Goshen Bicycle and Pedestrian Master Plan Executive Summary

The Michiana Area Council of Governments (MACOG), in partnership with the City of Goshen, received a grant from the Indiana State Department of Health Division of Nutrition and Physical Activity to develop a bicycle and pedestrian master plan for Goshen. This document outlines existing bicycle and pedestrian facilities in the city and provides recommendations to improve conditions to ultimately increase bicycling and walking in the area. This Executive Summary provides a vision, goals, and objectives to support and increase bicycling and walking in Goshen.

Vision

Plan recommendations envision communities in which walking and bicycling are safe, attractive, and convenient for people of all ages and abilities.

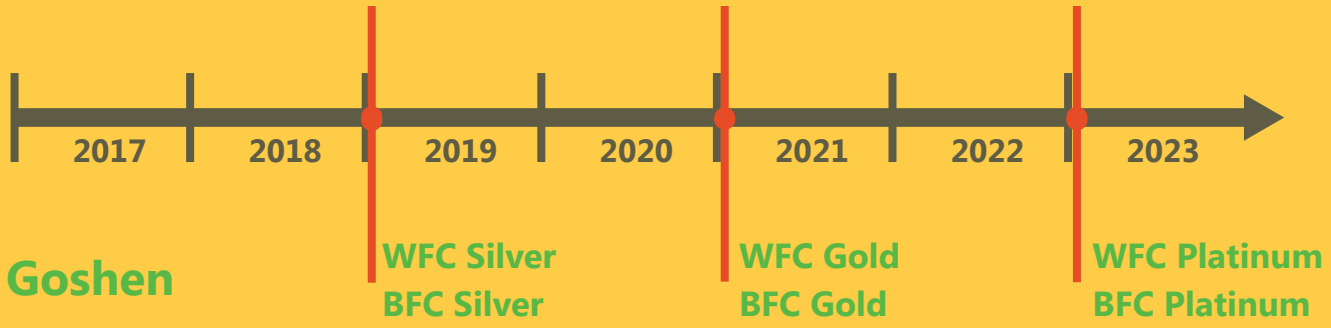
Mission Statement

The plan presents solutions to:

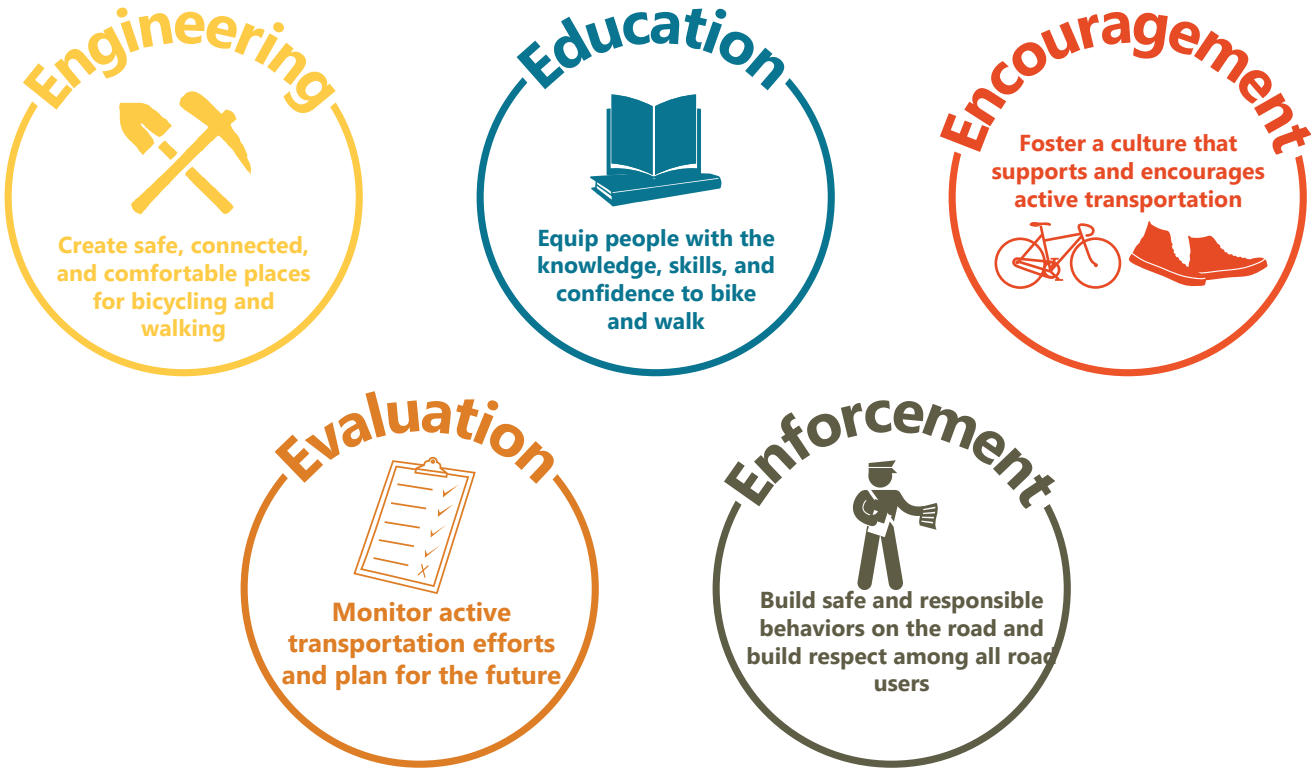
- **Build and maintain transportation networks that follow Complete Street philosophies, are welcoming, and connect people to the places they want to go.**
- **Create networks that are useful at all times of day and throughout the year.**
- **Educate and promote predictable behaviors to ensure that people who walk, bike, and drive can travel to and around Goshen safely and comfortably.**

Goals

The two overarching goals identified for the City of Goshen are to: (1) achieve Platinum-Level Walk Friendly Community (WFC) and (2) achieve Platinum-Level Bicycle Friendly Community (BFC) status, as recognized by the UNC Highway Safety Research Center and the League of American Bicyclists (LAB), respectively. A proposed timeline for these achievements is shown below.



The Five Es of Bicycle and Pedestrian Planning



Objectives

This plan provides objectives in five key areas, known as the "Five E's", to help guide the City of Goshen through the implementation of the plan's infrastructure and programming recommendations. Implementing these recommendations involves coordination among multiple city departments, as well as with the neighboring City of Elkhart and other external agencies. Also integral to the implementation of this plan will be support from walking and bicycling advocates, community partners, and other stakeholders who share a common interest in improving walking and bicycling in Goshen.

The objectives presented in the each of the "Five E's" should be led by a City employee identified as the pedestrian and bicycle coordinator (e.g., Right-of-Way Engineer), supported by other staff involved in planning, engineering, public works, public safety, health, and education sectors. The establishment of a pedestrian and bicycle coordinator can be done either as a new part or full-time appointment by the city, identification of a role within existing municipal staff, or identification of a coordinator to serve at the regional level.

The plan's objectives correspond with the "Five E's" of bicycle and pedestrian planning: engineering, education, encouragement, enforcement, and evaluation. A sixth "E," equity, underlies each of the "Five E's". Objectives were formed based on the plan's existing conditions analysis and public input process. The plan will use these objectives to develop infrastructure and programmatic recommendations. Bulleted lists under each objective represent potential recommendations that will assist in reaching that objective.

Engineering

- Use best practice design guidelines to reduce crashes on roadways, particularly to protect people walking and bicycling.
- Overcome gaps and barriers to safe walking and bicycling through infrastructure delivery that focuses on Complete Streets principles. Use creative suggestions to improve stressful roadways.
- Create a system of low stress facilities that do not rely on arterial and collector roadways.
- Coordinate restriping and resurfacing projects to include street redesigns that accommodate people walking and bicycling.
- Create a method for residents to participate in operations and maintenance discussions and delivery.
- Improve coordination with other agencies to deliver continuous walking and bicycling network coverage across jurisdictional boundaries. Provide a coordinated method for improved maintenance across all seasons.
- Keep active transportation networks in good repair.
- Work with the future MACOG wayfinding working group to implement a uniform, regional wayfinding system.
- Provide bicycle and pedestrian supportive facilities in high profile areas.

Education

- Creatively make use of city resources to broadcast public amenities and improve education opportunities.
- Formalize education opportunities so residents of all ages are knowledgeable about safe driving, bicycling, walking, and transit use.
- Coordinate educational program development and delivery with MACOG and other local, regional, and state-level stakeholders.
- Provide City staff, across all departments, with training related to best practice pedestrian and bicycle planning and design.

Encouragement

- Organize public events and other opportunities for residents to experience existing and proposed walking and bicycling amenities.
- Monitor the number of residents, employers, community organizations, and other stakeholders engaged in walking and bicycling programming.
- Promote ways for health providers and the public health community to become involved in furthering the plan's vision and mission statement.
- Use public information channels to promote opportunities for businesses to collaborate with walking and bicycling promotional initiatives.
- Now that bike share has launched in South Bend, create supportive infrastructure and policies that help bring a successful bike share model to Goshen.
- Grow the number of City staff whose work involves walking and bicycling issues.

Figure 1. Partnerships between law enforcement officers and local organizations enhance community rapport.

Enforcement

- Ensure that law enforcement activities related to transportation initiatives are cognizant of the most recent industry standards related to socially equitable and just policing and law enforcement training standards.
- Continue collaboration with other public agencies to organize traffic safety details that target high-risk crash contributing factors.
- Continue investigating behaviors correlated with high crash potential; work with law enforcement agencies to encourage safe walking, bicycling, and driving.
- Partner with law enforcement agencies in the development and project delivery of infrastructure options designed to eliminate traffic fatalities.
- Use public resources to investigate historic and present law enforcement activities to ensure equitable distribution of these resources.
- Collaborate with law enforcement community liaisons to investigate partnerships with local bicycle organizations related to developing walking and bicycling programming.
- Prioritize enforcement of existing laws to support bicycling and walking.

Evaluation

- Institutionalize the plan's recommendations by delegating implementation responsibilities throughout public agencies and community organizations.
- Periodically monitor the plan's implementation and local walking and bicycling levels.
- Continue to update the City's digital files, including GIS features, to accurately monitor existing and proposed walking and bicycling infrastructure.
- Expand residents' abilities to interact with the plan's implementation.

Figure 2. Evaluating walking and bicycling programming helps make a case for these programs' benefits.

Program Recommendations

The following recommendations have been developed in the areas of Education, Encouragement, Enforcement, and Evaluation. The following three general recommendations should considered as providing the foundation to support the remaining recommendations in this section. Engineering recommendations are provided in the Infrastructure Recommendations section.

Maintain the Steering Committee, originally convened during this planning process

This plan was supported by an steering committee. The committee should continue after the plan's adoption to continue interagency cooperation. The steering committee should consider reopening membership after the plan's adoption.

A diverse membership will help implement the plan's recommendations. The committee would continue to provide advice and recommendations to promote walking and bicycling. The recommendations in this section describe potential roles for the steering committee.

Identify a Pedestrian and Bicycle Coordinator

The City should identify a Pedestrian and Bicycle Coordinator or seek opportunities to support or coordinate with a regional pedestrian and bicycle coordinator. The identification of an individual for this role should help guide the implementation of the bicycle and pedestrian plan recommendations. The Pedestrian and Bicycle Coordinator would be responsible for frequent reporting to City Council, MACOG, and the public.

Establish a Bike and Walk Ambassador program

Cities across the country have created ambassador programs to conduct bike-related events and interact with the public at neighborhood or citywide events. Ambassadors are individuals hired from their community to educate and encourage their peers to ride their bikes more often and to do so safely.

Typically, one person or team manages several ambassadors at a time. The project manager is responsible for the program's structure, timeline, daily operations, and reporting/evaluation. The ambassadors perform in person outreach to community organizations, schools, and other groups.

Ambassador programs succeed by using three strategies: Creating stand-alone events in the warm months (i.e., light or helmet giveaways, bike rodeos), attending pre-existing community events (i.e., free concerts, festivals), and educating school aged children during the school year (i.e., classroom presentations). Appendix 2 describes the program in greater detail, including a sample program calendar.

Education

Develop formalized education opportunities for residents of all ages. Plan for seasonal, recurring education events. Leverage existing advocates and supporters to increase education among residents and stakeholders. Program tasks include:

League Cycling Instructor (LCI) Training

The City of Goshen should offer LCI training to Goshen citizens and City staff, and welcome participation by the Police Department. The number of LCIs in the region should be robust enough to include several people who can serve Goshen, Elkhart, and the surrounding areas. Ideally, the City should offer one (1) class annually.

Potential Leads

- Pedestrian and Bicycle Coordinator
- Parks and Recreation Department
- Public Works

Potential Supporters

- Goshen Police Department
- Goshen Fire Department
- League of American Bicyclists
- Friends of the Pumpkinvine Nature Trail

Walking and Bicycling Safety Campaign

A public education campaign should make use of online and printed materials to show support for walking and bicycling in Goshen. Materials created should include maps and calendars of popular events that involve walking and bicycling, and should include messages to foster empathy for people who walk and bicycle. Online materials should be shared by government and community organization social media accounts. Distribute materials seasonally to public destinations and leverage the public health and bicycle advocacy groups to assist in sharing this information.

Potential Leads

- Pedestrian and Bicycle Coordinator
- City of Goshen Mayor's Office
- Goshen Police Department

Potential Supporters

- MACOG
- Goshen Community Schools
- Elkhart County Public Health Department
- Friends of the Pumpkinvine Nature Trail
- Goshen Fire Department

Driver Safety and Awareness Campaign

Develop an advertising and public information campaign for residents in Goshen who drive. Develop materials with the key message of fostering respect, empathy, and the importance of protecting the safety of people who walk and bicycle. Include key messages in city-owned utility bills or notices at least twice annually, supplement with messages from the Mayor's office.

Potential Leads

- Pedestrian and Bicycle Coordinator
- City of Goshen Mayor's Office

Potential Supporters

- MACOG
- Goshen Police Department
- Goshen Fire Department
- Friends of the Pumpkinvine Nature Trail

Safe Routes to School Program

Programming should include education program development and delivery. Emphasize engineering improvements that will make it easier to walk and bike to school. Provide bike parking at schools and teach students how to securely lock bicycles every fall. The program should be piloted first at schools with higher rates of walking, then duplicated as a model for increasing walking at other schools in the region. School administrators should meet at least one annually to report on progress.

Potential Leads

- Pedestrian and Bicycle Coordinator
- Goshen Community Schools

Potential Supporters

- MACOG
- Elkhart County Public Health Department
- Parks and Recreation Department
- Public Works

Safe Routes for Seniors Program

Launch a program to identify key safety improvements near senior centers or in neighborhoods with senior citizens. Review pedestrian crossings and signal timing for adequacy in accommodating seniors. Program managers should meet annually with each City to make recommendations and coordinate with capital improvements planning.

Potential Leads

- Pedestrian and Bicycle Coordinator
- Council on Aging of Elkhart County
- REAL Services of Elkhart County

Potential Supporters

- Public Works
- Greencroft Communities

Figure 3. Safe Routes for Seniors programs would identify ways to improve older adults' mobility.

Encouragement

Create a culture where walking and bicycling are comfortable, desirable, and supported methods of transportation. Engage in seasonal, repeated activities to encourage residents and visitors to walk and bike, and provide incentives. Program tasks include:

Support and Publicize Recurring Events by Walking and Bicycling Organizations

Help publicize Pedal Power Pride, Chain Reaction Bicycle Project, Bike Elkhart, Friends of the Pumpkinvine, and other walking/bicycling organizations' group rides (e.g. Critical Mass, Kidical Mass, Bike n Dine) initiatives within City communications (i.e., newsletters, literature available at public buildings). Continue First Friday and Maple City Walk programming.

Potential Leads

- Bike Elkhart
- Pedal Power Pride
- Greater Elkhart Chamber of Commerce
- Redevelopment Commission
- Friends of the Pumpkinvine Nature Trail
- Chain Reaction

Potential Supporters

- Mayor's Office
- Neighborhood Associations
- Parks and Recreation Departments
- Health care providers (Beacon Health)
- Elkhart County Convention and Visitors Bureau

Increase City Presence at Local Events

Grow the number of businesses who participate in Bike to Work Week every May. Stakeholders and steering committee members expressed interest in encouraging participation in regional activities or scaling up local programming.

Potential Leads

- Pedestrian and Bicycle Coordinator
- Elkhart County Public Health Department

Potential Supporters

- Mayor's Office
- Michiana Bike Coalition
- Bike Elkhart
- Pedal Power Pride
- Friends of the Pumpkinvine Nature Trail
- Chain Reaction

Develop Walking and Bicycling Maps to Support Healthy Recreation

Produce walking and bicycling guides that are customized for the region and promote healthy active transportation and access to local businesses. Include local destinations that help residents lead active lifestyles. Examples include grocery stores that offer fresh produce, walking and bicycling trails, the Riverwalk, and more.

Potential Leads

- Elkhart County Health Department
- Pedestrian and Bicycle Coordinator
- Health systems (e.g. Beacon Health)

Potential Supporters

- Public Works
- MACOG

Offer Creative Incentives Partnered with Local Bike Share

Doctors and other healthcare professionals can help patients become more active if Goshen creates a "Prescription Bike Share" program once bike share launches in the region. This type of program allows doctors to "prescribe" patients a reduced-price bike share membership to help them incorporate exercise within their daily lives.

Potential Leads

- Pedestrian and Bicycle Coordinator

Potential Supporters

- MACOG
- Health systems (e.g. Beacon Health)

Embrace Bike Share

Bike share systems do well in cities with low-stress bicycle networks that include calm residential streets, paved shoulders or bike lanes, separated bike lanes, and trails. The plan's infrastructure recommendations are an encouragement tool to help more people feel comfortable bicycling in Goshen.

Work with City departments to involve bicycle share in City programming and special events. A citywide Bicycle Ambassador's program could help promote a future bike share system. The bike share system could supply bicycles for free or reduced-cost learn to ride events, in conjunction with area League Cycling Instructors (LCI). The bike share system could also make bicycles available during the Ambassadors' community bike rides.

Potential Leads

- Pedestrian and Bicycle Coordinator

Potential Supporters

- MACOG
- Elkhart County Convention and Visitors Bureau

Update Development Policies to Make Walking and Bicycling Easier, More Supported

Include sidewalks for all new, infill, and redevelopment. Sidewalks should be a minimum of five feet wide scaling up to eight or ten feet in high pedestrian use areas and along major arterial roadways and provide appropriate buffering from traffic. Review and revise zoning and subdivision regulations to provide for:

- Fine-grained mix of land uses
- Short-to medium-length blocks
- Street-oriented buildings
- Parking requirements that reduce the space committed to auto parking and require bicycle parking
- Require street design connectivity that supports walking, bicycling and transit
- Work to create transit routes that provide access to all residents every half mile or closer
- Provide for safe street crossing at locations where pedestrians need to cross, such as bus stops, schools, parks, and other major destinations
- Incorporate bicycle facilities into street and building design to provide for access and parking that is convenient and accessible.

Potential Leads

- Goshen Planning Commission
- Public Works

Potential Supporters

- MACOG

Evaluation

Develop a recurring, systematic approach to tracking progress at the City level. Review progress on an annual basis, at a minimum, and prepare an outward-facing report. Consider an annual presentation to City Council. Program and policy tasks include:

Institutionalize Bicycle and Pedestrian Accommodations through the Establishment of a Standing Bicycle and Pedestrian Committee

This plan was supported by a steering committee. The steering committee should continue after the plan's publication to continue interagency cooperation. Committee should include local government leaders, metropolitan planning department, chamber of commerce members, local visitors bureau staff, public safety representatives, bike-related business owners, and other walking and bicycling enthusiasts. The standing committee can continue working toward plan goals before the Pedestrian and Bicycle Coordinator is appointed.

Potential Leads

- Pedestrian and Bicycle Coordinator

Potential Supporters

- MACOG
- City of Goshen Planning & Public Works

Project Review for Bicycle and Pedestrian Accommodation

Establish a review committee for infrastructure projects, and check for consistency with bicycle and pedestrian infrastructure recommendations. Where none are present, review projects for general accommodation and establish a policy that new infrastructure projects should not degrade the walking and bicycling environment. Prepare written project reviews as part of project recommendations before City Council.

Potential Leads

- Pedestrian and Bicycle Coordinator
- Public Works

Potential Supporters

- Chain Reaction Bike Shop
- Bike Elkhart
- Elkhart County Public Health Department
- Friends of the Pumpkinvine Nature Trail

Collect Bicycle and Pedestrian Count Data on Rolling Basis

Install counters at various locations to collect data over the course of an entire year. Maintain a database for count data by location. Invest in continuous counters for high-profile locations. Prepare a counts data report as part of annual project reports or as a standalone memorandum.

Potential Leads

- Pedestrian and Bicycle Coordinator

Potential Supporters

- Public Works
- MACOG
- Elkhart County Convention and Visitors Bureau

Bicycle and Pedestrian Infrastructure Mapping

When projects are completed, they should be added to each city's GIS database. Review database at least once annually.

Potential Leads

- Pedestrian and Bicycle Coordinator

Potential Supporters

- Parks and Recreation Department
- Public Works
- Elkhart County Highway Department
- INDOT

Annual Report Card on Walking and Bicycling

Create an annual report card for new or modified bicycle and pedestrian infrastructure. Prepare quarterly reports for City staff in each city. Include bicycle and pedestrian count data where collected, and share year-over-year changes.

Potential Leads

- Pedestrian and Bicycle Coordinator

Potential Supporters

- Public Works
- MACOG

Increase Dialogue Opportunities between City and Residents for Walking and Bicycling

Expand the current 311 system to include codes related to sidewalk, bike lane, and trail maintenance requests. Prepare at least one (1) report annually on ticket levels and response times.

Potential Leads

- Public Works

Potential Supporters

- Pedestrian and Bicycle Coordinator
- Goshen Police Department

Achieve Consistent Opening and Closing Times of Trail Facilities

Keep trail open and close times consistent so commuters know can travel after sunset in the winter months.

Potential Leads

- Parks and Recreation Department
- Public Works Department

Potential Supporters

- Goshen Police Department

Recommendations for Plan Adoption

This plan illustrates potential infrastructure and programming tools to create a series of recommended actions for becoming more walk and bicycle friendly. They show potential tools to accomplish the plan's goals. Although this plan provides recommendations for potential infrastructure and programming options, cities are not limited to the facility types and streets included in this plan.

Recommendations are designed to be flexible and support multiple methods for implementation. One possible method involves creating an annual fund for pedestrian and bicycle improvements. The annual obligation would help diversify and enhance the respective pedestrian and bicycle networks.

Potential Leads

- Public Works
- Engineering
- Planning
- Pedestrian and Bicycle Coordinator

Potential Supporters

- Bike Elkhart and other advocacy groups

Enforcement

Create a culture that embraces bicycling and walking and emphasizes safe, predictable, and desirable behaviors by people walking, bicycling, and driving. Increase visibility of law enforcement on foot and by bicycle. Program tasks include:

Periodic Updates to Bicycle and Pedestrian Safety Best Practices for Public Safety Officers

Incorporate bicycle and pedestrian educational program into training of local law enforcement. This training could be integrated into officers' Roll Call meetings, formatted as an annual training with in classroom and on-bike components, or incorporated in Police Academy training.

Training materials, such as informational flyers, should be available if the City updates policies related to the rights and responsibilities of people walking and bicycling. Offer at least one (1) training update annually.

Potential Leads

- Goshen Police Department

Potential Supporters

- Pedestrian and Bicycle Coordinator

Adopt a Vision Zero Policy

Adopt a Vision Zero (VZ) policy that seeks to eliminate all traffic crashes. Vision Zero strategies seek to, "eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all."[1]

Street redesigns, policy changes, education or encouragement programs, and equitable law enforcement come together under the VZ umbrella. The Vision Zero Network is a campaign that brings cities together across the country to work towards these goals. The Cities should take advantage of the network's resources and online materials, such as case studies.

Potential Leads

- Pedestrian and Bicycle Coordinator

Potential Supporters

- Parks and Recreation
- Public Works
- Elkhart County Highway Department
- INDOT
- MACOG
- Engineering
- Planning

Conduct Regular Public Safety Reporting to City Officials

Public safety officers should provide regular reports on traffic crashes involving bicyclists and pedestrians to City officials. Findings could be incorporated in the annual evaluation report proposed in this plan. Reports can establish trends and discuss contributing factors as well as potential solutions.

Potential Leads

- Goshen Police Department

Potential Supporters

- Pedestrian and Bicycle Coordinator

1 http://visionzeronetwork.org/about/what-is-vision-zero/

Infrastructure Recommendations

This section presents network, intersection, and programmatic recommendations for the City of Goshen. Facility recommendations included in this plan represent the preferred. Each facility recommendation is grouped into three categories: mixed traffic, visually separated, and physically separated.

The plan is designed to be flexible in case the City decides one type of facility should be implemented instead of the facility type originally proposed in this plan. As such, these categories represent the fact that multiple facility types may be possible along a given corridor.

Recommendation development was an iterative and collaborative process. Active transportation networks must establish seamless, connected routes that link people to their destinations.

Recommended improvements should consider the existing environment, as well as the planned or expected future context. The needs of all roadway users, including the safety and comfort of people walking, bicycling, and accessing transit, must be balanced with roadway characteristics and corridor constraints. The outcome of this collective process represents a practical approach to improving the region's transportation options.

Recommendations for improving walking and bicycling illustrate preferred alternatives that were selected based on a variety of potential infrastructure investments. This plan presents guidance towards facility selection, but realizes that other infrastructure tools may be chosen in the future.

The plan's goals support the aim of advancing to higher certification levels in the Bicycle Friendly Community (BFC) and Walk Friendly Community (WFC) recognition programs.

To obtain higher certification levels, among other factors, cities must demonstrate well-connected walking and bicycling networks. The network recommendations help achieve these goals over time. Additional coordination and study will be needed to implement these facilities in the future.

Recommendations are subject to change and refinement as site conditions and development patterns change, and as other adjacent or intersecting projects are implemented. Additionally, some projects may require feasibility studies to verify routing or applicability.

Recommended Facility Guidance

The facility descriptions on the following pages provide guidance for facility selection based on criterial including roadway posted speed, traffic volume (average daily traffic), and land use factors. Grouped into categories based on guidance from the Federal Highway Administration *Small Town and Rural Multimodal Networks Guide*, recommended facility guidance draws guidance from this document as well as other national guidelines, including:

- National Association of City Transportation Officials (NACTO) *Urban Bikeway Design Guide*
- American Association of State Highway Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities*
- Institute for Transportation Engineers (ITE) *Protected Bikeways Practitioners Guide*

Mixed Traffic Facilities

Yield Roadway

A yield roadway is designed to serve pedestrians, bicyclists, and motor vehicle traffic in the same slow speed travel area. Yield roadways serve bidirectional motor vehicle traffic without lane markings in the roadway travel area.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Network			Land Use		
		Local	Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas
0 - 20	0 - 500	■					■

Neighborhood Greenway

A neighborhood greenway is a low-stress shared roadway bicycle facility, designed to offer priority for bicyclists operating within a roadway shared with motor vehicle traffic.

NOTE: Speed and volume management may be necessary for streets with higher speed limits and traffic volumes.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Network			Land Use		
		Local	Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas
0 - 20	0 - 1,500	■					■

Advisory Shoulder

Advisory shoulders create usable shoulders for bicyclists on roadways that are otherwise too narrow. The shoulder is delineated by pavement marking and optional pavement color. Motorists may only enter the shoulder when no bicyclists are present and must overtake these users with caution due to potential oncoming traffic. Note: In order to install advisory shoulders, an approved Request to Experiment is required as detailed in Section 1A.10 of the MUTCD.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Network			Land Use		
		Local	Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas
0 - 25	0 - 3,000		■		■	■	■

Visually Separated

Paved Shoulder

Paved shoulders on the edge of roadways can be enhanced to serve as a functional space for bicyclists and pedestrians to travel in the absence of other facilities with more separation.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Network			Land Use		
		Local	Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas
25 - 55	1,000 - 12,000+		■	■	■		■

Bike Lane

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and optional signs. A bike lane is located directly adjacent to motor vehicle travel lanes and follows the same direction as motor vehicle traffic.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Network			Land Use		
		Local	Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas
0 - 40	0 - 9,000	■	■			■	■

Pedestrian Lane

A pedestrian lane is an interim or temporary pedestrian facility that may be appropriate on roads with low to moderate speeds and volumes. A pedestrian lane is a designated space on the roadway for exclusive use of pedestrians. The lane may be on one or both sides of the roadway and can fill gaps between important destinations in a community. Note: This guidance features expanded content and minor differences from that in the FHWA Small Town and Rural Multimodal Networks document. Please refer to the guide for the formal presentation of this facility type.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Network			Land Use		
		Local	Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas
0 - 20	0 - 2,000	■	■				■

Physically Separated

Shared Use Path

A shared use path provides a travel area separate from motorized traffic for bicyclists, pedestrians, skaters, wheelchair users, joggers, and other users. Shared use paths can provide a low-stress experience for a variety of users using the network for transportation or recreation.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Network			Land Use		
		Local	Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas
-	-				■		■

Sidepath

A sidepath is a bidirectional shared use path located immediately adjacent and parallel to a roadway. Sidepaths can offer a high-quality experience for users of all ages and abilities as compared to on-roadway facilities in heavy traffic environments, allow for reduced roadway crossing distances, and maintain rural and small town community character.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Network			Land Use		
		Local	Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas
10 - 55	0 - 12,000+		■	■			■

Sidewalk

Sidewalks provide dedicated space intended for use by pedestrians that is safe, comfortable, and accessible to all. Sidewalks are physically separated from the roadway by a curb or unpaved buffer space.

Separated Bike Lane

Speed (Preferred mph)*	Volume (Preferred ADT)*	Network			Land Use		
		Local	Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas
10 - 50	0 - 12,000+	■	■				■

A separated bike lane is a facility for exclusive use by bicyclists that is located within or directly adjacent to the roadway and is physically separated from motor vehicle traffic with a vertical element. Examples of vertical elements include flexible bollards, concrete curb, planters, parked cars, or other options.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Network			Land Use		
		Local	Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas
10 - 55	0 - 12,000+		■				■

Transit Amenities

Signed Bus Stop

Signed bus stops mark locations where buses stop to pick up or drop off passengers. Signed bus stops should be used in places with awnings or other features where pedestrians can wait in inclement weather. Signed bus stops should follow ADA regulations for sidewalk to bus stop connections.

Bus Shelter

Bus shelters provide a place for transit riders to wait before boarding a bus. Bus shelter dimensions should be such that wheelchair users and people with strollers have space within the shelter.

Bike Locker at Transit Stop

Bike lockers at transit stops provide short or long term bicycle storage. Bike lockers should be routinely checked to ensure they function correctly. If a secure parking area is built around the lockers, the structure should be well-lit and inviting to users.

Cost Estimates by Type of Infrastructure

Infrastructure funding can be structured as a specific allowance set aside per year. Funding and implementation can also occur opportunistically as part of routine street resurfacing activities and other annual projects.

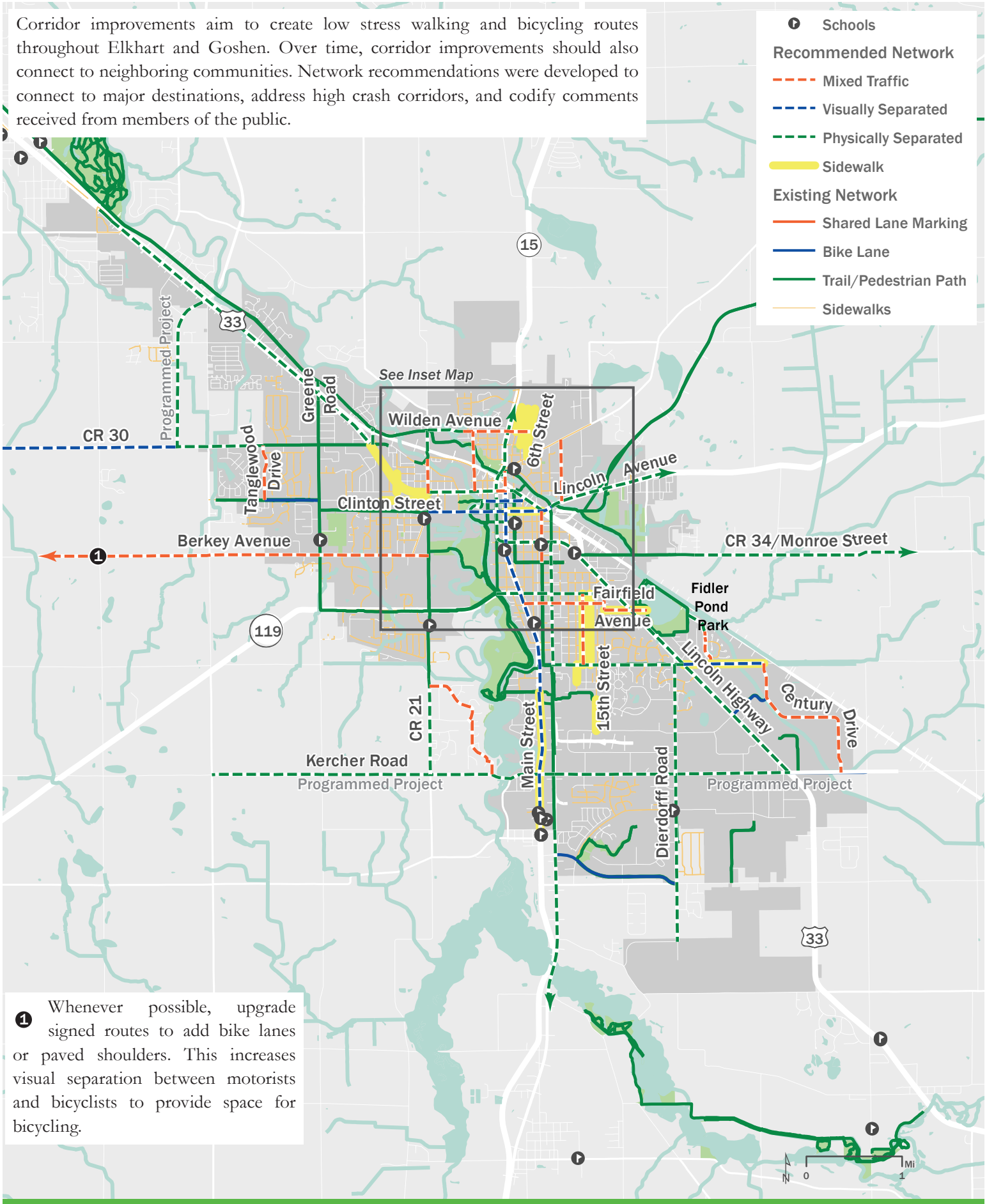
Cost estimates are an essential planning tool used for programming improvements and drafting applications for external funding sources. Cost estimates were developed based on initial planning-level examples of similar constructed projects and industry averages. Facility designs and associated cost estimates proposed in this plan are conceptual in nature and should be refined during engineering design and review in order to arrive at detailed project costs.

These costs do not include costs for right-of-way acquisition or project design, which can include planning, public process, facility design, and other background work required to implement the project. These additional costs can generally be estimated at 25% of the facility construction cost.

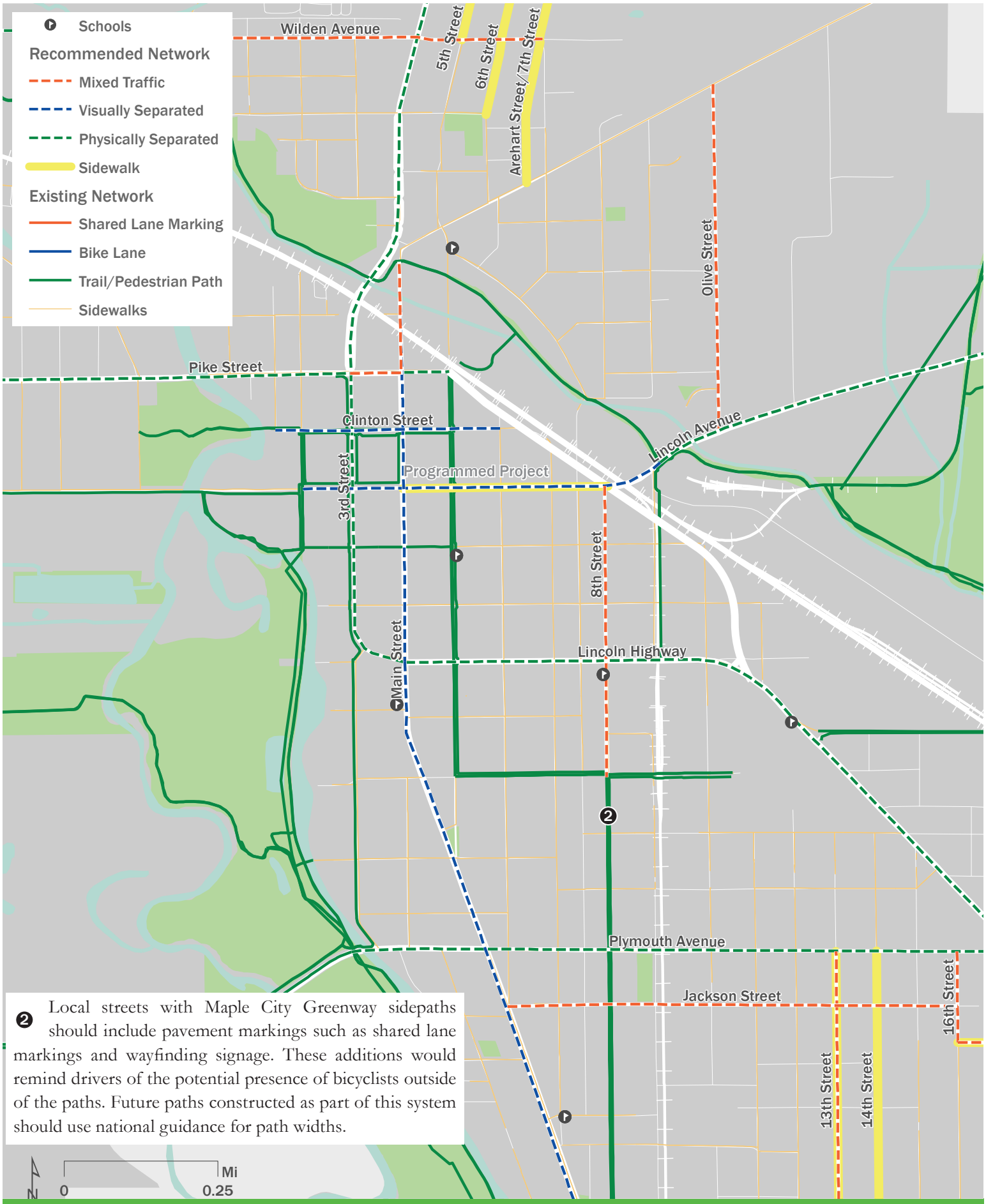
Table 1. Infrastructure Improvement Cost Estimates

Facility Type	Per Mile Cost Estimate (Lower Limit)	Per Mile Cost Estimate (Upper Limit)
Signed Route	$9,000	$15,000
Shared Lane Marking	$12,000	$20,000
Advisory Shoulder	$15,000	$20,000
Neighborhood Greenway	$70,000	$130,000
Traffic Calming (bumpouts, median island, raised crossing)	$115,000	$175,000
Stripe Existing Parking Lane	$6,000	$12,000
Bike Lanes (no buffer)	$40,000	$75,000
Buffered Bike Lanes	$60,000	$120,000
Physically Separated Bike Lane	Cost varies depending on separation treatment and configuration	
Sidewalk (estimate for both sides of street)	$225,000	$350,000
Sidepath	$350,000	$1,500,000
Trail	$400,000	$1,800,000
New Pedestrian and Bicycle Bridge	$11,000,000	$18,000,000

Corridor improvements aim to create low stress walking and bicycling routes throughout Elkhart and Goshen. Over time, corridor improvements should also connect to neighboring communities. Network recommendations were developed to connect to major destinations, address high crash corridors, and codify comments received from members of the public.



1 Whenever possible, upgrade signed routes to add bike lanes or paved shoulders. This increases visual separation between motorists and bicyclists to provide space for bicycling.



2 Local streets with Maple City Greenway sidepaths should include pavement markings such as shared lane markings and wayfinding signage. These additions would remind drivers of the potential presence of bicyclists outside of the paths. Future paths constructed as part of this system should use national guidance for path widths.

Goshen Pedestrian and Bicycle Network Recommendations Inset Map

Infrastructure Implementation

The recommendations presented in this plan offer guidance and potential tools for creating more walk- and bicycle-friendly cities. Evaluating projects helps each city allocate resources that align with the plan's vision and goals.

This section shows plan recommendations evaluated by different factors. Each row represents a pedestrian or bicycle infrastructure project. A "project" is defined as one or more proposed recommendations along a single corridor or along proximate corridors. This means that the project list is shorter than the overall list of recommended projects found earlier in this plan. Multiple facility types may be included with each distinct project. Projects were scored based on their relationship to connectivity, safety, project readiness, local support, and accessibility based on the following queries:

Connectivity
A. Does the project close a key gap in the network?
B. Does the project connect both municipalities?

Safety
C. Does the project address a safety concern (e.g., crashes/ intersection improvement)

Project Readiness
D. Can the project be constructed without grant assistance (i.e., relatively simple projects that would make more sense to use local funds rather than use staff time to apply for a grant)?
E. Is the project a roadway retrofit that could be accomplished with restriping?
F. Is there available pavement width or right-of-way to easily implement the project?

Use & Local Support
G. Was there evidence of community support on maps or in comments from members of the public or steering committee members?
H. Is this project in a high pedestrian use area?

Accessibility
I. Does this project increase connectivity related to bicycle infrastructure and walkability?
J. Does this project improve safety and connectivity to parks, schools, and other public facilities?
K. Does this project modify a previous completely non-accessible route with a fully accessible pedestrian route?

The tables on the following pages identify when a project meets the corresponding factors for evaluation using colored boxes.

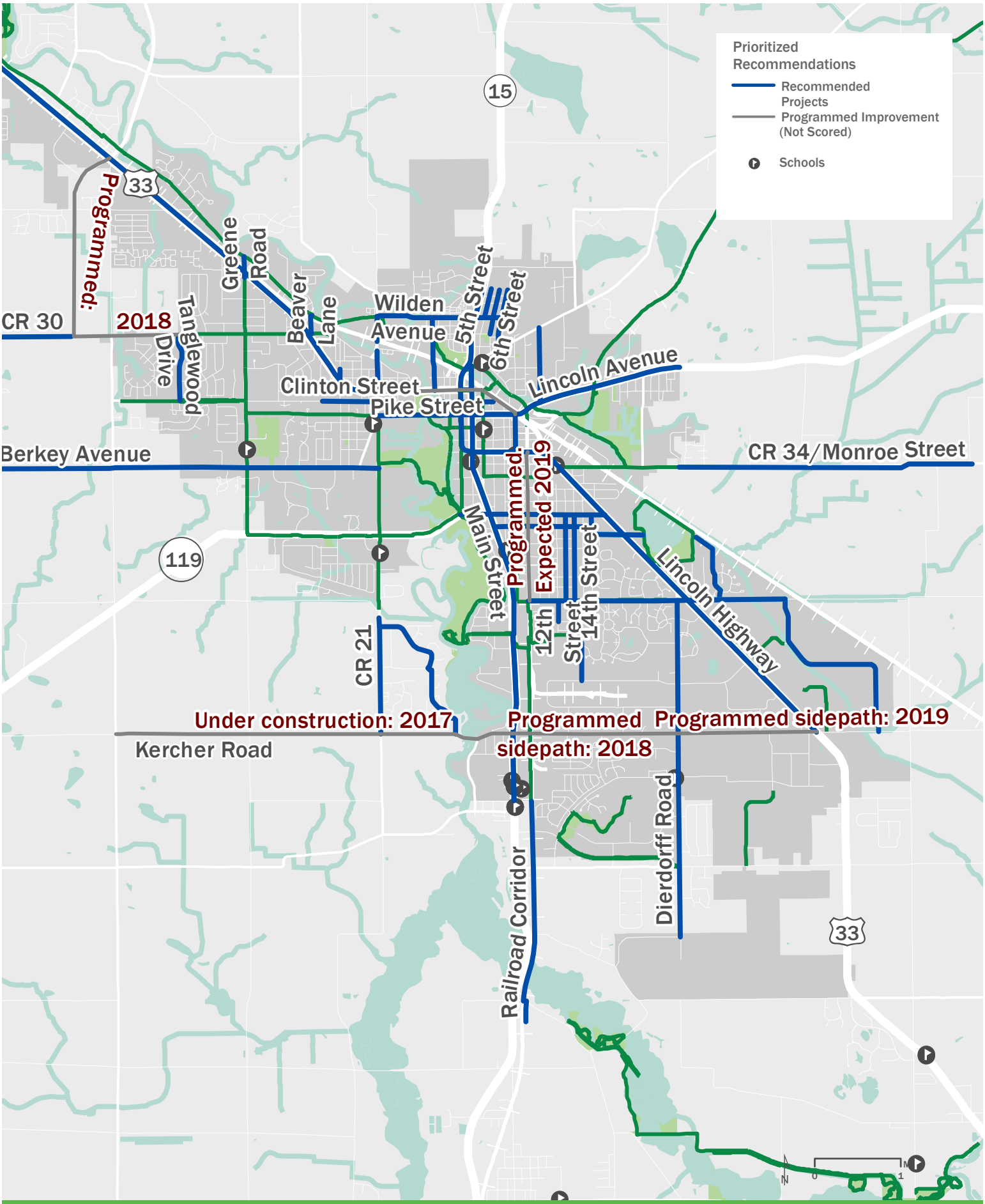

Prioritized Recommendations
Recommended Projects
Programmed Improvement (Not Scored)
Schools
15
33
119
Programmed: 2018
CR 30
Greene Road
Beaver Lane
Tanglewood Drive
Wilden Avenue
5th Street
6th Street
Clinton Street
Pike Street
Lincoln Avenue
Berkey Avenue
CR 34/Monroe Street
Programmed: Expected 2019
Main Street
12th Street
14th Street
Lincoln Highway
CR 21
Under construction: 2017
Programmed sidepath: 2018
Programmed sidepath: 2019
Kercher Road
Dierdorff Road
Railroad Corridor
N
0
1

Table 2. Goshen Recommended Projects

Street Name	Recommended Facility	Criteria										
		A	B	C	D	E	F	G	H	I	J	K
8th Street from Lincoln to Central City Trail	Neighborhood Greenway	■		■	■	■	■		■	■	■	■
Main Street from Mapleheart Trail to Woodlawn Drive	Bike Lane and Signed Route				■	■	■	■	■	■	■	■
Lincoln Highway from Main Street to Kercher Road	Sidepath, Sidewalk	■		■			■	■	■	■	■	■
Main Street (from Middlebury Street to southern municipal boundary) and 3rd Street (from Mapleheart Trail to Lincoln Highway)	Sidepath and Separated Bike Lane	■		■			■	■	■	■	■	
Main Street from Westwood Road to Kercher Road	Bike Lane and Sidewalk	■		■			■	■	■	■	■	■
Riverside Boulevard from Division Street to Pike Street	Sidewalk	■			■		■			■	■	■
Clinton Street from Rogers Park to 6th Street	Bike Lane			■	■	■	■			■		■
Lincoln Avenue from Pumpkinvine Trail to 29th Street	Bike Lane, Sidewalk, and Sidepath	■		■				■	■	■	■	
CR 36/College Avenue from Programmed north-south trail at railroad tracks to Century Drive	Sidepath, Sidewalk, and Paved Shoulder			■			■	■	■	■	■	
CR 21 from CR 36 to Kercher Road*	Sidepath			■			■	■		■	■	■
Path from southeast side of Fidler Pond to Spring Brooke Drive	Trail, Signed Route	■		■	■			■	■		■	
Greene Road from Mapleheart Trail to Greene Road Trail	Sidepath	■		■			■			■		■
Beaver Lane from Mapleheart Trail to Bashor Road Trail	Sidepath	■		■			■			■		■
1st Street from Wilden Avenue to Pike Street	Signed Route				■	■	■			■	■	
New Trail from Rogers Park Connector to Lincoln Avenue	Trail						■	■		■	■	■
CR 34/Monroe Street from Hillcrest Drive to CR 131*	Sidepath			■			■			■	■	■
Plymouth Avenue from Millrace Canal Trail to Lincoln Highway	Sidepath	■		■			■	■				
Jackson Street, Fairfield Avenue, and 16th Street from Main Street to Fidler Pond Park	Neighborhood Greenway, Sidewalk, and Signed Routes				■	■	■			■	■	
Meadow Ridge Drive and Orchard Drive from CR 21 to Kercher Road*	Neighborhood Greenway			■		■	■			■		■
Wilden Avenue from Indiana Avenue to 7th Street	Neighborhood Greenway and Sidepath			■						■	■	■

Criteria Key:
A. Closes gaps
B. Connects both municipalities
C. Addresses safety
D. Local funding
E. Restriping
F. Adequate right-of-way exists
G. Community support
H. High pedestrian use
I. Bicycle infrastructure and walkability
J. Schools and other public facilities
K. Pedestrian accessibility

* Denotes a project located outside of Goshen: would be implemented by other stakeholders

Street Name	Recommended Facility	Criteria										
		A	B	C	D	E	F	G	H	I	J	K
Tanglewood Drive from Bashor Road to Clinton Street	Signed Route				■	■	■			■		
CR 21/Indiana Avenue from Wilden Avenue to Pike Street	Sidepath and Traffic Calming				■		■	■		■		
13th Street and 14th Street from Plymouth Avenue to College Avenue	Sidewalk and Neighborhood Greenway	■					■	■		■		
15th Street (from College Avenue to Mervin Street) and 12th Street (from Winona Interurban Trail to Eisenhower Drive)	Sidewalk						■	■		■	■	
Century Drive from College Avenue to Kercher Avenue	Signed Route				■	■	■			■		
Railroad Corridor from southern municipal boundary to Baintertown Hydro Loop*	Trail							■		■	■	■
Arehart Street/7th Street, 6th Street, and 5th Street	Sidewalk						■			■		■
Olive Street from Middlbury Street to Lincoln Avenue	Advisory Shoulder				■		■			■		
Clinton Street from Riverside Boulevard to Indiana Avenue	Sidewalk						■			■		■
Dierdorff Road from College Road to Country Road 27	Sidepath			■						■		■
Berkey Avenue from CR 15 to Indiana Avenue	Advisory Shoulder						■			■		
CR 20/CR 100/CR 3 from Ash Road to CR 30*	Paved Shoulder						■	■				
CR 30 from CR 3 to Bashor Road	Paved Shoulder						■	■				

Criteria Key:
A. Closes gaps
B. Connects both municipalities
C. Addresses safety
D. Local funding
E. Restriping
F. Adequate right-of-way exists
G. Community support
H. High pedestrian use
I. Bicycle infrastructure and walkability
J. Schools and other public facilities
K. Pedestrian accessibility

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