

GIS is not a Survey

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Geographic Information Systems (GIS) have been around in computerized form for over 20 years. Yet it is still amazing to many of us, especially surveyors who have directed the creation of the systems, that the design professionals still misunderstand the accuracy and use of the datasets.

Datasets within a GIS are numerous and can include ownership parcels, aerial photography, utility locations, zoning districts, etc. Basically, if a dataset has a geographical component to it like an address or a geodetic coordinate, it can be mapped and included in a GIS. The focus of this discussion is the ownership parcels depicted in a GIS.

Every GIS has a disclaimer as to the accuracy and use of the data. Parcel disclaimers usually state something to the effect that "this is not a survey and should not be used as one." This is an extremely important statement. I am not familiar with any parcel dataset available through the counties that claim they are survey accurate.

Many of the parcel datasets were created by scanning and vectorizing auditors' tax maps (which is the main purpose for creating these datasets). More counties are trying to use the recorded description to compute the parcel boundary, but this still does not represent a survey. What is occupied or monumented on the ground may not be what the record description outlines.

Using GIS parcel data may be acceptable as a planning tool to understand the general parcel layout and parcel ownership information. However, it should never be used as the basis for final design work. If your bid, design, or plan involves accurately knowing the location of parcel boundaries, you need to hire a licensed professional surveyor to perform a survey and create a map from the field and record information collected.

Do not shortcut the survey if one is needed. Consult with a licensed surveyor as to the estimated time to complete a survey prior to submitting bids for your projects. If you build that building, road, or utility corridor on the wrong property, you may be buying it or involved in costly litigation.