Little Hunting Creek Gravity Sewer Replacement

WW-000024-002-A Mount Vernon District

Department of Public Works and Environmental Services Working for You!



Project Details

Project Description:

The Little Hunting Creek sanitary sewer pipe serves approximately 480 homes and one church. The existing 12-inch diameter, cast-iron pipe was constructed in 1961 and runs beneath Little Hunting Creek between Woodland Lane and Thomas J. Stockton Parkway for 845 linear feet. Over time, this sanitary line has developed multiple sags that were regularly causing blockages that had to be cleaned and flushed and was at imminent risk of complete pipe failure. This project included installation of a new 12" pipe that runs parallel to the existing pipe and that is supported by a series of driven timber piles and pipe supports to prevent future sagging. The existing pipe was filled with flowable fill and abandoned in place. The project was performed within a body of water with tidal-influenced conditions and strict time of year restrictions to protect the aquatic life, preserve the natural grades and stream banks as well as to maintain the quality of water and allow navigation within the creek. The work required the use of barges and marine divers to perform the installation of the new line. Extensive coordination and public outreach took place during all design and construction phases of the project. This project was substantially complete on August 18, 2022.

Project Overview:

- Install 845 Linear Feet (LF) of 12" Concrete Lined (CL) 52 Ductile Iron Pipe (DIP) and 25 LF of 24" Galvanized Steel casing pipe across Little Hunting Creek
- Install 190 LF of 24" CL-51 DIP, 20' in depth
- Install 176 LF of 20" CL-51 DIP, 20' in depth
- Install 25 LF of 8" CL-51 DIP
- Install 4 new manholes and rehabilitated 2 manholes
- Installation of 42 sets of dual timber piles with timber crossing bracing and steel pipe support cradles
- Use of coffer dams, turbidity curtains, barges and marine divers to perform work across Little Hunting Creek
- Extensive restoration of disturbed area adjacent to Thomas J Stockton Pkwy (approximately 4,500sq ft of riprap, coir logs, shoreline/wetland planting, trees, shrubs, special seed mix)
- Road restoration of approximately 14,300 sq ft and 120 LF of new curb/gutter

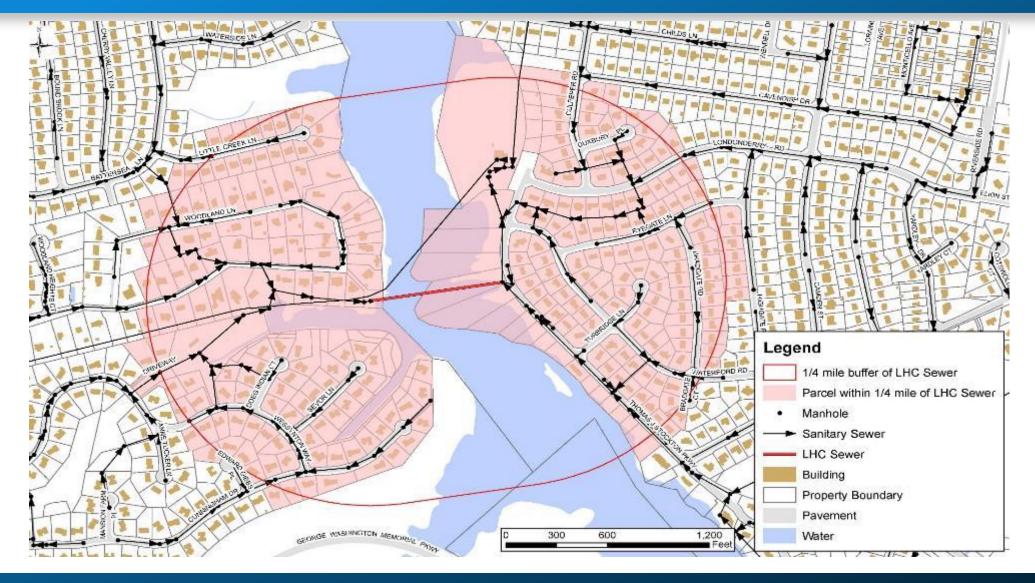
Project Team:

- Amin Abdel Hameid, P.E., Wastewater Design and Construction Division
- Thomas Grala, P.E., Wastewater Design and Construction Division
- Ricardo Fernandez, Wastewater Design and Construction Division
- Stephanie Thomson, Wastewater Design and Construction Division
- Thomas Richardson, P.E., Wastewater Collection Division
- Amy Linderman, P.E., Wastewater Collection Division

- Contractor: Garney Companies, Inc.
- Engineer: Arcadis U.S. Inc.



Mount Vernon District, Tax Map No. 111-1, between Woodland Ln and Thomas J. Stockton Pkwy



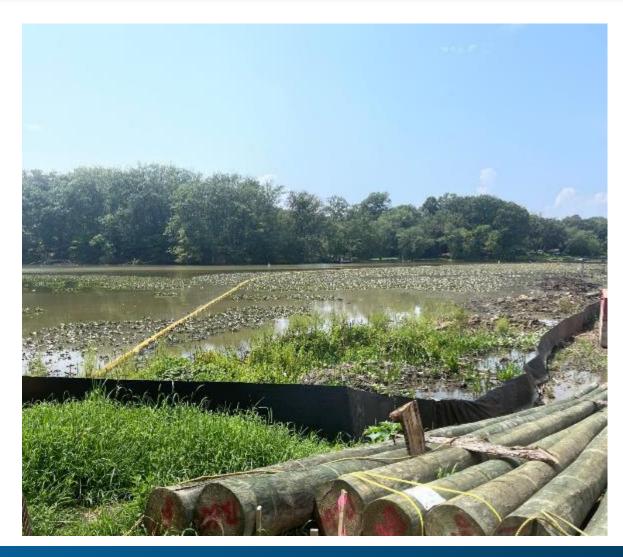
Loading and Preparing the Barges







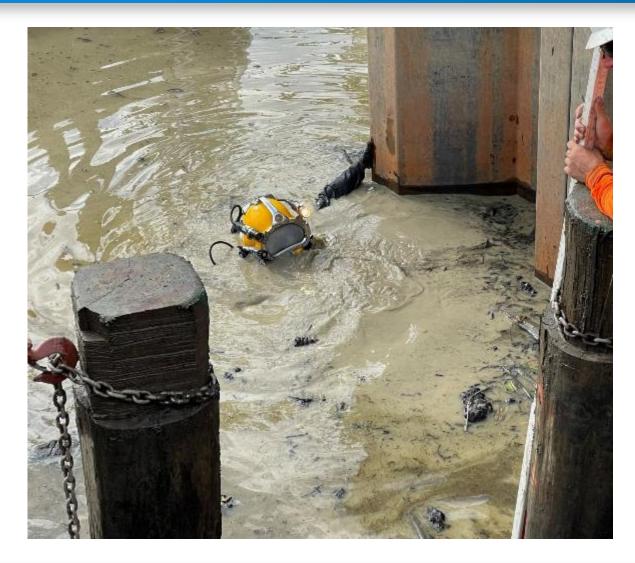
Installation of Turbidity Curtain and Coffer Dams







Marine Divers Working







Little Hunting Creek Gravity Sewer Replacement Installing Dual Timber Piles





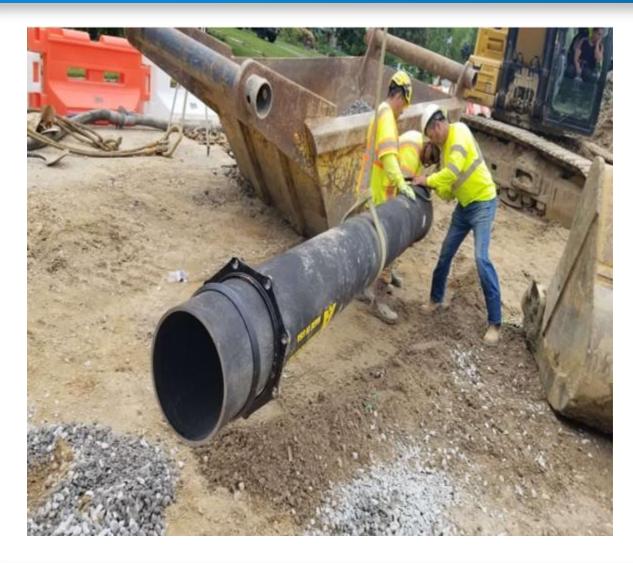
Maintaining Safety of Workers and Site

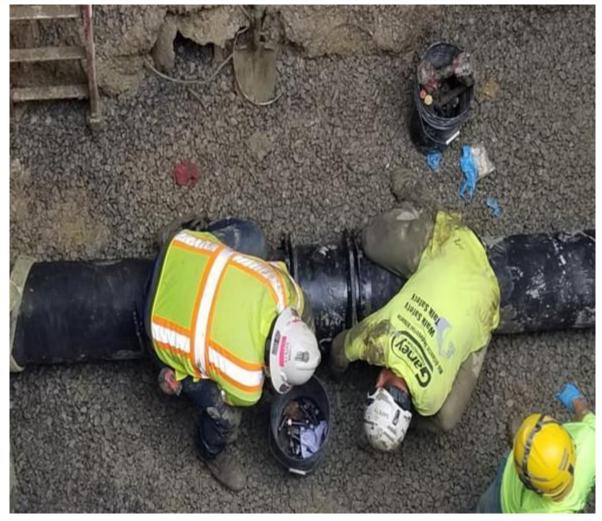






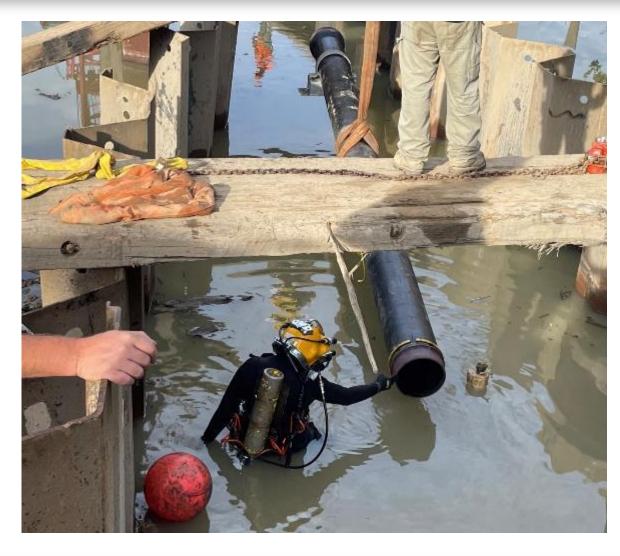
Installation of 12" CL-52 DIP From Thomas J Stockton Pkwy







Installation of 12" CL-52 DIP Across Little Hunting Creek



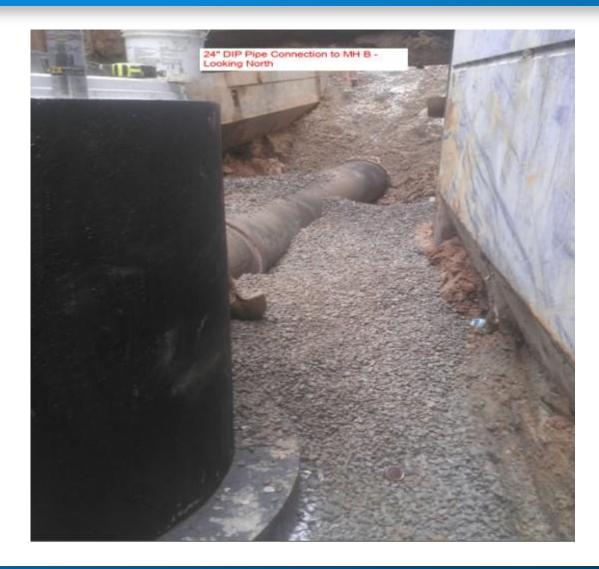


Installation of 12" CL-52 DIP Through Wood Lane Park





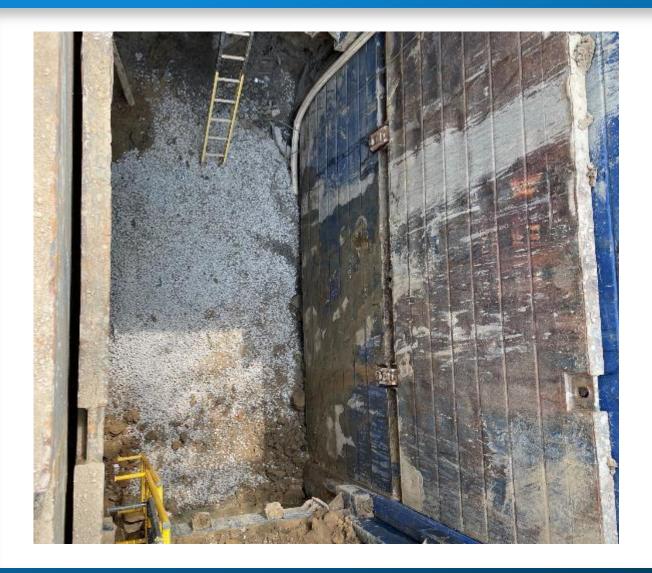
Installation of 24" CL-51 DIP and 8" CL-51 DIP





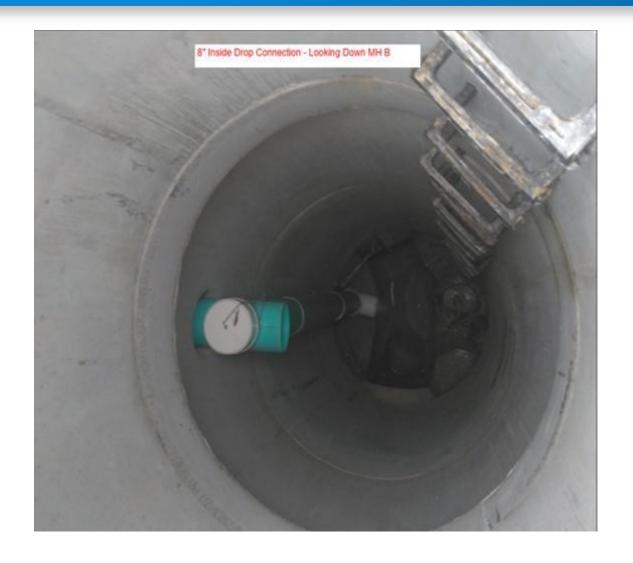


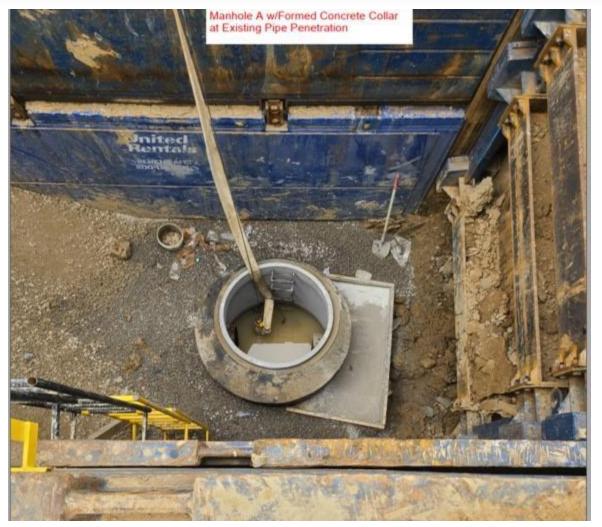
Installation of 20" CL-51 DIP





Construction of New Manholes







Thomas J Stockton Parkway

Before



After



Thomas J Stockton Parkway-More Before and After

Before



After



Wood Lane Park

Before



After



Additional Information

For additional information, please contact

Sharon North, M.A., Section Chief, Communications

703-324-8455, TTY 711

Sharon.North@fairfaxcounty.gov

www.fairfaxcounty.gov/publicworks

