

ISANTI COUNTY

Transportation Plan 2006-2030

Prepared By

SRF CONSULTING GROUP, INC.
ENGINEERS | PLANNERS | DESIGNERS

May 2007

**ISANTI COUNTY
TRANSPORTATION PLAN
(2006 — 2030)**

May 2007

Prepared with input from the Isanti County Board of Commissioners

George Larson, Vice Chair, District 1
Larry Southerland, Chair, District 2
Tom Pagel, District 3
Kurt Daudt, District 4
Susan Morris, District 5

and the

Transportation Plan Steering Committee

Richard Heilman, P.E. Isanti County Engineer
Jerry Schleicher, Assistant Isanti County Engineer
Tim Anderson, Isanti County Zoning Administrator
Dave Carlberg, Community Development Director, City of Cambridge
Carla Vita, Community Development Director, City of Isanti
Ken Ceagske, City Councilman, City of Braham
Jim Braun, Zoning Administrator, Athens Township
Mel Larson, Cambridge Township
Jim Kowalik, Spencer Brook Township
Robert Bollenbeck, East Central Regional Development Commission
Claudia Dumont, Planner, Minnesota Department of Transportation
Mike Mueller, Area Hydrologist, Minnesota Department of Natural Resources

Plan Consultant

SRF Consulting Group, Inc.

SRF No. 5714

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Study Location	1
1.2	Plan Purpose	3
1.3	Public Participation	5
2.0	TRANSPORTATION ISSUES	6
2.1	Issues Identification	6
2.2	Land Use.....	10
2.3	Population	11
2.4	Existing Traffic Volumes	13
2.5	Congestion Analysis	13
2.6	Safety and Crash Analysis	13
2.7	Multimodal Uses	18
3.0	ANALYSIS OF FUTURE TRANSPORTATION NEEDS	19
3.1	Traffic Projections	19
3.2	Future Congestion	20
4.0	ROADWAY AND MULTIMODAL SYSTEM PLANS	23
4.1	Functional Classification	23
4.2	Jurisdictional Transfers	29
4.3	System Designation	35
4.4	Ten-Ton Roadway System.....	38
4.5	Pedestrian/Bicycle Trail Plan	40
5.0	SPECIAL AREA STUDIES	41
5.1	Isanti County River Crossing Study	41
5.2	County Road 45 at Mud Lake	44
5.3	County Road 45 Realignment	44
5.4	CSAH 9 Corridor Study	44
5.5	Road Safety Audits	44
6.0	IMPLEMENTATION	50
6.1	Transportation Plan Adoption.....	50
6.2	Jurisdictional Realignment Process	52
6.3	Access Management	53
6.4	Rural Safety Improvements.....	57
6.5	Right-of-Way	57
6.6	Project Development and the Environmental Process	59
6.7	Smart Growth/Growth Management	59
6.8	Roadway Project Identification.....	60
6.9	Bridge Project Identification	63
6.10	Roadway/Bridge Preservation.....	63
6.11	Funding.....	64

APPENDICES

Appendix A	Issues Identified by Public Process
Appendix B	Traffic Volume and Roadway Segment Information
Appendix C	Jurisdictional Transfer Guidelines
Appendix D	Mn/DOT Access Control/Management Policy

LIST OF FIGURES

Figure 1	Location Map	2
Figure 2	Issues Map – Isanti County.....	7
Figure 3	Issues Map – City of Cambridge.....	8
Figure 4	Issues Map – City of Isanti.....	9
Figure 5	Crash Locations 2001-2005.....	14
Figure 6	Segment and Intersection Crash Analysis	15
Figure 7	Future Traffic Volumes.....	21
Figure 8	Future Congestion Levels.....	22
Figure 9	Existing Functional Classification.....	24
Figure 10	Future Functional Classification.....	27
Figure 11	Potential Jurisdictional Changes.....	34
Figure 12	Potential County State Aid System Changes.....	37
Figure 13	Proposed 10 Ton Route System.....	39
Figure 14	Special Study Area – County Road 45 at Mud Lake Alignments .	45
Figure 15	Special Study Area – County Road 45 Realignments.....	46
Figure 16	Special Study Area – CSAH 9 Corridor Study (East Segment)....	47
Figure 17	Special Study Area – CSAH 9 Corridor Study (West Segment)...	48
Figure 18	Road Safety Audit Sites	51
Figure 19	Access/Crash Relationship	53
Figure 20	Access/Mobility Relationship	54
Figure 21	Identified Potential Roadway Projects/Studies.....	61

LIST OF TABLES

Table 1	Historic Population Growth and Future Population Projections....	12
Table 2	Mn/DOT Statewide Average Comparison Crash Rates	17
Table 3	Average Comparison Crash Rates for CSAH and CR Facilities ..	17
Table 4	2030 Congested Segments	20
Table 5	Extent of Rural and Small Urban Area Functional Systems.....	26
Table 6	Proposed Functional Classification Changes.....	28
Table 7	Isanti County Functional Classification Mileage Summary.....	30
Table 8	Region 7E Functional Classification Mileage Summary.....	31
Table 9	Potential Jurisdictional Candidates	33
Table 10	Jurisdictional Transfers Mileage Summary	35
Table 11	Summary of Proposed County State Aid Mileage Changes.....	36
Table 12	River Crossing Scoping Study Matrix	43
Table 13	Corridor Studies Scoping Matrix	49
Table 14	Isanti County Access Control Guideline	55

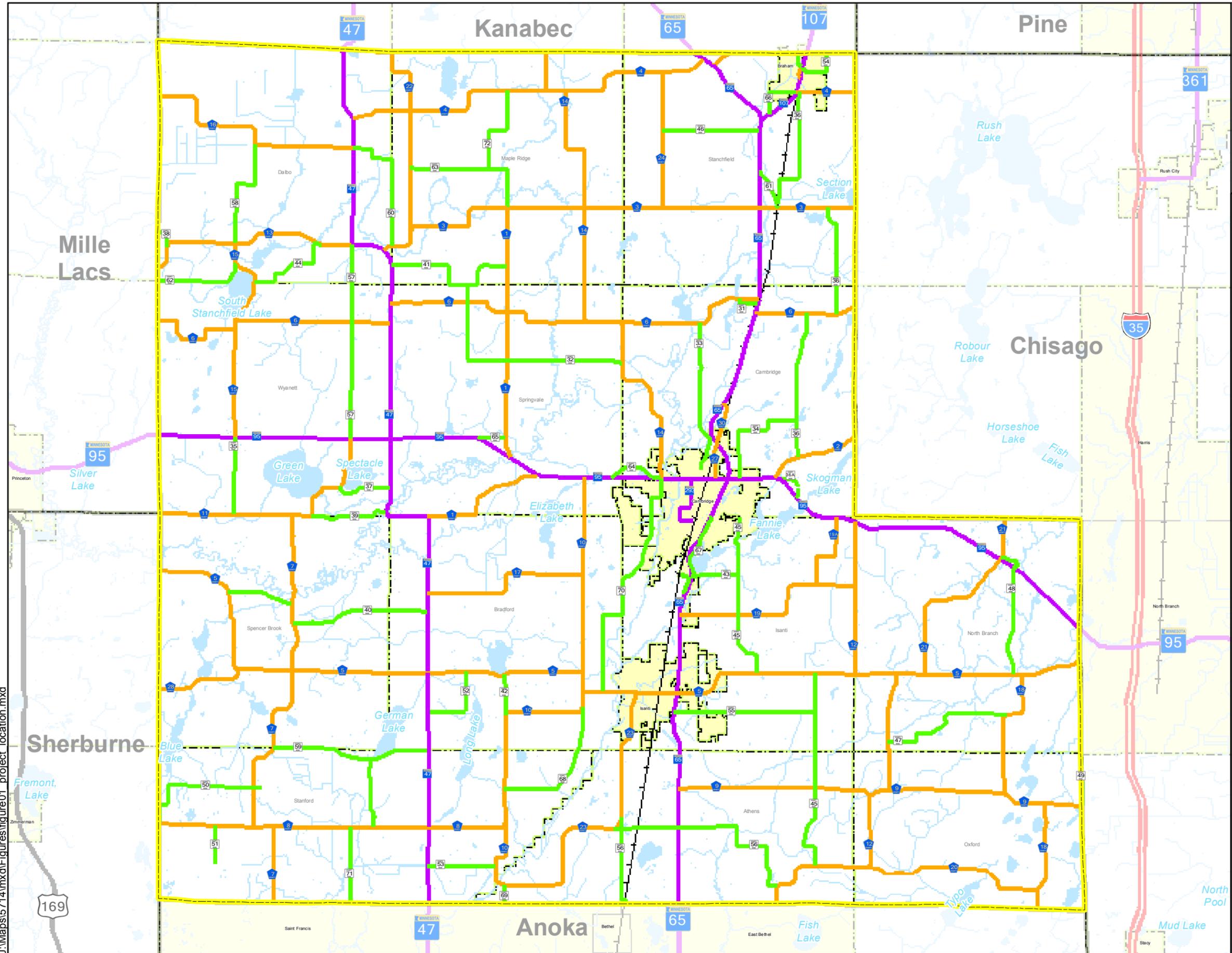
1. INTRODUCTION

1.1 *Study Location*

Isanti County is located approximately 50 miles north of the Twin Cities and 45 miles east of St. Cloud, and is bordered by Kanabec and Pine County on the north, Chisago County on the east, Anoka County on the south, and Sherburne and Mille Lacs County on the west (Figure 1). The county's proximity to the both the Twin Cities and St. Cloud serves commuters from both areas; several areas of the county serve as bedroom communities for either city. A substantial number of Isanti County residents work outside of the county. Major employers within the county include the Cambridge Medical Center and the Cambridge-Isanti School District. The largest employment sector in the County is the services industry (14.5 percent). Other major employment sectors include manufacturing, government, construction, transportation, and agriculture/mining. An adequate transportation system is critical to serve commuters employed outside of the County, and to connect industries and businesses located within the county to their suppliers and customers.

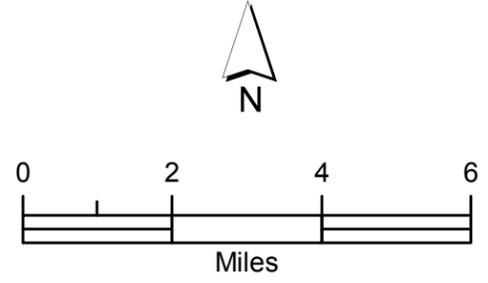
Isanti County has experienced rapid growth since the 1950s. The population of the county doubled between 1940 and 1990, and growth is projected to continue. Historically, the urbanized areas of the county, including the cities of Braham, Isanti, and Cambridge, have seen greater population increases than rural areas of the county. The population of the City of Cambridge increased from 2,720 in 1970 to 5,520 in 2000, and is expected to reach 6,114 by 2010. The population of Isanti City has increased at a faster rate, with a 1970 population of 679 to 2,324 in 2000. The city's population has exceeded 5,000. Meanwhile, rural populations have decreased or increased at a slower rate than urban populations. However, some of this difference between urban and rural population growth can be attributed to annexation. As traffic volumes increase, this population growth places increased pressure and demands on the county's transportation system.

Although cities within Isanti County have experienced substantial growth and development in recent years, nearly half of the county's total land area consists of agricultural uses. Given increasing development pressures in the past two decades, the total land dedicated to farming purposes has decreased. Many rural townships currently face residential development pressure. Changing land use patterns and increased development within the county present several challenges for the county's transportation system, including congestion on urban roadways, access management, the need for a 10-ton route system within the county, and the means to preserve and maintain the existing roadway system.



LOCATION MAP
 ISANTI COUNTY TRANSPORTATION PLAN
Figure 1

- Legend**
-  Interstate Highway
 -  US Trunk Highway
 -  Minnesota Trunk Highway
 -  County State Aid Highway
 -  County Road
 -  Railroad
 -  Isanti County
 -  Township Boundaries
 -  Municipal Boundaries



J:\Maps\5714\mxd\figures\figure01_project_location.mxd

1.2 Plan Purpose

The purpose of this plan is to provide the first multimodal comprehensive long-term transportation plan for Isanti County, guiding long-term transportation investments and policy decisions in Isanti County for the next 20 years. The plan will provide a basic framework for the development of the Isanti County Transportation system over the next 20 years, and will provide tools for identifying and implementing major transportation investments and policy decisions. Through community input and technical analysis of the county roadway system, problems and needs will be identified. Multimodal transportation improvements and strategies will be developed to address the changing demands on the county's transportation system. These strategies will involve the coordination and cooperation of government agencies, allowing stakeholders to maximize existing resources and reducing the potential for agency conflict.

Developing a 20-year transportation plan will allow Isanti County to develop an efficient transportation system that will accommodate changing land use patterns and population growth within the county. The planning process will also provide an opportunity to build and enhance relationships among various stakeholder groups involved in the process, including various levels of government agencies, private sector participants, and interest groups.

1.2.1 Goals and Objectives

The following goals and objectives were developed to guide the planning process, and to ensure that the transportation issues and needs identified during the planning process are adequately addressed. The goals and objectives include the following:

Goal 1: Safe & Efficient Movement

Strive to ensure that the transportation network promotes the safe and efficient movement of people and goods:

- Continue to maintain and preserve the existing county transportation infrastructure.
- Address safety concerns at high-crash intersection locations
- Review the current functional classification system and recommend changes to better align the transportation system with demands.
- Encourage consistency between roadway jurisdiction, designation, and functional classification.
- Improve and expand the existing transportation system to meet current and future needs.
 - Plan for future roadway corridors necessary to accommodate future growth.

Goal 2: Land Use and Development

Understand the correlation between growth in Isanti County and its transportation system to ensure that decisions regarding transportation are fully integrated with locally approved land use planning and development policies:

- Manage access along roadways, in accordance with local and state access spacing guidelines.
- Identify and preserve potential transportation corridors by utilizing such tools as official mapping, footprinting and subdivision requirements, where appropriate and feasible.
- Identify growth areas within the county and evaluate the impacts of proposed land use on the transportation system.
- Provide the Isanti County Highway Department input on land use, zoning and subdivision proposals during the development review process.

Goal 3: Economic Development

Recognize economic development issues when managing the transportation system's resources:

- Prepare a system plan for ten-ton roadways.
- Ensure that the transportation system serves major economic development generators.

Goal 4: Multimodal

Promote transportation mode choice as part of the county transportation system:

- Collaborate with County Parks and other stakeholders in the development of a county-wide trail system.
- Where appropriate and feasible incorporate bicycle and pedestrian improvements into the county roadway upgrades.
- Promote commuter rail service linking to the North Star Corridor.
- Promote other transit opportunities.

Goal 5: Coordination between Jurisdictions

Build cooperation and coordination among state and local jurisdictions:

- Seek opportunities to coordinate roadway improvement plans and studies with local entities, adjacent counties and the state.
- Review and propose logical jurisdictional modifications for discussion among affected governments.
- Promote cooperative intergovernmental maintenance activities to increase the efficiency and effectiveness of services.

GOAL 6: Investments and Use of Funding

Investigate opportunities to secure new funding for transportation needs and maximize the efficiency of current resources:

- Preserve, maintain and manage the existing highway system.
- Examine the current system designation and seek changes in state assistance.
- Encourage joint-agency and/or public-private partnerships and cost sharing strategies.
- Explore and develop new strategies to balance the realities of construction and maintenance needs with available financial resources.

Goal 7: Natural Resources

Recognize role as a steward of the County's Natural Resources

- Strive to minimize adverse impacts to Natural Resources
- Strive for early coordination with appropriate environmental agencies in project development and permitting.

1.3 Public Participation

Public participation and agency coordination were an important element in identifying transportation issues and needs, and in building support for the overall Transportation Plan.

The following approaches were used to accomplish these objectives:

- Project Steering Committee was established to guide the development of the plan and manage the planning process. The Committee consisted of representatives from Isanti County, Mn/DOT, DNR, and city and township engineers, planners, and officials. The Steering Committee met four times throughout the planning process to direct and refine the study process and products.
- Focus groups--Townships, cities, businesses, school bus providers, County Commissioners, Cambridge Isanti Transportation Action Council, Active Living By Design, emergency response providers, airport interests, environmental interests, trucking interests—issues identification. Wednesday, May 17, 2006.
- Two public open-house meetings were held to obtain input from affected agencies, communities and citizens on issues and the draft plan.
- County Board of Commissioners meetings: Four meetings with the County Board were held to ensure understanding of planning activities and receive guidance on plan elements. Upon delivery of certain plan products the Commissioners review documents and provide input.

2.0 Transportation Issues

Land use, population and traffic growth trends, safety, and multimodal uses were investigated during the Transportation Plan's development process to help identify transportation-related issues needed to define the county's transportation needs. The process of identifying existing conditions started with a series of focus group meetings with targeted stakeholders and public open house meetings. From there, information was collected on a number of issues related to existing and future transportation needs.

2.1 Issues Identification

Identifying and confirming transportation-related issues was an important part of developing the Isanti County Transportation Plan. Without this step, recommendations and improvements have little relevance to residents, business owners, public safety officers, elected officials and agency staff, and may not fully address the needs of those using the county roadway system. This section of the report discusses the issues identified through a series of focus group meetings with targeted interest groups to identify transportation-related issues within Isanti County.

The focus group meetings were held on Wednesday, May 17, 2006 at the Isanti County Government Center. The focus group meetings included representatives from the following areas:

- Townships
- Cities
- Businesses
- School bus providers
- County Commissioners
- Cambridge Isanti Transportation Action Council
- Active Living By Design
- Anoka Ramsey College
- Emergency response providers
- Airport interests
- Environmental interests
- Trucking interests

A complete list of all the issues identified is presented in Appendix A. Issues were documented and organized into the following categories:

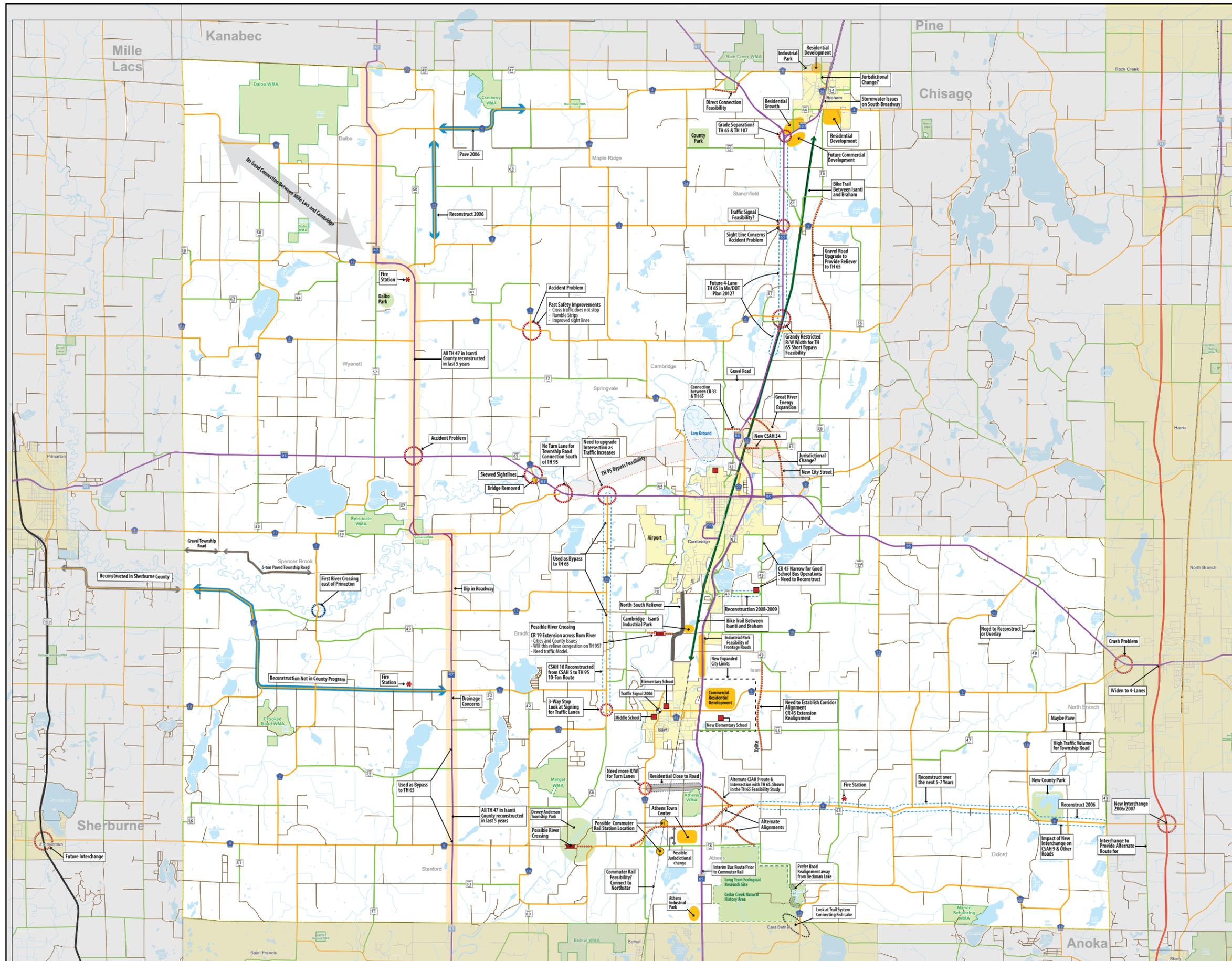
- Safety
- Efficient movement
- Multimodal
- Land Use/development
- Coordination between jurisdictions
- Economic development
- Investments and use of funding

Generally, comments included providing adequate access to economic development centers within and around the County, including the cities and major employers, preserving right-of-way for future road constructions, the need for more east west routes and more river and railroad crossing opportunities. Future growth areas in the cities of Isanti, Braham and Cambridge were also identified.

ISANTI COUNTY ISSUES MAP

ISANTI COUNTY TRANSPORTATION PLAN

Figure 2



Legend

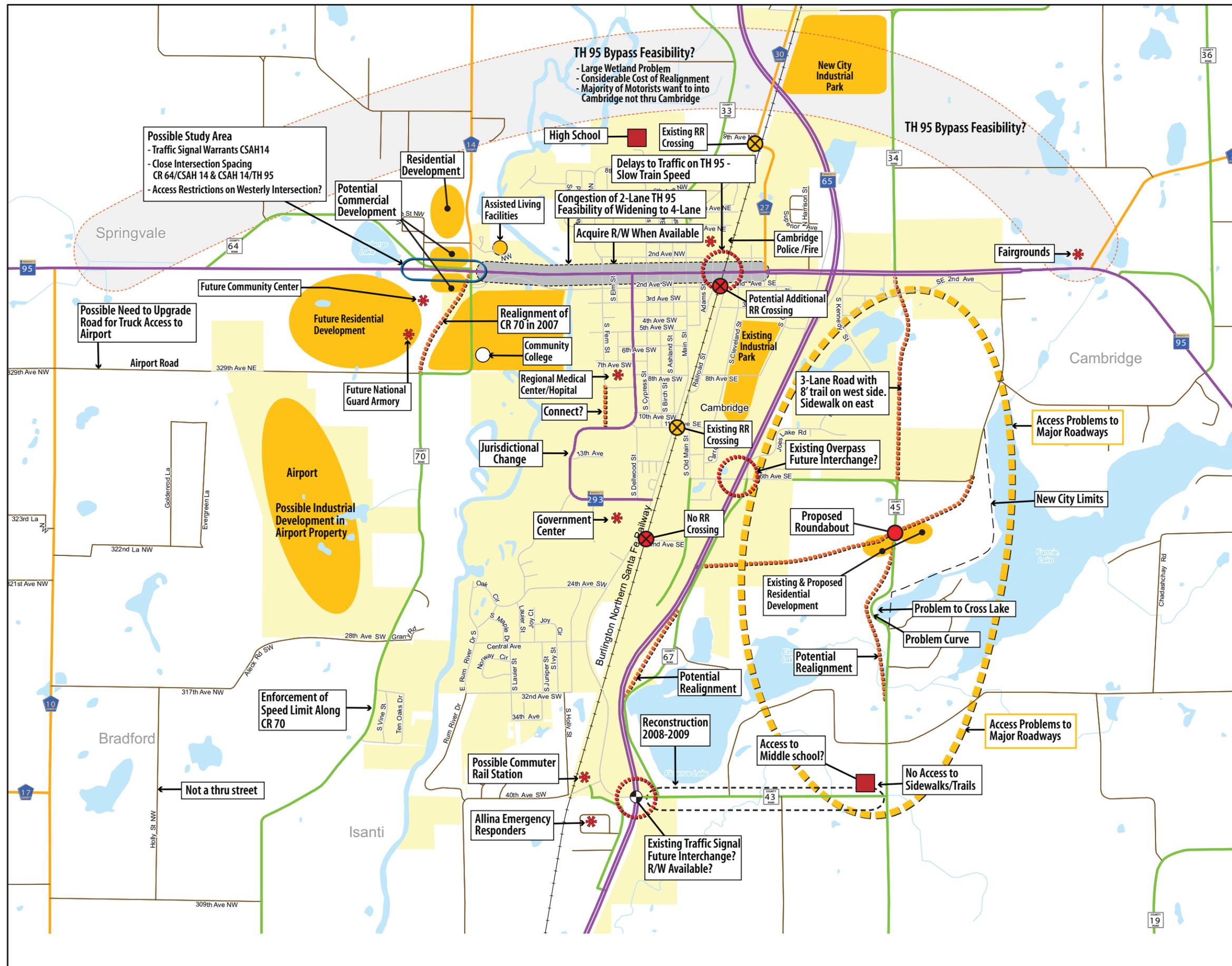
- Interstate Highway
- US Trunk Highway
- Minnesota Trunk Highway
- County State Aid Highway
- County Road
- Township Road
- Municipal Road

0 1 2 3 Miles

CITY OF CAMBRIDGE ISSUES MAP

ISANTI COUNTY TRANSPORTATION PLAN

Figure 3



Legend

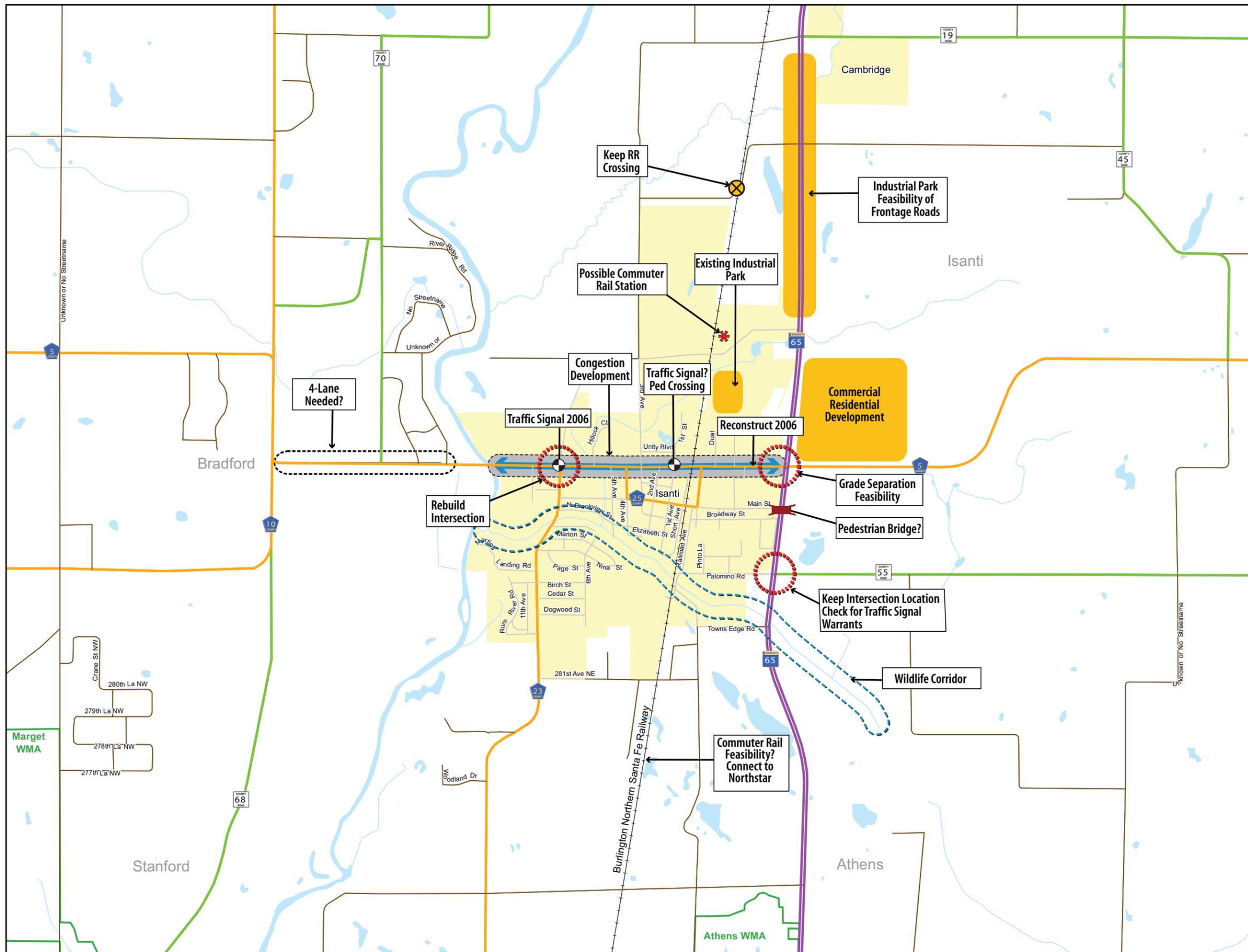
- Minnesota Trunk Highway
- County State Aid Highway
- County Road
- Township Road
- Municipal Road



CITY OF ISANTI ISSUES MAP

ISANTI COUNTY TRANSPORTATION PLAN

Figure 4



Legend

- Minnesota Trunk Highway
- County State Aid Highway
- County Road
- Township Road
- Municipal Road



2.2 Land Use

Land use information throughout the county was reviewed to gain an understanding of future land use densities, concentration of major trip generators, and economic growth factors.

A majority of land use in the unincorporated areas of Isanti County is agricultural. Nearly 50 percent of land in the county is designated for agricultural uses, while small areas of commercial and industrial uses are found intermittently along major transportation routes. However, residential development in rural areas is increasing due to growth in the Twin Cities metropolitan area. The county's land use goals reflect the challenges related to development pressure and the desire of many residents to manage growth and maintain the rural nature of Isanti County:

- Preserve and conserve agricultural land and related natural resources, in order to maintain the farm and the farm-related economy of the County.
- Preserve and protect the rural lifestyle.
- Establish a Comprehensive Growth Management Strategy for Isanti County.
- Provide for limited commercial and industrial development in rural centers where public utilities are not available.
- Provide and maintain an appropriate number of parks, trails, open space, and recreational facilities to meet the needs of County residents.
- Establish an open and ongoing relationship among all units of government in matters relating to planning and the provision of public services.
- Encourage and promote economic development in the identified growth centers of the County.

Future development areas have been identified in county and city planning documents, and through community input. The county's comprehensive plan established an Urban Service Area to accommodate development in areas where public services can be provided economically. Urban Service Areas are located within one mile of Isanti County's incorporated cities. Zoning within Urban Service areas occurs at higher densities than in rural areas.

More specifically, growth is expected in the following areas:

- *City of Cambridge:* Large parcels of buildable land along MN 65 in Cambridge. Designated as two industrial parks and an office park. New growth in west side of Cambridge: increased traffic on CR 14 and at the CR 14/70/Highway 95 intersection. The City of Cambridge has designated several areas adjacent to the city appropriate for future growth and annexation.
 - *Northeast of the City:* The area north of TH 95 and east of CR 34 beyond existing City boundary. Lands directly adjacent to either side of the roadway appropriate for commercial development. Land west of CR 34 and northeast of TH 65 is ideal for industrial development given its proximity to transportation infrastructure. Lands surrounding these areas may be appropriate for residential development.

- *Southeast of the City:* The area south and east of Cambridge’s existing boundary to the west side of Lake Fannie is considered to be suitable for single-family residential development, with the exception of areas adjacent to major roadways, which may be more suitable for multi-family housing. Mixed-density or planned unit development options may be explored in this area.
- *West of the City:* The area north and south of TH 95, and west of the Rum River, is also suitable for future development. Parcels located at the intersection of TH 95 and CSAH 14/70 are suitable for neighborhood/convenience commercial development, due to the proximity of high-density housing and the community college. Land south of TH 95 may be well suited for residential development or additional educational uses, if necessary, while single family residential may be appropriate for land north of TH 95. Some land along the river should be preserved as open space or park.
- *City of Isanti:* Commercial and residential development is occurring east of TH 65 and north and south of CSAH 5.
- *City of Braham:* Residential and commercial growth is occurring in northwest Braham. New residential development is also occurring east of TH 107.

2.3 Population

Changes in traffic demand and in other transportation modes and services, generally result from changes in regional population, land use, travel patterns. Examining historic population trends for the area is one of the first steps taken to estimate future transportation demands for the region.

Historical populations and projected population changes for Isanti County cities and townships were obtained from the Minnesota State Demographer (Table 1). The following observations have been noted about population trends in the area:

- Isanti County’s overall population nearly doubled between 1970 and 2000, increasing at annual rate of 2.4 percent.
- The City of Isanti was a major center of population growth in the county. The population of the City of Isanti increased at annual rate of 5.89 percent between 1970 and 2000.
- Several townships in southern Isanti County also experienced rapid growth during this time period; the townships of Athens, Bradford, and Oxford increased at annual rates greater than three percent.
- The population of Isanti County is aging; the median age in 1980 was 28.1, in 1990 increased to 32, increased again to 36 in 2000.
- The baby-boom generation will continue to be the largest age group in the County. As the baby-boom generation ages, demand for medical, recreational, and community services that assist elderly populations will increase.
- The annual rate of growth is projected to slow in portions of rural Isanti County to less than one percent.
- Future population growth is expected to be focused on the cities of Isanti County and those townships adjacent to the cities of Cambridge and Isanti, including Athens, Bradford, Cambridge, Isanti, and Springvale Townships.

Table 1
Isanti County Population⁽¹⁾

Government Unit	Historic Population					Projected Population					Percent Growth	
	1970	1980	1990	2000	2005	2010	2015	2020	2025	2030	1970-2005	2000-2030
Athens	849	1,793	2,062	2,322	2,394	2,430	2,509	2,575	2,623	2,657	181.98%	14.43%
Bradford	912	2,370	2,637	3,472	3,690	3,849	4,109	4,346	4,552	4,728	304.61%	36.18%
Braham	744	1,015	1,139	1,276	1,570	1,357	1,403	1,441	1,470	1,478	111.02%	15.83%
Cambridge City	2,720	3,170	5,094	5,520	7,057	6,114	6,333	6,516	6,656	6,756	159.45%	22.39%
Cambridge Township	2,174	2,452	1,988	2,413	2,572	2,628	2,776	2,910	3,027	3,126	18.31%	29.55%
Dalbo	595	665	616	634	727	688	703	713	720	722	22.18%	13.88%
Isanti City	679	858	1,228	2,324	5,181	4,272	4,730	5,143	5,497	5,796	663.03%	149.40%
Isanti Township	1,647	2,204	1,800	2,364	2,533	2,652	2,840	3,012	3,162	3,290	53.79%	39.17%
Maple Ridge	655	722	658	737	826	814	8,54	885	911	931	26.11%	26.32%
North Branch	960	1,507	1,486	1,654	1,786	1,757	1,815	1,864	1,900	1,925	86.04%	16.38%
Oxford	342	554	638	799	904	905	963	1,015	1,060	1,099	164.33%	37.55%
Spencer Brook	666	1,146	1,203	1,495	1,595	1,639	1,735	1,822	1,898	1,962	139.49%	31.24%
Springvale	817	1,046	1,113	1,384	1,524	1,542	1,634	1,718	1,790	1,852	86.54%	33.82%
Stanchfield	951	1,077	1,060	1,120	1,197	1,179	1,204	1,222	1,233	1,238	25.87%	10.54%
Stanford	922	1,592	1,822	2,075	2,299	2,253	2,364	2,452	2,523	2,579	149.35%	24.29%
Wyanett	927	1,429	1,377	1,698	1,844	1,852	1,958	2,055	2,139	2,210	98.92%	30.15%
Isanti County	16,560	23,600	25,921	31,287	37,699	35,930	37,930	39,690	41,160	42,350	127.65%	35.36%

⁽¹⁾ Population forecasts are from the Minnesota State Demographer and may not reflect forecasts done as part of more detailed local planning efforts.

2.4 Existing Traffic Volumes

Annual average daily traffic volumes (AADTs) on state highways and county routes were collected using historical data provided by Isanti County and Mn/DOT. Historical volumes for individual roadway segments are shown in Appendix B.

In general, traffic volumes increase as they approach larger cities in the county, such as Cambridge and Isanti. Traffic volumes on state roadways are generally higher than those on the county system. This pattern is typical of most areas within the state.

2.5 Congestion Analysis

Under existing conditions the only roadway segment experiencing congestion based on overall traffic volume is TH 95. However, other segments of TH 95 in the City of Cambridge along with CSAHs and other east-west roadways experience periodic congestion due to delays at BNSF Railroad crossings.

2.6 Safety and Crash Analysis

Public safety is a high priority for all agencies responsible for improving and maintaining public transportation facilities. To evaluate potential safety problems in the county, a crash analysis was performed using Department of Public Safety (DPS) crash records from 2001-2005. Records from the DPS were collected for state trunk highways, county state aid highways and county roads. The crash database was imported into the county Geographic Information System (GIS) format so that the data could be viewed on a map of the study area (Figure 5).

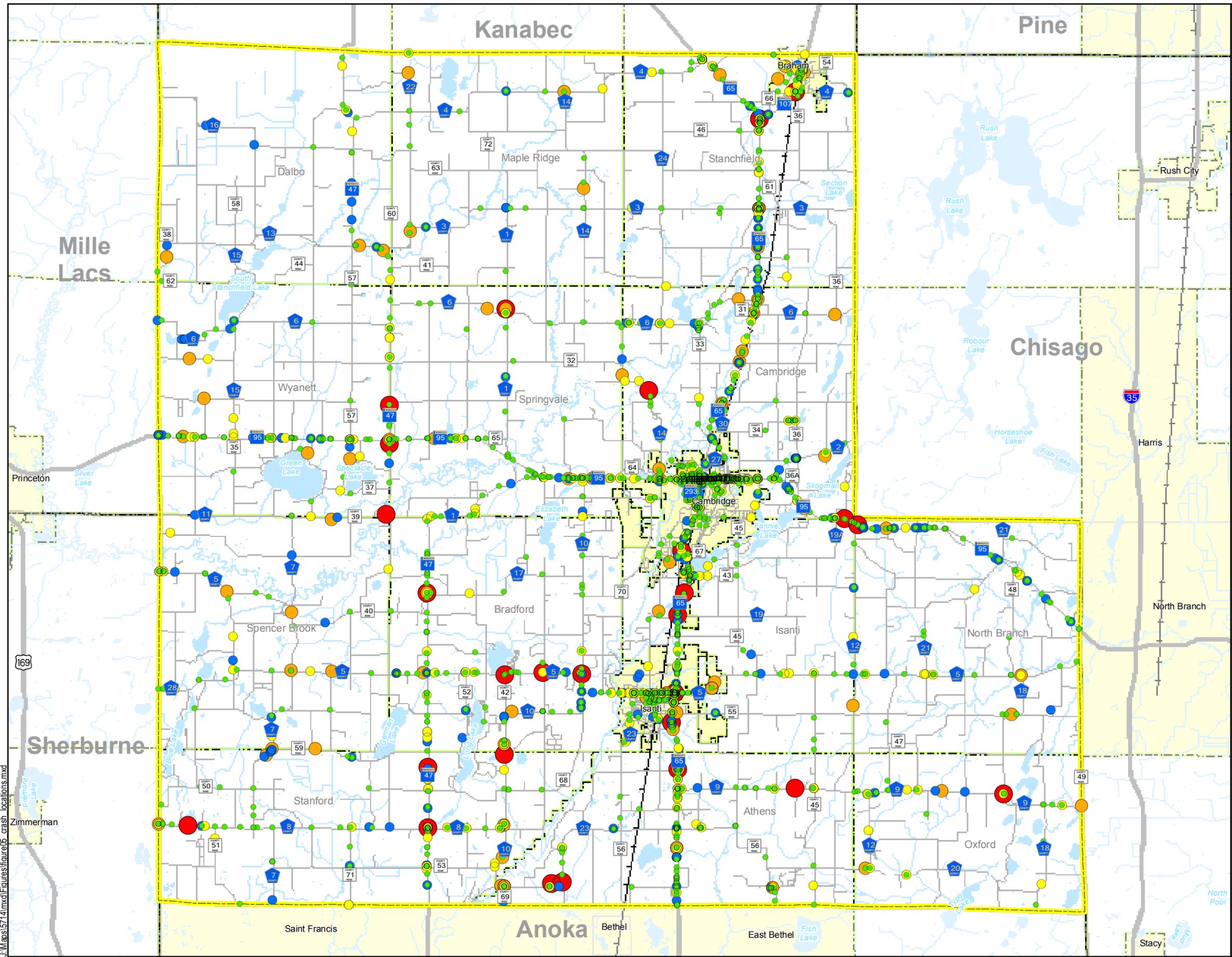
As part of the 20-year Transportation Plan effort, Isanti County performed Road Safety Audits (RSAs) on County State Aid Highways and County Roads within the County. The Isanti County RSA project followed a process that began with the County's selection of seven audit sites of concern. This report provides a crash history summary for each site and outlines the audit findings. The RSA is included as a separate document from the plan.

Analysis of crash data focused on identifying problems at intersections and on roadway segments. The analysis is described in the following sections.

2.6.1 Intersection Crash Analysis

Crash data from January 1, 2000 through December 31, 2005 was mapped to intersection locations on the CSAH and TH systems to identify problem intersections. A 500-foot buffer was established around intersections. This buffer was used to identify crashes that were most likely related to activities at the intersection. After the buffer was applied to the various intersections, their crashes were posted to the appropriate locations (Figure 6).

Each intersection was categorized into one of four crash groups: intersections with 56 to 100 crashes (fourteen or more crashes per year); intersections with 18 to 55 crashes; intersections with 6 to 17 crashes; and intersections with one to five crashes in the years studied.



CRASH LOCATIONS 2001-2005

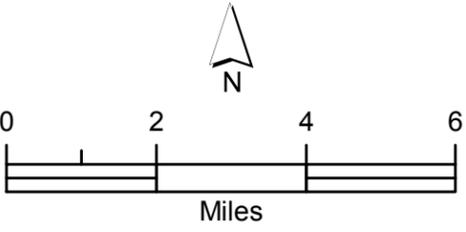
ISANTI COUNTY TRANSPORTATION PLAN

Figure 5

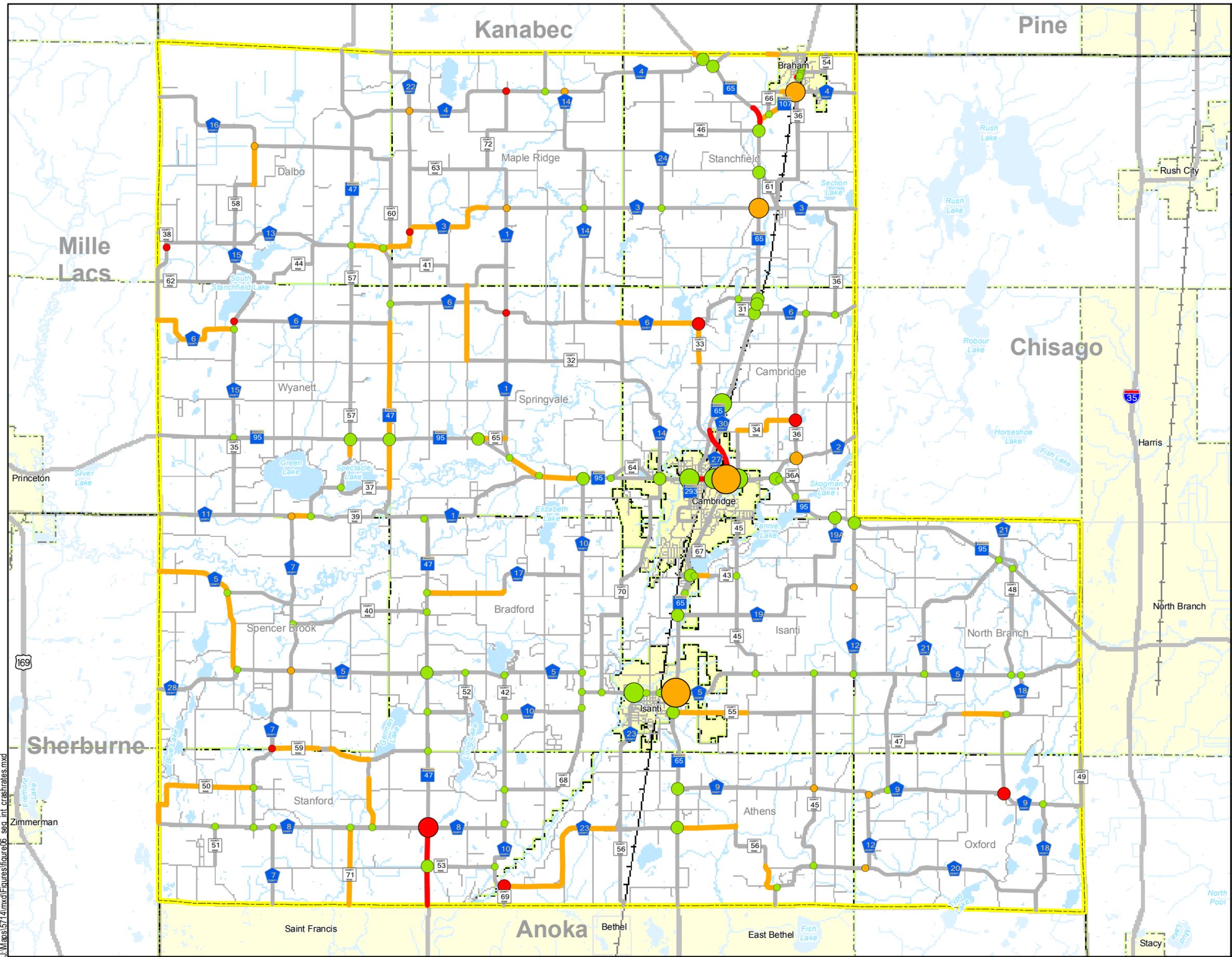
Legend

- Crash Severity**
- Fatal - 30 crashes
 - Incapacitating Injury - 84 crashes
 - Non-Incapacitating Injury - 390 crashes
 - Possible Injury - 415 crashes
 - Property Damage - 1876 crashes
 - No Apparent Injury - 1876 crashes
- Roadways
 - Railroad
 - Isanti County
 - Township Boundaries
 - Municipal Boundaries

Source: Mn/DOT Crash Data



J:\Maps\5714\mxd\figures\figure05_crash_locations.mxd



**SEGMENT AND INTERSECTION
CRASH RATES 2001-2005**

ISANTI COUNTY TRANSPORTATION PLAN

Figure 6

Legend

Intersections

- Intersection Crash Rate 2.0 - 3.7**
- Intersection Crash Rate 1.0 - 1.9**

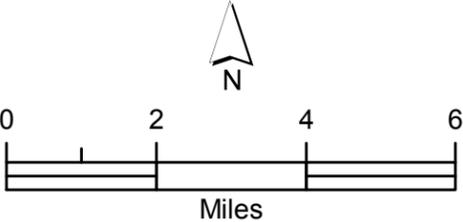
Total Crashes 2001 - 2005

- 1 - 5
- 6 - 17
- 18 - 55
- 56 - 100

Roadways

- High Crash Rate, High Frequency*
- High Crash Rate, Low Frequency*

* High crash rate is any segment that has a crash rate greater than 1.5 times the average crash rate for that design type.
 High Frequency - More than 4 crashes per mile per year.
 Low Frequency - 4 or less crashes per mile per year.
 ** Crashes per million entering vehicles.
 Source: Mn/DOT Crash Data



J:\Maps\5714\mxd\figures\figure06_seg_int_crashrates.mxd

In addition, a crash rate (crashes per million entering vehicles) was calculated for all county/county or county/trunk highway intersections. These crash rates were then compared to the statewide average crash rates for intersections involving a trunk highway or a countywide average for that design type. Those intersections that had a crash rate of 2.0 crashes per million entering vehicles or higher were classified as high crash rate intersections and are shown in red on Figure 6. Those with intersection crash rates between 1.0 and 1.9 crashes per million entering vehicles were noted in orange on Figure 6.

The results of the analysis show that eleven (11) intersections had a high crash rate (2.0 to 3.7 crashes per million entering vehicles). Of the 11 intersections, ten were county/county intersections. However, if an intersection has a very low volume of entering traffic, only a few accidents over the five-year period can result in a high crash rate. Therefore, the 11 intersections were reviewed for the number of crashes during the five-year time period. Of the 11 intersections, five intersections including the TH/County Highway intersections averaged at least one accident per year or greater (greater than five accidents between 2001 and 2005). In the more detailed Road Safety Audit, three of these intersection crash reports were reviewed which resulted in the finding that some of the crashes assigned to these intersections actually occurred elsewhere. Therefore in all three intersections reviewed it was found that all had less than five accidents during the five-year period and should not be considered high crash rate intersections.

Further analysis showed that 15 intersections, including four trunk highway intersections, have crash rates between 1.0 and 1.9 crashes per million entering vehicles. Of those, five intersections had five crashes or more according to the crash information supplied by the Minnesota Department of Transportation. Of these five intersections, four involved a trunk highway. No detailed review of the crash reports were performed on these intersections to see if the crash locations were accurately coded as this was beyond the scope of this study.

2.6.2 Segment Crash Analysis

While a majority of crashes occur at intersections, it is also important to look at crashes along roadway segments to identify abnormally high-crash segments. While numerous factors (i.e., geometric or cross-section deficiencies, sight distance problems, excessive access, blowing and drifting snow, etc.) contribute to crashes, segment analysis identifies potential problems so that further investigations and analysis can be done. In addition, segments can be targeted for safety improvements and investments.

In order to identify segments with high crash rates, a comparison was made between average crash rates by facility type, and the rates for each individual segment in the county. Crash rates for US and Trunk Highway segments were compared with Mn/DOT statewide average crash rates for similar facility types. Table 2 shows Mn/DOT average statewide average comparison crash rates for different rural and urban roadway types based on annual Average Daily Traffic (ADT) volumes.

Table 2
Mn/DOT Statewide Average Comparison Crash Rates for Trunk Highways, US Highways and Freeways

Code	Definition	Volume Threshold (ADT)	Mn/DOT Statewide Average Comparison Crash Rate ¹
U-1A	Urban two-lane at-grade local urban street at 30-45 mph	8,000	ADT < 1,500 = 2.6 ADT 1,500-4,999 = 2.7 ADT 5,000-7,999 = 3.0
U-3	Urban four-lane at-grade 30 mph	10,000	0.9
U-4	Urban expressway at 35-55 mph	35,000	5.5
U-4A	Urban expressway at 35-65 mph	35,000	2.2
R-1A	Rural two-lane at-grade at 55 mph	14,000	ADT < 1,500 = 1.0 ADT 1,500-4,999 = 0.8
R-3	Rural expressway at 55-65 mph	45,000	0.9
R-3A	Rural expressway at 55-65 mph	45,000	0.9
R-4	Rural freeway	60,000	0.6

¹ Comparison rates were based on 2000 to 2002 Mn/DOT statewide average crash rates.

For County State Aid Highways (CSAH) and County Roads (CR) in County, an average crash rate for each facility type was calculated. These average crash rates were used as comparison rates for the crash rate analysis (Table 3).

Table 3
Average Comparison Crash Rates for CSAH and CR Facilities

Code	Definition	Volume Threshold (ADT)	Isanti County Average Comparison Crash Rate ¹
U-1	Urban two-lane at-grade local urban street at 30 mph	8,000	4.13
R-1	Rural two-lane at-grade at 55 mph	14,000	2.26

¹ Isanti County rates are based on analysis of Department of Public Safety Data for the Isanti County area. Average comparison rates were developed for different facility types within the county using 2001 – 2005 crash data.

² Two-lane rural design highways with limited visibility, poor geometrics and/or poor roadway surface (gravel or poor pavement condition)

Information from Tables 2 and 3 were used to calculate a ratio of segment crash rates to average crash rates by facility type to identify high-crash segments for both the Mn/DOT and Isanti County roadway systems.

While the ratio of segment crash rates to average crash rates identifies areas with potential safety problems, it does not account for variations caused by short segment lengths and low traffic volumes. In order to account for these variations, an additional set of criteria was applied (require more than four crashes per mile per year). For the purposes of this plan, high-crash segments have been identified as segments that have a crash rate ratio greater than 1.5 times the average crash rate for a facility type and a crash frequency of more than four crashed per mile, per year. Using these criteria, high-crash segments with a high frequency were identified and shown in red on Figure 6. The orange color lines shown on Figure 6 indicate locations where the crash ratio is 1.5 or higher, but there are fewer than four crashes per mile, per year.

When reviewing the high-crash segment map, it is important to remember the following:

- Includes crashes at intersections within the segment.
- Short highway segments can result in high crash rates.
- Segments with low traffic volumes are subject to more variability (a small number of crashes can result in a high crash rate).
- Different types of highway facilities have different crash rates. For example, the average crash rate for a rural interstate freeway is 0.6 crashes per million vehicles-miles, while an urban expressway has an average crash rate of 2.2.

As shown in Figure 6, a number of the high-crash, high-frequency segments are in the urbanized areas where traffic volumes are higher.

Based on the analysis, it is recommended that the crash analysis results be considered in selecting improvement projects.

2.7 Multimodal Uses

Isanti County has a variety of modal transportation users and services including transit, bicyclists and pedestrians. The existing multimodal uses are summarized below.

2.7.1 Transit

Isanti County is served by Heartland Express transit service, which is a rural public transportation system serving riders in Isanti and Chisago Counties. Heartland Express provides dial-a-ride, curb-to-curb service in rural and urban areas of the county. All buses are handicap accessible, and operate Monday through Fridays from 5:00 a.m. to 6:00 p.m.

The feasibility of commuter rail along Highway 65 from Isanti County to the Twin Cities is also being explored. Commuter coach service along Highway 65 could be provided in the interim until planning and studies are completed and adequate funding is available for the rail project.

2.7.2 Trails

Trails can serve both transportation and recreation purposes. Some trail users choose to ride their bicycle or walk to and from work, shopping, or recreational locations as part of a lifestyle choice. People that use a bicycle for transportation purposes rather than recreational purposes are generally more comfortable riding with traffic on shoulders of roadways than typical recreation bicyclists who prefer their own separate paths.

Existing Trails

The existing trail system in Isanti County is limited to several local trails within the cities of Cambridge and Isanti, which serve more recreational purposes or as connections to local civic locations such as parks. Additionally, there are several trail segments along Highway 65, which could potentially serve more transportation purposes by providing important connections to work and shopping areas along Highway 65.

Opportunities for future trail connections that may serve both transportation and recreational purposes in the County are currently being studied by local stakeholders. This process is being managed by the Active Living by Design group, and a final report presenting recommendations for future trails is anticipated in the spring of 2007. Coordination of this Transportation Plan with the trails planning process will be managed by Isanti County staff.

3.0 Analysis of Future Transportation Needs

3.1 Traffic Projections

Traffic projections for the year 2030 were prepared to identify future capacity or system deficiencies, and to provide traffic information for decision-making by state, county and city staff officials, and for businesses and residents.

A variety of data sources and methods were used to derive 2030 projections for highways and county road segments within the county. Sources included regional population growth trends, historic traffic growth trends, and consideration of anticipated highway and county highway changes. Additionally, traffic volume projections for state highways from the Minnesota Department of Transportation were also reviewed.

The first step was to identify population and development trends through a review of census data and discussions with local planning officials. Then historical average daily traffic volumes and other traffic count sources were gathered from the county. Traffic volume inconsistencies were noted and investigated.

Five traffic projection methods were applied to historical volumes: compounded growth rate, straight-line projection, 1.6 percent per year and 2.5 percent per year, and the projection factor of 1.6. In general, the five methods for computing traffic growth provided a range of projected volumes; compounded rates were more aggressive, straight-line (slope) provided less aggressive estimate, while the 1.6 and 2.5 percent growth rates per year provided a statistical comparison for the other three methods. Growth projections were adjusted to reflect anticipated development trends and the potential for traffic diversion to new links. Potential development areas were identified through discussion with local officials, and segments were categorized into high-, medium- and low-growth areas. 2030 traffic projections for individual roadway segments in the county, by jurisdiction, are shown in Appendix B. For a majority of the CSAH and CR segments, the 2030 forecasts are based on the straight-line projection method. Footnotes on the tables in Appendix B explain deviations from this general rule. Forecasts for trunk highways were provided by Mn/DOT.

Projected traffic volumes reflect a countywide level of analysis. Traffic volumes on roadways within specific development areas may change, depending on the development densities. For this reason, specific study area forecasts should be completed when developing individual improvement projects. In addition, the county should periodically review land use and development/growth trends and adjust the projections accordingly.

Figure 7 shows projected traffic volumes by category.

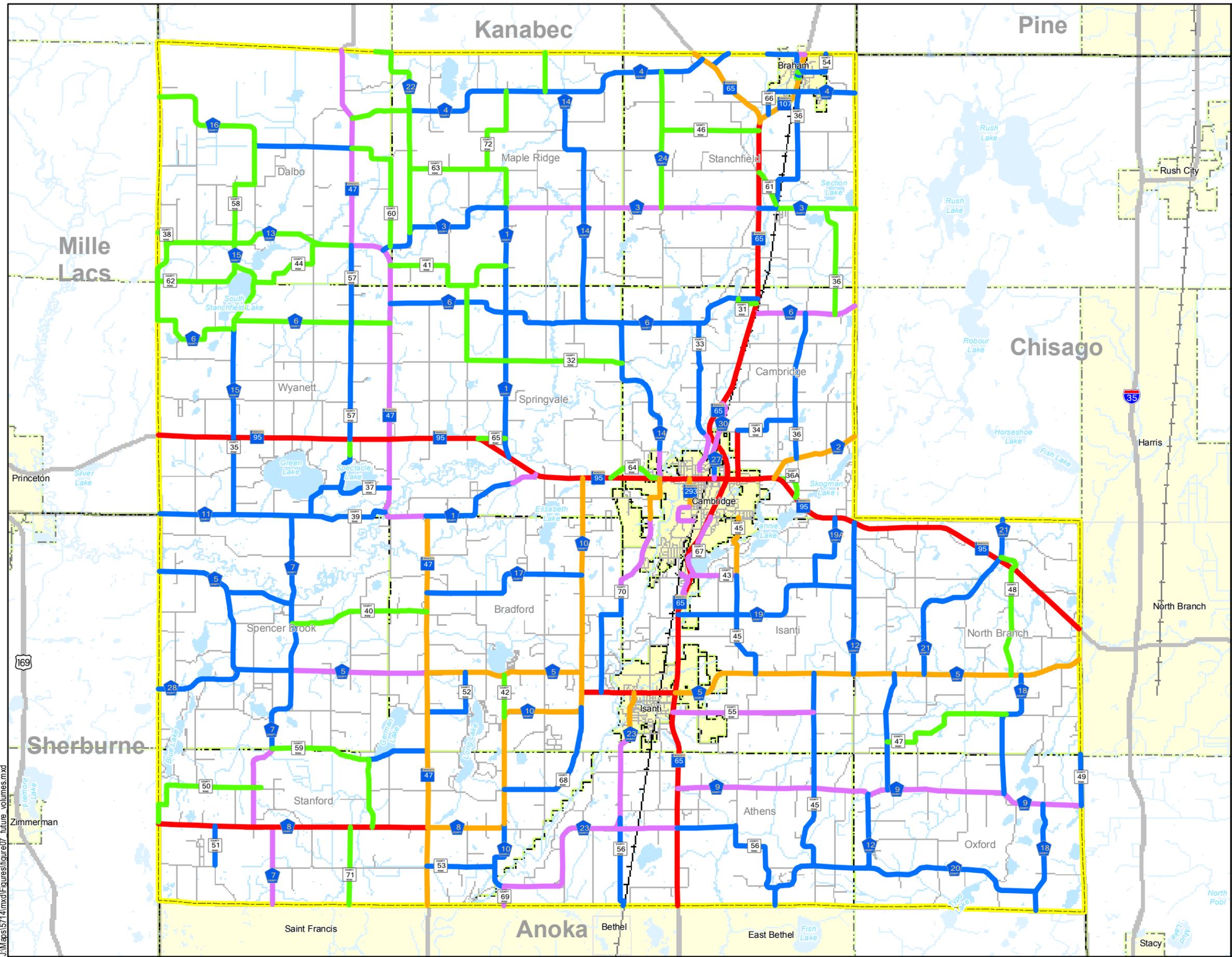
3.2 Future Congestion

Forecast data was used to identify future transportation system operational deficiencies. This information is ordinarily used to plan capacity improvements or to effectively manage the corridor through access controls, right-of-way preservation, setback requirements, and land use and development controls. The analysis followed the same procedure described in the existing conditions congestion analysis, except that 2030 daily traffic projections were compared with daily volume thresholds to establish future volume to capacity (V/C) ratios.

Over the next twenty years, nine segments are expected to become congested (V/C ratio over 1.1). These segments are shown in Figure 8 and are listed in Table 4 below. Additionally, Figure 8 presents roadway segments that are expected to be near congestion by 2030 (0.85 to 1.09 V/C).

**Table 4
2030 Congested Segments**

Route	From	To	V/C Ratio
TH 65	1.7 miles north of Cambridge	TH 107	1.36
TH 95	CSAH 27	TH 65	1.15
TH 95	Eastern limits of Cambridge	CSAH 2	1.56
TH 95	CSAH 2	Eastern county line	1.17
CSAH 5	CSAH 10	Western limits of Isanti	1.11
CSAH 5	Western limits of Isanti	CSAH 23	3.54
CSAH 5	CSAH 23	Dahlin Ave	1.57
CSAH 5	Dahlin Ave	TH 65	1.18
CR 34	TH 95	0.24 miles north	1.11
CR 34	0.25 miles north of TH 95	0.75 miles north	1.44



FUTURE TRAFFIC VOLUMES

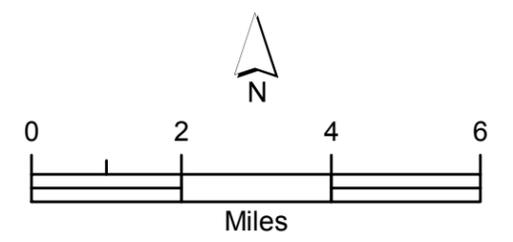
ISANTI COUNTY TRANSPORTATION PLAN

Figure 7

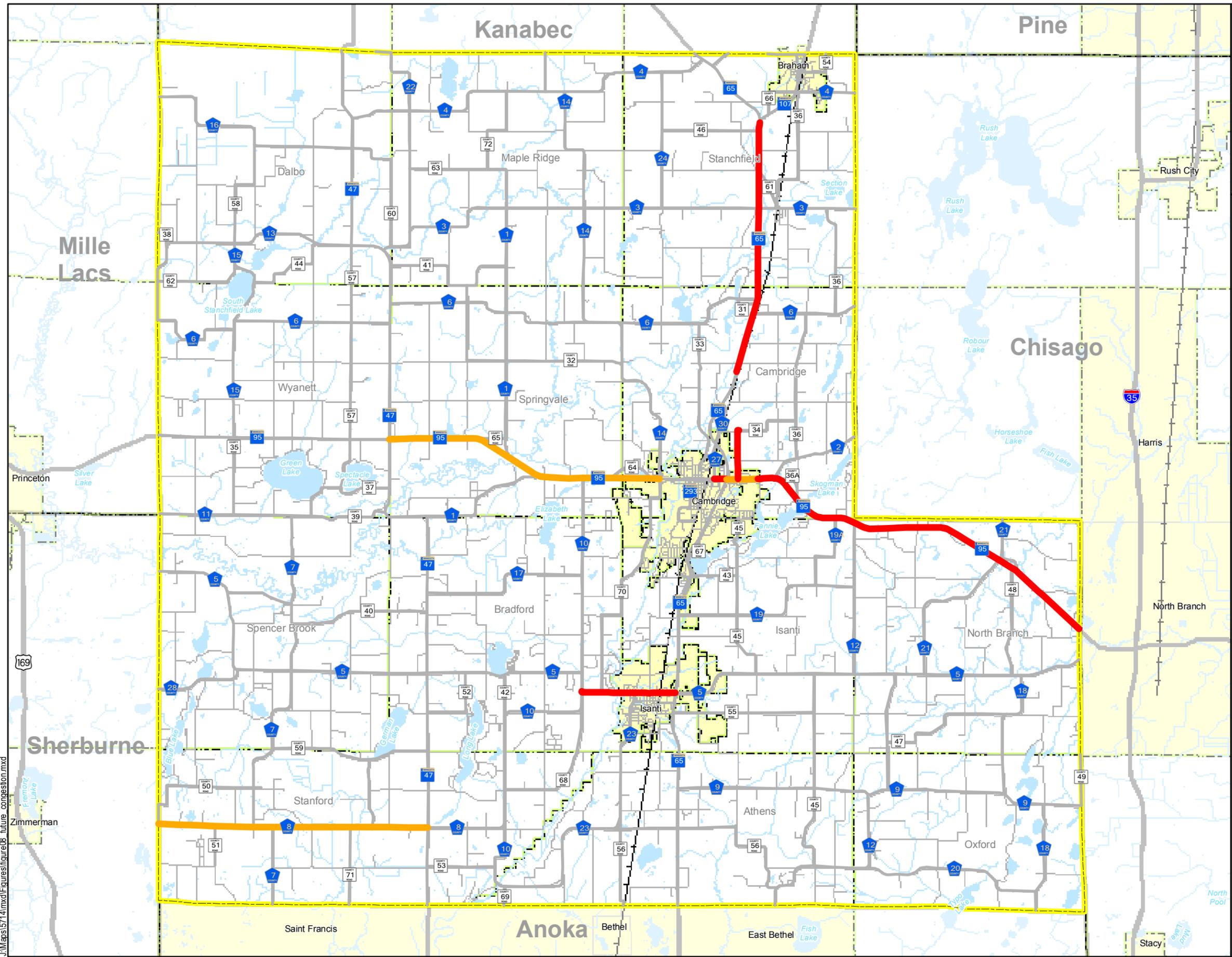
Legend

- Future Traffic Volumes***
- ADT < 500
 - ADT 500 to 1,999
 - ADT 2,000 to 4,999
 - ADT 5,000 - 10,000
 - ADT > 10,000
 - Railroad
 - Isanti County
 - Township Boundaries
 - Municipal Boundaries

*CSAHs and County Roads - Year 2030 with Straight Line Projection Method
Trunk Highways - Year 2029 Mn/DOT Traffic Projections



J:\Maps\5714\mxd\Figures\Figure07_future_volumes.mxd



FUTURE CONGESTION LEVELS

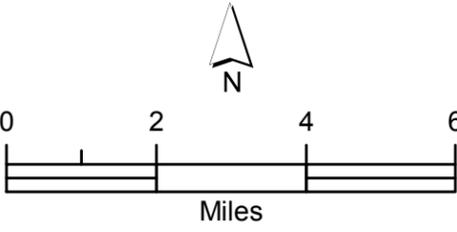
ISANTI COUNTY TRANSPORTATION PLAN

Figure 8

Legend

- Future Congestion***
- 0.85 - 1.09 (Near Congested)
 - 1.10+ (Congested)
 - Railroad
 - Isanti County
 - Township Boundaries
 - Municipal Boundaries

* Volume/Capacity Ratio
 *CSAHs and County Roads - Year 2030 with
 Straight Line Projection Method
 Trunk Highways - Year 2029 Mn/DOT Traffic Projections



J:\Maps\5714\mxd\figure08_future_congestion.mxd

Capacity analysis is a planning level tool used to identify potential problems based on the facility type and future volume projections. Although a segment may be shown as congested or near congestion, it is only one indication of a potential problem. Some segments can handle volumes higher than the threshold if they have little to no access points and relatively little cross traffic. As long as access remains limited, roadways noted in Figure 8 will likely operate better than the analysis indicates. While planning-level capacity analysis identifies potential problem areas, additional traffic information should be reviewed to confirm operational problems when specific improvements or operational changes are considered. This includes evaluating peak hour volumes, directional splits, and reviewing actual development and growth patterns for the area.

4.0 Roadway and Multimodal System Plans

4.1 Functional Classification

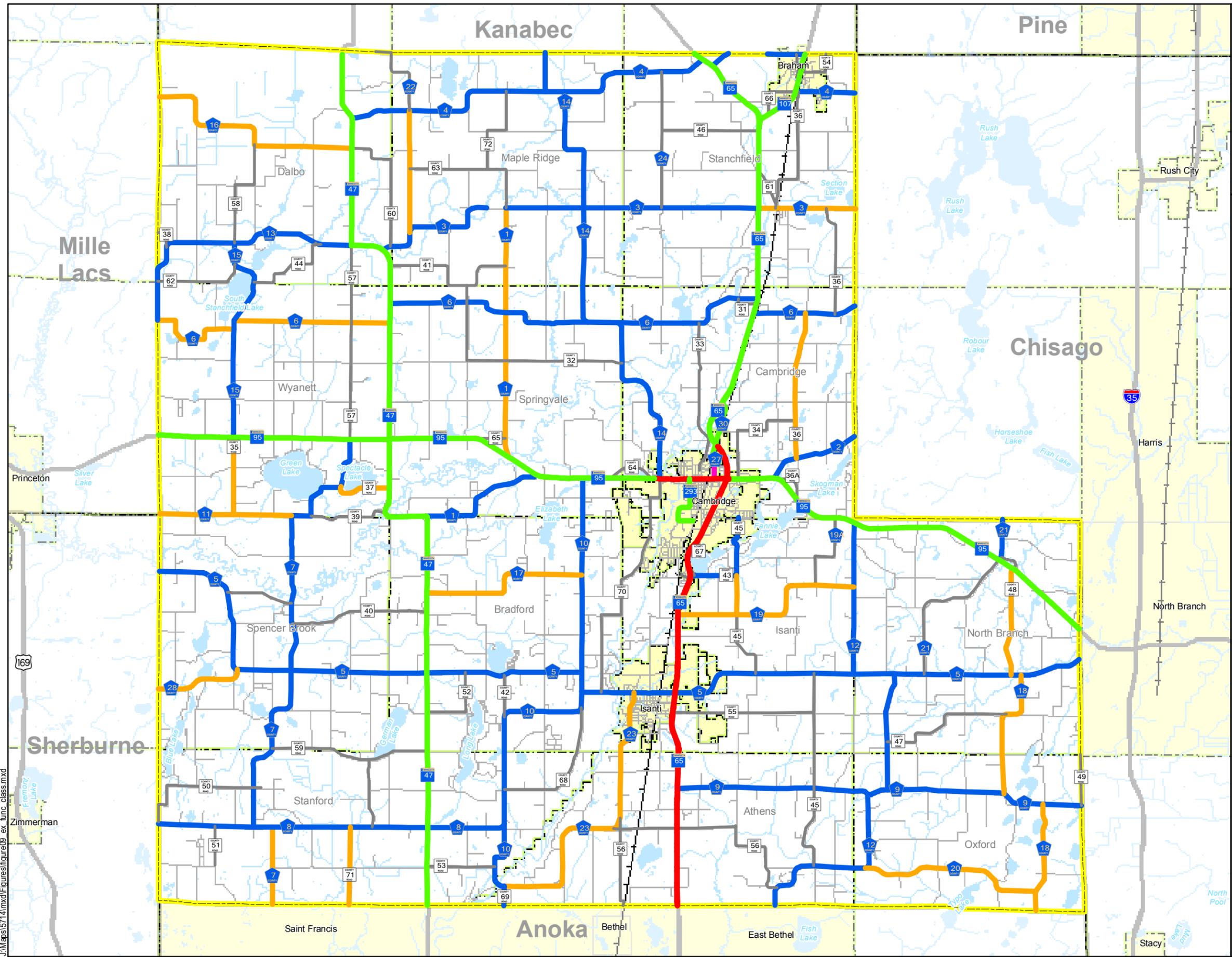
A functional classification plan defines a roadway hierarchy system based on the type of function roadways provide. It is used by agencies and planning officials to manage access, setbacks, and other design related features of the roadway. The designated function of a road is defined by its role in serving the flow of trips through the roadway system. A formal process for determining urban and rural functional classification is outlined in Haw's manual, *Highway Functional Classification—Concepts, Criteria and Practices*, March 1989. The concepts and guidelines in this manual were used to develop the updated functional classification plan for Isanti County.

4.1.1 Existing Functional Classification Plan

An important element of this Transportation Plan involved reviewing and suggesting changes to the functional classification plan (Figure 9). The functional classification process considered the following roadway and system characteristics.

- The trip length characteristics of the route as indicated by length of route, type and size of traffic generators served, and route continuity.
- The ability of the route to serve regional population centers, regional activity centers and major traffic generators.
- The spacing of the route to serve different functions (need to provide access and mobility for the entire area)
- The role of the route in providing mobility or land access (number of accesses, access spacing, speed, parking and traffic control).
- The relationship of the route to adjacent land uses (location of growth areas, industrial areas, and neighborhoods).

The rural functional classification system is broken down into four primary categories—principal arterials, minor arterials, major and minor collectors, and local roadways. Principal arterial roadways generally serve statewide and interstate travel, connecting large activity centers and attracting relatively long trips. Minor arterial roadways connect cities and larger towns. Collector roadways mainly serve intracounty travel and connect local roadways to the arterial network. Collector roadways are further classified into major and minor collectors based on the type of service they provide. Lastly, local roadways provide direct access to individual land uses and connect them to collector roadways. These categories as applied to the Isanti County roadway system are listed on the following pages.



EXISTING FUNCTIONAL CLASS

ISANTI COUNTY TRANSPORTATION PLAN

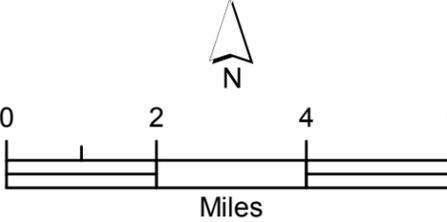
Figure 9

Legend

Existing Functional Class

- Principal Arterial
- Minor Arterial
- Urban Collector
- Major Collector
- Minor Collector
- Local
- Railroad
- Isanti County
- Township Boundaries
- Municipal Boundaries

Source: Mn/DOT, Isanti County



J:\Maps\5714\mxd\Figure09_ex_func_class.mxd

Principal Arterials (US 65 from TH 95 South)

- Connect major activity centers
- Have significant continuity at a state level
- Serve long, through-type trips
- Typically high-speed with limited access
- Serve very large travel sheds (regions)

Minor Arterials (CSAH 30, TH 47, US 95, TH 65 from TH 95 north)

- Connect key activity centers
- Have significant continuity on county/multi-county area
- Serve longer to medium-length trips
- Typically high-speed with limits on access
- Serve large areas

Collectors (CSAH 3, CSAH 5, CSAH 7 as examples)

- Connect local activity centers and/or connect to higher-order routes
- Have continuity on local level
- Serve medium- to short-length trips
- Can serve a variety of uses, and can therefore have a variety of speeds
- Places equal emphasis on access and mobility
- Route spacing allows service to smaller or localized areas

Local Routes (CR 59, CR 64 as examples)

- Connect local neighborhoods, farms, small developments, and higher-order streets/routes
- Have a low degree of continuity
- Have closely spaced access
- Provide direct access (no access control) to property
- Serve limited travelsheds (very few through trips)

The US Census Bureau considers municipalities with populations over 5,000 “urban areas.” Such cities may define an urban functional class roadway system and may obtain federal funds to maintain and construct their roadway system. The 2000 US Census indicates that the City of Cambridge is the only municipality within Isanti County with a population of more than 5,000. However, population estimates from the state demographer’s office indicate that the population of the City of Isanti exceeded 5,000 in 2005, which would designate this area as urban according to the US Census.

Established urban limits do not directly influence a route’s function; however, they do trigger a change in the functional classification terminology. It is common practice that major collectors, where appropriate, and minor arterials are commonly upgraded by one classification when they enter an urban area. For example, minor arterials that carry regional traffic into and out of an urban area become principal arterial routes when they enter urban areas, and major collector routes that feed traffic from the rural area into an urban area become minor arterial routes.

Rural and urban areas also differ in their classification of collector roadways. For example, in rural areas, collector routes are split into major collectors and minor collectors. Major collector routes are longer and connect smaller rural communities, carry intra-county traffic and connect to arterial routes. Minor collector routes are less important collector routes that connect less developed rural areas with major collector and arterial routes. Within the urban area there is a single classification called urban collectors. These routes feed traffic to the arterial routes and provide access to major traffic generators within the urban area.

4.1.2 Future Functional Classification Plan

A future functional classification system was developed using the above guidelines, and is shown in Figure 10.

Changes to the County functional classification system based on the rules and characteristics described in the previous section, are listed in Table 6.

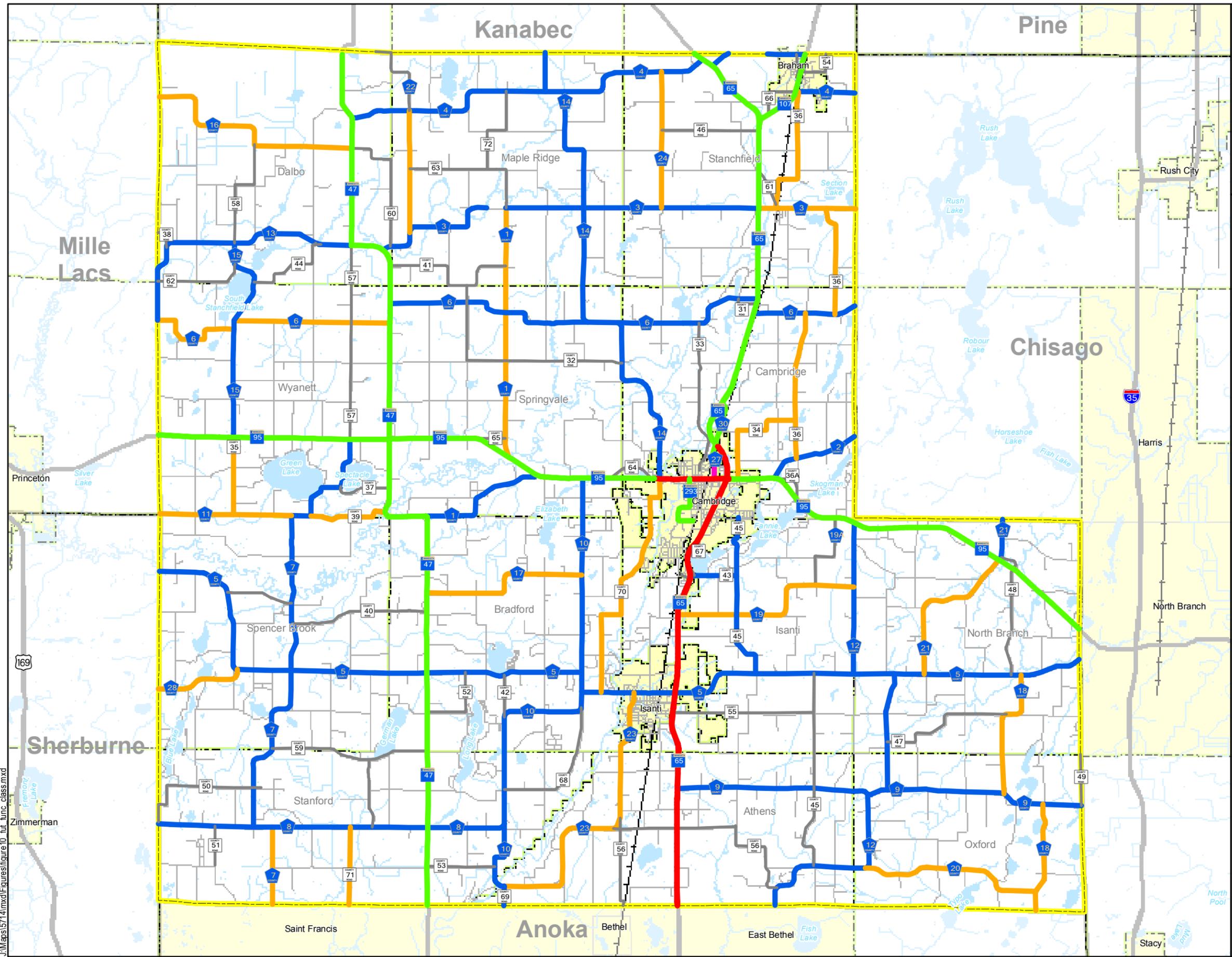
A number of the proposed functional classification changes can be made at this time while keeping the county within the acceptable functional classification ranges (Table 5), per AASHTO and Mn/DOT standards. As development increases and/or intensifies, additional local street mileage will be added and proposed functional classification changes can be completed to maintain appropriate distribution between local, collector and arterial routes. Another example is related to collector system mileage for rural areas. Table 5, below, provides a summary of the ideal ranges for functionally classed roadways on a transportation system, as identified by the Federal Highway Administration.

**Table 5
Guidelines on Extent of Rural and Small Urban Area Functional Systems**

SYSTEM	RURAL		SMALL URBAN	
	Range (percent)			
	VMT	Miles	VMT	Miles
Principal Arterial System	30-55	2-4	40-65	5-10
Principal Arterial plus Minor Arterial Road System	45-75	6-12 ⁽¹⁾	65-80	15-25
Collector Road System	20-35	20-25	5-10	5-10
Local Road System	5-20	65-75	10-30	65-80

Source: FHWA Functional Classification Guidelines – Concepts, Criteria, and Procedures, March 1989.

⁽¹⁾ With most states falling in the 7-10 percent range.



FUTURE FUNCTIONAL CLASS

ISANTI COUNTY TRANSPORTATION PLAN

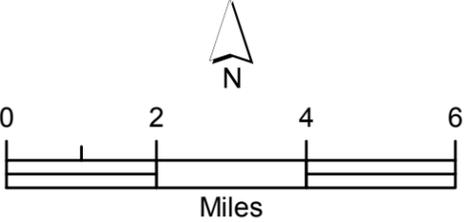
Figure 10

Legend

Future Functional Class

- Principal Arterial
- Minor Arterial
- Urban Collector
- Major Collector
- Minor Collector
- Local
- Railroad
- Isanti County
- Township Boundaries
- Municipal Boundaries

Source: Mn/DOT, Isanti County



J:\Maps\5714\mxd\Figure10_fut_func_class.mxd

**Table 6
Proposed Changes in Functional Class**

Mileage	Route	<i>Termini</i>		Existing Functional Class	Future Functional Class	Rationale
		From	To			
4.20	CSAH 21	CSAH 5	TH 95	Local	Minor Collector	Provides continuation of a minor collector designation. Replaces CR 48 as the minor collector in this portion of southeastern Isanti County.
3.50	CSAH 24	CSAH 3	CSAH 4	Local	Minor Collector	Provides an important north/south route between CSAH 14 on the west and TH 65 on the east.
2.95	CR 34	TH 95	CR 36	Local	Minor Collector	Provides a direct connection between TH 95 and CR 36 through the Cambridge Industrial Park Area.
6.32	CR 36	CSAH 6	CSAH 4	Local	Minor Collector	Provides the continuation of a north-south minor collector designation east of TH 65 in the northeast area of north-south Isanti County.
1.40	CR 37	CSAH 7	TH 47	Minor Collector	Local	CR 39 replaces CR 37 as the minor collector route connecting CSAH 11/CSAH 7 with TH 47.
2.09	CR 39	CSAH 7	TH 47	Local	Minor Collector	Provides east-west continuity and a direct connection of minor collector CSAH 11 with TH 47
1.82	CR 45	CSAH 5	CSAH 19	Local	Major Collector	Provides continuation of major collector paralleling TH 65 to the east and a north/south connection between the developing areas of the cities of Isanti and Cambridge.
1.00	CR 45	CSAH 19	CR 43	Minor Collector	Major Collector	Provides continuation of major collector paralleling TH 65 to the east and a north/south connection between the developing areas of the cities of Isanti and Cambridge.
3.39	CR 48	CSAH 5	TH 95	Minor Collector	Local	The minor collector function/designation is replaced by CSAH 21 in this portion of Isanti County.
6.52	CR 70	CSAH 5	TH 95	Local	Minor Collector	Provides a north-south minor collector between CSAH 10 and the Rum River and connects the cities of Isanti and Cambridge.

A significant portion of the rural County State Aid Highway (CSAH) routes are currently classified as major or minor collectors. Therefore, the county needs to be careful with the timing of some of the proposed functional classification changes that would increase the amount of collector roadways within the county. Other changes, such as downgrading a route from a major collector to a minor collector can be easily made.

The results should these proposed functional classification changes be approved are shown in Table 7 – Isanti County Functional Classification Summary comparing existing mileage and percent of system, proposed mileage and percent of system and the FHWA Target guidelines for each functional classification. As shown, the recommended changes fall within the FHWA guidelines for all Urban highways with the exception of Urban Collector which is less than the guidelines and all the Rural highways with the exception of Total Rural Collector which falls 0.2 percent over the 25 percent FHWA Target. However, in comparing the functional classification mileage to other Regional Development Commission 7E counties it is noted that Chisago County (29.3 percent) and Pine County (25.3 percent) also exceed the Rural Collector guidelines.

Table 8 shows the Region 7E Functional Classification Summary under the existing functional classification system and with the proposed changes in Isanti County. Again all Urban highway classifications fall within the FHWA guidelines with the exception of Urban Collector which falls below the target. Also all Rural highway classifications fall within the target range with the exception of the Total Rural Collector mileage for the proposed changes falling just over the target maximum of 25 percent at 25.4 percent. However this may change with the City of Isanti becoming an urban area thereby Rural Collectors within the city limits would become Urban Collectors. This would help the Urban Collector mileage reach the target range and lower the mileage in the Rural Collector total.

4.2 Jurisdictional Transfers

The jurisdiction of roads is an important element in the Transportation Plan because it affects a number of critical organizational functions and obligations (regulatory, maintenance, construction and financial). The primary goal of reviewing jurisdiction is to match the roadway's function with the organizational level best suited to handle the route's function.

The following process was used to identify jurisdictional transfer candidates:

- a. An updated functional classification plan was developed for the county.
- b. Jurisdictional transfer candidates were identified by the Steering Committee and the functional classification study.
- c. Guidelines were developed for route jurisdiction (Appendix C)
- d. A jurisdictional system framework was established (Appendix C)

Table 7
Isanti County Functional Classification Mileage Summary

Description	Existing Mileage	Actual % of System	Recommended Miles	Recommended % of System	FHWA Target %
Rural Principal Arterial-Other	0.0		9.6	1.0%	2-4%
Rural Minor Arterial	71.9	7.5%	62.3	6.5%	
<i>Rural Principal Arterial and Minor Arterial Total</i>	<i>71.9</i>	<i>7.5%</i>	<i>71.9</i>	<i>7.5%</i>	<i>6-12%</i>
Rural Major Collector	141.5	14.8%	144.3	15.1%	
Rural Minor Collector	76.8	8.0%	96.9	10.1%	
<i>Rural Collector Total</i>	<i>218.3</i>	<i>22.8%</i>	<i>241.2</i>	<i>25.2%</i>	<i>20-25%</i>
<i>Local Rural</i>	<i>668.2</i>	<i>69.7%</i>	<i>645.3</i>	<i>67.3%</i>	<i>65-75%</i>
Rural Total	958.4		958.4		
Urban Principal Arterial-Other	4.4	9.2%	4.4	9.2%	5-10%
Urban Minor Arterial	4.3	9.0%	4.3	9.0%	
<i>Urban Principal Arterial and Minor Arterial Total</i>	<i>8.7</i>	<i>18.2%</i>	<i>8.7</i>	<i>18.2%</i>	<i>15-25%</i>
<i>Urban Collector</i>	<i>1.9</i>	<i>3.9%</i>	<i>2.1</i>	<i>4.5%</i>	<i>5-10%</i>
<i>Urban Local</i>	<i>37.4</i>	<i>78.0%</i>	<i>37.2</i>	<i>77.4%</i>	<i>65-80%</i>
Urban Total	48.0		48.0		
System Total	1,006.4	100.0%	1,006.4	100.0%	

Source: Mn/DOT Transportation Information System-June 2006
Updated per 11-16-06 Steering Committee action

Table 8
Regional Development Commission 7E Functional Classification Mileage Summary

Functional Classification Description	Existing Mileage	Actual % of System	Proposed Miles	Proposed % of System	FHWA Target %
Rural Principal Arterial-Interstate	80.4		80.4		
Rural Principal Arterial-Other	117.0		126.6		
<i>Total Rural Principal Arterial</i>	<i>197.4</i>	<i>3.5%</i>	<i>207.0</i>	<i>3.7%</i>	<i>2-4%</i>
<i>Total Rural Minor Arterial</i>	<i>296.8</i>		<i>287.2</i>		
<i>Total Rural Principal and Minor Arterials</i>	<i>494.2</i>	<i>8.9%</i>	<i>494.2</i>	<i>8.9%</i>	<i>6-12%</i>
Rural Major Collector	824.3		827.1		
Rural Minor Collector	565.2		585.3		
<i>Rural Collector Total</i>	<i>1,389.5</i>	<i>24.9%</i>	<i>1,412.4</i>	<i>25.4%</i>	<i>20-25%</i>
<i>Rural Local</i>	<i>3,685.6</i>	<i>66.2%</i>	<i>3,662.7</i>	<i>65.8%</i>	<i>65-75%</i>
Rural Total	5,569.3		5,569.3		
Urban Principal Arterial-Other	4.4	9.2%	4.4	9.2%	5-10%
Urban Minor Arterial	4.3		4.3		
<i>Total Urban Principal and Minor Arterials</i>	<i>8.7</i>	<i>18.2%</i>	<i>8.7</i>	<i>18.2%</i>	<i>15-25%</i>
<i>Urban Collector</i>	<i>1.9</i>	<i>3.9%</i>	<i>2.1</i>	<i>4.5%</i>	<i>5-10%</i>
<i>Urban Local</i>	<i>37.4</i>	<i>78.0%</i>	<i>37.2</i>	<i>77.4%</i>	<i>65-80%</i>
Urban Total	48.0		48.0		
System Total	5,617.3		5,617.3		

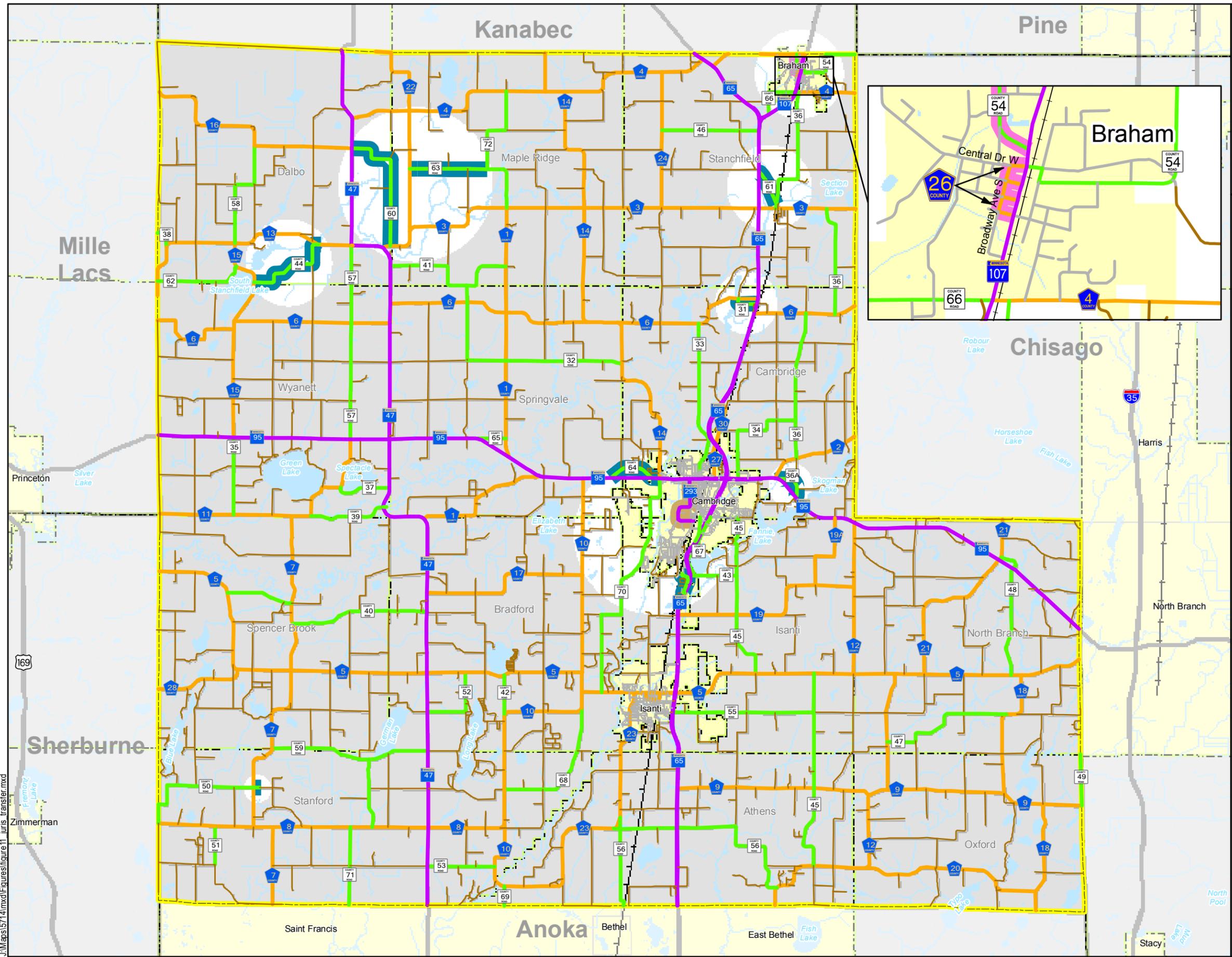
Source: Mn/DOT Transportation Information System-June 2006
Updated per Steering Committee direction 11-16-06

- e. Jurisdictional transfer candidates were grouped by their similarities. The transfer grouping are defined as follows:
 - Group 1:** Transfer candidate is linked with the Comprehensive Land Use Plan goal of protecting rural areas by directing growth to urban areas. Transportation facilities within and around urban areas, and especially in urban growth areas, were included in this grouping.
 - Group 2:** Transfer candidates are located in rural areas and involve only the transferring and receiving jurisdictions.
 - Group 3:** Transfer candidates are located in rural areas and involve more than two jurisdictions.
 - Group 4:** Transfer involves state highways
- f. Jurisdictional transfer candidates were reviewed against the jurisdictional framework, and reasons for and against the jurisdictional changes were noted (Table 9).
- g. Each jurisdictional transfer candidate was given a rating, based on the degree to which the route met transfer guidelines and through discussions by the steering committee. The ratings are defined as follows:
 - Rating 1:** Transfer candidate definitely meets transfer guidelines.
 - Rating 2:** Transfer candidate substantially meets transfer guidelines.
 - Rating 3:** Transfer candidate marginally meets transfer guidelines or the transfer candidate is dependent on future growth and development of the area.
 - Rating 4:** Transfer candidate does not meet future guidelines and therefore is not recommended as a future transfer.
- h. Upon review by the Steering Committee and Isanti County it was determined that no timeframe for these jurisdictional changes would be established. These potential changes may occur as opportunities and discussions with affected jurisdictions occur.

Based on the potential jurisdictional transfers discussed, a summary of mileage impacts to each roadway system was developed (Table 9). The recommended transfer candidates are shown in Figure 11.

**Table 9
Potential Jurisdictional Candidates**

Route	Termini		Length	Net Miles Gained		Existing Volume Range	Estimated Future Volume	Future Functional Class	Transfer Group	Transfer Rating	Transfer Timeframe	Rationale
	From	To		Township	City							
<i>CSAH 26</i>	City of Braham	-	0.53		0.53	<500; 500-1,999	<500; 500-1,999	Local	1	1		Short one-block segments of Central, 2nd St. SW, 3rd St. SW, 4th St. SW connected by a segment of Broadway Ave S. in the City of Braham. Does not serve an intra or inter-county route function.
<i>CR 31</i>	CSAH 6	TH 65	0.60	0.60		<500	<500	Local	2	1		Short segment paralleling CSAH 6. Does not serve a county highway function.
<i>CR 36A</i>	TH 95 W. Jct	TH 95 E. Jct	0.85	0.85		<500	<500	Local	1	1		Short segment that serves local access.
<i>CR 43</i>	W. of TH 65	-	0.66	0.66		500-1,999	500-1,100	Local	1	2		Short, non-continuous segment that serves essentially local access.
<i>CR 50</i>	E. of CSAH 7	-	0.17	0.17		<500	<500	Local	2	1		Short stub segment east of CSAH 7 that continues east as a township road.
<i>CR 54</i>	CSAH 4	TH 107	0.40		0.4	500-1,999	500-1,1000	Local	1	1		Short segment between CSAH 4 and TH 107. Does not serve an intra- or inter-county route function.
<i>CR 60</i>	TH 47	CSAH 3	3.43	3.43		<500	<500	Local	3	2		Short route paralleling CSAH 22 just 1/2-mile west of CSAH 22.
<i>CR 61</i>	TH 65	CR 36	0.95	0.95		<500	<500	Local	2	1		Short route between TH 65 and CR 36. Does not serve an intra- or inter-county route function.
<i>CR 63</i>	CSAH 22	CR 72	2.01	2.01		<500	<500	Local	2	2		Short east-west segment that parallels CSAH 4 and CSAH 3 on the north and south respectfully just 1-1/2 miles from each.
<i>CR 64</i>	TH 95	CSAH 14	1.44	1.44		<500	<500	Local	3	1		Short segment next to TH 95 that essentially serves local access.
<i>CR 44</i>	CSAH 75	CSAH 13	2.4	2.4		<500	<500	Local	2	1		Short segment paralleling CSAH 6 and CSAH 13. Does not serve an intra-or inter-county route function.



JURISDICTIONAL TRANSFER CANDIDATES

ISANTI COUNTY TRANSPORTATION PLAN

Figure 11

Legend

- Existing Jurisdiction**
 - State Trunk Highway
 - County State Aid Highway
 - County Road
 - Township Road
 - Municipal/Local Road
- Potential Jurisdictional Changes**
 - State to City/County
 - County to City
 - County to Township
 - Railroad
 - Isanti County
 - Township Boundaries
 - Municipal Boundaries

Source: Mn/DOT, Isanti County

N

0 2 4 6
Miles

J:\Maps\5714\mxd\figure11_juris_transfer.mxd

While the Plan recommends a number of potential transfers, it is understood that not every candidate will actually be transferred as proposed in the Plan and that some revisions in the Plan may be made in the future, based on changing needs and situations.

**Table 10
Potential Jurisdictional Transfers Mileage Summary**

	Existing Mileage	Future Mileage	Net Change
Trunk Highway ⁽¹⁾	76.50	74.82	-1.68
CSAH ⁽²⁾	226.90	223.31	-3.59
County Road ⁽³⁾	132.07	121.46	-10.61
City/Township Road ⁽⁴⁾	561.69	577.47	+15.78

⁽¹⁾ Assumes that TH 293 would transfer to the City of Cambridge (1.68 miles)

⁽²⁾ Reflects reduction of 0.66 miles of CSAH 25 turnback to City of Isanti and 0.22 miles of banked County State Aid miles

⁽³⁾ Assumes revocation of CSAH 19A to a County Road (2.30 miles)

⁽⁴⁾ Assumes jurisdictional transfers of CSAH 26, CR 31, CR 36A, CR 44, CR 60, CR 61, CR 64 and segments of CR 43, CR 50, CR 54 and CR 63 to the City or Township road system

NOTE: Table 12 reflects mileage changes based on potential jurisdictional changes **only** unless otherwise noted.

4.3 System Designation

The county highway system is divided into two categories, County State Aid Highways (CSAH) and County Roads. The difference in designation relates to the route’s function and funding. The CSAH system originated in the mid 1950s to provide an integrated network of secondary roads servicing the state’s rural transportation needs. Routes qualifying or designated as CSAHs are eligible to receive state funding for maintenance and construction activities, while County Roads are funded with local property tax dollars. Administration of the CSAH system is based on a detailed set of rules administered by the Minnesota Department of Transportation Office of State Aid. These rules outline requirements and responsibilities including designation, maintenance and reconstruction.

Reviewing the system designation ensures that demographic and transportation changes in the county have been adequately addressed through system designation changes. Route designation, as outlined in Chapter 8820.07 of the State-Aid Rules “Selection Criteria,” parallels the functional classification criteria used to designate collector and arterial routes. State-aid criteria are summarized as follows:

- State-aid routes carry heavier traffic volumes or are functionally classified as collector or arterial routes on the county’s functional classification system.
- State-aid routes connect towns, communities, shipping points and markets within a county or in adjacent counties, provide access to churches, schools, community meeting halls, industrial areas, state institutions and recreational areas; or serve as a principal rural mail route and school bus route.
- State-aid routes provide an integrated and coordinated highway system, consistent with projected traffic demands.

Using the above guidelines, Isanti County transportation system was reviewed to identify designation changes, based on functional classification changes, jurisdictional changes, proposed new roadway alignments and major construction projects. Table 11 shows a summary of potential county state aid mileage changes. Isanti County is in the process of evaluating their entire County Highway system for potential route designation changes.

Table 11
Summary of Potential County State Aid Mileage Changes ⁽¹⁾

Description of CSAH Change	Miles of CSAH Impacted
Proposed State Highway Turnbacks ⁽²⁾	0
Proposed CSAH Transfers to State Highway	0
Proposed CSAH Transfers to County Road	-2.83
CSAH Transfers to City ⁽³⁾	-0.66
Proposed City Transfers to CSAH	0
Proposed Township Transfers to CSAH	0
Proposed County Road Transfers to CSAH	+9.37
Banked County State Aid Mileage	-0.22
Total Change to State Aid System	+5.66

⁽¹⁾ The table summarizes the mileage changes for the Isanti County CSAH system based on functional classification changes and potential jurisdictional transfers. It does not reflect potential administrative changes to the Isanti County State Aid system.

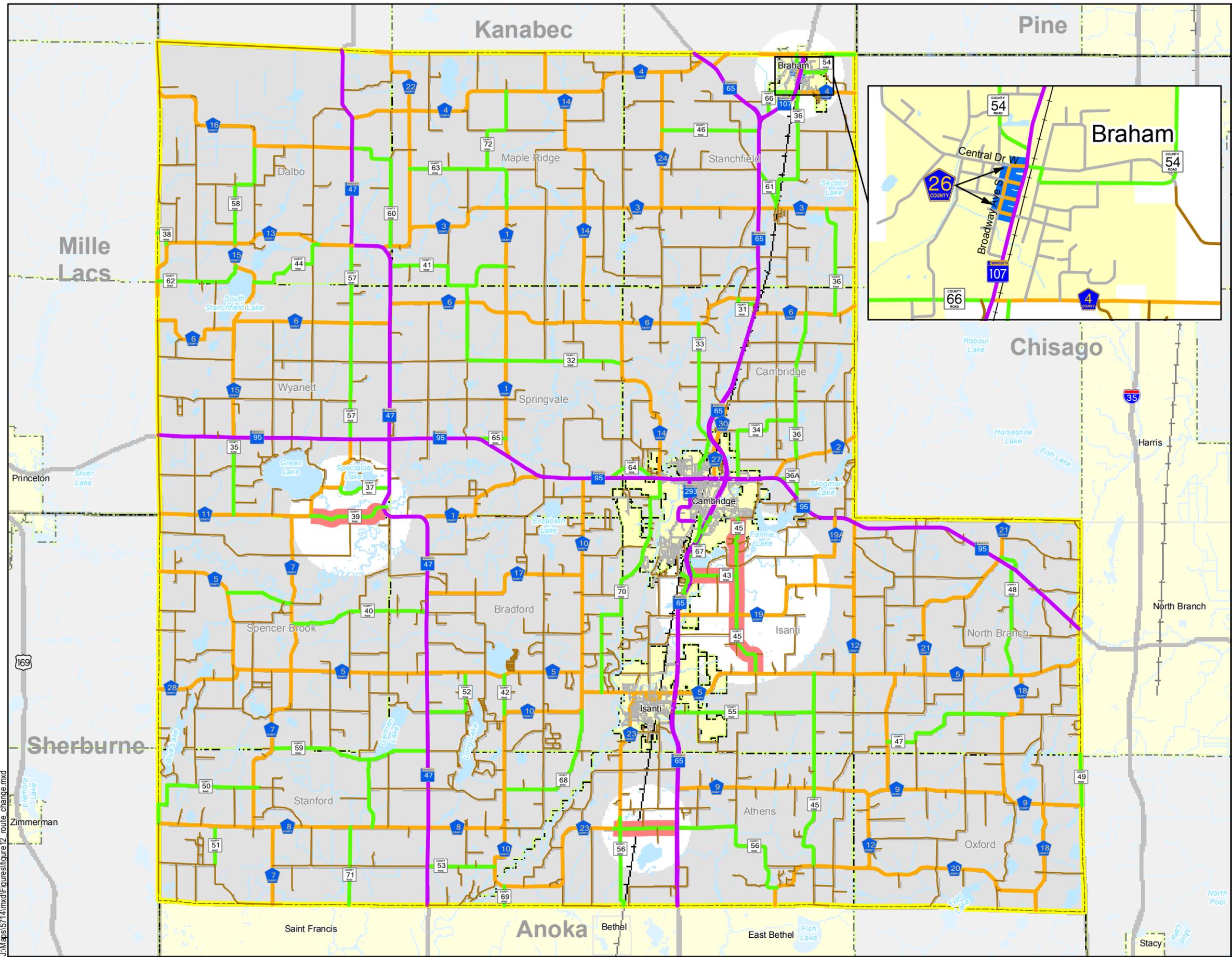
⁽²⁾ Potential turnback of TH 293 to the City of Cambridge does not affect the CSAH system mileage

⁽³⁾ This mileage reflects the jurisdictional transfer of CSAH 25 to the City of Isanti made in 2006.

The proposed changes will increase state-aid mileage from 226.90 miles to 232.56 miles. The proposed system designation changes are described in detail below, and are shown in Figure 12.

Potential Future Functional Classification Changes

- CR 39 between CSAH 7 and TH 47 upgraded to Minor Collector
- CSAH 24 between CSAH 3 and CSAH 4 upgraded to Minor Collector
- CR 34 between TH 95 and CR 36 upgraded to Minor Collector
- CR 45 between CSAH 5 and CSAH 19 upgraded to Minor Collector
- CR 36 between CSAH 6 and CSAH 4 upgraded to Minor Collector
- TH 293 downgraded to Urban Collector
- CR 37 between CSAH 7 and TH 47 downgraded to Local
- CR 48 between CSAH 5 and CSAH 21 downgraded to Local
- CSAH 21 between CSAH 5 and TH 95 upgraded to Minor Collector
- CR 70 between CSAH 5 and TH 95 upgraded to Minor Collector



ROUTE DESIGNATION CHANGES

ISANTI COUNTY TRANSPORTATION PLAN

Figure 12

Legend

- Existing Jurisdiction**
- State Trunk Highway
 - County State Aid Highway
 - County Road
 - Township Road
 - Municipal/Local Road
- Potential Route Designation Changes**
- County Road to CSAH
 - CSAH to County Road
 - Railroad
 - Isanti County
 - Township Boundaries
 - Municipal Boundaries

Source: Mn/DOT, Isanti County

Miles

J:\Maps\5714\mxd\figure12_route_change.mxd

Potential Route Designation Changes

- CSAH 19A between CSAH 19 and TH 95 revoked to a County Road
- CSAH 26 in Braham revoked to a County Road
- CR 39 between CSAH 7 and TH 47 designated as a County State Aid Highway
- CR 43 between TH 65 and CR 45 designated as a County State Aid Highway
- CR 45 between CSAH 5 and 235th Avenue designated as a County State Aid Highway
- CR 56 between CSAH 23 and TH 65 designated as a County State Aid Highway (dependent on east-west connection between TH 169 and I35)

Potential Jurisdictional Changes

- CSAH 26 turned back to City of Braham
- CR 31 from north of CSAH 6 to TH 65 turned back to Township
- CR 36A from CR 36 to TH 95 turned back to Township
- CR 43 west of TH 65 turned back to City of Cambridge/Township
- CR 44 from CSAH 15 to CSAH 13 turned back to Township
- CR 50 east of CSAH 7 turned back to Township
- CR 54 from CSAH 4 to TH 107 turned back to City of Braham
- CR 60 from TH 47 to CSAH 3 turned back to Township
- CR 61 from TH 65 to CR 36 turned back to Township
- CR 63 from CSAH 22 to CR 72 turned back to Township
- CR 64 from TH 95 to CSAH 14 turned back to Township
- TH 293 turned back to City of Cambridge (Cambridge/Mn/DOT discussion)

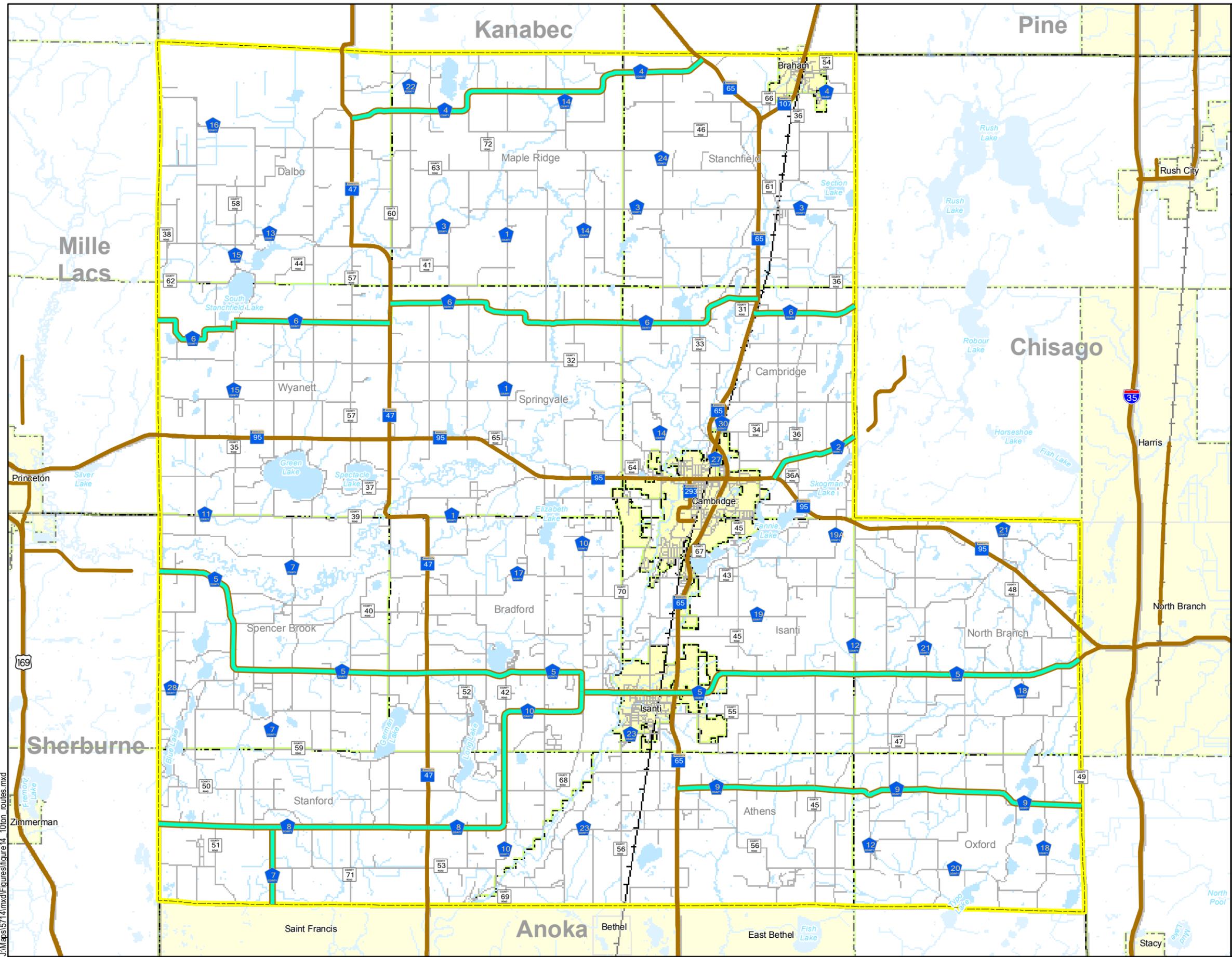
4.4 Ten-Ton Roadway System

Another component of the county's system plan is the development of 10-ton roadway guidelines. Many vehicles that use the transportation system today are larger and heavier than their predecessors. In addition, the increased exporting of products to global markets requires mobility of goods throughout the year (i.e., transporting materials during spring restriction periods), not just under ideal conditions. These factors require construction of a transportation system designated to withstand heavier loads.

As part of this Plan, 10-ton roadway guidelines were developed to identify transportation surfacing and resurfacing needs, and to develop a consistent system of rural farm-to-market routes throughout the county. The 10-ton roadway guidelines developed for Isanti County are as follows:

- Roadway is designated as major collector or higher
- Roadway provides connections to grain elevators, agricultural business centers or freight terminals
- Roadway has higher levels of traffic
- Roadway is paved
- Roadway is coordinated with adjacent county's 10-ton route system

The highways shown on the potential 10-ton route system may not meet all of these guidelines to be included (Figure 13).



**PROPOSED TEN-TON
ROADWAY SYSTEM**

ISANTI COUNTY TRANSPORTATION PLAN

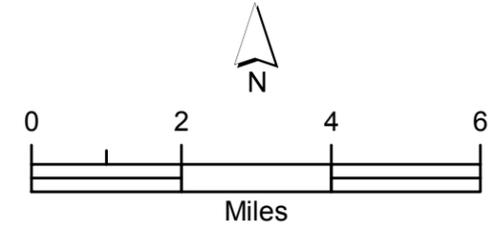
Figure 13

Legend

**Proposed 10 Ton
Route System**

-  Proposed
-  Existing
-  Railroad
-  Isanti County
-  Township Boundaries
-  Municipal Boundaries

Source: Mn/DOT



J:\Maps\5714\mxd\figure14_10ton_routes.mxd

4.5 Pedestrian/Bicycle Trail Plan

Active Living by Design, a trails interest group in Isanti County, is currently working with the Center for Rural Design at the University of Minnesota's College of Architecture and Landscape Architecture to develop a comprehensive trail plan. The plan will provide a more detailed discussion of trail needs for the County. The Isanti County Parks committee is also reviewing trail needs as related to county parks. Future trail needs identified during County transportation planning process are discussed below.

Several suggestions for future trails have been identified during Isanti County Transportation Plan focus groups, including the following:

- Provide a multi-use trail corridor for transportation and recreation purposes connecting the towns of Isanti and Cambridge with a future extension to the City of Brahm.
- Provide a trail connection with the trail in the City of Isanti park and the Cambridge-Isanti Bike/Walk trail.
- Provide trail connections to Anoka, Chisago, and Sherburne Counties, including the wildlife refuge in Sherburne County.

Isanti County should also consider possible trail connections to existing and future trails in adjacent counties to provide a continuous bicycle network within the region. Anoka County has identified several future trail segments that will connect to Isanti County.

- Proposed segment from the Isanti County Line connecting the Rum River North County Park in St. Francis, Lake George Regional Park in Oak Grove, Rum River Central Regional Park in Oak Grove and Ramsey, and Coon Rapids Boulevard in Anoka.
- Proposed segment from the Isanti County Line connecting Martin Island-Linwood Lakes Regional Park in Linwood, Coon Lake County Park in Columbus Township through Ham Lake and Blaine, and Rice Creek North Regional Trail in Circle Pines.
- Proposed segment to Sherburne Wildlife Refuge along Viking Boulevard would connect to Isanti County's link on CSAH 9.

The construction of the future segments discussed above would provide connections within Isanti County, and would connect Isanti County residents with regional trails in Anoka County and to recreational opportunities within Isanti and Sherburne County. In addition to the proposed trail segments discussed above, the County could also consider the construction of bicycle trails, either on or off the road shoulder in conjunction with county road projects. The county does not presently have any policies with regard to building or designing trails on or adjacent to county roadways.

5.0 Special Area Studies

Special area studies were identified for areas that required more detailed investigation and analysis. These areas were selected because they involved number of traffic, safety, and other planning and engineering issues. The areas are: Isanti County River Crossing Study; CR 45 Alignments at Mud Lake, Cambridge; CR 45 Alignments from CSAH 19 south; CSAH 9 and CR 56 Alignments and Road Safety Audits. These areas are discussed in more detail in the following paragraphs.

There are three corridor studies recommended for Isanti County. These corridors include County Road 45 at Mud Lake, a realignment of County Road 45 from south of CSAH 19, and a CSAH 9 Corridor Study looking at a potential new east-west corridor alignment. Costs are presented in ranges and should be considered preliminary. They include work in three general phases, an Alternatives Scoping phase, an Environmental Documentation and a Right-of-Way Preservation phase.

5.1 Isanti County River Crossing Study

During focus groups conducted for the development of the Isanti County Transportation Plan, several stakeholders identified the need for an additional crossing of the Rum River within Isanti County. The objective of this memorandum is to provide Isanti County decision-makers with a better understanding of the components, costs, and timeframe for various activities that would result in identifying a preferred alternative, completing environmental documentation requirements, and preserving the right of way needed for construction (Table 12).

PHASE 1: FEASIBILITY STUDY

The purpose of a river crossing feasibility study is to suggest a general location for a future river crossing, based on estimations of existing and future travel demand, an environmental scan identifying potential social, economic and environmental concerns, and preliminary engineering work.

The environmental scan component will include the general identification of environmentally sensitive areas and populations, a review of project area demographics, needed right-of-way, and fiscal and business impacts at potential river crossing locations. The scan of cultural resources as part of this task will identify recreational and agricultural areas, as well as the potential for impacts to historical and archaeological resources in the project area. The environmental scan is conducted at a broad-brush level and will not include any formal environmental documentation or detailed fieldwork.

The origin-destination study is used to determine travel patterns within Isanti County. To determine where trips begin and end, intercept surveys of travelers will be conducted at three to four existing river crossing locations. This data will be gathered electronically, and analyzed to better understand travel patterns within the County and to determine river crossing locations with the highest travel demand. Additionally, planning level forecasts will be conducted to determine which corridors will generate the highest demand in the future. This information will be used to determine river crossing alternatives that best meet the needs of Isanti County and regional travelers.

The environmental scan and the origin-destination study will be used to determine several alternatives for a river crossing location within the county. After several alternative locations have been identified, preliminary conceptual design work will be completed to determine structural needs at the various crossing locations, and to calculate initial cost estimates. Typical cross sections will also be developed.

After assessing environmental impacts and conditions, travel patterns, and preliminary engineering work, evaluation criteria will be developed based on the study components discussed above. The river crossing alternatives will be evaluated with these criteria in order to identify a river crossing alternative that is environmentally, structurally, and financially feasible, and that also meets the needs of Isanti County and regional travelers.

The river crossing feasibility study can be completed within six to twelve months. Many of the tasks may overlap, allowing the study to be conducted more quickly than if each task were conducted individually. The total costs of a river crossing study would be approximately \$100,000 to \$150,000. These costs can be refined based on input received from County staff and elected officials. In addition to the activities identified above, the county may choose to pursue environmental field work, additional documentation, or public involvement activities as part of the scoping study. These tasks would increase the total costs and timeframe of the feasibility study; however, some of these additional tasks may be incorporated into the formal environmental documentation process at a later date and lead to potential economies in this task.

PHASE 2: ENVIRONMENTAL REVIEW

The feasibility study discussed above will provide the County with a general location for a future river crossing location. Based on the results of this study, a more detailed environmental documentation process required by state and federal statutes for transportation projects may begin. Environmental documentation requirements regarding the need to prepare an Environmental Assessment Worksheet (EAW) (if no federal dollars are involved) or Environmental Assessment (EA) (if federal dollars are involved) or an Environmental Impact Statement (EIS) will depend on the project magnitude and potential impacts, with projects of larger magnitude or greater potential impacts requiring an EIS and those of lesser magnitude requiring an EA or EAW. Determining environmental documentation requirements will be part of the feasibility study. Depending on the project characteristics and potential impacts, this process can take between six months (for an EAW) to two years (for an EIS). During the environmental process, more detailed preliminary engineering concepts will be developed in order to gain a better understanding of project impacts. The total costs for an EAW ranges from \$80,000 to \$100,000, while EIS costs would range from \$275,000 to \$325,000.

PHASE 3: RIGHT OF WAY PRESERVATION

After the environmental documentation is complete, official mapping may be used to preserve rights-of-way for the preferred alternative. An official map identifies affected properties and proposed right-of-way requirements based on final geometric layouts. By officially mapping the river crossing corridor, the county can preserve the necessary right of way until construction activities begin. The process of preparing final geometric layouts and official mapping of the corridor will take approximately six months. The total costs for the preparation of final geometric layouts and an official map range from \$60,000 to \$65,000.

**Table 12
River Crossing Scoping Study Matrix**

Task	Costs
1. RIVER CROSSING FEASIBILITY STUDY	
Environmental Scan	\$15,000-\$30,000
1. Natural resources-Wetland and floodplain identification, Wildlife areas, threatened and endangered species, soils 2. Socio-economic-Demographics, fiscal impacts, ROW, Business Impacts 3. Cultural Resources-Recreational areas, prime farmlands, historical and archaeological resources, scenic views, etc.	
Origin Destination Study	\$40,000-\$50,000
1. Conduct intercept survey of travelers at 3-4 existing river crossings. 2. Data will be gathered electronically to determine existing origin and destination numbers 3. Planning level forecast to determine which corridor has highest demand for new river crossing	
Alternatives Identification	\$5,000-\$10,000
Engineering Concepts and Cost Estimates	\$20,000-\$30,000
Conceptual design work Typical Sections Other engineering work	
Alternatives Analysis	\$7,000-\$10,000
Develop evaluation criteria Evaluate alternatives	
Project Management	\$10,000-\$15,000
Printing, Mailing, Mileage , Etc.	\$5,000
Phase 1 Total	\$100,000-\$150,000
Estimated Time Frame: 6-12 months	
2. ENVIRONMENTAL DOCUMENTATION (EAW OR EIS)	
Environmental Assessment Worksheet (EAW)	
Conceptual design work Environmental analysis and report Public participation and project management	
Phase 2 Total	\$80,000-\$100,000
Estimated Time Frame: 6-9 months	
OR	
Environmental Impact Statement (EIS)	
Conceptual design work Environmental analysis and report Public participation and project management	
Phase 2 Total	\$275,000-\$325,000
Estimated Time Frame: 24 months	
3. RIGHT OF WAY PRESERVATION	
Prepare final layout	\$35,000
Prepare official map	\$25,000-\$35,000
Phase 3 Total	\$60,000-\$65,000
Estimated Time Frame: 6 months	

5.2 County Road 45 at Mud Lake

Project is needed to minimize a series of sharp curves on a road that will see increasing levels of traffic due to development in the Isanti/Cambridge area, specifically residential development and a recently opened new public school. Total project length is approximately 0.5 miles; project may include a bridge across Mud Lake and accompanying environmental/wetlands issues. Several alignment alternatives would be analyzed as to their feasibility, especially as to cost and environmental issues (Figure 14).

5.3 County Road 45 Realignment

Project is needed to minimize a number of 90-degree curves on County Road 45, providing a safer and more direct north-south connector road in the county system. This would also provide a reliever route to TH 65 traffic. Total project length is approximately 5 miles. Some development of alignment alternatives is assumed to identify the best means of providing a more direct connection while accounting for environmental and social (right-of-way) impacts (Figure 15).

5.4 CSAH 9 Corridor Study

Project is needed to provide greater east-west mobility across Isanti County. CSAH 9 provides a connection to I-35 just east of the Isanti County border and could eventually provide connectivity across the entire county providing a connection to the west with TH 169 in Sherburne County. This study could explore options for making this east-west connection, and could also be part of a larger study looking at future potential additional crossings of the Rum River. Total project length is approximately 10 miles and includes sections of road on new alignment as well as existing (Figures 16 and 17). Environmental issues could be quite complex, especially if a new river crossing was involved. Environmental costs summarized below do **NOT** assume costs of this crossing. Information on analyzing the feasibility and costs of an additional crossing of the Rum River were included in a separate special area study.

Cost estimates and timeframes for these corridor studies, based on the above assumptions, are summarized in Table 13.

5.5 Road Safety Audits

As part of the Transportation Plan effort, Road Safety Audits (RSAs) were performed on seven sites on the County State Aid Highways and County Roads within the County. RSAs are a tool where the safety performance, design and operation of roadways and intersections are examined by an independent multi-disciplinary team, and low-cost mitigating improvements or strategies are identified and suggested for implementation. RSAs were recognized in the Minnesota *Comprehensive Highway Safety Plan* as one of 15 critical strategies that can reduce traffic-related death and personal injury in Minnesota.

The report provided a crash history summary for each site and outlined the audit findings. It also contains suggestions for specific safety improvements the County may consider in order to improve the overall safety performance of each audit site. The ultimate goal of the Road Safety Audit process was to increase safety (i.e., reduce fatal and personal injury crashes within Isanti County) through engineering, enforcement and/or other strategies and to increase communications between agencies, enforcement, educators, and emergency responders.

SPECIAL STUDY AREA
COUNTY ROAD 45 AT MUD LAKE ALIGNMENTS

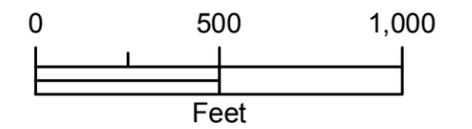
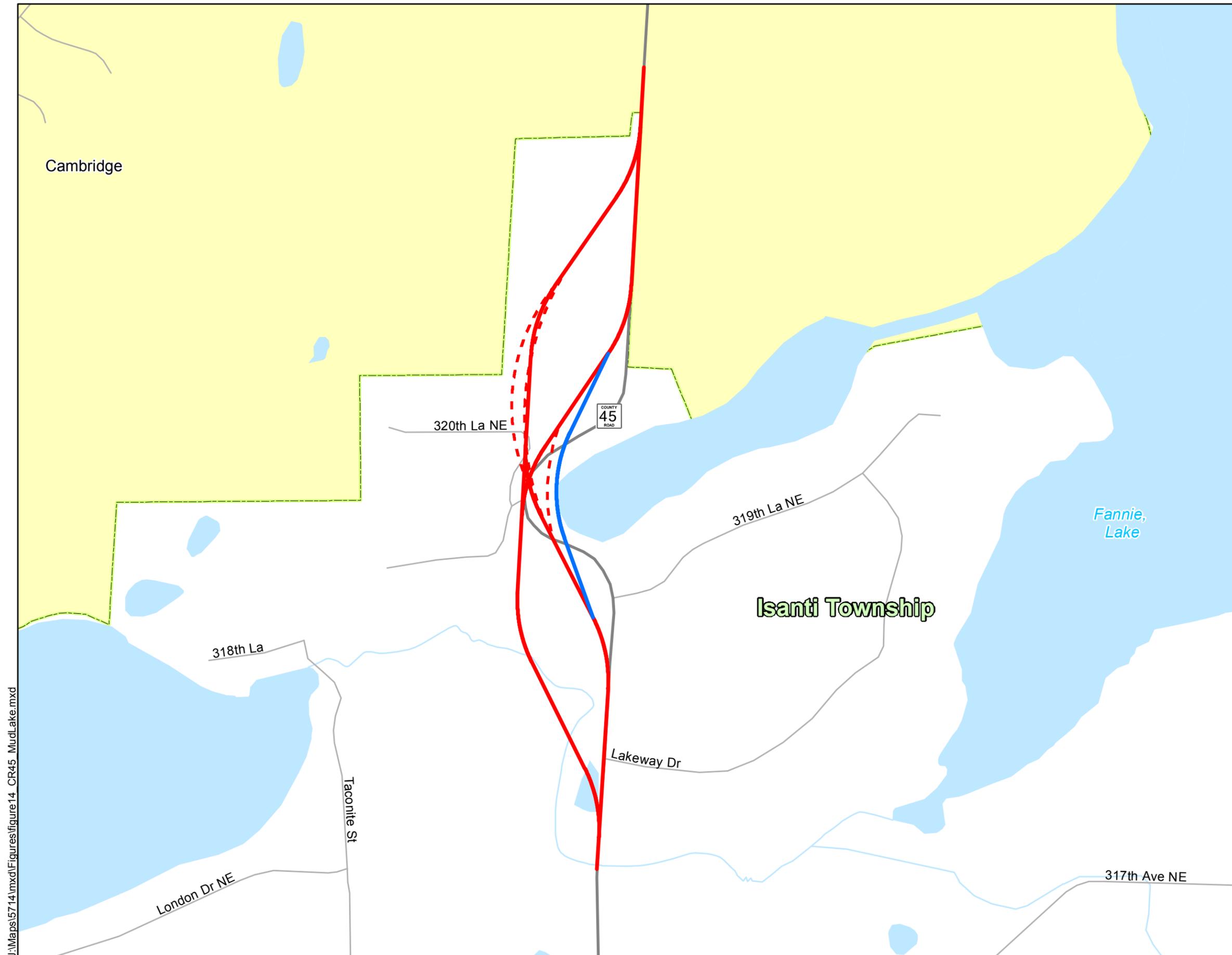
ISANTI COUNTY TRANSPORTATION PLAN

Figure 14

Legend

CR 45 Alignments

-  Main
-  Option
-  Other



SPECIAL STUDY AREA
COUNTY ROAD 45 REALIGNMENTS

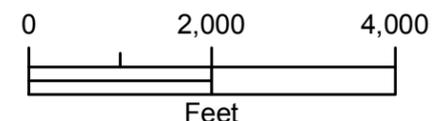
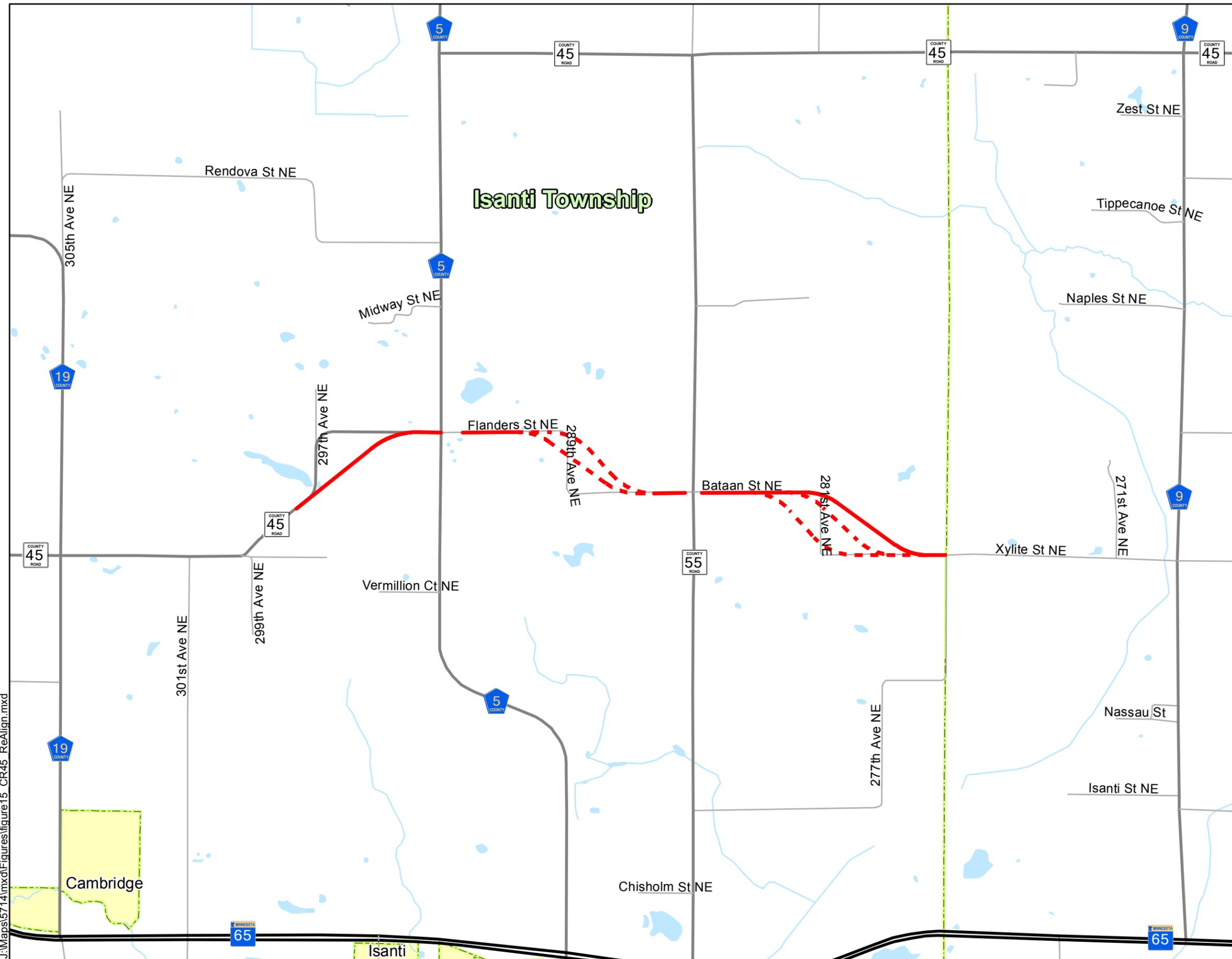
ISANTI COUNTY TRANSPORTATION PLAN

Figure 15

Legend

Realignments

-  Main
-  Option



J:\Maps\5714\mxd\Figures\figure 15_CR45_ReAlign.mxd

SPECIAL STUDY AREA
CSAH 9 Corridor Study - East Segment

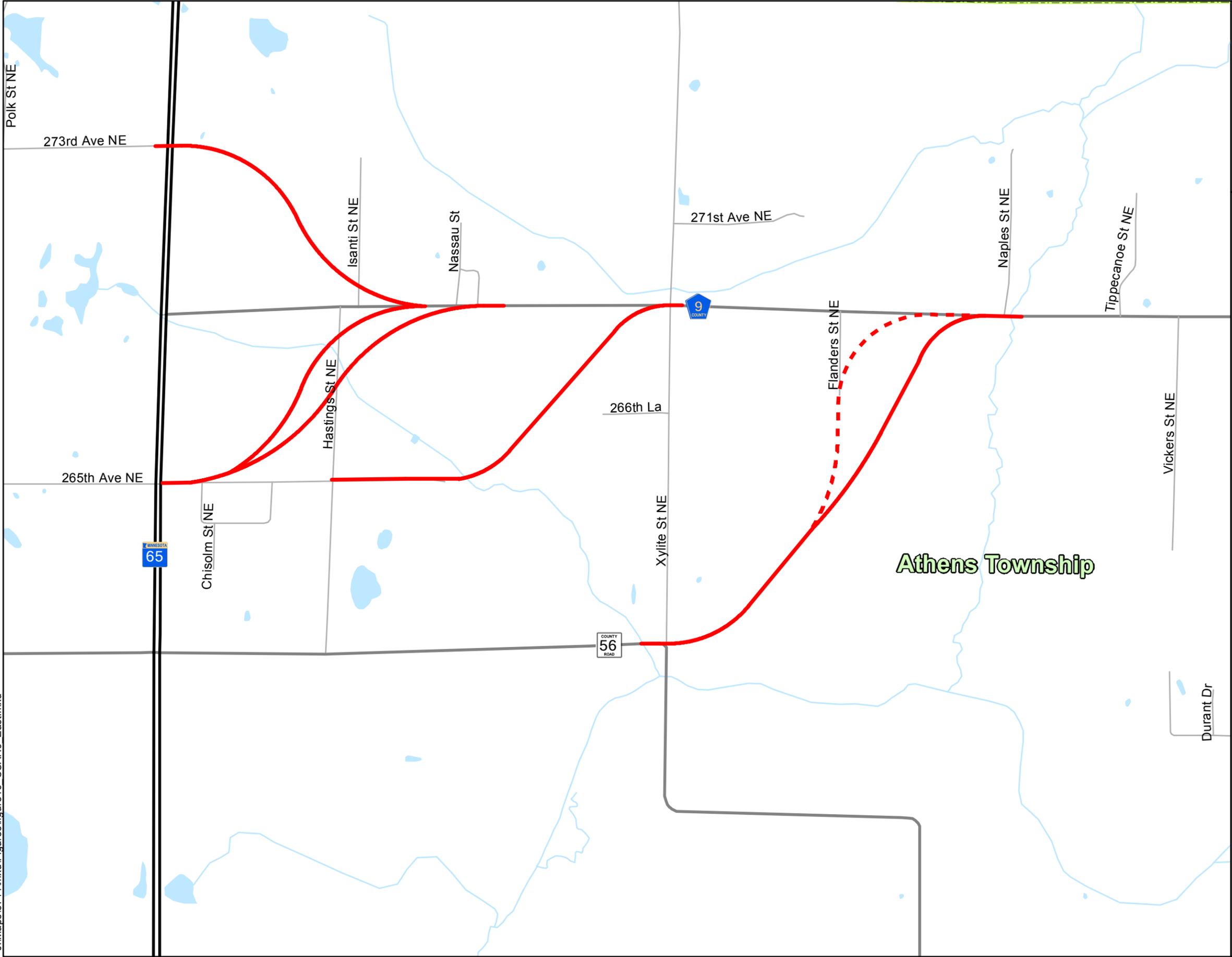
ISANTI COUNTY TRANSPORTATION PLAN

Figure 16

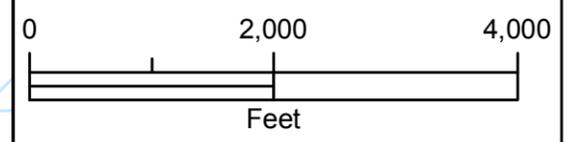
Legend

Realignments

-  Main
-  Option



Athens Township



SPECIAL STUDY AREA
CSAH 9 Corridor Study - West Segment

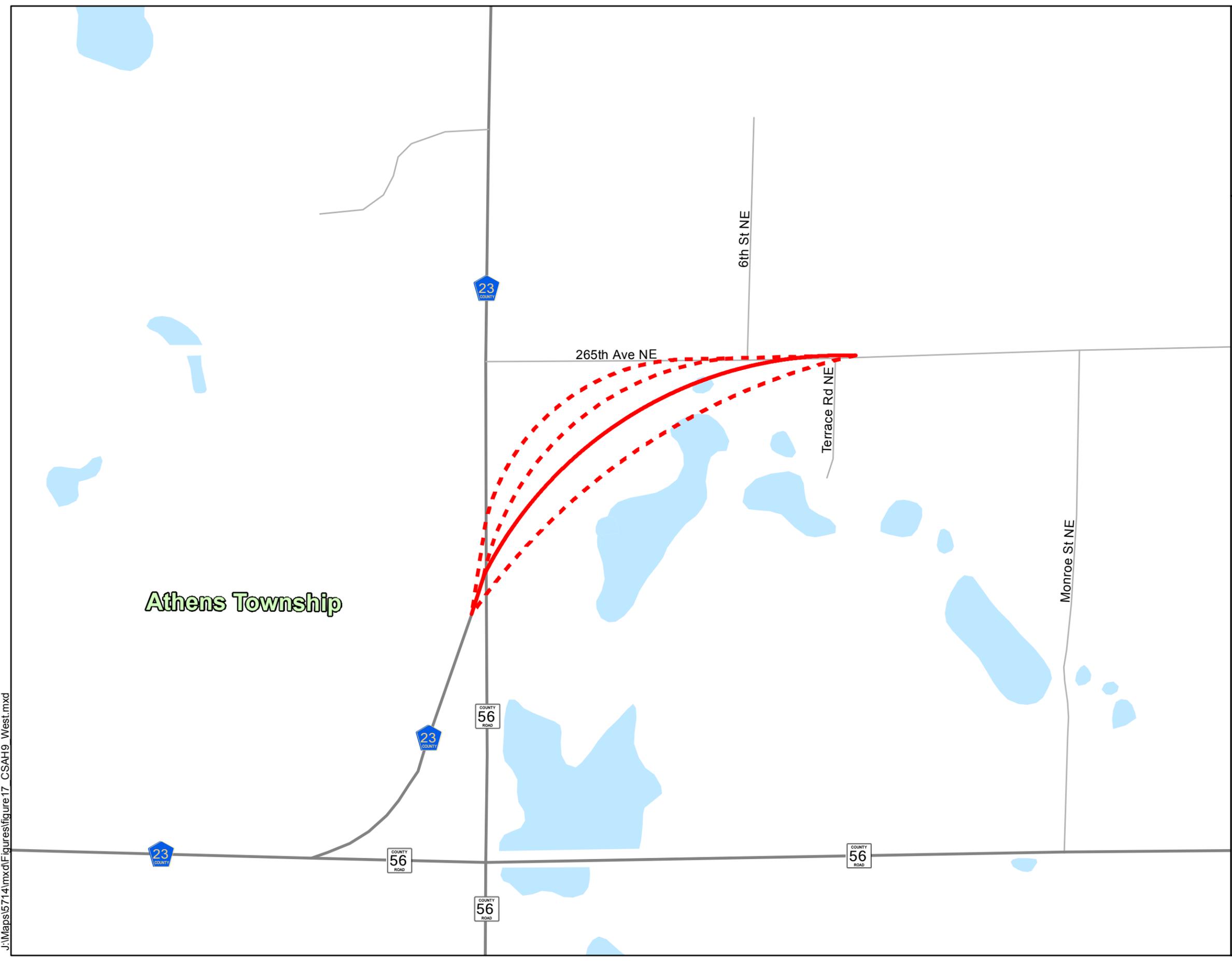
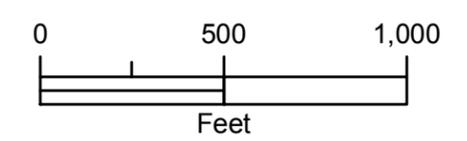
ISANTI COUNTY TRANSPORTATION PLAN

Figure 17

Legend

Realignments

-  Main
-  Option



J:\Maps\5714\mxd\Figures\figure17 CSAH9 West.mxd

**Table 13
Corridor Studies Scoping Matrix**

ISANTI COUNTY CORRIDOR STUDIES – Preliminary Cost Estimates			
Task	County Road 45 at Mud Lake	County Road 45 Realignment	CSAH 9 Corridor Study
1. ALTERNATIVES SCOPING PHASE			
Alternatives Identification	\$5,000 – \$ 10,000	\$5,000 – \$10,000	\$5,000 – \$10,000
Engineering Concepts and Cost Estimates Obtain 3D aerial base mapping Perform preliminary soil investigation by reviewing soil inventory Develop preliminary layouts Develop preliminary cross sections Develop preliminary drainage design Identify preliminary right-of-way impacts Prepare preliminary cost estimates	\$25,000 – \$50,000	\$50,000 – \$75,000	\$75,000 – \$100,000
Alternatives Analysis Develop evaluation criteria Evaluate alternatives	\$5,000 – \$10,000	\$5,000 – \$10,000	\$5,000 – \$10,000
Project Management	\$3,000 – \$7,000	\$6,000 – \$10,000	\$8,000 – \$11,000
Scoping Total			
Estimated Time Frame: 6-12 months	\$38,000 – \$77,000	\$66,000 – \$105,000	\$93,000 – \$131,000
2. ENVIRONMENTAL DOCUMENTATION PHASE (PM OR EAW)			
Project Memorandum (PM) Conceptual design work Environmental analysis and report Public participation and project management			
Environmental Total	\$12,000 - \$15,000	\$12,000 - \$15,000	\$12,000 - \$15,000
Estimated Time Frame: 3-4 months			
OR			
Environmental Assessment (EA/EAW) Conceptual design work Environmental analysis and report Public participation and project management			
Phase 2 Total	\$30,000 - \$50,000	\$30,000 - \$50,000	\$30,000 - \$50,000
Estimated Time Frame: 6-9 months			
3. RIGHT OF WAY PRESERVATION			
Prepare final layout Prepare official map			
Phase 3 Total	\$10,000 - \$20,000	\$20,000 - \$40,000	\$40,000 - \$60,000
Estimated Time Frame: 6 months			

During the site reviews and the information received from the county engineer, it was noted that the major issues throughout the County are high traffic speeds and poor compliance with stop signs. Most drivers are local and travel the same roadways frequently and tend to roll through intersections without stopping. This is reflected in the crash reports as many of the contributing factors in the crashes are due to drivers failing to yield the right-of-way.

Many of the improvements recommended for the sites are intended to improve visibility for drivers and reinforce the proper right-of-way at the intersection. Can delineators on existing stop signs are frequently recommended as a practical, inexpensive improvement that provides reflectivity of the stop signs to all intersection approaches. In addition, increased traffic education and enforcement are recommended and will be necessary to change driver behavior. The following is a listing of the seven RSA sites with Figure 18 showing the RSA locations.

Site 1 – CSAH 23 at 249th Avenue Northwest and Xeon Street

Site 2 – CSAH 7 from CR 59 to approximately 1/2 mile south of CR 59

Site 3 – CSAH 5 from approximately 1/2 mile east and west of CR 42

Site 4 – CSAH 1 at CSAH 6

Site 5 – CSAH 6 at CR 33

Site 6 – CSAH 2 at CR 36

Site 7 – CSAH 9 at CR 45

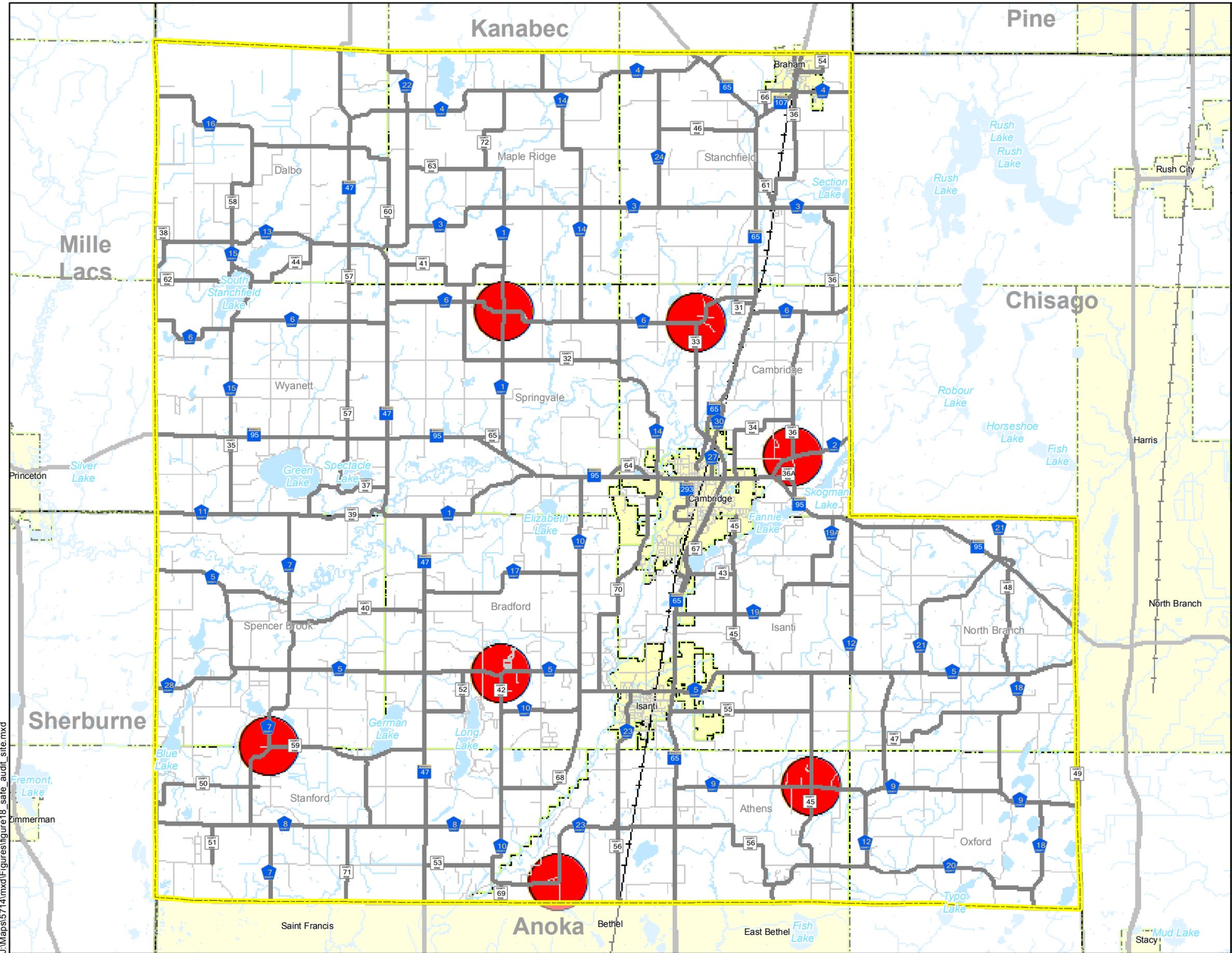
The entire Road Safety Audit Report is available at the Isanti County Highway Department Office.

6.0 Implementation

The previous section of this report examined existing needs and future transportation opportunities in Isanti County. This section of the report discusses strategies for implementing plan recommendations and to guide future transportation investments.

6.1 *Transportation Plan Adoption*

The first step towards implementation of the plan is for Isanti County to adopt it. By adopting the plan, the County will establish priorities and guidelines on which to base future transportation decisions. Ideally, all jurisdictions in the County should review the plan to ensure that these entities support the County's efforts to implement the plan. Citizens and members of the business community should understand the opportunities or limitations that the plan provides. Giving all affected groups full knowledge of the County's transportation goals will help them see and understand how these goals are linked to land use elements shown in the County's comprehensive land use plan. Copies of the plan should be provided to cities, townships and public libraries in the area so that it can be accessed by the greatest number of people.



ROAD SAFETY AUDIT SITES

ISANTI COUNTY TRANSPORTATION PLAN

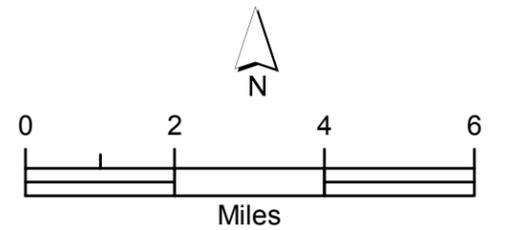
Figure 18

Legend

- Road Safety Audit Sites
- Isanti County
- Township Boundaries
- Municipal Boundaries

* High Frequency - More than 4 crashes per mile per year.
 * Low Frequency - 4 or fewer crashes per mile per year.

Source: Mn/DOT, Isanti County



The County should periodically review and update the Transportation Plan, based on estimates of future development, population trends, changing financial resources, and citizen and local government input. Depending on the speed and degree of change in the County, it is recommended that the plan be reviewed every five (5) to ten (10) years.

6.2 Jurisdictional Realignment Process

The Transportation Plan identifies jurisdictional realignments of roadways, based on functional classification, system continuity, access control, and roadway traffic. The Plan identifies and groups jurisdictional transfer candidates, rates each roadway's suitability for transfer. No estimates of timeframes for each transfer were made. Before addressing specific transfers, it is recommended that the County develop a Memorandum of Understanding (MOU) that outlines the process for negotiating potential jurisdictional changes. The memorandum would address issues such as:

- 1) Schedule or Timeframe of Proposed Transfers
 - A non-binding schedule (goal) for the jurisdictional transfer of identified routes within the 2030 timeframe.
- 2) System Issues and Legal Requirements
 - The ability to transfer mileage between the state-aid and local road system
 - The receiving agency's ability to use funding from turnback accounts for maintenance and improvements.
 - The requirements if a route is to revert to a township (i.e., the county must meet the requirements set forth in Minnesota Statutes, which require a public hearing, completion of repairs or improvements to meet standards for comparable roadways in the town and continued maintenance for a two-year period before date of revocation).
 - Further limitations on establishment, alteration, vacation or revocation of county highways as described in Minnesota Statutes Section 163.11.
- 3) Planning and Programming Issues
 - Any allocation of funds that will be made available from the transferring agency to the receiving agency.
- 4) Project Development, Design and Construction Issues
 - The process for development of projects, studies, right-of-way acquisition, design and construction of transferred routes.
 - The design and construction standards to be used for projects.
 - The process and framework for cost-sharing agreements.
- 5) Operational and Maintenance Issues
 - The responsibilities for utility permits, driveway access permits, changes to traffic controls and signing, and level of routine regular maintenance.
 - For jurisdictional transfers that also affect designation, the comprehensive approach taken by the Isanti County Transportation Plan will greatly assist county staff in preparing for State Aid Screening Board review.

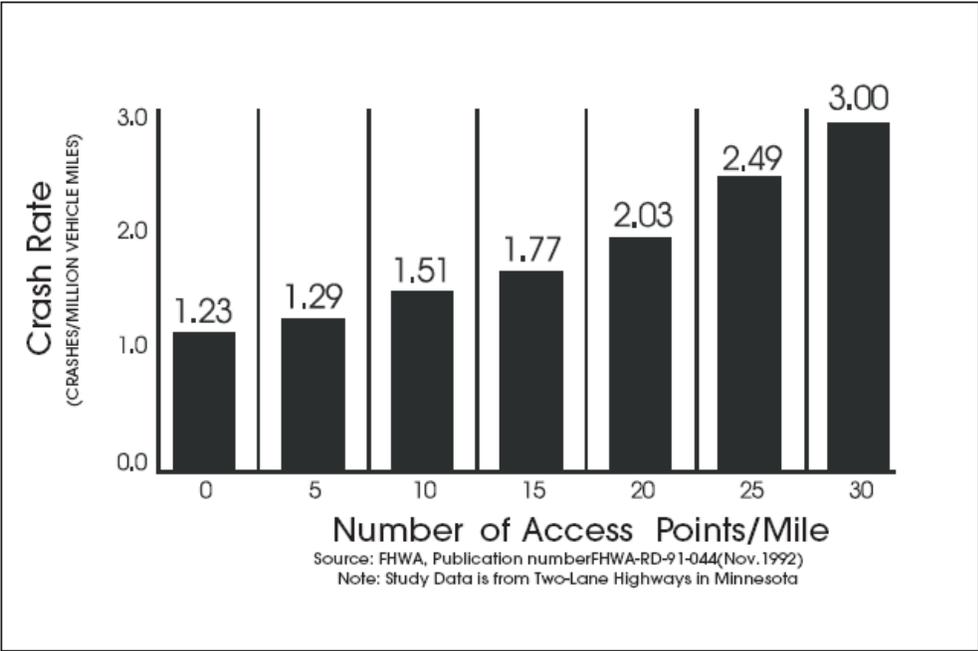
6.3 Access Management

The purpose of access management guidelines is to provide a mechanism for balancing property access, safety and mobility concerns. Transportation agencies regularly receive requests for additional access, including new public street access, commercial driveways, and residential and field access. Due to the large number of individuals and agencies often involved in the review of plat reviews and access requests, access spacing policies can be applied inconsistently at times, leading to confusion among agencies, developers, and property owners and creating long-term safety and mobility problems. The development of standard access spacing guidelines can improve communications among involved parties by clarifying expectations of those involved, and ensure that access spacing is applied in a fair and consistent manner. Access spacing can also be used to enhance safety along roadways, and to maintain the capacity and mobility of important transportation corridor. Additionally, access guidelines may be used to promote access management best practices, including the following:

- Aligning access with other existing access points
- Providing adequate spacing to separate and reduce conflicts
- Encouraging indirect access on high-speed, high volume arterial routes

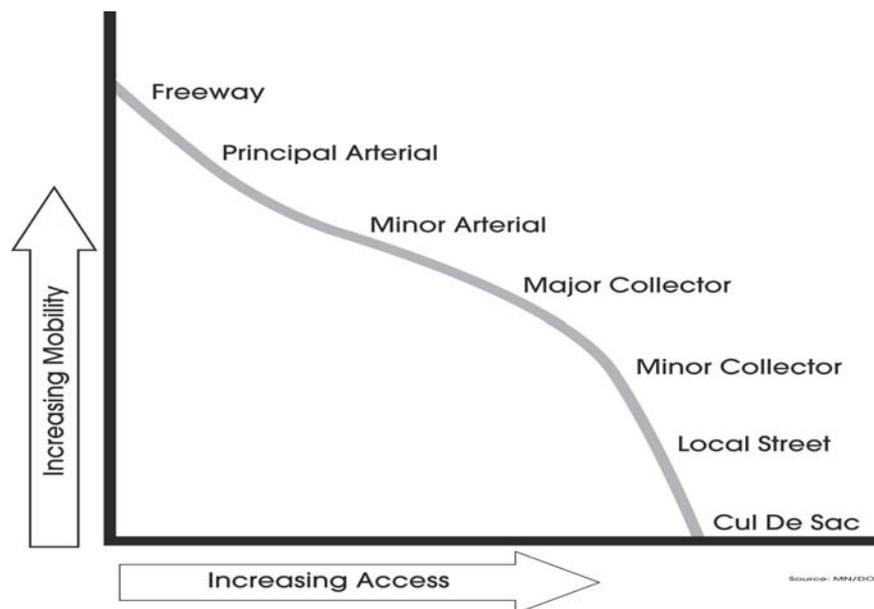
In addition to limiting the number of access points along a roadway, there are several different access management techniques that may be used to reduce the number of conflict points along a roadway, including grade-separated crossings, frontage roads or right-in/right-out access points. By applying these techniques, roadway safety can be greatly improved. Various studies demonstrate a direct relationship between the number of full access points and crash rates, including the Haw's Access Research Report No. FHWA-RD-91-044. This relationship is shown in Figure 19.

Figure 19
Access/Crash Relationship



Access management also plays an important role in maintaining roadway capacity and maximizing mobility while supporting the jurisdictions functional classification system plans. A key challenge facing Isanti County and its planning partners is adequately balancing access and mobility on the roadway system. The planned amount of access versus mobility in part determines the road's functional classification (see Figure 20).

Figure 20
Access/Mobility Relationship



Public road authorities are directed by Minnesota State Statutes to provide “reasonable, convenient, and suitable” access to property unless these access rights have been purchased. Courts have interpreted this to allow:

- Restrictions of access to right-in/right-out;
- Redirection of access to another public roadway if the roadway is reasonable, convenient and suitable.

In special circumstances, broader authority (police power) has been given to public agencies if the situation is deemed to jeopardize public safety. However, this is a very high standard to meet and is seldom used by public agencies. Land authorities may also exercise additional authority in limiting access through development rules and regulations. Land use authorities may require the following:

- Dedication/Donation of public rights-of-way,
- Construction of public roadways,
- Mitigation measures of traffic and/or other impacts,
- Change in and/or development of new access points.

The types of access controls listed above are processed through local appointed boards and elected officials, including planning commissions, town boards, city councils, and county boards.

Given that units of government at both the city and county level are typically involved at the planning stages of development proposals, access guidelines and corridor management practices should be implemented at the county and city level.

In 2002, Mn/DOT completed a multi-year study that developed access policies and access spacing guidelines for the Trunk Highway system. While Mn/DOT wrote the guidelines for its roadways, many of the recommendations can be applied to county systems. For example, access management guidelines promote coordination between land use and transportation strategies, and these issues affect decisions at the county level. Establishing appropriate spacing between public streets and private driveways is an important step toward maintaining the safety and mobility of the traveling public without sacrificing the accessibility needs of local residents. Mn/DOT's Access Management Guidelines are shown in Appendix D.

Table 17 shows the Isanti County access spacing guidelines to be used on the county roadway network. Isanti county access spacing guidelines are based on the same principles and goals as used by Mn/DOT and other counties.

The implementation of these guidelines can be done using a variety of processes (e.g., land use regulations, subdivision regulations and access permits). These processes should be developed so that they can deal with situations that fall outside the guidelines or are hardship cases. In existing corridors where significant development has occurred, the number of existing access points is likely to exceed the access guidelines. Unless these areas are undergoing redevelopment, their access must be addressed or approached differently. The proposed access control strategy in these areas is to aggressively minimize any new accesses while consolidating, restricting and/or reducing existing access points as redevelopment occurs.

It is important to consider the following points when applying the guidelines and addressing access issues:

- Guidelines should be used as long term goals, not as absolute rules.
- Maintaining some flexibility is important in promoting access consolidation.
- Existing physical barriers or constraints need to be considered.

**Table 14
Isanti County Access Control Guidelines**

Type of Access	Minor Arterial			Collector/Local		
	Urban Core	Urbanizing	Rural	Urban Core	Urbanizing	Rural
Primary, Full Movement, Public Street	1/8-mile	1/4-mile	1/2-mile	1/8-mile	1/8-mile	1/2-mile
Conditional Secondary, Public Street	1/8-mile	1/8-mile	1/4-mile	1/16-mile	1/8-mile	1/4-mile
Traffic Signal Spacing	1/4-mile	1/4-mile	1/2-mile	1/8-mile	1/4-mile	1/2-mile
Site/Property Access	Permitted, Subject to Conditions	Not Permitted	Permitted, Subject to Conditions			

Primary, Full Movement Public Street Access – These access types include other collector or arterial roadways that provide continuity in the roadway network and access to large geographic areas.
Conditional Secondary Public Street – These access types include other collector and other public (local) roadways. These accesses are subject to restricted movements, if needed, including right-in/right-out, left-in.
Traffic Signal Spacing – Traffic signal installation requires a Signal Justification Report (SJR) and is subject to the warrants provided in the Minnesota Manual of Uniform Traffic Control Devices. Signal placement typically coincides with a Primary, Full Movement Public Street Access.
Site/Property Access – These access types include any public or private access to a specific adjacent property. Examples of these type of accesses include private residences, townhome association roadways, retail malls, industrial sites, public and private schools, government offices. Site/Property access that is permitted but subject to restrictions shall be at the discretion of the County engineer.

¹ These guidelines apply to County roadways only. Mn/DOT has access authority on all Principal Arterials and Minor Arterials under their jurisdiction.

Minnesota's Local Road Research Board (LRRB) developed the following best management practices to address access in rural areas:

- Establish an access policy—develop a formal policy that ensures that the agency has processes in place to determine the need for and evaluate the use, location, spacing and design characteristics of the requested access points
- Encourage coordination during the zoning and platting process
- Give access permits for specific uses
- Encourage adequate spacing of access points
- Protect the functional area of intersections
- Ensure adequate site distance at entrances
- Avoid offset or dogleg intersections and entrances
- Encourage development of turn lanes and entrances
- Consider consolidating access or relocating existing access
- Encourage good driveway and intersection design characteristics such as:
 - Proper driveway width and turning radii
 - Proper corner clearance
 - Adequate approach grade
 - Alignment of intersections at right angles to maximize sight lines, minimize the time a vehicle is in the conflict area and facilitate turning movements
 - Proper grading of entrance inslopes and culvert openings
 - Keeping sight triangles and clear zones free of obstructions

In areas where access spacing guidelines cannot be met the following best management practices provide some alternatives for minimizing access and access problems:

- Encourage shared driveways and internal circulation plans: If direct access cannot be achieved during plat reviews, promote internal site circulation using shared access points.
- Restrict turning movements to reduce conflicts: If access points cannot be eliminated, consider turning movement restrictions (e.g., left-in or right-in/right-out only) through installation of raised medians or other channelization or signing. Eliminating a single turning movement can significantly reduce vehicle conflicts and crashes.
- Develop good parallel street systems for carrying local traffic: Make sure that important arterial routes have parallel street systems that provide local access and carry shorter local trips.

- Develop proper setbacks for future frontage roads: If frontage roads cannot be immediately justified (benefits do not outweigh costs), make sure that proper building and parking lot setbacks are established to minimize the impacts of future frontage roads.
- Develop proper secondary street spacing: Ensure that plats and new development proposals provide proper intersection spacing for future signals. Signalized intersections should be limited depending upon the type of street. Collector streets should provide continuity and connectivity with other street systems.
- Encourage proper lot layout to minimize access points: Promote direct residential access points onto local routes, instead of onto arterials or major collectors. Direct residential access onto arterial or collector routes slows traffic flow and can result in complaints when traffic levels increase. In rural areas, where farms have one access point per 40-acre entitlement and where lots are clustered in one portion of the farmstead, access points should be placed on local roads, not on high-speed, high-volume state or county roads.
- Encourage connectivity between developments: Streets in individual developments should be aligned to provide access to other developments, and right-of-way should be provided for future connections to adjacent developments. This promotes neighborhood connectivity, and provides quick and efficient routes for emergency vehicles, mail, garbage services, and street maintenance activities.
- Consider an Official Mapping process for important corridors: Important arterial corridors, or future interchange areas that are located in development-prone areas, can be protected through an official mapping process. Local agencies should revise zoning ordinances and subdivision regulations to dedicate official mapped corridors at the time of platting.

6.4 Rural Safety Improvements

Safety improvement recommendations for the Isanti County transportation network are outlined in the separate Road Safety Audit document.

6.5 Right-of-Way

Right-of-way is a valuable public asset that often makes up a considerable part of transportation project costs. Techniques exist for preserving future right-of-way and protecting it from encroaching or incompatible development. Issues facing existing right-of-way focus more on management and efficient use. Section 6.5.1 below describes Isanti County's approach to existing right-of-way management and use.

6.5.1 Right-of-Way Preservation

When future expansion or realignment of a roadway is proposed, but not immediately programmed, agencies should consider right-of-way (ROW) preservation strategies to reduce costs and maintain the feasibility of the proposed improvement. Several different strategies can be used to preserve ROW for future construction, including advance purchase, zoning and subdivision techniques and official mapping. Before implementing ROW preservation strategies, local agencies should weigh the risks of proceeding with ROW preservation without environmental documentation. (Note: Mn/DOT policy requires environmental documentation

prior to purchase.) If environmental documentation has not been completed, agencies risk preserving a corridor or parcel that has associated environmental issues.

Direct Purchase

One of the best ways to preserve ROW is to purchase it. Unfortunately, agencies rarely have the necessary funds to purchase ROW, and the public benefit of purchasing right-of-way is not realized until a roadway or transportation facility is built. Many agencies use any advance funding to prepare the environmental documentation needed to proceed with larger projects.

Planning and Zoning Authority

Local agencies have the authority to regulate existing and future land use. Under this authority, agencies have a number of tools for preserving right-of-way for transportation projects. These tools include:

Zoning

If the property is in a very low-density area (e.g., agricultural district), local agencies should try to maintain the existing zoning classification. Lower zoning classification limits the risk for significant development until funding becomes available for roadway construction. Isanti County is the designated wetland permitting authority for projects in the county.

Platting and Subdivision Regulations

Local platting and subdivision regulations give agencies authority to consider future roadway alignments during the platting process because most land must be platted before it is developed. Cities and counties can use their authority to regulate land development to influence plat configuration and the location of proposed roadways. In most instances, planning and engineering staff work with developers to develop a plat that accommodates the landowners/developers, and that conforms to a long-term community vision and/or plans. Local agencies can require ROW dedication/donation as part of the platting and subdivision process.

Flexible Development Review

In addition to the above strategies, some agencies negotiate with property owners to transfer ROW dedication/donation for future roadways needed to support increased development densities on remaining portions of the parcel. This enables the developer to get the same number of lots or units and also enables the agency to obtain the needed ROW.

Official Mapping

A final strategy to preserve ROW is to adopt an Official Map. An Official Map is developed by the local governmental unit and identifies the centerline and ROW needed for a future roadway. The local agency then holds a public hearing showing the location of the future roadway and incorporates the official map into its thoroughfare or community facilities plan. The official mapping process allows agencies to control proposed development within an identified area, and to influence development on adjacent parcels. However, if a directly affected property owner requests to develop his/her property, agencies have six months to initiate acquisition of the property to prevent its development. If the property is not purchased, the owner is allowed to develop it in conformance with current zoning and subdivision regulations. As a result, the official mapping process should only be used for

preserving key corridors in areas with significant growth pressures. In some cases, official mapping key parcels/corridors may increase the agency's ability to find sources of funds to purchase at-risk parcels.

6.6 Project Development and the Environmental Process

Depending on the size and type of project, implementing improvements identified in the Transportation Plan may require additional public participation and environmental review. Federal environmental documents are required for projects with federal funding. The type of document required depends on the size of the project.

If no federal funding is involved, state environmental review requirements and local ordinances or guidelines may still apply. Unlike the federal environmental process review, both project size and impact determine the level of environmental review. Specific rules on the level of environmental documentation can be found in the Highway Project Development Process Handbook at www.dot.state.mn.us.

In addition to state and federal rules regarding environmental documentation, there are a number of local, state, and federal permits that regulate wetlands, water quality, air quality, noise and other environmental and cultural resources. Early coordination with appropriate environmental agencies and the State Historic Preservation Office (SHPO) can reduce delays in the project development process and acquiring applicable permits.

6.7 Smart Growth/Growth Management

In communities across the nation, there is a growing concern that current development patterns – dominated by what some call “sprawl” – are not in the long-term interest of cities, existing suburbs, small towns and rural communities. Though supportive of growth, communities are questioning the economic costs of abandoning infrastructure in the city and rebuilding it further out. Factors such as demographic shifts, a strong environmental ethic, increased fiscal concerns, and more nuanced views of growth are fueling the smart growth movement.

Smart growth concentrates on investing in existing communities. By encouraging growth within communities where people already live and work, smart growth limits the encroachment of new development on farmland and open space, and makes existing communities more attractive by creating communities with a mix of housing, restaurants, parks and jobs. Taxpayer burdens are usually reduced because the need for new water, sewer and road infrastructure is minimized.

Isanti County is undergoing unprecedented growth, especially along the TH 65 and TH 95 corridors. While this growth affects all public facilities and services, it is having a profound effect on the county's transportation system. Citizen input strongly supports smart growth policies in the county. By investing and focusing growth in urban areas and areas contiguous to the cities, the benefits of existing public infrastructure can be maximized while farmland, wetlands, and open space can be preserved.

Smart growth provides many options, but the following common-sense principles will help guide public decisions and achieve desired results:

- Stewardship – use land and natural resources wisely to sustain them for the future.
- Efficiency – make efficient, integrated public investments in transportation, housing, schools, utilities, information infrastructure and other public services.
- Choice – give communities smart growth options and choices.
- Accountability – reinforce responsibility and accountability for development decisions.

Isanti County should continue its strong proactive planning efforts. The Transportation Plan focuses many of its recommendations on urban areas, or on areas adjacent to existing urban areas. As the county continues to grow, this approach to planning will promote growth within urban areas while protecting the county's rural nature.

6.8 Roadway Project Identification

There are a few key, large-scale transportation improvements that have been identified as part of this transportation planning process that will significantly improve traffic flow and safety within Isanti County. In addition, a number of smaller improvements have also been identified to improve spot locations where there may be some safety, congestion, operational, or other issues. The sections below discuss these projects and they are shown in Figure 21.

6.8.1 Large-Scale Projects

There are three key projects that will have a significant impact in Isanti County over the next 20 years. One of the projects is the upgrade of TH 65 to a four-lane divided expressway design from north of Cambridge to TH 107 in Braham. This improvement will address the safety issues on the current two-lane highway and provide capacity for future traffic volumes. This project is currently in Mn/DOT's 2008 to 2014 Long Range Program.

The second major project that was identified is the upgrade of TH 95 in Cambridge and east to I-35. This project is not currently programmed by Mn/DOT. However, as noted in Table 4 of Chapter 3.2, TH 95 is and will continue to increase in congestion. This will put additional burden on the need for alternative reliever routes for TH 95 to move traffic east-west through the City of Cambridge.

The third large-scale project is dependent on a feasibility study of the need and location(s) of a new crossing(s) of the Rum River south of TH 95. Two potential locations were identified in the planning process. One location was between the Cities of Cambridge and Isanti on an alignment that would extend existing CSAH 19 west across the Rum River to CR 70. This location may provide relief to TH 95 plus add an alternate route for local traffic to move east and west through this fast developing area of the County. The second location is in Athens Township that could directly link CSAH 8 and CSAH 9 to provide a regional highway corridor between TH 169 on the west in Sherburne County and I-35 on the east in Chisago County.

Another crossing of the Rum River was one of the most often cited issues identified by the focus groups and the public during the transportation planning process. A decision-making matrix was developed as part of the Transportation Plan work to provide the process to determine the feasibility of another crossing or crossings of the Rum River. This process is shown in Chapter 5.9 and Table 12.

Kanabec

Pine

Mille Lacs

Chisago

Sherburne

Anoka

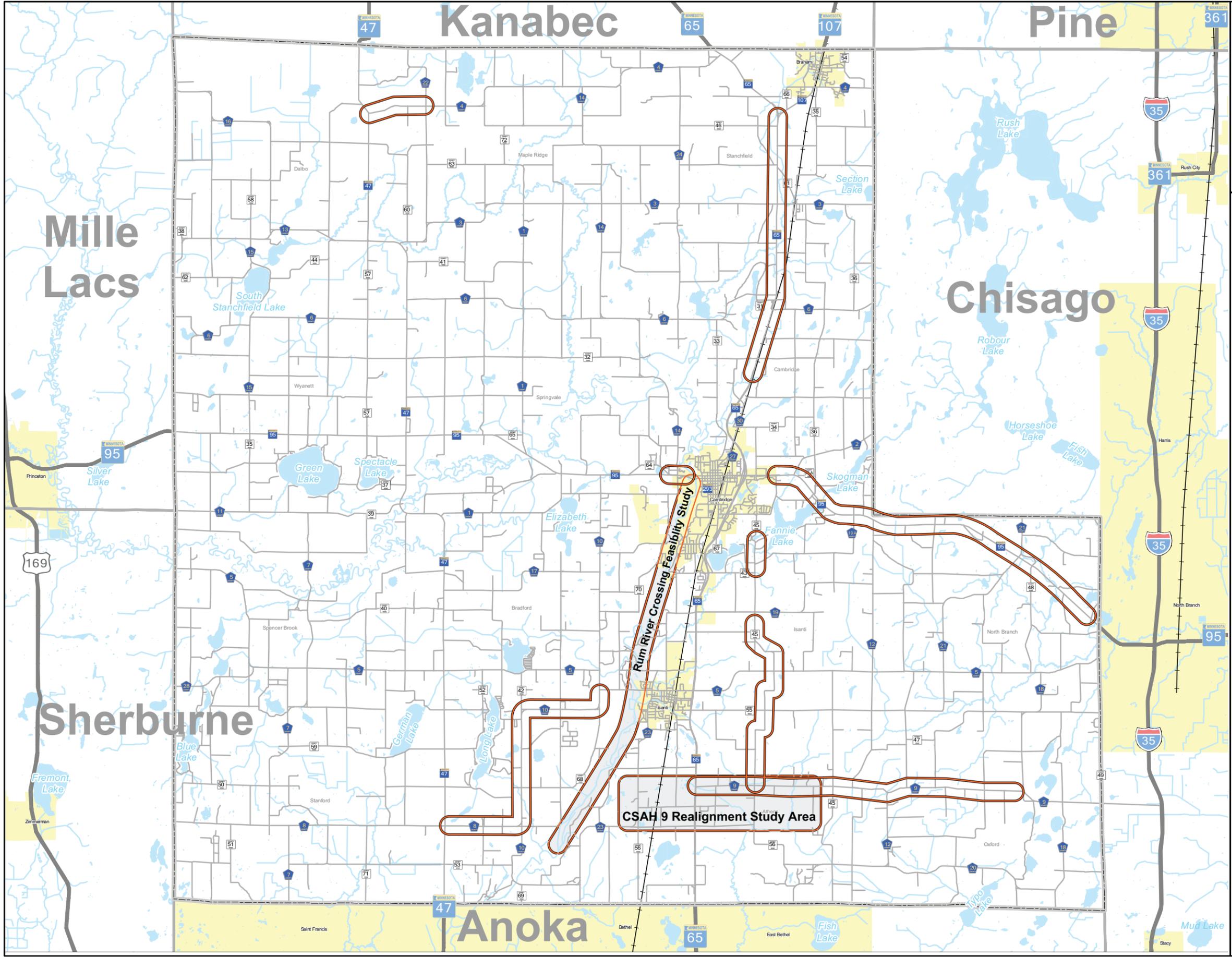
IDENTIFIED POTENTIAL ROADWAY PROJECTS/STUDIES
ISANTI COUNTY TRANSPORTATION PLAN

Figure 21

Legend

 Identified Potential Roadway Project/Study

0 1 2 3 Miles



6.8.2 Smaller-Scale Projects

There are a number of smaller-scale projects that have been identified to improve site specific problems. Chapter 5 of this plan identified special area studies where a more in-depth analysis was completed to identify construction improvements that will address both short- and long-term transportation needs. These improvements included:

- CR 45 realignment in the Mud Lake area
- CR 45 realignments south of CSAH 19
- CSAH 9/CR 56 realignment east and west of TH 65

Along with the studies identified in Chapter 5, there are a number of potential projects/follow-up studies that could be undertaken to address issues identified by stakeholders and technical analyses. These projects and follow-up studies, like the ones identified above, will require the cooperation of multiple jurisdictions. Projects are listed by agency with primary responsibility. **Please note: most of the projects and follow-up studies identified below have not been funded, nor have they been committed to by the agency with primary responsibility. In order to ensure that opportunities for corridor preservation are not lost, local jurisdictions should begin these planning efforts in the near future.**

Mn/DOT

- Reconstruction/modification to CR 70/CSAH 14 intersection with TH 95.
- Safety improvements as needed.

Isanti County

- CSAH 9 upgrade to address the increased traffic anticipated due to the opening of the new interchange on I35.
- CR 43 improvements from TH 65 to CR 45 to address the increased traffic caused by new development in the area and the opening of the middle school in the northwest quadrant of CR 43 and CR 45.
- Reconstruct CSAH 4 from TH 47 to CSAH 22 to complete the upgrading of CSAH 4 to a nine-ton route from TH 47 to TH 65.
- Reconstruction of CSAH 8/CSAH 10 east of TH 47 to CSAH 5. This would complete the connection from TH 169 in Sherburne County to TH 95 west of Cambridge and east of Cambridge via CSAH 5.
- Work with Mn/DOT to review capacity constraints on TH 65 and TH 95.
- Work with Mn/DOT to review warrants for traffic signals, roundabouts, other traffic control options or grade separations on TH 65 and TH 95.
- Work with Mn/DOT to review access management strategies and opportunities on the Trunk Highway system.
- Work with the DNR on highway projects involving environmental issues, including CR 45 around Mud Lake and any future crossings of the Rum River.
- Safety improvements as needed.

Cities of Braham, Cambridge and Isanti

- Work with Isanti County on plat review to ensure appropriate access and compatible land-use next to county highways.
- Work with Isanti County on plat review to ensure adequate right-of-way is dedicated.
- Partnering together to begin corridor preservation studies.

6.9 Bridge Project Identification

Most of the bridges in Isanti County are in good condition. Only one bridge on the county and township systems was identified as deficient. Although the current deficient bridge number is very low, the cost associated with improving them can be expensive. Therefore, the County should program as far in advance as possible for future bridge projects in order to be able to fund and secure funding for these projects.

The county should continue to seek state and federal funds where possible to assist in project implementation. Additionally, the county will continue to review bridge sufficiency ratings on regular basis to ensure continued bridge safety.

6.10 Roadway/Bridge Preservation

Most of Isanti County's transportation funding goes towards roadway/bridge preservation and maintenance activities.

Roadway and Bridge Preservation

Isanti County has made a significant investment in developing a roadway network that connects residents, businesses and agricultural centers with one another and to areas outside of the county. In order to ensure that this investment continues to provide the connections that these users have come to depend upon, the county will need to maintain and preserve its investment to the best of its ability given the current fiscal climate.

It is cheaper and more efficient to maintain roadways and address pavement quality issues before the roadway deteriorates to a point where it needs to be completely reconstructed. To ensure that it is addressing the most pressing maintenance and preservation issues, the county regularly monitors roadways to identify candidates for mill and overlay construction and/or reclamation on its bituminous roadways.

Using current highway funding projections for Isanti County Highway Department and a 50-year reconstruction cycle for bituminous highways on its system, the projected shortfall in funding just to preserve the existing system is in excess of \$3.3 Million annually. Even with a 75-year cycle the shortfall is still over \$2 Million every year.

Therefore, the county should continue its program of review and maintenance activities as funding allows. If additional funding becomes available, the county may wish to expand its pavement preservation and maintenance activities in order to reduce the need for total reconstruction of roadways.

Like pavement, bridges wear out and need rehabilitation and replacement. In general, the life of a bridge is significantly longer than that of pavement, but it is also more expensive to rehabilitate and to replace. Presently, the county monitors all of the bridges on its system on an annual or biannual basis to determine if the bridges are capable of carrying the capacity that they have been designed to accommodate. Additionally, if there is a significant weather (flooding) event, the county will target specific bridge locations for additional inspection to ensure that the structures remain sound.

If the county determines that the bridge is showing signs of wear and is in need of rehabilitation or replacement, the county will place the bridge on a list to receive state bonding funds. The county should continue its program of bridge inspection and maintenance activities as funding allows.

6.11 Funding

While a significant portion of the study involved developing the long-term transportation system needs, the study also developed implementation goals by identifying major improvements and funding issues.

At the present time, the overall transportation funding picture is quite discouraging. The State of Minnesota had a large funding deficit in 2003 and, as a result, cut significant monies to many programs. These cuts have impacted state programs and local agencies. In addition, there has been no increase in the state gas tax for over 18 years. While gas tax revenues have increased due to the increase in number of vehicles using the highways, the increase has not been able to keep pace with the increase in vehicle-miles traveled and the loss of purchasing power due to inflation. Also, recent reports indicate that federal gas tax revenues are down since the 9/11 terrorist attacks. This is expected to have an ongoing impact to federal revenue sources coming back to Minnesota.

On the positive side, the passage of the Constitutional Amendment dedicating all of the Motor Vehicle Sales Tax (MVST) to transportation is a step in the right direction. While this will provide some additional revenue to Isanti County and Mn/DOT, it does not come close to funding the needs identified on their systems.

Financial Strategies

Implementation strategies should consider present funding constraints; however, the funding picture will likely fluctuate many times over the next 20 years. Therefore, agencies need to employ a number of funding and implementation strategies aimed at building the infrastructure that will support their long-term growth strategies.

In general, this means:

- Public-private partnerships should be considered for every project as a way to fairly distribute construction or reconstruction costs of routes that can be shown to provide improved transportation benefits to selected areas, business or both.
- Agencies may have to partner, pool resources and jointly lobby for outside funding assistance to fund costly interchange type projects that could provide significant long-term benefits to the region.

- Pursue a State Aid transportation needs analysis to increase annual funding allotments.
- Pursue identified changes to State Aid system.
- Consider non-traditional funding for major system projects, such as, bonding.

Isanti County has transportation needs that substantially exceed current local agency funding revenue sources. This suggests that agencies will need to be creative and more aggressive in seeking funds. The following are examples of strategies that the agencies could pursue to obtain funds for developing the needed infrastructure.

6.11.1 Federal Funding

Federal Funds

There are projects in the Isanti County area that lend themselves to consideration of federal funding. These projects tend to be large capital projects that affect the greater region. The prime examples are the new potential River Crossing project(s) and the upgrade of CSAH 9 that will provide transportation benefits not only to the community, but also to the state highway system.

Annual Appropriations

Annually the federal government passes Appropriation bills to finance the operation of the government for the coming year and fund the federal programs. Transportation funding is one of the Appropriation bills. In the past, Congress has included appropriations to special “earmarked” projects that have been requested by an individual or a delegation of congressmen. While the large majority of local requests do not get special appropriations due to the limited funds available, some projects that have significant impact to the community and transportation system do. In most cases the projects receiving appropriation have been earlier included in the multi-year Authorization bill for Transportation. The new Congress leaders are looking at whether to cut back or eliminate earmarks in appropriation bills in the future.

Future Transportation Reauthorization Bill

For projects that could be funded beyond the current Transportation bill’s time period, 2010 and beyond, the county should pursue federal earmarking in the next Transportation Reauthorization bill. To position the county project for favorable consideration by your congressman and Minnesota senators, advanced work on the project is helpful. All preliminary design activities should follow federal guidelines to ensure the project will be eligible for federal funding.

Congressional High Priority Project (HPP) Funds

For county road projects that have a significant impact to communities and the county’s transportation system. (Applicability: reconstruction, future major connectivity routes, and reliever for congested routes with appropriate functional classification)

Area Transportation Partnership (ATP) Funds

Agencies should aggressively pursue these funds by documenting the transportation needs, level of support, environmental work, and right-of-way preservation activities. Isanti has benefited in the past on ATP that have been distributed among the three counties eligible to receive federal funds in Region 7E.

6.11.2 State Funding

County State Aid Highway (CSAH) Funds

Minnesota law dictates that all counties in the state receive a portion of the funds that the state collects from the gas tax and motor vehicle license fees known as the Highway User Tax Distribution Fund. CSAH funds can only be used for eligible items on designated County State Aid Highways.

Local Road Program

In 2002, the Legislature created the Local Road Improvement Program and established two accounts to provide funding assistance to local agencies in construction, reconstruction, or reconditioning projects with regional significance. The two accounts are the Trunk Highway Corridor Projects Account and the Local Road Account for Routes of Regional Significance.

State Roads of Regional Significance Funds (from biennial bonding bills) for construction or reconstruction of county roads that address major system deficiencies, contribute to economic development, or redevelopment efforts. (*Applicability:* CSAH 9)

Other potential state funding sources are:

- **Mn/DOT's Local Bridge Replacement Program** to construct new or reconstruct deficient bridges. (*Applicability:* county bridges with low sufficiency ratings)
- **Comprehensive Highway Safety Plan (CHSP) Central Fund** for grants to implement safety projects (i.e., safety audits, cost-effective lane departures or intersection improvements). (*Applicability:* high crash sites, county-wide signing, lighting, guardrail and/or shouldering upgrades)
- **Mn/DOT Local Agreement Program**, which is meant to assist the state and local jurisdictions, resolve spot transportation issues such as channelization or signal projects on the state system. (*Applicability:* TH 47/TH 65/TH 95 connections, intersections and frontage roads)
- **Mn/DOT Access Management Program Funding** to help county/cities close, consolidate or otherwise develop access alternatives that maximize the capacity of TH's. (*Applicability:* TH 65, TH 95 and frontage roads next to them)
- **State Gas Tax Increase with indexing**, which would increase the state-aid allocation to Isanti County and its cities. (*Applicability:* CSAH improvements)

- **County Wheelage Tax** legislation to allow all counties to assess a fee for each vehicle registered in the county, with no offset on property tax. (Applicability: various county road and CSAH projects)
- **County/City Sales Tax.** A political subdivision must get special legislation authorizing the imposition of the sales tax. The statute requires that the governing body of the political subdivision pass a resolution indicating its desire to impose the tax prior to requesting the enabling legislation. The resolution must include information on the proposed tax rate, the amount of revenue to be raised and its intended use, and the anticipated date when the tax would expire.

In 1999 the legislature began requiring a political subdivision to hold a local referendum at a general election before imposing an authorized local sales tax. The revenue may only be used to fund specific capital improvements that must be identified at least 90 days before the referendum. With the exception of Cook County, only cities have been allowed to impose general sales taxes.

6.11.3 County Funding

- **Local Property Tax:** Local contributions through local property taxes (city and county) can generate revenues for smaller projects, project development, access management and right-of-way preservation on CSAH projects and full funding on county road projects. The magnitude of these funds is unlikely to be able to fund the major improvements identified; however, they can contribute a portion and fund smaller projects. The key is that Isanti County should establish and maintain a stable property tax revenue dedicated for transportation.
- **Bonding** is a potential source of revenue for major projects. The county and the cities should investigate this to determine the level of bonding that could be captured and paid by the increased property valuations (growth) that is occurring and/or revenues generated by any additional State-aid allotments. Essentially, the growth may finance repayment of the bonds. Secondly, as current bonds are paid off, the county should shift the bond payments to the transportation budget or issue new bonds for transportation projects and continue the current bond payments to finance the repayment of the transportation bonds.
- **Development/Infrastructure Fees:** One of the reasons for the substantial infrastructure needs is the growth that is occurring with the communities. Therefore, it is a reasonable expectation that cities should capture revenues from these developments to help fund the infrastructure needs. Cities should be aggressive in their negotiations with developers to ensure that revenues are obtained to fund necessary improvements, and/or the developers make the improvements as part of the development. In this time of growing financial constraints and budget issues, many cities and counties are no longer able to completely fund the infrastructure or improvements needed to address the traffic impacts generated by the new developments. Development fees may provide the cities and counties with a portion of the costs for improving existing roadways or creating new roadways.

The basic procedures Isanti County and the Cities of Braham, Cambridge and Isanti follow to establish a development fee for a roadway infrastructure are as follows:

1. Select a local government “control” tool or method (e.g., access permit, building permit, zoning approval, etc.)

2. Establish a development threshold (e.g., number of units, trips generated, and acres to be developed) that will trigger a more comprehensive traffic analysis, negotiation process, and possibly provide a waiver procedure when the process is not required.
 3. Establish the purpose and content of the traffic study (e.g., traffic operations, access spacing, circulation, pedestrian/bicycle facilities, street layout and design parameters, traffic volumes/flows, impact to public streets/intersections, roadway capacity, safety improvements, costs of public infrastructure improvements needed to accommodate development); and who completes/pays for the study (e.g., professional traffic engineering firm hired by or approved by the city and paid by the developer).
 4. Explain the local review process and timeframe, and identify the appropriate county department personnel that will negotiate with the developer.
 5. Identify the approval process for the negotiated development fee (e.g., city arterial approval of terms), and the approval mechanism (e.g., execution of developer's agreement between the city and the developer, with subsequent issuance of a permit to proceed).
- **Isanti County's Cost Participation Policy** as part of this Plan is being reviewed and revised to ensure that the cost participation by the county and local agencies reflect the appropriate benefit each agencies receives from the proposed improvements.
 - **Cooperative Agreements** with cities or townships for mutually-desired capacity expansion, reconstruction, or trail improvements. (i.e., city secures the right of way and the county constructs the improvement as part of a county roadway project).
 - **Dedication/Donation of Right-of-Way:** All agencies, especially cities, should preserve right-of-way for the key arterial and collector corridors. Agencies should pay special attention to intersections of major facilities (e.g., provide additional width for potential turn lanes, bus stops). Agencies should first attempt to have right-of-way designated as part of the platting process. In other instances, agencies may consider official mapping, and/or direct purchase.
 - **Third-Party Agreements** (i.e., city, county or private developer) to construct turning lanes, traffic signals, intersection or access improvements where all parties have an interest in, and agree to share in, the responsibility for a roadway improvement. (*Applicability:* CSAH/CR improvements that are impacted by the development within a city.)
 - **Environmental Documentation:** Even though funding may not be available, agencies should pursue environmental documentation for selected key projects that have a significant need. This will better position the project for future funding. Past history has shown that projects with completed environmental work and public support often receive funding when new funding is approved.

APPENDIX A

Issues Identified by Public Process

Isanti County Long-Range Transportation Plan

Open House & Focus Group General Comments

Theme 1: Safety

- Safety is a concern at non-controlled railroad crossings.
- Provide a safe transportation network to bring people to this area.
- Look at spot safety improvements in rural areas—hills, curves, limited access, school bus stops, etc.
- Posted speed enforcement is an issue
- Fatalities at intersections i.e. CSAH 5/TH 65
- Opticon devices are being used on TH 65/TH 95 and will be installed on CR 5/CR 23 this summer.
- Limited river crossings (i.e. Rum River) have the greatest impact on quick emergency response
- Emergency response predicament with addressing—keeping up with City/Twp changes
- Railroad crossings also burden for emergency response
- RR crossings, safety, and traffic issues (i.e. volumes on TH 75/TH 95) are safety concern for schools
- Routes on TH 95 should be staged to minimize traffic disruption for school buses

Theme 2: Efficient Movement

- Cambridge-Isanti School District has over 800 employees with many living and commuting from outside the district.
- Because of congestion on the major highways, especially TH 95 in Cambridge, people are trying to avoid these roads and look for shortcuts on local streets.
- The number, length, and speed of the railroad trains cause considerable delays on TH 95, especially during the morning and evening rush hours.
- Travel patterns are, in part, related to school district boundaries.
- Future ring route around Athens town center using local roads.
- Designate main highway corridors, and design other routes to quell traffic.
- Need traffic model on CSAH 19 extension across Rum River to determine whether new route would relieve TH 95 congestion and if the route is feasible based on projected traffic volumes
- Good reviews/comments on the reconstruction of CSAH 10 from CSAH 5 to TH 95.
- CSAH 19 Crossing of TH 65/RR/Rum River
- Connections to and between Cambridge/Isanti are critical
- Need for E/W routes through County south of TH 95 (Athens and Cambridge): Develop E/W connection from TH 169 to I-35
- Grade separation at CR 5/TH 65
- County highways have good maintenance and are generally in good condition.

Theme 3: Multimodal

- Bike paths, trails should be separated from the county highways.
- Commuter Rail parallel to TH 65 on Cambridge tracks
- Serious concern with pedestrian accessibility across CR 5
 - Potential at 3rd Ave or at E. Dual Blvd
- Have bicycle trail next to BNSF tracks.
- Develop Comprehensive Trails Plan
- Connect parks/trails/cities
- Provide trails on County Roads
 - Connection to Anoka/Sherburne (wildlife refuge)/Chisago
- Minimum 3' paved shoulders
- Develop County map of trail routes
- "Cattle Pass" used for bikers/pedestrians
- Pedestrian/Bike facilities on bridge
- Trail in City of Isanti park should be connected with Cambridge-Isanti Bike / Walk trail
- Trail markings for bicycle lanes

Theme 4: Land Use/Development

- The residential development along CR 70 along with the National Guard facility, community center, community college, and other growth in the area will put increased demand on CR 70 and the CR 70/TH 95 intersection.
- Township communities around the cities are changing from agricultural to rural residential commuters.
- Majority of Isanti County's population commute to work outside of the county.
- County/cities need to preserve right-of-way corridors for roadway expansion i.e. CSAH 5 and CR 70.
- Developers should provide highway right-of-way in their plats adjacent to county highways—66' to 120'
- Support growth in areas with available infrastructure.
- County Comprehensive Planning Process can address connections between Isanti/Cambridge.
- New roads should avoid identified natural areas.
- Potential Vikings development impact on Isanti County

Theme 5: Coordination between Jurisdictions

- New middle school at County Roads 43 and 45 will have students attending from the whole northern part of the District.
- Cambridge Post Office has rural delivery routes.
- The City of Isanti's good relationship with the County helps the city develop well.
- Appreciate the County's willingness to invite transportation stakeholders to focus group meetings to hear their concerns.

Theme 6: Economic Development

- County needs to develop a 10-ton route system.
- Medical Center with 900 employees needs to have good and safe access to its facility to remain a regional medical center.
- Existing airport location restricted on size of aircraft that can use it. There could be a regional airport located where larger aircrafts can land.
- Cambridge is a regional center and to continue to grow it needs good and safe access to the transportation system.

Theme 7: Investments and Use of Funding

- County and cities need to look for new or special funding sources to help address the transportation needs in Isanti County.
- County, cities, and townships need to be in agreement with the proposed transportation projects in order to seek federal funding.

APPENDIX B

Traffic Volume and Roadway Segment Information

APPENDIX C

Jurisdictional Transfer Guidelines and System Framework

JURISDICTIONAL TRANSFERS

METHODOLOGY—GUIDELINES FOR ROUTE JURISDICTIONAL DESIGNATION

Issues and factors that must be considered when determining potential jurisdictional change include: historical practices, type of trips served (purpose and length), traffic volumes, access controls, functional classification, legal requirements, and funding and maintenance issues. The following draft guidelines were developed to provide a basis to review the routes in Isanti County for potential jurisdictional transfers. These guidelines will not determine if the jurisdictional transfers are feasible or politically acceptable, nor do they establish a timeframe under which transfers may occur. Instead, the guidelines define a common-sense approach for arriving at logical jurisdictional designations. Once there is agreement on how the jurisdictional designations should be established, an ongoing jurisdictional transfer process will need to be developed to address issues such as the financial implications for construction and maintenance of the facility, operational implications (perceived level of service, ability to maintain), perceived fairness in the distribution of route responsibilities, and timing of transfer.

It is not anticipated that all guidelines must be met in order for a jurisdiction designation to be recommended. However, a route meeting more criteria will have a stronger case for recommending a new route designation.

State Jurisdiction

Normally, state jurisdiction is focused on routes that can be characterized as follows:

- They are classified as either a principal arterial or minor arterial.
- They are typically longer routes serving statewide and interstate trips that connect larger population and business centers.
- They are spaced at intervals that are consistent with population density, such that all developed areas of the state are within reasonable distance of an arterial. (As a guide, rural arterial routes are considered to “serve” a community if it is within 10 miles or 20 minutes travel time on a minor arterial).
- They typically have design features (such as properly spaced access points) which are intended to promote higher travel speeds.
- They typically catch the major portion of trips entering and leaving urban areas as well as the majority of trips bypassing central cities.

County Jurisdiction

Typically county jurisdiction is focused on routes that can be characterized as follows:

Rural Areas

- They are functionally classified as a minor arterial, major collector or minor collector.
- They provide essential connections and links not served by the principal and other minor arterial routes. They serve adjacent larger towns that are not directly served by principal and minor arterial routes, and they provide service to major traffic generators that have intra-county importance.

- They are spaced at intervals that are consistent with population density so as to provide reasonable access to arterial or collector routes in developed areas.
- They may provide links between local traffic generators and outlying rural areas.

Within Urban Boundaries

- They are classified as either principal arterial or minor arterial routes
- They carry higher traffic volumes or they provide access to major regional traffic generators (shopping centers, education centers, major industrial complexes).
- They provide connections and continuity to major rural collector routes accessing the urban area and they provide continuity within the urban area, but do not divide homogenous neighborhoods.
- They emphasize higher mobility features than other local minor arterial routes (i.e., some form of access management or access control).

City Jurisdiction

Arterial routes, within the urban area, should be considered for city jurisdiction if they can be characterized as follows:

- They are short segments (less than 3 miles) with a moderate volume of traffic (3,000 to 8,000 ADT).
- They have higher local land access needs and close intersection spacing (promotion of local land access over mobility).
- They have close spacing with other arterial routes and shorter trip lengths, such as those found in Central Business District (CBD) areas.
- They provide no or very limited continuity to outlying rural areas. Urban arterials tend to have shorter trip lengths than rural arterials or collectors.
- They serve small geographic travel sheds.
- They provide on-street parking or other amenities that discourage the use of the route as a regional route (promotion of local access and adjacent land use activities at the street edge).

Collectors and local streets that provide property access and local traffic circulation are normally under city jurisdiction. These streets typically constitute 65 to 80 percent of the entire urban system mileage and can be characterized as follows:

- They are shorter in length (less than 1.5 miles) and carry low to medium volumes of traffic (500 to 3,000 ADT)
- They provide land access and traffic circulation to residential neighborhoods and to commercial and industrial areas (high access low mobility functions).
- They may divide homogenous residential neighborhoods to distribute trips to the arterial street system or final trip destinations.

Township Jurisdiction

Customarily, township jurisdiction is focused on rural routes that can be characterized as follows:

- They have low traffic volumes (less than 500 ADT).
- They are classified as local roadways on the functional classification system.
- They have minimal design features and most often are gravel surfaced.
- Their primary purpose is to provide access to adjacent property.
- They link outlying rural areas to County Roads (CR) or County State Aid Highways (CSAH), and the route length is usually less than five miles between CR or CSAHS.
- They primarily serve farmsteads, small rural subdivisions, rural churches/cemeteries, and agricultural facilities.
- They have irregular access spacing, but most often provide access to farms, field entrances, and they sometimes “T” with other roadways or dead-end.

JURISDICTIONAL SYSTEM FRAMEWORK

1. Management of the facility should close align with its function.
2. Align the route with the jurisdiction that is best suited to manage and maintain the facility (cost-efficiency). The following typical jurisdictional characteristics were utilized to determine transfer candidates:
 - A. Characteristics of the state system:
 1. Statewide function
 2. Multi-county facilities
 3. Continuity
 4. Inter-county through trips
 - B. Characteristics of CSAH designation:
 1. Higher levels of traffic
 2. Designated school and principal mail routes
 3. Designated collector or above
 4. Paved Routes
 - C. Characteristics of County Road System:
 1. Designated as minor collector or lower
 2. Lower levels of traffic
 3. Serves outlying rural areas and local traffic generators
 4. Paved or gravel routes
 - D. Characteristics of City MSA Routes:
 1. Cities with populations greater than 5,000
 2. Designated as collector or above on city functional classification system
 3. Higher traffic volumes than other city streets
 4. Provide access to local generators.

E. Characteristics of local jurisdiction:

1. Limited travelshed
2. Lack of continuity
3. Low growth
4. Low volume
5. Gravel surface

APPENDIX D

Mn/DOT Access Control Guidelines

MN/DOT SUMMARY OF RECOMMENDED ACCESS SPACING

Category	Area or Facility Type	Typical Functional Class	Intersection Spacing		Signal Spacing	Private Access
			Primary Full Movement Intersection	Conditional Secondary Intersection		
1	High Priority Interregional Corridors					
1F	Freeway	Principal Arterials	Interchange Access Only			
1A-F	Full Grade Separation		Interchange Access Only			
1A	Rural, Exurban & Bypass		1 mile	1/2 mile	INTERIM ONLY By Deviation Only	By Deviation Only
2	Medium Priority Interregional Corridors					
2A-F	Full Grade Separation	Principal Arterials	Interchange Access Only			
2A	Rural, Exurban & Bypass		1 mile	1/2 mile	STRONGLY DISCOURAGED By Deviation Only	By Exception or Deviation Only
2B	Urban Urbanizing		1/2 mile	1/4 mile	STRONGLY DISCOURAGED By Deviation Only	By Exception or Deviation Only
2C	Urban Core		300 – 600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions
3	High Priority Regional Corridors					
3A-F	Full Grade Separation	Principal and Minor Arterials	Interchange Access Only			
3A	Rural, Exurban & Bypass		1 mile	1/2 mile	1 mile	Permitted Subject to Conditions
3B	Urban Urbanizing		1/2 mile	1/4 mile	1/2 mile	By Exception or Deviation Only
3C	Urban Core		300 – 600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions
4	Principal Arterials in Primary Trade Centers					
4A-F	Full Grade Separation	Principal Arterials	Interchange Access Only			
4A	Rural, Exurban & Bypass		1 mile	1/2 mile	1 mile	By Deviation Only
4B	Urban Urbanizing		1/2 mile	1/4 mile	1/2 mile	By Exception or Deviation Only
4C	Urban Core		300 – 600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions
5	Minor Arterials					
5A	Rural, Exurban & Bypass	Minor Arterials	1/2 mile	1/4 mile	1/2 mile	Permitted Subject to Conditions
5B	Urban Urbanizing		1/4 mile	1/8 mile	1/4 mile	By Exception or Deviation Only
5C	Urban Core		300 – 600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions
6	Collectors					
6A	Rural, Exurban & Bypass	Collectors	1/2 mile	1/4 mile	1/2 mile	Permitted Subject to Conditions
6B	Urban Urbanizing		1/8 mile	NA	1/4 mile	
6C	Urban Core		300 – 600 feet dependent upon block length		1/8 mile	
7	Specific Access Plan – Access Outlined by Adopted Plan					