WAUSAU AREA LONG RANGE TRANSPORTATION PLAN 2050

Marathon County Metropolitan Planning Commission
– November 2016

Wausau Metropolitan Planning Organization

The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the Metropolitan Planning Program, Section 104(f) of Title 23, U.S. Code. The contents of this report do not necessarily reflect the views or policy of the U.S. Department of Transportation.

U.S. Department of Transportation
Federal Highway Administration

U.S. Department of Transportation
Federal Transit Administration

WAUSAU METROPOLITAN PLANNING ORGANIZATION
MARATHON COUNTY METROPOLITAN PLANNING COMMISSION
2015

BETTY HOENISCH (715 675-5607)
President, Village of Maine
office@townofmaine.com

STEVE HAGMAN (715 693-5660)
Chair, Town of Mosinee
shagman@charter.net

ALLEN OPALL (715 842-0983)
Chair, Town of Rib Mountain
aopall@townofribmountain.org

RAYNARD ZUNKER (715 845-7085)
Chairman, Town of Stettin
Dewray80@hotmail.com

JAMES RIEHLE (715 551-9826)
Chairman, Town of Wausau
jimriehle@gmail.com

MILTON OLSON (715 573-9805)
Chairman, Town of Weston
kamolson@frontier.com

JEFFREY P. WEISENBERGER
(715 675-3834)
President, Village of Brokaw
cootiebear64@yahoo.com

CHRIS VOLL
(715 359-1931)
President, Village of Kronenwetter
chris.voll@marathonelectric.com

GEORGE PETERSON**
(715 359-3660)
President, Village of Rothschild
gpeterson@rothschildwi.com

BARBARA ERMELING
(715 359-6114)
President, Village of Weston
bermeling@westonwi.gov

BRENT JACOBSON (715 693-2275)
Mayor, City of Mosinee
mayor@mosinee.wi.us

KREGG HOEHN (715 573-0263)
Mayor, City of Schofield
mayor@cityofschofield.org

ROBERT MIELKE (715 261-6800)
Mayor, City of Wausau
mayor@mail.ci.wausau.wi.us

KURT KLUCK (715 355-8518)
Chair, Infrastructure Committee
kurt.kluck@co.marathon.wi.us

RUSS HABECK
Regional Director
WisDOT, NC Region (715 421-8300)
ncr.dtsd@dot.wi.gov

*Chair **Vice-Chair ***Secretary

SUPPORT STAFF

Rebecca Frisch, Director***
MC CPZ Dept. (rebecca.frisch@co.marathon.wi.us)

Dave Mack, Transportation Planner
MC CPZ Dept. (dave.mack@co.marathon.wi.us)

TECHNICAL ADVISORY COMMITTEE

Jim Griesbach, Commissioner (1801)
MC Hwy Dept. (james.griesbach@mail.co.marathon.wi.us)

Jeff Gates, Administrator
C Mosinee (715 693-2275) (cityadmin@mosinee.wi.us)

Brad Lenz, City Planner
C Wausau (715 261-6753) (Brad.Lenz@ci.wausau.wi.us)

Greg Seubert, Manager
WATS (715 261-6526) (greg.seubert@mail.co.marathon.wi.us)

Richard Downey, Administrator
V Kronenwetter (715 693-4200) richard.downey@kronenwetter.org

Duane Gau, Director of Public Works
V Kronenwetter (715-693-4200) dgau@kronewetter.org

Daniel Guild, Administrator
V Weston (715 359-6114) (dguild@westonwi.gov)

Scott Turner, Street & Parks Superintendent
T Rib Mt. (715 842-0983) (STurner@townofribmountain.org)

Darryl Landeau, Transportation Planner
N.C.W.R.P.C. (715 849-5510) (dlandeau@ncwrpc.org)

Matt Schreiber, WisDOT, Madison
(Matt.Schreiber@dot.wi.gov)

Brian Grefe, Manager
CWA (715 693-2147/Ext 7) (bgrefe@fly-cwa.org)

Mark Thuot, Public Works Director
C Schofield (715 241-8863/715 571-8436)
(kking@cityofschofield.org)

Eric Lindman, Public Works & Utilities Director
C Wausau (715 261-6745) (Eric.Lindman@ci.wausau.wi.us)

Tim Vergara, Public Works Administrator
V Rothschild (715 359-3660) (TVergara@rothschildwi.com)

Randy Fifrick, Comm. Dev. / Zoning Admin.)
V Kronenwetter (715 693-4200) (rfifrick@kronenwetter.org)

Keith Donner, Public Works Director
V Weston (715 359-6114) (kdonner@westonwisconsin.org)

Gaylene Rhoden, Administrator
T Rib Mt (715 842-0983) (grhoden@townofribmountain.org)

President/CEO
Chamber of Commerce (715 845-6231)
(akapellusch@wausauchamber.com)

James Kuehn, WisDOT, Madison
(608 266-3662) (james.kuehn@dot.wi.gov)

David Meurett (david.meurett@dot.state.wi.us)
WisDOT, NC Region (715 421-8348)

EX OFFICIO MEMBERS

Rebecca Frisch, Director, MC CPZ

Marisol Simon, FTA

Mitch Batuzich, FHWA

LONG RANGE TRANSPORTATION PLAN – 2050
TABLE OF CONTENTS

Chapter 1 – Introduction 1-1
Chapter 2 – Goals and Objectives 2-1
Chapter 3 – Demographics and Land Use 3-1
Chapter 4 – Transportation Systems 4-1
Chapter 5 – Traffic Model Analysis 5-1
Chapter 6 – Transportation Improvement Recommendations 6-1
Chapter 7 – Environmental Review, Mitigation & Livability Strategies 7-1
Chapter 8 – Performance Indicators 8-1
Chapter 9 – Environmental Justice 9-1
Chapter 10 – Financial Plan 10-1
Appendix A A-1
Appendix B B-1

List of Tables

Table 2-1: Fast Act Planning Factors Addressed by Plan Goals 2-5
Table 3-1: Population by Municipality 3-1
Table 3-2: Population by Household 3-2
Table 4-1: Linear Roadway Mileage by Functional Classification 4-3
Table 4-2: Metro Ride Fares 4-10
Table 5-1: Committee Roadway Projects 2016-2019 5-2
Table 5-2: Level of Service 5-5
Table 10-1: 2011-2016 Federal, State and Local Funds Committee to Roadway Projects 10-2
Table 10-2: 2012-2019 TIP Project Funding and Sources 10-3
Table 10-3: State and Federal Transportation Revenue Projections 10-3
Table 10-4: Municipal Transportation Funding 2009 10-4
Table 10-5: Local, State and Federal Transportation Revenue Projections 10-4
Table 10-6: 2016-2019 TIP Funding 10-5
Table 10-7: WisDOT's Planned Preservation Projects and Projected Costs 2016-2021 10-6
Table 10-8: Local Road Preservation per Mile Cost Estimates 10-6
Table 10-9: Total Local System Preservation Costs 10-7

List of Maps

Map 1-1 – Wausau MPO Planning Boundary 1-2
Map 3-1 – Population Density by Census Block Group 3-4
Map 3-2 – Household Density by Census Block Group 3-5
Map 3-3 – Employment by Traffic Analysis Zone 2010 3-6
Map 3-4 – Minority Populations 3-9
Map 3-5 – Low Income Populations 3-10
Map 4-1 – Functional Classification 4-4
Map 4-2 – Roadway Infrastructure 4-6
Map 4-3 – Wausau Metro Area PASER Ratings 4-8
Map 4-4 – Metro Ride Bus Routes 4-9
Map 4-5 – Wausau Area Bike Map 4-12
Map 5-1 – Committed Projects 5-3
Map 5-2 – Wausau Metro Area 2010 Level of Service 5-4
Map 5-3 – Wausau Metro Area 2050 Level of Service 5-6
Map 6-1 – Future Regional Road Projects 6-9

CHAPTER 1 – INTRODUCTION

OVERVIEW

The Wausau Area Long Range Transportation Plan (LRTP), 2050 was prepared by the Marathon County Conservation, Planning and Zoning Department for the Marathon County Metropolitan Planning Commission (MCMPC). The MCMPC is the federally recognized Metropolitan Planning Organization (MPO) for the urbanized area consisting of the cities of Wausau, Mosinee, and Schofield; the villages of Brokaw, Maine, Kronenwetter, Rothschild, Weston, and the surrounding towns of Stettin, Rib Mountain, Mosinee, Weston, and Wausau in Marathon County, Wisconsin.

In 1980, the population of the Wausau urbanized area reached 50,000 and the Federal Highway Administration created the Wausau Metropolitan Planning Organization. The Marathon County Planning Commission was subsequently designated as the agent for the Wausau area MPO in 1983. In May 1996, the Marathon County Planning Commission was renamed the Marathon County Metropolitan Planning Commission.

The MCMPC is composed of the chief elected officials of the communities within the Wausau urbanized area, as well as representatives of the agencies having jurisdiction over roadways within the urbanized area. This commission is the decision-making authority for the MPO. The MPO includes sub-committee, the Technical Advisory Committee (TAC), which is composed of administrative, transportation, and planning professionals employed by the MPO representative communities. The TAC serves an advisory role to the Planning Commission. The TAC has its own advisory committee, the Bicycle and Pedestrian Sub-Committee, which addresses community issues that pertain specifically to bicycling and walking.

MPO PLANNING AREA

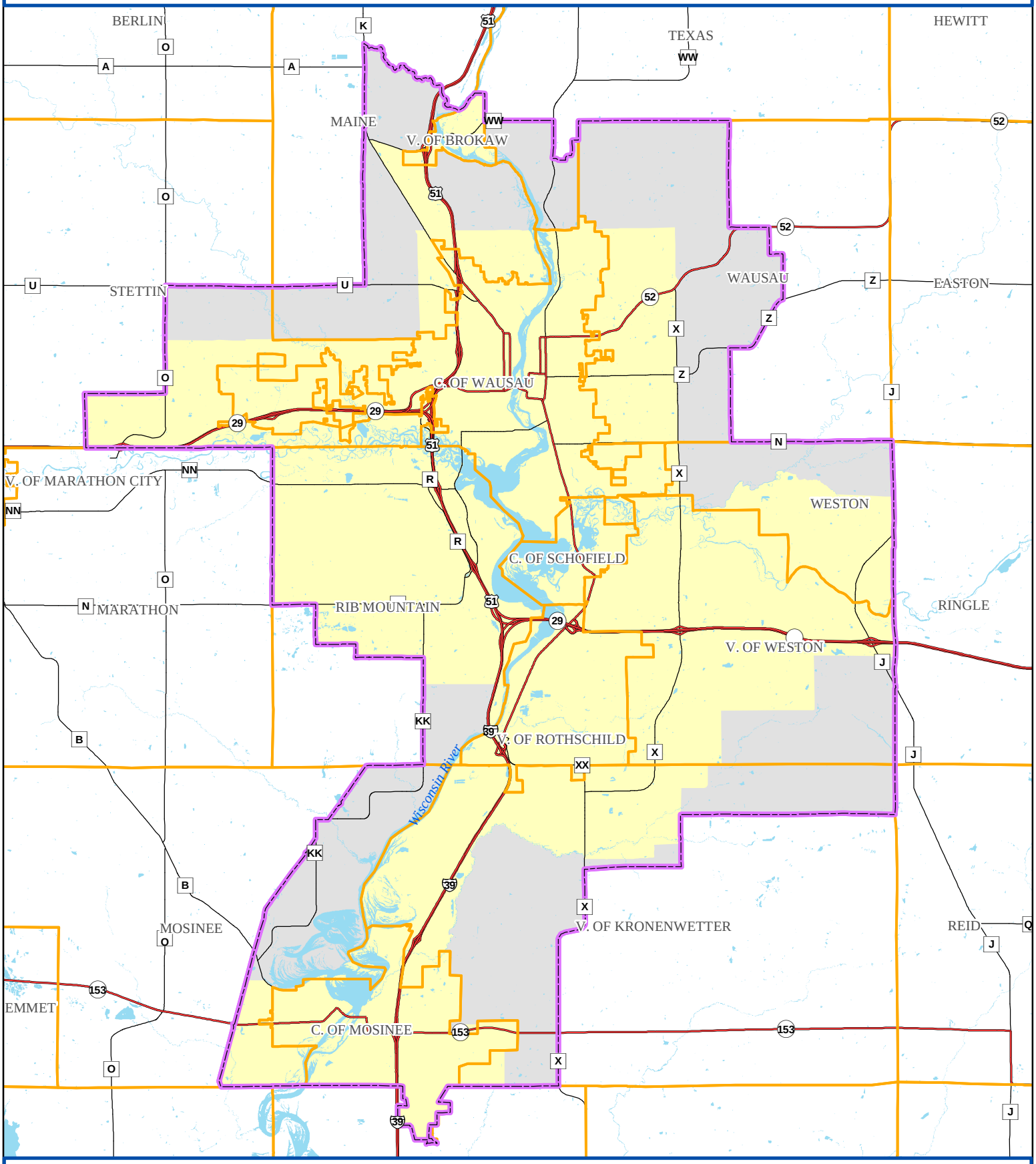
Working with the Wisconsin Department of Transportation (WisDOT) the MPO has approved the adjusted urbanized area (UZA) based on the US Census Bureau's urbanized area criteria. The UZA is shown on Map 1-1. The MPO planning area is also shown in Map 1-1. This area encompasses all the urbanized area, developing areas, and areas related to the urbanized area that could potentially be considered urbanized by 2050. The MPO may expand the planning area to ensure that it adequately addresses anticipated growth impacting the metropolitan area.

The planning area includes all or part of the following communities:

City of Mosinee
City of Wausau
City of Schofield
Village of Brokaw
Village of Kronenwetter
Village of Maine
Village of Rothschild
Village of Weston
Town of Marathon
Town of Stettin
Town of Wausau
Town of Mosinee
Town of Weston
Town of Rib Mountain

Wausau MPO Planning Boundary

Map 1-1



Planning Boundary
Urban Boundary
Census Municipal Boundary
State & US Highways
County Roads
Water Areas

0 0.5 1 2 3 4 Miles

N W E S

MARATHON COUNTY

Date: 10/14/2015

Map 1-1 includes the locations of major roadways, railroads, and trails within the planning area. The LRTP addresses transportation in terms of the movement of people and goods, not just vehicles. While the plan analyzes specific transportation modes (e.g. roadways, public transportation, bicycles/pedestrians, rail, and aviation), it stresses the interrelationships between modes and, when possible, encourages the integration of the various transportation components into a system that efficiently and cost-effectively meets the mobility needs of the area's citizens, businesses, industries, institutions, and the traveling public.

The LRTP is required to be fiscally constrained or based on reasonable future financial assumptions. The recommendations are based on projections of available federal, state and local revenue. There is not an assumption that significant additional funding will be available beyond current funding levels.

The plan is a work in progress not a fixed or final product but intended to be flexible and capable of responding to new or changing conditions. Land use and transportation studies are continuously being completed and/or updated, which may result in substantial changes to the plan. The plan must be updated at least every five years, and amendments may occur more frequently in response to the changing urban transportation system.

Most importantly, the LRTP reflects the vision and direction of local officials, relevant agencies, stakeholders, and the general public. From the beginning of the plan development, a public involvement process was undertaken that assured opportunities for the public to be involved in all phases of the planning process. The public provides valuable information needed to develop, maintain, and carry out an effective transportation plan. The public involvement process also provides an opportunity to educate the public about transportation planning and creates an informed community, which in turn leads to better planning.

PUBLIC PARTICIPATION PLAN

The purpose of a public participation plan is to establish a proactive public involvement process that ensures the opportunity for the public to be involved in all phases of the planning process. This is accomplished by providing complete information, timely public notice, opportunities for making comments, full access to key decisions, and early and continuing involvement in developing transportation plans and programs.

The following describes the public participation plan for the Wausau Area as established in the 2014 Public Participation Plan.

Public involvement means participation in planning by people (public) within the Wausau Metropolitan Planning Area (MPA) and its encompassing communities. It is a process of taking part in the transportation planning and decision-making that affects their community.

The public can provide valuable information needed to develop, maintain, and implement the transportation plan. The project team, local planning staff, and local officials need input from those who know the community best: the people who live and work here.

The public involvement process is two-fold. First, it gives the community an opportunity to provide input. Second, it allows the public to obtain information they may not have otherwise received, creating a more informed community. This information exchange, through the public involvement process, can lead to better planning and give the public a sense of ownership of the plan.

The county staff attempted to secure participation from stakeholders throughout the Wausau MPA. Stakeholders are individuals or entities that could be significantly affected by the transportation plan recommendations or could significantly influence implementation. Stakeholders include, but are not limited to: the general public; low income, minority and disabled groups; neighborhood representatives; chambers of commerce; special transportation interests such as freight shippers, transit users and bicycle organizations; local officials; and federal and state transportation agencies.

FEDERAL REQUIREMENTS

The metropolitan transportation planning process is federally required and aimed at developing programs to meet a region's transportation needs by analyzing the existing system and preparing plans and studies in a continuing, cooperative, and comprehensive manner (the 3-C planning process). These plans and programs are the basis for the development and operation of an integrated, inter-modal transportation system that facilitates the efficient and economic movement of people and goods. Public involvement was required under Federal Statute 23 USC 134, as part of the Federal Highway Bill, SAFETEA-LU. This plan complies with that bill and with continuing legislation from MAP-21 and the FAST Act.

The following regulations identify the federal requirements for Metropolitan Planning Organizations. The Code of Federal Regulations (CFR) 23 CFR 450, 500 and 49 CFR 613 are the source documents for these regulations.

Metropolitan Transportation Planning Process –
Include a proactive public involvement process that provides complete information, timely public notice, full public access to key decisions, and supports early and continuing involvement in the local transportation planning process.

Title VI of the Civil Rights Act of 1964 –
Ensure that no person shall, on the grounds of race, color, sex, national origin, or physical handicap, be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination under any program receiving federal assistance from the United States Department of Transportation.

Americans with Disabilities Act of 1990 –
Identify actions necessary to ensure that the local transportation planning process involves the entire community, particularly those with disabilities, in the development and improvement of services. The local process must also ensure that physical locations for such activities, as well as the information presented, shall be accessible to persons with disabilities.

Specialized Transportation Stakeholders –
Provide for the involvement of traffic, ride-sharing, parking, transportation safety, and enforcement agencies; commuter rail operators; airport and port authorities; toll authorities; appropriate private transportation providers; and where appropriate, local officials.

Environmental Agencies –
Provide for the involvement of local, state, and federal environmental resources and permitting agencies as appropriate.

National Environmental Policy Act –
Encourage and facilitate public involvement in decisions that affect the quality of the human environment. The National Environmental Policy Act (NEPA) is the basic national charter for protection of the environment. Public involvement under NEPA is subject to the regulations of the Council on Environmental Quality (CEQ).

Environmental Justice Executive Order 12898 –
Ensure that existing programs identify and address disproportionately high and adverse environmental effects on minority and low-income communities.

The involvement of a broad cross-section of the community is an essential element in planning the Wausau area's surface transportation system. Establishing community consensus early in the planning process helps identify acceptable alternatives that link transportation strategies to related issues such as environmental and socioeconomic goals. A transportation strategy that reflects and accommodates community views is a basic goal of the transportation planning process.

Public Participation Process –
The Wausau MPO also strives for an all-inclusive public process consistent with the provisions of Federal Highway Administration (FHWA) Title 23 Code of Federal Regulations Part 450 (23 CFR 450) and Federal Transit Administration (FTA) 49 CFR 613 as retained and amended by MAP-21 and the FAST Act. While retaining the requirement authorized by ISTEA that "MPOs develop and utilize a proactive public involvement process that provides complete information, timely public notice, full public access to key decisions, and supports early and continuing involvement of the public in developing LRTPs," SAFETEA-LU expanded those provisions to require "extensive stakeholder participation above and beyond public involvement."

The following policy statements to "ensure early and continuing involvement of the public in developing plans" were derived from existing language in 23 CFR 450 and 49 CFR 613.

Coordination and Consultation -

- Consult with agencies and officials responsible for other planning activities within the planning area that are affected by transportation in the development of LRTPs, including Indian Tribal governments and Federal Land Management and Resources agencies, if applicable.

- Coordinate with the public involvement and consultation processes for statewide transportation planning.

Accessibility and Information -

- Hold public meetings at convenient and accessible locations and times.
- Make public information available in electronically-accessible format.
- Provide reasonable public access to technical and policy information used in the development of plans and programs.
- Employ visualization techniques to describe LRTPs.

Timeliness -

- Provide timely information about transportation issues and processes to all concerned stakeholders, including affected public agencies, private providers of transportation, and other interested parties and segments of the community affected by transportation plans, programs, and projects.
- Provide adequate public notice of public involvement activities and time for public review and comment.

Public Comment -

- Demonstrate explicit consideration and response to public input received during the development of the LRTP.
- Provide a comment period of at least 45 day.
- Provide an additional opportunity for public comment if the final LRTP differs significantly from the version that was initially made available for comment.
- Include as part of the final plan or program a report or summary on the disposition of significant written or oral comments received on draft plans and programs.

Social (includes Environmental) Justice -

- Seek out and consider the needs of those traditionally underserved by existing transportation systems, including low-income and minority households, persons with disabilities, and the elderly.

Evaluation -

- Review the effectiveness of the public participation plan so as to ensure a full and open participation process.

Updates and Amendments -

- The public participation process outlined in the Public Participation Plan (PPP) will be evaluated and amended at least every five years. An amendment to the PPP may also occur if a federal or state regulation regarding public participation or environmental justice has been created or modified. In all cases, the public will be invited to provide comment. Inclusive public participation is encouraged throughout the update process at Wausau MPO and technical committee meetings, through comments received at the Wausau MPO office, and at outreach events.

- As the LRTP is being prepared, Wausau MPO staff makes use of all of the outreach activities identified earlier. Each activity and its results are summarized and incorporated into the LRTP as appropriate (either within the body of the LRTP or as an appendix). Public Participation is encouraged throughout the update process at Wausau MPO and technical committee meetings, through comments received at the Wausau MPO office, and at outreach events.

  Although a new LRTP is completed only every five years, components of the LRTP, which include modal plans like the Transit Development Program and the Bicycle and Pedestrian Plan, may be completed or amended as needed. These plans serve as stand-alone plans as well as components of the LRTP. Once adopted by the Wausau MPO, stand-alone documents that amend the modal plans or the LRTP will be considered part of the LRTP. During the development of the LRTP, new and amended modal plans will be incorporated into the LRTP either by reference or by content. Amendments to the LRTP may occur when significant changes have been made in Federal transportation law. "Significant" changes include:
  - Changing the scope of the planning process (i.e. adding a new planning factor).
  - Adding new requirements for the development of the plan.
  - Adding new requirements for consultation.
  - A Safety Element.

Public Notice and Comment -

- The public notice process for the new and amended LRTP and related modal plans includes:
  - Publishing the draft plan along with a public notice on the Wausau MPO website at www.WausauMPO.org to begin a 45 calendar day public comment period on the plan document;
  - Distributing the public notice via mail and e-mail to all Wausau MPO contact lists;
  - Inviting the public, and notifying the media, by meeting agenda to provide public comment at the Wausau MPO meetings that are scheduled to adopt the new or amended LRTP or modal plan. Comments made at the meeting are recorded in the minutes and comments received at the Wausau MPO staff office are read into those minutes.

Publication -

- The LRTP and modal plans will be made available in digital format at www.WausauMPO.org and in hardcopy at the Wausau MPO staff office. Hardcopies will be distributed to Wausau MPO member communities, agencies, other stakeholders, and the public upon request on a case by case basis. Reasonable requests for alternate formats will be considered and accommodated when possible. A fee may be charged, depending on the nature of the request.

CHAPTER 2 – GOALS AND OBJECTIVES

OVERVIEW

This chapter defines goals and objectives used in developing the Wausau LRTP, 2050. A critical component of this LRTP is that the recommended improvements reflect the values of the area's citizens, businesses, industries, and traveling public. The goals and objectives provide guidance in the planning process and define the means by which specific transportation improvements are evaluated.

The final list of goals and objectives were developed with consideration of the previous LRTP's goals and objectives, community issues and concerns, and federal guidelines. The 2011 LRTP's goals and objectives were reviewed for relevance and consistency with community issues and concerns identified by the MPO's technical committee, in public meetings, and consistency with the guidelines included in Federal Highway Bills MAP-21 and the FAST Act.

DEFINING GOALS AND OBJECTIVES

The plan's goals describe the general qualities, characteristics and conditions desired for the metropolitan area. Objectives outline the more specific outcomes that the plan's recommendations should attempt to achieve. The goals and objectives are critical to the plan as they serve as the basis for the measures of effectiveness when analyzing transportation improvement alternatives.

Goals are general statements that pertain to area-wide or systemic issues, yet should be specific enough to identify whether the goal has been achieved. For example, "improve the safety and efficiency of travel" can be a goal. The goal statement is measurable although it provides no further information on how the goal may be achieved. Some goals may overlap other goals. Decision makers assign priority to the various goals when making implementation decisions.

Objectives are more specific and measurable statements that expand upon the goal, identifying types of actions that advance the larger goal. By using the goal of "improve the safety and efficiency of travel" as an example, an objective could be "improve existing cross-town travel times on arterial corridors." Another objective could be "reduce accidents by implementing safety improvements at intersections with the highest crash rates." Generally several objectives are associated with a particular goal and may overlap.

GOALS AND OBJECTIVES

Goals and objectives are an integral part of the LRTP as they set forth a direction, or focus, to the community's vision.

Goal # 1 Develop and maintain the Transportation System to support the Economic Development of the area

Objectives:

- Create a transportation system that enhances existing activity centers.
- Encourage land uses and housing opportunities consistent with the area's character that minimize travel demand and increase transportation efficiencies.
- Promote growth that efficiently utilizes existing infrastructure and minimizes the need for additional infrastructure, while maintaining compatibility with the community's character.
- Minimize urban sprawl and "leapfrog" development.
- Provide transportation infrastructure and services that enhance economic conditions for primary regional markets.
- Provide transportation systems to create a pattern of accessibility that match and support the comprehensive plans in the region.

Goal # 2 Develop and maintain the Transportation System to minimize the Social and Environmental Impacts to the area

Objectives:

- Protect the area's significant natural resources and environmentally sensitive areas from negative transportation system impacts whenever feasible.
- Maximize natural resource benefits to the community via planned vistas, linkages, and land use relationships (e.g., use of buffers, locating low density land uses near natural resources, etc.).
- Minimize residential neighborhood through-traffic.
- Protect residential areas from negative transportation system impacts (e.g. noise pollution, speeding, safety concerns).
- Design roads to be compatible with surrounding areas and be pedestrian, bicycle and transit friendly (completes streets).
- Minimize the energy resources consumed for, and greenhouse gases emitted from, transportation.

Goal # 3 Develop and maintain a Multi-Modal Transportation System in the area that is Safe, Efficient, and Economical to allow for the Movement of People, Goods, and Services

Objectives:

- Minimize the number and severity of vehicular crashes with emphasis on reducing vehicle-bicycle and vehicle-pedestrian conflicts and crashes.
- Design safe facilities that promote appropriate travel speeds, enhance predictability, and provide a safe and comfortable environment for all transportation system users including non-motorized users.
- Reduce travel delays and minimize congestion on roads.

- Reduce traffic demand on congested roads.
- Increase the availability of multi-modal regional mobility services (e.g. intercity bus, air, highways).
- Provide a roadway system that is capable of achieving appropriate performance levels consistent with community goals.
- Enhance the opportunity for using transportation modes other than the auto for single person-trips, including pedestrian, bicycle, and public transit.
- Encourage the use of public transit where available.
- Promote bicycle and pedestrian travel modes by linking pedestrian and bicycle systems throughout the region.
- Provide transportation service for all modes that are accessible to residential areas and to primary trip attraction areas (e.g., places of employment, shopping, education, public services, and recreation).
- Provide effective linkages to non-local transportation systems (statewide, national) for all modes.
- Promote transportation system and land use coordination that reduces trip lengths and travel times for all modes of travel.
- Provide safe and convenient freight access via truck, rail, and air transportation systems.

Goal # 4 Develop and maintain the Transportation System that will optimize the Financial Resources in the area

Objectives:

- Prepare a fiscally constrained financing strategy.
- Leverage the use of non-local funds to increase the amount and/or effectiveness of federal and state funds available to the region.
- Promote equitable balance of financial support from local communities.
- Increase the use of private sector financial resources for transportation improvements.

Goal # 5 Foster Cooperation and Coordination among the Municipalities and Agencies through the Planning and Public Involvement Process

Objectives:

- Provide transportation services that achieve benefit and cost equity among member communities.
- Ensure that social justice is considered in the planning and financing of MPO transportation project improvements.
- Promote a functional hierarchy with appropriate jurisdictional responsibility (statewide, regional, and sub regional services) so that transportation system elements are balanced with level of responsibility. For example, the county should be responsible for elements having countywide or sub regional impacts or benefits and municipalities for elements having local community impacts.
- Enhance intergovernmental coordination and cooperation for improving multimodal transportation.
- Define specific milestones for implementation.
- Acquire and preserve right-of-way prior to development to minimize disruptions to existing and future homeowners and businesses.
- Minimize the amount of land needed for improvements.

- Maximize traffic flow efficiency within future development areas by planning for road systems within these areas that provide adequate travel mobility, along with land access.

PLANNING FACTORS

The Federal Transportation Bill, FAST Act, continues the metropolitan planning factors identified in previous bills to be considered by Metropolitan Planning Organizations when developing transportation plans and programs. These factors include:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the security of the transportation system for motorized and non-motorized users.
3. Increase the safety aspects of the transportation system for its motorized and non-motorized users.
4. Increase the accessibility and mobility options available to people and for freight.
5. Protect and enhance the environment, promote energy conservation, and improve quality of life and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
7. Promote efficient system management and operations.
8. Emphasize the preservation of the existing transportation system.
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
10. Enhance travel and tourism.

This Long Range Transportation Plan is being developed considering these ten metropolitan planning factors.

Table 2-1 illustrates the long range transportation goals and objectives and where they address the metropolitan planning factors.

Table 2-1
Fast Act Planning Factors Addressed by Plan Goals

	GOALS				
PLANNING FACTORS	Support Economic Development	Minimize Social and Environmental Impacts	Multi- Modal System	Optimize Financial Resources	Public Involvement Process
#1 – Economic Vitality	◇		◇	◇	◇
#2 – System Safety	◇	◇	◇		◇
#3 – System Security	◇	◇			◇
#4 – Mobility Options			◇		◇
#5 – Protect the Environment		◇			◇
#6 – System Connectivity			◇		◇
#7 – System Efficiency			◇	◇	◇
#8 – System Preservation		◇		◇	◇
#9 – Resiliency, Reliability and Stormwater		◇	◇		◇
#10 – Travel and Tourism	◇			◇	◇

CHAPTER 3 – DEMOGRAPHICS AND LAND USE

OVERVIEW

Human activity is a driving force for transportation demand. Transportation planners have struggled to understand and quantify this activity by any single metric. There are several key indicators that help indicate demand for transportation. For example, the number and size of households and types of employment relate to the type of trips made in a community. The locations and size of activity centers, whether for work or other purposes, also generate trips that must be considered. In order to understand and forecast travel demand, it is necessary to look at variables that create the demand.

SOCIOECONOMIC DATA

Population

The U.S. Census Bureau has a constitutionally mandated directive to perform a count of the population every 10 years. These counts are used to apportion federal representatives and used in funding models. In 2005, the Census Bureau fully implemented the American Community Survey (ACS). This is an ongoing statistical survey that collects much of the information that was previously obtained on the decennial long form census. The ACS samples 3.5 million households per year and is able to provide 3 or 5 year estimates for most of the country.

Unfortunately, in order to ensure privacy with the ACS data, results are only available in census block groups, a collection of several block groups. Understandably this does not allow for a finer scale of spatial analysis. Maps that represent socioeconomic data are using the ACS as a data source while the traffic model and performance indicator tables are using estimates from the Wisconsin Department of Administration. While the two sources are close in numbers they are not the same.

Table 3-1: Population by Municipality

Population			
Municipality	**2010**	**2015**	**% Change**
V Maine	2337	2345	0.3
T Mosinee	2174	2189	0.7
T Rib Mountain	6825	6900	1.1
T Stettin	2554	2566	0.5
T Texas	1615	1614	-0.1
T Wausau	2229	2249	0.9
T Weston	639	655	2.5
V Brokaw	251	243	-3.2
V Kronenwetter	7210	7525	4.4

Population			
Municipality	**2010**	**2015**	**% Change**
V Rothschild	5269	5302	0.6
V Weston	14868	15276	2.7
C Mosinee	3988	4021	0.8
C Schofield	2169	2212	2.0
C Wausau	39106	39063	-0.1

Source: U.S. Census, 2010

Source: DOA, Population Estimates, 2015

Population changes from 2010 to 2015 are minimal with a few exceptions. The village of Brokaw experienced a 3.2% decline in population due to a paper mill, the main local industry, closing. Growth can be seen in many of the suburban communities such as Schofield, Kronenwetter, Weston and Rib Mountain. The city of Wausau had a slight decline in population.

Population density by census block group is shown on Map 3-1. Outside the urbanized area, census block sizes are quite large. This corresponds with a lower population density in the more rural areas. Overall, the area has continued to grow.

Households

Households or dwelling units are typically used as one of the variables for calculating travel trips based on corresponding trip generation rates. The number of households generally corresponds with population. However, there are subtle differences depending on land use and housing types. For example, areas with primarily single-family detached housing may have larger households, whereas apartments and townhouses are likely to have smaller households. Not surprisingly, larger households tend to generate more travel trips than do smaller households.

Table 3-2: Population by Household

Households			Persons/Household		
Municipality	**Census 2010**	**Projection 2015**	**Census 2010**	**Projection 2015**	**2040 Projection**
V Maine	890	910	2.63	2.60	2.47
T Mosinee	814	836	2.66	2.64	2.51
T Rib Mountain	2650	2704	2.57	2.54	2.42
T Stettin	999	1035	2.56	2.53	2.41
T Texas	645	649	2.50	2.48	2.36
T Wausau	860	881	2.57	2.54	2.42
T Weston	228	245	2.77	2.75	2.61
V Brokaw	123	124	2.04	2.02	1.92
V Kronenwetter	2652	2801	2.71	2.68	2.55
V Rothschild	2199	2251	2.38	2.35	2.24
V Weston	5772	6085	2.54	2.52	2.40

Households			Persons/Household		
Municipality	Census 2010	Projection 2015	Census 2010	Projection 2015	2040 Projection
C Mosinee	1660	1703	2.39	2.37	2.25
C Schofield	994	1004	2.18	2.16	2.05
C Wausau	16487	16790	2.31	2.28	2.17
		Average	2.49	2.47	2.35

Source: U.S. Census, 2010

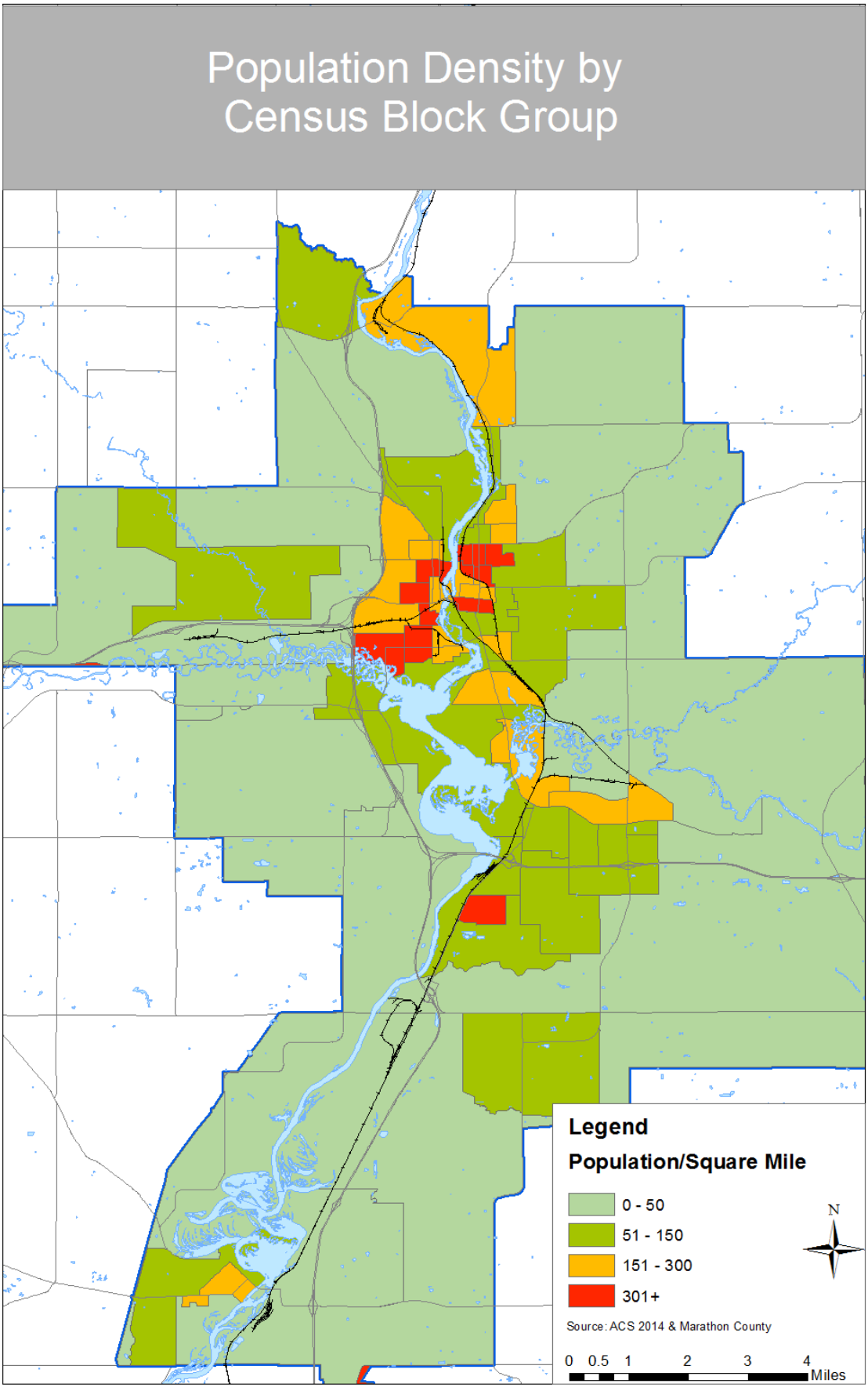
Source: DOA, Housing Estimates, 2015

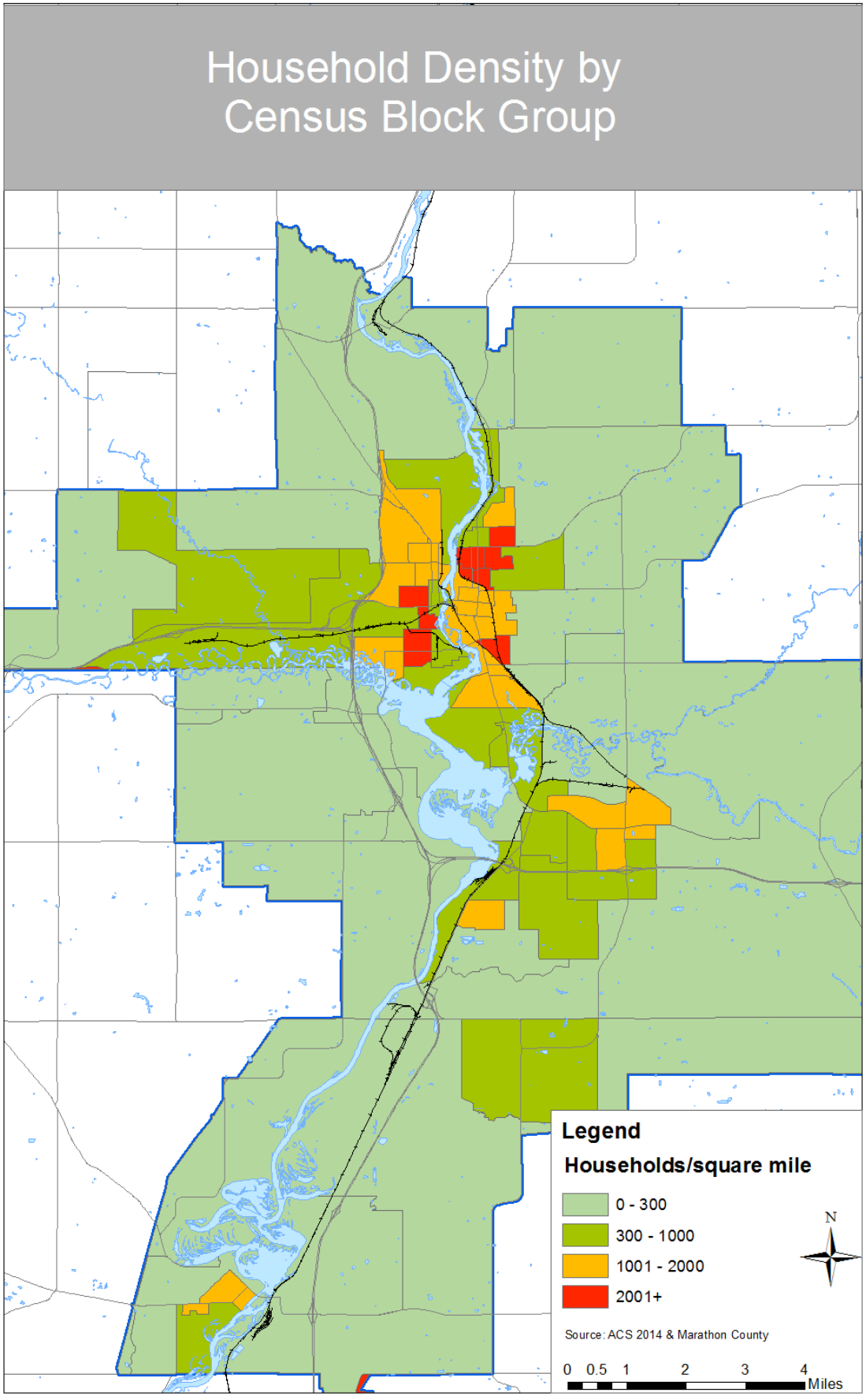
Using DOA estimates of households in the Wausau area, the 2015 average is 2.47 people per household. This number is projected to drop to 2.35 in 2040 due to demographic shifts in population and current trends of fewer children and waiting longer to have children. Transportation improvements that serve more households per unit of improvement generally will produce greater utility. For example, public transit service in a higher density residential area can serve more households per vehicle mile of service than transit service in a lower density area. Similarly, a mile of sidewalk or trail in a high density area can serve more people than in a low-density area. Map 3-2 shows the households per square mile.

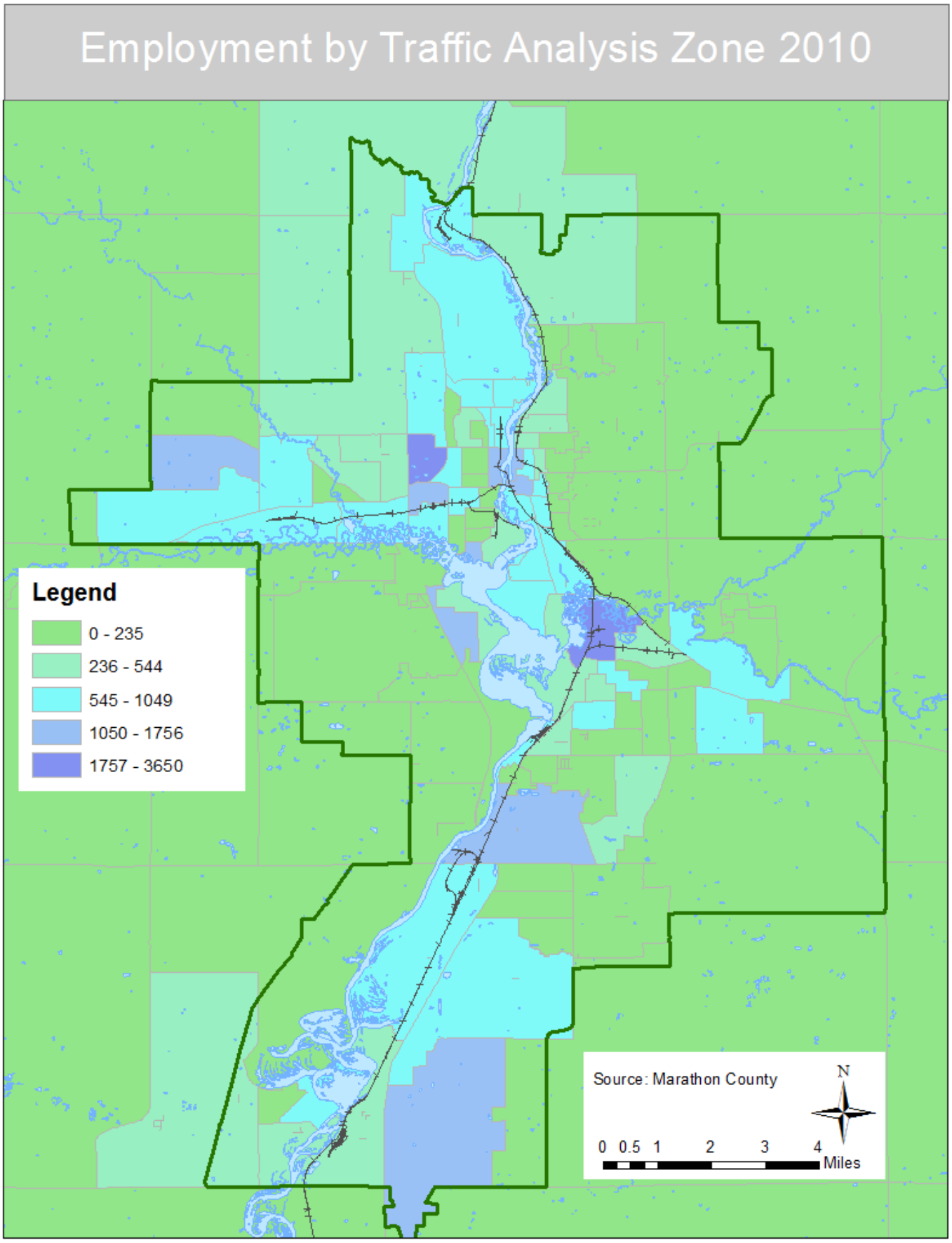
Employment

Employment data by type of establishment is a required input for the Traffic Model. The US Census Bureau does not provide employment data by Transportation Analysis Zone (TAZ) through the Census of Transportation Planning Package (CTPP). The employment data used for the travel demand model was from Woods & Poole Economic, Inc., a private firm that collects and projects economic and demographic data. Specifically, their 2013 Wisconsin State Profile: State and County Projections for 2040 was the starting point for the model's employment data. This data was adjusted based on feedback received on the current and future expected land uses in the TAZs.

Identifying concentrations of employment and activity centers are useful in evaluating options for transportation improvements (see Map 3-3). While there are significant numbers and concentrations of employment throughout the metro area, downtown Wausau has the most consistent employment density in the area. Liberty Insurance and the Aspirus Hospital area also have notable employment concentrations. Both retail/commercials areas and industrial park areas offer employment concentrations as well but may have different time shifts in addition to the traditional 8am – 5pm profile.


Population Density by
Census Block Group
Legend
Population/Square Mile
0 - 50
51 - 150
151 - 300
301+
Source: ACS 2014 & Marathon County
N
0 0.5 1 2 3 4
Miles


Household Density by
Census Block Group
Legend
Households/square mile
0 - 300
300 - 1000
1001 - 2000
2001+
N
Source: ACS 2014 & Marathon County
0 0.5 1 2 3 4
Miles


Employment by Traffic Analysis Zone 2010
Legend
0 - 235
236 - 544
545 - 1049
1050 - 1756
1757 - 3650
Source: Marathon County
N
0 0.5 1 2 3 4
Miles

Land Use

Transportation and Land Use Relationship -
The organization of daily life has created a demand for travel. The demand for public transportation connections between geographic locations grew into a desire for faster and more comfortable travel. Not long ago, walking distances defined the geographic relationship between daily activities. This relationship expanded with the advent of the bicycle, transit, and then the automobile. With each new transportation technology, the time allowed for travel remained relatively the same while the distance covered increased. Households still make travel decisions based on time. However, the development of the automobiles and structuring of transportation networks around that mode has made it possible to travel much greater distances within an allotted time. This has allowed for daily activities to be located much further from one's home.

Transportation and Development Cycle -
Just as the transportation system impacts location and destination decisions, the location, mix, and design of destinations greatly impact the demand for the transportation system. Improved transportation systems allow greater accessibility between dispersed land uses. In turn, dispersed land uses require more travel and thus more demand for transportation infrastructure. The importance of the relationship between land use and transportation should not be underestimated. Land use patterns and development decisions are often seen as controlled solely by market forces, leaving public agencies to respond to the transportation demand created in their wake. However, public land use policies directly affect private land use decisions such as zoning regulations and minimum parking requirements. Therefore, land use policies need to be considered in relation to the impact of transportation just as transportation policies need to be considered in relation to land use. Transportation systems and land use patterns have a well-documented reciprocal relationship. As communities have grown, the demands for transportation system improvements have also grown. However, these transportation improvements have also provided more convenient access to land farther out, thus spurring further growth. More than any other transportation system, it has been the road network and the prevalence of the automobile that has impacted land use patterns over the past half-century.

Existing Land Use -
Land cover was used as a proxy for existing land use. This was done to achieve consistency in describing existing land uses throughout the area, since some communities have adopted land use plans that use slightly different categories to describe land uses.

Noteworthy land use patterns or issues include:

- Rivers divide the urbanized area between east and west and to a lesser extent from north to south.

- Development is not contiguous; in general, jurisdictions have their distinct areas of both residential and commercial development. In many cases, water, or undeveloped land separates communities from their neighboring community.
- Development corresponds to the freeway system.

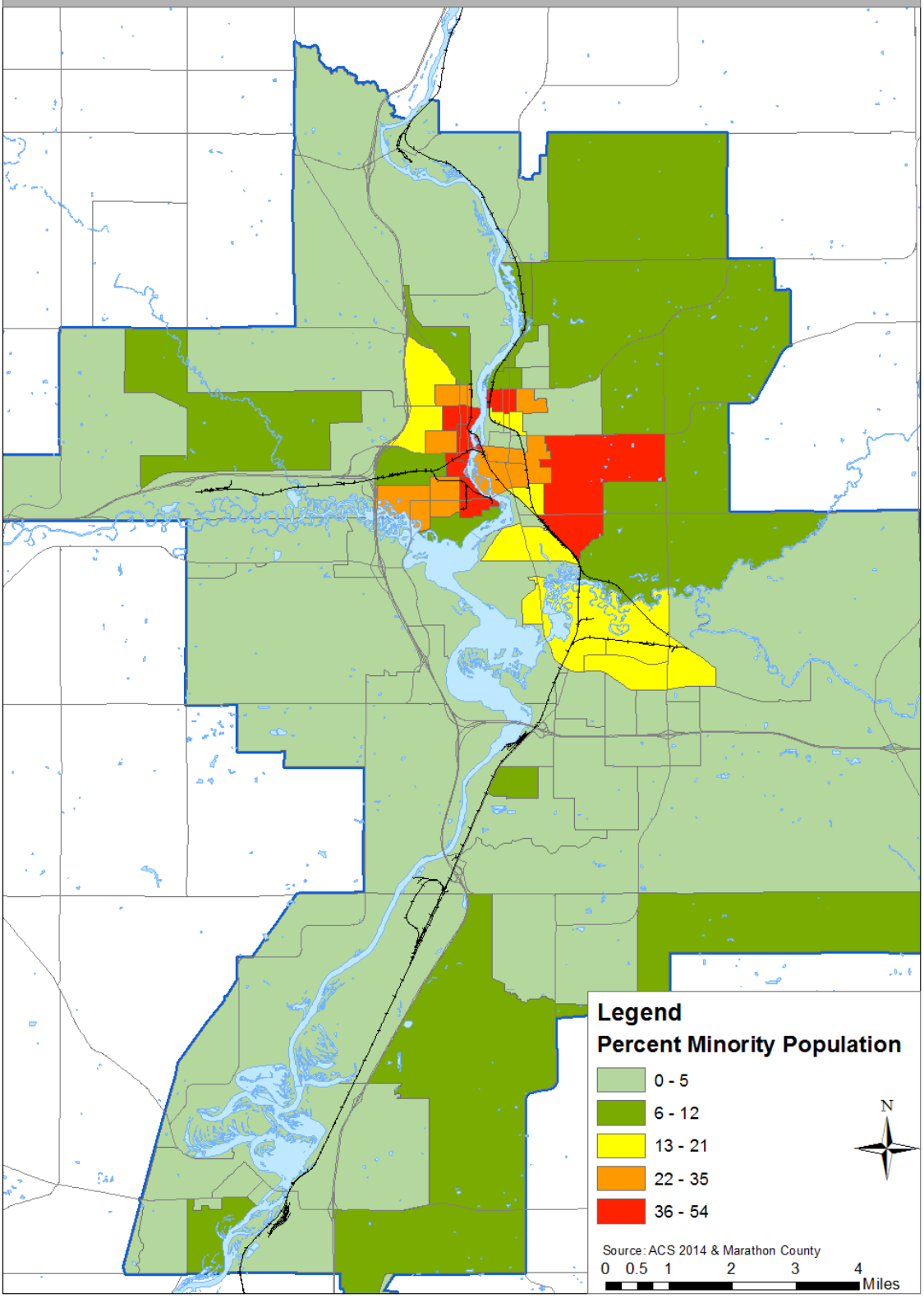
Minority Population -

The minority population of the planning area shows concentrations in the urbanized area, most notably in and near downtown Wausau (Map 3-4). The Title VI plan, which is publically available on the Wausau MPO website, address requirements of Executive Order 12898 and the DOT and FHWA Orders on Environmental Justice for persons belonging to any of the following groups: Black, Hispanic, Asian, American Indian and Alaskan Native, Native Hawaiian or Other Pacific Islander. The Asian population is by far the largest minority population in the area, accounting for seven percent (7%) of the MPA population. The total MPA minority population is about 10.5 percent (10.5%).

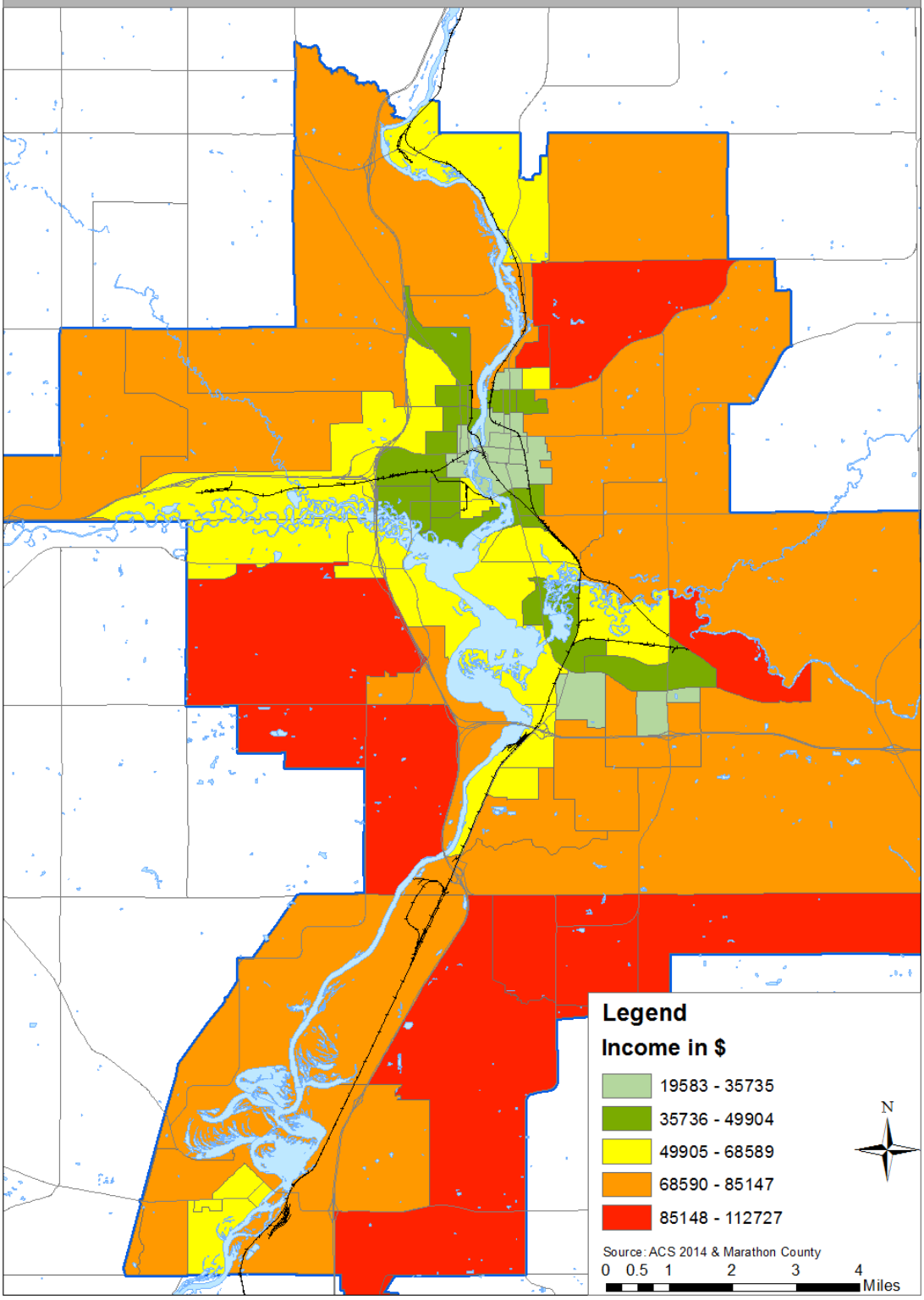
Low Income Populations

Low-income population is defined as a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines. A low income population is more likely to need alternate transportation options such as transit, paratransit, and non-motorized access. Map 3-5 shows concentrations of wealth in the suburban and outer reaches of the planning area.

Percent Minority Population by Census Block Group



Median Family Income by Census Block Group



CHAPTER 4 – TRANSPORTATION SYSTEMS

ROADWAYS

The Wausau Metropolitan area consists primarily of a grid pattern street system that is altered by the area's waterways and lakes. There are relatively few curvilinear streets and cul-de-sacs except where required due to topography. Within Marathon County, there are eight bridges that cross the Wisconsin River dividing the County between east and west. Seven of these crossings are within the Wausau Metropolitan Planning Area (MPA), three of which are within the city of Wausau. The Wausau urbanized area is connected to the surrounding rural areas by a system of State and County highways. I-39/USH 51 provides the primary north south route through the County. STH 29 is a mixed freeway/expressway facility that runs west to I-94 near Eau Claire and east to Green Bay. I-39/USH 51 and STH 29 are the main routes through the MPA and provide the main regional connection to other large urbanized areas. Most major traffic generators in Marathon County are located within the Wausau metropolitan area, although there is a significant amount of through-traffic. Much of the remainder of the County consists of rural agricultural lands and small villages generally served by two-lane State and County highways and local roadways.

FUNCTIONAL CLASSIFICATION

Roads are commonly classified in two ways: by ownership and by purpose. Jurisdiction refers to ownership of a particular road, while functional classification identifies the purpose of the road. A functionally classified road system is one in which streets and highways are grouped into classes according to the character of service they provide, ranging from a high degree of travel mobility to primarily a land access function. At the upper limit of the system (e.g., principal arterials) are those facilities that emphasize traffic mobility (long, uninterrupted travel), whereas facilities at the lower limits (e.g., local streets) are designed for land access.

Urban Functional Classification

Public streets and highways within Wisconsin's urban/urbanized areas are organized routes according to the character of service provided, ranging from travel mobility to land access. WisDOT has established criteria for determining the specific classifications assigned to streets and highways. These criteria include current ADT, land use service, spacing, and rural-urban interface. WisDOT uses the criteria to place the streets and highways within urban/urbanized areas into one of the following:

Urban Principal Arterials – Principal arterials serve major economic activity centers of an urban area, the highest Average Daily Traffic (ADT) corridors, and regional and intra-urban trip length desires. In every urban area, the longest trip lengths and highest ADT volumes are characteristic of the main entrance and exit routes. Because they have the longest trip lengths,

highest ADTs, and are generally extensions of the highest rural functional routes, such routes should be principal arterials.

Urban Minor Arterials – Urban minor arterials serve important economic activity centers, have moderate ADT volumes, and serve intercommunity trip length desires to interconnect and augment the principal arterial system. Trip lengths are characteristic of the rural-oriented traffic entering and exiting the urban area on the rural collector system. In conjunction with principal arterials, minor arterials should provide an urban extension of the rural collector system to the urban area's Central Business District (CBD) and connect satellite community CBDs with the main CBD.

Urban Collectors – Collectors provide direct access to residential neighborhoods, commercial, and industrial areas, and serve moderate to low ADT volumes and inter-neighborhood trips. As the name implies, these routes collect and distribute traffic between local streets and arterials. In the CBD and areas of similar development and traffic density, the collector system may include the street grid, which forms the logical entity for traffic circulation. Generally, the travel mobility and land access functions of collectors are equal.

Urban Local Streets – Urban local streets predominantly serve to access adjacent land uses, serving as the ends of most trips. All streets not classified as arterials or collectors are local function streets.

Within an urban/urbanized areas, no more than 35 percent of the total pubic roadway systems should be classified as principal arterials, minor arterials, and collectors. WisDOT desires 65 to 80 percent of the roadways within these systems to be classified as local.

Rural Functional Classification

Rural areas are the places in the state located outside of urban and urbanized areas. Roads and highways in these places are classified under WisDOT's rural functional classification criteria. Based on these criteria, rural roads and highways are classified into one of the following:

Rural Principal Arterials – Principal arterials serve corridor movements having trip length and travel density characteristics of an interstate or interregional nature. These routes generally connect urbanized areas and urban areas.

Rural Minor Arterials – Minor arterials, in conjunction with principal arterials, serve moderate to large-sized places (cities, villages, towns, and clusters of communities), and other traffic generators providing intra-regional and inter-area traffic movements.

Rural Major Collectors – Major collectors provide service to smaller to moderate sized places and other intra-area traffic generators, and link those generators to nearby larger population centers (cities, villages, and towns) or higher function routes.

Rural Minor Collectors – Minor collectors provide service to all remaining smaller places, link the locally important traffic generators with their rural hinterland, and are spaced consistent with

population density so as to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road.

Rural Local Roads – Local roads provide access to adjacent land and provide for travel over relatively short distances on an inter-township or intra-township basis. All rural roads not classified as arterials or collectors will be local function roads.

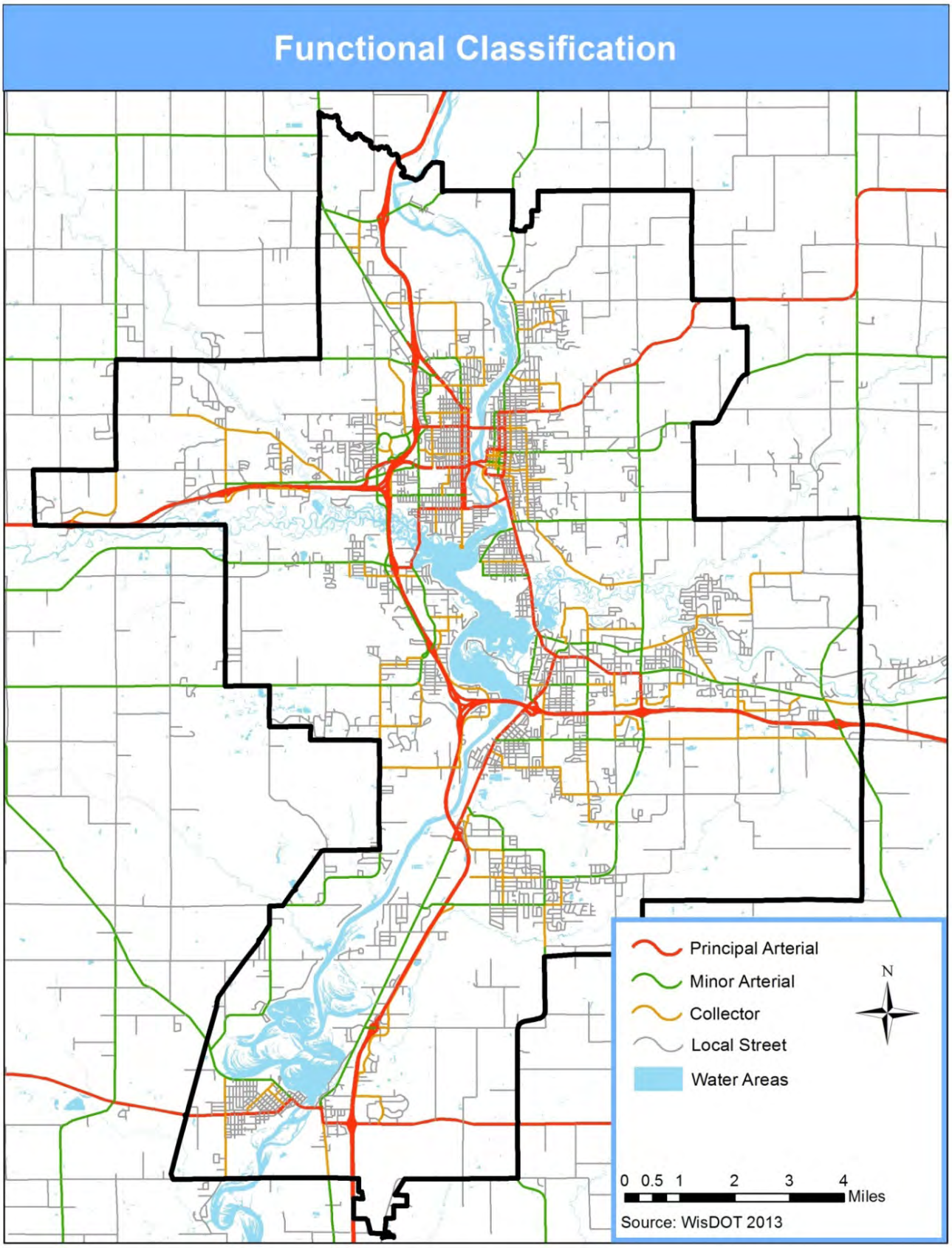
ROADWAY JURISDICTION AND FUNCTIONAL CLASSIFICATION BY MUNICIPALITY

The Functional Classification map, Map 4-1, illustrates the Wausau MPO's functional classification system. The linear miles of roadway by jurisdiction is important in assessing maintenance and reconstruction costs. Similarly, the functional classification associated with roadways relates to the standards to which those roadways are constructed and the associated costs. The Table 4-1 indicates linear roadway mileage by functional classification and County and local jurisdiction for each municipality within the Wausau MPA.

Table 4-1
Linear Roadway Mileage by Functional Classification

	County Jurisdiction				Municipal Jurisdiction			
	Arterial	Collector	Local		Arterial	Collector	Local	Total
Village of Maine	0.74	16.39				11.94	62.5	74.44
Town of Mosinee		16.57				3.25	44.71	47.96
Town of Rib Mountain	7.36	5.83			2.71	11.46	57.17	71.34
Town of Stettin		11.94			0.58	9.64	61.29	71.51
Town of Texas	0.29	20.8				12.52	45.25	57.77
Town of Wausau	1.9	12.47				3.24	53.02	56.26
Town of Weston	2.85	3.35				3.05	12.46	15.51
Village of Brokaw		1.3					2.52	3.82
Village of Kronenwetter	2.6	5.81			6.13	6.84	90.01	102.98
Village of Rothschild	0.9	0.65			4.13	5.17	30.88	40.18
Village of Weston	6.25	0.68			9.04	18.71	88.63	116.38
City of Mosinee					3.13	4.36	34.35	41.84
City of Schofield	0.11				2.15	1.73	12.14	16.02
City of Wausau	1.95				23.89	28.33	159.74	211.96
Marathon County Total	24.95	95.79			51.76	120.24	754.67	927.97

Map 4-1


Functional Classification
Principal Arterial
Minor Arterial
Collector
Local Street
Water Areas
N
0 0.5 1 2 3 4
Miles
Source: WisDOT 2013

System Traffic Volumes

Average Annual Daily Traffic (AADT) volumes for the Wausau MPA were obtained from WisDOT for 2016[1], the most recent year available for this project.

In the Wausau urbanized area, the freeways and other principal arterials carry the highest traffic volumes. The highest observed traffic volumes in the metro area are along the section of freeway where STH 29 and USH 51 merge and the County Highway N exit. Traffic volumes along this segment averaged about 60,400 vehicles per day in 2016.

ROADWAY INFRASTRUCTURE

Through-Traffic Lanes

The majority of the roads within the MPA, whether local or county, are two-lane roads with traffic flowing in both directions. State Highways are primarily two and four-lane roads, however, some highway sections of USH 51/STH 29 are six lanes wide. Downtown Wausau also contains sections of three-lane, one-way roads.

Bridges

The Roadway Infrastructure map, Map 4-2, also illustrates structures (e.g. bridges), and railroad crossings within the MPA. The most recently upgraded bridges are the STH 153 Wisconsin River bridge in Mosinee and Fox Glove Road bridge over I-39 in Rib Mountain.

Railroad Crossing

At-grade railroad crossings present safety concerns. As the number of trains and/or the amount of road traffic increases, safety concerns increase due to greater exposure. WisDOT's Bureau of Transit, Local Roads, Railroads & Harbors have looked at criteria for determining what types of warning devices should be at crossings or if crossings should be grade-separated. The factors considered in the past have included:

- Number and speed of trains per day
- Amount of vehicle traffic
- Number of lanes of traffic
- Speed of traffic
- Amount of commercial traffic and school buses
- Sight distances
- Accident history

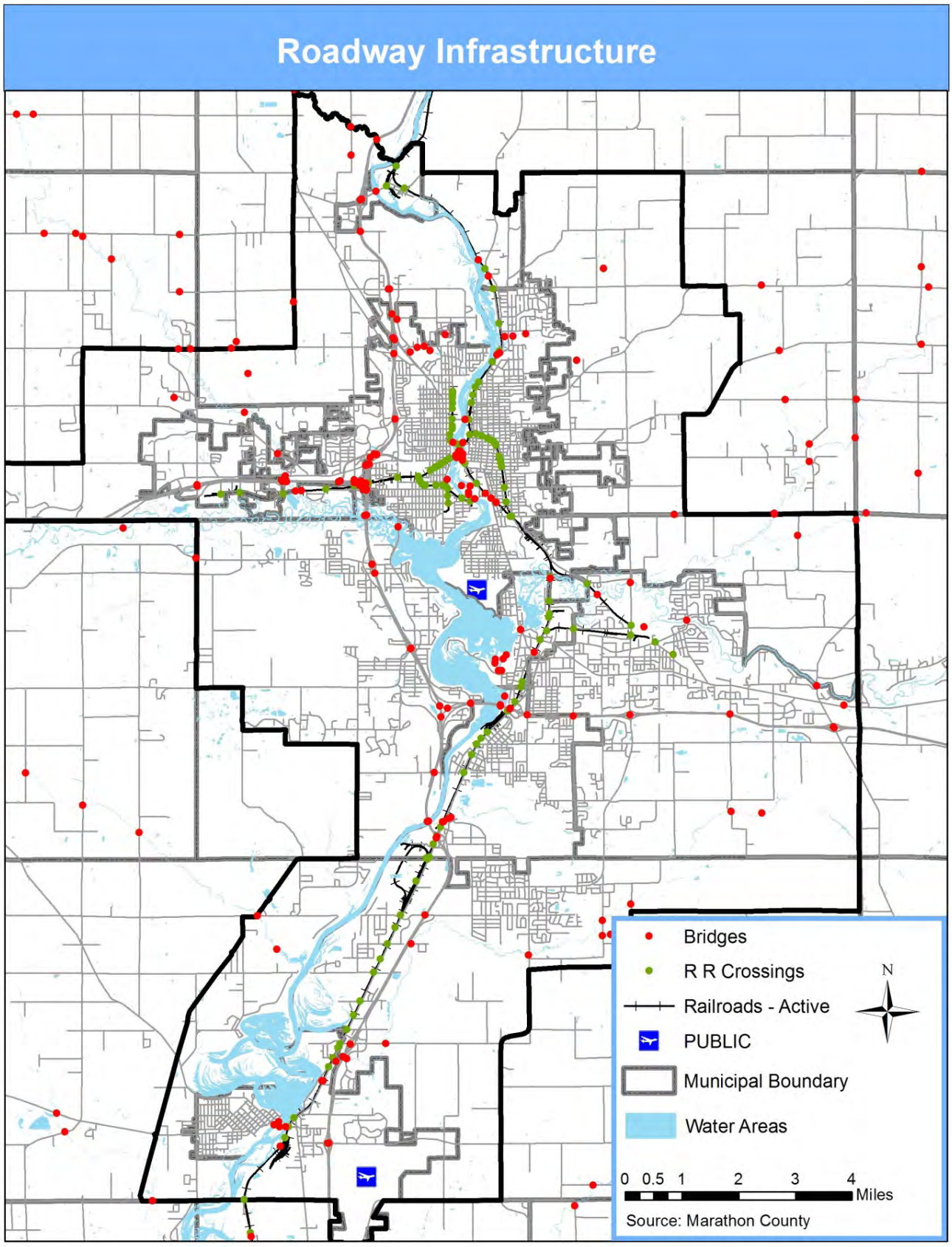
There are over 140 at-grade railroad crossings in the MPA.

Traffic Capacity Deficiency

The traffic capacity deficiency analysis utilizes a numeric Level of Service (LOS) value and a Level of Service threshold as described in WisDOT's Facilities Development Manual (FDM) to determine roadway deficiency. This more complex method incorporates an adjusted traffic

[1] All 2016 counts within the MPA are preliminary and subject to possible adjustment by WisDOT. These counts will be finalized by spring of 2017.

Map 4-2


Roadway Infrastructure
Bridges
R R Crossings
Railroads - Active
PUBLIC
Municipal Boundary
Water Areas
N
0 0.5 1 2 3 4
Miles
Source: Marathon County

forecast value, an operationally sensitive roadway capacity and a sliding deficiency determination based on the importance of the roadway within the overall transportation system. The detailed analysis of the travel deficiency in the Wausau MPA is found in Chapter 5.

Pavement Conditions

WisDOT requires all incorporated communities to prepare a Pavement Management Plan (PMP) using a pavement rating system for their local roads. A pavement rating system is an essential tool for identifying roadway maintenance priorities. The Pavement Surface Evaluation Rating system (PASER) is the system used most by Wisconsin communities and is a simplified management program for evaluations of surface pavement conditions. PASER rates road surfaces on a scale ranging from 1 to 10; 1 being the worse (i.e. failed) and 10 being the best (i.e. new construction).

The rating system provides an assessment of the appropriate maintenance method for local and county roads and Map 4-3 illustrates the pavement surface ratings provided from the Wisconsin Information System Local Roads (WISLR) database for roads within the Wausau MPA. WisDOT does not include pavement condition data for State highways in the WISLR database.

Maintaining current and accurate pavement condition data helps municipalities schedule roadway improvements and budget for future funding needs.

MULTI-MODAL TRANSPORTATION

Transit

The Wausau Area Transit System provides public transportation services in the Wausau area. In 2008, WATS changed its name to Metro Ride and is the only public transit service available to the general public within the MPA. In 2012, the village of Weston discontinued service which also eliminated service to the village of Rothschild and city of Schofield. Limited service was restored in 2013 but discontinued by Weston again in 2015. Currently, Metro Ride only services the city of Wausau.

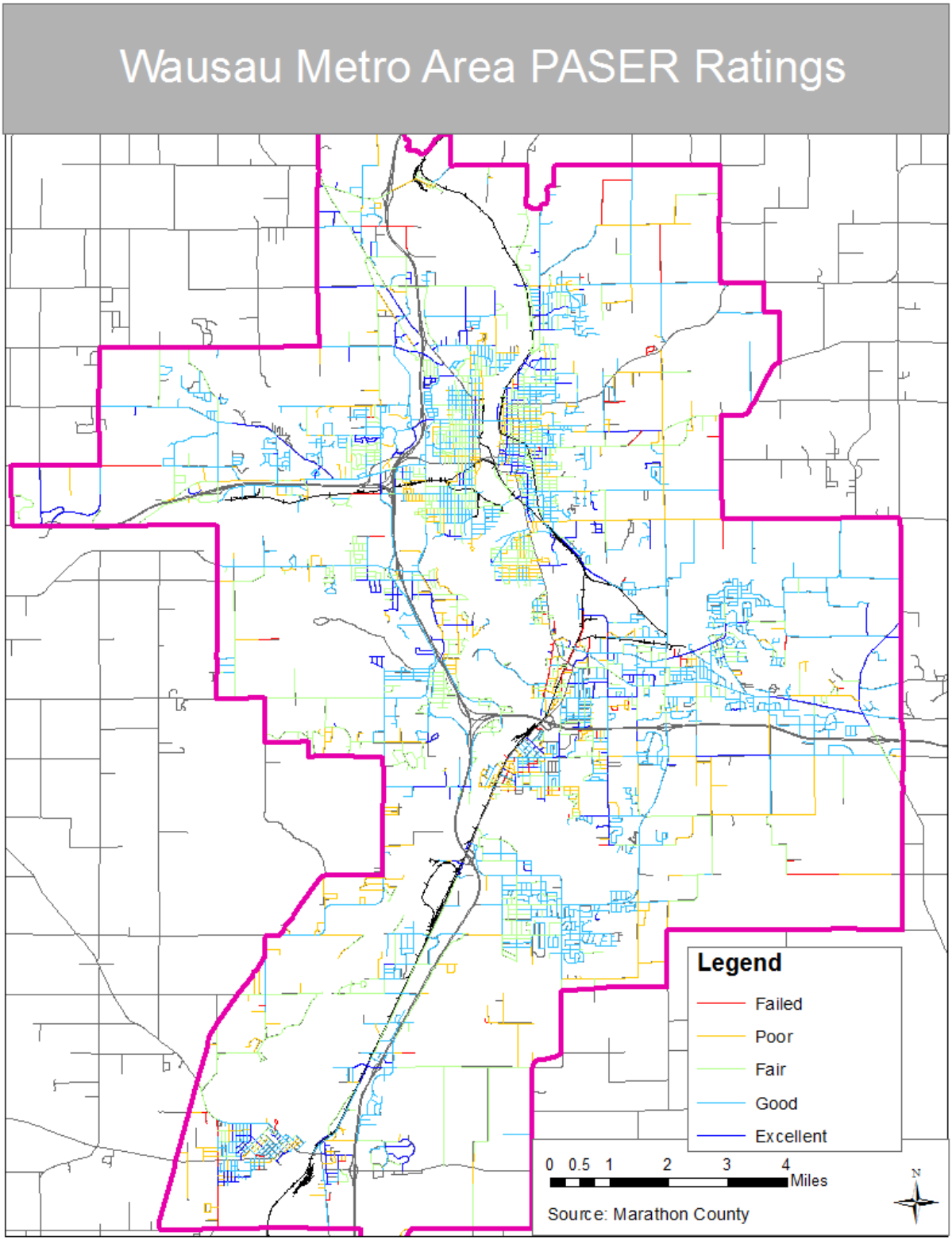
Transit Routes

Service includes seven fixed bus routes, as well as a curb-to-curb van paratransit service for the disabled. During the school year, ten express routes are offered. The routes are designed primarily for secondary school students getting to and from school without the need to transfer downtown. However, all express routes are available to the general public.

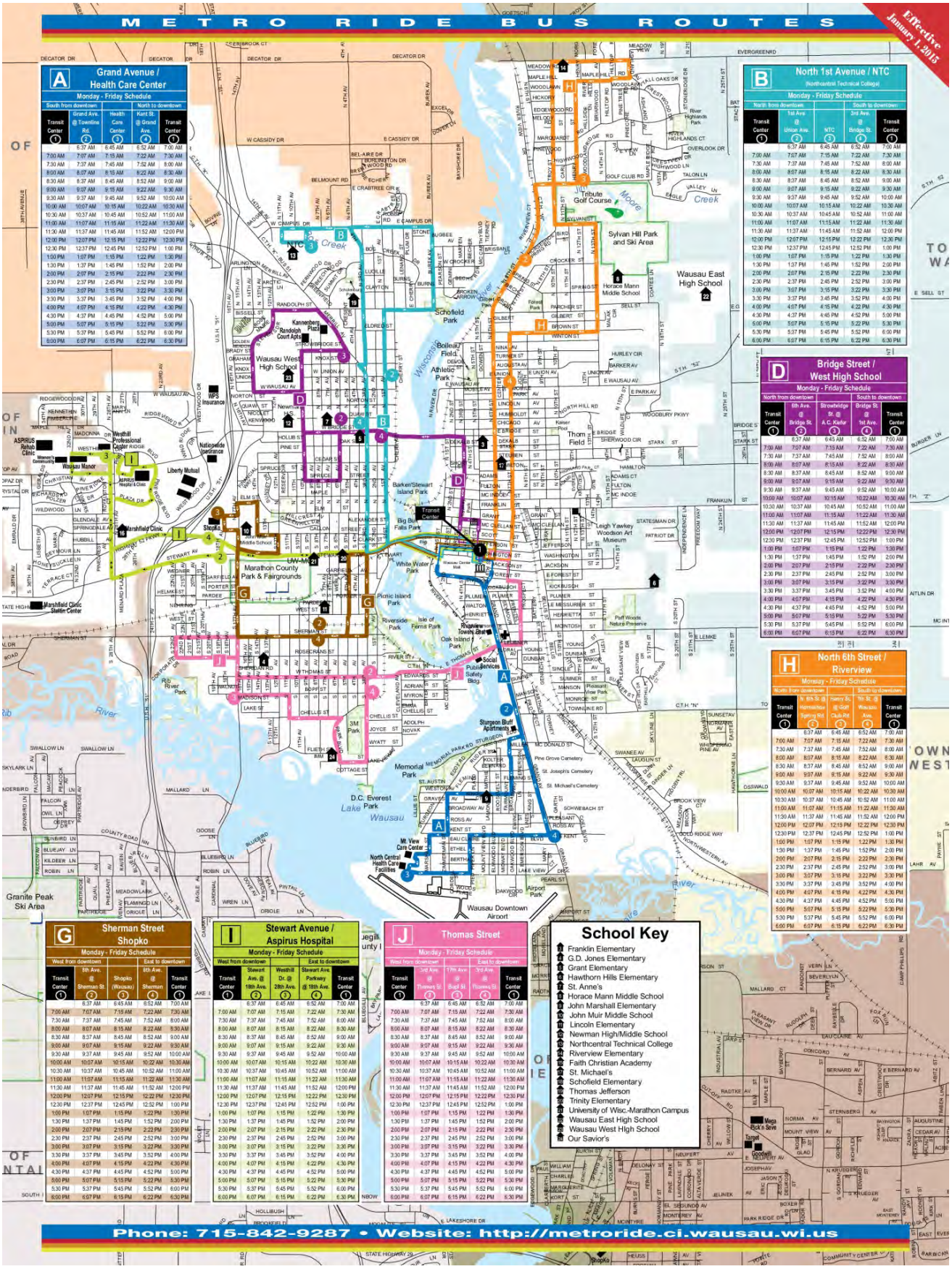
Regular Fixed Route Service

Regular fixed route service refers to the regularly scheduled daily transit routes that operate during normal operating hours and days. Metro Ride operates seven regularly scheduled fixed bus routes in the city of Wausau, which run at 30 minute intervals. These routes are illustrated on Map 4-4.

Map 4-3


Wausau Metro Area PASER Ratings
Legend
Failed
Poor
Fair
Good
Excellent
0 0.5 1 2 3 4
Miles
Source: Marathon County
N

Map 4-4


METRO RIDE BUS ROUTES
Effective January 1, 2018
A Grand Avenue / Health Care Center
Monday - Friday Schedule
B North 1st Avenue / NTC
(Northcentral Technical College)
Monday - Friday Schedule
D Bridge Street / West High School
Monday - Friday Schedule
H North 6th Street / Riverview
Monday - Friday Schedule
G Sherman Street Shopko
Monday - Friday Schedule
I Stewart Avenue / Aspirus Hospital
Monday - Friday Schedule
J Thomas Street
Monday - Friday Schedule
School Key
Franklin Elementary
G.D. Jones Elementary
Grant Elementary
Hawthorn Hills Elementary
St. Anne's
Horace Mann Middle School
John Marshall Elementary
John Muir Middle School
Lincoln Elementary
Newman High/Middle School
Northcentral Technical College
Riverview Elementary
Faith Christian Academy
St. Michael's
Schofield Elementary
Thomas Jefferson
Trinity Elementary
University of Wisc-Marathon Campus
Wausau East High School
Wausau West High School
Our Savior's
Wausau East High School
Wausau West High School
Sylvan Hill Park and Ski Area
Tribute Golf Course
Marathon County Park & Fairgrounds
Granite Peak Ski Area
Wausau Downtown Airport
Phone: 715-842-9287 • Website: http://metroride.ci.wausau.wi.us

Service Operation and Cost

Metro Ride provides service between 6:30 a.m. and 6:30 p.m. Monday through Friday. There is no service on weekends and holidays. The fare structure is listed in Table 4-16 below.

Table 4-2
Metro Ride Fares

Fare Category	Cash	Tokens	Tickets	Monthly Pass
Adults	$1.75	10 for $10.00	n/a	$38.00
Senior Citizens/Disabled	$0.85	n/a	n/a	$19.00
Students	$1.50	n/a	10 for $8.50	$19.00
Metro Ride Paratransit	$2.25	n/a	n/a	n/a

Transit Planning

The most recent Transit Development Plan (TDP) was completed in May of 2012, later than the projected 2011 completion date due to the changes in the service area. A new plan is scheduled for 2017.

Paratransit Services

Metro Ride provides demand responsive origin-to-destination van service for eligible persons who are unable to use the standard fixed routes. The service area is defined as any area within ½ of a mile from any regular bus route in the city of Wausau. North Central Health Care

(NCHC) is contracted by Marathon County to provide demand responsive van service to the wider metro area and county. Reservations must be made at least one day prior to the requested trip.

Pedestrians

The MPO has a Bicycle and Pedestrian Committee that meets monthly and a Bicycle and Pedestrian Master Plan that was approved in 2015 that addresses pedestrian facilities and issues within the MPA in much greater detail.

Walking is often overlooked and undervalued as a transportation mode. Within the MPA, according to the US Census, commuting via walking is the highest in the city of Wausau, specifically in the older neighborhoods near downtown. The US Census walking figures do not include recreational trips or trips for other purposes. Pedestrian infrastructure must often serve a dual purpose by accommodating wheelchair access in line with requirements set forth by the American with Disabilities Act (ADA). Requirements for pedestrian facilities within the Wausau MPA vary by municipality. Municipalities within the urbanized area generally do not require sidewalks in residential areas. The village of Rothschild is the exception, requiring sidewalks within new residential developments. The village of Weston has adopted a Complete Streets policy. The city of Wausau addresses the issue of sidewalks with developers on a case by case basis and the Town of Rib Mountain has a sidewalk policy for commercial areas. However, interest in creating walkable neighborhoods and downtown areas has been increasing.

Compliance with the American with Disabilities Act for MPO communities will take a prominent role in the coming years due to an enforcement emphasis by the Department of Justice. This will require an inventory of pedestrian infrastructure, local government accessibility and compliance plans for the larger communities.

Further details on pedestrian challenges, opportunities and recommendations can be found in the Wausau MPO Bicycle and Pedestrian Master Plan.

Bicycle and Multi Use Trails

The MPO's Bicycle and Pedestrian Committee and Bicycle and Pedestrian Master Plan also address bicycle facilities and issues within the MPA. In 2015, the Wausau Metro Area was designated a Bronze-level Bicycle Friendly Community by the League of American Bicyclists.

Bicycling can serve a recreational function, a health function and a transportation function. Bicycling, as a mode of transportation, is likely to be most viable within more densely developed urban areas, provided safe bicycling routes are available to desirable destinations.

Bicyclists vary by age, experience and knowledge, attitudes toward traffic, physical fitness levels, and reasons for riding (e.g. recreational trips, commuting, shopping, or exercise). Because of these differences, bicycle facilities that are appropriate or desirable for some riders may not be appropriate or desirable for other riders. An experienced bicyclist may be very comfortable and prefer to ride in mixed traffic whereas more casual bike riders may prefer to stay on dedicated trails and local roads.

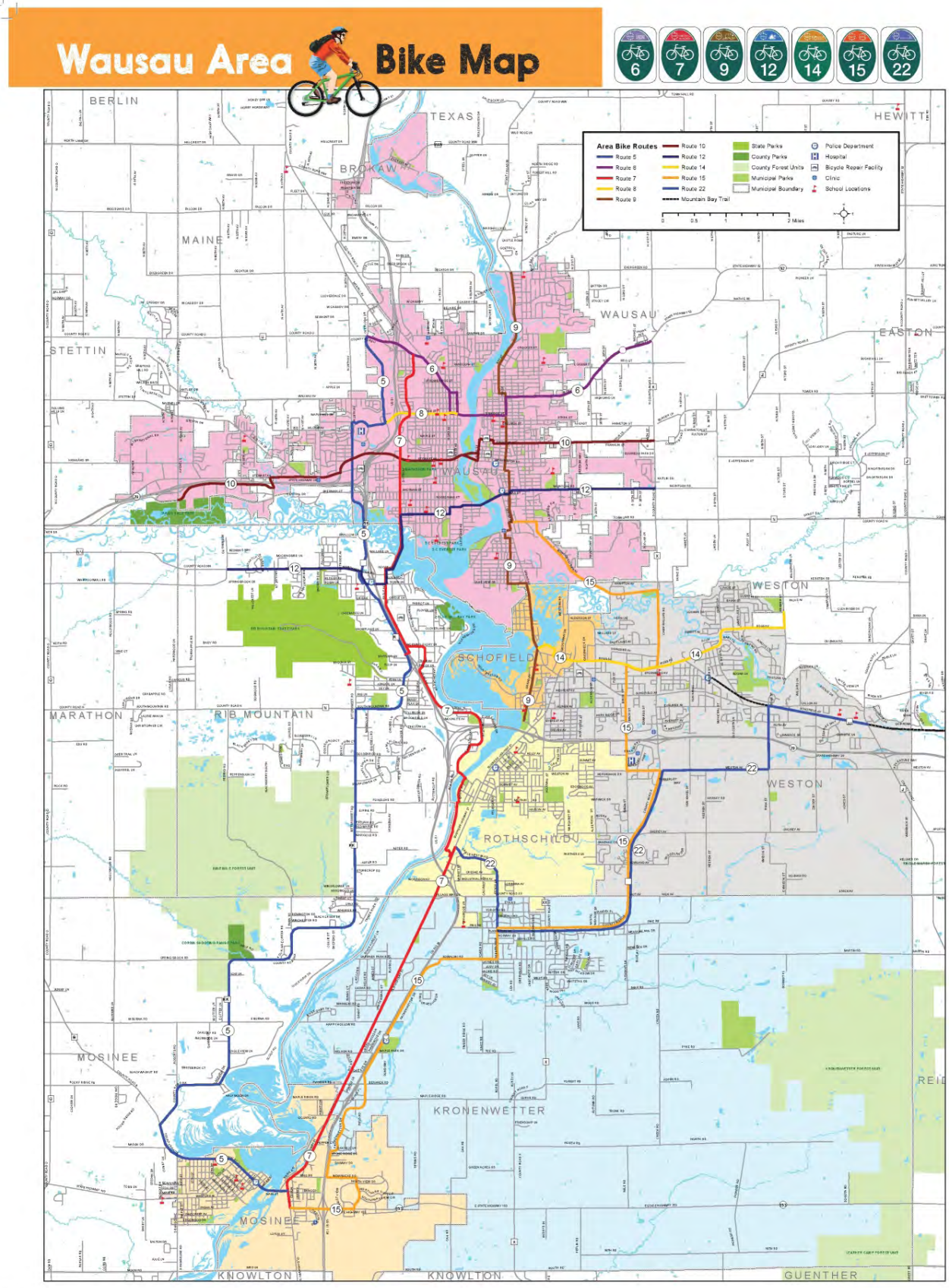
On-Street Bicycle Facilities

The current Bicycle and Pedestrian Master Plan outlines recommendations for all levels of cyclists and provides priority projects that help overcome geographic or system barriers. On-street bicycle facilities provide some of the most cost-effective alternatives for providing accommodations for bicyclists. One of the difficulties with creating on-road facilities is finding enough road width space to provide both safe and convenient routes that offer good access to major destinations. Bicyclists need access to major arterials which often serve as the shortest and fastest routes to key destinations or they need convenient parallel routes where busy arterials cannot accommodate safe bicycle facilities. Bicyclists should be accommodated along arterials for bicycling to be a viable mode of transportation for commuting and other trip purposes. On-street bicycle facilities also serve as important connections between existing and future off-street bicycle facilities. Off-street bicycle facilities are great for recreational bicycling but often do not provide access to destinations needed for most bike trips.

Multi-Use Trails

Well-planned and designed multi-use trails/paths can provide good pedestrian and bicycle mobility. The trails/paths can serve both commuter and recreational cyclists. Marathon County and the village of Weston are working to expand a portion of the existing railroad line from the

Map 4-5


Wausau Area Bike Map
6
7
9
12
14
15
22
Area Bike Routes
Route 5
Route 6
Route 7
Route 8
Route 9
Route 10
Route 12
Route 14
Route 15
Route 22
Mountain Bay Trail
State Parks
County Parks
County Forest Units
Municipal Parks
Municipal Boundary
Police Department
Hospital
Bicycle Repair Facility
Clinic
School Locations
0
0.5
1
2 Miles
BERLIN
TEXAS
HEWITT
BROKAW
MAINE
WAUSAU
EASTON
STETTIN
WESTON
SCHOFIELD
MARATHON
RIB MOUNTAIN
ROTHSCHILD
MOSINEE
KRONENWETTER
KNOWLTON
GUENTHER

Mountain Bay Trail trailhead to Camp Phillips road. This has been hampered by the encroachment of several buildings on the trail right-of-way. Additional trail mileage is planned for the Old Hwy 51 corridor in the village of Kronenwetter and extensions of the River's Edge Trail along the east bank in the city of Wausau. In 2017, the city of Mosinee will construct a new multi-use trail along the Wisconsin River.

REGIONAL PASSENGER TRANSPORTATION

Air Passenger Service

Two airports serve the Wausau MPA, the central Wisconsin Airport (CWA) located in Mosinee and the Wausau Municipal Airport located in Wausau. The CWA is a regional airport that offers daily flights on regional connector services that link to flights in Minneapolis, Detroit and Chicago. The Wausau Municipal Airport provides general aviation services and is large enough to handle corporate jets, charters, and privately owned aircraft.

Central Wisconsin Airport (CWA) – CWA is classified as an Air Carrier/Air Cargo airport, which means it is designed to accommodate virtually all aircraft up to, and in some cases including, wide body jets and large military transports. CWA is one of nine airports in Wisconsin that provide scheduled commercial air passenger service on a year-round basis. The CWA is conveniently accessible to the Wausau metropolitan area via I-39. It also draws customers from the larger Central Wisconsin region, including the Stevens Point and Marshfield areas. The airport completed a $10 million renovation in 2016 and is jointly owned by Marathon and Portage counties.

Wausau Municipal Airport**–** the Wausau Municipal Airport is owned by the city of Wausau and provides general aviation services and is fully equipped to receive large corporate jets, charters, and privately owned aircraft. The Wausau Municipal Airport is located in the city of Wausau along the southern boundary shared with the city of Schofield. US Business 51/Grand Avenue is the primary access route to the airport. The airport is located along the Wisconsin River and occupies a substantial amount of riverfront property. The airport's location along the river provides for the Wausau Seaplane Base, which adjoins the Wausau Municipal Airport.

Inter-City Bus

Inter-city passenger bus service is currently provided by Lamers Bus Lines between the Wausau and Milwaukee, via Stevens Point and Appleton. Greyhound Bus Lines provides services between Wausau and Minneapolis along the STH 29 corridor.

FREIGHT TRANSPORTATION

All of the roadways discussed are transportation facilities that serve a vital role in the movement of goods and freight through the Wausau Metropolitan area. Major highway facilities, rail lines and connections, and inter-modal facilities are essential components of freight transportation. These facilities, as related to freight, are described in this section.

Freight Movement

The movement of freight in and out of the Wausau MPA occurs via three modes: rail, truck and air.

Shipping large quantities of low value goods over long distances is most cost effective by rail, assuming travel time is not a high priority as shipping by rail is slower than other modes. Air freight is often only cost effective for goods that have high-value in relation to their volume or are more time sensitive or both. Trucks tend to be more cost-effective for shorter distances such as intra-state shipments. Still, many finished goods and perishables are transported cross country. Freight movement via truck is more flexible than rail given the extensive roadway infrastructure and smaller cargos.

Goods shipped to or from outside the state, including neighboring states, relies more heavily on rail. For Marathon County the inbound shipments by weight from outside Wisconsin have an approximate 80/20 split between rail and truck, respectively. Outbound shipments by weight have roughly a 40/60 split between rail and truck, respectively. Air freight within the County accounts for only a small volume of freight ton shipments for both inbound and outbound freight ton movements. Internal shipments refer to shipments that originate and terminate within the state of Wisconsin. Inbound-internal shipments terminate within Marathon County while outbound-internal shipments originate within the County. External shipments originate or terminate in a state or country other than Wisconsin.

Internal shipments are fairly dispersed throughout the state with the largest population areas receiving more goods from Marathon County. A larger portion of goods shipped to Marathon County are from rural areas of the State.

Trucks

Trucks handle almost 90 percent of all freight tonnage shipped within Wisconsin, serving businesses and industries of all sizes and in all parts of the state. Heavy trucks accounted for 15 percent of all trips crossing the parameter of the Wausau planning area.

The designation of truck routes within municipal areas allows for the community to direct truck traffic to roads that are best suited for this type of use. However, jurisdictions cannot prohibit trucks from publicly funded roadways. There are, however, some access constraints due to weight-limit restrictions on some County and local roadways and bridges. The TIMBER Act, which removes weight limits for logging trucks on a 12 mile stretch of Interstate in the Wausau MPA, was introduced for consideration in the US House of Representatives in October 2015. This rule change would allow large logging trucks to avoid local and county roads which they are now required to use.

The city of Wausau is the only municipality to designate truck routes on local roads within the city.

Rail Freight

Rail is an efficient and cost-effective mode for long distant freight shipping, particularly for low value bulk commodities, such as coal, timber, and grain. With the advent of multi-modal shipping, containerization of freight, and trailers on train flatcars, railroads have experienced resurgence since the 1980s. Once relegated to moving primarily bulk commodities, freight railroads are moving more finished goods. A benefit of shifting freight from trucks to rail is that is reduces the amount of truck traffic on the highways creating more room for other vehicle traffic. Less truck traffic also translates into less wear and damage to publicly funded roads.

Rail Facilities and Service

All of the tracks in the Wausau Metropolitan Area are owned and operated by Canadian National (CN) railroad. The only active rail line through the Wausau Metropolitan Area runs roughly parallel to the Wisconsin River and I-39/US 51 corridor through Marathon County. This line connects to the city of Mosinee; where there are rail yards serving the Mosinee Paper Mill, and the Village of Rothschild with the Domtar Paper Mill, and the WPS Power Plant. Another spur parallels STH 29 west of US 51 and serves the Wausau West Industrial Park. Rail spurs currently allow access to rail freight movements for the industrial areas located within the city of Wausau. Right-of-way for the corridor east of Camp Phillips Road in the village of Weston was abandoned and used to develop the Mountain-Bay State Trail running between the village of Weston and the city of Green Bay.

Air Freight

One point of access currently exists within the MPA for the potential movement of goods via airfreight services. Nine airfreight and express flights occur daily at the Central Wisconsin Airport (CWA). The airport is directly accessible via Interstate 39 and is located in the city of Mosinee. The airport facilities are currently large enough to handle any reasonable increase in airfreight traffic.

Freight in the Future

Continued increases in truck traffic will mean greater wear and tear on highways and greater congestion impacts. More truck traffic will also require greater attention to truck access to destinations within communities. Additional rail traffic may be market and resource (oil, lumber) dependent. There is also the possibility of unmanned aerial drones being utilized for small or medium freight deliveries. Legislation and regulations should be updated to keep abreast of this and other new technologies.

FUTURE TECHNOLOGIES

Autonomous Vehicles

In recent years, autonomous vehicles have moved from the pages of sci-fi novels and military research projects to the real possibility of becoming a viable option for most consumers. Google, Tesla, and most major automobile manufacturers have started developing self-driving car technology. Legislation and policy on the state and federal level is progressing but is likely

moving slower than technology. In January 2016, U.S. Transportation Secretary Anthony Foxx updated the previous National Highway Traffic Safety Administration's (NHTSA) 2013 policy statement on autonomous vehicles in order to spur development and remove regulatory roadblocks. Currently, there are ten states that have enacted legislation or an executive order that authorized the operation of autonomous vehicles.

The transportation planning opportunities with this technology are numerous. The possibility of a reduction or elimination of driver error could save countless lives that are lost every year in automobile related crashes. Freight vehicles could reduce costs of the movement of goods reducing the need for drivers of which there is a current shortage. There are still many issues to solve with the technology and legislation that will need to be addressed. The assignment of liability, to the owner/passenger/manufacturer, in a crash will have to be determined. Interaction with non-vehicles (pedestrians, bicycles) using the roadway could prove problematic. The National Association of City Transportation Officials (NACTO) recently released policy recommendations on how automated vehicles should behave in cities including limiting them to a maximum speed limit of 25 miles per hour. Automated vehicles present many opportunities but will take time, technology, and legislation to create a safe user environment for all road users. The Wausau MPO will continue to keep abreast of the technology and legislation related to this topic and inform member communities of appropriate measures.

CONCLUSION

This chapter covered the major components that make up the Wausau MPA's transportation system, including roadways, transit, bicycles, pedestrians, regional passenger systems, and freight. The chapter provided a summary of travel behaviors on the system in order to better understand how the transportation system is used. The information included provides a greater understanding of the strengths and weaknesses of the area's transportation system in order to determine how best to achieve the plan's goals and objectives.

CHAPTER 5 – TRAFFIC MODEL ANALYSIS

OVERVIEW

The purpose of this chapter is to review future conditions in the Wausau Metropolitan Planning Area primarily as they relate to the demand for transportation. Growth in population and employment are two of the driving forces impacting the transportation demand. These two factors serve as inputs to the travel demand model for forecasting future transportation demand. A third input factor is land use, where different types of households and employment are located. This chapter will examine the forecasted travel demand calculated from the area's travel demand model.

Based on socioeconomic and land use data, the Travel Demand Model calculates the number of vehicle trips, where these trips are coming from and going to, and then chooses the routes these vehicle trips would take on the model's roadway network. The model is created using 2010 base year data and calibrated with actual traffic counts from 2010 to replicate existing traffic conditions. 2015 is the base year for developing the Wausau model from a traffic count and population basis. Employment and land use information were taken from sources noted in previous sections of this plan.

The projected model developed was based on 2050 population, households, and employment projections within the MPA.

CAPACITY DEMAND VS LEVEL OF SERVICE

Models from the previous Long Range Transportation Plan's measurement for roadway deficiency were based on the concept of Capacity Deficiency. This method focused on the roadway design and the calculated capacity versus projected/actual traffic. For example, the model would indicate a deficiency if the volume was approaching the designed limits of a two lane collector. However, this does not measure the performance of the roadway as related to travel delay and could lead to overbuilding.

The current model uses a standard called Level of Service (LOS) which measures the performance of the roadway by incorporating not only the roadway design but by measuring the projected travel delay. The Level of Service models uses many of the same inputs and projected traffic counts. This produces a measure of the quality of traffic service related to speed, density, etc. in an easy to understand standard using letters A (free-flowing traffic) through F (forced or breakdown flow). It should be considered that LOS measures how well vehicles move and does not take into account the number of people in those vehicles. For example, a full bus would count the same as a single-occupancy vehicle.

COMMITTED ROADWAY PROJECTS

Roadway projects receiving state and federal funds for 2015-2019 are listed in Table 5-1 and shown on Map 5-1. A more comprehensive list of all roadway projects on all roads in the planning area may be found in the annual Transportation Improvement Program report. A copy of which can be found on the Wausau MPO website.

Table 5-1

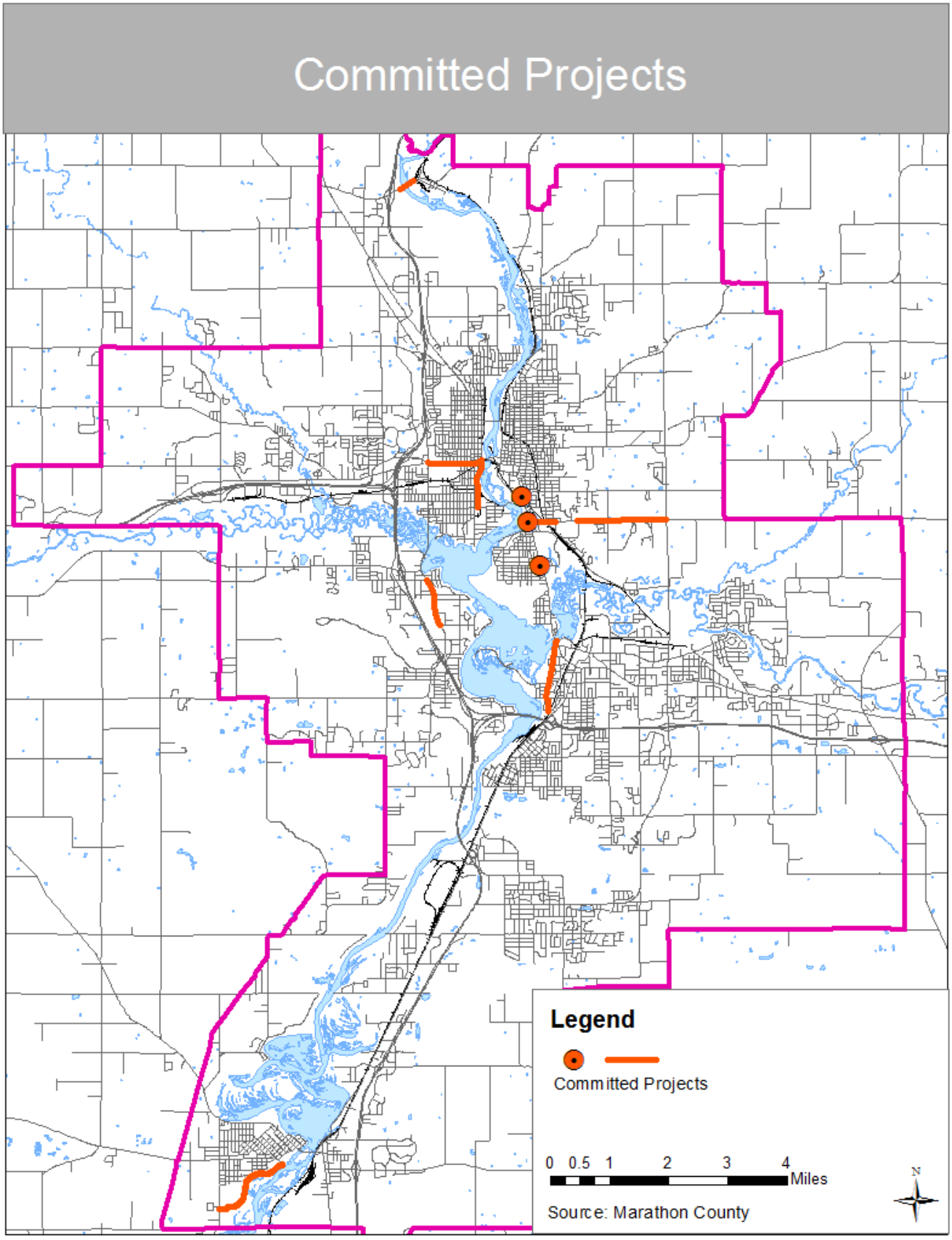
Committed Roadway Projects 2016 - 2019			
Roadway	**To/From**	**Description**	**Community**
US Highway 51	Wausau/Merrill	Bridge Rehab	State of WI
State Highway 29	Wausau/Wittenberg	Maintenance/Preservation	State of WI
Business 51	Grand Avenue	Recondition	City of Wausau
State Highway 52	17th Ave/1st Ave	Resurface	City of Wausau
County Highway WW	Wisconsin River Bridge	Redeck	Village of Maine
West Grand Ave	Kort St/Grand Ave	Resurface	City of Schofield
Riverwoods Trail	Chuck's Landing/Rangeline Road	Construction	City of Mosinee
1st Avenue	Thomas St/Stewart Ave	Reconstruction	City of Wausau
Townline Road	Grand Ave/Northwestern Ave	Reconstruction	City of Wausau
Rib Mtn Drive	County Hwy N	Pedestrian Facility	Town of Rib Mountain
Rib Mtn Drive	Cloverland/Robin Lane	Resurface	Town of Rib Mountain
Townline Road	Skyline Dr/CTH X	Reconstruction	Marathon County

CURRENT LEVEL OF SERVICE MODEL

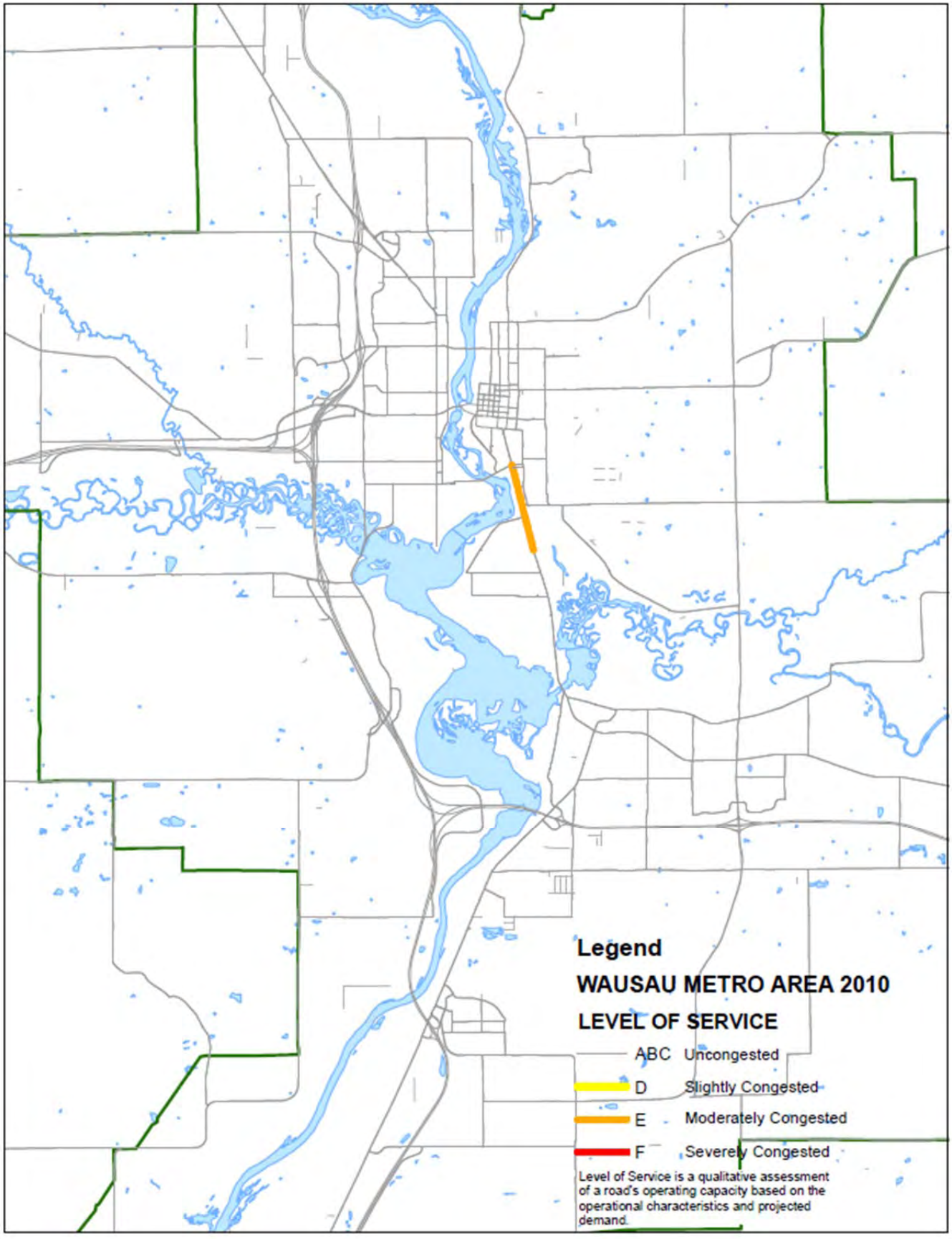
The travel demand model for the Wausau MPA (Map 5-2) was adjusted in 2015 using the latest socioeconomic and land use data. The only roadway with a level of service currently identified as congested is Grand Avenue in the city of Wausau. This area is rated a level 'E' (Moderately Congested) on Grand Avenue between Thomas Street and Weston Avenue to the south. Grand Avenue is a four lane road that serves as Business Highway 51 through Wausau, and connects to the southeast communities as well as Highway 29 and Interstate 39. In 2014, Grand Avenue was resurfaced and the center concrete median was removed.

WisDOT is planning improvements to three major intersections along the Grand Avenue segment that addresses operations and traffic deficiencies. These improvements should help traffic flow through the intersections and along the mainline roadway.

Map 5-1


Committed Projects
Legend
Committed Projects
0 0.5 1 2 3 4
Miles
Source: Marathon County
N

Map 5-2


Legend
WAUSAU METRO AREA 2010
LEVEL OF SERVICE
ABC Uncongested
D Slightly Congested
E Moderately Congested
F Severely Congested
Level of Service is a qualitative assessment of a road's operating capacity based on the operational characteristics and projected demand.

PROJECTED LEVEL OF SERVICE MODEL

The Level of Service projected by the travel model for 2050 (Table 5-2 and Map 5-3) for roadways in the Wausau area shows more segments with congestion than the current year.

Table 5-2

Roadway	To/From	Community	LOS
Grand Avenue/US Business 51	Thomas Street to Kent Street	City of Wausau	E-F
US Business 51/Grand Ave/Schofield Ave	Lake View Drive to Metro Drive	City of Schofield	D
Bridge Street	1st Street to 1st Avenue	City of Wausau	D
Old Highway 51	Main Street to Brown Street	City of Mosinee	D
County Road WW	N 32nd Ave to US Highway 51	Village of Maine	D

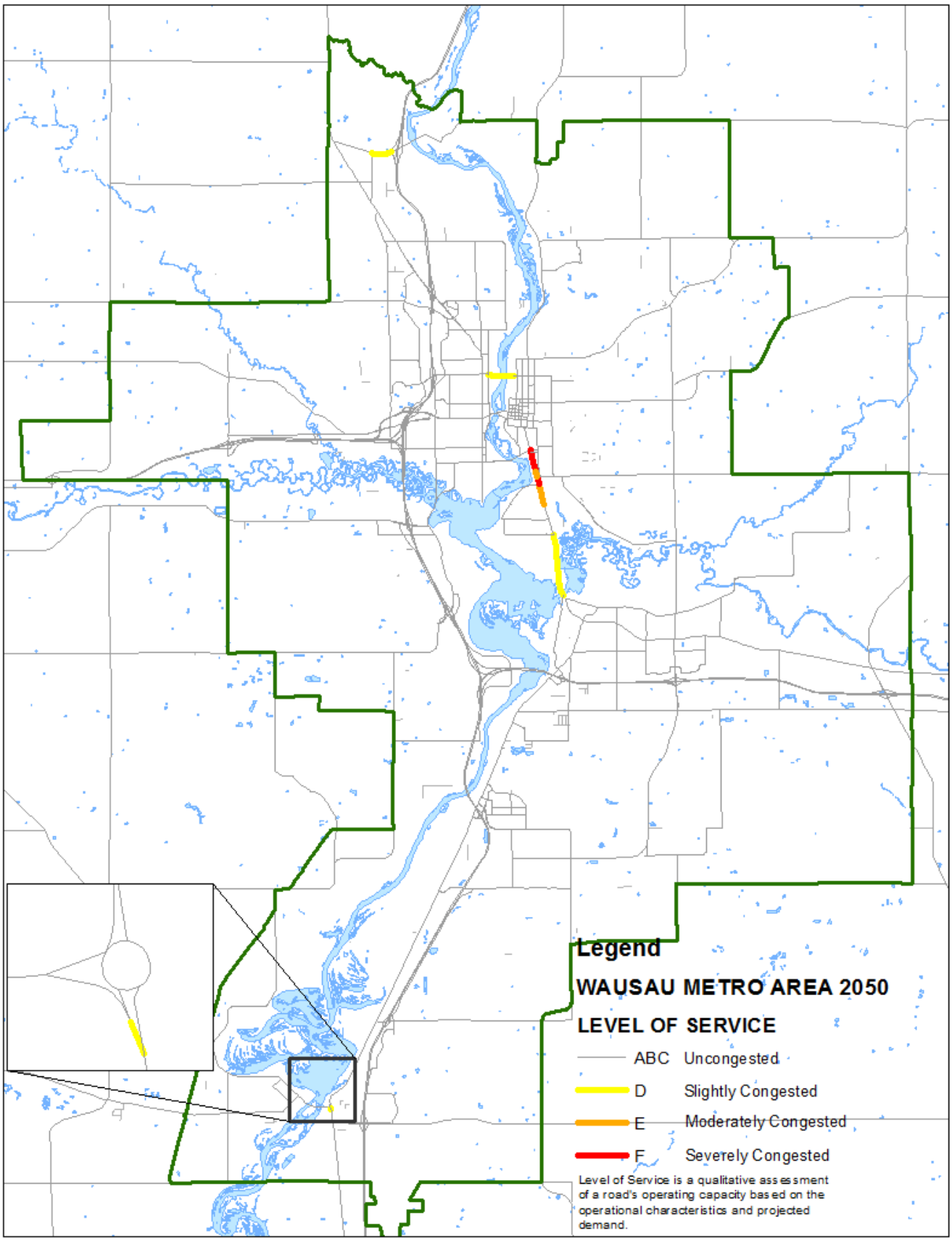
Grand Avenue (Business Highway 51) south of Thomas Street to Kent Street in Wausau is projected to have the worst congestion rating in the planning area. It fluctuates between a LOS rating of E and F. This projection mirrors the congestion found in the current year scenario model but is a lower LOS rating. The 'F' ratings appear to be near the intersections of Sturgeon Eddy Road, Townline Road and Thomas Street. The roadway is a four lane urban roadway with a speed limit of 35 mph. There are multiple access points from roads and driveways along the length. The corridor consists of mostly commercial and multi-family uses as well as a cemetery. There is sidewalk on both sides but is constrained between the curb and several buildings that are on the right of way border. Bike facilities consist of sharrows in the outer lanes and bikes are allowed to ride on the sidewalk. Currently, there is insufficient room to add a full bike lane or trail.

Grand Avenue from Lake View Drive to Metro Drive in Schofield shows a projected congestion of level 'D.' This section of roadway does have a wider profile with two travel lanes in each direction. The road does not have any bike facilities and cyclists are required to use the sidewalk. This corridor is primarily commercial but does face many of the same space constraints due to rivers and wetlands as the roadway to the north. The reason for this rating is not clear but since Grand Avenue is the main artery for traffic between Wausau and any of the southeastern communities it is likely a function of anticipated traffic volumes.

Bridge Street is projected for a level of congestion 'D' between 1st Street and 1st Avenue in Wausau. This segment encompasses the bridge and the major intersections on either side. This bridge is the northern most crossing of the Wisconsin River in Wausau and the only crossing from that point until Brokaw almost six miles to the north. It is a four lane road with few obstructions at this stretch. Congestion in this segment could be a result of the intersection performance on either side and could be monitored to identify improvements.

County Road WW between N 32nd Avenue and the interchange of Highway 51 is projected as a LOS 'D'. This roadway is a four lane county highway that handles traffic from Highway 51 to

Map 5-3


Legend
WAUSAU METRO AREA 2050
LEVEL OF SERVICE
ABC Uncongested
D Slightly Congested
E Moderately Congested
F Severely Congested
Level of Service is a qualitative assessment of a road's operating capacity based on the operational characteristics and projected demand.

the east. Since this area has commercial and agricultural properties as well as being located just west of the bridge in the villages of Brokaw and Maine it could experience future growth that would account for increased traffic.

The roundabout intersection of Old Highway 51 and Main Street in Mosinee has a southbound leg of the roadway projected at LOS 'D'. Main Street is the bridge crossing the Wisconsin River from downtown Mosinee and handles a large volume of traffic on any given day. Local officials have expressed the more immediate concern with the bridge and intersection on the west side. Since there is no clear consideration for how this specific section of the roadway may become congested it may be an issue with the model interacting with roundabouts. Subsequent models may provide further insight into this segment but for the present this roundabout and the Main Street bridge over the Wisconsin River can be monitored for any additional issues.

CONCLUSION

The output of the travel demand model is only as good as the inputs. This is the first use of Level of Service instead of a Capacity Demand for roadways within the Wausau MPO. Subsequent plans will provide further educational opportunities to see the use of level of service and further understand it. With each use of this model the inputs will be refined and the results better understood. There is no such thing as a perfect travel demand model, even if the inputs are accurate. Human behavior is subject to a wide variety of variables, many of which are impossible to predict. While the opportunities to find fault with travel demand model are endless, the fact remains that these models are currently the most practical tools available and produce results as good as can be expected given the wealth of unknowns the future holds.

The roadways within the MPO's planning area are currently performing, with the exception of a section of Grand Avenue in Wausau, at an acceptable level.

The forecasted congestion on Grand Avenue is the most consistent and severe in the area. It should be noted that this model is just one tool in the planner's toolbox. It is not meant to make decisions but rather focus our study efforts and inform decisions makers. The model does not address a host of issues, issues which should be addressed as part of the decision making process.

CHAPTER 6 –
TRANSPORTATION IMPROVEMENT RECOMMENDATIONS

PURPOSE / INTRODUCTION

This chapter discusses the alternatives that were considered and analyzed as potential recommendations in the Transportation Plan. These alternatives were evaluated on how best they would:

- Achieve the stated Goals and Objectives identified in Chapter 2,
- Address issues and opportunities identified in Chapters 3 and Chapter 4, and
- Reduce the forecasted Level of Service deficiencies identified in Chapter 5.

Within the last 20 years, the Wausau Metropolitan Area has seen a large number of roadway and highway projects that have greatly shaped the way people and goods move through the area. The WisDOT has dedicated a lot of financial resources to creating a freeway system that has the capacity to carry the projected traffic well into the future as well as creating a safer travel environment. With this state investment the local communities have also identified the need to provide funding for the local roadway system that will allow the area to grow and develop to their desired outcomes.

The area communities are now coming into a time where maintenance and preservation efforts will be a primary focus instead of the capacity expansion and development of new roadways.

ROADWAY SYSTEM

Transportation System Management

Some of the Transportation System Management measures to be taken to improve how traffic flows at certain locations to increase safety and efficiency are list below:

- Traffic Signals
- Roundabouts
- One-way conversions
- Two-way conversions
- Removal of on-street parking
- Road Diets
- Traffic and turn movement restrictions

Transportation Demand Management

Some of the Transportation Demand Management measures to be taken to reduce the traffic volumes at specific times or periods of the day are:

- Ridesharing
- Flexible employee work hours

- Bicycle and pedestrian facilities
- Restricted vehicle areas

TRANSIT SYSTEM

Metro Ride has been under the strain of determining the service area over the past few years. During the development of the previous Transit Development Plan (TDP) in 2012, the second largest community in the metro area, the village of Weston, decided to withdraw from providing transit service to the community, followed by the city of Schofield and the village of Rothschild. Neither Schofield nor Rothschild could sustain a successful route on the transit system without the village of Weston being a partner. Based on those unforeseen events, occurring in late 2011 and early 2012, the 2012 TDP had recommendations to retain the services that exist in the city of Wausau and expand into other local communities where transit service demand exists and contributes to the goal of implementing a regional transit network. In 2013, the village of Weston, and subsequently the city of Schofield and the village of Rothschild, decided to reenter the transit system and provide service in its community. In 2014, the village of Weston again withdrew from the transit system along with the city of Schofield and the village of Rothschild. Since then the transit system has only been available within the city of Wausau.

Over the past 3 years, the transit system has had an overall decrease in ridership but at a steady level with the loss of ridership from the other three communities. The viability of the transit system to the people of the metro area will be put to the test in the next few years. In 2017 the Wausau Area MPO and Metro Ride will embark on the development of another TDP for the area.

The 2017 TDP will focus on the needs for the service overall and the viability of the system in general if it only provides service in the city of Wausau. For transit to be a regional service, it means making and improving the connections with the neighboring communities, most specifically, the villages of Weston and Rothschild, city of Schofield, and the town of Rib Mountain. In order for those communities to agree to provide transit service in the future a new and stable funding source needs to be established. The introduction of special taxes could be a potential source but may not be palatable in the current political climate.

The creation of a Regional Transit Authority (RTA) would be an excellent organizational strategy for developing a stable funding source. Formation of an RTA requires state legislation and has been a political and highly contentious issue in Wisconsin but offers the best solution for developing both a sustainable plan as well as a truly regional system. The RTA would create the ability to have new funding streams and then a financially solid regional transit system. The success of an RTA could only happen if there is a great deal of planning and discussion amongst the area communities and those who are dependent on the bus service as their sole means of mobility.

ELDERLY AND DISABLED SPECIALIZED TRANSPORTATION

Marathon County administers the program funded mostly with the 85.21 Grant program from the Wisconsin Department of Transportation. In Marathon County, the 85.21 program provides rides to those that are aged 65 and over and disabled individuals at any age, and can only be used for medical, nutrition, and employment purposes. The elderly and disabled transportation program has seen a reduction in ridership over the past few years.

Currently, Metro Ride provides ADA compatible rides to all that qualify, only in the city of Wausau. The lack of a true metro transit system or services is influencing the number of users. North Central Health Care (NCHC) provides rides throughout the whole county but ridership is declining. Only having fixed-route transit service in the city of Wausau and not the entire metropolitan area has hurt Metro Ride's chances in developing this program to its full potential

Coordinating the funding programs with the State's Family Care program with that of the fixed route transit provider and the human services transportation providers would begin the process of determining which entity should be providing which rides to which clients.

BICYCLE AND PEDESTRIAN SYSTEM

This plan supports the recommendations of the Bicycle and Pedestrian plan. That plan is only 1 year old with little opportunity to implement most of the identified projects. The plan identifies a number of common and practical strategies that can be used to implement the plan. The following strategies are:

1. Modify roadways to utilize existing pavement. These may be in the form of striping existing pavement, reconfiguring on-street parking, and lane road diets.
2. Regulatory and wayfinding signs.
3. Coordinate path and sidewalk projects with roadway projects.
4. Prioritize stand-alone projects that provide high-value connections.

The bicycle network has its own list of recommendations based on the concept of Near-Term and Build-Out situations. The Near-Term projects are relatively easy to implement right away over the next few years. The Build-Out projects are typically more challenging and may have to wait until the roadway is scheduled for a complete reconstruction.

For a complete list of specific bicycle and pedestrian projects, refer to the *Bicycle and Pedestrian Plan for the Wausau Metropolitan Planning Organization, 2015*.

FREIGHT – RAIL

There are two areas of concern for rail freight movement in the Wausau metro area. The first issue revolves around at grade crossings and the need for signalization at those crossings or other measures. The second issue is that of rail shipment volumes in the area.

Safety and operational efficiencies of both the rail lines and the roadway network are the key factors in determining the impacts of at-grade crossings. The signalization or elimination of at-grade crossings and providing grade separation facilities can create differing impact in a community. A closer look at crash statistics indicate that crashes continue to occur even with warning devices and signals. Creating grade separations can eliminate the crash rates at intersections but have a profound effect on the community by dividing neighborhoods, and forcing other modes of travel to take and create lengthy and time consuming routes to navigate around the rail facilities. This can also affect how emergency services are delivered in the community if the most optimal routes are blocked by rail facilities. Rail facilities and the associated land uses need to be protected because of their importance to the business community but not at the expense of access for the rest of the community. Monitoring the rail crossings crash "hotspots" needs to be done on a continual basis. If locations indicate a problem, more investigation may be needed to determine a course of action.

The volume of rail traffic in the metro area has not changed much in the past few years. Coal going to the Weston Electric Power Generation Facility in the village of Kronenwetter is the major cargo moved by rail freight. The remainder of the usage is from a hand full of companies the move only a few rail cars around the area on a daily basis. Any new development that is being planned in the area that may require rail access should be established on or near existing rail lines to minimize the need to extend or create new lines thus disrupting the road network with additional rail crossings and potential conflict points.

FREIGHT – TRUCK

Truck transportation in the freight industry has not changed much in the Wausau metro area. With good access to the interstate and state highway systems, trucking operations and manufacturing and industrial businesses that rely on good access to the freeway systems are doing well in the Wausau area. The "Last Mile" concept in the truck freight industry is well accommodated in the area. Most industrial parks and larger commercial companies that have truck freight needs area located with the first mile or two of the freeway system.

Only a few isolated locations need to be studied to address the needs and concerns of truck traffic on the local street network. These include:

- Wausau Industrial Park connection from STH 29 to Stewart Avenue at 72nd Avenue
- Camp Phillips Road connection to the Schofield and Weston Industrial park off of Ross Avenue
- Turn movements and traffic volumes near the Weston Elementary School.
- Trucks using Thomas Street from the 3M Corporation and Kolbe & Kolbe Corp.

Another truck freight issue in the area is the potential creation of an intermodal rail to truck transfer location. This transfer location could provide the area with a rail connection to the entire U.S. that could potentially open doors of opportunity in the commercial and industrial sectors of the area economy.

In the coming years the need for "Over-The-Road" drivers will also be an issue if the number of drivers continues to diminish at the current rates. The future reduction of qualified drivers will have an impact on the merchandise delivery systems that are now in place to get products to people in the shortest amount of time. The adaptation of autonomous vehicles, mentioned in Chapter 4, in the trucking industry would play an ever expanding role in the future.

LAND USE

Transportation and land use have always been connected by the influence each has on the other. Both transportation and the land uses can be the primer of how and what type of development occurs. Uncoordinated or uncontrolled land use growth can have a negative impact on the area community's ability to keep pace with the transportation system, especially those of bicycle/pedestrian and transit. Typically transit is developed in response to the land uses and the development that occurs. Bicycle and pedestrian accommodations should be looked at when the roadways are reconstructed to minimize the impact retrofitting accommodations have on the existing roadway footprint.

Land use impacts transportation systems in a number of ways but more efficient, effective public transportation and roadway networks can be established to provide services inside the urban area by minimizing sprawl development, providing cost efficient services, providing more opportunities for disadvantaged (social justice), and providing for public safety.

Area communities will need to have discussions regarding land use decisions to minimize the conflicts that arise between transportation and land use: the conflict between high volume traffic and bicycle and pedestrian traffic; road construction projects that create barriers to bicycle and pedestrian users and with the neighborhoods thus cutting neighborhoods into pieces; and intersections that have high crash rates and congestion.

NEEDS SUMMARY

Capacity Needs

This LRTP includes the ideas and roadway projects identified for construction as new corridors, the addition of through-traffic lanes to existing facilities, and new additions to existing interchanges that were identified in the 2011 LRTP.

Although this plan has been developed based on the traffic model approach that highlights the LOS on the roadway network, an initial list of roadway improvement alternatives were generated based on the capacity model from the last LRTP 2011. These projects were reviewed for relevance and a continuing list of projects identified as warranting further analysis was developed. Some of the key locations with capacity issues are identified.

STH 153 between 4th Street and Old Highway 51 in Mosinee was identified as severely deficient in the travel demand model forecasts from 2011. With the STH 153 bridge's reconstructed to accommodate widening of the roadway to 4-lanes in the future, monitoring of the roadway and

periodic traffic counting should continue to take place for determining if traffic capacity levels and LOS are still being met.

The 2011 capacity analysis indicated that Bus USH 51 between Military Road and Eagles Nest Road in Rothschild will be deficient in 2035. This corridor also should continue to be monitored for capacity and LOS needs.

The section of 72nd Avenue between STH 29 and Stewart Avenue needs to continue to be monitored for its potential capacity and LOS needs. As the main road entering the Wausau Industrial Park, this has a potential for land use and service operations issues if not kept in check.

The following additional roadways identified in the 2011 model as having some level of deficiency should be further studied by either WisDOT or the community to determine if the capacity needs are still relevant:

Roadway Locations:

- Thomas St - 17th Ave to 3rd Ave
- Bus USH 51 - Military Rd to Imperial Ave
- CTH X - CTH XX to Pleasant Dr
- Old Hwy 51 - North of STH 153
- I39/USH 51 – Bus USH 51 to STH 29

The 2011 traffic capacity models show several freeway ramps developing deficiencies by 2035. These ramps include:

Roadway Ramp Location:

- USH 51/STH 29 Sherman St Northbound Off-ramp
- USH 51/STH 29 CTH N Southbound On-ramp
- STH 29 CTH X (Camp Phillips Rd) Westbound On-ramp
- STH 29 CTH X (Camp Phillips Rd) Eastbound Off-ramp
- STH 29 Bus USH 51 Eastbound Off-ramp

Identified capacity deficiencies on the National Highway System (NHS) need to be addressed that are still current from the 2012 LRTP, specifically, parts of Bus USH 51/Grand Avenue.

Providing for existing or future travel demand is a compelling rationale for increasing road capacity by building additional travel lanes or new roadways. However, there may be other compelling reasons for expanding capacity other than for mitigating congestion problems, such as improving connectivity to reduce travel times or improving capacity to improve safety.

Level of Service Needs

It is important to note that the traffic model is designed to estimate traffic Levels of Service on main line roads and highways. The modeled LOS deficiencies should not be taken at face value, but should be reviewed with respect to individual roadway geometric and operational characteristics that would impact service levels.

If the traffic model indicates a road segment has a low level of service and additional evidence supports these findings, the roadway should be studied from an operational/traffic engineering perspective, utilizing small area traffic level of service analyses and/or traffic simulation software. Some smaller improvement projects, like geometric changes and traffic signal modifications to the intersections can improve traffic flow along a roadway without having to do a major capacity expansion project. The results of the 2050 traffic model indicated several LOS deficiency problem areas. The corridors identified range from being at levels A to F and were discussed in Chapter 5.

A list of transportation improvement alternatives based on the traffic models and local knowledge has been established for this plan. These locations focused on providing a level of service that has been identified in Chapter 5 as D, E, or F. All other roadways are identified as be at a level of A, B, or C. The D, E, F locations are located on Map 6-1 and are described below:

Level D – Slightly Congested:

- CTH WW, Village of Brokaw from USH 51 to N 32nd Avenue
- Bridge Street, City of Wausau from 3rd Street to 1st Avenue
- Grand Avenue, City of Schofield from Lake View Boulevard to East Grand Avenue
- STH 153, City of Mosinee, east/south bound leg of the roundabout

Level E – Moderately Congested:

- Grand Avenue, City of Wausau from Townline Road to Sumner Street
- Grand Avenue, City of Wausau from Kent Street to Sturgeon Eddy Road

Level F – Severely Congested:

- Grand Avenue, City of Wausau from Sumner Street to Thomas Street

FUTURE REGIONAL ROAD PROJECTS

The following are projects that have been identified by the communities or by MPO staff as potentially needing to be evaluated or studied to indicate the benefits to the metro area or community road networks.

Village of Kronenwetter:

- Extend Kowalski Road easterly to connect with Martin Road.
- Evaluate the ability to construct an interchange at I39 and Kowalski Road.
- Expand to a 4-lane roadway, County Highway X from County Highway XX to Howland Road.
- Develop the northeast quadrant of the Maple Ridge road interchange as a Commercial/ Business Park

City of Mosinee:

- STH 153 Bridge Expansion and 4-lane roadway through the central business district.

Town of Rib Mountain:

- Construct a bridge crossing the Rib River at the County Highway O and STH 29 interchange.

Village of Rothschild:

- Expansion and 4-lane roadway of Business US Highway 51 from Eagle's Nest Blvd. to Military Road.

City of Schofield:

- Reconstruct Business US Highway 51/Grand Avenue from Metro Drive to the Eau Claire River Bridge.

City of Wausau:

- Reconstruct Grand Avenue from Kent Street to Thomas Avenue. Provide adequate turn lanes at Sturgeon Eddy Road, Townline Road, and Thomas Street, as well as create the appropriate bicycle and pedestrian accommodations.
- Evaluate the need for capacity expansion on 72nd Avenue from Packer Drive to Stewart Avenue at the entrance to the Industrial Park.
- Investigate the need for a bicycle and pedestrian bridge over the Wisconsin River.
- Evaluate the need for expansion of the Bridge Street Bridge over the Wisconsin River.
- Evaluate the need for a new bridge over the Wisconsin River north of Bridge Street and South of the Village of Brokaw.

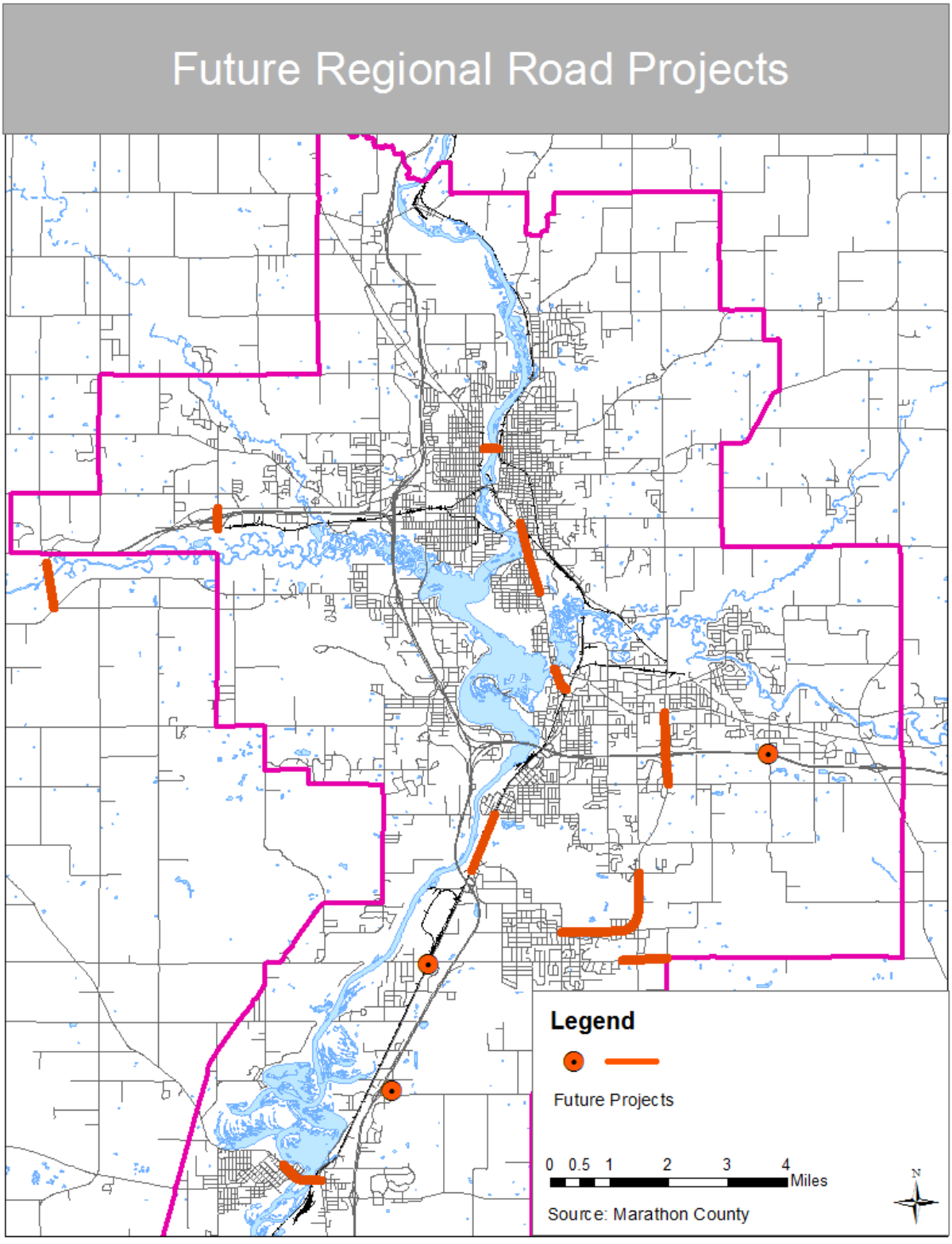
Village of Weston:

- Redevelop the Camp Phillips Road Corridor from Weston Avenue to Ross Avenue with the initial emphasis on the Weston Avenue to STH 29 interchange to accommodate the mixed-use development in the southeast quadrant of the interchange. Subsequent project would be commercial development along the corridor from STH 29 to Schofield Avenue with intersection improvements, and additional improvements from Schofield Avenue to Ross Avenue to accommodate the needs of the industrial park and the elementary school.
- Investigate the need for a new full interchange at Ryan Road and STH 29.
- Investigate intersection enhancements at key intersections on Schofield Avenue.

Region-wide:

- Investigate the need to new bridge crossings of the Rib, Wisconsin and Eau Claire Rivers in the metro area.
- Investigate the need for jurisdictional transfers of roadways to different municipalities.
- Full buildout of the Bicycle and Pedestrian Plan for the Metro area.

Map 6-1


Future Regional Road Projects
Legend
Future Projects
0 0.5 1 2 3 4
Miles
Source: Marathon County
N

CHAPTER 7 – ENVIRONMENTAL REVIEW, MITIGATION & LIVABILITY STRATEGIES

INTRODUCTION

This chapter will discuss compliance with the requirements in the areas of Environmental Review, Mitigation Strategies, Operations and Maintenance Strategies, Agency Consultation, and Livability Strategies.

The purpose of this discussion is to provide existing conditions for use during project scoping and environmental assessment as required by the National Environmental Policy Act (NEPA) of 1969. Anticipated and recommended projects are reviewed in relation to the agricultural, natural, and recreational resources in the area as well as to disadvantaged populations.

Federal law requires considering environmental mitigation activities in developing transportation plans, in addition to consultation requirements with federal and state natural resource, land management, environmental protection and other agencies. This chapter documents compliance with these requirements.

Metropolitan planning regulations state in 23 CFR 450.322 (f.) (7) that the plan shall include, at minimum:

> A discussion of types of potential environmental mitigation activities and potential areas to carry out theses activities that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan. The discussion may focus on policies, programs or strategies, rather than at the project level. The discussion shall be developed in consultation with Federal, State and Tribal land management, wildlife and regulatory agencies. The MPO may establish reasonable time frames for performing this consultation.

The MPO's role in examining issues related to environmental mitigation is to look at system level issues – this is not a project level environmental impact document, which requires field work and specific analysis under the National Environmental Policy Act (NEPA). The planning regulations require system level or regional analysis to look at cumulative effects of all projects from a high level which may streamline project level analysis to the extent they may act as "an early warning system" to both transportation and resource agencies of issues which may need to be considered in later project level analysis to assure that the planning and programming process as a whole considers what the long term environmental mitigation issues are for the region.

Since this high level view is the intent of the MPO planning requirements, the legislation and regulations specifically exempt consideration of planning factors and environmental mitigation

at the Plan or TIP phase from judicial review. Judicial review, however, is the function of the NEPA project level analysis, a level of analysis that the MPO has no direct role in but to review and comment like any other interested party.

This high level view may inform the NEPA process, but it is quite distinctly different from it by design and intent, since project engineering design decisions are typically not known at the planning stage. However, earlier awareness of potential issues from a high level system view may better alert implementing agencies of need to consider issues at the project stage when the project is designed – such as presence or absence of historic sites or possible locations of potential contamination areas that may require some form of mitigation.

GENERAL PLAN REVIEW

Through a multi-year process of data gathering, alternatives analysis, modeling, and agency and public review, the LRTP developed a list of multi-modal transportation recommendations to meet the anticipated growth and subsequent mobility demands. The analysis stages included review of county and municipal land use and transportation infrastructure improvement plans, State transportation plans, as well as Wisconsin Department of Natural Resources (WisDNR) defined environmentally sensitive areas.

The WisDNR guidelines describe environmentally sensitive areas as “Major areas that are unsuitable for the installation of waste water treatment systems because of physical or environmental constraints. Areas to be considered for exclusion from the sewer service area because of the potential for adverse impacts on the quality of the waters of the state from both point and non-point sources of pollution include, but are not limited to, wetlands, shorelands, floodways and floodplains, steep slopes, highly erodible soils and other limiting soil types, groundwater recharge areas, and other such physical constraints." (NR 121.05(1)(g)2.c.).

This plan does not include significant changes in highway project recommendations from the 2012 LRTP. Chapter 5 addresses the transportation or traffic model implications to the roadway network since the 2012 LRTP was adopted. The recommendations included in this plan were reviewed relative to identified environmentally sensitive areas.

The identification of environmentally sensitive areas are intended to provide for the long term protection of wildlife habitat and recreation areas; reduce runoff and erosion damage along lakes and rivers; preserve the quality of surface and groundwater; guide development to protect environmentally sensitive areas; prevent excessive non-point source pollution; and reduce public utility costs. In addition to all regulated wetlands greater than five acres, delineated on the Wisconsin Wetland inventory maps, all areas within the FEMA delineated 100-year flood hazard zones, and all areas of 20% or greater slope were considered in the alternatives analysis. Inventories of prime farmlands, by Soil Conservation Services standards, were reviewed, and farmland preservation program protections, mainly through exclusive agricultural zoning, were found to be minimal within the planning area.

The significant presence of historical, architectural and archeological properties in the MPO area has been identified and recorded by the State Historical Society of Wisconsin. While the publication of identified archeological sites is not included in this document, a review of proposed projects relative to the sites' locations has occurred, and none of those identified are impacted by the proposed transportation projects. Historical Society staff is also certain the area contains many undiscovered prehistoric and early historic sites.

MITIGATION STRATEGIES

The NEPA process includes an ordered approach to mitigation and involves understanding the affected environment and assessing transportation effects throughout project development. Effective mitigation starts at the beginning of the NEPA process and continues through a large part of the alternatives development and analysis process. Mitigation can be defined by the order of process sequencing as:

1) Avoiding the impact altogether.
2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
4 Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
5) Compensating for the impact by replacing or providing substitute resources or environments.

The generally accepted rule of: (1) avoid impacts, (2) minimize impacts, and (3) mitigate impacts, can be applied at this level of planning, in terms of identifying areas of potential environmental impacts in the development of a project recommendation.

Planning for more specific environmental mitigation strategies for the long range timeframe can be challenging. Some strategies, such as access controls, can reduce the pressure for development and can be discussed at the long range planning level. Others such as wetland mitigation can have implications for a project that is 15 or 20 years out, or has not reached the environmental assessment or preliminary design phase. Wetland banking is a practice of WisDOT for use in mitigation relative to state highway projects. The MPO, as an advisory body, does not have authority to partake in wetland banking for local projects.

Some planning level mitigation strategies, generally favoring lower impact improvements follow.

Land management strategies can address the rate and character in which development expands in the urbanizing area, and resulting demand for utility and transportation services. Issues such as urban sprawl, cost-efficient provision of urban services, environmental protections, public safety, and environmental justice, are discussed in Chapter 9: Environmental Justice. Area comprehensive plans promote and encourage compact development in the urban area, as well as accommodations for bicycle, pedestrian, and transit transportation modes. In

terms of natural resources, these policies mitigate the effects of growth and development by using less land, generating fewer vehicle miles traveled (VMT), and encouraging alternative travel mode options which reduce harmful emissions.

Operational and management strategies are means to mitigate issues such as congestion or safety on major construction or reconstruction projects. There are times when something as simple as modified lane-striping can better channel traffic and reduce crashes in a corridor, or better define the separation of bicycle and motorized vehicles. Other strategies are more technically complex, such as many Intelligent Transportation System (ITS) approaches.

OPERATIONAL AND MANAGEMENT STRATEGIES

The Wausau MPO will, to the maximum extent practicable:

- Recommend capacity expansion to mitigate traffic congestion only after considerations of other alternatives, such as access management, ITS, operations or congestion management, intersection modification, and traffic signal timing are addressed.
- Consider transportation system management strategies in the planning for arterial roads to improve traffic flow, maximize capacity, and increase overall system efficiency and safety.

Access management strategies for the planned projects included in the Long Range Plan are largely determined by the implementing communities. Controlling access with frontage roads, combined access points, or limiting access to public streets can protect the capacity of the highway well beyond that of a highway with multiple private accesses, reducing the need for expansion or replacement. Access management strategies are best incorporated into the initial project planning and design, to avoid costly purchase of right of way and access rights.

Intelligent Transportation Systems (ITS) is a very broad term, covering everything from synchronized signal systems to changeable message signs to automated vehicle locator systems on buses and paratransit vehicles to traffic monitoring centers, all with the intent of improving traffic flow, communication, and ultimately the safety of the transportation system. Currently, WisDOT uses mobile changeable message signs in advance of construction areas to warn and/or redirect traffic, but to date, regular congestion has not reached the level that any more permanent ITS actions are needed to address it. Many ITS applications costs are hard to justify because of the expense to the local communities with little or minimal identified benefits.

Operations can also play a role in mitigating the impacts of growth and development. Transportation planning and operating agencies generally share the goal of enhancing system performance, and can mutually benefit from stronger linkages. Some of those linkages include data sharing, performance measures, funding and resource sharing, and regional ITS architecture. Through such coordination and collaboration among State and local governments, MPOs, highway and transit agencies, other stakeholder organizations, and the general public, greater efficiencies and cost savings may occur along with better understanding of each others' roles, and improved ability to address short- and long-term needs. Some operations

management strategies are used in the urbanized area, such as data sharing between stakeholders, and the on-going membership of operations personnel on the Technical Advisory Committee. The MPO is working to develop and adopt specific performance indicators that will set the foundation for future comparisons to build on.

Congestion management has not been a critical issue in the Wausau area. Some site specific congestion does occur, but to date it has not been a driving force in transportation decision making. Some typical congestion management strategies, such as carpooling, public transportation options, park and ride, and flexible scheduling do occur on some level within the MPA, typically for other reasons (private programs, as public services, or general commuting desires).

Intersection Modification/Traffic Signal Timing can be low-cost and effective methods of addressing congestion issues. It is understood that intersections are frequently the first place that congestion and safety issues become apparent. Improvements such as signal timing and turn lane accommodations can improve traffic flow and address congestion issues to an extent. These strategies are typically addressed by local jurisdictions when safety issues or initial congestion issues arise, prior to the need or available funding to address capacity expansion.

AGENCY CONSULTATION

As part of the plan's implementation, system level analysis of the relationship between recommended projects and various natural features and resources will take place. Formal consultation with the Environmental Consultation List will take place as part of the review process including meetings to discuss the strategies the MPO communities will consider when encountering natural or human resource issues on their specific projects.

Environmental Consultation List

- Wisconsin Department of Natural Resources (WisDNR)
- State Historical Society
- Wisconsin Department of Agriculture, Trade and Consumer Protection
- U.S. Environmental Protection Agency (EPA)
- U.S. Fish and Wildlife Service
- U.S. Department of Agriculture, NRCS
- U.S Army Corps of Engineers
- National Park Service
- Great Lakes Inter-Tribal Council, Inc.
- Bad River Band or Lake Superior Chippewa Indians of Wisconsin
- Ho-Chunk Nation
- Lac du Flambeau Band of Lake Superior
- Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin
- St. Croix Band of Lake Superior Chippewa Indians of Wisconsin

Each party on the Environmental Consultation List will be provided a packet which gives a summary of the process for the plan's update and the projects within. Topics of discussion included the existing consultation process, potential impacts of proposed projects, and methods of addressing mitigation of those impacts. The agencies were notified during the draft plan's public review period for comments.

LIVABILITY STRATEGIES

Livability in transportation is about using the quality, location, and type of transportation facilities and services available to help achieve the community's goals such as access to good jobs, affordable housing, quality schools, and safe streets. This includes addressing road safety and capacity issues through better planning and design, like Complete Streets, maximizing and expanding new technologies such as intelligent transportation systems (ITS), and using travel demand management (TDM) approaches in system planning and operations. It also includes developing public transportation that enhances economic development, and offers residents and workers the full range of transportation choices like bikeways, pedestrian facilities, transit, and roadways—into a truly intermodal, interconnected system.

Sustainable transportation provides mobility and access to meet development needs without compromising the quality of life of future generations. A sustainable transportation system is safe, healthy, and affordable, while limiting emissions and use of new and nonrenewable resources. It meets the needs of the present without harming resources or the environment. It also considers the long-term economic health of a community.

Comprehensive planning focuses growth in existing communities to avoid sprawl; and supports compact, transit-oriented, walkable, bicycle-friendly land use, including neighborhood schools, complete streets, and mixed-use development with a range of housing choices. Its goals are to achieve a unique sense of community and place; expand the range of transportation, employment, housing choices and preserve and enhance natural and cultural resources; while promoting public health.

In order to accomplish these ideas, the Federal Highway Administration (FHWA) has developed six Livability Principles:

Provide more transportation choices. Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

Promote equitable, affordable housing. Expand location and energy efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.

Enhance economic competitiveness. Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services, and other basic needs by workers, as well as expanded business access to markets.

Support existing communities. Target funding toward existing communities through strategies like transit oriented, mixed-use development, and land recycling to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.

Coordinate policies and investment. Align policies and funding to remove barriers to collaboration, funding, and increase the accountability and effectiveness of all levels of government to plan for future growth.

Value communities and neighborhoods. Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable rural, urban, and suburban neighborhoods.

Area comprehensive plans have elements that address the livability and sustainability that can be incorporated into the transportation and land use recommendations of this plan. The implementation of these strategies would propel the Wausau MPO area to a desirable place for future economic development and growth. The following are recommendations incorporating elements of sustainability and livability:

- Provide, encourage, and foster provisions of a variety of transportation options to increase mobility and enhance accessibility;
- Develop coordinated bicycle and pedestrian facility networks;
- Develop ways to provide cost-effective and convenient public transportation services for the whole urban area;
- Continue to support transportation services for the elderly and persons with disabilities;
- Fully utilize the area's limited rail access;
- Maximize utilization of existing investments in transportation infrastructure and services;
- Provide for safe and efficient movement of truck traffic while minimizing negative impacts;
- Maintain a thoroughfare system that ensures the safe and efficient movement of people and goods;
- Coordinate transportation infrastructure improvements and services with land development and revitalization efforts;
- Foster cooperation and coordination of transportation system planning and investments.

CHAPTER 8 – PERFORMANCE INDICATORS

INTRODUCTION

This chapter presents the set of system performance indicators and the base data sets relevant to the indicators. The purpose of the performance indicators is to provide a means to evaluate the ability of the urbanized area to achieve its goals stated in Chapter 2. Currently, the indicators are not tied to any specific goal and are intended to be used for planning purposes.

Federal Highway Bill MAP-21 changed the Federal highway and transit programs by requiring the transition to performance-driven, outcome-based approaches to specific areas. In the planning process, critical changes are required of MPOs and public transit operators to link investments to the performance targets established to address performance measures in the key areas of:

- Safety
- Infrastructure condition
- Congestion
- System reliability
- Emissions
- Freight

The U.S. DOT published its final rulemaking on performance measures on May 27, 2016, thus initiating the timeline for states and MPOs to establish their performance targets in support of those measures. The states have one year to establish the performance targets for urbanized and rural areas after the rules were published. Within 180 days of when the states set their targets, the MPOs must establish their targets. To ensure consistency, the MPOs must coordinate with the state and the local transit provider when setting their performance targets.

To support the changes to implementing a performance-based process, MAP-21 establishes that every MPO is required to link the investment priorities contained in the area's Transportation Improvement Program (TIP) to achievement of the set performance targets.

Over time, the Technical Advisory Committee may wish to compile a more complete set of performance goals, some of which should include experience and trend data that would help put some quantitative goals in place. In 2017, Wisconsin State Department of Transportation will release their performance measures in line with the FAST act transportation bill. Local MPOs will then have six months to modify or adopt their performance indicators for compliance. Therefore it is likely the performance indicators listed below are subject to change in the near future.

PERFORMANCE INDICATORS

1. Safety

A. Streets and Highways

Indicators: Total Crashes, Total Fatal Crashes, Total Severe Injury Crashes

	2011	2012	2013	2014	2015
Total Reportable Crashes	1482	1392	1600	1607	1362
Total Severe Injuries	123	117	132	104	96
Total Crash Fatalities	7	6	3	1	3
Crash involving Bicycle	17	30	20	17	18
Crash involving Pedestrian	12	8	10	6	11

Source: Wisconsin Traffic Operations and Safety (TOPS) Laboratory. The WisTransPortal Data Hub. Available at http://transportal.cee.wisc.edu/

2. Accessibility and Mobility of People and Freight

A. Streets and Highways

Indicator: Level of Service on Functionally Classified Roads

Level of Service category and description	Mileage	%
A, B, C - Stable traffic flow with possible slight delays and/or impedance	2208.801	98.88%
D - High density of vehicles with stable but slower traffic flow	22.977	1.03%
E - Operating conditions at or near capacity; unstable flow	1.098	0.05%
F - Forced flow, breakdown conditions	0.986	0.04%

Source: WisDOT Traffic Model

Indicator: System mileage
Data Source: WisDOT- WISLR

Indicator: Functional Classification Mileage
Data Source: WisDOT- WISLR

	County Jurisdiction				Municipal Jurisdiction			
	Arterial	Collector	Local		Arterial	Collector	Local	Total
Town of Mosinee		16.57				3.25	44.71	47.96
Town of Rib Mountain	7.36	5.83			2.71	11.46	57.17	71.34
Town of Stettin		11.94			0.58	9.64	61.29	71.51
Town of Texas	0.29	20.8				12.52	45.25	57.77
Town of Wausau	1.9	12.47				3.24	53.02	56.26
Town of Weston	2.85	3.35				3.05	12.46	15.51
Village of Brokaw		1.3					2.52	3.82
Village of Kronenwetter	2.6	5.81			6.13	6.84	90.01	102.98
Village of Rothschild	0.9	0.65			4.13	5.17	30.88	40.18
Village of Weston	6.25	0.68			9.04	18.71	88.63	116.38
Village of Maine	0.74	16.39				11.94	62.5	74.44
City of Mosinee					3.13	4.36	34.35	41.84
City of Schofield	0.11				2.15	1.73	12.14	16.02
City of Wausau	1.95				23.89	28.33	159.74	211.96
Marathon County Total	24.95	95.79			51.76	120.24	754.67	927.97

B. Transit

Indicator: Revenue Hours of Service, Revenue Miles of Service (passenger trips, passenger miles, revenue hours, and revenue miles by system)

Data Source: National Transit Data Base (NTD), or transit operator (2011 TDP)

Wausau Metro Ride Operating Statistics						
Fixed Route Bus	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Passenger Trips	774,081	788,748	631,360	672,224	654,078	577,044
Revenue Miles of Service	542,404.44	543,845.94	375,987.65	411,843.48	404,710.05	375,625.55
Revenue Hours of Service	37,620.73	38,739.65	26,728.95	29,371.73	29,853.79	27,027.72
Passengers per Revenue Mile	1.43	1.45	1.68	1.63	1.62	1.54
Passengers per Revenue Hour	20.58	20.36	23.62	22.89	21.91	21.35
Paratransit	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Passenger Trips	8,064	8,697	3,370	3,388	3,303	2,504
Revenue Miles of Service	84,701.94	68,915.32	9,680.00	11,316.00	10,772.00	6,749.00
Revenue Hours of Service	5,936.15	5,014.87	855.30	832.89	805.88	577.64
Passengers per Revenue Mile	0.10	0.13	0.35	0.30	0.31	0.37
Passengers per Revenue Hour	1.36	1.73	3.94	4.07	4.10	4.33
Average length of trip	10.50	7.92	2.87	3.34	3.26	2.70
North Central Health Care						
Paratransit	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Passenger Trips	n/a	n/a	n/a	n/a	1133*	1501
Revenue Miles of Service	n/a	n/a	n/a	n/a	n/a	n/a
Revenue Hours of Service	n/a	n/a	n/a	n/a	n/a	n/a
Passengers per Revenue Mile	n/a	n/a	n/a	n/a	n/a	n/a
Passengers per Revenue Hour	n/a	n/a	n/a	n/a	n/a	n/a
Average length of trip	n/a	n/a	n/a	n/a	n/a	n/a

*April - December

Indicator: Percent urbanized area served by transit
Data Source: Marathon County

Percent Urbanized Area Served		
1/4 mile buffer around service area.		
Fixed Route Service Area*	10.8	sq miles
Wausau Urbanized Area**	47	sq miles
	23%	area served by transit

*Source: WATS
**Source: 2010 Census

3. Integration and Connectivity Across and Between Transportation Modes for People and Freight

A. Streets and Highways

Indicator: Designated park-ride capacity and use
Data Source: WisDOT Region Offices, Park-ride lot capacity and use statistics
Base Data: *No formal counts have been conducted as of 2016.*

Indicator: Bike Racks on Buses
Data Source: MetroRide
Base Data: *All fixed route buses have bike racks.*

B. Air

Indicator: Airport Passenger Volume (enplanements)
Data Source: CWA

Enplanements Central Wisconsin Airport		
2013	2014	% change
123,797	125,395	1.29%

Source: FAA

4. Efficient Management and Operations

A. Streets and Highways

Indicator: Deficient and severely deficient lane miles
Data Source: WisDOT – Transportation model output

Base Data: *No longer applicable due to change in traffic model.*

Indicator: Hours of congested travel

Data Source: MPO calculation – travel demand model – utilizing v/c relationship

Base Data: *Not yet compiled*

B. Transit

Indicator: Passengers/revenue hour of operation, passengers/revenue mile of operation, passenger miles traveled, number of passenger trips

Data Source: National Transit Database (NTD), or Metro Ride

Base Data: *See Performance Measure 2-b.*

5. System Preservation

A. Streets and Highways

Indicator: Pavement condition – number of miles and percent of total miles in each category

Data Source: WISLR for PASER, WisDOT Region Office

Base Data: *To Be Added.*

B. Bridges

Indicator: Structure Condition – Sufficiency Rating

Data Source: WisDOT Region Office

Sufficiency Rating		Number of Bridges	Percent total
81 to 100	Bridge is sufficient and not eligible for rehab or replacement	134	81%
51 to 80	Bridge is eligible for federal funds for rehab	23	14%
0 to 50	Bridge is eligible for federal funds for replacement or rehab	9	5%

Source: WisDOT H S I database

6. Regional Trends

Indicator: Population

Data Source: DOA, Division of Intergovernmental Relations – Population & Housing Estimates

Population		
Municipality	**2010**	**2015**
V Maine	2337	2345
T Mosinee	2174	2189
T Rib Mountain	6825	6900

Population		
Municipality	**2010**	**2015**
T Stettin	2554	2566
T Texas	1615	1614
T Wausau	2229	2249
T Weston	639	655
V Brokaw	251	243
V Kronenwetter	7210	7525
V Rothschild	5269	5302
V Weston	14868	15276
C Mosinee	3988	4021
C Schofield	2169	2212
C Wausau	39106	39063

Source: U.S. Census, 2010

Source: DOA, Population Estimates, 2015

Indicator: Households

Data Source: DOA, Division of Intergovernmental Relations – Population & Housing Estimates, and U.S. Census – American Community Survey

Households		
Municipality	**Census 2010**	**Projection 2015**
V Maine	890	910
T Mosinee	814	836
T Rib Mountain	2,650	2,704
T Stettin	999	1,035
T Texas	645	649
T Wausau	860	881
T Weston	228	245
V Brokaw	123	124
V Kronenwetter	2,652	2,801
V Rothschild	2,199	2,251
V Weston	5,772	6,085
C Mosinee	1,660	1,703
C Schofield	994	1,004
C Wausau	16,487	16,790

Source: U.S. Census, 2010

Source: DOA, Housing Estimates, 2015

CHAPTER 9 – ENVIRONMENTAL JUSTICE

In 1994, Federal Executive Order 12898 directed every federal agency to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies and activities on "minority populations and low-income populations." The order reads: "Each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations."

Since the Executive Order was issued, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) have worked with their state and local transportation partners to make sure that the principles of environmental justice have been integrated into every aspect of their mission. The three fundamental environmental justice principles include:

- To avoid, minimize or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction of or significant delay in the receipt of benefits by minority and low-income populations.

MPO ROLE

As the primary forum where state DOTs, transit providers, local agencies, and the public develop metropolitan area transportation plans and programs, MPOs can help local public officials understand how Title VI and environmental justice requirements improve planning and decision-making. To certify compliance with Title VI and address environmental justice, MPOs need to:

- Enhance their analytical capabilities to ensure that the long-range transportation plan and the transportation improvement program (TIP) comply with Title VI.
- Identify residential, employment, and transportation patterns of low-income and minority populations so that their needs can be identified and addressed, and the benefits and burdens of transportation investments can be fairly distributed.
- Evaluate and, where necessary, improve their public involvement processes to eliminate participation barriers and engage minority and low-income populations in transportation decision making.

TITLE VI NON-DISCRIMINATION PROGRAM/LIMITED ENGLISH PROFICIENCY

As a sub-recipient of federal funds administered by the Federal Transit Administration (FTA) and/or the Federal Highway Administration (FHWA) from the state of Wisconsin, the Wausau MPO is required to comply with *Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987*, and all related regulations and statutes.

In addition, the Wausau MPO is required to comply with *Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted Programs of the U.S. Department of Transportation.*

The purpose of these regulations is to assure that no person or groups of persons shall, on the grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any and all programs, services, or activities administered by the Wausau MPO, regardless of whether those programs and activities are federally funded or not.

In addition, Executive Order 13166, *Improving Access to Services for Persons with Limited English Proficiency*, was issued in 2000. This order requires that any agency that receives federal funds to establish a means of including Limited English Proficiency (LEP) persons in the planning process. The Attorney General for Civil Rights subsequently issued the guidance document, *Enforcement of Title VI of the Civil Rights Act of 1964—National Origin Discrimination Against Persons with Limited English Proficiency* [Department of Justice (DOJ) LEP Guidance], to assist agencies in "tak[ing] reasonable steps to ensure 'meaningful' access to the information and services they provide."

According to the DOJ LEP Guidance, "reasonable steps to ensure meaningful access" depend on a number of factors:

- The number or proportion of LEP persons that may be impacted by a project or program;
- The frequency with which LEP persons come in contact with the project or program;
- The importance of the service provided by the project or program; and
- The resources available to the receiving agency.

Currently the MPO policy is to provide anyone in need of interpretive services with reasonable measures on a one-on-one basis. Contacting the MPO office for specific information is the current procedure.

IDENTIFYING ENVIRONMENTAL JUSTICE POPULATIONS

All analysis was done using data from the 2010 Decennial Census and the American Community Survey, 2014. The first step in the analysis looked at the MPO planning area as a whole to evaluate whether the minority and low-income populations were greater than the rest of the state. A minority or low-income population higher than the state would indicate that the MPO planning area has a concentration, which would mean that the target populations in general would carry a greater portion of the recommended projects collective impacts than the rest of the population. In the Wausau area, the minority population makes up 16.3 percent of the population, in Wisconsin 12.2 percent of the population is minority. The US Census Bureau considers 20.2 percent of the families within the Wausau area to be below the poverty level, compared to 13.2 percent of Wisconsin's families. The initial analysis indicates that the MPO does not have a disproportionate number of minority or low income persons but there are certain areas within the MPO that do reflect higher percentages then the rest.

Maps 3-4 and 3-5 illustrate the locations of the aforementioned areas within the MPA. The map indicates block groups with higher than the MPA average of minority populations and low-income populations. The areas with high concentrations of minority or low-income populations determine the environmental justice areas of concern for evaluation purposes. The majority of the environmental justice target areas are located within the City of Wausau.

CONCLUSION

Of the recommended transportation improvements listed in the 2016-2019 Transportation Improvement Program, the Thomas St., Bridge St., 1st Avenue, Townline Avenue corridors in the City of Wausau; Fuller Avenue, in the Village of Weston; and Rib Mountain Drive in the Town of Rib Mountain all have the most direct impact on an identified EJ population. Through the planning and implementation process, environmental justice issues for this project and others will require additional analysis for identifying potential impacts and developing appropriate measures for mitigating these impacts.

CHAPTER 10 – FINANCIAL PLAN

INTRODUCTION

This chapter summarizes the financial analysis of potential transportation investments. Estimated revenue from existing and proposed funding sources is compared with estimated project costs of constructing, maintaining, and operating the existing and planned transportation system to the year 2050.

The regulations in the two Federal Highway Bills, Intermodal Surface Transportation Efficiency Act (ISTEA) and the Transportation Efficiency Act (TEA-21) brought about changes that required MPOs to consider the financial implications of their planning efforts. To this end, the federal planning regulations put in place the requirement for financial constraint of these documents included in the 2015 FAST Act.

All highway bills since then have retained the requirements for a fiscally constrained long-range transportation plan and the metropolitan Transportation Improvement Program (TIP).

Funding for Wausau MPA transportation maintenance and improvement projects comes from a variety of federal, state, local and private sources. The federal government is the primary source of funding for transportation systems in the United States. These funds come predominantly from federally assessed user fees and fuel taxes, and are apportioned back to the states on a formula basis. The primary source of revenue at the state level includes motor fuel taxes and vehicle registration fees. Finances at the county and municipal levels are primarily based on property taxes, sales taxes, and special assessments. The private sector, such as developers and business associations, often support transportation projects through impact fees, right-of-way donations, and cost sharing.

The cost of maintaining the existing transportation infrastructure is continually increasing as facilities age. The challenge the Wausau area faces in the future is to balance the preservation of the existing transportation infrastructure while at the same time identifying adequate funding for the construction of new transportation facilities. While there currently is less need for new construction and more of an emphasis on the preservation of the existing infrastructure, growth and traffic patterns will change enough over the next 25 year to warrant new construction as well.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) FUNDING

A review of Transportation Improvement Program (TIP) funding from the years 2009 through 2016 indicates transportation funding levels of recently completed or scheduled to be completed transportation projects.

Table 10-1 lists federal, state, and local funds allocated for transportation projects included in the 2009 to 2016 Transportation Improvement Programs. Between 2009 and 2016, about $166 million of federal funding has been spent or is committed to area roadway projects. Federal funding has accounted for over 56 percent of all allocated funding during this eight year time period. The state has spent or has allocated an approximate total of $66 million towards area roadway improvement projects during this time period.

Table 10-1: 2011-2016 Federal, State and Local Funds Committed to Roadway Projects

Year	Federal	State	Local	Total
2009	$17,481,262	$8,676,231	$11,240,371	$37,397,864
2010	$12,277,376	$7,762,224	$15,151,754	$35,191,354
2011	$32,386,191	$11,165,982	$11,849,592	$55,401,765
2012	$36,583,620	$13,285,340	$6,151,406	$56,020,366
2013	$21,180,593	$10,736,808	$6,755,342	$38,672,743
2014	$34,426,429	$10,790,689	$1,333,098	$46,550,216
2015	$3,553,415	$1,954,250	$3,589,154	$9,096,819
2016	$7,835,981	$1,884,621	$7,015,573	$16,736,175
Total	**$165,724,867**	**$66,256,145**	**$63,086,290**	**$295,067,302**

Source: Wausau Metropolitan Planning Organization Transportation Improvement Program; 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015.

Funding that has been committed to system expansion and system preservation projects within the TIPs between 2009 and 2016. Only about 10 percent of dollars allocated over this period have or will go toward system expansion projects.

Federal revenues still accounted for about $156 million (59%) of the $263 million allocated for preservation projects between 2009 and 2016. State dollars included in the 2009 to 2016 TIPs accounted for $62 million (24%) of preservation dollars.

Revenues dedicated to system preservation between 2009 and 2016 average to about $33 million annually.

2009-2016 Transportation Improvement Program Funding

Programmed expenditures and estimated available funding for the current TIP period are listed in Table 10-2. The figure of particular interest to the MPO is the newly named Surface Transportation Block Grant (STBG) funds formerly the STP-Urban funds, which the MPO has direct impact on how these revenues are allocated. These federal dollars are estimated to provide about $532,000 annually for transportation improvement projects, which totals to about $18 million over the life of the plan.

Table 10-2: 2012 – 2019 Transportation Improvement Program Project Funding and Sources

Note: The Wausau MPO received $3,193,326 in STP-Urban funds (STBG) for its 2014-2016 entitlement. The funds will be used in 2016-2019 construction projects.

Funding Source Programmed Expenditures and Estimated Available Funding

Agency	Program	2012	2013	2014	2015	2016	2017	2018	2019
Federal Highway	Interstate Maintenance	$16,892,936	$0	$2,703,948	$0	$0	$0	$0	$0
Administration	Safe Routes to Schools *	$0	$0	$0	$0	$0	$0	$0	$0
	Bridge Program	$248,400	$0	$0	$0	$0	$0	$1,207,960	$0
	Demonstration Projects	$0	$0	$0	$0	$0	$0	$0	$0
	STP - Urban +	$0	$14,640	$0	$0	$1,100,793	$1,109,775	$2,033,576	$932,783
	STP Enhancements*	$731,795	$887,930	$736,348	$961,708	$736,348	$395,040	$0	$0
	STP Safety	$603,000	$180,000	$442,600	$180,000	$180,000	$180,000	$180,000	$180,000
	National Highway System	$18,107,490	$20,098,023	$31,054,521	$2,411,707	$6,919,633	$6,414,002	$2,571,360	$0
Totals		$36,583,621	$21,180,593	$34,937,417	$3,553,415	$8,936,774	$8,098,817	$5,992,896	$1,112,783

* STP Enhancements and SRTS are combined into Transportatio Alternatives in the FAST Act 2015

+ STP Urban becomes ST Block Grant in the FAST Act, 2015

LOCAL REVENUE FORECASTS

A critical element of securing federal transportation funding is being able to provide the local match requirements. The Federal Highway Bill SAFETEA-LU requirement that local jurisdictions must provide for 20 percent, at a minimum, of project costs to receive federal funds equates to having federal funds cover up to 80 percent of project costs.

The ability of local jurisdictions to secure these matching dollars has been problematic for some communities. However, it is essential for securing STBG program funding. It is important for communities to show the resources available to provide matching funds for construction projects after accounting for needed regular operations and maintenance costs.

WisDOT allocates General Transportation Aids (GTA) as a proportion to the community's local transportation expenditures (approximately one dollar for every four local dollars spent on transportation). WisDOT projected that the entire Wausau MPA would receive approximately $4.8 million annually in GTA (see Table 10-3). This projection is based on current GTA allocations, which are based on current local transportation expenditures. MPA communities have to spend about $26.1 million annually on their transportation system to qualify for an annual $4.8 million in state GTA funds.

Table 10-3: State and Federal Transportation Revenue Projections

STH Preservation, Maintenance and Operation	Annual Revenues	2017-2050
Combined Backbone and non-Backbone	$18,783,421	$619,852,893
STH "Low Cost" Bridges	$966,488	$31,894,104
STH Maintenance and Operations	$4,177,600	$137,860,800
Subtotal	**$23,927,509**	**$789,607,797**

Local Road Expansion and Preservation		
STBG	$628,672	$20,746,176
General Transportation Aids	$4,833,548	$159,509,084
Connecting Highway Aids	$261,446	$8,627,718
Municipal Streets Portion of LRIP	$263,859	$8,707,347
Federal Safety Programs	$201,330	$6,643,890
Local Bridges	$350,227	$11,557,491
Transportation Alternatives Program	$466,768	$15,403,344
Subtotal	**$7,005,850**	**$231,195,050**
Total	**$30,933,359**	**$1,020,936,137**

Wausau area municipal transportation expenditures data was provided by the Wisconsin Department of Revenue (see Table 10-4). The average funding for the years provided are consistent with GTA revenue forecasts.

Table 10-4: Municipal Transportation Funding 2009

Operations & Maintenance	$ 9,855,000
Construction	$22,032,000
Total	**$31,887,000**

Source: Wisconsin Departments of Revenue and Transportation

Based on the municipal transportation funding information, on average, municipalities spent 32 percent of transportation revenues on operations and maintenance and 68 percent on construction projects. Assuming this ratio remains constant, about $14.9 million would be available annually for construction projects, which translates to a total of $494 million between 2017 and 2050.

The Wausau MPO is anticipated to qualify for about $628,700 in STBG funds annually. The minimum local match required for these funds is 20%, which translates to about $125,740 annually. To meet the minimum local match requirement for STBG funds, local communities would need to dedicate less that 1 percent of these construction revenues. If local communities were to match federal funding dollar for dollar (i.e. 50% match), which has been the norm for over 20 years, they would need to allocate 2.8 percent of construction revenues. If past experience is a reasonable indication of what can be expected in the future, then by looking at local matches contributed for past projects should suggest future local match capabilities.

Table 10-5 indicates the entire projected revenues for local, state, and federal fund over the entire planning period.

Table 10-5: Local, State and Federal Transportation Revenue Projections

	Annual Revenues	**2017-2050 Revenues**
Expansion and Preservation to Local Roads	**$7,005,850**	**$231,195,050**
Local Transportation Revenues		
Operations & Maintenance	$ 9,855,000	$325,215,000
Construction	$22,032,000	$727,056,000
Sub Total	**$31,887,000**	**$1,052,271,000**
Total Federal, State, and Local Roadway	**$38,887,000**	**$1,283,466,050**

Even though the Transportation Improvement Programs (TIP) are subject to change, particularly for out years, TIPs should provide a reasonable assessment of what was spent in the TIP's most current year. A review of the 2016 TIP indicated that about $77 million in local funding will be allocated to providing the local match between 2016 and 2019; this figure averages to about $19 million annually (Table 10-6).

The MPO's ability to identify and allocate local resources to match federal dollars during this time period suggests a capacity to meet local match funding obligations of the STBG fund program. The criteria used by the MPO to identify eligible projects for STBG funds can be found in Appendix A.

Table 10-6: 2016-2019 TIP Funding

2016-2019 TABLE 1
TIP PROJECT LISTING ($)

		FEDERAL	STATE	LOCAL	TOTAL
2016	SYSTEM PRESERVATION =	$ 7,099,633	$ 1,884,621	$ 3,831,486	$ 12,815,740
	SYSTEM EXPANSION =	$ 736,348	$ -	$ 3,184,087	$ 3,920,435
	TOTALS =	$ 7,835,981	$ 1,884,621	$ 7,015,573	$ 16,736,175
2017 *	SYSTEM PRESERVATION =	$ 7,880,964	$ 2,575,147	$ 5,932,275	$ 16,388,385
	SYSTEM EXPANSION =	$ 395,040	$ -	$ 10,086,252	$ 10,481,292
	TOTALS =	$ 8,276,004	$ 2,575,147	$ 16,018,527	$ 26,869,677
2018 *	SYSTEM PRESERVATION =	$ 6,268,569	$ 3,401,885	$ 6,095,668	$ 15,766,122
	SYSTEM EXPANSION =	$ -	$ -	$ 8,574,120	$ 8,574,120
	TOTALS =	$ 6,268,569	$ 3,401,885	$ 14,669,787	$ 24,340,241
2019 *	SYSTEM PRESERVATION =	$ 192,420	$ 1,036,930	$ 22,082,049	$ 23,311,399
	SYSTEM EXPANSION =	$ -	$ -	$ 17,308,553	$ 17,308,553
	TOTALS =	$ 192,420	$ 1,036,930	$ 39,390,602	$ 40,619,952
TOTALS:	SYSTEM PRESERVATION =	$ 21,441,586	$ 8,898,583	$ 37,941,477	$ 68,281,646
	SYSTEM EXPANSION =	$ 1,131,388	$ -	$ 39,153,012	$ 40,284,400
	TOTALS =	$ 22,572,974	$ 8,898,583	$ 77,094,489	$ 108,566,046

* Amounts show a 2.3% Annual increase to reflect Year of Expenditure Dollars

Source: Wausau MPO

TRANSPORTATION COST ESTIMATES

The operating and maintenance costs for the entire MPA road system are projected for the period 2017-2050. This cost has to be added to the implementation costs to assess the financial feasibility of the alternatives.

State Expenditure on State Facilities

State preservation expenditures were projected by WisDOT on a project by project basis and are listed in Table 10-7.

Table 10-7: WisDOT's Planned Preservation Projects and Projected Costs 2016-2021

Highway	Location	Year	Type of Improvement	Cost
USH 51	Wausau – Merrill	2019	Bridge Rehab	$8,000,000
STH 29	Bus 51 – CTH Q	2019	Pavement Replacement	$4,000,000
Various	CTH WW, Brokaw	2019	Replace Bridge Deck	$2,000,000
STH 153	Western Ave. Mosinee	2019	Joint Repair	$500,000
STH 153	Western Ave. Mosinee	2019	Resurface	$500,000
Total				**$15,000,000**
Total between 2016-2050				**$495,000,000**
Total Cost with 2% annual inflation rate				**$534,582,177**

Source: Wisconsin DOT 2016-2021 Six-Year Highway Improvement Program and Wisconsin Department of Transportation North Central Region.

Other Preservation and Operation projects will be programmed on State Highways based upon pavement conditions, traffic needs, and other documented deficiencies on the system.

The cost assumptions used were derived from WisDOT per unit road construction cost estimates, which are identified in Table 10-8. These costs were applied to the miles of local road miles by surface type based on the preservation sequences identified above. Road preservation cost estimates for each of the five year increments for a 50 year period were summed and divided by 50 to provide annual road preservation cost estimates.

Table 10-8: Local Road Preservation per Mile Cost Estimates

Functionally Classified Roads	Urban	Rural
Seal	$25,000	$15,000
Resurface	$595,200	$266,600
Reconstruction	$2,604,000	$1,494,200
Local Roads	Urban	Rural
Seal	$25,000	$15,000
Resurface	$297,600	$134,000
Reconstruction	$1,302,000	$747,100

Note: Includes 20% estimated design engineering cost; typically15% to 20% of construction costs and state design review costs typically 20% of design engineering cost.

Based on the aforementioned assumptions, the following annual road preservation cost estimates were developed and shown on Table 10-9 below.

Table 10-9: Total Local System Preservation Costs

- Functionally Classified Roads: $8,429,790
- Local Roads: $967,920
- Total Annual Preservation Costs $9,397,710
- **Total Costs 2016-2050 .....$310,124,430**

- **Total Cost with 2% Annual Inflation Rate $334,923,218**

CONCLUSIONS

Given the projection assumptions, roadway preservation projects at the local and state level indicate a projected surplus of revenues available. This projected surplus could be misleading, however as this plan has identified a number of studies of corridors, interchanges, and bridges that could result in the need to program several high cost highway projects. This plan has identified a few intersection improvement projects. Intersection improvement projects are often needed as the result of peaking characteristics of local traffic due to the specific land uses in the corridor. When the DOT scopes projects for the last two years of the next six year program it is likely that intersection improvements will be identified; these projects will be documented either in amendments to this plan or in future plan updates. These projects, along with a few potential capacity upgrade projects on studied interchanges, bridges, and corridors, will likely create a very tight budget for state preservation projects during the planning period.

APPENDIX A

RESOLUTION ADOPTING

THE

WAUSAU AREA

LONG RANGE TRANSPORTATION PLAN 2050

APPENDIX A

MARATHON COUNTY METROPOLITAN PLANNING COMMISSION

RESOLUTION # 7-16

RESOLUTION ADOPTING
THE WAUSAU AREA LONG RANGE TRANSPORTATION PLAN 2050

WHEREAS, the Marathon County Metropolitan Planning Commission was designated the Metropolitan Planning Organization for the Wausau Urbanized Area; and

WHEREAS, in compliance with Metropolitan Transportation Planning Regulations by the U.S. Department of Transportation, the Marathon County Metropolitan Planning Commission has develop a Long Range Transportation Plan for the Wausau Metropolitan Area; and

WHEREAS, the Long Range Transportation Plan identifies the transportation planning needs and activities of the Metropolitan Planning Area for a period of more than 20 years; and

WHEREAS, in 2015, the federal transportation bill, Fixing America's Surface Transportation (FAST) Act was passed by the Federal Government;

NOW, THEREFORE, BE IT RESOLVED, that the Marathon County Metropolitan Planning Commission has, in compliance with the FAST Act regulations, developed the *Wausau Area Long Range Transportation Plan 2050*;

BE IT FURTHER RESOLVED, in accordance with 23 CFR 450.336, the Wisconsin Department of Transportation and the Wausau Metropolitan Planning Organization for the Wausau, WI urbanized area hereby certifies that the metropolitan transportation planning process is addressing the major issues in the metropolitan planning area and is being conducted in accordance with all applicable requirements of:

1) 23 U.S.C. 134 and 49 U.S.C. 5303 and this subpart;

2) In non-attainment and maintenance areas, Sections 174 and 176 (c) and (d) of the Clean Air Act as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93;

3) Title VI of the Civil Rights Act of 1964 as amended (42 USC 2000d-1) and 49 CFR part 21;

4) 49 USC 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;

5) Section 1101(b) of the Fixing America's Surface Transportation Act (FAST Act)(Pub. L. 114-357) and 49 CFR Part 26 regarding the involvement of disadvantaged business enterprises in the US DOT funded projects;

6) 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;

7) The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) and 49 CRF Parts 27, 37, and 38;

8) The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;

9) Section 324 of title 23, U.S.C. regarding the prohibition of discrimination based on gender; and

10) Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR 27 regarding discrimination against individuals with disabilities.

BE IT FURTHER RESOLVED, that the Marathon County Metropolitan Planning Commission recommends that this document be submitted to the appropriate federal and state agencies for their review.

Dated this 8th day of November, 2016.

George Peterson, Vice-Chairman

Rebecca J. Frisch, Secretary
Director, Marathon County
Conservation, Planning, and Zoning

APPENDIX B

ALTERNATIVE PROJECT ANALYSIS EVALUATION

METHOD AND CRITERIA

Appendix B

Alternative Project Analysis Evaluation Method and Criteria

This appendix describes the process for evaluating alternatives and determining which projects, strategies and actions should move forward toward implementation. A set of criteria was developed to identify measures of effectiveness for evaluating those alternatives deemed most likely to address the transportation deficiencies identified.

For projects to proceed toward implementation and construction, they are required to be in both the Long Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP). Ideally, projects should be identified as a need early in the LRTP planning process. LRTP recommended projects should proceed toward implementation through a prioritization process. Prioritized projects at the top of the list should advance toward implementation with the appropriate level of additional planning and preliminary engineering toward adoption into the TIP with dedicated funding in place. Once included in the TIP, the project moves toward final engineering and construction. The planning process continuum (LRTP, TIP, Construction) dictates that the criteria used in evaluating both LRTP and TIP projects should be the same or similar. It would be inconsistent to judge or rank LRTP projects by a different set of criteria than TIP projects.

The LRTP and TIP project evaluation criteria should be consistent with one another. To this end, the TIP project selection process should use the LRTP project criteria. The current TIP project selection process and criteria are described below. The LRTP and TIP project evaluation and selection process should include criteria that address the highest priority goals and objectives.

Evaluation Criteria

The criteria used for evaluating improvement projects should relate to the values of the MPO and its constituents. These values are represented as the MPO's LRTP goals and objectives, which served as a starting point for establishing evaluation criteria. The goals and objectives were developed based on input from the Technical Advisory Committee, and the Planning Commission. The LRTP goals and objectives were finalized and adopted by the Technical Advisory Committee for inclusion in this plan.

The recommended Transportation Improvement Program within the LRTP and the prioritization criteria within this section assist the Marathon County Metropolitan Planning Commission in selecting projects for Surface Transportation Block Grant (STBG) funding. Project prioritization will be guided by the LRTP. Projects eligible for STBG funding will be prioritized every two years in relation to the three year STBG funding allocation. With the communities submitting projects to the MPO, the following criteria and points system are applied to the projects by the MPO staff. Staff takes recommendations to the MPO Technical Advisory Committee who

submits projects ranked by the criteria to the Marathon County Metropolitan Planning Commission for final approval. The following are the 8 criteria:

1. Key Component of Transportation System:

   This criterion gives merit to projects according to their overall relationship with the rest of the transportation system as outlined in local and regional adopted comprehensive and land use plans. Examples: projects that occur on principal arterials; transit projects that enhance system-wide transit service, bicycle/pedestrian projects that are included in adopted bike/pedestrian plans or occur along identified bicycle routes, or provide a critical link in the transportation system.

2. Preserves Existing System:

   This criterion rewards those projects that strive to preserve the existing transportation infrastructure. Examples: roadway projects that enhance travel along major transportation corridors or address pavement conditions; transit projects that enhance service along existing routes or enhance the overall system; bicycle/pedestrian projects that enhance the existing bicycle or pedestrian system, including replacement and rehabilitation of existing facilities.

3. Cost Effectiveness:

   This criterion reflects the results of a candidate project compared to the costs of the project (i.e. number of bus riders attracted per day). Using an estimated cost of the project, and number of users, a measure of the project's cost-per-user may be calculated to provide a point of comparison among the projects.

4. Promotes Efficient System Management and Operation:

   This criterion rewards those projects that promote an increase in density (population and/or employment), serve areas of mixed land uses, and reduce auto dependency.

5. Project Coordination:

   This criterion gives weight to projects that can be coordinated with roadway, transit, bicycle, or pedestrian project with another planned or programmed project that would result in significant cost and time savings.

6. Safety:

   This criterion is based on an assessment of existing safety and security problems and the extent to which the proposed project will reduce such problems. Crash statistics and standards should be used when considering roadway and bicycle/pedestrian projects, while safety and security aspects of passengers should be considered for transit

projects. Some Intelligent Transportation Systems (ITS) measures may be used for this criterion.

7. Congestion Relief:

   This criterion is based on an assessment of existing congestion problems and the impact a proposed project may have in reducing such problems. Existing congestion can be evaluated across all modes by looking at the volume of traffic or the number of people affected by the congestion. This criterion will also look at differing levels of ITS measures for congestion relief. Examples: roadway projects that may include new arterial roadways, traffic operations systems/ITS improvements; transit projects that increase service capacity, increase service reliability, decrease vehicle crowding, or reduce travel time; bicycle/pedestrian projects that provide bicycle path/lanes, or sidewalks to serve commuters, new sidewalks along principal arterials, or connections between communities.

8. Multimodalism:

   This criterion rewards projects that accommodate more than one mode of travel either a roadway, transit, bicycle, or pedestrian project accommodates more than three modes of travel.