LETTER FROM THE GUEST EDITORS

The Transportation Special Edition

Many fields of study reinvent themselves as new ideas come to the fore, but this process has been particularly profound in transportation science. This discipline, once largely the province of civil engineers, microeconomists, and travel-demand forecasters who tended to look rather narrowly at the various transportation modes, now attracts a more colorful spectrum of stakeholders. Environmental experts, urban-development specialists, and social scientists in many disciplines are pushing the field into exciting new areas. Along the way, much of the prevailing orthodoxy is being overturned.

The implications for practicing environmental professionals are enormous. Bold new strategies to reduce dependence on single-occupant, owner-occupied cars are gaining political traction. More aggressive use of expressway tolls, dedicated corridors for bicyclists, expanding car-sharing services in urban areas, new routes for high-speed rail lines, and electronic vehicle pricing (in which motorists pay per mile traveled) are just some of the ideas that are now percolating in the policy arena.

Widening acceptability of once-controversial ideas is not simply the result of the rising price of fuel, mounting traffic congestion, and the expanding green movement—the most commonly cited factors reported in the popular press. These factors, to be sure, are extremely important, but something more basic is also at play: the widening recognition that transportation decisions must be made with more careful regard to the indirect and secondary consequences than in the past.

That is why this issue of *Environmental Practice* is so timely and important. These articles offer compelling demonstrations of why conventional brick-and-mortar solutions (which are perhaps more aptly called "concrete solutions" in the transportation sector) are giving way to more complex strategies that account for the linkages between mobility, the environment, and quality of life. After reviewing the articles contained on these pages, readers will better appreciate why the push for faster trains, congestion pricing, and bicycle commuting will likely continue to grow. They will understand why planning professionals question policies that subsidize the provision of parking and encourage the use of nonpermeable pavements to the detriment of the environment. They will gain insight into why the movement to create sustainable communities is about far more than reducing energy use—it is a prudent strategy that can also benefit the fiscal condition of municipal governments.

Six *perspectives from the field* provide compelling case-study examples to illuminate these timely issues. Writing from Washington, DC, Joshua Shrank argues for the reorganization of federal transportation policy so that it embraces a more comprehensive approach to improvement and evaluation. Shrank illustrates why we must strive for a better understanding about how our transportation decisions influence climate change. Alan R. Bender, writing from the West Coast, examines some of the little-discussed environmental paradoxes associated with air transport. Bender shows how the expansion of low-cost carriers and the use of regional jets are raising difficult questions that our society has heretofore been reluctant to face. In a third piece, Barbara McCann writes a compelling summary of the environmental benefits of *Complete Street* systems. She explains how Complete Streets encourage a shift from automobile dependence to more sustainable options for travel.

The final three perspective articles take the reader to specific locales where shared *best practices* enable meaningful policy change. Paul T. Godfrey and Robert M. Sanford illustrate how inclusive and transparent planning processes dramatically increased public *buy-in* in the Portland, Maine, region. Recounting their experiences with a transportation-corridor study seeking to mitigate congestion while supporting regional growth objectives, they illustrate why soliciting public engagement early in the process paid dividends years later. Tom K. Martella provides an overview of an evaluation procedure used in Orange County to expedite the alternatives evaluation process for transit projects. He shows that by grouping alternatives according to similar characteristics or environmental concerns, the process to eliminate potential alternatives could be expedited, saving both money and time for environmental professionals. Rory Renfro takes an international perspective to examine how Middle Eastern cities have made bicycle and pedestrian elements major components of their transportation plans. He discusses how government agencies there have become quite adept at having infrastructure plans and programs to increase public awareness work hand in hand.

Researchers may take special interest in the five *peer-reviewed articles* in this issue. Wesley E. Marshall and Norman W. Garrick evaluate road safety in California to better understand the intersection (no pun intended) between urban form, bicycle traffic, and safety issues. An increasing presence of bicyclists and interconnected street designs, they show, translates into measurable improvements in safety—findings that are important to both city planners and advocates of nonmotorized forms of transport.

Two other articles explore the trade-off between the efficiency and affordability of roads and streets. Jorgen Harris and Sabina L. Shaikh explore the potential of *destination-based congestion pricing* in the Chicago region. Using the region's expressway system as a model, these economists

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explore the potential benefits of a variable congestion tax to optimally balance supply and demand. Their findings show that *optimal tolls* are actually quite high and have dual roles in reducing congestion and pollution. While Harris and Shaikh focus on the *demand side*, Todd Litman, from Canada's Victoria Transport Policy Institute, concentrates on the *supply side* of the equation. Litman estimates the amount of impervious surfaces that exist in urban areas and compares this with the optimal amount of paving that is needed. He offers fascinating insights into the current policies and planning practices that unintentionally contribute to excessive amounts of pavement.

As this issue goes to press, the debate over high-speed rail is swirling and a new round of federal funding appears in the offing. But critical questions remain unanswered. Is the United States really in the midst of a bona fide *mobility transition*? Do we understand the full range of policy choices necessary for high-speed rail to succeed? Anthony Perl and John Calimente explore these and other essential questions. Drawing from the United States and abroad, their work reviews the environmental impacts of high-speed rail and considers strategies to integrate it into the maze of federal policies. Some of these same themes appear in our article on the spectacular expansion of *curbside* bus services between major cities in the Midwest and Northeast in recent years. Our article shows that this little-understood mode of transportation has such a favorable *environmental footprint* that it deserves far more attention in the policy-making process.

We hope you enjoy reading this special issue. We certainly have enjoyed working with the authors to make their research available to you. Their work breaks new ground in a field that seems to be now reinventing itself in a particularly exciting way.

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