

3. Existing Conditions

This chapter provides a description of existing bicycle conditions within the City of Columbus. The information provided is based on field visits, the City's existing maps and planning documents, and meetings with the City staff.

3.1. Existing Conditions Summary

Below is a summary of key findings from this chapter:

1. **Columbus has an excellent shared use path system that has been developed primarily along north-south river corridors. However, this system is not well-connected to streets.** Wayfinding signage, on-street bicycle facilities that link to the existing trails, new trail access points, and bridges to provide access over barriers could significantly improve access to the trails.
2. **Over 900 survey responses were received. These were very positive and show support for new ideas.**
3. **Columbus, unlike most of the country, has seen a slight increase in bicycle commuting to work,** with 0.4% bicycling to work in 1990, 0.3% bicycling to work in 2000, and 0.6% bicycling to work in 2005.¹³
4. **There is a potential for “road diets” on arterial streets to alleviate the lack of on-street bikeways.** On many of Columbus' arterials, roadway widths and traffic volumes may allow four-lane roadways to be converted into three-lane roadways with a middle turn lane and bicycle lanes.
5. **The need for east-west bicycle connections goes back to 1993.** Successful east-west bikeways require appropriate connections over several barriers, including the Olentangy and Scioto Rivers, Alum Creek, I-71, State Route 315, and railroad tracks.
6. **Current signage and wayfinding systems are incomplete.** Though a bike route system has been developed for Columbus, the signage and numbering system could be improved by adding destination and distance information.
7. **There is no existing bike map that shows the bicycle system.**
8. **Alleys in many neighborhoods are a potential opportunity for developing bicycle boulevards.**

¹³ U.S. Census Bureau's 2005 American Community Survey estimates that 0.6% of commuters bicycle to work, with a margin of error of plus or minus 0.2%. The US Census and American Community Survey only count work-related trips by bicycle. The true number of daily bicycle trips which include utilitarian and recreational trips is likely to be significantly higher.

9. **The City should balance engineering efforts with the other E's: education, encouragement, enforcement and evaluation.** Columbus' efforts so far have been primarily engineering-related: constructing bicycle paths and lanes.
10. **Early wins are possible for bike parking, complete streets policy, and a share the road program.**
11. **Bike-transit use is significant as a result of the bike-on-bus program,** and clearly shows the latent demand for bicycle amenities. Between May 1, 2006 and April 31, 2007 COTA saw over 35,000 total weekday bicycle boardings—an average of 221 bicycle boardings each weekday.
12. **The 2012 bicentennial is a significant opportunity for bicycling in Columbus.**
13. **Bicycling can provide significant benefits for the city in terms of health, environment and quality of life.** These benefits include:
 - Air quality benefits, including reduction in motor-vehicle based air pollutants, such as particulate matter, reactive organic gases, and nitrous oxides
 - Congestion benefits, including the estimated reduction of 173,600 motor vehicle trips each weekday and reduction of 179,800 vehicle miles traveled per weekday.
 - Economic benefits, including estimated annual recreational income of \$21 to \$312 million, estimated annual savings in healthcare of \$1 to \$11 million, and estimated annual savings due to increased mobility of \$7.6 million.

3.2. Organization of Chapter

This chapter is divided into the following sections:

3.3. Setting, describes Columbus' location, land uses and key activity centers. (Page 3-3)

3.4. Types of Bicycle Facilities, describes the standard bikeway types—shared use paths, bicycle lanes, signed shared routes, paved shoulders—and introduces innovative bicycle facilities such as shared lane markings and bicycle boulevards. (Page 3-4)

3.5. Inventory of Columbus' Existing Bikeways lists Columbus' existing on- and off-street bicycle facilities, describes major off-street paths, and provides a map of these facilities. This section also describes existing support facilities, such as bicycle parking. (Page 3-6)

3.6. Assessment of Conditions, provides a general overview of bicycling conditions within the City. (Page 3-14)

3.7. Encouragement and Education Programs, describes biking and walking encouragement and education programs currently available in Columbus. (Page 3-16)

3.8. Multi-Modal Connections, describes how bicycles are supported on Columbus' transit services. (Page 3-17)

3.9. Opportunities and Constraints, describes and maps the existing opportunities for bicycle facilities and constraints to bicycling in Columbus. (Page 3-18)

3.3. Setting

The City of Columbus was founded in 1812 adjacent to the Scioto and Olentangy Rivers and has served as Ohio's state capital since 1816. With over 700,000 people, Columbus is the largest city in the state. The City area has grown dramatically in population and area between 1950 and the present day, with 186 square miles annexed to the city between 1950 and 2007. Columbus' current size is 225.9 square miles. Due to its growth by annexation, the City boundaries are not uniform, and within Columbus are islands of smaller communities. As a result, a stretch of road within Columbus boundaries may pass through several jurisdictions, making it logistically challenging to construct bicycle facilities along that roadway.

Downtown Columbus is the center of governmental, office and commercial space in the region. Additional office, shopping, and commercial centers are found around the city in local neighborhoods and along State Route 161 (Dublin-Granville Road) and I-270. Columbus' downtown is well-served by bicycle paths along the Olentangy and Scioto Rivers, and several opportunities exist to improve bicycle access to downtown along roadways, rivers, and abandoned rail lines. Within the downtown area, the proposed conversion of one-way streets to two-way will allow for construction of bicycle lanes.



Columbus' Downtown is well-served by bicycle paths along the Olentangy and Scioto Rivers

The primary geographic features of Columbus are its rivers, railroads and major freeways. Columbus' rivers generally flow north-south, and make it difficult for bicyclists to travel east-west. The primary waterway in the area is the Scioto River. Its tributaries include Big Darby Creek, the Olentangy River, Alum Creek, Big Walnut Creek, Blacklick Creek, and Little Walnut Creek. The bicycle paths that have been constructed along portions of the Scioto River, Olentangy River, and Alum Creek provide excellent north-south bicycle access.

The City is ringed by Interstate 270, and divided by I-70 (east-west), I-670 (east-west), I-71 (north-south) and State Route 315 (north-south). These roadways generally present barriers to bicyclists, but in one case, the I-670 Bikeway, bicycle facilities have been constructed within the highway right-of-way.

Columbus' railroads date back from the late 1800's and radiate from Columbus' downtown, providing access between downtown and the rest of the City. Abandoned rail lines in the southwest, southeast, and northeast quadrants of the city present potential opportunities for trails.

3.4. Types of Bicycle Facilities

3.4.1. AASHTO Bikeway Classifications

This plan separates bicycle facilities into three types, as identified by the American Association of State Highway and Transportation Officials (AASHTO). **Figure 3-1: AASHTO Bicycle Facility Types** illustrates the three types of bikeways.

Shared Use Path: a paved right-of-way completely separated from any street or highway. Often these are built within greenway corridors, along railroad rights-of-way or parallel to (but separate from) highways. Shared use paths are shared by a variety of users, including bicyclists, pedestrians, rollerbladers and people pushing strollers. As such, they need to be designed appropriately to accommodate all users.



The majority of bicycle trips are on local streets not designated as bicycle facilities

Bike Lane: a striped and stenciled lane for one-way travel on a street or highway. These are designated with signs, striping, and pavement stencils. With this type of bikeway, motorists and bicyclists share the street, each having their own preferred lane.

Signed Shared Roadway (Bike Route): a roadway shared by bicyclists and motor vehicle traffic and is identified by signing. On these routes, motor vehicles and bicycles share the same lane on a street. Signs are posted to indicate that the street is a bikeway.

Paved Shoulder: Many of Columbus' roadways have unpaved shoulders and have narrow (10 to 12 foot) motor vehicle lanes, making the roadways uncomfortable for bicycling. In many cases, providing a paved shoulder adjacent to a road can significantly improve bicycling conditions. The AASHTO Guide for the Development of Bicycle Facilities states that shoulders should be at least 4 feet wide, be maintained and be free of road debris.

3.4.2. Innovative Bikeway Treatments

In addition to the three AASHTO-designated bikeway types, there are other innovative treatments, two of which are outlined below.

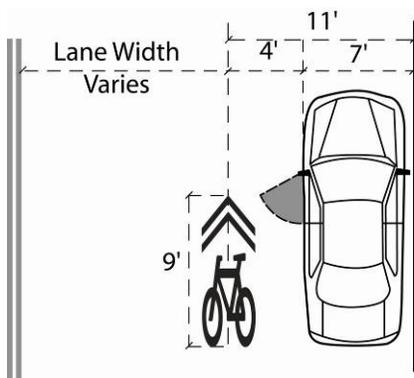
Bicycle Boulevards have been implemented in a variety of locations including cities in California (Berkeley, Palo Alto and Davis) and in Oregon (Portland). A Bicycle Boulevard is a roadway that allows all types of vehicles, but which has been modified to enhance bicycle safety and security. Roadways are designed to be places where cars and bicycles can equally share right-of-way. Bicycle Boulevards tend to be residential streets with lower traffic volumes, typically between 3000 to 5000 average daily vehicles, but can include secondary commercial streets.

Bicycle Boulevards typically include design features such as:

- Traffic calming devices such as traffic circles and bulbouts
- Bicycle destination signage
- Pavement stencils indicating status as a Bicycle Boulevard
- Crossing improvements at major arterials, such as traffic signals with bicycle-detection, four-way stops, and high-visibility crosswalks
- Stop signs on streets crossing the Bicycle Boulevard
- Some jurisdictions have implemented Bicycle Boulevards by removing on-street parking in select locations.

Bicycle Boulevards can be designed to accommodate the particular needs of the residents and businesses along the routes, and may be as simple as pavement markings with wayfinding signs or as complex as a street with traffic diverters and bicycle signals. Bicycle Boulevards are described and illustrated further in Chapter 8: Design Guidelines.

Shared-Lane Markings, though currently only officially accepted as an official marking within California, Shared-Lane Markings offer an option for providing bicycle facilities on narrow urban streets.¹⁴ The primary purpose of the Shared-Lane Marking is to provide positional guidance to bicyclists on roadways that are too narrow to be striped with bicycle lanes and to alert motorists of the location a cyclist may occupy on the roadway. Shared-Lane Markings are intended to reduce the chance of a cyclist colliding with an open car door of a vehicle parked on-street, parallel to the roadway. Shared-Lane Markings are appropriate for roadways in urban areas with on-street parallel parking.



Shared-Lane Marking Placement



Shared Lane-Markings in San Francisco

It should be noted that providing bicycle lanes on certain streets or designating certain streets as shared signed routes does not imply that bicycles should not be accommodated on all streets. The majority of bicycling takes place on undesignated city streets within neighborhoods. Bicyclists are legally allowed on all City streets and roads regardless of whether the roads are designated as a

¹⁴ Policy Directive 05-10 “Shared Roadway Bicycle Marking”, passed on September 12, 2005, outlines implementation guidelines for placing Shared Lane Markings. <<http://www.dot.ca.gov/hq/traffops/signtech/signdel/policy.htm>>

bikeway or not. Local agencies may not prohibit bicyclists from riding on any public street or highway. (Ohio Revised Code 4511.07 Local Traffic Regulations)

3.5. Inventory of Columbus' Existing Bikeways

The City of Columbus' existing bicycle facilities consist of approximately 46 miles of off-street shared use paths, 3 miles of bicycle lanes, and 19 miles of signed bicycle routes. Additionally, several streets with wide curb lanes or paved shoulders have been identified by the City as "bicycle-friendly" streets. The existing bicycle facilities are shown in **Figure 3-2, City of Columbus Existing Bikeways** and **Figure 3-3, Columbus Downtown Existing Bikeways**.

3.5.1. Shared Use Paths

The City of Columbus began construction of its shared use paths in 1969 with a 1.7 mile section of the Lower Scioto Greenway in Berliner Park. Since then the City, in partnership with Metro Parks, has constructed 48 miles of shared-use paths and shorter connector paths, including those along Alum Creek, Scioto River and Olentangy River.

The following shared use path descriptions were based on information provided on the Columbus Department of Recreation and Parks trails website and on 2007 mapping data provided by MORPC.

Alum Creek Trail

The Alum Creek Trail runs from Main Street in Westerville to connect with Blacklick Creek Trail in Franklin County at Three Creeks Park. The trail currently consists of two segments, listed from the south to the north:

- Three Creeks Park to Airport Drive/Ohio Dominican University
- Easton to Westerville

The City has plans to develop the trail system from Innis Park to Hayden Park. Approximately 15 miles of the system have been constructed in Columbus.

Trailheads are provided along all segments at the trail at parks and at Easton Way. Trailheads include:

North Segment: Cooper Park, Casto Park, Strawberry Farms Park, Tanager Woods Park, and Parkridge Park, Easton Way

South Segment: Wolfe Park, Academy Park, Nelson Park, Madison Mills Park, and Three Creeks Park

Blacklick Creek Trail

Approximately 10 miles of trail have been constructed along the Blacklick Creek Greenway within Columbus, Groveport and Franklin County. Four miles of existing trail are within Columbus' jurisdiction (See Table 3-1). The trail consists of two segments:

- From Alum Creek Trail in Three Creeks Park to just south of US-33 on the west edge of Groveport. This trail is within Grovepark.
- Shannon Road at Blacklick Parkland east, where it splits to serve Portman Park to the north and Pickerington Ponds Metro Park to the south. This 5.7 mile trail is within Columbus.

There are plans to connect the two segments. The proposed connection includes areas within the county and the City of Columbus.

The I-670 Multi-Use Trail

The 4-mile bike trail connects the Alum Creek Trail to Fort Hayes. It runs along I-670 and crosses the highway twice. This is part of the planned Downtown Bikeway Connector, and is an important link in the statewide Ohio to Erie Trail.



The Olentangy River Trail links Downtown Columbus to Neighborhoods in the North

Table 3-1: Existing Shared Use Paths within the City of Columbus

Name	From	To	Miles within Columbus
Alum Creek Trail - South	Three Creeks Park	Hayden Park at Airport Rd	10.2
Alum Creek Trail - North	Easton Soccer Fields (Easton Way and Sunbury Rd)	I-270 (Westerville Border)	5.1
Blacklick Creek Greenway Portman/Pickerington Ponds Metro Park	Shannon Road	Portman Park/Pickerington Ponds Metro Park	4.2
I-670 Multi-Use Trail	Alum Creek Trail	Fort Hayes	4.0
Olentangy Trail	Scioto/Olentangy Confluence	Worthington Hills Park	14.3*
Scioto Trail (Lower)	Berliner Park	Dublin Road Water Plant	7.5
Scioto Trail (west)	Dodge Park	Souder Avenue	1.9
Scioto Trail (Upper)	Grandview Avenue	River's Edge Office Park on Dublin Road/Riverside Drive	1.8
Sullivant Trace Path	Rhodes Park	Holton Park	1.0
TOTAL MILES			50

Source: MORPC Bikenways GIS, September 2007.

** 1.75 miles of Olentangy Trail is located in Worthington*

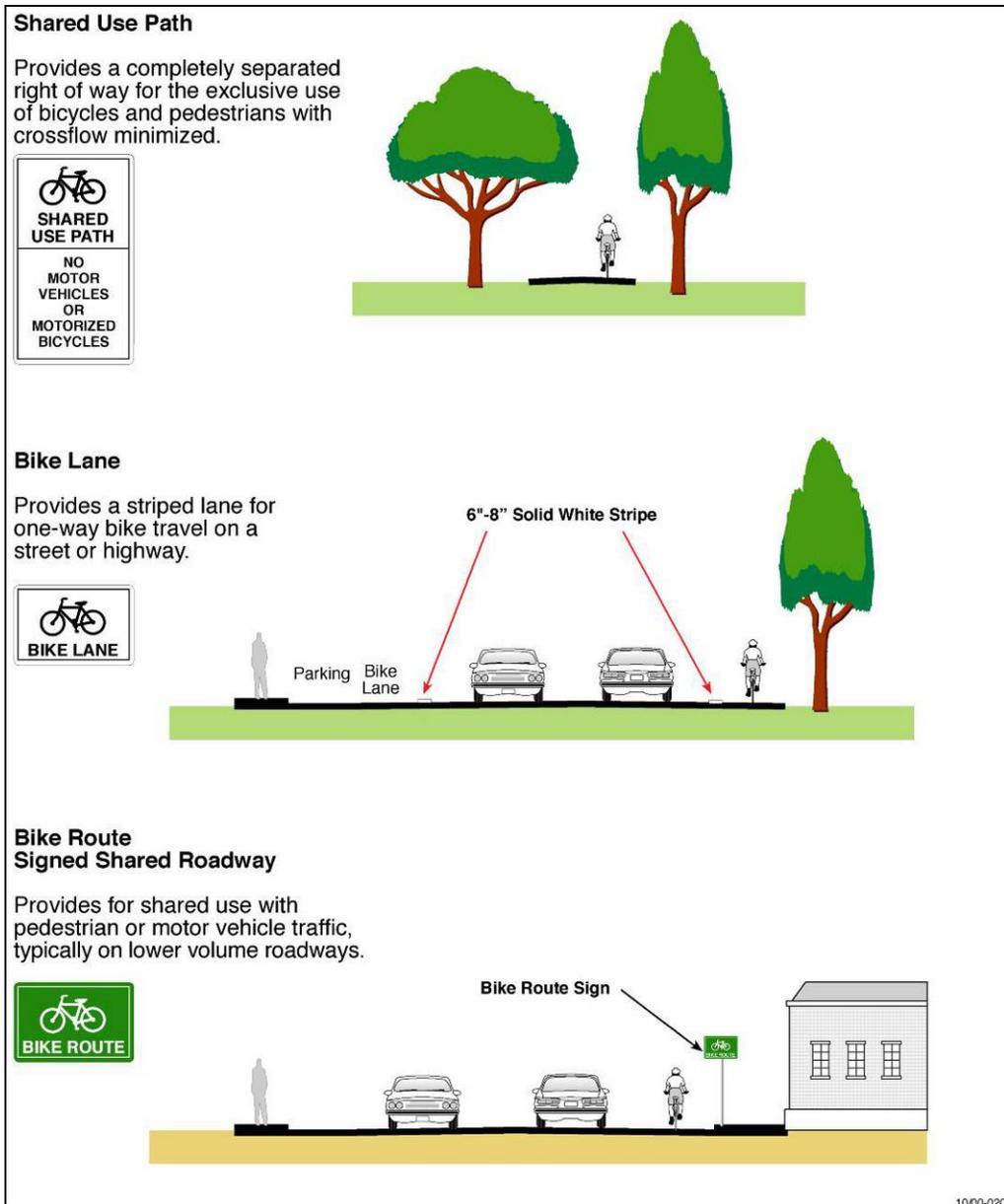


Figure 3-1: AASHTO Bicycle Facility Types

Figure 3-2: Existing Bicycle Network

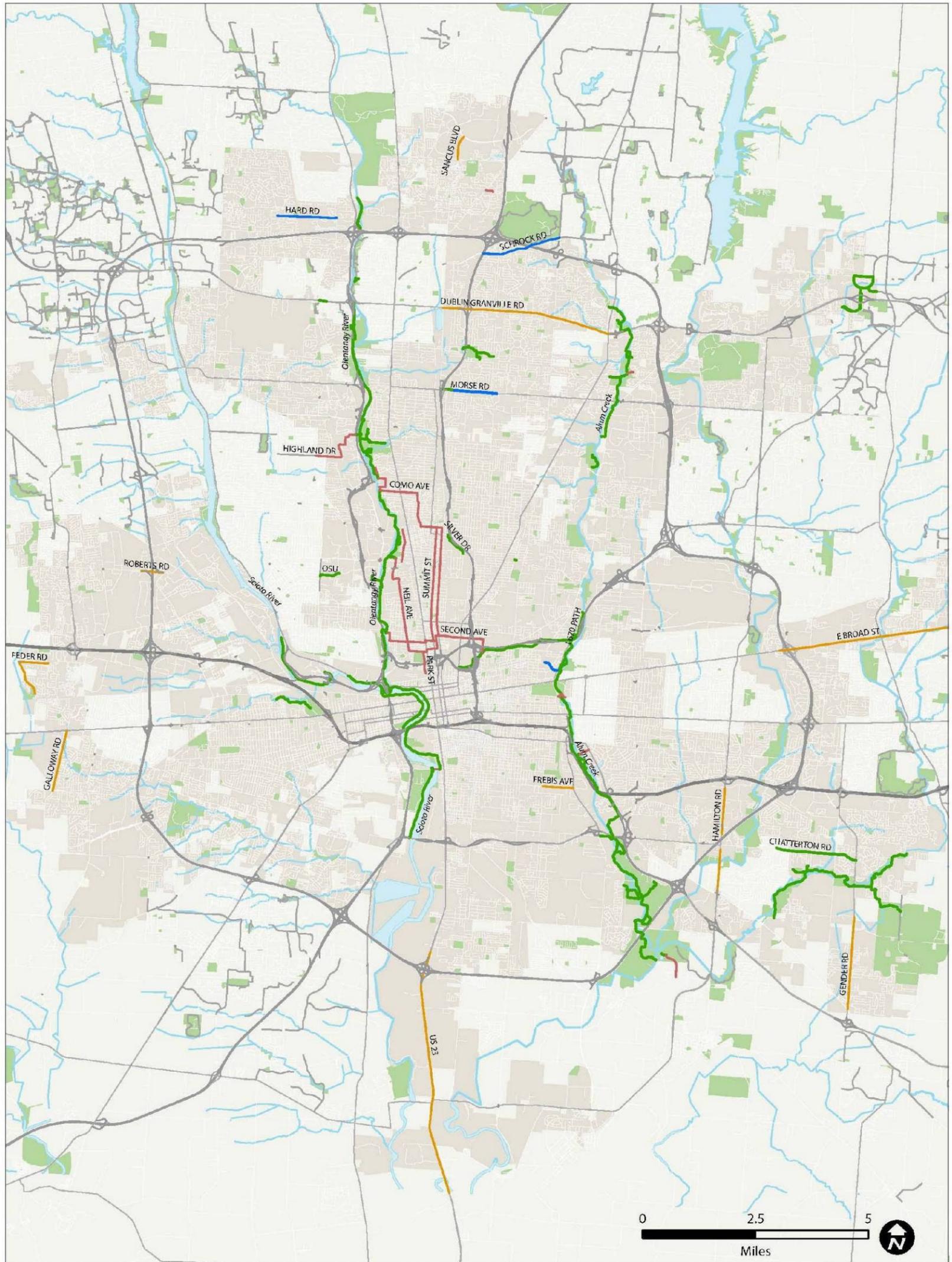


Figure 3-2: Existing Bicycle Network

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|---------------------------|-------------------------------------|----------|
| Existing Bikeways | Bikeways Outside of Columbus | Parks |
| Shared Use Path | Existing | Columbus |
| Bike Lane | | |
| Signed Shared Roadway | | |
| Paved Shoulder, Wide Curb | | |



Data Source: City of Columbus, Franklin County, Mid-Ohio Regional Planning Commission, U.S. Census. Map created by Alta Planning + Design. January 2008.

Figure 3-3: Existing Bicycle Network: Downtown Columbus



Figure 3-3: Existing Bicycle Network: Downtown Columbus

- | | |
|---|--|
| Existing Bikeways |  Parks |
|  Shared Use Path |  Columbus |
|  Signed Shared Roadway | |



Data Source: City of Columbus, Franklin County, Mid-Ohio Regional Planning Commission, U.S. Census. Map created by Alta Planning + Design. January 2007.

Olentangy Trail

The 14-mile Olentangy Trail connects Worthington, Clintonville, The Ohio State University, Harrison West and Downtown and is well-used by many residents. This pathway includes two bridges that cross the Olentangy River. The pathway was built over many years, and as such varies in width from 8' to 10' of paved surface. This popular trail serves many neighborhoods and provides a prime commuter route between residential neighborhoods to the north and downtown Columbus. Some sections are not wide enough to comfortably accommodate all users.

At North Broadway trail users must exit the shared path portion of the trail, and continue on the roadway before reentering the trail.

Most of the trail's 14.3 miles are located within Columbus' jurisdiction. Approximately 2 miles are located within Worthington.

Trailheads are located at Worthington Hills Park, Clinton-Como Park, Antrim Park, Whetstone Park, Northmoor Park, Tuttle Park, The Ohio State University, and Confluence Park.

While the trail is nearly continuous for its entire length, trail users must currently use on-street facilities at North Broadway, and through a section within The Ohio State University.

Scioto Trail

Approximately 11 miles of bicycle path has been built along the Scioto River in Downtown Columbus. This trail consists of four sections:

Lower Segment 7.5 mile segment from Frank Road to the Dublin Road Water Treatment Plant. This trail is one of the first stretches of trails Columbus built along a greenway. It serves commuters and recreational needs into the downtown area.

West Segment 1.9 mile segment on the west side of the river from Dodge Park to Souder Avenue. A trailhead is provided at the south end at Dodge Park. There is no trail head on the north end. The trail can be accessed at Main St., Rich St., Broad St., and Souder Avenue.

Upper Segment 1.8 mile segment along the east side of the Scioto River from Grandview Ave., under two I-670 bridges to a dead end near the River's Edge Office Park on Dublin Road/Riverside Drive. It will eventually be a part of the Upper Scioto Greenway Trail system running from downtown north to Griggs Park. Access is only at Grandview Ave at the I-670 exit.

Connector Trails

Approximately 10 miles of shorter connector trails have been built to provide access to parks and the longer trails. These trails are not summarized here, but are included on the map of existing bikeways.

The Ohio to Erie Trail

The Ohio to Erie Trail is a cross-state multi-use trail that when completed would reach from Cincinnati to Columbus to Cleveland. Within Columbus, the route currently runs along West Broad

Street to the Scioto Trail to the Olentangy Trail, then zigzags through residential streets to Schrock Road bicycle lanes, where it connects to the Alum Creek Trail in Westerville. The future alignment will follow the proposed Camp Chase Trail to the Scioto Trail, through downtown on the proposed Downtown Bikeway Connector, along the I-670 Trail and north along the Alum Creek Trail.

3.5.2. On-Street Bike Lanes and Signed Shared Roadways

In recent years, the City of Columbus has started to provide more on-street bicycle facilities. The city currently has 6.3 miles of bicycle lanes. Bicycle lanes exist on Hard Road between Linworth Road and Smoky Row Road (1.3 miles), on Schrock Road between Cleveland Avenue to just West of Huntley Road (3.0 miles), and on Morse Road from Karl Road to 4th (2 miles).

3.5.3. Bikeway Signage

Bikeway signage includes signs identifying a signed shared roadway, lane or shared-use path to cyclists and drivers (e.g. “Bike Lane” signs posted along a roadway with a bike lane), signs providing regulations or warnings to cyclists or drivers (e.g. bicycle-sized “STOP” signs on shared use paths), and signs providing wayfinding to cyclists (e.g. trailhead signage or bike route numbering).

On all shared use paths, Columbus uses trail wayfinding signage based on MORPC’s regional Central Ohio Greenways signage plan. This signage program has been adopted by several communities and provides a uniform identification and wayfinding system for all of Central Ohio.

On-street facilities use standard Ohio bikeway signage. Directional signage is provided by Columbus’ numbered bikeways corridor system, described in detail below. Bikeway-roadway crossings sometimes include signage indicating that motorists should yield to trail users.

In the mid-nineties, in response to resident requests to provide on-street bicycle facilities, and in conjunction with MORPC’s Regional Bicycle Master Plan update, Columbus developed a system of numbered bike routes to assist bicyclists in traversing the city. These bike routes are identified in **Table 3-2: On-Street Bike Routes Identified in 1994**. A single route may include both on-street and off-street facilities.

A list of these signed routes is provided below. Some of the routes have been installed. Route signs are standard bike route green with the route number on them.

The reasons for designating these alignments as bike routes were complex. Below are examples, with some reasons why these were selected.



Columbus uses Central Ohio Greenways wayfinding signage on its shared use paths.



- High Street, Neil Avenue: Has relatively high levels of bicycle use.
- Proposed Bikeways 53 and 54: Forms a coherent, relatively low-volume route through town.
- Williams Road: Forms a continuous route.
- Parsons Avenue: No freeway interchanges.
- Harrisburg Pike, Norton Road: Has paved shoulders.
- Morse Road, Route 161: Provides access to major commercial areas.
- Neil Avenue: Creates a direct route to major trip generator.
- Dublin Road, McKinley Avenue, Hilliard-Rome Road: Easy to add a bikeway.
- Walcutt and Roberts Roads: Provides continuity to a corridor.
- Northtowne and Sharon Woods Boulevards: Has relatively low traffic volumes.
- Summit & Fourth Street: Streets with excess capacity.

Table 3-2: On-Street Bike Routes Identified in 1994

Number	Direction	Name
360	EW	New Rome to Canal Winchester
380	EW	West Jefferson to Reynoldsburg
390	NS	Darbydale to Dublin
410	NS	Grove City to Dublin
440	EW	Hilliard to Grandview Heights to Bexley
460	EW	Upper Arlington to Gahanna
480	EW	Upper Arlington to Gahanna
490	NS	Lockbourne to Clintonville
500	EW	Henderson-Morse Bikeway
510	NS	Obetz to Polaris
530	NS	State Fairgrounds to Sharon Woods Park
540	EW	Dublin to New Albany
550	NS	Obetz to Bexley
560	EW	Westerville to Worthington
580	EW	Dublin to Westerville
670	NS	Canal Winchester to New Albany

3.5.4. *Bicycle-Accessible Bridges*

Columbus has constructed several bicycle and pedestrian bridges in recent years. Bridges span the Olentangy River, the Scioto River, and Alum Creek to provide access to the City's shared-use paths. Additional bridges have been constructed to connect neighborhoods over freeways, such as the bicycle and pedestrian bridges that span Interstate 71. The Broadmeadows Bicycle and Pedestrian Bridge, which connects Broadmeadows Park to the Olentangy Trail, will be completed in 2008. On-street crossings of the freeways and rivers are generally provided by arterial roadways, which do not always provide comfortable bicycling conditions.

3.5.5. *Bicycle Actuated Signal Detection*

Bicycle actuated signal detection includes in-pavement loop detectors, video detection and infrared systems. Loop detectors are in-pavement wire sensors that activate traffic signals when a vehicle is positioned over the loop. They work by sensing the metal in the vehicle. Several types of loop detectors can be adjusted to be sensitive enough to sense when a bicycle has stopped over the loop, and thus allow a bicyclist to activate a traffic signal.

Since heavy vehicle traffic and road construction can damage pavement and loop detectors, some cities install video detection at intersections with high volumes of traffic. A vehicle is detected when it enters a preset detection boundary within the camera's view. Video detection systems can be modified to identify bicyclists as well as motor vehicles.

Infrared detection can detect heat from the bicyclist and trigger a traffic light.

3.5.6. *Bicycle Parking*

Columbus provides bicycle racks along many of its shared-use paths and bicycle lockers at selected COTA park-and-ride lots (see Multi-modal connections section.). The Ohio State University provides ample bicycle parking. Bicycle parking is not generally available in retail and commercial areas. Major destinations, such as the Arena area in downtown, do not generally provide bicycle parking.

The Easton development re-zoning includes language for bike parking requirements. However, it is not written into the City's policies to require developers and businesses to provide bicycle parking. Adding such a requirement to the City's municipal code is recommended. The Bikeways Advisory Committee has developed a draft of bicycle parking ordinance.



Paving the shoulder on this road would allow the bicyclist and motor vehicle to share the roadway

3.6. Assessment of Conditions

3.6.1. *Bicycle Conditions on Streets*

Columbus' roadway network supports local bicycling within residential neighborhoods, but does not provide adequate longer cross-town facilities for bicyclists who are not comfortable riding on roads with heavy traffic volumes, high motor vehicle speeds, or multiple lanes. Below are descriptions of common on-street conditions.



Many of Columbus' arterials are not comfortable for bicycling, yet are often the only way to reach a destination

Bikeable, but Discontinuous Residential Streets

Residential roadways, which comprise the majority of Columbus' roadway network, are hospitable to bicyclists. These streets tend to have 25 mph speed limits, low motor vehicle volumes, and one lane in either direction. However, the bikeway network cannot be developed only on residential streets. The residential street system is discontinuous. Crossings of major streets, freeways, rivers and railroads can be difficult, and residential streets do not generally provide access to retail, commercial, employment, and entertainment destinations. Bicycling on residential streets can be improved by developing wayfinding signage and improving access across major roads, rivers and railroad tracks.

Constrained Roadway Widths

Constrained roadway widths pose another challenge for bicycling. Especially in Columbus' older neighborhoods, arterials and collectors are relatively narrow, and there is little room to widen these streets to accommodate bicycle facilities. Outside lane widths are often narrow and uncomfortable for bicycling. It may be possible to accommodate bicycle facilities on these roadways through road diets or shared lane markings.

Lack of Shoulder

In more rural areas, roads may lack shoulders, making it difficult to bicycle. These roads could be easily made bicycle friendly by paving the shoulder.

High Volume Arterials are Uncomfortable for Bicycling

Many of Columbus' arterials are not comfortable for bicycling, due to high speeds, numerous driveways, and heavy traffic. Improving these roadways for bicyclists generally means providing a separate lane or right of way for bicyclists. Modifications can range from reducing lane widths to provide bicycle lanes, adding bicycle lanes as part of a road diet, to developing an access control plan and parallel shared use path. The recent retrofit of Morse Road to include a median and bicycle lanes is a great example of how arterials can be improved to accommodate bicycling.

Integrated Curb and Gutter

Many of Columbus' streets have an integrated curb and gutter, with a gutter pan ranging from one foot to two feet in areas. The gutter pan effectively reduces the lane width for bicyclists. With repaving, a lip can develop between the gutter pan and the pavement, creating a hazard for bicycling. Roads with integrated curb and gutter should have wider bicycle facilities.

3.6.2. Bicycling Conditions on Shared-Use Paths

Columbus' shared-use paths are generally well-maintained. Many amenities have been constructed along the facilities, such as natural history interpretation areas, bicycle parking, shade shelters, benches, and landscaping. Shared-use paths near downtown are especially well-maintained.

Observations made during a field review include:

- Shared-use paths are well used by bicyclists, pedestrians, joggers, and people walking dogs.

- Shared-use paths are integrated into the neighborhood fabric, skirting parks and recreational facilities.
- The street connections to the shared-use paths aren't apparent, especially between paths and retail and commercial areas.
- There may be a need for additional trail staging areas. The OSU Medical Center parking lot often serves as a makeshift staging area for Olentangy Trail.
- Major repairs on shared-use paths can be slow.
- Lighting is not provided on most segments of the shared-use paths.
- Shared-use path width varies. A narrow width of 8' may not be wide enough to accommodate all users.
- Wayfinding is not apparent at shared-use path gaps where the shared-use path ends and users are required to use the road.
- Major signalized crossings are well-signed with regulatory signage and include pedestrian push buttons, but could be improved with infrastructure improvements.

3.7. Encouragement and Education Programs

Columbus sponsors encouragement and education programs related to bicycling. These include:

- Commit to be Fit, a health promotion program to encourage people to eat right and exercise.
- Pedal Instead, a program to provide City-sponsored secure bicycle parking corrals at summer festivals.
- The City also distributes three bicycle safety publications:
- Bicycle Safety: What Every Parent Should Know, a brochure written for parents teaching children how to bicycle. It covers most of the basic skills needed for bicycling on local streets.
- Bicyclist Survival, a general guide to bicycling for adults. The booklet discusses equipment, repairs, weather, clothing, and traffic skills.
- Street Smarts describes safe techniques for bicycling on arterial streets.

Nonprofits involved in encouraging bicycling in Columbus include:

- Columbus Outdoor Pursuits, a non-profit organization that provides outdoor recreational opportunities and training for youth and adults in central Ohio.
- Consider Biking and Simply Living are non-profit organizations working to promote bicycling.
- Central Ohio Bicycle Advocacy Coalition is a non-profit advocacy group with the mission of *“working, through education and through the building of a safe, comprehensive network of complete streets and trails to create a friendlier environment for bicycling enabling all our citizens to make bicycling part of their everyday routines.”* COBAC advocates for bicycle-friendly laws and policies, recruits volunteers for Pedal Instead and other bicycle-events, and publicizes bike rides.

The following agencies provide bicycle helmets and/or brochures to train on proper fitting and education.

- Nationwide Children’s Hospital implements a summer Bike Safety Program and includes bike safety and helmet use in babysitting training classes, S.A.F.E. (Safety Awareness for Everyone) and parenting classes.
- SafeKids Coalition has a grant process to purchase bicycle helmets. The grants are up to \$300 one time per year.
- Center for Injury Research and Policy, Children’s Hospital, provides helmets to schools and other groups. The helmets come with lessons on proper fitting, safety and education.

There is one League of American Cyclists Bicycle Instructor listed for Columbus.



COTA publishes a brochure instructing bicyclists on the use of bike racks on buses.

3.8. Multi-Modal Connections

The Central Ohio Transit Authority (COTA) supplies local bus service. COTA recently installed bike racks on all its buses. Demand for the service is clear; bicyclists have been using the racks on nearly all bus lines. Between May 2006 and April 2007, COTA saw over 35,000 weekday bicycle boardings—an average of 221 bicycle boardings each weekday. Bicycle boardings comprise 0.25% of overall ridership. Ridership data from the top ten bicycle boarding stops is shown in **Table 3-3: Top Ten COTA Bicycle Boarding Locations.**

Table 3-3: Top Ten COTA Bicycle Boarding Locations: May 2006 to April 2007

Line	Stop	Service	Average Daily Passengers	Average Daily Bicycle Boardings	Bicycle Boardings as a Percentage of Daily Boardings	Total Annual Bicycle Boardings
2	N.High St./E. Main Street	Local	10315	24	0.24%	6416
10	Broad St.	Local	6134	20	0.33%	5185
1	Cleveland/Livingston	Local	7132	16	0.23%	4340
8	Frebis Ave./Hamilton Ave.	Local	3229	8	0.27%	2278
6	Mt Vernon Ave./Sullivant Ave.	Local	2849	7	0.27%	1998
4	Indianola Ave./Parsons Ave.	Local	2413	6	0.27%	1700
3	Northwest Blvd/W.Mound St.	Local	1403	3	0.26%	943
18	Kenny Rd.	Local	904	3	0.38%	881
16	Long St/Easton	Local	2457	3	0.13%	854
7	Whittier St./Neil Ave	Local	2454	3	0.13%	852

Source: COTA Ridership Survey May 1 2006 to April 31, 2007.

Table 3-4: COTA Bike Locker Locations

Locations	Served By
Reynoldsburg Birchview near Brice Rd. & Eastgreen Blvd	#1, #45, #47
Crosswoods Off N. High St., just south of Campus View/Worthington Woods Bridge	#2, #31
Grove City Stringtown Rd. & Parkmead Dr.	#15, #64
Westwoods W. Broad St. & Westwoods Blvd./Hilliard- Rome Rd.	#10, #53
Delawanda	#2, #31, #95

*COTA bike lockers are fully enclosed.*

Source: COTA website http://www.cota.com/bike_n_bus.asp accessed September 7, 2007.

COTA also has a Bike & Ride program. In addition to the bikes on buses, COTA supplies bike lockers at eight park & ride facilities. Bike locker locations include eight completely enclosed bike lockers. Lockers are available for free rental on a month-to-month basis with a \$10 security deposit.

3.9. Opportunities and Constraints

Columbus' physical structure presents numerous opportunities and constraints to developing a continuous, comfortable bicycle network. These are described below and summarized in **Table 3-5: Opportunities and Constraints**

Columbus City Jurisdiction

Due to its annexations, there are many pockets within Columbus City boundaries that are not within the City's jurisdiction. The uneven boundaries complicate funding, constructing, and maintaining continuous bikeway facilities.

Despite these challenges, the large area of the City allows Columbus to truly develop a regional bicycle network.

Physical Barriers to Continuous Bicycle Facilities

Freeways, railroads, and rivers provide barriers to bicyclists, especially those traveling east to west. Often, the crossings over these barriers are arterial roadways that have high motor vehicle volumes and high speeds. For example, Interstate 71 travels nineteen miles through Columbus. Of thirty crossings, only seven are not arterial streets (two are pedestrian bridges). Two arterials cross the Scioto River in Franklin County: Greenlawn Avenue and State Route 665. Two other crossings, at Interstate 270 and State Route 104, are closed to bicyclists.

Shared Use Path system

Columbus has an excellent shared use path system that has been developed primarily along north-south river corridors. This system provides an excellent backbone for developing the citywide bicycle network. However, the current system is not well-connected to streets. Wayfinding signage,

on-street bicycle facilities that link to the existing trails, new trail access points, and bridges to provide access over barriers could significantly improve access to the trails.

Table 3-5: Opportunities and Constraints

Opportunities	Constraints
Large jurisdiction allows Columbus to provide regional bicycle facilities.	Islands of smaller communities within Columbus mean that proposed bikeways lie within multiple jurisdictions.
Road diets may be possible on many arterials.	Freeways, rivers, and railroads are barriers throughout Columbus.
Alleys in many neighborhoods could be designed as bicycle boulevards.	City is built out, so roadway widening to provide bikeways is not generally possible
Shared use paths can be developed along railroads, highways and rivers.	Crossings over rivers and highways are limited, generally provided by arterial roadways, and usually not bicycle friendly.
Existing shared-use path provides excellent backbone for city-wide bikeway network.	East-west connections are limited by barrier crossings.
Existing bicycle route numbering system can serve as a backbone to a new, improved wayfinding system.	

Alleyways as Bicycle Boulevards

Several neighborhoods within Columbus have alley systems that could potentially be used for low-traffic, low-speed, bicycle boulevards in some neighborhoods. Neighborhoods with alleys include those built during the mid-1800's to early 1900's. These include German Village and portions of the near south; Victorian Village, Italian Village and portions of the Short North; and the Olde Towne East and Franklin Park areas on the near east as well as Clintonville, South Linden, and Hilltop areas. Alleyways in downtown Columbus provide excellent connectivity and a network can be developed by adding high-visibility crossings and speed tables where alleys cross the street system. One high-priority demonstration project in Chapter 5, the Sullivant Avenue East-West Connector, recommends developing an alleyway parallel to Sullivant Avenue as a bicycle boulevard.

Rails to Trails Opportunities

There are many opportunities for Columbus to develop shared-use paths along both abandoned and active railroad corridors. Railroad lines radiate from downtown Columbus, providing access to nearly all parts of the City. Rail-with-trail opportunities have already been identified in Westerville and Hilliard.

Figure 3-4: Opportunities and Constraints

