



Government of West Bengal
Office of the Divisional Fire Officer
West Bengal Fire & Emergency Services
Station Feeder Road, P.O & P.S Siliguri, District: Darjeeling, Pin - 734005

Memo No.: FSR/211862406300001888

Date : 06-06-2024

From :
Divisional Fire Officer
Darjeeling Division (Member Convenor)
West Bengal Fire & Emergency Services

To :
Terai Infrastructures Limited , Terai Tea Company Limited & Abhijit Tea Company Private Limited
SEVOKE ROAD, WARD NO- 41 (S.M.C.), P.S.- BHAKTINAGAR, DIST- JALPAIGURI

Sub: Fire Safety Recommendation of Proposed construction of LG+UG+6 storied shop & LG+UG+3 storied MLCP Building under group of Mercantile in the name of Terai Infrastructures Limited , Terai Tea Company Limited & Abhijit Tea Company Private Limited at the Premises no MOUZA- DABGRAM, PLOT NO- 235,237,238,235/830, R.S. 2,3,5,6,7,8,9,10,11,12,13 L.R., J.L. NO- 02RS,02 LR, KHATIAN NO- 558,569/1 (R.S.), 57,58,60,67,84,115 (L.R.), SHEET NO- 08(R.S.),34,35 (L.R.),Touzi no u2013 3 (ja), Pargana u2013 Baikunthapur, SEVOKE ROAD, WARD NO- 41 (S.M.C.), P.S.- BHAKTINAGAR, DIST- JALPAIGURI, 734001..

This is in reference to your AIN 211862406300001888 dated 22-May-2024 regarding Fire Safety Recommendation of Proposed construction of LG+UG+6 storied shop & LG+UG+3 storied MLCP Building under group of Mercantile in the name of Terai Infrastructures Limited , Terai Tea Company Limited & Abhijit Tea Company Private Limited at the Premises no MOUZA- DABGRAM, PLOT NO- 235,237,238,235/830, R.S. 2,3,5,6,7,8,9,10,11,12,13 L.R., J.L. NO- 02RS,02 LR, KHATIAN NO- 558,569/1 (R.S.), 57,58,60,67,84,115 (L.R.), SHEET NO- 08(R.S.),34,35 (L.R.),Touzi no u2013 3 (ja), Pargana u2013 Baikunthapur, SEVOKE ROAD, WARD NO- 41 (S.M.C.), P.S.- BHAKTINAGAR, DIST- JALPAIGURI, 734001.

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 :

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(Municipality/ panchayat) 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.

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 5M 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.
6. One side of internal driveway shall be maintained 9mtr.

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) All stair & lift lobby shall be pressurised.

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 half 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) Fire Lift marked in the plan with the following specification – to enable fire services personnel to reach the upper floors with the minimum delay, and shall be available for the exclusive use of the firemen in an emergency.
- 8) The lift shall have a floor area of not less than 1.4 m². It shall have landing capacity of not less than 545 Kg (8 persons lift) with automatic closing doors of minimum 0.8 mm width.
- 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.

FIRE FIGHTING WATER:

Underground water reservoir having water capacity of 200000ltrs. and overhead water reservoir having capacity of 10000..ltrs. exclusively for fire fighting purpose with replenishing arrangements @ 1000 ltrs/min. preferably from two different sources of water supply shall be provided. 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

200mm ring main, 150 mm dia riser with single out let landing valve shall have to be provided.

AUTOMATIC SPRINKLER SYSTEM (IS:15105 2021)

The automatic sprinkler system shall have to be installed in the entire building . 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 2850 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) An independent identical pump for the purpose of sprinkler installation shall be made available. All such arrangement shall be done as per above code of practice.
- vii) All the pumps shall be incorporated with both manual and auto starting facilities .

Detection & Alarm System, Suppression System & Public address system (IS- 2189:1988):-

1. Auto Fire Detection System with the help of Heat and Smoke Detectors shall be installed in the entire 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.
2. 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.

Lighting Protection of the Building:-

This protection for buildings shall be provided as given in Part-VIII Building Services, Section-2 Electrical installation.

Yard Hydrants

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

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 meters distance from a hose nozzle when fully extended.

MULTI LAYER AUTOMATED MECHANIZED CAR PARKING SYSTEM:

1. Structural design:- The MLCP shall be constructed of structural steel construction.
2. Vertical Deck Separation:- For MLCP having Multi Car Parking level, vertical Fire separation between



the upper and lower decks by using a non-perforated and non-combustible materials (Structural Steel Plate) shall be provided. This is to minimize direct impingement of flame to the car in the upper deck and also to prevent dripping of any possible leaking fuel to the lower deck. Proper drainage system shall have to be provided for accidental leaking of oil from the car and sand bed shall be provided at the ground level.

3. Fire Engine Access Way:- Access way shall be provided for the Fire Engine to gain access to the car park entrance and exit.

4. Fire Hydrant:- Fire Hydrants are to be provided in accordance with CI 4.4 .

5. Natural Ventilation:- Each Car Parking deck shall be provided with at least 50% external ventilation opening of the perimeter wall areas and uniformly distributed.

6. Sprinkler & Detection System:- Open Modular Type Sprinkler along with Detectors shall be provided in all MLCP areas as per relevant I.S. Specification. Cross zone wise Sprinkler system shall have to be implemented.

7. Fire Pump:-Separate Jockey and Sprinkler pump of suitable capacity shall have to be installed for the MLCP areas.

8. Operating System:-Both Mechanical and Manual type operating system shall have to be provided.

AIR-CONDITIONING SYSTEM:- (SPLIT TYPE)

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.

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 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 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.

2. Floor number and direction sign of escape shall be displayed prominently as per clause 4.11 Annex D



of N.B. Code.

3. 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.
4. 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.
5. Mock fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.
6. 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 cancelled.

Memo No.: FSR/211862406300001888



Signature Not Verified

Digitally Signed.
Name: DEWAN LEKHA
Date: 06-Jun-2024 13:47:19
Reason: D-Sign
Location: E-Dist 2.0

Divisional Fire Officer

West Bengal Fire & Emergency Services