To better serve the Town of Guilderland's residents and staff, the Town started a major effort in 2018, to switch to a GIS system of the Town's water and sanitary sewer infrastructure.
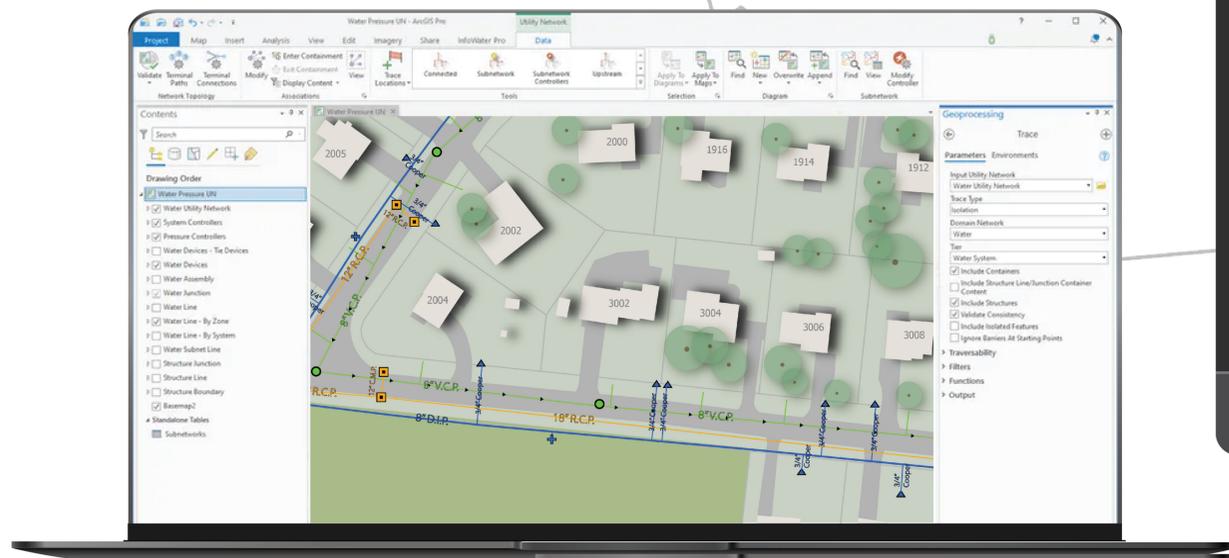
Thousands of paper as-built maps have been scanned and georeferenced in mapping software and then digitized to create an infrastructure GIS database. The Town staff is currently using a GNSS/GPS device to collect GIS data in decimeter accuracy and other technical equipment to verify the locations of the digitized assets. 14,448 of approximately 16,500 water/sanitary sewer assets have been verified as of 6/30/2021.

GIS-based water distribution and sanitary sewer collection networks will deliver advanced asset modeling capabilities, a modern web GIS architecture, and analysis tools designed to provide unprecedented levels of information gathering for enhanced operational management and decision-making. The utility networks will also serve as a centralized system of record that can be accessed by everyone at the utility on any device (desktops/smartphones/tablets) at any time. This will result in increased efficiencies in daily operations, planning projects, and responding to emergencies. By taking advantage of the Web GIS pattern, edits to the utility network made in the office or in the field are immediately disseminated across the entire organization. This real-time transfer of information to and from the field will greatly enhance efficiency and improve visibility of the overall operating picture.
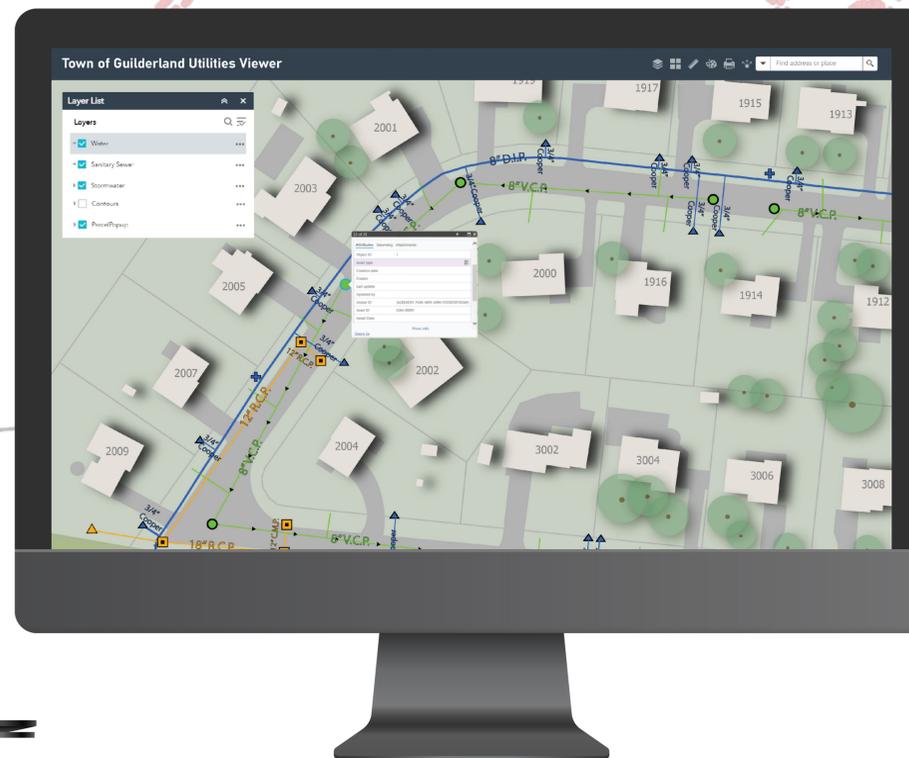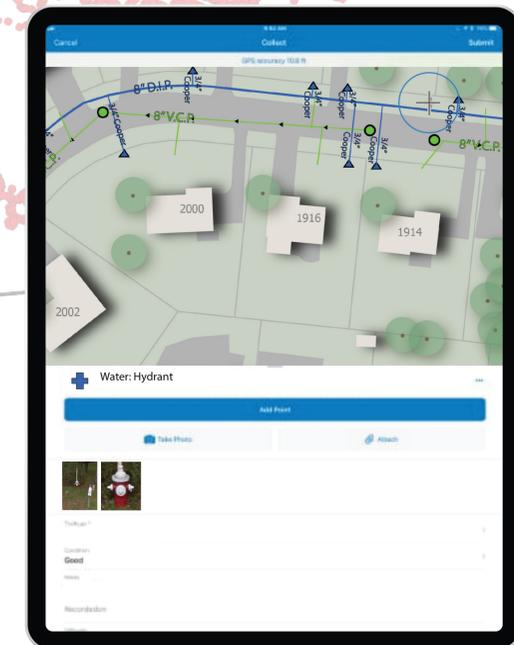
Final Products:

GNSS/GPS Device

From the Desktop/Laptop

On the Web

In the Field

Town of Guilderland High-Accuracy GIS Data Collection: Creating Water/Wastewater Utility Networks