



**Government Of West Bengal
Office Of The Deputy Director
West Bengal Fire & Emergency Services
Station Feeder Road, P.O & P.S Siliguri,
District: Darjeeling, Pin - 734005**

Memo no.:FSR/0125186220800181

Date: 21-02-2023

From:
Deputy Director
North Zone, HQ Wing,
West Bengal Fire & Emergency Services

To: Shri Jay Chand Chitlangia
Mouza- Sahapur, Plot No-1032/1207,1030,1031 Kh No-4069,1674,3745 PS-Malda,dist-Malda

Sub: Fire Safety Recommendation for Proposed construction of B+G+11 storied Commercial cum Residential Building under group of Residential in the name Sri Jay Chand Chitlangia at the Premises no- Mouza- Sahapur, R.S./L.R. Plot No-1032/1207,1030,1031 Kh No-4069,1674,3745 , J.L No. 110,PS-Malda,Dist-Malda,Pin- 732142.

This is in reference to your application no. 0125186220800181 dated 10-02-2023 regarding the Fire Safety Recommendation for Proposed construction of B+G+11 storied Commercial cum Residential Building under group of Residential in the name Sri Jay Chand Chitlangia at the Premises no- Mouza- Sahapur, R.S./L.R. Plot No-1032/1207,1030,1031 Kh No-4069,1674,3745 , J.L No. 110,PS-Malda,Dist-Malda,Pin- 732142.

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 drawing conforming relevant building rules of local Administrative body.
- 2.The interior finish decoration of the building shall be made low flame spread materials conforming I.S. specification.
- 3.Provision of ventilation at the crown of the central core-duct of the building shall be provided.
- 4.Arrangement shall have to be made for sealing all the vertical ducts by the materials of adequate fire resisting capacity.

Ventilation:-

- i) Sufficient ventilation will be provided at every place of the building. It should be designed as auto opening system in case of emergency.
- ii) Provision of ventilation at the crown of the central core-duct of the building shall be provided.
- iii) Mechanical extractor for smoke venting system shall also be provided. The design operating mechanism of the

system shall be such that the system shall operate on actuation of heat / smoke sensitive detector and sprinklers. It shall also have an arrangement to start it automatically or manually. It shall have an interlocking arrangement, so that the extractors shall continue to operate and supply fans shall stop automatically with the actuation of fire detectors. This ventilation system designed 30 air changes per hour than that of the scheduled air changes for normal operation shall be ensured in the system in case of fire or distress call. Mechanical extractors shall have an alternative source of power supply.

iv) Smoke venting facilities for safe use of escape routes shall be automatic in action with manual control in addition in the windowless (sealed box type) buildings.

OPEN SPACE & APPROACH

- 1.The open space surrounding the buildings shall conform the relevant building rules as well as permit the accessibility and manoeuvrability of fire appliances with turning facility having minimum 6.5 M width in each side.
- 2.The approach roads shall be sufficiently strong to withstand load of fire engine weighing up to 45 M.T.
- 3.The width and height of the access gates into the premises shall not be less than 6M and 5M respectively abutting the 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.

AIR-CONDITIONING SYSTEM:- (SPLIT TYPE) IS 659:1991

Peak summer is in full swing. During this period, chances of fire incidents become more imminent due to heavy current drawn by AC units. The following precautions must be scrupulously followed so as to avoid possibility of fire incident due to Window / Split type AC unit.

- 1.Joints must be avoided in AC wires. It is generally found that there are multiple joints in AC wires which is the single most common cause of Electric Fire due to heat generated in it which spreads quickly to inflammable materials like curtains, paper files etc.
- 2.It must be ensured that all AC units are comprehensively serviced before operation and filter is cleaned regularly through authorized service agency which increases cooling as well as results in less electric consumption.
- 3.Never use AC units on normal plug points or temporary extension boards except on covered MCB's.
- 4.Switch off air-conditioners, lights, fans, exhaust fans, heat convectors, fax machines, computer monitors, printers /scanners/UPS, inverters, photocopiers, TVs and other office equipments when they are not in use. Switch on only those lights fans, air-conditioners or other equipments which are required for functioning office. Do not leave air-conditioners, heat convectors, lights, fans and other electrical equipments and gadgets in 'ON' position when not required.
- 5.Keep the doors / Windows of air-conditioned rooms close to avoid loss of conditioned air. Provide automatic door closers.
- 6.Use air-conditioner fan/blowers and fans at low speed.
- 7.In summer reduce load on air-conditioners by putting curtains/blinds/shades on windows.
- 8.Window type air-conditioners/split type AC's being highly energy intensive equipments; they should be serviced at least thrice in a year as per the recommendations of manufacturers, The servicing included cleaning of air filters, cleaning of condensers/cooling coil, service and oiling of fan motors, checking of fasteners, checking of electrical spares, checking of current/voltage and checking of room temperature and grill temperature.
- 9.Replace old air-conditioners which have out-lived their useful life i.e. 7 years as per Competent authorised agency maintenance manual 2012 and have become unserviceable with star rated Energy Efficient air conditioners.

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 open able sashes at each floor level in the

external wall of the building.

3)The width of the staircase shall be made as marked in the plan. Corridors and the exit doors shall conforming the relevant building rules which upto date amendment.

4)All the staircases shall be extended upto terrace of the building and shall be negotiable to each other without entering into any room.

5)Fire and smoke doors at the entrances of all the staircase enclosure 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 open able in the direction of escape.

6)The staircase of basement shall be of enclosed type having fire resistance of not less than two hours and shall be situated at the periphery of the basement to be entered at the ground level only from the open air and in such positions that smoke from any fire shall not obstruct any exit serving the lower ground and upper mall of the building.

7) All principal staircases from ground to top floor shall be pressurized as marked in the plan. A positive pressure of 25-30 pa shall be maintained inside the staircase.

LIFT

1)Walls of all lift enclosures shall have a fire rating of two hours; lifts shafts have a vent area not less than 0.2 M2

2)Lift Motor Room shall be located preferably on top of the shaft and separated from the shaft by the floor of the room.

3)Landing doors in all lift enclosures shall have a fire resistant of not less than 1 hour.

4)All Lift Car door shall have a fire resistance rating of half an hour.

5)Exit from the lift lobby, if located in the core of the building, shall be through a self closing smoke stop door of half an hour fire resistance.

6)Grounding Switch(es), at ground floor level shall be provided on all the lifts to enable the fire service to ground the lifts..

7)Collapsible gates shall not be permitted for lifts and shall have solid lift doors with fire resistance of at least 1h.

8)A sign shall be posted and maintained on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall also contain a plan for each floor showing the locations of the stairways.

9)In case of failure of normal electric supply, it shall automatically trip over to alternate supply. This changeover of supply could be done through manually operated changeover switch. Alternatively, the lift shall be so wired that in case of power failure, it comes down at the ground level and comes to stand still with door open.

10) All principal lift and lift lobbies shall be pressurized as marked in the plan. A positive pressure of 25-30 pa shall be maintained inside the lift lobby.

BASEMENT

1.The basement shall be adequately ventilated.

2.The additional staircase from the open air as shown in the drawing shall be constructed besides the ramp conforming relevant I.S. specification.

3.The basement shall be protected with Auto sprinkler system.

4.Mechanical extractor for smoke venting system from basement levels shall also be provided. The system shall be of such design as to operate on actuation of heat/ smoke sensitive detector or sprinkling. It shall also have an arrangement to start it manually.

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

6.Mechanical extractors shall have to be designed to permit 30 air changes/hour in case of fire and shall be incorporated with an alternate source of power supply, for normal operation air changes shall be 12-15 air changes per hour.

REFUGE AREA:

1.Refuge area is not less than 15 sqm. and shall be provided on the external wall with cantilever projection or other suitable

means at 24 mtr. and above 15 mtrs. levels of the building as shown in the drawings.

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.

FIRE FIGHTING WATER

The Centre shall have to be equipped with 1,00,000 ltrs. of underground stored water and overhead water reservoir having capacity of 10000 ltrs. exclusively for fire fighting purpose with replenishing arrangement @ 1000 ltrs./min preferably from two different sources of water supply. 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.

WET RISER SYSTEM IS:3844

150mm ring main & 100 mm dia riser with single out let landing valve shall have to be provided.

AUTOMATIC SPRINKLER SYSTEM

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

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.

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 CO2/D.C.P. Fire Extinguishers conforming I.S. specification.

4.Transformer to be protected by High Velocity Water Spray Projection System as per relevant I.S. specification.

5.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.

Pumps for fire fighting Installation (IS 12469:1988):-

i) The standard code of practice recommended that all water based fixed fire fighting installations should be fed by two separate automatic pumps, one of which should act as stand by. Each pump should be designed to deliver water at required pressure and discharge, taking into account the height and volume of the building.

ii) The Fire pumps should be provided near the underground static water storage tank with minimum pressure of 3.5 kg. / sq. cm. at terrace level or farthest point.

iii) One electric and one diesel pump of capacity 2280 LPM and One electric pump of capacity 180 LPM should be install.

iv) The pumps should be installed and arranged in such manner so that it will start automatically due to fall in pressure as prefixed in the installation by installing a Jockey pump. Provision of Jockey pump shall also be made to keep the water-based system under pressurized condition at all times.

v) All the pumps shall be so designed as to supply water at the designed pressure and discharge into the water-based system which shall be installed in the buildings.

vi) All the pumps shall be incorporated with both manual and auto starting facilities .

HOSE REEL SYSTEM (IS 884:1985):-

i) Provision for Hose Reel in conjunction with wet riser shall be made at each floor of the building level from the underground reservoir through main pump conforming the relevant I.S. specification.

ii) The Hose reel hose system should be provided at each floor of the buildings. The internal dia of the said hose reel shall be 19 mm to 32 mm and the discharge capacity not less than 22.5 LPM. While the length of the hose reel not more than 36.50 meters. The distance of such installation should be in such a way that no part of the floor is more than 6 mtr distance from a hose nozzle when fully extended.

DETECTION ALARM SYSTEM I.S. 2189-1988.

1. Manually operated Electrical Fire Alarm System with at least three numbers of break glass type call boxes fitted with Hooters along with Public Address System at each floor connecting with visual panel board shall be made in Control Room. The Control Room shall be located at entrance of ground floor of the building, other requirements of the system shall be made conforming I.S. specifications.

2. Auto Fire Detection System with the help of Heat and Smoke Detectors shall be installed in all places of below and preferably above false ceiling of the building. 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. specifications.

3. The suppression system shall be made with Fire Extinguishers particularly in Computer, Electrical processing and Data Room and in all rooms of irreplaceable articles.

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

5. Public Address System linked between all floors and Control Room shall have to be established.

Yard Hydrants

Yard Hydrant / Landing Valve IS 13039:2014 shall have to be installed as per requirement.

ALTERNATE POWER SUPPLY

Arrangement shall have to be made to supply of power with the help of generator to operate at least fire pump, illumination of staircase, corridors etc. and other places of assembly area in case of normal power failure.

FIRST AID FIRE FIGHTING SYSTEM

First Aid Fire Fighting arrangement (Extinguisher) 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.

2. Fire notice for firefighting and evacuation from the building shall be prepared and be displayed at all vulnerable place of the building as per clause 4.11 Annex D of N.B. Code.

3. Floor number and direction sign of escape shall be displayed prominently as per clause 4.11 Annex D of N.B. Code.

4. The employees and security staff shall be conversant with installed firefighting equipment of the building on to operate in the event of fire and testing as per clause 4.11 Annex D of N.B. Code.

5. Arrangement shall be made for regular checking, testing and proper maintenance of all the fire safety installation and equipment installed in the building to keep them in perfectly good working conditions at all times.

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

7. Considering the gravity of growing hazard in the township, a crew of trained firemen under one experienced officer shall be maintained round the clock along with water tender (type-B) conforming I.S. 948 : 1983.

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 cancel.

Deputy Director
West Bengal Fire & Emergency Services

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