High-density polyethylene (HDPE): All materials for new or replacement HDPE plastic mains and services shall be selected for a 125-psig MAOP, unless otherwise designated by the City of Summerville.

HDPE Pipe <u>Minimum</u> Specification:

- ½" CTS PE4710 SDR-N/A, 0.090 wall
- ½" IPS PE4710 SDR-9.33, 0.090 wall
- ¾" IPS PE4710 SDR-11, 0.095 wall
- 1" IPS PE4710 SDR-11, 0.119 wall
- 1 ¼" ISP PE4710 SDR-11, 0.151 wall
- 2" IPS PE4710 SDR-11, 0.216 wall
- 4" IPS PE4710 SDR-11, 0.409 wall
- 6" IPS PE4710 SDR-11, 0.602 wall

HDPE Fittings <u>Minimum</u> Specification:

- All fittings and valves shall be Category 1
- All fittings and valves shall be corrosion resistant
- All fittings and valves shall be rated for a minimum of 125 psig MAOP.

C. Distribution Line Valves (Ref. §192.181), (ADB-94-02)

i. Valves shall be designed and installed in all high-pressure distribution systems (systems operating over 7" W.C.) at locations that will reduce the time to shut down each section of the system in an emergency.

ii. When determining valve location and spacing to meet the requirements of §192.181, the City of Summerville shall utilize the guide material developed by the Gas Piping Technology Committee (GPTC). As noted in Advisory Bulletin ADB-94-02, to specifically define the requirement for location and number of emergency valves is not feasible because the location and number of valves is dependent on local conditions, and because local conditions vary greatly. When designing the location and spacing of valves, the City of Summerville shall consider the following:

a. Physical Characteristics such as pipeline material, pipe size, etc.
b. Size and characteristics of area to be isolated (such as wall to wall paving area).
c. Topography features (such as rivers, major highways, and railroads).
d. Number of valves necessary to isolate the area.
e. Operating Characteristics such as operating pressure, pressure feeds, principal feeds into business districts, etc.
f. Number and type of customers such as business districts, high occupancy structures, hospitals, schools, and commercial and industrial users that would be affected

g. Time required for available personnel to arrive on scene and to carry out isolation procedures to stop the flow of gas.
h. Time required for controlling the pressure in the isolated areas by means of venting, transferring gas to adjacent systems, etc.
i. Time required for available personnel to restore service to customers.

iii. Each new regulator station controlling the flow or pressure of gas must have a valve installed on the inlet piping at a distance from the regulator station sufficient to permit the operation of the valve during an emergency that might preclude access to the station.

iv. Each new valve installed on a main must be placed in a readily accessible location with the operating stem or mechanism readily accessible so as to facilitate its operation in an emergency. Valves installed in a buried box or enclosure must be installed so that the box or enclosure does not transmit an external load to the pipeline. Additionally, measures should be taken to limit or reduce torsional loads and other pressures caused by the operation of the valve. This can be achieved through low-torque valves, protective sleeves, anchoring to prevent twisting, and transition pieces when connecting different materials.