

AutoCAD® Map 3D
Autodesk® Infrastructure Map Server
AutoCAD® Civil 3D®

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—Deeter Smith
GIS Administrator
Okaloosa Gas District

Connecting the enterprise.

Okaloosa Gas relies on accurate, available spatial data to help manage its natural gas distribution infrastructure.



Construction teams can more easily view asset data, such as material types, necessary to complete their tasks.

Project Summary

Founded in 1953 by the Florida State Legislature, Okaloosa Gas District is a major natural gas distribution utility within Florida's Panhandle region. The American Public Gas Association ranks the District 19th in its annual list of the top 100 municipal gas systems in the United States. With 124 employees, the District provides energy to more than 38,000 customers, including several major military installations, over a 400-square-mile service area. The company strives to deliver reliable energy and outstanding customer service. Since turning to AutoCAD® Map 3D and Autodesk® Infrastructure Map Server software to help integrate its maps with external systems, the District has been able to accelerate its response to outages—and enhance the way it manages infrastructure data. With support from AutoCAD Map 3D and Autodesk Infrastructure Map Server along with Oracle® Spatial, the District has been able to:

- Determine which customers have been impacted by an outage in minutes instead of hours with identification of key valve points for repairs
- Minimize duplicate data entry as projects move from design to construction to integration with the geographic information system (GIS)
- Improve adherence to the District's engineering standards while supporting diverse approaches to managing drawings and data
- Deliver more accurate online maps to customer service and workers in the field using mobile computing

The Challenge

At Okaloosa Gas, safety and customer service go hand in hand. The District's participation in the Florida-wide "call before you dig" program is designed to prevent outages and broken lines.

With transmission and distribution system maps that are accurate to within just a few feet, the program is largely successful. Accuracy is critical to District operations due to the large volume of existing underground infrastructure and growth in its service area. Unfortunately, line breaks, often caused by outside underground contractors, do happen. In the past, the District relied on a combination of tabular databases and paper maps to help guide outage response.

According to Deeter Smith, GIS administrator for Okaloosa Gas, disconnected processes and outdated maps often slowed response. She says, "We stored much of our connection data in an older database, and gave field crews paper system maps. The maps often missed newer customers, making it harder to get them back online after outages. It's also difficult, slow, and error-prone to accomplish traces using paper maps. AutoCAD Map 3D and Autodesk Infrastructure Map Server have helped us to move away from these time-consuming processes. Our people can focus their energy on responding faster and making rapid repair decisions instead of tracking down information."

The Solution

Several years ago, Okaloosa Gas decided that it wanted to use more integrated network data to drive its processes. Information from a number of sources needed to come together on network maps. Some customer information resided in one database, and other types of tabular data was stored in another database. The company's spatial data came from a variety of sources, such as from its own maps, local municipalities, and other utilities. The data was also stored in several file formats.

Utility delivers accurate asset data into the field.

AutoCAD Map 3D software seemed like a great option for helping the utility achieve its goals. The interface was based on AutoCAD® software, which was already familiar to people within the organization. Designed to work natively with data in multiple formats, AutoCAD Map 3D made it easier to use spatial data in many different file formats. This proved crucial: the District wanted to store its network information in an Oracle Spatial database to facilitate integration with other business systems, and AutoCAD Map 3D was designed to work with Oracle Spatial.

“We looked at a number of solutions,” says Jeremy Maines, information technology manager at Okaloosa Gas. “Our decision always came back to being able to easily tie information from multiple databases to our network data. AutoCAD Map 3D software seemed tailor-made for us. It even includes a natural gas data model based on industry standards, so we didn’t have to customize the solution for our industry. We just configured AutoCAD Map 3D to support our processes.”

Maines adds, “We did the vast majority of the implementation in-house, with help and support from Autodesk. This helped us to get started more cost-effectively, but we’re also seeing benefits from the familiarity we gained with AutoCAD Map 3D in the process. We have the know-how to improve the way we’ve configured the solution.”

Hours to Minutes

A recent, minor outage illustrates how more accurate information and maps can help restore service to customers faster. A construction contractor hit a 4-inch gas distribution line in a key resort area within the District’s service area. The utility responded immediately, with field crews dispatched to the scene.

Employees within engineering immediately ran traces using AutoCAD Map 3D to help determine

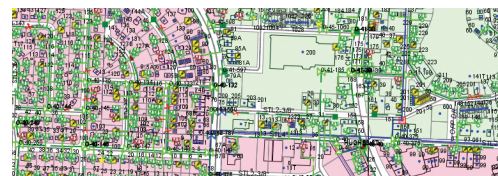
which customers were affected. The trace results allowed the rapid generation of a call list for customer service agents in the District’s call center. Agents immediately began contacting customers to inform them of the situation. In the event of a larger outage, AutoCAD Map 3D-generated data is fed into the automated outbound calling capabilities of the District’s interactive voice response system. After fixing the break, field crews and service technicians consulted online maps generated by Autodesk Infrastructure Map Server on their wireless laptops to help determine affected addresses and manage the restoration of service to the customers’ gas appliances.

“Before we implemented AutoCAD Map 3D, getting complete information about customers affected by an outage could take hours,” says Smith. “Communicating that information to field crews took time. Now, we can get a fuller picture of an outage in minutes. Customers get a faster response, and they know more about what’s happening. AutoCAD Map 3D helps bring together everything you need to respond—addresses, network maps, and valve locations—so our technicians can get their jobs done faster and customers back in service.”

Accuracy In for Accuracy Out

The use of AutoCAD Map 3D has helped the District improve the accuracy of its system information. It all begins with system design, which is done using AutoCAD® Civil 3D® software. As a design solution that includes some AutoCAD Map 3D functionality, AutoCAD Civil 3D eases the integration of maps from other organizations, such as local municipalities or other utilities, into the design process. When projects are complete, Okaloosa Gas can quickly incorporate the designs into AutoCAD Map 3D without duplicate data entry.

“What people don’t always understand about AutoCAD Map 3D is that it’s a real GIS,” says Smith. “It can do the analysis we require, but what’s great



about the product is its level of accuracy. In the GIS world, ‘accurate’ often means within 20 or 30 feet. AutoCAD Map 3D supports the degree of accuracy associated with engineering, where information data may be accurate to within a foot or even less.”

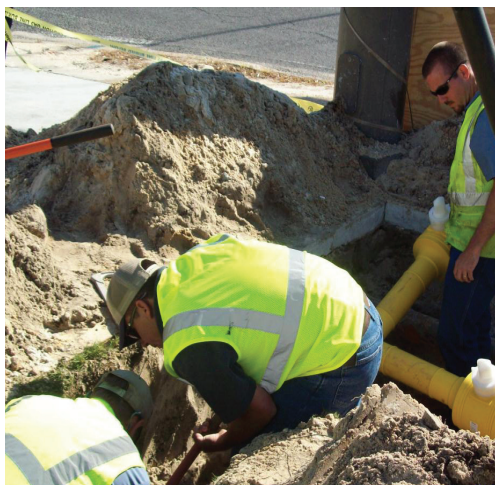
“System design can go straight from AutoCAD Civil 3D into AutoCAD Map 3D,” adds Maines. “That helps reduce the risk of data entry errors. The associated data resides in Oracle, where we can integrate it with information from our other business systems. The level of accuracy is invaluable, but being able to tie together maps with billing, usage, and equipment data has made so much possible. For instance, even our accounting technicians began using the mapping technology to more easily identify the specific location of equipment and accounts for tax reporting purposes.”

The Result

Having used AutoCAD Map 3D and Autodesk Infrastructure Map Server for several years, Okaloosa Gas District considers both essential to the utility’s workflow. Smith summarizes the District’s success: “We are definitely saving time and improving productivity with support from AutoCAD Map 3D, but it’s the level of accuracy that delivers the most value for the District. You can make better decisions and deliver better service when you have more accurate information.”

Learn More

Enhance the quality and availability of your infrastructure data with AutoCAD Map 3D and Autodesk Infrastructure Map Server software. Visit www.autodesk.com/map3d to learn more.



Crews have access to mobile data, allowing them to make more informed decisions in the field.

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