall be maintained round the clock for safety of the building.
12. Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.
13. Accordingly, a certificate is to be obtained from the Director General, West Bengal Fire & Emergency Services certifying about the satisfactory services, performance of all the Fire and Life 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 fire & life safety aspects of the buildings.

N.B. Any deviation and changes the nature of use of the building in respect of approved plan drawing, without obtaining prior permission from this office, this Fire Safety Recommendation will be treated as cancelled.



Signature valid


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Director  
West Bengal Fire & Emergency Services

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