

MWRDGC NOTES

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO
LOCAL SEWER SYSTEMS SECTION

GENERAL NOTES

- 1. Local Sewer Systems Section must be notified at least 10 working days prior to the commencing any work (call 708/588-4055).
 - 2. Elevation datum is U.S.G.S. Contour elevation is V/A
 - 3. All floor drains shall discharge to the storm sewer system. (NOT APPLICABLE)
 - 4. All downspouts and footcans shall discharge to the storm sewer system. (NOT APPLICABLE)
- All sanitary sewer pipe materials and joints shall conform to the following pipe materials and joint specifications:

Pipe Material Spec.	Joint Spec.
Vitrified Clay Pipe	
VCP (C-700)	C-425
VCP (No-Bel)(C-700)	C-425
Joint Collar	D-178
Concrete Pipe (C-14)	
RCP (C-76)	C-443
ACP (C-428)	D-186
ABS Sewer Pipe	
Solid Wall 6" dia. SDR 23.5	D-275
ABS D-2751	
ABS Composite/Truss Pipe	
8" - 15" dia.	
ABS D-2680	
PVC Gravity Sewer Pipe	
6" - 15" dia. SDR 26	
D-2241	D-3139
AWWA-C-900	D-3139
18" - 27" dia. F/dy=46	
F-679	
CISP A-74	D-217
DIP A-213	D-217

Note: The District has approved the following materials on a case-by-case basis in addition to those listed above. Please advise the District if considering any of these materials.

Sanitary sewer construction shall require stone bedding 1/4" to 1" in size, with minimum bedding thickness equal to 1/2" for pipe diameter of 8 inches or less and four (4) inches for pipe diameter greater than 8 inches. Materials shall be CA-11 or CA-13 and shall be placed at least 12" above the top of the pipe when using PVC.

"Bond-Seal" or similar flexible couplings shall be used in the construction of sewer pipe of dissimilar materials.

When connecting to an existing sewer main by means of a tee, the following methods shall be used:

1. Circular saw-cut of sewer pipe by proper tools ("Shower-Tap" machine) and proper installation of hub-wye or hub-tee saddle.
2. Remove an entire section of pipe (breaking only the top of one bell) and install a new section with a wye or tee branch.
3. With pipe cutter, neatly cut out desired length of pipe for use with "Bond-Seal" or similar couplings to hold it firmly in place.

When a sewer crosses under a water main, the minimum horizontal distance of 10 feet shall be maintained between the sewer and water main. If it is not possible to maintain this distance, the sewer shall be installed in a trench with a water main trench, keeping a minimum 18" vertical clearance from the water main. If the sewer crosses above a water main, the sewer shall be installed in a trench with a water main trench, keeping a minimum 18" vertical clearance from the water main.

Abandoned tanks shall be removed or shall be cast in place and shall be cast in place with concrete, conforming to the requirements of the sanitary and storm sewer codes.

IEPA REQUIREMENTS FOR SEPARATION OF SEWERS AND WATER MAINS

Section 653.119 Protection of Water Main and Water Service Lines

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

a) Water Mains

1) Horizontal Separation

- A) Water mains shall be laid at least ten feet horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.
- B) Water mains shall not be laid closer than ten feet to a sewer service connection.
 - (1) If it is not possible to prevent a lateral separation of ten feet
 - (2) the water main invert is at least 18 inches above the crown of the sewer; and
 - (3) 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.
- C) Both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, asbestos-cement pressure pipe, prestressed concrete pipe, or PVC pipe meeting the requirements of Section 653.111 when it is impossible to meet (A) or (B) above. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling.

2) Vertical Separation:

A water main shall be installed so the invert is 18 inches above the crown of the drain or sewer whenever water mains are connected to sanitary sewers or sewer service connections. The vertical separation shall be maintained for the full length of the water main located within ten feet horizontal of any sewer or drain. The length of the water main pipe shall be centered over the sewer service connection and shall be equidistant from the sewer main.

Both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, asbestos-cement pressure pipe, prestressed concrete pipe, or PVC pipe meeting the requirements of Section 653.111 when:

- (1) it is impossible to obtain the required vertical separation as described in (a) above; or

- C) A vertical separation of 18 inches 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 the water main.
- D) Construction shall extend on each side of the crossing until the normal distance from the water main to the sewer or drain lines is at least ten feet.

b) Water Service Lines

- 1) The horizontal and vertical separation between water service lines and all storm sewers, sanitary sewers, combined sewers or any drain or sewer service connection shall be the same as water main separation described in (a) above.
- 2) Water pipe described in (a) above shall be used for sewer service lines when minimum horizontal and vertical separation cannot be maintained.

c) Special conditions and alternate solutions shall be presented to the Agency when extreme topographical, geological or existing structural conditions make strict compliance with (a) and (b) above technically and economically impractical. Alternate solutions which are approved provided watertight construction structurally equivalent to approved water main material is proposed.

Water mains shall be separated from septic tanks, disposal and seepage basins by a minimum of 25 feet. Water mains and water service lines shall be protected from the entrance of hydrocarbons through diffusion through material used in construction of the line.

Manholes shall be inspected and leakage tested for tightness in accordance with ASTM C969-94-- "Standard Test Method for Infiltration and Exfiltration Acceptance Testing of Precast Concrete Pipe Sewer Lines", Vol. 04.05, Chemical Resistant Materials, Vitrified Clay, Concrete, Fiber-Cement Products; Mortars; Masonry (1996) (no later editions or amendments) or ASTM C1244-93 "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test", Vol. 04.05, Chemical Resistant Materials, Vitrified Clay, Concrete, Fiber-Cement Products; Mortars; Masonry (1996) (no later editions or amendments) or ASTM C1244-93 to service.