

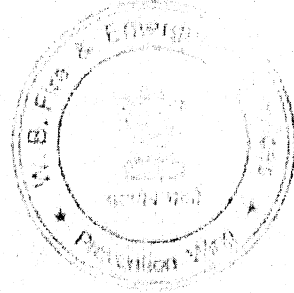
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Government of West Bengal
Office of the Director General
West Bengal Fire & Emergency Services
13-D, Mirza Ghalib Street, Kolkata-700 016

Memo No.: WBFES/ 6037/14 /How/RBC/1286/14(1286/14) Date: 05/12/14

From: The Director in charge
Fire prevention Wing
West Bengal Fire & Emergency Services.

To: Mr. Sougata Dhara
Architect,
For D-Form,
21 AC Block,
Salt Lake City, Sector - 01,
Kolkata - 700 064.



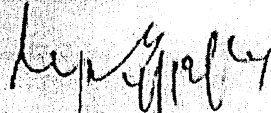
Sub: Fire Safety Recommendation for proposed Residential Building
B+G+XII storied at Holding No. 436, Ward No. 16, G.T.Road (N),
P.S. Golabari, Dist. Howrah.

This is in reference to your letter No. 8122 dated 30.10.2014 regarding
Fire Safety measure for proposed construction of B+G+XII storied Residential
Building under premises at Holding No. 436, Ward No. 16, G.T.Road (N), P.S.
Golabari, Dist. Howrah.

The plan drawings submitted by you was scrutinized and marked as
found necessary from the safety point of view. In returning one set of plan with
recommendation, this office is issuing fire safety recommendation in favour of the
aforesaid building subject to compliance of the following fire safety measure.
However, necessary sanction and approval must be obtained from competent
authority.

Encls:-

1. One set of Plan.
2. Recommendation placed
in this file.


Director in charge
Fire prevention Wing
West Bengal Fire and Emergency Services

RECOMMENDATION

A. CONSTRUCTION :

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

B. OPEN SPACE & APPROACH :

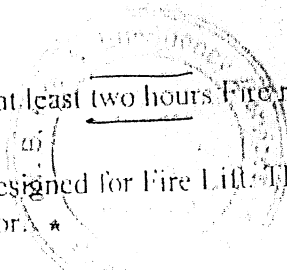
1. The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and maneuverability of Fire appliance with turning facility.
2. The approach roads shall be sufficiently strong to withstand the load of Fire Engine weighing up to 45 M.T.
3. The width and height of the access gates into the premises shall not be less than 5 M and 5 M respecting abutting the road.

C. 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 openable sashes at each floor level in the external wall of the building.
3. The width of the staircases shall be made as marked in the plan. Corridors and the exit doors shall conforming the relevant building rules With up-to-date amendments.
4. All the staircase shall be extended up to terrace of the building and shall be negotiable to each floor.
5. Fire and smoke doors at the entrances of all the Staircase enclosures 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 openable in the direction of escape.
6. Automatic smoke venting system with manual control facility shall be installed on the lobbies leading to stair cases as per relevant I.S. specification and provisions of N.B.C.

D. LIFT :

1. The walls of the lift enclosure shall be at least two hours Fire resisting type.
2. Collapsible gate shall not be permitted.
3. One of the lift in each block shall be designed for Fire Lift. The word "FIRE LIFT" shall be conspicuously written at ground floor. *



Automatic smoke venting system with manual control facility from lift shaft and lift lobby have to be made as per guide line of N.B.C. Part -IV, Annex 'C' and relevant I.S. specifications.

I. REFUGE AREA:

1. Three nos. of Refuge areas in each block not less than 15sq m., shall be provided on the external wall with cantilever projection or other suitable means at level of 18.45mtr, 26.4mtr, and 38.825 mtr, as shown in the plan drawing.
2. The refuge areas shall be of Fire resisting construction and protected with self closing F.C.D. at the entrance from the corridor or the staircase lobbies.
3. The position of refuge Areas shall be such that they are negotiable by the Fire service Ladder from the ground.

F. FIRE FIGHTING WATER :

Underground water reservoir having water capacity of 2 x @ 75,000 lts. Capacity and Over Head water reservoir of 2 x @ 25,000 lts. capacity exclusively for Firefighting purpose with replenishing arrangements @ 2000 lts./min. Preferably from two different sources of water supply shall be provided. The Fire Water Reservoir shall have overflow arrangement with the domestic Water Reservoir as well as to avoid stagnancy of water. The water reservoirs shall be kept full at all time.

G. HYDRANT SYSTEM :

1. The building 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 2280 lts. /min at the ground floor level outlet and minimum 900 lts./min at the top most outlet. In both cases the running pressure shall not be less than 3.5 Kgs./Cm². All other requirements shall conform I.S. 3844-1989.
2. Provision for Hose Reel in conjunction with Wet Riser shall be made at each floor level. Conforming the relevant I. S. Specifications.
3. Yard Hydrant/Ring Main Hydrant with provision of adequate numbers Hydrant shall be installed surrounding the residential building in accordance with relevant I.S. specification.
4. Provision of Fire service inlets shall be made as per relevant I.S. specification.

H. SPRINKLER INSTALLATION:

The automatic Sprinkler installation shall be provided in the Basement area staircase and lift lobbies of the building as per I.S. 9972.

I. 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 preferably be of ~~ground floor~~ type. (2)

Provision of Jockey Pump shall also have to be made to keep the water raised 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 be of positive type.

Fire Pump Room:

Fire pump room shall be constructed at the level of minus (-)2.3 m from 0 level to facilitate positive suction. A separate staircase as marked shall be made exclusively for the pump room from Ground floor.

J. BASEMENT :

1. The basement shall be adequately ventilated conforming provisions laid down in NBC Part IV and relevant I.S. specifications.
2. Basement shall not be used other than car parking and Fire Pump Room.
3. The basement shall be protected with Auto Sprinklers system and hose reel system etc.

K. 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 building as laid down in I.S. specification 1946 - 1982 and relevant clauses of N.B.C.
2. The vertical and horizontal ducts shall be supply sealed at each floor level.
3. The electrical main & meters shall be adequately protected with automatic CO₂/D.C.P extinguishing system.
4. Installation of Transformer shall be made outside of the building superstructure.
5. Alternative Power Supply :
 - a. 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, Auto smoke venting system and also for illuminating the Staircase, corridors etc. and other places of assembly of the building in case of normal power failure.

L. INTELLIGENCE ANALOGUE SYSTEM :

1. Auto Fire Alarm System with analogue addressable smoke/heat detector as per suitability shall be installed in each floor stair, lift lobby and basement.

2. 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.
3. 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 .
4. 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.
5. 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.

M. AIR CONDITIONING SYSTEM: (If any)

1. The A.H.U. shall be separated for each floor with the system Air Ducts for individual 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 combustibile materials.

N. 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. 15683 with effect from January 2012.

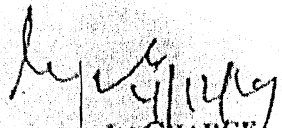
O. GENERAL RECOMMENDATIONS :

1. Fire License shall have to be obtained for proposed storing and processing with L.P.G. and other highly combustibile articles.
2. Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.
3. Floor numbers and directional sign of escape route shall be displayed prominently.
4. The Occupants, employees and security staff of the building shall be conversant with installed Fire Fighting equipments of the building and to operate in the event of Fire and Testing.
5. A Fire Control room including a close circuit T.V system shall have to be installed for continuous monitoring of the building.

6. Special rescue equipment like Smoke Hood, self contained B.A. set portable lights at least two pairs (4 sets) shall be made available in the main fire Control Room of the premises.
7. Lightning arrester arrangement to be provided at the highest points of the buildings as per relevant I.S specification.
8. Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire Safety installation and equipments installed in the building to keep them in perfectly good working conditions at all times.
9. A crew of trained Fireman under an experienced Officer shall be maintained round the clock for safety of the building.
10. Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.
11. Each year 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 installation of the building.

On compliance of all the above Fire 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 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 shall be treated as cancelled.


DIRECTOR IN CHARGE
FIRE PREVENTION WING
WEST BENGAL FIRE & EMERGENCY SERVICES

