



MIAMI VALLEY

BIKE PLAN UPDATE 2015



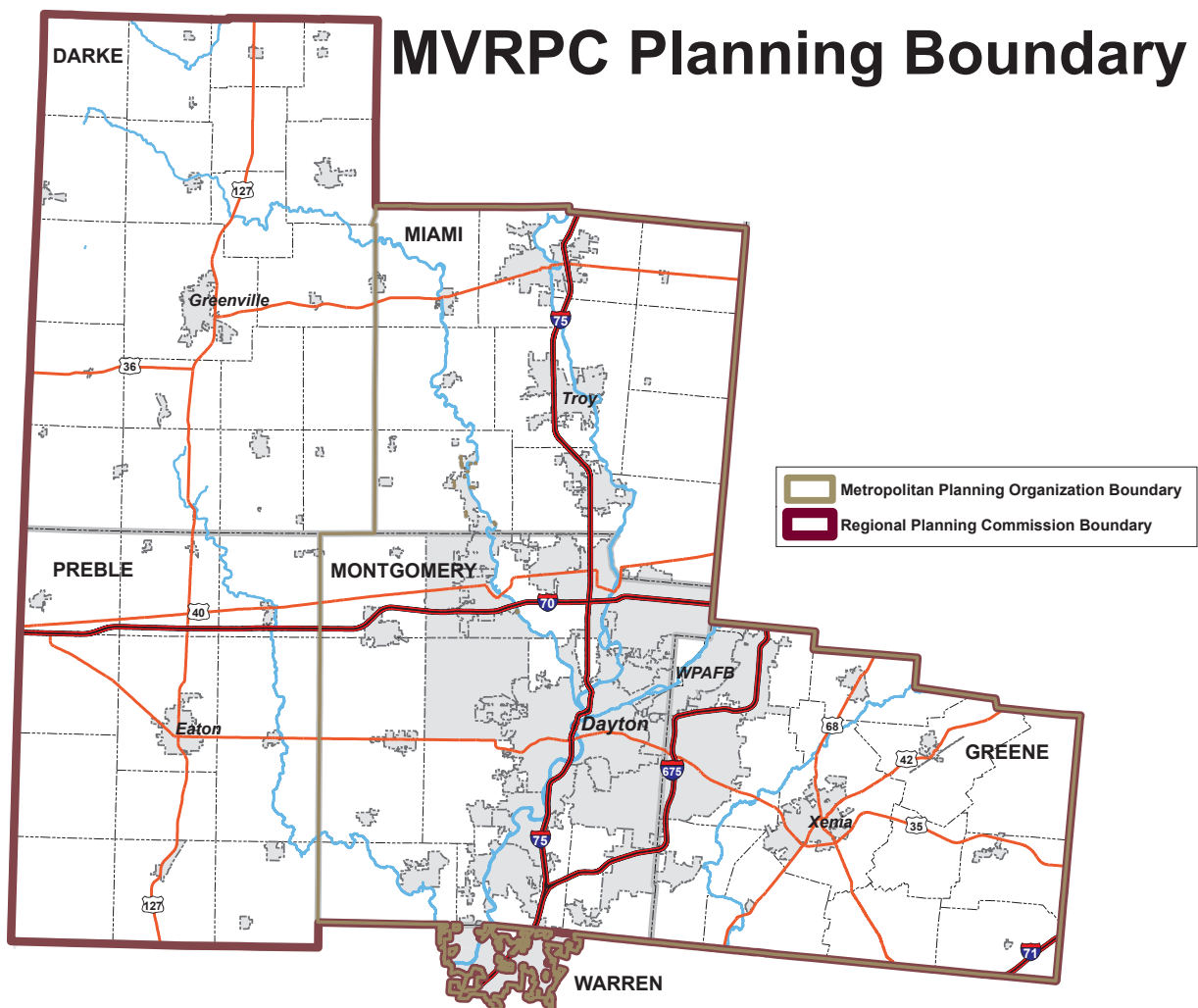
MIAMI VALLEY

Regional Planning Commission

NOVEMBER 2015

Shaping Our Region's Future Together

Established in 1964, the Miami Valley Regional Planning Commission promotes collaboration among communities, stakeholders, and residents to advance regional priorities. MVRPC is a forum and resource where the Board of Directors identifies priorities and develops public policy and collaborative strategies to improve the quality of life throughout the Miami Valley Region. MVRPC performs various regional planning activities, including air quality, water quality, transportation, land use, research, and GIS. As the designated Metropolitan Planning Organization (MPO), MVRPC is responsible for transportation planning in Greene, Miami, and Montgomery Counties and parts of northern Warren County. MVRPC's areawide water quality planning designation encompasses five (5) counties: Darke, Preble, plus the three MPO counties.



Bike Plan Update

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Buffered Bike Lanes, Kettering OH, **source: MVRPC**

Cycle Tracks, New York NY, **source: New York City Department of Transportation**

Intersection Treatments, Montreal Quebec, **source: Eric Robitaille, pedbikeimages.org, 2011**

Protected Bike Lanes, Santa Cruz CA, **source: Bill Daly, pedbikeimages.org, 2008**

Shared Use Paths, Beavercreek OH, **source: MVRPC**

Sharrow, Dayton OH, **source: MVRPC**

Shoulder Bikeway, **source: Michael Ronkin, National Complete Streets Coalition presentation at MVRPC, 2011**

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Long Range Transportation Plan Projects, **source: MVRPC**

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Bike Rodeo picture, Phoenix AZ, **source: Mike Cynecki, pedbikeimages.org, 2010**

Bicycles May Use Full Lane, **source: Manual of Uniform Traffic Control Devices, 2009**

Miamisburg OH Bike Friendly Business door sticker, **source: City of Miamisburg**

Miami Valley Ohio Bikeways Guide Map cover, **source: MVRPC**

Major Taylor Cycling Club of Dayton logo, **source: Major Taylor Cycling Club of Dayton**

Snapshot of FY 2014 CDC Funding Programs table, **source: Advocacy Advance**

Terms used in this document

Bike Facility Types

BICYCLE BOULEVARDS

An enhanced version of signed shared roadways, bicycle boulevards are developed through a combination of traffic calming measures and other streetscape treatments, and are intended to slow vehicle traffic while facilitating safe and convenient bicycle travel. Bike boulevards often are designed to offer a safer alternative to a busy parallel route. Appropriate treatments depend on several factors including traffic volumes, vehicle and bicycle circulation patterns, street connectivity, street width, physical constraints, and other parameters.



BIKE LANES

Designated exclusively for bicycle travel, bike lanes are separated from vehicle travel lanes with striping and also include pavement stencils. Standard bike lanes provide the lowest degree of separation from motor traffic. For higher volume roadways the enhanced facilities described in this list are preferred because of their greater degree of separation.

BUFFERED BIKE LANES

A buffered bicycle lane is a bicycle lane that is part of the roadway and is separated from motor vehicle traffic by a stripe painted on the road with an additional stripe painted beyond its outer edge (on one or both sides) that indicates the beginning of the motor vehicle lane or parking area. This adds a space buffer, but no physical barrier, between cars and bikes.

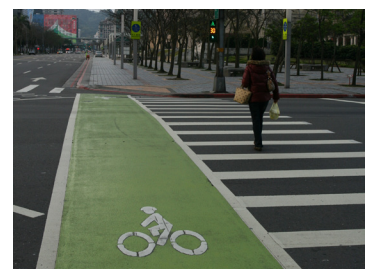


CYCLE TRACKS

A cycle track is an exclusive bicycle facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. Cycle tracks provide space that is intended to be exclusively or primarily for bicycles, and are separated from vehicle travel lanes, parking lanes and sidewalks by pavement markings or coloring, bollards, curbs/medians or a combination of these elements. Cycle tracks are distinguished from **PROTECTED BIKE LANES** by being two-way facilities constructed on one side of a one-way or two-way roadway.

INTERSECTION TREATMENTS

Intersection Treatments are critical to effective implementation of any of these facility types. Major roadway crossings can create a barrier to less experienced cyclists, effectively preventing these riders from using the route. Enhanced intersection designs for cycling facilities include green lanes, bicycle signals, and bicycle boxes.



LOW-STRESS/HIGH-STRESS CONNECTIVITY

Low-stress connectivity is the ability of a transportation network to connect cyclists' origins to their destinations without subjecting them to unacceptably stressful or uncomfortable riding conditions. Measuring the level of traffic stress is a means to identify barriers to riding for people with a low tolerance for traffic. To measure bicycling comfort and stress, GIS data on traffic speeds and volumes, roadway widths, bicycle facility type and other metrics are used to rank each street on a scale from 1 to 4, with 1 being the most comfortable and 4 being the most stressful.



PROTECTED BIKE LANES

Protected bike lanes are a simple concept: they are like sidewalks for bikes. While sidewalks separate pedestrians from vehicle traffic, protected bike lanes separate cyclists from auto traffic. Because they use planters, curbs, parked cars or posts to separate bike and auto traffic on busy streets, protected lanes are essential to building a full network of low-stress cycling routes. Protected bike lanes are distinguished from **CYCLE TRACKS** by being one-way facilities constructed on one or both sides of a roadway.

RURAL BIKE CORRIDORS

The concept of rural bikeways can be applied to rural roads in the Miami Valley based on the following potential levels of service:

1. *Basic Level of Service:* where rural roads have appropriate motor vehicle speeds and volumes, good pavement quality, adequate sight distances and rural land uses, two lane rural roads will serve as facilities for skilled bicyclists who are capable of sharing the road with other forms of traffic. Improvements to these roads can include "share the road" signage, speed limit enforcement techniques, motorist education, pothole and crack sealing repairs, vegetation management and other routine maintenance.
2. *Improved Level of Service:* where right of way, funding, and land use conditions are appropriate, paved shoulders can provide an improved level of service for all rural road users. Paved shoulders can help pavements last longer, provide safety benefits for motorists, serve as school bus stops, and provide space for both pedestrians and bicyclists. In some cases, paved shoulders can be provided by modifying the width of the existing travel lanes to minimize construction costs.
3. *Enhanced Level of Service:* In areas where adjacent land uses are favorable to increased use of bicycling, such as school zones, rural main street areas and near new developments, bikeway improvements can be made either along the road or in the corridor. These improvements can include the construction of bike lanes, paved shoulders, shared-use paths separated from the roadway, if right-of-way, funding and community support, and maintenance agreements exist.

SHARED-USE PATHS (ALSO REFERRED TO AS “MULTI-USE PATHS” AND “TRAILS”)

Often used by non-motorized users including pedestrians, cyclists, in-line skaters, and runners, shared-use paths are typically paved (asphalt or concrete) but may also consist of an unpaved smooth surface as long as it meets Americans with Disabilities Act (ADA) standards. The ‘Miami Valley Trails’ are referenced frequently in this report, and refer particularly to the network of paved shared use paths in the Region.



SHARROW

A shared-lane marking, or sharrow, is a street marking placed within a travel lane to indicate that a cyclist may use the full lane. Typically it consists of the wide shape of the arrow, pointing in the direction of traffic, combined with the bike symbol.

SHOULDER BIKEWAYS

Typically found in rural areas, shoulder bikeways are paved roadways with striped shoulders wide enough for bicycle travel. Shoulder bikeways often, but not always, include signage alerting motorists to expect bicycle travel along the roadway. Shoulder bikeways also accommodate pedestrians in rural areas.



SIDEPATHS

A sidepath is a bicycle facility that closely parallels a roadway and is separated from motor vehicle traffic by a curb or a swale. The sidepath is often in the location where one would expect a sidewalk, but is generally wider than a typical pedestrian facility. Sidepath placement guidelines are included in the appendix.

SIGNED SHARED ROADWAYS

A signed shared roadway accommodates vehicles and bicycles in the same travel lane. The most suitable roadways for shared vehicle/bicycle use are those with low posted speeds (25 MPH or less) or low traffic volumes (3,000 ADT or less). In addition to bike route and directional signs, shared roadways may also include on-route pavement markings and pavement markings at intersections (e.g., crosswalks, bicycle turn lanes, etc.). Other shared roadway treatments include wide outside lanes (14 to 16 feet wide) on higher-volume streets.



TRAFFIC CALMING

Traffic calming consists of the installation of physical interventions, including narrowed roads and speed humps, put in place on roads with the intention of slowing down or reducing motor-vehicle traffic as well as to improving safety for pedestrians and cyclists.

The Six Es of Bike Planning

Education: ideas for increasing cycling knowledge and skills

Offering a variety of ways for people to get the skills and confidence to ride is important to building great places for bicycling. All types of regional partners (communities, businesses, advocate organizations and universities) can offer options for adults looking to improve their biking skills with everything from tips online, brown bag lunch presentations and in-depth on bike training opportunities.

Encouragement: ideas for increasing ridership

Communities, businesses, advocates, and universities play a critical role in encouraging people to ride by giving them opportunities and incentives to get on their bikes. This can be done through producing community bike maps, route-finding signage, bicycle-themed celebrations and rides and commuter challenges. Dayton's investment in public bike sharing and other organizations' use of internal bike fleets, are convenient, cost effective, and healthy ways of encouraging people to make short trips by bike.

Enforcement: ideas concerning laws/rules regarding cycling

Basic laws and regulations need to govern bicycling and the rules of the road to ensure safety for all road users. With a good set of laws and regulations in place that treat bicyclists equitably within the transportation system, the next key issue is enforcement. Law enforcement officers must understand these laws, know how to enforce them, and apply them equitably to ensure public safety. In densely populated areas, bicycle theft prevention is also a huge undertaking. Having law enforcement partners and great policies in place is essential to promoting bicycling.

Engineering: ideas for infrastructure projects

The most visible and perhaps most tangible evidence of a great place for bicycling is the presence of infrastructure that welcomes and supports it. Survey after survey shows that the physical environment, a well-connected bicycling network consisting of quiet neighborhood streets, conventional and protected bike lanes, and separated trails is a key determinant in whether people will get on a bike and ride.

Equity: ideas for sharing the access to cycling across the Region

As a part of the larger transportation system, the cycling network represents a sizable public investment. As such, it is important to evaluate what groups or populations have been well served by these investments and what groups have not. Considerations of age, physical ability, race, language, education and income are insightful metrics in these evaluations.

Equity is a recent addition to the Es rubric, only coming into broad use around the time of the 2014 Pro Walk|Pro Bike|Pro Place conference in Pittsburgh, Pennsylvania. Equity was not a part of the bicycle planning Es lexicon in 2008 when the CLRBP was first developed and is therefore not included in some "5 Es" lists discussed in this Update.

Evaluation: ideas for measuring cycling

Establishing measurable goals and objectives and tracking progress on those goals is critical to effective planning. Bicycle counts, mode share data, crash data and user surveys are all good methods to measure use, safety and convenience of the regional cycling network.