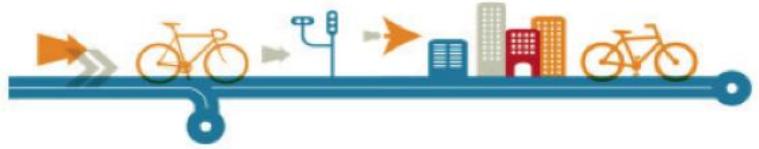




# BICYCLE FRIENDLY COMMUNITY FEEDBACK



## KNOXVILLE, TN

*Fall 2014*

Our Bicycle Friendly Community review panel was very pleased to see the current efforts and dedication to make Knoxville a safe, comfortable and convenient place to bicycle.

Below, reviewers provided recommendations to help you further promote bicycling in Knoxville. **Key recommendations are highlighted in bold.**

We strongly encourage you to use this feedback to build on your momentum and improve your community for bicyclists.

There may also be initiatives, programs, and facilities that are not mentioned here that would benefit your bicycling culture, so please continue to try new things to increase your ridership, safety, and awareness.

The cost of bicycle facilities and possible funding options are discussed on the last page of this report.

## RECOMMENDATIONS

### Engineering

Develop a design manual that ensures the safe and appropriate accommodation of bicyclists in every new road project or adopt the NACTO Urban Bikeway Design Guide.

Develop and implement streetscape design guidelines that foster a pleasant and

comfortable environment for pedestrians and cyclists. Beautiful streetscaping has also shown to increase community livability and pride, reduce crime and increase property values.

Ensure good connectivity of your street network by adopting connectivity policies or standards. A well connected street network is associated with more walking, biking, and transit use due to greater directness of travel and more route choice options.

Continue to work with Tennessee Dept of Transportation to implement Complete Streets with their projects.

Regulations that require bike parking for new developments can secure private funding. See this bicycle parking ordinances for guidance.

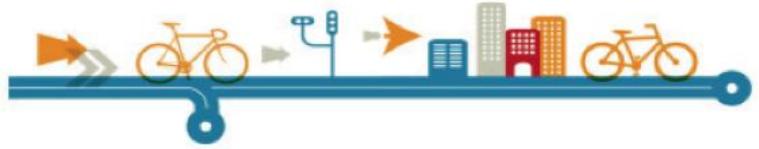
Pass an ordinance that would require larger employers to provide shower and locker facilities.

**Increase the amount of high quality bicycle parking throughout the community. Ensure that people arriving by bicycle have a secure and legal place to lock their bikes at popular destinations.**

Promote active transportation by reducing traffic speeds. Lower the speed limit to a maximum of 25 mph especially downtown, around schools and shopping centers, and in neighborhoods. Use traffic calming measures and low speed design principles to achieve higher compliance rates. Speed has been identified as a key risk factor in road traffic injuries, influencing both the risk of a road traffic crash as well as the severity of the



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injuries that result from crashes. For instance, pedestrians and cyclists have a 90% chance of survival if hit by a car travelling at a speed of 20 mph or below, but less than a 50% chance of surviving an impact of 30 mph or above. Studies also generally report a positive association between traffic safety (perceived and/or measured) and walking and cycling, particularly among women.

**Continue to expand the bike network and to increase network connectivity** through the use of different types of bicycle facilities. Note that shared lane markings should be used sparingly and only on low speed roads. On-street improvements coupled with the expansion of the off-street system will encourage more people to cycle and will improve safety. **Ensure smooth transitions for bicyclists between the local and regional trail network, and the street network, and connect bike facilities to transit stops.** These improvements will also increase the effectiveness of encouragement efforts by providing a broader range of facility choices for users of various abilities and comfort levels.

All new and existing bicycle facilities should conform to current best practices and guidelines.

Arterial roads are the backbone of your transportation network and often there are no safer alternative routes for people on bikes to access stores and places of employment. **Continue to add bike facilities along these roads. On roads where automobile speeds exceed 35 mph, it is recommended to provide protected bicycle infrastructure, such as cycle**

**tracks, buffered bike lanes or parallel 10ft wide shared-use paths.** Especially Cumberland Ave is in need of protected bike lanes near the University Commons development, the 3<sup>rd</sup> Creek Greenway, the Fort Sanders neighborhood and the university campus.

Develop a system of bicycle boulevards, utilizing quiet neighborhood streets, that creates an attractive, convenient, and comfortable cycling environment welcoming to cyclists of all ages and skill levels. Use the Bicycle Boulevards section of the NACTO Urban Bikeway Design Guide for design guidelines. See Bicycle Boulevards in action.

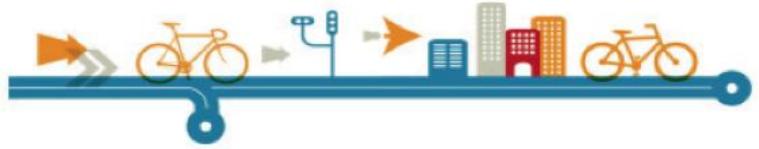
**Continue to make intersections safer and more comfortable for cyclists.** Include elements such as color, signage, medians, signal detection, and pavement markings. The level of treatment required for bicyclists at an intersection will depend on the bicycle facility type used, whether bicycle facilities are intersecting, the adjacent street function and land use. See the NACTO intersection design guidelines (preferred) and the 2012 AASHTO Guide for the Development of Bicycle Facilities for recommended intersection treatments.

Provide safety amenities such as adequate path lighting to allow for safer bike commuting before dawn and after dusk.

Redesign the railroad crossing on Neyland Drive to make it safer for cyclists trying to cross the tracks.



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## Education

**Bicycle-safety education should be a routine part of primary and secondary education, and schools and the surrounding neighborhoods should be particularly safe and convenient for biking and walking.** Work with your local bicycle groups or interested parents to expand the Safe Routes to School program to all schools. Click [here](#) for an exemplary bicycle safety curriculum designed for fourth and fifth grade students. For more information on Safe Routes to School, see the [National Highway Traffic Safety Administration's Safe Routes To School Toolkit](#) or visit [www.saferoutesinfo.org](http://www.saferoutesinfo.org).

It is essential to make both [motorists and cyclists](#) aware of their rights and responsibilities on the road. **Continue to expand your public education campaign promoting the share the road message.** Take advantage of your local bicycle groups for content development and staffing.

**Offer bicycling skills training opportunities for adults more frequently.** Increase demand by gearing classes to special audiences like women (offer child care), beginners, young professionals (networking event), Spanish-speakers etc. There are options from [short videos](#) and 1-2 hour courses to more in-depth training incorporating in-classroom and on-bike instruction. Other education materials, such as the League [Quick Guide](#), offer the opportunity to share bike education in an easily accessible format. For more information visit: <http://bikeleague.org/ridesmart>.

## Encouragement

**Expand encouragement efforts during Bike Month** in partnership with local bicycle advocacy groups. Proclaim May (or a month with mild and dry weather) as Bike Month. Host, sponsor and encourage more bicycle-themed community events, campaigns and programs. Increase your efforts on Bike to Work Day and Bike to School Day. Ensure to widely advertise all bicycle-themed community events and programs. For ideas and more information, visit <http://bikeleague.org/bikemonth>.

Consider offering a 'Ciclovía' or [Open Streets](#) type event, closing off a major corridor to auto traffic and offering the space to cyclists and pedestrians. [See Open Streets in action](#).

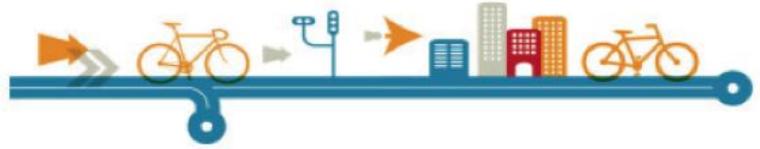
Encourage local businesses to provide discounts for customers arriving by bicycle or promote existing [bicycle discount programs](#).

Launch a bike share system that is open to the public. Bike sharing is a convenient, cost effective, and healthy way of encouraging locals and visitors to make short trips by bike and to bridge the "last mile" between public transit and destinations. See what is being done across the country at <http://nacto.org/bikeshare/>

**Encourage more local businesses, agencies, and organizations to promote cycling to their employees and customers and to seek recognition through the Bicycle Friendly Business program.** Businesses will profit from a [healthier, happier and more productive workforce](#) while the community will benefit from less congestion,



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better air quality, increased amenities and new destinations for cyclists, new and powerful partners in advocating for bike infrastructure and programs, and business-sponsored public bike events or classes. Your community's government should be the model employer for local businesses, and your chamber of commerce or local business association can help promote the program and its benefits. The League offers many tools to help promote the Bicycle Friendly Business program in your community.

## **Encourage the University of Tennessee to promote cycling to students, staff, and faculty and to seek recognition through the Bicycle Friendly University program.**

Many colleges and universities have embraced the growing enthusiasm for more bicycle-friendly campuses by incorporating bike share programs, bike co-ops, bicycling education classes and policies to promote bicycling as a preferred means of transportation. The community will benefit as well: Communities near BFUs have a higher number of regular bicyclists (as many students bike to campus, shops and restaurants), less congestion around campus, safer streets, and university-hosted public bicycle events, programs, and classes. The League offers many tools to help promote the Bicycle Friendly University program in your community.

## **Enforcement**

**Ensure that police officers report cyclist crash data and potential hazards to the public works department, traffic engineers and transportation planners to**

**timely identify sites in need of safety improvements for cyclists.**

**Pass additional ordinances that protect cyclists**, e.g. implement specific penalties for motorists for failing to yield to a cyclist when turning, ban cell phone use while driving, and make it illegal to harass a cyclist. Ensure that local law enforcement received training on any new bicycle-related laws.

## **Evaluation & Planning**

**Appoint an official Bicycle Advisory Committee (BAC) to create a systematic method for ongoing citizen input into the development of important policies, plans, and projects.** BACs should be involved in developing relevant policy and planning documents, setting priorities, reviewing annual bicycle program work plans, and reviewing major public and private projects. Ensure that the members of the committee reflect the diversity and ability levels of cyclists in your community. See this guide to forming a Bicycle Advisory Committee.

Increase amount of dedicated funding for bicycle infrastructure.

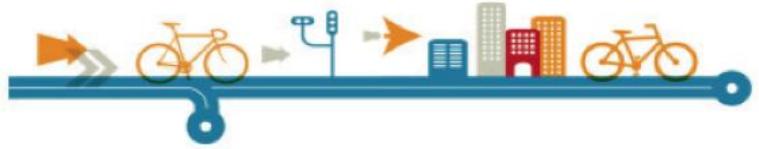
Ensure that your bicycle counts capture the gender of cyclists.

Adopt a target level of bicycle use (percent of trips) to be achieved within a specific timeframe, and ensure data collection necessary to monitor progress.

**Expand efforts to evaluate bicycle crash statistics and produce a specific plan to**



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**reduce the number of crashes in the community.** Available tools include [Intersection Magic](#) and the [Pedestrian and Bicyclist Crash Analysis Tool](#).

Establish a mechanism that ensures that bicycle facilities and programs are implemented in traditionally underserved neighborhoods.

## COSTS AND FUNDING OPTIONS

### Costs

Building a new roadway for motor vehicles can cost millions of dollars to construct, and many of the pedestrian and bicycle infrastructure facilities are extremely low-cost in comparison. Use [this database](#) to review up-to-date estimates of infrastructure costs of pedestrian and bicycle treatments from states and cities across the country.

### Federal Funding

Since 1992 bicycle and pedestrian projects have been eligible for federal transportation funding. To learn more about what federal funds are available for bicycle projects, use Advocacy Advance's interactive [Find it, Fund it tool](#) to search for eligible funding programs by bike/ped project type or review the same information as a PDF [here](#).

### State Funding

Biking and walking dollars aren't only available from the federal government. States can also have their own revenue sources that can be used to fund active transportation. Use [this report](#) and an [online tool](#) to explore your state's funding sources for bicycle and pedestrian improvements.

### Local Funding

Local governments can also create their own revenue streams to improve conditions for bicycling and walking. Three common approaches include: special bond issues, dedications of a portion of local sales taxes or a voter-approved sales tax increase, and use of the annual capital improvement budgets of Public Works and/or Parks agencies. Bicycle facility improvements can also be tagged on to larger projects to create economies of scale that results in reduced costs and reduced impacts to traffic, businesses, and residents. For example, if there is an existing road project, it is usually cheaper to add bike lanes and sidewalks to the project than to construct them separately. To learn more about public funding of bicycle infrastructure improvements, visit [pedbikeinfo.org/planning/funding\\_government.cfm](http://pedbikeinfo.org/planning/funding_government.cfm).

### Resources and Support

[Advocacy Advance](#) offers several tools, resources, and workshops to help advocates and agency staff maximize eligible funding programs.