



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

Memo no.:FSR/012518E208706220

Date: 10-12-2020

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

To: ASHOK SARAF  
Premises No.2/5, Sarat Bose Road, Kolkata700020

Sub: Fire Safety Recommendation for a proposed construction of G+32 storied Building under Group Residential Building at the premises no. - 7, Convent Road, KMC Ward No-55, Borough-VI, P.S- Entally, Kolkata-700014

This is in reference to your application no. 012518E208706220 dated 26-09-2020 regarding the Fire Safety Recommendation for a proposed construction of G+32 storied Building under Group Residential Building at the premises no. - 7, Convent Road, KMC Ward No-55, Borough-VI, P.S- Entally, Kolkata-700014

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:**

**A.CONSTRUCTION:**

- 1.The whole construction of the existing building shall be carried out as per approved plan drawings conforming the relevant building rules of local Municipality Body.
- 2.The floor area exceeds 3000 m<sup>2</sup> shall be suitably compartmented by separation walls up to ceiling level having 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.Arrangement shall have to be made for sealing all the vertical and horizontal ducts by the materials of adequate fire resisting capacity

**B.OPEN SPACE AND APPROACH:**

- 1.The open spaces surrounding the building shall conform the relevant building rules as well as permit the accessibility and manoeuvrability of Fire Appliances with turning facility.
- 2.The approach roads shall be sufficiently strong to withstand the load of Fire Engine weighting 45M.T
- 3.The width and height of the access gate into the premises shall not be less than 4.5 mts. and 5.0 mts. respecting the

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abutting road.

4. Drive way should be free from any type of obstruction. No parking will be allowed on the drive way.

5. All the Passage way should be kept clear for free access.

**C. STAIRCASE:**

1. The 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 4 hours.

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

3. The width of the staircase shall be made as marked in the plan. Corridors and the exit doors shall conform the relevant Building Rules with up to date amendment.

4. All staircase shall be extended up to terrace of the building and shall be negotiated to each floor.

5. The internal staircase of the hospital building shall be pressurised.

6. 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 one hour Fire Resisting wire glass window fitted with self-closing type openable in the direction of escape.

**D. LIFT:**

1. The walls of the lift enclosure shall be at least two hours Fire Resisting type.

2. Collapsible gate shall not be permitted.

3. The lift shall be designed for Fire Lift as per guide line of N.B.C. part-IV. The word "FIRE LIFT" shall conspicuously written at ground floor.

4. Lift and Lift Lobby shall have to be pressurized as per guide line of N.B.C. part-IV.

**E. REFUGE AREA:**

1. The Refuge area is not less than 15 sqm or the Refuge area on calculating the area at the rate of 0.3 m<sup>2</sup>/ person on the basis of floors area whichever is higher shall be provided on the external wall as cantilever projection or any other suitable means at above 24m. levels of the building.

2. The refuge areas shall be of Fire Resisting construction and protected with self-closing F.C.D. at the entrance from the corridors at staircase lobbies.

3. The position of refuge areas shall be such so that they are negotiable by the Fire Service Ladder from the ground level.

**F. AUDITORIUM, CINEMA AND VIDEO HALL & HALL:**

1. The doors/aisles/gangways/cross gangways/seating arrangements/corridors in hall etc. shall be made as per good practices of National Building Code Part-IV, Fire Protection as well as conforming norms of Cinematography Act with up to date amendment.

2. N.O.C. in connection to the Cinema, Video, Restaurant etc. shall be obtained from appropriate Authority.

3. The safety arrangement for the projection rooms shall be complied with as specified in the Cinematography Act with up to date amendment.

**G. EXIT:**

1. The auditorium shall have exits sufficient to provide for the total capacity thereof as determined in accordance with 8.

2. Clean aisle not less than 1.5 M in width shall be formed at right angles to the line of seating in such number and manner that no seat shall be more than seven seats away from the aisle. Row of seats opening on to an aisles at one and only shall have not more than seven seats.

3. The fascia of boxes, balconies and galleries shall have substantial railings not less than 65 cm. high above the floor. The railing at the end of aisles extending to the fascia shall be not less than 75 cm. high for the width of the aisle or 90 cm. high

at the foot of the steps

4. Cross aisles except where the back of seats on the front of the aisles project 60 cm. or more above the floor of the side, shall be provided with railing not less than 90 cm. high.

5. No display of exhibit shall be installed or operated as to interfere in any way with access to any required exits or with any required exit sign.

All displays of exhibits of combustible material or construction and all booths and temporary construction in connection with these shall be so limited in combustibility or protected as to avoid any undue hazard of fire which might endanger occupants before they have opportunity to use the available exits as determined by the authority.

6. All exits shall be either lead to final exits or must be a point of entry to protected route.

7. At least half of the exits from an auditorium should be removed from any stage or platform.

#### H. SEATING ARRANGEMENTS AND GANGWAYS:

1. All seats in balconies and galleries shall be securely fastened to the floor except that in nailed in enclosures, boxes with level floors.

#### I. FIRE FIGHTING WATER:

Underground water reservoir having water capacity of 2,00,000 ltrs. and overhead water reservoir having capacity of 10000 ltrs exclusively for fire fighting purpose with replenishing arrangements @ 1000 ltrs/min. preferably from two different sources of water supply shall be provided. The water reservoirs 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.

#### J. HYDRANT SYSTEM:

1. The building shall be provided with Wet Riser of 200 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 sqm. 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 2850 ltrs /min. at the ground level outlet and minimum 900 ltrs/min. at the top most 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 in conjunction with Wet Riser shall be made at each floor level and conforming the relevant I.S. Specifications.

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

#### K. SPRINKLER INSTALLATION:

The automatic sprinkler installation shall be provided in basement and in all floor areas of the building as per I.S. 9972. Alarm Gong to be incorporated along with the sprinkler system and test line shall be provided.

All other requirements shall be made in accordance with NBC-2016, Part-IV

#### L. FIRE PUMP:

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

2. A Separate Fire Pump shall preferably be made for the total Sprinkler Installation of the buildings. Provision of the 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.

3. One set pumps shall be provided for each 100 hydrants or part thereof, with a maximum of two sets. In case of more than one pump set installation, both pump sets shall be inter connected at their delivery headers.

4. Multi stage multi outlet pumps may be used

5. All other requirements shall be made in accordance with NBC-2016, Part-IV

#### M. ELECTRICAL INSTALLATION AND DISTRIBUTION:

1. The electrical installation including Transformers, Switch Gear, 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. The vertical and horizontal electrical ducts shall be sealed at each floor level by fire resisting materials.

3. The electrical installation shall be adequately protected with CO<sub>2</sub>/D.C.P. Fire Extinguishers conforming I.S. specification.

4. Arrangement for alternative power supply shall have to be made to supply power with the help of a generator to operate at least the Fire Pump, Deep Tube-Well Pump, Fire Alarm System etc. and also for illuminating the Staircase, Corridors, Lobbies etc. and other places of assembly of the building in case of normal power failure.

#### N. DETECTION AND ALARM SYSTEM:

1. Auto Fire Detection System with the help of Heat and Smoke Detectors shall be installed in all the floors, all places of below and preferably above false ceiling of the buildings. The system shall also be made in place of rooms where valuable articles have been kept. The other requirements of the system shall be made in accordance with I.S. 2183-1988.

2. Auto Fire Alarm System with Analogue Addressable Smoke/Heat Detectors as per suitability shall be installed in each floor.

3. Addressable analogue manual call boxes incorporating with sounders shall be installed in all floors area of the building in such a manner that maximum travel distance shall not be more than 22.5 mtrs. in order to reach any of the call point.

4. Micro Processor based 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 dialing facility to the local Fire services unit.

5. Both way Public Address Systems shall be made available in all floors of the building. The system shall be connected to the main Control Room.

6. The suppression system shall be made with Fire Extinguishers and Total Flooding system with CO<sub>2</sub>/F.M.-200 particularly in Computer, Electrical processing and Data Room and in all rooms of irreplaceable articles.

7. 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.-2016, Part-IV.

#### O. AIR CONDITIONING SYSTEM:

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.

#### P. FIRST AID FIRE FIGHTING SYSTEM:

1. First Aid Fire Fighting arrangement in the style 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.

#### Q. GENERAL RECOMMENDATIONS:

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

2. Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.
3. Floor numbers and directional sign of escape route shall be displayed prominently.
4. The employees and security staffs shall be conversant with installed Fire Fighting Equipments of the building and to operate in the event of Fire and Testing.
5. Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire Safety installation and equipments installed in the building to keep them in perfectly good working conditions at all times.
6. A crew of trained Fireman under the experienced Fire Officer shall be maintained round the clock for safety of the building.
7. Mock Fire practice and Evacuation Drill shall be performed periodically with participation of all occupants of the building.
8. 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 installation of the building.

On compliance of all the above Life and Fire Safety Recommendation, the Director General, West Bengal Fire & Emergency Services shall be approved for necessary inspection and testing of all 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.

Signature valid

Digital signed by ABHIJIT  
PANDEY  
Date: 23/01/2020 14:26:57 IST

Director  
West Bengal Fire & Emergency Services