

4.5. Lowrise Building Fire Protection Systems

- 4.5.1.** Lowrise buildings having building height of up to 15 m and low depth underground buildings or basements shall be provided with Fire protection Systems in compliance with **Table 9.21.a.** and Auxiliary Rooms Fire Protection Systems as per **Table 9.30.**

Table 9.21.a: Lowrise Building Fire Protection Systems

PREDOMINANT OCCUPANCY	SYSTEM REQUIREMENTS	COMBINED FIRE PUMP SET AND FIRE WATER TANK CAPACITIES
A. ASSEMBLY GROUP A, B, C. B. EDUCATION GROUP A, B, C. C. HEALTHCARE GROUP A, D. MERCANTILE GROUP A, B E. HOTEL GROUP A, B, C. F. DAY CARE GROUP A, B, C. G. DETENTION AND CORRECTIONAL GROUP A, B, C. H. MIXED AND MULTIPLE OCCUPANCIES I. LOW DEPTH UNDERGROUND BUILDINGS OR BUILDINGS WITH 2 OR LESS BASEMENTS	1. IF BUILT-UP GROUND FLOOR AREA IS UP TO 500 m² i. Hose Reel System shall be provided throughout the building as per Section 3.3. ii. Dry landing valves shall not be required.	1. IF BUILT-UP GROUND FLOOR AREA IS UP TO 500 m² iii. The capacity of the fire pump set shall be 50 gpm at pressure as required to satisfy 4.5 bar at the most remote Hose reel outlet valve.. iv. The water tank shall have capacity of 30 minutes of operation, complete with low water level detection and instantaneous refilling arrangement for utility water supply. v. Fire Pump and/or Fire water tank shall be permitted to be installed on the roof, if existing structure is capable of accommodating such additional load.
	2. IF BUILT-UP GROUND FLOOR AREA IS 501 m² TO 3600 m² i. Sprinklers shall be provided throughout the building including basements and podiums (open as well as closed) as per Section 3.5. ii. Auxiliary rooms and various areas of the building shall be protected as per Table 9.30. iii. Hose reel system shall be provided throughout the building as per Section 3.3. iv. Dry landing valves shall not be required.	2. IF BUILT-UP GROUND FLOOR AREA IS 501 m² TO 3600 m² v. The capacity of the fire pump set shall be 300 gpm at pressure as required to satisfy 4.5 bar at the most remote Hose reel outlet valve.. vi. The water tank shall have capacity of 30 minutes of operation, complete with low water level detection and instantaneous refilling arrangement for utility water supply.
	3. IF BUILT-UP GROUND FLOOR AREA IS MORE THAN 3600 m² i. Sprinklers shall be provided throughout the building including basements and podiums (open as well as closed) as per Section 3.5. ii. Auxiliary rooms and various areas of the building shall be protected as per Table 9.30. iii. Wet riser System shall be provided throughout the building as per Section 3.4. iv. Wet risers shall be interconnected at the highest level.	3. IF BUILT-UP GROUND FLOOR AREA IS MORE THAN 3600 m² v. The capacity of the fire pump set shall be 750 gpm if there are 2 standpipes and 1000 gpm if there are more than 2 standpipes at pressure as required to satisfy 6.9 bar at the most remote Landing Valve. vi. The water tank shall have capacity of 30 minutes of operation, complete with low water level detection, dedicated direct breaching inlet for refilling and instantaneous refilling arrangement for utility water supply.