

SmartMove...

SUCCESS STORIES FROM THE TOLLING INDUSTRY



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Agency

North Carolina Turnpike Authority (NCTA)

Project

Triangle Expressway

Purpose

The Triangle Expressway opened in three phases in December 2011, August 2012 and December 2012. The purpose of the 18-mile urban loop is to deliver badly needed congestion relief in a growing metropolitan area. North Carolina anticipates 50 percent population growth over the next 20 years, most of it concentrated in 16 counties, and the state sees transportation as one of the keys to its continuing competitiveness. By reducing travel times by 20 to 30 minutes in each direction for commuters to and from Research Triangle Park, the project helps cement and sustain the region's reputation as a focal point for technology development. Without tolling, the Triangle Expressway would have been completed sometime in the 2030s.

Vital Stats

- 18 miles, six lanes outside Raleigh, NC.
- Three phases opened between December 8, 2011 and December 20, 2012.

History

The North Carolina General Assembly created NCTA in 2002 in response to population growth, increasing highway congestion and dwindling financial resources. The decision brought North Carolina back to a tradition that began in the 1850s, when the state built a network of plank roads and hired local residents to collect tolls—at a rate of a half-cent per horse, one cent per team, three cents for four horses, or five cents per six-horse team.

In the 1920s, a \$150 million bond issue, the equivalent of \$14 billion today, helped fund 6,000 miles of construction in a decade. The state collected tolls to offset capital costs and accelerate repayment of its bonds.

North Carolina now has one of the two largest state-maintained transportation networks in the United States, with 80,000 miles of roads, passenger rail, the country's second-largest ferry system, ports and aviation. When it opened, the Triangle Expressway was the second all-electronic tolling (AET) facility in the U.S.

Results

Rather than charging tolls in the first four to six weeks of operation, NCTA used the initial period of operations to test the technology and hone its procedures and back office practices. Since then, monthly traffic and revenue have varied from 150 percent to 190 percent of target, with half of the customers using transponders and the other half relying on video tolling. The agency has sold 60,000 transponders, 50 percent above expectation, and sales are growing every month.



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The project benefited from innovation at every stage of development. NCDOT used a design-build contract to accelerate construction, worked exclusively with private consultants to speed up the acquisition process, and allowed the design-build team to introduce alternative technical concepts (ATCs) that would cut costs and drive innovation. The results were so positive that NCDOT has now extended the ATC process to all of the 10 to 12 design-build contracts it issues each year.

Key Success Factors

“Without tolling, this project would have been delivered using conventional pay-as-you-go cash somewhere post 2030,” said NCDOT Chief Operating Officer Jim Trogdon. Ten major cities across the state required urban loop projects worth \$6 billion combined, and with an available budget of \$140 million per year, “some are going to be completed post-2060, assuming no inflation.”

Tolling was a critical factor in securing DOT support for the Triangle Expressway, and that support ensured a reasonable bond rating that saved \$60 million in long-term financing costs, even in the nervous market of 2009.

Over the next five years, North Carolina could open up to 200 miles of managed lanes and 60 miles of greenfield toll projects.

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