Tracking First Hurdle to RRF Compliance

City of Norfolk employs GPS, bar code labeling and asset management software to overcome RRF challenge

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As municipalities nationwide strive to comply with the FHWA retroreflectivity requirements found in the revised Manual of Uniform Traffic Control Devices (MUTCD), many are facing a common obstacle – their traffic sign assets are not adequately inventoried and tracked, making it difficult to assess and manage retroreflectivity levels.

This was the case in the City of Norfolk, Va., where a manual system of managing traffic signage had become a major stumbling block to compliance with FHWA requirements.

"We weren't able to keep very good track of our assets," says Ivy Stacy, traffic maintenance supervisor for the City of Norfolk. "We couldn't keep a count of physical sign locations and we still don't have them all but are working toward it."

At that time, the approximately 100,000 traffic signs throughout Norfolk's 66 square miles along the Chesapeake Bay were identified with a general description of the sign's physical location. Crews arriving to install, remove or perform maintenance on a selected sign might arrive at the corner of Main and Market to find many signs matching the corresponding description.

According to Stacy, such imprecise tracking methods were prone to errors and inefficiencies, and could not be used to adequately assess and manage retroreflectivity levels according to the revised FHWA rules. The new rule, which became effective in January of this year, requires that municipalities have a system for inventorying and managing sign assets to ensure each sign meets minimum retroreflectivity standards.

"We had found it very difficult to inventory our sign assets without using a physical label," says Lonnie Tebow, superintendent of traffic operations for the City of Norfolk. "We saw that an inventory without labels could not be updated or maintained. Having a new inventory every five years or so was not an option for us."

So the city embarked on a progressive initiative to track all sign assets electronically using Metalphoto® bar code asset tags made by Camcode and Hanson Asset Management software by Infor Public Sector Essentials. They employed GIS specialist Tracy Wamsley of Michael Baker, Jr., Inc. in Virginia Beach to identify GPS coordinates of each sign, which are then matched up with the unique ID of each bar code tag. Maintenance crews are being equipped with hand-held barcode readers to help them accurately identify the signs on their work orders, and track the time and nature of the work completed, virtually eliminating errors inherent in manual data collection and entry.

This combination of a bar code asset tag that can withstand the elements, an accurate location tied to GPS coordinates and an easy-to-use software that tracks this information have proven to be the keys to improving accuracy and efficiency in Norfolk's sign management strategy.

"Our goals are to plan and schedule the repair and replacement of signs based on location, condition and type," says Tebow. "Through planning, we expect to see greater efficiency, leading to lower labor, material and equipment costs."

Just as critical as Norfolk's need for a comprehensive and easy-to-use inventory and tracking system was their desire for labels that would hold up under even the toughest weather conditions the Eastern Seaboard delivers.

"We went through testing with many different tags," says Stacy. "These signs get battered and beat up, but we found that the Camcode labels stick really well."

Constructed of an anodized aluminum known as Metalphoto®, the Camcode bar code asset tags used on the City of Norfolk's signs will withstand abrasion, intense temperatures and weather conditions, and exposure to UV, chemicals and solvents, according to Lou Peeples, senior sales engineer for Camcode.

"Our team was able to help the City of Norfolk determine the best material and attachment method for their application. Our object was to provide an asset tag that will last as long or longer than the signs they identify," says Peeples. "Not having to re-label for that length of time saves cities on both material expenses and labor costs."

So far, the City of Norfolk has inventoried and labeled about more than 1,000 signs using this new system, gradually adding to that number each year as budgets allow. Norfolk traffic maintenance staff received training on the handheld bar code readers this spring, and Stacy expects that all 100,000 of the city's signs will be tagged, tracked and mapped by 2012 to comply with FHWA regulations.

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