



**Government Of West Bengal**  
**Office Of The Divisional Fire Officer, Paschim Bardhaman**  
**West Bengal Fire & Emergency Services**  
**Asansol Fire Station, G.T. Road, P.O.-Asansol,**  
**P.S.-Asansol(South), Pin :- 713301**

Memo no.:FSR/0125186239100380

Date: 03-10-2023

**From:**  
**Divisional Fire Officer, Paschim Bardhaman**  
**West Bengal Fire & Emergency Services**

**To: Oris Enclave, (Edify Infrastructure Projects Private Limited),**  
**Mouza- Tetikhola, L.R Plot no.70, Kh no. 2015, J.L no. 111, under Gemua G.P Kaliganj, Ps- NTPS Durgapur, Dist -**  
**Paschim Bardhaman, Pin713212.**

**Sub: Fire Safety Recommendation for the Proposed construction of B+ G + X storied building under group Residential (Principal) occupancy, in favour of "Oris Enclave, (Edify Infrastructure Projects Private Limited)," at the Premises/Holding no-LR Plot No-70, Khatian No- 2015, JL No-111, Mouza- Tetikhola, Durgapur, P.S.-N.T.P.S, Dist-Paschim Bardhaman, Pin713212.**

This is in reference to your application no. 0125186239100380 dated 29-08-2023 regarding the Fire Safety Recommendation for the Proposed construction of B+ G + X storied building under group Residential (Principal) occupancy, in favour of "Oris Enclave, (Edify Infrastructure Projects Private Limited)," at the Premises/Holding no-LR Plot No-70, Khatian No- 2015, JL No-111, Mouza- Tetikhola, Durgapur, P.S.-N.T.P.S, Dist-Paschim Bardhaman, Pin713212.

**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:**

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

#### Basement:-

- The staircase of the basement shall be enclosed type. Entire construction shall be made of bricks / RCC type having Fire Resisting Capacity not less than 4 hours and protected with Fire Check Door.
- The width of the Staircase shall be made as shown in the plan. Corridors and the exit doors shall conforming the relevant building rules.
- The basement shall have to be provided with Auto Sprinkler System having integrity with alarming system.

#### OPEN SPACE & APPROACH:

- The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and manoeuvrability of Fire appliance with turning facility.
- 2.The approach roads shall be sufficiently strong to withstand the load of Fire Engine weighting up to 45 M.T.
- The width and height of the access gates into the premises shall not be less than 4.5M and 5 M respecting abutting the road.
- Drive way shall be free from any obstruction. No parking will be allowed on the Drive Way.

#### STAIRCASE:

- 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.
- The staircase of the building shall have permanent vents at the top equal to 5% of the Cross-Sectional Area of the Staircase enclosure and openable sashes at each floor level equal to 15% of the said cross sectional area shall have to be provided in the external wall of the building and open able sashes will be in the external wall of the building.
- The width of the staircases shall be made as marked/approved in the plan. Corridors and the exit Doors shall conform the relevant Building Rules as well as rules of the Cinematograph Act. With up-to- date amendments.
- The entire staircase shall be extended up to terrace of the building and shall be negotiable to each floor level without entering into any room. The roof of the Stair wall shall be Min. 1 M above the surrounding roof Area.
- Fire and Smoke doors at the entrances of all the Staircase enclosures as marked/approved in the plan at each floor level shall be provided. The F.C.D. shall be of at least one 02 hours Fire resisting wire glass window fitted with self-closing type open able in the direction of escape.
- Considering the staircase are only means of evacuation, Emergency Lighting Arrangement, Directional & Exit signage Etc. shall be made conforming the relevant I.S. Code in this regard.

#### LIFT:

- The walls of the Lift Enclosure of the building shall be at least two hours Fire Resisting Type respectively marked/as approved in the plan drawing with the vent at top of area not less than 0.2 Sq M.

- The Lift of the Building shall be designed at high-speed FIRE LIFT and conspicuously indication to be pasted.
- One of the lift car of the Building shall be large enough to accommodate standard Ambulance Stretcher and Medical Attendants.
- In case of Failure of Normal Electric Supply, it shall automatically trip over to alternate supply. Alternatively, the lift shall be so wired that in case of power failure, it comes down at the ground floor level and stand still with door open.
- Arrangement shall be provided for extraction of smoke in all the lift shaft by incorporating smoke venting system designed to permit 12 ACPH in case of fire and shall be of such designed to operate on actuation of sprinkler and/or Fire Alarm. In case of failure of normal electric supply. It shall automatically trip to alternate supply.
- Exit from Lift Lobby shall if located in the core of the building shall be through Self-Closing FCD of two hours Fire Resisting.
- The speed of the fire lift car in the building shall be such that it can reach the top from the ground within one Minute and visual indication of floor numbers shall be incorporated in the lift Car.
- All other requirements shall conform the I.S. Specification including the communication facility in the lift cars connecting to the Fire Control Rooms of the Building.
- The walls of the lift enclosure shall be at least two hours Fire resisting type. Collapsible gate shall not be permitted.

#### Refuge Area :

- Refuge Area shall not be less than 15 Sq M on the external wall with cantilever projection at the designated height as per NBC Part-IV 2016.
- The refuge area shall be of Fire Resisting Construction and protected with Self Closing FCD at the entrance from the Staircase shaft.
- The projected refuge area shall be surrounded by 1 M high wall and opening to the refuge area from utility or any utility shall not be allowed.

#### FIRE FIGHTING WATER :

- Underground water reservoir having water capacity of 100000 Ltrs. and O.H.W.R. 25000 ltrs capacity exclusively for firefighting purpose shall be kept full at all time.
- The Fire water reservoir shall have overflow arrangement with the domestic water reservoir as well as to avoid stagnancy of water.
- Provision of necessary manhole shall be made on the top of this reservoir as per specification.
- Provision of replenishment at the rate of at least 1000 lts./min. from two separate source of water supplies shall be made.

- The deep tube wells for the replenishment of the reservoir 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.
- Provision of placing Fire Appliances on the underground water reservoir to be made to draw water in case of emergency.

#### WATER LAYOUT SYSTEM:

- The building shall be provided with wet riser with 150mm. internal diameter Pipe Line with provision of Hose Reel Hose at the Staircase landings / half landings. The system shall be so designed that shall be kept charged with Water all the time under pressure All other requirements shall conforming I.S. 3844 – 1989.
- Provision for Hose Reel units on swivelling drum in conjunction with Wet Riser shall be made near each lading valves.
- Ring Main Hydrant with provision of adequate numbers Hydrant shall be installed surrounding the building in accordance with relevant I.S. specifications.
- Two fire service inlets near the entry or exit of the premises facing to the abutting road shall have to be provided.
- All area of Lower ground & Upper ground shop area, lobbies of all floors shall have to be provided with Auto-sprinklers and Auto Detection system.

#### 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 be of diesel driven type.
- Provision of Jockey Pump/Stand by 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.
- The Discharge Capacity of Jockey shall have to be 180LPM considering other IS specification.
- The Discharge Capacity of Main shall have to be 2280LPM considering other IS specification.
- The Discharge Capacity of Stand by shall have to be 2280LPM considering other IS specification.  
. Separate Fire Pump for sprinkler should be installed in the building with proper piping network.

#### DETECTION, ALARM AND SUPPRESSION SYSTEM: -

- 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, talk back system at each floor connecting with audio-visual panel board shall be made in control Room. The control Room shall be located at the entrance of Ground Floor of the building, other requirements of the system shall be made conforming I.S. 2189-1988.

•Auto Fire Detection System (Analogue Addressable) with the help of Flint and smoke detector shall be installed in all places of below and preferably above false ceiling of the building. The system shall also be made in places of rooms where valuable articles have been kept. The other requirements of system shall be made in accordance with I.S 2189-1988.

•The Suppression system shall be made with Fire Extinguishers and total flooding system with CO2/F.M.-200 particularly in computer and Electrical processing and data room and in a room of irreplaceable articles.

•Hotter will be sounded in such a manner so that an operation of a Detector or Manual call point Hooters will sounded on the same floor and immediate alternate floor.

#### INTELLIGENCE ANALOGUE SYSTEM:

•Auto Fire Alarm System with Analogue addressable smoke/heat detector as per suitability shall be installed in each floor.

•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.

•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 service unit.

•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.

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

#### Public Address System:

•Public address system linked between all floors and control Room shall have to be established.

#### ELECTRICAL INSTALLATION & DISTRIBUTION:

•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 building as laid down in I.S. specification 1946-1982.

•The vertical ducts shall be supply sealed at alternative floor level.

•The electrical installation shall be adequately protected with CO2/D.C.P. or Medium Velocity / Projector system.

•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 Alarm system, Fire Lift etc and also for illuminating the staircase, corridors etc and other places of

assembly of the building in case of normal power failure.

AIR CONDITIONING SYSTEM: (If any )

- The A.H.U. shall be separated for each floor with the system Air Ducts for individual floors.
- Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the Air Conditioning system.
- The system of auto shut down of A.H.U. shall be incorporated with auto detection and alarm system.
- The air handling Units room shall not be used for storage of any combustible materials.
- The A.H.U. shall be separated for each floor with the system .Air ducts for individual floors.
- Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the air conditioning system.
- The system of Auto shut down of A.H.U. shall be incorporate with the auto detection and alarm system.
- Escape route like staircase, common corridors lift lobby etc. shall not be used as return air passage.
- The A.H.U. room shall not be used for storage of any combustible materials.
- Arrangements shall be made for isolation at the strategic location by incorporating auto dampers in the Air Conditioning System.
- Wherever the ducts pass through Fire Wall of Floors, the opening around the ducts shall be sealed with fire resisting materials such as asbestos etc.
- The metallic ducts shall be used even for the return air instead of space above the false ceiling.
- The material 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 . If the air handling unit serve more than one floor, the recommendation given above shall be complied with in addition as below: ---
  - (a)proper arrangement by way of automatic fire dampers working on fusible link for isolating all ducts at every floor from main riser shall be made.
  - (b)The vertical shafts for treated fresh air shall be of masonry construction.
  - (c)The air filter for A.H.U. shall be of non-combustible materials.
  - (d)The A.H.U. room shall not be used for storing any combustible material.

(e) Inspection panel shall be provided in the main trunk to facilitate the cleaning of ducts of accumulated dust and to obtain access for maintenance of fire dampers.

**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:**

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

• Fire Notice for Firefighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.

• Floor numbers and directional sign of escape route shall be displayed prominently.

• 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.

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

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 and installations 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, F. S. C. 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.

Divisional Fire Officer (Member Convenor),  
Paschim Bardhaman  
West Bengal Fire & Emergency Services