Distribution Line Valves

(Ref. §192.181)
(ADB-94-02)

i. Valves shall be installed on all **high-pressure distribution systems** (systems operating above 7 inches water column) at locations that will **minimize the time required to shut down** each section of the system during an emergency.
ii. In determining valve location and spacing to meet §192.181, for new construction activities and Operations & Maintenance activities where large sections of main are replaced, **The City of Douglas** shall apply the principles contained in **PHMSA Advisory Bulletin ADB-94-02** and **GPTC Guide Material Appendix G-192.181**. As noted in ADB-94-02, defining exact spacing or number of valves is **not feasible** because **local conditions govern design**. When evaluating design for valve locations, the Operator shall consider the following:
    a) A review of existing valves in the system to determine that existing valve(s) spacing is adequate to minimize the time required to shut down the section in the event of an emergency.
    b) Physical characteristics of the system (pipeline material, pipe size, wall thickness, class location).
    c) Extent and character of the area to be isolated (e.g., wall-to-wall paving, urban development density).
    d) Topographical or access barriers (rivers, major highways, railroads).
    e) Number of valves necessary to isolate a section effectively.
    f) Operating characteristics (operating pressure, pressure-feed relationships, primary feeds into business districts).
    g) Nature and concentration of end-use customers, particularly high-occupancy structures, hospitals, schools, and industrial users.
    h) Estimated **response time** for available personnel to arrive on-scene and complete isolation.
    i) Spacing of valve(s) that will allow the affected portion of the system to be isolated by said valve(s) within an estimated time of 30-minutes or less once it is determined that the use of said valve(s) is necessary.
    j) Estimated time required to **restore service** to affected customers.

iii. Each **new regulator station** that controls the flow or pressure of gas shall include a **valve installed on the inlet piping** at a distance sufficient to allow valve operation during any emergency that could preclude access to the station. To the extent possible, **The City of Douglas** will install these valves on the inlet piping at a least 25-feet from the regulator station.

iv. Each **new valve installed on a main** shall be located in a **readily accessible position** with the operating stem or mechanism arranged for **safe, prompt operation** during emergencies. Where valves are installed in **buried boxes or enclosures**, installation must ensure that the box or enclosure **does not transmit external loads** to the pipeline.
Appropriate measures shall be taken to minimize **torsional and bending loads** during valve operation, which may include:

- Use of **low-torque valves**;
- Installation of **protective sleeves or stem extensions**;
- Anchoring or bracing to prevent twisting; and
- Use of **transition fittings** where differing materials are connected.

v. **Documentation**
Records shall be retained as required under 49 CFR Part 192 and made available for review upon request.