Table 9.24.: Parking Facility Fire Protection Systems

OCCUPANCY	SYSTEM REQUIREMENTS	FIRE PUMP AND FIRE WATER TANK CAPACITIES
C. PARKING GROUP C OPEN PARKING STRUCTURE	**1. IF BUILT-UP GROUND FLOOR AREA IS UP TO 2000 m^2 AND BUILDING HEIGHT IS LESS THAN 15 M** i. Hose Reel System shall be provided throughout the building as per Section 3.3. ii. Dry risers shall not be required.	**1. IF BUILT-UP GROUND FLOOR AREA IS UP TO 2000 m^2 AND BUILDING HEIGHT IS LESS THAN 15 M** iii. The capacity of the fire pump set shall be 50 gpm at a pressure as required to satisfy 4.5 bar at the most remote Hose reel outlet valve. iv. The water tank shall have capacity of 45 minutes of operation, complete with low water level detection and instantaneous refilling arrangement.
	2. IF BUILT-UP GROUND FLOOR AREA IS UP TO 2000 m^2 AND STRUCTURE HEIGHT IS 15 M—UP TO LESS THAN 23 M i. A wet riser System shall be provided throughout the building as per Section 3.4. ii. Wet risers shall be interconnected at the highest level.	**2. IF BUILT-UP GROUND FLOOR AREA IS UP TO 2000 m^2 AND STRUCTURE HEIGHT IS 15 M—UP TO LESS THAN 23 M** iii. The capacity of the fire pump set shall be 750 gpm if there are 2 stairs, 1000 gpm if there are 3 stairs and 1000 gpm if there are more than 3 stairs at pressure as required to satisfy 6.9 bar at the most remote landing valve. iv. The water tank shall have capacity of 60 minutes of operation, complete with low water level detection, dedicated direct breeching inlet and instantaneous refilling arrangement.
	3. IF BUILT-UP GROUND FLOOR AREA IS MORE THAN 2000 m^2 OR BUILDING HEIGHT IS 23 m AND ABOVE i. Sprinklers shall be provided throughout the Parking structure as per Section 3.5. ii. A wet riser system shall be provided throughout the building as per Section 3.4. iii. Wet risers shall be interconnected at the highest level.	**3. IF BUILT-UP GROUND FLOOR AREA IS MORE THAN 2000 m^2 OR BUILDING HEIGHT IS 23 m AND ABOVE** iv. The capacity of the fire pump set shall be 1000 gpm at a pressure as required to satisfy 6.9 bar at the most remote Landing Valve. v. The water tank shall have a capacity of 60 minutes of operation, complete with low water level detection, dedicated direct breeching inlet and instantaneous refilling arrangement.
	4. IF PLOT AREA IS MORE THAN 20,000 m^2 i. Yard Fire Hydrants shall be provided as per Section 3.11., in a loop to cover the entire development. ii. Yard hydrants shall not be required where infrastructure yard hydrants are available within 60 m of every exterior part of the structure. Tapping from existing yard hydrant network shall be permitted to extend the yard hydrants to comply with coverage requirements. iii. Sprinklers, wet risers or hose reel system shall be in accordance with Table 9.24.C.1., 2., or 3., as applicable.	**4. IF PLOT AREA IS MORE THAN 20,000 m^2** iv. Where a fire pump set is combined and serves yard hydrants and internal building systems, the capacity of the fire pump set shall be 1000 gpm at a pressure as required to satisfy 6.9 bar at the most remote Landing Valve and yard hydrant. v. Where fire pumpset serves only the yard fire hydrants, pump capacity shall be 1000 gpm at a pressure as required to satisfy 6.9 bar at the most remote hydrant valve. vi. Combined Fire water tank shall have capacity of 60 minutes of operation, complete with low water level detection, dedicated direct breeching inlet and instantaneous refilling arrangement