

Fox River Corridor

Bicycle and Pedestrian Improvements
Technical Memo

June 2018

Prepared for
Chicago Metropolitan Agency for Planning

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The Chicago Metropolitan Agency for Planning (CMAP) is working with McHenry County Planning and Development, in collaboration with Lake County in addition to local governments and organizations, to prepare a corridor plan for a segment of the Fox River. This corridor plan will include recommendations for the Counties, Villages, conservation and forest preserve districts, and other stakeholders to improve the Corridor's transportation network, recreational offerings, open space, natural resources, and economic development activities. Of particular interest to community stakeholders within the Corridor is improving the bicycle and pedestrian network.

This memo summarizes the development, evaluation, and prioritization of improvements to enhance the bicycle and pedestrian network in the Fox River Corridor, with an emphasis on strengthening regional connections. Priority improvement areas were identified, and concept plans were developed for these areas. These concepts will inform future efforts to improve the bicycling and pedestrian network for this portion of the Fox River Corridor.

1. Existing Conditions

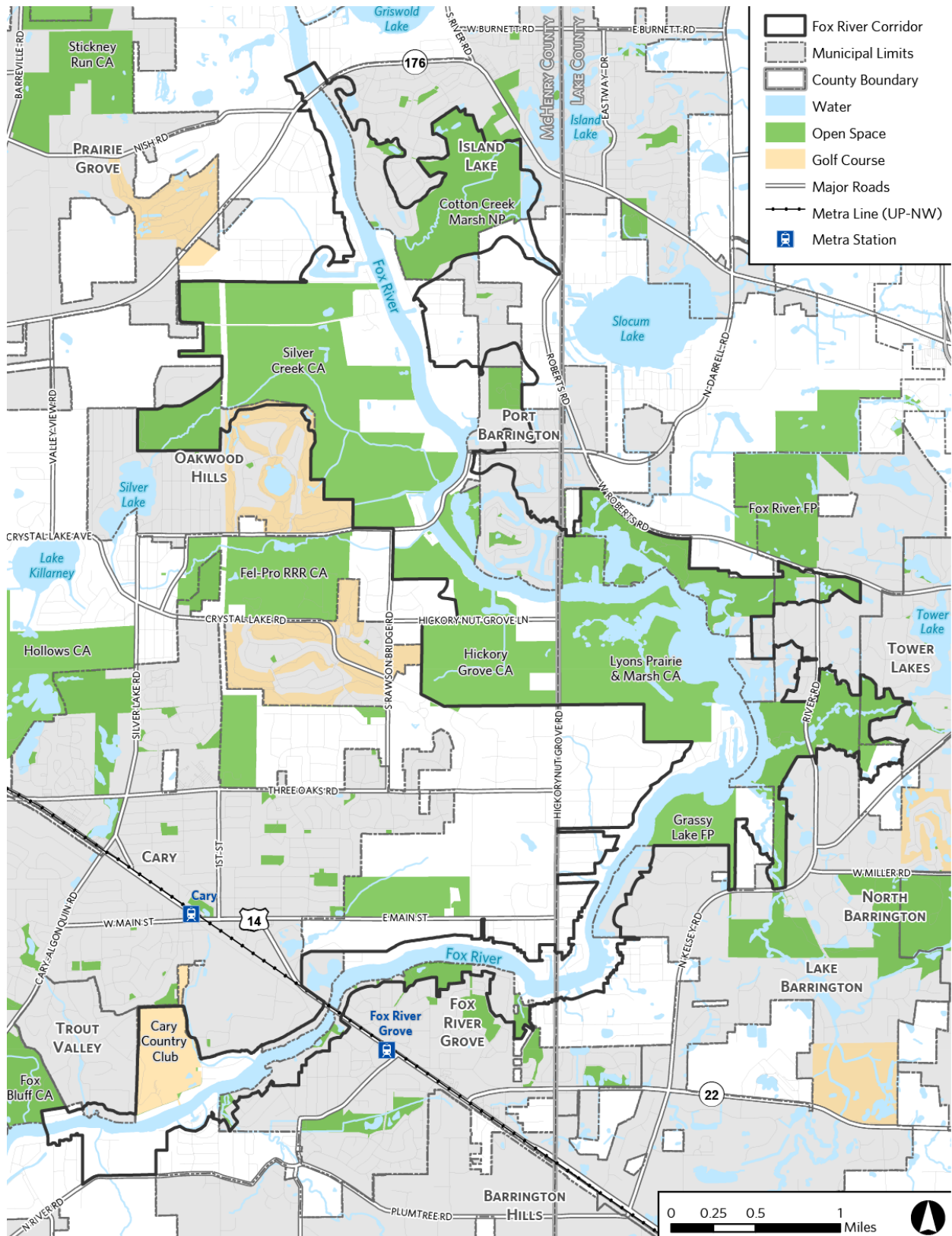
CORRIDOR DISCRIPTION

The Fox River Corridor follows the Fox River and generally extends from Burtons Bridge (IL-176) to the north to the Cary Country Club in the south. It is generally bounded by the Fox River or any adjacent Nature Preserves, Conservation Areas, or Forest Preserves on the western and eastern boundaries. The Fox River bisects the Corridor and three bridges connect its east and west sides: Burton's Bridge (IL-176) in the northern section, Rawson Bridge Road in the center, and Northwest Highway (US-14) bridge to the south. The corridor contains eight villages and unincorporated lands in southeast McHenry County and southwest Lake County, including portions of the Villages of Cary, Fox River Grove, Island Lake, Lake Barrington, Oakwood Hills, Port Barrington, Tower Lakes, and Trout Valley. Due to the multitude of municipalities within the study area, the road network can be under various jurisdictions depending what side of the river it's on in addition to the Illinois Department of Transportation (IDOT) controlling 3 roads near or within the corridor including: IL-176/State Rd, IL-22, and US-14. Access within and near the corridor is generally auto-dominated, although the southern portion is serviced by the UP-NW Metra commuter rail line and the Fox River Grove and Cary Metra stations lies just outside of the boundaries.

While residential land surrounds the corridor, the majority of land within the corridor consists of a combination of wetland and nature areas including: the Cotton Creek Marsh Nature Preserve, Silver Creek, Hickory Grove, Lyons Prairie & Marsh Conservation Areas, and the Fox River and Grassy Lake Forest Preserves.

Although the corridor lacks a unified river trail or direct access to any regional trails, many trails for pedestrians and bicyclists exist within the nature areas. Approximately five miles west of the Corridor, lies the Prairie Trail, a 26-mile, multiuse trail for non-motorized recreation. The trail connects to eight McHenry County communities. The Prairie Trail provides access to nearly 100 miles of trails stretching from the Wisconsin border in the north, to Algonquin, IL in the south where it links into Kane County's Fox River Trail. The Fox River Trail, similar in nature to the Prairie Trail, is a 40-mile multiuse path largely following the Fox River from the Kane County line to the north, to Oswego, Illinois in the south. This trail connects 12 communities to various nature preserves and downtowns.

Figure 1: Fox River Corridor



Many types of bicycle and pedestrian facilities are found in the Fox River Corridor, including:

- **Roads with No Shoulders** – While not a bicycle facility, many people biking in the corridor do so on narrow roads with no shoulder. This lack of shoulder forces people biking to ride in the travel lane. This is neither safe nor comfortable for people on bikes or people driving.
- **Roads with Wide Shoulders** – Roads with enough paved shoulder to allow people biking to safely, though not necessarily comfortably, ride outside the travel lane.
- **Sidewalks** – Concrete sidewalks adjacent to a road. These types of facilities typically have a narrow width and are not appropriate for safely accommodating both people walking and people biking, though people biking may utilize sidewalks when no other safe alternative exists.
- **Sidepaths** – Asphalt paths adjacent to a road, wider than a sidewalk and can accommodate both people biking and walking in both directions comfortably.
- **Multiuse Trails** – Asphalt paths for walking and biking which provide connections between neighborhoods or through parks. These trails are often not adjacent to a road and usually originate from a park or road.
- **Recreational Trails** – Crushed aggregate or dirt walking paths through natural areas. Biking is often difficult or prohibited on these trails.

KEY FINDINGS

An assessment of the existing bicycle and pedestrian network found the following challenges:

Disconnected Network of Pedestrian and Bicycle Facilities

Disconnected Trail Network

There is an abundance of natural areas in the Fox River Corridor, including conservation areas, forest preserves, and other open spaces and unincorporated areas. Many of these areas feature internal recreational trails but are typically disconnected from one another as users must drive to each individual area. Unlike areas south of the study area, there is no continuous riverfront trail along the Fox River in this study area that could serve as a spine for a complete trail network. While recreational trails are found within many of these natural areas, natural and physical barriers have led to a disconnected network of isolated trails. The Fox River itself is the most obvious natural barrier, and the wet, unstable soils found in wetlands along the river in these natural areas connections means connections through these areas may not be feasible. Additionally, privately owned riverfront properties serve as barriers between publicly accessible natural areas. The few continuous roads within the study area surrounding the forest and conservation areas have been designed for motorists. These higher-speed and high-volume roads also act as major barriers, further disconnecting the existing recreational trail system.

Disconnected Sidewalk and Sidepath Network

Sidewalks and sidepaths are found throughout the study area in pockets of residential neighborhoods, but much like the disjointed trail network, are not well connected. The sidewalks or sidepaths that do exist along major roads tend to end abruptly before reaching major destinations or other connections or are too narrow to accommodate both bicyclists and pedestrians. Sidewalks exist on two of the three river crossings including Rawson Bridge Road and Northwest Highway (US-14), however, there is no dedicated bicycle infrastructure providing safe passage to reach these amenities. Key streets in the corridor including Roberts Road, River Road, Rawson Bridge Road, and S Rawson Bridge Road generally lack any type of pedestrian facility.

Disconnected Street Network

The limited street network within the study area further complicates equitable space for all modes. Low street connectivity funnels all users onto the same busy roads. The existing arterials are mostly in good condition for motorists but act as physical and mental barriers for anyone less than the most confident and experienced cyclists. Where sidepaths and sidewalks aren't present, bicyclists are forced onto the shoulder or into the travel lanes when shoulders are not wide enough for bicycle travel. Geometric characteristics also introduce potential safety hazards for active transportation, as width and number of lanes can encourage motorists to speed. Heavily forested areas and hilly topography also provide sight lines challenges for both motorists and bicyclists.

Multiple Jurisdictions

Another challenge facing the Fox River Corridor is the multitude of jurisdictions controlling streets in the area. Most of the smaller and neighborhood streets are under local control, though some streets providing direct connections to destinations are under control of IDOT or the local township. It is generally more difficult to make improvements on these streets because of the additional coordination required. However, several examples of cross-jurisdiction coordination exist in the study area.

Limited Opportunities to Cross the Fox River

A lack of bridge crossings limit opportunities to connect the east and west sides of the Fox River. There are only three bridges across the Fox River in the Corridor, Burton's Bridge (IL-176), Rawson Bridge Road, and Northwest Highway (US-14). The limited number of crossings funnels motor vehicle traffic onto these bridges, which feature the highest traffic volumes in the Corridor.

Burton's Bridge has a daily traffic volume of 16,400 and is under IDOT jurisdiction, meaning any changes require extensive coordination with the agency. The bridge features wide shoulders, which provide people biking with a safe crossing, but no sidewalk for people walking. Currently, roads on either side of the bridge lack any safe accommodations for people walking or biking, however, a future IDOT project will improve crosswalks on the west side of the River.

Rawson Bridge Road has the lowest daily traffic volume of the three bridges at 7,300 and the bridge is under the jurisdiction of Nunda Township. Rawson Bridge Road features a modest sidewalk on one side of the road as well as narrow shoulders. Neither are wide enough to provide enough separation from motor vehicle traffic to facilitate safe and comfortable crossings. The roads on either side of the bridge lack any safe accommodations for people walking or biking.

Northwest Highway bridge has the highest daily traffic volume of the three bridges at 31,400 and is under IDOT jurisdiction, meaning any changes require extensive coordination with the agency. Northwest Highway also features a modest sidewalk separating from motor vehicle traffic by a concrete barrier, but no accommodations for biking. While it features sidewalks on the north side of the bridge, it lacks safe accommodations for biking.

The lack of safe accommodations for active transportation, either on or leading to these bridges, creates both real and perceived safety concerns for all modes. With the high traffic volumes and lack of amenities for active transportation, these bridges limit mobility within the Fox River Corridor and discourage people from walking and biking across the river.

Lack of Regional Trail Connections

The Fox River Corridor lacks any direct trail access to any major regional multiuse trails, including the Prairie Trail to the west or the Fox River Trail to the south. This lack of access isolates the communities within the study area and limits users of the existing trail network to residents. Safe and comfortable connections could open the corridor to an influx of visitors that would benefit the local economy.

2. Plan Review

A plan review was conducted to identify regional bicycle and pedestrian priorities and existing opportunities in the Fox River Corridor. Relevant plans included village comprehensive plans, county long-range plans, and other transportation-related efforts. Plans reviewed included:

- Fox River Corridor Study Existing Conditions
- McHenry County 2040 Long Range Transportation Plan
- McHenry County 2018-2022 Transportation Plan
- Comprehensive Plan Village of Lake Barrington
- Village of Cary Comprehensive Plan
- Lake County 2040 Transportation Plan Bike Priorities
- Village of Prairie Grove Comprehensive Plan
- Village of Lake Barrington Comprehensive Plan

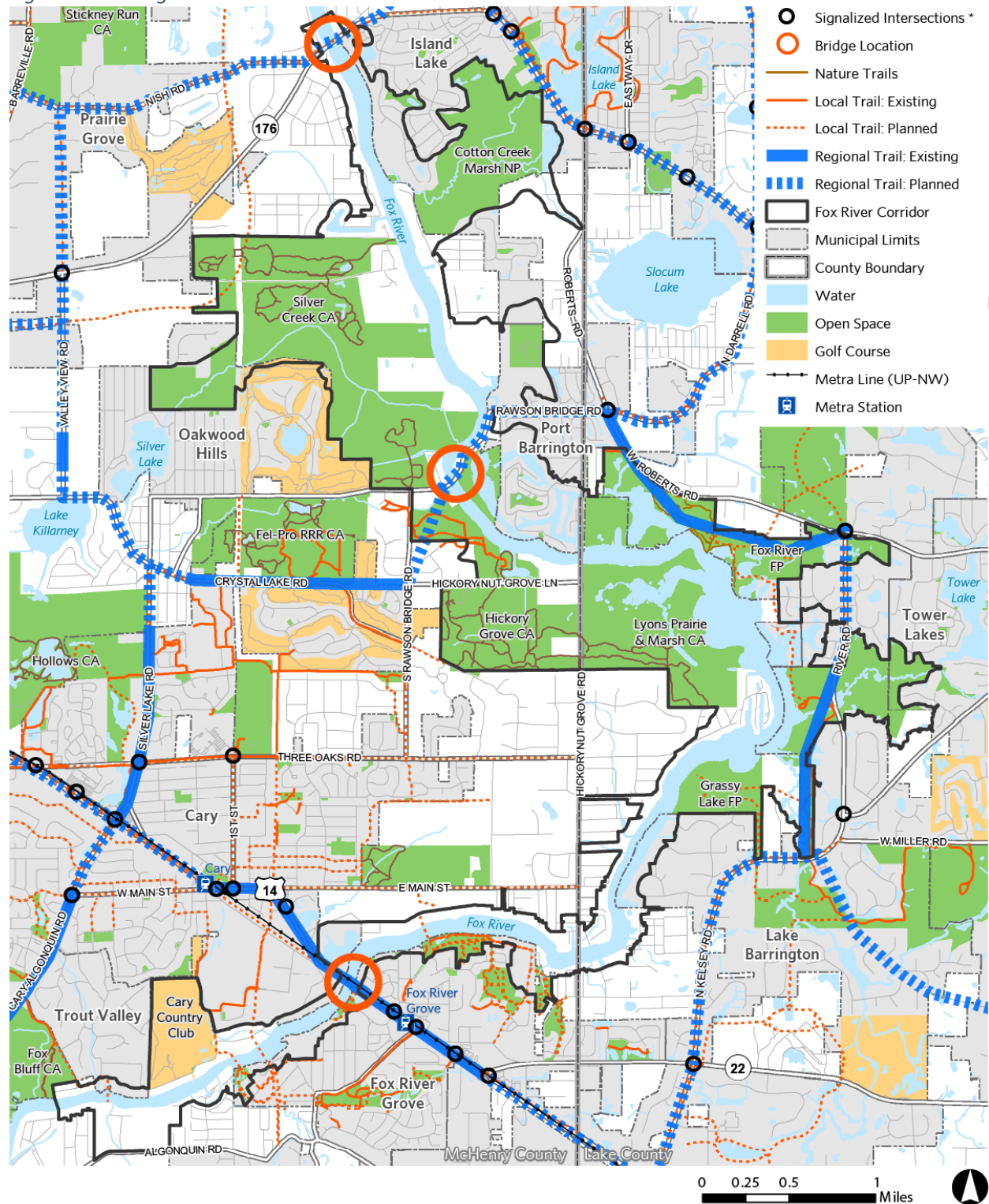
PLANNED CONNECTIONS/TRAILS

Major Planned Trails/Bike Facilities

Various agencies and jurisdictions have planned additional pedestrian and bicycle facilities in the Fox River Corridor. Several regional multiuse trails have been recommended to better connect the corridor. These key routes include:

- **Prairie Trail – Island Lake Connector**
via Route 176 and Nish Road (McHenry County 2040 Long Range Transportation Plan)
- **Rawson Bridge – Prairie Trail Connector**
via Rawson Bridge Road and Crystal Lake Road (McHenry County 2040 Long Range Transportation Plan)
- **Union Pacific Corridor**
Utilizing Union Pacific rail right-of-way, from the Prairie Trail southeast to Lake County (McHenry County 2040 Long Range Transportation Plan, Lake County 2040 Transportation Plan, Village of Cary Comprehensive Plan)
- **River Road and Kelsey Road** (Village of Lake Barrington Comprehensive Plan, Lake County 2040 Transportation Plan)
- **ComEd Right-of-Way (North/South)**
Connecting the Silver Creek Conservation Area, Fel-Pro RRR Conservation Area, Cary-Grove Park, and Fox River (Village of Cary Comprehensive Plan)
- **ComEd Right-of-Way (East/West)**
Connecting the Silver Creek Conservation Area west to US 31
- **S Rawson Bridge Road to Main Street** (Village of Cary Comprehensive Plan)

Figure 2: Existing and Planned Trails



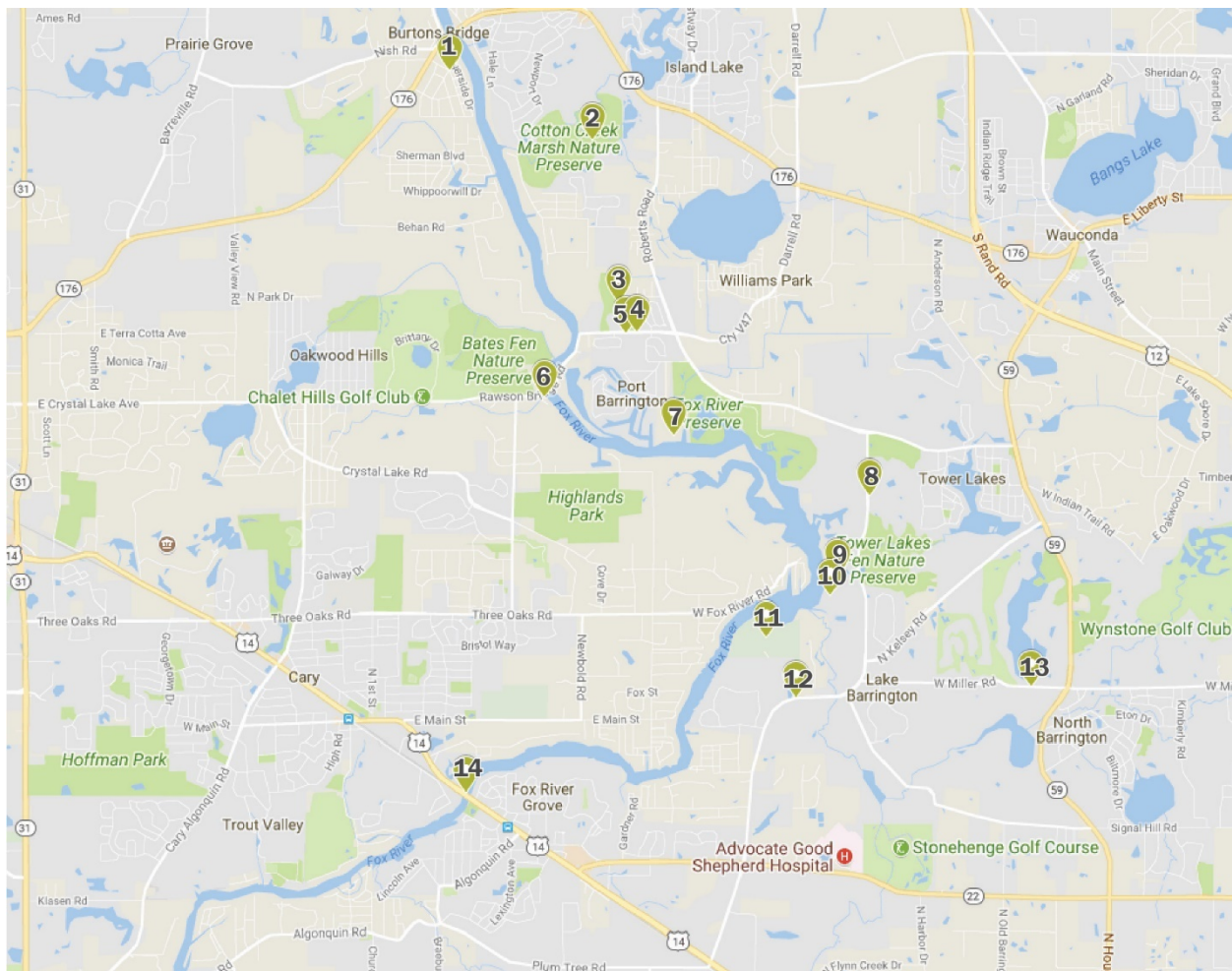
3. Additional Considerations

STAKEHOLDER OUTREACH

During CMAP's outreach process, stakeholders expressed a desire for safer and more enjoyable connections, particularly focused on the east side of the river. Figure 3 visualizes where improvements sourced from the community outreach activities are located. General comments for new connections included:

- On the east side of the Fox River between Fox Trail Park, Fox River Preserve, Grassy Lake Forest Preserve, and Wagner Fen that avoid Rawson Bridge Road, Roberts Road, and River Road
- On the west side of the Fox River between Fox Bluff Conservation Area and the Village of Trout Valley, Silver Creek Conservation Area and Burtons Bridge, Fel-Pro RRR Conservation Area, and within Silver Creek Conservation Area itself, and between Fox River Grove and Lake Barrington.

Figure 3: Bike and Pedestrian Public Input Survey Results



Public Input Received Through the Planning Process

Refer to Figure 3 for the location of each comment below.

1. This would be a valuable area for biking.
2. No clear path to get to this preserve area from Roberts Road and/or neighborhood streets.
3. Clearly marked path from the park to Fox River Preserve. Expand current trails and paths, connect through riverwalk to the Fox River Preserve.
4. Cars never stop for pedestrian traffic here despite signage. There needs to be active flashing lights for crossing.
5. We need a walking path to get down to the Broken Oar/between different sections of the Riverwalk.
6. Better signage and clear path (on bridge).
7. Having a trail from the Marina to the north along the river would be awesome.
8. Need connection from Grassy Lake to Fox River Preserve. River Road is dangerous for pedestrians/bikers; River Road is dangerous and fast for a rural road. Divert traffic from this area. Connect Fox River Preserve to Tower Lakes Fen Preserve and permit bikes on Tower Lakes Fen Preserve.
9. Connect marina with FPD and Lake Barrington Trails. Link Fox Preserve to Grassy Lake.
10. Seems like wasted space. should connect to other trails.
11. Perfect area for riverfront bike trail.
12. Move notification signs for crosswalk when heading north on Kelsey to alert drivers earlier about ped crossing, would like to be able to bike entire trail.
13. Bike lane on Miller Road.
14. Unsafe crossing and traffic congestion. Potential here for a pedestrian overpass.

Stakeholder Interviews

In addition to reviewing CMAP's outreach process to the public, a series of interviews were conducted with the various communities and stakeholders to assess findings during the Plan Review and discuss potential opportunities. Stakeholders interviewed included:

- McHenry County Planning & Development and Division of Transportation (Phone Interview)
- Lake County Division of Transportation (Interview/Email list)
- Village of Port Barrington (Email)
- Algonquin Township (Email)
- Village of Cary (Email)
- Nunda Township (Email)

The comments received are described below and organized by location.

Rawson Bridge Road

- Rawson Bridge Road is under Nunda township jurisdiction over the Fox River and to the west, and it might be difficult to install new bicycle and pedestrian improvements due to funding.
- Rawson Bridge Road is on Nunda Township's 2018 repaving list, and there is a possibility to accommodate new bicycle infrastructure.
- Most of the homes on the east side of the road, east of the bridge own the property adjacent to the river and right-of-way might be limited.
- The Broken Oar bar owns much of the surrounding property and there have been talks of creating their own Riverwalk south of the bar. Properties assumed owned by Broken Oar include the street parking lot across from the bar and Parcels directly south of the bar.
- Lake County DOT maintains Rawson Bridge Road from Roberts Road to the Lake/McHenry county line.
- Lake County does not currently have plans to resurface Rawson Bridge Road or restripe it with new bicycle facilities.
- While there are no current plans to add a sidepath along Rawson Bridge Road, the Village of Port Barrington indicates there is potential support for its construction.

Rawson Bridge

- Rawson Bridge is the most heavily used bridge in the corridor for bicyclists and pedestrians.
- The only bridge under local (non-IDOT) control. The bridge is under Nunda Township jurisdiction. There is a small possibility that the jurisdiction will change to McHenry County by Spring 2019.
- The existing sidewalk on the bridge is currently being replaced by Nunda Township.
- This area is in a floodplain and if a new sidepath were installed, other mitigation efforts would need to address shoreline erosion.
- This road does get truck traffic but is the best connection to cross the river for people walking and biking.
- A reduction in lane width could be considered by Nunda Township.

South Rawson Bridge Road

- The road is under Algonquin Township and the Village of Cary jurisdiction from Rawson Bridge Road to Three Oaks Road.
- Algonquin Township repaved the southern portion of the road last year. The road was striped incorrectly, and there are plans to restripe it again in 2019 with a bike lane planned for one side of the street. This bike lane would vary in width from 2.5' to 3.5'.
- The intersection of South Rawson Bridge road and Three Oaks Road is getting restriped by the Village of Cary. This project is currently in Phase 2 engineering. The intersection is most likely too narrow to accommodate any on-street bicycle facilities.
- The Village of Cary acknowledges South Rawson Bridge Road needs a sidepath to safely accommodate bicyclists and is generally supportive of one.

IL-176

- The IL-176 bridge over Fox River (Burton's Bridge) isn't utilized as extensively for bicyclists and pedestrians compared to Rawson Bridge, but its wide shoulders can accommodate people walking and biking. Options utilizing Burton's Bridge should be considered for long-term planning efforts, especially as the Nish Road intersection gets redesigned.
- The intersection of IL-176 and Nish road will be being redesigned by IDOT, and current plans include a sidepath. However, the redesign is auto oriented as the project is focused on prioritizing cars and signal work.

US-14

- IDOT jurisdiction
- Plans for a new bridge for bicyclists and pedestrians near US-14 are unlikely for the time being. Lions Park on the east side of the Fox River would serve as a good landing spot for a future bicycle/pedestrian bridge, and there is public land on the west side that could serve the bridge.

Cary Algonquin Road

- There is an existing sidepath on Cary Algonquin Road, and the Village of Cary is working on filling the existing gaps. The Village is interested in extending the sidepath on Cary Algonquin Road south from Fox Trail Drive to make a connection to the new park on Klasen.
- A new park with bicycle amenities is currently under construction in the southwest area of the village at the intersection of Klasen Road/Cary Algonquin Road. This park would feature bicycle trails and they are expecting high bicycle use.
- Where the sidepath ends on Cary Algonquin Road, there are plans to extend the path to Main Street. Here, a roundabout is planned with plans for on-street facilities on Main Street.

Kelsey Road/Roberts Road

- New bike-friendly shoulders are being installed on Kelsey Road that are guided by Lake County's DOT non-motorized transit guide. 3' - 4' bike friendly shoulders will be installed with the improvements stopping at IL-22.
- Roberts Road has been identified for a sidepath by Lake County.

River Road

- Lake County does not currently have plans to resurface River Road or restripe it with new bicycle facilities.

General Comments

- McHenry County is supportive of seeing improved pedestrian crossings throughout the entire Fox River Corridor. There is interest in connecting the local trails together as biking is a popular activity throughout the county. The County would also like to see connections to projects in Carpentersville, Algonquin, and Cary.

- MeHenry County would like new bike facilities to be safe and comfortable. The county would encourage bicyclists to bike between the nature areas.
- Filling existing gaps in the bike network and creating more east-west connections is a priority to the Village of Cary.
- The Cary Park District was awarded an ITEP grant for trails that would connect to Route 31 west of Hoffman Park.
- Port Barrington residents currently use side streets and paths within the nature areas to get to the Broken Oar or Rawson Bridge.
- Center Street, north of the Fox River Preserve currently serves as a low stress connection into the preserve.

STRAVA HEATMAP

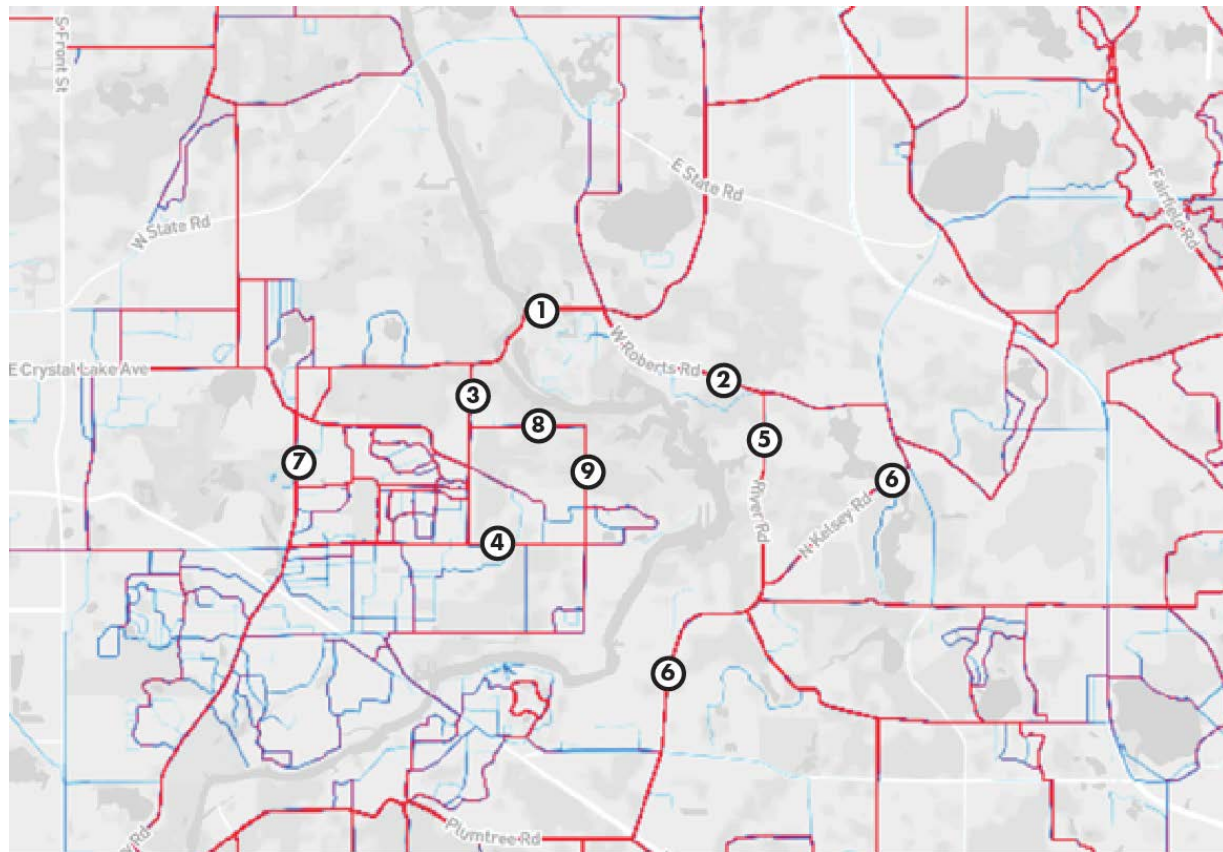
The fitness application Strava was analyzed to attempt to identify the existing connections bicyclists currently use and avoid. Users of the app can track their movement using GPS and identify their mode: biking, running, or swimming. Areas with activity is aggregated and can be viewed as a heatmap which highlights on a color scale with blue being little activity, to red which indicates heavily used routes. Streets that have no activity logged display no color. However, this method is features a self-selecting crowd who are typically comprised of bicyclists who are classified as strong and fearless. Conversely, this logic can be applied to see where this type of bicyclist is avoiding.

The most popular routes in the Fox River Corridor identified by Strava are not necessarily appropriate or comfortable for less than experienced and confident cyclists. While some popular routes in the corridor are roads with lower amounts of motor vehicle traffic (such as Rawson Bridge Road instead of IL-176 or US-14), other routes are utilized by cyclists because they offer a direct connection through the corridor. Rawson Bridge is by far the most heavily utilized route, as IL-176 and US-14 show little to no bicycling activity.

Popular streets for cyclists in the Fox River Corridor include:

1. Rawson Bridge Road
2. Roberts Road
3. S Rawson Bridge Road
4. Three Oaks Road
5. River Road
6. Kelsey Road
7. Silver Lake Road
8. Hickory Nut Grove Lane
9. N Hickory Nut Grove Road

Figure 4: Strava Bicycling Data



PROJECTS PLANNED OR UNDERWAY

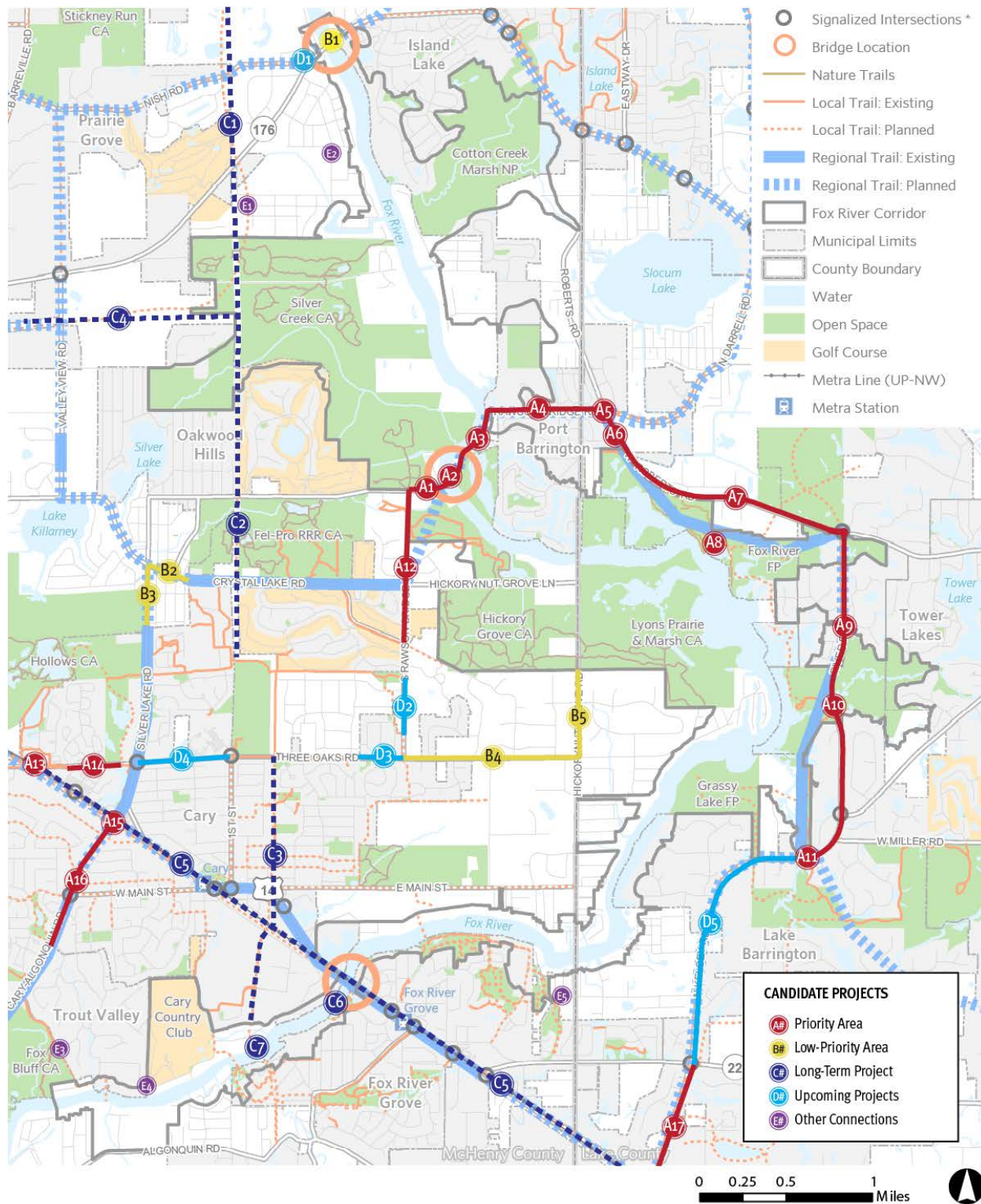
Stakeholder discussions revealed numerous projects planned or underway to improve conditions for people walking or biking in the Fox River Corridor. These projects are shown in Figure 5 and include:

- **IL-176 and Nish Road Improvements** – Nunda Township and IDOT plan to install a traffic signal at IL-176 and Nish Road. As part of the project, Wright Road will be realigned and a sidepath from Blue Island Road and Nish Road will be installed.
- **S Rawson Bridge Road** (Newcastle Drive to Three Oaks Road) – Algonquin Township recently repaved a portion of S Rawson Bridge Road. In conjunction with repaving, the road will be restriped in 2019 to include a narrow bike lane in one direction.
- **Three Oaks Road** (Nighthawk Way to S Rawson Bridge Road) – The Village of Cary will extend an existing sidepath east from Nighthawk Way to S Rawson Bridge Road. Construction is planned for 2019.
- **Three Oaks Road** (Silver Lake Road to 1st Street) – The Village of Cary will build a new sidepath from Silver Lake Road to 1st Street. The sidepath will be built on the south side of the road and will connect to the existing sidepath on the north side Three Oaks Road via a crosswalk. The sidepath will also connect to the Jaycee Park Path via crosswalks at Silver Lake Road. Construction is planned for 2019.
- **Kelsey Road** (River Road to IL-22) – Lake County is installing bike-friendly shoulders on Kelsey Road from River Road south to IL-22. Project estimated to be completed in fall 2018.

4. Candidate Projects

A wide range of possible candidate projects was identified after the initial analysis, field visit, evaluation of the current trail network, stakeholder interviews, and a review of existing plans. The candidate projects are shown on Figure 5 and a description of all projects can be found in Appendix A.

Figure 5: Candidate Projects



CANDIDATE PROJECT CATEGORIES

Candidate projects were then classified in one of four categories:

- **Priority Areas** – Bicycle/pedestrian improvements which would increase safety and improve regional connections through the Fox River Corridor, especially on corridors identified for future regional trails.
- **Low Priority Areas** – Bicycle/pedestrian improvements which would increase safety on routes of less regional significance in the Fox River Corridor, notably locations not expected to see significant regional bicycle/pedestrian travel.
- **Long-Term Projects** – Regionally-significant bicycle/pedestrian projects, such as new bridges, which require significant right-of-way acquisition, coordination, and/or capital investment.
- **Projects Underway** – Bicycle/pedestrian projects already underway in the Fox River Corridor.
- **Other Connections** – Additional short bicycle/pedestrian connections that were noted by stakeholders during this planning process.

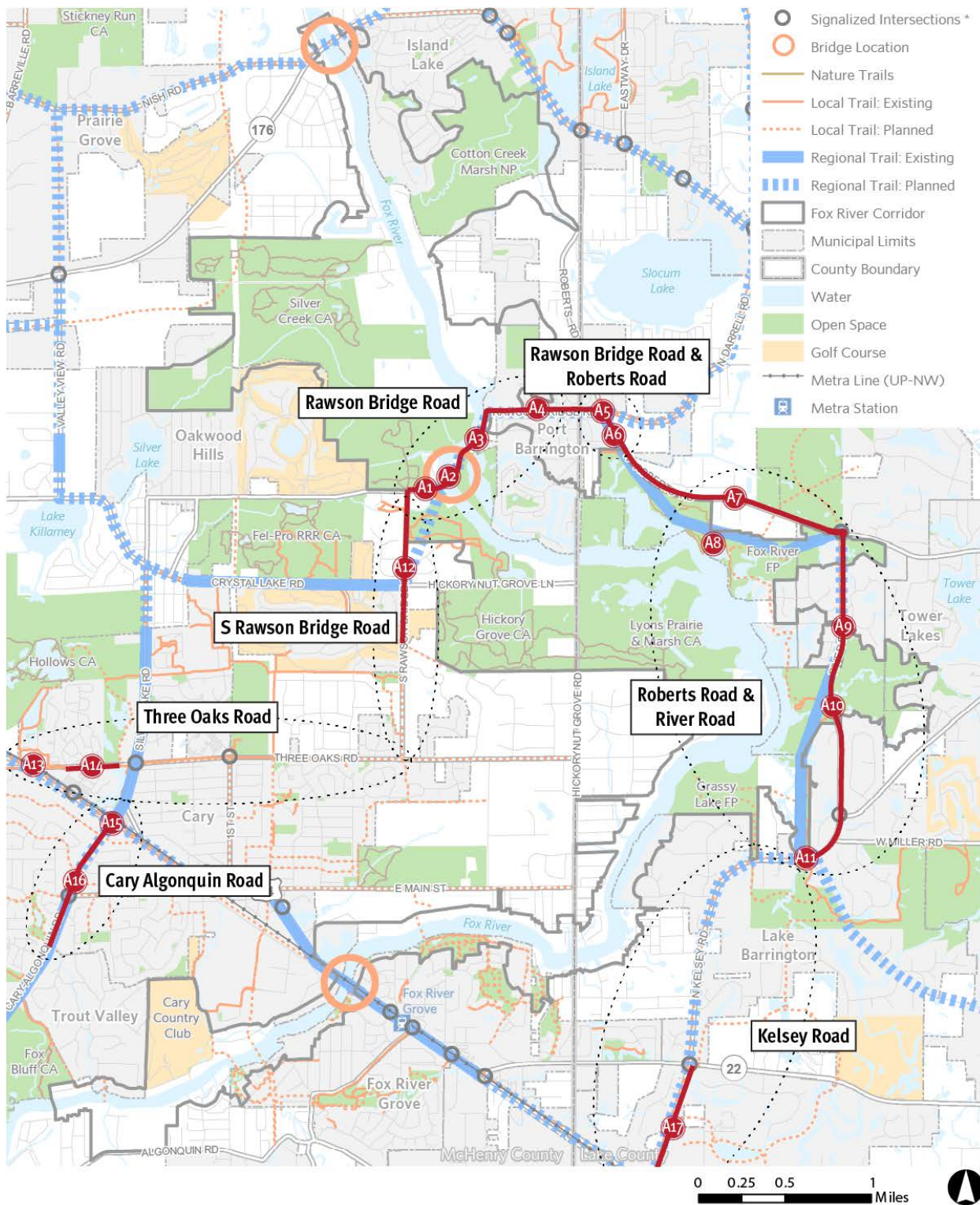
This categorization is the first screening of candidate projects. Only projects categorized as Priority Areas were analyzed for further consideration. These projects are regional connections which could be made over the short- or medium-term and with reasonable levels of funding.

CANDIDATE CORRIDORS

Projects identified as Priority Areas were then grouped into related candidate corridors. While projects could be implemented alone, it is recommended these projects be considered as they relate to one another along these regional corridors. These candidate corridors are listed below:

- Rawson Bridge Road (A1, A2, A3, A4)
- Rawson Bridge Road/Roberts Road Intersection (A5)
- Roberts Road and River Road (A6, A7, A9, A10)
- S Rawson Bridge Road (A12)
- Three Oaks Road (A13, A14)
- Cary Algonquin Road (A15, A16)
- Kelsey Road (A11, A17, D5)

Figure 6: Candidate Corridors



5. Prioritization

Candidate corridors were further evaluated to identify corridors of the highest regional priority. Three priority corridors were then selected for conceptual project development. Corridors were evaluated with several considerations in mind, including:

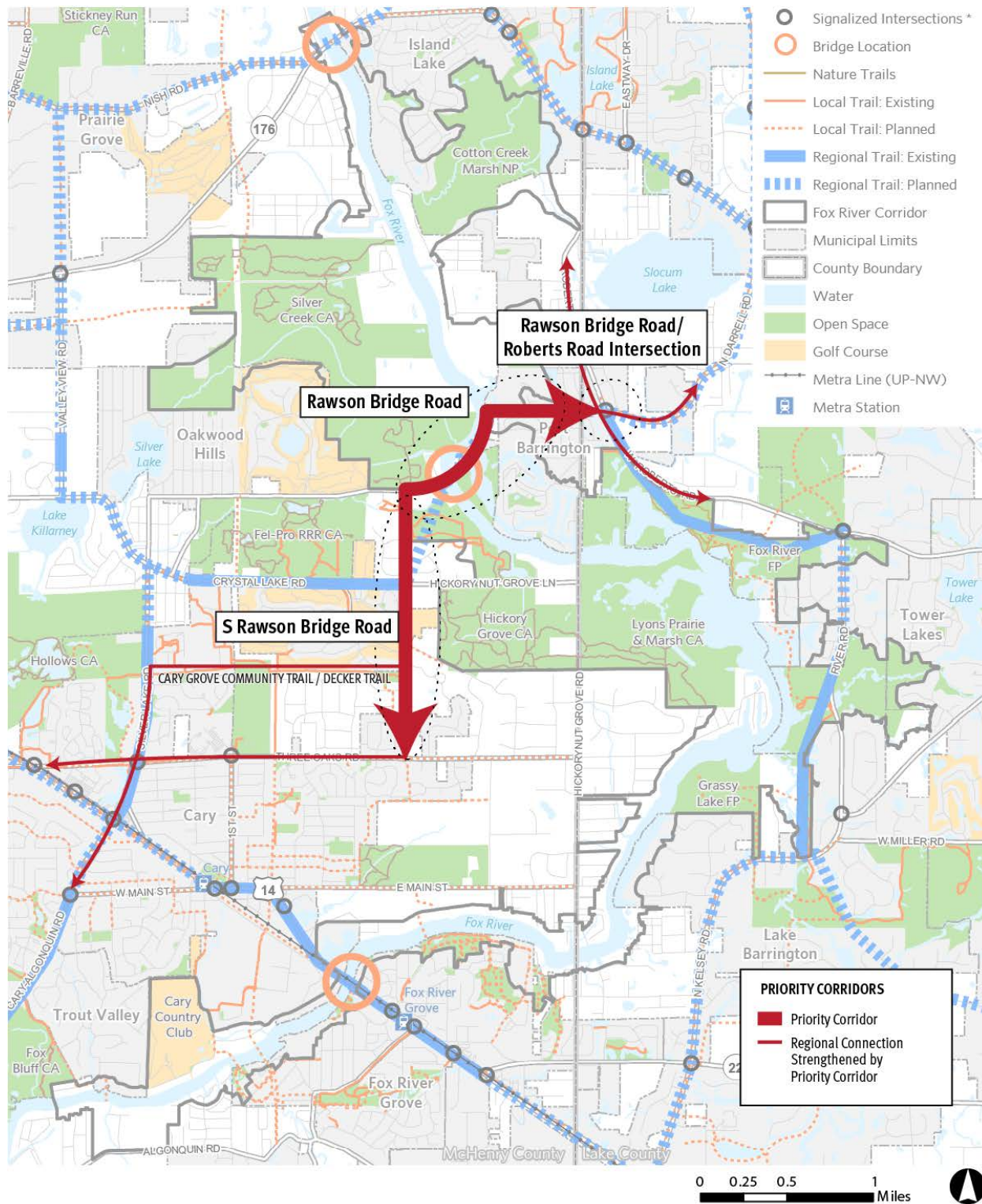
- Regional network connectivity
- Safety of people walking and biking
- Available right-of-way
- Anticipated costs
- Community support

The corridors identified as regional priorities are described below.

REGIONAL PRIORITY CORRIDORS

Shown in Figure 7, Rawson Bridge Road from S Rawson Bridge Road to Roberts Road, S Rawson Bridge Road from Rawson Bridge Road to Three Oaks Road, and Roberts Road/Rawson Bridge Road Intersection were selected as the three priority corridors. Together, coupled with existing facilities and future improvements on Three Oaks Road and Cary Algonquin Road, and with the Decker and Cary Grove Community Trails, these priority corridors will combine to create a new regional connection allowing for a direct and safe connection from Lake County, spanning the Fox River, into McHenry County, and connecting into Algonquin and the Prairie Trail. This newly minted regional connection will connect the corridor to an extensive existing trail system and invite travelers from neighboring counties to spend time and patronize local businesses. These regional priority corridors are discussed in detail below.

Figure 7: Regional Priority Corridors



Rawson Bridge Road

Rawson Bridge Road across the Fox River is the most vital connection in the Fox River Corridor. While not ideal for biking or walking, it is the safest river crossing in the area compared to IL-176 to the north and US-14 to the south. The bridge and most of the road is under Nunda Township jurisdiction, while the Lake County portion is maintained by the Lake County Department of Transportation. Analyzing the Strava data and stakeholder feedback, this bridge was found to be the most heavily utilized crossing for people biking of the three existing Fox River crossings. Following the road east of the bridge, the street turns sharply at The Broken Oar bar. Sight lines and speeds are a concern as the road lacks any bicycle accommodation east of the bridge and bikers are forced onto the street. A sidepath is recommended from The Broken Oar east to Roberts Road where sufficient right-of-way exists. South and west of The Broken Oar to S Rawson Bridge Road, the road should be restriped to create more space for people biking on the shoulder.

S Rawson Bridge Road

S Rawson Bridge Road connects the two major east/west routes in the Fox River Corridor area—Rawson Bridge Road, which connects over the Fox River and to the east, and Three Oaks Road, which connects to the west. S Rawson Bridge Road directs people crossing the Fox River from the east to off-street sidepaths on Three Oaks Road, and to the Decker and Cary Grove Community Trails which provide comfortable east-west connections to the existing sidepaths on Silver Lake Road.

Currently there is little to no shoulders on S Rawson Bridge Road, requiring people biking to utilize the travel lane. While a sidepath is present from Decker Park to the Foxford Hills Country Club, this off-street connection should be extended further north to Rawson Bridge Road and south to the existing sidepath on Three Oaks Road.

Other challenges here include topography and jurisdiction. The hilly topography on the south, from Decker Park to Three Oaks Road means fast approaching vehicles may not have adequate sight lines to see people riding bikes ahead. Additionally, the road switches in jurisdiction multiple times. Rawson Bridge Road to Hickory Nut Grove Lane is under Algonquin Township, Hickory Nut Grove Lane to just north of New Castle Drive is under the Village of Cary, before switching back to Algonquin Township.

The southern section of S Rawson Bridge Road, from Decker Park to Three Oaks Road was recently repaved by Algonquin Township. The Township plans to restripe that section to include a narrow bike lane in one direction. Restriping is expected in 2019. Any future improvements here should consider a sidepath as discussed in the Village of Cary's Comprehensive Plan.

Roberts Road/Rawson Bridge Road Intersection

Improvements to the intersection of Roberts Road and Rawson Bridge Road are recommended. The intersection is heavily used by bicyclists crossing the Fox River west via Rawson Bridge and travelling to the Fox River Forest Preserve. Both Roberts Road and Rawson Bridge Road feature paved shoulders on both sides, which are currently used by bicyclists, but turning movements at this intersection require bikers to merge and cross multiple lanes of traffic depending on their direction of travel.

Improvements at this intersection would not only provide safer turning movements for cyclists, but also provide a pedestrian connection into the Fox River Forest Preserve from Port Barrington. The intersection currently lacks any pedestrian crosswalks or accommodations. Improvements here would also connect the planned regional trail which would extend east along Darrell Road. Future commercial

development at this intersection could provide an opportunity to implement improvements at this location.

SECONDARY CORRIDORS

A series of secondary corridors also provide important bicycle and pedestrian connections in the Fox River Corridor. Due to existing conditions, planned projects, and needs along the Priority Corridors, improvements on these corridors are of less importance.

Roberts Road and River Road

Roberts Road and River Road are already heavily utilized by people biking. The roads offer moderate shoulders that, while narrower than current best practices, allow bicyclists to stay out of the travel lane. These shoulders are better accommodations than what exist on the identified regional priority corridors. In the future, these shoulders should be upgraded to match the bicycle friendly shoulders planned for Kelsey Road.

Kelsey Road

Planned bicycle accommodations on Kelsey Road should be extended further south to US-14 in the future. Without safe accommodations across the Fox River around US-14 however, this improvement is less of a regional priority. If long-term regional projects become a reality, such as a new bicycle/pedestrian bridge on the southern end of the Fox River Corridor or a new shared use path along US-14, becomes a reality, this connection will be of greater regional importance.

Three Oaks Road

Three Oaks Road already offers an off-street connection between S Rawson Bridge Road and Silver Lake Road through a series of sidewalks and sidepaths. While it is recommended all sidewalks be upgraded to sidepaths in the future, pedestrians and less experienced cyclists are still offered a continuous safe alternative to travelling in the roadway. The Village of Cary will improve conditions here by installing new paths from Silver Lake Road to 1st Street and from Nighthawk to S Rawson Bridge Road. The existing and planned sidepaths on Three Oaks Road make improvements to Three Oaks Road a low priority compared to other locations in the Corridor.

Cary Algonquin Road

The Fox River Corridor currently lacks any direct connection to regional trails, such as the Prairie Trail and Fox River Trail. Making improvements to Cary Algonquin Road can provide this connection. A combination of sidepaths and sidewalks on the west side of Cary Algonquin Road between US-14 and Fox Trails Drive begin to provide access toward the Prairie Trail and Fox River Trail. South of Fox Trails Drive, existing and planned facilities through Algonquin will provide direct access to the Prairie Trail. These planned improvements by the Villages of Cary and Algonquin make improvements on Cary Algonquin road a lower priority compared to other locations in the Corridor.

6. Recommended Improvements

Following prioritization and stakeholder interviews, specific improvements were developed along the priority corridors. These improvements are shown in Figure 8. Recommendations include new sidepaths where right-of-way allows, narrower lanes and/or wider shoulders where a sidepath is not feasible, and spot improvements throughout the corridor to facilitate safer crossings and transitions for people walking or biking. These areas offer the best short- and medium-term opportunities to increase safety for people biking and walking and improve regional bicycle and pedestrian connections to, from, and within the Fox River Corridor. Detailed concept plans of each intersection improvement can be found in Appendix B.

Figure 8: Overview of Recommended Improvements



S RAWSON BRIDGE ROAD

A new sidepath is proposed on the west side of S Rawson Bridge Road and would extend from the Foxford Hills Golf Club to Rawson Bridge Road. At Foxford Hills Golf Club, the new sidepath would end just south of the driveway for the golf course and connect to an existing sidepath on the east side of the road via a new crosswalk and signage. This would provide a continuous off-street connection along S Rawson Bridge Road from the Decker Trail to Rawson Bridge Road. New crosswalks with accompanying signage would be provided where necessary.

Routing people walking and biking across S Rawson Bridge Road at the Foxford Hills Golf Club is necessitated by a variety of obstacles and constraints. Placement on the west side is preferred due to the higher number of driveways and utility poles causing constrained points within the right of way on the east side of S Rawson Bridge Road. Right of way is generally wider on the west side of the road than the east, allowing more room for a side path. The sidepath does not continue south to directly connect to the Decker Trail south of Crystal Lake Road because of a utility pole, constrained right of way, and topography challenges created by the private golf course path going under Crystal Lake Road. An additional engineering study would be required to determine the feasibility of a sidepath on the east side of S Rawson Bridge Road or continuing the sidepath south to Crystal Lake Road on the west side of S Rawson Bridge Road.

1. New crosswalk and signage to connect the new sidepath on the west side of the road with the existing sidepath on the east side of the road at Foxford Hills.
2. New signage at Hickory Nut Grove Lane.
3. New crosswalk, signage, and stop bar at Leah Drive
4. New crosswalk, signage, and stop bar at Hilary Lane

Additional Future Improvements

Additional improvements for consideration in the future include:

- Placing rapid flashing beacons at the Foxford Hills crosswalk to warn motorists of people crossing S Rawson Bridge Road.

RAWSON BRIDGE ROAD

A sidepath is not feasible on Rawson Bridge Road from S Rawson Bridge Road to the Broken Oar Bar due to right-of-way constraints and floodplain/erosion concerns along the Fox River. Through this stretch, the travel lanes would be reduced to ten feet in each direction to create more space for people biking and to encourage motorists to drive slower. Between S Rawson Bridge Road and Rawson Bridge, the shoulders would also be widened to create additional space for people riding bikes. At each end of this stretch (at S Rawson Bridge Road and Arbor Village Drive/Broken Oar), new crosswalks and signage would provide transitions between on-street travel and off-street sidepaths for people biking. Continuing further east, a new sidepath would then extend from the Broken Oar to Roberts Road. New crosswalks with accompanying signage would be provided where necessary.

5. Transition from biking on the new sidepath on S Rawson Bridge Road to the shoulder of Rawson Bridge Road via an existing crosswalk. New stop signs on Rawson Bridge Road would facilitate this transition.

6. New crosswalk, signage, and flashing beacons to facilitate transition from biking on the shoulder of Rawson Bridge Road from the west to new sidepath on the south side of Rawson Bridge Road to the east.
7. New crosswalk, signage, and stop bars at Camden Lane
8. New crosswalk, signage, and stop bars at Riverwalk Lane

Additional Future Improvements

Additional improvements for consideration in the future include:

- Consider placing “Three Feet Min to Pass Bicycles” signage on Rawson Bridge Road where people biking must use the shoulder. Signage would be similar to signage installed by the Village of Cary on Georgetown Drive.
- Placing rapid flashing beacons at the Broken Oar crosswalk to warn motorists of people crossing Rawson Bridge Road.
- Closing the western driveway access to the Broken Oar Bar that is currently serving as entrance only and direct all access to the eastern driveway
- Reduce the speed limit along the Fox River between Rawson Bridge to the bend at the Broken Oar from 30 MPH to 20 MPH. This would encourage slower speeds around the bend, where the turn is already signed for 10 MPH. Additional signage at the bend could also be recommended to reinforce the 10 MPH speed limit at the turn.
- Remove trees at the southwest corner of Rawson Bridge road where the road sharply turns east by the Broken Oar Bar to improve sight distance
- Seek opportunities to work with the Village of Port Barrington and property owners to connect an existing path which extends southwest from Brighton Circle. The path currently dead ends at the property line but could be extended through Village property westward to a residential drive off Rawson Bridge Road. This would allow people walking and biking to avoid the bend at the Broken Oar altogether.

RAWSON BRIDGE ROAD/ROBERTS ROAD INTERSECTION

New crosswalks at the intersection of Rawson Bridge Road and Roberts Road would allow people to safely cross this intersection while walking. Additionally, new transitions from the shoulder to an off-street path at each approach to the intersection would allow people biking through the intersection to cross in the new crosswalks. This new configuration would better separate people biking from motorist and eliminate the need for people biking to merge into travel lanes when turning from one road to another. Improvements at this intersection would also connect to the new sidepath on Rawson Bridge Road to the west.

9. Intersection improvements, including new crosswalks, at Rawson Bridge Road and Roberts Road. Existing stop bars would be pulled back to accommodate the new crosswalks. New paved transitions will allow people biking on the shoulder approaching the intersection to cross the intersection in the new crosswalks and out of the travel lanes.

COST ESTIMATES

Planning-level cost estimates were developed for the recommended bicycle and pedestrian improvements in the Fox River Corridor. Costs were developed for corridor-level improvements on each road (S Rawson Bridge Road and Rawson Bridge Road) and the nine corridor improvement areas found on Figure 8. These cost estimates were developed from unit costs based on current pricing for 2018 construction. A 20% contingency was also added to each cost estimate. A more detailed engineering study is recommended to refine these cost estimates. Table 1 provides a summary of costs, and more detailed cost estimates can be found in Appendix C.

Table 1: Summary of Cost Estimates

Project	Total Cost
1. S Rawson Bridge Road and Foxford Hills Golf Club	\$ 2,007.00
2. S Rawson Bridge Road and Hickory Nut Grove Lane	\$ 840.00
3. S Rawson Bridge Road and Leah Drive	\$ 1,068.00
4. S Rawson Bridge Road and Hilary Lane	\$ 960.00
5. S Rawson Bridge Road and Rawson Bridge Road	\$ 2,682.00
6. Rawson Road and Arbor Villa Drive	\$ 2,628.00
7. S Rawson Road and Camden Lane	\$ 1,500.00
8. S Rawson Road and Riverwalk Lane	\$ 1,500.00
9. S Rawson Road and Roberts Road	\$ 107,832.00
S Rawson Road Sidepath	\$ 316,050.00
Rawson Bridge Road Sidepath and Roadway Widening	\$ 248,100.00
TOTAL CORRIDOR IMPROVEMENT COST:	\$ 685,167.00