

Chapter 4, Transportation

Section 1 - Introduction

Section 2 - Goals

Section 3 - Objectives, Practices, and Procedures

Section 4 - Description of Transportation Facilities

A. - Roads

B. - Traffic Counts and Traffic Flow Capacity

C. - Traffic Reports

D. - Driveway Permits

E. - Speed Limit Controls

F. - Water Transport

G. - Marinas and Harbors

H. - Intercity Bus Service

I. - Taxi Service

J. - Bicycle Transportation System

K. - Other Transportation Resources

L. - Air Transport

Section 5 - Applicable Transportation Plans

Section 6 - Funding the Town Road System

Section 7 - Charts and Maps

Section 1 - Introduction

In writing this section of the 2015 Comprehensive Plan, The Plan Commission looked into the future ten to twenty years. The Commission's conclusion: transportation, defined as the movement of people, goods, and services from one place to another, will continue in the future as it is at the time of the drafting of this Comprehensive Plan. Transportation at its most fundamental has remained the same for

decades, ever since motorized vehicles replaced animal-powered vehicles.

Having said that, the Plan Commission in drafting this Comprehensive Plan is acutely aware of the fact that our society, economy, government, and culture, among other factors, are constantly changing. Greener energy sources, enhanced safety features in motor vehicles and non-motorized vehicles, greater accessibility for the disabled, environmental, ecological, geological, and historical preservation, changing lake levels, wireless technology and communication, social media, etc. are shaping our world and our Town at an increasing rate. And while it is difficult to predict how these changes might impact transportation in the next ten to twenty years, the Plan Commission urges the Town and those looking to this Comprehensive Plan for guidance to understand that this document is meant to be dynamic and not static, suggestive and not definitive, open-minded, and not closed.

Section 2 - Goals

The Town's goals related to transportation include the following:

1—Maintain roadways in as drivable condition as economically possible.

2—Promote the safety of roads for vehicles, bicycles, and pedestrians.

3--Encourage the inclusion of bicycle and/or pedestrian paths whenever an opportunity arises, such as when a road undergoes a resurfacing or a reconstruction.

4—Maintain the Town roads as far as practicable and within the constraints of fiscal responsibility by maintaining the scenic, cultural, and historical characteristics of the roads as well as maintaining their rural nature and their geological and geographical features, all within the context of the other transportation and comprehensive plan goals.

5—Promote water access to silent sports as well as for the launching of motorized water craft, where any purchases or projects accord within the parameters of fiscal responsibility.

6—Establish harbor(s) of refuge on the Bay side as well as the lake side where geographically possible and economically feasible.

7—Respond to increasing boating pressures where economically feasible, including, but not limited to, marina enhancements and expansion.

8—Clean up or otherwise establish water-access points that happen not to be currently accessible or otherwise usable by people seeking additional access to water where feasible and practicable.

9—Promote parking that is safe and convenient, including parking for water access trailer parking, keeping in mind the needs of the physically disabled.

10—Encourage utility providers and internet providers to avoid running overhead lines and other obstructions on certain roads for the easy and safe transport of large water craft and waste hauling in light of the fact that within the Town, large water craft transport as well as waste water hauling are necessary.

11—Encourage extension of public transportation, such as bus lines from Gills Rock and points south as well as services such as Door 2 Door Connector Service into the Town.

12—Support green transportation alternatives where economically justified and environmentally sound.

13—Encourage the extension of water taxi service further north from its current operations into areas servicing the Town.

Section 3 - Objectives, Policies, and Procedures

1— The Town will continue to employ its own staff and machinery for road maintenance provided: it is economically feasible to do so; services are enhanced by this practice; and greater control over how the roads will be maintained will be accomplished.

2—Because the Town has many more miles of road per capita than any other municipality in Door County, the Town strongly supports state legislation increasing transportation aid.

3—The Town should diligently and aggressively pursue each and every source of funding from every level of government—federal, state, county, etc.—and from every possible private source to subsidize the Town’s revenue to promote its goals related to transportation. In light of the fact that governmental and private grant and funding programs are constantly changing, rather than list the possible sources of funding and grants in this Comprehensive Plan, the Plan Commission urges the Town and its staff to continue to be fully informed and alert to every possible grant and funding source through research and current awareness sources.

4-- Cooperate with other levels of government—county, state, and federal—to promote clean energy transportation, including, but not limited to, low emission or electric motor vehicles and non-carbon alternatives and electric car charging stations.

Employment of Pavement Management Programs

Town roads are rehabilitated, repaired, and maintained with funds provided by the State’s Local Roads Improvement Program (LRIP) and funds provided by the Town property tax assessment. The LRIP program is biennial and provides each local unit of government in the State with financial support derived from State taxes on gasoline and other transportation related surcharges for local road maintenance and repair.

The Town of Liberty Grove has a pavement management system (Pavement Surface Evaluation Rating--PaSER) that is reviewed annually by the Town's Highway Committee and, ultimately, the Town Board. The PaSER system provides a detailed inventory and description of all roads within the Town, provides a detailed surface condition survey of those roads, defines the goals and objectives of the Town with respect to its road maintenance and repair, and establishes a long-term maintenance schedule which would prioritize the road maintenance and repair needs.

A Pavement Management Program is a Capital Improvement Program geared specifically to the Town's roads. The Pavement Management Program provides the Town with a detailed, defensible document that assists elected and appointed officials making informed decisions regarding road maintenance and repair.

Employment of Adequate Design Standards

New highways and roads, in the optimum setting, shall be designed for their projected and desired use. State and Town road design standards shall be applied to all new construction and, where possible, existing roads undergoing major repair and reconstruction shall undergo this work according to the standards set forth in this plan.

In examining the design of Town roads, the "road-scape" of these facilities also should be considered. The "road-scape" includes the area adjacent to the road within the established right-of-way or the ditch that serves as a vegetative buffer between the road and the adjacent lots, a location for traffic signs and for utility lines.

Awareness of Special Transportation Needs

The Town should play an active a role as possible in the support, development, and maintenance of special transportation services for the elderly and disabled population of the Town.

Awareness of Rural Transportation Needs

Alternate systems of transportation are needed due to the lack of accessible and affordable housing coupled with the demand for high school and college age students who may not have access to reliable transportation. An economical and efficient transportation system is essential to the attraction of a sufficient workforce. The Town should continue to explore with the County, State, and Federal authorities the development of a rural transit (bus) system to provide service between the city, villages, and population centers located within the County and State.

SECTION 4 - Description of Transportation Facilities

A. Roads

The Town of Liberty Grove ["Town"] encompasses 115.0 gross miles of roads. The figures used in this plan are approximate, based on "Road Miles by functional Classification and Jurisdiction, Door County", WisDOT, 2008, and are not necessarily those figures used to determine the gross miles of roads for purposes of calculating Town expenses on roads, etc.

Of this amount, 14.1 are designated as "county" miles and 100.9 as "local" miles. The 14.1 miles of road under county jurisdiction are designated "collector" roads under the State of Wisconsin definition of "collector", and of the 100.9 miles of roads designated as "local", 5.5 are designated "collector" and 95.4 miles are designated as "local". The portion of State Trunk Highway 42 running through the Town is considered a "minor arterial".

Highways 42 and 57 comprise the Door County Coastal Byway. Access information at www.doorcountycoastalbyway.com.

The Town recognizes local roads as major and minor arterial roads, as follows:

Old Stage Road, Mink River Road, Lakeview Road, Town Line Drive, Country Lane, Woodcrest Road, Flintridge Road, Garrett Bay Road, Timberline Road, and Europe Bay Road.

The preferred designated heavy traffic/bypass routes in the Town are CTH ZZ, Old Stage Road, and Mink River Road.

The road system for the Town has been functionally classified based on the criteria in table 4.1.

An even more detailed list of Town Roads by name, zip code, classification (e.g., state, county, town, private) can be found in Table 4.2.

Maps of the roads in the Town are contained in Map 4.1.

B. Traffic Counts and Traffic Flow Capacity

Because the State ceased performing traffic counts in 2012, the Town purchased and operates its own traffic counter used primarily to determine TRIP funds and, ultimately, the width of roads.

Communities that rely heavily on tourism, entertain large numbers of seasonal guests, and support large numbers of second homeowners, including Liberty Grove, cannot accurately perform AADT (Annual Average Daily Traffic) counts.

Roads that serve the local community, such as the Town of Liberty Grove, are designed and engineered to accommodate a maximum level of traffic. The maximum total capacity of a two-lane, two-way road, such as STH 42, STH 57, CTH ZZ, CTH NP, and CTH Q under ideal conditions is 2,000 vehicles per hour, as determined by the Peak Hourly Traffic, regardless of traffic distribution by direction. [See, for example,

Highway Capacity Manual, Highway Research Board of the Division of Engineering and Industrial Research, 1985].

When looking at all the factors that go into determining a road's capacity—i.e., AADT, peak hourly traffic, and traffic flow capacity—Liberty Grove does not have within its borders any road that approaches or appears to approach the road's design capacity.

C. Traffic Reports

The Door County Sheriff's Department and the Wisconsin Department of Transportation collect vehicle traffic reports. The reports detail the time, location, type, and severity of crashes. The reports might also indicate problems with a road's vertical and horizontal alignment, roadway construction, and the geometric design of a road. The number, location, and severity of crashes can often indicate problem traffic safety areas that might be alleviated through a variety of measures, including alterations in the road geometry, enlargement of the intersection turning radii, maintenance of overgrown brush, and placement of more prominent signs or warning devices, relocation of accesses, and/or speed limit changes, to name a few measures to make a road area safer.

D. Driveway Permits

Driveways to local Town roads may also impair vehicle safety if improperly sited and/or designed.

Wisconsin state statutes allow towns to issue permits for all new driveways, allowing the town to prohibit driveways that are unsafe, e.g., driveways at the base or top of hills, driveways within a specified distance from an intersection, etc. The permit process can also regulate the size and design of driveway culverts due to the fact that improperly designed and sized culverts can pose traffic safety problems and impede drainage from the road surface.

The Town of Liberty Grove requires permits for all new driveways per statutory requirements and Town ordinances. For driveways accessing county or state roads, one is directed to the County Highway Department for permits. For all other permits, one is directed to the Town of Liberty Grove Administrative Office.

E. Speed Limit Controls

Wisconsin state statutes authorize and provide guidelines to local governments to change speed limits for roads within the municipality. Among the factors that must be considered and balanced in setting speed limits are:

- law enforcement agencies with statutory requirements;
- engineering study recommendations, and
- competing concerns and the opinions of a diverse range of interested parties. Interested parties include drivers, who tend to choose speeds that seem reasonable for conditions, and land owners and residents, who frequently tend to prefer and request lower speed limits than those posted.

The prevailing speed, i.e., the one most drivers choose, is a major consideration in setting appropriate speed limits. Engineers recommend setting limits at the 85th percentile speed, i.e., where 85% of the freely flowing traffic travels at or below that speed. An engineering study measuring average speeds is required to determine the 85th percentile speed limit. Other considerations include the road's design limit. This is the highest and safest speed for which the road was designed, and it takes into account the road type, geometry, and adjoining land use.

Speeds should be consistent, safe, reasonable, and enforceable. When 85% of the drivers voluntarily comply with posted speed limits, it is possible and reasonable to enforce the limits with the 15% who drive too fast. Unreasonably low speed limits tend to promote disregard for the posted limits and make enforcement much more difficult.

Unreasonably low speed limits may also promote a false sense of security among residents and pedestrians who may expect that posting lower limits will change a driver's speed behavior.

F. Water Transport

One ferry line transports passengers, motor vehicles, bicycles, and cargo from Northport to Washington Island. A second ferry line transports only passengers and bicycles from Gills Rock to Washington Island. Both ferry lines are privately owned and operated.

At the time of the writing of this Comprehensive Plan, no water taxis service areas in Liberty Grove. See Goal 13 above.

G. Marinas and Harbors

Ellison Bay Marina is located in Ellison Bay. Ellison Bluff forms the southwest boundary of Ellison Bay, which opens to the north and northwest, has steep shores, and affords protection from the south and east winds. Dock and marina facilities in Ellison Bay include a public marina and the Ellison Bay Town Dock, owned and operated by the Town.

Ellison Bay has the depth to become a harbor of refuge. See Goal 6 above.

Gills Rock, located on the southeast corner of Hedgehog Harbor at the top of the peninsula and at the northwest point of the southern mainland peninsula that separates Green Bay from Lake Michigan, provides a harbor that is sheltered from the south and enclosed on the east by Table Bluff and on the west by Death's Door Bluff.

Hedgehog Harbor has the depth to become a harbor of refuge. See Goal 6 above.

Northport, located at the very tip of the peninsula, consists of a ferry dock facility leased from the County by the Washington Island Ferry Line.

Rowleys Bay, located approximately 6 miles northeast of Sister Bay on the lake side of the peninsula and bordered by Newport State Park, covers approximately 1.5 miles in length and 1.25 miles in width. The mouth of the Mink River lies in the Bay, the river extending approximately 1.5 miles inland. At the time of the publication of this Comprehensive Plan, Wagon Trail Resort maintained boat launch facilities at Rowleys Bay.

Silent sport launch sites can be found in many of the Town parks, such as Europe Bay and Garrett Bay. Please refer to the Town brochure on the extent and exact place of such silent sport locations.

H. Intercity Bus Service

None currently exist. At one time, such a service connected areas as far north as Ellison Bay with towns and cities further south in Northeast Wisconsin. See Goal 11 above.

I. Taxi Service

Door 2 Door provides taxi service within the Town, including Ellison Bay, Gills Rock, and access to the Northport Ferry Dock.

J. Bicycle Transportation System

The Town of Liberty Grove approved *Town of Liberty Grove 2010 Bicycle Plan* ["Plan" or "2010 Bicycle Plan"] on February 3, 2011. The plan was prepared by the Bicycle Federation of Wisconsin, a membership-based, statewide nonprofit bicycle education and advocacy organization.

LINK: <http://www.bfw.org>.

A complete transportation system serves not only motorists, but also cyclists and pedestrians in a safe and efficient manner.

With the adoption of the 2010 Bicycle Plan, the Town of Liberty Grove joins other communities in Northern Door—i.e., Town of Gibraltar, Town of Baileys Harbor, and the Village of Egg Harbor—all of which adopted bicycle plans in 2009 and in 2010.

The 2010 plan will guide the development of bicycle infrastructure, provide design guidelines and policies for facilities, suggest bicycle encouragement, enforcement, and education opportunities, and highlight funding opportunities for the Town to pursue.

The 2010 *Bicycle Plan* focuses on bicycling for transportation as opposed to recreation. From a transportation perspective, trip origins, destinations and purpose are of utmost importance, and the bicycle is simply the means to the end, e.g., commuting to work or to school, shopping, attending a social event, etc. Conversely, recreational trips are made for the enjoyment of bicycling, and the destination, if there is one at all, is of minor importance. Most trips, and most facilities, serve both functions, but the bicycle and pedestrian network must be complete in order to serve transportation needs while also serving recreational bicyclists.

The *Plan* identifies existing facilities in Liberty Grove and recommends new programs, policies, and facilities, including on-street bicycle lanes and routes, sidewalks, and support facilities, such as bicycle parking. Implementation of the *Plan* will encourage bicycling and walking and increase safety, mobility, and access to destinations. Recommendations are prioritized to rapidly expand the network.

The *Town of Liberty Grove 2010 Bicycle Plan* is hereby incorporated by reference into the 2030 Comprehensive Plan. The Plan is available in

the Town's administrative offices or by contacting the Bicycle Federation of Wisconsin.

LINK: <http://www.bfw.org>.

K. Other Transportation Resources

The Door County Senior Resource Center-The Door County Senior Resource Center is a public agency operating a twelve passenger minibus on a fixed schedule, door-to-door, demand-responsive basis for elderly persons throughout the county available to persons 55 and older. Trips are provided for medical appointments, for nutrition programs, for personal business, and for trips to various social service agencies, e.g., Social Security Office, etc. The bus operates on a dial-a-ride system for people living in Sturgeon Bay and in the immediate urban area three days a week. For those living in Northern or Southern Door County, service is provided only one day a week.

Sunshine House-The Sunshine House is a sheltered employment facility located in Sturgeon Bay. The facility provides services to persons 16 years or older who have mental and/or physical disabilities. The services provided include sheltered employment, education, recreation therapy, day services, community support, and transportation. Transportation service is provided within the framework of a fixed route system, with the route determined by the home location of the clients. Although the primary area of operations is in the immediate area of the city of Sturgeon Bay, Sunshine House does provide transportation to clients throughout most of the county.

Red Cross-The Red Cross has a transportation service limited to medical trips to Green Bay two days a week and to Sturgeon Bay two days a week. An appointment is necessary.

Also available to Northern Door Residents:

Trolley Service

Scand Bus Service

Veterans Service Office Transportation

Northeast Wisconsin Transportation Service Inc. (NEW Transport)

Medivan of Green Bay

Para Tran of Sturgeon Bay

L. Air Transport

Liberty Grove is not serviced by any airports or air transportation systems. No privately-owned airstrips or helicopter landing pads exist in the Town.

Airports outside of Liberty Grove include Austin Straubel International Airport in Green Bay, Door County Cherryland Airport in Sturgeon Bay, Washington Island Airport, and Ephraim-Gibraltar Airport.

Private air-strip facilities are required to obtain a certificate of approval or permit from the Wisconsin Department of Transportation's Bureau of Aeronautics. The permit is issued if the Department determines that the location of the proposed air-strip is compatible with existing and planned transportation facilities in the area. Generally, permits are granted provided that the proposed air-strip is located so that approaching and departing aircraft clear all public roads, highways, railroads, waterways, or other traverse ways by heights complying with applicable federal standards. The permit is issued upon the applications review by WisDOT, Door County, and the town in which the facility is located.

Section 5 - Applicable Transportation Plans

The following section of this chapter presents state, regional, county, and local transportation plans that might apply within the Town.

State Highway Plan

The Wisconsin State Highway Plan 2020 states that, “Wisconsin’s State Trunk Highway system, consisting of approximately 11,800 miles of roads, is aging and deteriorating at the same time traffic congestion is increasing”. In response to this critical issue, WisDOT, in partnership with its stakeholders, has developed the *State Highway Plan 2020*, a 21-year strategic plan which considers the highway system’s current condition, analyzes future uses, assesses financial constraints, and outlines strategies to address Wisconsin’s preservation, traffic movement, and safety needs. The plan will be updated every six years to reflect changing transportation technologies, travel demand, and economic conditions in Wisconsin.

See “Six Year Highway Improvement Program, 2017-2022”,
www.wisconsin.gov/Pages/projects/6yr-hwy-impr/overview/default.aspx.

See “Connections 2030: Wisconsin’s Long-Range Transportation Plan”,
www.wisconsin.gov/Pages/projects/multimodal/conn2030.aspx

State Airport Plans

See “Wisconsin State Airport System Plan 2030”,
www.wisconsin.gov/Pages/projects/multimodal/sasp/default.aspx

Wisconsin State Railroad Plans

See “Wisconsin Department of Transportation Wisconsin Rail Plan 2030”
www.wisconsin.gov/Pages/projectsd/multimodal/railplan/default.aspx.

Bicycle and Pedestrian Plans

Wisconsin Department of Transportation Ahnapee Trail—Utah to Michigan. WisDOT originally planned to extend the Ahnapee Trail from where it currently ends at Utah Street (just north of the Bayview Bridge) north to Michigan Street. The project was put on hold as WisDOT conducted a safety analysis of the Sturgeon Bay bypass area. The outcome of the analysis may affect the originally planned location of the Ahnapee Trail for this expansion area.

Wisconsin Department of Natural Resources State Recreational Trails Network Plan. The DNR State Recreational Trails Network Plan identifies a series of potential trail corridors across Wisconsin that would link existing trails, public lands, natural features, and communities. It describes a vision of a statewide network of interconnected trails into which smaller state, partnership, county, municipal, and private trails feed. This plan includes discussion of what is referred to as “segment one”, a proposal initiated by the Door County Chamber of Commerce (now the Visitor Bureau) to extend the Ahnapee State Trail off-road from Sturgeon Bay north to the tip of the county in order to offer a safe, scenic alternative to busy roads.

Bicycle Transportation Facility Plan for the Bay-Lake Region. A primary function of the Bay-Lake Regional Planning Commission (BLRPC) planning effort finalized in 2002 was to provide a level of detail for bicycle facility planning beyond the DNR plan (above), and to bridge the DNR plan and municipal plans.

The BLRPC plan for Door County includes utilization and improvements to the state and county truck highway system in order to connect the incorporated communities and other major recreational destination points within the county to one another, to the City of Sturgeon Bay, and to adjoining county systems in Brown and Kewaunee Counties. Specifically, the plan recommends five-foot shoulder roadway

improvements along the entire length of STH 57; portions of STH 42; and portions of CTHs A, F, C, S, U, and DK. The total length proposed is 289.5 miles at an estimated cost of \$9.5 million. The bicycle plan includes maps depicting the existing bicycle facilities, County destination points, and preliminary recommended bicycle facilities for Door County. The plan can be found at:

LINK:

[http://www.baylakepc.org/Documents/Region/Regional Bike Plan.pdf](http://www.baylakepc.org/Documents/Region/Regional%20Bike%20Plan.pdf)

Door County Bicycle Capital Improvement Plan. The Door County Bicycle Transportation Capital Improvement Plan was last revised in 2003 by the Door County Highway Committee and the Chamber of Commerce (now Visitor Bureau) Trails Committee with input from WisDOT. This plan provides recommended back-road bicycle routes between communities and recommended roadway, bike trail, and bicycle route signage improvements. The Door County Silent Sports Alliance (DCSSA), a non-profit group that promotes and enhances participation in silent sports—including biking—in Door County, is currently working toward updating this plan with assistance from the Bicycle Federation of Wisconsin, a statewide non-profit.

Section 6 - Funding the Town Road System

The cost of constructing, maintaining, and operating roads under local jurisdiction (Town roads) is defrayed through the provision of General Transportation Aids (authorized in Section 86.30 of the Wisconsin Statutes). General Transportation Aids are distributed to all Wisconsin Towns through a highway aids formula administered by the Wisconsin DOT. Under the formula, local aid is distributed either as a share of eligible highway-related expenditures incurred by the Town, or on a per-mile basis, whichever is higher.

Eligible expenditures generally include all road construction and maintenance within the right-of-way, as well as a percentage of eligible law enforcement, street lighting maintenance and construction, and storm sewer construction. The share of cost rate is determined by the available funding and the average costs reported by the Town. Each town's share of costs is determined by multiplying the six-year average costs by an established percentage rate. Transportation Aids for Towns, as well as all other local units of government and counties, are derived primarily from motor fuel taxes and vehicle registration fees.

Chapter 4, Maps, Tables and Charts

Table 4.1a: Functional Classification Criteria for Rural Roads and Highways

Rural Principal Arterials						
County Population Density (Rural)	Basic Criteria			Supplemental Criteria OR must meet both of these plus 90% of Traffic Volume	Mileage	Percent of System Range
	Must meet any 2 of these					
	Population Service	Land Use Service	Spacing			
>43	Connect Places 50,000 with other places of 50,000	Provide access to major recreation areas of the state.	Maximum 30 Miles	>6,000		2.0-4.0% statewide
<43	Connect Places 5,000 with other places of 50,000			<2,000		
Rural Minor Arterials						
>43	Connect Places 5,000 with other places of 5,000	Service all traffic generating activities with an annual visitation of 300,000 if not served by a principal arterial	Maximum 30 Miles	>2,000	1. Alternate population connection 2. Major river crossing/ restrictive topography	4.0-8.0% statewide
<43	Connect Places 1,150 with other places of 5,000			<1,000		

Table 4.1b: Functional Classification Criteria for Rural Roads and Highways, continued.

Rural Major Collector					
County Population Density (Rural)	Basic Criteria			Supplemental Criteria	Mileage
	Must meet any 2 of these			OR must meet 2 of these plus 90% of Traffic Volume	Percent of System Range
	Population Service	Land Use Service	Spacing	Traffic Volume	
>43	Connect Places 1,500 with other places 1,150	Land Use Service Index > or = 16.	Maximum 10 Miles	>1,000	5.0-18.0% countywide
	Connect Places 575 with other places 1,150 or higher function route			(>4,000)	
<43	Connect Places 575 with other places 1,150 Or higher function route	Land Use Service Index > or = 12.		>400 (>1,600)	Most counties should be 7.0-14.0%
	Connect Places 115 with other places 575 or higher function route				

*Note: Loop routes and stub ended routes less than 5 miles long and meeting the basic criteria for a major collector should be limited to a minor collector classification.

Table 4.1c: Functional Classification Criteria for Rural Roads and Highways, continued.

Rural Minor Collector					
County Population Density (Rural)	Basic Criteria			Supplemental Criteria	Mileage
	Must meet any 2 of these OR the parenthetical Traffic Volume Alone			must meet 2 of these plus 90% of Traffic Volume	Percent of System Range
	Population Service	Land Use Service	Spacing		
>43	Connect places 115 with other places 115	Land Use Service Index > or = 8.	Maximum 10 Miles	<ol style="list-style-type: none"> 1. Alternate population connection 2. Major river crossing 3. Restrictive topography 4. Interchanges with a freeway 5. Parallel to a principal arterial 	5.0-10.0% countywide
	Connect places 60				
<43	with other places 115 or with higher function route.	Land Use Service Index > or = 5.		>200 (>800)	
Locals					
All public roads not classified as arterials or collectors					65% to 75% countywide
					Most counties should be at 68.0 - 72.0%

*Note: Loop routes and stub ended routes less than 5 miles long and meeting the basic criteria for a major collector should be limited to a minor collector classification.

Source: Wisconsin Department of Transportation, 2002; and, Bay-lake Regional Planning Commission, 2003

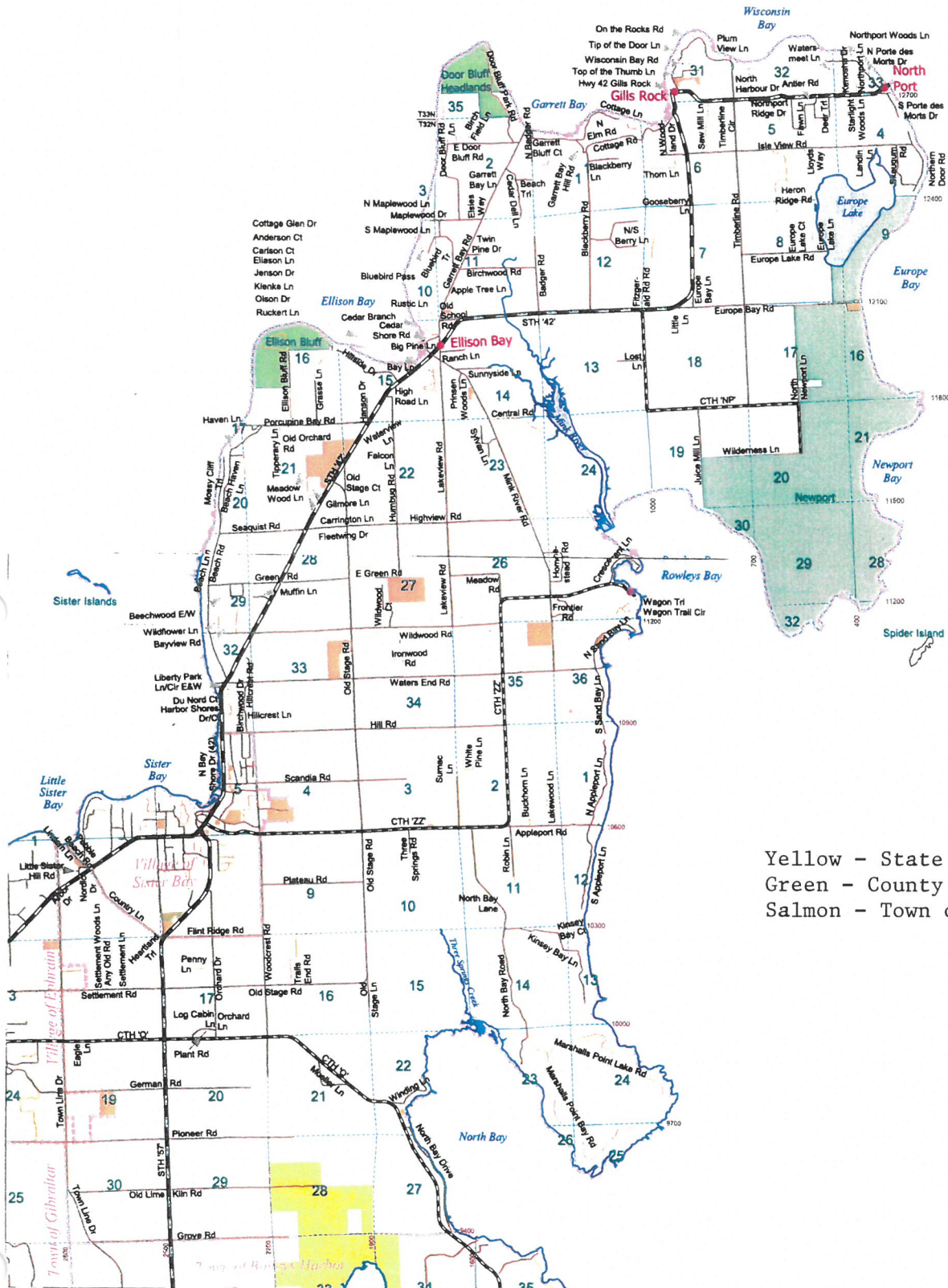
Table 4.2

TOWN of LIBERTY GROVE ROADS: with address ranges, section (#) and notes. - Update - 1/16/17
Where South, North, East, or West indicate a location, rather than a direction, it will be spelled out.

<p>Anderson Court at 1620 - 1640 W / 11940-11950 N (at Cottage Glen development) (15N) Antler Rd. at 470 - 490 W / 12680 N (5E) Any Old Rd. at 2610 W / 10150 - 10290 N (18) Apple Tree Lane at 1520 - 1570 W / 12170 - 12190 N (11N) Appleport Rd. at 1170 - 1460 W / 10600 N (1,2,11,12) Arbor Dr. at 2770 - 2800 W / 10440 - 10450 N (7) Badger Rd. at 1300 W / 12100 - 12370 N (see North Badger Rd.) (11N,12N) Bay Lane at 1680 - 1730 W / 11940 - 11980 N (15N) Bayview Road at 2240 W / 11200 - 11270 N (29N) Beach Haven Ln. at 2200 - 2260 W / 11630 - 11720 N (20N,21N) Beach Lane at 2210 - 2230 W / 11340 - 11420 N (29N) Beach Road at 2140 - 2330 W / 10050 - 11800 N (20N,21N,29N,32N) Beach Trail at 1300 - 1350 W / 12520 N (2N) Beard Rd. at 1440 - 1450 W / 11270 N (26N) Beechwood East at 2220-2240 W / 11320-11350 N (29N) Beechwood West at 2240-2260 W / 11320-11350N (29N) Big Pine Ln. at 1610 - 1630 W / 12010 - 12030 N (15N) Birch Field Ln. at 1470 - 1490 W / 12620 - 12680 N (2N) Birchwood Drive 2240 W / 10900 - 10970 N (32N) Birchwood Road at 1460 - 1510 W / 12300 N (11N) Blackberry Ln. at 1070 - 1150 W / 12550 N (1N) Blackberry Rd. at 1150 - 1170 W / 12100 - 12630 N (1N,12N) Bluebird Pass at 1580 W / 12350 - 12400 N (11N) Bluebird Trl. at 1530 - 1640 W / 12250 - 12350 N (10N,11N) Buckhorn Ln at 1390 - 1430 W / 10600 - 10652 N (2) Carlson Ct. at 1620 - 1650 W / 11950 - 11960 N (at Cottage Glen development) (15N) Carrington Ln. at 2030 W / 11610 - 11650 N (21N) Cedar Branch at 1630 - 1660 W / 12040 - 12090 N (15N) Cedar Dell Ln. at 1300-1380 W / 12400-12550 N (2N) Cedar Shore Rd. at 1600 - 161670 W / 12000-12100 N (15N) Central Rd. at 1230 - 1460 W (renamed DragonflyLn-2017) Cottage Glen Dr. at 1600 - 1640 W / 11870 - 11940 N (at Cottage Glen development) (15N) Cottage Ln. at 1000 - 1060 W / 12600 - 12630 N (1N) Cottage Road at 900 - 1150 W / 12570 - 12670 N (6E,1N) Country Ln. at 2500 - 2710 W / 10300 - 10510 N (7) Crescent Ln. at 1040 - 1140 W / 11110 - 11190 N (25N) Cty. Tk. NP at 550 - 1000 W / 11650 - 12100 N (13E,17E,18E,19E,20E) Cty. Tk. Q at 1680 - 2800 W / 9400 - 10000 N (16,17,18,21,22,27) Cty. Tk. ZZ at 1030 - 2370 W / 10600 - 11310 N (2,3,4,9,10,11,25N,26N,35N) Deer Trail at 410 - 440 W / 12630 - 12700 N (5E) Door Bluff La. At 1530 - 1550 W / 12620 - 12710 N (35NW) Door Bluff Park Rd. at 1360 - 1450 W / 12620 - 12900 N (2N,35NW) Door Bluff Rd. at 1530 - 1570 W / 12400 - 12780 N (2,35NW) Dragonfly Ln. at 1230 - 1460 W / 11730 - 11800 N (14N,23N,24N) Du Nord Ct at 2270 - 2300 W / 11000 N (32 S) E. Green Rd. at 1750 - 1830 W / 11350 N (27N) Eagle Lane at 2750 W / 9960 - 10000 N (19) East Door Bluff Rd. - 1330 - 1560 W / 12600 N (2N) Eliason Lane at 1640 - 1650 W / 11930 N (at Cottage Glen development) (15N) Ellison Bluff Rd. at 2050 - 2140 W / 11800 - 12080 N (16N) Elsies Way at 1470 W / 12400 - 12470 N (2N) Europe Bay Ln. at 850 W / 12100 - 12150 N (7E) Europe Bay Rd. at 350 - 900 W / 12090-12100 N (7E,8E,9E,16E,17E,18E) Europe Lake Ct. at 540 W / 12250 - 12360 N (8E) Europe Lake Ln. at 460 - 480 W / 12250 - 12360 N (8E) Europe Lake Rd. at 400 - 700 W / 12250 N (8E) Falcon Ln. at 1750 - 1820 W / 11680 N (22N) Fawn Lane at 480 - 550 W / 12610 - 12700 N (5E) Fitzgerald Rd at 990 - 1010 W / 12100 -13080 N (7E,12N) Fleetwing Dr. at 2010 - 2040 W / 11650 N (21N) Flint Ridge Rd. at 2200 - 2500 W / 10300 N (17) Frontier Road at 1230 - 1300 W / 11210 - 11270 N (25N) Garrett Bay Hill Rd. at 1150 - 1170 W / 12580 - 12620 N (1N) Garrett Bay Ln. at 1410 - 1430 W / 12510 N (2N) Garrett Bay Rd. at 1060 - 1600 W / 12020 - 12700 N (1N,2N,11N,14N,15N)</p>	<p>Garrett Bluff Ct. at 1220 - 1300 W / 12550 - 12580 N (1) German Rd. at 2240 - 2800 W / 9850 N (17,20) Gilmore Ln. at 2010 W / 11600 - 11650 N (21N) Gooseberry Ln. at 860 - 940 W / 12400 N (6E,7E) Grasse Ln. at 1950 - 1970 W / 11690 - 12000 N (16N) Green Rd. at 1900 - 2320 W / 11350 N (28N,29N) Grove Rd. at 2150 - 2800 W / 9400 N (28,29,30) Hanson Drive at 1850 - 1900 W / 11800 - 11950 N (15N) Harbor Shores Ct. at 2250 W / 10960 - 10980 N (32N) Harbor Shores Dr. at 2300 W / 10956 - 10986 N (32N) Haven Ln. at 2200 - 2260 W / 11720 N (20N) Heartland Trl. at 2500 - 2540 W / 10290 - 10300 N (18) High Road Ln at 1670 - 1750 W / 11870 N (15N) Highview Rd. at 1350 - 2030 W / 11500 N (21N,22N,23N,26N,27N,28N) Hill Road at 1450 - 2300 W / 10900 N (2,3,4,32N,33N,34N,35N) Hillcrest Ln. at 2150 - 2220 W / 10930 - 10950 N (32N,33N) Hillcrest Rd at 2210 - 2230 W / 10900 - 11130 N (32N) Hillside Drive at 1730 - 1940 W / 11930 - 12020 N (15N) Homestead Drive at 1260 - 1320 W / 11320 - 11400 N (25N) Humbug Rd. at 1750 - 1820 W / 11350 - 11870 N (15N,22N,27N) Hy. 42 Gills Rock at 890 W / 12730 - 12740 N (31NE) Ironwood Rd. at 1750 - 1780 W / 11050 - 11100 N (34N) Isle View Rd. at 180 - 860 W / 12550 N (4E,5E,6E) Jenson Dr. at 1640 - 1680 W / 11890 N (at Cottage Glen development) (15N) Juice Mill Ln. at 850 W / 11650 - 11800 N (19E) Kenosha Dr. at 370 W / 12700 - 12840 N (33NE) Kinsey Bay Ct. at 1350 - 1420 W / 10280 - 10290 N (13,14) Kinsey Bay Ln. at 1280 - 1490 W / 9990 - 10250 N (13,14) Klenke Ln. at 1620 - 1650 W / 11940 - 11950 N (15N) (at Cottage Glen development) (15N) Lakeview Road at 1600 W / 11200 - 12030 N (14N,15N,22N,23N,26N,27N) Lakewood Ln. at 1340 W / 10600 - 10750 N (2) Landin Lane at 330 W / 12440 - 12550 N (private) (4E) Liberty Park Cir. (E) at 2240 - 2260 W / 11000 - 11040 N (32N) Liberty Park Cir. (W) at 2260 - 2280 W / 11000 - 11050 N (32N) Liberty Park Ln. at 2300 W / 11020 - 11050 N (32S) Lindem Ln. at 2750 - 2860 W / 10560 - 10620 N (7) Little Ln. at 890 - 900 W / 11990 - 12100 N (18E) Little Sister Hill Rd. at 2710 - 2740 W / 10490 - 10520 N (7) Lloyds Way at 550 W / 12510 - 12550 N (5N) Log Cabin Ln. at 2350 - 2410 W / 10060 N (17) Lost Ln. at 1000 - 1080 W / 11950 N (13N) Maplewood Drive at 1460 - 1620 W / 12400 N (2N,11N) Marshalls Point Bay Rd. at 1070 - 1440 W / 9490 - 9970 N (23,25,26) Marshalls Point Lake Rd. at 1030 - 1370 W / 9790 - 9970 N (23,24) Meadow Road at 1450 - 1600 W / 11200 -11350 N (26N) Meadow Wood Ln at 1970 - 2040 W / 11590 - 11650 N (21N) Mink River Rd. at 1300 - 1630 W / 11050 - 12000 N (14N,15N,23N,25N,26N,35N,36N) Mossy Cliff Trl. at 2260 - 2280 W / 11530 - 11740 N (20N) Mueller Lane at 1970 - 2050 W / 9850 - 9930 N (21) Muffin Ln. at 2140 - 2190 W / 11300 - 11310 N (28N) N. Appleport Ln. at 1150 - 1220 W / 10600 - 10850 N (1) N. Maplewood Ln. at 1590 - 1620 W / 12400 - 12490 N (2N,3N) N. Porte Des Morts Dr. at 260 - 430 W / 12710 - 12800 N (33NE) N. Sand Bay Ln. at 1050 - 1180 W / 10050 - 11220 N (36N) Nordic Dr. at 2720 - 2740 W / 10420 - 10480 N (7) North Badger Rd. at 1300 W / 12590 - 12620 N (1N,2N) North Bay Drive at 1670 - 1810 W / 9400 - 9730 N (22,27) North Bay Lane at 1500 - 1530 W / 10370 N (11) North Bay Road at 1430 - 1550 W / 9880 - 10600 N (11,14,23) * North Berry Ln at 1010-1100 W / 12310-12370 N (12N) North Elm Rd. at 1090 - 1140 W / 10590 - 10650 N (1N) North Harbour Dr. at 630 - 700 W / 12750 -12790 N (32NE) North Newport Ln. at 550 W / 11800 - 11860 N (17E) North Woodland Dr. at 850 - 930 W / 12550 - 12630 N (6E) Northern Door Rd. at 240 - 280 W / 12410 - 12580 N (4E) Northport Ln. at 360 W / 12700 - 12760 N (33NE) Northport Ridge Dr. at 560 - 590 W / 12600 - 12700 N (5E) Northport Woods Ln. 340 - 350 W / 12770 - 12800 N (33NE) Old Lime Kiln Rd. at 2040 - 2790 W / 9550 N (28,29,30)</p>
--	---

Table 4.2 continued

Old Orchard Rd. at 2030 - 2090 W / 11750 N (21N)
Old School Road at 1530 - 1600 W / 12100 N (11N,14N))
Old Stage Ct. at 1900 W / 11600 - 11690 N (21N)
Old Stage Ln. at 1900 W / 10060 - 10160 N (15,16)
Old Stage Rd. at 1900 -2500 W / 10150-11690 N (3,4,9,10,15,16,17,21N,22N,27N,28N,33N,34N)
Olson Drive at 1620 - 1660 W / 11880 N (at Cottage Glen development) (15N)
On The Rocks Rd. at 810 W / 12890 - 12920 N (31NE)
Orchard Drive at 2350 W / 10000 - 10450 N (17)
Orchard Lane at 2300 - 2350 W / 10050 - 10060 N (17)
Pebble Beach Rd. at 2710 - 2800 W / 10510 - 10600 N (7)
Penny Ln. at 2350 - 2400 W / 10210 - 10230 N (17)
Pioneer Road at 2120 - 2800 W / 9700 N (19,20,21,28,29,30)
Plant Rd. at 2350 - 2430 W / 10000 - 10030 N (17)
Plateau Rd. at 1900 - 2200 W / 10450 N (9)
Plum View Ln. at 760 - 780 W / 12860 - 12870 N (31NE)
Porcupine Bay Ln. at 2140 W / 11800 - 11900 N (Sec.16N)
Porcupine Bay Rd. at 1820 - 2210 W / 11749 - 11800 N (15N,16N,21N,22N)
Porcupine Bay Ln. at 2100 W / 11800 - 11880 N (16N)
Prinsen Woods Ln. at 1540 W / 11880 - 11940 N (14N)
Ranch Ln. at 1520 - 1600 W / 12010 N (14N)
Robin Ln. at 1450 - 1540 W / 10420 - 10600 N (11)
Ruckert Ln. at 1600 - 1620 W / 11910 N (15N) (at Cottage Glen development) (15N)
Rustic Ln. at 1600 - 1680 W / 12100 - 12160 N (10N)
S. Appleport Ln. at 1210 - 1260 W / 10330 - 10600 N (12)
S. Maplewood Ln. at 1620 - 1640 W / 12290 - 12400 N (10N)
S. Porte Des Morts Dr. at 200 -260 W / 12600 - 12710 N (4E)
S. Sand Bay Ln. at 1110 - 1180 W / 10870 - 11050 N (1,36N)
Saw Mill Ln. at 770 - 780 W / 12550 - 12700 N (6E)
Scandia Rd. at 1720 - 2300 W / 10750 N (3,4)
Seaquist Rd. at 2030 - 2280 W / 11500 N (20N,21N,28N,29N)
Settlement Ln. at 2650 W / 10150 - 10290 N (18)
Settlement Rd. at 2500 - 2800 W / 10150 N (18)
Settlement Woods Ln. at 2675 - 2685 W / 10150 - 10280 N (18)
Settlement Woods Trl. At 2690 W / 10150 - 10220 N (18)
Skaugum Rd. at 170 - 230 W / 12400 - 12550 N (4E)
Skogen Ct. at 150 - 160 W / 12470 - 12500 N (private - not addressed)
South Berry Ln. at 1010 -1150 W / 12280-12310 N (12N)
St. Hy. 42 at 220 - 2800 W / 9400 - 12730 N (7,10N,11N,12N,13N,14N,15N,21N,22N,28N,32N,4E,5E,6E,7E,18E,31NE,32NE,33NE)
St. Hy. 57 at 2350 - 2500 W / 9400 - 10630 N (17,18,19,20,29,30)
Starlight Woods Ln at 340W / 12630 - 12700 N (4NE)
Sumac Lane at 1600 - 1640 W / 10600 - 10800 N (2,3)
Sunnyside Lane at 1410 - 1574 W / 11950 N (14N)
Sylvan Ln. at 1440 - 1480 W / 11650 - 11780 N (23N)
Thorn Lane at 890 - 990 W / 12510 - 12550 N (not yet developed) (6N)
Three Springs Rd. at 1750 W / 10450 - 10600 N (10)
Timberline Cir. at 700 - 750 W / 12600 - 12650 N (6E)
Timberline Rd. at 700 W / 11800 - 12800 N (5E,6E,7E,8E,17E,18E,31NE,32NE)
Tip of the Door Ln. at 870 - 880 W / 12820 - 12870 N (31NE)
Tipperary Ln. at 2090 W / 11660 - 11800 N (21N)
Top O The Thumb Ln. at 790 - 910 W / 12770 - 12790 N (31NE)
Town Line Drive at 2730 -2800 W / 9400-10550 N (18,19,30)
Trails End Rd. at 2040 - 2130 W / 10150 - 10350 N (9,16)
Twin Pine Dr. at 1300 - 1530 W / 12250 N (11N)
Wagon Trail Cir. at 1050 - 1110 W / 11220 - 11260 N (25N)
Wagon Trl. at 1050 - 1150 W / 11210 - 11260 N (25N)
Waters End Rd. at 1120 - 2330 W / 11050 N (32N,33N,34N,35N,36N)
Watersmeet Ln. at 380 W / 12720 - 12800 N (33NE)
Waterview Ln. at 1750 - 1810 W / 11800 N (22N)
White Pine Ln. at 1550 - 1600 W / 10770 - 10800 N (2)
Wilderness Lane at 390 - 670 W / 11570 -11670 N (20E)
Wildflower Lane at 2290 W / 11200 - 11270 N (29N)
Wildwood Court at 1770-1810 W / 11200-11330 N (27N)
Wildwood Road at 1450 - 2320 W / 11200 N (26N,27N,28N,29N,32N,33N,34N,35N)
Winding Ln. at 1730 - 1850 W / 9790 - 9860 N (22)
Wisconsin Bay Rd. at 690 - 980 W / 12700 - 12900 N (31NE)
Woodcrest Rd. at 2200 W / 9870 - 10750 N (9,16,17,20,21)



Yellow - State land, non-park
 Green - County or State park
 Salmon - Town owned land

