

BMTS Article Digest July - August 2015

BMTS Pedestrian & Bicycle Advisory Committee Members:

The following is a compilation of articles that may be of interest to BMTS Pedestrian & Bicycle Advisory Committee members. This and past digests can also be accessed in the Pedestrian & Bicycle Advisory Committee page of www.bmtsonline.com.

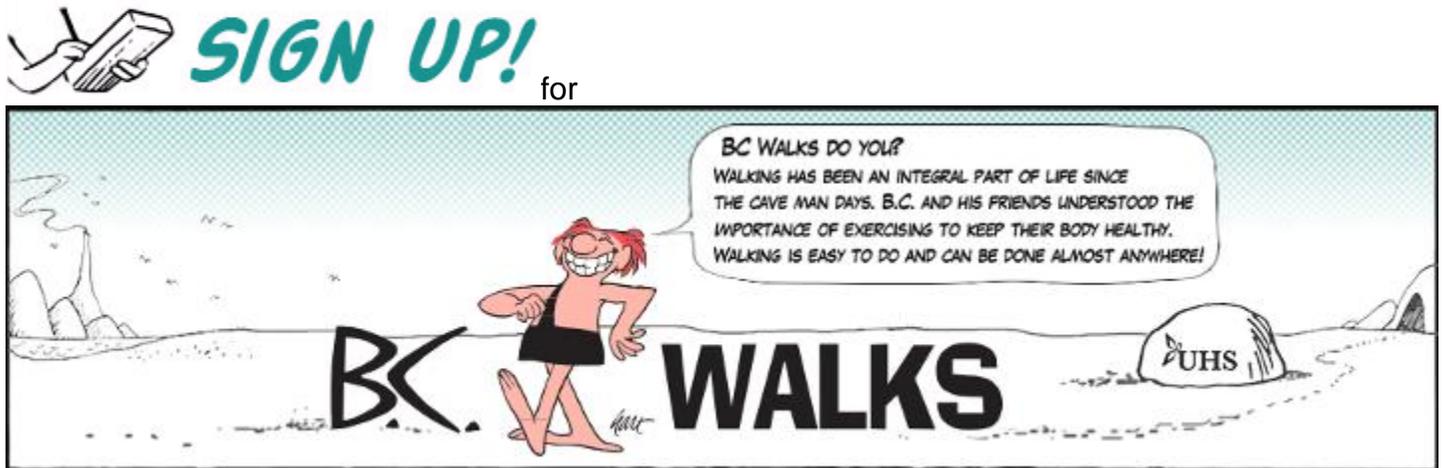
Scott



Take a look at the National Center for Bicycling & Walking's newsletter, **CenterLines**. You can also arrange to have it emailed directly to you.

See <http://www.bikewalk.org/newsletter.php>.

CenterLines is the bi-weekly electronic news bulletin of the National Center for Bicycling & Walking. **CenterLines** is our way of quickly delivering news and information you can use to create more walkable and bicycle-friendly communities.



Go to www.BCWalks.com!

Check out this website for Bike & Pedestrian Information!



www.coexistnys.org

In particular, view the interactive educational video clips.

Please, help spread the word!



BMTS TechWorks!

[2015 Binghamton Bridge Pedal](#)

Saturday, August 29th 9-11am

Followed by the Coolest Dessert in Town Contest

Join in the family fun with an escorted bike tour around Binghamton along the Chenango and Susquehanna Rivers! The 9 mile ride starts and ends at TechWorks!, 321 Water Street, Binghamton. Cool off afterwards with free ice cream at the Coolest Dessert in Town Contest.

All Bridge Pedal tickets include the ride, a 100% cotton T-Shirt, and entrance to the Coolest Dessert in Town Contest.

[Reserve your ticket and t-shirt today!](#)

[2015 Binghamton Bridge Pedal Ride Map](#)

[Get this information as a printable flyer](#)

Presented by:

BMTS

Innovation
**TECH
WORKS!**
Past, Present,
www.ctandi.org

(Goat) mowing operations ahead!

AMANDA PURCELL

POUGHKEEPSIE JOURNAL

The New York State Bridge Authority unveiled its newest contractors Wednesday: a herd of goats. For 12 weeks, the 12 furry, four-legged weed whackers will live in a fenced-in area on Delafield Street **beneath the Walkway Over the Hudson Bridge in Poughkeepsie**, mowing down on the overgrowth and saving the state thousands in maintenance costs.

The goats are part of a herd of 100 called Green Goats from Rhinebeck that work to manage overgrowth at 15 locations throughout the state, including Marist and Vassar colleges.

Owner Larry Cihanek said each of the goats can eat up to 30 pounds a day and reach weeds as tall as 6 feet. And unlike maintenance workers, the goats won't get a rash when they come in contact with poison ivy. In fact, they love to eat the pesky plant, Cihanek said. Bridge Authority Executive Director Joseph Ruggiero said the goats are expected to save the state close to \$8,000 in labor and maintenance costs. While he said there has been no talk of the goats forming a union, a goat did manage to escape during the night before he was corralled by a neighbor a few minutes later. "We've recruited him to join our homeland security task force to help" find security flaws, Ruggiero said jokingly.

The relationship between goats and the Delafield Street residents is important to Cihanek, who said he sees his goats as members of his family.



The New York State Bridge Authority will use goats to clean up the green space underneath the Walkway Over the Hudson.

AMANDA PURCELL/POUGHKEEPSIE JOURNAL

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To all: I thought you all might enjoy this, there is a lot of good information here especially as we plan for an aging population. Gil Penalosa is great!

<http://www.aarp.org/livable-communities/livable-in-action/info-2015/5-questions-for-gil-penalosa.html?encparam=o5jkQqYH1IYKhGPvaUpTYwBua6OZFJU6QoHxYIwXhPk%3D>

Enjoy!

Regards,

Mark D. Bowers

Associate Capital Program Analyst & Regional Pedestrian and Bicycle Coordinator

Sherwood and crew launched 'TechWorks!' in Binghamton

Valerie Zehl, Binghamton 2:05 p.m. EDT August 6, 2015



(Photo: ANDREW THAYER / Staff Photo)

Susan Sherwood had a vision that's quickly materializing on Water Street in Binghamton.

Its name is "TechWorks!" at the [Center for Technology & Innovation](#), but toss out the word "boring" if it occurs to you. This is no dusty backwater museum. It's as much about doing as seeing.

Think "send Morse Code messages," "pilot a flight simulator," "step inside a giant camera" and tons — literally — of other exhibits that make Sherwood's heart beat faster when she talks about them — citing detail after detail authoritatively at 78 rpm.

Its mission, "to document and present in context the inventions and industrial innovations of New York's Southern Tier," has been barreling forward since Sherwood and the board of directors accepted the donation of the old ice cream factory from Ed Levene, of United Auto Parts, in 2009.

What that descriptive one-liner doesn't mention is that the place is already packed with an A to Z (actually A to W, in one of its cavernous rooms) of local companies of many eras as well as components and inventions that have changed the world.

That's a claim Sherwood vehemently stands by: Many inventions and products that came out of upstate did nothing less than change the world.

And another claim she puts forward in both boldface and italics, with several exclamation marks: It's the Board that makes it all work; she's just the producer.

"We really have a stellar board," she said. "Each of them is regionally if not internationally known, and they're the source that keeps us moving forward."

Her passion and yes, money, started filling the old Binghamton Ice Cream building, also known as the Sealtest plant, with artifacts weighing from thousands of pounds to mere milligrams.

Sherwood is unpaid for all the energy and time — 48 or so hours a week in the building and extra time spent pursuing sponsors and gathering more stories — that she donates to the already-much-evolved site.

She not only brings boundless energy and constant humor to the place, she brings scholarship, although her credentials have to be pried out of her, so modest is she.

"In my previous life, I was a serious researcher, with 70-plus peer-reviewed publications, including five books, a dozen book chapters, and oodles of government reports and journal articles," she finally admitted. "These days, my writing is focused on fundraising and connecting the threads of regional innovation. I look forward to the time when TechWorks! is built and running, and I can spend quiet time at my writing table."

So don't mistake her upbeat effervescence for her being a lightweight. She's anything but.

She's elated to see that it's all coming together at warp speed, but gives all credit to her many sponsors and the busy-bee volunteers who swarm the place on a daily basis.

The prospect of tinkering with vestiges of yesteryear they saw during their careers at Ansco, IBM, Lockheed, Link and elsewhere drew in hundreds of dedicated volunteers. The boundless energy of the place captivates college, university and high school students who donate their time and creativity.

TechWorks! owes its burgeoning success to them all, she insists, but behind all their efforts scurries Sherwood, who hates talking about herself but is unstoppable when she discusses the Center for Technology & Innovation and TechWorks!

Vestal girl of the Sherwood line

Born in Endicott's Ideal Hospital 63 years ago, Sherwood grew up in what was then "downtown" Vestal, not too far from what is now better known as the Four Corners area. Vestal had about 4,000 residents then, she said, and the land on which Walmart now stands then supported a drive-in theater.

Her dad, W. Ben Sherwood, was the town's first attorney. Her mother, Ellen Ingeborg Delfs Sherwood, had met him when they both studied at Cornell University. She went on to become the first guidance counselor in the Vestal schools and an antique dealer on the side, Sherwood said.

Susan Sherwood emerged as the oldest daughter and the second of nine in the family, all raised on Cold Spring Farm at the west end of Castle Garden Road, where their property doubled as the neighborhood football and baseball fields.

She was often the ringleader of the neighborhood kids' activities, she said, always outside exploring, biking and "digging things up."

The TV clicked on for only an hour a day in their house, so the siblings bargained with each other to watch particular sports games or shows.

"You learn to negotiate in a big family," she said, noting that skill's application in her current role. She works hard to enlist corporate support for the site and its constant stream of events, often sponsored by the likes of the Raymond Corp., Binghamton Simulator, Huron Realty, NYSEG and other companies that offer tangible support in caring about the community.

A natural polyglot, she had little trouble learning French, Danish, German, Italian, Latin, Greek, Swedish and some Russian.

"But I can't spell in any language," she said with a smirk.

Math and science came equally easily to her, and as a designated "Mathlete," a team competition among schools, she could access entry to an Explorer post in Vestal, where she learned Fortran and became something of a computer nerd in a day before the term was created.

She spent her senior year not at Vestal High but in Denmark as a Rotary exchange student. Then she proceeded to Bryn Mawr outside Philadelphia, earning degrees in classical archeology and chemistry in 1974.

Curious career trajectory

Sherwood had wanted to become a biochemist originally, but Bryn Mawr had no such program. They did have a classical archeology program ranked fourth in the world, and a knock-your-socks-off Swedish professor who ignited her passion for that field.

Again owing to that benevolent association, she pursued higher education as a Rotary Foundation Fellow at Aarhus University in Denmark, where she achieved her master's degree in Roman archeology.

"Another highly employable field," she commented, deadpan.

Her computer skills enticed employers, and armed with the one-two punch of chemistry and archeology, a seemingly incompatible combination but in fact one that enabled her to understand environmental impact on ancient statues and the like, she went to work in DC immediately after graduation for the federal government in historic preservation.

"I was a G-man," she said with her trademark hearty laugh.

Her first task for them found her developing a computerized catalog of historic buildings and archeological sites owned by the National Park Service.

The NPS signed her paycheck 18 years for projects as far-ranging as acid-rain research and determining the source of deterioration of the Wieliczka Salt Mine statuary and chapels near Krakow, Poland, and the Taj Mahal in Agra, India.

“You could taste the air pollution in the winter in Agra,” she said. “I had to sleep with an air mask on.”

She’s gratified to know her team’s efforts there made a difference. “Now the air pollution is half what it was,” she said. Sherwood also served as lead author on several books about acid rain.

Such credentials bespeak a professional of considerable gravitas. Her personality bespeaks the unbridled joy of a gifted child dazzled by the array of jewels of the community around her.

“The giant camera is disabled-accessible,” she interjects in the middle of being pressed to tell her own story. “But my pride and joy is our new 1913 Link Automatic Piano.”

After she finishes her discourse on the wonders of that piece, which can emit the sounds of a piano, woodwinds or strings, she accepts the urging to talk, albeit reluctantly, about herself.

In 2001, she had a brief stint working for the Roberson Museum and Science Center, before taking off to actualize her own vivid and doable imaginings, for which she has the highest of all possible hopes.

“We can bring people off the highway,” she said. “We have internationally significant exhibits, and all these things were made here.”

People in their 60s, 70s and 80s in particular might want to stop to learn about the technologies that changed their lives before anybody ever thought about a “Silicon Valley.”

“The inventor of the lithium ion battery is a professor at Binghamton University, Stan Whittingham,” she said, then rattling off a short list of that battery’s many applications. “Cell phones, watches, electric cars, laptops — did you know that?!”

She hands over a pamphlet filled with other startling trivia, such as, “Nov. 1913 — World’s first text messages on land are sent in Morse Code between moving trains and stations in Binghamton and Scranton.” “1970 — Corning introduces first low-loss optical fiber for networks, revolutionizing the way the world communicates.”

And then, among many others, “Five onboard 4 Pi computers from IBM Owego on 1970s NASA Space Shuttles provided digital fly-by-wire signals to control hydraulic-driven actuators and interfaces between orbiter systems.”

Pop in to 321 Water St. sometime for a translation of that sentence.

And Sherwood shoots out emails that read as breathlessly as if she were speaking the words in person: “The team of folks who traipsed through our outdoor conversation forged a huge success ... The printer (repaired with parts made on a cutting-edge 3D printer at Triple Cities Makerspace “in the hood, as it were,” she said later with another laugh), originally designed for the IBM 360 system, printed its first page. The machine is in toddler mode now and the adults are all excited.”

She’s at least as enraptured every time her volunteers can bring an archaic piece of equipment back to life — and it happens often.

Sherwood not only speaks several miles a minute, but almost every sentence ends in an exclamation mark. Her constant enthusiasm is palpable, even if she leaves you panting as you struggle to take in whatever she’s discussing. She tries to keep her explanations comprehensible, but she simply knows too much to always pull it off.

She's on a mission, reaching into the realm of visions and creating physical realities. And she's moving forward at least as speedily as she talks — a remarkable feat.

Follow Valerie on Twitter @PSBValerieZehl and email her at vzehl@pressconnects.com.

Susan Ingrid Sherwood

Age: 63

Status at TechWorks!: volunteer

Hometown: Vestal

Home: Binghamton

Education: undergraduate degrees in chemistry and classical archeology from Bryn Mawr, master's degree in Roman archeology at Aarhus University

Family: Single, no children

Hobbies: "Sleeping" (said with a big laugh), cooking, swimming, gardening and teaching classes about technological inventions and ideas.

Special event: TechWorks! will be open from 9 a.m. to 1 p.m. Aug. 29 for the Third Annual **Coollest Dessert in Town** contest, during which visitors sample and vote on ice cream from local parlors. Guests can check out a view of the bikers at [the Binghamton Bridge Pedal](#) from inside inside the Giant Camera.

More information: Visit ctandi.org or call (607) 723-8600.

Progress depends on more 'infrastructure of community'

[Blog](#) post by [Robert Steuteville](#) on 30 Jul 2015

Robert Steuteville, Better! Cities & Towns



Columbia Heights. Source: Sitephocus

Healthy places need two physical characteristics: The *architecture* of community and the *infrastructure* of community. Together they comprise the vertical and horizontal parts of cities and towns. Both are critical, but the infrastructure lays the foundation and is also the most enduring: Buildings come and go, but streets last for centuries.

The new urbanist movement has made significant progress through form-based codes, promoting "missing middle" housing types, and transforming the development industry. Less headway has been made on infrastructure.

This issue has to do with the nature of buildings and streets. Developers are free to construct new kinds of buildings in response to market conditions, but the infrastructure that surrounds these buildings needs public leadership—and the support of government bureaucracies that don't respond to the market.

The markets have dramatically changed in the last decade—where they used to favor drive-only, conventional suburban development (CSD) they now favor compact cities and towns. Walkable urban places—which require the infrastructure of community—carry strong premiums across many real estate products nationwide, indicating that the demand for these places is much bigger than supply. Two or three decades ago, premiums favored CSD.

Key demographic groups—especially the Millennial generation—strongly prefer the infrastructure of community. Businesses are following. A recent [NAIOP study](#) showed that 83 percent of office tenants prefer walkable urban places in cities or suburbs. Even Walmart is urbanizing its hometown, [Bentonville, Arkansas](#), to attract the talent to keep the local economy growing and staff its headquarters and suppliers.

But the playing field still favors conventional suburban development in the vast majority of metro areas because of zoning codes and infrastructure implemented during the nation's era of suburban expansion and automobile dominance. Form-based codes, which focus on character of place rather than separation of use, are beginning to level the playing field in many places, but they are not sufficient. The vast "infrastructure of sprawl" that is already built and the institutions that protect and favor it remain powerful barriers to change.

Infrastructure of sprawl versus community

The infrastructure of sprawl consists of big roads and intersections that support driving only. The network is poorly connected and destinations are built with plentiful parking. I call this "[Big Asphalt](#)"—an energy intensive, expensive environment that discourages regular physical activity and erodes community.



The infrastructure of community—exemplified by street grids in older cities and towns from Gotham to Mayberry—is small-scale and connected. It supports mixed-use, walking, and bicycling. It accommodates automobiles in ways that respect human-scale public space. It supports transit, which is another key part of “the infrastructure of community.”



Photo source: [rsmith](#)

Manhattan, San Francisco, Savannah, and thousands of cities and towns across America were laid out with networks of streets that were established by civic leaders as public rights of way, punctuated by parks and civic spaces. This was, simply, the way things were built in America for hundreds of years and elsewhere in the world for millennia. This infrastructure still works today and comprises the most valuable and sought-after real estate on the continent.

In the middle of the 20th century the infrastructure of community was still largely intact. Despite decades of publicly funded road and highway construction and laws that gave automobiles the rights of way, 1950 was a golden time for transportation in the US. We had built drivable thoroughfares coast to coast—think Route 66—but communities were still walkable, coherently designed, intact. That changed rapidly as Big Asphalt kicked into high gear in the latter half of the century. The transformation consisted of at least four national public initiatives:

- 1) The destruction of neighborhoods in cities and towns through urban renewal, highway construction, and parking requirements that leveled historic buildings.
- 2) The construction of increasingly bigger roads and intersections, especially in the suburbs— using new professional standards, endorsed by government, that failed to take into account even minimal needs of human-scale locomotion.
- 3) Subdivision and zoning laws discouraged connections of streets, funneling traffic onto large roads and dispersing parks, schools, and other traditional neighborhood features to locations that required driving.
- 4) The dismantling of transit systems and massive public investment in highways.

The efforts listed above were spearheaded by government, but they worked *with* the market. During the 20th Century, the American public wanted drive-only, conventional suburban development. The policies *influenced* the real estate market, too, by dismantling cities and subsidizing sprawl. Still, businesses flocked to new locations surrounded by parking lots and buyers eagerly moved to suburban subdivisions.

This combination of policy and popularity built a US infrastructure that overwhelmingly favored the infrastructure of sprawl. More than 90 percent of our metropolitan regions are built in the drivable suburban pattern. Here's the breakdown in the Boston region, according to research by Christopher Leinberger of George Washington University.

U.S. Metropolitan Land Use Options

	REGIONALLY SIGNIFICANT	LOCAL SERVING
 WALKABLE URBAN	WALKUP (Walkable Urban Place) 1% <i>Metro Area Acreage</i>	NEIGHBORHOOD 3-7% <i>Metro Area Acreage</i>
 DRIVABLE SUB-URBAN	EDGE CITY 5-7% <i>Metro Area Acreage</i>	BEDROOM COMMUNITY 80-85% <i>Metro Area Acreage</i>

The infrastructure of sprawl extends to the vast majority (drivable sub-urban) of a typical region. Opportunities for urbanism are limited to a small part of the region—unless you can create an urban place from scratch. Source: Christopher Leinberger, George Washington University.

Leinberger argues that building walkable urban places could power our economy for the next generation or two, much like building suburban sprawl drove the economy in the generations after World War II. But we need the infrastructure to support it.

The infrastructure of sprawl holds our nation back economically—and in many other ways. How do we feel about spending money to improve the health care system when the government builds infrastructure that increases [obesity, diabetes, high blood pressure, and heart disease](#)? While the nation seeks ways to reduce carbon emissions, Big Asphalt [pushes in the other direction](#). Our infrastructure works at cross-purposes to reducing [traffic deaths](#), boosting [upward mobility](#), and improving [social cohesion](#).

The infrastructure of community is, historically, the physical manifestation of civilization. We spent the better part of a century dismantling it, and we shouldn't be surprised if that works against progress now. Why we built Big Asphalt is clear: That's what the market demanded at the time and the full implications of this policy were then unclear. The market is no longer demanding this and now we know better.

The right course with regards to streets and transit is clear: Level the playing field by rebuilding the infrastructure of community. The engineering profession, the state and federal Departments of Transportation, regional planning associations, and local public works officials must relearn how to build infrastructure that supports community.

Many of the changes are not technically challenging. Unlike buildings, street technology and construction has changed little over the years. Walkable, connected streets are built of the same base material, asphalt, and curbs as the larger roads of drive-only conventional suburbia. The reduced thoroughfare width and support for higher density

makes the infrastructure of community relatively cheap per unit of development. Retrofit is more expensive, however, and retrofiting *badly* is costlier still. DOTs are often afraid to use the simplest and most direct approach—narrowing lanes with paint and using the excess pavement for other things like bike lanes, on-street parking, or even private development—despite substantial evidence that [safety would rise](#).

New Urbanism and Big Asphalt

Starting in the 1990s, New Urbanism proposed a radically different configuration of communities than the business-as-usual pattern. In place of single-use pods, new urbanists proposed walkable neighborhoods and districts linked by multimodal transportation corridors. But this group—mostly developers, planners, and architects from the private sector at the time—had no capacity to make a dent in the infrastructure of sprawl.

They needed, at first, to prove that their vision could work. They did so mostly by building new neighborhoods and towns. They needed legal variances—including narrower streets, smaller curb radii, and more intersections—but the new towns were located on parcels that, like subdivisions, were internal to the larger arterial road networks of sprawl. Occasionally, new urbanists used subterfuge—in Seaside, Route 30A was altered without permission to slow traffic through the middle of town. New urbanists rhetorically attacked the infrastructure of sprawl, and they wrote books and manuals on street design, but this had very limited impact on Big Asphalt. Taking on DOTs was a quixotic battle that pragmatic new urbanists had little time and resources to fight.

New urbanists also built on infill sites, taking advantage of the older, nonconforming street networks from the pre-sprawl era. They worked, alongside many others, to incrementally repair the damage done to historic street grids.

In the meantime, those who build and maintain our infrastructure have grudgingly accepted the value of old-style street networks. Most states now have "complete streets" laws—calling for thoroughfares designed for all users. Newer design manuals such as the *Urban Street Design Guide* by the National Association of City Transportation Officials and *Designing Walkable Urban Thoroughfares* by ITE and CNU give engineers credible resources for the human-scale street networks. Study after study shows these networks are safer and work well to move all kinds of traffic. But traffic engineers and road builders are still slow to change their ways.

While the federal DOT has made strides in [Sustainable Communities](#), no state DOT has been willing to depart very far from business as usual. Few regional planning organizations, which distribute transportation funding, have made broad attempts to build the infrastructure of community or repair Big Asphalt.

DOTs have not clamored to make "complete streets" of Big Asphalt thoroughfares. When they do, it often means putting in bike lanes, sidewalks, and/or crosswalks with little change to the character of the highway or connectivity. In a nod to walkable places, DOTs often have "context-sensitive design" (CSS) programs. New urbanist traffic engineers sometimes joke that CSS means "meet with folks until they understand why the road needs to be wider with less access, or until they stop showing up."

There's a political component to this issue. A [battle is brewing](#) that pits hard-core highway supporters against younger, urban-oriented legislators over transportation funds. In Wisconsin, Millennial legislators who prefer walkable neighborhoods object to enormous funds spent on highway interchanges while a "complete streets" program is killed.



A massive Milwaukee interchange, top, and the "infrastructure of community" prior to its construction.

Research [steadily supports](#) the new urban position, contributing to the drumbeat for change. The infrastructure of sprawl was largely built based on assumptions about safety that fall apart under rigorous study. "Given the empirical evidence that favors 'narrower is safer', the 'wider is safer' approach based on intuition should be discarded once and for all," notes a June 2015 study presented to the Canadian Institute of Transportation Engineers.

We need a renewed focus on the infrastructure of community. New urbanists and their allies have largely won the battle with developers, who are eager to build walkable places where businesses want to locate. Standing in the way of a strong economy, better health, sustainability, and renewed communities are technical specialists clinging to an outdated approach.

Perhaps they could respond to a stick and carrot. The stick would be pressure from businesses and constituencies that now need the infrastructure of community. The carrot would be the chance to propell our nation forward in the 21st Century.

The US "infrastructure crisis" pertaining to lack of funding for roads and bridges generates a lot discussion in Washington and state capitals. The more critical problem depends less on the amount of funding and more how we spend it: We've built too much "infrastructure of sprawl" and too little infrastructure that supports community.

Robert Steuteville is editor and executive director of Better Cities & Towns.