



## Ogden City

### City Council Joint Work Session Notice

August 19, 2015 – 5:30 p.m.

City Council Work Room

Municipal Building – Third Floor

2549 Washington Boulevard, Ogden, Utah 84401

\*\*\*AMENDED\*\*\*

Notice is hereby given that the City Council will meet in a joint work session with the Ogden City Planning Commission on Wednesday, August 19, 2015 at 5:30 p.m. in the Council Work Room on the third floor of the Municipal Building located at 2549 Washington Boulevard in Ogden City, Weber County, Utah.

The purpose of the work session is to conduct land use training and discuss Council business.

\*\*\*Pursuant to Section 52-4-207 “Electronic Meetings” of the Open and Public Meetings Law, Vice Chair White will participate in the meeting via teleconference and such electronic means will provide the public body the ability to communicate via the teleconference.

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#### CERTIFICATE OF POSTING

The undersigned, duly appointed City Recorder, does hereby certify that the above notice and/or agenda was posted in three public places within the Ogden City Limits on this 18th day of August, 2015. These public places being: 1) City Recorder’s Office on the 2nd floor of the Municipal Building; 2) 2nd floor foyer of the Municipal Building; and 3) the Weber County Library. A copy was posted to the Utah State Public Notice Website and the Ogden City Website, as well as provided to the Standard-Examiner.

TRACY HANSEN, MMC  
OGDEN CITY RECORDER

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# City Council Work Session

## COUNCIL STAFF REVIEW

### ANNUAL LAND USE TRAINING SESSION WITH THE PLANNING COMMISSION

#### PURPOSE OF WORK SESSION:

- To receive land use training in a joint session with the Planning Commission

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#### **Background**

As part of the City's commitment to continued training for planning and land use issues and as directed by the State, the City Council and the Planning Commission are holding a joint work session to receive training on a topic related to land use regulation in the City. The topic has been chosen by the City's Legal Counsel, Planning Department and Council Staff. The topic was chosen based on what City staff felt was a current and relevant issue from which the Council and Commission could benefit.

#### **Complete Streets**

While the topic of Complete Streets may not be new to everyone on the Planning Commission and City Council, City staff felt that an overview of the topic and background on the City's current efforts to implement a complete streets policy could be beneficial. Not only will the topic itself be beneficial, the joint communication among Commission members and Council members will provide a common base from which future discussions may continue.

The American Planning Association defines a complete street as:

*"A safe, accessible, and convenient street for all users regardless of transportation mode, age, or physical ability. Complete streets adequately provide for bicyclists, pedestrians, transit riders, and motorists. Complete streets promote healthy communities and reductions in traffic congestion by offering viable alternatives to driving."*

The City is currently participating in a number of projects that have the potential to make Ogden more walkable, more multi-modal, and more accessible to our residents. UTA's transit study, the Fehr and Peers' bicycle master plan project, and the City's work with Wasatch Front Regional Council and Lochner on developing a complete streets policy



# City Council Work Session

## COUNCIL STAFF REVIEW

will all have a significant impact on how we look at our City and our public space. A solid understanding of what multi-modal, complete streets are is essential in successfully implementing the transit project and the bicycle master plan.

The Planning Commission and the City Council will be instrumental in reviewing and approving changes to the City code that result from the implementation of both the transit project and the bicycle master plan. In addition, the Commission and the Council will be involved in reviewing policies stemming from a policy specifically related to complete streets. The City has been working with Wasatch Front Regional Council and their consulting partner Lochner to develop a complete streets policy for the City. This policy will have a significant impact on the City's review process when developing and maintaining the City's roads.

As a way of providing background on complete Streets and the forthcoming policy, City staff has invited Greg Scott from Wasatch Front Regional Council to come to the joint meeting to give a presentation on the subject.

### ***Attachments***

1. APA Planning Advisory Service Quick Notes – Complete Streets
2. *Planning* article from May 2005 – Complete the Streets!
3. *Planning* article from May 2014 – Complete Streets Come of Age

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**Memos Prepared By:**

**Legal Contact:**

**Mark Stratford, 629-8140**

**Administrative Contact:  
Council Staff**

**Greg Montgomery, 629-8931  
Glenn Symes, 629-8164**

# Complete Streets

In the last decade transportation planners and urban designers have made a significant shift in their approach to the design and intended function of streets. Conventional transportation planning was concerned primarily with the safe and efficient movement of cars. Today many transportation planners are working with land-use experts and urban designers to create what have been termed "complete streets."

## WHAT ARE COMPLETE STREETS?

A complete street is a safe, accessible, and convenient street for all users regardless of transportation mode, age, or physical ability. Complete streets adequately provide for bicyclists, pedestrians, transit riders, and motorists. Complete streets promote healthy communities and reductions in traffic congestion by offering viable alternatives to driving.

**Democratizing the Streets.** Because streets and roads are the largest component of public space in every city, they should benefit the entire community. Improved design, a redefinition of function, and physical reorganization are the ways to achieve these benefits. Jurisdictions that adopt complete streets policies aim to create a comprehensive and integrated local and regional transportation network for all travel modes—driving, walking, and cycling.

**Policy Considerations.** Creating complete streets may mean changing the policies and practices of transportation agencies. Advocates argue that it will take new training, new procedures, and design manual changes to accommodate bicycling, walking, and transit to an equal degree with motor vehicles.

**Different Approaches.** The principle behind complete streets policy is that multimodal corridors should become the default design mode for streets—and a formal exception process must be followed when they are not. Many existing policies are based on the U.S. Department of Transportation's

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# QuickNotes

PAS QuickNotes No. 5



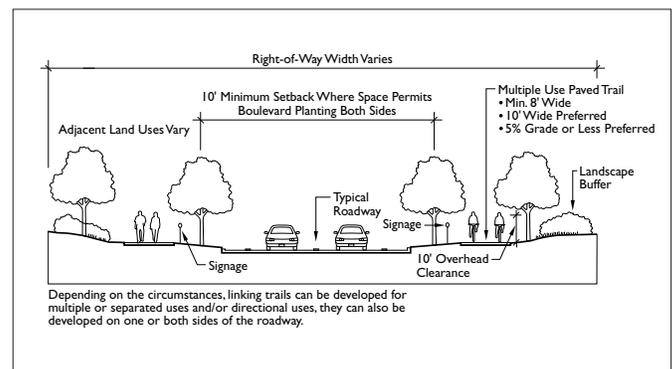
design guidance for Accommodating Bicycle and Pedestrian Travel: A Recommended Approach, which names only three exceptions where roads can lack facilities for all users: (1) excessive cost, (2) absence of need, and (3) roads where bicyclists and pedestrians are prohibited. More comprehensive policies include accommodation for people with disabilities and for transit vehicles and users.

## COMPLETE STREETS DESIGN CONSIDERATIONS

**Skinny Streets.** Skinny, or narrow, streets complement complete streets policies. Narrower traffic lanes result in slower travel speeds that translate into safer, more accessible, and more pleasant thoroughfares for all users. A physical narrowing of the actual street may be unnecessary because on-street parking can also visually narrow the thoroughfare for drivers.

**Street Connectivity.** Street connectivity—meaning the directness and length of the street blocks and the density of connections within a street system— influences the accessibility of destinations in a community and holds important implications for modal choice. Complete streets in areas with higher levels of street connectivity will produce greater overall accessibility for all travelers, regardless of the mode they choose.

**Context-Sensitive Streets.** All streets are not alike. Streets in industrial areas have a much different character than streets in residential, commercial, and mixed use districts. Traffic engineers and urban designers are beginning to combine the functional classification of streets with their adjacent land uses to yield a more comprehensive array of street types. This approach takes into account land uses adjacent to the street and recommends five basic classes of street design: commercial streets,



From Planning and Urban Design Standards  
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*Linking trails emphasize safe travel for pedestrians to and from parks and around the community.*

*(Continued on back.)*

mixed use streets, main streets, residential streets, and industrial streets. Streets in each class can be designed as complete streets.

### Complete Streetscape Design

**Elements.** Undertaking major construction projects to achieve complete streets is not always necessary. In fact, small projects can have a large impact. Examples include raised medians, pedestrian refuge islands within medians, bicycle lanes, bus pullouts, transit shelters, and street furniture.

### COMPLETE STREETS ARE FOR EVERYONE

**Pedestrian Safety.** Communities with complete streets policies protect travelers from cars. Walkways should provide secure footing, pedestrian pathways should be clearly indicated, and signaling must consider the rights of all users of the road. Designing the street with pedestrians in mind—sidewalks, raised medians, better bus stop placement, traffic-calming measures—all improve pedestrian safety. One study found that designing for pedestrian travel by installing raised medians and redesigning intersections and sidewalks reduced pedestrian risk by 28 percent.

**Public Health.** Public health officials are calling for Americans to increase their physical activity. Officials argue that increased walking and bicycling will help to combat the current obesity epidemic. A 2002 report issued by the National Conference of State Legislators noted that the most effective policy for encouraging bicycling and walking is complete streets.

**Vulnerable Populations.** Truly complete streets go beyond accommodating bicycling and walking to consider children, the elderly, and people with a disability. More often than not, the elderly and people with disabilities rely on the pedestrian and transit infrastructure for access and mobility. Complete streets policies make it possible for vulnerable populations to better use transportation systems by equipping streets with the necessary infrastructure, including curb ramps, textured and varied pavement, audible crossing signals, countdown signals, and high-visibility crosswalks.



*Multimodal streets like this one improve access and safety for drivers, pedestrians and cyclists.*

### DEVELOPING WITH COMPLETE STREETS

**Economic Development.** Streets create marketable value for abutting private property by providing access. Complete streets can increase the economic viability of a city district by improving access for more people, thus increasing the potential number of customers to businesses.

**Transit-Oriented Development.** Complete streets policies go hand in hand with transit-oriented development (TOD). Traffic-calming measures, streetscape improvements, and transit have successfully been combined to revitalize entire commercial districts. Both residential and commercial projects near transit typically appreciate in value more rapidly than other projects. In a TOD land uses and infrastructure are arranged to encourage and to facilitate the use of transit while accommodating a range of travel modes and purposes. Transition points where travelers transfer easily from one mode of transportation to another are key features of both complete streets and TODs.

**Challenges.** One challenge to complete streets implementation is a lack of right-of-way in cramped thoroughfares. Another is the misconception that complete streets cost more to build than “normal” streets when, in fact, complete streets most often cost no more and many times can cost less. Current methodologies for studying traffic pose another problem. Many contemporary traffic studies fail to consider how the presence of transit and decreases in automobile use associated with mixed use neighborhoods may lower trip generation rates. Communities should reevaluate traffic studies based on antiquated trip generation models. *Patrick C. Smith*

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# Complete the Streets!

New state and local policies require that virtually all roads be built to serve all types of users.

*By Barbara McCann*

In many communities, designating a bicycle route or pouring a few new sidewalks is no longer enough. In the college town of Columbia, Missouri, the city adopted new street standards last June calling for wider sidewalks and narrower lanes. The governing commission of the South Carolina Department of Transportation recently passed a resolution declaring that "bicycling and walking accommodations should be a routine part of the department's planning, design, construction, and operating activities."

In San Diego last November, voters approved a sales tax measure that is expected to generate \$14 billion over 40 years. It specifies that any roads built or improved with these funds must have room for cyclists and pedestrians.

All of these jurisdictions are part of a new trend: creating complete streets.

## **For everyone**



A complete street is defined as a street that works for motorists, for bus riders, for bicyclists, and for pedestrians, including people with disabilities. A complete streets policy is aimed at producing roads that are safe and convenient for all users.

Complete streets are not limited to a few designated corridors. Many communities have launched main street initiatives, adopted bicycle plans, or undertaken special planning processes for nonmotorized travel in specific places. In contrast, complete streets policies strive for diversity on just about every thoroughfare. And the process of creating complete streets is leading planners and engineers across the country to approach

street design in fundamentally new ways.

Most U.S. roadways are not "complete streets." According to a national survey conducted in 2002 by the federal Bureau of Transportation Statistics, about one quarter of all walking trips take place on roads without sidewalks or shoulders, and bike lanes are available for only about five percent of bicycle trips. Another BTS poll, the 2003 National Transportation Availability and Use Survey, found that the top complaint among both able-bodied and disabled pedestrians and cyclists was that there were too few usable sidewalks and bikeways — essentially, too many incomplete streets.

## **A new name**

For advocates of bicycling and walking, this state of affairs demanded a whole new paradigm — and a name to go with it. The term "complete streets" was coined in early 2003 by bicycle advocates as a way to describe — and sell — what had until then been referred to as routine accommodation.

For years, advocates of this approach had lobbied to get a provision inserted in federal law that would require roads built using federal highway funds to accommodate people on foot and bicycle. While the Transportation Equity Act of 1998 (TEA-21) included language asking states to consider bicycle and pedestrian travel, it is still not a requirement.

Creating complete streets is a key goal of America Bikes, a group formed by eight national bicycling organizations to lobby for bicycle-friendly provisions in the next federal transportation bill. "We saw how the name Safe Routes to School opened doors for bicycle and pedestrian safety for children," says

Martha Roskowski, former campaign manager for America Bikes. "Finally we have a name that describes the current vision of a network that is complete for everyone using the roads."

### Today's policies



More than two dozen jurisdictions have adopted laws or policies requiring that all roads be routinely built and reconstructed to accommodate pedestrians and bicyclists, including disabled travelers, according to a recent national survey conducted for the Thunderhead Alliance, a coalition of state and local advocacy groups.

These policies differ from typical bicycle and pedestrian plans in that they are not limited to roads that are part of designated bicycle or pedestrian networks, but cover all roads, or at least all major roads, in the system. The idea is that multimodal corridors would become the default mode — and justification must be given when they are

not.

Most of these policies have been put in place since 2001, when the U.S. Department of Transportation issued design guidance in response to the new language in TEA-21. The guidance document, "Accommodating Bicycle and Pedestrian Travel," states that "bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist."

Exceptions include roads where bicyclists or pedestrians are prohibited by law; where the costs are excessive (more than 20 percent of project costs); and where there is clearly no need. The document also calls for paved shoulders on rural roads and designs that are accessible for disabled people.

Some states, including South Carolina, Tennessee, California, Kentucky, and Virginia, have adopted resolutions or directives enacting some variation of the federal policy.

At the urging of bicycle advocates, Caltrans, California's transportation agency, adopted Deputy Directive 64 in 2001, calling for full consideration of the needs of bicyclists and pedestrians. The directive has been criticized for its vague wording, but the policy has spurred training programs in bicycle and pedestrian planning for both planners and engineers.

In March 2004, Virginia Transportation Secretary Whitt Clement announced "a broader and more enlightened approach to highway construction." The new policy requires the commonwealth to "initiate all highway construction projects with the presumption" that they will accommodate bicycling and walking.

Elsewhere, metropolitan planning organizations, counties, and cities have also used the federal guidance as a model, or in some cases, have crafted their own policies.

Santa Barbara's general plan, adopted almost three years before California's statewide 2001 directive, calls for "achieving equality of choice and convenience among modes." In Columbia, Missouri, new street standards calling for narrower roads and wider sidewalks were pushed by public health advocates and by Mayor Darwin Hindman, who firmly believes in the health benefits of walking and bicycling.

Many local policies have been adopted through internal directives or revised planning documents, but at least two local governments — in Illinois and California — have passed broadly worded council resolutions or ordinances, and MPOs in Ohio and California are requiring local governments using MPO-administered funds to meet complete street standards. In California, Sacramento has joined San Diego in requiring that roads built with funds raised through voter-approved bonds accommodate pedestrians and cyclists.

### Farthest along

For a vision of the future of complete streets, visit Oregon. The state adopted the idea long before anyone else and codified it into state law. Legislators passed a "Bike Bill" in 1971, about the same time as the state's innovative land-use planning laws were taking shape.



The bill, which required bicycle and pedestrian facilities on all new roads, streets, and highways, was considered a tough sell, recalls Michael Ronkin, head of the Oregon DOT's bicycle and pedestrian program. The measure was sponsored by a conservative Republican from the southern part of the state, who at the same time was promoting bills to regulate dynamite and to tax church property.

"Of the three," says Ronkin, the legislator "was told the bike bill was least likely to pass." But pass it did. The measure, which allows highway funds to be used to retrofit all roads, also requires that at least one percent of the state's highway fund be spent on

bicycle and pedestrian ways.

The impact of the law is obvious across the state. In Corvallis, 95 percent of arterial roads include bike lanes. In Portland, the rapid growth of the bike lane network since 1990 has been linked to dramatic increases in bicycle commuting. And even in suburban and rural areas, bike lanes and sidewalks are common.

But Oregon's work is far from done. Early implementation ignored pedestrians, and design standards were poor. It took years to make transportation engineers and designers aware of the requirement. Now, in the state's fourth decade of building for all modes, state and local bicycle and pedestrian planners are working on the thorniest design problems. "We've already gotten the low-hanging fruit; now we have to get out the big ladder," says Ronkin.

Bigger issues of land use and street connectivity still play a huge role in decisions to walk or cycle. In Oregon's experience, adding bike lanes and sidewalks to roads that are being widened from two to five lanes is not enough to mitigate the increased traffic volumes: Walking and cycling are still likely to decline.

Nonetheless, Ronkin says, roads must make these accommodations. "It is all a part of rethinking how roads function and whom they serve," he says.

### **Unique streets**

While the idea of complete streets is based on consistency — every time you build or reconstruct a road, make it multimodal — in practice, every project is unique. In a rural area, a complete street may be a two-lane road with a paved shoulder. In a congested urban area, it may feature an extra-wide sidewalk and refuge islands for pedestrians. It does not necessarily have to include bike lanes, however, because cyclists can travel safely with the slow-moving automobile traffic.

Truly complete streets expand beyond bicycling and walking to consider disabled users and transit riders. Every street cross section requires balancing the needs of many users in a way not considered in typical highway design manuals.

"For pedestrians who have disabilities, the weak link is the sidewalk," says Lois Thibault of the U.S. Access Board, an independent federal agency that develops accessibility guidelines. She notes that walking is the only independent mode of travel for people who are blind. "Complete streets build a network," she says, "and that's what everyone needs." Sidewalks are a necessity for disabled travel, but details such as curb ramps and audible crossing signals are critical as well.

Planning for disabled people is certainly not a new issue. Projects built with federal highway funds have been required to be accessible to all travelers since 1973, and the Americans with Disabilities Act of 1990 broadened the requirement to apply to all facilities, regardless of funding.

Even with this history, however, implementation has been slow. That's because, in most cases, pedestrian planning continues to be treated separately from routine road improvements. The Federal Highway Administration is now developing new policy guidance that spells out the responsibility of transportation agencies to work on pedestrian facilities in conjunction with routine roadway resurfacing and alteration.

The new policy is expected to direct transportation agencies to consider pedestrian and cyclist access in every road improvement project. This brings pedestrians "into the same house, with somewhat equal authority to ask for funds," says Thibault.

## **Don't forget transit**

Transit is the aspect of complete streets that has been addressed least often in existing policies. Some communities have begun to consider transit needs in their corridor planning. That's true particularly in places that are considering bus rapid transit, which calls for enhanced service in the existing right-of-way.

In some cases, transit vehicles get dedicated lanes; bus pullouts improve traffic flow, and "queue jumping" lanes help buses get through intersections. In Los Angeles, the Metro Rapid bus routes depend on a signal priority system that allows buses to extend green lights or shorten red ones.

But the key to complete streets for transit may be less in new technology and more in paying attention to the basics of pedestrian access.

"All transit trips start and end with a pedestrian component, so streets don't work for transit unless you can complete the trip," says Robin Blair, transportation planning manager for the Los Angeles Metropolitan Transportation Authority. The MTA is now developing "transit streets" that restrict automobiles but enhance pedestrian access.

## **The big challenge**

Finding enough right-of-way can be the biggest challenge for a complete streets program. Even if the right-of-way is in the transportation agency's hands, any widening, even for a sidewalk, may get a thumbs-down from residents who want to preserve existing landscaping and parking, or informal, private use of the right-of-way. This is the case along Florida's A1A, where plans to add a bike lane have met stiff opposition.

In response, many communities have begun to create complete streets where it is easiest — at a location where a wide travel lane can be narrowed or where traffic volume allows a four-lane road to be converted to two lanes with the addition of a center turn lane and bike lanes.

Fear of high costs is an equally great obstacle. Most complete streets policies don't come with special funding attached, and project budgets are sometimes set before bicycle and pedestrian facilities are considered. Street policies commonly cite "disproportionate cost" — defined by the U.S. DOT as 20 percent of the project budget — as a reason for exemption.

Experienced officials say the issue of cost can be overblown. Jeff Morales, former director of Caltrans, has said that integrating access for bicyclists, pedestrians, and disabled people right from the start actually minimizes costs.

Bridges offer a dramatic example. Providing enough room for cyclists and pedestrians during initial construction is far more effective than widening a bridge later.

## **Learning curve**

Two fundamental challenges to instituting a complete streets policy are a mind-set that is geared to following manuals and a lack of training. Until very recently, few schools offered either undergraduate or graduate courses on bicycle and pedestrian planning, and even fewer courses on planning for multiple users.

Keith Knapp, assistant professor of engineering and professional development at the University of Wisconsin–Madison, travels the country offering continuing education classes to engineers and planners. "I've talked for hours about the needs of bicyclists and pedestrians," he says, "only to have 80 percent of the students say at the end of the class that they don't plan to consider them."

Knapp attributes the students' resistance to the direction engineers get from their state transportation department directors and to engineers' typical reliance on standard traffic manuals. They fear that unconventional solutions will lead to unintended consequences, he says.

The manuals themselves are inadequate, in Knapp's view. The two manuals most commonly used — AASHTO's Green Book and the Highway Capacity Manual, published by the Transportation Research Board — are geared to rural construction and new roads that maximize traffic volume.

Knapp is looking forward to two forthcoming volumes that will take an integrated approach to designing for diverse users: an urban street design handbook from the Institute of Transportation Engineers, and urban arterial design guidelines being developed by ITE and the Congress for the New Urbanism.

Users, most notably bicyclists, are helping some state transportation departments to overcome the hurdles of implementing complete streets and urging other agencies to address the issue. In South Carolina, the League of American Bicyclists and local bicycle advocates are working with the state DOT to help implement its new policy, including training department personnel.

Several local and state bicycle advocacy organizations that are part of the national Thunderhead Alliance are pushing for new policies and planning Complete the Streets campaigns in Washington, Colorado, and Illinois (where a complete streets bill has passed through a legislative committee). And Advocates representing a long list of national groups — from AARP to Smart Growth America — met in January to consider strategies for spreading the idea.

### **Taking the next step**

Despite the challenges, a few communities are taking complete streets a step further. They are not simply adding a requirement to existing road plans or limiting themselves to rewriting their design manuals. They are reinventing their entire planning process to serve the needs of all road users.

Boulder, Colorado, has been promoting alternative modes for decades. Its GO Boulder initiative encourages bicycling, walking, and transit, and its innovative Hop, Skip, and Jump bus lines have reinvigorated the city's transit system with colorful vehicles and frequent service. But until recently, planning and funding were handled separately for each mode.

In 2003, Boulder eliminated the separate categories to create a multimodal corridor plan, so that every project considers every mode. "The change in the language and funding changed the dynamic," says Tracy Winfree, the city's director of public works for transportation. "The competition we had experienced before between modes disappeared."

The new plan calls for converting 10 city arterials into multimodal corridors, with the aim of integrating and coordinating automobile, transit, foot, and bicycle use citywide. Some arterials have already been converted. In addition, transportation network plans are to be developed for specific areas of the city.

Charlotte, North Carolina, has traditionally taken an auto-oriented approach to road design. Today, the city is taking a different tack. "We're looking to create a thought process that ensures that all users and all modes are considered," says city transportation planner Tracy Newsome.

A multidisciplinary team convened by the Charlotte DOT is creating a six-step process to evaluate each project in terms of the needs of various users, and in terms of the broader transportation and land-use context.

The process, now under review, will identify opportunities in each street segment to close gaps and increase connections in the bicycle, pedestrian, transit, and automobile networks, before selecting and modifying one of five multimodal street types. While the system won't result in equal treatment of everyone on every street, the intent is to complete the travel network for all users.

### **Converging trends**

The complete streets movement represents a convergence of several existing trends, spearheaded by a variety of groups. Bicycle advocates have long fought for "routine accommodation" policies. Innovative cities have adopted multimodal plans to free residents from automobile dependence. New urbanist builders have emphasized the need for walkable communities.

They have been joined recently by public health advocates seeking to increase physical activity and stem the obesity epidemic. Finally, more and more state and local transportation agencies are recognizing the need to do things differently.

At last January's annual meeting of the Transportation Research Board — an event usually dominated by traditional highway engineering concerns — more than 180 people packed a session called "Complete the Streets," with highway planners sitting side by side with disability and bicycle advocates. A series of similar sessions is planned for next year's meeting.

Complete streets may yet become a way for all road users, and all road designers, to shape the future of a maturing road network.

*Barbara McCann is a transportation and land-use consultant in Washington, D.C.*

[Sidebar: Obstacle Course](#)

[Sidebar: The Path to Pedestrianization](#)

## Resources

**Images:** Top — A Boulder arterial that was built as a multimodal corridor for auto, pedestrian, bicycle, and transit use. Photo by Phil Sanders. Middle — A commercial street filled with activity in Santa Rosa, California. Photo [www.pedbikeimages.org](http://www.pedbikeimages.org). Bottom — Water Street in Vancouver, British Columbia. Photo Dan Burden.

**Advocates:** Reach Barbara McCann at [www.bmccann.net](http://www.bmccann.net).

For more on complete streets, go to [www.completethestreets.net](http://www.completethestreets.net).

America Bikes is at [www.americabikes.org/completestreets.asp](http://www.americabikes.org/completestreets.asp).

Get the Thunderhead Alliance report at [www.thunderheadalliance.org](http://www.thunderheadalliance.org).

**State and local:** Oregon's "Bike Bill" is at [www.odot.state.or.us/techserv/bikewalk/plan\\_app/366514.htm](http://www.odot.state.or.us/techserv/bikewalk/plan_app/366514.htm).

For information on the University of Wisconsin's continuing education courses, go to <http://epdwww.engr.wisc.edu>.

The Boulder Transportation Master Plan is at [www.ci.boulder.co.us/publicworks/depts/transportation/masterplan](http://www.ci.boulder.co.us/publicworks/depts/transportation/masterplan).

**Federal:** For the U.S. DOT Design Guidance, "Accommodating Bicycle and Pedestrian Travel", see [www.fhwa.dot.gov/environment/bikeped/design.htm](http://www.fhwa.dot.gov/environment/bikeped/design.htm).

The U.S. Access Board is at [www.access-board.gov](http://www.access-board.gov).

# Complete Streets Come of Age

Learning from Boston and other innovators.

*By Corey Zehngebot and Richard Peiser*

The complete streets movement is coming of age, making this a good time to take stock.

Now 10 years old, complete streets policies came into being in late 2003 in response to car-centric planning. The term "complete streets" was coined by America Bikes as it was developing a new policy initiative with the goal of ensuring the same rights and safe access for all users of streets, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.

Common features include ample sidewalks, improved standards for street tree planting and other landscape elements, bike lanes, dedicated bus lanes, comfortable and accessible transit stops, frequent crossing opportunities, median islands, and curb extensions.

The movement spread rapidly. The National Complete Streets Coalition was formed in 2005; its founding members included the American Planning Association as well as America Bikes, Smart Growth America, and others. By the end of 2012 there were nearly 500 complete streets policies in place nationwide, according to an analysis by Smart Growth America. Though some of these policies are simply single-page ordinances, others are comprehensive guidelines. In addition, in the past decade, "complete streets" has become part of the lay vocabulary, not just a term used by transportation planners and streetscape advocates.

In addition to Boston's *Complete Street Guidelines*, San Francisco's *Better Streets Plan* (2011) and New York's *Street Design Manual* (2009) are some of the most comprehensive. Chicago (*Complete Streets Chicago*, 2013), Atlanta (*Connect Atlanta Plan/Street Design Guidelines*, 2013), Portland (*Portland Pedestrian Design Guide*, 1998), and other big cities likewise offer good examples, as do midsized cities such as Minneapolis (*Access Minneapolis*, 2008) and Louisville (*Complete Streets Manual*, 2007).

College towns such as New Haven (*New Haven Complete Streets Design Manual*, 2010) and Charlotte (*Urban Street Design Guidelines*, 2007), in particular, have passed ordinances that have made complete streets the cornerstone for streetscape design and implementation.



## Out East

With remarkable speed, Boston and cities across the country have embraced the concept of "street as space," thereby making more effective use of streets, their largest real estate asset.

Recognizing that 56 percent of city-owned lands are in the public right-of-way, the Boston Transportation Department in 2008 defined a set of aspirational complete streets goals that went beyond multimodal accommodation to emphasize green infrastructure and advances in streetscape design made possible through technology such as the use of structural soil to extend the life of street trees and the use of sensors to provide real-time information on parking availability.

Subsequently, BTD spent more than three years working with two consultants, Toole Design Group and Utile, Inc., to develop graphic guidelines, while also implementing tangible pilot projects. This dual approach was to make real — through compelling visuals and visible changes to streets throughout the city — the three core principles of Boston's *Complete Streets Guidelines: multimodal, green, and smart*.

Although they were completed less than a year ago, there has been sufficient time and work to identify both the precedents and descendants of Boston's guidelines.

Boston's approach placed strong emphasis on graphic representation, but through illustration. The conventional approach has been to appropriate photographs from other cities — often from overseas — to illustrate "best practices." San Francisco's *Better Streets Plan* and New York's *Street Design Manual* are good examples. These cities rely heavily on the use of photographs, while creating a framework that is clear, compelling, and cuts across jurisdictional boundaries.

Boston, however, developed three-dimensional perspective illustrations, along with the occasional photo, that placed streetscape elements in a context with an unmistakable Boston flavor. The city also recognized that the Federal Highway Administration's classification system for streets (locals, collectors, and arterials) was insufficient for urban environments. Consequently, Boston identified a novel set of urban street types — such as "downtown mixed-use" and "shared streets" — that supported complete street strategies.

These techniques — along with a web portal for real-time feedback collection, even before formal adoption by the city — have been embraced by other cities and national organizations. The National Association of Transportation Officials recently used similar graphic conventions for their *Urban Street Design Guide* and made their website the primary conduit for distribution of their guidelines.

Boston's website was designed to function as an educational tool for cities across the world, a virtual space where diverse audiences could explore the tenets of complete streets design, monitor development of the guidelines in real time, and view proposed and real projects.

Not so different from emerging planning tools like MindMixer or Streetmix, the website was intended to make the process tangible, transparent, and engaging. Currently, an interagency group is formalizing a framework for implementation.



## Taking stock

The three pillars of Boston's complete streets design help to demonstrate complete streets thinking in the past, present, and future.

**Multimodal** Boston is naturally a walking city. It has one of the highest mode-splits for walking in the U.S., but, in keeping with national trends, the city also has seen a dramatic increase in bicycle use. Bicycle ridership has doubled since 2007; the city has added more than 80 miles of bike lanes; a bicycle-share program, "Hubway," was launched in 2011 and has expanded every year since; a bicycle network plan was adopted; and the first helmet vending machine in the U.S. was introduced.

The most challenging aspect of accommodating bicycles has been respecting and hybridizing new concepts within Boston's historic urban fabric. The left-side bicycle lanes next to the Commonwealth Avenue Mall are excellent examples. Foregoing the right-side bike lane convention, pedestrian and bicycle accommodations were colocated down the center of Commonwealth Avenue, one of Boston's most picturesque avenues.

Though controversial when introduced in 2012, this anomalous bike lane is now an accepted feature of Boston's Back Bay. More recently, Boston was awarded a \$15 million grant from the FHWA for Connect Historic Boston, an initiative for which the city and the National Park Service have partnered to connect transit to Boston's history.

Still basking in the Boston Red Sox 2013 World Series win, the city also has just completed the new Yawkey commuter rail station, which will bring commuters, residents, and visitors within a five-minute walk of Fenway Park. This will replace a dilapidated platform with limited service. Built with state funds, this accessible commuter station will serve people coming to the rapidly developing Fenway neighborhood — with peak service on game days.

**Green** Introducing more trees and "greenscape" elements into Boston's urban environment has established positive aesthetic, health, and environmental effects. Nevertheless, just a few years ago, Boston was putting down nonpermeable asphalt and planting trees in undersized tree pits. Today, the city is installing permeable paving systems, structural soil, and large tree pits (as specified in the *Complete Streets Guidelines*) that allow for proper ground water infiltration. It's all part of a comprehensive and systemic green strategy.

One example is Peabody Square in Dorchester, where vestigial roadway was reclaimed as open space, and permeable sidewalks and rain gardens were installed. Created in tandem with a refurbished transit station, the reconfigured roadway not only improves traffic flow, but creates a plaza for outdoor cafe seating adjacent to new restaurants and housing.

Green doesn't always have to mean landscape; another pilot program for parklets supports the seasonal conversion of parking into open space, supporting sustainability more broadly by offering an open space alternative to parking. This program is expanding in 2014, concurrent with other parklet programs in cities across the U.S.



**Smart** The decision to highlight "smart" as a core principle was Boston's way to differentiate its *Complete Street Guidelines*, but perhaps natural for a city whose ties to education, pragmatics, and technology are culturally entrenched.

Peering into the future is never easy, but it has become clear that cities are entering a new era of complete streets design, as smart elements like electric vehicle charging stations, in-ground parking sensors, transportation demand management tools, and transportation-focused smartphone apps proliferate in Boston and in other cities across the country.

"Smart" and "technology" should not be used interchangeably — being smart is in part about leveraging technology. Cities should be smart about how complete streets concepts can adapt to different environments, recognizing that a one-size-fits-all approach won't work. Making use of a city's best assets will yield the greatest success.

Part of the larger emphasis on "smart city" design, new rideshare businesses like Uber and Lyft are changing transportation in expected locales like San Francisco, but also in cities like Houston, where cars are unquestionably dominant. As part of the sharing economy, these companies are already transformative, though cities and states are wrestling with the appropriate regulatory mechanisms. Complete streets can and will be part of this conversation, particularly as the conceptual underpinnings of "shared streets" naturally align it with the sharing of underutilized assets more broadly.

As better, more adaptive streetscape infrastructure is put in place, we are likely to see growth in smart hardware in addition to less-visible software. The design and technology of cars, bikes, and their complementary rideshare programs will evolve.

Concurrently, smaller scale innovations like smartphone-controlled bike locks are starting to emerge, in addition to larger scale advancements like induction-charged buses. These designs will create challenges that agencies and the guidelines did not anticipate. Both Boston and New York conceived of their design guidelines as living, evolving documents that can be updated regularly.

## Boston's Complete Streets, 2012

**Electric Vehicle Charging Stations** support the adoption of a new generation of clean-fuel vehicles. Linked to smart electric grids that use alternative energy sources such as solar and wind, they will help reduce dependence on fossil fuels and combat climate change.

**Ease of Maintenance** informs the design of roadways and sidewalks, favoring durable materials and maintenance agreements for special features to enhance the life and upkeep of Boston's streets.

**Accessible Surfaces** with smooth slip-resistant materials for sidewalks and crosswalks create comfortable walking environments that make streets welcoming for people of all ages and abilities.

**Bus Lanes and Transit Prioritization** at intersections improve the reliability of routes with high passenger volumes. Shelters with amenities and next bus information improve convenience for passengers.

**Intelligent Signals and Traffic Cameras** manage traffic flow in real-time. They facilitate vehicle progression and reduce wait times, improving fuel efficiency and reducing GHG emissions.

**Permeable Surfaces** for roadways and sidewalks help reduce flooding and erosion and preserve capacity in storm drains and combined sewers.

**Bicycle- and Car-Share Stations** provide the convenience of personal transportation, low costs, and energy savings without the need for car ownership.

**Smart Meters** that accept prepaid cards, payment by mobile phones, and allow for variable pricing facilitate more efficient use of limited curbside space.

**Minimum Lane Widths** assist in the accommodation of pedestrians and bicyclists when the available public right-of-way is limited in width. Narrower roadways also result in safer vehicle speeds.

**Bicycle Lanes and Cycle Tracks** create a citywide network that increases safety and encourages more people

to bicycle.

**Rain Gardens** and other greenscape elements at key locations divert stormwater directly to the soil. Maintainable rain gardens can filter pollutants, improve air quality, and provide greenery on the street.

**Digital Tags and Information Panels** integrated with street furniture and building facades enable wayfinding, community bulletin boards, trip planning, and place-based social networking.

**Wide Sidewalks** with unobstructed accessible pathways encourage walking. When combined with proper lighting, street trees, and vibrant street walls, they are inviting, safer, and contribute to placemaking.

**Street Trees** with sufficient rooting volume to thrive provide shade and beauty, support wildlife habitat, and reduce air pollution and energy consumption.

### Takeaways

As the next version of complete streets comes into focus, one can expect implementation challenges despite public and interagency buy-in. And though complete streets can cost more depending on the proposed features, cities have an obligation to take the long view.

A simple cost-benefit analysis of installing wider sidewalks and street trees might require more upfront capital costs, but this is not a sophisticated way of evaluating complete streets elements. Structural soils might be more expensive, but the operational costs over the long term will be lower as these trees will live longer and yield intangible benefits like shade, beauty, and improved air quality in cities.

Early criticisms, such as retail businesses suffering from lack of adjacent on-street parking or the public being concerned about unmet vehicular needs, have been repeatedly debunked. Streets that attract diverse users are seen as a key to economic revitalization, despite the fact that there will inevitably be some who do not benefit.

Cities have also learned that complete streets are not just about multimodal accommodations. Efforts to "green" the city are necessary complements; Chicago's Green Alleys program is one example of a city recognizing that better allocation of streets also includes landscape elements.

Tactical urbanism, or temporary, low-cost interventions often achieved through paint and off-the-shelf items, has offered tremendous support to the complete streets movement, though typically not formalized in city guidelines. Helping to alleviate blight or simply improve an average street through temporary measures can have profound positive effects.

Complementary to complete streets goals, but not necessarily under their auspices, advocates and city agencies should recognize and partner where appropriate to create streets that are complete in both conventional and unconventional ways.

Perhaps the greatest takeaway from the first decade of complete streets is that people value choice. Not every street can provide the same level of service for all users, but a true complete street offers choices.

Similarly, complete streets offer designers, planners, and engineers more tools in their toolbox for designing streets; technology is simply accelerating and growing the availability of those options. We've already seen how a decade of work can induce change; it's exciting to speculate what the future will bring.

*Corey Zehngebot is a senior urban designer and architect at the Boston Redevelopment Authority, and served as the project manager and creative director for the design of Boston's Complete Streets Guidelines. Richard Peiser is the Michael D. Spear Professor of Real Estate Development at the Harvard Graduate School of Design.*

## Walking for Health — in Healthy Communities

By Jay Walljasper

It's certain that debates about health care will escalate this year as congressional elections draw near. But there's a new twist in the discussion that might bring people together: the simple fact that physical activity, especially walking, shows remarkable promise for improving Americans' overall health and reducing skyrocketing medical costs.

Recent medical studies show that engaging in physical activity for as little as 30 minutes a day can prevent or help treat conditions such as diabetes, breast and colon cancer, depression, dementia, anxiety, osteoporosis, cardiovascular disease, obesity, and high blood pressure.

More will emerge when the U.S. Surgeon General's office releases a call to action on walking, which some observers compare to the landmark 1964 Surgeon General's report on the dangers of smoking. The call to action was initiated by former Surgeon General Regina Benjamin, who was so impressed by medical data on walking that she added trails to her health clinic in rural Alabama. The project is being carried forward by interim Surgeon General Boris Lushniak.

This growing attention to the role of walking also focuses on taking steps to make our communities more walkable, which positions city planning as a key element of the solution.

Despite the interest of the surgeon general, the push for walking and walkability is not a top-down effort. A full-fledged walking movement is emerging, which made a high-profile debut at the National Walking Summit held last fall. The event attracted more than 375 participants representing 235 organizations from 41 states and Canada, ranging from the PTA to AARP, the NAACP, the PGA, the American Lung Association, and Marriot Inc. Key groups coordinating the movement include America Walks, a coalition of more than 400 locally based advocacy groups, and Everybody Walk!, a collaborative of organizations convened by the nine-million-member health care nonprofit Kaiser-Permanente.

Bob Sallis, a family physician from Fontana, California, who spoke at the summit, says, "Walking is like medicine for my patients. ... If walking was a pill or medical procedure it would be on *60 Minutes*." Side effects, he adds, may include weight loss, improved mood, better sleep, and stronger bones.

Biking, jogging, dancing, swimming, gardening, aerobics, or playing sports will also boost your health, Sallis notes, but walking stands out as the most appealing and easiest exercise for most people. There's no cost, and it doesn't require special clothes, equipment, or facilities.

Walking is the nation's favorite physical activity, according to a Centers for Disease Control and Prevention publication, with six in 10 Americans walking for at least 10 minutes in the previous week. Adults walk six percent more often than in 2005, and walking for transportation accounts for a surprising 11 percent of all daily trips, according to the U.S. Department of Transportation. This includes 35 percent of trips to work, 40 percent to stores, and 46 percent to school or church if these destinations are within one mile of home. These statistics drive home the point that better health is linked to creating more walkable communities.

Still, 52 percent of us don't get the recommended minimum of 150 minutes of physical activity a week (double that for children), according to the CDC. Rates of inactivity are higher for women, seniors, and residents of the South and Midwest.

The aim of the walking movement is to get Americans back on their feet by encouraging us to make a habit out of taking a morning or evening stroll, walking the kids to school or sports practice, organizing a lunchtime hike with coworkers, or spicing up our weekends with a jaunt around town. But this depends on how safe, comfortable, and convenient it feels to walk in our communities. A host of factors — from vehicle speeds and fear of crime to the prevalence of sidewalks and mixed use developments — affect how often and how long people will walk.

*Jay Walljasper — author of The Great Neighborhood Book — writes, speaks, and consults about how to create stronger communities. His website is [www.JayWalljasper.com](http://www.JayWalljasper.com).*

## Resources

**Images:** Top — Left-side bicycle lanes on Commonwealth Avenue are one example of how Boston balanced new concepts with the city's historic urban fabric. Photo courtesy Boston Bikes,

www.nostonbikes.org. Middle — Expanded service and newly renovated Yawkey commuter rail station, which is within a five-minute walk of Fenway Park, will serve Boston's rapidly developing Fenway neighborhood. Photo WikiMedida Commons. Bottom — Boston's parklet program offers an open space alternative to parking. Parklets are seasonally converted parking spaces that are enhanced with landscaping, seating, or other design elements. Photo courtesy Boston Transportation Department.

Smart Growth America's Complete Streets Policy

Analysis: [www.smartgrowthamerica.org/tag/complete-streets-policy-analysis](http://www.smartgrowthamerica.org/tag/complete-streets-policy-analysis)

MindMixer is an online community engagement tool; [www.mindmixer.com](http://www.mindmixer.com)

Streetmix is an online platform that allows users to reconfigure or remix various street components; [streetmix.net](http://streetmix.net)

Do complete streets harm adjacent businesses? See Emily Drennen's presentation, "Economic Effects of Traffic Calming on Urban Small Businesses," available at [www.bikewalk.org/2004conference/sessions/28\\_Business\\_calm/TrafficCalming\\_summary.pdf](http://www.bikewalk.org/2004conference/sessions/28_Business_calm/TrafficCalming_summary.pdf)

Learn more from *Complete Streets*, PAS Report 559, published by the American Planning Association in 2010 and available at [www.planning/store](http://www.planning/store)

New York City's "Economic Benefits of Sustainable Streets" evaluated street-level retail and restaurants to measure economic gains as a result of complete streets: [www.nyc.gov/html/dot/downloads/pdf/dot-economic-benefits-of-sustainable-streets.pdf](http://www.nyc.gov/html/dot/downloads/pdf/dot-economic-benefits-of-sustainable-streets.pdf)

The Collaborative Lab, Rachel Botsman's "innovation consultancy," defines the sharing economy as an economic model based on sharing underused assets from spaces to skills to stuff, for either monetary or other types of benefits. Botsman is the coauthor of the 2010 book *What's Mine is Yours: The Rise of Collaborative Consumption*.

Do complete streets cost more? That question was addressed by James Shapard and Mark Cole, senior engineer and design section manager, respectively, in the Charlotte (North Carolina) Department of Transportation. Their presentation at the Transportation Research Board's 2013 annual meeting was called "Do Complete Streets Cost More than Complete Streets?"

The Victoria Transport Policy Institute has weighed in with *Evaluating Complete Streets: The Value of Designing Roads For Diverse Modes, Users and Activities*. One of its conclusions: Three groups are worse off in the complete streets movement: motorists who want to drive faster, urban fringe residents and property owners, and local merchants who rely on street parking.

For more about Uber, Lyft, and other rideshare services, see "Not Your Daddy's Taxi" in *Planning*, May/June 2013.