

5. *Implementation Plan*

Master Plan Adoption and Implementation

Adopting the Non-motorized Plan is the first step in the implementation process. Since there are many different agencies involved in this plan, each one will have to adopt the plan. The plan may be adopted in a few different ways, depending on what works best for each agency.

Typically, a non-motorized plan can be adopted in two ways. It can be adopted as an infrastructure improvement plan or as part of an existing community master plan. A community master plan usually contains multiple elements such as transportation, zoning, economic development etc. Adopting the non-motorized plan as part of a community master plan requires (Michigan Public Act 33 of 2008) the agency to send out the master plan to adjacent communities and the county for review for 42 days before the plan can be adopted. The alternative method is to adopt the plan as an infrastructure improvement plan and not part of the Master Plan. By doing this the agency does not have to meet the Act 33 requirement and can wait and include the Non-motorized Plan into the Community Master Plan next time it is updated, which at that point it would go through the Act 33 requirements.

Coordination

The Project Steering Committee contains representatives from all of the different agencies that will adopt this plan. This group should continue to meet after the plan has been adopted to provide residual coordination and to help oversee the implementation across jurisdiction boundaries. The group may want to expand to include representatives from the local school district, public health officials, police departments and other agencies as the group's mission expands.

Topics:

- 5.1 –Implementation Plan
- 5.2 – Funding Opportunities
- 5.3 –Annual Maintenance & Operation Costs

5.1 Implementation Plan

The proposed improvements fall into seven tasks. The first task is Initial Primary Corridors. This task includes projects that should be done first because they create key connections across the city that provide a backbone to the non-motorized system. The connections incorporate the existing pathways, employ near-term bike lane improvements and provide alternative routes to busy roads. These routes were determined based on public input, existing conditions, geographic distribution and desire to create key cross-community connections.

After the Initial Primary Corridors are completed, the following six tasks should be implemented concurrently as opportunities and funding become available. The six parallel tasks include the following:

- Bike Lanes
- Neighborhood Connectors
- Sidewalk Gaps
- Road Crossing Improvements
- Intersection Improvements
- Regional Connections

Some of the improvements include relatively modest changes such as road conversions and signage and others may take longer based on opportunities and available funding. Each task may take multiple years to implement. The speed of the implementation depends on the amount of money that is dedicated to the implementation along with the success of obtaining outside funding.

Implementation Tasks

These six implementation tasks fall into three categories, Near-term, Mid-term and Long-term. In general Near-term opportunities include improvements that may be accomplished by relatively modest changes to the existing road system. Mid-term opportunities include improvements that may be accomplished in the near future; however they may require some additional construction. Long-term improvements are projects that will be implemented with new development or reconstruction of existing roadways. Some construction intensive projects are identified as a Near-term or Mid-term improvement when it addresses safety concerns or there is a high demand for its implementation.

Please note that this report does not define the ideal long-term cross section for every primary road in the area. Rather it defines what improvements should be included and provides guidelines for a wide variety of road and right-of-way scenarios. Projects that require reconstruction may be very important; however they can be very capital intensive and should be prioritized after the initial primary corridors are implemented. Hopefully with the adoption of a complete streets ordinance, it is assumed that bicycle and pedestrian improvements will be incorporated into all projects as a matter of course.

Cost Estimate Introduction

In order to illustrate magnitude of costs and begin planning and budgeting for implementation, planning level cost estimates have been completed for the improvements proposed in the Initial Primary Corridors. In addition, cost estimates for a handful of “typical” treatments have been developed so that staff can consider these treatments in other areas if so desired.

It should be noted that these estimates are based on concepts only, and while they include healthy (20%) contingencies, they are not based on detailed designs. Quantities were derived from GIS data and aerial

imagery. If the community moves forward with implementation, detailed design will be completed and construction cost estimates recalculated at that time.

Acquiring Right –of-Way

Please note that acquiring easements and right-of-way will add to the financial burden of implementation, and can sometimes be as much as the project cost itself. Please refer to the following section for a detailed breakdown of the cost estimate for the Initial Primary Corridors.



Concurrent Studies

A separate study was being conducted of Main Street and Washington Street in Mt. Pleasant during the development of this plan. Due to this occurrence recommendations for Main Street and Washington Street are not provided in this plan. Please refer to the separate study for recommendations on how to proceed with these corridors.

List of Figures

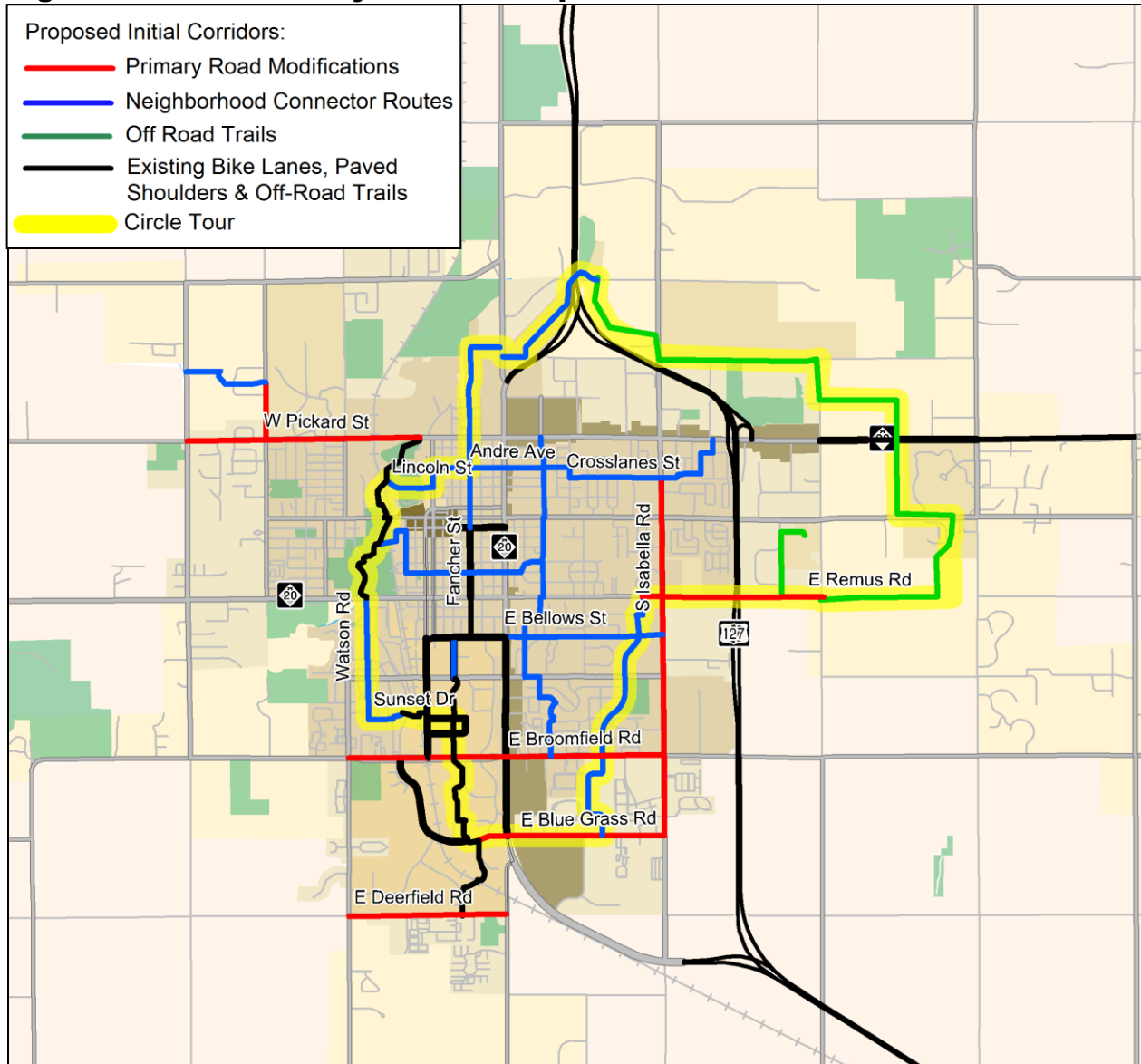
The following maps illustrate the non-motorized facilities implementation recommendations for the Greater Mt. Pleasant Area and Isabella County:

- Fig. 5.1A. Initial Primary Corridors Implementation
- Fig. 5.1B. Circle Tour
- Fig. 5.1C. Circle Tour Implementation
- Fig. 5.1D. Bike Lane Implementation
- Fig. 5.1E. Neighborhood Connectors and Off-Road Trails Implementation
- Fig. 5.1F. Sidewalk Implementation
- Fig. 5.1G. Road Crossing Improvement Implementation
- Fig. 5.1H. Regional Initial Primary Corridor Implementation
- Fig. 5.1I. Regional Connectors Implementation

Initial Primary Corridors Implementation

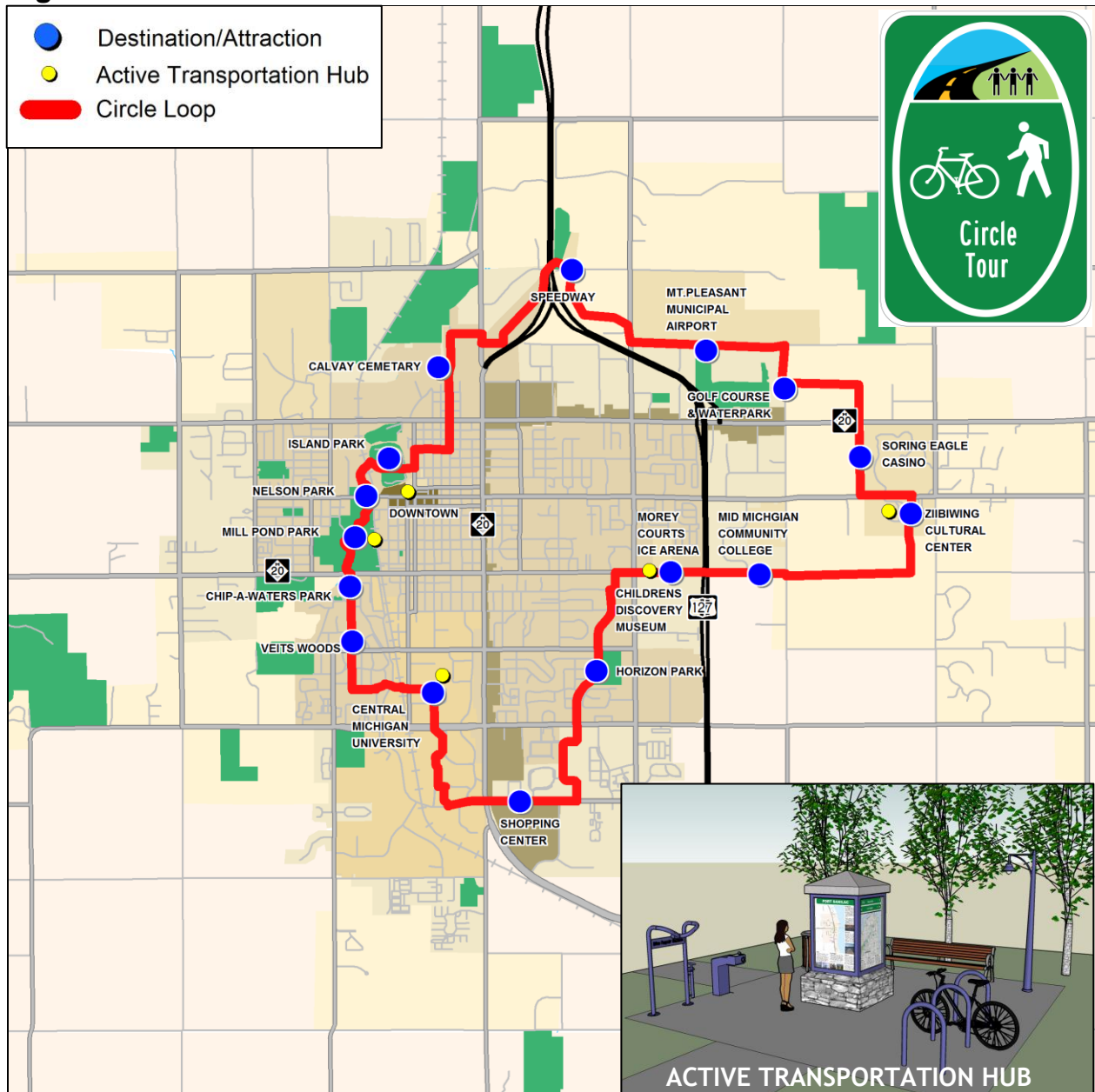
These are near-term projects that may be accomplished by simply restriping the road and large multi-year projects that may be implemented in pieces based on opportunities and funding. Overall, they will provide the framework for the non-motorized system.

Fig. 5.1A. Initial Primary Corridors Implementation



This task focuses on creating key connections across the city that provides a backbone to the non-motorized system. The connections incorporate the existing pathways, employ near-term bike lanes improvements, neighborhood connector routes, and provide alternative to busy roadways such as Mission Road and Pickard Street along the local neighborhood roads. Please note that some of the corridors, such as the Circle Tour described on the follow page, may include large multi-year projects that may be implemented in pieces based on opportunities and funding. Overall, the Circle Tour will provide the initial framework for the non-motorized system with routes across the community building upon and feeding into it. Approximately 28 miles of new facilities are proposed in this phase.

Fig. 5.1B. Circle Tour



Part of the Initial Primary Corridors, the Circle Tour could be a recreational loop around the Greater Mt. Pleasant Area that links key destinations. It would be a combination of on and off-road non-motorized facilities with minimal interaction with high speed, high volume motor vehicle traffic. This route is significant enough that special branding and signage could be designated to this route. There is also potential for art, interpretive and green technology installations along the route to essentially make this route an Urban Greenway. The loop is approximately 15 miles.

Active Transportation Hubs serve as orientation and resources centers for non-motorized trips and could be incorporated into the Circle Tour Route. These centers could contain additional information and amenities such as compressed air, bike parking and vending machines that dispenses basic bicycle supplies such as tubes and repair kits. The hubs would be located in high visibility locations around the Greater Mt. Pleasant Area. They would let people know that they could have walked or biked to that location and other destinations around the city. This would especially be an information source for CMU students and guest who may be less knowledgeable to the area and the non-motorized opportunities it provides.

Initial Primary Corridors Cost Estimate

The projected cost for the implementation of the Initial Primary Corridors is \$13,099,071.58. Please refer to the following tables below for a breakdown of the projected implementation costs based on facility type. Within each facility type the improvements are listed in order of implementation. The order of implementation was developed based on public input, near-term opportunities, demand and where the majority of the population would be served.

1) Proposed Neighborhood Connector Routes and Pathways (approximately 16 miles)

Provide alternative route to the major roads utilizing local neighborhood streets.

- Neighborhood connector routes are proposed on the following local streets, McDonald Drive, Joseph Drive, Lincoln Street, N Main Street, Andre Ave, Kane Street, Crosslanes Street, E Kay Street, 3rd Street, Palmer Street, 2nd Street, Mill Street, S Oak Street, E Maple Street, E River Road, Industrial Ave, Fancher Street, S Franklin Street, Brown Street, E Gaylord Street, S Elizabeth Street, S Lynnwood Drive, Fairfield Drive, Carnahan Place, Churchill Boulevard, Sweeney Street
- Due to the wide roadways and sporadic on-street parking, there is potential for near-term bike lanes to be added to some of the Neighborhood Connector Routes. These include the following road segments; see Fig. 5.2C for reference:
 - Add bike lane to E Bellows Street between N Main Street and N Crapo Street by narrowing the lanes to 11'
 - Add bike lane to E Bellows Street between N Crapo Street and Isabella Road by removing on street parking and narrowing the lanes to 11'
 - Add bike lanes to Watson Road by eliminating on-street parking, narrowing the lanes to 11' and adding an edge stripe
 - Add road edge stripe to S Fancher Street between Pickard Street and Michigan Street and between High Street and E Bellows Street (proposed construction 2011)
 - Add bike lanes to N Fancher Street between Pickard Street and Industrial Avenue through lane narrowing
 - Add bike lanes to Industrial Avenue between N Fancher Street and Mission Road through lane narrowing
 - Add bike lanes to Industrial Park Drive between Mission Road and E River Road by narrowing the lanes to 10' with 5' bike lanes.
 - Add shared lane markings to E River Road between Mission Road and S Isabella Road
 - Add shared lane marking to Sweeny Street between E Preston Road and E Broomfield Road
 - Add bike lanes to Sweeny Street between E Broomfield Road and E Blue Grass Road between 3 to 2 Lane Conversion
 - Add parking edge stripe to N Brown Street between E Pickard Street and E Remus Road
- Obtain easements to build the following short connector pathways through undeveloped Private Property:
 - Build 10' asphalt pathway between McDonald Drive to Joseph Drive
- Build the following short connector pathways through School Property:

- Build 10’ asphalt pathway between Sweeney Drive and E Remus Road connecting to Mt. Pleasant Baptists Academy
- Build 10’ asphalt pathway between Sweeney Drive and E Preston Road connecting to Oasis High School
- Build 10’ asphalt pathway between Carnahan Place and Churchill Boulevard
- Provide traffic calming techniques on local neighborhood streets, such as re-orienting stop signs and implementing curb extensions and mini-roundabouts.
- Provide wayfinding signage along routes to direct users
- Provide safe road crossing where the route crosses a major roadway (see road crossing improvements below)

Neighborhood Connector Cost Estimate:

Street	Between	Quantity	Unit	Unit Price	Cost Estimate		
Connector Routes		16.00	mi	\$ 261,600.00	\$ 4,185,600.00	Assumes (4) intersections with curb bumpouts (\$53K each), wayfinding signage, and (6) traffic calming treatments (i.e. traffic buttons, one way choker, speed table)	
Connector Routes with Bike Lanes							
E Bellow Street	Main	Crapo	0.95	mi	\$ 6,000.00	\$ 5,700.00	Narrow lanes to 11'
E Bellow Street	Crapo	Isabella Rd	0.50	mi	\$ 6,000.00	\$ 3,000.00	Remove on-street parking and narrow lanes to 11'
Watson Road			0.77	mi	\$ 5,200.00	\$ 4,004.00	Eliminate parking, narrow lanes to 11', add edge stripe
S Fancher St	Pickard St	E Bellows St	4350.00	ft	\$ 0.10	\$ 435.00	Road Edge Stripe
N Fancher St	Pickard St	Industrial Ave	0.57	mi	\$ 6,000.00	\$ 3,420.00	Lane narrowing
Industrial Ave	N Fancher St	Mission Rd	0.20	mi	\$ 6,000.00	\$ 1,200.00	Lane narrowing
Industrial Park Dr	Mission Rd	E River Rd	0.72	mi	\$ 6,000.00	\$ 4,320.00	Lane narrowing
S Brown Street	E Remus Rd	E Broadway Rd	2640.00	ft	\$ 0.10	\$ 264.00	Road Edge Stripe
N Brown Street	E Pickard St	E Broadway Rd	2698.08	ft	\$ 0.10	\$ 269.81	Road Edge Stripe
Sweeney Street	E Preston Rd	E Broomfield Rd	15.00	ea	\$ 225.00	\$ 3,375.00	Shared Lane Marking
Sweeney Street	E Broomfield	E Blue Grass Rd	0.65	mi	\$ 6,000.00	\$ 3,900.00	3 to 2 lane conversion
Connector Pathways							
Asphalt Trail	Mcdonald Dr	Joseph Dr	784.79	ft	\$ 45.00	\$ 35,315.55	Plus Easement Cost
Asphalt Trail	Sweeney Dr	E Remus	804.28	ft	\$ 45.00	\$ 36,192.60	To Mt Pleasant Baptist Academy
Asphalt Trail	Sweeney Dr	E Preston Rd	817.99	ft	\$ 45.00	\$ 36,809.55	To Oasis High School
Asphalt Trail	Carnahan Place	Churchill Blvd	353.95	ft	\$ 45.00	\$ 15,927.75	
Asphalt Trail	E River	Isabella	4195	ft	\$ 45.00	\$ 258,775.00	Drain Crossing
TOTAL						\$ 4,598,508.26	

Please note that the \$4.5 million dollar estimation is assuming the neighborhood connector routes are completely built out with pavement markings, signage and traffic calming elements. To reduce the initial costs, the neighborhood connector routes can be implemented in stages. Since the majority of the routes already exist, with exception to a few connector pathways, neighborhood connector routes can be designated by implementing wayfinding signs and reorienting the stop signs to establish a basic network. With the cost of bike route signage at around \$1,200 per mile (assuming 6 signs in three locations) the first stage of implementation for neighborhood connector routes would cost around \$20,000. In addition, many of the routes have potential for on-road bicycle facilities by adding pavement markings. Edge stripes, shared lane markings and bike lane markings could be added to these routes in the near-term for a total cost of around \$10,000. See the Appendix for more details on costs.

2) Proposed Bike Lanes on Primary Roads (approximately 5.5 miles)

Implement near-term road conversions to add bike lanes on major roadways.

- Add bike lanes to W Pickard Street between S Lincoln Road and N Main Street through a 4 to 3 lane conversion
- Add bike lanes to S Isabella Road between E Pickard Street and E Blue Grass Road through a 4 to 3 lane conversion
- Add bike lanes to E Broomfield Road between S Mission Road and S Isabella Road through a 4 to 3 lane conversion, where E Broomfield widens to 5 lanes at the intersection, implement a 5 to 4 lane conversion with designated right, straight and left turn lanes for west bound traffic and one lane of east bound traffic.
- Add bike lanes to E Blue Grass Rd between Encore Drive and S Isabella Road through a 4 to 3 lane conversion

Bike Lane Cost Estimate:

Street	Between	Quantity	Unit	Unit Price	Cost Estimate
W Pickard Street	S Lincoln N Main St	1.56	mi	\$ 6,000.00	\$ 9,360.00
S Isabella Rd	E Pickard St E Blue Grass Rd	2.51	mi	\$ 6,000.00	\$ 15,060.00
E Broomfield Rd	S Mission Rd S Isabella Rd	1.00	mi	\$ 6,000.00	\$ 6,000.00
E Broomfield Rd	Near Mission	0.24	mi	\$ 10,000.00	\$ 2,400.00
E Blue Grass Rd	Encore Dr S Isabella Rd	0.51	mi	\$ 6,000.00	\$ 3,060.00
TOTAL					\$ 35,880.00

3) Proposed Sidewalk Gap Improvements (approximately 13 miles)

Complete sidewalk gaps on the following roadways. For a more detailed map of the Initial Priority Corridor Sidewalk Gaps please refer to Fig. 4.2E.

- Complete sidewalk gaps on E Broomfield Road by adding 8’ sidewalk to both sides
- Complete sidewalk gaps on E Blue Grass Road by adding 8’ sidewalks to both sides
- Add 8’ sidewalk on west side of S Isabella Road from E Blue Grass Road to E Pickard Street
- Add 10’ sidewalk on E Remus Road with construction of proposed overpass
- Add 10’ sidewalk on the south side of E Deerfield Road
- Complete sidewalk gaps on Pickard Street by adding 8’ sidewalks to both sides of the road
- Complete sidewalk gaps on the south side of Bellow Street between N Crapo Street and S Isabella Road by adding 6’ sidewalk
- Complete the sidewalk gaps on the west side of Sweeney Road between E Broomfield Road and E Blue Grass Road by adding a 6’ sidewalk
- Add 8’ sidewalk on the east side of S Bamber Road between Pickard Street and Joseph Street
- Complete Sidewalk gap on the south side of Remus Road between S Isabella Road and the proposed pathway through Mt. Pleasant Baptist Academy by adding a 8’ sidewalk

Sidewalk Gaps Cost Estimate:

Street	Between	Quantity	Unit	Unit Price	Cost Estimate
E Broomfield		6736.93	ft	\$ 36.00	\$ 242,529.48
E Blue Grass Rd		8679.08	ft	\$ 36.00	\$ 312,446.88
Isabella Rd (west)	E Blue Grass E Pickard	8554.60	ft	\$ 36.00	\$ 307,965.60
E Remus Rd	Asphalt	9572.00	ft	\$ 45.00	\$ 630,740.00
E Deerfield Rd (south)	Asphalt	5229.00	ft	\$ 45.00	\$ 235,305.00
Pickard St		6241.00	ft	\$ 36.00	\$ 234,676.00
Bellow St (south)	Crapo St S Isabella	1285.00	ft	\$ 24.00	\$ 30,840.00
Sweeney Rd (west)	Broomfield E Blue Grass	3422.14	ft	\$ 24.00	\$ 82,131.36
S Bamber Rd (east)	Pickard Joseph St	1836.00	ft	\$ 36.00	\$ 66,096.00
Remus Rd (south)	Isabella MPB Academy	669.00	ft	\$ 45.00	\$ 30,105.00
TOTAL					\$ 2,172,835.32

4) Proposed Road Crossing Improvements

Provide safe crossing where a neighborhood connector crosses a major road or there is demand to get across the road. The following types of crossing improvements should be considered at each road crossing.

- Toucan Crossing with Pedestrian Hybrid Beacon
 - N Mission Road at Andre Ave
- Crossing Island with Rectangular Rapid Flash Beacon:
 - W Pickard Street at S Fancher Street (evaluate roundabout in future)
 - E Pickard Street at Airway Drive/2nd Street
 - E Pickard Street at Proposed Off-road Trail between S Summerton Road and S Leaton Road
 - E Broadway Road connecting Soaring Eagle Casino to Ziibiwing Cultural Center between S Summerton Road and S Leaton Road
 - E Broomfield Road at Sweeney Road
 - E Blue Grass Road at Sweeney Road
 - S Isabella Road at Crosslanes Street
- Crossing Island:
 - E Preston Road at South Lynnwood Drive
- Rectangular Rapid Flash Beacon:
 - Mission Road at Industrial Ave / Industrial Pak Drive
 - S Summerton Road at proposed trail crossing and Remus Road
 - E Deerfield Road at Three Leaves Drive
 - E Remus Road proposed Neighborhood Connector Pathway near S Isabella Street
 - E High Street at N Brown Street
 - W High Street at S Fancher Street
 - E Preston at Sweeny Street
- Rectangular Rapid Flash Beacon with Curb Extensions:
 - E Bellows at Sweeny Street
- Curb Extensions:
 - E Mosher Street at S Fancher Street
 - E Broadway Street at S Fancher Street
 - E Michigan Street at S Fancher Street
 - E Bellows Street at S Fancher Street
 - CMU Trail at Three Leaves Drives crossing driveway

- Other:
 - E Broomfield Road at Sweeney Street and at the existing CMU Trail. The pushbutton is currently hidden behind the controller box. The pushbutton should be relocated to a landing not more than 10 feet (6 is preferred) from the face of the curb on eastbound Broomfield Road and not more than 5 feet from the right edge of the crossing. The surface area of the landing must be a minimum of 5 by 5 feet and have a cross slope of less than 2% in all directions. If the pushbutton does fall within these limitations, then it can be relocated without addition infrastructure costs. For a major trail like this, as well as the major crosswalk for University activities, it is strongly recommended that there is correct placement of all pushbuttons to meet ADA requirements.

Road Crossing Improvements Cost Estimate:

Street	At	Quantity	Unit	Unit Price	Cost Estimate
Toucan Crossing with Pedestrian Hybrid Beacon					
N Mission Rd	Andre Ave	1	ea	\$ 160,000	\$ 160,000.00
TOTAL					\$ 160,000.00
Crossing Island with Rectangular Rapid Flash Beacon					
W Pickard St	S Fancher St	1	ea	\$ 29,000.00	\$ 29,000.00
E Pickard St	Airway Dr/2nd St	1	ea	\$ 29,000.00	\$ 29,000.00
E Pickard St	Proposed Trail	1	ea	\$ 29,000.00	\$ 29,000.00
E Broadway Rd	Soaring Eagle to Ziibiwing	1	ea	\$ 29,000.00	\$ 29,000.00
E Broomfield Rd	Sweeney Rd	1	ea	\$ 29,000.00	\$ 29,000.00
E Blue Grass Rd	Sweeney Rd	1	ea	\$ 29,000.00	\$ 29,000.00
S Isabella Rd	Crosslanes St	1	ea	\$ 29,000.00	\$ 29,000.00
TOTAL					\$ 203,000.00
Crossing Island (Bollards, landscaping, concrete curbs, pavement removal, striping, ped light)					
E Preston Rd	South Lynnwood Dr	1	ea	\$ 18,000.00	\$ 18,000.00
TOTAL					\$ 18,000.00
Rectangular Rapid Flash Beacon					
Mission Rd	Industrial Ave	1	ea	\$ 11,000.00	\$ 11,000.00
S Summerton Rd	Porposed Trail Crossing	1	ea	\$ 11,000.00	\$ 11,000.00
E Deerfield Rd	Three Leaves Dr	1	ea	\$ 11,000.00	\$ 11,000.00
E Remus Rd	Near S Isabella St	1	ea	\$ 11,000.00	\$ 11,000.00
E High St	N Brown St	1	ea	\$ 11,000.00	\$ 11,000.00
W High St	S Fancher St	1	ea	\$ 11,000.00	\$ 11,000.00
E Preston	Sweeney St	1	ea	\$ 11,000.00	\$ 11,000.00
TOTAL					\$ 77,000.00
Rectangular Rapid Flash Beacon with Curb Extensions					
E Bellows	Sweeney St	1	ea	\$ 37,000.00	\$ 37,000.00
TOTAL					\$ 37,000.00
Curb Extensions					
E Mosher St	S Fancher St	1	ea	\$ 26,000.00	\$ 26,000.00
E Broadway St	S Fancher St	1	ea	\$ 26,000.00	\$ 26,000.00
E Michigan St	S Fancher St	1	ea	\$ 26,000.00	\$ 26,000.00
E Bellows St	S Fancher St	1	ea	\$ 26,000.00	\$ 26,000.00
CMU Trail	Three Leaves Drives	1	ea	\$ 26,000.00	\$ 26,000.00
TOTAL					\$ 130,000.00
Other					
E Broomfield Rd	CMU Trail Crossing	1	ea	\$ 2,500.00	\$ 2,500.00
TOTAL					\$ 2,500.00

5) Proposed Off-Road Trails (approximately 5 miles)

Add trail connection to connect the City with Mid Michigan Community College and Soaring Eagle Casino/Ziibiwing Center on the East side of US 127.

- Build 10’ wide asphalt pathway extending from Remus Road to Soaring Eagle Casino then up through tribal lands to connect to the Soaring Eagle Water Park and S Summerton Road
- Build 10’ wide asphalt pathway connecting to Mid Michigan Community College
- Build 10’ wide asphalt pathway along the west side of S Summerton Road from proposed trail up to E Airport Road
- Build 10’ wide asphalt pathway along the south side of E Airport Road between S Summerton Road and S Isabella Road
- Build 10’ wide asphalt pathway along the west side of S Isabella Road between E Airport Road and E River Road

Off-Road Trail Cost Estimate:

Street	Quantity	Unit	Unit Price	Cost Estimate
Remus Rd to Summerton Rd (path)	13780.8	ft	\$ 45.00	\$ 620,136.00
Boardwalk/Wetlands	1330.0	ft	\$ 400.00	\$ 532,000.00
Creek/Drain Crossing	1.0	ls	\$ 70,000.00	\$ 70,000.00
	TOTAL			\$ 1,222,136.00
Connecting to Mid Michigan Comm College	2217.6	ft	\$ 45.00	\$ 99,792.00
Creek/Drain Crossing	1.0	ls	\$ 70,000.00	\$ 70,000.00
	TOTAL			\$ 169,792.00
Summerton Rd (west) (from trail to E Airport Rd)	1454.0	ft	\$ 45.00	\$ 65,430.00
E Airport Rd (south) (Btwn Summerton and Isabella Rd)	4458.0	ft	\$ 45.00	\$ 200,610.00
Boardwalk/Wetlands	950.0	ft	\$ 400.00	\$ 380,000.00
	TOTAL			\$ 580,610.00
	TOTAL			\$ 2,037,968.00

6) Intersection Improvements

Provide safe intersections that address ADA issues, high visibility cross walks and ramps.

- E Broomfield Road at W Campus Drive
- N Brown Street at E Pickard Street

Intersection Improvements Cost Estimate:

Street	AT	Quantity	Unit	Cost Estimate	Assumptions
E Broomfield Rd	W Campus Dr	1	ls	\$ 4,175.00	4 ramps, 90 ft of crosswalk plus lump sum for misc
N Brown St	E Pickard St	1	ls	\$ 8,430.00	8 ramps, 210 ft of crosswalk plus lump sum for misc
TOTAL				\$ 12,605.00	

7) New Bridge over US 127

There have been discussions about extending E Remus Rd over US 127 to connect the Saginaw Chippewa Tribal Land and Mid Michigan Community College to the downtown.

- Evaluate if potential vehicle bridge with bike lanes and sidewalks is feasible at Remus Rd over US 127

New Bridge over US 127 Cost Estimate:

According to a cost estimate conducted by MDOT in 2010 it was projected the cost of a new vehicle bridge with bicycle and pedestrian facilities would cost around \$3.5 million dollars to construct.

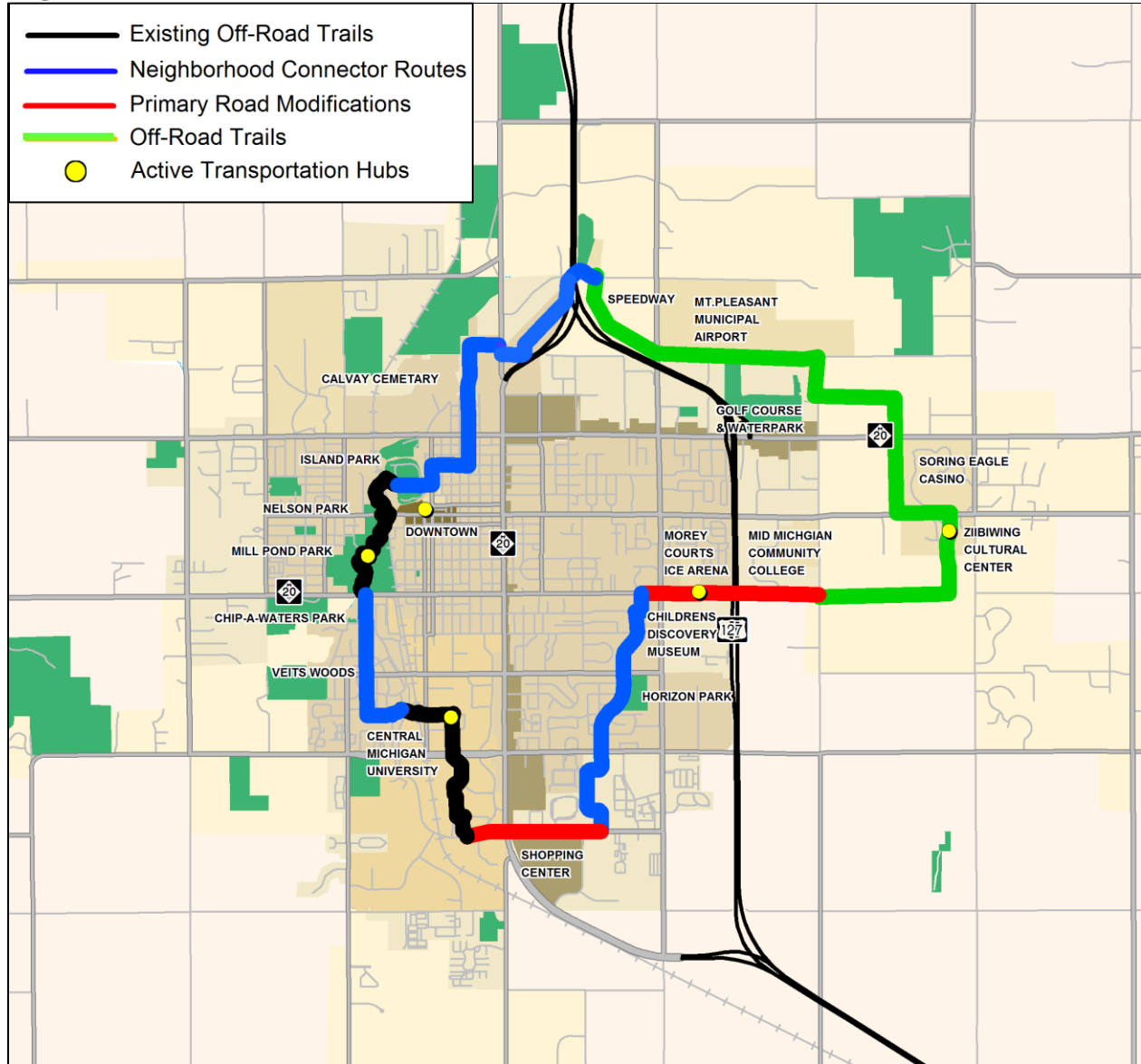
Alternative routes were evaluated, however based on current conditions there is not enough room to retrofit the E Broadway Road or E Broomfield Road overpasses to accommodate bicycle and pedestrian facilities in the near-term. The cost of adding a separate facility at Remus Road would probably cost the same as adding new facilities at E Broomfield Road or E Broadway Road.

Total Initial Primary Corridors Estimate = \$13,099,071.58

Circle Tour Implementation

The Circle Tour is part of the Initial Primary Corridor system. Below is a breakdown of the different facilities and costs that make up the circle tour.

Fig. 5.1c. Circle Tour Implementation



The Circle Tour connects to major destinations in the City of Mt. Pleasant, Union Township, Central Michigan University and the Saginaw Chippewa Indian Tribal Lands along with a potential to link to the proposed regional trails that will connect to Clare to the north and Shepherd to the south. Overall this loop is about 15 miles long with 2.4 miles of Existing Off-Road Trails, 5.3 miles of Proposed Neighborhood Connector Routes, 2.2 miles of Proposed Primary Road Modifications and 4.7 Miles of Proposed Off-Road Trails.

Circle Tour Cost Estimate

The projected cost for the implantation of the Circle Tour Loop (which is a part of the initial primary connectors) is \$7,144,618.15. This includes the 5 proposed active transportation hubs, wayfinding signage, traffic calming, bike lanes, multi-modal overpass, off-road trails and 10 road crossing improvements. Please refer to the table below for a breakdown of the projected implementation costs.

Street	Between	Quantity	Unit	Unit Price	Cost Estimate		
Traffic Calming Improvements							
Andre/Main/Lincoln		0.88	mi	\$ 261,600.00	\$ 230,208.00		
Sunset Lane		0.07	mi	\$ 261,600.00	\$ 18,312.00		
Sweeney		0.27	mi	\$ 261,600.00	\$ 70,632.00		
Bike Lanes							
E Blue Grass Rd	Sweeney	University Park Dr	0.81	mi	\$ 6,000.00	\$ 4,860.00	
Watson Rd			0.77	mi	\$ 5,200.00	\$ 4,004.00	Eliminate parking, narrow lanes to 11', add edge stripe
S Fancher St	Pickard	Andre	0.19	mi	\$ 6,000.00	\$ 1,140.00	
N Fancher St	Pickard St	Industrial Ave	0.57	mi	\$ 6,000.00	\$ 3,420.00	Narrowing Lane
Industrial Ave	N Fancher St	Mission Rd	0.20	mi	\$ 6,000.00	\$ 1,200.00	narrowing Lane
Industrial Park Dr	Mission Rd	E River Rd	0.72	mi	\$ 6,000.00	\$ 4,320.00	narrowing Lane
Sweeney St	E Preston Rd	E Broomfield Rd	15.00	ea	\$ 225.00	\$ 3,375.00	Shared lane markings
Sweeney St	E Broomfield	E Blue Grass Rd	0.65	mi	\$ 6,000.00	\$ 3,900.00	3 to 2 lane conversion
Sidepaths / Off-Road Trails							
E Blue Grass Rd	Sweeney	University Park Dr	6040.00	ft	\$ 45.00	\$ 271,800.00	10' wide asphalt
Trail	Sweeney	E Remus	804.28	ft	\$ 45.00	\$ 36,192.60	10' wide asphalt
Trail	Sweeney	E Preston	817.99	ft	\$ 45.00	\$ 36,809.55	10' wide asphalt
Trail	E River	Isabella	1.00	ls	\$ 188,775.00	\$ 188,775.00	4,195 ft plus drain crossing
Remus Rd	Isabella	Summerton	1.00	ls	\$ 440,750.00	\$ 440,750.00	5350 ft plus boardwalk
Remus Rd	Isabella	MPB Academy	669.00	ft	\$ 45.00	\$ 30,105.00	10' wide asphalt
Trail	Remus Rd	Summerton	1.00	ls	\$ 1,220,000.00	\$ 1,220,000.00	15,110 ft plus boardwalk and creek crossing
Summerton Rd (west)	Trail to E Airport Rd		1454.00	ft	\$ 45.00	\$ 65,430.00	
E Airport Rd (south)	Summerton	Isabella	1.00	ls	\$ 580,610.00	\$ 580,610.00	5408 ft plus boardwalk

Road Crossing Improvements

W Pickard St	S Fancher St	1	ea	\$	29,000.00	\$	29,000.00		
E Pickard St	Proposed Trail	1	ea	\$	29,000.00	\$	29,000.00		
E Broadway Rd	Soaring Eagle to Ziibiwing	1	ea	\$	29,000.00	\$	29,000.00		
E Broomfield Rd	Sweeney Rd	1	ea	\$	29,000.00	\$	29,000.00		
E Blue Grass Rd	Sweeney Rd	1	ea	\$	29,000.00	\$	29,000.00		
Mission Rd	Industrial Ave	1	ea	\$	11,000.00	\$	11,000.00		
S Summerton Rd	Proposed Trail Crossing	1	ea	\$	11,000.00	\$	11,000.00		
E Remus Rd	Near S Isabella St	1	ea	\$	11,000.00	\$	11,000.00		
E Preston	Sweeney St	1	ea	\$	11,000.00	\$	11,000.00		
E Bellows	Sweeney St	1	ea	\$	37,000.00	\$	37,000.00		
Active Transportation Hubs		5.00	ea	\$	29,555.00	\$	147,775.00		
Wayfinding Signage		1.00	ls	\$	25,000.00	\$	25,000.00	Route signs, pavement markings and street signs	
						<hr/>			
Sub-Total						\$ 3,614,618.15			
127 Bridge Crossing						Sub-Total		\$ 3,500,000.00	Vehicle and ped bridge (2010 MDOT Cost Estimate)
						<hr/>			
TOTAL:						\$ 7,114,618.15			

Total Cost of the Circle Tour Estimate= \$7,114,618.15

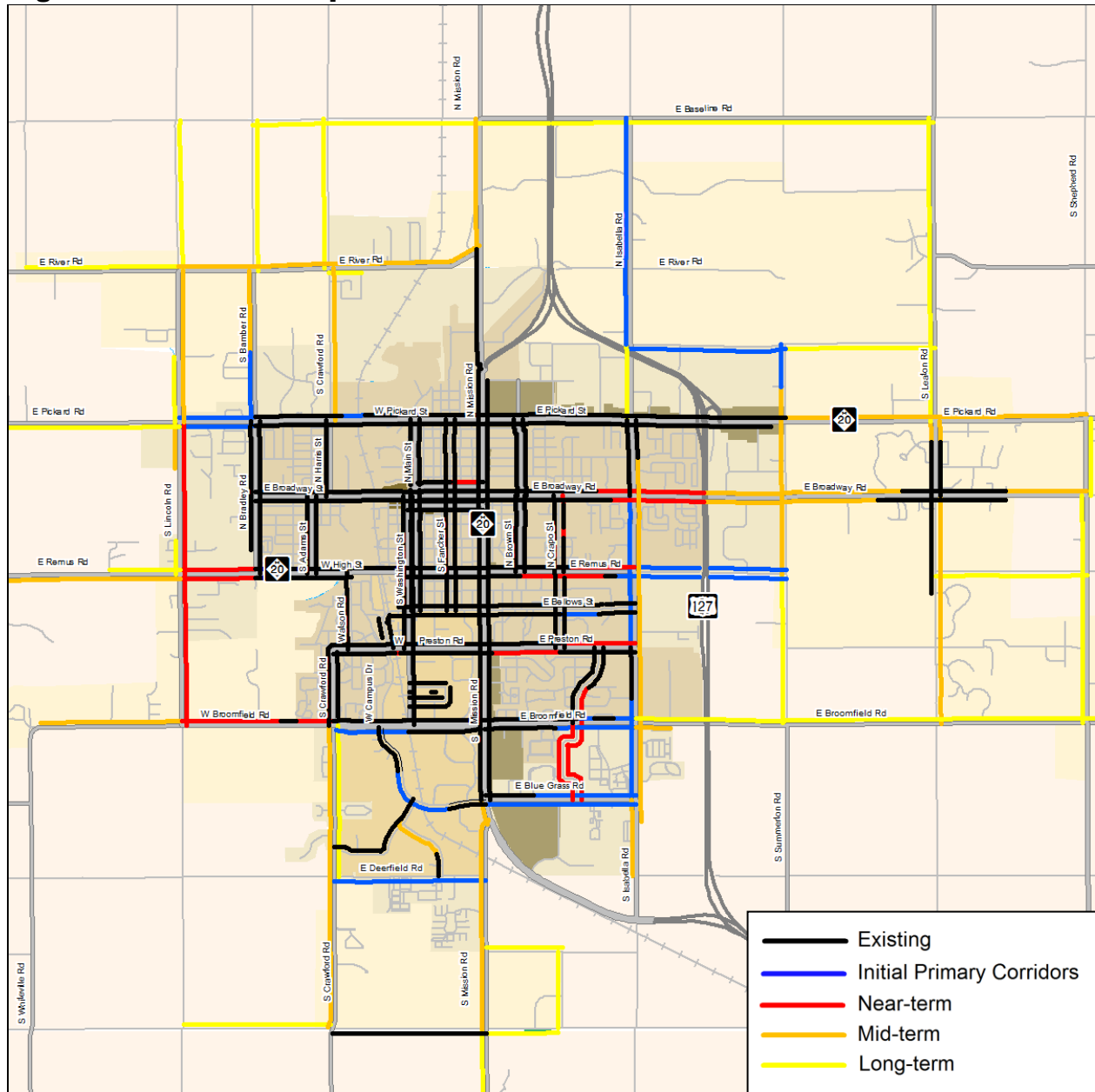
Non-motorized Network Implementation for the Greater Mt. Pleasant Area

The following maps display how the remaining segments of the network should be implemented. The proposed near-term, mid-term and long-term improvements are provided for each of the following facility types; Sidewalks, Bike Lanes, Neighborhood Connectors and Off-Road Trails, Road Crossing Improvements and Intersection Improvements.

Sidewalks Implementation

Some of the sidewalk gaps are addressed in the Initial Primary Corridors task.

Fig. 5.1D. Sidewalk Implementation



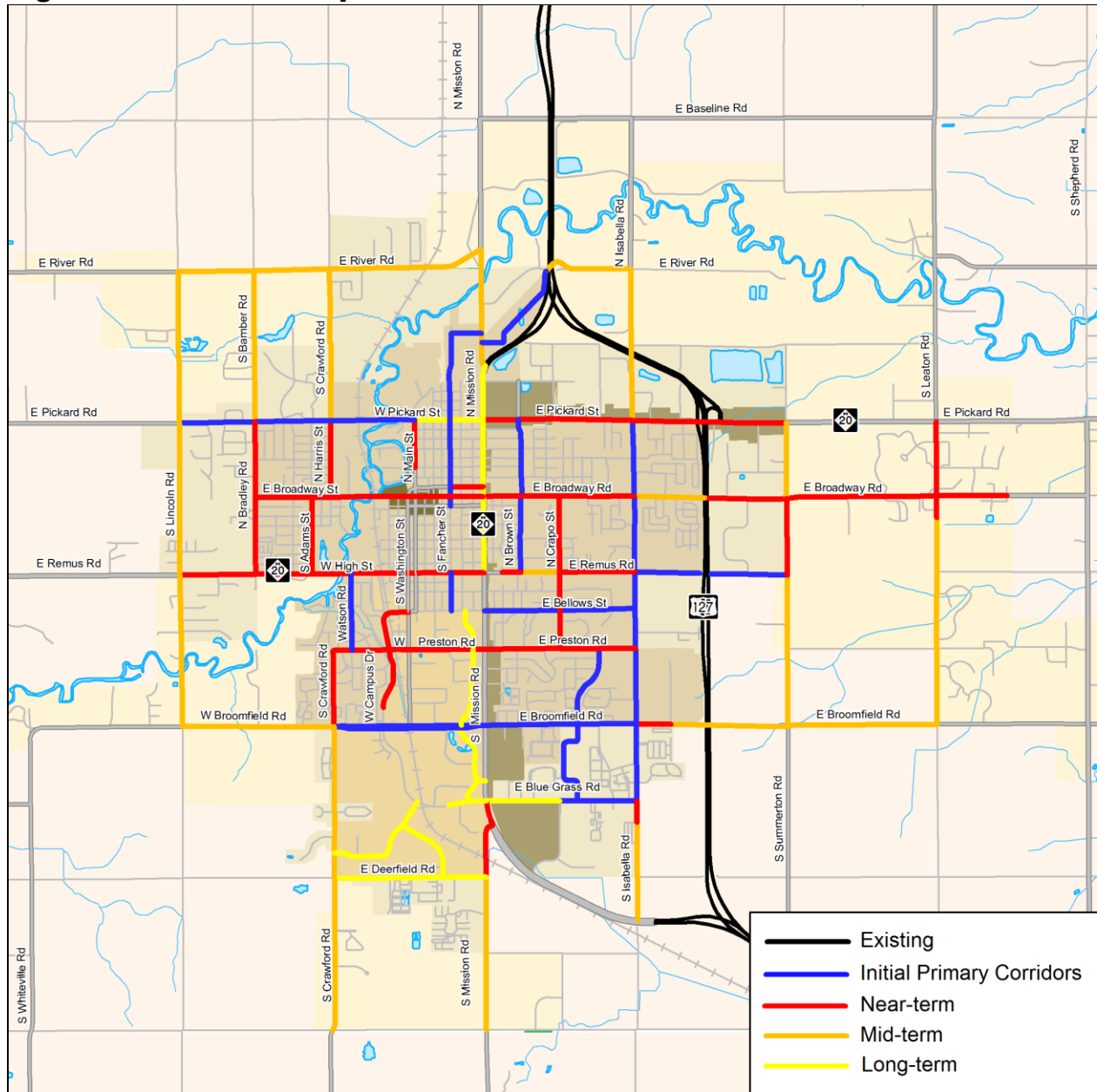
Some of the sidewalk gaps are addressed through the Initial Primary Corridor task. The remaining sidewalk gaps are broken into near-term, mid-term and long-term implementation. However, if opportunities become available to implement sidewalks from the mid or long term group they should be completed first.

In the near-term focus on completing sidewalk gaps in the urban areas, especially within the “No Bus Zone” and to neighborhoods that are isolated from the city center. In the mid-term focus on completing sidewalk gaps in the suburban areas on at least one side of the road. In the long-term focus on completing sidewalks in the suburban fringe areas and trying to connect all of the surrounding neighborhoods to the interior system.

Bike Lane Implementation

There is potential to add 21 miles of bike lanes to the Greater Mt. Pleasant Area in the Near-term.

Fig. 5.1E. Bike Lane Implementation



This task focuses on implementing on-road bike lanes. Most of the near-term bike lanes can be implemented simply by restriping the roadway. The mid-term bike lanes require minimal construction such as paving the shoulder. The long-term bike lanes should be implemented when a roadway is reconstructed.

1) Near-term Bike Lanes (approximately 21 miles)

Cost-effective and easily implemented by minor changes such as re-striping the existing road surface.

- Add shared lane markings to E Michigan Street between S Washington Street and S Lansing Street (planned reconstruction in 2012 between Washington Street and Fancher Street)
- Add bike lanes to W Preston Road between S Crawford Road and S Mission Road by narrowing the lanes to 11' (planned reconstruction in 2012 between Washington Street and E Campus Drive)
- Add parking edge stripe to S Adams Street between W High Street and E Broadway Street (planned overlay in 2013 between E Broadway Street and E High Street)
- Add bike lanes to E Broadway Street between N Bradley Road and the Chippewa River and between N Mission Road and S Isabella Road and between Soaring Eagle Casino and S Leaton Road by narrowing the lanes to 11' (planned reconstruction in 2014 from S Harris Street to S Washington Street)
- Add shared lane markings to E Broadway Street between Chippewa River and S Mission Road (planned reconstruction in 2014 from Harris Street to S Washington Street)
- Add bike lanes to W Campus Drive between W Preston Road and E Bellows Street through a 4 to 3 lane conversion (planned overlay in 2015 between W Preston Road and E Bellows Street)
- Add pavement marking and signs where there are existing paved shoulders on W High Street between S Lincoln Road and S Washington Street to make it a designated bike lane
- Add bike lanes to E High Street between S Washington Street and S Mission Road through a 3 to 2 lane conversion
- Add bike lanes to E High Street Between S Mission Road and Eastlawn Street by narrowing the lanes to 11'
- Add parking edge strip to E High Street between Eastlawn Street and N Brown Street
- Add bike lanes to E Remus Road between N Crapo Street and S Isabella Road by narrowing the lanes to 11'
- Add bike lane to E Pickard Street between N Mission Road and S Summerton Road by narrowing the lanes to 10.5'
- Add pavement marking and signs where there are existing paved shoulders on E Pickard Street between S Summerton Road and S Leaton Road to make it a designated bike lane
- Add pavement marking and signs where there are existing paved shoulders on E Broadway Road between US 127 and Soaring Eagle Boulevard to make it a designated bike lane
- Add shared lane markings to E Mosher Street between N Main Street and S Fancher Street
- Add bike lanes to E Mosher Street between N Main Street and S Mission Road by narrowing the lanes to 11'
- Add parking edge stipe to E Preston Road between S Mission Road and S Isabella Road
- Add parking edge strip to N Bradley Road between W High Street and W Pickard Street by eliminating on-street parking
- Add bike lane to N Harris Street between E Broadway Street and W Pickard Street by narrowing the lane to 11'

- Add bike lane to S Crawford Road between W Preston Road and W Broomfield Road by narrowing the lane to 11'
- Add bike lanes to W Campus Drive between W Broomfield Road and West Preston Road by narrowing the lane to 11' and adding shared lane marking near the intersection of W Campus Drive and W Broomfield Road
- Add bike lanes to N Main Street between W Pickard Street and E Lincoln Street by eliminating on street parking
- Add shared lane marking to N Main Street between E Mosher Street and E Lincoln Street
- Narrow lanes to 11' and add road edge stripe on S Mission Road between W High Street and E Blue Grass Road
- Add bike lanes to N Crapo Street between E Broadway Road and E Remus Road by adding a parking edge stripe
- Add bike lanes to N Crapo Street between E Remus Road and E Preston Road by narrowing the lanes to 11'
- Add bike lanes to S Summerton Road between E Broadway Road and E Remus Road by narrowing the lanes to 10'

2) Mid-term Bike Lanes (approximately 20 miles)

Minor changes needed such as paving the road shoulder.

- Add bike lanes to S Lincoln Road by paving the shoulder between W Broomfield Road and E River
- Add bike lanes to S Bamber Road by paving the shoulder between E River Road and W Pickard Street
- Add bike lanes to S Crawford Road by paving the shoulder between E River Road and W Pickard Street and between W Broomfield Road and E Millbrook Road
- Add bike lanes to N Mission Road by paving the shoulder between Industrial Avenues and E River Road
- Add bike lanes by paving the shoulder to S Summerton Road between E Pickard Street and E Broadway Road and between E Remus Road and E Broomfield Road
- Add bike lanes to S Isabella Road by paving the shoulder between E Blue Grass Road and BR US 127
- Add bike lanes to S Mission Road by paving the shoulder between E Deerfield Road and E Millbrook Road
- Add bike lanes on W Broomfield Road by paving the shoulder between S Lincoln Road and S Crawford Road and between Grover Parkway and S Leaton Road
- Add bike lanes to E Remus Road by paving the shoulder between N Brown Street and N Crapo Street
- Add bike lanes to E Broadway Street by paving the shoulder between S Isabella Road and US 127

3) Long-term Bike Lanes (approximately 6 miles)

The cost to add bike lanes to these roadways independently of a road reconstruction project would be significant. Thus to maximize the impact of finite resources the long-term improvements are expected to be implemented when a road is completely reconstructed (not just resurfaced).

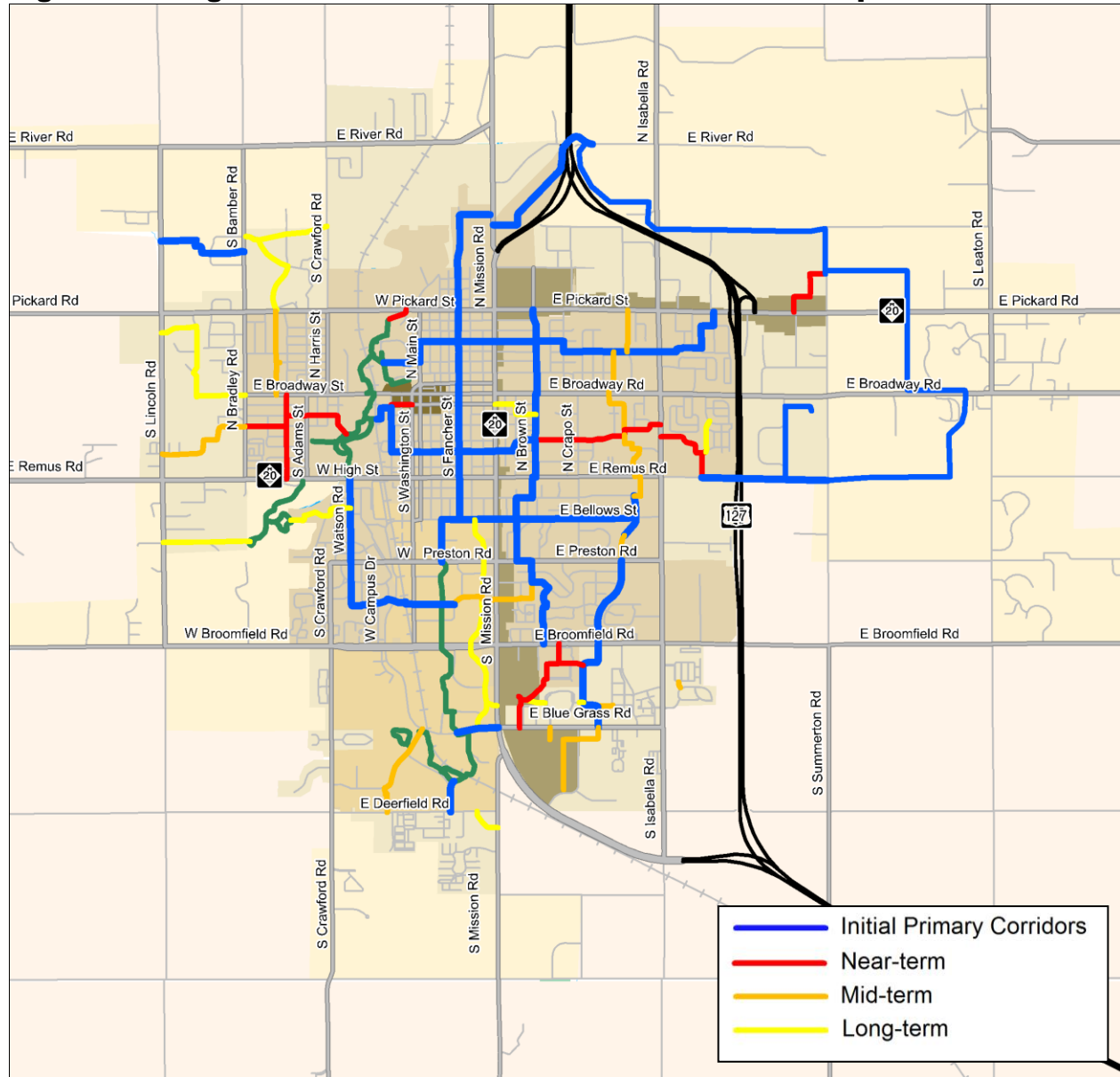
- Add bike lanes to E Blue Grass Rd between Mission Road and Encore Drive.
- Add bike lanes to E Deerfield Rd between S Crawford Road and S Mission Road
- Add Bike lanes to Mission Road between E High St and Industrial Ave
- Add Bike lanes to E Campus Drive between E Bellow Street and E Blue Grass Road
- Add Bike lanes to Three Leaves Drive between E Deerfield Road and W Campus Drive
- Add Bike lanes to Denison Drive between Three Leaves Drive and S Crawford Road
- Add Bike Lanes to Pickard Street between Main Street and N Mission Road



Nighborhood Connectors and Off-Road Trails Implementation

Please note that neighborhood connectors are not just restricted to the routes highlighted above. If desired elements of neighborhood connectors are desired, they could be used elsewhere in the city as a means to calm traffic, provide non-motorized links and enhance a streetscape.

Fig. 5.1F. Neighborhood Connectors and Off-Road Trails Implementation



This task focuses on implementation of the neighborhood connector routes and off-road trails. The near-term improvements are located mainly along existing roadways and only a few short connector pathways are needed. The mid-term improvements require short connector pathways to help link up the neighborhood connector routes. The long-term improvements include major off-road trails and the remainder of the neighborhood connector routes and pathways.

1) Near-term Neighborhood Connectors and Off-Road Trails (approximately 3.5 miles)

- Obtain easements to build the following short connector pathways through undeveloped Private Property:
 - Connect North Drive to Smalley Drive with a 8' pathway
 - Connect S Ivy over to Morey Courts and the Ice Arena with an 8' pathway
- Build the following short connector pathways through Public and Quasi-Public Property:
 - Provide an 8' pathway around Morey Court and Ice Arena connecting to S Isabella Road and E Remus Road
 - Build 10' pathway between the Ziibiwing Center/Soaring Eagle Casino and the Soaring Eagle Inn and Water Park
- Provide wayfinding and signage along near-term routes
- Implement traffic calming elements along near-term routes
- Implement road crossing improvements where near-term neighborhood connector routes cross a major roadway

2) Mid-term Neighborhood Connectors and Off-Road Trails (approximately 4 miles)

- Obtain easements to build the following short connector pathways through undeveloped Private Property:
 - Connect Sweeny Street to Tallgrass Apartments with a 8' pathway
 - Connect Sweeny Street to Sterling Way with a 8' Pathway
 - Connect Sweeney Street to Apartments on Collegiate Way with a 8' pathway
 - Connect E Blue Grass Road to Wal-Mart with a 8' pathway that extends south from the intersection of E Blue Grass Road and Sterling Way
 - Connect the Existing River Trail to S Lincoln Road with a 8' pathway that crosses through the southern end of the Central Concrete Products Property
- Build the following short connector pathways through Public and Quasi-Public Property:
 - Connect Sweeny Street to Preston Road with a 8' pathway across school property
 - Connect Crosslanes Street to Carter Street with a 8' pathway across school property
 - Build 8' pathway through Sunnyside Park that connects to N Cooley Street and Bruce Street
 - Connect N Bradley Road to E Transportation Drive with a 8' pathway across school property
 - Connect Denison Drive to E Deerfield Road with a 8' pathway across CMU property
 - Build 8' asphalt pathway between York Street and Appian Way
- Provide wayfinding and signage along routes
- Implement traffic calming elements along routes
- Implement road crossing improvements where neighborhood connector routes cross a major roadway

3) Long-term Neighborhood Connectors and Off-Road Trails (approximately 4.5 miles)

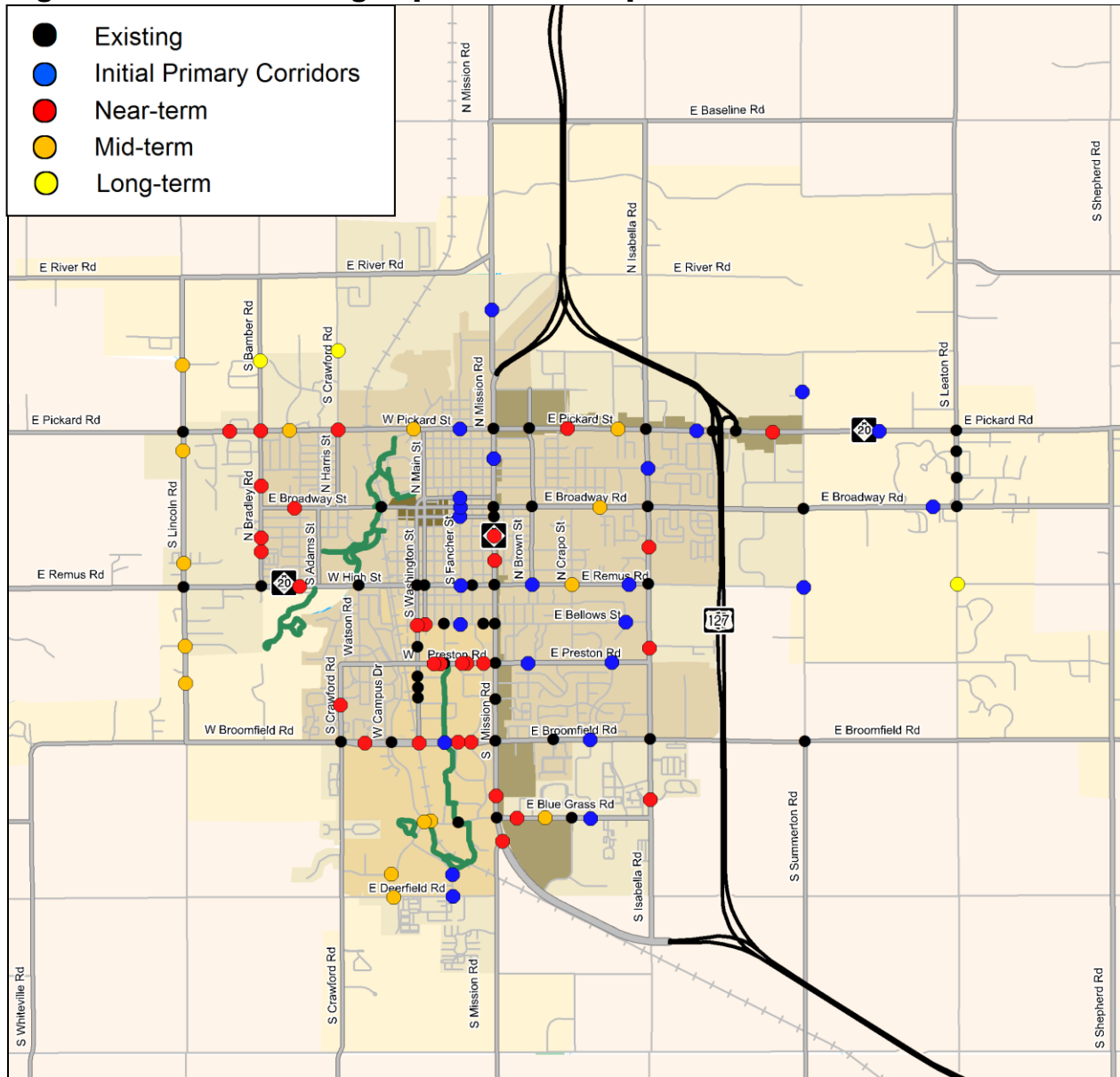
- Obtain easements to build the following short connector pathways through undeveloped Private Property:
 - Build 8' pathways connecting Target and Mission Mall to the nearby residential areas to the east and to Indian Hills Plaza to the south
 - Connect S Ivy to E Crossway Lane with a 8' pathway
 - Connect Flagstone Court to S Lincoln Road with a 8' pathway
- Build the following short connector pathways through Public and Quasi-Public Property:
 - Build 8' pathway through Union Township property near the intersection of Deerfield Road and S Mission Road, this area also has potential to become a trail head
 - Connect Greenbanks Drive to the existing River Trail with a 12' pathway
 - Coordinate with the City of Mt. Pleasant to provide pathway connections through the recently purchased property near Pickard Street and N Crawford Street when new development occurs
- Provide wayfinding and signage along routes
- Implement traffic calming elements along routes
- Implement road crossing improvements where neighborhood connector routes cross a major roadway
- Coordinate with Saginaw Chippewa Tribe to provide non-motorized connections when new roads are constructed
- Coordinate with the City of Mt. Pleasant to provide pathway connection through the recently purchased property near Pickard Street and N Crawford Street



Road Crossing Improvements Implementation

Some of the roads crossing improvements are addressed in the Initial Primary Corridors task.

Fig. 5.1G. Road Crossing Improvements Implementation

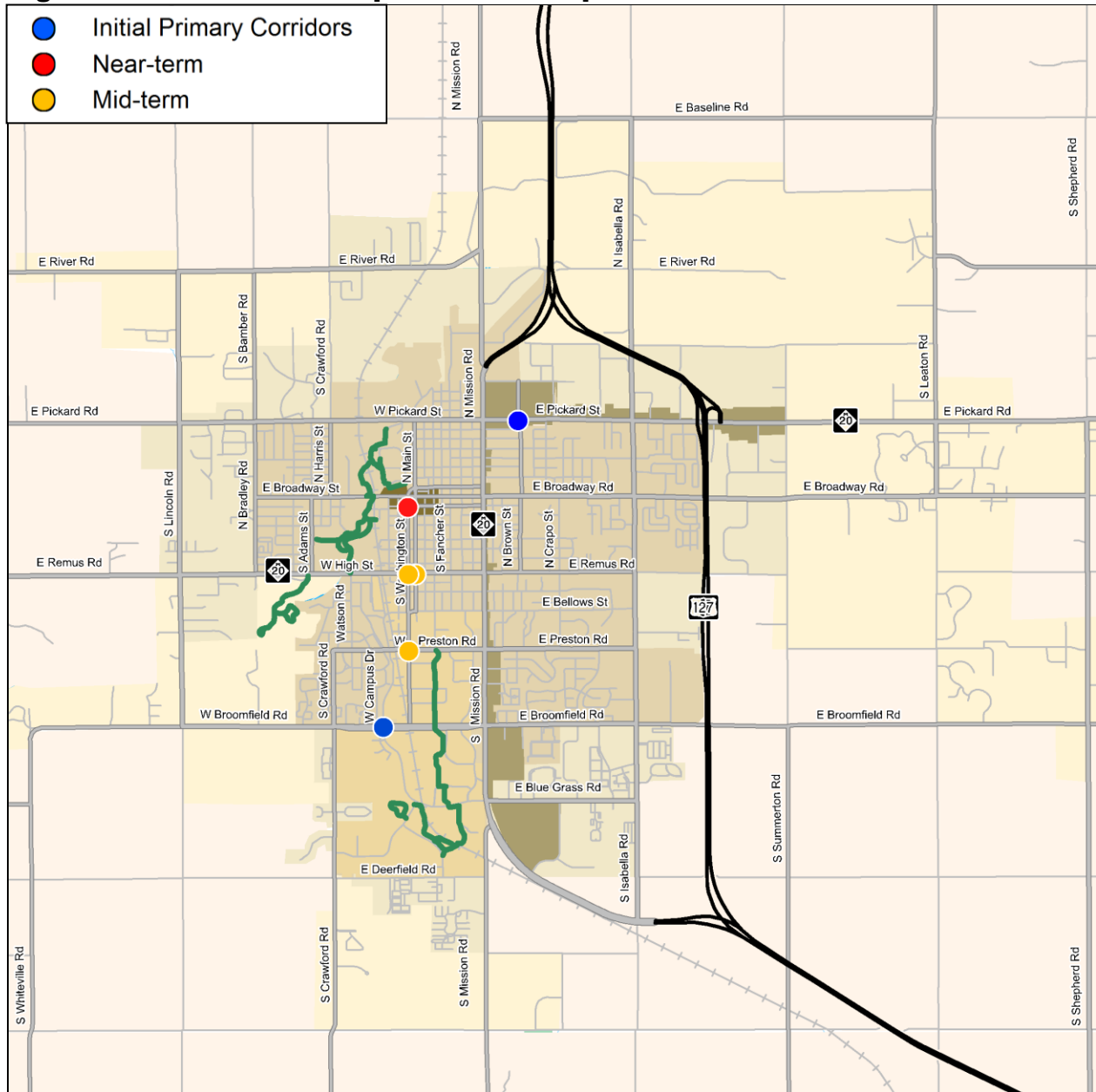


Road crossing improvements implementation rank was established based on the recommended implementation for neighborhood connector routes, sidewalks, and bike lanes. They were also selected based on latent demand to get across the street and safety concerns. Road crossing improvements should be coordinated with the other implementation tasks which include Neighborhood Connector Routes, Sidewalks, and Bike Lanes.

Intersection Improvements Implementation

Some of the intersection improvements are addressed in the Initial Primary Corridors task.

Fig. 5.1H. Intersection Improvements Implementation

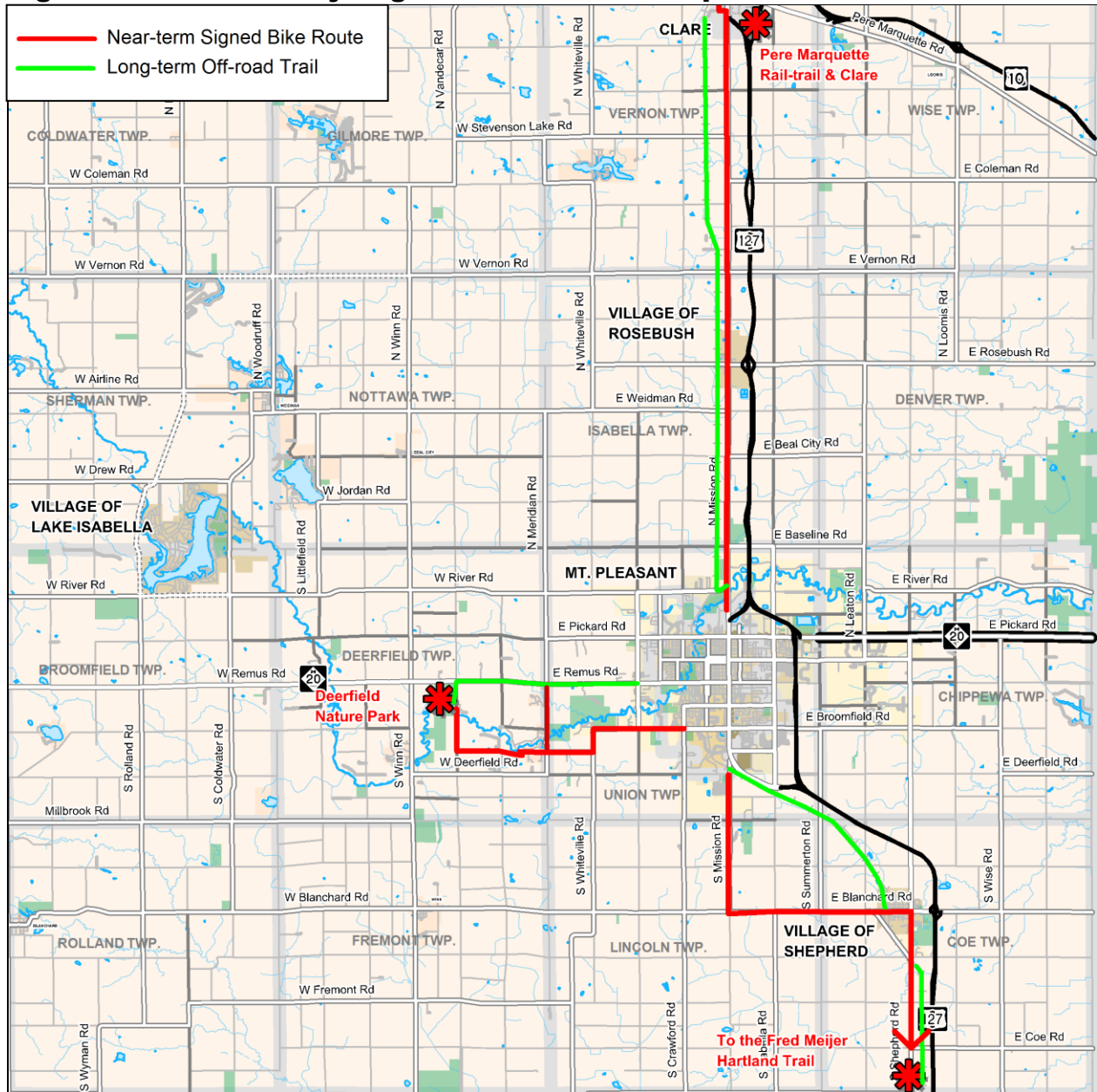


Intersection improvements implementation rank was established based on the recommended implementation for neighborhood connector routes, sidewalks, and bike lanes. They were also selected based on latent demand to get across the street and safety concerns. Intersection improvements should be coordinated with the other implementation tasks which include Neighborhood Connector Routes, Sidewalks, and Bike Lanes.

Initial Primary Regional Connections Implementation

The following improvements were determined based on public input, near-term opportunities, demand and where the majority of the population would be served. Overall, they will provide the framework for the regional non-motorized system.

Fig. 5.11. Initial Primary Regional Connections Implementation



This task focuses on creating key connections across the county that would provide a backbone to the non-motorized system. These routes are broken up into near-term and long-term improvements that can be implemented based on opportunities and funding. There are 30 miles of signed bike routes proposed and 28 miles of off-road trail proposed in this phase.

1) Connection to Meridian and Deerfield Park

- Near-term: Implement signed bike route along E Bloomfeild Road, S Whiteville Road, E Bluegrass Road, and S Vandecar Road out to Deerfield Park, with a signed bike route along S Meridian Road to Meridian Park.
- Long-term: Implement 10' Roadside Pathway on the south side of E Remus Road between S Vandecar Road and S Lincoln Road.
- It would be dangerous to continue the roadside pathway on the south side of E Remus Road due to the high volume of driveways between S Lincoln Road and S Bradley Road, the alternative option would be to use the proposed sidewalks going north or south on S Lincoln Street and then using the proposed Neighborhood Connector Routes paralleling E Remus Road to the North and South as an alternative route.
- When complete the near-term and long-term solutions will provide a 10 mile loop

2) Connection to Clare and the Pere Marquette Rail-Trail

- Near-term: Implement signed bike route along N Mission Road between Mt. Pleasant and Clare
- Long-term: Acquire easement to implement a Rail-with-Trail between Mt. Pleasant and Clare following the Great Lakes Central Railroad north of E River Road. The railroad has a 50' easement which means there is not enough room for a trail within its right-of-way so an additional property easement from the adjacent landowners (approximately 57 private owners) would be necessary to implement a path along this route. Obtaining easements from the adjacent land owners should be pursued and if the task presents too many challenges than a roadside pathway along N Mission Road should be considered. Please note that driveways that intersect the roadside pathway present safety hazards. Access consolidation may be necessary in some areas where there are a numerous driveways in close proximity to each other, such as near the Village of Rosebush.
- A Rail-with-Trail would be the more desirable option to placing a roadside pathway along N Mission Road because roadside pathways can be very difficult to fund due to their unsatisfactory nature as a bike facility. Also, a Rail-with-Trail would provide a more natural and scenic setting away from the roadway.

3) Connection to the Village of Shepherd and Fred Hartland Trail

- Near-term: Implement signed bike route along N Mission Road, E Blanchard Road and S Shepherd Road between Mt. Pleasant and the Village of Shepherd and then extending south to the Fred Meijer Hartland Trail.
- Long-term: Acquire easement to implement a Rail-with-Trail between Mt. Pleasant and Shepherd following the Great Lakes Central Railroad north of South of E Deerfield Road. The railroad has a 50' easement which means there is not enough room for a trail within its right-of-way so an additional property easement from the adjacent landowners (approximately 15 private owners) would be necessary to implement a path along this route. Obtaining easements from the adjacent land owners should be pursued and if the task presents too many challenges than a roadside pathway along S Mission Road, E Blanchard Road and S Shepherd Road between Mt. Pleasant and the Village of Shepherd should be considered. Please note that driveways that intersect the roadside pathway present safety hazards. Access consolidation may be necessary in some areas where there are a lot of driveways in close proximity to each other, such as near the Village of Shepherd.

- A Rail-with-Trail would be the more desirable option to placing a roadside pathway along S Mission Road because roadside pathways can be very difficult to fund due to their unsatisfactory nature as a bike facility. Also, a Rail-with-Trail would provide a more natural and scenic setting away from the roadway.

Initial Primary Regional Connections Cost Estimate:

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Cost Estimate</u>	
To Meridian and Deerfield Park					
Near-Term					
Signed Bike Route	7.96	mi	\$ 1,200.00	\$ 9,552.00	Bloomfield Road, Whiteville Road, Bluegrass Rd, Vandecar Rd to Deerfield Park. Also along Meridian Rd (this line should be red)
TOTAL				\$ 9,552.00	
Long-Term					
10' Path	23705.19	ft	\$ 45.00	\$ 1,066,733.55	S side of Remus Rd between Vandecar and Lincoln
TOTAL				\$ 1,066,733.55	
To Clare and Pere Marquette Rail Trail					
Near-Term					
Signed Bike Route	13.83	mi	\$ 1,200.00	\$ 16,596.00	N Mission Rd between Mt Pleasant and Clare
TOTAL				\$ 16,596.00	
Long-Term (Rail w Trail)					
Obtain Easements				TBD	57 Private landowners along railroad - easements needed to fit "rail with trail"
10' Path along RR	71997.8	ft	\$ 45.00	\$ 3,239,901.00	Along RR from Mission Rd to Pere Marquette Trail in Clare
Bridge Allowance	1	ls	\$ 500,000.00	\$ 500,000.00	
Boardwalk Allowance	1	ls	\$ 225,000.00	\$ 225,000.00	
Contingency (20%)				\$ 792,980.20	
TOTAL				\$ 4,757,881.20	Plus Easements from 57 landowners

To Village of Shepherd and Fred Meijer Hartland Trail

Near-Term

Signed Bike Route	11.11 mi	\$ 1,200.00	\$ 13,332.00	Mission Rd, Blanchard Rd and Shepherd Rd toward the Fred Meijer Hartland Trail (end distance calculation at Isabella Co line)
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<hr/>		TOTAL	\$ 13,332.00	
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Long-Term (Rail w Trail)

Obtain Easements			TBD	15 private landowners along railroad - easements needed to fit "rail with trail"
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10' Path along RR	42115.2 ft	\$ 45.00	\$ 1,895,184.00	Segment would become a signed bike route within the village of Shepherd -- approx 1.56 miles.
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Bridge Allowance	1 ls	\$ 280,000.00	\$ 280,000.00
Boardwalk Allowance	1 ls	\$ 160,000.00	\$ 160,000.00
Contingency (20%)			\$ 467,036.80

<hr/>		TOTAL	\$ 2,802,220.80	Plus Easements from 15 landowners
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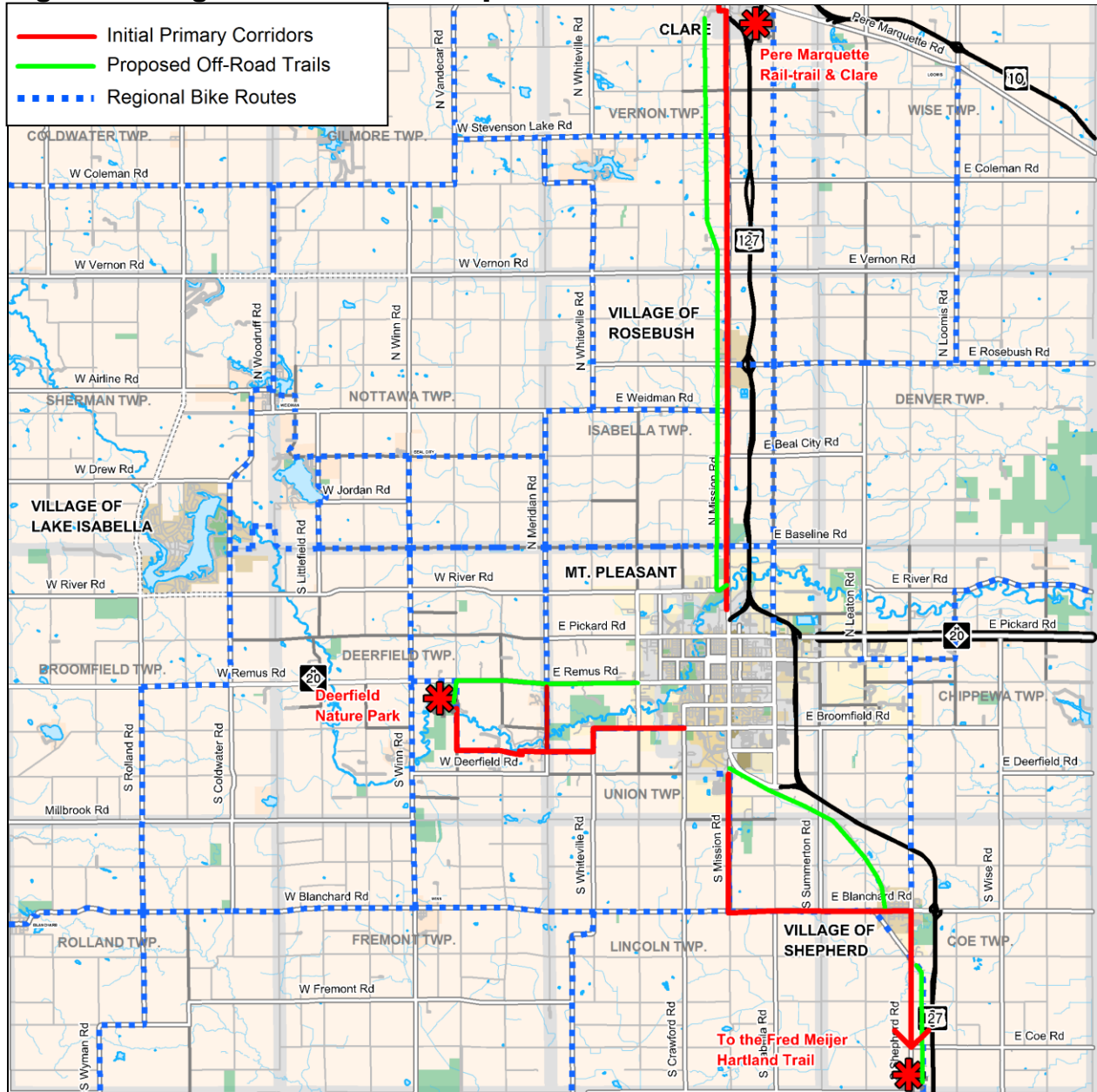
Total Cost of Near-term Initial Primary Regional Connections = \$39,480

Total Cost of Long-term Initial Primary Regional Connections = \$8,626,835.55

Regional Bike Route Implementation

Some of the roads crossing improvements are addressed in the Initial Primary Corridors task.

Fig. 5.1J. Regional Bike Route Implementation



The proposed Regional Bike Routes will help to link key destinations across the county. The connections include signed bike routes, paved shoulders, and potential off-road trails.

1) Near-term Regional Bike Routes

- Implement wayfinding signs on all routes so road can be used as on-road bike routes

2) Mid-term Regional Bike Routes

- Add bike lanes to the routes by paving the shoulder

3) Long-term Regional Bike Routes

- Implement off-road trails and roadway pathways



5.2 Potential Funding Sources

There are several potential funding sources to investigate as projects move toward implementation. Some projects have a higher likelihood of receiving outside funding assistance than others. Potential funding sources from outside entities change and evolve on a regular basis. Understanding available funding programs, their requirements and deadlines requires continuous monitoring. A few of the more common funding sources have been detailed here as a reference and resource. These are in addition to traditional funding methods such as the general fund, millages, bonds, Community Development Block Grants, etc.

MDOT Transportation Enhancement Program

Transportation Enhancement (TE) activities are federally funded, community-based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of the transportation infrastructure. To be eligible, a project must fall into one of the 12 TE activities and relate to surface transportation. Activities that relate to the implementation of this Master Plan include:

- Provision of facilities for pedestrians and bicycles: Includes bike lane striping, wide paved shoulders, bike parking, bus racks, off-road trails, bike and pedestrian bridges and underpasses.
- Paved shoulders four or more feet wide
- Bike lanes
- Pedestrian crosswalks
- Shared use paths 10 feet wide or greater
- Path/trail user amenities
- Grade separations
- Bicycle parking facilities
- Bicycle accommodations on public transportation
- Provision of safety and educational activities for pedestrians and bicyclists
- Programs designed to encourage walking and bicycling by providing potential users with education and safety instruction through classes, pamphlets and signage
- Preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails).
- Acquiring railroad rights-of-way; planning, designing and constructing multi-use trails; developing rail-with-trail projects; purchasing unused railroad property for reuse.

A minimum 20% local match is required (although more match is preferred) for proposed projects and applications are accepted on an on-going basis.

Michigan Natural Resources Trust Fund

The MNRTF provides funding for both the purchase of land (or interests in land) for recreation or protection of land because of its environmental importance or scenic beauty and the appropriate development of land for public outdoor recreation use. Goals of the program are to: 1) protect Michigan's natural resources and provide for their access, public use and enjoyment; 2) provide public access to Michigan's water bodies, particularly the Great Lakes, and facilitate their recreation use; 3) meet regional, county and community needs for outdoor recreation opportunities; 4) improve the opportunities for outdoor recreation in Michigan's urban areas; and, 5) stimulate Michigan's economy through recreation-related tourism and community revitalization.

All proposals for grants must include a local match of at least 25% of the total project cost. There is no minimum or maximum for acquisition projects. For development projects, the minimum funding request is \$15,000 and the maximum is \$300,000. Applications are due in April and projects must meet the goals of the community's Parks and Recreation Master Plan. If a community has recently received a significant MDNRE Trust Fund award for a project it may be a few years (2 to 3) before the community can be successful in approaching the Trust Fund again for additional projects. This is due to the Trust Funds historical pattern of dispersing their dollars geographically.

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

The CMAQ program was created to reduce congestion on local streets and improve air quality. Funds are available to urban communities designated as "non-attainment" areas for air quality. Pedestrian and bicycle projects are eligible for CMAQ funding where they can be shown to divert motor vehicle commuting traffic that would otherwise take place. CMAQ projects on roads must be on federal-aid eligible roads. There is typically a 20% local match requirement.

DALMAC Fund

Established in 1975 to promote bicycling in Michigan, the DALMAC Fund is administered by the Tri-County Bicycle Association and supported by proceeds from DALMAC. The DALMAC Fund supports safety and education programs, bicycle trail development, state-wide bicycle organizations, and route mapping projects. Applications must be submitted by March 1. They are reviewed by the DALMAC Fund Committee and approved by the Board. Grants are made by May of the year they were submitted. Applications can be found at www.biketcba.org. This is a relatively small grant program with a total of \$70,000 in 2010.

KODAK American Greenways Awards

Kodak, The Conservation Fund, and the National Geographic Society, provide small grants to stimulate the planning and design of greenways in communities throughout America. Made possible by a grant from Eastman Kodak, the program also honors groups and individuals whose ingenuity and creativity foster the creation of greenways. The application period typically runs from March 1st through June 1st. Program goals are to: develop new, action-oriented greenways projects; assist grassroots greenway organizations; leverage additional money for conservation and greenway development; and, recognize and encourage greenway proponents and organizations. Maximum grant is \$2,500. For more information go to www.conservationfund.org.

Safe Routes to School

The Safe Routes To School Program is a national movement to make it safe, convenient and fun for children to bicycle and walk to school. In Michigan, the program is sponsored by the Michigan Fitness Foundation and has gained momentum over the past few years. Examples of projects and programs eligible for funding include sidewalks, traffic calming, crossing improvements, bicycle and pedestrian facilities, public awareness campaigns, traffic education and enforcement, etc. Schools must be registered and develop a Walking Audit in order to be eligible to apply. SR2S funding is 100 percent federal; no

match is required. Projects must be constructed within 2 miles of the school. Applications are received and reviewed quarterly. Typical funding is approximately \$200,000 per school and does not cover engineering, administration or permits.

www.saferoutesmichigan.org

Bikes Belong

The Bikes Belong Coalition is sponsored by members of the American Bicycle Industry. Their mission is to put more people on bikes more often. The program funds projects in three categories: Facility, Education, and Capacity Building. Requests for funding can be up to \$10,000 for projects such as bike paths, trails, lanes, parking, and transit, and safe routes to school. Applications are accepted via email three times per year (April, August and November). More information can be found at www.bikesbelong.org.

MDOT Small Urban Program

The Small Urban Program provides federal Surface Transportation Program (STP) funding to areas with a population of 5,000 to 49,999. Road and transit capital projects are eligible for STP funds. During a call for projects, MDOT requests that eligible areas, such as Mt. Pleasant, submit road and transit capital projects for funding consideration. All road projects must be located on the federal-aid highway system and consistent with regional land use and development plans. Urban areas may submit for up to \$375,000 federal STP per project with a required 20% local match. Eligible projects include non-motorized shoulders, reconstruction, and non-motorized trails (along roads).

Foundations

There are a handful of private Foundations in the Mt. Pleasant area that may be considered for assistance in moving the non-motorized plan forward. It is unclear as to the likelihood of receiving assistance from these Foundations as many do not accept unsolicited proposals. Discussions would begin with an existing relationship and/or association with Foundation staff.

- Mount Pleasant Area Community Foundation
- W.E. Martin Foundation
- Dorsay Foundation
- Isabella Bank and Trust Foundation

5.3 Annual Maintenance & Operation Costs

There are many other factors that can affect cost of maintenance for a non-motorized system. However, the main factor affecting cost is the difference in agencies that maintain and operate facilities. Each agency will have different labor costs, access to different machinery and equipment, and may or may not have a volunteer base to offer assistance.

Routine maintenance can be defined as maintenance that is needed to keep the facility operating in a safe and usable condition, not involving major development or reconstruction. Below is a list of typical routine maintenance activities and their associated annual cost per mile (when applicable):

- Asphalt Paved Trail - \$4,500 per mile annually (includes sweeping/blowing of debris, mowing of shoulders, vegetation control, asphalt sealing, and snow removal)
- Asphalt Side Path - \$700 per mile annually (includes asphalt sealing, and snow removal)
- Concrete Sidewalk – 30+ year useful life with little or no yearly maintenance (assumes adjacent property owners are required to remove snow and repair broken or shifting flags as needed)
- Pedestrian Bridge – 50+ year useful life with little or no yearly maintenance (dependent on deck surface)
- Boardwalk - \$18,000 per mile annually (based on power-washing, mildewcide application and sealing of decking every three years)
- Bicycle Lanes - \$10,000 per mile annually (includes weekly sweeping and annual re-stripping)
- Signals - \$200 annually