



STANDARD SPECIFICATIONS FOR WATER AND SEWER
CONSTRUCTION IN ILLINOIS, LATEST EDITION.

41-2.01 PROTECTION OF WATER MAIN AND WATER SERVICE LINES

41-2.01A GENERAL

Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

41-2.01B HORIZONTAL SEPARATION – WATER MAINS AND SEWERS

- (1) Water mains shall be located at least ten (10) feet (3.1 m) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.
- (2) Water mains may be located closer than ten (10) feet (3.1 m) to a sewer line when:
 - (a) local conditions prevent a lateral separation of ten (10) feet (3.1 m); and
 - (b) the water main invert is at least eighteen (18) inches (460 mm) above the crown of the sewer; and
 - (c) the water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
- (3) When it is impossible to meet (1) or (2) above, both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling. See Standard Drawing No. 18.

06-01-15
WATER AND SEWER
SEPARATION
REQUIREMENTS
(HORIZONTAL
SEPARATION)

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41-2.01C VERTICAL SEPARATION – WATER MAINS AND SEWERS

- (1.) A water main shall be separated from a sewer so that its invert is a minimum of eighteen (18) inches (460mm) above the crown of the drain pipe, whenever a sewer is installed beneath a water main. The water main sewer service connections. The vertical separation shall be maintained for that portion of the water main located within ten (10) feet (3.1m) horizontally of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.
- (2.) Both the water main and sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction when:
 - (a) it is impossible to obtain the proper vertical separation as described in (1) above; or
 - (b) the water main passes under a sewer or drain.

NOTES

- (1) CASING, EITHER THE WATER MAIN OR SEWER, IS ACCEPTABLE IN LIEU OF PLACING THE SEWER IN WATER MAIN EQUIVALENT PIPE.
- (2) THE STORM SEWER CAN BE CONSTRUCTED WITH REINFORCED CONCRETE PIPE USING FLEXIBLE GASKETS JOINTS, (ASTM C361 C443) INSTEAD OF CAST-IRON PIPE. THE STORM SEWER WITH WATER MAIN EQUIVALENT PIPE OR CASING PIPE.
- (3) A vertical separation of eighteen (18) inches (460 mm) between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support the sewer or drain lines to prevent settling and breaking under the main, as shown on the Plans or as approved by the Engineering Department.
- (4) Construction shall extend on each side of the crossing until the perpendicular distance from the water main to the sewer or drain line is at least ten (10) feet (3.1 m) See Standard Drawings No. 19-23.

08-01-15
WATER AND SEWER
SEPARATION
REQUIREMENTS
(VERTICAL SEPARATION)

