

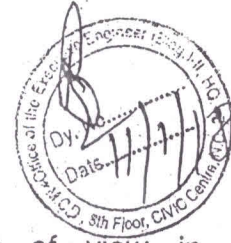
GOVERNMENT OF NATIONAL CAPITAL TERRITORY OF DELHI  
HEADQUARTERS: DELHI FIRE SERVICE  
-Connaught Place: New Delhi-110001

No. F.6/DFS/MS/2018/BP/17

Dated: 11.01.18

To,

The Executive Engineer (Bldg.) HQ  
South Delhi Municipal Corporation,  
9<sup>th</sup> floor, Civic centre, Minto Road  
New Delhi 110002



Subject: Clearance from fire safety point of view in r/o proposed addition/alteration in existing building at Plot No. B-4, Vasant Kunj, New Delhi.

Sir,

Please refer your letter No. D/677/EE(B) HQ I/SDMC/17 dated 22.12.2017 on the above cited subject. In this connection, this is to inform you that the matter was examined and observed that there is a proposal of addition/alteration in a Group Housing Society (Residential Occupancy) at Plot No. B-4, Vasant Kunj, New Delhi on a plot area of 15000 m<sup>2</sup>. The complex is proposed to have 06 blocks namely Block-1, 2,3,4,5 & 6. Block-1 to 4 are comprised of stilt + 9/10 upper floors having height 32.85 meter each, whereas Block-5 & 6 are comprised of stilt + 11 floors having height 35.85 meters each. Further, 02 level combined basement is proposed under the blocks. The details of each building block is as under.

S. No	Name of Block	No. of Floors	Height (m)	Refuge Area/ Fire Check floor (SQM/LVL)	No. of Stairs	Width of Staircases (m)	No. of Fire Tower	No. of Lifts	Ground coverage (SQM)	Occupancy
1.	Block-1	Stilt + 9/10	32.85	Not required as balcony provided	02	1.5 m each	01	03	151.798 of each unit	Residential
2.	Block-2	Stilt + 9/10	32.85	Not required as balcony provided	02	1.5 m each	01	03	151.798 of each unit	-do-
3.	Block-3	Stilt + 9/10	32.85	Not required as balcony provided	02	1.5 m each	01	03	151.798 of each unit	-do-
4.	Block-4	Stilt + 9/10	32.85	Not required as balcony provided	02	1.5 m each	01	03	151.798 of each unit	-do-
5.	Block-5	Stilt + 11	35.85	Not required as balcony provided	02	1.5 m each	01	03	151.798 of each unit	-do-
6.	Block-6	Stilt + 11	35.85	Not required as balcony provided	02	1.5 m each	01	03	151.798 of each unit	-do-
7.	02 level combined basement	-	-	-	12	1.5 m each	06	06	8178.757 & 8279.574	Parking and services

The building abuts on 30 meter wide road and approachable through 6.0 meter wide main gate. 06 meter wide internal road with 09 m turning circle all around the blocks is proposed to be provided.

The fire safety arrangements such as fire extinguishers, hose reel, downcomer/wet riser, automatic sprinkler system in entire basement, MOEFA, underground water storage tank of 2,00,000 liters capacity and overhead water tank of 25,000 liters capacity on block1 to 4 and of 5,000 liters capacity on block 5 & 6, Fire control Room, fire pump house having 03 electric pumps of capacity 2280 LPM



one for hydrant, one for sprinkler system and other for water curtain in basement, 01 diesel driven pump of 2280 LPM capacity and 02 jockey pumps having capacity 180 LPM each, terrace pump of 900 LPM capacity on the terrace of block 01 to 4 each, smoke management, pressurization system are proposed to be provided in the building.

Open set back area is not checked as it shall be checked by concerned Building sanctioning authority. The building shall be used strictly as per the provisions of Building Bye laws.

**There is no objection to this department for the construction of the said building subject to the compliance of the following fire safety recommendations:-**

1. **Access to building:** The plot abuts on 30 meter wide road and the building is accessible through 6.0 meter wide main gates, this meets the requirement of part 4 NBC 2016 / UBBL 2016. 06 meter wide fire tender movement road with 09 meter turning circle around building as proposed shall be ensured. It must be capable of taking the load of fire engine weighing up to 45 tonnes.
2. **Number, width, Type and arrangement of exits:** staircases as mentioned in the above table are proposed in the building blocks. This meets the requirement of travel distance as per UBBL 2016. All the continuous staircases shall be segregated at ground/stilt floor. The clear-cut width of the staircases/exits shall be maintained at the time of completion and exits/staircases shall meet the requirement of UBBL-2016 / part 4 NBC 2016. The exit doorway shall be openable from the side which they serve as per clause 7.12.5 of UBBL 2016. Further the fire towers shall be as per clause 1.4.46 / 9.3.13 of UBBL 2016.
3. **Protection of exits by means of fire check door(s) and or pressurization:** The fire check doors of minimum 2 hrs fire resistance rating shall be provided at the entrance of each staircase and lift lobby. Pressurization system for staircase/lift well and lift lobbies shall be installed as per the requirement of NBC Part IV/UBBL-2016.
4. **Compartmentation:** The basements shall be suitably compartmentalized so that the fire / smoke remain confined to the area where fire incidents have occurred and does not spread to the remaining part of the building. This shall conform to clause 8.4.6 of UBBL-2016 & NBC-IV.
  - a. The services, standby generator, store etc. must be segregated from other by erecting fire-resisting wall of not less than 04 hours rating. Each of the compartments must be individually ventilated and the opening for entry into each of these compartments must be fitted with self-closing fire / smoke check doors of not less than one hour fire rating fitted with magnetic latches.
  - b. All electric cables ducts and shafts shall be properly sealed at all floors with fire resisting material of similar rating. These shafts shall be minimum 02 hours fire rating.
  - c. Under no circumstances, two services shall pass through the same shaft, i.e. separate shaft be used for different purpose.
  - d. The entry to the staircase from all levels shall be segregated with a self-closing fire / smoke check door of not less than 02hour fire resistance rating. All vertical and horizontal openings including the gap between the glazing and the slab at each level in entire building shall be sealed properly with the non-combustible material having 02 hr fire resistance. Wherever false ceiling / suspended ceiling is provided, the same shall be of non-combustible in nature and that the compartmentation shall be extended up to ceiling level.
5. **Smoke Management system:** Smoke venting facilities shall be provided as per NBC Part IV, Fire and Life Safety. Mechanical extractors shall have an interlocking arrangements and the system shall be of such design as to operate on actuation of heat/ smoke sensitive detectors or sprinklers. Smoke extractor system shall be



designed to permit 12 air changes per hour in case of fire in upper floors and basement. A system of fresh air supply shall be provided at floor level and smoke outlet at ceiling level. Following points shall be ensured :

- a. All ducting shall be constructed of substantial gauge metal conforming to IS: 655. Air duct serving main floor areas, corridors etc. shall not pass through the staircases enclosures.
  - b. Automatic fire dampers shall be provided in the ducts at the inlets of the fresh air and return air of each compartment/floor.
  - c. Automatic fire dampers shall be closed automatically upon operation of a detector/sprinkler.
  - d. The air ducts for every floor/compartment shall be separated. In no way interconnected with the ducting of any other compartment.
6. **Fire Extinguishers:** The portable fire extinguishers of ISI mark suitable to risk shall be provided. The number of the fire extinguishers may have to be increased later when the layout of the partition etc. is known. All the fire extinguishers must be installed and maintained in accordance with IS: 2190-1992.
7. **First Aid Hose Reels:** A hose reel containing 30 m length of 20 mm bore terminating into a shut-off nozzle of 5 mm outlet connected directly to riser shall be provided as per clause 9.3.9 of UBBL-2016. This shall conform to IS: 884/1998.
8. **Automatic Fire Detection and alarming systems:** Not applicable as per NBC 2016, part 4.
9. **MOEFA (Manually Operated Electric Fire Alarm):** Manually operated electric fire alarm (MOEFA) shall be provided near escape point in the building including machine rooms as per clause 9.3.9 of UBBL-2016 and the same shall conform to IS: 2189/1999.
10. **Public Address System:** The public address system shall be provided in the building, having loudspeakers in the common area. The microphone, amplifier and control switches of public address system shall be installed in the fire control room.
11. **Automatic sprinkler system:** The Automatic sprinkler system shall be installed in the entire basement as per clause 9.3.9 of UBBL-2016 in accordance with BIS: 15105 / 2002. Flow alarm switch/gong shall be incorporated in the installation for giving proper indication/sound. The pressure gauge shall also be provided near the testing facility. The entire system including pump capacity and head, size of pipe network, orifice control etc. shall be provided in accordance with the relevant code. Draw off connection and fire service inlet shall also be provided at ground floor level.
12. **Internal Hydrants and Yard Hydrants:** Wet riser/downcomer system in the building near staircases shall be provided as per clause 9.3.9 of UBBL-2016 and it shall conform to IS 3844-1989. Hose box of suitable dimension shall be provided near each internal hydrant. Its design shall be such that it can be readily opened in an emergency. Each box shall contain two lengths of 63 mm diameter, 15m length, rubber lined delivery hoses conforming to IS: 636 complete with 63 mm instantaneous coupling conforming to IS: 903 with a nozzle of 16 mm diameter. Yard hydrants shall be provided all around the building.
13. **Pumping arrangements:** A Fire pump house having 03 number of electrical engine driven pumps of 2280 LPM capacity each (one for hydrant, one for sprinkler and other for water curtain), 01 No. of Diesel Engine Driven Pump of similar capacity and 02 Jockey pumps of 180 LPM capacity with suitable head, terrace pump of 900 LPM capacity on the terrace of block 01 to 4 each, shall be provided as per part 4 NBC 2016. The pump house shall be directly accessible and all the pumps shall be automatic in operation. The suitable orifice plate



- /reducer shall be provided to maintain the requisite pressure of 3.5 Bars at the remotest point. All the pumps shall be automatic in operation.
14. **Captive water storage for firefighting:** As per clause 9.3.9 of UBBL-2016 / part 4 NBC 2016, the underground water storage tank capacity of 2,00,000 liters as proposed shall be provided for firefighting only. The replenishment through bore well or from the town main be ensured @ 1000 LPM. This shall conform to the requirements given in Part 4 National Building Code of India 2016. Additional Overhead tank having of 25,000 liters capacity on block 1 to 4 and of 5,000 liters capacity on block 5 & 6 shall be provided on the terrace for firefighting only. The underground water storage tank shall be approachable by the fire engine. Draw off connection/ fire service inlet shall be provided. Further, a ladder or any other form of open access to the overhead tank shall be provided as per clause 7.10.3 of UBBL 2016.
15. **Exit Signage:** Exit signages shall be provided in the building at appropriate locations. Floor level marking, all exits and exit way marking signs (green in color) in entire building must be illuminated and wired to independent circuit supplied by alternate source of power supply. Wiring for the illuminated exit signs must be protected in such a manner that it cannot get involved in fire. Illuminated/ glowing strips paint shall be provided at each level to guide the direction for escaping towards a safe place. The sizes and color of the exit signs shall be as per IS 9457:1980.
16. **Provision of Lifts:** 02 passenger lifts and 01 fire lift in fire tower in each block are proposed to be provided in the building. The lifts shall be installed strictly in accordance with the provision of clause 9.3.3 of UBBL-2016 / part 4 NBC 2016.
17. **Standby power supply:** As per clause 8.5.3 of UBBL-2016 emergency lighting, exit signs, staircase and corridor lighting circuit, fire pumps, smoke extraction system shall be powered from an additional source of power supply like generator and shall be automatic in action. The emergency lighting system shall be capable of continuous operation for a minimum duration of 1 hour and 30 minutes. The emergency lighting shall be provided to be put on within 1 second of the failure of the normal lighting supply.
18. **Refuge Area:** As each residential unit has been proposed with balconies, therefore refuge area is not applicable as per clause 9.3.6 of UBBL 2016.
19. **Fire Control Room:** As proposed on the building plans a Fire Control Room shall be established at entrance floor in accordance with the provisions contained in clause 9.3.10 of UBBL-2016. Trained personal shall be appointed round the clock to look after the fire protection arrangements in the building.
20. **Special Fire Protection Systems for protections of Special risks:** The construction of electric sub-station and installation of Dry Transformer, LT & HT panels shall be as per the provisions specified by the Electrical Authority. However, the following points shall be followed:
- The HT & LT panels shall be separated with the walls of 2 hours fire resistance rating. It is necessary to separate shield wall extending up to the one meter on sides above the highest point of the transformer. Special protection systems as applicable shall be provided as per clause 5.1.4, 5.1.5, 5.1.6 of Part 4 NBC 2016.
  - The electric distribution cables/wiring shall be laid in a separate duct. The duct shall be sealed at every floor with non-combustible materials having the same fire resistance as that of the duct. Low and medium voltage wiring running in shaft and in false ceiling shall run in separate conduits;
  - Water mains, telephone lines, intercom lines, gas pipes or any other service line shall not be laid in the duct for electric cables; use of bus ducts/solid rising mains instead of cables is preferred.



- d. Separate circuit for firefighting pumps, staircases and corridor lighting and blowers for pressurizing system shall be provided directly from the main switch gear panel and these circuits shall be laid in separate conduit pipes, so that fire in one circuit will not affect the others.
- e. The inspection panel doors and any other opening in the shaft shall be provided with air tight doors having fire resistance of not less than 2 Hrs. the electric installations shall be as per BIS 1646.
- f. The fire protection of kitchens shall be done as per clause G 5.2 of part 4 NBC 2016.

The approval of building plans shall be valid only for the present layout of the floors; any subdivision of the floors shall only be done by ensuring the proper means of escape, with the prior approval of this department.

It shall be ensured that provisions of all requisite fire and life safety measures stipulated in UBBL-2016 and National Building Code of India 2016 shall be complied in letter and spirit before the occupancy of the building under intimation to this department. For any complaint/grievances regarding building permit, please contact on mail id [hpc\\_buildingpermit@dda.org.in](mailto:hpc_buildingpermit@dda.org.in).

Yours faithfully

Encl: a set of building plans

  
(Atul Garg)  
Chief Fire Officer  
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