

CHAPTER 6

TRANSPORTATION

Introduction

A transportation system provides for the efficient and safe movement of people and goods. It is the vital link that provides access to and from the Town of Barnes. The road network has allowed people to have access to the Town's valued natural resources which has resulted in a large increase in seasonal homes. Transportation is not exclusive to vehicles. Biking and hiking trails allow people to enjoy passive recreation. Some transportation options are limited due to the rural nature of the Town.

Modes of Transportation

The movement of people and goods is accomplished through a variety of transportation modes. These modes include car, truck, rail, transit, ship, air, bicycle and walking. For the most part, each mode fits a particular need. Automobiles function as the dominant mode for the movement of people throughout the Town of Barnes. Trucking provides for the rapid movement of goods and products over the highway network. Air travel moves people and lightweight products quickly over long distances. Shipping provides for transport through waterways. The railroad functions primarily for the movement of bulk commodities over long distances while bicycle paths and walking trails provide for the movement of individuals.

Roads

The major forms of transportation in the Town of Barnes are truck and automobile. The road system in the Town is composed of three different road surfaces: paved, gravel, and sand (*see Map 6-1*). According to the community survey, 85% of the respondents felt the roads in the Town were in good to fair condition.

ROAD SURFACES

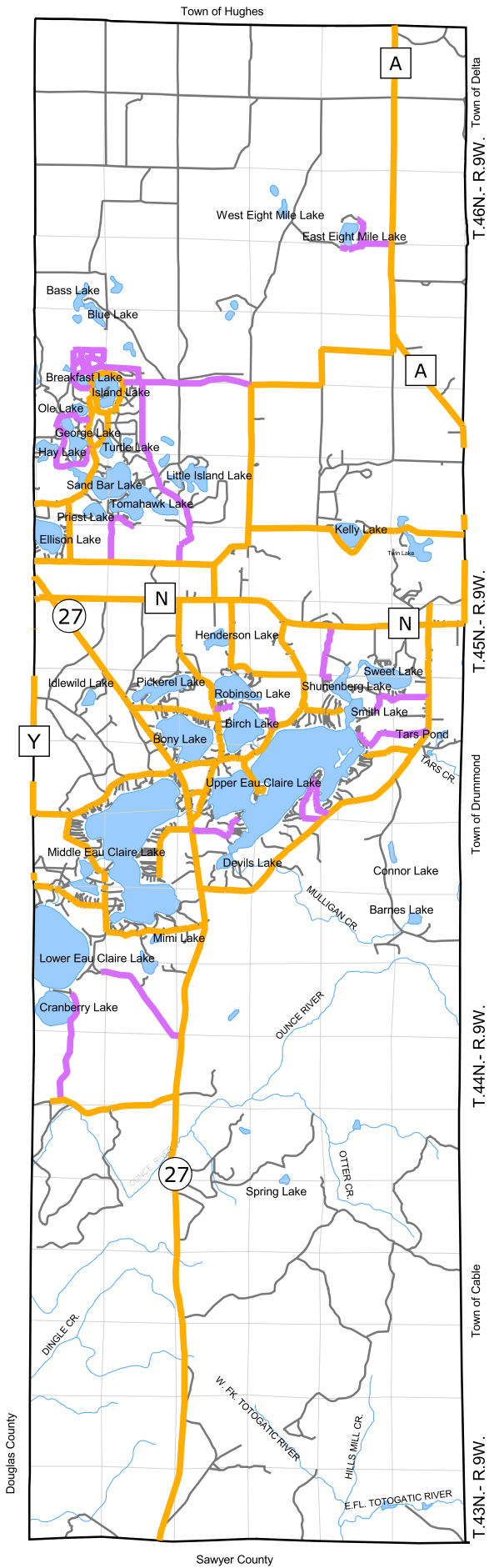
TOWN OF BARNES
Bayfield County, Wisconsin
Map 6-1

LEGEND

- BLACKTOP
- GRAVEL
- SAND OR PRIVATE
- Streams
- Section Lines
- Lakes



0 1 2 3 Miles



Functional Classification System

Roads in Town of Barnes are classified according to their function and jurisdiction. Classifications are divided into urban and rural categories based on population. Because the population of the Town of Barnes is below 5,000, it falls under the rural functional classification system.

The Functional Road Classification Map illustrates the functional classification of roads (see *Map 6-2*). In the future, some local roads may be elevated to a higher classification as traffic volumes increase. The functional road classifications are explained below:

Principal Arterials: Serve interstate and interregional trips. These routes generally serve all urban areas greater than 5,000 people. The rural principle arterials are further subdivided into 1) interstate highways and 2) other principle arterials.

The Town of Barnes does not have any principal arterials.

Minor Arterials: In conjunction with the principal arterials, they serve cities, large communities, and other major traffic generators providing intra-regional and inter-area traffic movements.

The only existing principal arterial is State Trunk Highway 27 (State jurisdiction).

Major Collectors: Provide service to moderate sized communities and other intra-area traffic generators, and link those generators to nearby larger population centers or higher function routes.

County Trunk Highways N, A (both County jurisdiction), and Pease Road (local jurisdiction) are classified as major collectors.

Minor Collectors: Collect traffic from local roads, and provide links to all remaining smaller communities, locally important traffic generators, and higher function roads. All developed areas should be within a reasonable distance of a collector road.

Lake Road, Denver Road (both local jurisdiction), and County Trunk Highway Y (County jurisdiction) are minor collectors in the Town of Barnes.

Local Roads: Provide access to adjacent land and provide for travel over relatively short distances. All roads not classified as arterials or collectors are local function roads. Some roads that are currently designated as local roads may be changed to collector roads in the future. The remaining roads throughout the Town are considered local and/or private.

FUNCTIONAL ROAD CLASSIFICATIONS

TOWN OF BARNES
Bayfield County, Wisconsin
Map 6-2


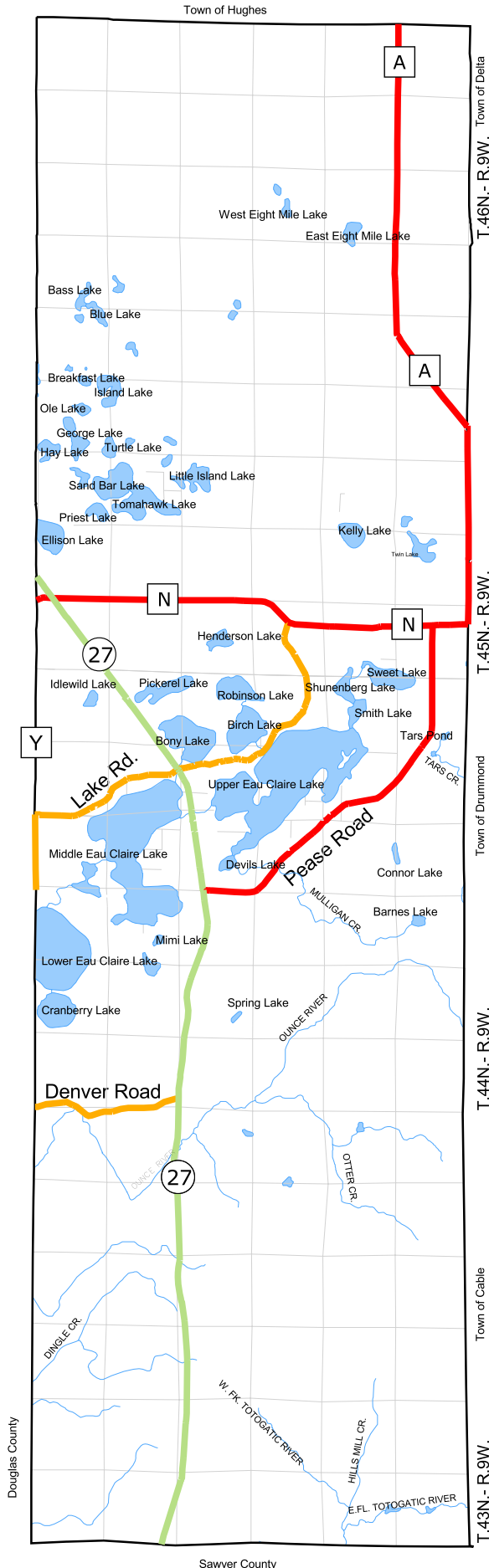
LEGEND

-  Minor Arterial
-  Major Collector
-  Minor Collector

-  Town Limits
-  Town Roads
-  County/State Roads
-  Streams
-  Section Lines
-  Lakes



0 1 2 3 Miles

Traffic Volumes

Traffic volumes have generally increased in the Town of Barnes. Table 6-1 shows the annual average daily traffic as calculated by the Wisconsin Department of Transportation (DOT). The DOT attempts to count traffic at the same location. Map 6-3 shows the two locations where these counts were taken. The increases can be attributed to two main factors. First, residents of the Town and surrounding area are making more frequent trips for shopping, commuting to work, visiting friends, etc. Secondly, tourism, especially in the summer, brings significant numbers of people into and through the Town of Barnes. It is expected that the amount of traffic will continue to increase in the future. The increased traffic will accelerate road degradation and may require local roads to be upgraded to operate at a higher function.

Table 6-1: Annual Average Daily Traffic		
Year	Site 1	Site 2
2003	630	N/A
2000	1,200	1,100
1997	770	770
1994	1,000	N/A
1990	490	480
1986	710	690
1983	540	690
1980	490	600
1977	500	830
1974	460	510
1971	340	340
1968	290	300
1967	300	310
1966	110	150
Source: Wisconsin Department of Transportation Bayfield County Land Use Plan		

ANNUAL AVERAGE DAILY TRAFFIC COLLECTION SITES

TOWN OF BARNES
Bayfield County, Wisconsin
Map 6-3


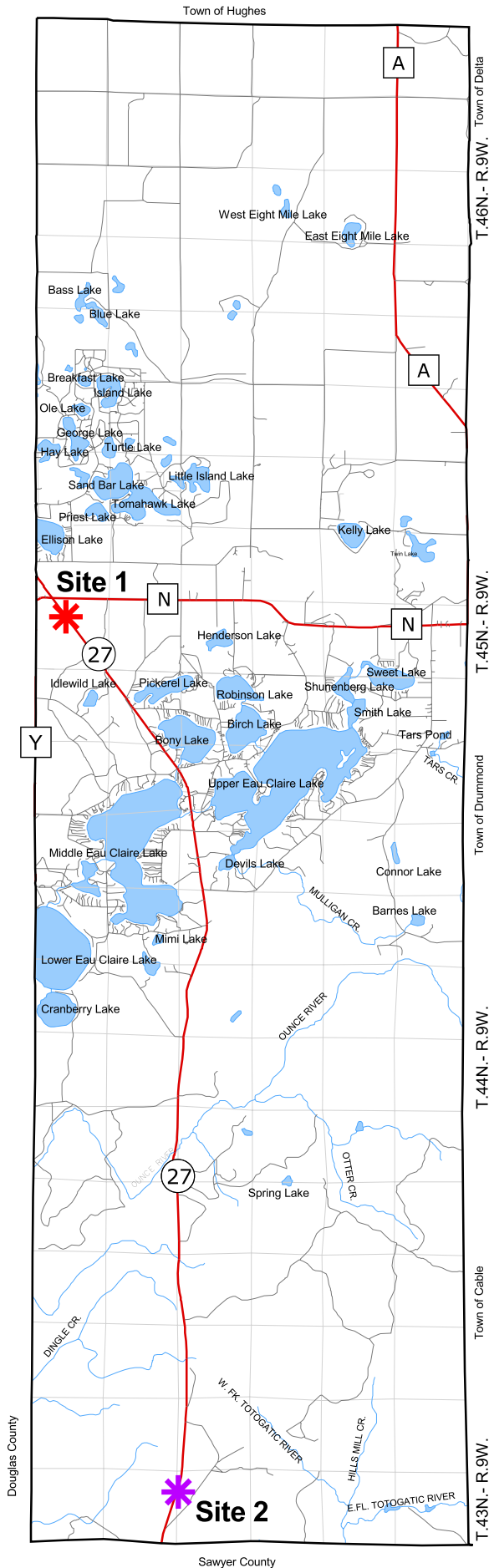
LEGEND

-  Site 1
-  Site 2

-  Town Limits
-  Town Roads
-  County/State Roads
-  Streams
-  Section Lines
-  Lakes



0 1 2 3 Miles

Town Roads

The Town of Barnes has a total of 149.2 miles of roads. Roads that are paved make up about 45.5 miles. Gravel roads make up 17.7 miles and sand roads make up the remaining 86 miles. Most of the roads in the populated areas near the lakes are paved or gravel. The majority of sand roads are found in the north portion of the Town.

Some of the biggest challenges to maintaining Town roads are the varying widths of right-of-ways and early road construction methods. Narrow right-of-ways make road widening, stormwater run-off control, and brush clearing difficult because of the lack of space to implement these actions.

Early roads were built by leveling the ground, and over time, due to continual grading, flat roads have developed with berms on each side. Some of these roads do not drain properly and require higher maintenance costs which could be reduced by establishing road design standards.

Driveways, Setbacks, and Parking Lots

Driveways, setbacks, and parking lots can have a lasting effect on the Town's northwoods character by making structures and vehicles highly visible. Many existing conditions, such as parking lots that are extensions of the roads, are the result of limited regulations and standards in the past.

There are several actions the Town may want to consider to preserve the northwoods character of the community. Driveway access points to properties could be limited and curved driveways encouraged to reduce the visibility of a structure. Front yard setbacks may be increased to set structures farther back from roads. Table 6-2 shows current setback requirements. Also, parking design standards could be developed to make large parking lots less visible.

The Town of Barnes is currently working on a Driveway Ordinance that addresses driveway locations and construction standards.

Table 6-2 Bayfield County Highway Setbacks		
Class of Highway	Setback from Centerline	Setback from Right of Way Line
State & Federal	110'	50', whichever is greater
County	75'	42', whichever is greater
Town	63'	30', whichever is greater
Source: Bayfield County Zoning		

State Highway and County Trunk Highway Future Projects

State Trunk Highway 27 will be reconditioned in the near future. Traffic will be diverted along a detour through the Town of Barnes while road construction is taking place. The detour will be routed on County Road N to County Road A. The Bayfield County Highway Department will be extending the shoulders of the County Trunk Highways and adding new signage to upgrade the roads to safely handle the increased traffic. Starting May of 2006 and ending in September of 2006, County Trunk Highway N and County Trunk Highway A will be under construction for the planned improvements.

Road Expenditure Planning

With infrastructure comes maintenance. A sound transportation plan should be able to foresee and responsibly plan for upcoming expenses. Two ways of doing this is by participating in the PASER program and devising a Capital Improvements Plan (CIP).

Pavement ratings can be used for planning maintenance and budgets for local roadways. In 2001, a state statute was passed that requires municipalities and counties to assess the physical pavement condition of their local roads. A common method of doing this is referred to as Pavement Surface Evaluation and Rating or PASER. PASER rates roadways from Failed (needs total reconstruction) to Excellent (no visible stress). PASER allows for better allocation of resources, a better understanding of pavement conditions, and allows for long term planning. The Town of Barnes had their first PASER inventory completed in 2001. The most recent PASER study was completed in December of 2005.

Capital Improvements Plans are long-range strategies that match the costs of future capital improvements to anticipated revenues. CIP's usually identify projects and associated costs over a 5-year period and should be updated every year.

Rail

Demand for rail services in the Town of Barnes and Bayfield County have been limited. Currently, there is no active rail service in Bayfield County. The nearest access to freight service is the Duluth/Superior area and the City of Ashland.

The nearest passenger service is Amtrak and is located in St. Paul, Minnesota.

Public Transportation

At present, there is no bus service through the Town of Barnes. Access to bus transportation can be found in the Duluth/Superior area and the City of Ashland.

Transportation for the Elderly and Disabled

Bayfield County currently offers elderly and disabled residents transportation service. This service relies on volunteers to transport elderly and disabled residents in the Town of Barnes and throughout the County. Volunteers are paid the federal reimbursement rate of 40¢/mile. The cost for the ride however is based on a sliding scale depending on the purpose of the trip. Table 6-3 shows the percent co-pay for each trip category.

Table 6-3 Elderly Transportation Fees	
Type of Trip	Percent the Rider Pays
Medical	30%
Nutrition	50%
Occupation	75%
Other	100%
Source: Human Services of Bayfield County	

The remaining cost is covered by the federal, state, and local government. Anyone interested in becoming a volunteer driver can fill out the proper forms and information at the Human Services Department. All volunteer drivers are given background checks every year for proof of driving record and insurance.

Air Transportation

Air transportation is not directly provided to the residents of the Town of Barnes. While there is a private airfield within the Town of Barnes, the closest public airport for commercial flights is the Duluth International Airport located in Duluth, Minnesota. The airport is approximately 50 miles away and offers connections to the Minneapolis/St. Paul International Airport in the Twin Cities.

Area airports can be found in Solon Springs, Hayward, Cable, Drummond, Oulu, Superior, Ashland, and other locations.

Water Transportation

The Duluth/Superior area offers the closest water transportation facilities.

Truck Transportation

Commercial trucking in the Town of Barnes is accommodated by State Trunk Highway 27 and County Trunk Highways A, N, and Y.

Bicycles and Pedestrian

There are no sidewalks or trails in the Town of Barnes used for transportation. There are some trails in Tomahawk Park that are used for recreation. Those will be addressed in Chapter 7.

Transportation Goals, Objectives and Policies, Programs, & Actions

Goal 1: Provide for the safe and efficient movement of people and goods in the Town of Barnes.

Objectives

1. Minimize the impacts of noise and air pollution.
2. Provide long-range transportation planning that identifies potential safety and traffic problems and suggests solutions for them.
3. Reduce the possibility of accidents due to poor visibility at intersections.

Programs, Policies, and Actions:

1. Support a State, County, and Town road system that promotes connectivity.
2. Establish access controls where necessary to preserve the integrity of roadways in existing and newly developed areas.
3. Develop right-of-way and design standards for new roads.
4. Insure all Town roads have adequate signage.
5. Develop transportation alternatives for seniors, the elderly, and the disabled.

Goal 2: Maintain local roads in an efficient and cost-effective manner.

Objectives

1. Minimize Town road maintenance costs.

Programs, Policies, and Actions:

1. Work with the Town Roads and Property Foreman to develop road construction and design standards.
2. Require Town road reconstruction and all new roads to meet Town road construction and design standards.
3. Require developers to pay for professional supervision of road construction in new developments.
4. Develop a Capital Improvements Plan to plan long-term for road maintenance, reconstruction of existing roads and construction of new roads.
5. Pursue available grant monies to help offset the cost of transportation system upgrades.

6. Utilize PASER ratings to inventory road conditions and plan road improvements.
7. Coordinate road projects with Bayfield County and the Wisconsin Department of Transportation.

Goal 3: Ensure transportation standards and improvements are compatible with the Town of Barnes' northwoods character.

Objectives

1. Reduce the visual impact of roads, driveways, and parking lots.

Programs, Policies, and Actions:

1. Encourage curved driveways that hide structures.
2. Develop driveway access standards that limit the number of access points to a parcel of land.
3. Develop parking design standards that hide large parking areas.
4. Review front yard setbacks to determine if distances need to be increased.
5. Require new road design and construction to have a minimal impact on the Town's natural environment.
6. Encourage and maintain vegetative screening between roads and buildings.