



Government of West Bengal
Office of the Director General
West Bengal Fire & Emergency Services
13D, Mirza Ghalib Street, Kolkata – 16

Memo No.: FSR/211862406300009319

Date : 27-12-2024

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

To :
Rabindra Nath Banik And Rathindra Nath Banik
Lake Town, Block-A, Ward No.-30, P.S.-Lake Town, Dist.- 24 Pgs(N), Pin.-700089

Sub: Fire Safety Recommendation of a proposed construction of B+G+11 storied Mercantile Cum Assembly building with 4- Screens Multiplex of Sri Rabindra Nath Banik and Rathindra Nath Banik at Holding no-1123 , Lake town, Block-A, Ward no- 30, At Mouza- Patipukur, J.L. No-23, P.S.- Lake town, Kolkata – 700089, Dist- North 24 parganas, Under Souh DumDum Municipality..

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This is in reference to your AIN 211862406300009319 dated 14-Dec-2024 regarding Fire Safety Recommendation of a proposed construction of B+G+11 storied Mercantile Cum Assembly building with 4- Screens Multiplex of Sri Rabindra Nath Banik and Rathindra Nath Banik at Holding no-1123 , Lake town, Block-A, Ward no- 30, At Mouza- Patipukur, J.L. No-23, P.S.- Lake town, Kolkata – 700089, Dist- North 24 parganas, Under Souh DumDum Municipality.

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 office is issuing Fire Safety Recommendation in favor of the aforesaid building for compliance of the following fire safety measure.

Recommendation :

A. CONSTRUCTION :

- 1.The whole construction of the proposed building shall be carried out as per approved plan drawings conforming the relevant buildings rules of NKDA.
- 2.The interior finish decoration of the building shall be made low flame spread materials conforming I.S. specifications.
3. Provision of ventilation at the crown of the central core-duct of the building shall be provided.



4. Arrangements shall have to be made for sealing all the vertical and horizontal ducts, shafts by the materials of adequate Fire resisting capacity as per N.B.C. Part – IV.

B. OPEN SPACE & APPROACH :

1. The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and maneuverability of Fire appliance with turning facility.
2. The approach & internal roads shall be sufficiently strong to withstand the load of Fire Engine weighting up to 45 M.T.
3. The width and height of the access gates into the premises shall be less than 6.0 Mtr. and 6.0 Mtr. respecting abutting the road.

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 wall of the building.
3. The width, tread & flight 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 amendment.
4. All the staircases shall be extended up to the terrace of the building and shall be negotiable to each other without entering into any room.
5. Staircase to be pressurized & pressure difference shall be 50Pa. as per N.B.C. Part – IV 2016 as shown in the plan.
6. Fire and smoke doors at the entrances of all the staircase enclosures and also as marked in the at each floor level shall be provided. The F.C.D. assembly shall be of at least two hour Fire resisting wire glass window fitted with self-closing type openable in the direction of escape & insulation criteria shall be 20 minute as per N.B.C. Part – IV 2016.

D. LIFT :

1. The walls of the lift enclosure shall be at least two hours Fire resisting type. Collapsible gate shall not be permitted.
2. One of the lift shall be designed as Fire Lift. The word "FIRE LIFT" shall conspicuously written in fluorescent paint on the lift landing doors at each floor level. Lift lobby of fire fighting shaft at all levels to be pressurized (25-30 Pa) as per N.B.C. Part – IV 2016.
3. Alternate source of power supply shall be provided for all lifts through manually operated change over switch.
4. In case of failure normal electric supply it shall automatically trip over to alternate supply.
5. The Speed of the fire lift shall be such that it can reach the top floor from ground level within one minute.
6. Lift communication system shall be provided in the lift and this system shall be connected to fire control room of the building.

E. BASEMENT:

1. The basement shall be adequately ventilated.
2. The basement shall be protected with Auto Sprinklers system.
3. Mechanical extractor for Smoke venting system basement levels shall also be provided. The system shall be of such design as to operate automatically on actuation of detection detector, CO sensor and MCP from basement levels shall have to be provided. The system shall be of such design as to



operate actuation of heat/smoke sensitive detector on sprinkling. It shall also have an arrangement to start it manually.

4.Mechanical extractors shall have an alternative source of supply.

5.All the basement shall be protected with Hose Reel Hose, Automatic Sprinkler System and Hydrants system conforming I.S. 3844 – 1989.

6.Mechanical extractors shall be designed to permit 30 Air changes per hour in case of Fire or distress call.

F. REFUGE AREA :

1.Refuge area is not less than 15sqm. Shall be provided on the external wall with cantilever projection or other suitable level of the building as shown in the plan.

2.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 lobbies.

3.The position of Refuge areas shall be such that they are negotiable by the fire service ladder from the ground & shall be sufficiently strong to withstand the load of Fire Engine weighting up to 45 M.T.

4.Each Refuge area to be provided with first aid box, fire extinguisher, P.A. System, Fire man talk back system & adequate emergency lighting as well as drinking water facility.

G. FIRE FIGHTING WATER :

Underground water reservoir having water capacity of 2,00,000 Ltr. and overhead reservoir of 20,000 Ltr. capacity exclusively for Fire Fighting purpose with replenishing arrangement @1000 Ltrs./Min. preferably from two different sources of water supply shall be provided. The Fire 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.

H. HYDRANT SYSTEM :

1.The building shall be provided with Wet Riser of 150 mm internal diameter pipe lines with provision of landing valves at the staircase landing/half landings at the rate of one such riser for 1000 Sq.Mt. of floor area. The system shall be so designed that be kept charged with Water all the time under pressure and capable to discharge 2850 Ltrs./Min. at the ground floor 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 conform I.S. 3844-1989.

2.Provision for Hose Reel in conjunction with Wet Riser shall be made at each floor level conforming the relevant I.S. specification.

3.Yard Hydrant & Ring Main Hydrant with provision of adequate numbers Hydrant along with Fire Service inlet for UGWR fire & also for riser system shall be installed surrounding the buildings in accordance with relevant I.S. specification.

I. SPRINKLER INSTALLATION :

The automatic Sprinkler installation shall be provided in refuge areas and in all floor areas including Basement and Gas bank of the building as per I.S. 9972. Alarm gang to be incorporated along with the sprinkler system.

J.FIRE PUMP :

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 building. One such pump shall



always be kept on Stand-by of diesel driven type. A separate fire pump shall be made for the total Sprinkler installation of the building. Provision of Jockey Pumps 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.

K. ELECTRICAL INSTALLATION & DISTRIBUTION :

- 1.The electrical installation including transformers, Switch Gears, Main & Meters etc. and the distribution system of the premises shall be made satisfying the code of practice for Fire Safety in general buildings as laid down in the I.S. specification 1946-1982.
- 2.All ducts shall be supply sealed at all floor level as per I.S. specification.
- 3.The electrical installation & server room shall be adequately protected with CO2/D.C.P flooding system. or High/Medium Velocity water spray Projector System as per relevant I.S. specification.
- 4.Alternative Power Supply :
Arrangements shall have to be made to supply power with help of a generator to operate at least the Fire Pump, Pump for deep Tube-well, Fire Alarm System, Fire Lift, pressurization fans and blowers, smoke extraction and damper systems etc. and also for illuminating the Staircase, Corridors, fire refuge areas etc. and other places of assembly of the buildings in case of normal power failure.

L. INTELLIGENCE ANALOGUE SYSTEM :

- 1.Auto Fire Alarm System with analogue addressable smoke/ heat detectors as per suitability shall be installed in all floor area of the building including basement area.
- 2.Addressable analogue manual call boxes incorporating with sounders shall be installed in all the floor area of the building in such a manner that maximum travel distance shall not be more than 22.5m in order to reach any of the call point.
- 3.Micro Processor based fire alarm panel shall be installed and all shall also be connected with main
- 4.Both way Public address system linked between all floors & fire refuge areas and Control Room shall have to be established.
- 5.All the installation shall also satisfy the I.S. Specification 2189 as amended and the code of practice as laid down in N.B.C. Part - IV.

M. 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 Air Handling Units room shall not be used for storage of any combustible materials.
- 4.Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the Air Conditioning System.
- 5.The system of auto shut down of AHU shall be incorporated with the auto detection and alarm system.
- 6.Escape route like staircase etc. shall not be used as return air passage.
- 7.Whenever the ducts pass through Fire wall of floors, the opening surrounding the ducts shall be sealed with Fire resisting materials such as asbestos rope vermiculite concrete etc.
- 8.The metallic ducts shall be used even for the return air instead of space above the false ceiling.
- 9.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.
- 10.Area more than 750 sq. m. on individual floor shall be segregated by a Fire wall and automatic fire damper for isolation shall be provided.



11. Air duct services main floor area, corridors etc. shall not pass through the staircase enclosures.
12. The air handling units shall be separated for each floor, and air ducts for every floor shall be separated and in no way interconnected with the ducting of any other floor.
13. If the air handling units serve more than 1 floor, the recommendation given above shall be complied with in addition to the conditions given below:-
 - a. Proper arrangements by way of automatic Fire dampers working on fuseable link for isolating all ducting at every floor from the main riser shall be made.
 - b. When the automatic Fire alarm operates the respective air handling units of the air conditioning system shall automatically switch off.
14. The vertical shaft for treated fresh air shall be of masonry construction.
15. The air filters for air handling units shall be of non combustible materials.
16. The air handling units room shall not be storage of any combustible materials.
17. Inspection panel shall be provided in the main trucking to facilitate the cleaning of ducts of accumulated dust and to obtain access for maintenance of fire dampers.
18. No combustible materials shall be fixed nearer than 15cm to any duct unless such duct properly enclosed and protected with non combustible materials (glass wool or Spun wool with neoprene facing enclosed and wrapped with aluminium sheeting) at least 3.2m thick. And which would not readily conduct heat.

N. FIRE DAMPER :

1. Fire damper shall be located in air ducts and return air duct / passages at the following point.
 - a. At the fire separation wall.
 - b. Where ducts / passage enter the central vertical shaft.
 - c. Where the ducts pass through floors.
 - d. At the inlet of supply Air Duct and the return air duct of each compartment on every floor.
2. The dampers shall operate automatically and shall simultaneously switch off the air handling fans. Manual operation facilities shall also be provided.
3. Automatic Fire Dampers shall be so arranged so as to close by gravity in the direction of Air movement and to remain tightly closed on operation of a fusible link.

O. 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 including basements and vulnerable locations of the premises shall be made in accordance with I.S. 2190-1992.

P. GLAZING & GLASS FAÇADE :

1. The glazing shall be in accordance with NBC Part 6. The entire glazing assembly shall be rated as per Table 1.
2. The use of glass shall not be permitted for enclosures of exits and exit passageway.
3. For fully sprinkled building having fire separation of 9 m. or more, tempered glass in a non-combustible assembly, with ability to hold the glass in place, shall be provided. Sprinklers to be provided within 600 mm of the glass façade which to be covered full area of the said glass façade.
4. All gaps between floor slabs and façade assembly shall be sealed by approved fire sealing material of equal fire rating of that floor at all floor level.
5. Openable panels shall be provided on each floor and such openings shall be operable at a height at a height between 1.2mtr. and 1.5 mtr. from the floor, and shall be in the form of openable panels (fire access panels) of size not less than 1000 mm X 1000 mm opening outwards.



- 6.The wordings, ' FIRE OPENABLE PANEL – OPEN IN CASE OF FIRE, DO NOT OBSTRUCT' of at least 25 mm letter height shall be marked on the internal side.
- 7.Such panels shall be suitably distributed on each floor based on occupant concentration & also to be located in common areas /corridors to facilitate access by the building occupants and fire personnel for smoke exhaust in times of distress.

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.Lightning protection for building shall be provided as per Part 8 'Building Services', Section 2 Electrical installations.
- 3.Fire pump house to be adequately ventilated & the other requirement for fire pump room to be as per NBC Part – IV 2016.
- 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.The employees and security staff shall be conversant with installed Fire Fighting equipment of the building and to operate in the event of Fire and Testing.
- 7.Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire
8. Safety installation and equipment installed in the building to keep them in perfectly good working conditions at all times.
- 9.A crew of trained Fireman under the 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 the building.
- 11.Close circuit T.V. shall have to be provided for the entire floor area including the basement area of the building.
- 12.On compliance of all the above Fire Safety recommendations, the Director General, West Bengal Fire & Emergency Services shall be approached for necessary inspection and testing of the installation before occupancy of the building. 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 drawings, without obtaining prior permission from this office, this Fire Safety Recommendation will be treated as cancelled.



Director

West Bengal Fire & Emergency Services