

Manhole Design and Style Guidance

The following chart contains guidelines for the City's preferred manhole style and approach depending on field conditions at the manhole location. Designed manholes shall meet these guidelines unless otherwise approved by the City of Columbia.

Manhole Design Guidance (Height, Cover, Marker) for New Projects	
Location/Scenario	Recommended Guidelines
New manhole; located in pavement or roadway shoulder; not in 100-yr flood plain	Rim flush with ground/pavement; standard frame and cover; no marker
New manhole; located in pavement or roadway shoulder; in 100-yr flood plain	Rim flush with ground/pavement; watertight frame and cover; no marker
New manhole; located in residential or commercial (highly-visible) location; not in 100-yr flood plain	Rim flush with ground; standard frame and cover; no marker unless deemed necessary by City
New manhole; located in residential or commercial (highly-visible) location; in 100-yr flood plain	Rim height to be determined by City on a case-by-case basis based on 100-yr flood plain elevation, (max height of 8-ft); flat-slab top with locking watertight access hatch anchored by bolts (lock to be weather, gas, cut resistant) if above grade; watertight frame and cover if flush with ground; no marker unless deemed necessary by City
New manhole; located in remote location (wooded, farmland, along creek, etc); not in 100-yr flood plain	Rim flush with ground; standard frame and cover; marker (appropriate marker height to be determined during design)
New manhole; located in remote location (wooded, farmland, along creek, etc); in 100-yr flood plain (flood plain elevation is <u>less than</u> 6' above ground)	Rim 2-ft above the 100-yr flood plain elevation (max height of 8-ft); flat-slab top with locking watertight access hatch anchored by bolts (lock to be weather, gas, cut resistant); no marker
New manhole; located in remote location (wooded, farmland, along creek, etc); in 100-yr flood plain (flood plain elevation is <u>greater than</u> 6' above ground)	Rim 1-ft above 100-year flood plain elevation up to a max height of 8-ft; flat-slab top with locking watertight access hatch anchored by bolts (lock to be weather, gas, cut resistant); no marker
Existing manhole; to remain in service adjacent to new sewer; not in 100-yr flood plain	No change to rim height or existing cover; install marker (marker height to be 4-feet)
Existing manhole; to remain in service adjacent to new sewer; in 100-yr flood plain	Raise rim height to match closest manhole on new sewer (max height of 8-ft); new flat-slab top with locking watertight access hatch anchored by bolts (lock to be weather, gas, cut resistant); no marker
Corrosion Control Considerations	Manholes susceptible to increased H2S levels shall be constructed with inert materials (calcium aluminate), including frame and cover
Manhole Venting	Venting manholes shall have candy cane vents set to a height 2-ft above the 100-yr flood plain elevation