



CASE STUDY

Water Resources

This customer story focuses on Rodriguez Consulting, LLC, a regional leader that provides innovative engineering and geospatial solutions for the nation's infrastructure, incorporating creative applications of technology.

The Rodriguez team of professionals specializes in design (land development, redevelopment, site retrofits), infrastructure (water, sewer stormwater, roadways), geospatial (GIS, GPS, LiDAR, land surveying) services.

Problem

The Philadelphia Water Department is in the process of removing their high pressure fire hydrants, left in place after the HPFS system was decommissioned in the mid-1990's. Rodriguez was brought into the project to provide a final inventory of the hydrants and to document any potential construction impacts to surrounding street features (i.e. ADA ramps, paving, poles, etc.). The assumption was that the inventory would be performed using paper maps and digital cameras.

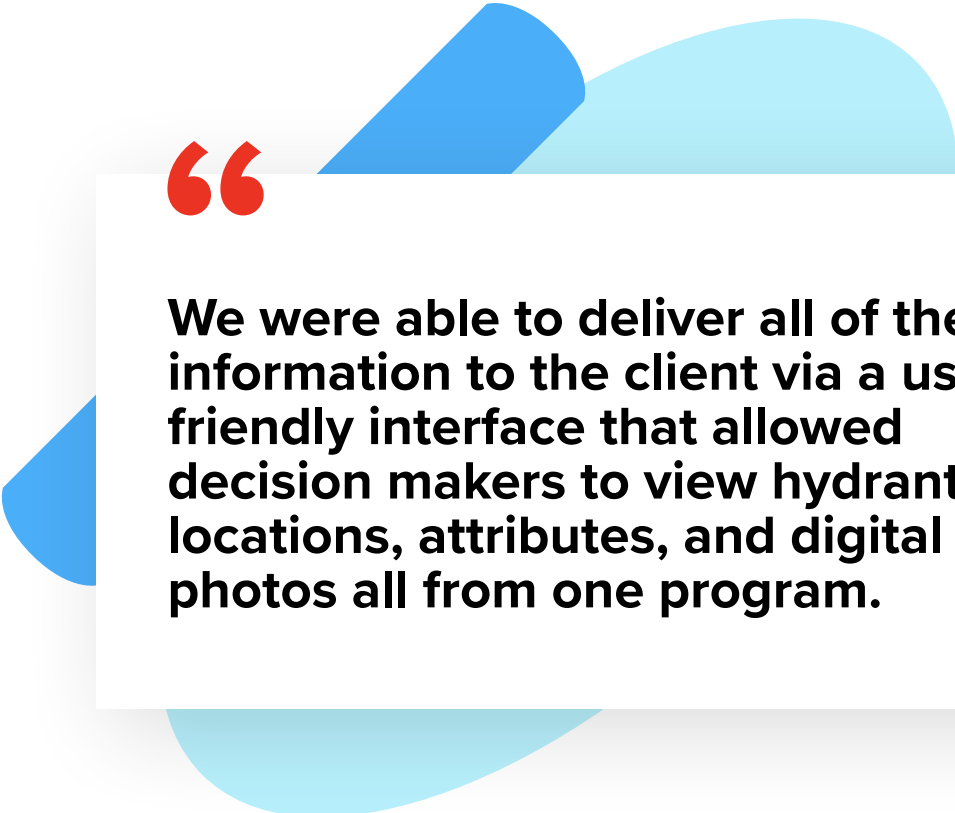
Working with Hatch Mott MacDonald, LLC, Rodriguez provided geospatial services to the Philadelphia Water Department for a high pressure fire service (HPFS) asset inventory project. The Department had decommissioned the fifty-six-mile HPFS system in 2005 as the system had been rendered obsolete. The objective of the asset inventory was to assess the location of existing inactive HPFS hydrants and the potential impact that removing the hydrants would have on the surrounding pavement, street furniture, and ADA ramps.



Searching for a Solution

DESIGNING THE APPLICATION IN FULCRUM

The Rodriguez team used Fulcrum to store, manage, and collect hydrant data and digital photos. A custom app was created to support the collection of hydrant location, photos, and attributes. Existing HPFS GIS data was imported into Fulcrum to serve as base data for the team to update and augment during field survey.



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FIELD DATA COLLECTION

After using ArcGIS to develop work plan basemaps for field staff, the HPFS hydrants were located and inventoried using iPads and Fulcrum. Digital photos and attributes such as pavement type and distance to ADA ramps were collected for each hydrant. Field teams walked and biked the streets to find and inspect each hydrant in the dataset, then synced the results up to the cloud for the QA/QC process.



How they use Fulcrum

DATA PROCESSING & QA/QC

Rodriguez used both Fulcrum's web dashboard and Google Earth to review and analyze the completeness and quality of the collected data. Fulcrum's Google Earth Streaming functionality allowed the management team to view data collection operations in "real time" using Google Earth for fast and easy data assessment. Progress of the field data collection versus the proposed work plan could be reviewed throughout the day by the project manager.

Stats & Metrics:

- ▶ Over 1000 fire hydrants inspected in the field
- ▶ 56+ miles of roadway surveyed
- ▶ Used Fulcrum on iPad Minis
- ▶ Completed over 4 weeks of field survey, with 2 teams of 2 engineering technicians
- ▶ One GIS technician in the office performed QA/QC daily, and developed work plans

Results & Benefits

DELIVERING QUALITY FOR CUSTOMERS

Rodriguez was already using Fulcrum to support surveying operations and was chosen for this project because it provided an efficient and interactive way to collect hydrant data and manage the data collection operations from a command center (the home office). More importantly, Rodriguez was able to deliver all of this information to the client via a user-friendly interface that allowed decision makers to view hydrant locations, attributes, and digital photos all from one system.

