



PARALLEL SEPARATION BETWEEN A WATER MAIN AND SEWER/STORM MANHOLE

The sewer/storm drain manhole is treated the same as a sewer/storm drain line with regard to water and sewer/storm drain separations based on the following:

- A sewer or storm drain main back-up may fill the manhole with liquid whereby the manhole becomes an extension of the main.
 - Per NAC 445A.6715.1 (b), a sewer main includes "any unidentified conduit with a diameter that exceeds 6 inches".
 - NAC 445A.6639 "Sewer line" defined. (NR S 445A.860) "Sewer line" means a pipe or conduit and any appurtenances, including catch basins and manholes, used to convey wastewater or surface drainage. (Added to NAC by Bd. of Health, eff. 2-20-97)
 - Per UDACS 2.22.03.A. (2), a separation of four (4) feet from a water lateral to the exterior of a manhole is the same as the separation requirement from a water lateral to a sewer lateral.
- I. Water mains shall be installed ten (10) feet from center of a sewer or storm drain manhole similar to requirement of UDACS 2.22.01.A (1).
- II. When a manhole is less than 10' but at least 6' from a water main, UDACS 2.22.01.B (2) must be satisfied. To comply the following shall be satisfied:
- A. To protect against corrosion, the sewer manhole will be installed in accordance with DCSWCS 2.2.10.i or Agency approved "Raven Lining System" or Agency approved equal. (Sewer Manhole only)
 - B. To help ensure water tightness, the manhole will be constructed as follows:
 - 1. Use of full-strength grout per DCSWCS standards.
 - 2. Watertight joints using Agency-approved seals at manhole sections and grade rings per DCSWCS standards.
 - C. One of the following options as approved by Wastewater Agency:
 - 1. The water line (main) shall be installed per UDACS 2.22.02.B.3 (b) in a sleeve of water quality pipe or installed per UDACS 2.22.02.B.3 (d) encased with cement slurry given Agency approval.
 - 2. Encasement of manhole with a minimum of four inches of cement slurry (300 psi +/-). The slurry will extend from six inches above the joint where the cone meets the top barrel to a depth of at least one 12 inches below the invert of the water main per UDACS 2.22.01.B.2.c (2).¹
- OR**
- Water tight Manhole per Wastewater Agency & SNHD accepted method including but not limited to:
- Warren Environmental lining systems
 - Raven lining system
- III. When a manhole is less than 6' from a water main, parts A, B, C1 and C2 above apply. Manholes shall be tested for leakage.

For a storm drain manhole, the above applies **except for** omitting part A regarding corrosion protection.

UDACS - "Uniform Design and Construction Standards for Potable Water Systems" - 2010

DCSWCS - "Design and Construction Standards for Wastewater Collection Systems" - 2009

¹ COLV Sewer Agency does NOT allow.