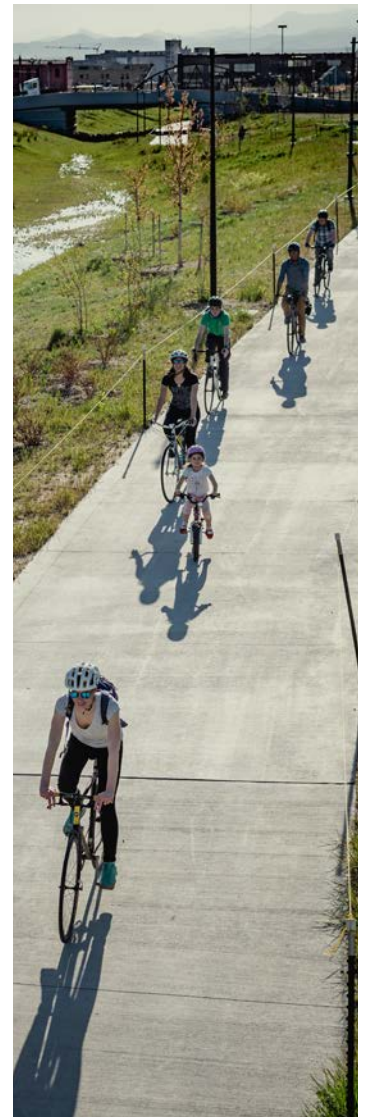


# City of Oakdale Pedestrian and Bicycle Plan



# Acknowledgments

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This plan was completed with the valuable input of many City of Oakdale stakeholders. Community members and City staff gave the planning team insight into the walking and bicycling environment of Oakdale. In addition to the public's input received through surveys, an open house, and pop-up workshop, the time and energy of the City Council and the Environmental Management Commission was particularly appreciated.

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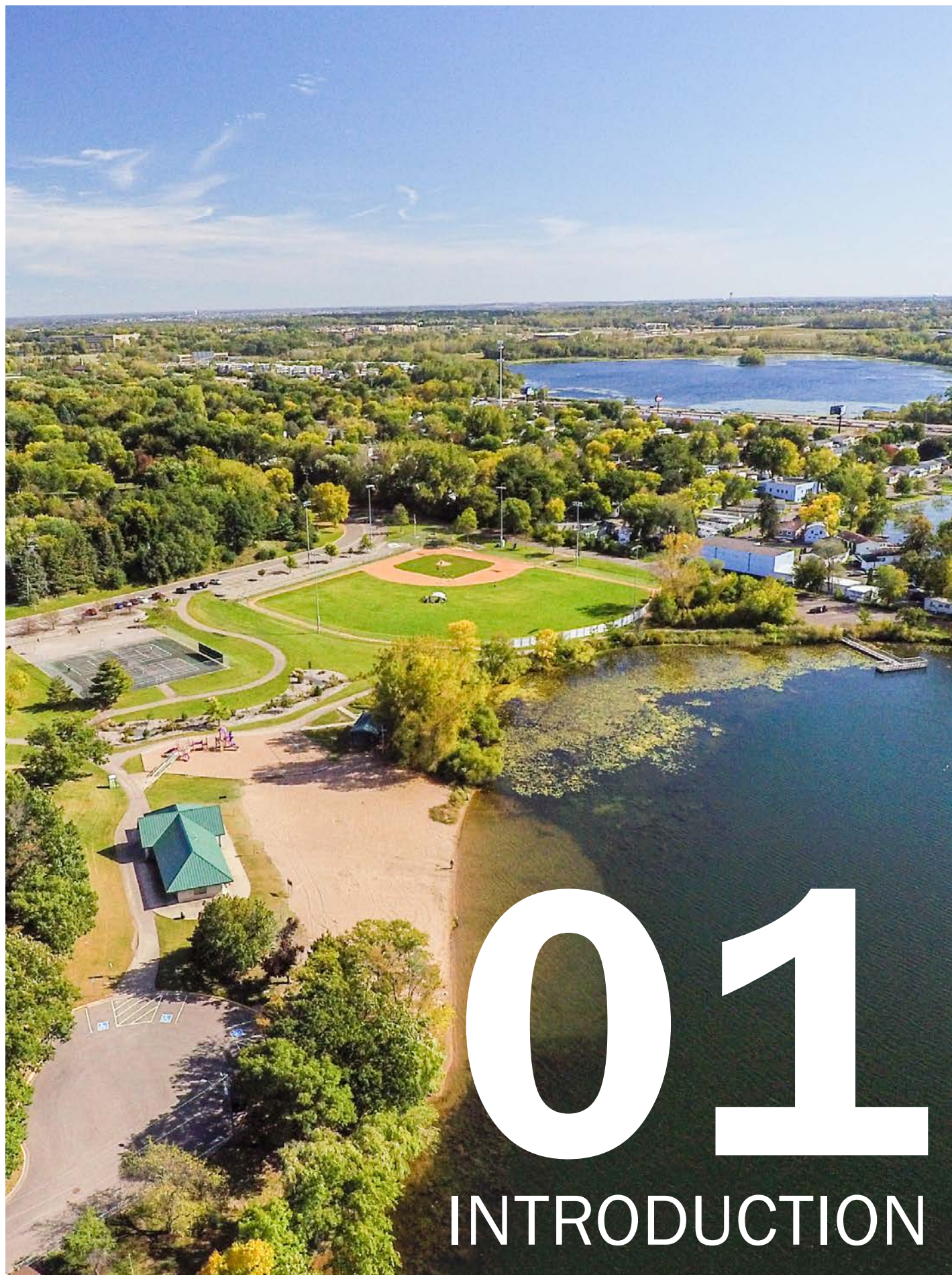


Information contained in this document is for planning purposes and should not be used for final design of any project. All results, recommendations, cost estimates, and commentary contained herein are based on limited data and information, and on existing conditions that are subject to change. Existing conditions have not been field-verified. Further analysis, community engagement, and engineering design are necessary prior to implementing the recommendations contained herein.

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# 01

## INTRODUCTION



## Vision

Oakdale is a suburban community that envisions a safer and more connected walking and bicycling network. The Oakdale Pedestrian and Bicycle Plan (hereafter referred to as “the Plan”) lays out a practical vision for a future network and will help achieve two of the community’s transportation goals established through the City’s 2040 Comprehensive Plan:

*“City roadways shall be safe and functional for pedestrians, bikes, automobiles and trucks.”<sup>1</sup>*

*“Sidewalks, trails, and bikeways shall be connected within the city and between adjacent cities.”<sup>2</sup>*

During the community engagement process for the Plan, community stakeholders were asked to provide three words to describe what they hoped bicycling and walking would look and feel like in Oakdale in the future. Their answers, summarized in Figure 1.1, inspired the following vision for walking and bicycling in Oakdale:

*“In the future, walking and bicycling will be a safe, connected, and accessible activity for people of all ages and abilities throughout the community.”*

## Why walking and bicycling?

Walking and bicycling in Oakdale are valued for their recreational, health, and destination connecting qualities. A completed network of walking and bicycling facilities will bring the community closer together, allowing children, families, adults, and seniors the freedom to reach one another and their destinations. Already, Oakdale has 33 miles of shared use paths and 19 miles of sidewalks.

## Why a Pedestrian and Bicycle Plan?

The 2040 Oakdale Comprehensive Plan contains a policy to, “*Update the 1995 Bicycle and Pedestrian Plan to incorporate the expansion of the existing trail and sidewalk network.*”

The City of Oakdale assigned the Environmental Management Commission to assist with guiding and reviewing the Plan. In 2019, the consulting firm of Toole Design was hired by the City of Oakdale to complete the Plan. The project was paused in 2020 due to the COVID 19 pandemic and restarted in 2022.

1 See Transportation Goal 1 on page 22 of the [Comprehensive Plan](#)

2 See Transportation Goal 4 on page 23 of the [Comprehensive Plan](#)

The Plan provides three major components to achieve a network of walking and bicycling facilities for the City of Oakdale:

- 1. Goals and strategies
- 2. A future walking and bicycling network (including shared use paths, sidewalks, and shared roadways)
- 3. An implementation action plan

Implementation is a key part of the Plan and is intended to help the City program projects in its annual and five-year capital improvement budgets, as well as pursue grant funding from outside sources and project partnerships with other entities.

## Who was involved?

The Community Development Department, in partnership with Toole Design, the Environmental Management Commission, and Oakdale City Council, led the planning process. Gaining community input was a key part of Plan development. The Plan is the distillation of ideas from over 300 stakeholders about their desires for the future. Residents were engaged through a community open house, a pop-up workshop, and online surveys. Additional input was gained from the Economic Development Commission, Parks Commission, Planning Commission, students at Tartan High School, and members of the 50+ Wellness Group. City staff also conducted 18 business retention visits and asked for input about walking and bicycling.

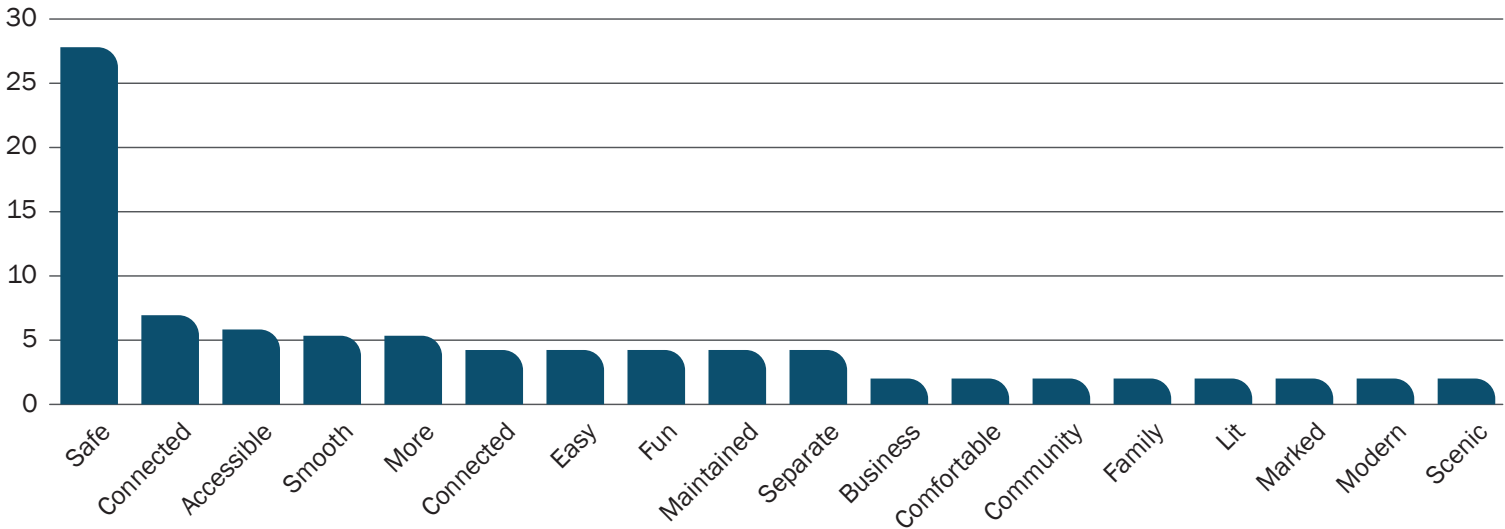
## What did the community tell us?

Stakeholders told the planning team they want an expanded walking and bicycling network that can be used primarily for recreation, facilities should guide users to have safe interactions between various modes, street crossings should be expanded in number and level of maintenance, and that more destinations will increase the frequency of walking and bicycling. These results are summarized in Chapter 2 – Community Engagement, as well as detailed in Appendix A.

## Where do we go from here?

In response to community engagement results, the project team (consisting of City staff and the consulting firm Toole Design) crafted three goals, nine strategies, and 24 actions recommended as policies to be adopted. Over time, these policies can be selected as new initiatives to help Oakdale become a more pedestrian- and bicycle-friendly community. Each goal, strategy, and action are described in Chapter 3 – Goals and Strategies. A future bicycling and walking network was then created, also based on community engagement results, and is discussed in Chapter 4 – Network. Finally, project rankings, a map index and planning level details, and funding sources are detailed in Chapter 5 – Implementation Action Plan.

Figure 1.1: 51 people responded with three words to describe their vision for walking and bicycling



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Broad engagement with the Oakdale community was embraced as a priority throughout the planning process, as the Plan is intended to reflect the vision and goals of the community. The planning team engaged people with both direct and indirect interest in walking and bicycling. For example, groups with direct interest included stakeholders attending an open house, taking an online survey, and members of the Oakdale 50+ Wellness Group. Groups with indirect interest included farmers' market attendees and library patrons at pop-up workshop, Tartan High School students, and business representatives. By uncovering ideas from community members from both types, the Plan recommendations reflect the community's values and priorities.

Community members were engaged during the first half of 2020 (prior to the COVID-19 pandemic) and the second half of 2022 to gather input and ideas before drafting the Plan. A more detailed analysis of the community engagement results can be found in Appendix A. All community input was combined to guide the goals and strategies in Chapter 3 as well as the future network in Chapter 4.

## How we engaged

Approximately 390 participant interactions took place. It was important for the project team to use a range of strategies to solicit feedback from community members. The following strategies were used (for more detail, see Appendix A – Community Engagement Report):

Open House: 16 people attended an open house on October 19, 2022.

Pop-up Workshop: 50 people were reached at a pop-up workshop at the Oakdale Farmers Market on September 28, 2022, and an additional 9 people were reached at the Oakdale Library on October 24, 2022.

Online Surveys and Mapping: The online survey and map were completed by 150 people in 2020 and 96 people in 2022, including Tartan High School students as shown in Figure 2.1.

City Council: The project team met with the Oakdale City Council four times to solicit feedback throughout the planning process:

1. *July 2022* – An overview of the planning process was given, as well as a chance for the City Council to weigh in on the public engagement approach, as detailed in a Public Engagement Plan.
2. *December 2022* – A draft Community Engagement Report was presented, as well as a draft list of three goals and nine strategies supported by community engagement findings. Feedback was solicited on both items.
3. *March 2023* – Goals and strategies were further defined with draft actions, and a draft future network map was also presented.
4. *July 2023* – A draft Plan was presented to the City Council for their input, in advance of laying the Plan out in InDesign.

Environmental Management Commission: The EMC with four members met four times throughout the process to give input and review the Plan recommendations. The Economic Development Commission, Parks Commission, and Planning Commission were also consulted to solicit

information on strengths, weaknesses, opportunities, and challenges, as described in Appendix A.

**Focus Groups:** In December 2022 and January 2023, the project team met with 50 people in three focus groups, including 42 students at Tartan High School (as shown in Figure 2.1) and eight members of the Oakdale 50+ Wellness Group. Because youth were generally not represented in the age demographics of the online survey, the project team partnered with Business Teacher Iker Belausteguigoitia to gain additional input from this valuable subset of the Oakdale community. In addition, City staff met with 18 representatives during business retention visits.

## What we heard

Key findings were made by analyzing input from both phases of engagement. These findings are addressed in subsequent chapters, which include recommendations for responding to community priorities. The main themes, which are supported by the Community Engagement Report in Appendix A, were:

- » **Respondents want an expanded walking and bicycling network that can be used primarily for recreation.** Oakdale's existing sidewalk and path network is already frequently used by residents. Residents love the existing scenery, with the Gateway State Trail and paths within Oakdale Nature Preserve being the most popular facilities. The public walks more than it rides a bicycle, but predominantly does both activities for recreational purposes. The largest deterrent to more walking and bicycling is the limited extent of the existing path network (as shown in Figure 2.2), particularly along Oakdale's busiest streets. Improved surface maintenance of trails would also encourage more bicycling.
- » **Facilities should guide users to have safe interactions between various modes.** Attitudes between people walking, bicycling, and driving are an area identified for improvement. On the trail system, users are confused about how pedestrians and bicyclists should interact. This confusion sometimes leads to conflicts between people bicycling and driving, since some bicyclists choose to then avoid the trail system and ride on streets. Negative feelings about people using

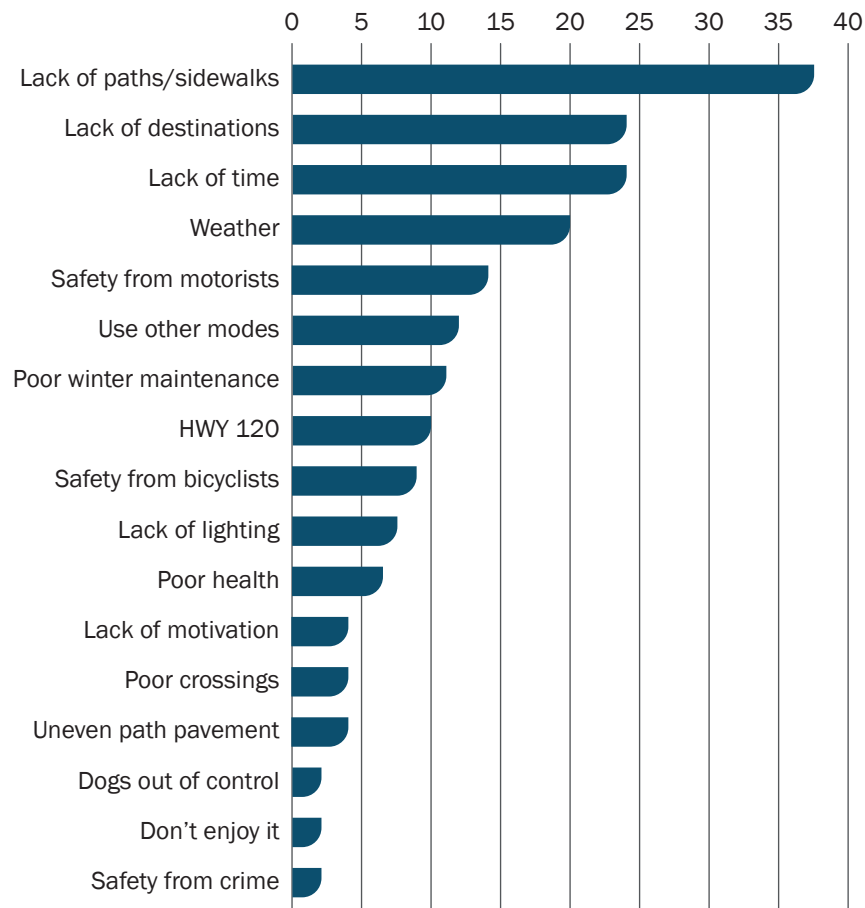


High school students took part in focus groups and completed online surveys at Tartan High School in December 2022.

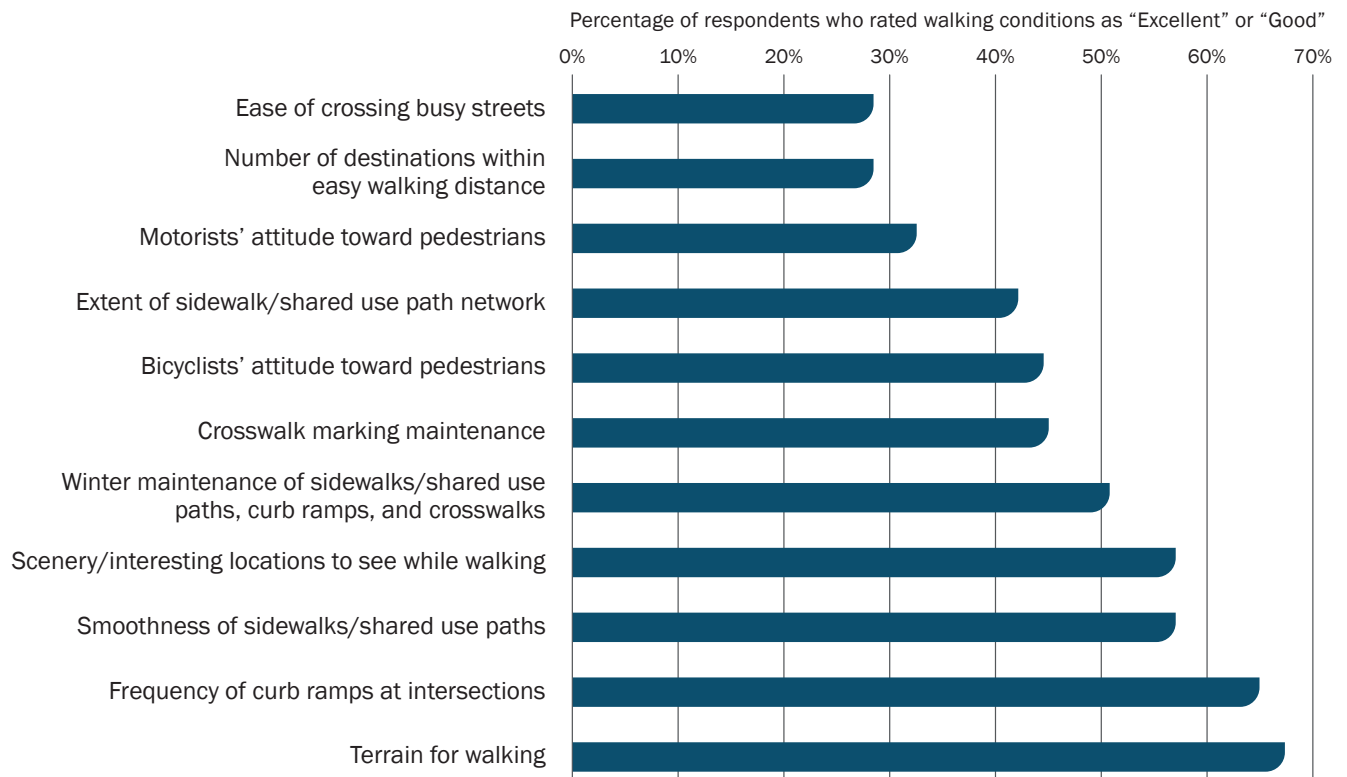
other modes of transportation are related to a lack of clear direction about how to interact, and a general lack of awareness about traffic-related regulations. The public overwhelmingly prefers separation between modes.

- » **Street crossings should be expanded in number and level of maintenance.** The ease of crossing streets was the lowest rated condition cited by pedestrians (as shown in Figure 2.3), and the second lowest rated condition cited by bicyclists. Respondents – especially those walking – frequently expressed a desire for more crossings and improved safety. Crosswalk marking and winter maintenance on existing crossings were also cited as needing improvement. On the other hand, respondents were very satisfied with the frequency and placement of curb ramps at intersections.
- » **More destinations will increase the frequency of walking and bicycling.** The number of destinations within easy walking distance was identified as a high deterrent to more walking, and a moderate deterrent to more bicycling. The creation of mixed-use developments with additional businesses, coupled with an expanded sidewalk and path network, will encourage more people to walk and bicycle. Marketing of existing facilities and destinations will also encourage more walking and bicycling.

**Figure 2.1:** The largest deterrent to walking reported by Oakdale residents is the lack of paths and sidewalks.



**Figure 2.2:** The lowest rated condition for walking in Oakdale was the ease of crossing busy streets.





03



GOALS AND  
STRATEGIES


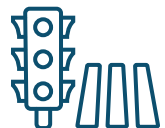







Goals and strategies are policies that will help the City of Oakdale become a more pedestrian- and bicycle-friendly community. As the City pursues efforts to achieve this future state, staff and elected officials can refer to this chapter to select new initiatives.

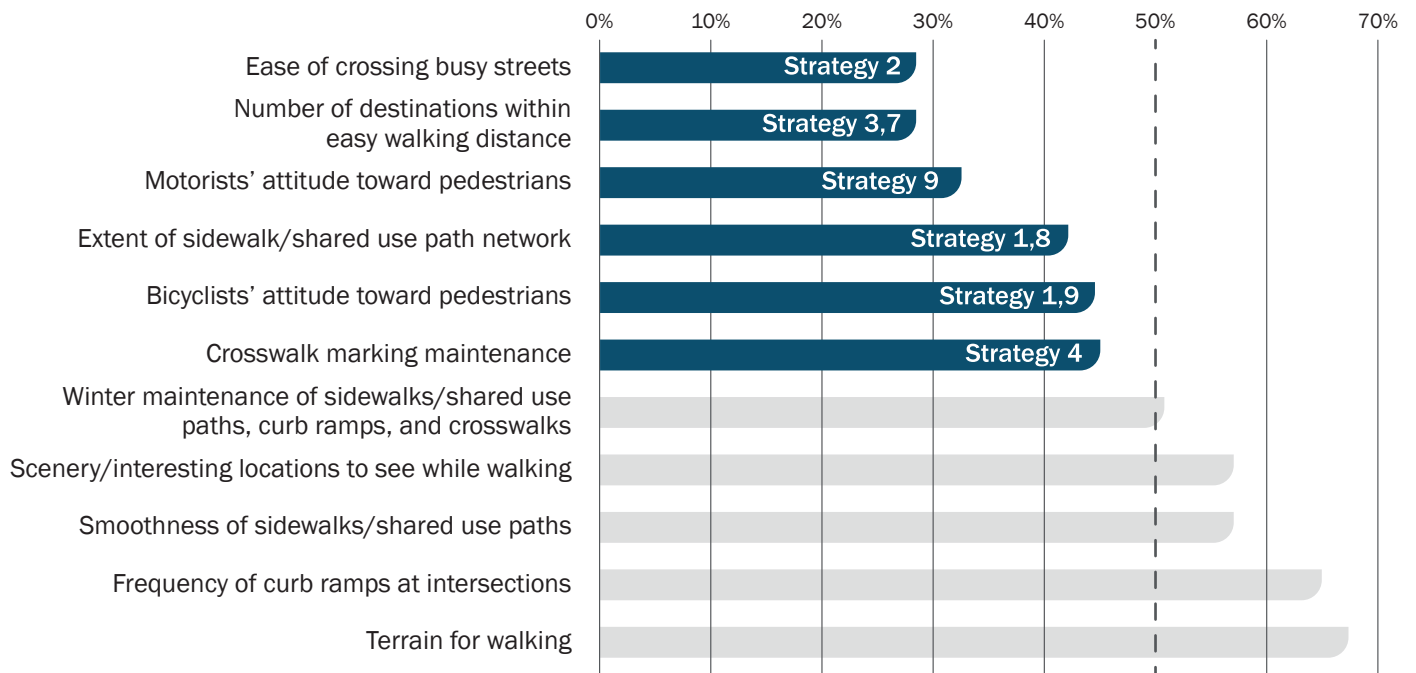
Community engagement findings are the basis for all goal and strategy recommendations, as shown in Figures 3.1 and 3.2. Over 150 stakeholders answered the following question, “How do you rate the following walking or bicycling conditions in Oakdale?” Possible answers were given on a five-point scale including excellent, good, okay, not good, or bad. Wherever 50% or less of respondents rated walking or bicycling conditions as excellent or good, a strategy was created to improve the condition.

There are three overarching goals for the Plan. The goals compiled groups of three strategies together and were guided by community engagement and staff recommendations. Each of those goals has three strategies, resulting in a total of nine strategies. Each strategy has two to four actions. The chart below is an outline of all goals, strategies, and actions. Following this chart, each goal, strategy, and action is described in detail. All goals, strategies, and actions were shared with the City Council and Environmental Management Commission in draft form before they were further developed.

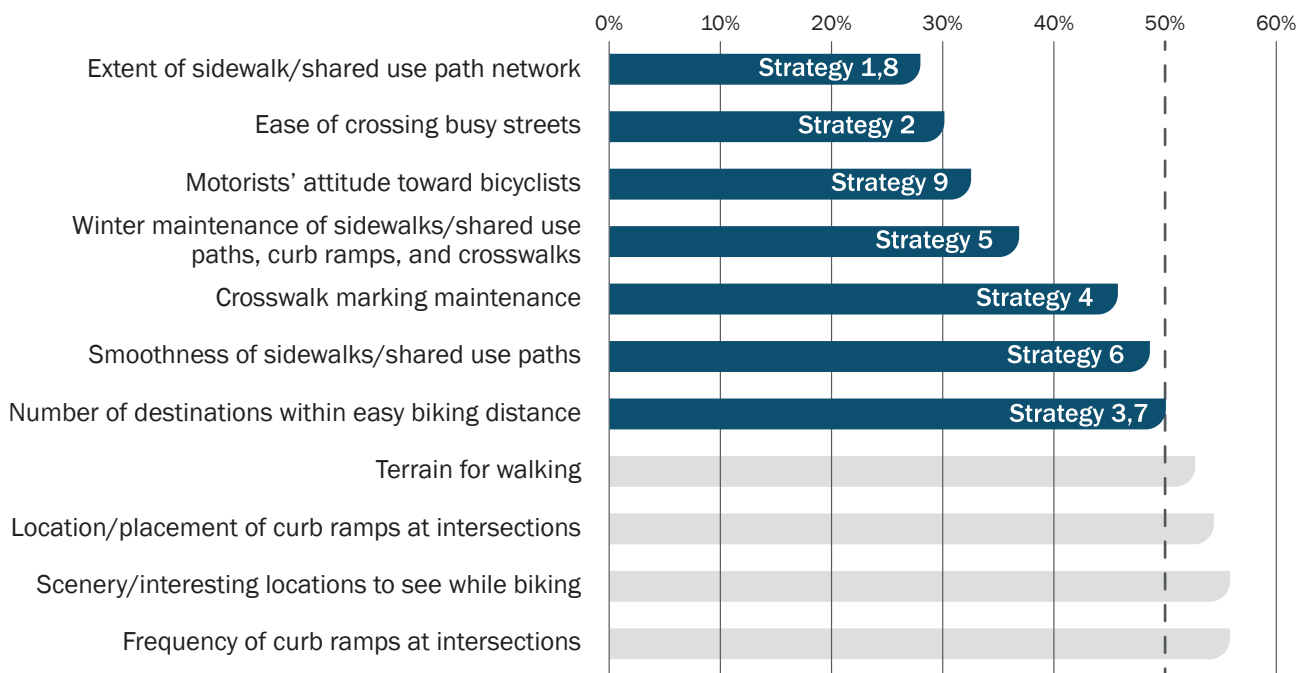
Goal A Expand the extent of the pedestrian and bicycle network	
<b>Strategy 1</b> Build and improve linear facilities 	<b>Action 1.1</b> Update design standards so that shared use path and sidewalk projects appeal to a wider cross section of residents  <b>Action 1.2</b> Coordinate walking and bicycling facility improvements with already-funded projects  <b>Action 1.3</b> Improve existing shared use paths to encourage safety and sharing facilities
<b>Strategy 2</b> Build and improve crossings 	<b>Action 2.1</b> Make it easier and safer for pedestrians and bicyclists to cross busy streets  <b>Action 2.2</b> Use proven measures to improve safety

<p><b>Strategy 3</b> Prioritize projects that connect important travel destinations</p> 	<p><b>Action 3.1</b> Prioritize the highest needs of residents – according to public feedback, existing transit systems, and citywide destination analysis (see Chapter 4) – so that linear facilities are connected</p> <p><b>Action 3.2</b> Connect residential neighborhoods with popular recreational areas like the Oakdale Nature Preserve and Gateway State Trail</p> <p><b>Action 3.3</b> Prioritize projects that have a higher likelihood of obtaining funding in municipal, county, regional, and state budgets and grants</p>
<p><b>Goal B Maintain the existing pedestrian and bicycle network</b></p>	
<p><b>Strategy 4</b> Improve maintenance of crosswalk markings</p> 	<p><b>Action 4.1</b> Use longer-lasting crosswalk marking materials</p> <p><b>Action 4.2</b> Develop a crosswalk marking inventory management system</p>
<p><b>Strategy 5</b> Improve winter maintenance of walking and bicycling facilities</p> 	<p><b>Action 5.1</b> Expand resources to provide more options for winter maintenance</p> <p><b>Action 5.2</b> Expand performance measures and priorities for winter maintenance</p> <p><b>Action 5.3</b> Design facilities to make winter maintenance easier</p> <p><b>Action 5.4</b> Develop maintenance requirements for new developments</p>
<p><b>Strategy 6</b> Expand the types of routine pavement maintenance to reduce long-term costs</p> 	<p><b>Action 6.1</b> Incorporate pavement maintenance techniques into capital budget planning</p> <p><b>Action 6.2</b> Develop a path and sidewalk pavement preservation inspection and repair program</p>
<p><b>Goal C Encourage active travel and inform the community about walking and bicycling options</b></p>	
<p><b>Strategy 7</b> Expand requirements and guidelines for new housing developments and mixed-use neighborhoods</p> 	<p><b>Action 7.1</b> Expand requirements that walking and bicycling routes be build allowing for safe passage between new housing and other destinations</p> <p><b>Action 7.2</b> Expand pedestrian and bicycle-friendly guidelines in new mixed-use neighborhoods</p>
<p><b>Strategy 8</b> Promote the existing walking and bicycling network</p> 	<p><b>Action 8.1</b> Develop a positive informational campaign about walking and bicycling</p> <p><b>Action 8.2</b> Establish a wayfinding signage network for major destinations and transit facilities that can be reached by walking and bicycling</p> <p><b>Action 8.3</b> Publish maps of walking and bicycling routes</p>
<p><b>Strategy 9</b> Increase community awareness of safety issues</p> 	<p><b>Action 9.1</b> Describe the most common types of crashes between motorists and pedestrians/bicyclists, as well as non-motorist related injuries not involving motorists, and how they can be avoided</p> <p><b>Action 9.2</b> Carry out a campaign to increase motorist, pedestrian, and bicyclist compliance with traffic laws</p> <p><b>Action 9.3</b> Develop and circulate resource materials</p>

**Figure 3.1:** Percentage of respondents who rated walking conditions as “Excellent” or “Good.” Conditions shown in blue are addressed in Chapter 3.



**Figure 3.2:** Percentage of respondents who rated bicycling conditions as “Excellent” or “Good.” Conditions shown in blue are addressed in Chapter 3.



Throughout this chapter, and the Oakdale Pedestrian and Bicycle Plan, the terms **“walking”** and **“pedestrian”** are used inclusively of people of all abilities including those using assistive devices.

## Goal A: Expand the extent of the pedestrian and bicycle network

As shown in Figure 3.2, the extent of the sidewalk/shared use path network was the poorest rated condition for bicycling. It was also the fourth poorest rated condition for walking, as shown in Figure 3.1. While Oakdale has made significant strides toward achieving a connected pedestrian and bicycle network, many important connections remain to be made. Sidewalks and shared use paths give all travelers – whether they are children, seniors, people with disabilities, or other adults - a safe and secure place to walk or ride separately from motor vehicle traffic. Studies have shown that sidewalks and shared use paths greatly reduce “walking along roadway” crashes<sup>1</sup> between pedestrians and motorists.

### Strategy 1: Build and improve linear facilities

Building and improving linear facilities addresses questionnaire respondents’ collective viewpoint that the extent of the sidewalk and shared use path network needs to be expanded, and that bicyclists’ attitude toward pedestrians needs improvement. Actions to achieve this strategy include designing sidewalk and shared use path project that appeal to a wide cross section of residents (1.1), coordinating walking/bicycling projects with already funded projects (1.2), and improving existing shared use paths to encourage sharing and safety (1.3).

#### Action 1.1: Update design standards so that sidewalk and shared use path projects appeal to a wider cross section of residents.

Sidewalks are designed to accommodate pedestrians, while shared use paths are designed to accommodate pedestrians, bicyclists, and other non-motorized users (i.e., people on mobility devices, rollerbladers, scooters, skateboarders, etc.). Shared use paths and sidewalks are also relied upon heavily by people with disabilities. Disabilities can include difficulty with conditions such as seeing, hearing, speaking, performing daily activities, and moving without the use of a wheelchair, cane, crutches, or walker. The

US Census Bureau estimates 27% of Americans have a disability, rising in prevalence from 17% under 18 years of age to 71% for those 75 years and older.<sup>2</sup> In 1990, the Americans with Disabilities Act (ADA) established the legal right for people with disabilities to have access to transportation within the public right-of-way.

Requirements for ADA have been created by the US Access Board, the federal agency that promotes equality for people with disabilities. In 2011, the Board published Public Rights-of-Way Accessibility Guidelines (PROWAG). A new edition of PROWAG is expected to be adopted soon. This Plan recommends that the City of Oakdale adopt the most recent version of PROWAG as a design standard. Currently the City’s Engineering Design Guidelines are limited to requiring that ADA specifications be followed for park pathway grades and by using cast iron truncated domes at street intersections (for people with vision disabilities). There are also three instances where current City of Oakdale design guidelines specifically are not in compliance with current PROWAG standards. These have been noted in Table 3.3.

In addition, the Minnesota Department of Transportation (MnDOT) has published a Facility Design Guide that includes design guidance for shared use paths and sidewalks. MnDOT’s Facility Design Guide is in sync with current PROWAG guidelines. Some examples of design guidance for shared use paths and sidewalks are shown in Table 3.3. The City of Oakdale includes design requirements for shared use paths and sidewalks primarily within its Engineering Design Guidelines, but also to a lesser extent in its Code Book. This Plan also recommends that both documents be updated to refer designers, developers, and contractors to the MnDOT Facility Design Guide for Non-Motorized Facilities.<sup>3</sup>

1 [https://www.pedbikeinfo.org/cms/downloads/PedestrianLitReview\\_April2014.pdf#page=10&zoom=100,69,326](https://www.pedbikeinfo.org/cms/downloads/PedestrianLitReview_April2014.pdf#page=10&zoom=100,69,326)

2 See the 2014 publication Americans with Disabilities: <https://www.census.gov/library/publications/2018/demo/p70-152.html>

3 See MnDOT’s Facility Design Guide – Chapter 8 Non-Motorized Facilities: <https://roaddesign.dot.state.mn.us/facilitydesign.aspx>

**Table 3.3:** Current design guidelines for shared use paths and sidewalks.

Design Element	Current Oakdale Design Guideline	MnDOT Facility Design Guide
<b>Shared Use Paths</b>		
Width	8' minimum (see section on "Sidewalk/Pedestrian Facilities" in Engineering Design Guidelines)	8' constrained minimum, 10' minimum, 10' – 12' preferred
Buffer Width	5' minimum (see section on "Sidewalk/Pedestrian Facilities" in Engineering Design Guidelines)	2' absolute minimum in constrained areas, 6' preferred, 10' recommended for snow storage
Vertical Clearance to Obstructions	n/a	8' minimum in constrained areas, 10' recommended
Horizontal Clearance to Obstructions	2' minimum, 4' preferred (see section on "Sidewalk/Pedestrian Facilities" in Engineering Design Guidelines)	2' recommended
<b>Cross Slope</b>	<b>2% recommended, 4% maximum (see section on "Sidewalk/Pedestrian Facilities" in Engineering Design Guidelines)<sup>4</sup></b>	1% recommended (with 1.5% design maximum to account for 0.5% construction tolerances); 2% maximum
<b>Running Grade</b>	<b>6% maximum where feasible (see section on "Sidewalk/Pedestrian Facilities" in Engineering Design Guidelines)<sup>5</sup></b>	5% maximum, although the grade can match that of an existing parallel roadway
<b>Sidewalks</b>		
<b>Width</b>	<b>4' minimum (see section on "Pedestrian Ways" in Chapter 21: Subdivisions of the City Code)<sup>6</sup></b> 5' minimum (see section on "Sidewalk/Pedestrian Facilities" in Engineering Design Guidelines)	5'
Buffer Width	5' minimum (see section on "Sidewalk/Pedestrian Facilities" in Engineering Design Guidelines)	2' minimum, 6' preferred, 10' recommended for snow storage
City of Oakdale design guidelines <b>shown in red</b> do not match current ADA guidelines in PROWAG.		

4 Does not meet current PROWAG standard of 2% maximum

5 Does not meet current PROWAG standard of 5% maximum, except where adjacent and parallel roadway exceeds 5%

6 Does not meet current PROWAG standard requiring 5' by 5' passing spaces every 200'.

## Action 1.2: Coordinate walking and bicycling facility improvements with already-funded projects

Three agencies – the City of Oakdale, Washington County, and MnDOT – each build streets in Oakdale. Each agency has a capital improvement program that include road projects scheduled at least five years in advance. This Plan recommends that as already-funded street reconstruction and maintenance projects are programmed and designed, they be coordinated with walking and bicycling facility improvements detailed in Chapter 5 – Implementation Action Plan.

While it is not always possible or desirable to delay walking or bicycling improvements until a street is reconstructed, incorporating walking and bicycling changes into larger street projects typically reduces the cost compared to carrying out each at a separate time. It can be more efficient, and avoid duplicate expenses like contractor mobilization and detour signing. Coordinating walking and bicycling improvements with already-funded projects also prevents new curbs and other elements from being unnecessarily removed and replaced later. Finally, coordination reduces impacts to travelers and property owners.

At times, an agency may replace a signal or upgrade ADA ramps at a spot location without reconstructing a longer street segment. Even if a spot improvement



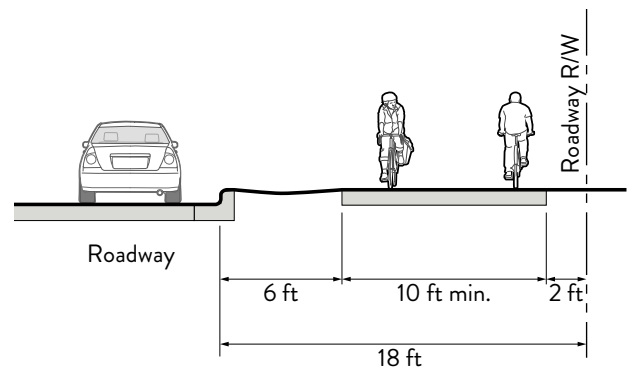
**Figure 3.4:** This image of an ADA ramp replacement project in Brookings, SD illustrates how an intersection project can be designed to prepare for a future shared use path project along the entire street.

may not be able to include the addition of a sidewalk or shared use path along a longer segment, the project may be able to construct a short (e.g., less than 200') facility at the intersection, which can then match in with a future walking or bicycling project, saving additional costs in future years. Figure 3.4 illustrates a location where reconstructed ADA ramps at an intersection were widened to facilitate a future shared use path that will be installed along the street later.

## Action 1.3: Improve existing shared use paths to encourage safety and sharing facilities

To address trail users' confusion about how pedestrians and bicyclists should interact on shared use paths, this Plan recommends that current Engineering Design Guidelines be updated.

Oakdale's current standard width for shared use paths throughout Oakdale is eight feet. As shown in Figure 3.3, eight feet is a "constrained minimum" width in MnDOT's Facility Design Guide. 10 feet is the nationally accepted<sup>7</sup> standard minimum width for shared use paths and is the required minimum width for federal funding programs such as the Recreation Trails Program. 10 feet is also the preferred minimum width in Minnesota, as shown in Figure 3.5. Constrained minimums may be more appropriate in local neighborhood settings where pedestrian and bicyclist traffic is expected to be low compared to more popular trails in major parks and along busier



**Figure 3.5:** Preferred shared use path dimensions next to a roadway. Image credit: MnDOT Bicycle Facility Design Manual.

7 See the 2012 AASHTO (American Association of State Highway and Transportation Officials) Bike Guide, section 5.2.1. According to the AASHTO Bike Guide, a reduced width of eight feet may be used where the following conditions prevail, "1) Bicycle traffic is expected to be low, even on peak days or during peak hours. 2) Pedestrian use of the facility is not expected to be more than occasional. 3) Horizontal and vertical alignments provide frequent, well-designed passing and resting opportunities. 4) The path will not be regularly subjected to maintenance vehicle loading conditions that would cause pavement edge damage. In addition, a path width of 8 ft (2.4 m) may be used for a short distance due to a physical constraint such as an environmental feature, bridge abutment, utility structure, fence, and such. Warning signs that indicate the pathway narrows (W5-4a), per the MUTCD (7) should be considered at these locations."

streets. The Gateway State Trail through Oakdale is 11 feet wide, which is an example of a more popular trail that is designed to accommodate one person passing two people walking or riding side-by-side.

This Plan also recommends that a sign design be chosen and posted along shared use paths to reinforce positive interactions. Three sign options have been included in Figure 3.6:

1. The Manual on Uniform Traffic Control Devices (MUTCD) includes standardized sign R9-6 to direct bicyclists to yield to pedestrians.
2. The MUTCD also includes standardized signs “Bicycles Permitted” (D11-1a) and “Pedestrians Permitted” (D11-2) which may be placed in locations along Oakdale’s trail system to inform trail users that both modes of travel are allowed and encouraged.
3. The City of Oakdale may also choose to create a tailored sign that encourages bicycle riders to signal to pedestrians before passing.



**Figure 3.6:** Examples of path signs to encourage proper yielding, sharing, and signaling include “Bicyclists Yield to Pedestrians” MUTCD R9-6 signs (left), “Pedestrians and Bicyclists Permitted” MUTCD D11-2 and D11-1a (bottom), and tailored messaging as shown in this example from Cedar Rapids, IA (right).

No matter the sign type chosen, this Plan recommends that Oakdale’s City Code be updated to match the chosen sign/s and codify expected trail user behavior. Currently Oakdale’s language is:

*“Section 15-18 Bicycling*

- (a) Bicycles shall be operated as closely to the right-hand curb or right-hand side of the path, trail, or roadway as conditions will permit and not more than two bicycles shall be operated abreast;*
- (b) No person shall operate a bicycle in any city park faster than is reasonable and safe, with regard to the safety of the operator and other persons in the immediate area . . .”*

Another example to consider is the Minneapolis Park & Recreation Board’s ordinance that has been in effect since the early 1980’s:

*“Persons overtaking and passing other users proceeding in the same direction shall be governed by the following:*

- (a) The person overtaking another proceeding in the same direction shall pass to the left thereof at a safe distance and shall not again return to the right side of the pathway until safely clear of the overtaken person.*
- (b) The person being overtaken shall give way to the right in favor of the overtaking person on audible warning, and shall not increase their speed until completely passed by the overtaking person.*
- (c) No person shall overtake and pass another using the left side of the pathway unless such left side is clearly visible and is free of oncoming users for a sufficient distance ahead to permit such overtaking and passing to be completed without interfering with the safety of those approaching from the opposite direction. (Pk. Bd. Ord. No. 81-102, § 1, 5-20-81)”*

## Strategy 2: Build and improve crossings

Building and improving crossings addresses questionnaire respondents' collective viewpoint that the ease of crossing busy streets needs enhancement. Out of all the walking conditions in Oakdale, respondents rated crossing busy streets lowest. Actions to address this strategy include a focus on busy streets (2.1) using a defined set proven measures to make crossings safer (2.2).

### Action 2.1: Make it safer and easier for pedestrians and bicyclists to cross busy streets

Oakdale currently has approximately 70 intersections with marked crosswalks, as shown in Figure 4.1, mostly concentrated along busy streets. Marked crosswalks are a visible indication to all travelers that pedestrians and bicyclists are expected to be crossing at an intersection. Common crossing issues for people walking and bicycling across busy streets include:

- » Marked crosswalks being spaced too far apart, resulting in pedestrians and bicyclists crossing at unmarked locations
- » Marked crosswalks being too long across a street
- » Motorists stopping their cars in the middle of crosswalks at stoplights and stop signs
- » Motorists in all lanes of traffic not stopping for people using the crosswalk, bypassing in other travel lanes or shoulder/parking lanes
- » Difficulty finding gaps in traffic during rush hours, due to heavy volumes and high speeds

This Plan recommends that pedestrian and bicyclists crossing improvements continue to be concentrated along Oakdale's busy streets, as defined in the Oakdale 2040 Comprehensive Plan and as shown in Figure 3.7.

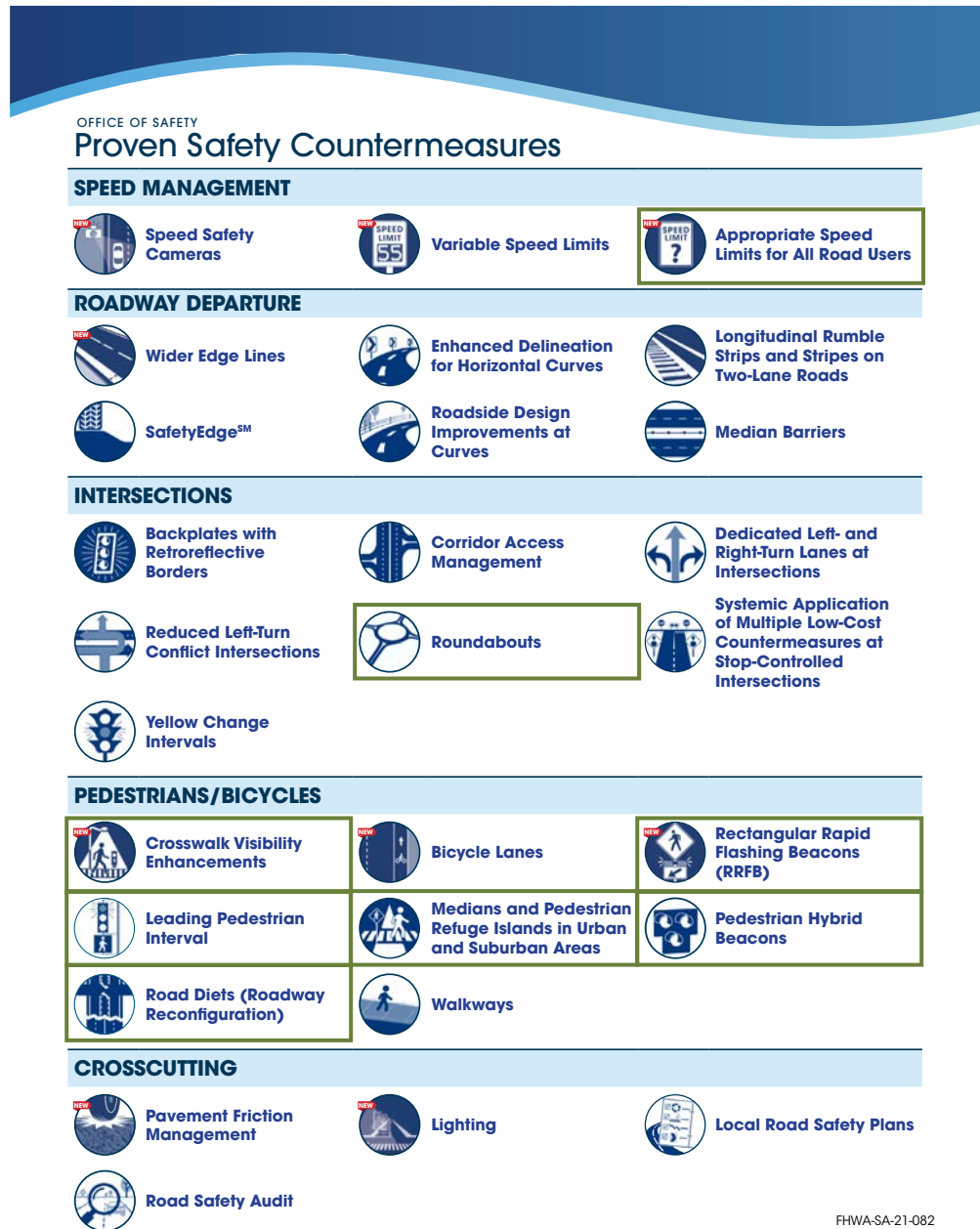


**Figure 3.7:** This map shows Oakdale's busy streets, with those marked as red, pink, purple, orange, or green as those where crossings should be built and improved.

## Action 2.2: Use proven measures to improve safety

The Federal Highway Administration (FHWA) Proven Safety Countermeasures initiative is a collection of measures that have been proven to be effective in reducing fatalities and serious injuries on streets and highways. In Oakdale over the past 10 years (2013 – 2023), five pedestrian/bicyclist crashes with motorists involved a fatality, and nine crashes involved a serious injury. Safety improvements for vulnerable road users should be prioritized and follow FHWA's Proven Safety Countermeasures.

This Plan recommends considering eight of FHWA's Proven Safety Countermeasures as a tool to improve safety at crossings and reduce Oakdale's frequency of fatalities and serious injuries. The Countermeasures shown in Figure 3.8 highlight how these eight strategies fit into the wider menu of 28 countermeasures to improve roadway safety. Each of the eight recommended strategies is briefly described in Table 3.9 Refer to FHWA's Proven Safety Countermeasures website for further details on each strategy.<sup>8</sup>






FHWA-SA-21-082

**Figure 3.8:** Eight of the 28 Proven Safety Countermeasures highlighted in green are recommended to improve crossing safety for pedestrians and bicyclists. Image Credit: FHWA






<sup>8</sup> <https://highways.dot.gov/safety/proven-safety-countermeasures>

**Figure 3.9:** FHWA Proven Safety Countermeasures recommended to improve the safety of pedestrians and bicyclists at crossings. Image and Text Credits: FHWA Proven Safety Countermeasures website - <https://highways.dot.gov/safety/proven-safety-countermeasure>

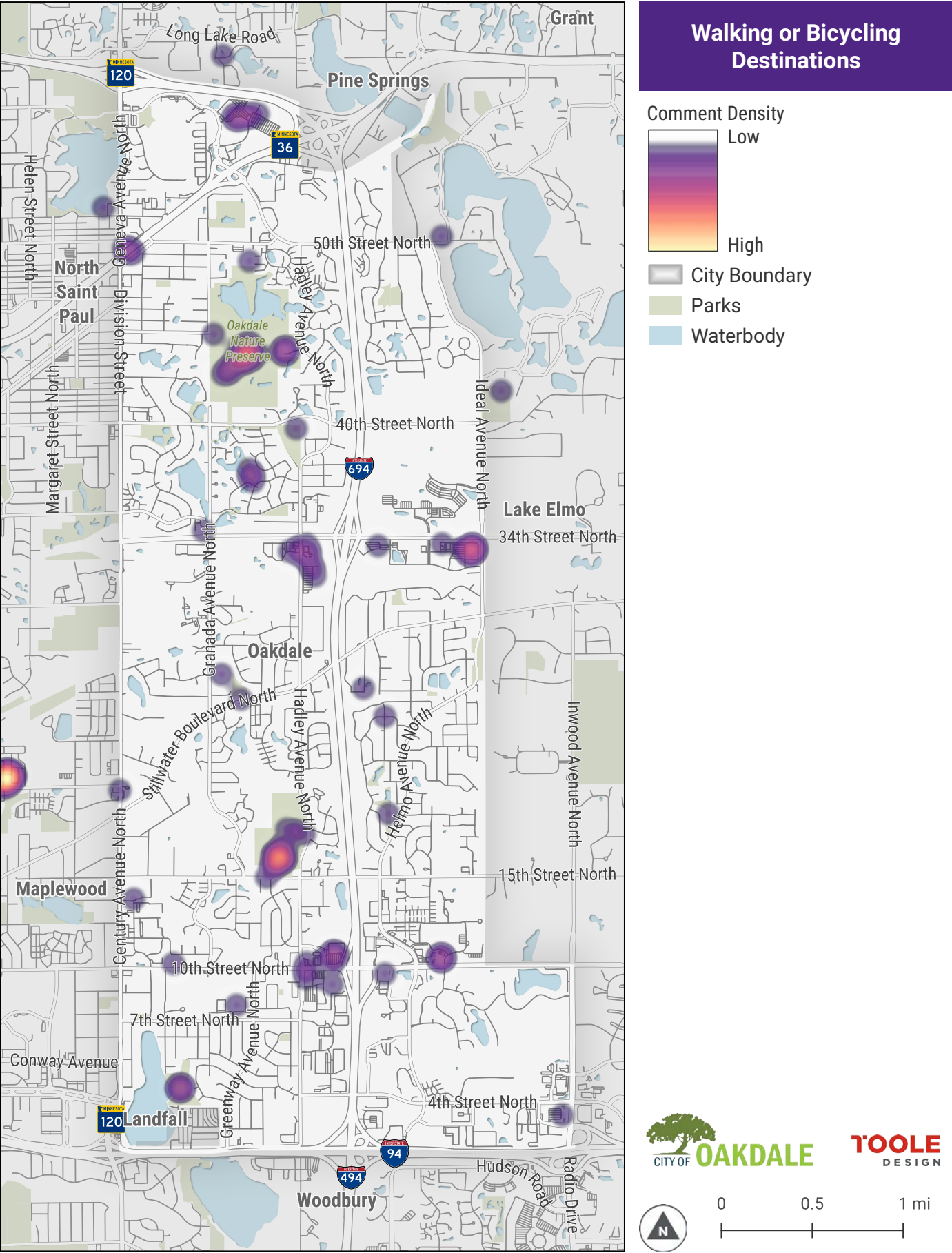
<p>Appropriate speed limits for all road users</p> 	<p><b>Benefits</b></p> <p>“Traffic fatalities in the City of Seattle decreased 26 percent after the city implemented comprehensive, city-wide speed management strategies and countermeasures inspired by Vision Zero. This included setting speed limits on all non-arterial streets at 20 mph and 200 miles of arterial streets at 25 mph.”</p> <p><b>Description</b></p> <p>“There is broad consensus among global roadway safety experts that speed control is one of the most important methods for reducing fatalities and serious injuries . . . (A study shows that) a driver traveling at 30 miles per hour who hits a pedestrian has a 45 percent chance of killing or seriously injuring them. At 20 miles per hour, that percentage drops to 5 percent.<sup>9</sup> . . . a growing body of research shows that speed limit changes alone can lead to measurable declines in speeds and crashes<sup>10</sup>. . . . When setting a speed limit, agencies should consider a range of factors such as pedestrian and bicyclist activity, crash history, land use context, intersection spacing, driveway density, roadway geometry, roadside conditions, roadway functional classification, traffic volume, and observed speeds.</p>
<p>Roundabouts</p> 	<p><b>Benefits</b></p> <p>“82% reduction in fatal and injury crashes when a two-way stop-controlled intersection is converted to a roundabout, and 78% reduction in fatal and injury crashes when a signalized intersection is converted to a roundabout.”</p> <p><b>Description</b></p> <p>“Roundabouts are not only a safer type of intersection; they are also efficient in terms of keeping people moving. Even while calming traffic, they can reduce delay and queuing when compared to other intersection alternatives. Furthermore, the lower vehicular speeds and reduced conflict environment can create a more suitable environment for walking and bicycling.”</p>
<p>Crosswalk Visibility Enhancements</p> 	<p><b>Benefits</b></p> <p><b>“High visibility crosswalks</b> can reduce pedestrian injury crashes up to 40%</p> <p><b>Intersection lighting</b> can reduce pedestrian crashes up to 42%</p> <p><b>Advance yield or stop markings and signs</b> can reduce pedestrian crashes up to 25%”</p> <p><b>Description</b></p> <p><b>“High visibility crosswalks:</b> Agencies should use materials such as inlay or thermoplastic tape, instead of paint or brick, for highly reflective crosswalk markings.</p> <p><b>Intersection lighting:</b> The goal of crosswalk lighting should be to illuminate with positive contrast to make it easier for a driver to visually identify the pedestrian. This involves carefully placing the luminaires in forward locations to avoid a silhouette effect of the pedestrian.</p> <p><b>Advance yield or stop markings and signs:</b> On multilane roadways, agencies can use ‘YIELD Here to Pedestrians’ or ‘STOP Here for Pedestrians’ signs 20 to 50 feet in advance of a marked crosswalk to indicate where a driver should stop or yield to pedestrians, depending on State law. To supplement the signing, agencies can also install a STOP or YIELD bar (commonly referred to as ‘shark’s teeth’) pavement markings.”</p>

<sup>9</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1127572/>

<sup>10</sup> Hu, W. and J. Cicchino (2019). Lowering the speed limit from 30 to 25 mph in Boston: effects on vehicle speeds. Insurance Institute for Highway Safety.

<p>Leading Pedestrian Intervals</p> 	<p><b>Benefits</b></p> <p>“A 13% reduction in pedestrian vehicle crashes at intersections”</p>
	<p><b>Description</b></p> <p>“A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left.”</p>
<p>Road Diets (Roadway Reconfiguration)</p> 	<p><b>Benefits</b></p> <p>“A 19 – 47% reduction in total crashes with 4-lane to 3-lane road diet conversions”</p>
	<p><b>Description</b></p> <p>“A Road Diet typically involves converting an existing four-lane undivided roadway to a three-lane roadway consisting of two through lanes and a center two-way left-turn lane.”</p>
<p>Medians and Pedestrian Refuge Islands in Urban and Suburban Areas</p> 	<p><b>Benefits</b></p> <p>“<b>Medians with marked crosswalks</b> result in a 46% reduction in pedestrian crashes <b>Pedestrian refuge islands</b> result in a 56% reduction in pedestrian crashes”</p>
	<p><b>Description</b></p> <p>“A <b>median</b> is the area between opposing lanes of traffic, excluding turn lanes. Medians in urban and suburban areas can be defined by pavement markings, raised medians, or islands to separate motorized and non-motorized road users...</p> <p>A <b>pedestrian refuge island</b> (or crossing area) is a median with a refuge area that is intended to help protect pedestrians who are crossing a road.”</p>
<p>Pedestrian Hybrid Beacons</p> 	<p><b>Benefits</b></p> <p>“A 55% reduction in pedestrian crashes and 15% reduction in serious injury and fatal crashes”</p>
	<p><b>Description</b></p> <p>“A traffic control device designed to help pedestrians safely cross higher-speed roadways at midblock crossings and uncontrolled intersections. The beacon head consists of two red lenses above a single yellow lens. The lenses remain ‘dark’ until a pedestrian desiring to cross the street pushes the call button to activate the beacon, which then initiates a yellow to red lighting sequence consisting of flashing and steady lights that directs motorists to slow and come to a stop and provides the right-of-way to the pedestrian to safely cross the roadway before going dark again.”</p>
<p>Rectangular Rapid Flashing Beacons (RRFB)</p> 	<p><b>Benefits</b></p> <p>“Up to a 47% reduction in pedestrian crashes and can increase motorist yielding rates up to 98%”</p>
	<p><b>Description</b></p> <p>“To enhance pedestrian conspicuity and increase driver awareness at uncontrolled, marked crosswalks, transportation agencies can install a pedestrian actuated Rectangular Rapid Flashing Beacon (RRFB) to accompany a pedestrian warning sign. RRFBs consist of two, rectangular-shaped yellow indications, each with a light-emitting diode (LED)-array-based light source. RRFBs flash with an alternating high frequency when activated to enhance conspicuity of pedestrians at the crossing to drivers.”</p>

**Figure 3.10:** Walking or bicycling destinations shared by residents should be a factor in prioritizing linear and crossing projects.



### Strategy 3: Prioritize projects that connect important travel destinations

Prioritizing projects that connect important travel destinations helps to address questionnaire respondents' collective viewpoint that there are not enough destinations within easy bicycling and (especially) walking distance. Actions to achieve this strategy include prioritizing the highest needs of residents (3.1), connecting neighborhoods with popular parks (3.2), and prioritizing projects with a higher likelihood of funding (3.3).

#### Action 3.1: Prioritize the highest needs of residents – according to public feedback, existing transit systems, and the destination analysis – so that linear facilities are connected

This Plan recommends that the highest destination needs of residents be considered from two sources: the walking or bicycling destinations residents reported during the public engagement process (as shown in Figure 3.10) and the destination analysis explained in Chapter 4.

Linear projects in Chapter 5 have been prioritized in part using the destination analysis explained in Chapter 4. However, a list of crossing projects has not been detailed in this Plan, and these future projects can be prioritized using Figure 3.10 and the Chapter 4 destination analysis. The destination analysis includes the following destinations:

1. Areas of higher population density
2. Commercial areas
3. Locations of parks
4. Areas of higher employment
5. Locations of transit stops
6. Areas with higher intersection density
7. Locations of schools
8. The Gold Line Bus Rapid Transit line stops

This Plan also recommends the addition of sidewalk connections between existing transit stops and existing perpendicular sidewalks or shared use paths. Short pedestrian connections between boarding/alighting areas and existing infrastructure will expand access for people with disabilities and other transit users, and make it possible for maintenance vehicles

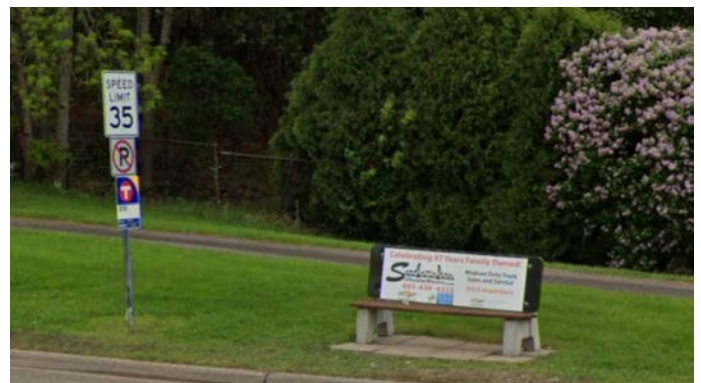
to clear paths in the winter. An example of an existing transit stop without a sidewalk connection is shown in Figure 3.11.

#### Action 3.2: Connect residential neighborhoods with popular recreational areas like the Oakdale Nature Preserve and Gateway State Trail

One of the key findings of the community engagement process was that residents primarily use the walking and bicycling network for recreational purposes, and that two of their favorite destinations are the Oakdale Nature Preserve and Gateway State Trail. The City of Oakdale and State of Minnesota have already made investments in these popular amenities. Yet many nearby neighborhoods remain disconnected from these parks. This Plan recommends prioritizing walking and bicycling connections – both linear segments and crossing projects – within a one-mile vicinity of popular areas like Oakdale Nature Preserve, Gateway State Trail, and Walton Park.

#### Action 3.3: Prioritize projects that have a higher likelihood of funding in municipal, county, regional, and state budgets and grants

Many funding sources exist for funding walking and bicycling projects. At the regional and state level, funding programs often use the density of destinations to prioritize new projects. For example, the Metropolitan Council's Regional Solicitation process described in Chapter 5 gives higher priority to funding projects located near higher population and employment density, as well as proximity to schools. This Plan recommends prioritizing projects that have a higher likelihood of funding from municipal,



**Figure 3.11:** This transit stop on Hadley Avenue south of 10th Street can be connected to the perpendicular shared use path with a sidewalk.

county, regional, and state budgets and grants. Linear projects in this Plan have already been prioritized using outside funding as a consideration in Chapter 5 – Implementation Action Plan. Crossing projects are not included in this Plan but should be ranked for priority in the same manner.

## Goal B: Maintain the existing pedestrian and bicycle network

As shown in Figure 3.2, maintenance of the shared use path system ranked as the fourth (winter maintenance), fifth (crosswalk maintenance), and sixth (smoothness of paths) worst conditions for bicycling. Crosswalk maintenance was also the sixth poorest rated condition for walking, as shown in Figure 3.1. While Oakdale prides itself on a well-maintained sidewalk and shared use path system in the winter, maintenance can continue to be improved with crosswalk markings, winter practices, and routine pavement surface treatments to expand access. The benefits of maintenance include a greater return on initial investment (with more users year-round), safer and more accessible facilities for people of all abilities, and a more enjoyable experience for people walking and bicycling. Oakdale already has 33 miles of shared use paths and 19 miles of sidewalks, the vast majority of which are maintained by City of Oakdale crews. With 22 miles of additional facilities planned, as described in Chapters 4 and 5, the following strategies will facilitate the goal of maintaining the pedestrian and bicycle network.

### Strategy 4: Improve maintenance of crosswalk markings

Improving maintenance of crosswalk markings helps to address questionnaire respondents' collective viewpoint that maintenance needs to be improved. Actions to achieve this strategy include using longer-lasting crosswalk marking materials (4.1) and developing a crosswalk marking inventory management system (4.2).

#### Action 4.1: Use longer-lasting crosswalk marking materials

Currently most crosswalks in Oakdale are installed and maintained by the City of Oakdale. The City has a crosswalk maintenance agreement with Washington County for county highways, whereby the City marks crosswalks and as a result is compensated by Washington County. MnDOT marks crosswalks along Highway 120. Most crosswalks are marked annually with latex paint, with crosswalks along Highway 120 marked with longer-lasting materials. This Plan recommends using longer-lasting crosswalk marking materials city-wide, along county highways and city streets. Longer-lasting crosswalk markings provide better year-round effectiveness, resulting in greater safety for people walking and bicycling. While this may cost more in the short-term (particularly to groove or recess markings into pavement)<sup>11</sup>, the labor involved in annually marking crosswalks will result in net savings to the City and County. Figure 3.12 illustrates the differences between basic crosswalk marking materials.

**Figure 3.12:** A comparison of crosswalk marking materials.  
Credit: FHWA Guide for Maintaining Pedestrian Facilities for Enhanced Safety

Material	Relative Cost \$=Low \$\$\$=High	Lifespan (months)	Retroreflectivity *=Low ***=High
Paint	\$	3 – 24	*
Epoxy Paint	\$\$	24-48	**
Thermoplastic (sprayed)	\$\$\$	48-72*	**
Pre-formed Tape	\$\$\$\$	36 – 96*	***

Note: Estimates based on minimum standard crosswalk treatment and updated to reflect 2013 comparative costs.<sup>16,17</sup> Thermoplastic and tape have shortened lifespans in snowy areas where they are often damaged by snowplows. Inlaid thermoplastic or pre-formed tape may last significantly longer than standard surface applications.

11. Also see Chapter 7 of the MnDOT Traffic Engineering Manual for guidance on material lifespans for surface applied versus recessed pavement markings: [https://edocs-public.dot.state.mn.us/edocs\\_public/DMResultSet/download?docId=17667572](https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=17667572)

## Action 4.2: Develop a crosswalk marking inventory management system

This Plan also recommends the development of a crosswalk marking inventory management system, to ensure that the network of marked crosswalks in Oakdale operates at a high-performance level. A crosswalk inventory management system can be completed as crosswalks are installed, with minimum annual or twice-per-year inspections. Information such as installation location, date, material type, supplier, and costs can be recorded. An action plan or to-do list can be developed after each inspection, to correct faded crosswalks like those shown in Figure 3.13. Several agencies have also adopted retroreflectivity standards with a mobile reflectometer unit, which guides transportation departments regarding the effectiveness of pavement markings for nighttime use.<sup>12</sup> This can be especially effective for improving safety for pedestrians and bicyclists at night.



**Figure 3.13:** The crosswalk on the right-hand leg of the intersection of 10th Street with Highway 120 has faded.

## Strategy 5: Improve winter maintenance of walking and bicycling facilities

Improving winter maintenance of walking and bicycling facilities addresses questionnaire respondents' collective viewpoint that winter maintenance needs to be improved, particularly for bicycling. Actions to achieve this strategy include expanding resources to provide more options for winter maintenance (5.1), developing performance measures and priorities (5.2), designing facilities to make winter maintenance easier (5.3), and developing maintenance requirements for new developments (5.4).

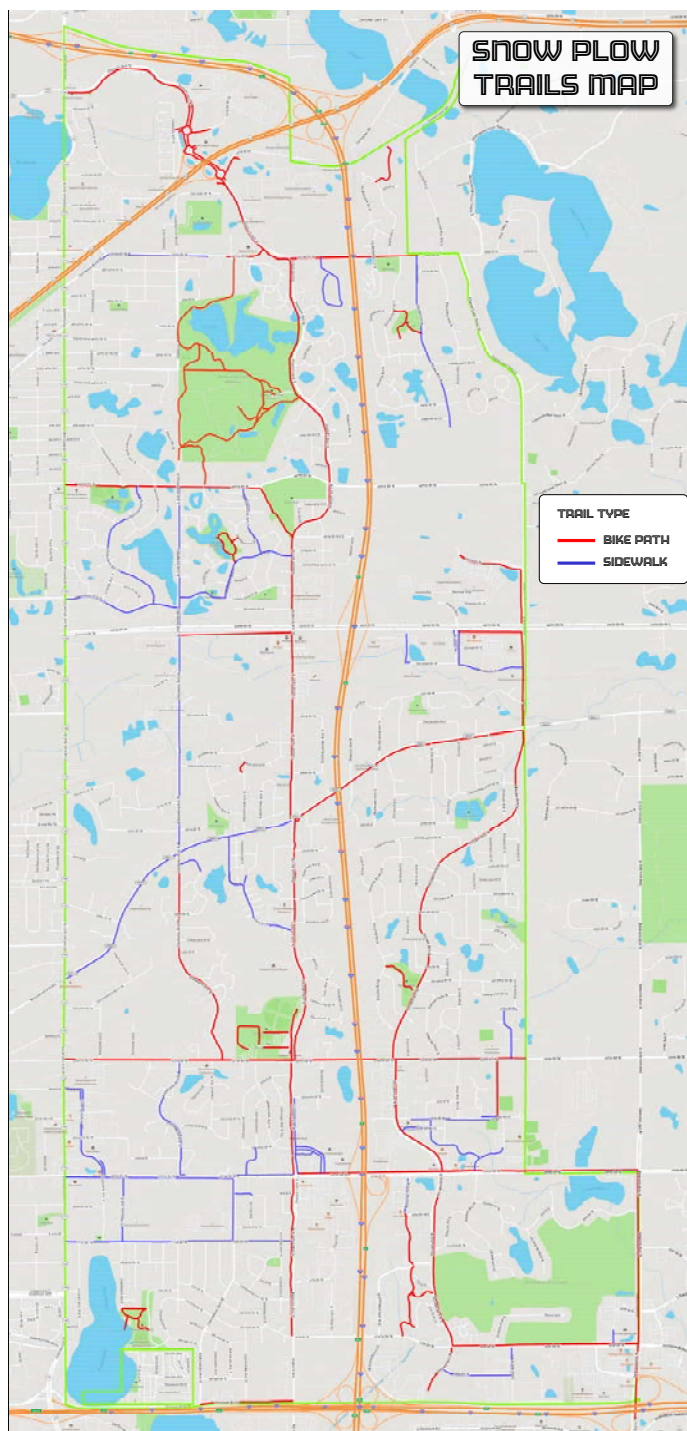
### Action 5.1: Expand resources to provide more options for winter maintenance

The City of Oakdale Parks Maintenance Department, which performs winter maintenance on Oakdale's sidewalk and shared use path network, including sidewalks and shared use paths along county and state highways (shown in Figure 3.14), already has a machine fleet that performs winter maintenance. These include the MV4 Sidewalk Machine, Toolcat, #2 MT Trackless, MV5 Snowsweeper, and ribbon (snow) blower attachments.<sup>13</sup> This Plan recommends the continued expansion of resources to provide more options for winter maintenance. Many other communities in the metro also have equipment to maintain sidewalks and paths, including pick-up trucks, skid loaders, miniature tractors, and lawn mower tractors converted to winter maintenance vehicles. Attachments include blowers, plows, brooms, sand spreaders, rock salt spreaders, and salt brine applicators. Salt brine is commonly applied using "pencil spray nozzles" attached to the back of a truck or utility vehicle, leaving parallel lines of salt brine mixture on a sidewalk or path. Pre-treating facilities with salt brine before a snow or icefall has the benefit of faster salt activation, quicker melting, better salt penetration, and reduced salt loss due to a lower "bounce and scatter" rate, which saves money and reduces environmental impacts by using less salt.<sup>14</sup>

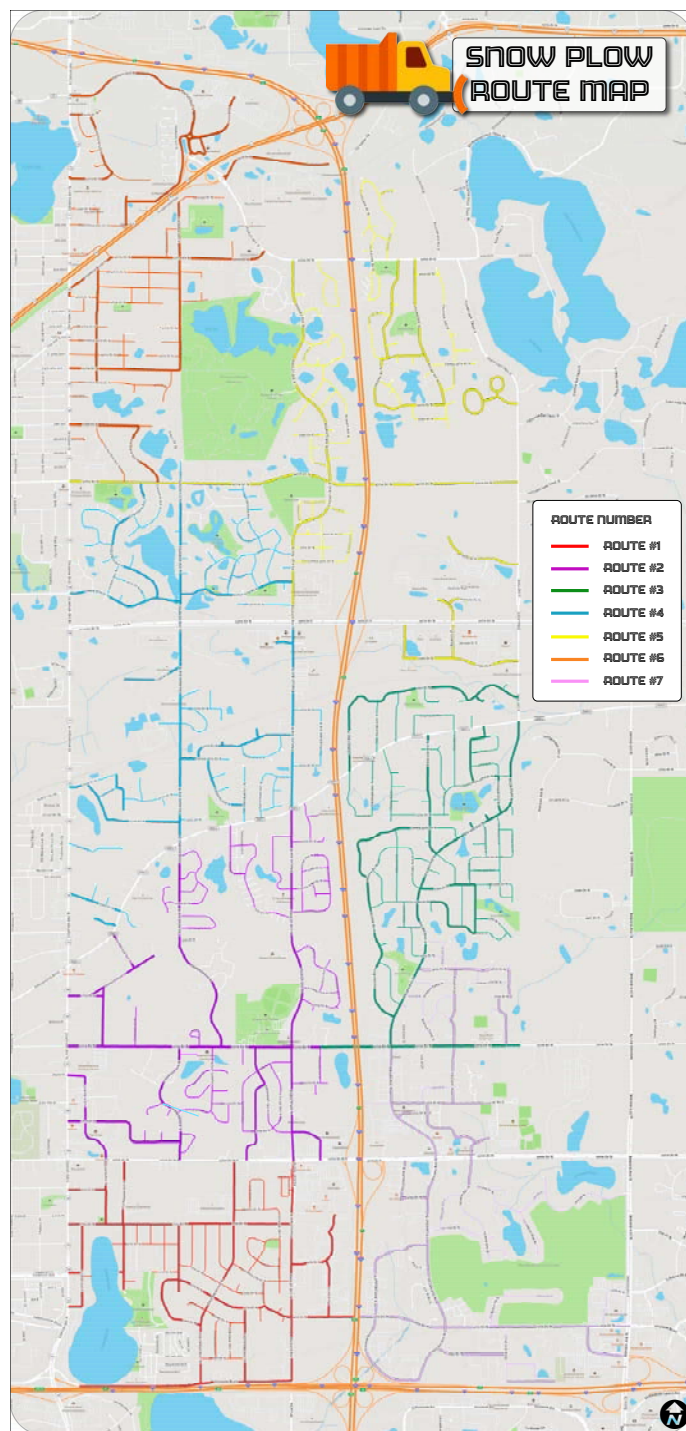
<sup>12</sup> See Caltrans Preliminary Investigation report on Commercial Pavement Marking Management Systems: <https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/preliminary-investigations/commercial-pavement-marking-management-systems-pi-a11y.pdf>

<sup>13</sup> See Oakdale 2022 – 2026 Capital Improvement Program

<sup>14</sup> See Toole Design's Winter Maintenance Resource Guide: <https://tooledesign.com/insights/2019/12/winter-maintenance-resource-guide/>



**Figure 3.14:** The network of paths and sidewalks cleared by City of Oakdale staff includes those along most City streets, County and State highways.



**Figure 3.15:** As an example, the street plow route map above shows routes with higher priority streets drawn in a darker line. A similar approach could be adopted for trail maintenance in the future.

## Action 5.2: Expand performance measures and priorities for winter maintenance

The City of Oakdale Streets and Fleet Division publishes separate maps for snow removal on streets and sidewalks/paths, as shown in Figures 3.14 and 3.15. This Plan recommends expanding measures and priorities for winter maintenance of sidewalks and paths. Plowing for streets is divided in seven districts, with priority given to arterial and collector streets in each district. Like street plowing, sidewalk/path plowing can be divided into districts, with priority given to arterial/collector-like trails.

This Plan also recommends that transit stops are cleared and that access to pedestrian activated stoplights are maintained for ADA access in winter, as shown in Figure 3.16. This recommendation may require that the City work with Metro Transit and the City's bench advertising contractor to determine prioritization and responsibilities for transit stop components, such as shelters, benches, and sidewalks/paths between the curb, transit stops, and nearby sidewalks/paths. ADA requires access to walkways during winter, and the Federal Highway Administration has issued guidance that pedestrian routes must be open and usable throughout the year, with only isolated or temporary interruptions.<sup>15</sup> An example of guidelines for winter maintenance at transit stops comes from the Massachusetts Department of Transportation, which recommends that bus stops have minimum 5-foot by 8-foot boarding and alighting areas cleared of snow and ice, with a minimum 4-foot-wide path connecting with nearby walkways.



**Figure 3.16:** A wintertime access route to a pedestrian push button is needed at this intersection on Hadley Avenue at 10th Street (left), while a maintained sidewalk is needed at this transit stop also on Hadley Avenue just south of 10th Street (right).

## Action 5.3: Design facilities to make winter maintenance easier

Sidewalks and shared use paths can be designed to make winter maintenance easier. This Plan recommends focusing on both facility width and drainage for improved winter maintenance. Proper facility width for winter maintenance is covered in Table 3.3 under Action 1.1. For example, widening shared use paths to 10' can make it possible to use pick-up trucks as maintenance vehicles on shared use paths without compromising the path edges to wheel tires. Another example is that a buffer width of 10 feet (between the curb and walking/bicycling facility) is ideal for snow storage in winter, although lesser widths are acceptable.

Designers of sidewalks and paths should ensure that the areas next to a facility are graded away on both sides, to prevent water from pooling on or running across the surface. Proper drainage is also facilitated by using cross slopes of 1%, ensuring that water flows to one edge of a sidewalk or path. Where proper drainage cannot be achieved along a sidewalk or path, adequate drainage infrastructure should be provided to prevent standing water. Where a sidewalk or path transitions to a curb ramp, ramps should be located at the high point of an intersection to avoid standing pools of water, and if this isn't possible, ADA-compliant storm drain grates should be added near the base of the ramps to drain standing water.



<sup>15</sup> [https://www.fhwa.dot.gov/civilrights/programs/ada/ada\\_sect504qa.cfm#q31](https://www.fhwa.dot.gov/civilrights/programs/ada/ada_sect504qa.cfm#q31)

## Action 5.4 Develop maintenance requirements for new developments

Wherever new developments create sidewalks or paths, the City should consider requiring winter maintenance. This Plan recommends developing winter maintenance requirements that would set expectations for priorities that match the City's sidewalk and path clearing program as described in Action 5.2.

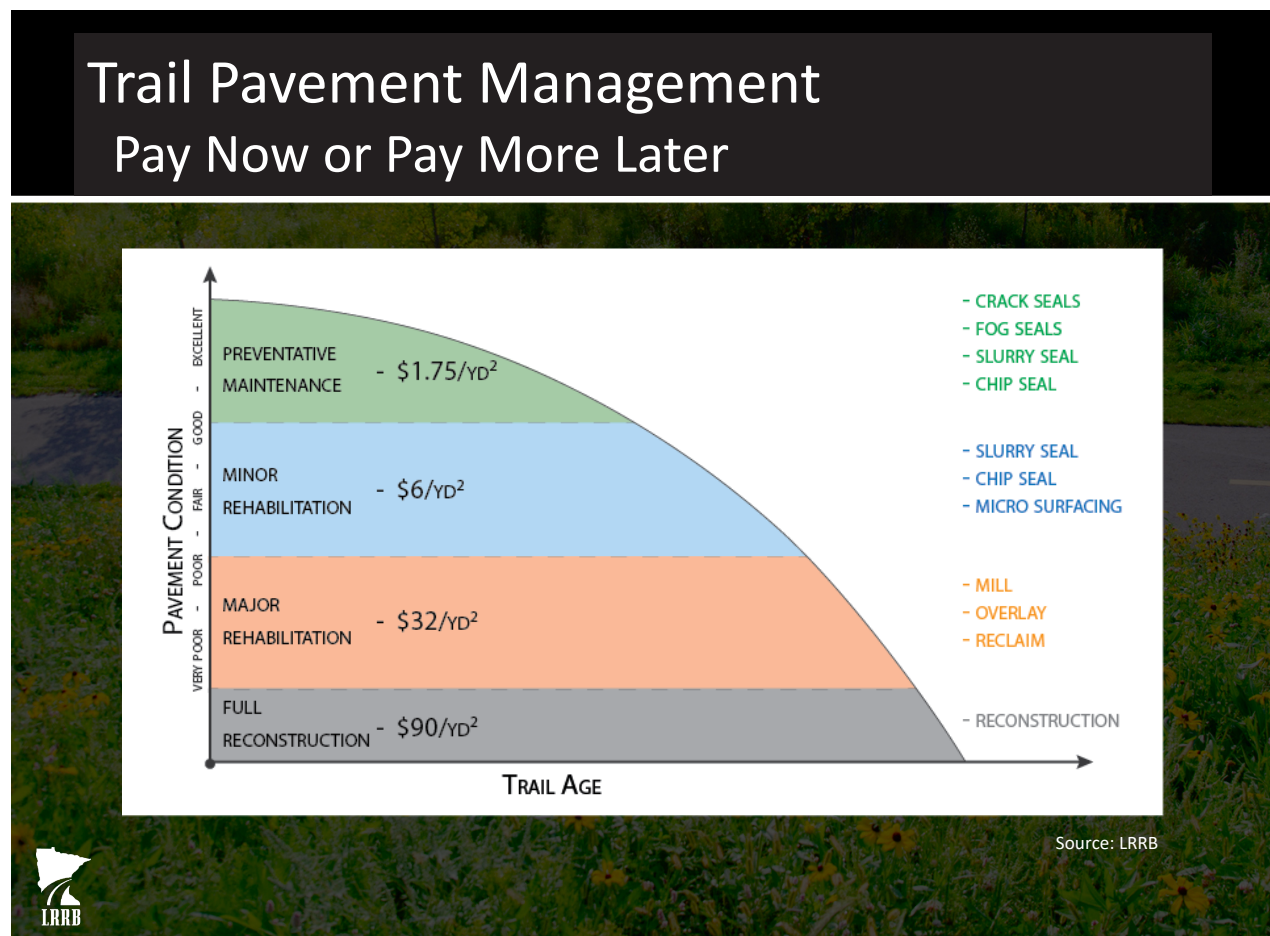
### Strategy 6: Improve routine maintenance of path and sidewalk pavement

Improving routine maintenance of path and sidewalk pavement addresses questionnaire respondents' collective viewpoint that the smoothness of paths and sidewalks needs improvement, particularly for bicycling. Actions to achieve this strategy include expanding the types of routine pavement maintenance (6.1) and developing a path and sidewalk pavement preservation inspection and repair program (6.2).

## Action 6.1: Incorporate pavement maintenance techniques into capital budget planning

After constructing a shared use path, ongoing pavement preservation is important to maintain a smooth surface for bicyclists and pedestrians and prolong the life of the asphalt pavement. Maintaining a smooth surface is more important for bicyclists and people with disabilities than it is for other travelers, as they are more vulnerable to cracks and rough surfaces.

Properly maintaining paths is also more cost-effective than neglecting preventative maintenance and allowing the condition to decay to the point that a costly reconstruction is needed, as shown in Figures 3.17, 3.18, and 3.19. This Plan recommends that the City of Oakdale incorporate pavement maintenance techniques into capital budget planning to reduce long terms costs. Concrete sidewalk maintenance is not covered in this Plan but can be referenced in the FHWA's Guide for Maintaining Pedestrian Facilities for Enhanced Safety.



**Figure 3.17:** Preventative shared use path maintenance is less costly over the long term than more expensive overlay or reconstruction projects. Credit: Minnesota Local Road Research Board<sup>16</sup>

**Crack treatments** are necessary to prevent moisture infiltration into path pavements, which can accelerate pavement distress. Crack treatments should be applied within the first five years of pavement construction to achieve the maximum benefit, and then reapplied as needed thereafter.<sup>16</sup>

**Surface treatments** are intended to restore minor surface defects and to seal and refresh the pavement surface. These generally have relatively short lives when compared to pavement overlays and must be re-applied on a regular basis to obtain maximum benefits. They include the following:

- » **Fog seals** are a recommended application for sealing and enriching the asphalt surface, sealing minor cracks, and helping prevent raveling (i.e., surface deterioration).
- » **Slurry seals** are a mixture of fine aggregates (i.e., rock) ranging in size from approximately  $\frac{1}{4}$  to  $\frac{1}{2}$  inch in diameter, asphalt emulsion (i.e., oil), water, and mineral filler, which is mostly Portland cement. Slurry seals, which are typically  $\frac{1}{4}$  to  $\frac{1}{2}$ " thick, may be used to seal existing oxidized and hardened asphalt pavements, slow surface raveling, seal small cracks, and improve skid resistance. Caution needs to be exercised in their use as this material takes anywhere from two to eight hours to harden depending on the temperature and humidity.
- » **Microsurfacing** is a mix of polymer-modified asphalt emulsion, well graded and crushed mineral aggregate, mineral filler, water, and chemical additives that control the "break" (i.e., separation of water from asphalt) and evaporation time. Microsurfacing is primarily used as a preventive maintenance technique or surface treatment for asphalt pavements still in good general condition. Microsurfacing can slow raveling of aging asphalt pavements. A decided advantage of microsurfacing is that it develops strength faster than slurry seals and can be opened to traffic in about an hour.

**Resurfacing** is carried out after a path has reached the end of its useful life. Methods include:

- » **Asphalt overlays** are the application of a new layer of hot-mix asphalt over the path surface.
- » **Mill and overlays** are the removal of a surface layer of asphalt to eliminate surface defects prior to the application of a new layer of hot-mix asphalt surfacing.
- » **Ultrathin bonded wearing course** is a polymer modified asphalt emulsion membrane followed within seconds by an ultra-thin life of high performance open-graded asphalt concrete mix, with immediate release to traffic.



**Figure 3.18:** An example of an Oakdale shared use path along Helmo Avenue that would benefit from crack and surface treatments.

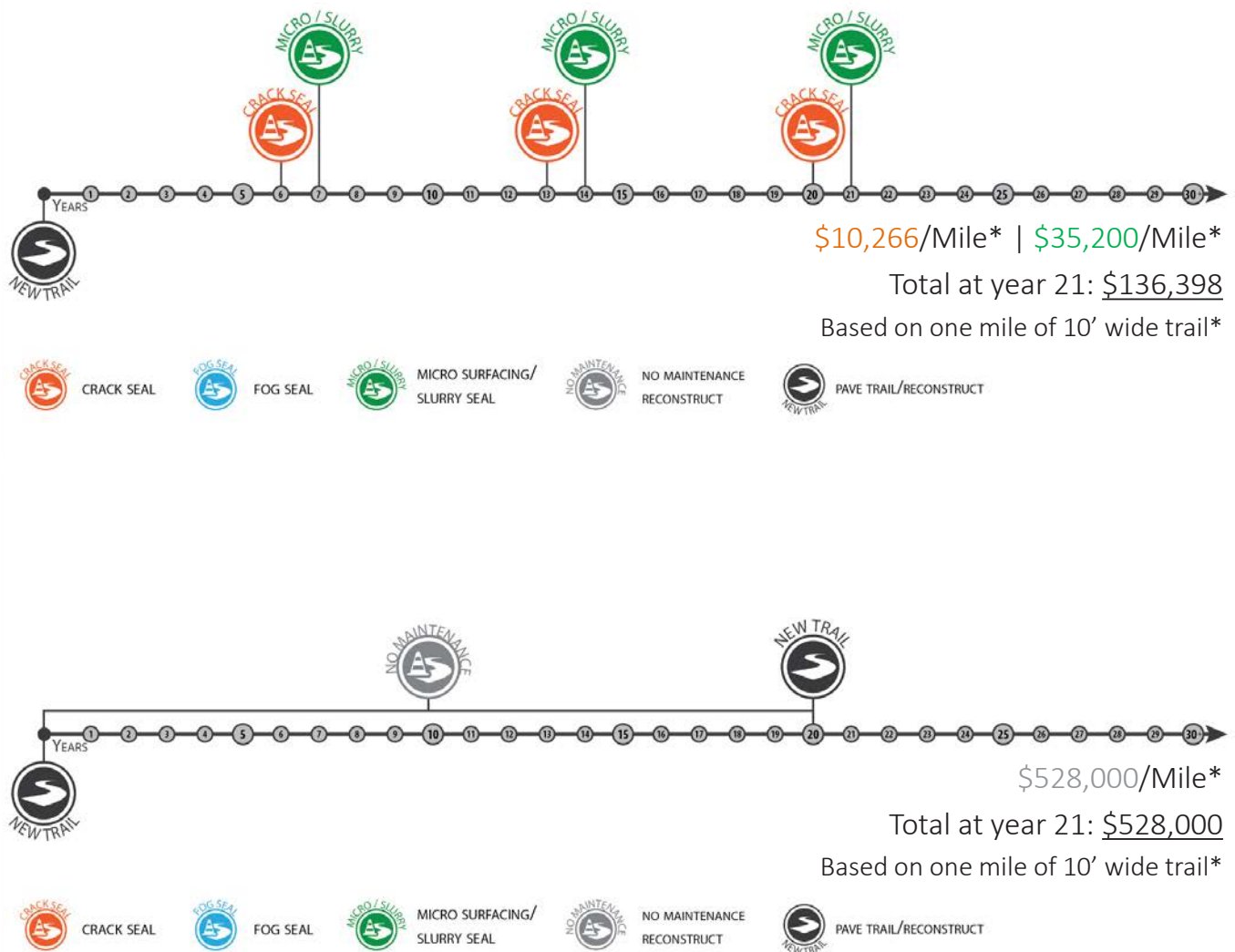
<sup>16</sup> See Training Course for Corridor Management and Maintenance of Paved Recreational Trails: <https://lrrb.org/workshop-corridor-management-and-maintenance-of-paved-recreational-trails/>

## Action 6.2: Develop a path and sidewalk pavement preservation inspection and repair program

This Plan recommends the development of preservation inspection program to better plan for maintenance regarding the condition of asphalt shared use paths. Inspection programs for concrete sidewalks are not covered in this Plan but can be referenced in the FHWA's Guide for Maintaining Pedestrian Facilities for Enhanced Safety.

A path inspection program can guide the various types of pavement preservation noted in Action 6.1. It can be carried out by a contractor or in-house, and can cover roads and paths, or paths only.

One example is Three Rivers Park District (TRPD), which uses an asset management software that rates and helps track pavement conditions of their paths. The rating system is called PASER, or Pavement Surface Evaluation and Rating, which was developed by the University of Wisconsin-Madison Transportation Information Center. TRPD combines the PASER system with their in-house GIS database to evaluate and track the condition of all their paths. Visual inspections are completed every two years, when technicians drive along the trails doing “windshield surveys” and assign them a rating based on a set of criteria defined by PASER. The PASER rating system is based on a 1-10 scale, with ten being a new path in excellent condition, as shown in Figure 3.20. In



**Figure 3.19:** Two scenarios for path maintenance: Scenario 1 involves crack sealing and microsurfacing with a total 20-year cost of \$136,000 (upper image), and Scenario 2 involves no maintenance for a 20-year cost of \$528,000 (lower image). Credit: Minnesota Local Road Research Board

another example, the City of Eden Prairie contracts with Goodpointe Technology, which uses ICON software. The ICON condition rating system uses a 100-point scale for all roads and paths. Eden Prairie has a goal of maintaining all surfaces at a level above 70 on the condition rating scale. When trails

fall below 70, maintenance is performed on an on-going basis. The City completes a survey every two to three years to ensure that ratings are up-to-date. The ratings are done block-by-block, even though there is often variation within each block.

**Figure 3.20:** The PASER rating system, adapted for use on shared use paths. Credit: Hennepin County Bikeway Maintenance Study

Number	Surface Rating	Visible Distress*	General condition/treatment measures
10	Excellent	None.	New construction.
9	Excellent	None.	Recent overlay. Like new.
8	Very Good	No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced (40' or greater). All cracks sealed or tight (open less than 1/4").	Recent sealcoat or new cold mix. Little or no maintenance required.
7	Good	Very slight or no raveling, surface shows some traffic wear. Longitudinal cracks (open 1/4") due to reflection or paving joints. Transverse cracks (open 1/4") spaced 10' or more apart, little or slight crack raveling. No patching or very few patches in excellent condition.	First signs of aging. Maintain 7 with routine crack filling.
6	Good	Slight raveling (loss of fines) and traffic wear. Longitudinal cracks (open 1/4"– 1/2"), some spaced less than 10'. First sign of block cracking. Sight to moderate flushing or polishing. Occasional patching in good condition.	Shows signs of aging. Sound structural condition. Could extend life with sealcoat.
5	Fair	Moderate to severe raveling (loss of fine and coarse aggregate). Longitudinal and transverse cracks (open 1/2") show first signs of slight raveling and secondary cracks. First signs of longitudinal cracks near pavement edge. Block cracking up to 50% of surface. Extensive to severe flushing or polishing. Some patching or edge wedging in good condition.	Surface aging. Sound structural condition. Needs sealcoat or thin non-structural overlay (less than 2")
4	Fair	Severe surface raveling. Multiple longitudinal and transverse cracking with slight raveling. Longitudinal cracking in wheel path. Block cracking (over 50% of surface). Patching in fair condition. Slight rutting or distortions (1/2" deep or less)	Significant aging and first signs of need for strengthening. Would benefit from a structural overlay (2" or more).
3	Poor	Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Severe block cracking. Some alligator cracking (less than 25% of surface). Patches in fair to poor condition. Moderate rutting or distortion (1" or 2" deep). Occasional potholes.	Needs patching and repair prior to major overlay. Milling and removal of deterioration extends the life of overlay
2	Very Poor	Alligator cracking (over 25% of surface). Severe distortions (over 2" deep) Extensive patching in poor condition. Potholes.	Severe deterioration. Needs reconstruction with extensive base repair. Pulverization of old pavement is effective.
1	Failed	Severe distress with extensive loss of surface integrity	Failed. Needs total reconstruction.

## Goal C: Encourage active travel and inform the community about walking and bicycling options

As shown in Figures 3.1 and 3.2, the number of destinations within easy walking/bicycling distance, the extent of the sidewalk/path network, and motorists' and bicyclists' attitude toward pedestrians are all areas for improvement. Oakdale can focus on these areas by expanding the number of destinations, promoting the existing sidewalk/path network, and providing information to educate travelers about how they can keep each other safe.

### Strategy 7: Expand requirements and guidelines for new housing developments and mixed-use neighborhoods

Expanding requirements and guidelines for new housing developments and mixed-use neighborhoods will help to address questionnaire respondents' collective viewpoint that there aren't enough destinations, particularly for walking. As new housing and other destinations are implemented in Oakdale, sidewalk and shared use path connections will make these developments more walkable and bikeable. Actions to achieve this strategy include expanding requirements that walking and bicycling routes be built allowing for safe passage between new housing and other destinations (7.1) and expanding pedestrian and bicycle-friendly guidelines in new mixed-use neighborhoods (7.2).

#### Action 7.1: Expand requirements that walking and bicycling routes be built allowing for safe passage between new housing and other destinations.

The Oakdale Comprehensive Plan already includes a policy to, "Promote the development of a variety of housing types within close proximity and safe pedestrian access to shopping and services, centers of employment, transit, schools, and parks, trails, and open space." As the City continues to promote such housing development, this Plan recommends the expansion of requirements that walking and bicycling routes be built allowing for safe passage between housing and other destinations.<sup>17</sup>



**Figure 3.21:** A sidewalk connection between housing and a Hy Vee grocery store in Oakdale.

Some examples of how this can be accomplished include the following:

- » Requiring sidewalks between housing and nearby businesses, as shown in Figure 3.21
- » Requiring "cut through" easements for pedestrians, such as sidewalks from a dead end or cul-de-sac to the closest local street, collector street, or cul-de-sac in an adjoining neighborhood
- » Requiring new developments to install sidewalks or paths which connect to existing or future sidewalks, or paths, running along streets
- » Requiring sidewalks or paths through parking lots to the main entrances of buildings, including marked crosswalks
- » Requiring sidewalk connections between transit stops and building main entrances
- » Requiring sidewalks between the main entrances of buildings when a development includes more than one building

<sup>17</sup> See Sustainable Development Code's article on Alternative Pedestrian Routes to Parking Areas, Neighborhoods, and Businesses: [https://sustainablecitycode.org/brief/alternative-pedestrian-routes-to-from-parking-areas-neighborhoods-and-businesses/#\\_edn3](https://sustainablecitycode.org/brief/alternative-pedestrian-routes-to-from-parking-areas-neighborhoods-and-businesses/#_edn3)

## **Action 7.2: Expand pedestrian and bicycle-friendly guidelines in new mixed-use neighborhoods.**

As Oakdale plans for future mixed use neighborhoods, this Plan recommends the expansion of pedestrian and bicycle-friendly guidelines in those areas, with the following potential changes:

- » Adopting bicycle rack siting and design guidance
- » Creating minimum bicycle parking requirements by building use and capacity
- » Creating level surfaces for people walking or bicycling, at driveways and through parking lots where sidewalks and paths intersect with cars
- » Creating shortcuts for sidewalks and paths between parking lots and neighboring properties
- » Providing wayfinding signs between destinations, including transit
- » Requiring ADA compliance for internal transportation circulation
- » Requiring buffers between sidewalk/paths and parking lots, to provide space for snow storage

## **Strategy 8: Promote the existing walking and bicycling network**

Promoting the existing walking and bicycling network addresses questionnaire respondents' collective viewpoint that the extent of the sidewalk and shared use path network needs to be expanded. Oakdale has been making great strides at network expansion, and more promotion will raise knowledge about sidewalks and paths already available. Actions to achieve this strategy include developing an information campaign about walking and bicycling (8.1), establishing a wayfinding signage network (8.2), and publishing maps of walking and bicycling routes (8.3).

### **Action 8.1: Develop a positive informational campaign about walking and bicycling**

This Plan recommends the development of a positive informational campaign to spread information about the benefits of walking and bicycling. A campaign can use positive imagery to reflect how residents can make walking and bicycling a regular part of their daily life in Oakdale. Existing resources can provide information about walkability benefits (see sidebar for

the benefits of walking)<sup>18</sup>, and most of these benefits also apply to bicycling. These materials can provide a starting point to develop locally relevant materials. The campaign should include images of Oakdale's diverse community members walking and bicycling in typical situations - walking dogs, exercising, running errands, getting to the bus, going to school, etc. By featuring families, older adults, service workers, and people of diverse racial backgrounds, perceptions about who walks and bicycles in the Oakdale can begin to shift. The images should be set in places throughout the community, indicating the different types of walking and bicycling options available.

#### **Some of the benefits of a walk-friendly community include:**

**Mobility and Connectivity:** Walkability increases mobility options for community members, especially those with limited mobility, transit users, and people without access to cars.

**Safety:** Facilitating walking can increase safety for users of all transportation modes, by slowing vehicle speeds, reducing crash severity, and the effects of "safety in numbers"

**Health and Wellness:** Even small amounts of daily walking can increase health outcomes, and walkability correlates with reductions in chronic disease, which can also reduce healthcare costs.

**Economic Development:** Walkability can lead to increased economic activity, new businesses attracted, and higher real estate values.

**Environmental Protection:** Shifting trips from driving to walking reduces carbon dioxide emissions and improves air quality for the entire community.

**Equity:** Providing walking as a transportation option can help families save money on transportation costs and provide an option that can be accessed regardless of wealth or physical mobility.

Source: Massachusetts Department of Transportation, "Municipal Resource Guide for Walkability".

18 See also the Benefits of Walking on the America Walks website: <https://americawalks.org/resources/benefits-of-walking/>

## Action 8.2: Establish a wayfinding signage network for major destinations and transit facilities that can be reached by walking and bicycling

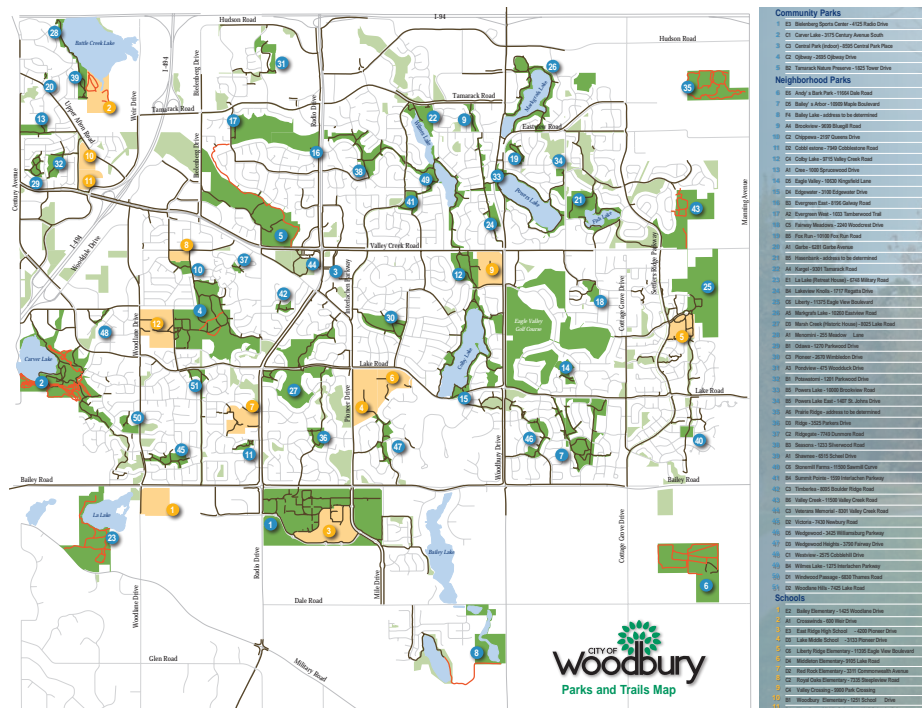
This Plan recommends the development of a wayfinding signage network for major destinations that can be reached by walking and bicycling, as shown in Figure 3.22. An initial effort could be implemented in the more destination-rich parts of the city, which are identified in Chapter 4. Wayfinding signage should have a consistent visual appearance that is compatible with City branding. Signs should guide people to the identified destinations and may include the distance and/or time needed to walk or ride a bicycle to that destination. Destinations to be highlighted in an area may be selected in consultation with the community.

## Action 8.3: Publish maps of walking and bicycling routes

This Plan recommends that Oakdale create and publish a map of suggested walking and bicycling routes. Print and online versions of a map could be made available, as shown in Figure 3.23. The City's website already has an online parks map and publishes a guide for new residents. Both documents could also be updated with information about walking and bicycling routes. Transit routes and stops could also be added.



**Figure 3.22:** Examples of wayfinding signage include those in Anacostia, MD (left), Milwaukee, WI (middle), and Broomfield, CO (right).



**Figure 3.23:** An example of a map that shows how walking and bicycling routes connect to parks and schools. Credit: City of Woodbury

## Strategy 9: Increase community awareness of safety issues

Increasing community awareness of safety issues addresses questionnaire respondents' collective viewpoint that motorists' attitude toward pedestrians and bicyclists needs improvement. Actions to achieve this strategy include describing the most common types of crashes and how they can be avoided (9.1), carrying out a campaign to increase compliance with traffic laws (9.2), and developing and circulating resource materials (9.3).

### Action 9.1: Describe the most common types of crashes between motorists and pedestrians/bicyclists, and how they can be avoided

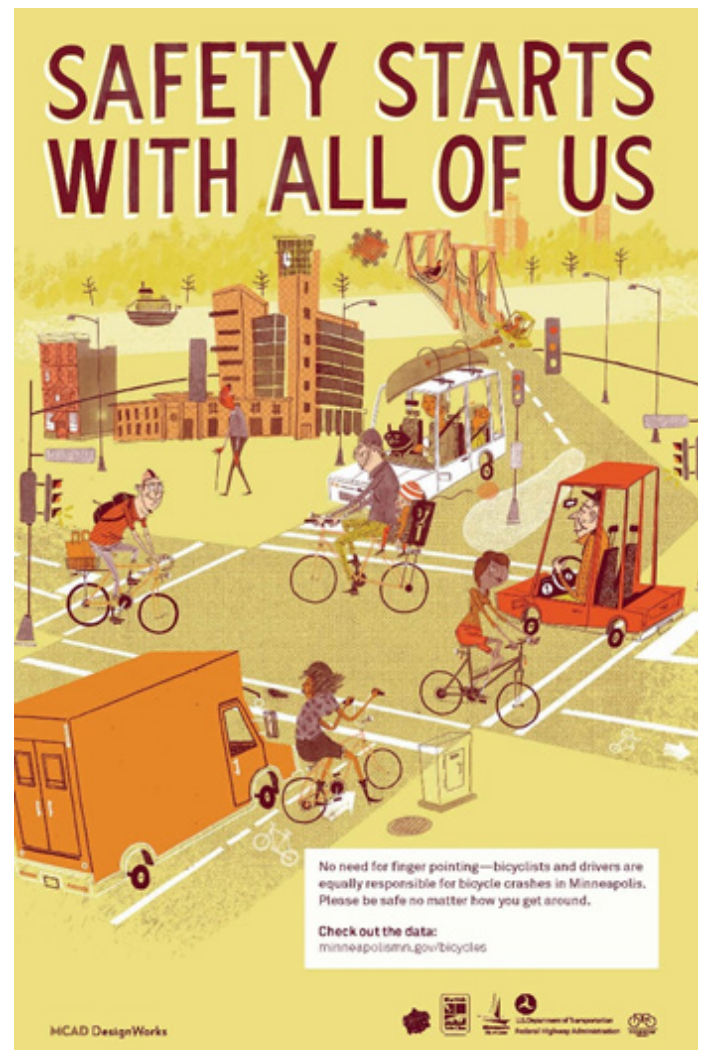
Oakdale currently reviews crash data compiled by MnDOT on the Minnesota Crash Mapping Analysis Tool. Data is limited to crashes between motorists and pedestrians or bicyclists over the last 10-year period. The data collected includes the location of the crash, time and date, severity of the injuries, pre-crash maneuvers, contributing factors, weather conditions, and a narrative of each crash. From this data, it is possible to gain an understanding of crashes affecting pedestrians and bicyclists in Oakdale. Using this tool, this Plan recommends describing the most common types of crashes between motorists and pedestrians/bicyclists, and then using that information for Actions 9.2 and 9.3.

### Action 9.2: Carry out a campaign to increase motorist, pedestrian, and bicyclist compliance with traffic laws

Using data from Action 9.1, this Plan recommends carrying out a campaign to increase compliance with traffic laws. For example, if the Oakdale crash data finds that motorists are not yielding to pedestrians and bicyclists in crosswalks at stoplights, the campaign should focus on increasing compliance with Minnesota's crosswalk law. Any campaign should be backed with a data analysis and established as a partnership between the City's Communications, Engineering, Public Works and Police Departments.

### Action 9.3: Develop and circulate resource materials

This Plan recommends developing and circulating resource materials about safety. Any resource materials should be friendly and accessible with a positive message of sharing the road, as shown in Figure 3.24. Once developed, the campaign materials should be widely distributed throughout the community. Potential avenues for communication may be the City of Oakdale website, the Oakdale Update newsletter, the City of Oakdale social media channels, the changeable message signs at City Hall and the Discovery Center, utility bill inserts, and bus stop ads.



**Figure 3.24:** An example of a safety focused campaign that keeps the message positive. Credit: City of Minneapolis



04

NETWORK



The walking and bicycling network in Oakdale is the basic infrastructure that serves people of all ages in the community. This chapter addresses the following foundational items:

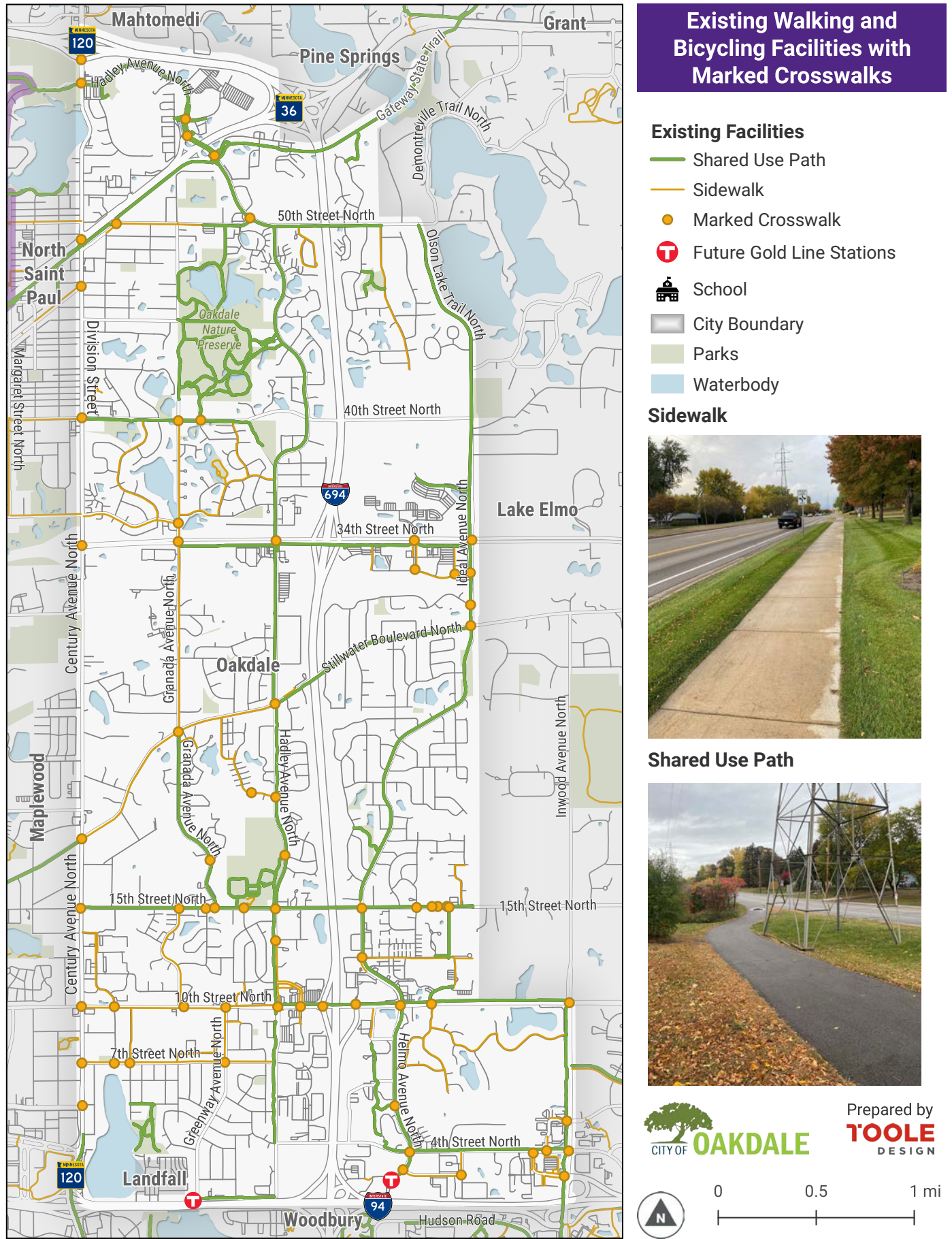
1. **Existing facilities** provide the starting point for examining Oakdale's network
2. **A pedestrian and bicyclist destination analysis** shows where the highest demand exists for an expansion of Oakdale's walking and bicycling network
3. **Previous plans** have already recommended an expansion of Oakdale's walking and bicycling network
4. **Three facility types** are recommended for the expansion of Oakdale's walking and bicycling network
5. **Oakdale's future walking and bicycling network** lays out an updated recommendation for where expansion should take place

## Existing Facilities

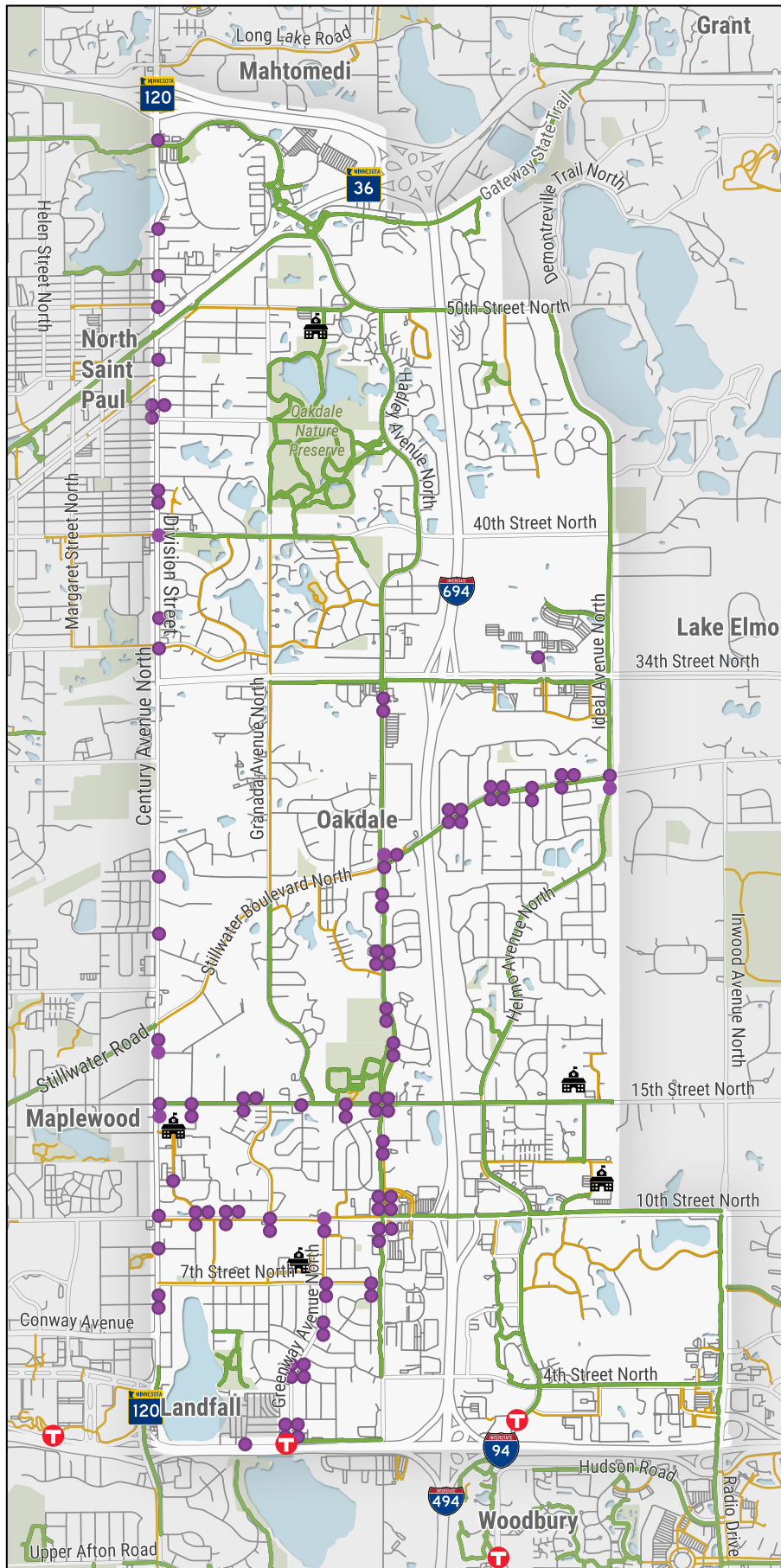
Existing walking and bicycling facilities within and adjacent to Oakdale are shown in Figures 4.1 and 4.2. The existing network includes the Gateway State Trail, which runs southwest-northeast along Highway 36. The primary north-south shared use paths run along Hadley Avenue and Olson Lake Trail/Ideal Avenue/Helmo Avenue, while the primary east-west shared use path runs along 15th Street. An extensive and popular path system exists in Oakdale Nature Center, with many other shared use paths and sidewalk segments throughout Oakdale.

Figure 4.1 shows the existing system of marked crosswalks, which are mostly concentrated along busy streets. Figure 4.2 shows the existing network of transit stops for Routes 219 and 294, which are concentrated on 10th Street (Route 294), 15th Street (Route 219), Century Avenue (Routes 219 and 294), Greenway Avenue (Route 219), Hadley Avenue (Routes 219 and 294), and Stillwater Boulevard (Route 294).

**Figure 4.1:** The existing walking and bicycling network in Oakdale is shown in yellow lines (sidewalks), green lines (shared use paths), and yellow dots (marked crosswalks).







**Figure 4.2:** The existing walking and bicycling network in Oakdale is shown in yellow lines (sidewalks), green lines (shared use paths), purple dots (bus stops), and red dots (future Gold Line Stations).



## Existing Walking and Bicycling Facilities with Transit Stops

### Existing Facilities

- Shared Use Path
- Sidewalk
- Bus Stop
- Future Gold Line Stations
-  School
-  City Boundary
-  Parks
-  Waterbody

### Sidewalk



### Shared Use Path



Prepared by  
**TOOLE**  
DESIGN



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## Pedestrian and Bicyclist Destination Analysis

A pedestrian and bicyclist destination analysis was completed for Oakdale, which is shown in Figure 4.3. The analysis shows areas with a greater concentration of destinations in purple and a lower concentration of destinations in white. Nine sets of destinations were combined in the analysis, and each were given a weight (shown in parentheses):

1. Population density (20)
2. Commercial areas (15)
3. Parks (15)
4. Employment (15)
5. Bus stops (10)
6. Intersection density (10)
7. Schools (10)
8. Future Gold Line Stations (5)

Two areas of Oakdale have the highest concentration of destinations: the southwest corner of the community (i.e., south of 15th Street and west of Helmo Avenue) and the far western border of Oakdale on the north side (i.e., west of Granada Avenue, south of 50th Street, and north of 40th Street). Appendix B includes eight maps showing the concentration of each set of destinations. The destination analysis was used as one factor in Chapter 5 to rank future projects.

## Facilities Recommended in Previous Plans

Previous planning efforts have already recommended walking and bicycling network expansion within and adjacent to the City of Oakdale, as shown in Figure 4.4. Three types of plans were researched to identify these facilities: regional plans, City of Oakdale plans, and plans from neighboring communities. These plans are listed at the bottom of this page.

**Regional plans** recommended facilities along:

- » Century Avenue
- » 10th Street
- » 50th Street
- » 7th Street
- » 34th Street
- » Hudson Boulevard
- » Stillwater Boulevard

Regional plans also recommended facilities along many other streets near the future Gold Line transit stations at Greenway and Helmo Avenues

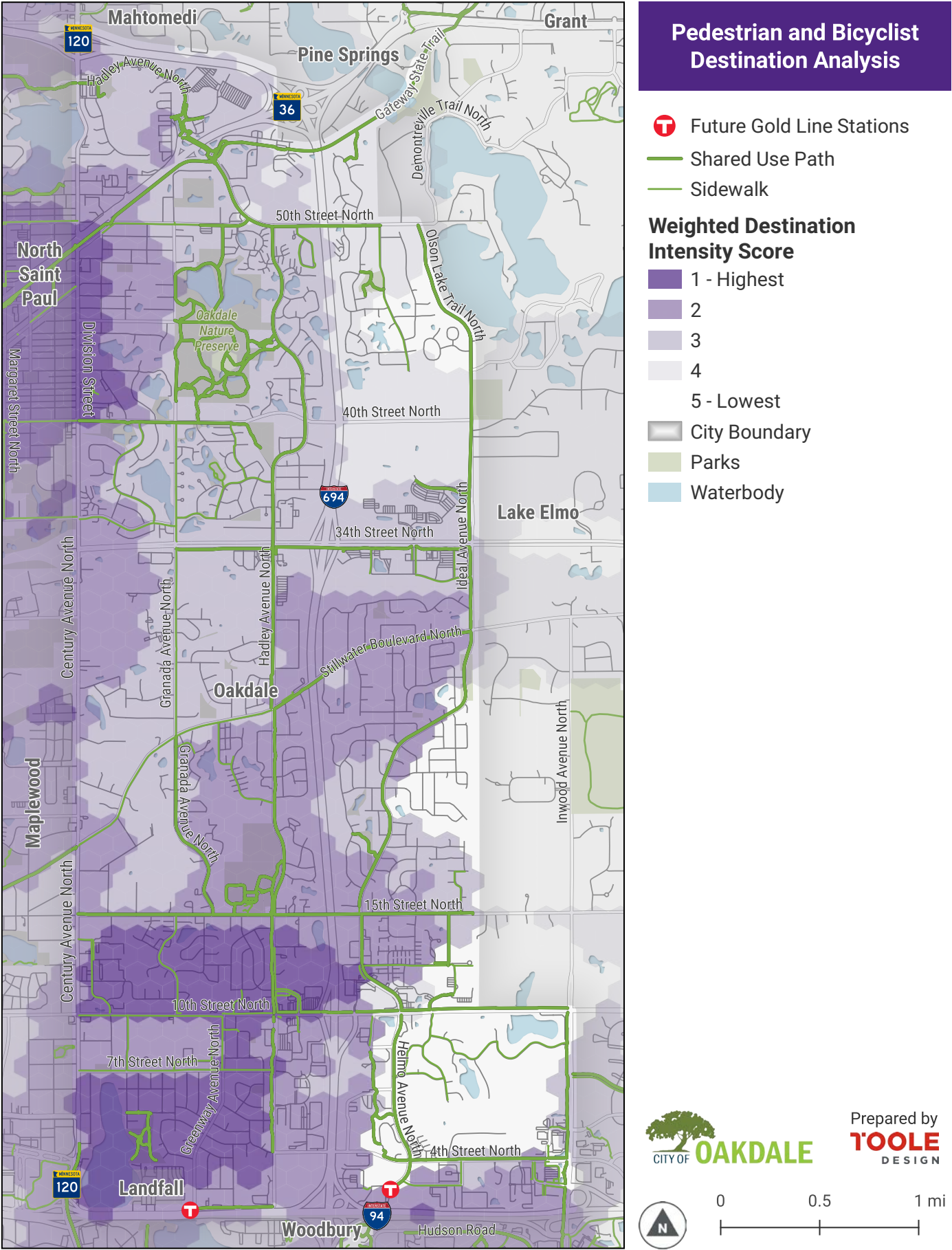
**City of Oakdale plans** recommended facilities along:

- » Granada Avenue
- » Helmo Avenue
- » 32nd Street
- » 45th Street
- » Helena Avenue
- » 40th Street

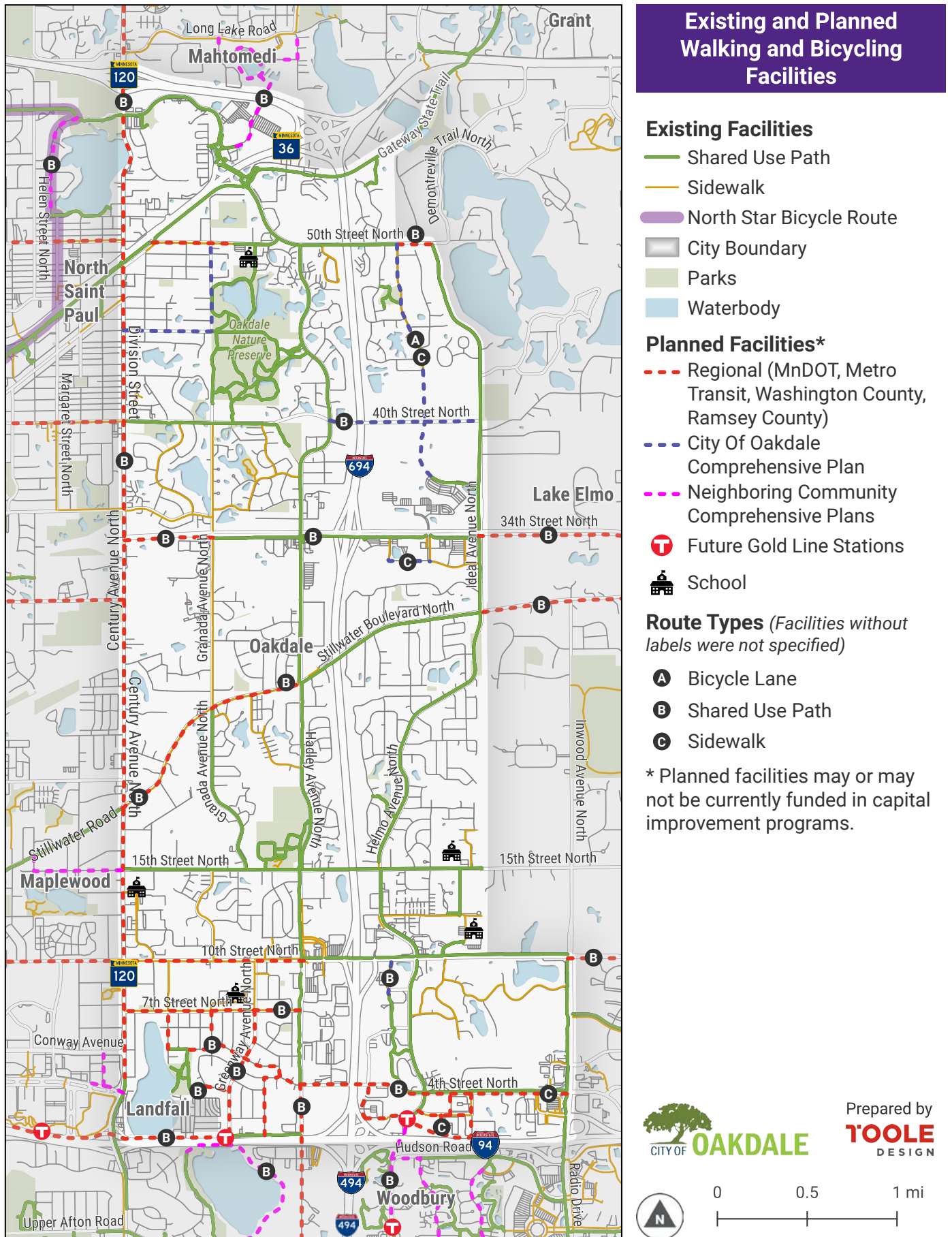
The only **neighboring community plan** to recommend a facility within Oakdale was Mahtomedi, which included a facility along 56th Street connecting to a new walking/bicycling bridge across I-694. A more detailed description of each plan's recommendations is included in Appendix C.

Plan Type	Plan Name	Adopted
Regional	MnDOT Statewide Pedestrian Systems Plan	2021
	Washington County Bicycle and Pedestrian Plan	2021
	Metropolitan Council 2040 Thrive MSP Transportation Policy Plan	2020
	Gold Line – Greenway Avenue Station Bus Rapid Transit Oriented Development Plan	2019
	MnDOT Metro District Bicycle Plan	2019
	Gold Line – Helmo Avenue Station Bus Rapid Transit Oriented Development Plan	2018
	Ramsey County-Wide Pedestrian & Bicycle Plan	2015
City of Oakdale	Oakdale Capital Improvements Plan (2022 – 2026)	2021
	Oakdale Comprehensive Plan	2018
Neighboring Community	Mahtomedi Comprehensive Plan	2019
	Maplewood 2040 Comprehensive Plan	2019
	Woodbury 2040 Comprehensive Plan	2019

**Figure 4.3:** A pedestrian and bicyclist destination analysis for Oakdale shows areas with more destinations in purple and areas with fewer destinations in white.



**Figure 4.4:** Walking and bicycling network expansion recommended in previous plans are shown in dashed red (regional), blue (Oakdale), and purple (neighboring communities).



## Facility Types

MnDOT's Facility Design Guide<sup>1</sup> is recommended as a best practice document for facility types within the City of Oakdale. Three facility types are recommended for Oakdale: sidewalks, shared use paths, and shared roadways.

### Sidewalks

Sidewalks are places for people to walk, and they are typically located along a street and constructed with concrete. While sidewalks are often five or six feet wide and flanked by turf or other vegetation, there are instances where they exist within an otherwise paved area. There are three types of zones around a sidewalk as shown in Figures 4.5: 1) pedestrian access route, 2) buffer, and 3) frontage.

#### Pedestrian Access Route

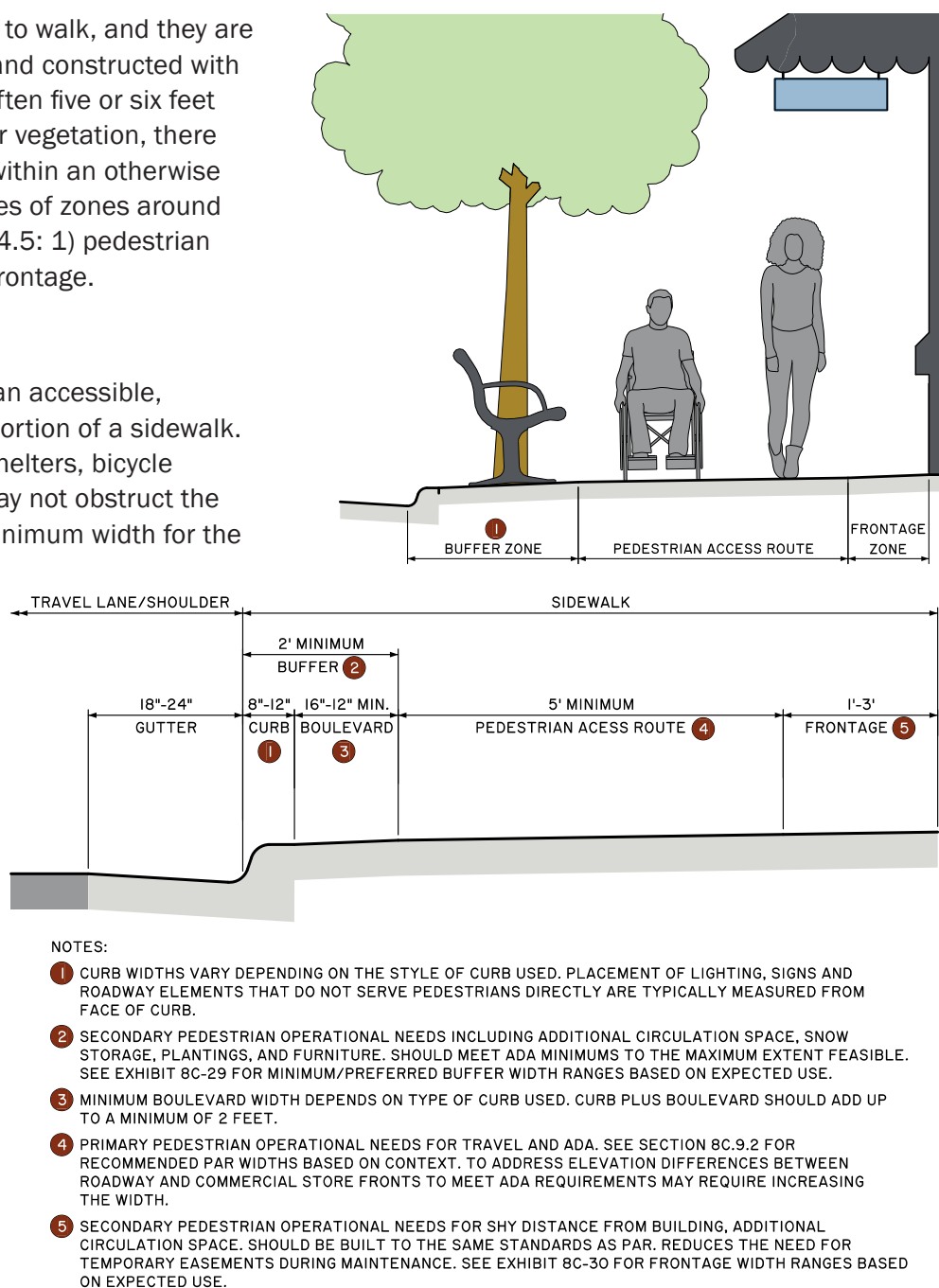
The pedestrian access route is an accessible, continuous, and unobstructed portion of a sidewalk. Vegetation, signs, fences, bus shelters, bicycle racks, benches, and planters may not obstruct the pedestrian access route. The minimum width for the pedestrian access route is five feet.

#### Buffer

The buffer is the area between the pedestrian access route and the street. It can be paved or landscaped and includes the boulevard and curb. It serves many functions including an area for turf, trees, signs, utilities, snow storage and street furniture such as bus shelters, bike racks, and benches. The minimum width for the buffer zone is two feet, with six feet preferred and 10 feet recommended for snow storage.

### Frontage

The frontage is the area between the sidewalk and private property. It can be paved or landscaped, but should be free from vegetation, since pedestrians prefer to walk one foot away from any obstruction. The minimum width for the frontage zone is one foot.



**Figure 4.5:** General sidewalk zones (top image) and detailed sidewalk zones (bottom image). Credit: MnDOT Facility Design Guide, Chapter 8 Non-Motorized Facilities

1 <https://roaddesign.dot.state.mn.us/facilitydesign.aspx>

## Shared Use Paths

Shared use paths are places for people to walk or ride a bicycle. They are often referred to as sidepaths when they are located along a street. Shared use paths are usually constructed with asphalt. While they are typically 10 feet wide and flanked by turf or other vegetation (see Figure 4.6), there are instances where they consist of one paved surface adjoining with a street curb. In these cases, the width of a shared use path does not include the paved buffer area where signs, utility boxes, streetlights, or other obstructions prevent walking or bicycling. MnDOT's Facility Design recommends that paved buffer areas have a different paving material from the path or be marked with an edge line.

A thorough discussion of shared use path width, horizontal and vertical clearances, side slopes, cross slopes, grades, signs, pavement markings, design speeds, drainage, ADA considerations, intersection treatments, and other topics is included in the MnDOT Facility Design Guide.<sup>2</sup>

## Shared Roadways

Shared roadways include shared lanes on motor vehicle-oriented roadways. These are only recommended in low speed, low volume residential contexts, which are comfortable and acceptable for most people walking and bicycling. MnDOT's Facility Design Guide recommends the following features to make bicycling more comfortable on shared roadways:

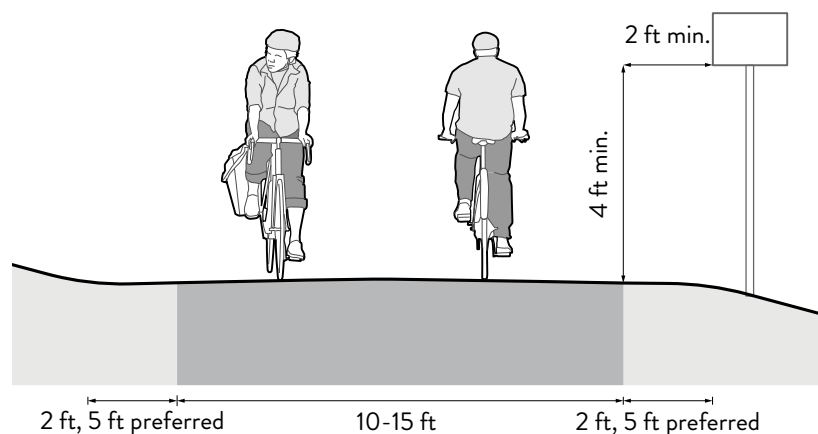
- » Low traffic speeds
- » Low traffic volume
- » Signs, pavement markings, and intersection crossing treatments
- » Adequate sight distances
- » Good pavement quality

Shared roadways should also be designed with ADA access in mind, particularly as it relates to cross slopes, which should not exceed 2%.

## Oakdale's Future Walking and Bicycling Network

Oakdale's future walking and bicycling network, as shown in Figure 4.7, combines the community's preferences from Chapter 2 with goals and strategies from Chapter 3. The vision is a completed network, which can be accomplished through Chapter 5's Implementation Action Plan.

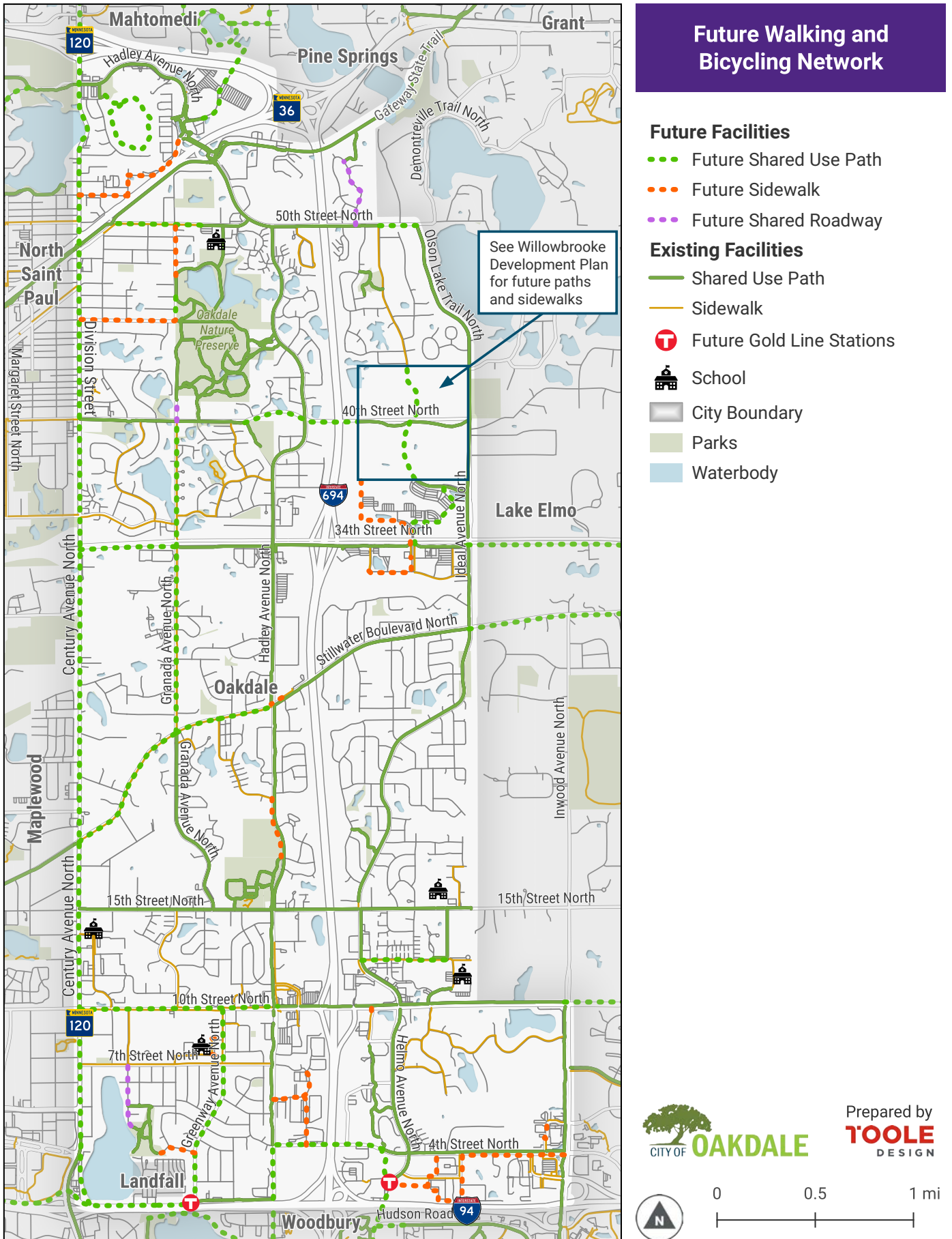
As with any plan, the future network identified in this Plan was analyzed at a planning level and does not represent detailed, site-specific study. While the facility type defined for each alignment in the network is established as the City's current policy, different decisions may be made as each project advances based on important factors such as right-of-way, public support, construction cost, and overall mobility goals. The City should seek to provide the most comfortable and safe facility possible for each alignment.



**Figure 4.6:** Shared use paths are typically a minimum of 10' wide and include buffers on either side. Credit: MnDOT Facility Design Guide, Chapter 8 Nonmotorized Facilities

<sup>2</sup> <https://roaddesign.dot.state.mn.us/facilitydesign.aspx>

**Figure 4.7:** The future walking and bicycling network for the City of Oakdale.





05

IMPLEMENTATION  
ACTION PLAN



The implementation action plan is a 3-step process used to carry out projects identified at the end of Chapter 4: Network. First, the projects are ranked using five factors and weights. Second, the projects are indexed on a map with an associated chart showing planning level details, including partners, phasing, and relative cost. Finally, funding sources for projects are summarized at the end of this chapter for staff to utilize when establishing the City's budget.

## Project Ranking

Project ranking is a tool used to rank and prioritize projects for implementation. Scores are only one factor used to program projects from the Plan into

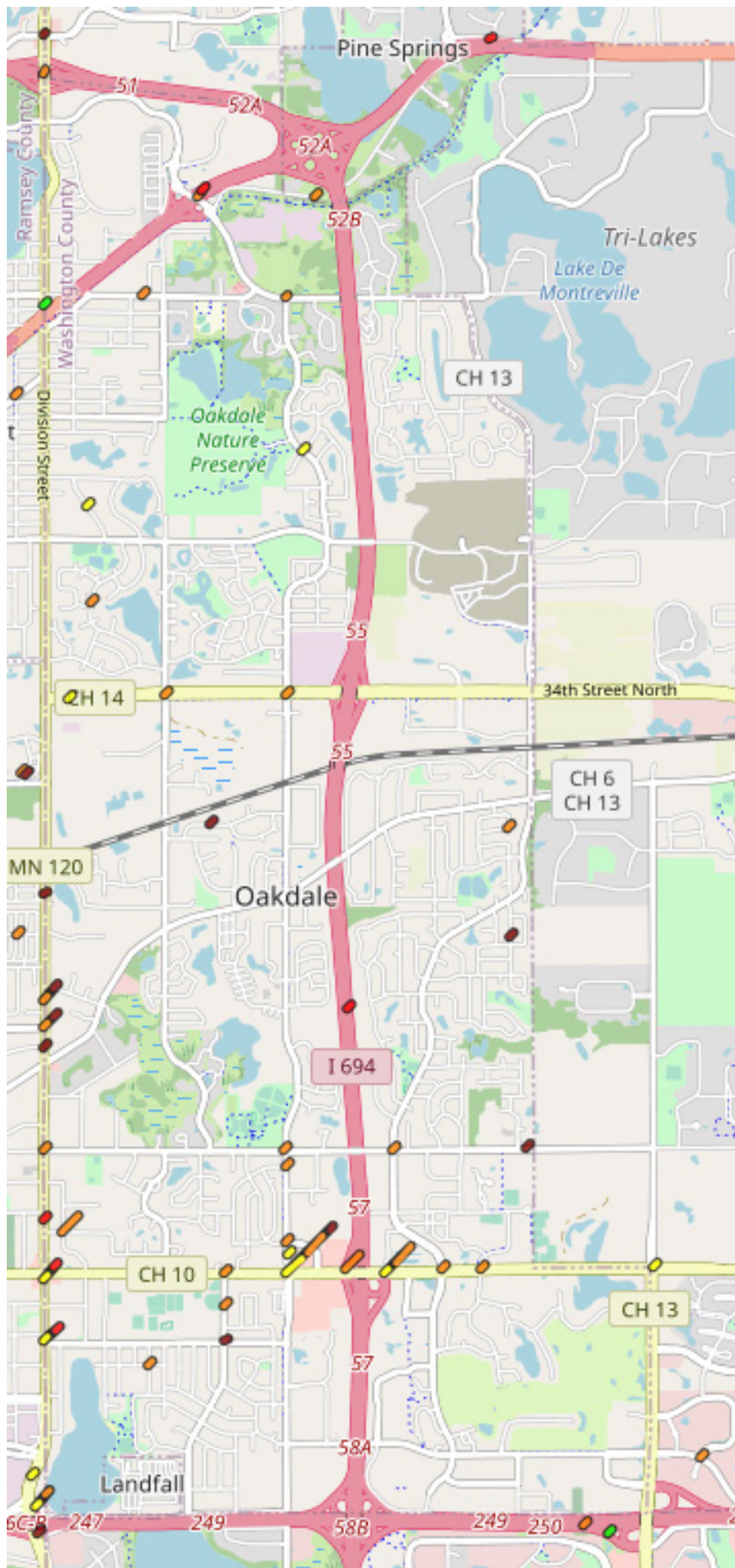
the City's budget and do not have to be strictly followed. For example, there may be instances where an upcoming road project by Washington County presents an opportunity where the City wishes to coordinate a bicycle/pedestrian facility improvement. However, assigning scores are helpful when there is a need to program many projects, as illustrated in the map in Figure 5.6 later in this chapter.

The Environmental Management Commission reviewed the following factors and weights and suggested giving extra emphasis to safety to reduce deaths and serious injuries for people walking and bicycling. Each factor has a measurable source, as noted in Figure 5.1.

**Figure 5.1:** Five project ranking factors, reviewed by the Environmental Management Commission.

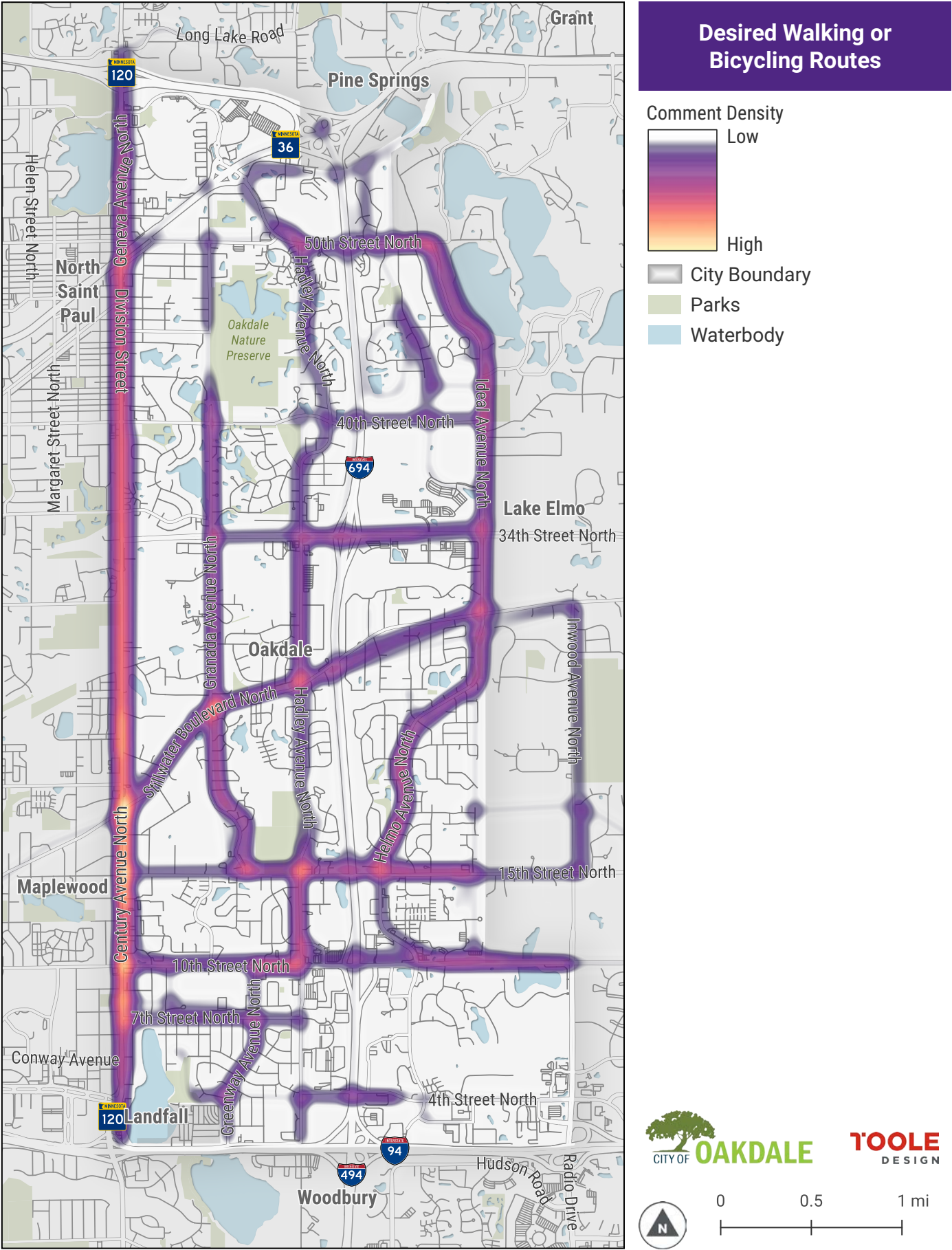
Factor	Higher Rank with . . .	Source	Weight (1=less weight, 2=more weight)
Cost estimates	Less cost	Toole Design estimates (see Implementation spreadsheet in Figure 5.7.)	1
Crashes involving bicyclists or pedestrians	More crashes	MnDOT Crash database (see Figure 5.2) <sup>1</sup>	2
Demand	More demand	"Desired walking or bicycling routes" map generated from community engagement (see Figure 5.3)	1
Destinations	Higher concentration of destinations	Map shown in Chapter 4 (see Figure 4.3)	1
State/federal grant funding eligibility	Projects likely to be funded with federal and state sources	Funding sources listed at the end of this chapter	1

<sup>1</sup> <https://www.dot.state.mn.us/stateaid/mncmat2.html>



**Figure 5.2:** This map produced from MnDOT's crash database for the past 10 years was used to generate scores for the crashes factor. Red indicates pedestrian or bicycle fatalities, brown indicates serious injuries, orange indicates minor injuries, yellow indicates possible injuries, and green indicates property damage only. For example, at the intersection of Washington County Highway 10 with Hadley Avenue, there were zero fatalities, one serious injury, three minor injuries, and two possible injuries. Pedestrian and bicycle fatalities and serious injuries were concentrated along Century Avenue and 10th Street.

**Figure 5.3:** This map, produced from community engagement, was used to generate scores for the demand factor.



After weights were determined, each project was scored based on the five factors, as shown in Table 5.4. Scores are a rough approximation of the second column in Figure 5.1 on a scale of one through

three, with one being a lesser score and three being a higher score. Project ID numbers can be used to locate each project shown on the map in Figure 5.6 later in this chapter.

**Figure 5.4:** Each project was scored based on five factors.

Cost estimates score	Crashes score	Demand score	Destinations score	State/Federal funding score	Total Score
<b>Higher score with . . .</b>					
Less cost	More crashes	More demand	Higher concentration of destinations	Projects likely to be funded with state and federal funding sources	
<b>1 – Century Ave/Minnesota State Highway 120</b>					
2	3	3	2	3	13
<b>2 – 56th Street/I-694 Crossing</b>					
1	1	1	1	1	5
<b>3 – Upper 51st Street/Glenbook Ave/Highway 36 Blvd N</b>					
2	1	1	2	3	9
<b>4 – 50th Street</b>					
2	2	1	2	3	10
<b>5 – Granada Avenue</b>					
2	1	2	2	3	10
<b>6 – Granada Avenue</b>					
2	1	1	2	1	7
<b>7 – 45th Street</b>					
2	1	1	3	3	10
<b>8 – Heath Avenue</b>					
3	1	2	1	2	9
<b>9 – 50th Street/Washington County Hwy 13</b>					
2	1	3	1	2	9
<b>10 – Granada Avenue</b>					
1	2	3	2	1	9
<b>11 – 40th Street</b>					
2	1	2	2	1	8
<b>12 – High Point Drive</b>					
3	1	1	2	1	8
<b>13 – High Point Drive/Hopkins Place</b>					
3	1	1	2	1	8
<b>14 – 34th Street/Washington County Hwy 14</b>					
2	2	1	2	1	8
<b>15 – 32nd Street/Market Place</b>					
3	1	1	2	1	8
<b>16 – Stillwater Boulevard/Washington County Hwy 6</b>					
1	1	2	2	3	9
<b>17 – Hadley Avenue</b>					
2	1	2	2	3	10

Cost estimates score	Crashes score	Demand score	Destinations score	State/Federal funding score	Total Score
<b>18 – 12th Street</b>					
2	1	1	2	3	9
<b>19 – 10th Street/Washington County Hwy 10</b>					
1	3	2	3	3	12
<b>20 – Tanners Lake West Shore</b>					
3	1	1	3	1	9
<b>21 – Glenbrook Avenue</b>					
3	1	1	3	1	9
<b>22 – Park Road/2nd Street</b>					
2	1	2	3	1	11
<b>23 – Greenway Avenue</b>					
2	3	2	3	1	11
<b>24 – 6th Street/Hale Avenue</b>					
2	1	1	2	3	9
<b>25 – Hudson Boulevard/Hadley Avenue/4th Street</b>					
3	2	2	3	3	13
<b>26 – Various Streets in SE Corner of Oakdale</b>					
3	1	1	2	1	8
<b>27 – Former Par 3 Golf Course</b>					
3	1	1	2	1	8



After scores were calculated, each value in Figure 5.4 was multiplied by the weights in Figure 5.1. Below, Figure 5.5 shows the weighted score for each project. Projects are sorted by total weighted score.

**Figure 5.5:** Scores in Figure 5.4 were multiplied by weights recommended by the Environmental Management Commission to come up with a total weighted score.

Cost estimates score	Crashes score	Demand score	Destinations score	State/Federal funding score	Total Weighted Score
Weight: 1	Weight: 2	Weight: 1	Weight: 1	Weight: 1	
<b>1 – Century Ave/Minnesota State Highway 120</b>					
2	6	3	2	3	16
<b>19 – 10th Street/Washington County Hwy 10</b>					
1	6	2	3	3	15
<b>25 – Hudson Boulevard/Hadley Avenue/4th Street</b>					
3	4	2	3	3	15
<b>23 – Greenway Avenue</b>					
2	6	2	3	1	14
<b>4 – 50th Street</b>					
2	4	1	2	3	12
<b>7 – 45th Street</b>					
2	2	1	3	3	11
<b>5 – Granada Avenue</b>					
2	2	2	2	3	11
<b>10 – Granada Avenue</b>					
1	4	3	2	1	11
<b>17 – Hadley Avenue</b>					
2	2	2	2	3	11
<b>24 – 6th Street/Hale Avenue</b>					
2	2	1	2	3	10
<b>18 – 12th Street</b>					
2	2	1	2	3	10
<b>14 – 34th Street/Washington County Hwy 14</b>					
2	4	1	2	1	10
<b>11 – 40th Street</b>					
2	2	2	2	2	10
<b>9 – 50th Street/Washington County Hwy 13</b>					
2	2	3	1	2	10
<b>21 – Glenbrook Avenue</b>					
3	2	1	3	1	10
<b>8 – Heath Avenue</b>					
3	2	2	1	2	10
<b>22 – Park Road/2nd Street</b>					
2	2	2	3	1	10

Cost estimates score	Crashes score	Demand score	Destinations score	State/Federal funding score	Total Weighted Score
<b>16 – Stillwater Boulevard/Washington County Hwy 6</b>					
1	2	2	2	3	10
<b>20 – Tanners Lake West Shore</b>					
3	2	1	3	1	10
<b>3 – Upper 51st Street/Glenbook Ave/Highway 36 Blvd N</b>					
2	2	1	2	3	10
<b>15 – 32nd Street/Market Place</b>					
3	2	1	2	1	9
<b>27 – Former Par 3 Golf Course</b>					
3	2	1	2	1	9
<b>12 – High Point Drive</b>					
3	2	1	2	1	9
<b>13 – High Point Drive/Hopkins Place</b>					
3	2	1	2	1	9
<b>26 – Various Streets in SE Corner of Oakdale</b>					
3	2	1	2	1	9
<b>6 – Granada Avenue</b>					
2	2	1	2	1	8
<b>2 – 56th Street/I-694 Crossing</b>					
1	2	1	1	1	6

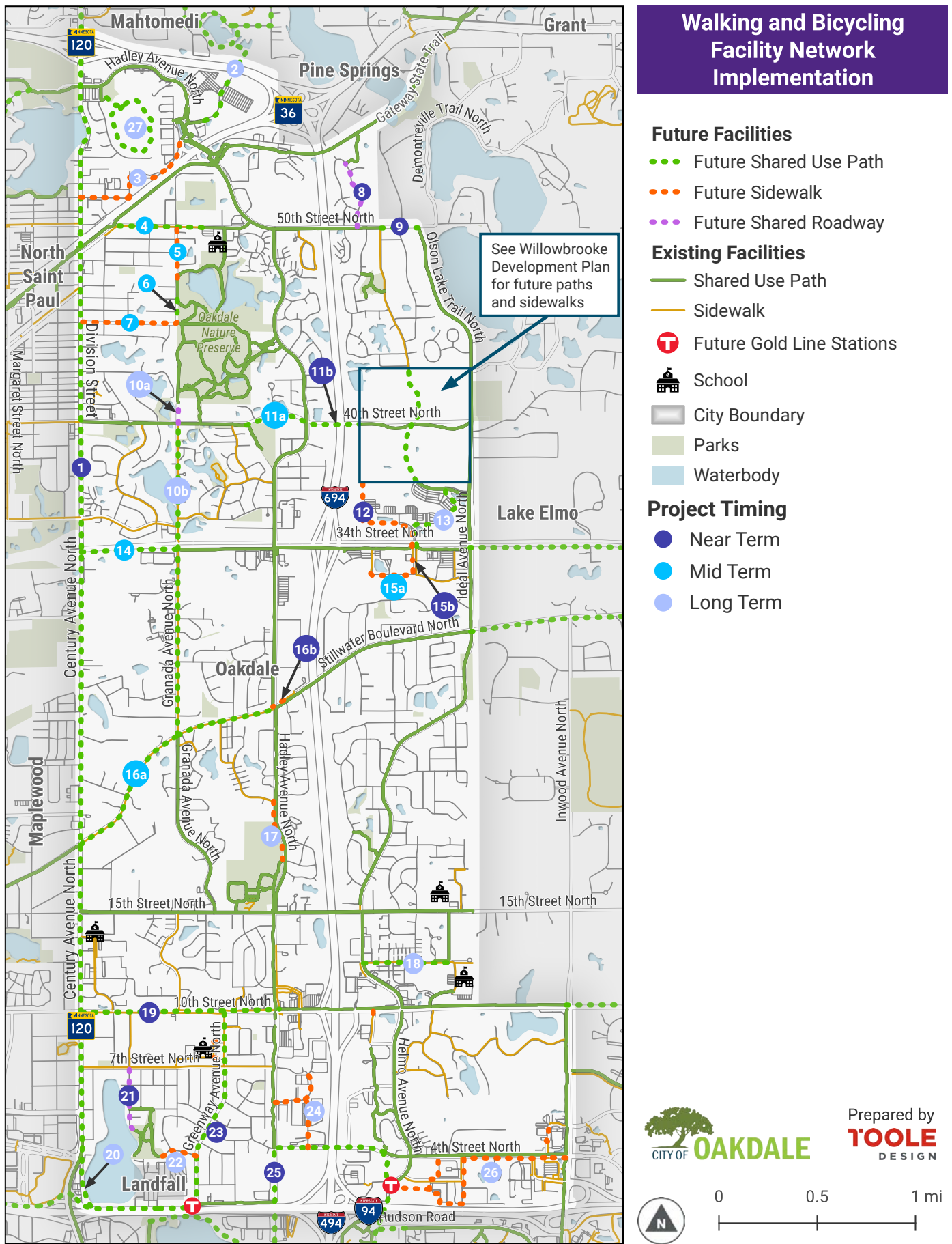


## Map Index and Planning Level Details

This section identifies future projects and locations, which are displayed on a map in Figure 5.6. Also provided are planning level details, shown in Figure 5.7. The latter Figure illustrates the following planning level details:

- » **Project types** corresponding to facility types in Chapter 4.
- » **Lead agency and partners** identifying a likely lead agency and the partners necessary for successful completion of a project.
- » **Phasing** which identifies a project timing by short-term (one to five years, 2024 – 2028), medium-term (six to 10 years, 2029 – 2033), and long-term (11 to 20 years, 2034 – 2043). Phasing was determined using project prioritization scores in the previous section as well as funded projects (explained at right).
- » **Funded project type** describing the type of associated project that can be coordinated with a walking/bicycling facility that may reduce project costs.
- » **Funded project year** identifying the year another project is currently programmed in a capital plan.
- » **Cost estimate** providing a planning level estimate of probable relative cost.
- » **Opportunities and challenges** describe issues that will need detailed planning and engineering design as each project is further developed.

**Figure 5.6:** The implementation map identifies projects by number, corresponding with the project numbers in the chart shown in Figure 5.7.



**Figure 5.7:** Lead agencies and partners, funded projects, cost estimates, and opportunities/challenges are identified for each project shown in the Figure 5.6 map.

Project ID	Roadway/ Trail/ Intersection Name	Project Extents	Length (miles)	Project Type	Lead Agency (Partner/s)	Phasing*	Funded Project Type	Funded Project Year	Planning Level Cost Estimate for City**	Ranking Score	Opportunities and Challenges
1	Century Avenue/ Minnesota State Highway 120	I-694 to I-94	5.5	Shared use path	MnDOT (City of Oakdale, Metropolitan Council)	Near term	Reconstruction	2027 (MnDOT Transportation Improvement Program)	\$\$	16	MnDOT plans to reconstruct Highway 120 between I-694 and 4th Street in 2027. A corridor study will be completed in early 2024, which will determine the conceptual design. Current options include on-street bike lanes, sidewalks, and a shared use path. It is recommended that the City of Oakdale request a shared use path on the east side of the highway. Bike lanes are not preferred by the City.
2	56th Street/I-694 Crossing	Hadley Avenue to I-694	0.3	Shared use path	MnDOT (City of Oakdale, City of Mahtomedi)	Long term			\$\$\$	6	Mahtomedi has plans to create a shared use path network just north of I-694, connecting Southwest Park and neighboring areas with the Gateway State Trail. A pedestrian and bicycle-only bridge over I-694 and a path along 56th Street would complete this connection. MnDOT indicated to the City of Mahtomedi (noted in the 2017 Mahtomedi Parks Plan) that this crossing of I-694 is low on their priority list. New funding opportunities may exist to increase the priority.
3	Upper 51st Street/Glenbrook Ave/Highway 36 Blvd N	Hadley Avenue to Highway 120	0.7	Sidewalk	City of Oakdale (MnDOT)	Long term			\$\$	10	As sections of these streets are reconstructed, a sidewalk can be added to one side. Various challenges such as power lines, retaining walls, fences, and trees/shrubs will require a corridor analysis to determine which side of each street is preferable for a sidewalk. These streets are approximately 25' to 35' in width, with parking allowed in some locations. Right-of-way is approximately 60' to 65' on Upper 51st Street, 64.5' on Glenbrook Avenue, and 45' on Highway 36 Boulevard. Street narrowing may be another option for sidewalk installation. The Glenbrook Small Area Plan underway will provide further guidance on location and timing of sidewalk improvements.
4	50th Street	Gateway State Trail to Castle Elementary School	0.5	Shared use path	City of Oakdale	Mid term			\$\$	12	Currently 50th Street is approximately 32' wide with a parking lane on the south side. Right-of-way is approximately 65'. Power line poles are situated between the curb and sidewalk. During a future reconstruction project a study should examine how to construct a shared use path, either by widening the sidewalk in place (right-of-way between the existing curb and parcel boundaries is approximately 20') or narrowing the street, and include feedback from area stakeholders.
5	Granada Avenue	50th Street to 47th Street	0.3	Sidewalk	City of Oakdale	Mid term			\$\$	11	Currently Granada Avenue is approximately 36' wide with a parking lane on the east side. The right-of-way is approximately 60'. During a future reconstruction project, a study should examine how a sidewalk can be constructed on the east side connecting to the shared use path that already exists south of 47th Street. The study should include feedback from area stakeholders and examine 1) placing the sidewalk to the east of the existing curb (right-of-way between existing curb and parcel boundaries is approximately 13') and 2) moving the curb westward through parking removal.
6	Granada Avenue	Upper 46th Street to 45th Street	0.1	Shared use path	City of Oakdale	Mid term			\$\$	8	On the east side of Granada Avenue outside of the right-of-way, a width of approximately 30' exists in the mowed area of Oakdale Nature Preserve (i.e., City owned property) between street trees and other park infrastructure to construct a shared use path which would connect the existing shared use path segments: 1) north of Upper 46th Street and 2) south of the tennis courts.
7	45th Street	Highway 120 to Granada Avenue	0.5	Sidewalk	City of Oakdale	Mid term			\$\$	11	45th Street is currently 36' wide east of Glenbrook Avenue, with parking allowed on both sides and a power line on the north side. 45th Street is currently 32' wide west of Glenbrook Avenue, with parking allowed on the south side. Right-of-way in both sections is approximately 60'. During a future reconstruction project, a study should examine how a sidewalk can be constructed on one side of the street. The study should include feedback from area stakeholders and examine 1) placing the sidewalk to the north or south of the existing curbs and 2) moving the curbs through parking removal. Right-of-way between the existing curb lines and parcel boundaries is apporoximately 9' on the north side and 18' on the south side. At the far west end of 45th Street, the sidewalk cannot be placed south of the curb because two houses are located too close to the existing curb.
8	Heath Avenue	Gateway State Trail to 50th Street	0.5	Shared roadway	City of Oakdale (MN DNR)	Near term			\$	10	A signed route between the Gateway State Trail and 50th Street would connect large portions of Oakdale to this popular trail. Adding wayfinding signs between both facilities along the Gateway Trail spur and Heath Avenue would give pedestrians and bicyclists a clear route. A crossing at the intersection of Heath Avenue and 50th Street is needed to safely transition between Heath Avenue and the shared use path on the south side of 50th Street.
9	50th Street/ Washington County Highway 13	Helmo Avenue to Olson Lake Trail	0.2	Shared use path	Washington County (City of Lake Elmo, City of Oakdale)	Near term			\$\$	10	This short gap in the existing shared use path network could potentially be filled by eliminating the shoulder and altering the right turn lane on the south side of 50th Street. To alter the right turn lane, an evaluation of turning movements and safety will likely be needed at the intersection of 50th Street and Olson Lake Trail. 50th Street is approximately 46' wide west of this intersection. Placing the shared use path south of the existing curb would require alterations to trees, power line poles, slopes, and right-of-way acquisition at the far east end of the segment. This project may require cost share participation from the city of Lake Elmo.
10a	Granada Avenue	Oakdale Nature Preserve to 40th Street	0.1	Shared roadway	City of Oakdale	Long term			\$	11	North of 40th Street, no right-of-way exists and traffic volumes are low on this street that is a dead end for motorists. A signed walking and bicycling route is recommended to connect to the shared use path at the north end of the cul-de-sac to 40th Street.

Project ID	Roadway/ Trail/ Intersection Name	Project Extents	Length (miles)	Project Type	Lead Agency (Partner/s)	Phasing*	Funded Project Type	Funded Project Year	Planning Level Cost Estimate for City**	Ranking Score	Opportunities and Challenges
10b	Granada Avenue	40th Street to Stillwater Boulevard	1.6	Shared use path	City of Oakdale	Long term			\$\$\$	11	Granada Avenue is approximately 32' wide, with an approximate 65' right-of-way. South of 40th Street, a sidewalk exists on the east side adjacent to the curb. For most of this segment, a parking lane is also on the east side. During a future reconstruction project a study should examine how to construct a shared use path, either by widening the sidewalk in place (approximately 18' of right-of-way exists east of the existing curb) or narrowing the street through parking removal, and include feedback from area stakeholders. North of 40th Street, no right-of-way exists and this could limit the potential for a shared use path.
11a	40th Street	Gresham Avenue to 200' west of I-694	0.5	Shared use path	City of Oakdale	Mid term			\$\$	10	40th Street is currently a 36' wide street with an 8' parking lane on the north side, 2 - 11' travel lanes, and a 5' shoulder on the south side. The right-of-way is approximately 65'. During a future reconstruction project, a study should examine how a shared use path can be constructed on the south side connecting to the shared use path that already exists west of Gresham Avenue. The study should include feedback from area stakeholders and examine 1) placing the shared use path to the south of the existing curb and 2) moving the curb northward through shoulder and/or parking removal.
11b	40th Street	200' west of I-694 to 200' east of I-694	0.1	Shared use path	MnDOT (City of Oakdale)	Near term	Reconstruction	2026 (Oakdale Capital Improvement Program?)	\$\$	10	During a future reconstruction of the 40th Street Bridge over I-694, a shared use path is recommended on the south side of 40th Street to match into the shared use paths on 40th Street west of Gresham Avenue and east of I-694.
12	High Point Drive	34th Street to Willowbrook Development	0.5	Sidewalk	Private Developer (City of Oakdale)	Near term	Private development	2023	\$	9	When High Point Drive is extended to the west and north to connect with the Willowbrook development, a sidewalk will be constructed on the west and south sides of the street.
13	High Point Drive, Hopkins Place	34th Street to 36th Street	0.5	Shared use path	Private Developer (City of Oakdale)	Long term			\$\$	9	A shared use path is recommended on the east and south sides of High Point Drive and Hopkins Drive during a future development project. An evaluation of the current number of travel lanes may be needed to allocate sufficient space for a shared use path.
14	34th Street/ Washington County Highway 14	Century Avenue to Granada Avenue	0.5	Shared use path	Washington County (City of Oakdale)	Mid term			\$\$	10	A shared use path on the south side of 34th Street is recommended independently of a road construction project under the existing powerline within existing right-of-way. Vegetation removal and drainage crossings will be required.
15a	32nd Street	Hemingway Avenue to Market Place	0.2	Sidewalk	Private Developer (City of Oakdale)	Mid term			\$	9	A sidewalk on the both sides of 32nd Street is recommended for installation during future development projects. Parcels on the western segment of this project are already owned by the City of Oakdale, and parcels on the eastern end are privately owned.
15b	Market Place	33rd Street to 32nd Street	0.1	Sidewalk	Private Developer (City of Oakdale)	Near term	Private development	2023	\$	9	A sidewalk on the west side of Market Place is already planned during a future development project.
16a	Stillwater Boulevard/ Washington County Highway 6	Century Avenue to Hadley Avenue	1.3	Shared use path	Washington County (City of Oakdale, Metropolitan Council)	Mid term			\$\$\$	10	A sidewalk exists on the southeast side adjacent to the curb. The street is 44' to 48' wide, with two travel lanes and two shoulders where parking is allowed. The existing right-of-way is approximately 70' to 80'. During a future reconstruction project a study should examine how to construct a shared use path, either by widening the sidewalk in place (approximately 8' to 18' of right-of-way exists southeast of the existing curb) or narrowing the street through shoulder removal, and include feedback from area stakeholders.
16b	Stillwater Boulevard/ Washington County Highway 6	Hadley Avenue to Hale Avenue	0.1	Sidewalk	Washington County (City of Oakdale)	Mid term			\$	10	A sidewalk exists on the north side of the street connecting the parking lot at the northeast corner of Hadley Avenue and Stillwater Avenue with the commercial building at 7066 Stillwater Boulevard. A transit stop is also located along the existing sidewalk. This results in a gap between the parking lot and the intersection. A sidewalk is recommended to fill this gap.
17	Hadley Avenue	21st Street to south end of Walton Park north parking lot	0.4	Sidewalk	City of Oakdale	Long term			\$\$	11	A sidewalk is recommended on the west side of Hadley Avenue during a future reconstruction project to provide a more direct connection for residents of the 21st Street/Gresham Avenue neighborhood to and from Walton Park. The shoulders/parking lanes on this 44' wide street can be narrowed to accommodate a sidewalk with vegetative buffer. The parking lot can be redesigned to include a sidewalk connecting the shared use path south of the parking lot to the existing crosswalk at the intersection of Hadley Avenue and Upper 17th Street.
18	12th Street	Helmo Avenue to Heron Avenue	0.5	Shared use path	City of Oakdale	Long term			\$\$	10	The existing sidewalk on the south side of the street can be widened to a shared use path during a future reconstruction project by moving the existing curb northward. Currently parking is allowed on both sides of this 36' wide street. Existing right-of-way varies from approximately 50' to 80'. Parking can be consolidated to one side of the street to narrow the street, providing adequate space for a shared use path and vegetative buffer/ snow storage with limited impact to space south of the curb. Consideration will need to be given to school bus traffic and parking due to the proximity of Skyview Middle School.

Project ID	Roadway/ Trail/ Intersection Name	Project Extents	Length (miles)	Project Type	Lead Agency (Partner/s)	Phasing*	Funded Project Type	Funded Project Year	Planning Level Cost Estimate for City**	Ranking Score	Opportunities and Challenges
19	10th Street/ Washington County Highway 10	Century Avenue to Hadley Avenue	1	Shared use path	Washington County (City of Oakdale, Metropolitan Council)	Near term			\$\$\$	15	The existing sidewalks on this street are recommended to be widened to shared use paths during a future reconstruction project. Currently the street is 52' wide with 3 travel lanes and shoulders (parking is not allowed). Existing right-of-way varies from 40' to 70'. The sidewalk is on the north side of the street east of Greenway Avenue and on the south side of the street west of Greenway Avenue. During a future reconstruction project a study should examine how to construct a shared use path, either by widening the sidewalks (right-of-way would likely be required) or narrowing the street through shoulder removal, and include feedback from area stakeholders. Near Century Avenue and Hadley Avenue, 10th Street is four or five lanes. At these locations, additional right-of-way may need to be acquired to retain the number of travel lanes. Alternatively, a study of intersection operations may provide a recommendation to reduce the number of travel lanes.
20	Tanners Lake West Shore	4th Street to Hudson Boulevard	0.4	Shared use path	Private developers (City of Oakdale)	Long term			\$	10	As parcels are redeveloped between Century Avenue and Tanners Lake, a shared use path should be built to connect Century Avenue with Hudson Boulevard along the lake, providing public access to this water body.
21	Glenbrook Avenue	7th Street to Tanners Lake	0.3	Shared roadway	City of Oakdale	Near term			\$	10	A signed route between 7th Street and Tanners Lake would connect neighborhoods north of 7th Street to Tanners Lake Park. Wayfinding signs between the crosswalk at 7th Street and Glenbrook Avenue and Tanners Lake would give pedestrians and bicyclists a clear route. Glenbrook Avenue is 28' wide with low traffic volumes and on-street parking allowed, making this an opportunity for a shared street between motorists, pedestrians, and bicyclists.
22	Park Road, 2nd Street	Tanners Lake Park to Greenway Avenue	0.2	Sidewalk	City of Oakdale	Long term			\$\$	10	A sidewalk is recommended for installation on the south side of Park Road and 2nd Street to connect existing shared use paths in Tanners Lake Park and a future shared use path on Greenway Avenue. Parking is currently allowed on both sides of this 28' wide street. Existing right-of-way is approximately 60', with 18' of right-of-way south of the existing curb. During a future reconstruction project a study should examine how to construct a sidewalk south of the existing curb, and include feedback from area stakeholders.
23	Greenway Avenue	10th Street to Hudson Boulevard	1	Shared use path	City of Oakdale (Tartan High School)	Near term	Reconstruction	2025 (Oakdale Capital Improvement Program)	\$\$	14	A shared use path is planned for the west side of Greenway Avenue in existing yards. Trees, retaining walls, landscaping, and public infrastructure may need to be removed or relocated south of 7th Street. A sidewalk may be constructed instead of a shared use path if challenges outweigh the benefits of a wider facility. This decision should be explored as design advances. North of 7th Street, an existing sidewalk on the west side of Greenway Avenue may be widened to a shared use path. A clear walking and bicycling connection between Greenway Avenue and the front doors of Tartan High through the school parking lot would improve safety and access.
24	6th Street, Hale Avenue	Hadley Avenue to 4th Street	0.5	Sidewalk	City of Oakdale	Long term			\$\$	10	A sidewalk should be installed on one side of 6th Street and Hale Avenue to connect commercial areas along these two streets with the shared use path on the west side of Hadley Avenue, as well as the future shared use path on the north side of 4th Street. Space exists to install sidewalks without narrowing the streets. Approximately 10' to 15' of right-of-way exists between parcel boundaries and the existing curbs.
25	Hudson Boulevard, Hadley Avenue, 4th Street	Century Avenue to Bielenburg Bridge over I-94	1.7	Shared use path	Metropolitan Council (City of Oakdale)	Near term	Reconstruction	2023/2024 (Gold Line Project)	\$	15	A shared use path will be built along the north and west sides of these streets as part of the Gold Line Bus Rapid Transit project.
26	Various streets	Southeast corner of Oakdale (Helmo Avenue Station Area)	n/a	Sidewalk	Private Developers (City of Oakdale)	Long term			\$	9	As streets are reconstructed and parcels are redeveloped in the southeast corner of Oakdale (Helmo Avenue Station Area), sidewalks should be added to one or both sides of each street to encourage walkability, as outlined in the Helmo Station Bus Rapid Transit Oriented Development plan.
27	Former Par 3 Golf Course	Trail Loop	1	Shared use path	Private Developer (City of Oakdale)	Long term			\$	9	Private developer has plans to construct a trail loop with neighborhood connections.
Total miles	Projects #1 - 25, 27	Shared roadway subtotal	0.9	* Near Term = one to five years, 2024 to 2028; Mid Term = six to 10 years, 2029 to 2033; Long Term = 11 to 20 years; 2034 to 2043 ** \$ = Low, \$\$ = Medium, \$\$\$ = High							
		Shared use path subtotal	16.7								
		Sidewalk subtotal	3.5								
		All Total	21.1								

## Funding Sources

This section describes potential funding sources for pedestrian and bicycle-related projects. In addition to the descriptions below, the US Department of Transportation manages a website that describes federal funding flexibility for bicycle and pedestrian projects, including a detailed table indicating which types of pedestrian and bicycle projects are eligible under various funding programs.<sup>2</sup>

### Regional Solicitation

The Regional Solicitation process is a federal funding program administered by the Metropolitan Council for pedestrian and bicycle projects. Project sponsors are required to pay 20% of costs, with the remaining 80% coming from the federal government. The Metropolitan Council's Transportation Advisory Board solicits, evaluates, and recommends projects to the Metropolitan Council. Solicitations are open every two years, with applications generally due in the first half of even numbered years. Funding becomes available approximately four to five years after awards are made. Pedestrian and bicycle projects can be applied for as standalone projects, or as part of roadway reconstruction/modernization projects, as described in the subcategories below. The Metropolitan Council manages a website which provides additional details on the Regional Solicitation.<sup>3</sup>

#### Regional Solicitation – Multiuse Trails and Bicycle Facilities

Under this category of the Regional Solicitation program, the City of Oakdale can apply to receive federal funds to build shared use paths, trails bridges/underpasses, or make improvements to existing shared use path corridors. Projects are ranked on seven criteria, with the top three criteria being 1) closing gaps and improving safety, 2) location in relation to the Regional Bicycle Transportation Network, and 3) proximity to existing population and employment. The maximum federal funding award is \$5.5 million, and the minimum is \$250,000.

The City of Oakdale applied for a federal funding award of \$924,000 for the 40th Street pedestrian/bicycle bridge over I-694 in 2022 but did not receive the grant. This category was very competitive in 2022, with 18 out of 49 projects funded.

#### Regional Solicitation – Pedestrian Facilities

Under this category of the Regional Solicitation, the City of Oakdale can apply to receive federal funds to build sidewalks, make ADA improvements, or improve crossings. Projects are ranked on seven criteria, with the top four criteria being 1) closing gaps and improving safety, 2) connections to jobs and schools, 3) proximity to existing population, and 4) connections to transit. The maximum federal funding award is \$2.0 million, and the minimum is \$250,000. In 2022, all 10 applications to the Metropolitan Council were funded, with the City of Oakdale not applying for any funds.

#### Regional Solicitation – Safe Routes to School (Infrastructure Projects)

Under this category of the Regional Solicitation, the City of Oakdale can apply to receive federal funds to build shared use paths, sidewalks, or crossings within a two-mile radius of an elementary, middle, or high school. Projects are ranked on six criteria, with the top three criteria being 1) closing gaps and improving safety, 2) relationship of the infrastructure project to the five “E’s” of evaluation, education, encouragement, equity, and engagement, and 3) the number of existing students who already walk or bicycle to a particular school. The maximum federal funding award is \$1.0 million, and the minimum is \$250,000. In 2022, all 10 applications were funded, with the City of Oakdale not applying for any funds.

#### Regional Solicitation – Roadway Reconstruction/Modernization

Under this category of the Regional Solicitation, the City of Oakdale can apply to receive federal funds to carry out roadway preservation projects that improve infrastructure condition, reduce crashes, and enhance multimodal travel options. Projects are

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<sup>2</sup> [https://www.fhwa.dot.gov/environment/bicycle\\_pedestrian/funding/](https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/)

<sup>3</sup> <https://metro council.org/Transportation/Planning-2/Transportation-Funding/Regional-Solicitation.aspx>

ranked on nine criteria, with the top three criteria being 1) improving safety, 2) current and future usage, and 3) infrastructure age/condition. Projects with multimodal elements such as shared use paths, sidewalks, and improved crossings also receive higher rankings. The maximum federal funding award is \$7.0 million, and the minimum is \$1.0 million. This category was moderately competitive in 2022, with 18 out of 31 projects funded. The City of Oakdale did not apply for any funds.

### **Regional Solicitation – Highway Safety Improvement Program**

Under this category of the Regional Solicitation, the City of Oakdale can apply to receive federal funds to carry out projects that reduce fatalities and injuries. Examples of pedestrian and bicycle-related improvements which are eligible include crosswalk enhancements, lighting, curb extensions, pedestrian countdown timers, pedestrian refuge island, shared use paths, sidewalks, road diets, and stop bars. Unlike other Regional Solicitation categories, project sponsors are required to pay 10% of costs, with the remaining 90% coming from the federal government.

### **MnDOT Active Transportation Program**

The Active Transportation Program is a state funding program administered by MnDOT for pedestrian and bicycle projects. 100% of funding comes from the state government (no local match is required). Pedestrian and bicycle projects that are eligible include crossing improvements, shared use paths, sidewalks, and traffic control devices. In 2022, the maximum state funding award was \$500,000 and the minimum was \$50,000. Nine projects were funding in 2022 out of 81 applications received, with \$3.5 million available. Recent legislation will increase the annual funding amount to \$19.5 million. MnDOT manages a website which provides further information on the Active Transportation Program.<sup>4</sup> MnDOT also funds walking and bicycling improvements, as part of state highway construction projects. These improvements do not require an application process.

### **MnDOT Safe Routes to School Infrastructure Grants**

The Safe Routes to School (SRTS) Infrastructure Grant program is a state funding program administered by MnDOT for pedestrian and bicycle projects near schools. 100% of funding comes from the state government (no local match is required). In 2021, \$7.5 million was available statewide. Recent legislation will increase the annual funding amount to \$10 million. MnDOT manages a website which provides further information on the SRTS Infrastructure Grant program.<sup>5</sup>

### **State of Minnesota Bonding**

Local units of government may request State of Minnesota bonding for transportation-related projects. Bonding bills are typically written by the State Legislature every other year. The City of Oakdale can ask state legislators to fund Oakdale-specific projects. Local projects typically require a 50% funding match coming from non-state sources (such as local property taxes or federal funding). More information about requirements for use of State bonding monies can be found on the Minnesota Management and Budget Capital Projects website.<sup>6</sup>

### **Recreational Trails Program**

The Recreational Trails Program (RTP) is an annual federal funding program administered by the Minnesota Department of Natural Resources (DNR). The program is intended to help local communities with shared use path projects. Eligible projects include: 1) Maintenance and restoration of existing trails, 2) Development of trailhead facilities and linkages, and 3) Construction of new trails. Trails are required to be 10' in width. The maximum federal funding award is \$200,000 and the minimum is \$2,500. Project sponsors are required to pay 25% of costs, with the remaining 75% coming from the federal government. The DNR manages a website that provides additional details on RTP in Minnesota.<sup>7</sup>

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4 <https://www.dot.state.mn.us/active-transportation-program/index.html>

5 <https://www.dot.state.mn.us/saferoutes/infrastructure-grants.html>

6 <https://mn.gov/mmb/debt-management/capital-projects/>

7 [https://www.dnr.state.mn.us/grants/recreation/trails\\_federal.html](https://www.dnr.state.mn.us/grants/recreation/trails_federal.html)



## **Bicycle and Pedestrian Plan**

# **Community Engagement Report**

**July 7, 2023**

**Key Findings, Engagement Strategies, and Detailed Results**



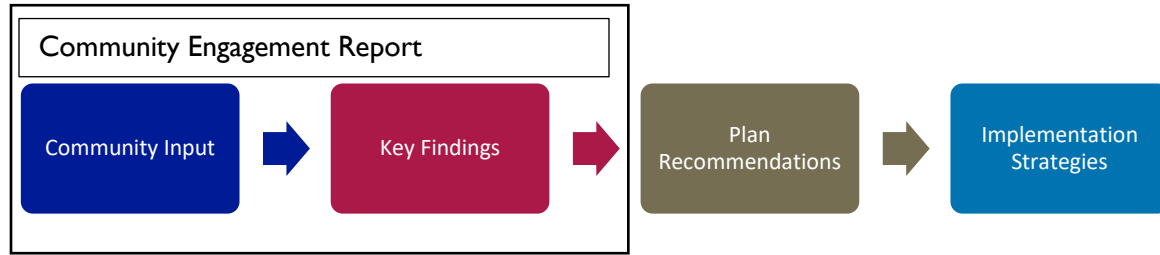
*The trails in Oakdale Nature Preserve are a popular place for walking. Image Credit: City of Oakdale*

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## INTRODUCTION

The purpose of this community engagement report is to summarize the approach to, and results of, engaging community members around the Oakdale Bicycle and Pedestrian Plan (Plan). The voices of residents identified key findings for the project team to further analyze and guide recommendations in the Plan.



*Illustration of Plan development process: community input informs key findings which lead to recommendations and implementation strategies.*

In 2020 and 2022, there were approximately 390 participant interactions that resulted in recorded input.



*Winter maintenance was an issue raised during the public engagement process.*

## KEY FINDINGS

- 1) **Respondents want an expanded walking and bicycling network that can be used primarily for recreation.** Oakdale's existing sidewalk and path network is already frequently used by residents. Residents love the existing scenery, with the Gateway State Trail and paths within Oakdale Nature Preserve being the most popular facilities. The public walks more than it rides a bicycle, but predominantly does both activities for recreational purposes. The largest deterrent to more walking and bicycling is the limited extent of the existing path network, particularly along Oakdale's busiest streets. Improved surface maintenance of trails would also encourage more bicycling.
- 2) **Facilities should guide users to have safe interactions between various modes.** Attitudes between people walking, bicycling, and driving are an area identified for improvement. On the trail system, users are confused about how pedestrians and bicyclists should interact. This confusion sometimes leads to conflicts between people bicycling and driving, since some bicyclists choose to then avoid the trail system and ride on streets. Negative feelings about people using other modes of transportation are related to a lack of clear direction about how to interact, and a general lack of awareness about traffic-related regulations. The public overwhelmingly prefers separation between modes.
- 3) **Street crossings should be expanded in number and level of maintenance.** The ease of crossing streets was the lowest rated condition cited by pedestrians, and the second lowest rated condition cited by bicyclists. Respondents – especially those walking – frequently expressed a desire for more crossings and improved safety. Crosswalk marking and winter maintenance on existing crossings were also cited as needing improvement. On the other hand, respondents were very satisfied with the frequency and placement of curb ramps at intersections.
- 4) **More destinations will increase the frequency of walking and bicycling.** The number of destinations within easy walking distance was identified as a high deterrent to more walking, and a moderate deterrent to more bicycling. The creation of mixed-use developments with additional businesses, coupled with an expanded sidewalk and path network, will encourage more people to walk and bicycle. Marketing of existing facilities and destinations will also encourage more walking and bicycling.

## STRATEGIES FOR ENGAGING OAKDALE'S RESIDENTS

The Oakdale Bicycle and Pedestrian Plan is intended to reflect the vision and goals of the community, not just those who explicitly identify as a “pedestrian” or “bicyclist.” By also uncovering the issues and ideas from community members with passive interest in walking or bicycling, the Plan recommendations will better reflect the community's values and priorities. For example, while parents of children may not identify as a pedestrian or bicyclist, they may have a personal interest in a



*Approximately 16 community members were engaged at an open house, held at Oakdale Discovery Center on October 19, 2022.*

walking and bicycling trail that leads to local schools for the safety and well-being of children.

Oftentimes communities have widespread interest in walking or bicycling, but limited time to devote to meetings and volunteer opportunities, making it difficult to gauge public opinion through conventional public meetings. Making engagement easy, tailored, and inviting helps reach people who may care, but are generally less vocal on a single issue like walking or bicycling. For these reasons, it was important for the project team to use a range of strategies to solicit feedback from community members.

This section summarizes the strategies used to engage a range of community voices, why the strategies were selected, and the input that was received.

### **Strategy A: Open House, Pop-up Workshops and Online Questionnaires**

On October 19<sup>th</sup> the project team solicited input at an open house with 16 participants. The open house was advertised on Oakdale's Facebook page. Community members were also linked to the project website and online questionnaire. An online map was also linked on the project website. Two pop-up workshops were also held: one at the Farmers' Market on September 28<sup>th</sup> with 50 participants reached and another at the Oakdale Library on October 24<sup>th</sup> with 9 participants reached.



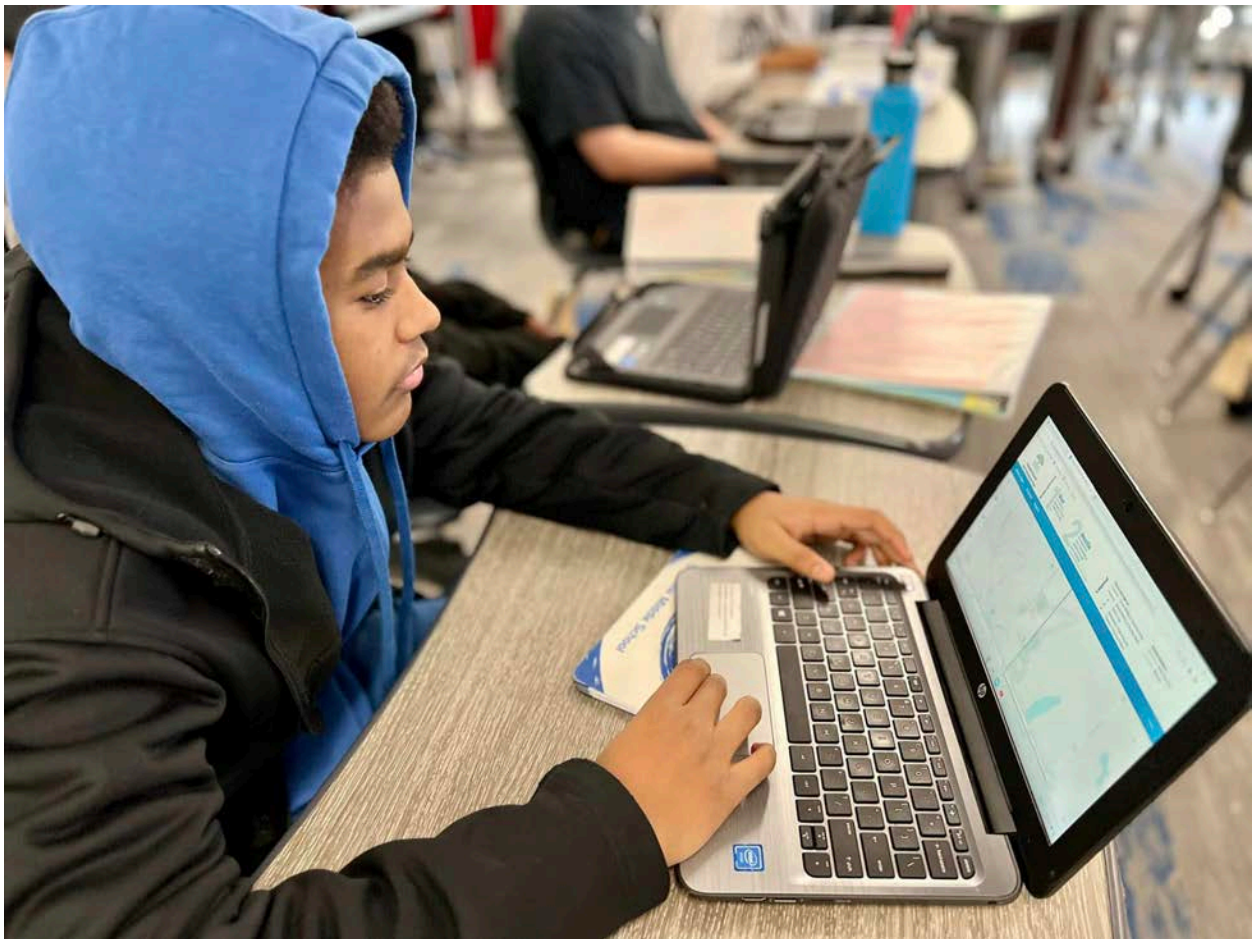
*A Facebook event advertising the open house.*

The online questionnaire and online map were promoted to Oakdale community members between October 1<sup>st</sup> and 31<sup>st</sup>. The online map was then again promoted between December 20<sup>th</sup>, 2022 and January 6<sup>th</sup>, 2023 on the City's Facebook page, and promoted to students at Tartan High School and Skyview Middle School in December and January. Excerpts from the questionnaire and map are provided on the following pages. The questionnaire and map mimicked the format that was used at the open house and pop-up workshop events. Approximately 68 people took the online questionnaire and 90 people completed the map. The results of the open house and questionnaire/map are combined in the following section to provide a composite snapshot.

During an earlier phase of the project in 2020, which was put on hold due to COVID, a similar online questionnaire and map were distributed to the community. At that time, 129 people completed the online questionnaire and 21 people completed the online map. Results from 2020 were also combined in the following section.



*Approximately 50 community members were engaged at a pop-up workshop, held at the Oakdale Farmers' Market on September 28, 2022.*



*A student at Skyview Middle School completes an online version of the map in January 2023. Credit: ISD 622*

# Bike and Pedestrian Plan Community Questionnaire



shaunmurphyjefferson@gmail.com (not shared)

[Switch account](#)



## Questions About Walking

How often do you walk for exercise/health/enjoyment? (choose one)

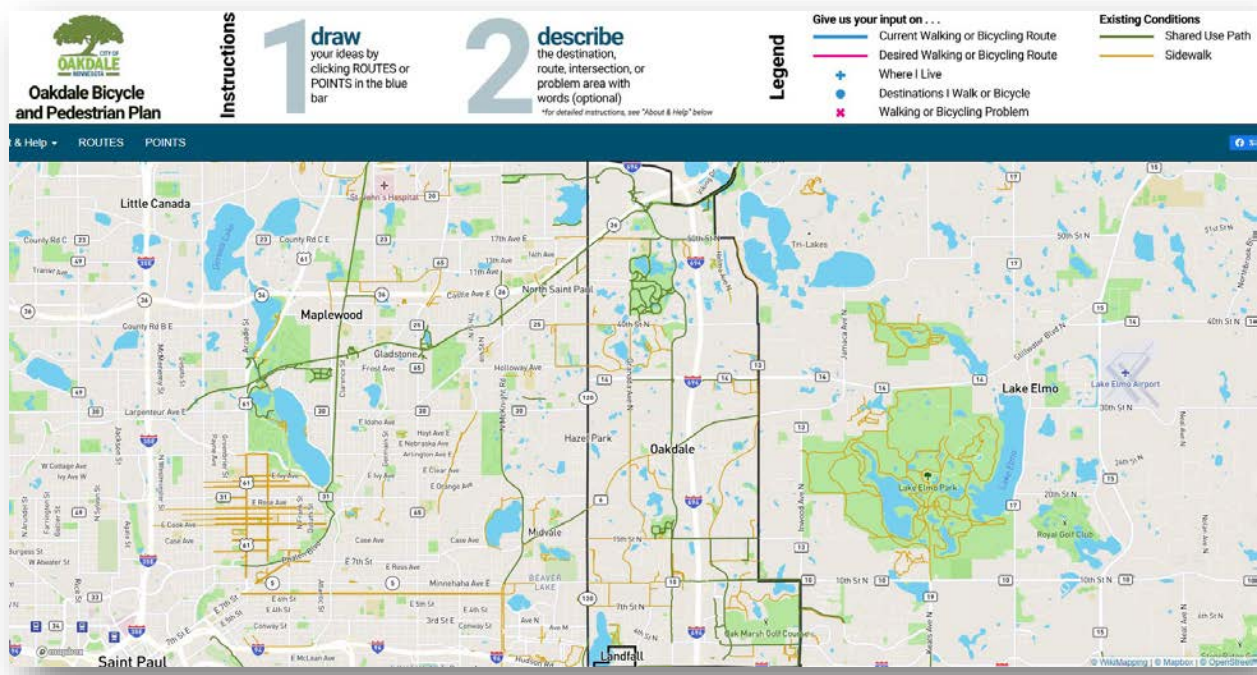
- ☐ At least once a day
- ☐ A few times a week
- ☐ A few times a month or less
- ☐ Never

How often do you walk to destinations such as shops, work, recreation, church, etc.? (choose one)

- ☐ At least once a day
- ☐ A few times a week
- ☐ A few times a month or less
- ☐ Never

How do you rate the following walking conditions in Oakdale? (choose one option in each row)

A screen capture of the online questionnaire showing questions about bicycling and walking in Oakdale.



A screen capture of the online map that asked for input on routes, destinations, and problems.

## MAPPING

Oakdale residents, reached at both in-person events and online through an interactive mapping website, were invited to identify examples of current walking or bicycling routes, desired walking or bicycling routes, walking or bicycling destinations, walking or bicycling problems, and where they live.

Residents submitted a total of:

- 149 current walking or bicycling routes
- 113 desired walking or bicycling routes
- 86 walking or bicycling destinations
- 100 walking or bicycling problems
- 40 locations where respondents live



Participants completed paper maps at the Oakdale Farmers' Market on September 28, 2022.

### Current Walking or Bicycling Routes

The map shown in Figure A-I summarizes the 149 routes where respondents identified they currently walk or ride a bicycle. On the north side of Oakdale, the Gateway Trail and trails through Oakdale Nature Preserve were the most popular locations for walking or bicycling. On the south side of Oakdale, 15<sup>th</sup> Street between Granada Avenue and Helmo Avenue was the most popular route.

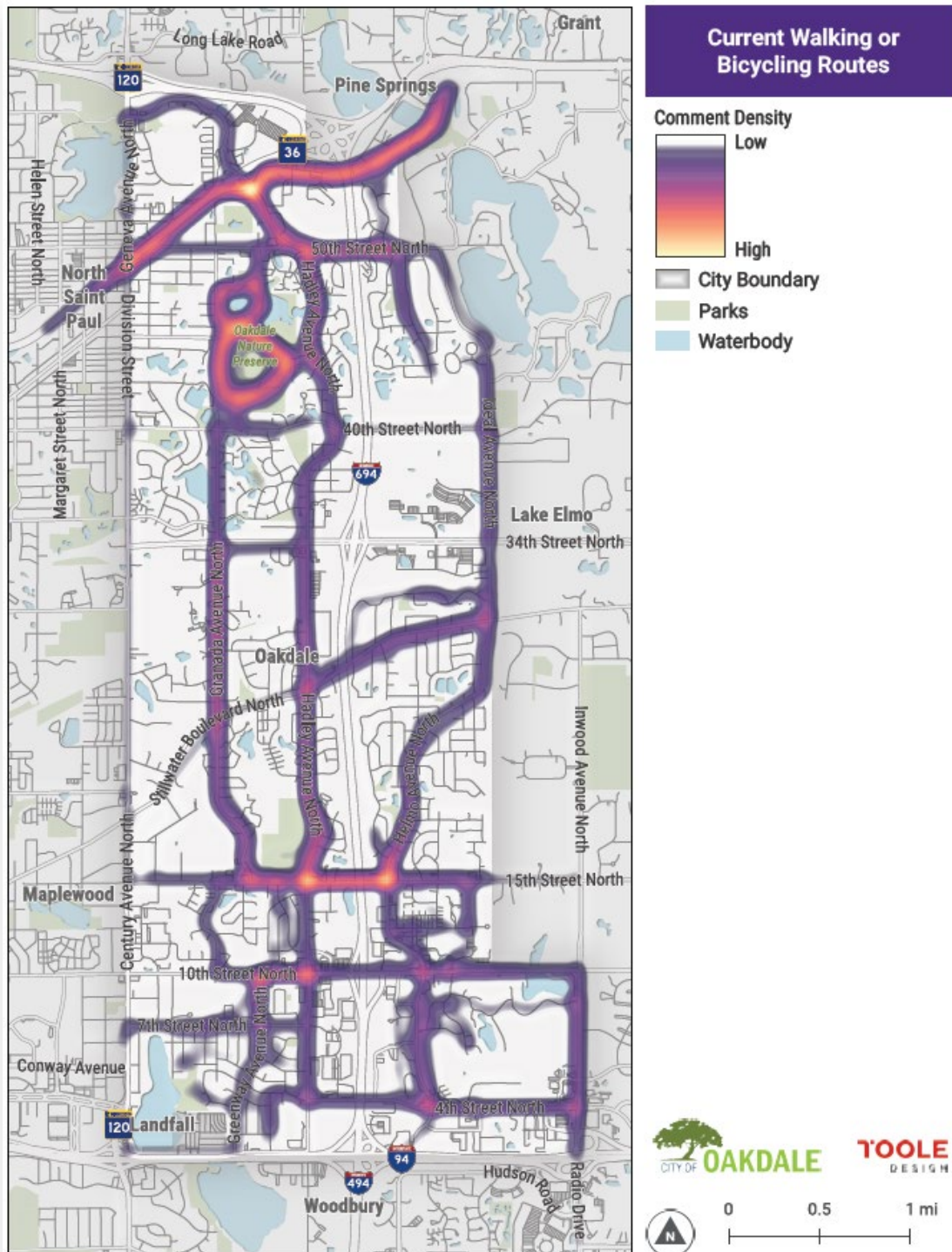


Figure A-I. Participants were asked to trace routes where they currently walk or ride a bicycle.

### Desired Walking or Bicycling Routes

The map shown in Figure A-2 summarizes the 113 routes where respondents identified they desired to walk or ride a bicycle. The most desired route for walking or bicycling was Century Avenue, particularly between Highway 36 and 7<sup>th</sup> Street.

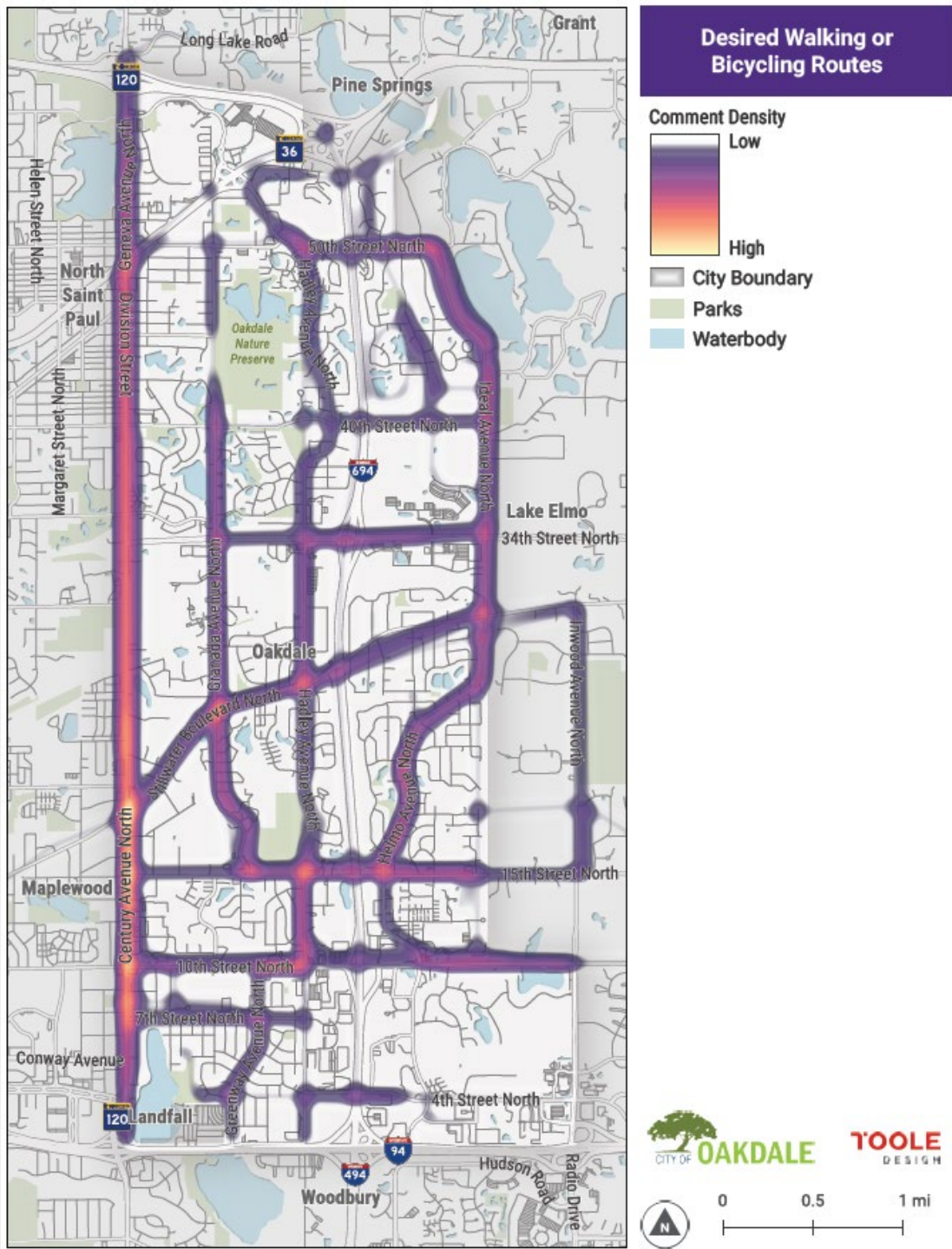


Figure A-2. Participants were asked to trace routes where they desire to walk or ride a bicycle.

### Walking or Bicycling Destinations

The map shown in Figure A-3 summarizes the 86 destinations respondents identified for walking or riding a bicycle. The three largest concentrations of destinations were Beaver Lake Estates along Maryland Avenue in Maplewood, Oakdale Nature Preserve, and Richard Walton Park.

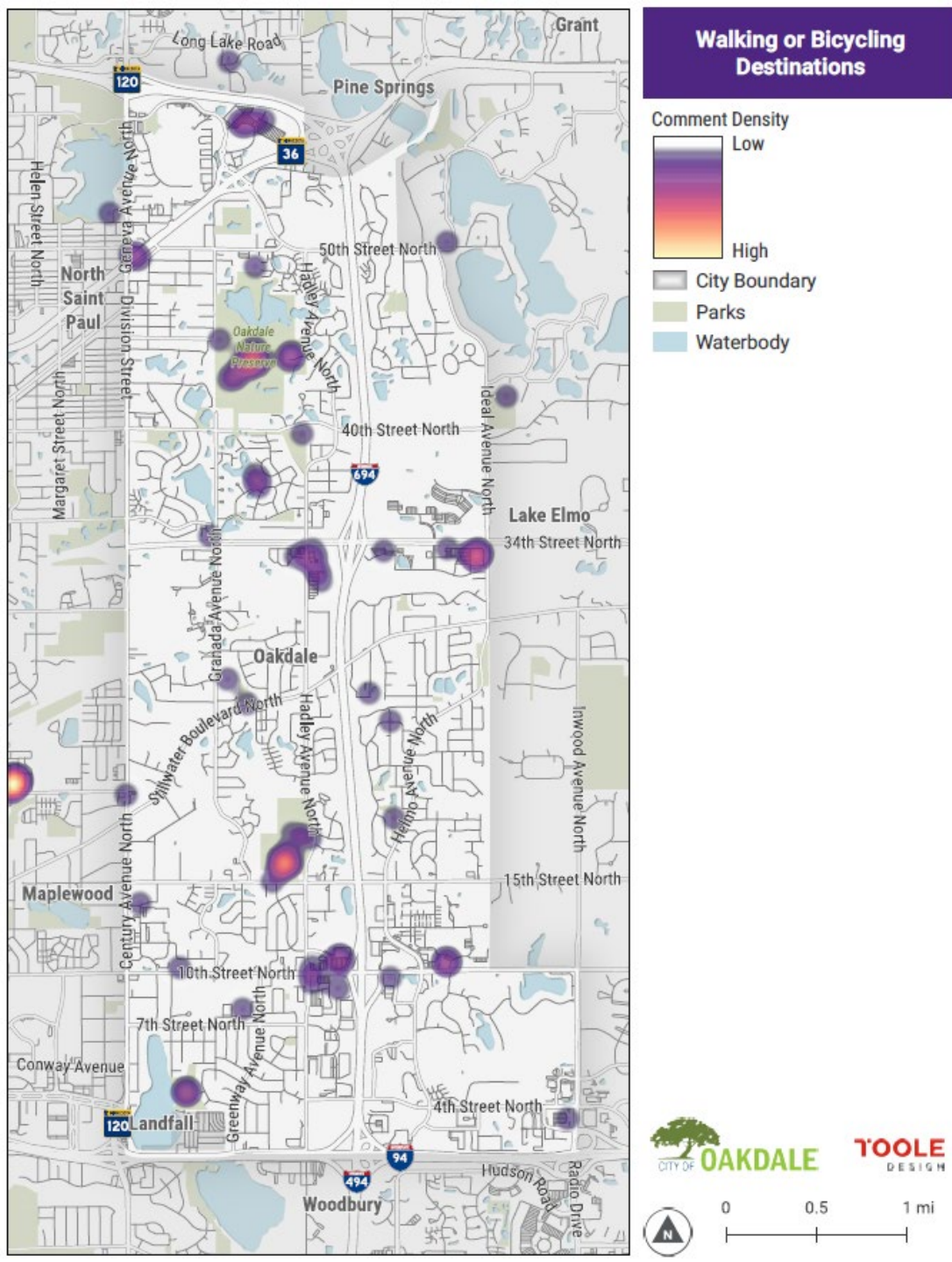


Figure A-3. Participants were asked to place points at destinations where they walk or ride a bicycle.

The map shown in Figure A-4 summarizes the 100 destinations respondents identified as problem spots for walking or riding a bicycle. The two largest problem spots were the intersections of Helmo Avenue/12<sup>th</sup> Street and Century Avenue/15<sup>th</sup> Street. The road with the largest number of problem spots was Century Avenue.



### Where Respondents Live

The map shown in Figure A-5 summarizes the 40 locations respondents identified as where they live. Most respondents identified living south of 34<sup>th</sup> Street.

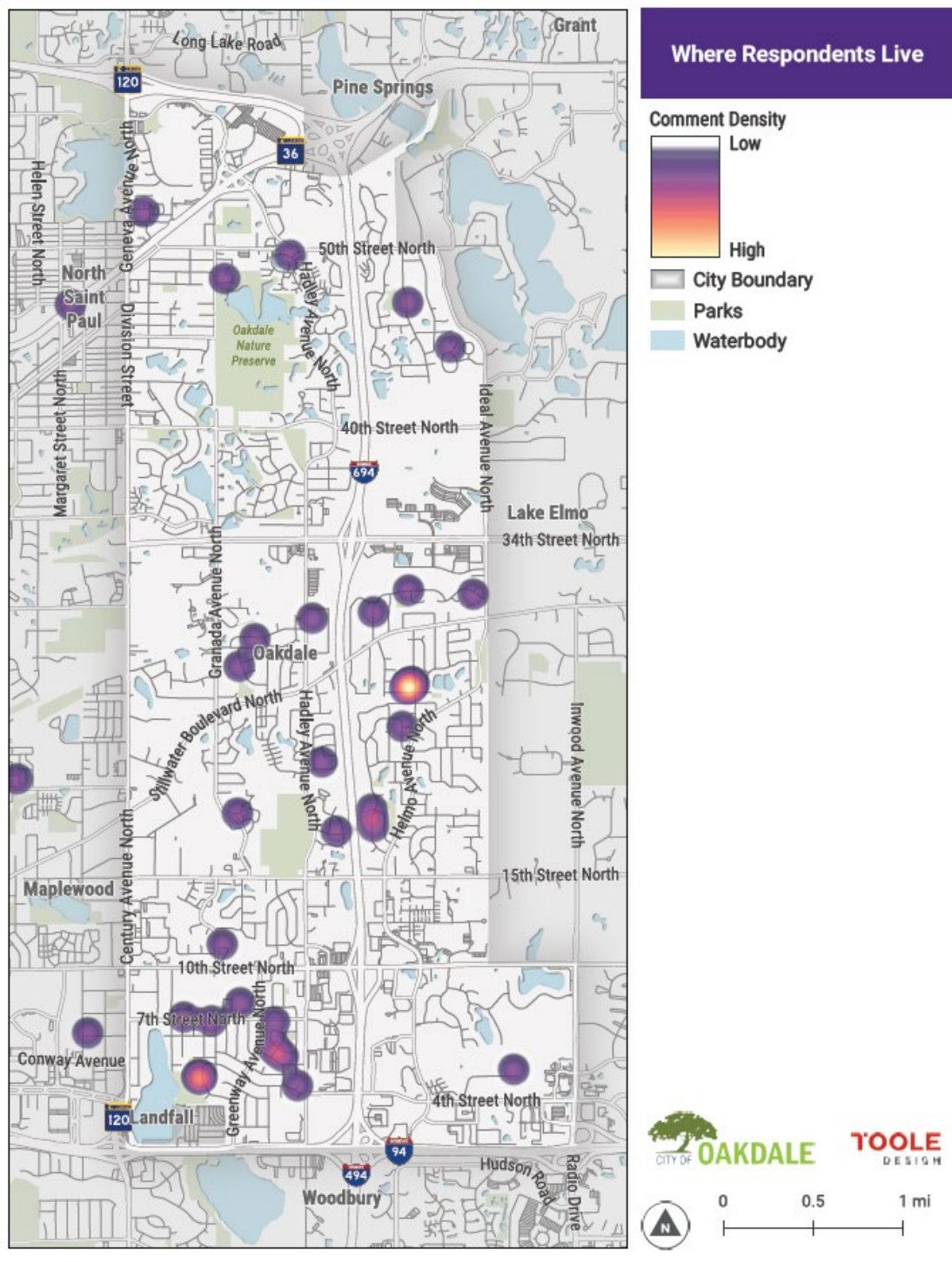


Figure A-5. Participants were asked to place points at locations where they live.

## WALKING FREQUENCY

Most respondents (46 percent) reported walking for **exercise/health/enjoyment** a few times a week, 39 percent reported walking for those purposes at least once a day, 14 percent reported walking a few times a month or less, and one percent reported never walking for those reasons.

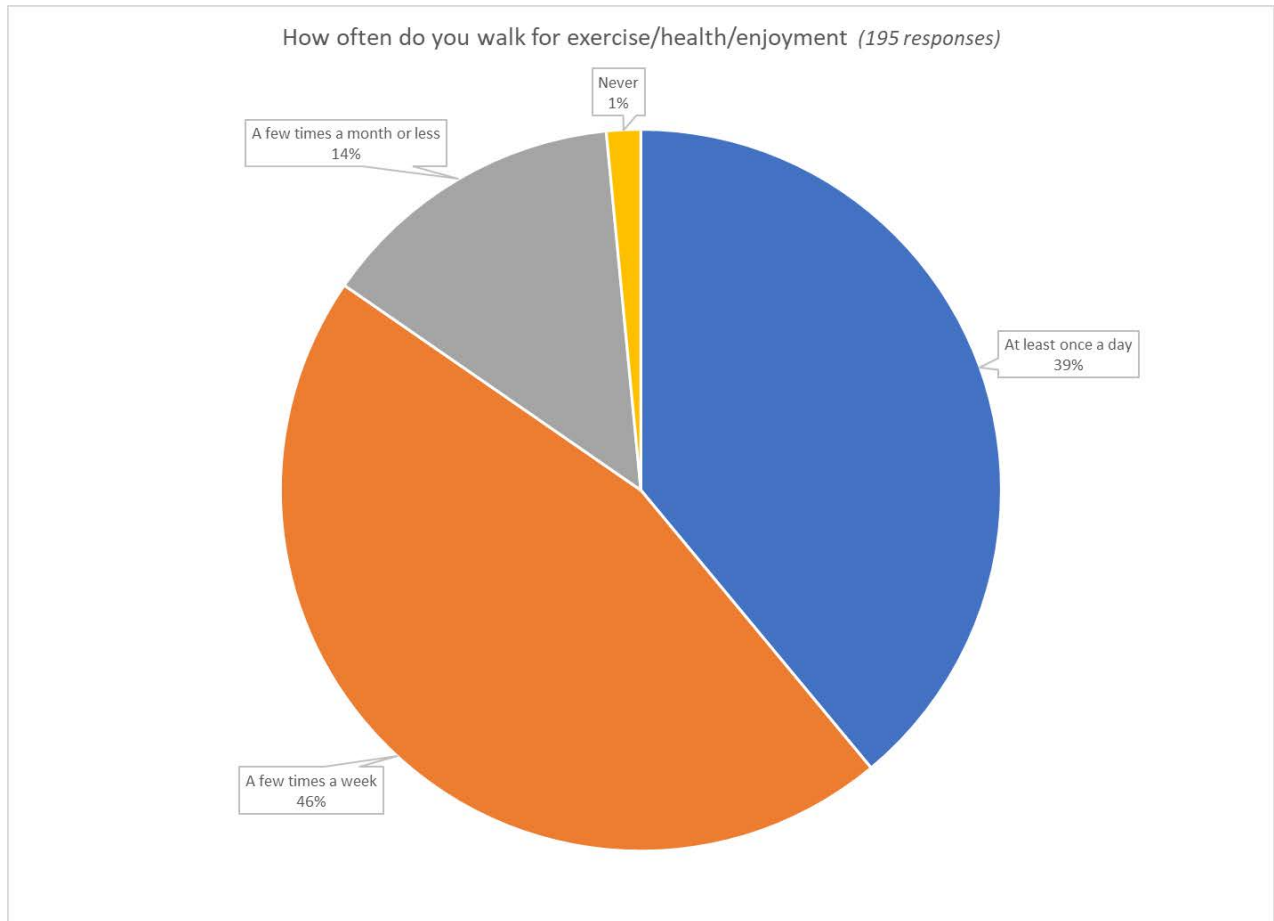


Figure A-6. Frequency with which participants in the Oakdale public engagement activities reported walking for exercise/health/enjoyment (answered by 195 participants).

Most respondents (41 percent) reported walking to destinations such as **shops, work, recreation, and church** a few times a month or less, 39 percent reported never walking for those purposes, 15 percent reported walking a few times week, and five percent reported walking for those reasons at least once a day.

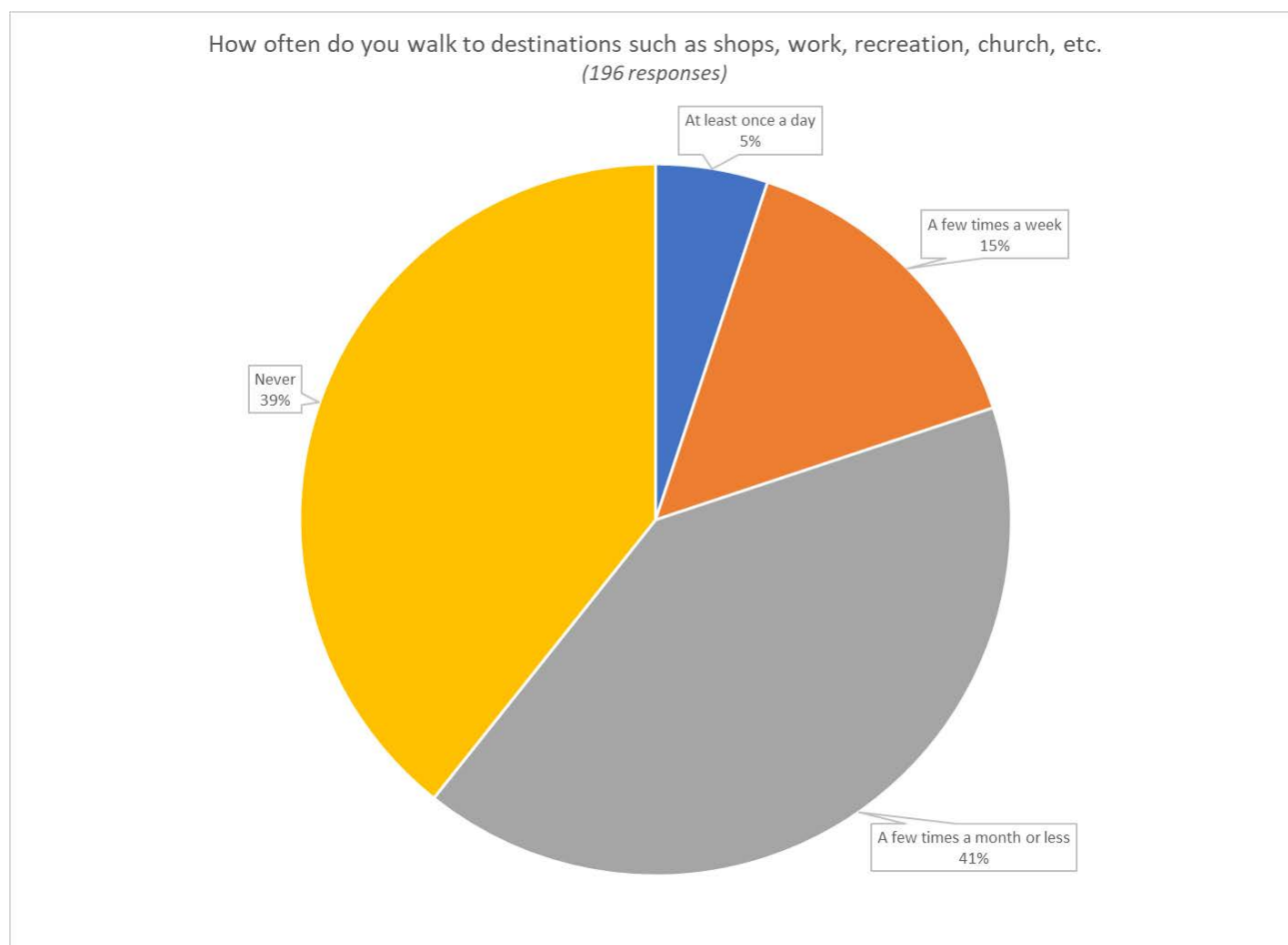


Figure A-7. Frequency with which participants in the Oakdale public engagement activities reported walking to destinations such as shops, work, recreation, and church (answered by 196 participants).

## WALKING DETERRANTS

Residents were asked the following open-ended question about what deters them from walking:

*What prevents you from walking more than you do now?*

167 people responded and identified a total of 192 unique deterrents (each respondent was allowed to mention up to 2 deterrents). Figure A-8 shows the most common walking deterrents. The three most common were:

1. Lack of paths/sidewalks (37/192, or 19%)
2. Lack of destinations (24/130, or 13%)
3. Lack of time (24/130, or 13%)

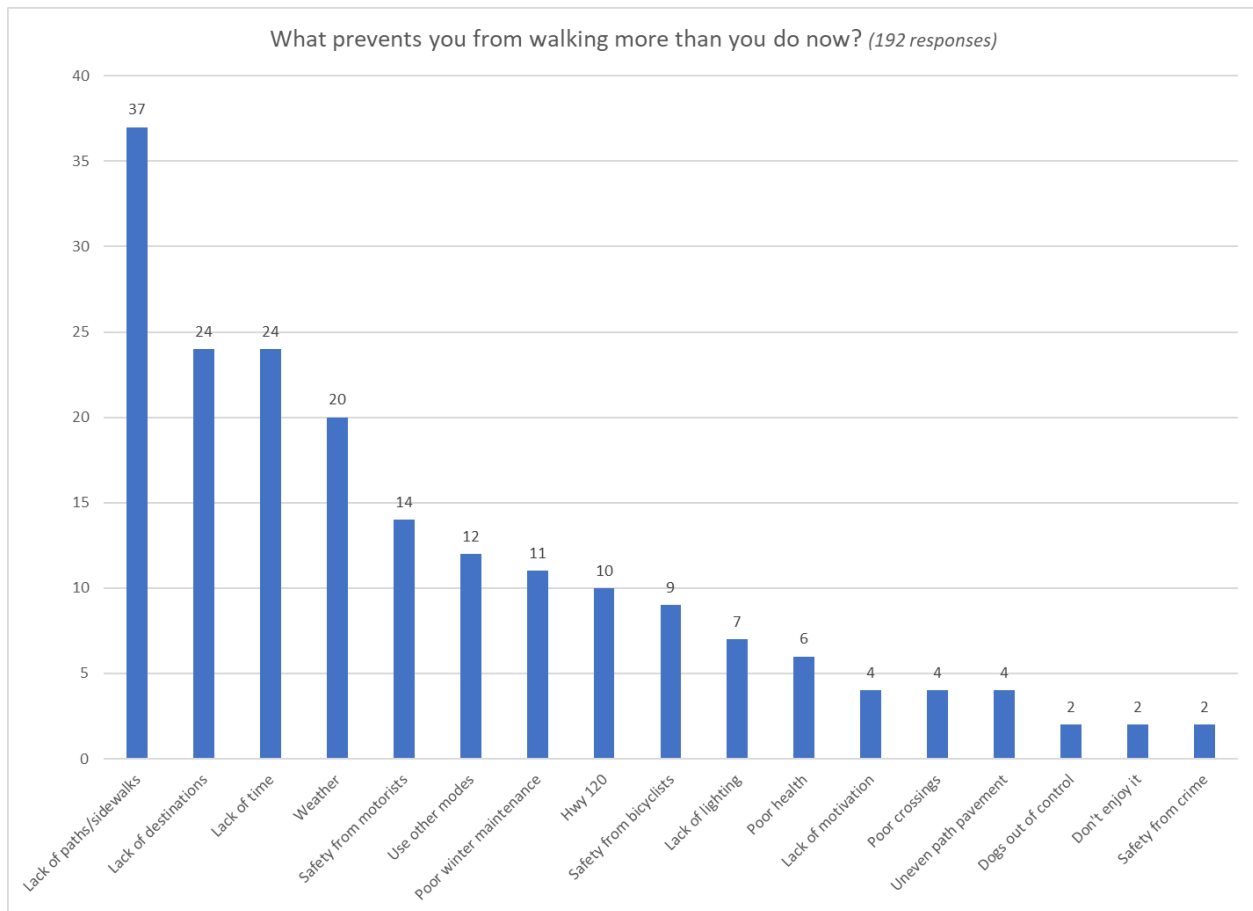


Figure A-8. Bar chart showing walking deterrents.

## RATING CURRENT CONDITIONS

Participants in the online questionnaire and community workshops were asked to rank a variety of current walking conditions in Oakdale on a five-point scale from 'Excellent' to 'Bad.' Figure A-9 displays the results of participants who voted for each condition as either 'Excellent' or 'Good'. Approximately 190 people answered this question. The conditions with the most positive ratings were:

1. Terrain for walking (66%)
2. Frequency of curb ramps at intersections (64%)
3. Smoothness of sidewalks/shared use paths (58%)

The conditions with the least positive ratings were:

9. Motorists' attitudes towards pedestrians (32%)
10. Number of destinations within easy walking distance (29%)
11. Ease of crossing busy streets (29%)

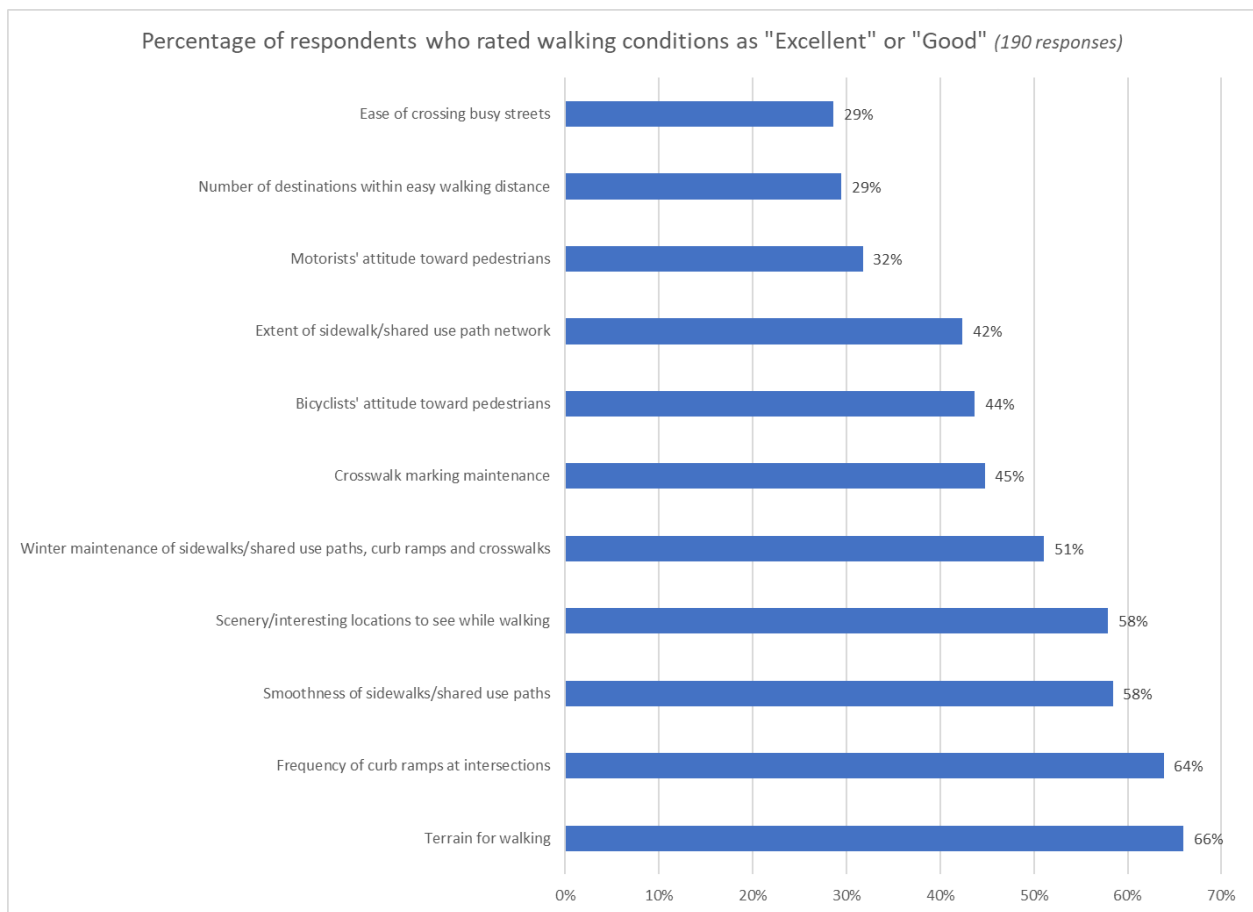


Figure A-9. Summary graph of percentage of respondents who rated each walking condition as 'Excellent' or 'Good'.

## DESIGN PREFERENCES FOR WALKING ALONG STREETS

Community members were asked to rate their comfort level with walking along streets in various types of pedestrian environments. Participants viewed a photo of each pedestrian environment, and then rated each on a five-point scale from 'Very Comfortable' to 'Very Uncomfortable'. Figure A-10 shows the percentage of respondents who ranked each category as either 'Very Comfortable' or 'Comfortable'. Approximately 195 people answered this question. The three pedestrian environments that received the most responses for 'Very Comfortable' or 'Comfortable' were wide sidewalks (94%), residential sidewalks (89%), and shared use paths (55%). The complete results of the pedestrian environment rankings and images of each pedestrian facility are shown below.

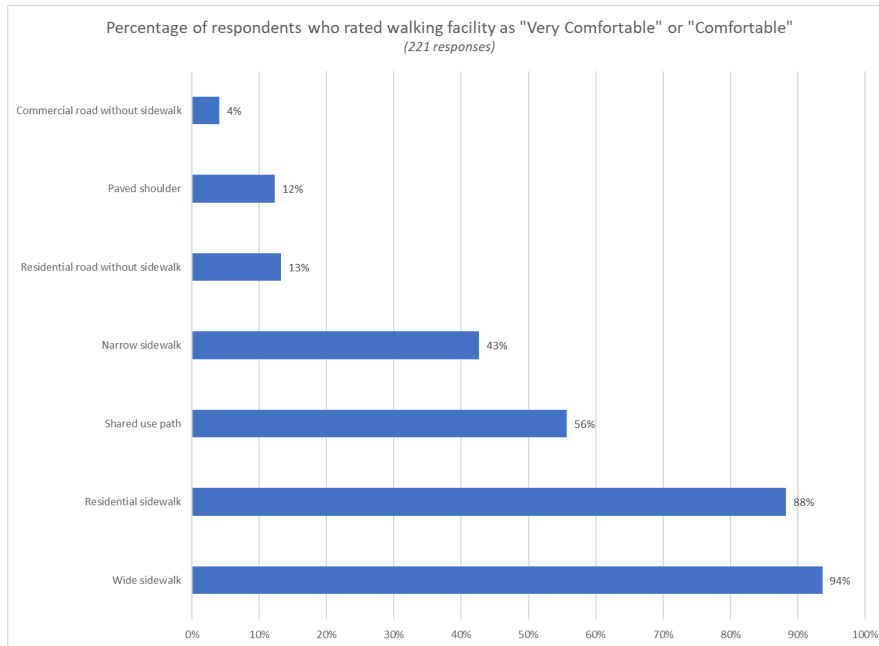


Figure A-10. Summary graph of percentage of respondents who rated each pedestrian environment as 'Very Comfortable' or 'Comfortable'. The images below were included in the questionnaire.



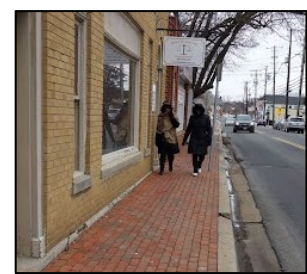
Wide sidewalk (94%)



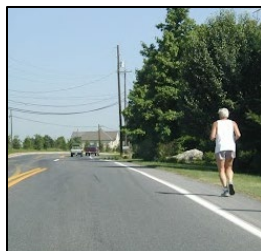
Residential sidewalk (88%)



Shared use path (56%)



Narrow sidewalk (43%)



Paved shoulder (12%)



Residential road without sidewalk (13%)



Commercial road without sidewalk (4%)

## BICYCLING FREQUENCY

Seventy percent of respondents reported bicycling each month. The largest share of respondents (36 percent) reported bicycling for **exercise/health/enjoyment** a few times a month or less, 30 percent reported never bicycling for those purposes, 28 percent reported bicycling a few times a week, and six percent reported bicycling for those reasons at least once a day.

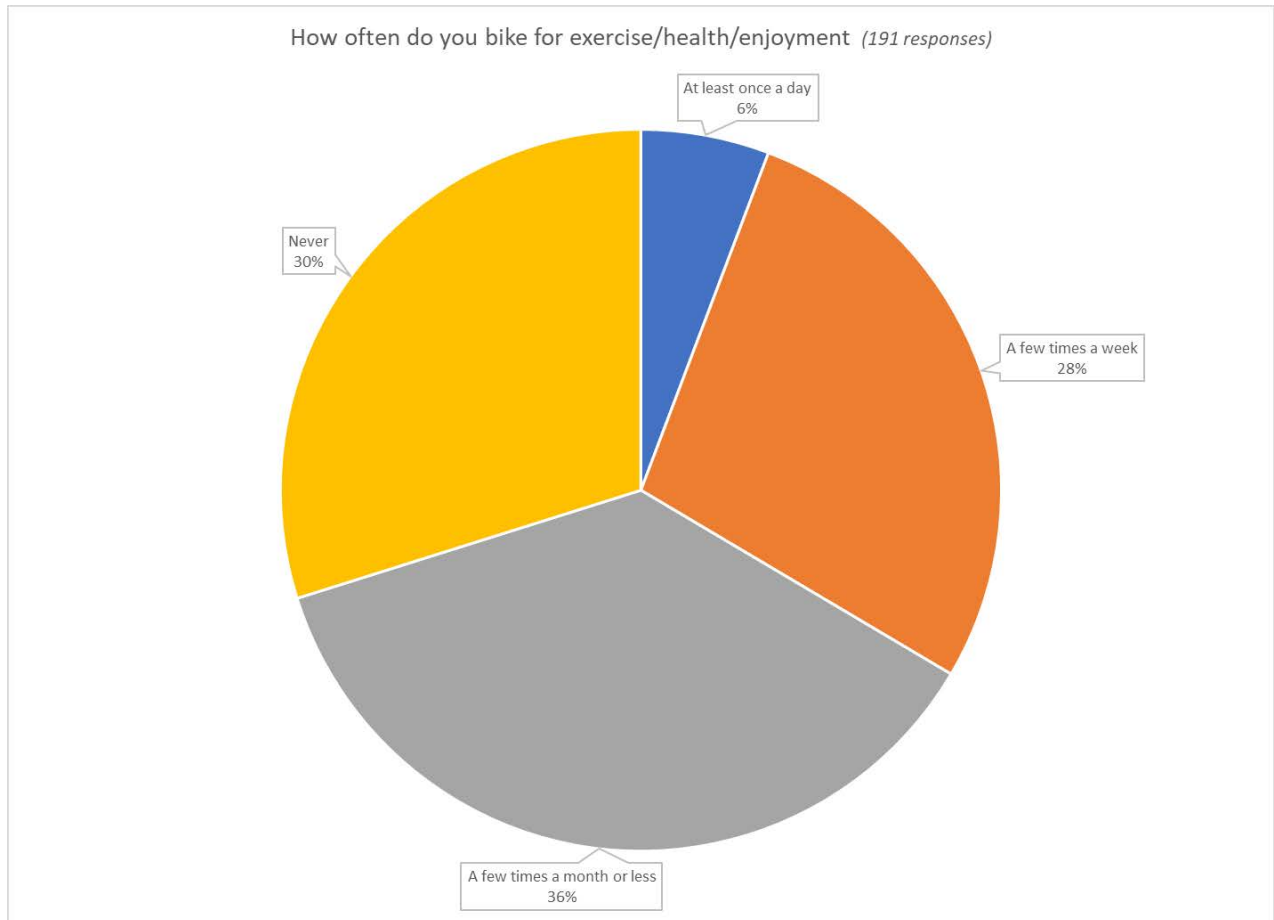


Figure A-11. Frequency with which participants in the Oakdale public engagement activities reported bicycling for exercise/health/enjoyment (answered by 191 participants).

51 percent of respondents reporting bicycling to a destination such as **shops, work, recreation, and church** at least once a month, while 49 percent of respondents reported never bicycling to those destinations. Of those who bicycled at least once a month, 40 percent reported bicycling for those purposes a few times a month or less, eight percent reported bicycling a few times week, and three percent reported bicycling for those reasons at least once a day.

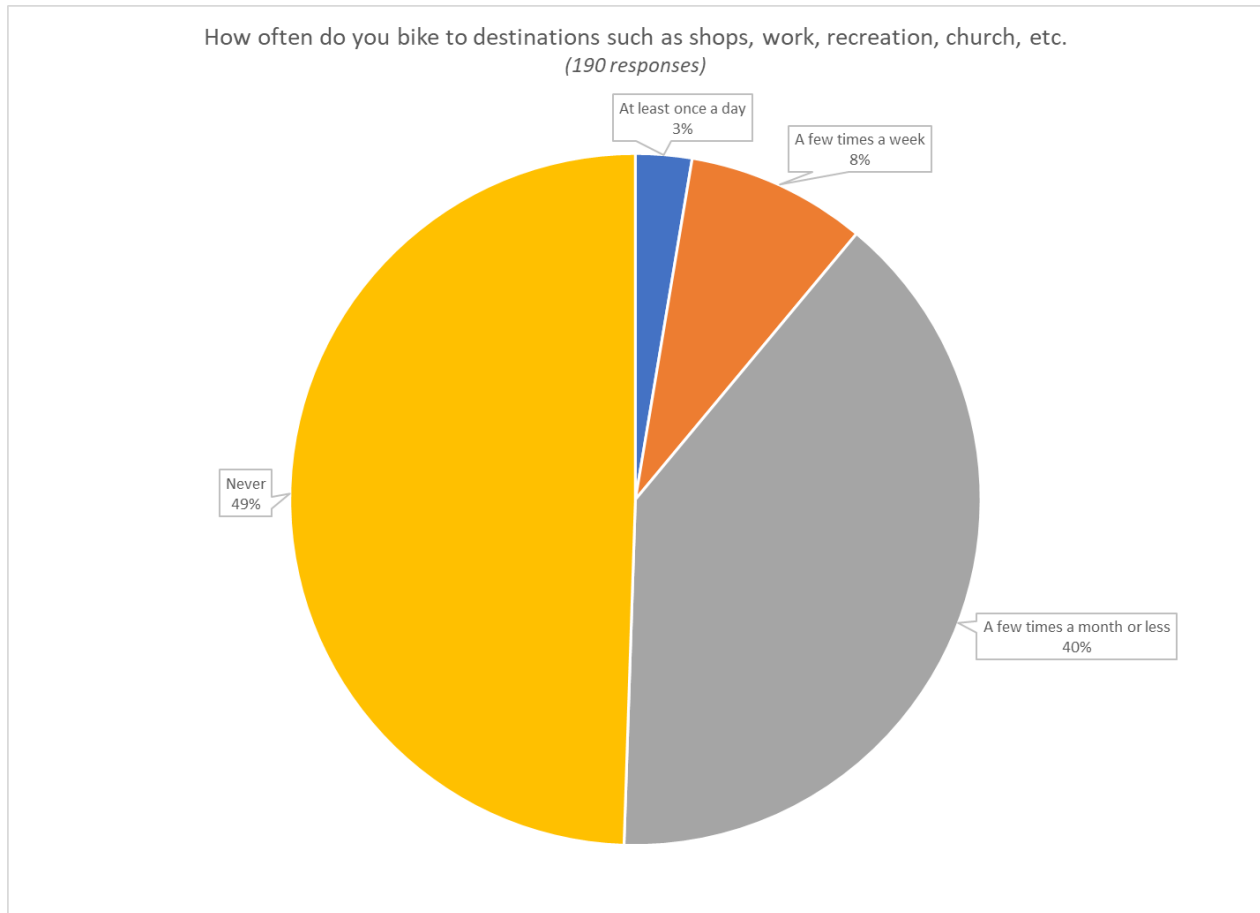


Figure A-12. Frequency with which participants in the Oakdale public engagement activities reported bicycling to destinations such as shops, work, recreation, and church (answered by 190 participants).

## BICYCLING DETERRANTS

Residents were asked the following open-ended question about what deters them from bicycling:

*What prevents you from bicycling more than you do now?*

134 people responded and identified a total of 149 unique deterrents (each respondent was allowed to mention up to 2 deterrents). Figure A-13 shows the most common bicycling deterrents. The three most common were:

1. Lack of facilities (e.g., paths, lanes) (36/149, or 24%)
2. Safety from motorists (19/149, or 13%)
3. Weather (18/149, or 12%)

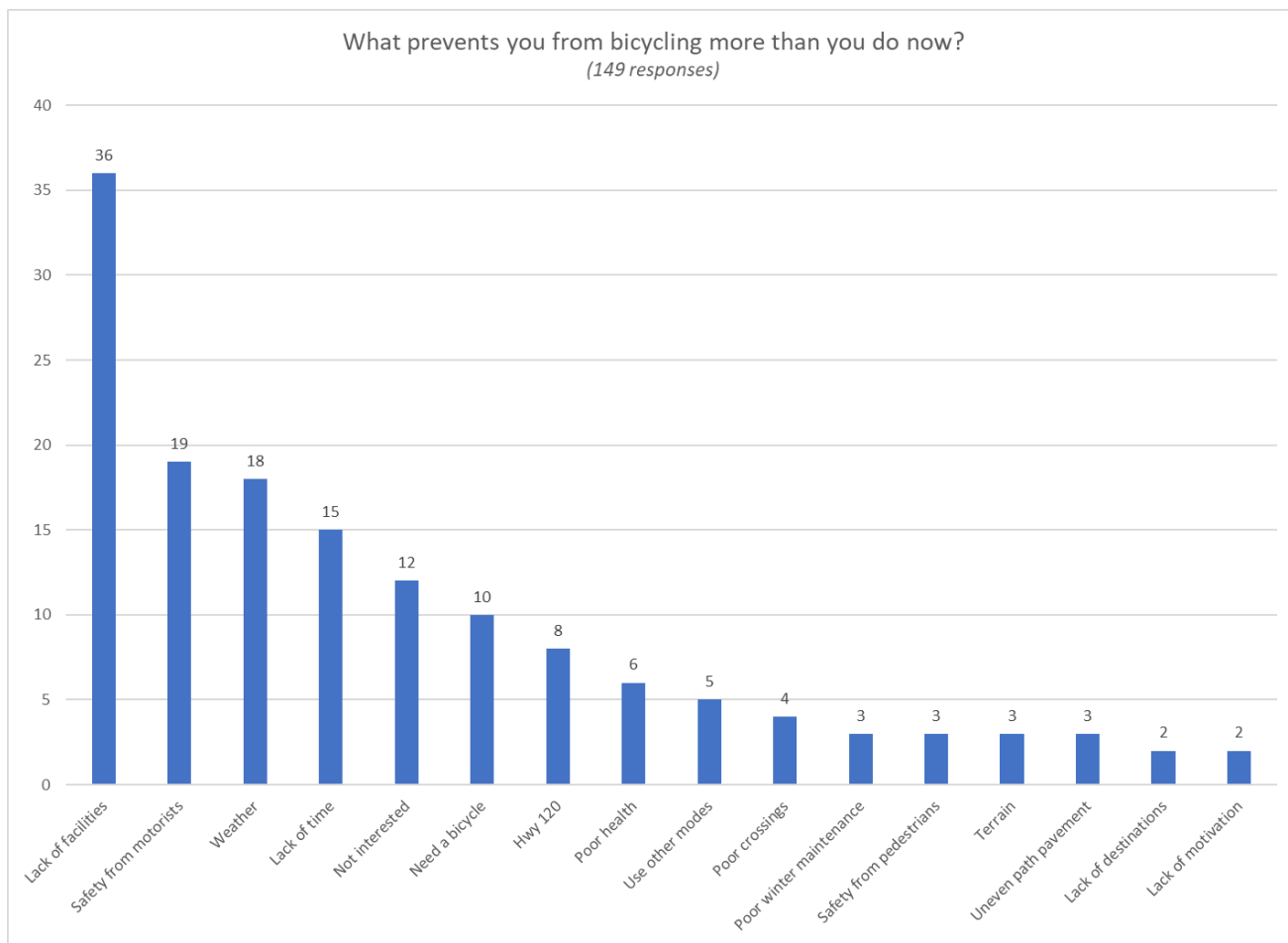


Figure A-13. Bar chart showing bicycling deterrents.

## RATING CURRENT CONDITIONS

Participants in the online questionnaire and community workshops were asked to rank a variety of current bicycling conditions in Oakdale on a five-point scale from 'Excellent' to 'Bad.' Figure A-14 displays the results of participants who voted for each condition as either 'Excellent' or 'Good'.

Approximately 171 people answered this question. The conditions with the most positive ratings were:

1. Frequency of curb ramps at intersections (56%)
2. Scenery/interesting locations to see while biking (56%)
3. Location/placement of curb ramps at intersections (54%)

The conditions with the least positive ratings were:

9. Motorists' attitudes towards bicyclists (32%)
10. Ease of crossing busy streets (30%)
11. Extent of sidewalk/shared use path network (28%)

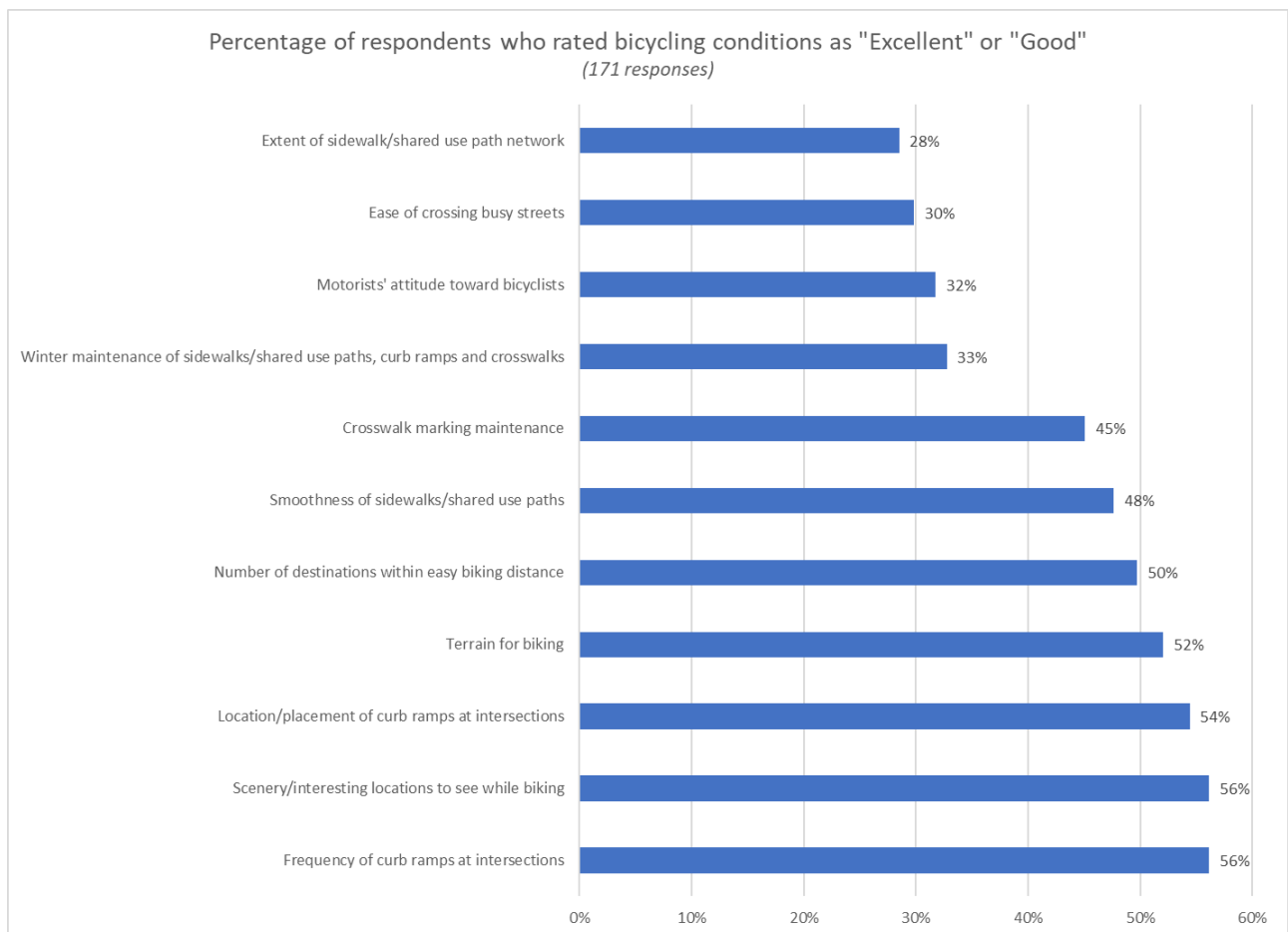


Figure A-14. Summary graph of percentage of respondents who rated each bicycling condition as 'Excellent' or 'Good'.

## DESIGN PREFERENCES FOR BICYCLING ALONG STREETS

Community members were asked to rate their comfort level with bicycling along streets in various types of bicycling environments. Participants viewed a photo of each bicycling environment, and then rated each on a five-point scale from 'Very Comfortable' to 'Very Uncomfortable'. Figure A-15 shows the percentage of respondents who ranked each category as either 'Very Comfortable' or 'Comfortable'. Approximately 195 people answered this question. The three bicycling environments that received the most responses for 'Very Comfortable' or 'Comfortable' were separated bicycle lanes at street level (71%), buffered bicycle lanes (56%), and shared use paths (49%). The complete results of the bicycling environment rankings and images of each bicycle facility are shown below.

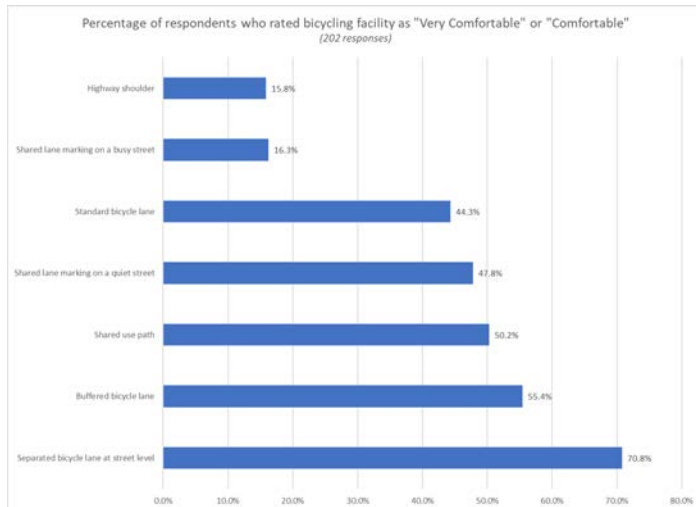


Figure A-15. Summary graph of percentage of respondents who rated each bicycling environment as 'Very Comfortable' or 'Comfortable'. The images below were included in the questionnaire.



Separated bicycle lane at street level (71%)



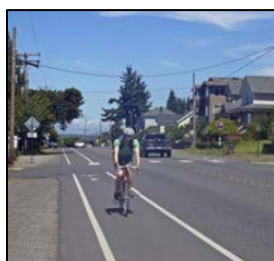
Buffered bicycle lane (55%)



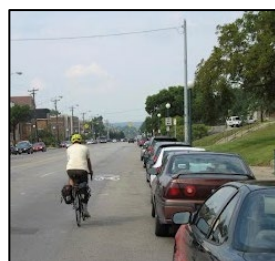
Shared use path (50%)



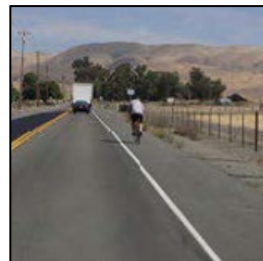
Shared lane marking on a quiet street (48%)



Standard bicycle lane (44%)



Shared lane marking on a busy street (16%)



Highway shoulder (16%)

## TOP ROUTES/INTERSECTIONS FOR IMPROVEMENT

Respondents were asked the following question and then encouraged to answer with an open-ended written text response:

*Imagine you had a magic wand and could instantly change one route and one intersection in our community to improve them for bicycling and walking. Which ones would you select?*

54 respondents submitted 58 ideas shown in Figure A-16 (ideas mentioned by only one respondent were not included in the chart). Highway 120/Century Avenue was the top priority in 12 out of 58 ideas (or 21%), while Hadley Avenue and Ideal Avenue were the top priorities in 6 out of 58 ideas (or 10% each).

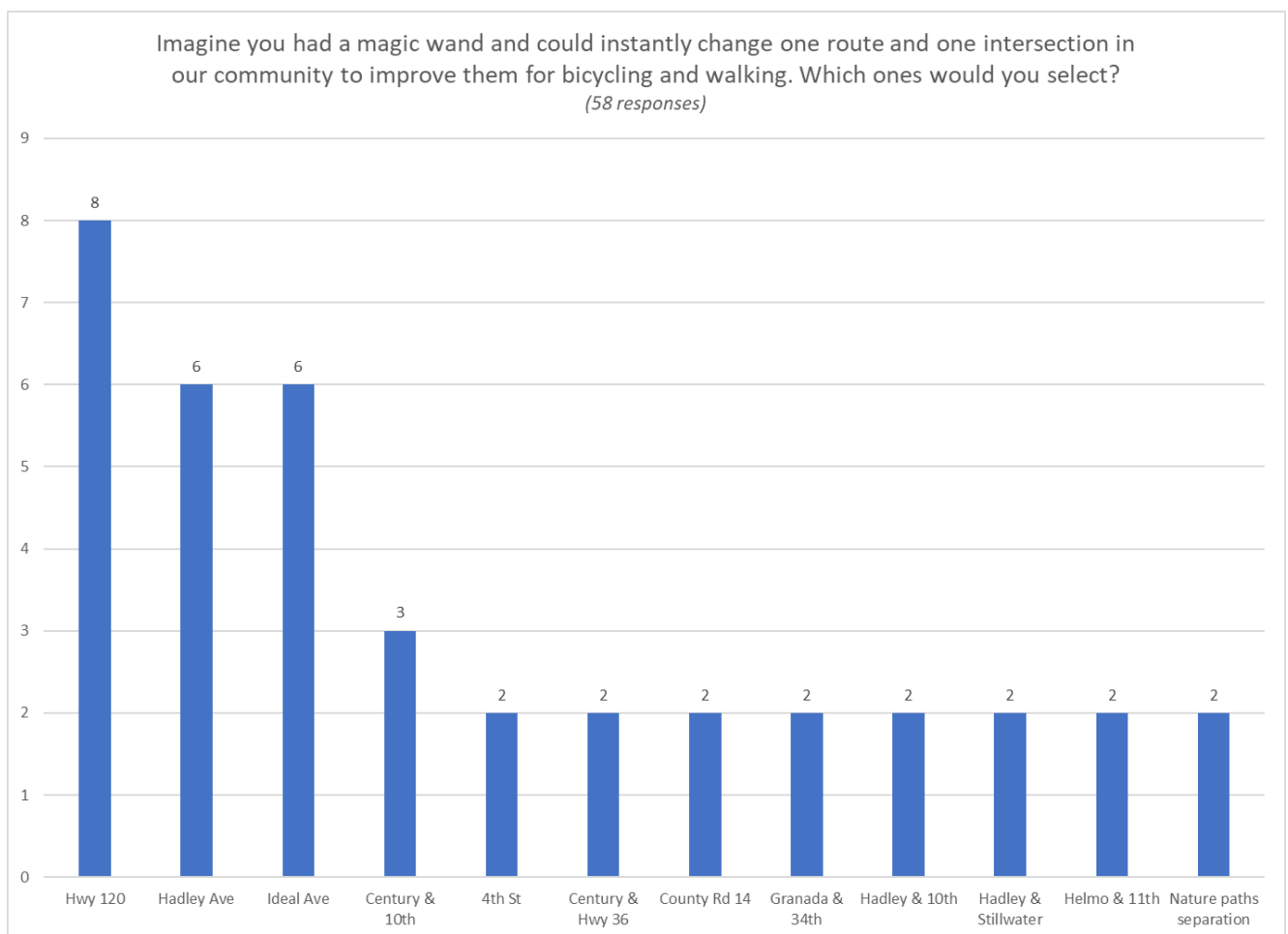


Figure A-16. Column chart showing the top route or intersection for instant change in Oakdale.

## STORIES ABOUT BICYCLING OR WALKING

Community members were asked the following question and then encouraged to answer with an open-ended written text response:

*Tell us why you want Oakdale to be bike- or walk-friendly. Share about the people in your life who would benefit from more bicycling and walking routes.*

49 people submitted stories with 69 themes, which are summarized in Figure A-17. Only themes mentioned by two or more respondents were included. The most popular themes were:

1. Safety (12/69, or 17%)
2. Kids (10/69, or 14%)
3. Health (9/69, or 13%)

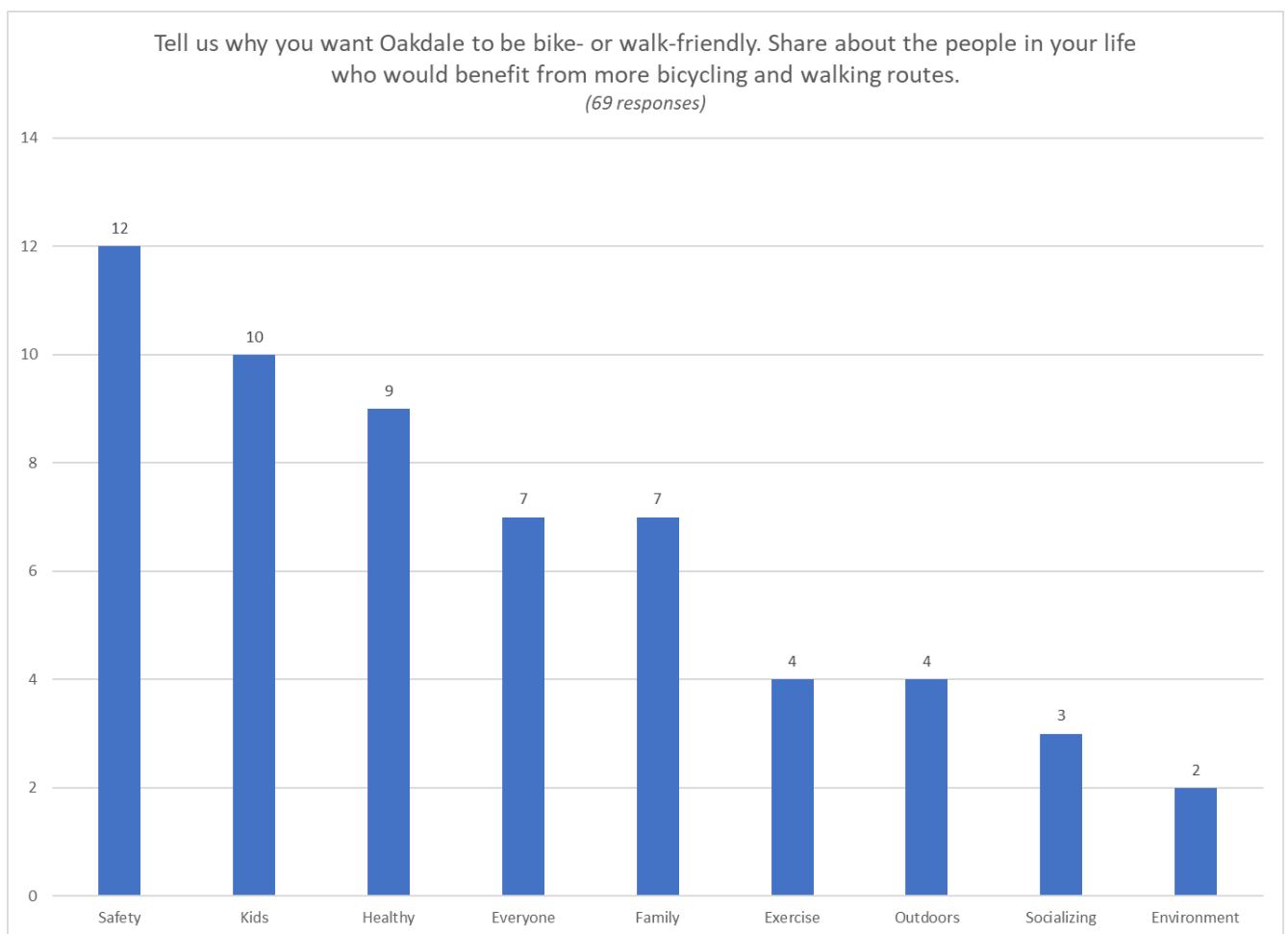


Figure A-17. Column chart showing the most popular themes in residents' stories about why bicycling or walking is personally important.

## ADDITIONAL COMMENTS

98 residents submitted additional comments to be considered for the Plan. The question prompt was the following:

*Is there anything else you would like to tell us regarding your experience walking or biking in Oakdale?*

Each comment was assigned general topics corresponding to their content. 107 topics were submitted. Only topics mentioned by two or more respondents were included in Figure A-18. The following five topics were the most mentioned in the additional comments:

1. Desire more bike/pedestrian facilities (19/107, or 18%)
2. Appreciate existing facilities (12/107, or 11%)
3. Safety from bicyclists (8/107, or 7%)
4. Supportive of bicycling/walking investments (7/107, or 7%)
5. Desire more bicycle regulation (6/107, or 6%)

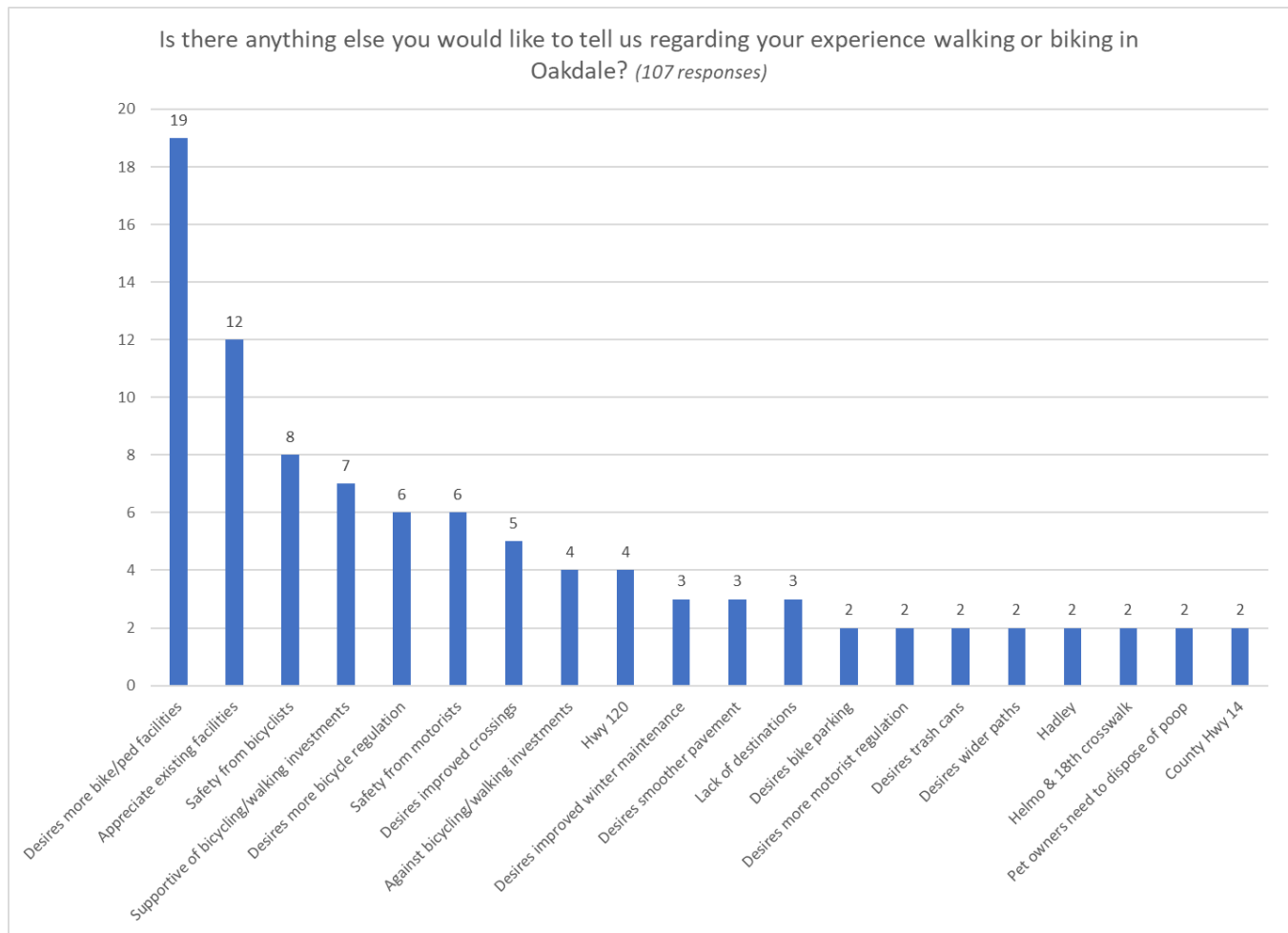


Figure A-18. Column chart of additional comments by topic.

## VISIONING

Residents were asked to provide three words to describe what they hope biking and walking will look and feel like in Oakdale in the future. 51 people responded with 130 words. Figure A-19 shows the most common visionary words chosen by the individuals. Only words mentioned by two or more respondents were included in the chart. The community most said they wanted Oakdale to be:

1. Safe (28/130, or 22%)
2. Accessible (7/130, or 5%)
3. Connected (6/130, or 5%)

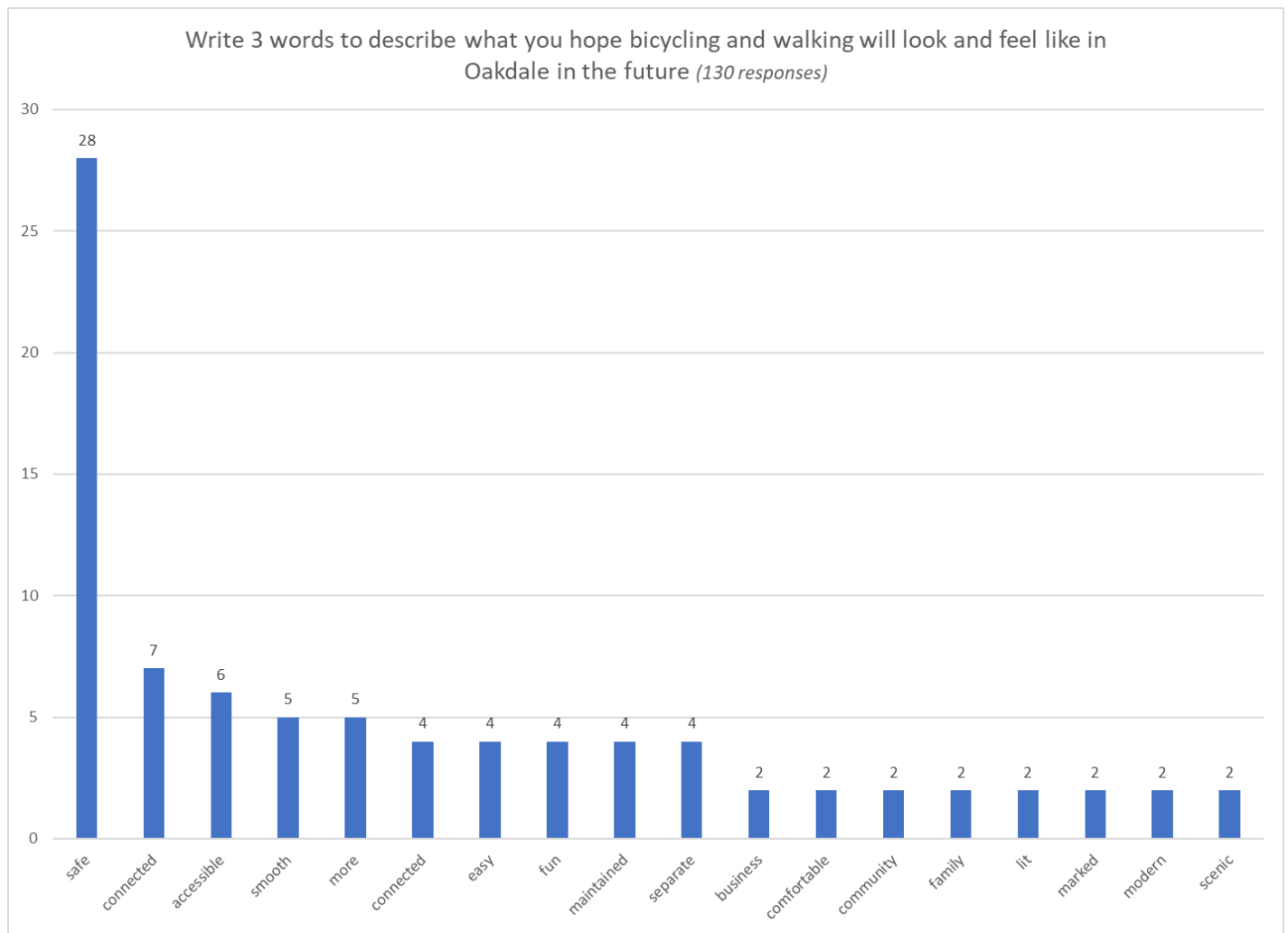


Figure A-19. Column chart of visioning words.

## PARTICIPANT DEMOGRAPHICS

The following section describes demographic characteristics of both in-person and online public engagement participants. 62% of participants were female and 38% were male, as shown in Figure A-20. In the 2010 census, 52% of Oakdale residents were female and 48% were male. 93% of participants were white, as shown in Figure A-15. In the 2010 census, 81% of Oakdale residents were White, 8% Asian, 6% Black, and 4% Hispanic.

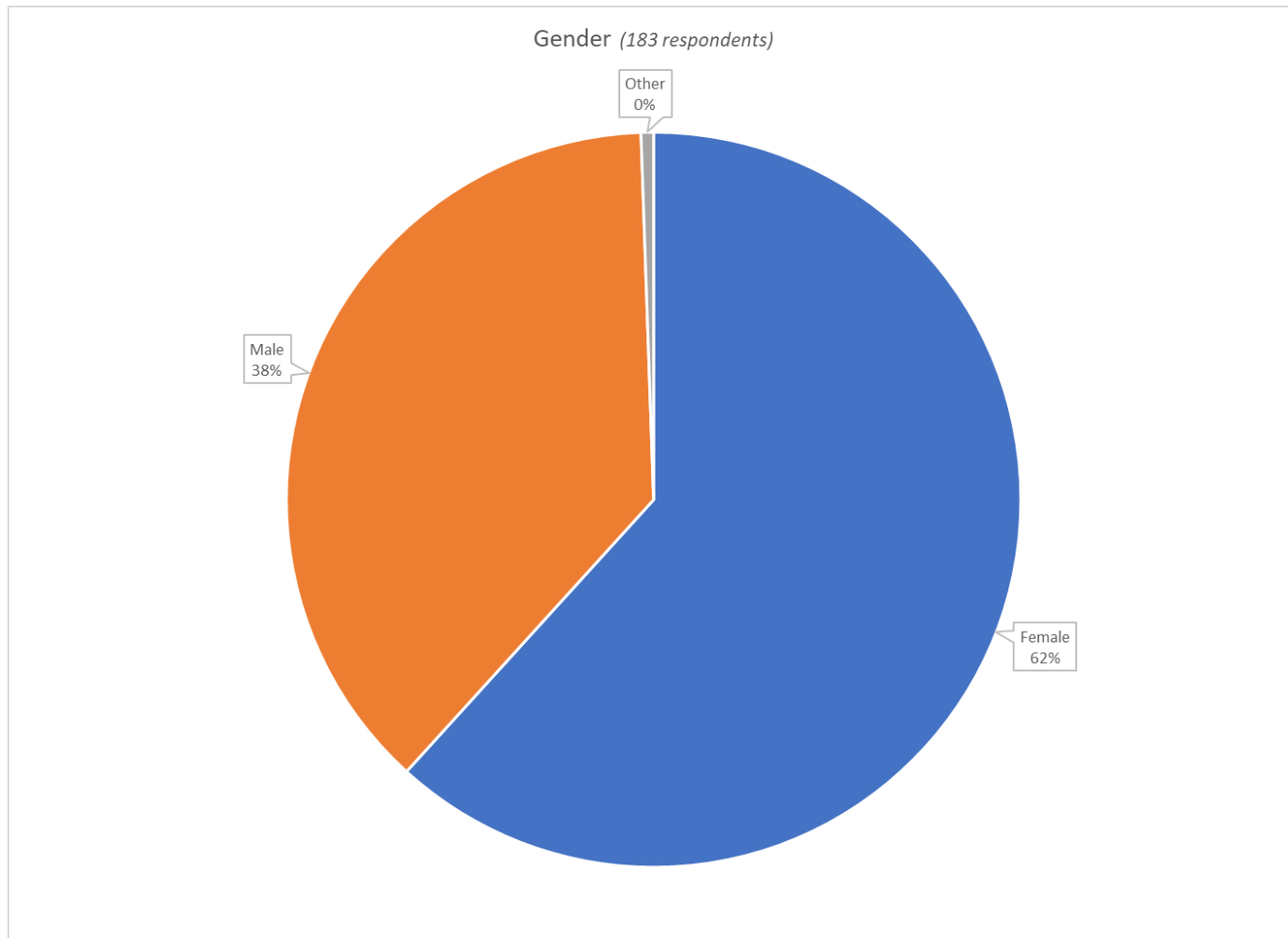


Figure A-20. Gender of participants in the Oakdale Bicycle and Pedestrian Plan public engagement activities.

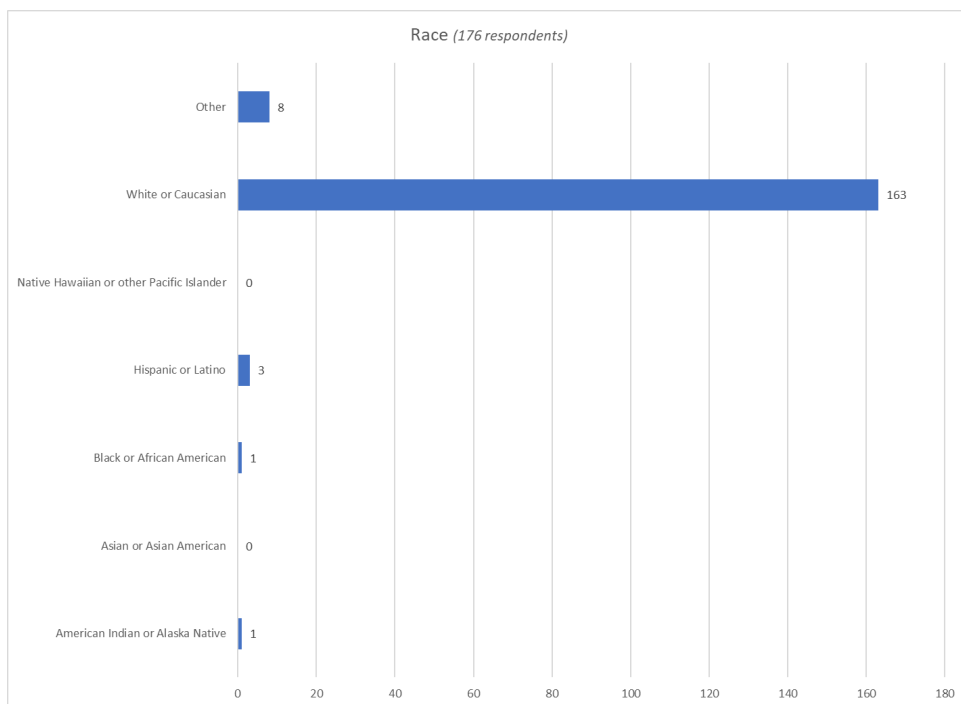


Figure A-21. Race of participants in the Oakdale Bicycle and Pedestrian Plan.

The most participants (34%) were between the ages of 55 and 64 followed by the ages of 35 and 44, as shown in Figure A-16. In the 2010 Census, 24% of residents were under the age of 18, 9% between 18 and 24, 26% were from 25 to 44, 29% from 45 to 64, and 11% 65 years of age or older. 15% of respondents identified as having a disability, as shown in Figure A-23.

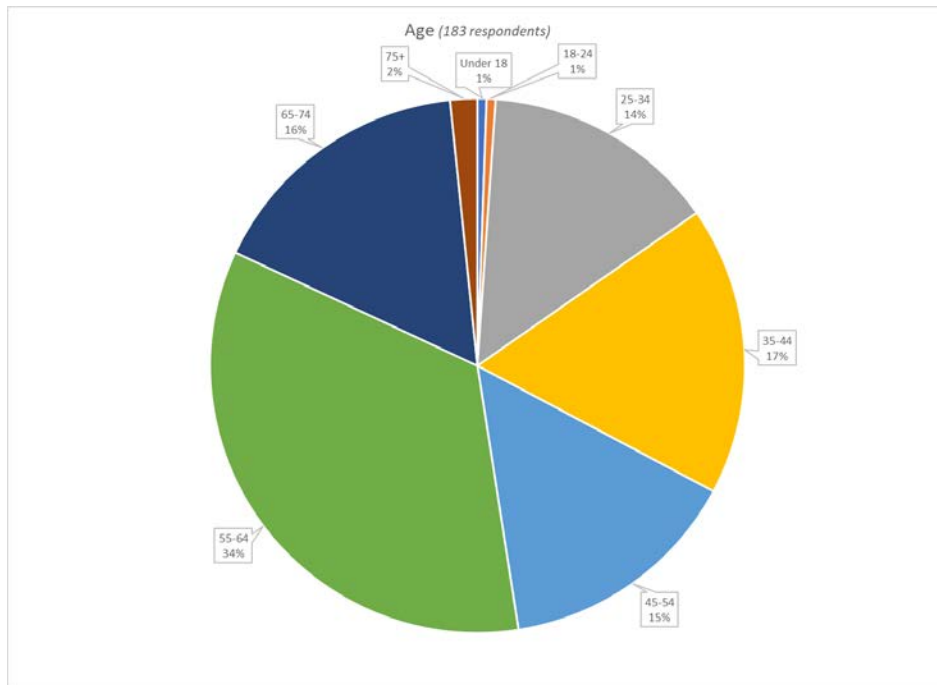


Figure A-22. Age of participants in the Oakdale Bicycle and Pedestrian Plan public engagement activities.

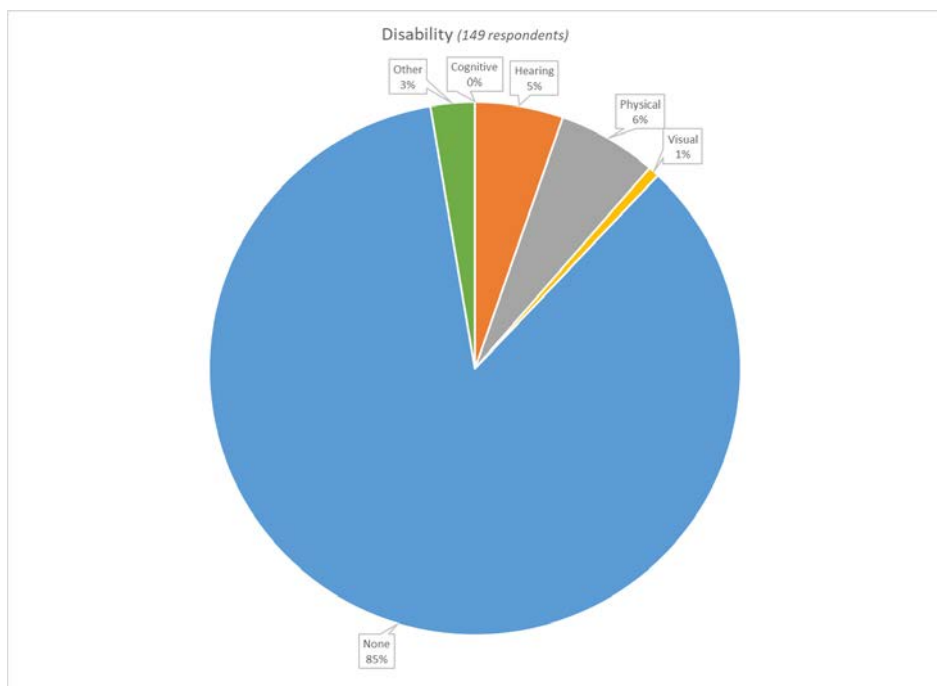


Figure A-23. Disability status of participants.

## Strategy B: City Commissions

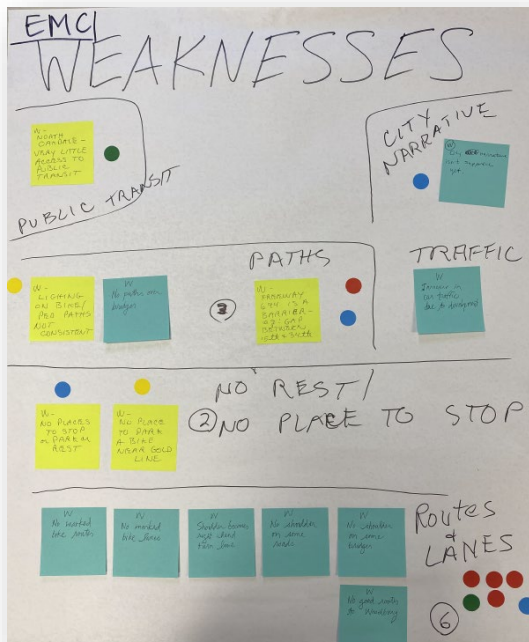
In the summer of 2022, several City commissions met to learn about and give input on the Bicycle and Pedestrian Plan. The commissions included:

- Environmental Management Commission
- Economic Development Commission
- Parks Commission
- Planning Commission

Toole Design and City of Oakdale Community Development staff facilitated the meetings with a focus on four key pieces of information: **strengths** (what are you proud of?), **weaknesses** (what things drive you nuts?), **opportunities** (are there organizations doing work, or upcoming projects we should know about?), and **threats** (what are the external forces that will make it difficult to make Oakdale more friendly for bicycling and walking?).

Commission members individually brainstormed ideas under each category, and then worked as a group to categorize them. Each person then voted on the top area in each category. Results included:

Category	Sub-categories (votes)
Strengths	Existing trails/paths (13), Trail maintenance (4), Wide streets/shoulders (2)
Weaknesses	Routes & lanes (6), Lack of sidewalks (3), Paths (3), Safety/crosswalks (2), Bike/road sharing (2), No rest stops (2), Lack of path amenities (2)
Opportunities	Development (7), Collaborations (5), Marketing (5), Street furniture (3), Lighting (3), Crosswalks (2)
Threats	Traffic (7), E-bike safety (4), Poorly planned multi-use scenarios (4), Political will (3)



## **Strategy C: Focus Groups**

On December 9<sup>th</sup>, 2022 and January 17<sup>th</sup>, 2023, the project team met with 50 people in three focus groups. These input sessions focused on how people view walking and bicycling in Oakdale and what ideas people have for improving the walking and bicycling environment. Earlier in 2022, staff from the Community Development Department conducted 18 business retention visits and asked representatives about the City's trail system or walkability. The following sections summarize the participant groups and key topics from the conversation.

### **HIGH SCHOOL STUDENTS**

The project team met with students from Tartan High School in the business classes of Iker Belausteguigoitia. 42 students in two classes were engaged. Key topics from the conversation included:

- Most students used a personal vehicle to get to school, either as a driver or passenger.
- Most students do not currently have a driver's license, but the majority have a driver's license or permit.
- Most students have walked or rode a bicycle around Oakdale, but closer to half of students view walking or bicycling as important on a personal basis.
- Approximately half of students think the government should use taxes for walking or bicycling infrastructure.
- Walking is more important to students than bicycling, since it's a more accessible form of transportation.
- Parks, schools, restaurants, and convenience stores are important destinations for walking or bicycling.
- Walking or bicycling as forms of transportation tend to be more important for younger children, people with dogs, and those concerned about their overall mental and physical health.
- Linear walk/bike facilities separated from motor vehicles, having streets with walk/bike facilities on both sides, safer street crossings, and nighttime lighting are needed improvements.

### **50+ WELLNESS GROUP**

The project team met with eight members of the Oakdale 50+ Wellness Group. Key topics from the conversation included:

- Folks walk in the Oakdale Nature Center, along Hadley, Helmo, and Stillwater Avenues, around Tanner's Lake, along the Gateway State Trail, and in their neighborhoods. Oakdale Nature Center is a treasured location.
- Repaved paths in Oakdale Nature Center are appreciated, and there is more repaving needed.
- Bridges in Oakdale Nature Center aren't being cleared of snow in the winter.
- People appreciate existing paths around Oakdale and that they are maintained so well in the winter.
- Bicyclists go too fast around people walking and can be surprising. It's difficult to mix the two modes on shared use paths without guidance about etiquette.
- About half of participants also ride a bicycle.
- Mixing the modes of pedestrians and bicyclists is easier on Hadley where the path is wider and visibility is greater, compared to paths within Oakdale Nature Preserve.
- Wider shared use paths are preferable over narrow shared use paths.
- Streets with shoulders are often used as an alternative for bicyclists where shared use paths are also available. This option is used to avoid conflicts with pedestrians.
- There is interest in more sidewalks being located within neighborhoods.
- It would be helpful to share more information about Oakdale's walking and bicycling facilities with residents.

## **BUSINESS RETENTION VISITS**

City staff visited with representatives of 18 businesses during business retention visits including Animal Emergency and Referral Center of MN, CCF Bank, Carol Mathey's Center for Children and Families, Crossroads Properties, FlowFit Yoga + Fitness, Greg Foote Jewelers, Hampton Inn and Suites, Hearing of America, Hi Five Sports Zone, Hy-Vee, JW's Beirstube, Little Inspirations Child Care Center, Park Tool, Platinum Bank, Sgt Pepper's Grille and Bar, Twin Cities Hardware, Victoria's Nails and Spa, and Warrior Nutrition. When representatives were asked their thoughts on the city's trail system or walkability, key topics from the conversations included:

- The city's trail system is generally good but needs improvements.
- There are site specific improvements that need to be made for certain businesses to improve walking and bicycling safety.
- Certain businesses are well positioned for nearby walkable destinations.
- Most people want a more trail friendly community, but most people also drive for their trips to businesses.
- The Gold Line project is a positive improvement.

# City of Oakdale Pedestrian and Bicycle Plan

 Gold Line Stations


 Shared Use Paths

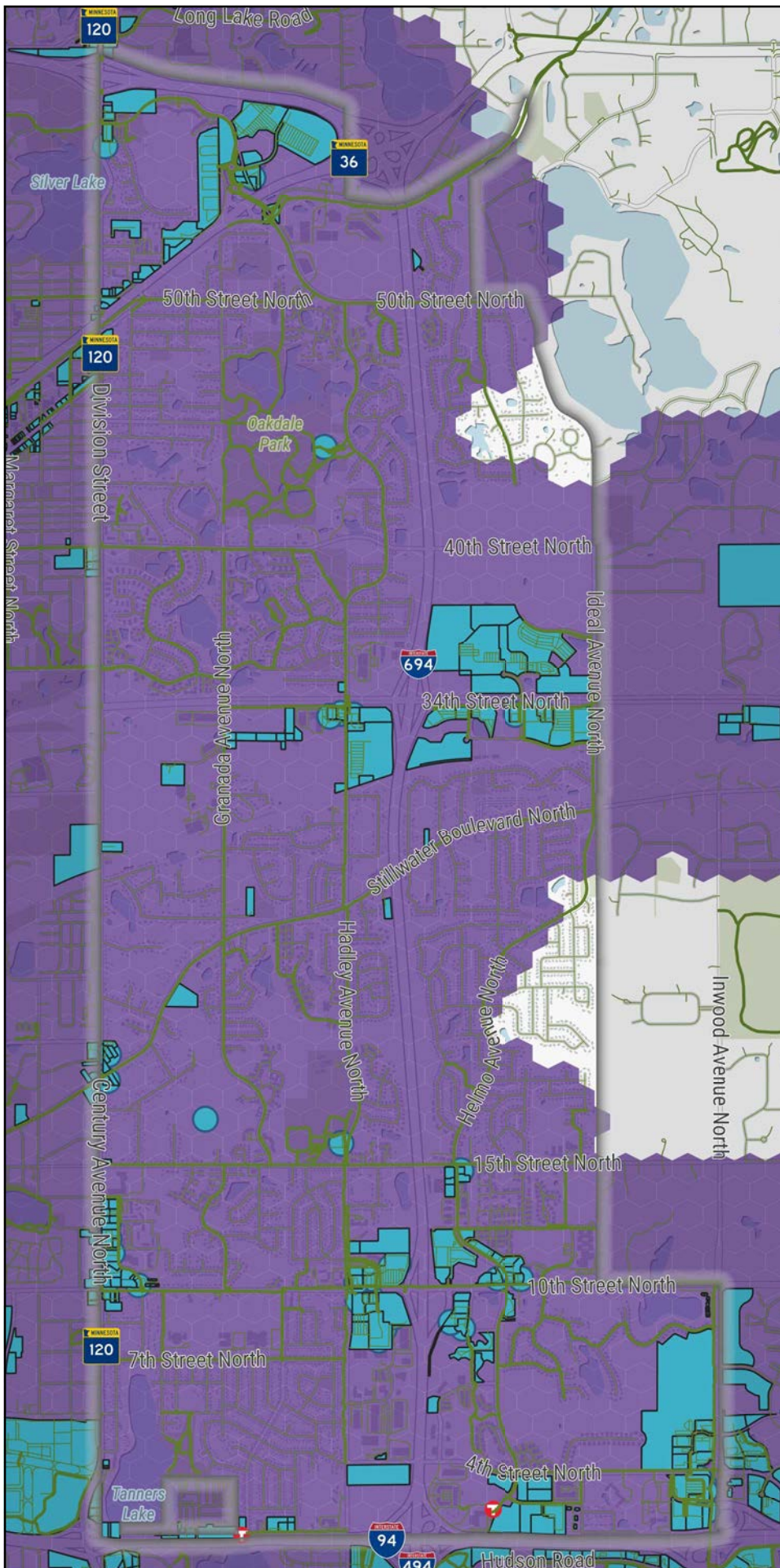
 Low Stress Network

*Commercial destinations  
within 1/2 mile*

None

 One or more

 Commercial parcels  
and food destinations




# City of Oakdale Pedestrian and Bicycle Plan

 Gold Line Stations

 Shared Use Paths

 Low Stress Network

*Total Employment  
within 1/4 mile*

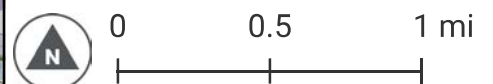
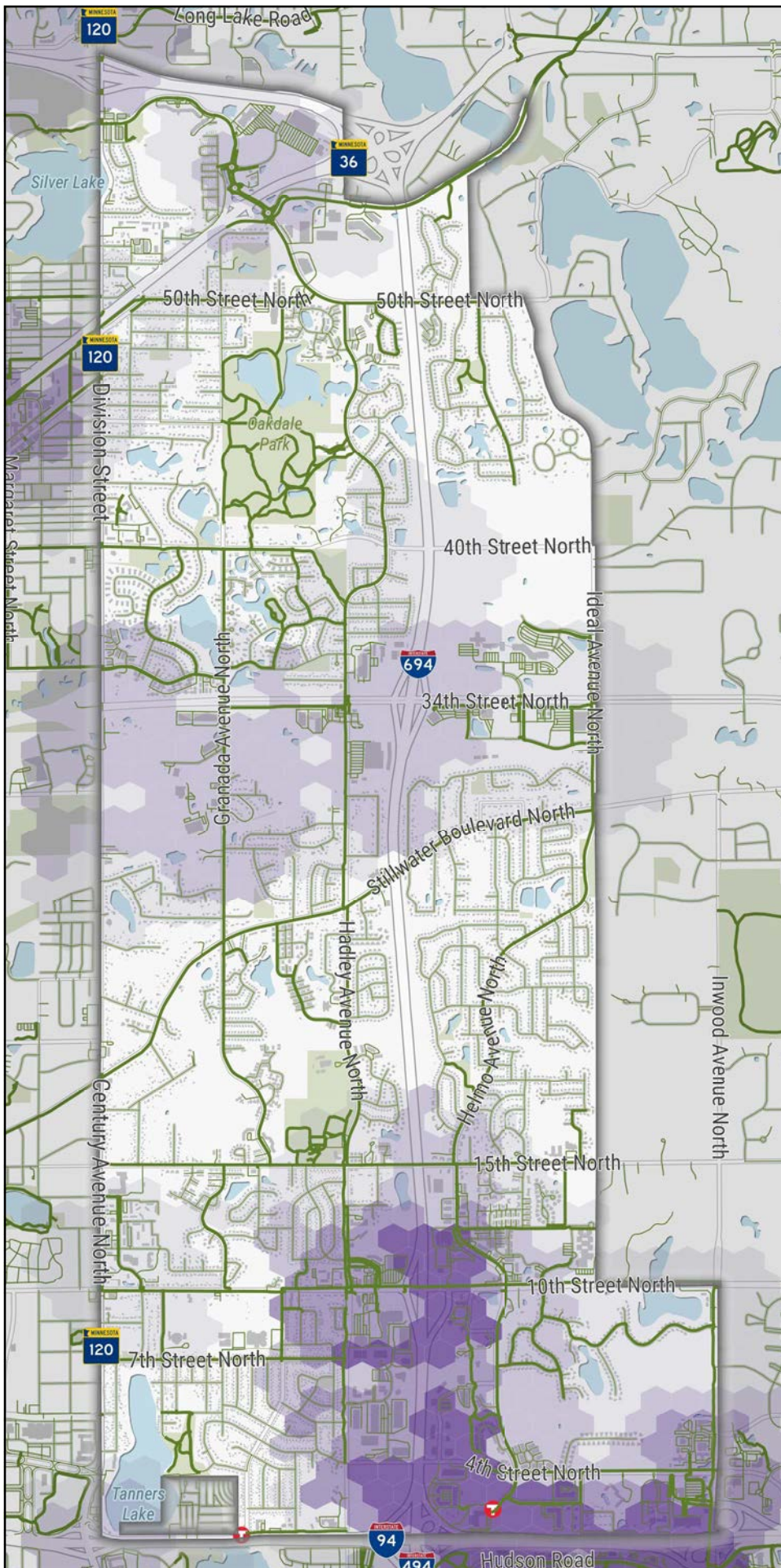
 1 - Highest

 2

 3

 4

5 - Lowest



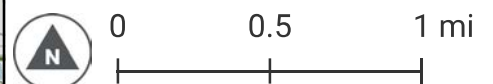
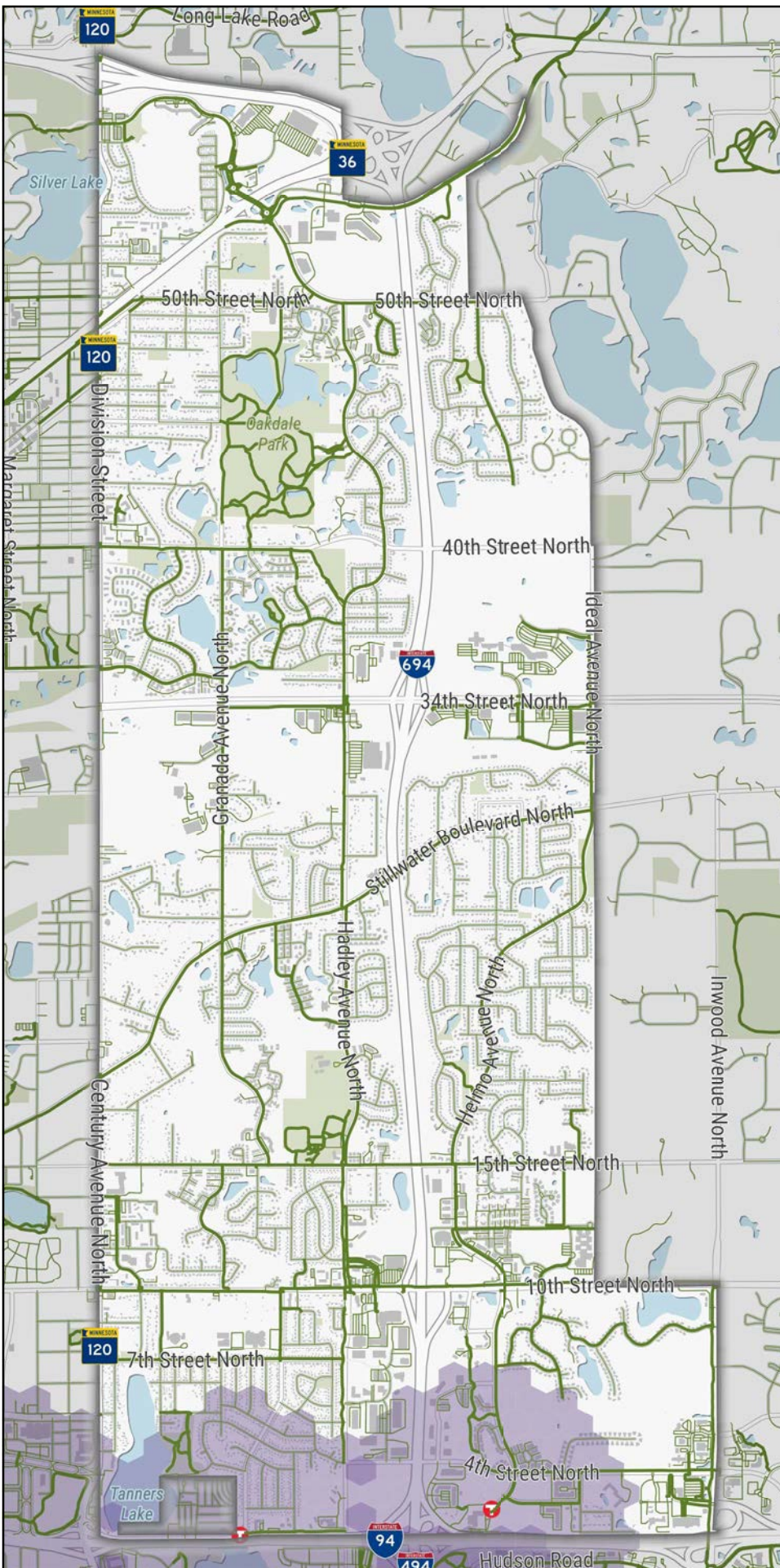
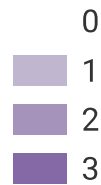
# City of Oakdale Pedestrian and Bicycle Plan

 Gold Line Stations

 Shared Use Paths

 Low Stress Network

*Number of Gold Line BRT stations within 1/2 mile*




# City of Oakdale Pedestrian and Bicycle Plan

 Gold Line Stations

 Shared Use Paths

 Low Stress Network

*Four-way intersection density  
within 1/4 mile*

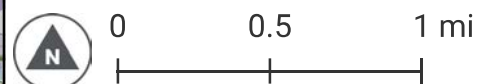
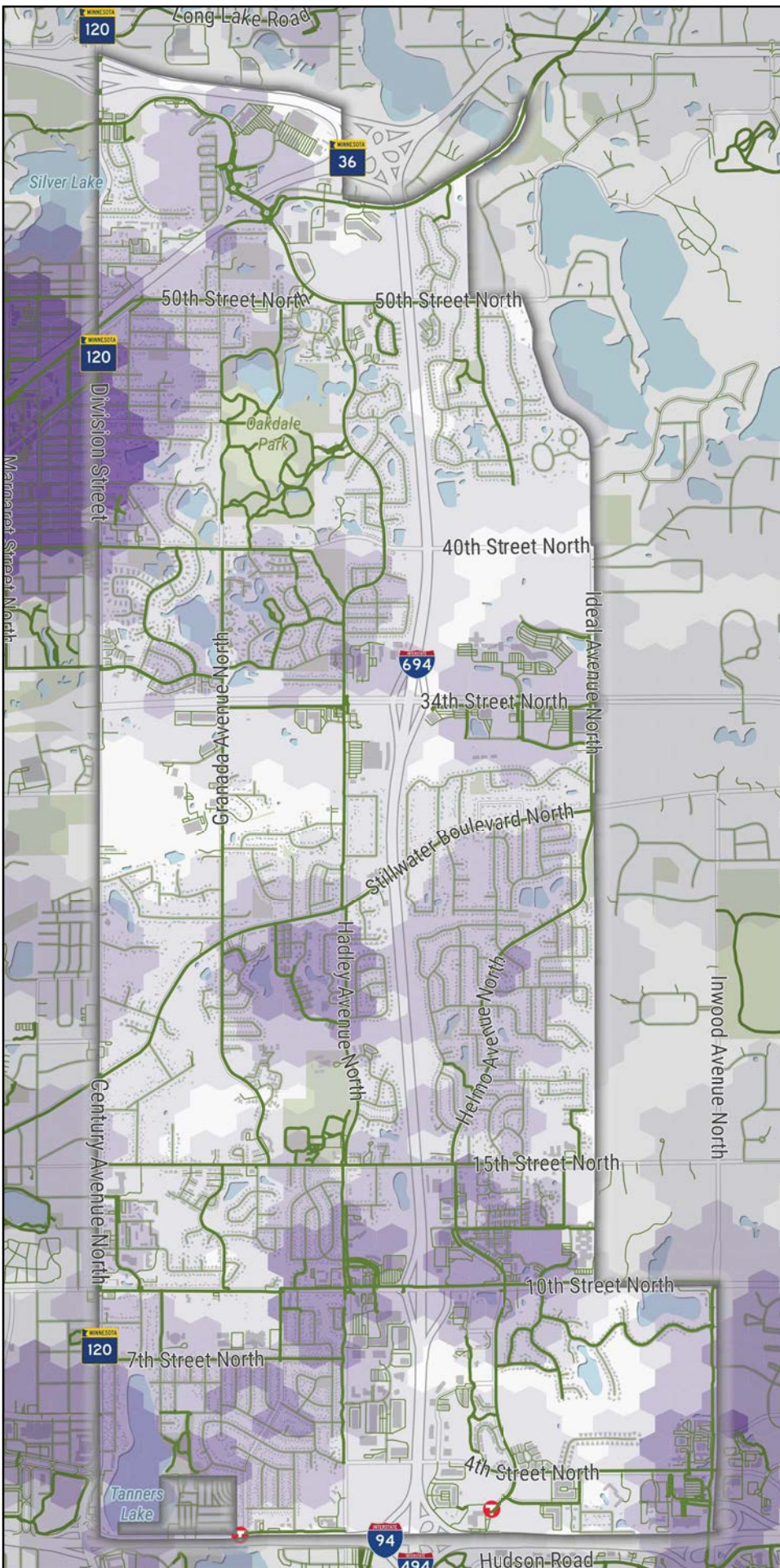
 1 - Highest

 2

 3

 4

5 - Lowest



# City of Oakdale Pedestrian and Bicycle Plan

 Gold Line Stations

 Shared Use Paths

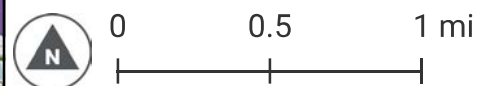
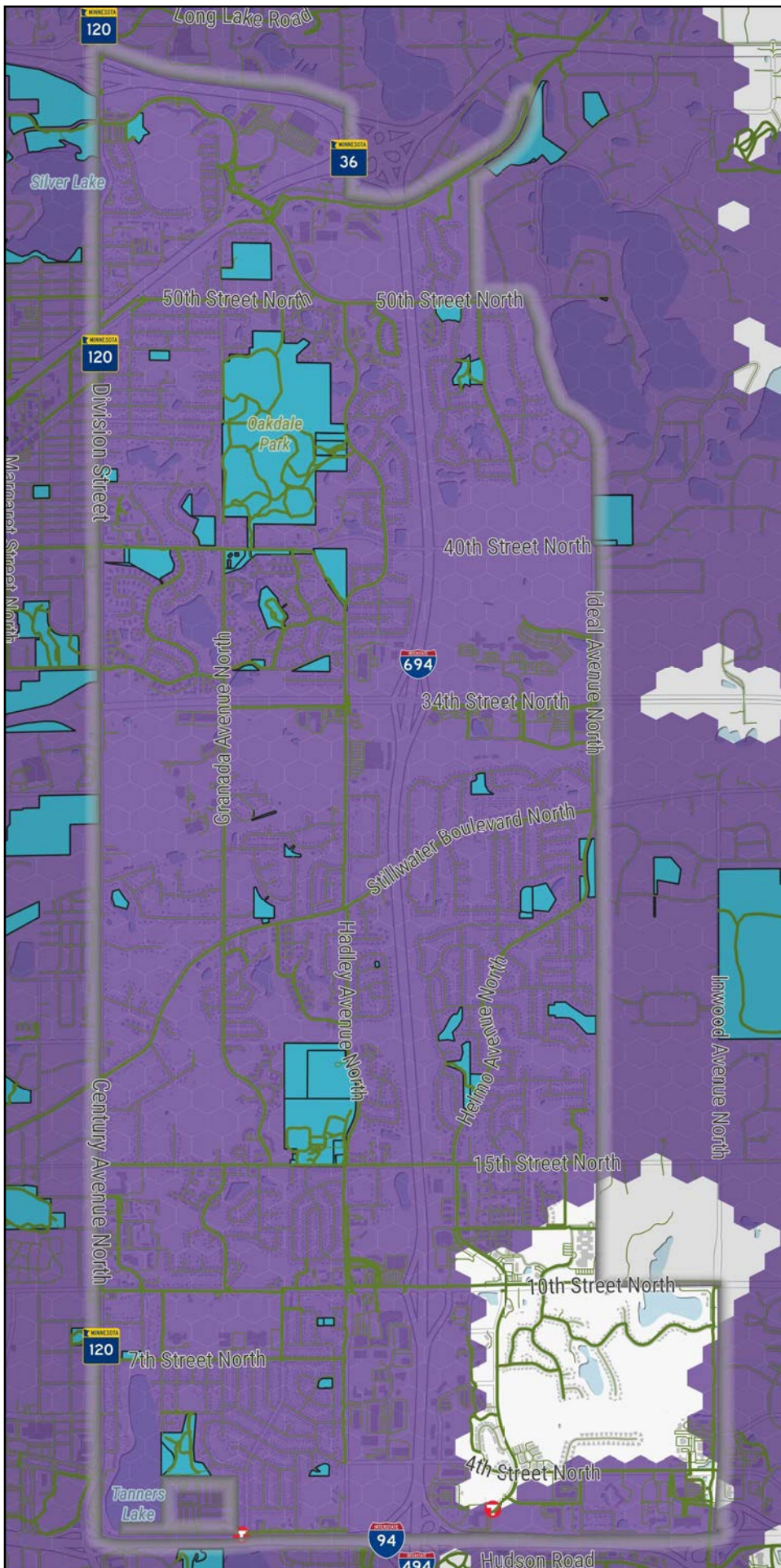
 Low Stress Network

*Parks within 1/2 mile*

None

 One or more

 Parks




# City of Oakdale Pedestrian and Bicycle Plan

 Gold Line Stations

 Shared Use Paths

 Low Stress Network

*Population density*

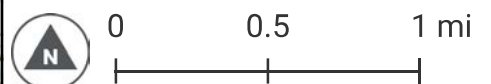
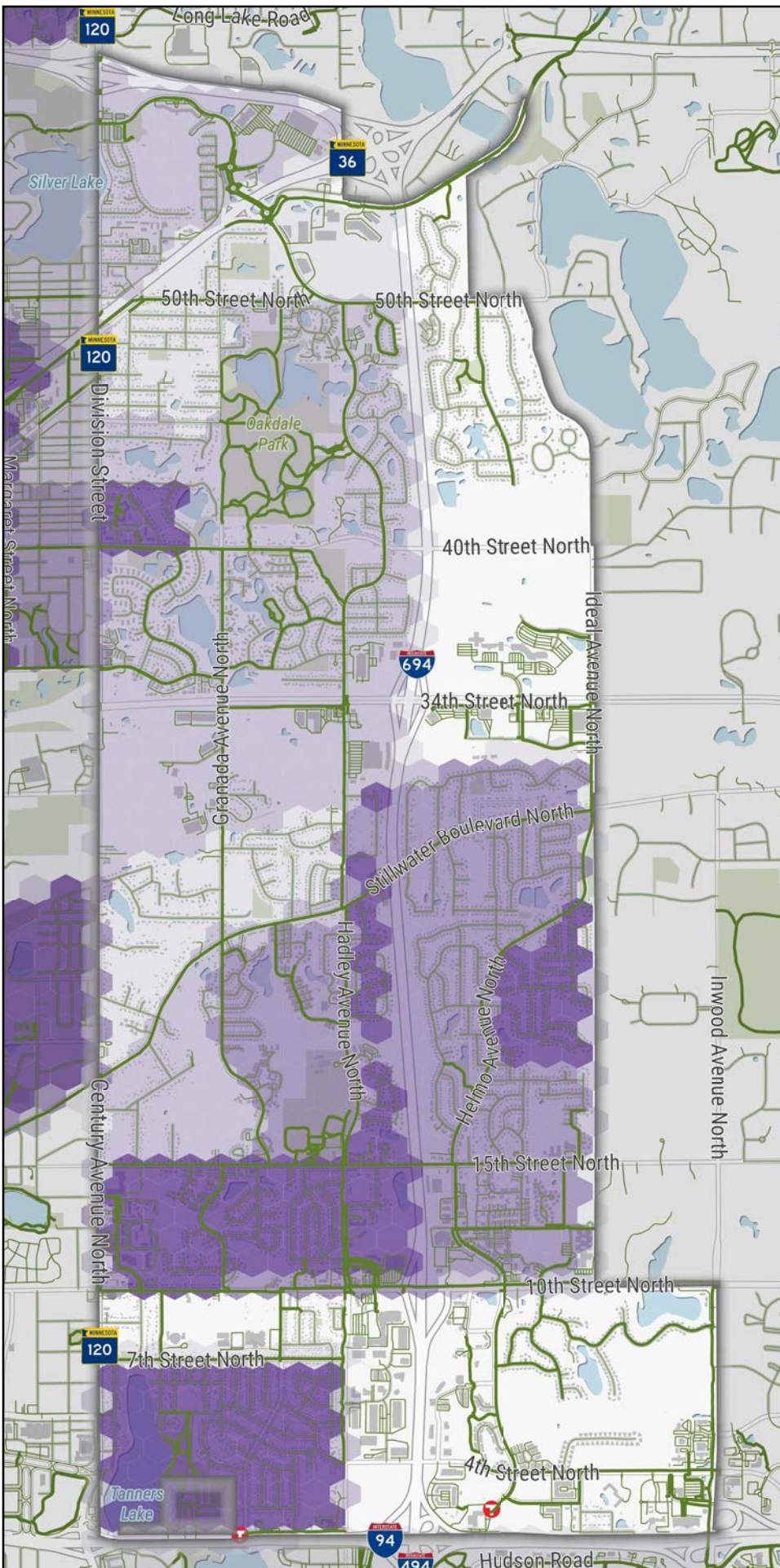
 1 - Highest

 2

 3

 4

 5 - Lowest




# City of Oakdale Pedestrian and Bicycle Plan

 Gold Line Stations

 Shared Use Paths

 Low Stress Network

*Number of K-12 schools  
within 1/2 mile*

 1 - Highest

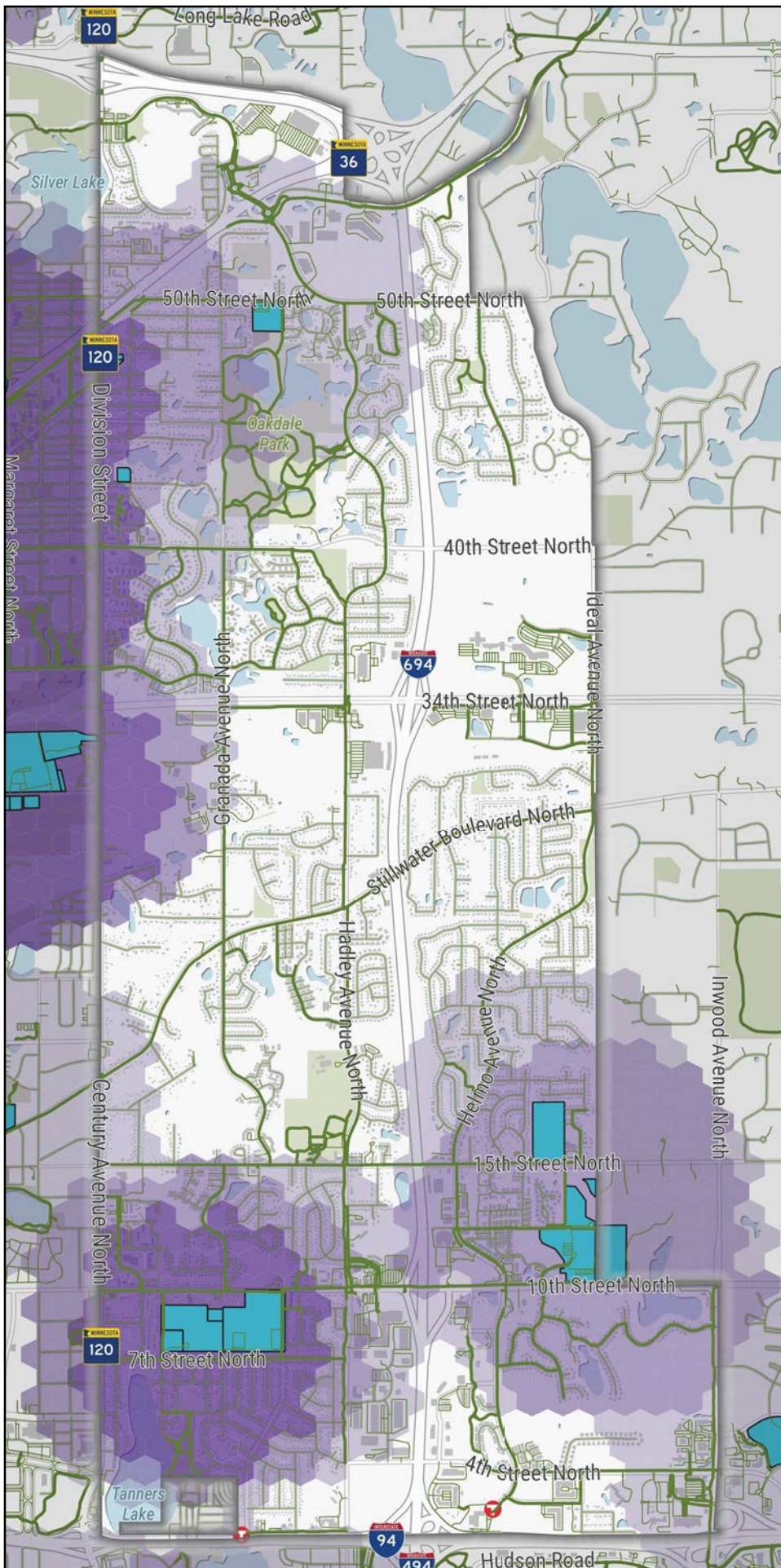
 2

 3

 4

 5 - Lowest

 School Parcels




# City of Oakdale Pedestrian and Bicycle Plan

 Gold Line Stations

 Shared Use Paths

 Low Stress Network

*Number of transit stops  
within 1/2 mile*

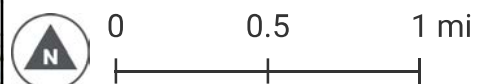
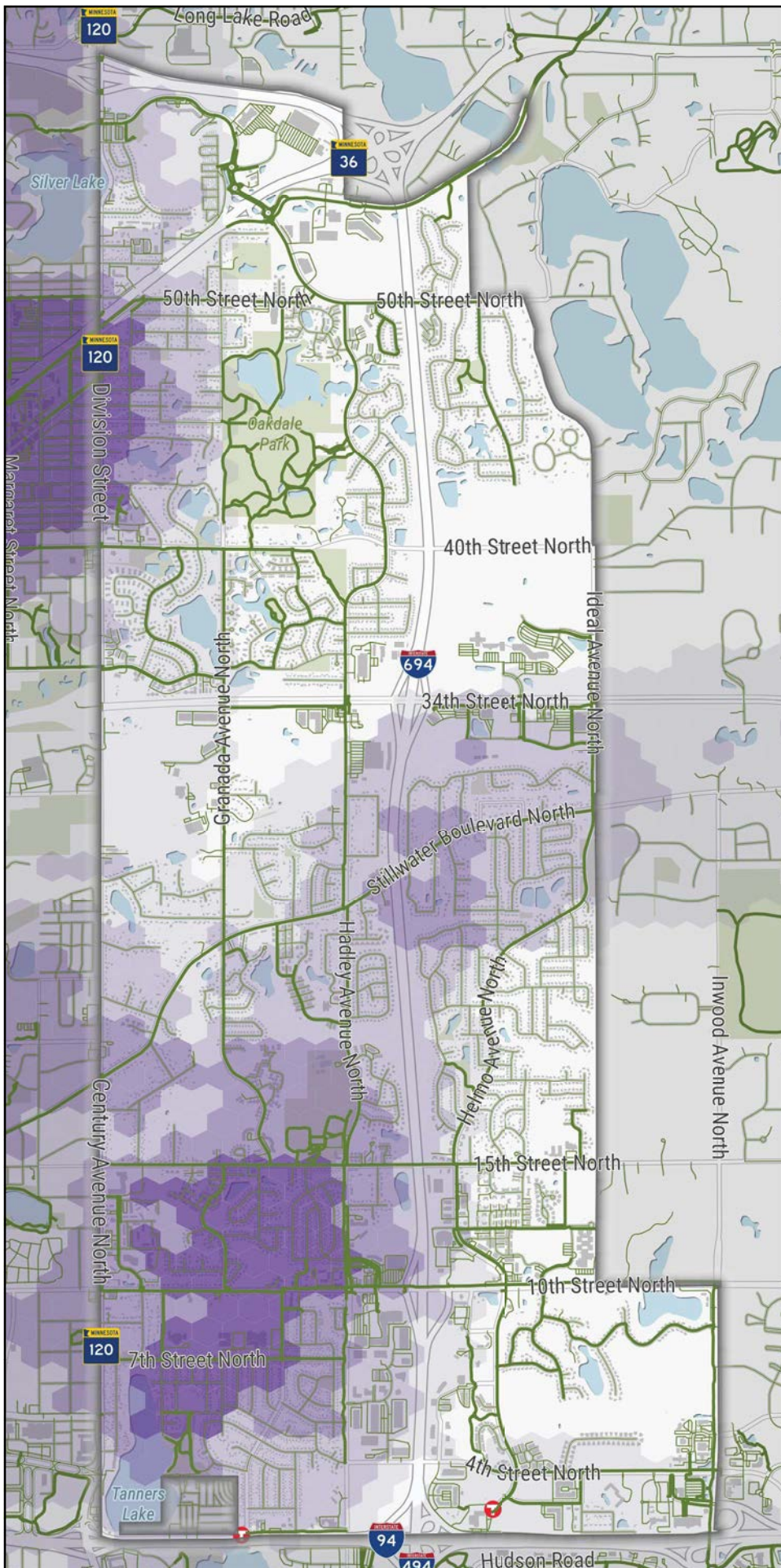
 1 - Highest

 2

 3

 4

5 - Lowest




# City of Oakdale Pedestrian and Bicycle Plan

 Gold Line Stations

 Shared Use Paths

 Low Stress Network

## Weighted Destination Intensity Score

 1 - Highest

 2

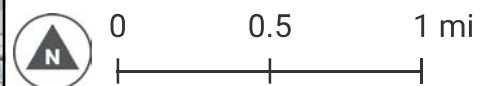
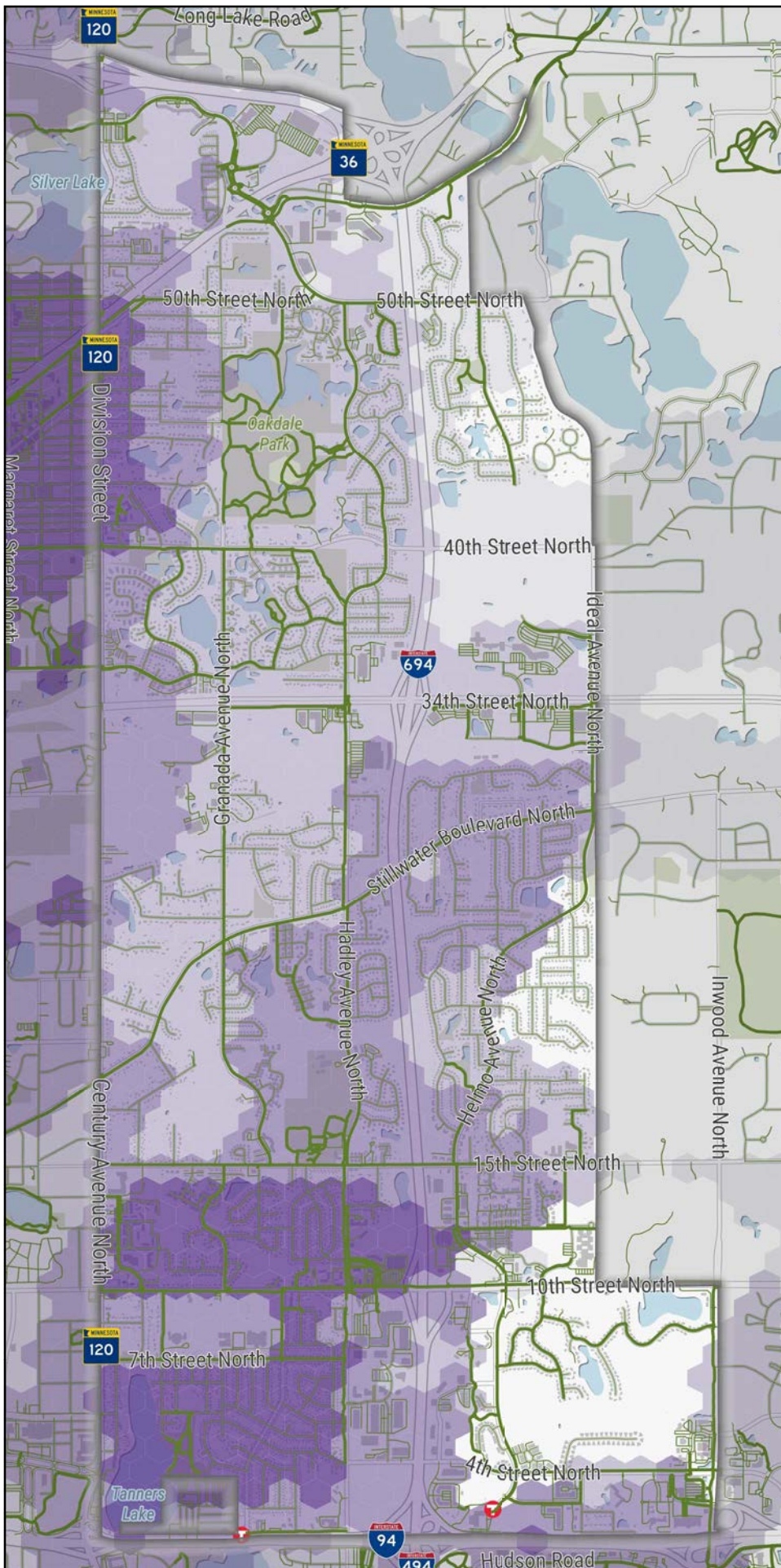
 3

 4

 5 - Lowest

Destination intensity score is calculated using the following weights:

- 20 Population density
- 15 Commercial
- 15 Parks
- 15 Employment
- 10 Transit stops
- 10 Intersection density
- 10 Schools
- 5 Gold Line BRT



## MEMORANDUM

February 27, 2023

To: Shannon Reidlinger, Andy Gitzlaff  
Organization: City of Oakdale  
From: Shaun Murphy-Lopez, Mitch Coffman  
Project: Oakdale Bicycle and Pedestrian Plan

### Re: Summary of Plans

Toole Design has conducted a comprehensive review of existing local and regional plans related to bicycling and walking. This memo provides a summary of local and regional bicycle and pedestrian goals and policies as well as recommended network routing and projects to consider and/or incorporate into the Oakdale Bicycle and Pedestrian Plan.

### City of Oakdale Comprehensive Plan

This 2018 Comprehensive Plan provides overall guidance for community development and the Oakdale Bicycle and Pedestrian Plan should help achieve the goals of the Comprehensive Plan and be consistent with its policies. The Comprehensive Plan lays out bicycle- and pedestrian-related goals and policies under the transportation and parks/trails subject areas.

#### Transportation

- **Goal 1 – City roadways shall be safe and functional for pedestrians, bikes, automobiles and trucks**
  - **Policy 1 – Study intersections and corridors to address issues such as traffic calming and congestion mitigation.**
- **Goal 2 – Highway 120 shall be safe, functional, aesthetically pleasing and support redevelopment and transit at certain locations.**
  - **Policy 1 – Establish safe bicycle and pedestrian access along the corridor with connections to neighborhoods along the corridor.**
- **Goal 3 – Future road infrastructure planning shall be performed collaboratively with adjacent cities, Washington County and the Minnesota Department of Transportation.**
  - **Policy 2 – Support a new multimodal bridge over Interstate 94 connecting Helmo Avenue North with Bielenberg Drive in Woodbury.**
  - **Policy 3 – Support the construction of a new interchange at Highways 36 and 120 to include pedestrian and trail access.**
- **Goal 4 – Sidewalks, trails, and bikeways shall be connected within the city and between adjacent cities.**
  - **Policy 1 – Update the 1995 Bicycle and Pedestrian Plan to incorporate the expansion of the existing trail and sidewalk network.**
  - **Policy 2 – Request Washington County complete trails identified in the County Transportation plan, specifically along County Road 14.**

- **Policy 3** – Support the construction of new sidewalk and trail connections identified in the Gold Line BRT Helmo and Greenway Station Area Plans.
- **Policy 4** – Collaborate with adjacent cities to plan and construct trail connections between cities.
- **Policy 5** – Establish wayfinding signage that promotes intercity trail system connections between Oakdale, Maplewood, Woodbury, North St. Paul, the Gateway Trail, and the Gold Line BRT Stations.
- **Policy 6** – Support the rehabilitation and reconstruction of complete streets that enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.
- **Policy 7** – Support the rebuilding of the 4<sup>th</sup> Street bridge over I-694 to include space for a dedicated pedestrian walkway and Gold Line BRT guideway.
- **Policy 8** – Support the addition of a pedestrian walkway adjacent to the 4<sup>th</sup> Street Bridge over I-694 to improve access to Helmo Station from the west side of I-694.
- **Goal 5 – Transit service shall provide mobility options for residents, workers, businesses, and transit dependent persons.**
  - **Policy 2** – Collaborate with Metro Transit to assess and improve transit facilities and sidewalk and trail connections to and from transit facilities.

### **Parks & Trails**

- **Goal 2 – Recreational programming, park facilities, and open space shall be accessible to all physical abilities and incomes.**
  - **Policy 2** – Develop a plan to ensure the public use of open space, including wetlands, is open to all pedestrians and bicyclists.
- **Goal 3 – Parks shall be integrated into the City's pedestrian system.**
  - **Policy 1** – Develop a plan to connect parks to each other via the City's trail and sidewalk system.

### ***How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan***

All overall policies and geographic-specific projects should be included in the Bicycle & Pedestrian Plan.



**Figure 1** The paths and trails map from the Oakdale Comprehensive Plan shows existing and planned bicycle and pedestrian facilities in relation to the City's park system

## City of Oakdale Capital Improvements Plan (CIP)

The 2022-2026 CIP establishes “a framework for planning the preservation and expansion of capital including equipment, facilities, and infrastructure. It sets the estimated schedule, timing, and details of specific improvements by year, together with the estimated cost, the need for the improvement, and sources of revenue to pay for the improvement.” In addition to the framework, it also includes capital projects programmed for construction over the next four years.

The CIP includes a summary of Standard Operating Policy FR-010 as it relates to “Bikeway/Pedway/Sidewalk Improvements.”

- A. *The city will install bikeway/pedways and sidewalks according to the Comprehensive Bikeway/Pedway Plan for the community. The bikeway/pedways should be an eight (8) foot wide asphalt surfaces separated from the roadway surface a minimum of four (4) feet. Sidewalks shall be five (5) feet wide concrete surface separated from the roadway surface a minimum of four (4) feet.*
- B. *The city will consider omitting sidewalks when 80% or more of the abutting property owners oppose the sidewalk improvements.*
- C. *Financing:*
  - 1. *Bikeway pedways can be financed as part of a roadway reconstruction assessment; park dedication fees; Municipal State Aid funds or Capital Improvement funds.*
  - 2. *Sidewalks along Municipal State Aid streets shall be financed with Municipal State Aid funds or Capital Improvement funds.*

Bicycle- and pedestrian-related projects programmed in the CIP include the following:

Project/Equipment	Year	Amount	Notes
CSAH 14 (34 <sup>th</sup> St N) Trail (Hadley Ave N to east side of I-694)	2022	\$68,947	Fills trail gap on the south side
40 <sup>th</sup> Street N Reconstruction (I-694 to Ideal Ave)	2022	\$3,099,546 (larger project cost)	Includes sidewalk and trail
Ideal Avenue (34 <sup>th</sup> St N to 44 <sup>th</sup> St N)	2022	\$515,932 (larger project cost)	Includes trail improvements
#2 MT Trackless	2023	\$128,800	Used for snow removal on trails
Oakdale Park Trail Repaving	2023	\$360,000	Trails will be repaved to improve condition, ADA compliance, and extend the life of the trail system
2025 Street Reconstruction and Overlay Project	2025	\$6,986,628 (larger project cost)	Includes 6' wide concrete sidewalk on Greenway Avenue between Hudson Boulevard and 7 <sup>th</sup> Street

Eberle Park Trail Repaving	2025	\$100,000	
2026 Street Reconstruction and Overlay Project	2026	\$7,667,248 (larger project cost)	Includes 8' wide bituminous path and pedestrian bridge over I-694 along 40 <sup>th</sup> Street

*How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan*

The policy on bikeway/pedway/sidewalk improvements should be considered and restated or amended in the Bicycle & Pedestrian Plan. Programmed projects should be included in the list of recommended projects, noting that funding sources have already been determined.



**Figure 2** The Oakdale CIP includes many bicycle- and pedestrian-related projects and equipment upgrades

## **Gold Line – Greenway Avenue Station Bus Rapid Transit Oriented Development (BRTOD) Plan**

The 2019 Gold Line Greenway Avenue BRTOD Plan by the City of Oakdale, City of Landfall, and Washington County Regional Rail Authority recommends creating a continuous biking and walking trail parallel to the BRT guideway. It also recommends strategic biking and walking improvements along existing, planned, and newly identified routes near the future Greenway Avenue station. Metro Transit's Gold Line Project Office will construct the "Corridor Trail" between Greenway Avenue and Hadley Avenue with the following elements:

- Trail lighting
- Landscaping between the trail and auto lanes
- Relocation of overhead utilities away from the trail
- Wayfinding signs

The project will also add the following:

- A new 10-foot trail along Hadley Avenue between 4<sup>th</sup> Street and Hudson Boulevard.
- A new 10-foot trail along the west side of Century Avenue between Hudson Boulevard and Brookview Drive in Woodbury.

Construction is scheduled to begin late in 2022 and take approximately two years to complete.

The plan recommends the following additional items which will not be built by the Gold Line Project Office:

- A future I-94 pedestrian and bicycle bridge between Hadley Avenue in Oakdale and Weir Drive in Woodbury.
- An extension of the trail on the east side of Century Avenue from 4<sup>th</sup> Street N to 10<sup>th</sup> Street N.
- A 10-foot trail along the west side of Greenway Avenue between Hudson Boulevard and 10<sup>th</sup> Street N.
- A study of the possibility of a trail on the south side of 7<sup>th</sup> Street N between Century Avenue and Hadley Avenue.
- A study of the possibility of a trail on the south/west sides of 5<sup>th</sup> Street N and Granada Avenue between Grovner Avenue and 7<sup>th</sup> Street N.
- The possibility of a walking and biking route along Greystone Avenue and 4<sup>th</sup> Street N between Hudson Boulevard and Hadley Avenue.
- The possibility of a trail along 2<sup>nd</sup> Street N and 5<sup>th</sup> Street N, to connect Tanners Lake Park with Greenway Avenue and Granada Avenue.
- Streetscape plans for the Corridor Trail and Greenway Avenue Trail including amenities such as benches, fencing, wayfinding, landscaping, lighting, and overlooks
- A study for a Tanner's Lake perimeter trail

A map from the plan illustrating these recommendations is shown in Figure 3.

### ***How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan***

The Oakdale Bicycle and Pedestrian Plan should consider including routes in the BRTOD Plan that provide access to the new Greenway Avenue Station. The plan should also note the facilities that will be constructed by Metro Transit's Gold Line Project Office between 2022 and 2025.



Figure 3 The Greenway Avenue Station circulation plan for bicycling and walking

### **Gold Line – Helmo Avenue Station Bus Rapid Transit Oriented Development (BRTOD) Plan**

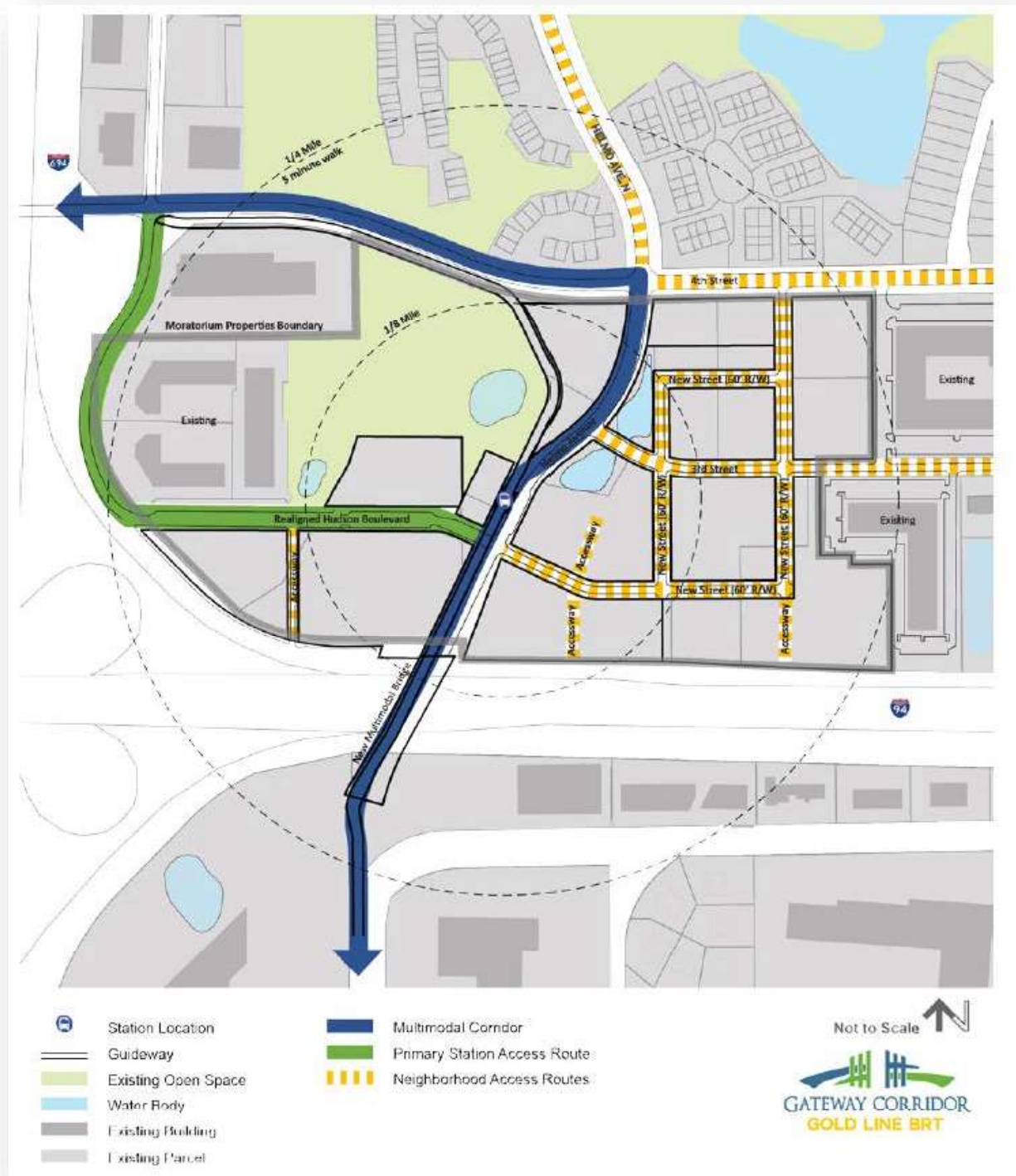
The 2018 Gold Line Helmo Ave Station BRTOD Plan by the City of Oakdale and Washington County Regional Rail Authority develops a circulation framework that fosters a pedestrian and bicycle friendly mixed-use development. Responsibility for completion of the walking and bicycling network is to be determined between the City of Oakdale, Metro Transit, and other BRT partners. As shown in Figure 4, this non-motorized framework includes 3 components:

- **Multimodal Corridor** – A shared walking and biking trail adjacent to the bus rapid transit route.
  - A 12-foot-wide trail along the west side of Helmo Avenue between 4<sup>th</sup> Street and Bielenberg Drive in Woodbury (including a new crossing of I-94).
  - A 12-foot-wide trail along 4<sup>th</sup> Street between Helmo and Hadley Avenues.
- **Primary Access Routes** – Pedestrian and bicycle emphasis streets that provide direct station access.
  - A 10-foot-wide pair of separated bike lanes on the north side of Hudson Boulevard (realigned) and sidewalks on both sides of Hudson Boulevard between Helmo Avenue and I-694.
  - A 12-foot-wide multi-use trail on the east side of Hudson Boulevard between I-694 and 4<sup>th</sup> Street.
- **Neighborhood Access Routes** – A fine-grained street grid supporting pedestrian and bicycle access within a half mile of the station.
  - Widening the existing 8-foot-trail to 12-feet along the north side of 4<sup>th</sup> Street between Helmo Avenue and Radio Drive.
  - Adding a 6' sidewalk to the south side of 4<sup>th</sup> Street between Helmo Avenue and Radio Drive.
  - Adding a 10' multi-use trail to the north side of 3<sup>rd</sup> Street between Helmo Avenue and Ideal Street.
  - Adding a 6' sidewalk to the south side of 3<sup>rd</sup> Street between Helmo Avenue and Ideal Street.
  - Adding 6' sidewalks on both side of any new streets near the station.

The multimodal corridor and primary access routes will be built by Metro Transit's Gold Line Project Office beginning in late 2022, with construction expected to last approximately two years. Neighborhood access routes will not be built by Metro Transit.

### ***How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan***

The Oakdale Bicycle and Pedestrian Plan should consider including routes in the BRTOD Plan that provide access to the new Helmo Avenue Station. The plan should also note the facilities that will be constructed by Metro Transit's Gold Line Project Office between 2022 and 2025.



**Figure 4** The Helmo Avenue Station circulation plan for bicycling and walking

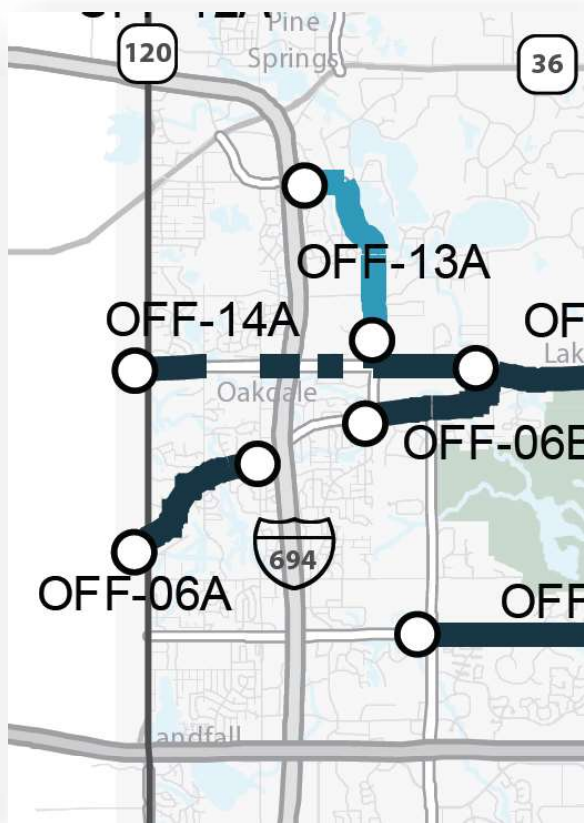
## Washington County Bicycle and Pedestrian Plan

This 2021 plan has a goal of creating a bicycle and pedestrian network that focuses on creating longer segment connections between cities and regional parks at 2-mile intervals. The plan notes Washington County's cost participation policy, which determines the division of cost between municipalities, MnDOT, and the County. The following projects along County highways in Oakdale were prioritized and are shown in Figure 5:

- 34<sup>th</sup> Street N (Washington County Highway 14) – high priority off-road facility, filling gaps in the existing shared use path on the south side of 34<sup>th</sup> Street N from Century Avenue across Oakdale into Lake Elmo.
- Stillwater Boulevard (Washington County Highway 6) – high priority off-road facility between Century and Hadley Avenue
- 50<sup>th</sup> Street N/Olson Lake Trail/Ideal Avenue (Washington County Highway 13) – medium priority off-road facility between Helmo Avenue and 34<sup>th</sup> Street N

### *How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan*

The above projects should be included in the network plan, with Washington County noted as a project partner.



**Figure 5** High- (dark blue) and medium- (light blue) priority projects from the Washington County Bicycle and Pedestrian Plan in Oakdale are located along 34<sup>th</sup> Street N, Stillwater Boulevard, and 50<sup>th</sup> Street/Olson Lake Trail/Ideal Avenue

## Ramsey County-Wide Pedestrian & Bicycle Plan

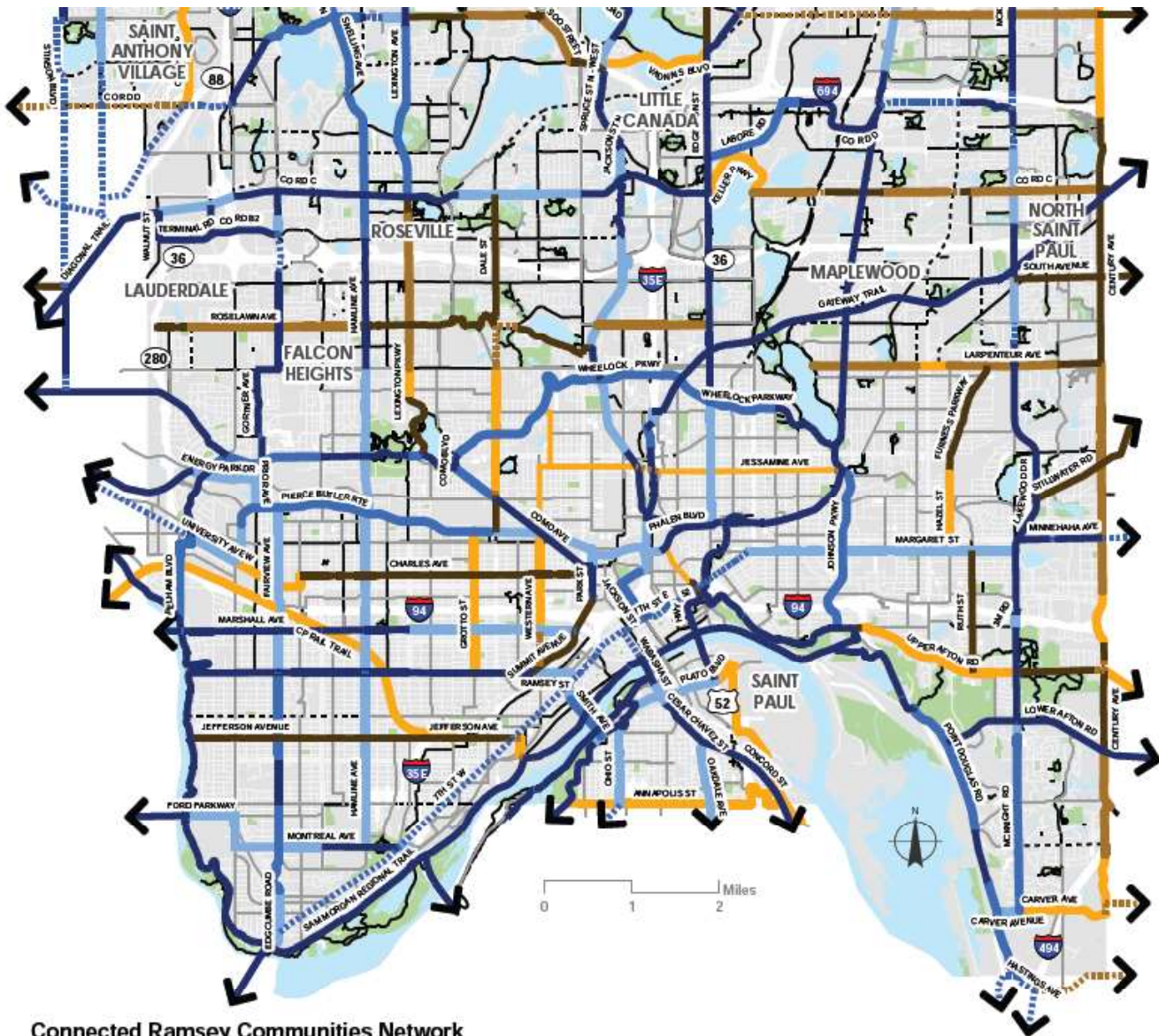
This 2015 plan contains a Connecting Ramsey Communities network, which has two types of regional facilities (as shown in Figure 6):

1. **Major County-wide Corridors** – These routes provide long-distance travel between communities, with wider-than-standard bikeway widths, separate pedestrian space, and protected traffic signals. Adjacent to Oakdale, the following are considered major routes:
  - a. Minnehaha Avenue in Maplewood, becoming 10<sup>th</sup> Street in Oakdale
2. **County-wide Connector Corridors** – These routes provide links between major routes, and do not have the high-capacity design elements on major routes. Adjacent to Oakdale, the following are considered connector routes:
  - a. Century Avenue
  - b. County Road C (17<sup>th</sup> Avenue) in North St Paul, becoming 50<sup>th</sup> Street in Oakdale
  - c. South Avenue in North St Paul, becoming 40<sup>th</sup> Street in Oakdale
  - d. Larpenteur Avenue in Maplewood
  - e. Stillwater Road in Maplewood, becoming Stillwater Blvd in Oakdale

The plan recommends that local communities prioritize both types of routes as “an important part of their bikeway network and aim to construct the routes to a high quality that serves all ages and abilities.”

### *How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan*

The above projects should be included in the network plan, with Ramsey County noted as a project partner.



**Figure 6** The Connected Ramsey Communities Network highlights routes of regional importance in shades of blue (major routes) and brown (connector routes)

## MnDOT Metro District Bicycle Plan

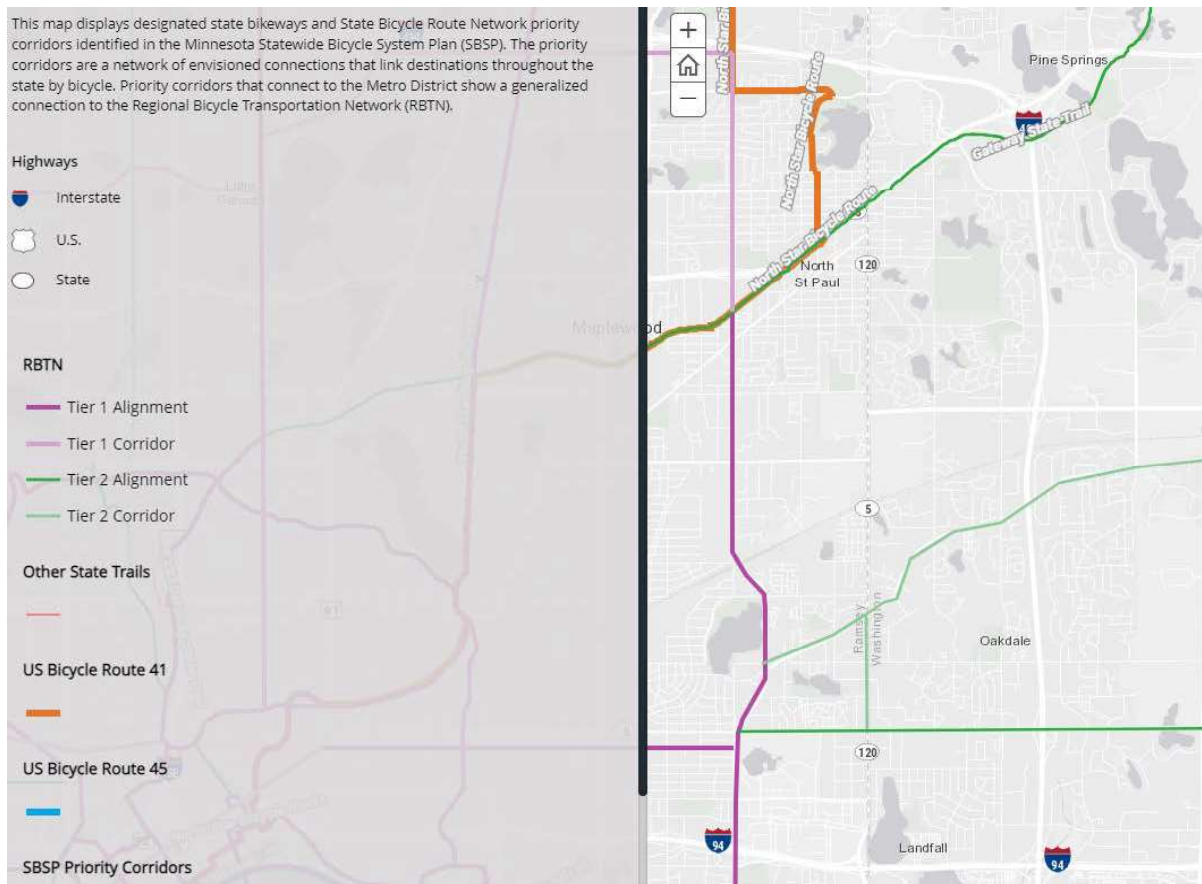
The 2019 MnDOT Metro District Bicycle Plan identifies State Bicycle Route Network priority corridors that link destinations throughout the state by bicycle. These corridors are aligned with the Metropolitan Council's Regional Bicycle Transportation Network (RBTN). Cities, counties, and the state are encouraged to plan and implement future bikeways on the RBTN to establish a seamless network of bikeways connecting regional destinations with local bicycle networks. As shown in Figure 7, four corridors in Oakdale are in MnDOT's plan:

1. 10<sup>th</sup> Street N
2. Century Avenue between 10<sup>th</sup> Street and Stillwater Boulevard
3. Gateway State Trail
4. Stillwater Boulevard

In addition, the North Star Bicycle Route (US Bicycle Route 41) skirts near the northwest corner of Oakdale on the west side of Silver Lake. This route connects St. Paul with Grand Portage on the Canadian border using a combination of trails and roads with shoulders.

### *How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan*

The above projects should be included in the network plan, with MnDOT noted as a project partner. The North Star Bicycle Route should be noted on maps as a corridor of regional importance.



**Figure 7** MnDOT's Metro District Bicycle Plan shows routes of regional importance in and near Oakdale

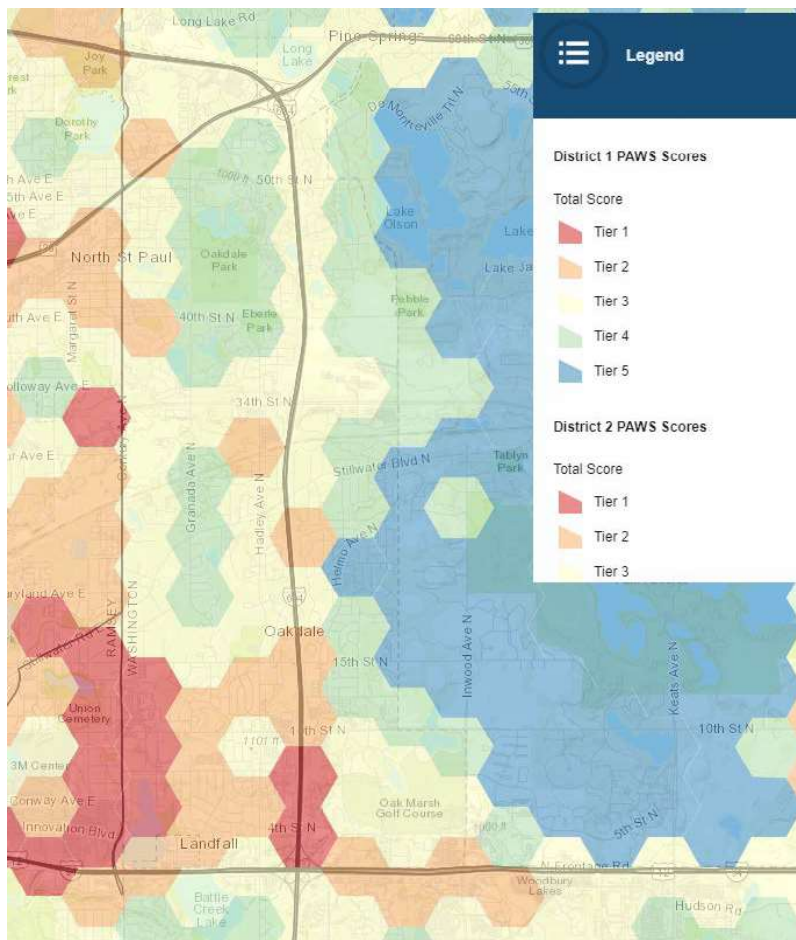
## MnDOT Statewide Pedestrian Systems Plan

This 2021 MnDOT plan is a detailed path for the agency to “maximize its role in making walking safe, convenient, and desirable for all.” The plan also seeks to “prioritize investments in a way that supports equity, safety, infrastructure, health, and land-use contexts.” As part of this plan, a Priority Areas for Walking Study (PAWS) was conducted across Minnesota, dividing the state into ½ mile wide hexagons. Each hexagon received a score based on 19 factors that indicate demand for walking and need for improvement to the walking environment. The plan says, “MnDOT District planners and designers may find the District-level scoring helpful in identifying areas to invest in walking. The PAWS map should be consulted in the initial phases of project planning for any transportation project . . . projects in higher ranked areas especially should prioritize comfort and safety for people walking over convenience for people using other modes of transportation.”

The top 0.2% of hexagons across Minnesota received a Tier 1 ranking. As shown in Figure 8, Oakdale contains 9 of these Tier 1 hexagons. The highest PAWS ratings are parallel to Century Avenue (Minnesota State Highway 120) and I-694 in the southern part of the community.

### How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan

During the development of the Bicycle & Pedestrian Plan, the PAWS map should be considered for use along and across state highways and freeways in Oakdale. MnDOT should be listed as a potential project partner where projects are recommended in these areas.



**Figure 8** Tier 1 PAWS scores in the Oakdale area indicate where pedestrian improvements will likely be the highest priority during MnDOT design work

## Metropolitan Council 2040 Thrive MSP Transportation Policy Plan: Chapter 7 – Bicycle and Pedestrian Investment Direction

This 2020 plan uses the Regional Bicycle Transportation Network (RBTN) to prioritize federal transportation funding. Tier 1 RBTN corridors are given the highest priority, and Tier 2 corridors are given the second highest priority.

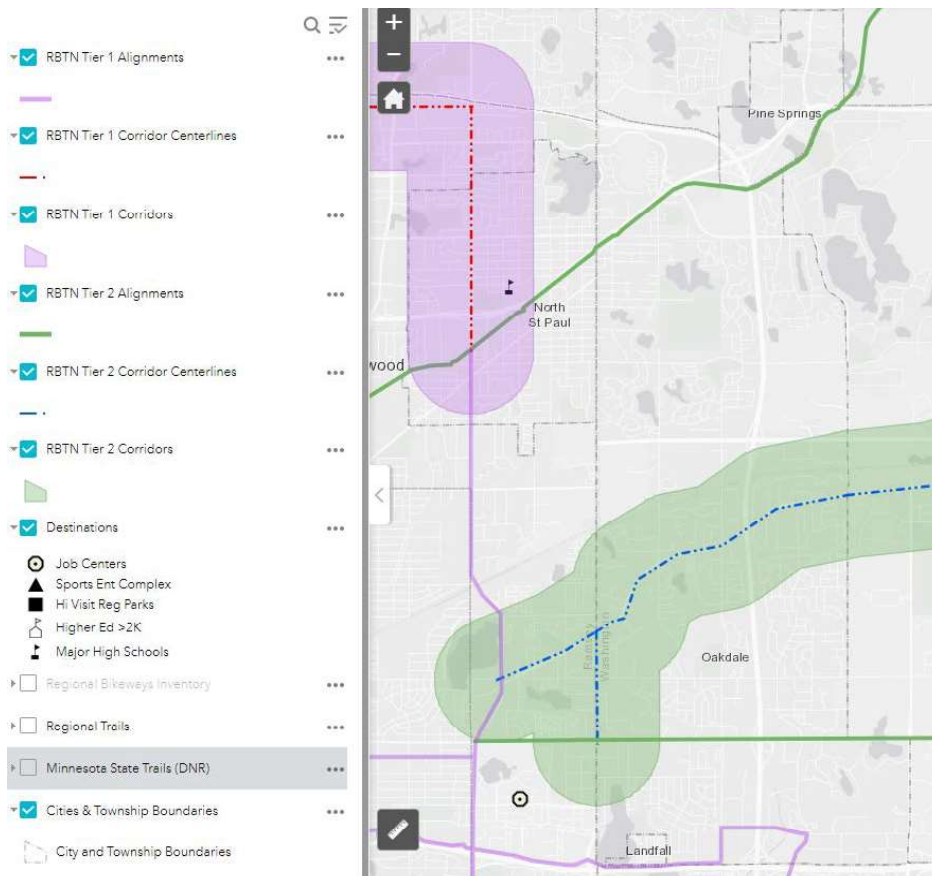
Oakdale has one Tier 1 RBTN corridor, with an alignment that runs parallel to the Gold Line BRT along Hudson Boulevard, Hadley Avenue, 4<sup>th</sup> Street N, and Helmo Avenue.

Oakdale has four Tier 2 RBTN corridors, as shown in Figure 9:

- 10<sup>th</sup> Street N between Century Avenue and Inwood Avenue
- Stillwater Boulevard, between Century Avenue and Ideal Avenue
- Century Avenue between Stillwater Boulevard and 10<sup>th</sup> Street N
- Gateway State Trail

### *How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan*

The above projects should be noted as those that may be prioritized for federal transportation funding, with the Metropolitan Council noted as a potential project partner.



**Figure 1** The Regional Bicycle Transportation Network guides the Metropolitan Council's prioritization of federal funding for bicycle facilities

## North St. Paul 2040 Comprehensive Plan

This 2019 plan establishes overall goals supportive of bicycle- and pedestrian-related improvements. Some specific projects relevant for Oakdale include:

- A proposed trail along Century Avenue (MN State Highway 120) between 50<sup>th</sup> Street N and 40<sup>th</sup> Street N, as well as between Highway 36 and I-694
- A proposed trail around Silver Lake
- A more park-like Gateway State Trail with modern restroom facilities
- Bicycling and walking improvements at the intersections of:
  - Century Ave & Hwy 36
  - Century Ave & 50<sup>th</sup> St N
  - Century Ave & 40<sup>th</sup> St N

#### *How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan*

The above projects should be included in the network plan. Project timing coordination with future City of Oakdale facilities should be researched with the City of North St. Paul.

### **City of Maplewood 2040 Comprehensive Plan**

Bicycle- and pedestrian-related goals in this 2019 plan include:

- *Connect pedestrian and bike routes with transit facilities.*
- *Create a network of uninterrupted trails.*
- *Tie parks together into a comprehensive park and trail system, and tie the City trail system with those of adjacent cities and counties.*
- *Bike routes should be off-street, however when not feasible, streets should be designed for safe bicycle passage under all conditions. This includes providing dedicated space for bicycles that is clearly marked, with signage for bicycle awareness. It also includes clearly marked intersections where trails cross roads, trimmed vegetation at intersections, and a thoughtful integration of on-street parking where necessary.*
- *Create a safe, multi-purpose, and all-season walking and biking network.*

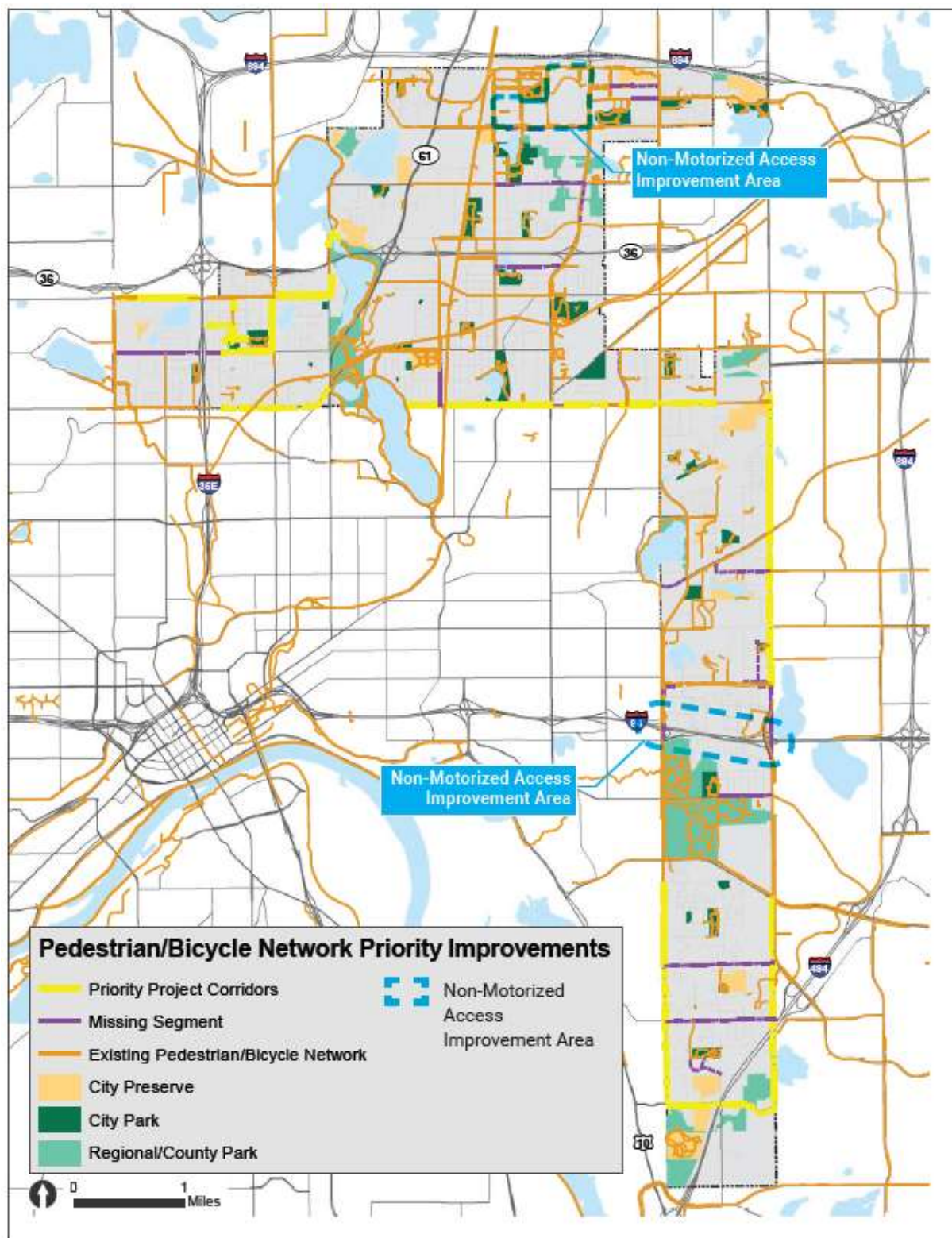
Bicycle and pedestrian project priorities shown in Figure 8 include:

- Century Avenue as a priority project corridor between Larpenteur Avenue and Conway Avenue
- Harvester Avenue as a missing segment from Century Avenue to the west
- Farrell Avenue and Conway Avenue as a missing segment near Lions Park along Century Avenue

The plan also notes that the current policy of the City is to install sidewalks on both sides of arterial streets and one side of collector streets.

#### *How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan*

The above projects should be included in the network plan. Project timing coordination with future City of Oakdale facilities should be researched with the City of Maplewood. Maplewood's sidewalk installation policy should be compared to Oakdale's and consistency between the two municipalities should be considered.



**Figure 2** Pedestrian and bicycle priorities in the Maplewood Comprehensive Plan

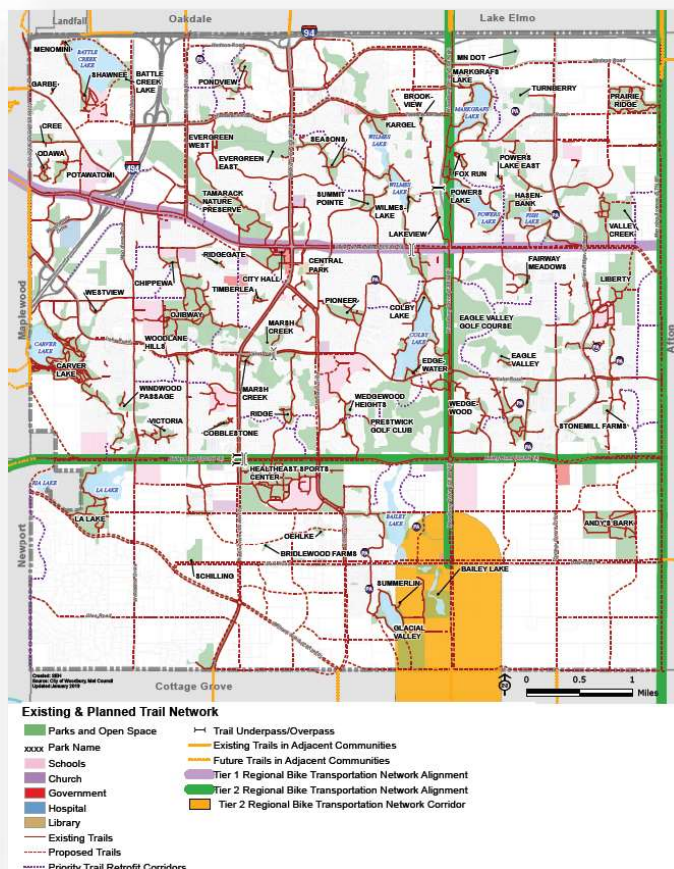
## Woodbury 2040 Comprehensive Plan

This 2019 sets a key goal of enhancing non-motorized elements of Woodbury's transportation system to improve transportation sustainability. The approach is to expand the trail network in two ways: 1) along all arterials, collectors, and certain local streets in newly developing areas; 2) close gaps in the existing network. As shown in Figure 11, proposed trails near Oakdale include:

- A perimeter trail around Battle Creek Lake
- A trail along the west side of Weir Drive
- A trail along both sides of Bielenberg Drive, as well as the completion of a missing gap between Bielenberg Drive and the existing trail on Hudson Road
- Priority trail retrofits along Landau Drive and Woodduck Drive

### *How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan*

The above projects should be included in the network plan. Project timing coordination with future City of Oakdale facilities should be researched with the City of Woodbury. Woodbury's trail installation policy should be compared to Oakdale's and consistency between the two municipalities should be considered.



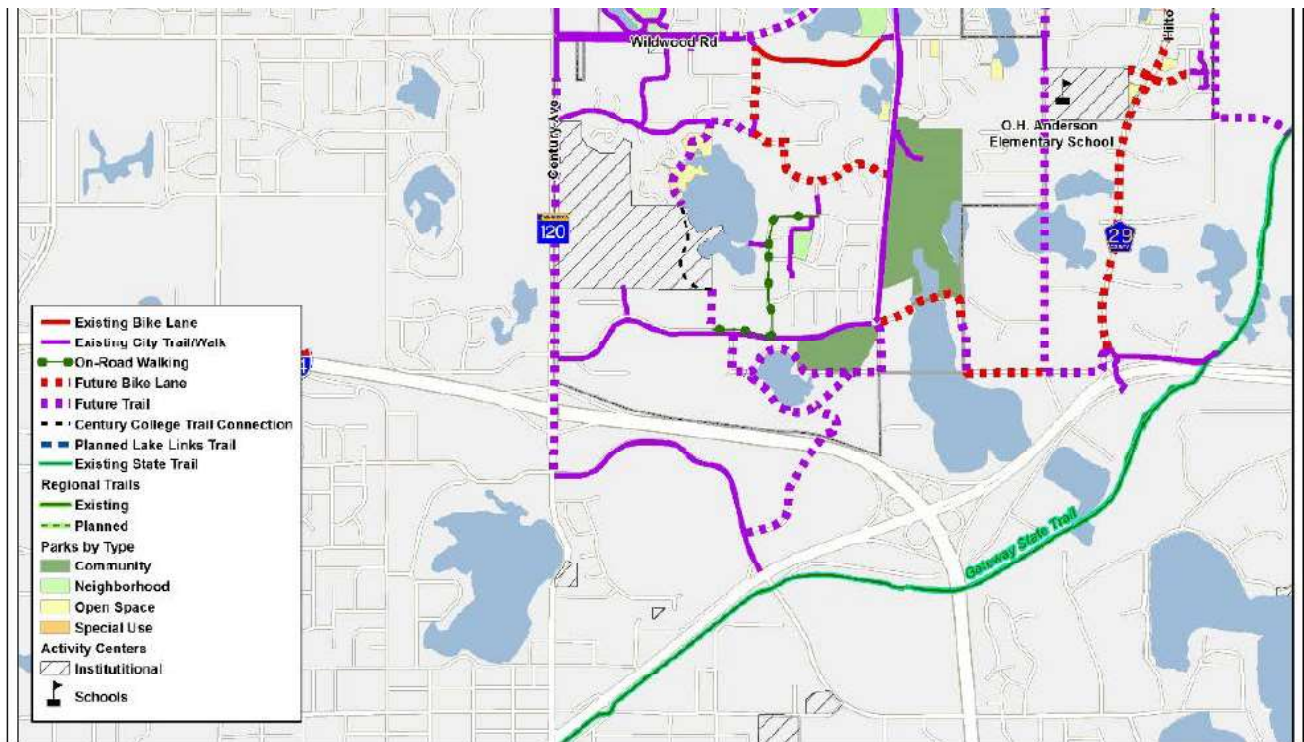
**Figure 3** The existing and planned trail network in Woodbury

## Mahtomedi Comprehensive Plan

The Mahtomedi Comprehensive Plan includes a map (shown in Figure 12) which shows a new trail connection over I-694 connecting 56<sup>th</sup> Street in Oakdale with 60<sup>th</sup> Street in Mahtomedi. The plan notes this new connection is part of the proposed Mahtomedi-Oakdale Trail Corridor, which is one component of the larger Lake Links Trail network.

### *How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan*

The above projects should be included in the network plan. Project timing coordination with future City of Oakdale facilities should be researched with the City of Mahtomedi.



**Figure 4** The existing and proposed bicycle and pedestrian network in Mahtomedi

## Other Comprehensive Plans

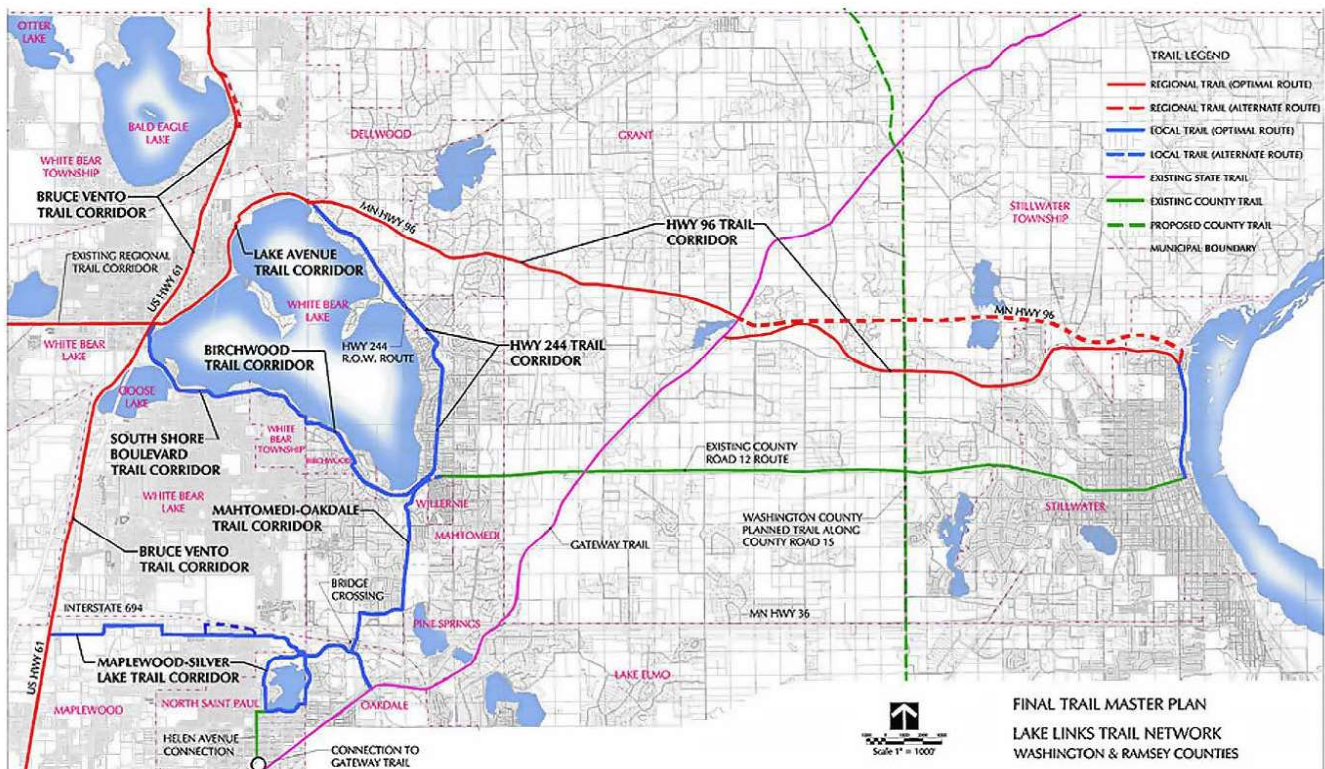
Comprehensive plans for Lake Elmo, Landfall, and Pine Springs were reviewed. None of those plans include any planned bicycle or pedestrian-related projects along their shared borders with Oakdale.

# Lake Links Trail Network Plan

This 2001 plan by Washington County Parks and Ramsey County Parks lays out a vision for the Lake Links Trail Network in Washington and Ramsey Counties between White Bear Lake, Silver Lake, the Bruce Vento Trail, the Gateway Trail, and Stillwater. Two levels of trails are identified as shown in Figure 13, and they include regional and local trails. The Mahtomedi-Oakdale Trail Corridor is shown as a local trail and connects the two communities via a bicycle and pedestrian bridge over I-694 between Highway 120 and Highway 36.

### How the Recommendations Should Be Considered/Used in the Oakdale Bicycle & Pedestrian Plan

Since this plan is over 20 years old, its current relevance should be researched with Washington County and Ramsey County. Project should be included in the Bicycle & Pedestrian Plan network if the Lake Links Trail Plan is still active, with Washington County and Ramsey County noted as partners.



**Figure 5** The Lake Links Trail Network Plan envisions a trail connection between Oakdale and Mahtomedi