

3.4. Underground and Basement areas other than Parking usage

3.4.1. Underground and basement areas shall be provided with smoke control systems in accordance with **Table 10.22.**

Table 10.22.: Underground and Basement Smoke Control System Requirements

LOCATION	SYSTEM REQUIREMENTS
1. EXIT STAIRS	<ul style="list-style-type: none"> i. Stairs connecting underground buildings and basements having a depth of more than 7 m from the fire access level shall be provided with a stair pressurization system, in accordance with Section 2.6. ii. Such stair pressurization shall extend to all the levels of the building, if the basement stair is common to all the floors above grade. iii. A stair pressurization using a vestibule, in accordance with Section 2.16. shall be permitted.
2. PASSENGER ELEVATOR LOBBY	<p><u>1. WITH PASSENGER ELEVATOR LOBBY</u></p> <ul style="list-style-type: none"> i. Every elevator connecting underground and basement areas shall have an elevator lobby. ii. Elevators with lobbies shall be arranged as smoke barriers. iii. Barriers forming the elevator lobbies shall have a minimum of 1-hour fire resistance rating. iv. Elevator lobby door assemblies shall confirm to the transmitted temperature at an end point not exceeding 250°C above ambient at the end of 30 minutes of the fire exposure. v. Elevator lobby door leaves shall be self-closing or automatic-closing. vi. The elevator lobby door leaves shall close in response to a signal from a smoke detector located directly outside the elevator lobby adjacent to or on each door opening. vii. Elevator lobby door leaves shall be permitted to close in response to a signal from the building fire alarm system. viii. No smoke control shall be required for lobby complying to Table 10.22.2. <p><u>1. WITHOUT PASSENGER ELEVATOR LOBBY</u></p> <ul style="list-style-type: none"> i. Underground, basement and basement parking areas without elevator lobby shall not be permitted.
3. FIREMAN'S LIFT LOBBY (FIRE-FIGHTING LOBBY)	<ul style="list-style-type: none"> i. Underground buildings and basements having a depth of more than 7 m from the fire access level shall be provided with a firefighting lift. ii. Such fire man's lift shall extend to all levels of the building. iii. The firefighting lift lobby shall not be required. However, where provided with a firefighting lift lobby, they shall be in accordance with Chapter 1. iv. The firefighting lift lobby enclosure shall be constructed of smoke partitions, enclosed in one hour fire-resistance rating and shall be arranged as smoke barrier. v. A smoke control or smoke purge shall not be required for firefighting lift shafts when the fire man's lift is provided with a firefighting lobby. vi. A firefighting lift pressurization using a vestibule, in accordance with Section 2.16. shall be permitted.
4. ENCLOSED EXIT AND EXIT ACCESS CORRIDORS	<ul style="list-style-type: none"> i. Corridor and open circulation areas at underground spaces and basements, other than parking shall be provided with a smoke management system in accordance with Section 2.8. ii. Enclosed rooms having a floor area greater than 280 m², shall be provided with a dedicated and independent smoke exhaust system in accordance with Section 2.17. OR Mechanical smoke purging system using a dedicated ducting in accordance with Section 2.13., shall be provided.