



# Connecting Communities: Integrating Transportation and Recreation Networks

International Trails Symposium — April 2019



U.S. Department of Transportation  
**Federal Highway Administration**





# USDOT Strategic Plan Goals for FY 2018-2022

## ***Safety***

- Reduce Transportation-Related Fatalities and Serious Injuries Across the Transportation System.

## ***Infrastructure***

- Invest in Infrastructure to Ensure Mobility and Accessibility and to Stimulate Economic Growth, Productivity, and Competitiveness for American Workers and Businesses.

## ***Innovation***

- Lead in the Development and Deployment of Innovative Practices and Technologies that Improve the Safety and Performance of the Nation's Transportation System.

## ***Accountability***

- Serve the Nation with Reduced Regulatory Burden and Greater Efficiency, Effectiveness, and Accountability.

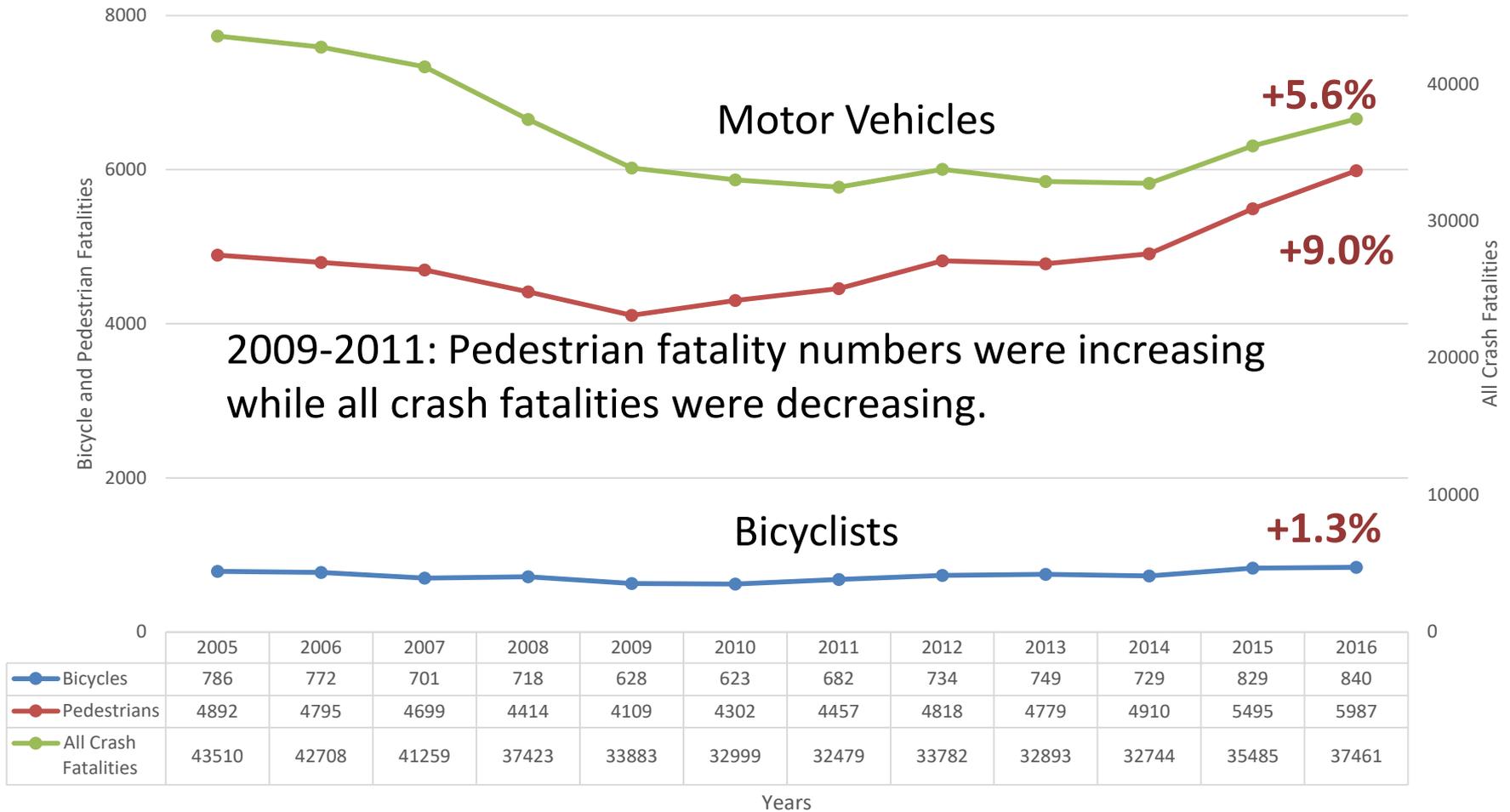
# Youth Corps and Workforce Development

## MAP-21 Section 1524

- DOT encourages States to have contracts and cooperative agreements with qualified Youth Service and Conservation Corps.
- Corps work on recreational trails, pedestrian and bicycle projects, safe routes to school.
- Corps provide workforce development training.
- Agencies can sole source to qualified Corps.
- [https://www.fhwa.dot.gov/environment/transportation\\_alternatives/guidance/youth\\_workforcedev\\_2018.cfm](https://www.fhwa.dot.gov/environment/transportation_alternatives/guidance/youth_workforcedev_2018.cfm)



# Highway Fatalities



Source: Fatality Analysis Reporting System (FARS) 2016 Annual Reporting File

● Bicycles

● Pedestrians

● All Crash Fatalities

# Connecting Communities: Integrating Transportation and Recreation

- We can connect and integrate transportation and recreation infrastructure.
- Trails: spines for transportation networks.
- Transportation and Recreation isn't either/or!



# Bridges and Tunnels: Essential Links for Networks

- Long life spans: Plan for future demand, use, and reuse.
- Bridges connect communities.



# Bridges and Tunnels: Essential Links for Networks

- Reconnect communities.
- Tunnels and underpasses.



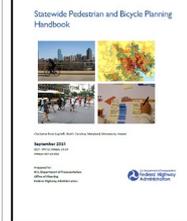
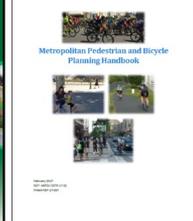
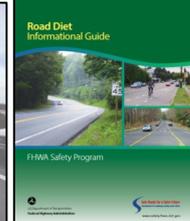
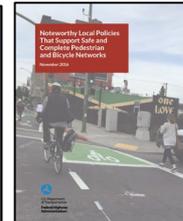
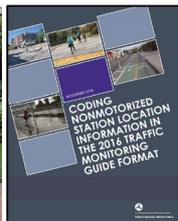
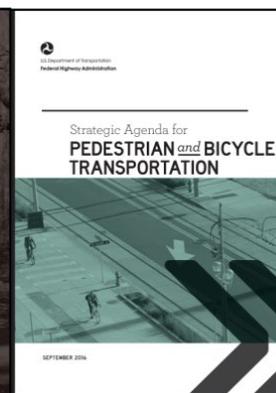
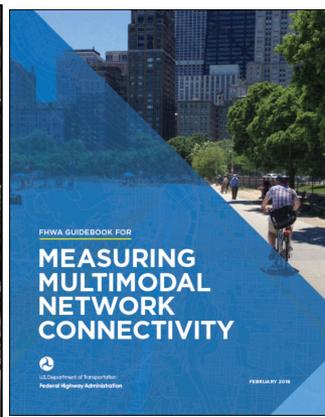
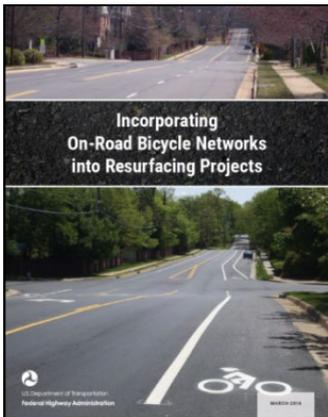
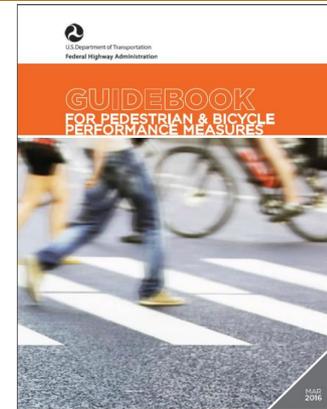
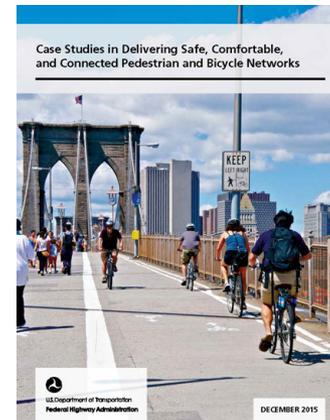
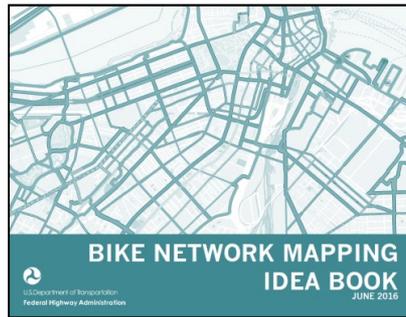
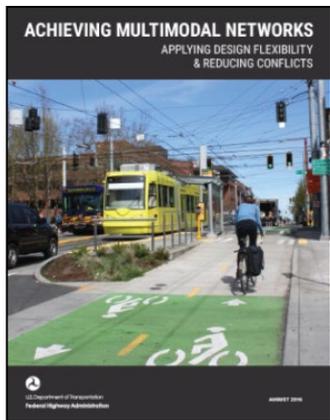
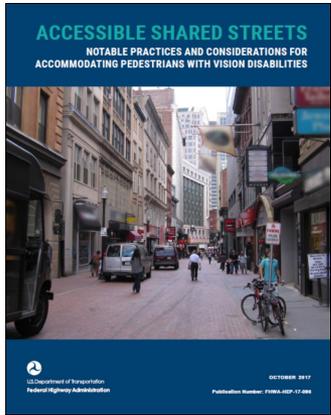
# Recreational trails used for transportation

- Rail-trails and other shared use paths.
- No Federal law or regulation requires pavement, (accessibility requires “firm and stable”).
- No Federal law or regulation prohibits equestrian use.

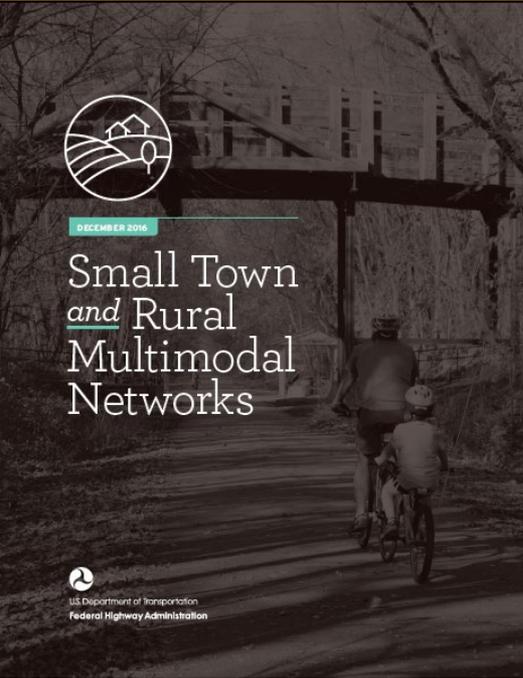


# FHWA Pedestrian and Bicycle Resources: 2013-2018

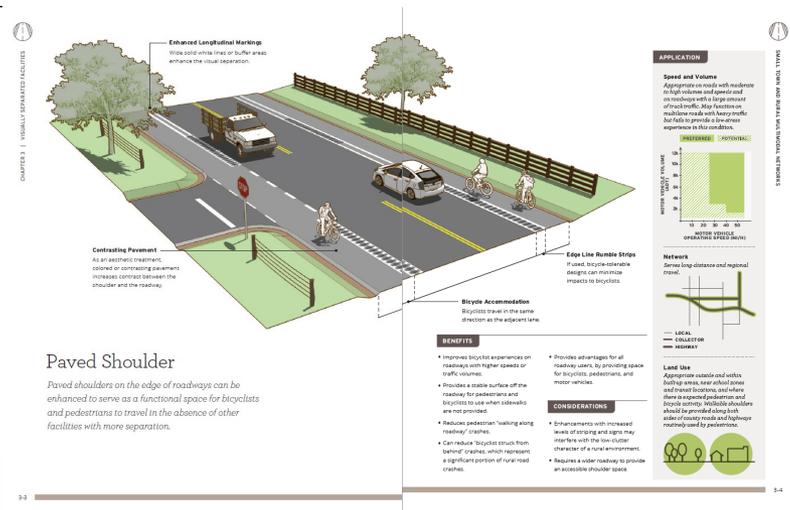
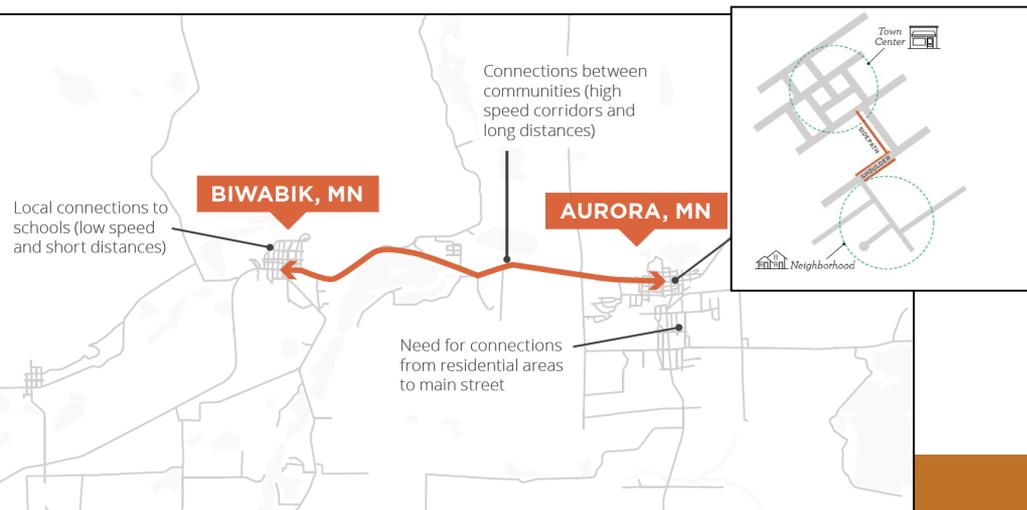
[www.fhwa.dot.gov/environment/bicycle\\_pedestrian](http://www.fhwa.dot.gov/environment/bicycle_pedestrian)



# Small Town and Rural Multimodal Networks



- Bicycle and pedestrian design in a rural context.
- Encourages innovation in development of safe and appealing networks for bicycling and walking.
- Examples of peer communities and project implementation.



# Strategies for Accelerating Multimodal Project Delivery

## STRATEGIES FOR ACCELERATING MULTIMODAL PROJECT DELIVERY



OCTOBER  
2018

FHWA-HEP-19-006

- Identifies specific strategies and techniques to accelerate multimodal project delivery.
- Proven techniques that agencies are using to get high quality results
- Reduce barriers and delays in the project delivery process.

# Achieving Multimodal Networks: Applying Design Flexibility and Reducing Conflicts

## ACHIEVING MULTIMODAL NETWORKS

APPLYING DESIGN FLEXIBILITY  
& REDUCING CONFLICTS



- Provide design flexibility, while reducing multimodal conflicts and achieving connected networks.
- Help practitioners address topics such as:
  - Intersection design
  - Road diets
  - Pedestrian crossing treatments
  - Transit and school access
  - Freight
  - Accessibility





# BIKE NETWORK MAPPING IDEA BOOK

U.S. Department of Transportation  
Federal Highway Administration

JUNE 2016

## MAP BASICS

Common approaches for bicycle infrastructure planning maps are highlighted below. The maps that follow demonstrate these general approaches to varying degrees.

### (1) COMMON INFORMATION LAYERS

#### BIKE NETWORK LAYERS

- Specific Facility Types**
- Bike path, bike lane, buffered bike lane, bike boulevard, separated bike lane, greenway, etc.
- OR
- Flexible Facility Types**
- On-street vs. off-street bikeway systems

#### LOCAL CONTEXT LAYERS

- Transit lines & stations
- Bikeshare stations
- Community amenities: Schools, universities, libraries, community centers, hospitals etc.
- Building footprints
- Specific land use functions, such as commercial uses
- Study areas or corridors

#### BASE LAYERS

- Parks & open space
- Streets
- Waterbodies
- City boundaries
- Labels

### (2) REPRESENTING DIFFERENT TYPES OF INFORMATION

#### PROPOSED VS. EXISTING NETWORK

- Identify ways to clearly denote what is existing and what is being proposed.
- |          |          |
|----------|----------|
| existing | existing |
| proposed | proposed |

#### COLOR SCHEME

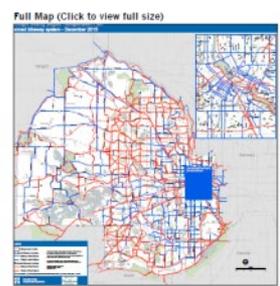
- Consider how color will play a role in highlighting the bicycle network. Bright, saturated colors stand out against softer and more subdued tones.

#### LEVEL OF INFORMATION

- Carefully consider the amount of information used to tell the story. More information can help, but it can also be overwhelming if not organized in a seamless way.
- Small icons and symbols can help to identify points of interest in a less obtrusive way

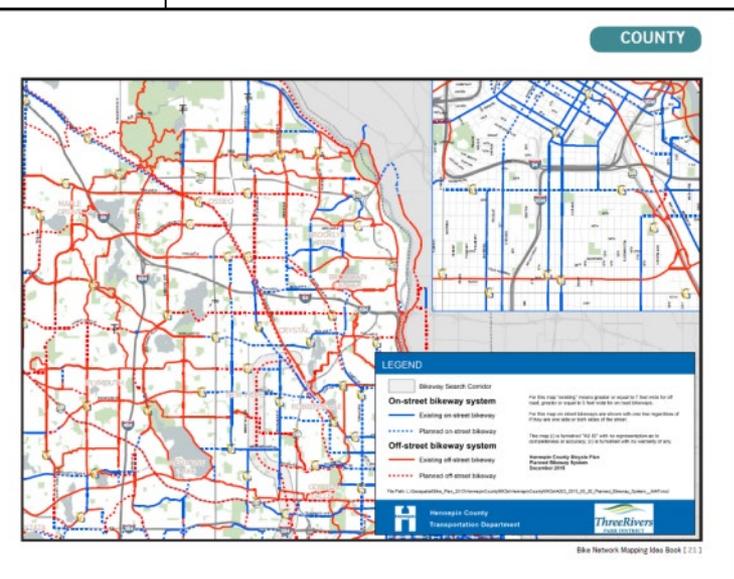
## HENNEPIN COUNTY, MN

LOCATION	YEAR	PUBLICATION	RESPONSIBLE AGENCY
HENNEPIN COUNTY, MN	2015	HENNEPIN COUNTY BIKE PLAN	HENNEPIN COUNTY



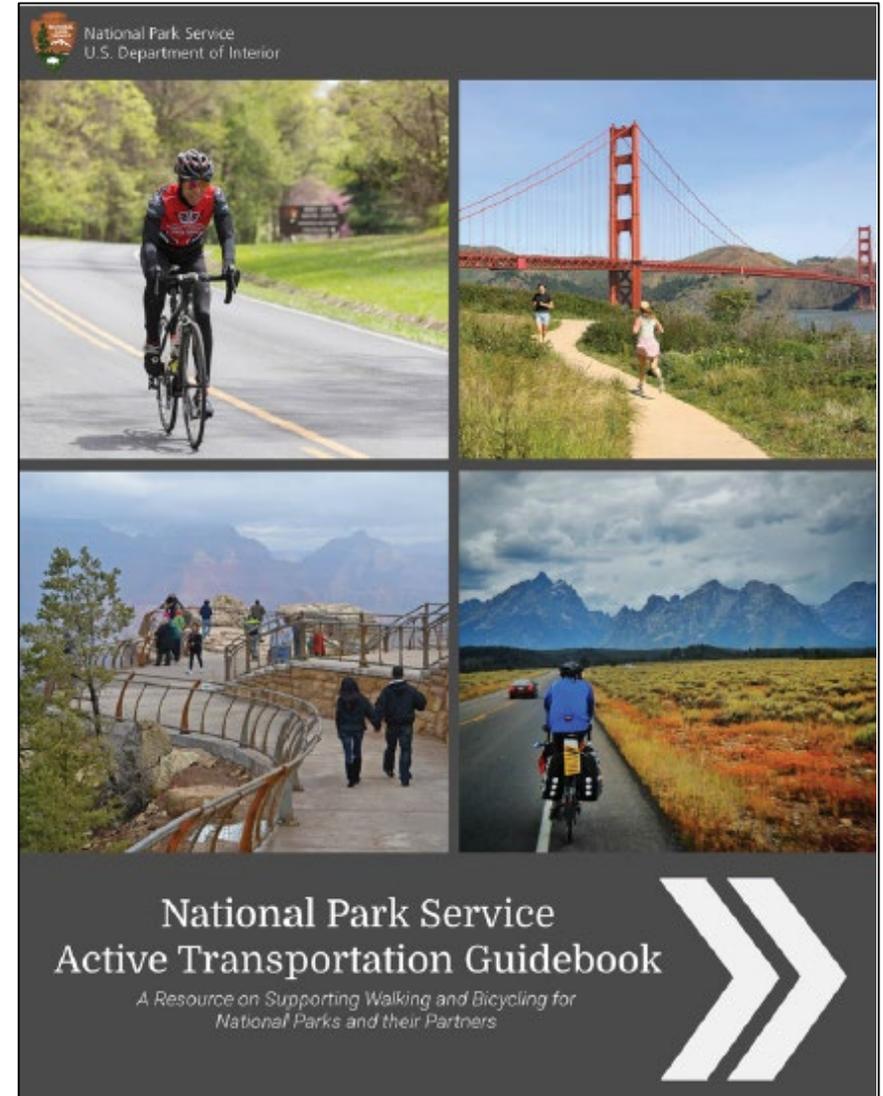
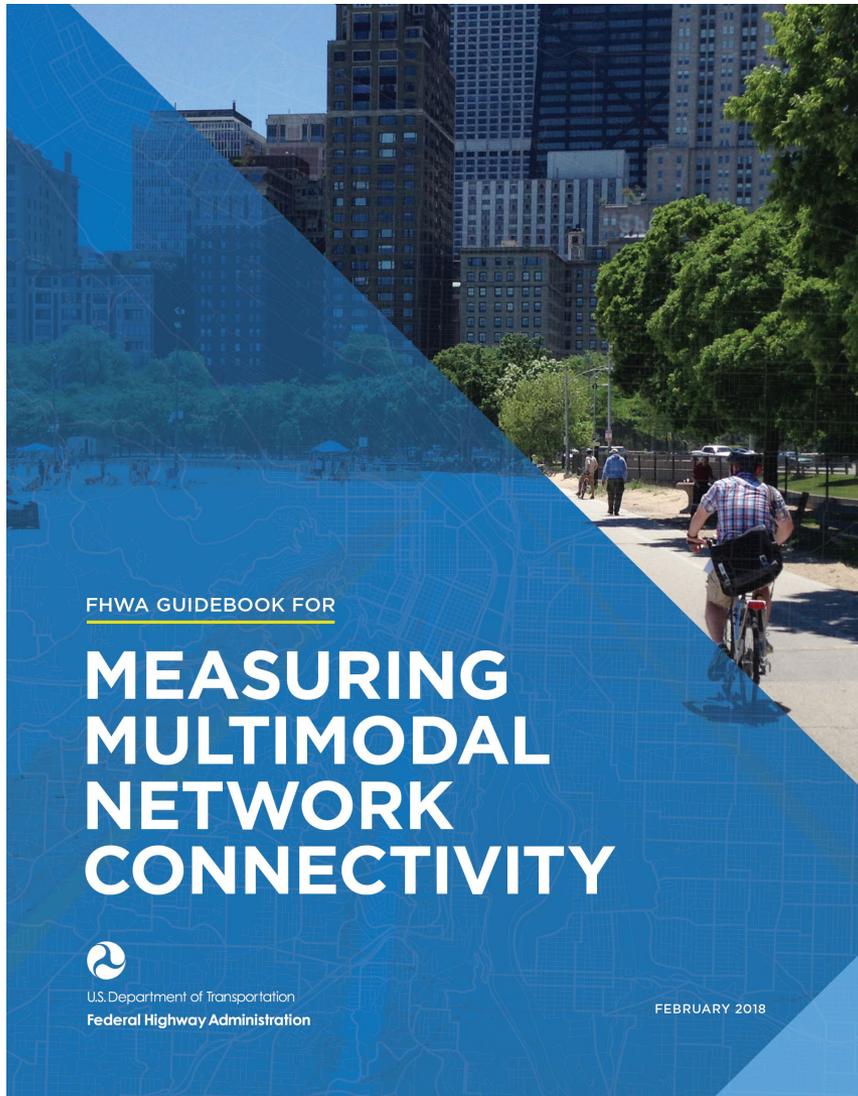
#### KEY MAP FEATURES

- Simple symbology - Two colors and two line types
- Map focuses on county and state roads. Local roads not shown to improve legibility.
- Downtown area is shown in more detail for closer inspection



# Measuring Multimodal Network Connectivity

## National Park Service Active Transportation Guidebook



# Proven Safety Countermeasures

See [safety.fhwa.dot.gov/provencountermeasures](http://safety.fhwa.dot.gov/provencountermeasures)

## Proven Safety Countermeasures

Select any of the following icons to learn more about the specific countermeasure



[Roadside Design Improvement at Curves](#)



[Reduced Left-Turn Conflict Intersections](#)



[Systemic Application of Multiple Low Cost Countermeasures at Stop-Controlled Intersections](#)



[Leading Pedestrian Interval](#)



[Local Road Safety Plan](#)



[USLIMITS2](#)



[Enhanced Delineation and Friction for Horizontal Curves](#)



[Longitudinal Rumble Strips and Stripes on Two-Lane Roads](#)



[Median Barrier](#)



[Safety Edge<sup>SM</sup>](#)



[Backplates with Retroreflective Borders](#)



[Corridor Access Management](#)



[Dedicated Left- and Right-Turn Lanes at Intersections](#)



[Roundabouts](#)



[Yellow Change Intervals](#)



[Medians and Pedestrian Crossing Islands in Urban and Suburban Areas](#)



[Pedestrian Hybrid Beacon](#)



[Road Diet](#)



[Walkways](#)



[Road Safety Audit](#)

# Pedestrian and Bicycle Funding Opportunities

## U.S. Department of Transportation Transit, Highway, and Safety Funds

Revised August 9, 2018

This table indicates potential eligibility for pedestrian and bicycle projects under U.S. Department of Transportation surface transportation funding programs. Additional restrictions may apply. See notes and basic program requirements below, and see program guidance for detailed requirements. 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.

Key: \$ = Funds may be used for this activity (restrictions may apply). ~\$ = Eligible, but not competitive unless part of a larger project. \$* = See program-specific notes for restrictions.																
Activity or Project Type	Pedestrian and Bicycle Funding Opportunities U.S. Department of Transportation Transit, Highway, and Safety Funds															
	BUILD	INFRA	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTP
Access enhancements to public transportation (includes benches, bus pads)	\$	~\$	\$	\$	\$	\$		\$	\$	\$						\$
ADA/504 Self Evaluation / Transition Plan									\$	\$	\$		\$			\$
Bicycle plans				\$					\$	\$		\$				\$
Bicycle helmets (project or training related)									\$	\$SRTS		\$		\$*		
Bicycle helmets (safety promotion)									\$	\$SRTS		\$				
Bicycle lanes on road	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$		\$				\$
Bicycle parking	~\$	~\$	~\$	\$	\$	\$		\$	\$	\$	\$	\$				\$
Bike racks on transit	\$	~\$	\$	\$	\$	\$			\$	\$						\$
Bicycle repair station (air pump, simple tools)	~\$	~\$	~\$	\$	\$	\$			\$	\$						\$
Bicycle share (capital and equipment; not operations)	\$	~\$	\$	\$	\$	\$		\$	\$	\$						\$
Bicycle storage or service centers (example: at transit hubs)	~\$	~\$	~\$	\$	\$	\$			\$	\$						\$
Bridges / overcrossings for pedestrians and/or bicyclists	\$	~\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$				\$
Bus shelters and benches	\$	~\$	\$	\$	\$	\$		\$	\$	\$						\$
Coordinator positions (State or local)						\$ 1 per State			\$	\$SRTS		\$				
Crosswalks (new or retrofit)	\$	~\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$				\$
Curb cuts and ramps	\$	~\$	\$	\$	\$	\$*	\$	\$	\$	\$	\$	\$				\$
Counting equipment				\$	\$		\$	\$	\$	\$	\$	\$	\$*			\$
Data collection and monitoring for pedestrians and/or bicyclists				\$	\$		\$	\$	\$	\$	\$	\$	\$*			\$
Historic preservation (pedestrian and bicycle and transit facilities)	\$	~\$	\$	\$	\$				\$	\$						\$
Landscaping, streetscaping (pedestrian and/or bicycle route; transit access); related amenities (benches, water fountains); generally as part of a larger project	~\$	~\$	~\$	\$	\$			\$	\$	\$						\$
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	\$	~\$	\$	\$	\$		\$	\$	\$	\$	\$	\$				\$
Maps (for pedestrians and/or bicyclists)				\$	\$	\$			\$	\$		\$	\$*			
Paved shoulders for pedestrian and/or bicyclist use	\$	~\$	\$			\$*	\$	\$	\$	\$		\$				\$

# Federal Transportation Program Sources for Trails

- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Surface Transportation Block Grant Program (STBG)
- Transportation Alternatives Set-Aside
- Recreational Trails Program (RTP)
- Federal Lands Transportation Program
- Federal Lands Access Program



# Transportation Alternatives



The TA Set-Aside authorizes funding for programs and projects defined as ***transportation alternatives***, including:

- On- and off-road pedestrian and bicycle facilities, including trails for nonmotorized use.
- Community improvement activities:
  - Historic preservation
  - Vegetation management
- Environmental mitigation related to stormwater and habitat connectivity
- Recreational trail projects
- Safe routes to school projects





## Eligible Project Sponsors

- Local governments;
- Regional transportation authorities;
- Transit agencies;
- Natural resource or public land agencies;
  - May include Federal, State, or local public land agencies
- School districts, local education agencies, or schools;
- Tribal governments;
- Nonprofit entity responsible for local transport safety programs;
- Any other local or regional governmental entity with responsibility for oversight of transportation or recreational trails (other than an MPO or a State agency) that the State determines to be eligible...
- RTP set-aside project sponsors determined by States.





# Recreational Trails Program



## Recreational Trails Program

- The RTP provides funds to the States to develop and maintain recreational trails for all trail uses.
  - Usually administered through a State resource agency.
  - Only FHWA program to support routine maintenance.
- States solicit and select projects for funding.
- States are encouraged to use [Youth Corps](#).
- Represents a portion of the Federal motor fuel excise tax paid by OHV users (including snowmobilers).



# Recreational Trails Program

## Eligible RTP Projects

- Maintain and restore existing trails (and bridges).
- Develop and rehabilitate trailside and trailhead facilities.
- Purchase and lease trail construction and maintenance equipment.
- Construct new trails (limits on Federal lands).
- Acquire easements or property for trails (willing seller only: Condemnation is prohibited).
- Trail assessments for accessibility and maintenance.
- Trail safety and environmental protection education.
- State administrative costs.



## Project Examples

### Recreational Trails Program Annual Report

- [https://www.fhwa.dot.gov/environment/recreational\\_trails/](https://www.fhwa.dot.gov/environment/recreational_trails/)

### Recreational Trails Program Database

- More than 24,500 project examples
- Searchable by State or project type
- Many examples for you to consider
- See <http://recreationaltrailsinfo.org/>

# Trail Training

FHWA Cooperative Agreements to promote trail training.

- American Trails: National Trails Training Partnership
- Tread Lightly! and National Off-Highway Vehicle Conservation Council: OHV User Ethics and OHV Safety and Access Training
- American Council of Snowmobile Associations: Snowmobile Safety and Access Programs
- Bureau of Land Management: National Scenic and Historic Trail Inventory and Monitoring
- The Corps Network: Youth Service and Conservation Corps Workforce Development
- Partnership for the National Trails System: National Trails System Information, Corridor Protection, and Training



# FHWA Contacts

Divisions: <https://www.fhwa.dot.gov/about/field.cfm>

Project Sponsors: Contact your State TA or RTP manager.

States: Contact your FHWA Division office.

- Transportation Alternatives:

[www.fhwa.dot.gov/environment/transportation\\_alternatives/](http://www.fhwa.dot.gov/environment/transportation_alternatives/)

- State TA Manager contacts

- RTP: [www.fhwa.dot.gov/environment/recreational\\_trails/](http://www.fhwa.dot.gov/environment/recreational_trails/)

- State RTP Administrator contacts

National TA and RTP oversight:

Christopher Douwes, Community Planner

Transportation Alternatives

Recreational Trails Program

[christopher.douwes@dot.gov](mailto:christopher.douwes@dot.gov)

202-366-5013

