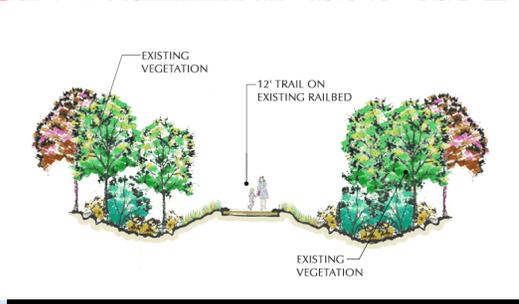
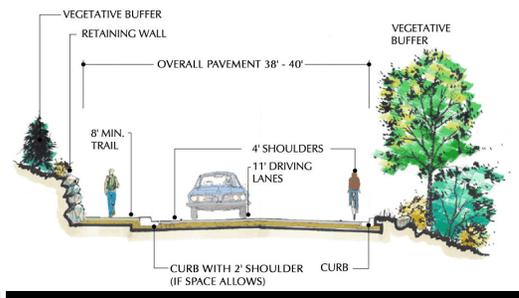
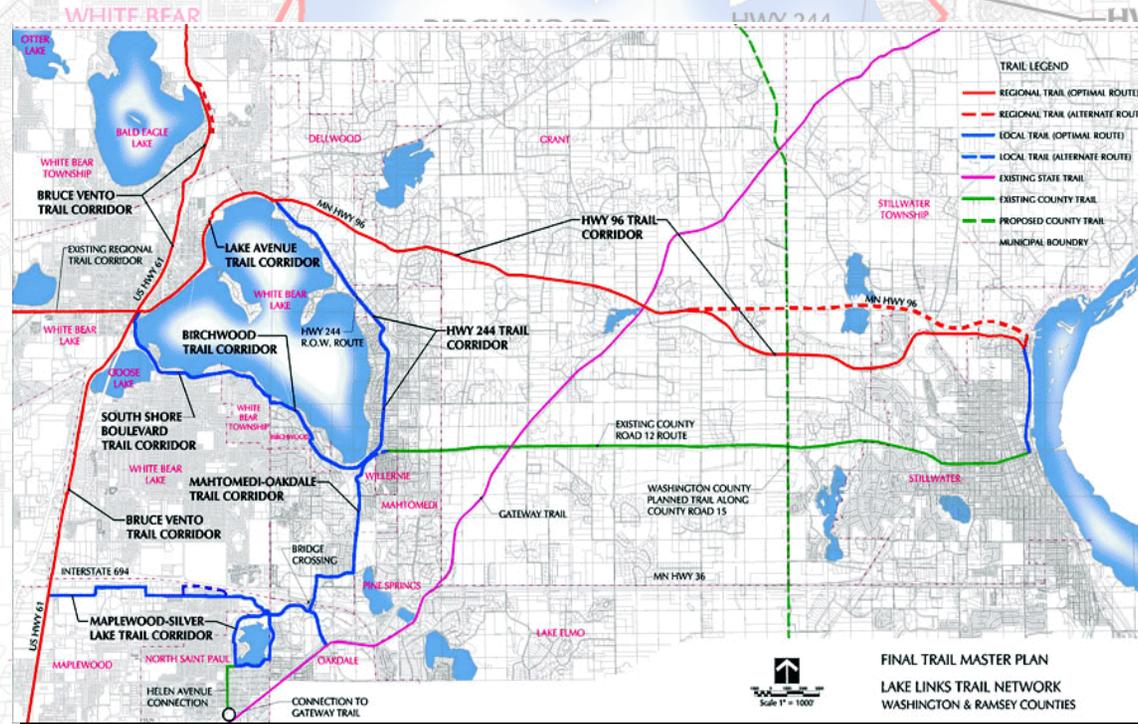


OTTER LAKE



Lake Links Trail Network Master Plan

Prepared For:
Washington County Parks
Ramsey County Parks



January 1, 2001

WASHINGTON COUNTY
PLANNED TRAIL ALONG
COUNTY ROAD 15

Prepared By:
Brauer & Associates, Ltd.

Acknowledgments

Overview

In February, 2000, Washington and Ramsey County Parks Departments retained Brauer & Associates, Ltd. to work with a Citizens Advisory Committee and Technical Advisory Committee to complete a comprehensive study for the Lake Links Trail Network. This document represents the culmination of the project, which was completed in January, 2001.

Acknowledgments

The planning team would like to thank the Washington and Ramsey County staffs for providing their insights and understanding of the concerns and issues facing this project. We would also like to thank the many individuals who participated as members of the two committees listed below. Their individual and collective insights were instrumental in drawing conclusions that both made sense and had a reasonable chance of being implementable. Their enthusiasm for the project and belief that the trail network would add value to the lives of people living in the study area kept the planning team motivated to the very end.

The planning team also extends a heartfelt thank you to the many people throughout the study area who took the time to attend meetings, write letters, make phone calls, and even bring us into their homes so that we could understand the issues first hand and find solutions that seemed reasonable and workable. It is our belief that maintaining an open dialogue with members of the broader community was the only possible way that retrofitting a trail into established communities would have any chance of being successful.

Finally, our appreciation is extended to the State legislators who sponsored the grant for this study. Their appreciation of the past citizen-driven planning efforts set the stage for this study to be undertaken.

State Legislators Sponsoring the Project

Minnesota Senate:	The Honorable Chuck Wiger	
Minnesota House of Representatives:	The Honorable Harry Mares	The Honorable Betty McCollum

Citizens Advisory Committee

Dorian Grilley, Chair					
Rick Brandon	Elmer Strohmeier	David Chase	Bill Rasmussen	Marianne Oie	Polly Shank
Tim Agness	Theresa Hegland	Tom Dwight	Claudette Munson	Pat Bantli	Jerry Lindquist
Lydia Crawford	Linda Ford	Charles Burfeind	Dennis Hoelscher	Neil Franey	John Hall
Bob Nuffort					

Technical Advisory Committee

Bruce Anderson	Rich McNamera	Jim Robinson	Tom Riedesel	David Vail	Steve Roe
Ron Hance	Laurie McRostie	Jon Hohenstein	Keith Arboleda	Barbara Parent	Sue Fitzgerald
Jerry M. Hicks	Jay Kennedy	Marc Goess	Susan Willhite		

Washington and Ramsey County Staff

James Luger, Parks Director, Washington County Parks
 Greg Mack, Parks Director, Ramsey County Parks
 John Elholm, Operations Coordinator/Parks Planner, Washington County Parks
 Larry Holmberg, Supervisor of Planning and Development, Ramsey County Parks

Sincerely,
 BRAUER & ASSOCIATES, LTD.



Jeff Schoenbauer

Consultant Team

Brauer & Associates, Ltd.

10417 Excelsior Boulevard, Suite 1
 Hopkins, MN 55343
 (952) 238-0831

Jeff Schoenbauer, Vice President, Principle-In-Charge
 George Watson, President
 Tim Wold, LA
 Candace Amberg, RLA
 Jason Amberg, RLA

WSB & Associates, Inc.

350 Westwood Lake Office
 8441 Wayzata Boulevard
 Minneapolis, MN 55426

Jay Kennedy, PE
 Mark Erichson, PE

Lake State Realty Services, Inc.

2140 Otter Lake Drive
 White Bear Lake, MN 55110

Julie Jeffery-Schwartz, Certified General Appraiser
 Paul Schwartz

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Summary Statement

Statement Overview

The summary statement captures the key points of the Lake Links Trail Network Master Plan as succinctly as possible. Inherently, the summary will not address many of the details of the plan. As such, for a more comprehensive understanding of the planning process and findings, it is recommended that the master plan report be reviewed. Copies of the master plan are available at the city offices of all of the cities, townships, and counties involved in the study.

Section I - Introduction and Planning Framework

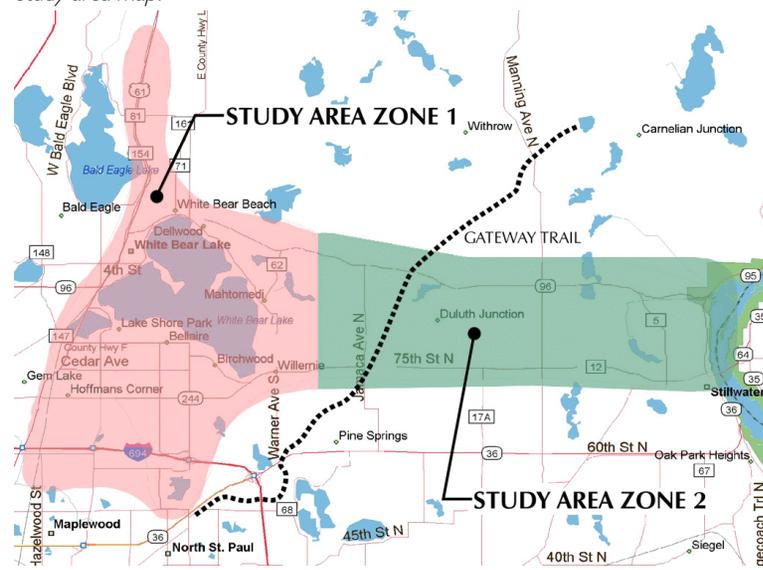
The project focused on the preparation of a comprehensive master plan for Lake Links Trail Network in Washington and Ramsey County.

The project focused on the creation of a comprehensive master plan for Lake Links Trail Network in Washington and Ramsey Counties. Funded through a state grant, the purpose of the project was to cooperatively develop a master plan for the study area, which included:

- ▶ A trail loop around White Bear Lake.
- ▶ A trail loop around Silver Lake.
- ▶ Extension of the Bruce Vento Trail from Maplewood to the Hugo trail system.
- ▶ Trail links between each of the above and to the Gateway Trail and Stillwater trail system.

The following figure illustrates the study area for the project.

Study area map.



This study was a direct outgrowth of years of citizen-led planning initiatives focusing on the development of a comprehensive trail system within the study area.

To support the planning initiative, a Citizens Advisory Committee (CAC) and Technical Advisory Committee (TAC) were formed.

A great deal of emphasis was placed on working with local communities and townships to define local planning issues and determine which trail route options were viable.

History and Rationale for Undertaking the Project

From a historical perspective, this study was a direct outgrowth of years of citizen-led planning initiatives focusing on the development of a comprehensive trail system within the study area. Whether at the local or regional level, the primary rationale behind past planning initiatives was fairly straightforward: An interlinking trail system within and between local communities was thought to offer outstanding recreational potential and would be of high community value. An equally compelling reason behind these past initiatives was the desire for a comprehensive trail system that would alleviate the unsafe conditions now found for pedestrians and bicyclists within the study area. For these reasons, the State legislature responded to citizen advocacy by sponsoring a grant to develop a comprehensive master plan for the Lake Links Trail Network, with the intent being to determine if the vision of a linked trail system was in fact achievable given the inherent constraints within the study area.

Project Oversight

At the agency level, Washington and Ramsey Counties shared responsibility for overseeing the planning process and ensuring that the requirements of the grant were fulfilled. To support the planning initiative, a Citizens Advisory Committee (CAC) and Technical Advisory Committee (TAC) were formed. The former consisted of citizens from each of the local municipalities and townships who were responsible for overseeing the planning process and working with the planning team on determining the most appropriate trail routes within the context of the inherent physical constraints and varying public opinion.

Public Involvement

Given the inherently difficult nature of retrofitting a trail into developed or settled communities, a great deal of emphasis was placed on working with local communities and townships to define local planning issues and determine which trail route options were viable. The public process included a number of steps to ensure that each community had an opportunity to participate and to ensure that planning outcomes were underpinned by an understanding of the local circumstances. In many cases, the public input process was literally taken down to the individual level to gain a first-hand understanding of the impact that the various routing scenarios would have on private property.

Property Acquisition Approach

One of the important factors affecting the ultimate location of the trail corridors was the use of a “willing seller” approach by Washington and Ramsey Counties for acquiring property for stand-alone trail corridors. Under this approach, potential trail corridors that traverse extensive areas of privately-owned property, such as some of the old railroad corridors, pose major challenges for land acquisition and in the end greatly affected the trails plan. In cases where the trail follows existing road rights-of-way, the willing seller approach translates into trying to stay within the existing right-of-way wherever possible to minimize the need to acquire property.

Acquisition of additional rights-of-way will be required in some areas to accommodate roadway upgrades and trail construction.

Section II – Community Value Statement

Recreational trends suggest that trail activities are the highest ranked recreational pursuits in this metropolitan region, far outpacing most other forms of recreation.

It seems quite evident that the community value of the trail network being proposed would be very high.

From an overall perspective, those that participated in the public process express a general belief that the trail network plan would indeed offer high community value.

Note, however, that given the eclectic nature of the rights-of-way throughout the study area, acquisition of additional rights-of-way will be required in some areas to accommodate roadway upgrades and trail construction. In most of these situations, right-of-way acquisition is driven largely by roadway construction requirements for grading, stormwater management, and so forth. In these instances, the trail would be placed in the rights-of-way already required for upgrading the roadway.

The community value statement essentially defines the benefits that a comprehensive trail network would bring to residents living within the surrounding region relative to its potential impacts across a number of variables, ranging from safety and crime to property values and loss of privacy. Taken as a whole, the community value statement defines whether or not the perceived benefits of the trail outweigh perceived impacts to justify its development. The following statement summarizes these findings.

Community Value Statement

With respect to the overall benefits of a comprehensive trail network, research suggests that trails offer a very high degree of community value by providing the type of recreational amenity that the majority of the population would actually use and like to have available near their home. As defined in the master plan, recreational trends suggest that trail activities are the highest ranked recreational pursuits in this metropolitan region, far outpacing most other forms of recreation. In addition, the improved safety for pedestrians and bicyclists as they travel along the proposed trail corridors is a value that some would argue is more important than that of the recreational experience. The community value statement is strengthened by evidence that suggests that potential down sides, like crime, trespassing, and littering, generally do not manifest themselves to any great degree. Based on the information presented in the master plan and that which was garnered from local public meetings and in-field interviews during the planning process, it seems quite evident that the community value of the trail network being proposed would be very high. This assumes that the personal values and issues defined by the residents and adjoining property owners can be effectively addressed.

General Summary of Public Input

As noted previously, a great deal of emphasis was placed on working with the local communities and townships to define local planning issues and determine which trail route options were viable and which were not. From an overall perspective, those attending the public meetings held at the local level, and those providing input through phone calls and letters, express a general belief that the trail network plan would indeed offer high community value. Although not everyone would agree, this also seems to hold true for those that own property next to one of the corridors and are therefore most directly affected by the master plan. Under the assumption that there is general support for the trail network within the study area, the concern shifts toward defining, in good faith, ways in which the personal concerns of individual property owners can be addressed to diminish their level of uncertainty as to the impact a given trail will have on their personal property and quality of life. As part of the public consensus building for the trail network, local residents helped establish a set of expectations that they have about how the trail master plan would be implemented. Expectations include:

Local residents helped establish a set of expectations that they have about how the trail master plan would be implemented.

- ▶ Property owners affected by the trail network will be given a reasonable opportunity to participate in the design process to ensure that their interests and concerns are dealt with in a responsible and forthright manner.
- ▶ Encroachment and direct Impact to private property will be minimized to the degree possible.
- ▶ Trail and roadway designs should be based on the principle of providing a safe environment for the pedestrian, bicyclist, and the driver of a motor vehicle.
- ▶ Aesthetic qualities and sense of place within the study area will be maintained or enhanced
- ▶ Master plan presented here should be used to define the key issues associated with each trail corridor and the expectations of those most impacted by trail development.

The last point is of considerable importance in that many of those that accept the master plan do so with the understanding that the planning agencies responsible for implementing the plan will adhere to these expectations and carry the good faith that has been built up thus far into and through the actual implementation process.

CAC Community Value Conclusions

The CAC came to the conclusion that the overall value of the trail network justifies its development.

In consideration of the findings defined in the master plan, the CAC came to the conclusion that the overall value of the trail network justifies its development and that the routes ultimately selected for inclusion in the master plan are those that offer the greatest community value with the fewest impacts to private properties and personal interests. Whereas there were alternative routes that offered outstanding trail opportunities, the ones ultimately selected were those that were thought to serve the need while still being reasonable and practical to implement, everything considered. Other conclusions related to the overall community value of the trail network include the following:

- ▶ Demand for trails is well established and will likely continue to grow in the future.
- ▶ Past citizen-driven planning efforts and public input during this study suggest that an integrated trail network in the study area would offer high community values.
- ▶ In-field observations suggests that trail routes defined by the master plan are already being used by pedestrians and bicyclists even though no formal trail exists.
- ▶ Public safety remains a major concern and is a significant factor in the selection of the trail routes.

Developing a viable master plan that is implementable requires an understanding of, and empathy for, the concerns of those most affected.

Whereas the community values as defined above suggest that a looped trail network would be of high community value, developing a viable master plan that is implementable requires an understanding of, and empathy for, the concerns of those most affected. Whereas the community values of the trail network are pronounced, the CAC also recognized that inevitably every trail alignment affects private properties and personal values to varying degrees. In light of this, the CAC was committed to working toward minimizing the direct impacts to private properties to the degree possible. In addition, the CAC asked the planning team to define the expressed concerns and opinions of property owners and to determine their expectations related to the trail alignment and character along each proposed corridor to ensure that those considerations were brought forward to the point of implementation. Forthcoming sections of the report considers these issues in greater detail and defines the development issues and constraints that need to be addressed as part of the implementation phase of the project.

Section III – Trail Network Master Plan

The final plan represents a network of trails that fulfill the objectives set for the study.

The trail network consists of eight trail corridors, which tie into several existing or planned corridors at the State, regional, and county level.

Total trail mileage is 34.1.

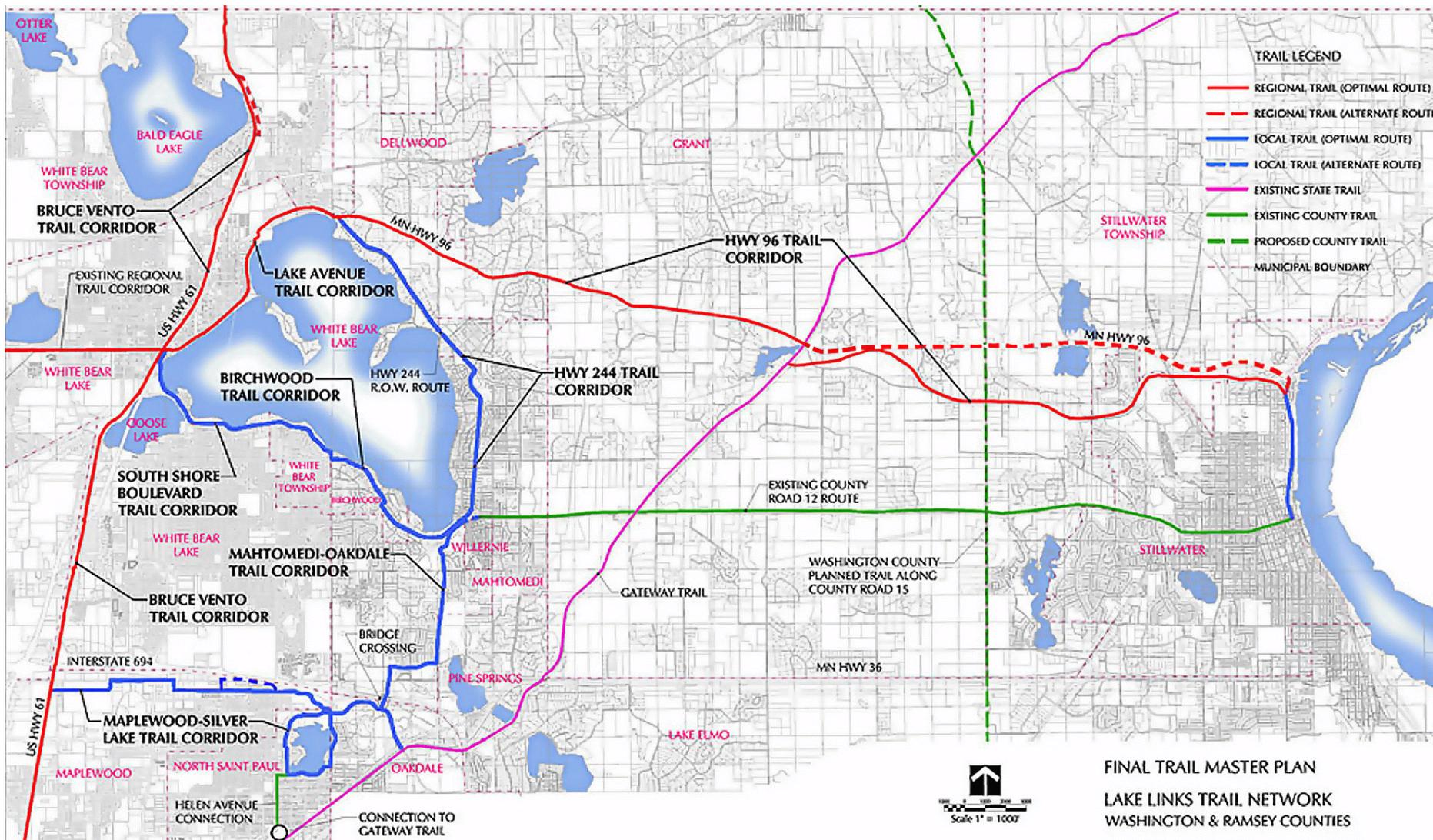
The trail network master plan is the end result of the planning and public process. The final plan represents a network of trails that fulfill the objectives set for the study. The master plan also represents a trail network that was molded as much by the limitations of the planning area as it was by the opportunities it offered. In spite of the challenges, it is believed that the trail network presented here offers very high recreational value to the surrounding communities and greatly improves pedestrian safety along the trail corridors.

The trail network consists of eight trail corridors, which tie into several existing or planned corridors at the State, regional, and county level. In addition, the trail network interlinks with a series of existing and planned local trails that, ultimately, will provide a seamless and expansive system of trails within the study area. The following table provides an overview of the trail corridors defined under the master plan. Total trail mileage is 34.1.

Trail Corridor	Description
Bruce Vento Trail Corridor (7.3 miles)	North-south regional trail that extends the existing trail from Beam Avenue in Maplewood north into Hugo, where it will continue on to link with other regional-level trails. The corridor generally follows the Burlington Northern railroad alignment, as well as existing adjacent roadways.
Lake Avenue Trail Corridor (2.1 miles)	Regional trail corridor that follows an existing trail corridor from Lions Park north along Lake Avenue on the west side of White Bear Lake in the City of White Bear Lake.
Hwy. 96 Trail Corridor (10.3 miles)	Regional trail corridor that follows the Hwy. 96/Zephyr Line rights-of-way from Ramsey Beach all the way to Stillwater.
Hwy. 244 Trail Corridor (3.5 miles)	Trail corridor that follows the Hwy. 244 right-of-way from Hwy. 96 south to the downtown area of Mahtomedi and Willernie.
Birchwood Trail Corridor (1.7 miles)	Trail corridor that follows Wildwood and Lake Avenues through the City of Birchwood. Given limited road right-of-way through this area, an on-street bike route is proposed for this segment.
South Shore Blvd. Trail Corridor (1.5 miles)	Trail corridor that follows South Shore Blvd. from East County Line to Goose Lake area.
Mahtomedi-Oakdale Trail Corridor (3.1 Miles)	Trail corridor that starts in downtown Mahtomedi and heads south to connect with an existing trail in Oakdale. This corridor includes a proposed pedestrian bridge across I-694.
Maplewood- Silver Lake Trail Corridor (4.6 Miles)	Trail corridor that provides a loop around Silver Lake and then heads west along the northern edge of Maplewood following a powerline easement and local streets to make a connection with the Bruce Vento trail corridor.

The map on the next page provides an overview of the Lake Links Trail Network.

Overall Trail Network Master Plan Map



Trail Network Evaluation Against Stated Criteria

A set of evaluation criteria were applied to the master plan to provide an objective framework for evaluating potential trail routing options. The following briefly summarizes the evaluation of the overall trail network against those criteria.

Evaluation Summary – First Tier Criteria

Criteria	Evaluation Statement
Regional Values	The trail network offers significant regional values, especially by providing: <ul style="list-style-type: none"> ▶ An interconnection between existing regional and State trail corridors and between local communities. ▶ A new regional-level recreational amenity that provides a new system of interconnected trails that allows trail users to travel through several communities.
Local Values	Trail network offers significant value to the local communities in a number of ways, including: <ul style="list-style-type: none"> ▶ Providing a safe place for pedestrians and bicyclists to walk, ride bikes, and in-line skate. ▶ Providing high demand recreational amenities for local residents to use and enjoy. ▶ Expanding local trail options beyond the local community to create a larger, more complete system.
User Experience Values	The trail network around the two lakes offers high recreational value in very desirable settings. Expanding the regionally-based trail system through the creation of the Lake Links Network also provides extensive recreational value by greatly expanding trail options offering a vast array of settings and lengths.

When considered against the evaluation criteria, it is clear that the Lake Links Trail Network measures up very well and that an interlinking trail system would offer high regional and local values.

Evaluation Criteria – Second Tier

Criteria	Evaluation Statement
Natural Setting	Even though the proposed trail corridors follow existing road and railroad rights-of-way, the lakes they encircle along with interconnections made with regional parks and local parks/natural open space areas offer high aesthetic and recreational value.
Separated Trail	With a few exceptions, the Lake Links Trail network consists of separated trails that greatly improve user safety and enhance the recreational experience.
Natural Resource Issues	Since virtually all of the trail corridors follow existing road and railroad right-of-way, the direct impact to natural areas is relatively minimal. Although trail construction (and roadway upgrades) will have some impact to adjacent wetlands and natural vegetation in select locations along Hwy. 96 and Hwy. 244, this can be kept to a minimum and any impacts would be appropriately mitigated.
Acquisition Issues	Since the trail corridors generally stay within existing road and railroad rights-of-way, acquisition of private properties is relatively minimal and generally limited to instances where the right-of-way is simply too narrow for trail (and roadway) upgrading occur.
Physical Constraints	Although impediments exist, the inherent physical constraints along the proposed corridors are surmountable and technically feasible to overcome.

Encroachment Issues	Minimizing the level of encroachment into adjacent properties and keeping the trail/roadway cross-section as narrow as possible within the right-of-way is a fundamental objective of the master plan and of critical importance to affected property owners.
Cost-Benefit	Given the high demand for trails in the region, along with the high recreational value and improved safety that these trails would provide to the surrounding communities, the long-term cost-benefit of Lake Links Trail Network appears justifiable.

Evaluation Criteria – Third Tier

Criteria	Evaluation Statement
Public and Political Acceptance	Based on the results of the public process, there is a general consensus that the trail network would offer high community value. However, there is also an expectation that the implementation of the trail would be done with sensitivity toward minimizing impacts to adjacent properties and maintaining the character of the corridors it follows. Acceptance of the plan is also based on the expectation that local communities will be directly involved in the implementation process and that local citizens will have an opportunity to participate in the detail design of the trail (and roadways) in their community.

When considered against the evaluation criteria, it is clear that the Lake Links Trail Network measures up very well and that an interlinking trail system would offer high regional and local values. In addition, the evaluation statements suggest that while technical and public/political issues remain to be fully addressed as part of implementing the plan, the actual development of the trail network seems very feasible

Regional and Local Designations

Whereas the trail network master plan serves to form a cohesive system of trails within the study area, there is a distinction between trail corridors that are locally-based and those that are regionally-based. As the trail network map illustrates, two of the corridors included under the Lake Links Trail Network are designated as regional trails: The Bruce Vento trail corridor and the Hwy. 96 trail corridor. These trails are given regional designation because they meet the criteria as defined by Regional Recreation Open Space Policy Plan Update. This includes:

- ▶ Providing access to or traverse through regional parks or park reserves and serve to link these parks together.
- ▶ Providing linkages between existing regional and state trails.
- ▶ Traversing interesting developed areas.
- ▶ Traversing high quality natural areas.

The remaining trails within the network are defined as local-level trails (city, township, and county), whereby their focus is on meeting local trail needs and providing connections to the regional and state trails. From an implementation standpoint, the most important distinction between trail types is the potential avenues available for funding. Whereas none of these sources are guaranteed, the inclusion of local trails within the Lake Links Trail Network master plan shows the inter-connective nature of these trails, which in turn provides the platform for local cities, counties, and townships to collaborate on seeking funding opportunities for development.

Two of the corridors included under the Lake Links Trail Network are designated as regional trails: The Bruce Vento trail corridor and the Hwy. 96 trail corridor.

The remaining trails within the network are defined as local-level trails.

The master plan provides an extensive technical review of the individual trail corridors defined by the master plan.

Technical Overview of Individual Trail Corridors

The master plan provides an extensive technical review of the individual trail corridors defined by the master plan. The purpose of the review is to more clearly define trail alignment and other important planning outcomes and issues. These in turn will set the stage for implementing the plan and serve as an underpinning for continued public input to ensure that the expectations of those most affected by trail development are ultimately met. The following table summarizes the technical review of each trail corridor.

Trail Corridor	Design Overview	Major Issues
Bruce Vento Trail Corridor	A separated trail with a 12' wide cross-section is recommended to accommodate heavy use and a variety of users.	<ul style="list-style-type: none"> ▶ Uncertainty of future multi-modal transportation needs along this railroad corridor. ▶ Retrofitting the trail in areas where space is limited. ▶ Ensuring that local residents have an opportunity to give input into the detail design process.
Lake Avenue Trail Corridor	Enhancements to trail cross-section to ensure pedestrian safety is recommended.	<ul style="list-style-type: none"> ▶ Working with local residents to determine the type of improvements that are justified and add value.
Hwy. 96 Trail Corridor	A separated 10' trail adjacent to the roadway is recommended given the regional status of this trail corridor.	<ul style="list-style-type: none"> ▶ Retrofitting the trail in areas where space is limited. ▶ Ensuring that local residents have an opportunity to give input into the detail design process.
Hwy. 244 Trail Corridor	A separated 8' to 10' trail as part of upgrading the roadway is recommended (local input is needed on final width).	<ul style="list-style-type: none"> ▶ Retrofitting the trail in areas where space is limited. ▶ Ensuring that local residents have an opportunity to give input into the detail design process.
Birchwood Trail Corridor	Maintaining existing on-road shared-use system is recommended, with upgrades.	<ul style="list-style-type: none"> ▶ Ensuring that local residents have an opportunity to give input into the detail design process.
South Shore Blvd. Trail Corridor	A separated 8' to 10' trail adjacent to the roadway is recommended, preferably with one-way road system.	<ul style="list-style-type: none"> ▶ Determining which roadway cross-section best serves need ▶ Ensuring that local residents have an opportunity to give input into the detail design process.
Mahtomedi-Oakdale Trail Corridor	Making connection between two established trails via a bridge across I-694 is recommended.	<ul style="list-style-type: none"> ▶ Determining the best location for the crossing and working with MNDOT to actually implement.
Maplewood-Silver Lake Trail Corridor	A separated 10' trail along the powerline in Maplewood and completing the loop around Silver Lake is recommended.	<ul style="list-style-type: none"> ▶ Retrofitting the trail in areas where space is limited. ▶ Ensuring that local residents have an opportunity to give input into the detail design process.

The timing of turning back some of the roads within the study area from the State to the county, and from the County to the local city or township is an important aspect of implementing the master plan.

Turnback Status of Roadways Affected by the Trail Corridors

The timing of turning back some of the roads within the study area from the State to the county, and from the County to the local city or township is an important aspect of implementing the master plan. Turnback essentially refers to a shift of responsibility for upgrading, maintaining, and operating a roadway from one agency to the other as part of the overall transportation plan for the region. The master plan provides an overview of the roads that fall under the turnback program and their current status. Roads included in this program include:

- ▶ Hwy. 244 – State to county turnback
- ▶ Hwy. 96 – State to county turnback
- ▶ County Road 94 / South Shore Blvd. – County to city and township turnback
- ▶ County Road 154 / Hugo Road – County to township turnback

The turnback schedule associated with each of these roadways is quite important to a number of the trail corridors. In reality, the development of the trails along these corridors will be lock-stepped with the timing of the upgrading and turning back of the adjoining roadway from the State to the County and from the County to the local cities and township. Also, the design for the roadways on the turnback schedule would follow the standards defined by MNDOT and the County. Note, however, that both Washington and Ramsey Counties recognize that some degree of flexibility may be required in order to incorporate a trail along these corridors and preserve their existing aesthetic qualities. As defined by this master plan, there is also the expressed desire by local residents to keep the roadway cross-sections as narrow as possible to help calm traffic and maintain the existing sense of place.

Alternative Trail Corridors Considered During the Planning Process

It became clear that these routes were either not the best option and/or would simply not be implementable and therefore did not warrant further consideration.

A number of alternative trail corridors were considered during the planning process. Whereas these routes were ultimately excluded from further consideration for various reasons, some of them held great promise when first considered against the first tier evaluation criteria. However, when measured against second and third tier criteria, it became clear that these routes were either not the best option and/or would simply not be implementable and therefore did not warrant further consideration. Note here that while each of these options did not make the final plan, some of them continue to have merit as part of local trail systems and, in some cases, may be worthy of a second look should the primary routes defined by the master plan fail to materialize.

Interconnection with Local Level Trail Systems

The interconnection between the Lake Links Trail Network and existing and planned local systems is a fundamental objective of the planning process.

Note that the interconnection between the Lake Links Trail Network and existing and planned local systems is a fundamental objective of the planning process. While the master plan focused on the Lake Links Trail Network, the local trail systems play a significant role in creating a comprehensive network of trails that provide a safe place for pedestrians and bicyclists to walk, ride bike, and in-line skate.

The trail design guidelines that would be applied to the trail corridors (and roadways) defined by this master plan would follow those commonly used for regional, State, and Federal projects.

Trail (and Roadway) Design Guidelines

The trail design guidelines that would be applied to the trail corridors (and roadways) defined by this master plan would follow those commonly used for regional, State, and Federal projects. The use of these guidelines is of importance for a couple of reasons:

- ▶ To ensure the development of consistent and safe trail corridors that are in sync with accepted design practices.
- ▶ To ensure that the trail corridors qualify for various trail funding programs that are sponsored at the Metropolitan Council, State, and Federal level.

With respect to trail signage, the master plan also calls for adherence to the previously defined design manuals as well as those prepared by MNDOT that relate specifically to trail and roadway signage.

Support Facilities for the Trail Network

The trail network master plan itself does not call for development of any major new support facilities.

One of the advantages of developing the trail network is that it links together numerous existing parks and public spaces, which in turn offers an important side benefit in that many of these areas already have, or will in the future, facilities that support the trails. This includes public parking, restrooms, picnic spaces, and sitting areas. In addition, connection to the downtown areas of the local communities provides ample opportunity for refreshments and food. Since this rather extensive infrastructure of facilities already exists, the trail network master plan itself does not call for development of any major new support facilities. Note, however, that the detail design for individual trail corridors should provide trail links from the main trails to existing support facilities, along with the necessary signage to ensure trail users are aware of these facilities.

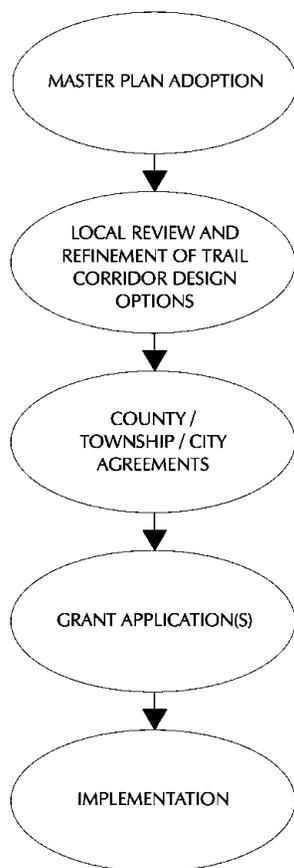
Affect of Multi-modal Transportation Plans on Trail System Planning

One of the factors that was considered as part of the planning for the Bruce Vento trail extension along the Burlington Northern railroad corridor was the potential for use of that corridor for multi-modal transportation, which ranges from buses to light and heavy rail. Whereas there is a great deal of uncertainty as to where this will ultimately lead, it is clear from various Metropolitan Council transit studies that some form of transit use of the corridor can be anticipated in future years. With this understanding, the intent of the Lake Links Trail Network master plan is to set the trail within the Burlington Northern railroad corridor on the periphery of the right-of-way, or even outside of it, wherever possible to minimize the potential for future conflicts.

Section IV – Implementation Plan

Implementation of the Lake Links Trail Network will require strong collaboration between local cities, townships and counties if a cohesive and complete trail system is to be realized.

Implementation steps.



Local cities, townships, and counties are encouraged to pursue implementation of the plan as a singular priority.

Collaborative Underpinning

Implementation of the Lake Links Trail Network will require strong collaboration between local cities, townships and counties if a cohesive and complete trail system is to be realized. While each of the trail corridors proposed offers numerous local benefits, the real opportunity lies in the broader vision of the plan that would result in a truly exciting regional asset offering outstanding recreational values. In many ways, the collective value of the larger trail network is greater than the sum of the individual parts. Through a shared common vision, opportunities for becoming a higher priority for receiving non-local funding can be enhanced over that which would otherwise be available to local units of government. Given the potential costs associated with implementing the plan, these outside sources of funding will likely be needed to offset the fiscal limitations facing local cities and townships.

Implementation Strategy

Implementation of the master plan will require a coordinated effort between local communities, townships, and counties – starting with the adoption of the master plan. This, of course, is based on the collective understanding that the options for each of the trail corridors defined in the master plan are subject to local review and refinement as part of the implementation process. This statement is critical in that each of the trail corridors defined by the plan raise numerous issues that will require additional public input and local evaluation to determine the design approach best suited for the community while still achieving the vision of the master plan. It is within the spirit of flexible collaboration that success in implementing the plan lies. The image at left outlines the implementation steps required to move from the vision of the master plan to actual development of the trail corridors.

Local involvement in the implementation process is of critical importance given the detail design issues that need to be addressed prior to the development of any of the trail corridors considered under the master plan. For example, at the fundamental level, decisions related to basic roadway configurations and cross-sections will have to be made prior to designing the trail itself. Likewise, inherent transportation issues (such as those associated with the South Shore Boulevard trail corridor) and roadway turnback schedules will also have to be addressed as part of the implementation planning. Of equal importance is the need for additional public input into the detail design process to ensure that the general public and property owners directly affected by a given trail corridor have a reasonable chance to participate in the design process to ensure that their interests and concerns are addressed in a responsible and forthright manner.

Implementation Priorities

The master plan does not establish specific priorities for implementation of the individual corridors. Instead, local cities, townships, and counties are encouraged to pursue implementation of the plan as a singular priority with the realization that the pace of implementation will be dictated by several factors:

- ▶ Timeframes associated with making final design decisions on specific corridors.
- ▶ Degree of success in assembling funding packages from various sources.
- ▶ Turnback schedules and timing of upgrades to roadways associated with a given trail corridor.

Realistically, there will be a degree of variability in the timing of implementing the plan due to the variability of the challenges facing each corridor.

Assembling an implementation team to oversee the detail planning and design process and coordinate the activities at the local and county level is recommended.

The cost projections presented in the master plan define the potential costs associated with each of the trail corridors defined by the master plan.

Another reason for taking this approach is the interlinked and dependent nature of many of the trail corridors, whereby one trail corridor cannot be easily separated from another and therefore precludes establishing a clearly defined prioritization schedule. Although a homogeneous timeframe for implementing the plan would be the best case scenario, realistically, there will be a degree of variability in the timing of implementing the plan due to the variability of the challenges facing each corridor.

Implementation Team

The importance of maintaining an ongoing and coordinated effort between local cities, townships, and counties toward plan implementation cannot be overstated and will be critical to the successful implementation of the master plan. Lacking this, the probability of seeing the plan implemented becomes far less certain. To this end, assembling an implementation team to oversee the detail planning and design process and coordinate the activities at the local and county level is recommended. This is particularly important here where a number of the local cities and townships simply do not have the day-to-day staffing needed to oversee the project and keep it moving forward in a timely, well-coordinated fashion.

It is recommended that the team consist of a representative from each of the cities, townships, and counties affected by the master plan (which was essentially the basis of the Technical Planning Team assembled for this project). In addition, the implementation team can also serve to coordinate and act upon grant opportunities and assembling funding packages. It is also recommended that the implementation team include representation from select outside public agencies with experience in trail development and grants.

Acquisition and Development Cost Projections

The cost projections presented in the master plan define the potential costs associated with each of the trail corridors defined by the master plan. The cost figures are intended to be used for budgeting purposes, project phasing, comparing the relative cost of one item to that of another. Although the cost projections are intended to be conservative, it must be recognized that the actual costs will vary depending on detail design and market forces when the plan is implemented.

The cost projections for development are broken down into two primary categories:

- ▶ **Base Cost Projection for Trail Development** – refers specifically to the cost to develop the trail itself *without* consideration for other development concerns that might be necessary for the trail to actually be developed.
- ▶ **Cost Projection for Associated Development** – refers to development that may be required to construct the trail, such as roadway upgrades and alternatives to the base development package as noted.

The following summarizes the development cost table provided in the master plan.

Trail Development Cost Projections

Trail Segment	Base Cost Projection for Trail Development		Cost Projection for Associated Development	
Bruce Vento Trail	2,012,000	to 2,414,400	626,000	to 751,200
Lake Avenue Trail	655,000	to 786,000	0	to 0
Hwy. 96/Zephyr Line Trail	2,500,000	to 3,000,000	280,000	to 336,000
Hwy. 244 Trail	1,560,000	to 1,872,000	2,810,000	to 3,372,000
Birchwood Trail	447,000	to 536,400	0	to 0
South Shore Trail	575,000	to 690,000	0	to 0
Mahtomedi-Oakdale Trail	700,000	to 840,000	0	to 0
Maplewood-Silver Lake Trail	1,060,000	to 1,272,000	160,000	to 192,000
Total Cost Projection for All Trail Corridors	9,509,000	to 11,410,800	3,876,000	to 4,651,200
Construction Engineering and Design (15%)	1,426,350	to 1,711,620	581,400	to 697,680
Grand Total Cost Projection for All Trail Corridors	10,935,350	to 13,122,420	4,457,400	to 5,348,880

The cost projections for land acquisition for the various trail corridors are intended to be used for budget estimating purposes. The intent is to project as accurately as possible a range of potential costs for land acquisition that would be in addition to the development costs listed above.

Land Acquisitions Cost Projections

Trail Corridor	Cost Projection for Acquisition*	
Bruce Vento Trail	260,000	to 310,000
Lake Avenue Trail	0	to 0
Hwy. 96 Trail	406,000	to 470,000
Hwy. 244 Trail	225,000	to 420,000
Birchwood Trail	0	to 0
South Shore Blvd. Trail	0	to 0
Mahtomedi-Oakdale Trail	60,000	to 75,000
Maplewood-Silver Lake Trail	150,000	to 200,000
Total Potential Cost Range for Land Acquisition	1,101,000	to 1,475,000

* – Range of potential costs is shown to account for some unknowns.

Operation and maintenance of the trail corridors will be a shared responsibility between the local cities, townships, and counties, with the responsibilities of each defined in joint-powers or other forms of agreement.

Operations and Maintenance of Trail Corridors

Operation and maintenance of the trail corridors will be a shared responsibility between the local cities, townships, and counties, with the responsibilities of each defined in joint-powers or other forms of agreement. The trails will be designed and operated to accommodate walkers, joggers, bicycling, and in-line skating. There will be no provision along these trail corridors for other activities such as snowmobiling, horseback riding, or cross-country skiing. With respect to rules and regulations, all trail corridors will comply with the standards of use currently in place for local and regional parks and trails as defined by city and county ordinances. This will ensure consistency in operation of the trail facilities defined in the plan with others found within the study area. Law enforcement associated with the trail will be covered by local police and county sheriff's departments in accordance with current practice and established relationships between the two counties and local cities and townships within the study area. With respect to fees and charges, the trails will be open to the public without fee, which is in line with current practices at the local and county level.

The responsibility for developing and maintaining the trails will depend on whether the trail is local (city, township, or county) or regional and whether it follows a local or county road. A table in the master plan considers development and maintenance responsibilities for each of the trail corridors based on standard practice. Recognize, however, that the responsibilities of the local cities and counties is subject to change in line with specific agreements prepared as part of the implementation process. An important side note to this discussion is that development costs could be significantly offset through special appropriations and grants at the state and federal level for local and regional trails (and roadway upgrades). Given the inherent limitations of local units of government to fund these projects solely on their own, finding alternative means of funding will be an important factor in actually being able to implement the plan.

Funding Options and Opportunities

By creating a recreational value of greater significance than would otherwise be the case, the opportunities for funding from a variety of funding sources opens up substantially.

One of the major advantages of the Lake Links Trail Network Master Plan is that it paints a broad vision for trails within the study area that collectively offers benefits beyond those of the individual local trail systems. By creating a recreational value of greater significance than would otherwise be the case, the opportunities for funding from a variety of funding sources opens up substantially. Equally important, this collective vision can also serve to raise the level of priority given to these trails over what might otherwise be the case. In this context, collaboration between local cities and the county can go a long way toward being successful in securing the funds necessary to build the trails. A table in the master plan provides an overview of potential funding sources.

Public Awareness

Once the initial promotional campaign is complete, it is expected that word-of-mouth will be the most successful promotional tool.

Once completed, public awareness of the trail network will be promoted through the local cities, townships, and counties through a coordinated effort. This would include trail network mapping, brochures, flyers, posters, and so forth to make residents aware of the new trails. Once the initial promotional campaign is complete, it is expected that word-of-mouth will be the most successful promotional tool.

Section I

Introduction / Planning Framework

Project Scope

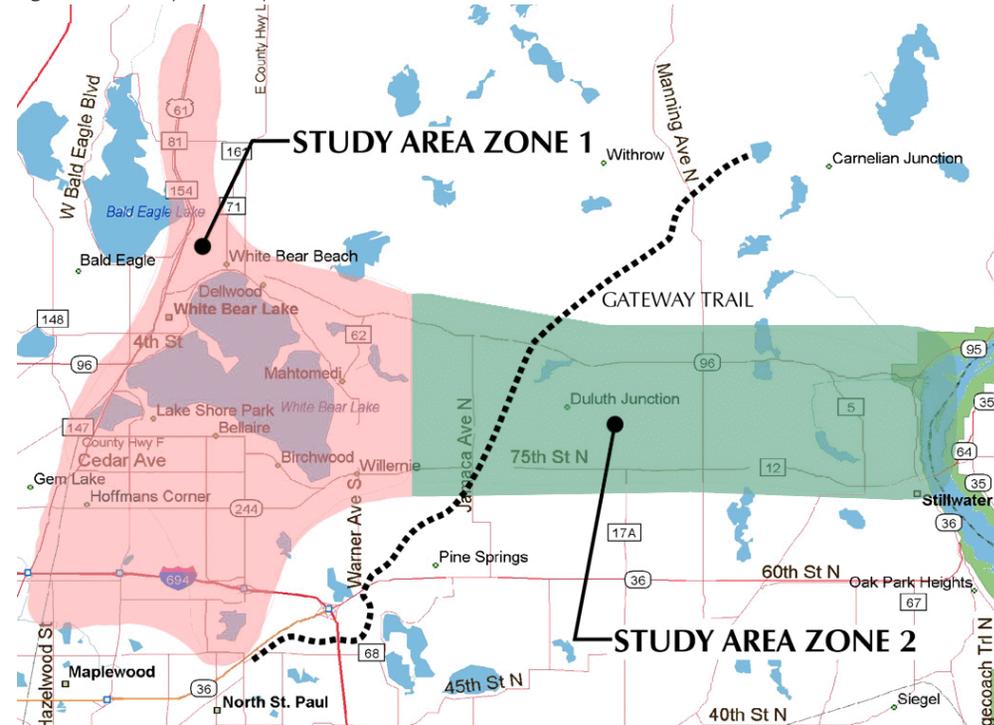
The project focused on the preparation of a comprehensive master plan for Lake Links Trail Network in Washington and Ramsey Counties.

The project focused on the creation of a comprehensive master plan for Lake Links Trail Network in Washington and Ramsey Counties. Funded through a state grant, the purpose of the project was to cooperatively develop a master plan for the study area, which included:

- ▶ A trail loop around White Bear Lake.
- ▶ A trail loop around Silver Lake.
- ▶ Extension of the Bruce Vento Trail from Maplewood to the Hugo trail system.
- ▶ Trail links between each of the above and to the Gateway Trail and Stillwater trail system.

Figure 1.1 illustrates the study area for the project.

Figure 1.1 – Study area map



History and Rationale for Undertaking the Project

This study was a direct outgrowth of years of citizen-led planning initiatives focusing on the development of a comprehensive trail system within the study area.

An interlinking trail system within and between local communities was thought to offer outstanding recreational potential and would be of high community value.

From a historical perspective, this study was a direct outgrowth of years of citizen-led planning initiatives focusing on the development of a comprehensive trail system within the study area. In some cases, these past initiatives were the impetus behind some of the formalized trail plans of local communities and townships, which over the past decade or so have been implemented to varying degrees. With respect to the broader study area, the citizen-driven report prepared by the *Around the Lake Trail Task Force* brought together many of the planning issues that needed to be addressed. That study and the other local trail planning initiatives were the catalysts behind the broader trail network master plan presented here.

Rationale for Undertaking This Planning Initiative

Whether at the local or regional level, the primary rationale behind past planning initiatives was fairly straightforward: An interlinking trail system within and between local communities was thought to offer outstanding recreational potential and would be of high community value. An equally compelling reason behind these past initiatives was the desire for a comprehensive trail system that would alleviate the unsafe conditions now found for pedestrians and bicyclists within the study area. In this regard, the existing and somewhat eclectic system of roadways of varying character and levels of safety leaves much to be desired for the average pedestrian, especially families with young children. In spite of these inherent unsafe conditions, it is still well documented that people use – and will likely continue to use – the existing streets and roads for walking and biking, especially those that encircle the two lakes in the study area.

For these reasons, the State legislature responded to citizen advocacy by sponsoring a grant to develop a comprehensive master plan for the Lake Links Trail Network, with the intent being to determine if the vision of a linked trail system was in fact achievable given the inherent constraints within the study area.

Planning Framework

The planning of the trail network followed a step-by-step process that encouraged public participation and allowed for a series of checks and balances to ensure that conclusions drawn represented those that had the greatest merit. Figure 1.2 provides an overview of the steps in the planning process.

Figure 1.2 – Steps in the planning process



Project Oversight

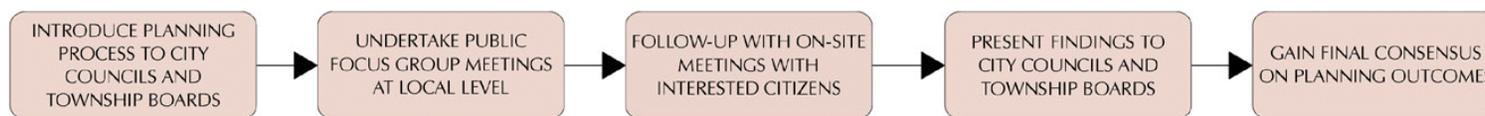
At the agency level, Washington and Ramsey Counties shared responsibility for overseeing the planning process and ensuring that the requirements of the grant were fulfilled. To support the planning initiative, two committees were formed, as follows:

- ▶ **Citizens Advisory Committee (CAC)** – consisted of citizens from each of the local municipalities and township who were responsible for overseeing the planning process and working with the planning team on determining the most appropriate trail routes within the context of the inherent physical constraints and varying public opinion.
- ▶ **Technical Advisory Committee (TAC)** – consisted largely of staff from the various municipalities and township who provided the planning team with background information on the study area and insight into the planning issues being faced.

Public Involvement

Given the inherently difficult nature of retrofitting a trail into developed or settled communities, a great deal of emphasis was placed on working with local communities and townships to define local planning issues and determine which trail route options were viable. The public process included a number of steps to ensure that each community had an opportunity to participate and to ensure that planning outcomes were underpinned by an

Figure 1.3 – Steps in the public process.



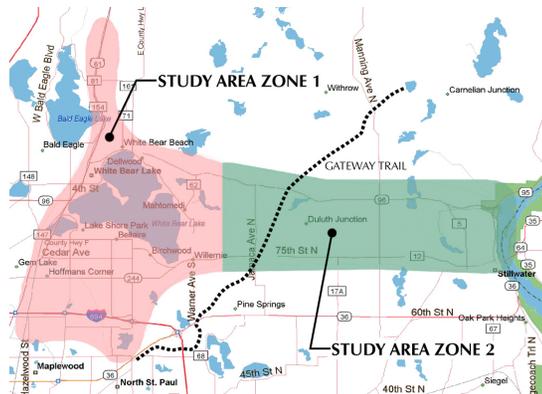
A great deal of emphasis was placed on working with local communities and townships to define local planning issues and determine which trail route options were viable.

understanding of the local circumstances. Figure 1.3 illustrates the key steps in the public process format. While the graphic depicts a direct linear progression, in numerous instances, the public input process was literally taken down to the individual level to gain a first-hand understanding of the impact that the various routing scenarios would have on private property. These meetings, along with the more structured public meetings, provided much needed guidance on determining which routes would ultimately have validity and be implementable. A summary of the public meeting schedule is provided in the appendix.

Study Area Characteristics

The inherent characteristics of the study area posed the greatest challenge to developing an interlinked trail system. Simply stated, retrofitting a trail system into well-established communities is fraught with technical complications and concerns about impacts to private properties. Nonetheless, the community values of developing such a system can also be quite high and make it well worthwhile to explore the possibilities. In general terms, the following defines the overall planning dynamics associated with the study area, which is broken down into a couple of distinct zones based on the different planning challenges posed by each.

Retrofitting a trail system into well-established communities is fraught with technical complications and concerns about impacts to private properties.



Study Area Zone 1

Character:

- ▶ Nearly fully developed area with a wide variety of housing, roadways, right-of-ways, public spaces, and lake access points.
- ▶ Development patterns range from small, almost cabin-style housing to large estates and some newer subdivisions.
- ▶ Established community infrastructure.

Opportunities:

- ▶ Potential to interconnect an eclectic collection of trail segments already developed in the study area.
- ▶ Potential to create a comprehensive and well-defined trail system around the lake.
- ▶ Old streetcar and rail right-of-ways, road right-of-ways, and various open lots offer some opportunities for retrofitting trails.

Constraints:

- ▶ Retrofitting a trail system into a developed area always offers numerous constraints and challenges.
- ▶ Limited right-of-way widths, well-established neighborhoods, lack of publically-owned land at critical points of connection, and individual concerns about encroachment on private property are routine challenges that will need to be surmounted.

Potential:

- ▶ Public value of creating a comprehensive system of trails in this zone is very high – especially when that system will include connection to the nearby State and Regional trails.

Study Area Zone 2

Character:

- ▶ Low density development patterns with larger acreage lots and some production and hobby/horse farms.
- ▶ Rural overall character with rolling countryside offering a variety of ecological systems and agricultural uses.
- ▶ Gateway Trail is a major recreational amenity and greenway corridor.

Opportunities:

- ▶ Extensive potential for a variety of trail/greenway corridor routes.
- ▶ Potential to interconnect trail systems from Zone 1 with those in Zone 2 and those near Stillwater.
- ▶ Location opportunities range from creating an east-west greenway corridor that traverses open countryside, lakes, ponds, and a variety of ecological systems to developing trails within existing right-of-ways.

Constraints:

- ▶ Creating a new trail system in a less densely populated area also offers numerous constraints and challenges.
- ▶ Private ownership of land and privacy issues led the debate with respect to creating a new greenway corridor.
- ▶ Individual concerns about encroachment on private property can be more challenging in these areas due to the expectation of privacy.

Potential:

- ▶ Public value of creating a comprehensive system of trails in this zone is very high – especially when that system will include connection to the State and Regional trails nearby.
- ▶ Creating an east-west greenway is a particularly appealing opportunity.

Criteria for Developing the Trail Network Master Plan

A set of evaluation criteria were developed to provide a more objective framework for evaluating potential trail routing options.

Given the inherent challenges of developing a trail system within the study area, a set of evaluation criteria were developed to provide a more objective framework for evaluating potential trail routing options. The criteria were broken down into three tiers to provide a progression of evaluation that started with a broad vision of the possibilities and progressed through technical evaluations and public acceptance. The following outlines the criteria used under each tier of evaluation.

Evaluation Criteria – First Tier

Focus was on the overarching project objectives of planning a trail network that offers regional and local values, as well as providing high user-experience value.

Criteria	Evaluation Statement
Regional Values	Trail segment serves as a connection between regionally significant facilities, including regional parks, regional trail corridors, and State trail corridors (the presence of high quality natural resources or other unique features is also highly desirable).
Local Values	Trail segment serves as a key component in a local trail system and provides a key link to regional and/or State trails and parks.
User Experience Values	Trail segment offers a high quality recreational experience for the user, whereby the trail setting is visually appealing, offers continuity with limited interruptions and impediments to travel, is not too difficult of a grade, and is safe to use.

Evaluation Criteria – Second Tier

Focus is on the more technically-oriented issues that affect decisions as to merit, location, and priority of a given trail segment. (These criteria look more closely at the practical nature of one trail alignment versus that of another)

Criteria	Evaluation Statement
Natural Setting	Trail segment is located in a natural setting that offers a pleasant recreational atmosphere.
Separated Trail	Trail segment is physically separated from a roadway, versus being part of the road shoulder.
Natural Resource Issues	Trail segment has limited impact (due to construction) to the natural resource qualities of the area it is traversing. The extent to which impacted areas can be restored is also a consideration.
Acquisition Issues	Trail segment requires acquisition of private properties for the trail corridor (willingness of owner to sell property and options available to acquire are key factors to consider).
Physical Constraints	Trail segment has surmountable physical constraints, including such items as difficult/unsafe road crossing, steep grades, built structures in the trail alignment, and so forth.
Encroachment Issues	Trail segment encroachment on adjacent properties is manageable (this may include stipulated agreements related to buffering and screening in certain situations).
Cost-Benefit	All things considered, the benefit of a particular trail segment versus its cost is justifiable due to its relative value to the region and community.

Evaluation Criteria – Third Tier

Focus is on the public and political acceptance of the trail network and individual trail segments.

Criteria	Evaluation Statement
Public and Political Acceptance	Trail segment is generally accepted by the public-at large in the community it traverses through. (City council/ township board action required to confirm, qualify, or deny support for the trail location prior to submittal to County Boards for approval.)

Property Acquisition Approach

One of the important factors affecting the ultimate location of the trail corridors was the use of a “willing seller” approach by Washington and Ramsey Counties for acquiring property for stand-alone trail corridors.

One of the important factors affecting the ultimate location of the trail corridors was the use of a “willing seller” approach by Washington and Ramsey Counties for acquiring property for stand-alone trail corridors. Under this approach, potential trail corridors that traverse extensive areas of privately-owned property, such as some of the old railroad corridors, pose major challenges for land acquisition and in the end greatly affected the trails plan.

In cases where the trail follows existing road rights-of-way, the willing seller approach translates into trying to stay within the existing right-of-way wherever possible to minimize the need to acquire property. Note, however, that given the eclectic nature of the right-of-ways throughout the study area, acquisition of additional rights-of-way will be required in some areas to accommodate roadway upgrades and trail construction. In most of these situations, right-of-way acquisition is driven largely by roadway construction requirements for grading, stormwater management, and so forth. In these instances, the trail would be placed in the rights-of-way already required for upgrading the roadway.

Section II

Community Value Statement

Overview

The Citizen Advisory Committee (CAC) and planning team placed a great deal of emphasis on finding a reasonable and responsible balance between community and personal values.

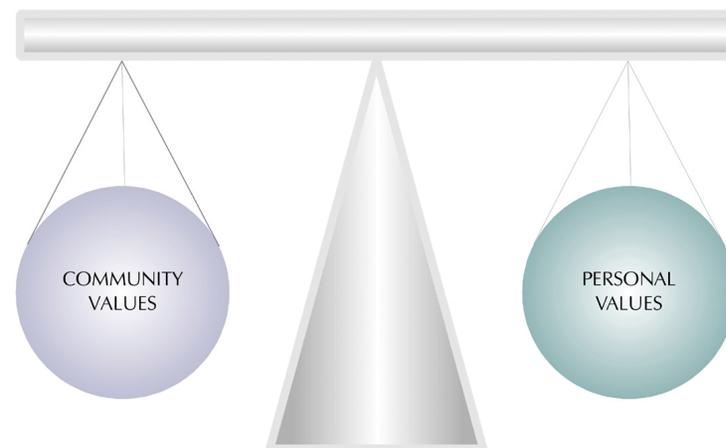
The impetus behind this and past planning initiatives stems from the idea that an interlinking trail network within the study area would be of high community value from a recreational and pedestrian safety perspective. On the other hand, it is also recognized that retrofitting a trail network through developed areas poses both direct and indirect impacts to private properties along each corridor. It also affects personal values related to residents' perceptions of their community and the quality of life they perceive to exist. Depending on one's perspective, developing a comprehensive trail network within the study area may or may not be considered positive.

In recognition of these issues, the Citizen Advisory Committee (CAC) and planning team placed a great deal of emphasis on finding a reasonable and responsible balance between community and personal values, the latter of which referring to issues such as direct impact on personal property, perceived loss of privacy, quality of life, and so forth. Figure 2.1 illustrates this balancing act.

Whereas this approach to working directly and constructively with communities (and the individuals who would be most impacted by planning outcomes) ultimately resulted in some very desirable trail routes being eliminated from consideration, doing otherwise would have undermined the good-faith approach to the public process and resulted in a plan that would be extremely challenging, if not impossible, to implement at the local level.

With this in mind, the following summarizes the findings of the public process and the benefits that the Lake Links Trail Network will bring to the local communities and larger region.

Figure 2.1 – Balancing act between community and personal values.



Community Value of the Trail Network

With respect to the overall benefits of a comprehensive trail network, research suggests that trails offer a very high degree of community value by providing the type of recreational amenity that the majority of the population would actually use and like to have available near their home.

The community value statement essentially defines the benefits that a comprehensive trail network would bring to residents living within the surrounding region relative to its potential impacts across a number of variables, ranging from safety and crime to property values and loss of privacy. Taken as a whole, the community value statement defines whether or not the perceived benefits of the trail outweigh perceived impacts to justify its development. The following statement summarizes these findings.

Community Value Statement

With respect to the overall benefits of a comprehensive trail network, research suggests that trails offer a very high degree of community value by providing the type of recreational amenity that the majority of the population would actually use and like to have available near their home. As defined in the table, recreational trends suggest that trail activities are the highest ranked recreational pursuits in this metropolitan region, far outpacing most other forms of recreation. In addition, the improved safety for pedestrians and bicyclists as they travel along the proposed trail corridors is a value that some would argue is more important than that of the recreational experience. The community value statement is strengthened by evidence that suggests that potential down sides, like crime, trespassing, and littering, generally do not manifest themselves to any great degree. The following table provides an overview of the key variables that affected the CAC's perspective on the community values that would be realized from a trail network within the study area.

Variable	Discussion
Demand for Trails	<p>From a regional perspective, trails are the highest ranked recreational activity. Survey results conclude:</p> <ul style="list-style-type: none"> ▶ Walking, especially within the neighborhood, is the #1 ranked recreational activity, with 85% of respondents being interested in this activity. ▶ Walking in natural areas and large parks is the #2 ranked recreational activity, with 78% of respondents being interested in this activity. <p><i>Source: Recreational trends survey conducted by the University of Minnesota Survey Research Center on behalf of the Metropolitan Council.</i></p>
Use of Trails	<p>The following summarizes the dynamics of trail use of the Gateway Trail based on regional trail use surveys:</p> <ul style="list-style-type: none"> ▶ 80% of trail users are adult. ▶ Median age of trail users is 44-44, although youth use is growing. ▶ 80% of trail users live within the county or city where the trail is located. ▶ Proximity of the trail to one's place of residence is very important to discovering it. ▶ Visiting new areas was not all that important to trail users. ▶ 95% use the trail for recreation, 4% for commuting, and 1% for getting to retail stores. ▶ Walking is the most popular use (39%), biking second (31%), and jogging third (18%). ▶ Use of the trail has increased dramatically in the last sixteen years. <p><i>Source: Metropolitan Council – Twin Cities Regional Trail Visitor Study (1999).</i></p>

The community value statement is strengthened by evidence that suggests that potential down sides, like crime, trespassing, and littering, generally do not manifest themselves to any great degree.

Variable	Discussion
Impact of New Trails on Adjacent Properties	<p>The following summarizes the results of a survey related to a new trail retrofitted into an area:</p> <ul style="list-style-type: none"> ▶ Usage – 75% of adjacent property owners use the trail (many of which were against the trail being developed). ▶ Problems – over 95% of the adjacent property owners reported no problems with the trail (such as loitering, litter, and trespassing). ▶ Economic impacts – vast majority reported that they believed that the trail would have no negative impact on their property values, with many believing that it could even increase values. ▶ Values – 75% say living near the trail offers distinct advantages, such as ease of access, convenience, exercise, and so forth. <p><i>Source: Lake Wobegon Regional Trail, Stearns County.</i></p>
Policing and Crime	<p>Review of policing issues associated with trails within Washington and Ramsey County yields the following:</p> <ul style="list-style-type: none"> ▶ Incidents of crime associated with trails is so low that they do not keep track of it separately. ▶ The contention that trail users routinely commit crimes to adjacent properties is not supported by crime statistics and evidence. ▶ Biggest area of concern with crime is at parking lots, where occasionally theft from the cars of trail users occurs (Note: Theft from cars in parking lots is not unique to trails, but occurs at parks, shopping centers, and other areas where the opportunity for a quick getaway exists). <p><i>Source: Washington and Ramsey County Sheriffs Department.</i></p>
Existing Use	<p>Public input and direct observations during the planning process yields the following insights:</p> <ul style="list-style-type: none"> ▶ Clear evidence suggests that the trail routes being proposed are already being used by bicyclists and pedestrians (this was commonly acknowledged at all public meetings and observed directly by CAC members and the planning team). ▶ Virtually all of those that walk or bike the area have a concern about personal safety – especially as it relates to children walking along the roads without trails. ▶ Drivers routinely complain that walkers and bikers are in the way on the roads within the study area.
Safety of Developed Trails	<p>Discussions with local cities that have retrofitted trails into similar settings yields the following with respect to safety for the trail user:</p> <ul style="list-style-type: none"> ▶ Actual and perceived pedestrian safety is improved when off-street trails are added along busy roads simply because people are no longer walking along the shoulder of the road where traffic speeds can be up to 55 MPH and shoulder widths are often very narrow. ▶ The incidence of conflict between pedestrians and vehicles at driveway crossings has not been found to be a major issue, with few reported occurrences of accidents (Note, however, that both the driver and the trail user have a responsibility to watch out for each other similar to any crosswalk or sidewalk system common in many cities). ▶ Adhering to generally accepted design standards for trails, including at driveway crossings, is important to maintain consistency in dealing with technical issues and maintaining as safe of pedestrian environment as possible.

It seems quite evident that the community value of the trail network being proposed would be very high.

General Summary of Public Input

A great deal of emphasis was placed on working with the local communities and townships to define local planning issues and determine which trail route options were viable and which were not.

From an overall perspective, those attending the public meetings, and those providing input through phone calls and letters, express a general belief that the trail network plan would indeed offer high community value.

Based on the information presented in the table and that which was garnered from local public meetings and in-field interviews during the planning process, it seems quite evident that the community value of the trail network being proposed would be very high. This assumes that the personal values and issues defined by the residents and adjoining property owners can be effectively addressed.

As noted in Section I, a great deal of emphasis was placed on working with the local communities and townships to define local planning issues and determine which trail route options were viable and which were not. To solicit input at the local level, a series of public open houses and focus group meetings were held. In each case, announcements were posted in local publications notifying residents of the opportunity to participate. In addition, special invitations were sent out to property owners adjacent to new trail corridors being considered to ensure that those most directly impacted by a given trail corridor had an opportunity to express their concerns and opinions.

As would be expected, attendance at the meetings was strongest by those that would be most directly impacted. Although this introduces certain biases of opinion, the comments made and perspectives gained were critical to the planning effort in that they helped shape the development of a master plan that would receive popular support within the context of being acceptable to those most personally affected.

Whereas opinions vary widely and many of the issues raised during the public process relate to details about how a given trail corridor would affect a specific piece of private property, a number of generalizations can be drawn from the public open houses, focus groups, and interviews with local residents, as defined below.

General Findings

From an overall perspective, those attending the public meetings, and those providing input through phone calls and letters, express a general belief that the trail network plan would indeed offer high community value. Although not everyone would agree, this also seems to hold true for those that own property next to one of the corridors and are therefore most directly affected by the master plan.

Under the assumption that there is general support for the trail network within the study area, the concern shifts toward defining, in good faith, ways in which the personal concerns of individual property owners can be addressed to diminish their level of uncertainty as to the impact a given trail will have on their personal property and quality of life. To this end, acceptance of any master plan by those that are most affected can best be defined in terms of a set of expectations that evolved through the public process, as the following defines.

Implementation Expectations

As part of the public consensus building for the trail network, local residents helped establish a set of expectations that they have about how the trail master plan would be implemented. The following defines the key points of these expectations.

Input into the Detail Design Process: Property owners affected by the trail network have an expectation that the implementation process will provide reasonable opportunity for them to participate in the design process to ensure that their interests and concerns are dealt with in a responsible and forthright manner.

Encroachment and Direct Impact to Private Property: Wherever feasible, trail and roadway cross-sections should be kept to the minimal acceptable width in order to minimize encroachment into private properties.

Safety: All trail and associated roadway designs should be based on the principle of providing a safe environment for the pedestrian, bicyclist, and the driver of a motor vehicle.

Aesthetic Qualities: Given the inherent and highly regarded character and sense of place within the study area, maintaining or enhancing the aesthetic quality of the trail corridors is of vital importance to both affected property owners as well as the general public.

Use of the Master Plan: The master plan presented here should be used to define the key issues associated with each trail corridor and the expectations of those most impacted by trail development. Equally important, the master plan should be used to frame future discussions to ensure that the understandings that residents have about key planning issues will be reflected in what is actually built.

The last point is of considerable importance in that many of those that accept the master plan do so with the understanding that the planning agencies responsible for implementing the plan will adhere to these expectations and carry the good faith that has been built up thus far into and through the actual implementation process.

Summaries of Public Input at the Local Level

Whereas the general summary defined above provides an overall summation of public input, the following summarizes public input at the local level to more clearly define issues and outcomes of greatest local concern. As was previously noted, attendance at the public meetings was strongest by those that would be most directly impacted. Although this introduces certain biases of opinion, it also helps ensure that the most challenging issues are brought out and addressed, thereby adding strength to, rather than taking away from, planning outcomes.

Many of those that accept the master plan do so with the understanding that the planning agencies responsible for implementing the plan will adhere to these expectations and carry the good faith that has been built up thus far into and through the actual implementation process.

The City of Mahtomedi has a history of trail planning at the local level and has actively pursued retrofitting trails along a number of local streets in recent years.

While the trolley corridor was seriously considered as a potential route to be included as part of the Lake Links Trail Network, in the end it was thought to best serve the community as a local-level trail with a more passive character that would compliment the route along Hwy. 244, as well as other local trails.

City of Mahtomedi

General Perspective: The City of Mahtomedi has a history of trail planning at the local level and has actively pursued retrofitting trails along a number of local streets in recent years. With respect to Lake Links Network, a variety of options were considered, with the primary focus being on determining the viability of routes along Hwy. 244, following an abandoned trolley line right-of-way through the city, or following an existing on-street route along Park Avenue. After considerable discussion, the route along Hwy. 244 offered the greatest potential for the Lake Links Trail Network for a number of reasons:

- ▶ Hwy. 244 has a history of being used by pedestrians and bicyclists, even though trail facilities are lacking and the road is thought to be unsafe in some areas to walk along.
- ▶ Upgrading of the road is needed, which provides the opportunity to retrofit a trail at the same time
- ▶ Adequate R.O.W. exists along Hwy. 244 to accommodate the trail and minimize encroachment into adjacent properties.
- ▶ Route along Hwy. 244 provides a strong north-south trail corridor within the city and as such becomes a major component of the local trail system.
- ▶ Route along Hwy. 244 ultimately gained stronger support than other options by those attending the public meetings.

Note that the one exception to following Hwy. 244 lies north of the District Center, where the R.O.W. becomes too narrow and structures are too close to the road to easily fit the trail. For this reason, the trail was routed along Briarwood from Quail to Dwinell, staying within the existing R.O.W.

While the trolley corridor was seriously considered as a potential route to be included as part of the Lake Links Trail Network, in the end it was thought to best serve the community as a local-level trail with a more passive character that would compliment the route along Hwy. 244, as well as other local trails. From a practical standpoint, this corridor also posed significant short-term issues that would bring into question whether or not it could be implemented in an acceptable timeframe. Most notable amongst these is property acquisition, in which the eight or so private property owners along the route have shown little interest in being willing sellers. Note that although this corridor is not part of the Lake Links Trail Network per se, it still offers considerable local value and merits continued consideration as being part of the long range local trail system plan. The same holds true for the on-street trail along Park Avenue, which too was found to have greater value as a local-level trail that compliments the route along Hwy. 244.

Supporting Factors: As defined above, the Hwy. 244 /Briarwood corridor offers many benefits with few major obstacles. Since the widened shoulder on the east side of the road already acts as a defacto trail (albeit not in very good condition), retrofitting a formalized trail along the road would appear to be relatively easy if done in concert with the upgrading of the road itself. In addition, this route is the most direct corridor through the city and provides continuity with the trail corridor extending south from Dellwood.

Detracting Factors: As with any retrofit situation, upgrading the road and building a trail will have some impact on adjacent properties which will naturally be of concern to affected property owners, even though the widened shoulder already exists for much of this segment. Critical to being successful in developing this trail route is making sure that the expectations associated with implementing the plan (as previously defined under the General Summary of Public Input) are adhered to.

City of Birchwood

General Perspective: The City of Birchwood is a small community with an intimate character. By and large, the streets are narrow and have a low speed limit (20 MPH). Houses, garages, utility poles, and other built features crowd the street edge and right-of-way. Public input and anecdotal evidence suggests that people walk and bike on the streets and feel quite safe in doing so. Bike route signage through the community also helps in defining the shared use of roads through the local neighborhoods. With this in mind, it becomes understandable that the public consensus is to continue the practice of shared-use of the local roads as the preferred option, with upgrades to signage and striping being the primary improvements. While the idea of a one-way road system similar to Lake Ave. in White Bear Lake was debated, it was clear that public acceptance of this approach was lacking at this point in time and would require considerably more public input and detail investigation to determine its merit. Also, it seemed to many that gave input that continuing the existing practice of an on-street, shared-use approach made the most sense since it has worked thus far and evidence to make any major changes has simply not manifested itself. Therefore, while the one-way approach was interesting, it was also thought to be something worthy of consideration in the future only if the on-street approach was found to be inadequate.

With respect to a separated trail with two-way traffic, residents simply found this approach to be unacceptable in that there is not enough room within the right-of-way and that the impact to adjacent properties would be too extensive. Also, it was generally agreed that a trail of this nature would change the character of the streets and city, which too was thought to be unacceptable.

As for routing options, a number of local streets were considered for the designated route that would be included in the Lake Links Trail Network Master Plan. This included routes that followed Wildwood and Lake Avenues, Cedar Avenue, and Birchwood Avenue. While each of these in some ways have similar characteristics, the Wildwood/Lake Avenues route was ultimately thought to offer the greatest potential for a few reasons. First, this route is closest to the lake, which is always of some visual interest to the passer by. Second, this route ties into the local park along Lake Avenue, which is important in that people from the community will be following Wildwood and Lake Avenues to get to the park anyway. Finally, the other routes were thought to be less desirable for a number of reasons. For example, Cedar was considered a bit more busy from a traffic standpoint and had some sight lines that were not very good. Birchwood, while being of similar character to Wildwood, also had a couple of spots where sight lines were poor, especially at some of the intersections.

Supporting Factors: As defined above, it is clear that local residents feel that the on-street approach is the best option and would like to see that reflected in the master plan. With some upgrades to signage and striping along

Public input and anecdotal evidence suggests that people walk and bike on the streets and feel quite safe in doing so.

It becomes understandable that the public consensus is to continue the practice of shared-use of the local roads as the preferred option, with upgrades to signage and striping being the primary improvements.

While the existing on-street approach has many supporters over other the options and has seemed to work well for the community, concern about safety should always be at the forefront of the decision process as the city considers its options in the future.

With certainty, the Lake Avenue trail along the western shore of White Bear Lake is one of the more popular trails within the city, and perhaps the region.

While the majority of those giving input showed strong support for the existing trail and see it as an asset to the community, there was an overwhelming strong sentiment that much more public input was needed to determine the best solution for the corridor.

the roads defined by the plan, it seems reasonable to expect that safe co-existence between vehicles and pedestrians can continue. In addition, since the current approach has worked well, gaining public support for doing otherwise seems unlikely at this time.

Detracting Factors: While the existing on-street approach has many supporters over other the options and has seemed to work well for the community, concern about safety should always be at the forefront of the decision process as the city considers its options in the future. In this light, the city is encouraged to monitor how well the current approach continues to work as time passes and the Lake Links Trail Network master plan becomes implemented. In addition, the city is also encouraged to open up the dialogue with residents in the near term about what a one-way system may entail and the pros and cons that such an approach would have. While it is not being suggested that the city will need to move in this direction, understanding the validity of a given option would seem prudent in making future decisions.

City of White Bear Lake

General Perspective: The City of White Bear Lake has an established trail plan for the city, which is in the process of being implemented. With certainty, the existing Lake Avenue trail along the western shore of White Bear Lake is one of the more popular trails within the city. With respect to Lake Links Network, the primary focus is on completing a loop around the lake, extending the Bruce Vento Trail through the city, and making a connection to the existing regional trail along Hwy. 96 that lies west of Hwy. 61.

With respect to the existing Lake Avenue trail, the focus is on working with the local residents on determining the type of enhancements that would add value and be appropriate – with the underlining issue being that of ensuring pedestrian safety along the corridor. Separating the walking area from the roadway is one option to consider in this regard, although it must be noted that local residents clearly want to look more broadly at design approaches and consider a variety of ways to ensure safety. While the majority of those giving input showed strong support for the existing trail and see it as an asset to the community, there was an overwhelming strong sentiment that much more public input was needed to determine the best solution for the corridor. At this point, there is a strong perspective that leaving the road/trail cross-section as it already exists and limiting improvements to enhancing striping, pavement colors, and other safety measures is the course to follow. The benefits of doing anything beyond this simply have not been proven to residents and therefore will have to be substantiated through the detail design process where they can participate in the discussion and decision process. The point here is that local citizens want to make sure that the city does not make any arbitrary decisions on how the trail should look without the benefit of more complete public input. Aside from the issues of the cross-section for the road and trail, a number of other concerns were defined, including uncertainty about:

- ▶ Maintaining adjacent property owners access to the lakeshore.
- ▶ Legal right-of-way widths, with a stated desire to clearly define legal ownership of the road right-of-way.
- ▶ Maintaining aesthetic qualities of the corridor and protecting the mature trees and other features that give the area its character.
- ▶ Technical issues such as turning radii, width of drive lanes, crossing driveways, so forth.

With respect to aesthetic issues, those that live along Lake Avenue feel very strongly that the existing sense of place is very important and cannot be lost in the process of making enhancements.

With respect to the Hwy. 96 trail corridor, it was clear that the current owners of the property along the lakeshore are not be willing sellers and therefore the trail should be placed within the existing road right-of-way.

With respect to the South Shore trail corridor, those attending the public meeting showed clear support for a one-way road system with a separated trail similar to that proposed for Lake Avenue.

With respect to aesthetic issues, those that live along Lake Ave. feel very strongly that the existing sense of place is very important and cannot be lost in the process of making enhancements. Protecting mature trees is of particular concern, as are other related stormwater management and ecological issues. Also, many feel that the existing on-street walkway works well and that there is no need for any major upgrades. Of clear importance here is the simple concern that wholesale changes to the corridor will adversely change the character of the area that residents hold in high regard. This underscores the importance of their involvement in the detail design process. One final note here relates to the regional versus local classification, whereby more discussion on this is perhaps warranted at the local level so that residents can gain an understanding of what that means in terms of trail design and use levels. Likewise, residents feel that additional discussion should be given to looking at other potential corridors to be designated as a regional trail and weighing the pros and cons of doing so relative to using the Lake Ave. alignment. (Note while this discussion is perhaps warranted, it should be remembered that Lake Ave. was selected due to the simple reality that a majority of people seeking a recreational experience are still likely to use Lake Ave. due to the inherent qualities that it offers. That pattern is unlikely to change irrespective of whether it is designated a local or regional trail.)

With respect to the Hwy. 96 trail corridor, it was clear that the current owners of the property along the lakeshore are not be willing sellers and therefore the trail should be placed within the existing road right-of-way. While most understand and even support the community value of the trail and know the area to be unsafe to walk along, they also have concerns about the technical design of the corridor. The following points were made:

- ▶ Keep the trail within the existing right-of-way to minimize encroachment into their properties.
- ▶ Provide some form of separation and buffering between the trail and private property to reduce the extent of trespassing that already occurs. This could include fencing, vegetation, ditches, signage, etc.
- ▶ Access to private lakeshore properties must be maintained.

In addition to trail related issues, those attending the public meeting also had comment on the road itself, with the main issues being keeping the road as narrow as possible and posting the lowest possible speed limit.

With respect to the South Shore trail corridor, those attending the public meeting showed support for a one-way road system with a separated trail similar to that proposed for Lake Avenue. Citing safety issues and heavy existing use, residents felt that a trail would be of great value and important to their quality of life. Interestingly, this approach was supported by residents in attendance that would be most inconvenienced by the on-way road system. As a second option, maintaining a two-way road with an urban cross-section and a trail directly adjacent to it was preferred in order to keep to the cross-section of the road and trail as narrow as possible and minimize any encroachment into private property. (Note that the right-of-way is 60' through this area, which is ample.)

As a third option, simply leaving the road as is and providing a separated trail was thought to be better than nothing, but there was also a great deal of concern about encroachment into existing trees, driveways, utility poles, and so forth along the corridor. This is especially a concern of those that have houses and other buildings closer to the road edge. Given these issues, this last option is one that would clearly be the most challenging to gain final consensus on and actually implement.

With respect to the Bruce Vento trail corridor, support was generally very strong, with the community value of this corridor considered to be very high.

As for technical concerns, the major points made during public input were dealing with the need to provide places to park along the road, maintaining or enhancing the aesthetic qualities of the area, making sure that lakeshore property owners could maintain access to their property from the road, and maintaining a sense of separation between the trail and the lakeshore properties in areas where the space between the road and lake is narrow.

With respect to the Bruce Vento trail corridor, support was generally very strong, with the community value of this corridor considered to be very high. In general, those giving input felt that following the existing railroad and road right-of-ways made very good sense and did not really impact private properties to any significant degree. The only exception to this is the area south of the SOO Line railroad tracks crossing, where residents there have a concern about where the trail will go given the limited space. (Note that the plan defines a couple of options in this regard and clearly states the affected property owners should be included in the detail planning of the trail in this area.)

Supporting Factors: As defined above, the supporting factors for each of these trails is that they offer high community value and would also greatly improve pedestrian safety. Maintaining the support for new trails and upgrading existing ones is contingent upon continuing the good-faith public process that brings those most affected by these trails into the design process to ensure that their individual and collective concerns are addressed.

Detracting Factors: The major issue here is not so much should the trails be developed, but to what level of development and how much of an impact will they have on adjacent properties. This again underscores the need to have an inclusive public process as defined above for the detail design of each trail corridor.

White Bear Township

With respect to the Hwy. 96 trail corridor, the issues remain the same as defined above for the City of White Bear Lake, with it being clear that the current owners of the property along the lakeshore would not be willing sellers and therefore the trail should be placed within the existing right-of-way for the roadway.

General Perspective: White Bear Township has an established trail plan for the township, which is in the process of being implemented. With respect to Lake Links Network, the primary focus is on completing the Bruce Vento trail corridor and completing a loop around the lake. With respect to the Hwy. 96 trail corridor, the issues remain the same as defined above for the City of White Bear Lake, with it being clear that the current owners of the property along the lakeshore would not be willing sellers and therefore the trail should be placed within the existing right-of-way for the roadway. While most again understand and even support the community value of the trail and know the area to be unsafe to walk along, they have the same concerns about the technical design of the corridor as defined above. In addition to trail related issues, those attending the public meeting again had comment on the road itself, with the main issues being keeping the road as narrow as possible and posting the lowest possible speed limit.

With respect to the South Shore trail corridor, those attending the public meeting showed clear support again for a one-way road system with a separated trail similar to that proposed for Lake Avenue.

With respect to the South Shore trail corridor, those attending the public meeting showed support again for a one-way road system with a separated trail similar to that proposed for Lake Avenue. Citing safety issues and heavy existing use, residents felt that a trail would be of great value and important to their quality of life. As for second and third options, those defined above by residents of White Bear Lake resonated with residents from the township as well, for the same reasons. As for technical concerns, the major points made during public input were again reflective of those defined by residents of White Bear Lake.

With respect to the Bruce Vento trail corridor, support was generally very strong, with the community value of this corridor considered to be very high.

With respect to the Bruce Vento trail corridor, support was generally very strong, with the community value of this corridor considered to be very high. In general, those giving input felt that following the existing railroad and road right-of-ways made very good sense and did not really impact private properties to any significant degree, with the exception of a stretch of Hugo Rd. south of Bald Eagle Regional Park. With respect to this area, a neighborhood representative stated that there is support for the trail itself (even though part of it involves shared-use of the road), but there are also larger concerns about the road itself that need to be addressed by the Township and County. The major issue here is that residents in this area feel that the traffic along the street is excessive and that pass-through traffic should be terminated on the southern end of the regional park. While this is a stand-alone issue, the idea of terminating the road at this location does in fact bode well for this segment of trail by reducing traffic on Hugo Road and making it safer for shared-use of the road in this very constricted area. Lacking a cul-de-sac type arrangement, traversing the trail through this area in a safe manner becomes more of a challenging proposition.

Supporting Factors: Once again, the supporting factors for each of these trails is that they offer high community value and would also greatly improve pedestrian safety. Maintaining the support for new trails and upgrading existing ones is contingent upon continuing the good faith public process that brings those most affected by these trails into the design process to ensure that their individual and collective concerns are appropriately addressed within the context of the limitations each of these corridors present.

Detracting Factors: The major issue here remains the same as in White Bear Lake, which is that it is not so much a matter of should the trails be developed, but to what extent and how much of an impact will they have on adjacent properties. This again underscores the need to have an inclusive public process as defined above for the detail design of each trail corridor.

City of Dellwood

General Perspective: The City of Dellwood posed a unique situation in that many residents came into the public process with many concerns and were generally not too excited about the idea of a trail through the community. Interestingly, though, the collective perspective of those attending the public meetings seemed to evolve as the planning process moved forward and residents became much more aware of the pros and cons that trails through the city would pose. Whereas the first public meeting residents were very guarded about (and even quite against) the trails, public support for them became more favorable as the process moved forward (based on comments made during follow up public meetings, phone calls, and on-site meetings). In fact, there is an enthusiastic contingent of supporters who seem to feel that the city has much more to gain than to lose with the trail project (and the related roadway upgrades).

Support for the trails, however, comes with very high expectations and a good faith understanding that implementation will be done following the parameters defined by this master plan. A key part of that understanding is that the implementation process will continue to include public input to address the detailed concerns that adjacent property owners have as they relate to the trail and the adjoining road.

Whereas the first public meeting residents were very guarded about (and even quite against) the trails, public support for them became more favorable as the process moved forward.

After considerable discussion and in-field review of specific situations with residents, the routes along Hwy. 244 and Hwy. 96 were indeed found to offer the greatest potential for the Lake Links Trail Network.

The Hwy. 96 trail corridor is important in that it helps spread out trail use in this area, which in turn will take some of the use pressure of the Hwy. 244 corridor.

Also of importance to the discussion is the understanding that when the roadways are upgraded, their cross-sections will be kept as narrow as possible to minimize encroachment into adjoining properties.

With respect to finding a trail corridor through the community, a variety of options were considered, with the primary focus being on determining the viability of routes along Hwy. 244 and Hwy. 96, as well as a number of other options. After considerable discussion and in-field review of specific situations with residents, the routes along Hwy. 244 and Hwy. 96 were indeed found to offer the greatest potential for the Lake Links Trail Network for a number of reasons (which parallel those defined by Mahtomedi residents):

- ▶ These two corridors have a history of being used by pedestrians and bicyclists, even though trail facilities are lacking and the road is thought to be unsafe in some areas to walk along (this is especially true of Hwy. 244).
- ▶ In the case of Hwy. 244, upgrading of the road is needed, which provides a great opportunity for retrofitting the trail at the same time the road is rebuilt.
- ▶ Adequate R.O.W. exists along key portions of Hwy. 244 to accommodate trail and minimize encroachment into adjacent properties (Note, however, that additional right-of-way will be needed in some area, although fortunately the impacts to adjacent properties would be relatively minimal).
- ▶ Route along Hwy. 244 provides a strong north-south trail corridor within the city and thus becomes a major component of the local trail system.
- ▶ Route along Hwy. 96 provides a strong east-west corridor that has regional significance by making a connection from the Bruce Vento and other regional trails to the Gateway trail and over to Stillwater.

The Hwy. 96 trail corridor is important in that it helps spread out trail use in this area, which in turn will take some of the use pressure of the Hwy. 244 corridor. This is an important point in that a narrower trail cross-section, which is less than the regional standard of 10'-12', can be used along Hwy. 244 where space is limited. This narrower cross-section also keeps the trail along Hwy. 244 in Dellwood in a local versus regional context, which was an important point to the residents who attended the public meetings.

Also of importance to the discussion is the understanding that when the roadways are upgraded, their cross-sections will be kept as narrow as possible to minimize encroachment into adjoining properties. Likewise, maintaining or enhancing the aesthetic qualities of the corridor was also very important to residents. It is the expectation of private entities, such as the White Bear Lake Yacht Club, that facilities critical to their day-to-day function are not compromised and that upgrades to the road and trail interface well with existing features along the roadway corridor. This includes issues such as parking, buildings, crosswalks, and other existing features of importance.

While public support for the trails was much stronger at the end of the process than at the beginning, some opposition does remain for a variety of reasons. Most notable of these is the feeling that some residents have that the trail is being forced upon them, a perceived loss of personal privacy, and concerns about safety of the trail at driveway interfaces. Whereas the opposing view was ultimately held by a minority of those attending the meetings and giving input through phone calls, the CAC was respectful of varying perspectives and directed the planning team to address as many of the issues up front as possible as part of the master planning process – including on-site reviews with property owners to address individual concerns and follow up on issues such as crime and safety.

Supporting Factors: The Hwy. 244 and Hwy.96 corridors are clearly vital links in the Lake Links Trail Network and have the potential to provide high recreational value and greatly improve pedestrian safety along these trail routes.

Detracting Factors: As with any retrofit situation, upgrading the road and building a trail will have some impact on adjacent properties which will naturally be of concern to the property owners. Critical to being successful in developing these trail corridors is making sure that the expectations associated with implementing the plan (as previously defined under the General Summary of Public Input) are adhered to.

City of Grant

General Perspective: The City of Grant offered different challenges than those of the other cities because of its rural overall character and residents concerns that a trail corridor through the city would infringe too heavily on private property. Although the Gateway trail has shown marked success and posed very few problems, the idea of another cross-country trail was not well received, especially by those that would have to sell their property to make it happen.

With respect to finding an acceptable trail corridor through the community, a couple of options were considered. The first was following an old, mostly privately owned railroad right-of-way that bisects the community from Mahtomedi over to the Gateway trail. Whereas this option showed great promise for a recreational trail, it was clear from public input that the current property owners have no interest in selling their property for a trail corridor for a variety of reasons, ranging from privacy issues to the desire to restore the old rail bed to natural vegetation. After considerable debate, it was clear that while this corridor would be of high value, the likelihood of gaining property ownership and general local support for the trail was rather remote. As a result, the primary focus for a trail corridor through the city shifted over to Hwy. 96 for a number of reasons:

- ▶ This corridor has a history of being used by pedestrians and bicyclists, even though trail facilities are lacking and the road is thought to be unsafe in some areas to walk or bike along.
- ▶ Adequate R.O.W. exists along most of the Hwy. 96 corridor through Grant to accommodate the trail.
- ▶ Route along Hwy. 96 provides a strong east-west corridor that has regional significance by making a connection from the Bruce Vento and other regional trails to the Gateway trail and over to Stillwater.

Residents attitudes about the Hwy. 96, as judged by those attending the public meetings and follow up phone calls, ranged from very enthusiastic to simple acceptance, and, in some cases, unsupportive. Those that are less enthused about the trail cite uncertainties about the impact the trail would have on private property or simply feel that a trail along Hwy. 96 is not necessary. As with other communities, a key part of accepting the trail corridor along Hwy. 96 is the understanding that the implementation process will continue to include public input to address the detailed concerns that adjacent property owners have as they relate to the trail and the adjoining road. Also of importance to this discussion is the understanding that when the roadway is upgraded, its cross-section will be kept as narrow as possible to minimize encroachment into adjoining properties. Likewise, maintaining or enhancing the scenic qualities of the corridor was also very important to residents.

The idea of another cross-country trail was not well received, especially by those that would have to sell their property to make it happen.

As with other communities, a key part of accepting the trail corridor along Hwy. 96 is the understanding that the implementation process will continue to include public input to address the detailed concerns that adjacent property owners have as they relate to the trail and the adjoining road.

The Hwy.96 corridor is an important route in the Lake Links Trail Network because of the regional connections that it makes.

There was great enthusiasm for completing the trail loop around Silver Lake, making the connection between the Oakwood and Mahtomedi trail systems, and making an east-west trail connection from Silver Lake over to the Bruce Vento trail.

There was complete support for developing a trail along Hwy. 120, where pedestrian safety has been an issue.

One other option that was cited during the public process was to simply continue the use of the County Rd. 12 trail corridor as the only route through the city. While this corridor is important to maintain, it was determined by the CAC and planning team that the Hwy. 96 trail corridor is also important in that it serves to make a more direct link between the Bruce Vento trail corridor and the Gateway trail. In addition, the Hwy. 96 route helps spread out trail use in this area, which is important to residents in Dellwood and Mahtomedi who want to make sure that the Hwy. 244 corridor remains more of a local, versus regional, trail for a variety of reasons as noted above.

Another issue raised is the need to accommodate horses along the roadways, including making provisions for them to cross the trail. Also, concern was expressed about who would be responsible for potential increased costs associated with emergency services for incidents happening along the trail. Likewise, operations and maintenance responsibilities also needs to be clearly defined prior to development.

Supporting Factors: The Hwy.96 corridor is an important route in the Lake Links Trail Network because of the regional connections that it makes. Also, since the trail essentially stays within the public right-of-way, there will be very limited, if any, impact to adjoining private properties.

Detracting Factors: As with any retrofit situation, building a trail along this corridor will pose some disruptions within the public right-of-way. Otherwise, given that the right-of-way is ample through the city of Grant, there should be only minor and short-term disruptions to adjoining private properties at the time that the trail is built.

Cities of Maplewood, N. St. Paul, and Oakdale

General Perspective: In general, there was great enthusiasm for completing the trail loop around Silver Lake, making the connection between the Oakwood and Mahtomedi trail systems via a pedestrian bridge across I-694, and making an east-west trail connection on the north side of Maplewood from Silver Lake over to the Bruce Vento trail following the powerline easement. Since each of these have been considered in the past at the local level, the idea of furthering that thinking by including them in the Lake Links Trail Network master plan was thought to be prudent and would strengthen the collective value of these local trails.

With respect to completing the trail loop around Silver Lake, there was complete support for developing a trail along Hwy. 120, where pedestrian safety has been an issue. There was also support for upgrading the trails in the parks on the north and south shores, which would be important parts of the loop trail around the lake as well as meeting in-park trail needs. Maintaining the existing on-street trail on Lake Blvd. was thought to be appropriate given the relatively light traffic and lack of space for an off-street trail to be developed. As for the bridge crossing of I-694, the idea of connecting the existing trails in Mahtomedi with those of Oakdale was well received, as was the idea of using a separate pedestrian bridge rather than the Hwy. 120 bridge crossing since it would be a much more pleasant and safer crossing.

With respect to the east-west trail corridor following the powerline, this too was well received by those attending the public meetings. Since this corridor is already defined in the City's park and trail system plan, gaining broad local support would appear likely. The major challenge here lies in gaining access to the powerline right-of-way, especially in the westerly segments where private properties abut both sides of the powerline corridor. Critical to making this alignment work will be involving adjacent property owners in the design process so that their specific concerns about encroachment and buffering can be addressed. Should this not be attainable, support was gained for an alternative alignment along County Rd. D.

Supporting Factors: Since many of these trail corridors and points of connection either already exist or are planned, tying them together into a cohesive whole through the Lake Links Trail Network master plan seems prudent and well conceived.

Detracting Factors: As with any retrofit situation, there will be some technical challenges that will have to be worked out as part of the detail design process, none of which are perceived to be insurmountable.

City of Stillwater

General Perspective: The City of Stillwater has a history of trail planning at the local level and has actively pursued construction of trails along a number of local streets and within new development areas in recent years. With respect to Lake Links Network, the major question raised was where was the best location for a regional level trail to interconnect with the local trail system. To this point, County Rd. 64 / McKusick Rd. alignment was thought to be a possibility at one point, in addition to the Zephyr Line right-of-way and the Hwy. 96 corridor. However, in the end, the County Rd. 64 alignment was thought to be best suited as a local trail and that either the Hwy. 96 or Zephyr Line right-of-way would be more desirable. With respect to the Zephyr Line as the primary route, it was seen as an interesting option that was worthy of consideration. At the same time, it was also recognized that the line is privately owned and that acquiring it was fraught with uncertainty. As such, the Hwy. 96 corridor provides a practical fallback position to be considered at the time the trail is implemented. Note also that the city expressed a desire to continue the regional trail into the downtown area along Hwy. 95, which would then provide a completed link from Stillwater to the larger Lake Links Trail Network. (Note: This is addressed in Section III.)

Supporting Factors: In general, linking the city's trail system to the Lake Links Trail Network was thought to make sense and would be of value to the community.

Detracting Factors: Aside from the technical challenges of retrofitting the trail, there are no major detracting factors that came to light during the planning process.

City of Hugo

General Perspective: Although the City of Hugo is on the periphery of the study area, connecting the Lakes Links Trail Network to the existing Hardwood Creek trail and the evolving Clearwater Creek trail corridor was thought to be important by those representing the city on the CAC and citizens-at-large who provided input during the planning process. The Clearwater Creek trail corridor in particular holds promise in that it would link the Bruce Vento and Hardwood Creek trail corridors to the Rice Creek Chain of Lakes trail system in Centerville/Lino Lakes.

Supporting Factors: Making the connections defined above greatly expands regional trail opportunities.

Detracting Factors: As defined by Hugo city staff, the actual route along the Clearwater Creek corridor has yet to be completely defined. However, recent development projects along the corridor do have a provision for trails along the creek, which is a major step toward the realization of this trail corridor.

CAC Community Value Conclusions

In consideration of the issues defined above, the CAC came to the conclusion that the overall value of the trail network justifies its development and that the routes ultimately selected for inclusion in the master plan are those that offer the greatest community value with the fewest impacts to private properties and personal interests.

Developing a viable master plan that is implementable requires an understanding of, and empathy for, the concerns of those most affected.

In consideration of the findings defined on the previous pages, the CAC came to the conclusion that the overall value of the trail network justifies its development and that the routes ultimately selected for inclusion in the master plan are those that offer the greatest community value with the fewest impacts to private properties and personal interests. Whereas there were alternative routes that offered outstanding trail opportunities, the ones ultimately selected were those that were thought to serve the need while still being reasonable and practical to implement, everything considered. Other conclusions related to the overall community value of the trail network include the following:

- ▶ Demand for trails is well established and will likely continue to grow in the future.
- ▶ Past citizen-driven planning efforts and public input during this study suggest that an integrated trail network in the study area would offer high community values.
- ▶ In-field observations suggests that trail routes defined by the master plan are already being used by pedestrians and bicyclists even though no formal trail exists.
- ▶ Public safety remains a major concern and is a significant factor in the selection of the trail routes.

Responding to Personal Values

Whereas the community values as defined above suggest that a looped trail network would be of high community value, developing a viable master plan that is implementable requires an understanding of, and empathy for, the concerns of those most affected. Whereas the community values of the trail network are pronounced, the CAC also recognized that inevitably every trail alignment affects private properties and personal values to varying degrees. In light of this, the CAC was committed to working toward minimizing the direct impacts to private properties to the degree possible. In addition, the CAC asked the planning team to define the expressed concerns and opinions of property owners and to determine their expectations related to the trail alignment and character along each proposed corridor to ensure that those considerations were brought forward to the point of implementation. Forthcoming sections of the report considers these issues in greater detail and defines the development issues and constraints that need to be addressed as part of the implementation phase of the project.

Section III

Trail Network Master Plan

Master Plan Overview

The final plan represents a network of trails that fulfill the objectives set for the study.

The trail network consists of eight trail corridors, which tie into several existing or planned corridors at the State, regional, and county level.

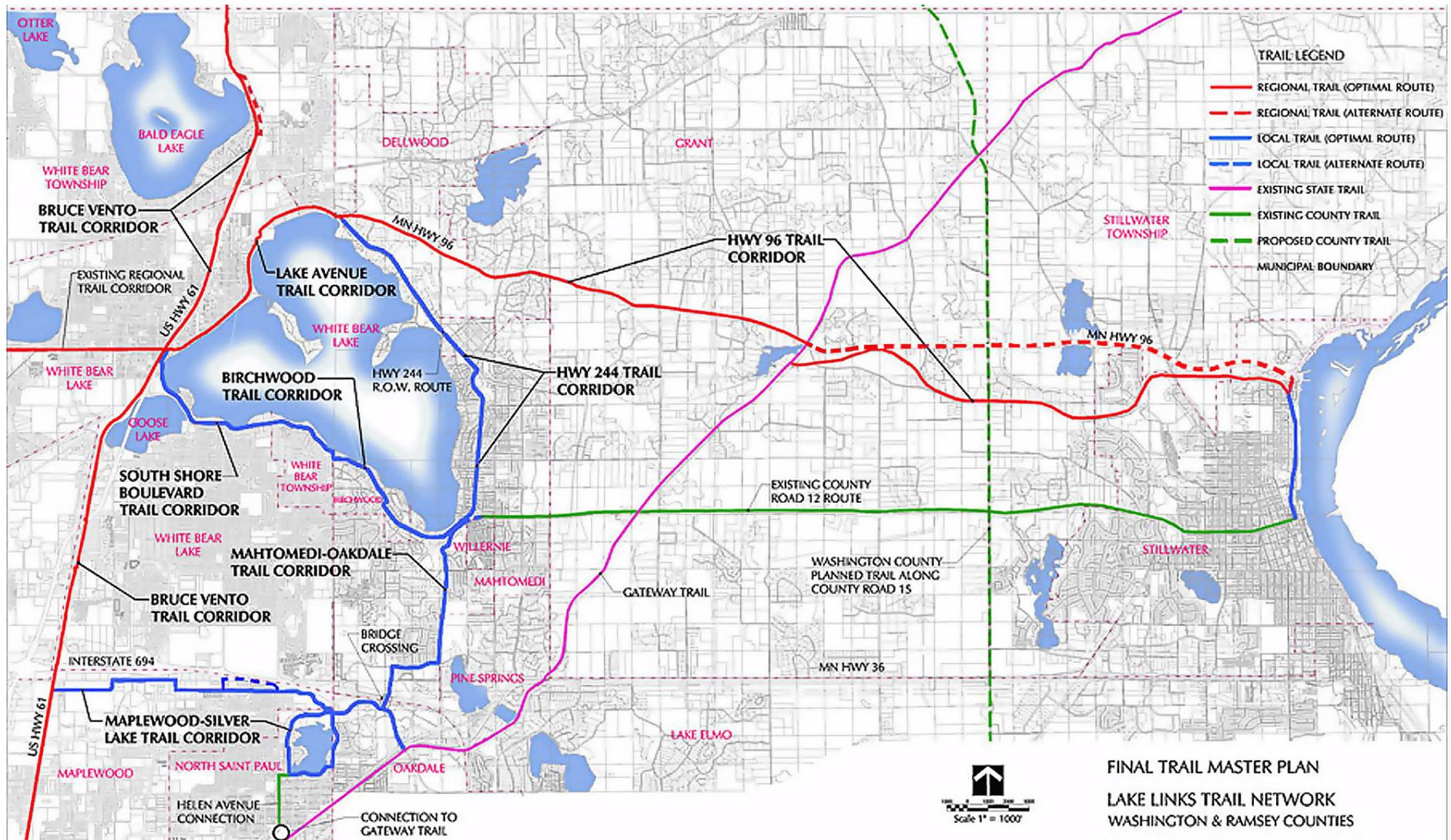
The trail network master plan is the end result of the planning and public process. The final plan represents a network of trails that fulfill the objectives set for the study. The master plan also represents a trail network that was molded as much by the limitations of the planning area as it was by the opportunities it offered. In spite of the challenges, it is believed that the trail network presented here offers very high recreational value to the surrounding communities and greatly improves pedestrian safety along the trail corridors.

The trail network consists of eight trail corridors, which tie into several existing or planned corridors at the State, regional, and county level. In addition, the trail network interlinks with a series of existing and planned local trails that, ultimately, will provide a seamless and expansive system of trails within the study area. The following table provides an overview of the trail corridors defined under the master plan. Total trail mileage is 34.1.

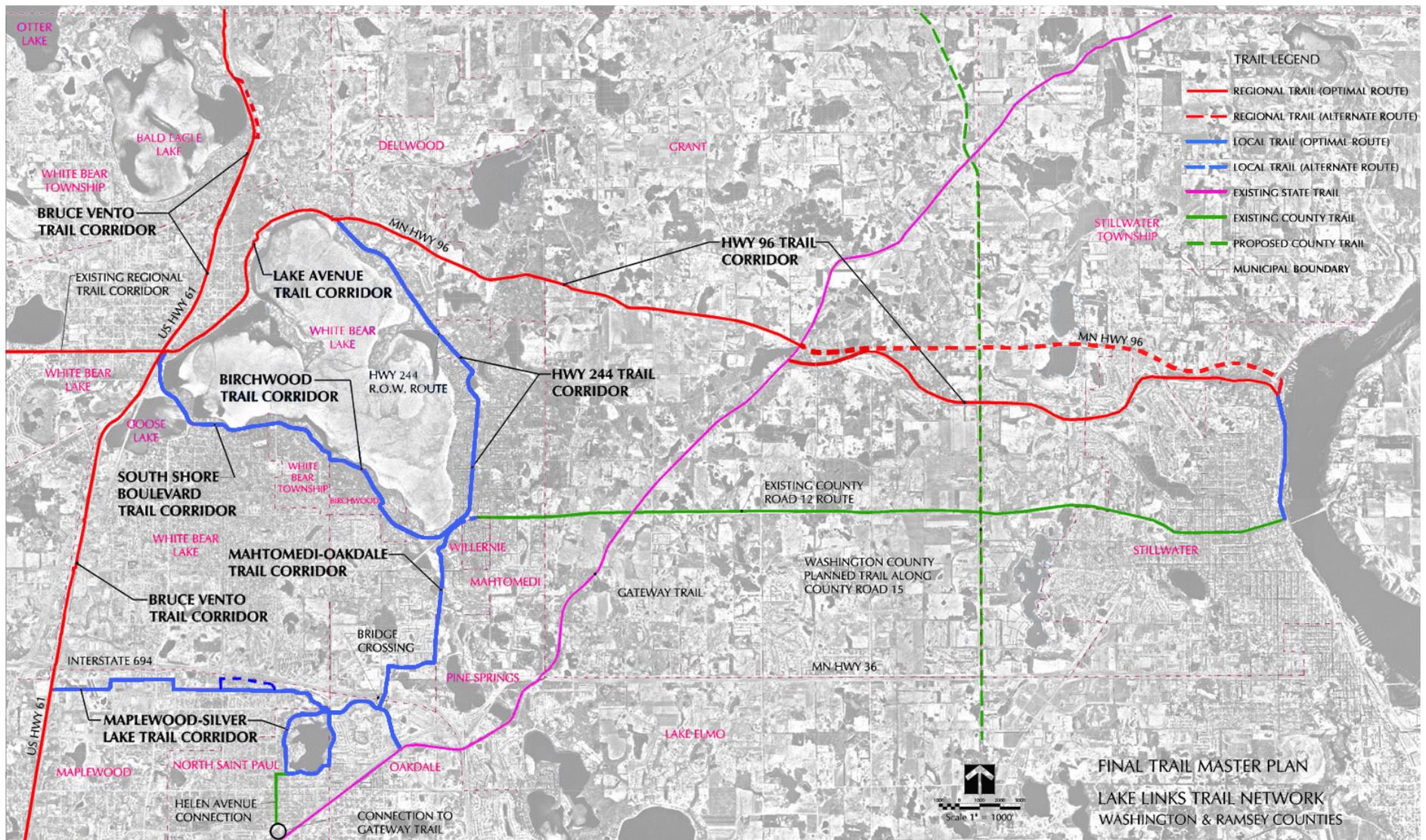
Trail Corridor	Description
Bruce Vento Trail Corridor (7.3 miles)	North-south regional trail that extends the existing trail from Beam Avenue in Maplewood north into Hugo, where it will continue on to link with other regional-level trails. The corridor generally follows the Burlington Northern railroad alignment, as well as existing adjacent roadways.
Lake Avenue Trail Corridor (2.1 miles)	Regional trail corridor that follows an existing trail corridor from Lions Park north along Lake Avenue on the west side of White Bear Lake in the City of White Bear Lake.
Hwy. 96 Trail Corridor (10.3 miles)	Regional trail corridor that follows the Hwy. 96/Zephyr Line rights-of-way from Ramsey Beach all the way to Stillwater.
Hwy. 244 Trail Corridor (3.5 miles)	Trail corridor that follows the Hwy. 244 right-of-way from Hwy. 96 south to the downtown area of Mahtomedi and Willernie.
Birchwood Trail Corridor (1.7 miles)	Trail corridor that follows Wildwood and Lake Avenues through the City of Birchwood. Given limited road right-of-way through this area, an on-street bike route is proposed for this segment.
South Shore Blvd. Trail Corridor (1.5 miles)	Trail corridor that follows South Shore Blvd. from East County Line to Goose Lake area.
Mahtomedi-Oakdale Trail Corridor (3.1 Miles)	Trail corridor that starts in downtown Mahtomedi and heads south to connect with an existing trail in Oakdale. This corridor includes a proposed pedestrian bridge across I-694.
Maplewood- Silver Lake Trail Corridor (4.6 Miles)	Trail corridor that provides a loop around Silver Lake and then heads west along the northern edge of Maplewood following a powerline easement and local streets to make a connection with the Bruce Vento trail corridor.

Figures 3.1 and 3.2 on the next two pages provide an overview of the Lake Links Trail Network.

Overall Trail Network Master Plan Map



Overall Trail Network Master Plan Map – Aerial View



Trail Network Evaluation Against Stated Criteria

As defined in the previous section, a set of evaluation criteria were applied to provide an objective framework for evaluating potential trail routing options. The following briefly summarizes the evaluation of the overall trail network against those criteria.

Evaluation Summary – First Tier Criteria

Criteria	Evaluation Statement
Regional Values	The trail network offers significant regional values, especially by providing: <ul style="list-style-type: none"> ▶ An interconnection between existing regional and State trail corridors and between local communities. ▶ A new regional-level recreational amenity that provides a new system of interconnected trails that allows trail users to travel through several communities.
Local Values	Trail network offers significant value to the local communities in a number of ways, including: <ul style="list-style-type: none"> ▶ Providing a safe place for pedestrians and bicyclists to walk, ride bikes, and in-line skate. ▶ Providing high demand recreational amenities for local residents to use and enjoy. ▶ Expanding local trail options beyond the local community to create a larger, more complete system.
User Experience Values	The trail network around the two lakes offers high recreational value in very desirable settings. Expanding the regionally-based trail system through the creation of the Lake Links Network also provides extensive recreational value by greatly expanding trail options offering a vast array of settings and lengths.

Evaluation Criteria – Second Tier

Criteria	Evaluation Statement
Natural Setting	Even though the proposed trail corridors follow existing road and railroad rights-of-way, the lakes they encircle along with interconnections made with regional parks and local parks/natural open space areas offer high aesthetic and recreational value.
Separated Trail	With a few exceptions, the Lake Links Trail network consists of separated trails that greatly improve user safety and enhance the recreational experience.
Natural Resource Issues	Since virtually all of the trail corridors follow existing road and railroad right-of-way, the direct impact to natural areas is relatively minimal. Although trail construction (and roadway upgrades) will have some impact to adjacent wetlands and natural vegetation in select locations along Hwy. 96 and Hwy. 244, this can be kept to a minimum and any impacts would be appropriately mitigated.
Acquisition Issues	Since the trail corridors generally stay within existing road and railroad rights-of-way, acquisition of private properties is relatively minimal and generally limited to instances where the right-of-way is simply too narrow for trail (and roadway) upgrading occur.
Physical Constraints	Although impediments exist, the inherent physical constraints along the proposed corridors are surmountable and technically feasible to overcome.
Encroachment Issues	Minimizing the level of encroachment into adjacent properties and keeping the trail/roadway cross-section as narrow as possible within the right-of-way is a fundamental objective of the master plan and of critical importance to affected property owners.

Cost-Benefit

Given the high demand for trails in the region, along with the high recreational value and improved safety that these trails would provide to the surrounding communities, the long-term cost-benefit of Lake Links Trail Network appears justifiable.

Evaluation Criteria – Third Tier**Criteria****Evaluation Statement****Public and Political Acceptance**

Based on the results of the public process, there is a general consensus that the trail network would offer high community value. However, there is also an expectation that the implementation of the trail would be done with sensitivity toward minimizing impacts to adjacent properties and maintaining the character of the corridors it follows. Acceptance of the plan is also based on the expectation that local communities will be directly involved in the implementation process and that local citizens will have an opportunity to participate in the detail design of the trail (and roadways) in their community.

When considered against the evaluation criteria, it is clear that the Lake Links Trail Network measures up very well and that an interlinking trail system would offer high regional and local values.

When considered against the evaluation criteria, it is clear that the Lake Links Trail Network measures up very well and that an interlinking trail system would offer high regional and local values. In addition, the evaluation statements suggest that while technical and public/political issues remain to be fully addressed as part of implementing the plan, the actual development of the trail network seems very feasible. Whereas the expectations are high as to how the plan will be implemented (as defined in the last section), there is also a reasonable degree of good faith built between the public and the CAC and planning team to ensure that personal concerns will be given due consideration as the project moves forward. While impacts to right-of-ways and, in some cases, adjacent properties are inevitable, expectations are high that implementing agencies will work toward minimizing encroachment and ensuring that the aesthetic qualities of the proposed corridors are not diminished.

Regional and Local Trail Designations

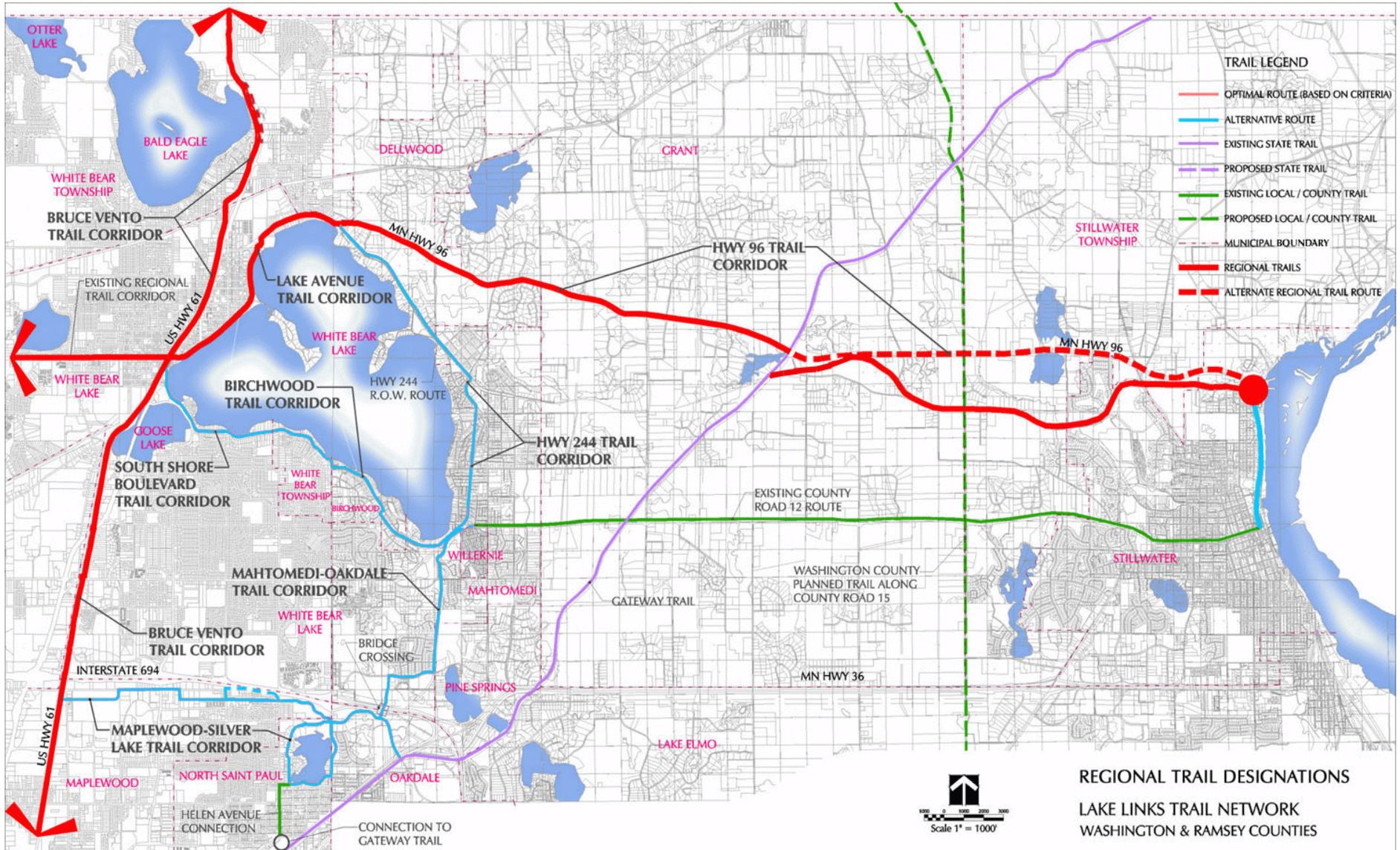
Whereas the trail network master plan serves to form a cohesive system of trails within the study area, there is a distinction between trail corridors that are locally-based and those that are regionally-based.

Whereas the trail network master plan serves to form a cohesive system of trails within the study area, there is a distinction between trail corridors that are locally-based and those that are regionally-based. As figure 3.3 on the next page illustrates, two of the corridors included under the Lake Links Trail Network are designated as regional trails: The Bruce Vento trail corridor and the Hwy. 96 trail corridor. These trails are given regional designation because they meet the criteria as defined by Regional Recreation Open Space Policy Plan Update (November, 2000). This includes:

- ▶ Providing access to or traverse through regional parks or park reserves and serve to link these parks together.
- ▶ Providing linkages between existing regional and state trails.
- ▶ Traversing interesting developed areas.
- ▶ Traversing high quality natural areas.

The remaining trails within the network are defined as local-level trails (city, township, and county), whereby their focus is on meeting local trail needs and providing connections to the regional and state trails. Note here that one of the advantages of the local trail designation is that it offers a higher degree of latitude in their location and width, which is important in situations where narrower trails (i.e., less than the 10' to 12' regional standard) may be desired to maintain its local level context (and perhaps necessary given space limitations in certain areas).

Regional Trail Designations Map



From an implementation standpoint, the most important distinction between trail types is the potential avenues available for funding.

From an implementation standpoint, the most important distinction between trail types is the potential avenues available for funding. Under the regional park designation, regional trails will likely be funded through programs administered through the Metropolitan Council through a competitive ranking process. Local trails, on the other hand, are funded at the local level or through a variety of trail funding programs at the County, State and Federal level. Whereas none of these sources are guaranteed, the inclusion of local trails within the Lake Links Trail Network master plan shows the inter-connective nature of these trails, which in turn provides the platform for local cities, counties, and townships to collaborate on seeking funding opportunities for development.

Technical Overview of Individual Trail Corridors

The purpose of the review is to more clearly define trail alignment and other important planning outcomes and issues.

The latter part of this section provides a technical review of the individual trail corridors defined by the master plan. The purpose of the review is to more clearly define trail alignment and other important planning outcomes and issues. These in turn will set the stage for implementing the plan and serve as an underpinning for continued public input to ensure that the expectations of those most affected by trail development are ultimately met. The following table provides an overview of each of the trail corridors.

Trail Corridor	Design Overview	Major Issues
Bruce Vento Trail Corridor	A separated trail with a 12' wide cross-section is recommended to accommodate heavy use and a variety of users.	<ul style="list-style-type: none"> ▶ Uncertainty of future multi-modal transportation needs along this railroad corridor. ▶ Retrofitting the trail in areas where space is limited. ▶ Ensuring that local residents have an opportunity to give input into the detail design process.
Lake Avenue Trail Corridor	Enhancements to trail cross-section to ensure pedestrian safety is recommended.	<ul style="list-style-type: none"> ▶ Working with local residents to determine the type of improvements that are justified and add value.
Hwy. 96 Trail Corridor	A separated 10' trail adjacent to the roadway is recommended given the regional status of this trail corridor.	<ul style="list-style-type: none"> ▶ Retrofitting the trail in areas where space is limited. ▶ Ensuring that local residents have an opportunity to give input into the detail design process.
Hwy. 244 Trail Corridor	A separated 8' to 10' trail as part of upgrading the roadway is recommended (local input is needed on final width).	<ul style="list-style-type: none"> ▶ Retrofitting the trail in areas where space is limited. ▶ Ensuring that local residents have an opportunity to give input into the detail design process.
Birchwood Trail Corridor	Maintaining existing on-road shared-use system is recommended, with upgrades.	<ul style="list-style-type: none"> ▶ Ensuring that local residents have an opportunity to give input into the detail design process.
South Shore Blvd. Trail Corridor	A separated 8' to 10' trail adjacent to the roadway is recommended, preferably with one-way road system.	<ul style="list-style-type: none"> ▶ Determining which roadway cross-section best serves need ▶ Ensuring that local residents have an opportunity to give input into the detail design process.
Mahtomedi-Oakdale Trail Corridor	Making connection between two established trails via a bridge across I-694 is recommended.	<ul style="list-style-type: none"> ▶ Determining the best location for the crossing and working with MNDOT to actually implement.
Maplewood-Silver Lake Trail Corridor	A separated 10' trail along the powerline in Maplewood and completing the loop around Silver Lake is recommended.	<ul style="list-style-type: none"> ▶ Retrofitting the trail in areas where space is limited. ▶ Ensuring that local residents have an opportunity to give input into the detail design process.

Turnback Status of Roadway Affected by the Trail Corridors

The timing of turning back some of the roads within the study area from the State to the County, and from the County to the local city or township is an important aspect of implementing the master plan.

The timing of turning back some of the roads within the study area from the State to the County, and from the County to the local city or township is an important aspect of implementing the master plan. Turnback essentially refers to a shift of responsibility for upgrading, maintaining, and operating a roadway from one agency to the other as part of the overall transportation plan for the region. The following table provides an overview of the roads that fall under the turnback program and their current status.

Roadway	Turnback To/From	Status	Impact on Trail Development
Hwy. 244	State to County	On turnback list, but unfunded under the current funding program. Likely to be a minimum of five, perhaps even ten, years before funding would be available to upgrade the road as part of a turnback agreement.	Upgrading the road as part of a turnback agreement is vital to this trail corridor in that the trail cannot be built without doing so. As it stands now, the timing of the turnback limits the short-term prospects for developing the trail. Note, however, that collaboration between the County and local cities could initiate a reassessment of the timing of this segment given the greater community values that would be realized with the development of the trail.
Hwy. 96	State to County	On the turnback list but unfunded under the current funding program. Likely to be a minimum of ten, perhaps even fifteen, years before funding would be available to upgrade the road as part of a turnback agreement.	Retrofitting the trail along the Hwy. 96 corridor will impact the road itself in some areas, especially the western half from the Ramsey County Beach to Ideal Ave. N. In these areas, the trail would either lie directly adjacent to the road behind a curb or be separated by a relatively narrow boulevard. To accomplish this, upgrading the road itself or shifting its location within the right-of-way may be necessary. In areas where the right-of-way is wider and ample room is available for the trail, no upgrading of the road would be needed to accommodate the trail. The most critical area of this road in the short-term is the stretch on the north side of White Bear Lake, where making the connection from the Ramsey County Beach to Hwy. 244 is critical to the trail loop around the lake.

Roadway	Turnback To/From	Status	Impact on Trail Development
County Road 94 / South Shore Blvd.	County to City and Township	County has desire to turnback to City of White Bear Lake and White Bear Township, but negotiations remain incomplete for a variety of reasons.	Retrofitting the trail along the South Shore corridor will impact the roadway in a variety of potential ways, depending on final decisions as to which road/trail cross-section is most appropriate. However, under each scenario the road will require some redesign to accommodate the trail. Given this, addressing turnback issues as part of implementing the trail master plan seems unavoidable.
County Road 154 / Hugo Road	County to Township	County has desire to turnback to White Bear Township, but negotiations remain incomplete for a variety of reasons.	Retrofitting the trail along Hugo Road will impact the roadway in a variety of potential ways, with the most important one being the issue of a cul-de-sac near Bald Eagle Lake. Given this, addressing turnback issues as part of implementing the trail master plan seems unavoidable.

In reality, the development of the trails along these corridors will be lock-stepped with the timing of the upgrading and turning back of the adjoining roadway from the State to the County and from the County to the local cities and township.

As the table defines, the turnback schedule associated with each of these roadways is quite important to a number of the trail corridors. In reality, the development of the trails along these corridors will be lock-stepped with the timing of the upgrading and turning back of the adjoining roadway from the State to the County and from the County to the local cities and township.

Design for Roadways on Turnback Schedule

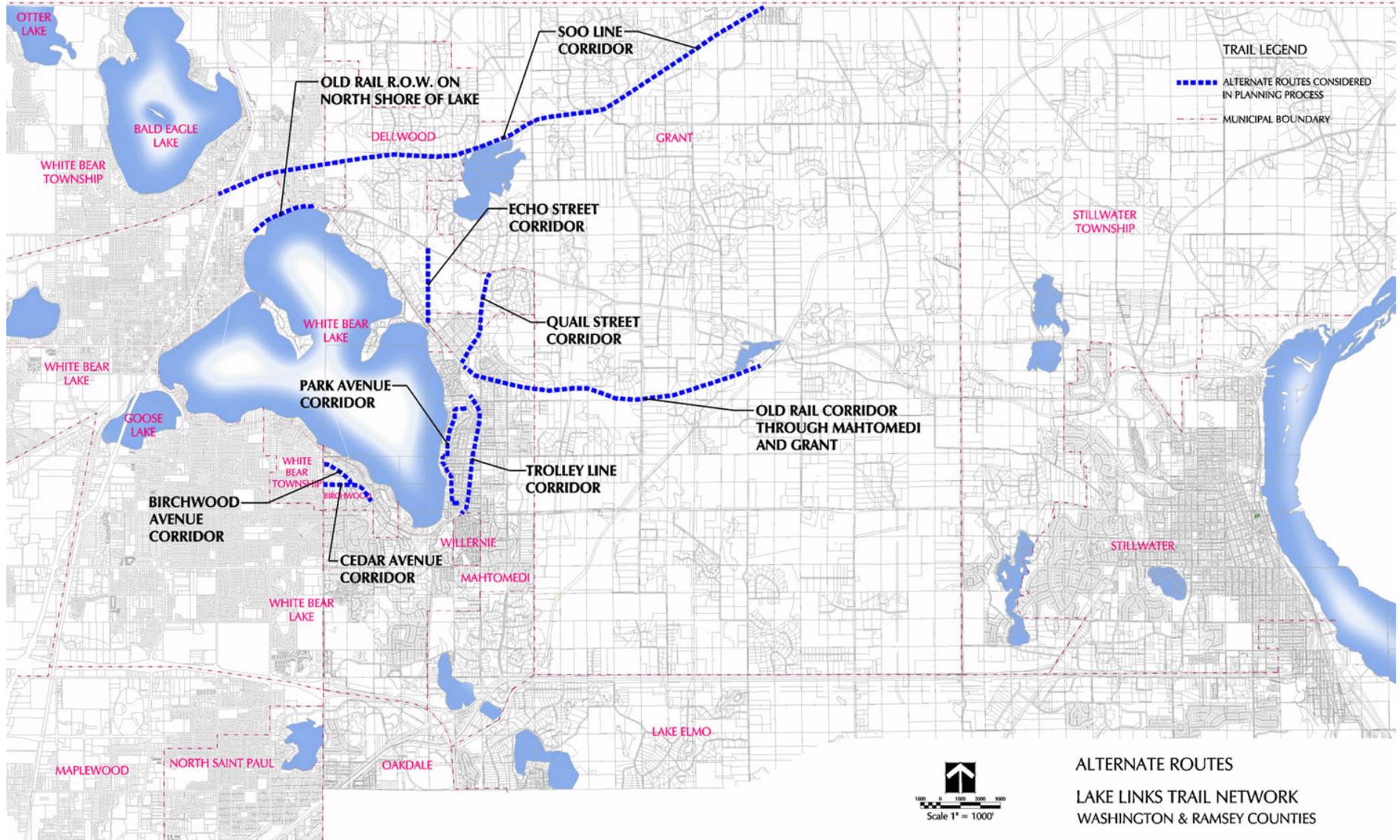
The design for the roadways on the turnback schedule would follow the standards defined by MNDOT and the County. Note, however, that both Washington and Ramsey Counties recognize that some degree of flexibility may be required in order to incorporate a trail along these corridors and preserve their existing aesthetic qualities. As defined by this master plan, there is also the expressed desire by local residents to keep the roadway cross-sections as narrow as possible to help calm traffic and maintain the existing sense of place. To this end, the cross-sections shown under the technical reviews for each of the trail corridors define the roadway/trail cross-sections found to be most advantageous to the CAC, with the understanding that they each meet minimum safety standards defined by MNDOT. The intent is to use these cross-sections as the starting point for future roadway designs.

Alternative Trail Corridors Considered During the Planning Process

A number of alternative trail corridors were considered during the planning process.

As previously noted, a number of alternative trail corridors were considered during the planning process. Whereas these routes were ultimately excluded from further consideration for various reasons, some of them held great promise when first considered against the first tier evaluation criteria. However, when measured against second and third tier criteria, it became clear that these routes were either not the best option and/or would simply not be implementable and therefore did not warrant further consideration. Figure 3.3 on the next page illustrates the alternative routes considered during the planning process. The figure is subsequently followed by a table that summarizes the rationale for their ultimate exclusion from the plan as primary routes.

Map of Alternative Trail Corridors Considered



Review of Alternative Trail Corridors

The following table defines the rationale for considering and ultimately excluding a number of alternative routes that were reviewed as part of the planning process. Note here that while each of these options did not make the final plan, some of them continue to have merit as part of local trail systems and, in some cases, may be worthy of a second look should the primary routes defined by the master plan fail to materialize.

The table defines the rationale for considering and ultimately excluding a number of alternative routes that were reviewed as part of the planning process.

Alternative Route	Overview and Rationale for Excluding from Master Plan
Old Railroad Right-of-Way on North Shore of White Bear Lake along Hwy. 96	This corridor would follow an old rail/trolley line right-of-way on the north side of White Bear Lake between Ramsey County Beach and Hwy 244. The right-of-way lies about midway between the highway and the lakeshore. Although some portions of this right-of-way are publically-owned, much of it is not. Although this alignment offered very high recreational values, it was eliminated from consideration due to the clear lack of interest by property owners in selling their lakeshore property or having it bisected by a trail easement. Under the circumstances, it was determined that working within the existing road right-of-way wherever possible was the most implementable approach to developing this segment of the Hwy. 96 trail corridor. (Note, however, that some impacts to adjoining properties are unavoidable along this segment of the trail, as defined in the technical review of this corridor.)
Old Railroad Corridor Through Mahtomedi and Grant	This old railroad corridor starts at about Briarwood and Quail Street in Mahtomedi and proceeds east through Grant until it reaches the Gateway trail. Whereas the portion of the corridor through Mahtomedi is largely publically owned, the remainder in Grant is privately-owned. Although this alignment offered very high recreational values, it was eliminated from consideration due to the clear lack of interest by property owners in Grant to sell their rights for a variety of reasons, ranging from privacy issues to simply disliking the idea of the trail corridor on its own merit. Under the circumstances, it was clear that this alignment would simply not be implementable under the willing-seller approach to land acquisition.
Echo Street and Quail Street Corridors	<p>These two parallel streets were considered as an alternative to the northern part of the Hwy. 244 corridor. After careful review, the Hwy. 244 route was determined to have the greatest merit for these reasons:</p> <ul style="list-style-type: none"> ▶ Completion of a cohesive around-the-lake loop was thought to be very important. ▶ The established pattern of use along Hwy. 244 is unlikely to change (people simply like going around the lake via the most direct route). ▶ Inherent safety issues associated with the current Hwy. 244 cross-section cannot be ignored. ▶ Continuity and directness of the Hwy. 244 route makes it the most prudent alignment. ▶ Constraints to developing a trail along either of these streets is similar to, if not greater than, those found along Hwy. 244. <p>For these reasons, the Hwy. 244 trail corridor was found to have the greatest merit.</p>

Alternative Route	Overview and Rationale for Excluding from Master Plan
SOO Line Rail Corridor	This corridor was considered as an alternative to the Hwy. 96 corridor or the old rail corridor through Mahtomedi and Grant to get from the Bruce Vento trail corridor to the Gateway trail. Whereas the corridor has some long-term potential for a significant regional-level trail corridor, it was found that it would not achieve the objectives set for this trail network and was therefore eliminated as an option.
Cedar and Birchwood Avenues Corridors	Cedar and Birchwood Avenues traverse through the city of Birchwood south of Wildwood and Lake Avenues. Although each of these were considered options, Wildwood and Lake Avenues were selected because they tied into an existing park, brought people closer to the lakeshore, offered relatively low traffic volumes, have reasonable sight lines, and were interesting to walk or bike along.
Trolley Line and Park Avenue Corridors in Mahtomedi	As defined in Section II, each of these two corridor options were considered as an alternative to the Hwy. 244 corridor. In the end, however, it was found that each of these are best suited to be local-level trails and that the Hwy. 244 corridor would best serve as the through corridor that would link the local trail system with the Lake Links Trail Network. Also, since Hwy. 244 is already used by pedestrians and bicyclists, upgrading the trail (and road) to improve safety was thought to be needed.

Interconnection with Local Level Trail Systems

As noted previously, the interconnection between the Lake Links Trail Network and existing and planned local systems is a fundamental objective of the planning process. While the master plan presented here focused on the Lake Links Trail Network, the local trail systems play a significant role in creating a comprehensive network of trails that provide a safe place for pedestrians and bicyclists to walk, ride bike, and in-line skate. Although the degree to which local level trail systems are defined and implemented varies between local cities, the maps shown in Appendix B provide an overview of local system plans that have been prepared and considered as part of this study. These maps also lend a broader understanding of the importance of the Lake Links Trail Network in making the key interconnections between and within local communities.

Trail (and Roadway) Design Guidelines

The trail design guidelines that would be applied to the trail corridors defined by this master plan would follow those commonly used for Regional, State, and Federal projects.

The trail design guidelines that would be applied to the trail corridors defined by this master plan would follow those commonly used for Regional, State, and Federal projects. Design manuals that would be referenced include:

- ▶ American Association of State Highway and Transportation Officials (AASHTO): Guide for the Development of Bicycle Facilities
- ▶ MNDOT: Minnesota Bicycle Transportation Planning and Design Guidelines
- ▶ State-Aid Bicycle Facilities Design Criteria
- ▶ Metropolitan Council Policy Plan for Regional Trails

The use of these guidelines is of importance for a couple of reasons:

- ▶ To ensure the development of consistent and safe trail corridors that are in sync with accepted design practices.
- ▶ To ensure that the trail corridors qualify for various trail funding programs that are sponsored at the Metropolitan Council, State, and Federal level.

Whereas the first of these last bullet points is important for logical reasons, the latter one is also of importance in that gaining access to a variety of funding programs will be critical to implementing the master plan. Whereas the trail corridors defined by the master plan can be implemented solely through local-level capital investment, the potential cost of doing so would likely make this approach very challenging, if not unrealistic. As such, adhering to the accepted standards wherever possible is advised.

With respect to trail signage, the master plan also calls for adherence to the previously defined design manuals as well as those prepared by MNDOT that relate specifically to trail and roadway signage.

Support Facilities for the Trail Network

One of the advantages of developing the trail network is that it links together numerous existing parks and public spaces, which in turn offers an important side benefit in that many of these areas already have, or will in the future, facilities that support the trails. This includes public parking, restrooms, picnic spaces, and sitting areas. In addition, connection to the downtown areas of the local communities provides ample opportunity for refreshments and food. Since this rather extensive infrastructure of facilities already exists, the trail network master plan itself does not call for development of any major new support facilities. Note, however, that the detail design for individual trail corridors should provide trail links from the main trails to existing support facilities, along with the necessary signage to ensure trail users are aware of these facilities. Detail design should also take into consideration logical locations for trash receptacles and benches, which are standard aspects of trail development. With respect to parking, it is believed that the existing public parking available within the parks and the local communities should be ample to support the new trails. Additionally, residents along virtually all of the corridors were generally against developing new parking lots in areas where the trail traversed through residential areas.

For a more complete understanding of the locations of support facilities refer to the *Technical Overview of Individual Trail Corridors* later in this section.

Affect of Multi-modal Transportation Plans on Trail System Planning

One of the factors that was considered as part of the planning for the Bruce Vento trail extension along the Burlington Northern railroad corridor was the potential for use of that corridor for multi-modal transportation, which ranges from buses to light and heavy rail. Whereas there is a great deal of uncertainty as to where this will ultimately lead, it is clear from various Metropolitan Council transit studies that some form of transit use of the corridor can be anticipated in future years. With this understanding, the intent of the Lake Links Trail Network master plan is to set the trail within the Burlington Northern railroad corridor on the periphery of the right-of-way, or even outside of it, wherever possible to minimize the potential for future conflicts.

Section IV

Implementation Plan

Collaborative Underpinning

Implementation of the Lake Links Trail Network will require strong collaboration between local cities, townships and counties if a cohesive and complete trail system is to be realized.

Implementation of the Lake Links Trail Network will require strong collaboration between local cities, townships and counties if a cohesive and complete trail system is to be realized. While each of the trail corridors proposed offers numerous local benefits, the real opportunity lies in the broader vision of the plan that would result in a truly exciting regional asset offering outstanding recreational values. In many ways, the collective value of the larger trail network is greater than the sum of the individual parts.

Although collaboration across municipal boundaries can have its challenges, it also offers greater potential to implement the plan over communities acting solely on their own. This refers to both maintaining momentum in moving the plan forward into implementation and securing the funding needed to do so. Through a shared common vision, opportunities for becoming a higher priority for receiving non-local funding can be enhanced over that which would otherwise be available to local units of government. Given the potential costs associated with implementing the plan, these outside sources of funding will likely be needed to offset the fiscal limitations facing local cities and townships within the study area. To this end, this section of the report establishes a framework and an overall strategy for achieving the vision defined by the master plan. This starts with an overview of the key implementation steps.

Implementation Strategy

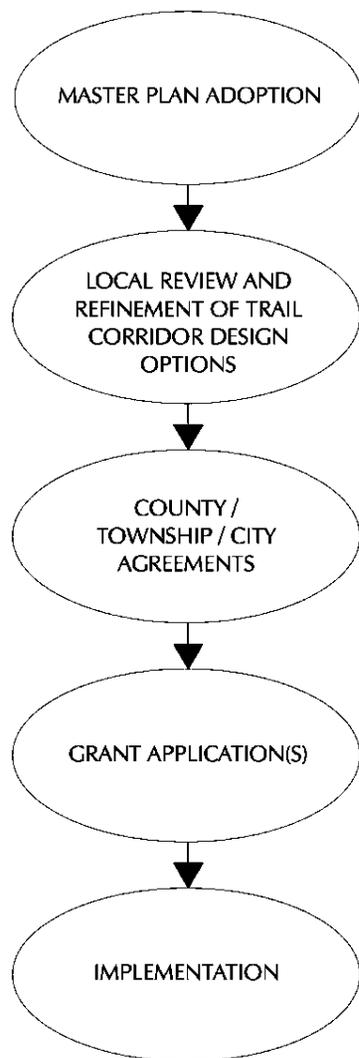
Implementation of the master plan will require a coordinated effort between local communities, townships, and counties – starting with the adoption of the master plan.

Implementation of the master plan will require a coordinated effort between local communities, townships, and counties – starting with the adoption of the master plan. This, of course, is based on the collective understanding that the options for each of the trail corridors defined in the master plan are subject to local review and refinement as part of the implementation process. This statement is critical in that each of the trail corridors defined by the plan raise numerous issues that will require additional public input and local evaluation to determine the design approach best suited for the community while still achieving the vision of the master plan. It is within the spirit of flexible collaboration that success in implementing the plan lies.

Implementation Steps

Figure 4.1 on the next page outlines the implementation steps required to move from the vision of the master plan to actual development of the trail corridors. The accompanying table provides additional detail.

Figure 4.1 – Implementation steps.



Step	Overview	Timing
Master Plan Adoption	Adopting the master plan through local resolution is the first step toward implementation and shows the commitments made at the city, township, and county level to collaborate on achieving a common goal while still retaining the flexibility needed to work out detail design issues at the local level.	Adoption of the master plan through local resolution as soon as possible establishes a starting point for implementation planning and design. (Note: Local resolutions received to-date are included in the Appendix.)
Local Review and Refinement of Trail Corridor Design Options	This step focuses on local review and selection of the trail corridor option(s) best suited to address the needs of the community while still achieving the overall vision of the master plan. This would include additional public input on critical issues affecting trail alignments and determining the level and type of development that is appropriate given local circumstances. Note that in many cases, the design process will involve the local city or township and county since the corridors being followed are often county roads or defined as regional trail corridors.	Each of the local cities, townships, and counties are encouraged to undertake this process as soon as possible given the lengthy timeframe involved in submitting, receiving, and implementing grant applications and/or appropriating local funds.
County/Township/City Agreements	Once the design for the individual trails are resolved at the local level, formal agreements between cities, townships, and counties will need to be adopted. Typically, these agreements clearly define development, operations, and maintenance costs and responsibilities for a given trail segment. Note that these agreements are typically required prior to grant applications to illustrate the shared commitment between public agencies to implement the master plan.	Preparation of agreements can run concurrent with local level review, or can be the next step once local issues are resolved.
Grant Applications	The opportunity to collaborate on grant applications is one of the strengths of the master plan by opening up the avenues that can be pursued for funding. Typically, the higher the level of collaboration on planning and grant applications between agencies, the greater the likelihood of receiving funding priority.	Expediency in preparing grant applications is important in that the grant cycles are often several years out from the time of application to actually receiving the funding.
Implementation	With the above steps completed, actual implementation can occur. Note that this will likely continue to involve collaboration between the local cities, townships, and counties in accordance with the agreements.	The pace of implementation will simply be lock-stepped with success in securing funding. Even if the completion of the above steps went extremely well, it would be hard to envision actual construction of the trails for at least three, and perhaps even five or more, years.

Local involvement in the implementation process is of critical importance given the detail design issues that need to be addressed prior to the development of any of the trail corridors considered under the master plan.

Local cities, townships, and counties are encouraged to pursue implementation of the plan as a singular priority.

Local Involvement in the Implementation Process

As defined in Section II – Community Value Statement, local involvement in the implementation process is of critical importance given the detail design issues that need to be addressed prior to the development of any of the trail corridors considered under the master plan. For example, at the fundamental level, decisions related to basic roadway configurations and cross-sections will have to be made prior to designing the trail itself. Likewise, inherent transportation issues (such as those associated with the South Shore Boulevard trail corridor) and roadway turnback schedules will also have to be addressed as part of the implementation planning.

Of equal importance is the need for additional public input into the detail design process to ensure that the general public and property owners directly affected by a given trail corridor have a reasonable chance to participate in the design process to ensure that their interests and concerns are addressed in a responsible and forthright manner. The goal here is for local cities, townships, and counties to work collaboratively toward implementation of the master plan, with the understanding that the options for each trail corridor defined under the plan are subject to local review and refinement as an inherent part of the process.

Implementation Priorities

The master plan does not establish specific priorities for implementation of the individual corridors. Instead, local cities, townships, and counties are encouraged to pursue implementation of the plan as a singular priority with the realization that the pace of implementation will be dictated by several factors:

- ▶ Timeframes associated with making final design decisions on specific corridors.
- ▶ Degree of success in assembling funding packages from various sources.
- ▶ Turnback schedules and timing of upgrades to roadways associated with a given trail corridor.

Another reason for taking this approach is the interlinked and dependent nature of many of the trail corridors, whereby one trail corridor cannot be easily separated from another and therefore precludes establishing a clearly defined prioritization schedule. As an example, completing the trail along Highway 244 will be of greater value if the segment along Highway 96 on the north shore of White Bear Lake is also completed. As such, drawing priority distinctions between trail corridors becomes difficult and as such suggests that working collaboratively on an aggressive timeframe on all trail corridors will produce the greatest overall results.

Although a homogeneous timeframe for implementing the plan would be the best case scenario, realistically, there will be a degree of variability in the timing of implementing the plan due to the variability of the challenges facing each corridor, as outlined in the following table.

Trail Corridor	Key Challenges Affecting Implementation Timing
Bruce Vento Trail Corridor	<ul style="list-style-type: none"> ▶ Securing easement rights from the railroad authority. ▶ Determining potential conflicts with future multi-modal transportation use of the corridor. ▶ Addressing roadway impact issues, especially those associated with the development of a cul-de-sac on Hugo Road. ▶ Addressing roadway turnback issues associated with Hugo Road. ▶ Working with the local neighborhoods and adjacent property owners on detail design of the trail corridor – especially along Hugo Road near Bald Eagle Lake.
Lake Avenue Trail Corridor	<ul style="list-style-type: none"> ▶ Working with the local neighborhoods and adjacent property owners on detail design of the trail corridor.
Hwy. 96 Trail Corridor	<ul style="list-style-type: none"> ▶ Addressing right-of-ways issues, which might include shifting of the road and/or acquiring additional right-of way in select locations. ▶ Addressing roadway turnback issues. ▶ Working with the adjacent property owners on detail design of the trail corridor, especially the area along the north side of White Bear Lake and in Dellwood through the golf course area.
Hwy. 244 Trail Corridor	<ul style="list-style-type: none"> ▶ Addressing rights-of-way issues, which will likely include acquiring additional right-of way in select locations. ▶ Addressing roadway turnback issues. ▶ Working with the adjacent property owners on detail design of the trail corridor.
Birchwood Trail Corridor	<ul style="list-style-type: none"> ▶ Working with local neighborhoods and adjacent property owners on detail design of signage and striping program for local streets.
South Shore Blvd. Trail Corridor	<ul style="list-style-type: none"> ▶ Determining feasibility of one-way roadway. This would include an in-depth examination of related transportation issues. ▶ Addressing roadway turnback issues. ▶ Working with the adjacent property owners on detail design of the trail corridor.
Mahtomedi-Oakdale Trail Corridor	<ul style="list-style-type: none"> ▶ Obtaining a trail easement to make the connection from the existing trails to the proposed bridge location, especially on the Mahtomedi side of the freeway. ▶ Working with MNDOT on site selection and feasibility study for constructing a pedestrian bridge in the location as defined in the master plan.
Maplewood-Silver Lake Trail Corridor	<ul style="list-style-type: none"> ▶ Obtaining a trail easement along the powerline easement. ▶ Working with the adjacent property owners on detail design of the trail corridor, especially in the area where the powerline easement is bordered by homes on either side.

Implementation Team

Assembling an implementation team to oversee the detail planning and design process and coordinate the activities at the local and county level is recommended.

The importance of maintaining an ongoing and coordinated effort between local cities, townships, and counties toward plan implementation cannot be overstated and will be critical to the successful implementation of the master plan. Lacking this, the probability of seeing the plan implemented becomes far less certain.

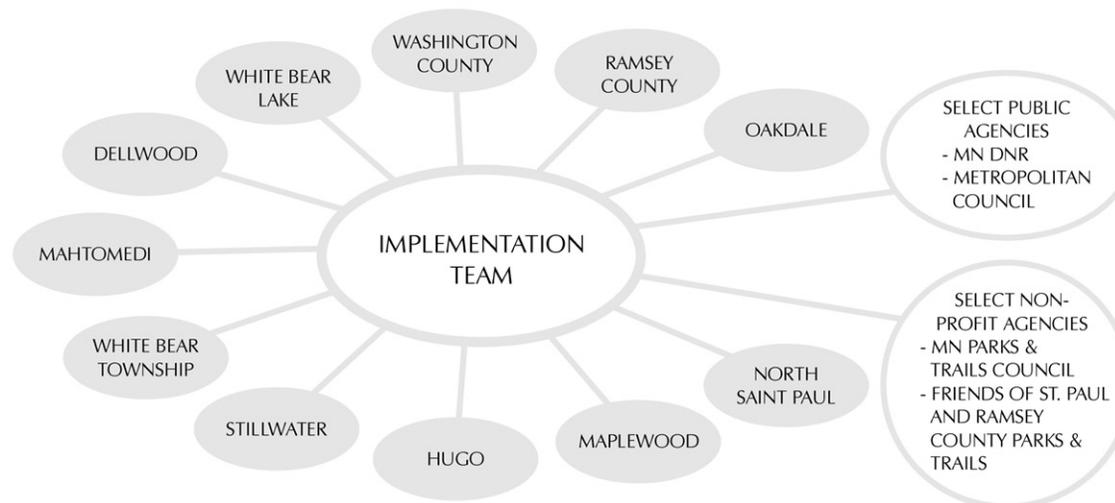
To this end, assembling an implementation team to oversee the detail planning and design process and coordinate the activities at the local and county level is recommended. This is particularly important here where a number of the local cities and townships simply do not have the day-to-day staffing needed to oversee the project and keep it moving forward in a timely, well-coordinated fashion.

It is recommended that the team consist of a representative from each of the cities, townships, and counties affected by the master plan (which was essentially the basis of the Technical Planning Team assembled for this project). In addition, the implementation team can also serve to coordinate and act upon grant opportunities and assembling funding packages.

It is also recommended that the implementation team include representation from select outside public agencies with experience in trail development and grants. For example, representation could include individuals from the MNDNR and Metropolitan Council who can bring practical experience to the process. Likewise, including representatives from select non-profit organizations could be invaluable in that they can be strong advocates for trail development and also bring their expertise in the area of grants and public relations to the team. The Minnesota Parks and Trails Council and Friends of St. Paul and Ramsey County Parks and Trails are examples of non-profit organizations who have long served the region as strong advocates for trail (and park) development.

The following figure illustrates the potential makeup of an implementation team for the Lake Links Trail Network.

Figure 4.2 – Potential makeup of an implementation team for the Lake Links Trail Network.



Acquisition and Development Cost Projections

The forthcoming cost projections define the potential costs associated with each of the trail corridors defined by the master plan.

The forthcoming cost projections define the potential costs associated with each of the trail corridors defined by the master plan. The costs are based on a combination of site specific acquisition and development issues as well as projects of similar size and complexity. The cost figures are intended to be used for budgeting purposes, project phasing, comparing the relative cost of one item to that of another. The costs are in 2000 dollars. Although the cost projections are intended to be conservative, it must be recognized that the actual costs will vary depending on detail design and market forces when the plan is implemented. Lacking detail design information, there are numerous unknowns that can affect the ultimate costs, perhaps markedly so. The forthcoming cost projection tables are broken down by individual trail corridor and options within that corridor. This was done to aid in evaluating the cost of one option over that of another. As shown, the major factors included under each cost projection are listed.

Trail Network Development Costs

The forthcoming cost projections are broken down into two primary categories:

- ▶ **Base Cost Projection for Trail Development** – refers specifically to the cost to develop the trail itself *without* consideration for other development concerns that might be necessary for the trail to actually be developed.
- ▶ **Cost Projection for Associated Development** – refers to development that may be required to construct the trail, such as roadway upgrades and alternatives to the base development package as noted.

Bruce Vento Trail Corridor

(Range of costs represents a 20% contingency for unknowns.)

Cost Projection Component	Factors Considered	Base Cost Projection for Trail Development	Cost Projection for Associated Development
Base trail development	<ul style="list-style-type: none"> ▶ Separate trail ▶ Grading, site preparation, storm sewer, etc. ▶ Curb in areas where trail is located adjacent to road ▶ Cul-de-sac ▶ Retaining walls ▶ Fencing and railings ▶ Landscaping and buffering in critical areas 	2,012,000 to 2,414,400	
On-grade crossings at 244 and 61	<ul style="list-style-type: none"> ▶ Additional costs if on-grade crossings are required at these two roadways, versus going under the existing bridges within the railroad R.O.W. 		58,000 to 69,600
Alternate route at Eagle Ave./SOO line crossing	<ul style="list-style-type: none"> ▶ Additional costs for following alternate route 		13,000 to 15,600
Alternate to Cul-de-sac	<ul style="list-style-type: none"> ▶ Additional costs for building structural retaining wall in lieu of cul-de-sac along Hugo Road 		350,000 to 420,000
Alternate route from Buffalo to Bald Eagle	<ul style="list-style-type: none"> ▶ Additional costs for following alternate route from Buffalo to Bald Eagle Regional Park (on east side of railroad tracks, with underpass) 		205,000 to 246,000
Total Cost Projections This Corridor		2,012,000 to 2,414,400	626,000 to 751,200

Lake Avenue Trail Corridor

(Range of costs represents a 20% contingency for unknowns.)

Cost Projection Component	Factors Considered	Base Cost Projection for Trail Development	Cost Projection for Associated Development
Base trail development	<ul style="list-style-type: none"> ▶ Separate trail ▶ Grading, site preparation, storm sewer, etc. ▶ Curb in areas where trail is located adjacent to road ▶ Landscaping and buffering in critical areas ▶ Streetscape improvements along Hwy. 61 	655,000 to 786,000	
Total Cost Projections This Corridor		655,000 786,000	0 0

Hwy. 96/Zephyr Line Trail Corridor

(Range of costs represents a 20% contingency for unknowns.)

Cost Projection Component	Factors Considered	Base Cost Projection for Trail Development	Cost Projection for Associated Development
Base trail development for Hwy. 96 corridor	<ul style="list-style-type: none"> ▶ Separate trail ▶ Grading, site preparation, storm sewer, etc. ▶ Curb in areas where trail is located adjacent to road ▶ Miscellaneous improvements (fencing, railings, boardwalks, etc.) ▶ Retaining walls ▶ Landscaping and buffering in critical areas ▶ Extend underpass at golf course ▶ Underpass at County Rd. 64 intersection 	2,500,000 to 3,000,000	
Follow Zephyr Line Corridor	▶ Additional costs if the Zephyr Line railroad corridor is followed in lieu of Hwy. 96 from Gateway into Stillwater		280,000 to 336,000
Total Cost Projections This Corridor		2,500,000 to 3,000,000	280,000 to 336,000

Hwy. 244 Trail Corridor

(Range of costs represents a 20% contingency for unknowns.)

Cost Projection Component	Factors Considered	Base Cost Projection for Trail Development	Cost Projection for Associated Development
Base trail development	<ul style="list-style-type: none"> ▶ Separate trail ▶ Grading, site preparation, etc. for trail only ▶ Miscellaneous improvements (fencing, railings, boardwalks, etc.) ▶ Streetscaping and miscellaneous improvements in Yacht Club area ▶ Retaining walls ▶ Landscaping and buffering in critical areas ▶ Utility adjustments (power poles, etc.) ▶ Pedestrian bridge near District Center to cross ditch 	1,560,000 to 1,872,000	

Reconstruct Hwy. 244	<ul style="list-style-type: none"> ▶ Additional costs to reconstruct Hwy. 244 to urban section to allow for trail to be developed (includes storm sewer and ponding, does not include other utilities that may need upgrading, such as water service, sanitary sewer, etc.) 		2,810,000 to 3,372,000
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Total Cost Projections This Corridor	1,560,000 to 1,872,000	2,810,000 to 3,372,000
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Birchwood Trail Corridor

(Range of costs represents a 20% contingency for unknowns.)

Cost Projection Component	Factors Considered	Base Cost Projection for Trail Development	Cost Projection for Associated Development
Enhancements along bike routes	<ul style="list-style-type: none"> ▶ Signage and striping for Lake Ave. and Wildwood ▶ Separated trail through city park 	51,000 to 61,200	
Base trail development – for trail segment along Cedar Avenue	<ul style="list-style-type: none"> ▶ Separated trail ▶ Grading, site preparation, storm sewer, etc. ▶ Curb in areas where trail is located adjacent to road ▶ Boardwalks through wetlands/ponds ▶ Retaining walls ▶ Fencing and railings ▶ Landscaping and buffering in critical areas 	396,000 to 475,200	

Total Cost Projections This Corridor	447,000 to 536,400	0 to 0
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South Shore Blvd. Trail Corridor

(Range of costs represents a 20% contingency for unknowns.)

Cost Projection Component	Factors Considered	Base Cost Projection for Trail Development	Cost Projection for Associated Development
Base trail development (for two-way traffic with adding a curb and trail to north side of road)	<ul style="list-style-type: none"> ▶ Separate trail ▶ Grading, site preparation, storm sewer, etc. ▶ Curb along north side of road ▶ Retaining walls ▶ Fencing and railings ▶ Landscaping and buffering in critical areas ▶ Miscellaneous improvements 	575,000 to 690,000	

Total Cost Projections This Corridor	575,000 to 690,000	0 to 0
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Mahtomedi-Oakdale Trail Corridor

(Range of costs represents a 20% contingency for unknowns.)

Cost Projection Component	Factors Considered	Base Cost Projection for Trail Development	Cost Projection for Associated Development
Base trail development	<ul style="list-style-type: none"> ▶ Separate trail for remaining trail segments ▶ Grading, site preparation, storm sewer, etc. ▶ Pedestrian overpass 	700,000 to 840,000	

Total Cost Projections This Corridor	700,000 to 840,000	0 to 0
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Maplewood-Silver Lake Trail Corridor

(Range of costs represents a 20% contingency for unknowns.)

Cost Projection Component	Factors Considered	Base Cost Projection for Trail Development	Cost Projection for Associated Development
Base trail development around Silver Lake	<ul style="list-style-type: none"> ▶ Separate trail along Hwy. 120 and on park property ▶ Grading, site preparation, storm sewer, etc. ▶ Curb in areas where trail is located adjacent to road ▶ Retaining walls ▶ Fencing and railings ▶ Landscaping and buffering in critical areas ▶ Pedestrian bridge near Silver Lake 	475,000 to 570,000	
Base trail development for powerline from Silver Lake to Vento trail	<ul style="list-style-type: none"> ▶ Separate trail ▶ Grading, site preparation, storm sewer, etc. ▶ Retaining walls ▶ Fencing and railings ▶ Landscaping and buffering in critical areas 	585,000 to 702,000	
Alternate alignment along County Rd. D	<ul style="list-style-type: none"> ▶ Additional costs for following alternate alignment along County Rd. D in lieu of following powerline easement 		160,000 to 192,000
Total Cost Projections This Corridor		1,060,000 to 1,272,000	160,000 to 192,000

Overall Cost Projections for Trail Development	Base Cost Projection for Trail Development	Cost Projection for Associated Development
Total Cost Projection for All Trail Corridors	9,509,000 11,410,800	3,876,000 4,651,200
Construction Engineering and Design (15%)	1,426,350 1,711,620	581,400 697,680
Grand Total Cost Projection for All Trail Corridors	10,935,350 to 13,122,420	4,457,400 to 5,348,880

Trail Network Acquisition Costs

The forthcoming cost projections for land acquisition for the various trail corridors are intended to be used for budget estimating purposes. The intent is to project as accurately as possible a range of potential costs for land acquisition that would be in addition to the development costs listed above. Taken together, a more complete understanding of the overall potential capital investments that are needed to complete the trail network can be ascertained. Note, however, that the cost projection table should not be construed to provide definitive values for acquiring property for each of the corridors. That level of cost evaluation cannot be ascertained without the benefit of more detailed layouts for each of the trail corridors. Once specific detailed layouts are completed, more site-specific property acquisition needs and costs can be determined. Note also that an estimate for acquiring the Zephyr Line easement has not been considered at this point given the expectation that it would not be available for acquisition in the near future. (Note: A more complete statement on methodology for projecting acquisition costs is provided in the appendix.)

Trail Corridor	Criteria Used	Related Issues	Potential for Cost Avoidance	Cost Projection for Acquisition*
Bruce Vento Trail	Assumes about 3.8 miles of trail easement required within railroad right-of-way. At 20' wide, about 9.2 acres of land would be needed at \$28,000/ac.	Assumes that about half of the trail would be located within roadway right-of-ways that are already publically owned.	Locating more of the trail within existing roadway rights-of-way adjacent to this corridor could reduce acquisition costs. Detailed review of actual right-of-way lines required to determine the potential for this to occur.	260,000 to 310,000
Lake Avenue Trail	No acquisition is anticipated at this time.	N/A	N/A	0 to 0
Hwy. 96 Trail	Assumes that about 3750 lineal feet of additional right-of-way would be needed on the north side of White Bear Lake in areas where the existing road is close to the edge of the existing right-of-way. At 20' wide, about 1.7 acres would be needed at \$200,000/ac. Also assumes that about 2,000 lineal feet of additional right-of-way will be needed in the area of the Dellwood Hills Golf Course and White Bear Yacht Club where the existing right-of-way is narrow. At 20' wide, about 1.0 acre would be needed at \$65,000 to \$125,000/ac. Note that acquisition needed for any new ponding is not factored into the above figures.	The big issue with the area on the north side of the lake is the location of the road. Whereas adequate right-of-way exists, the road is not always in the middle of it. If the road is shifted to the north, the need for additional right-of-way is diminished or even eliminated. With respect to the area by the golf course, future upgrades to the road itself would require additional right-of-way irrespective of the trail. In this context, the only reason to acquire additional right-of-way for the trail is if it is developed prior to upgrading the roadway.	The only potential way to avoid the cost of land acquisition for the trail on the north side of the lake is to shift the road itself to the north, which too has costs involved. Also, property owners on both sides of the road also need to be brought into the process to consider options and ramifications. With respect to the area by the golf course, the only option to avoid costs now is to wait until the road is upgraded and then build the trail within the right-of-way that would be acquired for the road upgrading.	\$406,000 to 470,000
Hwy. 244 Trail	Assumes that about 2,000 lineal feet of additional right-of-way would be needed in the area south of Meadow Lane where the existing road right-of-way is too narrow. Note here that in order for the road to be upgraded in this area, an additional 25' of easement width would be needed, irrespective of the trail. This totals about 3.0 acres at \$75,000 to \$140,00/ac. Note also that acquisition needed for any new ponding is not factored into the above figures.	The need for additional right-of-way along Hwy. 244 is driven primarily by roadway upgrading requirements and not the trail. The trail would simply be located in the right-of-way acquired for upgrading the road.	No real potential to avoid these costs as part of the roadway upgrading. However, the per acre cost could be greatly influenced by the cost-to-cure values associated with loss of buffers and so forth, should that be encountered.	225,000 to 420,000
Birchwood Trail	No acquisition is anticipated at this time.	N/A	N/A	0 to 0
South Shore Blvd. Trail	No acquisition is anticipated at this time.	N/A	N/A	0 to 0
Mahtomedi-Oakdale Trail	Assumes that an easement will be needed for making the trail connections from existing trails on the north and south side of the freeway to the proposed new pedestrian bridge crossing. This totals about 0.65 acres at \$87,000/ac. on the north side of the road. Acquisition on the south side should be very limited and cost about \$5,000	The final location of the bridge will have a bearing on the cost for easements. The costs as shown assume that the trail easement is along a property line, rather than splitting a property in half (which would cost more).	No real options to avoid acquisition costs in this case.	60,000 to 75,000
Maplewood-Silver Lake Trail	Assumes that about 1.9 acres would be needed on the west end of the trail (commercial land) at \$32,700/ac. and 1.6 acres needed on the east end of the trail (residential land) at \$54,000/ac.	Assumes that the land is already encumbered with an overhead powerline easement, which typically reduces the costs for acquiring a trail easement relative to fee title.	Only potential to avoid these costs is to follow existing road rights-of-way instead of the powerline easement.	150,000 to 200,000
			Total Potential Cost Range for Land Acquisition	1,101,000 to 1,475,000

* – Range of potential costs is shown to account for some unknowns.

Operations and Maintenance of Trail Corridors

Operation and maintenance of the trail corridors will be shared responsibility between the local cities, townships, and counties, with the responsibilities of each defined in joint-powers or other forms of agreement.

Operation and maintenance of the trail corridors will be a shared responsibility between the local cities, townships, and counties, with the responsibilities of each defined in joint-powers or other forms of agreement. The following considers these in greater detail.

Operation of the Trails

The trails will be designed and operated to accommodate walkers, joggers, bicycling, and in-line skating. There will be no provision along these trail corridors for other activities such as snowmobiling, horseback riding, or cross-country skiing. (Note: Horseback riding through Grant within the Highway 96 right-of-way is a local issue requiring consideration as part of the detail design of this corridor.)

With respect to rules and regulations, all trail corridors will comply with the standards of use currently in place for local and regional parks and trails as defined by city and county ordinances. This will ensure consistency in operation of the trail facilities defined in the plan with others found within the study area. Issues addressed under these ordinances include:

- ▶ Regulation of public use and activities
- ▶ General conduct and behavior
- ▶ General trail operation guidelines
- ▶ Enforcement

Law enforcement associated with the trail will be covered by local police and county sheriff's departments in accordance with current practice and established relationships between the two counties and local cities and townships within the study area.

With respect to fees and charges, the trails will be open to the public without fee, which is in line with current practices at the local and county level.

Development and Maintenance of the Trails

The responsibility for developing and maintaining the trails will depend on whether the trail is local (city, township, or county) or regional and whether it follows a local or county road. The following table considers development and maintenance responsibilities for each of the trail corridors based on standard practice. Recognize, however, that the responsibilities of the local cities and counties is subject to change in line with specific agreements prepared as part of the implementation process. An important side note to the forthcoming table is that development costs could be significantly offset through special appropriations and grants at the state and federal level for local and regional trails (and roadway upgrades). Given the inherent limitations of local units of government to fund these projects solely on their own, finding alternative means of funding will be an important factor in actually being able to implement the plan. The following discussion on funding options considers this in greater detail.

The responsibility for developing and maintaining the trails will depend on whether the trail is local (city, Township, or county) or regional and whether it follows a local or county road.

Trail Corridor	Context	Development Responsibility	Maintenance Responsibility
Bruce Vento Trail	Regional-level trail within railroad and road rights-of-way.	County is typically responsible.	County is typically responsible.
Lake Avenue Trail	Regional (and local)-level trail within a local road right-of-way.	County responsible for trail, cost share on roadway upgrades. City responsible for streetscape elements. (City responsible for trail segment south of Hwy. 61/Lake Ave.)	To be determined. (Cooperative agreement likely with some shared responsibility.)
Hwy. 96 Trail	Regional-level trail within a county road right-of-way (after turnback).	County is responsible for development.	To be determined. (Cooperative agreement likely with some shared responsibility.)
Hwy. 244 Trail	Local-level trail along a county road (after turnback).	County is responsible for development.	To be determined. (Cooperative agreement likely with some shared responsibility.)
Birchwood Trail	Local-level, on-street trail along a local road	City is responsible.	City is responsible.
South Shore Blvd. Trail	Local-level trail along a local road (after turnback).	City is responsible.	City is responsible.
Mahtomedi-Oakdale Trail	Local-level trails, with pedestrian bridge across I-694 being the major development issue.	City is responsible for trails, although special appropriations support is likely needed for pedestrian bridge.	City is responsible for trails. To be determined on bridge.
Maplewood-Silver Lake Trail	Local-level trails along county and local roads	City is responsible for powerline trail and local trails around lake. County responsible for Hwy. 120 segment by Silver Lake.	City is responsible.

Funding Options and Opportunities

One of the major advantages of the Lake Links Trail Network Master Plan is that it paints a broad vision for trails within the study area that collectively offers benefits beyond those of the individual local trail systems. By creating a recreational value of greater significance than would otherwise be the case, the opportunities for funding from a variety of funding sources opens up substantially. Equally important, this collective vision can also serve to raise the level of priority given to these trails over what might otherwise be the case. In this context, collaboration between local cities and the county can go a long way toward being successful in securing the funds necessary to build the trails. The table on the following page provides an overview of potential funding sources.

Funding Sources for Trail Development

Source	Description/Overview	Probability
Regional Parks and Trails Grant Program (Metropolitan Council)	Funding through the Metropolitan Council for regional parks and trails development projects. Funding is awarded through a competitive application process, where applicants are ranked against each other on a priority basis.	Competitive, but potential is reasonably high for projects of such significance. Still, likelihood is that it could take a number of years on priority list before actually being funded. Critical to this is getting on the funding priority list as soon as possible.
Local Trail Connections Grant Program – (MNDNR)	Funding through a MNDNR grant program for local trail connections to promote access between people and desirable destinations. Can be used as part of the local match for TEA-21 Enhancement Projects. \$50,000 maximum value.	Strong potential given that the local trails defined under the master plan provide significant connections to regional and other local trails. Also, use of this grant to help offset local match obligations adds to its appeal. Local match requirement is still a key factor to keep in mind.
Outdoor Recreation Grant Program (MNDNR)	Funding through a MNDNR grant program for local parks and recreation improvements. Provides a 50% match with local funding sources. Trails can qualify for this program.	Good potential and worth pursuing as part of overall grant package. 50% local match requirement is a key factor to keep in mind.
National Recreation Trail Grant Program (MNDNR)	Funding through a MNDNR grant program for local parks and recreation improvements. Provides a 50% match with local funding sources. \$100,000 maximum value.	Some potential and worth pursuing as part of overall grant package. 50% local match requirement is a key factor to keep in mind.
TEA - 21	The federal government allocates monies each year for alternative forms of transportation, which includes bicycle trails. The programs of note under this bill include the Congestion Mitigation and Air Quality Improvement Program, Transportation Enhancement Program, and Recreation Trails Program.	Funding availability through this bill has been fairly robust in recent years and offers good potential for trail development projects under the listed programs. Very much worth pursuing.
Turnback Program	As noted, a number of the roadways in the study area are part of turnback programs. In these instances, upgrading of the roadway could be part of the turnback agreements between agencies, which could include a provision for trails.	Case by case basis agreements, depending on the particular circumstances and the agencies involved. Potential here is to “piggyback” trail development on these projects, potentially resulting in substantial savings.
Local Property Taxes and Bonds	Minnesota statutes authorize cities to levy taxes on all taxable property in the city as needed to fund trail development. Minnesota statutes enable cities to issue bonds for trail acquisition or improvements.	Primary funding sources at the local level. Bonds are often used for larger-scale projects or general improvements that are beyond the reach of the annual CIP funding. Limitation here is the practical capacity of smaller cities in the study area. However, local funds can be leveraged to a high degree through the various grant programs listed.
Special Appropriations (State)	Relates to special appropriations for upgrading roadways and/or construction of trails. Turnback roads could be a particular focus here.	Significant opportunity given multiple values of upgrading roads and adding trails to the local community, county, and region.
Donations	Relates to cash donations, gifts, volunteerism, and professional services donated to the planning, acquisition, or development of trails.	Limited potential.

Public Awareness

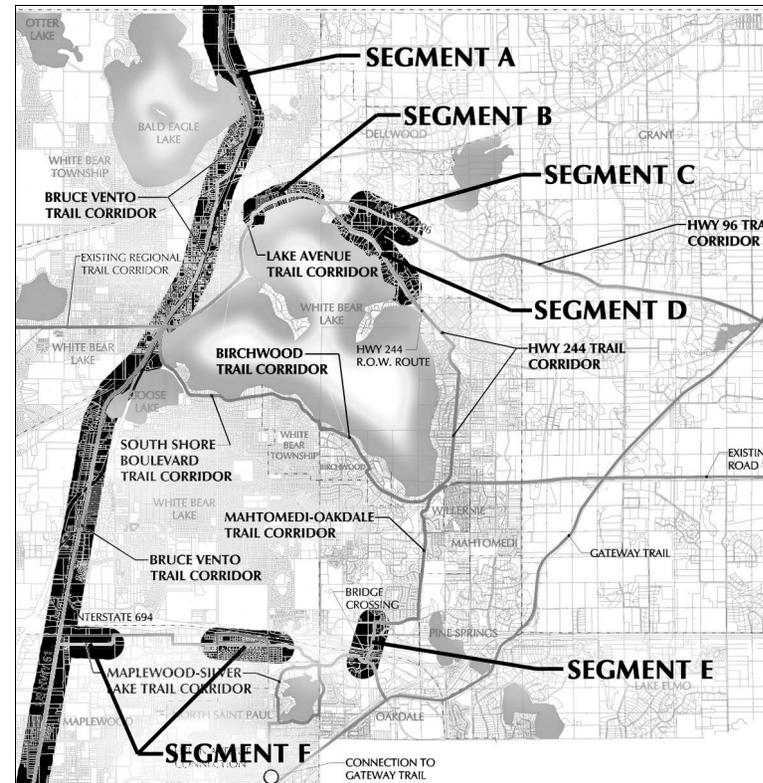
It is anticipated that any new trails added to the existing infrastructure will need very little direct promotion to make residents aware of their existence.

Once completed, public awareness of the trail network will be promoted through the local cities, townships, and counties through a coordinated effort. This would include trail network mapping, brochures, flyers, posters, and so forth to make residents aware of the new trails. Once the initial promotional campaign is complete, it is expected that word-of-mouth will be the most successful promotional tool. Given the history of past use of these corridors even without developed trails, plus the success of existing trails, it is anticipated that any new trails added to the existing infrastructure will need very little direct promotion to make residents aware of their existence.

Appendix A – Methodology for Determining Potential Acquisition Costs

Overview

The following provides background information related to the various land cost estimates for the different trail segments identified on the accompanying map. For descriptive purposes, the various trail segments are identified as segments A - F. Note that the estimates do not constitute an appraisal. The research performed is not specific enough to each parcel within the specified trail segments. This report is to be used solely for budget estimate purposes, with definitive values not being ascertainable until further research specific to each property is performed. Certain assumptions are incorporated, and are included herein.



Forthcoming are the detail the land costs on a per acre for the segments shown on the map.

Segment A (Bruce Vento Trail Corridor)

Segment A is the current Burlington Northern Santa Fe (BNSF) Railway line traversing generally along T.H. 61 from Beam Avenue on the south, to the Bald Eagle Otter Lake Regional Park on the north. It is proposed to place the trail within this right-of-way, which is already owned (presumably in fee) by BNSF. The railway traverses through various land uses, which include primarily commercial and residential. There is a lack of data to support a fee value for the railway, and across-the-fence values (values based on values of abutting land uses) were not deemed applicable, as the railway corridor in and of itself does not have a highest and best use consistent with the abutting land uses. Therefore, we have relied upon a value assigned for the corridor itself, and assume that the presence of a trailway adjacent to the existing rail line would not diminish the other potential uses for this corridor, including a snow mobile trail, a light rail line, etc. There is adequate width within this corridor to support adjacent uses other than just this trail. We are determining a value for this corridor at about \$.65/s.f., or about \$28,300/acre.

Segment B (Hwy. 96 Trail Corridor – North Side of White Bear Lake)

Segment B is a proposed segment of trail along the north side of White Bear Lake, generally along Highway 96, from Northwest Avenue on the west, to the 244/96 intersection to the east. The trail is planned on the south side of the roadway for a variety of reasons: topographical challenges exist on the north side of the road which would require significant cut and slope easements, thus increasing the width of the acquisitions; a minor amount of landscaping (buffer trees) may be impacted; there would be more public enjoyment of lake views and cohesion of the trail segment which would connect Ramsey County Beach to White Bear Beach Community Club to Ruthford Park, all of which are on the south side of the road; there are more marginal soils on the south side of the road, however a ridge exists that appears to be of appropriate width for a trail; an overhead utility line exists on the north side of the road, which may make trail placement challenging, or require removal/reinstallation of the line. The property on the south side is basically used for lake front recreation as adjoined to parcels on the north side of the road. None of the land on the south side of the road is considered buildable. Nonetheless, this land has a high recreation value, due to its lakefront on White Bear Lake. We have assigned a value for this segment of trail at \$200,000/acre. There is only one sale of lakefront land in this area that is not buildable: a .46 acre tract that sold for \$45,000 in 1995. After application of an adjustment for the passage of time, and lakefront natural enhancements, a final value of \$200,000/acre is determined.

Segment C (Hwy. 96 Trail Corridor – Golf Course Area)

Segment C is a portion of the trail that is located along Highway 96, basically from the 96/244 intersection on the west, to Hadley Avenue on the east. The majority of property ownership on the north side of Highway 96 is of two property owners: the Dellwood Hills Golf Course and the White Bear Yacht Club. There are very few private ownerships on the north side of the road. The topography and soils are challenging on this side of the road, so the trail would likely be on the south side of the road. The south side of the road has primarily privately-owned residential properties on acreage-sized lots, with the exception of a small amount of ownership by the White Bear Yacht Club. Along the south side of the road, there are various wooded pockets, which serve as visual buffers to the road from the upper bracket residences. The need for buffers may be minimized by the deep setback of several of these residences. Therefore, acquisition along the south side may include increased costs for reestablishing some type of visual buffer under a cost-to-cure scenario. Additionally, there is an overhead utility line on this side of the road. If it is possible to place the overhead utility line underground, there would be some mitigating offsets to the loss of a tree buffer. Furthermore, if it is possible to place the trail within the already-encumbered overhead power line easement corridor, acquisition costs could be greatly limited.

We will provide values for the various scenarios below.

Acquisition on the south side of the road outside of the overhead utility line corridor: Land values for this are based on the per acre value for lot sales and offerings within Dellwood. Applicable sales indicate a range of values per acre from \$36,424/acre for larger lots (over 4 acres), to \$70,752/acre for smaller lots (under 2.5 acres). However, there is a void of data for properties that have recently sold, so we have also considered current offerings. There is a total of 21 lots listed for sale within Dellwood. The average prices per acre range typically from \$32,300/acre to \$174,000/acre. The higher per acre values are for lots abutting the golf course, or that have a pond, or other desirable natural enhancements. The majority of lots are within the \$55,000 to \$75,000/acre range. We are determining a price per acre for the properties at \$75,000/acre. Additionally, we need to assign some cost-to-cure amounts for the loss of the visual buffer. This is best done with evergreen trees planted every ten- to fifteen-feet, staggered. Spading in these trees could add conservatively an additional \$50,000/acre. This is based on 1 tree at \$250-\$275, staggered every 12.5 feet. Therefore, the total acquisition cost per acre is about \$125,000 (value of the land and cost-to-cure).

Acquisition on the south side of the road inside the overhead utility line corridor: We are assuming the utility corridor to be easement, where the underlying fee ownership is to the individual property owners. Assuming that a trail could be placed within this corridor, the acquisition would be on already-encumbered, and significantly lower-valued land. It is estimated that the easement within an easement value would be perhaps 50% lower than the value of the fee, or \$40,000/acre. Additionally, it is possible that there would be tree removal in excess of the trees that would be removed or cut as a result of their presence within the utility corridor, so we need to add some cost-to-cure of approximately half of our prior-determined amount of \$50,000/acre, or \$25,000/acre.. Therefore, the total acquisition cost would be about \$65,000/acre with this scenario.

Segment D (Hwy. 244 Trail Corridor – South of Meadow Lane)

Segment D is a portion of the trail located on Highway 244, south from the 96/244 intersection to approximately Dwinnell or Quail Avenues. This is a difficult portion of the roadway to construct a trail segment due to the already-narrow width of the roadway right-of-way. On both sides of the road are upper-bracket residences. On the west side are numerous lake-front properties along the “Gold Coast” of White Bear Lake. On the east side of the road are various properties located in Dellwood. It is preliminarily identified that acquisition will be from the east side of the road, where the properties are setback a greater distance, and acquisition would be typically from the rear yards, not the front yards, as would be the case for the properties on the west side of the road. Due to the narrow road width, it may be likely that additional roadway right-of-way be acquired to insure safe distance of the trail from the lanes of vehicular travel.

To determine the value per acre of acquisition along this portion of the trail segment, we considered various lot sales within Dellwood. Applicable sales indicate a range of values per acre from \$36,424/acre for larger lots (over 4 acres), to \$70,752/acre for smaller lots (under 2.5 acres). However, there is a void of data for properties that have recently sold, so we also considered current offerings. There is a total of 21 lots listed for sale within Dellwood. The average prices per acre range typically from \$32,300/acre to \$174,000/acre. The higher per acre values are for lots abutting the golf course, or that have a pond, or other desirable natural enhancements.

The majority of lots are within the \$55,000 to \$75,000/acre range. We are determining a price per acre for the properties at \$75,000/acre. Additionally, it is possible that some landscaping may be acquired in the form of retaining walls, plantings, and volunteer trees which serve as a buffer to the road. We feel it necessary to add an additional \$65,000 for cost-to-cure landscaping and reestablishment of some buffers. Therefore the total per acre acquisition cost is estimated at \$140,000 (value of land and cost-to-cure).

Segment E (Mahtomedi - Oakdale Trail Corridor – I-694 Crossing)

Segment E is referred to as the I-694 crossing. Here the trail goes northerly from Hadley Avenue, just west of the Fleet Farm development, across I-694 (presumably with a foot bridge) to the Century College Truck Driving Center, along Echo Lake Avenue, to 60th Street. On the south side of I-694, the trail traverses through land that is not buildable (either due to marginal soils, or limited depth along the interstate frontage). On the north side of I-694, the trail enters onto the Century College Driving Center prior to following along the Echo Lake Avenue right-of-way truncating at 60th Street. Located along the north side of 60th Street is the Northeast Metro Business Center, where there is land still available for sale.

We have divided this trail segment into two distinct subcategories: land on the south side of I-694, and land on the north side of I-694. The land value on the south side is deemed nominal in nature due to the lack of the land being able to have a significant highest and best use. We have assigned the land value at \$10,000/acre. This is based on metro-area wetland sales, the majority of which have been purchased by government entities or developers.

The land on the north side of I-694 has a value based on the sales and offerings within the proximate Northeast Metro Business Park that is zoned Light Industrial. According to Clyde Fish, the owner and listing Realtor of the Park, the land has sold for \$1.95 to \$1.98/s.f. over the past three years. This includes one property currently under contract. There is one lot currently being offered at \$1.77/s.f., however, this is zoned office (valued slightly less than Light Industrial, according to Clyde Fish), and has some wetland area. We have determined a value for this portion of the trail segment at \$2.00/s.f., or about \$87,000/acre. In order to alleviate any potential amount for severance damage, it is recommended that the trail be located along the perimeter of properties (specifically, RPS and Century College Truck Driving Center).

Segment B (Maplewood - Sliver Lake Trail Corridor – Powerline Easement)

Segment F is referred to as the power line easement area. Here the trail generally traverses along an east-west overhead power line. This power line traverses through various land uses, including commercial (near the Regional Maplewood Mall), and residential. The trail segment at the mall area does follow along already existing roadway right-of-way alleviating the need to acquire from expensive commercial properties near this regional mall. According to Larry Holmberg, Ramsey County, the power line appears to be an easement, as denoted on the county plat map. Therefore, any further acquisition of this within the confines of the power line easement would need approval from both the power company (assumed to be now Xcel Energy, formally NSP), and the individual properties it traverses through. The acquisition costs should be lower than the fee value, as the land is already encumbered with an overhead power line easement, and the trail use would likely be deemed as less obtrusive than the already-existing overhead power line. Nonetheless, we have assigned two values to this trail segment: commercial value and residential value.

The commercial land area is located on the east side of Highway 61, west of the Maplewood Mall Area. This area is undeveloped, and has typically existing open and residential land uses. Some of the residential land is being marketed for commercial purposes, but as of yet, has not met the transition to commercial use. Therefore, due to the market demand, this land, although suitable for commercial use, is not deemed to be high-valued due to the lack of immediate demand. Additionally, the area needed for the trail is already encumbered with a power line easement. We are assigning a value for this land at \$.75/s.f., or about \$32,700/acre.

The residential land is fully developed. The majority of residential use is single family detached housing, and single family attached housing, most typically double-homes. As this area is fully developed, there are no vacant land sales for which to analyze. Instead, land values are based on extraction. Typically, the land value equates to about \$2.50/s.f. (e.g., 10,000 s.f. lot at about \$25,000 value), however the area for the trail is on land already encumbered with an overhead utility line easement, so we have subtracted about 50%, to arrive at a value for the residential land at about \$1.25/s.f., or about \$54,500/acre.

Assumptions Incorporated into this Budget Analysis

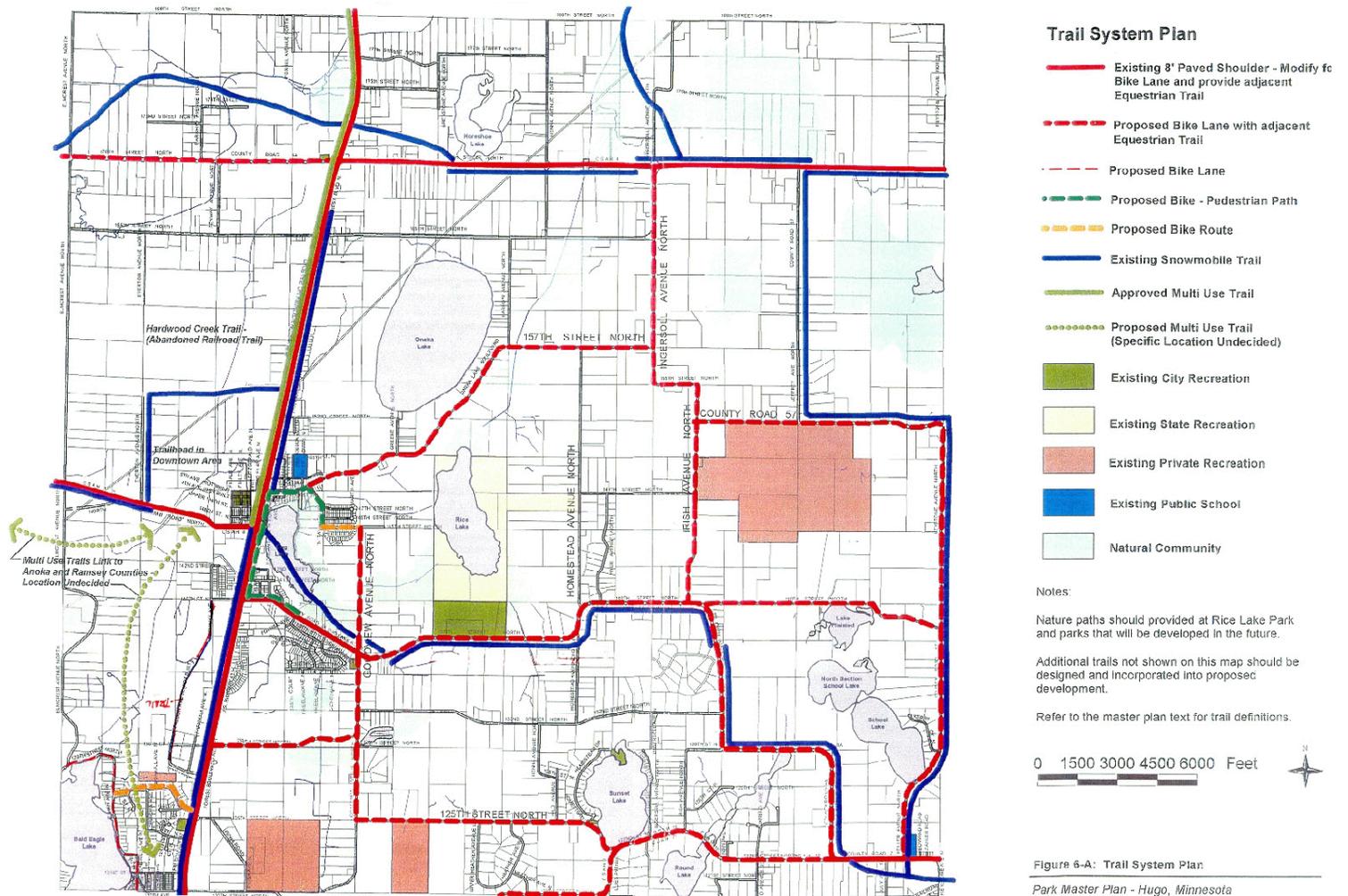
Please note the following assumptions:

- ▶ The values are based on historic data, and are approximate as of the date of this report. The actual acquisition will occur at a future date, therefore all values determined herein are subject to change based on new data which may become available and/or a typical market increase for the passage of time.
- ▶ We assume that severance damage is not applicable. All acquisitions are adjacent to existing roadway rights-of-ways, or within pre-existing easements. Therefore, without further analysis of each property impacted by a potential acquisition, it is assumed that severance damage is not applicable.
- ▶ We are assuming all trail segments to be purchased in permanent easement, not fee. We are however deeming that the value of the permanent easement to be the same as fee, due to the fact that the trail will encompass the property and render the land it sets on useless to the balance of the property. While this is a generous assumption, it is consistent with other right-of-way acquisitions for roadway, drainage, and utility purposes.
- ▶ We have not been provided information on temporary easements, slope easements, drainage, easements, or any other easements that would need to be created to facilitate this trail project. Therefore, the additional compensable value for these easements is not contained herein.
- ▶ For budgetary purposes, it is recommended that a 10-foot wide temporary easement be placed parallel and adjacent to the trail easement. Using a five-year temporary easement period, with a two-year floating period, (meaning that the land will be encumbered a total of five years, but it is expected that the land be temporarily used only for about a two-year period within the five-year period), using a reversionary method of temporary easement valuation with an 8.75% reversionary factor, the applicable rate for these temporary easements would be about 15 to 20% of the permanent easement value.
- ▶ For budgetary purposes, it is recommended that any slope or drainage easement be acquired as a permanent easement, consistent with its permanent slope or drainage use.
- ▶ To the best of this appraiser's belief, the information contained in this report is true and reported correctly. The information in this report, while not guaranteed, but has been taken from sources or records believed to be reliable.

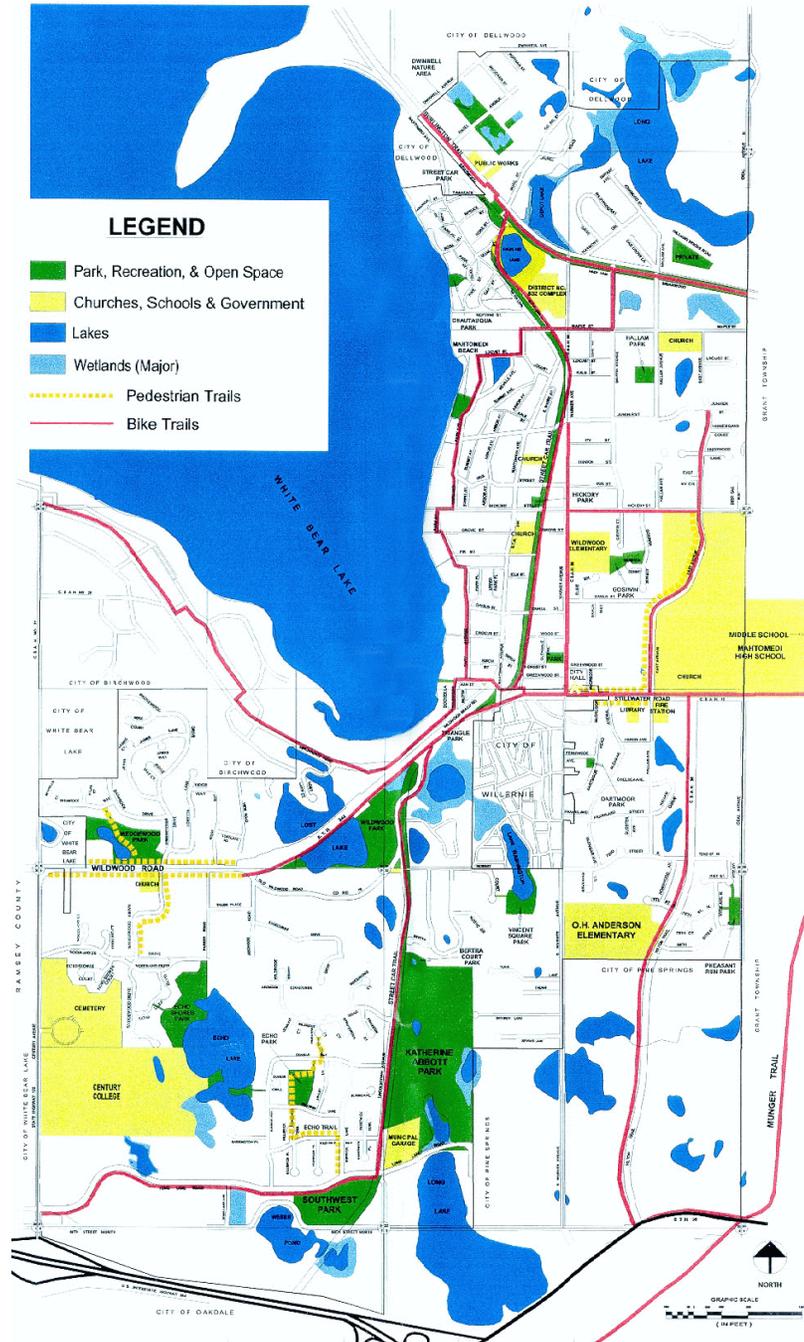
Appendix B – Local Trail Plans

The following provides maps of various local trail plans. Note that each map is subject to change without notice. The individual city or township should be contacted for up-to-date information on their trail system mapping.

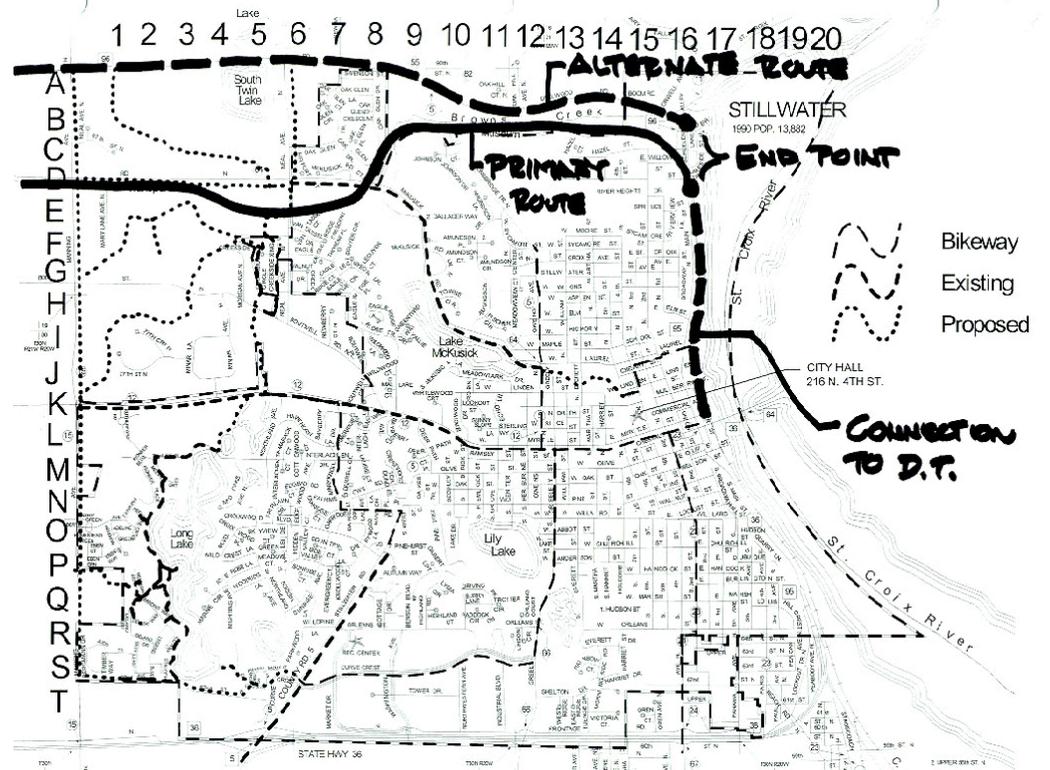
City of Hugo Trail System Map



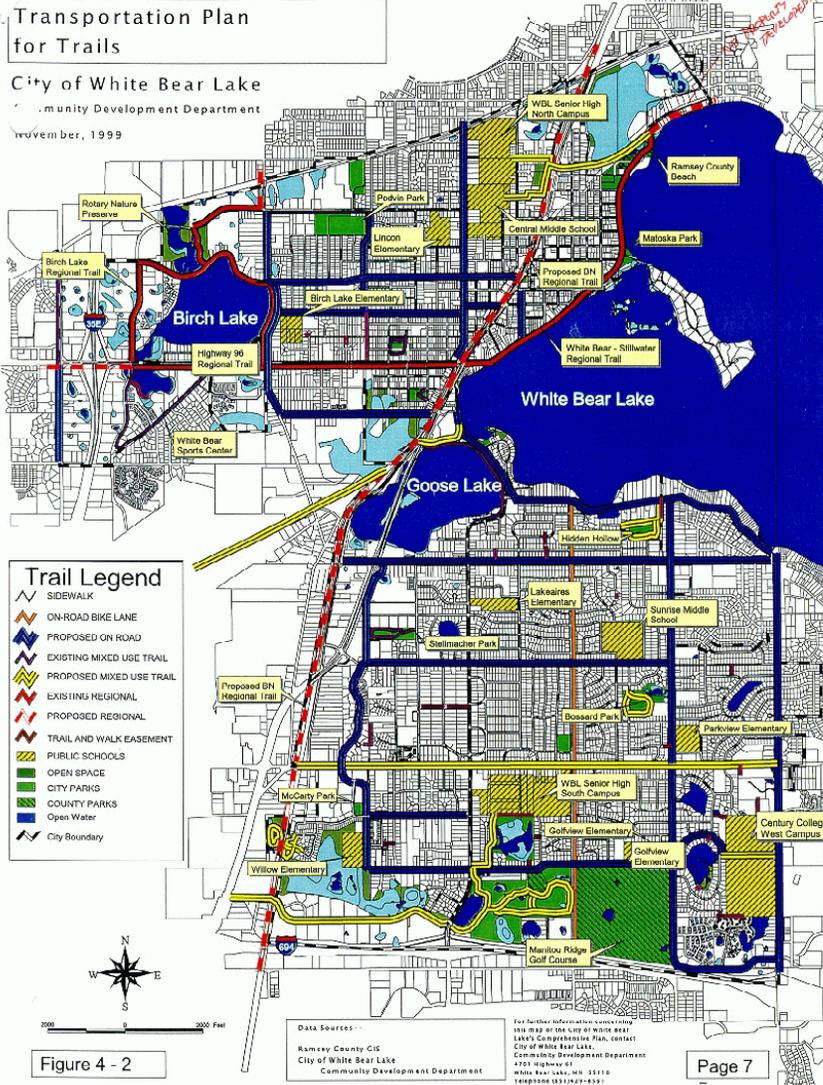
City of Mahtomedi Trail System Map



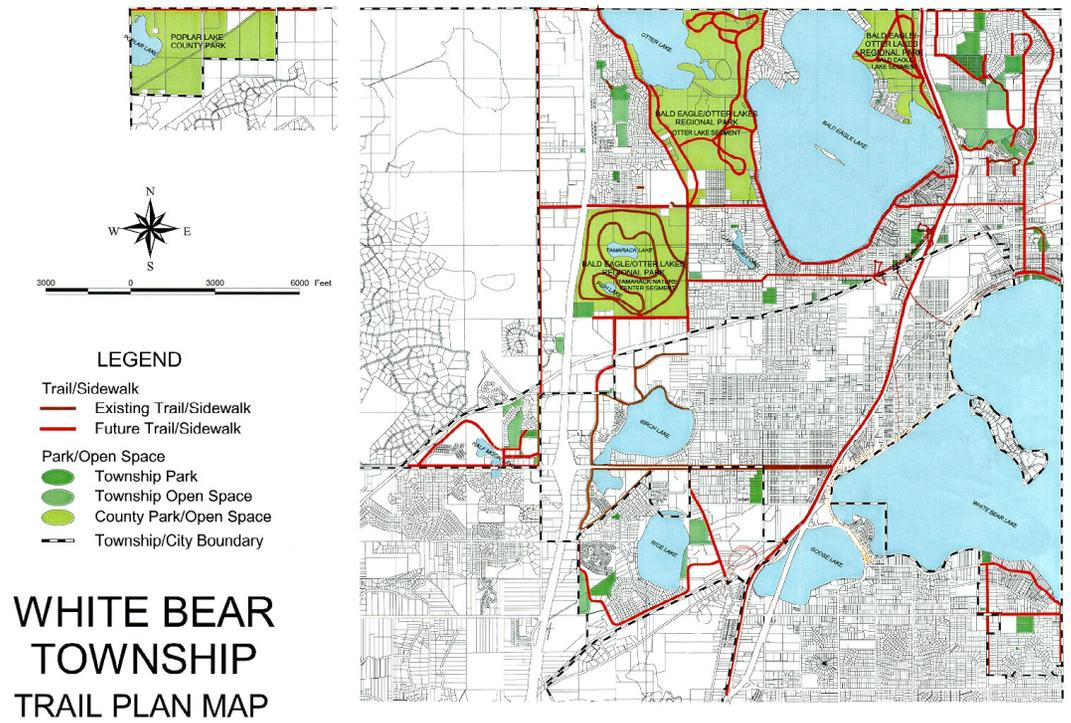
City of Stillwater Trail System Map



City of White Bear Lake Trail System Map



White Bear Township Trail System Map



City of Maplewood Trail System Map

