

Comprehensive Park and Outdoor Recreation Plan

Supplement #1

Pedestrian & Bicycle Facilities Recommendations

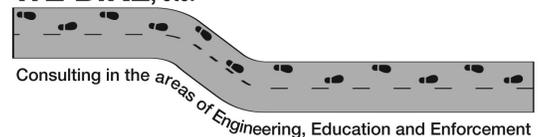


October 2009

Prepared by:
WE BIKE, etc.



WE BIKE, etc.



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Pedestrian & Bicycle Facilities Recommendations

Comprehensive Park and Outdoor Recreation Plan Supplement

Adopted October 7, 2009

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Purpose

In January of 2008 the Village of Little Chute completed work on, and approved, the *Comprehensive Park and Outdoor Recreation Plan* (CPORP). One of the goals of the Plan is to:

- Goal #5 Promote bicycling and pedestrian facilities throughout the Village.
- a. Promote the development of trails.
 - b. Pursue opportunities to link existing parks, future parks, and public facilities by a Village and County wide trail network.
 - c. Promote the use of bicycle and pedestrian facilities into planning of all public works projects where appropriate.

The Plan created a map identifying possible trail corridors. However, the identification of specific bicycle and pedestrian facility types (e.g., sidewalks, multi-use paths, shared use roadways, wide curb lanes, paved shoulders and bicycle lanes) was beyond the scope of the Plan.

This supplement to the CPORP provides bicycle and pedestrian facility recommendations which will allow Goal # 5 of the Plan to be achieved in a safe, timely and cost effective manner.

This document is not intended to be a stand-alone bicycle and pedestrian plan. Instead, it focuses primarily on facilities recommendations which will assist Village officials as they move forward with projects within the identified corridors. Recommendations rely on the CPORP and other documents, along with professional judgment. As the Village grows, or other circumstances dictate, a stand-alone plan may become useful.

Definitions

Abbreviations

AASHTO – American Association of State Highway and Transportation Officials

ADT – Average Daily Traffic

CPORP – Comprehensive Park and Outdoor Recreation Plan

MUTCD – Manual on Uniform Traffic Control Devices

WisDOT – Wisconsin Department of Transportation

Terms

Pedestrian

A person afoot or in a wheelchair. (AASHTO)

Bicycle

“Bicycle” means every vehicle propelled by the feet acting upon pedals having wheels any two (2) of which are not less than 14 inches in diameter. (Wisconsin State Statute 340.01 (5))

Vehicle

“Vehicle” means every device in, upon or by which any person or property is or may be transported or drawn upon a highway, except railroad trains. (Wisconsin State Statute 340.01 (74))

Trail

A paved or maintained path or track, as for bicycling or hiking.
(<http://www.yourdictionary.com/trail>)

Note: Although used in everyday language, the term “trail” is not sufficiently specific for purposes of bicycle and pedestrian facilities planning and therefore will be used sparingly in this document.

Pedestrian Facilities

Sidewalk

Sidewalks and walkways are “Pedestrian Lanes” that provide people with space to travel within the public right-of-way that is separated from roadway vehicles. (CPORP)

Crosswalk

Marked crosswalks indicate optimal or preferred locations for pedestrians to cross as well as show areas that the right-of-way vehicles (is) to yield to pedestrians. (CPORP)

Curb Ramps

Curb ramps or wheelchair ramps provide access between the sidewalk and roadway for people using wheel chairs, strollers, walkers, crutches, hand carts, bicycles, and also for pedestrians with mobility impairments who have trouble stepping up and down high curbs. (CPORP)

Path or Pathway

Track or route along which pedestrians are intended to travel. (AASHTO)

Shared-Use Path

A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. (AASHTO)

Bicycle Facilities

Shared Roadway (No Bikeway Designation)

A roadway which is open to both bicycle and motor vehicle travel. This may be an existing roadway, street with wide curb lanes, or road with paved shoulders. (AASHTO)

Signed Shared Roadway (Signed Bike Route)

A shared roadway which has been designated by signing ("Bike Route") as a preferred route for bicycle use. (AASHTO)

Paved Shoulder

Paved shoulders are typically used on roads without curb and gutter. They provide bicyclists with a smooth surface outside the main travel portion of the road on which to operate. Roads with paved shoulders are also much safer for motor vehicle drivers in that these roads experience far fewer head-on collisions. (CPORP)

Wide Curb Lanes

Wide curb lanes are the minimum treatment for arterial streets. Wide curb lanes allow bicyclists and motorists to share a travel lane without adversely affecting each other. On streets without parking, wide curb lanes are typically 14-15 feet wide. This does not include the curb and gutter section. Wide curb lanes also benefit motor vehicle traffic. In fact, wide curb lanes were originally designed to improve motor vehicle traffic flow. (CPORP)

Bike Lane or Bicycle Lane

A portion of the roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists. (AASHTO)

They (bicycle lanes) are usually 4-6 feet wide. Bicycle lanes are perceived by many bicyclists as being safer and thus encourage bicycling on these facilities. (CPORP)

Shared-Use Path

A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. (AASHTO)

Typical Cross Sections:

Road with Bicycle Lanes

(AASHTO, pg.24), (CPORP, pg.49)

Shared -Use Path (multi-use path)

(AASHTO, pg.35), (CPORP, pg. 49, 50)

Introduction

The goal of a sustainable transportation system is to create good mobility and access. This is true for motorists, bicyclists and pedestrians alike. The primary transportation network in our communities is the street network. All streets, as public rights of way, should take into account the needs of all modes of travel. This is sometimes referred to as Complete Streets.

People walk and bicycle for many reasons including recreation, fitness, transportation and the environment. By understanding their wants and needs, it is easier to determine which facilities are most appropriate for accommodating them. However, not all pedestrians or bicyclists are created equally.

Pedestrian and Bicyclist Types

Pedestrians

Pedestrians come in many shapes, sizes, ages and abilities. Yet, for the most part, all pedestrians can be accommodated sufficiently by providing sidewalks or paths along most roadways.

Bicyclists

How and where people bicycle is affected by their ability. Since bicycles are considered vehicles by state statute, bicyclists can be classified into three broad categories:

1. **Advanced or experienced adults** who are capable of operating under most traffic conditions;
2. **Casual or novice adults and teenagers** who are less confident in their ability to operate in traffic on collector and arterial streets without provisions for bicyclists; and
3. **Children** who because they are not mature mentally or physically are not capable of bicycling safely without adult supervision.

A subgroup of the child bicyclists category are preteen riders whose bicycle use is initially monitored by adults, but who are eventually allowed to ride unsupervised on the road system. The majority of their riding will occur on local residential streets with low vehicle speeds and volumes, but they do require access to key destinations such as schools, recreation facilities and neighborhood shopping areas. Most preteens (if they have been given proper bicycle education) will behave more like casual adult cyclists and thus are considered a subgroup.

Another subgroup of bicyclists is teenagers who have taken driver's education. For many, driver's education is where they are first formally introduced to the concepts of vehicular traffic. This information is critical to safe bicycle operation and should be provided at a much earlier age.

It is important to recognize that some casual or novice riders will eventually become experienced cyclists if an encouraging bicycle system is developed.

Because of the positive affects that walking and bicycling have on recreation, fitness, transportation and the environment they are vital to a community.

The differences in the needs and desires of pedestrians and bicyclists requires a variety of facility types to accommodate them safely and enjoyably.

Pedestrian Facilities

Facilities separated from motor vehicle traffic (sidewalks, paths, overpasses and underpasses) are preferred accommodations for persons afoot. Primarily because of the speed differential between pedestrians and motorists, walkers are safer, and feel more comfortable, on facilities that are separated from the roadway either by distance (e.g., a grass median) or by some sort of barrier.

All paths are intended for pedestrian use although they are sometimes erroneously called "bike paths." On-road, **lane reductions**, and **roadway narrowing**, reduce the distance pedestrians need to travel to cross the street improving safety. **Raised medians** provide safe refuge for pedestrians as they cross the street and allow them to cross only one direction of traffic at a time. **Driveway improvements** such as removing vegetation and restricting parking can remove visual obstructions. Good **roadway lighting** improves pedestrian comfort levels while walking at night and can significantly improve visibility and safety.

Sidewalks

Sidewalks should be a minimum of 5 feet wide to accommodate people walking side by side and passing. (Sidewalks are not recommended for bicycle travel.)

Shared-Use Paths

Shared-use paths can serve much the same function as sidewalks for pedestrians. However, because they also allow bicycle travel, multi use paths present conflicts for pedestrians that are largely absent from sidewalks. Shared-use paths should be a minimum of 10 feet wide with two (2) foot clear shoulders.

Bicycle Facilities

Factors Affecting Bicycle Compatibility

The three major factors which affect the suitability of a given road segment for bicycling are:

- **Traffic volume** - In general, the greater the traffic volume and heavier (trucks) the less suitable a road is for bicycling.
- **Roadway width** - Paved shoulders or curb lane widths over 12 feet tend to improve conditions for bicycle travel.
- **Speed** - As motor vehicle speeds increase (especially over 25 mph), the suitability of a road for bicycling decreases.

While all three factors are interdependent, positively modifying one or two factors for bicycling may make a road more suitable for bicycling overall.

Street Types

The various characteristics of certain types of streets (local/residential, collector, arterial) make them generally more or less suitable for bicycle travel. Appropriate bicycle facilities can make all street types bicycle friendly.

Local/Residential Streets

The majority of the roadways in Little Chute are local/residential. They serve small areas, tend to have relatively low traffic volumes and speeds and are therefore fine for most bicyclists without any special accommodations.

Collector Streets

Collector streets generally carry traffic from multiple smaller service areas. They have more traffic than local/residential streets and they may also have higher speed limits. Bicycle facilities such as wide curb lanes or bicycle lanes on busier and faster moving collector streets will increase both the safety and comfort level of less confident bicyclists.

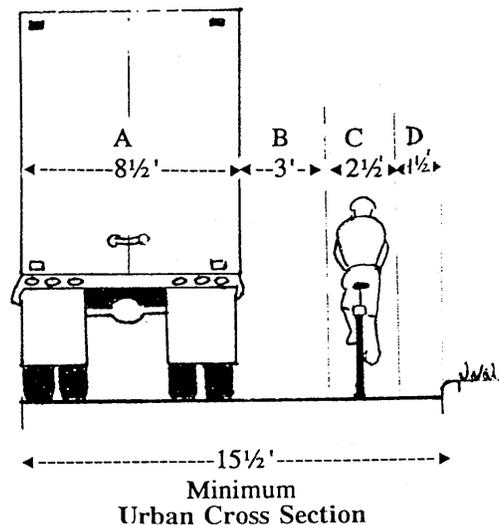
Arterial Streets (Principal, Minor)

Arterial streets move large amounts of traffic from many smaller service areas greater distances to other service areas. They generally have higher speed limits and traffic volumes. Arterial streets, and those that function as such, should be equipped with

sidewalks on both sides and bicycle lanes to improve pedestrian and bicyclist safety and comfort.

Narrow Lanes

Because of the low traffic volumes, most city streets and narrow town and county roads are currently suitable for bicycling with no additional improvements. However, travel lanes on major roadways are often too narrow for a motor vehicle and a bicycle to share side by side. This condition discourages bicycling, slows traffic and may increase the risk of crashes. Increasing lane width on roads with high traffic volumes and/or high speeds improves convenience for motorists and conditions for bicyclists.



A—truck width, B—recommended minimum separation distance, C—bicyclist's width with 10" of maneuvering room, D—gutter section with 18" storm sewer inlet grates, no joint line.

Wide Curb Lanes

Where there is insufficient room to place bicycle lanes on a road, some increase in bicycle accommodation may be achieved by providing wide curb lanes – lanes which are 14-15 feet wide.

Four generally accepted advantages of wide curb lanes are that they:

- Accommodate shared bicycle/motor vehicle use without reducing the roadway capacity for motor traffic.
- Minimize both real and perceived operating conflicts between bicyclists and motor vehicles.
- Increase the roadway capacity by at least the number of bicyclists capable of being accommodated.

- Assist turning vehicles in entering the roadway without encroaching into another lane and better accommodating buses and other wide vehicles.

Bicycle Lanes

Bicycle lanes are established to improve conditions for bicyclists on streets where higher traffic volumes and speeds lead to more frequent passing of bicyclists by motorists. Many bicyclists will feel uncomfortable bicycling on these streets without the additional space established for them in the form of a bicycle lane. Bike lanes are intended to provide the needed added space on the street for motorists passing bicyclists, to delineate the space for bicyclists and motorists to operate in and to provide for more predictable movements by each. Bike lanes also help to increase the total capacities of the highways carrying mixed bicycle and motor vehicle traffic. Bicycle lanes should be a minimum of 5 feet wide. Wider bicycle lanes, 6 feet maximum, are recommended on streets with high speeds (greater than 45 MPH), high traffic volumes or on-street parking.

Multi Use Paths

When appropriately located and designed, multi use paths, can provide bicyclists with an excellent facility for traveling within and through a community. Multi use paths work particularly well along barriers such as rivers, freeways, railroad tracks and within stream corridors where there is little cross traffic. However, there are numerous problems with paths located adjacent to roadways which should be carefully evaluated before a path is installed. (See Appendix A) Multi use paths should be a minimum of 10 feet wide with two (2) foot clear shoulders.

Many of the accommodations made to improve bicycle safety, mobility and access were originally developed to improve conditions for motorists (e.g., paved shoulders to improve maintenance and decrease head-on collisions and wide curb lanes/bicycle lanes to increase traffic capacity). The benefit to bicyclists is often a fortunate byproduct of improvements for motorists. Therefore, improving on-street conditions for bicyclists should also improve conditions for motorists in many cases.

Intersection Treatments

The majority of bicycle crashes, and a significant number of pedestrian crashes, in the urban environment take place at intersections. For that reason it is extremely important that all intersections safely, and to the extent possible, enjoyably accommodate bicyclists and pedestrians.

Roundabouts

At many intersections roundabouts are safer and easier to use than traditional intersections for most pedestrians and bicyclists. One way traffic, low traffic speeds and refuge islands are key safety features.

Crosswalks

At intersections with sidewalks, crosswalks may be marked or unmarked. Marked crosswalks should be highly visible and indicate a preferred (safer) crossing location for pedestrians.

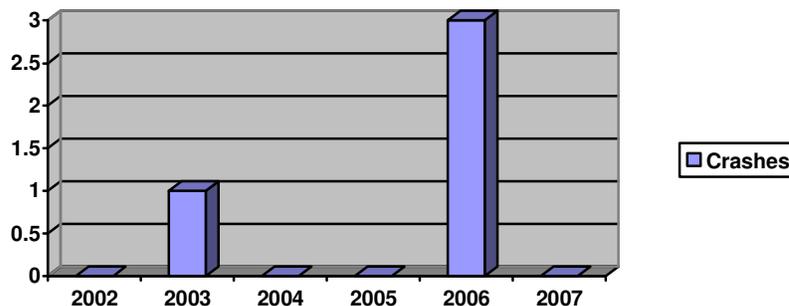
Other issues to Consider

Pedestrian and bicycle facilities are only as good as the education and enforcement which support them. Once good facilities have been constructed, it is paramount to educate the public on their proper use. Likewise, law enforcement personnel must be educated about pedestrian and bicycle facilities to appropriately enforce laws.

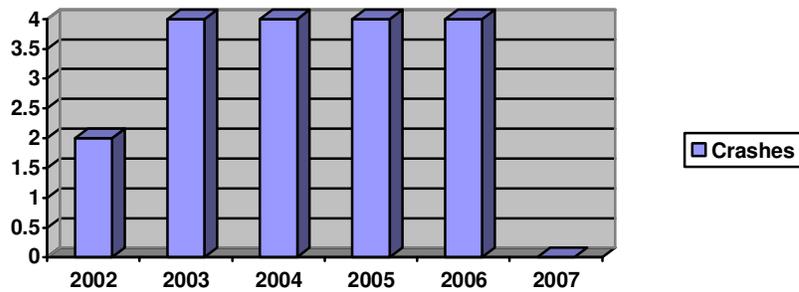
Pedestrian and Bicyclist Safety

Historically, the Village of Little Chute has been a relatively safe place to walk and bicycle. In the six years, 2002-2007, there were four pedestrian and 18 bicycle crashes reported. That is an average of .8 pedestrian and 3.6 bicycle crashes per year. One pedestrian was killed during this time period however the majority of the remainder of the crashes were non-incapacitating.

Pedestrian Crashes: 4



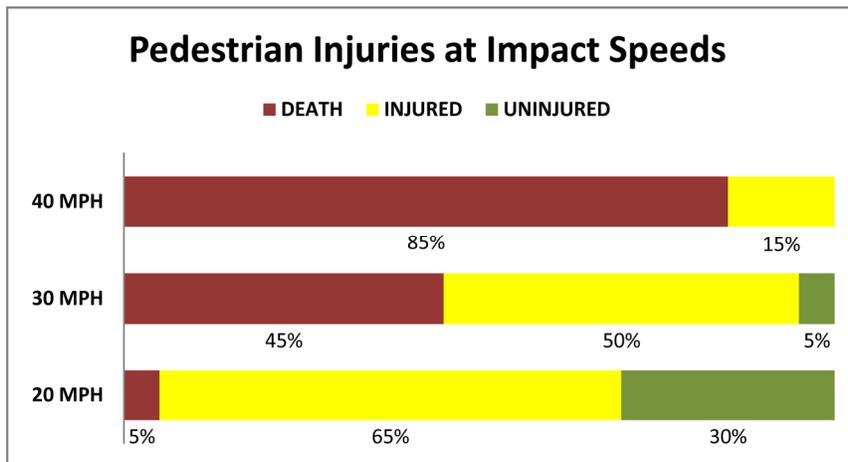
Bicycle Crashes: 18



Because of the relatively small number of crashes it is unwise to draw too many conclusions from these numbers however a more in depth analysis of the crash data identified no significant inconsistencies with state and national data. Due to insufficient local data, state and national trends were used while developing facilities recommendations.

Speed and Pedestrian (Bicycle) Safety

The speed at which a motor vehicle is traveling when it collides with a pedestrian (or bicyclist) has a direct correlation to the severity of the pedestrian's (or bicyclist's) injuries.



The recommendations in this plan are based on several widely recognized publications. The list of publications includes the following plans, guides and maps.

Plans:

- *Comprehensive Park and Outdoor Recreation Plan.* January 2008. Prepared by Rettler Corporation
- *Little Chute Safe Routes to School Plan.* November 2008. Prepared in coordination by Little Chute Safe Routes to School Committee & East Central Wisconsin Regional Planning Commission

- *Long – Range Transportation/Land Use Plan Fox Cities (Appleton) Urbanized Area.* October 2005. Prepared by East Central Wisconsin Regional Planning Commission
- *Transportation Improvement Program For the Fox Cities (Appleton) and Oshkosh Urbanized Areas – 2009.* Prepared by East Central Wisconsin Regional Planning Commission

Guides:

- *Guide for the Development of Bicycle Facilities.* 1999. American Association of State Highway and Transportation Officials (AASHTO).
- *Guide for the Planning, Design, and Operation of Pedestrian Facilities.* July 2004. American Association of State Highway and Transportation Officials (AASHTO).

Maps:

- Village of Little Chute Official Map – Speed Limits
- Grand Chute Trails Plan
- 2008 Trails Map City of Kaukauna, Outagamie County, Wisconsin
- Trails of the Fox Cities. March 2008. Prepared by City of Appleton GIS.

Proposed Corridor Assessment

During the initial process of recommending bicycle and pedestrian facilities for the corridors identified in the Comprehensive Park and Outdoor Recreation Plan, many factors had to be considered. These factors can be broken down into two categories, Village wide factors and corridor specific factors.

Village wide factors that were taken into account were barriers to transportation, corridor connectivity, and planned/future land-use. The barriers to bicycle, pedestrian and motor vehicle travel found in the Village include U.S.H. 41, Canadian National Railroad and the Fox River. These barriers have a minimal effect on motor vehicle travel due to the speed at which they travel. However, bicyclists and pedestrians travel at a much slower speed, making crossing distances of more than half a mile extremely difficult. Due to the limited number of existing crossings of these barriers, each one requires special attention. Planned/future land-use is also a key tool in determining future origins and destinations for bicyclists and pedestrians.

For each corridor identified in the CPORP, many factors were considered when making facility recommendations. These factors included width of roadway, cross section, speed of roadway, ADT, land – use, existing facilities, whether or not it was in the Safe

Routes to School Plan, and if there were any special considerations such as if the corridor was a truck route. This assessment can be found in Table 1.

Appendix A

Problems with paths located immediately adjacent to roadways are as follows (AASHTO):

1. Unless separated, they require one direction of bicycle traffic to ride against motor vehicle traffic, contrary to normal rules of the road.
2. When the path ends, bicyclists going against traffic will tend to continue to travel on the wrong side of the street. Likewise, bicyclists approaching a shared use path often travel on the wrong side of the street in getting to the path. Wrong-way travel by bicyclists is a major cause of bicycle/automobile crashes and should be discouraged at every opportunity.
3. At intersections, motorists entering or crossing the roadway often will not notice bicyclists approaching from their right, as they are not expecting contra-flow vehicles. Motorists turning to exit the roadway may likewise fail to notice the bicyclist. Even bicyclists coming from the left often go unnoticed, especially when sight distance is limited.
4. Signs posted for roadway users are backwards for contra-flow bike traffic; therefore these cyclists are unable to read information without stopping and turning around.
5. When the available right-of-way is too narrow to accommodate all highway and shared use features, it may be prudent to consider a reduction of the existing or proposed widths of the various highway (and bikeway) cross-sectional elements (i.e., lane and shoulder widths, etc.). However, any reduction to less than AASHTO Green Book (or other applicable) design criteria must be supported by a documented engineering analysis.
6. Many bicyclists will use the roadway instead of the shared use path because they have found the roadway to be more convenient, better maintained, or safer. Bicyclists using the roadway may be harassed by some motorists who feel that in all cases bicyclists should be on the adjacent path.
7. Although the shared use path should be given the same priority through intersections as the parallel highway, motorists falsely expect bicyclists to stop or yield to all cross-streets and driveways. Efforts to require or encourage bicyclists to yield or stop at each cross-street and driveway are inappropriate and frequently ignored by bicyclists.
8. Stopped cross-street motor vehicle traffic or vehicles exiting side streets or driveways may block the path crossing.
9. Because of the proximity of motor vehicle traffic to opposing bicycle traffic, barriers are often necessary to keep motor vehicles out of shared use paths and bicyclists out of traffic lanes. These barriers can represent an obstruction to bicyclists and motorists, can complicate maintenance of the facility, and can cause other problems as well.

Little Chute Corridor Evaluation

October, 2009

Corridors:

French Road (A) (Outside of municipal boundary)

Existing Conditions:

Street Classification: Collector

Cross section: 24', Rural

Speed: 25-45

ADT: 1200-3100 (2006)

Land use: Agricultural, residential, landfill

Facilities: None

Adjacent facilities: Apple Creek Trail

Future Plans:

SRTS Plan (2008): Yes

Issues:

Connection to Apple Creek Trail

Narrow bridge over U.S.H. 41

Recommendations:

- Wide curb lanes/Paved shoulders
- Shared use path (Apple Creek - Water Way, west side of road)
- To be constructed in accordance with Water Way

Prior to bridge reconstruction:

- Decrease bridge speed (25 MPH)
- Install "Bikes on Roadway" and Pedestrian caution signs
- Install Sharrows on bridge approaches

At time of bridge reconstruction:

- Add Wide curb lanes/Paved shoulders to bridge

Justification:

Rural area

Adjacent to U.S.H. 441

Continuous north-south corridor

Apple Creek Trail - Water Way connection

Narrow bridge

Crosses railroad tracks

Holland Road (B)

Existing Conditions:

Street Classification: Local street

Cross section: 22'-48', Rural, Urban

Speed: 25-35

ADT: 1100-3200 (2006)

Land use: Agricultural, residential, commercial, multi-family

Facilities: None

Adjacent facilities: None

Future Plans:

N/A

Issues:

Greater population density south of U.S.H. 41

Narrow bridge over U.S.H. 41

Recommendations:

- Retrofit roadway south of U.S.H. 41 with sidewalks on east side and bicycle lanes

Prior to bridge reconstruction:

- Decrease bridge speed (25 MPH)
- Install "Bikes on Roadway" and Pedestrian caution signs
- Install Sharrows on bridge approaches

At time of bridge reconstruction:

- Add sidewalks and bicycle lanes to bridge
- Install sidewalks on both sides of roadway and bicycle lanes north of U.S.H. 41

Justification:

Residential area south of U.S.H. 41

Connections to existing sidewalks

Narrow bridge

Future residential area

Vandenbroek Road (C)

Existing Conditions:

Street Classification: Local street

Cross section: 36', Rural, Urban

Speed: 25

ADT: Unknown

Land use: Agricultural, residential, multi-family

Facilities: Sidewalks (Elm Drive - Florida Avenue east side, Florida Avenue - CTH 00 both sides)

Adjacent facilities: Florida Avenue sidewalks

Future Plans:

SRTS Plan (2008): Preferred Walking Route from Elm Drive to North Avenue

Issues:

Narrow bridge over U.S.H. 41

Recommendations:

North of U.S.H. 41:

- Install sidewalks on both sides of roadway and bicycle lanes

South of U.S.H. 41:

- Complete sidewalks on both sides of roadway (except from Elm Road to Florida Avenue on west side– existing path) and add bicycle lanes

Prior to bridge reconstruction:

- Decrease bridge speed (25 MPH)
- Install “Bikes on Roadway” and Pedestrian caution signs
- Install Sharrows on bridge approaches

At time of bridge reconstruction:

- Add sidewalks and bicycle lanes to bridge

Note: Vandebroek Road is located approximately ½ mile east of Holland Road and ½ mile west of CTH N. The CPORP recommends that bicycle routes be placed ¼ to ½ mile apart throughout the urbanized area. Providing sidewalks and bicycle lanes on the U.S.H. Bridge will maintain this spacing.

Justification:

Is a continuous corridor

Connects with proposed Water Way Path

Crosses U.S.H. 41

On the SRTS preferred walking route (Elm Drive to North Avenue)

Residential area south of U.S.H. 41

Connections to existing sidewalks

CTH N (North of U.S.H. 41) (D)**Existing Conditions:**

Street Classification: Minor arterial

Cross section: Variable, Rural

Speed: 40

ADT: 4,900 (2007)

Land use: Agricultural, residential, commercial

Facilities: Sidewalks (U.S.H. 41 - Evergreen Drive both sides)

Adjacent facilities: None

Future Plans:

N/A

Issues:

N/A

Recommendations:

- Install sidewalks on both sides of roadway and add bicycle lanes

Justification:

Is a continuous corridor

Connects with proposed Water Way

Arterial

CTH N (South of U.S.H. 41 including overpass) (D)**Existing Conditions:**

Street classification: Principal arterial

Cross section: Variable, Urban

Speed: 25-40

ADT: 11,000 (2007)

Land use: Residential

Facilities: Sidewalks (U.S.H. 41 - North Avenue both sides)

Adjacent facilities: Sidewalks

Future Plans:

SRTS Plan (2008): Preferred Walking Route from Elm Road – South

Issues:

N/A

Recommendations:

- Add bicycle lanes to overpass
- Add bicycle lanes to roadway
- Shared use path (Moasis Drive south to CTH OO) on east side of roadway

Justification:

Is a continuous corridor

Arterial

Residential area

Connects to adjacent facilities

Middle School and High School located here

Crosses railroad tracks

Buchanan Street (E)

Existing Conditions:

Street Classification: Collector

Cross section: 24'-40', Rural, Urban

Speed: 25-35

ADT: 1,300-3,400 (2004 Village Map)

Land use: Agricultural, residential, commercial, industrial

Facilities: Sidewalk (Elm Drive - CTH OO, east side, CTH OO - Bluff Avenue both sides)

Adjacent facilities: Sidewalks

Future Plans:

SRTS Plan (2008): Preferred Walking Route from Elm Drive south to Lincoln Avenue

Issues:

None

Recommendations:

North of Moasis Drive:

Prior to bridge reconstruction:

- Decrease bridge speed (25 MPH)
- Install "Bikes on Roadway" and Pedestrian caution signs
- Install Sharrows on bridge approaches

At time of bridge reconstruction:

- Add sidewalks and bicycle lanes to bridge
- Install sidewalks on both sides of roadway and bicycle lanes north of U.S.H. 41

South of Moasis Drive:

- Retrofit roadway to include bicycle lanes to Coolidge Avenue
- Add bicycle route signs from Coolidge Avenue to Main Street

Note: Buchanan Street is located approximately ½ mile east of CTH N and ½ mile west of Rosehill Road. The CPORP recommends that bicycle routes be placed ¼ to ½ mile apart throughout the urbanized area. Providing sidewalks and bicycle lanes on the U.S.H. Bridge will maintain this spacing.

Justification:

Is a continuous corridor

Connects with proposed Water Way

Crosses U.S.H. 41

On the SRTS preferred walking route (Elm Drive - Riverside Avenue)

Residential area south of U.S.H. 41

Connections to existing sidewalks

Crosses railroad tracks

CTH CC/Rosehill Road (F) (Parts outside of future municipal boundary – See map)

Existing Conditions:

Street Classification: Collector/Minor arterial

Cross section: 36'-40', Rural, Urban

Speed: 25

ADT: 1,200-3,900 (2004 Village Map)

Land use: Agricultural, industrial, residential (south)

Facilities: None

Adjacent facilities: Sidewalks

Future Plans:

N/A

Issues:

Parts outside of future municipal boundary

Recommendations:

- Shared use path on west side of roadway (Hickory Drive - North Avenue)

South of North Avenue:

- Sidewalks on east side of roadway (North Avenue – Main Street) and bicycle lanes

Justification:

Is a continuous corridor

Connects with proposed Water Way

Crosses U.S.H. 41

Residential area south of U.S.H. 41

Connections to existing sidewalks

Crosses railroad tracks

Washington Street (G)

Existing Conditions:

Street Classification: Collector

Cross section: 40' - 41', Urban

Speed: 25

ADT: 1,700

Land use: Residential, mobile homes

Facilities: Sidewalks

Adjacent facilities: Sidewalks

Future Plans:

N/A

Issues:

None

Recommendations:

- Add bicycle route (Rolling Meadows Drive – CTH OO)
- Add bicycle lanes (CTH OO – Main Street)

Issues:

Land use and right of way

Justification:

Residential area

Connections to existing sidewalks

Is a continuous corridor

On the SRTS preferred walking route (Elm Drive to Riverside Avenue)

Crosses railroad tracks

Sanitorium Road (H)**Existing Conditions:**

Street Classification: Local street

Cross section: 31'-36', Urban

Speed: 25

ADT: 1,900

Land use: residential, commercial

Facilities: Sidewalks (Main Street-Riverside Drive, both sides)

Adjacent facilities: Sidewalks

Future Plans:

N/A

Recommendations:

- Add sidewalks on both sides of roadway (Lincoln Avenue/Riverside Drive – Fox River)

Issues:

Railroad tracks on north end

Justification:

Connects to Fox River Trail

Residential area

Connections to existing sidewalks

CTH N (S Madison/Maes Street) (I)

Existing Conditions:

Street Classification: Principal arterial

Cross section:

Speed: 25

ADT: 10,500-17,200 (2007)

Land use: Residential

Facilities: Sidewalks (U.S.H. 41-North Avenue, both sides)

Adjacent facilities: Sidewalks

Future Plans:

N/A

Recommendations:

- Install bicycle lanes (CTH 00/North Avenue – Kimberly)

Issues:

None

Justification:

Crosses Fox River

Residential area

Arterial

Connections to existing sidewalks

School nearby

Hans Parkway/Grand Avenue (J)

Existing Conditions:

Street Classification: Local street

Cross section: Hans Parkway 32', Grand Avenue 36'-64', Urban

Speed: 25

ADT: Unknown

Land use: Residential, commercial, public/institutional

Facilities: Hans Parkway: Sidewalks (north side)

Grand Avenue: Sidewalks (both sides)

Mill Street: (northwest side)

Adjacent facilities: Sidewalks

Future Plans:

SRTS Plan (2008): Preferred Walking Route

Issues:

None

Recommendations:

- Shared use path north side of Hans Parkway
- Shared use path west side of Grand Avenue north of McKinley Avenue
- Bicycle route signage south of McKinley Avenue to Main Street

Justification:

St. John School/Little Chute Elementary School
On the SRTS preferred walking route
Residential area
Connections to existing sidewalks
Adjacent to Legion Park

CTH JJ (K) (Parts outside of future municipal boundary – See map)

Existing Conditions:

Street Classification: Local street/Minor arterial
Cross section: Variable, Rural
Speed: 55
ADT: 2,500 (2007)
Land use: Agricultural, residential, commercial
Facilities: None
Adjacent facilities: None

Future Plans:

N/A

Issues:

Parts outside of future municipal boundary

Recommendations:

Sidewalks on both sides of roadway and bicycle lanes

Justification:

Is a continuous corridor
Borders a residential area
High truck traffic
Arterial

Water Way (Creek) (L)**Existing Conditions:**

Street Classification: N/A
Cross section: NA
Speed: N/A
ADT: N/A
Land use: Agricultural, residential

Facilities: None
Adjacent facilities: None

Future Plans:
N/A

Issues:
None

Recommendations:

- 10' wide shared use path with a minimum of 2 foot shoulders

Justification:
Is a continuous recreational corridor
Connections to future facilities

Evergreen Drive (M)

Existing Conditions:
Street Classification: Collector
Cross section: 22'-40', Rural
Speed: 25-35
ADT: 490-1,000 (2006)
Land use: Agricultural, commercial, residential, industrial
Facilities: None
Adjacent facilities: None

Future Plans:
N/A

Issues:
N/A

Recommendations:

- Sidewalks on both sides of roadway and bicycle lanes* (See Detail)

*Works best with a three lane roadway and pedestrian/bicycle friendly intersections.

Justification:
Proposed commercial corridor with adjacent residential
Is a continuous corridor
Connects with proposed Water Way
Connections to proposed sidewalks

Florida Avenue (N)

Existing Conditions:

Street Classification: Local street

Cross section: 36', Urban

Speed: 25

ADT: 940-1,300 (2006)

Land use: Residential, mobile home, recreational

Facilities: Sidewalks

Adjacent facilities: Sidewalks

Future Plans:

SRTS Plan (2008): Preferred Walking Route from Holland Road to Buchanan Street

Recommendations:

- Add bicycle lanes for entire length

Justification:

Is a continuous corridor

Direct route to school

Residential area

Connections to existing sidewalks

Adjacent to Van Lieshout Park

Middle School and High School located here

CTH 00/North Avenue (O)

Existing Conditions:

Street Classification: Principal Arterial

Cross section: Variable, Urban

Speed: 35-50

ADT: 9,800 (2000 Comp. Plan), 6,300-10,800 (2004 Village Map)

Land use: Landfill, industrial, residential, commercial, agricultural

Facilities: Sidewalks

Adjacent facilities: Sidewalks

Future Plans:

SRTS Plan (2008): Preferred Walking Route from Holland Road to Buchanan Street

Issues:

Truck route

Recommendations:

- Shared use path on the south side of the road

Justification:

Is a continuous corridor
Borders a residential area
High truck traffic
Arterial
Connections to existing sidewalks

McKinley Avenue (P)**Existing Conditions:**

Street Classification: Local street
Cross section: 34'-36', Urban
Speed: 25
ADT: Unknown
Land use: Residential
Facilities: Sidewalks
Adjacent facilities: Sidewalks

Future Plans:

SRTS Plan (2008): Preferred Walking Route from Madison Street to Grand Avenue

Issues:

None

Recommendations:

- Bicycle lanes from Washington Street to Madison Street
- Shared use path from Madison Street to Grand Avenue

Justification:

Residential area
Existing sidewalks
Cut through traffic on Jackson Street

Main Street/HWY 96 (Q)**Existing Conditions:**

Street Classification: Minor Arterial
Cross section: Variable, Urban
Speed: 25-45
ADT: 4,300-8,400 (2007)
Land use: Residential, commercial
Facilities: Sidewalks and bicycle lanes
Adjacent facilities: Sidewalks

Future Plans:

SRTS Plan (2008): Preferred Walking Route from Madison Street to Grand Avenue

Issues:

None

Recommendations:

- Add sidewalks (French Road to Adams Street)*
- Bicycle route (Washington Avenue to east)

*Sidewalk location may be determined by topography and other factors.

Justification:

Continuous corridor

Connects to adjacent communities

Lincoln Avenue (R)**Existing Conditions:**

Street Classification: Collector

Cross section: 36'-44', Urban

Speed: 25

ADT: 820-1,500 (2004 Village Map)

Land use: Residential

Facilities: Sidewalks

Adjacent facilities: Sidewalks

Future Plans:

SRTS Plan (2008): Preferred Walking Route from Vandebroek Street to Sanitorium Road

Issues:

None

Recommendations:

- Bicycle lanes from Van Den Broek Street – Wisconsin Avenue

Justification:

Adjacent to Heesakker Park

Provides access to Fox River Trail

Residential area

For River Trail (S)**Existing Conditions:**

Street Classification: N/A

Cross section: N/A

Speed: N/A

ADT: N/A

Land use: Recreational, residential

Facilities: None
Adjacent facilities: Sidewalks

Future Plans:

None

Recommendations:

- Shared use path, minimum of 10' wide with 2' shoulders

Justification:

No cross traffic
Along river
Connects parks
Aesthetically pleasing
Tourist attraction
Adjacent to Island, Doyle and Heesakker Parks

Patriot Drive (T)

Existing Conditions:

Street Classification: Local street
Cross section: 36', Urban
Speed: 25
ADT: Unknown
Land use: Commercial, industrial, residential
Facilities: None
Adjacent facilities: None

Future Plans:

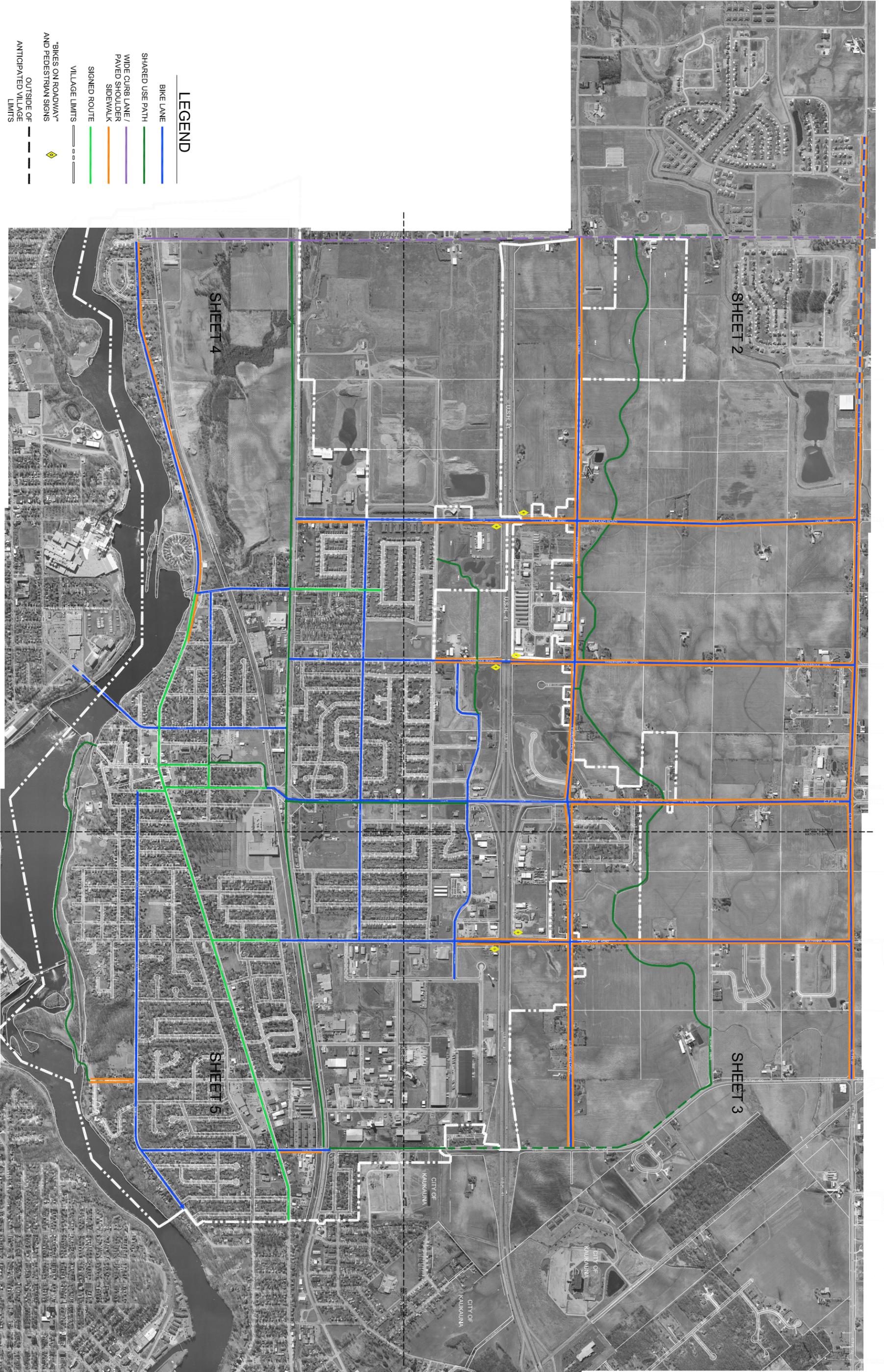
None

Recommendations:

- Bicycle lanes (Vandenbroek Road – Nixon Street)
- Shared use path west past ponds then along drainage way to ponds and then south to Elm Road

Justification:

Parallels STH 41
No cross traffic
In a stream corridor

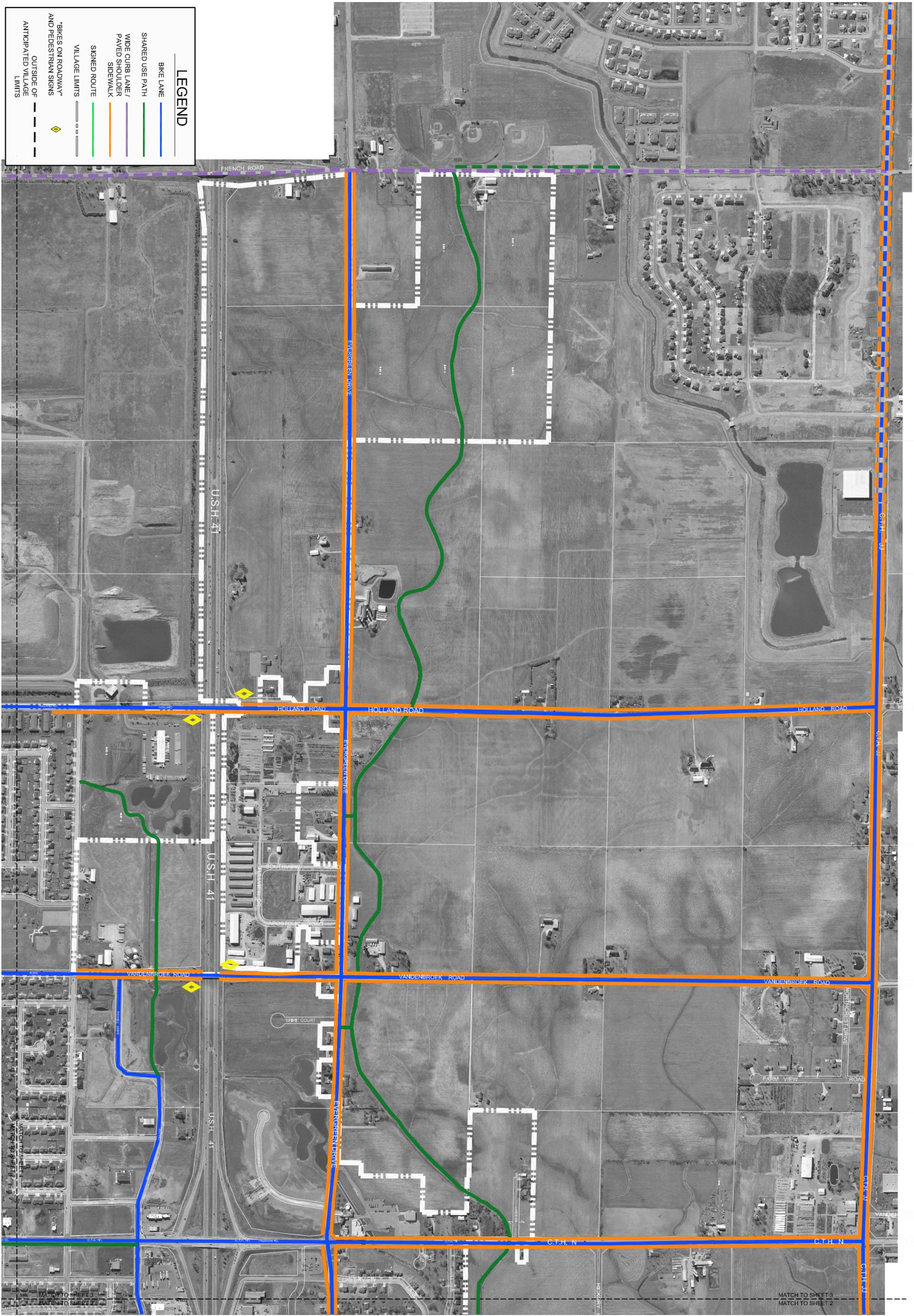


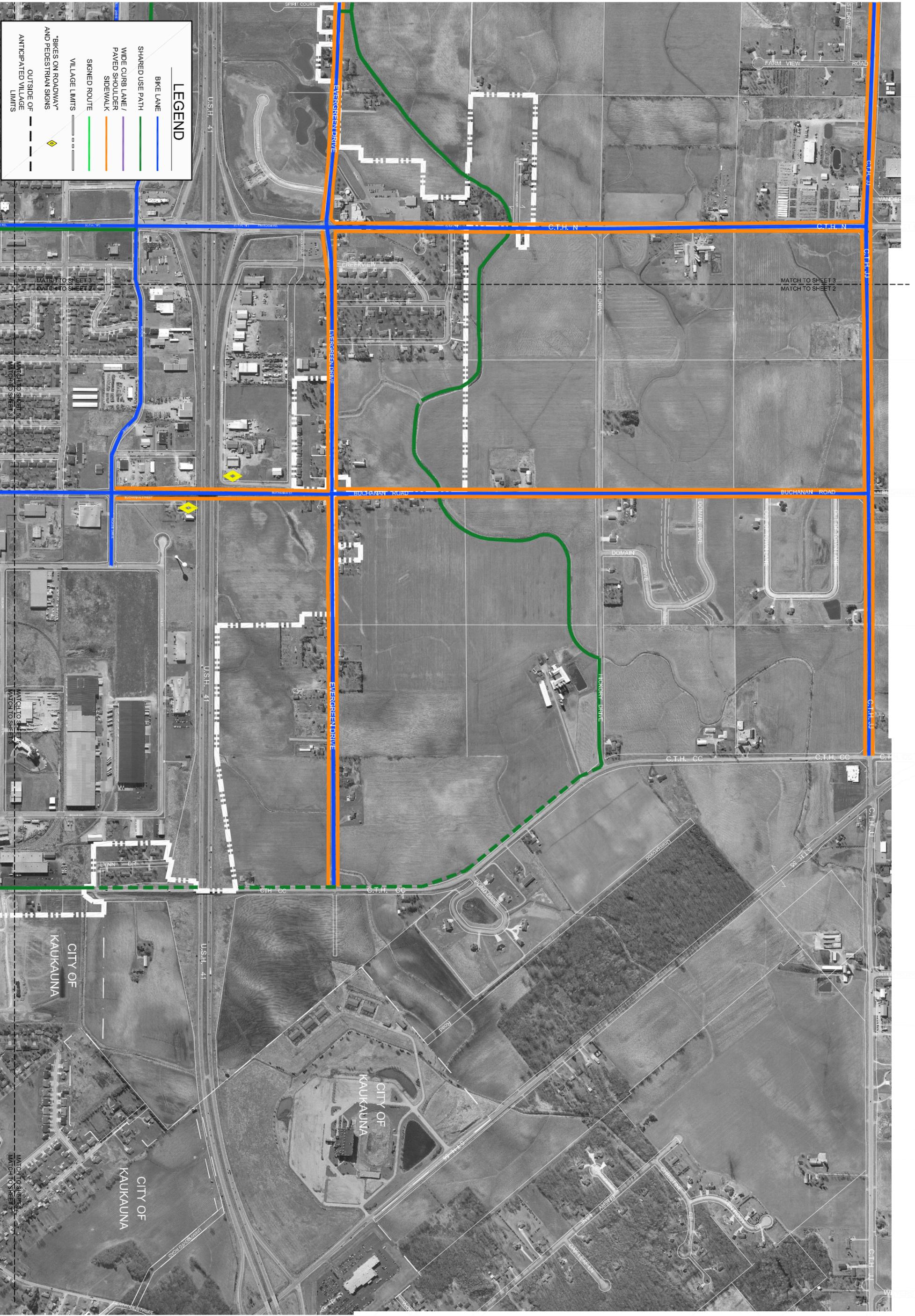
LEGEND

- BIKE LANE
- SHARED USE PATH
- WIDE CURB LANE / PAVED SHOULDER / SIDEWALK
- SIGNED ROUTE
- VILLAGE LIMITS
- "BIKES ON ROADWAY" AND PEDESTRIAN SIGNS
- OUTSIDE OF ANTICIPATED VILLAGE LIMITS

LEGEND

- BIKE LANE 
- SHARED USE PATH 
- WIDE CURB LANE/
PAVED SHOULDER
SIDEWALK 
- SIGNED ROUTE 
- VILLAGE LIMITS 
- "BIKES ON ROADWAY"
AND PEDESTRIAN SIGNS 
- OUTSIDE OF
ANTICIPATED VILLAGE
LIMITS 



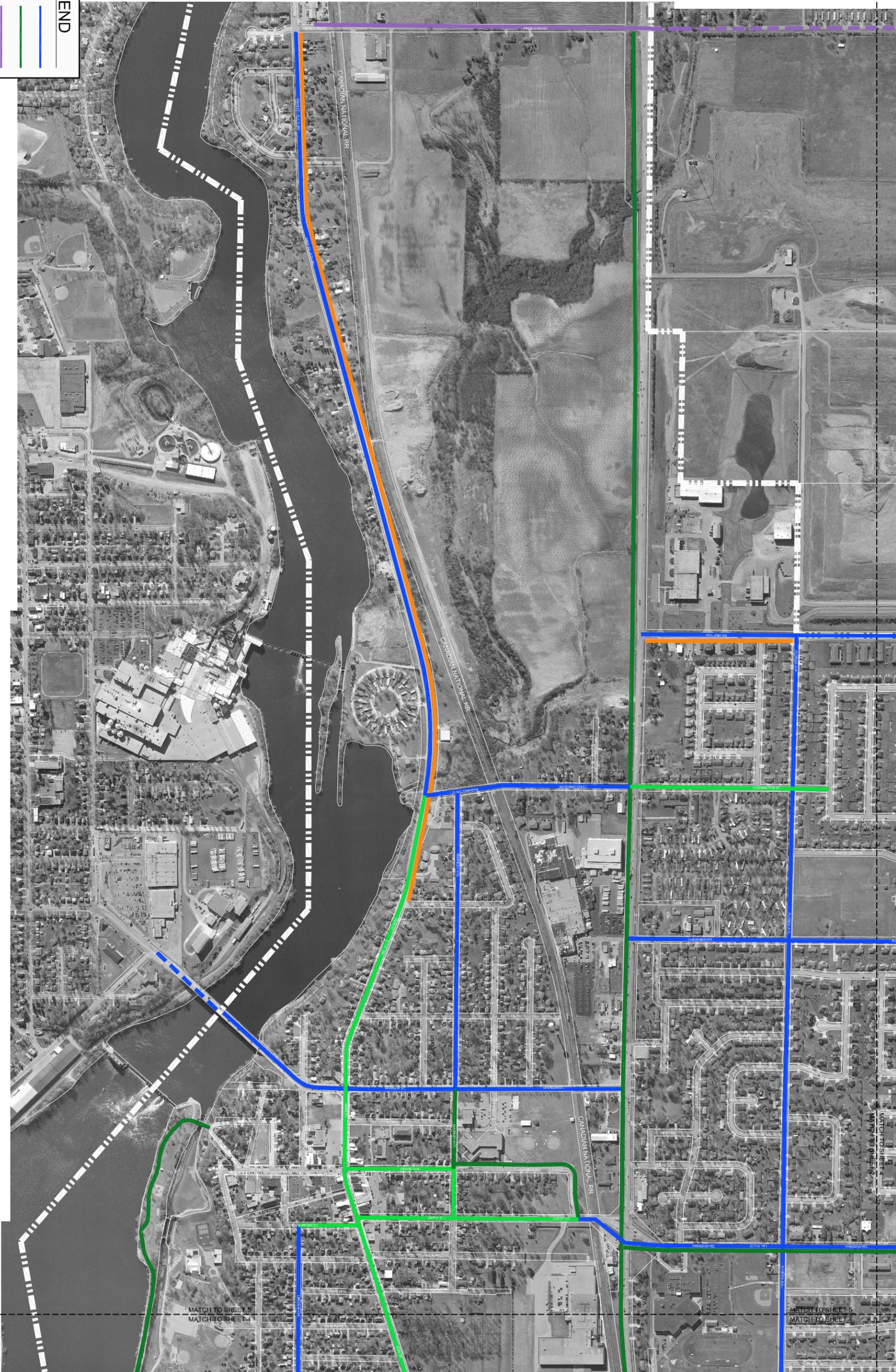


LEGEND

- BIKE LANE
- SHARED USE PATH
- WIDE CURB LANE / PAVED SHOULDER
- SIGNED ROUTE
- VILLAGE LIMITS
- OUTSIDE OF ANTICIPATED VILLAGE LIMITS
- "BIKES ON ROADWAY" AND PEDESTRIAN SIGNS

LEGEND

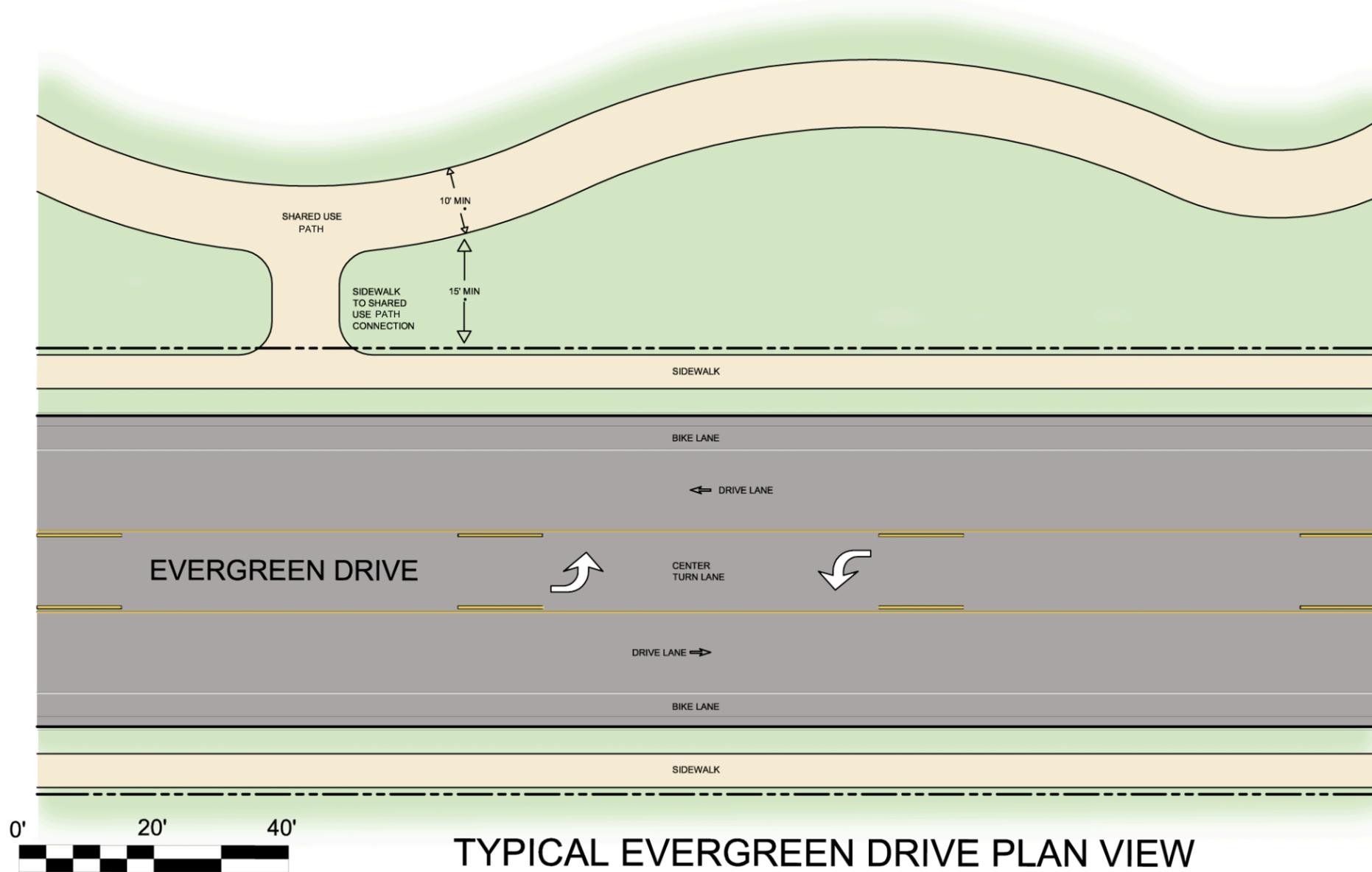
- BIKE LANE
- SHARED USE PATH
- WIDE CURB LANE / PAVED SHOULDER SIDEWALK
- SIGNED ROUTE
- VILLAGE LIMITS
- "BIKES ON ROADWAY" AND PEDESTRIAN SIGNS
- OUTSIDE OF ANTICIPATED VILLAGE LIMITS



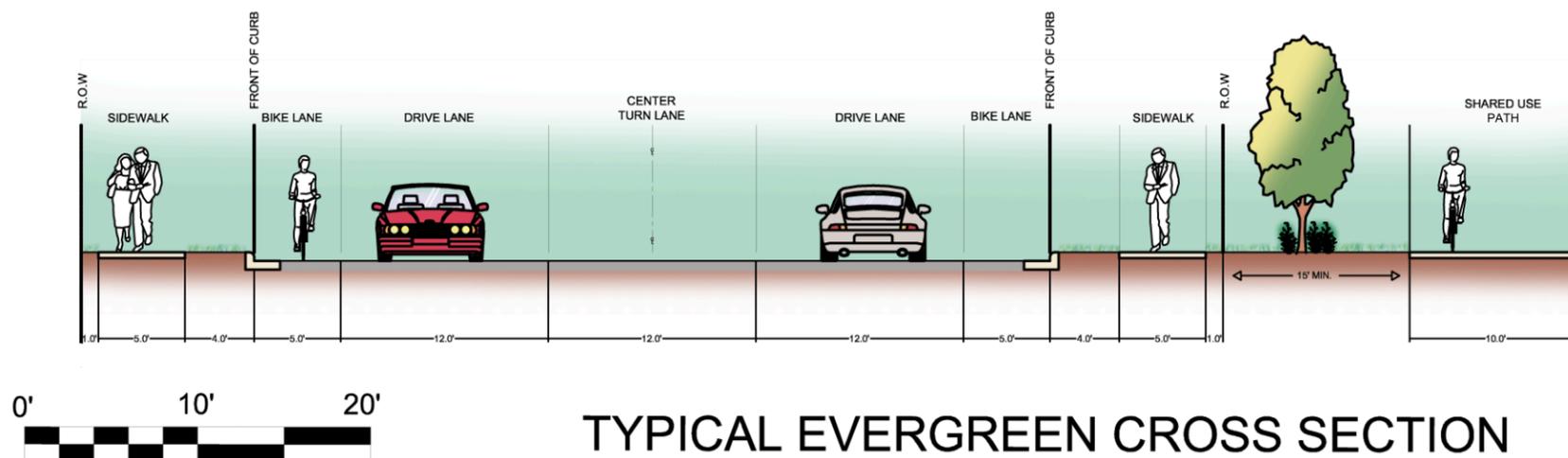


LEGEND

- BIKE LANE
- SHARED USE PATH
- WIDE CURB LANE / PAVED SHOULDER
- SIDEWALK
- SIGNED ROUTE
- VILLAGE LIMITS
- "BIKES ON ROADWAY" AND PEDESTRIAN SIGNS
- OUTSIDE OF ANTICIPATED VILLAGE LIMITS



TYPICAL EVERGREEN DRIVE PLAN VIEW



TYPICAL EVERGREEN CROSS SECTION

Table 1 - Little Chute Corridor Evaluation

LETTER	CORRIDOR NAME	CROSS SECTION	STREET CLASS	SPEED (MPH)	ADT	LAND - USE	EXISTING FACILITIES	SAFE ROUTE TO SCHOOL PLAN (2008)	Notes	Recommendation
A	French Road	24, Rural	Collector	25 - 45	1,200 - 3,100 (2006)	Agriculture, residential, landfill	N/A	Yes	Outside of municipal boundary	Wide Curb Lanes/Paved Shoulders & Shared use path
B	Holland Road	22 - 48, Rural/Urban	Local Street	25-35	1,100 - 3,200 (2006)	Agriculture, residential, commercial, multi-family	N/A	N/A		Sidewalks & Bicycle Lanes
C	Vandenbroek Road	36, Rural	Local Street	25	Unknown	Agriculture, residential, multi-family	Sidewalks	Preferred walking route from Elm Dr. to North Ave.		Sidewalks & Bicycle Lanes
D	CTH N (North of 41)	Variable, Rural	Minor Arterial	25 - 40	4,900 (2007)	Agriculture, residential, commercial	Sidewalks	N/A		Sidewalks & Bicycle Lanes
D	CTH N (South of 41)	Variable, Urban	Principle Arterial	25 - 40	11,000 (2007)	Residential	Sidewalks	Yes		Bicycle Lanes & Shared use path
E	Buchanan Street	24 - 40, Rural/Urban	Collector	25 - 35	1,300 - 3,400	Agriculture, residential, commercial, industrial	Sidewalks	Preferred walking route from Elm Dr south to Lincoln Ave.		Sidewalks, Bicycle Lanes/Routes
F	CTH CC/Rosehill Road	36 - 40, Rural/Urban	Collector/Arterial	25	1,200 - 3,900	Agriculture, industrial, residential (south)	Sidewalks	N/A	Parts outside of municipal boundary	Shared use path, Sidewalk, Bicycle Lane
G	Washington Street	40 - 41, Urban	Collector	25	1,700 (2007)	Residential, mobile homes	N/A	N/A		Bicycle Lanes/Route
H	Sanitorium Road	31 - 36, Urban	Local Street	25	1,900 (2004)	Residential, commercial	Sidewalks	N/A		Sidewalks
I	CTH N (South of 41)	?, Urban	Principle Arterial	25	10,500 - 17,200 (2007)	Residential	Sidewalks	Preferred Walking Route	Middle School and High School located here	Bicycle Lanes
J	Hans Parkway	32, Urban	Local Street	25	Unknown	Residential, Public/Institutional	Sidewalks	Preferred Walking Route	Little Chute Elementary School	Shared use path
J	Grand Avenue	36 - 64, Urban	Local Street	25	Unknown	Residential, Public/Institutional	Sidewalks	Preferred Walking Route	St. John School	Shared use path/Route
K	CTH JJ	Variable, Rural	Local/Arterial	55	2,500 (2007)	Agricultural, residential, commercial	N/A	N/A	Parts outside of municipal boundary	Sidewalks & Bicycle Lanes
L	Water Way (Trail)	N/A	N/A	N/A	N/A	Agriculture, residential	N/A	N/A		Shared use path
M	Evergreen Drive	22 - 40, Rural	Collector	25 - 35	490 - 1,100 (2006)	Agriculture, commercial, residential, industrial	N/A	N/A		Sidewalks & Bicycle Lanes
N	Florida Avenue	36, Urban	Local Street	25	940 - 1,300 (2006)	Residential, mobile home, recreational	N/A	Preferred Walking Route from Holland Road to Buchanan Street		Bicycle Lanes
O	CTH OO/North Avenue	Variable, Urban	Principle Arterial	35 - 55	6,300 - 10,800	Landfill, industrial, residential, commercial, agricultural	Sidewalks	Preferred Walking Route from Holland Road to Buchanan Street	Truck route for landfill	Shared use path
P	McKinley Avenue	34 - 36, Urban	Local Street	25	Unknown	Residential	N/A	Preferred Walking Route from Madison Street to Grand Avenue	Most easterly continuous north/south route	Bicycle Lanes & Shared use path
Q	Main Street/ Hwy 96	Variable, Urban	Minor Arterial	25 - 45	4,300 - 8,400 (2007)	Residential, commercial	N/A	Preferred Walking Route from Madison Street to Grand Avenue		Sidewalks & Bicycle Route
R	Lincoln Avenue	36 - 44, Urban	Collector	25	820 - 1,500 (2004)	Residential	N/A	Preferred Walking Route from Vandenbroek Street to Sanitorium Road		Bicycle Lanes
S	Fox River Trail	N/A	N/A	N/A	N/A	Recreational, residential	N/A	N/A		Shared use path
T	Patriot Drive	36, Urban	Local Street	25	Unknown	Commercial, industrial, residential	N/A	N/A		Bicycle Lanes & Shared use path