

Project 19-2 2020 Water Main Replacement (Manhattan CI Replacement)



Highline Water owns and operates several small diameter cast iron (CI) water mains in the general location of 2nd Place SW between SW 171st St and SW 176th St in the Maple Lane subdivision of Normandy Park. Typically, CI mains are not the District's highest priority for replacement; however, these unlined, 6-inch diameter pipes were constructed in the late 1950's by the Normandy Park Water Company. Over the years, the inside of unlined pipe corrodes and the buildup of rust deposits (tubercles) causes flow restrictions and water quality issues. This area is one of the few locations of record where the District has unlined, cast iron pipes still in service.

Most of these pipes are within easements in undeveloped, sensitive areas with limited valving and redundancy. One pipe crosses under a stream tributary to Miller Creek. Many cross private property under steep banks, trees or retaining walls. The District experienced previous ruptures and the location complicates repairs due to limited access.

The total footage of pipe requiring replacement is approximately 5,400 LF. Due to complexity of access, the District must first study alternatives to determine the most feasible method replace the main. Solutions may include trenchless technologies, like pipe bursting or directional drilling, or more traditional open cut methods. The District must select a consultant experienced in trenchless construction to determine the best alternative.

In 2019, the District will begin the planning, design and permitting effort in anticipation for 2020 construction season. The goal is to advertise early in 2020 to increase the probability for a favorable bid. Because of the additional design step to evaluate alternatives and the potential complexity in permitting associated with sensitive areas, the District will need to select a consultant early in 2019 to meet the project schedule.

The District budgeted \$100,000 in 2019 for preliminary study, design engineering and permitting. Future budgets include \$1.7 million for construction and other expenditures in 2020. After completion of the preliminary study, the consultant will prepare more precise construction and project costs for the selected alternative to budget future CIP's plans.

