



# McHENRY COUNTY

TRANSIT PLAN FINAL REPORT

## TRANSIT PLAN CONCEPT DISCUSSION

OCTOBER 2018

# McHenry County Transit Plan Update

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October 2018

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# TRANSIT PLAN CONCEPT DISCUSSION

## I. Introduction

This section is organized around four distinct approaches to future transit in McHenry County. The approaches described are designed to guide decisions made by stakeholders, elected officials, and the McHenry County Division of Transportation (DOT) to an achievable end goal. Whether or not that end goal is reached, it will give guidance on incremental improvements in transit service in the County, rather than those decisions being made in a reactive way with no guiding principle behind them.

Each of the concepts described below aims for the following:

- Make transit more relevant in the lives of today's County residents
- Increase transit ridership and access
- Increase the efficiency of transit
- Use advanced and forward thinking technology to attract new users to transit
- Add additional amenities to improve the quality of transit service delivery

In addition, there are several general and technological recommendations that can be implemented, regardless of which approach is taken.

## II. General Recommendations

These recommendations could be applied to any of the concepts.

### A. Fares

#### *Payment*

Although paratransit service generally does not use electronic fare media, the use of Ventra or another electronic fare medium should be explored for paying fares on MCRide vehicles (Ventra is accepted on fixed routes). This would also require an electronic farebox to be installed, but also would need to be able to be programmed to accept varied fares. In addition, if an application is developed to schedule MCRide or paratransit trips from a users' mobile device or computer, there should be a pre-payment component where the scheduled ride can be paid for in advance by using a credit card or a Ventra card. When this pre-paid rider boards the demand response vehicle, the payment confirmation can be called up to show the driver (much like an airline ticket is called up before boarding a plane).

## Policy

McHenry County already subsidizes rides on MCRide, which cost more to provide than fixed route trips. It would be optimum for the County, and for fixed route ridership in general, if more of those riders are shifted onto fixed routes where possible. One strategy would be for the County to subsidize free or severely reduced fares for any fixed route that operates entirely within the County.

Free fares are also available on Pace fixed-route services for low income older adults and people with disabilities who are enrolled in the Illinois Department on Aging's Benefit Access program and the RTA's Ride Free program. The income levels for eligibility range from \$27,610 or less for an individual, \$36,635 for a two-person household, and \$45,657 for a household of three or more people. Reduced fares are available from the Regional Transportation Authority (RTA) for those same groups (older adults and people with disabilities) who are not enrolled in the Illinois Department on Aging's Benefit Access Program. Although these programs are available, many County residents are not enrolled due to the hurdles in applying either for the program and the limited County routes on which the cards could be used. Allowing the reduced fares to be extended to all fixed route riders would help shift riders from MCRide to the fixed routes due to the lower cost.

Another way to encourage more fixed route ridership would be to reduce the area where a flat fare applies. Currently, MCRide costs just 25 cents more than a Pace fixed route fare for the first five miles, despite providing a higher level of service. Reducing the range of the flat fare, or increasing the cost for additional mile above the current 25 cent cost is a possible option.

## B. Service Differentiation

There is a distinct lack of visibility for fixed route transit in the County. This stems mainly from the fact that there is no distinction between the vehicles used for MCRide service and most fixed route service in the County. Only Route 550 consistently uses full sized buses. The other routes (806, 807, 808, and 809) use "cutaway" vehicles. Cutaway vehicles are smaller than full sized buses (about as long as a large pickup truck) that generally holds about 12 passengers (including two wheelchairs). These vehicles are commonly identified by the public as "paratransit" vehicles that are only for seniors and individuals with disabilities. While the ridership may warrant this choice of vehicles, it signals to most non-transit users in the County that the service is only for the seniors and individuals with disabilities. In addition, there are no destination or route signs on the vehicles used for fixed routes except a small laminated sheet of paper in the window.

This lack of visibility discourages new riders and contributes to the idea that transit in the County is not for everyone. If cutaway vehicles must still be used, the ones used for fixed routes should either be a different colored vehicle, or have destination and route signs attached when they are in service as a fixed route.



**FIGURE 1:** Example of a Bus with Temporary Signage

### C. Bike Racks

Due to the challenges in getting to bus stops in the County, bike racks should be installed on all fixed route vehicles (only Route 550 sports them now). Right now, there are many parts of the County where fixed routes operate where sidewalks are either non-existent or the network is patchy. Adding bike racks would help solve the “last mile” problem in transit usage. In addition, adding bike racks could open up access to the Prairie, H.U.M, Hebron and Ridgefield Trace Trails for those wishing to ride recreationally but who are without a car or car bike rack.

**FIGURE 2:** Example of a Cutaway Vehicle with a Bike Rack

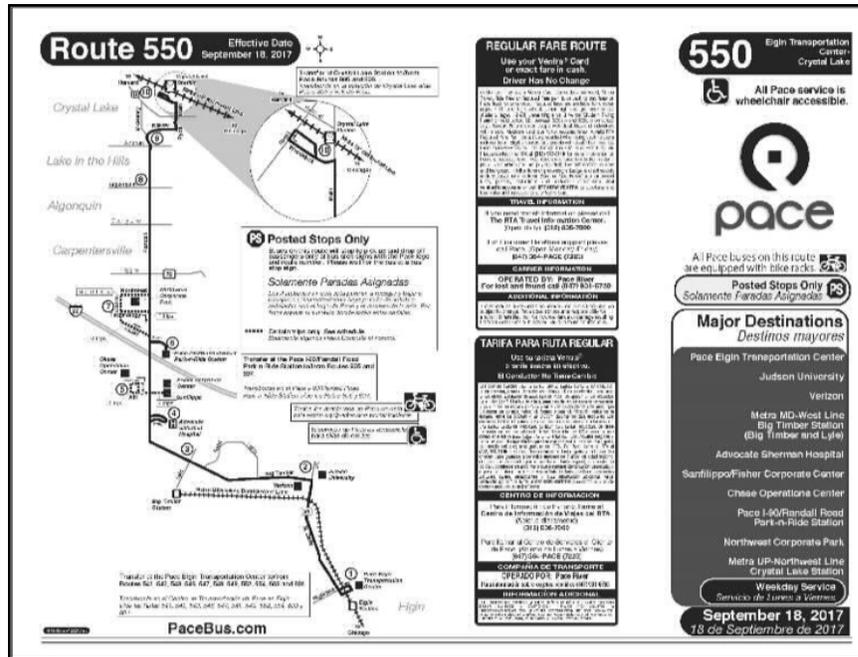


### D. Marketing and Promotion

Many potential Spanish speaking riders are unaware of the available fixed routes in the County and subsequently outreach to the Spanish speaking community needs to be increased. It would be helpful if Pace translated the McHenry County brochures and information into Spanish similar to Kane County information. Although MCRide has translated its materials into Spanish, it is suggested that more outreach to this community needs to be done, either by identifying community liaisons or through direct contact, in order to reach a more diverse clientele in the County.

More outreach should also be done in both English and Spanish to educate residents on how to use transit (Metra, Pace, and MCRide). This could take the form of brochures, pamphlets, or instructional videos posted on the County Website.

**FIGURE 3:** Example of a Translated Pace Schedule



### E. Metra Recommendations

This Plan encourages Metra to build a new coach yard north of the Woodstock station to allow more trains to originate and terminate there. In addition, Metra should explore adding more trains to McHenry and consolidating fare zones J, K, L, and M on a permanent basis in order to decrease the cost of rides within the County.

Besides these recommendations, the County remains committed to the Metra recommendations in the ONTO 2050 Plan:

- A 1.6 mile extension to Johnsburg from the McHenry station.
- Improvements to the existing signal system and additional crossovers and other track improvements to increase the operating capacity and reliability.
- New yards for the Johnsburg area.
- Two infill stations should be added to the line: Prairie Grove on the McHenry branch and Ridgefield on the Woodstock branch.

## **F. Demand Response Recommendations**

### *Service Overlap*

Adding the Southeast and Mid-Day dial-a-rides into MCRide would help reduce the overlapping of demand response service providers in the southeast part of the County. These services are run by Pace and have much more limited service area and hours than MCRide. Including this in the MCRide program will help residents in the southeast travel all over the County, rather than in a small circumscribed area.

### *Scheduled Services*

Due to the largest communities west of Illinois Route 47 (Marengo and Harvard) being isolated from the other major population centers, organizing trips into demand response trips with a posted schedule will help free up vehicles for use in the denser parts of the County. Right now, vehicles need to deadhead (i.e. travel without passengers) a long distance from the garage in McHenry to serve these riders increasing the cost per trip and decreasing the availability of vehicles.

One possible operating strategy is to create relatively long, linear flexible routes instead of using only demand response service to cover these areas. These typically connect a series of defined stops with scheduled times at those stops. Such a route may connect a series of villages along a state highway and proceed into a nearby city. A single stop per village is normally set up, preferably at a location with climate control or some protection from weather that is open during times that people would be waiting there: i.e. village halls, post offices, libraries, government offices, community colleges, retail stores (big box stores are popular destinations), gas stations, railroad/intercity bus stations, hospitals, etc. Ideally, these stops would be destinations in their own right. The important change from historic practice is that these routes would be flexible routes. Rather than making flag stops along the highway between posted stops they are available to make requested stops at homes or destinations either along the route or off it (up to some defined distance, perhaps a mile). In the city the bus may make a couple of scheduled stops at, say, a downtown transfer point and at a major medical center, but have enough time in its schedule to make other request stops in town, particularly for people with mobility issues that can't readily transfer to/from local buses.

A key advantage of flexible routes is that they do not need to have complementary paratransit service, because all riders are eligible to request deviations off the primary route. There may be a nominal additional charge for the off-route deviations (which may be waived for some classes of riders). A way to incentivize riders west of Illinois 47 to ride these flex routes at the posted times is to charge a flat fee to ride the route, while charging the standard MCRide distance based fee for those riders who request trips at different times.

### *Additional Garage/Vehicle Storage*

Another way to decrease deadhead times to this area is to establish a second place to park vehicles west of Illinois Route 47. The number of vehicles stored there would likely be no more than a handful and they can continue to be serviced at the existing garage. Chemung, Marengo, or Riley Townships would be a good candidates to host such a facility. Many Downstate systems park a few vehicles at township garages or public works facilities when their main facility is not centrally located (as is the case in McHenry County).

### *Regional Coordination*

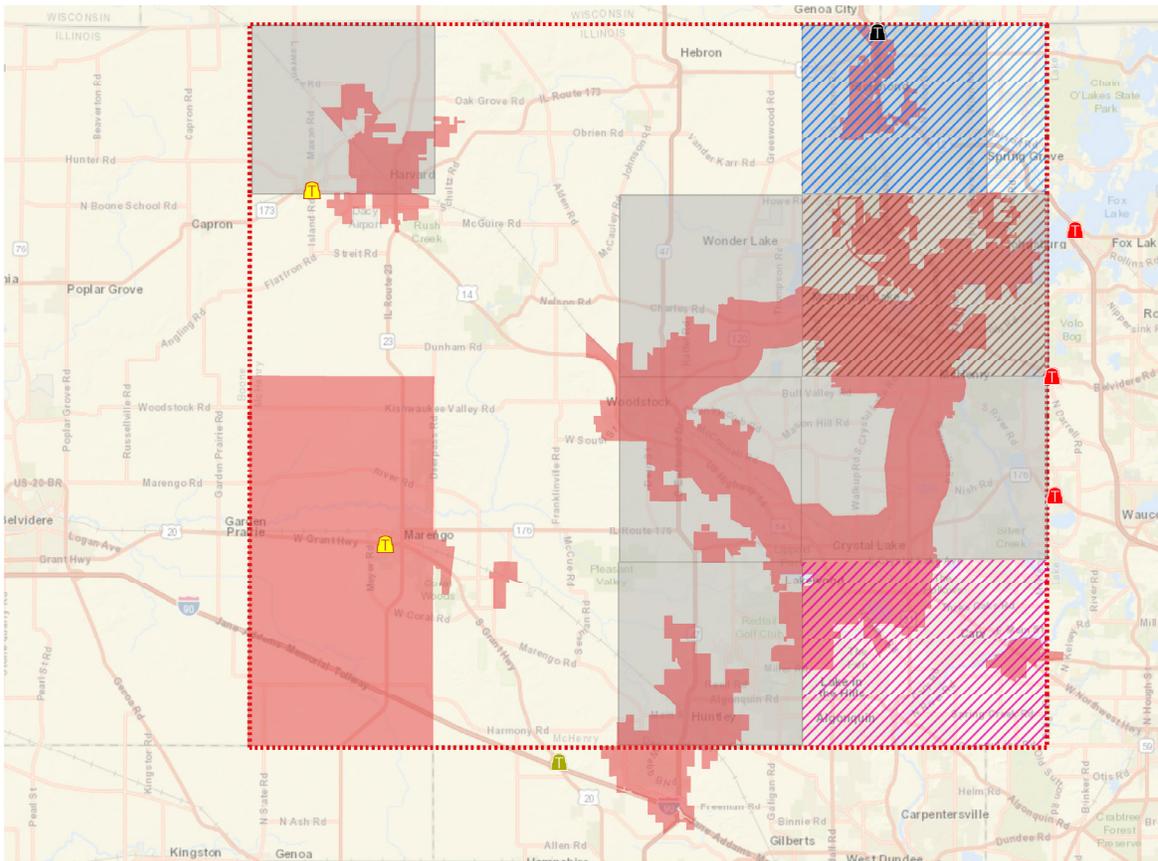
Closer coordination between MCRide and surrounding demand response services should be pursued. Some Downstate demand response agencies—for example BPART (Bureau County), NCAT (LaSalle County), and LOTS (Lee and Ogle County)—arrange transfers to adjacent counties' demand response agencies in order to allow riders to continue their trips outside their service area. These transfer locations are generally at gas stations or public places near the service areas' borders. The safety of these transfer locations is important—they are generally well lit, and have somewhere to wait that is both handicapped accessible and sheltered from inclement weather so that the vehicle transporting the rider on the first leg of trip need not wait for the connecting trip/vehicle.

MCRide already coordinates with Ride West Lake County by arranging transfers at the Fox Lake Metra station; the Walgreen's at Darrell Road and Belvidere Road in Lakemoor; and at Island Foods in Island Lake. As part of this coordination effort, the recommendations of the Lake County Paratransit Market Study should be examined to make sure they work with the demand response recommendations in this report; this study will be available in December 2018.

In order for these arrangements to work, there should be regular meetings between Ride Lake County West and the other surrounding agencies that provide demand response rides for everyone: Wal-to-Wal (Walworth County); Boone County Public Transportation; and TransVac (DeKalb County). These meetings could be with all of the surrounding agencies together or one-on-one. Meetings should be held regularly and a representative of the RTA and/or Pace should be invited. Besides establishing transfer points, cost sharing arrangements, especially on methods on arranging reductions in transfer costs (generally, two separate fares are required), should be a focus. Statutory issues related to where the agencies can operate can be worked through at these meetings as well.

Some possible transfer locations are shown in Figure 4. All of them are located in McHenry County or the RTA service area to follow restrictions on MCRide operating beyond the service area boundaries.

**FIGURE 4: Potential Demand Response Transfer Locations**



**MCRide**

- All Riders
- Seniors and Disabled Only

**Township Services**

- Algonquin Township
- McHenry Township
- Richmond Township

**Transfer Locations**

- Boone County
- TransVac
- Wal to Wal
- Lake County

The proposed new transfer locations follow<sup>1</sup>. All of these locations fit the criteria of a good transfer locations (shelter from weather/safe). Two would be considered additional point destinations for MCRide.

- Wayne’s Country Market (Marengo) is open generally from 8:00 AM to 6:00 PM on weekdays.
- Chemung Mart (Chemung) is open 24 hours, 7 days a week.
- Travel America (TA) Elgin (actually, located in Hampshire) is open 24 hours, 7 days a week.
- International House of Wine and Cheese (Richmond) is open 8:00 AM and 8:00 PM.

<sup>1</sup> Does not include Lake County, which has previously been discussed

## **G. Coordination with Municipalities**

As McHenry County, the sponsor of this Plan, has limited land use authority in areas with high transit demand, coordination needs to be done with the local municipalities if transit supportive policies are to be put forward. Most of these policies would involve the increase of pedestrian improvements to and from proposed bus stops. This can be done by inserting language in municipal codes that prioritizes new sidewalk construction within one quarter mile of a transit stop. As none of the concepts envision high capacity transit improvements (which are the main drivers of higher density developments), high density developments should remain concentrated near traditional town centers and their Metra stations. New developments such as independent living facilities, social service agencies, and affordable housing should be located along fixed routes instead of greenfield sites in rural areas of the County.

## **III. Strategies for Using Technology to Improve Transit Service**

### **A. Possible MCRide Features**

Depending on how McHenry County chooses to adjust service in the near or long-term, different software products and implementation teams will offer differing capabilities. This section describes the technology solutions for various aspects of the MCRide service.

#### *For Users*

Automated customer notifications (via e-mail, phone, and/or SMS) can be used when the trip is booked, the vehicle is approaching, or when customer is next in pick-up queue. This is a basic solution that predates the use of smart phone technology and has been in use for many years by the CTA with their bus tracker by text<sup>2</sup>. A more important technology improvement, and one that has been repeatedly cited as a desired improvement by County stakeholders, focus group attendees, and survey respondents, was the ability to place reservations via a web or mobile application, bypassing the need to contact a dispatcher via phone.

#### *For Dispatchers and Drivers*

The operating scheme could be software only (software-as-a-service (SaaS)) **or** a contractor could be hired to perform the service if the existing contracting agreement and transportation provider are not ideal for McHenry County. The operating features would need to include automated reservations, scheduling and dispatching with dynamic routing for incoming requests; the ability to generate multiple legs of a trip that involves a transfer; the ability to set different operating schedules/parameters for weekdays, weekends, holidays or special events; and the ability to generate reports for National Transit Database reporting or other monitoring/reporting needs.

The tasks of the driver would be limited to customer service and performing the manifest as presented on the in-vehicle tablet. An operator-facing manifest application can be developed as a part of this scheme which would process trip requests in real-time, and provide turn-by-turn and voice navigation if desired.

<sup>2</sup> <https://www.transitchicago.com/howto/bus-tracker-by-text/>

Further technical support availability (e.g. a fixed number of hours per month or as needed) is typically spelled out in SaaS contract. The selected vendors who could provide technological support for the MCRide program are listed below.

- DemandTrans
- RideCo
- TransLoc
- Trapeze
- Via

## B. Challenges and Opportunities to Engage TNC and Taxi Companies

Dedicated vehicles (DV) are those which an agency contracts with or owns that guarantee availability; non-dedicated vehicles (NDV) are contracted by an agency that provide varying degrees of flexibility (either by time of day, location, or guarantee) in order to serve demand in a cost-effective way. In general, when an agency contracts with a taxi operator or transportation network company (TNC) this is considered a non-dedicated vehicle arrangement since the provider is usually accepting trips on a case-by-case basis.

There are several well-documented challenges in putting together any service delivery approach that relies on non-dedicated vehicles such as taxis or transportation network companies. Some of these challenges include:

- **Fare payment:** Is the provider able to accept cash, and if so, how is cash deducted from invoices sent to the provider? If a provider does not accept cash, does this violate FTA requirements for comparable service?
- **Reliability of capacity:** Is there a contract in place which guarantees so many vehicles will be available during certain hours (this could be termed “semi-dedicated”)? Does the agency/payor need to promise a minimum number or trips or revenue per day in order to entice the contractor to participate?
- **Training for customers with disabilities:** Do the drivers of the non-dedicated vehicles have appropriate training required to transport customers with physical or cognitive disabilities? Are mechanism in place for driver training or “qualified” drivers? Are the vehicles accessible?
- **Background checks:** Is there a process for updating driver qualifications, running background checks, and vehicle maintenance/inspections?
- **Reservation process:** Do customers have the option to call a call center, book over the web, or book using a mobile (smartphone) application?
- **Control Flow:** Does the agency decide which trips belong on non-dedicated vehicles, or is that choice given to the customer?

- **Data sharing:** Who owns and/or has access to the trip data for trips which the agency is subsidizing? TNCs consider their trip data one of their most valuable assets; agencies have been collecting such trip data on their dial-a-ride and ADA paratransit customers for many years and already know their origins and destinations.

Pace, as the operator of MCRide, will need to issue a request for information (RFI), if they wish to explore different operating schemes and options, or issue a request for proposals (RFP) if the objectives and needs regarding software and vehicle acquisition are immediately clear.

## IV. Concept Development: A Summary

Four concepts are proposed as new service operating concepts for McHenry County. The current bus transit situation in the County is a vestige of the original fixed route network developed in the late 1970s and has changed little during the subsequent years, with the exception of reduction in service hours and the elimination of a route between Crystal Lake and Spring Hill Mall. However, the County has changed significantly since this time. Ways to travel without a car have increased and with the introduction of cell phone technology, personal computers, and the Internet, where, how, and when County residents need to travel has changed as well. Continuing to run service in the County the same way is not likely to lead to an increase, or even a stabilization of the current ridership levels.

The four concepts described below attempt to untether the transit system from its past moorings and focus on the future, with the goal of better serving today's residents. The concepts are presented as a solution to a particular hypothesis of how transit should be serving County, with a goal of increasing the viability of transit as an option for differing clientele. The bullet points below briefly sum up these concepts, which are described in greater detail in the following sections:

- Concept 1: Increase demand response service, decrease fixed route service
- Concept 2: Focus fixed routes on the highest demand areas
- Concept 3: Focus fixed routes on local service rather than long distance service
- Concept 4: Increase fixed route service, decrease demand response service

Each concept will include a brief discussion on how well it serves the following destinations:

- Good and Highest Demand Areas (as shown by the Transit Demand Index)
- Large Employers
- Schools
- Top Five National Big Box Stores (by total sales)<sup>3</sup>
- Subsidized Housing (restricted to Seniors/Disabled and open to all)

In addition, an estimated cost will be provided. The cost is in today's dollars and is based on the hourly service cost for Pace operations which can vary by service division.

<sup>3</sup> National Retail Federation has determined that Wal-Mart, Kroger, Target, Costco, and Home Depot are the large format stores that have sold the most merchandise (<https://stores.org/stores-top-retailers-2017/>)

Complete schedules for each of the fixed routes proposed in these concepts can be found in the [Transit Plan Addendum](#). Accompanying these schedules will be detailed maps of each fixed route proposed.

A preferred concept will then be chosen and will be largely based on one of the four concepts discussed, although elements of other concepts may be included. The preferred concept will also include a staging and implementation plan. The first stage will be cost neutral, while the subsequent stages will need additional funding. The funding recommendations will be general and focus on setting up a more sustainable funding structure for MCRide.

## **V. Concept 1: Extension of MCRide Service to the Entire County**

### **A. Hypothesis**

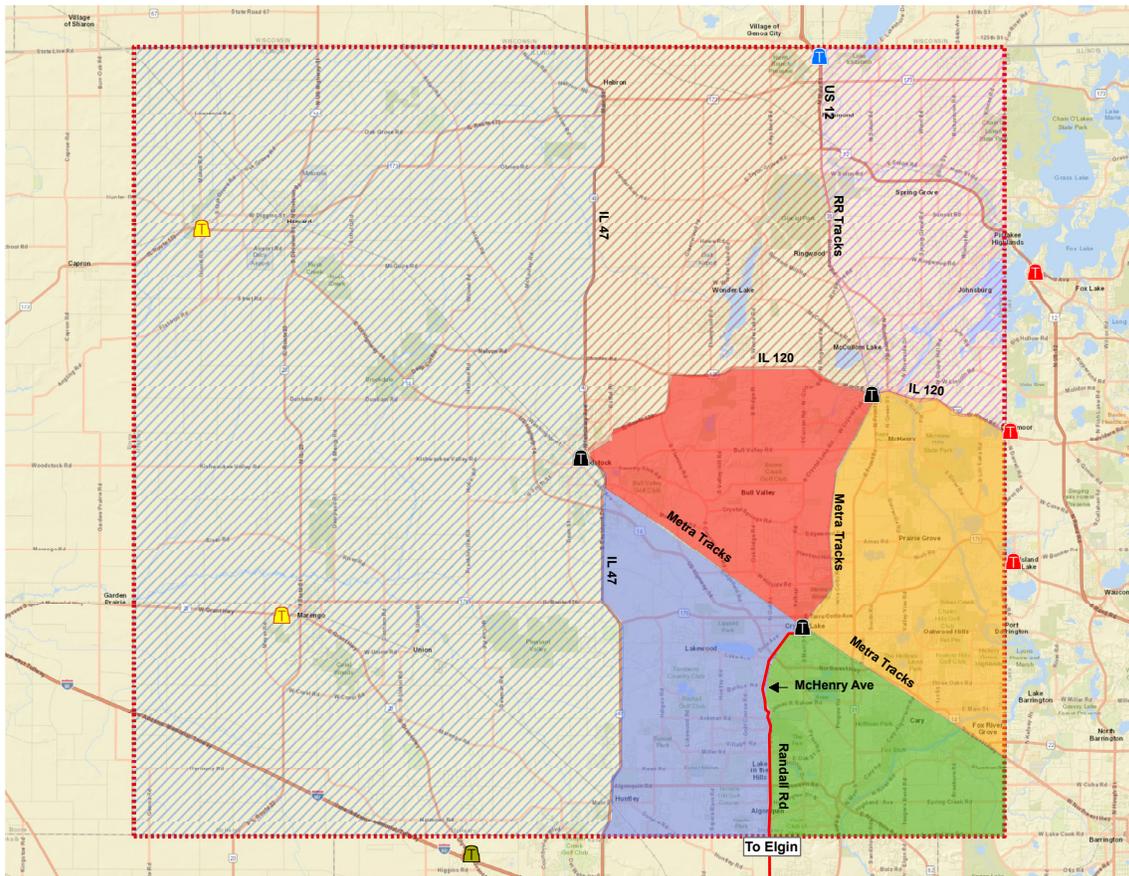
Fixed route ridership has been declining for many years in the County while MCRide demand has gradually increased. McHenry County's demographic and land use profile bear more of a resemblance to several Downstate counties than the other counties that make up the RTA service area. Due to the low density in most of the County, concentrating transit resources to a few fixed routes that run only a limited number of trips may not be the best way to serve residents, especially since travel patterns in the McHenry County are "many to many" rather than "many to one" (more common in large cities with robust downtowns or edge cities with a high concentration of employment). In addition, the cost per trip for a ride on the fixed routes operating entirely within the County is comparable to offering that same person a trip on MCRide. Extending MCRide service throughout the County would eliminate the confusion about who can ride and where they can ride to, and best serve the people who need transit most in the County: seniors, those with a disability, and those with no other means to travel.

### **B. Service Description**

In this concept, all fixed routes operating in the County other than Route 550 would cease to operate. All transit service that operates entirely within the County would be demand response service, which would now cover the entire County. In order to make this work, the County would be divided into zones, with transfers necessary when travelling long distances. Two zones could be traversed without a transfer; whereas three-zone travel would require a transfer at the points shown in Figure 5.

With the establishment of zones, there is a possibility that differing service levels can be provided, depending on the type of zone. Advance notice may need to vary depending on how resources are allocated; trips to/from rural zones may require a 24 hour notice to book trips in order to build the next day's schedule. In urban zones, less than 24 advance notice is possible. In addition, fares would now be zone, rather than mileage based. This would make the use of fare boxes on the vehicles more feasible, and make the service more user friendly.

**FIGURE 5: Concept 1 Service Map**



**Rural Zones**

- Zone 1
- Zone 2
- Zone 3

**Fixed Routes**

- Route H (550)

**Urban Zones**

- Zone 4
- Zone 5
- Zone 6
- Zone 7

**Transfer Locations**

- Boone County
- TransVac
- Wal to Wal
- Lake County
- Between Zones

There would need to be an aggressive push to develop an application or partnerships with TNCs to make this concept attractive. To better understand how this service would be implemented, more detail is provided in the [Transit Plan Addendum](#).

*Fixed Route Changes*

- **Route 550 (Route H)** would leave Randall Road and travel on McHenry Avenue, Crystal Lake Avenue, and Grant Street to the Crystal Lake Metra station (Northbound); southbound trips would use Main Street instead of Grant Street.

*Fixed Route Eliminations*

- **Routes 806, 807, 808, and 809** would all be eliminated.

*Destinations Served*

Since MCRide service is now extended to the entire County, 100 percent of destinations are served by transit; however, the convenience of that service is not equal to fixed route service, due to the fact that you must call ahead for a ride, and that ride may not be guaranteed unlike a fixed route, where there will always be a space on the bus and the schedule is more dependable. In this concept, none of the large employers would be served by fixed routes and for the other destinations, no more than 20 percent are served.

**TABLE 1: Concept 1 Demand Response (For All) Destinations Served**

	Percent of Good and Highest Transit Demand Areas	Large Employers	Schools	Big Boxes	Subsidized Housing (All)	Subsidized Independent Living
Current (Baseline)	68%	86%	16%	67%	86%	78%
Concept 1	100%	100%	100%	100%	100%	100%
Change	<b>32%</b>	<b>14%</b>	<b>84%</b>	<b>33%</b>	<b>14%</b>	<b>22%</b>

**TABLE 2: Concept 1 Fixed Route Destinations Served**

	Percent of Good and Highest Transit Demand Areas	Large Employers	Schools	Big Boxes	Subsidized Housing (All)	Subsidized Independent Living
Current (Baseline)	38%	71%	63%	67%	57%	56%
Concept 1	15%	0%	16%	33%	7%	11%
<b>Change</b>	<b>-23%</b>	<b>-71%</b>	<b>-47%</b>	<b>-33%</b>	<b>-50%</b>	<b>-44%</b>

*Service Span and Hours*

The current service span and days for MCRide (6:00 AM to 7:00 PM on weekdays; 9:00 AM to 5:00 PM on Saturday and Sunday) will remain the same.

**C. Concept 1 Cost**

The cost of this service would be \$2.5 million, an increase of about half a million dollars from the projected cost of MCRide for 2019 (\$1.9 million). For the purposes of this Plan, it will be assumed that the amount of money that Pace pays for fixed routes in the County (excepting Route 550) will be used to increase its cap on its MCRide funding share. The approximately \$768,000 that Pace currently spends on Routes 806, 807, 808, and 809 can be used instead as part of the match to pay for the expanded MCRide service area.

A replacement funding source would need to be instituted to replace the ad-hoc funding agreements that currently exist between the County and the contributing jurisdictions in the form of some additional funding from the County or tapping additional RTA sales tax monies.

## VI. Concept 2: Focus on Core Fixed Route Demand

### A. Hypothesis

Current fixed route funding in the County is spread thin. Pace has ended up with a fixed route network that runs too infrequently to be reliable. Because of this, most riders use MCRide instead of fixed route. Despite requiring a reservation and often having longer trip durations, MCRide provides better service than fixed routes in the County. By refocusing on the areas in the County with the most transit demand (as indicated by the transit demand index), Pace can reestablish regular headways and all day service for about the same cost as what they are currently paying.

### B. Service Description

#### *New Fixed Routes*

- **Route A** would run between Crystal Lake and the McHenry County Government complex via the Woodstock Metra station. This replaces parts of Routes 807 and 808.
- **Route B** would run between Northwestern Hospital-McHenry and the Crystal Lake Metra station. This replaces part of Route 806 and 807.

Timed transfers would be scheduled between fixed routes at the Crystal Lake Metra station and at the Woodstock Metra station for southbound trains (in the morning) and northbound trains (in the evening). New areas served include grocery stores on Eastwood Drive (Woodstock) and apartment complexes south of the Menards in Woodstock. Residents wishing to journey to Woodstock from Harvard would now need to take MCRide or Metra to make those trips; Woodstock to McHenry riders could either take Route B to Route A (a transfer being necessary in Crystal Lake) or take MCRide.

These routes would run on a 60 minute frequency, service would be on weekdays only, and follow the existing service spans (approximately 6:00 AM to 6:00 PM) in order to come as closely to the current cost of providing fixed route service in the County as possible. In this same vein, the vehicle types used on Routes 806, 807, and 808 (cutaways) would be used on these new routes.

#### *Fixed Route Changes*

- **Route 550 (Route H)** would leave Randall Road and travel on McHenry Avenue, Crystal Lake Avenue, and Grant Street to the Crystal Lake Metra station (northbound); southbound trips would use Main Street instead of Grant Street.
- **Route 570 (Route I)** would have a total of five trips per day extended to the McHenry Metra Station. The rest of the trips would be begin and end at the Fox Lake Town Center as they do now.

### *Fixed Route Eliminations*

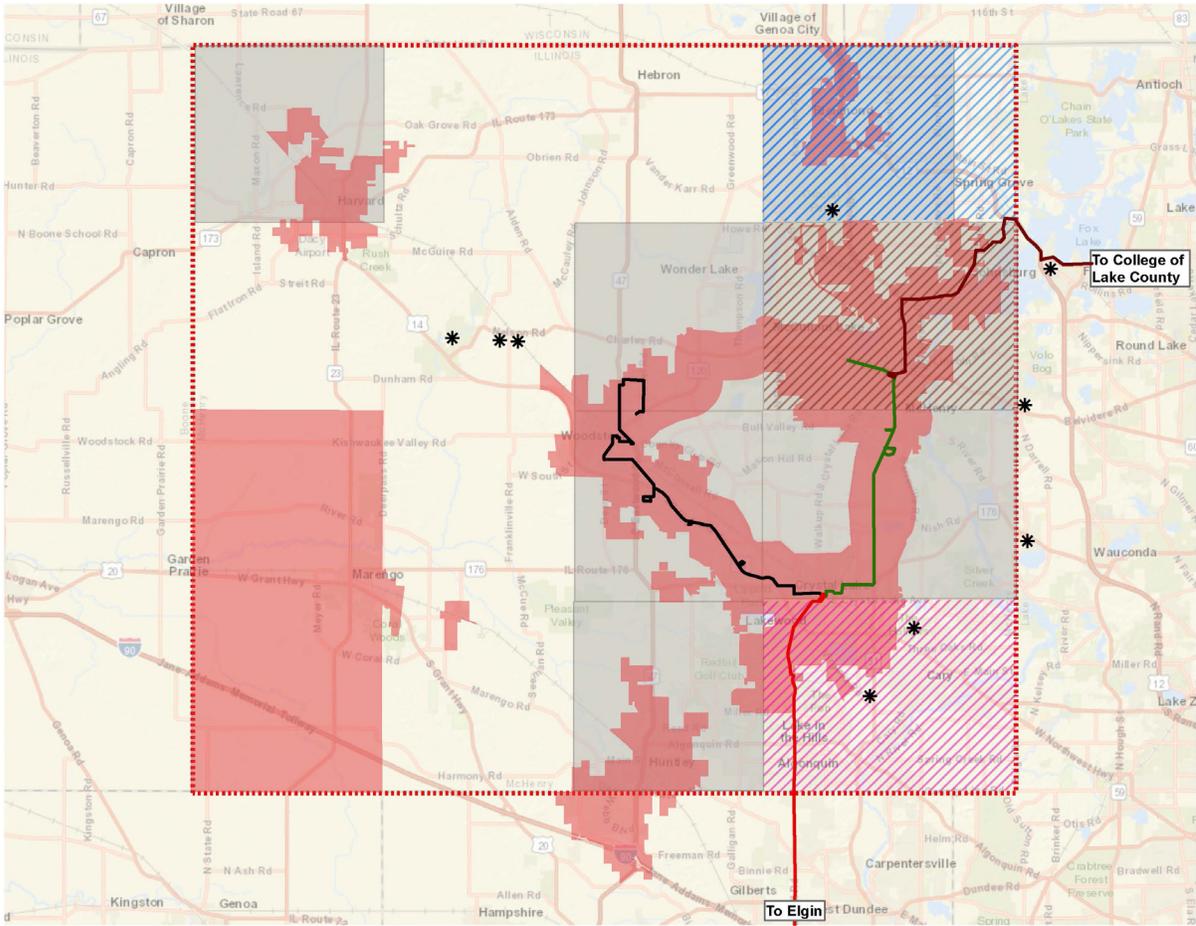
- **Route 806** north of Northwestern Hospital-McHenry would be replaced by extending Route 570 west of the Fox Lake Metra station; the routing along Crystal Lake Avenue would be replaced by Front Street/Illinois 31.
- **Route 807** between McHenry (Ringwood Road) and the McHenry County Government Center would be eliminated.
- **Route 808** between the Woodstock Metra station and Harvard would be eliminated.
- All of **Route 809** would be eliminated.

Most of the route eliminations involve routings that occur in rural areas where the bus picks up no riders. Route 807 between McHenry and Woodstock travels through eight miles of farm land, Route 808 between Woodstock and Harvard travels through 10 miles of farm land, and Route 809 is almost entirely rural in nature. The lack of ridership on these sections of routes contributes to their low efficiency (as judged by the riders per hour and riders per revenue vehicle mile metrics). Using these resources to beef up the routes serving the core transit demand in the McHenry—Crystal Lake—Woodstock would lead to greater efficiency in transit delivery in the County.

### *Demand Response Service*

Service would not be changed.

**FIGURE 6: Concept 2 Service Map**



**MCRide**

- All Riders
- Seniors and Disabled Only
- \* Point Destination

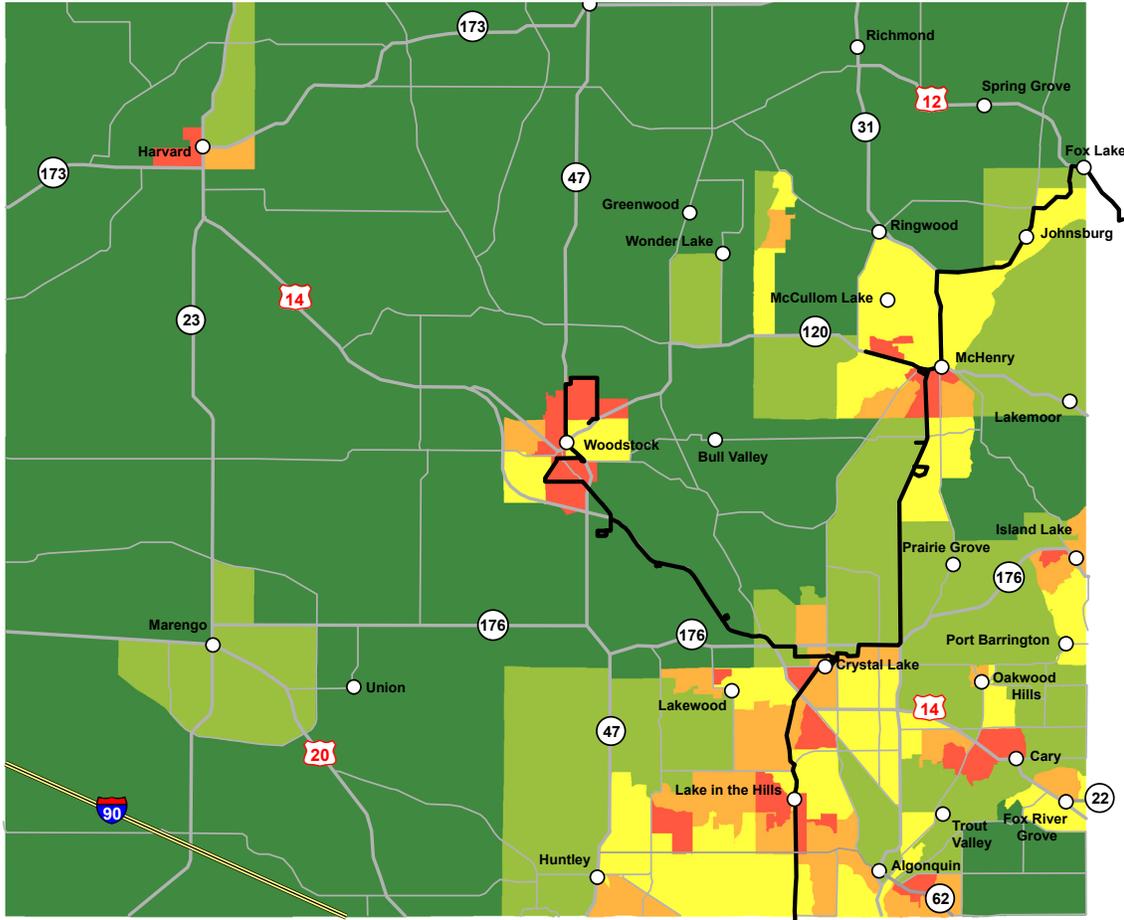
**Other Senior/Disabled Demand Response**

- Algonquin Township
- McHenry Township
- Richmond Township

**Fixed Routes**

- Route A: Central McHenry
- Route B: McHenry
- Route H (550)
- Route I (570)

**FIGURE 7:** Concept 2 Showing Transit Demand Index



**Fixed Route**



**Transit Demand Index**

- Little to No Transit Demand
- Poor Transit Demand
- Average Transit Demand
- Good Transit Demand
- Highest Transit Demand

Since this concept focuses on the core demand in the County, nine percent fewer good or high transit demand areas are served by fixed route; service to key destinations by demand response service remains unchanged as shown in Tables 3 and 4.

**TABLE 3: Concept 2 Demand Response (For All) Destinations Served**

	Percent of Good and Highest Transit Demand Areas	Large Employers	Schools	Big Boxes	Subsidized Housing (All)	Subsidized Independent Living
Current (Baseline)	68%	86%	16%	67%	86%	78%
Concept 2	68%	86%	16%	67%	86%	78%
Change	0%	0%	0%	0%	0%	0%

**TABLE 4: Concept 2 Fixed Route Destinations Served**

	Percent of Good and Highest Transit Demand Areas	Large Employers	Schools	Big Boxes	Subsidized Housing (All)	Subsidized Independent Living
Current (Baseline)	38%	71%	63%	67%	57%	56%
Concept 2	29%	64%	47%	58%	57%	22%
Change	-9%	-7%	-16%	-8%	0%	-33%

### *Service Span and Hours*

The current service span and days for MCRide (6:00 AM to 7:00 PM weekdays; 9:00 AM to 5:00 PM Saturday and Sunday) will remain the same; for the fixed routes, the span would be approximately 6:00 AM to 6:00 PM for the routes that only run within the County (Routes A and B) and the spans for the inter-county routes (Route H and Route I) would remain the same as the current spans (5:30 AM to 8:00 PM and 6:45 AM to 5:45 PM). Route I would not run between 9:00 AM to 3:20 PM. There would be no fixed route service on weekends.

### **C. Concept 2 Cost<sup>4</sup>**

The fixed route cost would be \$2.1 million. The cost to operate MCRide (\$2.2 million) would remain unchanged. This would be a decrease of \$130,000, all of which would be cost savings for Pace. Two less vehicles would be needed to operate the current fixed route vehicles during peak periods, while three more vehicles would be needed during off-peak periods. The vehicles freed up from fixed route use during the peak periods can be added to the demand response vehicle pool during those times, increasing availability for that transit mode.

<sup>4</sup> Route A and B use the cost per revenue hour of McHenry County fixed route service (\$61.91), Route H uses the cost per revenue hour of River Division (\$80.05), and Route I uses the cost per revenue hour of North Division (\$92.43)

## VII. Concept 3: Convert Long Distance Routes to Circulators

### A. Hypothesis

Bus transit in the County should be focused on local service within a particular community rather than between communities. Since long-distance trips are the least efficient for fixed routes to serve (most travel through miles of rural areas between communities), it would better serve the County if Metra and MCRide serve these low demand trips. Establishing fixed route circulators that travel only within one community (or two adjacent communities) would help increase the frequency of fixed route service for those residents and be more responsive to their needs rather than the current long distance route model. This could also shift local riders from the more inefficient (a high cost per trip) MCRide on to the more efficient circulator routes. In addition, having a vehicle present all day within a community would increase the visibility of transit and encourage more ridership and may prompt communities with circulators to be more proactive in promoting them. These vehicles could even be “branded” with the community/area name.

### B. Service Description

The five communities/areas with highest concentration of transit demand would be served by the circulators. Each of these areas has a mix of high demand origins and destinations (generally retail and health care related). Communities where Metra is present will have circulator schedules designed to meet as many trains as possible, which would facilitate longer distance travel within the County, and could also serve as feeder routes for Chicago-bound commuters. In order to help transition riders from MCRide service to the circulators, on weekdays and weekends those in Harvard, Crystal Lake, McHenry and Woodstock will have same service span as the current MCRide service. The circulators are described in greater detail below.

- **Route A** would serve Crystal Lake, the largest community in the County. Destinations served include McHenry County College, subsidized apartment complexes along Briarcliff Road and Terra Cotta Avenue, the commercial corridor along Northwest Highway, the Wal-Mart on Illinois Route 31 and (when it opens) the new medical complex at Three Oaks Road and that state highway. The frequency of this route would be about 60 minutes.
- **Route B** would serve Woodstock as there were many requests from residents for more service within their community, which is difficult to serve with the current long distance route service model. Even more so than Harvard, residents could in theory meet all of their basic needs without leaving Woodstock. In addition, there are a greater variety of health care establishments, several large retail establishments in addition to a Wal-Mart, and regional draws such as the Woodstock town square and the government center. The circulator would serve all of these destinations, and would also serve Marian Central Catholic High School and Woodstock High School. The frequency of this route would be 45 to 50 minutes.
- **Route C** would serve Harvard as this community has a comparably high concentration of low income residents. Due to its relatively isolated location in the County, many of the community’s basic needs are located within Harvard. Several industrial employers, Mercy Harvard Hospital, the Harvard High School, a Wal-Mart, and recreation opportunities would be within reach of the circulator. The frequency of this route would be 40 minutes.

- **Route D** would serve Cary and Fox River Grove, which have some of the highest transit demand in the County that is not served by fixed route transit. Destinations served would be both Metra stations, retail along the Northwest Highway, and large industrial employers in Cary such as Stryker and Aptar. The frequency of this route would be about 50 minutes.
- **Route E** would cover McHenry. It would serve many of the same destinations as the current Routes 806 and 807 with the exception of the Fox Lake Metra station. This station would now be served as a point destination all day by MCRide. Destinations served will be central McHenry, the Center for Independent Living, Northwestern Hospital-McHenry, Fox Point, and the commercial corridor along Richmond Road. The frequency of this route would be 45 minutes.

These circulators would all be run with cutaway vehicles.

#### *Fixed Route Changes*

- **Route 550 (Route H)** would leave Randall Road and travel on McHenry Avenue, Crystal Lake Avenue, and Grant Street to the Crystal Lake Metra station (northbound); southbound trips would use Main Street instead of Grant Street.

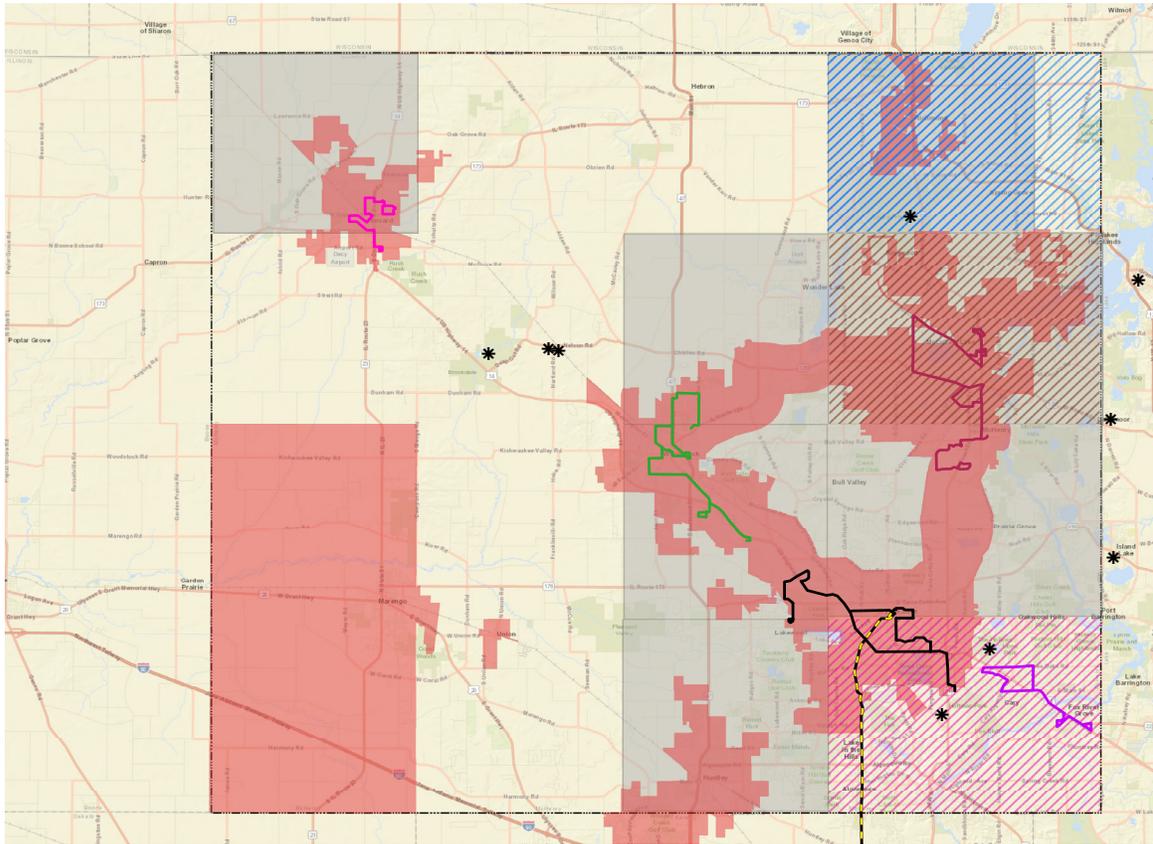
#### *Fixed Route Eliminations*

- **Routes 806, 807, 808, and 809** would all be eliminated.

#### *Demand Response Service*

Demand response service would not be changed.

**FIGURE 8: Concept 3 Service Map**



**MCRide**

- All Riders
- Seniors and Disabled Only
- ✱ Point Destination

**Other Senior/Disabled Demand Response**

- Algonquin Township
- McHenry Township
- Richmond Township

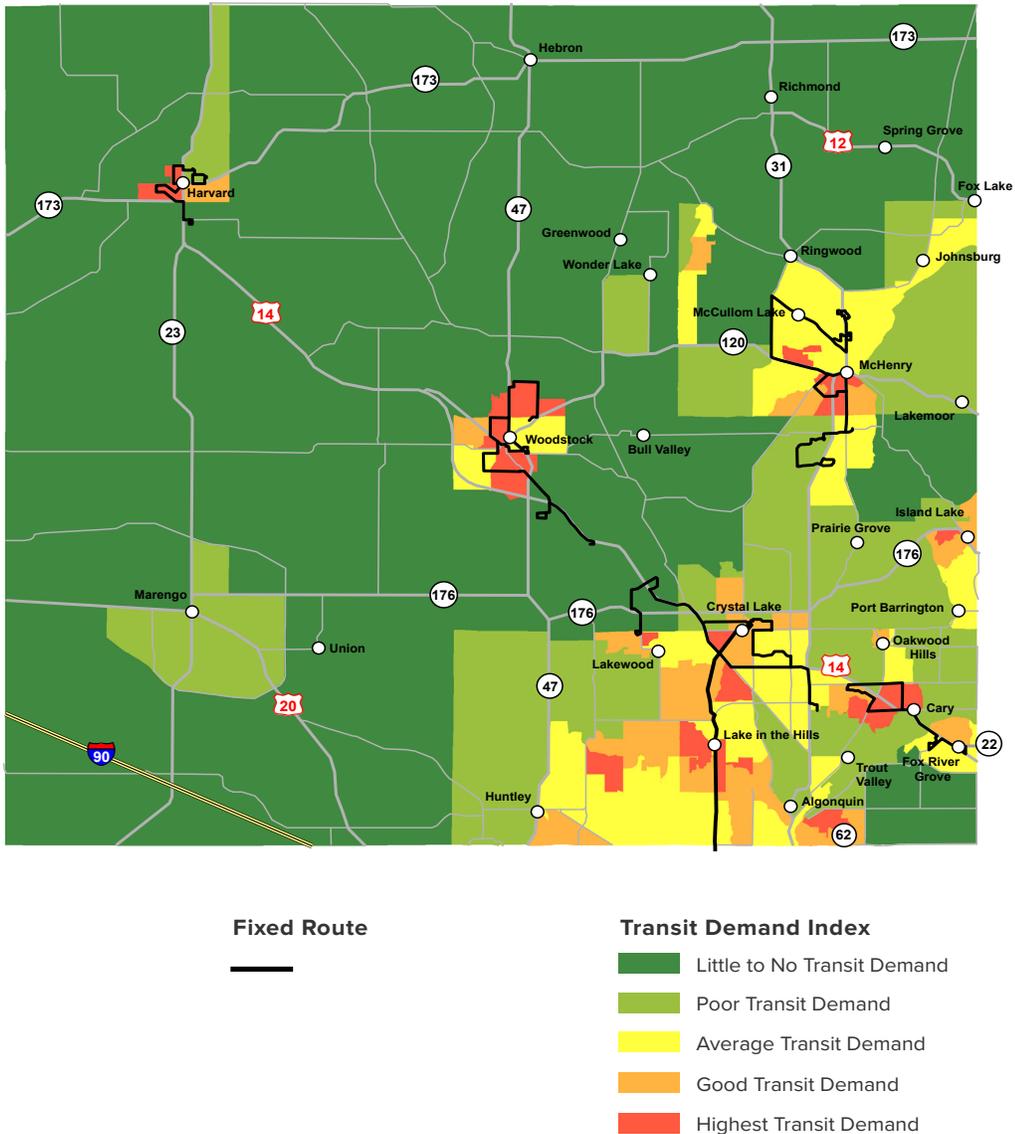
**Regional Fixed Route**

- Route H: Route 550

**Fixed Routes**

- Route A: Crystal Lake
- Route B: Woodstock
- Route C: Harvard
- Route D: Cary-Fox River Grove
- Route E: McHenry

**FIGURE 9:** Concept 3 Showing Transit Demand Index



There has been some shifting of access to fixed route from demand response service in this concept for those in good or highest transit demand areas. On the other hand, those who attend McHenry County College or Marian Central Catholic High School may need to rely more on demand response service in this concept (see Tables 5 and 6).

**TABLE 5: Concept 3 Demand Response (For All) Destinations Served**

	Percent of Good and Highest Transit Demand Areas	Large Employers	Schools	Big Boxes	Subsidized Housing (All)	Subsidized Independent Living
Current (Baseline)	68%	86%	16%	67%	86%	78%
Concept 3	68%	86%	16%	67%	86%	78%
Change	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>

**TABLE 6: Concept 3 Fixed Route Destinations Served**

	Percent of Good and Highest Transit Demand Areas	Large Employers	Schools	Big Boxes	Subsidized Housing (All)	Subsidized Independent Living
Current (Baseline)	38%	71%	63%	67%	57%	56%
Concept 3	53%	78%	63%	100%	86%	56%
Change	<b>15%</b>	<b>7%</b>	<b>0%</b>	<b>33%</b>	<b>29%</b>	<b>0%</b>

*Service Span and Hours*

The current service span and days for MCRide (6:00 AM to 7:00 PM weekdays; 9:00 AM to 5:00 PM Saturday and Sunday) will remain the same; for the fixed routes, the same span would be used for the routes that only run within the County (Routes A through E) in order to encourage MCRide riders to use the circulators instead. The span for the inter-county route (Route H) would remain the same as the current span (5:30 AM to 8:00 PM). Route H would only run on weekdays.

**C. Concept 3 Cost<sup>5</sup>**

The fixed route (circulator) cost would be approximately \$2.5 million. The MCRide service cost will remain the same (\$1.9 million)—availability of rides would be limited by the current budget, and it is expected that ridership will decrease as riders will shift to the more attractive and cheaper circulator service. This would be an increase of \$860,000, all of which would be borne by Pace. Seven more vehicles would be needed during off-peak periods, decreasing the vehicles available to MCRide to 18 between approximately 10:00 AM and 3:00 PM.

<sup>5</sup> Routes A through D use the cost per revenue hour of McHenry County fixed route service (\$61.91) and Route H uses the cost per revenue hour of River Division (\$80.05).

## VIII. Concept 4: Large Expansion of Fixed Route Services

### A. Hypothesis

Transit ridership in the County will remain stagnant unless service is increased to a point where it can transport residents to most of the areas regionally where they need or want to go. The decline in bus ridership in the County can be attributed to the lack of transit supply rather than a lack of demand. As bus transit availability has declined in the County over the last 25 years, less and less people are contemplating using transit as an alternative to driving. MCRide service, while serving as a safety net for the most vulnerable of the County's population, will not be attractive to millennials (who will find TNC's more useful for "on-demand" rides) and those with access to a car. In order to truly derive all of the secondary benefits that transit can create in a community (less congestion, pollution, and a component of denser more walkable communities), transit availability must be increased to meet much more of the current and potential future demand, rather than providing the bare minimum of service.

### B. Service Description

This concept transforms McHenry County's fixed route system into one on par with adjacent counties (Lake and Kane). The system is designed to serve every highest and good transit demand area in the County. Additional regional connections would be established between the County and adjacent counties, to more fully integrate the fixed route service with the rest of the Pace system. This concept intends for most residents be able use a fixed route bus to get to most places in the County with no more than one transfer. In addition, to increase the usability of transit, 30 minute frequencies will be instituted on many routes during peak periods. One unique aspect of this concept is the extension of routes beyond the RTA service area, fulfilling requests of County residents to connect to communities to the west of the County. This concept is designed to aspire to the ideal (in this case, serving the most possible people), without being bound by funding or jurisdictional constraints.

Unless otherwise noted, these routes would run every 30 minutes during peak periods on weekdays, and every hour the rest of the weekday and on Saturdays. A major transfer location would be at the Crystal Lake Metra Station.

#### *New Fixed Routes*

- **Route A** would be identical to Route A in Concept 2. It would run between Crystal Lake and the McHenry County Government complex via the Woodstock Metra station. Its routing is similar to Route 808 between those communities. This route would run every 30 minutes in the peak and 60 minutes off peak.
- **Route B** is an "L" shaped route runs between Woodstock and Crystal Lake via McHenry. Its routing is similar to Routes 806 and 807 between those communities. This route would run every 30 minutes in the peak and 60 minutes off peak.
- **Route C** is the Harvard Circulator described in Concept 3. Several industrial employers, a Mercy Harvard Hospital, Harvard High School, a Wal-Mart, and recreation opportunities would be within reach of the circulator which would run entirely within Harvard and would be the only route not connected by fixed route bus with the rest of the proposed system (Metra would connect transit riders to the rest of the region). The frequency of this route would be 40 minutes.
- **Route D** would jog between Huntley and the Crystal Lake Metra station. This route would also serve Northwestern Hospital-Huntley and high density areas in Lake in the Hills. This route would run every 25 minutes in the peak and 45 minutes off peak.

- **Route E** is designed to serve industrial employers in Cary and run beyond the County borders to serve the Wauconda Industrial Park. Special consideration would be made to connect potential and current employees to these jobs via Metra. The frequency would be 30 minutes in peak periods, and the route would not run during off-peak periods or on Saturdays.
- **Route F** would encourage utilization of the underused Park and Ride at Virginia Road and Illinois Route 31. Riders could use this lot to park overnight and catch a bus to O'Hare. As an express route, stops will be limited. Additional intermediate stops would be made at Sandbloom and Algonquin Roads and at the Barrington Road Park and Ride (to make connections to Pace's bus-on-shoulder express service). Access to the airport would be provided via the Airport Transit System (ATS). This route would run 50 to 60 minutes all day and on Saturdays and Sundays. Due to the nature of air travel, this route will run much earlier and later than the other routes (approximately 5:00 AM to 12:00 AM). In addition, the Park and Ride at Lake in the Hills would need to have enhanced security and be open to overnight and multiday parking in some or all of the spaces.
- **Route G** links Crystal Lake with Spring Hill Mall via Carpentersville. This route will help McHenry County employers access the labor pool in Carpentersville. Connections to other Pace routes would be possible at the mall. This route would run every 30 minutes in the peak and 60 minutes off peak.

Most of these routes are intended to be run with full sized (30 foot or over) buses. The exceptions would be Route C (which, due to its routing on local streets would necessitate using a cutaway vehicle) and Route F, which would need to run coaches to accommodate passengers' luggage.

#### *Fixed Route Changes*

- **Route 550 (Route H)** would leave Randall Road and travel on McHenry Avenue, Crystal Lake Avenue, and Grant Street to the Crystal Lake Metra station (northbound); southbound trips would use Main Street instead of Grant Street.
- **Route 570 (Route I)** would have a total of five trips extended to the McHenry Metra Station. The rest of the trips would be begin and end at the Fox Lake Town Center as they do now.

#### *Fixed Route Eliminations*

- **Route 806** north of Northwestern Hospital–McHenry would be replaced by extending Route 570 west of the Fox Lake Metra station. The routing along Crystal Lake Avenue would be replaced by Front Street/Illinois Route 31 south of the Metra Station and rest would be replaced by Route E.
- Most of **Route 807** between McHenry (Ringwood Road) and the McHenry County Government Center would be replaced by Route E.
- **Route 808** between the Woodstock Metra station and Harvard would be eliminated.
- All of **Route 809** would be eliminated.

These fixed routes would use the same vehicle types they use now and they would also only run on weekdays in the County.

### *New Flex Routes*

Instituting these routes will be the most challenging. As the routes would extend outside the RTA service area, an intergovernmental funding agreement would need to be made between the RTA and Winnebago, Boone and Walworth Counties to fund these routes. Conversely, McHenry County could directly work with these counties and fully fund their portion of the costs. Since the routes would run long distances through largely rural areas, the buses would be allowed to “flex” up to three quarters of a mile off of the route to pick up riders. This would satisfy the complementary ADA service requirement. The destinations chosen for the flex routes (Lake Geneva and Rockford) were the most requested destinations outside the RTA service area by survey respondents.

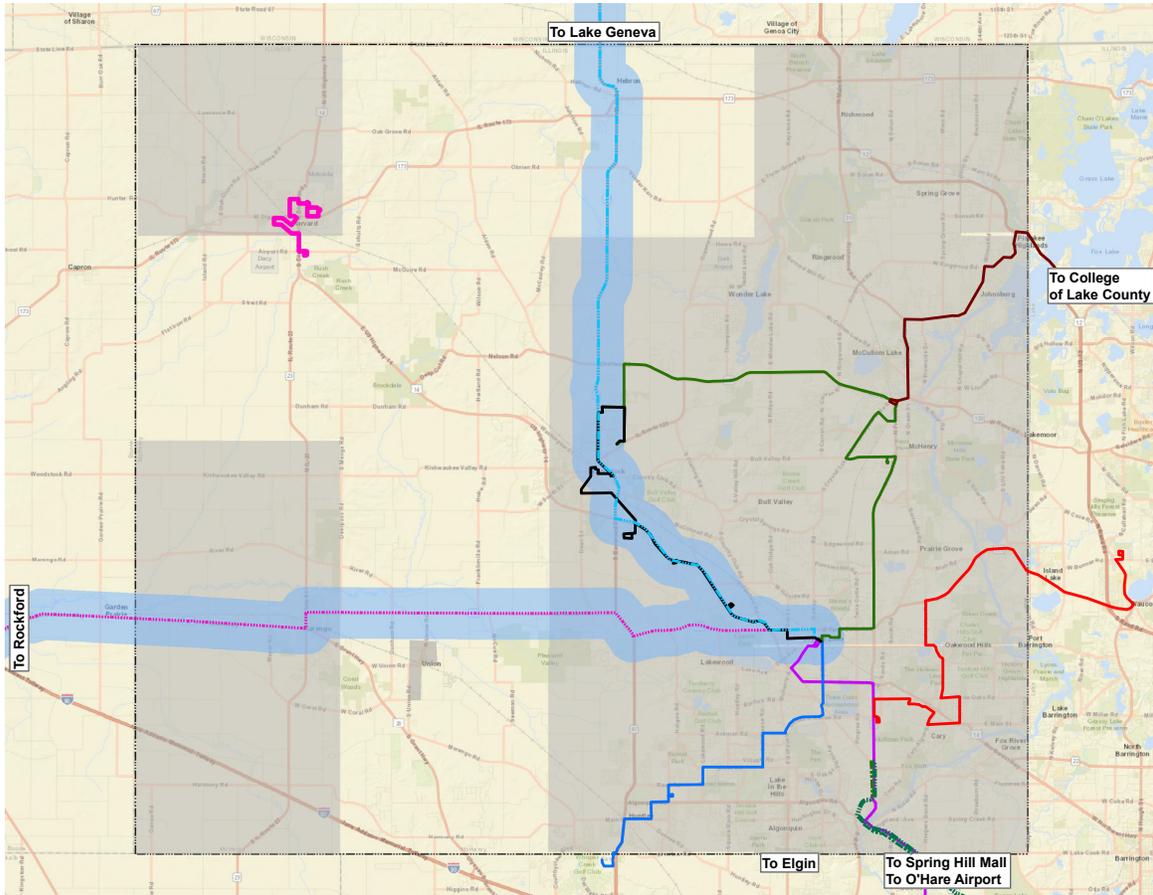
- **Route J** would run between Crystal Lake and Lake Geneva via Hebron, generally following US Route 14, Illinois Route 47, and Wisconsin Route 120. Stops would be limited to approximately one half mile within community boundaries or one mile between communities. Four daily round trips would be made on both weekdays and Saturdays, focusing on the leisure and shopper markets. The route would be designed to connect Metra riders to and from Chicago.
- **Route K** would run between Crystal Lake and Rockford via Marengo and Belvidere, generally following Illinois Route 176 and US Route 20. Stops would be limited to approximately one half mile within community boundaries or one mile between communities. Six daily round trips would be made on weekdays and would focus on those going to and from jobs and health care appointments.

These routes would use cutaway vehicles.

### *Demand Response Service*

As the fixed route service in the County is now robust, there will no longer be any need for demand response service (for all) in the County. Instead, MCRide will be transformed into a service for seniors and disabled only. Other than that change, the current service area for MCRide will remain the same.

**FIGURE 10: Concept 4 Service Map**



**Proposed Fixed/Flex Routes**

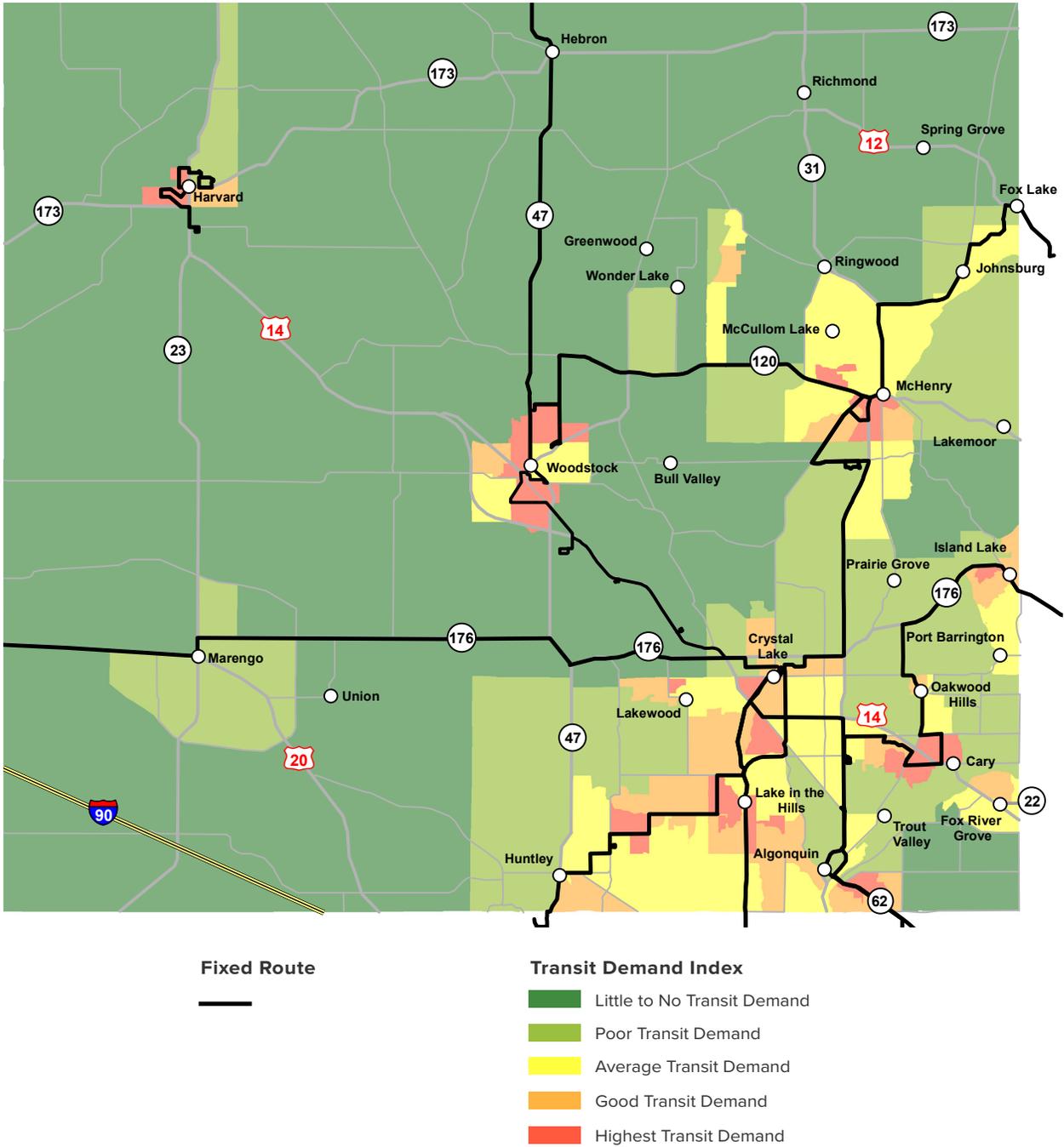
- Route A: Central McHenry
- Route B: Woodstock-McHenry-CL
- Route C: Harvard Local
- Route D: Huntley-Crystal Lake
- Route E: Wauconda-Cary
- Route F: Algonquin-OHare Express
- Route G: Crystal Lake-Spring Hill Mall
- Route H (550)
- Route I (570)
- Route J: Crystal Lake-Hebron-Lake Geneva
- Route K: Crystal Lake-Marengo-Rockford

**Flex Zone (All Riders)**

**Demand Response (Seniors and Disabled Only)**



**FIGURE 11:** Concept 4 Showing Transit Demand Index



Since the only service open to all is now fixed route service, demand response service (for all) no longer serves any of the highest and good transit demand areas. More than three-quarters (approximately) of each type of destination are served by fixed routes, with all of the big boxes and subsidized housing for all being served (see Tables 7 and 8).

**TABLE 7: Concept 4 Demand Response (For All) Destinations Served**

	Percent of Good and Highest Transit Demand Areas	Large Employers	Schools	Big Boxes	Subsidized Housing (All)	Subsidized Independent Living
Current (Baseline)	68%	86%	16%	67%	86%	78%
Concept 4	0%	0%	0%	0%	0%	0%
Change	<b>-68%</b>	<b>-86%</b>	<b>-16%</b>	<b>-67%</b>	<b>-86%</b>	<b>-78%</b>

**TABLE 8: Concept 4 Fixed Route Destinations Served**

	Percent of Good and Highest Transit Demand Areas	Large Employers	Schools	Big Boxes	Subsidized Housing (All)	Subsidized Independent Living
Current (Baseline)	38%	71%	63%	67%	57%	56%
Concept 4	74%	93%	79%	100%	100%	78%
Change	<b>36%</b>	<b>21%</b>	<b>16%</b>	<b>33%</b>	<b>43%</b>	<b>22%</b>

*Service Span and Hours*

The current service span and days for MCRide (6:00 AM to 7:00 PM weekdays; 9:00 AM to 5:00 PM Saturday and Sunday) will remain the same; for the fixed routes, the span would vary by route (see Table 9).

**TABLE 9: Concept 4 Fixed Route Service Span**

	Weekday Service Span	Saturday and Sunday Service Span
Route A	5:45 AM to 7:00 PM	8:45 AM to 5:30 PM
Route B	6:00 AM to 7:00 PM	9:00 AM to 5:00 PM
Route C	6:00 AM to 6:30 PM	9:00 AM to 5:00 PM
Route D	6:00 AM to 7:00 PM	9:00 AM to 5:00 PM
Route E	5:45 AM to 6:45 PM	No service
Route F	5:00 AM to 12:00 AM	5:00 AM to 12:00 AM
Route G	6:00 AM to 7:00 PM	5:00 AM to 12:00 AM
Route H	5:30 AM to 8:00 PM	No service
Route I	6:15 AM to 9:10 AM 3:30 PM to 5:45 PM	No service
Route J <sup>1</sup>	9:00 AM to 5:30 PM	No service
Route K <sup>2</sup>	6:00 AM to 6:30 PM	No service

<sup>1</sup>4 round trips a day<sup>2</sup>6 round trips a day

### C. Concept 4 Cost<sup>6</sup>

The operating cost for a full build out of the fixed route concept would be \$6.1 million, with a peak vehicle need of 35 vehicles weekdays and 11 on Saturday. The cost of demand response service would be \$2 million. The costs for Routes J and K would be shared between the surrounding counties, based on the mileage the route in McHenry County. This is an increase of \$3.9 million. The cost by route is broken down below.

**TABLE 10:** Concept 4 Fixed Route Weekday Cost

	<b>TOTAL</b>	<b>VEHICLES</b>
Route A	\$495,713	4
Route B	\$552,547	4
Route C	\$378,889	1
Route D	\$555,704	4
Route E	\$331,528	4
Route F	\$1,071,669	3
Route G	\$508,343	4
Route H	\$842,625	4
Route I	\$515,859	3
Route J	\$124,323	2
Route K	\$128,822	2
<b>Total</b>	<b>\$5,506,023</b>	<b>35</b>

**TABLE 11:** Concept 4 Fixed Route Saturday Cost

	<b>TOTAL</b>	<b>VEHICLES</b>
Route A	\$495,713.37	2
Route B	\$552,546.75	2
Route C	\$378,889.20	1
Route D	\$555,704.16	1
Route E	\$1,071,669.38	3
Route F	\$508,343.01	2
Route G	\$3,562,865.87	11
<b>Total</b>	<b>\$3,562,865.87</b>	<b>35</b>

<sup>6</sup>Costs are based on the following cost per revenue hours: Route F and H costs use the cost per hour of River Division (\$80.05); Route I North Division (\$92.43); and all other routes McHenry County fixed route service (\$61.91)

Although this concept would be the most costly, it is designed to be implemented in stages. The first implementation stage in Concept 4 would focus on the fixed routes that are modifications of the current fixed routes. This would mean that weekday schedules for Routes A, B, C, H, and I would be implemented in the Stage 1. Stage 2 would focus on filling out the local weekday service—Routes D, E, and G. Stage 3 would institute service on Saturdays in the County and connect the now robust local service to Cook County—this would include implementation of Route F. Finally, due to the complexity of working with jurisdictions outside the RTA service area, Routes J and K would be implemented last. The operating cost of implementing each stage is shown below.

**TABLE 12:** Concept 4 Fixed Route Implementation Cost by Stage

	<b>TOTAL</b>	<b>WEEKDAY VEHICLES</b>	<b>SATURDAY VEHICLES</b>
Stage 1	\$2,785,633	16	
Stage 2	\$1,395,575	28	
Stage 3	\$1,727,334	31	11
Stage 4	\$253,145	35	
<b>Total</b>	<b>\$6,161,688</b>		

If this concept was brought to Stage 3, it is likely that a new McHenry County bus garage would need to be built, or the existing garage expanded which would add to the cost. The current garage would not be able to accommodate the coach buses, for instance, that would be needed on Route F. There would also need to be improvements made to the bus staging area at or near the Crystal Lake Metra station, with a possible open air transfer center somewhere else downtown needed to accommodate the additional service.

## IX. Concept Comparison

In order to evaluate the concepts, they have been compared using the following metrics:

### *Quantitative:*

- 1. Percentage of key destinations served.** The key destinations are large employers, schools, Big Boxes, subsidized housing for all, and subsidized independent living facilities.
- 2. Percentage of good or highest transit demand areas served.** As shown in the transit demand index map.
- 3. Number of desired destinations reachable.** As indicated by the survey. Communities/ destinations must be able to be reached by no more than a two seat ride. Metra is included in this analysis.
- 4. Overall cost.** This makes no distinction for who pays and is the full build out cost of each concept
- 5. Cost to the County.** This number will rise and fall based on the balance between fixed routes and demand response services in the county.

### *Qualitative:*

- 6. Ease of use.** Is the system understandable for the first time or occasional user?
- 7. Ease of implementation.** Not a lot of promotional work would need to be done before the changes go “live”; capital costs are limited.
- 8. Land use impact.** Would the concept have an effect on land use decisions in the county?
- 9. Future oriented.** Will the resulting system be adaptable and attractive to younger users, and compatible with future transportation developments?
- 10. Value.** Will the ROI (return on investment) be worth it in terms of mobility, ridership, or satisfying demand?

Since demand response service is not as user friendly or reliable as fixed route service, the percentages for the quantitative items 1 through 3 are discounted by three quarters<sup>7</sup>. Otherwise, an area that had 100 percent demand response service coverage but no fixed route coverage would seem to have equal transit access with an area with a robust fixed route system, which is not the case.

<sup>7</sup>For instance, since in Scenario 1 100% of the county is now served by demand response (which would include all of the key destinations), this would be reduced to 25%.

A Harvey ball system was used to evaluate each concept against the metrics. An empty ball indicates that the concept rates the lowest in a particular metric; a quarter ball indicates that it rates second lowest; a half ball indicates that it rates second best; and a full ball the highest. In each metric, only one concept will rate the highest (a fully shaded ball) (see Table 13).

**TABLE 13:** Concepts 1 Through 4 Comparison

	Pct. of key destinations	Pct. of good or highest transit demand areas	Number of desired destinations	Overall cost	Cost to the County	Ease of use	Ease of implementation	Land use impact	Future oriented	Value	Overall score
Concept 1	○	○	◐	◐	○	○	○	○	◐	◐	○
Concept 2	◐	◐	○	●	◐	◐	●	○	○	○	◐
Concept 3	◐	◐	◐	◐	◐	◐	◐	●	●	◐	◐
Concept 4	◐	◐	◐	◐	◐	◐	◐	●	●	◐	◐
Preferred Concept	●	●	●	○	●	●	○	●	◐	◐	◐

A summary of the results indicates that both Concepts 3 and 4 are ranked equally, although Concept 3 has costs that are about one-fifth of Concept 4. Concept 4 performs well on the quantitative metrics, but does not do as well on the qualitative measures. Concept 1 has the lowest score, with most of the metrics scored with empty balls. The metrics are currently weighed equally; a discussion can be had on whether to weight each of these metrics equally, or whether it is more appropriate to weight one metric (for instance value or cost) higher than the other metrics.



**McHENRY  
COUNTY**  
TRANSIT PLAN FINAL REPORT