

# WATER MAIN CLEANING AND STRUCTURAL LINING

## PROJECT FREQUENTLY ASKED QUESTIONS

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### Why are water mains cleaned and lined?

Before the 1950's, cast iron water mains were not manufactured with a cement mortar lining. When an unlined metallic pipe corrodes, hard deposits called tuberculation form on its interior. These deposits reduce the quantity of flow in the main and, if they become dislodged, diminished water quality can result. Cleaning and lining of water mains is a proven, cost effective solution to rehabilitate water mains. It improves the water quality and increases the available water flow for fire-fighting because it creates a smoother pipeline interior. The City first began cleaning and structurally lining its water mains in 2012.

### Why not install a new water main instead?

Installing a new water main is substantially more disruptive and expensive than cleaning and lining an existing water main. New water main installations require the excavation of a continuous trench along one side of the street and the purchase and installation of new pipe. With cleaning and lining, it is only necessary to excavate several relatively small holes above the main at locations where there are existing valves or pipe bends. The cost of cleaning and lining an existing water main is approximately two-thirds the cost of purchasing and installing a new water main. Cleaning and lining can extend the useful life of water mains.

### How is a water main cleaned and lined?

The contractor begins by laying out temporary bypass pipes along the curbs on each side of the street. These pipes are disinfected, tested and approved by the Monroe County Health Department prior to use. Your water meter will be removed and your water service connected to the bypass pipe using a flexible hose. Connections are normally made through a basement window. Any access openings will be covered and made secure by the contractor. The contractor will contact the resident prior to making this connection. During the period that their meter is removed, customers will not be charged for the water that they use. However, the normal quarterly base charge will still be applied to their bill. After all temporary pipes and hoses are installed and connected, the water main will be taken out of service. Throughout construction, customer's water will be supplied through these temporary pipes and hoses. Special fittings located on the bypass pipe will allow the fire department to connect their fire hoses directly to the bypass pipe, thereby maintaining firefighting capability while the water main is out of service.

Excavations are made at selected locations above the water main (usually at intervals between 500 and 800 feet) and the main is cut at these locations to provide access for cleaning and lining equipment. A mechanical scraper is pulled through the main until all tuberculation is removed and the main is then flushed clean. The contractor then inserts a polyurethane liner into the interior of the main. After the liner has cured the main is pressure tested to ensure there are no leaks. The cut sections of main are repaired and the excavations are backfilled. Before the newly lined water main is placed back in service, it is disinfected, flushed and tested by the Health Department. After the newly lined main is placed back in service, the temporary bypass pipe and services are removed. The contractor will contact residents to make arrangements for removal of the temporary hose and reconnect the water meter. Pavement, lawns and sidewalks are restored to pre-construction conditions. From start to finish, the work on any one section of water main can take approximately 1 to 2-1/2 months.

### Where can I get more information?

Attend the Public Meeting on May 10, 2017 and Visit the City's cleaning & structural lining project website at <http://www.cityofrochester.gov/cleaningandStructurallylining/>