The capacity balancing act

Highway capacity: Too little means gridlock, but paving over America isn’t the answer either. The right balance involves careful policy decisions and compromise—and using the right tools to address concerns and diffuse controversy.

The many factors that help decide whether and how to add highway capacity represent a long-standing and evolving challenge. The Transportation Research Board has helped transportation agencies address this issue since first publishing its Highway Capacity Manual in 1950. NCHRP research has supported supplements and the four editions that followed. (A new 2010 edition supersedes the version in use since 2000.)

An international authority

Knowing when and how to add capacity requires the right planning tools.

McLeod says the importance of the manual in FDOT’s operations cannot be overstated. “Here in Florida, it’s the authoritative document for addressing highway capacity, quality of service, and level of service,” he says. “The manual’s methodologies are the way to evaluate the adequacy of existing and planned roadways.”

New guidance for new challenges
Kevin Hanley, AASHTO coordinator for the California Department of Transportation, has his eye on the 2010 update to the Highway Capacity Manual, which addresses new topics such as roundabouts, freeway weaving, shared-use paths, and active traffic management. “Emerging technologies and issues make ongoing research and updates to the manual critical.”

Keep it simple
Ohio also relies on the Highway Capacity Manual. Dirk Gross, administrator of the Office of Roadway Engineering for Ohio DOT, says that the manual is an analysis tool used in all of the agency’s studies. “The Highway Capacity Manual is invaluable for planning. It provides the data required for the careful balancing of costs and impacts in the planning and design of transportation infrastructure.”

Gross notes that the manual and software packages based on its methodology are quick and easy to use. “The manual provides the level of service for a given project in simple terms graded A through F. Those are terms that policymakers and members of the public can understand, and they facilitate policymaking discussions and decisions,” he says.

Brake lights illuminate the worldwide capacity challenge.

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