

## Chapter 3 - Transportation

The land use patterns of a community, and region are tied together by the transportation system, including roadways, railroads, airlines, trails, waterways, etc. The residents, businesses, agricultural producers, and manufacturers all rely upon a dependable transportation system to function and provide linkages to areas beyond their borders. The town's transportation network plays a major role in the efficiency, safety and overall desirability of the community as a place to live and work.

The Town of Watertown experienced some significant transportation changes since the Town's last comprehensive plan update. The most predominant change was during the late 2000's, the Town experienced the construction of a four lane State Hwy 26 By-Pass around the City of Watertown. The By-Pass which was open to through traffic in 2012, changed numerous local road access points and consumed significant agricultural acreage. On the other hand, the By-Pass established a logical growth boundary for the City of Watertown, aiding in long range planning decisions. The Town also experienced some additional trail development as part of the Glacial River and Drumlin Trail systems.

Specifically, this section addresses:

- Existing Road System
- Road Functional/Jurisdictional Classification
- Traffic Volume Trends and Forecasts
- Additional Modes of Transport
- Planned Transportation Improvements

### 3.1 Existing Road System

The existing road system for the Town of Watertown is illustrated in Map 3-2, Functional Classifications and Daily Traffic Counts. The town's road configuration is characterized by a typical rural grid roadway pattern of primarily north-south and east-west roads. Exceptions to this grid-type layout are State Highway (STH) 16, and County Roads A, Y, and E. Other exceptions include roads influenced by natural features such as wetlands, steep slopes, and the Rock River.

The general traffic circulation patterns through Watertown are as follows:

- STH 26 provides for north/south travel through Watertown, and serves as a primary transportation route for inter-city trips by local residents and inter-state trips for the region. The STH 26 and STH 16 corridors link Watertown to major population and employment centers of southeastern and southwestern Wisconsin (including Madison and Milwaukee) and northern Illinois (greater Chicago area) through the link with I-94. It also serves as a primary travel corridor to the recreational destinations along the Lake Michigan shoreline and in western Wisconsin. The STH 26 By-Pass which opened in 2012, has presented some local traffic access challenges but improved overall through traffic safety.
- County Trunk Highways (CTH) T, A, Y, X, D, E, P and CW, with support from intersecting local roads, provide primarily north and south directional travel within the town.
- Local town roads serve as collectors to the state and county highway system serving Watertown and provide both east-west and north-south directional travel.

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**Map 3-1 Functional Classification and Daily Traffic Counts**

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### 3.2 Road Functional/Jurisdictional Classification

As depicted on Map 3-1, the road system is composed of three levels of government jurisdiction. These include the town system encompassing the local roads, the county system of trunk highways, and the state highway system. The map illustration identifies that the local roads comprise the greatest mileage. However, for the greatest functional role and the amount of traffic carried by each type, STH 26 is the most significant. Roads within the Town, which are the principal component of the traffic circulation system, may be divided into three broad categories: arterial roads, collector roads and local roads. The function that the road serves in relation to existing traffic patterns, adjacent land use, land access needs, and the average daily traffic volumes determine its functional classification.

#### Arterial Roads

The principal function of an arterial is to provide the most efficient movement for relatively large volumes of traffic at increased speeds over medium to long distances between regions and large cities. Movement to and from other road facilities is limited to controlled interchanges. Arterial roads can be defined in one of two categories; principal or minor, as defined in Table 3- 1.

STH 26 and 16 serve as principal arterials for travel through Watertown.

STH 19 serves as a minor arterial.

#### Collector Roads

Historically, the function of collector roads in a rural setting was to provide access between local town roads and mills and markets. Collector roads provide general "area to area" service rather than the more specific "point to point" function of the town's local road system. Collector roads can be defined in one of two categories; major or minor, as defined in Table 3-1.

Major collectors in the town include CTH A, D, E and CW.

Minor collectors within the town include CTH Y and X.

#### Local Roads

The principal function is to provide traffic with access to and from property. Local roads serve the ends of most trips within a rural setting. Finding adequate funding to improve local roads continues to be a struggle for towns. Increased state for local roads continues to be an initiative of the Wisconsin Towns Association.

**Table 3-1**  
**Year 2010 Rural Area Highway Functional Classification Criteria**

<b>Basic Criteria</b> Must meet any two of these or the parenthetical traffic volume alone					Supplemental Criteria or must meet both of these plus 90% of traffic volume
<b>Functional Classification</b>	<b>Traffic Volume</b>	<b>Population Service</b>	<b>Land Use Service</b>	<b>Spacing</b>	
Principal Arterial	>= 6,000	Connect places 50,000 with other places 50,000. Connect places 5,000 – 49,999 to places 50,000+.	Provide access to major recreation areas	Maximum 30 miles	None for Principal Arterials
Minor Arterial	>= 2,000	Connect places 1,000 - 4,999 to places 50,000 +. Connect places 5,000 - 49,999 with places 5,000 to 49,999 or to higher functional route	Serve all traffic generating activities with an annual visitation >= 300,000 if not served by a principal arterial	Maximum 30 miles	1. Alternative population connection. 2. Major river crossing or restrictive topography.
Major Collector	>= 1,000 (>= 4,000, The highway segment must be a minimum of a ½ mile long)	Connect places 1,000 - 4,999 to places 1,000-4,999. Connect places 500 - 999 to places 50,000 +. Connect places 500 - 999 to places 5,000 – 49,999. Connect 500 – 999 to places 1,000 – 4,999. Connect places 500 – 999 to places 500 – 999 or higher function routes.	Land use service index $\geq 16$ .	Maximum 10 miles between Major Collectors or Higher Function Routes	1. Alternate population connection. 2. Parallels a principal arterial. 3. Interchange with a freeway. 4. Major river crossing. 5. Restrictive topography.
Minor Collector	>400 (>= 1,600, the highway segment must be a minimum of one-half mile long)	Connect places 100 - 999 to places 100 - 999. Connect places 50 - 99 to places 50,000 +. Connect places 50 - 99 to places 5,000 - 49,999 or higher function route.	Land use service index $\geq 8$ .	Maximum 10 miles between Minor Collectors or Higher Function Route	1. Alternative population connection. 2. Parallels a principal arterial. 3. Interchange with freeway. 4. Major river crossing. 5. Restrictive topography.

Source: Wisconsin Department of Transportation

### 3.3 Traffic Volume Trends and Forecasts

Annual average daily traffic (AADT) counts for 2006, 2009 and 2016 for three locations in Watertown are presented in Table 3-2. Table 3-2 also presents the change in annual average daily traffic counts from 2006 to 2016 for these three locations.

**Table 3-2**  
**Annual Average Daily Traffic Counts**  
**Town of Watertown**  
**2006-2016**

	Location	2006	2009	2016	# Change	% Change
A	STH 26 from High Road to Ebenezer Drive	12,700	11,200		-1,500	-11.8%
B	CTH D from CTH E to Luttmann Drive		660	660	0	0.0%
C	CTH E from CTH D to CTH P	2,000	2,600	2,600	600	30.0%

Source: Wisconsin Department of Transportation Average Annual Daily Traffic Counts 2006, 2006 and 2016.

Average Annual Daily Traffic counts are calculated by multiplying raw hourly traffic counts by seasonal, day-of-week, and axle adjustment factors. The daily hourly values are then averaged by hour of the day and the values are summed to create the AADT count.

As expected, the highest traffic volumes are associated with STH 26. However, overall, traffic volumes have stayed relatively stable since about 2009 (see Table 3-2 and Map 3-1). Some locations showing slight increases while others are showing actual decreases. The volumes maybe reflective of the impacts of the 2008 Recession and slower economic recovery since that event. It may also reflect a change in driving habits by younger generational preferences.

Traffic volumes are just one indicator of potential impacts to the condition of local road systems. Another growing concern especially in rural agricultural towns such as Watertown, is the increasing size and weights of agricultural equipment (Implements of Husbandry) and trucking.

Wisconsin continues to battle budgetary issues in respect to upgrading deteriorating roads at the state, county and local levels. The debate on how to increase funding to meet a growing demand for road improvement will likely continue into the foreseeable future. Towns are especially challenged as equipment gets larger, negatively impacting town roads.

The additional stress increases the need for additional roadway maintenance, thereby increasing the town's budgetary demands for road improvements.

### 3.4 Additional Modes of Transport

#### Air Service

The Watertown Municipal Airport is classified as a "General Utility II" airport and is a publicly- owned general aviation airport. It serves large aircraft up to 60,000 pounds. These aircraft range from typical corporate aircraft (including jets) to commuter airline aircraft. The airport is located along the southern border of the City of Watertown, just east of STH 26.

The Watertown Municipal Airport has services including charter service, aircraft repair, aircraft painting and flight school. Wisconsin Aviation manages the field for the City of Watertown and provides aircraft sales and maintenance. Central Aviation provides aircraft repairs and painting. A large variety of rental aircraft is available.

The Watertown Municipal Airport has two paved runways. One is 2,801 feet and the other is 4,429 feet. The airport also has several hangers and a terminal building with a conference room.

The nearest commercial air service is available from Austin-Straubel Airport in Green Bay, Dane County Regional Airport, and General Mitchell International Airport in Milwaukee.

#### Freight Rail Service

The Canadian Pacific Rail System (CPRS) crosses through the Town of Watertown in an east- west direction. The CPRS is a privately owned railroad. The main line serves Watertown, Ixonia, and Oconomowoc.

Wisconsin and Southern Railroad has a line that extends from Watertown west to Madison through Waterloo. The main line through Wisconsin currently serves as Amtrak's rail passenger route from Chicago to the Twin Cities.

The Union Pacific (UP) Railroad system passes through the Town of Watertown in a north-south direction. This line serves the cities of Jefferson, Fort Atkinson, and Watertown, and the Village of Johnson Creek. The UP Railroad is also a privately owned railroad.

Union Pacific and Canadian Pacific are both Class I Wisconsin railroads. Availability of these rail lines may provide opportunities for economic expansion or industrial development within Watertown.

### 3.5 Planned Transportation Improvements

Proposed road transportation improvements are shown on Map 3-2.

#### State Highway Projects

No state highway projects are planned for the immediate future in the Town of Watertown. However, discussions are ongoing for how STH 16 on the east side of the Town maybe realigned or by-passed. The Town should monitor discussions with the WDOT on this potential project.

### County Highway Projects

The Jefferson County Highway Department has one reconstruction project planned for county roads in the next five years. The project is listed as follows:

**Table 3-3  
Jefferson County Highway Department  
5-Year Highway Improvement Plan**

Year	Highway	Location	Length	Improvement
2018	CTH Y	Johnson Creek – STH 26	4.9 miles	Resurface/Rehab

### Town Highway Projects

The Town of Watertown follows the Pavement Surface Evaluation and Rating (PASER) road management inventory (required by Wisconsin Statute, 86.302). The program allows the town to develop a strategic and cost effective maintenance plan for the local road network on an annual basis.

### 3.6 Coordination with Other Transportation Plans

The following Wisconsin Department of Transportation statewide plans have been developed and should be consulted for further transportation planning information. The transportation element of this comprehensive plan has been coordinated with all applicable WisDOT plans.

- Wisconsin State Highway Plan 2020
- Wisconsin Bicycle Transportation Plan 2020
- WisDOT Access Management System Plan
- Wisconsin State Airport System Plan 2020
- Translink 21: A Multi-modal Transportation Plan for Wisconsin's 21st Century
- 6-Year Highway Improvement Program
- Statewide Transportation Improvement Program (S TIP)
- Wisconsin Pedestrian Policy Plan 2020
- Wisconsin State Rail Plan 2020
- Wisconsin State Transit Plan 2020

In addition, the town has coordinated its transportation planning efforts with the Jefferson County Bicycle Plan. The town is not within a regional planning commission's jurisdiction.

### 3.7 Transportation Goals and Objectives

#### Goals

Community goals are broad statements expressing public preferences for the long term (20 years or more). They specifically address key issues, opportunities and problems that affect the community. Goals are value-based statements that are not necessarily measurable.

## Objectives

Objectives are narrower than goals and are measurable statements usually attainable through direct action and strategic planning. The accomplishment of objectives contributes to fulfillment of the goal.

"A compilation of objectives, policies, goals, maps and programs to guide the future development of the various modes of transportation, including highways, transit, transportation systems for persons with disabilities, bicycles, walking, railroads, air transportation, trucking and water transportation."

### **Goal TE-1: *Provide and maintain a safe and reliable town transportation network.***

#### **Supporting Objectives:**

- TE-1.1 Adopt town road standards for the construction of public and private roads.
- TE-1.2 Implement and preserve access controls along all town roadways (i.e. driveway permits).
- TE-1.3 Develop and maintain a transportation plan to address long-term needs for road upgrades and new roads.
- TE-1.4 Ensure that new roads can connect to existing and planned roads on abutting properties whenever possible.
- TE-1.5 Consider the development of an official map to reserve adequate right-of-way for future road linkages.
- TE-1.6 Continually advocate to the WDOT for increased funding for local road aids to fund future town road projects.
- TE-1.7 Should a local road aid shortfall continue to exist, consider increasing town tax levies for the purposes of improving local roads.
- TE-1.8 Recognize the need to provide routes for ATV (All Terrain Vehicles) and UTV (Utility Terrain Vehicles) to use as a function of agricultural activities.
- TE-1.9 Continue to permit and monitor the Town's IOH (Implements of Husbandry) program.

### **Goal TE-2: *Increase the safety and use of non-motorized transportation modes.***

#### **Supporting Objectives:**

- TE-2.1 Consider bicycle and pedestrian safety needs when new roads are proposed or when major roadway improvements are made.
- TE-2.2 Consider/promote the development of multi-use trails and linkages as part of new development proposals.

- TE-2.3 Work with Jefferson County and adjacent municipalities in the development of bicycle and multi-use trails.
- TE-2.4 Continue to work with Jefferson County to plan for and implement a bike trail system within the region.

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**Map 3-2 Proposed Transportation Improvements**

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### 3.8 Transportation Policies

Policies identify the way in which activities are conducted in order to achieve fulfillment of the goals and objectives. Policies that direct action using the words "will" or "shall" are advised to be mandatory and regulatory aspects of the implementation of the *Town of Watertown Comprehensive Plan*. In contrast, those policies that direct policy using the word "should" are advisory and intended to serve as a guide.

1. The town should utilize the existing street network to the greatest extent possible in order to minimize future road maintenance costs and to avoid the fragmentation of farmland and woodland.
2. An area development plan shall be submitted as a condition of all subdivision review in order to ensure that proposed new roads can connect to adjacent properties and to avoid unnecessary cul-de-sacs and loops that can increase town maintenance costs.
3. Driveway lengths for new development should be limited to assist in response time for police, fire and emergency rescue services.
4. The town shall utilize information from the PASER (Pavement Service and Evaluation Rating System) to annually update the town's five year road improvements program, including the identification of funding sources and priorities for identified improvement projects.
5. The town should investigate the potential traffic impacts of development in the areas zoned R-2, Residential Unsewered and designated Rural Residential on the Preferred Land Use map.
7. The town should coordinate the extension of streets with the City of Watertown within the Planned Transition area.
8. The town should continue to coordinate the designation of bicycle trails on local and county roads with Jefferson County in order to promote alternative modes of transportation.
9. The town shall consider bicycle safety, particularly on designated bicycle routes (Map 3-2), at the time local roads are to be improved or resurfaced.
10. The town should work with local residents, neighboring municipalities, county park and planning staff, and state representatives to coordinate the development of a multi-use trail.
11. The town should investigate opportunities to work with other jurisdictions and private enterprise to provide transit and transportation facilities for the elderly and disabled.

### 3.9 Transportation Programs

The following transportation programs are available for use by the Town of Watertown. The following list is not all inclusive and programs are subject to change. For specific information a program representative should be consulted.

### **Adopt-A-Highway Program**

The Adopt-A-Highway Program is administered by the Wisconsin Department of Transportation (WisDOT). The program was initiated to allow groups to volunteer and support the state's anti-litter program in a more direct way. Each qualified group takes responsibility for litter control on a segment of state highway. The group picks up litter on a segment at least three times per year between April 1 and November 1. Groups do not work in dangerous areas like medians, bridges, or steep slopes. In addition, a sign announcing a group's litter control sponsorship can be installed. The state Adopt-A-Highway coordinator should be contacted for further information. Applications and forms are available through the WisDOT website.

### **Rustic Roads Program**

The Rustic Roads System in Wisconsin is an effort to help citizens and local units of government preserve what remains of Wisconsin's scenic, lightly traveled country roads for the leisurely enjoyment of bikers, hikers and motorists. An officially designated Rustic Road shall continue to be under local control. The county, city, village or town shall have the same authority over the Rustic Road as it possesses over other highways under its jurisdiction. A Rustic Road is eligible for state aids just as any other public highway.

### **Transportation Economic Assistance (TEA) Program**

The Transportation Economic Assistance program provides 50% state grants to governing bodies, private businesses, and consortiums for road, rail, harbor and airport projects that help attract employers to Wisconsin, or encourage business and industry to remain and expand in the state. Grants of up to \$1 million are available for transportation improvements that are essential for an economic development project. It must be scheduled to begin within **three** years, have the local government's endorsement, and benefit the public.

### **Transportation Enhancement Program (part of the Statewide Multi-modal Improvement Program (SMIP))**

Transportation enhancements (TE) are transportation-related activities that are designed to strengthen the cultural, aesthetic, and environmental aspects of transportation systems. The transportation enhancements program provides for the implementation of a variety of nontraditional projects, with examples ranging from the restoration of historic transportation facilities, to bike and pedestrian facilities, to landscaping and scenic beautification, and to the mitigation of water pollution from highway runoff. Most of the requests and projects awarded in Wisconsin have been for bicycle facilities. Examples of bicycle projects include multi-use trails (in greenways, former rail trails, etc.), paved shoulders, bike lanes, bicycle route signage, bicycle parking, overpasses/underpasses/bridges, and sidewalks.

Transportation enhancement activities must relate to surface transportation. Federal regulations restrict the use of funds on trails that allow motorized users, except snowmobiles. TEA 21 expanded the definition of transportation enhancements eligibility to specifically include the provision of safety and educational activities for pedestrians and bicyclists, which had not been clearly eligible under ISTEA.

### **Disaster Damage Aids**

Provides financial assistance to local governments to repair any highway that has had

significant damage due to a disaster event.

### **Emergency Relief**

Assists local governments with replacing or repairing roadways or roadway structure damage on all federal-aid highways (major collectors and above) resulting from a catastrophic failure or natural disaster.

### **General Transportation Aids (GTA)**

The second largest program in WisDOT's budget, GTA returns to local governments roughly 21.8 % of all state-collected transportation revenues (fuel taxes and vehicle registration fees) - helping offset the cost of county and municipal road construction, maintenance, traffic and other transportation-related costs.

### **Highway Safety Improvement Program (HSIP)**

The Highway Safety Improvement Program (HSIP) funds highway safety projects at sites that have experienced a high crash history. Emphasis is on low-cost options that can be implemented quickly.

### **Local Bridge Improvement Assistance**

Allocates federal and state funds to help local governments rehabilitate and replace the most seriously deficient existing federal-aid-eligible local structures on Wisconsin's local highway systems.

### **Local Roads Improvement Program (LRIP)**

Assists local governments in improving seriously deteriorating county highways, town roads, and city and village streets. The program has three basic components: County Highway Improvement (CHIP); Town Road Improvement (TRIP); and Municipal Street Improvement (MSIP). Three additional discretionary programs (CHIP-D, TRIP-D and MSIP-D) allow municipalities to apply for additional funds for high-cost road projects.

### **Local Roads Improvement Program (LRIP) Web System**

This tool will replace a local application, available only to WisDOT staff, with a centrally maintained Extranet Web system that can be used by anyone with authorized WAMS ID access and Internet connectivity.

### **Statewide Transportation Improvement Program (STIP)**

The Statewide Transportation Improvement Program (STIP) produces a four-year plan of highway and transit projects for the state of Wisconsin. Revised every year, the plan is a compilation of all highway (state or local) and transit (capital or operating) projects in urban and rural areas that propose to use federal funds.

### **Surface Transportation Program - Rural (STP-R)**

Allocates federal funds to complete a variety of improvements to federal-aid-eligible rural highways (primarily county highways).

### **Transportation Alternatives Program (TAP) October 2015**

TAP is a comprehensive federal funding program that was created by the Moving Ahead for Progress in the 21st Century Act (MAP-21), federal transportation legislation that was signed into law in July 2012 and effective as of October 1, 2012. TAP "provide[s] for a variety of alternative transportation projects, including many that were previously eligible activities under separately funded programs."

TAP incorporates the following three former WisDOT multi-modal transportation improvement programs:

- Safe Routes to School (SRTS);
- Transportation Enhancements (TE); and
- The Bicycle & Pedestrian Facilities Program (BPF).

WisDOT previously administered these programs as three distinct federal funding categories based upon the statutory requirements of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), as well as previous federal transportation legislation.

### **The Wisconsin Information System for Local Roads (WISLR)**

The Wisconsin Information System for Local Roads (WISLR) is an Internet-accessible system that helps local governments and the Wisconsin Department of Transportation (WisDOT) manage local road data to improve decision-making, and to meet state statute requirements. With Geographic Information System technology, WISLR combines local road data with interactive mapping functionality. The result is an innovative system that allows users to display their data in a tabular format, on a map, or both.

### **Pavement Surface Evaluation and Rating (PASER)**

PASER is a simple method of rating asphalt and concrete roads on a scale of 1 to 10 and gravel roads on a scale of 1 to 5, based on visual inspection. PASER manuals and a video explain how and why roads deteriorate, and describe proper repair and replacement techniques. PASER rating can be put into PASERWARE, an easy to use pavement management software. PASERWARE helps to inventory roads, and keep track of their PASER ratings and maintenance histories. It also helps to prioritize road maintenance and improvement needs, calculate project costs, evaluate the consequences of alternative budgets and project selection strategies, and communicate those consequences to the public and local officials. Both PASER and PASERWARE are available from the University of Wisconsin's Transportation Information Center at no charge. The Center also offers free training courses.