

(i) Separation of Water and Sewer Lines:

Protection of the water supply, be it distribution system, production facilities or source is not only prudent but mandatory and absolutely necessary.

Sanitary sewers and appurtenances thereto shall not physically connect to a public or private potable water supply system so as to permit the passage of any sewage or polluted water into the potable supply.

Sewer construction shall not disturb, degrade, or decrease the watertightness of any existing water supply line.

(A) Parallel Water and Sewer Lines:

- (i) Sewer lines should conform to Figure A-1.
- (ii) Common trench construction for water and sewer should be avoided where practical. Where used, the minimum pipe separations of Figure A-1 should be maintained.

(B) Vertical Separation at Crossings of Water and Sewer Lines:

No special precautions should be necessary where top of sewer line is at least 1.5 feet below bottom of waterline and adequate structural protection for each line is provided.

(C) Exceptions: Use of Pressure Pipe Material for Sewer Line:

- (i) Where the above horizontal or vertical separations cannot be maintained, the following pressure pipe materials should be used in addition to whatever waterline improvements or reconstruction that may be advisable or required for protection of water. The use of these pressure pipe materials from manhole-to-manhole is encouraged to avoid discontinuity

of materials.

- (I) Ductile iron pipe, class 50, ANSI Standard A21.51 (AWWA C-151) with either Push-on or mechanical rubber gasket joints in accordance with ANSI Standard A21.11 (AWWA-C 111).
 - (II) PVC pressure pipe, ASTM D-2241, SDR 32.5, (125 psi) with rubber-gasket joint in accordance with UNI-Bell Plastic Pipe Association recommended Standard Specification UNI-B-1 for a pressure-joint assembly.
 - (III) Asbestos-Cement pressure pipe, class 100, ASTM C-296 (AWWA C-400) with rubber gaskets in accordance with ASTM D-1869
 - (IV) High density polyethylene pipe (Driscopipe 1000) PE 3406, minimum SDR 32.5, with butt fused joints.
 - (V) Other materials approved by the State Health Division.
- (ii) At crossings requiring pressure pipe materials, the following should apply with one standard length of special pressure pipe centered over the waterline in all cases:

Pipe Material	Standard Pipe Length	Minimum Laying Length Each Side of Waterline Crossing
Ductile Iron	18 Feet	18 Feet
PVC	20 Feet	20 Feet
Asbestos-Cement	13 Feet	19 Feet
High-Density Polyethylene	38 Feet	19 Feet

(D) Soil Restoration at Crossings:

Soil removed in sewer line trench construction at waterline crossings where sewer crosses over water should be replaced in all areas to as near natural densities as possible through mechanical compaction to restore any natural resistance to groundwater movement which did exist prior to construction. Soil should include no rock fragments over 1-1/2 inch in the pipe zone.

(E) Well Protection:

No sewer pipe should be laid less than 50 feet from any well without specific Health Division approval. Pressure pipe materials should be used to protect wells where minimum setbacks are not obtainable or where additional protection is required as determined by the State Health Division.

(F) Pipe Testing:

Whenever a pressure pipe material is used for any of the above purposes of separation, an appropriate pressure test should be conducted on the pressure pipe to confirm watertightness. Test pressures should be no less than 15 psig where use will be for a gravity sewer and higher where use will be for a pressure sewer (force main).

(G) Other Exceptions should be resolved jointly with the water purveyor and the State Health Division.

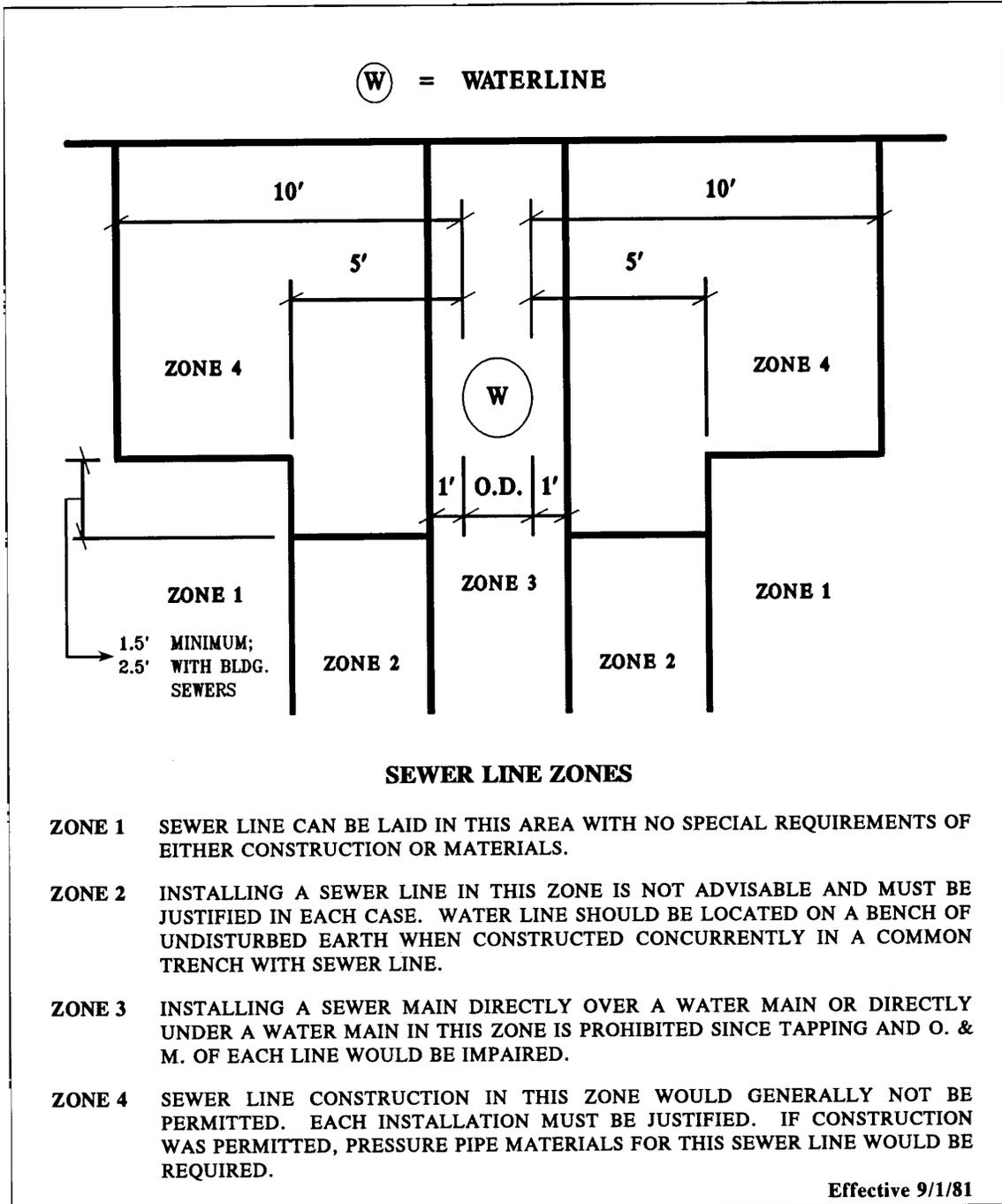


FIGURE A-1
SEPARATION OF PARALLEL WATER-SEWER LINES