BENTON BICYCLE MASTER PLAN

Master Plan

May 2024

ACKNOWLEDGMENTS

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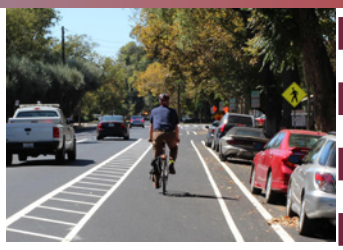
Goals for the Benton Bicycle Master Plan

- Connect to the Rend Lake Trail system and encourage Rend Lake bicyclists to visit Benton.
- The plan should accommodate all types of bicyclists, but especially the casual bicyclist who is interested but concerned.
- Shared-use paths (separated from traffic) should be the priority bicycle facility whenever feasible.
- The system should be connected and continuous between destinations, including Benton Park, the Square, Grade/Middle School, High School, and Rend Lake.
- Ensuring safe places for kids to bicycle, especially opportunities to ride to school.

BENTON
BICYCLE MASTER PLAN

Who Benefits from Bike Facilities

No Way, No How	Interested but Concerned	Enthused and Confident	Strong and Fearless



No desire to bicycle at all!

You enjoy bicycling, but are nervous about riding in traffic. You prefer bike trails and bike facilities separated from traffic.

You are comfortable riding in traffic, but prefer facilities like bike lanes.

You ride in all types of traffic, regardless of whether there are bike facilities.

The majority of bicyclists (especially new bicyclists) fall within these two categories of "Interested but Concerned" and "Enthused and Confident". Bike facilities are important not only from a functional standpoint, but also creates a welcoming environment.

Planning Process

Step 1
Existing Conditions and Community Input

Through a community survey and in-person meetings, input was received on priority destinations, preferred bike facilities, and goals.

The planning team collected data, maps, and summarized existing conditions.

Above: Advisory Committee Meeting

Above: Open House #1

Step 2
Routes to Study

Based on input and data from Step 1, a network of routes to study was developed. The planning team conducted in-depth analysis of the routes including available right-of-way, width of streets, average annual daily traffic (AADT) of vehicular traffic, speed limit, on-street parking, and feasibility to have a shared use path.

The planning team also analyzed existing and potential Bicycle Level of Traffic Stress (BLTS). BLTS helps to quantify the impacts of bicycle facilities on various streets and roads.

Step 3
Draft Master Plan

The draft Master Plan includes recommendations for:

- Future Shared Use Paths
- Streets with Future Bike Lanes
- Streets to have Shared Lanes
- Options for priority projects to determine the first grant application for a first phase construction project.

Step 4 Final Master Plan and Grant Application for First Phase Project

Based on input of the draft Master Plan, the planning team finalized the overall master plan and worked with the City and Advisory Committee to select a first phase project to submit for grant funding.

How will the Bicycle Master Plan be Implemented?
The Bicycle Master Plan should be considered a ***long-term guide***. The bicycle master plan will guide the City and other partners to improve bicycling in the City. The master plan does not commit a community to fund new projects. Instead, it is a guide to plan for the needs of bicyclists, especially when existing streets are resurfaced or reconstructed, or when new streets are built.

The master plan will help prioritize projects and leverage support and funding options such as grants from the Illinois Department of Transportation (IDOT).

Measuring the Comfort Level of Bicycle Facilities

An important component of the bicycle master planning process is measuring the impact (and potential priority) of different bike facilities. For example, a neighborhood street with very little vehicular volume and very low speeds is likely comfortable for most types of bicylists. However, a busy street with high traffic speeds and / or a heavy volume of vehicular traffic is going to feel extremely uncomfortable (and unsafe) for all except the very fearless bicyclist.

This bicycle master plan utilizes the Level of Traffic Stress (LTS) methodology to gauge existing and future condition of bicycle corridors to measure the level of bicycle comfort. The BLTS approach was developed in 2012 by the Mineta Transportation Institute and San Jose State University and has been utilized extensively nationwide. Some jurisdictions have made minor refinements to the methodology based on local goals.

LTS methodology is a framework used to evaluate and classify the safety and comfort of bicycle routes within a transportation network. Developed to assist planners, engineers, and policymakers, the LTS methodology helps identify areas where improvements are needed to encourage cycling and enhance overall bicycle network connectivity.

A key advantage of LTS is its user-friendly data entry parameters. The classification is often based on factors such as traffic volume, vehicle speed, the presence of dedicated bicycle infrastructure, and the overall road design.

Another frequently used rating system is the Bicycle Level of Service (BLOS). However, a drawback of the BLOS methodology is the level of detailed data required. This level of detail is difficult to obtain for a high-level master planning effort. Additionally, BLOS relies on traffic engineering metrics that might not fully align with the needs and preferences of cyclists. Finally, BLOS often does not give sufficient attention to intersections.

The LTS is typically classified into four levels, ranging from low stress to high stress, each representing different types of cycling environments. This plan utilizes a modified version (based on Montgomery County, Maryland) that includes a 2.5 rating since the jump from a 2 to 3 rating can be a significant step in comfort level.

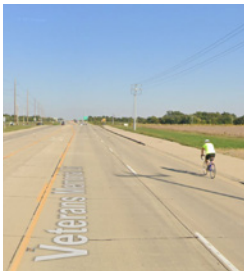
STRESS LEVEL 1
Low stress, requires little attention or further improvements. (Examples: Neighborhood streets, shared use paths.)

STRESS LEVEL 2.5
Mild to moderate stress. Comfortable for most adult bicyclists, but slightly higher traffic speeds and more parking conflicts. *(Examples: Bike lanes on streets with slightly higher traffic volumes and speeds.)*

STRESS LEVEL 2
Fairly low stress. Suitable for most of the population, but may require more attention than young children would be expected to deal with. *(Examples: Neighborhood streets, bike lanes, shared use paths immediately adjacent to traffic.)*

STRESS LEVEL 3
Moderate stress. Observant adult bicyclists can safely navigate, but not comfortable for a majority of bicyclists. *(Examples: Bike lanes on busy streets with higher traffic volumes and speeds.)*

STRESS LEVEL 4
High stress. Experienced and skilled bicyclists only. No bicycle facilities or facilities adjacent to high traffic volumes and speeds *(Examples: Multi-lane arterials or high speed, > 45 mph, two lane roads.)*



BICYCLE LEVEL OF TRAFFIC STRESS (LTS) METHODOLOGY: MIXED TRAFFIC SEGMENTS

Number of Lanes	ADT (vph)[1]	Functional Class	Posted or Prevailing Speed (mph)		
			≤ 20	25	30
Unmarked Centerline	≤ 750	Local	BLTS 1	BLTS 1	BLTS 2
	750 - ≤ 1,500	Local / Collector	BLTS 1	BLTS 1	BLTS 2
	1,500 - ≤ 3,000	Collector	BLTS 2	BLTS 2	BLTS 2
	> 3,000	Arterial	BLTS 2	BLTS 3	BLTS 3
1 through lane per direction	≤ 750	Local	BLTS 1	BLTS 1	BLTS 2
	750 - ≤ 1,500	Local / Collector	BLTS 1	BLTS 1	BLTS 2
	1,500 - ≤ 3,000	Collector	BLTS 2	BLTS 2	BLTS 2
	> 3,000	Arterial	BLTS 2	BLTS 3	BLTS 3
2 through lanes per direction	≤ 8,000	Arterial	BLTS 3	BLTS 3	BLTS 3
	> 8,000	Arterial	BLTS 3	BLTS 3	BLTS 4
3+ through lanes per direction	Any ADT	Arterial	BLTS 3	BLTS 3	BLTS 4

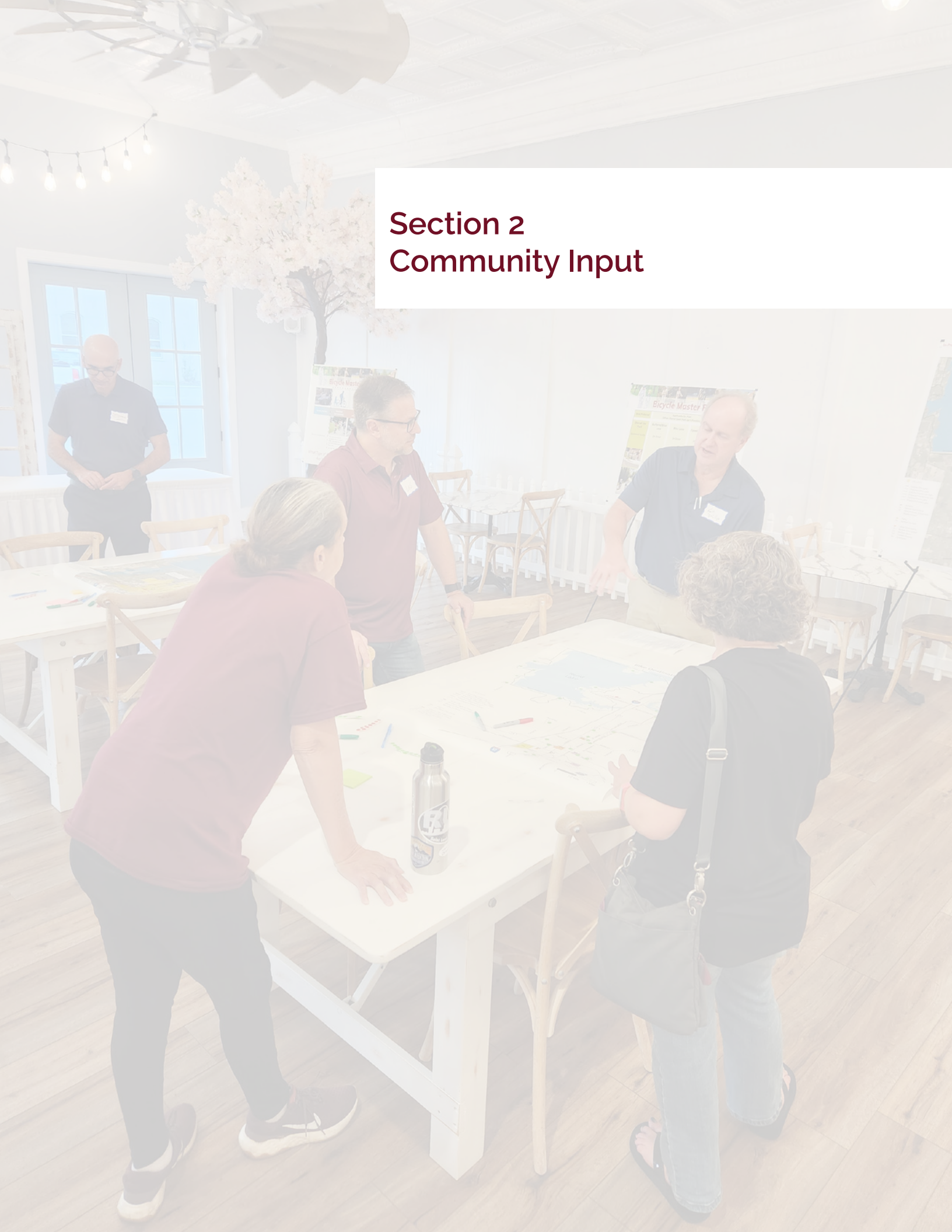
*[1] ADT is both directions for two-way streets. For one-way streets use 1.5*ADT.*

Sources for LTS Methodology: Oregon Multi-Modal Analysis Procedures Manual (2020) and Montgomery County Maryland Bicycle Master Plan LTS Methodology (2018). Both sources based on "Low Stress Bicycling and Network Connectivity," Mineta Transportation Institute Report, May 2012.

BICYCLE LEVEL OF TRAFFIC STRESS (LTS) METHODOLOGY: SEGMENTS WITH BIKE LANES

Posted Speed Limit (mph)	# of Through Lanes	Bike Lanes						
		No Parking			Parking			
		Infrequently Obstructed		Frequently Obstructed	Infrequently Obstructed / Low Parking Turnover			Frequently Obstructed / High Parking Turnover
		Bike Lane ≤ 5.5 ft	Bike Lane ≥ 6.0 ft		Bike Lane + Parking	Bike Lane + Parking = 14.0 - 14.5 ft	Bike Lane + Parking = 15.0 ft	
≤ 25	2 - 3	2	1	2.5	2.5 (2a)	2	1	2.5
	4 - 5	2.5 (2b)	2.5 (2b)	2.5	3			
	≥ 6	3			3			
30	2 - 3	2	2	2.5	2.5	2	2	2.5
	4 - 5	2.5 (2b)	2.5 (2b)	2.5	3			
	≥ 6	3			3			
35	2 - 3	3			3			
	4 - 5							
	≥ 6							
40	2 - 3	3			n/a			
	4 - 5	4 (3b)						
	≥ 6	4						
≤ 45	2 - 3	4			n/a			
	4 - 5							
	≥ 6							

Sources for LTS Methodology: Oregon Multi-Modal Analysis Procedures Manual (2020) and Montgomery County, Maryland Bicycle Master Plan LTS Methodology (2018). Both sources based on "Low Stress Bicycling and Network Connectivity," Mineta Transportation Institute Report, May 2012.



Section 2
Community Input

Advisory Committee

The role of the bicycle master plan Advisory Committee is to act as a sounding board for the planning team in providing feedback on existing conditions, potential routes and destinations, and plan recommendations.

The Advisory Committee met three times during the planning process. Meeting dates included:

Meeting #1: July 18, 2023

Meeting #2: November 15, 2023

Meeting #3: March 26, 2024

The second meeting was a joint meeting with the Mt. Vernon Advisory Committee at Rend Lake College.

Above: Advisory Committee meeting #1 on July 18, 2023

Right: Joint meeting of the Benton and Mt. Vernon Advisory Committees at Rend Lake College on November 15, 2023.

August 31st Stakeholder Meetings

The planning team held a series of stakeholder meetings on August 31, 2023.

The primary objective of the meetings was to offer an overview of the bicycle master plan process, raise awareness about the plan survey, and solicit input on potential destinations, preferred routes, and any existing barriers or challenges to biking in Benton.

The meeting schedule included:

10:00 am:	Benton School District
11:00 am:	U.S. Army Corps of Engineers (Rend Lake Trail System), Benton Chamber of Commerce
Noon:	Franklin Hospital
2:00 pm:	Benton Police Department, Franklin County Sheriff's Office

Open House #1 - October 3, 2023

The first open house for the bike master plan was held on Tuesday, October 3, 2023 at Cafe Bloom in downtown Benton from 5:00 - 7:00 pm.

The open house did not have a formal presentation, instead attendees could stop by anytime between 5:00 - 7:00 pm. During the open house, the planning team had the chance to discuss the bicycle master plan, promote the survey, and gather valuable input regarding potential destinations and preferred routes.

WSIL TV provided extensive coverage of the open house including a live broadcast and several stories of the event was included during WSIL broadcasts.

Open House #2 - February 27, 2024

The second open house for the bike master plan was held on Tuesday, February 27, 2024 at Cafe Bloom in downtown Benton from 5:00 - 7:00 pm.

The open house did not have a formal presentation, instead attendees could stop by anytime between 5:00 - 7:00 pm.

The key focus of the open house was a review of the draft bicycle master plan, including review of potential priority projects (see details of the projects later in this document).

The three potential priority were:
Option A: DuQuoin Shared Use Path
Option B: School to Park Connector
Option C: The Square via Maple Street

Comments at the open house were evenly split between Option A and Option B. The planning team used the feedback to work with the city and the advisory committee to choose the first phase project for the initial grant application.

Community Bike Master Plan Survey

An online community wide survey to gain input for the bike master plan took place from early August 2023 to October 12, 2023.

Key Take Aways from the Survey

Potentially Large Segment of "Potential" Riders

Almost 60% of respondents are "Interested but Concerned" and almost half only bike "a few times a year" or "hardly ever." Combined with almost two-thirds of respondents that they would bike more if " There were more bike facilities separate from the street (shared use path / multi-use trail)," this suggests that there is a large untapped segment of Benton's population that are desiring to bike.

Strong Consensus on Priority Destinations and Preferred Streets

The survey revealed a clear hierarchy of priority destinations and streets. Notably, respondents emphasized Benton Park, Rend Lake, and the Grade School/Middle School as priority destinations. Understanding the preferred streets for both present and future biking is be helpful for the corridor route analysis.

Strong Consensus on Desirability of Shared-Use Paths

The survey reinforced the desirability of shared-used paths. This wasn't surprising as it was the preferred bike facility type in listening sessions. However, the survey further solidified the objective of prioritizing shared-use paths whenever feasible.

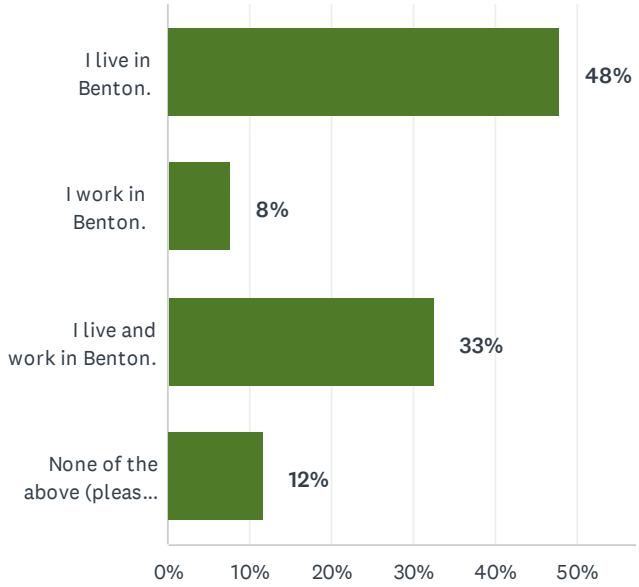
Rend Lake as a Destination and Economic Development Opportunity

While the scope of the planning process is focused on the city limits, it is important to understand connectivity beyond the City. The survey clearly indicated the desirability of connecting to Rend Lake as a destination.

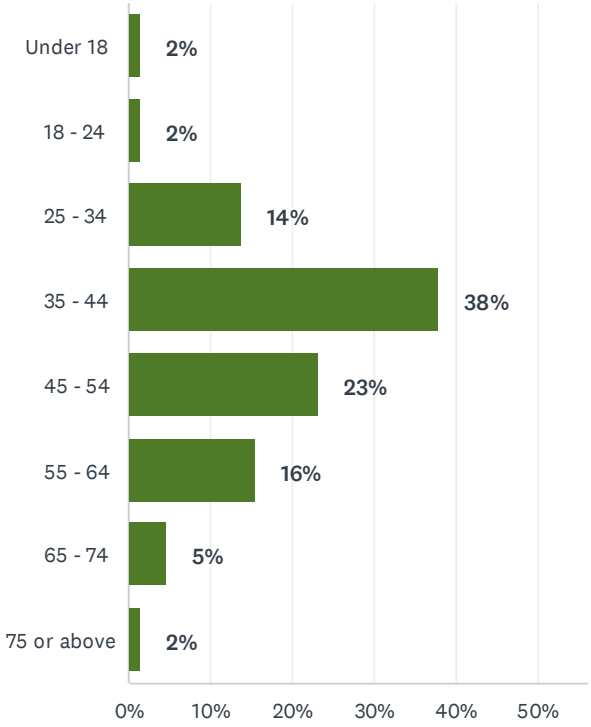
The survey also recognized the opportunity to capitalize on visitors to the Rend Lake Trail by encouraging them to visit Benton stores and restaurants via a bike connection.

Almost two-thirds of respondents said that they would bike more if "There were more bike facilities separate from the street (shared use path / multi-use trail)"

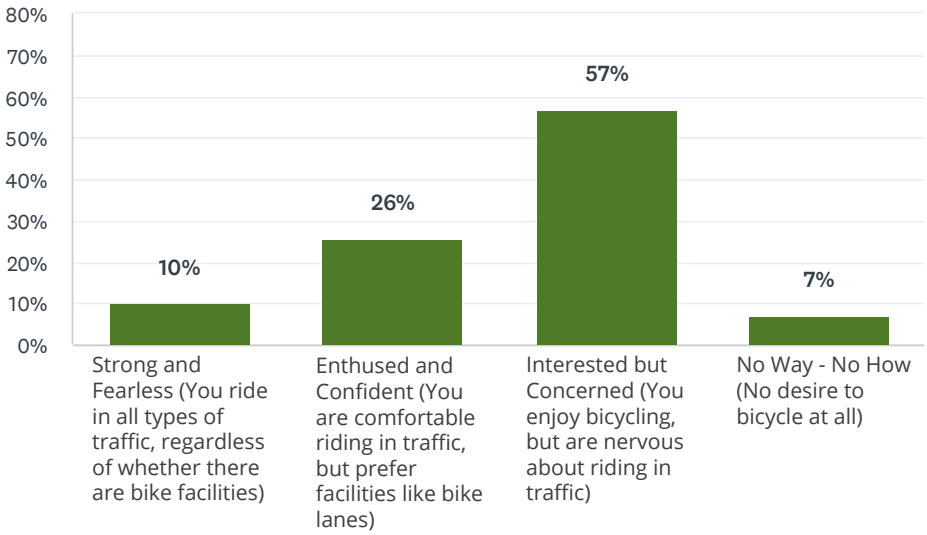
Q1. Choose what best describes you? (choose one)



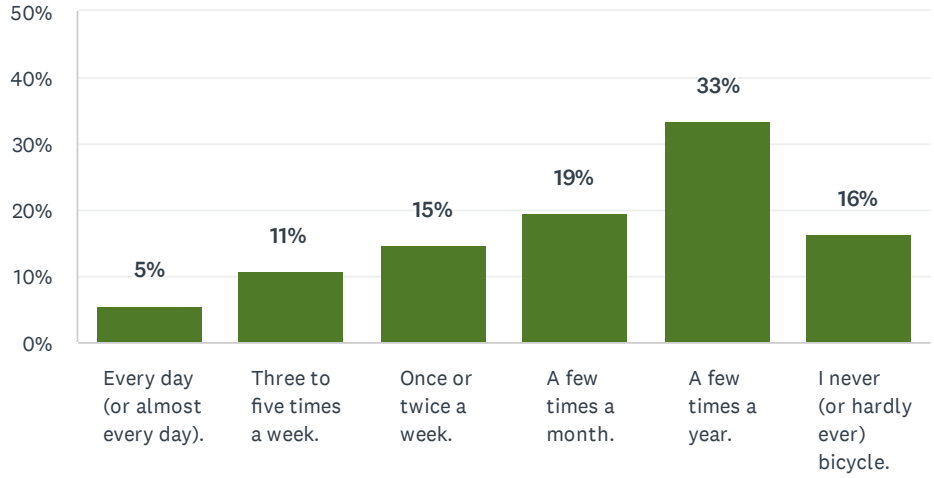
Q2. What is your age?



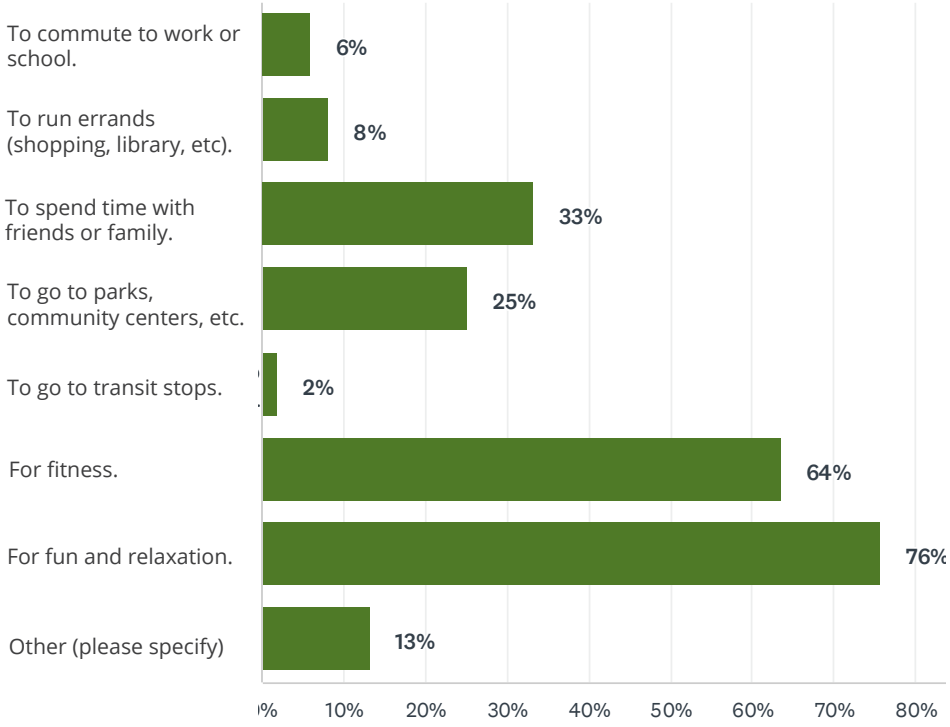
Q3. What best describes you as a bicyclist? (choose one)



Q4. How often do you currently bicycle? (choose one)



Q5. Why do you bicycle now? (choose one)



Q6. What are your top 3 biking destinations within the City? (List up to three)

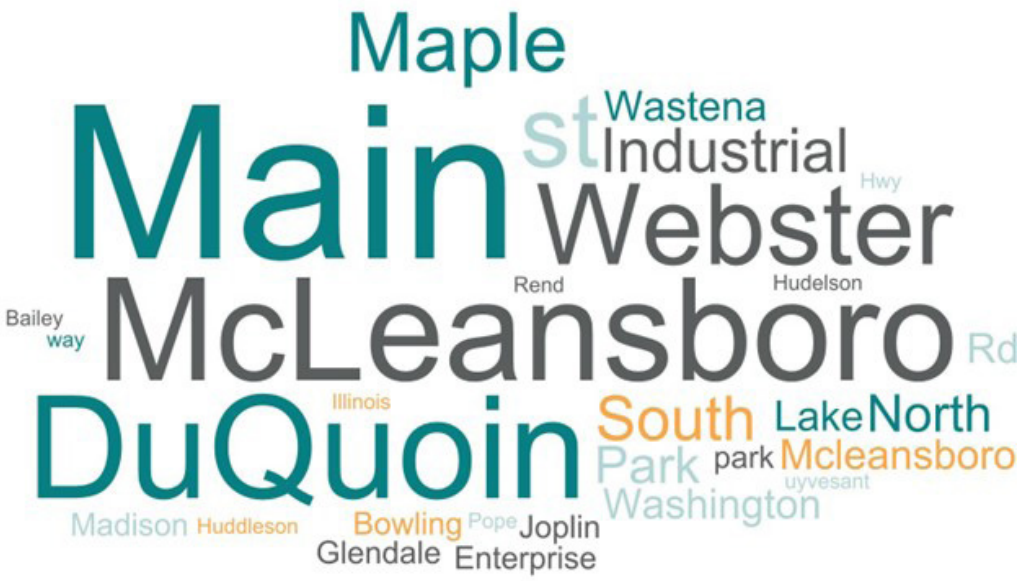
Benton Park was by far the top destination mentioned in survey responses. Other top destinations mentioned included library, the square, school, and around town.

Q7. What are destinations outside of the City limits that you bike from the City (or would like to bike)? (List up to three)

Rend Lake was by far the top biking destination outside the city. Remember that the question included "..or would like to bike," so Rend Lake is more of a desired destination as opposed to a current destination.

Other destinations mentioned were nearby towns like Sesser, West Frankfort, and Christopher and businesses like Walmart.

Q8. Currently, what streets do you frequently bicycle on?



Top streets that respondents currently bike on include:

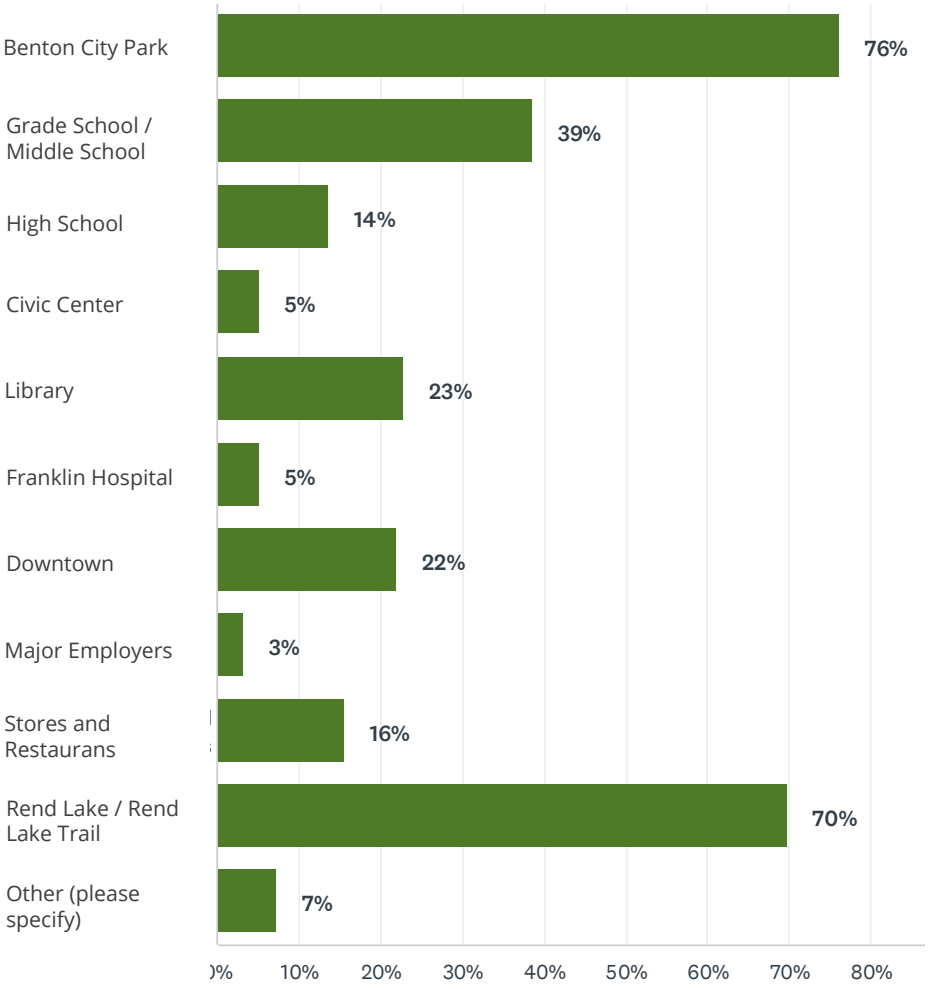
- Main
- McLeansboro
- DuQuoin
- Webster
- Industrial

Q9. In the future, what streets would you like to bicycle on? (Perhaps you don't bicycle on these streets now because you feel unsafe)

Top streets that respondents would like to bike on include:

- Main
- McLeansboro
- DuQuoin
- Petrofff
- Webster

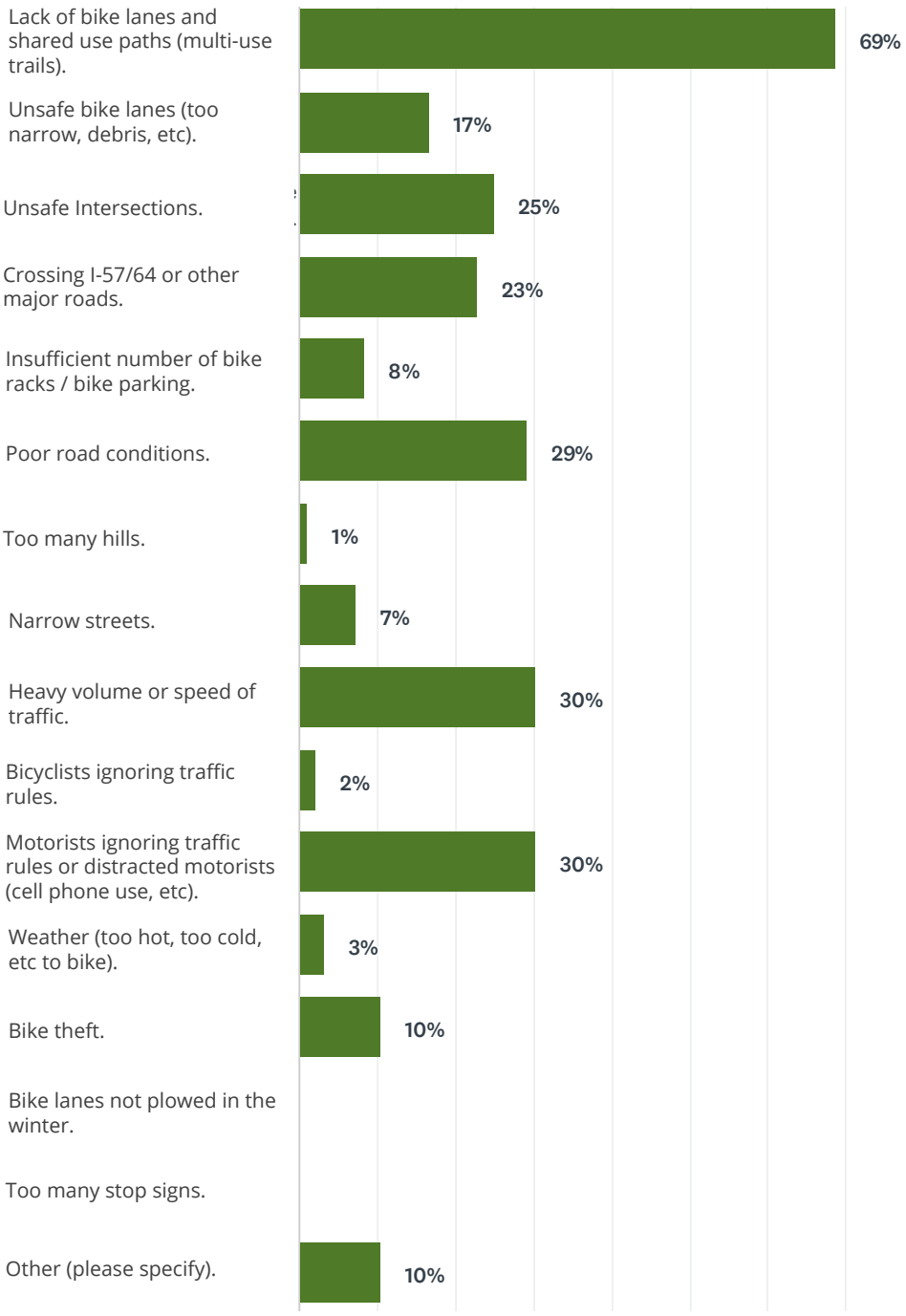
Q10. What are your top three priorities for destinations in the City that future bike facilities should connect? (Choose up to three)



Other destinations mentioned:

- Benton Lake
- The Dollar General on Bailey Lane needs be accessed safely from the housing since they visit there often.

Q11. What are the top three challenges to biking in Benton? (Choose up to three)

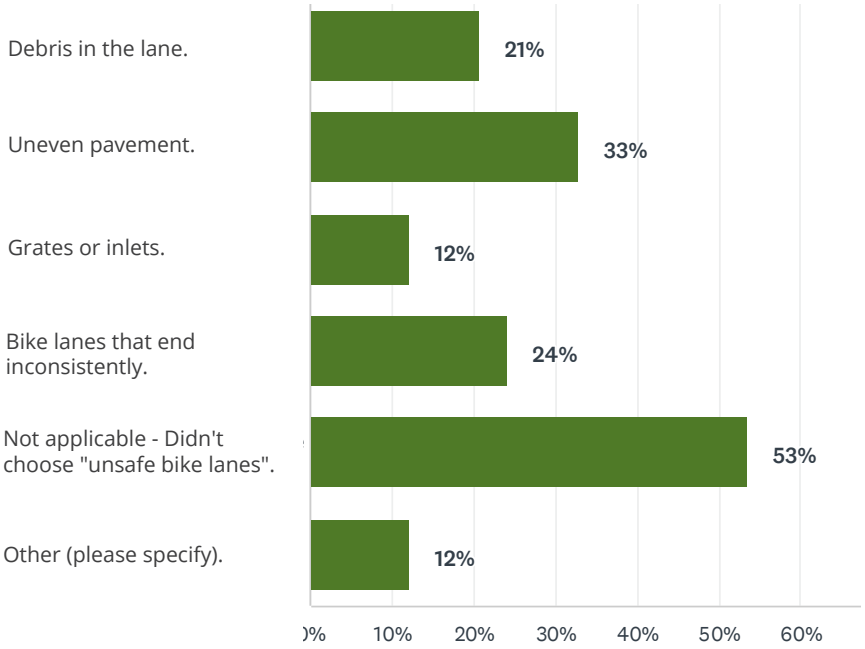


Other responses:

- Square congestion
- Riding on major roads
- Most people are not smart enough to travel from Benton to west city to go to Walmart. I understand that Walmart is not located in Benton, however I think the 2 entities could work together with idot to direct bicycle traffic in a safe manner..... most individuals do not realize or are too lazy to use the less used Webster street bridge.
- Putting bike paths along major vehicle routes is begging for disaster. Is a bike path along across Rend Lake on rt154 really being considered? Really?!?!?!? And I thought routing bicycles around the square was questionable.
- There needs to be a places that children can ride their bikes, like at a park, without being kicked off a “walking path”
- Insufficient sidewalks

Q12. If you chose "unsafe bike lanes" in the last question, what makes the bike lanes unsafe?

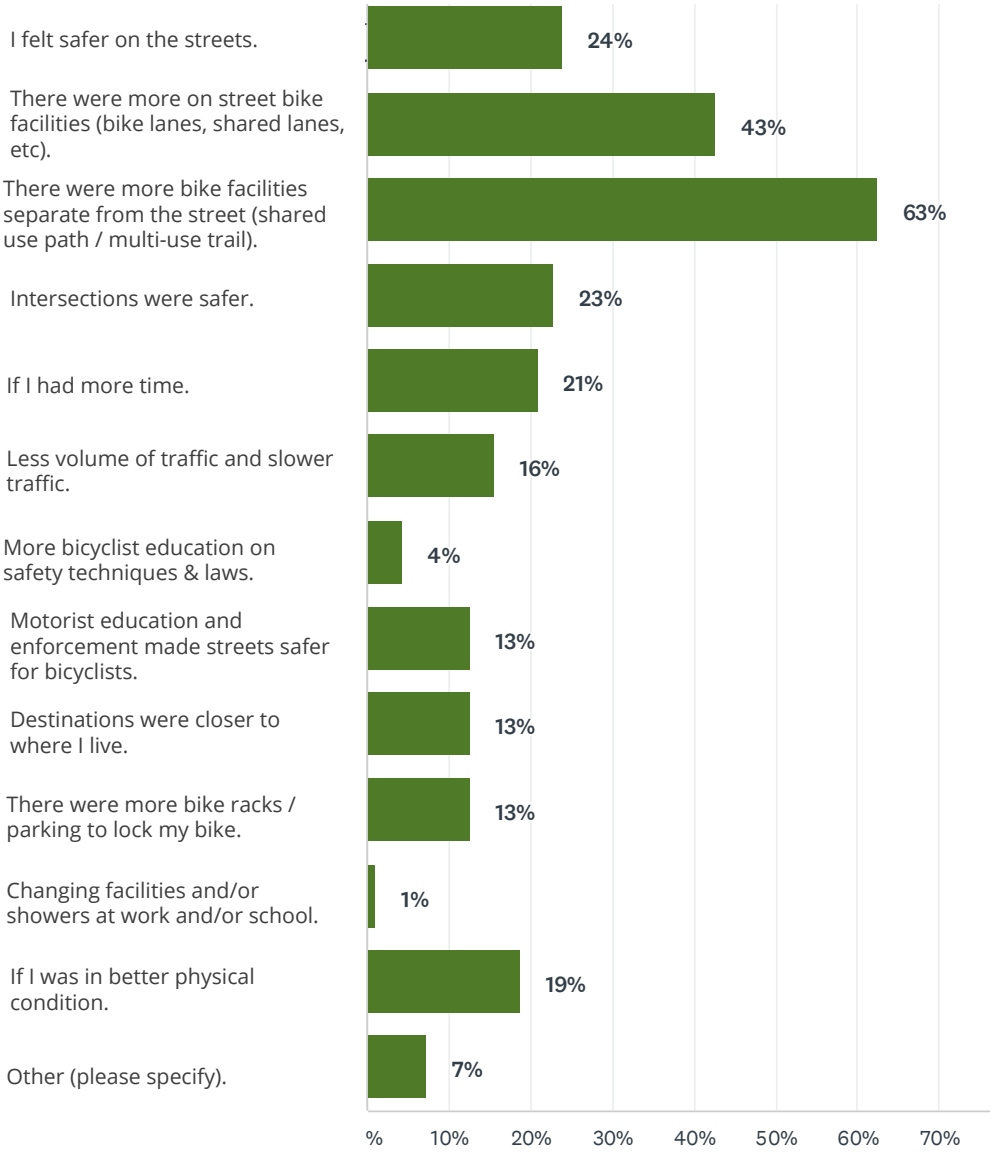
(Choose all that apply)



Other responses:

- I don’t bike but do not bike paths anywhere around the Benton square, it is extremely unsafe as will cause more congestion!
- Do we even have bike lanes anywhere in Benton?
- Horrible sidewalk conditions where there are no bike lanes and where there are bike lanes they’re very few and far between.

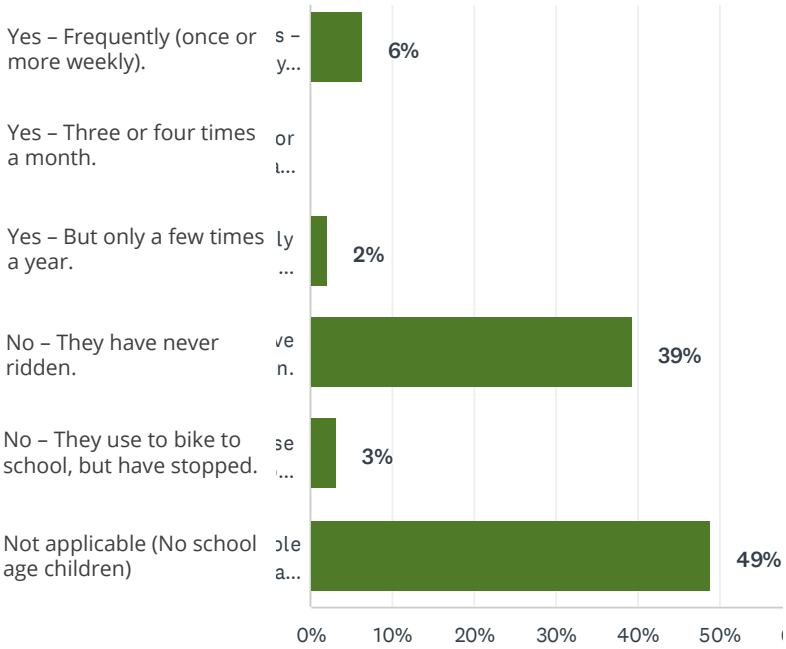
Q13. What are the top three changes would help you bicycle more often? (Choose up to three)



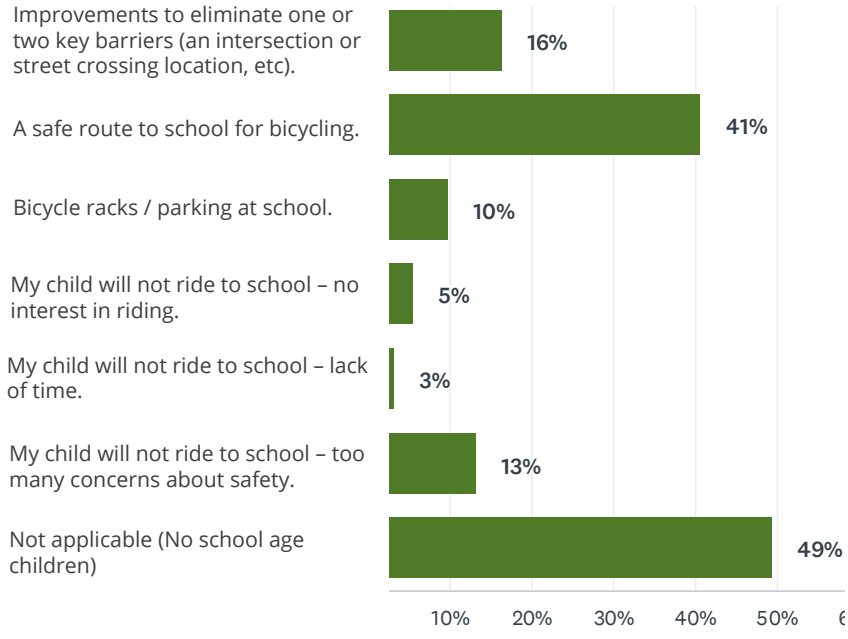
Other responses:

- Streets in better condition. Less potholes and loose gravel. Drains that do not trap bicycle wheels.
- I do not bike
- Wasted taxpayers money
- Never ride a bike. Use car like normal human
- I don't have a suspended drivers license.
- I don't bike.

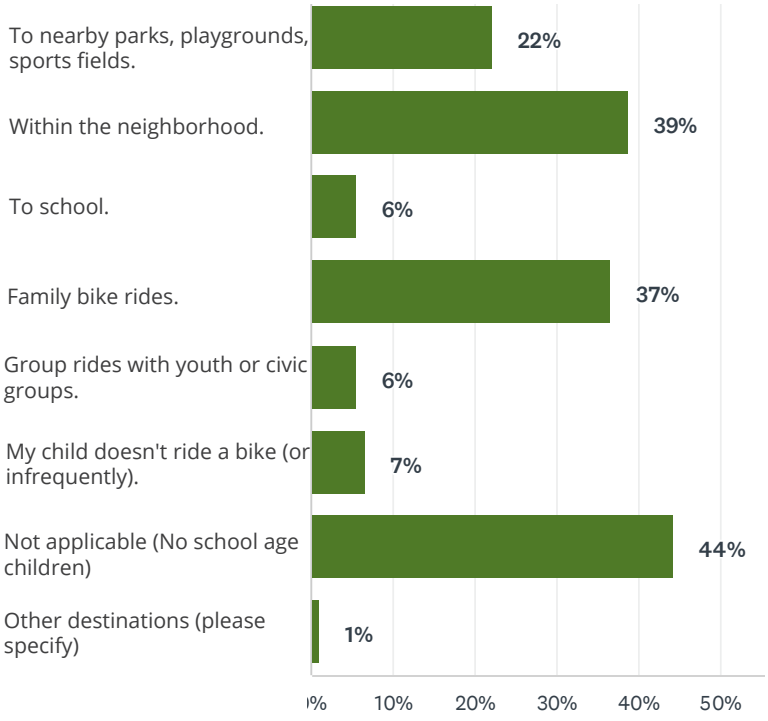
Q14. If you have school age children (grade school thru high school), do they bike to school? (choose one)



Q15. If your child doesn't ride or rides infrequently, what would help your child bike to school? (Choose all that apply)



Q16. If you have school age children, where do they bicycle?
(Choose all that apply)



Q17. What should be the top priorities for improving bicycling in Benton?

Responses:

- Safety for the kids that need to ride and maybe it will encourage more kids to ride to school.
- Safety and access to biking and or walking that is separate from traffic.
- Safety of the children.
- Repairing side streets and creating alternative/off highway routes.
- Wide enough and well marked lanes for cyclists. Trails that are continuous without disconnect. Places where you could park you vehicle so that you can get your bike out to jump on a trail.
- Improving surface conditions. Separating bicycles from motor vehicles.
- Parking storage for bikes. More cautious drivers. Well kept sidewalks/grounds for bicyclist.
- Maybe flashing bicycle lights
- Make bike lanes and educate drivers on sharing the road with bike traffic.
- Safe paths for more kids to get out. Keeping kids safe and parents peace of mind that their kids will be safe
- Bike lanes to the library and to the schools and the park or just around loop just to get out and ride would be nice
- No bicycles around the square. No bicycles on state highways
- Bike lanes, and a safe route TO rend lake path
- DuQuoin Street offers a good access to cycle from Benton to Rend Lake, BUT it needs a dedicated bike lane from Pizza Hut to Petroff. Crossing 57 is scary with traffic. I think this roadway to head out of town has great potential.
- Make cycling around the city to popular destinations safe and easy.
- More specific routes
- Bike lanes, motorist education
- Adding bike lanes and better sidewalks.
- More bike lanes. Safety and awareness for bicyclists.

- Safe paths
- Bicycle lanes and paths
- I, personally, like separate bike trails..but I don't bike much and think that emphasis should be on helping kids that have to bike to school, get their safely and away from heavy school traffic.
- For me, it would be recreational connection to Rend Lake and then a way to safely get to West City. I think it may be more important to secure safe routes to schools and the park. Prioritize the kids needs and safety.
- Bike lane for safety of everyone.
- Keep off the more heavily traveled roads. Keep off the higher speed roads.
- Making sure the bicycle lanes can used properly and safely. Establishing them in areas where their most necessary
- Bike lanes and bike racks
- Safety and multiple places for bicycles to be locked up at destinations
- Not doing it.
- Improving sidewalks/bike paths. Bikers ride on the street instead of the sidewalk currently, making it dangerous.
- Connecting the existing bike path at Rend lake
- "Designated bike lanes
- Reminders to motorists to be bike friendly "
- There should be bike lanes connecting Benton to the Rend Lake trails.
- Make sure kids have safe paths to get to and from school. Also access to the Dollar General on Bailey Lane from the housing.
- Actually having bike lanes
- Tie into Rend Lake paths
- Safer intersections
- Bike lanes
- Bicycle safety clinics for cyclists and drivers. Bike lanes on all Main Streets. Shoulder added to route 37 North to Ina.
- 1) Safety 2) Good destinations 3) Scenic Routes
- Bike lanes
- I think paths that would enable kids (especially young teens or parents who are brining little ones along on their bikes) to get to Rend Lake bike paths or the Benton Community park without having to load those bikes up in a truck first would be great! I think encouraging ease of shopping for people without motorized street vehicles, would be fantastic. I am especially thinking of the times I have seen people taking their motorized wheelchair/ handicapped scooters across the interstate bridge. Having a bike path across the interstate that could also be used for pedestrians and the handicapped would be fantastic! I see quite a few people walking there.
- Bike/walking paths
- Eliminate bike lanes.
- Either have bike lanes or even and safe sidewalks to ride on
- "Connecting Benton to the Rend Lake Cycling Trails.
- Creating Bike lanes or routes to important destinations.
- 1. Community awareness. 2. A detailed growth plan for adding bike lanes. 3. Awareness of routes in the country that are safe for cyclists.There are a lot of great roads out there. However, we need pullouts for parking or ways to connect from the city. "
- safety - good road surface
- More specific paths with minimal crossing of automobile lanes.
- Get rid of the fake “bike lanes” that are currently in the roads (driving lanes) and gutters.
- Separate lanes for bike away from main road. Not the way that is around town where they just stuff a bike lane in on a road. That’s not inviting to the biker and it feels dangerous. Separate paths like sidewalks for bikes.
- "Bike path to Rend Lake
- More bike lanes"
- Finish marking the paths around town. More paths that are separate from the vehicle traffic.
- Safety safety safety! Drivers need to understand rules of the road
- Making bike paths separate from street bike paths, in the park, around airport lake, etc.
- Connecting all the existing bike shared use paths, and/ or a grand loop all around the entire city with cut through paths in the middle to get to some inner city destinations.
- A bike route around Miller Lake would be nice for family recreation.
- Off road shared use paths, providing a bike park for kids (pump track, obstacle course); we drive to St. Louis to bike with our kids because of the availability of facilities for young riders to practice fun skills
- Better traffic law enforcement.

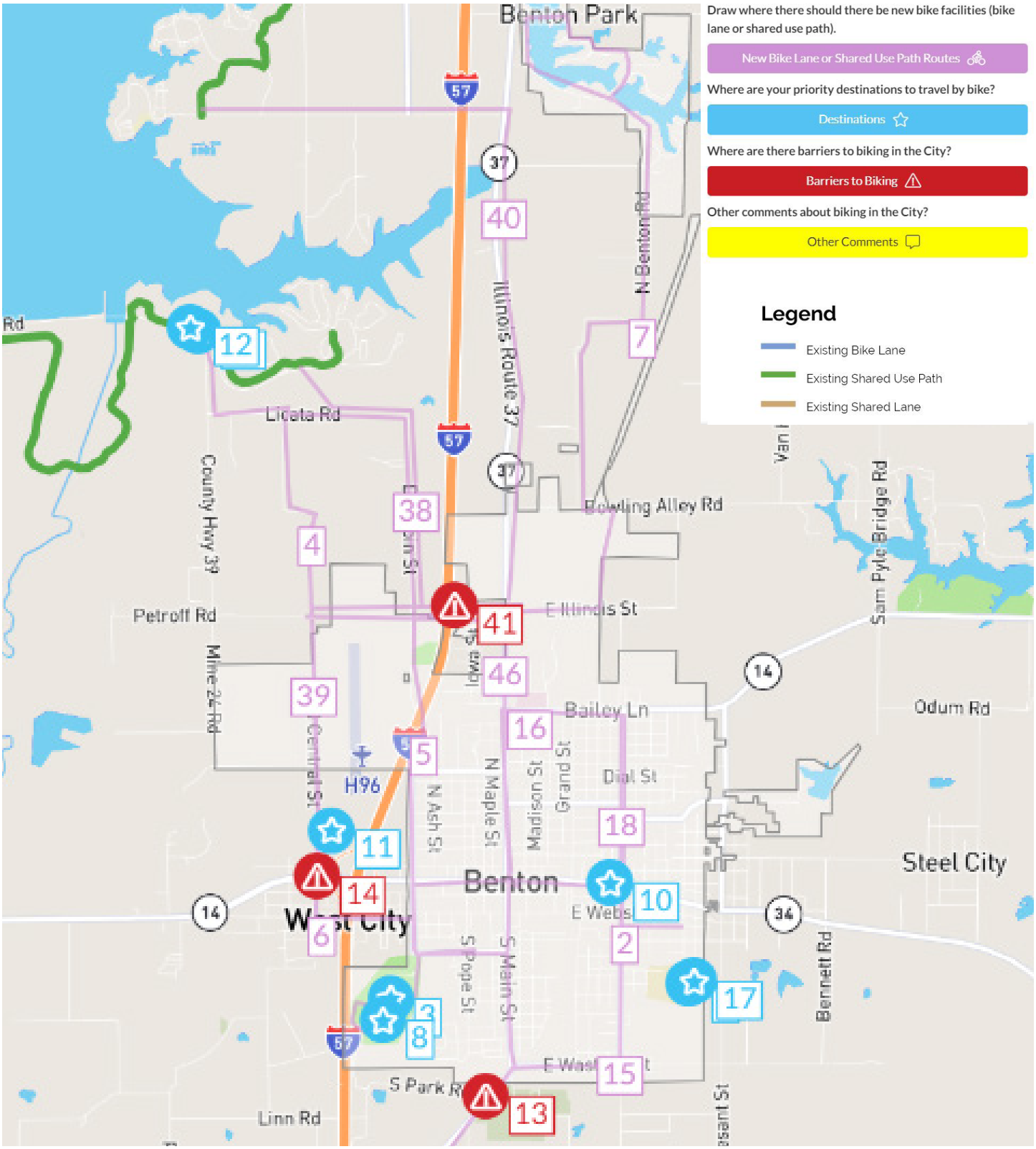
Q18. Other comments regarding the Benton Bicycle Master Plan.

- There are so many areas of IL that have invested in multiple purpose off road use trails for biking, walking, running etc. With our close proximity to Rend Lake, it would be brilliant to at least add a trail to the lake.
- It always disturbs me to see disabled individuals driving scooters on dangerous streets because there are no sidewalks around grocery store, medical services, and other necessities. Creating bike lanes on main streets will do less to improve the safety of our children and elderly than restoring our basic infrastructure.
- None
- We think this is a great idea . So far this year we have bicycled 1300 miles on the bike trails around Rend lake. It would be great to be able to bike into Benton to shop or eat out safely!!
- I think it's great! Get people out and moving more!
- Sounds good...I can't wait for this ...
- I think more people would bike to work or school within Benton if their were bike racks so we could lock our bikes because there is a lot of bike theft in Benton. And if we had a bike lane more kids might ride to school. Maybe offer incentives for the ones that ride bikes for example I know the police station had a bike program where you register your bike, but give those people a free lock and chain for the bike? Maybe even helmets for the kids?
- You must realize that bicyclist are a hazard to themselves, and to those who are trying to avoid them while driving
- Keep this going! Any and all improvements to the infrastructure of Benton to support cycling as a commuting option is fabulous.
- Extending bike lanes/shared paths to extend to the Rend Lake campgrounds would be fantastic for our local businesses.
- No
- We have a very high amount of bicycle thefts
- See above...but I think that kids cycling should be a priority.
- Excited for this and completely support the project.
- Rend Lake has safe riding paved trails and paths. This money will be ill spent
- If there's a safe bike lane for cyclist there will be more people will be interested in biking.
- I understand that the state did it, but removing parking along east Main in order to encourage more bicycles to go to the square is not helpful to any residents. But then again, the only inconvenience is to the business patrons who now have to walk farther. I never see bicycles using the lane or going around the square.
- Very happy this is happening!
- Children are going to be the most frequent riders
- Quit waste grant and tax payer money. This effects too small of a percent of the population.
- Connecting the city to the lake bike trails would be a good idea.
- Great idea as many of the people who live in town use bicycles as a primary way to get to and from work. I would love to see this in action and improved roadways that come along with it
- "Thank you for addressing an up to date opportunity for Benton citizens
- Cycling
- Work and
- Pleasure "
- There is no need for bike lanes on any of the main streets. There are streets that run parallel to all of the main streets for bikes.
- Safer streets
- I think it could help a business expand or open to accommodate increased traffic if used regularly
- I love that this is being researched for the town. I honestly don't live in town, but would love for bicyclists to have a safe place to bike. As someone who almost hit a grade school kid riding a bike that suddenly veered off the sidewalk and fell into the road once, I would love for there to be better places for the bikers because it makes my job as a driver safer too!
- A waste of taxpayers money. Me and my children rode bicycles when we were younger on streets and sidewalks just fine. This is a good example of why our State and country is broke. If this goes through, I will vote against everyone who votes for it. Also, eliminate the stupid bike lane on East Main, parking for the businesses is more important.
- This is a waste of taxpayer money. Get a real man's hobby.
- Great initiative.

"There are so many areas of IL that have invested in multiple purpose off road use trails for biking, walking, running etc. With our close proximity to Rend Lake, it would be brilliant to at least add a trail to the lake. "

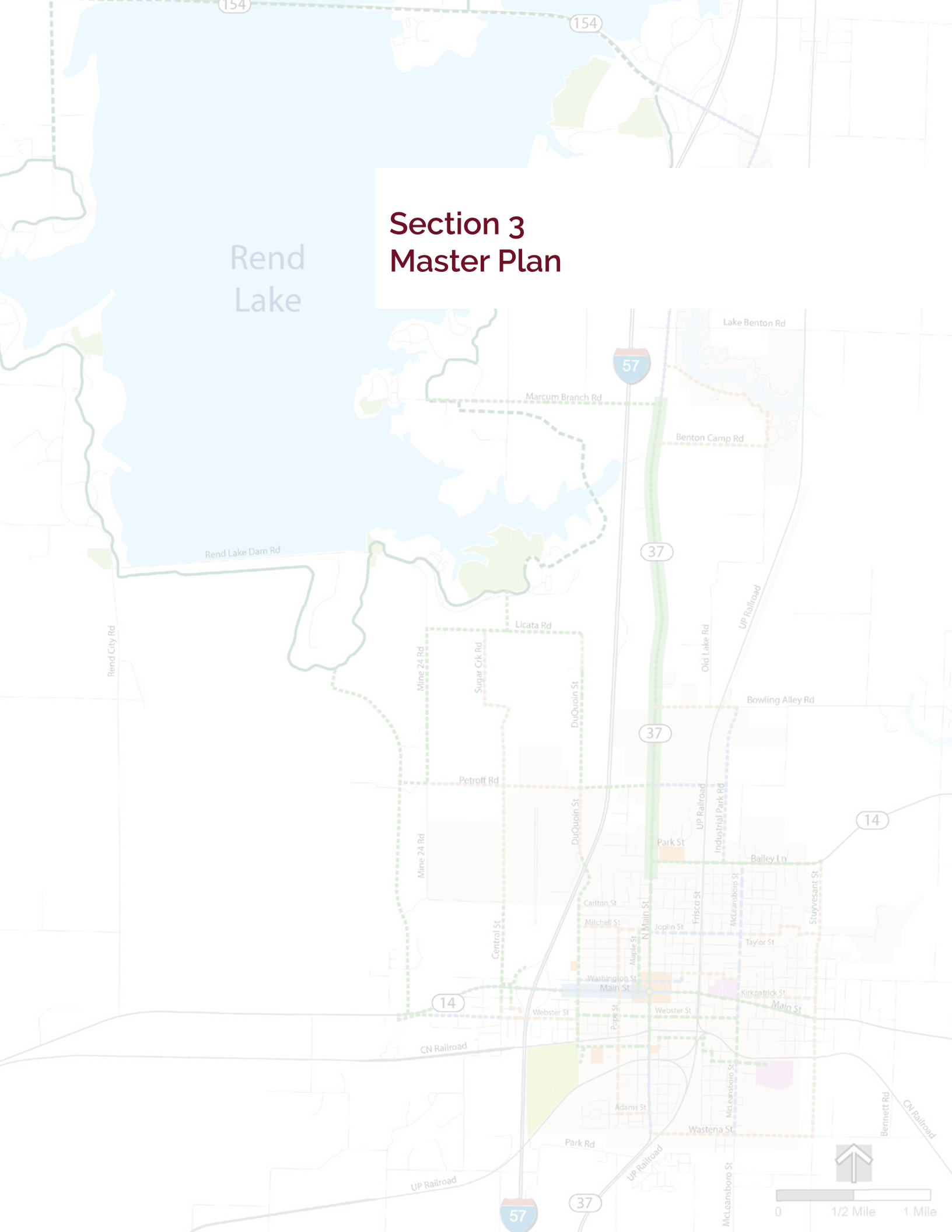
Map Tool Comments

The survey incorporated a mapping tool that allowed participants to provide location-specific comments on an online map. Below, you'll find the comments and suggestions received through this mapping tool.



Comment 13: Busy Highway need to cross to get to the grade school from anywhere west of Main Street. Wastena is one of only a couple of roads that go across the RR tracks to the grade school.
Comment 41: Overpass on I-57.
Comment 12/48: A multi use trail off road to Rend Lake for biking and walking. As a local I would utilize this for exercise. It would bring in tourism from Rend Lake.

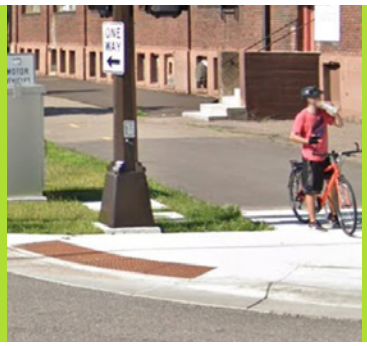
Section 3
Master Plan



Most Preferred

Shared Use Path

Separated Facility



Applicable for Plan (When Shared Used Path isn't Possible)

Buffered Bike Lane

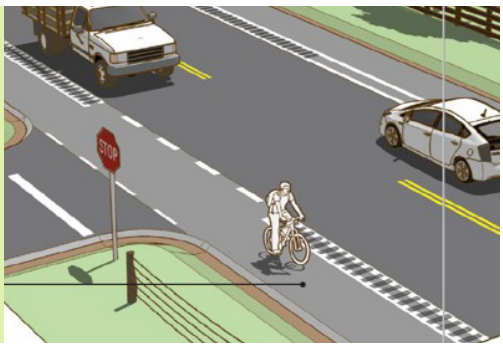
On-Street

Bike Lane

On-Street

Paved Shoulder

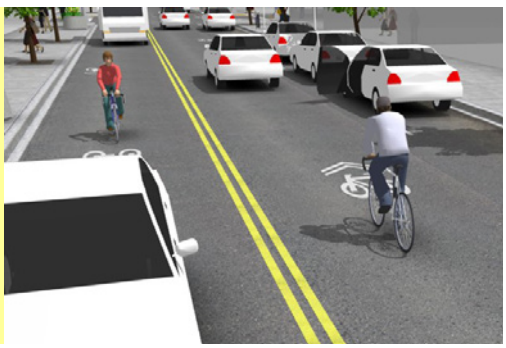
On-Street



Least Preferred

Shared Lane

On-Street Shared Lane



Bicycle Toolkit: Shared Use Paths

Shared Use Paths are physically separated from motor vehicle traffic, except at road crossings. Shared use paths accommodate a variety of users, including pedestrians, bicyclists, and others, for both recreation and transportation purposes. Shared use paths away from roads, on easements or their own rights-of-way tend to be more pleasant and popular.

The recommended width for a shared use paths is 10 ft, in order to facilitate bi-directional and multi-modal traffic. A trail within a connected system of greenspace is often referred to as a "greenway."

Other common terms: multi-use trail, sidepath.

ADVANTAGES

- One of the most popular bicycle facility types. High demand from the public.
- Complete separation from vehicular traffic (except at street crossings).
- Path can be a catalyst for other development since it shows a fixed investment in bicycle facilities.

CONSIDERATIONS

- Available right-of-way or easements for path location.
- Long-term maintenance of trails.
- Relatively high cost compared to other facility types.

IDOT REQUIREMENTS

- 10 ft width minimum, with 2 ft clearance on both sides.
- 8 ft width may be allowed for short distances due to physical constraints.
- Edge of the path to be at least 5 ft from the curb face and 7 ft from the traveled way.
- High-speed rural roads require greater separation distance between path and edge of shoulder.

Example: Urban Shared Use Path

The photo below is representational of a shared use path in a city environment. The photo illustrates key criteria including a minimum of 5 ft from the edge of the path to the face of the curb.

Example: Rural or Park Shared Use Path

The photo below is representational of a shared use path in a rural or park environment.

Bicycle Toolkit: Bike Lane

Bike lanes are portions of the roadway designated for bicyclist use with pavement marking/symbols and optional signing. Bike lanes are typically between five and six feet wide (including gutter pan) on each side of the road with a stripe, signage, and pavement markings. Cyclists in each bike lane travel one-way with the flow of traffic.

Parking is not permitted in designated bicycle lanes. When a road has bike lanes and adjacent parking, the bike lanes should be striped between the parking space and the travel lanes. Regular sweeping is important, as bike lanes tend to collect debris.

ADVANTAGES

- Traffic-calming effect for motor vehicles.
- More predictable movements by both cars and bikes.
- Better cyclist adherence to laws about riding on the right side of the road.
- Dramatic increases in bike usage with lower car-bike crash rates.

CONSIDERATIONS

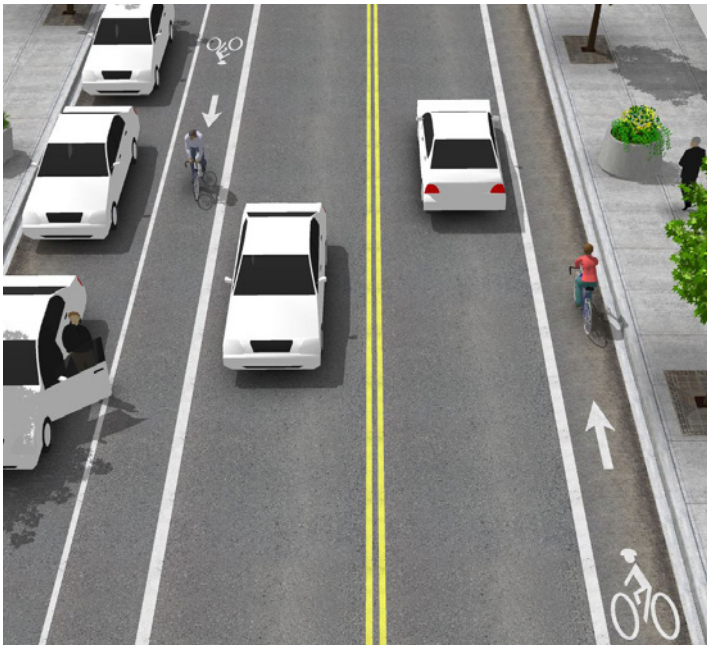
- Car door opening into bike lane can be an issue when bike lane is adjacent to on-street parking.
- Transitions through intersections or when a street narrows or important. Bicyclists can be "stuck" when a bike lane unexpectedly ends.
- Not as comfortable for many casual bicyclist because of adjacent traffic.
- Gutter pan joint edge can create a uneven surface for bicycle tires.

IDOT REQUIREMENTS

- Five ft is the minimum width of a bike lane (stripe-to-stripe or stripe-to curb face)
- Gutter pans are sometimes not acceptable for bicycle travel due to the presence of debris or broken pavement, and the pavement/ gutter joint can sometimes become vertically uneven or separated from the gutter and affect bicycles with narrow tires.

Example: Bike Lane (With Parking and With Curb)

Right side of graphic: Example of bike lane adjacent to curb.
Left side of graphic: Example of bike lane adjacent to on-street parking.
Source: NATCO



Bicycle Toolkit: Buffered Bike Lane

Buffered bike lanes are bicycle lanes with a designated buffer space separating the bicycle lane from the adjacent vehicle travel lane and/or parking lane. The buffer area comprises a pattern of standard longitudinal markings and added chevron or diagonal markings for larger buffer widths.

ADVANTAGES

- Similar advantages as regular bike lane, however in addition buffered bike lanes provide greater shy distance between motor vehicles and bicyclists and increase the level of comfort and safety for bicyclists.
- Placing a 2 ft 6 in. minimum buffer immediately adjacent to a parking lane can be effective in reducing dooring crashes.

CONSIDERATIONS

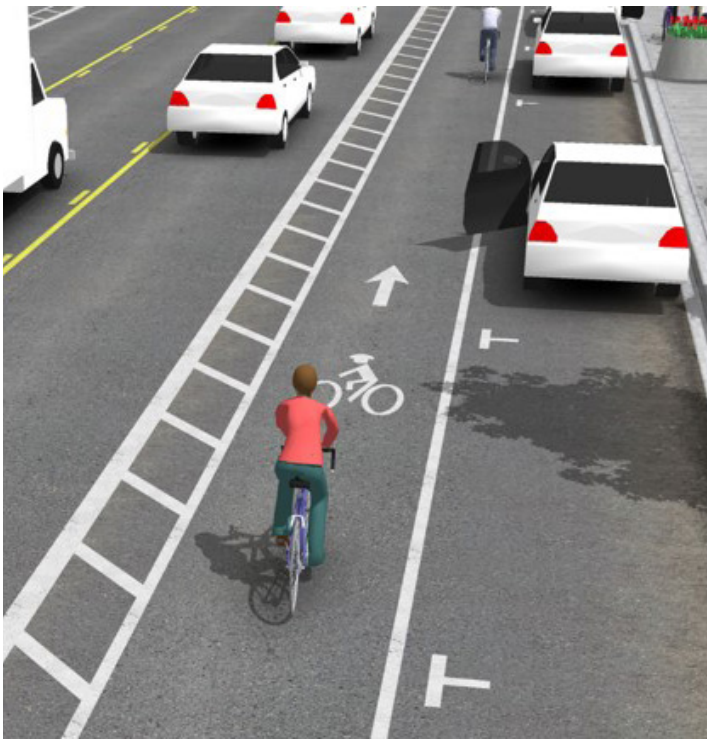
- Similar considerations as regular bike lane, however additional width required can be a constraint for applicability.

IDOT REQUIREMENTS

- Buffer areas are marked with two solid white lines (a 5 in. minimum line width is required on the vehicle traffic side) at least 12 in. apart. Where the buffer total width is 18 in or more, diagonal or chevron markings are recommended for clarity.

Example: Buffered Bike Lane (With Parking and With Curb)

Source: NATCO



Bicycle Toolkit: Shoulder

For rural roads and streets without enough available pavement width for a full bike lane, the use of a paved shoulder for bicyclists can be an acceptable bicycle facility type, especially when there are limited options for other facility types.

For these roads to have a full 5 ft width bike lane would be cost prohibitive. The roads will need to be widened which would require moving the curb line and reconstructing stormwater inlets.

In the short term, they are part of the overall bicycle network, but they are acknowledged that they do not meet the requirements of a full bike lane. Long term if the road is reconstructed, the road width should accommodate a full bike lane width or a sidepath should be added.

Sometimes these can be called "Urban Shoulder" or "Advisory Shoulder."

ADVANTAGES

- Although the striping does not meet the width requirement of a standard "bike lane", the shoulder does provide a measure of safety for bicyclists and provides traffic calming. dooring crashes.

CONSIDERATIONS

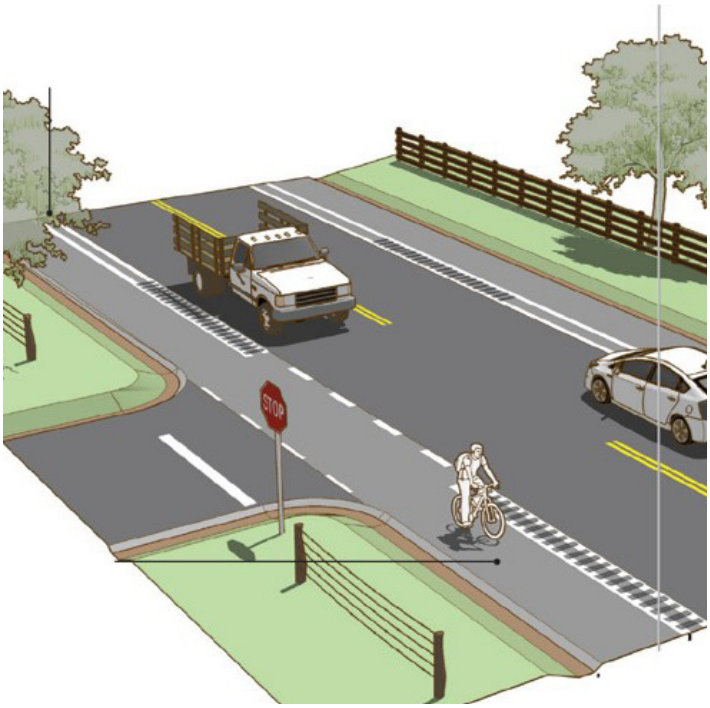
- The joint between the asphalt and gutter can create a safety issue for bicyclists, especially with the width of the lane already less than a standard bike lane. When the street is resurfaced, a portion of the gutter should be milled to allow a wider area for bicyclists.
- Shoulders cannot be called, marked, and/or signed as official "bike lanes".

IDOT REQUIREMENTS

- For rural roadways, IDOT has minimum width requirements for shoulders based on various traffic volumes and vehicular speeds.

Example: Shoulder

Source: Federal Highway Administration 'Small Town and Rural Multi-Modal Networks'



Bicycle Toolkit: Shared Lane

Shared Lanes include:
- Streets with sharrows.
- Shared roadways (no pavement striping), just signage.

The Sharrow (Shared Lane Marking) is used primarily for streets with insufficient width (or need) for bike lanes. On such roads with significantly occupied on-street parallel parking, the center of the marking shall be 11 feet (or more) from the curb; with no occupied parking, the center of the marking shall be 4 feet (or more) from the curb. The markings should be placed right after an intersection and spaced at intervals of 250 feet thereafter. The shared lane marking also can be used to indicate correct straight-ahead bicycle position at intersections with turn lanes, where bike lanes or combined bike/parking lanes have been temporarily dropped.

Shared roadways may be appropriate where there is not enough room for dedicated bike lanes and traffic volumes are low enough that sharrows are not required.

ADVANTAGES

- Sharrows can alerts motorist more effectively than signs that bicyclists are sharing a lane, positions bicyclists outside of car "door zone", and can be especially effective at intersections to better position bicyclists and alert motorists.
- Shared roadways can be used to supplement other bicycle facilities such as bike lanes, paved shoulders, sharrows, etc.

CONSIDERATIONS

- Especially for the casual bicylist, sharrows or shared roadways do not increase bicyclist comfort or safety.
- Should be the lowest ranked bicycle facility option, and only used when other bike facilities are not practical.

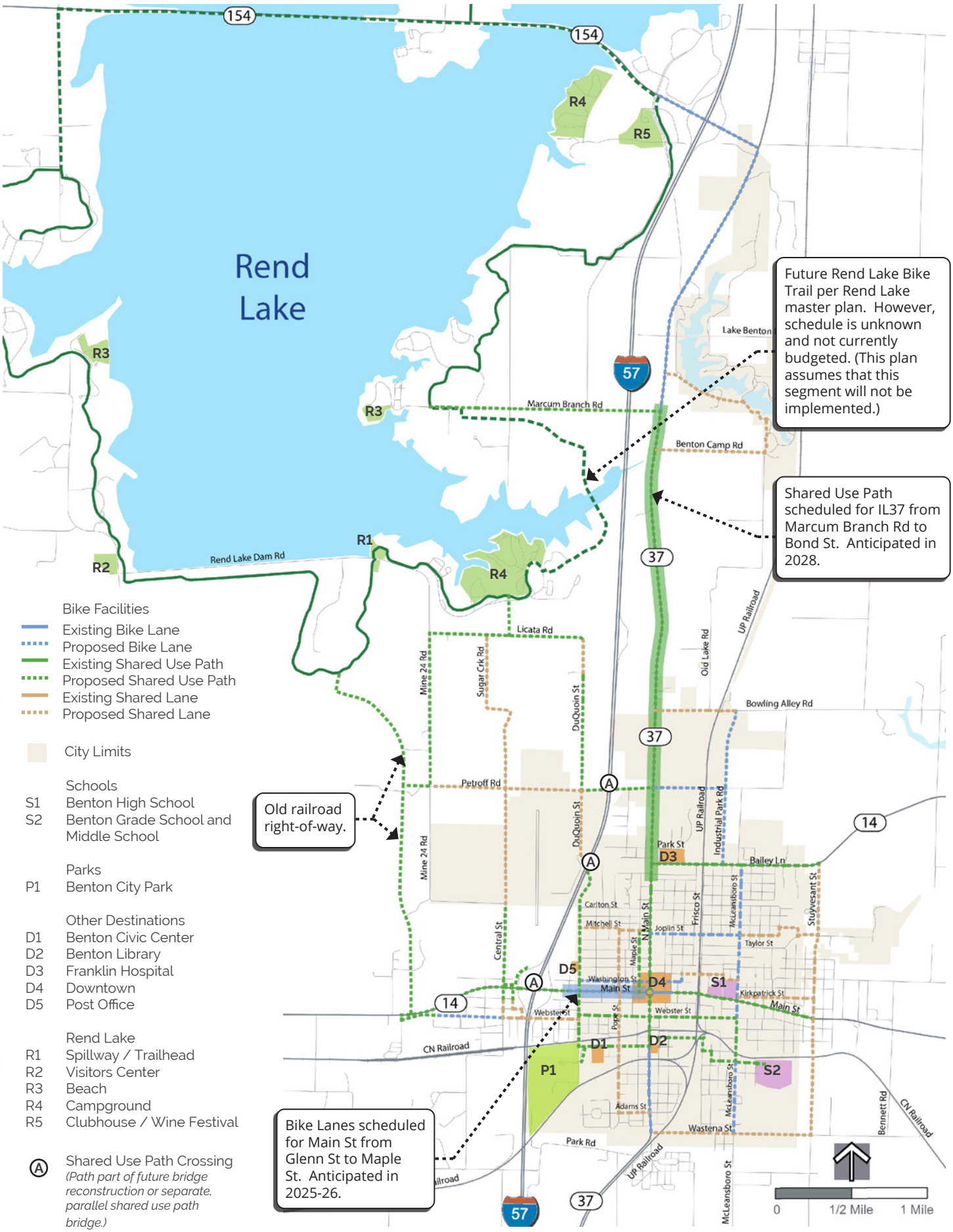
IDOT REQUIREMENTS

- Sharrows should not be used on roadways with posted speed limits above 30 mph, and should be considered only where traffic volumes are fairly low.

Example: Shared Lane with Sharrows

Source: NATCO

Bicycle Master Plan



Bike Facilities
- Existing Bike Lane
- Proposed Bike Lane
- Existing Shared Use Path
- Proposed Shared Use Path
- Existing Shared Lane
- Proposed Shared Lane

City Limits

Schools
- S1 Benton High School
- S2 Benton Grade School and Middle School

Parks
- P1 Benton City Park

Other Destinations
- D1 Benton Civic Center
- D2 Benton Library
- D3 Franklin Hospital
- D4 Downtown
- D5 Post Office

Rend Lake
- R1 Spillway / Trailhead
- R2 Visitors Center
- R3 Beach
- R4 Campground
- R5 Clubhouse / Wine Festival

Ⓐ Shared Use Path Crossing *(Path part of future bridge reconstruction or separate, parallel shared use path bridge.)*

Priority Corridors

The priority corridors include:

- **Option: School to Park Connector *(Community Preferred Priority)***
- Option: DuQuoin Shared Use Path
- Option: The Square via Maple Street

The following pages provide additional details about each priority corridor. Each option includes community priorities (connecting to Rend Lake, connecting the school to Benton Park, etc.) or greatly improves the Bicycle Level of Traffic Stress for key segments.

Based on community input, the top priority corridor was Option: School to Park Connector, since the entirety of this corridor is within the city limits of Benton and would connect the Middle/Grade School, Library, and Benton Park. A slight change in alignment from the draft plan better connects to the Library and situates the bicycle/pedestrian crossing of IL-37 at a better location. The draft plan included Webster Street as the key east-west connection. The updated and final plan utilizes Hudelson Street and Spani Street as the key east-west connection.

Implementation

Item 1. First Phase Project: School to Park Connector (Steve McCommons Bike Path). See details on the following pages.

Item 2. On-Going Grant Applications: The City should continue to utilize regular grant programs (such as the Illinois Transportation Enhancement Program [ITEP] to implement the priority corridors and other recommendations of the Master Plan.

Item 3. On-Going City Street Resurfacing / Reconstruction: As the City repaves, resurfaces, or makes improvements to various streets in the City, the City should use the Master Plan as a guide to incorporate the recommended bicycle facilities.

Item 4. IDOT Future Projects: As IDOT plans future improvements for state roadways in or near Benton (especially East Main Street and intersections / bridges of Interstate 57), the City should use the Master Plan to coordinate with IDOT for the preferred bicycle facilities.

Item 5. Rend Lake Connection: IDOT's future improvements to IL-37 (anticipated by 2028) will result in a shared use path from Bond Street to Marchum Branch Road. While this provides a connection to Rend Lake, an overall loop connection to Rend Lake is recommended. For the completion of the loop connection, a western connection is most feasible via DuQuoin Street or the vacated railroad right-of-way west of West Benton. While a priority and benefit for Benton, both routes are primarily out of Benton's city limits. Benton should proactively work with IDOT, West Benton, Franklin County, and the U.S. Army Corps of Engineers to advance implementing one of the two routes. The vacated railroad right-of-way may be the preferred route. An initial step is to verify if the right-of-way is viable and available. Based on a review of Franklin County online assessor data, the right-of-way appears intact. The railroad right-of-way also complements bike corridors along IL-14 within West Benton and to Walmart (see Item 6).

Item 6. Walmart and Railroad Right-of-Way Connections: IDOT's future improvements to IL-14 (anticipated in 2025-2026) will include bike lanes along IL-14 to Glenn Street. In the future, when the IL-14 bridge is replaced over I-57, bicycle facilities should be part of the future bridge reconstruction or be used as a separate, parallel shared-use path bridge. Further west along IL-14, there is an opportunity for a shared use path within the right-of-way of IL-14, especially if vehicular traffic volumes are low enough to have only one eastbound lane of IL-14. This allows connections to Central Street and, thus, Walmart. Alternatively, if the shared use path is on the north side of IL-14, the path could access Walmart via the I-57 ramp right-of-way.

IL-14 right-of-way can also provide access for a shared use path further west to the vacated railroad right-of-way near Court Street.

Item 7. Webster Street Connection to West Benton
Webster Street is a fairly low volume street (a BLTS of 2) and could be used as alternative connection to West Benton (and thus Walmart and railroad right-of-way). The proposed bicycle facility for Webster Street is shared lanes.

Item 8. Use the League of American Bicyclist's "Bicycle Friendly Community" (BFC) program as guide for education, enforcement, evaluation, and encouragement:
This master plan focuses on the physical ("engineering") aspect of improving bicycling in the City by recommending a network of bicycle facilities (shared use paths, bike lanes, and shared lanes) throughout the city. However, components such as education and encouragement are important in developing a bicycle friendly culture. The League of American Bicyclist's "Bicycle Friendly Community" program is a great resource. Even if the City doesn't apply to be a bicycle friendly community, the program's application checklist is a great resource for best practices and benchmarking current policies.

Above: Example of a separate shared use path bridge over I-57 in Effingham, Illinois.

Item 9. Bicycle Wayfinding Plan
As bicycle facilities are implemented, the City should develop a community-wide bicycle wayfinding signage system that identifies destinations and corridors. Bicycle wayfinding helps to further brand the City and signifies that bicyclists have the same importance as motorists.

Item 10. Continue Bicycle Advisory Committee
The Bicycle Advisory Committee should continue to meet on an annual or semi-annual basis to provide guidance to the City on future priority projects and help ensure that the City is continuing to progress on implementation.

Priority Project Option: School to Park Connector

Summary

Length: Approx 1.5 miles.
Route includes Hudelson Street, Spani Street, Wilson Street, and Forest Street

Strengths

Connects Middle/Grade School, Library, Civic Center, and Benton Park.

Provides a new, safe crossing of IL-37 to connect neighborhoods west of IL-37 to the Library.

Considerations

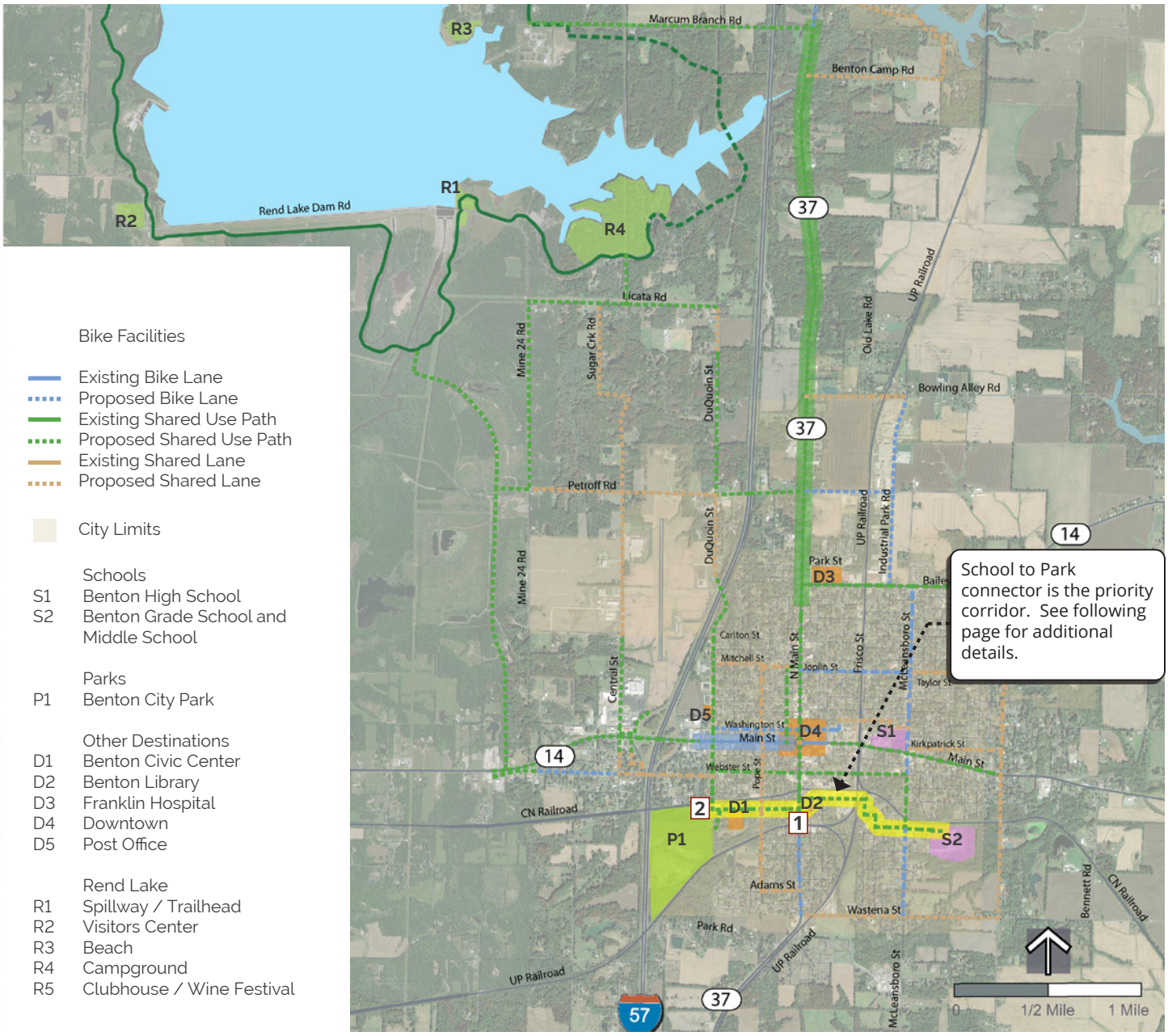
Needs coordination with Library to connect path across Library property from IL-37 to Commercial Street.

Considerations (*cont*)

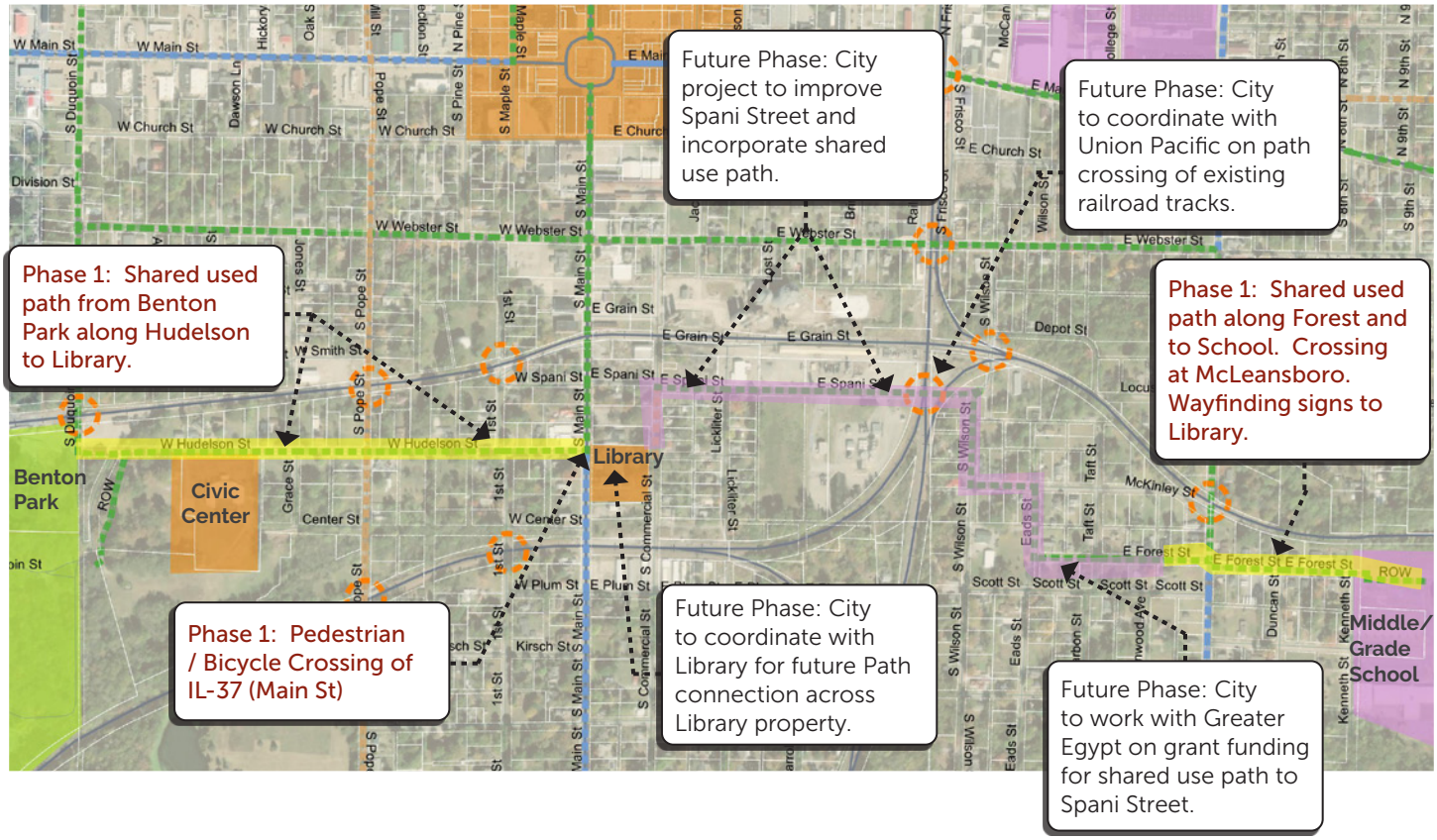
Shared use path on McLeansboro St would require curb relocation.

1. Intersection with IL-37

Existing cross traffic does not stop at intersection with IL-37. Existing AADT is 6,400. A controlled crosswalk (rapid flashing beacon or signalized) would provide a designated crossing point for bicyclists and pedestrians.



Priority Project: School to Park Connector (Steve McCommons Bike Path)



The priority project corridor will take multiple phases for implementation. The exhibit on this page shows the proposed first phase and future phases. The benefit of this corridor is that it connects multiple Benton destinations, including Benton Park, Civic Center, Library, and Middle / Grade School. In addition, a new controlled bicycle/pedestrian crossing of IL-37 (Main Street) will provide a safe crossing point for neighborhoods west of IL-37 to access the Library.

The name of the path will be the "Steve McCommons Bike Path" to honor Steve McCommons, a long-time resident of Benton who passed away in 2008. Steve was a strong advocate for bicycling and was a teacher, coach, and mentor at Benton High School.

See the appendix for information regarding the Phase 1 grant application materials.

Additional phases will include follow-up actions by the City, including:

- The City to coordinate with Library for future path connection across Library property.
- The City plans a future project to improve Spani Street and incorporate a shared use path.
- As part of the Spani Street improvement project, the City to coordinate with Union Pacific Railroad about the path crossing the existing railroad tracks. The planning team made initial contact with Union Pacific in March 2024.
- City to work with Greater Egypt on grant funding for the shared use path to Spani Street utilizing sections of Wilson Street, McKinley Street, Eads Street, and Forest Street.

Priority Project Option: DuQuoin Shared Use Path

Summary

Length: Approx 3.5 miles.

Strengths

Directly connects Rend Lake Trail with Benton Park and downtown Benton.

Future connection to planned shared use path on IL-37 (via Petroff) would create a continuous Rend Lake Loop.

Considerations

At 3.5 miles, would require multiple grant cycles for implementation.

Several stretches of narrow ROW would require ROW acquisition or shared lane.

Several areas of significant topography.

Existing DuQuoin bridge very narrow.

1. Narrow ROW

According to assessor parcel information, only 40' ROW in these segments. Too narrow for shared use path.

2. Existing DuQuoin Bridge

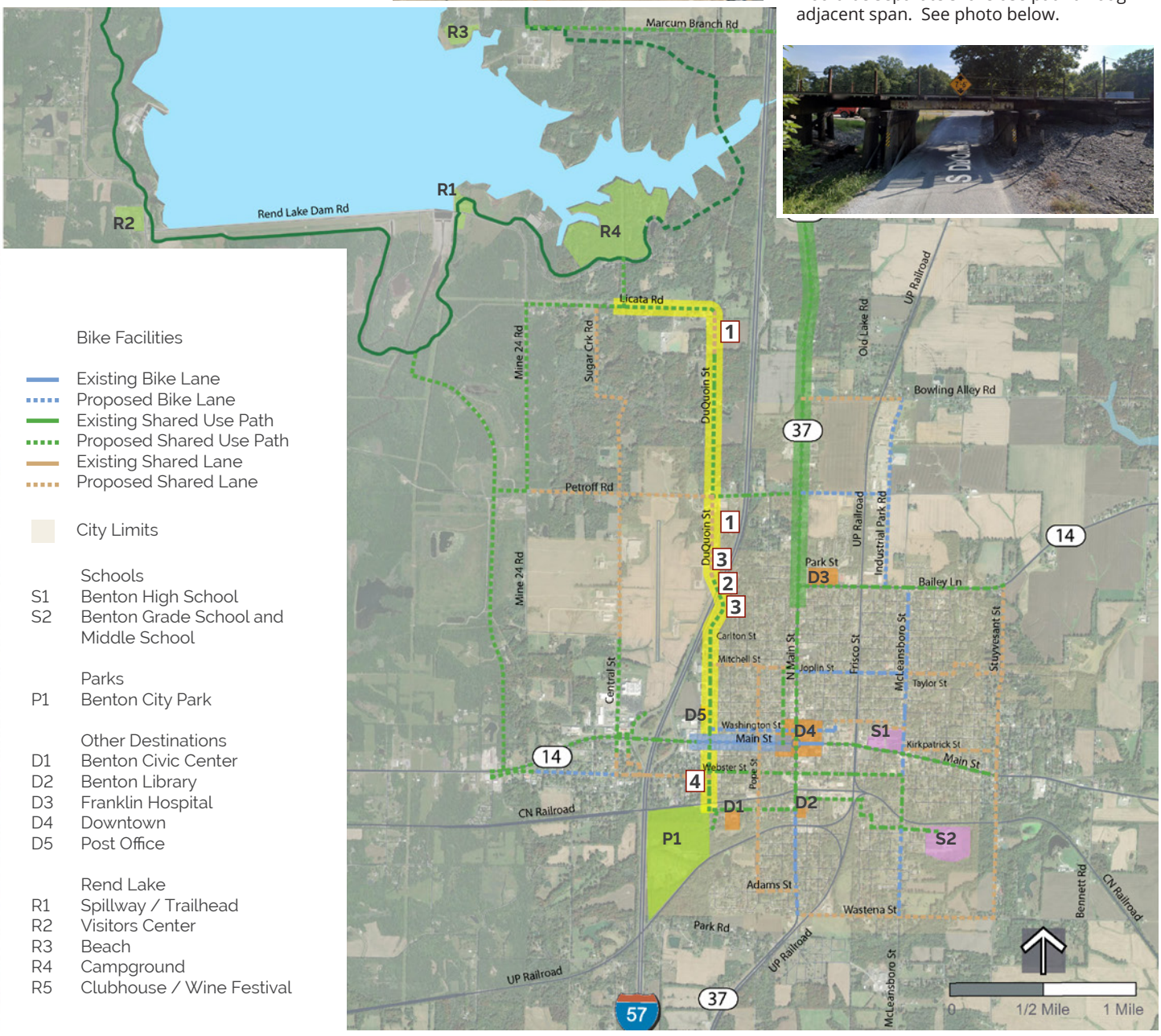
Existing DuQuoin St bridge over I-57 too narrow for bike facilities. A shared use path would require waiting for future bridge reconstruction or a separate, parallel shared use path bridge. See photo below

3. Approaches to DuQuoin Bridge

The elevation of terrain falls below the roadway on the east and west sides of DuQuoin St and is heavily forested. A path on the side of the road would require significant earth work or retaining walls. See photo below.

4. Railroad Trestle at Entrance to Park

DuQuoin St is low BLTS of 2, so a shared lane would allow bikes access to the park through the existing underpass on Du Quoin. However, preferred solution would be separate share use path through adjacent span. See photo below.



Bike Facilities

- Existing Bike Lane
- Proposed Bike Lane
- Existing Shared Use Path
- Proposed Shared Use Path
- Existing Shared Lane
- Proposed Shared Lane

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Other Destinations

- D1 Benton Civic Center
- D2 Benton Library
- D3 Franklin Hospital
- D4 Downtown
- D5 Post Office

Rend Lake

- R1 Spillway / Trailhead
- R2 Visitors Center
- R3 Beach
- R4 Campground
- R5 Clubhouse / Wine Festival

Priority Project Option: The Square via Maple Street

Summary

Length: Approx 0.9 miles.
Route includes IL-37, Mitchell St, Maple St.

Strengths

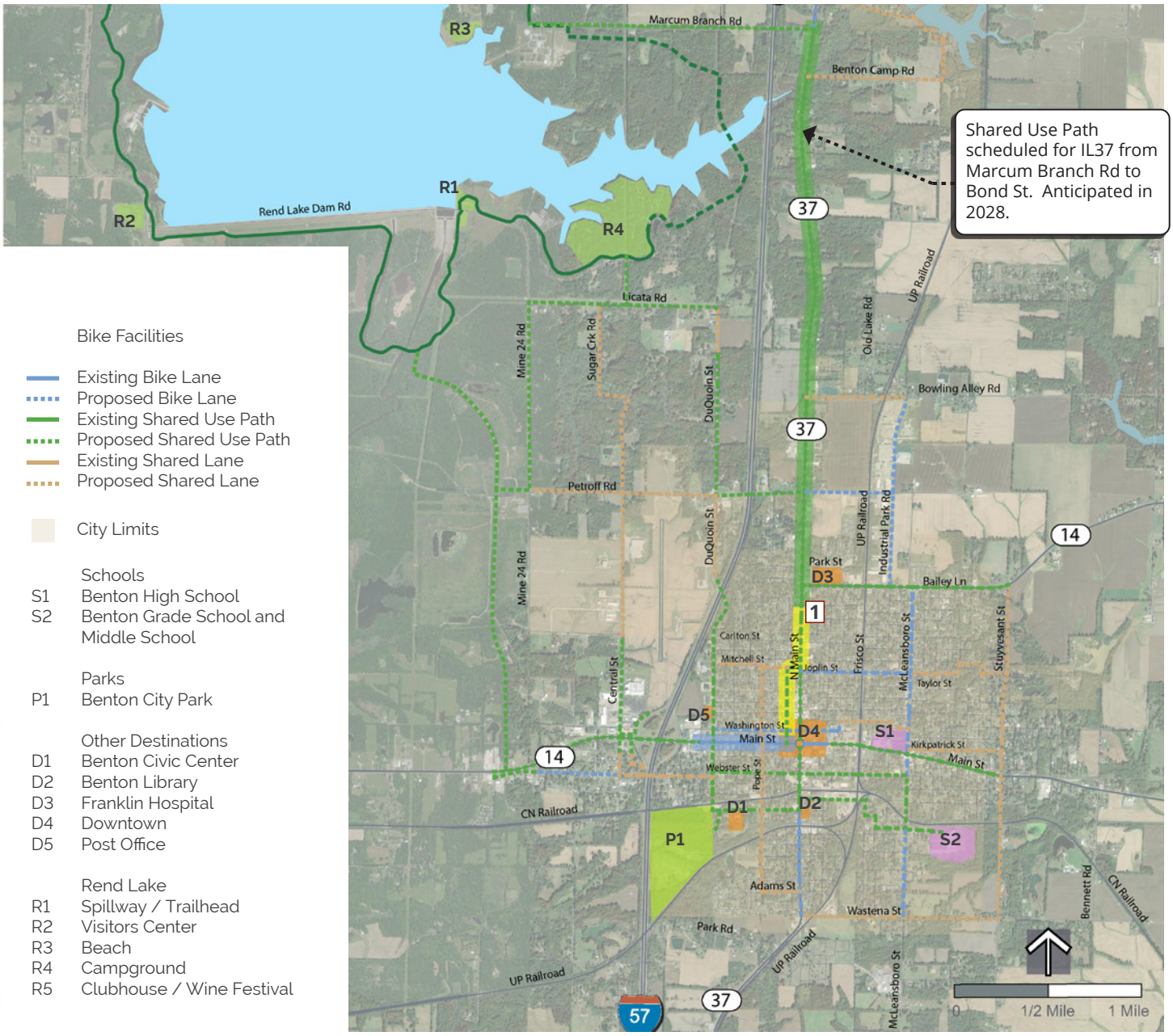
Connects downtown Benton with future shared use path scheduled for IL-37 from Bond St to Marcum Branch Rd.

Considerations

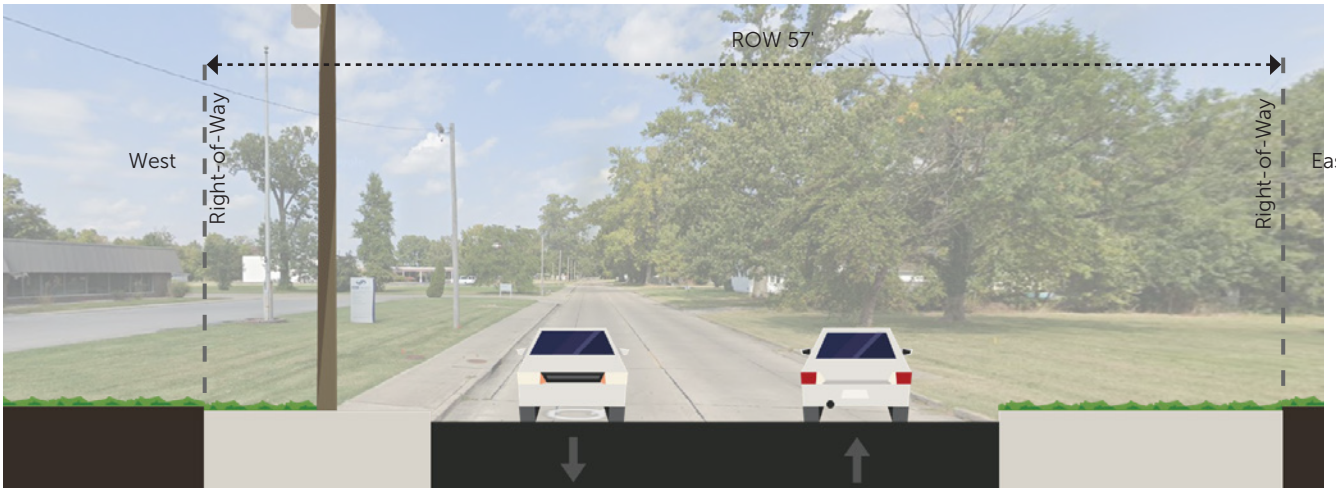
New shared use path may require relocation of curb, loss of parking, and utility pole relocations on Maple St. Maple is a low volume street (BLTS of 1-2). Bike lanes or shared lanes may be an acceptable option.

1. Connection to Future Shared Use Path

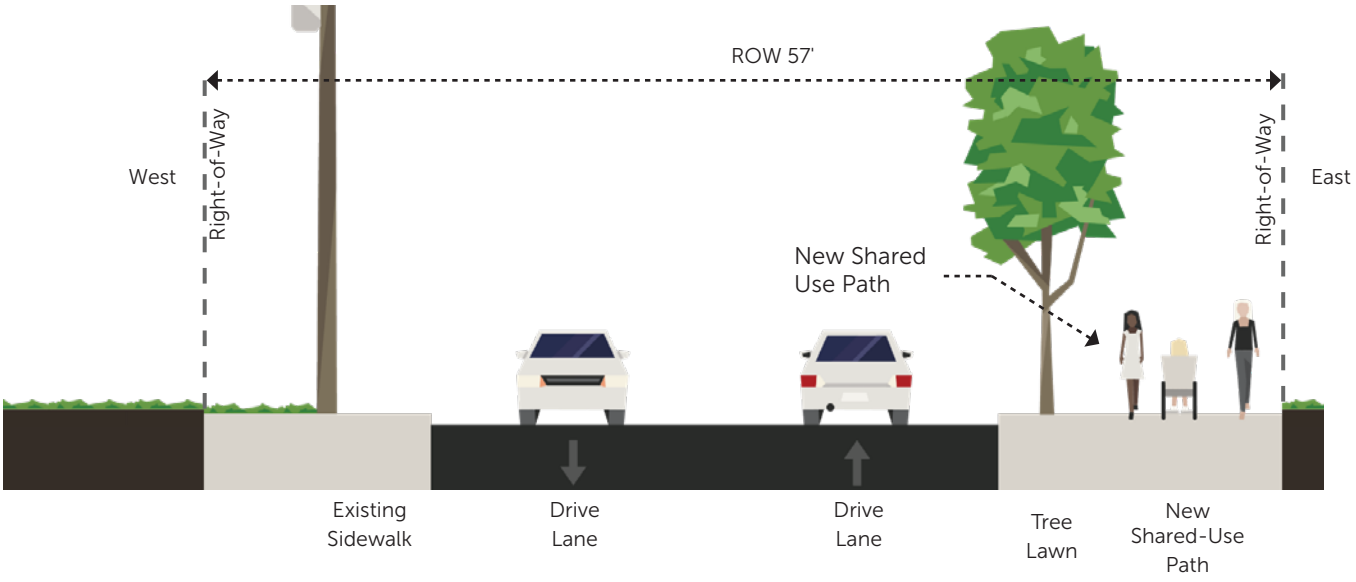
Shared use path scheduled for IL-37 from Marcum Branch Rd to Bond St. Anticipated in 2028. This project would connect downtown Benton to the start of the future shared use path along IL-37 at Bond St.



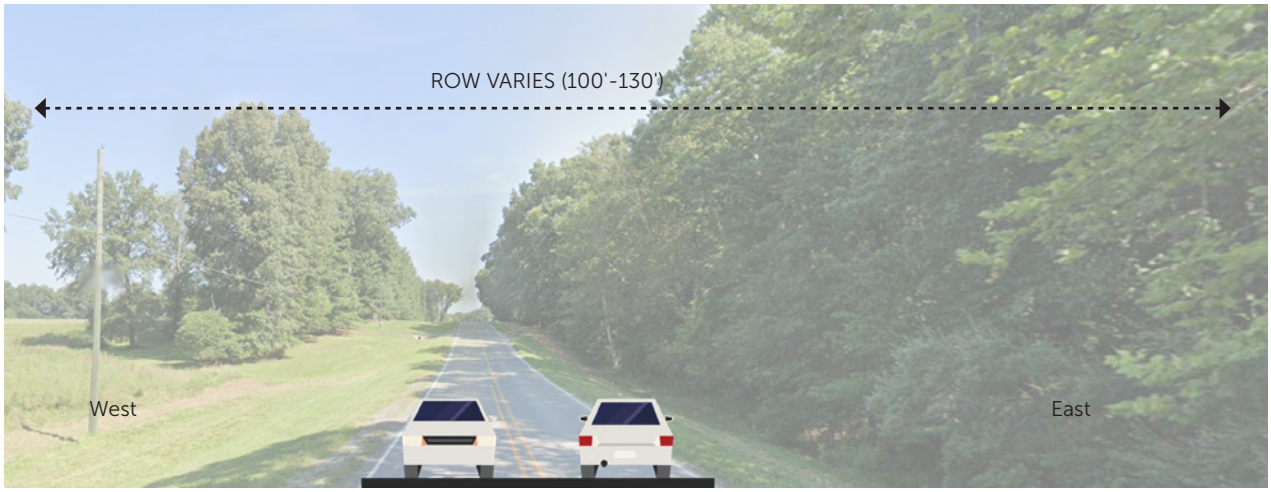
DuQuoin Street (North of 5th): Existing Condition



DuQuoin Street (North of 5th): Proposed Condition

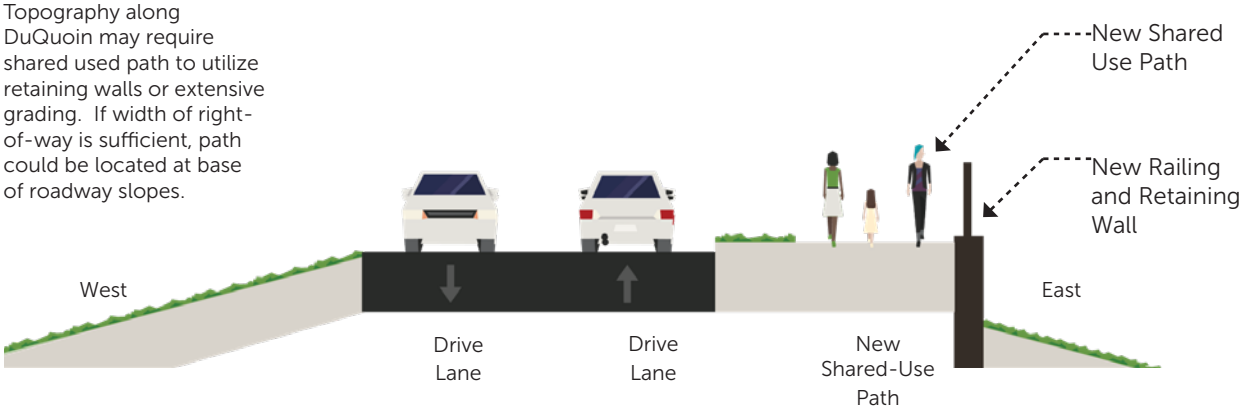


DuQuoin Street (South of Bluebell): Existing Condition

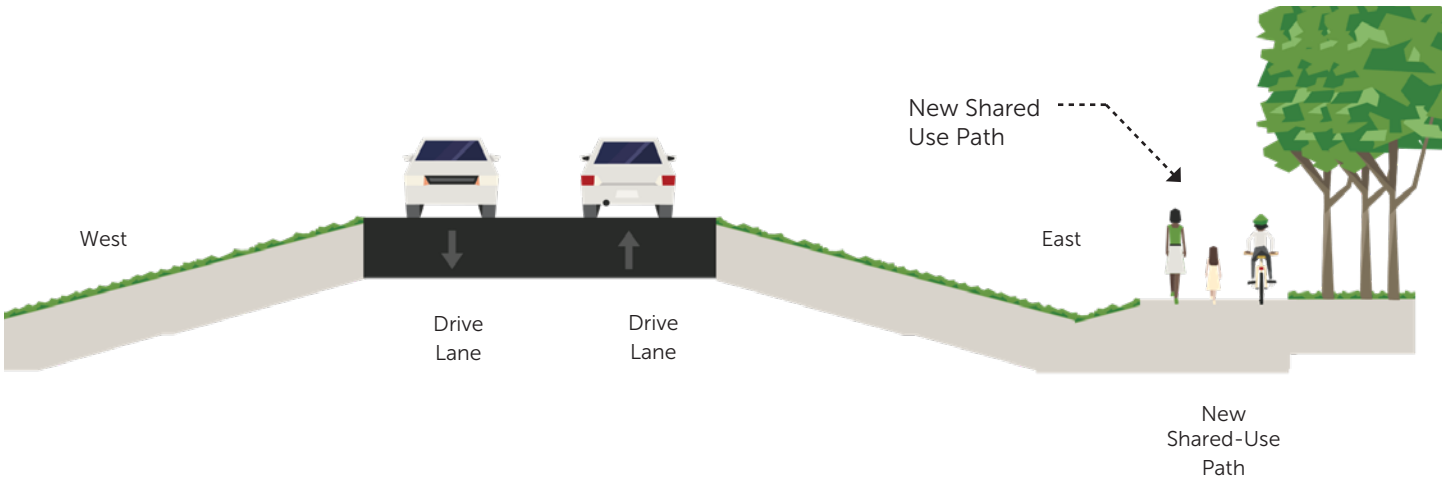


DuQuoin Street (South of Bluebell): Proposed Opt 1

Notes
Topography along DuQuoin may require shared used path to utilize retaining walls or extensive grading. If width of right-of-way is sufficient, path could be located at base of roadway slopes.



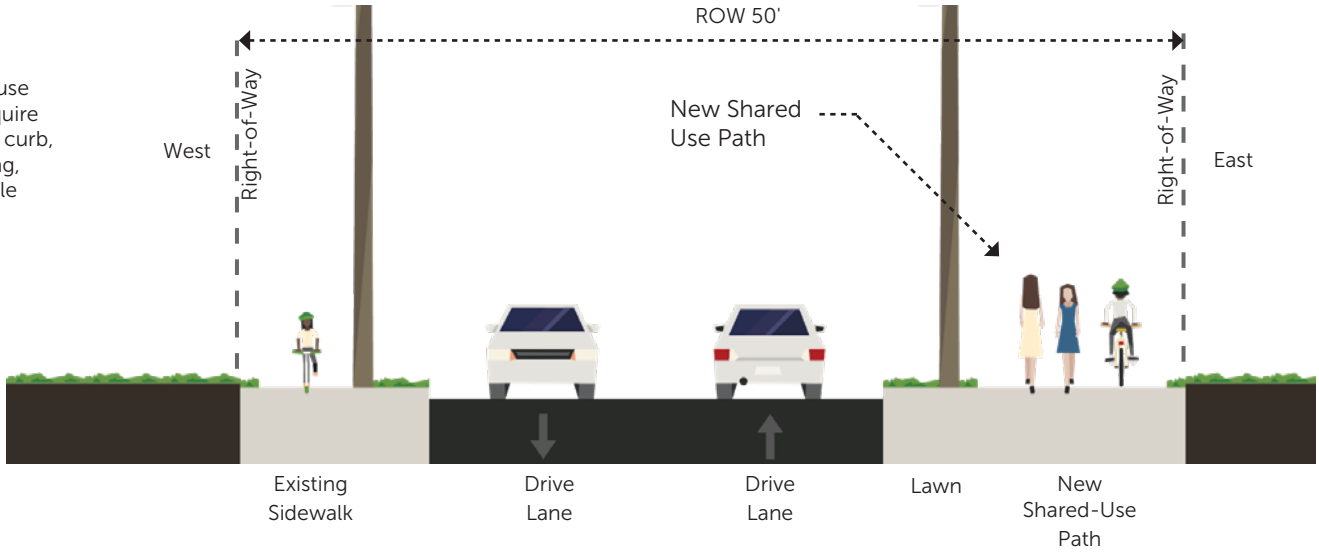
DuQuoin Street (South of Bluebell): Proposed Opt 2



Maple Street (South of 4th): Existing Condition

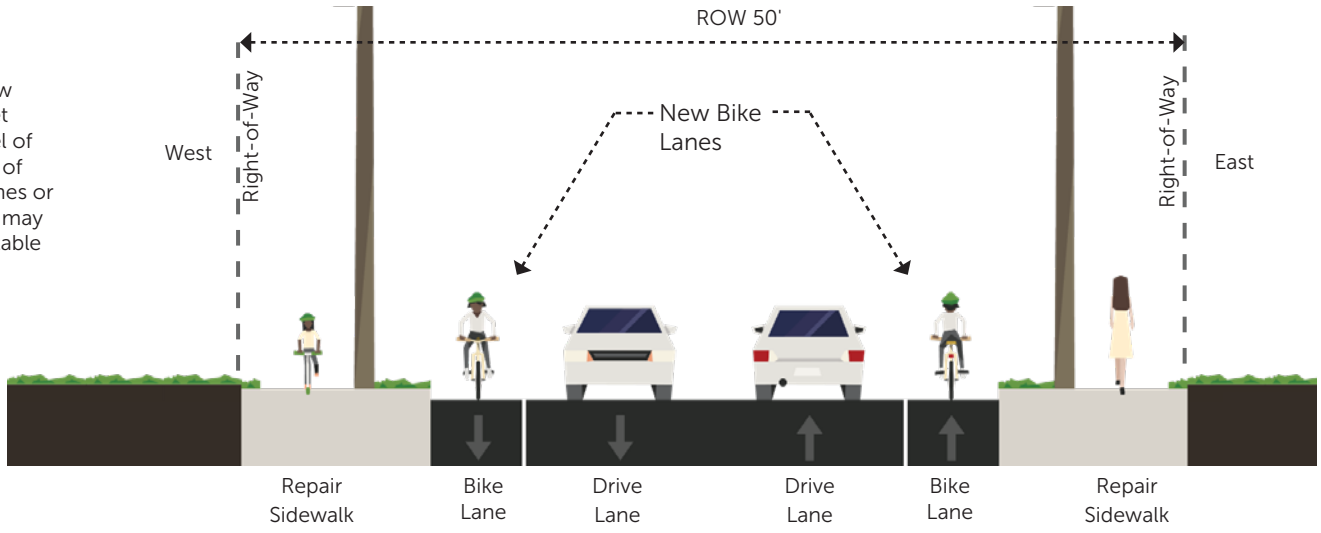
Maple Street (South of 4th): Proposed Opt 1

Notes
New shared use path may require relocation of curb, loss of parking, and utility pole relocations.

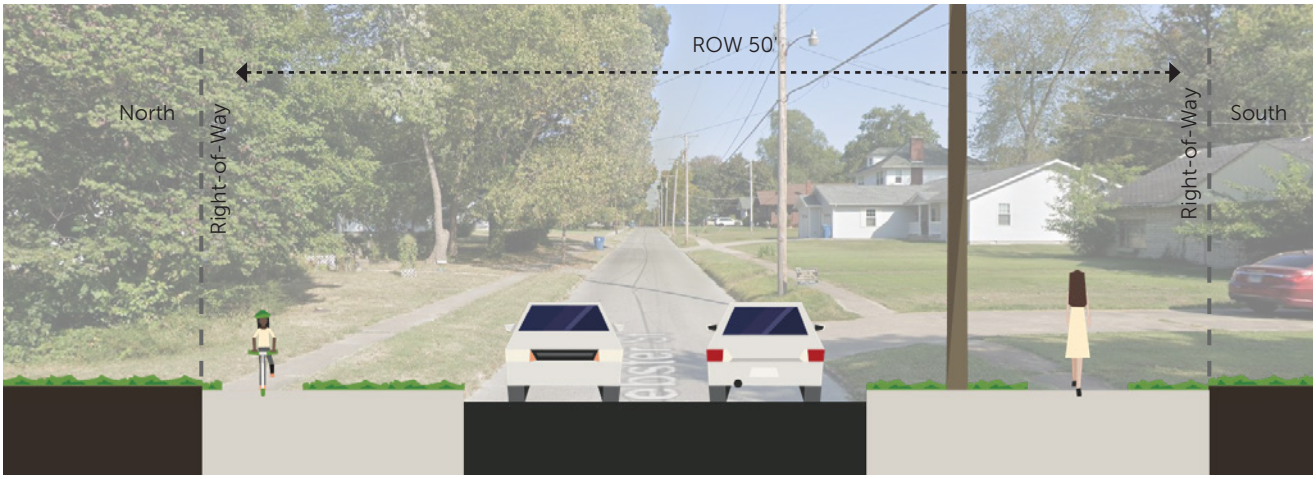


Maple Street (south of 4th): Proposed Opt 2

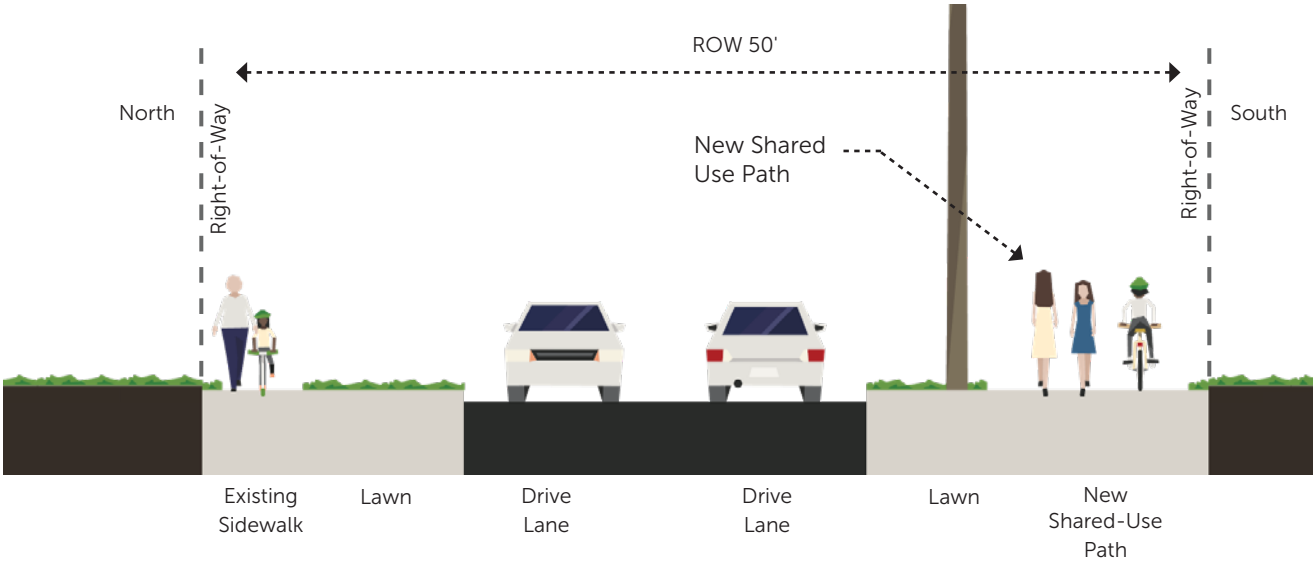
Notes
Maple is a low volume street (Bicycle Level of Traffic Street of 1-2). Bike lanes or shared lanes may be an acceptable option.



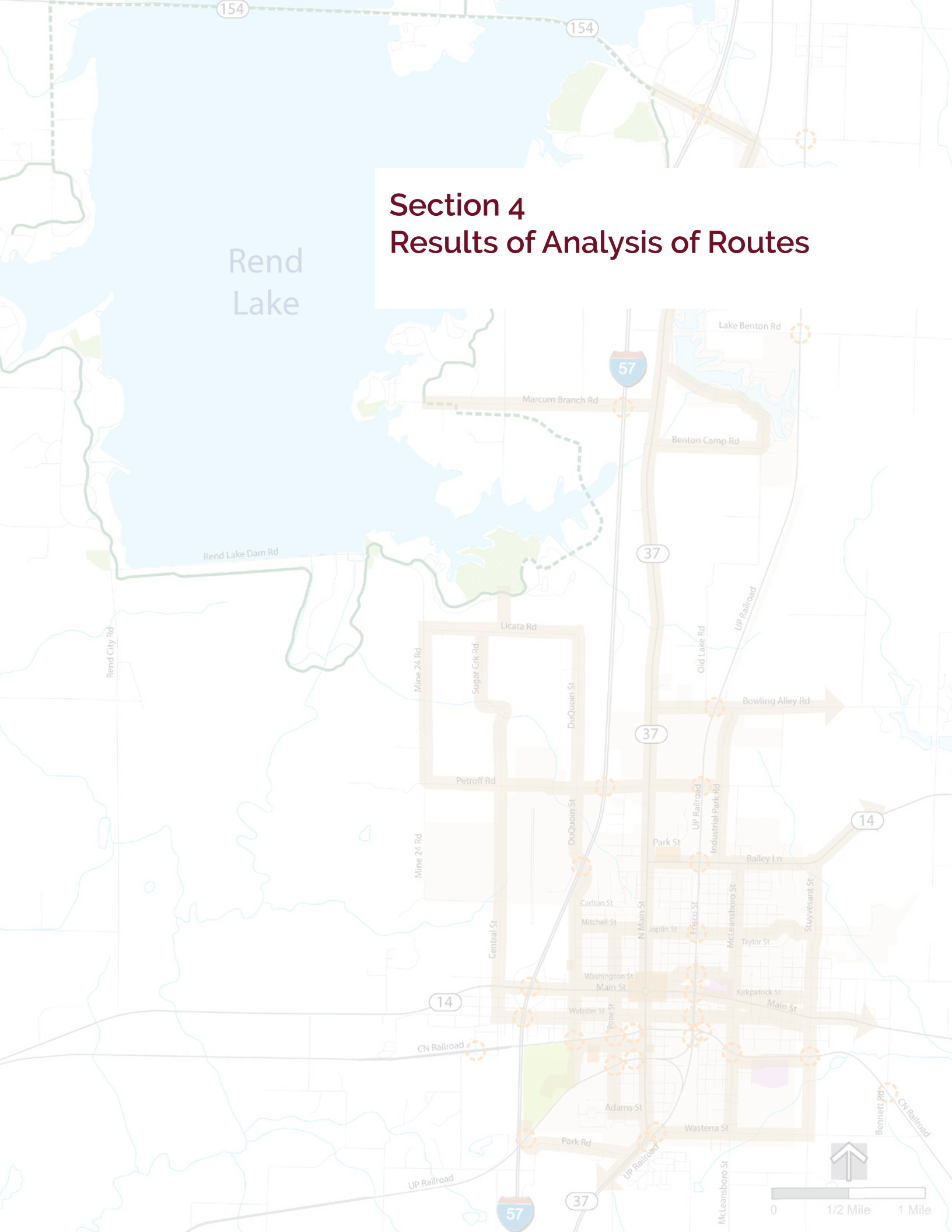
Webster Street (East of Aiken): Existing Condition



Webster Street (East of Aiken): Proposed Condition



Section 4
Results of Analysis of Routes



Routes to Study

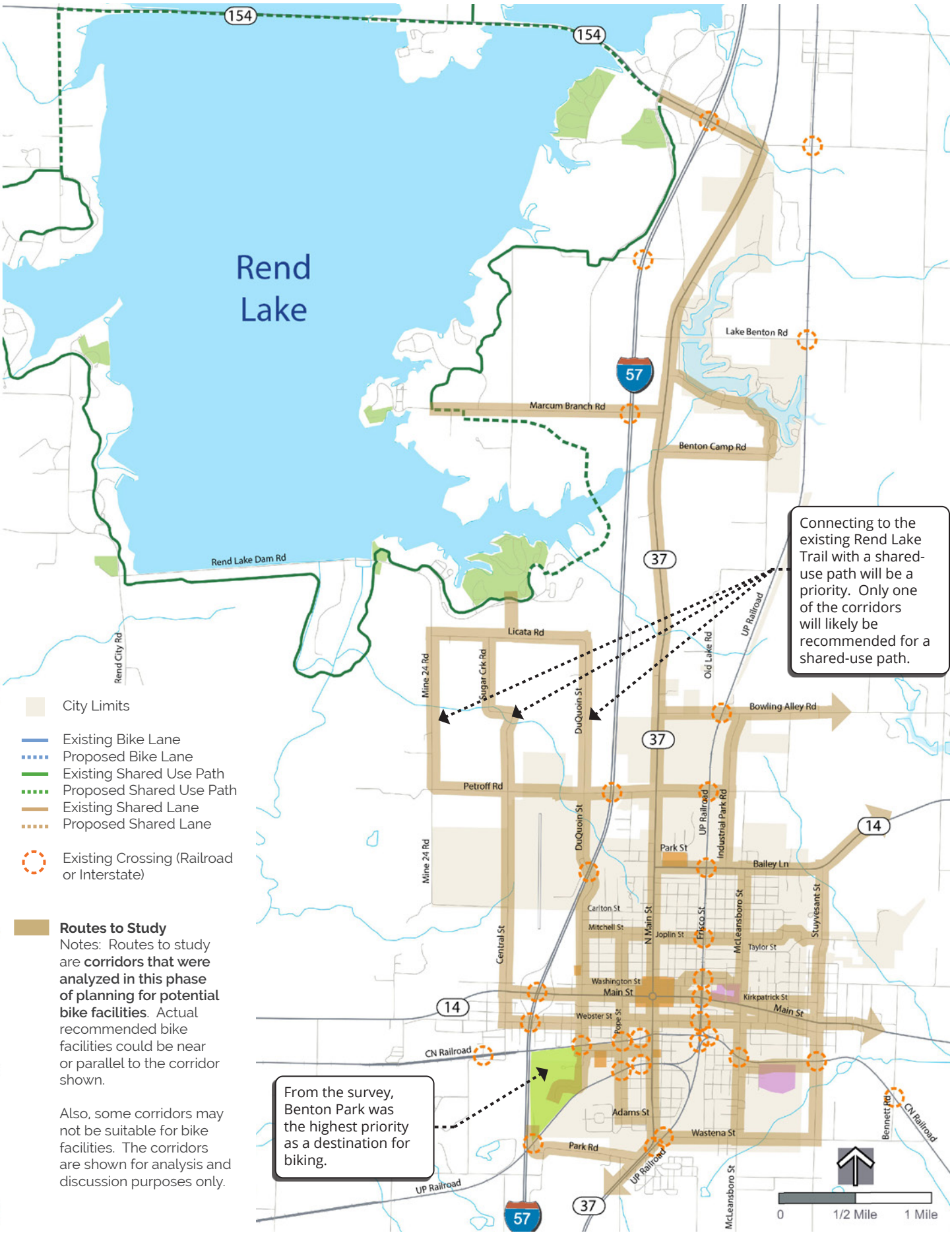
The following pages illustrate the "Routes to Study." Routes to study are **corridors that were analyzed in the analysis phase of planning for potential bike facilities**. Actual recommended bike facilities could be near or parallel to the corridor shown. In addition, some corridors may not be suitable for bike facilities. The corridors are shown for analysis and discussion purposes only.

Guiding principles for selection of the Routes to Study include:

- Linking destinations.
- Providing access throughout the city to bike facilities (no more than 1/2 mile to a mile apart).
- Connecting the network (loops throughout the City and to destinations).
- Accommodating different user groups (commuters, recreational bicyclists, youth, families, casual bicyclists, etc.).

While a shared use path is the preferred bicycle facility type, with nearly 40 miles of routes to study shown, the evaluation of on-street facilities will be a crucial aspect of the upcoming planning phase from a practical implementation perspective.

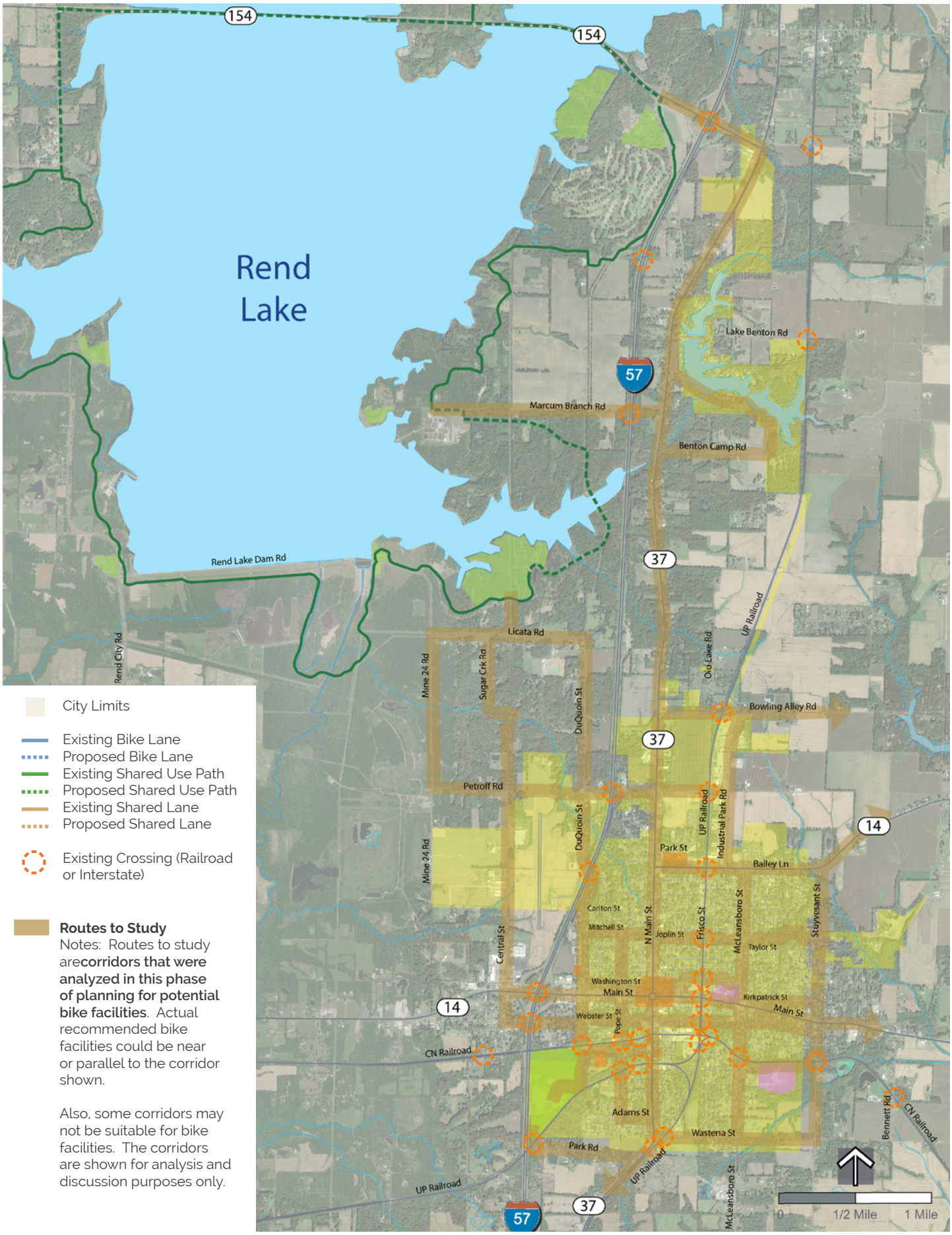
Routes to Study



Routes to Study
Notes: Routes to study are **corridors that were analyzed in this phase of planning for potential bike facilities**. Actual recommended bike facilities could be near or parallel to the corridor shown.

Also, some corridors may not be suitable for bike facilities. The corridors are shown for analysis and discussion purposes only.

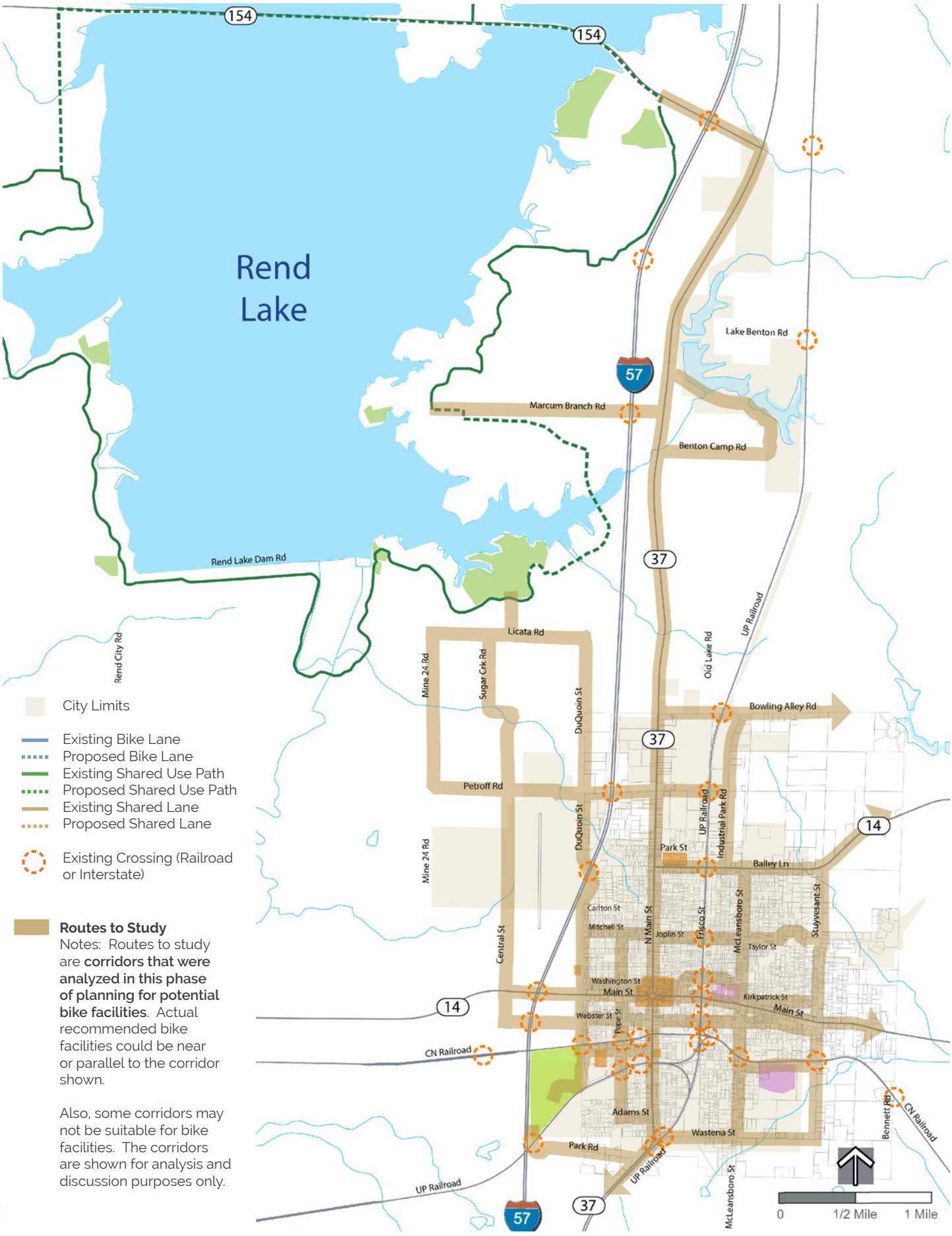
Routes to Study (with aerial)



Routes to Study
Notes: Routes to study are**corridors that were analyzed in this phase of planning for potential bike facilities**. Actual recommended bike facilities could be near or parallel to the corridor shown.

Also, some corridors may not be suitable for bike facilities. The corridors are shown for analysis and discussion purposes only.

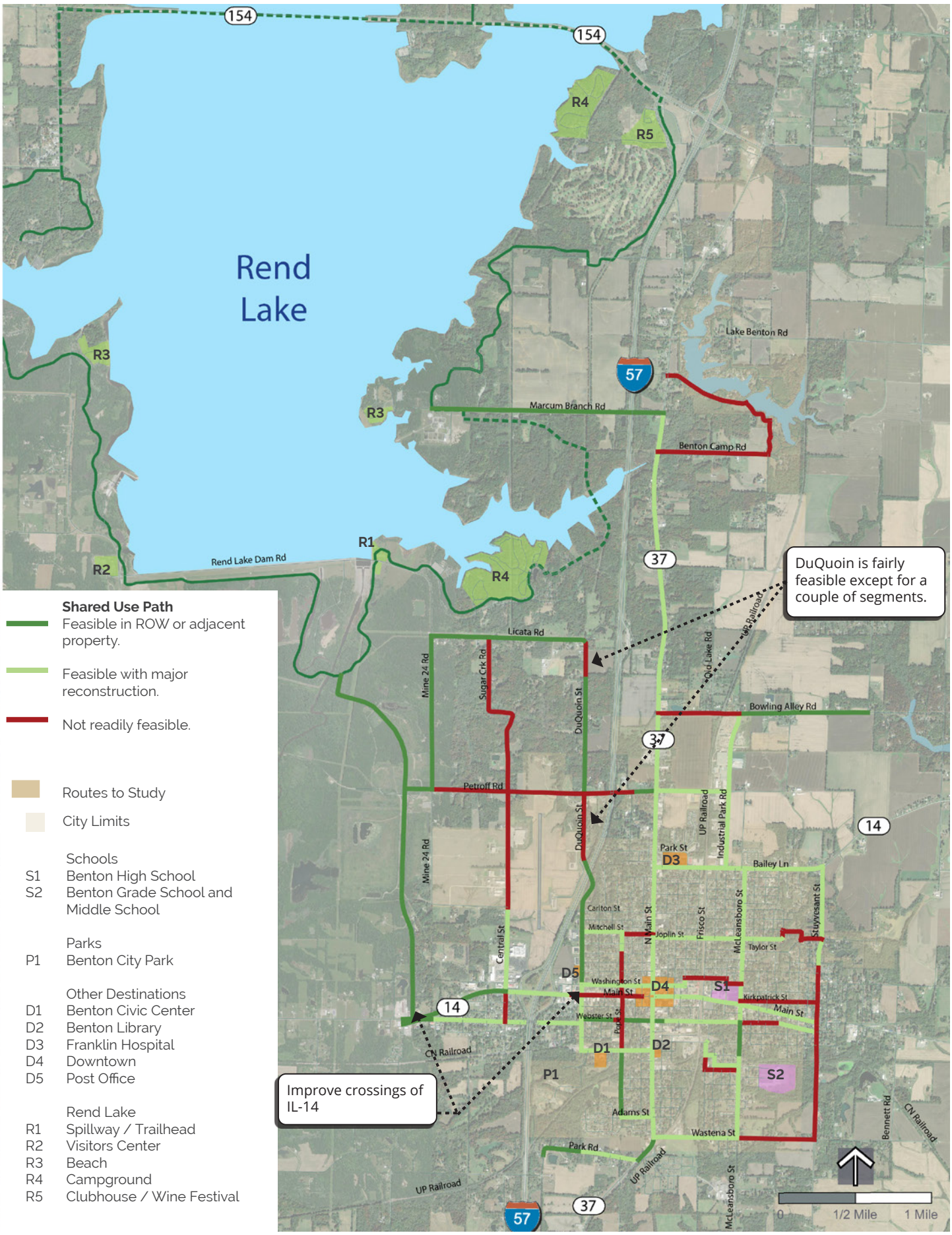
Routes to Study (with parcels)



Notes: Routes to study are **corridors that were analyzed in this phase of planning for potential bike facilities**. Actual recommended bike facilities could be near or parallel to the corridor shown.

Also, some corridors may not be suitable for bike facilities. The corridors are shown for analysis and discussion purposes only.

Shared Use Path Feasibility



Shared Use Path

Feasible in ROW or adjacent property.

Feasible with major reconstruction.

Not readily feasible.

Routes to Study

City Limits

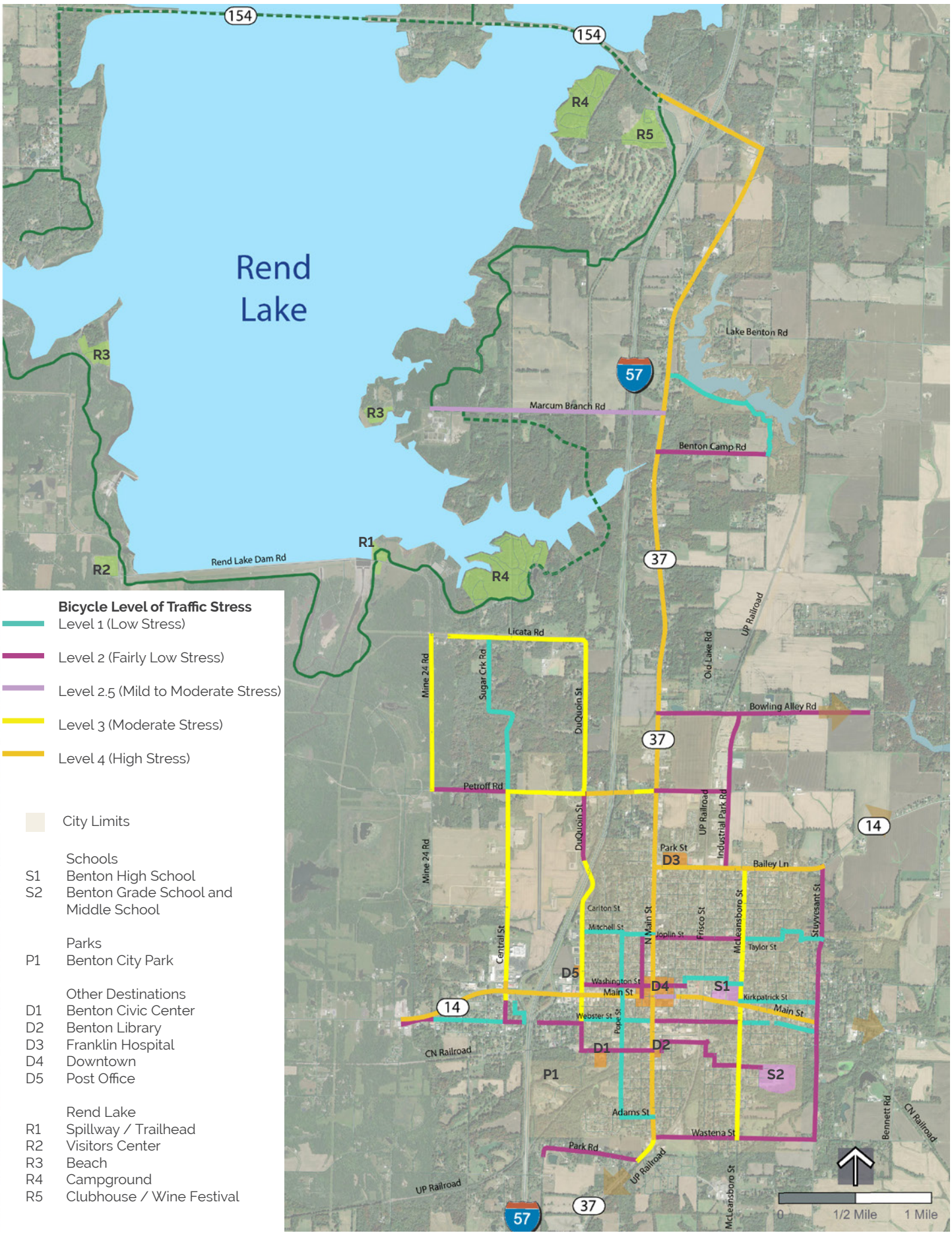
Schools
- S1 Benton High School
- S2 Benton Grade School and Middle School

Parks
- P1 Benton City Park

Other Destinations
- D1 Benton Civic Center
- D2 Benton Library
- D3 Franklin Hospital
- D4 Downtown
- D5 Post Office

Rend Lake
- R1 Spillway / Trailhead
- R2 Visitors Center
- R3 Beach
- R4 Campground
- R5 Clubhouse / Wine Festival

Existing Bicycle Level of Traffic Stress (LTS)



Bicycle Level of Traffic Stress

- Level 1 (Low Stress)
- Level 2 (Fairly Low Stress)
- Level 2.5 (Mild to Moderate Stress)
- Level 3 (Moderate Stress)
- Level 4 (High Stress)

City Limits

Schools
- S1 Benton High School
- S2 Benton Grade School and Middle School

Parks
- P1 Benton City Park

Other Destinations
- D1 Benton Civic Center
- D2 Benton Library
- D3 Franklin Hospital
- D4 Downtown
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Rend Lake
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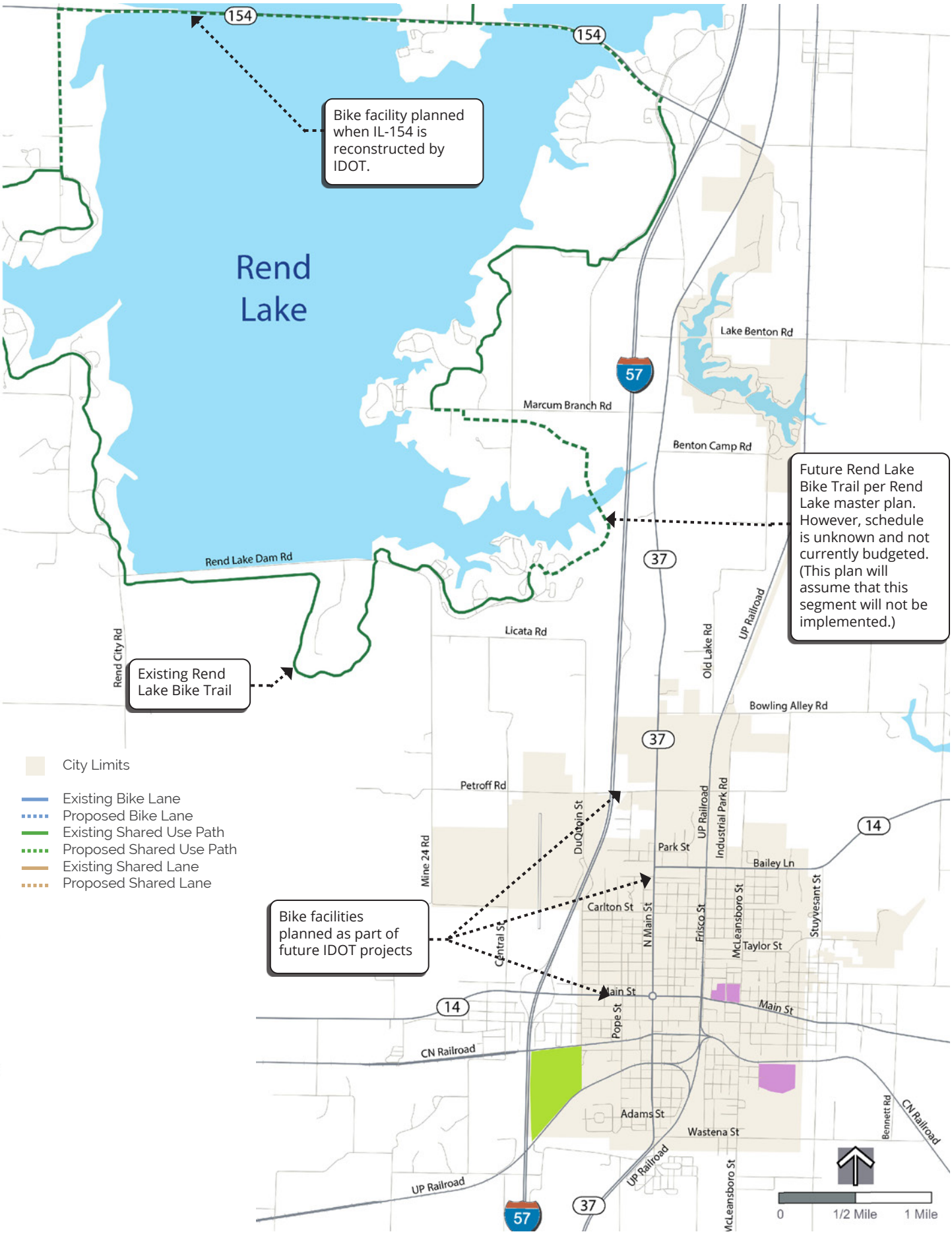
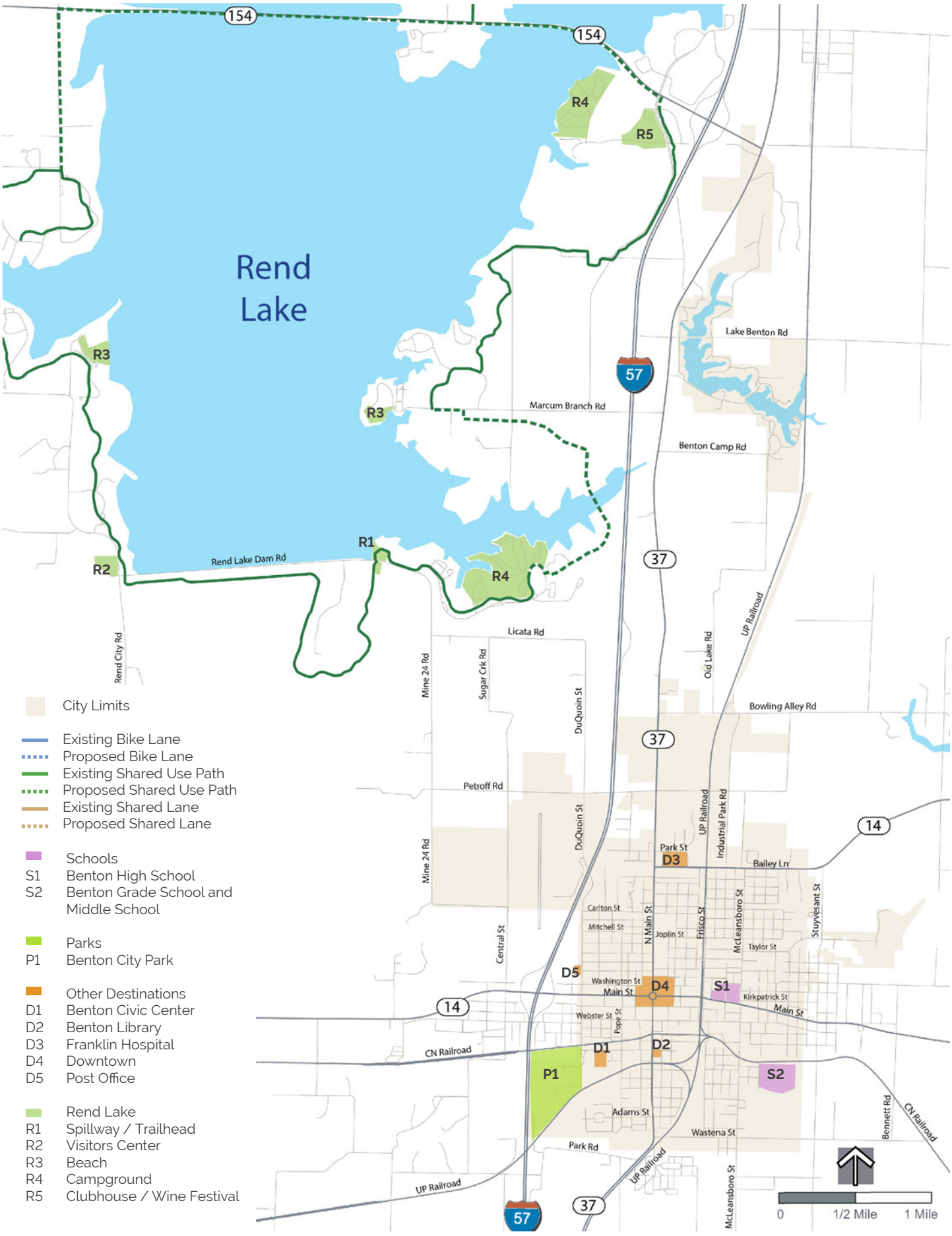
- R2 Visitors Center
- R3 Beach
- R4 Campground
- R5 Clubhouse / Wine Festival

Section 5
Existing Conditions

Existing Bike Facilities and Plans



Bike Destinations



City Limits

Existing Bike Lane
Proposed Bike Lane
Existing Shared Use Path
Proposed Shared Use Path
Existing Shared Lane
Proposed Shared Lane

Schools
S1 Benton High School
S2 Benton Grade School and Middle School

Parks
P1 Benton City Park

Other Destinations
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D5 Post Office

Rend Lake
R1 Spillway / Trailhead
R2 Visitors Center
R3 Beach
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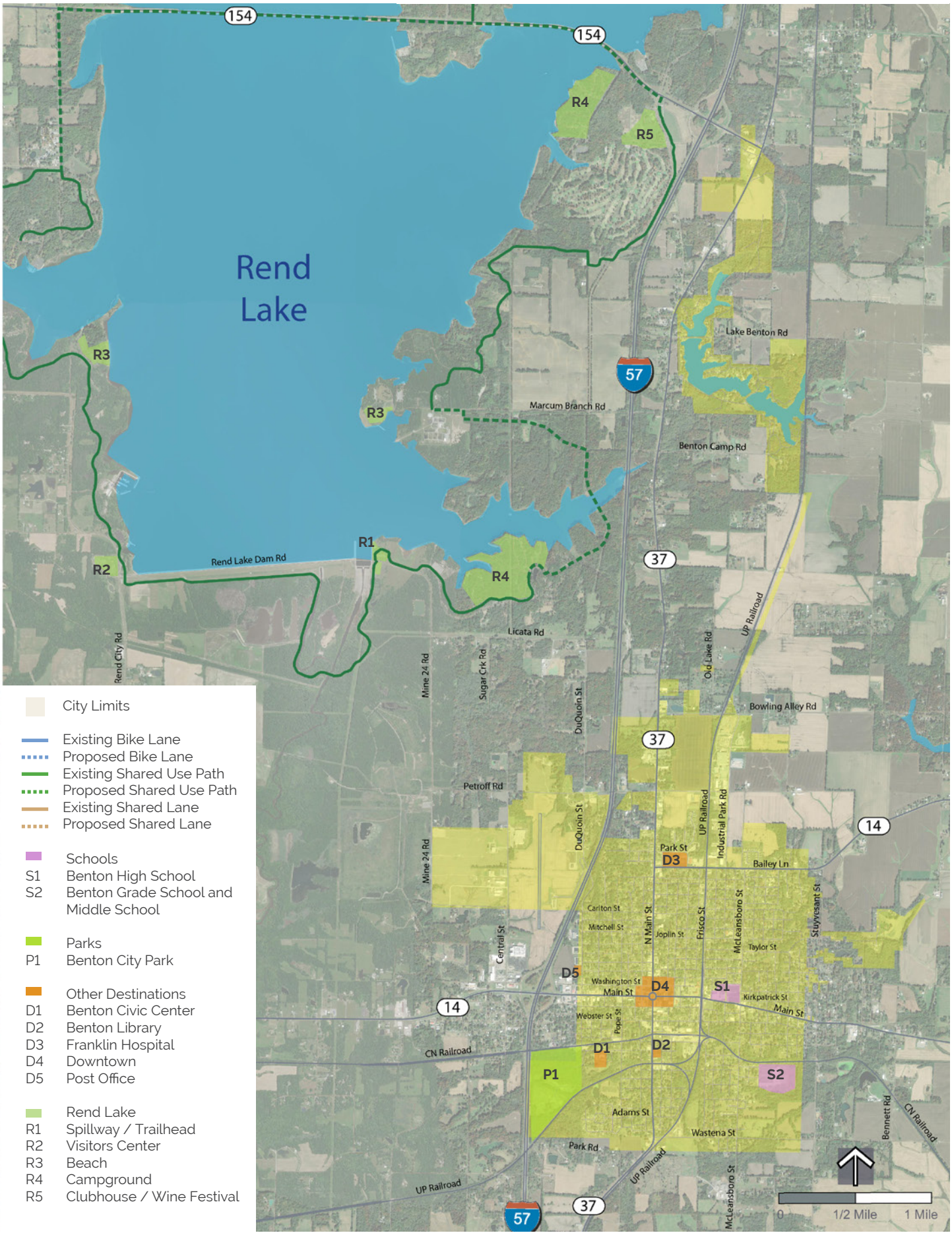
Bike Destinations (with aerial)



City Limits

Existing Bike Lane
Proposed Bike Lane
Existing Shared Use Path
Proposed Shared Use Path
Existing Shared Lane
Proposed Shared Lane

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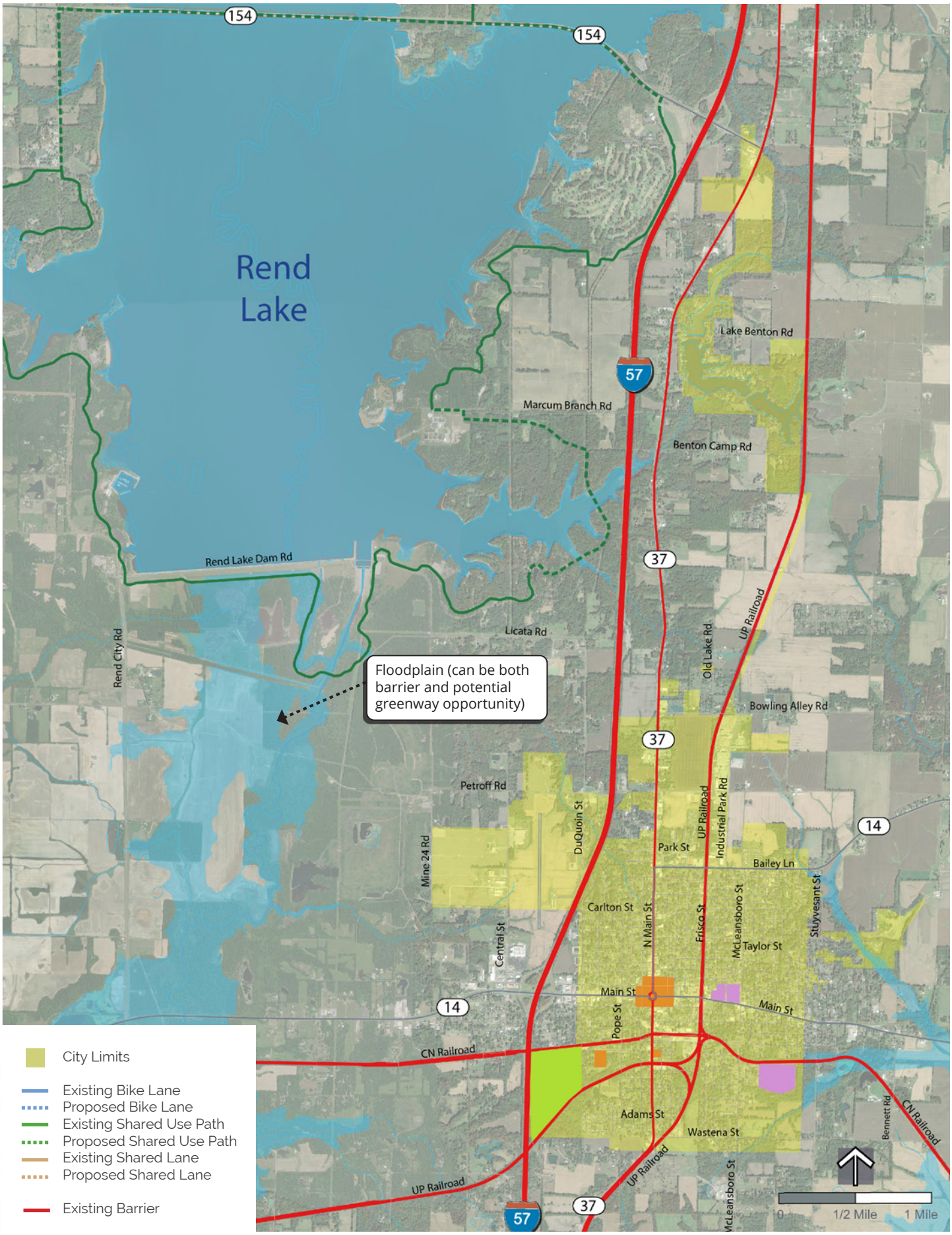
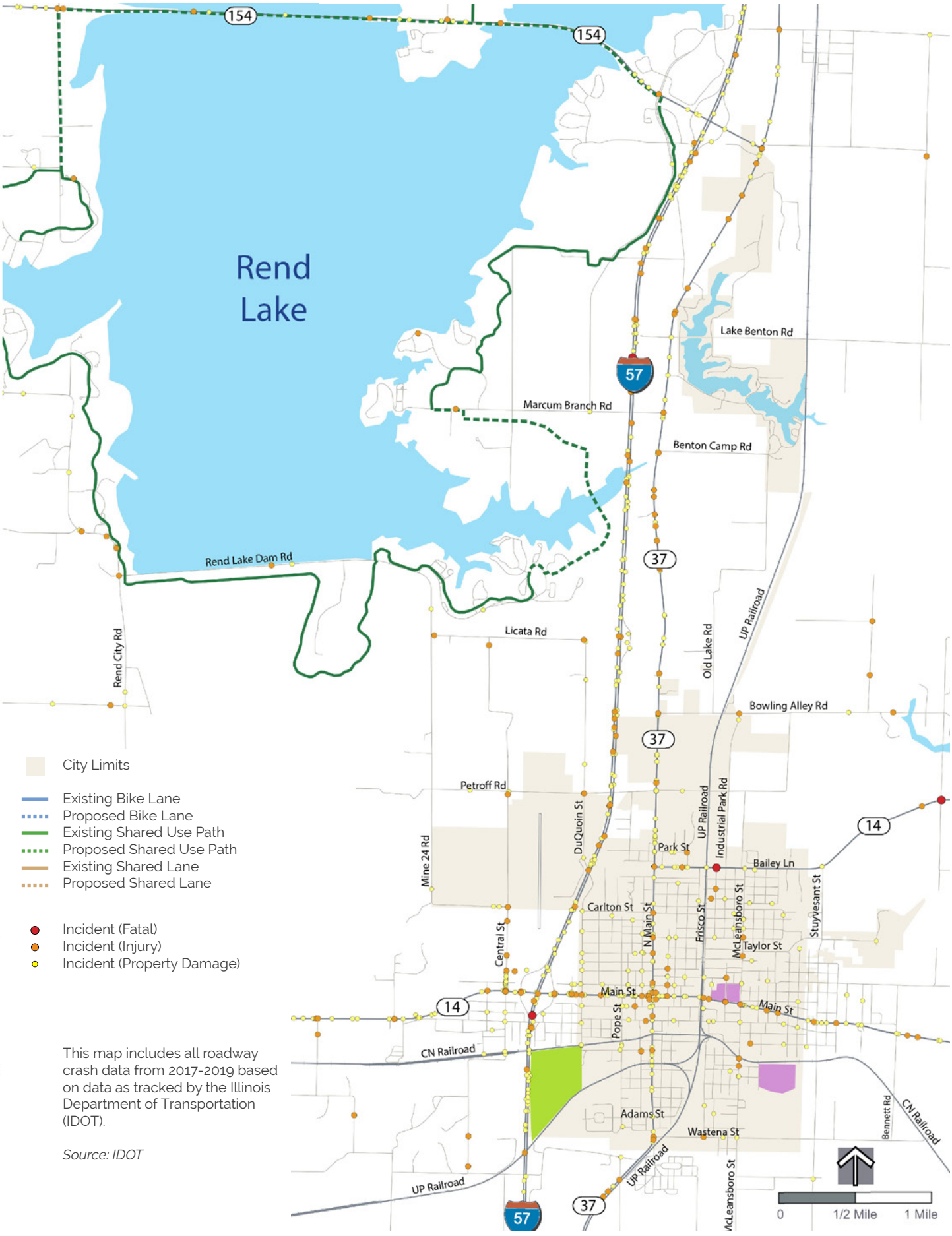
Barriers to Biking



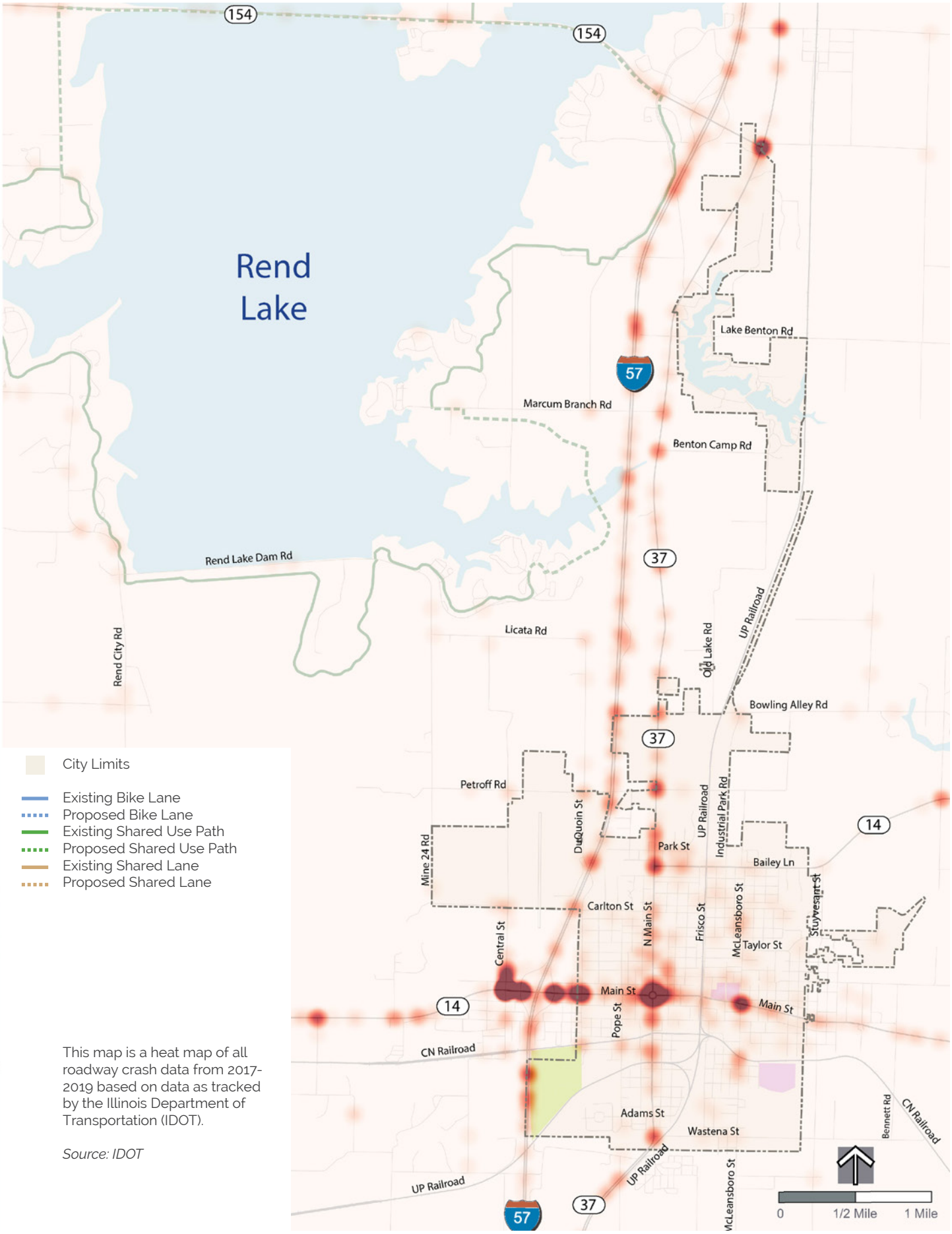
Roadway Crash Data: All (2017-2019)



This map includes all roadway crash data from 2017-2019 based on data as tracked by the Illinois Department of Transportation (IDOT).

Source: IDOT

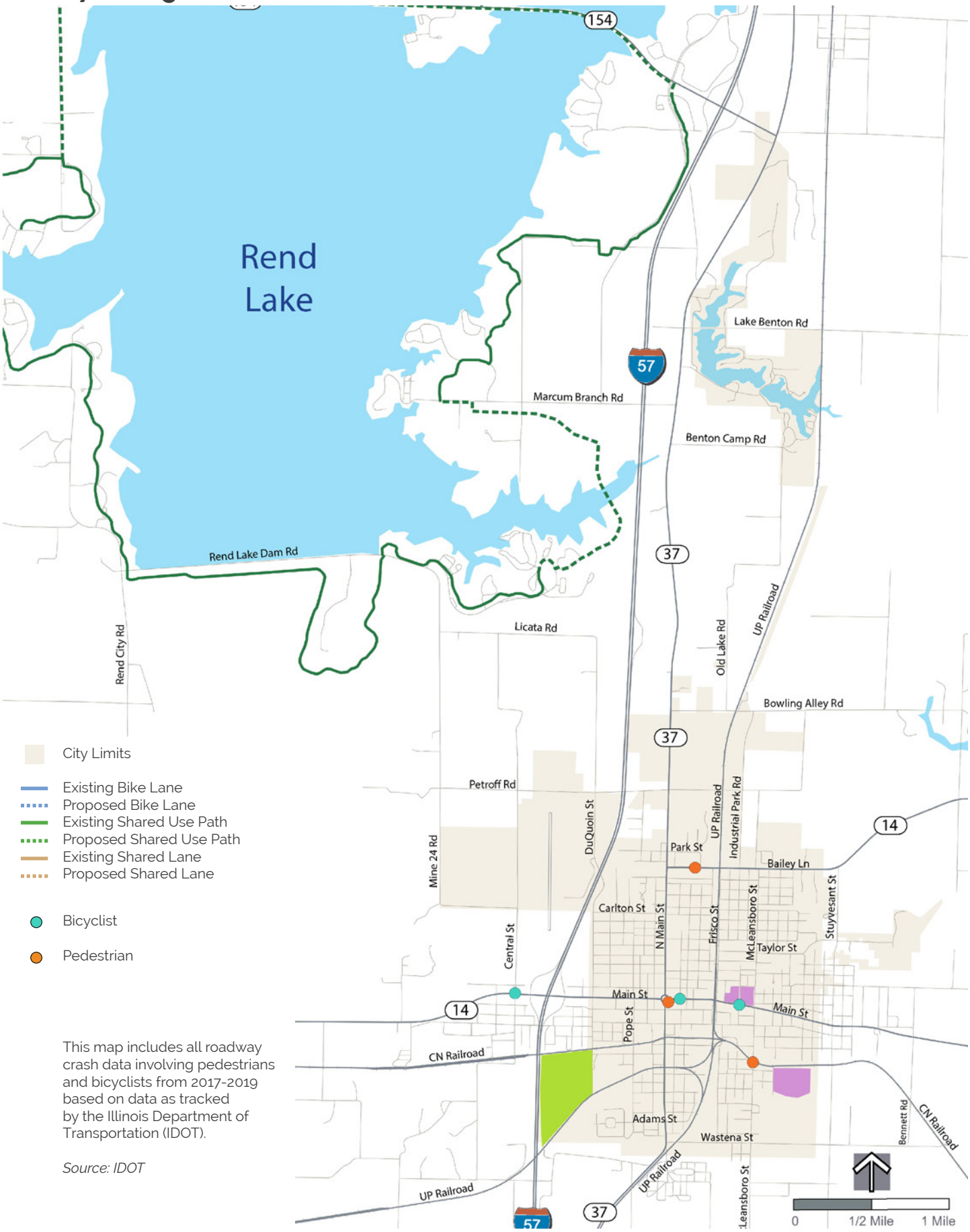
Heat Map of Roadway Crash Data: All (2017-2019)



This map is a heat map of all roadway crash data from 2017-2019 based on data as tracked by the Illinois Department of Transportation (IDOT).

Source: IDOT

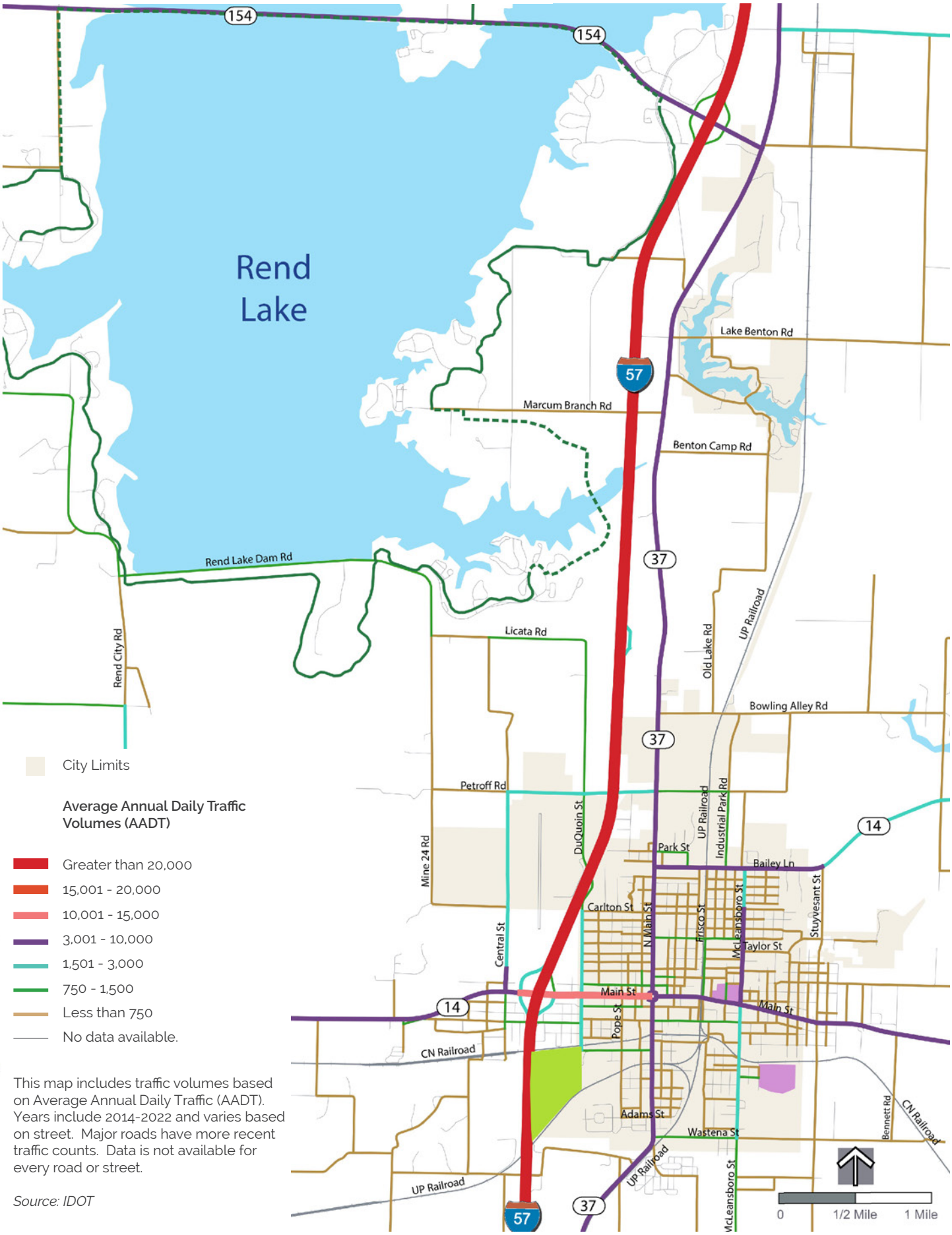
Roadway Crash Data: Involving Bicyclists and Pedestrians (2017-2019)



This map includes all roadway crash data involving pedestrians and bicyclists from 2017-2019 based on data as tracked by the Illinois Department of Transportation (IDOT).

Source: IDOT

Vehicle Traffic Volumes



City Limits

Average Annual Daily Traffic Volumes (AADT)

- Greater than 20,000
- 15,001 - 20,000
- 10,001 - 15,000
- 3,001 - 10,000
- 1,501 - 3,000
- 750 - 1,500
- Less than 750
- No data available.

This map includes traffic volumes based on Average Annual Daily Traffic (AADT). Years include 2014-2022 and varies based on street. Major roads have more recent traffic counts. Data is not available for every road or street.

Source: IDOT

Last Updated: May 30, 2024