WATER AND SEWER LINE SEPARATION (TCEQ SEC. 290)

GENERAL

When new potable water distribution lines are constructed, they shall be installed no closer than nine feet in all directions to wastewater collection facilities. All separation distances shall be measured from the outside surface of each of the respective pieces.

Potable water distribution lines and wastewater collection lines or force mains that form parallel utility lines shall be installed in separate trenches.

No physical connection shall be made between a drinking water supply and a sewer line. Any appurtenance shall be designed and constructed so as to prevent any possibility of sewage entering the drinking water system.

WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING CRITERIA SHALL APPLY:

NEW WATERLINE INSTALLATION – PARALLEL LINES

Where a new potable waterline parallels an existing, non-pressure or pressure rated wastewater line/force main and the engineer is able to determine that the existing line is not leaking, the new potable waterline shall be located at least two feet above the existing line, measured vertically, and at least four feet away, measured horizontally, from the existing line. Every effort shall be exerted not to disturb the bedding and backfill of the existing wastewater line.

Where a new potable waterline parallels an existing pressure rated wastewater line (pipe & joints) and it cannot be determined by the engineer if the existing line is leaking, the existing wastewater line shall be replaced with a 150 psi pressure rated pipe. The new potable waterline shall be located at least two feet above the new wastewater line, measured vertically, and at least four feet away, measured horizontally, from the replaced wastewater line.

Where a new potable waterline parallels a new wastewater line/force main, the wastewater line shall be constructed of 150 psi pressure rated pipe (pipe & joints). The new potable waterline shall be located at least two feet above the wastewater line, measured vertically, and at least four feet away, measured horizontally, from the wastewater line.

NEW WATERLINE INSTALLATION – CROSSING LINES

Where a new potable waterline crosses an existing, non-pressure rated wastewater line, one segment of the waterline pipe shall be centered over the wastewater line such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater line. The potable waterline shall be at least two feet above the wastewater line. Whenever possible, the crossing shall be entered between the joints of the wastewater line. If the existing wastewater line is disturbed or shows signs of leaking, it shall be replaced for at least nine feet in both directions (18 feet total) with 150 psi pressure rated pipe. Any wastewater pipe joint within nine feet of the waterline shall be 150 psi pressure rated.

Where a new potable waterline crosses an existing, pressure rated wastewater line, one segment of the waterline pipe shall be centered over the wastewater line such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater line. The potable waterline shall be at least six inches above the wastewater line. Whenever possible, the crossing shall be centered between the joints of the wastewater line. If the existing wastewater line shows signs of leaking, it shall be replaced for at least nine feet in both directions (18 feet total) with 150 psi pressure rated pipe. Any wastewater pipe joint within nine feet of the waterline shall be 150 psi pressure rated.

Where a new potable waterline crosses a new, non-pressure rated wastewater line and the standard pipe segment length of the wastewater line is at least 18 feet, one segment of the waterline pipe shall be centered over the wastewater line such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater line. The potable waterline shall be at least two feet above the wastewater line. Whenever possible, the crossing shall be centered between the joints of the wastewater line. The wastewater pipe shall have a minimum pipe stiffness of 115 psi at 5.0% deflection. The wastewater line shall be embedded in cement stabilized sand (see details above) for the total length of one pipe segment plus 12 inches beyond the joint on each end.

Where a new potable waterline crosses a new, non-pressure rated wastewater line and a standard length of the wastewater pipe is less than 18 feet in length, the potable water pipe segment shall be centered over the wastewater line. The materials and method of installation shall conform with one of the following options:

Within nine feet horizontally of either side of the waterline, the wastewater pipe and joints shall be constructed with pipe material having a minimum pressure rating of 150 psi. An absolute minimum vertical separation distance of two feet shall be provided. The wastewater line shall be located below the waterline.

All sections of wastewater line within nine feet horizontally of the waterline shall be encased in an 18 foot (or longer) section of pipe. Flexible encasing pipe shall have a minimum pipe stiffness of 5.0% deflection at 115 psi. The encasing pipe shall be centered on the waterline and shall be at least two nominal pipe diameters larger than the wastewater line. The space around the carrier pipe shall be supported at 5 foot (or less) intervals with spacers or be filled to the springline with washed sand. Each end of the casing shall be sealed with water tight non-shrink cement grout or a manufactured water tight seal. An absolute minimum separation distance of six inches between the encasement pipe and the waterline shall be provided. The wastewater line shall be located below the waterline. When a new waterline crosses under a wastewater line, the waterline will be encased as described for wastewater lines above or constructed of ductile iron or steel pipe with mechanical or welded joints as appropriate. An absolute minimum separation distance of one foot between the water line and the wastewater line shall be provided. Both the waterline and wastewater line, must pass a pressure and leakage test as specified in AWWA C600 standards.

Where a new potable waterline crosses a new, pressure rated wastewater line, one segment of the waterline pipe shall be centered over the wastewater line such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater line. The potable waterline shall be at least six inches above the wastewater line. Whenever possible, the crossing should be centered between the joints of the wastewater line. The wastewater pipe shall have a minimum pressure rating of 150 psi. Any wastewater pipe joint within nine feet of the waterline shall be 150 psi pressure rated. The wastewater line shall be embedded in cement stabilized sand for the total length of one pipe segment plus twelve inches beyond the joint on each end. Where cement stabilized sand bedding is used, the cement stabilized sand shall have a minimum of 10% cement per cubic yard of cement stabilized sand mixture, based on loose dry weight volume (at least 2.5 bags of cement per cubic yard of mixture). The cement stabilized sand bedding shall be a minimum of six inches above and four inches below the sewer pipe.

WATERLINE AND MANHOLE SEPARATION

The separation distance from a potable waterline to a manhole shall be a minimum of nine feet. Where the nine feet separation distance cannot be achieved, the potable waterline shall be encased in a joint of 150 psi pressure class pipe at least 18 feet long and two nominal sizes larger than the new conveyance. The space around the carrier pipe shall be supported at five foot intervals with spacers or be filled to the springline with washed sand. The encasement pipe shall be centered on the crossing and both ends sealed with cement grout or manufactured seal.

LOCATION OF FIRE HYDRANTS

Fire hydrants shall not be installed within nine feet vertically or horizontally of any sanitary sewer line regardless of construction.

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SANITARY SEWER STANDARDS

UTILITY CLEARANCE NOTES

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