



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

Memo No.: FSR/211862406300000264

Date : 30-05-2024

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

To :
Ajna Commercial Pvt. Ltd.
Mouza-Rekjoani, JL no-13, RS/LR Dag no-4061,4065P, LR Kh. No-9666 to 9674,9682,9720,9721, Rajarhat, North 24 Pgs-700135

Sub: Fire Safety Recommendation for a proposed construction of one no Tower having segregate 2 nos. Blocks (Block A & Block B) of a G+VII storied Building under group of Residential Building at Mouza - REKJOANI, J.L. No - 13, Comprised in R.S/L.R. DAG NOS. 4061 & 4065(P), Recorded in L.R. KHATIAN NOS. 9666 TO 9675,9682,9720 & 9721, Under P.S - Rajarhat, within the Limit Of Rajarhat, Bishnupur 1 No. Gram Panchayet, Dist- North 24 Parganas.

This is in reference to your AIN 211862406300000264 dated 19-Mar-2024 regarding Fire Safety Recommendation for a proposed construction of one no Tower having segregate 2 nos. Blocks (Block A & Block B) of a G+VII storied Building under group of Residential Building at Mouza - REKJOANI, J.L. No - 13, Comprised in R.S/L.R. DAG NOS. 4061 & 4065(P), Recorded in L.R. KHATIAN NOS. 9666 TO 9675,9682,9720 & 9721, Under P.S - Rajarhat, within the Limit Of Rajarhat, Bishnupur 1 No. Gram Panchayet, Dist- North 24 Parganas.

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. MATERIALS FOR RAPID FLAME SPREAD CATEGORIES INCLUDING UNTREATED WOOD FIBER BOARD ETC. SHALL BE NOT USE. THE DOORS AND WINDOWS PREFERABLY SHALL BE MADE OF METAL.
2. THE INTERIOR FINISH DECORATION OF THE BUILDING SHALL BE MADE WITH THE MATERIALS WITH LOW FLAME SPREAD AND LOW SMOKE AND TOXIC GAS GENERATING CATEGORIES CONFORMING I.S. SPECIFICATION.



ARRANGEMENT SHALL HAVE MADE FOR SEALING ALL THE VERTICAL SERVICE DUCTS BY THE MATERIALS OF ADEQUATE FIRE RESISTING CAPACITY.
FIRE RATING TEST CERTIFICATE OF ALL INTERIOR FINISH DECORATION SHOULD BE SUBMITTED TO THIS OCCUPANCY BEFORE TAKING OCCUPANCY.

SERVICE DUCTS AND SHAFTS SHOULD BE ENCLOSED BY WALLS OF 2 HOURS AND DOORS OF ONE HOUR FIRE RATING. ALL SUCH DUCTS SHALL BE PROPERLY SEALED AND FIRE STOPPED AT ALL FLOOR LEVEL.

B. OPEN SPACE & APPROACH:

1. THE OPEN SPACE SURROUNDING THE BUILDING SHALL BE KEPT CLEAR OPEN TO SKY AND SHALL CONFIRM THE RELEVANT BUILDING RULES AS WELL AS PERMIT THE EASY ACCESSIBILITY AND MANEUVERABILITY OF THE FIRE APPLIANCES WITH TURNING FACILITY.
2. THE APPROACH ROAD AND ROADS SURROUNDING THE BUILDING SHALL BE SUFFICIENTLY STRONG TO WITHSTAND THE LOAD OF FIRE ENGINE WEIGHTING UP TO 45 M.T.
3. THE WIDTH AND HEIGHT OF THE ENTRY GATES TO THE PROMISES SHALL NOT BE LESS THAN 4.5M AND 5M RESPECTIVELY.
4. DRIVEWAY SHOULD BE FREE OF ANY TYPE OBSTRUCTION.
5. NO PARKING WILL BE ALLOWED ON THE DRIVE WAY.

C. STAIRCASE:-

1. THE STAIRCASE OF THE BUILDING SHALL BE ENCLOSED TYPE, ENTIRE CONSTRUCTION SHALL BE MADE OF BRICK / R.C.C. TYPE HAVING FIRE RESISTING CAPACITY NOT LESS THAN 4 HOURS RESPECTIVELY MARKED IN THE PLAN.
2. THE STAIRCASES SHALL HAVE PERMANENT VENTS AT THE TOP EQUAL TO 5% OF THE CROSS SECTIONAL AREA OF THE STAIRCASES ENCLOSURES AND OPEN ABLE SASHES AT EACH FLOOR LEVEL EQUAL TO 15% OF THE SAID CROSS SECTION ARE SHALL HAVE TO BE PROVIDED IN THE EXTERNAL WALL OF THE BUILDING.
3. ALL THE STAIRCASE OF THE BUILDING SHALL BE NEGOTIABLE TO EACH OTHER IN EACH FLOOR WITHOUT ENTERING INTO ANY ROOM AND SHALL BE EXTENDED UP TO RESPECTIVE TERRACE.
4. THE ROOF OF THE STAIR WALL SHALL BE 1M ABOVE THE SURROUNDING ROOF AREA.
5. THE WIDTH OF THE STAIRCASES AND CORRIDORS AND TRAVEL DISTANCE OF DIFFERENT CATEGORIES OF OCCUPANCIES SHALL HAVE TO CONFORM THE RELEVANT BUILDING RULES.
6. FIRE AND SMOKE CHECK DOORS AT THE ENTRANCES OF THE STAIRCASE ENCLOSURES AT EACH FLOOR LEVEL SHALL BE PROVIDED AS PER SUITABLE.
7. THE F.C.D. SHALL BE AT LEAST ONE HOUR FIRE RESISTING WIRE GLASS WINDOW FITTED WITH SELF-CLOSING TYPE OPEN ABLE IN THE DIRECTION OF ESCAPE.
8. CONSIDERING THE STAIRCASES ARE ONLY MEANS OF EVACUATION, EMERGENCY LIGHTING ARRANGEMENT DIRECTIONAL, EXIT, SIGN ETC. SHALL BE MADE CONFORMING THE RELEVANT I.S. CODE IN THIS REGARDS.

D. LIFT:-

1. THE WALLS OF THE LIFT ENCLOSURE OF THE BUILDING SHALL BE AT LEAST TWO HOURS FIRE RESISTING TYPE RESPECTIVELY MARKED IN THE PLAN WITH THE EVENT AT TOP OF AREA NOT LESS THAN 0.2M².
2. THE LIFT OF THE BUILDING SHALL BE DESIGNED AT HIGH SPEED "FIRE LIFT" AND CONSPICUOUSLY INDICATED MARKED IN THE PLAN.
3. ONE OF THE LIFT CAR OF THE BUILDING SHALL BE LARGE ENOUGH TO ACCOMMODATE STANDARD AMBULANCE STRETCHER AND MEDICAL ATTENDANTS.
4. THE ELECTRIC POWER SHALL BE FROM SEPARATE SUPPLY MAINS IN THE BUILDING AND CABLES RUN WITH IN THE LIFT SHAFTS, LIGHT AND FANS IN THE LIFT CARS SHALL BE OPERATED FROM 24 VOLTS, SUPPLY ON EMERGENCY IN CASE OF FAILURE OF NORMAL POWER SUPPLY LIFT SHALL AUTOMATICALLY TRIP OVER ALTERNATE POWER SUPPLY.
5. ARRANGEMENT SHALL BE PROVIDED FOR EXTRACTION OF SMOKE IN ALL THE LIFT SHAFT BY INCORPORATION SMOKE VENTING SYSTEM DESIGNED TO PERMIT 30 AIR CHANGES PER HOUR IN CASE OF FIRE AND SHALL BE OF SUCH DESIGN AS TO OPERATE ON ACTUATION OF SPRINKLER OR FIRE ALARM. IN CASE OF FAILURE OF NORMAL ELECTRIC SUPPLY.
6. IT SHALL BE AUTOMATICALLY TRIP TO ALTERNATE SUPPLY.
7. EXIT FROM THE LIFT LOBBY IF LOCATED IN THE CORE OF THE BUILDING, SHALL BE THROUGH A SELF-CLOSING SMOKE STOP DOOR OF 1HOUR FIRE RESISTANCE.



THE SPEED OF FIRE LIFTS IN THE BUILDING SHALL BE SUCH THAT IT CAN REACH THE TOP FROM THE GROUND FLOOR WITHIN 1 MINUTE IN VISUAL INDICATIONS OF FLOOR NUMBERS SHALL INCORPORATE IN THE LIFT CARS.

ALL OTHER REQUIREMENTS SHALL CONFORM THE I.S. SPECIFICATION INCLUDING THE COMMUNICATION FACILITY IN THE LIFT CARS CONNECTING TO THE FIRE CONTROL ROOM OF THE BUILDING.

AIR CONDITIONING SYSTEM (if required) :

1. The A.H.U. shall be separated for each floor with the System Air Duct for individual floors and in no way interconnected with the ducting of any other 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 unit room shall not be used for storage of any combustible materials.
 5. Escape route like staircase, common corridors, lift lobby etc. shall not be used as return air passage.
 6. Whenever the ducts pass through Fire wall of floors, the opening rounding the ducts shall be sealed with fire resisting materials such as asbestos rope vermiculite concrete etc.
 7. The metallic ducts shall be used even for the return air instead of space above the false ceiling.
 8. The materials used for insulating the ducts system (inside or outside) shall be of non-combustible materials, glass wool shall not be wrapped or secured by any materials of combustible nature.
 9. Area more than 750 sq. Mtr on individual floors shall be segregated by a Fire wall and automatic fire damper for isolation shall be provided.
 10. If the air handling unit serve more than one floor, the recommendation shall give above shall be comply with in addition to the condition given below:
 - a. Proper arrangement by way of automatic fire dampers working on fuse able 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 unit of the air conditioning system shall automatically be switched off.
 11. The vertical shaft for treated fresh air shall be of masonry construction.
 12. Inspection panel shall be provided in the main trucking to facilitate the cleaning of ducts of the accumulated dust and to obtain access for maintenance of fire dampers.
 13. No combustible materials shall be fixed nearer than 150 mm of any duct unless such duct is properly enclosed and protected with non-combustible materials (glass wool or spun glass with neoprene facing, enclosed and wrapped with aluminium sheeting) at least 3.2 mm thick would not readily conduct heat.
 14. The ducting shall be constructed of substantial gauge metal in accordance with good practice.
- M. FIRE DAMPERS (if required) :**
1. These shall be located in conditioned air ducts and return air ducts/ passages at the following points:
 - a) At the fire separation wall,
 - b) Where ducts pass through floors and,
 - c) At the inlet of supply air duct and return air duct of each compartment on every floor.
 2. The dampers shall operate automatically and shall simultaneously switch of the air handling fans. Manual operation facilities shall also be provided.
- NOTE: -** For blowers where extraction system and duct accumulators are used, dampers shall be provided.
3. Fire/smoke dampers for building more than 24 meter in height:
For apartment house - In non-ventilated lobbies/corridors operated by fusible link/smoke detector with manual control.
For other building - On operation of smoke detection system and with manual control.
 4. Automatic Fire dampers shall be so arranged as to close by gravity in the direction of air movement and to remain tightly closed on operation of a fusible link/smoke detector.

E. FIRE FIGHTING WATER :

Under Ground Water Reservoir of 75,000 ltrs marked in plan drawing & overhead water reservoir 25,000 ltrs required for fire as per N.B.C Part IV, 2016 capacity for entire project exclusively for Fire Fighting purpose with replenishing arrangements @2000 ltrs/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.



WATER LAYOUT SYSTEM:

ing Main 100 mm internal diameter pipe line with provision of adequate numbers of Yard Hydrants with necessary accessories if required and provision of adequate numbers of fire service inlet shall be installed surrounding premises in accordance with relevant I.S. specifications.
The system shall be so designed that shall be kept charged with water all the time under pressure and capable to discharge 900 lts/min and running pressure shall not be less than 3.5Kgs/Sq.cm. All other requirements shall conform I.S. 3844 – 1989.

G. DOWN COMER & HOSE REELS SYSTEM(Both blocks, Block A & Block B)separately if required):-

i. THE BUILDING SHALL BE PROVIDED DOWN COMER WITH 100 MM DIA AND HOSE REEL HOSE UNIT WITH PROVISION OF OUTLETS IN EACH FLOOR AT THE STAIRCASES LANDINGS/HALF LANDINGS AS PER SUITABLE AT THE RATE OF ONE SUCH UNIT OF DOWN COMER WITH ALL ACCESSORIES AND HOSE REEL PER 1000SQ.M. OF FLOOR AREA.

ii. HOSE REEL UNIT: - PROVISION OF HOSE REEL UNITS ON SWIVELING DRUM IN CONJUNCTION WITH DOWN COMER NEAR EACH LANDING VALVES SHALL BE MADE AT EACH FLOOR LEVEL OF THE BUILDING.

iii. ALL OTHER REQUIREMENTS OF THE WATER BASE FIRE PROTECTION SYSTEM SHALL BE MADE AS PER I.S. SPECIFICATION 3844-1989 (WITH UP TO DATE AMENDMENT).

H. FIRE PUMP (BOTH BLOCKS, BLOCK A & BLOCK B)SEPARATELY IF REQUIRED):-

1. Provision of the Fire Pumps shall have to be made to supply water at the rate-designed 900 LPM discharge pressure and discharge into the Water based system which shall be installed in the respective pump room for residential building.

2. One such pump shall always be kept on standby as a Main Pump.

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

4. The suction of pumps shall preferably of positive type or in case of negative suction the system shall be down comer with suitable terrace pump with overhead tank.

5. The Number and type of fire pumps shall be as per provision of I.S specification & N. B. C. Part – IV, 2016.

J. 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 I.S. specification 1946 – 1982.

2. Electrical distribution system shall conform all the requirements as laid in I. S. 1646-1982.

3. The electrical installation shall be adequately protected with automatic CO2/D.C.P.

4. All electrical installation viz. Transformer Switch Gear L.T., H. T. rooms shall be protected with both auto detection and suppression systems as per suitability.

K. 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, etc. and also for illuminating the Staircase, corridors etc. and other places of the buildings in case of normal power failure.

L. SPRINKLER INSTALLATION (IF REQUIRED):-

1. The automatic Sprinkler installation shall have to be provided in covered car parking area & commercial or common area and alarm gang to be incorporated.

2. Sprinkler test line shall have to be provided as per suitable.

M. DETECTION AND ALARM SYSTEM (BOTH BLOCKS, BLOCK A & BLOCK B)SEPARATELY IF REQUIRED):-

1. Manually operated Electrical Fire Alarm system with at sufficient numbers of break glass type call boxes fitted with Hooters along with public address system, at each floor connecting with audio- visual panel board shall be made in Control Room.

2. The Control Room shall be located at the entrance of Ground Floor of the occupancy, other requirements of the system shall be made conforming I.S. 2139 – 1989.

3. Smoke detector as per suitability shall have to be installed in covered car parking area & commercial or common area as where required as per I.S. Specification.

N. Public Address System (BOTH BLOCKS, BLOCK A & BLOCK B)SEPARATELY IF REQUIRED: -

Public address system linked entire occupancy and Control Room shall have to be established.

O. FIRSTAID FIRE FIGHTING SYSTEM:

First Aid firefighting arrangement in the style of placing suitable type of portable Fire Extinguishers, Fire



s etc. in entire occupancy, Gas Bank (if any) and vulnerable locations of the premises shall be made in accordance S. 2190-92.

GENERAL RECOMMENDATIONS:

- Fire License shall have to be obtained for proposed storing and processing with L.P.G. and other highly combustible articles.
- Separate LPG Gas Bank shall have to be constructed & maintained if required and protected with auto suppression and detection system.
- Fire Notice for Fire Fighting and evacuation from the occupancy shall be prepared and be displayed at all vulnerable places of the premises.
- Disposable type B. Musk to be kept always for emergency fire situation.
- A crew of trained Firemen under experienced officers shall be maintained round the clock for safety of the entire occupancy.
- Directional sign of escape route shall be displayed prominently.
- The occupancy and security staff shall be conversant with installed Fire fighting equipment's of the occupancy 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 entire occupancy to keep them in perfectly good working conditions at all times.
- Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of buildings.
- Fire Kiosk shall have to be providing with all accessories.
- The certificate has 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 installation of the entire occupancy.

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, 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 entire occupancy.

N.B. : Any deviation and changes the nature of use of the buildings in respect of the approved plan drawing, without obtaining prior permission from this office, this Fire Safety Recommendation will be treated as cancelled.

Memo No. FSR/2118624063000000264



Signature valid

Digitally Signed.
Name: ABHINAV PANDEY
Date: 30-May-2024 15:45:49
Reason: D-Sign
Location: E-Dist 2.0

Director

West Bengal Fire & Emergency Services