



A vision for active living in Jericho and Underhill

Active Living Workshop
Jericho | Underhill

October 2011
Summary of Findings and Recommendations
AARP and the Walkable and Livable Communities Institute

Active Living Workshop Jericho | Underhill



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Jennifer Wallace-Brodeur
AARP Vermont
Associate State Director
199 Main Street, Suite 225
Burlington, VT 05401
Office: (802) 951-1313
Email: jwbrodeur@aarp.org
Web: www.aarp.org/vt

Dan Burden
Executive Director
WALC Institute
1215 Lawrence Avenue, Suite 001
Port Townsend, WA 98368
Office: (360) 385-3421
Email: dan@walklive.org
Web: www.walklive.org

Amy Silverstein Levner
Manager, Home and Community
AARP Livable Communities
601 E St NW, Washington, DC, 20049
Office: 202-434-3556
Email: alevner@aarp.org
Web: www.aarp.org

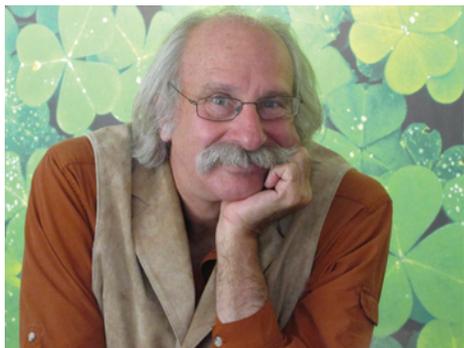
Kari Papelbon, Zoning and Planning
Administrator
Town of Underhill
PO Box 32
Underhill Ctr., VT 05490
Office: (802) 899-4434 ext.106
Email: underhillzoning@comcast.net
Web: www.underhillvt.gov

Jeanne Anthony
Senior Project Manager
AARP Livable Communities
601 E St. NW, Washington, DC,
20049
Office: (202) 434-2430
Email: janthony@aarp.org
Web: www.aarp.org

Todd Odit, Town Administrator
Town of Jericho
PO Box 39
Jericho, VT 05465
Office: (802) 899-9970 ext. 109
Email: todit@jerichovt.gov
Web: www.jerichovt.gov



A Message from Dan Burden



Executive Director
Walkable and Livable Communities Institute

Dear Friends,

Thank you, first of all, for making us feel welcome in Jericho and Underhill and for introducing us to your communities' assets, including well-built, pleasant homes, buildings, open spaces, schools and streets.

I found both communities compelling as good places to invest, to re-energize and to make neighborhoods complete and whole again. I don't say this lightly, as I have traveled many parts of North America in working to help more than 3,500 communities become more walkable and livable. Your towns are unique and poised to become more vibrant, but they aren't without their challenges.

Walking or using any form of active transportation has become challenging in America, and we are driving our health, sense of community and local economies to ruin.

Health care costs in the U.S. are now the highest in the world, and are rising. The annual cost of obesity is estimated at \$300 billion per year. In too many places, the built environment has been made unnatural and unhealthy.

*Your towns are unique
and poised to become
more vibrant, but they
aren't without their
challenges.*

Add to the health care costs the economic struggles of downtowns and main streets, and the consequences are frightening. We can do better.

As I travel to towns, I find that the most vibrant and successful communities have something in common: they rally behind a common vision, set a strategic plan and then act together to make their streets for people.

Denver did this with a transit mall and by reclaiming its historic buildings. Portland, Oregon did it by replacing freeways and parking garages with parks and hearty town centers. The people of North Little Rock, Arkansas trusted the mayor and city council to bring Main Street to life and then infused their town with stadiums, parks and trails. Chattanooga,

Tennessee went from America's dirtiest town to its cleanest, built on the belief that it could do better.

By rallying behind a unified vision, each of these communities did what they set out to do. Is it now Jericho's and Underhill's turn?

There are reasons for hope. I work with towns focused on people first; they are exhibiting courage, taking risks and trying new design tools, like road diets and modern roundabouts, among others. We have the opportunity to build communities that represent our highest capacities and places that support engagement, personal health and the natural world. They must support our aging population, too.

“Aging in place” is a significant concern for all of us. Americans over the age of 65 accounted for just over one-tenth of the population in 2009. This will increase to one-fifth of the population within two decades. Isolation of seniors in places like Jericho and Underhill is a real threat since many will not have the option of driving.

The good news is that the challenges we face are opportunities for improving quality of life for all. This report provides guidance for making changes - some simple and some long-term - that will result in a built environment that is more supportive of active living.

It should be noted that comprehensive studies and traffic analyses weren’t conducted as part of this effort, but the guidance herein should prove valuable as you take steps toward a walkable, livable, healthier and happier Jericho and Underhill.

May the winds of change bring much good to you, and through you.



Introduction: Active Living Workshops

Executive Summary

The walkability and livability of a community—whether urban, suburban or rural—is heavily influenced by land-use and transportation planning, design and policies. The built environment affects health, well-being and happiness. Walkability and livability reflect on the ability of people to move about in their daily lives with inviting, safe and reliable transportation choices. Where walkability and livability are supported, active living exists, and the entire community benefits.

AARP and the Walkable and Livable Communities Institute have developed an Active Living Workshop to engage communities in making their streets and neighborhoods more walkable, livable, healthy and sustainable. The goal of the workshop is to build capacity by promoting a shared language amongst residents, government staff and elected officials; illustrate through examples and audits how walkability and livability benefit a community and how they can be achieved; and inspire each participant to become involved in the movement towards active living.

The AARP and the WALC Institute facilitated an Active Living Workshop for the Vermont communities of Jericho and Underhill in October 2011. The workshops focused on Complete Streets, walkability and livability through educational presentations, walking audits, visioning sessions, and examination of tools that can improve the communities' livability.

The purpose of the workshops included assessing the current community design and street form, identifying possible improvements, and inspiring participants to support changes that increase active living. Goals included helping participants recognize how planning and design influence community-building and providing an expanded toolkit to draw from to build healthier neighborhoods.

This report provides a summary of findings from the Active Living Workshop and provides recommendations based on observations made during the workshop to improve walkability and livability.

Key recommendations include:

- Complete the 100-day challenges and other identified priorities, as described herein.
- Develop a plan to implement the Vermont Complete Streets law.
- Calm traffic by right-sizing streets and intersections.
- Upgrade crosswalks and sidewalks to encourage active transportation.
- Green the streets with community beautification projects.
- Encourage mixed-use, pedestrian-oriented development.

Key Concepts

The following concepts and terms describe many of the key tools and practices that support active living. They are referenced throughout this report.

Active Transportation: Also known as non-motorized transportation, this includes walking, bicycling, using a wheelchair or using “small-wheeled transport” such as skates, a skateboard or scooter. Active modes of transportation offer a combination of recreation, exercise and transportation. (See Victoria Transport Policy Institute, www.vtpi.org.)

Aging in Place: The ability to continue to live in one’s home safely, independently and comfortably, regardless of age, income or abilities. Living in a familiar environment and being able to participate in family and other community activities. Also called, “Living in Place.” (See National Aging in Place Council, www.ageinplace.org.)

Charrette: [pronounced, “shuh-RET”] A collaborative session to solve urban-design problems that usually involves a group of designers working directly with stakeholders to identify issues and solutions. It is more successful than traditional public processes because it focuses on building informed consent. (See Walkable and Livable Communities Institute, www.walklive.org.)

Complete Streets: Roads that are designed for everyone, including people of all ages and abilities. Complete Streets are accessible, have vehicle speeds appropriate for the area, are comfortable for walking and biking, and include sidewalks, street trees and other amenities that make them feel “complete.” (See National Complete Streets Coalition, www.completestreets.org.)

Head-Out Angled Parking: Also called “back-in” or “reverse” angled parking, this is arguably the safest form of on-street parking. A driver “backs in” to the angled parking spot, which offers multiple benefits, including creating a sight line between the driver and other road users when pulling out. Additionally, head-out parking allows the driver to load their trunk from the curb, instead of adjacent to the travel lane. And for drivers with young children, seniors or other who need extra help, when parked in a head-out spot, the open car doors reduce the chance of a child stepping into the vehicle travel lane.



Level of Service: Also called “LOS,” this is a qualitative measure describing the flow of traffic on a roadway. It generally describes these conditions in terms of speed, travel time, freedom to maneuver, traffic interruptions, safety and the perceived comfort and convenience of the driver. The interruptions to other modes are not generally considered.

Livability: In the context of community environments, livability refers to all of the factors that add up to a community’s quality of life – including the built and natural environments, economic prosperity, social stability and equity, educational opportunity, and culture, entertainment and recreation possibilities. (See Partners for Livable Communities, www.livable.org.)

Median Crossing Islands: A short island, about 40 to 80 feet long, in the center of the roadway, serves as a traffic-calming device or a pedestrian refuge. Islands are generally eight to 12 feet wide, but narrower island can achieve their purpose, as well. Islands should be landscaped with low, slow-growth ground cover, and tall trees without branches or leaves at ground height—such as palm trees—that help motorists see the islands well in advance but don’t obstruct sight lines.

Mini Traffic Circles: Also called a “mini circle,” a mini traffic circle is a form of an intersection that navigates vehicles around a small circle or ellipse about eight to 15 feet in diameter that is either lightly domed or raised. They are not the same as rotaries or roundabouts. When raised, a mini traffic circle should be visible from hundreds of feet away, creating the feeling of a small park in the neighborhood. A proper number of mini circles will bring speeds down to 22 to 25 mph along the corridor while helping traffic flow more smoothly due to the decreased number of complete stops. The circles should be designed to reduce speeds to 15 to 18 mph at each intersection.

Road Diet: When a road is overly wide or has more vehicle travel lanes than are needed or safe, travel lanes can be removed and the extra width used to add bike lanes, sidewalks, a buffer between the travel lanes and sidewalks, on-street parking, a landscaped median or some combination thereof. A common road diet transforms a four-lane road without bike lanes into a three-lane road (one travel lane in each direction with a center turn lane or median) with bike lanes and street trees. (See Walkable and Livable Communities Institute, www.walklive.org. Also see appendix, How to Do It: Road Diets.)

Rotaries: Also called traffic circles, rotaries are a form of an intersection that navigates cars around very large circulating islands. An entire traffic circle can be as big as a football field. And can include stop signs and signals. They are not the same as roundabouts or mini circles. Rotaries are cumbersome and complicated and can induce higher speeds and crash rates. Many rotaries in North America and Europe are being removed and replaced with the preferable roundabout.

Roundabouts: Also called “modern roundabouts,” they are not the same as traffic circles, mini circles or rotaries. Roundabouts are a form of intersection that navigates cars around a circulating island, typically about 60 feet in diameter. Roundabouts are an ideal tool for collector and arterial roads, and around freeway on-off ramps. Properly designed, roundabouts hold vehicle speeds to 15 to 20 mph while simultaneously eliminating the need for cars to make left turns, which are particularly dangerous for pedestrians. They often replace signalized intersections or four-way stops and can reduce crashes by more than 80 percent and can increase capacity by 30 percent by keeping vehicles moving.

A mini traffic circle.



A roundabout.



Safe Routes to School: A national program to improve safety and encourage more children, including children with disabilities, to walk, bike and roll to school. The program focuses on improvements through the five E's: engineering, education, enforcement, encouragement and evaluation. (See National Center for Safe Routes to School, www.saferoutesinfo.org.)

Sharrows: A “shared roadway marking”—usually paint—placed in the center of a travel lane to alert motorists and bicyclists alike to the shared use of the lane. They help position bicyclists away from the opening doors of cars parked on the street, encourage safety when vehicles pass bicyclists and reduce the incidence of wrong-way bicycling.

Sidewalks: All sidewalks, trails, walkways and ramps should be on both sides of streets. Where sidewalk gaps exist or ramps are missing, they should be fixed on a priority basis, working out block-by-block from schools, medical facilities, town centers, main streets and other areas where people should be supported in walking and biking. Sidewalks in people-rich areas should be at least eight feet wide and separated from the curb by a “furniture zone” that can accommodate planter strips, tree wells, hydrants, benches, etc.

Smart Growth: Growing in a way that expands economic opportunity, protects public health and the environment and creates and enhances places that people love. (See U.S. EPA, www.epa.gov/smartgrowth/.)

Street Trees: Street trees not only provide shade and a nice environment, but also help protect students walking and bicycling. When placed within

four to six feet of the street, trees create a vertical wall that helps lower vehicle speeds and absorb vehicle emissions. They also provide a physical buffer between cars and children. On streets with a narrow space between the sidewalk and curb (also known as the “furniture zone”), trees can be planted in individual tree wells placed between parking stalls, which further reduces travel speeds. Depending on the species, they should be spaced 15 to 25 feet apart.

Traffic Calming: Using traffic engineering and other tools designed to control traffic speeds and encourage driving behavior appropriate to the environment. Examples include street trees, bulb outs, medians, curb extensions, signage, road diets and roundabouts. Traffic calming should encourage mobility for all modes.

Street trees and edges.

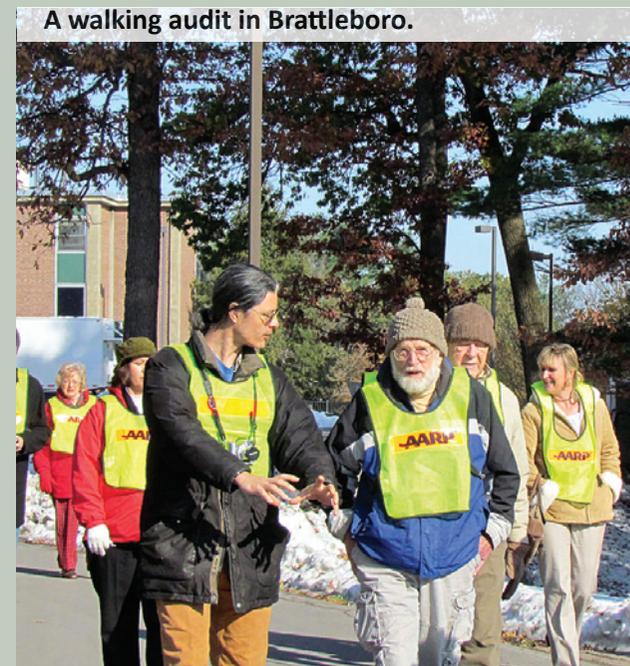


Walking Audit: Also called a “walking workshop,” this is a review of walking conditions along specified streets conducted with a diverse group of community members. Participants experience firsthand the conditions that either support or create barriers to walking and biking. (See more about walking audits: Walkable and Livable Communities Institute, www.walklive.org.)

A walking audit in Riverside/Underhill Flats.



A walking audit in Brattleboro.



Jericho and Underhill

The AARP and the WALC Institute facilitated an Active Living Workshop for Jericho and Underhill, Vermont on October 25 and 26, 2011. The workshop was held at the United Church of Underhill and was led by Dan Burden of the WALC Institute with assistance from Anita Jenkins, AICP.

Participants were guided through an interactive workshop and walking audit to engage participants in identifying areas of concern, community values, barriers and assets, and potential improvements to benefit the livability of their community.

Agenda

Evening presentation on October 25.

Workshop on Oct. 26.

9:00 a.m. Registration and refreshments

9:30 a.m. Opening remarks: Jennifer Wallace-Brodeur, AARP Vermont, Kari Papelbon, Underhill Planning and Zoning Administrator and Future of the Flats

9:50 a.m. Setting the agenda and roundtable discussion

11:00 a.m. Walking audit

12:00 p.m. Discussion and summary

12:15 p.m. Lunch, provided by Village Cup

1:15 p.m. Strategies for Riverside/Underhill Flats, tools and Q&A

2:45 p.m. Next steps

3:00 p.m. Evaluation and adjourn



Assessment

The Riverside/Underhill Flats Village straddles the town line between Jericho and Underhill in Vermont. The Village serves as a center of culture, commerce and community linking the two towns, and contains the Underhill Post Office, Deborah Rawson Memorial Library, Underhill I.D. Elementary School and Browns River Middle School, Mills Riverside Park, several churches, Jacobs Family Market, numerous other small businesses, rental properties, and private residences. The Village includes two largely undeveloped properties with opportunity to include a mix of uses to further support residents.

The Village has been the focus of several studies including the 2006 Design Charrette, "Take Charge/Recharge Community Forums" (Future of the Flats), Summer Walk and Talks and resulting Map, and the Dickenson Street Improvements study. In addition, Vermont's Downtown Development Board recently awarded the towns of Underhill and Jericho a Village Center Designation (24 VSA Chapter 76A) for the Riverside/Underhill Flats Village Center. The Village Center Designation Program supports efforts to revitalize Vermont's traditional Village Centers. The designation provides property owners in the district special tax credits to repair and refurbish their property, and the district has priority consideration for several state and federal grant programs.

A concern relative to each of the previous studies, and apparent during the Active Living Workshops, were the estimated 15,000 daily vehicle trips on Route 15, a major state highway connecting northern Vermont to the greater Burlington area. The major issues identified with Route 15 and the connecting Park Street and River Road were:

- Speed of vehicles
- Pedestrian safety
- Lack of a safe crossing on Route 15
- Degraded and missing sidewalks
- School children are discouraged from walking to school due to these safety concerns



Key Findings

At present, the Village is in need of streets and developments that are friendly to pedestrians and that encourage active transportation. Indeed, there are a number of challenges to transforming this Village, but there are an equal number of opportunities that exist for real change. Through public-private partnerships, community outreach and support, thoughtful pedestrian-scaled design, the Village has the propensity to be developed into an attractive, vibrant area that by design, encourages active transportation, increases economic development, and enhances health, well-being and overall quality of life for residents of the Village.

Key Recommendations

The following recommendations provided by the WALC Institute aim to improve walkability, livability and sense of place in the Village.

- Complete the 100-Day Challenge, as described in the following sections.
- Engage in street designs for Park Street and River Road to narrow the lanes to 10 feet, include sidewalks, tighten the turning radius at intersections to shorten the crosswalk width, include mini circles, medians and roundabouts.
- Build gateways on Route 15 at the bridges at each entrance to the Village. Install sidewalks. Include other traffic calming measures such as street trees to encourage a driving speed of 25 mph or slower.
- Dickenson Street studies have included preliminary designs that the community would like to see revised to give more attention to the pedestrian environment. Work with the engineers to design the street to the standards of a “complete street.”
- Create a public-private partnership to incent mixed-use and pedestrian-friendly development of the large vacant properties.

For descriptions of best practices and ideas for funding sources, see the appendix.

The walking audit.



Route 15.



Community Values

Each participant at the workshop had the opportunity to write down the top three things they value the most about their community. As these values were presented and grouped together, the following values were those that were most agreed upon:

- Sense of community
- Family and friends
- Good schools
- Nature, open space, seasons, wildlife
- Engaged and involved citizens
- Outdoor activity
- Healthy lifestyle
- Quiet, peaceful
- Personal safety
- Political attitudes

Participants were also asked to look out 20 years and envision Riverside/Underhill Flats. They saw:

- The village is an active, vibrant community with a mix of shops, restaurants and services to support the residents.
- Development is sustainable and at a pedestrian scale. Utilities are buried and no longer interfere with the beauty of the area
- Drivers slow down and stop to shop and eat.
- Community activities occur often in the village center.
- Residents walk and bike everywhere. Public transportation is available to get to nearby towns.
- There are many recreational opportunities.

Participants identify their shared values.



Envisioning 20 years out.



The Walking Audit

The walking audit provided an opportunity to explore Riverside/Underhill Flats with workshop participants and learn where the troubled spots were and what participants envisioned. The walk began at the United Church of Underhill and continued down Park Street to River Road and then up Route 15 and back to the church.

Participants discovered how to properly retrofit streets and intersections to enhance the pedestrian environment. Pedestrian crossings were scrutinized, and it was discovered some led to no sidewalk connection. Ideas for crossing improvements were shared.

The group evaluated intersection width and turning radii.



The study area includes Park Street, River Road and Route 15.



The group formed a human mini circle to test its effect on vehicle speeds.



Existing Conditions

Park Street

Park Street was found to be straight, with no visual breaks. When drivers are able to see long, straight distances, they tend to increase speed. Some of the uses along Park Street are properly located near the street, which encourages pedestrian activity, but some uses are set further back and have no sidewalk connection, which discourages pedestrian activity. A sidewalk on one side of the street makes walking less desirable, particularly to destinations on the side of the street without a sidewalk.



Existing Conditions

River Road

The intersection of Park Street and River Road has a very wide turning radius. Large turning radii increase the distance a pedestrian has to cross, and tend to encourage higher-speed turns. River Road includes a sidewalk on one side of the road, which changes sides at the school. There is a crosswalk that seems to lead to nowhere, and another crosswalk that has low visibility for motorists. Actual driving speeds were found to be over the posted speed limit. Therefore, the participants' concerns about high speed and difficulty crossing this road were validated.



Existing Conditions

Route 15

During the walking audit, it became clear that Route 15 was the most undesirable street to walk along. This is due to the higher traffic volumes and higher speeds. The crossing at River Road and Route 15 is challenging as motorists coming into the town are not slowing for pedestrians. Again, having a sidewalk only on one side limits pedestrian activity along Route 15. Route 15 continues its very rural feel through the Village with few buildings to form a sense of place.



Workshop Priorities

Following the walking audit and review and discussion of workable tools in the Village, the participants prioritized improvements in the following manner.

Street Improvement Priorities

1. Route 15
2. Dickenson Street
3. Park Street and River Road

Intersection Improvement Priorities

1. Route 15 and River Road at Jolley's
2. Dickenson Street and River Road
3. Route 15 at Dickenson or Raceway
4. Park Street and River Road

Other Improvement Priorities

1. Gateway treatments at Route 15 bridges
2. Improve/relocate pedestrian crossings along Route 15 between River Road and Park Street
3. Create full system connectivity with streets and pathways
4. Add a connection from Jolley's to the park
5. Improve Park Street with medians to break long sight lines
6. Add a mini circle at Park Street and Veterans Park

Dickenson Street.



Park Street.



The 100-Day Challenge

As participants discussed all of the project priorities developed during the workshop, the Institute team members introduced the concept of the 100-Day Challenge: goals that can be met within 100 days to demonstrate the community's ability to acquire resources and to work together towards an important goal.

A project is more likely to succeed if motivated individuals set a course to accomplish their goals immediately. Early successes provide the hand-and-toeholds needed to pull the group from one achievement to the next. Goals don't need to be lofty but they do need to be sincere. Success is more likely with the following conditions in place:

Leadership – Leaders who inspire others to act in a collaborative manner to identify and accomplish a goal.

Motivated Teammates – Individuals with a can-do spirit who are eager to work together.

Actionable Strategies – Identification of the tasks in support of the goal; individuals to take on the tasks; and a time scale for completion.

Early Successes – Projects that allow for immediate successes to keep the group motivated and to build confidence.

Goals identify the leaders the team should expect to engage. While each task group will take on its own leadership structure, leaders are identified because of their knowledge, experience or professional purview.

Participants in Underhill Flats.



Participants in Underhill Flats.



Identifying values and opportunities that exist in Underhill and Jericho.



The group should seek out other task leaders or group leaders and consider each success a step to the next project. Remember the adage “success comes in can’s; failure in cant’s.”

The 100-Day Challenge provides an opportunity for the Village to jump-start improvements and build greater capacity to move forward in creating the vision.

The workshop projects were prioritized during the discussion of the 100-Day Challenge. Note that weather - and in particular, winter - may affect timing of the projects below. Progress should be made on those things that can be done given the climate and conditions.

The participants’ top five priorities were identified as:

1. Create a bridge gateway.
2. Build Dickenson Street to improve pedestrian flow to Route 15 and enable multi-use development of the Villeneuve parcel.
3. Add double edge lines on River Road.
4. Build a temporary mini circle at Park Street and River Road.

The top priority listed by those in attendance was to create a bridge gateway on Route 15. The participants agreed to accept this top priority as their 100-Day Challenge.

Several people volunteered to lead a steering committee, including: Kelly King, Roger Putzel, Faith Ingulsrud, Sean Reilly and Gretchen Daly. Others signed up to assist: Penny Miller, Jessica Alexander and Wayne Hende. Future of the Flats involvement will also be important in next steps.

Best practice: a mini traffic circle.



Best practice: bold edge lines help to calm traffic.



Best practice: gateway signs cue drivers they are arriving at a place, not just passing through a space.



Recommendations

Riverside/Underhill Flats has a great opportunity to become a vibrant village. Active transportation should be encouraged and supported, with emphasis on creating Complete Streets and creating incentives for developments that are mixed-use and pedestrian-friendly.

Creating a sense of place and pedestrian-friendly streets is going to be key to transforming this area into a destination that nearby residents will want to walk and bike to. It is essential that this area become “people-rich,” which calls for proper infill development that adds to the quality of residential living and fosters new employment opportunities.

The WALC Institute makes the following recommendations to improve walkability, livability and sense of place in Jericho and Underhill.

A good sign: youth engaged in community events for Jericho and Underhill.



The village of Riverside/Underhill Flats has great potential.



Recommendations: Short-Term

Complete the 100-Day Challenge

Create a bridge gateway on Route 15.

Tackle other identified priorities:

1. Build Dickenson Street to improve pedestrian flow to Route 15 and enable multi-use development of the Villeneuve parcel.
2. Add double edge lines on Park Street.
3. Add double edge lines on River Road.
4. Build a temporary mini circle at Park Street and River Road.

Rebuild and Maintain Sidewalks

Rebuild sidewalks where they are in poor condition. Missing sidewalks need to be built on both sides of each street to complete the sidewalk network.

Add Street Trees and Shrubs

Where sidewalks are set back from the edge of pavement, add lighting, planters, shrubs or street trees to provide a pedestrian barrier to traffic.

Best practice: even in snow conditions, sidewalks should be maintained, such as in Hamburg, NY.



Best practice: edge treatments, including shrubs and lighting, help buffer pedestrians from traffic.



Recommendations: Short-Term

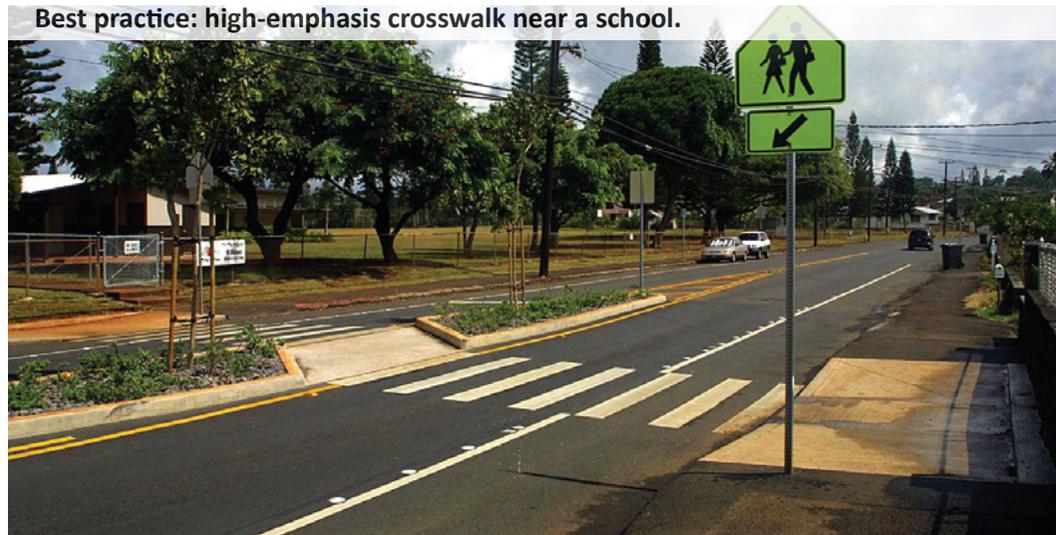
Restripe Streets

Restripe Park Street and River Road using bold edge lines to achieve 10-foot travel lanes. Do not include yellow center lines except through curves. Restripe the radius, use temporary planters, or build curbs at the intersection of Park Street and River Road to achieve a more appropriate radius of 10 to 15 feet.

Apply High-Emphasis Crosswalk Markings

Improve crosswalk markings to include bold markings (at least 12 feet wide), and maintain for high visibility at all times. Ladder style crosswalk markings are preferred by those with visual impairments. The crossing at the school exit needs to have curb cuts for complying with the Americans with Disabilities Act. Lengthen the existing sidewalks to connect to a relocated school crossing. The crossing should be moved so it is not along the roadway curve and has great visibility.

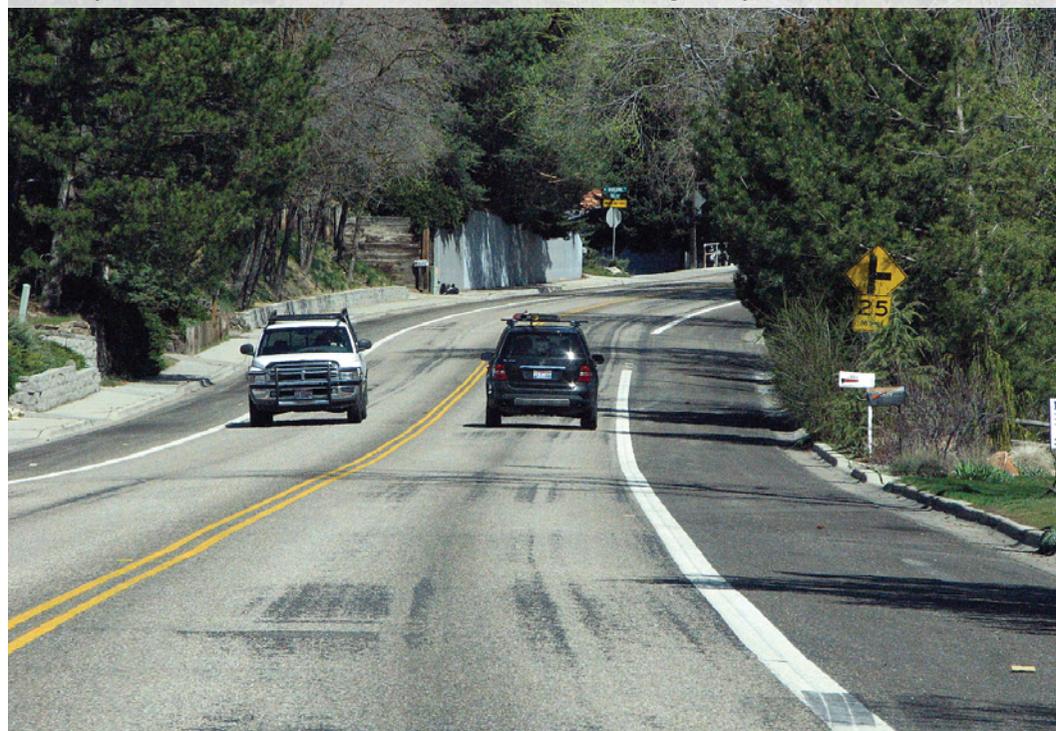
Best practice: high-emphasis crosswalk near a school.



Best practice: planters help reduce the turning radii at an intersection.



Best practice: make the lanes narrower with bold edge stripes.



Recommendations: Short-Term

Implement Complete Streets Policies

Gov. Peter Shumlin recently signed into law legislation that helps ensure Vermont's roads are safe for all users by requiring transportation policy to take into account the needs of motorists, bicyclists, public transportation users and pedestrians of all ages and abilities.

Taking the Vermont complete streets policy from paper into practice will be up to the local communities' planners, engineers, elected officials and residents. Through street design, retrofitting and maintenance, the community will decide how all users will be accommodated within a street.

Design choices will be influenced by budgets, the site, environmental and other contextual issues.

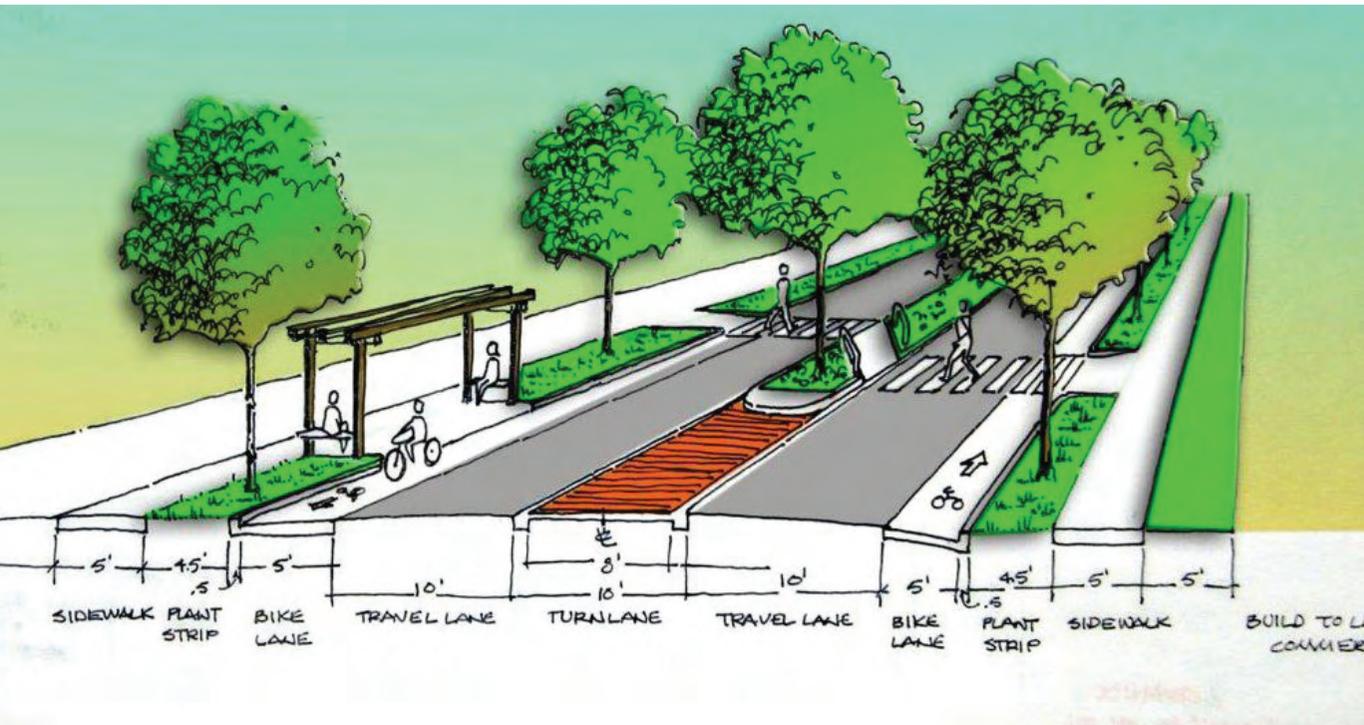
The towns of Underhill and Jericho have an immediate opportunity to begin implementing the policy. Dickenson Street has been analyzed for two-way traffic with the study showing positive results for connectivity in the street network. However, the Dickenson Street preliminary plan included in the study was not fully supported by the community due to the limited pedestrian considerations.

With the road being in the early stages of planning, this is an easy opportunity for the commu-

nities to review the complete streets elements and fully apply the guidelines. Dickenson Street could be the communities' first newly built street to fully implement the Vermont complete streets policy.

For more information on the Vermont complete street policy, visit: <http://www.leg.state.vt.us/docs/2012/Acts/ACT034.pdf>.

Best practice: a complete street "typical section"



Best practice: a complete street in Vancouver, B.C.



Recommendations: Short-Term

Create Short-Term Gateways

Riverside/Underhill Flats needs to be fully announced to motorists entering the village. Use the bridges as structural “gateways” that create a strong sense of place and let people - arriving by all modes - know that they are entering a town that is people-rich. Enhance the bridges with planters or other tools for temporary gateway treatments. See the photo-visualization at the end of this section for a vision of a longer-term solution.

Consider turning the bridges into gateways, as in the photo-visualization provided.



Best practice: gateways announce someone is arriving at a “place,” not just passing through a space. Paint can create a temporary gateway.



Best practice: a short-term gateway option.



Recommendations: Mid-Term

Roundabout Analysis

Analyze key intersections such as River Road and Route 15 and Dickenson Road and Route 15, to determine if roundabouts will work to keep vehicle speeds low through the Village. See the Key Concepts section and the appendix for information on how roundabouts improve traffic flow and improve safety.

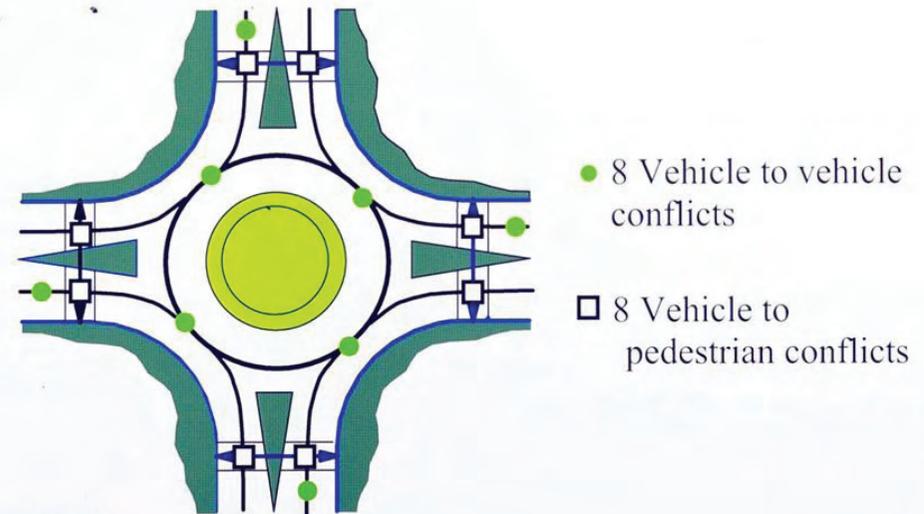
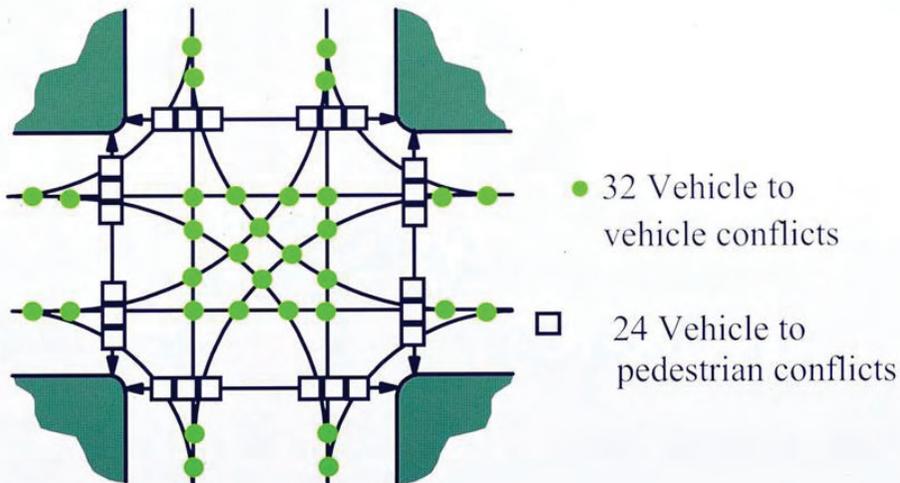
River Road and Route 15

A roundabout at this intersection should include curbing, medians, enhanced lighting, streetscaping and other visual and geometric elements to keep vehicle speeds low. Such a treatment would add to the gateway and other placemaking efforts and further complement other traffic-calming measures. Such a placement would also enhance traffic circulation and distribution, and provide added safety in this key location.

Best practice: entering a roundabout in San Diego, CA.



Roundabouts reduce the number of conflict points between cars and people from 24 to eight. They also calm traffic and help create a strong sense of place.



Recommendations: Mid-Term

Add Medians at Crosswalks

Add short medians to crosswalks to further enhance safety and visibility along River Road and Route 15.

Build Mini Circles

The first stop during the walking audit was at Park Street and Veterans Drive. This intersection is marked as a stop, but functions as a yield. A mini-circle would be an appropriate tool at this location. Participants actually saw how this would function as they gathered and “built” the first test mini-circle - a human mini circle - at this location. Drivers passed, smiled, and drove as they should, slowly through the intersection. Another appropriate location for a mini circle is at Park Street and River Road. This mini circle would be a larger size and scale with a raised curb to accommodate a tree within the circle.

Best practice: mini circles, even in rural or residential areas, help to calm traffic.



Best practice: a short median at a crosswalk helps calm traffic and provide pedestrians a refuge if needed.



Participants build a human mini circle to learn how it works.



Recommendations: Mid-Term

Add Short Medians

To slow traffic on Park Street, add short medians to break the road visually. The first median should be in front of the Jacobs Family market.

Create Long-Term Gateways

Engage in a full gateway design for the bridges that is unique to Riverside/Underhill Flats. Construct these gateways to fully announce to the motorists that they are entering a village.

Dickenson Street

Build Dickenson Street to improve pedestrian flow to Route 15 and enable multi-use development of the Villeneuve parcel.

Best practice: a short median visually breaks up the road, which calms traffic.



Best practice: a gateway solution in Golden, CO.



Photo-Visualization

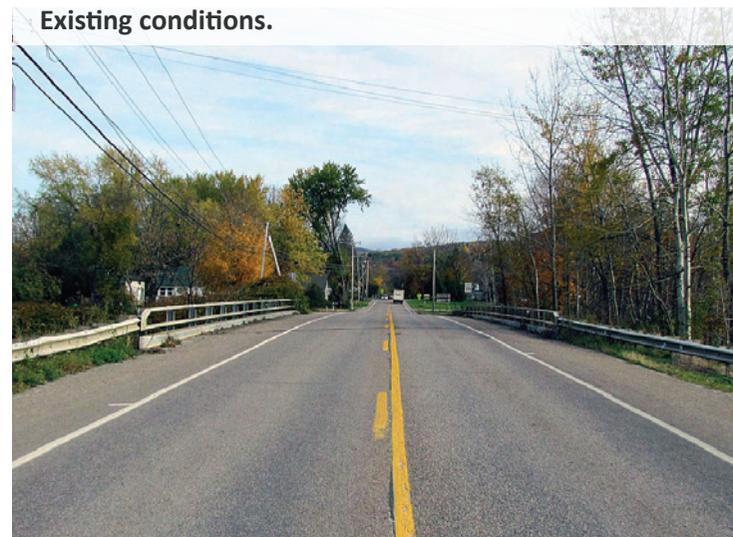
Making motorists fully aware that they are changing their environment from driving speedily along a rural road, to slowing for a pedestrian-friendly village is the first step to changing motorist behavior.

The community identified through its 100- Day Challenge that a top priority is to create gateway entrances to the village. The WALC Institute has prepared a photo-visualization to show how that can be accomplished.

The existing bridge along Route 15 becomes an entry cue. The village of Riverside/Underhill Flats is fully announced through vertical gateway treatment, signage and enhanced tree plantings. The elements included are more pedestrian scale and embrace the heritage of Vermont.

Note that the change is made completely within the existing right-of-way. Note also that in the photo-visualization, utilities have been placed underground, a long-term investment that many communities are finding worthwhile both for its placemaking value and to protect utilities during storms.

Existing conditions.



A vision for active living and a gateway entrance; see the next two pages for full images.



Photo-Visualization

Existing conditions.



Photo-Visualization

A vision for active living and a gateway entrance.



Next Steps

From Inspiration to Action



Review Recommendations in this Report

The WALC Institute shared with participants that the work products for the Active Living Workshop would include this report and photo-visualization. Participants should review this document and provide feedback to the state AARP office. We have included very specific recommendations that should be reviewed to determine their feasibility and whether they are in line with the community's vision. Then, an Action Plan may be developed to move these recommendations forward.

Disseminate Information

Build on the momentum by disseminating the information gathered at the workshop and share this report and photo-visualization with their respective agencies and organizations.

Collaborate and Stay Informed

Building cross-field partnerships will enable groups to share knowledge, leverage resources and implement policies, systems, and environmental-change strategies more effectively and expeditiously. Tap into the AARP Vermont office, the Vermont Department of Health, the Area Agency on Aging, churches, chambers of commerce, school districts and Safe Routes to School Programs that also promote active living and community-building. Contact the National Complete Streets Coalition at www.completestreets.org and the National Center for Safe Routes to School at www.saferoutesinfo.org.

Develop an Action Plan

To move from inspiration to action, participants should develop an action plan that supports specific goals. Additionally, identify:

- What will be done: specific actions or activities
- By whom: specific people with clear responsibilities
- When: specific time line for completing activities
- How: specific resources needed to complete activities

| Action | Person(s) | Timeline | Resources Needed | Desired Outcomes | Metrics for Success | Next Steps |
|--------|-----------|----------|---|--|--|--|
| What? | Who? | When? | <ul style="list-style-type: none"> • Time? • Money? • What Else? | <ul style="list-style-type: none"> • What do we want to happen? • What is the desired outcome? • Why are we doing this? | <ul style="list-style-type: none"> How will we know we have been successful? • Time Savings? • Lower Costs? • Lower Crime Rates? • Increased Use of Facilities? • Healthier, Happier Residents and Visitors? • Increased Tourism? | <ul style="list-style-type: none"> • How do we document this project? • How do we communicate successes, failures, and lessons learned? • What naturally follows? What's the next step? |

Create a Civic Engagement Plan

Effective community engagement is critical when developing policies and projects that impact a community's built form. Regardless of setting – whether urban, rural, large city or small town – the benefits of effective community engagement in projects affecting the built environment are numerous. Effective community engagement improves the success rates of policies and projects affecting the built environment. This is in large part because community engagement helps the agencies and organizations that are leading a project understand and respond to the local conditions that will influence the project's development. For example, agencies that create true community engagement are more successful at adapting to socioeconomic changes that may influence the effort than those that do not conduct effective outreach. Additionally, when people affected by the project are involved from the beginning of the development process, it reduces the likelihood of unexpected or significant opposition when it comes time to implement the project. Community members also have unique knowledge of local contexts - including political, cultural and geographic settings. By interacting with the public and gaining important local insight, project leaders can shape and direct the project in keeping with the community vision and needs.

A conventional model of “public involvement” has been built around complying with legal requirements for issuing public notices about projects and related events, holding public hearings to solicit feedback and incorporating feedback into draft recommendations. The community has been invited in when project leaders have decided input is needed - or when it is mandated by law - and the public hearings, citizen advisory councils, and public comment sessions have formalized the effort. At many public meetings or events, a classroom structure communicates to people that they are to listen and not converse. This model fails to truly engage the public or capitalize on all of the benefits of successful civic engagement. To engage communities, leaders must move from the conventional model to one that focuses on outreach, capacity-building, inclusiveness and collaboration.

A successful public process starts with developing a community outreach plan that describes the desired outcomes of the project and details the public process, including who the stakeholders and audiences are, how they should be reached, messages, the tools that will be most effective, and how the success of the effort will be measured. In general, community

engagement activities need to address issues that the public perceives as important. Thus, while developing the community outreach plan, project developers should seek ways to explain to the public why the project matters. Additionally, efforts should be made to conduct workshops, events or meetings in places that are comfortable and familiar to the audiences, and to use language that is clear. Each communication or event should contribute to the public's understanding of the project and its purpose.

Specific outreach tools may include educational workshops, media outreach, paid advertising, surveys, print materials such as flyers and brochures, Public Service Announcements, educational videos, slide presentations, charrettes, newsletters, websites and online communications, direct mail, letters to the editor or guest commentaries, councils, partnerships, coffeehouse chats, meetings, interviews, demonstrations, bulletin boards and more. The main point is that each of these elements has been identified and tied to other initiatives with outcomes and measures of success so that a quality control and effectiveness feedback loop is in place.

The goal is to engage the community. If the community is not engaged, leaders must take responsibility for developing effective and successful outreach programs that achieves this identified goal. A civic engagement plan allows creators to look at localized efforts to build capacity within the community, which will include the identification of outreach goals, definitions of success, measures for evaluating effectiveness, and ways to adjust for improvements over time.

Build Cultural Competence

Ensuring that programs and messages are designed to be relevant, appropriate and effective in different cultures and different languages is important to any successful community outreach. In fact, cultural competence has emerged as a key strategy to improving health and the quality of health care and social services for everyone in the U.S. regardless of race, ethnicity, cultural background or language proficiency.

Translating important messages requires strong cultural knowledge, because a word for word translation will not be effective. Reaching people of all backgrounds often requires more than simply translating messages. To increase their effectiveness, many organizations working with multi-cultural populations are developing “health promoters” programs that recruit

people who live in and work in a community to be community educators and liaisons between the program and the community. An example is the DeSoto County, Florida program Promotores/as de Salud that serves Hispanic farm workers.

Other communities are working to culturally adapt messages. For example, in California's San Joaquin Valley, campaigns to encourage people to reduce their contribution to summertime smog were developed for English-speaking and Spanish-speaking markets. The campaigns were culturally adapted to focus on types of behavior changes that would be relevant and appropriate in the cultural context of the different audiences.

Adaptation of this type requires strong knowledge of the culture and language of the target audience.

Broaden the List of Stakeholders

To build effective community engagement, project leaders should broaden the list of stakeholders and partners whose involvement is sought. Stakeholders and partners commonly include municipal staff, advocacy groups, residents, business operators, property owners, elected officials, community leaders, neighborhood safety groups, school representatives, health agencies, "main street" or downtown groups, charitable non-profit organizations and regional employers. To be more effective, project leaders also should seek the early involvement of churches, news outlets, potential opposition groups and children. Now, more than ever, we identify community outside of geographical areas.

- Churches - Across the country, churches build and sustain more social capital than any other type of institution. Thus, project leaders should seek innovative ways to work with church leaders to engage their membership in public projects.
- Media - Conventional community outreach plans have treated the media as a means of simply disseminating information. A more effective approach is to engage members of traditional news outlets (newspaper, television and radio) and non-traditional outlets, or "new" media (online news services, bloggers), as stakeholders and seek their involvement early in the process. Just as project leaders should build capacity amongst residents and within the community, so too should they seek to build capacity with journalists and news outlets.

- Opposition Groups - Special efforts should be made to identify and reach out to people and organizations that may be expected to oppose the project under development. It is important to build their trust and involvement. Try to identify and address their concerns both as part of the public process and during special stakeholder interviews or meetings.
- Children - Although children have much to offer in the community planning and design process, they remain mostly untapped throughout community transformation processes. A child's imagination is a powerful tool; they can dream up the perfect community in which to live, play and go to school. Beyond the power of their imaginations, they also can bring very practical solutions to the table. For example, children often are aware of shortcuts to the places they go that could be formalized into trails and added to the community's pedestrian network map. They often speak volumes about important values and their honesty helps raise the discussion to the level of guiding principles. Perhaps most importantly, the involvement of children in public processes can change the whole tenor of the events.

Start with a Base of Shared Values and Build Understanding

The conventional model for public involvement in projects that affect the built environment often engages the public too late in the process, and in a manner that pits interests against each other. For example, holding a public hearing on a proposed project sets up stakeholders to take a position either for or against the project, without any discussion about community values and whether the project supports those values.

A better model is to start the public process with educational workshops or visioning sessions that build a base of shared values. In some communities, a vision plan already exists and in those cases, the vision plan should help guide the project development. In other communities, a simple visioning exercise during a public workshop can go a long way toward helping stakeholders see that they generally want the same things for their community – safety and security, economic development, recreation and places to play, and so on – and that their goal should be to collaborate on ways to achieve those ideals through the project being developed.

Approach Engagement as a Two-Way Conversation

Effective public engagement involves much more than telling people about a project. Rather, effective engagement actually facilitates a dialogue that leads to reciprocal learning, collaboration and – ideally – consensus. By engaging in reciprocal learning through the public process, project leaders will gain insight and perspective that can help them ensure the project is tailored to meet the community's needs. Community members also will learn from each other.

Support a Community Steering Committee or Neighborhood Revitalization Group

Organize a community-based group, such as a Revitalization Group, to represent the values and goals of the neighborhood, evaluate the recommendations of this memo, prioritize efforts, and pursue funding for implementation. One of the working group's first tasks could be to reach out to faith-based groups, schools, residents and organizations to build capacity within the community.

Because community is defined less by geographical boundaries and more by our habits and routines, this working group may need to reach outside of the annexed area, to organizations and groups that residents belong to, in order to meet neighbors.

The Neighborhood Revitalization Group could look to the Port of Bellingham project and the success of its working group as a model: <http://www.portof-bellingham.com/index.aspx?NID=344>

Celebrate Successes

It is important to celebrate early successes to publicize new community assets, bring recognition to the people involved, reaffirm that the process has worked, and build more support for work to be done.

Support a community-based steering committee. Even children can take part.



Celebrate successes.



Strategies and Policies to Evaluate During the Action Planning Process

The benefits of livable communities transportation policies include:

- Sustainable and cost effective land use and transportation patterns.
- Reduced infrastructure costs and less sprawl.
- Localized transportation investments.
- Multi-modal transportation opportunities for children, adults and seniors to encourage healthier lifestyles and active transportation for life.
- Protection of natural and cultural resources.
- Opportunities for residents to interact to create a vibrant community.
- Healthy people in healthy environments.

Obstacles to Livable Communities Transportation Policy

Livable communities transportation policies call for changing the way we approach transportation to ensure our communities remain desirable places to live, work, and play. This vision contrasts with current transportation trends, which focus narrowly on congestion and our deteriorating transportation systems. A focus on livability assesses projects based on how they will improve quality of life and livability in communities. Obstacles to Livable Communities Transportation Policy are:

- Traditionally, transportation departments and municipalities have focused on delivering projects on time and on budget with roadway design programming standards that favor the single-occupant automobile. Livability is not included in the criteria. An understanding of the impacts of transportation planning and land use decisions on quality of life is absent from most planning documents.
- Auto-oriented development patterns have changed the form of communities from walkable, transit oriented, street grid systems to strip and single-family development accessed by regional automobile corridors.
- Communities have not focused on integrating transportation and land use planning to protect rural resource lands and wildlife corridors from the impacts of development.
- Livability requires context-sensitive design solutions that address the needs of rural, urban, and suburban areas. Communities must develop

and localize those acceptable street treatments that support livability.

- Level-of-service focuses mainly on vehicle mobility at the expense of all other modes.

Top Policy Initiatives for Livable Communities

The following livability policies support and promote active living.

- Apply context-sensitive approaches to all transportation projects by utilizing a local Street Design Guide.
- Adopt and implement Complete Streets policy.
- Focus on a connected street networks for pedestrians and bicyclists.
- Reform level-of-service standards for all modes and prioritize accessibility and livability.
- Manage for a reduction in Vehicle Miles Traveled.
- Encourage Transit-Oriented Development.
- Adopt a broad or regional approach to planning so that improvements cross jurisdictions and offer regional connectivity.
- Support and encourage partnering with local communities to achieve mutual interests in promoting livable communities. Consider formalizing this through Joint Agreements.
- Direct transportation funding toward communities to spur economic revitalization and protect landscapes from sprawl. Include Livability Criteria in the funding of projects. Increase collaboration among federal, state, and local governments to better target investments and improve accountability.
- Provide training and education on Livable Communities policies to the community. Promote tools for creating Livable Communities such as model policies, programs and regulations.
- Encourage communities to define their values during the transportation planning and design processes.
- Ensure the environmental quality of a community by addressing air and water quality, pollution, noise concerns, watershed restoration, and preservation of green space and trees in transportation planning and design processes.
- Enhance community aesthetics with transportation facilities, incorporating unique local features (i.e. scenic views, natural resources, cultural resources, art).

Top Strategies for Livable Communities

To encourage Active Living, the following livability strategies should eventually be implemented in the community and surrounding areas:

- Provide a mix of land uses.
- Build compact design and increase density.
- Create mixed-income housing opportunities and choices.
- Prioritize walkable communities and active transportation.
- Foster distinctive, attractive neighborhoods with a strong sense of place.
- Preserve open space, historic and cultural resources, natural beauty, and critical environmental areas.
- Strengthen and direct development toward existing communities.
- Provide a variety of transportation choices.
- Make development decisions predictable, fair, and cost effective.
- Encourage community collaboration in development decisions.

Walkability is not just about recreation and exercise, but also about transportation and social interaction.



Livability and social engagement are strengthened with walking destinations.



Additional Practices to Consider

Practices to Consider Applying in Jericho and Underhill

Education and awareness for all roadway users.



Community planning for neighborhood rebuilding.



Create and Adopt Livable Street Design Guidelines

Faced with the challenges of meeting transportation demand while preserving the character of the community, municipalities are creating and adopting Livable Street Design Guidelines. Streets play a significant role in livability. The design of streets impacts the access, choice in mode, safety, comfort, health, identity, retail success, economic vitality and quality of life of the community.

Livable Street Design Guidelines move us away from a volume-only approach to street design. Street Design Guidelines allow us to bring land use and transportation planning together so that we move away from levels of service as the sole criteria for street design. Street Design Guidelines set forth street standards and provide guidance as we are designing new streets or improving existing streets. These guidelines give us new metrics for measuring the success of a street.

The Street Design Guide provides an assessment of local street typologies and highlights traffic calming features that have a history of success locally. When crafting Street Design Guidelines, communities should look to the following documents to ensure that these guidelines fall within the acceptable standard: American Association of State Highway Transportation Officials (AASHTO) Policy on Geometric Design of Highways and Streets ("The Green Book"); the Institute of Transportation Engineers' (ITE) Traditional Neighborhood Development Street Design Guidelines; and ITE's Traffic Engineering Handbook The Manual on Uniform Traffic Control Devices.

Street Treatments to Encourage Active Transportation

Crossing Markings



Curb Extensions



Raised Intersections



Crosswalk Signs



Mini Circles



Short Medians



Crosswalk Islands



Intersection Chicane



Bike Lanes



It is important to note that virtually all of the range of values needed to build healthy, safe and working streets are found in these guides. Meanwhile, too many communities and practitioners have adopted practices that are high in the speed and efficiency range, and low in the safety and community building range.

For this reason, there are many new guides that better inform and instruct practitioners and the public on how to build roads that work for all uses, including land use, sustainable practices, economics and the retail and social life of communities. Los Angeles County has recently released its Model Design Manual for Living Streets, which is a good example for all communities. View it at: <http://www.modelstreetdesignmanual.com>.

Other excellent city, regional and state level guides include those released by Charlotte, N.C.; Portland, Oregon; San Diego, California; and the Smart Transportation Guidebook by New Jersey/PennDOT (March, 2008).

Study these guides, then adopt one of the best fitting guides in the short term, and work longer term to create a guide best suited for this city. It is important to have the city council formally adopt both an interim, then a permanent, new guide. Once again, such guides do not replace the AASHTO or ITE writings, they merely support it and give a broader, better adapted range of design that allow roads to be built to maximize safety, affordability, sustainability, land values, sales and trip reductions.

Increase Enforcement for Pedestrian Safety

In 2009, 4,092 pedestrians were killed and an estimated 59,000 were injured in traffic crashes in the United States – an 8 percent decrease from the 4,414 killed in 2008, and a 14 percent decrease from the 4,763 pedestrians killed in 2000. The United States can do better. Among all developed nations, the U.S. is ranked at or near the bottom per capita for its extreme traffic fatalities.

Note that our very high auto dependence leads us to a low Vehicle Miles Traveled rate, but a better comparison is on a per capita basis. Nationally, in 2009, pedestrian deaths accounted for 12 percent of all traffic fatalities (and often 1/2 of urban places), and made up 3 percent of all the people injured in traffic crashes.

The National Highway Traffic Safety Administration estimates that on average, a pedestrian is killed every two hours and injured every nine minutes on our roadways.

In 2009, 630 cyclists were killed and an additional 51,000 were injured in motor vehicle crashes. Cyclist deaths accounted for 2 percent of all motor vehicle traffic fatalities, and made up 2 percent of all the people injured in traffic crashes during the year. The number of cyclist fatalities in 2009 is 12 percent lower than the 718 cyclist fatalities reported in 2008. For more information on Street Safety, see: <http://www.beststreetsmart.net/>.

One of the most critical factors in street safety is enforcement that concentrates on intersections and corridors with high-crash rates. An enforce-

ment program for pedestrian safety should include an evaluation of motorist, bicyclist, pedestrian and transit users to determine whether we are anticipating and accommodating one another appropriately.

For instance, an enforcement program will look at whether motorists yield the right-of-way to pedestrians in crosswalks and should address some of the more critical problems such as speeding, shortcuts through neighborhoods, red light running and obstructions to the pedestrian right of way such as parking.

An enforcement program will look at pedestrian behaviors too and whether pedestrians are engaging in aggressive or dangerous activities such as walking into a stream of traffic, crossing intersections against the signal and, thereby, disrupting the flow for other modes. It should also include bicyclist enforcement programs aimed at curtailing problematic behaviors such as riding the wrong way in a traffic lane, riding at night without lights or required reflectors, or bicycle parking that impedes other modes.

Compliance and enforcement activities are most often overseen by the police. In order to improve safety, health and livability, the communities should increase enforcement activities around school zones and other critical areas where vehicle-pedestrian conflicts have been high or where poor yielding behaviors by motorists have been observed. To aid in enforcing the rights of all street users, the community should increase the number of police officers walking and biking in the community. Additionally, the municipalities should survey the built environment and the community to determine whether streets are in

compliance with 2010 ADA Standards for Accessible Design. See: <http://www.ada.gov/regs2010/2010ADASTandards/2010ADASTandards.htm>.

In order to collect information about problematic areas, the community should provide a system for recording pedestrian safety concerns, such as poor lighting, broken sidewalks, obstructions, perceived sense of danger, or for noting gaps in the pedestrian network. This may be a website or a display at libraries and schools.

Many drivers ignore the pedestrian's right-of-way. One extremely dangerous situation happens when there are multiple travel lanes and one vehicle stops for the pedestrian crossing, and another overtakes and passes the stopped car, striking the pedestrian.

The Uniform Vehicle Code (UVC) is a set of traffic laws prepared by the National Committee on Uniform Traffic Laws and Ordinances which serves as a model in most states. See: <http://www.ncutlo.org/>.

Pedestrians, too, have duties to ensure the safety and comfort of other road users. There are places where they are prohibited (interstates, for example) and they must comply with traffic signals.

For more information on pedestrian and bicycle safety enforcement, see: <http://www.mwcog.org/uploads/committee-documents/b15cXfXa20090311142525.pdf>

Increase Education and Awareness for All Road Users

An educational and awareness campaign can take the guesswork out of navigating our streets. In order to improve safety and enjoyment of using streets, the community should:

- Develop culturally sensitive messaging for all pedestrian safety programs and information. For an example or an outreach brochure for education and awareness, see: http://www.metroplanorlando.com/files/view/10_things_motorists_should_know_about_bicycling.pdf.
- An example of a Pedestrian and Bicycle Safety Public Awareness campaign can be found here: http://www.bestreetsmart.net/resources/2010/SS10_Summary_v1.pdf.
- Train city staff on planning and designing roadways for pedestrians through walking audits. A walking audit, also known as a “walking workshop,” is conducted with residents, officials, city staff, community groups and other stakeholders of an area. These walks can take from sixty minutes to two or more hours. Diverse groups of people, including City/County officials, planners, engineers, emergency responders, neighborhood leaders, community groups, and residents see, feel and hear problems up close. Walking audits are one of the most powerful tools for people to discuss common issues of interest or concern related to the design, operation of streets, parks, open spaces, as well as a way to discuss security, safety, and other features of their community. In many cases, complex and challenging issues are addressed and solved right in the field. This initiative would allow the community to assess and document existing conditions, while building local partnerships at the local level. The walking audit is a community engagement tool as much as it is a community assessment tool.
- Develop safety tips for motorists, pedestrians, bicyclists and transit users based on critical local issues. New York City’s Department of Transportation noted that although older adults make up only 13% of New York City’s population, they make up 33% of New York City’s pedestrian deaths. Their educational and enforcement campaigns remind drivers that older adults or others with special needs may need more time crossing at an intersection. Additionally, their educational campaigns look at areas around schools and parks where children may dart out

from between parked cars. They recognized that one-third of all pedestrian injuries happen after dark and so they include this information in their outreach campaigns along with a dusk to dawn headlight reminder. Their safety tips remind pedestrians that a vehicle traveling at 30 mph may need 125 feet to come to a complete stop. Given the constraints of a city, they also remind pedestrians that larger vehicles need room to turn and back wheels mounting the sidewalk can be dangerous to pedestrians. Their outreach materials focus on walking under the influence in addition to the dangers of driving under the influence of drugs or alcohol. Their materials state that in 1998, one of every 10 pedestrians killed was under the influence of alcohol, other drugs (including prescription medication), or a combination of both. To see their educational campaign, go to: <http://www.nyc.gov/html/dot/html/safety/safetyedu.shtml>

Education and enforcement in Las Vegas, NV.



Concluding Thoughts

To improve well-being and to help ensure that Jericho and Underhill revitalize in a manner consistent with community values and vision, careful planning and execution are required. Immediate action also is needed, however, and the resolve of residents and leaders, as evidenced by enthusiastic agreement with the 100-Day Challenge, bodes well for the success of the community.

Nonetheless, implementing the recommendations of this report won't always be easy. Many of these recommendations represent best practices from throughout the country, including many that are not conventional in their approach. They will require flexibility and creativity on the part of the staff developing them and considerable outreach to the people most affected by the changes.

As they are implemented, some residents or business operators may at first

express concern or resistance. Bring them into the process and help them understand the value of the effort. Be assured throughout that these recommendations are based on extensive knowledge of tools that are working in other places in the country and can work in Jericho and Underhill.

In some cases, drive times in vehicles will be slightly longer, although usually by a matter of seconds or mere minutes. But community members can—and should—adapt to slight reductions in vehicle speeds by leaving a minute or two earlier for their combined trip, so that they are not late for work and don't feel compelled to drive fast near schools or other places where people should be walking and biking.

Seize the opportunity to create a healthy place, with healthier people. Here's to active living in Jericho and Underhill.



Appendix

Livable streets in Winter Garden, FL.



Livable streets in Manhattan Beach, CA.



Appendix

Walkable and Livable Communities Institute for AARP

Town Maker's Guide: Healthy Building Placement

Town Maker's Guide: Livable Schools

How to Do It: Best Practices

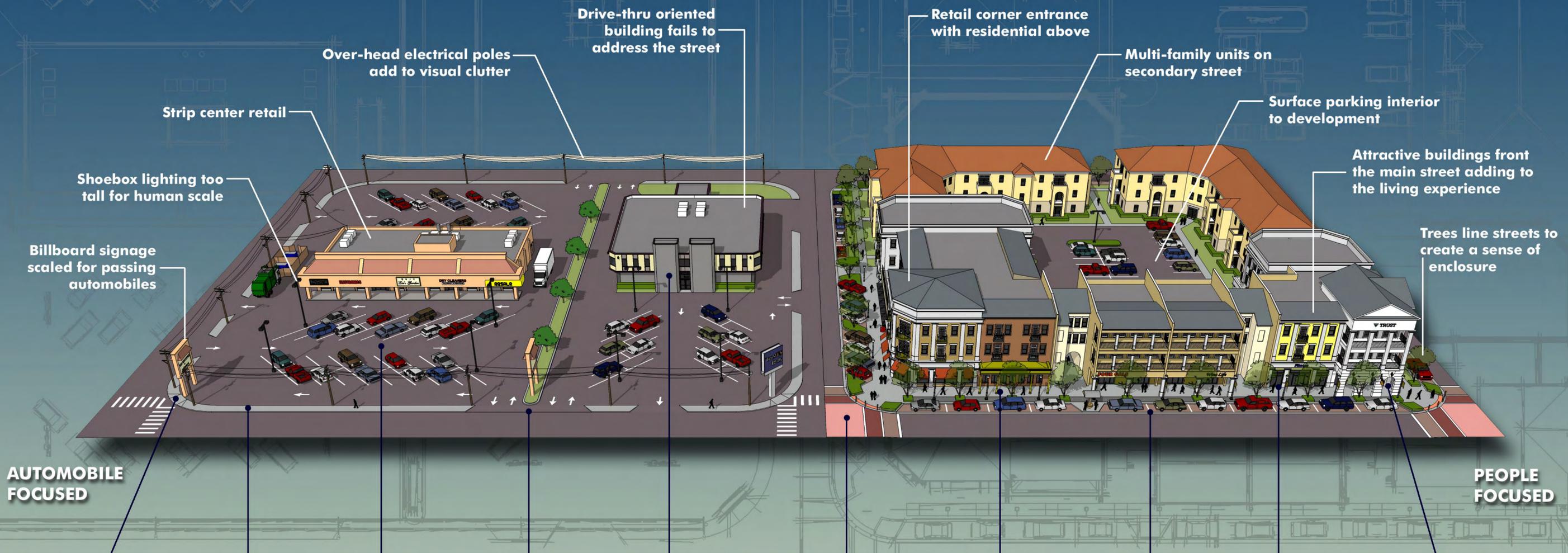
Checklist: Moving Toward Change

22 Benefits of Urban Street Trees

Complete Streets Spark Economic Revitalization, from the National Complete Streets Coalition

"Funding Active Living," a chapter from the *draft* AARP/WALC Institute Active Living Implementation Guide

TOWN MAKER'S GUIDE: Healthy Building Placement



EDGES **SIDEWALKS** **PARKING** **BUILDINGS** **CHARACTER** **EDGES** **SIDEWALKS** **PARKING** **BUILDINGS** **CHARACTER**



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| <p>Edges are essential for a comfortable walk. Edges define spaces and provide visual cues to guide appropriate behaviors. Open areas such as this create high levels of discomfort for both walkers and drivers. Without an edge, walkers feel they have entered the motorist's realm and motorists feel that pedestrians do not belong, so they do not respect them. Edgeless streets look sick and make people feel sad.</p> | <p>Sidewalks must be a comfortable width (typically 6-10 feet for suburban commercial areas), be separated from the curb with a planter strip of 6-10 feet, be continuous and not open to numerous driveways. In general, the higher the roadway speed the wider the planter strip. This space lacks a sidewalk completely, but even the portion with a walk does not "invite" walking.</p> | <p>Parking set to the front of a building devalues walking in many ways. It creates building-to-building swaths of asphalt as wide as 400 feet. Such inhospitable environments (too hot in the summer, too cold in the winter and lonely all the time) do not honor walking, bicycling, transit, or even auto arrivals. Off-street parking takes three times as much land as on-street parking.</p> | <p>Walkability requires easy and complete access to buildings. When buildings are set back, arrival by foot is plagued with problems. Individual properties often carve up the front of a block into independent parking lots and this fractionalizing of land creates ugly and unpleasant spaces to traverse. It devalues the overall experience and also the overall land value. Property owners rarely take care of these spaces, investing instead in large signs advertising to drivers.</p> | <p>Suburban style strip malls and building types are often devoid of character and personality. They are large, faceless, lifeless, uninteresting, uninspiring spaces. Walkers tend to shun such "voids" and motorists tend to speed up when they come across them. These spaces can be anywhere - they have a universal ugliness. Health studies reveal that people in ugly places have elevated blood pressure. Road rage also increases.</p> | <p>Quality edges provide a protective enclosure satisfying the human eye, heart and foot. Edges address our need for comfort, safety and security. Creating a sense of enclosure usually requires building to the interior edge of walkways, planting ground cover and trees, and including on-street parking to buffer the pedestrian from moving traffic. Edges are essential to an enjoyable walking experience.</p> | <p>Sidewalks of sufficient width allow walking to be the most natural, fun, rewarding and healthy way to travel. They allow people to enjoy walking, a relaxed conversation with another, to linger or sit outdoors at a café, and they encourage people to stay and socialize. Although sidewalks can be made of a number of materials from concrete to pavers, the most pleasant walkways have a simple elegance—they are well constructed and maintained.</p> | <p>The combination of on-street parking and urban buildings carefully screen or fully hide off-street parking. Off-street parking is placed in interior courts or in well landscaped gardens to the side or rear of the building. Thriving downtowns or pleasant villages rarely require off-street parking minimums. In many cases today, municipalities prescribe maximum number of spaces that are allowed, which makes better use of limited space.</p> | <p>Quality buildings not only create an address, they address the street. Well designed urban buildings have 70-90% glass at grade, giving natural surveillance to the street. A palette of colors, shapes, tones, textures, window styles add predictability, authority and dignity to a street. In order to improve mobility and accessibility, buildings need to have convenient breaks and pauses, certainly every 400 feet and sometimes less.</p> | <p>Buildings can be simple in their designs, but they must help contribute to the character, personality, style, complexity, elegance, charm and experience of the street. In this way, they define where we are. We want to play in our environment, celebrate great artistry and cultural achievements, and create a place that is always fun to come back to, enjoy and protect. A great street is also great theatre.</p> |
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TOWN MAKER'S GUIDE: Livable Schools



Cafeteria with rear service

Bus drop-off and pick-up, and teacher/staff parking

Library wing with adjacent reading garden

School is integrated into neighborhood with a mix of housing, offices and retail

Courtyard with outdoor classroom and vegetable garden

Park space with playground, multi-purpose courts, and bathroom building

Main entrance with bike parking and parent drop-off/pick-up

On-street parking

STREETS/PARKING



Streets should support walking, bicycling and vehicle movement. Lanes should be no more than 10 feet wide and, if possible, should be separated from on-street parking by a two-foot valley gutter. On-street parking gives motorists a place to wait when picking up children and uses as little as a third of the space of off-street parking. Restricting parking times along the curbs next to the school allows these areas to be used for student drop-off and pick-up. Signs should inform motorists to stay with their cars at all times. Head-out (or reverse) angled parking is the safest and most efficient on-street parking. Head-in angled parking and parallel parking also can be good options. On-site parking may not be avoidable, but can be minimized.

CROSSINGS



Around schools, drivers should feel that they are entering a pedestrian realm and that people may be using crossings any time of day. Where crossings are located, streets should be designed so that traffic is slow — between 15 and 20 mph — and sight lines are good. At higher speeds, motorists are less likely to yield to pedestrians and the risk increases. Crossings are best with good lighting, when students cross one lane at a time, and when students and drivers can clearly recognize and respond to each other. Median islands, curb extensions (or “bulb outs”) and raised table crossings help create these conditions.

DROP-OFF/PICK-UP



With high rates of students arriving and leaving school in cars, there are many “conflict points” between motorists, walkers and bicyclists. If volumes of traffic are high, on-school drop-off and pick-up patterns can include compact, stacking areas that are monitored at all times by adults to ensure that children are only exiting vehicles at the front of the queue when all cars are stopped. It is helpful to have a “valet” program through which adult volunteers or older students — under the guidance of staff — open and close car doors and help students find their parents. On-street parking and nearby parking options, such as a church parking lot, can help. Signs ask parents to turn off their engines, which helps reduce vehicle emissions and protect children’s lungs.

SECURITY



Schools should be integrated into neighborhood designs to provide high levels of “watchfulness” over children. Homes, apartments and townhouses should be near the streets and their “A” sides — their fronts, where abundant windows allow occupants to look outside — should face the streets where students will be walking and bicycling. Each school building should have windows. Low fences and landscaping features can define play areas and access points. Bicycle parking should be located where it is highly visible and sheltered from the elements.

TREES



Street trees not only provide shade and a nice environment, but also create comfort and separation for students walking and bicycling. When placed within four to six feet of the street, trees create a vertical wall that helps lower vehicle speeds and absorb vehicle emissions. On streets with a narrow space between the sidewalk and curb (also known as the “furniture zone”) trees can be planted in individual tree wells between parking stalls, which further tightens the visual appearance of the street and reduces travel speeds. Depending on the species, they should be spaced 15 to 25 feet apart.

SEPARATION



At the school, it is best to separate the different modes of travel (walking, bicycling, bus and parent driving). Sidewalks and school entries should be designed to keep walking and cycling students from crossing the pathway of motorists. Parking lots should be designed so students don’t need to walk through them to enter or exit the school. When these conflicts cannot be avoided fully, raised table crossings are encouraged. Additional design elements such as colorized or raised crossings improve detection between motorists and students, and they give motorists a clear message that they are to slow down and yield to students.

SHARED PARKS



Neighborhoods are most complete when public spaces such as parks are co-located with schools. In this way, a community’s important assets are available in one place. Parking is shared, shade is available, neighbors keep watch over the park and the school, students have quality places to play or wait for their parents, and social exchange amongst all age groups is fostered. Co-located facilities help hold a community together, providing the highest level of conservation and sustainability.

INTERSECTIONS



Intersections near schools should be designed to keep motorists’ speeds under control — typically no higher than 15 to 20 mph — no matter what time of day. Turning speeds are especially important and can be controlled with mini-circles, roundabouts and raised intersections. Curb extensions (also called “bulb outs”) and inset parking help motorists to see pedestrians and pedestrians to see motorists. They also reduce crossing distance time and exposure, and they slow motorists on all turns.

SIDEWALKS



Sidewalks, trails, walkways and ramps should be on both sides of the street around the entire perimeter of the school. Where sidewalk gaps exist, they should be fixed on a priority basis, working out block-by-block from the school. Sidewalks around the school should be at least eight feet wide and should be separated from the curb by a “furniture zone” that can accommodate planter strips, tree wells, hydrants, benches, etc. Where appropriate, on-street parking or bike lanes provide an additional buffer to the sidewalk.

ACCESS



Students should have easy access to the campus from each direction of approach. Adjoining properties shouldn’t be walled off from the school or from the routes to school. Pedestrian and cycling students should be able to use links that shorten trip distances and disperse the traffic for pick-up and drop-off around the school.

Although this document highlights many of the key components of properly placing and designing school sites, there are others to consider. For example, educational programming plays a major role in the activities that need to be accommodated. More space for outdoor physical activity may be needed. The square footage of the building may be less or greater. Renovating an older school may be an option, which requires a cost-benefit analysis. Additionally, local conditions and policies need to be accommodated. School attendance policies affect the distance students must travel and whether they arrive by car, bus, bicycle, or foot. Rural environments, open attendance policies, charter schools and magnet schools can pose challenges to walkability, but motor trips can still be combined with walking trips through strategies such as “Park and Walk” programs.

The following can be of help:
National Center for Safe Routes to School, www.saferoutesinfo.org
Council of Educational Facility Planners International, www.cefpi.org
American Architectural Foundation, www.archfoundation.org
National Trust for Historic Preservation, www.preservationnation.org

How to Do It: Codes to Create Traditional, Walkable Communities

Most land-use codes were written at a time when U.S. cities had an abundance of land, water, clean air and other resources. We assumed continued availability of these resources, as well as financing, which led communities to construct poorly connected and outwardly expanding light-density development, street networks and other inefficient infrastructure. As a result, land uses were separated – sometimes by miles – and urban areas were allowed to decay.

Today, we have a better understanding of the limitations of our available resources. Roads, bridges, sewers and water lines that are now failing, need to be replaced or refurbished. Doing so will be two to eight times more expensive than if we had stayed current with maintenance.

As we make “brick and mortar” changes to the physical infrastructure, we also should update the policy infrastructure, including land-use codes, to foster more livable, walkable communities. Existing codes promote poor connectivity, which leads to higher dependence on cars – and even greater strain on infrastructure. Facing high gas and energy costs, residents are ready for change. But it will require more than Band-Aid solutions. Metaphorically speaking, we’re talking surgery and radical changes to get our towns back to good health.

Toward Change: Mix Uses and Connect Streets

Walkable and livable communities can’t develop without transit, dense development, mixed land uses and strong street connectivity. Most existing codes do not tolerate - let alone encourage - such forward-thinking development. Instead, codes have generated misplaced development, forcing residents to get into their cars and leave their neighborhoods to access basic services. Progressive developers, planning board members, architects and others have seen the need to embrace a better system, one that promotes sustainability, eco-friendly practices, walkability and transit-friendly design.

Unfortunately, their efforts have been slowed by outdated code and regulations. A number of cities throughout the country have even drafted visionary plans. However, too often these plans are relegated to

back shelves as leaders and planners grapple with code-related challenges. The question is: How can we shape codes to encourage better development? The first step is to develop a process that is inclusive, comprehensive and clear.

1. Fully engage all stakeholders to develop a vision. Enlist both the general public and the development community in the process of creating new code that supports smart, complete and predictable standards for development. Include stakeholders with differing opinions to help create a vision that is holistic, practical and collaborative. Broad support will provide the



Envision Gulf Shores: *Gulf Shores in Alabama has an existing vision plan and a land-use plan that are a good start to supporting active living. The plans should be re-visited and updated, if needed, or further implemented.*

necessary political shield for leaders to write, adopt and enforce new codes that promote sustainability, green design, active living and livable communities.

2. Understand that many factors affect the built environment. New proposals should address all of the factors that can influence design standards, not just the obvious ones. For example, tenant expectations shouldn't be an afterthought.

3. Create a master plan that clearly communicates the development expectations. Standards that are clear, concise and predictable are more likely to be accepted and to succeed. In fact, predictability is the developer's friend. Standards must be highly graphical and easy to understand for both builders and regulators. Programs should be reviewed and evaluated yearly, and amended as appropriate.

Seek Examples of Success

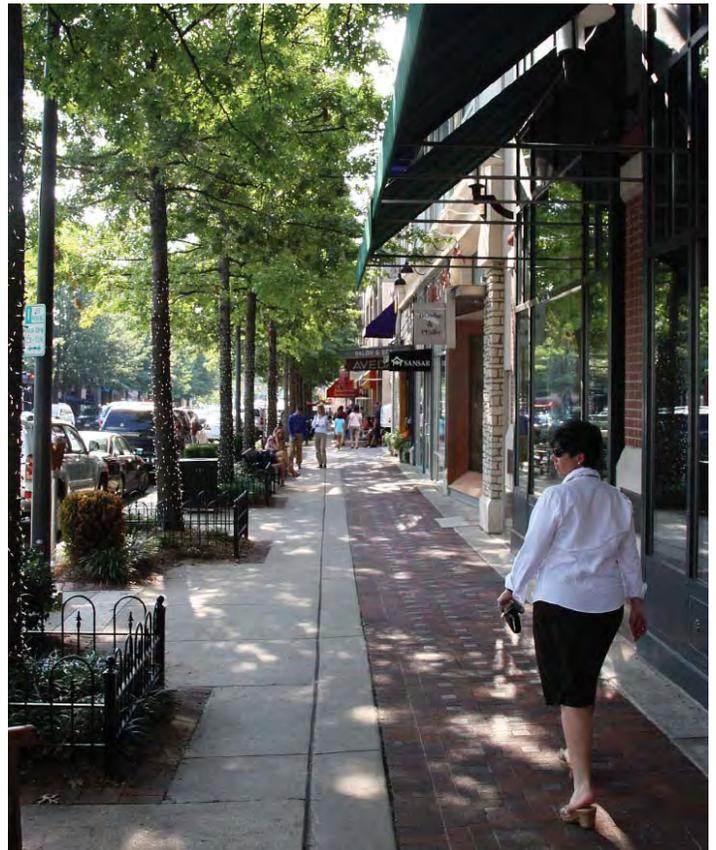
A municipality doesn't need to change its entire book of codes overnight. In fact, it's probably smarter to make changes incrementally.

For example, the central Florida city of Eustis, like many small towns, has taken the time during this latest market lull to "right the ship." While reviewing the city's land-development regulations, city leaders recognized the need for a downtown vision and began a concurrent vision plan driven by the public. They have found a common language in creating walkable streets, balancing automobiles with pedestrians and alternative modes of transport, and melding land-use decisions with transportation goals. They have adopted new form-based codes with district design standards, block developments, typical streetscapes and a vision plan to focus future development.

When the market recovers, Eustis will be prepared to receive development as part of a community vision that will result in a more sustainable, vibrant and livable city.

It is admirable that so many communities throughout the country want to promote walkable, livable communities. The next step is for governments, residents, developers and planners to work together to make this a reality. It's time to throw out archaic codes and create new rules that foster smarter - and healthier - growth.

Over time, buildings in the town centers should front the streets. New buildings, or adapted buildings, can provide important added presence of people in the downtown. Many sidewalks have fallen into ruin. While investments in streets are behind the times, support systems for walking are less than 20 percent of investments needed to support this mode of travel. Communities need to make an ongoing investment in walkability infrastructure.



How to Do It: Traffic-Calming Roundabouts

Roundabouts facilitate through-traffic and turning movements without requiring signal control. Roundabouts are made up of a circulating roadway with an island that is often used for landscaping or other decorative features. The circulating roadway is typically wider than the approach roadways and features an additional 'apron' against the edges of the island; both of these features allow for fire trucks, ambulances and other large vehicles. Roundabouts increase intersection volume by up to 30 percent. As the only requirement for yielding the right-of-way is to traffic already in the circulating roadway, vehicles can continue moving through intersections carrying a light volume,

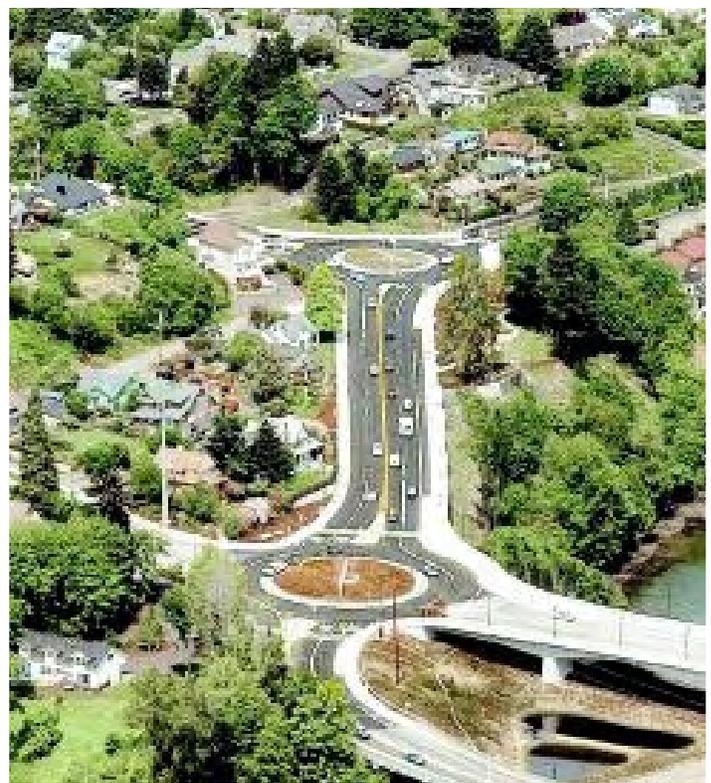
Due to their low speed and the reduced points of potential conflict, roundabouts can reduce injury crashes by 76 percent and fatal crashes by 90 percent.

roundabouts also can reduce injury crashes by 76 percent and fatal crashes by 90 percent. See the Insurance Institute for Highway Safety's website: www.iihs.org/research/topics/roundabouts.html.

requiring no queue at the approach roadways and potentially allowing all intersecting streets to use the intersection at once. Due to their low speed and the reduced points of potential conflict,

Roundabouts reduce delay, which reduces idling engines, air pollution, noise and lost time. Roundabouts provide safer and more comfortable pedestrian crossings. Splitter islands serve as a pedestrian refuge. Allowing one car length between the crossing and circulating lane(s) optimizes roundabout efficiency for vehicles. Roundabouts reduce conflicts in multiple ways: when crossing, pedestrians face only one potential conflict (traffic either entering or exiting the roundabout, divided by the splitter island), and not the six conflicts per crossing leg in full-crossing intersections. In properly designed roundabouts, all conflicts are at low speeds for both entering and exiting traffic. Roundabouts also create the least delay to pedestrians wishing to cross a street. Instead of waiting for up to two minutes to cross (common with a signal), the pedestrian reaching a roundabout rarely has more than a two- to eight-second delay for each leg that they cross. Most bicyclists circulate easily with traffic, since traffic is now going their speed.

For more information about roundabouts, see the Federal Highway Administration's educational video about roundabouts, at http://safety.fhwa.dot.gov/intersection/roundabouts/fhwasa10023/wmv_cc_final/10-2124_Roundabouts.wmv.





By helping re-scale a roadway, roundabouts help set the stage for more successful retail trade and social life. The roundabout below transformed an ugly strip street in Golden, Colorado, into a much better proportioned street. Four roundabouts were built; all signals were removed. One surprising result: retail trade in the corridor outperformed all other streets in Colorado during the last recession.

Top photo, Holland, Michigan.
 Bottom photo, Orlando, Florida. Both mini-circles manage traffic quietly, maximize on street parking by bringing speeds down, and offer attractive corners in the commercial districts they occupy. A mini-circle or two on key streets on gateway approaches to town, in downtowns and other locations will add charm, beauty and movement. Mini-circles are low cost and attractive traffic management tools that can be easily designed and installed. Although costs can be as low as \$15-25k, much more attractive circles are recommended for a number of historic roads where speeds are too high. A cost range of \$75-125k would be appropriate for central locations, while modest price circles can be used elsewhere in the community. Mini-circles reduce the potential for crashes by 90%. Yield controls are used on all approaches. Seattle, Washington has placed over 1,000 mini-circles.



Roundabouts with Right-Turn Bypass Lanes

The addition of street network and roundabouts help to keep traffic flowing, but keep it flowing slowly, which creates a better environment for pedestrians and cyclists. In some areas, roundabouts should have right-turn bypass lanes, as illustrated below.

The top images are of a roundabout in Boulder, CO and the bottom image is of a roundabout leading to the Charlottesville, VA airport.



Success Story: Roundabouts and Crossings

Communities can draw inspiration from Bradenton Beach, Florida, where this state road previously exposed pedestrians to high speeds at this crossing. On average, one pedestrian was killed each year. Walking for exercise, pleasure or transportation was suppressed. Following the construction of the roundabout, all crashes disappeared, and a new stage was set for mixed use development

After 14 years of operation, there had been no reported crashes of any type. New economic life has set a mood of prosperity to the entire shopping district. Today, there is an abundance of pedestrian life.



How to Do It: Crossings

Principles: Crossings should be well placed, located where there is a strong desire to cross, where sight distances are good, where speeds are low. Shown on these pages, the use of materials to create attractive streetscape features add beauty, function and place. Each functional part (i.e. parking, crossings, curb extensions, lane narrowing) should be designed to add to the charm, aesthetics, character and integrity of the street. Following European examples, virtually all street traffic operations signs can be removed, once the street “reads” correctly, that speeds are to be low, courtesies toward people high.





This Golden, Colorado crossing makes use of several important principles, the street is narrowed (to sixteen feet of asphalt, with another 2 feet in each valley gutter). Growth of ground cover (keep trimmed to 20-28 inches) and tall vertical trees, in time, will complete this crossing. This road was once 40 feet wide. Today parents feel comfortable having their children make crossings along a popular park and trail.



Use high-emphasis markings. A new approach is being used (noted in the center photos) with paving ground down about 1/3rd of an inch. A hot ceramic mix is poured in, then reflective glass beads are settled on top. This anti-slip design is expected to wear well and outlast the life of the road surface. If desired, crossings can also be raised. This raised table has a 1:16 gradient change.

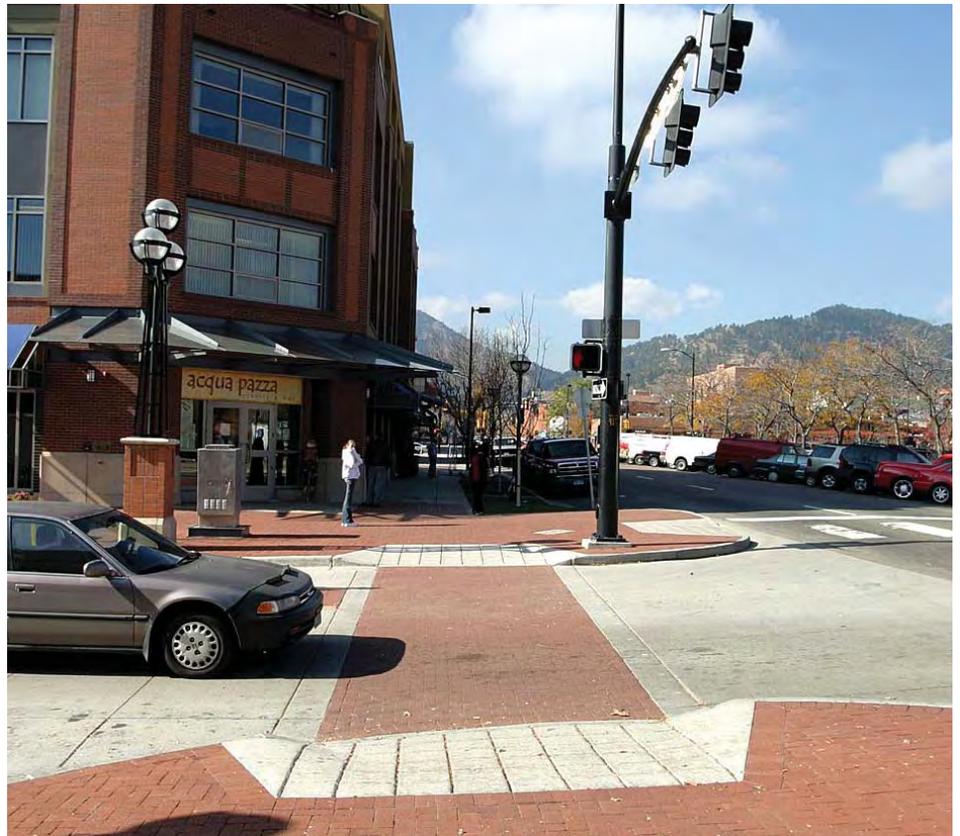


Tools used to slow traffic and help people cross streets.

If space exists where some crossings will be warranted, then a median island can be added. This is a former four-lane road, in Olympia, Washington. With medians pedestrians are only exposed to one direction of moving traffic at a time. Medians should have both ground cover and trees to make them more noticeable to motorists from greater distances. Use of these features slows speed, then draws attention to the crossing.

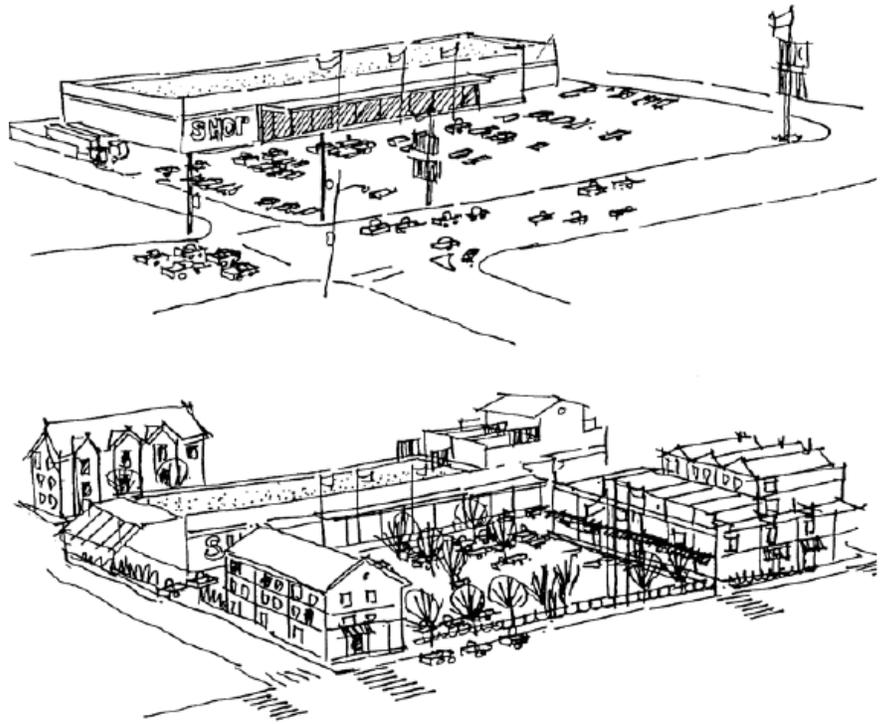


Additional tools can be used to aid pedestrians in crossing streets safely. Curb extensions reduce crossing distances. Landscaping helps channel pedestrians to ramps. Using two ramps per corner simplifies crossings. Color contrast is an aid for older pedestrians and pedestrians with visual problems. Count down timers are now recommended as a soft replacement for all urban area signalized crossings.



How to Do It: Convert Suburban Strips to Village Centers

The conversion of a strip to a village center starts with taking critical corners and placing urban buildings there. These new buildings help size and shape the importance of the corner and the corridor. In time, well placed buildings are joined together to create vertical walls that provide character and community. This works in small scale hamlets to larger scale shopping districts. Illustrations here show how the new visual qualities help dampen traffic speeds. Buildings start the critical process of “enclosing” streets, giving them a feel of “place” and importance. The two photos below illustrate the importance of architecture and town form in controlling the speed of roadways. There is little more than engineers can do in the bottom image to control speed. Meanwhile, careful, thoughtful, placement of buildings and placemaking brings speeds, and therefore development opportunities alive.



Shown to the right is a correctly assembled urban block, and below it a conventional suburban block. Note how the suburban strip image is unappealing for walking (or even driving), and hastens motorists through a space. This increases the potential for speeding. Thus, poorly designed buildings and block patterns impact business life and people multiple ways.



Correctly designed and placed urban form is necessary to help heal downtowns or other places where people are to spend time and money. Unless code calls for an urban form, do not expect such development. It costs more, but it produces more. Urban mixed-use development typically yields \$25-60/square foot, while single-use commercial zoning built to suburban models yields only \$5-15/square foot.



Suburban influences in town centers can be replaced over time. A partnership between private and public land holders can result in scenes that look much like these, and even better.

Public streets form and frame so much of our public realm that by emphasizing speed of cars, we destroy character and sense of community. Once streets are rebuilt for lower, but steady, speeds, it is possible to provide new, mixed use buildings that create a sense of place, character and arrival.

As these transitions occur land can increase in value from \$5-15/sq ft to \$35-60/ sq ft. Scene to the right: In time either the entire mall can be replaced, or a portion in the middle can be taken down to create an attractive pathway that invites a direct route to street shops.

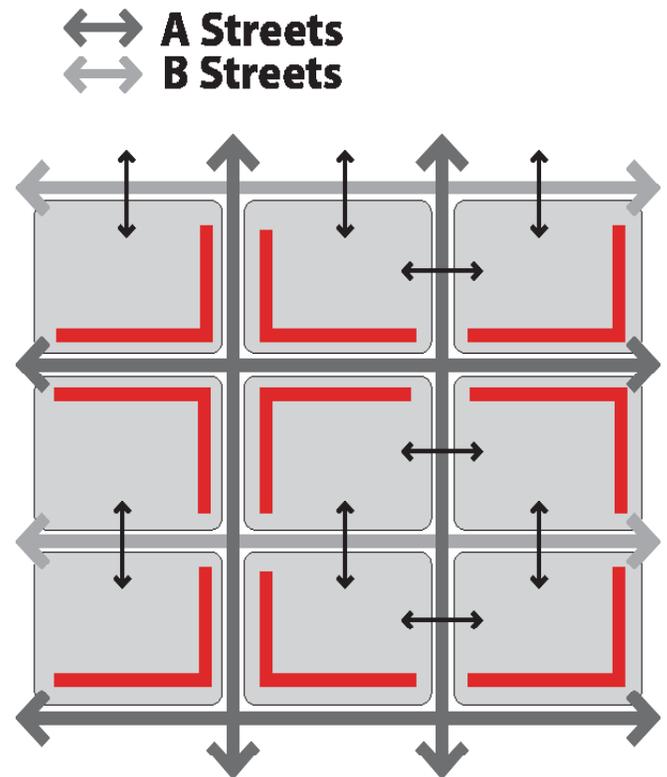


How to Do It: From Placeless to Place, Convert “B” Streets to “A”

The illustration to the right emphasizes those streets (outlined in red) that are “A” Streets. “B” Streets in the illustration are not highlighted with red. These can be alleys, or any type of a utility street.

In the two photos at the bottom of the page, it is clear that two developers were involved. To the right, the developer privatized the neighborhood. Even though the developer was required to install sidewalks, the wall (“B” treatment) assures that no one will walk here. In contrast, across the street, another developer “honored the street” by placing “eyes” to the street. In this case the street is being treated as an “A” street. Town codes must stress that if people are to walk to destinations, a series of “A” streets must be created, and developers cannot put back yards to these important streets.

Of course, it is more complicated than that. If the city, or state wants to use the collector as a higher speed conduit, void of trees and other place, developers will find it hard to sell homes along the street. The street is the core tool for creating successful neighborhoods, security and a desire to walk.



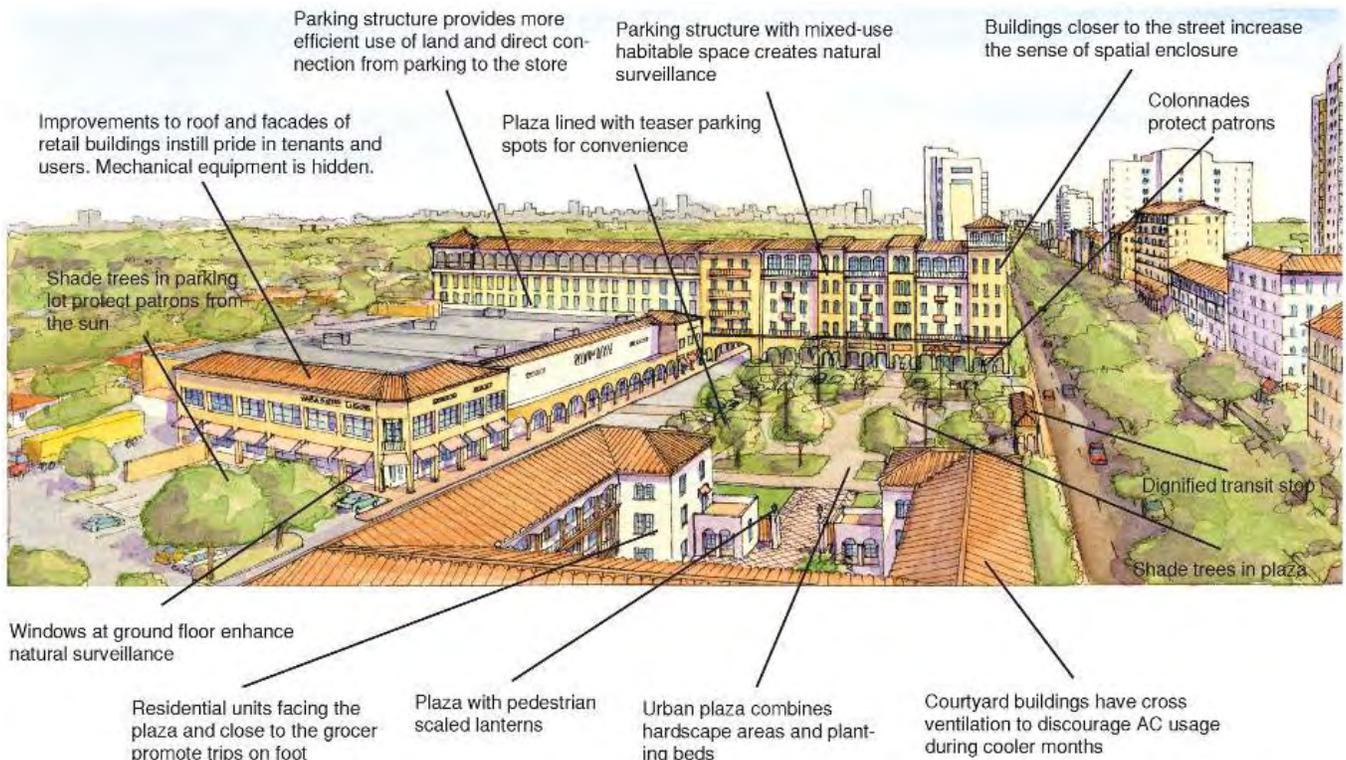


In the photograph above, the functional use of a street is defined. Places where people want to walk are "A" streets (where buildings are designed to watch over the street). Meanwhile a series of "B" streets are needed to provide for utilities, deliveries and other internal functions. For the most part, people will not walk along "B" corridors.

Meanwhile, the above "B" street performs quite well for people who live here or make deliveries here. In the next row of images, a street not designed for walking (middle left) can be transformed into an "A" street which watches over parks, schools or corridors where continuous walking trips are important.



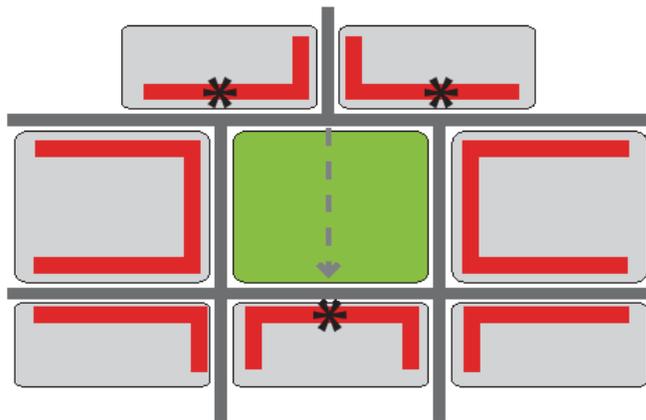
Right and above photos: This suburban style "B" street is transformed into the image below, changing the function of the street into an "A" category. In recent years, teams of planners, engineers, architects and landscape architects have made transitions allowing areas to become alive and active. It often takes more than one discipline to do this. Indeed, those areas that do not transform well are areas where people do not understand multiple functions needed in corridors.



Optimizing Your View and Increasing Social Interaction and Social Equity

When terminating views guide the human eye down a street, several important things happen. The iconic building, mountain or lake vista provides an attraction that draws the person toward the destination, just as an anchor store does in a mall. The terminal point also reduces the tendency to speed, since motorists realize their journey will be interrupted. The terminating vista also acts as a navigational aid.

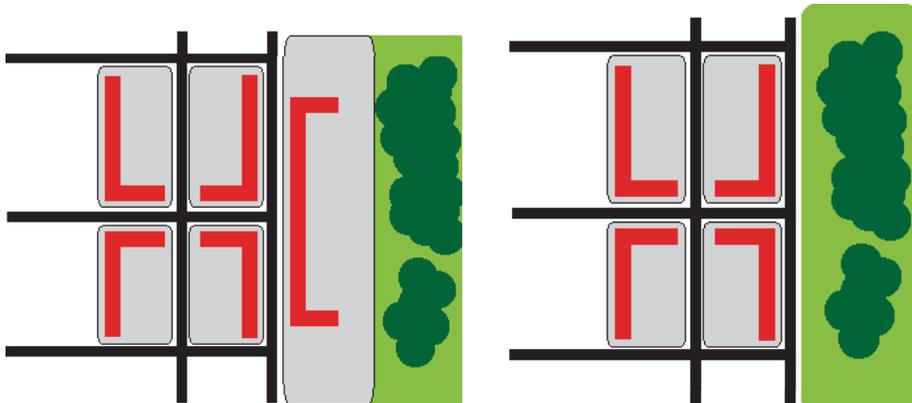
To maximize the value of land, the destination property (park, lake, plaza) should have a well designed, quiet and attractive street running parallel to it. The more sides that have access, the more valuable the land becomes. Other streets need to lead up to this perimeter street and connect with it. In some cases, a well designed trail acts as the “street” enabling people to walk or bicycle comfortably along the water’s edge. In no case should a stream, river, lake, park or even school yard feel privatized through absence of access.

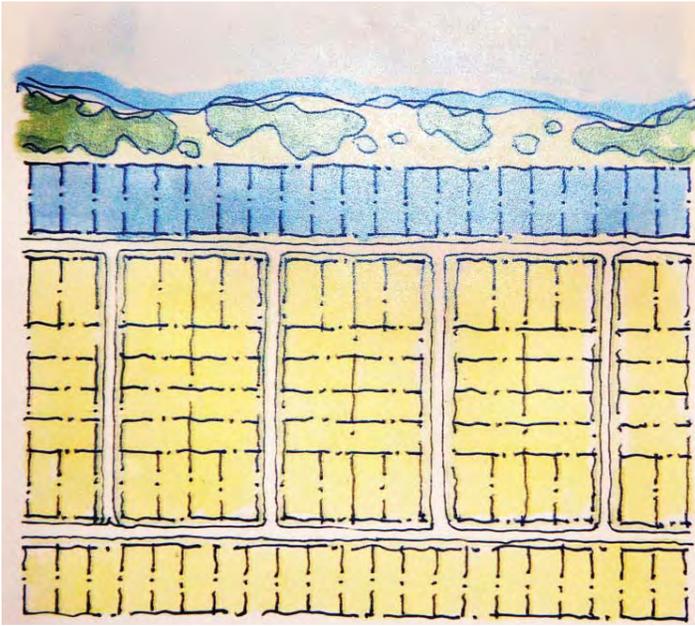


In these illustrations, the red lines represent the edges of adjacent properties that have access to the amenity.

On top, connected streets provide the highest access to the amenity, support social exchange, reduce crime rates, and increase land values.

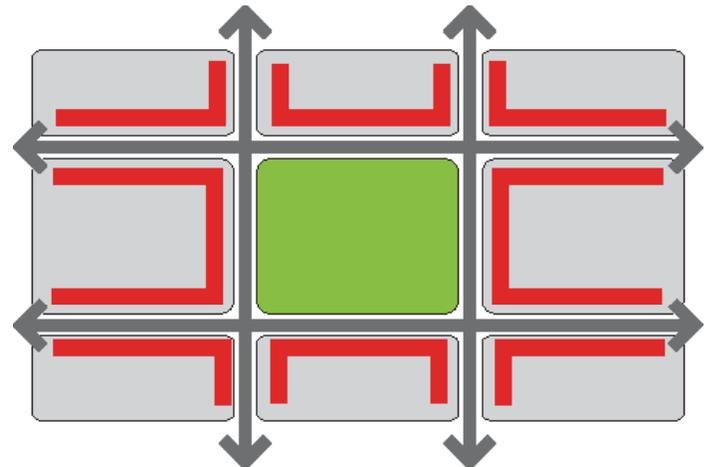
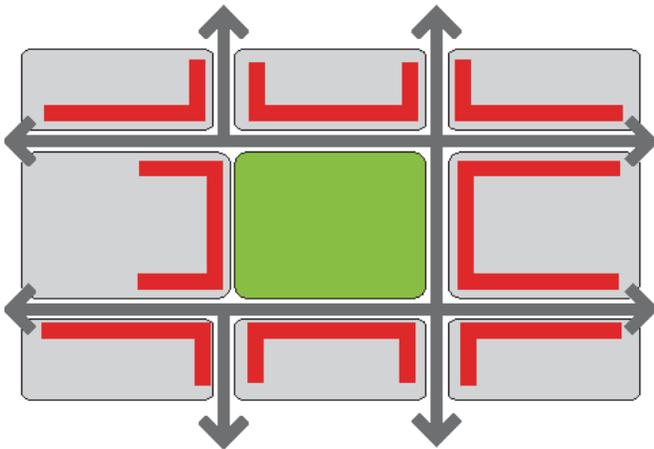
Below, disconnected streets privatize the amenity, decrease walking, and increase potential for property and personal crime.





Privatized -- Wrong Way. The above layout of streets privatizes the lake. Although homes along the shoreline may hold a 10% higher sale and resale value, the amenity, which should belong to the entire community, is now inaccessible to others. Even if a small beach front is accessible at some point, the overall value of homes going 2 to 10 blocks deep are devalued. The developer makes less money on total property values, and the community suffers from reduced social interaction.

Public Access -- Right Way. This alternative design maximizes access to the neighborhood feature (lake, park, school). As access is increased, the number of walking and bicycling trips increase, there is less need for expensive and environmentally damaging parking lots, and the development community makes a greater return on investment. In the scene to the left, the project may not “pencil out” once all associated utilities, street and other costs are worked out. With higher values, the project is more likely to be viable.



Wrong Way. Streets do not connect on the left hand side. The above layout of streets breaks street connectivity and privatizes the park. This reduces access to the park. In a small park, this gives the park user the feeling that they are in someone’s yard. Since the property often has its back to the park, it reduces the “eyes” on the park and creates an increasing risk that the park will not be used fully. Reduced park use, in turn, invites crime in the park and to adjacent property owners. Low park use also reduces property values.

Right Way. This design maximizes connectivity and access to the park, square or plaza. By placing more activity along the park (walking, bicycling and driving) the park becomes more interactive and better used. Ideally, all streets surrounding the park will have either parallel or angled parking, thus minimizing the amount of park land that must be devoted to parking. This also lightens the environmental damage, since on-street parking takes up only 1/3rd the amount of space as off-street parking.

How to Do It: Complete Streets

Major streets with moderate to high volumes of traffic should be transformed into “Complete Streets.” Bike lanes, bike trails, sidewalks, streetscaping, curb extensions, mid-block crossings and other tools are applied.

Traffic calming and traffic management techniques should be used. On-street parking can be striped, curb extensions, tree wells and medians can be added. Such improvements not only bring down speeds, they improve town centers and connect streets by reducing noise and perceived danger.

Most principal streets should have lanes narrower than today, especially when combined with bike lanes. Bike lanes add a buffer to parking and sidewalks. There are 22 benefits when bike lanes (or paved shoulders) are added.

Sidewalk construction and maintenance should be greatly improved, especially within 1/4 to 1/2 mile of town centers and schools.

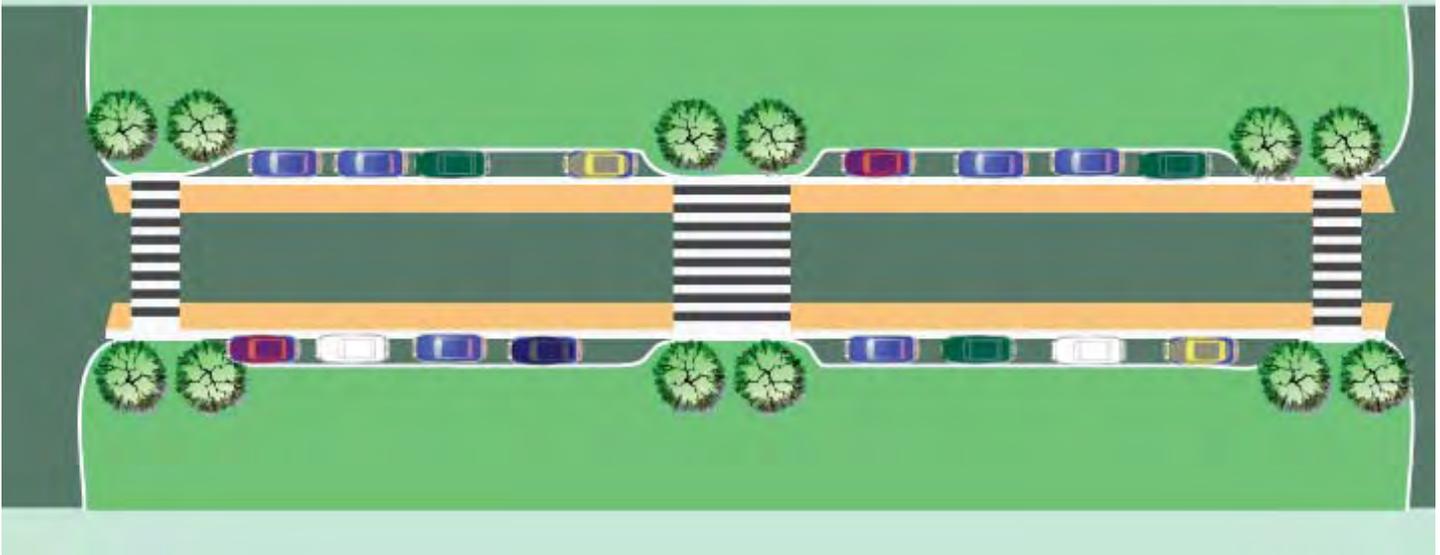
ADA ramps (Universal Design) need attention in many locations.



Above and below: Example of a two lane road with a median, inset parking, one ten foot wide lane in each direction and bike lanes. A roadway based on these concepts can move up to 20,000 ADT (if used with roundabouts at key intersections). If roundabouts are not used, more lanes are added at intersections for storage and turns at key intersections -- not the entire section.

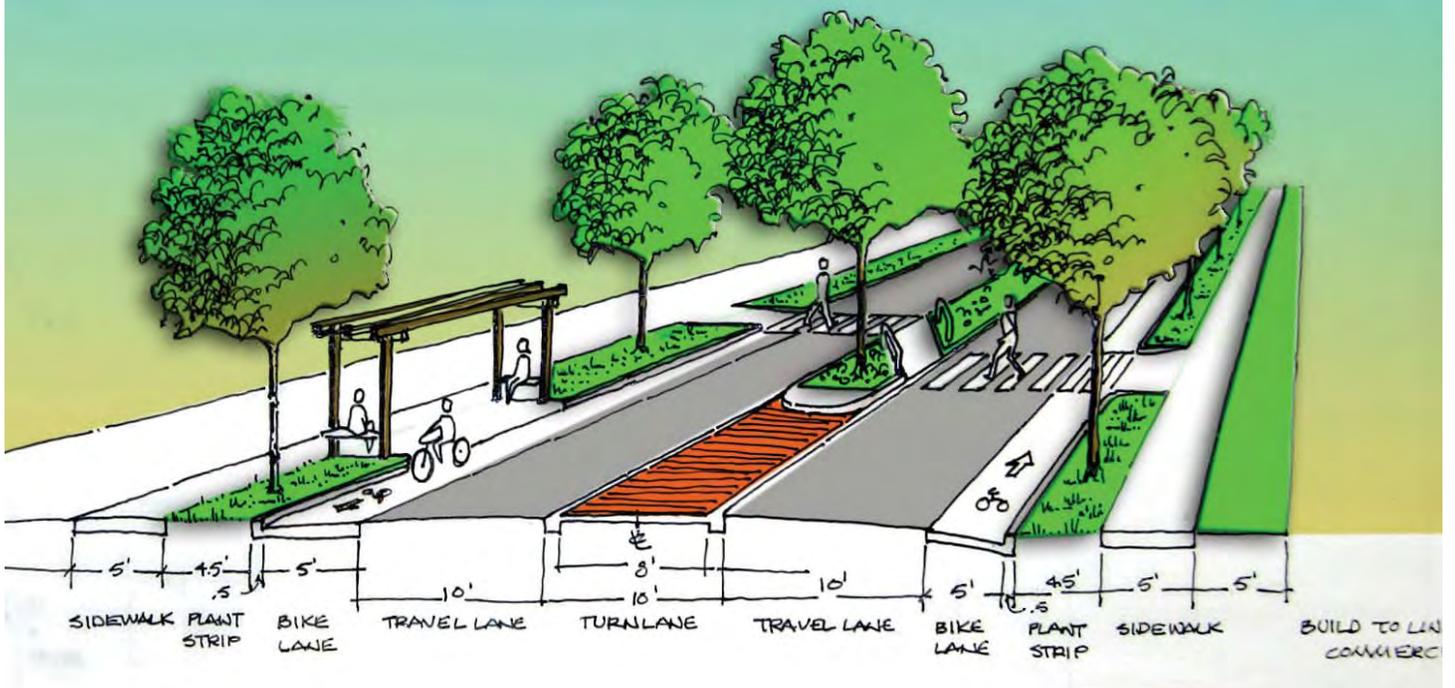
(Photo: Issaquah Highlands, Issaquah, Washington)





Complete Streets vary in design based on the type of street involved, speed and volume, block form, whether parking is needed or not, climate, demographics and other factors. These sections illustrate a number of desired features, including support for walking and bicycling along streets, and the ability to cross over. Trees are generally spaced each 15 to 30 feet. Minimum dimensions for an environmentally friendly street are provided in the bottom illustration. A center turn storage lane of ten feet, two travel lanes of ten feet each, two five foot bike lanes (using an extended gutter pan that is saw cut for joints), two planter strips of 5 feet each and two sidewalks of five feet each can fit inside a 60 foot right-of-way.

TYPICAL SECTION



How to Do It: Road Diets

WHO

Typically implemented by city, county or state transportation agencies, road diets help achieve the policies advocated for by Complete Streets (www.completestreets.org), Smart Growth America (www.smartgrowthamerica.org), and many other national, state and local groups seeking a safer, more walkable and livable community for road users of all ages and abilities.

WHAT

A road diet involves eliminating travel lanes on a roadway to improve safety for pedestrians and bicyclists. While there can be more than four travel lanes before treatment, road diets are generally conversions of four-lane, undivided roads into three lanes—two through lanes plus a center turn lane or median island. The fourth lane may be converted into a bicycle lane, sidewalk, planter strip for street trees, a bus stop, a separated multi-use trail, a wider outside lane and/or for on-street parking. Rural areas might add wider shoulders for bicyclists, roundabouts near a town – especially as a gateway treatment - or separated multi-use trails. In other words, based on the surrounding land use and travel speeds or context of the road, the street cross section is reallocated.

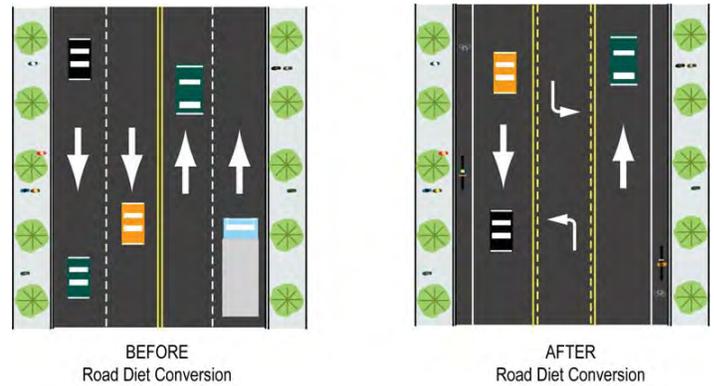
WHERE

Lane and Road Diets can be successfully implemented on collector and arterial streets, main streets, commercial corridors, or town centers; on any street that is over-designed to give priority to the motor vehicle; and in areas where there is greater need to provide for multi-modal travel.

WHEN

Context is the key to a successful lane or road diet, Complete Streets, and Smart Growth. The objective of any design change should be to match the roadway environment with the actual roadway function.

Candidate roads will usually have an ADT (Average Daily Trips) of less than 20,000 to ensure minimal effects on vehicle capacity, although successful road diets have been performed with volumes reaching 30,000 ADT and the roadway did not reach the most congested condition of LOS F (a level-of-service failing grade.) Ideal roads are in need of mitigation to reduce traffic conflict, crashes, and to slow down vehicles, and are in



areas that wish to encourage economic development, address parking circulation, improve streetscapes, and create safer roads.

WHY

The benefits of road diets are numerous: they improve road safety for users of all ages and abilities, whether they travel by foot, wheelchair, bicycle, stroller, or motor vehicle; create a welcoming community environment; and help to solve some of our more pressing public health issues such as reducing obesity, and rates of heart disease, diabetes, and high blood pressure by encouraging active living. Other benefits can include: economic development, increased property values, improved streetscape, better parking circulation, reduced vehicle speeds, improved mobility and more efficient land uses - mixed uses that offer affordable housing, retail, restaurant, and/or office options.

Anecdotal case study results support the conclusion that pedestrians, bicyclists, and adjacent landowners typically prefer the corridor environment of a road diet, especially a two-lane cross section with median islands. When people are the priority, a true livable community and sense of place exist.



Many American towns have the potential to go from having too many lanes for storing cars, to fewer lanes which then build place and the local economy. After the 1989 Loma Prieta earthquake, Pacific Ave. in Santa Cruz, CA was rebuilt to the scene below. Now with narrower street widths and a sense of place, the street teems with life and vitality and generates revenue.



HOW

Conduct a traffic study, and before/after traffic counts of all road users; understand the limitations of traffic modeling; consider special bus designs such as bus pull-outs. Engage the community, educating residents and local leaders on why lane/road diets are a good idea. Survey affected merchants and residents along the corridor to learn what the expectations and objections of a road diet might be. Garner local political support from elected leaders, leverage financial resources from various sources. Funding for road diets can often come from economic development programs, state and local transportation departments, regional metropolitan transportation planning organizations, state and county health departments, main street programs, tree planting or green-up programs. There are many funding sources that can be explored to create significant change.

How to Do It: Parking

The retail life of a town center is supported best by having sufficient on-street parking. Many towns fail to use their streets wisely. They induce speeding by having too much space for vehicular flow, and not enough for car storage.

On-street parking only takes one third as much land as off street parking. On-street parking belongs on center city streets, serving as a buffer to moving cars and a natural traffic calming tool. When used in conjunction with curb extensions (bump outs) and tree wells, parking is said to be inset, narrowing streets, making pedestrian crossings easier, more comfortable and safe.

In time, to achieve compact town center form, where more people can live and help activate the town center, it will be necessary to move away from most off-street parking. Once a full and vibrant retail life is achieved, each parking space becomes worth \$200,000 per year. Thus, attention to using town center streets to maximize convenient parking, is urgent and paramount.

If head-out angled parking is used (highly recommended) the entire curb to curb dimension can be 54-56'. When head-out angled parking is used, lane widths can be much narrower, since back out "discovery time" is not needed. Also, the back end of vehicles have more overhang, so less space is used.

Parking bay depths should be 15 feet. An added two foot of space is picked up when valley gutters are used (highly recommended). See valley gutter in photos.

Keep travel lanes to a combined width of 20-22 feet. A center line is not used. This tight driving space helps keep speeds low, which reduces the chance of vehicle crashes.



Head-Out Angled Parking

There are multiple benefits to head-out angled parking. It is the safest way to park a vehicle and it increases the “yield” of how much on-street parking can be used (from 30 to 110 percent).

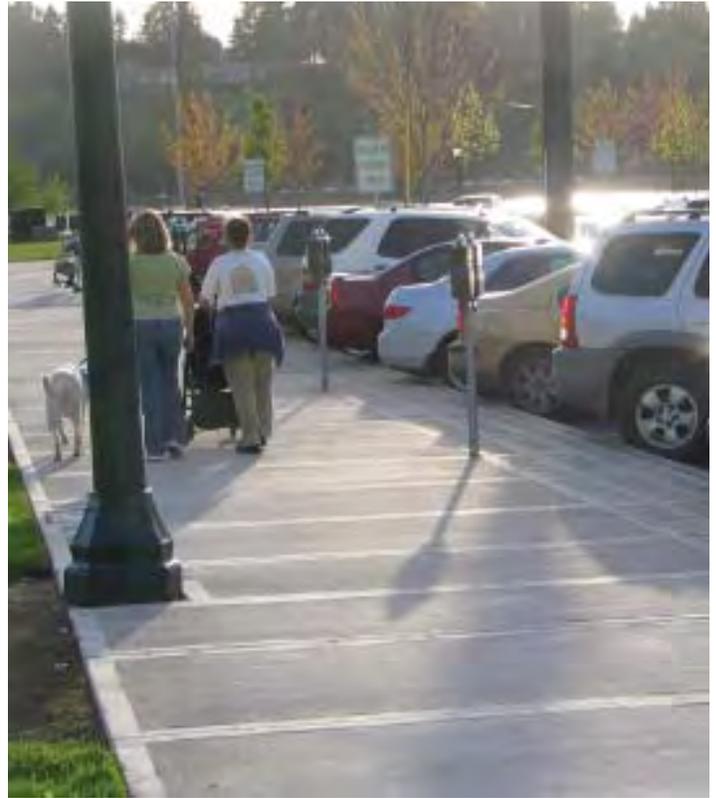
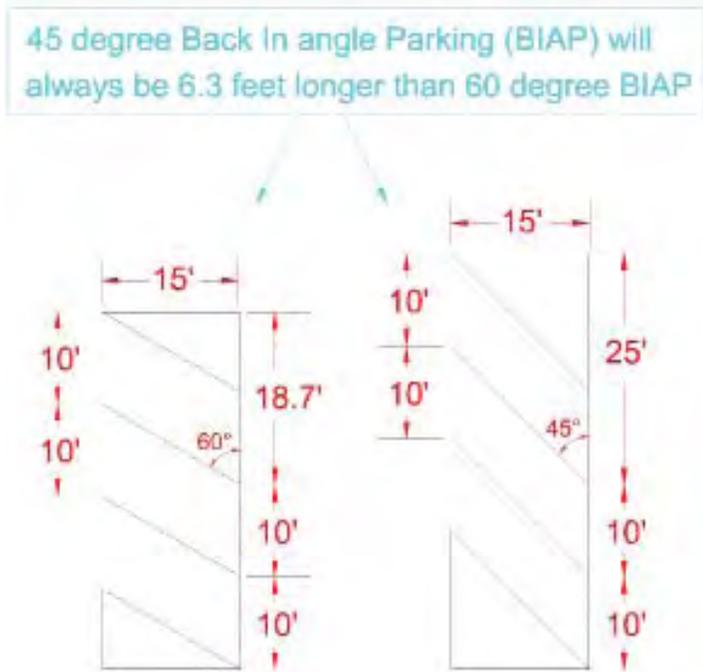
Head-out angled parking maximizes use of adjacent land, since off-street parking takes up three times as much space as on-street. It also takes up less road space (adjacent lanes can be 11 feet wide).

It also is easier to do than parallel parking. It places the trunk where it is safe to access, and when car doors open, passengers are directed toward the sidewalk, which is especially helpful if they are young children.

Keep sidewalks wide and comfortable. Head-out parking allows cars to overhang more than front-in angled parking, so set all fixtures (lamps, hydrants, signs, trees) 24 to 30 inches from the edge of curb.



With front-in angled parking many communities max out their parking gain by using 60 degrees. With head-out angled parking (also called “back-in angled parking, or BIAP), the “yield” is reduced when a 45-degree angle is used. Either angle is possible, but with head-out, 45 degrees is more common, since it is easier to park. It is generally recommended that parking bays be no more than fifteen feet deep (perpendicular measurement). With a two-foot-wide valley gutter, bringing the full depth to 17 feet, all conventional and many oversized vehicles fit in this space. Omit center lane lines when using on street parking to allow motorists to go around a car in the process of parking when there is no opposing traffic. Removal of center lane lines has been shown to reduce traffic speeds and crashes.



How to Do It: Tree Wells



Sometimes a building-to-building right-of-way is too tight to plant trees in sidewalk areas. Use of in-street tree wells can allow the street to be “greened” and often without removal of parking. Tree wells can either be installed to allow water to flow naturally in existing channels, or, if a complete reconstruction is needed, to insert drainage in a pattern that supports these green innovations. Tree wells are used on many local streets, but can also be used, along with curb extensions on roads like SR 70 and SR 17, in Florida. A number of state roads apply tree wells in a variety of states and provinces (including snow country, such as Boise, Idaho and Columbus, Ohio) in urban areas. Use of tree wells and curb extensions, in combination, help bring speeds to more appropriate urban levels.

How to Do It: Paseos and Plazas that Create a Sense of Place

Placemaking: The transforming of a street, sidewalk, plaza, square, paseo, open lot, waterfront or other space to be attractive, rewarding and a community source of distinction and pride. Good places make good experiences possible and have consequences in our lives. People want to share experiences and ideas on common ground, in attractive, well designed and cared for public places.

Principles: Reinvestment in streets, between buildings, and in other well located public spaces brings added value to all buildings and homes in a town center. A front porch storing last decades sofa and washing machine detracts. Placemaking, like interior decorating, must create a strong, compelling sense of place that makes time spent in these spaces rewarding and memorable. Consider the public and private realm of a town center as a public/private partnership. Consider the greater town center as a canvas waiting for rich, vibrant tones, textures and colors that honor existing or adapted buildings and streets. Nothing should be ho-hum. Places can be funky and relaxed, but they must be thoughtful, sensitive to place, and cared for.

Streetscapes help create character and charm. In many towns, many decades of deterioration must be attended to. The town center is a fine home for things waiting to happen, but many existing furnishings, old facades, litter cans, upheaved sidewalks, detract.

The waiting plaza space shown in the upper corner is truly the opportunity that can be the “tipping point” to all other investments.

Plaza spaces must be carefully crafted to bring about proper levels of enclosure, transparency, human scale, complexity, “imageability” and comfort. See illustrations on the opposite page for examples.

Even small public spaces need a minimum of ten different treats or activities or points of interest for the public to become fully engaged. Don’t overlook the needs of seniors, and the drawing power of children to come to these places.



Not ready for prime time: Above is an example of a physical space that can become an important plaza, outdoor room and connector. It’s all about reaching the “tipping point.” (See Malcolm Gladwell’s book by same title). Below: Adapted into public space.



Placemaking includes outdoor “rooms.”

Just as with a home environment, cities have the opportunity to draw in visitors and residents to special “rooms” created for social exchange or instead a chance to relax, read, or simply hang out. These are examples of paseos and other spaces between buildings that take on a unique life. Common to all, plenty of design, “eyes on the realm” and comfort.



How to Do It: Sidewalks

Principles: Sidewalks in a town center require high levels of design and care. It is within the protected spaces of a sidewalk where people move freely, but also spend time engaging others and spending time to enjoy the beauty of their public space. Sidewalks work best when they are fully buffered from moving traffic. The following considerations should be provided when laying out sidewalks.

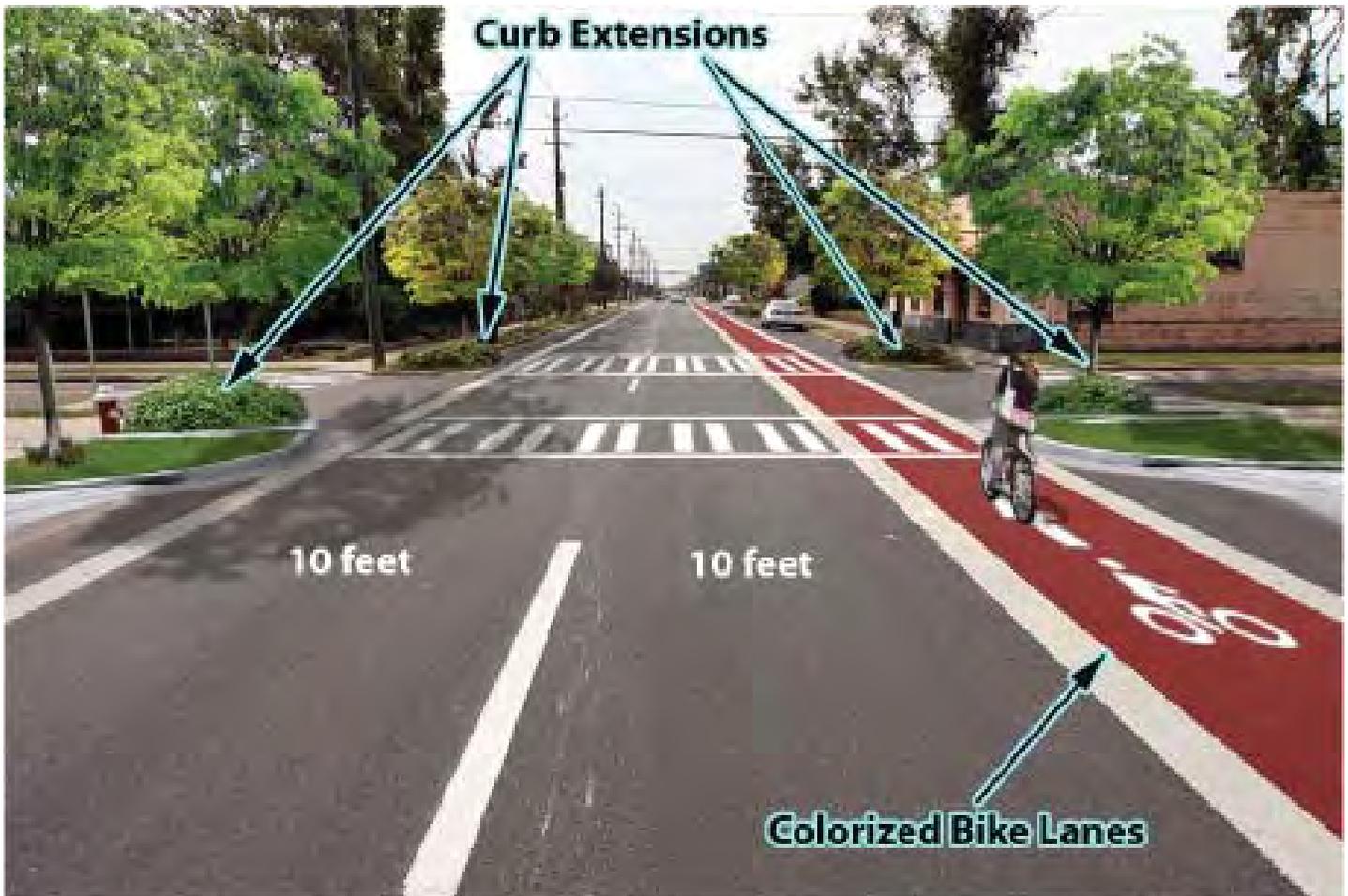
Use color, texture, street furniture and other materials to distinguish functional areas of walkways. Sidewalks have three parts (shy zone, furniture zone and the walk/talk zone). See illustration to the right.

If driveways must interrupt, keep these to minimal widths (14 foot for one way, 26-28 for two way). Use contrasting colors and materials, and keep sidewalks fully flat across driveways.

Sidewalk widths may need to vary, according to existing building placement, and other constraints. Try to keep town center sidewalks to 12-16 feet, when practicable, but be willing to narrow when constraints exist.



How to Do It: Curb Extensions



Curb extensions help transform a place into a more attractive, natural, functional and prosperous town and center. Curb extensions capture all space not used by autos. By adding curb extensions, towns turn these vital spaces into civic and retail uses. All construction should be done in a way that it least disrupts local businesses. Winter Park, and Sanford, Florida replaced sewers, water lines and other infrastructure as part of its reconstruction. Streets were worked on at night, then covered during the day to maximize retail success.

How to Do It: Snow and Snow Removal

People often get hung up discussing problems with snow storage and removal, versus emphasizing opportunities for placemaking. It is important to address how towns and cities can benefit from winter festivals, and not get overly troubled by the need to master better ways to address snow removal. That said, walkability is achieved by paying close attention to snow storage and removal details. Extra design must be built in to accommodate a variety of people (residents and tourists) seeking the winter experience. A special focus on keeping trails and walkways open and accessible year round is fundamental. This will become even more important and challenging with an aging society. This won't be easy, but it must be done.

Residents should expect that transit and school walking trips will be given the first priority for snow removal. Meanwhile, close collaboration and cooperation between state, and town snow removal teams is needed so that snow is not simply moved from the street to the recently plowed walkway or trail openings, back to the street and back to the walkway again.

Other snow cities, such as Keene, New Hampshire and Hamburg, New York have established practices that work under their extreme snow loads. Officials should study practices in these cities, as well as other walkable extreme snow cities, such as in Denmark, Norway, Sweden and Finland.



When residents, and especially children, are required to turn to street walking in harsh winter conditions, walkability can be expected to drop significantly. Winter brings on problems with low light and low visibility as well.

Winter cities must learn to deal with large snow loads. This requires the purchase, operation and maintenance of specialized equipment to keep walking pathways open. Snow removal for pedestrians should be maintained at the same levels and care as provided to motorists.

Checklist: Moving Toward Change

Nearly every community in the country could benefit from some sort of change or improvement to the built environment to create or support walkability and livability. As groups of residents, leaders or organizations come together to create momentum for those changes, consideration should be given to which projects or interventions have the greatest chance of succeeding and which will have the greatest benefit. The scoring system below, created by Ontario, Canada’s Ministry of Health Promotion as part of the Community Physical Activity Planning resource manual, provides a good starting point for prioritizing efforts.

This checklist identifies a number of criteria that can be used to select projects for your plan. Not all criterion will be applicable to every project. Your committee may identify other criteria relevant to your plan. Rank proposed projects on a scale of 1-5 depending on how well they fulfill each criterion.

| Criteria | Not applicable | Proposed Projects Fulfills Criterion | | | | |
|---|----------------|--------------------------------------|----------------|------------|---|---|
| | | Completely | Satisfactorily | Not at all | | |
| | | 5 | 4 | 3 | 2 | 1 |
| Will achieve the goals and objectives of the plan | | | | | | |
| Will addresses the needs of segments of the community targeted in our plan | | | | | | |
| Will produce the desired results in the desired timeframe | | | | | | |
| Will be supported by the parties responsible for implementation | | | | | | |
| Has an existing agency prepared to assume responsibility for implementation | | | | | | |
| Will be supported by the community | | | | | | |
| Will be supported by community and external funding agencies | | | | | | |
| Will not conflict with or duplicate existing projects in the community | | | | | | |
| Takes full advantage of existing resources in the community | | | | | | |
| Can realistically be implemented within the plan’s timeframe | | | | | | |
| Can be implemented with available financial resources | | | | | | |
| Can be implemented with available staff resources | | | | | | |
| Is financially viable and sustainable over the long term | | | | | | |
| Other Criteria: | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Checklist: Moving Toward Change

Just as with the checklist on the previous page, groups of people or organizations coming together to improve the built environment to support walkability and livability should assess any potential projects for existing shortcomings or opportunities for improvement. The checklist below, developed by members of the WALC Institute, provides a list of qualities that should be assessed as a first step in evaluating an effort's viability.

TYPE OF PROJECT: Residential Mixed Commercial Office Civic

LAND USE

YES NO

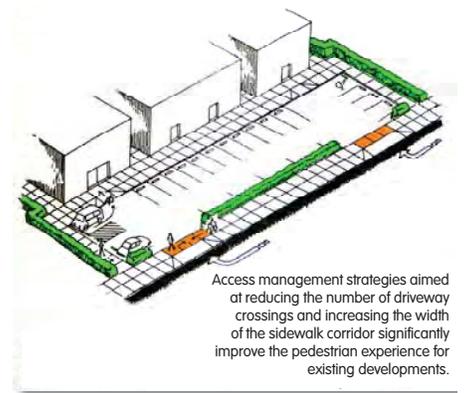
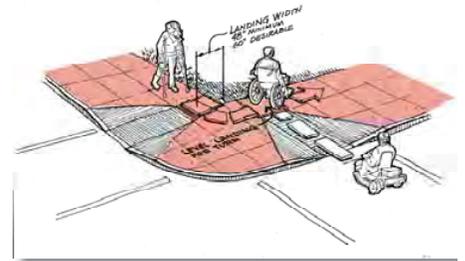
- Does the project/development promote interaction between neighbors?
If YES please list: _____
- Is the physical design of the project harmonious with the overall neighborhood?
- Is this development adjacent to existing development and connecting to the development with pedestrian links and roadway connections?
- Is there an adequate mix of land uses that provide a variety of housing choices?
- Do these mixes provide for a great diversity in incomes, and especially provide for affordability?
- Are there locations for non residential land uses that are integrated with the residential?
- Is the land use configured around a walkable block size (1/4 mile perimeter)?
- Is there a range of density permitted in the neighborhood?
- Are fronts of homes properly placed and have windows watching over schools, parks, streets, trails and other public places?
- Is the architecture of buildings attractive and supportive of life on the street, park, school?
- Are there provisions eliminating garages from "mooning" the street (i.e. required garage setbacks, lot frontage percentage)?
- Are public buildings, parks and other common destinations properly placed to maximize the number of people that can walk to them?
- Can the majority of people walk safely and comfortably in ten minutes (2500 feet), and without crossing dangerous intersections to an elementary school?
- Can the majority of people walk safely and comfortably in twenty minutes (5000 feet), and without crossing dangerous intersections to a high school?
- Is there too much emphasis on providing large amounts of off-street parking (relates to affordability, density)?



TRANSPORTATION, STREETSCAPING, & STREET DESIGN

YES NO

- Does the project/development achieve a connectivity index of 1.4? The index is calculated by dividing the number of street links (street sections between intersections, including cul-de-sacs) by the number of street nodes (intersections and cul-de-sacs). A grid street network would yield an index of 2.0.
- Does the project/development provide mobility options for those who cannot drive?
- Does the project/development have a well connected sidewalk system that lead to local destinations?
If YES what is the proposed width of the sidewalks (5.0 foot minimum recommended)? _____
- Are sidewalks detached from the curb allowing planter strips to take up driveway elevation changes?
- Do all corners have ADA accessible ramps (2 ramps per corner preferred)?
- Do planter strips offer canopy street trees (each 15-30 feet recommended)?
- If median tree plantings are preferred, are plantings adequate for canopy development (each 15-30 feet recommended)?
- Are there adequate provisions made for proper care and maintenance of canopy trees?
- Do building practices eliminate privacy fences (above 4.0 feet) toward the public side of properties?
- Are there specifications that public facing fencing be attractive and transparent above 4.0 feet?
- Do curbs, swales, curb extensions, or other designs keep cars parked in correct locations (no rollover curbs)?
- Does the project/development have, or connect to, a trail system for walking or biking?
- Does the project/development contain elements that enhance the feeling of neighborhood security and safety?
- Are local streetlights provided?
- Are houses oriented toward the street to provide "eyes on the street"?
- Are the buildings addressing the street? (i.e. front doors)
- Is there parking between the building and the street?
- Can a child walk safely, comfortably, and feel watched over enroute to school?
- Are there sidewalks/pathways along the route to the school(s)?
What is the walking distance to the area's schools? _____
- Is the visibility at intersections good? Can drivers see short children, physically handicapped?
- Does the route contain known dangerous intersections?
If YES please list _____
- Are there crossing guards at these intersections?
- Will the project/development contain a significant elderly population?
- Can the elderly walk to important destinations (i.e. banks, post office community centers, and library)? What is the walking distance to these destinations? _____



TRANSPORTATION, STREETSCAPING, & STREET DESIGN CONTINUED

YES NO

- Are there sidewalks/pathways along the routes to these destinations?
- Is the overall speed at or below 25 mph for all local streets?
- Is the overall speed at or below 30 mph for all collector streets?
- Does the project contain design elements to calm traffic such as curb extensions, mini-circles, parking chicanes, roundabouts, medians, raised street crossings, or similar features?
If YES please list _____
- Does the project/development present unsafe conditions or deter access and free mobility for the physically handicapped?
- For projects/development on arterial streets, does the plan include pedestrian crossing signals and/or mid-block crossing islands?
- Is public transportation available?
If YES, where and how close is the nearest bus/train stop? _____
- Does the nearest bus/train stop have a shelter?
- Does the nearest the bus/train stop have a bench and litter can?
- Do curb extensions or other treatments prevent motorists from parking too close to corners?
- If narrow streets are used, do streets provide a physical space (20 feet wide) every 200 feet for emergency response operations?
- If alleys are used, is there high transparency (surveillance) in the alley?
- If paseos (connectors or links) are used, is there high transparency (surveillance) to the paseo?
- Do schools, parks, and other public destinations have adequate well located and secure bike parking?



PARKS & OPEN SPACE

YES NO

- Can the majority of people walk safely and comfortably in five minutes (1500 feet) to a public gathering place, park, plaza, or community center?
- Are there an adequate number of parks provided within walking distance (1/8 — 1/4 mile) from every residence?
- Are there sidewalks/pathways, ADA ramps along the route to the above services?
- What is the walking distance to the area's amenities? _____
- Is the size of parks and open space adequate for the amount of potential residents?
- Are there a number of buildings/houses that watch over parks, trails, and open space?
- Are these parks well used? If not yet built, are there a number of things to discover and do in these parks?
- Do parks have appropriate on-street parking, or is there too much off-street parking?



22 Benefits of Urban Street Trees

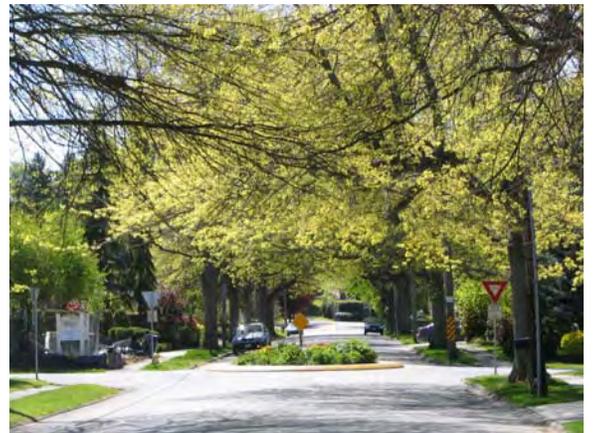
By Dan Burden, Partner and Senior Urban Designer
Glattig Jackson Kercher and Anglin
Co-Founder Walkable Communities
Forestry graduate, University of Montana
November, 2008

U.S Forest Service facts and figures and new traffic safety studies detail many urban street tree benefits. Once seen as highly problematic for many reasons, street trees are proving to be a great value to people living, working, shopping, socializing, walking and motoring in, around and through urban places.

For a planting cost of \$250-600 (includes first 3 years of maintenance) a single street tree returns over \$90,000 of direct benefits (not including aesthetic, social and natural) in the lifetime of the tree. Street trees (generally planted from 4 feet to 8 feet from curbs) provide many benefits to those streets they occupy. These trees provide so many benefits that they should always be considered as an urban area default street making feature. With new attentions being paid to global warming, the need for energy independence, and more urban living more is becoming known about the many negative environmental impacts of treeless urban streets. We are well on the way to recognizing the need for urban street trees to be the default design, rather than a luxury item to be tolerated by traffic engineering and budget conscious city administrators.

The many identified problems of street trees are overcome with care by designers. Generally street trees are placed each 15-30 feet. These trees are carefully positioned to allow adequate sight triangles at intersections and driveways, to not block illumination of the street from overhead lamps, and not impact lines above or below ground. Street trees of various varieties can be used in all climates, including semi-arid and even arid conditions.

The science of street tree placement and maintenance is well known and observed in a growing number of communities (i.e. Chicago, Illinois; Sacramento, Davis, California; Eugene, Oregon; Seattle, Redmond, Olympia and Issaquah, Washington; Charlotte, N.C.). Although care and maintenance of trees in urban



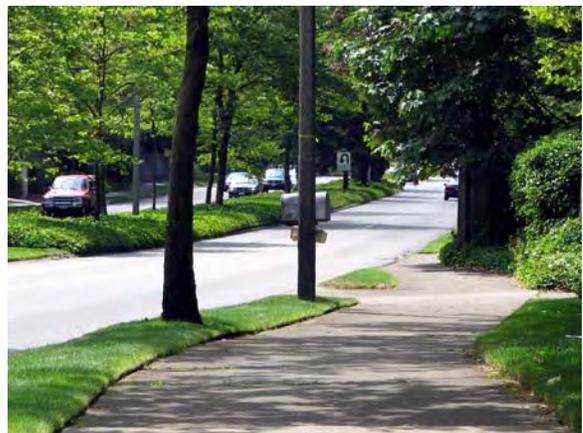
places is a costly task, the value in returned benefits is so great that a sustainable community cannot be imagined without these important green features.

Properly placed and spaced urban street trees provide these benefits:

Increased motorized traffic and pedestrian safety (contrary to popular myths). See below article for details on mode safety enhancements. See especially the compilation of safety benefits detailed in, *Safe Streets, Livable Streets*, by Eric Dumbaugh *Journal of the American Planning Association*, Vol. 71, No. 3, Summer 2005. One such indication of increased safety with urban street trees is quoted from this document:

“Indeed, there is a growing body of evidence suggesting that the inclusion of trees and other streetscape features in the roadside environment may actually reduce crashes and injuries on urban roadways. Naderi (2003) examined the safety impacts of aesthetic streetscape enhancements placed along the roadside and medians of five arterial roadways in downtown Toronto. Using a quasi-experimental design, the author found that the inclusion of features such as trees and concrete planters along the roadside resulted in statistically significant reductions in the number of mid-block crashes along all five roadways, with the number of crashes decreasing from between 5 and 20% as a result of the streetscape improvements. While the cause for these reductions is not clear, the author suggests that the presence of a well defined roadside edge may be leading drivers to exercise greater caution.”

1. **Reduced and more appropriate urban traffic speeds.** Urban street trees create vertical walls framing streets, and a defined edge, helping motorists guide their movement and assess their speed (leading to overall speed reductions). Street safety comparisons show a reduction of run-off-the-road crashes and overall crash severity when street tree sections are compared with equivalent treeless streets. (Texas A and M conducted simulation research which found people slow down while driving through a treed scape. These observations are also noted in the real world when following motorists along first a treed portion of a street, and then a non treed portion. Speed differentials of 3 mph to 15 mph are noted.



2. **Create safer walking environments**, by forming and framing visual walls and providing distinct edges to sidewalks so that motorists better distinguish between their environment and one shared with people. If a motorist were to significantly err in their urban driving task, street trees can deflect or fully stop a motorist from taking another human life.
3. **Trees call for planting strips**, which further separate motorists from pedestrians, buildings and other urban fabric.
4. **Increased security.** Trees create more pleasant walking environments, bringing about increased walking, talking, pride, care of place, association and therefore actual ownership and surveillance of homes, blocks, neighborhoods plazas, businesses and other civic spaces.
5. **Improved business.** Businesses on treescaped streets show 20% higher income streams, which is often the essential competitive edge needed for main street store success, versus competition from plaza discount store prices.
6. **Less drainage infrastructure.** Trees absorb the first 30% of most precipitation through their leaf system, allowing evaporation back into the atmosphere. This moisture never hits the ground. Another percentage (up to 30%) of precipitation is absorbed back into the ground and taken in and held onto by the root structure, then absorbed and then transpired back to the air. Some of this water also naturally percolates into the ground water and aquifer. Storm water runoff and flooding potential to urban properties is therefore reduced.



7. **Rain, sun, heat and skin protection.** For light or moderate rains, pedestrians find less need for rain protection. In cities with good tree coverage there is less need for chemical sun blocking agents. Temperature differentials of 5-15 degrees are felt when walking under tree canopied streets.
8. **Reduced harm from tailpipe emissions.** Automobile and truck exhaust is a major public health concern and contains significant pollutants, including carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), and particulate matter (PM). Tailpipe emissions are adding to asthma, ozone and other health impacts. Impacts are reduced significantly from proximity to trees.
9. **Gas transformation efficiency.** Trees in street proximity absorb 9 times more pollutants than more distant trees, converting harmful gasses back into oxygen and other useful and natural gasses.
10. **Lower urban air temperatures.** Asphalt and concrete streets and parking lots are known to increase urban temperatures 3-7 degrees. These temperature increases significantly impact energy costs to homeowners and consumers. A properly shaded neighborhood, mostly from urban street trees, can reduce energy bills for a household from 15-35%.
11. **Lower Ozone.** Increases in urban street temperatures that hover directly above asphalt where tailpipe emissions occur dramatically increase creation of harmful ozone and other gasses into more noxious substances impacting health of people, animals and surrounding agricultural lands.



12. **Convert streets, parking and walls into more aesthetically pleasing environments.**

There are few streetmaking elements that do as much to soften wide, grey visual wastelands created by wide streets, parking lots and massive, but sometimes necessary blank walls than trees.

13. **Soften and screen necessary street features**

such as utility poles, light poles and other needed street furniture. Trees are highly effective at screening those other vertical features to roadways that are needed for many safety and functional reasons.

14. **Reduced blood pressure, improved overall emotional and psychological health.**

People are impacted by ugly or attractive environments where they spend time. Kathlene Wolf, Social Science Ph.D. University of Washington gave a presentation that said “the risk of treed streets was questionable compared to other types of accidents along with the increased benefit of trees on human behavior, health, pavement longevity, etc.” She noted that trees have a calming and healing effect on ADHD adults and teens.

15. **Time in travel perception.** Other research and observations confirm that motorists perceive the time it takes to get through treed versus non-treed environments has a significant differential. A treeless environment trip is perceived to be longer than one that is treed (Walter Kulash, P.E.; speech circa 1994, Glatting Jackson).

16. **Reduced road rage.** Although this may at first seem a stretch, there is strong, compelling research that motorist road rage is less in green urban versus stark suburban areas. Trees and aesthetics, which are known to reduce blood pressure, may handle some of this calming effect.



17. **Improved operations potential.** When properly positioned and maintained, the backdrop of street trees allow those features that should be dominant to be better seen, such as vital traffic regulatory signs. The absence of a well developed Greenscape allows the sickly grey mass of strip to dominate the visual world. At the same time, poorly placed signs, signals, or poorly maintained trees reduces this positive gain, and thus proper placement and maintenance must be rigidly adhered to.



18. **Added value to adjacent homes, businesses and tax base.** Realtor based estimates of street tree versus non street tree comparable streets relate a \$15-25,000 increase in home or business value. This often adds to the base tax base and operations budgets of a city allowing for added street maintenance. Future economic analysis may determine that this is a break-even for city maintenance budgets.



19. **Provides a lawn for a splash and spray zone, storage of snow, driveway elevation transition and more.** Tree lawns are an essential part of the operational side of a street.

20. **Filtering and screening agent.** Softens and screens utility poles, light poles, on-street and off-street parking and other features creating visual pollution to the street.

21. **Longer pavement life.** Studies conducted in a variety of California environments show that the shade of urban street trees can add from 40-60% more life to costly asphalt. This factor is based on reduced daily heating and cooling (expansion/contraction) of asphalt. As peak oil pricing increases roadway overlays, this will become a significant cost reduction to maintaining a more affordable roadway system.

22. **Connection to nature and the human senses.** Urban street trees provide a canopy, root structure and setting for important insect and bacterial life below the surface; at grade for pets and romantic people to pause for what pets and romantic people pause for; they act as essential lofty environments for song birds, seeds, nuts, squirrels and other urban life. Indeed, street trees so well establish natural and comfortable urban life it is unlikely we will ever see any advertisement for any marketed urban product, including cars, to be featured without street trees making the ultimate dominant, bold visual statement about place.



Complete Streets are designed and operated so they work for all users— pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Communities that adopt complete streets policies are asking transportation planners and engineers to consistently design and alter the right-of-way with all users in mind. Contact the National Complete Streets Coalition (www.completestreets.org) to learn about the diverse groups working together to enact complete streets policies across the country!

Complete Streets Spark Economic Revitalization

More than a decade ago, streets in downtown West Palm Beach were designed so drivers could quickly pass through without stopping. The properties downtown were 80% vacant, the city was \$10 million in debt, and street crime was common. In an effort to revitalize a barren downtown, the mayor looked first to transportation investments, such as pedestrian crossings, traffic calming measures, and streetscaping. Today, West Palm Beach boasts a booming, safe downtown with an 80 percent commercial occupancy rate. Commercial and residential property values along the improved corridors have soared.¹



Complete streets transformed West Palm Beach's downtown into a friendly destination during the day, and in the evening.

Photos courtesy of Downtown Development Authority
West Palm Beach

Incomplete streets restrict economic development

In today's landscape, retail and commercial development is often accessible only by automobile along roads that have become jammed even on weekends. Potential shoppers are left with no choice but to fill up the tank and drive. For many, that can mean staying home. This is particularly true for seniors; research shows that that "half of all non-drivers age 65 and over – 3.6 million Americans – stay home on a given day because they lack transportation."² The economy cannot reach its maximum potential when buyers are unable to reach retail destinations.

Lack of transportation options also affects the workforce. In a 2006 Airport Corridor Transportation Association report on employment centers outside Pittsburgh, 30% of employers responded that transportation was the number one barrier to hiring and retaining qualified workers.³ Although bus routes serve a portion of the center, more than 50% of employees responded that there was no bus stop convenient to home or work. Other employees noted that they didn't use public transportation because bus stops in the area had no sidewalks to safely reach their destination. The lack of a network of complete streets in and around this activity center makes it difficult to attract and retain employees.

Incomplete streets hinder economic growth and can result in lost business, lower productivity, and higher employee turnover.

(over)

The Benefits of Complete Streets 7



Complete Streets Steering Committee Organizations

AARP
Alliance for Biking and Walking
America Bikes
America Walks
American Council of the Blind
American Planning Association
American Public Transportation Association
American Society of Landscape Architects
Association of Pedestrian and Bicycle Professionals
City of Boulder
HNTB
Institute of Transportation Engineers
League of American Bicyclists
McCann Consulting
National Association of Area Agencies on Aging
National Center for Bicycling and Walking
Safe Routes to School National Partnership
Smart Growth America
SvR Design Company

National Complete Streets Coalition

1707 L St NW, Suite 1050
Washington, DC 20036
(202) 207-3355
info@completestreets.org



Complete Streets Spark Economic Revitalization

Complete Streets create viable, liveable communities

Creating infrastructure for non-motorized transportation and lowering automobile speeds by changing road conditions can improve economic conditions for both business owners and residents. When Valencia Street in San Francisco's Mission District slimmed its traffic lanes to slow down cars and accommodate other users, merchants reported the street changes enhanced the area. Nearly 40 percent of merchants reported increased sales, and 60 percent reported more area residents shopping locally due to reduced travel time and convenience. Overall, two-thirds of respondents described the increased levels of pedestrian and bicycling activity and other street changes improved business and sales.⁴ A network of complete streets is more safe and appealing to residents and visitors, which is also good for retail and commercial development.



Right: Don Burden

Complete streets in North Carolina attract more tourists: in 2004, NC DOT invested \$6.7 million in bicycling infrastructure which brings in \$60 million annually from visitors.

Street design that is inclusive of all modes of transportation, where appropriate, not only improves conditions for existing businesses, but also is a proven method for revitalizing an area and attracting new development. Washington, DC's Barracks Row was experiencing a steady decline of commercial activity due to uninviting sidewalks, lack of streetlights, and speeding traffic. After many design improvements, which included new patterned sidewalks, more efficient public parking, and new traffic signals, Barrack's Row attracted 44 new businesses and 200 new jobs.⁵ Economic activity on this three-quarter mile strip (measured by sales, employees, and number of pedestrians) has more than tripled since the inception of the project.

Complete streets also boost the economy by increasing property values, including residential properties, as generally homeowners are willing to pay more to live in walkable communities. In Chicago, homes within a half-mile of a suburban rail station on average sell for \$36,000 more than houses located further away.⁶ Similarly in Dallas, the new public transportation rail line helped spur retail sales in downtown Dallas, which experienced sales growth of 33 percent, while the sales in the rest of the city grew 3 percent.⁷

¹ Street Redesign for Revitalization, West Palm Beach, FL. Case Study No. 16. http://www.walkinginfo.org/pedsafe/casestudy.cfm?CS_NUM=16.
² Surface Transportation Policy Partnership. Aging Americans: Stranded Without Options. 2004. http://www.transact.org/library/reports_html/seniors/aging.pdf
³ Airport Corridor Transportation Association (ACTA). Study of Improved Shared Ride Transportation Services to the Robinson/North Fayette Employment Center. October 26, 2006. <http://www.acta-pgh.org>.
⁴ Drennen, Emily. Economic Effects of Traffic Calming on Urban Small Businesses. 2003. http://www.emilydrennen.org/TrafficCalming_full.pdf.
⁵ Barrack's Row Annual Report. 2006. <http://www.barracksrow.org/public/AnnualReports/BAR-001-AnnualRprt4.pdf>.
⁶ American Public Transportation Association. Public Transportation Means Business. http://www.apta.com/government_affairs/tea21/documents/brochure_transit_means_business.pdf.
⁷ APTA. Public Transportation Means Business.

Funding Active Living Projects

Chapter Topics:

1. Strategic Partnership Building
2. Partners in Active Living
3. Funding Sources for Active Living
4. Funding Checklist
5. Grant Writing

Once a project has been identified, finding a funding source is the next step. Installing sidewalks in a neighborhood, developing a master plan, engaging the community and developing outreach materials all require an investment. There is one question that every individual striving to create more walkable and livable communities must answer: how will we pay for this?

STRATEGIC PARTNERSHIP BUILDING

When developing a funding strategy for active transportation projects, it is important to know what resources exist. Aligning initiatives with local nonprofit organizations, civic clubs, businesses, schools, and government agencies provides a vital link to existing programs within the community and access to the funding opportunities that are available.

As a lone ranger, it is difficult for any group to gain the amount of community support needed to leverage resources and compete with other communities for funding at state and national levels. Building local partnerships is the key to a successful funding strategy and should be the first step in seeking out money. This approach encourages community building, building support for projects, recruiting volunteers and joining a network or coalition that opens doors to grant funding that your group, alone, may not qualify for. Partnerships should span a number of relevant fields in the public, private and nonprofit sectors. Below is a list of potential partners who may be beneficial to any group advocating for walkable and livable communities.

YOUR PARTNERS IN ACTIVE LIVING

Health Departments and Healthcare Providers

The built environment has a profound impact on public health and is one of the root causes of our nation's obesity epidemic, which is tied to staggering chronic disease rates. Walkable communities provide more opportunities for achieving the amount of daily physical activity needed to reduce and prevent these diseases. Health Departments are eligible for state funds and grants that can be used to promote active living initiatives in communities. To find your health department, visit: <http://www.apha.org/about/Public+Health+Links/LinksStateandLocalHealthDepartments.htm>

The National Association of County and City Health Officials (NACCHO) offers resources, technical assistance and continuing education through a peer exchange of best practices. To access this toolbox, visit: <http://www.naccho.org/toolbox/>

Many hospitals and other healthcare providers conduct programs to improve community health and prevent injury and accidents. A children's hospital, for example, may help with efforts to improve walkability and livability as part of a program to reduce childhood obesity or prevent childhood orthopedic injuries.

Main Street Programs

The National Trust Main Street Center works with statewide Main Street programs in almost every state, in addition to several citywide neighborhood programs and other regional programs. Main Street are economic development nonprofit organizations devoted to downtown revitalization and historic preservation. Walkability, placemaking and compete streets are cornerstones of vibrant Main Streets and, as non-profits, these groups are eligible for tourism, economic development, and planning and design

grants that ultimately promote active living. To find a Main Street partner, visit: <http://www.preservationnation.org/about-us/partners/>

Chambers of Commerce, Tourism Council and Business Networks

Many communities have an established Chamber of Commerce. This organization represents business members large and small. Complete Streets and walkable communities attract Chambers because they spur economic development and create jobs. To learn more about your Chamber of Commerce, visit: <http://www.uschamber.com/chambers/directory/default.>

Consider also approaching tourism councils, convention center operators, visitors bureaus and other business networks.

Rotary, Elks, YMCA, Churches, Kids' Groups and other Civic Clubs

Civic organizations can be partners in championing active living initiatives. They usually have a longstanding membership of dedicated community leaders already in place who are willing to join forces with others to make their community a better place to live, work, play, and learn. Some municipalities and community foundations offer a nonprofit directory, which is a good place to begin the search. To locate community foundations, visit: <http://www.cof.org/whoweserve/community/resources/index.cfm?navItemNumber=15626#locator>

Law Enforcement

Law enforcement should be included in any effort to improve conditions for pedestrians and bicyclists. This may include reaching out to a police chief, officer, sheriff, deputy or judge. If your town includes a campus with its own law enforcement, such as a university, coordination with agen-

By the Numbers: Deadly Streets

Studies have shown that bicyclist injuries and collisions with automobiles can be reduced by up to 50 percent when marked, on-street bike lanes are provided.

The construction of raised medians, curbs and sidewalks reduces the amount of time that pedestrians are exposed to traffic, and at risk of collision, by 28 percent. Streets designed for pedestrian safety often provide drivers with increased safety, too.

Of the 40,037 pedestrian fatalities for which the location of the collision was known, more than 40 percent were killed where no crosswalk was available. Just 10 percent of pedestrian fatalities occurred inside a crosswalk. After the age of 55, the vast majority of Americans do not change residence: only five percent move and fewer than 2 percent move between states each year.

This all adds up to tell us that we need to invest in our communities by building more bike lanes, sidewalks, and trails. Then, we need to connect them so that pedestrians and bicyclists have a network for travel. Anything short of this will further exacerbate social isolation for seniors.

cies may be required. When meeting with law enforcement, a list of main concerns along with time and date of observation is useful (i.e. speeding, yielding behaviors, crash rates or safety issues). To learn more about enforcement programs, see: <http://www.walkinginfo.org/enforcement/programs.cfm>

Local Government

Streets, roads, and highways are owned by cities, towns, villages, tribal governments, counties, regional transportation agencies, state agencies, or federal entities. The owner of the street assumes responsibility for improving, maintaining, and operating the facility. Occasionally, several entities will share responsibility for a street or intersection. Your local transportation agency can help you determine who has jurisdiction over various roadways and help direct you to someone who can address your issue.

Reach out to your local departments for public works, transportation and streets to address particular problems. Parks and recreation departments often have jurisdiction over off-street paths and trails. Transit entities, which may be independent or within the agencies listed above, install and maintain transit shelters. Visit your city's website for more information and local government departments and capital improvement projects. To find your local and state electeds, visit: <http://www.capwiz.com/apha/dbq/officials/>

Boards and Commissions

Governing bodies such as a city council, planning commission, board of supervisors, school board or town trustees care about the health and well-being of their community. Making contact with these individuals is important as you determine next steps, including when you might formally present your concerns before a governing body. Reach out to your City Hall to learn more about your planning commission and city council.

State Agencies and Departments

All states have a department of transportation or highway department that operates and maintains state roadways. They are responsible for their statewide transportation plans with strategies and policies to maintain mobility for all modes of transportation on federal highways and state roadways. The department of transportation administers federal funding programs and you can find your State's website here: <http://www.enhancements.org/Links.asp#statedot>

Each state is required to fund a Bicycle and Pedestrian Coordinator position in its transportation department to promote non-motorized transportation. To find your State Bicycle and Pedestrian Coordinator, visit: <http://www.walkinginfo.org/assistance/contacts.cfm>

Safe Routes to School (SRTS) programs make it safer for children to walk and bike to school. SRTS funds can be utilized for sidewalks, bike paths, and complete streets as long as the project is within walking and biking distance of a public school. To learn more about the Safe Routes to School Program, visit: <http://www.saferoutesinfo.org/> and to learn about Safe Routes to School initiatives in your state, visit: <http://www.saferoutesinfo.org/program-tools/find-state-contacts>

Regional Transportation Agencies

Urbanized areas with a population of more than 50,000 are required carry out a continuing, comprehensive, and cooperative transportation planning process to develop a Long Range Transportation Plan and a Transportation Improvement Program (TIP) which contains a list of proposed federally supported projects to be carried out. Metropolitan Planning Organizations (MPOs) or Rural Planning Organizations (RPOs) develop and implement Regional Transportation Plans (RTP) with strategies and policies. To learn

more about state-wide opportunities, including regional opportunities to encourage multi-modal transportation, see: <http://www.fhwa.dot.gov/planning/statewide/manual/manual.pdf>

National Organizations

There are a number of national organizations and coalitions that focus on providing resources to encourage active transportation and active living. Visit the following websites for more information:

AARP – The Livable Communities group focuses on active living. See: <http://www.aarp.org/home-garden/livable-communities/>

Active Living by Design – The Robert Wood Johnson Foundation Active Living by Design program has become a model for establishing community partnerships for active living. See: <http://www.activelivingbydesign.org/>. The Active Living By Design Resource Guide can be found here: <http://www.activelivingbydesign.org/sites/default/files/ALBD%20Active%20Living%20Resource%20Guide%20March%202009-updated%20Aug%202011.pdf>

Alliance for Biking and Walking – The Alliance for Biking and Walking is a national coalition of state and local bicycle and pedestrian advocacy organizations. See: <http://www.peoplepoweredmovement.org/site/>. The 2010 Walking and Bicycling Benchmarking Study can be found here: <http://www.peoplepoweredmovement.org/site/index.php/site/memberservices/C529> and a wealth of resources on bicycle and pedestrian planning can be found here: <http://www.peoplepoweredmovement.org/site/index.php/members/members3/C258>

America Walks – America Walks is a national coalition of local advocacy groups dedicated to promoting walkable communities. See: <http://americawalks.org/>. The Resources Page on the America Walks website provides invaluable information for active transportation. See: <http://americawalks.org/resources/links>

America Bikes – America Bikes is a national coalition of local advocacy groups dedicated to promoting bicycling in the federal transportation bill. See: <http://americabikes.org/>. To learn which federal funding your project might qualify for, see the following factsheet: <http://www.americabikes.org/Documents/AB-Federal-Program-Factsheet.pdf>

American Public Health Association – The American Public Health Association (APHA) offers resources and toolkits around transportation. See: <http://www.apha.org/advocacy/priorities/issues/transportation>

Association of Pedestrian and Bicycle Professionals – The mission of the Association of Pedestrian and Bicycle Professionals is to facilitate the exchange of professional and technical knowledge. See: <http://www.apbp.org/>

League of American Bicyclists – The League promotes bicycling for fun, fitness and transportation and works through advocacy and education for a bicycle-friendly America. See: <http://www.bikeleague.org/>

National Center for Bicycling and Walking – The mission of the National Center for Bicycling and Walking is to create bicycle-friendly and walkable communities. See: <http://www.bikewalk.org/>

Partnership for a Walkable America – The goals of the Partnership are to improve the conditions for walking in America and to increase the number of Americans who walk regularly. See: <http://www.walkableamerica.org/>

Safe Communities – Safe Communities, a project of the National Highway Traffic Safety Administration (NHTSA), is a national organization dedicated to creating local community coalitions to prevent motor vehicle injuries. See: <http://safecommunitiesamerica.org/>

Smart Growth America – Smart Growth America focuses on developing coalitions to improve communities. See: <http://www.smartgrowthamerica.org/about/our-coalition/>

<http://www.smartgrowthamerica.org/about/our-coalition/>

Transportation for America – Transportation for America is a growing, national coalition committed to creating a new national transportation program that will take America to the 21st Century by building a modernized infrastructure and healthy communities where people can live, work, and play. See: <http://t4america.org/>

In the toolbox of the report, find the Active Living Resources Tool which includes organizational resources and documents.

Federal Agencies and Departments

There are a number of federal departments and agencies that focus on providing funding and resources to encourage active transportation and active living. Visit the following websites for more information:

The Centers for Disease Control and Prevention (CDC) – The CDC offers activity guidelines and resources for active living. See: <http://www.cdc.gov/physicalactivity/everyone/guidelines/index.html>. A resource on improving health through transportation policy can be found here: <http://www.cdc.gov/transportation/docs/FINAL%20CDC%20Transportation%20Recommendations-4-28-2010.pdf>

Federal Highway Administration (FHWA) – FHWA ensures that the nation's roads and highways are safe and operating well. FHWA's Bicycle and Pedestrian Program promotes bicycle and pedestrian transportation accessibility, use, and safety. See: <http://www.fhwa.dot.gov/environment/bikeped/>

To learn more about grant sources, visit: <http://www.fta.dot.gov/grants.html>. To review their Livability in Transportation Guide, visit: http://www.fhwa.dot.gov/livability/case_studies/guidebook/

U.S. Department of Housing and Urban Development (HUD) – HUD oversees a program called the Community Development Block Grant which focuses on civic engagement and development that will encourage benefit low- and moderate-income persons, prevent or eliminate slums or blight, or address community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community for which other funding is not available. See: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs

U.S. Environmental Protection Agency (EPA) – EPA provides funding through the interagency Partnership for Sustainable Communities and offers technical assistance that supports state efforts to implement smart growth and sustainable communities. See: <http://www.epa.gov/dced/index.htm>. To learn more about the Partnership for Sustainable Communities between HUD, EPA and DOT, visit: <http://www.sustainablecommunities.gov/> The U.S. Department of Transportation (USDOT) provides a National Transportation Enhancements clearinghouse to share information on projects that have been funded through the Federal Transportation Acts. Types of eligible projects include pedestrian and bicycle facilities and safety activities, acquisition of scenic or historic easements, landscaping and scenic beautification, and preservation of abandoned railway corridors. To learn more about programs and project funded in your state, visit <http://www.enhancements.org>

Transportation Enhancements (TE) – The TE website provides a state profile that shows how transportation funding is distributed at the state level. See: <http://www.enhancements.org/Stateprofile.asp>. Additionally, the site contains an up-to-date list of all programmed TE projects in the country. The list includes the project name, location, the year the project is expected to be funded, the local funding match, the federal funding match, and the total project cost. This is sorted by State and TE Activity such as Pedestrian and Bicycle Facilities funded. Additionally, it provides a search by year and funding source. See: <http://www.enhancements.org/projectlist.asp>

To see how your state stacks up against the national average for bicycle and pedestrian projects, visit: <http://www.americabikes.org/resources/> and visit the State Benchmarking Factsheets.

FUNDING SOURCES FOR BICYCLE AND PEDESTRIAN PROJECTS

One funding source may not provide enough revenue to support current activities or sustain a program. Therefore, it's important to be resourceful and seek out a number of funding sources through different mechanisms at the local, state and national level. Below is a list of typical funding sources and mechanisms to explore. Federal funding sources can be challenging to navigate. The following chart provides information on available federal funding. The link to each funding source is provided in the key.

Other funding sources for bicycle and pedestrian projects can be found through Community Development Block Grants (CDBG) through the Department of Housing and Urban Development. CDBG provides funds for community-based projects that include sidewalk improvements and bicycling or walking facilities to revitalize neighborhoods. See: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs

The U.S. Environmental Protection Agency (EPA) provides funding through the interagency Partnership for Sustainable Communities and offers technical assistance that supports state efforts to implement smart growth and sustainable communities. See: <http://www.epa.gov/dced/index.htm>. To learn more about the Partnership for Sustainable Communities between HUD, EPA and DOT, visit: <http://www.sustainablecommunities.gov/>

FUNDING CHECKLIST

As you build support for your program and look for funding opportunities, reach out to agencies to learn more about local, regional, state and national active living initiatives that your program can align with. Pages 78-80 provide funding sources for bicycle and pedestrian projects.

GRANT WRITING

Once local, regional, state and federal partnerships have been explored, it may make sense to apply for funding through a grant. A grant is an award of financial assistance from a government agency, private foundation or charitable nonprofit to a recipient to carry out specific acts for the public good. Usually, the funding source identifies the problem they want addressed, and the applicant comes up with solutions to address it.

A grant is made of up several essential parts that appear in most applications. Some parts of grant applications may vary and that's why it's imperative that you follow the guidelines provided by the funding sources explicitly. Download a copy of the guidelines, read the guidelines, and abide by the guidelines in every part of your grant application.

CHARACTERISTICS OF EFFECTIVE GRANT WRITING

Abiding by the guidelines for all parts of the application is critical to ensuring the application meets the basic requirements for consideration. However vital this is, it does not guarantee that an application will be selected for funding. Effective grant writing requires a level of quality, creativity and ingenuity to set one application apart from the rest.

- Appropriate Writing Styles
- Write to the funding source
- Write in the correct language of the field and avoid slang or jargon
- Write to inform and show how your project aligns with the funder's desired outcomes
- State your case clearly by using current data cited properly

Funders are looking at 1) the quality of the ideas expressed, 2) your ability to communicate these ideas clearly and concisely, and 3) the likelihood that your work plan will be effecting in addressing the problem posed. Attention to detail and the style of writing also influence reviewers' decisions during the selection process. Grant writing can seem technical, especially when confined to strict guidelines, but the more grants you write, the more opportunities you'll find for creative flexibility. Adding pictures to text, displaying data in tables, and designing an attractive layout are just some of the ways to make your application shine.



Residents, City Staff, and AARP take to the streets in Mound Bayou, MS to document conditions and prioritize next steps towards active living.

Bicycle/Pedestrian Funding Opportunities

| | NHS | STP | HSIP | SRTS | TEA | CMAQ | RTP | FTA | TE | BRI | 402 | PLA | TCSP | JOBS | FLH | BYW |
|--------------------------------|-----|-----|------|------|-----|------|-----|-----|----|-----|-----|-----|------|------|-----|-----|
| Bicycle and pedestrian plan | | • | | | | • | | | | | | • | • | | | |
| Bicycle lanes on roadway | • | • | • | • | • | • | | • | • | • | | | | | • | • |
| Paved shoulders | • | • | • | • | • | • | | | | • | | | | | • | • |
| Signed bike route | • | • | | • | • | • | | | | | | | | | • | • |
| Shared use path/trail | • | • | | • | • | • | • | | | | | | | | • | • |
| Single track hike/bike trail | | | | | | | • | | | | | | | | | |
| Spot improvement program | | • | • | • | • | • | | | | | | | | | | |
| Maps | | • | | • | | • | | | | | • | | | | | |
| Bike racks on buses | | • | | | • | • | | • | • | | | | | | | |
| Bicycle parking facilities | | • | | • | • | • | | • | • | | | | | | | • |
| Trail/highway intersection | • | • | • | • | • | • | • | | | | | | | | • | • |
| Bicycle storage/service center | | • | | • | • | • | | • | • | | | | • | • | | |
| Sidewalks, new or retrofit | • | • | • | • | • | • | | • | • | • | | | | | • | • |
| Crosswalks, new or retrofit | • | • | • | • | • | • | | • | • | | | | | | • | • |
| Signal improvements | • | • | • | • | • | • | | | | | | | | | | |
| Curb cuts and ramps | • | • | • | • | • | • | | | | | | | | | | |
| Traffic calming | | • | • | • | | | | | | | | | • | | | |
| Coordinator position | | • | | • | | • | | | | | | | • | | | |
| Safety/education position | | • | | • | | • | | | | | • | | | | | |
| Police patrol | | • | | • | | | | | | | • | | | | | |
| Helmet promotion | | • | | • | • | | | | | | • | | | | | |
| Safety brochure/book | | • | | • | • | • | • | | | | • | | | | | |
| Training | | • | | • | • | • | • | | | | • | | | | | |

Source: <http://www.fhwa.dot.gov/environment/bikeped/bp-guid.htm#bp4>.

*See the Key on the following page for funding sources

Bicycle/Pedestrian Funding Opportunities Key

| | | |
|---|--|---|
| NHS | National Highway System | http://www.fhwa.dot.gov/planning/nhs/ |
| STP | Surface Transportation Program | http://www.fhwa.dot.gov/safetealu/factsheets/stp.htm |
| HSIP | Highway Safety Improvement Program | http://safety.fhwa.dot.gov/hsip/ |
| SRTS | Safe Routes to School Program | http://safety.fhwa.dot.gov/saferoutes/ |
| TEA | Transportation Enhancement Activities | http://www.fhwa.dot.gov/environment/te/index.htm |
| CMAQ | Congestion Mitigation/Air Quality Program | http://www.fhwa.dot.gov/environment/air_quality/cmaq/index.cfm |
| FLH | Federal Lands Highway Program | http://www.flh.fhwa.dot.gov/ |
| BYW | Scenic Byways | http://www.fhwa.dot.gov/hep/byways/index.htm |
| BRI | Bridge | http://www.fhwa.dot.gov/bridge/hbrpp.htm |
| 402 | State and Community Traffic Safety Program | http://safety.fhwa.dot.gov/policy/section402/ |
| PLA | State/Metropolitan Planning Funds | http://www.fta.dot.gov/grants/13093_3563.html |
| TCSP | Transportation and Community and System Preservation Pilot Program | http://www.fhwa.dot.gov/tcsp/index.html |
| JOBS | Access to Jobs/Reverse Commute Program | http://fta.dot.gov/grants/13093_3550.html |
| RTP | Recreational Trails Program | http://www.fhwa.dot.gov/environment/rectrails/index.htm |
| FTA | Federal Transit Capital, Urban & Rural Funds | http://www.fta.dot.gov/grants_263.html |
| TE | Transit Enhancements | http://www.fhwa.dot.gov/environment/te/te_provision.htm |
| Source: http://www.fhwa.dot.gov/environment/bikeped/bp-guid.htm#bp4. | | |

Funding Checklist

| Date Contacted | Agency | Website |
|----------------|--|--|
| | <i>Health Department</i> | http://www.apha.org/about/Public+Health+Links/LinksStateandLocalHealthDepartments.htm http://www.naccho.org/toolbox/ |
| | <i>Main Street Program</i> | http://www.preservationnation.org/about-us/partners/ |
| | <i>Chamber of Commerce</i> | http://www.uschamber.com/chambers/directory/default |
| | <i>Community Foundations</i> | http://www.cof.org/whoweserve/community/resources/index.cfm?navItemNumber=15626#locator |
| | <i>Local and State Elected Officials</i> | http://www.capwiz.com/apha/dbq/officials/ |
| | <i>Transportation Enhancement Funding by State</i> | http://www.enhancements.org/Links.asp#statedot |
| | <i>State Bike and Pedestrian Coordinator</i> | http://www.walkinginfo.org/assistance/contacts.cfm |
| | <i>State Safe Routes to School Coordinator</i> | http://www.saferoutesinfo.org/program-tools/find-state-contacts |
| | <i>American Public Health Association</i> | http://www.apha.org/advocacy/priorities/issues/transportation |
| | <i>Federal Highway Administration Bicycle and Pedestrian Program</i> | http://www.fhwa.dot.gov/environment/bikeped/ |
| | <i>Federal Highway Administration State Manual</i> | http://www.fhwa.dot.gov/planning/statewide/manual/manual.pdf |
| | <i>Department of Housing and Urban Development CBDG</i> | http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs |
| | <i>Partnership for Sustainable Communities (DOT, HUD, EPA)</i> | http://www.sustainablecommunities.gov/ |
| | <i>Centers for Disease Control and Prevention</i> | http://www.cdc.gov/transportation/docs/FINAL%20CDC%20Transportation%20Recommendations-4-28-2010.pdf |
| | <i>AARP Livable Communities</i> | http://www.aarp.org/home-garden/livable-communities/ |
| | <i>Active Living By Design</i> | http://www.activelivingbydesign.org/ |
| | <i>Alliance for Biking and Walking Resources</i> | http://www.peoplepoweredmovement.org/site/index.php/members/members3/C258 |
| | <i>America Bikes</i> | http://americabikes.org |
| | <i>America Walks Resources</i> | http://americawalks.org/resources/links |
| | <i>Association of Pedestrian and Bicycling Professionals</i> | http://www.apbp.org/ |
| | <i>Complete Streets Coalition</i> | http://completestreets.org |
| | <i>League of American Bicyclists</i> | http://www.bikeleague.org/ |
| | <i>National Center for Bicycling and Walking</i> | http://www.bikewalk.org/ |
| | <i>Partnership for a Walkable America</i> | http://www.walkableamerica.org/ |
| | <i>Safe Communities</i> | http://safecommunitiesamerica.org/ |
| | <i>Smart Growth America</i> | http://www.smartgrowthamerica.org/about/our-coalition/ |
| | <i>Transportation for America</i> | http://t4america.org |

Typical Parts of a Grant Application

- Cover Letter
- Table of Contents
- Abstract
- Problem or Needs Statement
- Goals and Objectives
- Work Plan
- Management Plan and Key Personnel
- Evaluation Plan
- References Cited
- Appendices

Determining Whether to Pursue Funding

Funding sources will release a Request for Applications (RFA) or Request for Proposals (RFP), which is public notice that funding is available and applications are now being accepted. The RFA/RFP will provide a link to the grant guidelines and application. The guidelines should be read thoroughly to determine suitability. When reading the guidelines, be sure to answer these essential questions:

Who is Eligible?

Certain funding opportunities may be reserved for certain entities, like 501(c)3 nonprofits or local government agencies. If your group is ineligible to apply, it is possible to form partnerships with entities that are eligible. The eligible agency would be the lead agency that submits the grant application.

Does Funding Require a Match?

Grants often come with a match, which can be in the form of cash, in-kind services or a combination of the two. For instance, if the application requires a 1/3 cash match and you are requesting \$100,000, you are obligated to reserve \$33,000 of your own funds or service donations for activities associated with this particular grant. In-kind services can be in the form of office space, equipment, rent or other overhead costs that you're dedicating to the program and even staff time. If you're unable to meet the match specified in the guidelines, then do not apply. Your application will not be considered and you will have wasted valuable time and resources.

How Competitive Is the Selection Process?

A funding source may award funding to multiple organizations or agencies that apply. This is important to know in order to gauge how competitive the selection process is going to be. If a funding source is only awarding 10 communities across the nation, then it's likely going to be a tough selection process. Depending on your group's level of preparation and experience in grant writing, you may want to focus your time and resources on another funding opportunity.

Will the Award Meet Your Need?

Grants come in all shapes and sizes. It's important to know the minimum and maximum amounts of the awards to make sure the grant is worth the time and energy you put into writing it and administering it if you are awarded the funds. You should also be considering the overall project budget here. If your budget exceeds the maximum funding amount awarded, your application will not be considered.

Does Your Program Require Modification?

Making considerable changes to the original project or program plan in order to meet guidelines is a red flag. Minor changes are almost necessary, but significant changes typically mean that this is not the right grant for you.

Other Questions To Ask

Answering the following questions will help in determining which grant applications are worth pursuing:

- Does the funding agency share your mission?
- Has the funding agency funded projects similar to yours?

- Is the funding agency interested in the same population as you?
- Do your desired outcomes and the funding agency's desired outcomes match?
- Will the schedule for award work for you?
- Do you have a coalition, task force, group or advisory board supporting the effort?
- Have you contacted local, regional, state and federal partners to solicit feedback on your program?
- Have you identified local resources, including in-kind service donations, to use as a match for grants and other fund-raising activities?
- Do you have training materials, a presentation or other information explaining the problem and your proposed solution? Have you shared this work plan with community partners for support and buy-in?
- Have you visited with other organizations to build capacity or support for your program and to learn more about their funding sources?

SEEK AND YOU SHALL FIND

While there are funding sources at the federal, state, regional and local level, finding the right funding source takes creativity. Some will enjoy raising money through a rummage sale, bake sale or event. Others delight in research and seeking out government or foundation grants. And others work with local government to discover how service donations, tax incentive programs and matching funds might pay for an active living project. As you discover the outreach technique that feels right to you, consider the following:

- Make appointments with your elected officials and city staff to discuss your project and ask about potential funding opportunities available.
- Build those strategic partnerships in the community. Likeminded orga-

nizations and agencies may have access to government funds that your group is ineligible to apply for. Partnering with these organizations and agencies on grant applications is beneficial to all parties involved. Together, partners are able to share knowledge and tasks, leverage resources and have a better chance at winning larger, more competitive grants for their communities.

- Hold fundraisers and host fun community events where proceeds go to benefit your group's activities. Admission, vendors, parking, food and beverages, auctions and contest can all be used to generate funds for your initiatives and bring your community closer together for a good cause.
- Use the internet. Browse the web for keywords associated with your project (example: sustainable communities + grants) and bookmark the relevant websites that post funding announcements. Often these websites, like www.grants.gov have options for you to subscribe to on-line listservs or RSS feeds that alert you when new material is posted. This allows you to receive funding information as it's released and with relatively little effort on your part.

Think about what you can offer your community in time and effort and how this investment can generate goodwill and inspire others.



Children and teens in Ardmore, OK raising funds through a car wash

Case Study: *Olympia, WA*

Parks and Sidewalks Project

Many streets in Olympia lacked sidewalks, which made walking in the community difficult, dangerous, and unpleasant. The Bicycle and Pedestrian Advisory Committee (BPAC) surveyed streets and compiled data from 1997 to 2003, creating a ranking system for the city's sidewalk needs.

Implementation Challenge: Funding

Securing funding for the project was the greatest obstacle—over \$50 million was needed to put sidewalks on at least one side of all major roads in Olympia. In addition, a Parks and Recreation Advisory Committee project was seeking \$100 million in funding at the same time. City polls showed 42% of voters supported a 1% tax for sidewalks, and 49% supported a 2% tax for parks. Neither project had the support required to secure funding.

Success Strategies

- **Explore Options:** In Olympia, a municipal bond requires a supermajority to pass, while a tax increase requires only a simple majority of the popular vote. Because of this, the city pursued funding through a tax measure that would have a greater chance of passing.
- **Join Forces:** The same city poll showed 57% of voters would support a 3% utility tax that funded both the sidewalks and parks. The two campaigns merged their efforts, combining their supporters to rally the majority vote necessary to pass the measure. Walking advocates worked with the group creating the parks plan to identify common goals and concerns, noting that walking is the most popular form of recreation

Funding:

- Explore your options to find the best funding mechanism for your project.
- Join forces with similar campaigns or interest groups to create large voting bases.
- Choose which election to place your measure in. Consider the best time of year to run your campaign, and how long or short the race will be.

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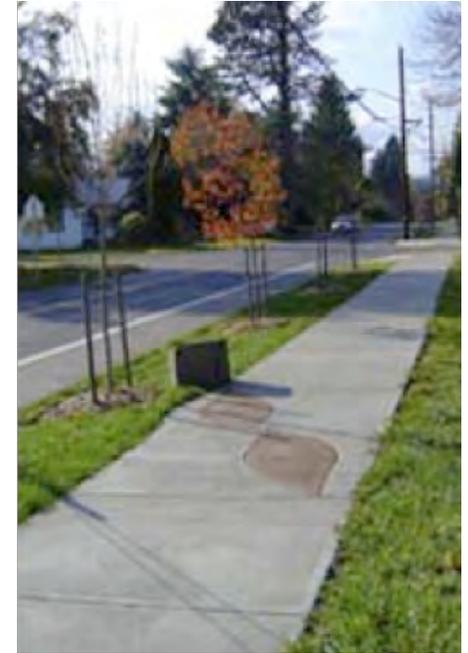
- **Campaign Timing:** The city council voted in July of 2004 to put the Parks and Sidewalks measure on the September ballot. This meant the already organized support campaign had a large advantage over their opponents. Putting the measure on the ballot in September helped as well—voters are more likely to be invested in outdoor recreation issues in the summer and fall.

Implementation Challenge: Prioritizing Projects

With projects as inclusive and long-term as this Parks and Sidewalks initiative, there is a danger of becoming bogged down in negotiations over which community or neighborhood will see results first. These conflicts can lead to divisions within supporters, and can hold up approval or funding for the project indefinitely.

Success Strategies

- **Create a Clear Plan:** The BPAC prioritized all the streets in the city that needed sidewalks. They focused first on streets with high traffic speeds and volumes, where the safety benefits of sidewalks would have the greatest impact. A point system based on criteria such as density, nearby amenities, and street characteristics helped to objectively prioritize the needed improvements. The list of planned projects was finalized before the funding measure went to a public vote, so voters could see clearly what the money would be spent on.
- **Involve Citizens:** Volunteers collaborated with the BPAC to survey the city's streets and evaluate the sidewalk needs. By encouraging their input, the city was able to incorporate suggestions on which walking routes were most frequented and where citizens would like to see sidewalks installed first.



Prioritizing Projects

- Create a clear plan for multi-stage projects, so that citizens understand the progression of improvements.
- Involve citizens in the evaluation and planning processes, so they see some of their desires reflected in the final plan.

Results to Date

Olympia voters passed the Parks and Sidewalks measure with 57% approval, as predicted. The 3% tax on electricity, natural gas, and telephone utilities is shared between the two partner projects—1% to sidewalk construction and maintenance, and 2% to parks and recreation. It has increased annual sidewalk funding from \$150,000 to \$1 million.

With the additional funding provided by the utility tax, the sidewalk additions and improvements have proceeded on pace with the initial BPAC projections. Since 2003, 5.4 miles of sidewalk have been completed, comprising 6.4% of the 84 miles of needed sidewalk identified by the BPAC in 2003. The city adopted a 'Parks and Pathways' logo that they stamp into every block of new sidewalk laid, so citizens can see their money at work.

Contact Information

Jim Lazar
Olympia Safe Streets Campaign
P.O. Box 1423
Olympia, WA 98507
(360) 786-1822
jim@jimlazar.com