

Chapter 4

STRATEGIES AND RECOMMENDATIONS

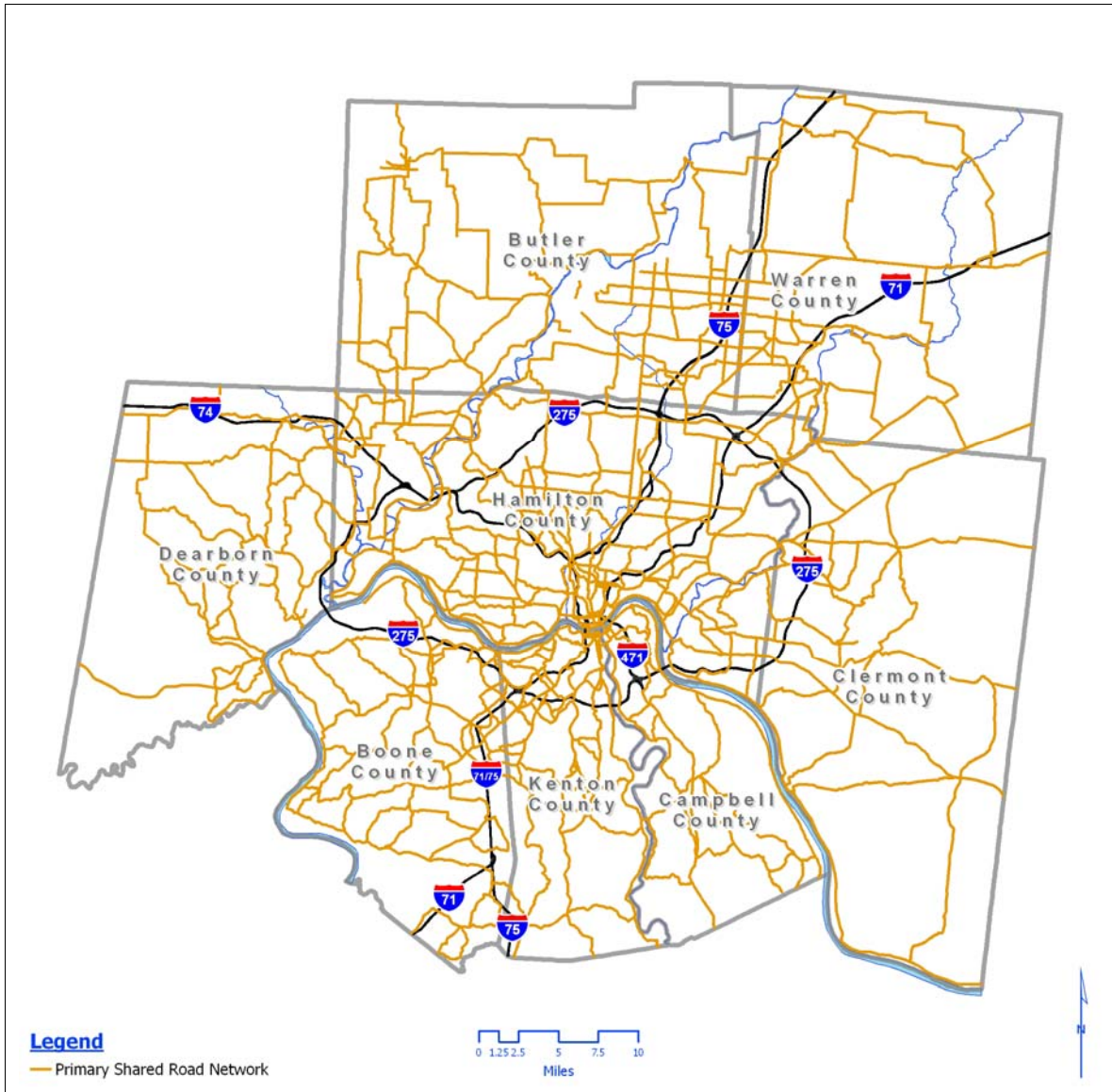
*Complete Streets are designed and operated to enable safe access for all users.
Pedestrians, bicyclists, motorists and bus riders of all ages and abilities
are able to safely move along and across a complete street.*
--- Complete Streets Coalition

The recommendations for the updated Regional Bicycle Plan are presented in this chapter. Many of these recommendations have been carried over from past plans as they propose activities that are ongoing. New recommendations have been added from the comments of the OKI Regional Bicycle Plan Advisory Committee and from the comments received at the public meetings held for the plan. Progress in implementing the plan has fulfilled some recommendations which have been removed.

Many of these recommendations are long term in that they will need to be implemented on an ongoing basis. For example, Chapter 2 reviews many of the recommendations from the 2001 plan and documents activities undertaken in the interim to carry them out. Many also involve a partnership between OKI and other agencies, particularly city, township and county governments which are most often the sponsors for projects and responsible for the maintenance of facilities. Bicyclists are also critical to the plan implementation process as the “constituents” being served by the recommended improvements. It is important for cyclists to work with local jurisdictions to express their needs, provide technical input to project development and express appreciation for projects implemented.

While the regional bicycle plan still considers all roads, other than freeways, as shared roads for biking, this plan update attempted to define a more specific, higher priority road network. The result is the Primary Shared Road Network shown in Figure 4.1. These roads were selected from input by Cincinnati Cycle Club members, the Bicycle Plan Update Advisory Committee, public comment at the first round of long range plan open houses, local bike plans, and staff input to fill in gaps. The resulting network is still extensive and includes many major arterials indicating the needs of cyclists for direct travel routes to their destinations. It also supports the past general policies for incorporating bicycle facilities in all roads as they are scheduled for improvements (see the new Complete Streets recommendations). Roads of particular importance to cyclists were also identified for improvements such as Round Bottom, Bridgetown and Kemper Roads and Dixie Highway. These are often roads used by cyclists in urban areas to ride out to the rural countryside.

Figure 4.1 – OKI Primary Shared Road Network



RECOMMENDATIONS FOR THE REGIONAL TRAIL NETWORK

Chapter 2 documented the additions to the regional trails system that have occurred since the previous update of the Regional Bicycle Plan. A detailed description of the component trails and local contacts can be found in Appendix 1, the status report on trails and greenways. The trail system, existing and proposed, is shown on the map in Figure 4.2, the Regional Trails System. The following activities are recommended for the continued expansion of the trails system.

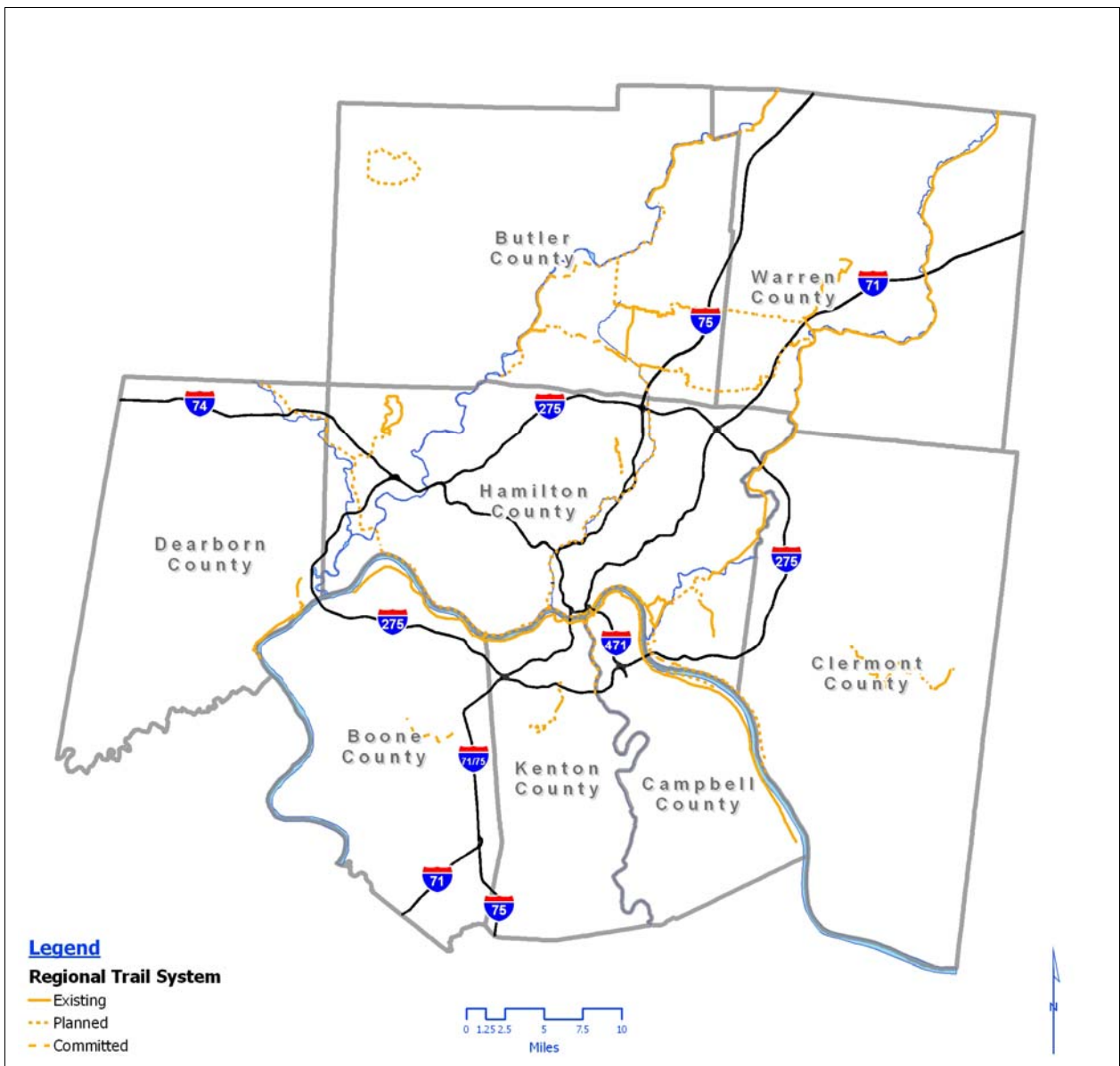
Little Miami Scenic Trail

It is recommended that OKI, the City of Cincinnati, Hamilton County Park District, Anderson Park District and other affected organizations coordinate the identification and extension of the Trail from the Little Miami Golf Center to a

connection with the Lunken Playfield Bike Path. A commitment should be made to the connection to the proposed Ohio River Trail at Kellogg Ave. Current alternatives include using the Lunken Path west of the river or the Elstun Rd. corridor east of the river. These are dependent on river crossings at either or both existing bridges at Beechmont and Kellogg Avenues.

It is recommended that connecting trails be studied between the Little Miami Scenic Trail and nearby communities to facilitate bicycle access as opposed to transporting bikes by motor vehicle. Proposed connections at this time include extending the Anderson Twp. Five Mile Trail, the Murray Rd. Trail in Fairfax, the Williamsburg – Batavia Hike – Bike Trail, and the Miami 2 Miami Connection.

Figure 4.2 – OKI Regional Trails System



Great Miami Bike Trail

It is recommended that the Great Miami Trail be constructed from Franklin to Fairfield including connections to Dayton's River Bikeway. This includes completing the two mile gap in Middletown from SR 4 to Baxter Ave. in Franklin, the seven mile gap from SR 73 in Middletown to Rentschler Forest and the four mile section from High St. in Hamilton to Rentschler. Lead agencies include the Miami Conservancy District, the cities of Hamilton and Middletown, and Metroparks of Butler Co.

Support a bikeway connection between the Fairfield end of the Trail and the Shaker Trace Bike Trail in Hamilton County's Miami Whitewater Forest.

The Plan supports the Hamilton County Park District plan for a shared use path connection between Shaker Trace in Miami Whitewater Forest and Shawnee Lookout Park on the Ohio River and connection to Cincinnati's Western Riverfront Bikeway.

It is recommended that connecting trails be studied between the Great Miami Bike Trail and nearby communities to facilitate bicycle access as opposed to transporting bikes by motor vehicle. Proposed connections at this time include Harrison, Fairfield, Trenton and the Miami 2 Miami Connection.

Ohio River Trail

It is recommended that the Ohio River Trail be constructed from Lunken Airport east to New Richmond. The feasibility study completed in 2000 should be used as a guide for implementation. A one mile section from Sutton to five Mile Road has been funded and is in design.

It is recommended that the development of the proposed Cincinnati Ohio River Trail from the central riverfront connecting to the Lunken Bike Path be completed. Current proposals include a "temporary" alignment proposed for the Oasis rail line with private funding and a "permanent" route along the banks of the Ohio River.

It is recommended that the Ohio River Trail be continued past the Great American Ballpark and through the "Banks" Central Riverfront Park redevelopment.

Studies should be initiated for extensions of the Riverfront Trail through the western Cincinnati riverfront ultimately to Shawnee Lookout Park.

Mill Creek Greenway Trail

It is recommended that a shared use path be developed in the Mill Creek corridor as part of the stream restoration and flood protection program and as recommended in the 1998 Mill Creek Greenway Master Plan and the previous US Corps of Engineers re-channelization project.

It is recommended that connecting trails be studied between Mill Creek Trail and nearby communities, such as on the West Fork of the Mill Creek, to facilitate bicycle access and encourage bicycle transportation.

Western Hamilton County

Trail recommendations from the Western Hamilton County Transportation Study include the Hamilton County section of the Great Miami River Trail. The Hamilton County Park District is planning for this facility as a connection between the eight mile Shaker Trace loop trail in Miami Whitewater Forest to Shawnee Lookout Park. A connection from Shaker Trace to the Great Miami Trail in Fairfield is recommended.

Previous planning recommendations for a rail-trail conversion of the abandoned C&O rail corridor through Westwood and Bridgetown are withdrawn due to the loss of the right-of-way.

Other bicycle facility recommendations of the Western Hamilton County Transportation Study are for on-street facilities to accommodate safe bicycle travel.

Kentucky Route 8 River Path

KY Route 8, along the Ohio River in Campbell, Kenton and Boone Counties, represents the River Path and should receive priority consideration for bicycle facility improvements as recommended in the Forward Quest River Path proposal in 1996 and the Vision 2015 report for Bellevue, Newport and Covington in 2006 which includes a Licking River Trail. This would include shared use paths and improvements to the existing roadway as feasible to add bike lanes, paved shoulders, edge striping, appropriate signage, overlooks and restrooms.

Williamsburg – Batavia Hike and Bike Trail

Federal transportation funds have been allocated for a portion of the trail. This initial phase will connect Williamsburg and the campground at East Fork Lake State Park. Bike route signing is recommended for the shared road portions of the trail. A bridge over the East Fork is recommended to connect with Sycamore Park, the western terminus, in Batavia.

Miami 2 Miami Connection

This project involves eight jurisdictions and several different types of bikeways. The trail gap along SR 129 in Liberty Township should be completed to connect the trailhead at Maud Hughes Rd to the Wetlands Park. Another 1.6 mile recently built trail along the Miami-Erie Canal in West Chester has been extended two miles further west to Gilmore Ponds Preserve. Reconstruction plans for Bethany Road in Butler and Warren Counties should include bike lanes to accommodate the M 2 M as recommended.

Dearborn Trails

The Dearborn Trail has components in Greendale, Lawrenceburg and Aurora that primarily follow the Ohio River. Recommendations include closing the gap at the

Argosy Casino to connect the Greendale trail and the Lawrenceburg River Walk, replacing the sidewalk on the George St. bridge in Aurora, signing the bike route through Aurora to Lesko Park and reconstructing the Lesko Park Trail. The planned reconstruction of SR 56 from Aurora to Rising Sun is to include shoulders to accommodate cyclists and hikers. With the completion of the trail through the AEC power plant, the coast to coast American Discovery Trail will be rerouted from US 50 to Dearborn Trail.

In general, OKI supports plans for local recreational trail projects that may not be of regional significance, but do conform with regional goals for a safe, convenient and appealing bicycling environment and may provide connections to the regional trail network. Additional local trail projects proposed at this time include:

- Oxford Perimeter Path – Butler County
- Greater Cincinnati Airport Loop Trail – Boone County
- Stone House Trail – Campbell County
- Murray Ave. Trail Extension – Hamilton County
- Five Mile Trail Extension – Hamilton County
- Licking River Greenway – Campbell / Kenton County
- Banklick Creek Trail – Kenton County
- Gunpowder Creek Trail – Boone County

For all components of the Regional Trail Network, support facilities should be considered for trailheads, bike parking, water, rest rooms, phones and camping.

Monitor little used and announced abandoned rail corridors in the region for future development as shared use paths. Priority should be given those lines that connect with the trails along the Ohio, Little Miami, Great Miami and Licking Rivers and the Mill Creek.

RECOMMENDATIONS FOR ON-STREET BIKEWAY IMPROVEMENTS

OKI, in cooperation with local jurisdictions and area bicyclists, should define the regional bikeway system including 1) the bicycle routes identified on the OKI Bike Route Guides for Ohio and Kentucky 2) the Primary Shared Roads network defined for this plan, shown in Figure 4.1 and 3) the regional trail system identified in Figure 4.2.

Roads identified in the regional bikeway system should be given priority for funding to improve cycling safety and continuity of the system. Recommended improvements, depending on the context, include bike lanes, wide curb lanes, shared lane markings (sharrows), bicycle boulevards, paved shoulders, edge striping and appropriate signage, including distances and destinations.

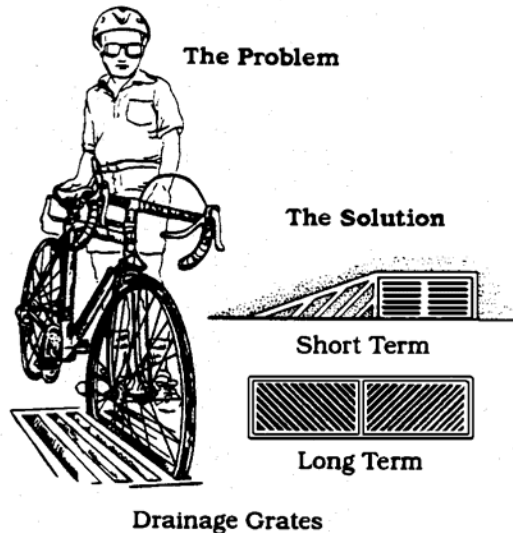
Note: In developing the OKI Bike Route Guides, area cyclists assigned the suitability classifications according to their personal experience with these roads. "Recommended Bike Routes" (blue on the map) should be protected from degradation of their level of safety, particularly where exposed to urbanization and increased traffic. "Alternate Bike Routes" (shown in yellow) and "roads not

recommended for bicycle travel” (shown in red) should receive consideration for improving the safety of bicycle operation.

Roads traversing steep hills should receive priority for widening, signage and other improvements for bicycle safety. Cycling in this region routinely requires traversing hills between the river valleys and upper plateau with a 300 to 400 foot difference in elevation. Cyclists climbing these hills at speeds of 5 to 10 mph are at greater risk than when descending the hills because of the greater difference in speed from passing traffic, exposure to more overtaking vehicles and less stability at lower speeds. Where such roads are improved, priority should be given to widening the uphill lanes.

Plans for all bridge and viaduct construction, replacement or rehabilitation in the OKI region are required by FHWA to provide for safe accommodation of bicycle traffic where bicycles are permitted to operate at both ends of the bridge or viaduct.

State and local highway departments throughout the region should assure that bicycle-safe storm water inlets are used in new road construction and rehabilitation.



State and local highway departments throughout the region should also assure that metal construction plates, used in road construction, have beveled edges to prevent flat tires for bikes.

It is recommended that a policy statement be prepared addressing the use of “rumble strips” along highway shoulders as related to bicycle safety.

Note: Rumble strips are sometimes provided within the shoulder of a road to alert inattentive or sleeping motorists that they are out of the travel lane. Most often rumble strips are lateral grooves cut or embossed into the pavement. They adversely affect cyclists with vibration that can cause loss of control. Considerations to minimize the effect of rumble strips for cyclists include the width and depth of the groove, the width of the strip, the placement of the strip within the shoulder (next to, or away from the travel lane), the presence of breaks of smooth pavement in the strip for cyclists to cross, and the need for rumble strips at all.

This plan encourages the maintenance of bikeway facilities by the responsible jurisdictions to repair damage from deterioration and remove accumulated debris.

Appendix 4, OKI Regional Bicycle Plan 2030 Future Projects, lists projects extracted from the 2030 Regional Transportation Plan recommendations. The first section contains

projects specifically including bicycle facilities while the second section contains recommended highway projects on roads identified as needing bicycle accommodation either in specific plans, or on the Primary Shared Road system.

In addition, there are roads in the region that are heavily used by cyclists that are experiencing increasing traffic from urban development resulting in increased concern for cyclist safety by both the cyclists and motorists. Several such streets were suggested by Cincinnati Cycle Club members for inclusion in the Primary Shared Road system. One of these is Round Bottom Road in Hamilton and Clermont Counties which is heavily used by cyclists from eastern Cincinnati riding to rural Clermont County. Round Bottom is narrow, two-laned with physical constraints and increasing car and truck traffic. Although not currently programmed for improvements, road widening for shoulders or striped bike lanes should be initiated. Other roads mentioned with a high cycling demand are Bridgetown Rd. (SR 264), Kemper Rd. in Hamilton County, Eastern/Riverside Dr. in Cincinnati and Ky. Route 8 in Campbell, Kenton and Boone Counties.

PLANNING RECOMMENDATIONS FOR BICYCLE FACILITIES

Complete Streets

Federal transportation legislation adopted in 1991 required state and metropolitan transportation plans to broaden their scope for multi-modal planning and include provisions for bicycle and pedestrian travel. Supplementary guidelines in 1999 specified that accommodating these modes should be a routine part of roadway project development. These policies are now referred to as creating complete streets to accommodate motorists, transit, cyclists, and pedestrians of all ages and abilities. Toward these goals, the following recommendations are offered.

Sponsors of roadway construction, expansion and resurfacing projects should incorporate bicycling facilities into all such projects unless exceptional circumstances exist. Planning guidelines and standards should be applied to determine appropriate treatment for the roadway. Exceptional circumstances are set forth in the recommended OKI Complete Streets approach in Appendix 2.

The ICC Prioritization Subcommittee members should review TIP projects and amendments to evaluate the impact of projects on bicycling and recommend bicycle facility improvements where appropriate. This review should also consider integrating a Complete Streets approach into the prioritization scoring process.

Planners and engineers should include the needs of bicyclists when designing transportation facilities (e.g. road lane width and shoulders, storm water inlets, bridges, transit access and parking) in urban, suburban and rural areas according to recommended roadway design standards including standards for construction, signing and pavement markings such as the AASHTO design guidelines and FHWA design treatments. These will normally call for on-street improvements such as wide right lanes, striped bike lanes, or paved shoulders. Parallel sidepaths should only be used where conditions are conducive to avoiding conflicting movements.

Note: Parallel sidepaths (shared use paths within a road right-of-way, but separated from the roadway pavement) are often perceived as safer than sharing the road with traffic. This may be the case where the path is used by children riding at near pedestrian speeds, and adjacent to a waterfront, hillside, railroad or other barrier where there are no crossing streets or driveways. In urban applications where streets and drives would cross the sidepath, cyclists are put at greater risk from being out of the sightlines of turning motorists. This is especially true for cyclists traveling in the opposite direction of the adjacent travel lane. At both ends of the sidepath, these cyclists also need to cross the street to access to or from the proper side of the road for their direction of on road travel. Sidepaths may also cause hostility from motorists towards cyclists who choose to remain in the street (as they are legally entitled to do) rather than use the sidepath because of greater risk, conflicting pedestrian use or inadequate maintenance. In no case should cyclists be required to use a sidepath and be prohibited from using the street.

Additional consideration of the needs of child bicyclists and pedestrians should be incorporated into local and regional bicycle facility planning. Consideration of the "Safe Routes to School" infrastructure needs should occur as part of roadway improvements within two miles of elementary and middle schools. Encouraging such school trips by biking and walking has transportation benefits of reduced congestion and motor vehicle emissions.

OKI will coordinate with transit operators and bicyclists in the region regarding bike racks on buses and/or bikes in transit vehicles, and the installation of bike lockers at park and ride lots and transit centers.

Identify and secure available local, state and federal sources of funding for bicycle facilities and programs.

- Review Ohio license and gas tax highway funding legislation for potential use for bicycle and pedestrian facilities. Develop legislation needed to enable the use of these funds for bicycle and pedestrian facilities.
- Prepare single page handouts for each state and federal funding program for which bicycle and pedestrian improvements are eligible.
- Identify potential private and corporate funding sources, including user's fees, and foundations.
- Maintain files for applicant eligibility, application requirements, project eligibility, and administrative guidelines for the various funding sources.

Technical Assistance Program

OKI will continue to designate a staff planner to maintain the regional bicycle planning programs and activities and provide technical assistance to local jurisdictions.

Local jurisdictions are encouraged to develop bicycle plans to promote bicycling as a mode of transportation and maintain an official plan for determining the compliance of

project funding requests. These plans should be coordinated with neighboring jurisdictions and the regional plan and seek the involvement of local bicyclists.

Cities and counties are encouraged to designate a bicycle coordinator who can integrate bicycle projects with ongoing transportation and development projects and coordinate these activities with other departments, adjacent jurisdictions and bicycling organizations. The bicycle coordinator need not be a full-time position, but should be knowledgeable about the transportation needs of bicyclists.

Local jurisdictions are encouraged to consider pedestrian and bicycle circulation within and between residential subdivisions during the land development process.

Transportation corridor studies, thoroughfare plans and comprehensive plans for counties and cities should seek the participation of bicyclists and pedestrians to include the needs for these modes of travel as well as those of motor vehicles.

OKI will continue to maintain an up-to-date library of bicycle resource material and will distribute bicycle safety information and other related materials.

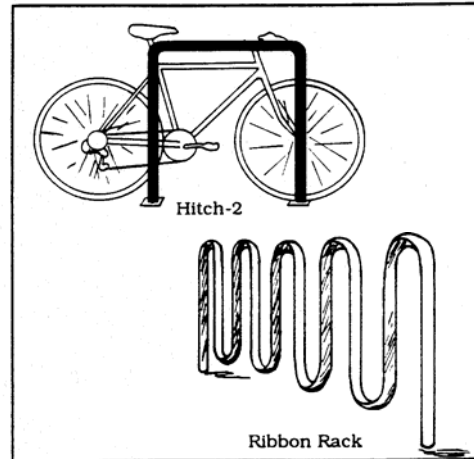
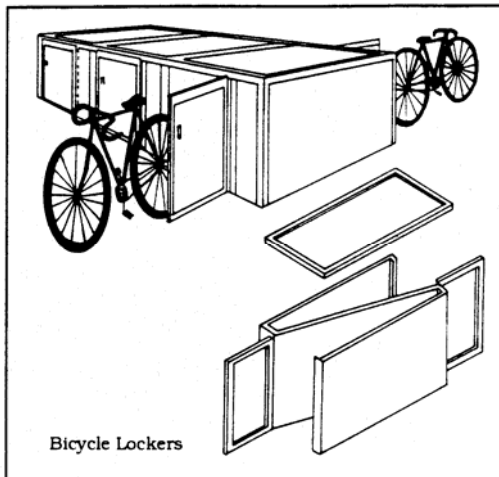
OKI will facilitate and participate in bicycle facility planning workshops on a regular basis for planners, engineers and other professionals in the region.

Participate in the development of the OKI Unified Planning Work Program and Transportation Improvement Program to incorporate bicycling and bicycle facilities into appropriate regional programs and projects.

Major Investment Studies and Corridor Plans shall include consideration of all modes including bicycle and pedestrian travel through the participation of OKI staff and cyclists living in the area. Where consistent with the purpose and need of a study, considerations include:

- Appropriate on-street accommodations
- Appropriate interchange accommodations
- Consideration of alternatives' impacts on bike suitability of local roads
- Incorporate local bike plan recommendations in MIS plan
- Opportunities for trails
- Covered bicycle parking at transfer points
- Bike accommodation in or on transit vehicles
- The effect of transit rail flangeways in streets on bicycle use

Bicycle parking facilities, e.g. lockers and/or covered racks, should be provided at all major public and private destinations, e.g. employment and retail areas; professional buildings; restaurants; schools, libraries and universities; apartments; parks and recreation areas; public and private parking lots and garages; park-and-ride lots and transit centers. Local jurisdictions that approve development plans and enforce zoning regulations are encouraged to include provisions for secure bicycle parking facilities in their parking regulations. OKI will look into ways to resume the experimental bike rack program to provide free racks to businesses and agencies for their employees and customers.



Participate in the interdepartmental work of OKI to incorporate the role of bicycle and pedestrian travel in its activities toward integrating transportation and land use planning.

- **OKI Transportation/Land Use Connection**
 Since the last update of the Bicycle Plan, the Land Use Commission, a committee of the OKI Board as a whole, has completed its work with the preparation and adoption of the *OKI Strategic Regional Policy Plan*. This report contains general goals and objectives intended to guide local jurisdictions with their land use plans and encouraging coordination with the regional goals and policies. In turn, these local comprehensive plans are used in the scoring of transportation projects submitted for funding through the OKI TIP. The Policy Plan encourages better local and regional planning for, and investment in, pedestrian, bicycle and transit friendly land uses. Progress toward these objectives is now focused at the local level where cycling interests need to participate with the local planning agencies.
- **Regional Clean Air Program**
 OKI's Regional Clean Air Program works to publicize smog alerts when high ozone and particulate matter levels exist and recommends actions for individuals, companies and local governments to take in order to avoid increased pollution levels. OKI's efforts include an aggressive media relations and advertising campaign to keep the clean air issue at the forefront of local radio, television and newspaper reporting; strategic event marketing activities aimed at educating a vast portion of the public; and partnerships to encourage alternatives to driving alone. Bicycling is among the alternatives that are promoted. Cyclists interested in working towards improved regional air quality should consider converting their car trips to bicycling or transit for errands and to work. Cyclists can also contact OKI to be added to the smog alert notification list.

Information about these and other OKI committees is available on the OKI web site at www.oki.org.

Develop a bicycle component for the OKI regional GIS program based on the OKI travel demand model highway network plus additional information needed to determine bicycle level of service. The following items are a preliminary list of the anticipated needs:

- Adapt the OKI street network to a bicycle facility network including OKI Bike Route Guide street system with suitability ratings (5 layers)
- Local facilities, existing and proposed (striped lanes, wide curb lanes, signed routes, shared-use paths) (8 layers)
- Posted speed limit (1 layer)
- Bus routes (1 layer)
- Roadway specs – lanes, shoulders, lane width, volumes, condition (data)
- Major traffic generators (1 layer)
- TIP projects (1 layer)
- Private facilities, description of general area served (1 layer)
- Mountain bike off-road recreational trails (parks) (1 layer)
- State defined cross-state bicycle routes (1 layer)
- Other defined trail routes (Buckeye, Ohio to Erie, Underground Railroad, American Discovery Trail) (4 layers)

Establish procedures for communication with the bicycling community about the regional bicycling environment on an ongoing basis.

- Develop a handout for a citizens guide to promoting bicycle and pedestrian facilities in their communities.
- Continue the OKI Bicycle E-Info News e-mail newsletter to a distribution list of persons in the region who express an interest in receiving regular information about bicycle issues, plans, meetings and projects.
- Prepare, publish and update the OKI Regional Bike Route Guide maps for the eight counties in the OKI region and the City of Cincinnati to inform cyclists of the recommended roads and paths for bicycle travel.
- Revise the Clean Air Guaranteed Ride Home program to include bicycle commuters who need transportation for personal emergencies or severe weather.
- Encourage adult cyclists to use their bicycle instead of their motor vehicle for more of their work and personal business trips through education, encouragement, enforcement and enactment policies and programs. Appendix 5 presents the constraints and incentives for bicycle commuting in the region.

Note: These types of support programs have long been recommended in bicycle facility plans. However, they are not normally a function of regional or local transportation planning agencies. This recommendation now suggests partnering with appropriate agencies in the region around their specific program areas of expertise to promote more and safer bicycling. Such agencies could include school districts, police departments, public health agencies, air quality agencies, environmental organizations and others.

- Prepare funding source files with eligibility, application and administration guidelines for the identified funding sources.

- Distribute notices to the appropriate local governments of upcoming application periods for state and regional funding programs and notify local governments of upcoming application cycles for state and regional funding programs.
- Provide technical assistance to units of local governments and other public and private agencies to expand and improve the bicycling environment.
- Contribute to the national safety goal of reducing the number of bicyclists killed and injured while, at the same time, increasing the number of trips made by bicycle.
 - Participate in the recommendations and implementation of the respective state Strategic Highway Safety Plans as required under SAFETEA-LU.
 - Continue distributing bicycle education and safety brochures.
 - Partner with other agencies specializing in community safety education and enforcement and assist them in promoting bicycle safety.
 - Provide technical assistance to communities participating in Bicycle Friendly Community programs.
- Research education programs and public service announcements for motorists and cyclists on cyclists' rights on roadways regarding rights and duties for roadsharing and coping with biking problems and motorist hostility.

*"To lane or not to lane,
 That is the question.
 Whether 'tis nobler in the street to suffer
 The calls and honks of dysfunctional drivers,
 Or to take refuge from a queue of traffic,
 In a marked bicycle lane. To "claim the lane"
 No more; and, by a space to say we end
 The tension and the bad misunderstandings
 That bikes are heir to, 'tis a countermeasure
 Some would devoutly wish."
 --- Anonymous*