

The City of Albuquerque's

Bikeways & Trails Facility Plan



City Council Hearing - March 16, 2015

Bikeways & Trails Benefits



Investments in Albuquerque

Early Accomplishments (first 25 years)

- 24 Miles of Bike Lanes
- 39 Miles of Trails
 - Paseo del Bosque
 - Paseo del Nordeste
 - Tramway Trail

Recent Accomplishments (since 2000)

- Tripled the extent of the system
- Three Bicycle Boulevards
- Major Trail Projects
 - Gail Ryba Bridge (over Rio Grande)
 - Bear Canyon Arroyo Bridge (I-25)
 - Four new North Diversion Channel Trail Underpasses

Bikeways & Trails	1974	2000	2014	Total Proposed System
Multi-Use Trails	0	55	154	270
Bike Boulevards	0	0	6	16
Bike Lanes	0	48	203	399
Bike Routes	0	56	134	193
Total System Length	0	159	520*	926
Grade-Separated Crossings	0	15	31	46

Investments in Albuquerque



Recent Accomplishments (since 2000)

- Tripled the extent of the system
- Three Bicycle Boulevards
- Major Trail Projects
 - Gail Ryba Bridge (over Rio Grande)
 - Bear Canyon Arroyo Bridge (I-25)
 - Four new North Diversion Channel Trail Underpasses

Bikeways & Trails	1974	2000	2014	Total Proposed System
Multi-Use Trails	0	55	154	270
Bike Boulevards	0	0	6	16
Bike Lanes	0	48	203	399
Bike Routes	0	56	134	193
Total System Length	0	159	520*	926
Grade-Separated Crossings	0	15	31	46

Public Perspectives (2010)

- ∞ The Albuquerque area has a **great trail system** that should be promoted.
- ∞ Strong desire to get **“interested but concerned”** potential bicyclists riding.
- ∞ To encourage bicycling, **roads should feel safer.**
- ∞ Existing programs should be expanded with **more staff and resources.**
- ∞ **Closing gaps** to high-activity destinations should be a priority.



Public Perspectives (2014)



Source: BikeABQ Survey (374 Responses)

Public Perspectives (2014)



Source: BikeABQ Survey (374 Responses)

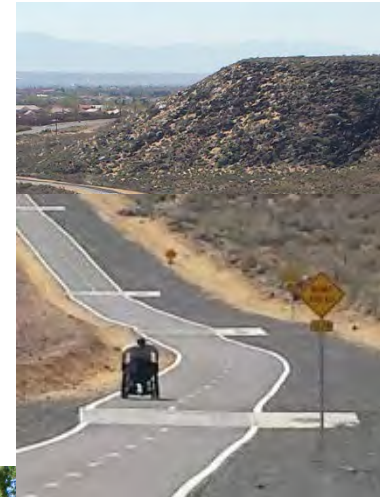
Project Timeline



- ☞ Update started in 2009
- ☞ Three public meetings in 2010; online survey; stakeholder workshops; user & agency interviews
- ☞ Three open house meetings in 2014 with over 100 attendees
- ☞ Draft Plan completed in June 2014
- ☞ Adoption process:
 - September – 1st EPC Hearing
 - October – 2nd EPC Hearing
 - December – 1st LUPZ Hearing
 - February 2015 – 2nd LUPZ Hearing

Purpose

- ∞ Assess the current system
- ∞ Recommend
 - New facilities
 - Management processes
 - Education & outreach programs
- ∞ Improve non-motorized transportation options
- ∞ Connect Parks, Open Space and Trails



Albuquerque's Planning Structure



∞ Rank I

- Comprehensive Plan

∞ Rank II (Bikeways & Trails)

- Area Plans (Rank II)
- Facility Plans (Rank II)

∞ Rank III

- Sector Plans
- Corridor Plans

This Plan is internally consistent with the Comprehensive Plan policies and vision.

Bikeways & Trails System Vision

The City will provide access for *cyclists, pedestrians, and trail users* to all areas of Albuquerque, in order to provide *recreation opportunities* and to encourage cycling and walking as a *viable transportation* options, which result in an improved *quality of life* in the Albuquerque Metropolitan Area.



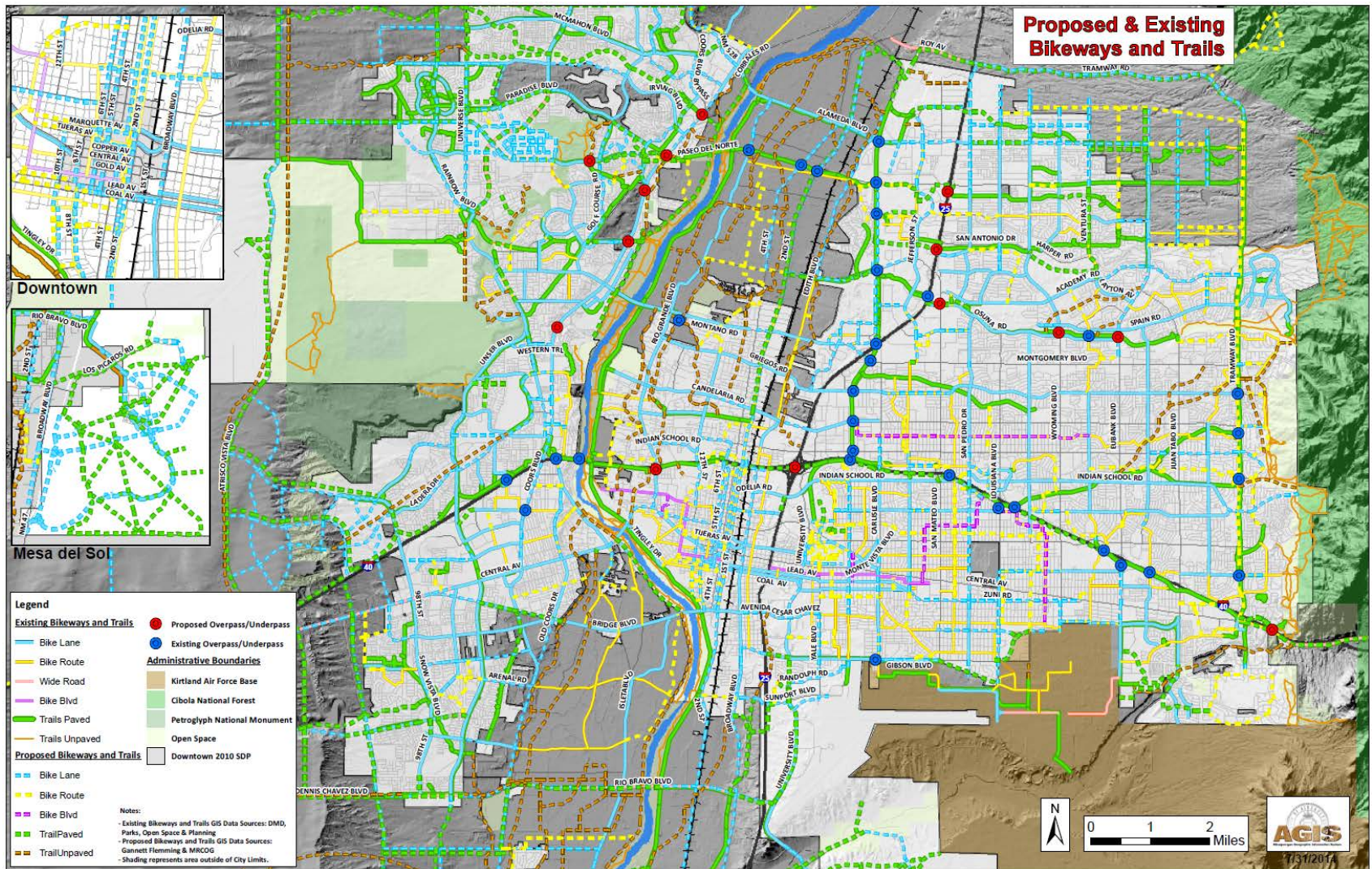
Planning & Policy Framework

7 Plan Goals

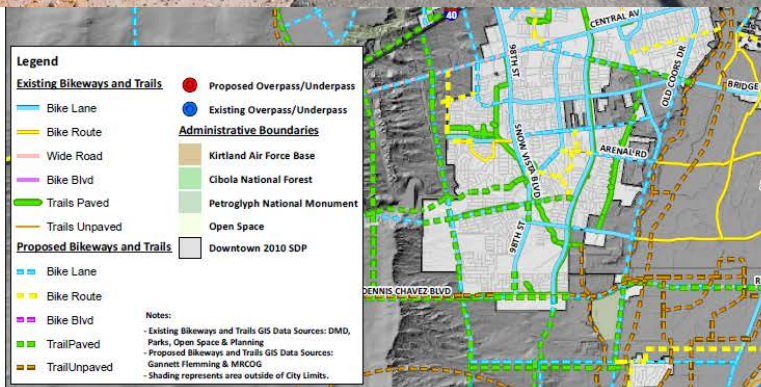
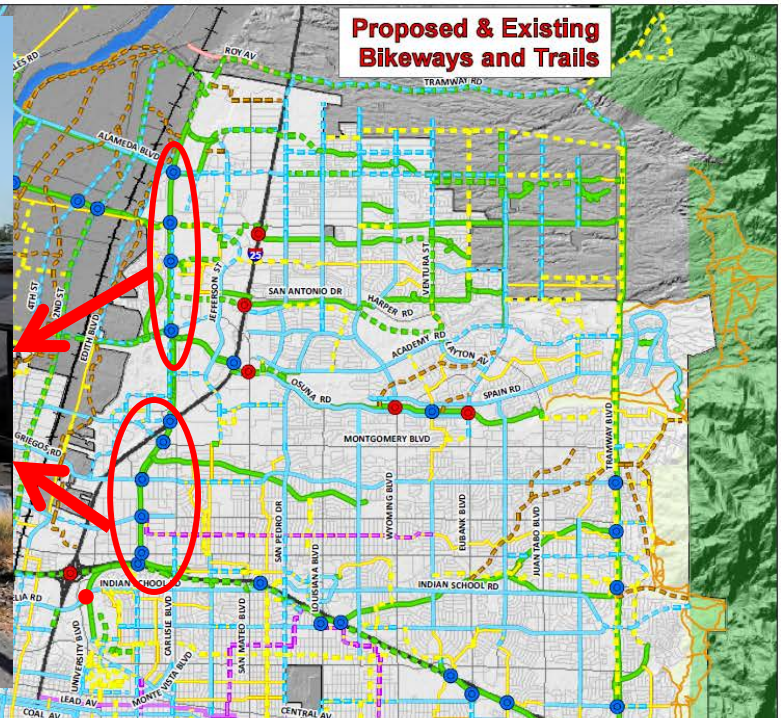


- ✧ **Improve and enhance** cycling and pedestrian opportunities.
- ✧ Develop a continuous, interconnected, and comprehensive **system** of bikeways & trails.
- ✧ Enhance **maintenance** of all bikeways & trails.
- ✧ **Increase use** of the bikeways & trails network.
- ✧ Increase **public awareness** and education related to bikeways & trails.
- ✧ Recognize and leverage the bikeway & trail network as an integral part of economic development and **quality of life**.
- ✧ Streamline administrative practices and coordination.

Proposed Facilities



Proposed Facilities



Programs

☞ Current Safety, Education & Encouragement Programs

- A. City Bicycling & Trail Programs
(Bike Rodeos, Esperanza Community Bike Shop, Bike Box program, trail building & maintenance volunteer program)
- B. Partnerships & Programs to Encourage/Support
(Bike events, driver education, bike valet, Safe Routes to School, advocacy groups & bike clubs)



☞ Proposed Programs

- A. Enhanced enforcement actions (for bicyclists, peds, & cars)
- B. Bicycle & trail counts + crash reporting
- C. Other awareness/encouragement/education programs



Implementation

- A. Administrative Organization & Coordination
- B. Role & Structure of Advisory Committees
- C. Policies for Bikeway & Trail Development
- D. Procedures for Design, Development, & Review
- E. Maintenance Approach



Next Steps

- ∞ Adopt the Plan 😊
- ∞ Prioritize **Legislative Changes** recommended
(that will not be accomplished by the UDO process)
- ∞ **Short-term actions:**
 - A. Construct new facilities according to the Design Manual
 - B. Develop Performance Measures
 - C. Improve efficacy of GABAC and GARTC – training opportunities, collaboration with MRCOG
 - D. Enhance ABQs capacity for monitoring & evaluation

Questions? Comments?



Source: <http://travelingtosome.weebly.com>

Public Comments & Concerns

Other miscellaneous comments:

- Don't combine **transportation and recreation** into 1 system– not standard practice in other communities;
Good to combine and simplify plan – one document, help funding
- Education efforts – need shift to **motorists education**
- Need to **involve all stakeholders**– NMDOT, Bernalillo County, Traffic Operations
- **Need for standards**, not guidelines (use NACTO not AASHTO)
- Use **best practices that are successful elsewhere**
- Add key projects important to bike community, **mechanism for bike community to initiate** and participate in projects; Need to better reflect **community experience and expertise** in plan
- **High speed roadways need more attention**
- Total facility mileage doesn't reflect qualitative experiences
- **Evaluate existing facilities for hazard and risks**
- More specification in certain areas...
- Roads not safe for children – signs, safe routes, **need to be safe for all ages**, etc.
- Maintenance – **need more funding for maintenance**

Comments from the EPC Hearing



Recommended Conditions of Approval:

- Continue to evaluate and confirm the recommended facilities
- Work to identify the extent of facilities that do not meet the current proposed standards
- Work on a summary document that can be used by the community
- Make the text about Maintenance Policies consistent for trails and on-street facilities
- Summarize the recommendations more concisely
- Incorporate NMDOT comments
- Strengthen references to the NACTO guidelines
- Include the League of American Bicyclists recommendations for ABQ
- Add reference to the ADA transition plan



Additional Errata/Edits to Consider:

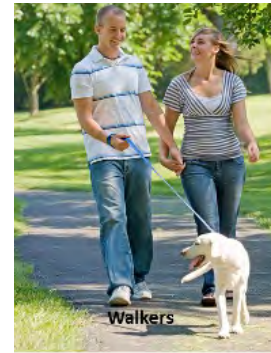
- Update the Design Guidelines to remove references to “safe” and “safety”
- Incorporate ABQ Ride’s comments



People

Existing Conditions:

- Population:
 - 555,500 people in ABQ
 - 902,800 in AMPA
- Variety of cyclists, with different needs
 - Advanced users
 - New riders, children
 - Traffic intolerant adults
- Pedestrians, equestrians (slower travel speeds)
- Needs of utilitarian users & recreational users are similar: safe, comfortable, direct routes



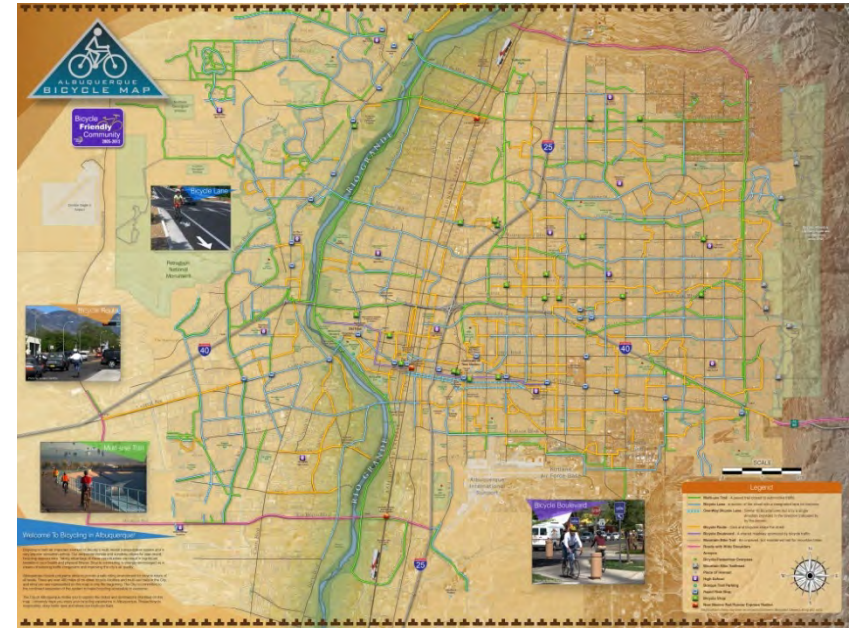
Our Trail & Bikeway System

Facility Types

- Multi-use trail - 154 miles
- Bicycle lane - 197 miles
- Bicycle route - 134 miles
- Bicycle boulevard - 6 miles

Support facilities

- Intersections & Crossings
- Parking & trailheads
- Signage



Our Bikeway & Trail System

∞ Assets & Challenges:

- Access to Destinations -
 - Major employment centers
 - Civic buildings such as libraries
 - Transit stations
 - Major retail and commercial centers
 - Schools/Universities
- Connections to Parks & regional recreation areas
- Multi-Modal Connections



System Analysis



Public Involvement

- 3 Public open house meetings
- 2 Stakeholder workshops
- 13 User and agency interviews
- Recent regular attendance @ GABAC/GARTC



Trail & Bikeway User Counts



Crash Analysis

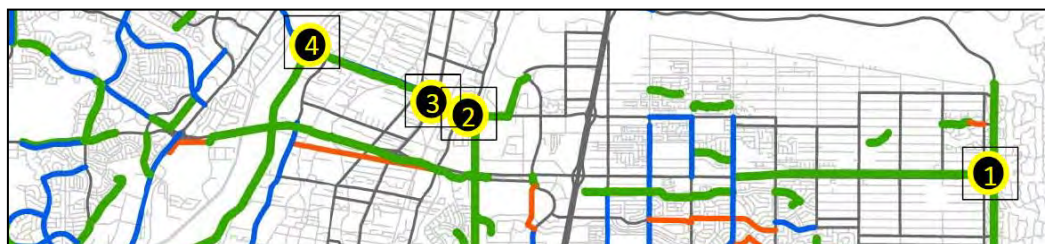


Bicycle specific analyses:

- Bike Quality Index
- Cycle Zone Analysis
- User Survey
- Street Plan GIS analysis
- Engineering Gap analysis
- Bicycle Commuting Data



Survey of other jurisdictions



Our Bikeway & Trail System

∞ Assets & Challenges:

- Physical Barriers
 - Interstate Highway, Arterials & Rail Road
 - Indian Pueblos
 - Airports / Military Base
- Topography
 - West Mesa Escarpment
- Geography
 - Rio Grande
 - Open Space & Arroyos
- Discontinuous System
- Lack of Wayfinding Tools



System Analysis

🌀 Bikeway & Trail User Programs

- Education, Encouragement & Enforcement
- Review existing programs & recommend new ones

🌀 Current Studies

- 50 Mile Activity Loop
- Bicycle boulevard assessment
- Bike route signage assessment
- Wayfinding sign project

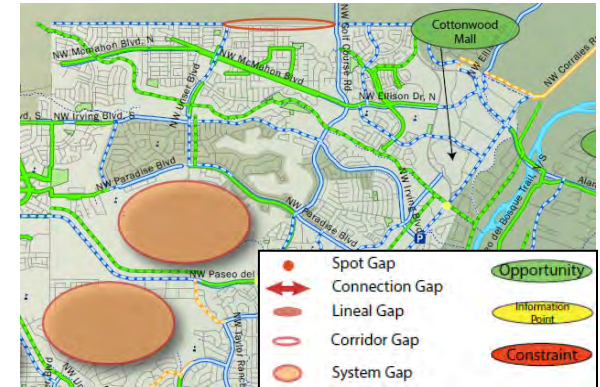


Esperanza Community Bike Shop
Graduates of the First Class

Recommendations

🌀 Bikeway & Trail Development Approach

- A. Administrative Organization & Coordination
- B. Role & Structure of Advisory Committees
- C. Policies for Bikeway & Trail Development
- D. Procedures for Design, Development, & Review



🌀 Legislative Recommendations – City Traffic & Zoning Code, DPM

🌀 Maintenance & Operations Recommendations

🌀 Monitoring & Evaluation

- A. Bikeway & Trail Counts
- B. Crash Data Collection & Analysis



Design Manual

Bicycle & Trail Facilities

1.6 Bike Lanes

Design Summary

Designated exclusively for bicycle travel, bike lanes are separated from vehicle travel lanes with striping and also include pavement stencils. Bike lanes are most appropriate on arterial and collector streets where higher traffic volumes and speeds warrant greater separation.

The DPM recommends minimum bike lane widths of:

- 5 feet, measured from painted edgeline to edge of gutter, on roadways with posted speed limits of 40 mph or greater.
- 4 feet, measured from painted edgeline to edge of gutter, on roadways with posted speed limits of 35 mph or less.

However, AASHTO and other guidance authorities recommends a 5-foot minimum for bike lanes, with 4 feet only in restricted corridors. This text should be considered for revision to specify that a 5-foot bike lane is recommended on streets with posted speed limits of 35 mph or less. In addition, the DPM should specify that bike lanes are measured to the inside edge of the gutter pan, ensuring smooth pavement rather than a gutter edge in the bike lane.

Discussion

Many bicyclists, particularly less experienced riders, are more comfortable riding on a busy street if it has a striped and signed bike lane than if they are expected to share a wide lane. Providing marked facilities such as bike lanes is one way of helping to persuade more tentative riders to try bicycling.



Bike lanes are a popular accommodation for commuter and recreational cyclists.



Bike lane pavement markings in Portland, Oregon provide character to the roadway.

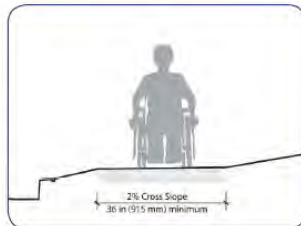
1.9.1.2 Trail Accessibility

Design Summary

- 3 feet minimum clear width, where less than 5 feet, passing space should be provided at least every 100 feet.
- Cross slope should not exceed 5 percent.
- Signs shall be provided indicating the length of the accessible trail segment.
- Curb ramps shall be provided at roadway crossings and curbs. Tactile warning strips and auditory crossing signals are recommended.

Discussion

Slopes typically should not exceed 2 percent. However,



ADA clearance requirement.

Intersections & Grade Separated Crossings

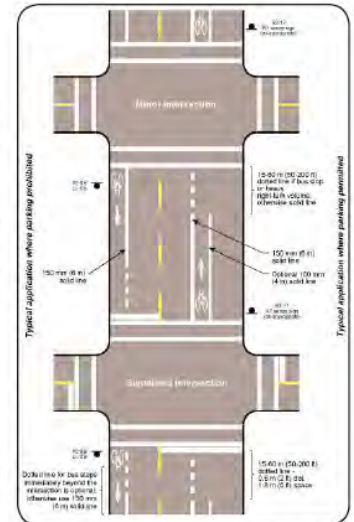
1.6.1.4 Bike Lane Striping at Intersections

Design Summary

- Stop striping bike lanes at painted crosswalks or the near side cross street property line
- At complex intersections, bike lanes may be dotted.
- At signalized or stop-controlled intersections with right-turning motor vehicles or at bus stops on the near side of the intersection, replace the solid striping to the approach should be with a broken line with 2-foot dots and 6-foot spaces for 50 to 200 feet.
- If a bus stop is located on a far side of the intersection, replace the solid white line with a broken line for at least 80 feet from the crosswalk on the far side of the intersection.
- At T-intersections with no painted crosswalks, continue the bike lane striping on the side across from the T-intersection through the intersection area with no break.

Discussion

Bike lane striping should be brought to the crosswalk or property line on the near side of an intersection. Bike lane striping is not continued through intersections, except where high volumes of motor vehicles are turning right, a bus stop is located in advance of or on the far side of the intersection or at a complex intersection. In the example photo from Portland, Ore., bicyclists are directed on the right hand side of a



Landscaping improves the walking and bicycling experience, and can deter vandalism.

Type 4: Grade-separated Crossings

Grade-separated crossings may be needed where existing bicycle/pedestrian crossings do not exist, where ADT exceeds 25,000 vehicles and where 85th percentile speeds exceed 45 mph. Safety is a major concern with both overcrossings and under-crossings. In both cases, shared-use path users may be temporarily out of sight from public view and may have poor visibility themselves. Under-crossings, like parking garages, have the reputation of being places where crimes occur. Most crime on shared-use paths, however, appears to have more in common with the general crime rate of the community and the overall usage of the shared-use path than any specific design feature.

Design Manual

Amenities & Wayfinding

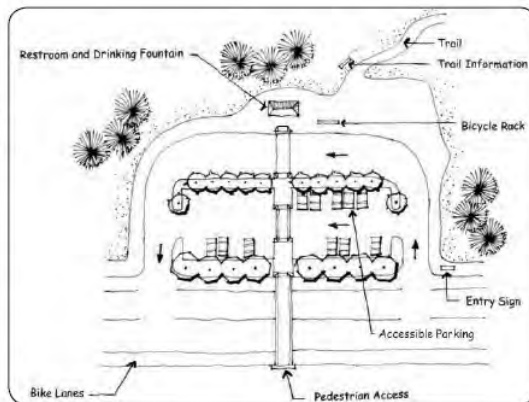
1.9.5.4 Trailheads

Design Summary

- Major trailheads should include automobile and bicycle parking, trail information (maps, user guidelines, wild-life information, etc.), garbage receptacles and restrooms.
- Minor trailheads can provide a subset of these amenities.

Discussion

Good access to a path system is a key element for its success. Trailheads (formalized parking areas) serve the local and regional population arriving to the path system by car, transit, bicycle or other modes. Trailheads provide essential access to the shared-use path



for the cyclist alerting the motorist to the unique character and operations of the bicycle boulevard (Figure 6).

1.10.1.4 On-Street Signage Guidelines

Signage for on-street bikeways can serve both wayfinding and safety purposes including:

- Helping to familiarize users with the bicycle network.
- Helping users identify the best routes to destinations (Figure 7).
- Helping overcome a "barrier to entry" for people who are not frequent cyclists or pedestrians.
- Visually cue motorists that they are driving along a bike route and should use caution.
- Including mileage and travel time estimates minimize the tendency to overestimate the amount of time it takes to travel by bicycle (Figure 8).

Identifying Destinations for Signage

Destinations for on-street signage can include:

- On-street bikeways (regional or local)
- Commercial centers
- Regional or local parks and trails
- Public transit sites
- Civic or community destinations, such as hospitals and schools
- Area destinations (e.g., cities, downtowns or neighborhoods)



Figure 6a



Figure 7 - Wayfinding signage concept.

Maintenance Practices

1. On-Street Bike Facility Maintenance Considerations

Like all roadways, bike lanes, routes, and bike boulevards require regular maintenance. This includes sweeping, maintaining a smooth roadway, ensuring that the gutter-to-pavement transition remains relatively flat and installing bicycle-friendly drainage grates. These considerations are particularly relevant to bike lanes, as cyclists have a narrow corridor to traverse.

Surface

Bicycles are much more sensitive to subtle changes in roadway surface than are motor vehicles. Various materials are used to pave roadways and some are smoother than others. Compaction is also an important issue after trenches and other construction holes are filled. Uneven settlement after trenching can affect the roadway surface nearest the curb where bicycles travel. Sometimes compaction is not achieved to a satisfactory level, and an uneven pavement surface can result due to settling over the course of days or weeks. For more information, see BikeSafe Repetitive/Short-Term Maintenance document:

www.bicyclinginfo.org/bikesafe/countermeasure.cfm?CM_NUM=4

- Ensure that on new roadway construction, the finished surface on bikeways does not vary more than 1/4 of an inch.
- Maintain a smooth surface of all bikeways that is free of potholes.
- Maintain pavement so ridge buildup does not occur at the gutter-to-pavement transition.

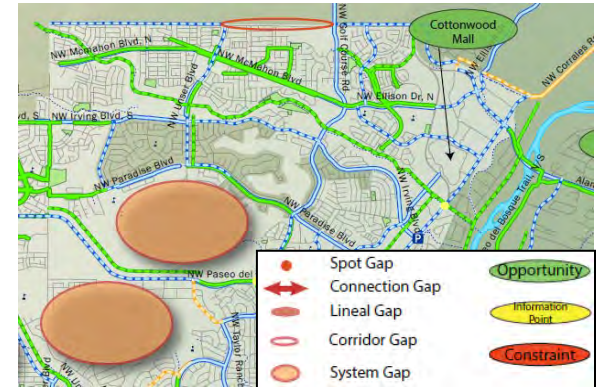


Examples of bicycle-safe drainage grates.

Implementation

🌀 Bikeway & Trail Development Approach

- A. Administrative Organization & Coordination
- B. Role & Structure of Advisory Committees
- C. Policies for Bikeway & Trail Development
- D. Procedures for Design, Development, & Review



🌀 Legislative Recommendations – City Traffic & Zoning Code, DPM

🌀 Maintenance & Operations Recommendations

🌀 Monitoring & Evaluation

- A. Bikeway & Trail Counts
- B. Crash Data Collection & Analysis

