

## SECTION 805

### SEPARATION OF WATER MAINS AND SEWERS

#### I. GENERAL

No sewer line shall pass within 50 feet of a drinking water supply well, water supply source, or drinking water structure unless special construction and pipe materials are used to obtain adequate protection, in accordance with the Virginia Health Department *Waterworks Regulations*.

#### 1.1. FACTORS TO BE CONSIDERED

- A. Materials and types of joints for water and sewer mains
- B. Soil Conditions
- C. Service Branch Connections into the Water Main and Sewer Mains
- D. Compensating Variations in the Horizontal and Vertical Separations
- E. Offsetting of Pipes Around Manholes
- F. Parallel Installation
- G. Crossing
- H. Space for repairs and alterations of water and sewer mains
- I. Identification of the physical restraints preventing normal separation

#### 1.2. PARALLEL INSTALLATION

##### A. Normal Conditions

Water mains shall be at least 10 feet horizontally from any sanitary sewer, or sewer manhole; the distance shall be measured on edge.

##### B. Unusual Conditions

When local conditions prevent a horizontal separation of 10 feet, a water main may be closer to a manhole or sanitary sewer provided that:

1. The bottom (invert) of the water main is at least 18 inches above the top (crown) of the sewer.
2. Where the vertical separation cannot be obtained, the sewer shall be constructed with AWWA approved water pipe in accordance with Section 200, and the latest edition of the VDH *Waterworks Regulations*.

### 1.3. CROSSING

#### A. Normal Conditions

Water lines crossing sewers shall be laid to provide a separation of at least 18-inches between the bottom of the water line and the top of the sewer.

#### B. Unusual Conditions

When local conditions prevent a vertical separation as described above, the following construction shall be used:

1. Sanitary sewers passing over or under water mains shall be constructed of AWWA approved water pipe in accordance with Section 200, pressure tested in place in accordance with Section 801, without leakage prior to backfilling.
2. Water mains passing under sanitary sewers shall, in addition, be protected by providing:
  - a. A vertical separation of at least 18 inches between the bottom of the sewer and the top of the water main.
  - b. Adequate structural support for the sewers to prevent excessive deflection of joints and settling on and breaking of the water line.
  - c. The length of water pipe will be centered at the point of crossing so that the joints will be equidistant and as far as possible from the sewer.

#### C. Under no condition shall water pipes pass through or come in contact with any part of a sewer manhole.

## II. EXECUTION

Not Applicable to this Section.

## III. MEASUREMENT FOR PAYMENT

Not Applicable to this Section.

End of Section