

REPORT OF THE MAYOR'S TASK FORCE ON BIKE AND WALKABILITY

University City, Missouri



June 25, 2012



Report of the Mayor's Task Force on University City's Bike and Walkability

The Task Force was convened in October, 2010 when we received our charge from Mayor Welsch. The charge is in Appendix 1 along with a list of the members of the Task Force. As we did our initial research we realized that we confronted a steep learning curve, but taking advantage of the many resources available to us locally, nationally, and online we believe we have created a planning document that the City can use to increase the safety of pedestrians, bicyclists, and vehicle users.

There is a growing interest in urban areas that are walkable and bikable. The N.Y. Times articles, Death of the Fringe Suburbs, and Now Coveted, A Walkable Convenient Place, both describe a suburb like University City and discuss the economic and personal advantages of creating a more walkable city. See Appendix 2 for these articles.

Residents want to be able to walk or bike safely to destinations, both for health and recreational reasons. More home buyers are looking for communities that offer mass transportation, bike facilities, well maintained sidewalks, and adequate lighting. Parents want their children to be able to walk to school. University City has the opportunity to be a biking and walking leader in the region.

University City and the metropolitan area is served by two not-for-profit organizations which are very instrumental in moving our region forward in the areas of pedestrian and bicyclists safety. The Task Force has worked closely with both organizations.

Trailnet, an advocacy group formed in 1988, helps municipalities design streets, sidewalks and trails where people can walk and bike safely to local destinations within and throughout their community. Trailnet is one of eleven regional partners developing a sustainability plan linking agencies, services and resources across the bi-state area.

The Great Rivers Greenway District was formed in 2000 after Proposition C passed and levied a one tenth of one cent sales tax in St. Louis City, St. Louis County, and St. Charles County. The purpose of the monies is to set up a system of interconnected multi-use recreational routes. One of the signature routes, the Centennial Trail, connecting Forest Park to Creve Coeur Park, runs through University City.

In March of 1998 the Missouri Highway Commission approved the creation of the Bicycle and Pedestrian Advisory Committee. MODOT has built a statewide network of partnerships to move bicycle and pedestrian issues forward.

Right after the Task Force was named, the City learned of and applied for a grant from MODOT. This grant, available through Trailnet, enabled the City to hire H3, a professional planning firm. The Task Force became the steering committee for H3, and their detailed plan for bike and walking facilities in University City, The Bicycle and Pedestrian Plan, is an integral part of our report and referred to in this report as The Plan.

COMPLETE STREETS / LIVABLE STREETS LEGISLATION

Complete Streets or Livable Streets legislation requires that the City take into account the needs of pedestrians, bicyclists, and motorists in all stages of planning. It indicates that the City intends to increase the safety and viability of walking and biking within our City. We researched best practices in this area and have submitted legislation to the City Manager.

Many resources exist to assist the City in pursuing the goals of this legislation. Missouri Livable Streets is a public-private partnership between the University of Missouri Extension, Missouri Department of Transportation and over 12 other organizations. Together, they work to ensure that all communities have flexible policies in place so that all Missourians have access to safe transportation options, regardless of ability, age, or income level. The University of Missouri hosts their webpage at www.livablestreets.missouri.edu .

A copy of the proposed legislation, after changes made by City staff, is in Appendix 3. We request that the City Council adopt this legislation as soon as possible.

SAFE ROUTES TO SCHOOL

Safe Routes to School is a nationally recognized program. To date, the University City School District has received one infrastructure grant from MODOT to increase the safety of school children who walk to school. Trailnet employs a school specialist who is working with two parent teacher organizations in the school district, Flynn Park and Jackson Park elementary schools. Flynn Park sponsored a Family Walk to School Day on April 10, 2012, and because of

that experience, parents at Flynn Park are asking for crossing guards at the intersections of Big Bend and Kingsbury, and on Delmar at both Big Bend and Midland.

The Jackson Park community has participated in a walk to school survey, and the PTO is considering sponsoring Family Walk to School Days.

Trailnet has written a grant to the Missouri Foundation for Health for a Pedestrian Safety After School Program at Flynn Park and Jackson Park.

We recommend that the City work closely with the school district to increase pedestrian and biking safety on routes specified as safe routes to school. See page 83 in The Plan for more information.

PEDESTRIAN SAFETY

University City is a community of walkers. We walk to school and to work, to destinations and for shopping, for recreation, leisure, and entertainment. It may be hard to notice the increase in pedestrian traffic in our community because pedestrians do not snarl traffic, but a recent Washington University research study found that 35% of people access the Loop on foot. Indeed, the Delmar Loop was rated one of the 10 Great Streets in America in part because it is “especially attractive to pedestrians.”

www.planning.org/newsreleases/2007/oct02-14.htm

However, despite the success of Delmar Boulevard, pedestrian infrastructure in our community is not consistently available, safe, nor well maintained. Our City’s well connected grid of streets, one of our greatest assets, contains obstacles to safe access for all pedestrians throughout our community:

1. Some arterial roads with access to transit buses lack sidewalks or have discontinuous sidewalks. Examples are North and South and Delmar from Midland to Jackson.
2. Other arterial roads have sidewalks that are obstructed, or of variable width. These sidewalks are impassable for individuals in wheelchairs or for families with young children. Examples are the entire length of Olive or Delmar at Hanley.

3. Most arterial roads have excess capacity for cars and posted speed limits higher than 30 mph. This encourages speeding and creates both a real and perceived sense of danger for non-vehicular traffic. Roads exhibiting these conditions are west Delmar, North and South, Midland, and Vernon.
4. Many neighborhood streets have narrow, discontinuous, or no sidewalks. Other neighborhood streets lack curbs. This creates hazardous conditions for non-vehicular traffic especially in inclement weather.
5. Street lighting in many areas of the City is poor and not designed to illuminate pedestrian ways.
6. Many bus stops have poor pedestrian access and waiting areas. Examples include locations at Delmar at Purdue and North and South at Balson/Blackberry.
7. Signalized crossings are not designed for pedestrian convenience and safety.
 - a. Crossing signals are often inconsistent or of too short duration for pedestrians. The Task Force's survey of signals along Delmar Boulevard found that in the east/west direction walk signals turned on automatically with each light cycle, whereas in the north/south direction the walk signals could only be activated by the pedestrian. Most pedestrians were unaware of this.
 - b. Ramps often do not meet ADA requirements creating barriers for handicapped individuals and families with young children in strollers.
www.ada.gov/pcatoolkit/chap6toolkit.htm
 - c. Crossing distances are often long and right-hand slip lanes are not designed to optimize pedestrian safety. An example of this type of unsafe crossing is at Delmar and Old Bonhomme.
 - d. There is poor education and enforcement of traffic laws pertaining to pedestrians. Commonly ignored laws include: vehicles must yield to pedestrians and vehicles must stop at a red light before making a right-turn-on-red.
 - e. There are no pedestrian only protected crossing cycles at major intersections or at peak times for pedestrian traffic. School commute times require additional protections.
 - f. There is poor pedestrian access to Heman Park/Centennial Commons/Heman Pool on Olive between Pennsylvania and Midland.

8. Marked and unmarked crosswalks are difficult to navigate and are dangerous.
 - a. Mid-block and end-block marked crosswalks are particularly hazardous in University City due to failure of cars to yield to pedestrians. Examples are at Delmar near Old Bonhomme, and at Central, Purdue, Vassar, Trinity, and The Tivoli.
 - b. Ramps often do not meet ADA requirements, creating barriers for handicapped individuals and families with young children.
www.ada.gov/pcatoolkit/chap6toolkit.htm
 - c. Crossing distances are often long and lack pedestrian safety amenities, such as refuge islands or speed-tables.
 - d. Vehicles often “roll through” stop signs and drivers fail to make eye contact with pedestrians.
9. The City has a number of paved and unpaved pedestrian and multi-use paths, such as Heman Park, Mona Terrace, Ackert Walk, Centennial Greenway and Ruth Park Woods, which could be improved and enhanced.
 - a. The paths lack connectivity.
 - b. Recreational facilities could be improved by providing foot paths in more parks.

The Task Force recommends that the City adopt best practices in updating, maintaining, and upgrading sidewalks, intersections, and multi-use paths.

www.gocolumbiamo.com/Planning/Documents/columbia_report_burden.pdf

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_562.pdf

www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/

The types of facilities, amenities, and traffic calming strategies employed depend on the current street design and goals. Examples include: sidewalk “bump-outs” at crossings to decrease pedestrian crossing distances, speed tables to prioritize pedestrian traffic by maintaining the sidewalk level and surface across a street creating a wide speed bump to slow traffic (Mehlville/Centennial Greenway at Kingsbury/Washington/Loop South), changes in road texture, increasing driveway slope, enhancing medians and creating pedestrian refuges on wide streets, enhancing bus shelters, and providing seating along paths and sidewalks.

The Plan provides recommendations for enhancing pedestrian facilities throughout University City. One recommendation proposed is a network of Bike/Walk Streets connecting north-south and east-west corridors. The Bike/Walk Streets are lower volume mostly residential streets adjacent to major traffic arteries that are proposed to give priority to non-vehicular traffic by:

1. lowering speed limits to 20 mph.
2. diverting vehicular traffic off the streets every few blocks to prevent through access while permitting local access.
3. encouraging pedestrian and bicycle flow by replacing 4-way stops at intersections with cross-traffic stop signs only.
4. planning Bike/Walk Streets on streets that have signalized lights at major cross streets to enhance safety and improving bike and pedestrian activation of signals.

Great Rivers Greenway (GRG) has proposed building the Centennial Greenway through University City. This is a mostly off-road bike and pedestrian path from the 170-Olive corridor to Washington University and Forest Park. The entire Centennial Greenway will link Forest Park to Creve Coeur Park and the KATY trail. The proposed path through University City would connect a number of parks, existing trails, commercial districts on Olive and Delmar, and provide flood mitigation along the River des Peres. Obstacles to the completion of this project are the large number of landowners and stakeholders involved, which include St. Louis County, B'nai Amoona Congregation, University City School District, Green Center, University City, Washington University, and residents. GRG is currently starting construction on another project to connect the Olive 170 corridor to Clayton's Shaw Park. "The Spur" will provide residents in the west end of University City with a recreational/commuting path with access to commercial districts on Olive, Delmar, and in Clayton.

Appendix 4 includes relevant web sites and some of the data collected by the Task Force on signal timing at various pedestrian crossings. It also includes a City map showing the locations of existing sidewalks, and a second City map showing the locations of traffic signals, bus stops, and marked crosswalks.

BICYCLIST SAFETY

The Plan indicates the direction the City should move as we create a more bike friendly City for the future. However, in addition to well marked bike routes, bicyclists need a safe and

convenient way to secure their bikes when they reach their destination. Busy areas, such as the Loop, need to furnish a place for bicycle parking in order to prevent the chaos and confusion of bikes locked to parking meters, fences, and telephone poles. There is adequate bicycle parking at the Centennial Greenway Plaza on Delmar, but more parking is needed in the Loop. The Task Force recommends that one in-street bicycle parking corral be installed on an experimental basis.

www.portlandonline.com/transportation/bikeparking

In addition, the Task Force recommends that all City facilities furnish bike racks, and that businesses should be encouraged to provide bike parking.

Appendix 5 includes more resources.

BUILDING A LIVABLE/SUSTAINABLE/ BIKE AND WALK COMMUNITY

The opportunities to build a healthier and safer University City are driven by demographic changes and a shifting lifestyle preference. There is increasing demand for communities that are “car optional.” University City has a tremendous opportunity to be at the forefront of this movement and shape our future in a way that moves us toward a healthier, more sustainable future.

Shortsighted planning sacrifices the long term fiscal health of University City and starves some of the business districts that could be thriving. Rebuilding and designing University City for the future requires that the City rewrite laws and regulations to transform existing development patterns, and take advantage of the available opportunities to promote walkable, mixed-use development in University City.

<http://www.HousingandCommunitySolutions.org>

The Task Force recommends that the City undertake a planning code and zoning audit in order to understand the regulatory and legislative underpinnings of our City’s infrastructure, and then move to recommend necessary changes in planning codes and zoning laws. Many resources are available to help with this time consuming, but very important activity.

<http://www.uctc.net/papers/783.pdf>

<http://www.smartgrowthamerica.org/state-local-leaders/leadership-institute/implementation-tools/code-and-zoning-audit/>

Appendix 6 includes more resources

FUNDING SOURCES

Many government agencies, including the Federal Transportation Commission and MODOT, provide money for pedestrian and bicycle facilities and programs. Also, many non-profits are involved in this field and have grant opportunities. The Plan contains a list of resources starting on page 50.

PROGRAMMING

Everyone feels safer, and is safer, when people are walking and biking in their neighborhoods and along their streets. By systematically creating a network of biking and walking streets and trails, University City will increase both the safety and health of our residents. However, creation of such a City environment is a little like the chicken and the egg question: what comes first; a lot of walkers and bikers, or the environment that encourages such activities?

An educational component is required, and there are many ways in which the City, school system, and law enforcement can help create a safer environment more conducive to both walking and biking. The Plan contains numerous specific suggestions, along with resources, beginning on page 80.

LOOKING TO THE FUTURE

Our Task Force recommends that a staff person from the Public Works and Parks Department be designated, and publicly recognized, as a Bicycle and Pedestrian Coordinator. This will result in the flow of relevant information to the same staff person, and give residents a specific person to contact with pedestrian and biking concerns.

We also recommend that the City Council make some provisions for a continuing, organized citizen involvement with The Bicycle and Pedestrian Plan, as well as other walking and biking initiatives in our City. We recommend that the Council form a Walk/Bike Commission. This commission would: continue to work with the University City School System on their Safe

Routes to School Program; begin safety and educational outreach programs coordinated with the City Police and Fire Departments; participate, with City staff, in public meetings required as the Bicycle and Pedestrian Plan is implemented; advocate for the continued implementation of the Centennial Greenway; and participate in a planning code and zoning audit.

We are asking the City Council to position University City as a favored destination for walkers and bicyclists in the region. Cyclists will ride into the City on our connected bike paths to attend events, shop, and eat. New residents seeking safe walking and biking facilities for themselves and their families will select University City for their home. Children will walk and bike to school in safety and better health. New businesses will be drawn to a community with a vibrant street life and high foot traffic.

ACKNOWLEDGEMENTS

The Task Force could not have fulfilled our charge without the support and knowledge of City staff. Lynnette Hicks, Senior Public Works Program Manager attended every Task Force meeting, educated us on City policy, laws, and requirements, and assisted us in innumerable ways. Her cheerful and organized presence made a daunting task possible.

We also received invaluable assistance from: Angelica Gutierrez, Project Manager I; Sinan Alpaslan, City Engineer/Assistant Public Works and Parks Director; and Andrea Riganti, Director, Community Development Department. These three employees attended relevant meetings as needed and assisted us at various times. Their knowledge was critical to our work.

Megan Fuhler, Project Manager II, prepared the grant that funded The Bicycle and Pedestrian Plan, and created the maps included in our report.

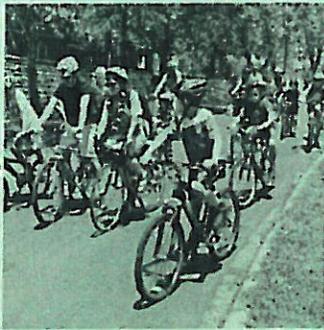
Several times, when we were bogged down in the process, we consulted either Lehman Walker, the City Manager, or Richard Wilson, the Director of Public Works and Parks Department. Both men readily returned phone calls and scheduled time to meet with us to answer our questions and help us move toward our goals.

Timothy Breihan, H3 Studio Project Manager, represented H3 during this project, and without his expertise our charge would not have been completed. Kevin Neill, the Bike Walk Planner at

Trailnet, attended most of our meetings, encouraged us every step of the way, and educated us about the regional aspects of our work.

Finally, we want to thank Mayor Welsch and the City Council for asking us to undertake this effort. It is gratifying to live in a city that welcomes and encourages citizen involvement.

APPENDIX



Appendix 1

Charge

Mayor's Task Force on University City's Bike & Walkability

October 4, 2010

In an effort to move University City towards being one of the most sustainable cities in the St. Louis metropolitan region and to make the streets as safe as possible for bicyclists and pedestrians, a Mayor's Task Force on University City's Bike & Walkability is being established.

This task force is being charged with reviewing best practices locally, nationally and internationally to determine how to make University City's streets safe for sustainable walking and biking, and how to move forward on making University City a "complete streets" community. To accomplish this task force will, among other actions of its choosing, do the following.

- Conduct a survey of streets in the city to determine how well they accommodate pedestrian and bike travel, in a safe manner, while streets are being utilized by other users.
- Become familiar with policies relating to foot and bike traffic held by other entities which control local streets, e.g. State of Missouri and St. Louis County.
- Communicate with surrounding municipalities to determine how the bikeable and walkable University City streets can/should connect with streets in their communities.
- Produce a report of actions University City should take to make local streets more pedestrian and bike friendly, including suggestions on how law enforcement can and should be involved and ideas where needed implementation funds may be found.
- Research the "complete streets" approach to designing city streets and make recommendations to City Council on whether or not the city should move to adopt a Complete Streets ordinance.
- Offer suggestions/ideas on how to educate residents about pedestrian and bike safety, and encourage residents to walk and bike more often.
- Recommend to Council how University City could/should connect to national and international efforts, e.g. International Charter for Walking, etc.

The Task Force on University City's Bike and Walkability will establish guidelines for its work schedule and routines. However, the final report to the Council should be received by the Council no later than February 1, 2012 so that the recommendations contained therein can be considered by the Council as it prepares the budget for Fiscal Year 2013.

The Mayor has requested that each member of the City Council appoint two constituents to this Task Force, preferably from the ward which they represent in an effort to maintain the geographic diversity of the group. The Mayor will appoint one resident from each ward; and a Mayoral liaison to the task force.

The Mayoral liaison to the Task Force on University City's Bike and Walkability will preside at the meetings of the group until such time as the task force members determine how to organize their work in a productive manner, at which time the members will decide on its leadership structure and consider all Task Force members for the leadership positions established.

Members of the Taskforce

Voting Members

Sarah Hanly, Co-Chairperson

Margaret Johnson, Co-Chairperson

Carol Wofsey, Recorder

Jerry Breakstone

Linda Fried

Arno Perlow

Jane Schaefer

Beverly Jane Spudich

John Watson

Non-Voting Members

Lynette Hicks, Department of Public Works and Parks, University City

Karl Scheidt, University City School District

Appendix 2

The Death of the Fringe Suburb

New York Times, November 26, 2011

By CHRISTOPHER B. LEINBERGER

Washington

DRIVE through any number of outer-ring suburbs in America, and you'll see boarded-up and vacant strip malls, surrounded by vast seas of empty parking spaces. These forlorn monuments to the real estate crash are not going to come back to life, even when the economy recovers. And that's because the demand for the housing that once supported commercial activity in many exurbs isn't coming back, either.

By now, nearly five years after the housing crash, most Americans understand that a mortgage meltdown was the catalyst for the Great Recession, facilitated by underregulation of finance and reckless risk-taking. Less understood is the divergence between center cities and inner-ring suburbs on one hand, and the suburban fringe on the other.

It was predominantly the collapse of the car-dependent suburban fringe that caused the mortgage collapse.

In the late 1990s, high-end outer suburbs contained most of the expensive housing in the United States, as measured by price per square foot, according to data I analyzed from the Zillow real estate database. Today, the most expensive housing is in the high-density, pedestrian-friendly neighborhoods of the center city and inner suburbs. Some of the most expensive neighborhoods in their metropolitan areas are Capitol Hill in Seattle; Virginia Highland in Atlanta; German Village in Columbus, Ohio, and Logan Circle in Washington. Considered slums as recently as 30 years ago, they have been transformed by gentrification.

Simply put, there has been a profound structural shift — a reversal of what took place in the 1950s, when drivable suburbs boomed and flourished as center cities emptied and withered.

The shift is durable and lasting because of a major demographic event: the convergence of the two largest generations in American history, the baby boomers (born between 1946 and 1964) and the millennials (born between 1979 and 1996), which today represent half of the total population.

Many boomers are now empty nesters and approaching retirement. Generally this means that they will downsize their housing in the near future. Boomers want to live in a walkable urban downtown, a suburban town center or a small town, according to a recent survey by the National Association of Realtors.

The millennials are just now beginning to emerge from the nest — at least those who can afford to live on their own. This coming-of-age cohort also favors urban downtowns and suburban town centers — for lifestyle reasons and the convenience of not having to own cars.

Over all, only 12 percent of future homebuyers want the drivable suburban-fringe houses that are in such oversupply, according to the Realtors survey. This lack of demand all but guarantees continued price declines. Boomers selling their fringe housing will only add to the glut. Nothing the federal government can do will reverse this.

Many drivable-fringe house prices are now below replacement value, meaning the land under the house has no value and the sticks and bricks are worth less than they would cost to replace. This means there is no financial incentive to maintain the house; the next dollar invested will not be recouped upon resale. Many of these houses will be converted to rentals, which are rarely as well maintained as owner-occupied housing. Add the fact that the houses were built with cheap materials and methods to begin with, and you see why many fringe suburbs are turning into slums, with abandoned housing and rising crime.

The good news is that there is great pent-up demand for walkable, centrally located neighborhoods in cities like Portland, Denver, Philadelphia and Chattanooga, Tenn. The transformation of suburbia can be seen in places like Arlington County, Va., Bellevue, Wash., and Pasadena, Calif., where strip malls have been bulldozed and replaced by higher-density mixed-use developments with good transit connections.

Reinvesting in America's built environment — which makes up a third of the country's assets — and reviving the construction trades are vital for lifting our economic growth rate. (Disclosure: I am the president of Locus, a coalition of real estate developers and investors and a project of Smart Growth America, which supports walkable neighborhoods and transit-oriented development.)

Some critics will say that investment in the built environment risks repeating the mistake that caused the recession in the first place. That reasoning is as faulty as saying that technology should have been neglected after the dot-com bust, which precipitated the 2001 recession.

The cities and inner-ring suburbs that will be the foundation of the recovery require significant investment at a time of government retrenchment. Bus and light-rail systems, bike lanes and pedestrian improvements — what traffic engineers dismissively call “alternative transportation” — are vital. So is the repair of infrastructure like roads and bridges. Places as diverse as Los Angeles, Phoenix, Salt Lake City, Dallas, Charlotte, Denver and Washington have recently voted to pay for “alternative transportation,” mindful of the dividends to be reaped. As Congress works to reauthorize highway and transit legislation, it must give metropolitan areas greater flexibility for financing transportation, rather than mandating that the vast bulk of the money can be used only for roads.

For too long, we over-invested in the wrong places. Those retail centers and subdivisions will never be worth what they cost to build. We have to stop throwing good money after bad. It is time to instead build what the market wants: mixed-income, walkable cities and suburbs that will support the knowledge economy, promote environmental sustainability and create jobs.

Christopher B. Leinberger is a senior fellow at the Brookings Institution and professor of practice in urban and regional planning at the University of Michigan.

May 25, 2012

Now Coveted: A Walkable, Convenient Place

By CHRISTOPHER B. LEINBERGER

WALKING isn't just good for you. It has become an indicator of your socioeconomic status.

Until the 1990s, exclusive suburban homes that were accessible only by car cost more, per square foot, than other kinds of American housing. Now, however, these suburbs have become overbuilt, and housing values have fallen. Today, the most valuable real estate lies in walkable urban locations. Many of these now pricey places were slums just 30 years ago.

Mariela Alfonzo and I just released a Brookings Institution study that measures values of commercial and residential real estate in the Washington, D.C., metropolitan area, which includes the surrounding suburbs in Virginia and Maryland. Our research shows that real estate values increase as neighborhoods became more walkable, where everyday needs, including working, can be met by walking, transit or biking. There is a five-step "ladder" of walkability, from least to most walkable. On average, each step up the walkability ladder adds \$9 per square foot to annual office rents, \$7 per square foot to retail rents, more than \$300 per month to apartment rents and nearly \$82 per square foot to home values.

As a neighborhood moves up each step of the five-step walkability ladder, the average household income of those who live there increases some \$10,000. People who live in more walkable places tend to earn more, but they also tend to pay a higher percentage of their income for housing.

Although we have not studied all urban areas to the same degree, these findings appear to apply to much of the rest of the country. In metropolitan Seattle in 1996, the suburban Redmond area, home to Microsoft, had the same price per square foot as Capitol Hill, a walkable area adjacent to downtown, based on data from Zillow. Today, Capitol Hill is valued nearly 50 percent above Redmond.

In Columbus, Ohio, the highest housing values recorded by Zillow in 1996 were in the suburb of Worthington, where prices were 135 percent higher than in the struggling neighborhood of Short North, adjacent to the city's center. Today, Short North housing values are 30 percent higher than those of Worthington, and downtown Columbus has the highest housing values in that metropolitan area.

In the Denver area, Highlands Ranch, an upscale, master-planned community 20 miles south of downtown, had housing in 1996 that cost on average 21 percent more than housing in Highlands, a troubled neighborhood adjacent to downtown Denver. Today, Highlands has a 67 percent price premium over Highlands Ranch.

People are clearly willing to pay more for homes that allow them to walk rather than drive. Biking is part of the picture, too. Biking and walking are part of a "complete streets" strategy that public rights of way should be for all of society — not just cars.

The rise in bike-sharing systems in Minneapolis, metropolitan Washington, and soon New York City makes it possible to imagine a future in which a third of a city's population gets around primarily by bicycle. The popular Web site Walk Score has just added Bike Score to let people know which neighborhoods are most bikable.

Demand for walkable urban space extends beyond city centers to suburbs; in metropolitan Washington, more than half of the walkable places are in the suburbs, like Reston Town Center, 22 miles from downtown Washington; Ballston, in Arlington County; and Silver Spring, in suburban Maryland. Residents can easily get to grocery stores, cafes, libraries and work by rail transit, biking and walking.

Why is there an urbanization of the suburbs? Some baby boomers want to sell their large suburban houses and move to a walkable urban place but stay close to friends and family. Young families want the advantages of walkable urban life but also high-quality suburban schools. This trend is about both the revitalization of center cities and the urbanization of the suburbs.

To address the affordability challenge, a sensible strategy would include changes like zoning that allows homes with units in the back or over the garage. But the long-term solution is encouraging the building of more walkable places, which will reduce the price premiums by creating more supply.

(Disclosure: I am the president of Locus, a coalition of real estate developers and investors, and a project of Smart Growth America, which supports walkable neighborhoods and transit-oriented development.)

Different infrastructure needs to be built, including rail transit and paths for walking and biking. Some research has shown that walkable urban infrastructure is substantially cheaper on a usable square foot basis than spread-out drivable suburban infrastructure; the infrastructure is used much more extensively in a small area, resulting in much lower costs per usable square foot.

It's important that developers and their investors learn how to build places that integrate many different uses within walking distance. Building walkable urban places is more complex and riskier than following decades-long patterns of suburban construction. But the market gets what it wants, and the market signals are flashing pretty brightly: build more walkable, and bikable, places.

A professor at the George Washington University School of Business and a senior fellow at the Brookings Institution.

Appendix 3

Complete Streets Legislation

AN ORDINANCE OF THE CITY OF UNIVERSITY CITY, ADOPTING THE COMPLETE/LIVABLE STREETS POLICY AS PROVIDED HEREIN.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF UNIVERSITY CITY, MISSOURI, AS FOLLOWS:

Section 1. Purpose

- (1) The name of this policy shall be the Complete/Livable Streets Policy
- (2) The purpose of this policy is to set forth guiding principles and practices to be considered in all transportation projects to encourage walking, bicycling and other non-motorized forms of transit, in addition to normal motorized transit, including personal, freight, and public transit vehicles. All uses must be designed to allow safe operations for all users regardless of age or ability.
- (3) The ultimate goal of this policy is the creation of an interconnected network of “Complete Streets”, as defined herein, that balances the needs of all users in pleasant and appealing ways in order to achieve maximum functionality and use.

Section 2. Application and scope

- (1) While this policy does not require certain designs or construction standards and does not require specific improvements, this policy does require that the city consider complete street elements in the design, construction and maintenance of public transportation projects, improvements and facilities. This policy further requires consideration of complete street elements by the Plan Commission, Traffic Commission, Green Practices Commission, and Parks Commission. All developers and builders shall comply with plans approved in accord with this ordinance.
- (2) This policy is intended to cover all development and redevelopment in the public domain within University City. This includes all public transportation projects such as, but not limited to, new road construction, reconstruction retrofits, upgrades, resurfacing, ADA compliant construction, and rehabilitation. Routine maintenance may be excluded from these requirements by the city on a case-by-case basis. This also includes privately built roads intended for public use. As such, compliance with these principles may be factored into decisions related to the city's participation in private projects and whether the city will accept possession of privately built roads constructed after the passage of this ordinance.
- (3) The city understands that special considerations and designs are necessary to accommodate older, adults or disabled citizens and will work to ensure that those needs are met in all complete street designs. All public transportation projects involving complete street elements shall be ADA compliant to help meet those special considerations.

(4) This Ordinance applies to all new and retrofit projects, including design, planning, maintenance and operations for all rights of way.

Section 3. Guiding principles and practices

(1) "Complete Street" defined. A complete street is designed to be a transportation corridor for all users: pedestrians, cyclists, wheel chair users, transit users, and motorists. Complete streets are designed and operated to enable safe continuous travel networks for all users. Pedestrians, bicyclists, wheel chair users, transit users, motorists and people of all ages and abilities are able to safely move from destination to destination along and across a network of complete streets. Transportation improvements, facilities and amenities that may contribute to complete streets and that are considered as elements of a "complete street" include: street and sidewalk lighting; pedestrian and bicycle safety improvements; access improvements, including at a minimum compliance with the Americans with Disabilities Act; public transit facilities accommodation including, but not limited, to pedestrian access improvement to transit stops and stations; street trees and landscaping; drainage; and street amenities.

(2) The city will strive, where practicable and economically feasible, to create a comprehensive and connected transportation network in a manner consistent with, and supportive of, the surrounding community by incorporating complete streets design elements into all public transportation projects.

(3) The city will incorporate complete streets principles into all public strategic plans. The principles, where practicable, shall be incorporated into other public works plans, manuals, rules, regulations, operational standards, and programs as appropriate and directed by the City Manager. The principles shall be incorporated into appropriate materials and resources no later than two years after the adoption of this ordinance.

(4) It shall be a goal of the city to foster partnerships with the State of Missouri, St. Louis County Metro, neighboring communities, and University City Business Districts in consideration of functional facilities and accommodations in furtherance of the city's complete streets policy and the continuation of such facilities and accommodations beyond the city's borders.

(5) The city recognizes that complete streets may be achieved through single elements incorporated into a particular project or incrementally through a series of smaller improvements or maintenance activities over time. The city will draw upon possible funding sources to plan and implement this policy and shall investigate grants that may be available to make complete street elements more economically feasible.

Section 4. Study/analysis to be undertaken as part of public transportation project

(1) During the planning phase of any major public improvement project, the city shall conduct a study and analysis incorporating this ordinance into the public transportation project.

(2) The study and analysis shall include cost estimates, whether the elements of Complete Streets could be incorporated in a safe manner, the degree that such improvements or facilities may be utilized, the benefit of such improvements or facilities to other public transportation

improvements, whether additional property is required, physical or area requirements or limitations, and any other factors deemed relevant.

(3) Such study and analysis shall be considered in the design and planning of the public transportation project. The city shall consider the incorporation of complete streets elements in each public transportation project to the extent that such is physically feasible.

Section 5. Administration

(1) The Public Works and Parks Director shall be responsible for the overall implementation and execution of the complete streets principles and practices.

(2) The Public Works and Parks Director shall view all City improvements as opportunities to create a comprehensive, integrated, connected transportation network that allows users to choose among different modes of transportation.

(3) The Public Works and Parks Director shall view all City improvements as opportunities to improve safety, access, and mobility for all travelers along and across a network of complete streets.

(4) The Public Works and Parks Director shall recognize bicycle, pedestrian, wheelchair and transit modes as integral elements of the City's transportation system.

(5) The Public Works and Parks Director shall collaborate with appropriate staff to adopt a complete streets checklist for use on all public transportation projects.

(6) When available, appropriate, and monetarily feasible, the city shall support staff professional development and training on non-motorized transportation issues through attending conferences, classes, seminars and workshops.

(7) The Public Works and Parks Director shall pledge to work with other agencies and organizations to promote complete streets and ensure connectivity with contiguous municipalities.

Section 6. Effective Date

This ordinance shall become in full force and effect from and after the date of passage.

Useful Web sites

- <http://www.livablestreets.missouri.edu>
- <http://www.completestreets.org/>
- <http://www.pednet.org/>
- <http://mobikefed.org/2011/04/complete-streets-missouri-policies-named-among-top-nation>

Appendix 4

Pedestrian Safety

Useful Websites

<http://www.ada.gov/pcatoolkit/chap6toolkit.htm>

http://www.gocolumbiamo.com/Planning/Documents/columbia_report_burden.pdf;

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_562.pdf;

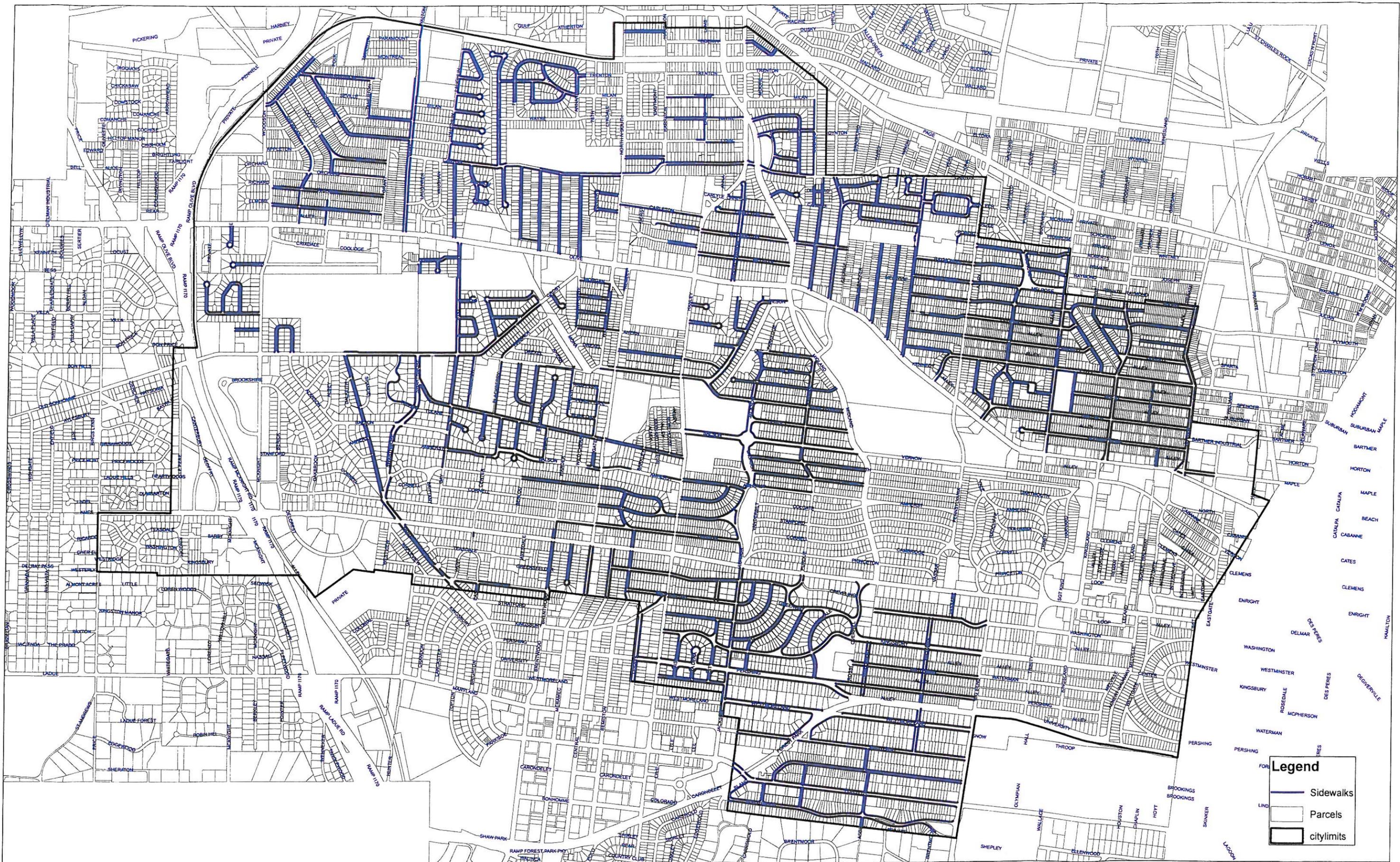
http://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/

Signal Survey and Data

Intersection		Direction	Duration and Comments	
Olive	Skinker	N/S	75s	
Olive	Kingsland	N/S	35s	
Olive	Kingsland	E/W	20s	
Olive	Ferguson	N/S	4s, no countdown	
Olive	Ferguson	E/W	25s	
Olive	Pennsylvania	N/S	35s	
Olive	Pennsylvania	E/W	48s	Peds signal not working
Olive	Midland	N/S	30s	
Olive	Midland	E/W	30s	
Olive	Hanley	N/S	30s	
Olive	Hanley	E/W	30s	
Olive	North and South	N/S	30s	
Olive	North and South	E/W	20s	
Olive	81st	N/S	20s	
Olive	81st	E/W	20s	
Olive	82nd	N/S	25s	
Olive	82nd	E/W	20s	
Olive	McKnight/Warson	N/S	30s	
Olive	McKnight/Warson	E/W	30s	
Olive	I-170	E/W	no signal	20s yellow warning signal. Cars do not yield
Delmar	Westgate	N/S	5s walk signal, 9s countdown, 14s total; pedestrian activated	
Delmar	Westgate	E/W	Variable, 9s countdown; automatic	

Delmar	Mehlville	N/S	8s walk signal, 10s countdown, 18s total; pedestrian activated	22 s wait for walk signal after pressing walk button. No ADA directional ramp on SW corner. Peds button far from intersection.
Delmar	Leland	N/S	30s walk signal, 12s countdown, 42 total; pedestrian activated	
Delmar	Leland	E/W	22s walk signal, 12s countdown, 44s total; automatic	
Delmar	Kingsland	N/S	24s walk signal, 17s countdown, 41s total; pedestrian activated	
Delmar	Kingsland	E/W	33s walk signal, 19s countdaown, 52s total; automatic	
Delmar	Sgt Mike King	N/S	7s walk signal, 13s countdown, 20s total; pedestrian activated	
Delmar	Sgt Mike King	E/W	10s periodic "no walk" w countdown during green light; automatic	Green light is shorter (16s) than pedestrian activated green light. County appears to be in process of realigning position of cross walk. No directional ramp on SE corner
Delmar	Big Bend	N/S	8s walk signal, 14s countdown, 22s total; pedestrian activated	
Delmar	Big Bend	E/W	28s walk signal, 12s countdown, 40s total; automatic	
Delmar	Midland	N/S	9s walk signal, 10s countdown, 19s total; pedestrian activated	
Delmar	Midland	E/W	19s countdown with long walk signal; automatic	
Delmar	Jackson	N/S	7s walk signal, 11s countdown, 18s total; pedestrian activated	
Delmar	Jackson	E/W	automatic signal when traffic light changes; automatic	
Delmar	Hanley	N/S	10s walk signal, 14s countdown, 24s total; pedestrian activated	Utility/signal posts obstruct sidewalk
Delmar	Hanley	E/W	28s walk signal, 14s countdown, 32s total; automatic	Utility/signal posts obstruct sidewalk
Delmar	North and South	N/S	7s walk signal, 10s countdown, 17s total; pedestrian activated	Utility/signal posts obstruct sidewalk
Delmar	North and South	E/W	8s walk signal, 12s countdown, 20s total; automatic	Utility/signal posts obstruct sidewalk

Delmar	Old Bonhomme	N/S	8s walk signal, 12s countdown, 20s total; pedestrian activated	dangerous slip lane
Delmar	Old Bonhomme	E/W	8s walk signal, 12s countdown, 20s total; automatic	dangerous slip lane
Delmar	Delcrest	N/S	8s walk signal, 12s countdown, 20s total	
Delmar	McKnight	N/S	6s walk signal; no countdown; pedestrian activated	
Delmar	McKnight	E/W	8s walk signal, 12s countdown, 20s total; automatic	
Delmar	I-170	N/S	~5s, no countdown; pedestrian activated	dangerous slip lane
Delmar	I-170	E/W	automatic signal when traffic light changes	



Department of Public Works and Parks
 6801 Delmar Boulevard University City, Missouri 63130
 Phone (314) 505-8550 Fax (314) 862-2634
 Source: St. Louis County Department of Planning
 Missouri Department of Transportation
 St. Louis County Highway Division, METRO St. Louis
 GIS Datasets 2009 | Map Created Dec 1, 2011

UNIVERSITY CITY BIKE AND WALKABILITY MAP





Department of Public Works and Parks
 6801 Delmar Boulevard, University City, Missouri 63130
 Phone (314) 505-8560 Fax (314) 862-0694
 Source: St. Louis County Department of Planning,
 Missouri Department of Transportation,
 St. Louis County Highway Division, METRO St. Louis
 GIS Datasets 2009 | Map Created Dec 1, 2011

UNIVERSITY CITY BIKE AND WALKABILITY MAP



Appendix 5

Bicycle Safety

- <http://www.ite.org/traffic/tcstate.asp>
- http://www.sf-planning.org/ftp/BetterStreets/docs/BSP_R2_Boards_COMBINED.pdf
- <http://www.walkinginfo.org/videos/pubdetail.cfm?picid=88>

In-street Parking

- <http://www.portlandonline.com/transportation/bikeparking>

Appendix 6

Building a Livable, Sustainable Community

- <http://www.smartgrowthamerica.org/> (This organization contains material to plan and implement a planning and zoning audit.)
- http://www.sf-planning.org/ftp/BetterStreets/docs/BSP_R2_Boards_COMBINED.pdf
- <http://www.ibike.org/engineering/landuse.htm>
- <http://www.vtpi.org/shoup.pdf>
- <http://www.uctc.net/papers/783.pdf><http://www.smartgrowthamerica.org/state-local-leaders/leadership-institute/implementation-tools/code-and-zoning-audit/>
- <http://www.HousingandCommunitySolutions.org>