

DIVISION 3

SEWER DESIGN CRITERIA

Section 3.01 GENERAL

The following sewer design criteria shall apply to all gravity sewer system designs in the City. Additional design criteria are specified in the Standard Drawings.

The minimum sewer pipe shall be eight-inch (8") diameter and shall not be designed at a grade flatter than that which would provide a two (2) ft/sec cleansing velocity within the pipe. If the State guidelines require steeper grades than the manufacturer recommendations, the State guidelines shall apply. The engineer shall coordinate the pipe size with the City Engineer for future design capacities. Minimum slopes for differing pipe sizes are shown below:

MINIMUM SEWER MAIN SLOPES

Pipe Size	Min Slope (ft/ft)
4"	.02
6"	.01
8"	.0034
10"	.0025
12"	.0020
15"	.0015
18"	.0012
21"	.00095
24"	.00078
30"	.00058
36"	.00046

Section 3.02 MANHOLE DESIGN

Minimum manhole interior diameter is four (4) feet for manholes with one inlet and one outlet pipe. Manholes with two or more inlet pipes and one outlet pipe shall be a minimum of five (5) feet in diameter.

Spacing between manholes shall be no more than four hundred (400) feet unless special approval is granted by the City Engineer.

Pipe inverts through a manhole shall have a minimum two-tenths (0.20) fall from the inlet to the outlet when the pipes are greater than 100° apart in alignment. When the pipes are 90° to 100° apart in alignment, three-tenths (0.30) fall will be required. Pipe alignments under 90° will not be allowed and will require the construction of additional manholes.

A manhole must be provided at the end of all piping sections in a development. The manhole must be located as close to the edge of the project as reasonably possible when future adjacent land development is possible. A pipe stub of equivalent pipe diameter shall be placed in the manhole for future connection. The stub shall have a plug installed at the end of the pipe. No service laterals will be allowed in the stub.

Section 3.03 LATERAL CONNECTIONS

Lateral connections directly into a manhole will not be allowed. Sewer main must be of sufficient depth to allow for a minimum of three (3) feet of cover over the lateral connection. Sewer laterals are typically to be located 10' away from the water lateral on the down hill side. Water laterals are to be located as the center of lots.

Section 3.04 SEWER LIFT STATIONS

Sewer lift stations will only be allowed upon written approval by the City Engineer.