

## SECTION 221.00

# SEPARATION REQUIREMENTS FOR WATER MAINS AND NON-POTABLE PIPELINES

### CRITERIA FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES

- A. The construction of new main lines for the conveyance of potable water and non-potable material shall conform to California Title 22 Code of Regulations, Division 4 – Environmental Health, Chapter 16 – California Waterworks Standards, Article 4 – Materials and Installation of Water Mains and Appurtenances, §64572 – Water Main Separation. Said regulation and approved cases exceptions are detailed herein.
- B. For the purpose of this standard, non-potable material shall include: Untreated sewage, primary or secondary treated sewage, recycled water, and hazardous fluids such as fuels, industrial wastes, etc.
- C. In no case, should water mains and non-potable pipelines conveying sewage or other liquids be installed in the same trench.
- D. Installation of water mains or non-potable pipelines 24-inches in diameter or larger shall be reviewed and approved in writing by the California Department of Public Health on a Case-By-Case basis prior to construction.
- E. The construction criteria presented in this standard shall apply to house laterals that cross above a water main, but not to those house laterals that cross **below** a water main.

### STANDARD MAIN SEPARATION

- A. New water mains shall be at least ten (10) feet horizontally from, and one (1) foot vertically above, any parallel non-potable pipeline.
- B. New Water mains shall be installed at least four (4) feet horizontally from, and one (1) foot vertically above, any parallel storm drain.
- C. New raw water supply lines shall be installed at least four (4) feet horizontally from, and one (1) foot vertically below, any parallel water main.
- D. If crossing a non-potable pipeline, a new water main shall be constructed no less than 45-degrees to and at least one (1) foot above that pipeline. No connection joints shall be made in the water main within eight horizontal feet of the non-potable pipeline.
- E. The Vertical separation specified in (A), (B), and (C) is required only when the Horizontal distance between a water main and non-potable pipeline is less than ten (10) feet.
- F. The minimum separation distances above shall be measured from the nearest outside edge of each pipe barrel.

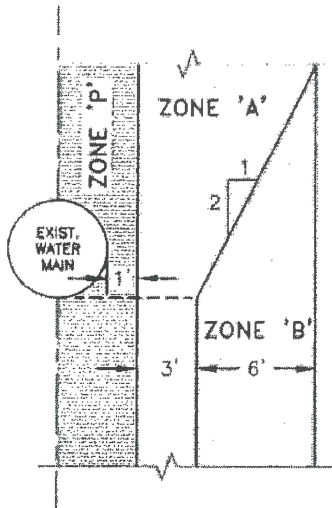
### ALTERNATE CRITERIA FOR MAIN SEPARATION

- A. When new water mains or non-potable pipelines cannot be constructed in accordance with the above standard due to limiting existing conditions, the appropriate alternate construction criteria described in the cases below shall apply either one or both of the systems.
  - Case 1: A New non-potable pipeline and a new or existing water main.
  - Case 2: A new water main and an existing non-potable pipeline.

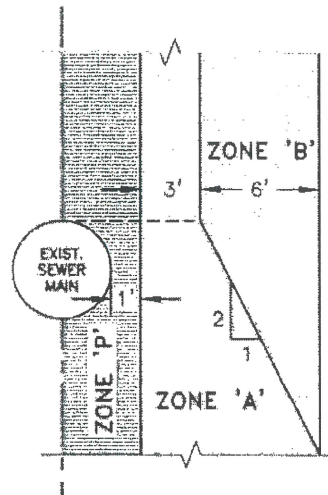
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**CASE 1**  
NEW NON-POTABLE PIPELINE

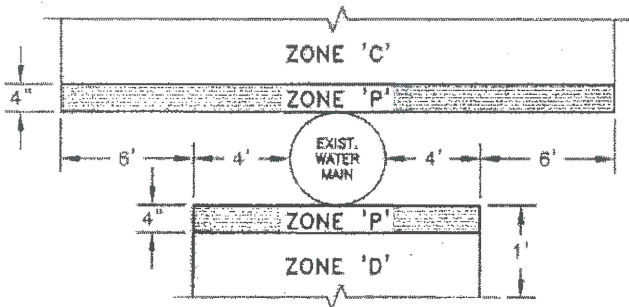
**CASE 2**  
NEW WATER MAIN



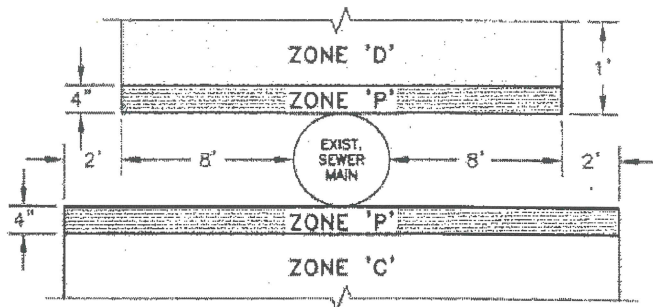
PARALLEL



PARALLEL



CROSSING



CROSSING

DESCRIPTION OF SPECIAL CONDITIONS BY ZONE		
ZONE	CASE 1: NEW NON-POTABLE MAIN	CASE 2: NEW WATER MAIN
P	NEW CONSTRUCTION IS PROHIBITED WITHIN THIS AREA	NEW CONSTRUCTION IS PROHIBITED WITHIN THIS AREA
A	NEW CONSTRUCTION WITHIN THIS AREA SHALL HAVE PRIOR WRITTEN APPROVAL FROM BOTH CDPH AND THE DISTRICT	NEW CONSTRUCTION WITHIN THIS AREA SHALL HAVE PRIOR WRITTEN APPROVAL FROM BOTH CDPH AND THE DISTRICT
B	NEW CONSTRUCTION WITHIN THIS AREA SHALL BE DIP WITH COMPRESSION JOINTS OR PVC WITH RUBBER RING JOINTS (ASTM D3034)	NEW CONSTRUCTION WITHIN THIS AREA SHALL BE DIP WITH COMPRESSION JOINTS OR PVC WITH RUBBER RING JOINTS (ASTM D3034)
C	NEW CONSTRUCTION SHALL BE DIP, CLASS 200 PVC, OR HDPE (C906-99) AND HAVE NO JOINTS WITHIN TEN (10) FEET FROM EITHER SIDE OF WATER MAIN	NEW CONSTRUCTION SHALL BE DIP, CLASS 200 PVC, OR HDPE (C906-99) AND HAVE NO JOINTS WITHIN TEN (10) FEET FROM EITHER SIDE OF WATER MAIN
D	NEW CONSTRUCTION SHALL BE DIP, CLASS 200 PVC, OR HDPE (C906-99) AND HAVE NO JOINTS WITHIN FOUR (4) FEET FROM EITHER SIDE OF WATER MAIN	NEW CONSTRUCTION SHALL BE DIP, CLASS 200 PVC, OR HDPE (C906-99) AND HAVE NO JOINTS WITHIN FOUR (4) FEET FROM EITHER SIDE OF WATER MAIN