COTTONWOOD BICYCLE PLAN

2018 UPDATE

ACKNOWLEDGMENTS

SPECIAL THANKS

Residents and City staff who contributed comments and insight in reviewing the draft of the plan.

City Council:

Mayor Tim Elinski
Vice Mayor Kyla Allen
Council Member Deb Althouse
Council Member Tosca Henry
Council Member Ruben Jauregui
Council Member Linda Norman
Council Member Karen Pfeifer

PROJECT TEAM

City of Cottonwood Bicycle Advisory Committee:

Dylan Johnstone
Dr. Bob Richards
Nancy Gottschalk, Yavapai County Health Services
Heather Klomparens, Yavapai County Health Services
Hezekiah Allen, City of Cottonwood Recreation Services

IMAGES, FIGURES, AND TABLES

All images, figures, and tables by Dylan Johnstone unless otherwise noted.

TABLE OF CONTENTS

This page is left intentionally blank.

INTRODUCTION

INTRODUCTION

The city of Cottonwood serves as a regional and market center to the growing Verde Valley communities, including Clarkdale, Jerome, Cornville, Camp Verde, Yavapai-Apache Nation, Verde Village, Village of Oak Creek, Lake Montezuma, and Sedona (Figure 1).

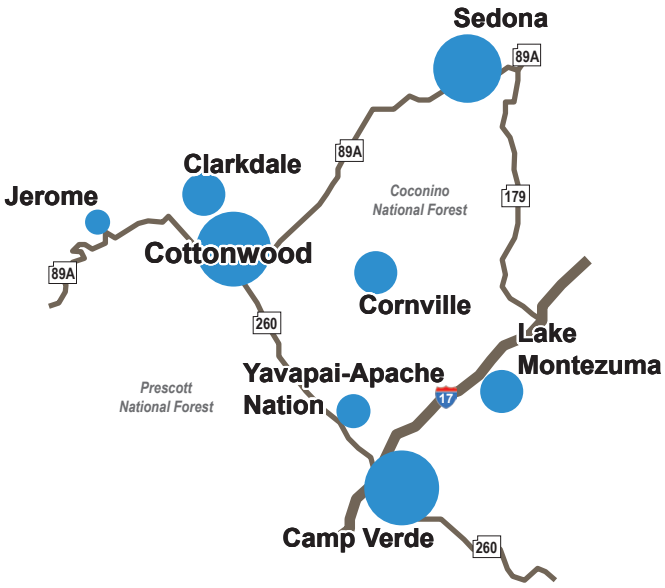
The region has a very amenable climate, abundant open areas, scenery and tourism. Cottonwood residents benefit from the city's fairly compact pattern of urban development, and proximity to the Verde River and its numerous recreational amenities. As a hub of regional housing, employment, and tourism, the city has a growing a demand for active transportation and recreational opportunities.

COTTONWOOD GENERAL PLAN 2025

To meet this demand for bicycling, the **Cottonwood General Plan 2025** encourages the development of a comprehensive bicycle system and a Complete Streets program in Chapter 4, the Circulation Element. Several goals in this chapter specifically relate to the need for the **Cottonwood Bicycle Plan***:*

- Goal 4-2. Support regional, multi-jurisdictional transportation planning.
- Goal 4-3. Improve opportunities for alternate modes of transportation, including bicycling, walking and transit.
- Goal 4-4. Support development of a comprehensive bicycle program.
- Goal 4-5. Develop and improve pedestrian and bicycle routes from commercial areas, schools and activity centers to nearby neighborhoods and residential areas.

FIGURE 1. VERDE VALLEY OVERVIEW



- Goal 4-9. Support and implement Complete Streets design criteria for new streets and corridor revitalization.

The **General Plan** cites that proposed circulation improvement projects, including those for bicycle and pedestrian facilities, are part of ongoing efforts. "Comprehensive program evaluation is recommended as a part of the capital improvement planning program. Short- (1-5 years) and long-term (5+ years) project selection should be based on prioritization criteria developed to guide such decisions. Implementation of bicycle improvements should be based on priorities indicated in the **Cottonwood Bicycle Plan**." Improvement projects identified in the *General Plan* are selected from multiple sources including the **Verde Valley Multimodal Transportation Study** (2009), City Council's Annual Strategic Planning and Capital Improvements Planning process, ADOT's long-range planning program, and ongoing public input.

PURPOSE

The purpose of this document is to encourage and enhance opportunities for bicycling within Cottonwood by guiding the development of bicycling programs, policies, and infrastructure. This document will further develop many of the goals, objectives, and ideas from the **Cottonwood General Plan 2025** to guide implementation with recommended actions for programs, policies, and infrastructure, and a proposed low-stress bikeway network and project list.

SCOPE AND PUBLIC PROCESS

This document serves as an update to the **Cottonwood Bicycle Plan**, originally adopted in October 2009. The initial draft for this update was compiled by the Cottonwood Bicycle Advisory Committee (BAC). The Cottonwood BAC was formed in 2002 and serves as a citizen advisory committee to City Council. The BAC meets monthly and supports bicycle education programs, infrastructure, and policies.

The initial draft of the **Cottonwood Bicycle Plan 2018 Update** will be submitted for preliminary review by the Planning and Zoning Commission and City Council, prior to initiating a formal public review process. The City circulated the proposal for review and comment by the public, other departments and jurisdictions, regarding the proposed bikeway network system, facilities, regulations and educational components.

The final draft was approved by the City Council on November 6, 2018.

GOALS

The following goals are offered to guide the development of a bicycle plan for the City of Cottonwood as an affordable amenity that also addresses the community's needs for recreation and active transportation:

1. Increase the percentage of all trips made by bicycle in the City of Cottonwood.

2. Establish and maintain an integrated system of bikeways that enables low-stress, safe, and convenient bicycling. The network should link neighborhoods and commercial areas throughout the city.

3. Work with advocacy groups and stakeholders to develop a Complete Streets Program for the City.

4. Encourage bicycling as a means of achieving cleaner air, less traffic congestion, better health and preserving the natural, rural environment that surrounds the City.

5. Integrate bicycling with economic development and tourism efforts. Bicycling is seen by many as an important indicator of the quality of life of an area.

OVERVIEW

The city of Cottonwood has many characteristics that make it ideal for cycling, including its mild climate with little snow or rain, moderately flat terrain, and relatively compact form of development. Although surrounded by mountains, much of Cottonwood lies within a mostly flat valley. Even neighborhoods that are in the foothills on the western edge of the community can be accessed via gradually sloping roads. The bulk of local (including incorporated) development occurs within an area of about 12 square miles. Most destinations are easily accessible to cyclists and can be reached within 15-20 minutes on a bicycle (Figure 2).

HISTORY

2002

- Formation of the Cottonwood Bicycle Advisory Committee (BAC)

2007

- Installation of “Share the Road” signs on all collector roads

2009

- Cottonwood Bicycle Plan first adopted
- ADOT selects Cottonwood for Safe Routes to Schools program (SRTS) and also received a federal grant for SRTS.
- First annual Mayor’s Ride
- City Council, City staff, and community members participated in Mayor’s Bike to Work Day

2012

- League of American Bicyclists designated the City of Cottonwood as a Bronze Level Bicycle Friendly Community (BFC)

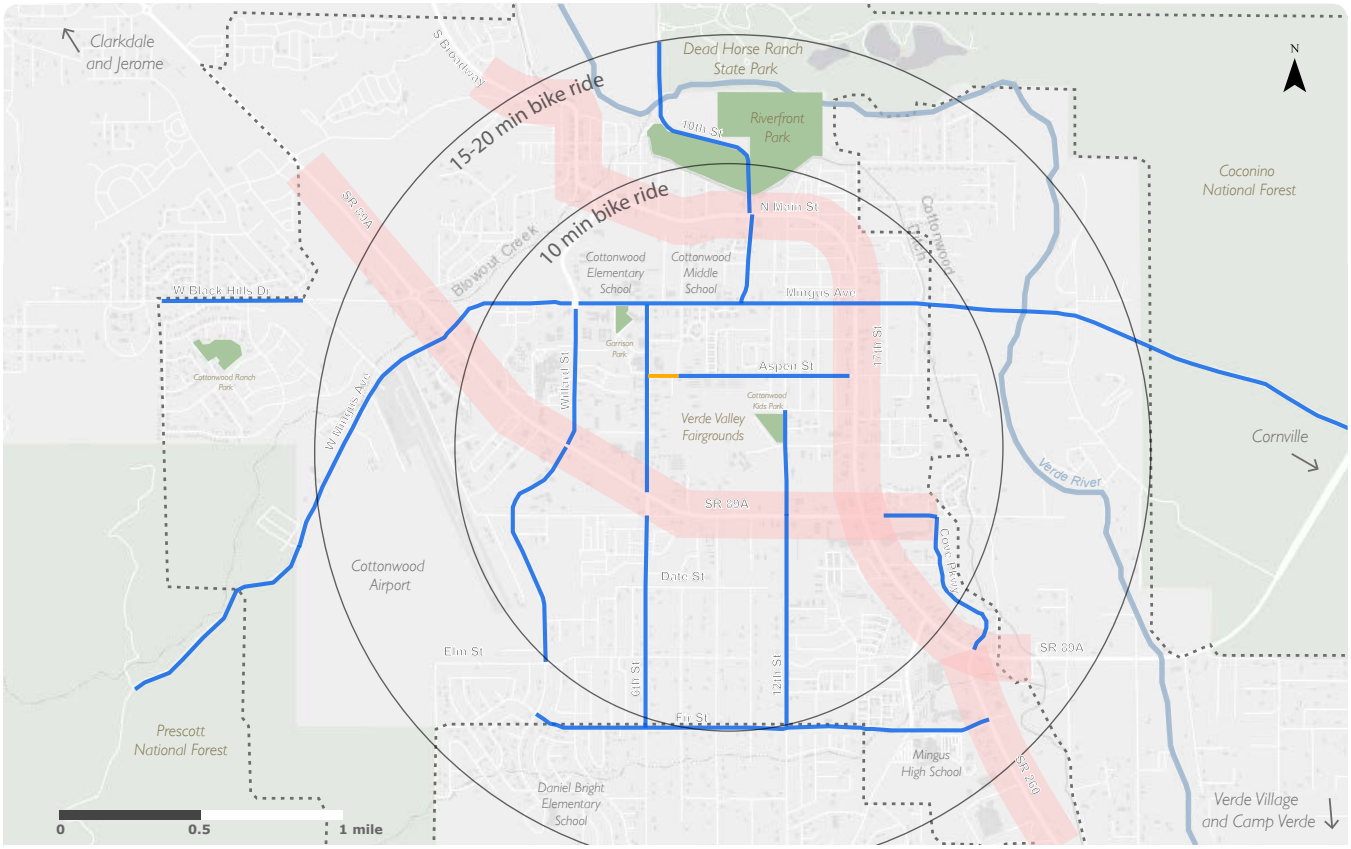
2016

- Cottonwood City Council approves $6k funding for Cottonwood BAC
- Cottonwood Riverfront Trails and Recreation Master Plan

2017

- Cottonwood’s first bicycle map printed and distributed

FIGURE 2. OVERVIEW OF COTTONWOOD



City of Cottonwood Overview

Bicycle Network
- Existing Bicycle Lanes
- Existing Shared Lanes with Markings

- CAT/Lynx Stops
- City Boundary
- Commercial Zones
- City Parks

Data sources:
County of Yavapai, Esri, HERE, Garmin, NGA, USGS

Prepared by Dylan Johnstone for the City of Cottonwood
February 2018

The current bicycle network largely provides standard bicycle lanes on the city's north-south and east-west collector streets. However, as is, the network has several gaps and does not provide adequate access to the main commercial corridors along Main St., SR 89A, and SR 260.

With intentional planning, the City can continue to construct and connect low-stress bicycle routes through both neighborhoods and commercial areas. Opportunities exist both along quiet, local streets and busy arterials. A well-planned network can further encourage people to try bicycling for the first time or bicycle more often for transportation or recreation. In addition to the bicycle network, the programs and policies discussed in this plan will also assist in encouraging bicycling in the City of Cottonwood.

FOUR TYPES OF CYCLISTS

COTTONWOOD BICYCLE USE SURVEY RESULTS

The Cottonwood Bicycle Advisory Committee administered a survey to identify barriers to bicycling in the city of Cottonwood in the winter/spring of 2018 to inform this plan. The survey was distributed online to community members at the Cottonwood Recreation Center, Yavapai County Health Services clients, and local bicycling groups. The results collected and reported include survey data from 354 online respondents.

The survey questions helped to categorize community members into four types of cyclists, a typology developed in Portland, Oregon to describe riders' varying comfort levels when bicycling: "strong and fearless," "enthused and confident," "interested, but concerned," and "no way, no how."

"Strong and fearless" riders are comfortable bicycling regardless of road conditions, traffic speed and volume, number of lanes, or presence/absence of a bicycle facility.

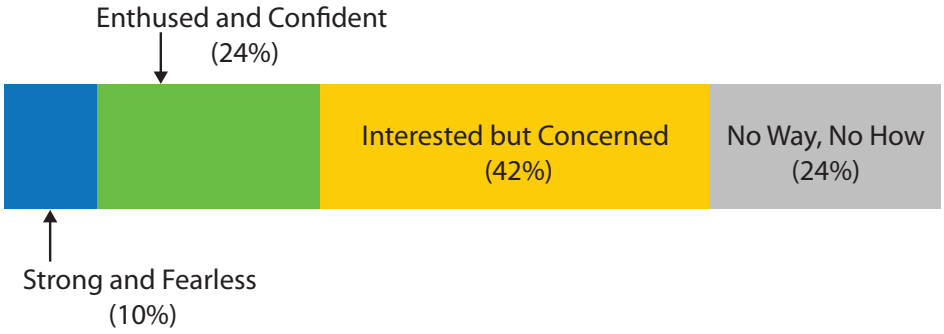
"Enthused and confident" riders are comfortable riding with motor vehicle traffic, but only on certain roads with bicycle lanes, wide shoulders, and easy to navigate intersections.

"Interested, but concerned" riders demonstrate interest in bicycling more, but are only comfortable riding on certain lower stress bicycle facilities.

The **"no way, no how"** group is composed of people either not interested or physically unable to ride bicycles.

The "strong and fearless" and "enthused and confident" groups are more likely to ride already (10% and 24% of respondents surveyed, respectively). Current network of bicycle lanes on collectors is okay for these groups.

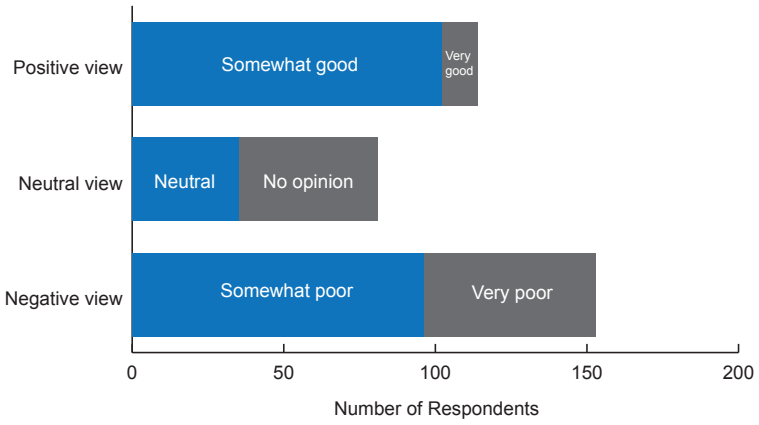
FIGURE 3. FOUR TYPES OF CYCLISTS IN COTTONWOOD



Graphic based on: Geller, R. (2006). Four types of Cyclists. Portland Office of Transportation. Analysis of Cottonwood Bicycle Use Survey data from 354 total survey respondents, 2018.

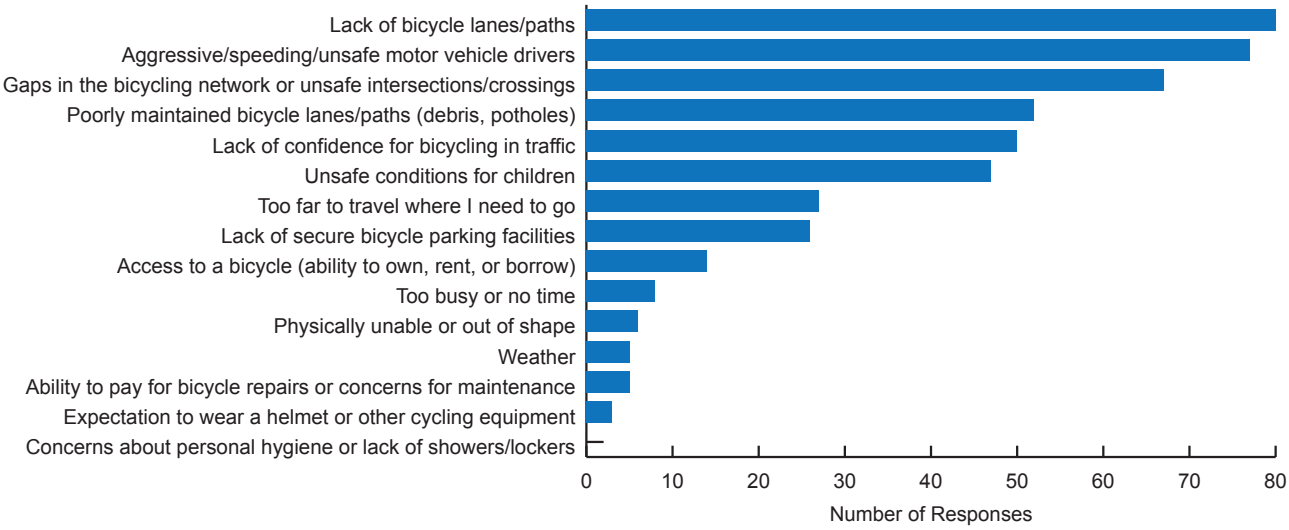
The “interested, but concerned” group (42% of respondents) require low-stress conditions to ride, such as separated paths and local streets with low volumes (less than 1,500 ADT) and low speeds (less than 25 mph. Across the U.S., communities are developing bicycle networks to encourage “interested, but concerned” riders to bicycle more often. The major concerns of this group in Cottonwood are related to the bikeway network and motorist behavior that is perceived to be unsafe or uncomfortable (Figure 5). Concerns about speeding motorists are also reported in the results for the 2017 Cottonwood Community Survey.

FIGURE 4. RESPONSES WHEN ASKED “HOW WOULD YOU DESCRIBE COTTONWOOD AS A PLACE FOR BICYCLING?”



Analysis of Cottonwood Bicycle Use Survey data from 348 respondents, 6 skipped the question, 2018.

FIGURE 5. MAJOR BARRIERS TO BICYCLING FOR INTERESTED, BUT CONCERNED



Analysis of Cottonwood Bicycle Use Survey data from 149 interested, but concerned respondents, 2018.

LEVEL OF TRAFFIC STRESS ANALYSIS

Level of Traffic Stress (LTS) analysis identifies what routes cyclists of varying abilities are willing to ride on given traffic stress (Mekuria et al., 2012). The higher the LTS, the more stressful the route. A LTS 1 is suitable for all ages and abilities. A LTS 1 or LTS 2 is acceptable for "interested, but concerned" riders.

In LTS analysis, the weakest link in a route (i.e., the link with the highest LTS) determines overall LTS for that route. A low-stress network is only as good as its weakest link. This methodology assumes that riders will choose not to ride certain routes that exceed their individual threshold of traffic stress.

Figure 6 explains some of the characteristics used to classify streets by LTS and Figure 8 provides examples of street configurations by LTS.

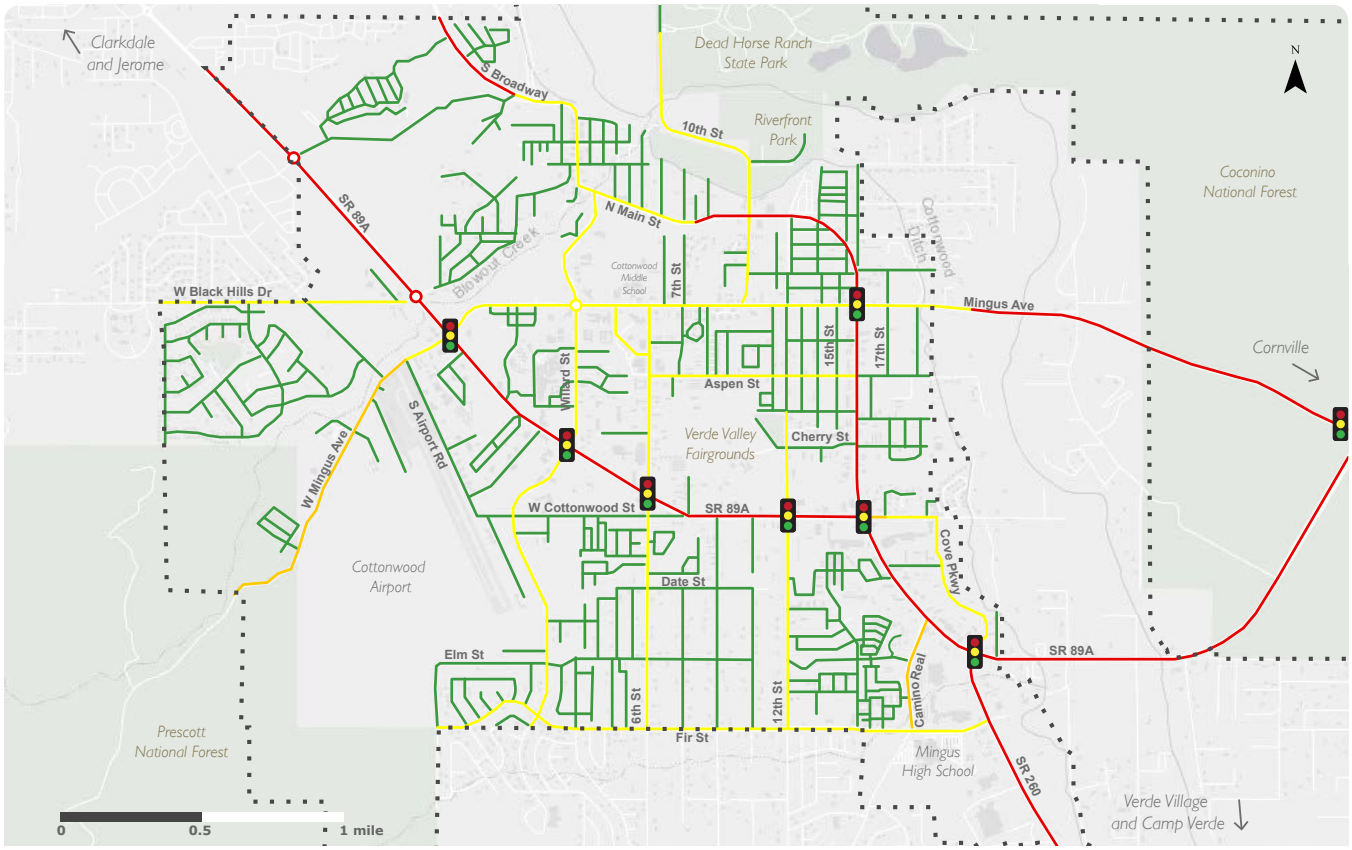
The Cottonwood street network provides low-stress LTS 1 routes on local streets and many LTS 2 routes on its collectors with bicycle lanes (Figure 7). The commercial corridors along Main St., SR 89A, and SR 260 are LTS 4 routes, and thus high stress or inaccessible to most riders.

FIGURE 6. LEVEL OF TRAFFIC STRESS CLASSIFICATIONS

Criteria	LTS 4	LTS 3	LTS 2	LTS 1
Stress Level	High stress for experienced or skilled cyclists	Moderate stress, tolerable for many experienced cyclists	Little stress, but requires more attention	Low stress, suitable for all ages and abilities
Speed and Number of Lanes	Moderate to high speeds, 2-5+ lanes	Moderate speeds, 1-5 lanes	Slightly higher speeds, 1-3 lanes	Low speeds/ volumes,1-2 lanes
Intersection Approaches and Crossings	Unsafe/difficult	Perceived safe	Not difficult	Easy crossing
Example of Street	No bike lanes on a busy street	Narrow bike lane or shoulder on a busy street	Collector-level streets with bike lanes, buffered bike lane on a calm street	Residential, local streets and separated paths and protected bike lanes

Source: Authors' analysis of Oregon Department of Transportation and Alta Planning LTS classifications

FIGURE 7. LEVEL OF TRAFFIC STRESS ANALYSIS, COTTONWOOD



City of Cottonwood Level of Traffic Stress Analysis

Level of Traffic Stress
- LTS 1 -- routes tolerable for all ages and abilities and "interested, but concerned"
- LTS 2 -- routes tolerable for "interested, but concerned"
- LTS 3 -- routes tolerable for "enthused and confident"
- LTS 4 -- routes tolerable for "strong and fearless"

Traffic Lights

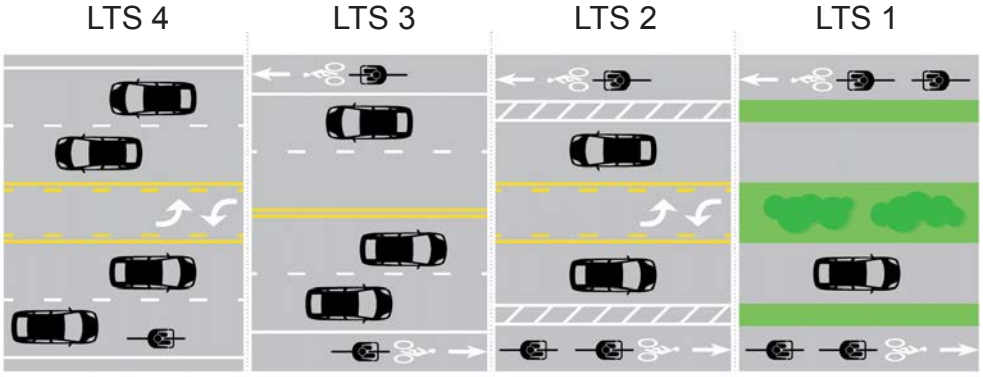
City Boundary

Data sources:
County of Yavapai, Esri, HERE, Garmin, NGA, USGS

Prepared by Dylan Johnstone for the City of Cottonwood
February 2018

Note that posted speed is used rather than prevailing speed (the 85th percentile) to determine LTS ratings, due to limited available data. This may portray some routes as lower stress than they are in reality.

FIGURE 8. EXAMPLE ROADWAY CONFIGURATIONS BY LEVEL OF TRAFFIC STRESS



Source: Alta Planning LTS classifications

ECONOMIC IMPACTS

A 2013 Arizona Department of Transportation report, **Economic Impact Study of Bicycling in Arizona: Out-of-State Bicycle Tourists & Exports**, provides a valuable assessment of the economic impacts of bicycling tourism:

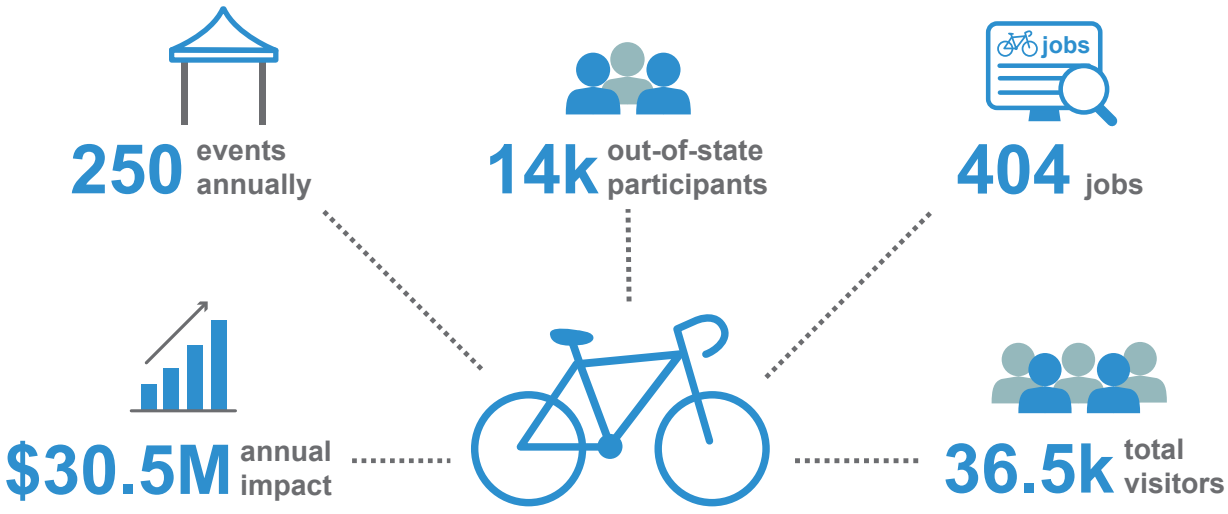
- At least 250 events annually bring in about 14,000 out-of-state participants, and 36,500 total visitors, including these participants' travel parties.
- Compared to a typical cross-section of tourists, bicycling tourism participants have higher incomes and are more educated.
- An estimated annual direct and indirect/ induced economic contribution of $30.5 million and 404 jobs.

The Verde Valley and Cottonwood benefit from tourism brought to the area by the local wine industry and outdoor recreation amenities. There are many opportunities to integrate bicycling and tourism through developing family-friendly, shared-use paths along the Verde River and through Old Town.

From 2013-2017, the Verde Valley hosted the Bike MS: Ride the Vortex event as a major fundraising event for the National Multiple Sclerosis Society – Arizona Chapter. Source: Bike MS

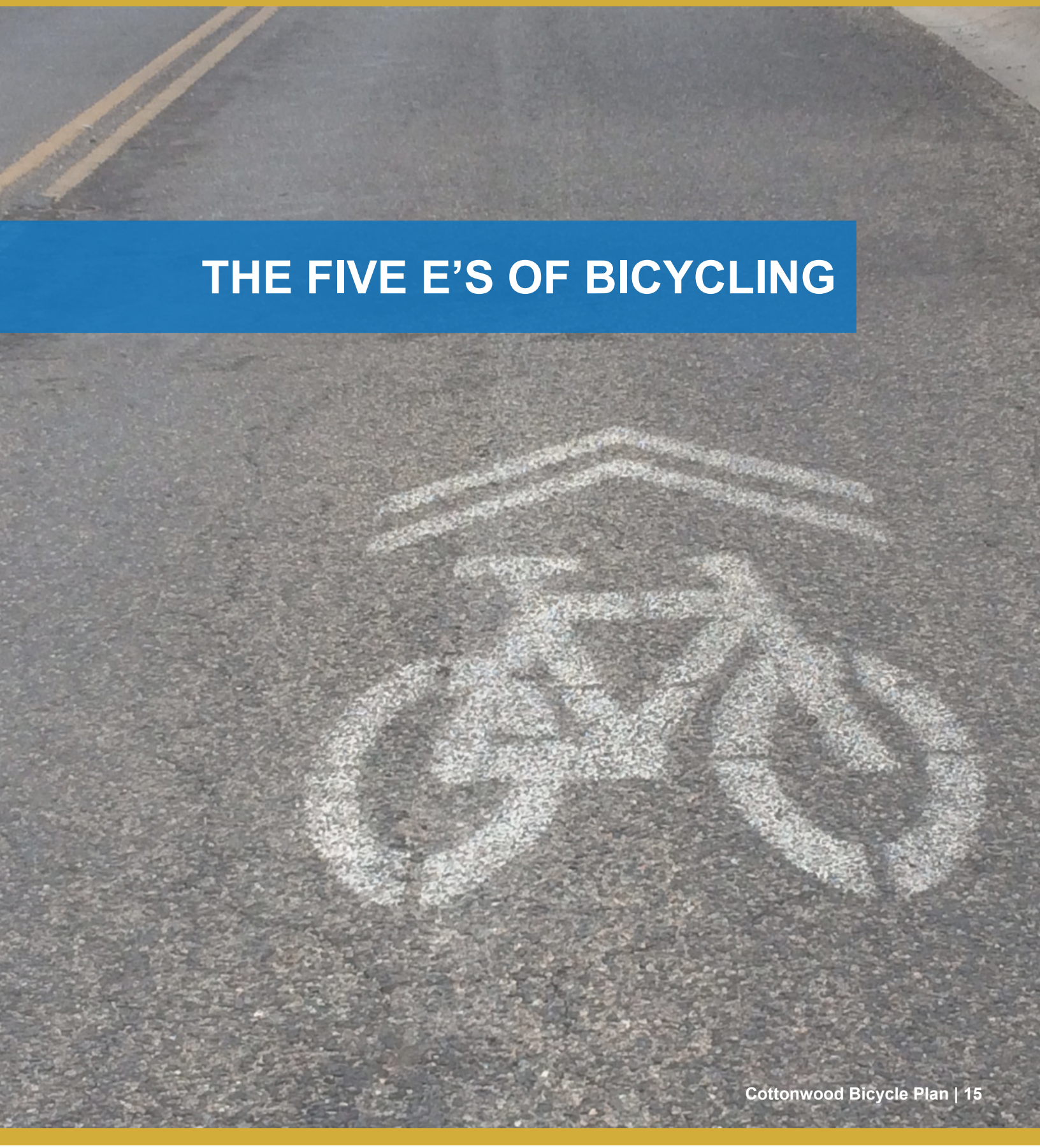
Across the country, many small cities and towns are marketing shared-use "rail trails" to successfully attract tourism and revitalize main streets.

FIGURE 9. ECONOMIC IMPACTS OF BICYCLING TOURISM IN ARIZONA



Data source: Economic Impact Study of Bicycling in Arizona: Out-of-State Bicycle Tourists & Exports, 2013

THE FIVE E'S OF BICYCLING



THE FIVE E'S OF BICYCLING

The Five E's of bicycling involves more than just developing the bicycle facilities. Facilities alone do not address the full range of bicycling concerns. A more comprehensive "Five E's" approach, combining engineering with enforcement, education, encouragement and evaluation and planning is nationally recognized for the success of such programs.

ENGINEERING

Engineering is the most visible part of the bicycle planning process. Important functions of the engineering component include determining locations of routes, types of facilities, surveys of existing and preferred uses, and locations and types of bicycle parking facilities.

The layout of the system should take into consideration the geography of bicycle trip generation and destination associated with the needs of commuters, recreation and tourism. New roadway development and major reconstruction projects should be evaluated to consider including bicycle lanes or shared roadways, where appropriate. Factors for bicycle routes should highlight rider safety, convenience, and overall traffic volume. Safety issues include the quantity of motor vehicles, posted speed limit, road shoulder width, and frequency of parked cars.

ENGINEERING OBJECTIVES

- ENG-1: Develop a network of low-stress bikeways
- ENG-2: Update the City Code, policies, and standards to support bicycling and building a bikeway network
- ENG-3: Maintenance of existing and future bicycle network
- ENG-4: Addressing safety issues through the bicycle network infrastructure
- ENG-5: Integration with public transit
- ENG-6: Improve access to natural surface trails
- ENG-7: Increase bicycle parking near major destinations

OBJECTIVE ENG-1. DEVELOP A NETWORK OF LOW-STRESS BIKEWAYS

A bikeway network should provide safe and convenient bicycle access throughout the city. Building a network of low-stress bikeways encourages people of various ages, skill levels, and interests to bicycle.

Routes should provide access to parks, mixed-use corridors, neighborhood districts, community centers, and various types of activity centers and key destinations. Bicycle wayfinding signs are useful for directing bicyclists to important destinations along the network.

Bike to School Day, May 2017
Source: Heather Klomparens

	Recommended Actions	Agency Responsible	Timeline
ENG-1a	Continue to analyze trip generation and destination, level of traffic stress, and other relevant data to inform the bikeway network planning.	PUBLIC WORKS	ST
ENG-1b	Stripe and sign bicycle routes from the Bikeway Network Project List (Appendix). Include vertical and horizontal signage as needed to prevent parking in bicycle lanes.	PUBLIC WORKS	ST-LT
ENG-1c	Bicycle wayfinding signage to major destinations (recreation center, library, Old Town, commercial centers, parks, etc.). Prioritize low-stress, low-traffic routes.	COMM DEV, PUBLIC WORKS, BAC	LT
ENG-1d	All new collector streets should provide sufficient right-of-way for bicycle lanes. Consider traffic volumes and speeds to select an appropriate facility type needed to ensure that the route is low-stress (e.g., standard, buffered, or protected bicycle lane). Consult guidance from research, AASHTO, and national bicycle organizations.	PUBLIC WORKS	ST

OBJECTIVE ENG-2. UPDATE THE CITY CODE, POLICIES, AND STANDARDS TO SUPPORT BICYCLING AND BUILDING A BIKEWAY NETWORK

	Recommended Actions	Agency Responsible	Timeline
ENG-2a	Adopt a new ordinance that requires bicycle facilities when constructing new roads and reconstructing/repaving existing roads. Develop street design guidelines for this ordinance.	CITY COUNCIL, PUBLIC WORKS	ST
ENG-2b	Adopt facility design standards and guidelines for bicycle facilities. AASHTO Guide for Development of Bicycle Facilities provides guidelines that are nationally accepted and legally defensible. Standards and guidance on signage can be found in the Manual on Uniform Traffic Control Devices (MUTCD).	PUBLIC WORKS	ST
ENG-2c	Develop standards for developers to build and maintain paved, shared use paths. Where possible, these shared use paths should connect to the existing bikeway network. Consider the placement of these shared use paths on the perimeter of residential and commercial developments to reduce conflicts between motor vehicles and bicycles and pedestrians.	COMM DEV, PUBLIC WORKS	ST
ENG-2d	Adopt a new ordinance to encourage businesses to provide short-term bicycle parking and require it for new development. Bicycle parking should be placed near building entrances and should seek to minimize conflicts with pedestrians. Consider using a bicycle parking ratio to determine the amount required.	COMM DEV	ST

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) APPROVALS

The FHWA posts information on the MUTCD approval status for bicycle-related signs, markings, signals, and other treatments:

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/mutcd/index.cfm

OBJECTIVE ENG-3. MAINTENANCE OF EXISTING AND FUTURE BICYCLE NETWORK

	Recommended Actions	Agency Responsible	Timeline
ENG-3a	Integrate bicycling-related issues into Public Works maintenance schedules. This includes repainting of faded bicycle lanes, shoulders, sharrows (shared lane markings), and crosswalks, and street sweeping for glass and debris removal from bicycle lanes.	PUBLIC WORKS	LT
ENG-3b	Provide a number for local bicyclists to call to report maintenance issues that affect bicycling (e.g., potholes, grates, trash and snow removal).	PUBLIC WORKS	ST

OBJECTIVE ENG-4. ADDRESSING SAFETY ISSUES THROUGH THE BICYCLE NETWORK INFRASTRUCTURE

	Recommended Actions	Agency Responsible	Timeline
ENG-4a	Work with City engineers, planners, and Public Works to address safety issues at intersections, particularly at locations where bicycle facilities are dropped in exchange for motor vehicle turn lanes.	PUBLIC WORKS	LT
ENG-4b	Work with ADOT to add bicycle lanes to state-owned arterials (e.g., SR 89A and SR 260)	CITY COUNCIL, COMM DEV	LT

Regular maintenance includes repainting bicycle lanes and shared lane markings ("sharrows").

Above is the intersection of SR 89A and Main St., which currently lacks bicycle facilities.

Bicycle racks are available on all Verde Lynx and CAT buses.

OBJECTIVE ENG-5. INTEGRATION WITH PUBLIC TRANSIT

The City of Cottonwood has a fixed-route bus system, known as Cottonwood Area Transit (CAT), featuring two fixed bus routes serving Cottonwood, Clarkdale, and Verde Village.

The CAT system is one of the oldest and most successful small transit systems in Arizona. The CAT Commission facilitated by Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA) recommends that CAT provide bike racks on the buses. The CAT system connects with the Verde Lynx, which provides direct bus service between Cottonwood and Sedona, seven (7) days-a-week.

A well-connected and low-stress bicycle network can integrate nearby transit routes to provide safe "last mile" bicycling connections between transit stops and destinations.

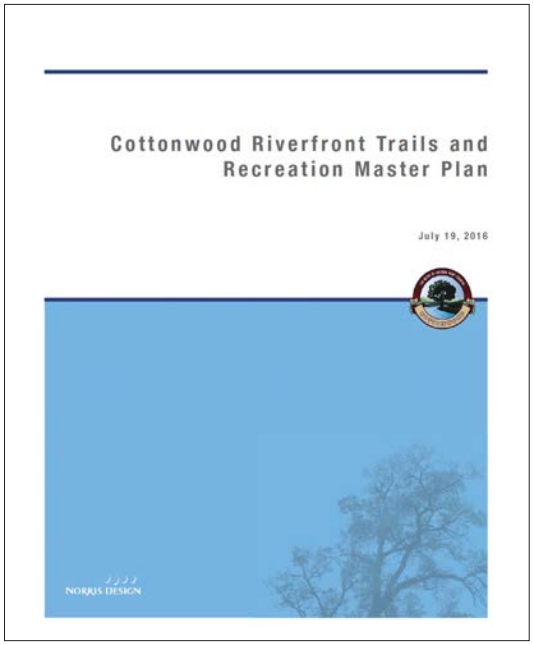
	Recommended Actions	Agency Responsible	Timeline
ENG-5a	Provide bicycle parking at key Verde Lynx/CAT stops/ stations.	PUBLIC WORKS, CAT, NAIPTA	LT
ENG-5b	Ensure that Lynx and CAT vehicles supply bicycle racks for customers.	CAT, NAIPTA	ST
ENG-5c	Improve "last mile" connections for bicycling to key transit stops/stations.	PUBLIC WORKS, CAT	LT

OBJECTIVE ENG-6. IMPROVE ACCESS TO NATURAL AND HARD SURFACE TRAILS

Increased tourism and economic development in Cottonwood and the Verde Valley region will likely require additional trails, trailheads, parking areas, roadway improvements, and signage to meet recreational needs, recognized by two existing plans:

- **Cottonwood Riverfront Trails and Recreation Master Plan** (2016) provides trail types and cross sections to assist in the planning, design, and construction of a trail system in Cottonwood.
- **Verde Valley Regional Trails Concept Plan** (2011) identified a network of trails and trailheads, although the trail alignments and trailhead locations were not authorized or approved for the completed report.

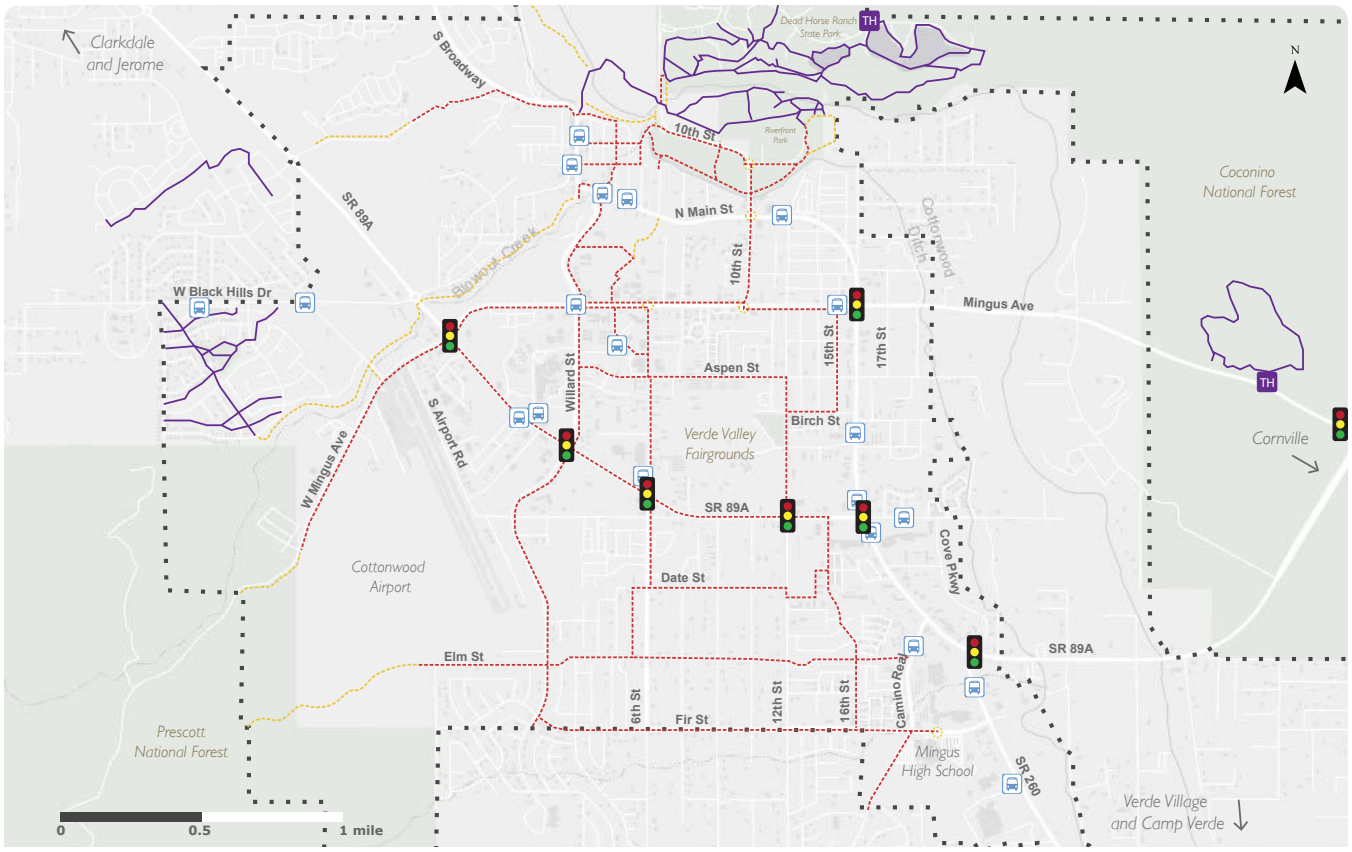
	Recommended Actions	Agency Responsible	Timeline
ENG-6a	Plan and construct the proposed natural and hard surface trails and trailheads to connect with regional trails and parks through implementation of the *Cottonwood Riverfront Trails and Recreation Master Plan*.	PARKS/REC, COMM DEV	LT
ENG-6b	Provide motor vehicle parking at trailheads	PUBLIC WORKS, PARKS/REC	LT



Cottonwood Riverfront Trails and Recreation Master Plan (2016)

Trailhead of the Jail Trail starting in Old Town

FIGURE 10. PROPOSED AND EXISTING TRAIL SYSTEM



City of Cottonwood Trail System

Trails
- Existing Trails
- Proposed Soft Trails
- Proposed Hard Trails

- Enhanced pedestrian crossing
- CAT/Lynx Stops
- Traffic Lights
- City Boundary

Data sources:
Esri, USGS, Norris Design/Cottonwood Riverfront Trails and Recreation Master Plan, 2016

Prepared by Dylan Johnstone for the City of Cottonwood
February 2018

OBJECTIVE ENG-7. INCREASE BICYCLE PARKING NEAR MAJOR DESTINATIONS

	Recommended Actions	Agency Responsible	Timeline
ENG-7a	Provide secure bicycle parking at city bus stops, NAIPTA stops, recreation center, library, Old Town, and other municipal and County buildings.	PUBLIC WORKS	LT
ENG-7b	Encourage private businesses to install bicycle racks and corrals for customers.	COMM DEV, ECON DEV, CHAMBER OF COMMERCE	ST

Bicycle parking located at the entrances to the Cottonwood Library and Cottonwood Recreation Center.

ENFORCEMENT

Bicycles are treated by law as vehicles in all 50 U.S. states. Bicyclists are granted all of the rights and are subject to the duties applicable to the driver of a vehicle (ARS 28-812). Bicyclists must therefore also accept similar responsibilities. Consistent enforcement programs help to encourage lawful behavior for bicyclists and motorists. Improved behavior leads to better safety statistics and builds greater acceptance of bicycles as a legitimate user of the roadway.

ENFORCEMENT OBJECTIVES

- ENF-1: Support the Cottonwood Police Bicycle Patrol
- ENF-2: Enforce existing laws and regulations that apply to bicyclists. Look for opportunities to provide education with enforcement where possible
- ENF-3: Update and develop city codes and ordinances to support bicycling

OBJECTIVE ENF-1. SUPPORT THE COTTONWOOD POLICE BICYCLE PATROL

	Recommended Actions	Agency Responsible	Timeline
ENF-1a	Support Cottonwood Police Bicycle Patrol with safety classes taught by certified cycling instructors.	POLICE, BAC	LT

Cottonwood Police Department Bicycle Patrol receiving new bicycles with support from the Bicycle Advisory Committee and the Verde Valley Bicycle Company, January 2018.

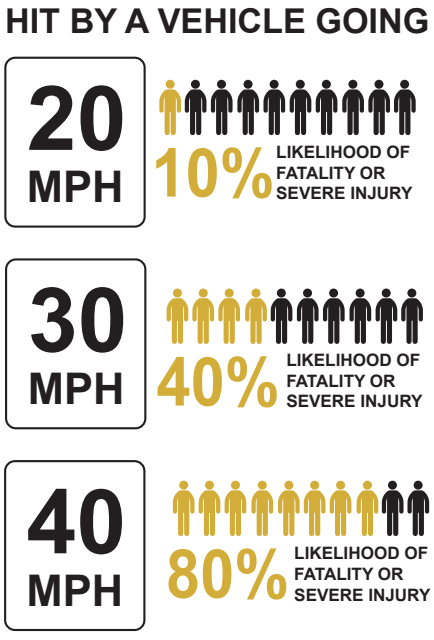
OBJECTIVE ENF-2. ENFORCE EXISTING LAWS AND REGULATIONS THAT APPLY TO BICYCLISTS

	Recommended Actions	Agency Responsible	Timeline
ENF-2a	Continue to enforce existing laws and regulations that apply to bicyclists. Look for opportunities to provide education with enforcement where possible.	POLICE	LT

OBJECTIVE ENF-3. UPDATE AND DEVELOP CITY CODES AND ORDINANCES TO SUPPORT BICYCLING

	Recommended Actions	Agency Responsible	Timeline
ENF-3a	Update city code to allow bicycling on sidewalks. Bicyclists commonly use sidewalks along the high volume arterial roads (SR 89A, SR 260). Many do not feel safe riding in the roadway without designated bicycle facilities. Consider revising the code to disallow riding only on sidewalks in the Old Town business district.	CITY COUNCIL, COMM DEV, POLICE	ST

In Seattle residential neighborhoods, the campaign for 20 is Plenty encourages drivers to slow down. Source: Seattle Department of Transportation



Data source: U.S. Department of Transportation, Literature reviewed on travel speeds and pedestrian injuries, March 2000.

EDUCATION

Education programs are key components to building a successful bicycle transportation system and fostering the growth of bicycle use in a community. Education programs can help to encourage courteous and lawful behavior among motorists and bicyclists of all ages, and enhance the skill level of bicyclists and motorists, thus leading to safety improvements. Bicycle safety education programs have been shown to reduce accident rates for adults and children.

Public education events and proactive safety training can help publicize the bike system and rules of the road.

SAFE ROUTES TO SCHOOL

In December of 2008, Cottonwood received a three year Safe Routes to School Grant from ADOT. The project included designation of primary (bicycle and pedestrian) routes for children of all abilities, related safety improvements and education.

Eligible Safe Routes to School projects include sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bike parking, and traffic diversion improvements in the vicinity of schools (within approximately two miles).

Although the Safe Routes to School program lost funding in 2011 Yavapai County Community Health Services continues to participate bicycle and pedestrian awareness through Walk to School Days, Bike to School Days, Bike Rodeos, Community Events, Bicycle Awareness Month and the Mayor's Ride in Cottonwood and the Verde Valley. This education and outreach is funded in part through the SNAP Ed Grant from Arizona Department of Health Services (ADHS).

EDUCATION OBJECTIVES

- EDU-1: Support and implement Safe Routes to School Programs
- EDU-2: Support bicycling education for adults
- EDU-3: Support education for motorists

OBJECTIVE EDU-1. SUPPORT AND IMPLEMENT SAFE ROUTES TO SCHOOL PROGRAMS

	Recommended Actions	Agency Responsible	Timeline
EDU-1a	Organize and support the Cottonwood Safe Routes to School Committee.	CITY COUNCIL, BAC, SCHOOLS	ST
EDU-1b	Implement Safe Routes to School curriculum in all elementary and middle schools in Cottonwood.	SCHOOLS	ST
EDU-1c	Coordinate with National SRTS Program for Walk/Bike to School Day or Month.	SCHOOLS, YOUTH COMM	ST
EDU-1d	Secure dedicated funding for Safe Routes to School programs.	CITY COUNCIL, PARKS & REC, BAC	LT

A strong showing for Bike to School Day in May 2017, an annual event for the Safe Routes to School program. Source: Heather Klomparens

OBJECTIVE EDU-2. SUPPORT BICYCLING EDUCATION FOR ADULTS

	Recommended Actions	Agency Responsible	Timeline
EDU-2a	Develop or support classes on road safety and basic maintenance targeted for adults.	BAC, LOCAL BICYCLE ADVOCACY ORGS, LOCAL BICYCLE SHOPS	LT

OBJECTIVE EDU-3. SUPPORT EDUCATION FOR MOTORISTS

	Recommended Actions	Agency Responsible	Timeline
EDU-3a	Work with Arizona Department of Motor Vehicles and other statewide advocacy efforts to add questions to the Arizona drivers' license exams about bicyclists.	BAC, COALITION OF ARIZONA BICYCLISTS	LT

ENCOURAGEMENT

Encouragement programs may provide information, equipment, or training to get more people bicycling. These programs often highlight that bicycling is a convenient, cost-effective, healthy, and environmentally-friendly form of transportation. Given information on safe bicycle routes and some basic safety information, more people may choose to ride bicycles for relatively short, utilitarian trips rather than using a private vehicle.

Events are used to demonstrate how bicycling can be a social activity and fun. Events often encourage people of all ages and abilities to try bicycling in safe, supportive environments, such as streets closed to motor vehicles and opened to people walking, bicycling, scootering, etc. Internationally, these "open streets" programs are well-received by communities.

ENCOURAGEMENT OBJECTIVES

- ENC-1: Provide bicycling services and information to public
- ENC-2: Develop programs that encourage new riders through targeted outreach
- ENC-3: Provide fun bicycling opportunities for all ages and abilities
- ENC-4: Support local bicycling advocacy efforts

OBJECTIVE ENC-1. PROVIDE BICYCLING SERVICES AND INFORMATION TO PUBLIC

	Recommended Actions	Agency Responsible	Timeline
ENC-1a	Provide maps, information, and trip planning assistance at Chamber of Commerce and recreation center. Include educational brochures developed by ADOT safety awareness pilot program for the Verde Valley for safe riding practices and common crashes between bicycles and motor vehicles.	COMM DEV, BAC	ST
ENC-1b	Develop or support programs for equipping bicyclists (e.g., bike, helmet, or lights giveaways).	CITY COUNCIL, BAC	LT
ENC-1c	Create or support visibility campaigns that highlight upcoming bicycling events or important safety issues.	CITY COUNCIL, BAC	ST
ENC-1d	Update and distribute the Cottonwood bikeway map annually or biannually.	BAC	ST

OBJECTIVE ENC-2. DEVELOP PROGRAMS THAT ENCOURAGE NEW RIDERS THROUGH TARGETED OUTREACH

	Recommended Actions	Agency Responsible	Timeline
ENC-2a	Develop a program to mail information to Cottonwood residents about bicycling (e.g., maps, trip planning, safety tips). Consider doing this in conjunction with National Bike Month in May. This program would focus on behavior change and getting new riders to bicycle.	PARKS & REC, ECONOMIC DEV, CHAMBER OF COMMERCE, BAC	LT
ENC-2b	Provide or support local organizations in organizing learn-to-ride classes and safety classes.	CITY COUNCIL, PARKS/REC, BAC, LOCAL BICYCLE ADVOCACY ORGS	ST

OBJECTIVE ENC-3. PROVIDE FUN BICYCLING OPPORTUNITIES FOR ALL AGES AND ABILITIES

	Recommended Actions	Agency Responsible	Timeline
ENC-3a	Organize or support local organizations in organizing an Open Streets event, opening streets for people to walk, bicycle, skate, scooter, etc. Consider routes that go through local neighborhoods and utilize streets with low traffic volumes.	CITY COUNCIL, BAC, LOCAL BICYCLE ADVOCACY ORGS	LT
ENC-3b	Continue to develop and promote easy, family-friendly routes for the Mayor's Ride.	CITY COUNCIL, BAC	ST

MAYOR'S RIDE AND BIKE TO WORK WEEK

Since 2009, the Mayor's Ride has been an annual tradition in Cottonwood to kick-off the start of Cottonwood Bike Week. Last year's family-friendly ride started and ended at Garrison Park and went for a 2.7 mile loop on mostly flat streets through Old Town and down Main Street. Participants earned Bike to Work Week points toward prizes. Following the Mayor's Ride, families with kids were encouraged to attend a Bike Rodeo hosted by Yavapai County Community Health Services promoting bike safety and fun.

The first annual Bicycle Buy & Sell took place following the Mayor's Ride with 20% of all proceeds to Chain Reaction, a non-profit fixing up donated bikes and giving them to people in need.

Other Bike to Work Week events included a Ride of Silence, honoring the lives of those who have been killed or injured, and a social ride led by a group of local cyclists.

2017 Mayor's Ride through Old Town with Mayor Tim Elinski as a kick-off to Cottonwood Bike Week.
Source: Verde Valley News/Vyto Starinskas

OBJECTIVE ENC-4. SUPPORT LOCAL BICYCLING ADVOCACY EFFORTS

	Recommended Actions	Agency Responsible	Timeline
ENC-4a	Support the Cottonwood Bicycle Advisory Committee by allocating dedicated annual funding to organize and implement bicycling advocacy, events, and programs.	CITY COUNCIL	ST
ENC-4b	Continue to support the local advocacy efforts of the Cottonwood Bicycle Group, Verde Valley Cycling Coalition, and other advocacy organizations.	CITY COUNCIL, BAC	ST

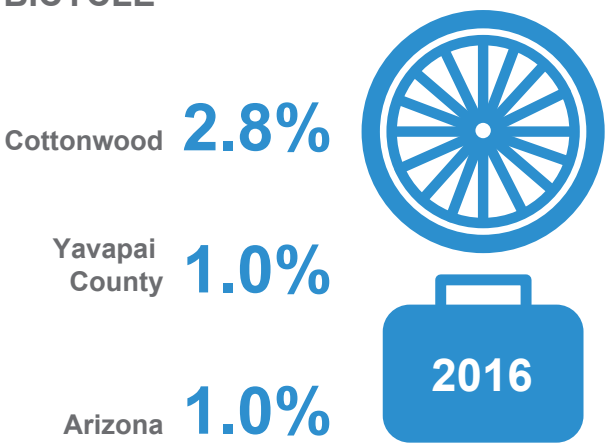
EVALUATION AND PLANNING

Monitoring and documenting outcomes, attitudes and trends through the collection of data before and after installation of improvements needs to be ongoing. Evaluation of such data is key to determining the scope and the success of the bicycle program. Data is used to track the amount of bicycling taking place in the community, crash and fatality rates, and ways that the community works to improve these numbers. Implementation of goals and objectives outlined in the bike plan should be tracked with an annual report to the City Council, including how much of it has been implemented and what the next steps for improvement are. Evaluation should include bicycle traffic counts, community surveys, and bike crash analysis investigations.

EVALUATION AND PLANNING OBJECTIVES

- EVA-1: Measure bicycle usage
- EVA-2: Evaluate safety performance metrics
- EVA-3: Building the bikeway network

FIGURE XX. COMMUTE TO WORK BY BICYCLE



Data sources: 2010 U.S. Census, ACS 2016 5-year estimates

OBJECTIVE EVA-1. MEASURE BICYCLE USAGE

	Recommended Actions	Agency Responsible	Timeline
EVA-1a	Conduct analysis using the 2017 National Household Travel Survey (NHTS) data to understand the percentage of all trips made by bicycle. If this data is not sufficient, conduct or support a household activity travel survey to collect this data.	BAC	ST
EVA-1b	Review data on commute trips, which are available annually through the American Community Survey (ACS) from the U.S. Census Bureau. In 2010, the U.S. Census reported 1.8% of Cottonwood workers commuted by bicycle. This rose to 2.8% in 2016, according to ACS 5-year estimates. This a higher rate than the statewide bicycle commute mode for Arizona of 1.0%, and Yavapai County, also reporting 1.0%.	BAC	ST
EVA-1c	Develop and secure funding for a regular data collection program using at least one permanent, continuous counter and multiple short duration counts taken across the network. Short duration counts may be taken by adapting pneumatic tube counters used for motor vehicles to also count bicycles. Additional research and guidance* exists on using other automated counting technologies. If funding does not exist for automated counting technologies, organize a manual count program for short duration counts (2-hr counts conducted by staff, interns, or volunteers).	PUBLIC WORKS, BAC	ST

**NCHRP 797 Report, Guidebook on Pedestrian and Bicycle Volume Data Collection, is available as a free reference at: http://www.trb.org/Publications/Blurbs/171973.aspx*

OBJECTIVE EVA-2. EVALUATE SAFETY PERFORMANCE METRICS

	Recommended Actions	Agency Responsible	Timeline
EVA-2a	Obtain and review traffic and bicycle crash-reporting data from Cottonwood Police Department and local hospitals. Meet with city engineers, police, and Public Works to review bicycle crash data and make recommendations to address problem areas.	PUBLIC WORKS	ST
EVA-2b	Understand levels of perceived safety through conducting surveys. Add a question(s) asking how safe people feel when bicycling in Cottonwood.	BAC	ST

Maggie is a part of the Cottonwood Bicycle Group, which hosts social rides through Cottonwood and Clarkdale every Friday. She rides a recumbent bicycle with an electric assist for climbing larger hills.

OBJECTIVE EVA-3. BUILDING THE BIKEWAY NETWORK

	Recommended Actions	Agency Responsible	Timeline
EVA-3a	Evaluate network completion. Create and update the bicycle facilities inventory annually. Present these findings to the BAC and City Council. Performance measures include percent of residents within a quarter mile of an existing bikeway and percent of bikeway miles completed.	PUBLIC WORKS	ST
EVA-3b	Evaluate network connectivity. Performance measures include bikeway network density (miles of bikeway per square mile) and percent of missing links (total miles of gaps) in the existing bikeway network.	PUBLIC WORKS	ST
EVA-3c	Evaluate capital spending on bicycle infrastructure. A performance measure would be an increase in funding for bicycle facilities.	PUBLIC WORKS	ST

This page is left intentionally blank.

RECOMMENDED BIKEWAY NETWORK

TRIP GENERATION AND DESTINATION

The highest residential densities exist adjacent to the Main and Mingus intersection and proximal to Fir and 12th Street. However, new developments with higher densities are beginning to occur in the western portions of the city.

The major commercial corridors are located along two state highways, SR 89A and SR 260, and Main St. These corridors are home to the majority of service and retail businesses, grocery stores, and restaurants in Cottonwood. Much of the commuter trips target these retail corridors; as well as schools and employment centers located central to the city's core.

Tourism brings a large amount of traffic through the area on weekends and holidays to visit Sedona, Jerome, State and National Parks, as well National Forest areas that surround the city. Drivers may not be familiar with bicyclists on roadways, as bicyclists in other parts of the country may utilize separate bike paths for traveling. Signage both on and along the roadways is therefore of vital importance to inform tourists of bicyclists.

Prime tourist attractions include Old Town Cottonwood, Dead Horse Ranch State Park, Tuzigoot National Monument, Blazin' M Ranch and the Verde Canyon Railroad. Still other recreational opportunities exist peripheral to the city in the form of unimproved trails which access open forest areas.

CIRCULATION SYSTEM

Motor vehicle traffic inside the city is predominately served by an arterial spine formed by SR 89A and SR 260. These state highways experience 30,000+ average daily trips (ADTs), congesting intersections at various locations. The SR 89A and SR 260 intersection can experience up to 35,000 ADTs, and a Level of Service "F" during peak flows for motor vehicles. SR 89A and SR 260 currently do not have bicycle facilities within city limits.

Main Street is a major commercial corridor, which would benefit from adding bicycle lanes.

A series of collector streets accessing these arterial corridors serve surrounding residential neighborhoods as well as destinations. Most of these collectors are striped for bicycle use, including Mingus Ave., 6th St., 10th St. 12th St., Aspen St., and Fir Ave. However, horizontal and vertical signage indicating these bicycle facilities could be improved. At intersections, these bicycle lanes are often dropped in exchange for motor vehicle turn lanes. Safety studies have shown that intersections are common crash locations, and therefore, it is important to provide dedicated facilities through intersections to prevent conflicts between different modes.

From the collector streets an extensive system of local residential streets serves various neighborhoods throughout the city.

BIKEWAY NETWORK

A bikeway network is a system of bikeways that, for a variety of reasons including safety and convenience, provides a superior level of service for bicyclists. It is important to recognize that by law, bicyclists are allowed on all streets and roads regardless of whether they are a part of the bikeway network.

The bikeway network is a tool that allows the City to plan for the future and to focus and prioritize implementation efforts where they will provide the greatest benefit to the community. During the planning of the proposed bikeway network, input was received from the local bicycling community and city staff for selecting routes.

Route selection took into consideration the following criteria:

- Existing collector and local street system
- Roads with low traffic volumes and speeds
- Network connectivity
- Topography
- Side friction (bicyclists prefer roads that minimize potential side street conflicts)
- Wider riding areas
- Smooth roadways
- Access from residential areas
- Number of destinations served
- Schools
- Parks
- Employment centers
- Transit shelters
- Roads that minimize potential conflicts with parked vehicles

The recommended bikeway network focuses on providing:

- Low-stress greenways on local streets
- Low-stress bicycle facilities along or adjacent to busy arterials and collectors
- Needed connections to address gaps in the network, including safe crossings

The scope of this project focuses only on bikeways along roadways or “on-street,” but offers suggestions for additional off-street segments to make connections in the network.

Where possible, this plan seeks to incorporate the **Cottonwood Riverfront Trails and Recreation Master Plan** (2016), which provides trail types and cross sections to assist in the planning, design, and construction of a trail system in Cottonwood. The paved or hard-surface trails designated in the trails master plan are referred to as “shared-use paths” when discussing the bikeway network. In some situations they also may be interpreted as “greenways” on quiet local streets.

Development of bicycle facilities on the State-owned corridors (SR 89A and SR 260) would be subject to coordination with the Arizona Department of Transportation (ADOT).

BIKEWAY FACILITY TYPES

Bikeway facility types should be selected for a given project based on traffic volumes and speeds, right-of-way widths, cost, and the level of comfort for bicyclists the project is seeking to achieve.

Bikeway facility types are described by the **AASHTO Guide for the Development of Bicycle Facilities** (2012) under "Choosing an Appropriate Facility Type" (Page 2-15):

> *"Although incorporating bicyclists' needs into the design of major transportation corridors can be challenging, the reality of planning bikeways in built environments means that roadways constitute the majority of a bicycle network. Whenever streets are constructed or reconstructed, appropriate provisions for bicyclists should be included consistent with federal policy. Technical information on the design of different bikeways is provided in Chapters 4 and 5. The bikeway design options are:*
>
> - *Shared lanes,*
> - *Marked shared lanes,*
> - *Paved shoulders,*
> - *Bike lanes,*
> - *Bicycle boulevards, and*
> - *Shared use paths.*
>
> *"Bike routes" are not included in the list above because they represent a designation, rather than a facility type. See Section 2.5.3 on "Wayfinding for Bicycles.*

Shared lane

Bicycle boulevard

Marked shared lane

Paved shoulder

"Bike routes" were removed as a facility type or classification in the 2012 update of the **AASHTO Guide for the Development of Bicycle Facilities**. The "bike route" designation is used for bikeways made of multiple facility types and signage can be used for continuous routing, as advised by MUTCD guidance.

For the scope of this project, the Proposed Bikeway Network Project List provided in this chapter does not specify what type of bicycle lane (standard, buffered, protected) should be used for a given corridor, as this may require further study. Guidance from AASHTO and other nationally recognized design guidebooks, from the FHWA and NACTO, indicate that separation and protection from motor vehicle traffic volumes greater than 20,000 ADT require more than a minimum 4' standard bicycle lane. Consider buffered or protected bicycle lanes in these cases, such as for SR 89A and SR 260. See Figure 11 for design standards and guidance.

A 2014 research report, "Lessons from the Green Lanes: Evaluating Protected Bike Lanes in the U.S." found that after the installation of separated facilities, ridership on all facilities increased. Survey data indicated that over a quarter of riders are bicycling more because of the separated bike lanes and that 10% of current riders switched from other modes. This report is available at: http://trec.pdx.edu/research/project/583/Lessons_from_the_Green_Lanes:_Evaluating_Protected_Bike_Lanes_in_the_U.S._

Standard bicycle lane
www.pedbikeimages.org /Dan Burden

Protected bicycle lane

Buffered bicycle lane
www.pedbikeimages.org /Lyubov Zuyeva

Shared use path
www.pedbikeimages.org /Jim Hash

FIGURE 11. NACTO GUIDANCE ON SELECTING BIKEWAYS

Contextual Guidance for Selecting All Ages & Abilities Bikeways

Roadway Context				All Ages & Abilities Bicycle Facility
Target Motor Vehicle Speed*	Target Max. Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		*Any*	*Any of the following:* high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts‡	**Protected Bicycle Lane**
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	**Shared Street**
≤ 20 mph	≤ 1,000–2,000		< 50 motor vehicles per hour in the peak direction at peak hour	**Bicycle Boulevard**
≤ 25 mph	≤ 500–1,500			
	≤ 1,500–3,000	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	**Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane**
	≤ 3,000–6,000			**Buffered or Protected Bicycle Lane**
	Greater than 6,000			**Protected Bicycle Lane**
	Any	Multiple lanes per direction		
Greater than 26 mph†	≤ 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	**Protected Bicycle Lane, or Reduce Speed**
		Multiple lanes per direction		**Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed**
	Greater than 6,000	*Any*	*Any*	**Protected Bicycle Lane, or Bicycle Path**
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		*Any*	High pedestrian volume	**Bike Path with Separate Walkway or Protected Bicycle Lane**
			Low pedestrian volume	**Shared-Use Path or Protected Bicycle Lane**

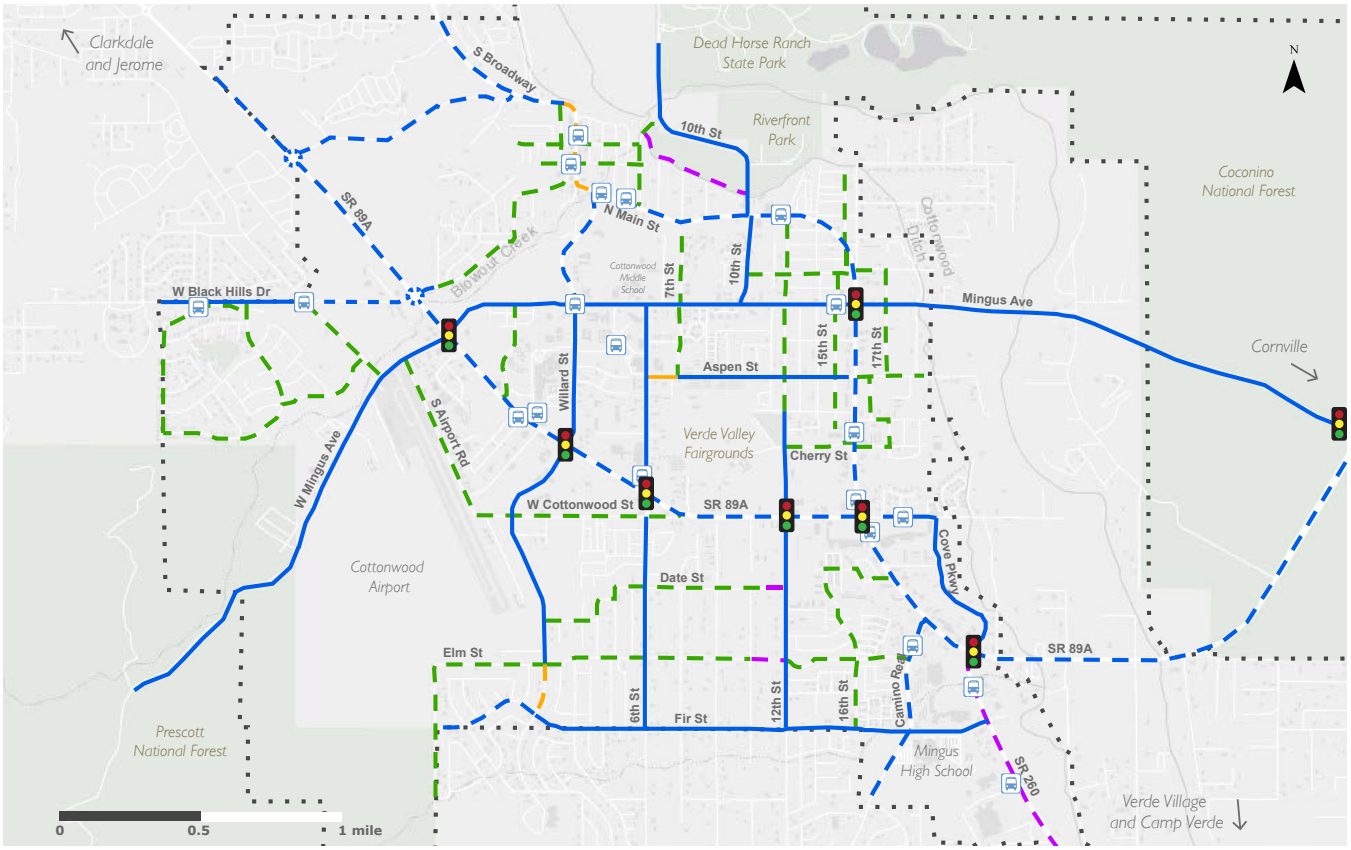
* While posted or 85th percentile motor vehicle speed are commonly used design speed targets, 95th percentile speed captures high-end speeding, which causes greater stress to bicyclists and more frequent passing events. Setting target speed based on this threshold results in a higher level of bicycling comfort for the full range of riders.

† Setting 25 mph as a motor vehicle speed threshold for providing protected bikeways is consistent with many cities' traffic safety and Vision Zero policies. However, some cities use a 30 mph posted speed as a threshold for protected bikeways, consistent with providing Level of Traffic Stress level 2 (LTS 2) that can effectively reduce stress and accommodate more types of riders.[18]

‡ Operational factors that lead to bikeway conflicts are reasons to provide protected bike lanes regardless of motor vehicle speed and volume.

Source: NACTO Designing for All Ages and Abilities, December 2017

FIGURE 12. CURRENT AND PROPOSED BIKEWAY NETWORK



City of Cottonwood Bicycle Network

Bicycle Lanes
- Existing
- Proposed

Paths
- Proposed Shared-Use Paths

Shared Lanes
- Existing Shared Lanes with Markings
- Proposed Shared Lanes with Markings
- Proposed Greenways

- Roundabouts
- CAT/Lynx Stops
- Traffic Lights
- City Boundary

Data sources:
County of Yavapai, Esri, HERE, Garmin, NGA, USGS

Prepared by Dylan Johnstone for the City of Cottonwood
February 2018

Network Totals	Length (miles)
Current bicycle lanes	13.5
Proposed bicycle lanes	11.5
Current and proposed shared lanes	0.7
Proposed greenways	13.6
Proposed shared-use paths	5.0
Total	**44.3**

Proposed Bikeway Network Project List				
Corridor Description	**Proposed 2009 Bikeway Network**	**Proposed 2018 Bikeway Network**	**Updated in 2018 Plan**	**Length (miles)**
Airport Road	Proposed bicycle lanes (W Cottonwood-Mingus, Mingus-city boundary)	Proposed greenway (W Cottonwood-Mingus, Mingus-city boundary)	Y	1.0
E Aspen Street	Multiple facility types: current bicycle lanes (7th-15th), proposed shared lanes (6th-7th, 15th-S Main)	Multiple facility types: current bicycle lanes (7th-15th), proposed shared lanes (6th-7th, 15th-S Main), proposed greenway (S Main-city boundary)	N	1.9
W Black Hills Drive	None	Multiple facility types: current bicycle lane (city boundary-Airport), proposed bicycle lanes (Airport-SR 89A)	Y	0.9
N Cactus Street	None	Proposed greenway (N Main-Pima)	Y	0.2
Camino Real	Proposed bicycle lanes (SR 260-city boundary)	Proposed bicycle lanes (SR 260-city boundary)	N	0.7
S Candy Lane	None	Proposed greenway (W Mingus-SR89A)	Y	0.4
E Cherry Street	Proposed shared lanes (12th-S Main)	Proposed greenway (12th-S Main)	Y	0.4
S Chuckawalla Street	None	Proposed greenway (W Mesquite Dr-city boundary)	Y	0.5
E Cochise Street	None	Proposed greenway (10th-N Main)	Y	0.4
Coconino Street	None	Proposed greenway (N Main-E Memory)	Y	0.1
S Cottonwood Ranch Road	None	Proposed greenway (W Blackhills-Wagonwheel)	Y	0.4
Cottonwood Street	Multiple facility types: proposed bicycle lanes (Airport-SR 89A)	Proposed greenway (Airport-SR 89A)	Y	0.7
Cove Parkway	Proposed bicycle lanes (Cottonwood-SR 260)	Current bicycle lanes (Cottonwood-SR 260)	Y	0.6
E Date Street	None	Multiple facility types: proposed greenway, off-street connection (11th-12th)	Y	0.7
W Desert Willow Drive	None	Proposed greenway	Y	0.5

Proposed Bikeway Network Project List				
Corridor Description	**Proposed 2009 Bikeway Network**	**Proposed 2018 Bikeway Network**	**Updated in 2018 Plan**	**Length (miles)**
S Desparado Drive	None	Proposed greenway	Y	0.4
E Elm Street	Multiple facility types: Proposed bicycle lanes (all segments except 11th-12th), off-street connection (11th-12th)	Multiple facility types: proposed greenway, off-street connection (11th-12th)	Y	1.3
Fir Street	Current bicycle lanes (S Willard-SR 260)	Current bicycle lanes (S Willard-SR 260)	N	2.0
Groseta Ranch Road (Kindra Heights)	Proposed bicycle lanes (SR 89A-N Main)	Proposed bicycle lanes (SR 89A-N Main)	N	0.9
N Main Street (Mingus to city boundary)	Multiple facility types: proposed bicycle lanes (Mingus-N Willard St, N Willard Rd-city boundary), proposed shared lanes (N Willard Rd-N Willard St)	Multiple facility types: proposed bicycle lanes (Mingus-N Willard St, N Willard Rd-city boundary), proposed shared lanes (N Willard Rd-N Willard St)	N	2.1
S Main Street	Proposed shared lanes (Mingus-SR 89A)	Proposed bicycle lanes (Mingus-SR 89A)	Y	0.8
Mingus Avenue	Multiple facility types: current bicycle lane (city boundary-SR 89A, N Willard-SR 89A), proposed bicycle lanes (SR 89A-N Willard)	Current bicycle lanes	Y	4.6
W Mesquite Drive	None	Proposed greenway (Elm-Chuckwalla)	Y	0.4
Pima Street	None	Proposed greenway	Y	0.4
Pinal Street	None	Proposed greenway	Y	0.4
W Running Iron Lane	None	Proposed greenway	Y	0.3
E Skyline Drive	None	Proposed greenway	Y	0.3
E Tierra Verde Drive	None	Proposed greenway	Y	0.2

Proposed Bikeway Network Project List				
Corridor Description	**Proposed 2009 Bikeway Network**	**Proposed 2018 Bikeway Network**	**Updated in 2018 Plan**	**Length (miles)**
N Verde Heights Drive	None	Proposed greenway (SR 89A-Pima)	Y	0.8
Willard Street	Multiple facility types: Proposed shared lanes (N Main-Mingus, Elm-Fir), current bicycle lanes (Mingus-SR 89A, Cottonwood-Elm), proposed bicycle lanes (SR 89A-Cottonwood)	Multiple facility types: Proposed bicycle lanes (N Main-Mingus, consider climbing bicycle lane and downhill shared lane configuration), current bicycle lanes (Mingus-Elm), proposed shared lanes (Elm-Fir)	Y	1.8
S 3rd Street	None	Proposed greenway	Y	0.1
N 5th Street	None	Proposed greenway	Y	0.3
5th Street Connection	None	Proposed shared-use path (5th-10th)	Y	0.4
6th Street	Current bicycle lanes (Mingus-Fir)	Current bicycle lanes (Mingus-Fir)	N	1.5
7th Street	None	Proposed greenway	Y	0.5
10th Street	Current bicycle lanes (Dead Horse-N Main)	Currrent bicycle lanes (Dead Horse-Mingus)	Y	1.2
12th Street	Multiple facility types: proposed shared lanes (Mingus-Birch), current bicycle lanes (Birch-SR 89A), proposed bicycle lanes, (SR 89A-Fir)	Multiple facility types: proposed greenway (N Main-Birch), current bicycle lanes (Birch-Fir)	Y	1.8
15th Street	None	Proposed greenway	Y	0.9
S 16th Place	None	Proposed greenway	Y	0.1
S 16th Street	Proposed shared lanes (Rainbow Trail-Fir)	Proposed greenway	Y	0.6
17th Street	None	Proposed greenway	Y	0.5
SR 89A	Proposed bicycle lanes	Proposed bicycle lanes	N	6.6
SR 260	Proposed bicycle lanes	Proposed shared-use path	Y	4.4

IMPLEMENTATION STRATEGIES

Building out the Cottonwood bikeway network can be achieved through two implementation strategies. While each strategy is equally important to improving the bikeway network, the strategies have varying costs, benefits, and barriers related to implementation, to be briefly discussed in this section.

A NETWORK OF LOW-STRESS GREENWAYS ON LOCAL STREETS

Costs Shared lane markings ("sharrows"), speed humps/tables, wayfinding signage, native plantings and stormwater management (optional)

Benefits By utilizing the local street network, Cottonwood residents have direct access to low-stress bikeways in their neighborhoods. Low-cost, easy to implement.

Barriers Less barriers to implementation and a short timeline to build the network out quickly

Design guidance recommends local roads without centerlines, speeds up to 25 mph, and traffic volumes less than 1,500 ADT (up to 3,000 ADT is acceptable under certain circumstances with appropriate traffic calming devices).

Greenway concept on a local street in Cottonwood

LOW-STRESS BICYCLE FACILITIES ALONG OR ADJACENT TO BUSY ARTERIALS AND COLLECTORS

Costs Vary with level of separation between motorized and non-motorized modes. Buffered bicycle lanes would be low cost since only paint is used. Protected bicycle lanes, raised bicycle lanes at sidewalk-grade, and shared-use paths are considered higher cost facilities. Safe crossings will also vary in cost.

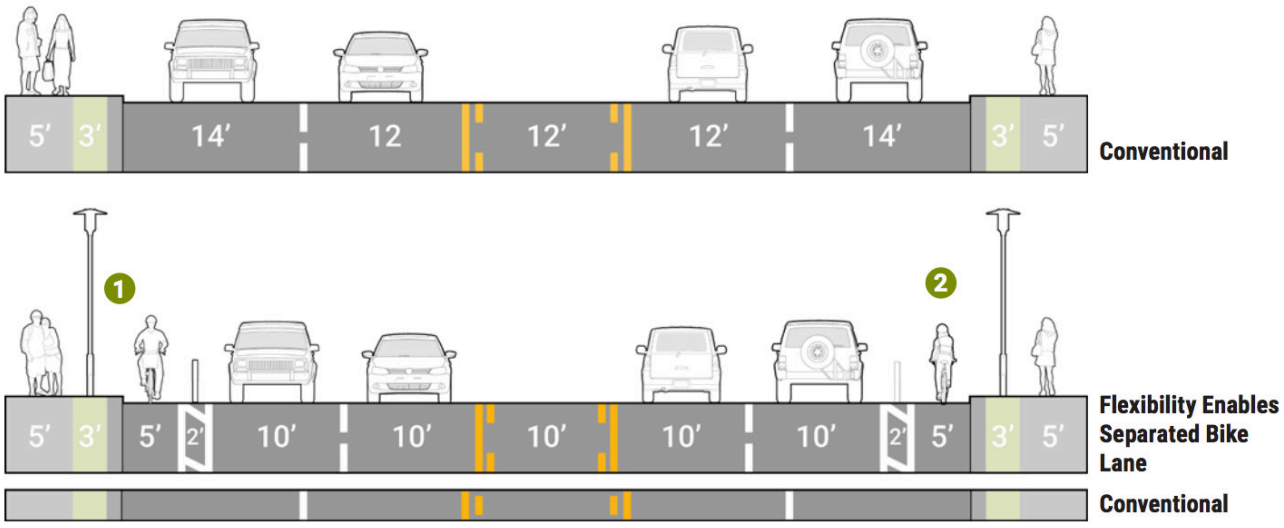
Benefits The major commercial corridors in Cottonwood are located along the high volume arterials. Providing physical separation from motor vehicle traffic along these corridors would offer people riding bicycles convenient and safe access to commercial areas. This would likely reduce sidewalk riding as well.

Barriers Multi-jurisdictional coordination is required along State-owned highways. A longer timeline and budget may be required, dependent on facility type(s) used for a project.

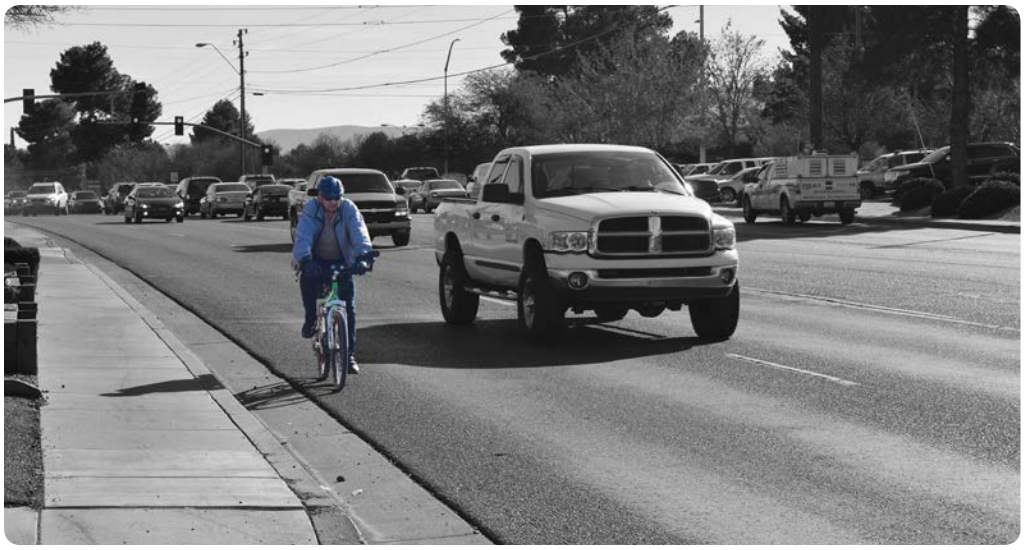
Design guidance will vary depending on the level of separation required given roadway width (number of lanes), posted and prevailing speeds, and traffic volumes. Generally, the higher volume roadways will require higher levels of separation to attain comfortable bicycling facilities for riders of all ages and abilities. These corridors also need crossing improvements. Visibility of cyclists and pedestrians at night could be improved by adding rapid flashing beacons at existing midblock crosswalks. Crossing distances could be reduced by adding island refuges at midblock crosswalks on streets with three lanes or more.

Recent FHWA guidance offers design concepts for several reconfigurations ("road diets") of 5-lane roadways and intersections in **Acheiving Multimodal Networks** (2016) and **Small Town and Rural Multimodal Networks** (2016).

FIGURE 13. SEPARATED BIKE LANES, 5-LANE ROADWAY RECONFIGURATION



Source: FHWA, Achieving Multimodal Networks: Applying Design Flexibility and Reducing Conflicts (2016)



South Main St. lacks appropriate bicycle facilities for low-stress conditions. Separation is encouraged because of the observed high traffic volumes (20,000+ ADT) and speeds (posted 35mph). A buffered bicycle lane or protected bicycle lane would be optimal to increase comfort for riders along this corridor.

Often people choose to ride on the sidewalk along the Main St., SR 89A, and SR 260. Sidewalk riding creates conflicts with pedestrians and has been shown to be a common reason for crashes with motor vehicles entering/exiting driveways and streets.

Providing dedicated space to bicycles would discourage sidewalk riding.

Without bicycle facilities or separate signal phases at the signalized intersections, bicyclists are left to use the crosswalk signals. Above, a right-turning vehicle stops just in time for a person riding to pass in the crosswalk. This is often referred to as a "near miss" in safety studies.

Missoula, MT / Population: 69,100 Separated bike lane along a commercial corridor

Source: FHWA, via Rural Design Guide

Russelville, AR / Population: 28,581 Separated bike lane with planted medians

Source: Mike Repsch, Alta Planning via Rural Design Guide

Design concept for a median island connecting a neighborhood greenway. The island has space that allows bicycles and pedestrians to wait while crossing one side of the street at a time.

Median islands are an FHWA Proven Safety Countermeasure.

Source: NACTO Urban Bikeway Design Guide

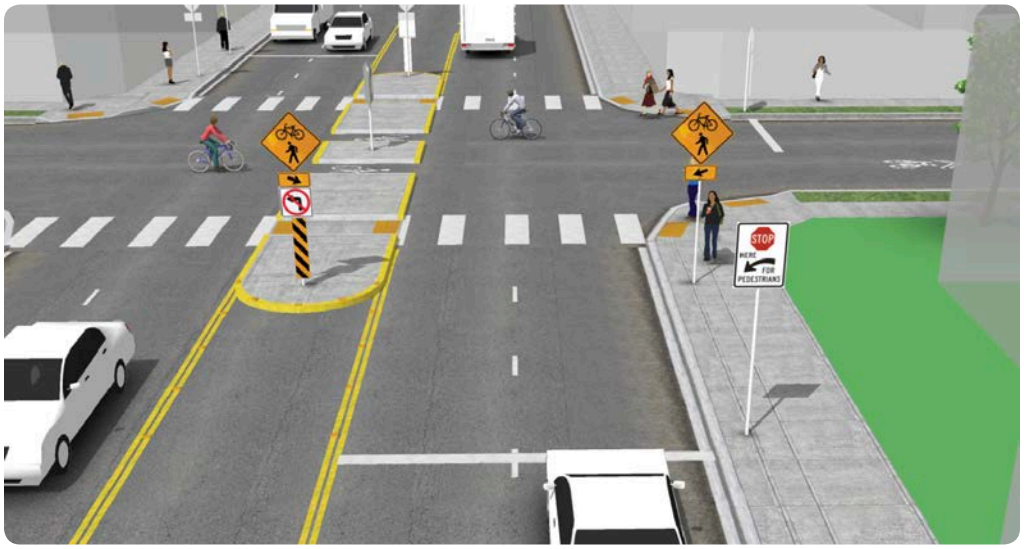


FIGURE 14. DESIGN STANDARDS AND GUIDANCE

Date Published	Agency*	Resource
Documents Encouraging Flexibility in Roadway Design		
1997	FHWA	Flexibility in Highway Design
2004	AASHTO	A Guide for Achieving Flexibility in Highway Design
Aug 20, 2013	FHWA	Memorandum stating agency's support for flexibility in the design of bicycle and pedestrian facilities
Current Guidelines and Standards		
2009	FHWA	Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)
2010	TRB	Highway Capacity Manual (HCM)
2011	AASHTO	A Policy on Geometric Design of Highways and Streets (Green Book)
2012	AASHTO	Guide for the Development of Bicycle Facilities
Publications with Best Practices and Innovations in Multimodal Design		
2010	ITE	Designing Walkable Urban Thoroughfares: A Context Sensitive Approach
2013	NACTO	Urban Street Design Guide
2014	FHWA	Road Diet Guide
2014	NACTO	Urban Bikeway Design Guide
2015	FHWA	Separated Bike Lane Planning and Design Guide
2015	MassDOT	Separated Bike Lane Planning and Design Guide
2016	FHWA	Achieving Multimodal Networks Applying Design Flexibility and Reducing Conflicts
2016	FHWA	Small Town and Rural Multimodal Networks; Rural Design Guide website: http://ruraldesignguide.com/
2017	NACTO	Designing for All Ages and Abilities

***List of Abbreviations**

AASHTO	American Association of State Highway and Transportation Officials
FHWA	Federal Highway Administration
ITE	Institute of Transportation Engineers
MassDOT	Massachusetts Department of Transportation
NACTO	National Association of City Transportation Officials
TRB	Transportation Research Board

Appendix

APPENDIX

DEFINITIONS

BICYCLE: Every device, including a racing wheelchair, that is propelled by human power and on which a person may ride and that has either: (a) Two tandem wheels either of which is more than sixteen inches in diameter. (b) Three wheels in contact with the ground any of which is more than sixteen inches in diameter (ARS 28-101.6).

BICYCLE FACILITIES: A general term denoting improvements and provisions made by public agencies to accommodate or encourage bicycling, including parking and storage facilities, and shared roadways not specifically designated for bicycle use.

BICYCLE LANE: A portion of a roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists.

BICYCLE PATH: See Shared Use Path.

BICYCLE ROUTE SYSTEM: A system of bikeways designated by the jurisdiction having authority with appropriate directional and informational route markers, with or without specific bicycle route numbers. Bike routes should establish a continuous routing, but may be a combination of any and all types of bikeways.

BIKEWAY: A generic term for any road, street, path or way which in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

HIGHWAY: A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

RAIL-TRAIL: A shared use path, either paved or unpaved, built within the right-of-way of an existing or former railroad.

RIGHT-OF-WAY: A general term denoting land, property or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

ROADWAY: The portion of the highway, including shoulders, intended for vehicular use.

RUMBLE STRIPS: A textured or grooved pavement sometimes used on or along shoulders of highways to alert motorists who stray onto the shoulder.

SHARED ROADWAY: A roadway which is open to both bicycle and motor vehicle travel. This may be an existing street with wide curb lanes, or road with paved shoulders, or any street with a width that supports existing motor vehicles and bicycles in the same lane.

SHARED USE PATH: A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Paths may also be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users.

SHOULDER: The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use and for lateral support of sub-base, base and surface courses.

SIDEWALK: The portion of a street or highway right-of-way designed for preferential or exclusive use by pedestrians.

SIGNED SHARED ROADWAY (SIGNED BIKE ROUTE): A shared roadway which has been designated by signing as a preferred route for bicycle use.

TRAIL: A marked or established path or route

TRAVELED WAY: The portion of the roadway for the movement of vehicles, exclusive of shoulders.

UNPAVED PATH: A path having a soft surface such as natural soil or decomposed granite. The decomposed granite may be stabilized.

FUNDING SOURCES

Specific funding programs for bicycle facilities and programs are likely to change from year to year, so the program criteria and availability of each should be checked in advance. Many funding programs involve competitive grants, matching funds, public planning requirements, multi-objective criteria and other requirements that should be carefully evaluated by any agency considering such sources. Funding opportunities for bicycle improvements can be looked at in terms of federal, state, local and private sources, as follows:

FEDERAL FUNDING

This section outlines federal funding programs, but does not include details about eligibility requirements and additional restrictions that may apply. Consult program guidance for detailed requirements.[1]

"Project sponsors should fully integrate nonmotorized accommodation into surface transportation projects. Section 1404 of the Fixing America's Surface Transportation (FAST) Act modified 23 U.S.C. 109 to require federally-funded projects on the National Highway System to consider access for other modes of transportation, and provides greater design flexibility to do so.

"The Fixing America's Surface Transportation (FAST) Act replaced the former MAP-21 Transportation Alternatives Program (TAP) with a set-aside of funds under the Surface Transportation Block Grant Program (STBG) for transportation alternatives (TA). These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity... As under TAP, the FAST Act requires all TA projects to be funded through a competitive process. Eligible applicants include all entities that were eligible to apply for TAP funds. The FAST Act also allows nonprofit entities responsible for the administration of local transportation safety programs to apply.[2]

---

1 Federal Highway Administration. US DOT Transit, Highway, and Safety Funds. Accessed at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.cfm

2 Federal Highway Administration, 2016. Fixing America's Surface Transportation Act or "FAST Act" Accessed at https://www.fhwa.dot.gov/fastact/factsheets/transportationalternativesfs.cfm

Federal Grants

ADA/504 Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973

ATI Associated Transit Improvement (1% set-aside of FTA)

CMAQ Congestion Mitigation and Air Quality Improvement Program
https://www.fhwa.dot.gov/environment/air_quality/cmaq/

FLTTP Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands and Tribal Projects)

FTA Federal Transit Administration Capital Funds

- Fixed Guideway Capital Investment Grants
- Formula Grants for Rural Areas
- TOD Planning Pilot Grants
- Enhanced Mobility of Seniors and Individuals with Disabilities

More information: https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/livable-sustainable-communities/fta-program-bicycle

HSIP Highway Safety Improvement Program

NHPP National Highway Performance Program

NHTSA 402 State and Community Highway Safety Grant Program

NHTSA 405 National Priority Safety Programs (Nonmotorized safety)

PLAN Statewide Planning and Research (SPR) or Metropolitan Planning funds

RTP Recreational Trails Program

SRTS Safe Routes to School Program / Activities

STBG Surface Transportation Block Grant Program

TA Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program)

TIFIA Transportation Infrastructure Finance and Innovation Act (loans)

TIGER Transportation Investment Generating Economic Recovery Discretionary Grant program

STATE FUNDING

Federal funds are sub-allocated to state and regional governments to be administered to local governments and nonprofits through competitive grants processes.

Previously, the Federal Highway Administration allocated funding to states including Transportation Enhancement (TE) and former Transportation Alternatives Program (TAP) funds to be administered by state DOTs. In FY 2016, ADOT apportioned $15 million in TE and TAP funds, with $44.8 million available funds.[3] Currently, under the FAST Act, funds are set aside under the Surface Transportation Block Grant Program (STBG) and for administrative purposes, the funds are referred to as the TA Set-Aside.[4] TA Set-Aside funds combine previously separate funding streams for Transportation Alternatives (TA), Recreational Trails Program (RTP), and Safe Routes to School (SRTS) programs.

For a project to be eligible for the TA-Set-Aside funds[5], it must be identified in the Statewide Transportation Improvement Program (STIP)/Transportation Improvement Program (TIP) and be consistent with the Long-Range Statewide Transportation Plan and the Metropolitan Transportation Plan(s). Northern Arizona Council of Governments (NACOG) manages the Transportation Improvement Program (TIP) for Apache, Coconino, Navajo, and Yavapai counties for the regional transportation system and other funding opportunities.[6] Arizona Department of Transportation manages the State Transportation Improvement Program (STIP).[7]

NACOG states, "The TIP requires regional collaboration to ensure resources are shared, prioritized, maximized, and maintained for the benefit of greater northern Arizona. This includes public input processes consisting of "Call for Projects", public review periods, and ongoing management whereby members of the public, NACOG membership, and other stakeholders review and recommend action to ensure the TIP is monitored and implemented.[8]

These funding streams may be useful for planning and building regional bicycling assets, including trails, shared-use paths along State-owned right-of-way, and bicycle and pedestrian bridges.

---

3 Transportation Alternatives Data Exchange at the Rails-to-Trails Conservancy, 2016. Accessed at http://trade.railstotrails.org/state_profile?state_id=4

4 Federal Highway Administration. Transportation Alternatives. Accessed at https://www.fhwa.dot.gov/environment/transportation_alternatives/

5 Federal Highway Administration. Transportation Alternatives (TA) Set-Aside Implementation Guidance. Accessed at https://www.fhwa.dot.gov/environment/transportation_alternatives/guidance/guidance_2016.cfm

6 NACOG Funding Opportunities. Accessed at https://nacog.org/departments/Regional-Planning/page/funding-opportunities_1.html

7 ADOT STIP. Accessed at http://azdot.gov/planning/transportation-programming/state-transportation-improvement-program

8 NACOG 2018-2023 TIP. Accessed at https://nacog.org/departments/Regional-Planning/page/tip.html

LOCAL FUNDING

According to the Pedestrian and Bicycle Information Center, there are three common approaches to creating local revenue streams to improve conditions for walking and bicycling:

- Special bond issues
- Dedications of a portion of local sales taxes or a voter-approved sales tax increase
- Use of the annual capital improvements budgets of Public Works and/or Parks agencies

Other potential local funding sources can be created from:

- Improvement districts or tax-increment financing (TIF) districts
- Property taxes
- “Sin” sales taxes, such as alcohol and cigarette taxes
- Local option taxes
- Public-private partnerships

PRIVATE DEVELOPMENT SOURCES

Development projects, including commercial, multi-unit residential projects, and mixed use development, can be required to provide bicycle facilities through rezoning and subdivision requests, as well as through zoning and permit requirements enabled by Ordinance 144. Right-of-way can also be pursued as donations from land owners, emphasizing the economic benefits to the developer, as well as to the city in general.

FOUNDATIONS AND NON-PROFIT GRANT PROGRAMS

Grant PeopleForBikes Community Grant Program

Agency PeopleForBikes

Summary Projects previously funded include bike paths and rail trails, as well as mountain bike trails, bike parks, BMX facilities, and large-scale bicycle advocacy initiatives. Previous grant recipients include organizations and local governments in Flagstaff, Prescott, and Sedona.

Link https://peopleforbikes.org/our-work/community-grants/

Agency REI Foundation

Summary Non-profit partnerships and grants with trail building groups and conservation associations.

Link https://www.rei.com/stewardship/creating-access#community-investment-and-engagement

Agency Robert Wood Johnson Foundation

Summary Invests in grantees that are working to improve the health of all Americans. Current or past projects in the topic area “walking and biking” include greenway plans, trail projects, advocacy initiatives, and policy development.

Link https://www.rwjf.org/

PLAN REVIEW

LOCAL PLANS

Plan Cottonwood Riverfront Trails and Recreation Master Plan

Agency City of Cottonwood

Year 2016

Summary This Master Plan includes trail types and cross sections to serve as a resource and reference guide for city agencies, local communities, trail groups, and stakeholder groups with regard to planning, design and construction of Cottonwood's trail network.

Plan Cottonwood General Plan 2025

Agency City of Cottonwood

Year 2014

Summary The General Plan defines goals and objectives for the growth and development of Cottonwood into 2025. The General Plan serves as a guide for the future, including aspirations for the community and strategies for implementation. It is divided into 13 chapters.

In Chapter 4, the Circulation Element, the General Plan encourages the development of a comprehensive bicycle system and a Complete Streets program. Several goals in this chapter specifically relate to the need for the *Cottonwood Bicycle Plan.*

Plan Cottonwood Bicycle Plan

Agency City of Cottonwood

Year 2009 (out of date)

Summary At the direction of the City Council, the City's planning staff began the development of a bicycle plan in the Fall of 2007. This plan provided recommended actions for the 4 E's of bicycling and proposed an inexpensive, on-street bicycle system that focused on providing bicycle lanes on the City's collector streets. This plan was developed with support from the Verde Valley Cyclists Coalition.

Plan Cottonwood Parks and Recreation Commission Five-Year Plan

Agency City of Cottonwood

Summary Identifies funding priorities, lists several trail segments and connections, including the 5th Street Trail Connection, the trail master plan study, and urban trail system.

Plan Cottonwood Middle School Travel Plan

Agency City of Cottonwood

Year 2009

Summary This plan was developed to identify improvements that would encourage students to walk and bicycle safely to and from school. The plan found that on average 20 students bike to/from school, 89 walk to school, and 117 walk home. It cited safety of intersections/crossings and traffic volumes as top reasons students do not walk to school. The action plan included implementing the Cottonwood Bicycle Plan; completing sidewalks along Mingus Ave., 10th St., and collector streets within walking boundary; modifying traffic flow patterns during dismissal; and encourage carpooling.

REGIONAL PLANS

Plan Verde Valley Master Transportation Plan

Agency Arizona Department of Transportation

Year 2015

Summary This plan studies existing conditions and future growth in the Verde Valley region in order to make recommendations for agencies under the Verde Valley Transportation Planning Organization (VVTPO) when making future land use and multimodal improvements.

Plan Verde Valley Trails Concept Plan

Agency Trail Plan Work Group consisting of a group of trail advocates from throughout the Verde Valley, residents from the Towns of Jerome and Camp Verde, and staff from the Prescott National Forest, Coconino National Forest, State Parks, City of Sedona, City of Cottonwood, Town of Clarkdale, and Yavapai County.

Year 2011

Summary This regional trail plan defines a long-range vision for how trails and open space networks could fit into the future vision for the Verde Valley and serves as a practical resource and guide for all of the communities and land agencies. Identified a network of trails and trailheads throughout the Verde Valley region, although the trail alignments and trailhead locations were not authorized or approved for the completed report.

Plan Verde Valley Multimodal Transportation Study

Agency Verde Valley Transportation Planning Organization (VVTPO)

Year 2009 (out of date)

Summary The Verde Valley Multimodal Transportation Study (VVMTS) was developed to guide the implementation of transportation improvements in the region. Following the 2008 recession, its optimistic economic projections indicating significant growth and available funding opportunities changed dramatically. These changes required updated local planning studies for VVPTO member jurisdictions with more accurate projections given the slowing economic growth.

STATE PLANS AND STUDIES

Plan ADOT Statewide Bicycle and Pedestrian Plan Update

Agency Arizona Department of Transportation

Year 2013

Summary This statewide plan focuses on bicycle and pedestrian planning needs on the State Highway System, given significant growth in the state over the last decade. Recommendations are organized by the 5 E's of bicycling. Improvements for SR 260 and SR 89A are called for in public comments.

Plan ADOT Bicycle Safety Action Plan

Agency Arizona Department of Transportation

Year 2012

Summary Reports on safety statistics statewide and on the State Highway System (SHS). The safety action plan's public comments indicate issues with the lack of paved shoulders, lack of understanding or awareness of bicycle laws in Arizona; presence of debris in the shoulders along SR 260. Comments also mention that generally on 89A: lack of bike lanes in areas, harassment from drivers; vehicles, fail to yield right-of-way in traffic circles; debris; stopped vehicles in the bike lane; slick concrete when hot on newly paved areas. One street segment in Cottonwood (Cottonwood St. to Grosetta Rd.) makes the list of high priority street segments due to a high number of bicycle crashes.

Report Economic Impact Study of Bicycling in Arizona: Out-of-State Bicycle Tourists & Exports

Agency Arizona Department of Transportation

Year 2013

Summary This study provides a valuable assessment of the economic impacts of bicycling tourism in Arizona. Findings include:

- At least 250 events annually bring in about 14,000 out-of-state participants, and 36,500 total visitors, including these participants' travel parties.
- Compared to a typical cross-section of tourists, bicycling tourism participants have higher incomes and are more educated.
- An estimated annual direct and indirect/induced economic contribution of $30.5 million and 404 jobs.

ARIZONA BICYCLING ORGANIZATIONS AND RESOURCES

Organization Cottonwood Bicycle Group

Purpose A local group of cyclists who hold weekly social rides in and around Cottonwood. This group also organizes special rides, including a New Year's Day ride since 2002 and rides during National Bike Month.

Organization Verde Valley Cyclists Coalition

Mission The Verde Valley Cyclists Coalition, Inc. (VVCC) is a 501(c)(3) non-profit formed to improve the bicycling environment and quality of life in the Verde Valley of Northern Arizona. We do this by encouraging bicycle use as an energy-efficient, economical and nonpolluting healthful and enjoyable form of transportation and recreation.

Organization Coalition of Arizona Bicyclists

Purpose Bicyclist traffic safety education, lobbying for state laws

Mission The mission of the Coalition of Arizona Bicyclists (CAB) is to promote efforts that improve bicycling usage and safety within the state of Arizona by addressing law enforcement and transportation engineering issues through education, outreach and advocacy programs thereby enhancing the role of bicycling in local, county and statewide transportation plans. CAB is also a 501(c)(3) non-profit.