



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

Memo no.:FSR/0225186238701240

Date: 18-01-2024

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

To: MR RAJ KUMAR RUNGTA MR KUSHAL RUNGTA
097,141,NETAJI SUBHAS CHANDRA BOSE ROAD

Sub: Fire Safety Recommendation for Proposed G+15 Storied under Group Residential Building at premises no. 097, 141, Netaji Subhas Chandra Bose Road.

Application Reference : KMC (CAF-2023100287) received on 04-12-2023 regarding the Fire Safety Recommendation for Proposed G+15 Storied under Group Residential Building at premises no. 097, 141, Netaji Subhas Chandra Bose Road.

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 building shall be carried out as per approved plan drawings conforming the relevant building rules of local Municipal/ Panchayet Body.
- 2.The interior finish decoration of the building shall be made low flame spread materials conforming I.S. specifications.
- 3.Provision of sufficient ventilation shall be provided within the building.
- 4.Arrangement shall have to be made for sealing all the vertical and horizontal ducts by the materials of adequate fire resisting capacity.
- 5.All passage ways and gangways shall be kept clear for free movement of the workers and occupants of the building.
- 6.Fire Check Doors shall be provided as shown / marked in the plan at each floor level. The F.C.Ds, shall be of at least two hours Fire resisting wire glass window flitted with self-closing (door closers) type and openable in the direction of escape.
- 7.Roof shall be used as a refugee area in case of an emergency and it should be open to sky for all time. No permanent or temporary structure will be allowed on the roof.

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 maneuverability of Fire Appliances with turning facility.

- 2.The approach roads and internal driveways 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 mts. and 5.0 mts. facing the abutting road.
- 4.Drive way (Minimum 6 M) surrounding the building/s shall be free from any type of obstruction and open to sky. No parking will be allowed on the drive way.
- 5.All the Passage way / corridor should be kept clear for free access.
- 6.Sufficient space (9 M X 15 M) below the Fire Refuge areas shall be kept clear for Placing of Fire service Aerial Ladder.

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 2 hours.
- 2.The staircases of the building shall be Cross-ventilated at each floor level in the external walls of the building or Pressurized as per existing norms and provision of NBC Part 4, 2016 .
- 3.The staircases shall be extended up to terrace of the building and shall be negotiable to each floor.
- 4.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.
- 5.Fire Check Doors shall be provided as shown / marked in the plan at each floor level. The F.C.Ds, shall be of at least two hours Fire resisting wire glass window flitted with self-closing (door closers) type and openable in the direction of escape.
- 6.Considering the staircases are only means of evacuation, emergency lighting arrangement for staircases and corridors with alternative source of power supply and also on separate circuit shall be made, directional & exit sign etc. shall be provided conforming the relevant I.S.specification.

D)LIFT:

- 1.The walls of the lift enclosures of the buildings shall be at least two hours fire resisting type and all the internal shafts shall be pressurized as per existing norms and provision of NBC Part 4, 2016.
- 2.Collapsible gates are not allowed in lifts.

E)Fire Fighting Shaft (Fire Tower):

Fire Fighting Shaft with Fire Check Door shall be provided in accordance with the guidelines of Part-4 of National Building Code, 2016.

F)FIRE FIGHTING WATER:

The underground water reservoir of 1,50,000 litres and Overhead water reservoir of 10,000 litres shall be provided exclusively for Fire Fighting purpose with replenishing arrangements @1000 lts/min preferably from two different sources of water, shall be provided. The water reservoirs shall have overflow arrangement with the domestic water reservoir as well as to prevent stagnancy of water. The water reservoirs shall be kept full at all time.

G)WATER BASED SYSTEM:

- 1.The building shall be provided with Wet Riser System of 150 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 Lts./min. at the ground floor level outlet and minimum 900 Lts./min. at the top most and remotest outlet. In both cases the running pressure shall not be less than 3.5 Kgs/cm². All other requirements shall conform I.S. 3844 & I.S. 13039. 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 connected to overhead tank.

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

3.Ring Main Hydrant with provision of adequate numbers Hydrant shall be installed surrounding the building in accordance with relevant I.S. specification.

4.Fire Service inlet shall be provided with the Wet Riser in accordance with relevant I.S. specification.

5.Fire Brigade water drawing arrangement from underground fire tanks shall be provided.

6Automatic Sprinkler Installation - The automatic Sprinkler installation shall be provided in all floor areas of the building. Separate sprinkler riser of 150 m Internal diameter pipe Line for the entire sprinkler system shall be provided. All the installations shall be as per with the I.S. 15105 and provision of NBC Part 4, 2016. Alarm gong to be incorporated along with the sprinkler system.

7.The entire water based fire fighting system shall be installed as per the provision of Table 7 of Part 4 of the National Building code, 2016.

H)FIRE PUMP:

1.Provision of the Fire Pump of 2280 LPM shall have to be made to supply water at the rate-designed pressure i.e. minimum 3.5 kg/sq.cm at the top most and remotest point and discharge into the Hydrant system, which shall be installed in the building.

2.Provision of separate pump of 2280 LPM for automatic sprinkler system shall be provided.

3.One such pump of diesel driven type shall always be kept on stand-by .

4.Provision of Two numbers Jockey Pump with 180 LMP discharge capacity shall also have to be made to keep the Hydrant and Sprinkler system under pressurized condition all the time.

5.All the pumps shall be incorporated with both manual and auto starting facilities. The suction of pumps shall be of positive type.

6.The Number, capacity and set of fire pumps shall be installed as per provision of N. B. C. Part 4, 2016.

I)ELECTRICAL INSTALLATION AND DISTRIBUTION:

1.The electrical installation including Transformers, Switch Gear, Main & Meters, LT panel rooms etc. and the distribution system of the premises shall be made satisfying the code of practice for Fire Safety in general building as per relevant I.S. specification.

2.Adequate Lightning Arrester shall be provided as per standard.

3.The vertical and horizontal electrical ducts shall be sealed at each floor level by fire resisting materials/ fire barrier.

4.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 LS marked and be of F.R.L.S. Categories.

5.Arrangement for alternative power supply shall have to be made to supply power with the help of a generator to operator 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.

I)Detection and Alarm (Intelligence Analogue) System:

1.Auto Fire Alarm system with analogue addressable smoke / Heat/ Beam/ I.R. detector as per suitably shall be installed in each floor.

2.Addressable analogue manual call boxes incorporating with sounders should be installed in all floors area of the building in such a manner that maximum travel distance shall not be more than 30 M in order to reach any of the call point.

3.Microprocessor based fire alarm panel shall be installed and all shall also be connected with main panel at the fire central room of the premises having direct dialing facility to the local fire service unit.

4.Both way public address system shall be made available in all floors of the building. The system shall be connected to

the main control room.

5.All the installations shall also be satisfy the I.S. specification 2189 (as amended) and the code of practice as laid down in the N.B.C. part-IV.

6.Response indicator below the false ceiling in conjugation with the smoke detector above the false ceiling shall be provided, satisfy the relevant I.S. specification and the code of practice as laid down in the N.B.C. part-IV,2016.

7.Hooter will be so arranged so that sound can be heard from any corner of the Industry on operation of any Detector or Manual Call Point.

J)Ventilation :

All the floor spaces of the building shall be adequately ventilated by naturally or mechanically as per the provision of NBC Part 4, 2016.

K)HVAC SYSTEM (if any):

1.All the floor spaces of the building shall be adequately ventilated by naturally or mechanically as per the provision of NBC Part 4, 2016 and other relevant Standard.

2.Proper smoke extraction system shall be provided in accordance with relevant I.S. specification and provision of Part -4 of NBC, 2016.

3.The A.H.U shall be separated for each floor with the system Air Ducts for individual floors.

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.The air handling units room shall not be used for storage of any combustible materials.

7.Escape route like staircase, common corridors, lift lobby etc. shall not be used as return air passage.

8.Wherever the ducts pass through Fire wall of floors, the opening around the ducts shall be sealed with approved Fire resisting materials.

9.The metallic ducts shall be used even for the return air, instead of space above the false ceiling.

10.The materials used for insulating the duct system (inside or outside) shall be of non- combustible materials, glass wool etc. and shall not be wrapped or secured by any materials of combustible nature.

11.Air ducts 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.The vertical shaft for treated fresh air shall be of masonry construction.

14.The air filters for air handling units shall be of non-combustible materials.

15.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.

16.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.

L)FIRST AID FIRE FIGHTING SYSTEM:

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.

K)GENERAL RECOMMENDATIONS:

- 1.Fire License shall have to be obtained for storing and processing of L.P.G. and/or 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 System/equipment 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 measures installed in the building to keep them in perfectly good working conditions at all times.
- 6.A crew of trained Fireman under an experienced Fire Officer shall be maintained round the clock for safety of the building.
- 7.To eliminate risk of Fire Hazards, Good House Keeping both for insides and outside of the building shall be strictly maintained.
- 8.Mock Fire practice and Evacuation Drill shall be performed periodically with participation of all staff and students 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 and 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 building.

NB. For any deviation in construction and changes in nature of use of the building, in respect of 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