



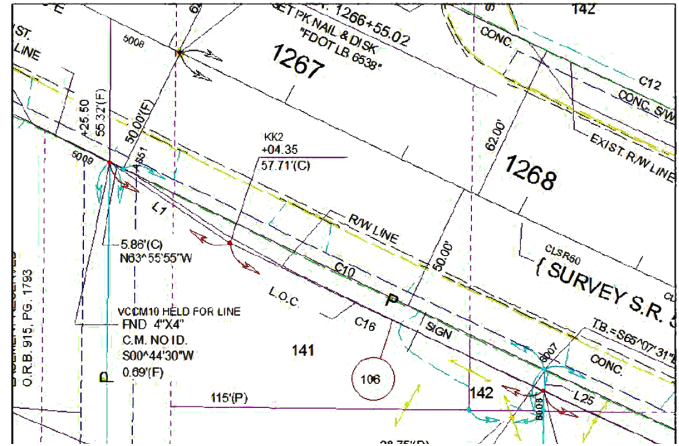
Florida Department of Transportation Research Strategic Plan to Optimize the Management of Right-of-Way Parcel and Utility Information at FDOT BDR74 977-03

The Florida Department of Transportation (FDOT) manages more than 12,000 centerline-miles of highway that run through hundreds of jurisdictions. The right-of-way (ROW) that these roads are built on is a massive and complex resource in its own right affected by boundary issues, roadside feature inventories, mapping, buying/selling/leasing, and utilities accommodations. Assuring that this information is up-to-date and readily accessible is important to all phases of FDOT work, from design through construction and maintenance.

Information like this is usually managed with computer-based systems called geographic information systems (GIS) that integrate precision mapping with resource location. FDOT has used GIS for years, but program area plans and/or mapping products and many other geography-based data sets are still maintained separately by different offices. Concerns about redundant data storage and ineffective, time-consuming workflows, led FDOT to launch development of a centralized and more consistent GIS framework.

FDOT wanted to add ROW parcel and utility data to its existing GIS system. Also, it wanted to add workflow documents and its extensive collection of aerial photography to its electronic document management system. FDOT contracted with Texas Transportation Institute (TTI) researchers to help develop an implementation plan for management of ROW parcel and utility data. TTI researchers worked to develop a detailed understanding of existing systems and processes, met with key stakeholders to fully understand current operations and needs, and implemented their findings in model systems to demonstrate feasibility and for comparison.

The researchers scheduled meetings and conference calls with stakeholders within FDOT. They met with representatives of FDOT Central Office in Tallahassee, District 5 (east central Florida), and District 6 (south Florida). At the



This map, defining a section of right-of-way, gives an indication of the complexity of information that must be maintained to manage this state asset.

Central Office, conversations focused on ROW acquisition, information technology plans and systems, utilities, construction, and use of existing CAD files. At the district level, the main topics were ROW and utility data processes and gathering sample project data.

The researchers were familiar with ROW asset management at other state DOTs. In general, integrating asset management across an agency using GIS is in its early stages. Several systems are available to support such efforts. The researchers reviewed several systems and reported on their application to FDOT's needs. They also developed a comprehensive data model for FDOT ROW asset management and developed a prototype application in ArcGIS based on the model.

The researchers demonstrated the feasibility of integrating ROW asset management to meet FDOT goals. They made several specific recommendations for improving current processes and facilitating the transition to a new, more comprehensive system. Integration of ROW asset management will facilitate many aspects of FDOT planning, construction, and maintenance, reducing duplication of efforts and streamlining FDOT operations.

Project Manager: John Krause, FDOT Surveying and Mapping Office
Principal Investigator: Cesar Quiroga, Texas A&M University
For more information, visit <http://www.dot.state.fl.us/research-center>