**Table 9.24.: Parking Facility Fire Protection Systems**

| PREDOMINANT OCCUPANCY | SYSTEM REQUIREMENTS | FIRE PUMP AND FIRE WATER TANK CAPACITIES |
|---|---|---|
| **A. PARKING GROUP A , ENCLOSED PARKING STRUCTURE** | **4. IF PLOT AREA IS MORE THAN 20,000 $m^2$**<br><br>i. Yard Fire Hydrants shall be provided as per **Section 3.11.**, in a loop to cover the entire development.<br>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.<br>iii. Sprinklers, wet risers and hose reel system shall be provided for the building in accordance with **Table 9.24.A.1., 2., or 3.** as applicable. | **4. IF PLOT AREA IS MORE THAN 20,000 $m^2$**<br><br>iii. 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 hydrant valve and the hose outlet.<br>iv. 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.<br>v. The 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. |
| **B. PARKING GROUP B , MECHANICAL/ ROBOTIC PARKING STRUCTURE** | **1. IRRESPECTIVE OF AREA**<br><br>i. A deluge water spray system shall be provided as per **Section 3.8.**, such that each vehicle is under the deluge spray coverage.<br>ii. A wet riser system shall be provided throughout the building, near stairs and on access walkways as per **Section 3.4.**<br>iii. Wet risers shall be interconnected at the highest level.<br><br>**2. IF PLOT AREA IS MORE THAN 20,000 $m^2$**<br><br>i. Yard Fire Hydrants shall be provided as per **Section 3.11.**, in a loop to cover the entire development. The fire Hose for interior of the building shall be tapped from the hydrant loop.<br>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. | **1. IRRESPECTIVE OF AREA**<br><br>iv. The capacity of the fire pump set shall be sufficient to satisfy minimum of 2 adjacent deluge water spray system zones at a pressure as required to satisfy 6.9 bar at the most remote Hose reel outlet valve.<br>v. The water tank shall have a capacity of 60 minutes of operation, complete with low water level detection and instantaneous refilling arrangement.<br><br>**2. IF PLOT AREA IS MORE THAN 20,000 $m^2$**<br><br>iii. 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 the hydrant outlet.<br>iv. 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 outlet.<br>v. The 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 |