

**GOVERNMENT OF ANDHRA PRADESH
MUNICIPAL ADMINISTRATION AND URBAN DEVELOPMENT (M1) DEPARTMENT**

Memo No. 4011/M1/2008

Dated: 19-05-2008.

Sub: - Municipal Administration and Urban Development (M1) Department
– Additional Fire Safety measures for existing High – Rise Buildings
having deficiency in setbacks – Reg.

Ref: - 1. G.O. Ms. No. 45 MA&UD Dept Dated 04-02-2006
2. G.O. Ms. No. 154 MA&UD Dept Dated 13-03-2007
3. G.O. Ms. No. 246 MA&UD Dept Dated 19-03-2008
4. From the D.G Fire and Emergency Services Lr. Rc. No.
1428/E2/2006 Dated: 13-05-2008.

In continuation of the orders issued in the references 2nd and 3rd cited, regarding the Fire Safety measures to be provided in the existing buildings, the DG Fire and Emergency Services in the reference last cited has suggested certain further additional fire safety measures for existing High Rise Buildings.

The issue was further discussed by the Principal Secretary to Government, Home Department with the Principal Secretary to Government, M.A&U.D.Department, Director, Fire and Emergency Services, Officer on Special Duty, M.A&U.D.Department, and a reputed practising structural engineer as it was felt that the additional fire safety requirements should be rational and implementable taking into consideration the structural safety of such existing multi storied buildings.

After careful consideration of the proposal of the Director General of Fire and Emergency Services, the Government hereby issue the additional fire safety measures for existing high rise buildings having deficiencies in setbacks, as given in the annexure to this Memo.

**S.P. SINGH
PRINCIPAL SECRETARY TO GOVERNMENT**

To
Commissioner and Special Officer,
Greater Hyderabad Municipal Corporation,
Hyderabad.
The Director General of Fire and Emergency Services,
A.P. Hyderabad.
Commissioner and Director of Municipal Administration,
A.P. Hyderabad.
The Director of Town and Country Planning,
A.P. Hyderabad.
All the Commissioners of Municipal Corporations and Municipalities in the State
through Commissioner and Director of Municipal Administration, A.P. Hyderabad.
The Vice chairmen of Urban Development Authorities in the State.
The Chairperson and Managing Director, A.P. TRANSCO, Hyderabad.
The Managing Director, HMWS&SB.

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SECTION OFFICER

ANNEXURE**(Memo No. 4011/M1/2008 Dated: 19 – 05 - 2008.)**

Additional Fire Safety measures required to be complied in respect of existing Multi-storied Buildings where the mandatory open spaces are deficient, which shall be over and above the requirements given in G.O. Ms. No. 154 M.A. & U.D. (M1) Department dated: 13-3-2007:

- A) Residential apartment buildings : (height below 24 meters)
- B) Residential apartment buildings : (height above 24 meters)
- C) Commercial/Business/Assembly/Hotel & Educational buildings deficient in 6 meters. open spaces on one side and on abutting road side.
- D) Commercial/Business/Assembly/Hotel & Educational buildings deficient in 6 meters. open spaces on three sides and on abutting road side.

A) ADDITIONAL FIRE SAFETY MEASURES REQUIRED FOR RESIDENTIAL APARTMENT BUILDINGS (A 4) : (Height Above 18 meters and up to 24 meters.)

- i) **The available open spaces** all round the building should be made obstruction-free to facilitate movement of fire fighting personnel and equipment.
- ii) Each floor or for every built up area of 500 sq m minimum **(a)** One 2 Kg. Dry Chemical Powder or one Carbon-Di-Oxide 2 Kgs. and **(b)** One Water type 9 liters Fire Extinguisher should be provided
- iii) The building should have an additional static water supply storage of not less than 10,000 liters either in the Underground/Overhead tank and any deficit shall be made good and provided.
- iv) Yard Hydrant system should be provided on all sides of the building.
- v) Four way Fire Brigade Inlet.
- vi) A pump of minimum 5 HP capacity should be provided and connected to the fire fighting system.

B) ADDITIONAL FIRE SAFETY MEASURES REQUIRED FOR RESIDENTIAL APARTMENT BUILDINGS (A4) : (Height above 24 meters.)

- i) **The available open spaces** all round the building should be made obstruction-free to facilitate movement of fire fighting personnel and equipment.
- ii) Each floor or for every built up area of 500 sq m minimum **(a)** One 2 Kg. Dry Chemical Powder or one Carbon-Di-Oxide 2 Kgs.

and **(b)** One Water type 9 liters Fire Extinguisher should be provided

- iii) The building should have an additional static water supply storage of not less than 15,000 liters either in the Underground/Overhead tank and any deficit shall be made good and provided.
- iv) Automatic Detection and Alarm system should be provided on each floor higher than 24 meters.
- v) Manual alarm system shall be provided on all floors
- vi) Yard Hydrant system should be provided on all sides of the building with two numbers fixed monitors on the side where open space is deficient.
- vii) Automatic sprinkler system should be provided on each floor higher than 24 meters.
- viii) Compartmentation should be done by providing Fire doors @ one balcony per apartment on the deficient side/s.
- ix) One Diesel Pump of 1620 LPM capacity and one Jockey pump of 180 LPM capacity should be provided.

C) ADDITIONAL FIRE SAFETY MEASURES REQUIRED FOR COMMERCIAL/ BUSINESS/ ASSEMBLY/HOTELAND EDUCATIONAL BUILDINGS DEFICIENT IN 6 MTS. OPEN SPACES ON ONE SIDE AND ON ABUTTING ROAD SIDE :

- i) **The available open spaces** all round the building should be made obstruction-free to facilitate movement of fire fighting personnel and equipment.
- ii) Each floor or for every built up area of 500 sq m minimum **(a)** One 2 Kg. Dry Chemical Powder or one Carbon-Di-Oxide 2 Kgs. and **(b)** One Water type 9 liters Fire Extinguisher should be provided
- iii) The building should have additional static water supply storage of not less than 15,000 liters either in the Underground/Overhead tank and any deficit shall be made good and provided.
- iv) Additional external staircase of R.C.C or M.S. of 1.25 meters. Width, from ground floor to terrace connecting all floors through a fire door and accessible from all parts of the floor on the side where there is deficiency (other than abutting road side).

Note : In cases, where it is not possible, the staircase from terrace to ground floor (roof exit) shall be provided in a strategic place in consultation with Fire and Emergency Services Department to ensure safe evacuation of inmates.

- v) Wet-riser cum downcomer with landing valve, 2 Nos. Delivery Hoses and One Hose reel shall be provided on all floors on the additional staircase.
- vi) Water shower curtain to overcome exposure hazard to neighboring property covering entire side and all floors shall be provided on the side where there is deficiency in open space.
- vii) Automatic Sprinkler system should be provided in the entire building.
- viii) Each Shop/Room should be provided with (a) One 2 Kg. Dry Chemical Powder or one Carbon-Di-Oxide 2 Kgs. and one Water type 9 liters Fire Extinguisher.
- ix) Automatic Detection and Alarm system should be provided on each floor higher than 24 meters.
- x) Manual alarm system shall be provided on all floors

- xi) Yard Hydrant system should be provided on all sides of the building with two numbers fixed monitors on the side where open space is deficient.
- xii) Compartmentation should be done by providing Fire doors @ one balcony per establishment on the deficient side/s.
- xiii) One Diesel Pump of 2850 LPM capacity and one pump of 180 LPM capacity should be provided.
- xiv) For Hotels, Malls, Multiplexes and Institutional (Hospital) occupancies where there is considerable life risk due to presence of large number of occupants/public the following shall be provided :
 - a) A qualified Fire Officer with experience of not less than 3 years should be appointed as a caretaker for the entire premises. He should be entrusted with the responsibility of maintaining the systems suggested above, to layout fire orders and Fire & Emergency Services. If not available, a person may be appointed and training will be imparted by the Fire and Emergency Services Department.
 - b) A Fire Command Station should be established in the lobby of building on the entrance floor and such command station be adequately illuminated.
 - c) The main control of the public address system, and fire alarm system should be at Fire Command station.
 - d) A Fire Safety Director/ Building Evacuation Supervisor should be nominated for the building. He should nominate a Fire Warden for each floor of the Building, who will initiate action as deemed fit to ensure fire safety in public interest.
 - e) Trained fire fighting crew round the clock with at least minimum 2 Nos. of 9 liters Mist equipment. The required training will be imparted by the A.P. Fire and Emergency Services Department.

D) ADDITIONAL FIRE SAFETY MEASURES REQUIRED FOR COMMERCIAL /BUSINESS ASSEMBLY /HOTEL AND EDUCATIONAL BUILDINGS DEFICIENT IN 6 MTS. OPEN SPACES ON THREE SIDES AND ON ABUTTING ROAD SIDE :

- i) **The available open spaces** all round the building should be made obstruction-free to facilitate movement of fire fighting personnel and equipment.
- ii) Each floor or for every built up area of 500 sq m minimum **(a)** One 2 Kg. Dry Chemical Powder or one Carbon-Di-Oxide 2 Kgs. and **(b)** One Water type 9 liters Fire Extinguisher should be provided
- iii) The building should have an additional static water supply storage of not less than 25,000 liters either in the Underground/Overhead tank and any deficit shall be made good and provided.
- iv) If the built-up area is less than 500 sq. meters, one additional external staircase of R.C.C. or M.S. with 1.25 meters. Width from ground floor to terrace connecting all floors through a fire door and accessible from all parts of the floor shall be provided in a strategic place to ensure safe evacuation of inmates.

- v) If the built-up area is more than 500 sq. meters, one additional external staircase of R.C.C./M.S. with 1.25 meters. Width from ground floor to terrace connecting all floors through a fire door and accessible from all parts of the floor shall be provided on each side where open space is deficient (other than abutting road) to ensure safe evacuation of inmates.

Note : In cases, where it is not possible, the staircases from terrace to ground floor (roof exit) shall be provided in a strategic places in consultation with Fire and Emergency Services Department to ensure safe evacuation of inmates.

- vi) Wet-riser cum downcomer with landing valve, 2 Nos. Delivery Hoses and One Hose reel shall be provided on all floors on the additional staircase.
- vii) Water shower curtain to overcome exposure hazard to neighboring property covering entire side and all floors shall be provided on the sides where there is deficiency in open space.
- viii) Automatic Sprinkler system should be provided in the entire building.
- ix) Each Shop/Room should be provided with (a) One 2 Kg. Dry Chemical Powder or one Carbon-Di-Oxide 2 Kgs. and one Water type 9 liters Fire Extinguisher.
- x) Automatic Detection and Alarm system should be provided in the entire building.
- xi) Yard Hydrant system should be provided on all sides of the building with two numbers fixed monitors on the side where open space is deficient.
- xii) Compartmentation should be done by providing Fire doors @ one balcony per establishment on the deficient side/s.
- xiii) Two Electric and One Diesel Pump of 2850 LPM capacity and one Jockey pump of 180 LPM capacity should be provided.
- xiv) Conversion of the occupancy from high hazard to low hazard especially in higher floors wherever feasible.
- xv) Provision of fire proofing on the side having deficiency in open space and also on the neighboring building where there is exposure hazard.
- xvi) Procuring suitable portable monitors for conducting fire fighting from the periphery or adjacent buildings.
- xvii) For Hotels, Malls, Multiplexes and Institutional (Hospital) occupancies where there is considerable life risk due to presence of large number of occupants/public the following shall be provided :
- a) A qualified Fire Officer with experience of not less than 3 years should be appointed as a caretaker for the entire premises. He should be entrusted with the responsibility of maintaining the systems suggested above, to layout fire orders and Fire & Emergency Services. If not available, a person may be

appointed and training will be imparted by the Fire and Emergency Services Department.

- b) A Fire Command Station should be established in the lobby of building on the entrance floor and such command station be adequately illuminated.
- c) The main control of the public address system, and fire alarm system should be at Fire Command station.
- d) A Fire Safety Director/ Building Evacuation Supervisor should be nominated for the building. He should nominate a Fire Warden for each floor of the Building, who will initiate action as deemed fit to ensure fire safety in public interest.
- e) Trained fire fighting crew round the clock with minimum 1 No. of 9 liters Mist equipment per floor. The required training will be imparted by the A.P. Fire and Emergency Services Department.
- f) Water Tender Type 'B' or 600 liters Mist equipment mounted on Trolley.

S.P. SINGH
PRINCIPAL SECRETARY TO GOVERNMENT

//FORWARDED BY ORDER//

SECTION OFFICER