# CHAPTER XI

## WATER LINES

TRANSMISSION AND DISTRIBUTION

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CHAPTER XI
WATER LINES
TRANSMISSION AND DISTRIBUTION

Section 1. Design and Construction Provisions. The provisions of Chapter I as to occupancy of and construction within highway rights-of-way shall apply.

Section 2. Definitions. For the purpose of this regulation the following definitions are used:

(a) "Transmission line" means any pipeline conveying raw or treated water from a well field or remote storage facility to a treatment plant and/or distribution storage tank.

(b) "Distribution line", including individual customer connections and distribution mains, means those lines conveying water to customers and fire protection systems from a common source.


(a) Transmission lines shall not be allowed parallel encroachments in narrow highway rights-of-way, especially if roadway reconstruction, widening or slope modification is contemplated in the foreseeable future.

(b) When parallel encroachment is allowed, the line shall be located as close to the highway R/W line as possible.

(c) Crossings of the roadway and/or paved side streets and approaches may be made by either boring a casing pipe or heavy wall thickness pipe under the roadway template. Crossings of roadway templates shall be as near to perpendicular to the roadway centerline as possible.

The requirement for casing of the road crossing shall be specifically discussed between the applicant's engineer and the Department's engineer, and shall among other things, depend on the pipeline materials used and the system's operating pressure.

(d) Depth of cover shall, at a minimum, be below frost line but not less than four (4) feet below natural ground or roadway ditch flow line.

(e) Shallow depth of cover below natural ground with a dirt fill over the pipeline for frost protection shall not be allowed.

(f) Carrier pipe and casing pipe shall be able to withstand highway loading, as determined by pipe manufacturers data for the type and size proposed and the anticipated operating pressure, and be of the most durable and maintenance free material. The lines shall be cathodically protected.
(g) All manholes for vacuum breakers, air relief valves, meters, etc. shall be constructed flush with the surrounding terrain, and if in the paved portion of the roadway in a manner that allows for adjustment for future changes in pavement thickness.

(h) Vent pipes and marker posts shall be located at the R/W line. If they fall within the roadway's clear recovery area they shall be of a break away design.

(i) Blow off valves shall be located near the highway R/W line and near an existing water course of sufficient size to minimize flooding of the road and erosion damage.

The blow off valve shall be oriented away from the roadway and permanent structures.

(j) If trenching across paved areas has been specifically approved by the Department's engineer, backfill compaction, pavement repair, and restoration of the highway R/W shall be as directed by the Department.

(k) Bore and receiving pits shall be no closer than fifteen (15) feet to the bottom of the roadway embankment or ditch flow line, but no closer than thirty (30) feet from the edge of traveled way to the face of the pit.


(a) Pertinent portions of Section 3 apply to this section as well.

(b) Service connection crossings to customers shall be held to a minimum by installing major feeder lines across the highway R/W and starting distribution on the other side of the highway.

(c) Hydrants, meter boxes and service line shut off valves shall be located off the highway R/W whenever possible.

(d) Service connections to customers and lines to hydrants shall, at a minimum, be constructed below frost line but not less than four (4) feet below the top of the roadway or adjacent natural ground.