

# A Case Study

## Glynn County Utilizes Mobile Data Collection for Street Light Inventory.



### Highlights

- No Additional software or hardware.
- Development of a local street light dataset.
- Provide an analysis layer for cost reduction ideas.

### Return on Investment

- Location of all county street lights.
- Audit of street Light power bills
- Cost saving analysis based on location of street lights.

### Contact Us

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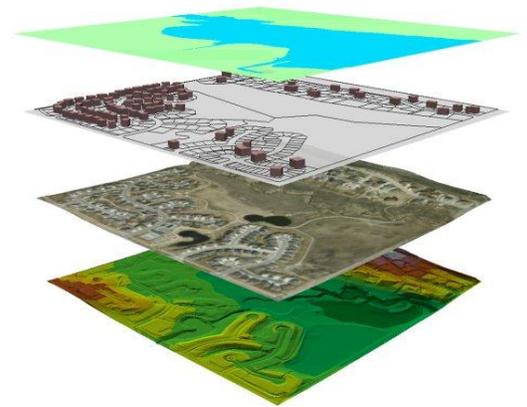
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Primary data capture using GPS technology is the backbone of many GIS projects. Traditionally, this form of data collection proved to be a time consuming undertaking. Through the implementation of ESRI's ArcMobile and ArcSDE technology, primary data capture has witnessed a dramatic increase in efficiency and ease of use.

### Background

The Glynn County GIS department was approached by Public Works staff requesting assistance with street light locations throughout the county. A daunting task as one might believe, the only information provided was a hard copy 2000 audit of light locations from Georgia Power. The audit mapped county owned street lights, and more importantly, the lights Glynn County was billed upon. Totaling some \$20,000.00 per month, determining the location of these important assets was critical. Should the county decide to turn off a light or request work on a light, its location is of vital importance.

In years past, a project of this scope would have required two GPS field technicians with antenna mounted backpacks to cover each neighborhood or street gathering and filling out required information on a hand held unit. With the advent of ESRI ArcMobile and ArcSDE with in the Small Government ELA, the amount of time required for a project of this type is greatly reduced.



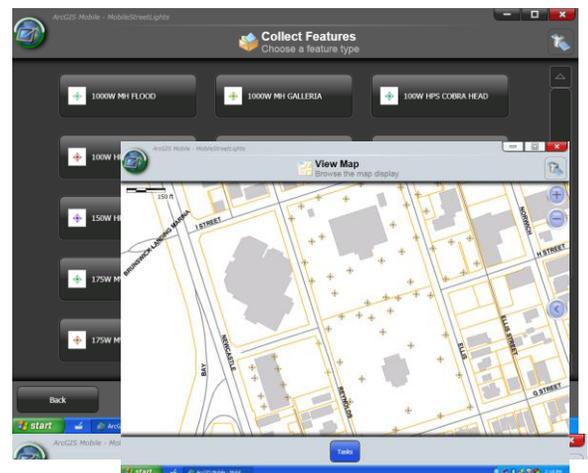
### Timeline:

Priority was given to the project with a desired turnaround time of two weeks. From database design, to implementation and review, the project was completed on time resulting in 1,990 street lights being added to the Glynn County GIS Database.



Glynn County GIS

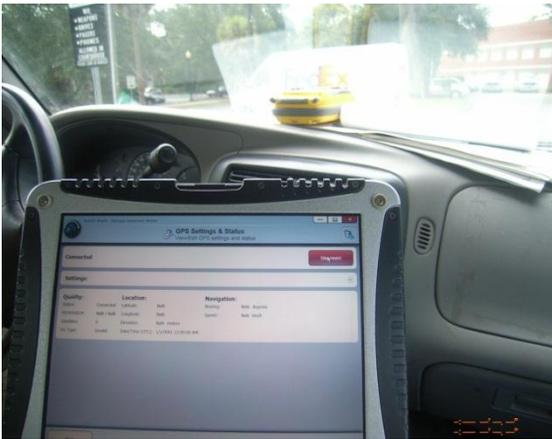
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**Workflow:**

First, data structure was the main consideration. Having no staff well versed in utility GIS standards; ESRI's resource center was tapped. Visiting the Energy Utilities forum, a Multi Speak Design Template was downloaded and a street light feature class was exported to an Arc10 GDB for schema manipulation. Once an agreed upon schema was built staff quickly deployed an ArcMobile application to a Panasonic Toughbook blue toothed to a Trimble GEO XH.

With a computer mount loaded into a field vehicle, two GPS technicians were able to locate neighborhoods with the assistance of the Georgia Power Audit Map. Moreover, careful consideration was given to the schema design and a coding system was developed for non-county owned lights. This would allow the field crew to collect county owned street lights as well as privately owned or Georgia Power owned street lights. This was done in an effort to provide Georgia Power with updated street light information.



Panasonic Toughbook Blue Toothed to Trimble GEO XH

Staff Analyst utilized color infrared imagery and Google street view/ Birds Eye View to digitize points remotely. Again, using the 2000 audit as a guide it was possible to navigate to points and collect information according to the schema guidelines. This process was aided by ERSI's Attribute Assistant Add-In. A reverse geocode assigned the nearest address for the location description field. Also, the intersect feature capability was used to capture the elevation from an underlying digital elevation model (DEM).

At the end of the day data was brought back to the GIS office where it was synched to the Mobile version connection to the SDE. Finally, attribute assistant was used to populate the field data with address location and elevation information.

**Challenges:**

As with any project that requires a quick start up, changes to the schema were required to meet unexpected needs. Any schema changes had to be made after the data was synched back into the SDE. A day's worth of work was lost due to a schema change being made to the SDE while data was checked out and in the field.

**Project Rewards**

The Glynn County GIS department was able to effectively and efficiently use mobile collection technology to gather valuable asset information. The time savings was enumerable and provided Public Works location information to better understand and monitor street light assets.

*Additionally, the workflow and lessons learned has provided a process template that is being implemented on various additional county assets; opening the door for dramatic new efficiencies in the way Glynn County performs field edits.*