2.5. LPG Central Tank Design and Installation

2.5.1. General requirements for all types of LPG Tank installations

2.5.1.1. This part of the guideline is intended for LPG tanks installed above ground, Mounded or on roof top of buildings. Section provides Tank separation distances, allowable quantities, construction material, detection system, suppression system, fire fighting requirements and other system configurations in relation to LPG Tank installations.

2.5.1.2. Central tank LPG is preferred to be installed underground or above ground locations rather than roof top locations.

2.5.1.3. LPG containers are not allowed to be installed on the roof of high-rise buildings. However, considering the UAE's buildings and space constraint, it is permitted on roof of buildings up to 90 m., i.e., LPG tanks on Super-highrise buildings (having height more than 90 m) is not allowed. LPG tanks on roof is subjected to strict compliance with Code and regulation requirements and Civil Defence approval.

2.5.2. Piping distribution, Filling and other requirements for all types of LPG Tank installations

2.5.2.1. Piping distribution requirements for any LPG Tank installations shall be as per **Table 11. 4.**

Table 11.4: Piping Distribution requirements for LPG Central Tank installations

ITEMS	LPG PIPING DISTRIBUTION, FILLING AND OTHER REQUIREMENTS FOR LPG CENTRAL TANK INSTALLATIONS
1. PIPING	i. No liquid phase LPG is allowed to be piped into the building. ii. In infrastructure LPG distribution, liquid phase shall be permitted up to compound walls of the building. iii. Two Stage pressure regulators are essential for all LPG installations. First regulator to reduce system pressure to 5 psi (0.350 bar) for large commercial customers or to 75 mbar for residential customers and second stage regulator to reduce it further to 0.5 psi (0.035 bar). However, in large infrastructure LPG networks, the pressure reduction shall be in accordance with length of the network and drop calculations. iv. LPG distribution shall not pass through the following areas. a. Exit routes, Exit stairs , Exit corridors, Exit lobbies b. Public or assembly areas c. Public seating areas d. Fire fighting lobbies, Fire Command Center, Fire pump room, Control Rooms e. Lift shafts, Fire fighting riser shafts, Sprinkler valve rooms, garbage chutes, cavity walls, HVAC ducts f. Under building and equipment foundations g. Compartments or ducts dedicated for electrical switchgear, transformers, generators garbage rooms, refrigeration chambers, cold rooms h. Pipes and vessels containing flammable, oxidizing, corrosive and other hazardous liquids and materials. v. Piping can be routed through ceiling of basements with "pipe-in-pipe" arrangement.