

To Pima County and All Jurisdictions  
Departments of Transportation  
Mayors and Council Members

Pima County and the greater Tucson area are great places to ride a bike. Many people use their bicycle as a main mode of transportation, to commute to work, school, to access mass transit and visit friends. People also ride their bicycles for exercise and recreation. Bicycling programs improve community health, air quality and tourism.

The goal of the Tucson Pima County Bicycle Advisory Committee is to develop strategies to guide the Pima County region in creating safe and sustainable bicycling facilities. Safety is a major concern for bicyclists and is the majority reason to not bicycle. The following pages identify the changes needed for safe, convenient and attractive facilities to encourage safe bicycling.

Although we have tried to make this list of recommendations as complete as possible, we would hope that you would not rule out or overlook the possibilities of implementing innovative bicycle facilities. One example would be green pavement markings, which can be used for prioritizing bicycle lanes, positioning bicycles at intersections and to help the flow of traffic around streetcars. Considerations for bicycles should be placed ahead of and considered before design for any streetcar plans begin.

In working with design on bicycle paths separated from roadways, care should be taken to address multiple crossings of pathways, such as driveways, roads, intersections, and etcetera, keeping in mind that families with young children and other inexperienced riders use these facilities.

We recommend education and outreach to encourage motorists and cyclists of their rights and responsibilities for using the roadways. A Complete Streets plan and policy would be a goal for our community to work together in achieving and putting into action.

We thank you for your time and consideration in helping the greater Tucson area become an even better place to ride a bike.

## Recommended Standards for Roadways with Consideration for Bicyclists

- Traffic lanes be limited to 10-11' wide wherever necessary to accommodate on-road bike routes with striped shoulders ("on-road bike routes") to assist in keeping traffic speed reduced and allow adequate space for the on-road bicycle routes. Roadways with speed limits up to 45 miles per hour (mph) can be striped with 10' lanes and roadways with speed limits 50 mph and above can be striped with 11' lanes in order to accommodate on-road bike routes. It is recommended to lower speeds from 45/50 mph to 40/45 mph.
- Request the standard width for on-road bike routes in new construction should be 6' for a paved shoulder or 6' with vertical curb and no gutter pan. The standard for restriping projects should be 6' whenever feasible by narrowing traffic lane width as described above. For existing roadways that include gutter pans, the on-road bike route would be striped with 5' minimum asphalt width next to the gutter pan due to the hazardous seam that develops at the gutter line.
- On-road bike routes should be clearly marked with pavement legends (bicycle and rider with directional arrow) in 1/8-mile increments in urbanized areas and 1/4-mile intervals in suburban/rural areas, and at beginning of right turn only lanes as well as before and after every intersection. This is in order to make on-road bike routes more clearly visible to motorists and bicyclists, as well as reduce wrong-way bicycle riding which accounts for nearly 30 percent of bicycle crashes.
- Signs for bicyclists indicating "Wrong Way" should be placed on the back of Bike Route/Bike Lane signs for the purpose of keeping the bicycle traffic flow with vehicular traffic.
- On-road bike route white edge lines should be at least 8" wide to increase visibility and awareness of on-road bicycle routes; this has been used on Mountain Avenue with great results.
- "Colored lanes" be used where vehicular traffic crosses an on-road bike route such as at right turn lanes, drop lanes, merges and constricted conditions. Examples include Rillito Bridge over Dodge. Green pavement markings could also be implemented in new construction, such as bike boxes for westbound bicyclist from La Cholla traveling north to Magee. The Grant Road project, streetcar project are also considering the benefits of colored priority lane markings for bicycles.
- Manual on Uniform Traffic Control Devices (MUTCD) has recently approved sharrow markings that can be placed in 220' intervals on roadways with lanes too narrow to share with speed limits of 35 mph and less. Some examples of where these could be used are places with on-street parking, being placed 13' from the curb to allow bicyclists to avoid the door zone and motorist awareness of bicyclists in the roadway.
- On-road bike routes be reasonably continuous on major roadways in order to avoid confusion for vehicular and bicycle traffic.
- On-road bike routes be placed to the left side of right turn only lanes and add double dashed markings at start of change, per the MUTCD, which is standard practice for City of Tucson, Pima County and other local governments.

- Dual left turn lanes be restricted to protected-only left turns, where drivers may only make the left turn on designated left turn green arrows in order to **greatly** improve safety for pedestrians, bicyclists and drivers; reduced service can be outweighed by increased safety. Dual left turn lanes that have dashed “follow-thru” markings also add to safer turns.

- Corners at intersections be a 25’ or less radius in order to facilitate safer and slower vehicular traffic at intersection corners, to reduce the size of intersections and reduce pedestrian crossing distances; or consider analyzing 25-30-35’ radius in design.

- All neighborhood traffic circles on local streets will include street name signs and keep right reflective signs ONLY. The City of Seattle has installed over 2,000 traffic circles throughout the city using this method and has experienced an average crash reduction of over 94 percent at these intersections. Per the MUTCD, the least signage should be utilized for low-volume, low-speed intersections and by reducing traffic signs roadway users will better scan for other roadway users and will follow appropriate yielding behavior, as experienced in Seattle. Reduction in use of traffic signs will also reduce purchase, installation and maintenance costs for the jurisdictions. Excess signage would be removed by jurisdictions at traffic circles, i.e., existing stop or yield signs. Ask for outreach help to call for petitions in neighborhood.

- The construction Share the Road sign with bicycle symbol should be placed at ¼-mile intervals along roadways for roadway, on-street bike route, sidewalk construction, roadway maintenance activities and utility/telecommunications projects. The “Share the Road, Pass with Care, Bike Lane Ends” sign should no longer be used due to its excessive wording contrary to the MUTCD. This is also a confusing message given to drivers of vehicles which may lead them to believe that it is illegal for bicyclists to use that roadway due to the temporary closing of the bike lane.

Whenever feasible, on-street bike routes should be maintained through construction zones and/or suitable alternative routes may be signed but no mandatory for bicyclists to use.

During times of road repair and construction, all construction signs should be placed outside the paved shoulder and outside the on-road bike route. Practice of turning construction signs 90 degrees, or parallel to roadway, creating a “knife’s edge,” should cease.

- The “Bike Lane Ends” signs should be eliminated; or, if it remains required, a “Share the Road” sign should immediately follow. The addition of sharrows with “Share the Road” signs could be of benefit when used in these situations.

- In areas with diagonal parking, evaluation should be considered as to whether back in parking or head first parking is safer for bicyclists.

- Repaving, resealing and resurface projects should consider traffic flow and if a road diet would be warranted to add bicycle lanes.