



Arizona Public Service

Phoenix, AZ

ESRI ArcInfo

Landbase & Underground Facility Conversion, Data Integration

Client: Arizona Public Service Company

Contact: Chuck Stevens

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Size of the Service Area: 3,459 sq. miles

Number of Facilities by Type:

1,691 underground electric distribution quarter section maps

11,116 county assessor map references

138,291 underground service entry points

Customers: 827,000

Dollar Amount of the Contract

Proposed: \$3,056,501

Actual: \$3,342,591 (\$286,090 additional scope)

Detailed description of the services provided and formats of deliverables:

As subcontractor on the Arizona Public Service (APS) project, ASI was responsible for the conversion of landbase, electrical underground distribution and sub-transmission facilities (Transmission lines with voltage of 69 KV or less) plus overall data integration for final client delivery in the target platform of ArcInfo 8.0.x. The project included twelve APS electrical distribution districts.

The landbase conversion was a multi-phased process. The primary steps involved were the migration of existing County GIS data into the APS data model, PLSS compilation/edge matching, source warping, legal polygon (Parcel/Property Line, etc.) capture and ETAK centerline adjustment and update

as necessary. The final step was linking Assessor Parcel Numbers to an external county database. While the majority of the work was completed at the ASI Texas Solution Center, certain tasks were subcontracted to InfoTech Enterprises Ltd of Hyderabad, India. Those tasks were legal polygon capture and ETAK data adjustment/update. InfoTech Enterprises, LTD is ASI's offshore business partner and has collaborated with ASI on more than 50 successful conversion projects since 1996. Upon completion of all landbase conversion phases, the data was run through ASI's quality assurance process, which is based upon project specifications agreed upon by both APS and ASI. A total of 1,691 underground electric distribution quarter section maps were warped with 11,116 references to county assessor maps that were processed for the landbase conversion.

The conversion process of the electrical data began with a source preparation of the underground data on a feeder-by-feeder basis, which was performed at the ASI Texas Solution Center. The prepared sources were then forwarded to InfoTech in Hyderabad for conversion of underground distribution and sub-transmission data. After the electrical conversion phase was completed, the data was run through a series of automated and manual Quality Control/Quality Assurance processes at the ASI Texas Solution Center. 138,291 underground service entry points were converted. All overhead electrical distribution was provided to ASI via another GIS vendor under contract with Arizona Public Service Company.

The final Quality Control/Quality Assurance and integration of land, electrical distribution (both overhead and underground) and sub-transmission data into the APS target platform of ArcInfo 8.0.x was performed at ASI's Texas Solution Center. The acceptance rates for attribute and graphic criteria of landbase data were 99.94% and 99.94% respectively. For underground distribution and sub-transmission data, the acceptance rates were 99.20% and 99.37% respectively. The project was completed in January 2004.

Project Status

Started: February 2001

Completed: January 2004