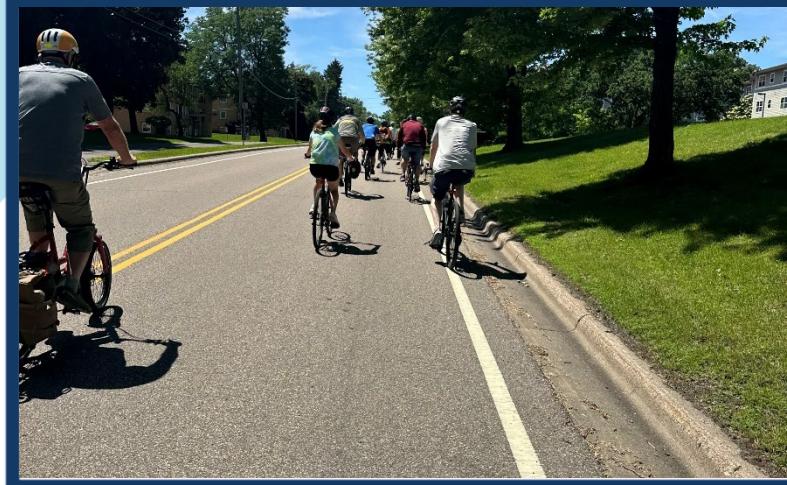
Bicycle Plan

Establishing Roseville's Bicycling Network

ROSEVILLE

DRAFT January 2025



Acknowledgement

Active Transportation Committee:

Jennifer Lowry
City of Roseville

Matthew Johnson
City of Roseville

Noelle Bakken
City of Roseville

Thomas Paschke
City of Roseville

Connie Bernardy
Ramsey County

Kou Xiong
Roseville Area Schools

Jacob Swanson
Roseville Police Department

Bob Bierscheid
Resident

Bryan Ficek
Resident

Nick Boulton
Roseville Parks and Recreation Commission Member

Jesse Freihammer
City of Roseville

Antonio Montez
City of Roseville

DEPARTMENT OF TRANSPORTATION

This Plan was funded through the Minnesota Department of Transportation's (MnDOT) Active Transportation Program.

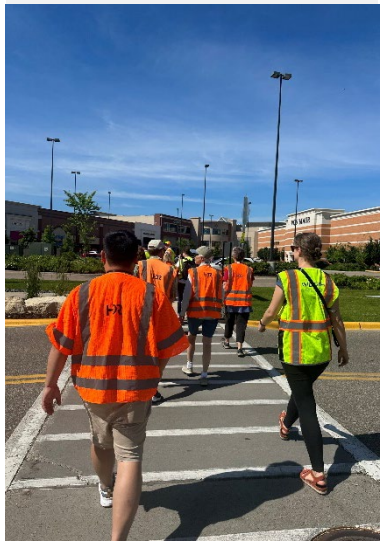
Learn more:

www.dot.state.mn.us/active-transportation-program

Executive Summary

This Bicycle Plan is the result of a 12-month collaboration from February 2024 to February 2025. A local Bike Plan Committee of city and county staff and Roseville residents came together to set direction, co-create strategy and engagement which included bicycle audits, hands-on network planning workshop, and hosted an online interactive mapping tool and survey to collect broader input.

This Plan serves as a living guide. The Plan builds on existing plans, engagement with residents, lessons learned from other cities, and observation and coordination with city staff to establish a Priority Bike Network for Roseville, along with a preliminary prioritization framework, and next steps for moving the plan forward.



What's in the Plan?

The Plan is organized into several sections:

Introduction | Section 1: Discusses the purpose of the Plan, the benefits of biking and why City of Roseville values biking and the benefits it brings to the community.

Our Streets Today | Section 2: Highlights existing conditions, policy and plans that support this plan and data and insights from the engagement process. It talks about the physical and geographical barriers to a connected network, how to overcome them and how different agencies and partners should work together to create a seamless experience for people biking.

Bikeways for All, Bike Network Framework | Section 3: Focuses on who bikes, why people bike (or might not) and the approach the city will take to getting more people on bikes. It introduces a framework for how the city's bike network and its bike routes can be categorized and the types of facilities that support people biking of all ages and abilities.

Building the Network | Section 4: Presents Roseville's Priority Bike Network developed during this plan, the different types of routes that make up the Network, and Core Concepts to provide examples for how Roseville can implement their Bike Network.

Setting Our Wheels In Motion | Section 5: Discusses the opportunities and processes for getting the Bike Network implemented, including funding, planning, prioritization and maintenance of projects. It talks about how a network can be supported through other initiatives and programs to grow a culture of biking in Roseville.

Moving Forward | Section 6: A call to action to join Roseville's steps towards becoming a more bike-friendly city!

Introduction

SECTION 1

Why a Bicycle Plan?

People . Pedal+ . Power

Bicycle Terminology

The Plan uses the terms ***bicycling, bike, biking*** and ***bicyclist*** broadly to refer to people of all ages and abilities riding bicycles both human-powered and electric-assisted, including devices adapted for use by people with disabilities. “Pedal+” above refers to the range of bicycle and bicycle-like devices.

The terms ***bikeway***, ***bike route, bike facility*** and ***bike infrastructure*** refer to any space designated and built for people riding bikes. You’ll learn more about the different types of bikeways, routes, facilities and infrastructure in this document.

PURPOSE

Bicycling is a sustainable transportation option that contributes to a vibrant, equitable and sustainable city. A key goal of the City of Roseville Bicycle Action Plan is to increase the number of people biking. The Plan builds from, and is supported by, the city’s Complete Streets Policy, 2040 Roseville Comprehensive Plan, 2021 Pathways Master Plan and community goals by promoting the development and maintenance of a complete and connected bikeway system that creates opportunities for people of all ages abilities to ride a bicycle. The Plan establishes a vision for how and why bicycles will play an important role in the future of the city.

The primary purpose of this Plan is to develop a network of bicycle routes that allow people to safely and comfortably ride bicycles for both recreational and functional trips: daily errands, to get to work, a friend’s house or school, or to enjoy Roseville’s great parks. This is a network-level planning document that identifies specific corridors (routes) for future investment in bike infrastructure. The bike network priorities and recommendations, policies and programs in this Plan serve as a roadmap and should be used to guide next steps and other planning efforts that reference biking.

Bike photo

Bike photo

Plan Vision

VISION

A bicycle network that is safe, comfortable and accessible for riders of all ages and abilities, especially for people experiencing systemic barrier and inequities; to use confidently.

Plan Goals

GOALS

Safe Streets: Create a safe, comfortable, and convenient network that prioritizes people of all ages and abilities bicycling, improving community access and safety for all.

Health & Well-Being: Encourage a healthy active lifestyle for all, improving community health outcomes.

Transportation Choice: Make bicycling an efficient way to get around the community, reach neighboring cities, and connect to transit, increasing bicycle trips and reducing automobile trips.

How the Plan was Developed

The Bicycle Plan is the result of a collaborative process led by Roseville's Bike Plan Committee. The committee came together to host and participate in:

- **Bicycle audits to assess existing conditions**
- **Network mapping workshop to define bicycle routes and connections**
- **Online engagement using an interactive mapping tool and survey to collect broader community input**
- **Plan review through virtual meetings with city champions who participated in the network mapping workshop**

The Plan builds on existing plans and policies, community and committee participation and evidence-based state and national best practices to identify a bicycle network and action steps to guide future investments in making bicycling safer and more accessible for all.

The City of Roseville received planning assistance to develop this Plan, funded by the Minnesota Department of Transportation (MnDOT) Active Transportation Program. The Active Transportation Program aims to increase the number of people walking and biking to destinations.

Why Bicycling Matters

EQUITY

7.4% percent of Roseville households do not have access to a vehicle and 36.7% percent have just one. Owning a new car costs roughly **$12, 182 per year** (AAA, 2023). This is a sharp increase from 2022 when the average yearly cost was $10,728. Car ownership should not be a requirement for getting around safely and efficiently.

2022 American Community Survey 5-year estimate, table B08201

AAA Newsroom. (2023, August 30). *Annual new car ownership costs boil over $12K*. AAA. https://newsroom.aaa.com/2023/08/annual-new-car-ownership-costs-boil-over-12k/

ENVIRONMENT

The city supports Minnesota's goal of **80%** reduction of greenhouse gas (GHG) by 2050. Vehicle travel is the **second** leading source (42%) of GHG emissions in the City of Roseville.

Bike networks reduce dependence on driving to get around. Less driving provides two-fold benefit – cleaner air and reduced impact on our climate.

Minnesota Department of Transportation. (n.d.). *Minnesota Walks: Statewide Pedestrian System Plan*. https://www.dot.state.mn.us/minnesotawalks/index.html

ECONOMY

Bicycling means business: it stimulates local economies through job creation, tourism and business development.

People biking make **more frequent trips** than people driving, spending more money at local businesses.

Cortright, J. (2009). *Walking the walk: How walkability raises home values in U.S. cities*. CEOs for Cities. https://nacto.org/docs/usdg/walking_the_walk_cortright.pdf

Schmitt, A. (2012, December 5). *Cyclists and pedestrians can end up spending more each month than drivers*. Bloomberg. https://www.bloomberg.com/news/articles/2012-12-05/cyclists-and-pedestrians-can-end-up-spending-more-each-month-than-drivers

Why Bicycling Matters

HEALTH & WELLBEING

Bicycling **as part of everyday travel** is as effective as structured workouts for improving health. Active commuting is associated with a **11% reduction** in cardiovascular risk.

American Public Health Association. (2010). *The hidden health costs of transportation*. https://www.apha.org/-/media/files/pdf/topics/transport/apha_active_transportation_fact_sheet_2010.pdf

SOCIAL CONNECTION

"**Humans are social creatures**—we live in community. Individual health and wellbeing is intricately tied to the health of our communities and our interactions with others."

Bicycling provides us more opportunity to interact with our friends, neighbours and community.

Taking Charge of Your Health & Wellbeing. (n.d.). *How do our social networks affect wellbeing?* University of Minnesota. https://www.takingcharge.csh.umn.edu/how-do-our-social-networks-affect-wellbeing

HAPPINESS

Researchers at the University of Minnesota have found **bicycling** to be the **happiest form of transportation.**

University of Minnesota. (2018, August 20). *The happiest mode of transportation? That would be cycling*. University of Minnesota. https://twin-cities.umn.edu/news-events/happiest-mode-transportation-would-be-cycling

Why Bicycling Matters | Safer Streets for All

Traffic-related crashes that kill and severely injure people are a **serious transportation equity** and **public health concern**. Minnesota is seeing a rising share of crashes involving people biking that result in fatal and serious injuries.

It is estimated that **Ramsey County** has the **second highest serious injury rate of bicyclists** relative to the rest of the **state** (2009-2013) (Pedestrian & Bicycle Plan, Gaps & Barriers in Ramsey County). In Ramsey County, **three-percent** of all crash **fatalities are bicyclists** which is **one-and-half times** the **state average** (Pedestrian & Bicycle Plan, State of Walking & Biking Environment). Streets with higher numbers of bike crashes tend to be in St Paul, Roseville also reported areas with between one and six crashes from 2004-2014, including on nearly all major roads (Pedestrian & Bicycle Plan, State of Walking & Biking Environment).

In Roseville specifically, over **130 people walking or biking were involved in a crash in the last 10 years**, 5 of them lost their lives, and 25 sustained life-changing injuries. Of the crashes involving people walking and biking in the past 10 years, nearly **20% occurred on Roseville city streets**.

One of the top reasons people cite for not biking is concern about safety (both traffic safety and personal security). People who bike (and walk) are the most vulnerable transportation system users. National and state data show American Indian/Alaskan Native, Black/African American and Hispanic people and low-income individuals are at greater risk of being severely injured or killed due to a motor vehicle related crash while biking.

Streets that are safe for people biking (and walking) reduce the frequency and severity of crashes and minimize conflicts between all transportation users. Safety, both real and perceived, is essential to increasing the number of people who bike.

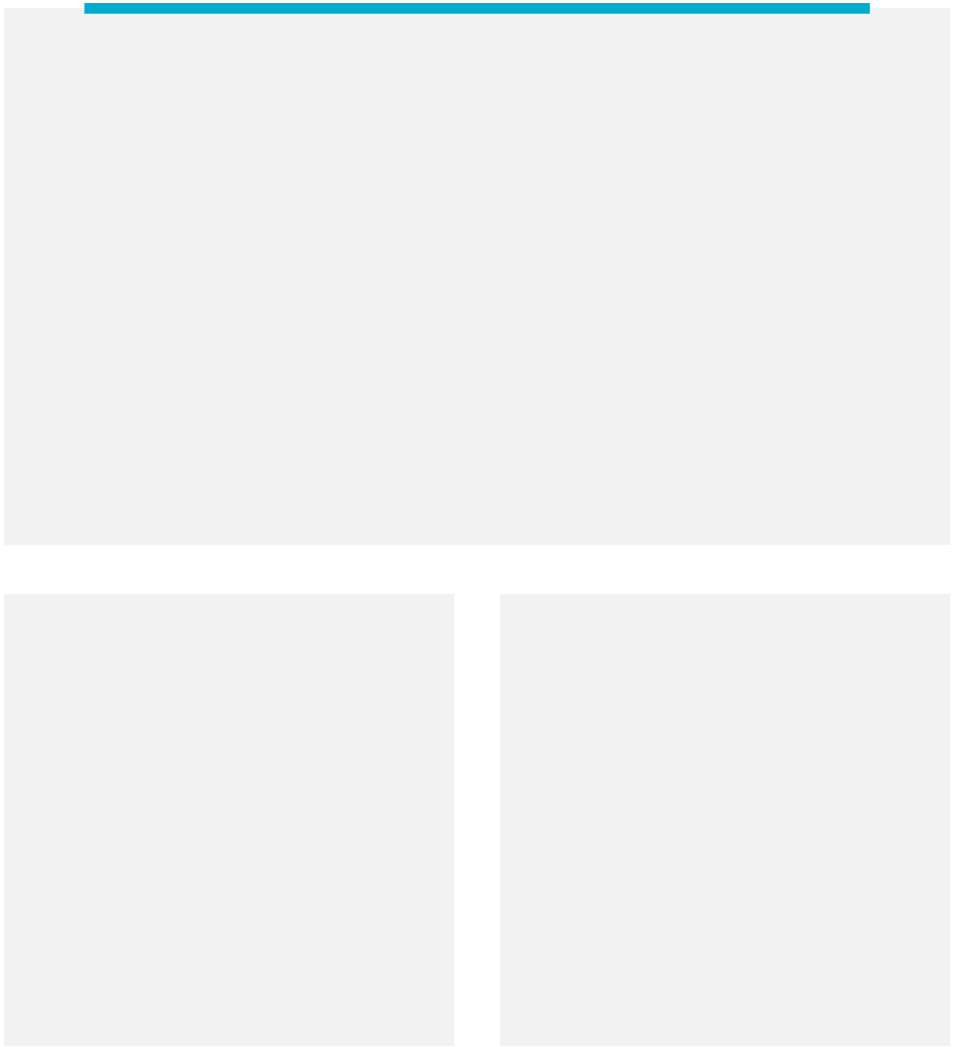
Lyndale Ave in Richfield before (above) and after (below) the installation of modern roundabouts at multiple intersections, which allowed lane space to be reallocated for protected bike lanes (cycle tracks).

Safer Streets By Design

Street design and allocation of street space play a large part in managing vehicle speeds, which are directly correlated to injury and mortality outcomes in crashes involving bicyclists and pedestrians. For example, narrowing and/or removing travel lanes allows space to be reallocated for bike lanes, buffered bike lanes or fully separated or protected bike lanes (also called cycle tracks). Striping bike lanes on a street visually narrows the street, which can reduce the speed of drivers and provide greater comfort to people walking.

Installing intersection treatments like modern roundabouts, a Federal Highway Administration (FHWA) Proven Safety Countermeasure, reduce drivers' speeds and decrease the distance people walking and biking need to cross at intersections. In addition, they increase vehicle capacity at intersections without the need to add vehicle lanes, allowing street space to be reallocated for protected bike lanes or shared use paths. Designing streets that are safe and comfortable for people biking benefits the safety of other users, creating a positive feedback loop.

Streets that are complete (see page 29) put people first and become even greater community assets. They are places where people want to bike, rather than places where people can bike if they must. In turn, more people choose to bike.



Toward an All Ages & Abilities Bike Network

A high-quality bicycle network can significantly impact community access, convenience, well-being and environmental and economic resiliency. A safer, more connected and balanced network will encourage and promote bicycling for everyday trips, giving people more transportation choice. Plus, biking is a fun way to enjoy Roseville!

Our Streets Today

SECTION 2

What is it Like to Bike Today | Policy Framework

COMMUNITY SNAPSHOT

Recent plans and policies have made efforts to improve biking in Roseville. Plans have established comprehensive standards for the development and maintenance of routes, creating safe and accessible travel for pedestrians, cyclists and other wheeled users. Additionally, they collectively support a vision of growth of well-connected bike network, enhancing safety and connectivity while promoting physical activity and community interaction.

"Roseville's streets enhance neighborhood character, encourage human interaction and physical activity, and facilitate engagement in the community and local commerce. City policies and transportation projects incorporate principles of sustainability and environmental stewardship, reflecting the value of natural spaces and clean air and water for the community." – *Roseville's Complete Streets Policy*

EXISTING PLANS & POLICIES

Roseville's **Bicycle Plan** supports and is informed by the following existing plans and policies:

Pathway Master Plan (2021 Update) – This plan provides policies and standards for the community's pathway facilities including planning, design, construction, and maintenance. The goal is to have safe travel for pedestrians, cyclists, and other wheeled users (e.g., in-line skaters) on every street. Pathways are intended to connect residents to schools, retail, residential, parks and other destinations inside and outside the city. See Page 18 of this plan for more detail on the Pathway Master Plan.

Roseville 2040 Comprehensive Plan – The Comprehensive Plan provides a vision for growth and development. It analyzes and sets policies and goals regarding land use, housing, economic development, transportation, utilities, parks and trails and more. The plan is guided by several goals including providing access to destinations through a reliable, affordable and efficient multi-modal transportation system and encourages the use of non-motorized transportation by providing and supporting development of a high-quality network of both off-road and on-road pathways.

Complete Streets Policy (2019) – This policy states Roseville will create a safe and sustainable transportation network for motorized and non-motorized [active] transportation users. The policy encourages the use of active transportation through the development of a high-quality network of both off-road and on-road facilities to ensure that bicycle and pedestrian routes are safe, efficient and attractive.

What is it Like to Bike Today | Policy Framework

RAMSEY COUNTY WIDE PEDESTRIAN & BICYCLE PLAN GOALS:

Goal 1: Improved Health through Active Mobility for All

Goal 2: A Complete and Connected Multi-Modal Network

Goal 3: A Safe Transportation System for Pedestrians and Bicyclists of All Ages and Abilities

Goal 4: Equity and Social Justice in the Transportation System

Goal 5: A Coordinated Approach to Filling Gaps in the Pedestrian and Bicycle System

Goal 6: A Transportation System that Contributes to Sustainable and Prosperous Communities

NEIGHBORING AND OVERLAPPING PLANS

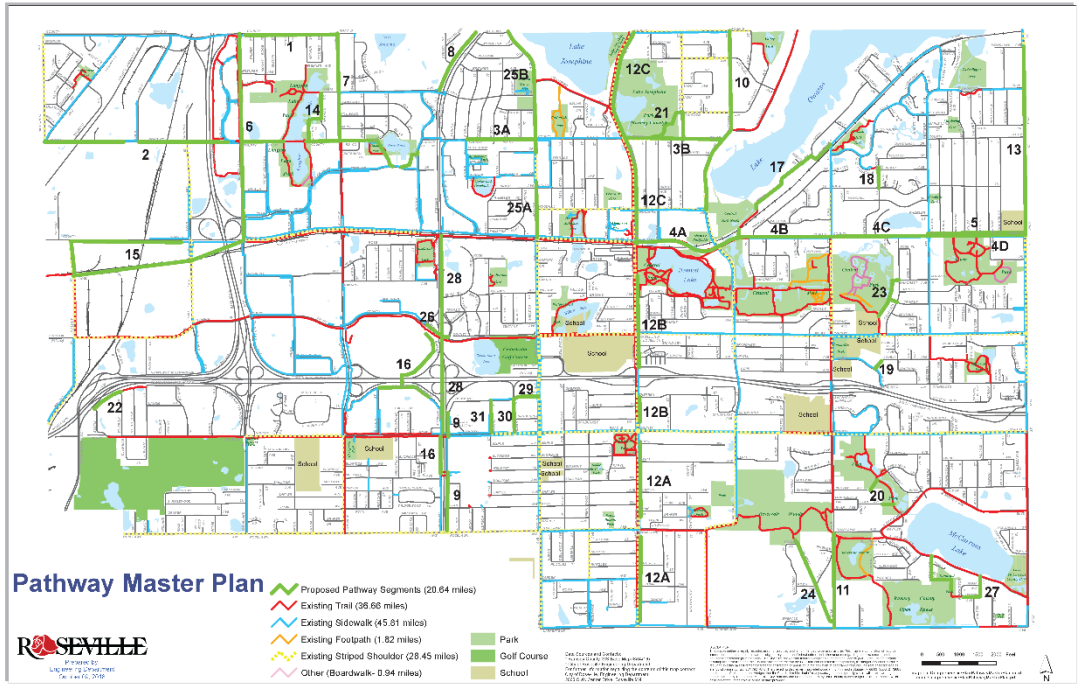
Roseville's **Bicycle Plan** supports and is informed by the following plans developed by neighboring and overlapping jurisdictions:

City of Saint Paul Bicycle Plan – This plan, adopted by city council in 2024, updates the vision of riding a bicycle in Saint Paul. Riding a bicycle will be safe, fun, and comfortable for all residents and visitors. Key updates along Roseville/Saint Paul border include a separated bikeway on Larpenteur Ave, Rice St, and Dale St. Hamline Ave also will have a separate bikeway which will switch to a on-street bike lane north of Larpenteur Ave.

Ramsey County Wide Pedestrian & Bicycle Plan– This plan envisions that walking and bicycling is an integral part of daily life in Ramsey County for people of all ages and abilities, allowing them to move freely across the integrated system. An annual inventory is conducted by individual jurisdictions, typically municipalities, to identify the types and miles of various active transportation facilities. Active Living Ramsey Communities will then evaluate the network based on their goals outlined in this plan (see left) using a range of analyses. Following the analysis, a summit will be held to explore ways to collaborate and build out the network.

City of Minneapolis Transportation Action Plan Bicycling Section–This plan gives an overview of the current network and planned expansion. Notable Minneapolis bikeways for Roseville include the existing low stress bikeway on the diagonal trail. Planned bikeways of significance include near-term low stress bikeway on Saint Anthony Blvd that connects to the diagonal trail and the long-term low stress bikeway that is planned for E Hennepin Ave which, turns into Larpenteur Ave in Roseville.

Pathway Master Plan



The 2021 Pathway Master Plan presented the existing Pathway network in Roseville and identified additions and upgrades to the existing pathway network for people walking, biking and skating. The proposed pathway segments from the Master Plan are shown on the map above, along with existing pathways. The Pathway Master Plan is adopted by reference in the City's Comprehensive Plan and serves as a planning tool to assist the City on decisions regarding pathway issues.

What is a Pathway?

Any facility that serves non-motorized users commonly within the public right-of-way. They can be paved shoulders and bike lanes to sidewalks, trails, and footpaths.

Pathway Progress

Roseville has completed 9 Pathway segments since plan adoption in 2021 and has proposed the completion of 6 more to be completed by 2025.

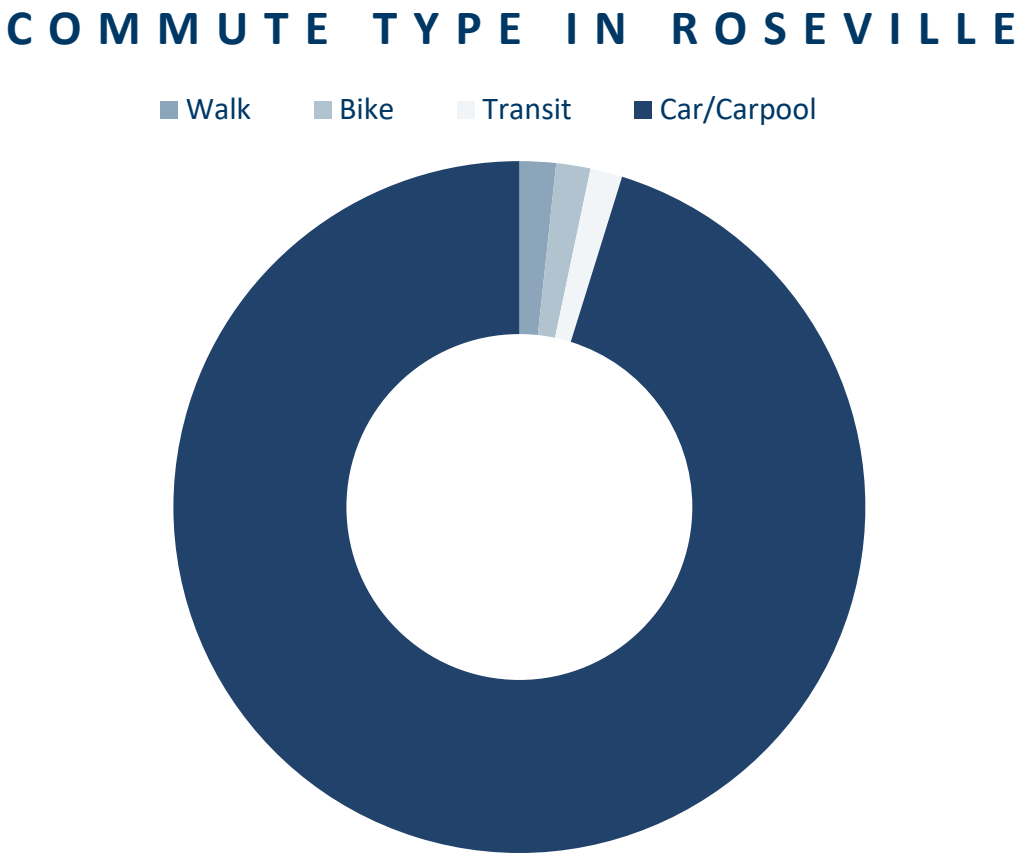
Building from the Pathway Master Plan

The 2021 Pathway Master Plan is comprehensive and holistic, incorporating a "constellation" (park service areas) concept to connect residents to parks within park service areas and between park service areas. The Master Plan also used a detailed scoring criteria to prioritize pathway projects.

Given that the Pathway Master plan was designed to address the needs of all non-motorized users, not just cyclists, it lacks specifics on how a proposed pathway can specifically address the needs of cyclists. This Bicycle Pathway plan builds from the Pathway Master Plan by:

1. Recommending Pathway designs that are specific for cyclists
2. Adding new Pathway segments to further build out the Bicycle Pathway Network in Roseville, especially for people commuting or running errands by bike
3. Suggests interim or "second best" treatments for Bicycle Pathway segments and routes Roseville can achieve in the short to midterm

How Is Roseville Moving Today?



1.7% Walk

In Roseville, 1.7 percent of commuters walk to work compared to 2.2 percent statewide[1].

1.6% Bike

In Roseville, 1.6 percent of commuters bike to work compared to 1.7 percent statewide[1].

1.5% Transit

In Roseville, 1.5 percent of commuters take transit to work compared to 1.5 percent statewide[1].

[1]American Community Survey, 2022 5-year estimates. The American Community Survey is an ongoing survey administered by the U.S. census bureau that provides vital information on a yearly basis about our nation and its people.

How the Community Was Engaged

Photo caption

Photo caption

Roseville Bike Plan Survey
Open from April 18th to July 1st, 2024. There were 370 responses to the survey.

Roseville Bike Plan Interactive Comment Map
Open from April 10th to June 30th, 2024. There were 324 visitors who left 378 comments.

Walk and Bike Audits
Three audits that took place on June 10th and June 11th, 2024. City staff, project staff, committee members and residents were present.

Network Mapping Workshop
The in-person mapping workshop took place on June 11th, 2024. City staff, committee members and residents worked together to identifying a priority bicycle network for Roseville.

LEARNING FROM OUR ENVIRONMENT

Walk and Bike Audits

Photo caption

Photo caption

Photo caption

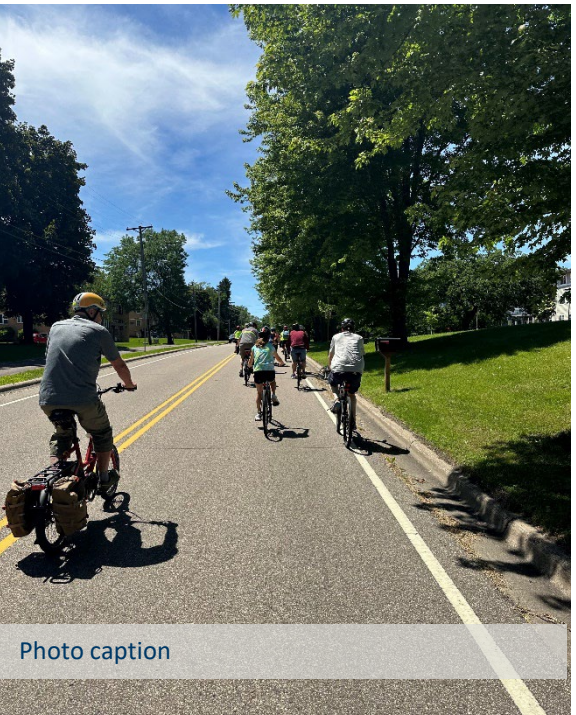


Photo caption

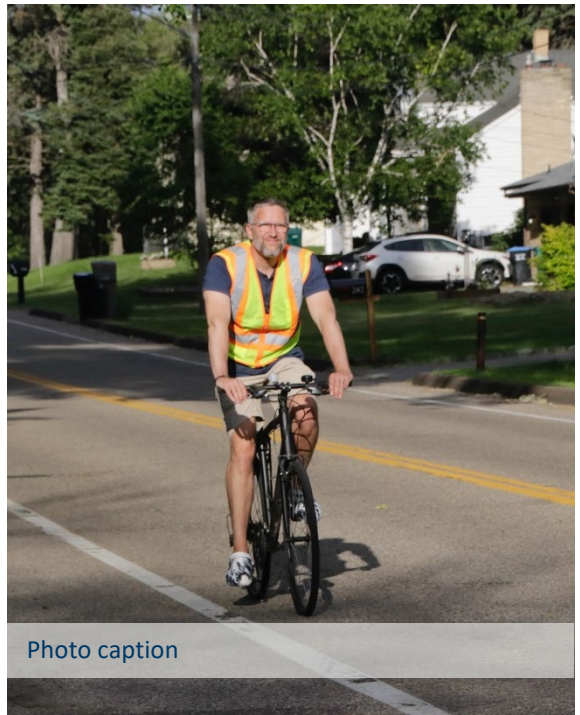
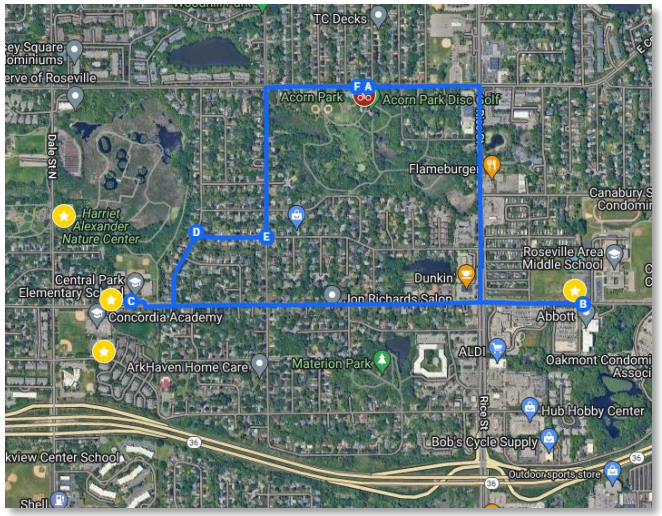


Photo caption

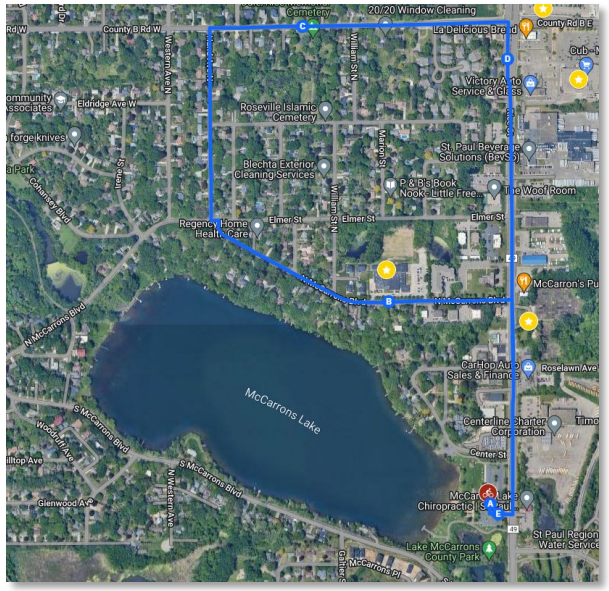
Photo caption

Bike Audits



Bike audit route in northeast Roseville

Bike-focused walk audit route near Rosedale Center



Bike Audit route in southeast Roseville

Members of the Roseville Bike Plan Committee were joined by residents for three bike audits on June 10th and 11th , 2024. The audits were held starting from Rosedale Center, Lake McCarron's County Park (southeast Roseville), and Acorn Park (northeast Roseville). Key observations and takeaways from these audits are summarized in the following pages.

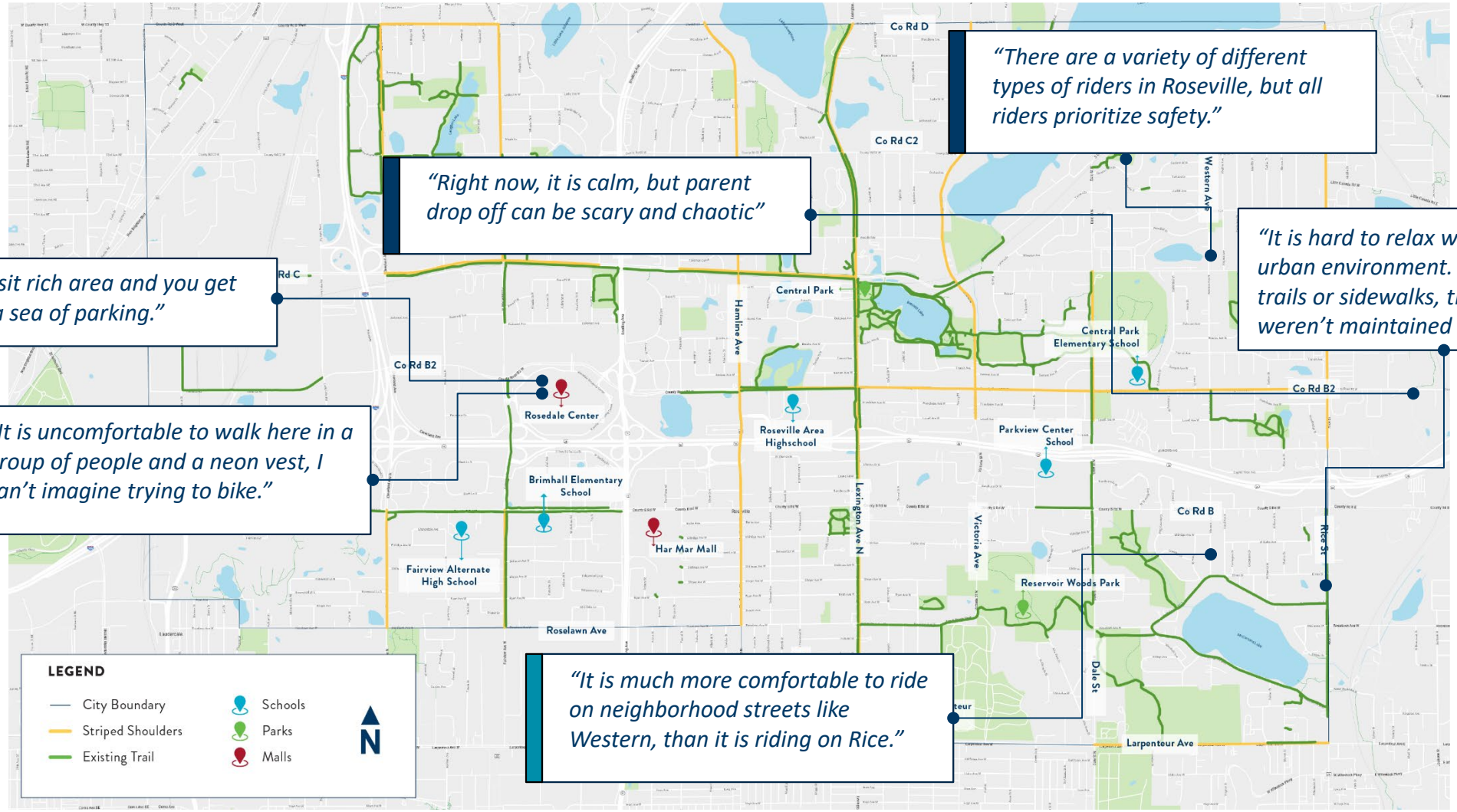
Bike audits are powerful tools for engagement, bringing together people with diverse perspectives and experiences—from city staff and elected leaders to community members— to:

- Observe and deepen understanding of how active transportation users experience a street
- Tap into people's knowledge of place
- Learn from the physical built environment
- Engage in meaningful dialogue

Bike Audits

Members of the Roseville Bike Plan Committee were joined by residents for three bike audits on June 10th and 11th , 2024. The groups who participated in the audits are shown starting from lower left: Rosedale Center, Acorn Park, and Lake McCarron's County Park.

What We Heard | **Bike and Walk Audit Comments**



"There are a variety of different types of riders in Roseville, but all riders prioritize safety."

"Right now, it is calm, but parent drop off can be scary and chaotic"

"Relative transit rich area and you get dumped into a sea of parking."

"It is hard to relax when cycling in an urban environment. If there were trails or sidewalks, they had debris or weren't maintained very well."

"It is uncomfortable to walk here in a group of people and a neon vest, I can't imagine trying to bike."

"It is much more comfortable to ride on neighborhood streets like Western, than it is riding on Rice."

Key Observations: Bike-Focused Walk Audit

WALK AUDIT – Rosedale Center

Biking around Rosedale Center and adjacent commercial and retail destinations presents challenges due to the lack of bike lanes on County Rd B2, forcing cyclists onto narrow sidewalks where they may come into conflict with pedestrians. While Fairview Ave has a recently constructed trail on the east side of the road, access to the business entrances are lacking for bikers and conflicts with drivers at driveways still pose a problem. High traffic speeds in the area contribute to a noisy environment, making sidewalks feel uncomfortable for both walkers and bikers, especially where sidewalks are immediately adjacent to the curb (no landscape buffer to separate people walking from the motorist travel lane). Despite being a well-served transit area, connections to transit are unclear and indirect.

KEY FINDINGS

Heavy Traffic and Speeds Reduce Biyclist Comfort

To create a comfortable environment for all, tools are needed to address loud, fast traffic near pedestrian and cyclist facilities. Implementing traffic calming measures and dedicated bike lanes can enhance safety and comfort.

Potential Conflicts Between Pedestrians and Bicyclists

Without bike lanes, most cyclists resort to riding on the sidewalk. This can create conflicts with pedestrians and compromise safety for both groups.

Key Observations: Bike-Focused Walk Audit

WALK AUDIT KEY FINDINGS, CONTINUED

Sidewalk and Road Geometry

Sidewalk and road geometry can be challenging for cyclists near Rosedale Center, especially 90-degree turns. These sharp turns make navigation across intersections difficult due to lack of space for a rider's bike and can compromise safety.

Long Distances Between Crosswalks

Long blocks can lead to pedestrians crossing midblock using the median. This behavior indicates a need for more crossing points.

Access Challenges

At Rosedale Center, navigation for cyclists can be challenging due to limited direct paths to building entrances. Sidewalks often lead in the opposite direction of the mall. Additionally, bike parking is limited and it's difficult for walkers and bikers to reach the transit center.

Corners and Curb Ramps

While there is a new shared-use path on Fairview Ave near Rosedale Center, the group observed that the corners still provide little space for a cyclist to turn their bike to stop and wait to cross Fairview Ave.

Key Observations: Bike Audits

BIKE AUDITS – McCarron's County Park and Acorn Park

In addition to the Bike-Focused Walk audit at the Rosedale Center area, the Roseville Bike Plan committee and residents convened for two bike audits. Participants got on their bikes and experienced Roseville's streets and bike facilities for themselves. Bike audits started from McCarron's County Park and Acorn Park and were 3-4 mile loops covering a variety of existing biking conditions and facilities in Roseville. The key observations from these audits are summarized on this and the following page.

KEY FINDINGS

The Comfort of Quiet Roads

Bike facilities on quieter roads, with less traffic and lower speeds, like Western Ave, rather than busy ones like Rice St, create a more comfortable environment for cyclists.

Complexities in Navigation

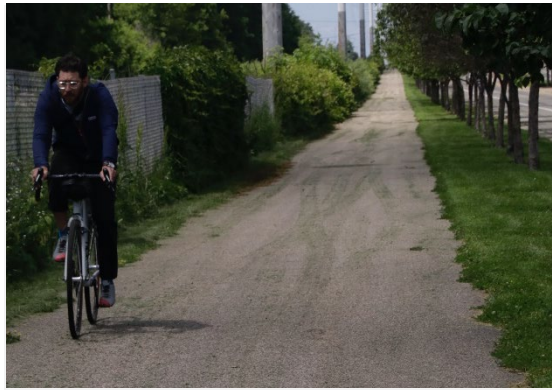
The group discussed that wayfinding for cyclists is complex and can be a barrier for prospective cyclists. Logical and coherent routes, aided by signs and wayfinding would be very helpful to cyclists in Roseville.

Key Observations: Bike Audits

BIKING AUDIT KEY FINDINGS, CONTINUED

Rice Street

Rice Street is heavily trafficked, so cyclists prefer riding on the sidewalk. Where shoulders exist, they are often dropped and merged with the right turn lane. The left turn from Rice St onto Co Rd B2 is awkward and uncomfortable, requiring either a risky maneuver across multiple lanes of traffic or a two-stage left turn.



Overgrown Vegetation

The audit group observed that there are comfortable shared-use trails in Roseville parks that can be used for bike commuting, but trees and bushes over-growing into the paths make it hard for cyclists to share these facilities with people walking.

Youth are a Priority

Safe travel to school, parks and other places youth like to access is critical to their health and independence. To make cycling a safe option for youth, dedicated bike lanes, safe crossings and bike-friendly policies are crucial.

Bike Lanes Benefit All

Having dedicated bike space separate from the sidewalk is beneficial for both the cyclist and the pedestrian. Bike lanes put vehicle travel lanes further away from traffic.

Network Mapping Workshop

Drafting the Priority Bike Network

After the walk and bike audits were complete, a network mapping workshop was held where community members and city staff applied their observations to start identifying priority routes for cyclists in Roseville. Approximately 20 Roseville residents and other stakeholders participated.

The workshop began with an overview of active transportation principles and established what kind bikeway facility types are most convenient and comfortable for different types of cyclists. Participants then used large maps of Roseville to identify important trip origins and destinations. Next, participants drew connections between trip origins and destinations and identified what improvements were needed along these routes to make them safe and comfortable for all cyclists. At the end of the session, small groups shared out the routes they identified, and the group discussed the priority network that was starting to emerge. The results of the Network Mapping Workshop formed the basis of the Priority Bike Network presented on Page 59 of this plan.

Emerging Priority Bike Routes Identified During the Workshop

The half-mile arterial road grid emerged as a priority during the workshop as these roads provide direct and continuous routes through the city, which are important features for cyclists. Some specific routes in the half-mile arterial road grid that emerged as priorities during the workshop were Fairview Ave, Hamline Ave, County Rd C – connection to the Diagonal Trail, and Roselawn Ave as a connection to St. Paul and Victoria St.

Interactive Comment Map

Photo caption

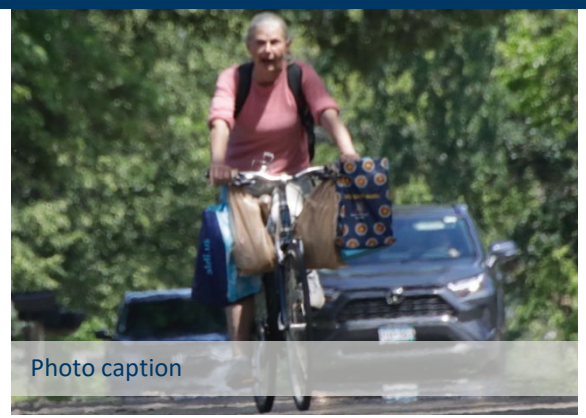


Photo caption

Photo caption

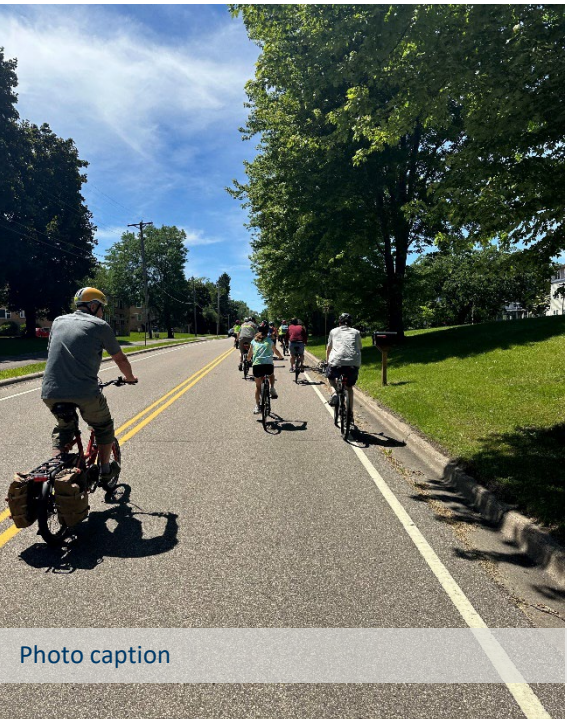


Photo caption

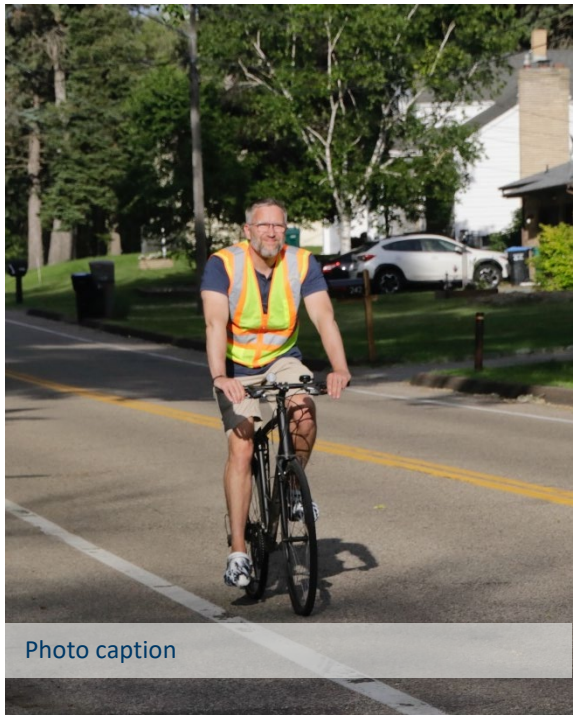
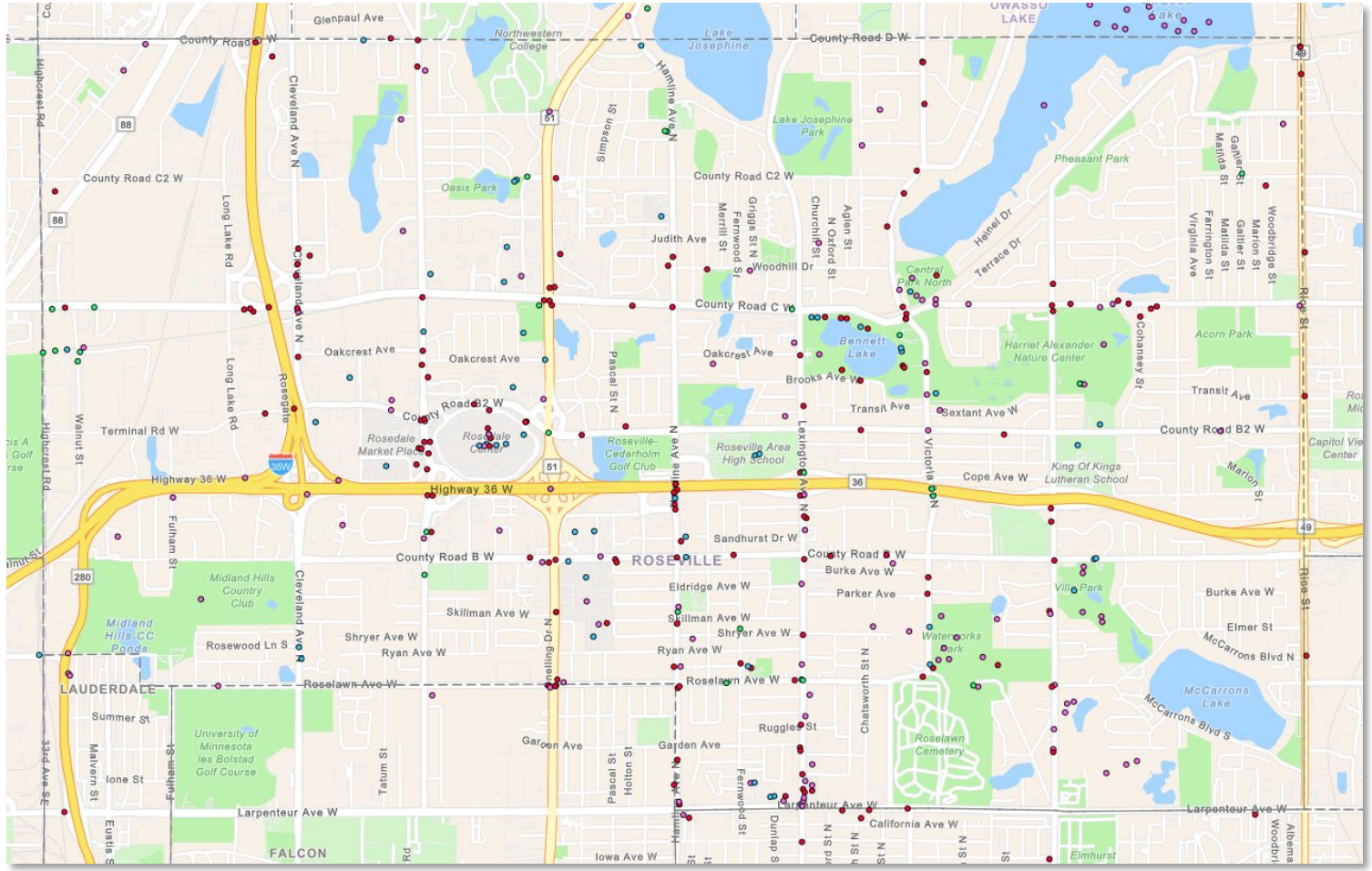


Photo caption

Photo caption

What We Heard, Observed, Learned



Legend:

- Destinations
- Biking is currently safe/comfortable
- Biking is currently unsafe/uncomfortable
- Ideas/requests

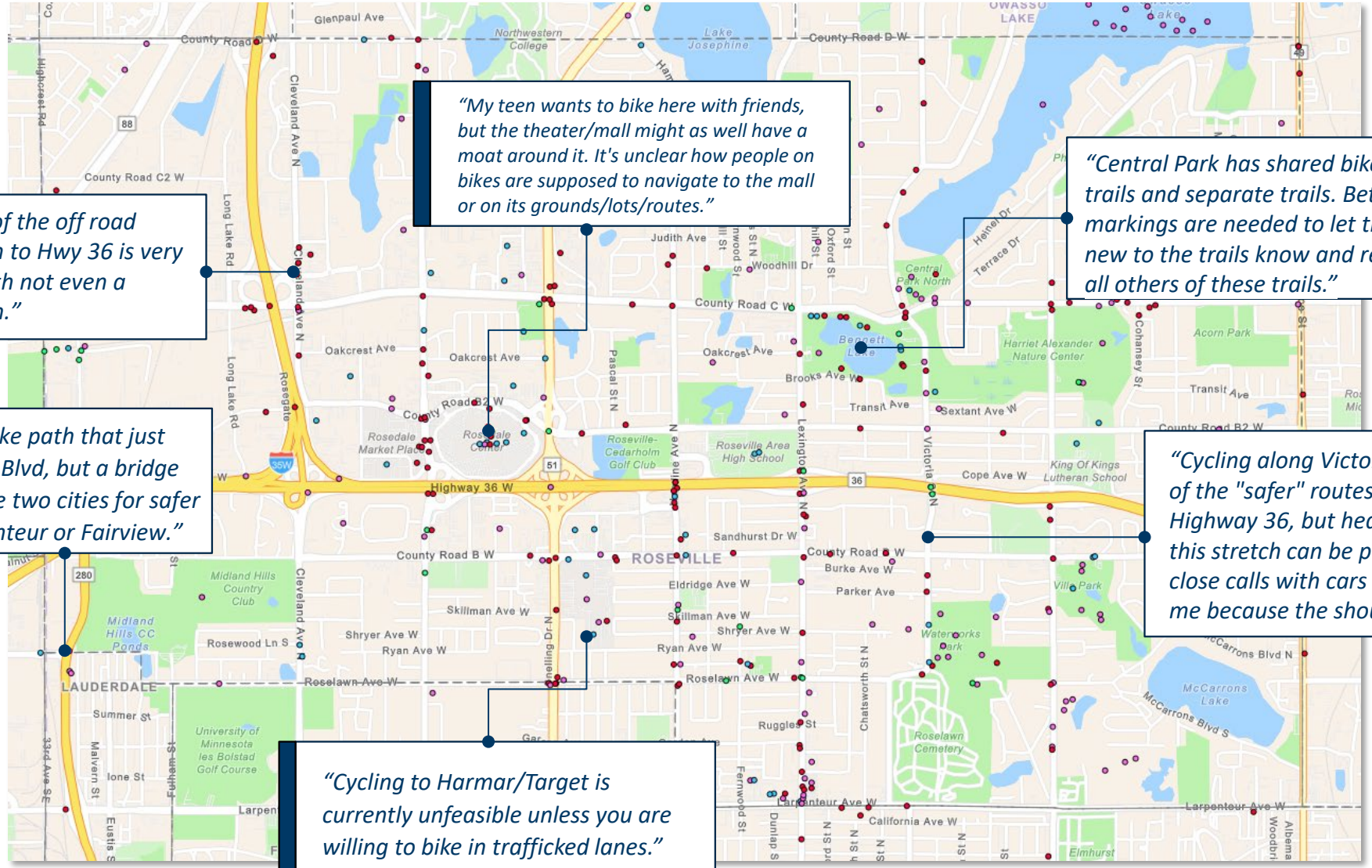
The Roseville Bike Plan Interactive Comment Map allowed community members to place pins on a map based on four categories:

- Destinations (places people currently bike or wish to bike to)
- Safe/Comfortable Biking
- Unsafe/Uncomfortable Biking
- Ideas/Requests (bike facility suggestions)

The map was open from April 10th to June 30th, 2024 and had 324 visitors who left 378 comments

"I would love for our city to be more bike friendly. We have plenty of businesses that are fairly close but they're inaccessible without a car. Adding bike lanes would be amazing." – Community Member

What We Heard | **Specific Issues and Opportunities**



"My teen wants to bike here with friends, but the theater/mall might as well have a moat around it. It's unclear how people on bikes are supposed to navigate to the mall or on its grounds/lots/routes."

"Central Park has shared bike/ped trails and separate trails. Better markings are needed to let those new to the trails know and remind all others of these trails."

"Cleveland south of the off road bikeway and down to Hwy 36 is very uncomfortable with not even a shoulder to ride on."

"There is a nice bike path that just ends at Industrial Blvd, but a bridge would connect the two cities for safer riding than Larpenteur or Fairview."

"Cycling along Victoria is considered one of the "safer" routes for crossing Highway 36, but heading southbound on this stretch can be perilous. I've had close calls with cars nearly brushing past me because the shoulder is so narrow."

"Cycling to Harmar/Target is currently unfeasible unless you are willing to bike in trafficked lanes."

Interactive Comment Map

The majority of comments received on the interactive map related to places where biking is currently unsafe or uncomfortable. Those comments are summarized here:

- There is a desire for better bike infrastructure on Hamline Ave N. Users would like to see marked bike lanes and eventual conversion to protected bike lanes.
- Snelling Ave N is perceived as dangerous and unsafe. Several comments indicated a desire for a bike and pedestrian bridge near County Rd C for an east to west connection.
- Fairview Ave N in front of Rosedale Center is stressful for cyclists because of high traffic speeds, congestion and high number of intersections.
- Users say they will not bike to Rosedale Center because they feel it is unsafe even though there are plenty of amenities they'd like to bike to like shopping, restaurants and a movie theatre.
- There is a desire for improvements to Central Park biking paths like updating signage, improving bumpy areas of the paths and creating separate paths for walkers and bikers.
- Users find the County Rd C and Dale St N intersection dangerous, with frequent stop sign violations. They request better traffic control and support the planned 3- to 4-lane conversion on County Rd C.
- Users say they avoid riding on Rice St because it has a lot of traffic. They use alternate routes on local streets when possible.
- The north section of Victoria St N is undesirable and unsafe for bikers. Although it is used by confident bicyclists, there are no sidewalks, and the shoulder width is narrow.

Interactive Comment Map

The remainder of comments received on the comment map were related to places where biking is currently safe or comfortable, destinations, and ideas. Those comments are summarized here:

- Users would like to bike to Rosedale Center and the transit center that is nearby.
- Users would like to see bike facilities on Lexington Ave so that there is a safe connection to Como Park.
- Bike parking is essential and requested by bicyclists at stores and restaurants including Cub Foods and Dairy Queen.
- Har Mar Mall is near residential areas and users want connections from those residential areas to the commercial businesses like Cub Foods and Target.
- Users love the Diagonal Trail and appreciate the connection that it provides to Minneapolis.
- Central Park is well used and loved by the community, but they would like more connections from residential areas.
- Residents want their children to have the option to bike to schools like, Roseville Area High School and Central Park Elementary, safely.

Overarching Findings from Engagement

Need for Improved Comfort and Safety on Major Roads

There are significant concerns about biking safety and comfort on major roads like Snelling Avenue, County Road B, Rice Street and Fairview Avenue.

Lack of Dedicated Bike Infrastructure

Bike routes separated from vehicle traffic were expressed as a desire to enhance safety and comfort, especially for families and commuters.

Unsafe Bikeways in Key Areas

Several areas were noted for having inadequate or uncomfortable bike paths, but issues vary depending on the area. People biking in Central Park experience conflicts with pedestrians while there are not bike facilities for people biking to Rosedale Center on Co Rd B2.

High Traffic Volume

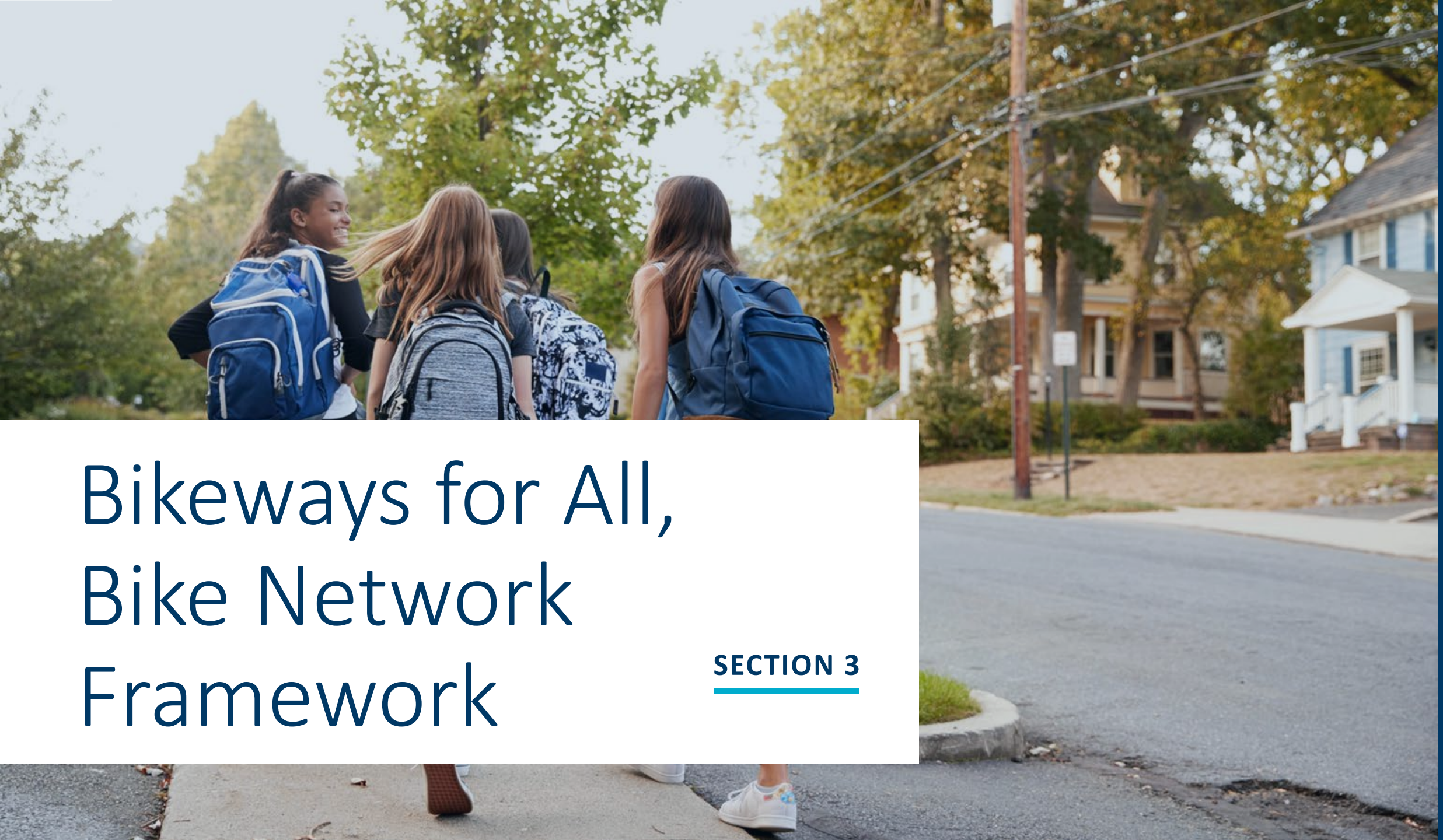
High traffic volumes and are major concerns. Locations like County Road C east of Lexington Ave and the intersection of County Road B and Hamline Avenue are areas where traffic conditions make biking intimidating.

Complex Intersections

Bike audit and interactive comment map results frequently showed that large, complex intersections in Roseville are unsafe and uncomfortable for bicyclists of all ages and abilities.

Improved Amenities and Maintenance

There is a notable concern about the lack of bike racks at key destinations, poor maintenance of existing bike paths and the need for better infrastructure support.



Bikeways for All, Bike Network Framework

SECTION 3

Who are We Designing For?

People . Pedal+ . Power

Transportation Equity

Policy, design and practices in our transportation system have led to inequities, disproportionately affecting low-income, people with disabilities, Black, Indigenous and People of Color, women and children. Advancing transportation equity requires a shift in transportation system design and decision-making processes. For example, it might mean more investment in areas that have been historically underserved. It also requires underserved users and communities share in the power of decision-making through engagement and design processes.

A BIKE NETWORK FOR ALL AGES AND ABILITIES, YEAR ROUND

To become a premier bike-friendly city, Roseville's bicycle network must **accommodate people biking of all levels, ages, abilities and preferences, and prioritize less confident and more vulnerable people (e.g., children)**. The network must also accommodate people in all seasons.

People bike for different trip purposes. Transportation-related trips are categorized as trips to work, school, for errands (such as groceries) or connecting to transit. Recreational trips are considered trips for physical activity or leisure.

Depending on trip purpose, people have different preferences. For example, people biking to the grocery store or work often prioritize directness as time is important whereas people out for a recreational bike ride value attractiveness and comfort, more than a direct route. Regardless of trip type, safety is critical for all people, especially when ensuring children have safe routes to school, parks and other places. In addition, people's preferences and comfort for biking may change by time of day, who they are traveling with (e.g., children), weather or other factors.

Understanding the diversity and nuance of trip purpose and bicyclists' preferences is an important part of planning for bikeways throughout Roseville. This Plan intentionally avoids designating a route for a particular trip purpose. Often, the same bikeway network is used for both transportation and recreation trips. **To make all forms of bike trips a real option for more people, the Plan establishes the need, and incremental steps, to prioritize the "interested but concerned" type of bicyclist who want to bike more, but do not currently feel safe or comfortable doing so. Meeting the needs of this cross section in bike network and facility design will create a low stress, all ages and abilities network that is inviting for the majority of the community**.

Bike Network Principles

To provide transportation choice and encourage biking trips, routes must be:

SAFE
Does the route minimize risk of injury and danger (both traffic and personal safety)?

COMFORTABLE
Does the route appeal to a broad range of age and ability levels and are there user amenities (e.g., places to sit, bike racks, protection from the weather)?

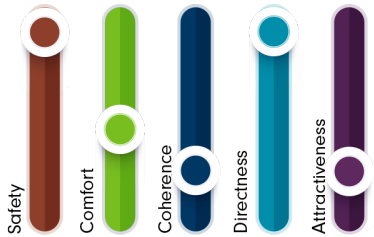
COHERENT
How easy is it to understand where to go? How to navigate a crossing or an intersection? How connected is the network?

DIRECT
Does the route provide direct and convenient access to destinations?

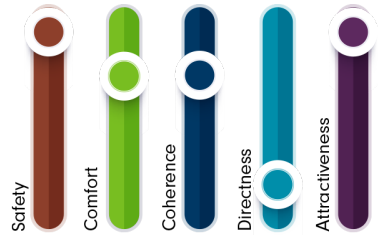
ATTRACTIVE
Is the route green, well-maintained and celebrate local identity?

The significance of each principle may vary from route to route and from person to person. For example:

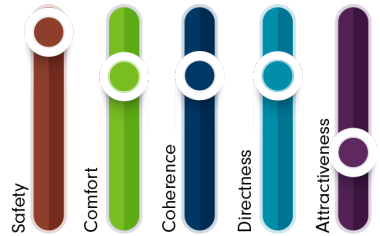
Commute or Errand Trips: People commuting or running errands value directness and safety.



Recreational or Leisurely Trips: For recreational trip-goers the biggest sift is in directness and attractiveness.

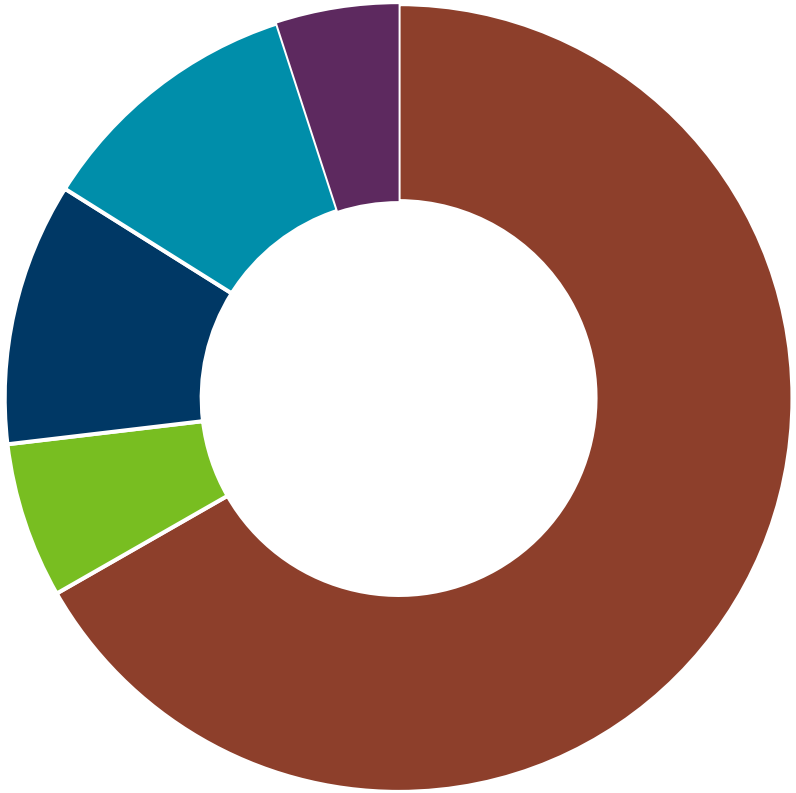


School Trips: This refers to elementary aged school children. This is the hardest group to design for as safety is vital, but all characteristics are important. The route is only as strong as the weakest link, so safety at intersections is also critical.



Key Principles of Bikeability | **Bike Plan Survey Results**

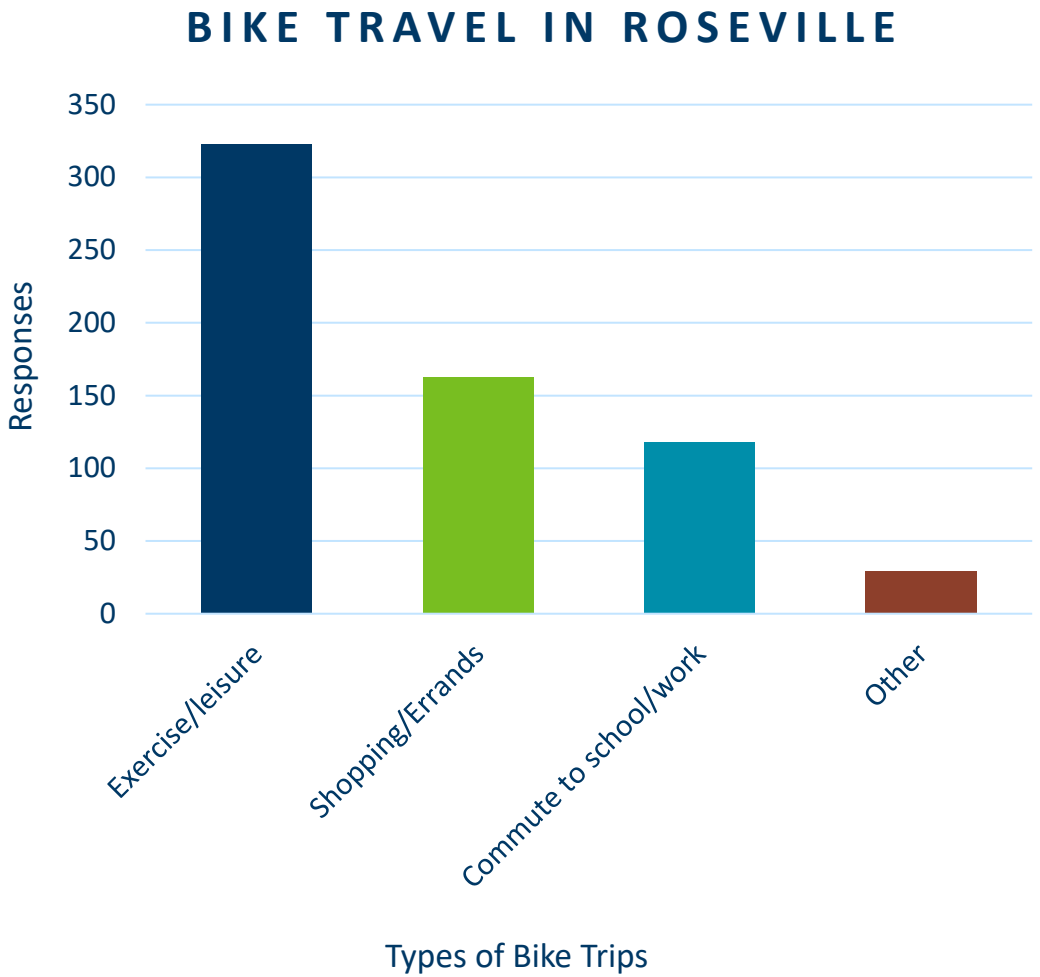
IMPORTANCE OF KEY BIKE NETWORK PRINCIPLES



Of the 361 Roseville Bike Plan survey respondents (Page 20), **241 prioritize safety** above all other principles, indicating that most bikers value safety regardless of their biking confidence level or reason for biking. Definitions of the Bike Network Principles are provided on the previous page.

- ***66.8%*** *Safety*
- ***11.1%*** *Directness*
- ***10.8%*** *Coherence*
- ***6.4%*** *Comfort*
- ***5.0%*** *Attractiveness*

Bike Travel in Roseville | **Bike Plan Survey Results**



89%

Of survey respondents said they bike for exercise and leisure

Out of the 360 respondents who answered the question about their reasons for biking in Roseville, **323** indicated they bike for **exercise or leisure**, **163** for **shopping or errands**, **118** for **commuting to school or work**, and 29 selected other reasons. It's no surprise most people bike for recreational trips given the many high-quality parks and trails in Roseville. There is opportunity to increase transportation-related trips with the future bikeway network.

Bicyclist User Types

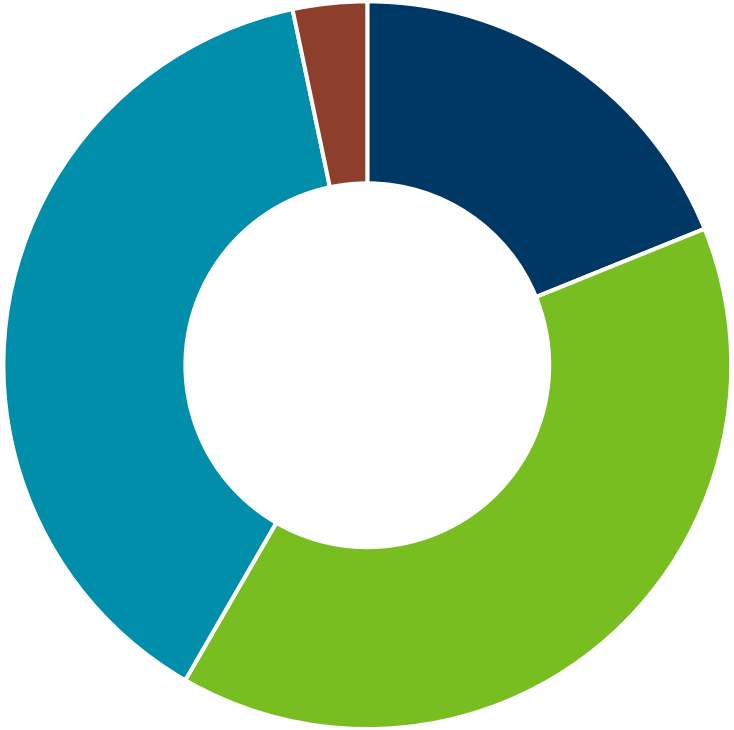
Low Stress Tolerance → High Stress Tolerance

NO WAY NO HOW	INTERESTED BUT CONCERNED	ENTHUSED & SOMEWHAT CONFIDENT	HIGHLY CONFIDENT
33%	**51-56%**	**5-9%**	**4-7%**
People will not bike out of disinterest or inability to do so.	People in this group would like to bike more, but do not feel safe on busy streets with fast moving traffic nearby. Biking on streets with fewer and slower-moving cars or in a space separated from vehicles would help them feel more comfortable. National and state research finds, on average, **over half of the population are interested in bicycling more often** but are **concerned about having to share the road with motor vehicles. They would like lower stress street environments to bike.**	People who currently bike for transportation. Sometimes they are comfortable sharing the street with drivers but would prefer to ride on streets with bike lanes or separated paths.	People who will ride regardless of roadway conditions and bicycle facility. Highly confident riders represent the smallest category of people willing to bike.

Graphic adapted from *AASHTO Guide for the Development of Bicycle Facilities*

What Type of Bicyclist Are You? | **Bike Plan Survey Results**

TYPES OF BICYCLISTS IN ROSEVILLE



Of the 365 Roseville Bike Plan survey respondents, nearly **80%** identified themselves as either **enthusiastic and somewhat confident** or **interested but concerned**, indicating they would bike more with improved infrastructure.

- ***18.9%*** *Highly Confident*
- ***39.5%*** *Enthused and Confident*
- ***39.4%*** *Interested but Concerned*
- ***3.3%*** *No Way, No How*

Comfort Types of Bicyclists

Low Stress Tolerance → High Stress Tolerance

INTERESTED BUT CONCERNED	ENTHUSED & SOMEWHAT CONFIDENT	HIGHLY CONFIDENT

WHAT IS TRAFFIC STRESS?

Bicycle Level of Traffic Stress (LTS) is a way to evaluate the stress a person bicycling may feel when they ride on a road close to traffic. It assigns a stress level to streets and bikeways based on factors such as:

- Traffic speed
- Number of travel lanes
- Number of vehicles
- Frequency of on-street parking turnover
- Ease of intersection crossings
- Presence of bike lanes
- Presence of physical barrier to bike lane

LTS 1	Most children will feel safe bicycling on these streets.
LTS 2	The “interested but concerned” adult population will feel safe bicycling on these streets.
LTS 3	Streets that are tolerable to “enthused and somewhat confident” riders who still prefer having their own dedicated space.
LTS 4	High stress streets with high-speed limits, multiple travel lanes and limited or non-existent marked bikeways.

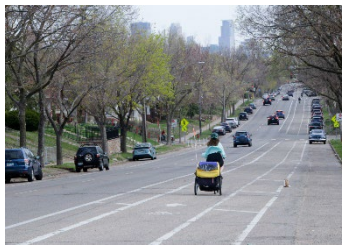
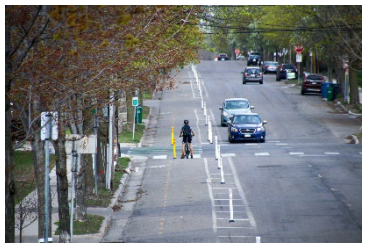
LTS LEVEL	DESCRIPTION	HIGHLY CONFIDENT BICYCLIST WILL RIDE	ENTHUSED & SOMEWHAT CONFIDENT BICYCLIST WILL RIDE	INTERESTED BUT CONCERNED BICYCLIST WILL RIDE
LTS 1	   	YES	YES	YES
LTS 2	  	YES	YES	Inviting to most adults, but demands more attention than might be expected from children
LTS 3	 	YES	Often, but more variability in level of comfort	NO
LTS 4		YES	NO	NO

Chart adapted from *MnDOT Bicycle Facility Design Guide*

How to Select Bike Facility Type

There are many different types of bike facilities. These facilities are all different in the way they interact and operate with other users of the street. The range of bicycle facility types is also always evolving. Determining how each bike route will function requires detailed examination of each corridor, which is beyond the scope of this Plan, using several interrelated concepts and approaches:

- **Context Sensitive:** Balance the community's economic, social and environmental needs and values alongside the corridor's operational needs. This includes considering existing and future land use and how the type of facility might vary along a given route.
- **Complete Streets:** Evaluate streets during any stage of a street project (e.g., planning, design, maintenance) to provide safe, comfortable and inviting facilities for all transportation users, especially the most vulnerable.
- **Safe System Approach:** Prioritizes safety over speed. Project focus on efforts to effectively design for all transportation users' safety by managing vehicle speeds by design. This is a proactive approach that provides guidance on how to select bike facilities and other proven safety treatments based on traffic speeds and volumes.
- **Engagement:** Thoughtful engagement with the community living along the route/corridor.

Bikeway Facility Types

The bikeway routes and facility types discussed in this Plan are defined as:

- **Protected bike lanes:** Routes on busy streets that are physically separated from moving vehicle traffic either using landscaping, bollards or other features such as flexible delineator posts or with a curb. Protected bike lanes can be at the same level as the street or at curb-level. Protected bike lanes are only intended for bikers or people using similar modes.

- **Shared-use path:** Routes shared by bicyclists and pedestrians. Shared-use paths include paths at curb-level along a busy street or paths further from the street, like through a park.

- **Painted bike lanes or painted buffered bike lanes:** Bike lanes marked on the roadway with white paint. As space allows, a painted buffer space can be added to provide visual separation between moving traffic, parked cars or both.

- **Traffic-calmed local streets:** Low-speed, low traffic volume streets where bikes share the street space with vehicles. Shared-use streets include both neighborhood greenways or bicycle boulevards (streets that prioritize bike travel). Traffic-calmed local streets would apply to a subset of Roseville's local city street network (see Page 75).


Protected bike lane (curb-level)


Protected bike lane (bollard-protected)


Shared-use path (In Roseville)


Shared-use path


Painted bike lane

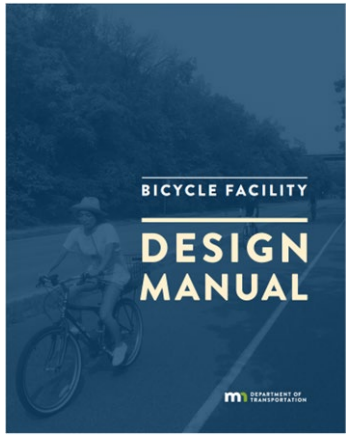

Painted buffered bike lane


Shared-use street (bicycle boulevard)


Neighborhood greenway

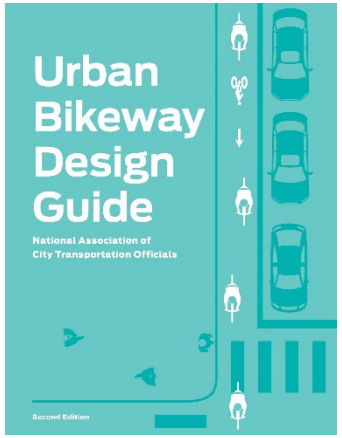
Best Practices

The bike network presented in this Plan, and associated bikeway recommendations, are based on state and national evidence-based best practices in bikeway design. Use, adopt or endorse the following design guides to support decisions about design that will be made during later stages of corridor/route planning and implementation.



[Bicycle Facility Design Manual]

Minnesota Depart of Transportation (MnDOT)

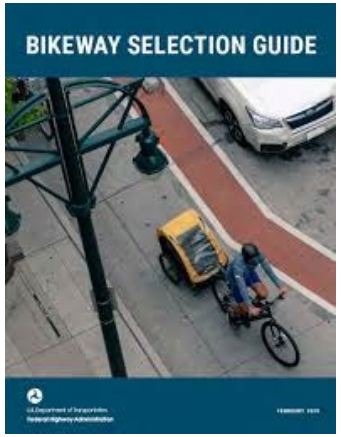


[Urban Bikeway Design Guide]

National Association of City Transportation Officials (NACTO)

[Urban Street Design Guide]

National Association of City Transportation Officials (NACTO)



[Bikeway Selection Guide]

Federal Highway Administration (FHWA)

Complete Streets

Complete Streets is an approach that integrates people and place in the planning, design, construction, operation and maintenance of streets. A Complete Streets policy helps ensure a comprehensive and connected multimodal transportation system that prioritizes safety over speed, more equitably balances the needs of different modes and supports local land uses, economies, cultures and natural environments.

Complete Streets look different from street to street. There is no "standard," rather a holistic and context sensitive approach is taken to address the unique needs of users and characteristics of place. For example, to make biking safer, more accessible and inviting, a "collector" or "arterial" street might include buffered or protected bike lanes to account for higher traffic speeds and volumes. While on a residential street people biking and driving might share the lane and mix due to the low traffic speeds and volumes.

Roseville's Complete Streets Policy

"Roseville's transportation system is robust and complex, providing facilities for vehicles, freight, walking, bicycling, and transit, and prioritizing connectivity between essential community hubs such as neighborhoods, schools, shopping centers, and parks. All modes of transportation are equally safe and accessible, facilitating the mobility of all community members and especially vulnerable populations."

MnDOT Complete Streets Policy

"MnDOT must follow a complete streets approach in all phases of planning, project development, operation and maintenance activities."

One of the four policy goals is to **"increase bicycling and walking as a percentage of all trips."** The policy states higher priority should be given to address identified user needs on projects that:

- **Equity:** Have a higher proportion of people with disabilities, people of color, older adults, children or low-income
- **Mode Shift:** Have a higher probability of increasing the number of people walking, biking or taking transit
- **Safety**: Addresses a significant safety issue for vulnerable users
- **Connectivity:** Addresses a gap or barrier created by prior transportation investments
- **Plan Alignment:** Are identified in a local or regional plan

Ramsey County All-Abilities Transportation Network

Ramsey County All-Abilities Transportation Network resolution (2016) to advance the county vision: "A vibrant community in which all are valued and thrive." Public works uses an evaluation checklist for road, trail and transit projects to ensure the resolution is put into practice.

Safe System Approach

More communities and agencies, including Minnesota Department of Transportation (MnDOT) are following the Safe System Approach to traffic safety, which aims to eliminate fatal and serious injuries for all road users, including the most vulnerable users – people walking, bicycling and rolling.

The Safe System Approach focuses roadway safety efforts on ways to effectively:

1. **Design for the people in the system**
2. **Manage vehicle speeds by design**
3. **Employ proactive tools to manage risks across an entire roadway network, especially for the most vulnerable users**
4. **Foster integrated, collaborative and coordinated action**

> [MnDOT] can prevent traumatic life-altering, costly crashes by focusing on creating low-speed environments in population centers and around other destinations where people are likely to walk [and bike]."
>
> - Statewide Pedestrian System Plan

Learn more about the Safe System Approach: https://www.transportation.gov/NRSS/SafeSystem

Safe System: When to Mix, When to Separate

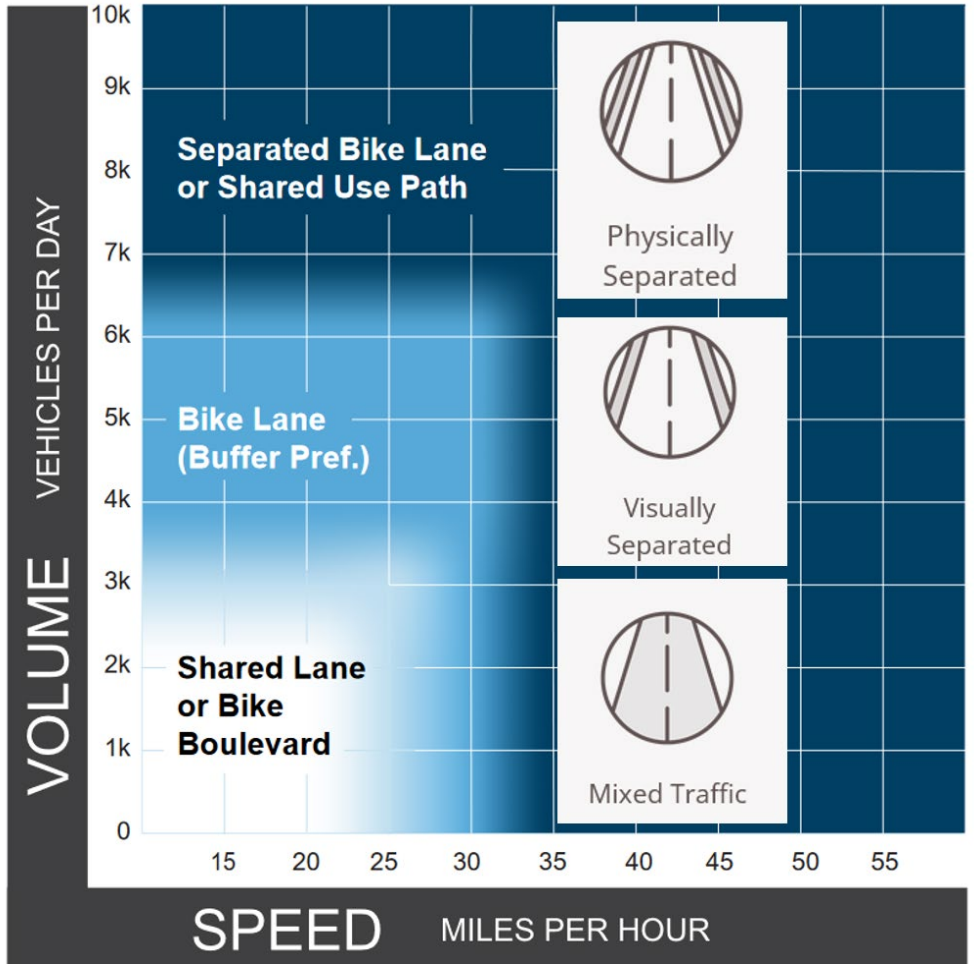


Chart adapted from *Federal Highway Administration Bicycle Selection Guide (2019)*.
Note: Chart assumes operating speeds are similar to posted speeds. If they differ, operating speed should be used rather than posted speed.

BIKEWAY SELECTION GUIDE

The chart (left) was developed by Federal Highway Administration (FHWA) and used by MnDOT in the Bicycle Facility Design Manual. It is considered a best practice when selecting the best bikeway for a street.

A key aspect to ensure safer roads by design is **separating users in the street space**. The **greater the vehicle speed** and the **higher the vehicle volume,** the **greater the physical separation** needs to be between people driving and people biking.

Separate and **protect people** from moving traffic when **vehicle speeds are above 20 mph**. This can be done visually with painted bike lanes or buffered bike lanes or physically with bikeways fully separated by curbs, street trees, on-street parking and more.

A **shared street environment**, where users are mixed, can be created for **people biking and driving** when **speeds are at or below 20 mph and vehicle volumes are relatively low**. This is a common environment on neighborhood residential streets. Traffic calming tools, such as neighborhood traffic circles, chicanes, pinch-points and curb extensions can be used to further mange and achieve 20 mph speeds on residential or low volume streets.

The Bike Network Informs Future Bikeway Projects

The Priority Bike Network provided in this Plan helps Roseville be strategic about investments and implementation, especially in partnership with other road authorities (e.g., county and state). It will inform the selection of bikeway facility types by showing where higher quality facilities are needed the most to support all ages and abilities bicyclists (“interested but concerned” type of bicyclist). If a project is planned on a roadway that is shown on the bike network, including the appropriate bike infrastructure should be prioritized as part of the project.

Taking a Complete Streets approach means the city will not always have the opportunity to implement a street’s preferred or highest quality bikeway in the short term. Facilities like protected bike lanes or shared-use pathways often require full street reconstruction to appropriately re-allocate street space, which happen less frequently and are costly. The city should be prepared to implement (including with county and state) interim bikeway facilities as the streets are maintained (e.g., in mill and overly or pavement preservation projects or annual restriping). For example, in restriping projects the city can narrow vehicle travel lanes to stripe bike lanes or use pavement markings and signage to convert “bikeable shoulders” that exist today to bike lanes. As space allows, the city can use paint to add painted buffers or other low-cost treatments such as flex-posts (delineators) to create a more protected bikeway in the interim.

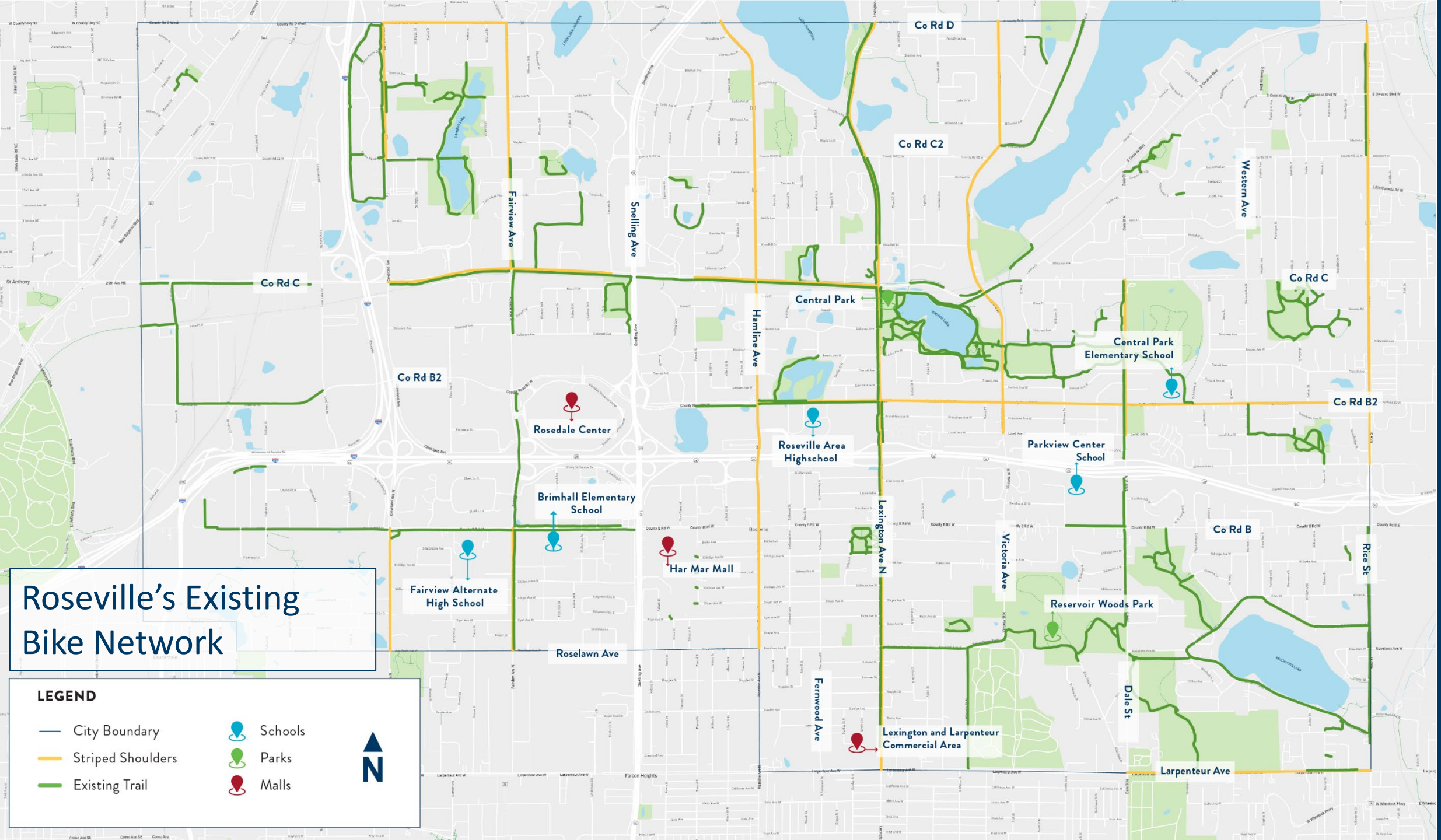
Building the Network

SECTION 4

Existing Bike Network | Current Bike Routes in Roseville

The existing network of bike routes in Roseville is shown on the on the following page. The existing network is comprised of striped shoulders and shared-use paths that are mostly located on Ramsey County roads. Shared-use paths in Roseville city parks also contribute to the existing network.

As summarized on Page 55, sidewalks comprise nearly 50% of existing bikeable routes in Roseville. While city ordinance allows biking on sidewalks, sidewalks are not a long-term solution for cycling in Roseville as sidewalks are narrow and biking on sidewalks introduces conflicts between bicyclists and pedestrians and drivers do not expect to see cyclists on sidewalks.



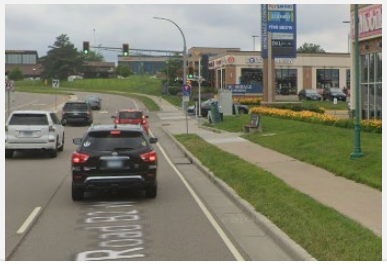
Roseville's Existing Bike Network

LEGEND

- City Boundary
- Striped Shoulders
- Existing Trail
- Schools
- Parks
- Malls

N

Existing Network | Facility Types in Roseville's Bike Network

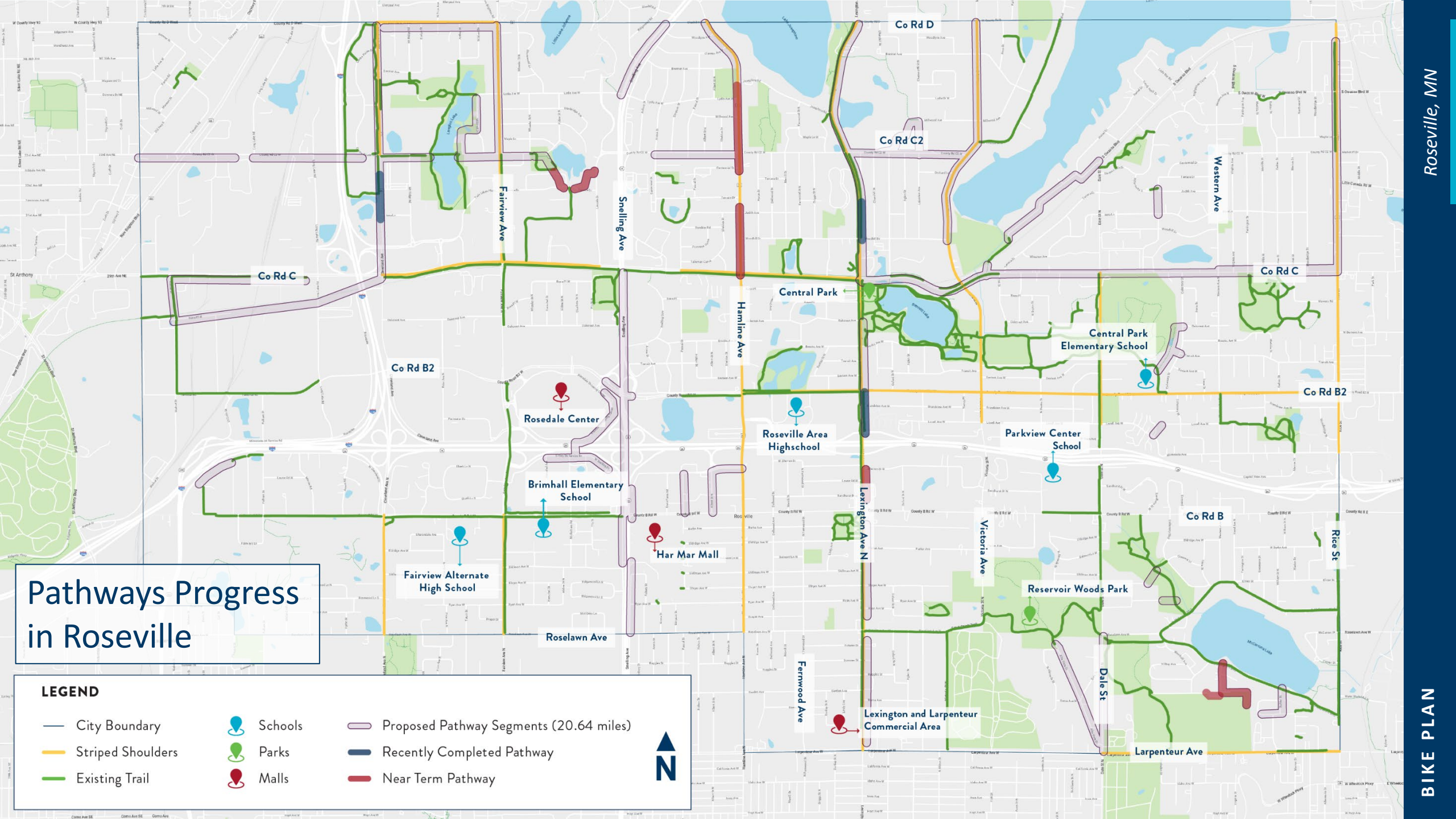
Bikeway Type	Existing Mileage	Percent of Network	Example
Sidewalks: In Roseville sidewalks are typically 5-6 ft wide paved facilities alongside a street intended for use by people walking however city ordinance allows for bikers to use sidewalks, too. Sidewalks are not a long-term solution for cyclists in Roseville but are part of the existing network.	46.8	46%	 *A sidewalk on Co Rd B in Roseville*
Shared-use path: In Roseville these include paved trails alongside a busy street shared by people walking and biking. They are typically 8-10 ft wide.	36.6	36%	 *A shared-use path on Co Rd C in Roseville*
Bike Shoulders: In Roseville these include street-level paved shoulders often shared with parking and marked with a white line	17.96	18%	 *Bike shoulders on Western Ave in Roseville*
Total	**101.36**	**100%**	

Existing Bike Network | **Pathways Progress in Roseville**

The map on the following page shows proposed Pathways as identified in Roseville's 2021 Pathway Master plan update overlaid on the existing bike network. The map also shows the progress the City has made on the Pathway Master plan since 2021, with nine recently completed pathway segments and six near term pathways programmed for completion in the next several years.

This bike plan seeks to build from the Pathways Master plan by:

- Reaffirming proposed pathway segments identified in 2021 that continue to be priorities for bicycling upgrades today
- Identifying new bike routes to add to the bicycle network in Roseville
- Identifying the types of bike facility upgrades appropriate for these routes


Pathways Progress in Roseville
LEGEND
City Boundary
Striped Shoulders
Existing Trail
Schools
Parks
Malls
Proposed Pathway Segments (20.64 miles)
Recently Completed Pathway
Near Term Pathway
N
Co Rd D
Co Rd C2
Co Rd C
Co Rd B2
Co Rd B
Fairview Ave
Snelling Ave
Hamline Ave
Lexington Ave N
Victoria Ave
Western Ave
Rice St
Dale St
Fernwood Ave
Roselawn Ave
Larpenteur Ave
Central Park
Central Park Elementary School
Rosedale Center
Roseville Area Highschool
Parkview Center School
Brimhall Elementary School
Har Mar Mall
Fairview Alternate High School
Reservoir Woods Park
Lexington and Larpenteur Commercial Area
St Anthony
Roseville
Roseville, MN
BIKE PLAN

Priority Bike Network|

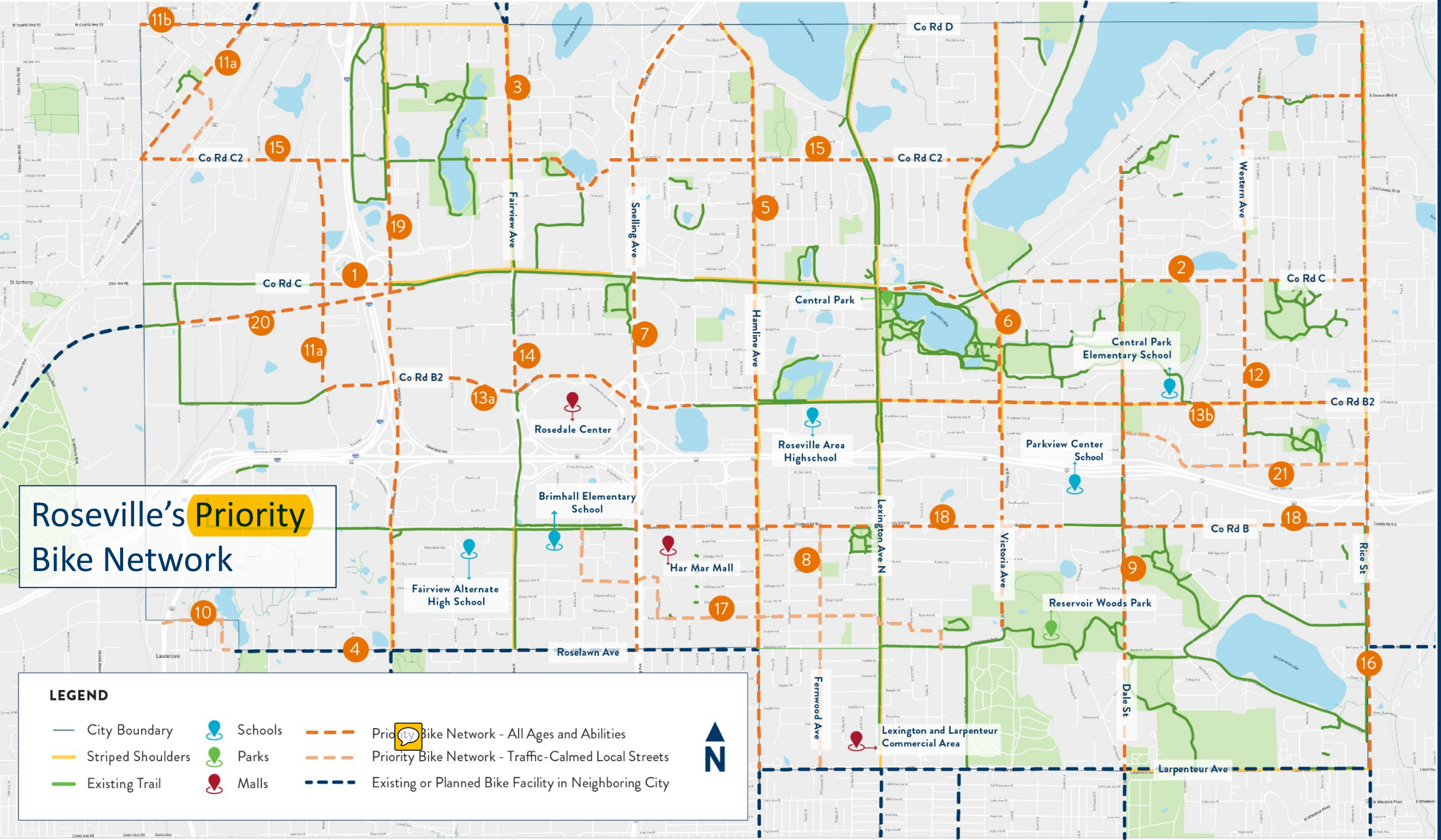
The map on the following page shows the Priority Bike Network identified through the development of this Plan. This network was identified through:

- Bicycle audits to assess existing conditions
- Network mapping workshop to define bicycle routes and connections
- Online engagement using an interactive mapping tool and survey to collect broader community input
- Plan review through virtual meetings with city champions who participated in the network mapping workshop

The Priority Bike Network map on the following page identifies **two different types of routes** that make up the Priority Bike Network:

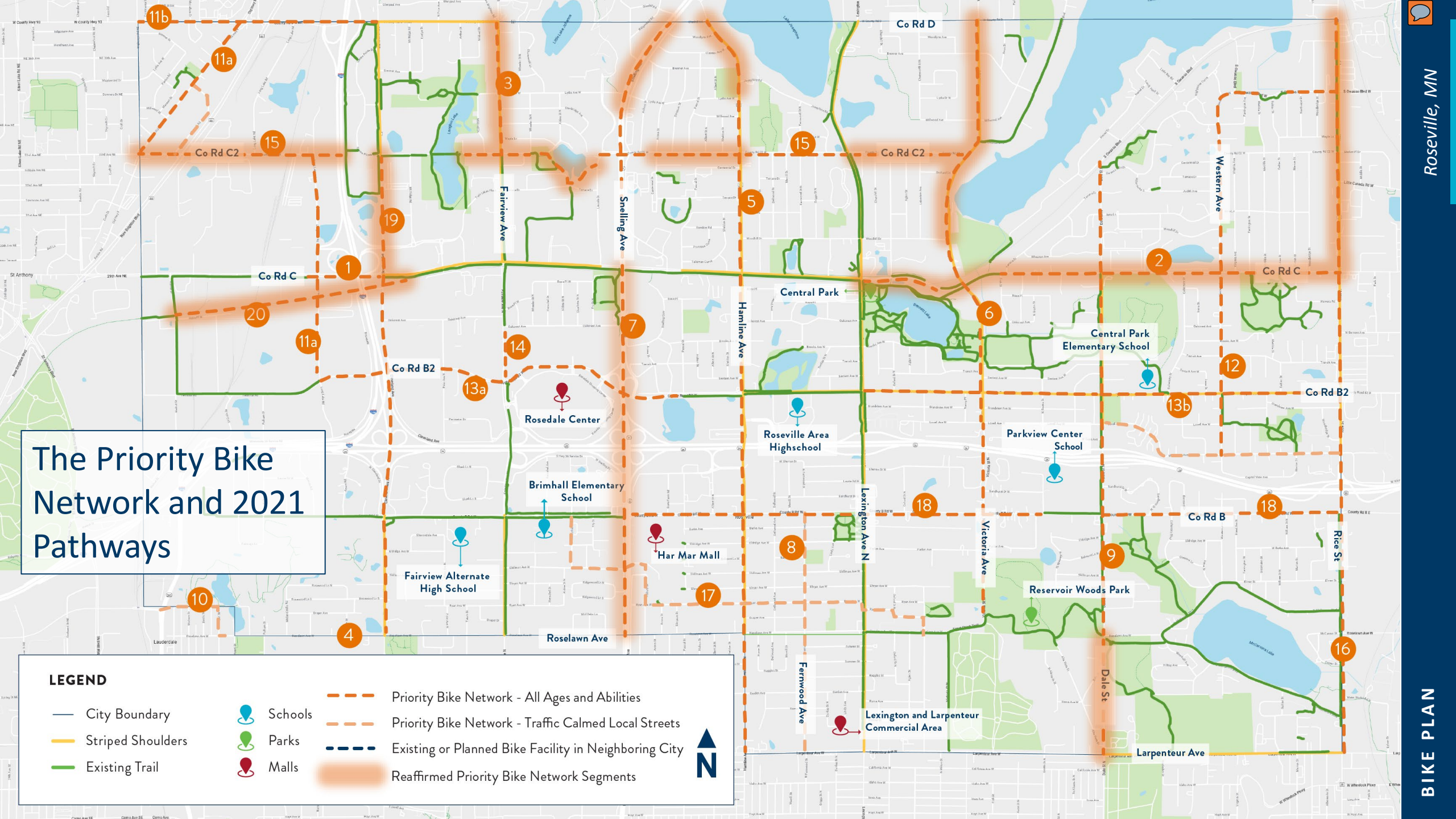
- **All Ages and Abilities** – these bike routes focus on the half-mile major road grid in Roseville where vehicle volumes and speeds are high enough that complete separation of bike facilities from vehicle traffic is required for bicyclists of all ages and abilities to feel comfortable . These routes are located on city, county, and state roads. Along with separation from vehicle traffic, improving the complex intersections and barrier crossings along these routes will be essential to making them All Ages and Abilities (See Overarching Network Recommendation #2 on Page 65).
- **Traffic-Calmed Local Streets** – these bike routes focus on city streets where traffic volumes and speeds might be low enough for bike lanes, buffered bike lanes, and shared-use street treatments to provide a comfortable environment for users of all ages and abilities and complete separation of bike facilities from vehicle traffic may not be required. Intersections where these routes cross major roads will also need improvement.

The Priority Bike Network identified through development of this plan is extensive. To help the city identify projects to move forward in the near-term a **draft prioritization** is provided starting on Page 81 of this plan.


Roseville's Priority Bike Network
Co Rd D
Co Rd C2
Co Rd C
Co Rd B2
Co Rd B
Fairview Ave
Snelling Ave
Hamline Ave
Lexington Ave N
Victoria Ave
Western Ave
Rice St
Fernwood Ave
Dale St
Roselawn Ave
Larpenteur Ave
Central Park
Central Park Elementary School
Rosedale Center
Roseville Area Highschool
Parkview Center School
Brimhall Elementary School
Har Mar Mall
Fairview Alternate High School
Reservoir Woods Park
Lexington and Larpenteur Commercial Area
LEGEND
City Boundary
Striped Shoulders
Existing Trail
Schools
Parks
Malls
Priority Bike Network - All Ages and Abilities
Priority Bike Network - Traffic-Calmed Local Streets
Existing or Planned Bike Facility in Neighboring City
N
Roseville, MN
BIKE PLAN

Priority Bike Network| **New and Reaffirmed Bike Routes**

The map on the following page shows priority bike routes identified through the development of this bike plan. It also identifies Pathways that were identified in the 2021 Pathway Master Plan and were again identified during development of this bike plan. These routes are highlighted in orange on the following map and labeled as “reaffirmed priority bike network segments” to illustrate where this bike plan overlaps with the 2021 Pathways Master Plan and where new priority bike routes have been identified.


The Priority Bike Network and 2021 Pathways
LEGEND
City Boundary
Striped Shoulders
Existing Trail
Schools
Parks
Malls
Priority Bike Network - All Ages and Abilities
Priority Bike Network - Traffic Calmed Local Streets
Existing or Planned Bike Facility in Neighboring City
Reaffirmed Priority Bike Network Segments
N
Co Rd D
Co Rd C2
Co Rd C
Co Rd B2
Co Rd B
Fairview Ave
Snelling Ave
Hamline Ave
Lexington Ave N
Victoria Ave
Western Ave
Rice St
Fernwood Ave
Dale St
Roselawn Ave
Larpenteur Ave
Central Park
Central Park Elementary School
Rosedale Center
Roseville Area Highschool
Parkview Center School
Brimhall Elementary School
Har Mar Mall
Fairview Alternate High School
Reservoir Woods Park
Lexington and Larpenteur Commercial Area
St Anthony
Lauderdale
Roseville, MN
BIKE PLAN

Overarching Network Recommendations

1. **Promote All Ages and Abilities bikeways on all roads in the half-mile arterial grid. This includes city, county and state roads.**
2. **Address complex intersections and barrier crossings**
3. **Fill gaps in existing shared-use path network**
4. **Identify and Improve a Network of Traffic-Calmed Local Streets:**
    - **Identify**
    - **Use Paint**
    - **Traffic Calming**
    - **Safer Routes to School**

1. Promote All Ages and Abilities Bikeways on All roads in the Half-Mile Arterial Grid

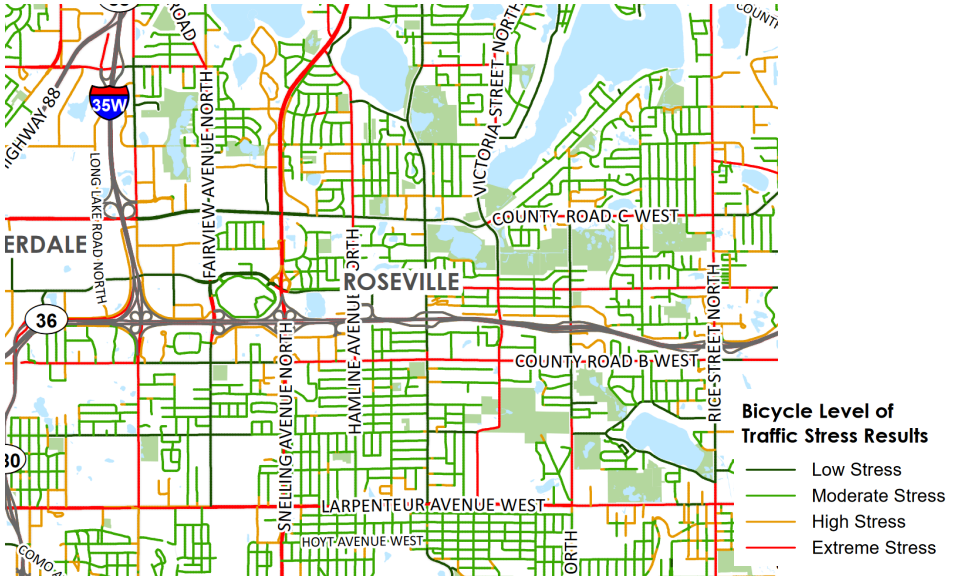
Ramsey County roads create most of the half-mile arterial grid within the city, making them critical to the city's bike network.

The County's Pedestrian and Bicycle Plan (2015) Bicycle Network Deficiency Analysis identifies those streets that are most and least suitable for traveling by users of all ages and abilities as determined by the level of traffic stress. Many of the county roads in Roseville are classified as high- to extreme- stress due to high vehicle speeds and volumes, multi-lane conditions and minimal to no bikeway facilities, such as portions of Larpentuer Ave, Hamline Ave, Rice Street and County Road C, B and B2.

Continue to partner with Ramsey County to improve safety for bicyclists on the county's high-speed, high-volume arterial streets by coordinating efforts and pooling resources to ensure protected bike lanes or shared-use pathways continue to get built.

While local streets are often considered low stress, the county's analysis classifies most local streets in Roseville as moderate stress because the city's default posted speed limit is 30 mph which is too high for users of all ages and abilities to ride in mixed traffic (See Overarching Network Recommendation 4).

Ramsey County Bicycle Network Deficiency Analysis



1. Promote All Ages and Abilities Bikeways on All roads in the Half-Mile Arterial Grid

Several next steps include:

Keep the momentum going on these joint projects:

- Hamline Ave Bike Lane Demonstration Project
- County Road C 4-3 Lane Conversion

Continue involvement in the planning process for a longer-term re-visioning of Rice Street.

Share this Plan with the county, Met Council, and MnDOT.

Seek funding: By jointly applying for regional, state or federal grants, the city and county can secure funding for infrastructure upgrades, like protected bike lanes and safer intersections. This collaboration ensures a unified approach to road safety that addresses both local needs and county goals to create a more comprehensive, sustainable and bike-friendly transportation network.

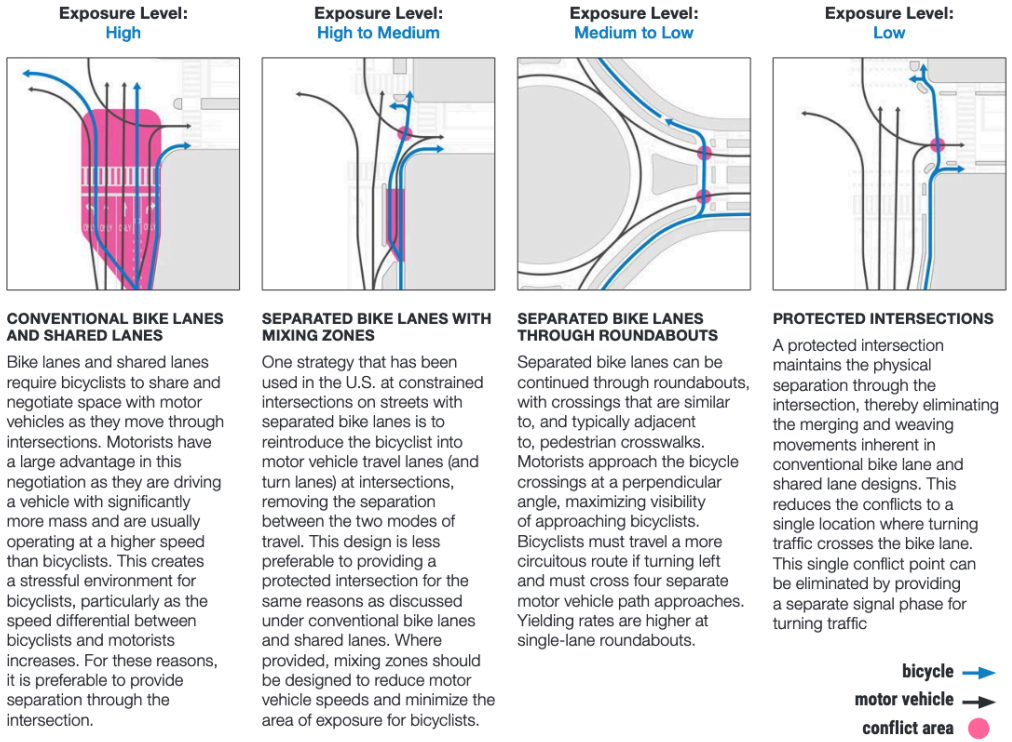
2. Address Complex Intersections and Barrier Crossings

Complex Intersections

A bike route is only as strong as its weakest intersection or crossing. Intersections are the place where the most vehicle-bike conflicts occur. Many intersections in Roseville are highly complex with multiple vehicle lanes, wide travel lanes, long crossing distances and overly wide turn radii which encourage drivers to make fast, sweeping turns. These auto-oriented designs increase exposure and risk for people biking (and walking), reduce safety and comfort of the bike network and can discourage bicycling altogether. As Roseville works to make streets safer and more welcoming for bicyclists of all ages and abilities intersection design is key – don't drop bicyclists at the intersection.

As a next step, consider doing a city-wide or corridor specific intersection and crossing safety analysis to prioritize intersections and crossings and start to identify safety counter measures and treatments. Remember: just because people are not *observed* biking at an intersection does not mean they do not *want* to bike through that intersection. Be proactive - observed bicycle traffic should not be a major input when deciding to build safer intersections.

Figure 7: Comparison of Bicyclist Comfort and Safety at Intersections



Source: MassDOT Separated Bike Lane Planning & Design Guide

2. Address Complex Intersections and Barrier Crossings

Barrier Crossings

A key takeaway from the network mapping workshop conducted during the development of this plan (Page 29) was the presence of major barriers throughout the city, namely Hwy 36, I-35W, and Hwy 280 as well as associated interchanges and on and off ramps. These freeways prevent low-traffic, low-volume local streets from being viable routes for cyclists as these local streets do not connect over these barriers, forcing cyclists on to high-volume, high-speed arterial streets. The continuity of this half-mile arterial street network is why an All Ages and Ability network should be implemented on these streets, but safe and comfortable crossings of barriers are essential to making the network truly All Ages and Abilities

MnDOT's on-going Highway 36 study, of which Roseville has been a key partner, is an important component to start addressing crossings over Hwy 36 for bicyclists in Roseville. The study started in 2023 and will conclude in spring 2025 and extends from Cleveland Ave to the west to the Bruce Vento Trail in Maplewood to the east. The study will describe ideas the study team analyzed to meet the project's purpose and need, including ideas for improving safety and comfort for people crossing over Hwy 36 by bike or foot. These ideas could include closing ramp access, adding protected or buffered bike lanes, setting a target speed of 30 mph on streets that cross Hwy 36, intersection treatments designed to slow driver speeds to less than 10 mph at crossings, and restricting right turns during red lights.

> *"Snelling Ave is downright dangerous on a bike but the only remotely viable options (Hamline and Fairview) are also dangerous and incredibly dilapidated. Could probably say the same regarding Hwy 61, using English or Edgerton as alternatives, these roads/crossings were not designed with cyclists in mind."*
>
> - Comment from MnDOT's Highway 36 study survey

In addition to Hwy 36, other barriers were identified as missing or in need of improvement during development of this Bike Plan:

- Hwy 280 in the southwest corner of the city
- Co Rd C2 over I-35W

Core Concepts

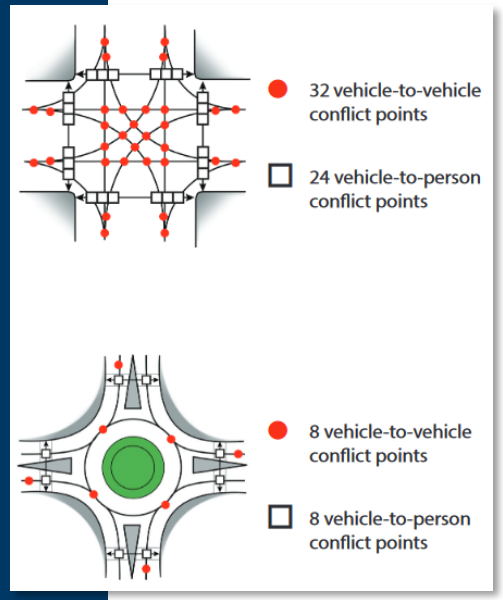
MODERN ROUNDABOUTS

A SAFER CHOICE BY DESIGN

Modern roundabouts, including mini or compact roundabouts, are a Federal Highway Administration (FHWA) **Proven Safety Countermeasure**, creating a safer intersection for all users:

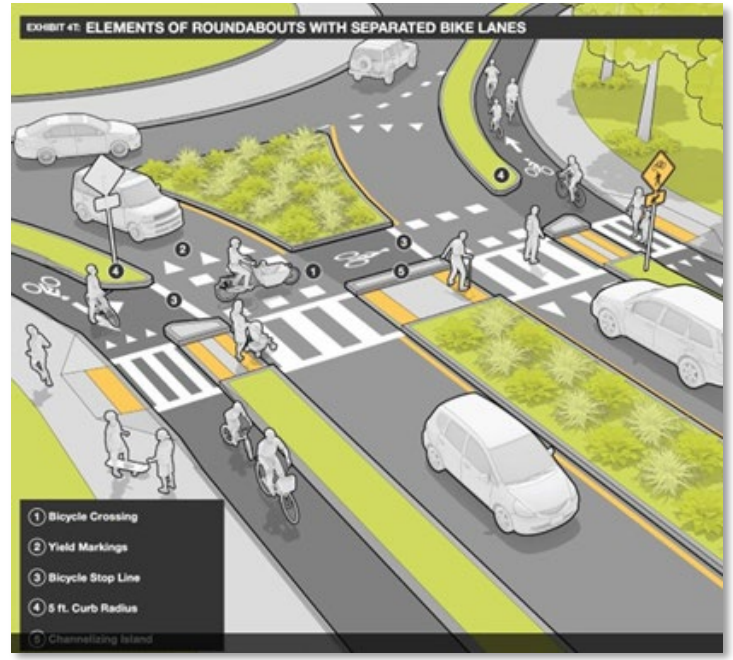
- 90% reduction in fatal crashes
- 75% reduction in injury crashes
- 30-40% reduction in pedestrian crashes
- 10% reduction in bicycle crashes
- 30-50% increase in traffic capacity

A single-lane modern roundabout can handle up to 25,000 vehicles per day (a compact roundabout slightly less); a double-lane roundabout can handle up to 43,000 vehicles per day. When designed properly, roundabouts ensure motorist speeds of 15-23 mph, which increases drivers' ability to judge and react to other people driving, walking and biking. Roundabouts also create gateway treatments, providing space for landscaping, local art and signage.



Photos (top to bottom right):

- Domed mini or compact roundabout with curb extensions in winter. (Detroit Lakes, MN)
- Compact roundabout with a painted rainbow creates a sense of arrival and welcome. (Richfield, MN)
- Single (and double) lane roundabouts have fewer vehicle-to-vehicle conflict points and vehicle-to-person conflict points than a signalized intersection.
- Massachusetts DOT diagram showing guidance for roundabouts with protected bike lanes and crossings.



Core Concepts

PROTECTED INTERCETIONS

DEDICATED SPACE FOR EACH MODE

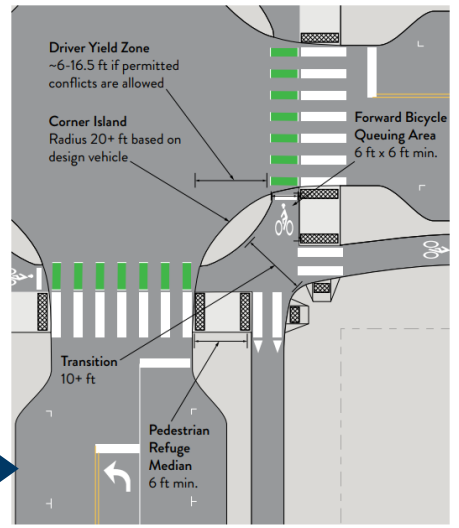
Protected intersections provide dedicated space for each mode of travel: walking, biking and driving. They can be implemented at stop-controlled or signalized intersections and are most often used with separated bike lanes, but may be used with conventional bike lanes, paved shoulders or even shared lanes. A variation on the standard protected intersection can also be designed for two-way bicycle traffic on one side of the road.

Protected intersection benefits:

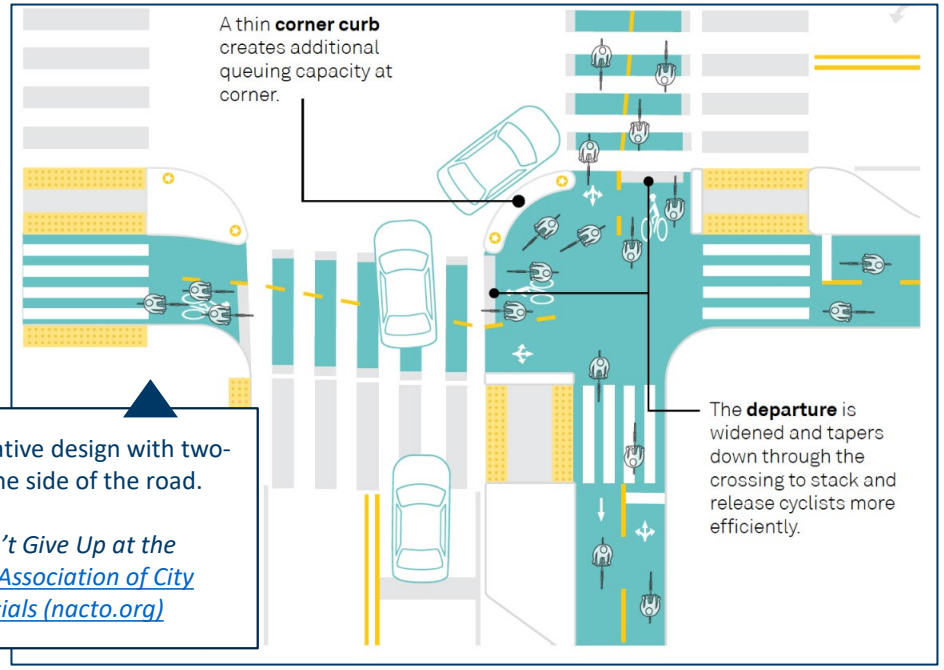
- Provide clear right-of-way assignment between modes
- Maintain physical separation between bicyclists and motor vehicles through an intersection
- Place queued bicyclists in front of and in clear view of drivers
- Improve visibility of bicyclists for motorists while turning
- Clearly define pedestrian and bicycle operating spaces
- Reduce pedestrian and bicycle crossing distance
- Reduce motor vehicle turning speed

Elements of protected intersections can be implemented without reconstruction using paint and bollards.
See NACTO's Don't Give Up at the Intersection (2019).

Source: MnDOT Bicycle Facility Design Manual, 5-37 and 5-38.



- People using a protected bike intersection. (Davis, CA) (above photo)
- Graphic illustrates key features: a corner island, bicycle queueing area, driver yield zone and pedestrian refuge median. *Source: MnDOT Bicycle Facility Design Manual*



Graphic illustrating alternative design with two-way bicycle traffic on one side of the road.

Source: NACTO, "Don't Give Up at the Intersection" National Association of City Transportation Officials (nacto.org)

3. Fill Gaps in Existing Shared-Use Path Network

Roseville has been building shared-use paths through its parks and in partnership with Ramsey County on several county roads, including County Road C.

A large section of County Road C west of Lexington Ave includes a shared-use path. A gap exists in this path between Cleveland Ave and Long Lake Rd. During the engagement process of this Plan, many people shared the desire for this gap to be closed. Additionally, a gaps in the shared-use path on Fairview Ave exist as well.

Filling in shorter, missing segments of shared-use path along already existing routes is one step towards creating a **network of All Ages and Abilities routes** through the city to connect more people to important destinations like Rosedale Center (Fairview Ave) and the Diagonal Trail in Minneapolis (Co Rd C).

Shared-use paths and driveways:

As shared-use path gaps are closed and new shared use paths are built, ensure where the path crosses driveways that the path cross slope is maintained (does not dip down). This prioritizes bicyclists' safety and through movement at minor crossings such as driveways. It slows motorists turning movements, increases motorists yielding behavior, and reduces conflicts between people driving and bicycling. As an added benefit communities find snow removal of paths that do not dip down at driveways work better for snowplow equipment.

During a bike audit along Rice St the group noted that the numerous driveways along the existing Shared-use path created a bumpy ride. Maintaining a relatively flat cross slope where a shared-use path crosses a driveway creates a more comfortable route for bicyclists.

4. Identify and Improve a Network of Traffic-Calmed Local Streets

Roseville's local street network (city-owned streets) feature **limited direct, continuous routes for bicyclists**. Routes using local streets are winding, have dead-ends or, are super blocks (long blocks with limited to no connectivity due to large parks, schools, shopping centers or other land use decisions).

However, local streets are currently some of the only alternatives to roads like Snelling Ave and Co Rd C, and **many cyclists in Roseville take advantage of local streets to supplement their route.** This means bicyclists ride in mixed traffic or a shoulder that is shared with pedestrians and/or parked vehicles. Some local streets are posted at 30 mph or higher. For example, parts of Victoria Ave are posted at 35 mph. The higher vehicle speeds reduce the safety and comfort for bicyclists, and most people who fall into the "interested but concerned" bicyclist category are likely not to bike.

While the local street network works for some bicyclists, it does not work for everyone. There is an opportunity to strengthen a subset of Roseville's local streets to create a **Traffic-Calmed Local Streets** network for riders of all ages and abilities. This network can be achieved through incremental, cost-effective approaches.

Identify the Network

Traffic-Calmed Local Streets can **supplement**, be an **alternative to**, or **provide connection** to the All Ages and Abilities routes identified in the Priority Bike Network on Page 67. A Traffic-Calmed Local Street network is especially important as All Ages and Abilities routes might take longer to implement given the need for reconstruction and coordination with other agencies to complete these routes.

This plan has identified three local routes (#8, #17, and #21 in the Priority Bike Network) to become **Traffic-Calmed Local Streets**, but the City should work to identify additional routes to add to this network that supplement and connect to the All Ages and Abilities routes by:

- Reviewing local network links identified in the 2021 Pathways plan
- Identifying continuous local street routes
- Reviewing public engagement collected for this Plan

4. Identify and Improve a Network of Traffic-Calmed Local Streets

Use Paint

Once the city has identified the Traffic-Calmed Local Street network, paint can be used to implement some routes. This approach allows for the city to take a context sensitive and Safe System Approach to Complete Streets. By narrowing travel lanes and reallocating space for painted bike lanes or painted buffered bike lanes, Roseville can create a clear visual separation between people biking and driving. Painted bike lanes also help slow motorists' speeds and serve as a visible reminder to drivers to be mindful of people biking, promoting a more cautious and considerate driving culture. Importantly, using paint provides a more flexible solution, allowing cities to test the effectiveness of new traffic patterns and adjust as needed. By reallocating space in this way, cities demonstrate a commitment to making streets safer and more accessible for all road users. See Core Concepts – Right-Sizing Streets and Core Concepts – Bike Lanes on Pages 72-74.

Core Concepts

RIGHT-SIZING STREETS

More communities are prioritizing a people-first approach to street design. To make streets safer for people walking, biking and driving, street spaces is being reallocated by reducing vehicle lane widths and removing lanes altogether. The gained space is reallocated towards wider sidewalks, bike lanes, separated bike lanes (also known as protected bike lanes or cycle tracks), street trees, on-street parking and more.

Right-sizing 5- or 4-lane streets to 3- or 2-lane streets works best on streets that have daily traffic volumes of 8,000 to 20,000 vehicles. As streets reach the higher traffic volumes additional intersection treatments, such as the modern roundabout, might be needed to more effectively manage vehicle traffic.

Photo (above): Main Street in Hamburg, NY is a major state truck route carrying 12,000 vehicles per day. The town of Hamburg and NYDOT replaced four intersections with single-lane modern roundabouts, removed two travel lanes and narrowed the remaining lanes to 10-feet, allowing wider sidewalks, park assist lanes and additional street trees.

Core Concepts

RIGHT-SIZING STREETS

> Travel lanes could be as narrow as 10 feet. Narrower lanes and narrower street width are associated with fewer crashes."
>
> *MnDOT Technical Memorandum No. 17-12-TS-05 and No. 18-09-TS-06*

> "Ten-foot lanes do not result in an increase in crashes or reduce vehicle capacity on roads with speeds of 45 mph or less. Narrower lane widths can contribute to lower vehicle operating speeds, which can increase safety for all roadway users."
>
> *FHWA Bicycle Selection Guide, 2019*

Travel Lane Width: Narrowing lanes can reduce the operating speed of traffic while also providing the additional space needed for bikeways. Ten-foot-wide lanes have a positive impact on a street's safety without impacting traffic operations. To support vulnerable users like pedestrians and bicyclists, streets should maximize buffer space and work to manage safe speeds for all by design.

National Association of Transportation Officials (NACTO): https://nacto.org/publication/urban-street-design-guide/street-design-elements/lane-width/

Context Sensitive: AASHTO's *A Policy on Geometric Design of Highways and Streets,* commonly referred to as the "Green Book," provides flexibility to use 10-foot-wide travel lanes in a variety of situations depending on operating speeds, volumes, traffic mix, design vehicle, horizontal curvature, use of on-street parking and land use context.

Minnesota State Aid Standards (Part 8820.9941) note minimum lane width of 10 feet may be allowed on streets with bike lanes when design speeds are less than 35 mph and when all street factors are considered (e.g., bus route, traffic mix, land use). It also notes engineering judgment should be used.

Core Concepts

BIKE LANES

SAFER STREETS FOR ALL

Cities investing in bicycling infrastructure—from bike lanes to fully separated or protected bike lanes (or cycle tracks)– achieve environmental and safety advantages through the increase of bicycle use. Bike lanes are one of FHWA's **Proven Safety Countermeasures.** Conventional (or painted) bike lanes designate an exclusive space for people biking with pavement markings and signage. Many benefits of bike lanes go beyond the bicyclist:

- Increases bicyclist comfort
- Creates visual separation between people biking and driving
- Increases predictability of bicyclist and motorist positioning and interaction
- Visually reminds motorists of bicyclists' right to the street
- Improves comfort for pedestrians by providing additional buffer space to the sidewalk
- Improves emergency response by providing space for motorists to pull over
- Supports more compact intersections as bike lanes provide an effective turning radius for large vehicles, allowing for other tools such as curb extensions to support people on foot

BIKE LANE SAFETY BENEFITS

49% ↓ in total crashes decreased on 4-lane undivided collectors and local roads due to marked space and lane reduction.

30% ↓ in total crashes decreased on 2-lane undivided collectors and local roads due to marked space.

Buffered bike lanes are almost always higher comfort than conventional bike lanes. Fully separated bicycle lanes provide further safety benefits and are more comfortable to people of all ages and abilities due to the greater separation between people biking and driving.

Sources:
https://highways.dot.gov/safety/proven-safety-countermeasures/bicycle-lanes
https://nacto.org/publication/urban-bikeway-design-guide/bike-lanes/
https://www.aarp.org/content/dam/aarp/livable-communities/livable-documents/documents-2014/Livability%20Fact%20Sheets/Bicycling-Fact-Sheet.pdf

4. Identify and Improve a Network of Traffic-Calmed Local Streets

Bicycle Boulevards:

Some routes in the **Traffic-Calmed Local Street** network might be low-speed and low-volume enough that painted bike lanes are not necessary and elements design to calm traffic and alert drivers to presence of cyclists at key locations are appropriate. Many of these routes simply require the city to sign and use pavement markings to mark these as shared use streets or "bicycle boulevards." In some cases, additional traffic calming tools should be considered to ensure motorists go 15-20 mph and vehicle volumes stay low. These traffic calming tools can include neighborhood traffic circles (Page 77), chicanes (Page 78), or median refuges with vehicle closure (Page 79). Roseville should consult the guides listed on Page 47 of this plan for additional treatments to consider for Bicycle Boulevards. How these treatments work together to form a Bicycle Boulevard is described on Page 76.

In addition to calming traffic, these treatments also act as wayfinding for cyclists, alerting them that they are on a route intended for them.

Improving biking conditions on a network of **Traffic-Calmed Local Streets** will provide a more comfortable parallel route to high-volume, high-speed major roads and can be implemented faster than improvements to major roads (many of which are county roads).

Safe Routes to School

Prioritizing bike routes to schools is a crucial first step in building a city's bike network because it encourages active transportation for children and promotes healthy habits from a young age. Ensuring safe routes for students also addresses concerns about road safety, giving parents more confidence to allow their children to bike to school. By focusing on schools, Roseville can establish a core network of bike routes that connect key neighborhoods, laying the foundation for a more extensive, citywide bike infrastructure.

Core Concepts

BICYCLE BOULEVARD

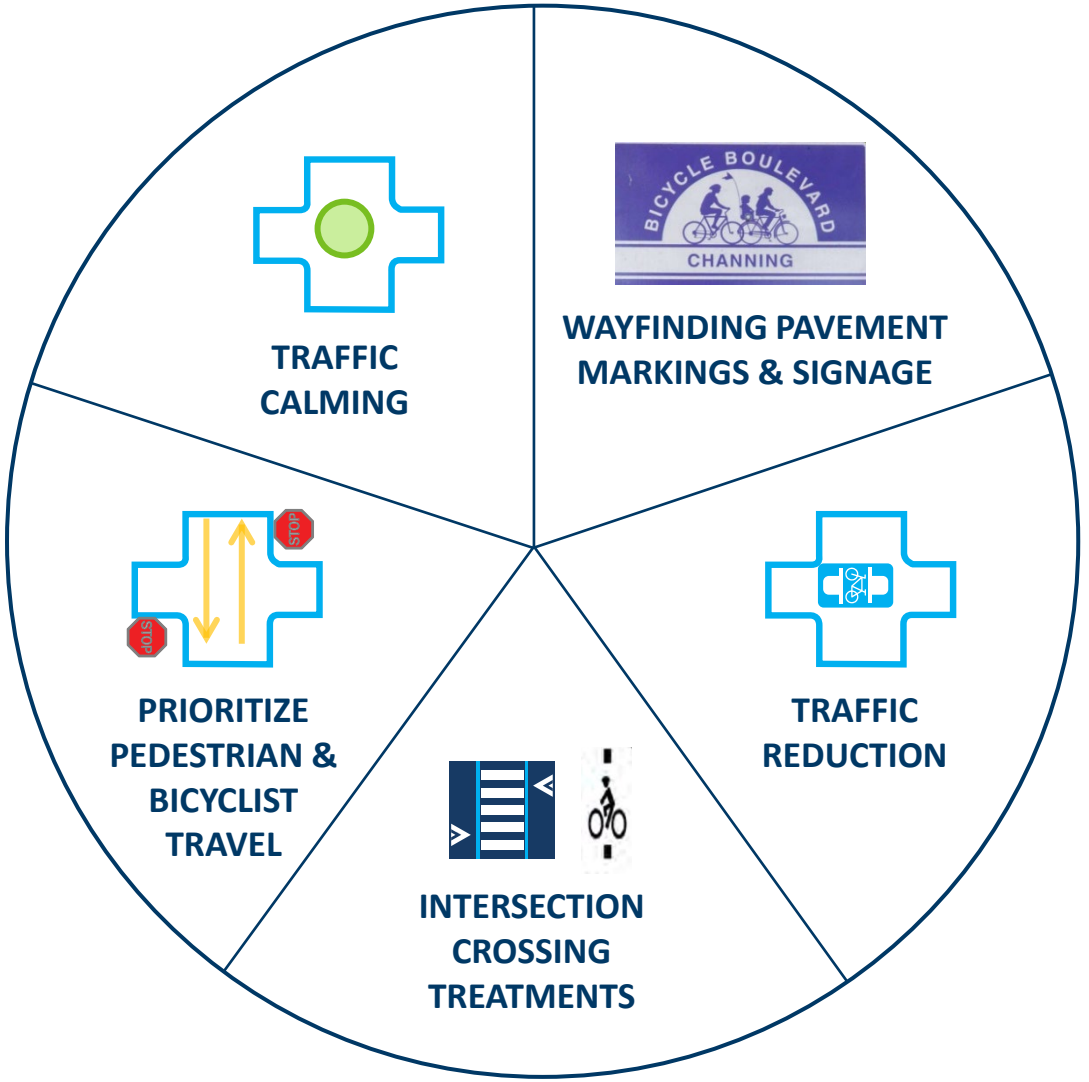
PRIORITIZE NEIGHBORHOOD ROUTES FOR PEOPLE BIKING

Bicycle boulevards (also called neighborways or neighborhood greenways) are **low-volume** and **low-speed residential streets** that **prioritize people walking** and **bicycling** and discourage motor vehicle through traffic. Street design elements are mixed and matched along the corridor to:

- Reduce or maintain low motor vehicle volumes
- Reduce or maintain low motor vehicle speeds
- Create a direct, coherent (logical) and continuous route
- Create access to key community destinations
- Create comfortable and safe intersection crossings
- Give priority to people walking and biking, reducing delay

Combined, these treatments create an **attractive, convenient and comfortable shared street environment** that is welcoming to people of all ages and abilities.

BICYCLE BOULEVARDS: A MIX OF DESIGN ELEMENTS



Adapted from Portland Bicycle Boulevard Guide: PortlandBicycleBoulevardGuidebook.pdf

Core Concepts

NEIGHBORHOOD TRAFFIC CIRCLE

20 MPH IS PLENTY ON RESIDENTIAL STREETS

Traffic circles (also called mini-circles) work to reduce vehicle speeds in a few ways.

First, they interrupt the “straightaway” feel of many residential streets that can signal to drivers to go a faster speed than the posted speed. Second, traffic circles narrow the intersection, slowing drivers’ through and turning movements. Slower intersection speeds increases motorists’ yielding behavior to people walking and biking.

Traffic circles are a proven safety treatment, reducing all types of intersection crashes by 90% and injury crashes by 97% (Seattle Department of Transportation). They are most effective when installed as a series at multiple intersections along a corridor.

▲ Traffic circles help achieve neighborhood-friendly speeds of 15-20 mph by design. (Saint Paul, MN)

▲ Traffic circles can be tested using low-cost materials. They keep people safely in motion, which is beneficial to people biking. (Edgewater, CO)

▲ Street trees in traffic circles adds to the traffic calming effect while also helping to better manage stormwater. (Seattle, WA)

▲ Traffic circles can be designed to create gateways into key neighborhoods or districts, like downtown, with features such as sculptures or artwork. (Holland, MI)

Core Concepts

CHICANES

20 MPH IS PLENTY ON RESIDENTIAL STREETS

Chicanes slow vehicle traffic and can add space for greening and stormwater management. They can also be implemented quickly with just paint and temporary bollards.

Chicanes are curb extensions that create a serpentine, horizontal shifting, effect. This shifting eliminates long stretches of straight streetway where motorists can pick up speed by requiring drivers to drive more slowly due to the lateral shift. They are often paired with median islands to further manage motorist speeds. Chicanes can be created with parking stalls, sidewalk extensions, or green infrastructure curb bump outs that allow for planting of native vegetation and rain gardens. Chicanes also create space for street furniture or public art.

Chicanes provide space for native vegetation as seen on Grand Avenue in Minneapolis, MN.

A designated space outside of the chicane element helps bicyclists avoid having to merge into traffic at a narrow pinchpoint, and creates a route for people walking, especially when no sidewalks exist. (Source: NACTO.org)

Core Concepts

MEDIAN REFUGE-Vehicle Closure

PRIORITIZE NEIGHBORHOOD ROUTES FOR PEOPLE BIKING

Median refuges that extend through the intersection where a bike boulevard crosses a busy street improve the crossing experience for people walking and biking, especially at major intersections by shortening the crossing distance into two separate sections with a place to stop in the middle. They also reduce vehicle traffic volumes on the bicycle boulevard by restricting vehicle turning movements on to and off the busy street.

Traffic analysis is needed to assess potential impact of diversion onto nearby streets and to consider additional traffic calming measures needed to mitigate any traffic impacts. Coordination would be needed with Ramsey County or MnDOT if the diverter is on their roadway. Impacts to emergency responders should be considered before implementation.

Median refuges with vehicle closure are only one method to keep traffic volume low on local streets. Roseville should consult the guides listed on Page 28 for additional traffic reduction strategies for Bicycle Boulevards.

Motorists can only take a right off the 40th Street Bicycle Boulevard at this traffic diverter. (Cedar Ave. Minneapolis, MN)

Motorists can make a right turn onto and off of the Charles Ave Bicycle Boulevard at Lexington Pkwy. (St. Paul, MN)

Setting Our Wheels in Motion

SECTION 5

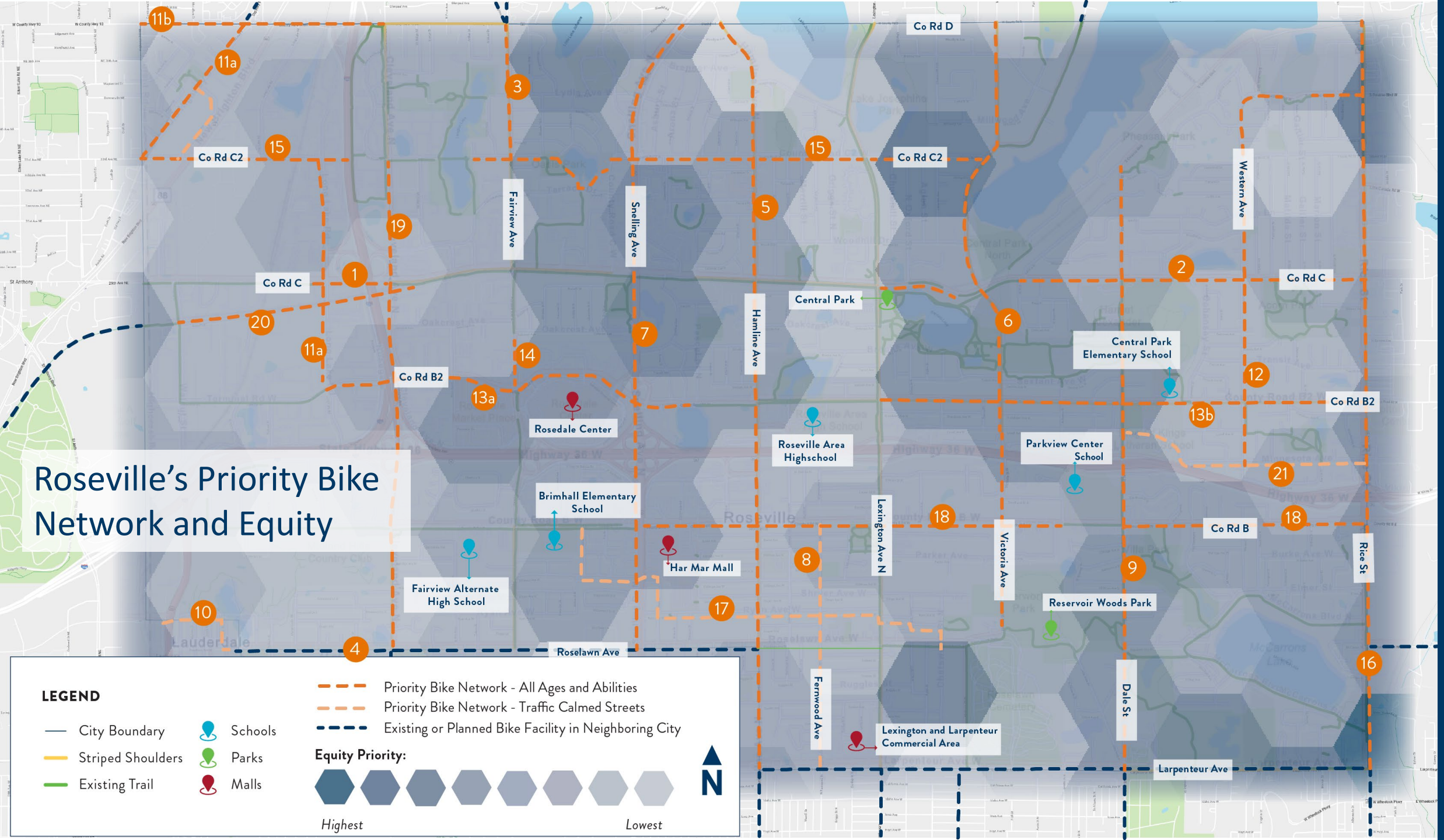
Prioritization

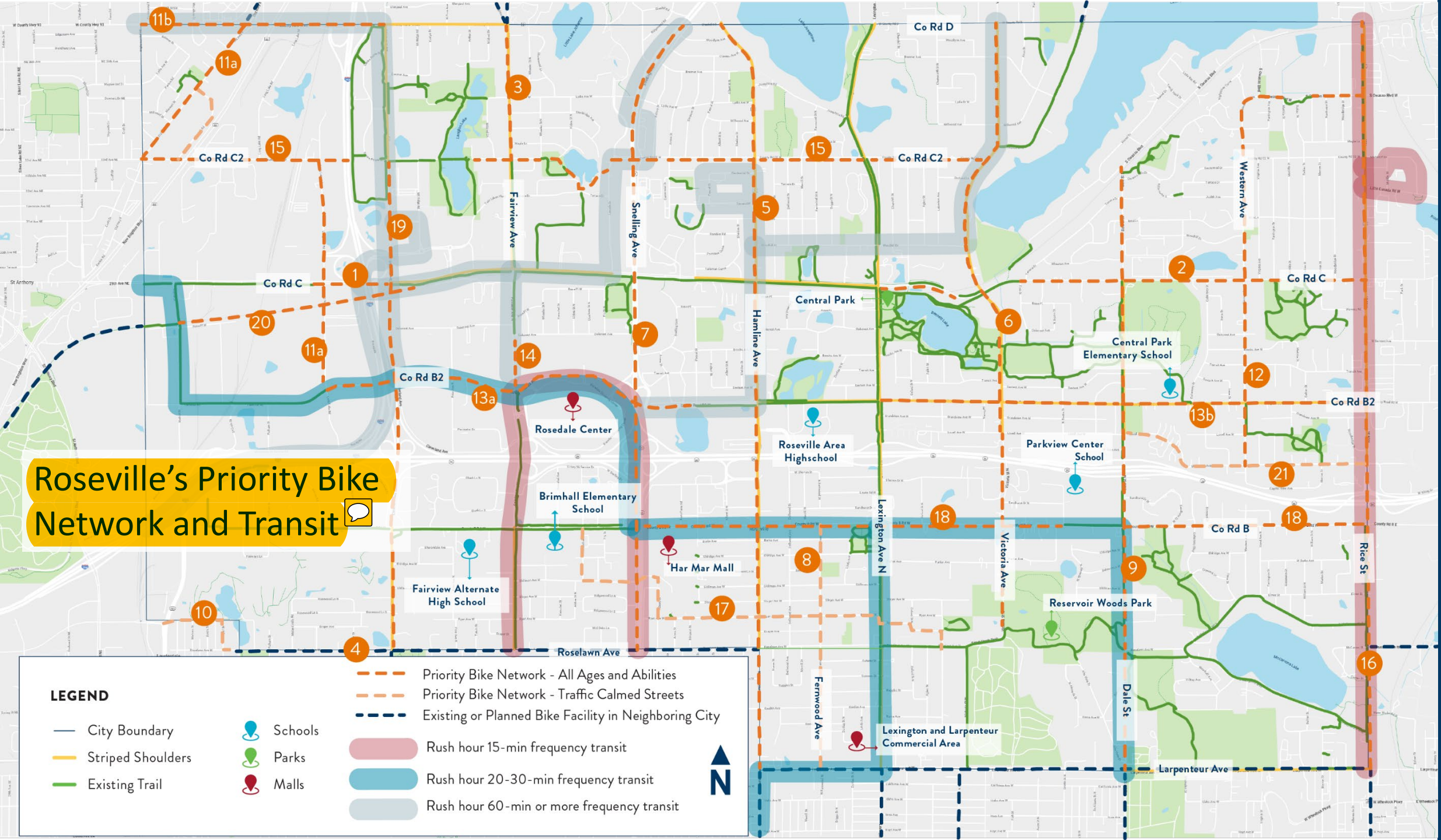
To get started, Roseville will need to prioritize Bike Network routes to determine what to program and to share their priorities with Ramsey County. This plan provides a starter prioritization framework on the following pages. Routes were prioritized using the following criteria and the results are summarized in the table starting on Page 84

- **Equity:** MnDOT's Active Transportation Equity score tool was used for this criteria. MnDOT's Active Transportation Equity score divides the state into small polygons and considers multiple demographic, public health, and existing infrastructure factors to assign an equity score to each polygon. Roseville's Priority Bike Network was overlayed with these polygons and each route was assigned a high, medium, or low equity priority based on the polygons they intersect. Bike Network routes intersecting with equity polygons with a score of 0-5 were assigned low equity priority, 4-10 were assigned medium equity priority, and 11-15 were assigned high equity priority. (See the map on Page 82)
- **Transit:** Connections to transit was a priority for the city when embarking on this bike planning process. Location and frequency of planned transit routes were compared with the Priority Bike Network and network routes were assigned a transit connectivity score based on their interaction with these routes. Metro Transit's Network Next and Network Now were used to identify planned transit routes in Roseville. (See the map on page 83)
- **Connections to Neighboring Bike Networks:** As a first-ring suburb, Roseville's bike network plays an important role in regional connectivity for cyclists. Additionally, engagement results indicated a strong desire for Roseville residents to be able to connect to neighboring cities by bike. Neighboring city's existing and planned bike routes were identified, and Roseville's Priority Bike Network routes were scored based on their connectivity to these routes. (see map on page 59)
- **Connections to School:** The ability of children to safely and comfortable use a cycling network speaks to its all ages and abilities nature. Prioritizing connections to school will help Roseville take the first steps to providing safe and comfortable biking conditions for this key group of bikers. Bike routes in the Priority Bike Network were compared to locations of schools and given a qualitative score based on their proximity or connection to schools in Roseville. (see map on page 59)

Roseville can expand on this starter prioritization by adding in additional metrics:

- **Safety:** perform a city-wide traffic safety analysis to determine intersections or street segments that have a history of being dangerous for people on bike.
- **Implementability:** Based on city and county programmed street projects and relative cost of appropriate improvements for the route (e.g. mini traffic circles vs full reconstruction to add a side path) the city can make a qualitative determination of which routes are most implementable and achieve those in the next 3-5 years.
- **Re-affirmed Routes:** Review results of the 2021 Pathways Master plan and consider giving segments or routes in the Bike Network extra priority if they were identified again during development of this Plan


Roseville’s Priority Bike Network and Equity
LEGEND
City Boundary
Striped Shoulders
Existing Trail
Schools
Parks
Malls
Priority Bike Network - All Ages and Abilities
Priority Bike Network - Traffic Calmed Streets
Existing or Planned Bike Facility in Neighboring City
Equity Priority:
Highest
Lowest
N
Co Rd D
Co Rd C2
Co Rd C
Co Rd B2
Co Rd B
Fairview Ave
Snelling Ave
Hamline Ave
Lexington Ave N
Victoria Ave
Western Ave
Rice St
Fernwood Ave
Dale St
Roselawn Ave
Larpenteur Ave
Central Park
Central Park Elementary School
Roseville Area Highschool
Parkview Center School
Rosedale Center
Har Mar Mall
Brimhall Elementary School
Fairview Alternate High School
Reservoir Woods Park
Lexington and Larpenteur Commercial Area
Roseville
Lauderdale
St Anthony
Roseville, MN
BIKE PLAN


Roseville’s Priority Bike Network and Transit
Co Rd D
Co Rd C2
Co Rd C
Co Rd B2
Co Rd B
Roselawn Ave
Larpenteur Ave
Fairview Ave
Snelling Ave
Hamline Ave
Lexington Ave N
Victoria Ave
Western Ave
Fernwood Ave
Dale St
Rice St
Central Park
Central Park Elementary School
Rosedale Center
Roseville Area Highschool
Parkview Center School
Brimhall Elementary School
Har Mar Mall
Fairview Alternate High School
Reservoir Woods Park
Lexington and Larpenteur Commercial Area
LEGEND
City Boundary
Striped Shoulders
Existing Trail
Schools
Parks
Malls
Priority Bike Network - All Ages and Abilities
Priority Bike Network - Traffic Calmed Streets
Existing or Planned Bike Facility in Neighboring City
Rush hour 15-min frequency transit
Rush hour 20-30-min frequency transit
Rush hour 60-min or more frequency transit
N
Roseville, MN
BIKE PLAN

Bicycle Priority Network Prioritization

	Route/Segment	Equity – MnDOT Active Transportation Equity Score	Transit Connectivity	Connects to Neighboring Network	Connects to School
1	County Rd C Between Long Lake Rd and Cleveland Ave	Medium	Low – connects to medium and low frequency bus routes	Medium – does not connect directly to neighboring network but completes route to the Diagonal Trail in Minneapolis	Low – no schools nearby
2	County Rd C – Central Park to Rice St	Medium	High – connects to future high frequency transit route on Rice St.	Low – does not connect directly to neighboring network	Medium – schools within ~1/2 mile
3	Fairview Ave – North-South Artery	Medium	High – completes connection to future high frequency transit route	High – connects directly to neighboring networks	Low – no schools nearby
4	Roselawn Ave across town from Reservoir Woods to Lauderdale	Medium	High – intersects existing and future high frequency transit	High – connects directly to neighboring network	Medium – schools within ~1/2 mile
5	Hamline Ave N	Medium	Medium – connects to low and medium frequency future transit routes	High – connects directly to neighboring network	High – connects directly, or almost directly, to Roseville Area Highschool

Bicycle Priority Network Prioritization

	Route/Segment	Equity – MnDOT Active Transportation Equity Score	Transit Connectivity	Connects to Neighboring Network	Connects to School
6	Victoria Ave from Reservoir Woods to Co Rd D	High	Medium – connects to low and medium frequency future transit routes	Medium – Does not connect to neighboring network but gets close	Medium – school within ~1/2 mile
7	Snelling Ave – Arden Hills to Roselawn Ave	High	High – connects to high frequency future transit routes	High – connects directly to neighboring network	Medium – school within ~1/2 mile
8	Fernwood Ave	Medium	Medium – connects to medium-frequency future transit routes	High – connects directly to neighboring network	Low – no schools nearby
9	Dale St from Larpenteur Ave to Owasso Blvd (Crossing Hwy 36)	Medium	Medium – Connects to and overlaps with medium-frequency future transit routes	High – connects directly to neighboring network	High – connects directly, or almost directly, to two schools
10	Crossing over Hwy 280 to Minneapolis	Medium	Medium – would provide connection to Minneapolis and additional transit opportunities but does not directly connect to transit within Roseville	High – Does not connect directly to neighboring facility but provides connection to extensive bike network in Minneapolis	Low – no schools nearby

Bicycle Priority Network Prioritization

	Route/Segment	Equity – MnDOT Active Transportation Equity Score	Transit Connectivity	Connects to Neighboring Network	Connects to School
11	Northwest Roseville Connections	Medium	Low – connects to low-frequency future transit routes	High – connects directly to neighboring network	Low – no schools nearby
12	Western Ave – Owasso to McCarron's	High	High – connects to high-frequency future transit routes	Low – does not connect directly to neighboring network	Medium – school within ~1/2 mile
13	Co Rd B2 from Long Lake Blvd to Rice St	Medium	High – connects to multiple future high-frequency transit routes and medium-frequency routes	Medium – does not connect directly to neighboring network but gets close	High – 13b connects directly to school
14	Fairview Ave - Oakcrest Ave to Co Rd B2	Medium	High – connects to and overlaps with future high-frequency transit routes	Low – does not connect directly to neighboring network	Low – no schools nearby
15	Co Rd C2	High	Low – connects to low-frequency future transit routes	Low – does not connect directly to neighboring network	Low – no schools nearby

Bicycle Priority Network Prioritization

	Route/Segment	Equity – MnDOT Active Transportation Equity Score	Transit Connectivity	Connection to Neighboring Network	Connects to School
16	Rice St	High	High – overlaps with future high-frequency transit route	High – connects directly to neighboring network	Low – no schools nearby
17	Brimhall Elementary School to Reservoir Woods Park	Medium	Medium – connects to future high- and medium-frequency transit routes	Medium – does not connect directly to neighboring network but gets close	High – connects directly to school
18	Co Rd B – Snelling Ave to Rice St	Medium	High – connects multiple high- and medium-frequency future (and existing) transit routes	Medium – does not connect directly to neighboring network but gets close	High – connects directly, or nearly directly, to school
19	Cleveland Ave – Co Rd C2 to Roselawn Ave	Medium	Medium – connects to future medium- and low-frequency transit routes	High – connects directly to neighboring network	Medium – school within ~1/2 mile
20	Connection from Co Rd C to Diagonal Trail	Medium	Medium – connects to future medium- and low-frequency transit routes	High – connects directly to neighboring network	Low – no schools nearby
21	Minnesota Ave/Lovell Ave from Rice St to Dale St	Medium	High – connects to future high-frequency transit routes	Low – does not connect directly to neighboring network	High – connects directly to Concordia Academy and King of Kings Lutheran School

Policy Recommendations

The following are policy recommendations that support bicycling.

Policy	Recommendation: What is being suggested?	Description: What is the policy?	Action Step: What is a next step(s) to take?
Toward Zero Deaths	Make an official and public commitment to a Toward Zero Deaths goal to achieve zero traffic fatalities or severe injuries among all road users within a set timeframe.	Toward Zero Deaths (also called Vision Zero) is a strategy to eliminate all traffic fatalities and severe injuries. A local policy lays out goals, timeline, stakeholders and a commitment to multi-disciplinary cooperation and collaboration, community engagement, transparency and equitable outcomes. Establishing a Toward Zero Deaths goal can help justify other changes in how streets are designed, maintained and operated which improves safety for all. Minnesota Toward Zero Deaths (TZD) is a program and network to support local and statewide traffic fatalities or severe injury reduction goals. *Learn more and join the Minnesota TZD network.*	❑ Educate and advance a Toward Zero Deaths goal for all road users within a set timeframe with the mayor, city council and city manager.
Safer Vehicle Operating Speeds	Take advantage of reconstruction projects to change street design to support slower operating speeds.	Roseville acknowledges that posted speed limits are less effective than roadway design at managing driver speeds. The city would like to begin pursuing changes in their street design process that prioritize slower vehicle operating speeds. This could look like establishing a **target speed** (the speed you want drivers to go) for different street types (e.g. 20 mph for Traffic-Calmed Local Streets) and establishing design standards to be used during redesign and reconstruction of these streets.	❑ Establish a "Target Speed" street design policy that states street elements should be designed to the desired operating speed, rather than the speed drivers are already going. ❑ Establish target speeds for different street types in the city.

Policy Recommendations

The following are policy recommendations that support bicycling.

Policy	Recommendation: What is being suggested?	Description: What is the policy?	Action Step: What is a next step(s) to take?
Land Use, Development Code/ Ordinance	Ensure current land use code and ordinances support compact, mixed-use practices to help encourage bicycling trips.	Retail and commercial sites are important local and regional destinations in Roseville. Land use is a big factor in supporting active trips. Retail and commercial development has historically prioritized the car with strip-style development which creates unclear and indirect access to business entrances for people arriving on foot or bike. As development and redevelopment of retail sites in Roseville continues, the city has an opportunity to influence the built form through development ordinance and design review. Compact, mixed-use development with short blocks, pedestrian and bike-only links or trails, buildings that front the street, ample bike parking and reducing or eliminating off-street parking requirements for vehicles allows active transportation (including transit) to work more effectively. Higher housing density located in and near retail or mixed-use commercial districts is key to addressing local housing needs and mode shift, as well. Density can be done well. For example, many cities are incentivizing Accessory Dwelling Units (ADUs) on residential, single family zoned, properties by eliminating off-street parking requirements to support this incremental development strategy.	❑ Review and revise land use development code/ ordinances to help promote bicycle trips

Policy Recommendations

The following are policy recommendations that support bicycling.

Policy	Recommendation: What is being suggested?	Description: What is the policy?	Action Step: What is a next step(s) to take?
Bike Parking in Private Development	Update parking ordinances to ensure bike parking is required in future development projects.	Secure, well located and highly accessible bike parking is necessary for biking to be a viable transportation option. It is a relatively compact and cost-effective parking strategy. Many cities have minimum ordinances for bike parking and bike racks. These requirements can include the number of spaces needed, where to locate them, availability of short- and long-term options and how to install. To encourage installation of bike parking ordinances often apply to new developments, counting toward vehicle parking requirements. *Resource: Essentials of Bike Parking, Association of Pedestrian and Bicycle Professionals*	❑ Review current parking and land-use/development ordinances to evaluate bike parking requirements and develop recommendations to increase bike parking. ❑ Develop a grant program to support private property owners who want to add bike parking.
Equitable Enforcement of Cyclist Behavior	Revise existing city policies related to disparities in traffic enforcement to include cyclists.	Roseville Police Department currently has policies in place to address the disparities communities of color experienced re-lated to traffic enforcement. Currently, the policies only refer to vehicular and pedestrian traffic. The current policy stresses a focus on moving violations versus equipment violations.	❑ Review and revise city policies related to disparities in traffic enforcement to include bicyclists. ❑ As is also referenced in the TZD practice recommendation in this Plan, consider use of TZD grant funds for additional driver and cyclists education efforts on bicycling laws and cyclist right of way.

Practice Recommendations

The following are practice or agency procedure recommendations that support bicycling.

Practice	Recommendation: What is being suggested?	Description: What is the practice?	Action Step: What is a next step(s) to take?
Complete Streets Checklist	Revise Complete Streets checklist to be used by public works and planning.	Roseville currently has a Complete Streets check list, but it should be revisited and revised. Complete Streets checklists are used to help put Complete Streets Policies into practice. Checklists are used at the start of any project to summarize data and information about the street and surrounding land use, record details of the project and identify specific improvements that can be incorporated. See an example of a Complete Streets Checklist.	❑ Review and revise the existing Complete Streets Checklist using current standards and examples to use in support of Complete Streets Policy.
Design Guidance	Adopt or endorse national or state street design guides.	Rewriting street design guides can be time intensive and cost prohibitive for many communities. To support implementation of Complete Streets and this Plan, adopt or endorse state and national design guides to enable the use of best practices and design flexibility. Such as: • National Association of City Transportation Officials (NACTO) Urban Street Design Guide • NACTO Urban Bikeway Design Guide and Designing for Small Things with Wheels (guidance on e-bikes) • Federal Highway Administration (FHWA) Small Town and Rural Multimodal Networks • MnDOT Bicycle Facility Design Manual	❑ Review and adopt or endorse design guide(s) to be used by city staff and consultants on street projects.

Practice Recommendations

The following are practice or agency procedure recommendations that support bicycling.

Practice	Recommendation: What is being suggested?	Description: What is the practice?	Action Step: What is a next step(s) to take?
Bike Parking in Street Projects	Update bicycle parking practices to expand bicycle racks in the right of way to accommodate the diversity of bike types (e.g., adaptive and cargo bikes, e-bikes, scooters).	Cities have been providing on-street parking, often for free, for vehicles for decades. To help encourage and achieve local mode shift goals and ensure biking is a viable transportation option, future capital street projects should include an approach to reserving curbside or furnishing zone of sidewalks for bike racks. These spaces should include covered, weather protected, options, support electric charging needs and accommodate larger bikes (e.g., cargo or adaptive). Bike racks can be customized to reflect the character of the community and serve as a public art element.	❑ Complete a citywide evaluation of bike rack installations and develop a process to identify locations to add bike racks across the city. ❑ Install bicycle parking with all capital street projects.
Maintenance Procedures	Ensure annual budget provides for regular maintenance and minor repairs of active transportation facilities.	Shared use paths, on-street bicycle facilities and sidewalks require regular maintenance. People walking and biking are more susceptible than motor vehicles to pavement irregularities such as cracks, potholes, broken glass and gravel. Establishing an annual process for assessing conditions and determining where repairs are needed, including addressing ADA compliance is an important practice to maintaining active transportation network.	❑ Complete a condition inventory of sidewalks, multi-use trails or paths and ADA compliance. ❑ Establish and prioritize repair locations using a data driven approach based on inventory data. ❑ Confirm location of and fill gaps in the bike network, prioritizing gaps near parks and other public destinations.

Practice Recommendations

The following are practice or agency procedure recommendations that support bicycling.

Practice	Recommendation: What is being suggested?	Description: What is the practice?	Action Step: What is a next step(s) to take?
Winter Maintenance	Ensure that bikeways and walkways are cleared from snow in a timely manner.	Maintaining winter access for people walking and biking in the city is critically important. Winter maintenance often requires many people and institutions throughout the city help ensure paths are kept clear and passable. Currently, the city is responsible for clearing all shared-use paths within the city within 24 hours after snow has quit falling and after a minimum of 2” of accumulated snowfall. Additionally, the city does not allow parking on city streets after two or more inches of continuous snowfall until streets have been plowed curb to curb.	❑ Expand education and awareness efforts for residents and businesses on city’s bikeway snow and ice removal ordinance, related standards and responsibilities. ❑ Establish a city-run corner and transit clearing program. ❑ Determine best way to ensure existing and future on-street bike lanes and bicycle boulevards have the same quality of snow and ice clearance as protected bike lanes and shared use paths.

Practice Recommendations

The following are practice or agency procedure recommendations that support bicycling.

Practice	Recommendation: What is being suggested?	Description: What is the practice?	Action Step: What is a next step(s) to take?
Toward Zero Deaths (TZD)	Continue TZD program efforts through participation in County-wide program facilitated by the Saint Paul Police Department.	Toward Zero Deaths (also called Vision Zero) is a strategy to eliminate all traffic fatalities and severe injuries. A local policy lays out goals, timeline, stakeholders and a commitment to multi-disciplinary cooperation and collaboration, community engagement, transparency and equitable outcomes. Establishing a Toward Zero Deaths goal can help justify other changes in how streets are designed, maintained and operated which improves safety for all. Minnesota Toward Zero Deaths (TZD) is a program and network to support local and statewide traffic fatalities or severe injury reduction goals. *Learn more and join the Minnesota TZD network*. Roseville currently partners with the Saint Paul Police Department for a county-wide TZD grant provided through MnDOT.	❑ Continue, and explore expanding, the city's role in county-wide TZD efforts coordinated by the Saint Paul Police Department. ❑ Explore using funds available through TZD program participation towards driver and cyclist education on bicycling laws and rights of way.

Program Recommendations

The following are program recommendations that support bicycling.

Program	Recommendation: What is being suggested?	Description: What is the program?	Action Step: What is a next step(s) to take?
Safe Routes to School (SRTS)	Continue to support local Safe Routes to School program efforts.	Safe Routes to School programs improve safety, reduce traffic and improve air quality near schools through a multidisciplinary approach that is structured around the "6 Es." These are evaluation, education, encouragement, equity, engagement and engineering. Cities can continue to support by leading engineering efforts by prioritizing active transportation investments along key routes to school. Related to education, in 2023 state legislation was passed that requires all public-school students receive instruction in safe walking and bicycling skills at the beginning of the school year. *Resource: Walk and Bike Safety Education for K-8 Students, MnDOT*	❑ Work with school partners to apply for MnDOT planning, boost or infrastructure grants to enact this Plan and a SRTS Plan. *See MnDOT's Safe Routes to School Grant Funding page for opportunities.*
School Streets and Park & Walk Programs	Pilot School Streets and/or Park & Walk in partnership with neighborhood schools.	School Streets are temporary car-free zones adjacent to or leading up to a school. School Streets help manage traffic and improve safety during school arrival and dismissal by eliminating vehicle congestion in front of schools. This creates an environment that encourages children and caregivers to walk, bike, roll, paly and learn before, during and after school. Often School Streets are paired with Park & Walk zones where school buses and/or caregivers drop students at an established location(s) a few blocks from school. School staff, parents and other volunteers walk the kids to/from school.	❑ Collaborate with school partners and neighborhood residents on a School Street pilot. *See Minnesota Safe Routes to School Guide on School Streets and Park & Walk and learn from Seattle Department of Transportation School Streets.*

Program Recommendations

The following are program recommendations that support bicycling.

Program	Recommendation: What is being suggested?	Description: What is the program?	Action Step: What is a next step(s) to take?
Bicycle Rack and Corral Cost Share Program	Develop a bike rack and corral cost share program.	Cities are instituting bike rack programs that allows businesses and other eligible organizations to request bike racks for the public right of way in front of their property. This includes bike corrals that can store 10-12 bikes , including covered, placed in an on-street parking stall. Minneapolis allows eligible businesses to be reimbursed up to 50% of the bicycle rack or corral cost and 50% of the installation cost. Schools, libraries, parks and other eligible public facilities can request to receive racks at no cost.	❑ Assess current bike parking availability and develop recommendations to increase bike parking through a cost share bike rack and corral program.
E-bike Rebate Program	Develop and pilot and E-bike rebate program.	To encourage more people to bicycle and make bicycling more accessible the city can establish its own e-bike rebate program.	❑ Research how other cities have established rebate programs.
Wayfinding Program	Continue developing a wayfinding program for cyclists	Help existing and new bicyclists identify bike routes they can use, either now or as the Priority Network is implemented. Wayfinding can consist of virtual or print maps, signage and pavement markings.	❑ Continue developing a wayfinding program for cyclists ❑ Develop a plan to update the wayfinding program annually as projects are completed and based on public feedback

State and Federal Funding for Active Transportation

In addition to local Capital Improvement Program funds, local jurisdictions may seek state and federal funding to assist with development of the active transportation network. Most programs involve applying through one of these agencies:

- Federal Highway Administration (FHWA)
- Minnesota Department of Transportation (MnDOT)
- Minnesota Department of Natural Resources (MNDNR)
- Greater Minnesota Regional Parks and Trails Commission (GMRPTC)
- Legislative-Citizen Commission on Minnesota Resources (LCCMR)

Grants are sometimes also available through organizations that support economic development and tourism, public health, and conservation and the natural environment. Private donations are popular for projects that support community recreation and well-being.

Source	Funds	Purpose
FHWA	Safe Streets and Roads for All (SS4A)	Low-cost infrastructure; education; monitoring and evaluation
FHWA Reconnecting Communities Pilot	Reconnecting Communities Pilot (RCP)	Creating connections across highways
MnDOT Active Transportation Program	Infrastructure Grants, Planning Assistance, Quick Build/Demonstration Projects	Support active transportation capacity building and facilities
MnDOT Safe Routes to School	Planning Assistance and Boost grants	Support current SRTS plans and programs
MnDOT Safe Routes to School	Infrastructure Funds	Construct sidewalks; improve crossings
MnDOT (Federal funding)	Transportation Alternatives (TAP)	New pedestrian and bike facilities
MnDOT	State Aid for Local Transportation (SALT)	Highway projects

State and Federal Funding for Active Transportation

Source	Funds	Purpose
Metropolitan Council	Regional Solicitation	Multi-modal infrastructure projects that focus on outcomes like moving people more effectively, managing congestion, safer streets for people walking and biking and improving air quality
MN DNR	Regional Trail Grant	Motorized, non-motorized and joint trail usage
MN DNR	Outdoor Recreation Grant Program	Matching grant for the cost of acquisition, development, and/or redevelopment of local parks and recreation area
MN DNR	Local Trail Connections Program	Supports acquisition and development of trail linkages
MN DNR (Federal funding)	Federal Recreational Trail Program	New trails, trail maintenance and trailhead construction
Greater Minnesota Regional Parks and Trails Commission	Parks and Trails Legacy Grant Program	“Regionally Designated” parks and trails can be funded
Legislative-Citizen Commission on Minnesota Resources (LCCMR)	Environment and Natural Resources Trust Fund (ENRTF)	Activities that protect, conserve, preserve and enhances Minnesota's air, water, land, fish, wildlife and other natural resources

Next Steps

1) Identify a network of Traffic-Calmed Local Streets

This plan identifies three Traffic-Calmed Local Street routes in the Priority Bike Network, but the city will work to identify additional Traffic-Calmed Local Street routes to add to the Priority Bike Network. These routes can be upgraded with bike lanes using paint as well as traffic calming treatments to achieve a low-speed, low-volume environment for bicyclists to share the street with drivers. Traffic-Calmed Local Streets provide an alternative and redundant route to the All Ages and Abilities routes on arterial streets in Roseville and can be implemented without reconstruction and using temporary materials.

2) Identify Priority Intersections and Barrier Crossings for Improvement

Given that Roseville's Priority Bike Network is comprised of the half-mile grid of major roads, plus additional Traffic-Calmed Local Streets, there are many intersections and barriers in the network that require improvement. Use engagement data collected for this Plan and crash data to prioritize intersections for improvements.

3) Finalize Prioritization

This plan provides a preliminary prioritization framework for Roseville to start planning and implementing projects. The City should add to and finalize this prioritization by considering:

- Bike crash history and trends
- Implementability
- Priority projects from the 2021 Pathways Master Plan

Next Steps

4) Conduct additional engagement.

A public comment period and focused engagement with equity communities are needed to collect additional input and finalize this plan. The city has identified these as critical steps to adoption and successful implementation of this plan.

- Conduct focused engagement with equity communities in Roseville and update this plan based on feedback.
- Develop a shorter, two-page summary of this plan to make public review more accessible.
- Collect broad public comment on this plan, revise plan based on comments and share back to the public how comments were incorporated.

5) Build momentum and participation by doing low-cost, quick build projects or events to raise awareness.

Taking incremental steps to demonstrate change helps projects get realized much faster than the typical street design process allows. This saves money and time in the long run and builds momentum and public appetite for permanent change.

- Use paint or temporary devices! When and where possible test curb extensions to tighten curb radii to slow turning motorists and shorten crossing distances. Or test narrower travel lanes (10-feet) to paint a buffered bike lanes, providing more visual separation between people biking and driving.
- Sign and use pavement markings to mark on-street bike lanes.
- Identify a priority project from this plan that is a candidate for a demonstration project. Work with community members to further test and refine ideas.

Next Steps

6) Coordinate and advocate for this Plan

- Adopt the Plan.
- Share it with partners.
- Continue to coordinate Ramsey County and other agencies to further corridor and street design in support of biking.

7) Put the plan into action!

Actively use this plan as a living guide and start to program studies, update practices and implement other low-cost action items to advance Roseville's Priority Bike Network.

Moving Forward

SECTION 5

A Call to Action

COMMUNITY CHARGE

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed est felis, commodo sit amet lectus at, suscipit blandit massa. Pellentesque interdum, est vitae efficitur consequat, lectus tortor sodales lectus, vitae imperdiet tortor magna a nibh. Cras malesuada tincidunt interdum.

Placeholder

Etiam ut ante risus. Curabitur iaculis, eros a mollis lacinia, ante lectus mollis lacus, eu feugiat lectus ante non justo. Integer vel felis eget lectus congue pulvinar. Mauris vel fermentum eros. Aliquam accumsan tincidunt mi, ac accumsan eros varius eu. Nulla blandit magna sit amet eros condimentum convallis. Duis odio quam, faucibus a tortor id, luctus posuere sem. Suspendisse non nulla interdum, accumsan erat sit amet, venenatis quam. Proin porta vulputate arcu non aliquam. Nulla ante ex, efficitur vitae facilisis vel, bibendum quis elit.

Lorem ipsum dolor sit amet

Etiam ut ante risus. Curabitur iaculis, eros a mollis lacinia, ante lectus mollis lacus, eu feugiat lectus ante non justo.

Lorem ipsum dolor sit amet

Etiam ut ante risus. Curabitur iaculis, eros a mollis lacinia, ante lectus mollis lacus, eu feugiat lectus ante non justo.

Lorem ipsum

Etiam ut ante risus. Curabitur iaculis, eros a mollis lacinia, ante lectus mollis lacus, eu feugiat lectus ante non justo. Integer vel felis eget lectus congue pulvinar. Mauris vel fermentum eros. Aliquam accumsan tincidunt mi, ac accumsan eros varius eu. Nulla blandit magna sit amet eros condimentum convallis. Duis odio quam, faucibus a tortor id, luctus posuere sem. Suspendisse non nulla interdum, accumsan erat sit amet, venenatis quam. Proin porta vulputate arcu non aliquam. Nulla ante ex, efficitur vitae facilisis vel, bibendum quis elit.