Best Practices | Smart Growth

Developing More Walkable Communities

How do development patterns support walk friendly communities? Dense development is associated with higher levels of walking and transit use and reduced automobile dependency. Compact, mixed-use development is fundamental to making communities walkable because more origins and destinations will be within walking distance of one another.

There are a variety of Smart Growth strategies for communities to create a built environment that supports walking – some of these can apply to the whole city and others can be applied to certain districts or corridors within a city or town:

- Infill development
- Accessory dwelling units
- Ground floor mixed-use
- Density Bonuses
- Form-based codes

Putting Together Smart Growth Strategies in Arlington

Arlington County, VA, implements a variety of Smart Growth concepts. The community’s outstanding transit-oriented planning efforts, coupled with innovative transportation demand management strategies, are helping shape the community into a truly walkable place.

Arlington’s Master Transportation Plan supports the integration of transportation into all aspects of urban development and gives priority to the movement of people, not vehicles. Solidifying the relationship between land use and transportation, Arlington makes an effort to focus high-density development around rail stations and corridors with extensive transit service. In fact, 90 percent of all new development is taking place along two rail corridors and in places with substantial bus service. Focusing density along the corridors also allows Arlington to maintain lower-density residential neighborhoods elsewhere. In addition, Arlington’s Complete Streets policy ensures all travel modes are considered in the planning of every street infrastructure project.

One of Arlington’s main corridors, Columbia Pike, a 3.5-mile streetscape connecting the Pentagon to the Fairfax County line, has a form-based code that is designed to foster pedestrian-oriented development on this stretch of South Arlington’s historic main street. Compared to traditional zoning, which separates uses, form-based codes focus on the community’s design vision while allowing a range of uses within acceptable building types.

To help reduce single-occupancy vehicle (SOV) trips and encourage alternative travel modes, Arlington requires Transportation Demand Management strategies that reduce SOV trips to be included in site plan development. This helps coordinate site development with commuter and transit services. Arlington also offers density bonuses to developers who provide amenities that enhance walkability.

All of these concepts have helped make Arlington a walkable community while ensuring that the community will continue to develop and redevelop in a manner that integrates, supports and encourages walking.
How Other Cities Are Implementing Smart Growth

**Infill Development**
Promotes a variety of housing types, proximity to popular destinations, connectivity, and easier access to alternative travel modes (walking, biking, public transportation).

With little remaining vacant land, Silver-level communities like Alexandria, VA, and Charlottesville, VA, have implemented excellent zoning policies that have required 100 percent of all new development over the last five years to be infill development. Alexandria’s policies include maximum parking standards, parking location requirements, and priced public parking to ensure that valuable public space is not unnecessarily used as parking. To help make certain parts of the City more walkable, Charlottesville offers an Infill Special Use Permit (SUP)—a tool that allows for deviations from the current lot size requirements. Residents and developers can go online to see a map of areas that allow an Infill SUP.

In their 2010 Strategic Plan, Decatur, GA, emphasized the financial benefit of infill development. Much of the underdeveloped land in the City is in the Downtown area and near rail stations. The Plan said that one of the best ways to provide additional services and density in the community, without raising taxes, is to expand the tax base through infill.

**Accessory Dwelling Units**
ADUs are housing units built either inside an existing house or on the same lot.

A policy allowing accessory dwelling units in Charlottesville has many goals: to support affordable home ownership, aging in place, residential density, walkability, and to provide the opportunity for additional income (from a rental unit).

This policy also helps by encouraging infill development. The City finds that people are taking advantage of the allowance and expects to see more permits for ADUs.

**Ground Floor Mixed-Use**
Requiring retail/commercial uses on the ground floor of residential buildings in mixed-use corridors or districts.

Alexandria has a measure that states, “No room or space used for residential purposes or commercial purposes, other than restaurant or retail room or space, shall be permitted on the ground floor of residential buildings in mixed use zones.” This type of policy helps foster a pedestrian friendly environment that increases walking trips made by residents.

**Density Bonuses**
Used by local governments to allow a developer to build at a higher density than zoning permits in exchange for something agreed upon by both parties.

Many WFCs provide density bonuses as a way to encourage developers to provide affordable housing or pedestrian amenities such as street furniture.

**Form-Based Codes**
An alternative to conventional zoning that regulates the form, scale, and massing of buildings rather than their use (residential, commercial, etc.)

Communities like Arlington and Alexandria already utilize form-based codes while Charlottesville makes it a consideration in the City’s Comprehensive Plan. The Plan moves toward a zoning ordinance that is not based on building use alone but pays more attention to differences in density, height, and a maximum size of allowable use.
Streetscapes help set the tone for the character of a community. A beautiful street can help support the social and economic development of a neighborhood. Pedestrian amenities and design elements are important for making walking more comfortable and enjoyable.

A well-maintained streetscape can promote the livability and vitality of the area. One way to make sure that designated areas of a city are attractive places for people to live, work, and shop is to have an active space requirement in the city ordinances. For example, an ordinance could require active uses on a certain percentage of the street level frontage, regardless of the primary use.

For some walkable communities, streetscape policies are about working with what they already have, like San Francisco, CA’s rights-of-way or Santa Barbara, CA’s system of pedestrian streets. Other WFCs, like Chicago, IL, and Seattle, WA, set the bar with design manuals that ensure that capital projects will include pedestrian amenities and design elements.

Reclaiming the Public Right-Of-Way in San Francisco
San Francisco’s streets make up 25 percent of the City’s land area and take up more space than all of the City’s parklands. This space includes excessively wide roads and unnecessary parking spaces. San Francisco’s “Pavement to Parks” program reclaims this underutilized pavement by turning small sections into public plazas or “parklets.” Residents and businesses can apply for a permit to turn the parking spaces in front of their property into a parklet, which is often the length of one or two parking spaces and includes street furniture. The plaza projects are initiated by the City, which closes off certain intersections or parts of intersections to create a public space. Traffic circulation around the plazas is evaluated before the changes are made more permanent.

To be considered for a Pavement to Parks project, there must be:

- A sizeable area of under-utilized roadway
- A lack of public space in the surrounding neighborhood
- Pre-existing community support for public space at the location
- The potential to improve pedestrian and bicyclist safety via redesign
- Surrounding uses that can attract people to the space
- Identified community or business steward

After a property owner applies for and receives a permit to install a parklet, they become responsible for the maintenance and also have the discretion to remove the parklet.

The program, inspired by the success of a similar program in New York City, was started in 2010 as a way to repurpose street space for people instead of cars.

Preserving the “Paseo” System in Santa Barbara
Gold-level Santa Barbara, CA, makes sure to preserve a unique architectural element of the City’s streetscape. The City’s Pedestrian Master Plan highlights “paseos,” or pedestrian-oriented shopping streets. The paseos were created after the removal of parking lanes behind businesses in 1969. The paseos’ initial success as parking pass-throughs
and additional retail frontage has motivated the City to highlight their maintenance and expansion in the Plan. The chapter that covers the paseos in the Pedestrian Master Plan functions as a standalone document focused on the network and complements the goals, policies, and strategies of the General Plan and Urban Design Guidelines. The City is also looking to replicate these paseos in other locations to create even more inviting, walkable passages.

**Streetscape Design Guidelines That Everyone Can Understand**

A streetscape design manual should be created for a variety of audiences, including design professionals and stakeholders. Streetscape design manuals help people directly involved in the permitting and construction of street space improvements—property owners, architects, engineers, and planners. Both Chicago, IL, and Seattle, WA, make their documents accessible to the public so that neighbors and community leaders can understand the streetscape improvement process and how to get involved. Chicago’s manual starts off with a section on community involvement, while Seattle’s is web-based so that it is easily searchable.

**Chicago**

Chicago’s Streetscape Design Guidelines start off with a letter from then-Mayor Richard Daley stating that the manual addresses fundamental quality of life issues within the Gold-level City’s streetscape, such as safety, accessibility, and neighborhood identity. Mayor Daley’s letter lends leadership and political authority to the document while showing support for more livable, walkable communities. The document is considered a tool for community involvement. Therefore, it includes a simple, clear explanation of the streetscape implementation process and a thorough description of design features that can enhance the pedestrian environment on public streets, including pedestrian-scale lighting, widening sidewalks, adding street furniture and landscaping, and updating crossing treatments.

**Seattle**

The City of Seattle considers the City’s street rights-of-way as an important and complex public resource. Therefore, the rules and guidelines that regulate the design of City streets should be easily understood by the public. Instead of making readers thumb through hundreds of pages of municipal codes, Seattle created an interactive, web-based Rights of Way Improvement Manual that is much easier for the user to navigate. The Manual summarizes the Land Use Code requirements for street and alley improvements and presents the specific criteria for design and installation. The latest online version (www.seattle.gov/transportation/rowmanual) includes a feature that allows users to interact with a street view in order to learn about design criteria. This includes information on trees, street furniture and public art, street lighting, and curb radii.

**Public Art**

Incorporating artwork into the pedestrian environment can help make walking a more desirable experience. Any aspect of the streetscape can include public art as part of the design—benches, tree grates, wayfinding signs, bike racks, or even the concrete used for sidewalks.

**Eugene**

Eugene, OR, recently completed a street reconstruction project in the lively University District that included a bike path, tree replanting, and a pedestal for a public art project. The art project, which is still in progress, was awarded to a local artist who is creating a 16-foot heron statue out of recycled metal. The artwork will even include metal from early twentieth century trolley tracks that were dug up during the street repaving.

Eugene now uses a variety of funding mechanisms, including the City’s Public Art Fund, Federal Transportation Enhancement money, and private funding to support public art in its transportation projects.

**Seattle**

Establishing goals and identifying partnerships helps communities conceive of and fund public art projects. Seattle’s DOT has an Art Plan that outlines specific projects and approaches for creating beautiful and interesting spaces in the right-of-way. The City’s Art Plan has a “Toolkit” geared toward SDOT project managers. This toolkit is a source for generating possibilities for common projects, such as bridges, trails, and streets, to include public art.
Safe and Accessible Streets

Designing, engineering, operating, and maintaining quality roadways and pedestrian facilities is a critical element in producing Walk Friendly Communities.

There are a variety of design elements and technologies that cities can use to provide safer, inviting, and more accessible streets for pedestrians.

Many of the elements discussed in this section do more than accommodate pedestrians—they make roads safer for all users. These elements include:

- Minimum sidewalk widths appropriate to the street classification and land use
- Pedestrian facilities for bridges and underpasses
- Pedestrian signaling systems
- Crosswalks and yield lines
- Median refuge islands
- Tight curb radii (to slow down turning vehicles)
- Curb extensions
- Traffic calming/road diets

Beyond the design elements, communities should keep an inventory of the location and condition of curb ramps and sidewalks. This information is important for prioritizing projects and maintenance.

Neighborhood Traffic Calming in Seattle

Traffic calming is a way to design streets that uses physical and visual cues to encourage motorists to drive more slowly. If done well, traffic calming reduces traffic speeds, the number and severity of crashes, and the noise levels.

The Neighborhood Traffic Calming Program in Seattle, WA, is impressive, particularly the neighborhood traffic circle element of the program. These mini-circles have been found to reduce motor vehicle crashes by an average of 90 percent in Seattle. Over the past 30 years, Seattle has installed about 1,030 traffic circles and has now instituted a formal process for proposal, as there is still enormous demand. Community members can easily access criteria for proposal evaluation and detailed information about the process through the City’s website.

Beyond physical improvements to the street, the City also recognizes that the most effective way to address traffic concerns is for community members to work with the Seattle Department of Transportation (SDOT). If residents or neighborhoods are concerned about the speed and/or volume of traffic on their streets, they fill out a request form through SDOT. Starting this process helps make sure that community members and SDOT have a clear understanding of the nature of the concern and potential options for addressing the concern.

The next step is for at least one resident in the area to attend a Neighborhood Traffic Safety Meeting, where he or she learns about different traffic calming options and is trained to use the radar speed gun. Residents then use the gun to collect speed and volume data, which SDOT uses to determine the level of driver compliance. This type of partnership makes sure that residents take some responsibility and eases the burden on City staff resources.
Luke Korpi, a SDOT Senior Civil Engineer, says one challenge this process tries to address is that perception is often different from reality. The City gets hundreds of requests each year, and in the majority of cases, the data collected by residents and analyzed by City staff show that people are driving safely. He said it is much easier for residents to understand the conclusion when it is based on data they collected themselves. Plus, the neighbors are in a better position to choose the time of day and place where they think the problem is most prevalent.

If the data indicate that compliance is low and there is unsafe traffic in the neighborhood, different community-oriented traffic calming measures are discussed. These measures may include signs, parking management, and educational tools that encourage drivers to slow down. There are also some cases in which the City determines that physical traffic calming measures are appropriate. However, the Neighborhood Traffic Calming program has been around since the 1970s, so many of the City streets have already been improved.

Korpi also points out that most of Seattle’s streets tend to be narrower and include street parking so drivers are encouraged to drive slowly. Therefore, relatively few streets need aggressive traffic calming to slow down drivers.

Seattle embraced traffic calming fairly early compared to other cities and quite robustly. But their program is not just about engineering—passing some responsibility to residents represents a multi-faceted approach that includes education and enforcement.

Putting the Road on a Diet
Reducing travel lanes helps communities reallocate space to provide safer pedestrian crossing and bike lanes. For example, a four-lane road can transition to three lanes—one lane going in each direction, a center turn lane, and bike lanes going both directions. These simple changes improve pedestrian safety by creating a buffer (via bike lanes), reducing the number of traffic lanes they have to cross, and encouraging slower driving speeds. Plus, there will also be room for a crossing island. The successful reconfiguration of a main commuter route in Seattle resulted in a 23 percent reduction in collisions over the preceding five years and a 60 percent reduction of drivers traveling over the speed limit.

Innovative Traffic Signaling in Forest Park
Bronze-level Forest Park, IL, uses traffic-calming devices like curb extensions at intersections and Pedestrian Hybrid Beacons (also known as a HAWK beacon) to help make walking safe for all community members.

HAWK beacons use traditional traffic and pedestrian signal heads, but in a different configuration. They are used to help pedestrians and bicyclists cross a busy street safely, particularly at mid-block or high-speed locations where a full traffic signal may not be appropriate.

According to Tim Gillian, Village Administrator, Forest Park has also worked to calm traffic for pedestrians along many of its major roadways by installing “must stop for pedestrian signs,” bulb-outs, benches, and stamped concrete crosswalks.

“Striped crosswalks or stamped concrete crosswalks for increased visibility and beautification at all entrances to parks and open spaces have been installed to create safer access for pedestrians,” says Gillian.

Design Features for Safer, Healthier Streets
Bronze-level Davidson, NC, uses many geometric design features such as curb extensions, smaller curb radii, and median crossing islands to improve pedestrian access.
and enhance the comfort and safety of the pedestrian environment. While the Town has done a nice job of designing their streets to be comfortable for walkers and reduce the likelihood and severity of an accident, the Town is constantly striving for improvement. The 2013 update of the Town’s Planning Ordinance will include revised street design guidelines that will have gone through a Health Impact Assessment (HIA).

The HIA was made possible through a grant from the Centers for Disease Control and Prevention’ Healthy Community Design Initiative. In spring 2012, the Town formed the Davidson Design for Life (DD4L) Committee to start looking at the potential health impacts of the existing street design standards. The Committee expects to present its findings later this year.

“Daylighting” in Hoboken
Gold-level Hoboken, NJ, began “daylighting” street corners to improve visibility between oncoming vehicles and pedestrians in uncontrolled crosswalks. At $40 each, the vertical delineators offer a cheaper, faster solution compared to constructing curb extensions. The City identified priority corners based on historical accident data and community input.

Focusing on Accessibility

Since 1990, every public agency (over 50 employees) in the country has been responsible for maintaining a plan, the Americans with Disabilities Act (ADA) Transition Plan, to make all of its programs and facilities universally accessible.

Eugene
Eugene, OR, has demonstrated a long-term commitment to accessibility. Every fiscal year, Eugene sets aside funds for retrofitting existing curb ramps and sidewalks. Audible and visual crossing signals are also a priority in each phase of the Plan. Currently, 66 percent of all intersections have curb ramps at all four corners. The City continually gets feedback from working groups like the Human Rights Commission, in order to address public opinion and perform outreach to help prioritize new areas. Public Works and Engineering staff in Eugene also strive to make temporary construction areas accessible.

Corvallis
Corvallis, OR, has an extensive pedestrian signal system that is very accessible. With audible pedestrian signals installed at all of the intersections outside of the Central Business District, and handicap accessible ramps on all corners of all signalized intersections, those with physical and visual impairments can walk with much more ease throughout the community.

San Francisco
San Francisco has a model pedestrian signaling system. Over 70 percent of all signalized intersections have pedestrian countdown signals. The City’s guidelines for the installation of pedestrian signals state that all signalized intersections without pedestrian signals should be updated, and pedestrian countdown signals should be installed at all new signalized intersections. The guidelines also state that accessible pedestrian signals that aid the crossing of the visually and hearing impaired should be installed. Currently, 11 percent of signalized intersections have accessible pedestrian signals, and the City maintains prioritized list of intersections that need signal installations.

Best Practices | Engineering

Images courtesy of Daniel Carter, UNC Highway Safety Research Center
Best Practices | Staff and Training

Pedestrian Coordinators
Having a staff member devoted to pedestrian issues is one of the most important criteria for a Walk Friendly Community. Pedestrian coordinators are particularly important in terms of advocating for street design improvements, education and encouragement programs, and for increased enforcement of pedestrian-supportive laws.

Coordinators provide a vision and voice for active transportation in a community and perform a variety of roles. In places like Charlotte, NC, coordinators are heavily involved in pedestrian planning and sidewalk connectivity. In other communities, like Wilsonville, OR, coordinators manage the implementation of pedestrian plans and are involved in public outreach and education for alternative transportation.

Charlotte
Charlotte demonstrates its commitment to pedestrian safety by having not one, but two pedestrian coordinators on its staff. The Charlotte Department of Transportation hired Malisa McCreedy and Scott Correll to manage its Pedestrian Program. They help the Planning and Design Division develop and implement the City’s Transportation Action Plan, Sidewalk Retrofit Policy, Urban Street Design Guidelines, and Subdivision Ordinance. They have also been involved with the interdisciplinary Charlotte 2030 Sustainability Plan.

In the last year, McCreedy has worked on a Walkability Strategy, a short 15-page document of graphics, photos, and data sound bites. This document will be used for education of and to promote walkability in Charlotte. According to McCreedy, “The Walkability Strategy builds on the existing policy, plans, and practice, referencing the relationship between land-use, transportation and public health to create vibrant communities, while recommending next steps to address the outstanding challenges.”

The other big project that McCreedy and Correll are in the midst of is the Pedestrian Safety Action Plan, in partnership with the University of North Carolina’s Highway Safety Research Center. Together, they are creating a pedestrian safety awareness campaign along with analyzing top intersections for safety improvements.

McCreedy says the biggest lessons learned are to reach out to community partners such as “neighborhood associations, main street groups, public health, universities, local businesses, and foundations” for input and support of efforts.

“Allaskcommunitypartners toparticipate by going to them, instead of expecting them to come to you,” says McCreedy.

Before McCreedy and Correll were hired, much of the Program’s work focused on improving sidewalk connectivity. Public resistance to sidewalks, or what Vivian Coleman, previous Pedestrian Program Manager, calls NIMFY-ism (Not in My Front Yard), was met by working with elected officials to explain the need for sidewalks. Residents commonly had concerns that sidewalks would be too close to houses, encourage crime, and require tree removal. Coleman learned to strike a balance between preservation and sidewalks, compromising by providing more residents with trees.
“Think very carefully about how sidewalk projects are presented, even in cases in which public approval is not technically needed,” says Coleman. She recommends having public meetings so that residents can play a role, for example, if they have a special tree they want to save.

Wilsonville
Following one of the key recommendations of their Pedestrian Plan, Wilsonville hired a full-time Bicycle and Pedestrian Coordinator, Jeff Owen. Owen oversees the implementation of the Bicycle and Pedestrian Master Plan and the Transit Master Plan in this Bronze-level community. He coordinates with other departments such as Public Works and Community Development to make sure pedestrian and cyclist needs are met in all projects. Owen also coordinates with the area’s transportation system, SMART, to expand the commuter program, “SMART Options,” which is designed to reduce the number of vehicle miles traveled in the City.

Owen created and leads the Bicycle and Pedestrian Task Force, an informal group of residents and employees that meets quarterly to discuss community concerns and to make sure the City is still making progress on big projects. Discussion topics have included infrastructure updates, current planning efforts, SRTS, and Wilsonville Sunday Parkways (for which the Task Force provided initial input and will serve as the volunteer base).

“The Plan set out priority projects and the group serves as a realistic gauge of priorities. What the group does that’s really valuable is they help raise awareness of dangers of particular intersections and things that could be improved,” says Owen of the Task Force’s instrumental role in prioritizing potential investments.

As the City has been updating its Transportation System Plan, the group has served as a good base to get public comments by encouraging the public to be proactive.

“It gives the public a way to be involved and find solutions, not just complaints,” says Owen.

Owen is also in charge of education and outreach regarding walking and transit use. One of his key accomplishments has been to create a fold-out walking map of the City, with streets categorized by traffic density. The City has printed 15,000 copies to date, thanks to grant funding. The maps are distributed for free at events, community centers, and grocery stores.

“They are really out there being used. The maps have been beneficial in helping people realize they were near a connector they didn’t realize was there, like sidewalk connections from a cul-de-sac,” says Owen. The process of creating the map not only helped Wilsonville residents find sidewalk connections, but the process also brought to light gaps in existing roadway, sidewalk, and trail networks.

Training
Ongoing training for professional staff underscores a community’s prioritization of walkability and pedestrian safety. By educating public officials, communities can help ensure that ordinances and walking-supportive policies are implemented.

Training activities offer an opportunity to refresh current practices and learn new strategies related to pedestrian education, safety, or design. This can reduce or eliminate potential miscommunication between professionals who often work in different departments.
In Lee’s Summit, MO, City staff and law enforcement have annual driver’s education training that includes pedestrian safety awareness. Law enforcement staff has additional training required for pedestrian and driver safety beyond the City’s annual requirement of employment.

Transportation personnel, i.e. bus drivers and transportation administrative staff, for the school district(s) are routinely trained for driver and pedestrian safety. City transportation officials, i.e. traffic engineers, transportation engineers, and planners, are routinely trained for pedestrian safety and design through continuing education requirements, professional registrations, accreditations, design standards and regulatory requirements.

Training and education is programmed annually as a normal part of the City and School District operating budgets. For example, the City Traffic Engineer attends several continuing education sessions related to pedestrian safety each year.

**Training Engineers and Planners in New Orleans**

New Orleans, LA, takes part in annual trainings offered by the New Orleans Regional Planning Commissions (NORPC). NORPC offers a three-day workshop for planners and engineers called, “Designing Streets for Pedestrians and Bicyclists.” The workshop is designed to teach transportation professionals how to design streets for pedestrians and bicyclists, including planning for good pedestrian design, sidewalk design elements, pedestrian street crossings and signals, intersection design, and ADA compliance.

NORPC has hosted the workshop annually since 2006. Approximately 40 engineers and planners participate each year, and over 200 participants from both the public and private sectors have been trained.

“When we started offering this workshop, examples of good bicycle and pedestrian facilities were few and far between, so bringing in experienced instructors who had worked on projects around the country was seen as a way to build capacity locally,” says Dan Jatres, NORPC Program Manager. The impact of the program is tangible, as at the project level, New Orleans can now point to local examples of well-planned, -designed, and -constructed facilities. Additionally, interest in the workshop has spread beyond New Orleans, and NORPC now holds additional workshops in other Louisiana cities.

Jatres feels the success of the workshop is based on presenting information participants lack, but in a manner that makes the material approachable. Participants of the most recent workshop in June 2012 highlighted the following positives in a post-workshop survey:

- The course manual is a great reference that they can bring back to the office
- Exposure to best practices they otherwise would not encounter
- In-depth, yet accessible information
- Group exercises in the classroom and in the field that show the results of good and bad design

“The participants leave with a great resource and firsthand experience on how their planning and design decisions impact the end users,” reports Jatres.

**Webinars**

The Pedestrian and Bicycle Information Center (PBIC) offers webinars on a variety of topics related to pedestrian and bicycle safety. PBIC currently offers webinars in the following series:

- Livable Communities Webinar Series
- FHWA Pedestrian Focus Webinar Series
- Pedestrian Safety Action Plan Webinar Series
- Designing for Pedestrian Safety Webinars
- Easter Seals Webinar Series

To sign up, go to www.walkinginfo.org/webinars