

7.3.1

22,500 Traffic Signs. 550 Miles. 5 Months. 1 System.

Presenter

Gwen Ford

GIS Analyst

City of High Point

gwen.ford@highpointnc.gov

Co-Presenter

Tasked with how to comply with new FHWA traffic sign retroreflectivity requirements, the City of High Point Transportation Department needed an inventory of the existing traffic signs to determine how many signs needed to be replaced and the cost of replacement. The City GIS Department built an internet-based, collection application with ArcGIS API for Flex to locate traffic signs using aeriels and attribute them with sign type, size, reflectivity, installation date, support type, and MUTCD codes. Collection was scheduled for 3 days a weeks, 8 hours a day. Using laptops with aircards, 2-3 crews collected data each day. With the inventory complete, the Transportation Department identified 355 Stop and 187 Yield signs that will need to be replaced at an estimated cost of \$ 38,000. Also, maps can now identify the locations of these signs, so that the crews are not driving around at night looking for deteriorated signs.

Many governments are stumped at how to best approach trying to comply with the new traffic sign retroreflectivity requirements adopted by the Federal Highway Administration (FHWA) to improve nighttime visibility. The regulation was presented without direction in a field that is still new to GIS. As a result, hardly any governments were able to meet the deadlines and the rules were rescinded and postponed. In the meantime, many governments are turning to third party solutions and finding them to be too expensive. Conducting our inventory with Flex and importing the data into TEAMS for management has been an effective, low cost solution for our city and we hope that other cities will be able to benefit from our endeavor. After we completed the sign inventory, we tried to build a work-management software with GIS, but did not have the staff or funds to do it. We found an internet-based application by Design Info Tech called TEAMS. For a few cents per location, we are able to maintain the sign inventory, dispatch work orders, produce reimbursement reports, and more. Few, if any other programs, let you see your signs in such a variety of ways: as sign faces, in assemblies, by ownership, etc. TEAMS allows us to tie work history, documents, images, accident reports, and all kinds of information to each sign location. The interface is friendly enough to accommodate our wide range of users - from work crew to office staff, some with limited map and computer skills. Communication between the office staff and work crew about the work location is no longer ambiguous, but pin-pointed to a specific sign location. Work crews can view a list of open tasks and a map of the locations to plan out the day. The inventory allows them to anticipate what equipment to load in the trucks before they head out. Management can take advantage of the robust reporting capability to produce reimbursement requests for NCDOT, generate cost estimates for sign replacements, and budget for materials. Supervisors can review work history at each sign to address safety improvements and reduce liability risks. So far, we are immensely pleased with our solution and look forward to sharing with others.

Bio(s):

Gwen has over fifteen years of experience in GIS. She joined the City of High Point six years ago and has been diligent in expanding the use of GIS in the field of Transportation. Her forte is in visualization and cartography.