

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 defuse 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

Doug McLeod of Florida DOT's Systems Planning Office has worked with the *Highway Capacity Manual* since the 1980s. "The *Highway Capacity Manual* is one of the three essential highway guides, right there with FHWA's *Manual on Uniform Traffic Control Devices* and AASHTO's 'Green Book'—*A Policy on Geometric Design of Highways and Streets*," he says. "The *Highway Capacity Manual* is referenced and used worldwide. It's TRB's biggest seller."



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 to meet the public's needs."

McLeod explains how other stakeholders in Florida also use the manual for planning and decision making. "Agencies like our state

land planning agency and local governments rely on this document," says McLeod. "So do private developers. This is critical because planning always has the potential to be controversial. By recognizing the *Highway Capacity Manual* in Florida, we are able to point to a national, authoritative document to help us justify decisions. It helps ensure that everyone involved in a project or decision plays by the same rules and uses the same tools."

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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.

New guidance for new challenges

Kevin Hanley, AASHTO coordinator for

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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. Caltrans looks forward to employing the new tools and methods in the 2010 *Highway Capacity Manual* to address congestion and improve the movement of travelers and goods," he says.



Brake lights illuminate the worldwide capacity challenge.

"The essential and compelling impact of addressing capacity is an improvement in quality of service and a reduction in delay," Hanley adds. "Those in turn lead to a wide range of economic and safety benefits. The ongoing research investment in capacity is well worth it."

The *Highway Capacity Manual* may be purchased online from the TRB Bookstore at books.trbbookstore.org.

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