



Watertown Charter Township Non- Motorized Transportation Plan

2022

Prepared By: Watertown Charter Township Urban & Regional Planning Practicum Team



Acknowledgments

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Executive Summary

This plan was prepared by the Watertown Charter Township Urban and Regional Planning Practicum Team, a group of eight undergraduate and graduate students as a part of the Planning Practicum capstone course at Michigan State University. The MSU practicum team worked alongside Watertown Charter Township staff to create this document. The purpose of this project is to review and update the existing non-motorized transportation plan, as well as existing infrastructure for non-motorized transport in Watertown Township and linkages to surrounding jurisdictions. This report highlights the existing conditions of the Township via a non-motorized transportation infrastructure review within the Township, as well as a socio-economic profile of the community to better understand the Township's needs. After conducting the review of non-motorized transportation infrastructure and reviewing the socio-economic profile data, the team recommended infrastructure additions for three specific 'neighborhoods' in which non-motorized transportation is needed the most.

In the North Airport Road neighborhood, the team recommends the expansion of the existing newly implemented sidewalks along Airport Road, this includes a 175' northern expansion which will connect the existing sidewalk to the south entrance of Lakeside Preserve, a major residential subdivision. The team also identified that this sidewalk should be extended south along Airport Road to the Rosewood Hills subdivision, connecting the major residential subdivisions in the northeast section of the Township with each other, as well as to DeWitt Township. Additional crosswalks and signage will also be needed to complete this extension.

The team has also identified the South Airport Road neighborhood as an area for future growth with the development of the Royal Scot and Nottingham Fields subdivisions. Future housing developments will dictate the sidewalk and crosswalk infrastructure, and it is recommended that the Township works directly with the developers when implementing new infrastructure. Additionally, the team suggests four-foot paved shoulders along Airport Road from State Road to West Stoll Road, and along West Stoll Road to the entrance of Nottingham Fields to connect the two subdivisions.

In the Wacousta neighborhood, the team suggests the revitalization or replacement of overgrown sidewalks along Wacousta and Herbison Roads to ensure safety, as many children and parents use these to commute to Wacousta Elementary. The installation of a sidewalk on the west side of Wacousta Road connecting the Klein Farm Subdivision to the existing sidewalk north of the Looking Glass River in the downtown area of Wacousta is also proposed. The completion of the sidewalk will connect both major subdivisions, both parks inside Wacousta, and the Wacousta Elementary School. Additional crosswalks and signage will also need to be implemented.

The team has also identified four projects outside of the immediate neighborhoods. A walking trail is proposed underneath the Consumers Energy utility lines spanning from Bauer Road to Lowell Road, south of Clark Road, and north of Stoll Road. A canoe launch is proposed on the far east side of the township, which would give community members a chance to float the stretch of the river located inside the Township boundaries. Also recommended, a four-foot paved shoulders along Clark Road. After numerous meetings, the resident's feedback identified that a bike path along this road would be too intrusive to properties, so extending the shoulders to four feet would be appropriate. Although this would be an expensive and substantial project, it would be a big steppingstone in connecting the east and west sides of the township via non-motorized transportation. The team also identified 136 acres along Watertown Parkway which could potentially be used for recreational purposes to expand non-motorized biking and walking trails. The site could even undergo development to become a park to encompass all types of outdoor non-motorized activities.

Furthermore, the team established both short- and long-term implementation goals. Higher priority short-term goals for the Township include completing the sidewalk extension along Airport Road; revitalizing existing deteriorated infrastructure; and implementing new sidewalks along Wacousta Road; as well as the implementation of paved shoulders along Airport and Stoll Roads. Replacing the non-compliant paved shoulders along Wacousta Road and implementing new crosswalks and signage for each of these projects are also a high priority. Long-term goals with lower priority are due to requiring further research and partnerships with outside communities or groups. These lower priority goals include partnering

with Consumers Energy on a walking path, developing the 136-acre vacant property into a community nature park, partnering with Michigan Water Trails to implement a new canoe launch and river trail, as well as partnering with surrounding communities to continue to improve connectivity options across Township lines. To implement these projects, necessary funding will need to be obtained. The team has identified potential funding resources from the local, state, and federal level to help fund the projects in this plan. Applying for the grants and partnering with the programs detailed in this report could reduce the financial burden imposed on the township. These proposed projects and infrastructure would enhance connectivity and improve non-motorized transportation options for Watertown Township residents.

Section 1. Introduction

Watertown Charter Township adopted a non-motorized transportation plan in 2009 to help guide the Township's development of non-motorized infrastructure and facilities to help better connect the Township's residents to each other and surrounding communities. The purpose of this document is to review and revise the current 2009 non-motorized transportation plan goals and objectives as well as suggestions for non-motorized transportation project implementation. These goals and objectives will be consistent with the desires of the community and its residents.

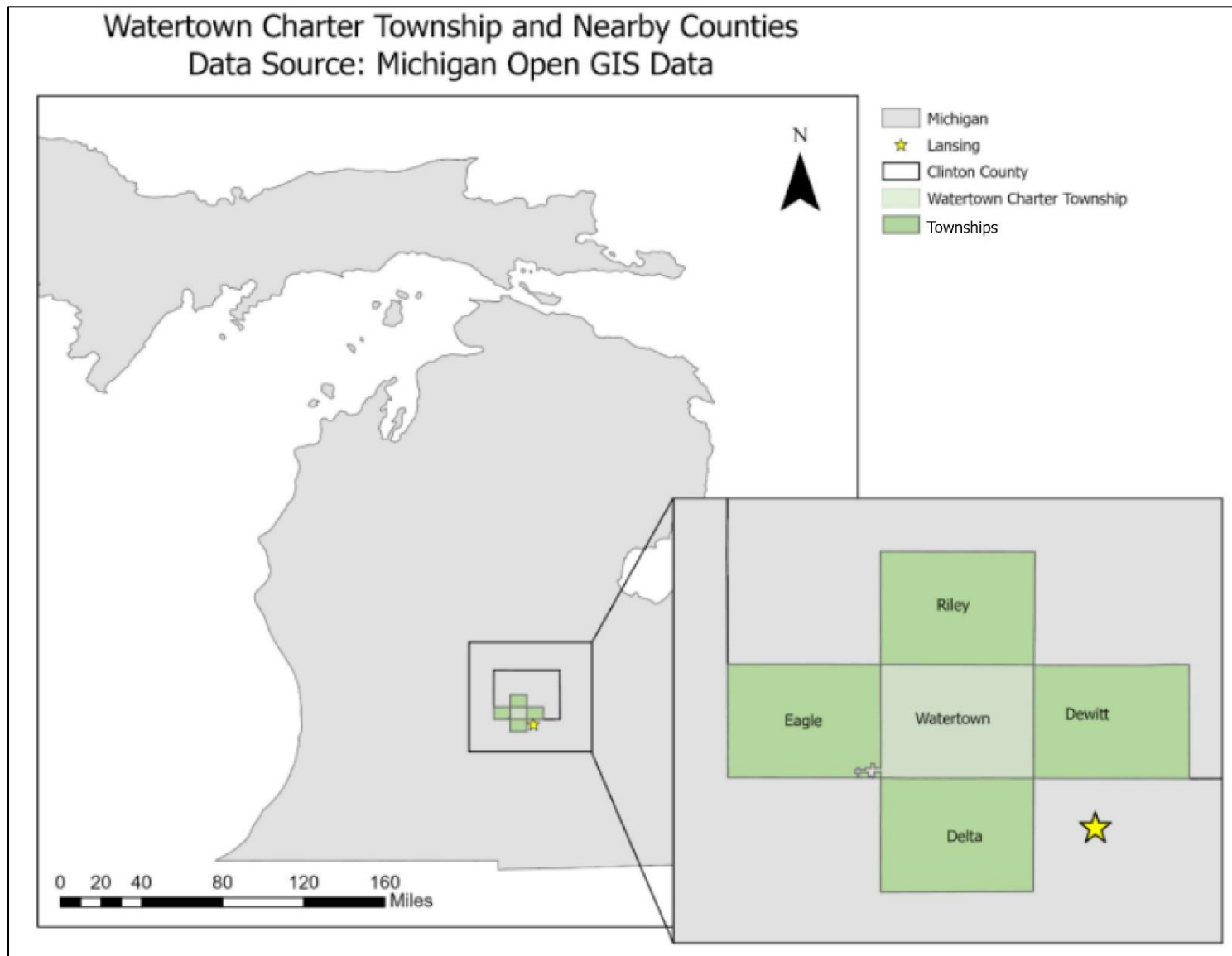
1.1 Michigan State University 2022 Practicum

In the spring of 2022, Watertown Charter Township collaborated with a group of students from Michigan State University (MSU) to assist in revising and updating prior plans and performing assessments. During this process, Watertown Charter Township and consulting firm Giffels-Webster are updating and creating a new Master Plan. Research of past, current, and future data trends and observations throughout the process has been analyzed and used to create the plan. The MSU Planning Practicum team has compiled their findings, including presenting goals and strategies, into a professional summary report, summarizing the goals and recommended implementation strategies over the next five to ten years.

1.2 Location

Watertown Charter Township is in southern Clinton County, just northwest of Lansing, Michigan, shown in Figure 1. According to the United States Census Bureau, the Township has a total area of 35.72 square miles, of which 35.51 square miles is land and 0.21 square miles is water. The Township is bordered by Eagle Township to the west, DeWitt Township to the east, Riley Township to the north, and Delta Township to the south, shown in Figure 2. Watertown Charter Township is primarily rural with a strong agricultural economy and industrial sector. There are also larger scale residential developments on the east and west sides with many opportunities for development and future growth.

Figure 1& 2: Location of Watertown Charter Township



Section 2. Socio-Economic Profiles

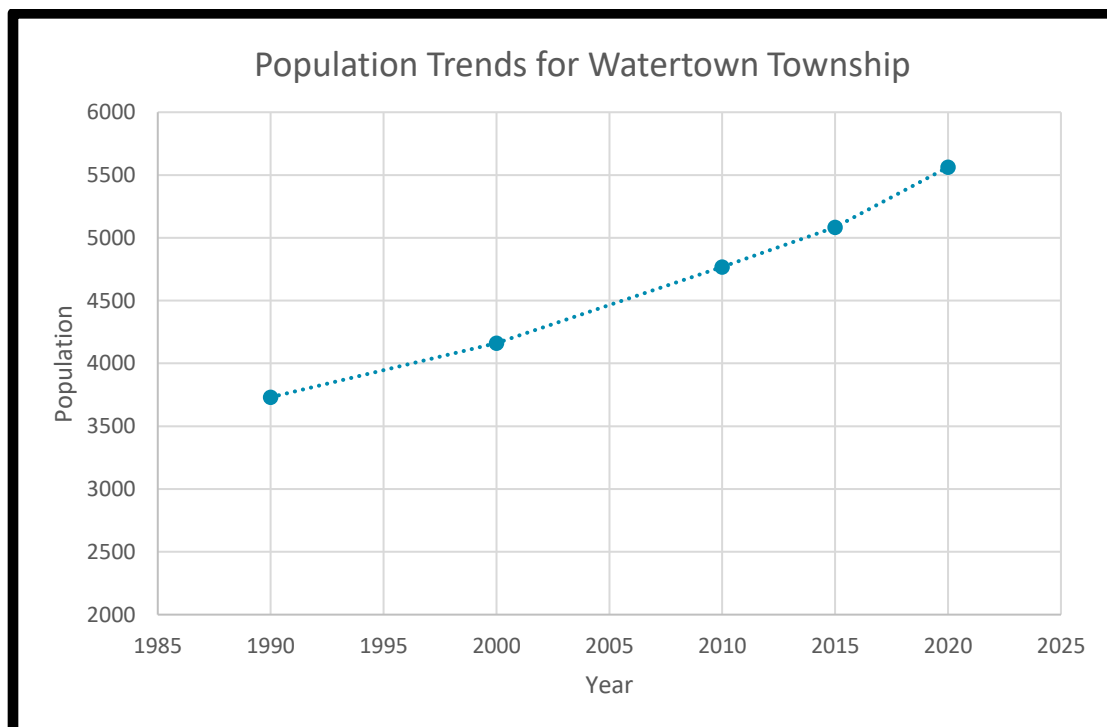
To establish context regarding the non-motorized transportation plan, a compilation of United States Census data and a complete socio-economic profile for Watertown Charter Township, Delta Township, Dewitt Township, and Clinton County was created.

United States Census data from the American Community Survey for 2010, 2015, and 2019 was collected for various demographic and population characteristics, including population, race, age and gender, education, income distribution and housing, employment, and commuting. The same data sets were collected for Delta Township, Dewitt Township, as well as Clinton County.

2.1 Population

As of 2020, the population of Watertown Charter Township was 5,563, an increase of about 15% from 2010. The population density in the Township is 149.8 people per square mile. There were also 1,940 households, 1,497 families, and an average of 2.7 people per household. From 2010 to 2019, the population grew by 553 people, a 1.1% increase.

Figure 3: Total Population of Watertown Charter Township



In 2020, Dewitt Township and the City of Dewitt both had population increases, like Watertown Charter Township. The population of Clinton County also increased to 79,595, an increase of 3,746 from the 2010 Census, less than a 1% increase. Clinton County's population density is 133 people per square mile, less than that of 149.8 in Watertown Township.

2.2 Age

Age

Census data for Watertown Charter Township indicates that the population is aging. Data from the 2019 American Community Survey shows that the median age has increased by 2.3 years from 41.5 years of age to 43.8. Over one-third of the township's population is over the age of 55, however the largest age category is 35 to 44 years old at 14.6% of the total population. The aging population should be taken into consideration when implementing new non-motorized transportation facilities as accessibility will be needed for the aging population. This can also help identify which non-motorized infrastructure will be most needed.

Similarly, to Watertown Charter Township the population of Clinton County has aged over the past decade going from an average age of 37.9 in 2010 to 40.6 in 2019. Clinton County's largest age group is 45-54 at 13.7% of the total population, however less than one-third of the population is over the age of 55 unlike the township. These trends are very similar and can allow for non-motorized connectivity between the township and other communities within the county to be as seamless as possible due to the similar demographics.

Table 1: Age distribution for Watertown Charter Township (2019).

Watertown Charter Township Age Distribution Data Source: US Census ACS Survey (2019)	
Age	Total Population (%)
Under 5 years	4.5%
5 to 9 years	6.7%
10 to 14 years	9.5%
15 to 19 years	4.7%
20 to 24 years	3.0%
25 to 34 years	8.6%
35 to 44 years	14.6%
45 to 54 years	12.6%
55 to 59 years	11.6%
60 to 64 years	6.7%
65 to 74 years	10.4%
75 to 84 years	4.9%
85 years and over	2.2%

Table 2: Age distribution for Clinton County (2019).

Clinton County Age Distribution Data Source: US Census ACS Survey (2019)	
Age	Total Population (%)
Under 5 years	5.5%
5 to 9 years	6.5%
10 to 14 years	6.1%
15 to 19 years	6.3%
20 to 24 years	6.6%
25 to 34 years	12.0%
35 to 44 years	11.8%
45 to 54 years	13.7%
55 to 59 years	8.2%
60 to 64 years	5.9%
65 to 74 years	10.7%
75 to 84 years	5.0%
85 years and over	1.9%

2.3 Education

The largest group enrolled in school is grades kindergarten through eighth grade at 56.9%, followed by college or graduate school at 22.8%, followed by high school (grades 9-12) at 15.1%. Compared to 2010, the same groups were the largest, so this has stayed consistent with elementary aged students accounting for the largest percentage of school enrollment. This data shows us that having good means of non-motorized transportation is necessary for Wacousta near Wacousta Elementary School as over half of all school enrollees in the township attend the school. This could be in the form of additional sidewalks and crosswalks as well as potential bike paths as many of the families with children who attend school here live within proximity. Having the ability for school children to be able to safely travel to school is important for any community.

Table 3: School Enrollment for Watertown Charter Township.

School Enrollment	2010	2019
Nursery school, preschool	10.6%	5.2%
Kindergarten	7.6%	2.4%
Elementary school (grades 1-8)	42.5%	54.5%
High school (grades 9-12)	16.9%	15.1%
College or graduate school	22.5%	22.8%

Like Watertown Township, the largest group in Clinton County enrolled in school is elementary school (grades 1-8) with 7,629 students (39.4%). The next largest enrollment category is 3,830 (19.8%) in High School (grades 9-12), followed by graduate or postgraduate school with 6,218 students (32.14%). The largest group enrollment in Delta Township is K-8 at 40.4% followed by college or undergraduate school at 27.3%. Dewitt Township has the same largest enrollment as Delta with K-8 being at 46.2% followed by high school enrollment grade 9-12 at 25.9%.

2.4 Employment

In 2019, the Watertown Charter Township employment rate was 62.7%, compared to 2010, when the employment rate was 69.9%. This could be due to the aging population of the township, as over one-third of the township's population is over the age of 55 and with Michigan's average retirement age of 62 this could be the cause of the drop in employment. In contrast, from 2018 to 2019, employment in Clinton County grew at 2.24%, from 37,700 thousand employees to 38,600 thousand employees. Even though Clinton County has a lower employment rate than the Township (61.3%), it is increasing over time, unlike the township. Both Delta and DeWitt townships have also seen slight decreases in their employment rates (a 1.8% and 1.3 decrease respectively). This decrease of employment coupled with the increase in average age may indicate that the aging residents in the township would be more likely to use non-motorized transportation for recreational purposes rather than commuting purposes, which is important to consider when suggesting implementation strategies and recommendations.

2.5 Housing

From 2010 to 2019, Watertown Charter Township added 80 total housing units. Housing units' occupancy increased over the same period, adding 69 occupied housing units, while also adding 11 vacant housing units, making a net of 58 additional occupied housing units. For all jurisdictions, they experienced a net addition of occupied housing units with the decrease of vacant housing units. From 2010 to 2019, Clinton County also added 1,483 total housing units. Like Watertown Charter Township, occupied housing units increased with the addition of 2,317 units, with a net addition of 834 units. Neighboring Delta and Dewitt Townships both added housing units as well. Delta Township added 633 occupied housing units since 2010, while Dewitt Township added 233 total housing units. The County has 32,155 housing units, with Watertown making up 6% of those total units. Currently, the average number of people per household in Clinton is 2.61, which is 0.09% less than the average in the Township.

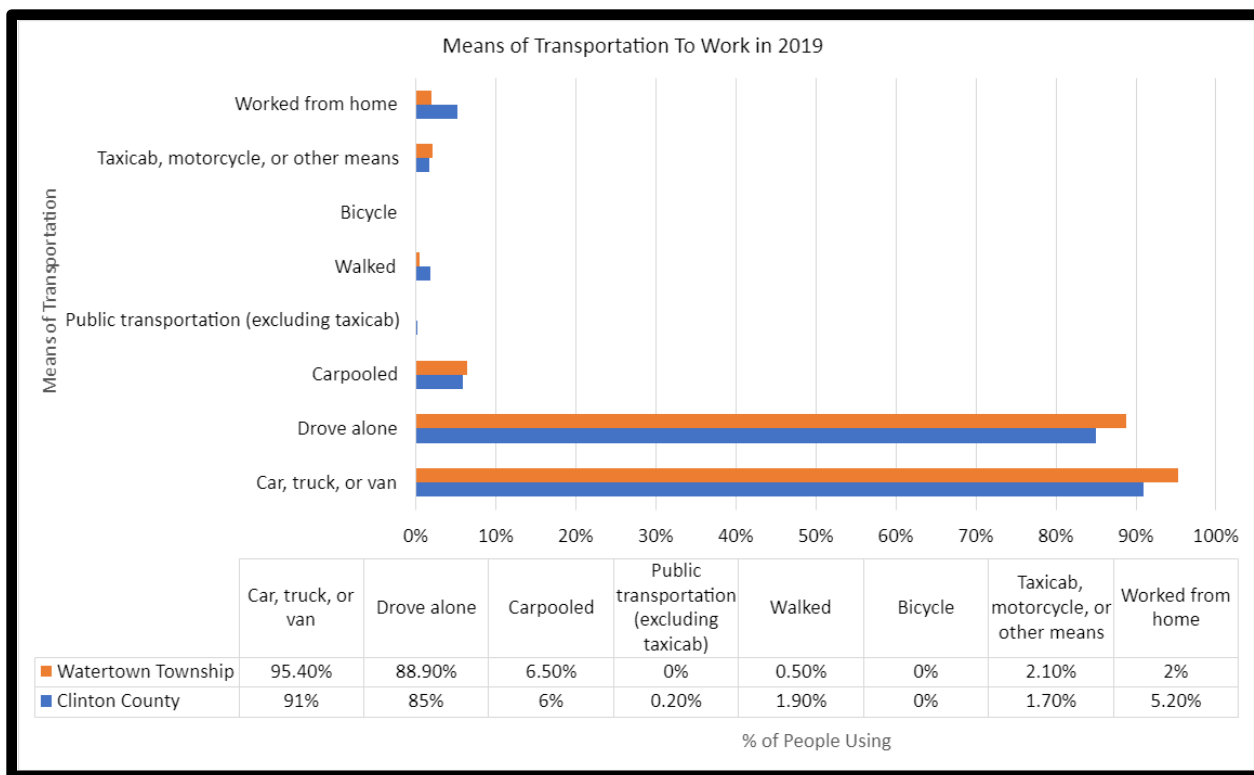
It is important to connect new housing developments that have been constructed since 2009 to current non-motorized transportation routes. This has partly been completed with the addition of the new sidewalk along airport road on the east side of the township which has already helped to connect residents to other communities. With an increasing population, even more housing development is expected to happen in the coming years on the east side. This growth and new housing developments will provide more opportunities to connect residents via non-motorized transportation. Non-motorized infrastructure can be tied into these housing developments to reduce costs and increase efficiency.

2.6 Transportation

Means of Transportation to Work

Most residents use an automobile to commute to work with 95.4% of residents using a car, truck, or van to get to work, with most of them (88.9%) driving alone. A smaller percentage of 6.5% residents carpooled to work, these percentages can be seen on the graph below. There are limited public transportation options within the Township, resulting in low usage. A small percentage of the residents walked to school (0.5%) while none rode their bikes. In 2019, approximately 91% of Clinton County residents used a car, truck, or van as their primary means of transportation to work, 85% of those residents drove alone to work. Only 0.2% of residents used some sort of public transportation to get to work as there are limited opportunities, and less than 2% of residents walked to work and 1.7% used a taxicab, motorcycle, or other means of transportation.

Figure 4: Means of Transportation to Work in 2019



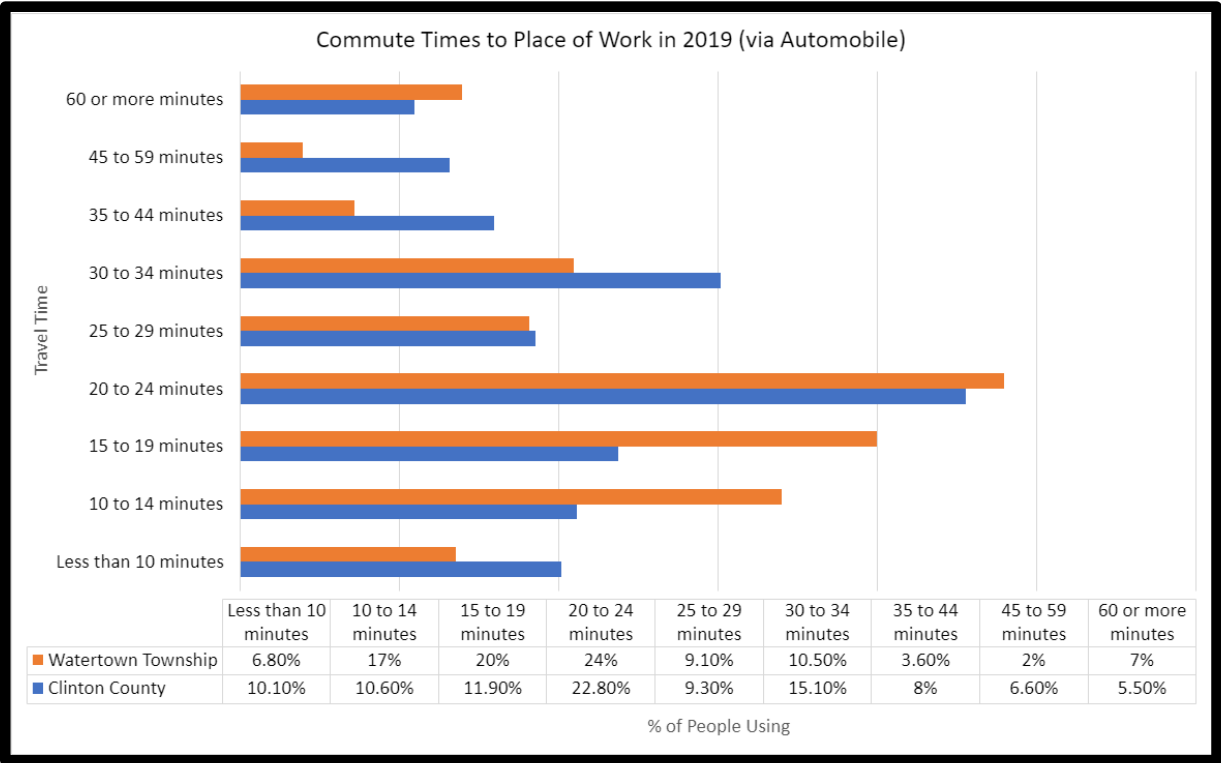
Place of Work

In recent years more residents are working in places outside of the township and Clinton County, with the community seeing a 10.8% decrease in residents that work within the township over the past decade. The same holds true for Clinton County which has seen a 2.4% increase in the number of residents working outside of the county. Just under 40% of the residents of Delta Township travel to work within Eaton County, where 62.4% of the residents work outside of the county. Additionally, 73.8% of Dewitt residents worked outside of the county. With many residents commuting over 25 minutes to work via automobile, it is reasonable to assume they would not be using non-motorized transportation to commute. Instead, they may be using non-motorized transportation for other reasons, like recreational activities or to travel between attractions within the township.

Travel Time to Work

The average commute time to work for Watertown Township residents has increased 3.6 minutes over the past decade, going from 23.6 to 26.2 minutes. About 7% of residents reported commuting times of over an hour. Clinton County residents have reported very similar average commute times of 26.5 minutes, and 5.1% of residents reported a travel time of over an hour. The combination of long commute times coupled with places of work outside of the Township and county suggest that very few residents will be commuting to work via non-motorized transportation. It suggests, rather, that the focus of future non-motorized transportation should not be placed on commuting to and from places, but rather on recreational activities. A minor exception to this is traveling to and from Wacousta Elementary School.

Figure 5: Commute Times for Watertown Charter Township and Clinton County Residents



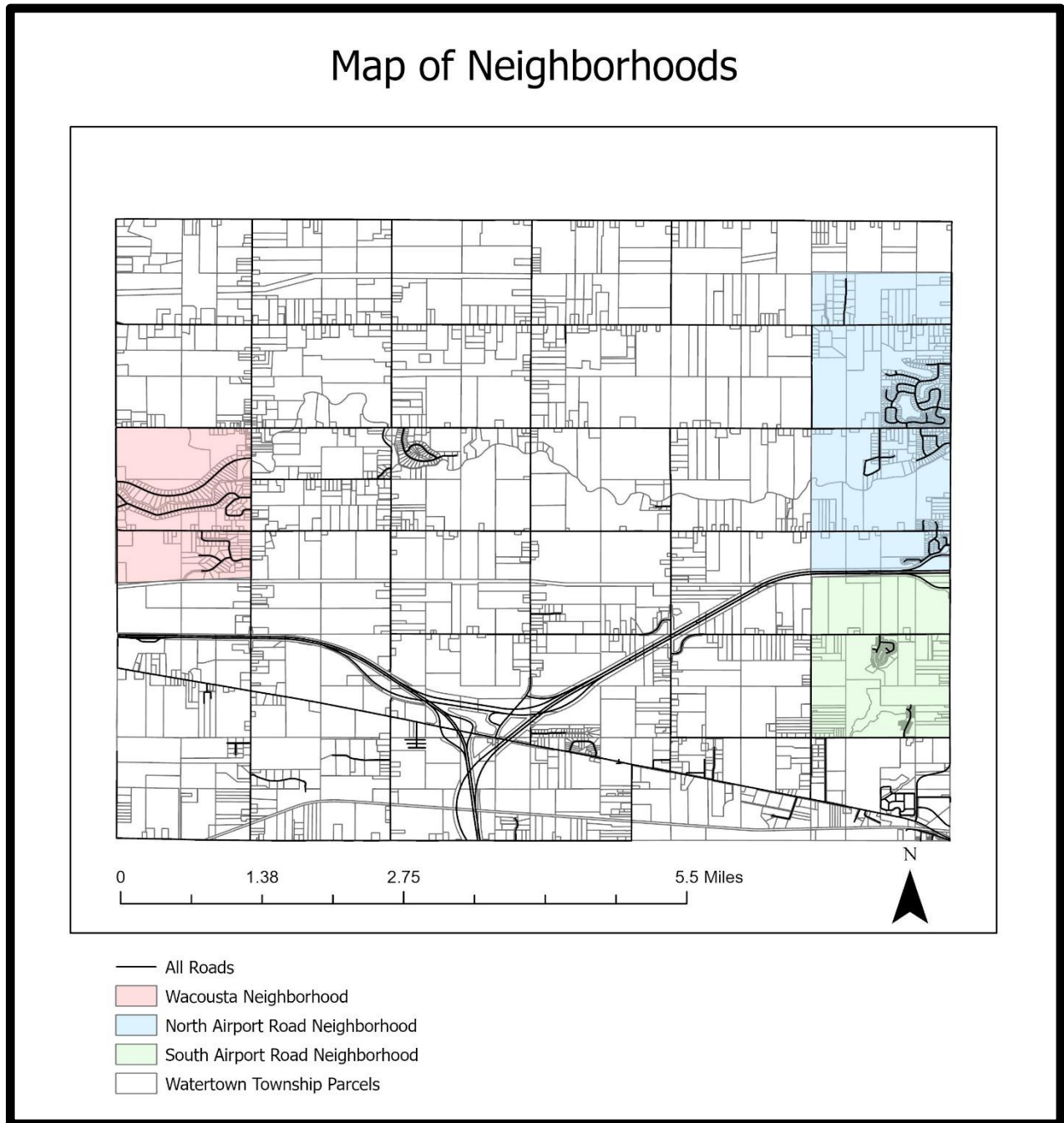
Section 3. Update to the Inventory of Current Watertown Township Non-Motorized Infrastructure

This is an inventory of the non-motorized transportation infrastructure and facilities which includes streets and subdivisions, bridges, trails, crosswalks, sidewalks, speed limits and signs, attractors, and paved shoulders. This inventory includes the existing inventory from the 2009 non-motorized transportation plan as well as additions of new infrastructure, most of this being minor improvements like the addition of a crosswalk signal which has been built since the 2009 plan was implemented.

3.1 Reviewing current inventory of non-motorized infrastructure

This updated inventory was created by referencing datasets obtained from the Township and focused on the Township's three major population centers: North Airport Road Neighborhood, Wacousta Neighborhood, and South Airport Road Neighborhood. These neighborhoods were chosen because they are the areas with the most residential and commercial densities relative to the rest of the Township. Wacousta has a concentrated population and is home to multiple parks, Wacousta Elementary School, and the Township Hall. Both the north and south Airport Road neighborhoods represent significant population density, with the south neighborhood expected to see significant housing development in the coming years. While this plan highlights these three 'neighborhoods' as areas of focus, it will be important to create linkages between them in the future.

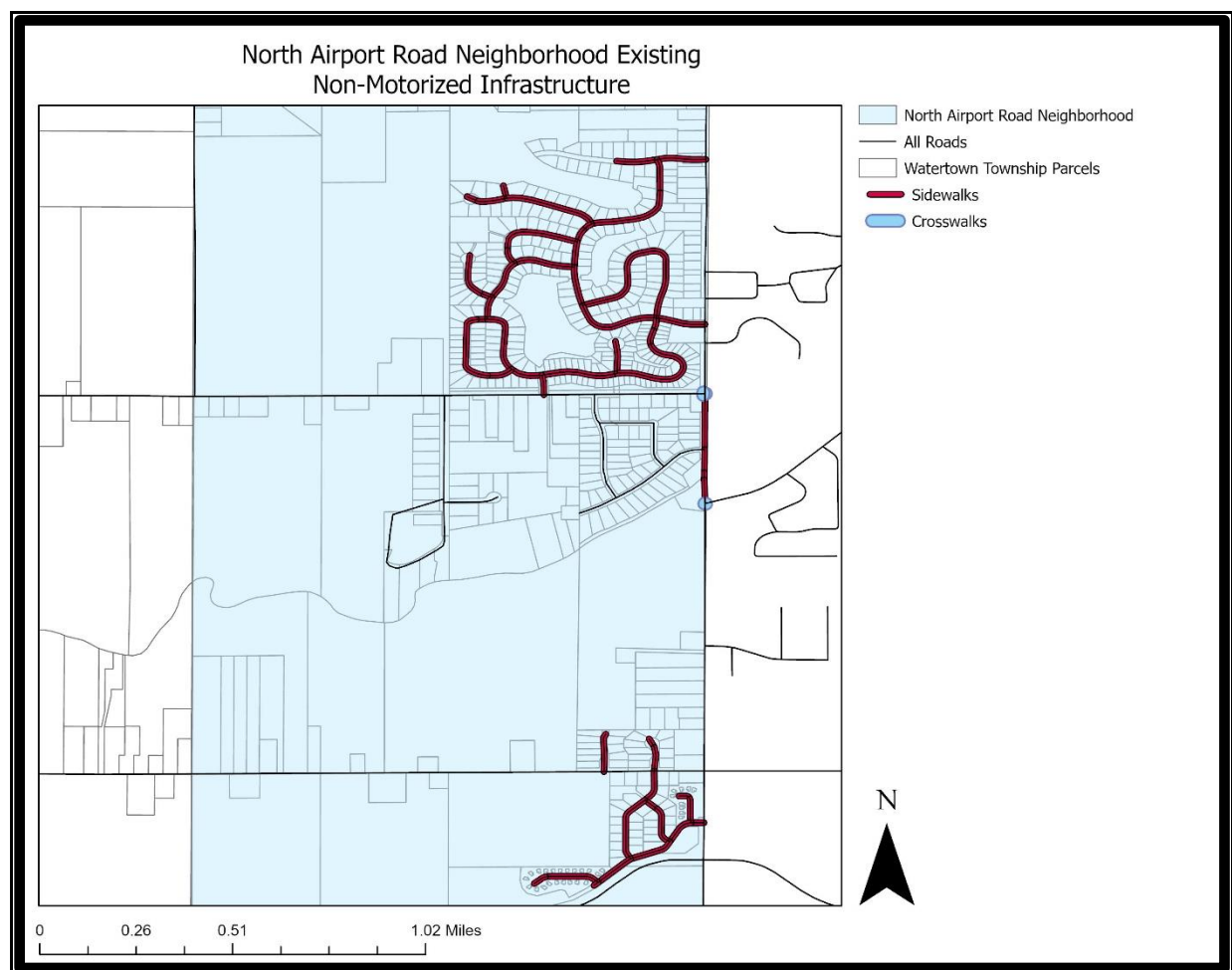
Figure 6: Map of Neighborhoods



3.2 North Airport Road Neighborhood

The North Airport Road Neighborhood is the most populated and advanced from a non-motorized infrastructure perspective compared to the other neighborhoods. The neighborhood is bordered by Interstate-69 on the south, Howe Road on the north, Airport Road on the east, and Grove Road on the west. The North Airport Road neighborhood borders Dewitt Township on its west and many community members from Watertown Township want access to Dewitt Township's amenities. This neighborhood is predicted to continue to grow, and this area is slated for additional future development as there is access to public utilities and as more individuals seek to reside in the North Airport Road neighborhood subdivisions.

Figure 7: Map of existing non-motorized transportation infrastructure in the North Airport Road Neighborhood




Streets and Subdivisions	
Airport Road	Paved throughout the corridor approximately 22' wide, without paved shoulders.
Herbison Road	Paved from Airport Road west as far as Hideaway Lane, approximately 22' wide.
Hideaway Lane	Private, paved drive serving the Hidden Lakes Estates subdivision. This lane is approximately 22' wide and is lit.
Presidents Way	Paved road approximately 22' wide within the Lakeside Preserve Subdivision.
Lakeside Preserve Subdivision	Contains numerous completed and planned paved streets including Warm Creek, Paradise Drive, Chartreuse, Mahogany, Chancellor Drives, and Lavender and Stillbrook Lanes.
Westwinds Subdivision	It contains four paved surface streets: Westwind, Southwind, Shadybrook Lanes and Driftwood Drive.
Clark Road	Paved throughout the corridor approximately 22' wide, without paved shoulders.
Rosewood Hills Subdivision	Consists of Cordaleigh Drive, Ernest Way, Keepsake, Trumpeter, and Cherish Lanes, all of which are paved.
Watertown on the Meadows I Subdivision	Consists only of Heidi Lane, a wide cul-de-sac road that opens onto Clark Road. This street is paved to 32' width at its narrowest point, has curbs and gutters, and is lit with streetlights.
Watertown on the Meadows II Subdivision	It consists only of Adeline Drive, a dead-end road that opens onto Clark Road. This street is paved to 27' width, has curb and gutter, and is lit with streetlights.

Bridges	
Airport Road Bridge	<p>Traverses the Looking Glass River in this corridor on Airport Road between Herbison Road near the Westwinds neighborhood. It has 10' lanes, 2' paved and marked shoulders, sidewalk on both sides.</p>  <p>Image 1</p>

Trails	
Currently there are no township sanctioned walking trails inside the North Airport Road Neighborhood.	

Crosswalks	
W Herbison Road (South)	A crosswalk connects the adjacent sidewalks in DeWitt Township to Airport Road. Currently, the road paint is in good condition. There are walk timers on both sides of the road that appear to be in good order. (See Image 2.)
W Herbison Road (North)	Currently, this crosswalk does not have a designated sign or walk timers. The paint on the road is in fair condition.
Airport Road (Near W Herbison)	Currently, this crosswalk does not have a designated sign or walk timers. The paint on the road is in fair condition.

Sidewalks	
Airport Road Sidewalk	<p>1000' of newly constructed 5' sidewalk, beginning at W Herbison Road running parallel to Airport Road, ending at the adjacent portion of W Herbison to the South.</p>  <p>Image 2</p>

Speed Limits and Signs	
Airport Road	50 MPH
Herbison Road	55 MPH
Clark Road	55 MPH
Internal Subdivision Streets	25 MPH

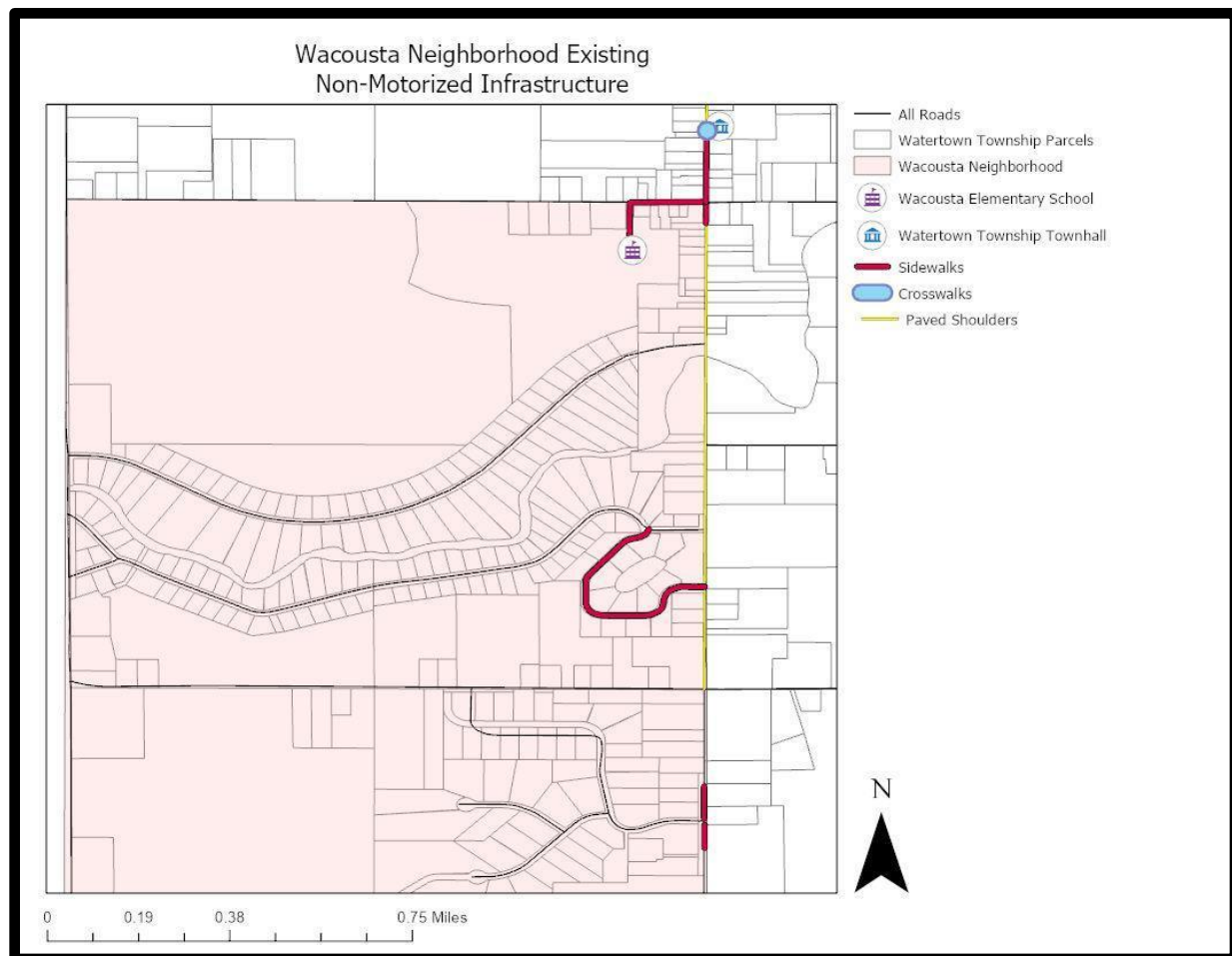
Paved Shoulders
There are currently no paved shoulders in the North Airport Road Neighborhood.

Attractors	
Watertown Township	Dewitt Township
Rosewood Hills Subdivision	Schavey Road Plaza (restaurants, offices, YMCA, stores)
Watertown on the Meadows I Subdivision	DeWitt Public Library
Watertown on the Meadows II Subdivision	DeWitt schools
Lakeside Preserve Subdivision	Herbison Road bike lanes provide access to a four-mile sidewalk route around the City of DeWitt
Westwinds Subdivision	Redeemer United Methodist Church
Looking Glass River	Looking Glass Riverfront Park (includes canoe landing)

3.3 Wacousta Neighborhood

The Wacousta Neighborhood is bordered by Herbison Road to the north, Consumers Energy power line corridor to the south, Bauer Road to the west and Wacousta Road to the east. The Wacousta Neighborhood is home to the Watertown Township Hall, a Grand Ledge School District Elementary School, Wacousta General Store, and two parks which give the residents of Watertown Township access to the Looking Glass River.

Figure 8: Map of existing non-motorized transportation infrastructure in the Wacousta Neighborhood



Streets and Subdivisions	
Wacousta Road	Paved throughout Wacousta approximately 22' wide with a 2' paved shoulder
Herbison Road	Paved to the east as far as Francis Road and to the west past the Wacousta Elementary School to the Wacousta United Methodist Church. It is generally 20' without paved shoulders.
Hummingbird Lane	Paved between Wacousta Road and Riverside Drive with a sidewalk along the inside of the road that ends near Riverside Drive but stops short of Wacousta Road, it is also lit with streetlights. It has no paved shoulders but is curbed.
Summer Lane and Jon Scott Drives	Both support a residential subdivision off Herbison Road just over one mile from the corner of Wacousta and Herbison Roads. The streets are paved, without shoulders or sidewalks.
Looking Glass Brook and Riverside Drive	Both are paved roads without sidewalks or shoulders.
Corrison Road	It runs between Wacousta Road and Forest Hill Road and is gravel.
Klein Farm Lane, Lookout Circle, and Summer Ridge Circle	These roads are internal to the Klein Farms subdivision, paved, but without shoulders or sidewalks.

Bridges	
Wacousta Road Bridge	The Bridge has 10' lanes, 2' paved and marked shoulders, and a 4' raised sidewalk on both sides.
Bauer Road Bridge	The Bridge is 27.5' wide with 10' lanes and marked paved shoulders just over 3' wide.
Herbison Road Bridge (nearest to Wacousta)	This bridge is currently being replaced; construction began March 1st, 2022.
Herbison Road (furthest from Wacousta just past Forest Hill Road)	This is a narrow, five-year-old bridge without paved shoulders or a sidewalk.

Trails

There are several hiking trails located in Watertown Township Heritage Park behind the Township Hall. These are mowed grassy trails.

Crosswalks



There is one marked crosswalk in the Wacousta Neighborhood on Wacousta Road in front of the Township Hall.



Image 3

Speed Limits and Signs

Wacousta Road	Current speed limits drop from 55 MPH to 45 MPH to 35 MPH as it approaches Wacousta along Wacousta Road from both the north and south.
Herbison Road	55 MPH

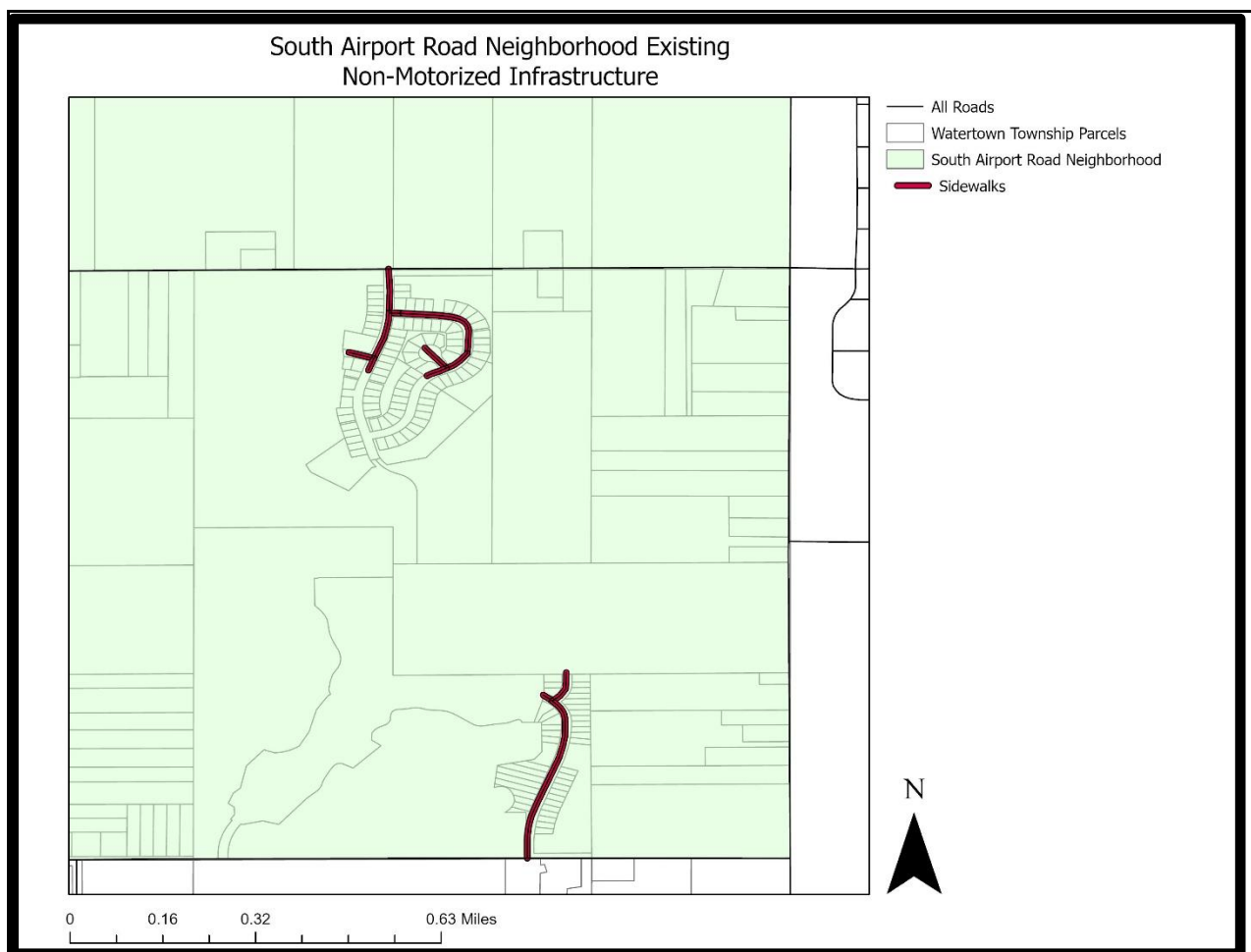
Sidewalks	
Wacousta Road Sidewalks	<p>There are failing sidewalks along the west side of the Watertown Township Hall that run 0.2 miles South and resume along the frontage of the house on the corner of Looking Glass Brook. These sidewalks were originally 4' wide but are in disrepair and overgrown. In addition, there is a short stretch of modern sidewalk along the west side, south of Clark Road in front of the Klein Farm subdivision that includes the houses fronting Wacousta Road. This sidewalk is 5' wide and in good shape, but isolated.</p> <div>   </div> <p>Image 4 Image 5</p>
Hummingbird Lane Sidewalk	<p>The sidewalk runs along the inside of the road that ends near Riverside Drive but stops short of Wacousta Road.</p>

Attractors	
Heritage Township Park	Gloria Miller Looking Glass Valley Park
Watertown Township Hall	Watertown Township Gymnasium
Wacousta Elementary School	Wacousta United Methodist Church
Wacousta Masonic Lodge	Wacousta Cemetery
Wacousta General Store	Fabiano's Grocery and Deli
Looking Glass River	Holiday Haven Girl Scout Camp & Mill-Run Girl Scout Camp, Michigan Capital Council
Canoe Landings – Looking Glass Valley Park (wood and concrete), Heritage Township Park (wood and concrete), Forest Hill Road near Herbison (natural)	

3.4 South Airport Road Neighborhood

The South Airport Road Neighborhood is the newest developing neighborhood in Watertown Township. Developers recently purchased land to be developed into subdivisions and housing as the Township continues to grow in population. The South Airport Road Neighborhood is bordered by West State Road on the south, West Stoll Road on the north, Airport Road on the east, and South Grove Road on the west. The need for safe non-motorized transportation will be essential as this neighborhood continues to increase in population.

Figure 9: Map of existing non-motorized transportation infrastructure in the South Airport Road Neighborhood



Streets and Subdivisions	
Airport Road	It is paved throughout the corridor approximately 22' wide, without paved shoulders.
Stoll Road	It is paved from Airport Road to Grove Road and gravel beyond. The paved portion of the road does contain 2' wide paved shoulders. There are no marked speed limits or streetlights. Nottingham Fields Parkway and Loxley Lane within the Nottingham Fields subdivision are also paved with sidewalks and streetlights.
State Road	It is currently gravel. There are no marked speed limits or streetlights.
Nottingham Fields Subdivision	Consists of all paved roads including Nottingham Fields Parkway, Gamelyn Court, Loxley, Gisbourne, and Sherwood Lanes. All roads have sidewalks installed up to development limits and are lit with streetlights.
Links at Royal Scot Subdivision	It consists of all paved roads, Turnberry Street and Carnoustie Drive. All roads have sidewalks installed up to development limits and are lit with streetlights.

Bridges
Currently there are no bridges inside the South Airport Rd Neighborhood.

Trails
Currently there are no township sanctioned walking trails inside the South Airport Rd Neighborhood.

Crosswalks
Currently there are no crosswalks inside the South Airport Rd Neighborhood.

Sidewalks

There are two units of sidewalks located in Nottingham Fields Subdivision and Links at Royal Scot Subdivision. Sidewalks continue to expand with additional residential development inside the subdivisions.



Image 6



Image 7

Speed limits/Signs

Airport Road is marked 50 MPH and slows to 40 MPH as it approaches the airport. Stoll and State Roads are an unposted 55 MPH.

Attractors

Links at Royal Scot Subdivision	Nottingham Fields Subdivision
Links at Royal Scot Golf Course	

Paved Shoulders

There are currently no paved shoulders in the South Airport Rd Neighborhood.

3.5 2009 Non-Motorized Transportation Plan Project Status

In 2009, Watertown Charter Township implemented a Non-Motorized Transportation initiative to enhance the overall health and safety of the community and its members. Watertown Township is an agriculturally based township with a rich history of farming practices. This, however, does not distract from the fact that the Township is growing and with an increase in population, comes an increase in traffic. The need for safe non-motorized travel as an alternative or recreational use was increasing by the day. Watertown Township outlined the process, using a three-phase approach. The Township prioritized implementation of projects by organizing highly populated areas into three pods. The Township collected data on every pod, attractors, sidewalks, paved shoulders, crosswalks, etc. The Township then created goals and infrastructure projects for future non-motorized transportation within the 2009 non-motorized transportation plan. The following tables provide a status update on the projects initiated in the 2009 plan. All compliance judgments are based on MDOT standards and the Michigan Manual on Uniform Traffic Control Devices.

North Airport Road Neighborhood		
Project	Status	Rationale
Airport Road Paved Shoulders between Herbison & Clark Road	Incomplete	Poor site conditions
Sidewalks	Partially complete	Costs
Crosswalks	Partially complete	Costs

Wacousta Area Neighborhood		
Project	Status	Rationale
Wacousta Rd Paved Shoulders	Completed but non-compliant	Shoulders paved at 2' in width, need to be 4'-7' to be a legal bike lane.
Crosswalks near Wacousta Elementary	Incomplete	Failed to meet safety requirements.
Crosswalk to Township Hall	Completed but non-compliant	Standard CW, when a mid-block crossing requires special emphasis CW, no signage.
Sidewalk Upgrades	Incomplete	Failing structurally but are in place.

South Airport Road Neighborhood		
Project (recommendations)	Status	Rationale
Paved shoulders on roads near developments	Incomplete	Not currently required, will be paid for by developer.
Sidewalks	Partially complete	They will continue to be constructed as more houses are developed within subdivisions.
Crosswalks	Incomplete	Not currently required, will be paid for by developer.
Appropriate speed limits regarding non-motorized travel	Incomplete	They require further development.

Section 4. Comparison of Watertown Township non-motorized infrastructure to nearby areas.

Providing circulation routes between Watertown Township and the surrounding communities is necessary to ensure continuity between the non-motorized transportation plans of Watertown Township as well as the neighboring and overarching jurisdictions. Watertown Township will need to work closely with the neighboring communities such as DeWitt township, Delta Township, Eagle Township, Riley Township, and Clinton County to implement these linkages.

4.1 Evaluation of current accessibility between the Township and Delta and Dewitt Townships

Current non-motorized accessibility between Watertown Township and the surrounding communities is limited. Since the non-motorized plan was implemented in 2009, Watertown Charter Township has added a sidewalk on the east side of the Township that connects to Dewitt Township; as well as a project that was aimed at adding paved shoulders along Wacousta Road throughout Wacousta. The shoulders are two feet wide, which is significantly smaller than the five-foot requirement from MDOT. The sidewalk additions on Airport Road have allowed the residents that reside on the east side of the Township to better access DeWitt. The crosswalk that connects Airport Road to West Herbison Road, is a post-2009 addition that allows for safe access to Delta Township. There are currently no non-motorized connections between Watertown Township and Delta Township, Eagle Township, or Grand Ledge.

4.2 Comparison and linkages to existing non-motorized transportation plans in Delta and Dewitt Townships and Clinton County

Accessibility between the communities in Clinton County and the surrounding region is critical to connecting community members and public spaces. The Clinton County Non-Motorized Facilities Plan implemented in 2015 aimed to create linkage portals between non-motorized facilities throughout the county through multi-use trail systems, shared use roadways, and bike lanes to link residents to significant recreation areas and businesses. This plan has incorporated the local efforts of each municipality within the county to create a cohesive non-motorized vision for the future. Many of the local communities have implemented their own non-motorized transportation plans with the goal of providing safe linkages between the communities.

The Clinton County non-motorized transportation plan focuses on linkages between communities. The Clinton County plan suggests a “signed and unsigned on-road North-South facility” along Airport Road between Watertown Township and Dewitt Township. This suggestion is also made in the DeWitt Township non-motorized plan. This connection was partially implemented in the form of sidewalks running alongside Airport Road connecting Herbison Road in Watertown Township to Herbison Road in DeWitt Township. The county plan also indicates that Clark Road is an important East-West route that connects many of the townships within the county and notes that the route is designated for Bike Lane, Shared Use Path, and Paved Shoulder development. This same vision is reflected in both the DeWitt Township and 2009 Watertown Township non-motorized transportation plans as well. Adding bike lanes or shared roadway paths along Wacousta Road is also suggested in the Clinton County plan; paved shoulders were later developed along Wacousta Road; however, they do not meet the MDOT requirements of five feet in width. The DeWitt Township non-motorized plan also indicates that State Road could be a potential connector as well with the addition of bike lanes.

Table 4: Comparison to Clinton County Non-Motorized Plan project implementations.

Comparison to Clinton County Non-Motorized Plan		
Project (recommendations)	Status	Priority Given (From Clinton County plan)
North – South facility along Airport Road	Partially Complete	High
Clark Road East - West bike loop connection	Incomplete	Medium
Wacousta Road Bike Lanes	Partially complete (incorrect)	Previously completed prior to plan
State Road Bike Lanes	Partially Complete (Dewitt portion)	Medium

Section 5. Non-Motorized Connections Between Watertown Township and Surrounding Communities.

Connectivity between Watertown Township and the local communities such as DeWitt and Delta Townships is one of the main goals of Watertown Charter Township and providing non-motorized access to these connections would allow for greater access and use. These connections may be used for commuting, travel between residences, and recreational activities. In this section we will describe the existing conditions of non-motorized connections between the communities as well as potential future infrastructure developments that would help facilitate non-motorized transportation between the communities.

5.1 Interconnectivity. Delta and Dewitt Township existing and proposed non-motorized transportation routes.

When the non-motorized transportation plan was implemented in 2009, the Township was seeing an increase in residential use of non-motorized transportation. With this came concerns over safety and ease of access to the surrounding jurisdictions to which the residents frequently travelled. Watertown Township has worked alongside surrounding communities as well as with regional municipalities to create linkages between the communities to ensure easy accessibility for all residents.

At the time the 2009 Non-Motorized Transportation Plan was implemented, there were few safe options for residents to travel between communities due to the lack of critical non-motorized infrastructures such as signage, paved shoulders, and crosswalks. Since the plan was implemented, a new sidewalk development has allowed for greater accessibility and safer travel between Watertown Township and DeWitt Township. Sidewalks were implemented along Airport Road which connects Herbison Road in Watertown Township to Herbison Road in Dewitt Township. This has allowed the population in eastern Watertown Township to access walking and biking trails more easily in Dewitt Township. This non-motorized route will also increase accessibility of the neighborhood's subdivisions.

Potential future non-motorized infrastructure in this area could include adding new sidewalk infrastructure to the existing sidewalks along Airport Road to connect South from Herbison Road to Clark Road, as well as North from Herbison to Howe Road. The addition of this new sidewalk would provide further access to community members in the Rosewood Hills subdivision as well as the Lakeside Preserve subdivision.

5.2 Heritage River Trail

The Looking Glass River is an important focal point of Watertown Township, as it winds through the center of the Township through some of the most populated areas. Not only can the river be used as active transportation itself through the use of canoes and canoe launches, but it can also be used as an area for recreational uses. As the Looking Glass River is located within the Grand River watershed, it is a designated Heritage River Trail. Heritage River Trails were created by the Michigan Department of History, Arts, and Libraries to showcase the history of the rivers in Michigan.

Section 6. Future Trends and Proposed Infrastructure.

The following are the future trends that Watertown Charter Township are likely to experience in the coming years as the population and needs of the community change over time. With this growth will come the need for more development in the forms of housing and transportation infrastructure. This growth should be coupled with development of non-motorized infrastructure, especially in the north and south airport road neighborhoods. This is where much of the new housing will be built to keep up with the growing population in the coming years. This plan seeks to preemptively plan for these changes by suggesting infrastructure additions and improvements in these new developments that will connect the new subdivisions (Royal Scot and Nottingham Fields) to existing non-motorized infrastructure like the sidewalks along airport road that connect the Township to DeWitt Township. While it is important to improve infrastructure that exists in current developed areas of the Township, planning to create new non-motorized transportation facilities in unison with future developments will allow the township to fill those needs as they present themselves.

6.1 Population Projections

The data used for these projections are from the United States American Community Survey for years 2010 and 2019. From 2010 to 2019, the Township gained 553 people. Using this formula, the growth rate for Watertown Charter Township is calculated to be 1.63% per year. Figure 10 depicts the population projections for the Township over the next 30 years

Figure 10: Population Projections for Watertown Charter Township

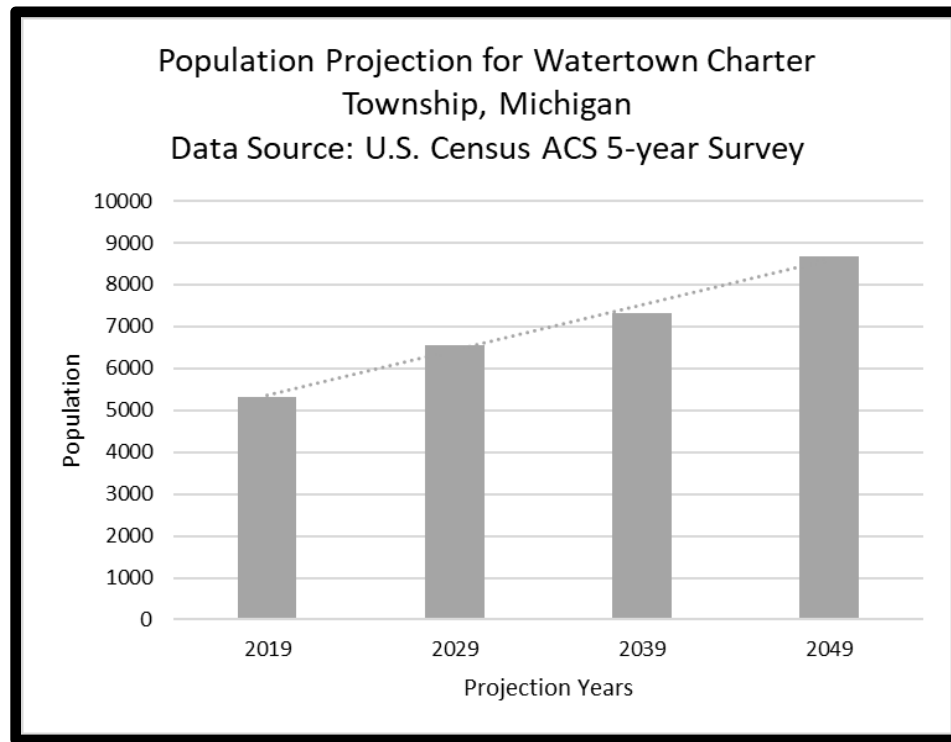


Table 5: Population Projections for Watertown Charter Township, Michigan

Population Projections in Watertown Charter Township Data Source: US ACS Survey 5-year Estimates				
Year	2019	2029	2039	2049
Population	5,321	6,263	7,321	8,676

6.2 Land-Use/Zoning Development Trends

Figure 11 depicts the current zoning districts within Watertown Charter Township. Currently, all non-motorized infrastructure falls within the R-1 single-family residential zoning and the VSC village service center zones. This is because this is where the Township is the most densely populated, however there are no non-motorized connections from the east side of the Township to the west side. Currently the only non-motorized route west to east would be the Looking Glass River and the use of canoe launches. The current agricultural zoning may be impacting the ability to implement non-motorized facilities in the middle of the Township to better connect it. Many residents want to keep the rural feel to the town and enjoy all the open space the agricultural zoning provides; the agricultural land also provides jobs and revenue for

the community so it is unlikely that any of this zoning will change. It would be advantageous for the township to work with farmers to develop a plan regarding their land and non-motorized transportation. As the population of the township increases it will be important to make sure that the new housing developments will have access to non-motorized transportation routes. Significant housing developments are predicted to be built in the coming five years in the south Airport Road neighborhood. It will be important to connect these new developments to existing non-motorized infrastructure as they are being built, this will ensure continuity between the projects.

Figure 11 shows potential future changes to the Land-use of Watertown Charter Township that is being proposed for the 2022 Master Plan update. Notable changes include the increase in residential land-use along Airport Rd on the west side and around Wacousta and the change from residential land-use to recreational land-use noted on #6 on the map. The 136 acres that will switch from residential land-use to recreational land-use has been deemed a spot for wetland rehabilitation and outdoor activities. This area would provide a great space for non-motorized biking and walking trails and could even undergo development to become a park to encompass all the outdoor non-motorized activities including possible 5K trail loops for the community to enjoy. The proposed changes to the West side of the Township would mean an increase in population as well as the need for housing in this area, which would in turn increase the need for non-motorized facilities in the area. This would also apply to the Wacousta Village area for an increase in residential zoning. As these areas become more developed, priority should be placed on non-motorized transportation access.

Figure 11: Current Zoning Map of Watertown Township

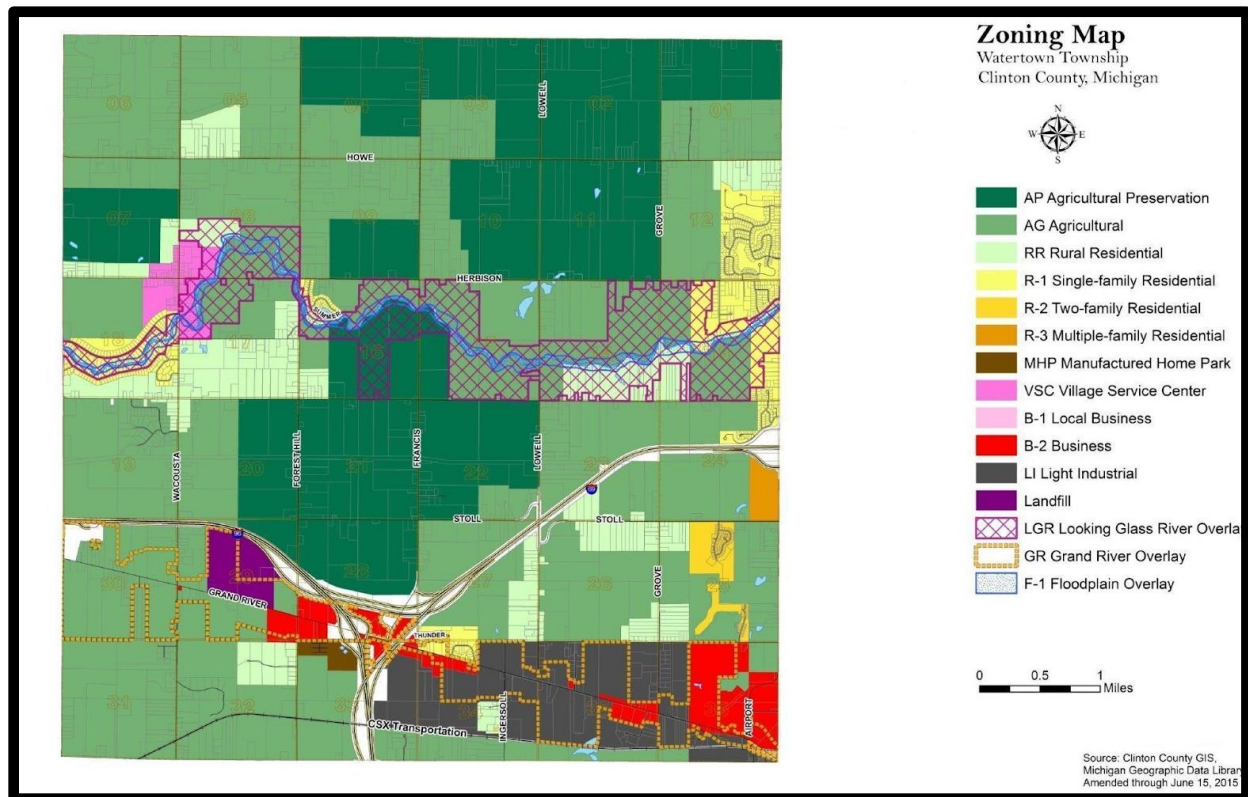
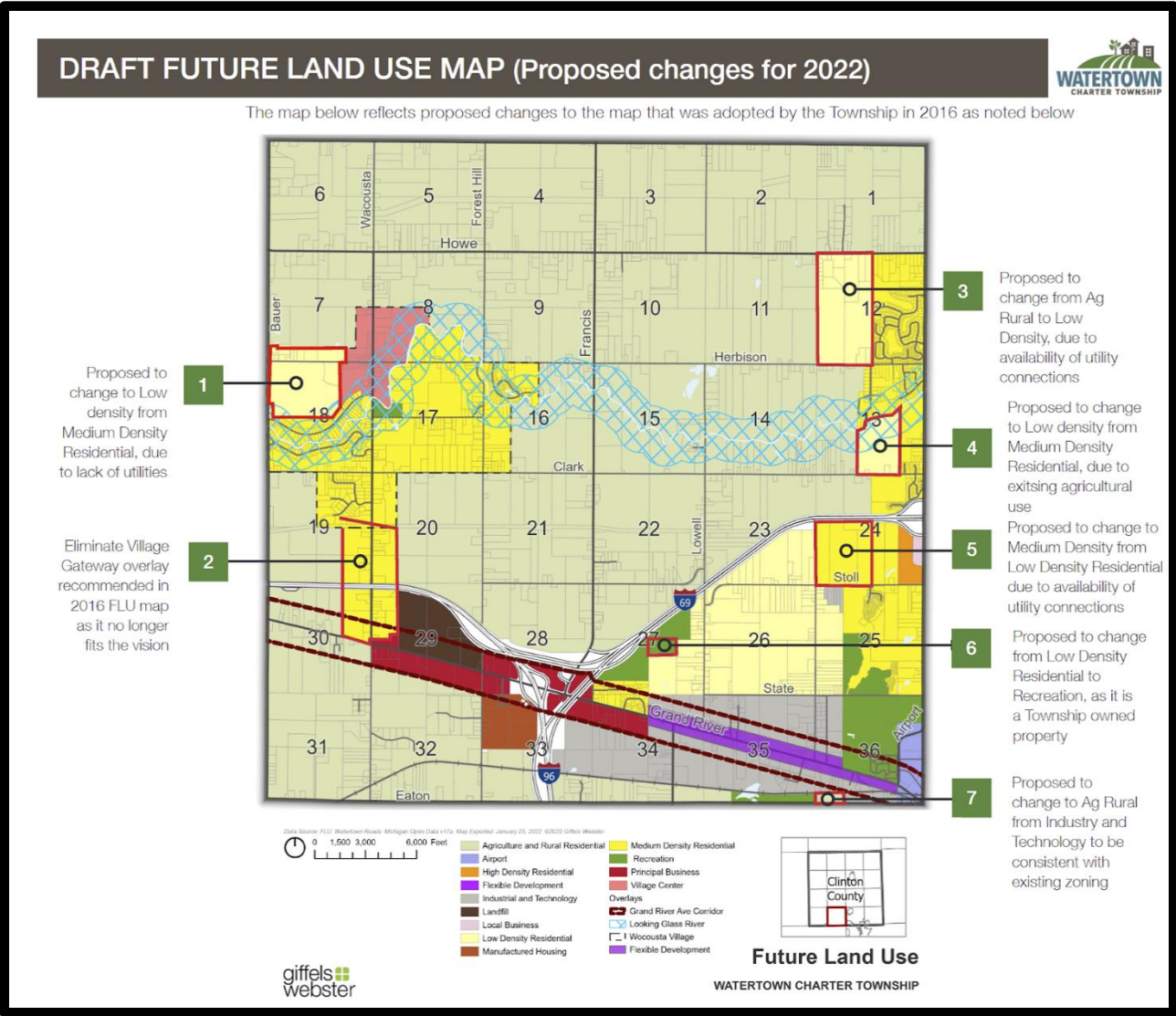


Figure 12: Proposed Future Land Use Map provided by Giffels-Webster Consulting



Section 7. Recommendations for Proposed Infrastructure

This section introduces the MSU practicum team's proposed non-motorized infrastructure and facilities projects based on the data reviewed and the needs of the community.

7.1 North Airport Road Neighborhood

This neighborhood is home to many subdivision developments both inside Watertown Township and nearby DeWitt Township. Residents have expressed their desire for a more connected community and safe non-motorized travel routes. Expanding the existing sidewalk on the western side of Airport Road will help achieve this connectivity and improve the sense of community in the North Airport Road Neighborhood.

Crosswalks

With the possible expansion of the existing 1000' of sidewalk on Airport Road, additional crosswalks will need to be constructed to maintain a safe walking path.

- *Warm Creek Drive*: Located north of Herbison Road, this is the south entrance to Lakeside Preserve subdivision and has both an entrance and exit lane, both approximately 20' wide. There are two existing connections to the subdivision sidewalk networks near the Airport Road intersection.
- *Stillbrook Lane*: Located north of Warm Creek Drive, this is the north entrance to Lakeside Preserve subdivision and has both an entrance and exit lane, both approximately 20' wide. There are two existing connections to the subdivision sidewalk networks near the Airport Road intersection.
- *W Howe Road*: The intersection of W Howe Road and Airport Road is the Northeastern limit of Watertown Township. There are existing sidewalk systems along W Howe Road in neighboring DeWitt Township that led to other subdivisions.

Sidewalks

Additional five-foot sidewalks on the western side of Airport Road will better connect the neighborhood's subdivisions and provide more accessibility for the community. The team recommends the expansion of the existing newly implemented sidewalks along Airport Road, this includes a 175' northern expansion which will connect the existing sidewalk to the south entrance of Lakeside Preserve, a major residential subdivision. The team also identified that this sidewalk should be extended south along Airport Road to the Rosewood Hills subdivision, connecting the major residential subdivisions in the northeast section of the Township with each other, as well as to DeWitt Township. Additional crosswalks and signage will also be needed to complete this extension.

Speed limits/Signs

The posted speed limit on Airport Road is 50 mph and there are no plans to change this. The addition of bike and pedestrian signs would increase the safety of those using the proposed sidewalk.

Paved Shoulders

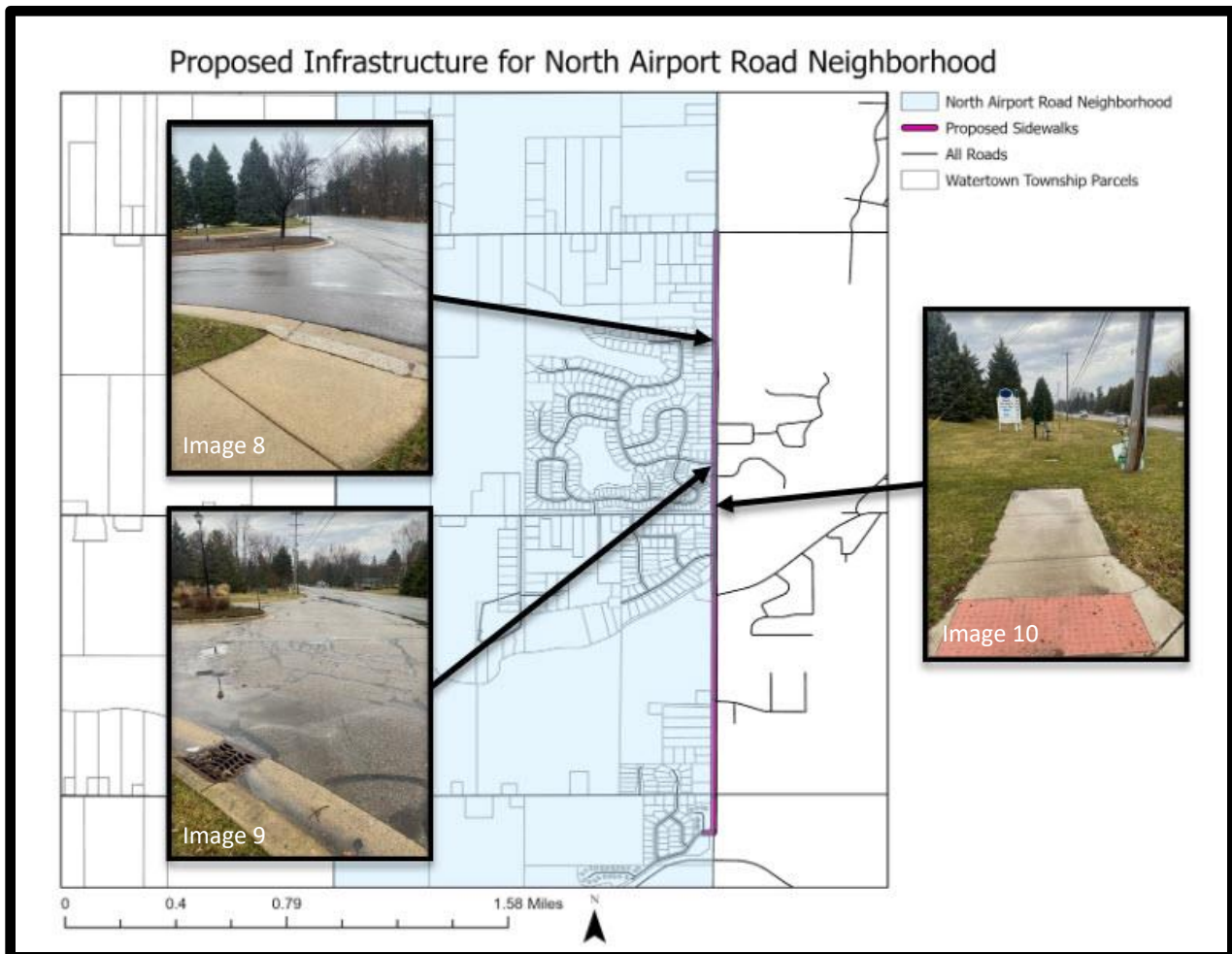
There are currently no plans to extend or paint the existing paved shoulders on Airport Road. All pedestrian traffic would be encouraged to use the proposed sidewalk.

Funding Options

For smaller projects and infrastructure such as signage and crosswalk painting, money from the Federal COVID-19 fund can be used to lighten the expenses on the Township. The township should also consider the Transportation Alternatives Program (TAP) as a potential funding source. This program has about \$24.5 million available annually which comes from federal transportation funds designated by congress and administered by the Michigan Department of Transportation. Another option for funding is the Tri-County Transportation Improvement Program (TIP) which is a capital improvement program aimed at improving all sectors of transportation in the tri-county area. Applying to the TIP for non-motorized may be beneficial to the community, especially in the aspect of connectivity to Dewitt Township in the east, as improving connectivity is

a prime goal of the TIP, especially if there is already non-motorized infrastructure in place like the recent sidewalk additions.

Figure 13: Map of Proposed Infrastructure in North Airport Road Neighborhood.



7.2 Wacousta Neighborhood

Crosswalks

The addition of crosswalks in Wacousta could enhance the safety and overall well-being of the community members. The crosswalks would be best suited near Heritage Park and Looking Glass Valley Park, as well Wacousta Elementary.

Sidewalks

The revitalization of the overgrown 4' sidewalk on the west side of Wacousta Road and east side of Herbison Road could play an integral role in the safety and accessibility of the community members. If the sidewalk cannot be repaired, then replacement of the sidewalk is recommended. In addition to the potential repair of the overgrown sidewalk, the installation of a sidewalk on the west side of Wacousta Road connecting Klein Farm Subdivision to the existing sidewalk north of the Looking Glass River in the downtown area of Wacousta is proposed. The completion of the sidewalk will connect both major subdivisions, both parks inside Wacousta, and the Wacousta Elementary School.

Speed Limits/Signs

The team proposes implementing Share the Road signs inside the 35mph zones of Wacousta Road signaling the road is being shared with cyclists and other forms of non-motorized transportation. In addition, the implementation of pedestrian crossing signs at proposed crosswalk locations will be necessary.

Image 11: Proposed “Share the Road” signage



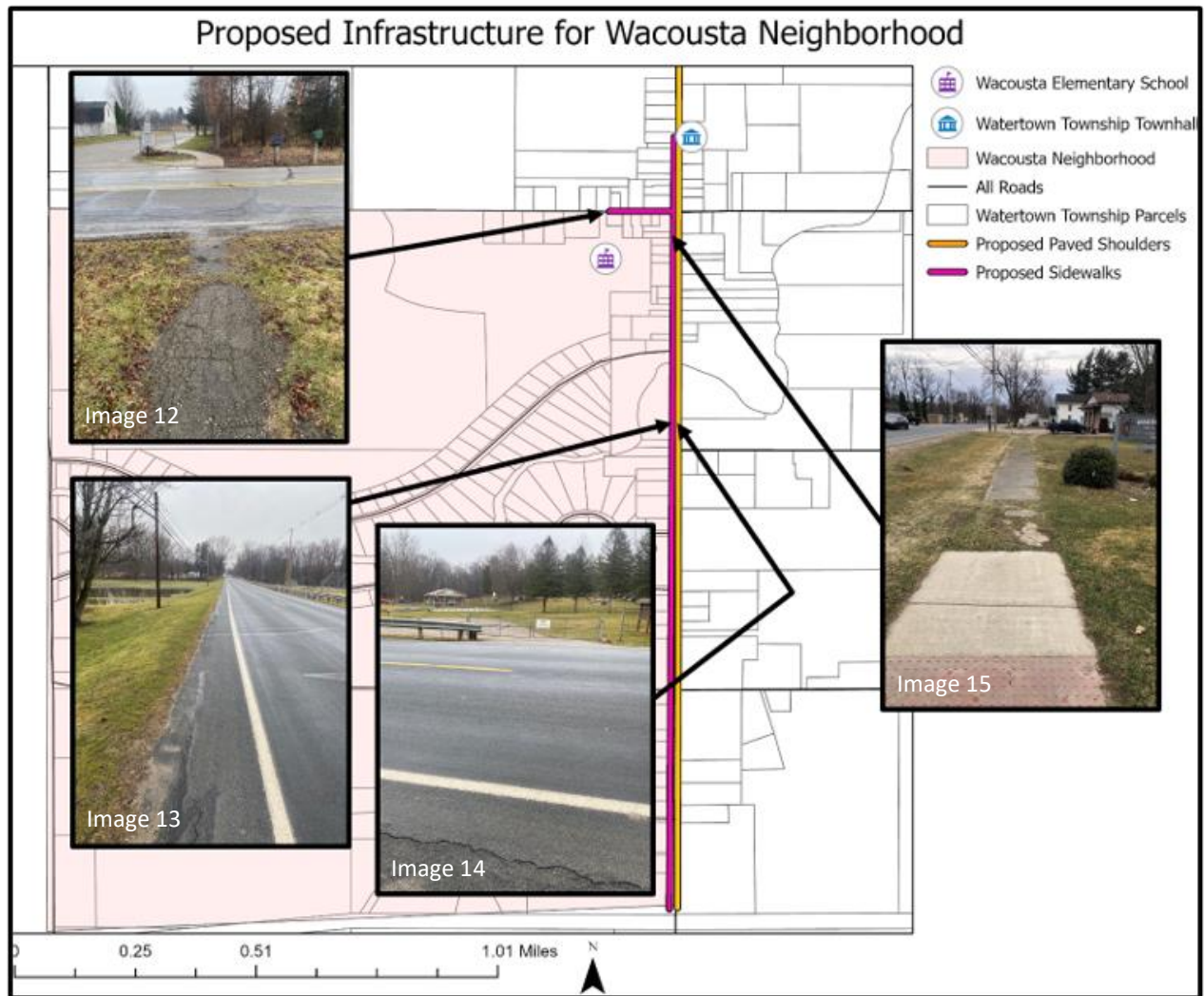
Paved Shoulders

Extension of the existing two-foot paved shoulders inside Wacousta to four-foot paved shoulders would enhance the safety and usability of the bike lane in the Wacousta neighborhood. This would also make the paved shoulders up to code with MDOT standards. Appropriate pavement markings should be used in combination with proper signage.

Funding Options

For smaller projects and infrastructure such as signage and crosswalk painting, money from the Federal COVID-19 fund can be used in unison with other grants to lighten the financial burden of these projects. The Safe Routes to School Program (SRTS) would be an appropriate partnership to create to help remediate the sidewalks near Wacousta Elementary School. Grant money, provided by the program, can help update old infrastructure, build new infrastructure, and provide enforcement with grants reaching the potential of \$220,000. Both TIP and TAP grants would also be appropriate funding sources for the proposed projects in this neighborhood, and the TAP grants can be used in unison with SRTS funding.

Figure 14: Map of Proposed Infrastructure in Wacousta Neighborhood.



7.3 South Airport Road Neighborhood

Crosswalks

As the population in the south airport road neighborhood continues to grow, it is likely that the need for crosswalks will increase. This should be considered during development reviews and through partnerships with developers to improve accessibility to non-motorized transportation via crosswalks.

Sidewalks

The addition of sidewalks is likely to become pivotal in the safety and connectivity of the south region subdivisions and the north neighborhood subdivisions. Internal sidewalks will continue to expand as construction and development of additional housing occurs within the subdivisions.

Speed limits/Signs

Implementation of Share the Road signs is needed considering the 50 to 55 MPH speed limit on Airport Road.

Paved Shoulders

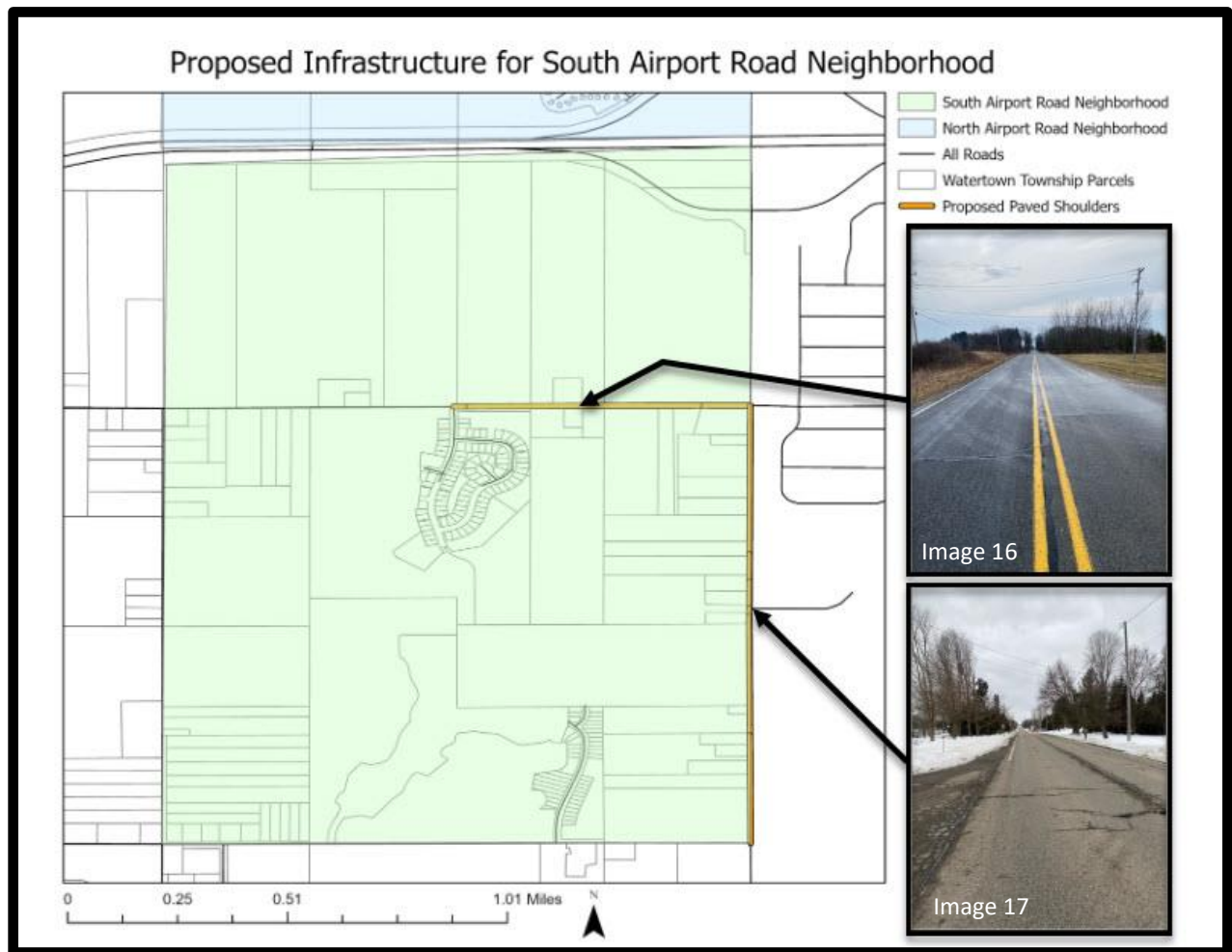
The addition of a 4' paved shoulders on Stoll Road, west of South Airport Road up to the entrance to Nottingham Fields Subdivision is recommended. Also proposed is the addition of 4' paved shoulders on South Airport Road, north of West State Road and south of West Stoll Rd. This will connect both subdivisions via South Airport Road and promote safe travel. The addition of paved shoulders on West State Road is not currently applicable considering the road is currently gravel. When State Road is paved as the Links at Royal Scot development re-starts, non-motorized opportunities, including paved shoulders, should be considered.

Funding Options

Both TIP and TAP grants would be appropriate to apply for to help provide funding for the proposed projects in this neighborhood. Extending paved shoulders can be expensive to implement, however if the Township applies for these grants the financial burden imposed

could be reduced. The current 2020-2023 Transportation Improvement Program invests around \$680 million into transportation projects in the region, with approximately 1% of federal investment from the TIP being funneled into non-motorized facilities. These funds coupled together could be used to implement the paved shoulders in this neighborhood as sidewalks will not be implemented until development occurs.

Figure 15: Map of South Airport Road Proposed Infrastructure.



7.4 Consumers Utility Line Walking Path

There is a need to develop an east-west connection within the Township in a cost-effective manner. Utility lines are an efficient way to give the residents of the community access to walking paths for recreational and widespread use which could be used to connect the east and west sides of the Township. Inside Watertown Township, Consumers Energy has a section of utility lines spanning from Bauer Road to Lowell Road, south of Clark Road, and north of Stoll Road. This section of power lines stretches through agricultural fields and fence lines in the rural countryside of Watertown Township. The proposed paved or gravel path would give residents a safer, more family-friendly mode of non-motorized transportation. Consumers Energy has been a willing partner on recreational use paths on their properties in areas close to the Township. A project was recently completed in the City of Lansing with the construction of the South Lansing Pathway, a paved walking and biking path on Consumers Energy property. This project was a success for the city of Lansing, giving individuals more non-motorized opportunities while using land that was already being used for utility lines. Creating a partnership like this could lead to many opportunities and Watertown Township should consider this potential opportunity to bring more transportation options to their residents.

Figure 16: Location of Consumers Energy utility line.



7.5 East Watertown Township Canoe Landing

The Looking Glass River is a focal point of Watertown Township. It enters from its east boundary and exits from its west. Implementing the Looking Glass River as a form of non-motorized transportation could pay huge dividends to the Township. We are proposing the addition of a third boat or canoe launch to the community. Currently, Watertown Township has two canoe landings maintained by the township in Gloria Miller Looking Glass Valley Park, and Heritage Park. The launches are both located on the west end of the Township off Wacousta Road. We propose the addition of a canoe launch on the far east end of Watertown Township which would give community members on the east side, as well as all members of the Township, a chance to float the stretch of the river located inside the Township boundaries, further connecting the east and west sides of the township via non-motorized transportation.

A potentially suitable area is west of Airport Road and south of Herbison Road. The 65 acres of land is currently owned by New Way Development LLC. It could be advantageous for the Township to partner with this developer on a future planning process for residential construction to incentivize installing these non-motorized facilities. Much of the acreage in the northern corner of New Way Development's plot of land is unsuitable for residential construction due to it being in the flood plain of the river. The implementation of a canoe launch on this land could make this space useful for non-motorized transportation and can bring members of the community together. The ability to access the Looking Glass River in Watertown Township is an ongoing focal point of discussion and the proposed new park and canoe launch could unite the community from east to west.

Creating an ADA compliant canoe launch would further provide non-motorized transportation access to those with physical disabilities. This can be done by implementing a gangway slope, adding handrails, adding a supportive plank to enter a vessel, and providing ample room to accommodate watercraft, wheelchairs, and other equipment. Grant funding options from the Michigan Department of Natural Resources Waterways Program could provide funding for this canoe launch. There is approximately \$3.3 million for the Waterways program each year. The Township could also partner with Michigan Water Trails, which is a program which is made up of several nonprofits, commissions, local governments, universities, and various state departments who help fund building and maintaining the Water Trails. Through Michigan Water Trails, Watertown Township could apply for funding with the chance to designate the Looking Glass River as sanctioned Water Trail.

Figure 17: Location of Heritage Park existing canoe launch on the west side.



Figure 18: Location of Looking Glass Valley Park existing canoe launch on the west side.

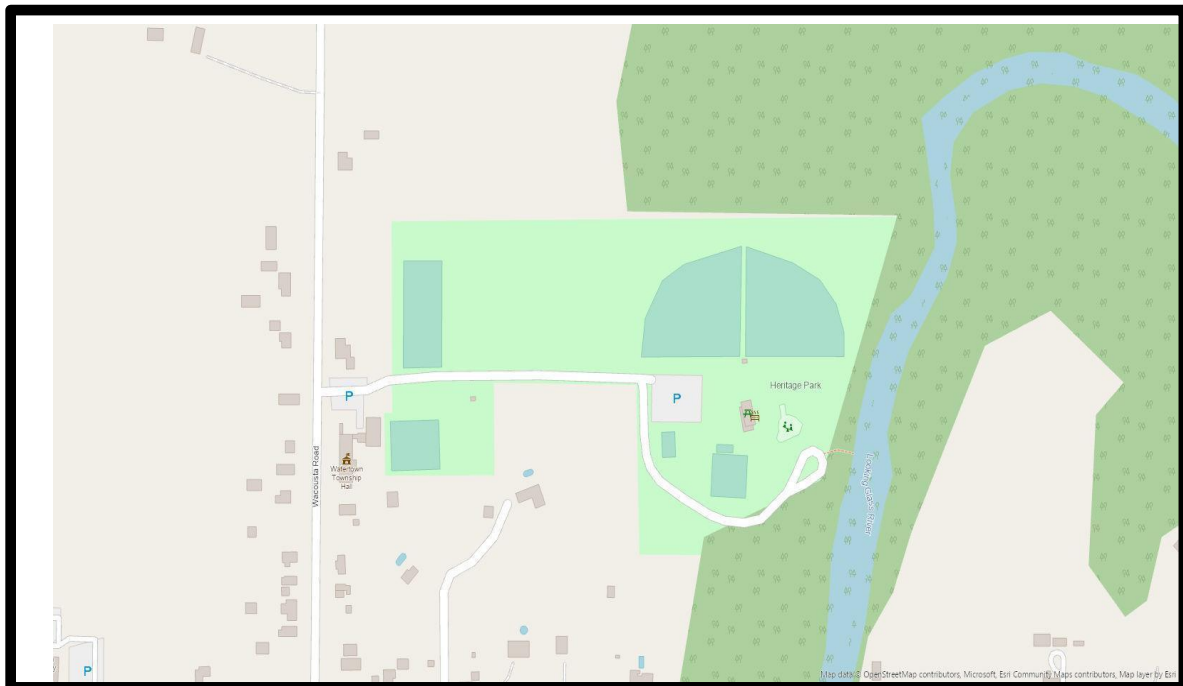


Figure 19: Proposed canoe launch on the east side of the Township.



7.6 Clark Road 4' Paved Shoulders

Clark Road is one of the main arteries running east and west through Watertown Township. It is a pivotal road in providing ample connectivity for the residents of the community. The addition of paved four-foot bike lanes could give residents the opportunity to travel east and west and improve connectivity in the township. The addition of a paved bike path could provide a more family-oriented travel corridor, however, after discussion in multiple township board meetings, the bike path proved to be too intrusive to the residents' properties along Clark Rd. Although the four-foot paved shoulders would result in significant tree loss as the expanded right-of-way of Clark Road would grow significantly and the cost is very substantial, the addition of the four-foot paved shoulders would be a significant step in linking the east and west end of Watertown Township. These paved shoulders could be used to bike or walk on and would provide much safer access along Clark Road than what is currently available.

The DALMAC is a biking event that occurs every year as bicyclists ride from Lansing, MI to Mackinaw City, MI. The race passes directly through Watertown Township via Clark Road. The DALMAC fund advances and promotes the use of bicycles; bicycle safety; public awareness of bicyclists' rights on public thoroughfares; bicycling events; a bicycle route system for the tri-county, Lansing metropolitan area; a statewide bicycle route system; instruction as to the care and maintenance of bicycles; and social opportunities for bicyclists. The current application period to receive DALMAC funds is between January 1st and March 15th. This funding could help implement paved shoulders along Clark Road, as the race runs along this road.

Figure 20: Proposed area of Clark Road receiving 4' paved shoulders.

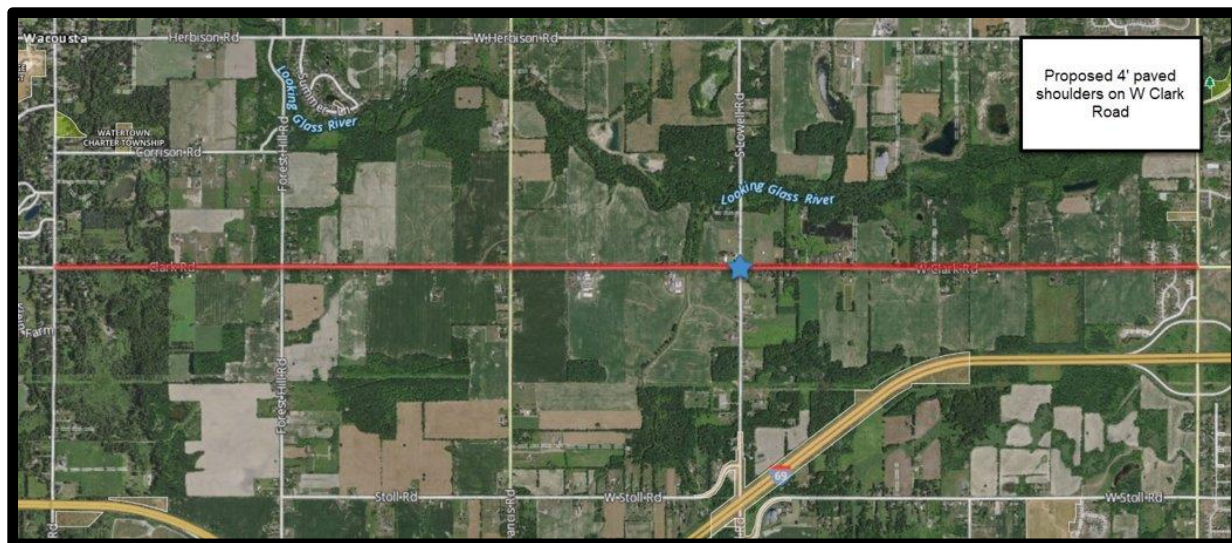


Image 20: Clark Road intersection at South Lowell Road where proposed installation of 4' paved shoulders should be implemented.



7.7 Watertown Parkway Property

Watertown Township owns land off Watertown Parkway south of Interstate 69, which currently sits undeveloped. The 136-acre area has been identified as a spot for wetland rehabilitation and outdoor activities. This area would provide a great space for non-motorized biking and walking trails and could even undergo development to become a park to encompass a multitude of outdoor non-motorized recreational activities. Implementation of 5k walking and biking loops, varying in difficulty and skill level for the members of the community to enjoy is also very much a possibility.

Figure 21: Proposed Watertown Parkway Property Park and Trail System.

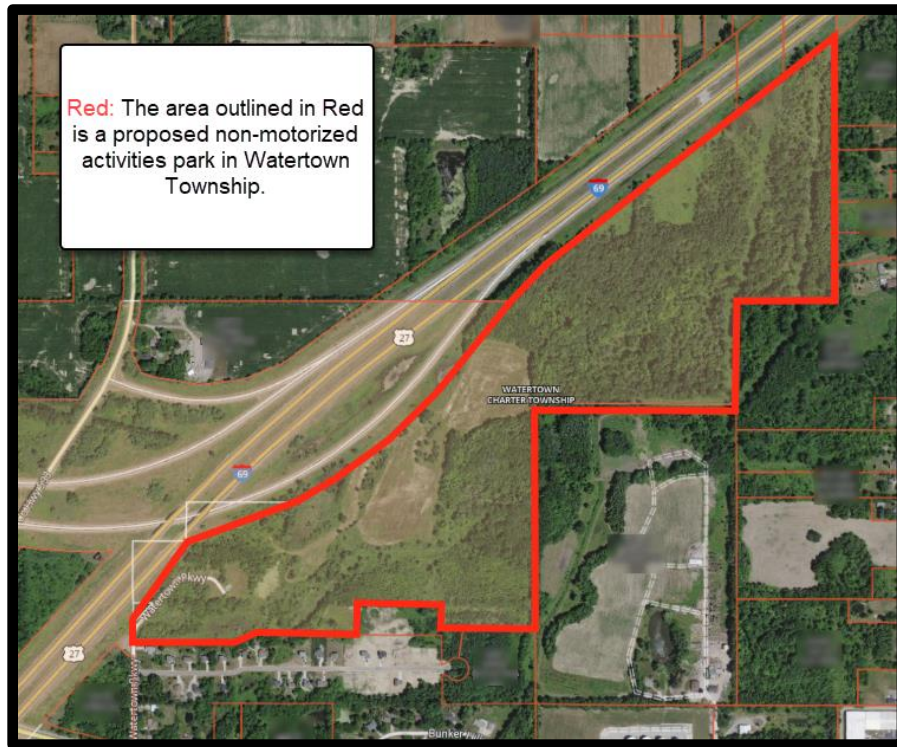


Image 21: Entrance path at proposed Watertown Parkway Property Park

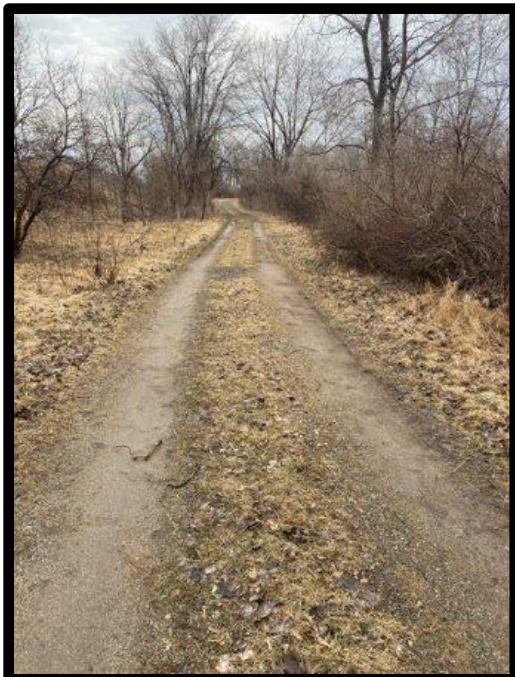


Image 22: Parking area at proposed Watertown Parkway Property Park



Section 8.1 Priorities for Implementation

In the following section, short-term and long terms actions are listed with strategies for implementation. Short term actions are proposed for implementation in the next five years, with long term actions being proposed for implementation longer than five years. Many long-term suggestions will require further research and will rely on partnerships being formed with outside communities and groups.

8.1 Short- and Long-Term Actions

Short-Term Actions (Five years or less)

- Working with the county road commission to achieve the following:
 - Crosswalk installation in North Airport Road and Wacousta Road Neighborhoods.
 - Share the Road and Pedestrian Crossing signage installation in North Airport Road, Wacousta, and South Airport Road Neighborhoods.
 - Re-Installation of Wacousta Road 4' paved shoulders as well as the addition of 4' paved shoulders on Stoll Road up to Nottingham Fields Subdivision.
- Allocate or seek funding and grant opportunities to achieve the following:
 - Addition of sidewalks in the North Airport Road and Wacousta Neighborhoods.
 - Addition of 4' paved shoulders on Clark Road.
 - Addition of 4' paved shoulders on South Airport Road between West State Road and West Stoll Road.

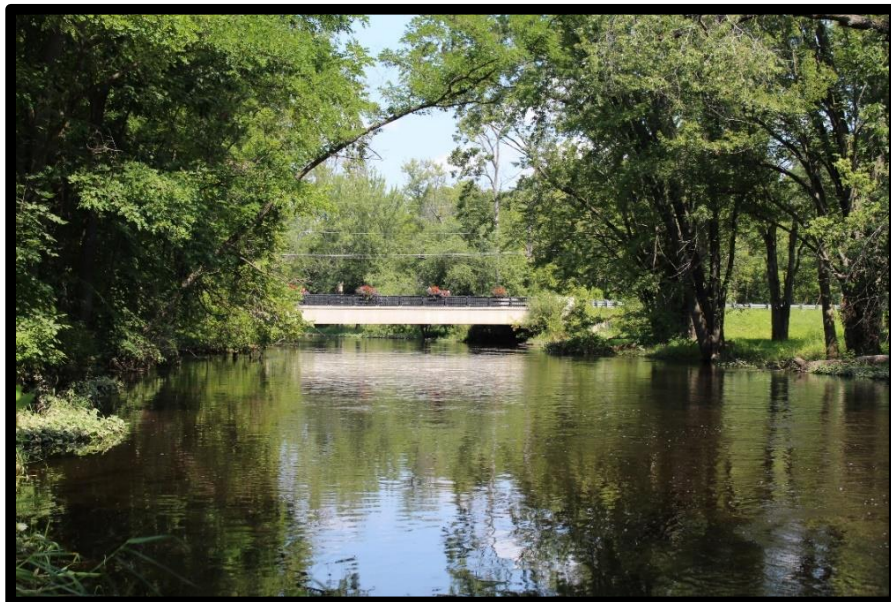
Long-Term Actions (Longer than 5 years)

- Partnering with Consumers Energy for the development of a recreational walking path.
- Partnering with Michigan Water Trails and New Way Development LLC for a community canoe launch and sanctioned Water Trail.
- Develop vacant property owned by Watertown Township into community nature park.
- Continue to apply for grants and funding opportunities to fund large, long-term projects, while continuing to improve connectivity in Watertown Township
- Continue to partner with surrounding townships to improve connectivity opportunities across township lines.

8.2 Conclusion

This plan serves as a guide to improve existing non-motorized infrastructure, as well as implementing new infrastructure to benefit the community. The proposed infrastructure will help to connect the Township residents with each other, as well as with the surrounding communities. This infrastructure is proposed to help provide safer traveling options for non-motorized transportation. These connections can help advance the community by providing access to nearby townships and the attractors that draw people there as well as making it more sustainable. Increased recreational activities for community members and visitors are going to be provided by the proposed infrastructure. Implementation of the recommended projects and strategies are going to require public support and funding. Public funding from economic assistance programs and grants can be secured for the community from local, state, and federal programs outlined in section seven of the plan. Incorporating public participation into the development process is also beneficial for the Township as the community members can provide meaningful input into the development process. While the automobile is overwhelmingly the most common mode of transportation for most commuters in the Township, creating a network of non-motorized facilities can help create a resilient community with more transportation opportunities for all residents.

Image 23: East Bridge on Herbison Road over the Looking Glass River.



Section 9. Appendices

The following information is included in an appendix for ease of reference. These include additional socio-economic profile data that does not directly affect non-motorized transportation, and non-motorized transportation maps for Delta Township, Bath Township, Dewitt Township, and Clinton County. Additionally, there is a proposed water trail map for Watertown Township.

9.1 Additional Socio-Economic Profile Data

9.1.1 Race

Watertown Charter Township, like Clinton County and Dewitt Township, has a large majority of White residents, both around 92-93%, with smaller percentages of other races. In 2019, Watertown Charter Township about 94% of the population identified as white with all other races accounting for less than 5% of the population, as shown in Table 1. Delta Township differs from the surrounding jurisdictions because there is also a large population of Black or African American residents at 12%. Similarly, Dewitt and Delta Townships had a large Hispanic population, around 7.5%, whereas Watertown and Clinton had below 5% each.

Table 6: Race in Watertown Charter Township, Clinton County, Delta Township, and Dewitt Township, Michigan (2019).

	Watertown Charter Township	Clinton County	Delta Township	Dewitt Township
White	93.9%	92.3%	76.5%	91.6%
Black or African American	0.8%	2.2%	11.3%	2.7%
Asian	1.7%	1.5%	5.7%	1.3%
Hispanic	4.5%	3.68%	7.9%	8.3%
Other	0.9%	0.04%	0.2%	0.5%

9.1.2 Gender

In 2019, Watertown Charter Township had 2,573 males and 2,748 females. Compared to the total population of 5,321, males make up 48.4% of the population, while females make up 51.6% of the population. These percentages differ from those in 2010; males were 51.5% of the population, while

females were 48.5% of the total population. The same was the case for Clinton County. Comparing the total population numbers of males and females, 38,704 and 39,685 respectively, males represented 49.37% while females represented 50.63. Similarly, Delta Township has a higher female population than males at 17,581 compared to 15,543. Dewitt Township was the opposite with a higher male population than females at 7,612 compared to 7,499. The average age for males is 43.2 compared to 45.3 for females.

9.1.3 Educational Attainment

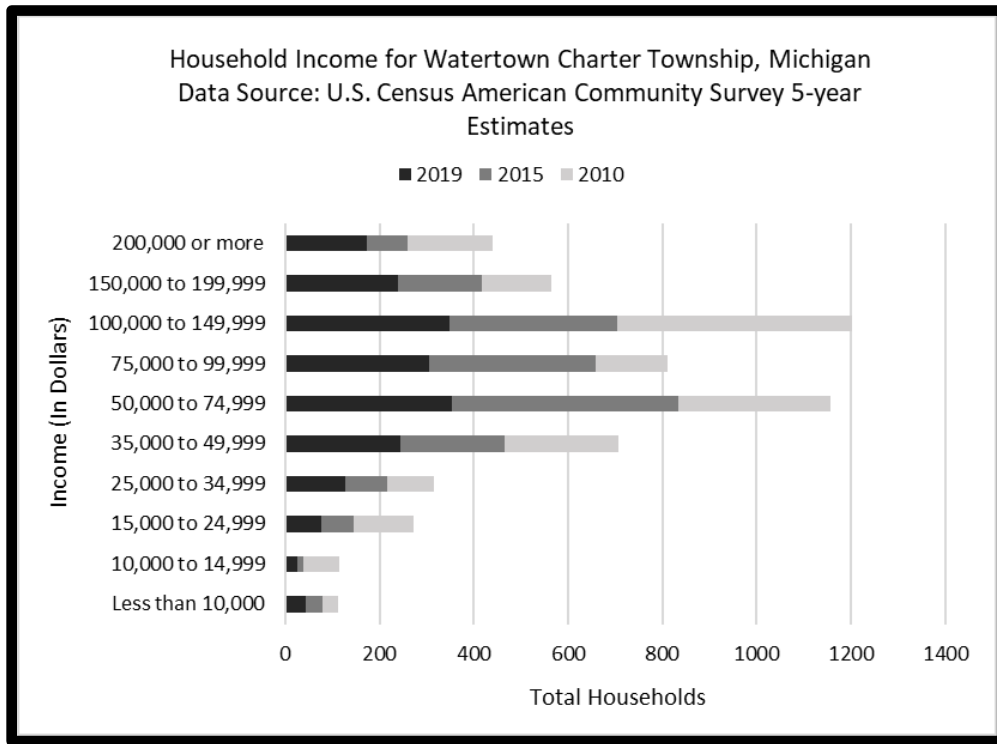
Educational attainment is based on people over the age of 25. In 2019, 3,807 people were over the age of 25 in Watertown Township. 3,681 (96.6%) were high school graduates, 1,394 (36.6%) had a bachelor's degree or higher, and 102 (2.6%) had no high school diploma. In 2019, 52,250 residents over 25 had received a high school diploma (95%). 18,592 residents have received a bachelor's degree or higher (33.8%) and 2,684 residents had no high school diploma (4.8%).

Clinton County had 54,934 residents over the age of 25. Of those residents, the majority (95.1%) were high school graduates or higher, followed by a bachelor's degree or higher (26.5%). In 2019, 24,371 people were over the age of 25 in Delta Township, and of those, 23,442 (96.2%) were high school graduates or higher, 9,902 (40.6%) had a bachelor's degree or higher and 3,728 (15.2%) had a graduate or professional degree. In the same year, Dewitt Township had 10,775 people over the age of 25, with 2,570 (23.8%) receiving a high school diploma, 2,393 (22.2%) receiving a bachelor's degree, and 1,281 (11.8%) receiving a graduate or professional degree. For all the jurisdictions included many of their residents had a high school diploma or equivalent, followed by a bachelor's degree.

9.1.4 Income Distribution

Census data indicates that the median family household income is increasing county-wide. In 2019, the median income for a household in Watertown Charter Township was \$82,542 with a median family income of \$68,472 and the per capita income was \$38,160. This is a household median income increase of over \$3,000 from 2010. In 2019, the median household income in Clinton County grew to \$70,390 from \$67,482 in 2010. Compared to Watertown Township, Delta and Dewitt Township had a lower median income.

Figure 22: Household income for Watertown Charter Township.



9.1.5 Occupation

In 2019, 46.2% of Watertown Charter Township's residents had an occupation in the management, business, science, and arts occupations, followed by sales and office occupations (18.7%). Clinton County, Delta Township, and Dewitt Township had the same largest and second largest categories of occupations: management, science, and arts, followed by sales and office.

Table 7: Occupation in Watertown Charter Township (2019).

Occupation	Total Population (%)
Management, business, science, and arts occupations	46.2%
Service occupations	13.9%
Sales and office occupations	18.7%
Natural resources, construction, and maintenance occupations	11.0%
Production, transportation, and material moving occupations	10.2%

9.1.6 Industry

In 2019, 18.7% of Watertown Charter Township residents worked in the educational services, health care, or social services industry, followed by the finance and insurance, and real estate and rental and leasing industry (13.6%), and public administration (10.1%). Clinton County, Delta, and Dewitt Township had similar industry distributions, with the largest percentage of their residents working in the educational services, health care, or social services industry. They differ in that Clinton County's next largest category was manufacturing at 11.2%, Delta's was public administration at 11.9%, and Dewitt's was professional, scientific, and management, and administrative and waste management services at 11.4%.

Table 8: Industry in Watertown Charter Township (2019).

Industry	Total Population (%)
Agriculture, forestry, fishing and hunting, and mining	3.8%
Construction	6.5%
Manufacturing	10.1%

Wholesale trade	3.8%
Retail trade	5.9%
Transportation and warehousing, and utilities	3.4%
Information	0.7%
Finance and insurance, real estate and rental and leasing	13.6%
Professional, scientific, and management, and administrative and waste management services	9.5%
Educational services, health care and social assistance	18.7%
Arts, entertainment, recreation, accommodation, and food services	6.2%
Other services, except public administration	7.5%
Public administration	10.3%

Section 9.2 Funding Options and Opportunities

For the projects within this plan to be implemented into action, resources must be made available for the Township to fund these projects. The following section will provide potential resources for the Township to apply and use for funding for the implementation of non-motorized transportation facilities. Using a combination of these resources can lighten the financial burden imposed on the Township created by these investments into the community.

9.2.1 [Federal COVID-19 relief funding](#)

Watertown Township, like many other cities and townships in the area, experienced challenging times during the Covid-19 pandemic. The federal government has issued relief grants for townships to help overcome the financial setbacks caused by Covid-19. Watertown Township has elected to set aside a portion of their allocated funding to update and install new non-motorized transportation facilities. These funds may be beneficial being used for smaller infrastructure implementations within the Township.

9.2.2 [Safe Routes to School Programs | US Department of Transportation](#)

The Safe Routes to School Program (STS) is a US Department of Transportation Program that partners with cities and townships to promote safe walking and cycling routes to schools for children in the community. Grant funding, provided by the program, can help update old infrastructure, build new infrastructure, provide



enforcement, and enforce safety classes. Michigan SRTS currently offers two grant opportunities for communities to receive federal funding. The Mini Grant is for programming only; it simply helps schools build culture and programs such as walking programs, school bus programs, incentive programs, and safe drop-off site programs. Municipalities can apply once a year for up to \$10,000. The Major Grant is a grant to help communities construct sidewalks, crosswalks, and all other infrastructure that would improve safe walking and biking routes to your community school. The STS program provides up to \$220,000 in funding and requires an in-depth planning process. Wacousta Elementary School is in the township and is currently surrounded by failing sidewalk infrastructure. This would be a great program to partner with to provide Safe Routes to School for the children of Watertown Township that attend Wacousta Elementary School.

9.2.3 [Michigan Water Trails](#)

Michigan Water Trails is a program used to fund and maintain designated Water Trails in Michigan. This program is made up of several nonprofits, commissions, local governments, universities, and various state departments who volunteer and fund building and maintaining the Water Trails. There are currently three sanctioned water trails in the Mid- Michigan area, one of which is the Middle Grand River Heritage Trail, which runs from Eaton Rapids to Muir. The Looking Glass River is a tributary of this section of the Water Trail when it empties into the Grand River in downtown Portland just west of Watertown Township. Through Michigan Water Trails, Watertown Township could apply for funding with the chance to designate the Looking Glass River as sanctioned Water Trail. A future river access point on the eastern boundary of the Township would promote connectivity across Watertown Township by giving residents an accessible form of non-motorized transportation.



9.2.4 [DALMAC Fund - Tri-County Bicycle Association](#)

The DALMAC is a biking event that occurs every year as bicyclists ride from Lansing, MI to Mackinaw City in the memory of the founder Dick Allen. In 1971, Allen challenged his friends to “ride all the way to the bridge”, proving that motorists and cyclists could share the road safely. There are multiple different routes available for riders, the most popular being the 5-Day West, consisting of 354 miles and four nights of camping at local Michigan schools. After the route begins on Michigan State University’s campus, the route heads north, passing through Watertown Township via Clark Road. The DALMAC fund advances and promotes the use of bicycles; bicycle safety; public awareness of bicyclists’ rights on public thoroughfares; bicycling events; a bicycle route system for the tri-county, Lansing metropolitan area; a statewide bicycle route system; instruction as to the care and maintenance of bicycles; and social opportunities for bicyclists. The current application period to receive DALMAC funds is between January 1st and March 15th. This funding could help implement paved shoulders along Clark Road, as the race runs along this road.



9.2.5 [Transportation Alternatives Program - MDOT](#)

The Transportation Alternatives Program uses federal transportation funds designated by congress to provide competitive grants to improve and enhance transportation and provide alternative transportation options. This program has about \$24.5 million available annually. The minimum grant amount is \$200,000 and there is no maximum amount for the grants. Municipalities must apply for grants and eligible applicants include cities, villages, road commissions, townships, and other municipal agencies. TAP is overseen by the Michigan Department of Transportation (MDOT), which administers most grants, with additional grants administered by several metropolitan planning organizations (MPOs). The Safe Routes to School Program is also eligible for TAP funding and can be used in unison.



9.2.6 [Tri County Transportation Improvement Program](#)

The Tri-County Transportation Improvement Program is a short-range capital improvement program that is aimed at improving all sectors of transportation in the tri-county region. This program is run as a function of the Tri-County Planning Commission, which also operates as the region's Metropolitan Planning Organization (MPO) to coordinate federally funded transportation projects. The program channels all the federal funding directly into the local communities. The types of projects that may be included in the TIP program include road improvements, transit capital improvements, public transit, and non-motorized facilities. Funding for non-motorized transportation can be used to maintain or enhance bicycle and pedestrian infrastructure and connections as well as safety. The current 2020-2023 Transportation Improvement Program invests around \$680 million into transportation projects in the region, with approximately 1% of federal investment from the TIP being funneled into non-motorized facilities. Applying to the TIP for non-motorized may be beneficial to the community, especially in the aspect of connectivity to Dewitt Township in the east, as improving connectivity is a prime goal of the TIP, especially if there is already non-motorized infrastructure in place like the recent sidewalk additions.



9.3 Regional Non-Motorized Transportation Maps

Figure 23: Delta Township Non-Motorized Transportation Plan

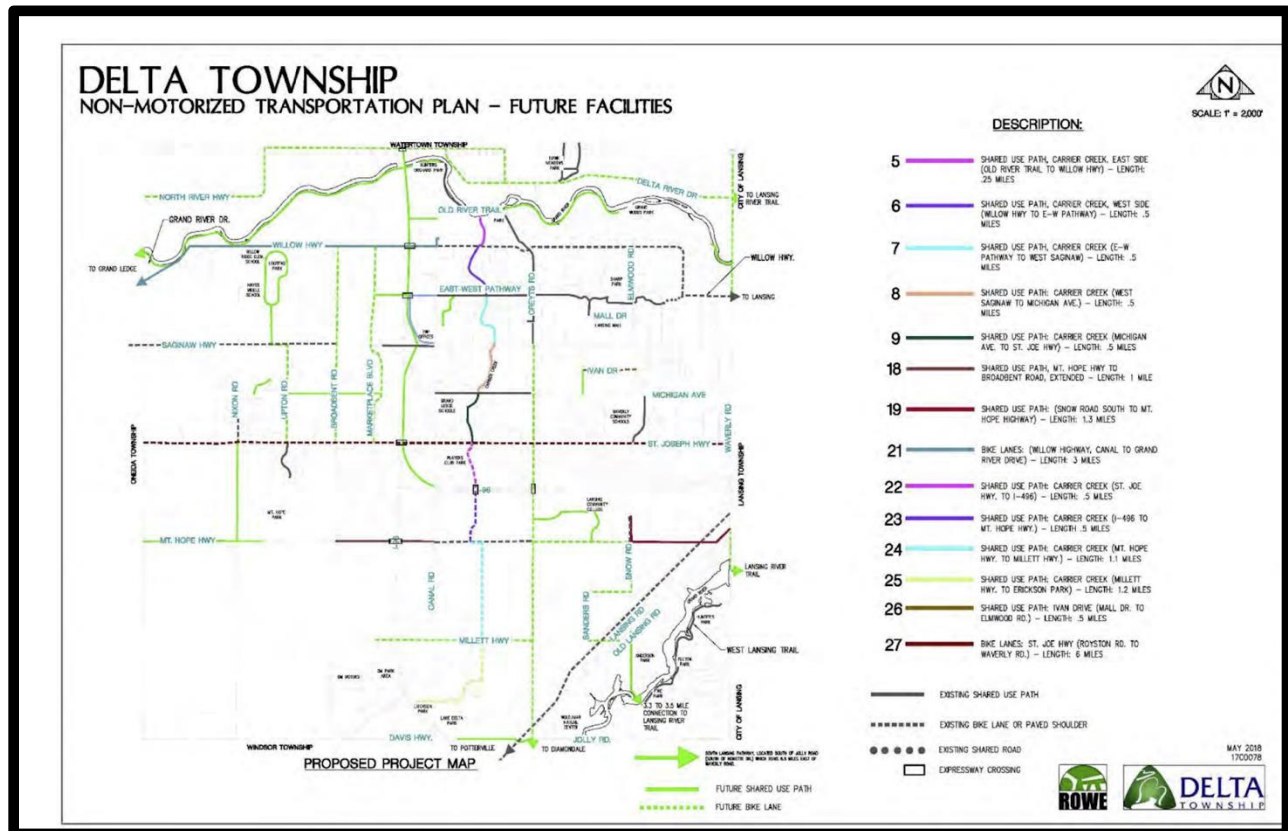


Figure 24: Bath Township Bicycle and Non-Motorized Pathways Primary Pathways

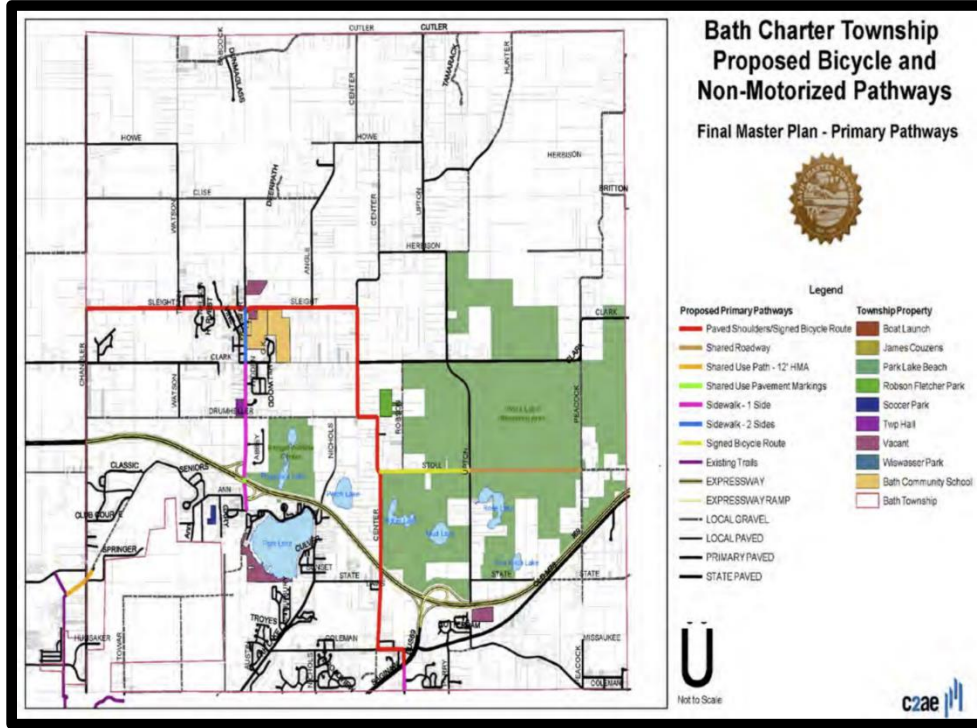


Figure 25: Bath Township Bicycle and Non-Motorized Pathways Future Pathways

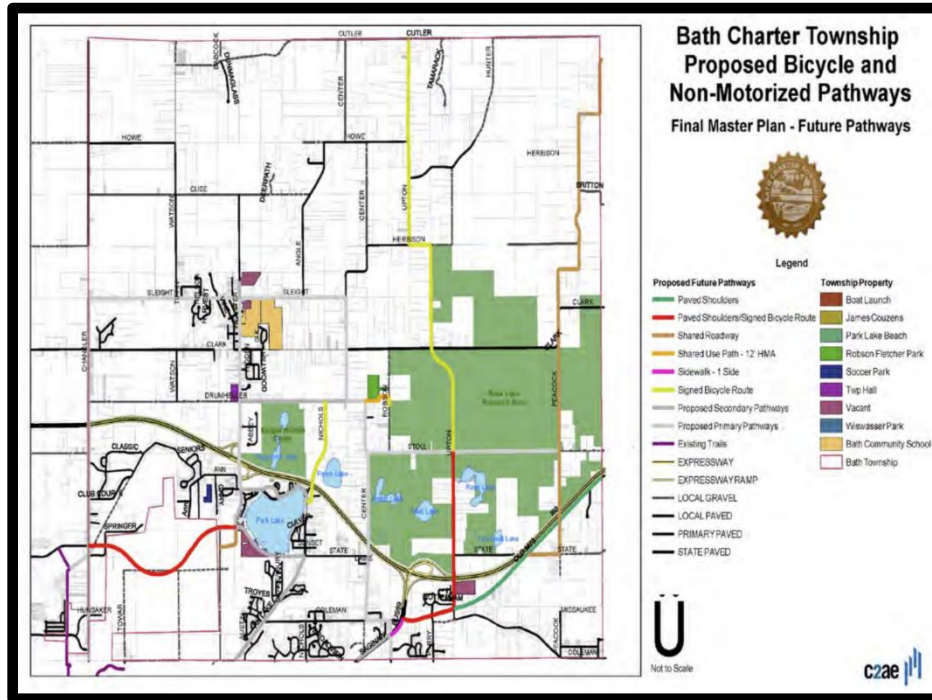


Figure 26: 2019 Dewitt Charter Township Non-Motorized Infrastructure

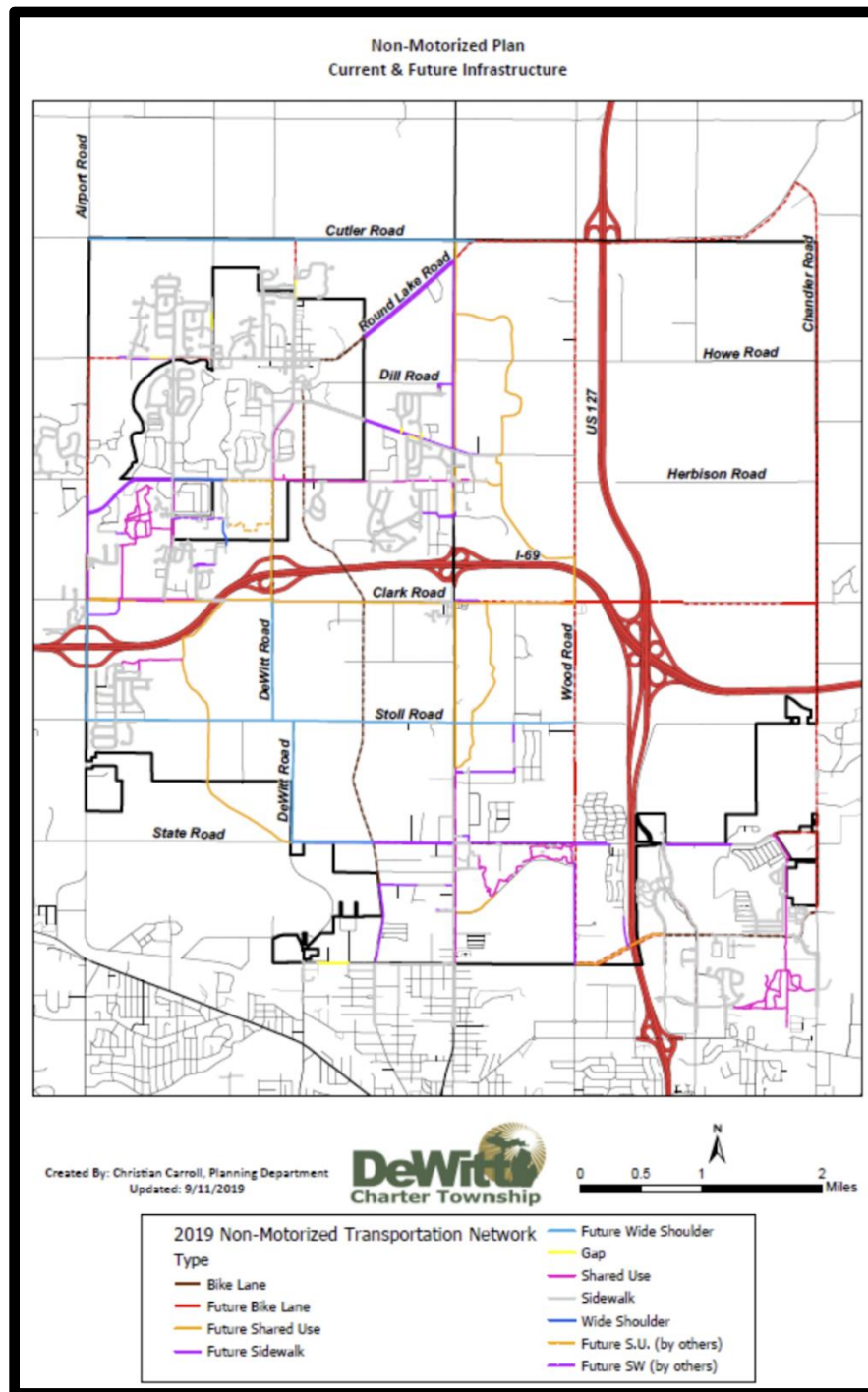
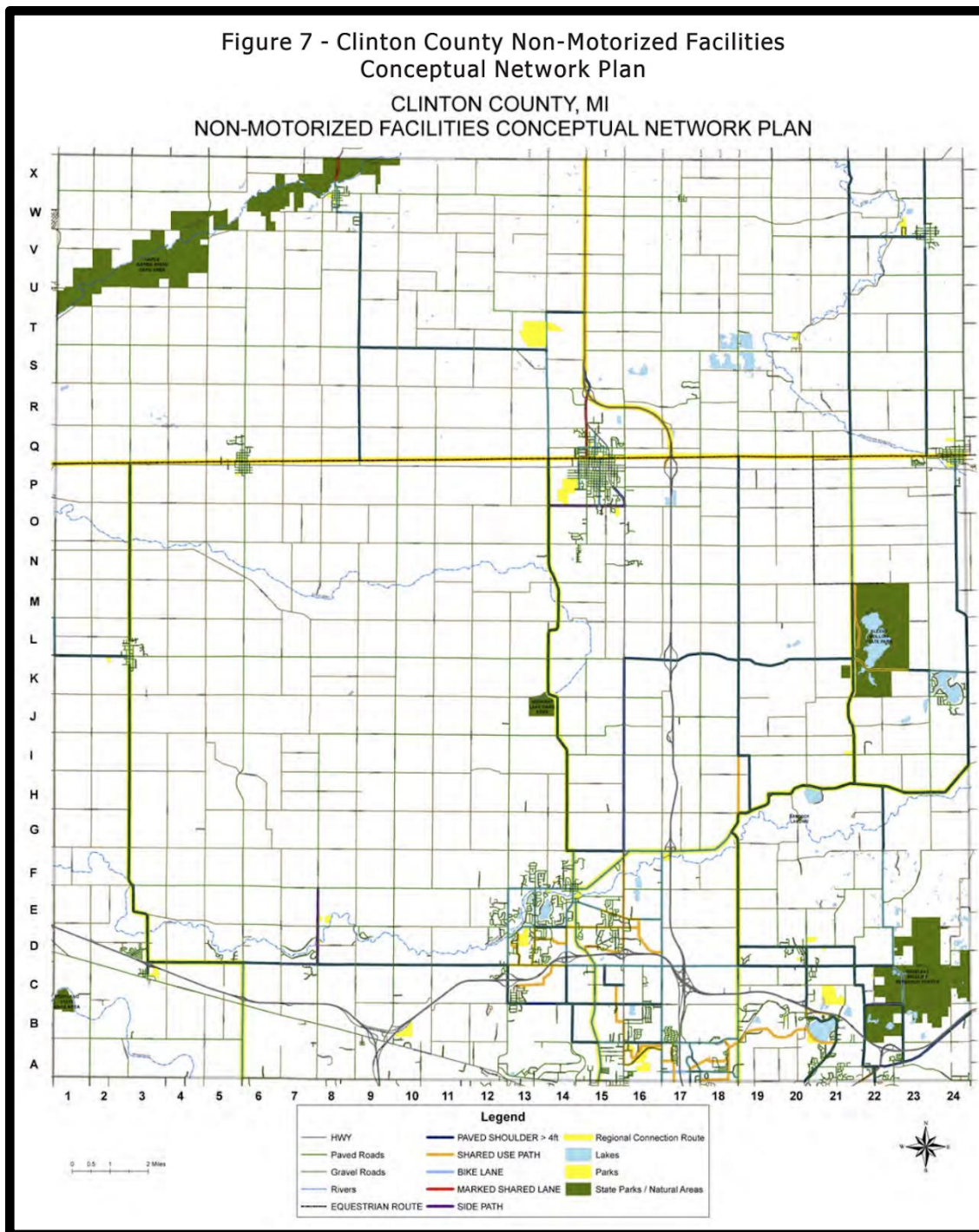
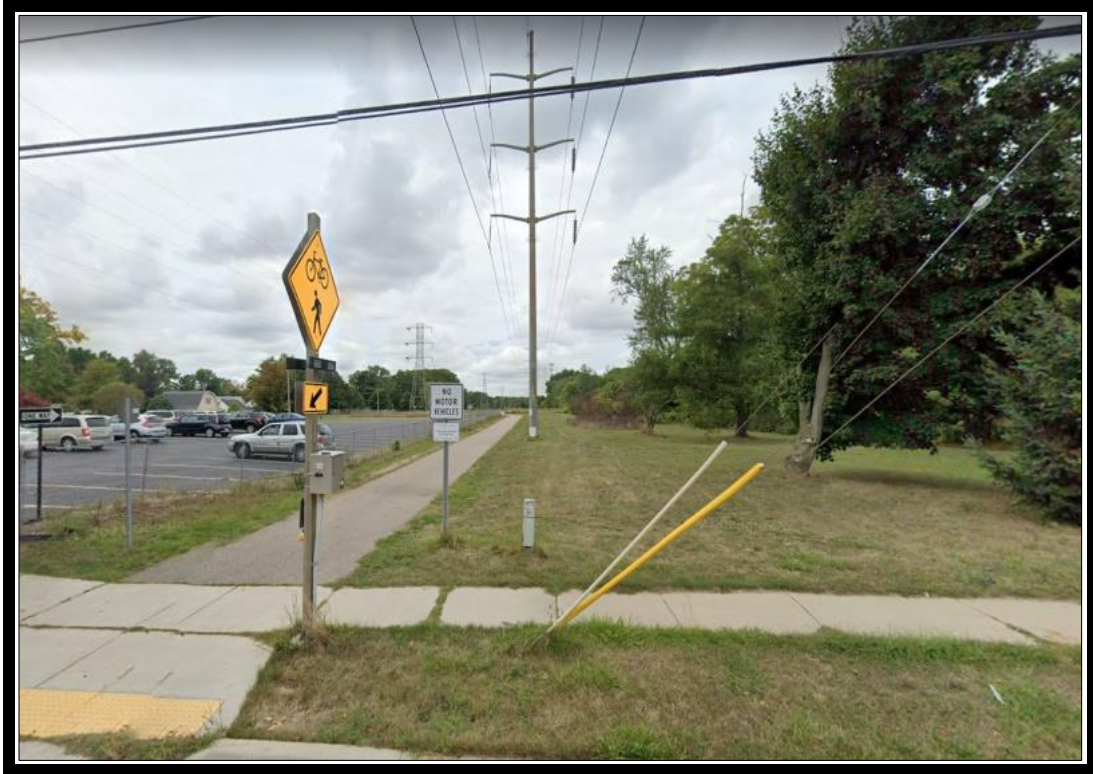


Figure 27: Clinton County Non-Motorized Facilities Conceptual Network Plan



9.4 South Lansing Pathway on Consumers Energy property.

Image 24: South Lansing Pathway on Consumers Energy property



9.5 Non-Motorized Transportation Signage Examples in Neighboring Townships

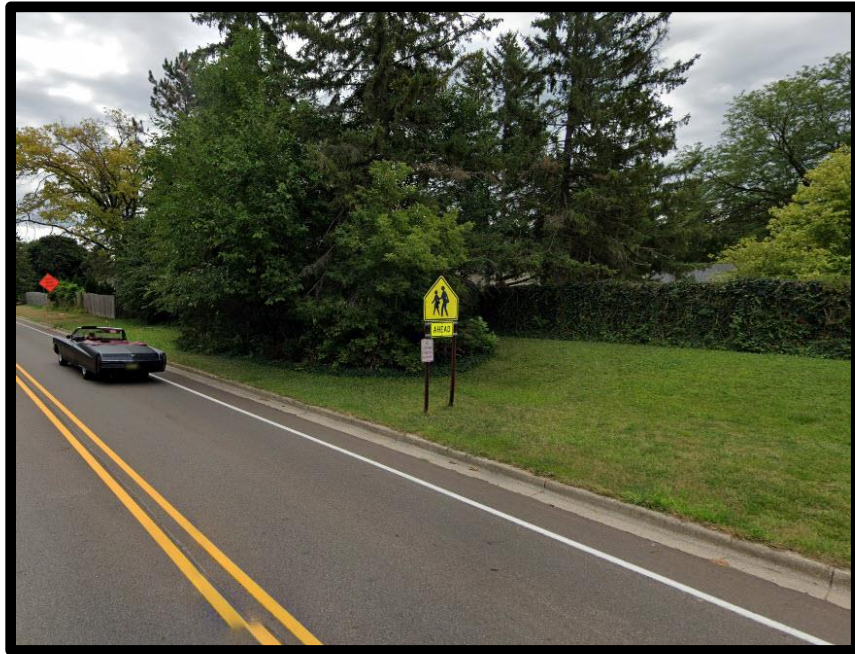
Image 25: Bike Lane Signage DeWitt Township on Turner Road



Image 26: Pedestrian Crossing Signage on Clark Road in Dewitt Township

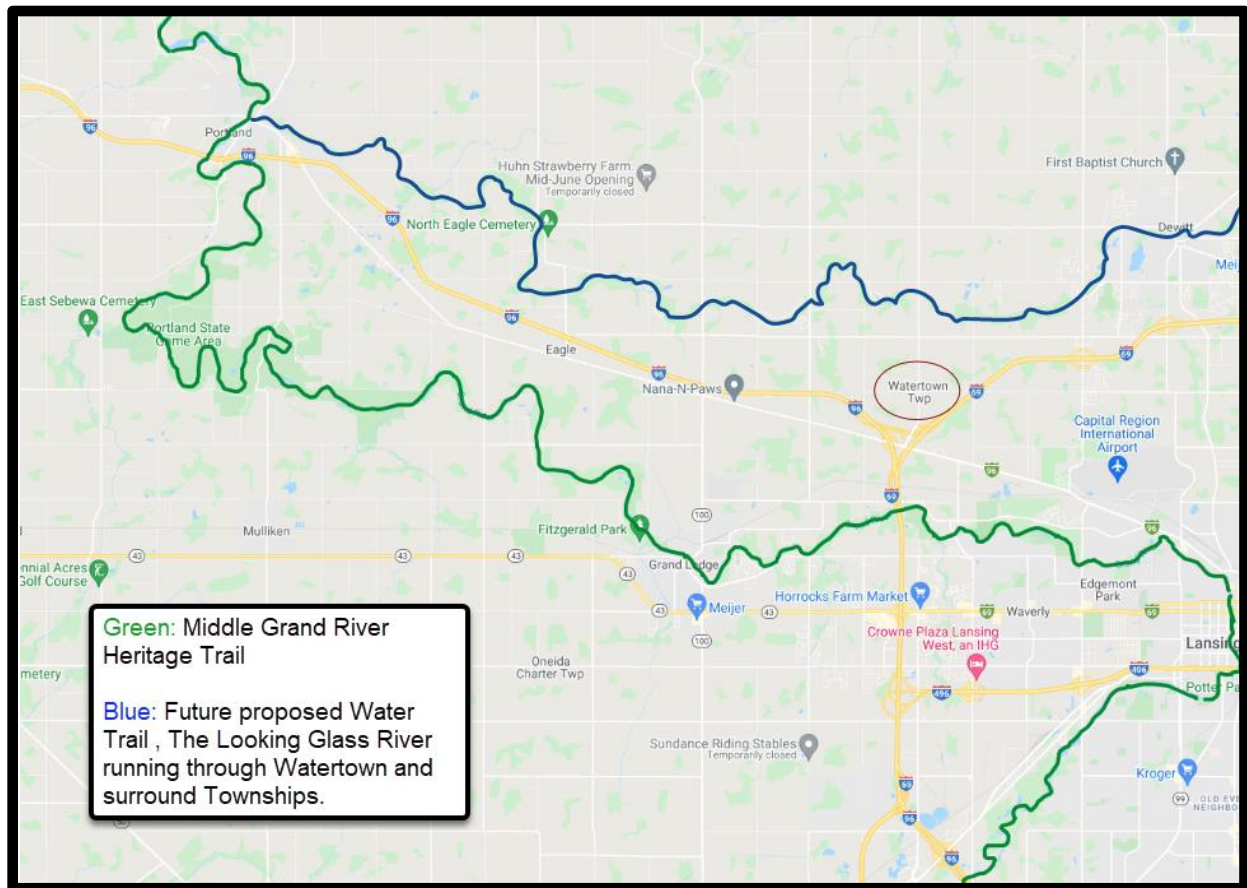


Image 27: Pedestrian Crossing Ahead Signage on Herbison Road in Dewitt



9.6 Proposed Water Trail Map in Watertown Township

Figure 28: Proposed Water Trail in The Looking Glass River.



Glossary

Bike Lane - A portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists.

Crosswalk - A specially paved or marked path for pedestrians crossing a street or road

Interconnectivity- Interconnection is the linking of two networks for the mutual exchange of traffic.

Non-Motorized Transportation - Also known as active transport, which refers to modes such as walking, bicycling, skates, rickshaws, skateboards, scooters, and wheelchairs.

Paved Shoulder- The paved area of a street between the travel lane and the curb or, if there is no curb, the edge of pavement.

Sidewalk- A usually paved walk for pedestrians at the side of a street

Trail- Any non-motorized transportation route not found within a road right-of-way.