

City of Brooklyn Park

Pedestrian & Bicycle Plan



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Pedestrian and Bicycle Plan

October 30, 2015

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Executive Summary



A Walkable, Bikeable Brooklyn Park

Walking and biking are basic and sustainable forms of transportation that, when adequately accommodated, provide healthy, affordable, and enjoyable mobility options for people through a wide range of ages, abilities and incomes. Walkable, bikeable places encourage non-motorized travel by providing comfortable, interesting, and useful walking and biking routes and destinations. Walking and bicycling provide additional transportation options and freedom of mobility for people of all ages, abilities and incomes, including the young and elderly.

This plan offers infrastructure and programming recommendations to improve walking and biking conditions in Brooklyn Park and make walking and riding a bike more convenient and enjoyable travel choices for people who live, work, and play in the city.

Vision

“People of all ages and abilities enjoy walking and biking for transportation, recreation, and fitness in Brooklyn Park. Staying healthy and active in the city is as easy as walking to transit, biking to school, meeting friends for dinner, or running errands.”

Approach

This plan is based on an active living approach that seeks to create conditions that invite more Brooklyn Park residents to walk or bike more often to meet their transportation and mobility needs. In addition, this plan strives to connect Brooklyn Park residents to destinations including schools, parks, commercial areas, employment centers, transit corridors, city services, and community gathering places through a network of reasonably direct, comfortable, and inviting routes.

What's in the plan

This plan envisions a citywide pedestrian and bicycle network based on community guidance, network analysis, and best practices. This plan includes:

- An expanded pedestrian and bicycle network that addresses gaps and enhances connectivity with a denser fabric of sidewalks, and on- and off-street bikeways;
- Detailed school zone improvements to make it possible for more students to walk or ride a bike to school;
- Guidance for policy and programming improvements including wayfinding, bicycle parking, and educational, encouragement, and enforcement programs;
- Priority improvement areas for short-term corridor and intersection investments;
- Recommended performance measures to help the city track progress during implementation.

Guiding principles

Recommendations are guided by the following principles:

Attract new users

Invite more users to the network by providing safe, comfortable, convenient, and continuous routes.

Equitable access to walking and biking facilities

Distribute walkways and bikeways throughout the city, with a focus on improving connections in under-served areas.

Connect to local and regional destinations

Provide connections to schools, parks, transit corridors, commercial destinations, city services, the library, employment, and regional trails.

Maintenance for year-round use

Provide consistent, ongoing maintenance so people may access the network for transportation, health and fitness, and recreation throughout the year.

Sustainability

Walking and biking as a way to support economic, social, and environmental sustainability in the city.

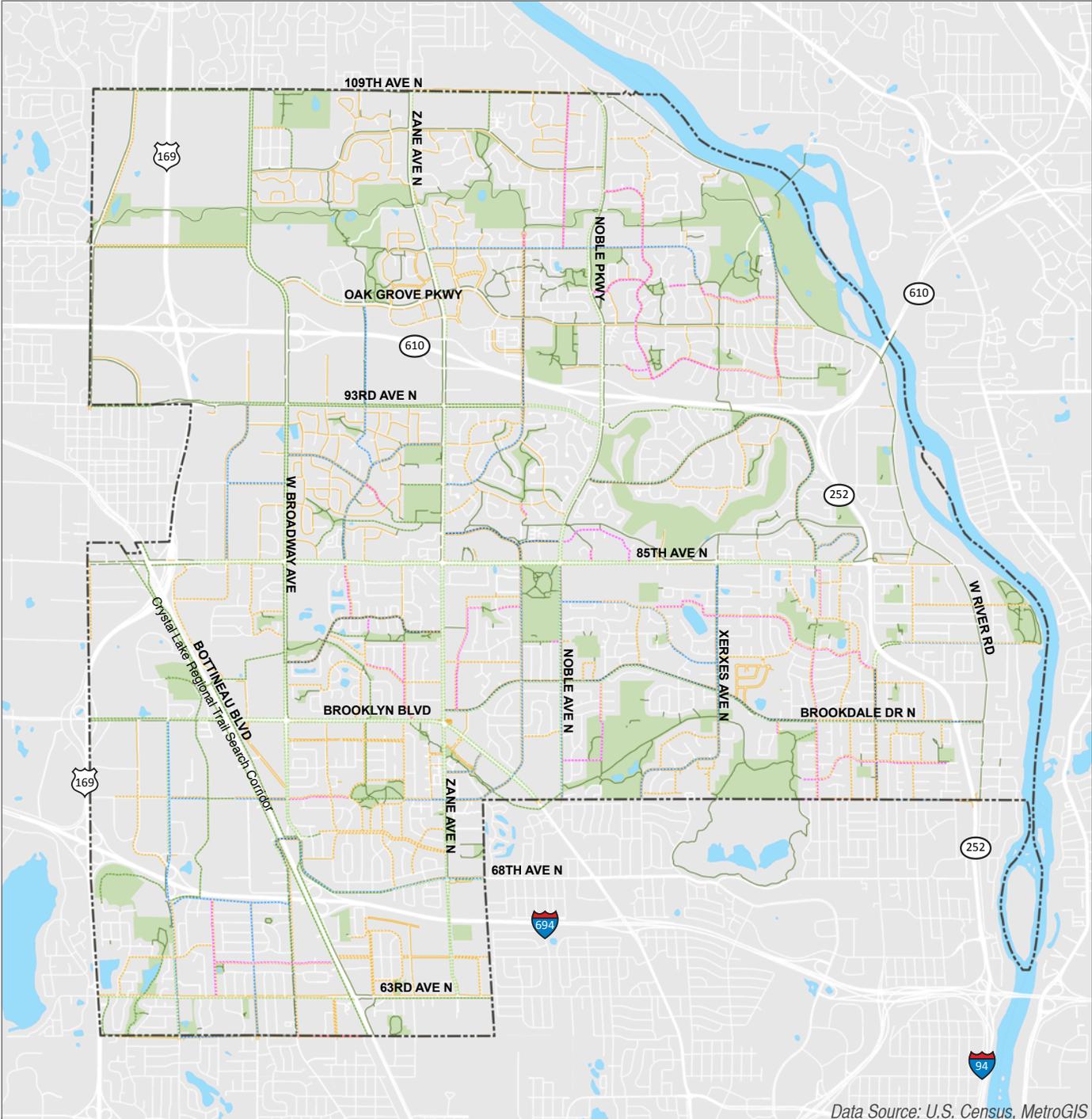
What people want

Hundreds of Brooklyn Park residents shared experiences, ideas, and priorities for improving walking and bicycling conditions in the city. Their guidance was incorporated into this plan's network and programming recommendations.

This is what they said:

- Walking and riding a bike are valued.
- New facilities must be added to fill gaps in the existing network.
- Consistent, ongoing maintenance (especially during winter) is needed.
- Greater separation from motor vehicles for people walking and biking is desired.
- The frequency and design of intersections makes crossing the street difficult.
- Improve wayfinding to help people navigate the system and reach their destinations.

Network Vision: Pedestrian and Bicycle Recommendations



Data Source: U.S. Census, MetroGIS

Existing

- Sidewalk
- Shared-use path / park trail

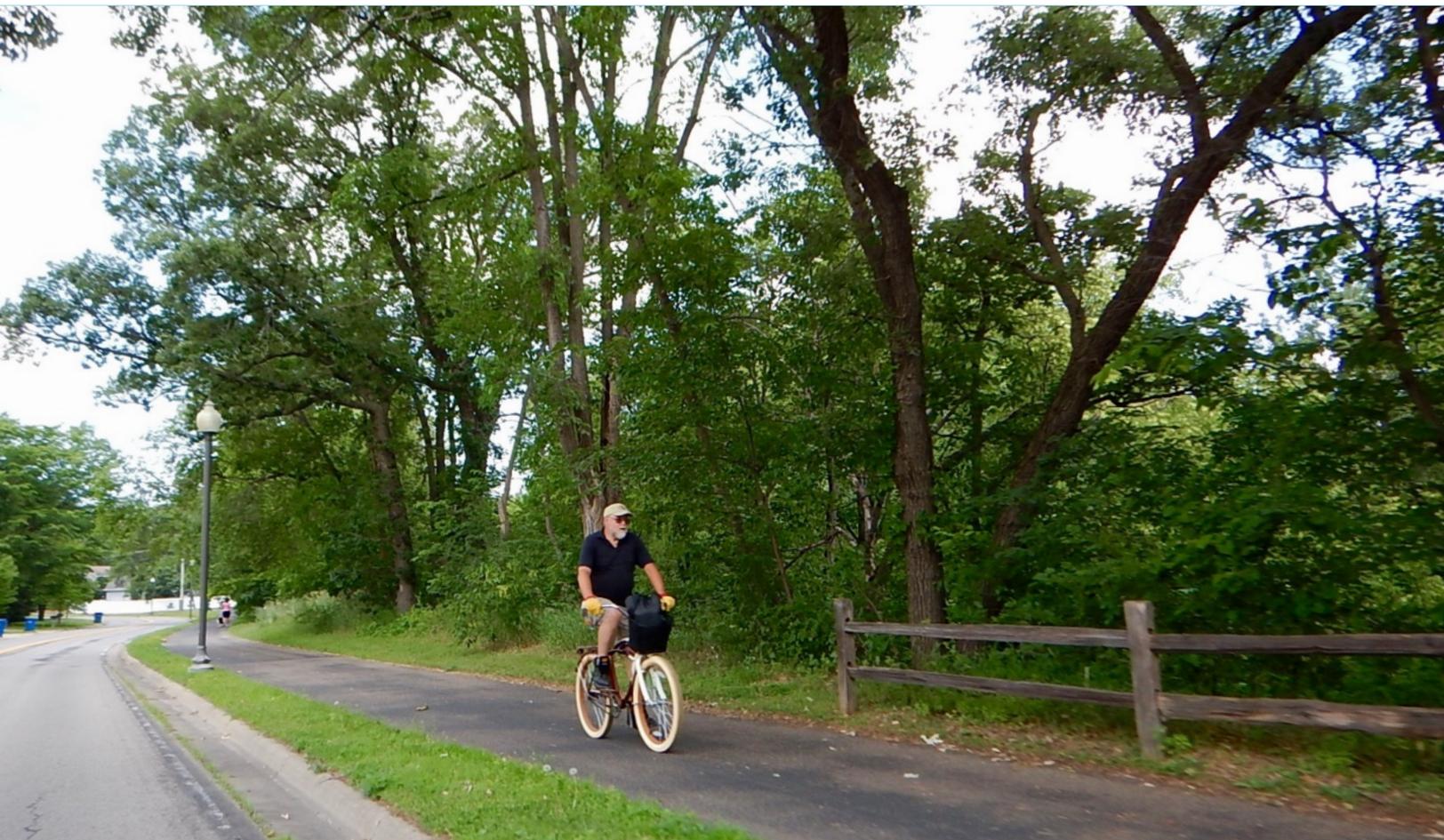
Recommended

- - - New sidewalk
- - - New shared-use path
- - - Upgrade sidewalk to path
- - - Neighborhood slow street
- - - Conventional bike lane
- - - Buffered bike lane

1. Approach

This chapter contains the following sections:

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Vision

People of all ages and abilities enjoy walking and biking for transportation, recreation, and fitness in Brooklyn Park. Staying healthy and active in the city is as easy as walking to transit, biking to school, meeting friends for dinner, or running errands.



1.1 – Why Walking and Biking?

Walking is a foundation for individuals’ health, well-being and sense of connection. Walking is free and accessible for people through the widest range of ages, income levels and physical abilities. It is the most basic form of transportation—at some point during every trip, everyone is a pedestrian. Like walking, bicycling offers mobility and connectivity at a relatively low cost for residents young and old alike.

Communities that provide safe, comfortable and convenient facilities for active transportation enjoy increased levels of health and equity, as more people are able to access school, transit, employment, services, recreation, and everyday needs.

A robust pedestrian and bicycle network in Brooklyn Park supports all people traveling within the city (including those who drive) by delivering the following benefits:

Safety

The pedestrian and bikeway system will help reduce crashes and improve safety by providing a more interconnected network with fewer gaps, more separation from motor vehicle traffic, and calmer streets.

Livability

Increasing transportation options helps achieve broader community goals including access to jobs, neighborhood schools, and services.

Mobility

Walking and bicycling increase mobility, allowing people of all ages and abilities to reach more destinations throughout Brooklyn Park.

Health

Active transportation options, like walking and biking, provide an opportunity for residents to build physical activity into their daily lives. In general, communities with higher rates of walking and bicycling have lower rates of obesity, and higher percentages of residents meeting weekly recommended physical activity levels.

An active living approach

Health starts in the communities where we live, work, and play. The way communities are planned and designed plays a significant role in the physical, emotional, and financial well-being of community members. Active living policies and initiatives seek to make physical activity (like walking or biking) a useful, easy, fun and normal part of everyday life for a community’s residents.

Active living is important for a community because it can:

- Improve physical and mental health;
- Make walking and biking safer;
- Bring people together to build safer, stronger communities;
- Reduce traffic congestion, improve air quality, maximize green space, and reduce transportation costs for families; and
- Decrease the risk and severity of chronic disease and medical costs.



Walkable, bikeable places provide more equitable access to community destinations.

Household and community prosperity

Walking and biking are affordable transportation options that reduce the cost of transportation for all. People who walk or bike for at least some of their trips are able to save on many costs associated with vehicle ownership, freeing up budget for other necessities and luxuries.

Cleaner air

When more people are able to walk, bike, or take transit to meet their transportation and mobility needs instead of driving, all residents benefit from cleaner air and reductions in harmful pollutants caused by vehicle exhaust.

Recreation

Walking and biking are among the top desired recreational activities in Metropolitan Council surveys, especially among older residents, whose numbers are growing. During public engagement, Brooklyn Park residents reported walking and biking for fitness and recreation more than other reasons. Many said that they walk or bike recreationally four or more times per week during fair-weather months.

Parking and congestion alleviation

Over 25% of trips in the U.S. are shorter than one mile. That's a 20 minute walk, or a 5 minute bike ride, an approachable distance for most people. Fewer people driving means less congestion on existing roadways, less demand for parking, less time and money spent waiting in traffic, and safer conditions for people who choose to walk or bike.

Regional economic competitiveness

Communities with trails and other safe walking and biking infrastructure attract tourism, and the economic boost that comes with it. Businesses that can be easily accessed by foot or bike are perceived as being more convenient, and can benefit from customers who have additional ways to access stores.

Replacing driving trips with walking and biking keeps more money in the local economy by not exporting it to purchase fuel. If each household in Brooklyn Park were able to buy one less gallon of gas each month at \$2.50/gallon by walking and biking more, they would save a combined \$787,000 a year to use in the local economy.

Did you know?

Fifty percent of all trips in the U.S. are three miles or shorter, and over 25% of trips are less than one mile. Yet as many as two thirds of those short trips are taken in private motorized vehicles.

The most harmful pollutants are emitted within minutes of starting a car. Short trips pollute more per mile and have a bigger negative impact on environmental and physical health than longer trips.

1.2 – Building a Plan for a Variety of Users

When implemented, the Brooklyn Park pedestrian and bicycle network will provide safe, comfortable, and inviting routes and places for walking and biking. Increased use will depend not only on improving the network for those currently walking and biking, but also on attracting new users (those uncomfortable with the current system), especially for short trips. When evaluating implementation strategies, it is important to consider and understand general attitudes toward walking and bicycling.

Attitudes toward walking and bicycling

People have an increasing desire to live in places where they can comfortably walk or bike more often for recreation, health and fitness, or transportation. The Oregon Transportation Research and Education Consortium identified four general attitudes and perceptions about bicycling. These groups are imprecise and fluid; someone might behave in a manner consistent with one category one day, and another the next based on purpose, who they are biking with, familiarity, or whim. As people gain experience biking, their attitudes and perceptions may also change.

Strong and fearless (about 1% of people)

“I am a die-hard cyclist. I feel comfortable riding with cars and taking the lane on any street.”

People in this group are undeterred by any roadway condition or design. They typically self-identify as bicyclists, and tend to wear specialized gear and ride high-performance bikes. They often take the shortest route when biking for transportation, and seek challenges when biking recreationally. Separation from people walking is more important to these riders than separation from people driving. Their passion for bicycling can make them vocal advocates, but their bicycling experience differs from that of most people.

Enthusiastic and confident (about 9% of people)

“I will bike for transportation or recreation. I feel best riding on bike lanes, but will take the lane if necessary.”

People in this group are comfortable sharing the road with motor vehicle traffic, but they prefer bike lanes or other designated bikeways. They may go a little out of their way for a better bikeway. Bicycling is often a secondary part of their identity, and they will bike to maintain this status. They may wear clothing that works well for biking, but is also wearable as everyday clothing.

Interested but concerned (about 53% of people)

“I like the idea of biking, but I don’t bike much (or at all) now. If I do bike, I often ride with others, and stick to the trails. Comfort is my highest priority.”

This group represents the largest potential market for increases in ridership. People in this group prefer off-street paths, and may ride for transportation if bikeways feel safe. Comfortable conditions while biking are a priority. Interested but concerned riders do not self-identify as bicyclists, and would not feel guilty if they never biked again. Many people in this group could easily become more or less active riders — a good network may bump them into the enthusiastic and confident group, while an incomplete network or a few bad experiences may push them into the not able or interested group.

Not able or interested (37% of people)

“No way, no how.”

This group includes people who have no current interest in bicycling, or who are physically unable to bike. Some of this group could transition into the interested but concerned group if environmental or personal circumstances changed.

Changing trends

Connecting walking, biking, and transit

Nearly every transit trip involves a walking trip at the beginning, end, or both. Improving bicycle access to transit stops and stations increases the number of people served by transit catchment areas.

In 1997, Metro Transit began equipping transit vehicles to carry bicycles, a feature that is now standard on all vehicles. In addition, bicycle parking is now routinely provided at transit stations and park and rides, including over 250 bike lockers installed and maintained by Metro Transit. Between 1997 and 2012, Metro Transit ridership increased 30 percent, serving 20 million new annual trips. Transit ridership and bike-transit connections are anticipated to continue, especially with the addition of bus rapid transit, and two light rail lines (including the Blue Line Extension to Brooklyn Park).

Driving habits are changing

For nearly 45 years from 1960 onward, per capita vehicle-miles traveled (VMT) increased at a fairly steady rate. Then, in 2004, the predictably upward trend changed, as Americans started driving *less*. Initially, the reversing trend was hypothesized to be a consequence of higher gas prices and an economic downturn. However the trend has continued through the economic recovery.

Nationally, VMT per capita has declined 7.2 percent since its peak in 2004. In Minnesota, VMT per capita declined 5.3 percent in the same period. Per capita VMT on

all roadways in Hennepin County decreased 4 percent after peaking in 2001. Along Hennepin County roads, per capita VMT declined 6.5 percent since peaking in 2004.

More people are walking and biking

National data reveal that people 34 and younger are more likely to choose modes other than driving, and are at least partially responsible for the downward trend in per capita VMT. Between 2001 and 2009, the average number of vehicle miles traveled among people ages 16–34 decreased 23 percent. During the same time period, this age group made 24 percent more bicycling trips, 16 percent more walking trips, and 40 percent more trips on transit.

The recent focus on millennials has largely overshadowed another significant change in bicycling trends: biking rates among people 55 and up are soaring. New trips by seniors (ages 65 and above) account for 22 percent of the net increase in adult biking.

In addition, more people are biking wearing everyday clothing, and riding average bikes — they bike because it fits into their lives. The demographics of people who bike are also beginning to better reflect the population as a whole, including increasing rates among non-white groups, women, and seniors. Women, who are underrepresented in bicycling, accounted for nearly half of new bicycle commuters since 2005.

People are using existing trail systems differently

The number of people using the Three Rivers Park District regional trail system (which includes the Brooklyn Park’s Rush Creek Regional Trail, Shingle Creek Regional Trail, and planned Crystal Lake Regional Trail), has increased steadily in the last decade. The number of bicycle commuters (people who are riding to work or school) using the Three Rivers’ regional trail system has tripled.

The approach to pedestrian and bicycle planning is changing

Today, communities, cities, counties, and states are making a shift in the approach to pedestrian and bicycle planning. Planners and policy-makers are re-learning the importance of balancing the needs of all roadway users including people walking, biking, driving, and taking transit. Communities across the country are adopting pedestrian and bicycle plans, Safe Routes to School initiatives, and Complete and Living Streets policies — all of which work towards a common goal of making walking and biking better for people.

Planning and implementing networks that make walking and bicycling safe, convenient, and inviting encourage more people to try walking and biking. As more people walk and bike, use of (and demand for) quality infrastructure increases, fostering a community culture that encourages and accepts walking and biking as a normal, enjoyable part of everyday life.

1.3 – Developing Safe Routes to School (SRTS) in Brooklyn Park

The Problem

Fewer students walk or bike to school today than in the past. Some reasons for the downward trend include traffic speeds and volumes along routes, low availability of sidewalks and sidepaths, and changes in school siting methods that result in more students living farther away from school.

As more students are driven to school in personal vehicles, congestion and traffic safety concerns in school zones increase, resulting in conditions that further deter students and their parents from walking or biking to school.

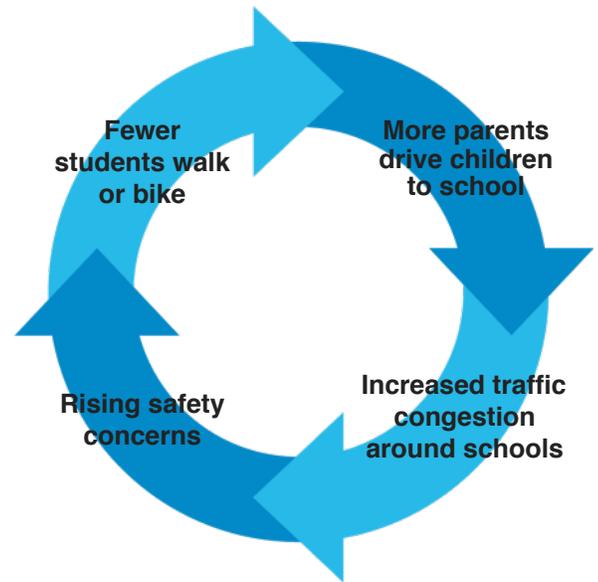
The Benefits of SRTS Programs

The benefits of Safe Routes to School (SRTS) improvements and programs are numerous and varied. Programs that educate and enable more students to walk and bike to and from school have significant benefits for the students, the school, and the community at large.

Benefits to Students

In a time of increasing obesity and associated health risks, especially among young people, enabling students to safely walk and bike to school can have profound benefits on individual health and well-being. Walking or biking to and from school builds physical activity into children’s daily routine. Parents who walk or bike with their children for all or part of their trip also benefit from the physical activity.

Additionally, there is an increasing understanding about the positive correlation between students’ academic performance and the amount of physical activity they experience during the school day. Studies have shown that physical activity improves students’ concentration, grades, and test scores. SRTS programs and efforts can be a significant part of incorporating physical activity into students’ daily routines.



Safe Routes to School (SRTS) is a positive response to a negative cycle in which fewer students walk or bike to school as a result of land use and transportation patterns.



Walking and biking to school provides opportunities for students to build physical activity into their day. Walking school buses or bike trains also turn traveling to and from school into social events.

Benefits to Schools

Educating, encouraging, and enabling students to walk and bike to and from school through SRTS improvements and programs can reduce the need for expensive bus transportation provided by the school district. This means that more of the school's financial resources can be spent on classroom and educational resources for students, and not on transportation.

Benefits to Communities

The benefits of SRTS improvements and programs for communities as a whole are significant. SRTS efforts can help improve local air quality around schools and in neighborhoods, reduce traffic congestion (a significant problem near many schools at drop-off and pick-up times), improve the overall safety of neighborhood streets, improve the overall health and quality of life of community residents, and elevate the livability of communities as a whole.

Did you know?

- Students living 2 miles or less from school could bike to school in 20 minutes or less.
- According to the Centers for Disease Control and Prevention (CDC), children should receive at least 60 minutes of aerobic physical activity each day (biking and walking count as this type of physical activity).
- According to a 2010 National Household Travel Survey brief, just over 7 minutes were spent walking or biking each day by children age 5–10, and just over 14 minutes by children age 11–15.

1.4 – The 6 Es of Pedestrian and Bicycle Planning

One effective way of thinking about and implementing pedestrian and bicycle planning initiatives is to consider six categories that proposed interventions may fit into: Engineering, Education, Encouragement, Enforcement, Evaluation, and Equity – commonly known as the 6 Es.

About the 6 Es

Engineering

Engineering recommendations can be thought of as “on-the-ground” improvements. Engineering involves the planning, design, construction, and maintenance of infrastructure including roads, sidewalks, bikeways, intersection treatments, signage, and end-of-trip facilities.

Education

Education programs teach people about the benefits associated with walking and biking investments, rules of the road, and how to access and use existing amenities. Education programs include pedestrian and bicycle safety trainings, promotional campaigns, and network maps.

Encouragement

Encouragement programs inspire more people to try walking or biking through fun and inviting activities including friendly competitions, incentive programs, inclusive group rides, and community-wide events like Open Streets.

Enforcement

Enforcement programs often include participation from local law enforcement with a focus on enforcing traffic safety laws like speed limits, parking regulations, and general roadway behavior.

Evaluation

Evaluation programs measure the success of investments at achieving desired outcomes. Evaluation takes place before and after programming and infrastructure improvements to



Engineering includes on-the-ground improvements like sidewalks, bike lanes, and intersection improvements.



Events like PARKing Day can help encourage walking and biking trips, and educate people on the benefits of walking and biking investments.

establish a baseline and measure progress overtime. Examples of performance measures that may be evaluated include public perception, behavioral changes and modal shifts, and network safety.

Equity

Equity focuses on distributing facility and programming improvements fairly throughout a community to ensure that residents of all neighborhoods and population groups have equal access to high quality infrastructure and programs. Equity efforts include intentionally public engagement efforts to reach diverse populations, and equitable implementation of infrastructure and programs throughout a community to overcome economic, geographic, social, and physical barriers to walking and biking.

1.5 – Goals for this Plan

I. Increase walking and biking

Increase the number of people walking or biking for transportation, health and fitness, and recreation in Brooklyn Park by providing a continuous network of safe, inviting facilities, and implementing far-reaching encouragement, education, enforcement, and evaluation programming.

II. Expand the existing network

Brooklyn Park has significant assets for walking and biking already in place. Expanding the existing network will result in a system that invites people of varying abilities and skill levels to safely, comfortably, and efficiently walk and bike to destinations throughout Brooklyn Park including schools, parks and trails, transit, and commercial areas.

III. Focus on safety and comfort

Create a safe and comfortable network of pedestrian and bicycle facilities, acknowledging that most people will only walk or bike as far as the nearest barrier. Promote walking and bicycling as a mode of transportation that is practical, convenient, and enjoyable for transportation, health and exercise, and recreation.

IV. Support year-round Active Living

Implement a system that works throughout the year by providing year-round access for users and maintaining existing pedestrian and bicycle facilities against seasonal hazards and long-term wear and tear.

V. Sustainability

Implementing pedestrian routes and bikeways as a tool towards environmental, economic, and social sustainability by providing people mobility options that are non-polluting, affordable, healthful, and community-based.



Enable more students to walk and bike to school by focussing on improving connections to and near Brooklyn Park schools.



Attract new users to the network by prioritizing network safety and facility comfort.

2. Existing Conditions

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2.1 – Brooklyn Park in Context

Regional context

Brooklyn Park is a developing community located in northeastern Hennepin County on the west bank of the Mississippi River. It is bordered by the City of Champlin on the north; Maple Grove and Osseo on the west; New Hope, Crystal, and Brooklyn Center on the south; and the Mississippi River on the east. Brooklyn Park is the 6th largest city in Minnesota, and the 2nd largest suburb of Minneapolis and Saint Paul.

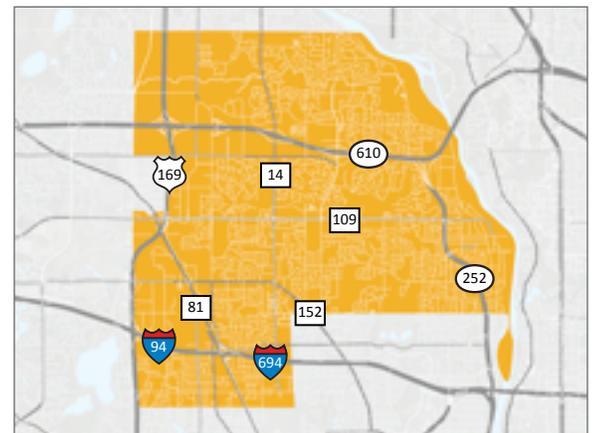


Brooklyn Park is located in northeast Hennepin County on the Mississippi River, about 10 miles north of downtown Minneapolis.

Regional corridors

Roadways

Major roadway corridors include Interstates 94/694, located in the far southern portion of Brooklyn Park. U.S. Highway 169 is located in the western part of the city. State Highway 252 is located in the eastern portion of the city. State Highway 610 runs east-west through the northern portion of Brooklyn Park. County Road 81 (Bottineau Boulevard) is also a main route in the southwestern portion of the city.

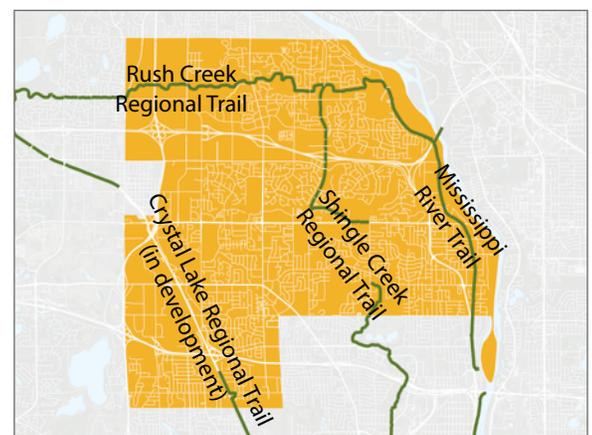


Brooklyn Park is traversed by several interstate and state highways, as well as busy county roadways.

Bikeways

Several regional bicycle corridors are located in Brooklyn Park. A segment of the Mississippi River Trail is located along West River Road with connections to both Brooklyn Center and Champlin. The Rush Creek Regional Trail provides an east/west connection in the northern portion of the City from Maple Grove's Elm Creek Park Reserve to the Brooklyn Park and Coon Rapids Dam Regional Park. The Shingle Creek Regional Trail provides a partial north/south connection along Noble Parkway in central Brooklyn Park.

The City of Brooklyn Park also has a robust network of city and neighborhood parks, many of which include recreational trails. Additional local trails provide connections between parks. Current and ongoing planning efforts by Brooklyn Park's Recreation and Parks Department include expanding the city's existing trail network to improve park and trail connectivity and access.



Regional bikeways including the Mississippi River Trail, Rush Creek and Shingle Creek Regional Trails pass through the city.

Table 2.1 – Brooklyn Park Population by Numbers

Census Population Information

Selected characteristic	Brooklyn Park	Hennepin County
Population		
Population estimates, July 1, 2013	78,373	1,198,778
Population, Census, April 1, 2010	75,781	1,152,425
Population forecast, 2040, Metropolitan Council Community Profile*	97,900	1,367,000
Geography		
Population per square mile, 2010	2,907	2,082
Land area in square miles, 2010	26	554
Age and Sex		
Persons under 5 years, percent, April 1, 2010	9	7
Persons under 18 years, percent, April 1, 2010	29	23
Persons 65 years and over, percent, April 1, 2010	8	11
Female persons, percent, April 1, 2010	51	51
Race and Hispanic Origin		
White alone, percent, April 1, 2010	52	74
Black or African American alone, percent, April 1, 2010	24	12
American Indian and Alaska Native alone, percent, April 1, 2010	1	1
Asian alone, percent, April 1, 2010	15	6
Two or More Races, percent, April 1, 2010	4	3
Hispanic or Latino, percent, April 1, 2010	6	7
White alone, not Hispanic or Latino, percent, April 1, 2010	50	72
Population Characteristics		
Veterans, percent, 2009–2013	5	5
Foreign born persons, percent, 2009–2013	20	13

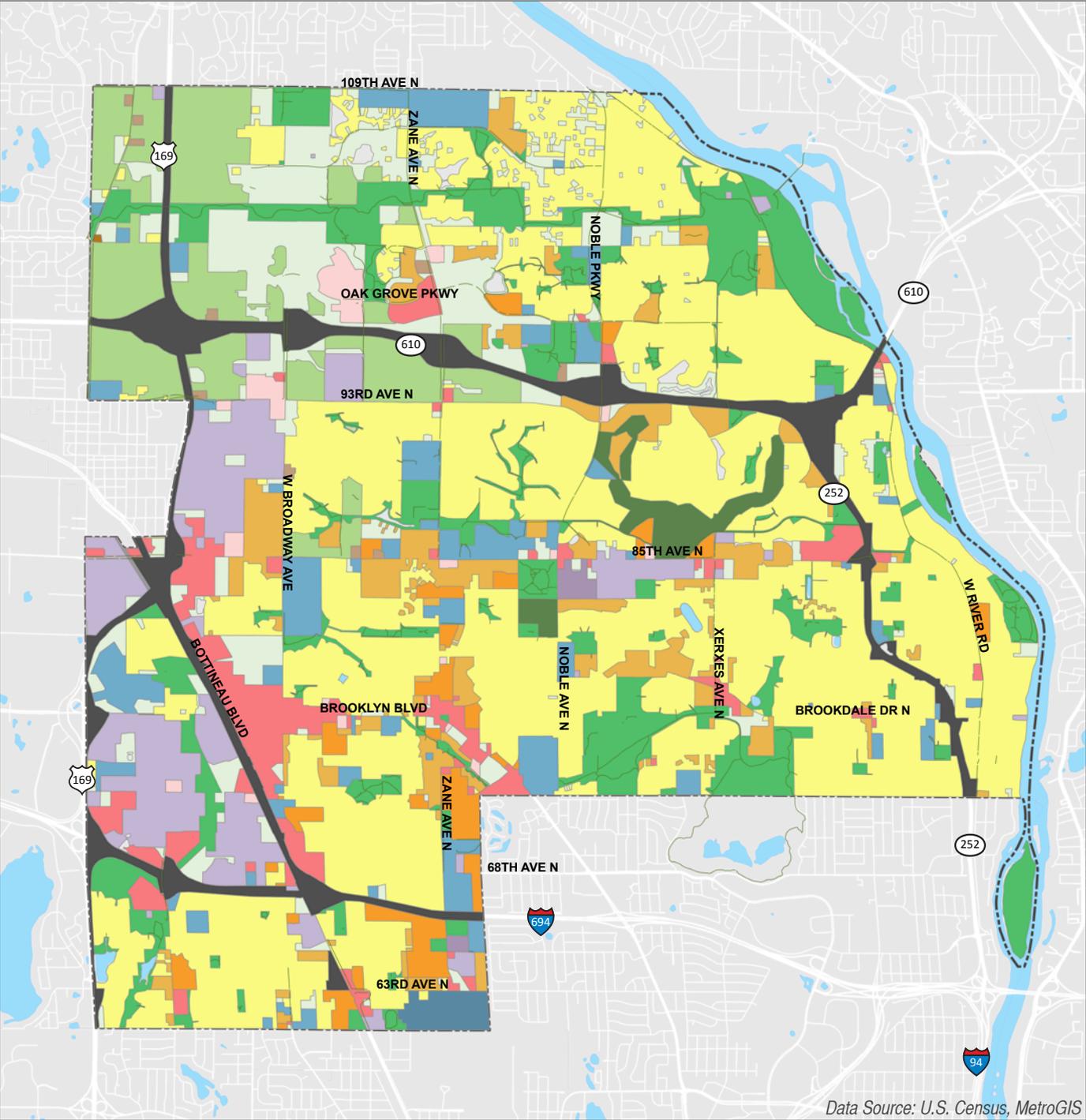
Selected characteristic	Brooklyn Park	Hennepin County
Housing		
Housing units, April 1, 2010	27,841	509,469
Owner-occupied housing unit rate, 2009–2013	71	64
Median value of owner-occupied housing units, 2009–2013	188,900	230,900
Median selected monthly owner costs -with a mortgage, 2009–2013	1,670	1,769
Median selected monthly owner costs -without a mortgage, 2009–2013	500	570
Median gross rent, 2009–2013	854	917
Families and Living Arrangements		
Households, 2009–2013	26,342	481,263
Persons per household, 2009–2013	2.9	2.4
Language other than English spoken at home, percent of persons age 5 plus	26	17
Commuting to Work**		
Drove alone, percent	78	74
Carpooled, percent	11	8
Public Transit, percent	5	7
Walked, percent	1	3
Other means, percent***	2	3
Worked at home, percent	3	5
Mean travel time to work (minutes), workers age 16 years+, 2009–2013	25	23
Income and Poverty		
Median household income (in 2013 dollars), 2009–2013	64,113	64,403
Per capita income in past 12 months (in 2013 dollars), 2009–2013	26,917	37,485
Persons in poverty, percent	12	12

* Brooklyn Park is identified as a top 10 growing community in the metro region by 2040 in Thrive MSP 2040.

** Data from American Community Survey 2013 Estimates.

*** Includes biking. 0.1% of Brooklyn Park residents commute by bike, according to ACS 2012 Estimates.

Figure 2.1 – Existing Land Use in Brooklyn Park

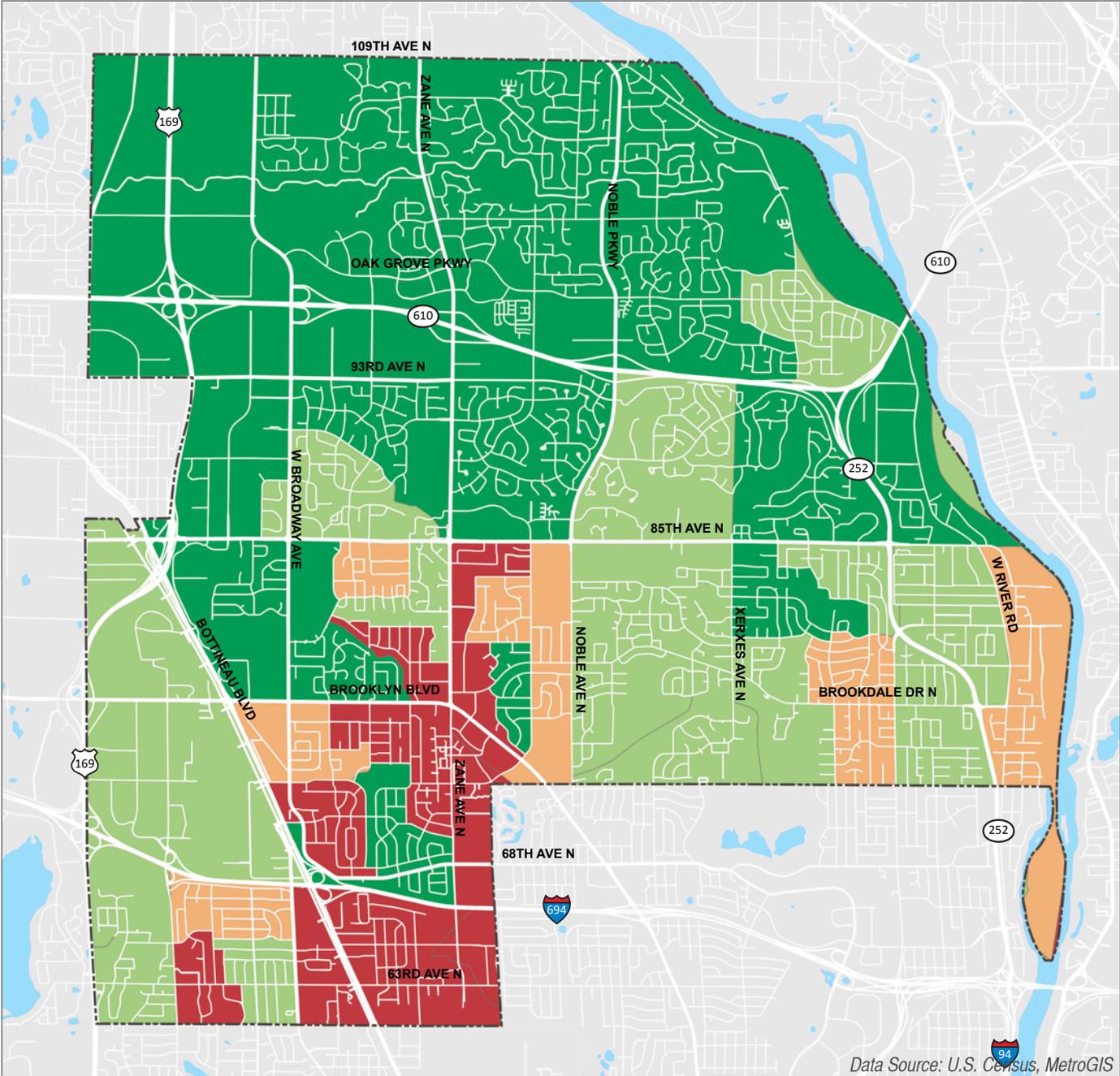


Data Source: U.S. Census, MetroGIS

Existing Land Uses

- | | | | |
|--------------|------------------------|----------------------------|------------------------|
| Agricultural | Industrial and Utility | Mixed Use Residential | Retail/Commercial |
| Airport | Institutional | Multifamily | Single Family Attached |
| Farmstead | Major Highway | Office | Single Family Detached |
| Golf Course | Mixed Use Industrial | Park, Recreation, Preserve | Undeveloped |

Figure 2.2 – Household Income Distribution



Data Source: U.S. Census, MetroGIS

Annual Household Income (Quartile Distribution)

- First quartile (\$24,156–\$49,524)
- Third quartile (\$64,113–\$82,188)
- Second quartile (\$50,778–\$64,112)
- Fourth quartile (\$82,500–\$120,685)

Exploring median household incomes within a region may highlight areas with income disparities. Areas shown in orange and red have an aggregated median household income at or below 50% of Brooklyn Park's median household income, while areas shown in green contain a larger proportion of households in the upper 50% of earners. Data is block group-level data from the US Census' 2009-2013 5-year American Community Survey Summary File, recompiled and made available through the Metropolitan Council.

Development patterns

Brooklyn Park is considered both a second and third tier suburb. Land development north of 85th Avenue began in the mid 1980s with the approval of several neighborhoods surrounding Edinburg golf course. Residential development continued north of Highway 610 in the 1990s and moved east after 2000. Brooklyn Park includes plans for six future neighborhoods in the northwestern portion of the city. The city still includes undeveloped land and farms.

Land uses in Brooklyn Park are generally separated, and the roadway network follows a typical suburban development hierarchy: minor arterials (generally Hennepin County roads spaced about every mile) provide automobile-oriented connections to commercial areas, employment centers, and other important destinations. Neighborhood streets provide limited connectivity within the larger grid – often ending in cul-du-sacs or dead end, and funneling traffic out onto high-speed, high-volume arterials.

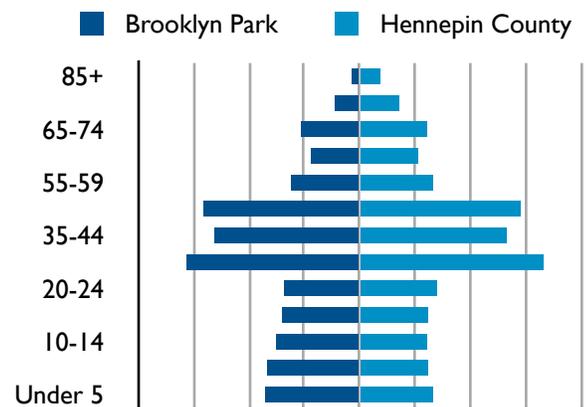
Connections to transit

Brooklyn Park is served by Metro Transit bus service with suburban local and limited stop commuter routes. The city will also be the northern terminus of the planned METRO Blue Line Extension, a light rail transit service that will extend from downtown Minneapolis to Robbinsdale, Crystal, and Brooklyn Park. Traveling north from the Crystal border, the line will run along Bottineau Boulevard before moving to W Broadway Avenue in the western portion of the city. Five stations are planned within the city, including:

- 63rd Avenue Station
- Brooklyn Boulevard Station
- 85th Avenue Station
- 93rd Avenue Station
- Oak Grove Parkway Station (northern terminus)

See Figure 2.3 for METRO Blue Line Extension alignment and station locations in Brooklyn Park. For detailed views of recommendations in station areas, see Appendix D.

Age distribution as a percent of overall population



Brooklyn Park has a slightly younger population than Hennepin County as a whole.

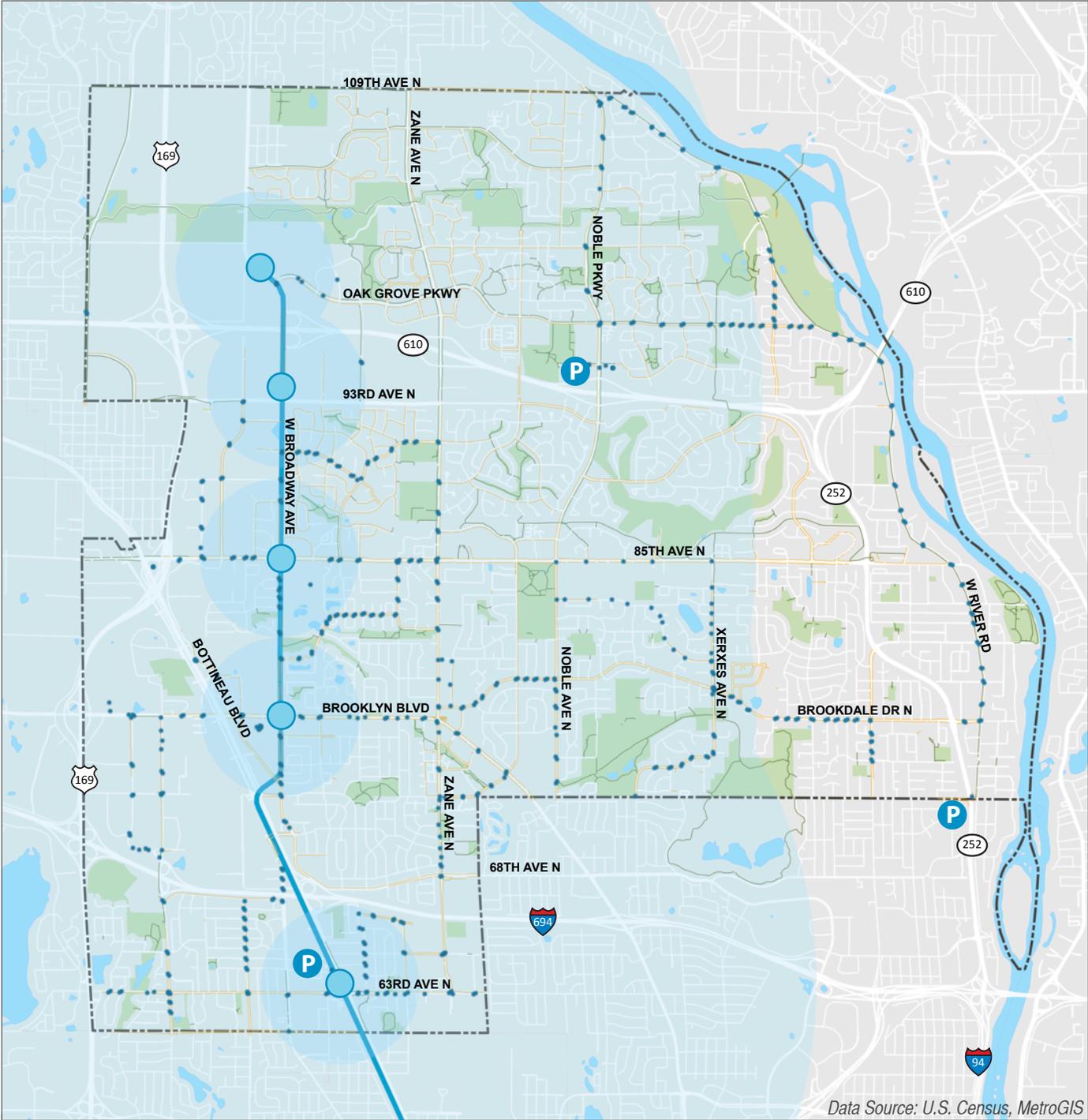


Higher-density housing in the Village Creek Community is within walking distance of commercial destinations.



Brooklyn Park is served by Metro Transit bus service.

Figure 2.3 – Existing Bus Stops and Proposed Light Rail Transit



Data Source: U.S. Census, MetroGIS

Existing Transit and Planned Blue Line Extension (Bottineau LRT)

- Existing Metro Transit bus stop
- P** Existing Metro Transit Park & Ride
- Planned station location
- Planned Blue Line Extension alignment
- 1/2 mile LRT station buffer (10 minute walk)
- 3 mile LRT station buffer (15 minute bike ride)

Connections to schools

Three school districts operate in Brooklyn Park including Anoka-Hennepin, Osseo, and Robbinsdale school districts. Nearly 20 schools, including public elementary, middle, and high schools, as well as charter schools, are located within city limits. North Hennepin Community College and a campus of Hennepin Technical College are also located in Brooklyn Park.

Safe Routes to School infrastructure recommendations are included for the following schools as part of this plan:

- Athlos Leadership Academy
- Birch Grove Elementary
- Brooklyn Middle School
- Champlin Park High School
- Crest View Elementary
- Edinbrook Elementary
- Excell Academy Charter
- Fair Oaks Elementary
- Hennepin Technical College
- Monroe Elementary
- North Hennepin Community College
- North View Middle School
- Oxbow Creek Elementary
- Palmer Lake Elementary
- Park Brook Elementary
- Park Center Senior High
- Prairie Seeds Academy
- Woodland Elementary
- Zanewood Elementary

See Figure 2.4 for school locations and walk sheds. Infrastructure and program recommendations for the schools above are outlined in Appendix C.



A clearly marked school crossing and school speed zone in Brooklyn Park.

Safe Routes planning for schools in adjacent communities

The geographic extent considered by this plan's recommendations is within the city limits of Brooklyn Park. Therefore, only schools located within Brooklyn Park were considered for site specific SRTS analysis. However, due to school enrollment boundaries, many Brooklyn Park students are assigned to neighborhood schools located outside of Brooklyn Park in adjacent municipalities.

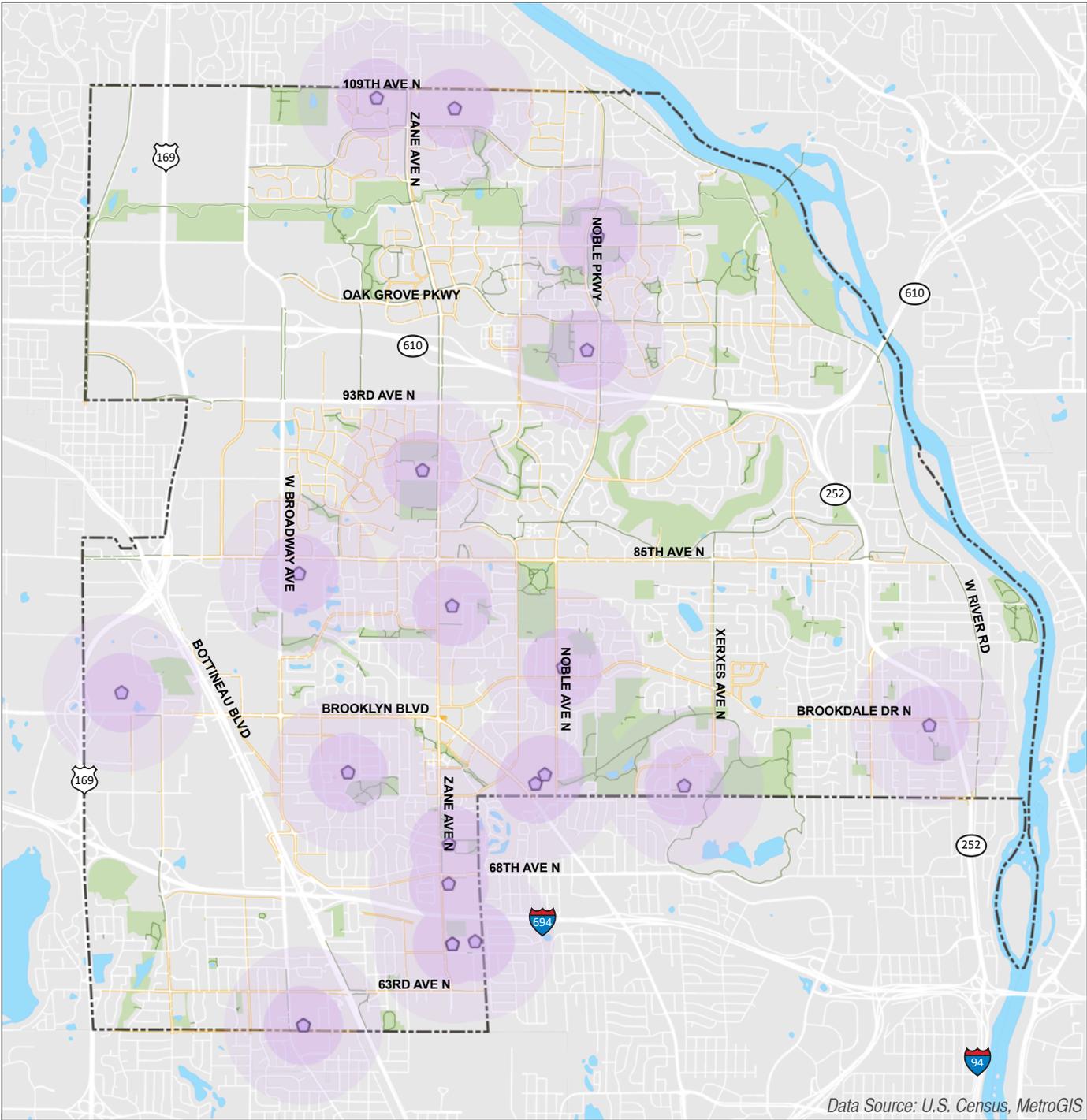
Students attending these schools stand to benefit from improved walking and biking facilities within Brooklyn Park city limits, but additional planning both on- and off-site is recommended to further improve student routes to school.

School districts and/or individual schools are encouraged to pursue funding for dedicated Safe Routes to School planning and infrastructure projects.

Funding and support for additional planning is available through:

- [MnDOT Safe Routes to School Grants](#)
- [Transportation Alternatives Program](#)

Figure 2.4 – Brooklyn Park Schools



Data Source: U.S. Census, MetroGIS

Brooklyn Park Schools

-  School location (public elementary, middle, and high schools; higher education)
-  1/4 mile and 1/2 mile school buffers (5–10 minute walk)

Connections to parks and trails

The City of Brooklyn Park contains numerous parks and trails that provide recreational, fitness, and transportation opportunities to people walking and biking in the city. In addition to neighborhood parks, the city offers several parks with community-wide and regional significance, including parks and trails within the Three Rivers Park System, including:

- Oak Grove Park
- Eidem Homestead
- Coon Rapids Dam Regional Park
- Edinburgh Golf Course
- Community Activity Center and Armory
- Central Park
- River Park
- Brookdale Park

The Recreation and Parks Department recently completed the Recreation and Parks Master Plan, which identifies existing parks and trails as a major asset to the city, and includes recommendations to improve access to parks by developing a more connected trail system.

This plan aims to add to the Recreation and Parks Master Plan by providing additional guidance for a more robust pedestrian and bicycle network to better connect people to destinations within the city, including parks.

Existing parks and trails are included to provide geographic context on most maps within this plan. Parks are shown in light green, and existing trails are shown as a solid, dark green line.



The Rush Creek Regional Trail connects to Coon Rapids Dam Regional Park. Both are under Three Rivers Park District jurisdiction.



Recreational trails are located within and between several city parks.

2.2 – Existing Pedestrian and Bikeway System

Brooklyn Park’s existing pedestrian and bicycle system is an asset to the city. Residents take advantage of regional and local trails and city sidewalks for fitness and recreation, and to run errands to nearby commercial destinations. By upgrading existing facilities, addressing gaps in the network, and paying close attention to the safety and comfort of pedestrians and bicyclists, the city can increase opportunities for people to walk and bike more often for health, recreation, and transportation.

Assets and opportunities

Existing sidewalks and trails

Brooklyn Park includes segments of three regional trails, including the Mississippi River Trail and Three Rivers Park District’s Shingle Creek and Rush Creek Regional Trails. The city also has local trails, mostly north of 85th Avenue, that connect to parks and other destinations. Sidewalks and/or trails are present on one or both sides of most major corridors in Brooklyn Park. Addressing gaps in the existing network will help to increase the network’s accessibility, connectivity, and usefulness as a transportation network.

Expansion of METRO Blue Line

The METRO Blue Line Extension is a planned 13-mile light rail transit corridor that will connect Brooklyn Park to Crystal, Robbinsdale, and downtown Minneapolis. The Blue Line Extension has eleven proposed stations, five of which will be located in Brooklyn Park. Service is planned to begin in 2021, and will connect people to major destinations in the city including North Hennepin Community College and Target North Campus. The introduction of the Blue Line Extension provides an opportunity to increase multimodal transportation options and travel to, from, and within Brooklyn Park.



Existing parks and trails are an asset to walking and biking in the city.

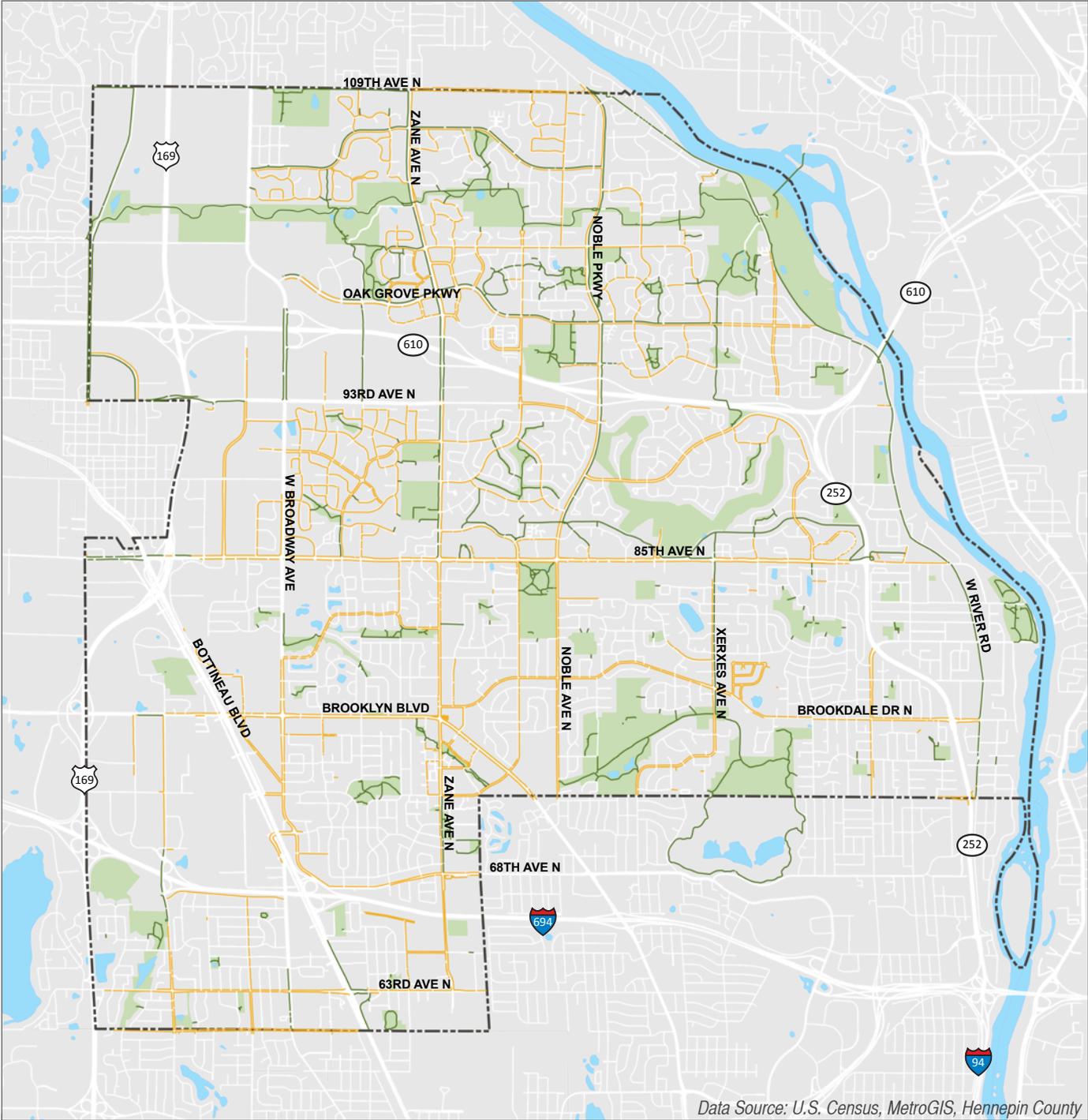


Construction along 73rd Avenue N, where a bicycle lane is being provided as part of a current repaving project.



The last stop on the METRO Blue Line Extension connects commuters to Target North Campus.

Figure 2.5 – Existing Pedestrian and Bicycle Network



Existing Pedestrian and Bikeway System

- Existing sidewalks
- Existing shared-use path / park trail

Citywide Safe Routes to School initiative

One goal of this plan is to provide infrastructure recommendations to support safer routes to school for Brooklyn Park students. Recommendations focus on improving connections to elementary, middle, and high schools, as well as higher education institutions within Brooklyn Park city limits. Higher priority will be given to elementary and middle schools. A citywide Safe Routes to School approach will increase opportunities for all Brooklyn Park students to build physical activity into their daily routines by walking or riding a bike to school. Safe Routes to School initiatives have far-reaching benefits, including reduced traffic congestion and cleaner air in school areas, reduced transportation costs for school districts, parents and students, and improved health and academic performance among students. Many Brooklyn Park schools are adjacent to community centers or athletic facilities, so in addition to providing safe routes to school, recommendations support safe routes to community assets for a wide range of residents to enjoy. In addition to infrastructure improvements, education, encouragement, and enforcement programming should also be used to increase safety, support, and appeal of walking and bicycling for transportation, fitness, and recreation.

Challenges

Distance to important destinations

Separated land uses are prevalent in Brooklyn Park. Many Brooklyn Park residents report living too far away from important destinations to be able to walk or bike for transportation. However significant portions of Brooklyn Park's population *do* live within walking and bicycling distance of commercial, educational, and recreational destinations. Safe, convenient, and enjoyable connections within neighborhoods and between destinations are one way to increase opportunities for walking and biking. Wayfinding, encouragement programs, and education initiatives are also effective tools for reshaping people's perceptions about what are reasonable walking or biking trips.



Bicycle parking at Zanewood Recreation Center designed by Brooklyn Junior High STEM students.



Sidewalks are not provided on many residential neighborhood streets.



Unwelcoming, unmarked road crossings can make destinations seem further apart, even if they are within walking distance.

Limited route options

Brooklyn Park’s roadway network is fairly typical of second and third tier suburbs. The city has a large grid of high-volume, high-speed roadways that provide fairly direct routes to commercial, employment, recreational, and educational opportunities with disjointed curvilinear streets between the larger grids. Although these corridors work well for efficiently moving motor vehicle traffic, they present significant challenges when it comes to providing safe, low-stress routes for people walking and biking.

A well-gridded street network enables people walking or biking to choose low-stress routes with relative ease by shifting to streets that parallel busy arterials. In Brooklyn Park, options for well-connected alternate routes are limited. Local, low-stress streets often end in cul-de-sacs and dead ends, or simply funnel users (pedestrians, bicyclists, and drivers) back onto the same busy roadways. Pedestrian- and bicycle-exclusive cut-throughs can be one effective way to mitigate connectivity limitations of cul-de-sacs, allowing people walking and bicycling to access neighboring streets while maintaining limited access to motor vehicle traffic.

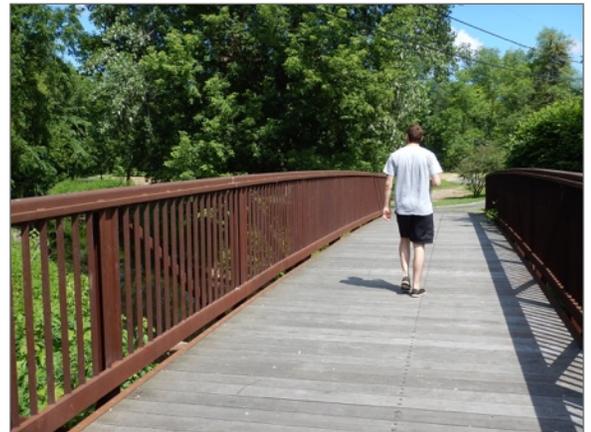
Infrequent and inconvenient crossings

Brooklyn Park’s arterial roads often provide the most direct routes from Point A to Point B, and connect the city’s most important destinations. These important connections typically have long blocks with limited crossing opportunities for people walking and biking. When crossings do exist, they are often long (crossing several vehicle travel lanes and channelized right-turn lanes) and inconvenient (complicated signal timing with multiple turning phases with long wait times for people walking or bicycling).

Signalized intersections on 85th Avenue N, for example, are spaced anywhere from a quarter mile to a full mile apart because cross-street traffic volumes do not meet warrants for a traffic signal – thus necessitating a 5–20 minute walk simply to cross the street at a signal. When signalized intersections and marked crossings are provided across 85th Avenue N, people walking and biking are typically required to cross five or more lanes of traffic (not including ‘pork



Mountable curbs are present adjacent to sidewalks and vegetative buffers on several residential streets – a characteristics that could lead to parking on boulevards.



A bridge across Shingle Creek ends at Brunswick Avenue N south of Brooklyn Boulevard. Many people run across Brooklyn Boulevard where the two streets meet.



An elderly woman takes refuge on a ‘pork chop’ island at Zane Avenue and Brooklyn Boulevard.

chop' islands and channelized right-turn lane crossings, which are often not marked).

Similar conditions are common along Brooklyn Park's minor arterials, and contribute to making walking and bicycling in the city challenging and inconvenient. Long crossings also passively encourage unsafe behavior among people walking and biking, who are reluctant to travel significantly out of their way and be delayed to cross at a marked crossing.

Gaps in the existing network

Sidewalks and/or sidepaths are present on one or both sides of most major corridors in Brooklyn Park. They are provided less frequently on neighborhood streets, especially south of 85th Avenue N. There are opportunities to upgrade existing facilities on important corridors, implement on-street bicycle facilities where appropriate, and install new sidewalks and sidepaths to eliminate gaps. Planning for and providing a continuous network of safe, comfortable, and convenient pedestrian and bicycle facilities within neighborhoods and connecting to important destinations is one of the fundamental steps in creating opportunities for more people to walk and bike in Brooklyn Park.



ADA compliant infrastructure enables a wider range of users to access and use the network, including those who require mobility aids.



A bike rider with a child in tow riding on the sidewalk on Zane Avenue N.

2.3 – Existing and Concurrent Plans and Policies

Local plans and policies

Brooklyn Park Recreation & Parks Master Plan

The Brooklyn Park Recreation and Parks Master Plan is an existing plan that was adopted by the City of Brooklyn Park on October 1, 2012. The plan establishes existing conditions and identifies several opportunities for future improvements, including engagement, maintenance and safety, facilities and parks, park programs, and trail connections. The plan provides a resource for the Recreation and Parks Department to better address the changing needs of the community and to prioritize investments.

Many goals and objectives identified in the Recreation and Parks Master Plan support walking and bicycling. Trails, cited as the “most popular recreation amenity,” are identified a primary focus area for improvement and continued investment. Trails “bring the park system closer to every resident, are usable by all ages and abilities, offer transportation alternatives, and support active living.” The plan recommends making it easier to walk and bike by closing gaps in the sidewalk and trail network.

Brooklyn Park Comprehensive Plan

The 2030 Brooklyn Park Comprehensive Plan was completed in 2008. It is a long-term plan that addresses community-wide issues and desires, with an emphasis on special planning areas. Environmental sustainability and active transportation are among several topics covered in the Comprehensive Plan. From the plan: “The City of Brooklyn Park recognizes that travel by foot and bicycle are essential components of the transportation system. Sidewalks and trails along streets are intended to enhance pedestrian and bicyclist safety by providing a separation from street vehicular traffic within the public right-of-way (Ch 5, page 38).” The city also encourages land use decisions that allow for short walking or bicycling trips.

Building on engagement efforts completed for previous plans

Public outreach and engagement has been conducted for numerous plans, studies, and projects in Brooklyn Park and Hennepin County. In many cases, engagement revealed important experiences and insights about walking and riding a bike in the city. The following engagement summary reports were reviewed as part of the Brooklyn Park Pedestrian and Bicycle Plan:

- Park Haven Apartment Complex Outreach
- Brooklyn Boulevard Community Outreach Notes
- Hennepin County Listening Sessions Draft Report
- Brooklyn Park Community Workshop Summary
- Starlite Transit Center Outreach Summary
- Summer Bash Event Summary
- Bottineau LRT Station Area Planning Outreach
- Hennepin County Bicycle Transportation Plan
- Hennepin County Pedestrian Plan

Shingle Creek Pedestrian Study

Brooklyn Park, Brooklyn Center, and Hennepin County commissioned this study on the Shingle Creek corridor to explore how development could play a role in environmental restoration. The study recommends mixed-use development in Brooklyn Center along Brooklyn Boulevard that includes a park and trail along Shingle Creek, providing connections to the greater network of trails. This scenario would improve water quality and natural habitats in the area and enhance options for walking and bicycling. One of the priorities endorsed in the report is to “[d]evelop a trail system that links Village Creek with Noble Avenue following the creek alignment. In the near term, use an at-grade crossing of Brooklyn Boulevard at Regent Avenue. In the long term, construct a pedestrian/bicycle overpass where Shingle Creek passes beneath Brooklyn Boulevard.”

Safe Routes to School

Formal Safe Routes to School planning has not previously been conducted in Brooklyn Park. The Safe Routes to School component of this plan is citywide, and will focus on high-level infrastructure recommendations. Additional Safe Routes to School planning will be needed for deeper, site-by-site analysis. Walking and biking related education has been integrated into curriculum in some Brooklyn Park Schools, including Brooklyn Junior High, where S.T.E.M. students designed bicycle parking for Zanewood Community Center.

City Sidewalk Policy

The City of Brooklyn Park’s City Sidewalk Policy outlines policies and procedures for installation of sidewalks and trails in new and existing areas. The policy defines the primary purpose of sidewalks and trails as a means for people to walk or bike to schools, religious institutions, shopping centers, parks, recreational facilities, and civic centers. It defines the secondary purpose of sidewalks and trails as a means for connecting to local and regional trails and parks, serving as a portion of the Hennepin County bikeway system, and providing outdoor social and recreational activities.

TH 252 Corridor Study

Staff from Brooklyn Park are working with Brooklyn Center, Met Council, Metro Transit, MnDOT and Hennepin County to establish a long-term vision for TH 252 and to identify short-term improvements and strategies to address congestion, safety, and neighborhood connectivity issues. Study objectives include identifying expressway or freeway options, identifying improvements for pedestrian and bicycle crossings, and documenting proposed transit improvements. Current concepts include a limited access freeway resulting in potential street closures, pedestrian bridges, overpasses, and conversions to full or half interchanges along TH 252 at 85th Avenue N, Humboldt Avenue/81st Avenue N, Brookdale Drive, 73rd Avenue N in Brooklyn Park.

Regional plans and policies

Hennepin County plans and policies

Hennepin County Active Living Policies and Partnership

Active Living Hennepin County, founded in 2006, is a county-led partnership of cities, businesses, and nonprofits working together to increase opportunities to be more active on a daily basis. Through the program, partners are supported in the development of Complete Streets policies, active living resolutions, improved infrastructure design guidelines, and policy implementation. Active Living Hennepin County also provides a resource for communities seeking funding and technical support for active living initiatives.

Hennepin County Complete Streets Policy

Brooklyn Park is located within Hennepin County, which in 2009 became the first Minnesota county to adopt a Complete Streets Policy. The purpose of the policy is to ensure that streets under the county's jurisdiction are designed and operated to assure safety and accessibility for all roadway users including people walking, biking, driving, and taking transit.

Hennepin County Transportation Systems Plan

In 2011, Hennepin County and the Metropolitan Council adopted the 2030 Hennepin County Transportation Systems Plan, which establishes long-range transportation goals for the county. "Bicycle use is increasing for a variety of reasons, including health, exercise, financial, and environmental factors. These values support the development of an interconnected bikeway system that supports recreational trips and utilitarian trips that connect to job centers, commercial centers, schools, transit, and other important destinations."

Hennepin County Public Works Strategic Plan

The Hennepin County Public Works Strategic Plan guides the implementation and administration of its programs and projects. This plan provides guidance for the work of the five Public Works departments (Planning, Policy and Land Management; Environment and Energy; Transportation (Road and Bridges); Community Works; Facility Services; and Management Support). The plan specifically recognizes the importance of increasing transportation choices and supports bicycling as a means to achieve the county's vision for a seamless transportation network. The plan emphasizes the role of active living and complete streets and provides strategies and actions to further the county's commitment to these policies.

Hennepin County Pedestrian Plan

The Hennepin County Pedestrian Plan was adopted in September 2013. The Pedestrian Plan is part of the county's overall 2030 Transportation Systems Plan, and supplements the county's Complete Streets Policy. County roads in Brooklyn Park were generally identified as medium to medium-high priority for pedestrian improvements.

Hennepin County Bicycle Plan

Hennepin County and Three Rivers Park District partnered to develop the 2040 Bicycle Transportation Plan, which the Hennepin County Board of Commissioners adopted in April 2015. The Plan aims to promote bicycling for commuting and recreation by building a safe bikeway system that connects county residents to destinations. The Plan will be updated over time as local municipalities refine and update their own bicycle transportation plans.

See Figure 2.6 on the next page for Hennepin County Bicycle Plan recommendations in Brooklyn Park.

Hennepin County Cool County Initiative

Hennepin County's Cool County initiative aims to reduce greenhouse gas emissions from county operations. The specific targets are a 30% reduction by 2025 and an 80% reduction by 2050, from a baseline set in 2005. The effort will include practices to reduce transportation emissions.

Three Rivers Park District Plans and Policies

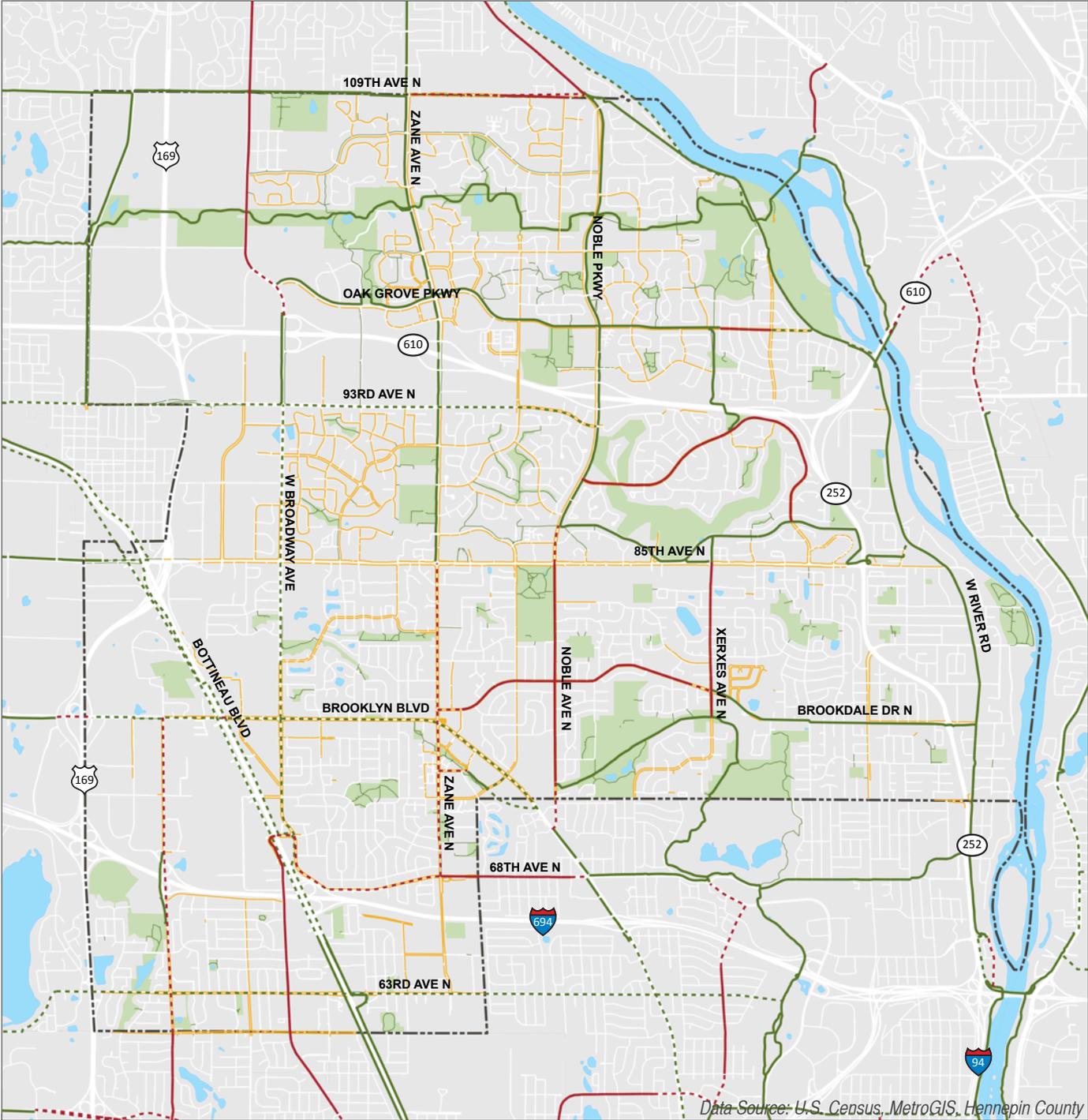
Coon Rapids Dam Regional Park Master Plan

Two regional trails, the Mississippi River Trail and Rush Creek Regional Trail, meet outside Coon Rapids Dam Regional Park in northeast Brooklyn Park. The planning process for the Coon Rapids Dam Regional Park Master Plan is currently ongoing. The master plan is anticipated to be presented to local cities, the Metropolitan Council, and Park District Board of Commissioners during the summer of 2016.

Three Rivers Park District Vision Plan

The Three Rivers Park District Vision Plan is a forward-looking plan that offers action-oriented goals to respond to expected future environmental, economic and social changes throughout the region. Regarding walking and bicycle trails, the plan recommends developing a sustainable funding mechanism to account for recent and future increase in trail users and in recognition of the importance of trails as a component of the transportation network.

Figure 2.6 – Hennepin County Bicycle Plan Recommended Network



Data Source: U.S. Census, MetroGIS, Hennepin County

Existing Pedestrian and Bikeway System

- Existing sidewalks
- Existing park trail
- Existing on-street bikeway (unmarked shoulder)
- - - Proposed on-street bikeway
- Existing off-road trail / shared use path
- - - Proposed off-road trail / shared use path

Metropolitan Council Plans and Policies

METRO Blue Line Extension Planning & Bike Study

Planning is underway for the METRO Blue Line Extension. The project is currently in the Project Development phase, which includes initial design and engineering as well as completion of environmental documentation. A Station Area Planning Community Working Group (CWG) has been established by the City of Brooklyn Park and Hennepin County for the 610 Corridor Stations (93rd Avenue/Oak Grove LRT Stations). Through extensive outreach, residents and business representatives have the opportunity to share comments regarding land use, urban design, and infrastructure around Brooklyn Park's stations. Construction for the METRO Blue Line Extension is expected to begin in 2018, with passenger service commencing in 2021. A METRO Blue Line Extension Bike Study led by Hennepin County is also underway to examine and recommend bicycle connections within three miles of station locations and has been coordinated with this plan for consistency.

Metropolitan Council Transportation Policy Plan and Twin Cities Regional Bicycle System Study

The Transportation Policy Plan (TPP) presents Metropolitan Council's policies and plans to guide development of the region's transportation system. The 2040 TPP was adopted by Met Council in January 2015. It reflects the Thrive MSP 2040 plan, the region's visioning and development guide. The TPP contains chapters on transit, pedestrian, and bicycle investments, and includes the Regional Bicycle System Study.

Completed in 2014, the study was developed to better understand how bicycling fits into the regional transportation plan and to work towards improving both on- and off-road facilities. The study identifies key regional destinations, develops guiding principles, and proposes a regional network and framework for monitoring system performance. The TPP identifies the following Brooklyn Park corridors within the Regional Bicycle Transportation Network: Noble Avenue N, Zane Avenue N, Brookdale Drive N, 93rd Avenue N, 109th Avenue N, and W Broadway Avenue.

Metropolitan Council Regional Parks Policy Plan

The Metropolitan Council adopted the 2040 Regional Parks Policy Plan in February 2015. This plan works with Thrive MSP 2040 to create a 30-year vision for the region. The Regional Parks Policy Plan emphasizes the importance of equitable access to parks by all residents, promotion of multimodal access, and the expansion of the Regional Parks System to conserve and preserve natural resources, connect communities, enhance quality of life. Brooklyn Park's Regional Parks and Trails include: Shingle Creek Regional Trail, Rush Creek Regional Trail, Coon Rapids Dam Regional Park, and Three Rivers Regional Park. Long-term plans for the Crystal Lake Regional Trail call for an extension through Brooklyn Park along Bottineau Boulevard, eventually connecting to the Elm Creek Park Reserve.

Statewide Plans and Policies

MnDOT Complete Streets Policy and Work Plan

MnDOT adopted a Complete Streets Policy in November 2013. This policy requires that Complete Streets designs be considered at each phase of MnDOT projects including planning, construction, maintenance and operations. Complete Streets policies encourage context-sensitive designs that are accessible and safe for users of all ages and abilities, and balance the needs of pedestrians, bicyclists, transit users, and drivers. The Complete Streets Work Plan is a complementary document that is updated regularly to reflect tasks and timelines for Complete Streets implementation work.

MnDOT Minnesota GO Vision and Statewide Multimodal Transportation Plan

Minnesota GO is a 50-year visioning document that focuses on how to best invest funds in a statewide transportation network. The Statewide Multimodal Transportation Plan provides policy and direction for implementing the vision established in Minnesota GO. The Statewide Multimodal Transportation Plan is currently undergoing a revision and is expected to be approved in 2017.

MnDOT Statewide Bicycle System Plan

The Statewide Bicycle System Plan follows the Statewide Bicycle Planning Study, and falls within MnDOT's Minnesota GO family of plans. Community engagement was completed in March 2015. Thousands of comments were received, including several in Brooklyn Park, to help guide the development of the Statewide Bicycle System Plan. A draft Plan was released for public comment during summer 2015.

MnDOT Statewide Pedestrian System Plan

Planning for the MnDOT Statewide Pedestrian System Plan is ongoing. MnDOT and the Minnesota Department of Health are co-leading the statewide plan. Extensive public outreach and engagement efforts were completed during the Summer of 2015. The Statewide Pedestrian System Plan expected to be completed in the Spring of 2016.

Safe Routes to School Minnesota

Safe Routes to School Minnesota provides planning and implementation grants for programming and infrastructure improvements to make it safer for children to walk or bike to school. Planning grants fund Safe Routes to School plans at the school, district, or city wide level. Communities that have a plan in place are better prepared to pursue additional funding and support for infrastructure and programming implementation.

Statewide Health Improvement Program

The Brooklyn Park Pedestrian and Bicycle Plan is funded by the Statewide Health Improvement Program (SHIP). SHIP supports healthy choices in communities throughout the state through initiatives focusing on physical activity, healthy eating, workplace wellness, Safe Routes to School, and alcohol, drug and tobacco reduction.

2.4 – Community Engagement

Public outreach and engagement was conducted in person and online to connect with Brooklyn Park residents and receive their comments and guidance about existing conditions, user routes, needs and destinations, and to help identify opportunity corridors in the city.

A detailed summary of public engagement efforts can be found in Appendix B.

In-person engagement

A variety of in-person events were held at various stages during the planning process to share project information and gather public comments. In-person engagement events included:

- METRO Blue Line Extension Open House Tabling
- Tater Daze Pop-Up Workshop
- Farmers Market Pop-Up Workshop
- Community Listening Session at City Hall
- Draft Plan Presentation

Activities varied slightly between engagement events depending on format, weather, and project phase. In general, in-person events included the following exercises:

- Plan overview
- Wish/Love activity (what’s working, what needs work)
- Identifying barriers and prioritizing solutions
- Mapping destinations, routes, barriers, and ideas
- Opportunities for general comments and questions

Online engagement

A project website (www.brooklynparkpedbikeplan.org) was developed to gather and share information during the life of the project. The site included general project information, notices about in-person events, and online engagement opportunities including a project survey, interactive map, general comments tool, and a place for people to sign up for



A Brooklyn Park resident shares ideas at the Tater Daze Pop-Up Workshop.



Participants at the Brooklyn Park Farmers Market Pop-Up Workshop.

Engagement by the Numbers

- **5 in-person events** invited people to share experiences and ideas for improving walking and biking in the city
- Over **100 unique users** logged into the interactive online map
- **More than 175 map comments**, including destinations, routes, barriers, and ideas shared in person and online
- **142 project surveys** completed online

project updates. Online materials were designed to closely match in-person activities. Online tools, including survey and interactive map, were launched June 15. The public survey and interactive map were available for two months, and were closed for public comment on August 16.

The City of Brooklyn Park used its social media channels (including Facebook and Twitter) to promote the project, direct people to online tools, and announce public events.

Online materials were used to gather information regarding:

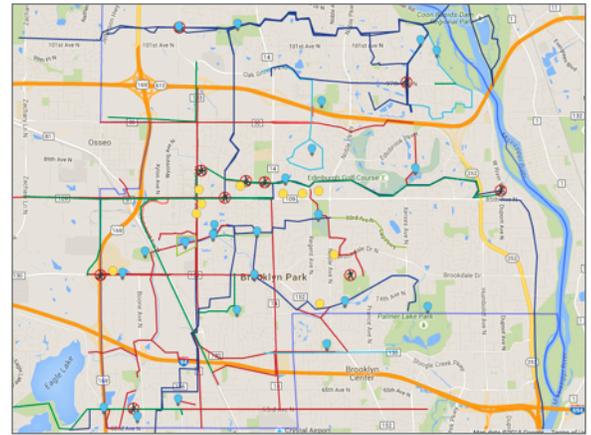
- Rider habits (frequency and purpose);
- Prioritizing destinations, barriers, and opportunities;
- Mapping destinations, routes, barriers, and ideas; and
- General comments and questions.

Comments collected during mapping exercises (in person and online) can be found combined in Figure 2.7.

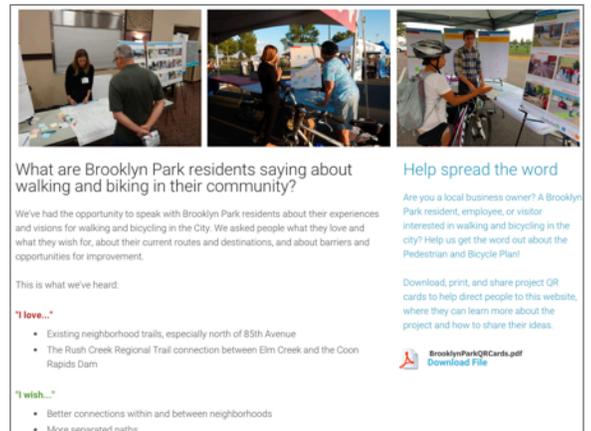
Key themes

Several key themes emerged over the course of public outreach and engagement, including:

- There is a significant network for walking and biking in place today.
- People are walking and biking today, mostly for recreation.
- Greater separation from motor vehicles is desired.
- Destinations are considered too far apart.
- Key opportunities identified by the public include:
 - Addressing gaps in the network;
 - Making it easier for people to cross streets;
 - Improving wayfinding;
 - Providing consistent, ongoing maintenance;
 - Installing more bike racks to promote ridership; and
 - Addressing perceived and public safety concerns.



People entered routes, barriers, destinations, and ideas using an interactive online map.

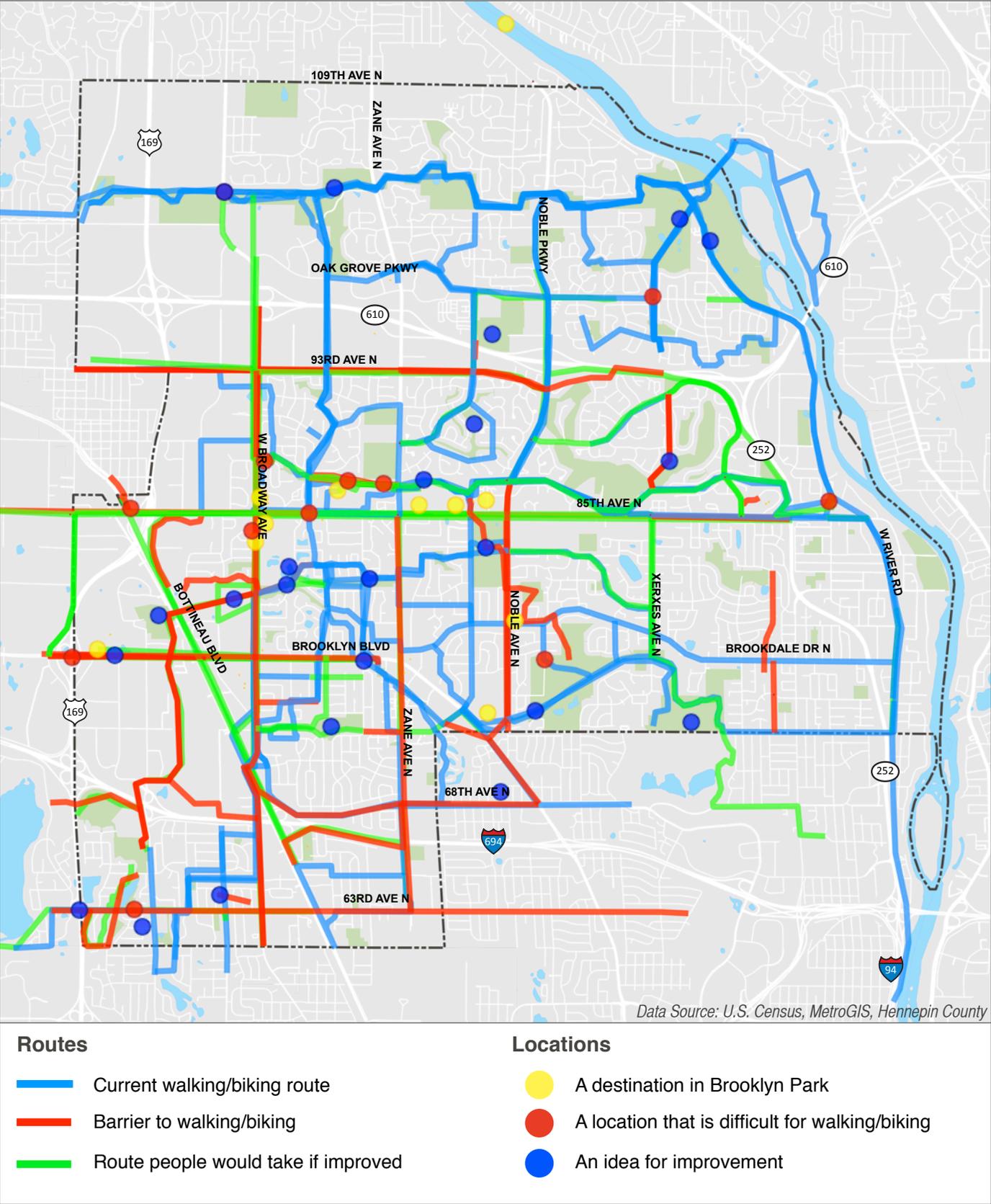


A project website was set up to share information and host online tools.



Participants discuss routes, barriers, and destinations at a community workshop.

Figure 2.7 – Map of Public Engagement Comments (in-person and online)



3. Network Recommendations

This chapter contains the following sections:

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3.2	Pedestrian Network Recommendations	44
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3.1 – Network Overview

The City of Brooklyn Park has many assets for walking and biking in place today. However gaps in the network make it difficult for many people to walk or bike safely and comfortably in their neighborhoods and access important destinations including schools, local parks, commercial areas, and transit. The infrastructure recommendations outlined in this chapter address gaps and barriers in the existing network, and provide guidance for developing a more complete, equitable, and inviting network for walking and biking in Brooklyn Park.

Recommendations are based on engagement with the Project Steering Committee and the general public, network analysis, site visits, and best practices. Further facility design and engineering must be completed prior to implementation.

Pedestrian and bicycle facility types

Five different facility types to improve accessibility, mobility, and connectivity options for people walking and biking in Brooklyn Park are described in this section. For more information about facilities and crossing treatments as well as selection and application guidance, see Appendix A.

Sidewalks

Sidewalks are paved concrete or asphalt walkways designed for pedestrian use. A well-connected sidewalk network is the foundation of pedestrian accessibility. High quality sidewalks include level and unbroken surfaces, ADA compliant curb ramps, vegetation, and lighting. Additional facilities like benches, waste receptacles, and public art provide additional user comfort and interest.

The city’s current Sidewalk Policy states: “Sidewalks shall be concrete of six feet width and located a minimum eight feet from back of curb when along collector streets, and 12 feet when along arterial streets.... Sidewalks shall be installed immediately adjacent to back of curb when conditions warrant.” Sidewalk recommendations include segments identified in the Transportation Chapter of the city’s Comprehensive Plan.



Upgrading existing sidewalks to shared-use paths along major corridors will make traveling easier and more comfortable for people walking and biking.

Goals of the network

Recommended route improvements are meant to achieve the following goals:

- Fill gaps in the existing network;
- Address concerns of those currently walking and biking in Brooklyn Park;
- Attract new users by developing a safe, comfortable, and inviting network;
- Provide connections to important destinations including schools, neighborhood parks, commercial areas, employment, transit, and regional corridors;
- Update existing sidewalks to shared-use paths to increase multi-modal comfort and accessibility; and
- Plan for connections along and to West Broadway in anticipation of the METRO Blue Line Extension.

Shared-use paths

A shared-use path (SUP, often also known as trail) provides a shared space for people walking and biking that is separate from motor vehicle traffic. Shared-use paths work better when they include fewer intersections with motorized traffic.

In this plan, shared-use paths are recommended parallel to busy roadways where on-street bicycle facilities would not be suitable for the majority of users. SUPs are also recommended at other locations: along streams and railroads, and through parks. SUPs provide increased separation from motor vehicle traffic, and are also used at parks and natural assets to provide more scenic routes. Striping of shared-use paths helps to clarify passing lanes, and identify separate lanes for people walking or biking in high use areas.

Shared-use paths should be a minimum width of ten feet. Eight foot widths are acceptable for short distances in constrained spaces. Asphalt is recommended to help differentiate from sidewalks, provide a smoother surface for wheeled users, and to reduce installation costs. Shared-use path recommendations include segments identified in the Transportation Chapter of the city’s Comprehensive Plan and Recreation and Parks Master Plan.



Shared-use paths are recommended along roadways to provide space that is separate from motor vehicle traffic, and wide enough to accommodate people walking and biking.



Signage along shared-use paths may be used to encourage safe trail behavior.

Neighborhood Slow Streets

Neighborhood Slow Streets (also known as bike boulevards) are residential streets designed to prioritize bicycle travel while making motor vehicle traffic more calm. They can include some or several types of traffic-calming elements: bump-outs, traffic circles, speed tables, or others.

Neighborhood slow streets make walking and biking easier and safer by reducing motor vehicle speeds and by improving crossing movements; they benefit all residents by improving overall traffic safety along the corridor. Route signage, pavement markings, and stop sign orientation can help highlight the street as a bikeway.



Neighborhood Slow Streets can include traffic calming elements, and prioritize non-motorized travel.

Bicycle lane

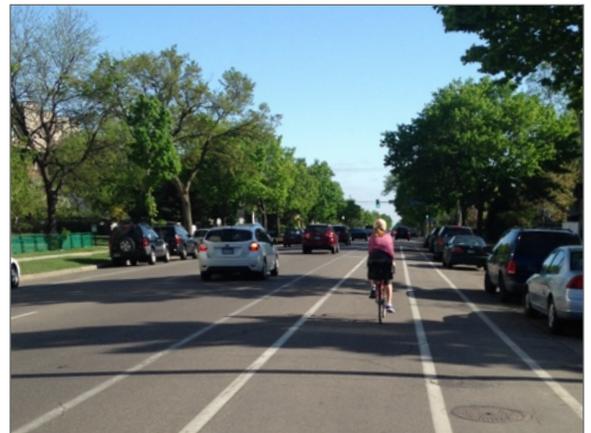
Bicycle lanes designate a portion of the roadway for preferential use by people biking. Lanes are defined by paint and pavement markings, and may also include signage. Bicycle lanes may be located adjacent to curbs or on-street parking. Shared bicycle/parking lanes are discouraged. Bicycle lanes should be a minimum of 5 ft. in width, but 6 ft. or greater is recommended. When placed adjacent to curbs, bike lane widths should not include curb and gutter. When placed adjacent to on-street parking, bike lanes should be placed outside of the door zone to prevent the risk of dooring incidents.



Bicycle lanes designate a portion of the roadway for preferential use by people biking.

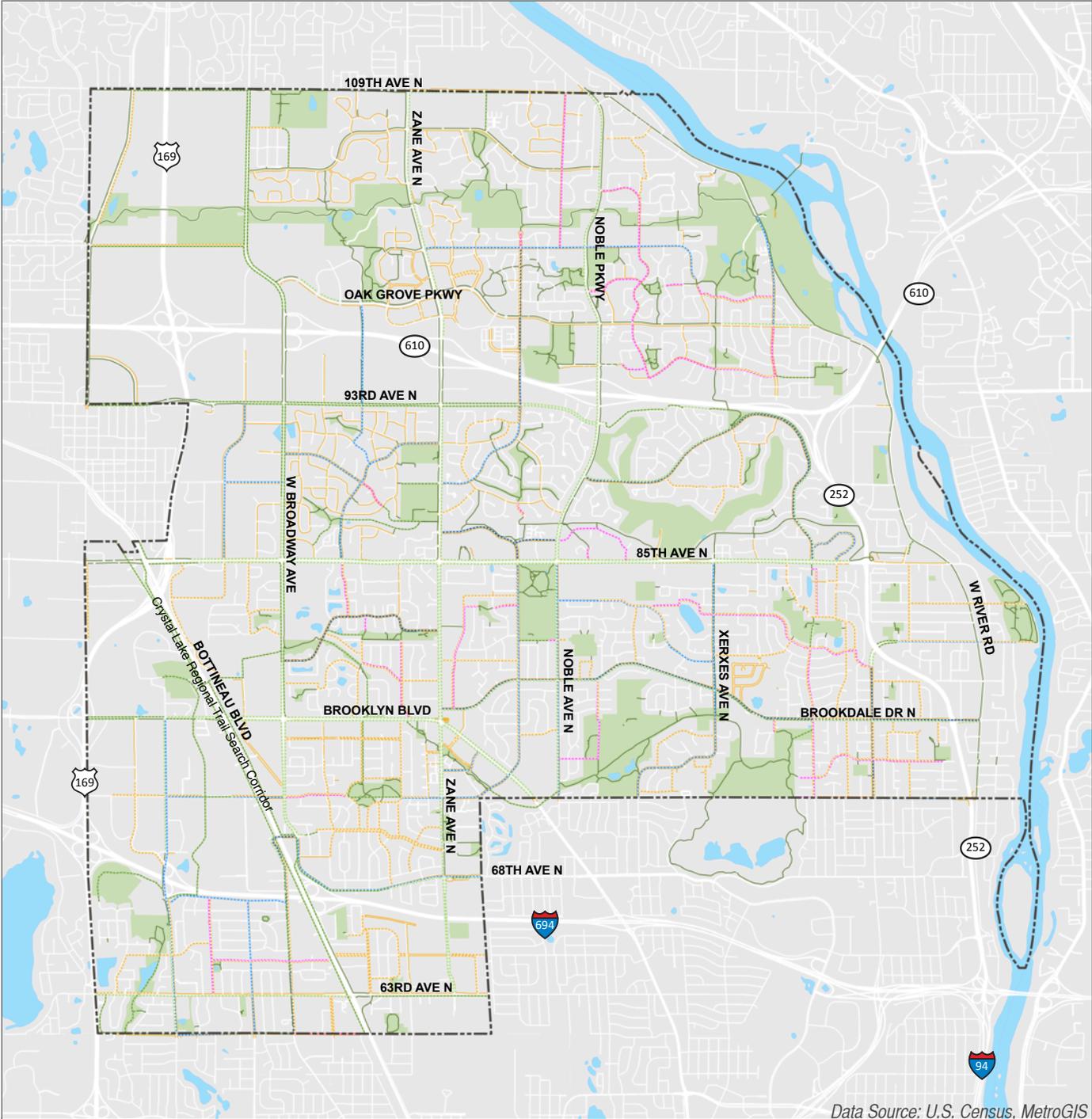
Buffered bicycle lane

Buffered bicycle lanes are conventional bike lanes that include an additional painted buffer space for increased separation between people biking and people driving. Buffers should be a minimum of 2 ft wide. Wider buffers with cross-hatching are recommended as space allows to further separate people biking from motor vehicle traffic, and increase user comfort. If on-street parking is present and space allows, an additional painted buffer may be provided between the bicycle lane and on-street parking to reduce the risk of dooring incidents.



Buffered bicycle lanes provide an additional painted buffer space between the bike lanes and vehicle travel lanes. Buffers between on-street parking and bike lanes are also recommended when space allows.

Figure 3.1 – Network Vision: Pedestrian and Bicycle Recommendations



Data Source: U.S. Census, MetroGIS

Existing

- Sidewalk
- Shared-use path / park trail

Recommended

- - - New sidewalk
- - - New shared-use path
- - - Upgrade sidewalk to path
- - - Neighborhood slow street
- - - Conventional bike lane
- - - Buffered bike lane

3.2 – Pedestrian Network Recommendations

The recommended Brooklyn Park pedestrian network provides a denser, more equitably distributed network of sidewalks and shared-use trails.

Building on the city’s sidewalk system

Recommended sidewalk and shared-use path connections are consistent with city gap/need analysis, with additional recommendations to expand access and route options.

Expanding shared-use path network

Dual-side shared-use paths are recommended along minor arterials to allow for comfortable travel along the city’s most direct corridors. Recommendations for trail connections along Shingle Creek and Bottineau Boulevard are consistent with previous and ongoing planning efforts.

Connecting to places

Sidewalks and shared-use paths are recommended along roadways connecting to schools, parks, transit, and commercial areas. Sidewalks within neighborhoods provide a separated and comfortable place for people to walk recreationally, and to connect to nearby routes and destinations.



A focus on connecting students to schools.



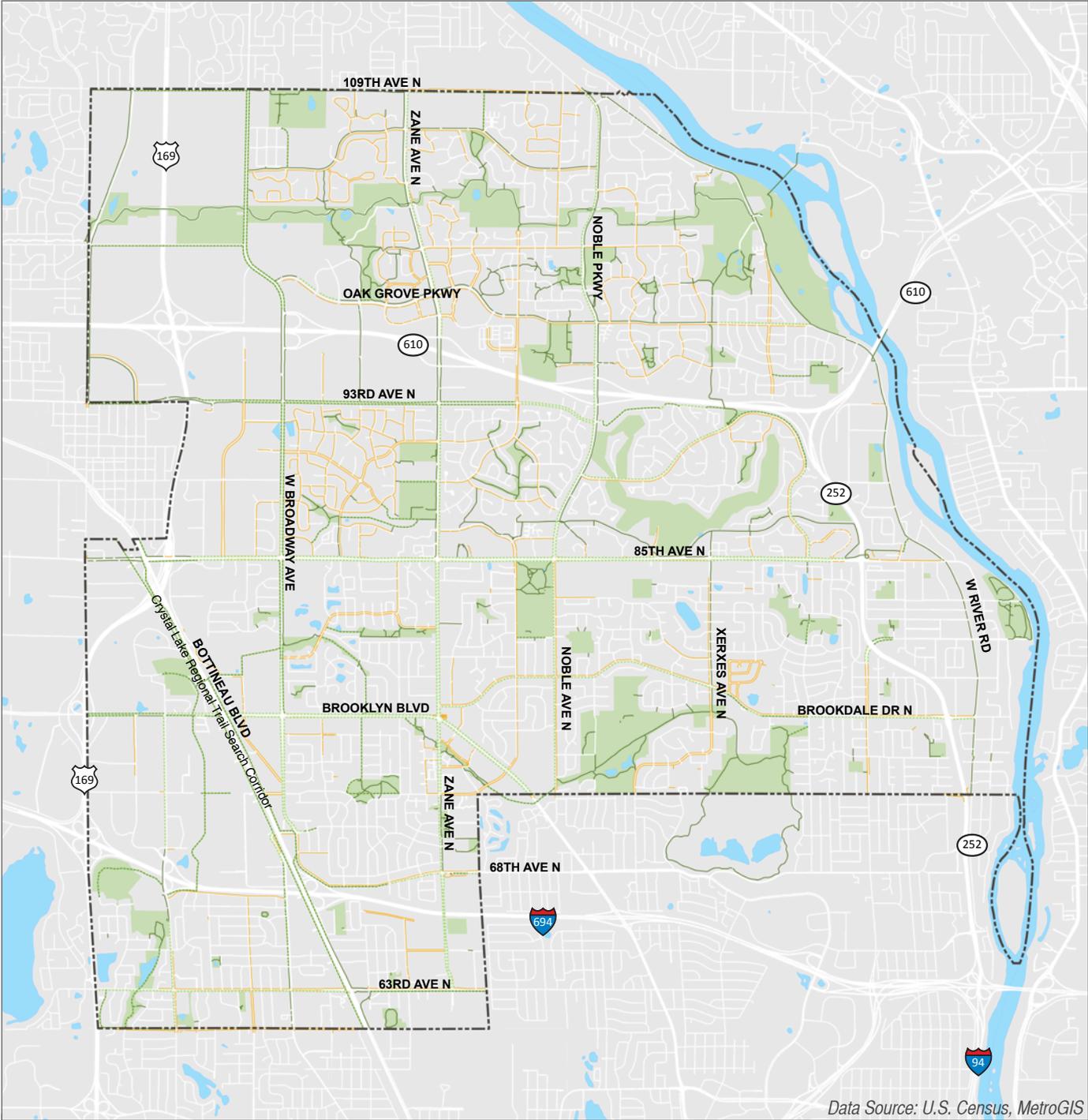
Create opportunities for Brooklyn Park employees to be active during the day by walking to/from work, or during lunch.

Table 3.1 – Pedestrian Network Miles

Facility type	MILES		
	Existing	New	Total
Sidewalk	121	65	132
Shared-use path	71	103	174
Total pedestrian network	192	104	306

Note: Network measurements include upgrading 54 miles of existing sidewalk to shared-use path, and installing 49 miles of new shared-use path connections. Total sidewalk miles and new pedestrian network miles account for conversion of existing sidewalk to shared-use path.

Figure 3.2 – Recommended Pedestrian Network



Data Source: U.S. Census, MetroGIS

Existing

- Sidewalk
- Shared-use path / park trail

Recommended

- - - New sidewalk
- - - New shared-use path
- - - Upgrade existing sidewalk to shared-use path

Table 3.2 – Additional Treatments for Walkability

<p>Sidewalk furnishings</p>	<ul style="list-style-type: none"> • Encourage street trees, vegetative buffers, and street furnishings to control stormwater and provide shade. • Accommodate necessary utility infrastructure. • Allow for facilities that enhance the pedestrian environment including pedestrian-scaled lighting, public art, wayfinding, vegetation, etc. • Accommodate commercial activities that invite walking and add activity and interest to the area.
<p>Street crossings</p>	<ul style="list-style-type: none"> • Reduce unsafe crossing behavior by providing safe, marked opportunities for people walking or biking to cross the street at least every half-mile along minor arterials, and every quarter-mile in neighborhoods and adjacent to commercial or retail development, schools, parks, and along transit routes. • Install ADA-compliant curb ramps at all marked and unmarked crosswalks. • Establish guidelines for use of raised crosswalks and median refuge areas for crossing areas. • Increase installation of curb extensions where possible, including neighborhoods and where on-street parking is permitted. • Design intersections with the minimum allowable turning radii to slow traffic speeds, to allow perpendicular curb ramps to be positioned parallel to crosswalks and perpendicular to curb, and to shorten overall crossing distance. • Design channelized turn lanes and median refuges with attention to biking and walking movements. • Avoid multiple turning lanes when possible. • Implement advanced stop bars to deter motorists from encroaching into crosswalks when stopped.
<p>Pedestrian crossing signals</p>	<ul style="list-style-type: none"> • Continue updating pedestrian crossing signals to countdowns until all units have been converted. • Test new user-activated technologies for traffic control including Rapid Rectangular Flashing Beacons (RRFB), Pedestrian Hybrid Beacon (PHB or HAWK), and others. • Consider implementation of Leading Pedestrian Intervals. • Ensure that clearance intervals are properly timed.
<p>Driveways</p>	<ul style="list-style-type: none"> • Limit the width, number, and location of driveways through consolidation and other means.
<p>Requirements for sidewalks in new and existing developments</p>	<p>Consider modifying the City Sidewalk Policy to:</p> <ul style="list-style-type: none"> • Allow for greater flexibility in implementation. • Include goal of providing sidewalks on at least one side of local streets including new development and retrofits on existing streets, including dead ends that provide cut-throughs or park/trail connections.

3.3 – Bicycle Network Recommendations

The recommended Brooklyn Park bicycle network provides a denser, more equitably distributed network of on- and off-street bicycle facilities.

Expanding shared-use path network

Dual-side shared-use paths are recommended along minor arterials to allow for comfortable travel along the city’s most direct corridors. Recommendations for trail connections along Shingle Creek and Bottineau Boulevard are consistent with previous and ongoing planning efforts.

Establishing an on-street network

An on-street network including neighborhood slow streets, bike lanes, and buffered bike lanes will provide dedicated connections within neighborhoods and across town.

Connecting to places

Bicycle connections are recommended along roadways adjacent to schools, parks, commercial areas, higher-density housing, and along transit corridors to facilitate and accommodate bicycle travel within neighborhoods and throughout the city.



Neighborhood Slow Streets provide bicycle connections on calm residential streets.



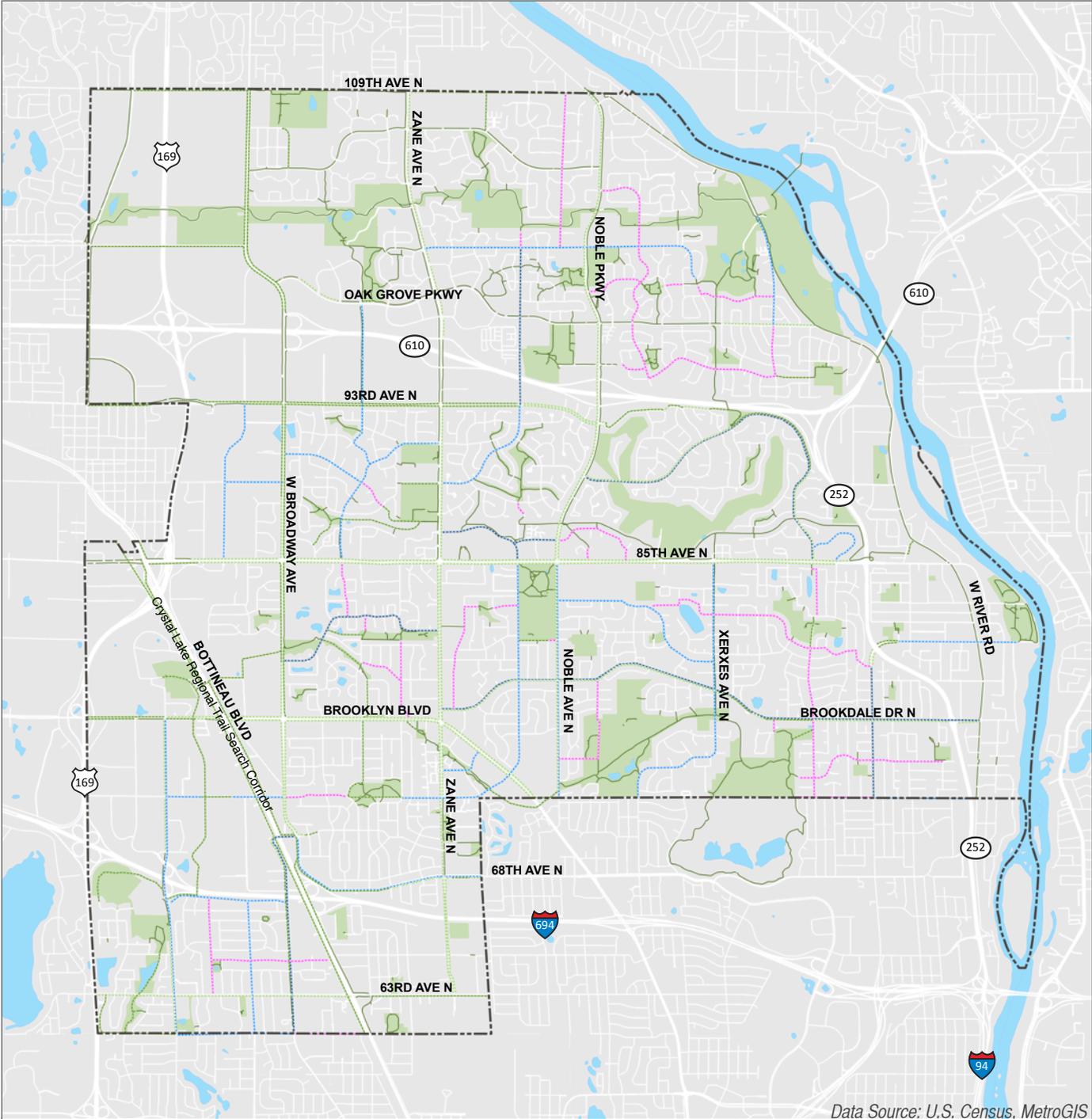
Shared-use paths are recommended to provide comfortable connections along busy roadways.

Table 3.3 – Bicycle Network Miles

Facility type	MILES		
	Existing	New	Total*
Neighborhood slow street	0	22	22
Bicycle lane	0	64	64
Buffered bicycle lane	0	32	32
Shared-use path	71	103	174
Total bicycle network	71	221	292

Note: All measurements are lane miles, excluding neighborhood slow streets, which are center lane miles. It should be assumed that all recommended conventional and buffered bicycle lanes be applied on both sides of the street to dedicate space for two-way bicycle travel.

Figure 3.3 – Recommended Bicycle Network



Data Source: U.S. Census, MetroGIS

Existing

— Shared-use path / park trail

Recommended

— New shared-use path

— Upgrade existing sidewalk to shared-use path

— Neighborhood slow street

— Conventional bike lane

— Buffered bike lane

Table 3.4 – Additional Treatments for Bikeability

<p>Bicycle network design</p>	<ul style="list-style-type: none"> • Draw on latest best practices for full selection of bikeway facilities. Sources include: 2012 AASHTO Guide for the Development of Bicycle Facilities, NACTO Urban Bikeway Design Guide, FHWA Separated bike Lane Planning and Design Guide, MnDOT Bikeway Facility Design Manual, and others.
<p>Bicycle parking</p>	<ul style="list-style-type: none"> • Establish an ongoing “Request-a-Rack” program. • Develop bicycle parking requirements for new development, and install bicycle parking at existing destinations including commercial and employment centers, recreational areas, schools, and other community destinations where people may arrive by bike. • Work with Metro Transit to provide secure, short- and long-term parking at major transit hubs including Park & Ride lots and planned Bottineau LRT stations. • Adopt and follow Hennepin County’s bicycle parking guidelines: http://www.hennepin.us/~media/hennepinus/residents/transportation/bike/bike-plan/Appendix%20F%20%20Bicycle%20Parking%20GuidelinesFINAL.pdf • More information about bicycle parking is provided in Chapter 4 and in Appendix A.
<p>Rest stops</p>	<ul style="list-style-type: none"> • Establish guidelines for installation of rest stop facilities including benches, water refill stations, short-term parking, bicycle maintenance stations, trash and recycling, and restrooms.
<p>Bicycle treatment at intersections and trail crossings</p>	<ul style="list-style-type: none"> • Mark bicycle lanes across right-turn lanes and through intersections by marking them with green paint where appropriate. • Install chevrons and dashed lines across intersections where appropriate. • Install signage at conflict points where appropriate. • Establish guidelines for installing medians or raised crosswalks at trail crossings and intersections. • Install bicycle signal detection including loop detectors or camera detection along bikeways when signals are installed or majorly updated. • More information about intersection treatments is included in Appendix A.
<p>Lighting of trails and on-road facilities</p>	<ul style="list-style-type: none"> • Establish policies for providing lighting along on- and off-road facilities, and in tunnels and other areas along trails as needed.
<p>Facility maintenance</p>	<ul style="list-style-type: none"> • Develop facility maintenance guidelines for ongoing and seasonal maintenance including street cleaning, vegetation maintenance, snow and ice removal, and re-striping. • Develop a snow and ice removal policy for on- and off-street bicycle facilities, and publicize “Winter Network” identifying priority routes for snow and ice removal along pedestrian and bicycle facilities. • More information regarding facility maintenance is provided in Chapter 4.

4. Programs & Operations

This chapter contains the following sections:

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Increasing walking and bicycling in Brooklyn Park will require physical improvements (filling sidewalk gaps, building trails, implementing an on-street network, etc.) along with implementation of programming strategies including education, encouragement, policy changes, and facility maintenance.

4.1 – Education and Encouragement

Education and encouragement programs promote increased walking and biking by educating roadway users on safe interactions, incentivizing walking and biking trips, and spreading awareness and support for non-motorized transportation options.

Network maps

People won't use a walking or biking network if they are unaware of its existence, or if they don't know how it may help them reach their desired destinations. Printing and distributing bikeway maps is a high-benefit, low-cost way to promote walking and biking by helping people identify route choices. Network maps can also be used to promote the city's local businesses and festivals.

Map inserts can provide information covering rules of the road, bicycle safety and maintenance, and connecting with mass transit. Another low-cost and potentially helpful tool is integrating web-based trip planner services (like Google Maps or Cyclopath) into the city's website or events pages. Walking and bicycling route and parking information can also be prioritized when providing directions to city events to encourage more people to arrive on foot or by bike.

Community-wide walking and biking events

Special events offer an opportunity to bring attention to practical, fun, and healthy aspects of walking and riding a bike as tools for transportation, recreation, and health. Because these events are community-wide and of limited duration, people are more open to participating without feeling like they have to commit to making a long-term

Strategies for education and encouragement programming

- Educate the public about walking and bicycling as sustainable modes of transportation that save money, promote healthy living, and reduce emissions and traffic congestion.
- Develop activities and events to overcome barriers to walking and biking.
- Support programs to encourage employers to support walking and biking as viable transportation options.
- Provide tools for residents and visitors to easily report issues or concerns.
- Partner with community organizations and local businesses to promote and participate in education programs.
- Work with partners to expand driver's education and coursework about the rights and responsibilities of all road users.



Open Streets events are one-day events that invite people to experience city streets in a whole new way: at their own pace, on their own power and without safety concerns about interactions with motor vehicle traffic.

change in their travel or recreation habits – but sometimes that’s all that is needed to open the door to adopting new travel behaviors over the long term.

Potential events and programs include:

- Monthly group rides with the Brooklyn Park City Council, the Mayor or other local personalities;
- Open Streets events that close a road or two to auto traffic once a month and make it a bike and pedestrian-only street;
- Parks and recreation programs that work with non-profit or bicycling advocacy groups to sponsor bicycling events and activities, especially on trails and regional bicycling routes; and
- Participate in walk/bike weeks. These types of events, including Walk/Bike to Work Week, often include special publicity, route guidance, group events, and pit stops for participants, and provide a fun and inviting opportunity for people to try walking or biking in their community.

Rider incentive and TDM programs

Increased use of walking and biking can help achieve Transportation Demand Management (TDM) objectives for workplaces and communities while improving community health and supporting local economic development. Several types of incentive programs are in use in communities throughout the United States.

Some of the most popular programs include:

- Business associations provide discounts to shoppers who arrive by bike; and
- Employers offer parking cash-out benefits, which give employees who don’t drive the cash equivalent of the parking subsidies provided to drivers.

These programs help address parking and congestion issues that sometimes hinder successful commercial areas. Brooklyn Park businesses could offer discounts for customers who arrive on foot or by bike.



Inclusive group rides, like Slow Roll Detroit, provide opportunities for people to ride in a supportive environment.



Businesses can provide discounts to shoppers who arrive by walking or biking.

Learning from community-members for improved health outcomes in Brooklyn Park

In 2015, Hennepin County conducted ten community listening sessions with minority residents living in Brooklyn Park and Brooklyn Center.

The goal of the sessions was to speak directly with community members and learn more about health issues and opportunities to support improved health outcomes. Topics included opportunities and barriers regarding healthy and affordable food access, physical activity, and tobacco use and prevention.

A top priority identified by the different communities was a need for increased access to parks and culturally appropriate programming. In addition, residents voiced a strong need for adequate sidewalks and public bike sharing systems.

Working in collaboration with Brooklyn Park Recreation and Parks Department, Hennepin County Public Health is supporting the hiring of cultural liaisons to work with the Recreation and Parks Department to bridge the gap between community members and the city.

The intended outcomes of the initiative are to:

1. Increase participation of diverse community members in the recreation and parks decision-making processes.
2. Increase participation in recreation and parks programs and activities.
3. Improve the quality of life for underserved low-income communities of color, by empowering and engaging community leaders at the local level to advocate and educate for safer bikeways and walkable communities.
4. Build the cultural capacity of the Recreation and Parks Department to effectively serve racial-ethnic minority groups.

What participants had to say about barriers and opportunities for physical activity:

“My big thing is access. I think that in some of the more affluent neighborhoods in Brooklyn Park and Brooklyn Center, they have these well-designed trails that are not on the street. And, you know, the neighbors can walk the streets. When you come into the busy and less fortunate neighborhoods, you don't have those access to trails.”

— Africa-born Community Member

“Where my kids walk back and forth to and from school, there's no sidewalks, so they had to walk in the middle of the street or sometimes the side of the street. And I always tell them, okay, walk on the side of the street. Don't walk in the middle, but stay off the grass.”

— Hmong Community Member

4.2 – Enforcement and System Safety

People tend to avoid activities that feel dangerous. Providing a network of facilities that not only *feel* safe, but actually *are* safe, is essential in promoting and supporting walking and bicycling trips.

Safety evaluation

A successful pedestrian and bicycle network is safe, comfortable, and convenient to users. Not feeling safe is a common concern among people who are wary of walking, and especially riding a bike, for more of their trips. There are three measures of safety, all of which should be considered when designing facilities and assessing system safety:

Actual safety

Actual safety can be measured quantitatively by tracking the frequency and severity of collisions involving people walking or biking. What is the actual risk of being involved in a collision as a pedestrian or bicyclist, and how severe will it be?

- Track frequency and severity of collisions involving people walking or biking.
- Prioritize improvements in areas with high rates of collisions.

Perceived safety

Also called subjective safety, perceived safety may be influenced by the speed, volume, and proximity of passing vehicles. Is it easy to cross the street? Do you have to bike fast in order to keep up with car traffic?

- Provide separation between people driving, walking, and biking.
- Take measures to calm traffic along corridors where people walk and bike.
- Reduce noise of motor vehicles by using quieter road surfaces.
- Enforce speed limits and proper yielding behavior by motorists.
- Provide designated pedestrian and bicycle signal phasing at intersections.
- Highlight pedestrian and bicycle pathways through intersections with crosswalks, colored paint, lighting, and refuge medians.

Social safety

Social safety can be tied to public safety issues. Is the route well lit? Does the route feel isolated, or are there “eyes on the street”? Is crime or theft a concern?

- Design tunnels so that people can see out of them as they are entered.
Avoid blind corners on paths whenever possible.
- Install sidepaths that are wide enough to allow users to comfortably pass.
Address issues of crime.

- Keep facilities clean, and free of litter and graffiti.
- Maintain vegetation so that grass, shrubs, and trees do not encroach on walkways or bikeways.
- Keep walkways and bikeways well lit at night so that users can easily see obstacles, other people walking and biking, and be easily seen by people driving.

Safety measures do not operate in isolation. Addressing one safety issue is likely to improve others. Calming traffic, for example, is likely to improve both perceived and actual safety, as slower moving drivers are more likely to stop for people walking and biking, and less likely to cause severe injuries in the case of a collision.

The city should consider providing an easy way for people walking and biking in Brooklyn Park to report incidents or areas of concern, and establish a way of monitoring and addressing user conflicts.

Safety education

People driving, walking, and biking all contribute to making all modes safer and more effective: one of the leading causes of crashes is the unexpected behavior of at least one of the parties involved. Safety programs for all roadway users have been shown to be an effective and cost-efficient way of reducing the risk of crashes and injuries while encouraging people to walk or bike more often. It is important to balance targeted safety campaigns like helmet and bike light promotion with comprehensive safety education that addresses the rules of the road and the individual rights of all sidewalk, trail, and roadway users.

Safety education approaches are outlined for each of the following user groups:

- Children learning the rules of the road;
- Teens and adults walking and biking; and
- Motorists interacting with people walking and biking.

For children

Share information on safe walking and bicycling at an early age on to teach important safety skills and reinforce the message that walking and bicycling are enjoyable, useful means of transport. United States schools commonly provide automobile driver education for children 15 or older, children and teens rarely receive formal safety training for walking or riding a bike.

In European countries where the mode split for bicycling is much higher, schools typically provide formal training in safe bicycling starting in elementary school. In the Netherlands, children undergo an annual three week training on bicycling rules and

maneuvers. Similar training may be provided in Brooklyn Park, potentially as a partnership between the city and school districts. The city may also include more walking and biking safety instruction in the annual summer Safety Camp.

Children are most receptive to new ideas when action-oriented teaching and repetition are combined with rewards and incentives. Rewards and incentives may include certificates of completion or bicycle/pedestrian licenses, free or reduced-cost bicycle helmets and accessories, or discount coupons for area bicycle shops.

For teens and adults

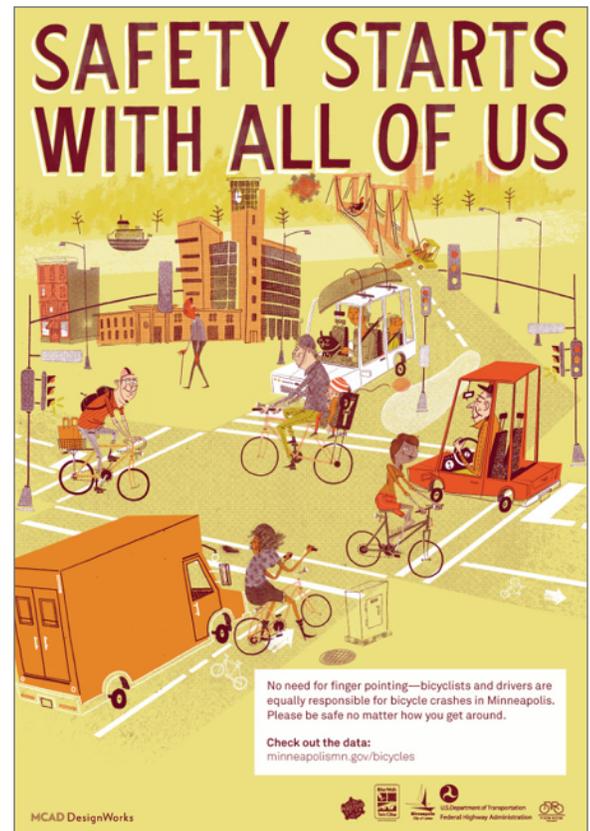
Teens and adults range in bicycling skills and confidence. Some are comfortable riding on busy streets and mixing with traffic while others prefer quieter streets or separated trails. There are adults who ride only a few times a year and those who ride often but primarily for recreation. Each type of rider has their own concerns and philosophy about how bicycles fit into the transportation system. Education efforts must recognize this and tailor messages to each group.

In addition, it is important to educate teens and new drivers about the rights of bicyclists, and how to safely interact with people walking and bicycling while operating a motor vehicle. Highlighting pedestrian and bicycle education in drivers' education courses, and featuring related questions on license exams reinforce the idea that roadways are shared spaces, and remind new drivers how to safely interact with other roadway users, whether walking, biking, or driving.

For people driving

The goal in educating motorists is to foster a broad and general public awareness and respect for people walking and bicycling. All people who drive are also pedestrians, and many already ride a bike at least on occasion. Bicycle route signs and markings are helpful to people biking and driving because they remind people driving that people biking may be present in the roadway.

Right: Posters designed by Bill Robholz for a City of Minneapolis bike safety campaign.



Safety enforcement methods

A variety of law enforcement methods can help change unsafe behaviors, making it easier for people of all ages and abilities to walk and bike in Brooklyn Park. Regardless of the method used, enforcement methods require consistency and follow-up in order to maintain effectiveness. To measure the effectiveness of an enforcement method, study behaviors before and after efforts. Studies may be as simple as measuring speeds or observing behavior of people driving, walking, and biking. If results are positive, continue with that method of enforcement. If results indicate little improvements in unsafe behavior, another method should be used.

Speed trailers

Portable speed trailers display drivers' real-time speeds compared to posted speed limits. Devices may help reduce driver speeds and increase awareness of local speed limits. Speed trailers are most effective when they flash "slow down," or flash lights that mimic photo speed cameras or police cars when drivers surpass the speed limit. Some trailers have the ability to collect traffic data including vehicle counts and speed information, which can be used to identify times when additional enforcement may be needed. In some cases, back-up enforcement by police officers may be needed to stop and/or ticket individuals who are speeding.

Active speed monitors

Active speed monitors are permanent devices to keep drivers aware of speeds and remind them of the need to slow down in school zones. Speed monitors are typically displayed below school speed limit signs, and visually display drivers' speed in real time as they pass.

Traffic complaint hotlines

Traffic complaint hotlines or non-emergency numbers (311) allow community members to report traffic problems directly to city staff and local police. Comments can be used to identify problem traffic areas with the most frequent complains. Police may then follow up by providing concentrated enforcement in the area as needed.

Adjusting speed limits

According to current Minnesota Statutes, Minnesota cities must, in general, defer to the Minnesota Department of Transportation when setting or adjusting speed limits, even on their own road facilities.

Minnesota Statutes, however, also reserve the right for cities to set their own speed limits on their road facilities under the following circumstances, according to Minnesota Statutes § 169.14 and § 160.263:

- A city may, without any additional engineering or traffic investigation, reduce the speed limit to not less than 25 mph on roads that have a designated bicycle lane.
- A city, without any additional engineering or traffic investigation, reduce the speed limit to 25 mph on a "residential roadway." (A city street or town road whose total length is up to a half-mile).
- A city may, without any additional engineering or traffic investigation, reduce speed limits to 30 mph for a city street in an "urban district" (Any segment of a city street or town road that is built up with structures spaced less than 100 feet apart for a minimum distance of a quarter-mile).
- A city may, with support from an engineering or traffic study, reduce the speed limit to not less than 15 mph, or more than 30 mph below the surrounding speed limit in school zones (A segment of street or highway that abuts school grounds where children have access to the roadway or where a school crossing is in place).

Progressive ticketing

Issuing tickets is the strongest enforcement strategy, and is usually reserved for changing unsafe behaviors that other strategies fail to change. Progressive ticketing is a method of introducing ticketing through a three-stage process: educating, warning, and ticketing.

Educate

First, community awareness of the problem must be established. Raising awareness of the issue will change some behaviors and will create public support for follow-up enforcement efforts.

Warn

Second, warn the public about actions to be taken and why by distributing flyers, posting signs, and sharing information using social and traditional media. Issuing warnings allows police to contact many more non-compliant motorists compared to writing citations. High frequency of stops also ensures that many other people witness warning stops, prompting them to obey the rules. Give people time to change behaviors before ticketing starts.

Ticket

Finally, after the “warning” time expires, clearly announce when and where ticketing operations will occur. If offenders continue to violate the law, officers begin writing tickets. Ticketing gives the program credibility by establishing police follow-through.

Speed enforcement in school zones

Strict enforcement of speed limits in school zones is one enforcement tool that can improve safety for students and families walking and biking to school. A ‘zero tolerance’ policy for speeders in established school zones, and an increase in fines for drivers who violate posted school speed limits, are useful approaches. In Minnesota, drivers who violate speed limits in school speed zones are fined double the amount of the basic fine unless the ordinary fine is less than \$25. Any ordinary speeding violation fine less than \$25 automatically receives an additional \$25 fine.

4.3 – Policy Recommendations

Considering and implementing a range of policy changes can create a lasting framework for facilitating walking and biking improvements in Brooklyn Park.

Adopt a Transit-Oriented Development Ordinance

Commercial, employment, and transit areas are, and will continue to be, important destinations for daily trips in Brooklyn Park. In anticipation of the METRO Blue Line Extension, the city may explore opportunities to adopt Transit-Oriented Development (TOD) policies to help guide future development near planned Bottineau LRT stations. Station area planning is currently underway as part of the METRO Blue Line Extension planning process. Developing a city wide TOD policy would provide guidance for long-term development near station areas.

TOD guidelines provide standards for the development of attractive, compact, walkable, mixed-use centers near transit stations to create live/work/play areas that provide easy access to regional transit connections. An ordinance could regulate building orientation and design, provision of pedestrian and bicycle facilities and parking, and establish measures to accommodate motor vehicles and parking in a way that minimally impedes pedestrian and bicycle mobility. This includes traffic calming measures, provision of separated walking and biking facilities, landscaping, and other strategies to facilitate walking and biking enjoyment, comfort, access, and circulation.

Adopt a Complete Streets Policy

Complete Streets is a design philosophy that considers the needs of all present and potential users of a community's transportation network. Complete Streets laws and policies ensure that a community's roads and streets are routinely designed and operated to provide safe space and access for users of all ages and abilities, including people walking, biking, driving and taking transit.

Adopting a city wide Complete Streets design policy will help ensure that all street construction and street improvement projects in Brooklyn Park anticipate and address the needs of people walking, biking, and using other modes. Over the long run, embedding this Complete Streets approach into the city's normal operating procedures may do more for walking and biking than any one specific plan could.

4.4 – Wayfinding

Imagine a highway system without street signs, warnings of upcoming exits or interchanges, or confirmation signs reassuring drivers of a particular route. Anticipating routes and arriving to destinations safely, without stress, and in a timely manner would be a challenge. The same goes for signing and identifying destinations and decision points along (and near) designated walking and bicycle routes.

Wayfinding tools, including signs, pavement markings, maps, and online trip planning tools make it easier for people to navigate existing facilities on foot or by bicycle by directing users to connecting walkways and bikeways, and important destinations. Ensuring information is easy to find and understand for people of all ages and abilities is important in ensuring that a wide range of people have access to the benefits of walking or biking for more of their trips.

Develop a robust and consistent wayfinding system

Develop an on-the-ground wayfinding system including signs and pavement markings to help people navigate the existing network. Update signage as needed to reflect new destinations and newly implemented facilities. Include wayfinding signs as a component of all projects.

Print and distribute route maps

Provide network and route maps that are accessible for all, including people who do not speak English as a primary language and those who may require larger text. Include safety tips, information about different facility types, and bicycle traffic laws.

Continue to make GIS data publicly available

Publish pedestrian and bicycle related data including planned projects, construction information, pedestrian and bicycle detours, and collision information to keep the public informed, and to allow for development of third party applications.

Additional guidance for wayfinding including sign types and application can be found in Appendix A.



A robust wayfinding system enables people to easily navigate the available network when traveling to destinations.



Confirmation signs along the Minneapolis Grand Rounds provide affirmation that users are on a designated route.



Pavement markings also help direct people along a designated route.

4.5 – Bicycle Parking

Visible, secure bicycle parking is essential for making bicycling a viable option for transportation purposes. Most people will simply not bike to locations where parking isn't available. Others will improvise by locking bikes to anything that seems secure. Attempts to lock to 'anything that doesn't move' can result in damage to fixtures including light posts and railings, and can also cause hazards to people walking.

“Not having places to lock bikes/bike trailers prevents me from biking more places [due to] concerns with crime / having bikes stolen while in a store or restaurant.”

– Brooklyn Park resident



Tater Daze attendees locked their bikes to Inverted-U bicycle parking at Noble Sports Park.

Short-term bicycle parking

Short-term parking accommodates visitors, customers, employees, and others who arrive at a destinations with the intention of leaving within a few hours. Standard inverted-U racks, securely anchored and placed near primary entries are recommended. Short-term parking is recommended for Brooklyn Park's neighborhood parks, schools, transit stations, employment centers, and commercial areas.

Long-term bicycle parking

Long-term parking accommodates employees, students, residents, commuters, and multi-modal travelers. Long-term parking should be secure, weather-protected, and in a visible and convenient location. Long-term parking may be provided using inverted-U racks in a secure and supervised area, or by bicycle lockers, bike stations, or bike rooms. Long-term parking should be provided at schools, major transit hubs, and office areas.

Placement and function

Parking areas should be visible and prominent, located near a building's main entry, and located clearly and conveniently along a bicycle riders' natural path to access a site.

More information about bicycle parking is available in Appendix A.

Expanding bicycle parking options in Brooklyn Park

Compared to other infrastructure-related improvements, bicycle parking is a relatively quick and inexpensive way to make bicycling easier.

There are several steps the city can take to better accommodate bicycle riders' parking needs:

- Develop bicycle parking guidelines for straightforward installation.
- Establish a policy for including bicycle parking as part of new development and installing it at existing destinations.
- Create a "Request-a-Rack" program and/or bicycle rack cost-share program to add bicycle parking at local businesses.

Resources

- Hennepin County Bicycle Parking Guidelines
- Dero Pocket Guide to Bike Parking
- Bicycle Alliance of Minnesota

4.6 – Facility Maintenance

Walking and biking facilities should receive adequate maintenance to protect the investments made by the City of Brooklyn Park and its partners and to ensure that they continue to serve the needs of residents and visitors well into the future.

User needs

People walking, especially people who use mobility aids, depend on a level, slip-resistant surface for travel. Walking surfaces that are free from unexpected bumps, holes or cracks, ice, or other slippery materials are paramount for people’s safety and comfort. People walking also depend on motorists’ ability to anticipate and respond to their presence when crossing streets.

Surfaces that are adequate for people driving can be treacherous for people walking or biking: gravel can deflect a bicycle wheel; a crack in the pavement or a poorly-placed utility grate can trap a wheel or trip walkers; wet leaves, ice, and gravel in walkways and bikeways can result in a fall, limit mobility for people requiring aids, and reduce system use.

Maintenance of travelways (sidewalks, sidepaths, and on-street bike facilities), signs, signals, and pavement markings is important in providing a reliable network for people walking and biking.

General considerations

Maintenance budget

Preventive maintenance reduces hazards and future repair costs. Maintenance costs and responsibility for maintenance should be assigned when projects are planned and budgets developed. As with roadways, typical annual maintenance costs range from 3 to 5 percent of infrastructure replacement costs - for example, a \$100,000 facility should include a \$5,000 annual maintenance budget. Life-cycle cost analysis is recommended to determine the net value of using longer-lasting, higher-quality materials during construction if they reduce yearly maintenance expenditures.



A well maintained network of walking and biking facilities can encourage year-round use.



Keeping sidewalks free of obstructions, or providing detours during road construction can make pedestrian travel easier.

Management plans

A management plan is a tool to identify maintenance needs and responsible parties. A management plan that includes the maintenance component for a proposed facility should be in place before construction. Additionally, a management plan should include a means for users of the system to report maintenance and related issues and to promptly address them.

A facility's management plan answers basic operational and staffing questions such as frequency of maintenance tasks and who is responsible for the following issues:

- Filling potholes
- Removing downed or dangerous trees
- Responding to vandalism and trespassing
- Removing litter
- Replacing stolen or damaged signs
- Watering and weeding landscaping
- Acting as the main contact
- Covering expenses

User-initiated maintenance requests

Users of Brooklyn Park's pedestrian and bicycle network will likely be the first to notice hazards, maintenance issues, and opportunities to improve the system. A formal mechanism for receiving requests for maintenance can help focus and prioritize investments, avert deterioration of the city's infrastructure investments, provide effective management, and reinforce resident-ownership of Brooklyn Park's non-motorized network assets. See ClickFix and 311 are two tools that invite users to report non-emergency issues to the city by app, phone, or online. The City of Brooklyn Park should consider using one or both options for user-initiated maintenance requests and develop a public marketing campaign to increase public awareness and use of the tools when available.

Routine maintenance

Street sweeping

Loose gravel, sand, leaves, and other debris on the surface of bicycle lanes, paved shoulders, and paved sections of shared use paths should be removed at least once a year, normally in the spring. Debris will tend to accumulate on bicycle lanes because automobile traffic will sweep these materials from the automobile portions of the roadway. This is especially true for bicycle lanes that are located directly adjacent to a curb, where debris collects already.

Markings

Signs and pavement markings are important features of walkways, bikeways and roadways, and help ensure continued safe and convenient use of these facilities. It is critical that bikeway signs, striping, and legends be kept in a readable condition.

Some recommendations to address these infrastructure elements include:

- Regular inspection of bikeway signs and legends, including an inventory of signs to account for missing or damaged signs;
- Prompt replacement of defective or obsolete signs;
- Regular inspection of striping, and prompt reapplication as needed. Bike lanes may require annual re-striping if located on higher-volume streets; and
- Consider durable cold plastic for skip-striping bike lanes across right turn lanes.

Snow and ice removal

Snow removal is a critical component of pedestrian and bicycle safety. The presence of snow or ice on sidewalks, curb ramps, or bikeways will deter pedestrian and cyclist use of those facilities to a much higher degree than cold temperature alone.

Seniors and other vulnerable adults will avoid walking in locations where ice or snow accumulation creates slippery conditions that may cause a fall. Curb ramps that are blocked by ice or snow effectively sever access to pedestrian facilities for wheelchair users and seniors. Additionally, inadequately maintained facilities may force people walking or biking to take a route that is unsafe or inconvenient.

When the surface of a road is covered by snow, the pavement markings that guide and warn people walking, biking, or driving may be difficult to see. Clear snow from the entire roadway surface so pavement markings are identifiable, and people walking and biking can comfortably travel as far to the right as possible.



Maintain paint including crosswalks and bikeways against wear and tear.



A bike lane in need of re-striping.



Snow and ice removal during Minnesota winters is critical for extending use of pedestrian and bicycle facilities throughout the year.

Prioritizing snow clearing operations

A useful approach for maximizing the efficiency of maintenance investments is to identify locations where accumulation of snow or ice would significantly impede pedestrian and bicycling access and safety so that these locations are prioritized for clearing immediately after a storm event.

Surface repairs

People walking and biking are more sensitive and more vulnerable to problems in the roadway surface than people driving. A smooth surface, free of potholes and other major surface irregularities, should be provided and maintained. Care should be taken to eliminate other physical problems. Requests for surface improvements could be made through the user-initiated maintenance request program described above.

Loose asphalt materials from patching operations often end up on the shoulder, where the larger particles adhere to the existing surfacing, creating a very rough surface for biking. Fresh loose materials should be swept off the road before they have a chance to adhere to the pavement.

Utility cuts can leave a rough surface for people biking if not back-filled with care. Cuts should be backfilled and compacted so that the cut will be flush with the existing surface when completed. Extra care should be used when cuts are made parallel to bicycle traffic to avoid a ridge or groove in the bicycle wheel track. Considerations should be given to adding the above specifications to utility permit requirements.

Road resurfacing

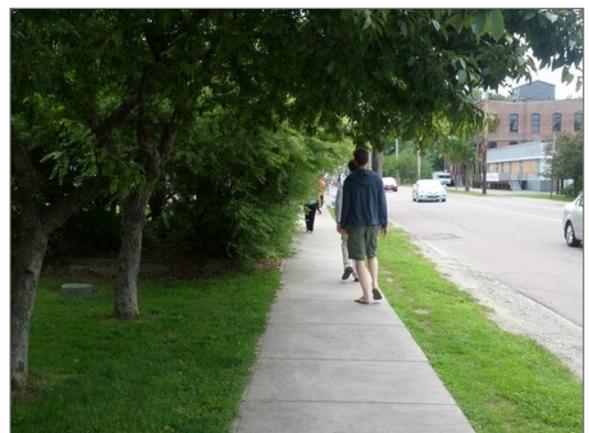
Street resurfacing projects provide ideal opportunities to greatly improve conditions for people walking and biking by narrowing automobile travel lanes, widening shoulders, or adding bicycle lanes, for example. However, if not done correctly (by leaving a ridge or a joint in a shoulder or bicycle lane for example), conditions may worsen.



Clearly mark detours when construction projects block established routes.



Uneven road surfaces can make riding a bike, even in a designated facility, uncomfortable.



Vegetation should be trimmed to minimize walkway/bikeway encroachments.

Items to consider on resurfacing projects that will help improve conditions for people walking and biking include:

- Gravel driveways and alleys should be paved back 5–10 feet from the curb or right-of-way to prevent gravel from spilling onto shoulders or bikeways.
- Loose gravel used during the installation process for chip seals creates hazardous bicycle riding conditions, especially in shoulder areas. Provide warning signs for bicycle riders as well as bicycle route detours during installation.
- Avoid leaving a ridge in the area where people ride bikes, which occurs where an overlay extends only part-way into a shoulder or bike lane. If possible, the overlay should be extended over the entire surface of the roadway to avoid leaving an abrupt edge.

Stormwater management

Drainage facilities may change grades and deteriorate over time. Ensuring that bicycle-safe drainage grates are located at the proper height greatly improves cyclist safety; it may sometimes be necessary to adjust or replace catch basins to ensure continued safe operations and improve drainage. The small asphalt dams that are sometimes constructed on roadway shoulders to divert storm-water into catch basins are a hazard to people biking, and their use should be avoided.

Event-related drainage issues (e.g. backed-up grates) and long-term drainage hazards (unsafe grates) can be reported through the user-initiated maintenance request program, and should be proactively addressed whenever street improvements are made.

Vegetation

Vegetation encroaching into and under a sidewalk, shared-use path, or trail crossing creates a nuisance and a hazard for people walking or biking, especially for those with sight or mobility impairments. Vegetation maintenance ensures smooth and clear pedestrian and bicycle travel areas and reduces visual barriers that could otherwise hinder user safety. City maintenance staff are generally responsible for vegetation management. Management needs should be considered during design and construction for long-term maintenance.

Vegetation management issues identified by users (e.g. tree roots causing heaving of sidewalk surfaces, encroachment and maintenance issues) may be reported through the user-initiated maintenance request program.

5. Implementation

This chapter contains the following sections:

5.1	General Approaches to Implementation	68
5.2	Network Implementation and Prioritization	69
5.3	Program Implementation	75
5.4	Evaluation and Performance Measures	76



5.1 – General Approaches to Implementation

When adopted, the Brooklyn Park Pedestrian and Bicycle Plan will become part of the city’s existing Comprehensive Plan, which guides planning work through the year 2030.

A productive approach for implementing infrastructure and programming recommendations during that time period should include:

- Development of initial concepts for pedestrian and bicycle network improvements based on recommendations from this plan, guidance from Brooklyn Park staff and community, a review of existing conditions, and an analysis of gaps and opportunity corridors.
- A “test-run” of new projects by installing temporary pilot/pop-up versions of proposed changes. Pilot projects provide opportunities to measure impacts and gather comments from community members before investing in a permanent infrastructure improvement.
- Further refining of conceptual recommendations through additional engineering and land use analysis, as well as coordination with the local community.
- Funding support for implementation of this plan’s recommendations from multiple sources. A table of potential funding sources is available in Appendix E. The city should work closely with Hennepin County regarding implementation of facilities along county roadways.



Google streetview captures construction crews installing a new shared-use path in front of Zanewood Community School.



Temporary installations, also known as pop-up, pilot, or tactical urbanism projects, are useful for testing new ideas. Image: Test-run for a protected bike lane (cycletrack) in Hopkins.

5.2 – Network Implementation and Prioritization

Pedestrian and bicycle improvements are often implemented as part of larger streetscape and roadway improvements. For this reason, it is difficult to provide precise phasing recommendations for network implementation. Regardless, identifying priority areas and projects can be helpful in moving implementation forward fairly and effectively.

As much as possible, consider the following when selecting, designing, and implementing infrastructure recommendations:

- Coordinate pedestrian and bicycle improvements with scheduled road construction and repairs to avoid potential conflicts and take advantage of opportunities for simultaneous improvements.
- Street resurfacing, restriping, and streetscape projects provide opportunities to stripe on-street bicycle facilities or improve off-street sidewalk and trail connections at minimal costs.
- Treatments that require special consideration and careful design include raised crosswalks, channelized turn lane improvements, neighborhood slow streets with traffic calming elements, bicycle-specific traffic signals, and refuge islands.
- Pursue additional funding to support the design, implementation, and maintenance of pedestrian and bicycle improvements on a regular, ongoing basis.
- Act on opportunities to include pedestrian and bicycle improvements as part of development and redevelopment projects, or through spot improvements.

Implementing off-street recommendations

Providing a continuous network of sidewalks and trails is key for supporting safe and comfortable walking trips. The following improvements will help to increase the safety and comfort of the existing network, and should be integrated into corridor projects to increase pedestrian comfort and accessibility:

- Upgrading pedestrian signals to include countdown timers, Accessible Pedestrian Signals (APS), and revising timing to provide more time for pedestrians to cross.
- Upgrading curb ramps to ADA standards.
- Installing pedestrian-scaled street lighting along sidewalks and trails.
- Providing pedestrian refuges through median retrofits and installation.

Implementing on-street recommendations

Space for accommodating on-street bicycle facilities may be created within existing right-of-way by using one or more of the following methods:

- Narrowing the width of existing travel and parking lanes:
 - 11 ft maximum recommended travel lane width
 - Adhere to minimum allowable width of 12 ft for state aid roadways with posted speed limits over 40 mph.
 - 8 ft maximum recommended parking lane width
- Reduce the number of travel lanes:
 - On streets with four or more lanes, low to moderate through volumes (20,000 ADT and below), and high left-turn volumes, the two center-most lanes may be converted into a single dual-left-turn lane, improving ease and safety of left-turns, and freeing up space for on-street bicycle facilities. This conversion is often referred to as a road diet or safety conversion.
- Removing or consolidating on-street parking where present.
- Designate existing shoulders or excess roadway space for bicycle use.
 - Recommend against shared parking/bike lanes, as they provide inconsistent and unpredictable conditions for both bicycle riders and motorists - bicyclists may have to mix with traffic in order to pass parked vehicles.

Trip Generation Analysis and Priority Improvements

A trip generation model was used to help identify areas with higher potential to generate pedestrian and bicycle trips. By combining this information with infrastructure recommendations from the plan, as well as with existing conditions and guidance from city staff, a list of priority corridor and intersection improvements was developed.

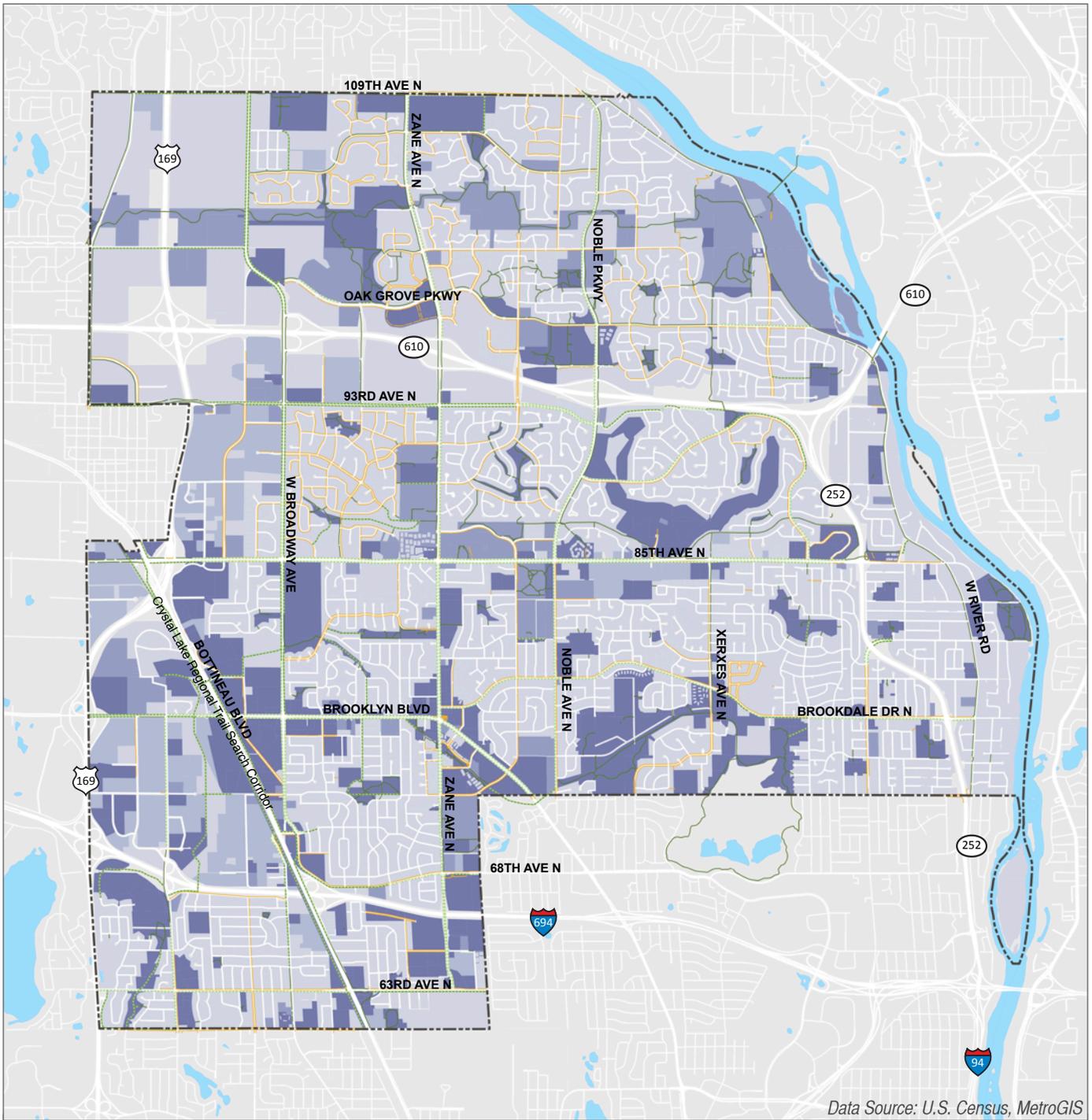
Table 5.1 - Parcel Trip Generating Potential

Weight	Uses
High – 5	Commercial/retail, schools, neighborhood parks, multi-family housing, future LRT stations
Medium – 3	Community centers, libraries, offices, regional parks, religious institutions, transit stops
Low – 1	Industrial, single-family residential

Figure 5.3 shows the location of these priority corridor and intersection improvements (for both walking and biking), as well as the trip generation potential of parcels throughout the city.

Tables 5.2 and 5.3 provide additional details about the location and extent of these priority corridor and priority intersection improvements.

Figure 5.1 – Pedestrian Network and Trip Generation Potential



Data Source: U.S. Census, MetroGIS

Trip generation potential	Existing facility	Recommended facility
High	Sidewalk	New sidewalk
Medium	Shared-use path / park trail	New shared-use path
Low		Upgrade existing sidewalk to shared-use path

Figure 5.2 – Bike Network and Trip Generation Potential

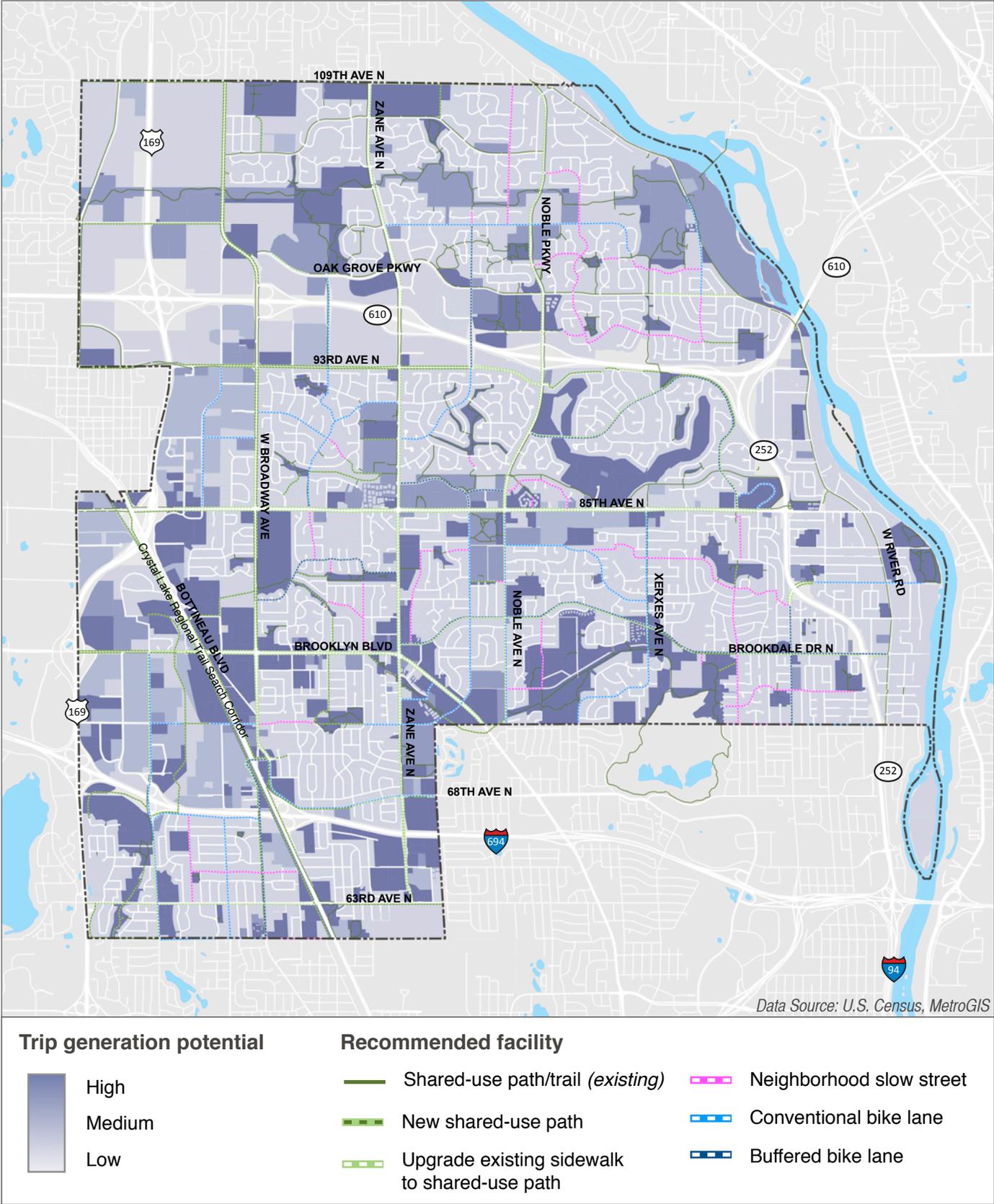
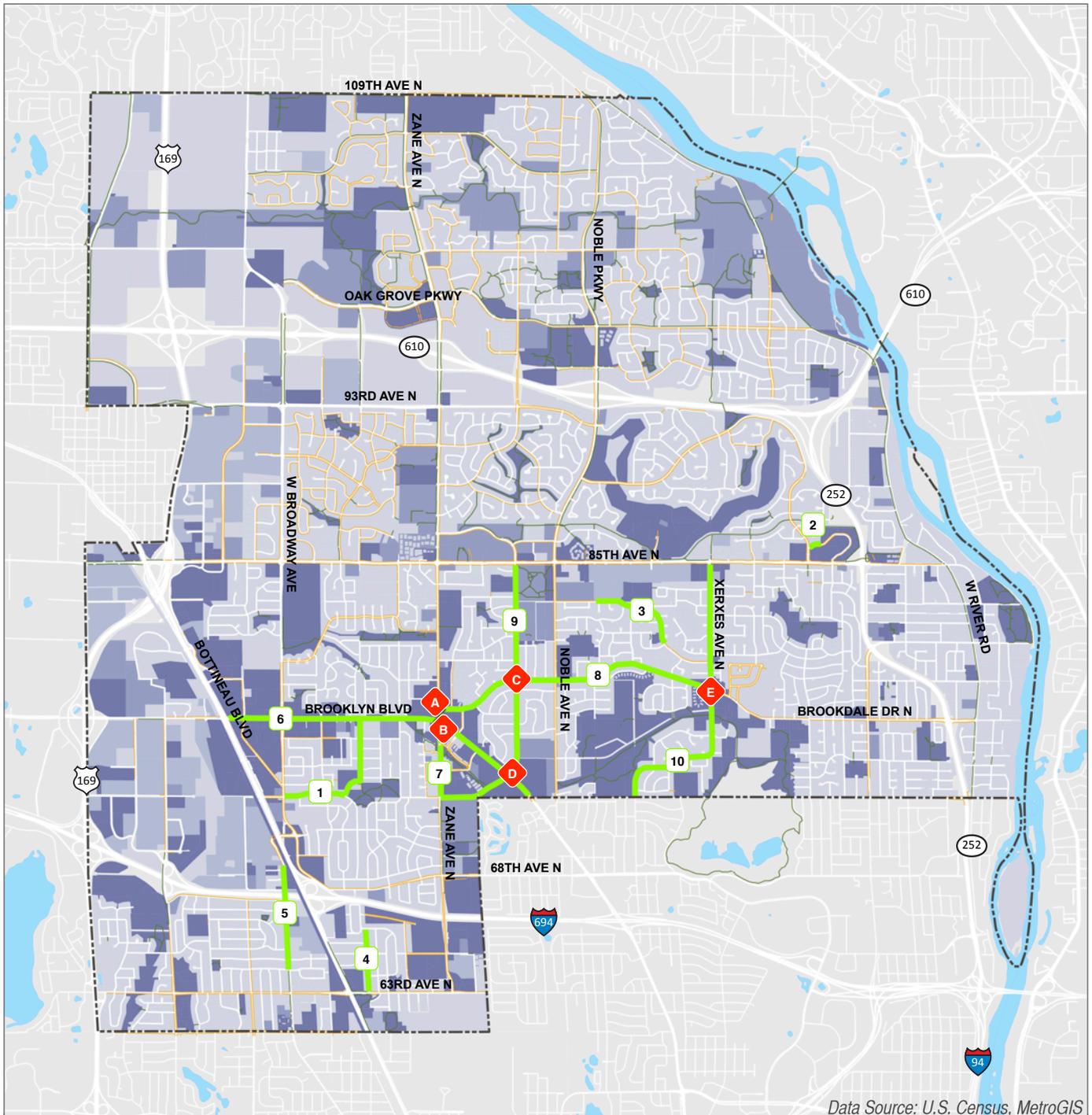


Figure 5.3 – Priority Recommendations



Data Source: U.S. Census, MetroGIS

Trip generation potential	Existing facility	Priority corridors / intersections
		<p data-bbox="979 1713 1510 1738"><i>See Tables 5.2 and 5.3 for ID-specific recommendations</i></p>

Table 5.2 – Priority Corridor Improvements

ID	Corridor	From	To	Type *
1	73rd Avenue North / Jersey Avenue N / Hampshire Avenue N	W Broadway Avenue	Brooklyn Boulevard	SW
2	Edinburgh Centre Drive N (north side)	Edinbrook Parkway	existing sidewalk	SW
3	83rd Avenue N / Lad Parkway	June Avenue N	80th Avenue N	SW
4	Hampshire Avenue N	63rd Avenue N	66th Avenue N	SW
5	W Broadway Avenue	64th Avenue N	69th Avenue N	SUP
6	Brooklyn Boulevard	Bottineau Boulevard	Brooklyn Park border	SUP
7	Zane Avenue N (east side)	73rd Avenue N	Brookdale Drive N	SUP
8	Brookdale Drive N	Zane Avenue N	Xerxes Avenue N	BBL
9	73rd Avenue N / Regent Avenue N	Zane Avenue N	85th Avenue N	BL
10	74th Avenue N / Xerxes Avenue N	73rd Avenue N	85th Avenue N	BL

*** Definitions:**

SW: Sidewalk

BL: Bike lane

SUP: Shared-use path

BBL: Buffered bike lane

Table 5.3 – Priority Intersection Improvements

ID	Intersection	Recommended Improvements
A	Brookdale Drive N & Zane Avenue N	Implement best practices and recommendations outlined in the Infrastructure Toolkit (Appendix A) for intersections and crossings. Consider: <ul style="list-style-type: none"> • Reduce turning radii where practical. • Install high-visibility crosswalks and forward stop bars. • Install refuge medians that extend beyond crosswalks and into intersections. • Provide countdown timers and extend crossing time as needed. • Consider leading intervals for people walking or biking. • Install bicycle signal detection (loop or camera detection) or bicycle push buttons at intersections along designated bicycle routes. • Reduce the width or number of motor vehicle travel and turn lanes as possible. • Install ADA compliant curb ramps and signals. • Modify channelized right turn lanes to prioritize safety and comfort of people walking or biking.
B	Brooklyn Boulevard & Zane Avenue N	
C	Brookdale Drive N & Regent Avenue N	
D	Regent Avenue N & Brooklyn Boulevard	
E	Brookdale Drive N & Xerxes Avenue N	

5.3 – Program Implementation

The city’s role in implementation of programming initiatives will vary depending on resources and capacity. The city may take the lead, provide support, or work in partnership with other organizations, neighborhood groups or local businesses to initiate and implement a diverse array of programs.

Programs implementation should occur in coordination with infrastructure implementation and evolve as needed in the long term to educate all roadway users on how to safely operate in shared spaces including travel-ways and intersections, promote use of new facilities through encouragement programming, and support network safety through enforcement and facility maintenance.

When working to implement programs, the City of Brooklyn Park can:

- Provide support to schools for further Safe Routes to School planning and programming implementation at the school-, district- and city wide levels;
- Leverage partnerships with governmental and non-governmental agencies, community organizations, and local businesses to support education and encouragement programming; and
- Work closely with local police to enforce traffic safety laws, lead safety workshops including community education classes or bike rodeos, and provide a positive example for safe driving and bicycling behavior.



Bicycle police can help increase positive contact with residents.



Provide safety education courses for roadway users of all ages, modes, and abilities.

5.4 – Evaluation and Performance Measures

Performance measures are instruments that help assess the extent to which progress is being made in implementing a plan. They are a set of goals, trends or targets that are meant to be met at a certain point of time in the future - for example, to double the rate of people walking or biking in Brooklyn Park within ten years of the adoption of this plan. Targets or trends can also be checked at recurring intervals, or at a closer or farther time in the future.

The performance measures recommended the system address four broad categories:

- Safety and user comfort
- Use of facilities
- Facilities and network
- Community and municipal awareness and support

Safety and user comfort

Pedestrian and bicycle crashes should be tracked. Fewer crashes per year would indicate an improved environment, especially if more people are walking and biking for their daily trips. Data can be obtained from the Minnesota Department of Public Safety.

Recommended performance measures:

- Number of pedestrian-vehicle crashes
- Severity of pedestrian-vehicle crashes
- Number of bicycle-vehicle crashes
- Severity of bicycle-vehicle crashes

Optional measures:

- Pedestrian sense of safety (intercept or general community survey)
- Bicyclist sense of safety (intercept or general community survey)
- Automobile compliance and awareness in areas with high rates of pedestrian and bicycle use (observation)

Facility use

Volunteer counts are conducted in many communities in the Twin Cities to track the number of people walking or biking along a given corridor, or through a specific intersection. Brooklyn Park can work with Hennepin County to establish a bicycle and pedestrian counting program. An increase in observed walkers or bikers would indicate an improved environment, especially if collisions involving people walking or biking decrease over the same period.

Recommended performance measures:

- Percent of residents who walk or bike to work
- Percent of students who walk or bike to school
- Percent of residents who walk or bike to other destinations
- Annual pedestrian and bicycle counts

Facilities and network

A system's physical facilities and network provide the foundation for increasing travel by foot or bike. Measuring progress in the implementation and development of facilities will help measure success in plan implementation, and provide additional context for understanding potential gains in user safety and facility use that may occur as new facilities are added.

Recommended performance measures

- Miles of sidewalks and trails
- Miles of on-street bicycle facilities
- Number of new bicycle parking spaces
- Miles of gaps in pedestrian network
- Miles of gaps in bicycle network
- Percent of planned facilities installed

Community and municipal awareness and support

Effective implementation of this plan and the realization of its goals require the participation of government and community partners, and the interest and engagement of the broader community. The performance measures included in this category describe the level to which walking and bicycle interests, attitudes, and practice have permeated Brooklyn Park's culture. Performance measures that help evaluate awareness and support include:

Recommended performance measures

- Adoption of a city wide Complete Streets Policy
- A pedestrian and bicycle counts program is set up and maintained
- Pedestrian and bicycle maps and information are available to the public
- Events promoting walking and biking (i.e. Open Streets) are held regularly
- Police enforce laws that protect people walking and biking
- Number of public interest or advocacy clubs or organizations
- Safe Routes To School (SRTS) programs are active in Brooklyn Park schools