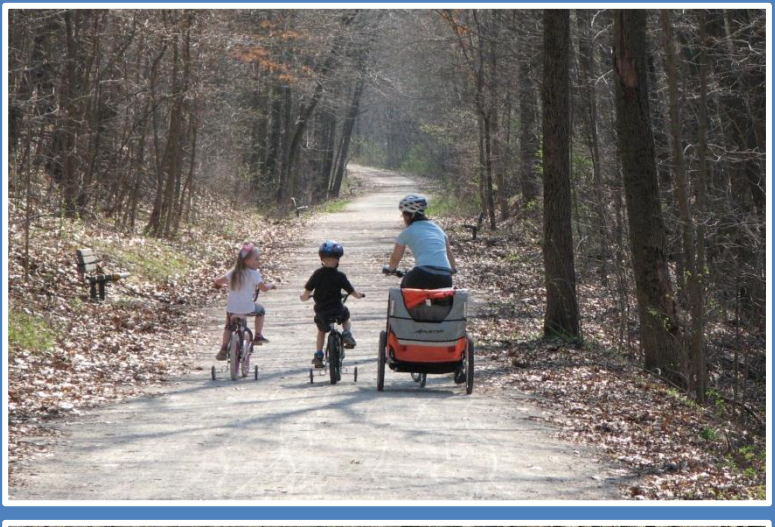
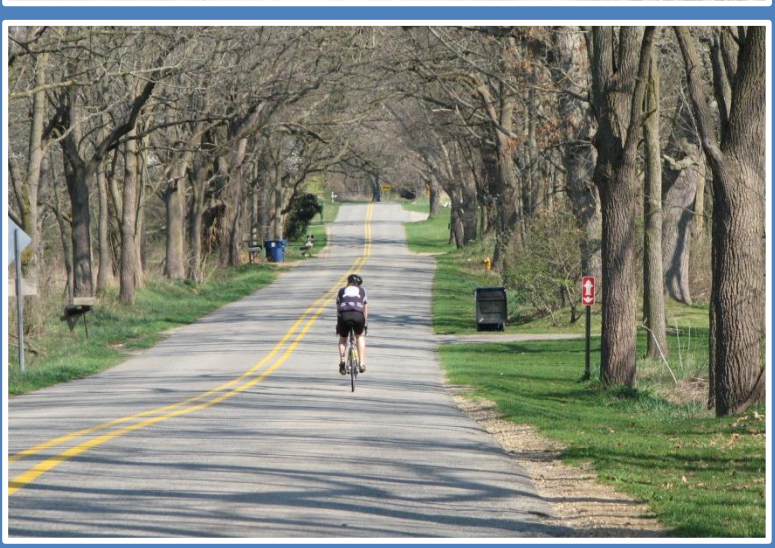
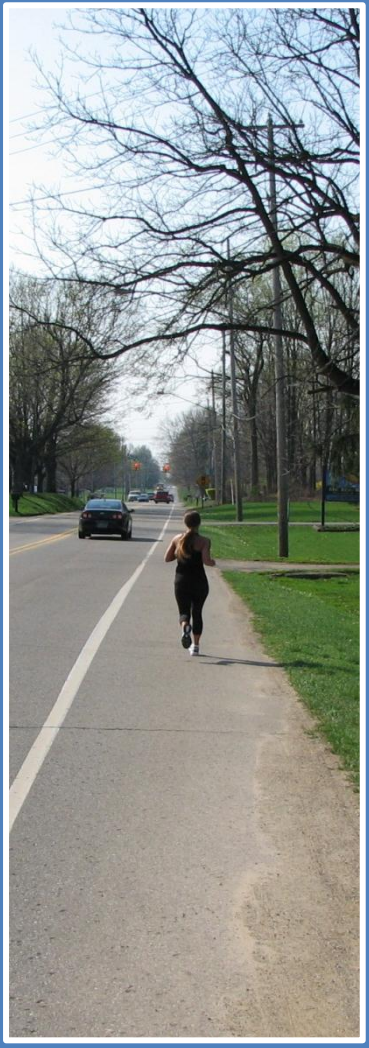
OSHTEMO CHARTER TOWNSHIP

2012 NON-MOTORIZED PLAN UPDATE

August 15, 2012







prepared by:

The Greenway Collaborative, Inc.

CONTENTS

1. Introduction Page 1

2. Non-motorized Framework Page 4

3. Prioritization Page 11

4. Appendix Page 15

Corridor Summaries and Recommendations

Kal-Haven and Kalamazoo River Valley Trail Connection Alternatives

Design Guidelines

December 2011 Mark-up

1. INTRODUCTION

Oshtemo Charter Township has made significant progress in the planning and construction of bicycle and pedestrian facilities over the past ten years. The purpose of the 2012 Non-motorized Plan Update is to review the current state of the planning efforts, provide recommendations on specific corridors of interest and outline a framework for the Township to move forward on priority corridors. The 2012 Non-motorized Plan Update is not a Comprehensive Non-motorized Transportation Plan. Rather it should be viewed as a strategic plan that identifies where efforts should be focused and reconciles the recommendations of numerous preceding plans.

PROJECT BACKGROUND

The project impetus was a meeting held during December of 2011. The meeting included Township planning staff and members of the Capital Improvement Committee. The purpose of the meeting was to map out a way to move forward on some of the recommendations in the various plans that had been prepared between 2005 and 2011. The group identified 14 corridors in the Township with outstanding issues that should be addressed. Questions for particular corridors were raised such as: is a path needed on both sides of the street; should a road have a bike lane or pathway and what should be built first.

Of particular interest was the connection to the Kal-Haven Trail and Kalamazoo River Valley Trail. A very detailed feasibility study was conducted in 2005 for that link but, given the estimated cost and concerns expressed by some residents along the proposed route, there was a desire to make sure that all options had been fully considered. The resulting document, here-in referred to as the December 2011 Mark-up can be found in the Appendix.

This plan was originally conceived as a review of those 14 corridors. It quickly became apparent that some type of overall framework would be necessary in order to provide any recommendations. There was also a desire from Township officials to further explore off-road trail options in addition to facilities located within the road Right-of-Way.

PRECEDING STUDIES

A number of plans have been developed over the past decade that provide recommendations for non-motorized facilities, these plans include:

- 2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study
- 2008 Oshtemo Charter Township Non-motorized Plan
- 2011 Charter Township of Oshtemo Master Plan

The existence of these three plans demonstrates the Township's commitment to non-motorized transportation planning; however there are some deficiencies in the documents.

First off, there are discrepancies in the recommendation of the plans. For example, the 2005 document will recommend bike lanes and the 2008 document will recommend sidewalks or a sidepath for the exact same segment. This plan will review the previous plans and provide recommendations that address these issues.

Additionally, the existing plans lack any mention of Public Policies, Community Programs, Environmental Issues and Metrics of success. In an ideal world, these items would be incorporated into a non-motorized plan; however, due to the limited scope of work for this project, these issues are not included in this document. In the future, a more comprehensive non-motorized plan should be prepared to address those deficiencies.

The purpose of this plan is to provide an overview of the non-motorized network and provide recommendations for the principal non-motorized routes that should be developed first. The recommendations are based on a review of the previous plans and the existing conditions. The recommendations from this plan will provide a framework and prioritization strategy that will help guide future development of the non-motorized network.

The following pages demonstrate the components of a non-motorized network and how they build a framework to provide a variety of facilities for all users.

ELEMENTS OF A COMPREHENSIVE NON-MOTORIZED PLAN

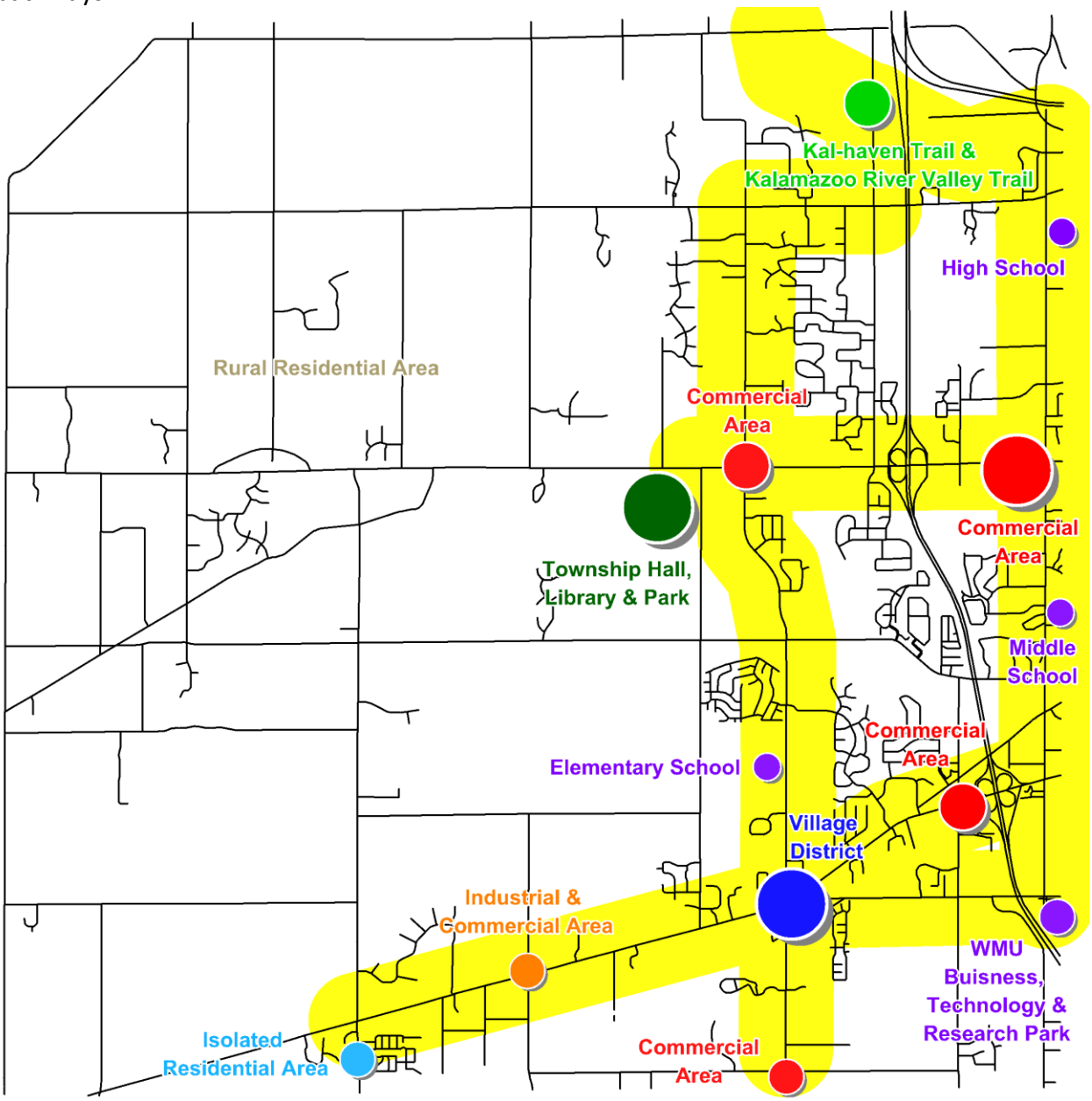
A comprehensive non-motorized transportation plan should include recommendations for public policies, improvements to the physical environment, community programs to encourage more walking and bicycling as well as metrics of success. These essential elements influence the number of people who walk and bicycle and the quality of their experience. The following graphic lists the components and the issues within each element that a comprehensive plan should address.

The purpose of a comprehensive non-motorized plan is to identify the means to establish a physical and cultural environment that supports and encourages safe, comfortable and convenient ways for a wide spectrum of pedestrians and bicyclists to travel throughout the Township and into the surrounding communities.

2. NON-MOTORIZED FRAMEWORK

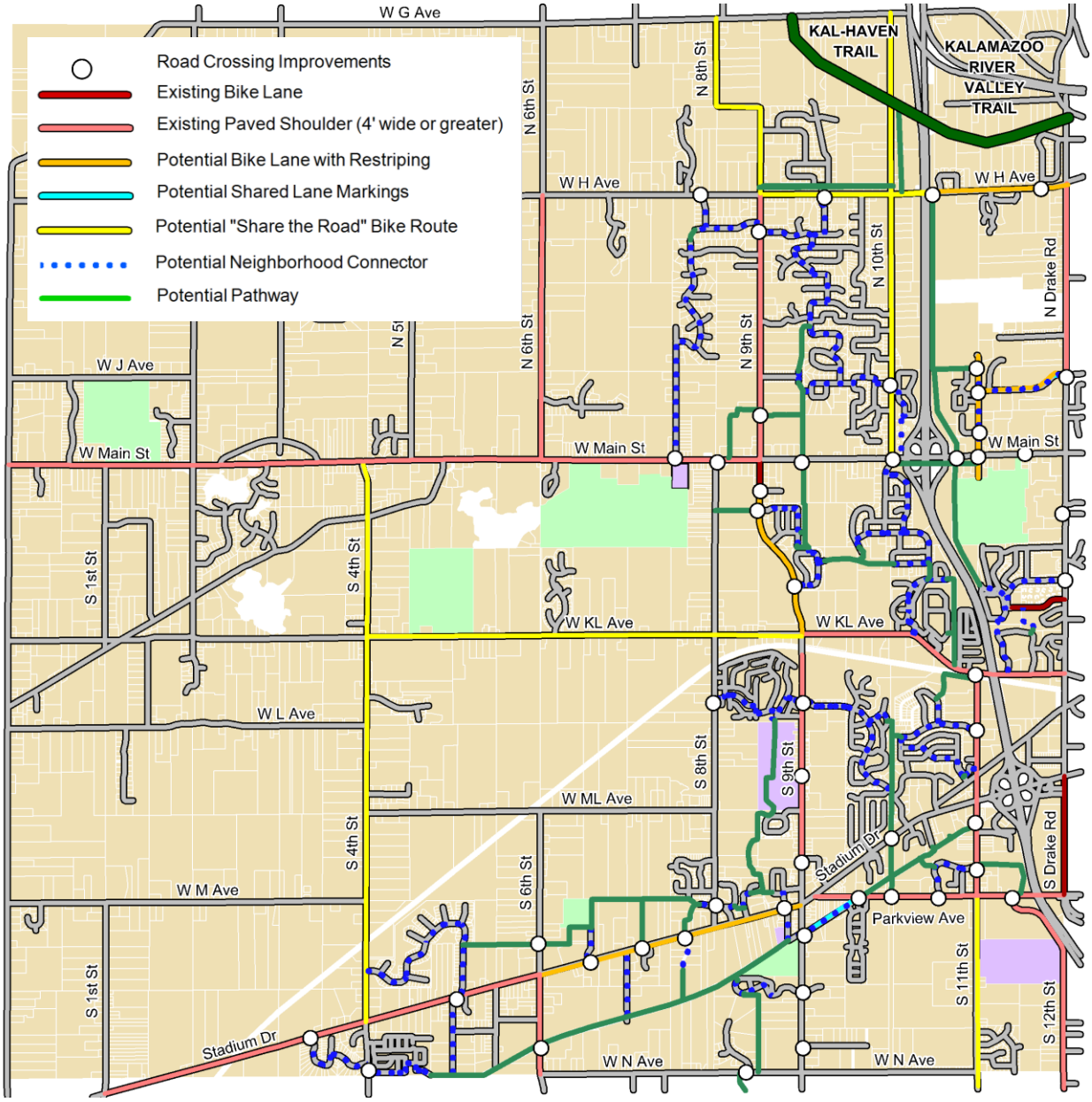
KEY CORRIDORS

Highlighted below are key corridors in the township that provide connections between areas of higher population and major destinations. This plan focuses on providing non-motorized connections along and across these corridors and to the major destinations identified on the map below. The recommendations for these corridors may include improvements to the road right-of-way or alternative routes that access the corridor utilizing the local roads and off-road pathways.



CONCEPTUAL FRAMEWORK

The following is a conceptual framework for the non-motorized system that includes off-road trails and neighborhood connector routes. The following pages describe the elements of a non-motorized system and how they work together to provide a network that supports a spectrum of non-motorized users.



Please note that the conceptual routes shown above are based on a cursory review of the township and illustrate the types of opportunities that may be available. A more detailed analysis including public engagement should be completed before these conceptual routes are developed any further.

Spectrum of Non-motorized Routes

The Greenway Collaborative, Inc.

PRIMARY LINKS	NEIGHBORHOOD CONNECTORS	OFF-ROAD TRAILS
TYPICAL FACILITY TYPES:		
Complete Streets that may include the following: • Bike Lanes & Sidewalks • Sidepaths • Paved Shoulders • Shared-use Arrows • Road Crossing Improvements	Complete Streets that may include the following: • Guided Routes • Named Routes • Bike and Pedestrian Boulevards • Neighborhood Greenways • Crossing Improvements Where Neighborhood Connectors Intersect Primary Roadways	• Foot Trails • Soft-surfaced Trails • Hard-surfaced Trails • Road Crossing Improvements Where Trails Intersect Primary Roadways
CONTEXT AREAS:		
• Urban suburban and rural primary roads (Arterials and Collectors) • Urban and suburban contexts typically have bike lanes or shared use arrows paired with sidewalks or sidepaths • Rural contexts typically have paved shoulders	• Urban and suburban local and residential roads • Connecting pathways through neighborhood parks and schools • Provide alternative routes to busy Primary Links	• Major parks • Waterfronts • Abandoned rail corridors • Active rail corridors • Transmission corridors
PRIMARY TRIP TYPES:		
• Daily transportation to work and for personal business	• Mix of daily transportation, Safe Routes to School and close to home recreation	• Use depends on location • Recreation destination
TRIP CHARACTERISTICS:		
• Users typically segregated into mode specific facilities such as sidewalks and bike lanes • Exposure to high speed and high volumes of motorized vehicle traffic • Just as direct a path of travel as using a motor vehicle	• More of a shared space, sidewalks may or may not be present • Moderate exposure to low speed and low volumes of motorized vehicle traffic • In some cases trips via neighborhood connectors may be longer than the same trip via primary links	• Non-motorized users separated from motorized vehicle traffic • Minimal exposure to motorized traffic at roadway crossings • Directness of travel depends on the route and what resources it connects

Primary Links
The Greenway Collaborative, Inc.

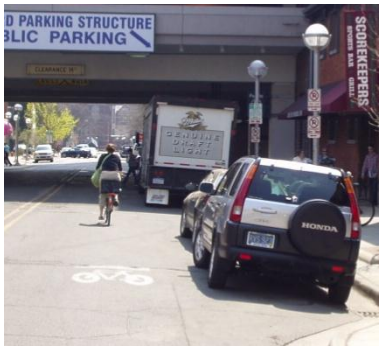
PAVED SHOULDERS:

- Accommodate bicycle and pedestrian use in rural areas
- Generally do not have bike lane signs and/or pavement markings except at intersections where a designated right turn lane is present, then a paved shoulder should be transitioned to standard bike lane pavement markings to avoid conflicts with right turning vehicles
- May be signed as a bike route or with a Share the Road sign

BIKE LANES AND SIDEWALKS:

- Bike Lanes are in-road travel lanes designated for bicycle use and delineated with pavement markings and signage
- Bike Lanes direct bicyclists to travel with the flow of traffic and minimize vehicles swerving to avoid a bicyclist
- Bike Lanes provide a safer alternative to sidewalk bicycling for adult bicyclists
- Sidewalks, set back from the roadway and buffered from traffic by trees provide a comfortable walking environment

SHARED-USE ARROWS AND SIDEWALKS:



- Typically used in downtown streets where there is not room for a bike lane, there is on-street parallel parking and bicycles are discouraged from using sidewalks
- Pavement markings direct bicyclists to move with traffic and outside of the reach of opening car doors
- Markings also indicate to motor vehicles to expect bicycles in the roadway
- Used on primary roads with speeds 35 mph or lower

SIDEPATHS:

- AASHTO Guide for the Development of Bicycle Facilities generally considers sidewalks undesirable as Shared-use Paths
- Should only be used in locations where the pathway is uninterrupted by driveways and roadways for long distances and safe and convenient road crossing opportunities to the other side of the road are provided

Neighborhood Connectors

The Greenway Collaborative, Inc.

GUIDED ROUTES:

At each decision point signs, about the size of a typical street sign, indicate the route direction,

- Located primarily on low speed, low traffic volume local roads and connecting pathways
- Signs provide wayfinding by noting direction and distance to key destination such as schools, parks and the downtown
- Identify routes that may not be obvious to someone who is unfamiliar to the area
- Along the route signs are used periodically to reassure users they are still along the route

NAMED ROUTES:

- Incorporates the elements of the Guided Routes
- Provides trail system branding and specific route identification
- Are helpful in providing consistency where a long-distance route is comprised of a number of different facility types
- Generally used on routes that provide key connections between major destinations – something worthy of a name or number

BICYCLE AND PEDESTRIAN BOULEVARDS:

- Generally Incorporates the elements in Guided Routes, and Named Routes
- Route is optimized for bicycle travel while discouraging through motor vehicle traffic via tools such as motor vehicle diverter islands that are permeable to bicycles and pedestrians
- Motor vehicle speeds reduced through calming measures
- Stop signs and yield sign are oriented to provide unimpeded flow of bicycle traffic

NEIGHBORHOOD GREENWAYS:

- Incorporates elements of the Guided Bike Routes, Named Bike Routes, and Bicycle Boulevards
- Designed for pedestrian and bicycle use
- Contains elements that reflect the character of the surrounding community such as natural areas, local art, community gardens and historic features.
- Has sustainable design elements such as rain gardens and permeable pavement

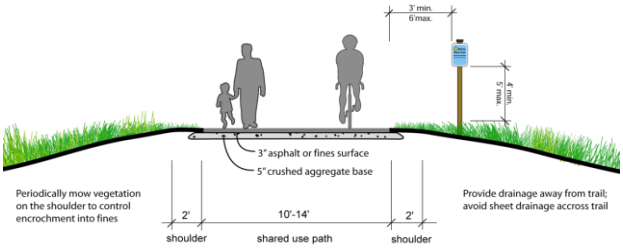
Off-Road Trails

The Greenway Collaborative, Inc.

FOOT AND SOFT-SURFACE TRAILS:

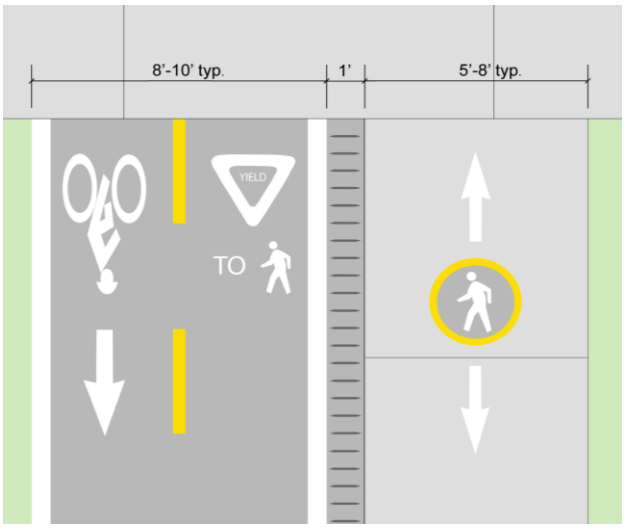
- Surface materials may include native soil, crushed stone and wood chips
- Sometimes considered a "nature trail"
- User groups generally consist of trail runners, walkers, mountain bikers and equestrians
- Generally used for recreational purposes
- May provide key short-cuts

SHARED USE PATHWAY:



- The "typical" trail
- Best used in suburban and rural areas with low to moderate bicycle and pedestrian volumes
- Surfacing choice influences user types
- A variety of trail surfaces are used with crushed aggregate fines and asphalt being the most common.
- Minimum width is 10' with a 2' buffer on each side
- Generally used for recreational purposes and some transportation trips depending on location

SEPARATED USE PATHWAY:



- Trail is comprised of two separate but adjacent trails, one for bicycles and one for pedestrians
- Best used in urban and high use areas
- Minimizes conflicts between bicyclists and pedestrians
- Pedestrians should be accorded right-of-way at the Intersections with walkways
- Typically asphalt is used for the bicycle path and concrete is used for the pedestrian path
- Minimum width is 14' with a 2' buffer on each side when combined or they may be constructed as two separate trails separated by a buffer

Road Crossing Improvements

The Greenway Collaborative, Inc.

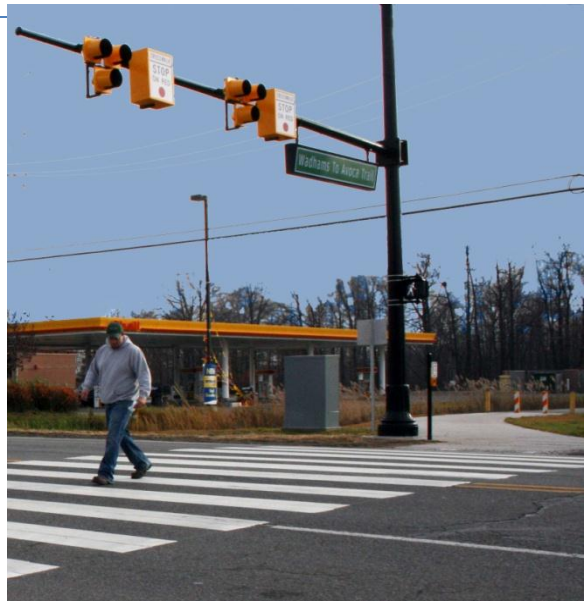
ACTUATED RECTANGULAR RAPID FLASH BEACON:

- High intensity LED flashers that are paired with crosswalk signs
- LED flashers alternate and get motorist attention when activated
- Push-button or passively activated
- Can be linked to advanced warning signs with LED flashers
- Solar powered models available
- Passive activation works best when there is a long pedestrian approach, such as a pathway

CROSSING ISLAND:

- Pedestrians only have to cross one direction of traffic at a time
- Provide Storage area for pedestrians waiting for acceptable gaps in the flow of traffic before completing the street crossing
- Can be combined with Actuated Rectangular Rapid Flash Beacons
- Good for locations where there are three or more busy lanes and/or high speed roadways

HYBRID PEDESTRIAN SIGNAL:



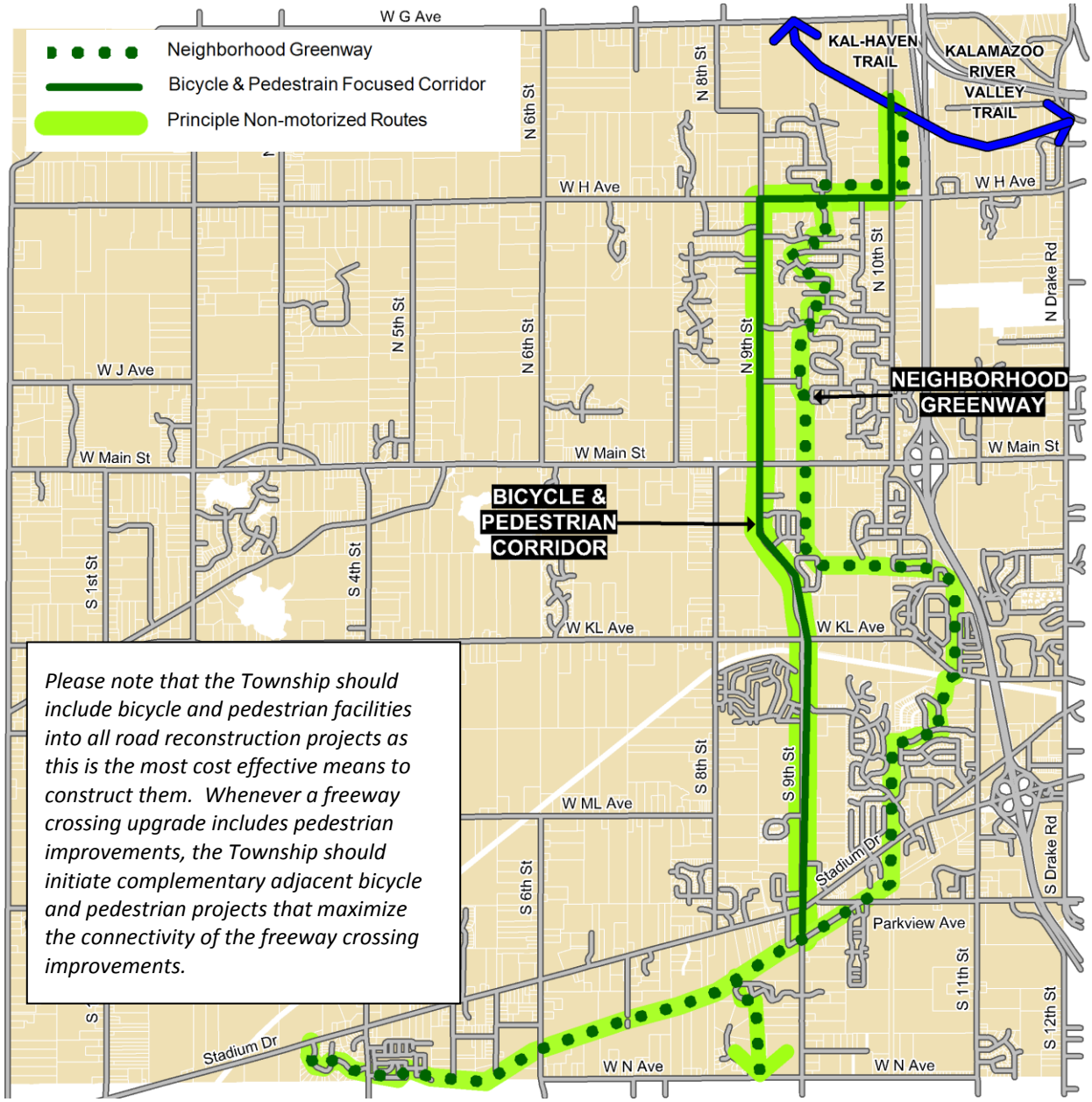
- Used to help pedestrians cross mid-block where a traditional pedestrian crosswalk signal would be inappropriate
- Minimizes delay to motor vehicle traffic
- Good for locations where there are few usable gaps in traffic, usually on high speed/high volume roadways when a crossing island is not feasible

The signal is kept dark at its resting state. When a pedestrian activates the crossing button, a flashing yellow signal is displayed to motorists. This is followed by a steady yellow then a solid red at which time the pedestrian is displayed a walk signal. During the clearance interval, the motorists are displayed an alternating flashing red signal. Motorists may then move forward if the pedestrian or bicyclist has already crossed the road.

3. PRIORITIZATION

When developing a framework for a non-motorized network, it is important to implement the plan in order of priority. Priority is based on near-term opportunities and connections that will have the greatest effect on the most people.

The following map displays the Principle Non-motorized Routes that should be implemented first. These routes provide key connections across the township and to neighboring communities. They will link major destinations, such as the Kal-Haven Trail, Kalamazoo River Valley Trail (KRV) and The Village District, and serve areas of higher population.



Please note that the Township should include bicycle and pedestrian facilities into all road reconstruction projects as this is the most cost effective means to construct them. Whenever a freeway crossing upgrade includes pedestrian improvements, the Township should initiate complementary adjacent bicycle and pedestrian projects that maximize the connectivity of the freeway crossing improvements.

PRINCIPLE NON-MOTORIZED ROUTES

The Principle Non-motorized Routes provide two distinctly different non-motorized facilities:

BICYCLE & PEDESTRIAN FOCUSED CORRIDORS:

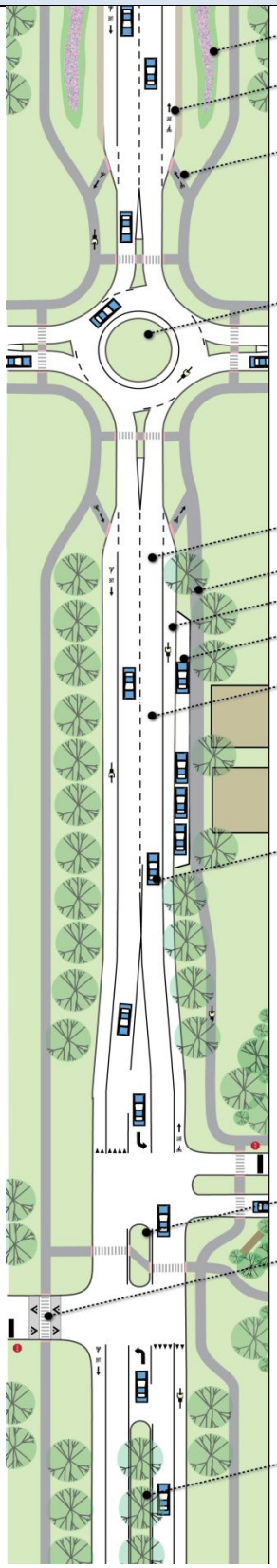
They are roadways where an emphasis is placed on the needs of the non-motorized user. The roadway has design elements such as frequent mid-block crossings, roundabouts, medians and street trees that result in motorists naturally driving the roadway at 30 to 35 mph. The result is that the road is a much more comfortable environment to walk along and many bicyclists will be comfortable using bike lanes on these roads. A Bicycle and Pedestrian Focused Corridor is proposed for 9th Street.

NEIGHBORHOOD GREENWAYS:

They are primarily located on low speed, low traffic volume local roads and connecting pathways. They link neighborhoods to parks, schools and commercial areas. Signs provide wayfinding by noting direction and distance to key destinations. Elements such as traffic calming, public art, rain gardens and historic features can be added to enhance the routes. These routes appeal to families, children and people who are less comfortable walking and bicycling along a major roadway. Neighborhood Greenways are proposed as alternative routes for the 9th Street and Stadium Drive Corridors.

The graphic on the opposite page provides an overview of the two different types of corridors.

BICYCLE & PEDESTRIAN FOCUSED CORRIDORS



Rain gardens

Paved shoulder with bike lane markings (4' to 5' wide)

Ramps for optional bicycle entry and exit at round-about

Compact roundabouts to provide road crossings and traffic calming

Posted speed limit generally 30 to 35 MPH

Sidewalks (6' to 8' wide)

Bike lanes (5' to 6' wide)

On-street parking in business districts

Generally 2 to 3 lane roadways

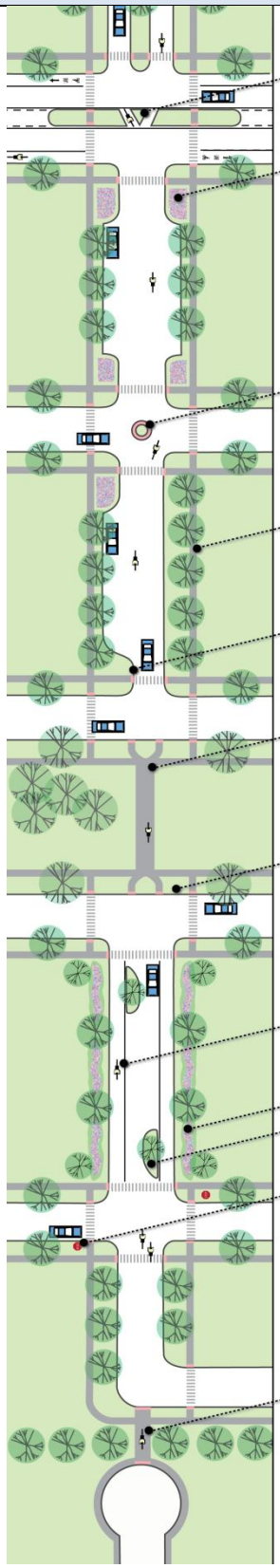
Average daily traffic volumes generally 5,000 to 15,000 vehicle a day

Crossing Island helps to slow traffic and allow the road to be crossed in two stages

Speed table to slow traffic at subdivision entrances where there is poor visibility

Raised median provides refuge for informal road crossings and provides opportunity for rain gardens

NEIGHBORHOOD GREENWAYS



Raised median prevents motor vehicle traffic but permits bicycle and pedestrian traffic

Curb extensions help to calm traffic, shorten road crossing distance and provide areas for rain gardens

Mini-traffic circle replaces stop signs and calms traffic

Generally 5' sidewalks on both sides of the road

One-way choker at road entrance prohibits motor vehicle traffic from entering from one direction, although road remains open to two-way traffic

Pathways through parks and schools can provide shortcuts unavailable to motorized traffic

Provide wayfinding along the route

When sidewalks are unavailable, it may be desirable to indicate an area for bicycles and pedestrians or sign as a shared roadway

Rain garden

Traffic Calming

Stop or yield signs favor through movement

Short pathways that connec separated roadways provide non-motorized shortcuts to other neighborhoods and routes

PRINCIPLE NON-MOTORIZED ROUTE SEGMENTS

The Principle Non-motorized Routes may be seen as being comprised of three segments. The following provides more information on each of the segments.

NORTH/SOUTH CORRIDOR: KAL-HAVEN/KRV TRAILS TO VILLAGE DISTRICT

9th Street is a key north/south connection across the township. It also provides a link between the Kal-Haven/KRV Trails, the Village District and Texas Township. With the implementation of sidewalks, bike lanes, crossing-islands and roundabouts, 9th Street has the potential to become a lively street that welcomes bicycle and pedestrian activity. An alternate route utilizing neighborhood connector routes and off-road trails should be developed as an alternative to 9th Street Corridor for families, beginner cyclists and people who would prefer to be away from a busy corridor.

EAST/WEST CORRIDOR: 4TH STREET TO QUAIL RUN

Stadium Drive is a key east/west corridor that connects commercial, residential and industrial areas to the Village District. Stadium Drive between 6th Street and 9th Street is a busy 5 lane road with high speeds, traffic and numerous driveways making it a challenging corridor to provide non-motorized facilities in the near-term. An alternate route utilizing neighborhood connector routes and off-road trails should be developed as an alternative to Stadium for families, beginner cyclists and people who would prefer to be away from a busy corridor. The Village District has the potential to be the “downtown” of Oshtemo Township and should be developed to support such an environment. A more detailed study should be done in the Village District focusing on how the area can support a more bicycle and pedestrian friendly atmosphere.

KAL-HAVEN TRAIL & KALAMAZOO RIVER VALLEY TRAIL CONNECTION

Together, the Principle Non-motorized Routes provide connections to the Kal-Haven/KRV Trails. The Kal-Haven Trail and Kalamazoo River Valley Trail are part of the Great Lake to Lake Trail that stretches across the state of Michigan from South Haven to Port Huron. Providing connections from the more populated areas of the township to the Kal-haven/KRV Trails will help encourage bicycle and pedestrian use and provide a good starting point to expand the non-motorized network.

4. APPENDIX

Corridor Summaries and Recommendations Page 17

Kal-Haven/KRV Trail Connector Alternatives Page 47

Design Guidelines Page 51

December 2011 Markup Page 55

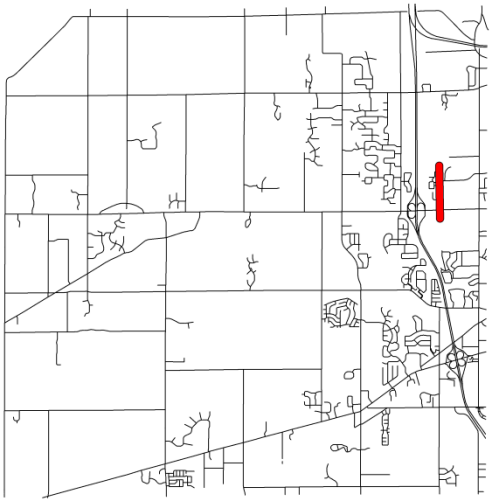
CORRIDOR SUMMARIES AND RECOMMENDATIONS

This section provides the recommendations for the most appropriate type of pedestrian and bicycle facility in each corridor based on safety, context, demand, feasibility and general cost/benefit for the 14 corridors indicated on the December 2011 Mark-up. The following pages provide an overview of each corridor which includes recommendations regarding travel along and across the roadway and provides implementation and phasing strategies:

- **Maple Hill Drive .....pg. 18**
- **Croyden Avenue .....pg. 20**
- **Green Meadow Drive/Driftwood Avenue .....pg. 22**
- **Atlantic Avenue .....pg. 24**
- **H Avenue: from 9th Street to Drake Road.....pg. 26**
- **West Main Street: from 9th Street to Drake Road .....pg. 28**
- **KL Avenue: from Drake Road to 4th Street .....pg. 30**
- **Stadium Drive: from 4th Street to Quail Run Road.....pg. 32**
- **Parkview Avenue: from Stadium Drive to Drake Road .....pg. 34**
- **Drake Road: from H Avenue to Parkview.....pg. 36**
- **11th Street: from KL Avenue to N Avenue .....pg. 38**
- **10th Street: from West Main Street to G Avenue.....pg. 40**
- **4th Street: from West Main Street to N Avenue .....pg. 42**
- **9th Street/GH Avenue/8th Street: from N Avenue to Briarwood Avenue .....pg. 44**

MAPLE HILL DRIVE

CORRIDOR DESCRIPTION



Maple Hill Drive is a two lane road with curbs. The road is approximately 30 feet wide with approximately 15 foot wide travel lanes.

At the intersection of Maple Hill Drive and West Main Street a turning lane is added for traffic turning onto West Main Street. Maple Hill Drive is approximately 45 feet wide at the intersection.

This corridor provides access to commercial centers and residential developments.

Existing Non-motorized Facilities:

There is an existing sidewalk along the east side of Maple Hill Drive beginning at W Main Street and ending approximately 620 feet to the north where a marked crosswalk provides access across Maple Hill Drive to Vintage Lane. The sidewalk is continuous and in good condition.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Construct sidewalk on east side of road between West Main Street and Croyden Avenue (partially completed)

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Add sidewalk to Maple Hill Drive north of West Main Street (side of street not specified)

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Add bike path to Maple Hill Drive between Croyden Avenue and West Main Street and add sidewalk along Maple Hill Drive north of Croyden Avenue (side of street not specified)

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Add bike lanes to Maple Hill Drive by restriping the road so the travel lanes are 10 feet wide and the bikes lanes are 5 feet wide. To add bike lanes at the intersection realign the striping at the intersection to provide a designated left turn lane and one through lane in each direction. The travel lanes should be 11 feet wide and the bike lanes 6 feet wide at the intersection.
- Complete the sidewalk along the east side of the road between West Main Street and Croyden Avenue.
- Complete the sidewalk along the east side of Maple Hill Drive south of West Main Street.

Mid-term Improvements:

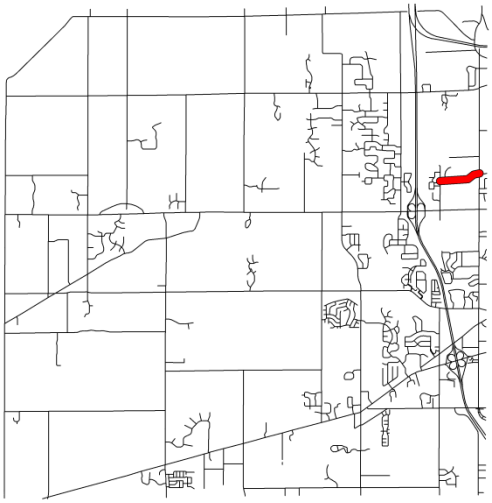
- Complete the sidewalk along the east side of the Maple Hill Drive north of Croyden Avenue.
- Add crossing improvements at Croyden Avenue, Summer Ridge Lane, and Summer Ridge Blvd.

Long-term Improvements:

- Construct sidewalk along the west side of Maple Hill Drive north of West Main Street.
- When Maple Hill Drive is reconstructed evaluate if road needs to be widened to provide bike lanes at a level of service of C or above (see Design Guidelines in Appendix for more details).

CROYDEN AVENUE

CORRIDOR DESCRIPTION



Croyden Avenue is a two lane road with curbs. The road is approximately 30 feet wide with 15 foot wide travel lanes.

At the intersection of Croyden Avenue and Drake Road, a turning lane is added for traffic turning onto Drake Road, the nature of this lane cannot be determined via air photo. Croyden Avenue is approximately 35 feet wide at the intersection with 3 lanes of traffic.

This corridor provides access to commercial centers and residential developments.

Existing Non-motorized Facilities:

None.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Construct sidewalk on south side of Croyden Avenue between Maple Hill Drive and Drake Road

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Construct sidewalk along Croyden Avenue between Maple Hill Drive and Drake Road (side of road not specified)

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Construct bike path along Croyden Avenue between Maple Hill Drive and Drake Road (side of road not specified)

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Add bike lanes to Croyden Avenue by restriping the road so the travel lanes are 10 feet wide and the bikes lanes are 5 feet wide. The road width at the intersection is too narrow to allow near-term bike lanes in both directions. A shared-lane marking may be used as a temporary alternative at the intersection.

Mid-term Improvements:

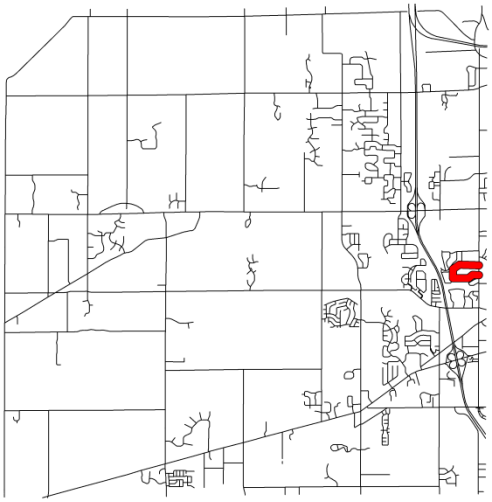
- Construct sidewalk along the north side of the Croyden Avenue between Maple Hill Drive and Drake Road as the majority of housing is on the north side.
- Add pedestrian crossings at the intersection of Croyden Avenue and Drake Road and at Croyden Avenue and Maple Hill Drive, as well as providing sidewalk connections to the crosswalks where they do not exist

Long-term Improvements:

- Construct sidewalks along the south side of Croyden Avenue between Maple Hill Drive and Drake Road.
- When Croyden Avenue is reconstructed, widen road to add bike lanes at intersection and evaluate if Croyden Avenue needs to be widened to provide bike lanes at a level of service of C or above (see Design Guidelines in Appendix for more details).

GREEN MEADOWS DRIVE/DRIFTWOOD AVENUE

CORRIDOR DESCRIPTION



Green Meadows Drive between Drake Road and Dragonfly Road is a 2 lane residential road with curbs. The road is 32 feet wide with 11 foot wide travel lanes and 5 feet wide bike lanes.

Green Meadows north of Dragonfly Road is a 2 lane residential road with paved shoulders. The road is approximately 28 feet wide and has 14 foot wide travel lanes.

Driftwood Avenue is a 2 lane residential road without curbs. The road is approximately 22 feet wide with 11 foot travel lanes. When Drivewood Avenue turns into Crimson Lane it becomes a 2 lane road with curbs that is approximately 30 feet wide with no pavement markings designating lanes.

Driftwood Avenue turns into Arboretum Parkway on the east side of Drake Road, just to the east of the township boarder. Arboretum Parkway has existing bike lanes that head toward Kalamazoo and terminate at the roundabouts at Solon Street.

There is an existing utility corridor that may have the potential for an off-road trail that runs along Highway 131 between Green Meadow Road and the Kal-Haven/KRV Trails.

Existing Non-motorized Facilities:

Green Meadows Drive has existing bike lanes between Drake Road and Dragonfly Road.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Construct Bike Lanes along Green Meadow Drive (Already exists between Drake Road and Dragonfly Road)

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Construct sidewalk along Driftwood Avenue, Crimson Lane and Green Meadows to connect to potential bike path that is planned for the utility easement along Highway 131 (side of road not specified)

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Construct sidewalk along Driftwood Avenue, Crimson Lane and Green Meadows to connect to potential bike path that is planned for the utility easement along Highway 131 (side of road not specified)

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Construct sidewalk along south side of Driftwood Avenue/Crimson Lane.
- Construct sidewalk along south side of Green Meadows Road west of Crimson Lane.
- Improve road crossing along Green Meadow Road at the intersections of Crimson Lane, Hickory Valley Drive and Round Hill Road.
- Improve road crossing at intersection of Driftwood Avenue and Drake Road.

Mid-term Improvements:

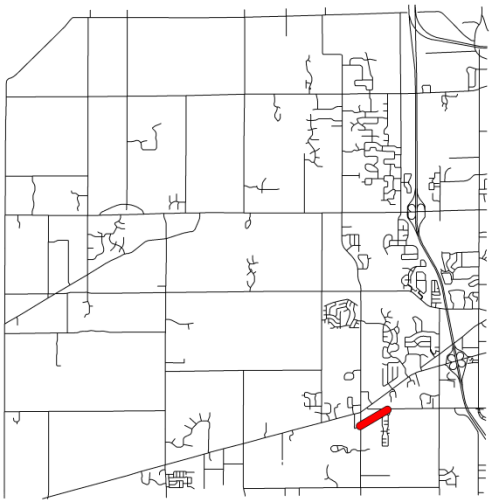
- Construct sidewalk on north side of Green Meadow Road between Crimson Lane and Drake Road.
- Improve road crossing at Drake Road and Green Meadow Road.

Long-term Improvements:

- Complete sidewalks along both sides of Green Meadows Drive, Driftwood Avenue and Crimson Lane.

ATLANTIC AVENUE

CORRIDOR DESCRIPTION



Atlantic Avenue is located in the Village District and provides access to a large manufactured home development.

Atlantic Avenue is a 2 lane road with curbs. The road is approximately 22 feet wide with 11 foot travel lanes.

Existing Non-motorized Facilities:

There is a short segment of sidewalk on the north side of Atlantic Avenue extending approximately 450 feet to the east from 9th Street.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Construct sidewalk on the north side of Atlantic Avenue between 9th Street and Parkview Avenue.

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Construct sidewalk along Atlantic Avenue between 9th Street and Parkview Avenue (side of street not specified).

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Construct sidewalk along Atlantic Avenue between 9th Street and Parkview Avenue (side of street not specified).

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Designate Atlantic Avenue as a bike route with signage.
- Add shared-lane markings.

Mid-term Improvements:

- Add pedestrian crossing at Atlantic Avenue and 9th Street intersection as well as providing sidewalk connections around the intersection where they do not exist.
- Construct sidewalk on the south side of Atlantic Avenue.

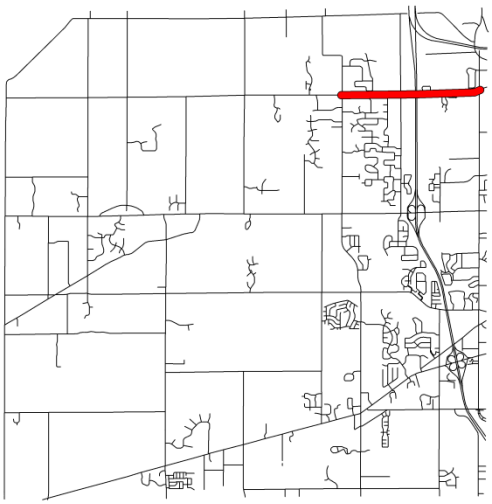
Long-term Improvements:

- Construct sidewalk on the north side of Atlantic Avenue.
- When road is reconstructed, evaluate if bike lanes are needed to maintain a level of service rating of C (see Design Guidelines in Appendix for more details).

.

H AVENUE: FROM 9TH STREET TO DRAKE ROAD

CORRIDOR DESCRIPTION



H Avenue from 9th to 10th is a 2 lane road with paved shoulders. The road is approximately 28 feet wide with 11 foot travel lanes and 3 foot paved shoulders.

H Avenue from 10th to Highway 131 overpass is a two lane road with paved shoulders. There are guardrails on both sides of this segment of road limiting the bridge width to 28 feet wide. There are 11 foot wide travel lanes and 3 foot wide paved shoulders.

H Avenue from Highway 131 overpass to Drake Road is a two land road with paved shoulders. The road is approximately 30 feet wide, with 12 foot travel lanes and 3 foot paved shoulders.

H Avenue flares at West Port Drive to include a center turn lane and a right turn lane for access to the neighborhood to the south. At this location the road is approximately 50 feet wide with four travel lanes to the west of the intersection and approximately 40 feet wide with three travel lanes to the east of the intersection. Curbs are also present on the south side of the road at this intersection.

H Avenue is a truck route.

Existing Non-motorized Facilities:

None.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Construct a sidepath along the south side of H Avenue from Highway 131 to Drake Road.

There are no recommendations for H Avenue between Highway 131 and 10th Street.

Construct sidepath along the north side of H Avenue between 9th Street and 10th Street.

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Add bike lanes along H Avenue between 10th Street and Drake Road and between Ramblewood Drive and 9th Street.

Construct sidepath along the north side of H Avenue between 9th Street and 10th Street and along south side of H Avenue between Ramblewood Drive and 10th Street.

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Add bike lanes along H Avenue between 10th Street and Drake Road and between Ramblewood Drive and 9th Street.

Construct sidepath along the north side of H Avenue between 9th Street and 10th Street and along south side of H Avenue between Ramblewood Drive and 10th Street.

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Narrow travel lanes to 11 feet wide to provide for 4 foot paved shoulders along H Avenue between Highway 131 overpass and Drake Road.
- Add "Share the Road" signs to H Avenue between Highway 131 overpass and 9th Avenue.
- Add wide sidewalk along the north side of H Avenue between 9th Street and 10th Street (with crossing improvements at intersections).
- Add road crossing improvement at the intersection of H Avenue and Bramble Drive.

Mid-term Improvements:

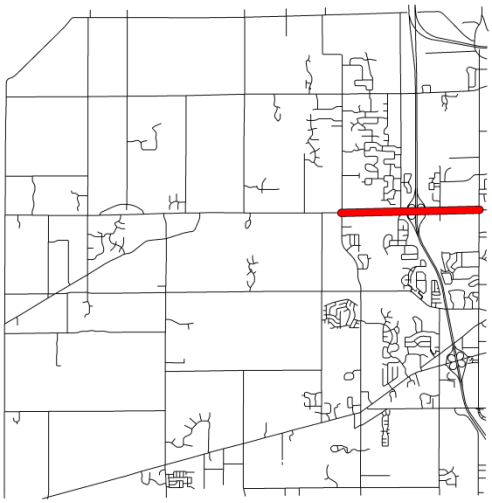
- Add sidewalk to the south side of H Avenue between 9th Street and 10th Street.
- Construct Sidewalk along south side of H Avenue between the Utility Corridor and Drake Road.
- Add road crossing improvement at H Avenue and Northfield Trail.

Long-term Improvements:

- When H Avenue between 10th Street and the Utility Corridor, including the Highway 131 overpass, is reconstructed, coordinate with the implementation of the Utility Corridor Pathway to provide a sidepath on the south side of H Avenue between 10th Street and the utility corridor. Include crossing improvements at the 10th Street and H Avenue intersection, along with wayfinding signage to the Kal-Haven/KRV Trails at that time.
- When H Avenue is reconstructed between 9th Avenue and the Utility Corridor, including the Highway 131 overpass, widen road to provide bike lanes at a level of service of C or above (see Design Guidelines in Appendix for more details).
- When H Avenue is reconstructed between Highway 131 overpass and Drake Road, evaluate if road needs to be widened to provide bike lanes at a level of service of C or above (see Design Guidelines in Appendix for more details).
- Construct sidewalk on north side of H Avenue between Drake Road and the Utility Corridor.
- Add road crossing improvement at H Avenue and the Utility Corridor.

WEST MAIN STREET: FROM 9TH AVENUE TO DRAKE ROAD

CORRIDOR DESCRIPTION



There is a lot of commercial activity at West Main Street and 9th Street and Drake Road. The library, township hall and park are also all located off of West Main Street near 8th Street.

West Main Street east of the 131 interchange is a 5 lane road with curbs. The width of the road changes all along the corridor due to flared turning lanes at driveway entrances. For the most part, the travel lanes are approximately 11 to 12 feet wide.

The interchange of West Main Street and Highway 131 has free-flowing ramps and merging lanes on the bridge deck on the north side that present challenges for non-motorized transportation. The bridge deck is approximately 80 feet wide with 6 travel lanes.

West Main between 9th Street and 10th Street is a 5 lane road with curbs. The road is approximately 60 feet wide with 12 foot travel lanes.

The Average Daily Traffic (ADT) for this corridor is over 30,000.

Existing Non-motorized Facilities:

There are existing sidewalks on both the north and south side of West Main Street from just east of the 131 Interchange and continuing all the way to Drake Road. The sidewalks are in good condition with marked crosswalks at driveway intersections and detectable warning.

There are existing wide sidewalks on both sides of West Main Street between 9th Avenue and 10th Avenue.

There are no existing sidewalks across the bridge at the 131 Interchange.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Construct sidewalks on both sides of West Main Street between Highway 131 and Drake Road

Construct sidewalk to the north and sidepath to the south of West Main Street between Highway 131 and 9th Avenue.

There are no recommendations for the bridge.

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Construct sidewalks on both sides of West Main Street between Highway 131 and Drake Road.

Construct sidewalk to the north and sidepath to the south of West Main Street between Highway 131 and 9th Avenue.

There are no recommendations for the bridge.

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Construct sidewalks on both sides of West Main Street between Highway 131 and Drake Road

Construct sidewalk to the north and sidepath to the south of West Main Street between Highway 131 and 9th Avenue.

Construct sidepath on both sides of the bridge over Highway 131.

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

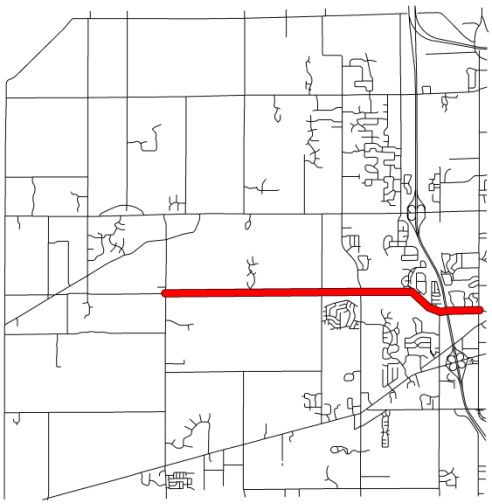
- The bridge over Highway 131 is scheduled to be rehabilitated in 2012 and there are plans to add a sidepath to the south side of West Main Street providing a connection between the existing sidewalks. The path on the south side avoids the free flowing ramps. High visibility crosswalks should be used in conjunction with tightening the curb radius and using Rapid Rectangular Flash Beacons.
- Add pedestrian wayfinding signage on the sidewalk on the north side at the intersections of Maple Hill Drive and 10th Street directing pedestrians to cross to the south side of the street if they plan on crossing the freeway.
- Add pedestrian crossings across West Main Street at the signal between Maple Hill Drive and Drake Road as well providing sidewalk connections to the crosswalks where they do not exist
- Add a mid-block crossing island across West Main Street between 9th and 10th street where the center turn lane is not needed.

Long-term Improvements:

- When Highway 131 interchange is reconstructed, safety issues with the free-flowing ramps should be addressed. The free-flowing ramps should be placed at a 45 degree angle to West Main Street. Also, bike lanes and sidewalks should be considered in both directions over the bridge deck.
- When West Main Street is reconstructed, the road should be widened to incorporate bike lanes that maintain a level of service rating of C (see Design Guidelines in Appendix for more details).

KL AVENUE: FROM DRAKE ROAD TO 4TH STREET

CORRIDOR DESCRIPTION



KL Avenue from Drake Road to 9th Street is a two lane road with paved shoulders. The road is approximately 30 feet wide, with 11 foot travel lanes and 4 foot paved shoulders.

KL Avenue flares at the intersections of Copper Beach Blvd, Jefferson Commons, S 11th Street, Concord Place Drive, Mount Royal Drive, Claremont Drive and Drake Road to include center turn lanes, right turn lanes, and/or bypass lanes. Curb are also present at these intersections on at least one side of the road.

KL Avenue from 9th Street to 4th Street is a two lane road with paved shoulders. The road is approximately 26 feet wide, with 11 foot travel lanes and 2 foot paved shoulders.

Beginning at Drake Road, just east of the township boundary, KL Avenue has an existing bike lane that heads toward downtown Kalamazoo terminating at Western Michigan University's Campus.

Existing Non-motorized Facilities:

There are 4 foot paved shoulders on KL Avenue between Drake Road and 9th Street.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Add bike lanes along KL Avenue between Drake Road and 8th Street.

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Add bike lanes along KL Avenue between Drake Road and 4th Street.

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Add bike lanes along KL Avenue between Drake Road and 4th Street.

Construct bike path along the north side of KL Avenue between 4th Street and 9th Street.

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

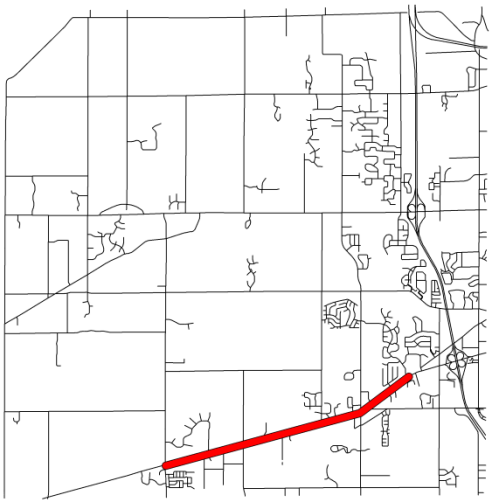
- Sign KL Avenue with "Share the Road" signs between 9th Street and 4th Street
- Construct sidewalk on north side of KL Avenue between Colonial Trail and Drake Road. This would require boardwalk at pond but serves housing better.
- Improve road crossing at KL Avenue and Colonial Trail.

Long-term Improvements:

- When KL Avenue is reconstructed between 4th Street and 9th Street widen street to add bike lanes at a level of service of C or above (see Design Guidelines in Appendix for more details).
- When road is reconstructed evaluate if KL Avenue needs to be widened between 9th Street and Drake Avenue to provide bike lanes at a level of service of C or above (see Design Guidelines in Appendix for more details).
- While a sidewalk between Copper Beach Road and 9th Street would be ideal, due to topography, wetlands and vegetation it is likely cost prohibitive. The long-term recommendation for this corridor would be to maintain a wide paved shoulder and provide an alternative route utilizing neighborhood connector routes to the north and south of KL Avenue.
- Since KL Avenue between 4th street and 9th street passes through a rural area of the community with few developments, it is recommended that a wide paved shoulder be maintained for bicycle and pedestrian use. In the future if development and population increases along the KL corridor between 4th Street and 9th Street, evaluate adding sidewalks to this segment.

STADIUM DRIVE: FROM 4TH STREET TO QUAIL RUN ROAD

CORRIDOR DESCRIPTION



Stadium Drive is a key east/west corridor that connects commercial, residential and industrial areas to the Village District.

Stadium Drive between 6th Street and Quail Run Road is a 5 lane road with curbs. The road is approximately 60 feet wide, with 12 foot wide travel lanes. 6th Street to 8th Street has ADT of 14,566, 8th Street to 9th Street has ADT of 17,788 and 9th Street to Quail Run Road has an ADT of around 29,000.

Stadium Drive from 6th Street to 4th Street is a 2 lane road with paved shoulder. The road is approximately 32 feet wide, with 11 foot travel lanes and 5 foot paved shoulders. This segment of road has an ADT of 14,344.

Stadium Drive between 6th Street and 4th Street flares at the intersections of S 5th Street and Hathaway Road to include center turn lanes. In this segment the road width is approximately 46 feet wide and narrow to 41 feet for a short portion. This segment of road has an ADT of around 14,000.

Existing Non-motorized Facilities:

There are a few disconnected segments of sidewalk along the north side of Stadium Drive between 8th Street and Quail Run Road

There is an existing 5 feet paved shoulder on Stadium Drive between 6th Street and 4th Street.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Add sidepath to south side of Stadium Drive between 4th Street and 8th Street.

Construct sidewalk on both sides of Stadium Drive between 8th Street and Quail Run Road.

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Construct pathway along Stadium Drive (side of road is not specified) between 4th Street and 8th Street.

Construct sidewalk on both sides of Stadium Drive between 8th Street and Quail Run Road.

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Construct pathway along Stadium Drive (side of road is not specified) between 4th Street and 8th Street.

Construct sidewalk on both sides of Stadium Drive between 8th Street and Quail Run Road.

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Designate the 5 feet wide paved shoulders between 4th Street and 6th Street as Bike Lanes with signage and pavement markings.
- Restripe Stadium Drive at the intersection of 5th Street and Hathaway Road to continue the bike lanes through the intersection.
- Complete sidewalk gaps on north side of Stadium Drive between 8th Street and Quail Run Road.
- Add pedestrian crossing improvements at the intersection of Stadium Drive at Fairgrove Street and Quail Run Road as well as providing sidewalk connections to the crosswalks where they do not exist.

Mid-term Improvements:

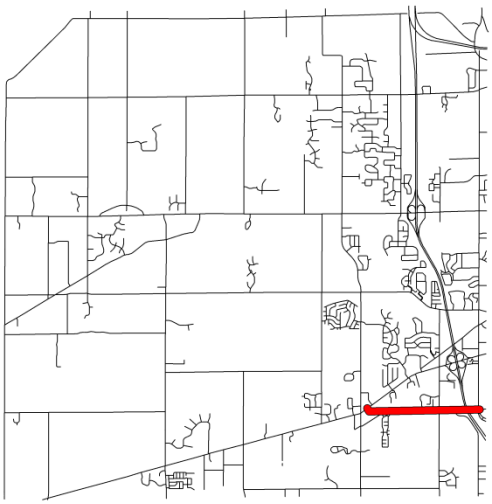
- Construct sidewalk on the north side of Stadium Drive between 4th Street and 8th Street.
- Construct sidewalks along the south side of Stadium Drive between 8th Street and Quail Run Road.
- Add pedestrian crossing improvements at the intersection of Stadium Drive and Hathaway Road as well as providing sidewalk connections to the crosswalks where they do not exist.
- Add cross islands on Stadium Drive at 8th Street, 7th Street and Andover Drive where the left turn lane is not utilized.

Long-term Improvements:

- Construct sidewalk on the south side of Stadium Drive between 4th Street and 8th Street.
- When Stadium Drive between 9th Street and Quail Run Road is reconstructed widen road to provide bike lanes at a level of service of C or above.
- Stadium drive between 4th Street and Quail Run Road is not suitable for shared use path on either side of the road due to the number of intersecting roads and driveways. While the road could be restriped to provide a 4 foot wide bike lane (5 feet is minimum with curb in AASHTO Guidelines), few would use the substandard lane on such a high speed roadway. The focus should be on constructing alternative routes to the north or south of the corridor.

PARKVIEW AVENUE: FROM STADIUM DRIVE TO DRAKE ROAD

CORRIDOR DESCRIPTION



Parkview Avenue from Stadium Drive to 11th Street is a 2 lane road with paved shoulders. The road is approximately 30 feet wide, with 11 foot wide travel lanes and 4 foot wide paved shoulders. Parkview Avenue flares at Atlantic Avenue and Crystal Lane to accommodate center turn lanes at the intersection.

Parkview Avenue between 11th Street and 12th Street is a 3 lane road with paved shoulders. The road is approximately 44 feet wide with 11 foot travel lanes and 10 foot center turn lane. The paved shoulders are approximately 8 feet wide on the north side of the road and 4 feet wide on the south side.

Parkview Avenue between 12th Street and Drake Road is a 3 lane road with paved shoulders. The road is approximately 50 feet wide with 11 foot travel lanes. The paved shoulders are approximately 8 feet wide. However as Parkview Avenue approaches the intersection of Drake road, the additional turning lanes reduce the paved shoulders and are replaced with curbs near the intersection. The curb section of Parkview Avenue is approximately 56 feet wide with 4 lanes of traffic.

The Village District is located at Parkview Avenue and Stadium and Western Michigan University's campus is located at Parkview Avenue and Drake Road.

Existing Non-motorized Facilities:

There are 4 foot wide and greater paved shoulders along Parkview Avenue between 12th Street and Drake Road.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Bike Lanes are proposed for Parkview Avenue between 11th Street and Drake Road.

Sidewalks are proposed for both sides of Parkview Avenue between Stadium Drive and 11th Street.

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Bike Lanes are proposed for Parkview Avenue between 11th Street and Drake Road.

Sidewalks are proposed for Parkview Avenue between Stadium Drive and 11th Street (side of street not specified).

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Bike Lanes are proposed for Parkview Avenue between 11th Street and Drake Road.

Sidewalks are proposed for Parkview Avenue between Stadium Drive and 11th Street (side of street not specified).

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Restripe the intersection at Drake and Parkview to include Bike Lanes through the intersection.
- Add pedestrian crossings at Parkview Avenue and 11th Street intersection as well as providing sidewalk connection around the intersection where they do not exist.
- Construct sidewalk along the north side of Parkview Avenue between Stadium Drive and 11th Street.
- Add crossing Island at Parkview Avenue and Atlantic Avenue.
- Construct sidewalk along the south side of Parkview Avenue between 11th Street and Drake Road.
- Retro fit the Bridge deck by removing the center turn lane and providing 11 foot travel lanes in each direction, 6 foot bike lanes in each direction and 8 foot sidewalks in each direction.

Mid-term Improvements:

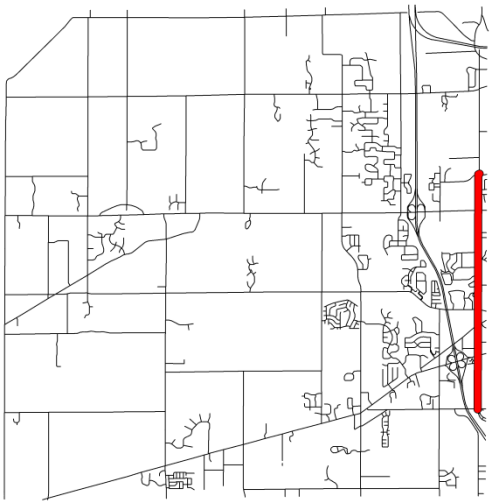
- Construct sidewalk along the south side of Parkview Avenue between Stadium Drive and Atlantic Avenue.
- Add pedestrian crossings at Parkview Avenue and 11th Street intersection as well as providing sidewalk connection around the intersection on where they do not exist.
- Construct sidewalk along the north side of Parkview Avenue between 11th Street and Drake Road.

Long-term Improvements:

- When bridge over 131 is reconstructed construct sidewalk along Parkview Ave between 11th Street and Drake Road.
- In the future, if development occurs on the agricultural land between Atlantic Avenue and 11th Street, evaluate adding sidewalks to the south side of Parkview Avenue along this segment.

DRAKE ROAD: FROM H AVENUE TO PARKVIEW AVENUE

CORRIDOR DESCRIPTION



There is significant commercial and residential development along Drake Road. Kalamazoo Central High School is located off Drake Road near H Avenue and Drake Road terminates at Western Michigan University's BTR Park to the south.

Drake Road between H Avenue and Croyden Avenue is a 2 lane road with paved shoulders. The road is approximately 30 feet wide with 11 foot travel lanes and 4 foot paved shoulders. The high school is located near H Avenue on the east side of Drake Road.

Drake Road between Stadium Drive and Croyden Avenue is a 5 lane road with curbs. The width of the road changes along the corridor due to flared turning lanes at driveway entrances. For the most part, the road is approximately 58 feet wide with 11 foot to 12 foot wide travel lanes. ADT for this segment is 31,559.

About a quarter mile south of Stadium Drive, Drake Road becomes a divided road with two lanes in each direction with a 30 foot planted median. The road has a curb along the inside lanes and a 5 foot paved shoulder along the outside lane.

Existing Non-motorized Facilities:

There are segments of existing sidewalk along the east side of Drake Road for the majority of the corridor; however there are a number of large gaps within this segment that create a disconnected route.

There are existing bike lanes along Drake Road between Stadium Drive and Parkview Avenue. The bike lanes appear to be in good conditions and designed with pavement markings.

There are existing 4 foot paved shoulder on Drake Road between H Avenue and Croyden Avenue.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Add bike lanes to Drake Road between Croyden Avenue and Parkview Avenue.

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Add sidewalk to Drake Road between Croyden Avenue and Parkview Avenue (side of street not specified).

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Add sidewalk to Drake Road between Croyden Avenue and Parkview Avenue (side of street not specified).

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Complete all sidewalk gaps on the east side of Drake Road between H Avenue and Parkview Avenue.
- Add pedestrian crossing at Drake and Driftwood Avenue intersection as well as providing sidewalk connection on south west corner of intersection where they do not exist.
- Construct crossing island at Drake Road and Beckley Road where left turn lane is not utilized.
- Improve pedestrian crossing at Drake Road and Stonebrook Avenue, H Avenue and Croyden Avenue.

Mid-term Improvements:

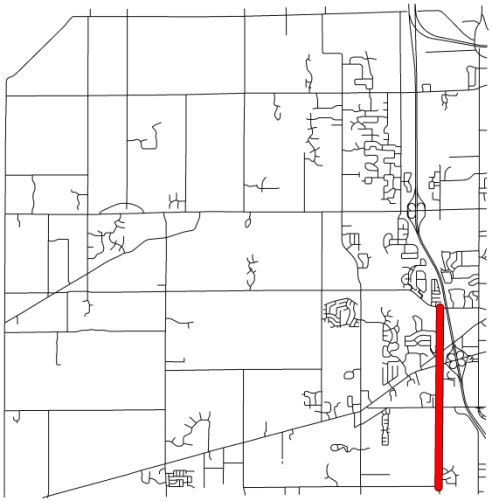
- Construct sidewalks on the west side of Drake Road between H Avenue and Stadium Drive.

Long-term Improvements:

- When Drake Road is reconstructed between Stadium Drive and Croyden Avenue widen road to provide bike lanes at a level of service of C or above (see Design Guidelines in Appendix for more details).
- In the future, if development occurs on the undeveloped land on the west side of Drake Road between Stadium Drive and Parkview Avenue, evaluate adding sidewalks to the west side of Drake Road along this segment.

11TH STREET: FROM KL AVENUE TO N AVENUE

CORRIDOR DESCRIPTION



11th Street from Parkview Avenue to N Avenue is a 2 lane road with unpaved shoulders. The road is approximately 22 feet wide, with 11 foot wide travel lanes.

11th Street from Parkview Avenue to Holiday Terrace is a 2 lane road with paved shoulders. The road is approximately 30 feet wide, with 11 foot wide travel lanes and 4 foot paved shoulders.

11th Street from Stadium Drive to Holiday Terrace is a 3 lane road with paved shoulders. The road is approximately 42 feet wide, with 11 foot wide travel lanes and 4 foot paved shoulders.

11th Street from Stadium Drive to KL Avenue is a two lane road with paved shoulders. The road is approximately 30 feet wide with 11 foot wide travel lanes and 4 foot wide paved shoulders. There is an at-grade railroad crossing as well.

Existing Non-motorized Facilities:

There are 4 foot paved shoulders along 11th St between Parkview Avenue and KL Avenue.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Sidewalk is proposed for the west side of 11th Street between Parkview Avenue and Stadium Blvd.

Bike Lanes are proposed for 11th Street between Parkview Avenue and N Avenue.

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Sidewalk is proposed for 11th Street between Parkview Avenue and Stadium Blvd. (side of road not specified).

Bike Lanes are proposed for 11th Street between Parkview Avenue and N Avenue and between Stadium Drive and KL Avenue.

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Sidewalk is proposed for 11th Street between Parkview Avenue and Stadium Blvd. (side of road not specified).

Bike Lanes are proposed for 11th Street between Parkview Avenue and N Avenue and between Stadium Drive and KL Avenue.

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Construct sidewalk on the west side of 11th Street between Parkview Avenue and KL Avenue.
- Construct sidewalk on the east side of 11th Street between Parkview Avenue and N Avenue.
- Improve road crossings and the intersection of 11th Street and Parkview Avenue, Michigan Avenue, KL Avenue and N Avenue.
- Add "Share the Road" Sign to 11th Street between Parkview Avenue and N Avenue
- Add road crossing improvements on 11th Street at Coddington Lane and Holiday Terrace.

Mid-term Improvements:

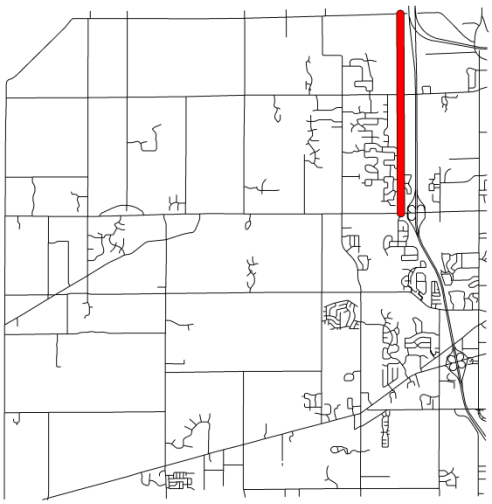
- Construct sidewalk on the west side of 11th Street between Parkview Avenue and N Avenue.

Long-term Improvements:

- In the future, if development occurs on the agricultural land on the east side of 11th Street between N Avenue and Parkview Avenue, evaluate adding sidewalks to the west side of 11th Street along this segment.
- When 11th Street between Parkview Avenue and N Avenue is reconstructed, widen road to provide bike lanes at a level of service of C or above (see Design Guidelines in Appendix for more details).

10TH STREET: FROM WEST MAIN STREET TO G AVENUE

CORRIDOR DESCRIPTION



10th Street between H Avenue and West Main Street is a 2 lane road with paved shoulders. For the most part the road is approximately 30 feet wide with 11 foot travel lanes and 4 foot paved shoulders; however there are a few areas where the road narrows and the paved shoulders reduced to less than 4 feet wide.

10th Street between H Avenue and G Avenue is a 2 lane road with paved shoulder. The road is approximately 28 feet wide with 11 foot travel lanes and 3 foot paved shoulders. There is significant topography in this area.

The ADT is 3,157.

The majority of development along 10th Street is residential. Also, the Kal-Haven Trail and the Kalamazoo River Valley Trail meet at 10th Street a half mile north of H Avenue with an existing road crossing on 10th Street at that location.

Existing Non-motorized Facilities:

None.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Add sidepath along the east side of 10th Street between West Main Street and G Avenue.

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Add bike lanes along 10th Street between West Main Street and G Avenue.

Construct path along the west side of 10th Street between West Main Street and Kal-Haven/KRV Trails.

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Add bike lanes along 10th Street between West Main Street and G Avenue.

Construct path along the west side of 10th Street between West Main Street and Kal-Haven/KRV Trails.

Since 2011:

There has been discussion of constructing a pathway along the east side of 10th Avenue between West Main Street and Torrington Road and then crossing the road and continuing the pathway on the west side of 10th Street between Torrington Road and the Kal-Haven/KRV Trails.

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Sign 10th Street between West Main Street and G Avenue with "Share the Road" Sign.
- The two most recent previous studies recommend placing a sidepath on the west side of 10th Street between H Avenue and the Kal-Haven/KRV Trail. While the previous studies may have done a more in depth study of this corridor, it should be noted that vegetation has been cleared on the east side of the road due to the presence of the power lines. Although both sides of the road present topographic challenges, it may be easier to implement the pathway on the east side of the road due to the cleared area. Also, if the pathway was placed on the east side of the road the vegetation along the west side of the street would be preserved as not to disturb the visual character of the roadway.

Mid-term Improvements:

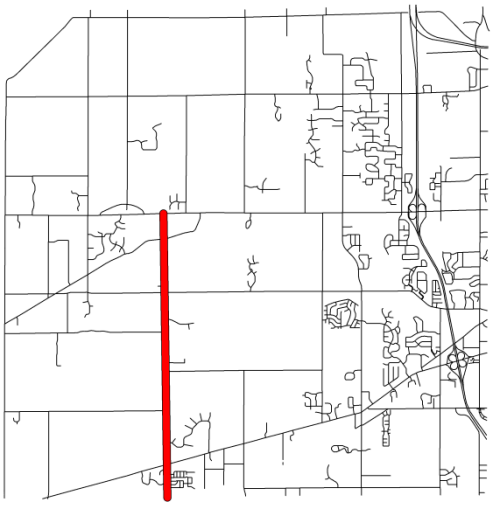
- The two most recent previous studies recommend placing a sidepath along the west side of 10th Street between West Main Street and H Avenue. Ideally, sidewalk should be built on both sides of the roads. Due to the development on both sides of the road, existing vegetation, ponds and power lines, it doesn't really matter which side of the street the sidewalk is constructed first. Either way when the sidewalk is constructed, crosswalks need to be built to allow access from developments on the other side of the street to the sidewalk. Crosswalks should be placed where local roads and entrances to residential communities intersect 10th Street.

Long-term Improvements:

- When 10th Street is reconstructed, widen road to provide bike lanes at a level of service of C or above (see Design Guidelines in Appendix for more details).

4TH STREET: FROM WEST MAIN STREET TO BRIARWOOD AVENUE

CORRIDOR DESCRIPTION



4th Street passes through a rural area of the community with most of the residential development located south of Stadium Drive.

4th Street is a 2 lane road with unpaved shoulders. The road is approximately 24 feet wide with 12 foot travel lanes.

There is an at-grade railroad crossing.

Existing Non-motorized Facilities:
None.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:
Unknown (or none).

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:
Add bike lanes along 4th Street between N Avenue and West Main Street.

Construct path along the east side of 4th Street between N Avenue and West Main Street

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:
Add bike lanes along 4th Street between N Avenue and West Main Street.

Construct path along the east side of 4th Street between N Avenue and West Main Street.

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Sign the road with "Share the Road" Sign.
- Construct sidewalk on the east side of 4th Avenue between Hathaway Road and Briarwood Avenue.

Mid-term Improvements:

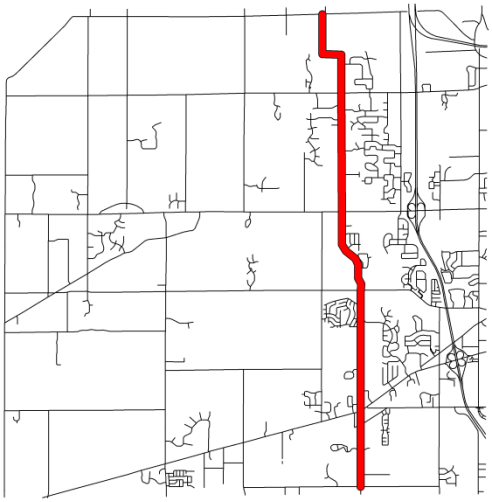
- Add road crossing improvement at 4th Avenue and Greystone Road.

Long-term Improvements:

- When 4th Street is reconstructed, widen the road to provide bike lanes at a level of service of C or above (see Design Guidelines in Appendix for more details).
- Since 4th Avenue between West Main Street and Stadium Drive passes through a rural area of the community with few developments, it is recommended that a wide paved shoulder be maintained for bicycle and pedestrian use. In the future if development and population increases along the KL corridor between 4th Street and 9th Street, evaluate adding sidewalks to this segment.

9TH STREET/GH AVENUE/8TH STREET: FROM N AVENUE TO G AVENUE

CORRIDOR DESCRIPTION



9th Street is a key north/south corridor and connects residential areas to key destinations such as commercial centers and the Village District.

9th Street/GH Avenue/8th Street between H Avenue and G Avenue is a 2 lane road with an unpaved shoulder. The road is approximately 25 feet wide. The road has a few tight turns and a lot of topography as it navigates along a ridge. The ADT is 1,186.

9th Street between H Avenue and West Main Street is a two lane road with paved shoulders. The road is approximately 30 feet wide with 11 foot travel lanes and 4 foot paved shoulders. The ADT is 5,663.

9th Street between West Main Street and Mickeys Trail is a 5 lane road with curbs. The road is approximately 68 feet wide with 11 foot travel lanes and 6 foot bike lanes. The ADT is 15,767.

9th Street between Mickeys Trail and KL Avenue is a 2 lane road with paved shoulders. For the most part, the road is approximately 30 feet wide with 11 foot travel lanes and 4 foot paved shoulder, however there are some segments where the paved shoulders are less than 4 feet wide on one side and greater than 4 feet wide on the other. The ADT is 16,566.

9th Street between KL Avenue and the Railroad is a 5 lane road with curbs. The street is approximately 61 feet wide with 11 foot travel lanes and 3 foot paved shoulders. The ADT is 15,215.

9th Street between the Railroad and Meridian Avenue is a three lane road with paved shoulders. The road is approximately 40 feet wide with 10 foot-11 foot travel lanes and 4 foot paved shoulders. The ADT is 15,215.

9th Street between Meridian Avenue and N Avenue is a 5 lane road with curbs. The road is approximately 60 feet wide, with 12 foot wide travel lanes. The ADT is 26,013 south of Stadium Drive.

Existing Non-motorized Facilities:

There are existing bike lanes on 9th Street beginning at West Main Street and extending ¼ mile to the south.

There are existing 4 foot paved shoulders on 9th Street between H Avenue and West Main Street and between the Railroad and Meridian Avenue.

There are two short disconnected segments of sidewalk on the east side of 9th Street between West Main Street and Seeco Drive.

There is a sidewalk on the entire west side of 9th Street between Stadium Drive and N Avenue.

There is a sidewalk on the east side of 9th Street between Stadium Drive and Atlantic Avenue.

There is an existing 12 foot pedestrian bridge along 9th Street at the railroad crossing south of KL Avenue.

2005 Non-motorized Transportation System and Recreational Trailway Feasibility Study Proposed Facilities:

Add sidepath along east side of 9th Street between H Avenue and West Main Street.

Add bike lane in both directions between on 9th Street between Mickeys Trail and West Main Street.

Add bike lane on west side of 9th Street and sidewalk on east side of 9th Street between Mickeys Trail and KL Avenue.

Add sidewalk on west side of 9th Street and sidepath on east side of 9th Street between KL Avenue and Stadium Drive.

Add sidewalk to both sides of 9th Street between Stadium Drive and N Avenue.

2008 Oshtemo Charter Township Non-motorized Facilities Plan Proposed Facilities:

Add bike lane to 9th Street/GH Avenue/8th Street between G Avenue and West Main Street.

Add sidepath along east side of 9th Street between H Avenue and West Main Street.

Add pathway along 9th Street between West Main Street and KL Avenue (side of street not specified).

Add sidewalk on west side of 9th Street and sidepath on east side of 9th Street between KL Avenue and Stadium Drive.

Add sidewalk to 9th Street between Stadium Drive and N Avenue (side of street not specified).

2011 Charter Township of Oshtemo Master Plan Proposed Non-motorized Facilities:

Add bike lane to 9th Street/GH Avenue/8th Street between G Avenue and West Main Street.

Add sidepath along east side of 9th Street between H Avenue and West Main Street.

Add pathway along 9th Street between West Main Street and KL Avenue (side of street not specified).

Add sidewalk on west side of 9th Street and sidepath on east side of 9th Street between KL Avenue and Stadium Drive.

Add sidewalk to 9th Street between Stadium Drive and N Avenue (side of street not specified).

NON-MOTORIZED RECOMMENDATIONS

Near-term Improvements:

- Sign the 9th Street/GH Avenue/8th Street between H Avenue and G Avenue with "Share the Road" Sign and provide bike route signage to the Kal-Haven Trail.
- Designate the paved shoulder along 9th Street between H Avenue and West Main Street and between the Railroad and Meridian Avenue as a bike lane with pavement markings and signage.
- Restripe 9th Street between H Avenue and West Main Street and between the Railroad and Meridian Avenue where the road flares at intersecting local roads to continue the bike lane through the intersection.
- Restripe 9th Avenue between Mickeys Trail and KL Avenue to accommodate 11 foot travel lanes and 4 foot paved shoulders.
- Construct wide sidewalk along the east side of 9th Street between KL Avenue and Stadium Drive.
- Complete sidewalk along east side of 9th Street between N Avenue and Atlantic Avenue.
- Add pedestrian crossings at Atlantic Avenue and 9th Street intersection as well as providing sidewalk connection around the intersection where they do not exist.

Mid-Term Improvements:

- Construct sidewalk along the east side of 9th Street between KL Avenue and H Avenue.
- Add road crossing improvements on 9th Street at Technology Avenue, Tall Oaks Drive, Meridian Avenue, Prairie Ridge Elementary School, Quail Run Drive, Seeco Drive, and Oak Highlands Drive.
- Evaluate adding roundabouts at the intersection of 9th Street and West Main Street, KL Avenue and Stadium Drive, to reduce the number of turning lanes at intersections creating a high level of service for bicycles.

Long-term Improvements:

- Construct sidewalk along the east side of 9th Street between Stadium Drive and H Avenue.
- When 9th Street between Meridian Avenue and N Avenue and between KL Avenue and the Railroad is reconstructed, widen the road to provide bike lanes at a level of service of C or above.
- When any segment of 9th Street is reconstructed, evaluate if road needs to be widened to provide bike lanes at a level of service of C or above.
- Due to the topography and vegetation along 9th/GH Avenue/8th Street between H Avenue and G Avenue, no long-term improvements are suggested as they would diminish the character of the roadway.

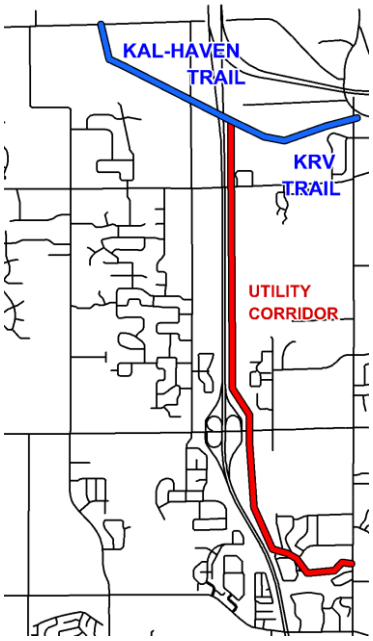
KAL-HAVEN AND KALAMAZOO RIVER VALLEY (KRV) TRAILS CONNECTOR ALTERNATIVES

The Kal-Haven/KRV Trails are located on the northeast corner of the township and are part of a statewide trail, The Great Lake to Lake Trail that travels from South Haven to Port Huron, all the way across southern Michigan. There currently is a trail head on 10th Street that provides access to both trails by motor vehicle, however there are no designated bicycle or pedestrian routes that connect to the trails. A ravine with steep elevation changes runs along the south side of the trail making it challenging for a bicyclist or pedestrian to access the trails from the south.

There are a number of alternatives to access the Kal-Haven/KRV Trails from West Main Street; they include 9th Street, 10th Street, H Avenue, G Avenue, West Main Street, and the utility right-of-way along freeway. The following pages describe the benefits and draw-backs of each alternative, and a recommendation is included at the end of the section.

ALTERNATIVE 1: OFF-ROAD TRAIL ALONG HIGHWAY 131 UTILITY CORRIDOR

A utility corridor with transmission lines runs parallel to the Highway 131 corridor on the east side between Green Meadow to the south and the Kal-Haven/KRV Trails to the north. The corridor connects to the commercial district at West Main Street and to numerous residential developments. North of H Avenue the corridor passes through a ravine with steep elevation changes and vegetation. This corridor may have the potential to provide an off-road trail connection to the Kal-haven/KRV Trails



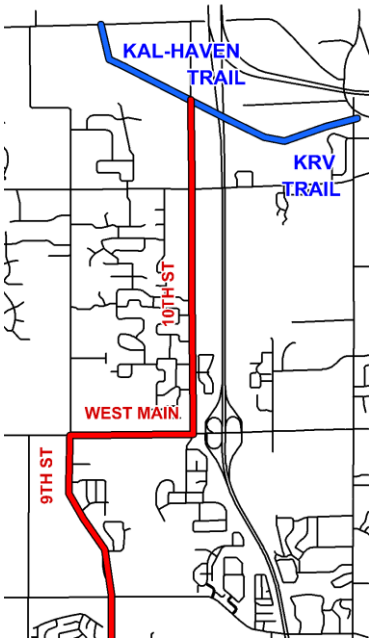
Benefits:

- Connects to commercial/residential area at West Main Street
- Off-Road Trail separated from a roadway

Drawbacks:

- Location: Since the trail is on the east side of Highway 131 it limits access for a majority of the township's population
- Property: The utility corridor is owned by Consumers Energy, all of the other alternatives deal with existing right-of-way.
- Cost: an entire new facility would have to be built
- Topography: The steep ravine and vegetation would present challenges in construction
- Noise: Trails located along an expressway can be very noisy environments that are uncomfortable spaces to be in

ALTERNATIVE 2: 9TH STREET/ WEST MAIN STREET/ 10TH STREET



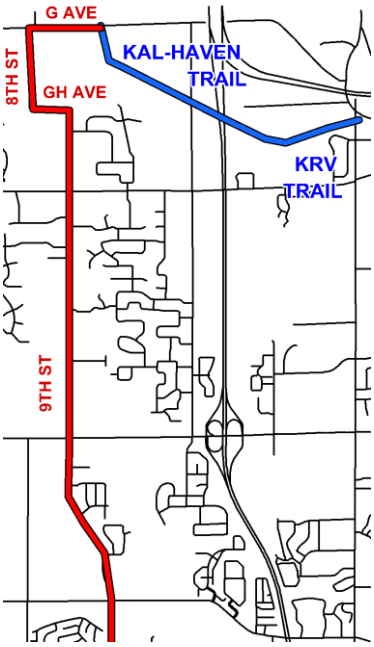
Benefits:

- Utilizes existing sidepaths on West Main Street
- Connects to residential areas
- Connects to the Village District
- Compared to 9th Avenue and the Utility Corridor, 10th Street north of H Avenue would have the best potential to add a pathway connection to the Kal-Haven/KRV Trails since the right-of-way is already graded for the road and there are no sharp turns

Drawbacks:

- 10th Street paved shoulders are less than 4 feet wide in some areas, the roadway would have to be widened to accommodate bike lanes along this corridor
- An additional facility would have to be built on H Avenue between 9th Street and 10th Street to provide access to the trail for the neighborhoods along that corridor
- Residents have shown opposition to building a sidepath along 10th Street
- Gravel Trucks use 10th Street northbound between West Main Street and H Avenue and in both directions between H Avenue and G Avenue

ALTERNATIVE 3: 9TH STREET/GH AVENUE/8TH STREET/G AVENUE



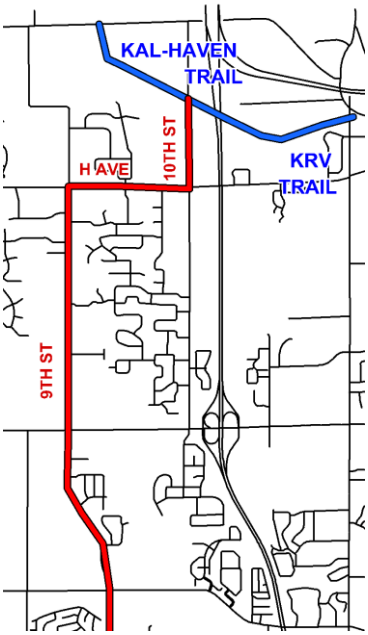
Benefits:

- A majority of this road segment has an existing paved shoulder over 4 feet wide or the opportunity to add 4 feet wide paved shoulder in the near-term by restriping the roadway
- Connects to residential areas
- Connects to Village District to the south
- 9th Street/GH Avenue/8th Avenue between H Avenue and G Avenue is not a truck route

Drawbacks:

- 9th Street/GH Avenue/8th Street north of H Avenue has challenging terrain and curves that children and beginner cyclists may not be comfortable on
- Gravel Trucks use 9th Street in Southbound between H Avenue and West Main Street

ALTERNATIVE 4: 9TH STREET/H AVENUE/10TH STREET



Benefits:

- A majority of this road segment has existing paved shoulders over 4 feet wide or the opportunity to add 4 feet wide paved shoulder in the near-term by restriping the roadway
- Connects to residential areas
- Connects to Village District
- Compared to 9th Avenue north of H Avenue and the Utility Corridor, 10th Street north of H Avenue would have the best potential to add a pathway connection to the Kal-Haven/KRV Trails since the right-of-way is already graded for the road and there are not sharp turns

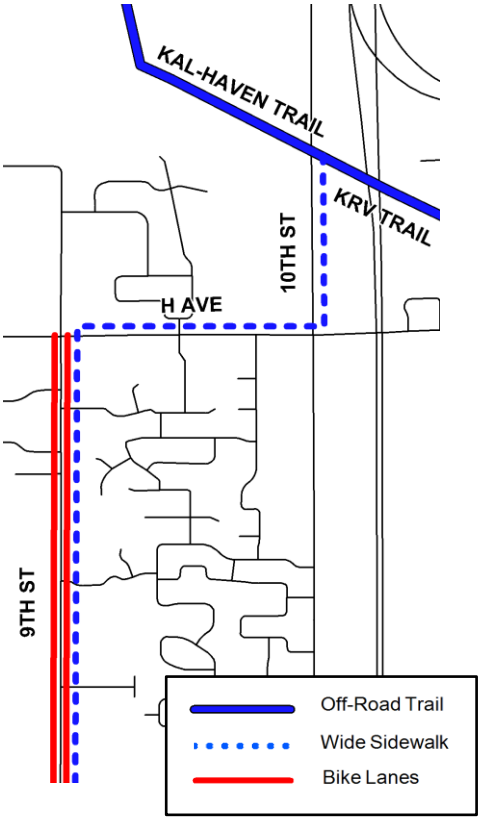
Drawbacks:

- H Avenue is not suitable for bike lanes in the near-term and there are no existing sidewalks, so a new non-motorized facility would have to be built.
- Between West Main Street and H Avenue, Gravel trucks use 10th Street northbound, H Avenue westbound and 9th Street southbound

KAL-HAVEN/KRV TRAILS CONNECTOR RECOMMENDATION

ALTERNATIVE 4: 9TH STREET/H AVENUE/10TH STREET

Alternative 4 was chosen because it connects to a large area of the population and to the Village District, utilizes the least challenging connection across the ravine, provides a non-motorized connection along H Avenue where there currently is none, and utilizes existing paved shoulders and near-term bike lanes.



9th Street: Between West Main Street and H Avenue Recommendations:

- Bike Lanes through lane narrowing and utilize existing 4 foot wide paved shoulders
- Construct wide sidewalk on east side of 9th Street

H Avenue between 9th and 10th Street Recommendations:

- Construct wide sidewalk on the north side of H Avenue

10th Street between H Avenue and G Avenue Recommendations:

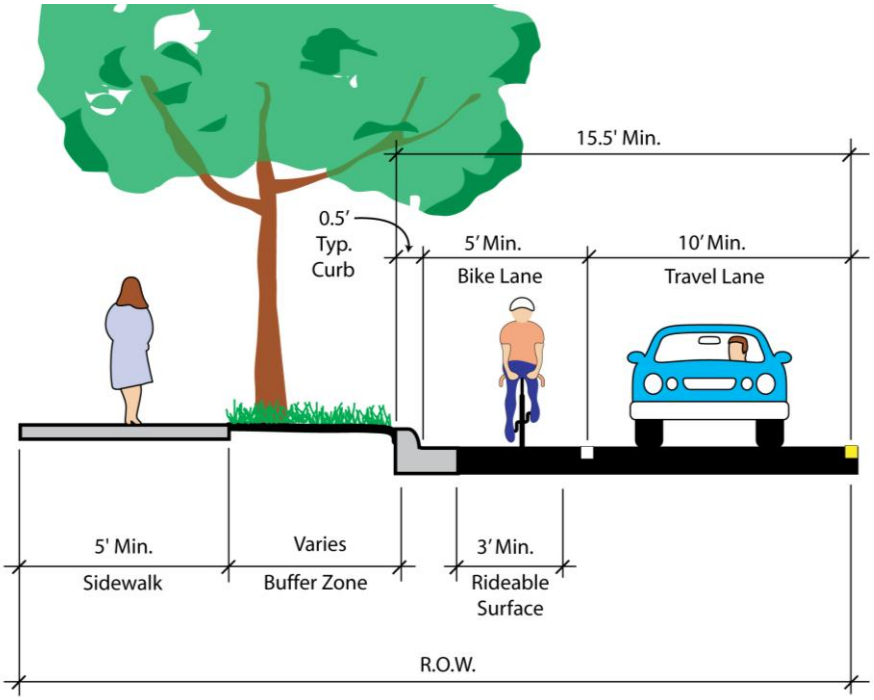
- Construct wide sidewalk on the east side of 10th Street

9th Street/GH Avenue/8th Street/G Avenue: From H Avenue to G Avenue:

- Although 9th Street north of H Avenue provides challenging terrain and curves, it is still a low volume scenic road that many advanced cyclist may prefer. This segment of 9th Street north of H Avenue should be signed with "Share the Road" signs and provide wayfinding signage to the Kal-Haven Trail as an alternative route for cyclists

DESIGN GUIDELINES

URBAN MULTI-MODAL ROADWAY DESIGN GUIDELINES



URBAN BIKE LANE SIZING CHART

The following chart indicates the minimum bike lane width necessary to maintain a bicycle quality/level of service of C or above

12' Travel Lanes

	Urban 2 Lane Road:					Urban 4 Lane Road:					
No. of Lanes	2	2	2	2	2	4	4	4	4	4	4
Design ADT	3,500	5,000	10,000	15,000	20,000	15,000	20,000	25,000	30,000	35,000	40,000
25 mph	5	5	5	5	5	5	5	5	5	5	5
30 mph	5	5	5	5.5	6	5	5	5.5	5.5	5.5	6
35 mph	5	5	5.5	6	6.5	5	5.5	5.5	6	6	6
40 mph	5	5	5.5	6	6.5	5.5	5.5	6	6	6.5	6.5
45 mph	5	5.5	6	6.5	6.5	5.5	6	6	6.5	6.5	6.5
50 mph	5	5.5	6	6.5	7	6	6.5	6.5	6.5	6.5	7
55 mph	5	5.5	6	6.5	7	6	6.5	7	7	7	7

11' Travel Lanes

	Urban 2 Lane Road:					Urban 4 Lane Road:					
No. of Lanes	2	2	2	2	2	4	4	4	4	4	4
Design ADT	3,500	5,000	10,000	15,000	20,000	15,000	20,000	25,000	30,000	35,000	40,000
25 mph	5	5	5	5.5	5.5	5	5	5	5.5	5.5	5.5
30 mph	5	5	5.5	6	6.5	5	5.5	6	6	6	6.5
35 mph	5	5	6	6.5	6.5	5.5	6	6	6.5	6.5	6.5
40 mph	5	5	6	6.5	7	6	6	6.5	6.5	7	7
45 mph	5	5.5	6.5	7	7	6	6.5	6.5	7	7	7
50 mph	5	5.5	6.5	7	7.5	6	6.5	7	7	7	7.5
55 mph	5	6	6.5	7	7.5	6.5	6.5	7	7	7.5	7.5

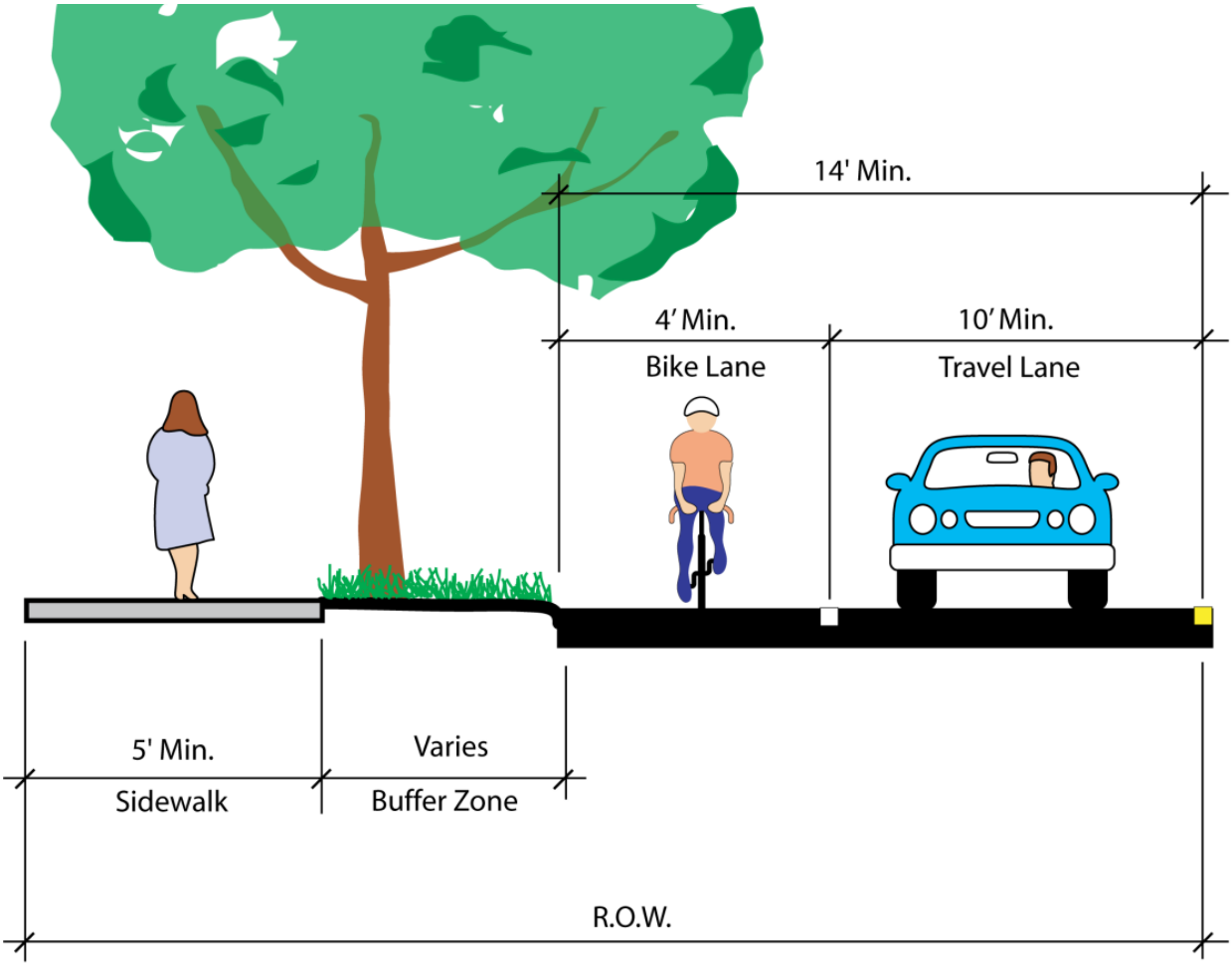
10' Travel Lanes

	Urban 2 Lane Road:					Urban 4 Lane Road:					
No. of Lanes	2	2	2	2	2	4	4	4	4	4	4
Design ADT	3,500	5,000	10,000	15,000	20,000	15,000	20,000	25,000	30,000	35,000	40,000
25 mph	5	5	5	6	6	5	5	5.5	6	6	6
30 mph	5	5	6	6.5	7	5.5	6	6.5	6.5	6.5	7
35 mph	5	5.5	6.5	7	7	6.5	6.5	6.5	7	7	7
40 mph	5	5.5	6.5	7	7.5	6.5	6.5	7	7	7.5	7.5
45 mph	5	6	7	7.5	7.5	6.5	7	7	7.5	7.5	7.5
50 mph	5	6	7	7.5	8	6.5	7	7.5	7.5	7.5	8
55 mph	5	6.5	7	7.5	8	7	7	7.5	7.5	8	8

Notes

1. Size is based on an 18” wide gutter pan. If the gutter is only 1’ wide or there is no gutter the width may be reduced by 0.5’.
2. Bike lane sizing is based on 3% truck traffic. For every 1% increase in heavy vehicles add approximately 8” to 9” of additional bike lane width.
3. In urban areas, where there is a demand for on-street parking and none exists, bike lanes 7’ and over may experience illegal parking.

RURAL MULTI-MODAL ROADWAY DESIGN GUIDELINES



RURAL BIKE LANE SIZING CHART

The following chart indicates the minimum bike lane width necessary to maintain a bicycle quality/level of service of C or above.

12' Travel Lanes

	Rural 2 Lane Road:					Rural 4 Lane Road:					
No. of Lanes	**2**	**2**	**2**	**2**	**2**	**4**	**4**	**4**	**4**	**4**	**4**
Design ADT	**3,500**	**5,000**	**10,000**	**15,000**	**20,000**	**15,000**	**20,000**	**25,000**	**30,000**	**35,000**	**40,000**
25 mph	4	4	4	4	4	4	4	4	4	4	4
30 mph	4	4	4	4	4.5	4	4	4	4	4	4.5
35 mph	4	4	4	4.5	5	4	4	4	4.5	4.5	4.5
40 mph	4	4	4	4.5	5	4	4	4.5	4.5	5	5
45 mph	4	4	4.5	5	5	4	4.5	4.5	5	5	5
50 mph	4	4	4.5	5	5.5	4.5	5	5	5	5	5.5
55 mph	4	4	4.5	5	5.5	4.5	5	5.5	5.5	5.5	5.5

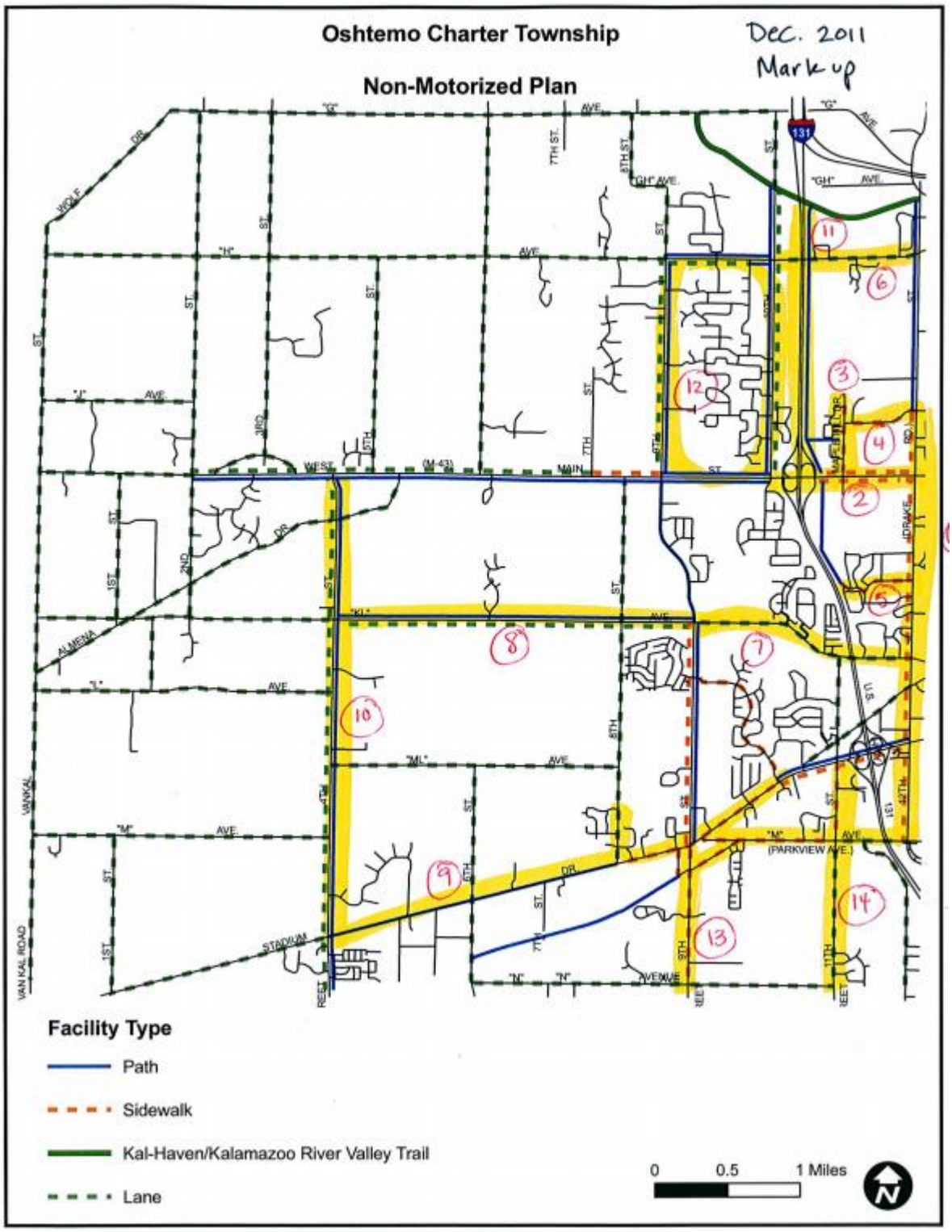
11' Travel Lanes

	Rural 2 Lane Road:					Rural 4 Lane Road:					
No. of Lanes	**2**	**2**	**2**	**2**	**2**	**4**	**4**	**4**	**4**	**4**	**4**
Design ADT	**3,500**	**5,000**	**10,000**	**15,000**	20,000	**15,000**	**20,000**	**25,000**	**30,000**	**35,000**	**40,000**
25 mph	4	4	4	4	4	4	4	4	4	4	4
30 mph	4	4	4	4.5	5	4	4	4.5	4.5	4.5	5
35 mph	4	4	4.5	5	5	4	4.5	4.5	5	5	5
40 mph	4	4	4.5	5	5.5	4.5	4.5	5	5	5.5	5.5
45 mph	4	4	5	5.5	5.5	4.5	5	5	5.5	5.5	5.5
50 mph	4	4	5	5.5	6	4.5	5	5.5	5.5	5.5	6
55 mph	4	4.5	5	5.5	6	5	5	5.5	5.5	6	6

10' Travel Lanes

	Rural 2 Lane Road:					Rural 4 Lane Road:					
No. of Lanes	2	2	2	2	2	**4**	**4**	**4**	**4**	**4**	**4**
Design ADT	3,500	5,000	10,000	15,000	20,000	**15,000**	**20,000**	**25,000**	**30,000**	**35,000**	**40,000**
25 mph	4	4	4	4.5	4.5	4	4	4	4.5	4.5	4.5
30 mph	4	4	4.5	5	5.5	4	4.5	5	5	5	5.5
35 mph	4	4	5	5.5	5.5	5	5	5	5.5	5.5	5.5
40 mph	4	4	5	5.5	6	5	5	5.5	5.5	6	6
45 mph	4	4.5	5.5	6	6	5	5.5	5.5	6	6	6
50 mph	4	4.5	5.5	6	6.5	5	5.5	6	6	6	6.5
55 mph	4	5	5.5	6	6.5	5	5.5	6	6	6.5	6.5

DECEMBER 2011 MARK-UP



Action Items for updating the
Non-Motorized Transportation Facilities Plan
December 15, 2011

	What	Who
1	Bicycle facilities along Drake Road from Croyden to Parkview.	Consider adding to the Drake Road sidewalk feasibility study. Would likely involve looking at roadway and lane widths for on-street bicycle facilities.
2	Bicycle facilities along West Main Street over 131 and east to Drake Road	Staff to coordinate with MDOT to ensure that on-street bicycle facilities are considered in any future road projects here.
3	Bicycle facilities along Maple Hill Drive	Staff
4	Bicycle facilities along Croyden Avenue	Staff
5	Bicycle facilities along Green Meadow Drive/Driftwood Avenue, especially if road is extended to Maple Hill Drive. Consider bike path on one side, sidewalk on the other?	Staff
6	H Avenue from 10th to Drake. Current plan shows paved shoulder, but this road is now a truck route. Would multi-use path be more suitable? Which side of street?	Staff
7	Pedestrian access along KL Avenue from Drake to 9th Street. Topographic constraints preclude sidewalks.	Staff to indicate on plan that sidewalks are not feasible due to physical constraints.
8	KL Avenue from 4th Street to 9th Street. Is lane or path needed in this low population area? If path, which side of road is best?	Staff
9	Stadium Drive from 4th Street to 8th Street. Is a bike path needed on both sides or just one side? If one side, which side? This is a low population area.	Staff
10	4th Street from West Main Street to N Avenue. Is lane or path needed in this low population area? If path, which side of road is best?	Staff

	Areas requiring further study	
11	Highway 131 Corridor	Three north-south paths within a one mile wide corridor are shown on our plan. Staff to study the need for these routes and determine feasibility.
12	West Main to Kal-Haven Trail connection: evaluate whether 10th Street, 9th Street and H Avenue, or Hwy 131 is best option.	Consultant
13	In the Village district, bicycle facilities along Stadium Drive from 8th Street to Quail Run Drive, 9th Street from Stadium to N Avenue, Parkview from 9th to 11th Streets, and Atlantic Avenue. Pedestrian facilities on 8th Street, from Stadium to Baton Rouge Ave	Add non-motorized transportation to consultant-led transportation study of Village district.
14	11th street from Parkview Avenue to N Avenue, and Parkview from 11th to Drake. Also 11th Street from Stadium to Parkview. Genesee Prairie sub-area plan calls for "non-motorized connection from KVCC to BTR". Should it be a path instead of paved shoulder? Bike facility needed along 11th from Stadium to Parkview, current plan is for sidewalk only. Would path be feasible?	Staff