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To: Marion County Regional Planning Commission

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Marion County Active Transportation Concepts Map and Memorandum

This memo documents the creation of an Active Transportation Concepts Map for Marion County and the City of Marion. A public engagement process supported map development, with community input gathered through a public workshop and stakeholder meetings. The memo describes Marion's existing bicycle and pedestrian infrastructure and programs that support active transportation. It documents the public engagement process. It provides a detailed narrative of proposed projects with route descriptions, facility types, and a prioritization process that identifies several routes critical to improving active transportation in Marion County.

The Marion Public Health Built Environment Committee served as the local advisory team during this project. The committee includes representatives from the following organizations:

- City of Marion Engineer
- County Parks Board
- Downtown Marion Inc.
- Marion Area Transit,
- Marion City Parks
- Marion County Engineer
- Marion County Regional Planning Commission
- Marion Police Department
- Marion Public Health Creating Healthy Communities (CHC) program
- Marion Technical College
- Marion Township Roads Department
- Paul Omness Designs
- The Ohio State University Marion
- Tri-County Mobility Manager
- United Way
- YMCA

Active Transportation

Active transportation is an umbrella term that describes all the ways people travel without using a motorized vehicle. The most common forms of active transportation are walking and bicycling. The term does not limit these activities to their recreational function, but instead considers them as healthy, sustainable, and practical ways to commute, run errands, connect to transit and carry out daily tasks, potentially reducing the need for private car ownership and improving the environment.

While active transportation may be perceived as a big city phenomenon, it plays an important role in communities of all sizes. Many small towns and rural areas across Ohio have completed or are pursuing a variety of active

transportation efforts. These range from isolated improvements to county-wide active transportation plans, participation in the Ohio Department of Transportation's Active Transportation Academy and Action Institute, bicycle and pedestrian data collection, and other strategies. Active transportation is an effective means of improving community health and quality of life in small towns and rural areas. Rural areas have higher rates of physical inactivity and chronic disease than urbanized areas. Traffic crashes and zero-vehicle households are also more common in rural areas. These facts demonstrate a clear need for improved walking and bicycling conditions outside major cities.

Existing Infrastructure

Pedestrian Facilities

Marion was developed in the 19th Century, before the advent of the automobile. It has a compact, walkable downtown with a mix of land uses and dense urban fabric. Marion's downtown includes historic buildings and mid-century architecture repurposed for civic uses, such as the Marion County Building, a former shopping center. While downtown Marion's walkability has been degraded as a result of one-way street conversions, heavy truck traffic, and vacant storefronts, it remains the geographic and cultural center of the community, with strong potential to be revitalized in the coming years.

Beyond downtown, the sidewalk network is intermittent, with frequent gaps on major roads and residential streets. In addition to network gaps, unmaintained sidewalks during winter weather further deter people from walking to nearby destinations. Sidewalks are virtually nonexistent in the county, with the exception of LaRue, Prospect, Caledonia, and other small towns.

Left: Historic buildings in Downtown Marion (source: Wikimedia).
Right: unshoveled sidewalks during winter weather.

Bicycle Facilities

Marion has several existing on-street bicycle routes and one shared use path that extends outside the city limits. East Center Street/SR 309 has standard bike lanes for approximately one mile in both directions, and Mt Vernon Avenue/Marion-Mt Gilead Road/SR 95 has standard bike lanes from University Drive to Blevins Boulevard. Both facilities were installed during ODOT resurfacing projects. Together, these routes comprise about two miles of on-street bicycle facilities. However, the traffic speeds and volumes, frequent turning movements, and lack of safe accommodations at intersections and highway interchanges degrade facility quality and usability on both routes. At the public workshop, many community members explained that few people use the bike lanes for these reasons.

Marion County contains one off-street active transportation corridor. The Tallgrass Trail extends approximately 12 miles from the City of Marion's west side to the Hardin County line. It features four trailheads with parking areas, one campground, drinking fountains, bathrooms, and other amenities for trail users. The scenic route, which follows a former railroad, attracts recreational users from across the region.

The Ohio State University (OSU) Marion and Marion Technical College combined campus features a 1.5 mile multiuse trail network. In 2015, University Drive was extended south of SR 95 and a multiuse path was installed adjacent to University Drive along the length of the campus. This path connects to the larger sidewalk network, and has recently been extended to a residential neighborhood west of the campus and to the Forum Shopping Center northeast of the campus. OSU Marion has plans to extend the path further, given enough funding, to create a loop around the campus and an additional connection to a residential neighborhood east of the campus.

In 2012 the City of Marion established a 10-mile on-street bicycle loop route. It also has a network of proposed signed and marked on-street bicycle branch routes. The network connects schools, downtown, OSU Marion, and other important destinations across the city. The Sawyer-Ludwig route, OSU/MTC route, and downtown route are complete and have been marked with signage and shared lane markings, but the majority of the branch network is not complete. Further, the 10-mile loop route could benefit from improvements to create a safer and more comfortable bicycling experience.

In 2012 Marion City Schools was awarded Safe Routes to School infrastructure funding to improve walking and bicycling at Taft Elementary School. In 2015 sidewalk improvements and a pedestrian bridge were installed on school grounds.

Ohio is establishing a network of State and US and bicycle routes which will provide bicyclists with safe and convenient connections through and to population centers and destinations across the state. State Bike Route (SBR) 39 travels through the western half of Marion County, extending north-south through Prospect, Greencamp, and Big Island. It continues north to Wyandot County and eventually terminates in Findlay, where it connects with US Bike Route (USBR) 25. Its southern terminus is west of Columbus, where it connects to USBR 21/the Ohio to Erie Trail. While the route currently is not marked, identifying this alignment as a high priority for future improvements will help Marion connect to the expanding statewide and national system of bike routes.

Existing Supportive Programs

In 2018, the City of Marion adopted a Complete Streets Policy, known as the Total Street Use Policy, to promote an integrated and balanced transportation network for all users. In addition to this important policy success, a number of other programs support walking and bicycling throughout the community:

Education

The Built Environment Committee organizes **Bike Safety Events** annually at Marion City Schools. This program has grown from its launch in 2013 when it visited two schools and now engages several hundred students each year, teaching bicycle safety etiquette and distributing helmets to students.

Crime Prevention Through Environmental Design (CPTED) recognizes that crime perceptions and threats have a direct correlation on levels of active transportation. In 2017 the Built Environment Committee hosted a CPTED training. Over 20 key leaders attended this training. Post training interventions have been initiated and adopted through the CHC coalition and the Marion Police Department. On a related note, The Marion Police Department conducted a community survey on perception of crime in different neighborhoods to better understand how actual and perceived criminal activity influences behavior, including the choice to use active transportation.

In 2018 the Marion Public Health CHC program partnered with Yay Bikes! to offer **professional development ride** experiences to local leaders. An overwhelming response was noted based on maximum attendance capacity during both sessions. Over 12 leaders, advocates and local officials participated in the ride. Positive feedback from Yay Bikes! regarding our bicycle infrastructure, street beautification, and motorist responsiveness laid the foundation to support future active transportation efforts. Ride outcomes included: increased education and encouragement strategies and the continuation of demonstration projects that support active transportation.

In 2018 Marion hosted a **Complete Streets Implementation training** facilitated by Toole Design. This was a follow-up training from 2016 in which Toole Design met with key leaders on Complete Streets Policy development.

All Marion City and County Kindergarteners complete a **Safety City** training provided by the Marion Police Department. This opportunity exposes children to bicycle and pedestrian safety concepts.

Encouragement

The **Hot Tamale Bicycle Tour** is a countywide event attracting over 400 bicyclists from Ohio and surrounding states. Beginning over 35 years ago, the tour begins at Waldo Community Park and riders may choose between 8, 19, 32, and 62-mile routes. The tour highlights the Tallgrass Trail and many of the quiet, scenic country roads throughout the county.

Every year, many of Marion City and County Schools participate in **Walk to School Day**. Students and their families are encouraged to consider walking or bicycling to school. Student athletes from Harding High School volunteer to stand at elementary and middle school crosswalks to help younger students cross the street and hand out water bottles and bike helmets. In 2011, several hundred students were involved in Walk to School Day and in 2013 over 3,000 students participated across the county. The event has sustained high participation in recent years.

The Marion Popcorn Festival provided its first ever **Bike Valet** in 2018. Bike Valet at major events helps to alleviate the stress of finding safe bike parking while also advertising and encouraging bicycling as an alternative mode of transportation to and from major events. The Popcorn Festival also features the “Popcorn 100” cross-county bike ride that attracts a number of riders from within and outside Marion County.

In 2019 the Marion County Park district will begin offering a **Universal Bike Share** program at the Tallgrass Trail. This no-cost program aims to encourage bicycling for individuals of all abilities.

In 2019 Marion General Hospital along with Center Street Community Health Center began hosting monthly **Walk With A Doc** programing at our local YMCA.

Enforcement

No enforcement activities were identified beyond standard public safety practices.

Evaluation

Currently, the City of Marion and Marion County do not conduct regular bicycle and pedestrian counts. Isolated evaluation of the active transportation network occurs on an infrequent basis. In partnership with Ohio State University Extension, Marion City Schools students participated in a series of **walk audits**. Through a community-based research process using photography, GPS and GIS technology, they studied the sidewalk network’s connectivity to food access, physical activity, safety, and the built environment. Students have documented attributes of the community environment that are supportive or inhibitive of healthy eating and will be working with OSU Extension to develop a series of presentations for the community using the geocoded routes and photographs in order to facilitate dialogue.

In 2017, Marion County conducted a **Transportation Health Assessment** to gauge transportation access to health care needs. Community leaders pledged that the assessment will continue to be "repeated on a regular basis and data and results will be trended so that yearly results can be compared ensuring that benchmarking can occur and improvements (or degradation) in services as noted."[1]

In 2017 Marion Public conducted a **Nutrition and Physical Activity Health Assessment**, which includes information on sidewalk infrastructure, physical inactivity, roadway characteristics, community safety, and greenspace access.

The Marion Public Health CHC program conducts **evaluations on built environment strategies**. Evaluation measures include local observation, bicycle and pedestrian counts, walk audits, trail and park counts, and post-intervention surveys.

Public Engagement

Field Observations

Toole Design and the local project lead facilitated a series of public engagement activities over the course of two days in January 2019. The local project lead organized a tour, identifying locations to visit that highlight active transportation challenges and/or opportunities. Members of the Built Environment Committee partipcated in the tour and offered their local knowledge and expertise regarding active transportation issues at various sites around the city and county. Due to extreme winter weather, the team was unable to visit sites throughout the county and focused primarmily on destinations within the City of Marion. Site visits included:

- OSU Marion
- Marion YMCA
- President Warren Harding Memorial
- Marion Area Transit Center
- Downtown Marion
- Marion Tallgrass Trail
- Whirlpool Corporation
- Prospect Community Park

This experience allowed the Toole Design team to develop a more nuanced, on-the-ground understanding of active transportation challenges in Marion. In outlying neighborhoods, low-density development with siginficant distances between destinations and lack of multimodal infrastructure deterred people from walking and bicycling to the YMCA and other destinations. Downtown, one-way streets that encoruage speeding degraded the active transportation environment and encouraged private vehicle use instead. Railroad crossings were another major barrier identified during the tour and subsequent workshop activities.

[1] Marion Public Health. (2017). The Road to Better Health 2017: Marion County Transportation Health Assessment. Retrieved from: https://marionpublichealth.org/wp-content/uploads/2017/11/FINAL-Marion-County-Transportation-Report-9-15-17.pdf

Figure 1. Core team members visited the Tallgrass trailhead and other sites to better understand active transportation challenges and opportunities.

Public Workshop

Public engagement activities culminated in a workshop, which was attended by local decision makers and community members. Toole Design led workshop participants in several mapping activities to gather more information about active transportation conditions, needs, and priorities. Participants marked gaps and barriers in the existing network (e.g. highways, railroads, natural features) and key walking and bicycling trip generators (e.g. schools, employment centers, downtowns) on plotted maps.

Gaps and barriers in the City of Marion included:

- West Center Street/SR 95 east of Whirlpool (no sidewalks)
- Mt Vernon Avenue/SR 95 by OSU Marion (sidewalk gaps)
- Barks Road East near YMCA (sidewalk gaps, lack of crosswalks)
- Vernon Heights Blvd west of Virginia Avenue (no sidewalks)
- Downtown Marion (lack of bicycle facilities and bicycle parking)
- Mary Street (no sidewalk on east side)
- Leader Street (no sidewalks to Marion County Job & Family Services)
- West Fairground Street (no sidewalks on north side)
- Oak Street between West Fairground Street and Lincoln Park (no sidewalks)
- Lincoln Park (no walking paths)
- Marion Tallgrass Trail (not connected to City)

Gaps and barriers in Marion County included:

- The length of US 23 in Marion County
- Waldo-Fulton Road east of US 23
- Columbus-Sandusky Road South/SR 98 north of Marion-Cardington Road East/SR 529 (truck traffic)
- Marion-Cardington Road/SR 529 from Marion-Waldo Road/SR 423 to Columbus-Sandusky Road South/SR 98 (high speeds)
- Richland Road/SR 529 from Marion-Cardington Road West/SR 529 to Marion-Edison Road (high volumes)
- Marion-Marysville Road/SR 4 between SR 203 and Marion (high speeds)
- Marion-Upper Sandusky Road/SR 423 (high speeds)
- Harding Highway West/SR 309 between Big Island and Marion (high speeds)

Participants identified several potential bicycle and pedestrian generators throughout the county that currently lack multimodal access:

- Heritage Elementary School
- River Valley High School
- River Valley Baseball For Youth Complex
- Delaware State Park
- Big Island Wildlife Area
- Killdeer Plains Wildlife Area
- Waldo Pool
- LaRue Pool
- LaRue Baseball and Softball Park

Participants used their knowledge of local roadway conditions and experiences with walking and bicycling in the county and city to identify potential active transportation corridors. Potential corridors included:

City

- Holland
- Road/Silver Street
- Fairground Street
- Vernon Heights Boulevard
- Forest Hill Drive
- North Main Street
- Fairwood Avenue
- Tallgrass Trail extension to downtown

County

- Proposed State Bicycle Route 39 from Prospect to Big Island via Greencamp
- Keene Road West connecting to Barks Road via Sawyer-Ludwig Park
- Waldo to Marion via St James Road, Kreis Road, and Richland Road
- Claridon to Caledonia via Whestone River Road North
- Marion-Williamsport Road

Toole Design and government staff facilitated mapping activities and presented active transportation concepts during the public workshop.

Public events for Day 2 of the workshop were canceled due to extreme winter weather. However, Toole Design met with a core team of stakeholders from the Built Environment Committee to further develop an active transportation network based on public input gathered during Day 1. The group selected specific routes within each identified priority corridor where active transportation facilities could be introduced. Toole Design staff presented common and innovative active transportation facilities, such as bicycle boulevards, shared use paths, separated bike lanes, Rectangular Rapid Flashing Beacons, and high-visibility crosswalks. With support from

ODOT and Ohio Department of Health (ODH) staff as well as the local project lead, Toole Design guided stakehodlers in applying appropriate treatments to each location. Day 2 concluded with a project prioritization exercise. Stakeholders ranked projects' importance based on factors such as equity and connectivity.

Built Environment Committee Meeting

Due to low attendance during Day 2 activities, Toole Design repeated the prioritization activity with the entire Built Environment Committee during its February meeting. An online prioritization survey was also developed to solicit feedback from workshop participants and the public. Committee members also reviewed a draft network concept and rationale and provided feedback to Toole Design for further refinement.

Recommendations

The Project Team developed infrastructure, programming, and policy recommendations by drawing on the existing conditions analysis, field observations, discussions with the Built Environment Committee, and community input. Recommendations are divided into two parts: infrastructure, which includes linear improvements and spot improvements for both the county and the city, and supportive programs, which includes education, enforcement, evaluation, encouragement, and policy recommendations.

Infrastructure

All proposed routes and improvements were developed from information gathered during public engagement and existing conditions analysis, including stakeholder comments, field visits, geospatial analysis, and other data sources. The proposed network would add eight miles of active transportation facilities within the City of Marion and 27 miles throughout Marion County. Improvements in Marion use the city's existing compact, walkable and bikeable environments to enhance active transportation accessibility and connectivity along low-stress routes, such as neighborhood bikeways. They address critical gaps in the existing network, including sidewalk gaps and inadequate bicycle facilities on major roads. In the county, shared use paths and signed routes with widened paved shoulders connect smaller communities to the City of Marion, to one another, and to parks, trails, schools, recreational opportunities, and other community assets. Figure 1 shows project distribution in the city and county by facility type.

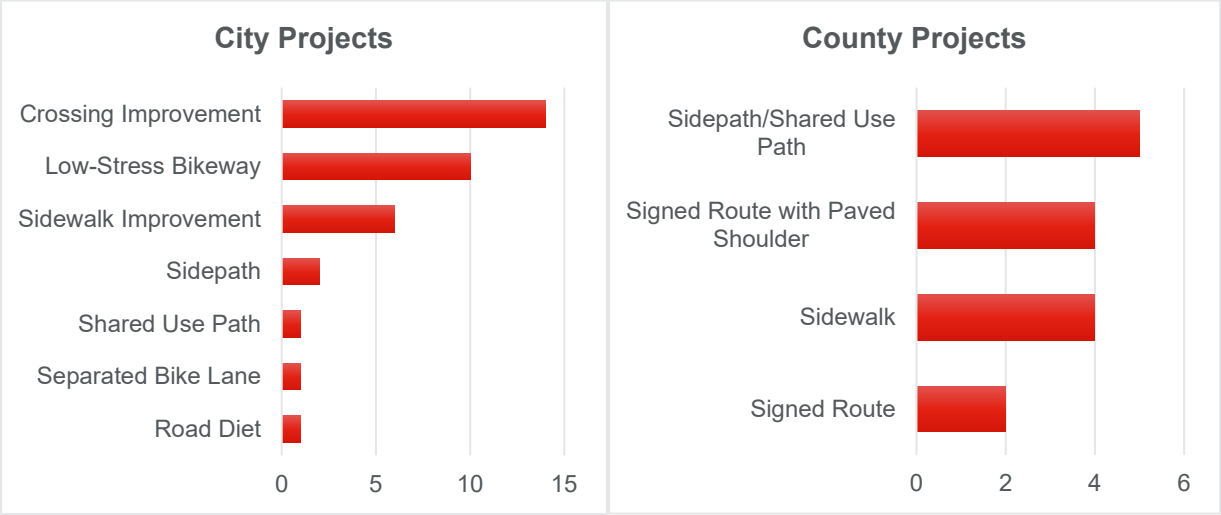

Figure 1. Project Distribution by Facility Type

Infrastructure recommendations are also identified by scale: spot improvements (S) focus on specific intersections or crossing locations and linear improvements (L) recommend active transportation improvements along an entire corridor. Tables 1 and 2 display detailed information on all proposed projects, including location, extents, facility type, project description, connections to other facilities, and priority. The connections to other facilities column identifies other proposed projects that connect to the one in question, as well as connections to the existing network (the sidewalk network for sidewalk improvements and the signed and marked routes, bike lanes, or Tallgrass Trail for bicycle improvements).

Exhibit 1 shows recommendations for Marion County and Exhibit 2 shows recommendations for the City of Marion.

Downtown Recommendations

Due to their importance in the regional and local active transportation networks, recommendations for Downtown Marion are addressed in detail here. Improvements on Center Street (L-19) and Main Street (L-26) propose several road diet configurations that would calm traffic, improve safety, and enhance active transportation amenities.

Most roads in downtown Marion are one-way. Center Street and Church Street form the primary east-west one-way pair, with at least eight north-south one-way streets in downtown. In the 1940s diagonal parking was eliminated and additional through lanes were installed. In the 1960s, one-way pairs were implemented to move vehicle traffic through downtown even more quickly by reducing turning conflicts at intersections. A major drawback of one-way streets is that they sacrifice direct vehicle access to destinations, resulting in induced vehicle miles traveled because drivers must take a more circuitous route to their destinations. One-way streets also encourage speeding and less cautious driving behavior due to fewer potential conflicts. They are a strong deterrent for people walking and bicycling.

Reverting an existing one-way street to its original two-way operation is a nationwide trend in communities of all sizes. Reversion benefits include enhanced connectivity, increased economic activity, slower speed, and reduced out of direction travel to arrive at destinations. These reversions are especially successful when there is an excess of vehicular capacity on the roadway network. All roads in downtown Marion, including Center and Main Streets, should receive further study to determine how to best improve walking and bicycling conditions downtown. One-way to two-way reversions may be a feasible and effective strategy to reinvigorating downtown economically and encouraging a friendlier active transportation environment.

Table 1: City Recommendations

Map ID	Location	Extents	Facility	Description	Connections	Priority
L-1	Richland Ter and Greenlea Dr	Richland Rd/SR 529 to Marion-Edison Rd/CR 169	Low-Stress Bikeway	Connects proposed sidepath on Barks Rd with existing University Dr shared use path and OSU Marion trail network.	L-2	Low
L-2	Barks Rd	White Oaks Rd/Davids St to Richland Rd/SR 529	Sidepath	Connects YMCA, subdivisions on Barks Rd E, commercial uses at Delaware Ave/SR 423 intersection, and Sawyer-Ludwig Park. Includes on-road improved AT connection over railroad crossing on Barks Rd W with signed and marked route on shoulder. Extend eastern terminus north on Richland Rd/ SR 529 to connect to proposed bicycle boulevard on Greenlea Dr.	L-1	High
L-3	Barks Rd E	Forest Hill Dr to Lakeview Blvd	Sidewalk Improvement	Existing sidewalk along north side of Barks Rd E is discontinuous with gaps between residential neighborhoods, YMCA, and other destinations. Fill in gaps to create continuous network along Barks Rd E and provide alternative route to L-2.	L-2, S-5, Existing Network	Medium
L-4	Lake Blvd, Community Dr, presidential memorial access road, Ohio Health property	Barks Rd E to Vernon Heights Blvd	Low-Stress Bikeway	Signed and marked bicycle boulevard uses service roads and residential streets to provide access to destinations on Delaware Ave/SR 423. Includes trail connection through presidential memorial. Provides low-stress alternative route for users of all ages and abilities.	L-2, L-5, L-21, L-22,	Low
L-5	Brightwood Dr, Presidential Dr	Vernon Heights Blvd to Bradford St	Low-Stress Bikeway	Signed and marked bicycle boulevard uses residential streets to connect presidential memorial, cemetery, Harrison Elementary School, Grant Middle School, and neighborhoods. Provides low-stress alternative route for users of all ages and abilities.	L-4, L-6, L-21, L-22,	Low
L-6	E Walnut St, Presidential Dr, Bradford St	Delaware Ave/SR 423 to Mt Vernon Ave/SR 95	Low-Stress Bikeway	Signed and marked bicycle boulevard uses residential streets to connect presidential home to points south via L-4 and L-6. Provides low-stress alternative route for users of all ages and abilities.	L-5, L-7, L-20, S-8	Low

Map ID	Location	Extents	Facility	Description	Connections	Priority
L-7	Access roads behind properties on west side of Delaware Ave/SR 423	W Barks Rd to W Walnut St	Low-Stress Bikeway	Signed and marked bicycle boulevard uses service roads, park paths, and residential streets to provide access to locations on west side of Delaware Ave/SR 423. Connects neighborhood north of St Mary's Cemetery, Veterans Memorial Park, civic, and commercial uses on Delaware Ave/SR 423. Provides low-stress alternative route for users of all ages and abilities.	L-2, L-5, Existing Network	Low
L-8	Davids St	Parcels north of Sawyer-Ludwig Park entrance	Sidewalk Improvement	Extends existing sidewalk on west side of Davids St south to Sawyer-Ludwig Park; provides safe pedestrian connection between recreational opportunities and neighborhoods north of the park.	L-2 (via park), Existing Network	Low
L-9	Bennett St	Campbell Rd to Clinton St	Low-Stress Bikeway	Extends existing bicycle route on Bennett St to provide low-stress connection from westside neighborhoods to Whirlpool, connecting residents to employment.	Existing Network	Low
L-10	Rail corridor	Marion Tallgrass Trail trailhead to Whirlpool	Shared Use Path	Extends Marion Tallgrass Trail east, past windmills, to Whirlpool rail corridor, terminating at Whirlpool facility. Provides low-stress alternative route to Whirlpool from northwest neighborhoods.	S-14, Existing Network	Medium
L-11	Holland Rd	Marion-Williamsport Rd to Waterworks Rd	Low-Stress Bikeway	Extends existing signed bicycle route on Holland Rd to Tallgrass trailhead.	S-9, Existing Network	Low
L-12	Silver St	Milburn Ave to Oak St	Low-Stress Bikeway	Signed and marked bicycle boulevard uses residential street to increase connectivity in northwest Marion. Extends existing bicycle route on Holland Rd east, connecting with proposed network. Provides low-stress alternative route for users of all ages and abilities.	L-13, L-14, L-17, S-11, S-12, Existing Network	Low
L-13	Leader Street	Silk St to W Fairground St	Sidewalk Improvement	Fill in sidewalk gaps to Marion County Job & Family Services.	L-12, L-15, Existing Network	Low

Map ID	Location	Extents	Facility	Description	Connections	Priority
L-14	Mary Street	Tully St to Joseph St	Sidewalk Improvement	Install sidewalk on east side of street.	L-12, Existing Network	Low
L-15	West Fairground St	Railroad crossing to Universal Ave	Sidewalk Improvement	Install sidewalk on north side of street.	L-13, L-16, L-17, Existing Network	Low
L-16	Oak St	W Fairground St to Lincoln Park	Sidewalk Improvement	Install sidewalks on both sides of street	L-15, L-17, Existing Network	Low
L-17	Oak St	W Center St/SR 309 to W Fairground St	Low-Stress Bikeway	Signed route with shared lane markings uses low-volume residential collector to increase connectivity in northwest Marion.	L-12, L-15, L-16, L-19, Existing Network	Low
L-18	Wilson Ave	N Greenwood St to Madison Ave	Low-Stress Bikeway	Signed and marked bicycle boulevard uses residential street/alley to provide low-stress alternative route to E Center St.	Existing Network	Low
L-19	Center St/SR 309	Park Blvd to Kensington Pl	Road Diet	Two-way (E Center St): Convert 4-lane two-way road with standard bike lanes into 3-lane road with two-way left turn lane (TWLTL) and separated bike lanes with painted buffer and flexible delineators. Existing pavement width could accommodate two 11-ft travel lanes, two 10-ft separated bike lanes including buffers, and a 12-ft TWLTL. This improvement would reduce vehicular traffic speeds and improve actual and perceived safety for active transportation users. One-way (E/W Center St): Convert head-in angled parking to back-in angled parking; install separated bike lane on south side of street; consider temporary demonstrations (e.g. parklets, Open Streets) to explore potential for permanent streetscape improvements; consider engineering study for one-way to two-way conversion.	L-12, L-26, S-10, S-13, Existing Network	Medium

Map ID	Location	Extents	Facility	Description	Connections	Priority
L-20	Delaware Ave/SR 423	Barks Rd to Superior St	Sidewalk Improvement	Sidewalks are virtually absent from west side of Delaware Ave/SR 423 and from east side south of Community Dr. Extend sidewalk network on both sides to provide safe and convenient routes to commercial, civic, and healthcare uses along Delaware Ave/SR 423.	L-2, L-6, L-21, L-22, S-6, S-8, Existing Network	Low
L-21	Vernon Heights Blvd	Delaware Ave/SR 423 to Virginia Ave	Sidewalk Improvement	Extend sidewalks to provide continuous pedestrian route from Delaware Ave/SR 423 to Mt Vernon Ave/SR 95.	L-4, L-5, L-20, L-22, L-23, Existing Network	Low
L-22	Vernon Heights Blvd	Delaware Ave/SR 423 to Virginia Ave	Separated Bike Lane	Separated bike lanes use existing on-street parking and no-parking zones to create low-stress route on Vernon Heights Blvd. Provides access to cemetery, presidential memorial, and destinations on Delaware Ave/SR 423.	L-4, L-5, L-20, L-21, L-23, Existing Network	Low
L-23	Vernon Heights Blvd	Virginia Ave to Mt Vernon Ave/SR 95	Sidepath	Widen existing sidewalks on both sides of Vernon Heights Blvd into sidepaths to accommodate bicycle and pedestrian traffic. Alternative: extend separated bike lanes (L-17) north to Mt Vernon Ave/SR 95.	L-21, L-22, Existing Network	Low
L-24	E Center St/SR 309	Parkview Ave to pedestrian bridge east of Lawrence Ave	Sidewalk Improvement	Sidewalk gap isolates Harding High School from larger pedestrian network. Fill in sidewalk gap to provide safe and convenient route to school.	Existing Network	Medium
L-25	Marion-Mt Gilead Rd/SR 95 and US 23	University Dr to US 23	Sidewalk Improvement	Sidewalk gaps exist, primarily on south side of Marion-Mt Gilead Rd/SR 95. Fill in gaps on both sides to provide safe and convenient route to OSU Marion and commercial uses along corridor.	S-2, S-3, S-4, Existing Network	Low
L-26	Main St/SR 423	Columbia St to Copeland Ave	Road Diet	Columbia Ave to Klerx Ave/Patton St; convert 4-lane road with on-street parking into 3-lane road with TWTL and separated bike lanes with painted buffer and flexible delineators. Existing pavement width	L-19, Existing Network	Low

Map ID	Location	Extents	Facility	Description	Connections	Priority
				could accommodate two 11-ft travel lanes, two 8-ft separated bike lanes including buffers, and a 12-ft TWLTL. If desirable, on-street parking could be maintained from Church St to Huber St to accommodate downtown demand. Separated bike lanes would transition to shared lane markings in this segment. The remaining on-street parking appears under-utilized and could be replaced by separated bike lanes. Klerx Ave/Patton St to Copeland Ave: Convert 5-lane road with two-way left turn lane (TWLTL) into 3-lane road with TWTL and separated bike lanes with painted buffer and flexible delineators. Existing pavement width could accommodate two 11-ft travel lanes, two 8-ft separated bike lanes including buffers, and a 12-ft TWLTL. This improvement would reduce vehicular traffic speeds and improve actual and perceived safety for active transportation users.		
L-27	West Center St	Graphic Packaging to Plymouth St	Sidewalk Improvement	Install sidewalks on south side of street.	Existing Network	Low
S-1	Richland Rd/SR 529 and Barks Rd	Intersection	Crossing Improvement	Install high-visibility crossing (paint, signage, optional Rapid Flashing Beacons) to connect sidepaths on Barks Rd E to bicycle boulevard on Greenlea Dr.	L-1, L-2, L-31	Low
S-2	Marion-Mt Gilead Rd/SR 95 and US 23	Intersection	Crossing Improvement	Install high-visibility crossings (paint, signage, Rapid Flashing Beacons) on all entry/exit ramps for US 23	L-25	Low
S-3	Marion-Mt Gilead Rd/SR 95 and Edgefield Blvd/McMahan Blvd	Intersection	Crossing Improvement	Upgrade standard crosswalks on all intersection legs to high-visibility/continental markings. Install "Turning Vehicles Yield to Pedestrians" signs (R10-15). Review signal timing to determine if pedestrian signal phasing accommodates vulnerable road users.	L-25, Existing Network	Low
S-4	Mt Vernon Ave/SR 95 and University Dr	Intersection	Crossing Improvement	Upgrade standard crosswalks on all intersection legs to high-visibility/continental markings. Install "Turning Vehicles Yield to	L-25, Existing Network	Low

Map ID	Location	Extents	Facility	Description	Connections	Priority
				Pedestrians" signs (R10-15). Review signal timing to determine if pedestrian signal phasing accommodates vulnerable road users.		
S-5	Barks Rd E and Wellness Dr	Intersection	Crossing Improvement	Install high-visibility/continental crosswalks on all intersections legs. Install "Turning Vehicles Yield to Pedestrians" signs (R10-15).	L-2, L-3	Low
S-6	Barks Rd and Marion-Waldo Rd/Delaware Ave/SR 423	Intersection	Crossing Improvement	Install high-visibility/continental crosswalks on all intersections legs. Install "Turning Vehicles Yield to Pedestrians" signs (R10-15). Install pedestrian signals.	L-2, L-20	Low
S-7	Barks Rd W and White Oaks Rd/Davids St	Intersection	Crossing Improvement	Install high-visibility crossings (paint, signage, Rapid Flashing Beacons) at intersection; for railroad crossing, see ODOT guidance for "Selecting Supplemental Treatments and Traffic Control Devices for Pedestrian and Bicycle At-Grade Crossings of Rail Lines."	L-2, L-8 (via park), L-36	Low
S-8	Delaware Ave/SR 423 and E Walnut St	Intersection	Crossing Improvement	Upgrade standard crosswalks on east and west intersection legs to high-visibility/continental markings. Install high-visibility/continental markings on north and south intersection legs. Install "Turning Vehicles Yield to Pedestrians" signs (R10-15). Install pedestrian signals. Install pocket bike lanes and bike boxes[2] on east and west approaches.	L-6, L-7, L-20	Low
S-9	Marion-Williamsport Rd and Holland Rd	Intersection	Crossing Improvement	Install bicycle warning signage (W11-1) on Marion-Williamsport Rd intersection approaches.	L-11	Low
S-10	W Center St railroad crossings (pair) between	Railroad crossing	Crossing Improvement	See ODOT guidance for "Selecting Supplemental Treatments and Traffic Control Devices for Pedestrian and Bicycle At-Grade Crossings of Rail Lines."	L-19, Existing Network	Low

[2] Pocket bike lane and bike boxes use pavement markings to help bicyclists navigate through intersections. They provide space for bicyclists at the front of queued traffic to make them more visible to motorists.

Map ID	Location	Extents	Facility	Description	Connections	Priority
	Davids St and Park Blvd					
S-11	Silver St railroad crossing between Milburn Ave and Toledo Ave	Railroad crossing	Crossing Improvement	See ODOT guidance for "Selecting Supplemental Treatments and Traffic Control Devices for Pedestrian and Bicycle At-Grade Crossings of Rail Lines."	L-12	Low
S-12	Silver St railroad crossing between Bartram Ave and Chester St	Railroad crossing	Crossing Improvement	See ODOT guidance for "Selecting Supplemental Treatments and Traffic Control Devices for Pedestrian and Bicycle At-Grade Crossings of Rail Lines."	L-12	Low
S-13	Oak St railroad crossing between Huber St and Owens St	Railroad crossing	Crossing Improvement	See ODOT guidance for "Selecting Supplemental Treatments and Traffic Control Devices for Pedestrian and Bicycle At-Grade Crossings of Rail Lines."	L-17, Existing Network	Low
S-14	Marion-Williamsport Rd and L-9	Intersection	Crossing Improvement	Install bicycle warning signage (W11-1) on Marion-Williamsport Rd intersection approaches. Optional: Install Rapid Flashing Beacons for trail users.	L-10	Low

Table 2: County Recommendations

Map ID	Location	Extents	Facility	Description	Connections	Priority
L-28	Prospect-Norton Rd/CR 121	Prospect to Waldo	Signed Route	Signed and marked bicycle route along low volume county roads provides direction and improved connection between Prospect and Waldo.	L-29, L-36, L-38	Low
L-29	St James Rd/CR 141 and Whetstone River Rd/CR 163	Waldo to Caledonia via Claridon	Signed Route with Paved Shoulder	Signed route with paved shoulder along Whetstone River Rd provides a scenic, low-stress route and connects Waldo, Claridon, and Caledonia. Establishes connection across US 23, perceived as a barrier to active transportation users.	L-28, L-30	Medium
L-30	Whetstone River Rd S/CR 163, Richland Rd/CR 132	Whetstone River Rd S/CR 163 to Marion-Cardington Rd E/CR 136	Signed Route with Paved Shoulder	Signed route with paved shoulder along Whetstone River Rd, CR 163, and CR 132 is a part of a larger connection between Waldo and Marion. Paved shoulder provides a lower stress facility along this mid-volume county road. Also connects across US 23, perceived as a barrier to active transportation users.	L-29, L-31	Medium
L-31	Richland Rd/SR 529	Marion-Cardington Rd E/CR 136 to Marion-Edison Rd/CR 169	Sidepath/Shared Use Path	Path extends the Ohio State Marion campus trail into the county and connects to the larger county wide low-stress network.	L-1, L-2, L-30, S-1	High
L-32	Owens Rd W/CR 108	Marion-Marysville Rd/SR 4 to properties between railroad and Marion-Waldo Rd/SR 423	Sidewalk	Connects Pleasant Township residential areas with Pleasant Elementary School, Middle School, and High School.	L-34, L-35, L-36	Low
L-33	Somerlot Hoffman Rd W/CR 106	Gooding Rd/CR 126 to properties between railroad and	Sidewalk	Connects Pleasant Township residential areas with Pleasant Elementary School, Middle School, and High School.	L-34, L-35	Low

Map ID	Location	Extents	Facility	Description	Connections	Priority
		Marion-Waldo Rd/SR 423				
L-34	Gooding Rd/CR 126	Owens Rd W/CR 108 to Marion-Marysville Rd/SR 4	Sidewalk	Connects Pleasant Township residential areas with Pleasant Elementary School, Middle School, and High School.	L-32, L-33, L-36	Low
L-35	Smeltzer Rd/CR 107	Owens Rd W/CR 108 to Marion-Cardington Rd E/CR 136	Sidewalk	Connects Pleasant Township residential areas with Pleasant Elementary School, Middle School, and High School.	L-32, L-33	Low
L-36	CD&M Trolley Line Trail	Delaware County Line to Marion City via Prospect	Sidepath/Shared Use Path	Connects Prospect and Marion with a sidepath along SR 203; uses CD&M right of way along SR 4.	L-2, L-28, L-32, L-34, L-38, S-7	High
L-37	Marion-Bucyrus Rd/SR 4	Marion-Williamsport Rd to Crawford County Line	Sidepath/Shared Use Path	Connects Marion and Crawford County via SR 4 using the CD&M right of way.	None	Low
L-38	Proposed State Bicycle Route 39	Delaware County Line to Wyandot County Line	Signed Route with Paved Shoulder	Widened shoulder and signed route for proposed State Bicycle Route 39 through Marion County. Provides major north-south connection for western half of the county.	L-28, l-36, Existing Network	High
L-39	Elgin High School Path	Espyville Rd S to Elgin High School	Shared Use Path	Shared use path provides more convenient and comfortable connection between Espyville Road and Elgin High School for students using active transportation.	None	Low
L-40	N Main St/Agosta Northern Rd/ CR 53	Railroad St to Tallgrass Trail	Sidepath/Shared Use Path	Connects New Bloomington to Tallgrass Trail via low-stress separated facility.	Existing Network	Low

Map ID	Location	Extents	Facility	Description	Connections	Priority
L-41	N High St, LaRue-Marseilles Rd/SR 37	West St to northern village limits	Shared Use Path	Connects LaRue with local recreation center and pool where no sidewalks currently exist.	L-42, L-43, Existing Network	Medium
L-42	LaRue-Marseilles Rd/SR 37	LaRue to Tallgrass Trail	Signed Route with Paved Shoulder	Paved shoulder along LaRue-Marseilles Rd provides the most direct connection to Tailgrass Trail trailhead and LaRue. Provides some separation between bicycles and motor vehicles.	L-41, Existing Network	Low
L-43	West St, LaRue-Kenton Rd/CR 14, Riley Rd/CR 16	LaRue to Tallgrass Trail	Signed Route	Signed and marked low-volume county road enhances connection between Tailgrass Trail and LaRue.	L-41, Existing Network	Low

Program Recommendations

Program recommendations build on the existing programming already in place in Marion County and the City of Marion to provide a more supportive environment for active transportation. The recommendations are organized according to the non-engineering Es of Active Transportation as well as other programs and policies; programs often span more than one category. Ultimately, the goal should be to have a mix of programs that incorporate all the categories.

Education

Bicycle and Pedestrian Education as part of the physical education curriculum. School districts in Marion County could use the physical education curriculum to teach safe walking and bicycling behaviors to elementary school-age children. In Washington, D.C. public schools, all second-grade students are taught how to ride a bicycle. A similar program in Marion County would help create a culture of healthy, active living and improve student safety.

Regular Bicycle Rodeos and Adult Bicycle Education. In addition to bicycle/pedestrian safety education in schools, there should be regular bicycle rodeos and other bicycle education events countywide. A bicycle rodeo is an activity with stations that test various bicycling skills like obstacle avoidance, riding slow but stable, and starting and stopping. Bicycle Rodeos can be part of larger events like Marion's Popcorn Festival, or standalone events. The YMCA or other organizations should also consider hosting regular adult bicycle education classes. There are many adults interested in bicycling who may not know how to ride at all or how to ride on roads with motor vehicles. Classes in basic bicycle riding and riding in mixed traffic would help target these interested people and lower barriers to bicycling in the county.

Encouragement

School Buses and Bike Trains. Walking School Bus and Bicycle Train programs in communities across the county would enable children to safely use active transportation to get to school. In many places, parents may not be comfortable with their child walking or biking to school alone, but they are unable to walk or bike with them every day. In a walking school bus or bike train, an adult walks or bicycles to school with their child and stops by houses along the way, picking up additional children walking or bicycling to school. In this way, children can walk or bicycle to school and are supervised the entire time. Usually, parents whose children participate take turns being the chaperone. These programs lower barriers to getting kids active and help create a culture of walking and bicycling. Several schools across the county have already seen large turnout for Walk to School Day; making this a year-round activity while expanding it to more schools would increase student physical activity, reduce car trips to/from school, and improve school area safety. Safe walking and bicycling routes can be identified at each school by school staff in consultation with local planners and engineers. In the past, student athletes from Harding High School volunteered to help facilitate Walk to School Day and more high school students and potentially University students could also chaperone these programs to gain community service hours.

Bike to Work Day. Like Bike to School Day, Bike to Work Day is an encouragement event that helps people understand how they might commute to work by bicycle. While events across the country take place at different times of year, most take place during Bike Month in May. The county should work with local jurisdictions to publicize the event and to set up "pit-stops" where participating bicyclists can get Bike to Work Day t-shirts or other prizes.

Bicycle parking The Project Team frequently heard that there is little or no bicycle parking in Marion County and commercial areas in the City of Marion. The county could help local governments process requests for bicycle parking locations and work with adjacent property owners to install new parking. Depending on available funding, the local municipality could pay for the racks itself or share the cost with the business owner.

Start a frequent walker or biker program: Frequent walker and biker programs provide small rewards or incentives to students who regularly walk and bicycle to school. Frequent walker and biker programs require a system for tracking student trips. For example, students can be assigned a punch card that volunteers or teachers can punch each time a trip is completed.

Fire Up Your Feet: Fire Up Your Feet (www.fireupyourfeet.org) encourages families, students and schools to work together and create active lifestyles that inspire all children to be healthy and physically active. A key component of the program is an online physical activity tracker. These online resources are available to any school or PTA/PTO group in the country.

Healthy Fundraising: A Fun Run held on school grounds or in a nearby park is a healthy and fun school fundraising activity. This type of school fundraiser promotes physical activity instead of the traditional activity of selling candy bars. A Fun Run gets students and parents in the habit of walking and exercising. Using no-cost, online resources, like those at www.fireupyourfeet.org, makes healthy fundraising fun and profitable.

Enforcement

Targeted Driver Speed Enforcement. An integrated approach to speed enforcement includes driver education, speed feedback signs, progressive ticketing, and other elements. Driver education may include yard signs urging drivers to “slow down,” and safe driver pledges. Speed feedback signs can be used to increase driver awareness about their speed and collect motor speed and volume data. The latter may be helpful for prioritizing locations for police enforcement. Each Highway Patrol District in Ohio has a speed feedback trailer that local jurisdictions can request. During the stakeholder workshops Barks Road was discussed several times as both the only access to the YMCA and one of the busier roads. Other roadways with key destinations may also be identified as priority roadways for this program. Progressive ticketing is a method of introducing police enforcement in stages. First an announcement is made that police enforcement will take place. Officers initially give only warnings and proceed to ticketing only after a specified warning period has passed. Enforcement should take place at irregular times.

Bicycle Police. Equipping police officers with bicycles and adding bicycle racks to police cruisers can help officers patrol streets and trails. Police officers walking or bicycling are better positioned to understand the needs of active transportation users than those who patrol only in motor vehicles. Bicycles are also needed for officers to access trails that are not open to motor vehicles. The local police departments and county sheriff’s office should collaborate on this strategy.

Evaluation

Regular Bicycle and Pedestrian Counts. Twice a year, the county should conduct several days of bicycle and pedestrian counts to get a sense of popular active transportation corridors and how levels of walking and bicycling change over time. County staff could coordinate volunteers to conduct these counts. The UCLA Bike Count Data Clearinghouse has great resources for starting a count program (http://www.bikecounts.luskin.ucla.edu/).

Student-Led Pedestrian Environment Evaluation. Using Marion City Schools Next Generational Learning Environs which employs project-based learning, high school students could develop an asset management database for the County that catalogs the characteristics and condition of pedestrian infrastructure including sidewalks, crosswalks, pedestrian signals, curb ramps, and signage. Students would develop Geographic Information Systems (GIS) and cartography skills while providing the county or local communities with a prioritized list of pedestrian facilities in need of repair or improvement. This program could fill a critical gap in the county’s data needs. The county has led some bicycling mapping efforts for wayfinding purposes, but no regular collection for system evaluation. This data collection is important to help each city and the County at large understand where specific problem areas are for walkability.

Policy Recommendations

Adopt a Walkable School Siting Policy. Work with each school district to ensure that new school sites are located within walking distance of the residents it serves. Siting schools so people must drive to them increases traffic congestion around arrival and dismissal and is detrimental to student health by limiting physical activity.

Encourage Walking and Bicycling Through Zoning
In future Comprehensive Plan Updates, the County could strengthen zoning guidance that encourages walkability through mixed-use development, including adopting form-based code, to provide pedestrian-friendly urban design and site design standards. For example, the code could require commercial buildings to have pedestrian-scaled, sidewalk-oriented facades and entrances, much like many of the buildings already in the downtown commercial corridor. The zoning code could also be used to provide more bicycle parking at commercial and multi-family residential buildings by potentially allowing developers to build less car parking if they build high quality and secure long-term bicycle parking.

Prioritization

Once the active transportation concepts map was developed and shared with stakeholders, each project underwent a prioritization process to guide implementation efforts. Local priorities and expertise guided project prioritization: Built Environment Committee members expressed their preferences during a voting activity, and community members participated in a similar exercise via an online survey. Once these scores were combined, projects were divided into high, medium, and low-priority categories based on a given project's score relative to all projects. Projects that ranked highest – within the top third – were categorized high-priority, projects with scores in the middle third were labeled medium-priority, and projects in the lowest third were labeled low-priority. Prioritization results are listed for each project in Tables 1 and 2. High- and medium-priority projects are shown in Exhibit 3 for Marion County and Exhibit 4 for the City of Marion.

Different priority levels do not have timeframes associated with them; for example, one to five years for completion of high-priority projects. Instead, they will serve as a general frame of reference for decision-makers when discussing the community's most urgent walking and bicycling projects and active transportation investments.

High-Priority Projects

This process identified almost 11 miles of high-priority projects, primarily in the county. The proposed Barks Rd sidepath (L-2) is the only high-priority project within city limits. The sidepath would connect the YMCA, subdivisions on Barks Road East, commercial uses at the Delaware Avenue/SR 423 intersection, and Sawyer-Ludwig Park. It would include an improved on-road connection over the railroad crossing on Barks Road West, with a signed and marked bicycle and pedestrian route on the shoulder.

There are three high-priority projects in Marion County. The proposed Richland Rd/SR 529 sidepath/shared use path (L-31) would extend the OSU Marion campus trail on University Drive into the county and connect to the larger county wide low-stress network. The proposed CD&M Trolley Line Trail (L-36) would travel from the Delaware County line to the City of Marion Prospect, using a sidepath along SR 203; and CD&M right of way along SR 4. The proposed State Bicycle Route 39 (L-38) would cross Marion County north-south, from the Delaware County line to the Wyandot County line. The signed route would include a widened paved shoulder to accommodate a variety of comfort levels among bicyclists and provide a major north-south connection for the western half of the county.

Together, these four routes form Marion's high-priority network: a continuous system that uses on and off-street facilities to improve active transportation connectivity on the south side of the City of Marion and the southern and western parts of Marion County.

Medium-Priority Projects

The medium-priority network consists of seven miles of proposed facility, primarily in the county. Four medium-priority projects were identified in the City of Marion but are small in length compared to county projects. Sidewalk improvements along Barks Road East (L-3), between Forest Hill Dive and Lakeview Boulevard would fill gaps in the existing sidewalk network between residential neighborhoods, the YMCA, and other destinations. It would also provide an alternative route to the Barks Road sidepath (L-2). Extending the Marion Tallgrass Trail trailhead to Whirlpool (L-10) via an existing rail corridor would bring the trail's eastern terminus to the Whirlpool facility. It would provide a low-stress alternative route to Whirlpool from Marion's northwest neighborhoods. The Center St/SR 309 road diet (L-19) requires further study. Several lane configurations are described in Table 1, and the overall purpose and benefit of one-way to two-way street reversions is explained in the recommendations section. L-24, also on E Center Street/SR 309 is a small project that would fill a gap in the existing sidewalk network around Harding High School. Filling in the sidewalk gap would provide a safe and convenient walking route to school.

Beyond city limits, three medium-priority projects are dispersed throughout Marion County. A signed route with paved shoulder (L-29) on St James Rd/CR 141 and Whetstone River Rd/CR 163 would provide a scenic, low-stress route and connect Waldo, Claridon, and Caledonia. It would also establish a connection across US 23, perceived as a barrier to active transportation users. Another signed route with paved shoulder (L-30) on Whetstone River Road, CR 163, and CR 132 would provide a low-stress facility between Waldo and Marion. A shared use path in LaRue (L-41) on N High Street and LaRue-Marseilles Road/SR 37 would connect LaRue with the local recreation center and pool where no sidewalks currently exist.

Compared to the high-priority network, medium-priority routes are more disjointed and do not form a continuous system across the county. The remaining projects were categorized as low-priority and are described in more detail in Tables 1 and 2.

Conclusion

With 35 miles of active transportation routes, the proposed network would dramatically improve bicycling and waking connectivity throughout Marion County. It would connect population centers, provide needed access to important destinations and services, and increase quality of life and public health for people walking and bicycling. With community input, local officials should use the high-priority projects described above to guide their decision-making when it comes to active transportation investments.

Exhibit 1. Marion County Proposed Active Transportation Network

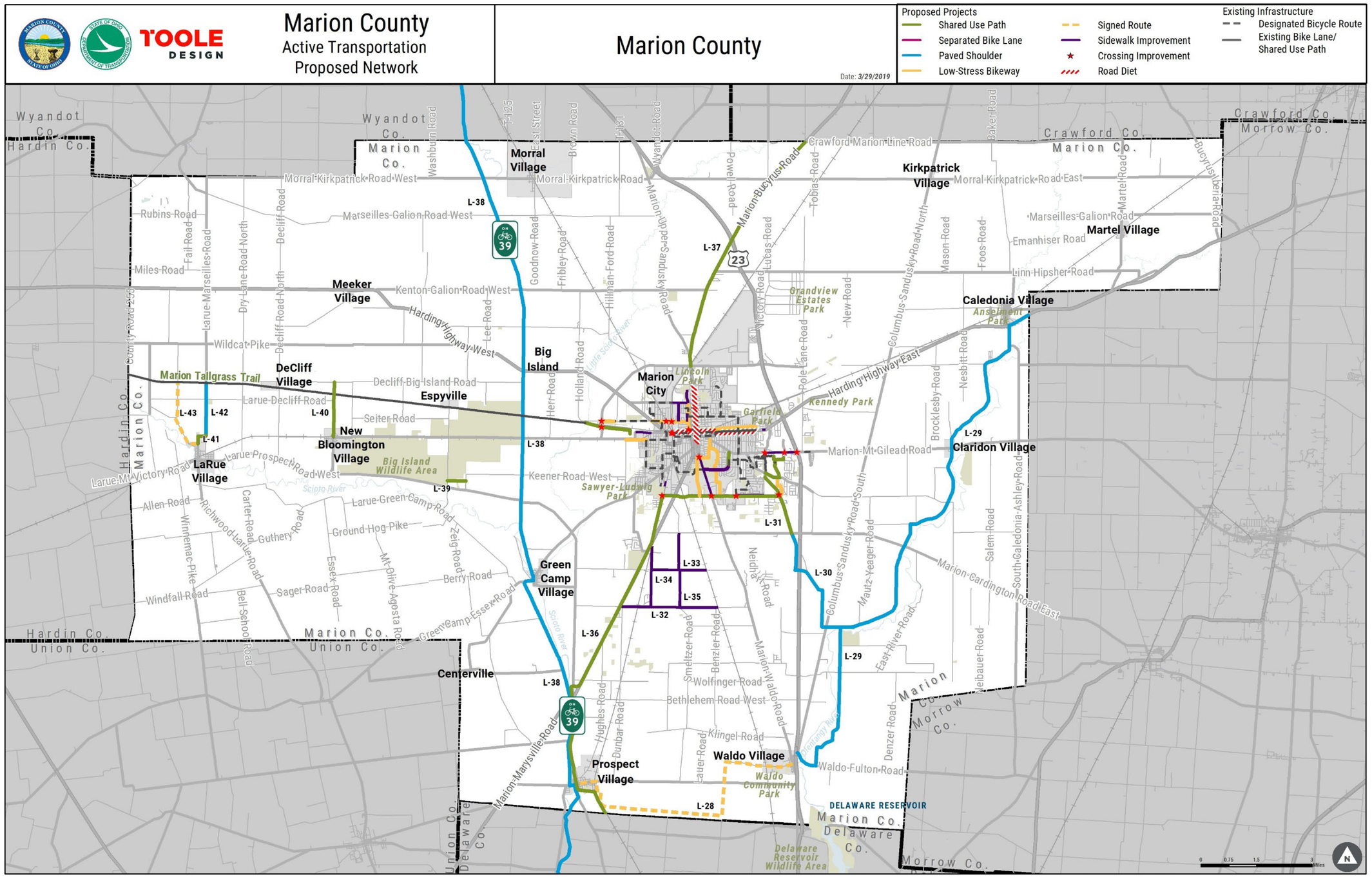

Exhibit 2. City of Marion Proposed Active Transportation Network

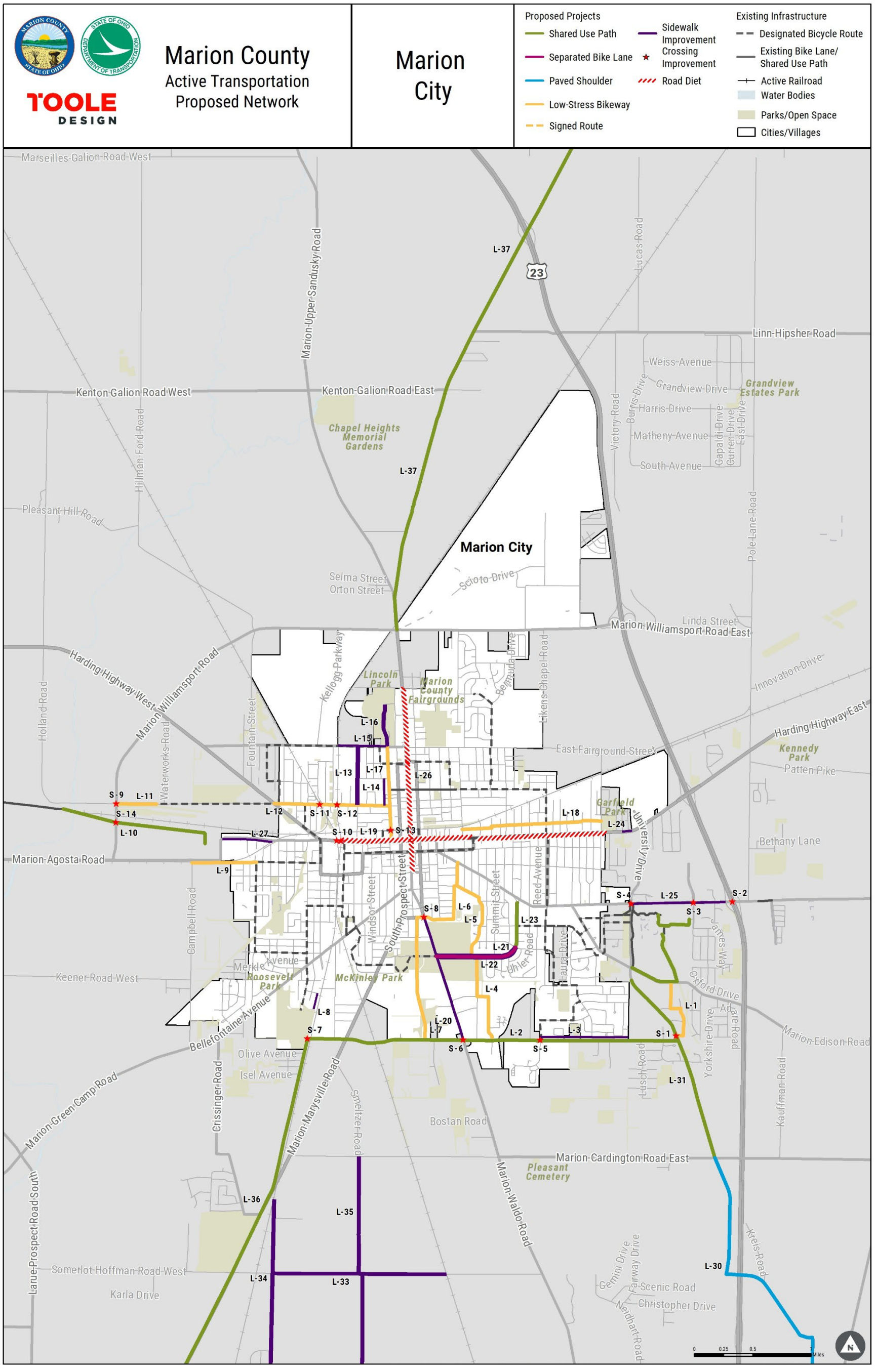

Exhibit 3. Marion County Active Transportation Priority Network

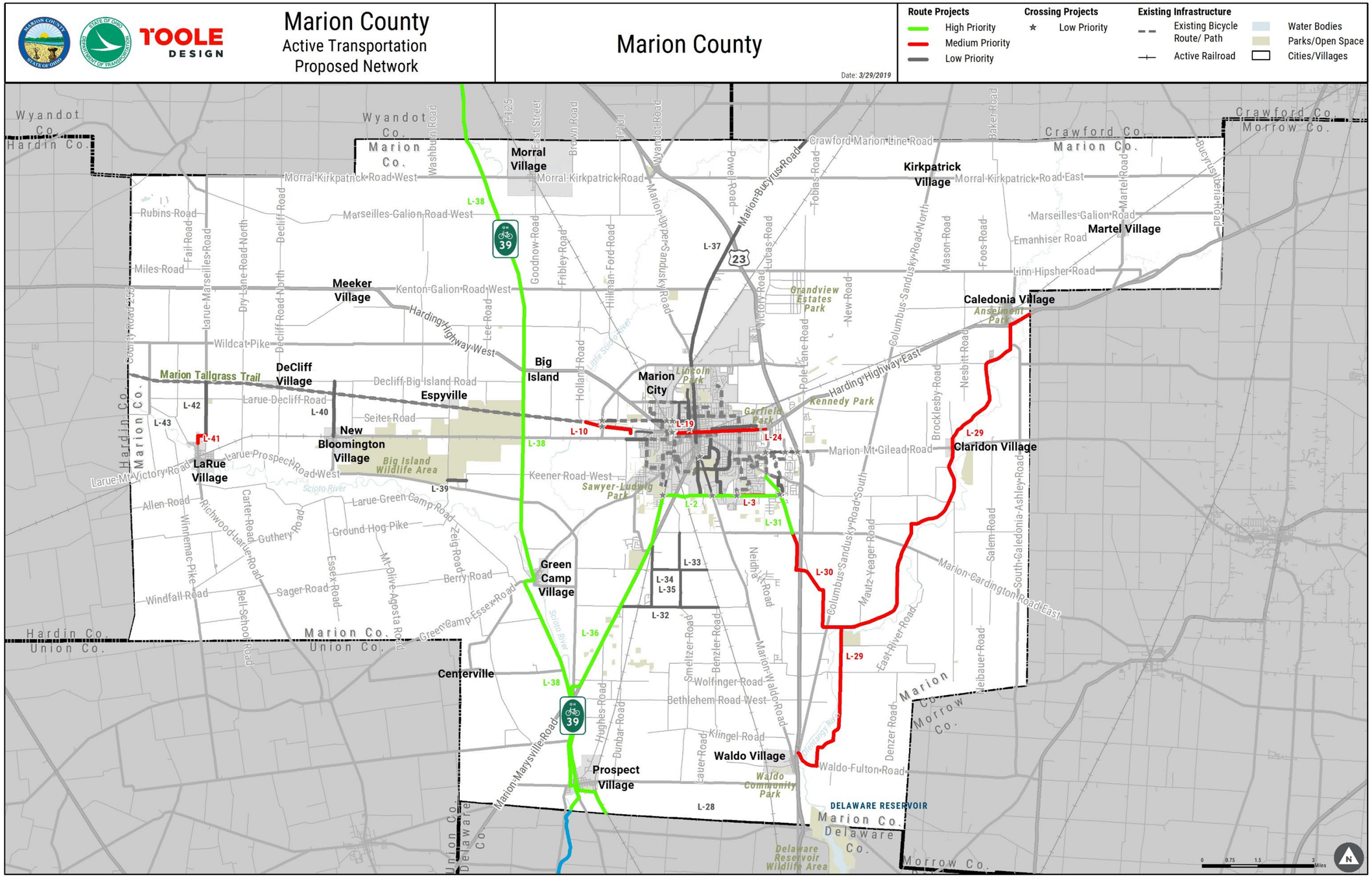

Exhibit 4. City of Marion Active Transportation Priority Network