



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

**Memo No.: FSR/211862406300007927**

**Date : 04-04-2025**

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

**To :**  
**Dtc Projects Pvt Ltd**  
**1, Netaji Subhas Road, Kolkata-700001**

**Sub: Fire Safety Recommendation for proposed construction of B+G+P+XXVIII Storied Residential building comprising 6 Nos. Tower shown as Tower- 1, 2, 3, 4, 5, 6 & 153 Nos. G+II Storied Row Housing along with III Storied Club House within a Residential Housing Complex in the name and style as DTC PROJECTS Pvt. Ltd. at Dag No. 832, 833, 834, 835, 879, 884 at Mouza- Kamduni (188), under Kirtipur-II Gram Panchayat, P.O.- Kamduni, District- North 24 Parganas, Pin- 700 135, West Bengal..**

This is in reference to your AIN 211862406300007927 dated 21-Nov-2024 regarding Fire Safety Recommendation for proposed construction of B+G+P+XXVIII Storied Residential building comprising 6 Nos. Tower shown as Tower- 1, 2, 3, 4, 5, 6 & 153 Nos. G+II Storied Row Housing along with III Storied Club House within a Residential Housing Complex in the name and style as DTC PROJECTS Pvt. Ltd. at Dag No. 832, 833, 834, 835, 879, 884 at Mouza- Kamduni (188), under Kirtipur-II Gram Panchayat, P.O.- Kamduni, District- North 24 Parganas, Pin- 700 135, West Bengal.

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 PART:**

- i) The whole construction of all the proposed buildings shall be carried out as per approved plan drawing and conforming by the relevant building Rules of local municipal authority.
- ii) The interior finish decoration of the building shall be made low flame spread materials conforming I.S. specification.



vi) Provision of ventilation at the crown of the central core-duct of the all buildings shall be provided.  
v) Arrangements shall have to be made for sealing all the vertical & horizontal ducts by the materials of adequate Fire resisting capacity.

vi) Electrical Service ducts and shafts should be enclosed by a walls of 2 hours fire rating at all floor levels in each towers/buildings.

#### OPEN SPACE & APPROACH:-

i) The open space surrounding the whole towers and buildings shall be kept clear open to sky and shall conform the relevant building rules as well as permit the accessibility and maneuverability of Fire Service Hydraulic ladder jacking with turning facility as shown in the approved plan drawing.

ii) The approach roads shall be sufficient strong to withstand the load of fire engine weighting up to 45 metric ton.

ii) The width and height of the access gate into the premises shall not be less than 7.00X6.00 Mt. respectively of the abutting road.

#### STAIRCASE:

i) All staircase of the buildings shall be enclosed type. Entire construction shall be made of bricks having Fire Resisting Capacity not less than four hours.

ii) The staircase of the building shall have permanent vents at the top equal to 5% of the cross sectional area of the staircases enclosures and openable sashes at each floor level equal to 15% of the said cross section area shall have to be provided in the external wall of the all buildings.

iii) 1 No. staircase including 1 no. lift enclosed by F.C.D as shown in the plan and shall be pressurized from ground to top floor as shown in the plan for Towers. A positive pressure of 25-30 pa. shall be maintained inside the staircase and shall be maintained round the clock where natural ventilation not possible shall be treated as Fire Tower.

iv) The width of the all staircases, corridors and exit doors shall be made as shown in the plan shall conform the relevant buildings rules with up to date amendments.

v) The entire staircase shall be extended up to terrace of the building and shall be negotiable to each floor except club house building.

vi) Fire and smoke doors at the entrances of all the staircase in each block enclosures as shown 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 openable in the direction of escape.

vii) Glazing and glass bricks shall not be used surrounding the staircases.

viii) No entrance for AHU/Electrical unit will be allowed from staircases landing as also no A.H.U. or Electrical room will be allowed adjacent to the staircase or Fire escape corridor/lift.

ix) Considering the all staircases are only means of evacuation, so emergency lighting arrangement, directional sign of EXIT etc. shall be made conforming the relevant I.S. code in the regards.

#### LIFT :

i) The walls of the lift enclosure shall be at least two hours Fire resisting type. Collapsible gate shall not be permitted.

ii) One of the lift car in each tower/block shall be designed at high speed FIRE LIFT and conspicuously indicated. In case normal power failure, it shall automatically trip over to alternate supply trough and those lift shall be so wired that it comes down at eh ground level land comes to stand still with door open. The speed of the FIRE LIFT's in the all towers shall be such that it can reach the top from the ground floor within 1 minute in visual indications of floor numbers shall incorporated in the lift cars.

iii) 1 No. lift of HIG Block from ground to top floor shall be pressurized as shown in the plan, a positive pressure of 25-30 pa. shall be maintained inside the lift wall and lobby. Pressurization shall be maintained round the clock.

iv) Exit from the lift lobby if located in the core of the buildings, shall be through a self-closing smoke stop door of 1 hour Fire resisting.

v) Public Address system shall be incorporated inside the all lift cars in each tower.

#### REFUGE AREA :

i) Refuge area is not less than 15 Sq/m. shall be provided on the external wall with cantilever projection at 8th, 13th, 17th, 22nd, 27th floor level as shown in the plan.

ii) The Refuge areas shall be of Fire resisting construction and protected with self-closing F.C.D at the entrance from the half landings at staircase lobbies. The projected refuge area shall be surrounded by 1.00 Mt. high wall and any utility shall not be allowed. Stair at refuge area and opening window not allowed.

iii) The position of Refuge areas shall be such so that they are negotiable by the Fire Service Aerial



hydraulic ladder from the ground, there shall be marked an area 9X15 below each refuge platform and P.A. System also shall be established inside the all refuge platform.

#### BASEMENT :

The basement shall be adequately ventilated. The exit from the basement shall be from open Air and from any points of safety. The entire basement shall be protected with Automatic Sprinkler System. Mechanical Smoke Extractor System from basement levels shall also be provided and connected to the auto actuation system with the smoke detection system. It shall also have an arrangement to start it manually. Mechanical Smoke Extractor shall have an alternate source of power supply. The staircase of basement shall be of enclosed type having Fire resistance of not less than 2 hrs. and shall be situated at the periphery of the basement to be entered at ground level only from the open air and in such position that smoke from any Fire in the basement shall not obstruct any exit having the ground upper floor of the building. The basement floor area does not exceeds 3000m<sup>2</sup> and shall be suitably compartmented by Water Curtain as shown in plan drawing as per N.B.C. Part – IV 2016.

#### FIRE FIGHTING WATER :

Underground Water Reservoir for Fire having water capacity of 4,00,000 Lt. capacity exclusively for Fire Fighting purpose as shown in the plan. Overhead Water Reservoir for Fire of 10,000 Lt. capacity for all high rise towers as shown/marked in the plan exclusively for Fire fighting purpose with replenishing arrangements @ 1000 Lt./min. preferably from two different sources of water supply shall be provided. The water reservoir 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. Provision of necessary manhole shall be made on the top of both reservoir as per specification. The deep tube wells for the replenishment of the reservoir shall be incorporated with the auto starting facility with the actuation of auto detection system of the whole premises and shall also connected with dual power supply units.

#### HYDRANT SYSTEM:

i) The buildings shall be provided with Wet Riser 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 2850 Lt./min. at the ground floor level outlet in around at farthest blocks and minimum 900 Lt./min. at the top most outlet. In both cases the running pressure shall not be less than 3.5kgs/sq.cm. All other requirements shall conforming I.S. 3844 – 1989.

ii) Provision for Hose Reel in conjunction with Wet Riser shall be made at each floor level in all towers. Conforming the relevant I.S. specification.

iii) 150 mm. dia. Ring Main Hydrant arrangement covering the entire premises along with all Row Housing Units to be provision of pillar type yard hydrants with hose boxes, containing 2 lengths of 63 mm. delivery hose and short branch pipe shall be provided at all the strategic location at 30 Mt. interval gap and surrounding the all towers/buildings conforming I.S. 3844-1989 (upto date amendment). Provision of adequate numbers of Fire Service Inlet shall have to be provided in surrounding the said Housing Complex as per relevant I.S specification.

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

Separate Fire pump shall have to be provided for Sprinkler Installation system of the Housing Complex. Provision of 2 nos. Jockey Pump (Hydrant and Sprinkler) 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 or as per suitability. To avoid high pressure in lower level of wet riser in the entire blocks shall have provided multi stage, multi-outlets pumps (creating pressure zones) or variable frequency driven pumps or any other suitable arrangement to be provided as per N.B.C. Part IV 2016. Pump capacity shall be based on the covered area of the building. One set of pumps shall be provided for each 100 hydrant or part thereof, with a maximum of two sets. In case of more than one pump set installation, both pump sets shall be interconnected at their delivery headers and for which alternative provision of additional set of pumps, the objective can be met by providing additional diesel pump of the same capacity and doubling the water tank capacity as required for one set of pumps.

#### SPRINKLER Installation :



The automatic Sprinkler Installation shall be provided in all floor area in all tower except Row Houses(low rise buildings), club house, basement, double layer car parking and covered car parking area of the all blocks as per I.S. 9972. Alarm Gong to be incorporated along with the sprinkler system. A sprinkler test line shall have to be established for routine checking in all towers area also.

Double Layer Car Parking :

- i) Structural Design : The double layer car parking shall be constructed of structural steel construction.
- ii) Vertical Deck Separation : Double layer car parking having vertical Fire separation between the upper and lower decks by using a non-perforated and non-combustible materials (structural Steel plate) shall be provided. 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.
- iii) Fire Engine Access Way : Access way shall be provided for the Fire Engine to gain access to the car park entrance and exit.
- iv) Fire Hydrant : Fire Hydrant shall have to be provided in accordance with the provision of N.B.C Part IV 2016 and relevant I.S. specification.
- v) Natural Ventilation : Each car parking deck shall be provided with at least 50% external ventilation openings on the perimeter wall areas with uniformly distribution pattern.
- vi) Sprinkler & Detection System : Open Modular type Sprinkler along with detectors shall be provided in all double layer car parking area as per relevant I.S. Specification.
- vii) Cross zone wise Sprinkler system shall have to be implemented.
- viii) Operating System : Both Mechanical and Manual type operating system for double layer car parking shall have to be provided.

Kitchen Protection (if any for other than residential flat) :

1. The entire kitchen areas should be protected with automatic water sprinklers extended from the existing water base system in the building. However, no sprinklers should be provided within 3 m of cooking equipment and kitchen hood.
2. The entire kitchen areas should be installed with automatic detectors of approved rating. The installed thermal detectors should be connected to the existing fire detection alarm panel of the building.
3. First aid fire-fighting equipment of approved class should be installed as per provisions of IS: 2190-2010.
4. Cleaning of kitchen exhaust ducts should be done periodically to ensure that carbon soot does not accumulate in the duct to avoid chances of outbreak of fire.
5. Installed detectors and sprinklers should be checked periodically to ensure that the sensors detecting equipment are not coated with grease and other suspended particular matter and thus their sensing capabilities are desensitized.
6. Grease strip should be available for efficient and regular cleaning of concrete or paved floors of kitchen and also drainage areas.

GAS BANK (if any for other than residential flat):

- i) Liquefied Petroleum Gas (LPG) store shall be on the ground level of the said building area which to be constructed at least 2mt. distance between an installation and any building, public place, roadways, and other surroundings. The installation shall be protected from excessive weathering by sun, rain etc. and from tampering by unauthorized person.
- ii) Adequate ventilation at ground level i.e. 100 mm. above of gas bank, open to.
- iii) Cylinders shall be located on a concrete or brick floor, raised minimum 100 mm. from ground level in case of outdoor installations. The doors of the LPG storage room to be made with non-inflammable materials which shall open outwards & shall have louvers/wire mesh to ensure visibility & ventilation.
- iv) L.P. Gas detector/sensor to be installed at the gas bank area. Auto suppression system shall have to be provided inside the gas bank as per relevant I.S. specification. Cylinders shall not be stored along with any combustible materials.
- v) Full & empty cylinders are to be stored separately. All the gas cylinders shall be kept in upright position with chaining to prevent accidental fall.
- vi) All gas cylinders shall be capped when not in use. The gas cylinder storage area shall not have any loose electrical cables, wires or lines in the vicinity.
- vii) Avoid storing cylinders in confined location with improper ventilation.

ELECTRICAL INSTALLATION & DISTRIBUTION :

- i) The heavy electrical installation including Transformers, Switch Gears, L.T./H.T. rooms, Substations etc. and the distribution system of the entire premises shall be protected with both auto detection and



suppression systems.

- ii) Electrical distribution system of all the towers shall be made in the form of concealed wiring or in heavy gauge M.S. conducted continuously bonded to earth cables shall be I.S. marked and preferable be of F.R.L.S. categories.
- iii) The vertical & horizontal electrical ducts shall be sealed at each floor level in all buildings by fire resisting material.
- iv) The electrical main & meters shall be adequately protected with CO2/DCP Fire extinguisher.
- v) Fire Control Panel and Both way public address system linked between all floors shall be provided at the control room.

#### AUTO DETECTION AND ALARM SYSTEM :

- i) Manually Operated Electrical Fire Alarm system incorporating with hooter shall be installed in all floor area in all the towers including club house in all floor area of the buildings in such a manner that maximum travel distance shall not be more than 30 Mt. in order to reach any of the call points.
- ii) Auto Fire Alarm System which analogue addressable smoke/heat detectors as per suitability shall be installed in all floor area in all towers, club house (where smoke detection system not effective, beam detection system to be provided at double height hall with stage area), double layer and covered car parking area and basement area also except Row Houses.
- iii) Hooter will be sounded in such a manner so that an operation of a Manual Call Point Hooters will sounded on the same floor and immediate alternate floor.
- iv) Both Way Public Address System linked between all floors in all towers and connected to Fire Kiosk and Fire Control room shall have to be established.
- v) Close Circuit T.V. shall have to be provided for the entire project area of the complex and monitoring display unit shall be established in the Fire Kiosk room and Fire Control room.

#### Alternative Power Supply :

Arrangement shall have to be made to supply with the help of suitable generator's of adequate capacity to operate at least the Fire Pumps, Pump for deep Tube-well(if any), Fire Detection & Alarm System, pressurization system, Fire Control room, Fire Lift and also for illuminating the staircase of all towers, corridors, Fire Refuge areas etc. as well as other place of assembly of the all blocks in case of normal power failure, other requirements of the system shall be made conforming relevant I.S. Specification.

#### AIR CONDITIONING SYSTEM (If any) :

- i) The A.H.U. shall be separate for each floor with the system Air Ducts for individual floors.
- ii) Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the Air Conditioning system.
- iii) The system of auto shut down of A.H.U. shall be incorporated with the auto detection and alarm system.
- iv) The air handling units room shall not be used for storage of any combustible materials.
- v) Escape route like staircase, common corridors, lift lobby etc. shall not be used as return air passage.
- vi) When the automatic Fire Alarm operates the respective air handling units of the air conditioning system shall automatically switched off.

#### 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 (including electrical rooms, Fire Pump room, DG set room etc.) of the whole premises shall be made in accordance with I.S. 2190 – 1992.

#### Fire Kiosk:

There shall be a centralised Fire Kiosk shall be established in the entrance at ground floor of the all blocks, fitted with audio visual fire alarm control panel linked with all fire detection and alarm system, public address communication system etc. to all the floors of all the blocks in the housing complex. This room shall always be manned round the clock with trained staff in this regard.

#### GENERAL RECOMMENDATIONS :

- i) Fire License shall have to be obtained for proposed storing and processing with L.P.G and other highly combustible articles.
- ii) Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of all buildings.
- iii) Floor numbers and directional sign of escape route shall be displayed prominently in all blocks at each floor area.
- iv) The employees and security staff shall be conversant with installed Fire Fighting equipments of the



buildings and to operate in the event of Fire and Testing.

v) A crew of trained Fireman shall be maintained round the clock for safety of the all blocks.

vi) Disposal type B.A. mask to be kept at Fire Kiosk room always for emergency Fire situation.

vii) The department of Fire & Emergency Services, Government of West Bengal, shall not take any responsibility in respect of any legal dispute if pending or arises about the title of land/property.

On compliance of all the above Revised Fire and Life safety Recommendation, 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 said occupancy shall be issued on being satisfied with the test and performance of safety aspects of installation of the all buildings.

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

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**Director**

**West Bengal Fire & Emergency Services**

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