



Fire AUDIT & PREVENTION **Wing**

EMERGENCY & FIRE SAFETY STANDARDS

ESSENTIAL SAFETY REQUIREMENT (For buildings over 38 feet)

1. Emergency Access to Buildings

- All Multistory building shall be constructed only on roads minimum 30 feet wide to allow easy access to emergency and fire vehicle. The emergency and fire vehicles shall be able to easily access the emergency exit staircase of the building. Appropriate parking for all occupants of the buildings shall be ensured so that the safe passage to Emergency and fire vehicle ensured.
- The route of all outdoor wires/ cable shall be managed in such a way so that they do not create overhead obstruction in emergency operation and movement of emergency and fire vehicles.

2. Stander of Emergency Staircase

- The emergency staircase in a building shall be located in such a way that it provide clear access to the road for rescue operation and fire fighting. It may also be used by the occupants of the building routinely to access to the road so that it remains obstruction free all the time.
- The staircase shall be separated from the main building by two fire doors, opening outwards. The fire doors shall be hinge type with a cleared width of at least 3 feet and minimum one hour fire resistant rating.
- The staircase shall have an accessible window or opening towards the road with adequate size (minimum 2.5x 3 feet) to enable evocation of persons in case of an emergency.
- The staircase (s) route shall be adequately illuminated at all times and free from all obstruction.
- A building having over 10,000 square feet area per floor shall have minimum two staircases, one on each side of the building. The maximum travel distance to a staircase shall not exceed over 100 feet.

3. Emergency Exit Signs.

Each staircase shall be clearly marked by a sign reading "EXIT" in plainly legible letters not less than 6 inches high.

4. Fire Extinguishers

- All building shall have one multipurpose (A,B,C) dry chemical powder 6 Kg Fire Extinguishers for each 2000 square feet of floor area. At least two fire extinguishers of 6 kg each shall be placed on each floor (if floor size is less than 2000 square feet).
- The maximum travel distance to a fire extinguisher shall not exceed 75 feet but for kitchen areas this distance is 30 feet.

5. Standards for Fire Hydrant system

- All multistory building having four to ten floors shall have a pressurized internal fire hydrant system which independent over – head water tank of minimum 7500 gallons and external under – ground water tank of 15000 gallons. In case where the building is over 10 storeys high, it shall have an independent over head tank of 15000 gallons and external under – ground water tank of minimum 30000 gallons. The external under – ground tank shall accessible to the Fire – fighting vehicles at all times.
- The pressurized internal fire hydrant system shall be independent and separable from the normal water supply system and shall be maintained at 3-5 bar pressure at all floors through an electric pump of suitable capacity for fire fighting, which remains operational even if the power supply of main building is shut off.
- The hydrant system shall have two compatible standard inlets at ground level for connecting with the emergency fire vehicles.
- The pressurized internal fire hydrant system shall have a water hydrant outlet (with shutoff valve and a pressure gauge) connected to a 1.5 inch X 100 feet fire hose stored in metallic hose cabinet at or near an emergency staircase.
- All fire fighting pumps shall be placed in such a manner that their base is at least two feet below the bottom of the water tank.

6. External fire Hydrant System

- All building shall have engine operated standby external fire fighting pump connected to an adequate water source and supplying water to an external pipeline serving to external fire hydrants.
- The external fire hydrant shall be located at least six feet away and not more than fifty feet from the building. The distance between any two hydrants shall not exceed more than 100 feet.

7. Emergency Evacuation Plan

- The emergency evacuation plan shall be displayed at conspicuous places in all buildings.
- The plan shall describe layout of the building with complete fire fighting equipment and emergency exits.

- An emergency assembly area shall be clearly marked outside the building.

8. Air- conditioning System

The central air conditioning where provided shall have ventilation ducts and false ceiling made of non – inflammable material except asbestos.

9. Fire Alarm System

An automatic fire alarm system shall provide in buildings. The control panel of system shall be placed in the watch/ guard room preferably at the entrance of the building which shall be manned at all times.

10. Sprinkler System

All internal car parks below ground level shall have adequate automatic water sprinkler system connected to the pressurized internal fire hydrant system.