

Implementation

This plan focuses on the long range vision for the bike route network

Bicycling is a viable mode of transportation. This plan, with community input, is a long-term vision for bikeways within Duluth-Superior Metropolitan Area. The ideas in this plan can be implemented in a number of ways. Funding is often a large barrier to building and maintaining bikeways, meaning implementation depends on volunteers to champion projects. The implementation also involves working closely with the community, property owners, and others. Some projects can be accomplished with volunteers, some with the help of local jurisdictions or agencies, and some with donations or grants. Some bikeways will need to involve many partners in the implementation.

Additional considerations for bikeway implementation involve determining alignments, the surface type needed, construction and engineering needs, environmental impacts, liabilities, legal constraints, potential conflicts with other user groups, property ownership, maintenance, security, marketing, wayfinding, and more. Some additional guides and resources are listed in the appendix that may be able to assist in some of these areas.

Implementation will only be possible with citizen by-in/driven and will take a coordinated effort between roadway jurisdictions, private property owners, community groups, citizens and impacted stakeholders.

Key Bikeway Implementation Guidance

NACTO – Urban Bikeway Design Guide

NACTO – Design for All Ages & Abilities, contextual guidance for high-comfort bicycle facilities.

FHWA – Incorporating On-Road Bicycle Networks into Resurfacing Projects

FHWA – Small Town & Rural Multimodal Networks

Addressing Issues

Common Barriers and Solutions

1. Safety - do not feel safe bicycling in the street.
 - a. Separate bikelanes from motor vehicle traffic
 - b. Reduce motorist-bicyclists confusion & frustration – provide clear direction
2. Comfort - due to weather and street condition
 - a. Regular maintenance of the streets with bikeways
 - b. Reliable snow removal and street sweeping
3. Hills – too steep of terrain, too many hills.
 - a. Point cyclists (through mapping, pavement markings and signage) towards uphill routes that are not too steep, provide bike climbing lanes and have off-street paths zig-zag up the hill.
 - b. Improve bike to transit connections
 - c. Allow for on-board bicycle options
 - d. Install staircase bicycle ramps
4. Inconvenient – distance and can't carry other items
 - a. Create direct routes on the longer distance bikeways, less meandering.
 - b. Continue school bicycling education programs
 - c. Show what is possible – educate public about commuter gear at events, demonstrate the latest gear for helping people car items by bike.
5. Do not have a bike
 - a. Expand bike share, particularly in areas of low income, low car ownership.

Common Barriers to Bicycling

Safety

Comfort

Hills

Inconvenient

No bike available

- b. Bike maintenance workshops and support such as free pop-up bike shops.
- c. Create a program to utilize the numerous bicycles that are picked up by transit and the police to get out to people who do not have a bike.

General Recommendations

1. Connect the major traffic generators (schools, commercial hubs, retail centers, job clusters) with the most direct routes.
2. Try demonstration and pilot projects. Give people a taste of what the changes might be like. One-day road diets and pop-up protected bike lanes let people test the concept before any large expenditures are made. Pilot projects need to be well thought-out, but they can be adjusted. Make adjustments based on actual data, not forecasts and fears of change,” says Campbell.
3. Continue to research, develop and expand bike share options in the Duluth-Superior area.
4. Incorporate bikeway design best practices, creative place-making, public art opportunities, and green infrastructure into street, transit and trail projects.
5. Include in local development standards, improve bikeway connectivity and support facilities from public bikeway infrastructure to increase local access to schools, businesses and services, including bikeways through parking lots and direct and separated connections between bikeway facility and major entrance points into the destination.
6. Up and Down the Hill
 - o Provide wayfinding through mapping, signage and pavement markings on routes that have easier hill climbs.

- Add bike rails to public stairways, where streets or ramps do not exist and that provide key connections to and/or between bikeways.
 - Include bike transporting as part of any study examining the feasibility of improving getting up & down the hill in Duluth, whether it be gondola or funicular infrastructure.
7. Take into extra consideration intersections as well as design of the bikeway when placing bikeway facilities on streets, with high traffic speeds, higher traffic volumes, along door zones, angled parking, roads with regularly truck deliveries.
 8. Policy - Design for multimodal, including bikes, can only exclude bike infrastructure based on limited exceptions – must prove that there is no other way. Instead of making the case to include bicycle infrastructure, the case must be made to exclude it.
 9. Streets with high demand for bicycle ridership should not be re-routed. Improvements to these roads should be done in ways that makes them practical to use for commuting by bicycle.
 10. Streets with low demand for bicycle ridership, it is acceptable to re-route the bike route to a parallel or equivalent route or segment, even if it means its less direct if it is more feasible to do so.
 11. Develop a functional classification system for bikeways
 12. Review all traffic signal systems to ensure bicycle detection is present and effectively working.

13. Overall preference for bikeways is a separated facility. Except for low volume, low speed streets, goal is to have a separated from motor vehicle traffic bikeway facility.
14. Most direct route as possible regardless of motor vehicle volumes. This means that main thoroughfares are more preferred than side streets.
15. Provide bikeway transportation facility route alternatives to trail corridors that are particularly used for recreation. Lakewalk is a route where bicyclists currently take it but would prefer another route instead.
16. Bicycle Advisory Committee – with at minimum every other month meetings. Consider a city structure, particularly with the two largest cities where bicycle issues arise more frequently, Duluth, MN and Superior, WI.
17. High quality bicycle parking- consider user when deciding on parking:
 - Short term visitors, generally not everyday – bike racks located near front doors, with natural surveillance and visibility. Do not place bike racks behind buildings in hidden corners. Encourages theft.
 - Bike parking should be available at all public places.
 - Bike parking shelters – at schools, and other places where large numbers of people bike frequently and leave bikes for longer periods of time.
 - Identify hot spot areas where bicycles are frequently stolen or vandalized and devise solutions to address this issue, including but not limited too installing bike racks that are more vandal resistant and relocating bike racks to a more visible area with better natural surveillance
 - Secure bike parking options – provide options for secure bike parking including lockers, secure entry area.
 - Major event movable/temporary bike racks – for major events have a set of bike racks available to be moved.

18. Drainage Grates – replace all drainage grates along bikeways with bike friendly grates.
19. Railroad Crossings – all bikeways should cross perpendicular to the tracks. Identify all locations where this is not the case and propose a timeline for fixing this issue.

Performance Measurement

This plan while long range in vision, is meant to provide a method in which to track progress as well as provide flexibility to learn through trial and error. A number of key indicators should be annually be tracked including:

- Level of Traffic Stress – perform analysis on the bikeway system. This grading system will provide jurisdictions an objective score. Improvements over time.
- Total bicycle network mileage, including high speed roads bike facilities and the mileage of all ages and abilities network.
- Level of Use – conduct an annual bike count in September (following the National Bike and Ped Documentation Project protocols) focusing on trends (changes over time) and before and after changes with new and/or improved bikeway infrastructure.
- Level of Use – count number of bicycles parked at all schools each month.
- Total percent of students who have a high quality, all ages and abilities bikeway to school.
- Crash Rates – serious and fatalities – track and improve reporting of cyclists crashes.

- Sidewalk Riding – track percent of people who bicycle riding on sidewalks
- Gender & Children Gap – track the number gender and age of people who bicycle.
- Bicycle parking – track the total number of publicly available bicycle parking available to ensure people have a secure and legal place to park their bicycle. Public and private.

Future Plan updates

As is the case with all planning documents, this plan will require future updates to remain useful and relevant. The current state of bicycle planning nationwide is rapidly evolving and U.S. cities are embarking on an age of experimentation with new bicycle facilities. Cities are beginning to design and build new types of bikeways that were relatively unknown as little as five years ago. It is anticipated that bicycle planning innovations will continue to accelerate. It is recommended that this plan be reviewed annually to take advantage of new opportunities, new innovations, and new trends. It is likely that over the coming years, new priorities or strategies will emerge, and new initiatives and programs will be desired.