

building gas piping system by the use of a flexible hose; the hose shall be suitable and safe for the conditions under which it can be used. [NFPA 54:9.6.3.1]

- (B) Where industrial gas utilization appliances requiring mobility are connected to the rigid piping by the use of swivel joints or couplings, the swivel joints or couplings shall be suitable for the service required, and only the minimum number required shall be installed. [NFPA 54:9.6.3.2]
- (C) Where industrial gas utilization appliances subject to vibration are connected to the building piping system by the use of all metal flexible connectors, the connectors shall be suitable for the service required. [NFPA 54:9.6.3.3]
- (D) Where flexible connections are used, they shall be of the minimum practical length and shall not extend from one room to another or pass through any walls, partitions, ceilings, or floors. Flexible connections shall not be used in any concealed location. They shall be protected against physical or thermal damage and shall be provided with gas shutoff valves in readily accessible locations in rigid piping upstream from the flexible connections. [NFPA 54:9.6.3.4]

1211.5 Appliance Shutoff Valves and Connections.

Gas utilization appliances connected to a piping system shall have an accessible, approved manual shutoff valve with a nondisplaceable valve member, or a listed gas convenience outlet [NFPA 54:9.6.4], installed within 1.8m (6 ft.) of the appliance it serves. Where a connector is used, the valve shall be installed upstream of the connector. A union or flanged connection shall be provided downstream from this valve to permit the removal of controls. Shutoff valves serving decorative gas appliances shall be permitted to be installed in fireplaces if listed for such use. [NFPA 54:9.6.4.1]

1211.6 Quick-Disconnect Devices. Quick-disconnect devices used to connect appliances to the building piping shall be listed. [NFPA 54:9.6.5.1] When they are installed indoors, an approved manual shutoff valve with a nondisplaceable valve member shall be installed upstream of the quick-disconnect device. [NFPA 54:9.6.5.2]

1211.7 Sediment Trap. When a sediment trap is not incorporated as a part of the gas utilization appliance, a sediment trap shall be installed downstream of the appliance shutoff valve, as close to the inlet of the appliance as practical at the time of appliance installation. The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet, as illustrated in Figure 12-1, or other device recognized as an effective sediment trap. Illuminating appliances, ranges, clothes dryers, decorative vented

appliances for installation in vented fireplaces, gas fireplaces, and outdoor grills shall not be required to be so equipped. [NFPA 54:9.6.7]

1211.8 Installation of Piping. Piping shall be installed in a manner not to interfere with inspection, maintenance, or servicing of the gas utilization equipment. [NFPA 54:9.6.8]

1212.0 Liquefied Petroleum Gas Facilities and Piping.

1212.1 General. Tanks shall be constructed, fabricated, designed, tested, and stamped in accordance with the *ASME Boiler and Pressure Vessel Code*, Section VIII or equivalent International Standard(s) approved by the Authority Having Jurisdiction.

1212.2 Indoor. Tanks having a water capacity exceeding 473L (125 gal.) shall not be installed inside a building or a structure.

1212.3 Outdoor. When tanks are located on roofs or exterior balconies, the buildings shall be constructed with noncombustible materials.

1212.3.1 Grade Level Tank. Liquefied petroleum gas filling connections, liquid level valves, and relief valve tanks having a water capacity equal to or less than 7,600L (2,000 gal.) shall be provided with a distance of not less than 7.6m (25 ft.) from the property line, structure, building exterior wall, building projections, central air-conditioning condenser, ventilation air intake, appliance combustion intake/outlet, clothes dryer outlet, or window air conditioner. Liquefied petroleum gas filling connections, liquid level valves, and relief valve tanks having a water capacity exceeding 7,600L (2,000 gal.) shall be provided with a distance of not less than 30m (100 ft.) from the property line, structure, building exterior wall, building projections, central air-conditioning condenser, ventilation air intake, appliance combustion intake/outlet, clothes dryer outlet, or window air conditioner.

1212.3.2 Underground Tank. Liquefied petroleum gas filling connections, liquid level valves, and relief valve tanks having a water capacity equal to or less than 7,600L (2,000 gal.) shall be provided with a distance of not less than 3.6m (12 ft.) from the property line, structure, building exterior wall, building projections, central air-conditioning condenser, ventilation air intake, appliance combustion intake/outlet, clothes dryer outlet, or window air conditioner. Liquefied petroleum gas filling connections, liquid level valves, and relief valve tanks having a water capacity exceeding 7,600L (2,000 gal.) shall be provided with a distance of not less than 15m (50 ft.) from the property line, structure,