



SERVICE NEEDS AND GAPS REPORT

Illinois Statewide Public Transportation Plan

AUGUST 2017

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SERVICE GAPS AND NEEDS REPORT

Illinois Statewide Public Transportation Plan

I. SERVICE GAPS AND NEEDS FOR TRANSIT

A. Introduction

This supplemental report to the Illinois Statewide Public Transportation Plan identifies the transit need in the state outside of the RTA service area and addresses ways to fulfill demand that is currently unmet. The recommendations in the report are made on a purely analytical basis and this report does not attempt to solve agency funding shortfalls or resource shortages, but acknowledges they are serious and important. Instead, the aim of this report is to provide a more detailed look at where such funding may be lacking.

To estimate “demand” (i.e. number of transit rides needed in a given area) three different approaches were taken: one for demand response/flex route/commuter systems open to the general public, one for “limited” demand response systems, and one for fixed route systems. For the demand response systems, key demographics were used to estimate demand. For fixed route systems, Illinois’ 14 systems were compared to peer systems outside of the state. Methodologies employed to estimate demand were based on research developed through the Transit Cooperative Research Program (TCRP).

B. Public Transit Demand Methodologies

The following section lays out the preferred methodologies for calculating transit demand for limited demand response transportation, fixed route, and general demand response/flex route services throughout the state. These demand methodologies are explained in detail following this section. The table below summarizes the demand methodology used for each type of transit system.

Table 1: Transit System Demand Methodologies

TRANSIT SYSTEM CLASSIFICATION	DEMAND METHODOLOGY
Limited Demand Response	Program Demand
General Demand Response /Flex Route/ Commuter	Non-Program and Commuter Demand
Non-Urban Fixed Route	Small Fixed Route Demand
Urban Fixed Route	Small Fixed Route Demand
Complimentary ADA/Paratransit	Small Fixed Route Demand

The “Program Demand” methodology applies to limited demand response services. This service can encompass subscription trips for clients to a social service agency or demand response service only open to certain populations. This type of service is funded under Section 5310.

The “Non-Program and Commuter Demand” methodology applies to demand response services, flex route services, and commuter services open to the general public and can be funded through Section 5307 or Section 5311.

The “Small Fixed Route Demand” methodology applies to fixed route systems. Fixed route systems can be either urban (funded through Section 5307) or non-urban, i.e. rural (funded through 5311). These types of systems carry the majority of their riders on fixed routes that repeat their routing and schedules on a daily basis and make transfers with each other, producing a network of routes. The same demand methodology is also applicable to complimentary ADA/paratransit needs.

1. Program and Non Program Demand Methodologies¹

In order to estimate demand for program and non-program demand response services, a modified version of the methodology presented in the Transit Cooperative Research Program (TCRP) Report 3 was used. The first methodology shown below uses the following inputs and formulas to calculate demand reported on a county-wide basis for program (or limited) demand response services and the second computes the demand for non-program demand on a countywide basis for those services open to the general public. To estimate total demand for the county, the results of each methodology are added together and presented as one number. The output of this demand methodology results in a demand estimate expressed in revenue service hours.

¹ Method adapted from Transit Cooperative Research Program (TCRP) Report 3: Workbook for Estimating Demand for Rural Passenger Transportation

2. Program Demand Methodology

Program Demand Inputs²:

- Age 16 and above (a_1)
- Total Mobility Limited³(b_t)
- Mobility Limited 18 to 64⁴ (b_1)
- Age 16 to 64 (a_2)

Age 65 and above (a_3) Program Participation Formulas⁵:

- from Developmental Services: Adult: $P_1 = 2.15 \times (a_1 \div 1000)$
- from Developmental Services: Case Management: $P_2 = 29.8 \times (b_1 \div 1000)$
- from Group Home (above 2,000 mobility limited in county): $P_3 = 7.33 + [5.57 \times (b_t \div 1000)]$
- from Mental Health Services (above 2,000 mobility limited in county):
 $P_4 = [(45.9 \times (b_t \div 1000))] - 36.4$
- from Mental Health Services: Case Management: $P_5 = 8.4 \times (a_2 \div 1000)$
- from Senior Nutrition: $P_6 = 30.1 \times (a_3 \div 1000)$

Program Annual Trip Rates (using Low Observed Rate)⁶:

- Developmental Services: Adult: **138.6**
- Developmental Services: Case Management: **20**
- Group Home (above 2,000 mobility limited in county): **196.2**
- Mental Health Services (above 2,000 mobility limited in county): **30**
- Mental Health Services: Case Management: **2.4**
- from Senior Nutrition: **117.6**

Program Demand Equation:

$$D = (P_1 \times 138.6) + (P_2 \times 20) + (P_3 \times 196.2) + (P_4 \times 30) + (P_5 \times 2.4) + (P_6 \times 117.6)$$

² All numbers from American Community Survey 2010-2014 5 Year Estimates

³ Mobility limited considered having an independent living difficulty

⁴ Mobility limited considered having an independent living difficulty

⁵ Formulas are from TCRP 3

⁶ Trip rates are from TCRP 3 p 85

3. Non-Program Demand Methodology

For demand response services open to the general public, two methods⁷ can be applied to determine non-program demand in either a rural or small urban setting. One method is to compare the system analyzed to peer systems within the state. In using this method, the parameters/ground rules for each comparison would need to be determined in advance, and this method could only be used to project demand in counties where some level of service already exists. Another method, which can be applied to all areas of the state regardless of current levels of service, uses an equation based on an analysis of the 2009 Rural National Transit Database and workshops conducted by that organization⁸. This equation weights three demographic groups who are most likely to use public transit. The second (demographic based) method will be used to compute non-program demand response estimated ridership because of its universal applicability.

Non-Program Demand Inputs⁹:

- Persons Age 60+ (a)
- Mobility Limited 18 to 64 (b)
- Persons Residing in Households With No Vehicle Available (c)

Formulas:

- Population Age 60+: $2.20 \times a$
- Mobility Limited Population 18-64¹⁰: $5.21 \times b$
- Persons Residing in Households With No Vehicle Available: $1.52 \times c$

Non-Program Demand Equation:

$$D=(2.20 \times a)+(5.21 \times b)+(1.52 \times c)$$

7 TCRP Report 161: Workbook for Estimating Demand for Rural Passenger Transportation(Non-Program Demand Formula)
8 <http://www.ntdprogram.gov/ntdprogram/data.htm> (RY2009 Database)
9 All numbers from American Community Survey 2010-2014 5 Year Estimates
10 Mobility limited considered having an independent living difficulty

4. Method to Determine Commuter Route Demand¹¹

In certain areas of the state there are enough residents traveling in a similar direction from their homes to access a job that there is potential for establishing a commuter transit service option. In order to calculate the need for commuter routes in any part of the state, the “On The Map” function on the US Census Website¹² was used to calculate commuter trips. Once this number was determined, it was plugged into the equation below.¹³ A metric of estimated commuters riding public transit could then be established, and a flex commuter route was conceptualized. In order to determine the threshold for establishing a commuter route, a recommended standard is 80% of the capacity of a super medium duty cutaway vehicle (18 out of 22 seats filled) as a guide, with a minimum of seven daily trips made and hourly service from 6:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM. This would serve as the threshold needed to establish a flex route at 125 estimated rides.

Commuter Route Inputs:

- Workers Commuting from Rural County to Urban Place (a)
- Distance in Miles from Rural County to Urban Place (b)¹⁴
- Number of Commuters (c)

Equation to Estimate Commuter Transit Trips Per Day:

$$D = [0.024 \times (0.0000056 \times a) - (0.00029 \times b)] \times c \times 2$$

11 TCRP Report 161: Workbook for Estimating Demand for Rural Passenger Transportation (Peer Review Method)

12 <http://onthemap.ces.census.gov/>

13 Note that this method can only be used if there are less than 10,000 people commuting between a rural county to an urban place

14 Distance used is from largest community in the county to urban center

5. Small Fixed Route Demand Methodology¹⁵

Since fixed route systems offer a more standardized service than demand response systems, it is possible to compare them with peer systems from other states. The peers are compared based on how much service they provide, both in their density and amount of service. The geographies of the areas are also compared. From this, several ratios are developed that estimate the demand for service.

Small Fixed Route Inputs:

- Population of the area served
- Square miles of the area served
- Annual vehicle hours of service provided
- Number of one way trips per year

Ratios:

- Trips per Capita
- Trips per Vehicle Mile
- Trips per Vehicle Hour

6. Summary

Table 2 shows how these methodologies will be applied in the various counties in Illinois. For counties with fixed route systems, urban area and rural demand were treated separately; certain counties also showed some commuter demand, and this demand was also treated separately.

15 TCRP Report 161: Workbook for Estimating Demand for Rural Passenger Transportation (Peer Review Method)

Table 2: Transit System Demand Methodologies By County

County	Total Population	Non-urbanized population	Program	Non-Program	Fixed Route	Commuter	County	Total Population	Non-urbanized population	Program	Non-Program	Fixed Route	Commuter
Adams	67,113	26,331	Rural Only	Rural Only	X		Livingston	38,476	38,476	X	X		
Alexander	7,821	7,821	X	X			Logan	30,047	30,047	X	X		
Bond	17,571	17,571	X	X		X	McDonough	32,388	13,195	Rural Only	Rural Only	X	
Boone	54,005	54,005	X	X			McLean	172,390	40,425	Rural Only	Rural Only	X	
Brown	6,878	6,878	X	X			Macon	109,833	34,745	Rural Only	Rural Only	X	
Bureau	34,361	34,361	X	X			Macoupin	47,229	47,229	X	X		
Calhoun	5,033	5,033	X	X			Madison	267,937	84,091	Rural Only	Rural Only	X	
Carroll	15,027	15,027	X	X			Marion	38,922	38,922	X	X		
Cass	13,440	13,440	X	X			Marshall	12,319	12,319	X	X		
Champaign	204,214	79,606	Rural Only	Rural Only	X		Mason	14,309	14,309	X	X		
Christian	34,415	34,415	X	X			Massac	15,148	15,148	X	X		
Clark	16,240	16,240	X	X			Menard	12,658	12,658	X	X		
Clay	13,675	13,675	X	X			Mercer	16,204	16,204	X	X		
Clinton	37,952	37,952	X	X			Monroe	33,373	33,373	X	X		
Coles	53,655	53,655	X	X			Montgomery	29,740	29,740	X	X		
Crawford	19,626	19,626	X	X			Morgan	35,272	35,272	X	X		
Cumberland	10,950	10,950	X	X			Moultrie	14,896	14,896	X	X		
DeKalb	104,919	104,919	X	X			Ogle	52,782	52,782	X	X		
De Witt	16,461	16,461	X	X			Peoria	187,197	65,423	Rural Only	Rural Only	X	
Douglas	19,867	19,867	X	X			Perry	22,034	22,034	X	X		X
Edgar	18,171	18,171	X	X			Piatt	16,552	16,552	X	X		
Edwards	6,687	6,687	X	X			Pike	16,244	16,244	X	X		
Effingham	34,280	34,280	X	X			Pope	4,362	4,362	X	X		
Fayette	22,041	22,041	X	X			Pulaski	5,967	5,967	X	X		
Ford	13,906	13,906	X	X			Putnam	5,895	5,895	X	X		
Franklin	39,774	39,774	X	X			Randolph	33,091	33,091	X	X		
Fulton	36,616	36,616	X	X			Richland	16,144	16,144	X	X		
Gallatin	5,439	5,439	X	X			Rock Island	146,964	38,573	Rural Only	Rural Only	X	
Greene	13,677	13,677	X	X			St. Clair	268,415	138,729	Rural Only	Rural Only	X	
Grundy	50,173	50,173	X	X			Saline	24,876	24,876	X	X		
Hamilton	8,371	8,371	X	X			Sangamon	198,808	77,589	Rural Only	Rural Only	X	
Hancock	18,808	18,808	X	X			Schuyler	7,454	7,454	X	X		
Hardin	4,226	4,226	X	X			Scott	5,260	5,260	X	X		
Henderson	7,074	7,074	X	X			Shelby	22,216	22,216	X	X		
Henry	50,031	50,031	X	X			Stark	5,888	5,888	X	X		
Iroquois	29,272	29,272	X	X		X	Stephenson	47,053	47,053	X	X		X
Jackson	60,125	60,125	X	X			Tazewell	135,872	78,719	Rural Only	Rural Only	X	X
Jasper	9,658	9,658	X	X			Union	17,620	17,620	X	X		
Jefferson	38,716	38,716	X	X			Vermilion	80,773	48,290	Rural Only	Rural Only	X	
Jersey	22,751	22,751	X	X			Wabash	11,730	11,730	X	X		
Jo Daviess	22,427	22,427	X	X			Warren	17,784	17,784	X	X		
Johnson	12,650	12,650	X	X		X	Washington	14,527	14,527	X	X		
Kankakee	112,682	85,537	Rural Only	Rural Only	X		Wayne	16,627	16,627	X	X		
Kendall	118,194	118,194	X	X		X	White	14,549	14,549	X	X		
Knox	52,447	20,549	Rural Only	Rural Only	X		Whiteside	57,680	57,680	X	X		
La Salle	112,698	112,698	X	X			Williamson	66,808	66,808	X	X		
Lawrence	16,726	16,726	X	X			Winnebago	292,026	93,121	Rural Only	Rural Only	X	X
Lee	35,248	35,248	X	X			Woodford	38,965	38,965	X	X		

C. Estimation of Fixed Route/Complimentary ADA Demand

1. Selection of Peer Agencies

Illinois currently has 14 downstate fixed route transit systems focused on the public (two systems, Huskie Lines in DeKalb and Saluki Express in Carbondale are wholly funded by universities and are not part of this study). As discussed in Section B, the methodology used to estimate demand for the fixed route systems in downstate Illinois centers on peer comparisons.

Appropriate peer agencies for each fixed route transit agency were identified by using a methodology from TCRP Report 141¹⁶. This report provides a transit peer ranking system for Section 5307 providers based on five service characteristics and nine urban area characteristics (see Table 3). “Likeness scores” for these factors are determined based on the percentage difference between a potential peer’s value and the target agency’s value.

Table 3: Peer Agency Factors

Urban Area Characteristics	Description	Service Characteristics	Description
Urban Area Population	The total population in the urbanized area (i.e., an urban area with population over 50,000) .	Total Vehicle Miles Operated	The total distance traveled annually by revenue service vehicles of a transit system, including both revenue miles and deadhead miles
Population Growth Rate	The percent change in population between the baseline year of 2000 and the user-selected data year.	Total Operating Budget	The reported total spending on operation, including administration, maintenance, and operation of service vehicles, of a transit system
Population Density	The total population per square mile in the urbanized area the transit agency resides	Percent Demand Response	The percentage of demand response service for an agency, measured based on the number of vehicles operated in maximum service
State Capital	Whether the agency is located in a state capital	Percent Service Purchased	The percentage of transit service purchased from outside service provider(s), measured based on the number of vehicles operated in maximum service.
Percent Population with College Degree	The percentage of population 24 years or older with a minimum of a bachelor degree in the urbanized area the transit agency resides.	Service Area Type	Type of area that transit agency serves (e.g. only central city, central city and suburban, central city and rural, sole provider for an urban area)
Percent Poverty	Percent of population with income below the poverty level		
Annual Delay (Hours) per Traveler	Total annual delay hours per traveler as reported in the Urban Mobility Report published by the Texas Transportation Institute		
Freeway Lane-Miles per Capita	Average freeway lane-miles per resident as reported in the Urban Mobility Report from TTI; used only for large urban areas.		
Distance	The distance in miles between the target and peer systems, measured between the centroid locations of their urbanized areas.		

16 An on-line tool for calculating likeness scores can be accessed at <http://www.ftis.org/INTDAS/>.

A score of zero indicates that the peer and target agency values are exactly alike, while a score of one indicates that one agency's value is twice the amount of the other. A total likeness score is calculated from the individual factors. Peer information is shown in the Appendix.

In general, a total likeness score under 0.50 indicates a good peer match, a score between 0.50 and 0.74 represents a satisfactory peer match, and a score between 0.75 and 0.99 represents usable potential comparison that may not in fact be useful. The geographic location of the transit agency was also taken into consideration while choosing appropriate peers.

For non-urban fixed route providers there is not a readily available on-line tool for calculating peers. However, using the same methodology can provide relevant peer agencies in nearby states.

2. Identification of Fixed Route Services with Unmet Projected Demand

Of the 14 Illinois fixed route systems, only four show that they have unmet projected demand. These systems are: Peoria (CityLink), Bloomington (Connect Transit), Rockford (RMTD), and Madison County (MCT). These fixed route systems most likely have unmet demand because they are operating less service hours than would be expected, as compared to their peers. A review of each of these systems, the peers they are being compared to, and the demand not being met (measured in service hours) follows.

Most Illinois fixed route systems are meeting demographically anticipated demand at a substantially higher percentage than their peers from other states. Because the amount of service provided actually exceeds the amount of demand that would be predicted by simple demographics, it can be inferred that a significant number of "choice" riders are being attracted by these agencies. Choice riders are riders who aren't necessarily dependent on public transportation for their travel mode, but choose public transportation as they find it more convenient than driving.

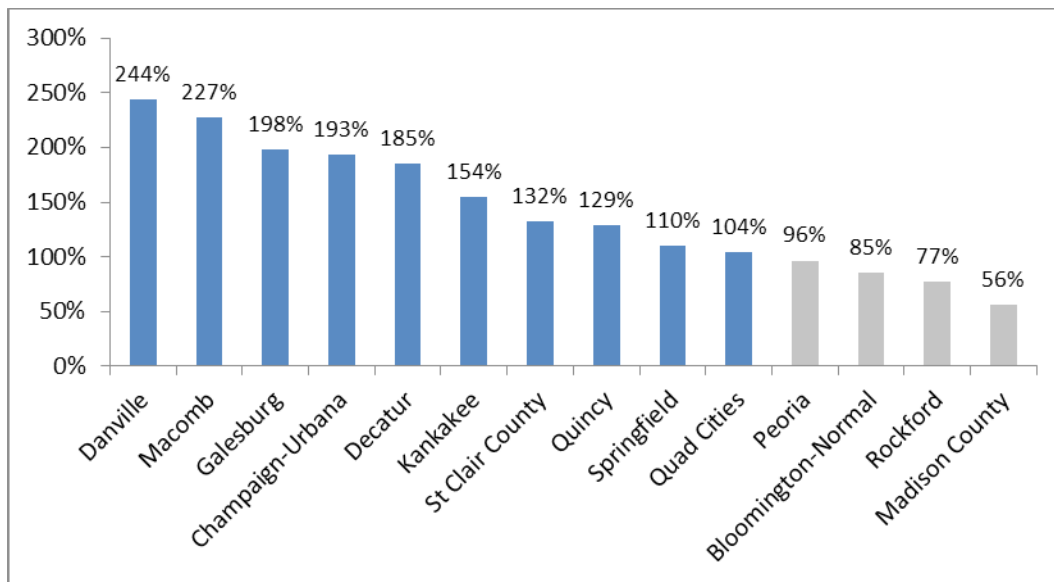


Figure 1: Percentage of Demand Met by Fixed Route Systems¹⁷

3. Peoria (CityLink)

Agencies with the highest “Peer Similarity” scores for CityLink are the transit systems in the Quad Cities (Illinois), Shreveport (LA), Erie (PA), Savannah (GA), and South Bend (IN). CityLink is currently meeting 96% of all demographically anticipated demand. In order to reach 100% demand, it is estimated that CityLink would need to provide approximately 6,000 more service hours annually. A recommendation to extending all routes until 8:00 PM on weekdays would fill this gap.

4. Bloomington-Normal (Connect Transit)

Agencies with the highest “Peer Similarity” scores for Connect Transit are the transit systems in Lafayette (IN), Charlottesville (VA), Kenosha (WI), Racine (WI), and Bloomington (IN). Connect Transit is meeting 85% of demographically anticipated demand currently, leading to a deficit of about 19,000 revenue hours.

Connect Transit recently initiated Sunday service to match current Saturday service on all routes, which should help close most of this gap; the rest of the gap could be closed by starting the three highest ridership routes an hour earlier on Saturday.

¹⁷ Demand is considered “Demographically Anticipated Demand”

5. Rockford (RMTD)

Agencies with the highest “Peer Similarity” scores for RMTD are the transit systems in Fort Wayne (IN), South Bend (IN), Evansville (IN), Springfield (IL), and Shreveport (LA). RMTD is meeting 77% of expected demand, which translates to a deficit of about 28,000 hours. Implementing the following service expansions would make up the difference:

- Implementing half hour peak weekday service on the 11 routes currently running hourly (or worse) headways all day
- A new commuter route (identified in Section E) between Rockton and Rockford
- Restore hourly service to Belvidere

6. Madison County (MCT)

Madison County’s peer systems are other regionally focused systems: Greater Attleboro-Taunton Regional Transit Authority (several exurban Boston communities); CATA (Lansing, East Lansing, MI); Pioneer Valley (Springfield, MA region); Metro RTA (Summit County, OH); Jefferson Transit (Jefferson Parish, part of suburban New Orleans, LA). They are meeting just over half (55%) of projected demand, a deficit of 121,000 hours.

This hourly deficit would require extensive system expansion, which could include:

- Running all regional, cross county and shuttle routes at half hour intervals on all days
- Running all shuttle routes on Sunday
- Expanding general demand response service to rural Madison County
- Running limited midday and weekend service on the St. Louis express routes

D. Identification of New Fixed Route System

Cities that are not part of a larger metropolitan area, that lack a fixed route system and have a combined projected program/non-program demand greater than 48,000 riders can be considered ideal candidates for the initiation of fixed route system service. The average program/non-program demand for five peer cities between 20,000 and 40,000 people with fixed route systems was calculated. The cities were Paducah and Frankfort, Kentucky; Muskogee (Oklahoma); Bluefield-Princeton (West Virginia); and Vicksburg (Mississippi). Examining cities of more than 20,000 residents in Illinois, under this rubric the City of Freeport presents itself particularly as a strong candidate for fixed-route transit service. Freeport has a higher than state average poverty and unemployment rate; introducing a fixed route system will improve mobility for job access for these residents. At present, Freeport has a demand response system which is open to the general public; however, general public demand systems are more useful for lifeline transportation (medical appointments, and essential shopping trips) than for trips requiring regular daily drop-offs and pick-ups (such as for a job).

Using the methodology explained in Section B (*Program and Non Program Demand Methodologies*), a demand estimate for the City of Freeport was developed and is shown in Table 4. The program/non-program demand shown in Freeport is greater than 48,000 riders which, as noted above, is the minimum threshold to start a fixed route system:

Table 4: Freeport Fixed Route Projected Demand

Program	Population	Estimated Participation	Demand
Developmental Services: Adult	20,180	43	6,013
Developmental Services: Case Mgmt	663	18	353
Group Home	1,117	14	2,659
Mental Health Services	1,117	15	446
Mental Health Services: Case Mgmt	15,034	126	303
Senior Nutrition	5,146	155	18,216
Non-Program			
Population Age 60+	6,987		15,371
Population Age 18-64 with a Mobility Limitation	663		3,454
Persons Living Households without a Vehicle	2,420		3,678
		Total Projected Demand	50,494

Figure 2 shows a conceptual routing of this new fixed route system.

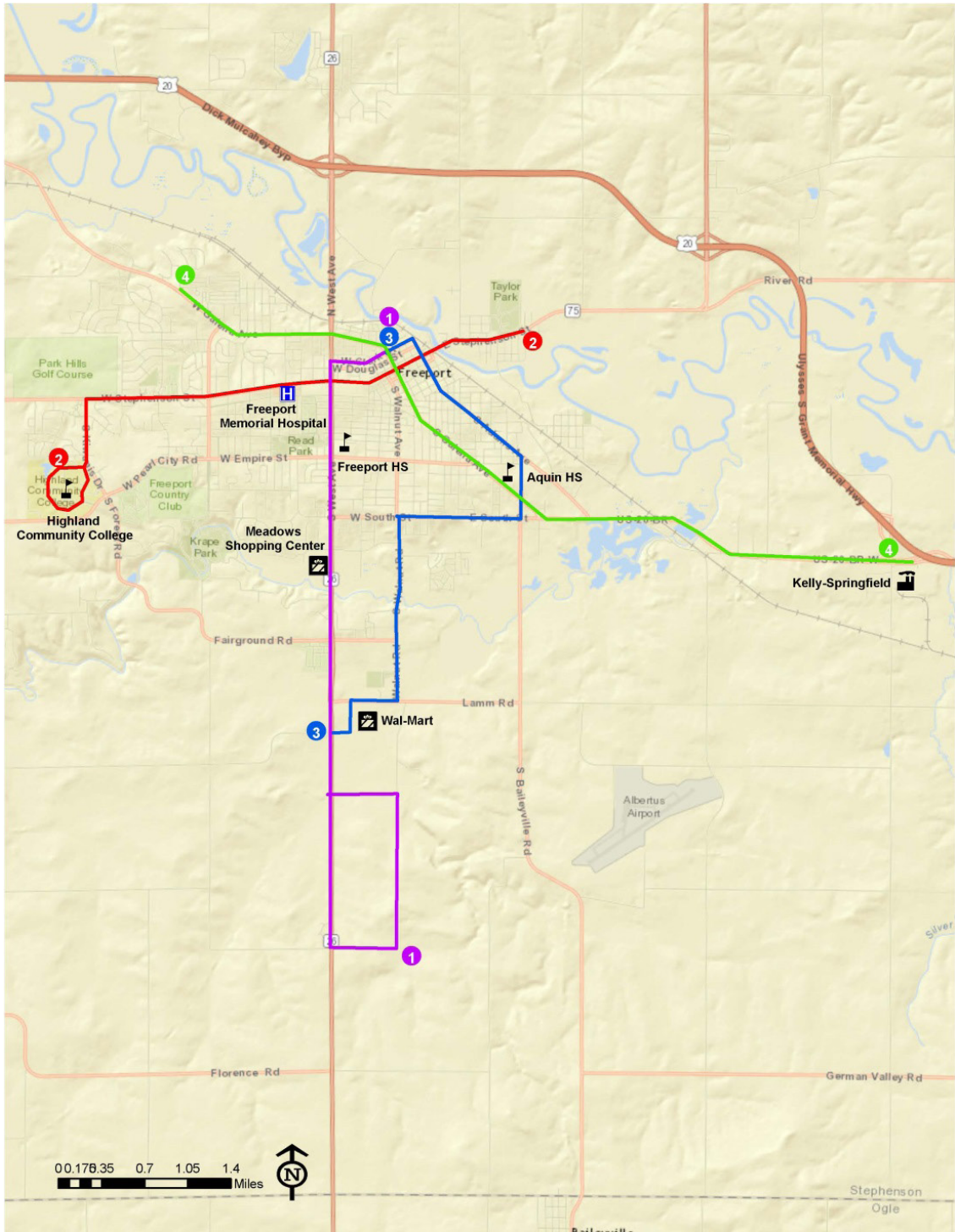


Figure 2: Conceptual Freeport Fixed Route System

E. Identification of New Commuter Routes¹⁸

Commuter routes are defined as buses running on fixed routes on fixed schedules over a distance greater than ten miles with limited stops. Most trips bring residents from suburban areas to nearby urban cores, but some serve demand along a “reverse commute” path as well. Major portions of these routes are non-stop, i.e. express service. To identify new commuter routes, the following analysis was conducted: For those counties with above 2,000 projected daily trips to a nearby urban core, trip origin was ascertained first at the ZIP code level, and then at the community level to determine whether a fixed commuter route would make sense. If ridership from one of these communities to the urban core was projected to be above 125, it was marked in this report as candidate for a potential new commuter route.

1. Rockford Region

In recent years, suburban areas to the north of Rockford have grown in population even as population core city has remained static at best. While the Rockford Mass Transit District (MTD) operates two routes in suburban Machesney Park and Loves Park, the villages of Roscoe and Rockton (population 10,680 and 5,296, respectively) currently only have access to general public demand service, provided by Stateline Mass Transit District. Daily demand for a route connecting Roscoe and Rockton to Rockford is estimated at approximately 150 commuters; a potential commuter, peak hour only service would appear to be both viable and needed.

Once a commuter route is established, further travel within Rockford, Belvidere, Cherry Valley, Loves Park, and Machesney Park could be accomplished via transfers to existing RMTD Routes 20 and 22 at either West Lane Road (IL Route 173) or Alpine Road, and at the East Side Transfer Center to Routes 11, 18, 19, and 24. Figure 3 shows a conceptual routing for this commuter route.

18 All employment numbers are from 2014 taken from OnTheMap (<http://onthemap.ces.census.gov/>)

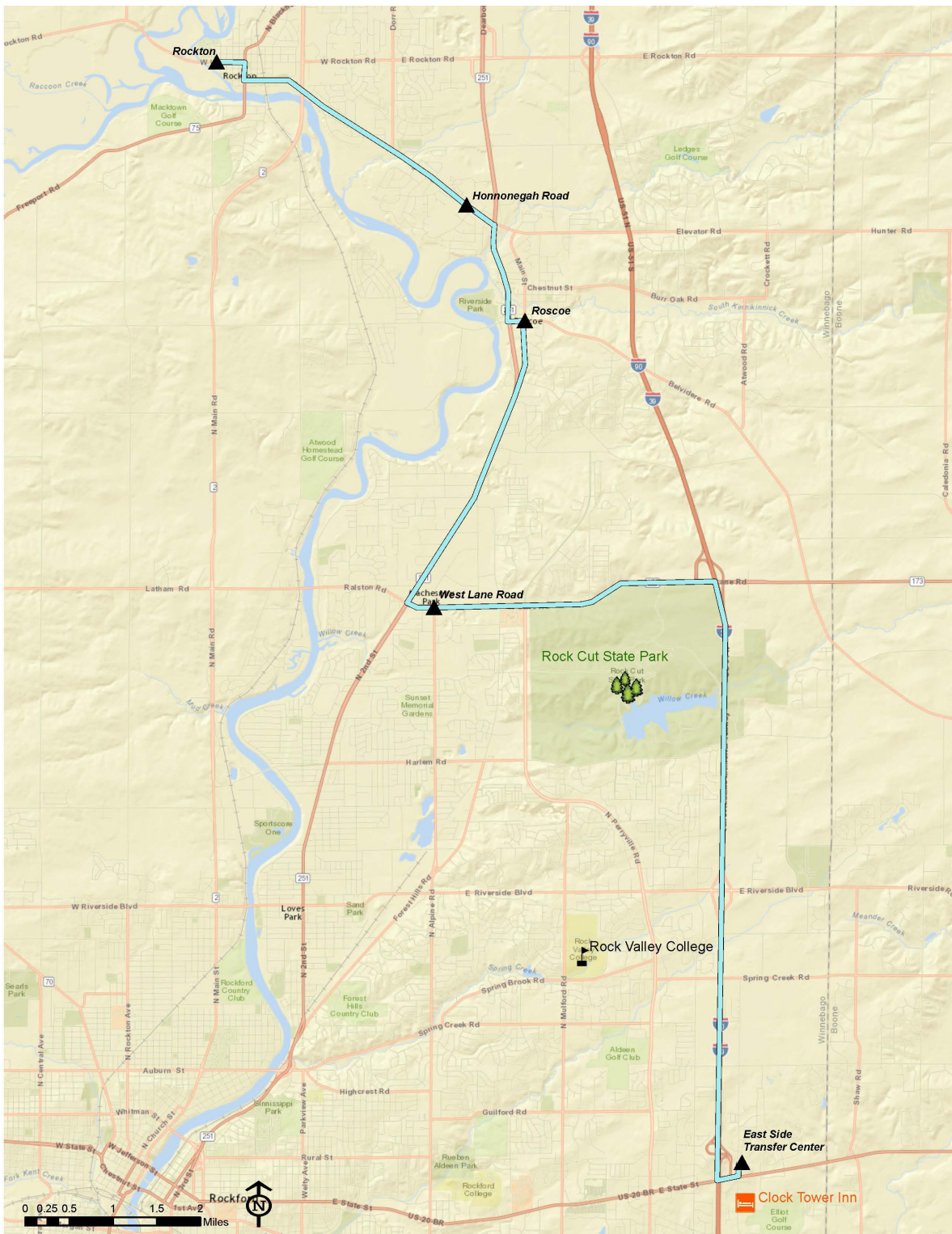


Figure 3: Conceptual Rockford Commuter Route

2. Peoria Region

Two communities east of Peoria show high commuter demand: Washington, with a population of about 15,000, and Morton, with a population of 16,525. Washington shows a projected demand of 160 riders to workplaces in East Peoria and Peoria, sufficient for a peak period express route. This could either be a new route, with limited stops all the way into Peoria (as shown in Figure 4), or the current CityLink Route 8 could be extended east from its present terminus at Sunnyland Plaza. Connections to other CityLink routes can be made at Sunnyland Plaza (Route 8) and at the Transit Center in Downtown Peoria.

Morton has sufficient demand in both directions to warrant an all-day route; there are about 150 commuters projected to use transit to access jobs in and around Morton (large employers in the community include a pumpkin canning factory operated by Nestle; Morton Buildings; Morton Industries; Matcor Metal Fabrication; and a Caterpillar parts warehouse). 180 commuters are projected to use the service in the “traditional” commute manner. Connections to other CityLink routes can be made at the Transit Center in Downtown Peoria.

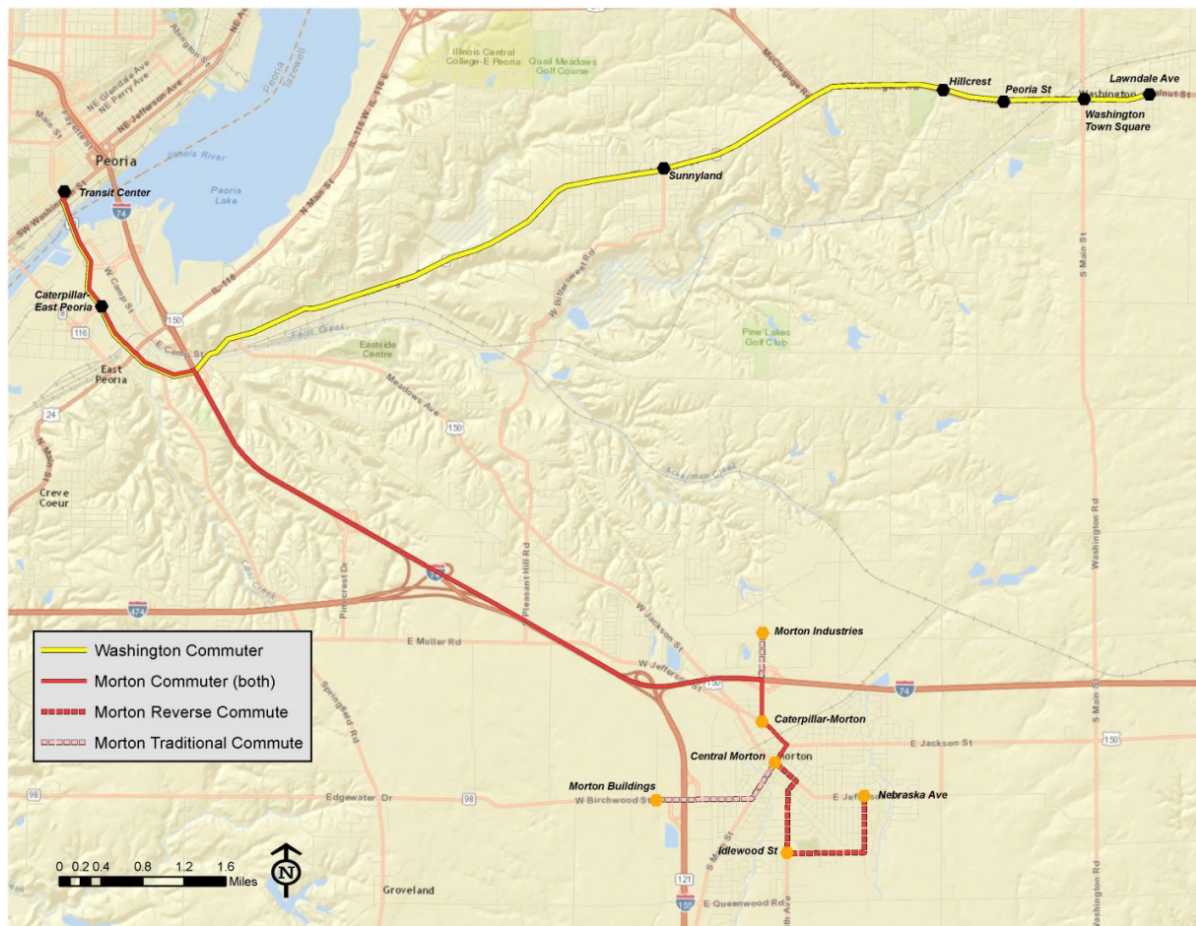


Figure 4: Conceptual Peoria Commuter Routes

3. Aurora Region

There is strong projected demand for a commuter route from the Village of Oswego to the City of Aurora. A previous route operated between Oswego and the Aurora Metra station, but this route focused more on commuters to and from the urban core of Chicago rather than central Aurora. A route designed to connect to the Pace “pulse” at the Aurora Transportation Center would reorient this service to those working in the Aurora–Naperville–Warrenville employment corridor along I-88. If Metra decides to extend service to Oswego, this route will serve as an interim option until that line is completed. Figure 5 shows this conceptual route.

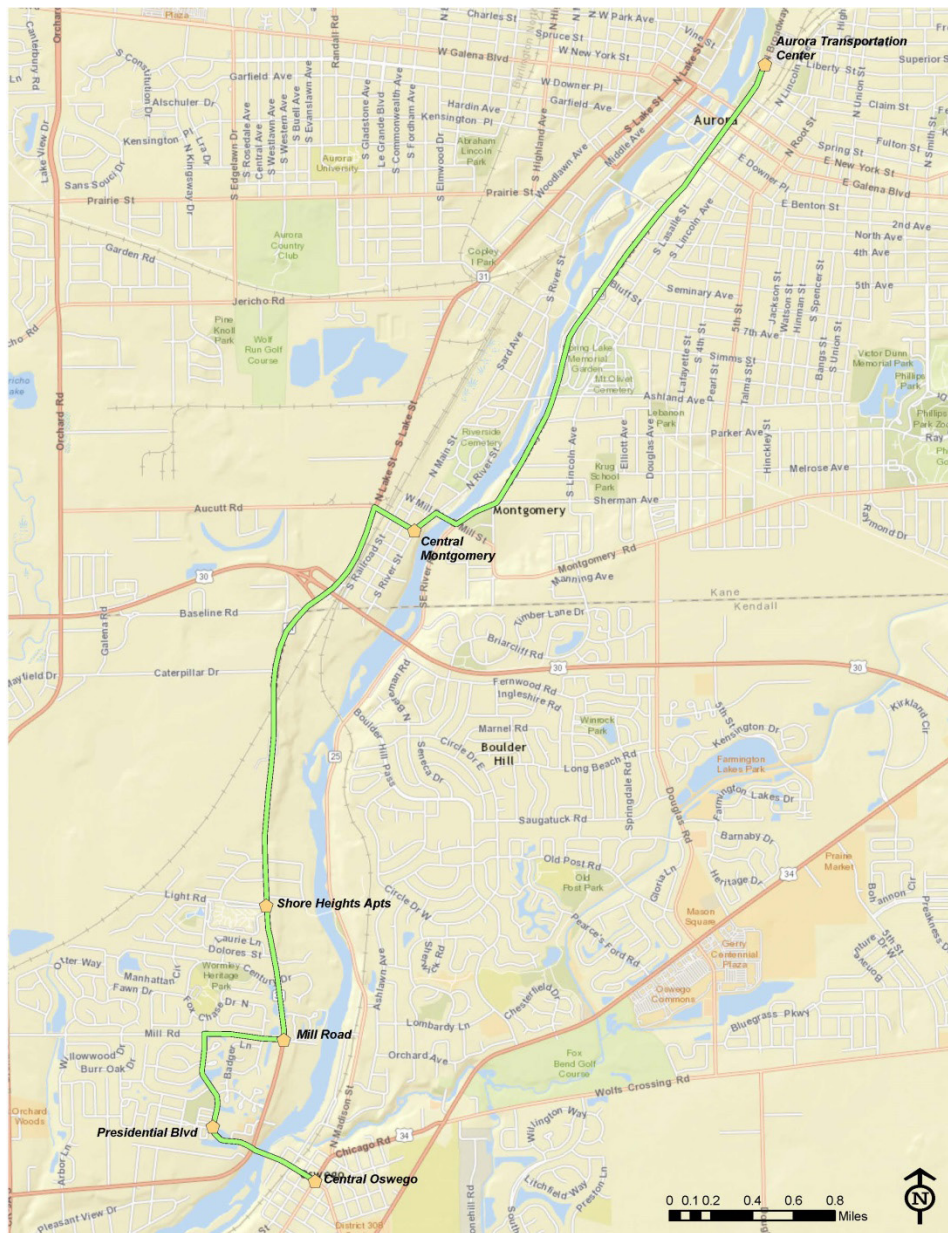


Figure 5: Conceptual Aurora Commuter Route

4. Commuting Possibilities in High-Need, Low-Density Areas

There is a great need in the state for connecting counties with high unemployment levels to proximate areas with large employment bases. One of the primary goals for public transportation is to help residents access opportunities to advance their personal and economic prospects, either through education or employment, without necessarily making a cost prohibitive investment in a personal vehicle. Many Illinois counties with high levels of joblessness do not meet the daily ridership threshold set for traditional rural to urban commuter routes (i.e. 125 projected riders per day). However, the need for opportunity is no less acute for these residents who happen to live in areas with lower population densities. Establishing rural intercity flex routes with limited stops in small communities could go a long way in addressing this gap. Services of this type should use minibuses and operate on a limited basis (i.e. not on regular headways).

Counties chosen for discussion below have commuter flows of more than 2,000 a day; have poverty rates above the state average; and are adjacent to counties with more than 24,000 jobs¹⁹.

The following flex commuter routes were explored and are shown in Figures 6 and 7:

1. Anna to Carbondale

- *Connections can be made throughout Carbondale with existing Jackson County MTD Flex Routes*
- *28 minute running time (one way)*

2. Greenville to Edwardsville

- *Connections can be made throughout Madison County, and to St. Louis, at the MCT Edwardsville Station*
- *39 minute running time (one way)*

3. Watseka to Kankakee via St Anne and Aroma Park

- *Connections could be made in Kankakee with River Valley Metro; perhaps could be through routed with their route to Metra*
- *40 minute running time (one way)*

4. Vienna to Marion

- *28 minute running time (one direction). This route could possibly be through routed with existing RIDES intercity route to Carbondale.*

5. Pinckneyville to Murphysboro and Carbondale

- *Connections can be made throughout Carbondale with existing Jackson County MTD Flex Routes*
- *37 minute running time (one way)*

6. Freeport to Rockford

- *Connections can be made throughout Rockford with the RMTD.*
- *35 minute running time (one way)*

¹⁹ Note that smaller populated counties like Alexander and Union were not deemed to have a population threshold to make a commuter route worthwhile. Also, although Pittsfield (to Quincy) and Paris (to Danville) have similar demand to the above commuter services, their running time (over 45 minutes) would not likely attract any regular riders.

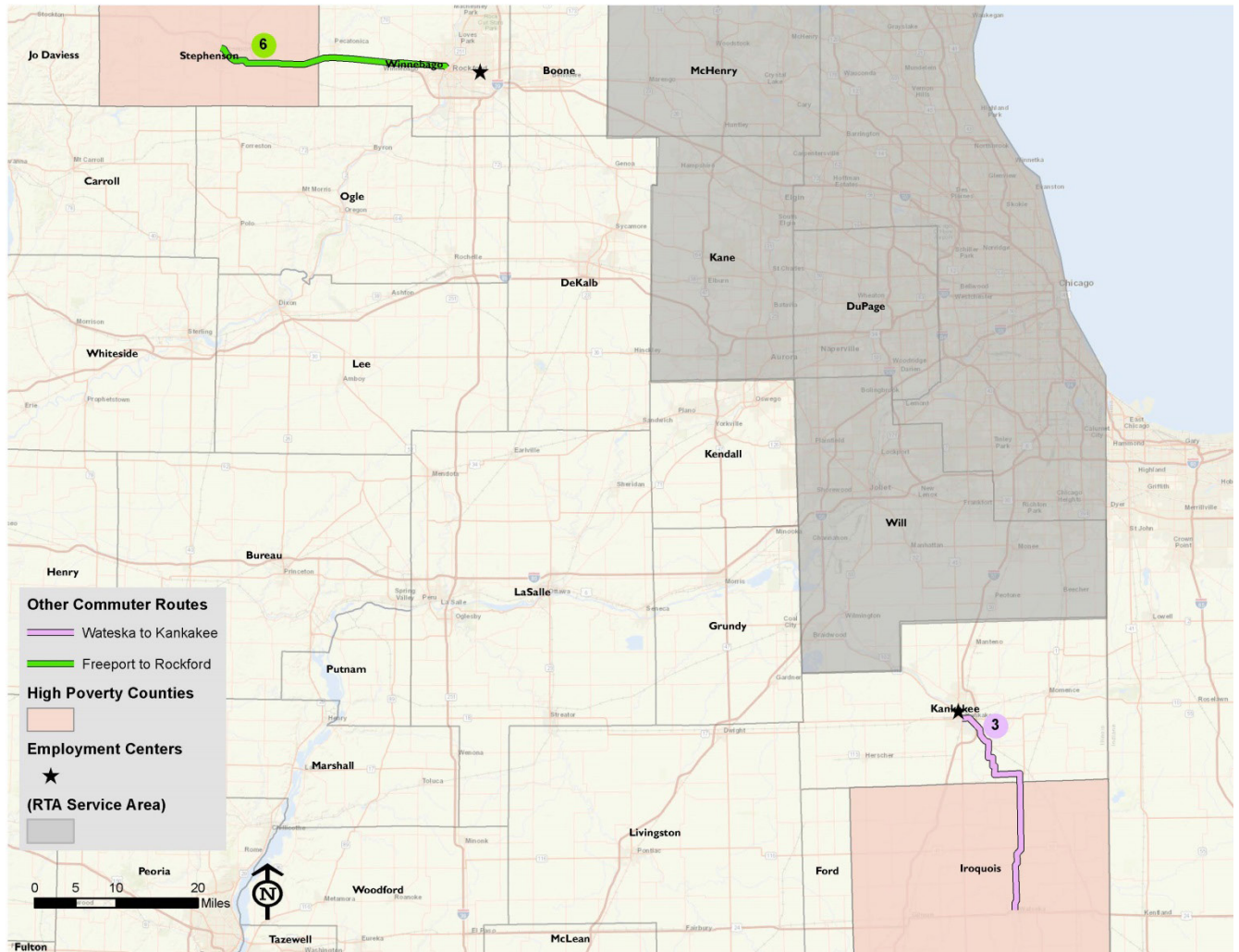


Figure 6: Conceptual Other Commuter Routes: North

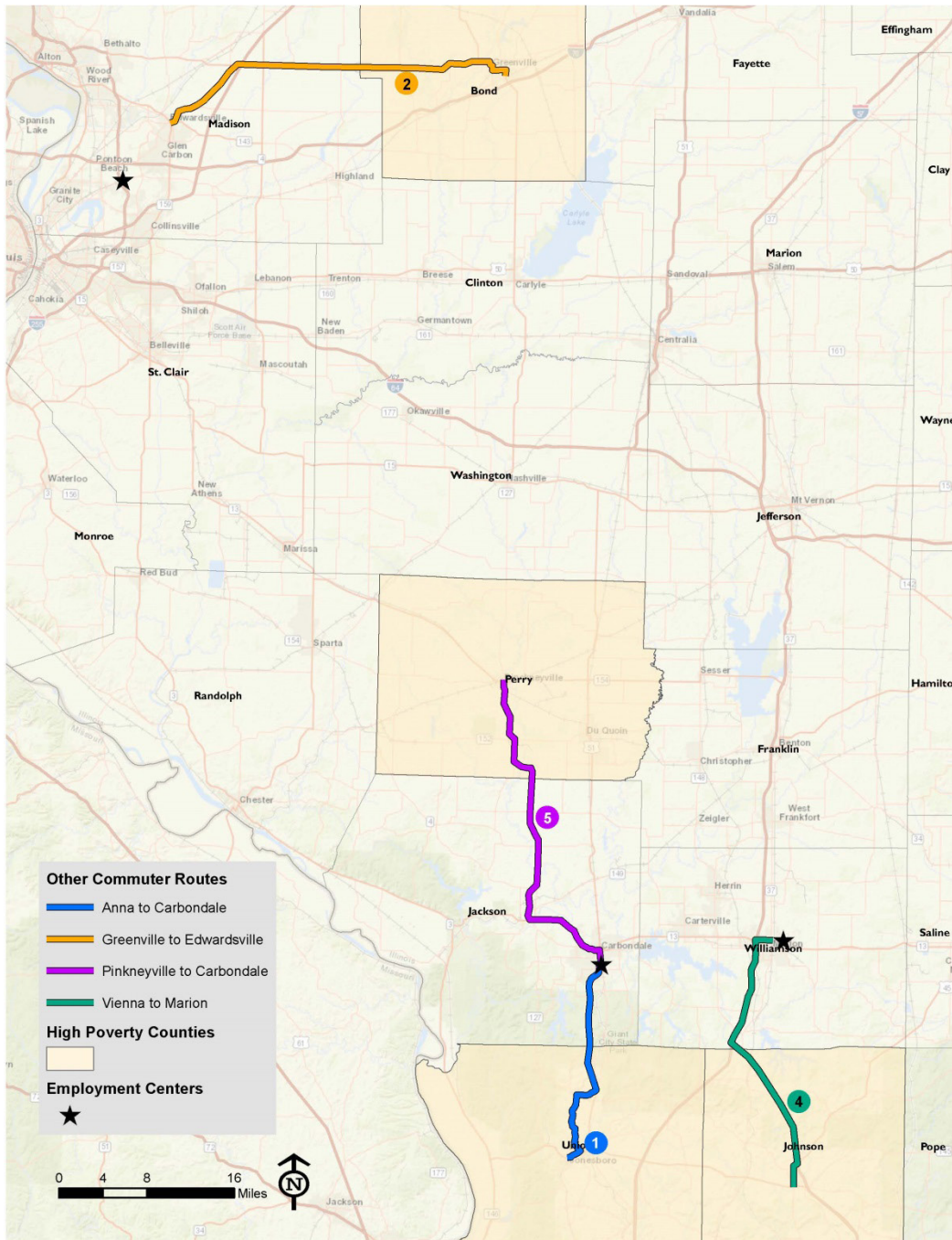


Figure 7: Conceptual Other Commuter Routes: South

F. Demand Response Service Demand

As stated previously, demand response services can be roughly divided into general demand response/flex route service (represented by non-program demand) and limited demand response service (represented by program demand). For the purposes of this section, those demand projections are added together, with the assumption that a hypothetical flex route/demand response service could serve both types of demand, either independently or in tandem with social service agencies.

Figures 8 and 9 and Tables 5 and 6 identify the projected demand for both program and non-program trips in the non-urbanized parts of all Illinois counties. Adams, Champaign, Cook, Macon, Madison, McLean, McDonough, Kankakee, Knox, Peoria, Rock Island, Sangamon, St Clair, Vermillion, and Winnebago Counties are counties that have urbanized areas with fixed route systems; demand for these urbanized areas is addressed in Section C. Figure 3 organizes overall demand projections into the 11 existing HSTP regions. Table 5 provides estimated demand for years 2015 and 2025. Note that these demand numbers are meant to apply to demand response services only and not to fixed route or commuter services which were addressed in previous sections.

Based on the methodologies used and described in Section B, the total amount of demand response need in the downstate HSTP regions is estimated at 5.2 million demand response rides per year. Since 2.9 million rides were provided last year by the current human service transportation providers, it is estimated that almost 45% of demand was not met. This estimated demand is expected to remain relatively flat between now and 2025 due to low expected population growth in downstate Illinois. In general, the amount of demand met varies throughout the state but it appears that regions that include one or more urbanized areas have more difficulty meeting estimated demand than those which are mainly rural.

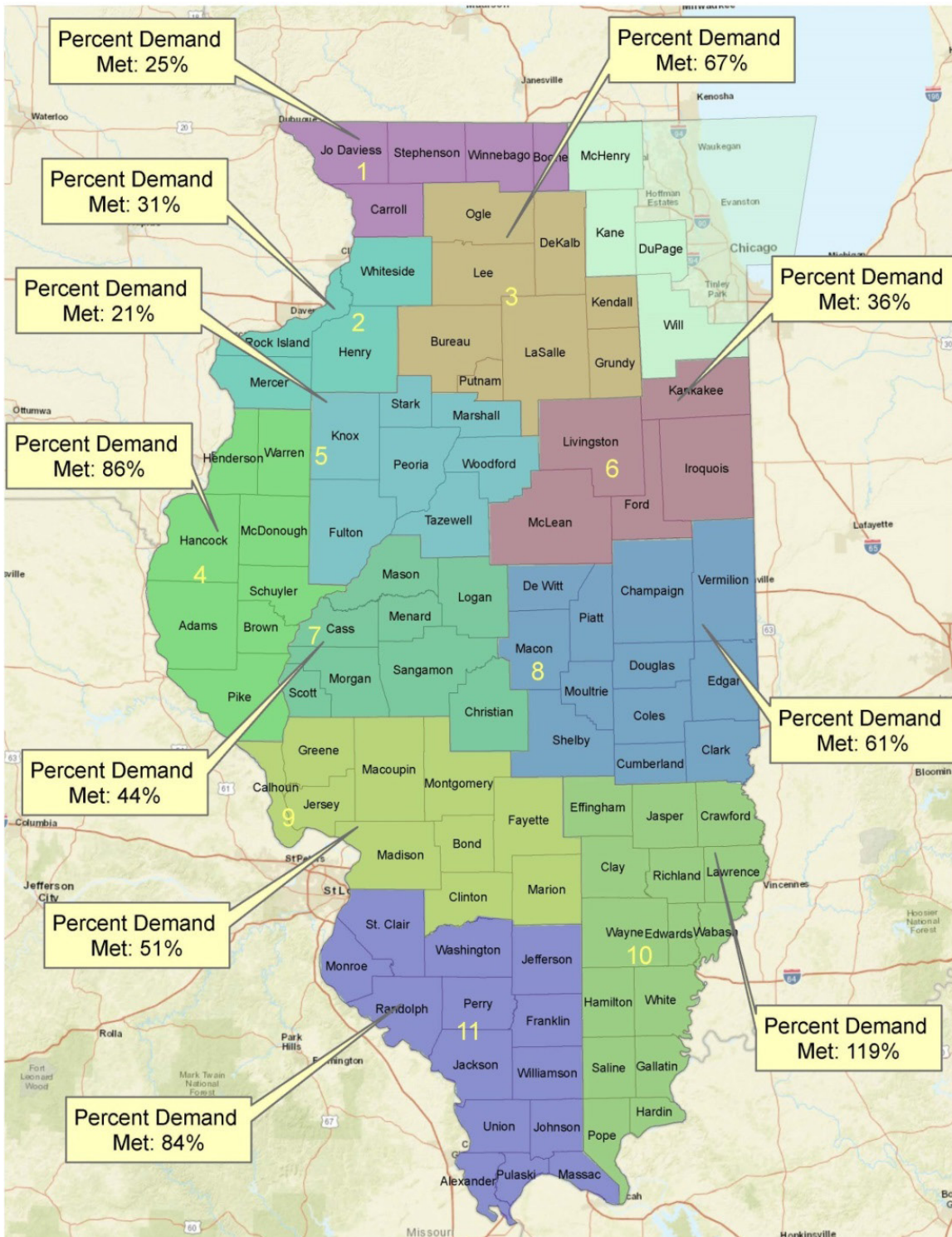


Figure 8: Projected Demand Met by HSTP Region

Table 5: Demand by County: Projected Change From 2015-2025

County	2015	2025	Difference	County	2015	2025	Difference
Adams	43,128	41,079	-2,049	Livingston	64,135	66,002	1,867
Alexander	18,248	17,049	-1,199	Logan	48,070	48,700	630
Bond	30,082	31,996	1,914	McDonough	24,682	26,341	1,659
Boone	70,765	85,585	14,820	McLean	57,366	65,840	8,474
Brown	10,331	11,783	1,452	Macon	55,035	51,674	-3,361
Bureau	63,588	61,336	-2,252	Macoupin	86,066	82,300	-3,767
Calhoun	11,000	10,613	-387	Madison	142,704	145,394	2,690
Carroll	30,179	27,315	-2,864	Marion	72,828	67,890	-4,938
Cass	21,418	20,301	-1,117	Marshall	23,374	21,989	-1,385
Champaign	108,224	119,571	11,347	Mason	28,224	23,815	-4,408
Christian	62,932	59,147	-3,785	Massac	31,145	31,742	596
Clark	27,412	25,278	-2,134	Menard	21,039	21,462	424
Clay	25,475	24,085	-1,390	Mercer	29,046	28,057	-989
Clinton	58,460	60,275	1,815	Monroe	48,265	55,034	6,768
Coles	86,929	94,625	7,696	Montgomery	48,634	47,936	-698
Crawford	34,896	33,582	-1,314	Morgan	62,386	62,142	-244
Cumberland	20,721	20,191	-530	Moultrie	26,344	26,008	-336
DeKalb	130,843	158,289	27,446	Ogle	83,291	86,534	3,243
De Witt	27,851	26,217	-1,634	Peoria	145,899	142,372	-3,528
Douglas	32,699	32,439	-260	Perry	38,021	38,929	908
Edgar	33,702	29,931	-3,771	Piatt	26,485	25,602	-883
Edwards	13,326	12,453	-873	Pike	30,944	29,144	-1,800
Effingham	52,536	50,849	-1,687	Pope	11,248	11,125	-124
Fayette	37,659	39,519	1,861	Pulaski	13,737	11,692	-2,044
Ford	25,806	24,577	-1,228	Putnam	10,966	11,119	153
Franklin	83,141	79,345	-3,796	Randolph	57,305	55,577	-1,728
Fulton	66,845	64,298	-2,547	Richland	32,108	28,934	-3,174
Gallatin	12,339	10,549	-1,790	Rock Island	64,177	61,711	-2,466
Greene	24,558	22,317	-2,241	St. Clair	213,180	211,776	-1,403
Grundy	69,605	81,773	12,168	Saline	54,362	50,918	-3,444
Hamilton	16,971	16,859	-112	Sangamon	111,093	115,779	4,686
Hancock	35,183	31,013	-4,170	Schuyler	14,737	13,922	-815
Hardin	10,980	9,774	-1,206	Scott	10,498	10,123	-375
Henderson	14,926	13,769	-1,156	Shelby	42,175	40,091	-2,084
Henry	88,645	83,718	-4,927	Stark	12,758	11,785	-973
Iroquois	53,955	49,428	-4,527	Stephenson	90,336	87,525	-2,811
Jackson	92,377	96,515	4,138	Tazewell	114,244	114,719	474
Jasper	17,826	15,327	-2,499	Union	36,997	35,968	-1,029
Jefferson	71,568	72,705	1,137	Vermilion	82,149	77,743	-4,406
Jersey	37,029	38,875	1,846	Wabash	21,989	20,557	-1,432
Jo Daviess	45,395	44,136	-1,259	Warren	30,101	28,891	-1,210
Johnson	23,786	26,116	2,330	Washington	25,725	25,058	-668
Kankakee	143,064	151,178	8,114	Wayne	31,324	29,086	-2,238
Kendall	108,336	143,162	34,827	White	29,271	25,863	-3,408
Knox	36,196	34,044	-2,152	Whiteside	104,301	97,506	-6,795
La Salle	191,154	190,028	-1,126	Williamson	121,957	126,407	4,451
Lawrence	26,729	26,156	-572	Winnebago	246,421	258,287	11,866
Lee	59,715	61,191	1,476	Woodford	56,635	60,116	3,481

Table 6: Projected Demand Met by County

County	Current Demand	Current Ridership	Percent of Current Demand Met	2025 Demand	Percent of Future Demand Met	County	Current Demand	Current Ridership	Percent of Current Demand Met	2025 Demand	Percent of Future Demand Met
Adams	43,128	0	0%	41,079	0%	Livingston	64,135	18,560	29%	66,002	28%
Alexander	18,248	29,164	100%	17,049	100%	Logan	48,070	20,027	42%	48,700	41%
Bond	30,082	35,611	100%	31,996	100%	McDonough	24,682	49,029	100%	26,341	100%
Boone	70,765	27,825	39%	85,585	33%	McLean	57,366	124,497	100%	65,840	100%
Brown	10,331	20,108	100%	11,783	100%	Macon	55,035	7,659	14%	51,674	15%
Bureau	63,588	63,816	100%	61,336	100%	Macoupin	86,066	40,311	47%	82,300	49%
Calhoun	11,060	0	0%	10,613	0%	Madison	142,704	0	0%	145,394	0%
Carroll	30,179	1,578	5%	27,315	6%	Marion	72,828	10,971	15%	67,890	16%
Cass	21,418	19,039	89%	20,301	94%	Marshall	23,374	4,183	18%	21,989	19%
Champaign	108,224	16,891	16%	119,571	14%	Mason	28,224	1,761	6%	23,815	7%
Christian	62,932	0	0%	59,147	0%	Massac	31,145	36,616	100%	31,742	100%
Clark	27,412	6,531	24%	25,278	26%	Menard	21,039	0	0%	21,462	0%
Clay	25,475	6,166	24%	24,005	26%	Mercer	29,046	4,425	15%	28,057	16%
Clinton	58,460	104,199	100%	60,275	100%	Monroe	48,265	13,405	28%	55,034	24%
Coles	86,929	52,534	60%	94,625	56%	Montgomery	48,634	10,802	22%	47,936	23%
Crawford	34,896	39,398	100%	33,582	100%	Morgan	62,386	108,814	100%	62,142	100%
Cumberland	20,721	10,678	52%	20,191	53%	Moultrie	26,344	15,432	59%	26,008	59%
DeKalb	130,843	50,008	38%	158,289	32%	Ogle	83,291	9,829	12%	86,534	11%
De Witt	27,851	21,685	78%	26,217	83%	Peoria	145,899	26,123	18%	142,372	18%
Douglas	32,699	7,465	23%	32,439	23%	Perry	38,021	52,901	100%	38,929	100%
Edgar	33,702	35,615	100%	29,931	100%	Piatt	26,485	43,851	100%	25,602	100%
Edwards	13,326	3,552	27%	12,453	29%	Pike	30,944	19,821	64%	29,144	68%
Effingham	52,536	37,020	70%	50,849	73%	Pope	11,248	17,173	100%	11,125	100%
Fayette	37,659	5,865	16%	39,519	15%	Pulaski	13,737	23,616	100%	11,692	100%
Ford	25,806	7,395	29%	24,577	30%	Putnam	10,966	3,008	27%	11,119	27%
Franklin	83,141	208,496	100%	79,345	100%	Randolph	57,305	19,735	34%	55,577	36%
Fulton	66,845	27,217	41%	64,298	42%	Richland	32,108	37,012	100%	28,934	100%
Gallatin	12,339	20,761	100%	10,549	100%	Rock Island	64,177	15,350	24%	61,711	25%
Greene	24,558	0	0%	22,317	0%	St. Clair	213,180	0	0%	211,776	0%
Grundy	69,605	11,051	16%	81,773	14%	Saline	54,362	100,165	100%	50,918	100%
Hamilton	16,971	21,623	100%	16,859	100%	Sangamon	111,093	0	0%	115,779	0%
Hancock	35,183	13,438	38%	31,013	43%	Schuyler	14,737	2,946	20%	13,922	21%
Hardin	10,980	21,623	100%	9,774	100%	Scott	10,498	1,272	12%	10,123	13%
Henderson	14,926	0	0%	13,769	0%	Shelby	42,175	21,131	50%	40,091	53%
Henry	88,645	37,952	43%	83,718	45%	Stark	12,758	1,949	15%	11,785	17%
Iroquois	53,955	55,433	100%	49,428	100%	Stephenson	90,336	39,550	44%	87,525	45%
Jackson	92,377	56,729	61%	96,515	59%	Tazewell	114,244	35,371	31%	114,719	31%
Jasper	17,826	5,637	32%	15,327	37%	Union	36,997	37,101	100%	35,968	100%
Jefferson	71,568	117,081	100%	72,705	100%	Vermilion	82,149	50,062	61%	77,743	64%
Jersey	37,029	0	0%	38,875	0%	Wabash	21,989	20,731	94%	20,557	100%
Jo Daviess	45,395	39,825	88%	44,136	90%	Warren	30,101	56,729	100%	28,891	100%
Johnson	23,786	22,964	97%	26,116	88%	Washington	25,725	40,283	100%	25,058	100%
Kankakee	143,064	32,823	23%	151,178	22%	Wayne	31,324	72,813	100%	29,086	100%
Kendall	108,336	26,000	24%	143,162	18%	White	29,271	22,701	78%	25,863	88%
Knox	36,196	0	0%	34,044	0%	Whiteside	104,301	45,504	44%	97,506	47%
La Salle	191,154	47,943	25%	190,028	25%	Williamson	121,957	177,224	100%	126,407	100%
Lawrence	26,729	23,361	87%	26,156	89%	Winnebago	246,421	9,748	4%	258,287	4%
Lee	59,715	47,470	79%	61,191	78%	Woodford	56,635	13,232	23%	60,116	22%

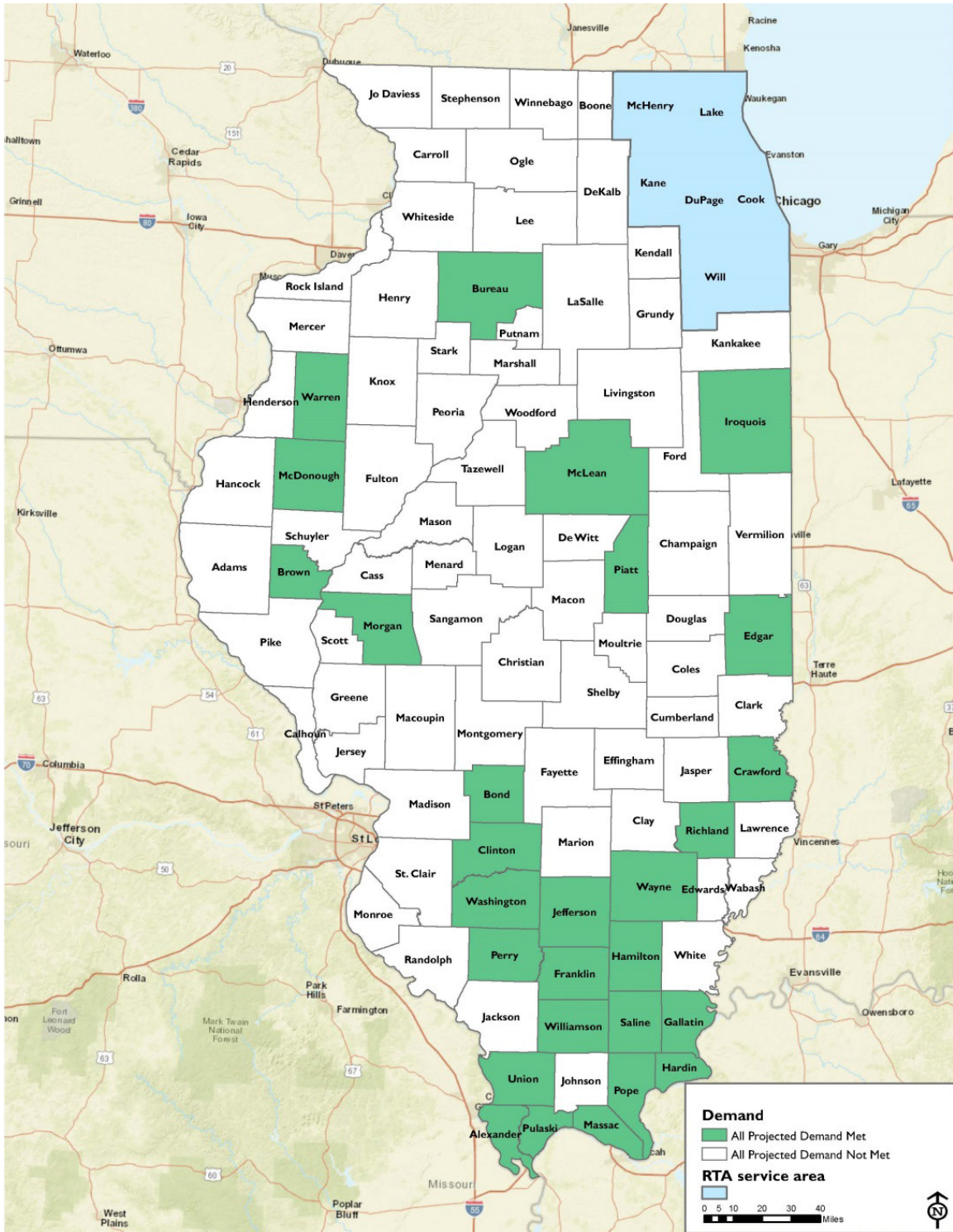


Figure 9: Illinois Counties with All Projected Demand Met

1. Identification of New and Enhanced Demand Response Services

For counties that show between 1,000 and 2,000 daily commute trips between them, it is recommended that a scheduled demand response trip be instituted. These trips can accommodate subscribed riders for work trips, medical appointments, and for social visits. The trips would not have a specific route; rather, they would spend a period of time picking up riders around the origin county, and then drop them off in the largest community or urban area in an adjacent county.

Table 7 shows the (origin) counties recommended for such a service.

Table 7: Proposed Scheduled Demand Response Trips by County

County	Destination	Connections
Christian	Springfield	SMTD Transfer Center (SMTD)
DeKalb	Rockford	Downtown Transit Center (RMTD)
	Elgin	Elgin Transportation Center (Pace, Metra)
	Aurora	Aurora Transportation Center (Pace, Metra)
Fulton	Peoria	CityLink Transfer Center (CityLink)
Kendall	Joliet	Joliet Union Station (Pace, Metra)
Logan	Springfield	SMTD Transfer Center (SMTD)
Morgan	Springfield	SMTD Transfer Center (SMTD)
Whiteside	Clinton, IA	Central Transfer Point (MTA)
Woodford	Peoria	CityLink Transfer Center (CityLink)
	Bloomington	Uptown Normal (Connect Transit, Amtrak)

Also, in order to meet some of this demand, there were some recommended fixed route and commuter bus solutions mentioned in Section F. For Stephenson County, it is expected that by implementing a City of Freeport fixed route system, most if not all of the unmet demand in the county could be met. In addition, unmet Tazewell County demand could be satisfied by the two commuter bus routes proposed for the Peoria metropolitan area.

In addition, general public demand response service should be established in the 11 counties that do not currently have it (shown in Figure 10), either by extending services from a nearby provider, or establishing a new provider. The counties that have no public transit service (as of 2015) are Calhoun, Greene, Henderson, Jersey, and Menard counties. Adams, Knox, Madison, Sangamon, St. Clair, and Winnebago are counties with fixed route and paratransit service, but have gaps (large rural segments of the counties with no general public demand response service). When establishing general public demand response services, there should be a service span of at least 12 hours, with service operating until at least 5:00 PM. It is also recommended that a minimum service area size should be established for all general public demand response transit providers. Best practices indicate that 4,500 square miles is a good threshold for service area, and/or a minimum population of 150,000. Implementing service areas of this size will also reduce the need to make interagency transfers or to run trips out of the service area to access medical appointments, educational or vocational opportunities, and social service agency visits.

Having a general public demand response service area meet these minimum thresholds will also enable the agency to access a large enough base of potential service contracts for local match, and allow the agency to be more cost effective when purchasing vehicles or technology products.

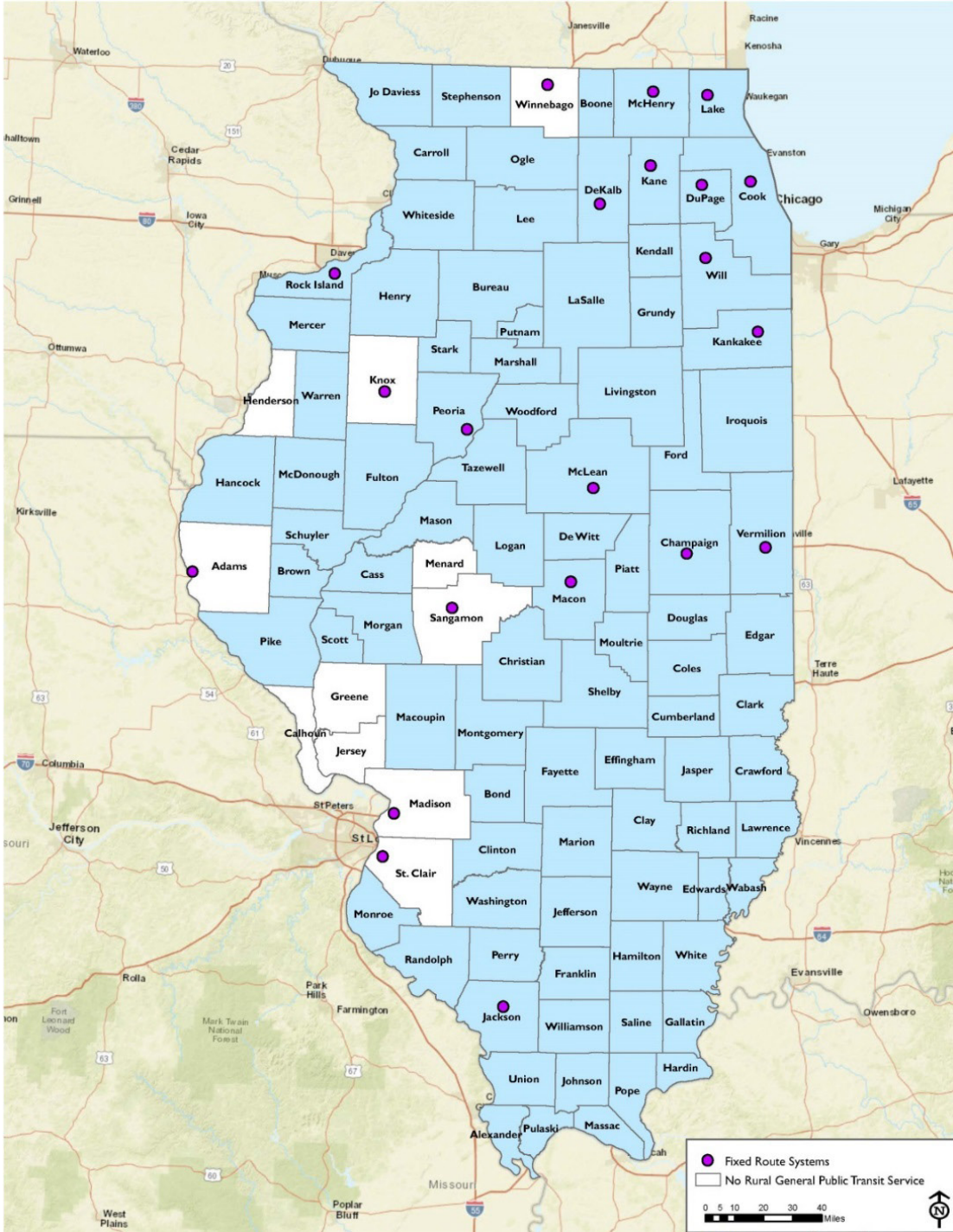


Figure 10: Counties Without Rural Transit Available to the General Public

G. Intercity Demand

1. Near-Term Priorities

In order to meet future intercity travel demand, a proper foundation must be established. The following are some near-term solutions that may help achieve this:

- The Illinois Bus Network website should be updated and expanded to include regional maps and online timetables. Intercity operators should be included in a GTFS feed registry to facilitate inclusion of independently-developed trip planning applications and all feeds should be submitted to Google to make statewide trip planning via common consumer technology (i.e., computers, smart phones, etc.).
- The process of establishing multimodal transit centers, which make transfers between carriers feasible, should continue; intercity carriers should be encouraged to relocate to existing transit centers in Rockford, Decatur, and Danville (new facility under construction). New transit centers, consolidated with rail passenger stations should be constructed in Springfield (to be built in conjunction with relocation of the passenger rail route through downtown to the 10th Street corridor) and in Quincy (to replace one on the outskirts of town). This latter transit center was rejected locally in 2014
- Kankakee and Galesburg should consider relocation their current central on-street terminals with transit centers at the rail passenger stations.

2. Longer Term Recommendations

The Chicago to Springfield portion of Chicago to St. Louis rail route should be double-tracked, allowing nine daily round trips in this segment. Double-tracking of the existing Union Pacific route is not recommended as the proposed high speed route will need to be a dedicated passenger-only line. A shorter route, with the potential for a station more centrally-located in Madison County (Edwardsville is a good candidate) should be the focus for future investment. A spur passenger line off of this track should be extended to Peoria, from Normal. Some trains could terminate in Peoria rather than St. Louis. Refer to Figure 11.

For shorter routes, a full Chicago—Rockford—Dubuque rail route should begin operations, with four daily round trips to Rockford, and two of these trips operating through to/from Dubuque. The Chicago—Quad Cities route, recently approved for state funding, should run four round trips daily.

It is assumed that with the services described above in place there would no longer be a significant market for the for-profit operators of bus, air, or airport bus service between Chicago and Champaign, Springfield, Normal, Peoria, or Rockford.

Regional commuter rail should be expanded beyond the current Metra statutory area (Cook, Lake, Kane, McHenry, DuPage, and Will Counties). The following routes are recommended:

- Rockford, taking the form of either an extension of some St. Louis or Champaign trains beyond O'Hare or an extension of some of the Metra service that now terminates in Elgin.
- Ottawa and LaSalle/Peru, following the long range recommendations of the recently-completed Illinois Valley Study for four peak period trips (eastbound in the morning, westbound in the evening, probably as an extension of existing Metra Rock Island District trains).
- Oswego and Plano (supplementing the existing, and planned, Amtrak trips) probably also as extension of peak period Metra BNSF commuter rail trips.

Any intercity bus routes in the future that do not parallel rail service should offer, at least, two trips per day in each direction.

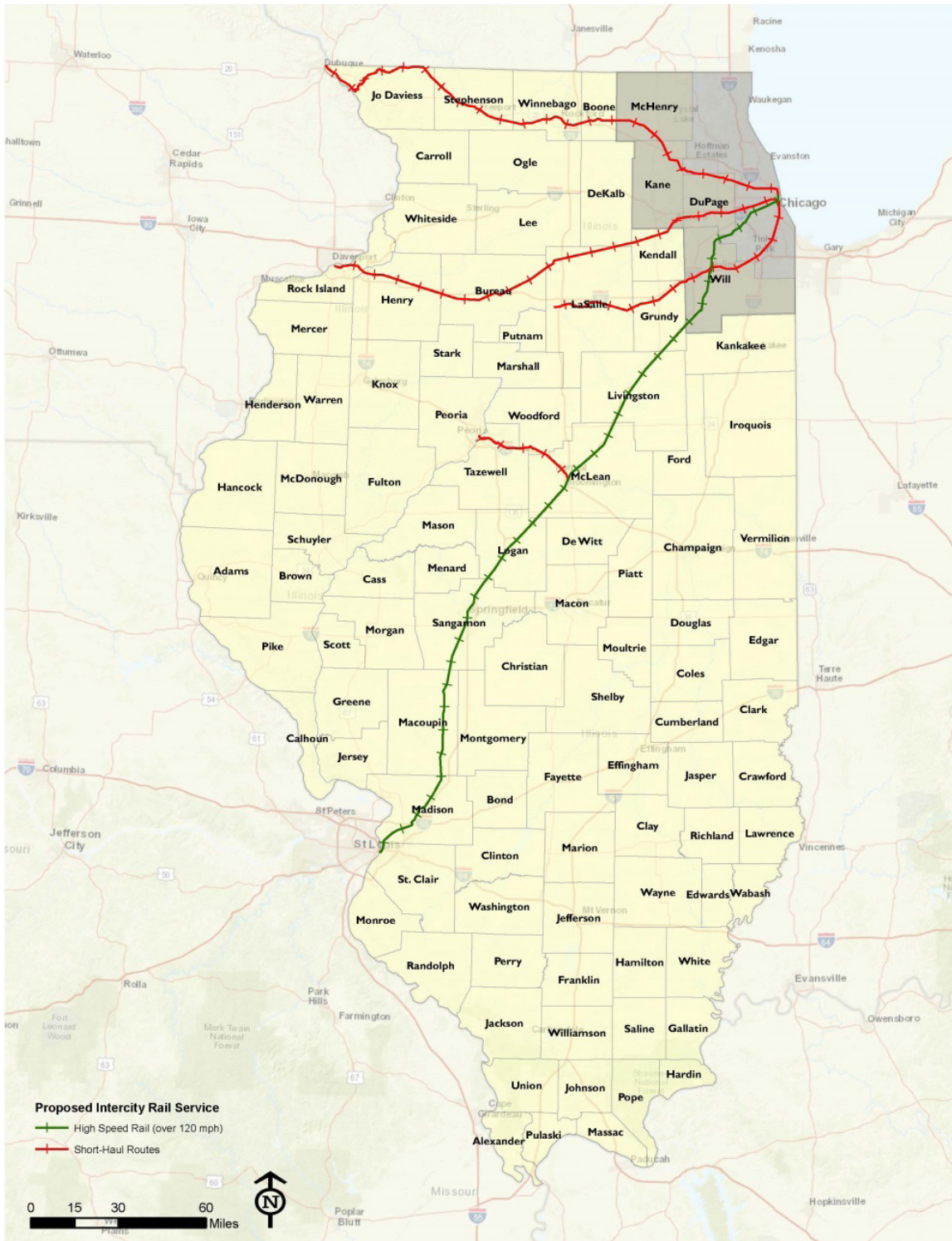


Figure 11: Proposed Intercity Rail Service

SERVICE GAPS AND NEEDS REPORT

Illinois Statewide Public Transportation Plan

APPENDIX

Input Data from Peer Transit Systems

Name of Peer System	Quad Cities (MetroLink)	Shreveport	Erie	Savannah	South Bend
Population of Area	268,624	275,814	192,204	207,917	271,689
Size of Area Served (Square Miles)	46	185	82	165	161
Annual Vehicle-Miles of Service Provided	2,451,868	2,826,947	2,910,950	3,176,053	1,526,683
Annual Vehicle-Hours of Service Provided	170,588	191,955	249,174	250,329	112,600
Service Type (Fixed Route, Route-Deviation, Demand-Response)	Fixed Route	Fixed Route	Fixed Route	Fixed Route	Fixed Route
Number of One-Way Trips Served per Year	3,571,142	3,339,458	3,692,041	4,391,966	2,296,904

Results of Peer Data Comparison		Annual Vehicle- Annual vehicles-			Average Demand	Current Ridership	Difference	Hours Needed
		Population	miles	hours				
Input Data for CityLink:		244,009	2,733,844	168,627				
Observed Trip Rates		Demand Estimate Based On:						
Peer Values		Population	Annual Vehicle- miles	Annual vehicles- hours				
Trips per Capita								
Maximum	21.1	5,148,590						
Average	14.8	3,611,333						
Median	13.3	3,245,320						
Minimum	8.5	2,074,077						
Trips per Vehicle-Mile								
Maximum	1.5		4,100,766					
Average	1.4		3,827,382					
Median	1.4		3,827,382					
Minimum	1.2		3,280,613					
Trips per Vehicle-Hour								
Maximum	20.9			3,524,304				
Average	18.2			3,069,011				
Median	17.5			2,950,973				
Minimum	14.8			2,495,680				
Values expected for my system								
Maximum		5,148,590	4,100,766	3,524,304.0				
Average		3,611,333	3,827,382	3,069,011.0	3,502,575	3,376,486	126,089	6,304
Median		3,245,320	3,827,382	2,950,973.0				
Minimum		2,074,077	3,280,613	2,495,680.0				

Input Data from Peer Transit Systems					
Name of Peer System	Fort Wayne	South Bend	Evansville	Springfield (IL)	Shreveport
Population of Area	291,314	271,689	218,749	157,591	275,814
Size of Area Served (Square Miles)	172	161	119	92	185
Annual Vehicle-Miles of Service Provided	1,757,635	1,526,683	1,585,525	1,707,928	2,826,947
Annual Vehicle-Hours of Service Provided	126,591	112,600	113,544	133,387	191,955
Service Type (Fixed Route, Route-Deviation, Demand-Response)	Fixed Route	Fixed Route	Fixed Route	Fixed Route	Fixed Route
Number of One-Way Trips Served per Year	2,035,378	2,296,904	1,926,472	1,863,394	3,339,458
Degree of Coordination with Other Carriers (Low, Medium, High)					

Results of Peer Data Comparison	Annual Vehicle- Annual vehicles-			Average Demand	Current Ridership	Difference	Hours Needed
	Population	miles	hours				
Input Data for RMTD:	278,959	1,947,549	139,388				
	Observed Trip Rates	Demand Estimate Based On:					
	Peer Values	Population	Annual Vehicle- miles	Annual vehicles- hours			
	Trips per Capita						
	Maximum	12.1	3,375,404				
	Average	9.6	2,678,006				
	Median	8.8	2,454,839				
	Minimum	7.0	1,952,713				
	Trips per Vehicle-Mile						
	Maximum	1.5		2,921,324			
	Average	1.2		2,337,059			
	Median	1.2		2,337,059			
	Minimum	1.1		2,142,304			
	Trips per Vehicle-Hour						
	Maximum	20.4		2,843,515			
	Average	17.0		2,369,596			
	Median	17.0		2,369,596			
	Minimum	14.0		1,951,432			
	Values expected for my system						
	Maximum	3,375,404	2,921,324	2,843,515.0	2,461,554	1,914,428	547,126
	Average	2,678,006	2,337,059	2,369,596.0			27,356
	Median	2,454,839	2,337,059	2,369,596.0			
	Minimum	1,952,713	2,142,304	1,951,432.0			

Input Data from Peer Transit Systems

Name of Peer System	Lafayette	Charlottesville (JAUNT)	Kenosha	Racine	Bloomington (IN)
Population of Area	138,534	91,068	120,142	131,012	105,345
Size of Area Served (Square Miles)	74	35	51	49	21
Annual Vehicle-Miles of Service Provided	1,873,133	1,995,119	1,008,991	1,383,937	1,138,840
Annual Vehicle-Hours of Service Provided	149,812	112,898	78,501	97,131	107,448
Service Type (Fixed Route, Route-Deviation, Demand-Response)	Fixed Route	Fixed Route	Fixed Route	Fixed Route	Fixed Route
Number of One-Way Trips Served per Year	5,458,986	314,994	1,319,931	1,395,324	3,485,063
Degree of Coordination with Other Carriers (Low, Medium, High)					

Results of Peer Data Comparison		Population	Annual Vehicle-miles	Annual vehicles-hours	Average Demand	Current Ridership	Difference	Hours Needed
		121,236	1,555,991	110,399				
Input Data for Connect Transit:								
	Observed Trip Rates	Demand Estimate Based On:						
Peer Values		Population	Annual Vehicle-miles	Annual vehicles-hours				
Trips per Capita								
Maximum	39.4	4,776,698						
Average	19.5	2,364,102						
Median	11.0	1,333,596						
Minimum	3.5	424,326						
Trips per Vehicle-Mile								
Maximum	3.1		4,823,572					
Average	1.7		2,645,185					
Median	1.3		2,022,788					
Minimum	0.2		311,198					
Trips per Vehicle-Hour								
Maximum	36.4			4,018,524				
Average	20.6			2,274,219				
Median	16.8			1,854,703				
Minimum	2.8			309,117				
Values expected for my system								
Maximum		4,776,698	4,823,572	4,018,524.0				
Average		2,364,102	2,645,185	2,274,219.0	2,427,835	2,067,276	360,559.33	19,281
Median		1,333,596	2,022,788	1,854,703.0				
Minimum		424,326	311,198	309,117.0				

Input Data from Peer Transit Systems

Name of Peer System	Greater Attleboro-Taunton Regional Transit Authority (Taunton)	CATA (Lansing)	Pioneer Valley (Springfield, MA)	METRO RTA (Akron)	Jefferson Parish Department of Transit Administration (Gretna)
Population of Area	98,175	287,598	551,543	542,899	431,019
Size of Area Served (Square Miles)	72	136	302	420	94
Annual Vehicle-Miles of Service Provided	3,256,355	5,933,418	7,101,709	5,683,623	1,809,034
Annual Vehicle-Hours of Service Provided	200,546	421,720	523,133	412,305	132,899
Service Type (Fixed Route, Route-Deviation, Demand-Response)	Fixed Route	Fixed Route	Fixed Route	Fixed Route	Fixed Route
Number of One-Way Trips Served per Year	1,177,036	11,868,880	11,750,780	5,427,929	2,217,009
Degree of Coordination with Other Carriers (Low, Medium, High)					

Results of Peer Data Comparison		Annual			Average Demand	Current Ridership	Difference	Hours Needed
		Population	Vehicle-miles	Annual vehicles-hours				
Input Data for MCT:		232,298	5,583,842	259,016				
Observed Trip Rates		Demand Estimate Based On:						
Peer Values		Population	Annual Vehicle-miles	Annual vehicles-hours				
Trips per Capita								
Maximum	41.3	9,593,907						
Average	17.9	4,158,134						
Median	12.0	2,787,576						
Minimum	5.1	1,184,720						
Trips per Vehicle-Mile								
Maximum	2.0		11,167,684					
Average	1.2		6,700,610					
Median	1.2		6,700,610					
Minimum	0.4		2,233,537					
Trips per Vehicle-Hour								
Maximum	28.1			7,278,350				
Average	17.3			4,480,977				
Median	16.7			4,325,567				
Minimum	5.9			1,528,194				
Values expected for my system								
Maximum		9,593,907	11,167,684	7,278,350.0				
Average		4,158,134	6,700,610	4,480,977.0	5,113,240	2,848,662	2,264,578.33	121,100
Median		2,787,576	6,700,610	4,325,567.0				
Minimum		1,184,720	2,233,537	1,528,194.0				

