

RESEARCH YOU CAN USE

Golden age of street design

For the 1996 book *Best Development Practices* (APA Planners Press), I toured the state of Florida searching for traditional towns with good main streets. Fifty-eight stops later, I had found only six examples of classic main streets.

State highways running through these places, the original main streets, were so wide that they were difficult to cross and unpleasant to walk along. With widening, street trees had been removed and sidewalks narrowed. Parking lanes had been dropped. Main street businesses had gradually been replaced by strip commercial uses, tailored to the higher speed environment.

What is responsible for the sorry state of arterial highways in Florida and elsewhere? The easy (and wrong) answer is *A Policy on Geometric Design of Highways and Streets*, the American Association of State Highway and Transportation Officials' publication more commonly known as the Green Book.

The indictment goes something like this: State, county, and city departments of transportation blindly follow this bible of geometric design. They do so for fear of tort liability, which arises when substandard designs result in crashes. The Green

Book itself is conservative to a fault when it comes to lane and shoulder widths, vertical and horizontal curve radii, lateral clearances and offsets at the street edge, and other geometric features. As one critic put it: "In the post-Interstate era . . . the engineering profession's Green Book devotion has led state transportation officials into some all-but-indefensible decisions."

From case studies conducted for the New Jersey DOT in the early 2000s, I concluded that the blame was misplaced. Green Book minimum standards aren't excessive, and concerns over tort liability are overblown. What then stands in the way of great streets? Back then, I posited that the real culprits are:

- state and county geometric standards more conservative than AASHTO's minimums
- roadway level-of-service standards that demand road widening whenever congestion appears
- reliance on typical geometric "cross sections" when designs should instead be tailored to specific conditions and contexts
- imposition of new construction standards on resurfacing, restoration, and rehabilitation projects
- use of design exceptions only to save

money, not to preserve main street environments

- maintenance concerns, particularly regarding street trees and special paving materials.

While these factors remain at play, I think that we are entering a golden age of street design. The first reason for optimism is the meteoric rise of the complete streets movement. Complete streets accommodate all users, including pedestrians, bicyclists, and transit users. The Complete Streets Policy Atlas on Smart Growth America's website now lists 656 jurisdictions that have adopted complete streets policies, nearly all of them in the last decade.

The second reason for optimism is the growing number of complete streets design manuals. Some examples:

- Charlotte, North Carolina's *Urban Street Design Guidelines* (search for that title at <http://charmack.org/city/charlotte/transportation>)
- Institute of Transportation Engineers and the Congress for the New Urbanism's *Designing Walkable Urban Thoroughfares: A Context-Sensitive Approach* (www.ite.org/css/RP-036A-E.pdf)
- New Jersey DOT and the Pennsylvania



The rework of W. Lancaster Boulevard in Lancaster, California, converted two travel lanes and a turn lane to diagonal parking and a median plaza. The sidewalks and plaza got new landscaping and other improvements.



DOT's *Smart Transportation Guidebook* (search for that title at www.state.nj.us)

- National Association of City Transportation Officials' *Urban Street Design Guide* (<http://nacto.org/usdg>)

The third reason for optimism is the recent emergence of good examples of redesigned streets. Salt Lake City, where I live, has put 11 streets on road diets, dropping a travel lane on each street and using the extra width for bike lanes. The city just installed its first curb-separated protected bike lanes (referred to in Europe as cycle tracks) on an east-west arterial through the central business district. The redesigned street also includes new concrete centerline medians with pedestrian refuges and public art, and bike racks commissioned from local artists.

On the subject of good examples, Marc Schlossberg and his colleagues at the University of Oregon have published a user-friendly guide entitled *Rethinking Streets: An Evidence-Based Guide to 25 Complete Street Transformations*. Each transformation is described and illustrated with four pages of before-and-after photos and cross sections; figure-ground diagrams; and most importantly, outcome data on traffic volumes, speeds, crash rates, and where available, pedestrian and cycling volumes. The book is provided free of charge as a PDF at rethinkingstreets.com.

I end this column with a quote from a personal hero, the late Donald Appleyard, author of the 1981 book *Livable Streets*. Appleyard called streets the "most important part of our urban environment." He went on to say: "[W]e should raise our sights for the moment. What could a residential street—a street on which our children are brought up, adults live, and old people spend their last days—what could such a street be like?" What indeed.

—Reid Ewing

Reid Ewing is a professor of city and metropolitan planning at the University of Utah and an associate editor of the Journal of the American Planning Association. More than 40 past columns are available at www.plan.utah.edu/?page_id=509. The New Jersey DOT study is available at <http://contextsensitivesolutions.org/content/reading/flexible-design-new-jersey/resources/flexible-design-new-jersey>.

LETTERS

Roll on, but get it right

I thoroughly enjoyed your special conference issue (January 2015), which focused on the Seattle-Tacoma metro region and the state of Washington. It clearly showed why Seattle has earned the unofficial title of "Queen City of the Pacific Northwest."

Just one question/correction: In the article "Roll On, Columbia," Jeffrey Litwak, legal counsel for the Columbia River Gorge Commission, is quoted as saying, "The railroads are aware of this [referring to federal regulatory authority over railroad operations in the Columbia River Gorge National Scenic Area] and, recently, Burlington Northern and Union Pacific railroad met with the commission to discuss potential issues."

Was Mr. Litwak actually referring to the Burlington Northern Santa Fe (BNSF) Railroad or was he referring to both the BNSF and Union Pacific railroads? Union Pacific runs freight train service along the Oregon (southern) bank of the Columbia River Gorge, including oil and coal trains. Please clarify.

—Bill Washburn, AICP

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Response

I think the quote just contains a typo. The word "railroad" (singular) should be "railroads" (plural). The plural is used twice in the quote; hence the typo where the singular appears.

—Jeffrey Litwak
Columbia River Gorge Commission

PLANNERS LIBRARY

Planning and organizing for conservation

In *Conservation Catalysts: The Academy as Nature's Agent* (2014; Lincoln Institute of Land Policy; 350 pp.; \$30), edited by James N. Levitt (Harvard Forest and Lincoln Institute of Land Policy), 46 contributors offer 18 articles on landscape conservation in the U.S. and abroad, with an overall focus on the roles played by academic institutions.

In New England, the Harvard Forest's Wildlands and Woodlands Initiative started just over 10 years ago from the premise that large forest preserves and large actively managed forests could work together for the region's benefit. In Massachusetts a goal is to permanently protect 2.5 million acres compared to the current one million, "predominantly through easements from willing landowners paired with strategic conservation acquisitions and economic incentives for conservation."

In central Florida the "scrub ecosystem" is much smaller and more endangered than New England forests, considered the 15th most endangered ecosystem in the nation. The Archbold Biological Station, a nonprofit research institution, helped catalyze interest; according to Hilary M. Swain and Patricia A. Martin, public and private investment has "tripled the area of protected scrub and reduced the risk of extinction for many species."

Because almost all the virgin timber has been logged, and citrus growers and scattershot development and sand mining have taken much of the rest, that degree of protection is not enough. Archbold and the Nature Conservancy have worked to develop a local conservation constituency in the rural area. "The big, sexy land deals have largely been completed, and it's mostly multiple small challenges that remain," especially in acquiring protected lands that can be managed by controlled burning.

Douglas Givens describes the land conservation initiative of Kenyon College in central Ohio. One quandary for academic institutions is how they can do nonacademic things. Kenyon formed the Philander Chase Corporation, a separately incorporated nonprofit with a preservation mission for the area landscapes, including working landscapes. It is a 501(c)(3) organization with only one member, the college. Together the two have made creative use of opportunities.

The Ohio Agricultural Easement Purchase Program, designed to maintain land in farming, required some entity other than the affected landowner to apply for an easement. PCC made applica-