

**WEBINAR**

**BIKE  
LANE  
GOES  
HERE**



# Stories from the Field: AARP Bike Audit Tool Kit in Action

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Wednesday, February 26th @ 3:00 PM ET

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**[BIKELEAGUE.ORG/WEBINARS](https://bikeleague.org/webinars)**



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- » Webinar is being recorded, will be posted at:
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- » Closed captions are available
  - » Can be hidden or shown from the Zoom menu on your screen:
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- » Feel free to type your questions into the Q&A at any time!

# Speakers



**Mandla Moyo**

Senior Advisor,  
AARP Livable Communities &  
Community Challenge  
**AARP**



**Jacqueline Langhals**

Executive Director  
**Go Ottawa**  
(Ottawa, OH)



**Jared Harber**

Executive Director  
**Oaks and Spokes**  
(Raleigh, NC)



**Jennifer Mabery**

Health Education  
Coordinator  
**Yavapai County  
Community Health  
Services**  
(Cottonwood, AZ)



**Moderator:**

**Amelia Neptune**

Director, Bicycle Friendly America Program - **League of American Bicyclists**

# Agenda

- **Welcome**
  - **Amelia Neptune** – Bicycle Friendly America Program Director, League of American Bicyclists
- **2025 AARP Community Challenge Grant**
  - **Mandla Moyo** – Senior Advisor, AARP Livable Communities & Community Challenge

## Three Bike Audit Projects In Action:

- **Ottawa, OH**
  - **Jacqueline Langhals** – Executive Director, Go Ottawa
- **Raleigh, NC**
  - **Jared Harber** – Executive Director, Oaks and Spokes
- **Cottonwood & Clarkdale, AZ**
  - **Jennifer Mabery** – Health Education Coordinator, Yavapai County Community Health Services
- **Q&A**



**NATIONAL BIKE SUMMIT**

**MARCH 11-13, 2025**

MARTIN LUTHER KING JR. MEMORIAL LIBRARY  
901 G ST. NW | WASHINGTON, DC 20001



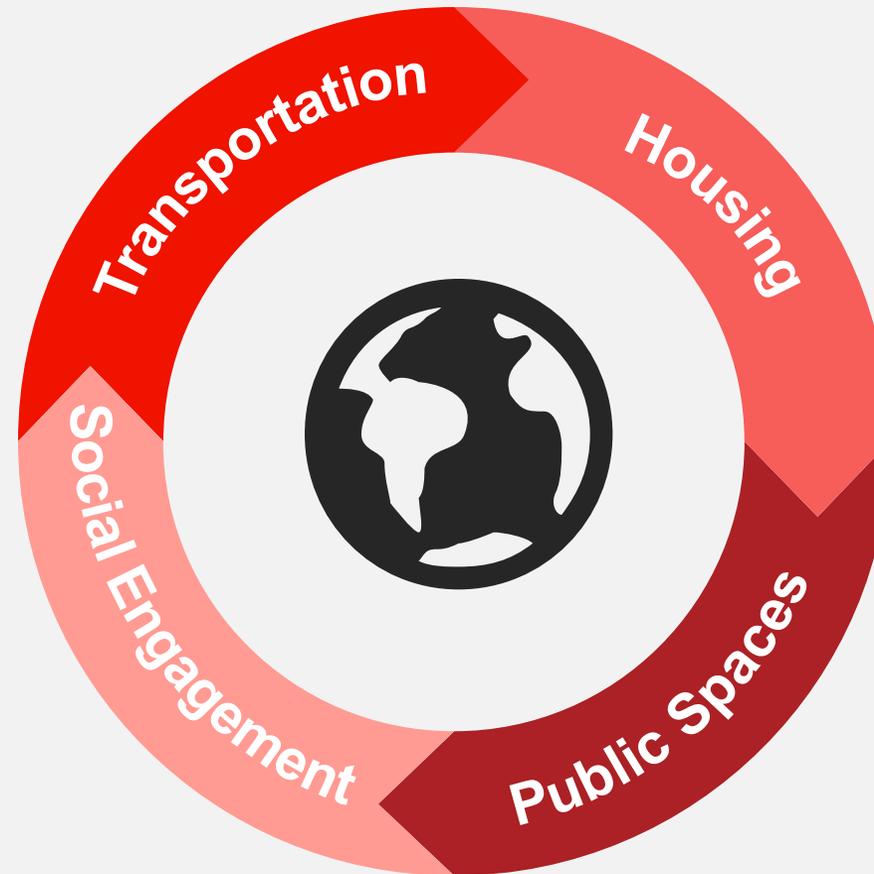
One of the best parts of the National Bike Summit? **“Learning from other communities and experiencing DC's bike infrastructure first-hand.”**

[bikeleague.org/summit](https://bikeleague.org/summit)

# Our Goal



AARP Livable Communities seeks to support state and local leaders to ensure that **they are designing communities that work for people of all ages** by addressing:



“By 2034, there will be **more people over 65 than under 18** – for the first time ever.”

# AARP Community Challenge



A grant program to make communities *more livable* for people *of all ages* with *tangible improvements* that jump-start *long-term change*



# Quick Action Timeline



8 weeks for applications

8 weeks for paperwork

5 months for projects

**March 5** | Applications are due by 5:00 pm ET / 2:00 pm PT

**May** | All applicants will be notified of their status by email

**June 11** | MOU forms to be completed and returned by grantees

**June 25** | Public announcement of selected grantees & projects begin

**December 15** | All projects must be completed

**December 31** | Deadline for after-action reports

## 2025 COMMUNITY CHALLENGE

# Grant Opportunities



In 2025, the AARP Community Challenge is accepting applications across three different grant opportunities:

- ✓ **Flagship Grants**
- ✓ **Capacity-Building Microgrants**
- ✓ **Demonstration Grants**



2025 COMMUNITY CHALLENGE

# Flagship Grants



Flagship Grants continue the successful Community Challenge grant program, first launched in 2017.

These grants offer a broad opportunity for communities to apply for funding and to be creative across these five categories:



**Public Places**



**Digital Connections**



**Transportation**



**Community Resilience**



**Housing**

# Demonstration Grants



This opportunity funds projects that encourage replication of promising local efforts. Grants tend to fall between \$10,000-\$20,000 and will not exceed \$25,000. AARP will accept applications for projects in the following four categories:



## Enhancing Pedestrian Safety

*with funding support provided by Toyota Motor North America*

**TOYOTA**



## Expanding high-speed internet access and adoption

*with funding support provided by Microsoft*

 **Microsoft**



## Reconnecting Communities Divided by Infrastructure



## Implementing Housing Design Competitions

# Capacity-Building Microgrants



Combining \$2,500 grants with additional resources, such as webinars, cohort learning opportunities, up to two hours of one-on-one coaching with leading national nonprofit organizations and AARP publications, this grant opportunity will accept applications for projects that benefit residents in the following four categories:



Disaster Preparedness Training



Walk Audits



Bike Audits



HomeFit® Guide Modifications

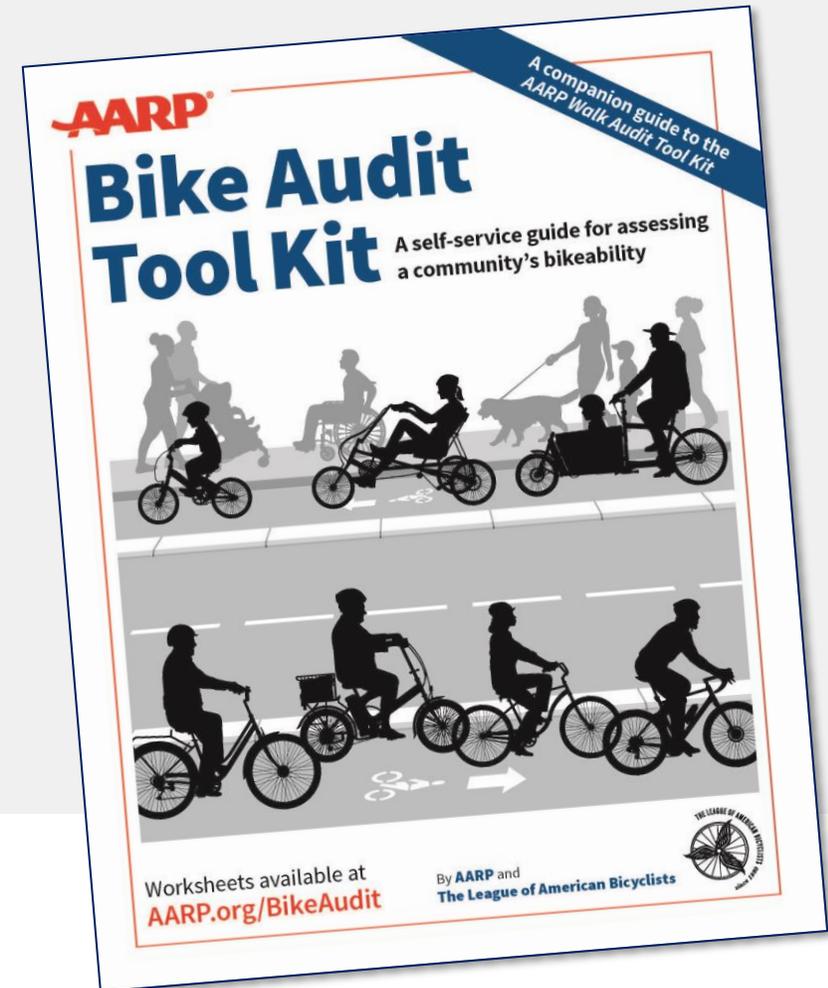
# AARP Bike Audit Tool Kit

A self-service guide for assessing a community's bikeability

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Produced by AARP and the League of American Bicyclists, the 32-page, information- and photo-filled *AARP Bike Audit Tool Kit* can be used by individuals, local leaders, organizations and others who are concerned about the safety and bikeability of a street or neighborhood.

Find this publication (in English and Spanish) and more about bicycling:  
[AARP.org/BikeAudit](https://www.aarp.org/BikeAudit)



# OTTAWA BIKE AUDITS KICK-OFF MEETING

JULY 17TH AT 9 AM  
PUTNAM COUNTY  
DISTRICT LIBRARY



Help us  
decide where  
we should  
assess bike  
safety in  
Ottawa!



AARP COMMUNITY CHALLENGE

## In a Resident's Voice



*"Without these audits, we never would have met these volunteers who are going to continue to stay engaged with the efforts. They did not have an outlet for this until our group engaged them in this process, and now it seems that they could help lead us into the future."*

**Go Ottawa**

**Ottawa, Ohio**

# Additional Questions?



## Resources

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**Email**

[CommunityChallenge@aarp.org](mailto:CommunityChallenge@aarp.org)



**Learn more on the website**

[AARP.org/CommunityChallenge](https://AARP.org/CommunityChallenge)



**Sign up for the AARP Livable Communities e-Newsletter**

[AARP.org/LivableSubscribe](https://AARP.org/LivableSubscribe)

✓ **Text LIVABLE to 50757**

✓ **Scan the QR Code**



SCAN ME



# OTTAWA OHIO BIKE AUDITS



This project was funded by a grant from AARP. The AARP Community Challenge is a grant program to make tangible improvements in communities that jump-start long-term change. It is part of AARP's nationwide Livable Communities initiative, which supports the efforts of cities, towns, neighborhoods and rural areas to become great places to live for people of all ages. To learn more, visit [aarp.org/Livable](http://aarp.org/Livable).

# CONTEXT & PURPOSE

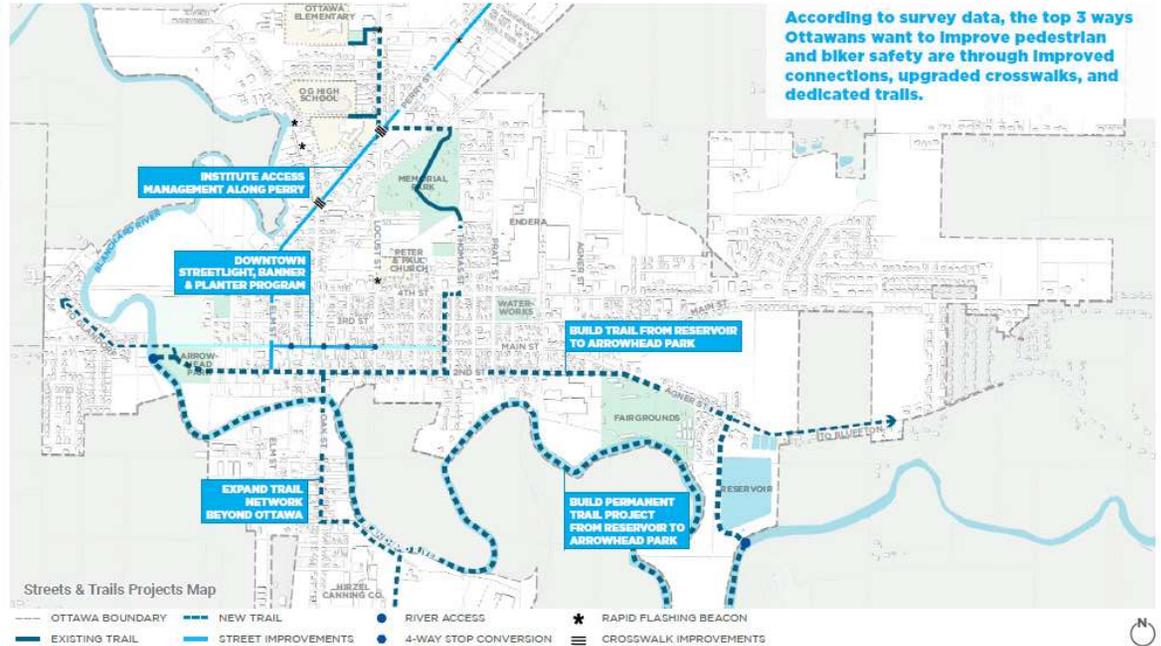


## OUR VISION

Build safe bicycle and pedestrian connections between our schools, the reservoir, downtown, and the river. Then, look further out and better connect to Gilboa and Glandorf.

## PRINCIPLES + OBJECTIVES

- » Build an interconnected off-street trail network that connects neighborhoods to schools, downtown, and the river
- » Maintain clear branding, pavement markings, signage, and debris/snow clearance along the trail network
- » Calm intersections and prioritize pedestrians along key streets and Main Street in particular
- » Grow usage of the Blanchard River Float Trail as an active part of the trail system
- » Support the growing use of golf carts, eBikes, and electric vehicles
- » Broaden presence of active living in marketing Ottawa
- » Reduce reliance on school busing
- » Ensure that pedestrian comfort and safety are at the core of every street improvement



According to survey data, the top 3 ways Ottawans want to improve pedestrian and biker safety are through improved connections, upgraded crosswalks, and dedicated trails.



# LOCATION SELECTION



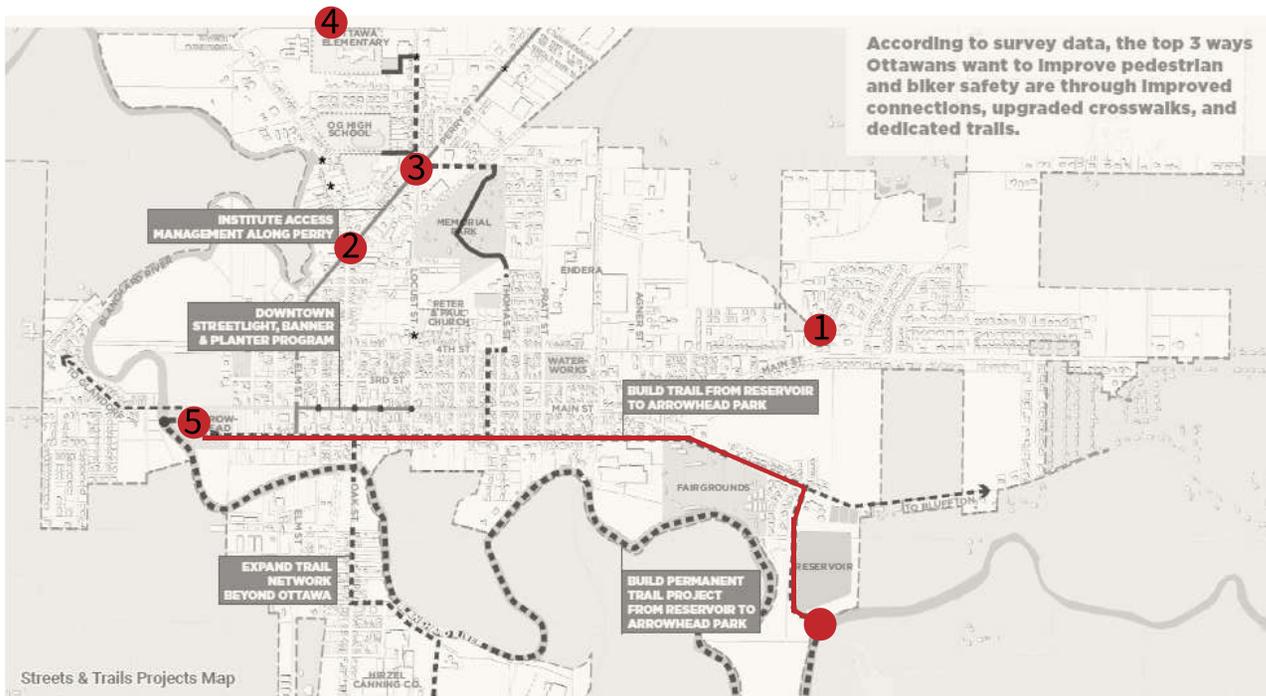
Location 1: Selhorst Drive: While not called out in our strategic plan as a potential bike path, local bikers said that this intersection was hazardous and well-traveled. Recently, a resident from Tawa Manor had a biking accident at this location.

Location 2: McDonald's Intersection: This intersection was called out in the strategic plan for improved crosswalks. This was also an area where local bikers felt unsafe.

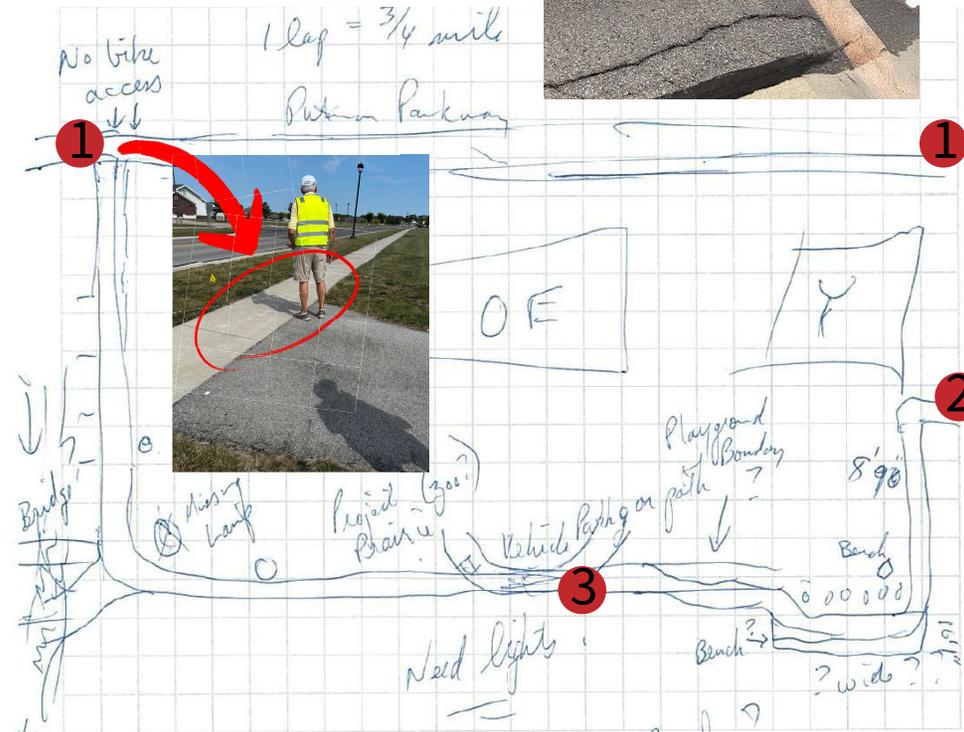
Location 3: High School Intersection: This intersection is on the proposed future bike path to connect with our schools. This was also an area where local bikers felt unsafe.

Location 4: Putnam Parkway: This area is on the proposed future bike path to connect with our schools.

Location 5: 2nd Street: This is in the strategic plan as the first phase of a bike trail between Arrowhead Park and the Ottawa Reservoir.

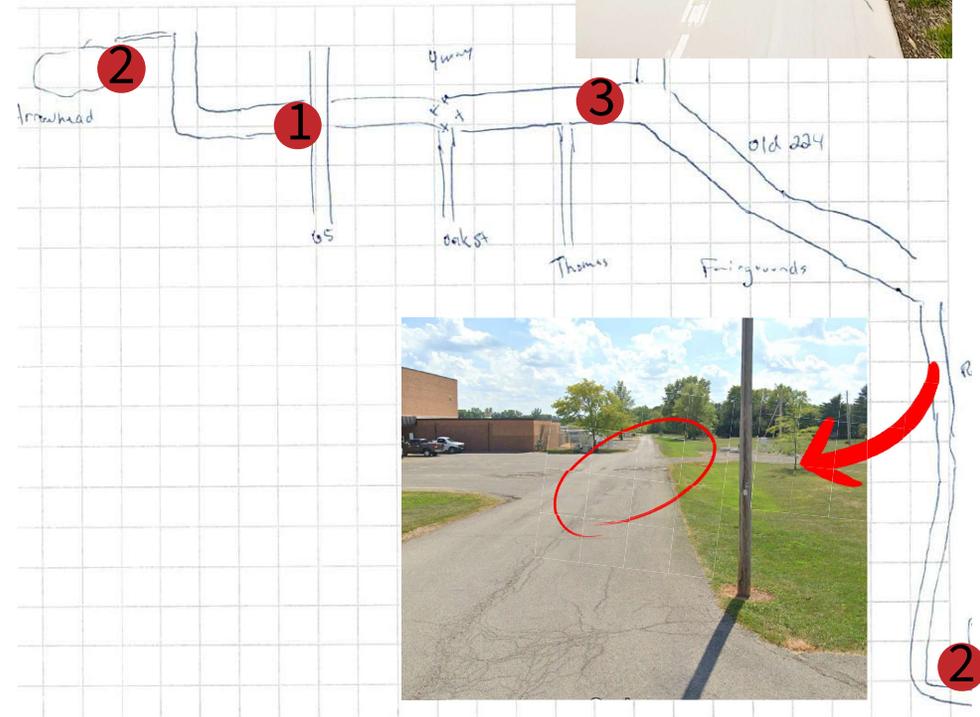
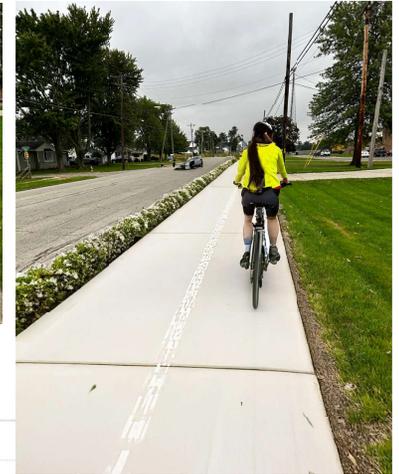


# PUTNAM PARKWAY



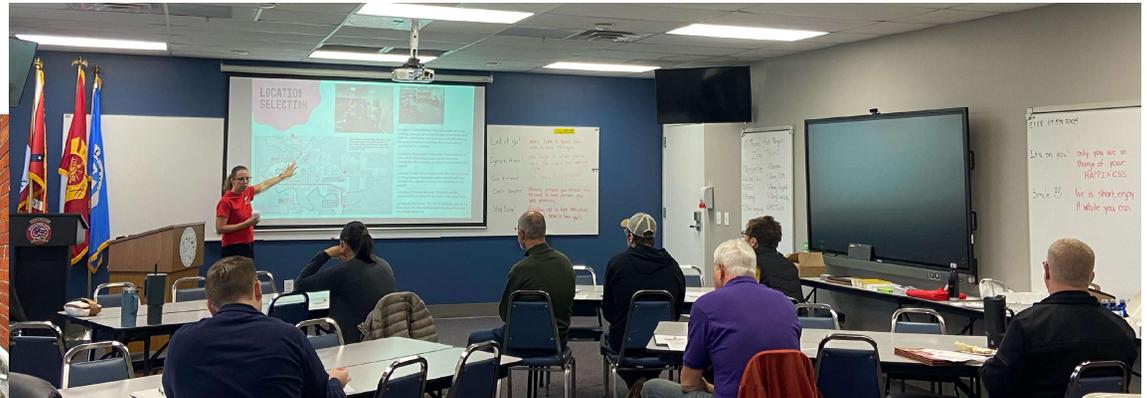
Observation	Suggested Improvement	Short, Medium, or Long Term
<b>1</b> No crosswalks across Putnam Parkway and no crosswalk across 109 at housing complex.	Add crosswalks at 109 & Putnam Parkway, as well as at least one someone near the Library. Consider artistic crosswalk at Library.	M
No signage alerting drivers to pedestrians/bicyclists	Add signage at key locations	S
Broken lights along walking path behind school	Fix lights	S
<b>2</b> Crosswalk signal at Meadows Glen not working many times of day and not being used	Check power system to ensure lights work on peak times; Education plan for pedestrians	S
No sidewalk after the Meadows or Library so no connection to Rte 15	Add sidewalk	L
No drinking fountain or trash receptacles along walking path and opportunity for more seating	Add at least 1 trash receptacle. Benches donated over time. Drinking station added in future.	Trash & Bench - S Drinking Station - L
Path ends abruptly for bicyclists when it comes back out to Putnam Parkway	Is there opportunity to connect to new development behind the Meadows?	L
<b>3</b> Walking path is blocked by vehicles during drop off and pick up	Shift lane for drop off and pick up	M

# 2ND STREET



Observation	Suggested Concepts for Trail
<p>1 Crossing 65 will be issue. Oak &amp; Thomas intersections also pose hazards.</p> <p>3 Potential obstructions along path include: utility poles, trees, mailboxes, and driveways. West of Car-E-It tracks has less obstructions on North side of street. After the tracks, there seem to be less obstructions on South side of street.</p>	<p>Can we go under 65? Signalized crossing for Oak &amp; Thomas.</p> <p>Can we start on North and have a crossing at some point?</p>
<p>2 Fairgrounds intersection also potential hazard unless switch is made prior</p>	<p>Switch to south side of street for multimodal path before Fairgrounds to help with safety through that intersection</p>
<p>Current sidewalk is in need of repairs.</p>	<p>Utilize the need for these repairs to move forward with repaving of wider multimodal path.</p>
<p>Potholes at Reservoir cause a hazard for cyclists</p>	<p>Fill in &amp; pave over. Could we pave all the way to rear of Reservoir?</p>
<p>2 No bike parking at either end of potential trail or access to drinking</p>	<p>Limited bike parking to be added at Arrowhead and Reservoir. Drinking water station to be added along path in long-term.</p>
<p>No public restrooms at Reservoir</p>	<p>Add seasonal port-a-let service similar to Arrowhead Park</p>

# NEXT STEPS



AMERICA WALKS

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## Transportation Alternatives Program (TAP) & Guidance

October 01, 2024 | ODOT



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## League of American Bicyclists'



# COMMUNITY SPARK GRANTS

## COMMUNITY CHANGE GRANTS



### 2025 AARP COMMUNITY CHALLENGE

Application Deadline:  
Wednesday, March 5, 2025  
5 PM (ET) / 2 PM (PT)



Grants to make communities livable for people of all ages  
[aarp.org/CommunityChallenge](https://aarp.org/CommunityChallenge)



Pictured: Knight Creative Communities Institute  
2023 AARP Community Challenge Grantee (Tallahassee, Florida)



# BIKE WALK AUDIT REPORT



**AARP**® COMMUNITY CHALLENGE GRANT 2024

# TABLE OF CONTENTS

1

Introduction

2

Background

3

Process

4

Audit Location #1 - Brookside Dr

5

Audit Location #2 - Garner Rd

6

NCSU's Cycling Cities - Student Audits

7

Acknowledgements



# INTRODUCTION

**Raleigh, North Carolina, is rapidly growing, increasing the demand for safe and efficient transportation options. Oaks and Spokes, a biking and walking advocacy organization, conducts annual audits to assess street and greenway safety, identifying ways to improve roadways and trails for all users—whether they walk, bike, or drive.**

## Why Conduct Biking and Walking Audits in Raleigh?

Raleigh’s rapid growth presents both opportunities and challenges. More people and development mean greater demand on our transportation infrastructure. Ensuring safe and accessible routes for biking and walking is essential for:

- Reducing traffic injuries and fatalities.
- Reducing congestion.
- Reducing environmental and social harm.
- Supporting a more sustainable and equitable city.

Conducting audits allows us to identify areas where infrastructure can be improved to ensure safety and accessibility for all roadway users.

## The Purpose of Biking and Walking Audits:

Conducting audits allows us to identify areas where infrastructure can be improved to ensure safety and accessibility for all roadway users. But our biking and walking audits are more than just assessments—they are a way for our community to take an active role in shaping Raleigh’s transportation future.

These audits:

- Highlight areas where biking and walking infrastructure is insufficient or unsafe.
- Provide actionable recommendations to city planners and officials.
- Encourage public awareness and dialogue about roadway safety.
- Engage volunteers and concerned citizens in meaningful advocacy efforts.

## Goals of the Audits:

Through these audits, Oaks and Spokes aims to:

- Identify specific locations where infrastructure improvements are needed.
- Advocate for safer crosswalks, bike lanes, and pedestrian pathways.
- Promote equity by ensuring all neighborhoods have safe biking and walking access.
- Collaborate with local government staff and elected officials to prioritize safety for vulnerable roadway users such as children and legacy residents.
- Build a community of informed and engaged volunteers who are passionate about making Raleigh safer and more accessible.





# BACKGROUND OAKS AND SPOKES

## OUR MISSION

Oaks and Spokes is transforming Raleigh into a city where biking and walking are safe, accessible, and integral to everyday life.

We value community, equity, safety, health, and engagement:

- **Community:** Building a vibrant, active transportation culture to enhance community life.
- **Equity:** Ensuring all individuals, regardless of background, have equal access to active transportation through affordable resources.
- **Safety:** Advocating for safer roadways via better infrastructure, funding, and design for all users.
- **Health:** Promoting active transportation to reduce car dependency and its negative impacts on personal and environmental health.
- **Engagement:** Empowering civic involvement through education, outreach, and advocacy with government and officials.

## OUR PURPOSE

Oaks and Spokes envisions a transportation network that is both just and sustainable, featuring safe streets and seamless connectivity. We advocate for equitable access to safe, active transportation options to reduce car dependency and foster a community that enhances the quality of life for all.



# 30%

OF RESIDENTS IN  
WAKE COUNTY  
DO NOT  
DRIVE A CAR



# OUR AUDIT PROCESS

Biking and walking audits go beyond assessing roadway safety; they are tools for engagement and advocacy. They help connect with community leaders and partners while providing data to advocate for active transportation improvements with communities and officials.

## 1

### Planning with informed intent:

When planning an audit, we work with the city's Department of Transportation, analyze collision data, and gather community input to identify key areas for improvement. In doing so, we weigh quantitative and qualitative data equally. We also use the city's strategic bicycle and pedestrian plan to prioritize and expedite targeted projects.

## 2

### Community partnership:

After identifying an audit location, we engage the community by collaborating with local homeowners, leaders, and partner organizations. This approach rallies volunteers, provides an educational and social outlet for all ages, and offers opportunities for Oaks and Spokes members to support our work.

## 3

### The audit:

On the day of the audit, volunteers can choose to work all day or in shifts. Audits typically last six hours, with each shift including group walks and bike rides along the corridor under assessment. Sufficient observational time is provided to thoroughly evaluate roadway user frequency, behavior, demographics, and more. Volunteers help identify, photograph, and take videos of the areas needing improvement.

## 4

### Continued advocacy:

After completing an audit, we compile a report using data collected by volunteers. This report is shared with volunteers, members, community partners, city staff, and elected officials. We also present it to the Bicycle and Pedestrian Advisory Commission (BPAC) to highlight needed improvements and request their recommendations to proceed with next steps to ensure that these improvements are made.

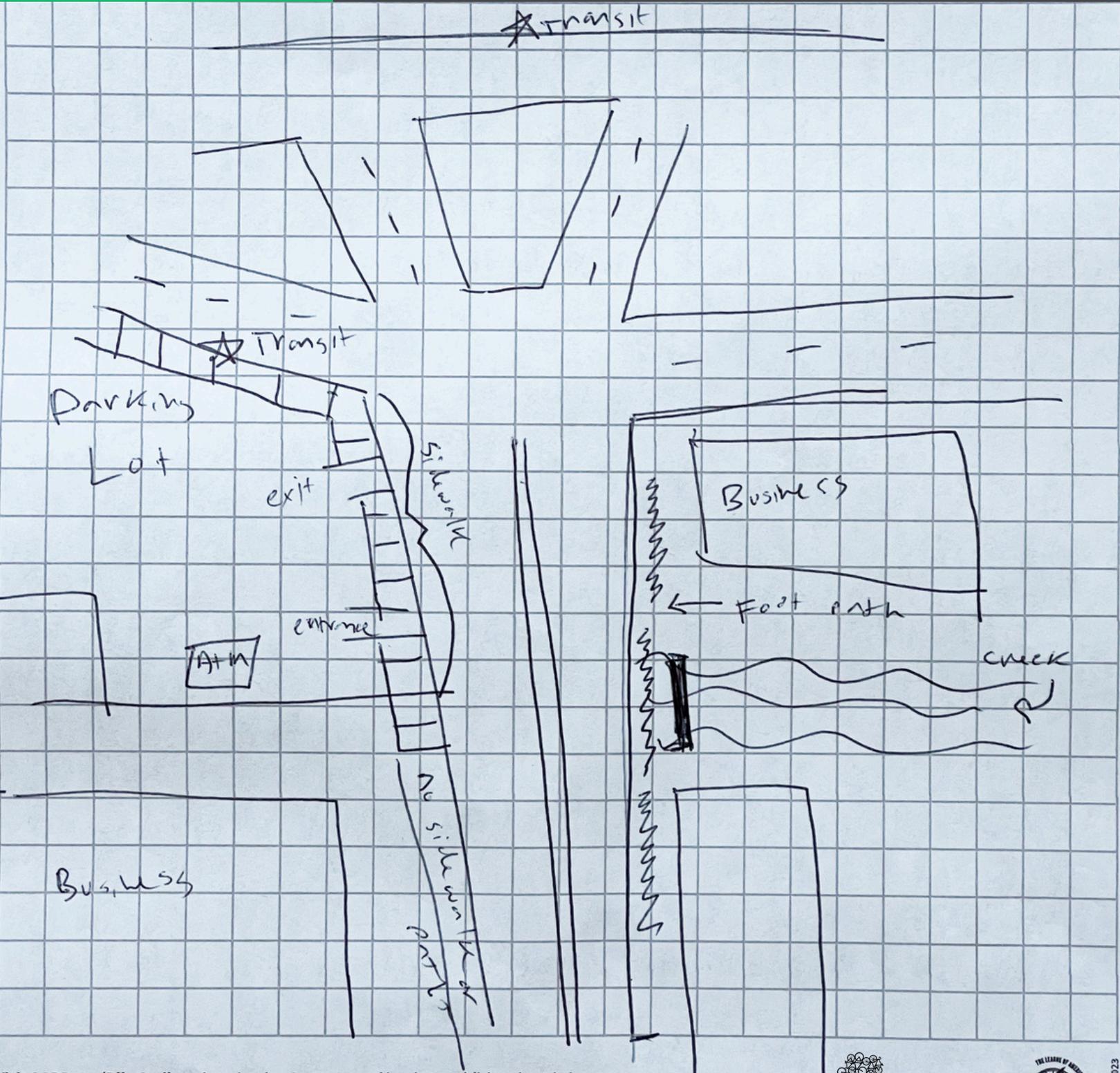


# AUDIT 1

October 10, 2024

# BROOKSIDE DRIVE

East Raleigh: North to South,  
Between Watauga St and Wake Forest Rd



Visit [AARP.org/BikeAudit](https://www.aarp.org/BikeAudit) to download, print, copy and/or share additional worksheets.

The AARP Bike Audit Tool Kit was created with the League of American Bicyclists ([BikeLeague.org](https://www.bikeleague.org)).



© AARP 2023

Sidewalk



# BROOKSIDE DR

## A SNAPSHOT

**Community Name:** Oakwood

**Location:** East Raleigh - Brookside Dr,  
between Watauga St and Wake Forest Rd

**Distance:** 1 mile

**Zoning Type:** Residential, Residential Mixed-Use, Industrial Mixed-Use

**Speed Limit:** 25 MPH

**Road Type:** Neighborhood Collector

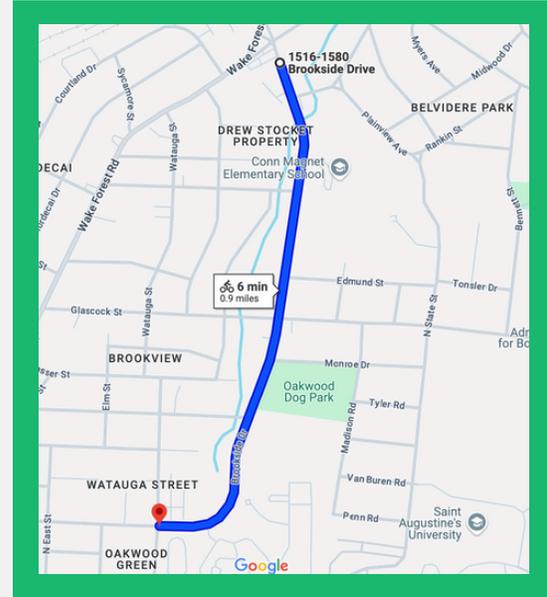
**Travel Lanes:** 2

**Bike Lanes:** Present on 10% of the corridor

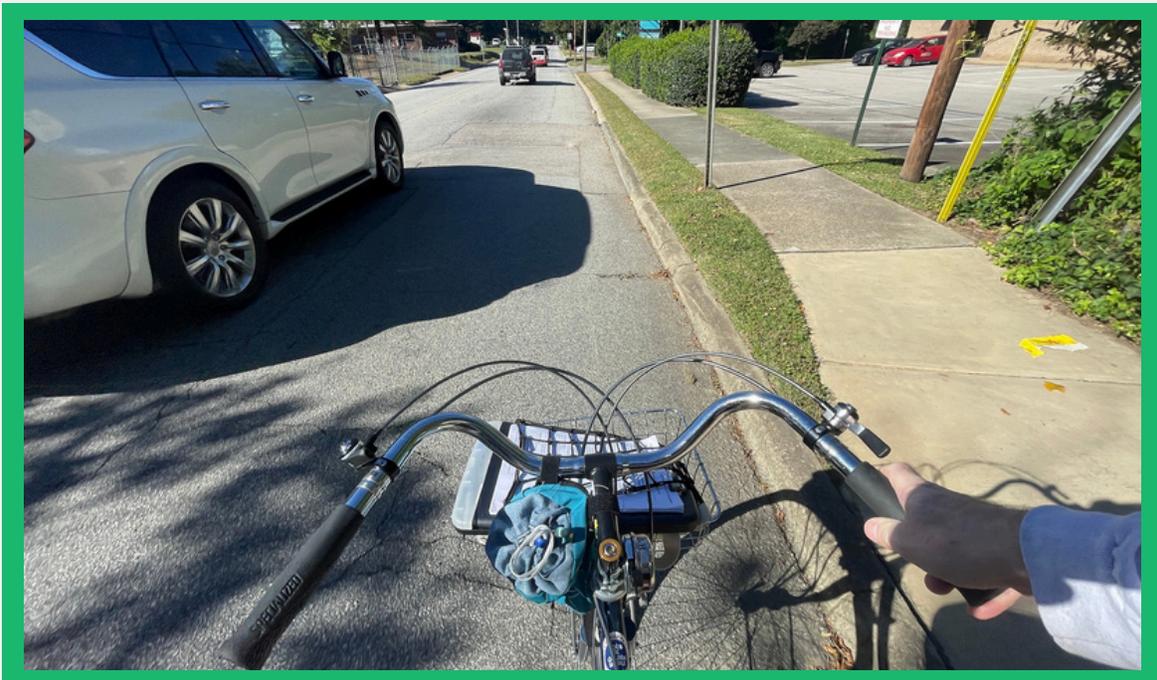
**Sidewalks:** Yes, but only on the southern portion

**Transit Stops:** 3

**Points of Interest:** Conn Elementary School, Oakwood Park and Dog Park, Small Shopping Center



Brookside Dr is a mixed-use, predominantly residential collector road serving the urban neighborhoods of Oakwood and Brookview. It connects residents to Oakwood Park, Brookside Market Shopping Center, Conn Elementary, and major roads like Wake Forest Rd and Capital Blvd, providing access to central and northern Raleigh. The corridor lacks dedicated bike facilities. Sidewalks are present from Watauga St to Frank St but disappear in the more industrial northern section. Existing Sidewalks are in poor condition.



**AARP**



AARP

# BROOKSIDE DR BIKING CONDITIONS



Heading North



Short Bike Lane



Narrow Space



Speed Limit



Bike Lane Space



Traffic Volume



Bike Parking



Plenty of Space



Missing Curb

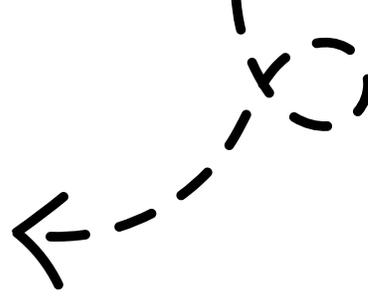


No Options



# BROOKSIDE DR

## WALKING CONDITIONS



**Sight Line**



**Ramp Condition**



**Ramp Angle**



**Debris + Cracks**



**Over Growth**



**More Cracks**



**Close Crossing**



**Poor Condition**



**Fall Hazard**



**Sidewalk Ends**



# BROOKSIDE DR

## WALKING CONDITIONS CONT.



**Many Peds**



**Forced in Road**



**In Road w/ Truck**



**Strollers and Dogs**



**Only Street**



**No Refuge**



**No Refuge**



**Some Repairs**



**No Detour**



**More Debris**

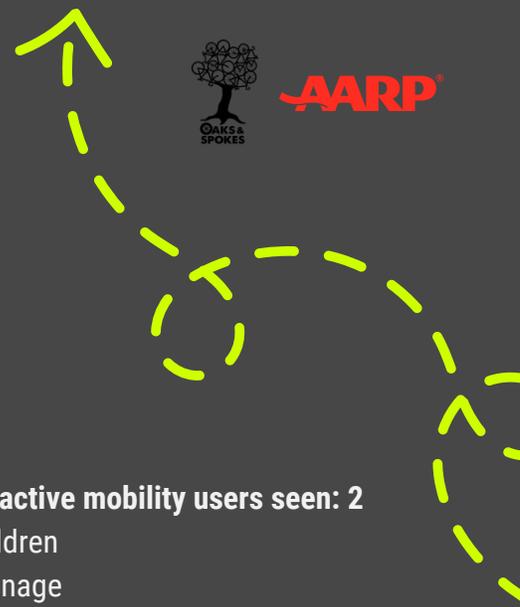


# BROOKSIDE DR OBSERVATIONS

3:00 - 6:00 PM



AARP



## Number of cyclists seen: 22

- 10% Children
- 0% Teenage
- 30% Young Adult
- 30% Middle Aged Adult
- 30% Older Adult
- 90% Male Presenting
- 10% Female Presenting

## Number of pedestrians seen: 68

- 20% Children
- 10% Teenage
- 10% Young Adult
- 40% Middle Aged Adult
- 20% Older Adult
- 50% Male Presenting
- 50% Female Presenting
- 3 Dogs

## Number of active mobility users seen: 2

- 0% Children
- 0% Teenage
- 50% Young Adult
- 50% Middle Aged Adult
- 0% Older Adult
- 50% Male Presenting
- 50% Female Presenting

## Driver behavior observed in a one hour period:

- Drivers not yielding to pedestrians at crosswalks: 5
- Drivers rolling through stop signs: 50
- Drivers stopping past the stop line: 46
- Drivers stopping in the middle of an intersection: 1
- Drivers looking at their phones: 36
- Drivers speeding more than 5 MPH over the speed limit: 5

## Cyclist behavior in a one hour period:

- Cyclists not stopping at stop sign: 1
- Cyclists riding on road: 13
- Cyclists riding on sidewalk: 2

## Other behavior in a one hour period:

- Scooter rider running a stop sign: 1
- Large children with families presence around 3:00 PM due to school being let out.

22

CYCLISTS

68

PEDESTRIANS

2

SCOOTERS



AARP

# BROOKSIDE DR BUILDING A BETTER BLOCK



## Needed improvements for South Brookside Dr:

- Extend the bike lane on the western side all the way to Glascock Street, adding a buffer and protection in place of on-street parking.
- Add a bike lane on the eastern side.
- Paint the bike lanes green.
- Install speed cushions along this portion of Brookside to reduce speeding vehicles traveling downhill to the north.
- Add ramps and a crosswalk in front of the entrance to Oakwood Park.
- Clear overgrowth and debris from existing sidewalks on the eastern side.
- Add bike lane protection along the entire western side to accommodate cyclists and pedestrians, as there is no sidewalk.
- Repaint crosswalk lines at Glascock St.
- Make the crosswalk at the Glascock intersection raised and striped to discourage stop sign rolling and improve pedestrian visibility.

## Needed improvements for North Brookside Dr:

- Add protected bike lanes on both the east and west sides from Glascock St to the Wake Forest Rd intersection.
- Remove the separate left-hand turn lane at the four-way stop at Glascock St.
- Repair and clear sidewalks from Glascock St to Frank St.
- Add curb bump-outs at Edmund St to narrow entry and exit, enhancing safety for crossing pedestrians.
- Add striping across Edmund St.
- Ensure new developments include sidewalk and bike lane detours during construction.
- Extend the sidewalk on both the east and west sides of Brookside Dr north of Frank St.
- Repair damaged ramps.
- Move the stop line at Frank St further back to keep stopped traffic away from the crosswalk.
- Repaint crosswalk striping.
- Add a raised crosswalk to enhance safety for school children.
- Install speed cushions north of Frank St to slow traffic approaching the blind curve heading south toward the school crosswalk at Frank St.



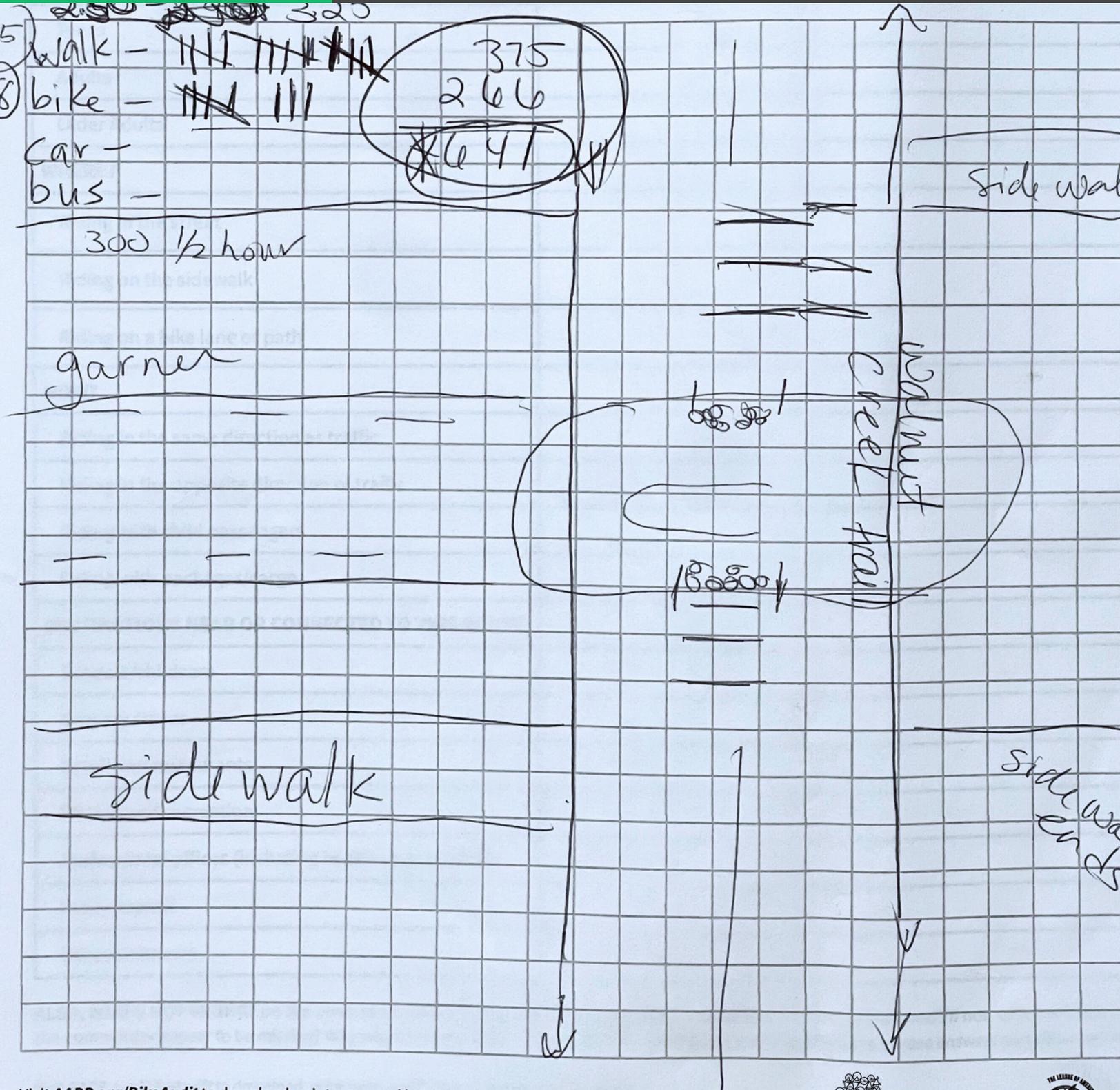
BUILDING A BETTER BLOCK  
**GROWS BIKING  
AND WALKING**

# AUDIT 2

November 13, 2024

# GARNER ROAD

Sotheast Raleigh: North to South,  
Between Martin Luther King Jr BLV and the Walnut Creek Greenway



Visit [AARP.org/BikeAudit](https://www.aarp.org/BikeAudit) to download, print, copy and/or share additional worksheets.

The AARP Bike Audit Tool Kit was created with the League of American Bicyclists ([BikeLeague.org](https://www.bikeleague.org)).



# GARNER RD A SNAPSHOT

**Community Name:** Southpark.

**Location:** Southeast Raleigh - Garner Rd, between Martin Luther King Jr. BLVD and the Walnut Creek Greenway.

**Distance:** 0.6 mile

**Zoning Type:** Residential, Residential Mixed-Use, Industrial Mixed-Use

**Speed Limit:** 35 MPH

**Road Type:** Neighborhood, Business Collector

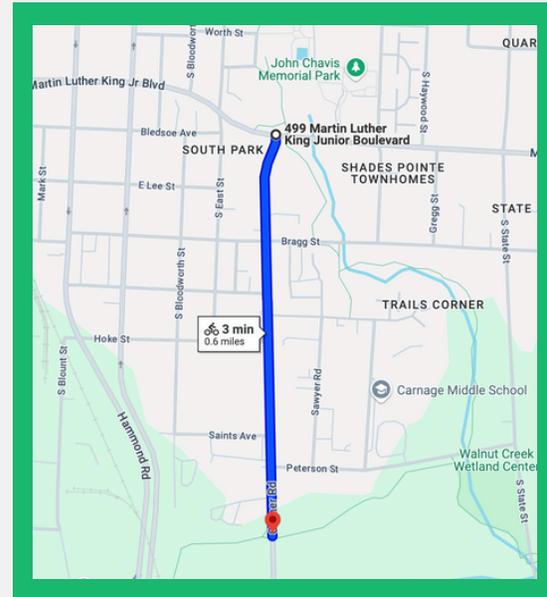
**Travel Lanes:** 2, 1 center turn-lane

**Bike Lanes:** Present on 10% of the corridor

**Sidewalks:** Yes, on eastern side. Very disconnected on western side.

**Transit Stops:** 6

**Nearby Points of Interest:** John Chavis Memorial Park, The Walnut Creek Greenway, Carnage Middle School, Anchorlight Art Studios, Walnut Creek Wetland Center.



Garner Rd is a mixed-use, historically industrial corridor southeast of downtown Raleigh. Garner Road connects neighborhoods southeast of downtown to the city center and nearby municipalities such as Garner and Clayton, NC. The area, zoned for higher housing density, includes new residential developments, a middle school, the Walnut Creek Greenway, and several transit stops. Further south, a scrap metal recycling center generates significant heavy truck traffic along the corridor. Much of this truck traffic comes from a nearby I-40 ramp that enters the area near Garner Road.

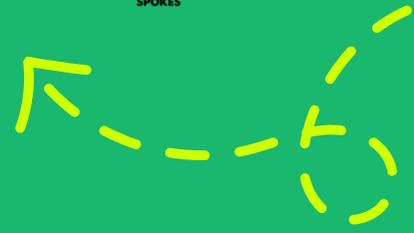


**AARP**



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# GARNER RD BIKING CONDITIONS



**Line of Sight**  
.....→



**Heavy Trucks**  
←.....

**Unsafe Passing**  
.....→



**Excessive Center Turn Lane**  
←.....

**Density Incoming**  
.....→



**Last Mile Needs**  
←.....

**Greenway Exit**  
.....→

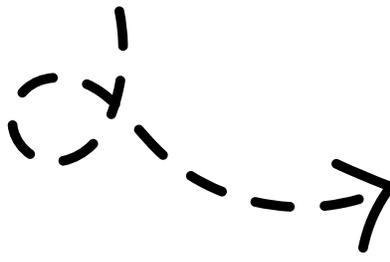


**Greenway Xing**  
←.....

**Long Hill**  
.....→



**Very Exposed**  
←.....



# GARNER RD

## WALKING CONDITIONS

**Sight Line**  
.....→



**Ramp To Where?**  
←.....

**New Dev Sidewalk?**  
.....→



**New Dev Forced In Street**  
←.....

**Raised Lip**  
.....→



**Gravel Sidewalk**  
←.....

**Close Crossing**  
.....→



**Poor Condition**  
←.....

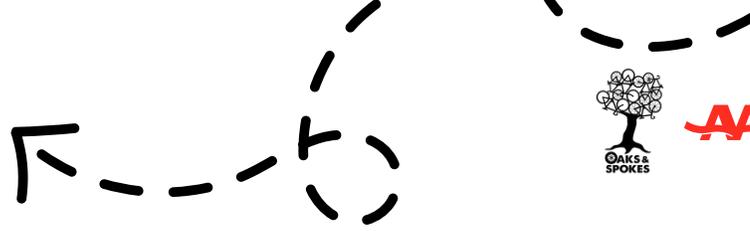
**Ramp Angle**  
.....→



**Sight Obstruct**  
←.....

# GARNER RD

## WALKING CONDITIONS CONT.



**Long Crosswalk**  
.....→

**Cross Signal**  
←.....

**Road Barrier**  
.....→

**Missing Sidewalk**  
←.....

**Missing Sidewalk**  
.....→

**Missing Sidewalk**  
←.....

**Forced In Street**  
.....→

**No Refuge**  
←.....

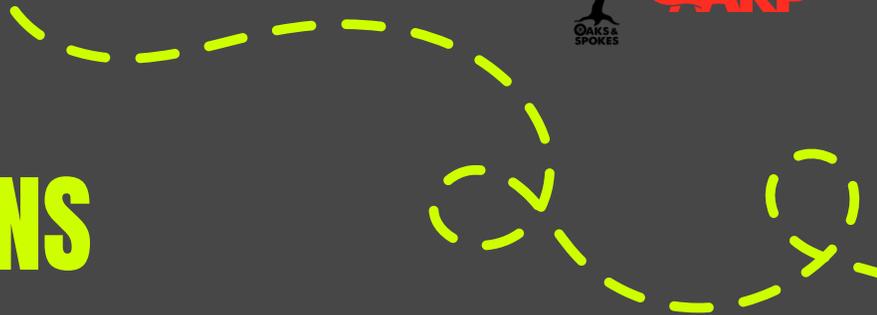
**No Crosswalk**  
.....→

**No Crosswalk**  
←.....



# GARNER RD OBSERVATIONS

1:00 - 6:00 PM



### Number of cyclists seen: 18

- 0% Children
- 0% Teenage
- 30% Young Adult
- 40% Middle Aged Adult
- 30% Older Adult
- 90% Male Presenting
- 10% Female Presenting

### Number of pedestrians seen: 60+

- 0% Children
- 10% Teenage
- 10% Young Adult
- 40% Middle Aged Adult
- 30% Older Adult
- 70% Male Presenting
- 30% Female Presenting

### Number of transit users seen: 45

- 0% Children
- 5% Teenage
- 20% Young Adult
- 50% Middle Aged Adult
- 25% Older Adult
- 70% Male Presenting
- 30% Female Presenting

### Driver behavior observed in a one hour period:

- Drivers not yielding to pedestrians at crosswalks: 10
- Drivers rolling through stop signs: 45
- Drivers stopping past the stop line: 40
- Drivers stopping in the middle of an intersection: 0
- Drivers looking at their phones: (not recorded)
- Drivers speeding more than 5 MPH over the speed limit: 60+
- Heavy-duty trucks in one hour: 123

### Cyclist behavior in a one hour period:

- Cyclists in road: 2
- Cyclists on greenway: 6
- Cyclists using transit: 2

### Other behavior in a one hour period:

- Significant presence of heavy trucks driving this corridor due to recycling center.
- Many pedestrians throughout corridor at all times.

**18**  
CYCLISTS

**60+**  
PEDESTRIANS

**45+**  
TRANSIT RIDERS

# GARNER RD

## BUILDING A BETTER BLOCK



### Needed improvements for intersection at MLK Jr. BLVD:

- Repaint crosswalks.
- Add striping to crosswalks.
- Adjust light timing to optimize pedestrian crossings.
- Extend the crossing signal duration.
- Add pedestrian islands halfway across each intersection to provide refuge and narrow the intersection at the light.
- Build a crosswalk with sidewalk ramps on the eastern side of MLK Jr. Blvd.
- Add more street lighting.
- Narrow the entrance and exit of Garner Road at the intersection.
- Extend the sidewalk from the corner down the western portion of Garner Road.
- Lower the speed limit on MLK Jr. Blvd.

### Needed improvements for Garner Rd:

- Narrow the intersection at MLK Jr. Blvd.
- Add pedestrian bump-outs on Garner Road at MLK Jr. Blvd.
- Complete sidewalks on both the eastern and western sides of Garner Road, extending from MLK Jr. Blvd. to the Walnut Creek Greenway.
- Update building ordinances to require sidewalk construction for new single-family developments.
- Add striped pedestrian crosswalks at all crossing areas near transit stops and sidewalk ramps.
- Improve lighting throughout the corridor.
- Install lighting in urban sections of the greenway to enhance safety and allow for all-day access.
- Install rapid flashing beacons at mid-block crossings near transit stop locations.
- Remove the middle turn lane along most of the corridor.
- Repurpose the space from the middle turn lane for protected bike lanes.
- Improve the greenway crossing to eliminate trip hazards.
- Add flashing beacons at the greenway crossing.
- Divert heavy truck traffic south on Hammond Road from I-40 to Rush Street, then north on Garner Road to the recycling center. Prohibit heavy truck traffic from traveling north to Hoke Street and then south down Garner Road.
- Clear metal scrap debris from heavy truck traffic.
- Add transit shelters and bike parking.

BUILDING A BETTER BLOCK  
GROWS BIKING AND WALKING

# AUDITS 3-7

Fall Semester 2024

# NCSU CYCLING CITIES

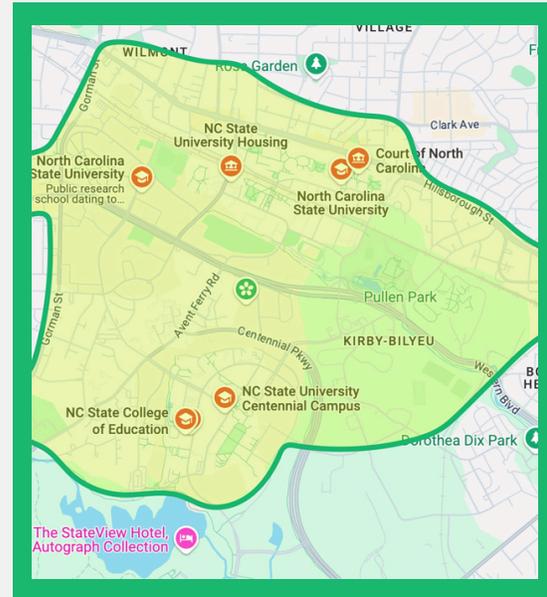
A Pilot Interdisciplinary Perspectives GEP Course  
Professor: Ross Bassett, w/ support from Oaks and Spokes



# NC STATE A SNAPSHOT

**Community Name:** NC State University  
**Location:** West Raleigh, 2 miles west of Downtown Raleigh, predominantly along the Hillsborough Street and Western Boulevard corridors.

**Distance:** Approximately 3 square miles  
**Zoning Type:** Institutional zoning, university  
**Speed Limit:** Varies  
**Road Type:** Main thoroughfares, collectors, and university access roads  
**Travel Lanes:** Varies  
**Bike Lanes:** Very limited; existing lanes require significant maintenance  
**Sidewalks:** Present throughout the area  
**Transit Stops:** Extensive, with a large presence of the Wofline and GoRaleigh services  
**Nearby Points of Interest:** Main Campus, Pullen Park, Dorothea Dix Park, Centennial Campus, Hillsborough Street District, Downtown Raleigh, The Village, and Meredith College Campus



Ross Bassett, a long-time member of Oaks and Spokes and an Advocacy Committee member, introduced a new course titled Cycling Cities to NCSU's general interdisciplinary curriculum. In this class, Dr. Bassett explored with students how cycling has influenced urban development over the decades and how it continues to shape modern transportation.

As part of the course, Oaks and Spokes collaborated with six groups of students to conduct bike audits in various areas around NC State's campus. These audits focused on routes between Centennial Campus and Main Campus, on-campus pathways, greenways, Hillsborough Street, and city-wide connections. The students' final presentations are included as separate attachments.



# ACKNOWLEDGEMENTS



BBiking and walking audits are both an educational tool and advocacy in action. Oaks and Spokes' mission is to ensure biking and walking are safe and integral to everyday life.

Thank you to AARP's Community Challenge Grant for providing us the ability to continue transforming Raleigh into a much more active and healthier community for all ages.

Thank you to our amazing volunteers, without whom we could not accomplish this work.

Thank you to Southeast Raleigh Promise and their high school youth ambassadors, Conn Elementary School's PTA, all the amazing neighbors in our audit locations, Ross Bassett, Jordan Birkner, and all of our NCSU Cycling Cities students!

## Oaks and Spokes

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Raleigh, NC 27611-8726

[info@oaksandspokes.org](mailto:info@oaksandspokes.org)

[www.oaksandspokes.org](http://www.oaksandspokes.org)

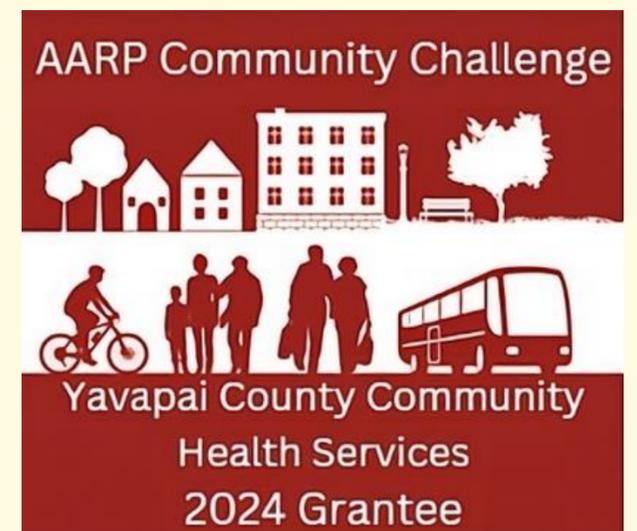
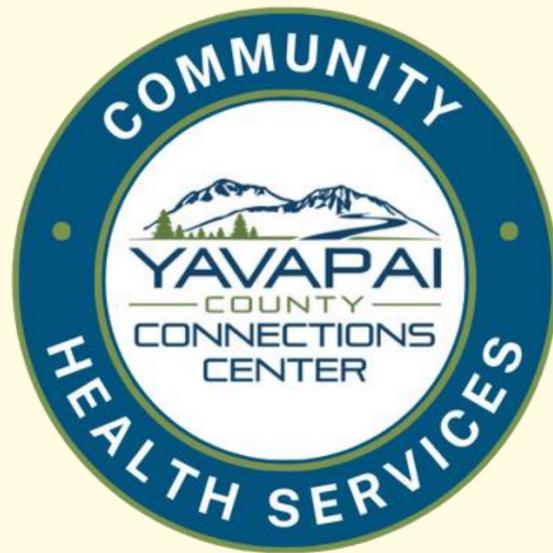
[@oaksandspokes](https://twitter.com/oaksandspokes)



# THANK YOU FOR RIDING YOUR BIKE

# Bike Audit 2024!

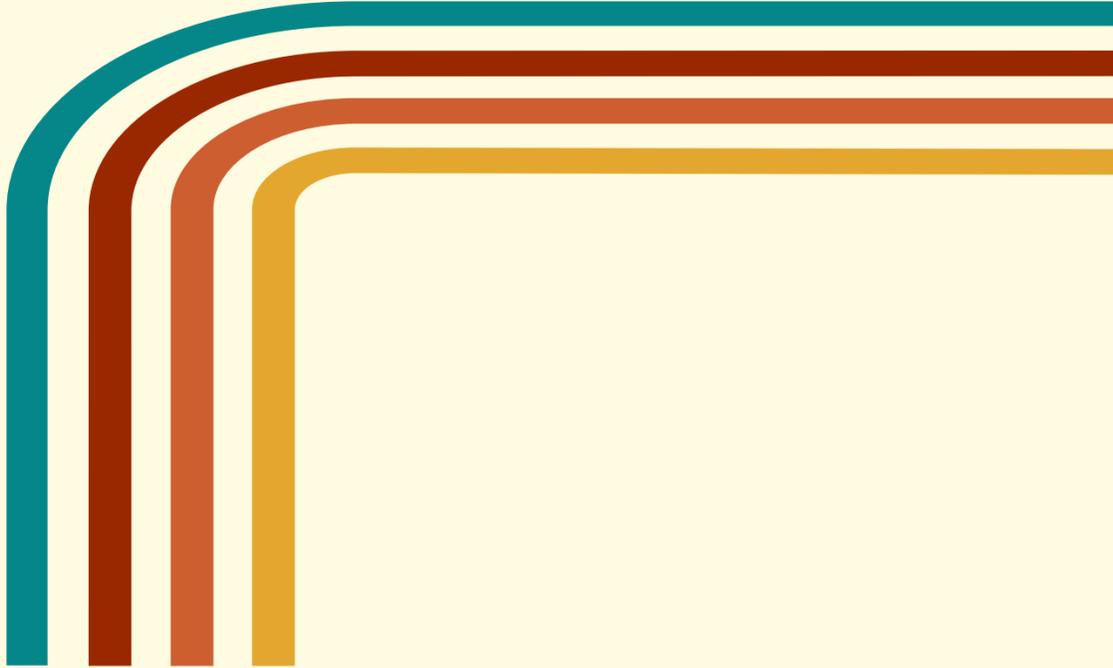
Yavapai County-Cottonwood/Clarkdale



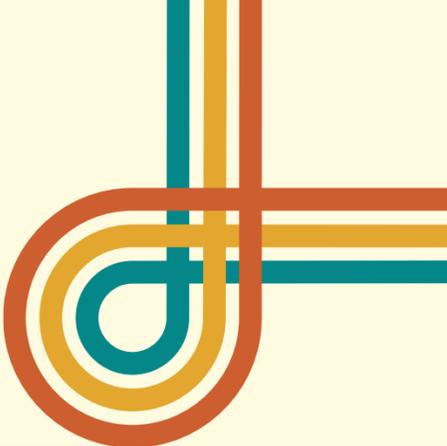
# Partners and Selection



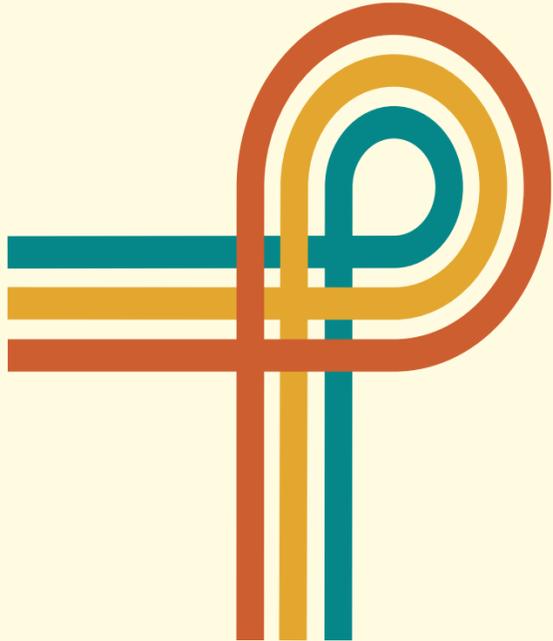
**Stakeholders  
Collaboration  
Implementation**



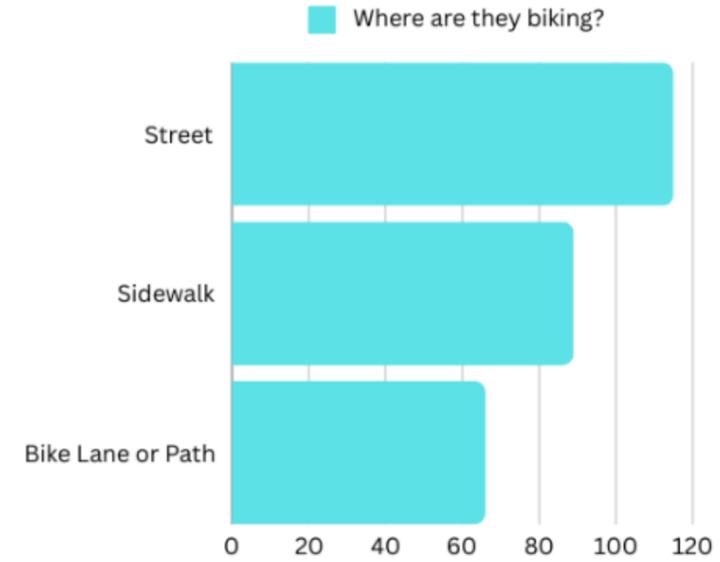
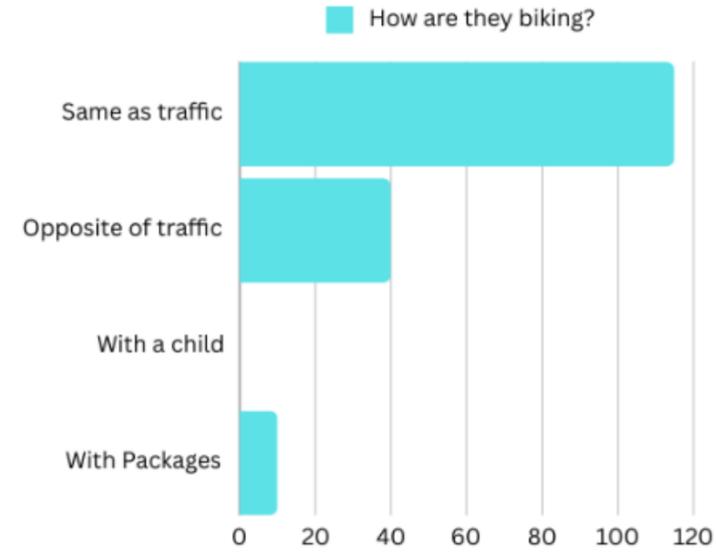
# Audit Locations

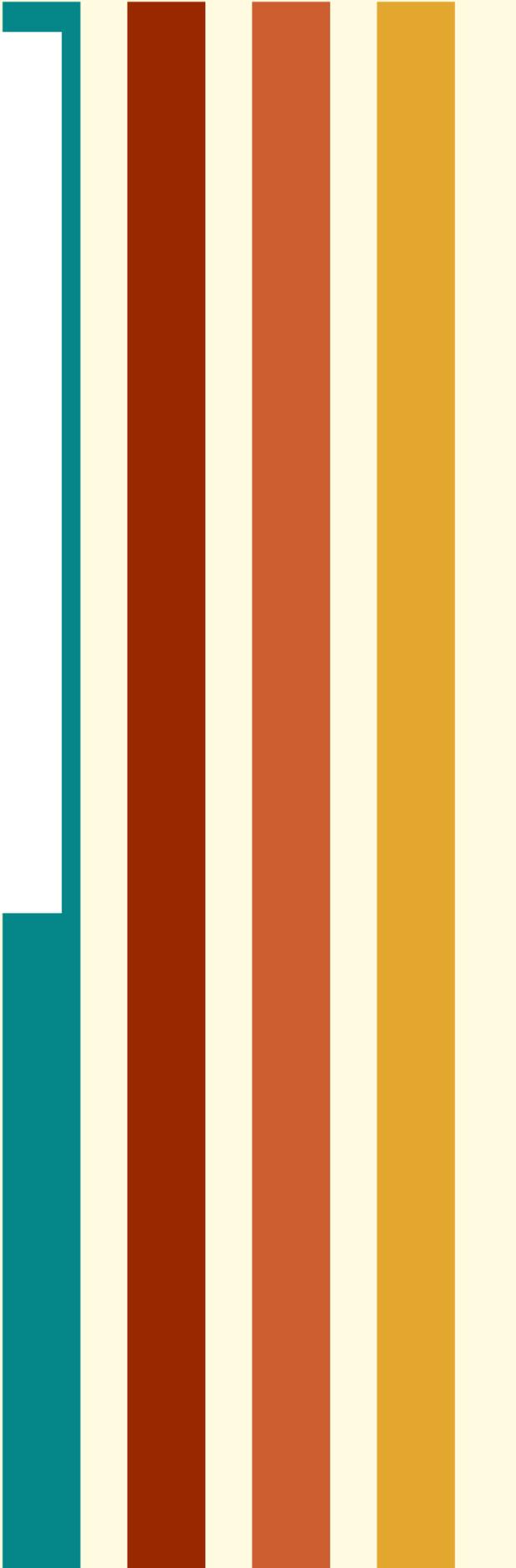
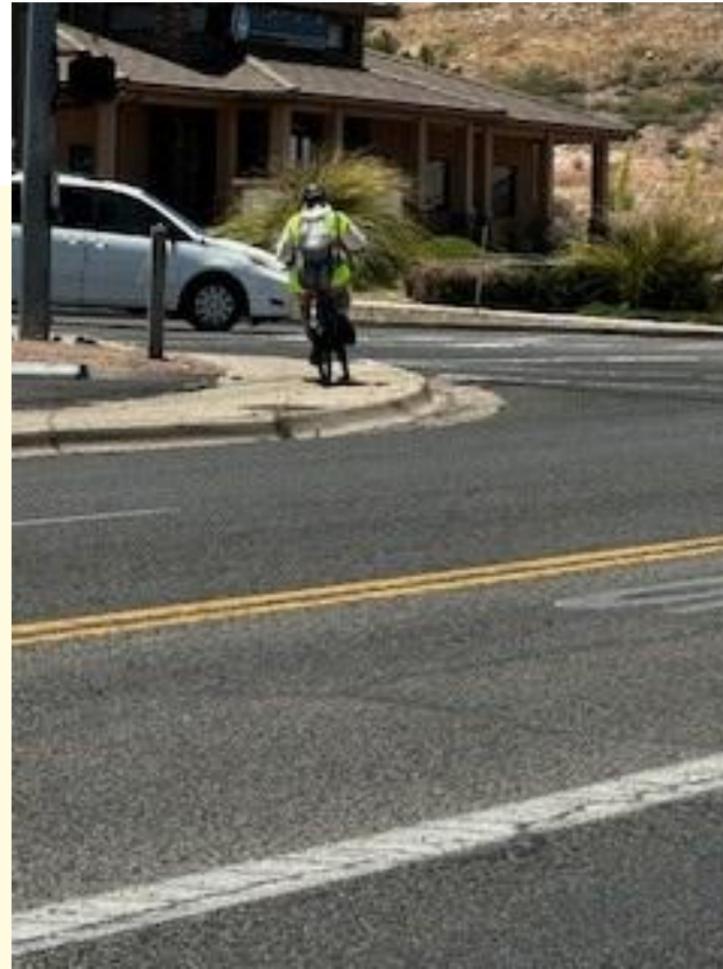
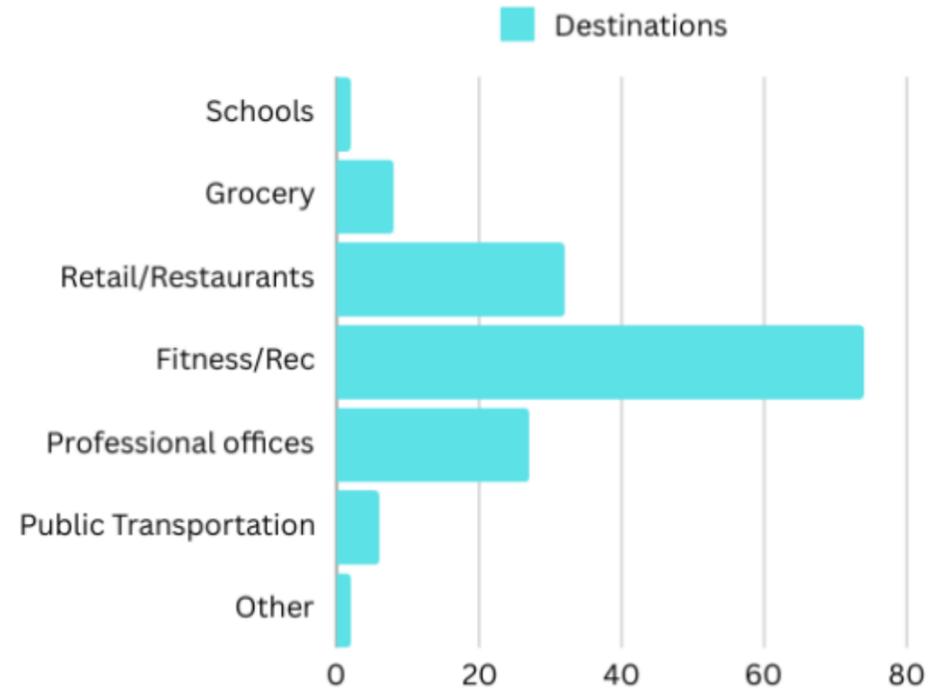
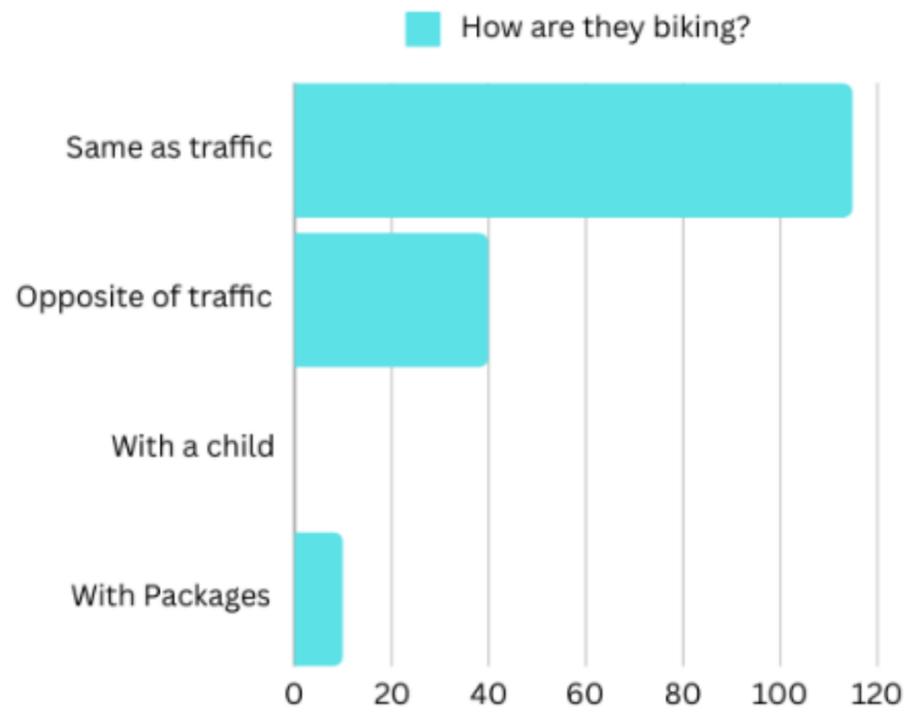


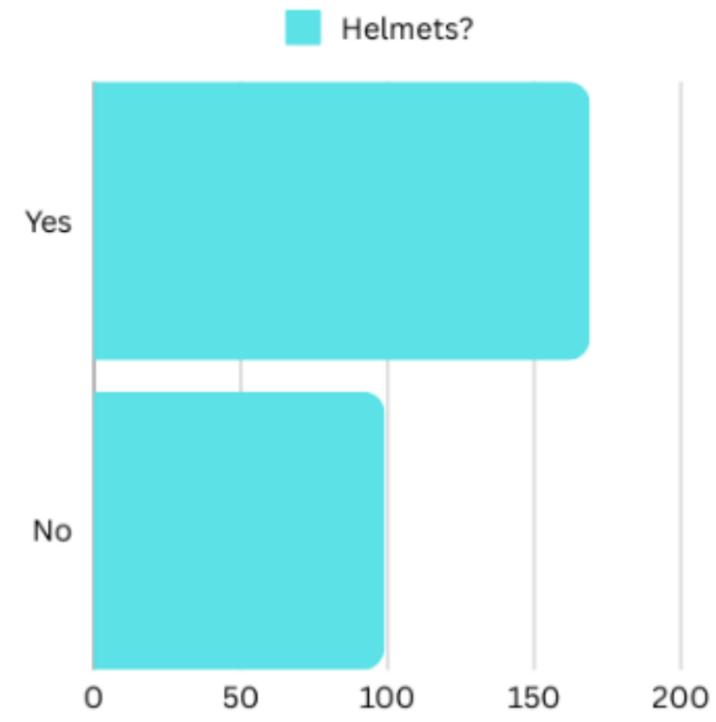
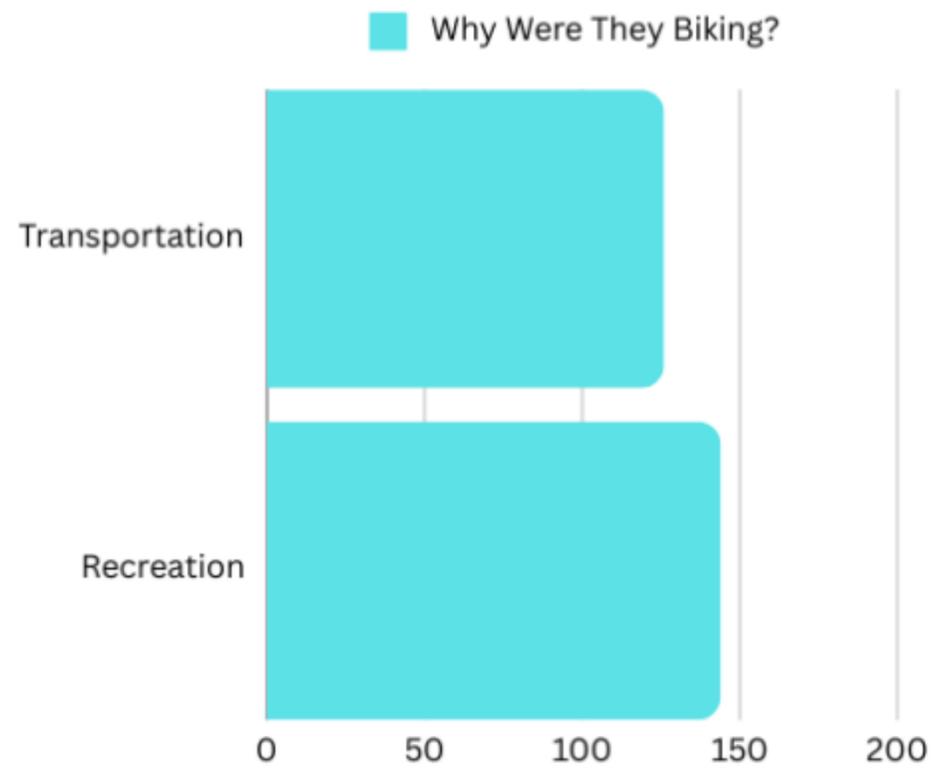
13!



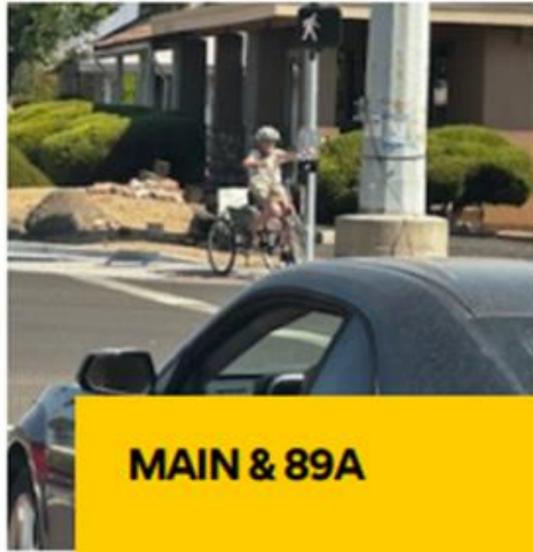
# What was measured







# PRIORITY LOCATIONS - COTTONWOOD



## MAIN & 89A

- \* Main and 89A serves as a major artery to several retail, businesses, jobs, and services for the community.
- \* Work with partners to implement safe streets for all and improve upon bike lanes and signage with bike lanes continuing along the corridor.

No children or recreational cyclists were documented, at this site only transportation cyclists. This is most likely due to the unsafe conditions and high traffic.



## HWY 260 & 89A

- \* HWY 260 and 89A is very dangerous and frequently avoided by recreation cyclists. Transportation cyclists and pedestrians use it to access schools, stores and services.
- \* Work with partners to implement safe streets for all and improve upon bike lanes and signage with bike lanes continuing along the corridor.

BAC has spoken with many cyclists, both recreation and transportation, about their concerns of this very dangerous junction. There are zero protective measures in place for cyclists.

# PRIORITY LOCATIONS - CLARKDALE



## LANNY LN & OLD JEROME HWY

- \* This area provides an alternative safe route option for recreation. Many cyclist & pedestrians utilize this route.
- \* Work with partners to create bike lanes or multi-use lanes for all. Add this section in Phase 2 of the Verde Connection Bike Route.

Wonderful safe route option for community members. A multi-use and inclusive pathway, along with clear sign markings, are needed to improve safety.



## CLARKDALE ROUND & 89 A

- \* This heavily used connection to main arteries could be made significantly safer by incorporating road sharrows and green paint to enhance visibility and guide traffic.
- \* Work with partners to help design and implement. Add this section to Verde Connection Bike Route to connect to proposed multi-use trails on Clarkdale Pkwy and Cement Plant Rd.

Many recreation cyclist utilize this area leading to Jerome and back into Cottonwood area connections.

## MARKING EXAMPLES



Gilbert, AZ



Tempe, AZ

- Now wouldn't this be Amazing!
- Green paint is a universal sign to motorists and cyclists
- Alerts everyone
- Be the leader in the Verde Valley to do this first.



# EDUCATIONAL OPPORTUNITIES



## BIKE HELMET PROGRAMS

### Identify Grants

### Work with Schools

### Community Building

Yavapai County Community Health Services should collaborate with the City and Town to design helmet safety programs and explore opportunities for helmet giveaway events.

Awareness campaigns should be developed within each community to highlight the benefits of helmet safety and encourage participation in these programs.

# BIKE SAFETY CAMPAIGN



**EDUCATION FOR BOTH CYCLISTS AND MOTORISTS**

## WORK WITH STAKEHOLDERS TO IMPLEMENT AND PROMOTE BIKE SAFETY EDUCATION

The City and Town should collaborate with local committees, clubs, and nonprofit organizations to develop a comprehensive bike safety campaign. This initiative will focus on educating cyclists about road rules and best practices for safe navigation. Equally important is the creation of a parallel safety campaign for motorists, emphasizing awareness of cyclist safety and promoting adherence to the 3-foot passing rule.

# FUTURE OUTLOOK

## CONNECTION

The City of Cottonwood and the Town of Clarkdale have a large cycling community. Many recreation cyclists are over the age of 50. Being rural areas, we also have a significant number of residents that use a bicycle as their only means of basic transportation. Our communities boast beautiful trails, a State Park, a National Park, schools, bike skills parks, and several resource centers. Providing safe routes for all creates a safe and desirable place for families, young and old, to enjoy and create connection.



## BUILT ENVIRONMENTS

Built environments promote:

- **A Healthier Lifestyle**
- Enhances Safety
- Supports Sustainability
- **Economic Benefits**
- Improves Accessibility & Mobility
- Builds Stronger Communities
- Reduces Traffic Congestion
- **Attracts New Residents and Investments**

Built environments designed with cycling infrastructure are vital to communities. They promote healthier lifestyles, stimulate local economies by attracting cyclists, and appeal to young professionals as it creates a more livable and desirable place to call home.

# SUMMARY & CONCLUSION

## SUMMARY

Over a three-month period (August, September, & October), 13 bike audits were conducted at various times across at least six different days. These audits assessed bicycle usage, who is cycling, how and where, safety concerns, and helmet use. These audits also identified priority locations and concerns, identified immediate needs and long term goals, and provided recommendations for implementing cycling education and safety programs, including motorists education campaigns.

Specific concerns and needs:

- A comprehensive overview of the addition of quality bike lanes throughout area creating safe routes and connectivity.
- The addition of quality signage to alert motorists and cyclists of their presence.
- Additional road markings - sharrows, bike symbols in lanes, and use of green paint areas at intersections or specific areas of concern to both protect cyclists and to alert motorists.
- Educational campaigns regarding cycling safety, helmets safety, and motorists interaction with cyclists.

## CONCLUSION

Bike audits are vital for fostering safer, more accessible cycling infrastructure, and reducing environmental impact. By identifying areas for improvement, these audits enhance community connectivity, promote health and well-being, and strengthen local relationships, both with decision makers and community members. They contribute to creating bike-friendly and inclusive communities that accommodate cyclists of all ages, abilities and needs, including adaptive riders.



