

# transportation

## ROADS

### Asset Management Firms See Big Future on Public Programs 10/16/2006

By William C. Sullivan, Editor of *Transportation* and *ENR* Contributor

Outsourcing asset management of roads—lane miles, vegetation, paving, bridges, even rest areas—was pioneered by the Virginia and Florida transportation departments less than 10 years ago. Now, with shorter budgets and longer-term attitudes, this type of contract is starting to catch the interest of other transportation owners around the nation.



Private firms are maintaining highways for state agencies in long-term contracts

Lacy Love, director of asset management for the **North Carolina Dept. of Transportation**, says it recently obtained legislative approval for two pilot projects. "We are finalizing a request for proposals for one project" that entails 139 highway miles near Charlotte, she says. "We're still developing a cost estimate." North Carolina, Utah, Missouri, California, Mississippi, and various toll agencies are also interested in privatizing asset management of roads. Firms specializing in this field expect up to 30 new contracts to be bid through next year.

Nine years ago, the **Virginia DOT** signed **VMS Inc.**, Richmond, to maintain 250 highway miles in a five-year contract, with another five-year extension, says Quentin D. Elliott, VDOT asset management director. "We looked at the contract and liked certain things. Other things, there were better tools for."

VDOT created a Turnkey Asset Maintenance Service contract methodology that emphasizes performance specifications for routine activities like patching potholes, mowing, and so forth, says Elliott. A performance spec might call for no water standing in travel lanes, certain tasks being done within two days, or 12-inch maximums for vegetation heights. "We decided we would contract out heavy repairs," he adds. VDOT also created a six-module system for its asset management program, to help pin down needs. It includes:

1. Random condition assessments of road assets and segments, including how much is being spent on each.
2. Needs-based budgeting. Info from the random assessments help shape the maintenance budget.
3. Planning. Allows VDOT to calculate how much it would take to maintain current levels and how much is needed to improve.
4. Work Accomplishment. This creates a history of asset improvements and real-time costs. For example, if an engineer looks at a drainage pipe, he can access electronic information that will let him know when it was last cleaned.
5. Inventory. A GIS system collects inventory as each asset is worked on. It records size, location, type et cetera.
6. Analysis. Overall record of all the decisions, costs and data of the program.

"We prefer the name 'performance-based contracting' versus 'asset management,'" notes Richard Herlich, VMS president and CEO. "This all started in the mid-'90s and

was called asset management, because at the time all of the people were in government. The focus was based on budget-based management. It wasn't based on what work needs to be done based on a typical life cycle." Asset management, he notes, is geared toward doing the right maintenance at the right time to extend the life cycle. "If you outsource operations and maintenance for a long time on a fixed price basis, the contractor will spend more money on the asset early on to raise the performance of the road."

Performance-based contracting is more flexible, he says. "We wanted to apply asset management techniques to roads and infrastructure, a crucial part of which is the flexible expenditure of monies."

VDOT also switched from RFPs to IFBs—invitation for bids. Firms would submit a technical proposal proving their qualifications, then VDOT would open bids to those qualified vendors. Since then, VDOT has refined its contract process to utilize invitations for bids and emphasize performance-based goals. VDOT's aim is to outsource 100% of its Interstate maintenance by 2009.

Six years ago, the **Florida Dept. of Transportation** issued an RFP to provide "fence-to-fence" services on 253 miles of I-75 between Miami and Ocala, says Tim Lattner, director of maintenance for FDOT. "At the time it was a new approach. Prior to that we had just used in-house forces. We had various contracts for mowing, pickup, et cetera. We just had multiple contracts."

The idea to enlist outside companies for asset maintenance sprung from an unsolicited proposal to FDOT in 1999 that promised savings and efficiency. It launched a pilot project to serve as a litmus test for the effectiveness of outsourcing.

**Infrastructure Corp. of America**, Nashville, won the first seven-year contract that began in July 2000. The I-75 scope of work included all maintenance work on the road, on public lands running parallel to the road, round-the-clock response times, rights-of-ways, medians, bridges, rest areas and call boxes.

Since then the approach has flourished. Currently there are 23 such contracts in Florida and there will be an estimated 28 by July of 2008. Four private contractors are doing asset maintenance for FDOT and one county, Collier County, also has an asset maintenance project.

"In essence, you take a section of roadway or a geographical area and hire a contractor to basically take care of all the maintenance needs for that area," says Mike Sprayberry, FDOT maintenance contract administrator. "Scope is basically whatever maintenance there is to do, we want the contractor to do. Roadsides, debris removal, bridge inspection, striping, guardrail inspections, guardrail repairs."

Sprayberry cited the incidence response program as something that has been particularly successful. "When there is a crash, say on the interstate, [the maintenance contractor is] required to go out and make sure everything is taken care of whether it's barricading the road, or do whatever they need to do for traffic control," Sprayberry says. The contractor is required to deploy resources to take care of the problem within 15 minutes. If the job is not getting done, FDOT will find out.

"We'll hear from the highway patrol out there if nobody showed up or if they showed up late," Sprayberry says. "[The highway patrol] is required to keep a log of all the responses made." In addition, random areas are inspected every four months and given scores from 0 to 100 based on specific performance requirements. Scores are averaged over the course of a year and can result in financial penalties to the contractor if the work does not meet the specifications.

Both VDOT and FDOT officials cited interest from their peers in other states. "We do get inquiries from other states," says Lattner, noting he has been asked to make a presentation on the FDOT's asset maintenance program in Louisiana next year. Elliott says "we've been asked to do presentations around the world." As for other states, "there is a big interest around the nation."

Aging DOT workforces and shrinking budgets are helping to spur the trend. "In the last 12 months or so there's definitely been an uptick in interest level," adds Butch Eley, chief operating officer of ICA. "I think states will begin to adopt a programmatic approach." He notes that current contracts include a 10-year maintenance of rest stops along highways in Florida. "They've chosen to set up long-term lump-sum performance-based contracts," he says. "When you move away from year-to-year contracts for these services and make them long enough, then contractor and owner are in alignment. We have to live with the work we do out there year in and year out. That creates an incentive on our part to fix root causes of problems, not just patch things up."

Currently, VMS and ICA -which recently won a \$7 million, six-year contract to maintain the Sunshine Skyway Bridge carrying I-275 across Tampa Bay- are among only a handful of firms who specialize in road asset management. Others include **DeAngelo Brothers, Inc.**, Hazleton, Pa., and **Roy Jorgensen Associates, Inc.**, Buckeystown, Md. "It's a relatively small group of companies who are engaged in this that have come out of the engineering and construction arenas," says Eley. "There's engineering, a financial component, planning." He notes that many of the actual tasks are subcontracted to local firms as well.

Elliott says other companies are starting to consider this niche as part of diversifying their services. VDOT awarded one contract to a local MBE firm to maintain 87 miles of highway.

Eley notes that lessons are being learned with this relatively new process. "One of the biggest challenges we've seen is how to deal with major catastrophes, like hurricanes," he says. For example, maintaining Florida roads hit by hurricanes in past years proved tough in terms of both work conditions and payments. "In some cases, reimbursement for work we did a year ago is yet to be paid," he notes.

Snow and ice are also difficult to predict. "It has challenged us to be innovative in how we approach and plan for it," says Eley. For example, maintaining a section of highway in Richmond is different than in Norfolk, because the snowfall amounts differ. "We have to gain experience and work with contractors in the area to get the expertise to do that work."

Herlich concurred: "In Tennessee and Virginia, you have to be ready and plan for snow, but it may or may not happen." Other challenges include the price of oil for asphalt and the price of steel for bridges. "No contract can foresee every possibility," he notes.

One possibility that he does foresee is working with toll authorities, and eventually private developers as they take over long-term operations of roads. "All of the new projects that are going to be built using private lease agreements will need asset management because the states will want the roads back in good shape," he says. "Infrastructure of all kinds will likely shift this direction, including airport, ports, canals, and tunnels."

For now, NCDOT is focusing on the roads part. "We grow 2 percent in lane miles per year, and we don't expand our workforce; we use contracts as a way to supplement it," says Love. As for the pilot project, "the theory is that the bundled contracts will save on overhead costs. We are going to do some comparisons of what this contract will cost us versus what it would cost us in house, so that we can make decisions on future contracts and initiatives."