

Pace ReVision

# Network Concepts Report

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# What is Pace's ReVision Project?



# ReVision is a plan to reimagine the Chicago region's suburban bus network.

## What is Pace?

Pace Suburban Bus serves two critical functions in the Chicagoland transportation system.

- Pace provides **general public transit** in suburban Cook County, as well as DuPage, Kane, Lake, McHenry and Will counties. This service is available to everyone.
- Pace also provides **ADA paratransit**<sup>1</sup> in these six counties, including in the City of Chicago. This specialized service is available to qualifying people with disabilities.

Pace is one of the three transit service boards that operate under the Regional Transportation Authority (RTA) in the Chicago region. The other two are:

- Chicago Transit Authority (CTA), which provides bus and rail service, mostly in the City of Chicago.
- Metra, which provides commuter rail services connecting the city and its suburbs.

## Pace Suburban Service

### Suburban Bus Network

ReVision focuses on transit that is available to everyone, including:

- **Bus routes** that operate on a fixed schedule, with a fixed set of bus stops<sup>2</sup>. This includes

<sup>1</sup> ADA is the Americans with Disabilities Act. ADA regulations require public transit agencies to better serve people with disabilities, as a civil right. This includes the requirement for paratransit, which exists to serve people who are not able to use general public transit. Paratransit is usually provided as a reservation-based door-to-door service between any two locations within 3/4-mile of all-day bus and rail service.

<sup>2</sup> In some outer suburban and rural areas where bus stops have not yet been installed, Pace bus routes also can stop at locations requested by passengers. These are called "flag stops".

both regular bus routes and Pace's new Pulse rapid routes<sup>3</sup>.

- **On Demand** zones, where Pace operates a bus that people can use to reach any location within a fixed area. This includes connections to nearby bus and rail routes.

See page 6 for an overview map of the suburban bus network. Detailed sub-regional maps are available in Appendix A.

### Other Suburban Services

This report does not cover the following services that are used only by advanced reservation:

- Dial-A-Ride. These are similar to On Demand zones, but they usually require advance trip reservations and may only be available to specialized population groups such as seniors and people with disabilities. Dial-A-Rides are typically a partnership with Pace and are largely funded by municipal, township and county governments.
- Vanpools. These programs allow commuters who regularly travel to the same places at similar times to share use of a van owned by Pace. Occasional vanpool trips can also be reserved through VanGo.

ReVision focuses on where and how often Pace buses operate, and where to provide regular, express or On Demand bus service.

<sup>3</sup> Pulse is Pace's arterial rapid transit (ART) program. Pulse routes operate every 15 minutes or better most of the day, seven days per week. Pulse routes also make fewer stops and operate faster than traditional routes thanks to improvements like transit signal priority.

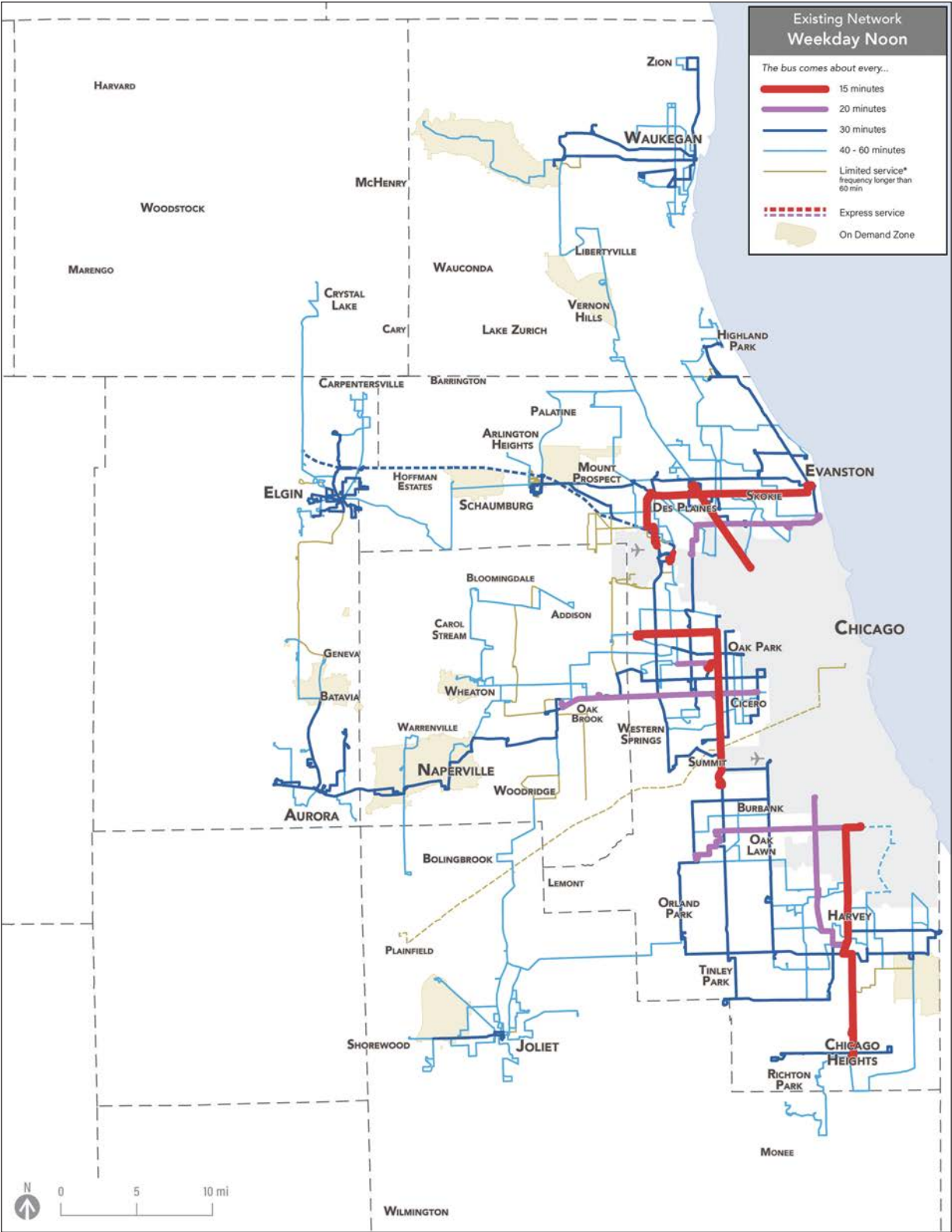
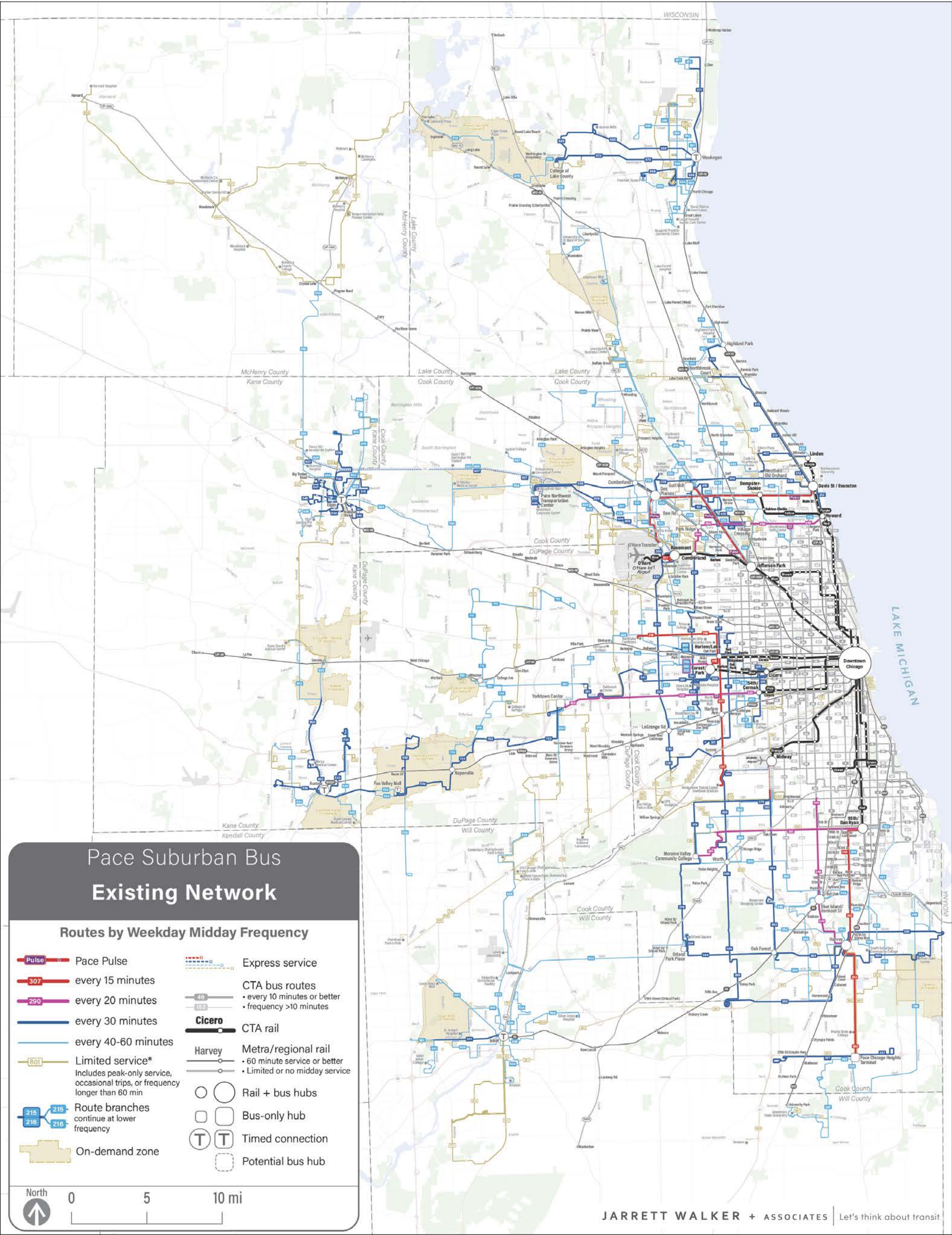


Figure 1: Simplified map of Pace's existing service as of Spring 2024, based on service frequency on weekdays at noon. See following page and Appendix A for more detailed maps.



# Network Overview Map - Spring 2024





# Why does the suburban bus network need to change?

## 1. Pace's funding is inadequate for the area it serves.

### Pace covers a large area with very little service.

Pace's service area covers 3,450 square miles, and about 5.7 million suburban residents. Despite this, Pace's suburban services receive less than 10% of regional public funding for transit operations<sup>1</sup>. This is due to a regional formula that has limited bus transit funding in suburban areas despite decades of suburban population growth. As a result, **Pace's resources are much less than those of other agencies serving comparable suburban areas.**

1 The Regional Transportation Authority (RTA)'s 2024 budget allocates \$233 million of public funding to Pace operations, out of a regional total of \$2.40 billion. Public funding accounts for nearly 70% of Pace's total operating expenses.

For example, Pace's service area is similar in scale to Connecticut, or half of New Jersey<sup>2</sup>. These suburban states have a similar range of land uses, and are also served by extensive commuter rail systems connecting to a transit-rich inner city. But, as shown in Figure 2, **transit agencies in Connecticut and New Jersey provide 50 to 100% more bus service per capita than Pace.**

The difference is even more stark comparing Pace with the Toronto suburbs, where local agencies provide over four times as much bus service per resident, and transit ridership is over ten times higher than in Pace's service area<sup>3</sup>.

2 Connecticut has a land area of about 4,800 square miles and a population of about 3.6 million. New Jersey has a land area of 7,400 square miles and a population of about 9.3 million.  
3 In 2022, Pace buses served 13.6 million boardings in a region with about 5.7 million suburban residents. Bus agencies in the Toronto suburbs served a combined 133 million boardings in a region with about 3.8 million suburban residents.

### Most people and places are far from transit.

The network map on page 6, and the chart in Figure 3 below, make the consequences of this low funding clear. **Nearly 60% of people and jobs in Pace's service area are located more than a half-mile from any bus or rail service.**

The sheer scale of these numbers suggests that this is not just about low densities and scattered development. Large, continuously developed areas – where millions of people live – have little to no bus or rail service.

The numbers also suggest this is not just about people with means or privilege choosing to live in places where a car is required. **Nearly 50% of low-income suburban residents also live more than a half-mile from any bus or rail service.**

### Service is very infrequent.

Fewer than 5% of people and jobs in Pace's service area located within a half-mile walk of frequent service - operating every 15 minutes or better in the middle of the day.

In other words, **most Pace riders either have to time their trips to the bus schedule, or risk waiting a very long time at the bus stop if they can't.** If a bus comes every 60 minutes, then the average rider will wait 30 minutes for it. By then, they might already have reached their destination in a car.

On many routes, low frequencies are compounded by special trip patterns that take place just a few times per day. If a Pace rider tries to ride the bus at a different time than usual, the same bus might not be going to the same places.

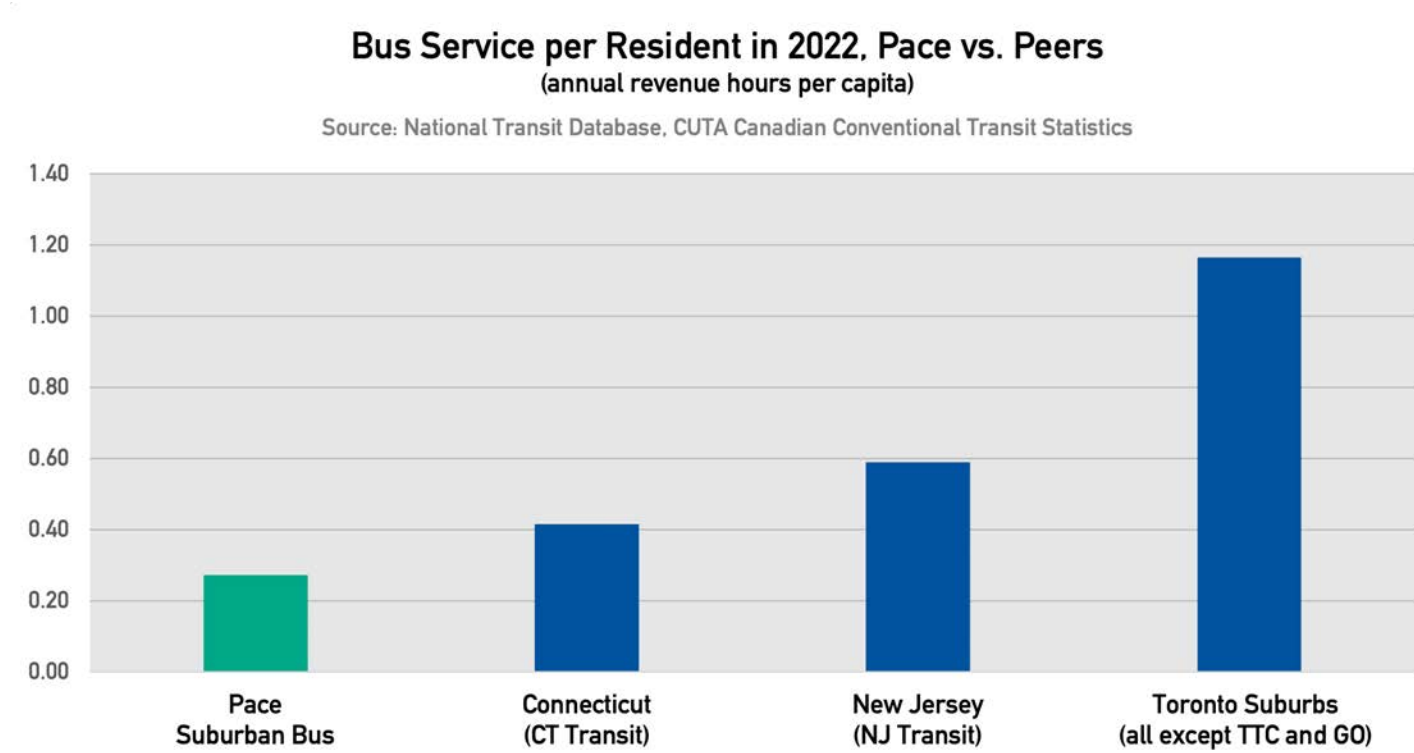


Figure 2: Chart comparing the amount of bus service available per resident of the Pace service area, compared to bus service per resident in Connecticut, New Jersey and the Toronto suburbs.

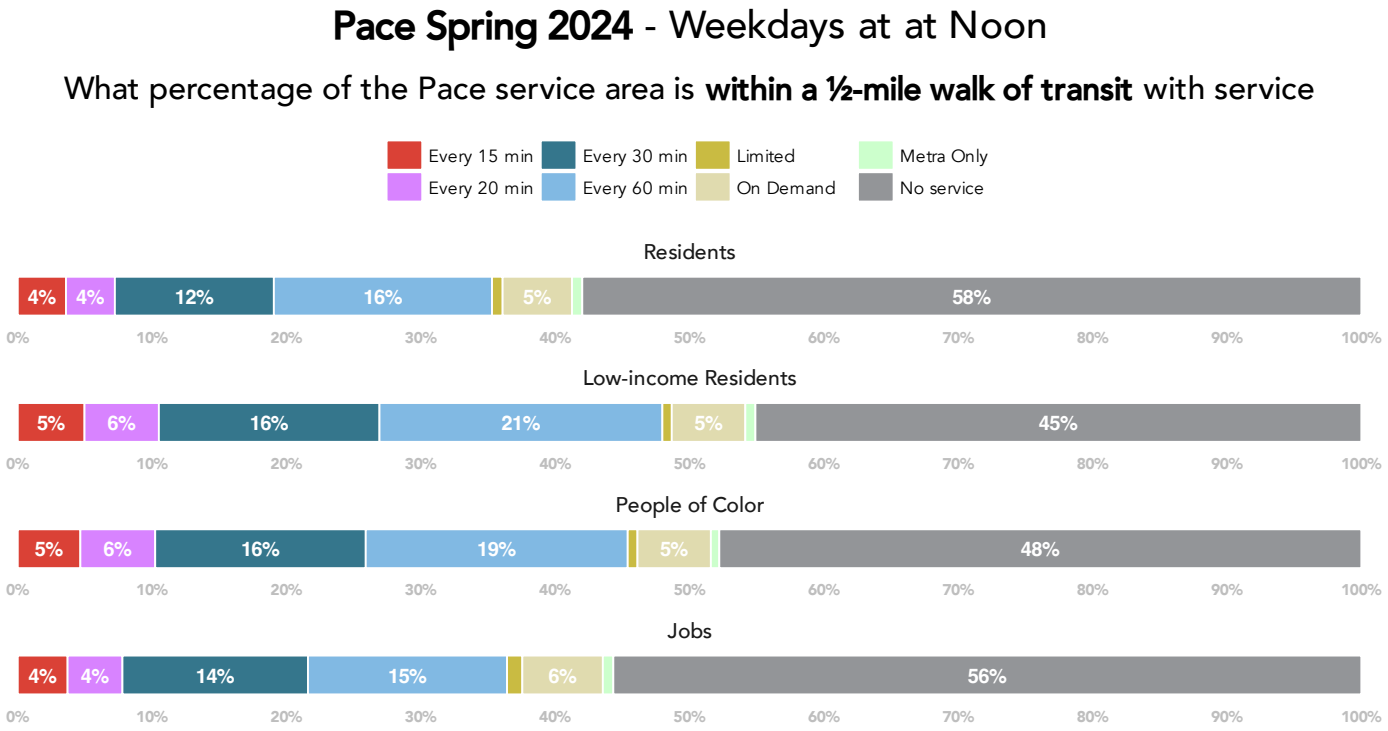


Figure 3: Chart showing the percentage of residents and jobs within a 1/2-mile walk of transit service at different frequencies in the Pace service area.

As a result, transit provides very limited access to opportunity.

The combination of low frequencies and scarce coverage means that **very few people live in areas where transit can take them to a broad range of places in a reasonable amount of time.**

The map in Figure 4 shows how many jobs someone could reach within 60 minutes at noon on a weekday – by transit and walking only – starting from anywhere in the six counties served by Pace. Darker areas have access to more jobs.

Measuring access to jobs provides information about access to many kinds of opportunity, because most of the places people need to reach regularly are places of employment - this includes retail, services, schools and many others.

As Figure 4 shows, access to opportunity by transit outside the City of Chicago is extremely limited. In the six counties served by Pace, **fewer than 12% of suburban residents have access by transit to at least 100,000 jobs within an hour.**

There are nearly 2.6 million suburban jobs in this area, so even access to 100,000 jobs by transit does not mean “you could reach most of the places you might need to go”.

Areas where transit and walking provide relatively high access to opportunity are mostly limited to inner parts of north and west Cook County, and the immediate vicinity of the largest suburban employment centers in Oak Brook, Schaumburg, and parts of Naperville.

Pace’s funding levels are much lower than comparable agencies in the suburbs of New York and Toronto.

As a result, suburban bus service in Chicagoland offers extremely limited coverage, mostly at low frequencies.

Under these conditions, transit can’t provide useful service to most suburban residents.

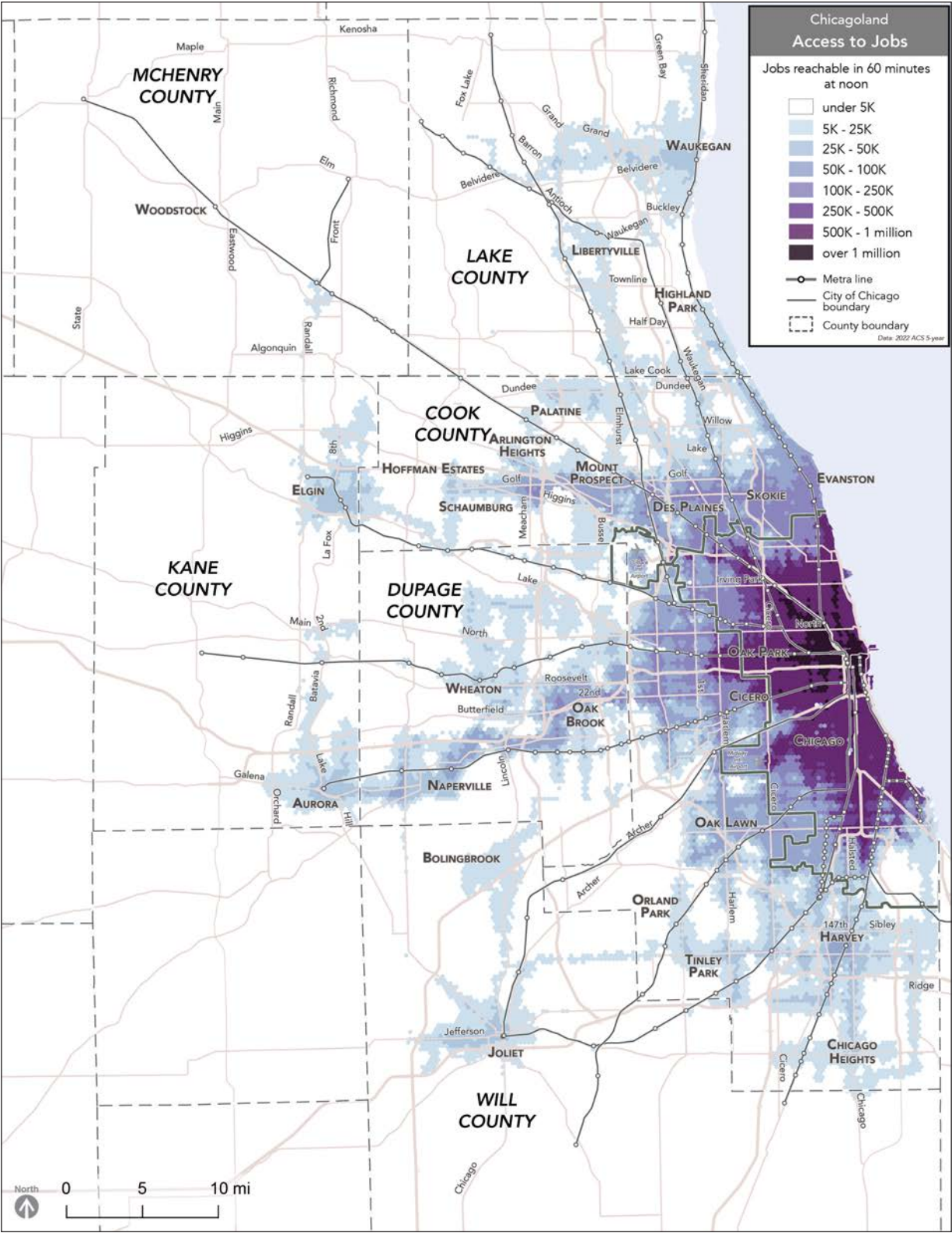


Figure 4: Map showing the number of jobs accessible by transit and walking within 60 minutes, starting from anywhere in the six counties served by Pace.



## 2. Pace service reflects legacy local networks.

Pace was formed in 1983 through the merger of several private and municipal transit companies. Since then, Pace has unified these networks under a single customer-facing regional brand.

Over time, Pace has made thoughtful improvements within the limited resources available. However, the structure of Pace's routes still largely reflects the geography of its service divisions, rooted in the former local transit companies. Each division's network reflects its unique local history and evolving practices.

Figure 5 (at right) illustrates seven distinct areas of the network map on page 6. **Bus frequency and coverage in each local area are organized differently, shaped by specific service needs, goals, and available funding.**

For example:

- Funding has only allowed for targeted service restructuring in some areas (e.g. Aurora, South Cook County) over the last twenty years, while others (e.g. Elgin) have not.
- Some divisions offer Sunday service, while others do not. As a result, there is little suburban bus service on Sundays outside Cook County.

**While these differences may reflect history, there is little evidence that they align with current public preferences.** Pace's routes remain more closely tied to historical service patterns than to the demands of today's growing region.

Pace's existing funding levels, which have remained relatively unchanged since the 1980s, have not evolved with the suburban region's rapid growth and shifting transportation needs. This funding environment impacts Pace's ability

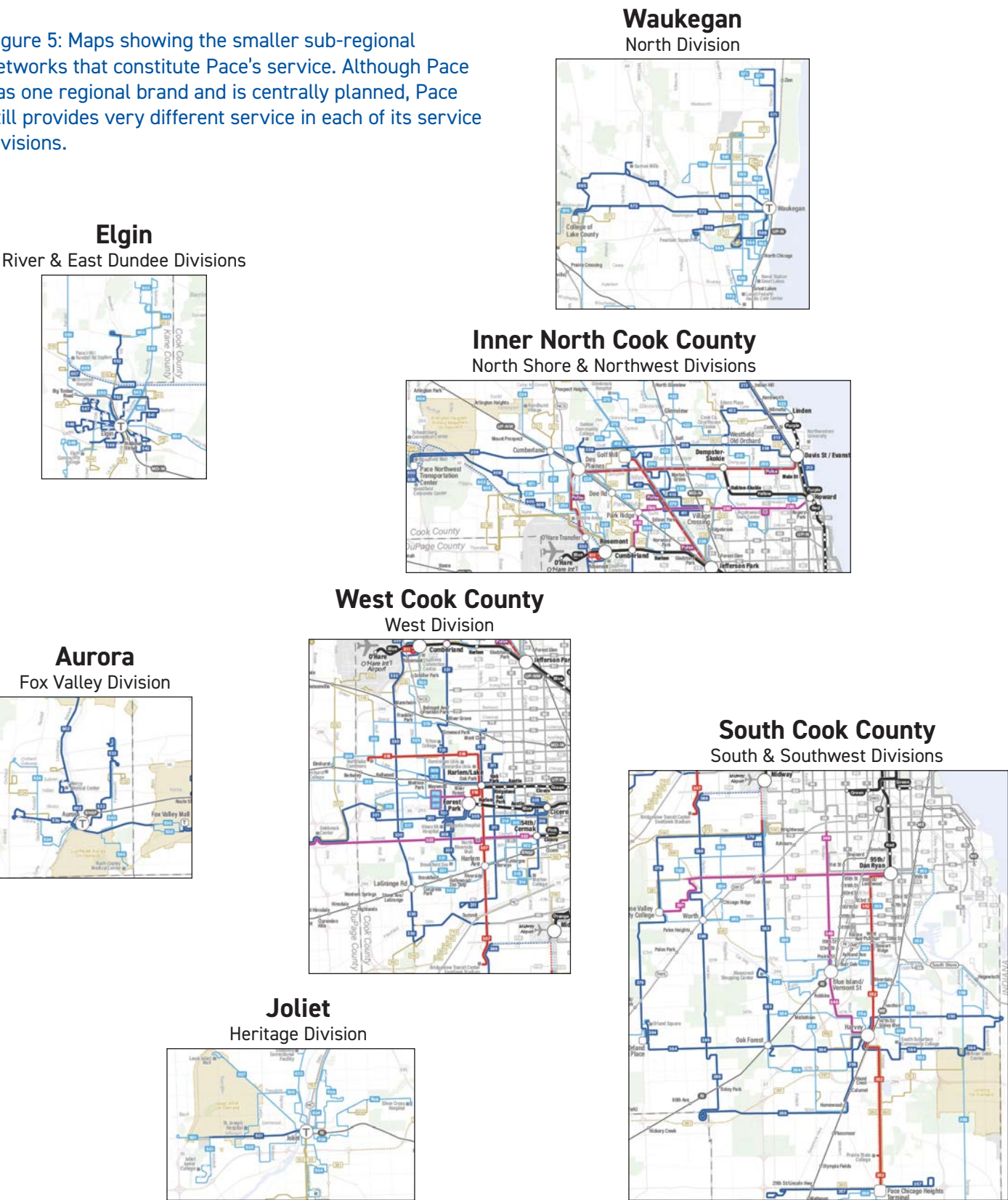
to expand service into large parts of Pace's service area that have urbanized in the last 40 to 50 years. Consequently, service continues to focus on the older municipal fabric: around the edges of Chicago and in the satellite cities of Elgin, Waukegan, Joliet, and Aurora.

Despite these challenges, Pace remains committed to delivering high-quality service and exploring innovative ways to strengthen the network. **Addressing the absence of a consistent regional network will require adequate funding and a comprehensive review of Pace's entire system to better align service with the region's evolving travel needs.** The large regional gaps in transit coverage discussed on previous pages largely match the areas not shown in Figure 5.

**Pace's sources of revenue have not grown to match the extensive suburban development of the last four decades.**

**As a result, Pace service is still mostly organized to serve communities that were already built-up in 1983.**

Figure 5: Maps showing the smaller sub-regional networks that constitute Pace's service. Although Pace has one regional brand and is centrally planned, Pace still provides very different service in each of its service divisions.



### 3. The regional fiscal cliff requires Pace to think differently about the future.

#### Regional transit agencies face a funding gap starting in 2026.

Starting in 2026, regional transit is expected to incur a deficit of over \$730 million, or nearly 20% of all transit expenses<sup>1</sup>. This gap is caused by several converging problems:

- Transit fare revenue plummeted in 2020, and is unlikely to return to pre-COVID levels. Even as ridership continues to recover, fare revenue has stagnated, partly due to equity-oriented changes in fare structure.
- Pandemic-era federal assistance is coming to an end. Pace, CTA and Metra are expected to spend down remaining federal operating assistance by the end of 2025.
- **The cost of providing transit is growing faster than revenues from sales and real estate taxes.** These taxes, combined with matching funds from the State of Illinois, provide most of the region's public funding for transit<sup>2,3</sup>. Operating costs are growing for many reasons, including higher labor costs, aging infrastructure and equipment, escalating pension and paratransit costs due to an aging population, and the expected transition to zero-emission vehicles.

#### What can Pace do about this?

If this funding gap is not resolved, Pace, Metra and CTA will all be required to make major service cuts. Pace's 2026 budget plan currently includes \$26.5 million of "budget balancing actions", or about 7% of total operating expenses.

Pace and its regional partners are currently advocating for changes that could lead to increased future funding. Many of these changes are described in the [Plan of Action for Regional Transit](#) (PART), developed by the Chicago Metropolitan Agency for Planning (CMAP).

PART identifies a road map for a range of planning, operating and funding actions that would lead to "the system the region wants". This includes a **call for transformational investment in regional transit, including over \$500 million per year<sup>4</sup>** in added transit operating funds, above and beyond what it would require to fill the existing funding gap.

1 Based on the 2022 RTA [Transit is the Answer](#) Strategic Plan, and the Plan of Action for Regional Transit

2 In 2024, RTA public funding corresponds to about 50% of Metra operating expenses, 55% of CTA operating expenses, 70% of Pace suburban operating expenses, and 95% of Pace regional ADA paratransit operating expenses.

3 The sources of regional public funding for transit are defined under Illinois law by the [RTA Acts of 1983 and 2008, codified as 70 ILCS 3615](#).

4 PART calls for a total transformational investment of \$1.5 billion per year in operating expenses. This includes \$730 million to close the gap, and \$250 million of investments to pay for reduced and better integrated regional fares. Most of the remainder is for added service, above and beyond 2019 levels.

#### RTA 10-year financial plan baseline budget gap scenario

- State and regional funding
- System-generated revenues
- Federal support
- Budget gap

Source: CMAP analysis of RTA 10-Year Financial Plan Technical Working Group Memo and RTA budget data.

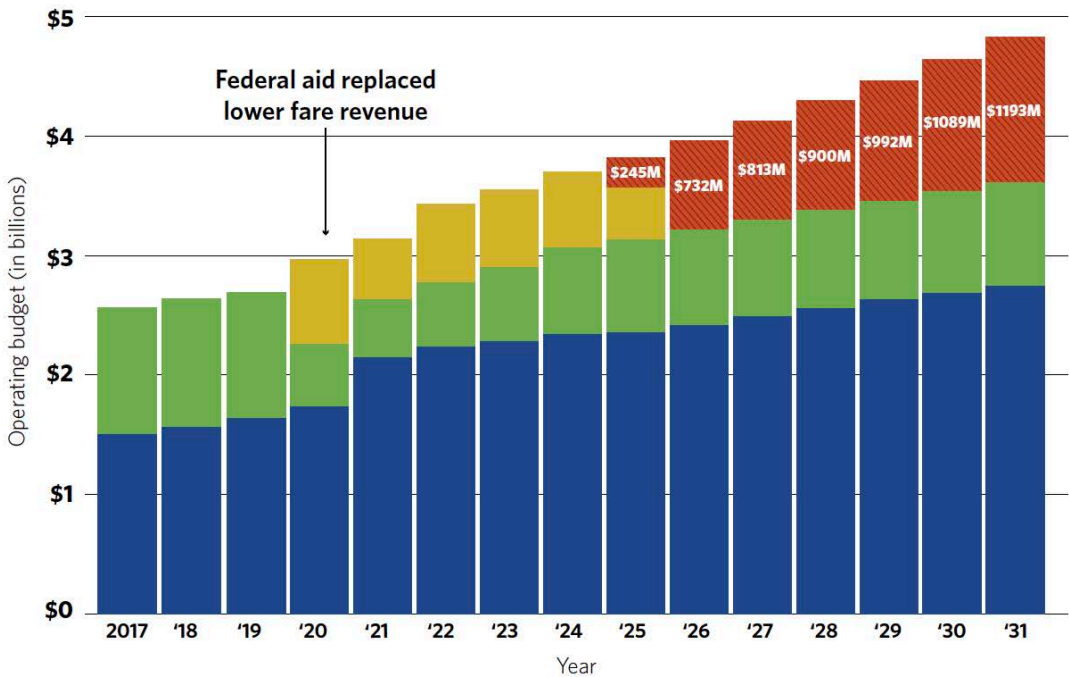


Figure 6: Chart showing the gap in regional transit funding expected starting in late 2025. Pace's own budget projections suggest a deficit of \$26.5 million in 2026, about 7% of total projected expenses. (Chart Source: [CMAP Plan of Action for Regional Transit](#))

**Regional funding for transit is growing more slowly than operating costs. This could require Pace, Metra and CTA to cut service as soon as 2026, despite already low service levels.**

**In the face of this fiscal cliff, Pace and its partners are calling for transformational investment. This report presents concepts that illustrate what a better funded suburban bus network could look like and achieve.**



# Options for improving service depend on the level of investment.

## Funding Levels Considered

This report is part of Pace's contribution to the regional vision for transformational investment. Pace is proposing network concepts that illustrate the amount and types of suburban bus service that could be provided under two financial scenarios.

- **Filling The Gap - Pace Plus 10.** This scenario illustrates what a 10% increase in service might look like, bringing total service up to pre-Covid levels. This is what Pace could do if the Illinois legislature acts to close the identified gap in regional funding, but does no more.
- **Transformational Investment - Pace Plus 50.** This scenario illustrates what Pace could do with funding to increase service by over 50%, compared to pre-COVID levels.

**The Pace Plus 50 scenario would require about \$150 million per year** in added suburban bus service, or about 30% of the regional investment contemplated in PART.

This would be significantly higher than Pace's historic 9.5-10% share of regional public funding. Pace considers this reasonable in light of the gap between suburban bus service in the Chicago region and its peers. Figure 7 shows that the Pace Plus 50 funding scenario would place Pace suburban bus levels slightly higher than those offered by CT Transit<sup>1</sup> in Connecticut, and a little lower than those offered by NJ Transit in New Jersey.

**This report does not consider a scenario involving a 2026 service cut due to reduced funding.** Pace considers that scenario unacceptable to its riders and will take all possible actions to avoid it.

<sup>1</sup> Pace Plus 50 would result in an amount of service comparable to all bus service in Connecticut, including CT Transit and the service provided by a small number of locally-specific agencies (e.g. Greater Bridgeport).

## Network Concepts

Based on these funding scenarios, ReVision has developed three network concepts.

### Pace Plus 50 - Ridership

This concept illustrates what the Pace suburban bus network might look like, if the primary goal of the network were to generate high ridership. High ridership requires service that delivers high levels of access to opportunity to many people. In most cases, this requires long, direct bus routes at high frequencies.

Accordingly, this concept illustrates a **Plus 50 network focused on the denser and more active areas that can best justify a bus at least every 15 to 30 minutes, seven days per week.**

### Pace Plus 50 - Coverage

This concept illustrates what the Pace suburban bus network might look like, if the primary goal of the network were to provide a basic, reliable service near as many people as possible. Accordingly, this concept illustrates a **Plus 50 network focused on extending service every 60 minutes, seven days a week, as far as possible into the suburbs, with very few frequency increases outside planned Pulse corridors.**

### Pace Plus 10 - Limited Investment

This concept illustrates **what Pace might do if the state legislature acts to close the regional funding gap, but no more.** This concept includes an increase in weekend service, local network changes in some areas, and improvements to frequencies on some future Pulse corridors.

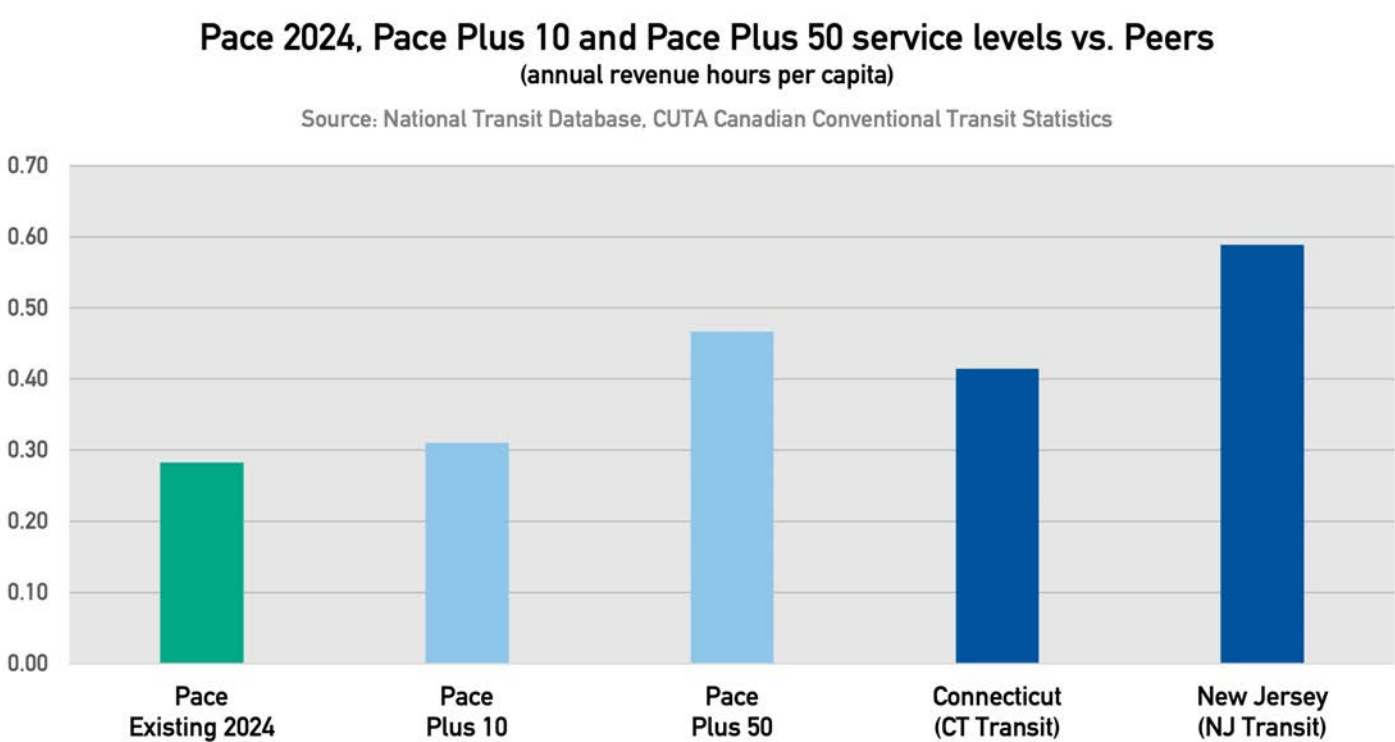


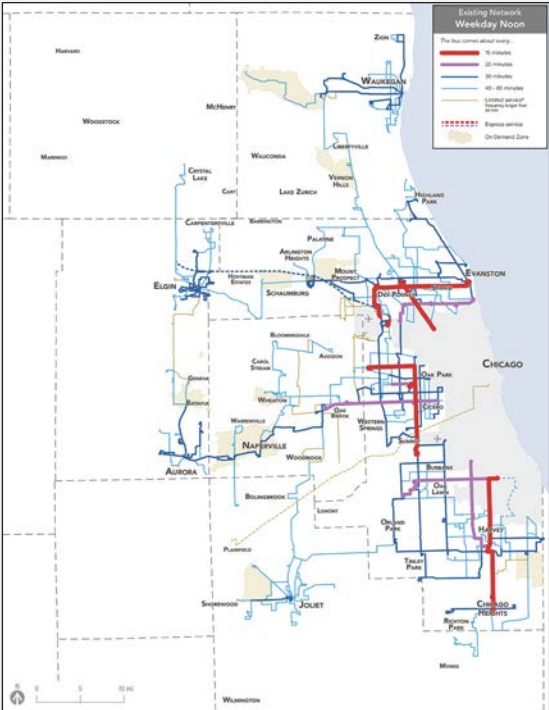
Figure 7: Chart comparing the amount of current bus service per resident of the Pace service area, compared to the Pace Plus 10 and Pace Plus 50 scenarios and service available in Connecticut and New Jersey.

# Snapshot: Existing Service vs. Future Network Concepts

1 What is Pace's ReVision Project?

## Existing Service

1.6 million revenue hours per year



### Frequency

Most routes run every 40 to 60 minutes or worse. Many routes don't run on Sunday, especially outside Cook County. A few routes run every 15 to 30 minutes on weekdays.

### Coverage

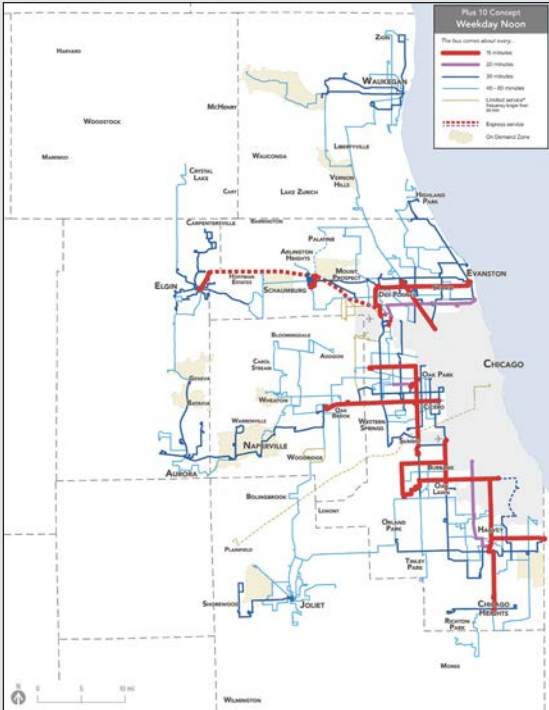
**42%** of suburban residents live within a 1/2-mile walk of all-day bus or rail service. Service is very limited outside Cook County, Waukegan, Elgin, Aurora and Joliet.

### Access to Opportunity

The median suburban resident can reach **30,500 jobs within 1 hour** by transit and walking. The median low-income suburban resident can reach 97,000 jobs.

## Plus 10 - Limited Investment

1.8 million revenue hours per year



### Frequency

Most routes would run every 40 to 60 minutes or worse. Nearly all routes would run on Sundays. A few more routes would run every 15 to 30 minutes on weekdays than today.

### Coverage

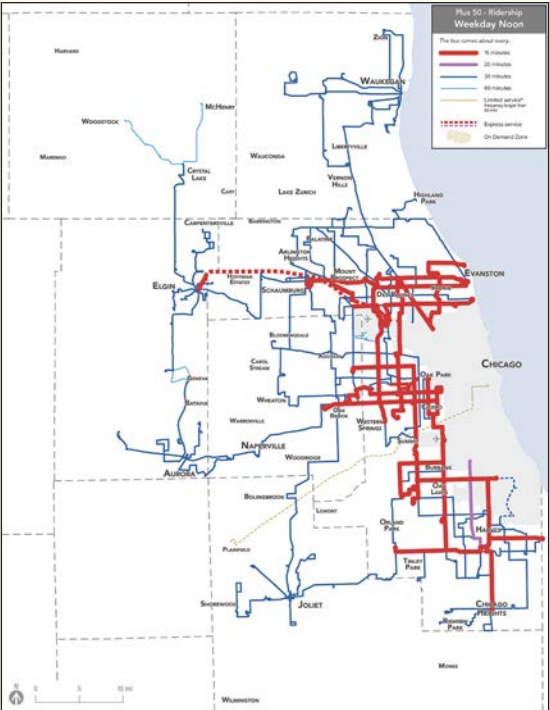
**42%** of suburban residents would live within a 1/2-mile walk of all-day bus or rail service. Service remains limited outside Cook County, Waukegan, Elgin, Aurora and Joliet.

### Access to Opportunity

The median suburban resident could reach **7% more jobs (+2,000) within 1 hour** by transit and walking. The median low-income suburban resident could reach 103,000 jobs.

## Plus 50 - Ridership

2.7 million revenue hours per year



### Frequency

Nearly all routes would run every 15 to 30 minutes, seven days per week. Service would operate at the same frequencies on Weekdays, Saturdays and Sundays.

### Coverage

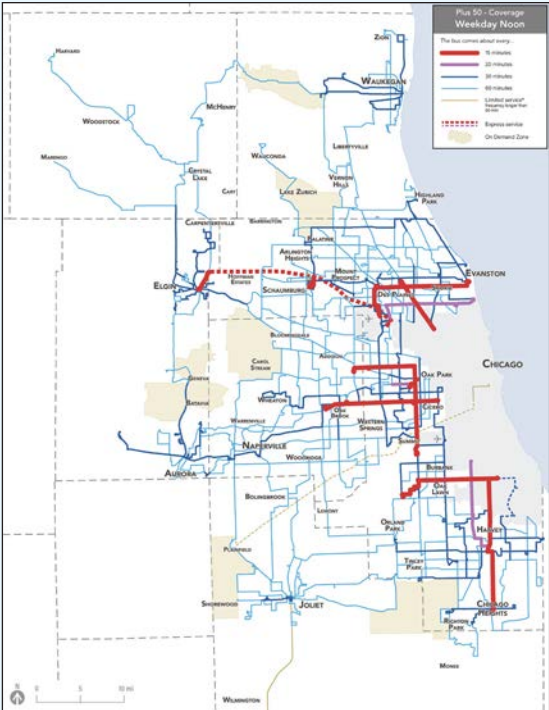
**37%** of suburban residents would live within a 1/2-mile walk of all-day bus or rail service. People near service would typically have more frequent service. Service limited outside Cook County, Waukegan, Elgin, Aurora and Joliet.

### Access to Opportunity

The median suburban resident could reach **86% more jobs (+26,000) within 1 hour** by transit and walking. The median low-income suburban resident could reach 129,000 jobs.

## Plus 50 - Coverage

2.7 million revenue hours per year



### Frequency

Most routes would run every 60 minutes, seven days per week. A few more routes would run every 15 to 30 minutes than today. Service at the same frequencies on Weekdays, Saturdays and Sundays.

### Coverage

**56%** of suburban residents would live within a 1/2-mile walk of all-day bus or rail service. Significantly more service outside Cook County, Waukegan, Elgin, Aurora and Joliet.

### Access to Opportunity

The median suburban resident could reach **30% more jobs (+9,000) within 1 hour** by transit and walking. The median low-income suburban resident could reach 101,000 jobs.



## 2

## Transit's Challenge in the Suburbs



# Transit is useful because it provides access to destinations and opportunities.

This chapter explains how the key elements of a transit network create a service that many people find useful, and the challenges in creating useful service in a suburban environment.

## Access to Opportunity

Many factors affect people's decision to use transit, but the most fundamental one is time. Most potential riders are working, studying, or raising children (or all three!) and have a limited amount of time in their day that they can devote to traveling. Even people who can't drive won't use public transit if it takes more time than they can spare.

For this reason, this report focuses on **how many destinations someone can reach in a fixed amount of time**, and whether changes to bus service could improve that.

## The “Wall Around Your Life”

Wherever you are, there is a limited number of places you could reach in a given amount of time. These places can be viewed on a map as a blob around your location, as shown in Figure 8.

You can think of the edges of this blob as a “wall around your life.” Beyond this area are things you can't do on most days because it simply takes too long to get there. The jobs, education, shopping, and any other resources outside this area are less likely to be available to you.

**Changes in transit service can make a measurable difference.** The best changes in network design bring more of these opportunities within reach.

## Measuring Access

Measuring access to and from useful destinations is a good way to capture how the design of the network leads to ridership.

**When access is high, it means that when someone looks up a trip they want to make, they are more likely to find that the travel time is reasonable.**

But access to opportunity is a good thing separate from the ridership that it generates.

- In real estate, access contributes to the value of a location.
- Access to jobs and education is a critical need for people with low incomes, who are more likely to rely on transit, because transportation is a common barrier to these things.
- Access is a measure of how many options we have in our lives. In this sense, **access to opportunity is a measure of freedom**, which needs no other justification.

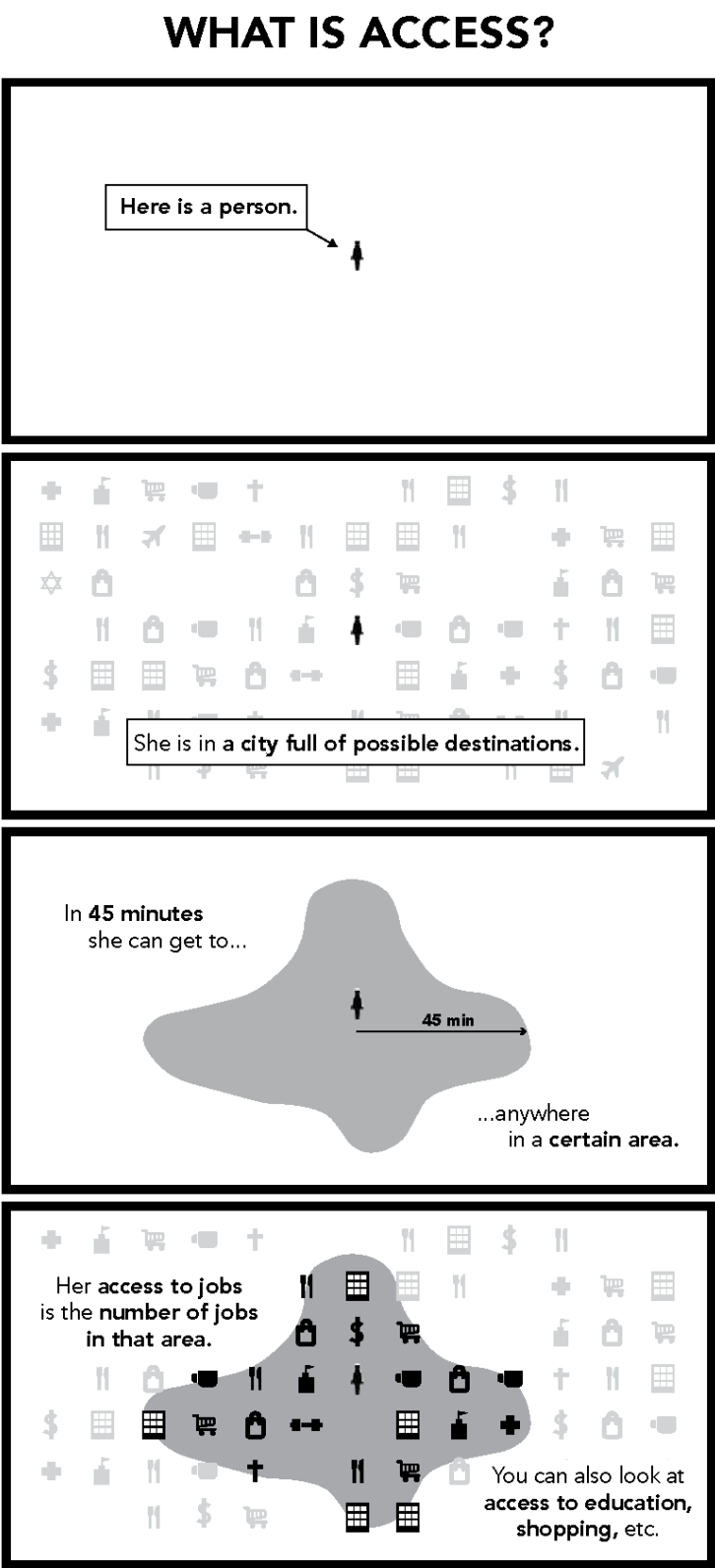


Figure 8: Cartoon describing the concept of Access to Opportunity.



# Frequent transit is useful to more people because it expands access.

## Travel Time by Transit

A typical transit trip contains:

- **Walking**, or traveling to and from the bus stop. Although some people cycle, or park and ride, most transit trips begin and end with a walk, either on foot or with the assistance of a wheelchair or personal mobility device.
- **Waiting**. Waiting is time spent outside the bus or train, and not in motion, as part of your trip. It is the difference between when you ideally want to go and the time you actually can.
- **Riding**. Riding is all the time spent inside the transit vehicle.

Adding these three types of time provides the complete door-to-door travel time.

### Why does waiting matter so much?

Waiting is not just time spent at the bus stop; it includes any time between the moment you want to travel and when the next bus arrives.

If you have real time information about when the bus is expected, you can show up at the stop just a few minutes earlier and avoid spending a long time at the bus stop. But if the bus comes only once an hour, you still often can't travel at the time that would serve you best.

If you don't ride transit regularly, frequency may feel invisible and is easy to forget. But for many trips, frequency is the most important factor in determining if transit can get you there on time.

## Frequency Is Freedom

More frequent service dramatically improves access, in ways that all relate to waiting time.

- **Shorter Initial Wait**. Unless you plan your life around a bus schedule, the average wait for transit is half the frequency. If a bus comes every 30 minutes, your average wait will be 15 minutes. But if it comes every 15 minutes, your average wait will be 7.5 minutes.
- **Faster Transfers**. To go further than places on the bus route you happen to be on, you'll need to connect to another route. Frequency makes this kind of connection easy, because the next bus is always coming soon.
- **Easier Recovery from Disruption**. Frequent service is more reliable, because if a bus breaks down you don't have to wait as long until the next one shows up.
- **Spontaneity and Freedom**. When transit comes every few minutes, there's no need to build your day around a bus schedule. You can turn up at the stop and go, whenever you want.

### What is frequent enough?

Frequency is expensive to provide, so it's important to think about just how frequent service needs to be. A frequency of 15 minutes or better has a good chance of being useful to someone whenever they need to travel, especially if that frequency extends over many hours of the day, every day.

Adequate frequency depends on trip length, because it doesn't make sense to wait long to go a short distance. For many people, it wouldn't make sense to wait 15 minutes to go half a mile, because you could probably walk to your destination in that time. But it might make sense to wait that long to go several miles across town.

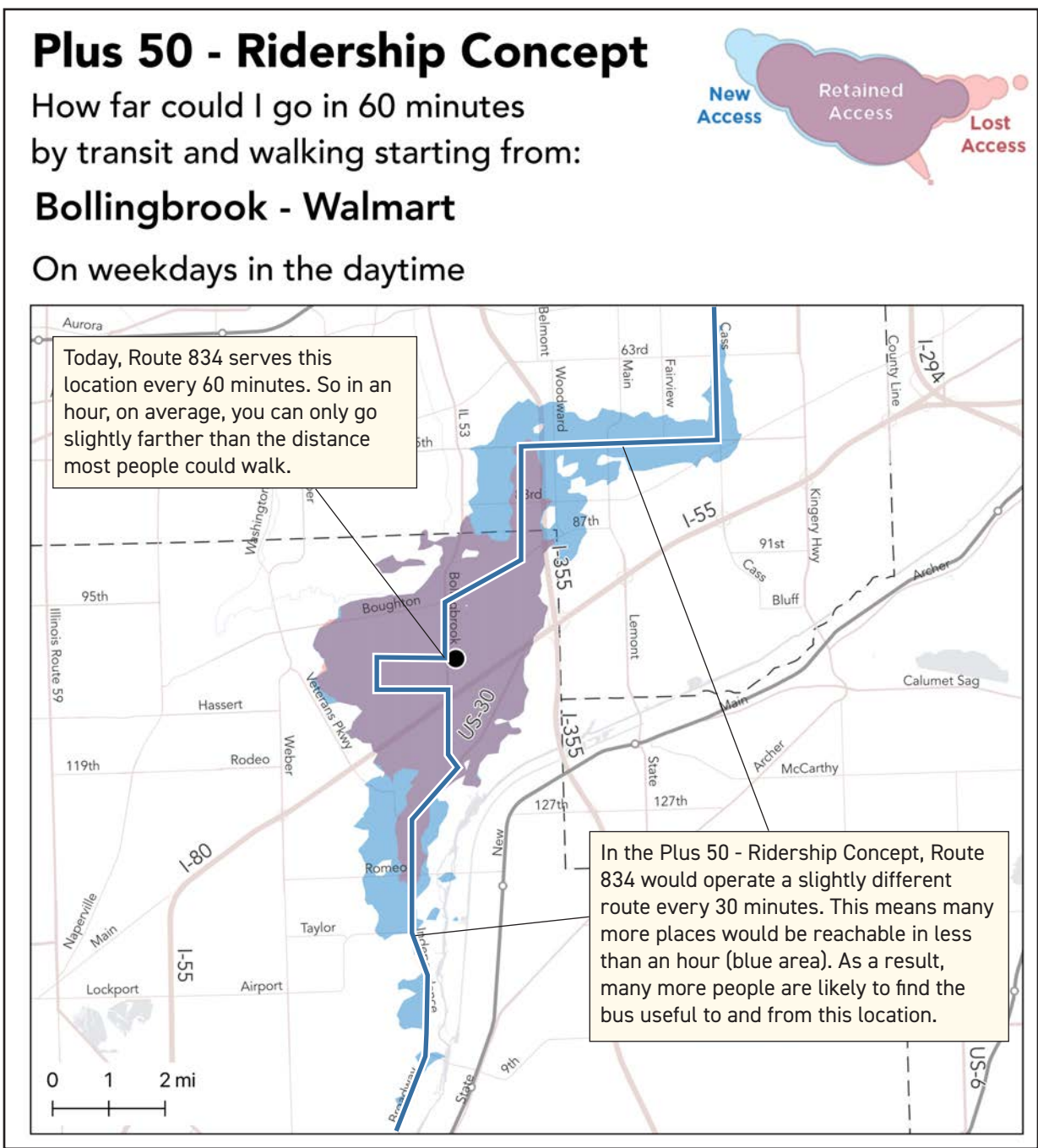


Figure 9: Example of increased access due to higher frequency. In the Plus 50 - Ridership network concept, the frequency of Route 834 increases from every 60 minutes, to every 30 minutes. As a result, access to and from the Bollingbrook Wal-Mart would increase dramatically.

# The way many suburbs are built makes frequent transit expensive to provide.

Creating a high-access transit network isn't just about faster or more frequent service. **Many factors outside the control of Pace have an essential role in transit's potential to effectively serve a community.** This includes land use, development, urban design, and street and road network decisions made by municipal, county and state units of government. As shown on this page, these include:

- **Density.** Where there are many residents and activities in an area, there are many places people might want to go, so more reasons to ride.
- **Walkability.** An area only becomes accessible by transit if most people can safely and comfortably walk to and from the nearest transit stops.
- **Linearity.** Straight paths are faster and cheaper to operate, relative to the number of places served. Straight routes are also easier to understand and more appealing to most potential riders.
- **Proximity.** The longer the distance between two places, the more expensive it is to connect them. Areas with continuous development are more cost-effective to serve than areas with big gaps.
- **Mix of Uses.** When there is a mix of land-uses along a route, transit can provide direct access to a broad range of destinations. Mixed-use transit corridors also tend to be very productive, because people ride in both directions at many times of the day.

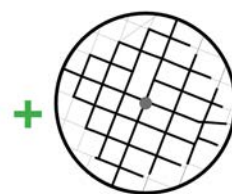
**These geometric facts pose a political challenge. A transit system focused on cost-effective and useful service concentrates service in the most favorable locations, which can serve communities unevenly.**

Recognizing this, Pace has created [Transit Supportive Guidelines](#) to provide guidance to communities interested in transit, and offers free design review assistance to developers and designers.

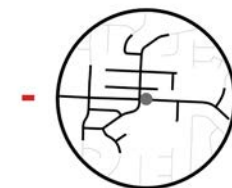
## How Land Use and Development Affect Ridership

Land use and development patterns have a huge impact on whether transit can serve an area efficiently. Here are some ways that land use can be better (+) or worse (-) for high-ridership transit.

**WALKABILITY** *Is it possible to walk between the stop and the activities around it?*



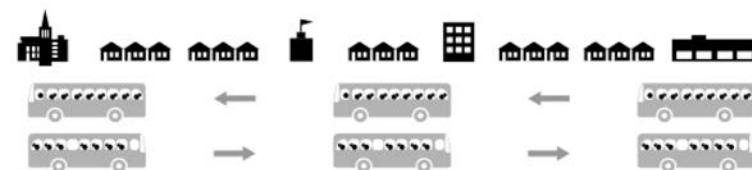
The dot at the center of these circles is a transit stop, while the circle is a 1/4 mile radius.



The whole area is within  $\frac{1}{4}$  mile, but only the black-shaded streets are within a  $\frac{1}{4}$  mile walk.

**+** It must also be safe to cross the street at a stop. You usually need the stops on both sides for two-way travel!

**MIX OF USES** Do people travel in both directions, all day?



- + A mix of land uses means buses are ridden in both directions, more times of the day and week.



- Transit serving purely residential areas tends to be full in one direction, but empty in the other.

**DENSITY** *How many people, jobs, and activities are near each potential transit stop?*



+ Many people and jobs are within walking distance of transit.



- Fewer people and jobs are within walking distance of transit.

**LINEARITY** *Can transit run in reasonably straight lines?*



- + A logical transit line is a direct path between any two destinations on it.



- Destinations located off the straight path force transit to deviate, discouraging those who want to ride through and increasing cost.

**PROXIMITY** *Does transit have to traverse long gaps?*



- + Short distances between many destinations are faster and cheaper to serve.



- Long distances between destinations means a higher cost per passenger.



# Densities are mostly low, and there are many gaps between built-up areas.

The map on this page (Figure 10) provides a high-level regional overview of density, proximity and mix of uses. It shows the amount and type of trip destinations on a typical weekday in 2023 throughout the six counties served by Pace<sup>1</sup>. On this map:

- White areas are mostly undeveloped. There are few destinations of any kind, and very few people travel there.
- Blue areas are mostly residential, and not very dense. Apart from the people that live there, few people travel to these places.
- Orange areas are mostly non-residential, and not very dense. This includes places where people travel for work, school, shopping, and many other purposes. These places attract more trips than residential areas, but few people live there.
- Purple and red areas are dense, and have a mix of residential and non-residential destinations. These areas generally have the most activity, and attract the most trips.

## Key Findings

### Density

Densities are generally much lower in suburban areas than in the City of Chicago. This is evident from the amount of light blue and orange on the map. The most significant exceptions to this rule are in Evanston and Cicero/Oak Park, where densities are similar to adjacent areas on the North and West sides of Chicago.

<sup>1</sup> This data is based on a seasonal simulation prepared by Replica. Replica synthesizes data from many sources (including cell-phone locations, Census data, bank and merchant transactions, and vehicle counts) to create an approximation of all trip origins and destinations. [Further details on methodology are available here.](#) The map on this page aggregates Replica data in 400 meter (quarter-mile) hexagons.

In more outlying parts of the suburbs, dense developments are more sporadic. They tend to be found around large highway-based shopping areas, or in old town centers near Metra stations.

**Consequence:** Most suburban places generate relatively few trips per square mile, so most suburban buses need to travel many miles to serve a large number of people.

### Mix of Uses

Suburban development tends to separate residential and non-residential uses. Commercial and other uses tend to follow long arterial highways. Between these highways lies a mix of residential (blue) and undeveloped (white) areas. The highest densities of non-residential uses are located in Chicago and its immediate outskirts.

**Consequence:** To connect many different kinds of places, most transit routes have to run long distances. Because activity destinations are so concentrated in and near Chicago, Pace runs many services that are busier in one direction than the other.

### Proximity

**There are large gaps in development and empty areas throughout the suburbs.** In the inner suburbs, these gaps reflect a mix of freeways, industrial and rail corridors, and forest and nature preserves. In more outlying areas, gaps tend to reflect a mix of undeveloped rural land and subdivisions deliberately organized with very large lots and wide gaps between neighborhoods.

**Consequence:** Transit routes that connect many different places have to travel through long, empty gaps where nobody gets on or off the bus.

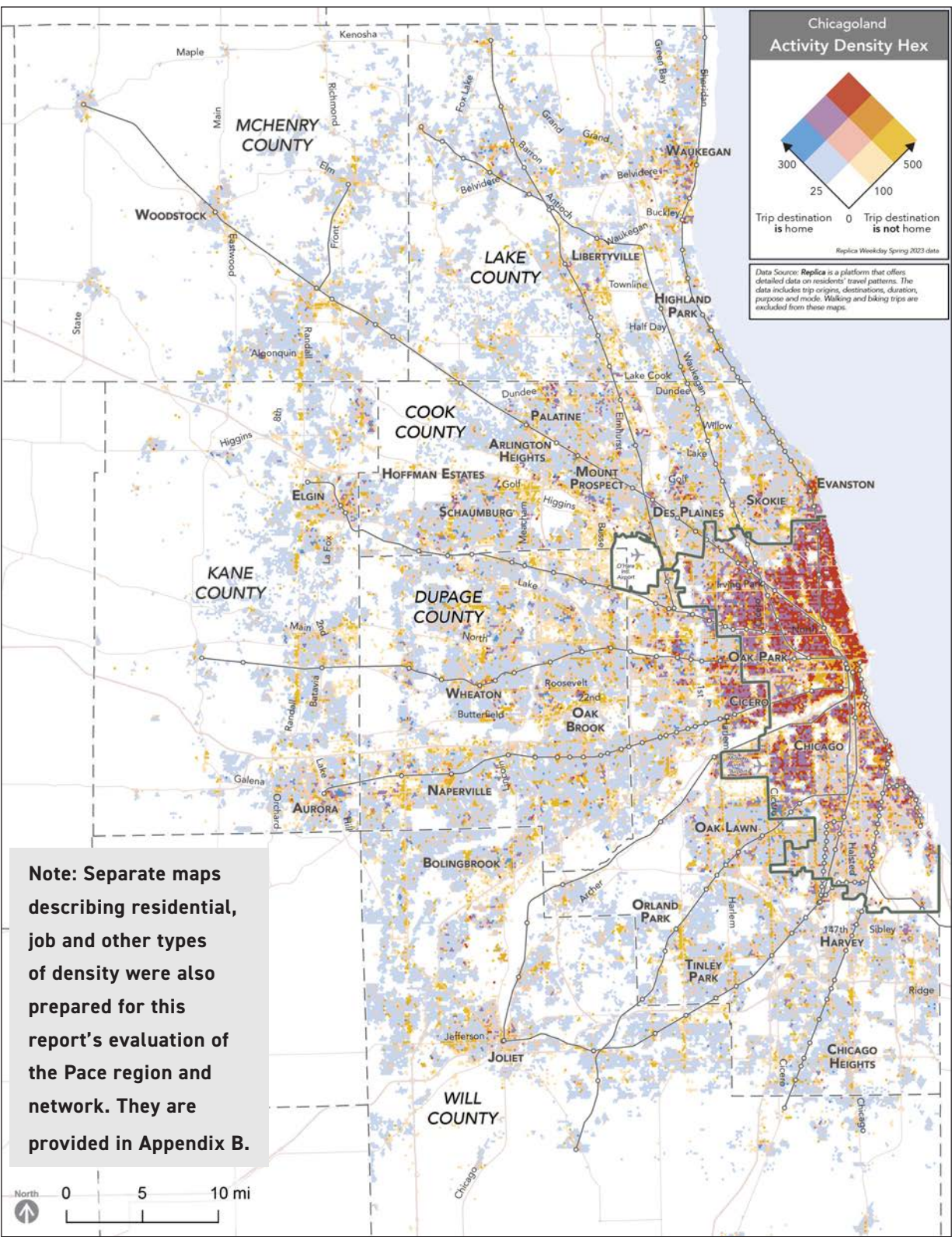


Figure 10: Map showing the density and types of trip destinations (residential vs. non-residential) throughout the six-counties served by Pace.



# Walkability is generally poor outside of old town centers.

The map on this page (Figure 11) provides a high-level regional overview of how easy or hard it is to walk. This map shows the impact of the street network on how far someone could walk, depending on where you are located, by calculating the area accessible to someone within a 1.5 mile walk<sup>1</sup>.

- **Darker green areas are places where the street network is well connected.** There are many intersections, and block lengths are relatively short, so in most cases, there's not a huge difference between a straight-line distance, and the distance you would need to walk, to get from point A to point B.
- **Light green and yellow areas** have fewer streets, and more dead-ends. Legally walking between any two points may require significant detours.

This map is not a complete map of walkability. It does not show many of the other potential obstacles to walking, such as:

- Absence or poor condition of sidewalks
- Inadequate Pedestrian lighting
- Unsafe crossings at major streets
- Inadequate drainage

Because poorly connected street networks are often developed in areas where walkability is not a priority, these issues are often correlated.

## Key Findings

**Many of the gaps visible in the map of density and proximity (see page 17) also impact walkability.** Places with less development also have fewer streets. This is not necessarily a problem, if few people travel through them. However, it does mean that these empty areas are in some cases landscape barriers.

**Most of the well-connected street networks in the Chicago suburbs follow Metra lines.** This likely reflects the era in which older rail-centric suburban town centers were built. These places were built to facilitate easy walking to a transit station. There are especially large walkable centers in Aurora, Elgin, Joliet and Waukegan, which were significant cities even before World War II.

Locations newly developed since the 1980s have typically not emphasized pedestrian connectivity. As a result, the colors on the map tend to get lighter in more outlying areas.

**Consequence:** Many of the areas where Pace runs service have limited walkability. As a result:

- Suburban bus stops must be located very carefully, and sometimes can only provide access to a very small area.
- Some locations can't safely be served, or require significant route deviations (see next page)

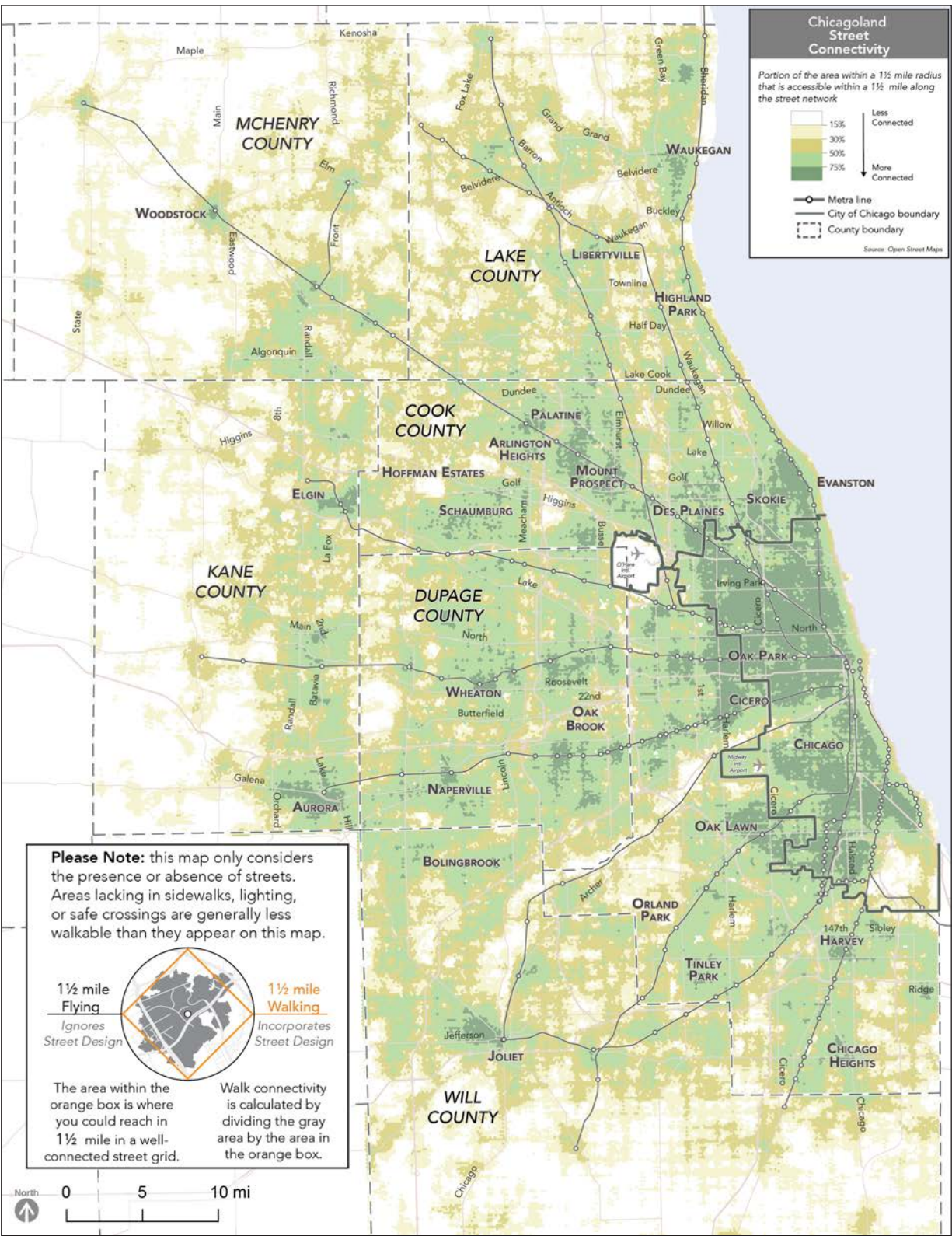


Figure 11: Map showing how street connectivity varies throughout the six counties served by Pace. Well-connected street networks are critical to ensuring walkability to and from bus stops.

<sup>1</sup> About a 30-minute walk for a healthy fit adult.



# Linearity is challenged by large campuses that can't be well served from main streets.

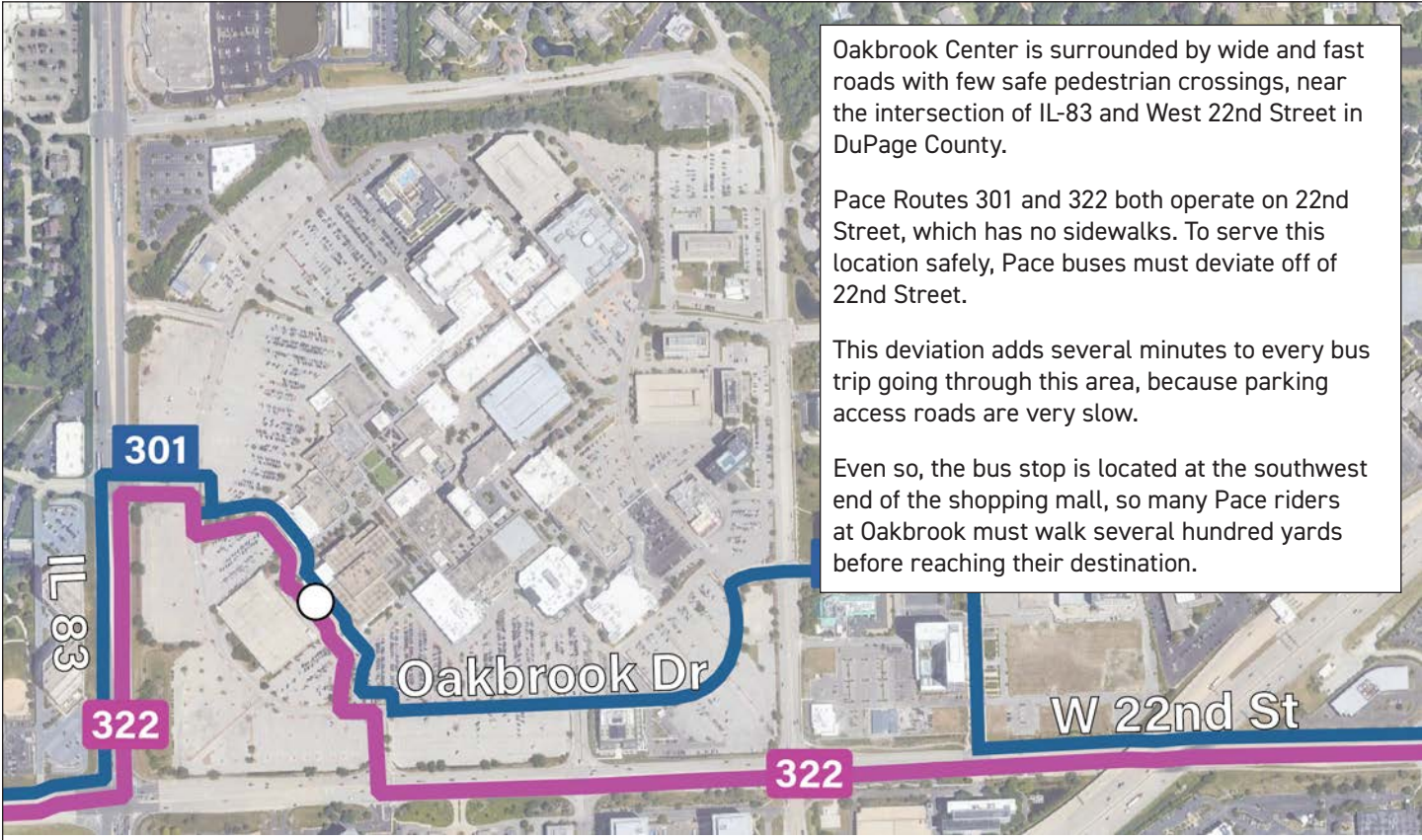
Many suburban destinations are on 100+-acre campuses that house places like regional shopping malls, hospitals and medical centers, community colleges, and major employers.

These sites attract many trips in a relatively small area. In other words, their density is at least somewhat favorable to transit. However, the road and site design around these campuses tends to be centered around driving and parking cars, in ways that make it challenging and expensive to provide useful transit service.

The images and captions on this page depict specifics of two prominent places in the inner western suburbs, where Pace provides bus service. But similar conditions prevail in dozens of other locations throughout Chicagoland.

Transit-hostile road and site design around many campuses forces Pace to operate longer, more complicated and more expensive routes than it otherwise might.

Figure 12: Aerial image of Oakbrook Center shopping mall and the bus routes that serve it.



The Loyola/Hines complex is located between Roosevelt Rd and Cermak Road, just west of IL-171 in west Cook County.

Pace Route 322 operates on Cermak Rd, but this road is physically separated from this campus by a railroad and a National Guard site.

Pace Route 331 operates on IL-171, which has no pedestrian facilities. As a result, Pace must deviate Route 331 into the Hines VA parking lot, and to a frontage road (2nd Ave) by the Loyola entrances off IL-171.

Both deviations add several minutes to every bus trip. This makes the bus much less useful for people who want ride across this area to points further north or south.

Pace Route 301 operates on Roosevelt Rd, which has some pedestrian facilities and safe crossings.

However, because most buildings on site are located a half-mile or more south of Roosevelt, Pace operates a separate Route 308 from Forest Park to the heart of this campus, at an added cost of about \$1 million per year.



Figure 13: Aerial image of the Loyola Medicine / Hines VA hospital complex, and the bus routes that serve it.



# Data on existing travel provide clues for transit planning, but not the whole story.

Regional travel patterns include huge numbers of trips that the built environment prevents transit from serving effectively.

The map in Figure 14 below illustrates the volume of typical weekday travel in 2023 within and between different parts of the six-county area. This is a useful indicator of overall travel demand patterns. However, many suburb-to-suburb trips are car-dependent, and are likely to remain so even with a significant investment in new transit service, because of low densities, long distances, and transit-hostile built environments.

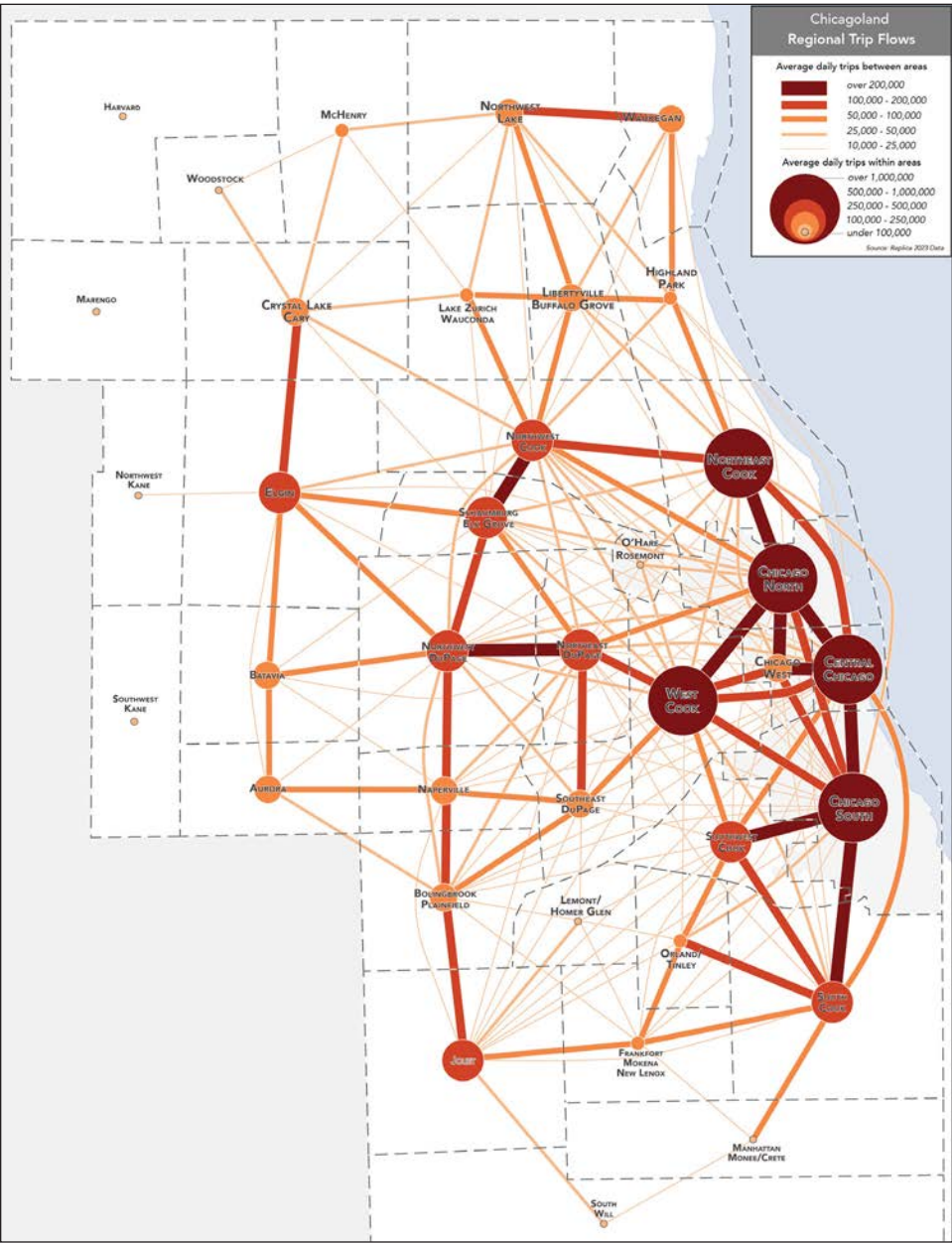


Figure 14: Map showing estimated 2023 weekday trip flows within and between different parts of Pace's six-county service area and the City of Chicago. (Source: Replica)

Existing ridership patterns tell us where it's possible to ride transit now, not all the places where potential riders might want to go.

Figure 15 below is a map that illustrates areas of high and low ridership for Pace on weekdays in the spring of 2023. The areas that stand out on this map closely match the location and levels of service available in the existing network, as shown on the network overview map on page 6. However, it's clear from the map in Figure 14 that many people want to travel in areas that have very little current Pace service. Some of those people would take transit, if transit were available.

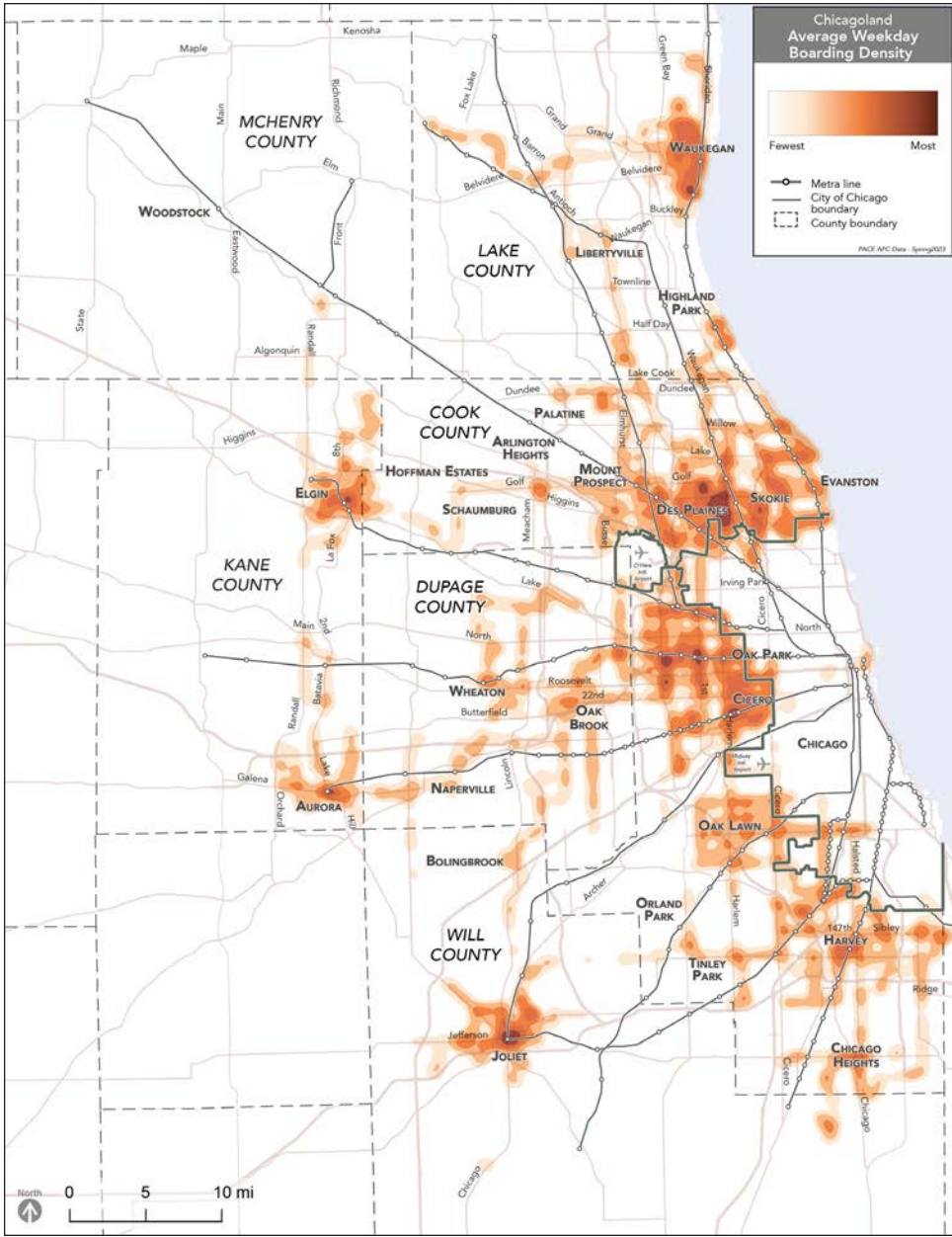


Figure 15: Map showing estimated 2023 weekday trip flows within and between different parts of Pace's six-county service area and the City of Chicago. (Source: Replica)



# Network planning must balance conflicting ridership and coverage goals.

## Ridership Goals

The previous pages show how certain patterns of development make it possible to serve more people at a lower cost. This is generally consistent with maximizing ridership. Where development is dense, walkable, proximate, and mixed, the same transit service dollar will provide more access to more people.

**When the goal is ridership, it's more efficient to focus on high frequency in areas many people want to go.** This concentrates service where conditions are favorable. This makes service much more useful to people and destinations in dense, walkable and well-connected areas, but it also means large areas aren't covered by transit.

Designing a transit system for **high ridership** serves several popular goals, including:

- Competing more effectively with cars, so that the region can grow without increasing traffic congestion.
- Reducing the public subsidy needed for each ride by collecting more fare revenue.
- Minimizing air pollution and climate impacts by replacing car trips with transit trips.
- Supporting dense and walkable development.

## Coverage Goals

On the other hand, many other popular goals for transit don't require high ridership. Designing a transit system for **high coverage** serves these goals:

- Ensuring that everyone in the service area has access to some transit service, no matter where they live.
- Providing the ability to reach as many places

as possible for people who have limited or no access to personal vehicles.

**When the goal is coverage, transit must reach as many places as possible, whether or not service is frequent enough to be useful to most people.** Coverage goals require transit agencies to spread service out, which means spreading it thin.

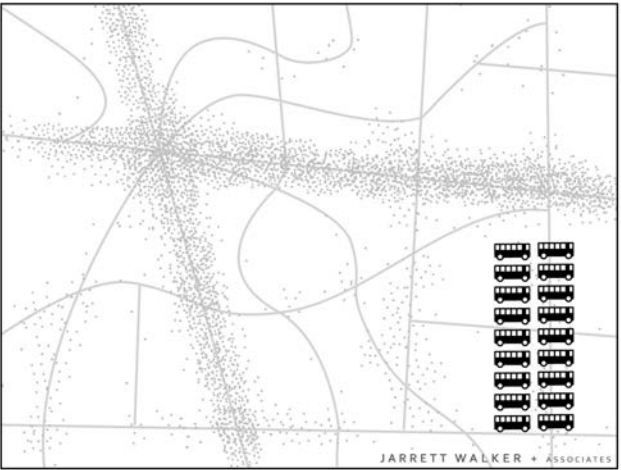
## The Trade-Off

**A transit agency can pursue high ridership and extensive coverage at the same time, but the more it pursues one, the less it can provide of the other.** Every dollar that is spent providing high frequency along a dense corridor is a dollar that cannot be spent bringing basic service in areas farther out.

However, the choice between pursuing ridership and coverage is not binary. All transit agencies spend some portion of their budget on each type of goal. A particularly clear way for transit agencies to set a policy balancing ridership and coverage is to decide what percentage of their service budget should be spent in pursuit of each.

**The “right” balance of ridership and coverage goals is different in every region, and can change over time.**

**The “Plus 50” future network concepts presented in this report illustrate the trade-off between a transformational investment in ridership, and a transformational investment in coverage.**

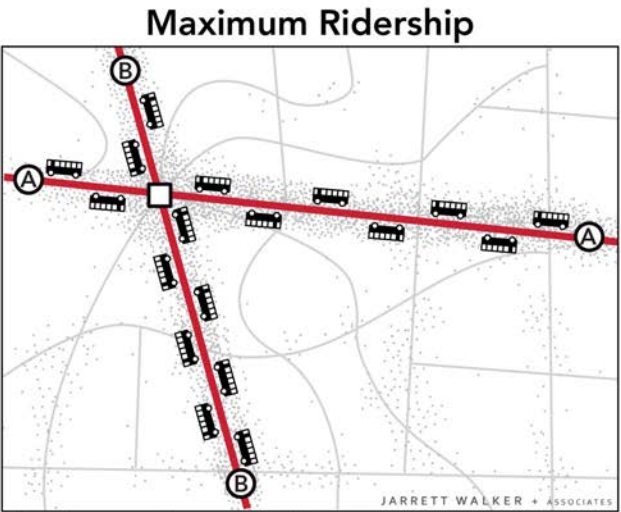


Imagine you are the transit planner working in this fictional neighborhood.

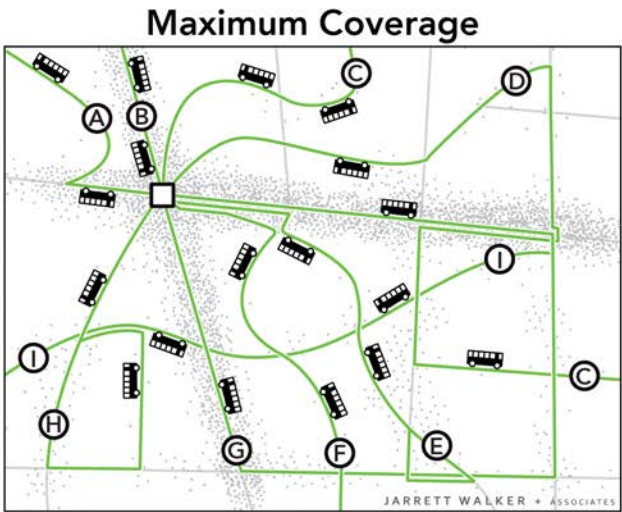
The dots scattered around the map are people and jobs.

The 18 buses are the resources the town has to run transit.

Before you can plan transit routes, you must decide: what is the purpose of the system?



All 18 buses are focused on the busiest areas. Waits for service are short, but people in less populated areas have to walk long distances. Frequency and ridership are high, but many places have no service.



The 18 buses are spread around so that there is a route on every road. Everyone lives near a stop, but routes are infrequent, so waits for service are long. Only a few people can wait that long, so ridership is low.



# Pace must take into account economic, racial and geographic equity.

## Economic Equity

### Higher Levels of Service Where the Demand and Need for Transit is Higher.

The single most important indicator of demand for transit is the total density of travel in an area, as illustrated in Figure 10 on page 17. Nonetheless, people with more limited income and wealth typically have a higher need for public transit, because they are less likely to have reliable access to a personal vehicle.

In addition, low and mid-wage workers also perform many essential in-person only jobs, and there is a broader social interest in ensuring their mobility. This has always been true, but has become increasingly clear to policy-makers in the wake of the COVID-19 pandemic.

### Measuring Economic Equity Needs

Several indicators derived from the U.S. Census' American Community Survey (ACS) provide insight into where people are more likely to need transit service for economic reasons. These include:

- **Density of Low-Income Residents.** The map in Figure 16 on this page shows where people who live in households with incomes below 150% of the Federal Poverty Level are concentrated.
- **Density of Households without Cars.** This is illustrated by Figure 17 on page 23. Measuring the density of low-income residents and zero-vehicle households makes it possible to locate both higher needs and ridership potential due to a concentration of need.
- **Average Personal Income.** This is illustrated by Figure 18 on page 23. Measuring average incomes makes it possible to understand which places have the highest levels of need, regardless of ridership potential.

## Key Findings

The maps on this and the next page suggest that the following suburban areas are also likely to have higher than average demand and need for transit, for economic reasons:

- **Most of Aurora, Elgin, Joliet and Waukegan,** and some of their immediately adjacent neighboring communities such as Zion, North Chicago and Carpentersville.
- **Most of south and southwest Cook County.** This includes three distinct concentrations:
  - **Chicago Heights** and areas immediately to the south.
  - Most of the area **within 5 to 8 miles of Harvey.** This roughly corresponds to the area north of I-294, between the Indiana State Line and Cicero Ave/IL-50.
  - Most of the area **south of Midway Airport and north of the Calumet River,** particularly between Cicero Ave and La Grange Rd/US-45.
- **Much of west Cook County,** especially in Cicero and Berwyn, and in many of the **areas north of Cermak Rd and south of O'Hare Airport,** especially west of 1st Ave/IL-171.
- Several areas of north Cook County, including **parts of Evanston, Skokie, Niles, Des Plaines, Palatine, Wheeling and Schaumburg.**

Many other places also appear to have relatively high poverty, but their more isolated nature and higher car ownership rates suggest relatively low potential for transit ridership, compared to the areas above. This includes areas in and near Round Lake Beach in Lake County; Bollingbrook in northern Will County; Tinley Park in southwest Cook County; and many more scattered locations, especially (but not exclusively) in DuPage County.

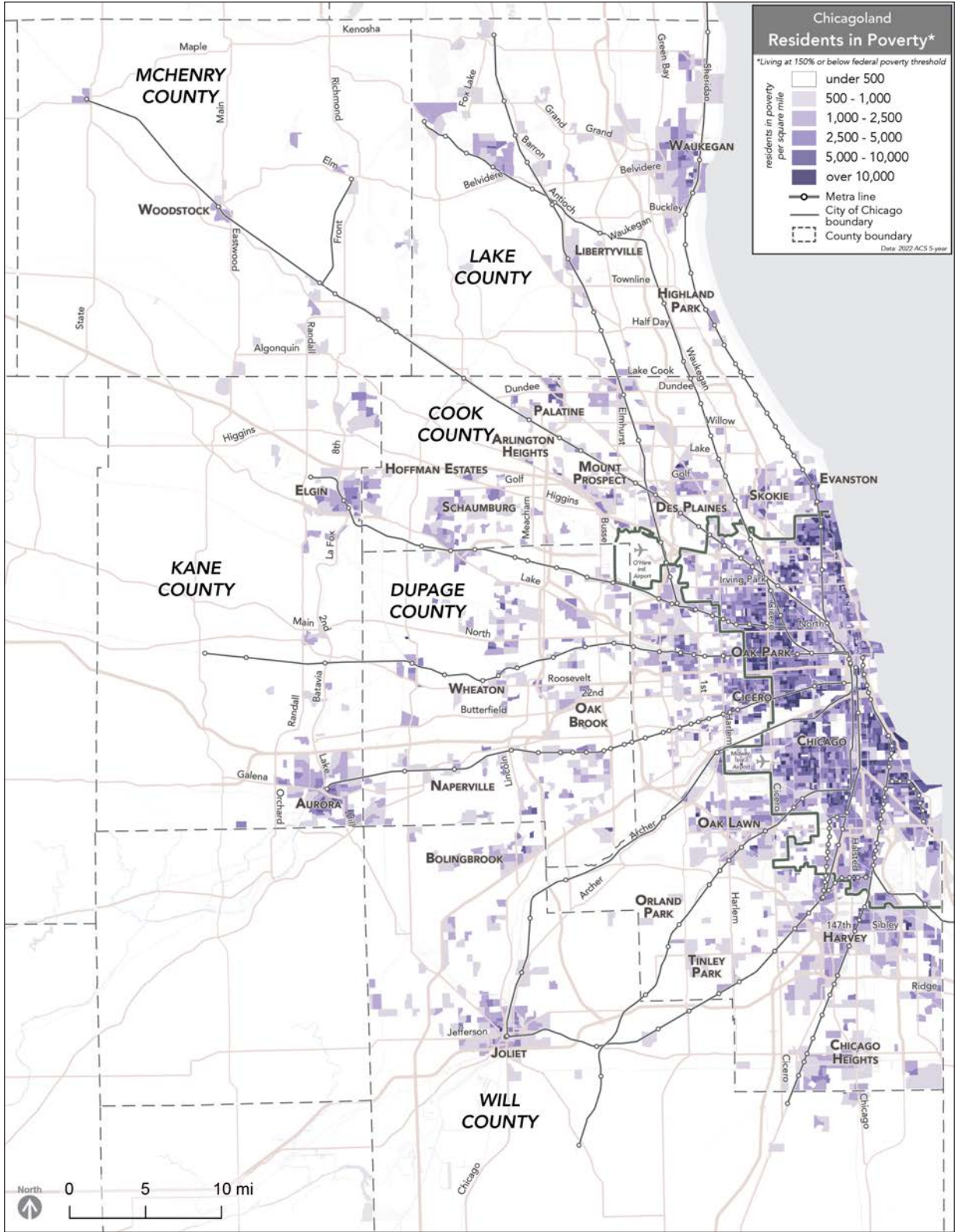


Figure 16: Map showing how the density of people living in low-income households varies throughout the six counties served by Pace.



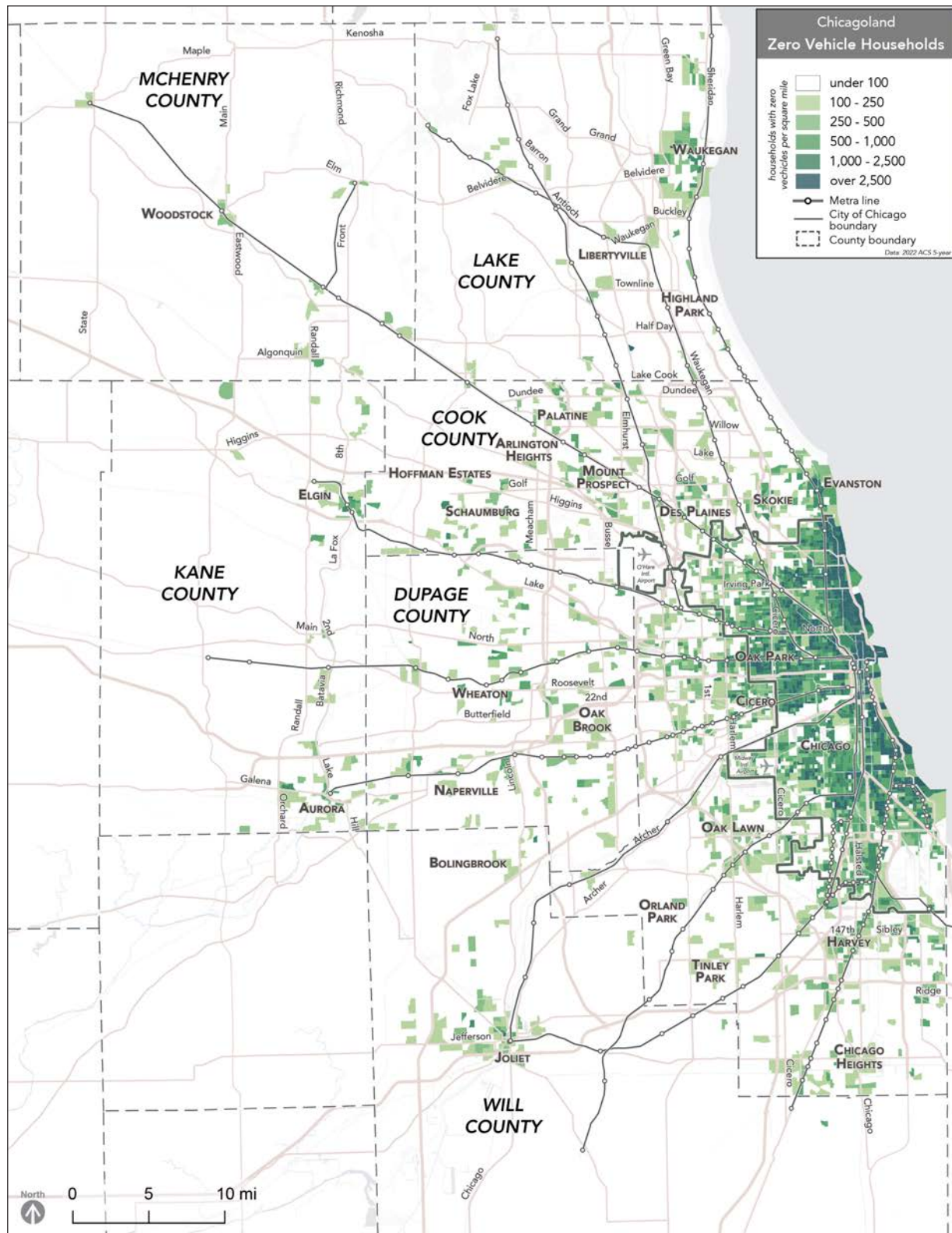


Figure 17: Map showing how the density of households with zero vehicles varies throughout the six counties served by Pace.

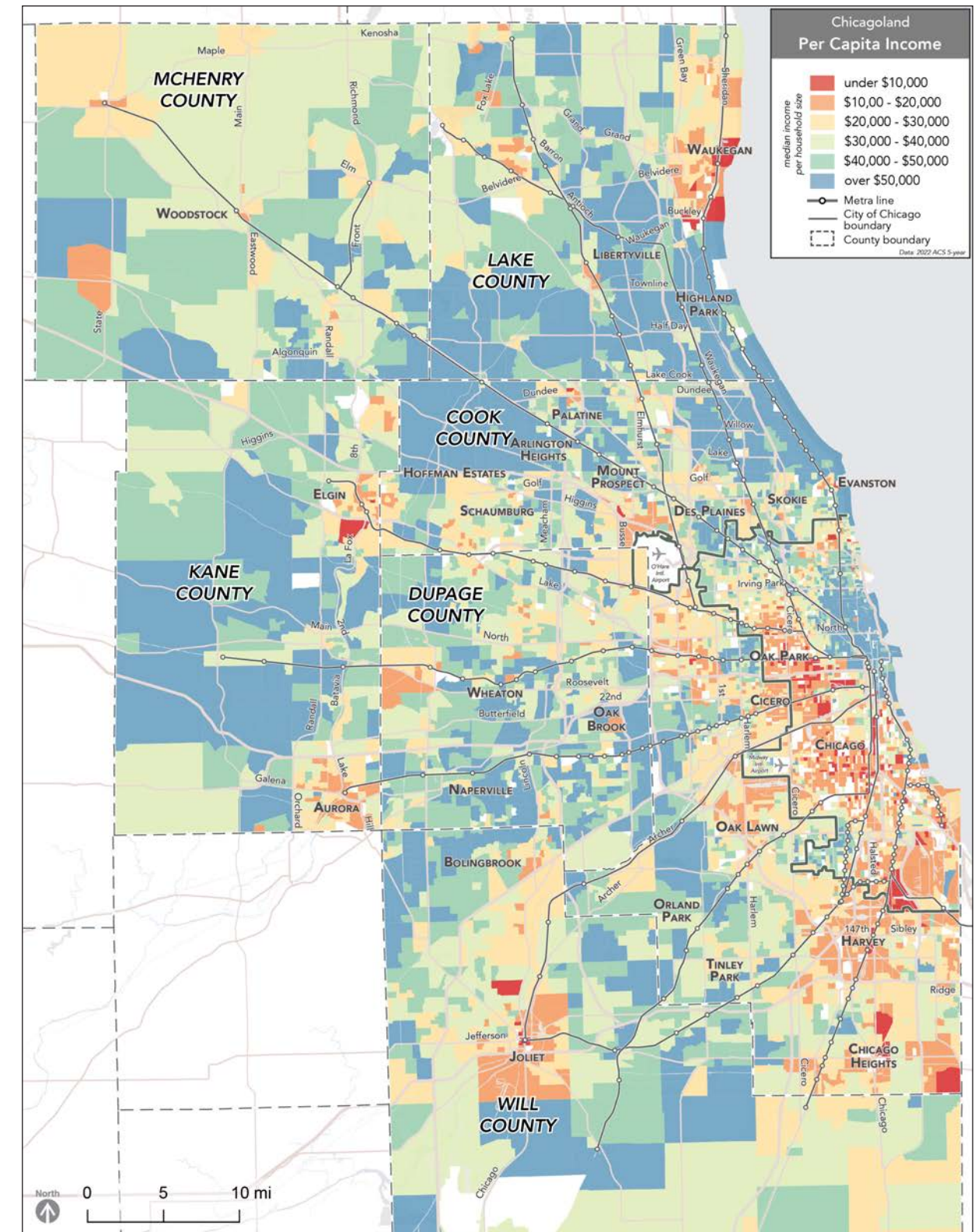


Figure 18: Map showing how average personal income varies throughout the six counties served by Pace.



# Racial Equity

## Consistent Standards and Levels of Service, Regardless of Race and Ethnicity.

Like most places in the US, **residents of different races and ethnicities often tend to live in different areas**, as illustrated by the map in Figure 19. For example:

- Most suburban Black residents live in south Cook County, in majority-Black communities.
- A significant share of suburban Hispanic residents live in predominantly Hispanic communities in places like Aurora, Carpentersville, Elgin, Franklin Park, Round Lake Beach, West Chicago, and Waukegan.

These kinds of concentrations exist in part due to historic racist housing policy, zoning policy and home lending practices. Communities marginalized on the basis of race and ethnicity often have less political power, and can be at higher risk of receiving substandard public services.

To counter this, transit agencies like Pace strive to provide service according to regionally consistent standards, and to make sure that services in communities of color are at least as good as in predominantly White areas.

## Title VI as a Minimum Federal Baseline

Federal regulations that apply Title VI of the Civil Rights Act of 1964 require transit agencies to ensure that major service changes do not impose a disparate impact on people of color<sup>1</sup> and a disproportionate burden on people with low incomes.

<sup>1</sup> This report prefers the term “people of color” to describe all people with a racial or ethnic identity other than, or in addition to, White and non-Hispanic. Title VI regulations use the term “minority” to describe the same population.

In Pace's own Title VI policy, in case of a major service change, minority populations must not bear “adverse effects” at rate more than 20% higher than non-minority population. Low-income populations must not bear adverse effects at a rate more than 10% higher than non-low income populations.

Title VI policy also requires Pace to ensure that its quality of service is as high on “minority” and “low-income” routes as on other routes<sup>2</sup>.

These kinds of standards are useful, but are not in themselves a complete solutions to meeting regional equity goals. For example, they do not enforce metrics to ensure that the quantity and types of existing service are provided equitably region-wide.

**This report tracks the racial and economic equity impacts of the future network concepts by measuring:**

- 1. Proximity:** The percentage of low-income residents and people of color who would live near transit service, including frequent service.
- 2. Access to Opportunity:** The percentage of low-income residents and people of color whose access to opportunity would be significantly impacted.

<sup>2</sup> “Minority” or “low-income” routes that operate in Census Tracts where the percentage of people that fall into these categories is above the regional average (40.2% minority, 14.6% low-income).

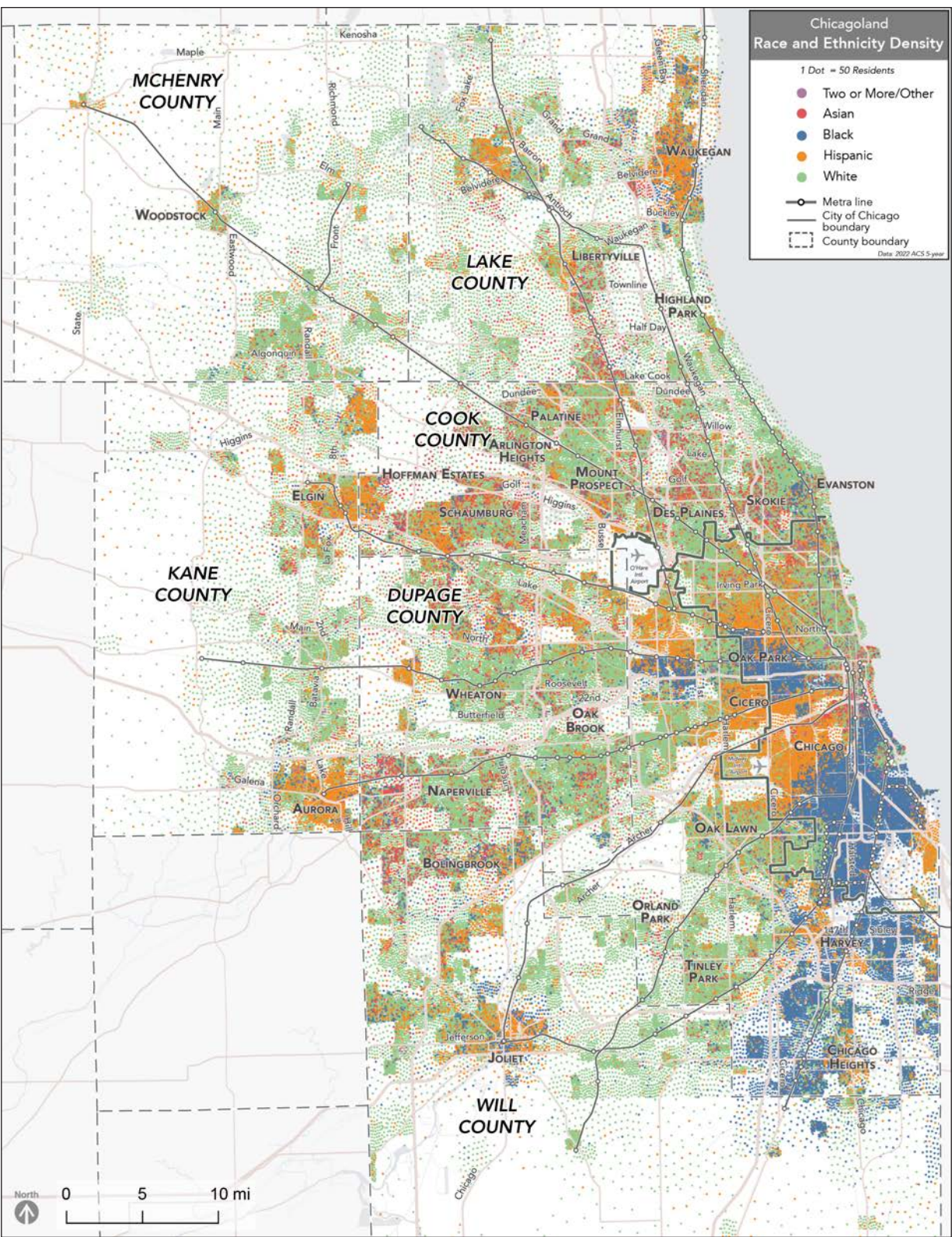


Figure 19: Map showing the distribution of residents by census-reported race and ethnicity group throughout the six counties served by Pace.



## Geographic Equity

### Matching Each Community’s Contribution with a Corresponding Amount of Service

RTA public funding is associated with specific shares of regional sales and other taxes that each county in Pace’s service area must dedicate to transit. These formulas specify both tax rates in each county, and the percentages of each tax that go to CTA, Metra or Pace.

Overall, Pace suburban services receive about 10% of regional public funding<sup>1</sup>. But because the funds are tracked at the county level, each county has an expectation that it will receive a share of service that matches or exceeds its share of tax receipts.

**Because the counties vary widely in their built environment, this expectation can come into conflict with ridership goals.** It can also conflict with a goal of providing service for people with the highest needs, because some counties have higher shares of low-income people and people without cars than others.

Overall, ensuring that each county’s contribution is matched by service tends to push Pace toward coverage goals, and toward developing customized relationships with each county.

These relationships often result in special programs that help ensure Pace funds are spent in ways that reflect each county’s goals. However, this also adds complexity to Pace’s service offerings and can conflict with the goal of a regionally cohesive system.

<sup>1</sup> This is slightly less than the 13% that Pace is entitled to by statutory formula, because (a) 15% of all public funding is held by the RTA for its own operations, programs and capital projects, and (b) regional ADA paratransit funding takes precedence over all other transit; a variable and growing share of the regional budget is “taken off the top” to make this possible.

For example, Pace dedicates substantial resources to planning, administering, operating and keeping separate multiple city- and county-level dial-a-ride programs. Each of these programs is created to match the expectations of its respective partner jurisdictions.

These programs increase the amount of service Pace provides overall, and significantly improve lifeline coverage in rural and exurban areas. However, they also reduce Pace’s ability to plan and operate transit service consistently across the region.

Furthermore, **providing an equitable amount of transit service in each county does not always result in an equitable amount of benefit.** The benefits of higher transit coverage apply equally to all people near service. However, the benefits of higher ridership are distributed regionally, even if some areas receive more service than others. This includes the economic benefits of reduced congestion, the environmental benefits of reduced air pollution from cars, and the fiscal benefits of higher farebox recovery.

**The expectation that tax receipts in each county will be matched by service tends to push Pace toward coverage goals, and encourages Pace to develop customized services in different parts of the region.**

**This can come into tension with racial and economic equity goals, which benefit from consistent regional standards.**

ST I (after RTA distributions)	Statutory distributions based on location			Effective distribution formula
	Chicago	Cook (remainder)	Collar counties	
CTA	100%	30%	-	49%
Metra	-	55%	70%	39%
Pace	-	15%	30%	12%
PTF I	Discretionary			

ST II and PTF II (after ADA and other distributions)	Statutory distribution formula
CTA	48%
Metra	39%
Pace	13%

Figure 20: Statutory shares of the main sources of RTA public funding, by county and service board. Source: Plan of Action for Regional Transit.

	City of Chicago	Suburban Cook County	DuPage County	Kane County	Lake County	McHenry County	Will County
12 Months Ended 12/31/14	\$ 343,832	\$ 521,593	\$ 97,995	\$ 33,208	\$ 62,156	\$ 19,964	\$ 45,249
Percentage of Total	30.59%	46.41%	8.72%	2.95%	5.53%	1.78%	4.03%
12 Months Ended 12/31/15	363,131	541,214	100,795	34,482	62,705	20,385	46,555
Percentage of Total	31.06%	46.29%	8.62%	2.95%	5.36%	1.74%	3.98%
12 Months Ended 12/31/16	368,589	546,376	102,966	35,476	63,521	20,801	47,453
Percentage of Total	31.10%	46.10%	8.69%	2.99%	5.36%	1.76%	4.00%
12 Months Ended 12/31/17	365,311	548,955	103,254	36,047	63,041	20,976	48,403
Percentage of Total	30.80%	46.29%	8.70%	3.04%	5.32%	1.77%	4.08%
12 Months Ended 12/31/18	380,082	572,126	105,460	37,452	64,929	21,507	50,455
Percentage of Total	30.85%	46.44%	8.56%	3.04%	5.27%	1.75%	4.10%
12 Months Ended 12/31/19	390,709	580,259	107,848	37,876	62,748	21,895	52,826
Percentage of Total	31.15%	46.27%	8.60%	3.02%	5.00%	1.75%	4.21%
12 Months Ended 12/31/20	319,612	554,640	102,676	37,302	61,586	21,400	53,942
Percentage of Total	27.76%	48.18%	8.92%	3.24%	5.35%	1.86%	4.69%
12 Months Ended 12/31/21	429,301	693,634	127,919	46,466	75,601	26,670	69,216
Percentage of Total	29.23%	47.22%	8.71%	3.16%	5.15%	1.82%	4.71%
12 Months Ended 12/31/22	476,052	724,659	137,054	49,468	82,051	27,864	72,418
Percentage of Total	30.33%	46.17%	8.73%	3.15%	5.23%	1.78%	4.61%
12 Months Ended 12/31/23	499,478	751,449	139,631	50,494	84,234	28,918	76,679
Percentage of Total	31.82%	47.88%	8.90%	3.22%	5.37%	1.84%	4.89%

Note: Amounts above include revenues from the General Fund and the Agency Fund

Figure 21: RTA Sales Tax revenues (in thousands of dollars) by county, from 2014 to 2021. Source: RTA Special Purpose Combining Financial Statement, 2023.



3

## The Existing Suburban Bus Network



# Introduction to the Pace Suburban Bus Network

## Network Definition

As of Spring 2024, the suburban bus network includes 135 fixed bus routes<sup>1</sup> and ten On Demand zones<sup>2</sup>. This includes:

- 109 routes that operate all day, Monday to Friday. Among these routes:
  - 95 operate on Saturday.
  - 52 operate on Saturday and Sunday.
  - Hours of service vary widely, but most routes start service by 6 AM.
- 19 routes that operate limited trips, typically at morning or afternoon peak hours on weekdays only.
- 10 On Demand zones, where Pace operates a bus that people can use to reach any location within a fixed area.

This reflects a network that was pared down due to the pandemic, with gradual service restoration since. Overall, Pace operated about 7% less service in Fall 2023 than in Fall 2019.

### General vs. Specialized Routes

Most Pace bus routes – and all On Demand zones – are paid for with Pace's own funds, and operated by Pace's service divisions for general public purposes. However, there are many exceptions:

- Pace operates and pays for part of the cost of 10 routes that have private partners. These routes serve logistics employment sites that belong to Amazon, Centerpoint, FedEx and UPS at shift change times.

<sup>1</sup> Includes Pulse Milwaukee and Pulse Dempster as fixed routes.

<sup>2</sup> In this report, the suburban bus network includes fixed bus routes and On Demand zones. It does not include services that require an advance reservation, like Dial-A-Ride or vanpool services. This report does not propose and does not anticipate any changes to dial-a-ride or vanpool service.

- Pace pays for part of the cost of six bus routes operated or administered by local cities. This includes three routes in Niles, two in Highland Park, one in Rosemont, and one in Schaumburg.
- Pace pays private contractors to operate five routes that are located far from its operating bases, including two in DuPage County, and three in McHenry County.
- In Waukegan, the local high school district buys transit passes for students to help fund supplemental service at school hours.

Regardless of purpose or funding partner, all of Pace's routes are operated on Pace-branded vehicles, and are open to the general public.

## Frequency-Based Maps

Figure 22 on this page is a simplified map of the existing network, on weekdays in the middle of the day. **A detailed region-wide map is on page 28.** Detailed sub-regional maps are available in Appendix A.

On these and other route maps throughout this report:

- **Red lines mean frequent service**, typically every 15 minutes or better in the middle of the day.
- **Purple** means about **every 20 minutes**.
- **Dark Blue** means about **every 30 minutes**.
- **Light Blue** means about **every 60 minutes**.
- **Gold** means this route operates **peak-only or otherwise limited** service (e.g. less than every 60 minutes, or not every weekday).

Detailed maps also show CTA and Metra lines and stations in gray and black for reference.

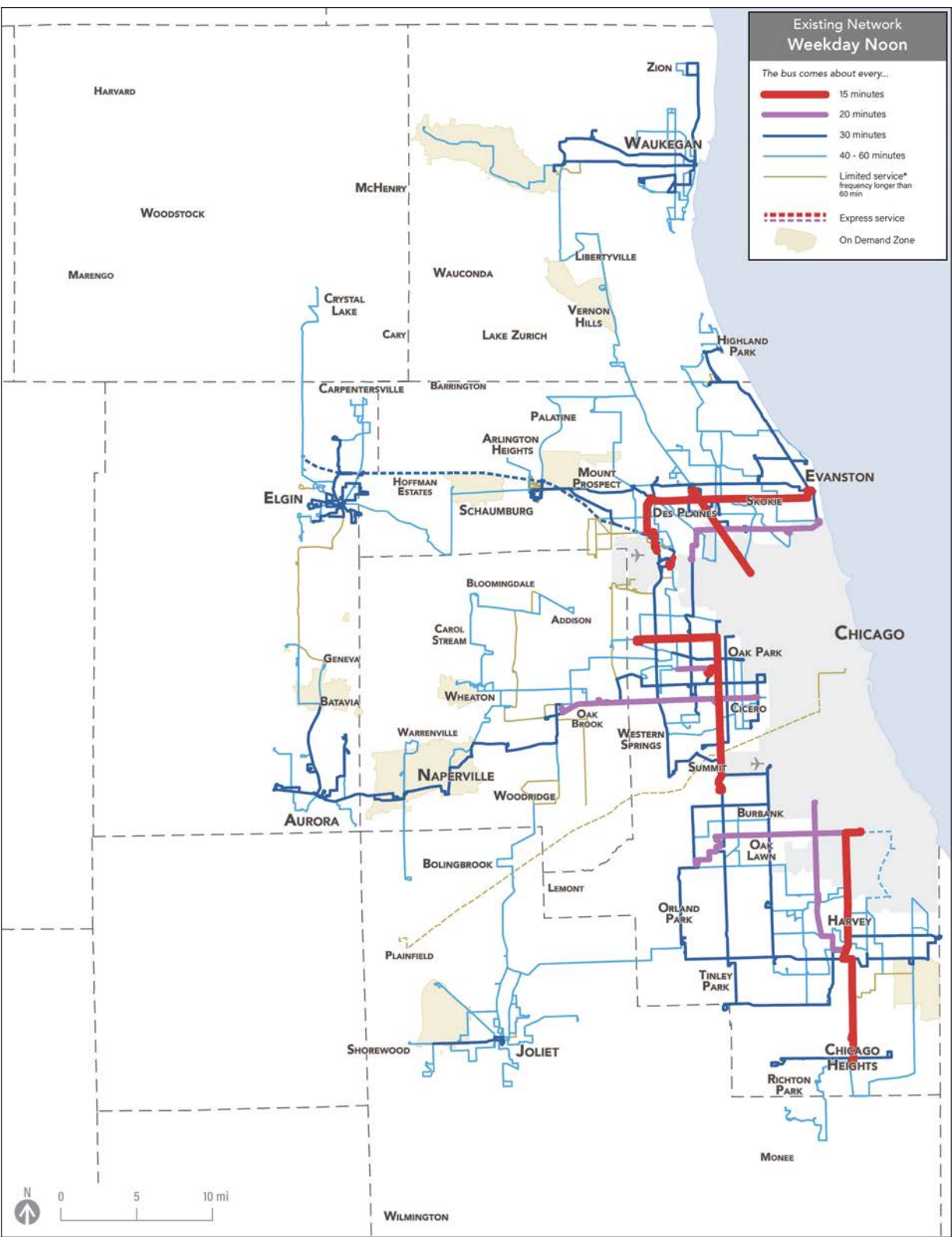
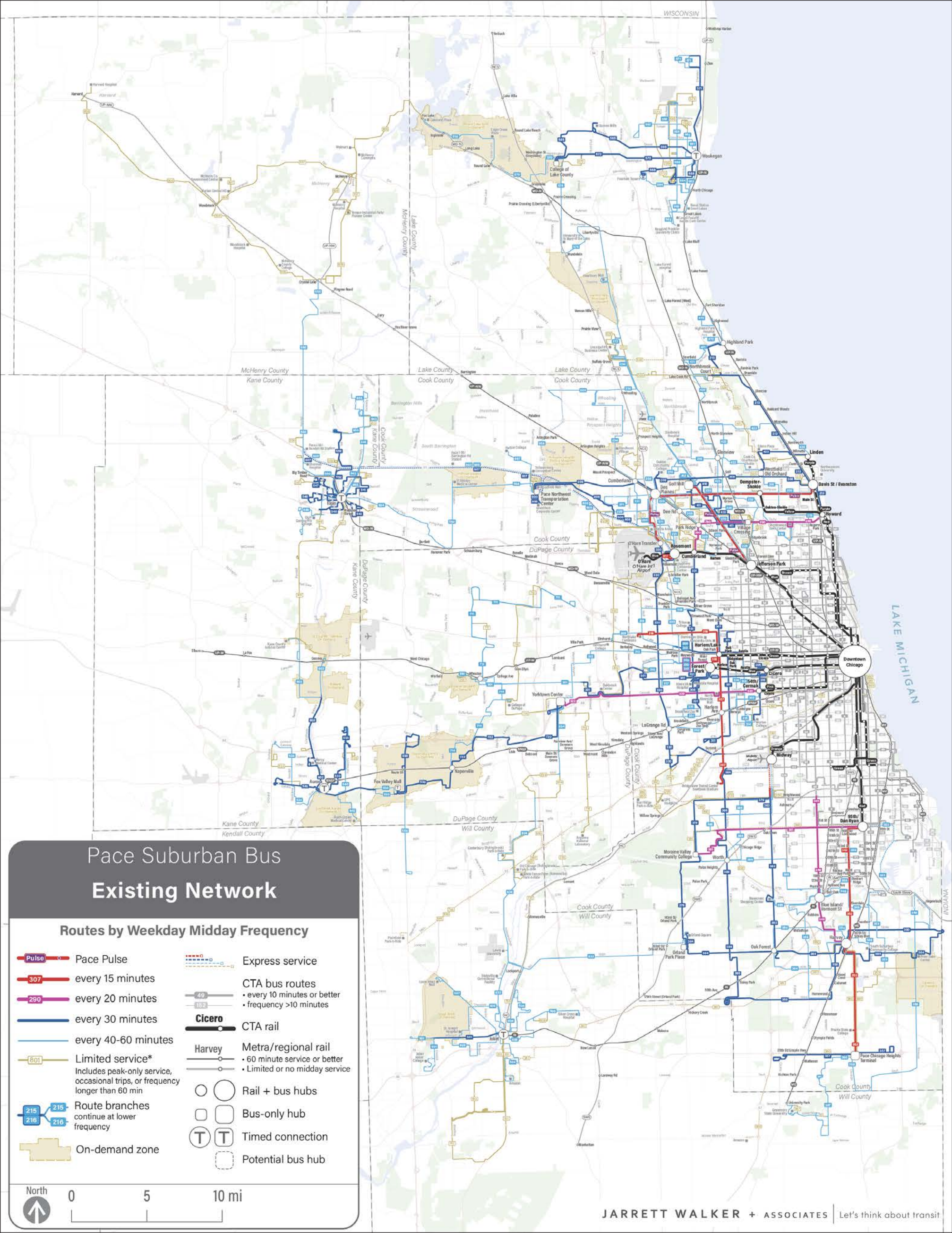


Figure 22: Simplified map of Pace's existing service as of Spring 2024, based on service frequency on weekdays at noon. See following page and Appendix A for more detailed maps.



# Network Overview Map - Spring 2024





# There are many smaller networks, rather than a regional system.

As discussed in Chapter 1, Pace service is mostly a collection of smaller sub-regional networks.

Each smaller network is operated by its own Pace division. Most Pace divisions are the continuation of a local bus company that existed before 1983. Limited growth in funding has prevented Pace from expanding service to many other areas.

As a result, the map extracts in Figure 23 show about 85% of Pace’s suburban service. The remainder includes express routes along I-90 and I-55, and local routes operated in areas far from division bases, especially in DuPage and McHenry counties.

### Long Distances

Because Pace’s service area is so large, smaller sub-networks are necessary, because most bus routes can’t be longer than about 15 to 20 miles.

This is because the longer a bus route becomes, the less likely it will remain on time. Maintaining reliable schedules imposes limits on the length of lines. Longer routes are also unattractive to bus drivers, because of long times between breaks<sup>1</sup>.

There is no definitive rule on the maximum length of a bus route, but a common practice is to limit route length to 90 minutes in one direction.

### Major Landscape Barriers

Landscape barriers also tend to separate the region into subareas, with limited connections in-between. These include:

- **O’Hare Airport and nearby freeways** and industrial areas. There are only three street crossings of I-90 between Rosemont and I-290. This separates north Cook County from west Cook County and northeastern DuPage County.

<sup>1</sup> Long routes also imposes a long time between restroom visits. This is not just a driver problem: very few people want to be on a bus that is stopped because a driver has to use the restroom.

- **Des Plaines River, I-55** and adjacent industrial areas, forest preserves and large land uses. There are only four non-freeway crossings in the 21 miles from Harlem Ave to Lockport. This separates west and south Cook County, as well as south Cook County and DuPage county.
- A 15-mile long band mostly **between Kirk Road and IL-59**, north of I-88 separates cities on the Fox River from more continuous development east of Highway 59. This band includes large land uses like Fermilab and the DuPage Airport, and several forest preserves.

### Different Rules in Different Areas

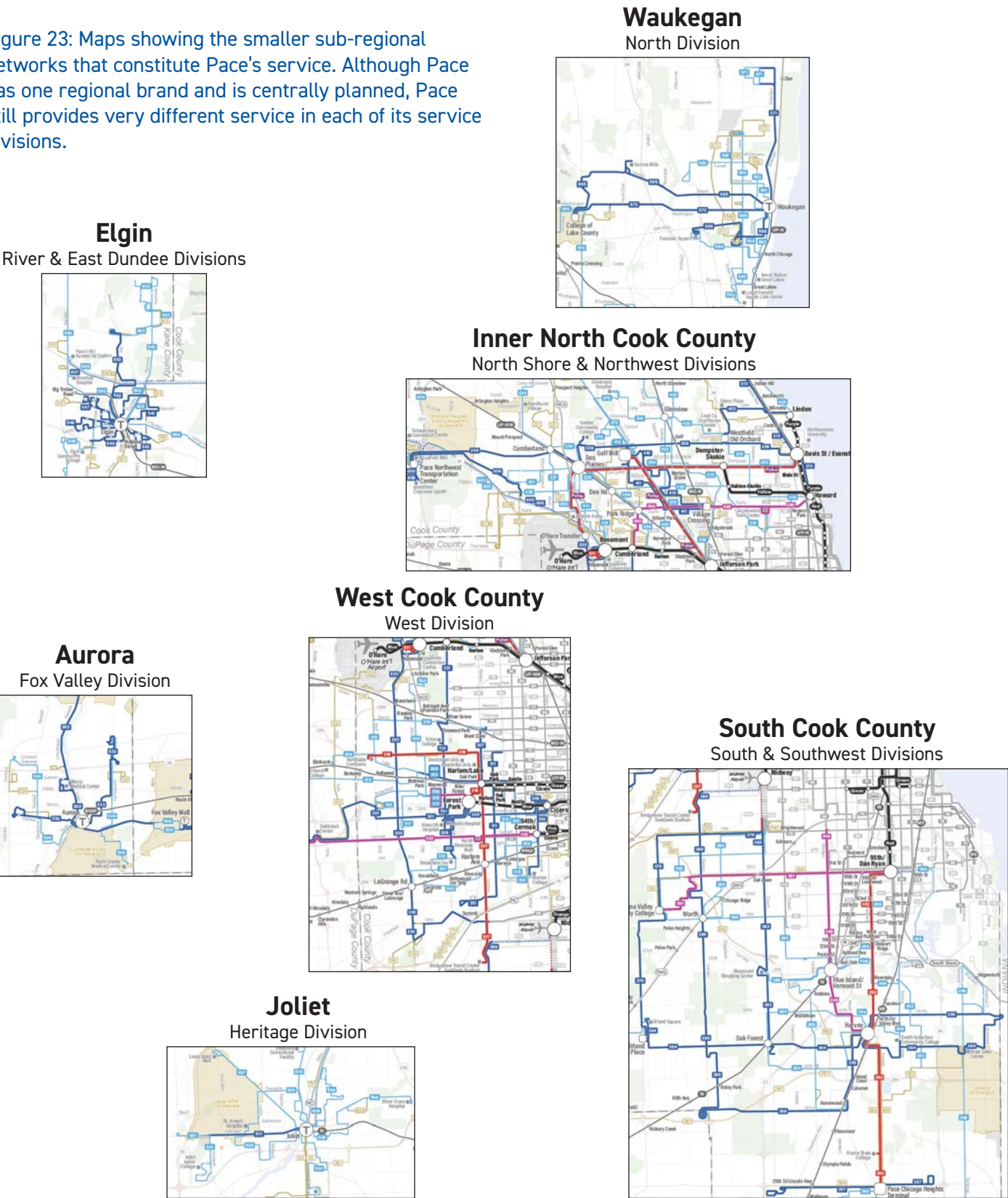
Each local network organizes bus frequency and coverage differently. These differences go beyond what could be explained by local economic, social or geographic conditions.

For example, both Aurora and Elgin are streetcar-era satellite cities with significant low-income and Hispanic populations. Their bus networks cover similarly sized areas, and their populations are likely to have similar needs overall.

Yet their local bus networks are strikingly different. In Aurora, service is organized in a small number of two-way routes that require users to walk longer distances but ensure relatively direct travel. In Elgin, service is organized in one-way loops that minimize walking but require passengers to accept long detours for relatively short distances.

Another key difference between divisions is in weekend service. **Some divisions provide service on Sundays, while others do not.** As a result, there is almost no suburban bus service on Sundays outside Cook County. This difference may reflect history, but there’s no evidence that it reflects public preferences, or that it matches lower need or demand for Sunday service outside Cook County.

Figure 23: Maps showing the smaller sub-regional networks that constitute Pace’s service. Although Pace has one regional brand and is centrally planned, Pace still provides very different service in each of its service divisions.





# There are frequent corridors, but no frequent network.

## What is frequent service?

Frequent service refers to bus routes where a person can reasonably expect that, at any time, the bus is probably arriving soon. In the US, this is often taken to mean service **every 15 minutes or better** during daytime hours<sup>1</sup>. This includes the following five Pace routes<sup>2</sup>:

- Pulse Milwaukee and Pulse Dempster operate every 15 minutes, seven days per week, from about 6 AM to 9 PM.
- Route 352 (Halsted) operates every 15 minutes, seven days per week, from about 7 AM to 8 PM<sup>3</sup>.
- Route 307 (Harlem) and Route 318 (West North Ave) operate every 15 minutes on weekdays, from about 6 AM to 7 PM.

Another four Pace routes approach this level of frequency, with service every 20 minutes until about 7 PM, Monday to Saturday. These are:

- Route 290 (Touhy Ave)
- Route 322 (Cermak Road/22nd St)
- Route 349 (South Western)
- Route 381 (95th Street)

As shown in Figure 24, Pace intends to eventually upgrade all of these routes to its Pulse arterial rapid transit standard. This will reduce waits, extend service hours and speed up travel on routes that carry almost 30% of existing riders.

<sup>1</sup> This is not universal. In some cities, buses are not considered frequent unless they come at least every 10 to 12 minutes. The Toronto Transit Commission (TTC)'s frequent network requires service every 10 minutes or better, seven days a week, until 1 AM.

<sup>2</sup> Route 811 (Rosemont Circulator) also operates every 10 to 15 minutes, seven days per week, from 7 AM to midnight (10 PM on weekends). However, this route serves a very small area.

<sup>3</sup> On Sunday, this frequency does not extend south of Pace Harvey Transportation Center. Uniquely among Pace routes, the northern half of Route 352 operates 24 hours a day, with 30-minute frequency in the evening, late night, and early morning hours.

Nevertheless, most Pulse routes will connect to just one other Pulse route. Many trips will continue to require transfers to and from infrequent service.

This is significant because relatively few trips start and end near the same street and bus route. **In an extensive area like the Chicago suburbs, many transit trips will inevitably require using more than one bus**, so there's a high value to establishing frequent connections.

## When many frequent routes connect with each other, many transit trips get shorter.

As explained in Chapter 2, **frequency is useful because it reduces waiting. This effect is doubled for any trip that requires a transfer**, where a passenger has to wait for two buses. This principle underlies the frequent grid of bus lines operated by CTA in the City of Chicago. It could be applied in parts of the suburbs as well, if funding were available for more frequent routes.

For example, consider a trip from Downtown Harvey to RiverCrest Shopping Center, in south Cook County. This requires taking Route 364 from Harvey, and a transfer to Route 383 at Oak Forest. Currently, both routes operate every 30 minutes.

- On average, a person taking this trip will spend 30 minutes waiting: 15 minutes for their first bus, and another 15 minutes for their second bus.
- In a worst-case scenario, if they miss their first bus and their transfer, they might have to wait a whole hour.

In the Plus 50 - Ridership concept described in Chapter 4, both of these routes would run every 15 minutes. **Improving frequency on both routes would save the person taking this trip 15 minutes on average, and up to 30 minutes in a worst-case scenario.**

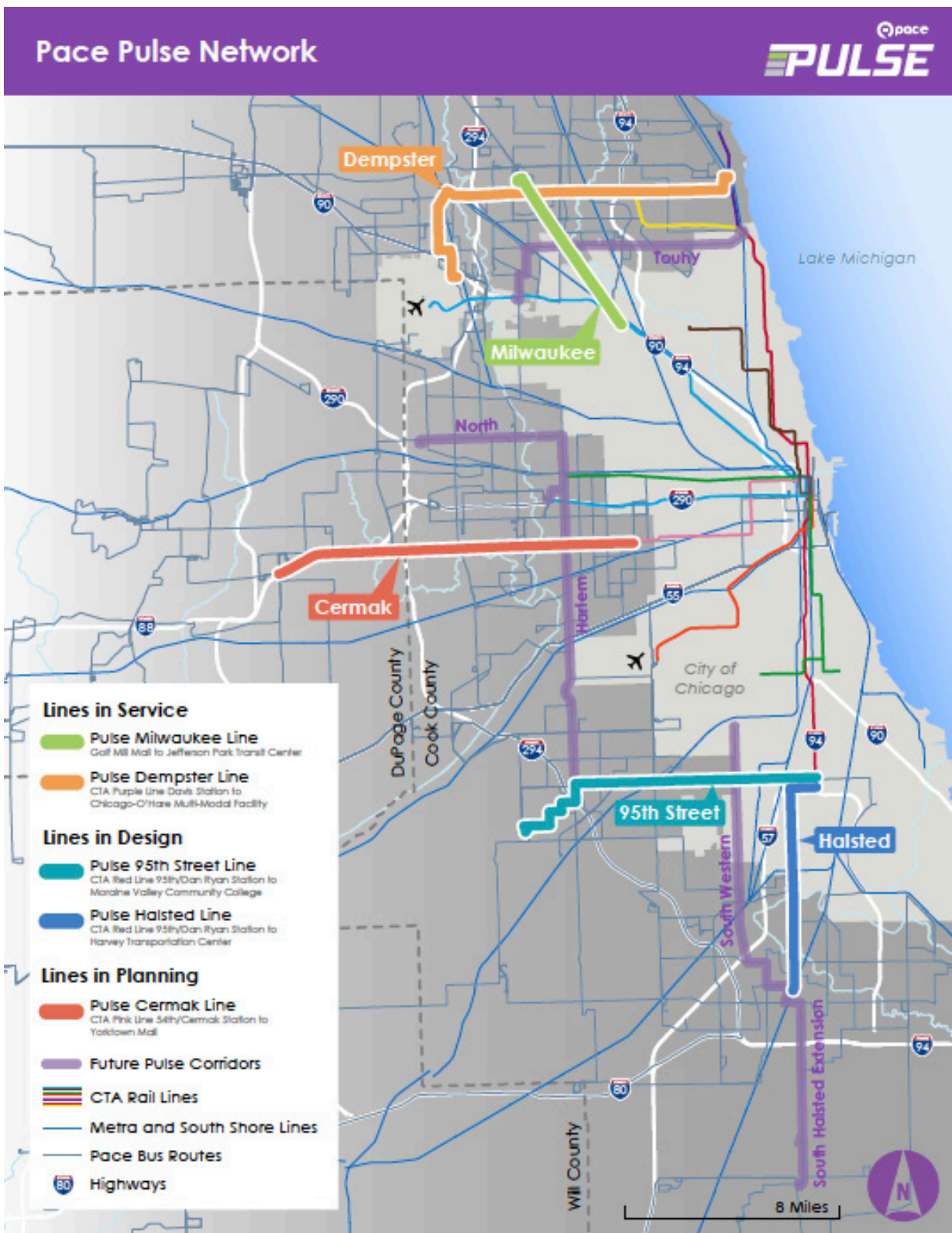


Figure 24: Map showing Pace's planned expansions for its Pulse arterial rapid transit routes.



# Mostly low frequencies and limited coverage produce very little access to opportunity.

## Mostly Low Frequencies

Outside weekday peak hours, most Pace routes run at most every 40 to 60 minutes. Among Pace’s 109 all-day fixed routes, on weekdays in the midday:

- 61 operate every 40 to 60 minutes or worse.
- 42 operate about every 20 to 30 minutes.
- Only six operate every 15 minutes or better.

## Limited Coverage

Even accounting for other transit services, like Pace On Demand, Metra and connecting CTA bus and train routes, **most suburban residents and most of the places they need to go are located more than a half-mile from any bus or train service.**

As shown in Figure 27 on page 32, within Pace’s six-county service area<sup>1</sup>, this includes about:

- 58% of residents (including 46% of low-income residents and 49% of people of color).
- 56% of jobs and work destinations.
- 57% of school destinations
- 52% of shopping destinations
- 59% of social and recreational destinations

## Very Little Access to Opportunity

This combination of low frequencies and scarce coverage means that **very few people live in areas where transit can take them to a broad range of places in a reasonable amount of time.**

The map in Figure 25 shows how many jobs someone could reach within 60 minutes – by transit and walking only – starting from anywhere in the six counties served by Pace. Darker areas have access to more jobs.

Measuring access to jobs provides information about access to many kinds of opportunity, because most of the places people need to reach regularly are places of employment - this includes retail, services, schools and many others.

In the six counties served by Pace, **fewer than 12% of suburban residents have access by transit to at least 100,000 jobs within an hour.** There are 2.6 million suburban jobs in the same area.

There are nearly 2.6 million suburban jobs in this area, so even access to 100,000 jobs by transit does not mean “you could reach most of the places you might need to go”.

Areas where transit and walking provide relatively high access to opportunity are mostly limited to inner parts of north and west Cook County, and the immediate vicinity of the largest suburban employment centers in Oak Brook, Schaumburg, and parts of Naperville.

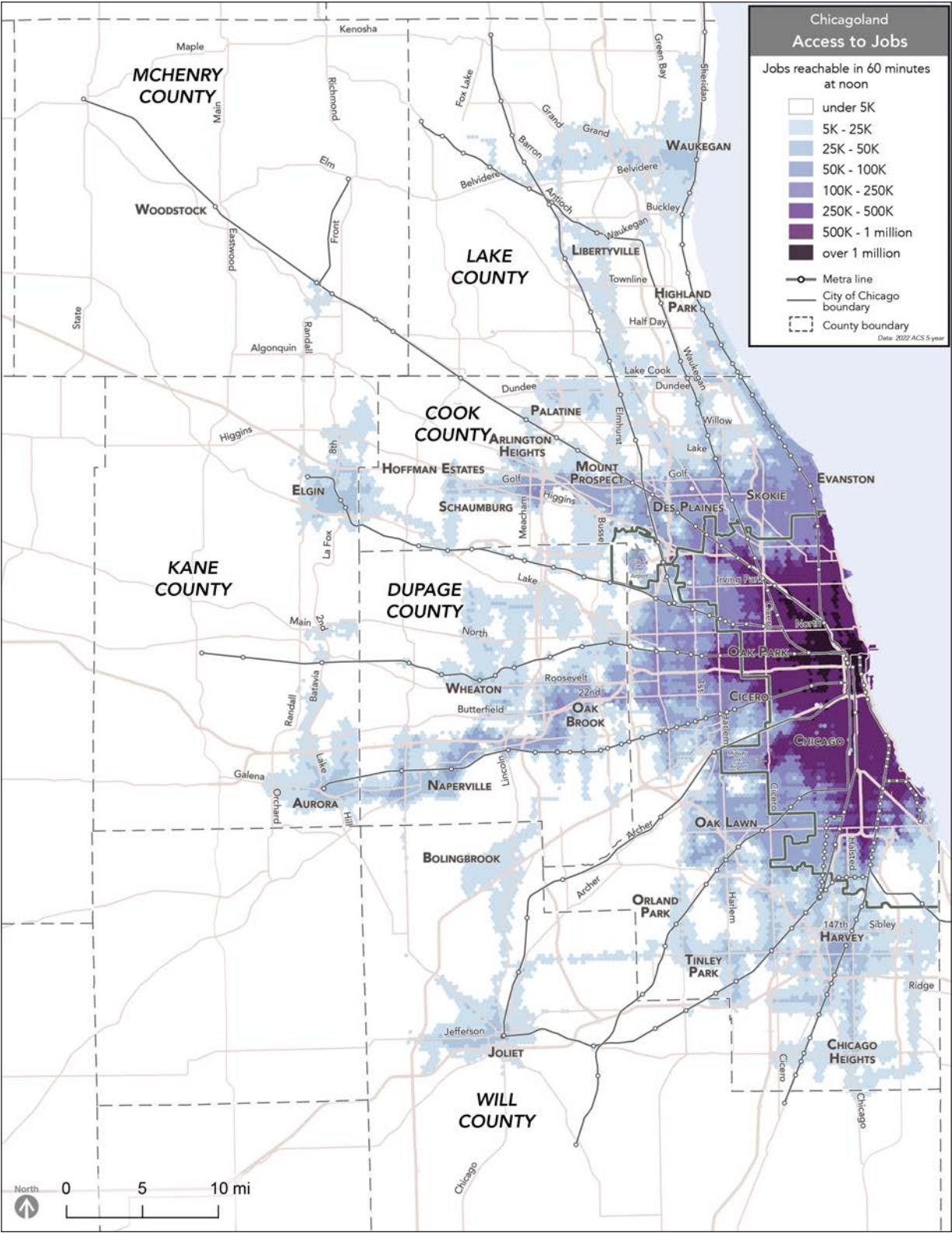


Figure 25: Map showing the number of jobs accessible by transit and walking within 60 minutes, starting from anywhere in the six counties served by Pace.

<sup>1</sup> Includes suburban Cook, DuPage, Kane, Lake, McHenry and Will counties. Does not include the City of Chicago.



# On Demand service expands coverage, but relies on low ridership.

## What are On Demand zones?

In addition to its regular suburban bus routes, Pace operates ten On Demand zones. These are shown as **tan-colored areas** on the network map on page 28. This type of service is also commonly known as “microtransit”. They are generally located toward the edge of the network, in areas that may have significant overall population or destinations, but may not have enough density on linear corridors to enable efficient bus routes. Figure 26 (below) is Pace’s map of the West Joliet On Demand zone.

Anyone travelling within an On Demand zone can request a ride with as little as 10 minutes notice, using the Pace website, On Demand app, or a dedicated phone number. On Demand zones also allow connections to nearby bus and Metra routes.

## Benefits of On Demand

On Demand increases the number of places where transit is available without an advance reservation. Figure 27 shows that **On Demand zones cover about 5% of the people and places in Pace’s service area**. These areas would otherwise have no bus or rail service.

## Limitations of On Demand

The main limitation of On Demand is **low passenger capacity**. People travelling in the same area at the same time are often going different directions. As a result, it’s rarely possible to serve more than one passenger at a time. Therefore, as more people want to ride, either wait times must increase, or Pace must dedicate more vehicles and drivers. **In practice, Pace is not able to guarantee maximum wait times on On Demand**, so a rider’s travel time may vary.

Pace On Demand zones typically carry 1.5 to 3 passengers per hour, compared to an average of 13 passengers per hour on fixed bus routes. The most efficient microtransit services in North America may carry up to 6 passengers per hour. However, achieving this level of efficiency requires asking riders to walk farther to pickup locations, and limiting the places they can be dropped off. Either option significantly reduces the appeal of the service.

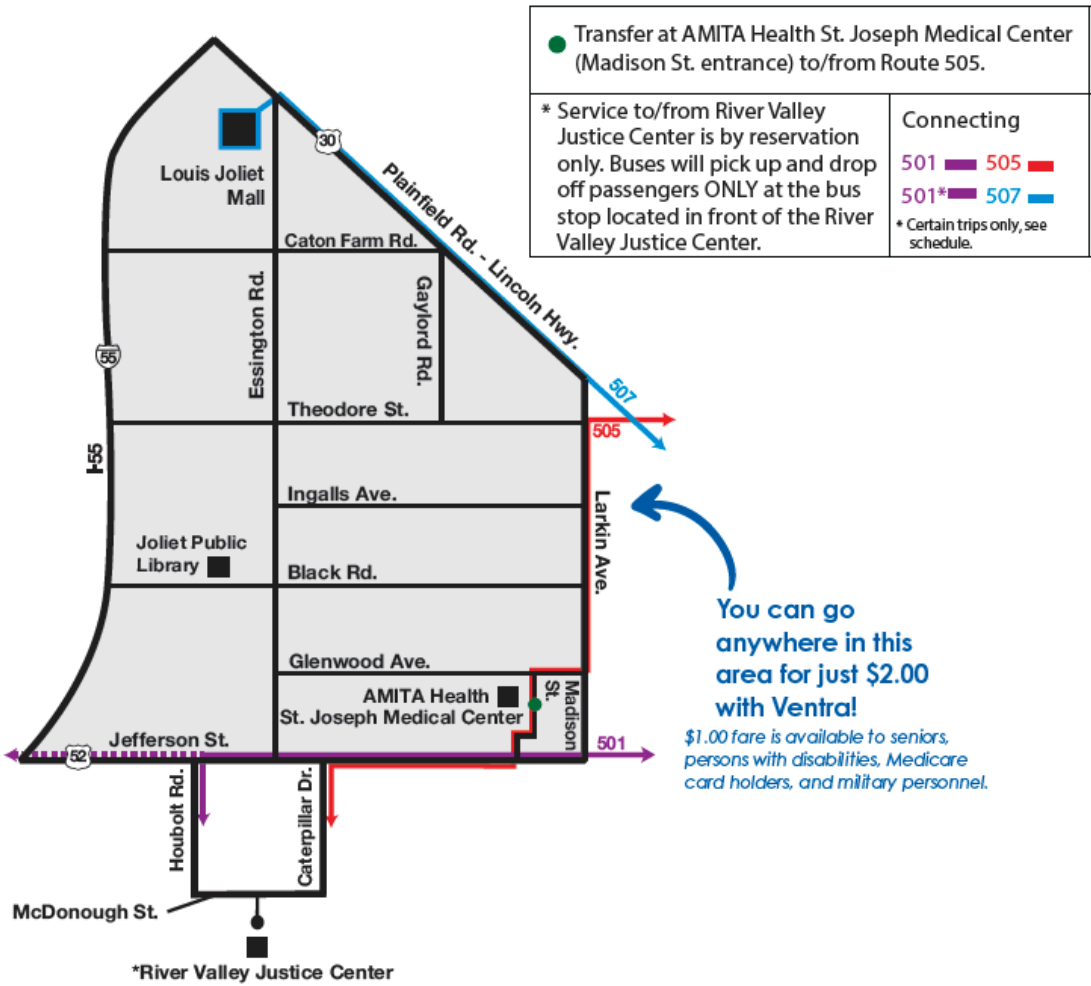


Figure 26: Official map of a Pace On Demand zone. This zone covers West Joliet, specifically the area between US-30, Larkin Ave, Jefferson St and I-55. Anyone can book an On Demand trip between any two places in this area, or to connect to one of Pace’s fixed bus routes at the edge of this zone.

## Pace Spring 2024 - Weekdays at Noon

What percentage of the Pace service area is within a 1/2-mile walk of transit with service

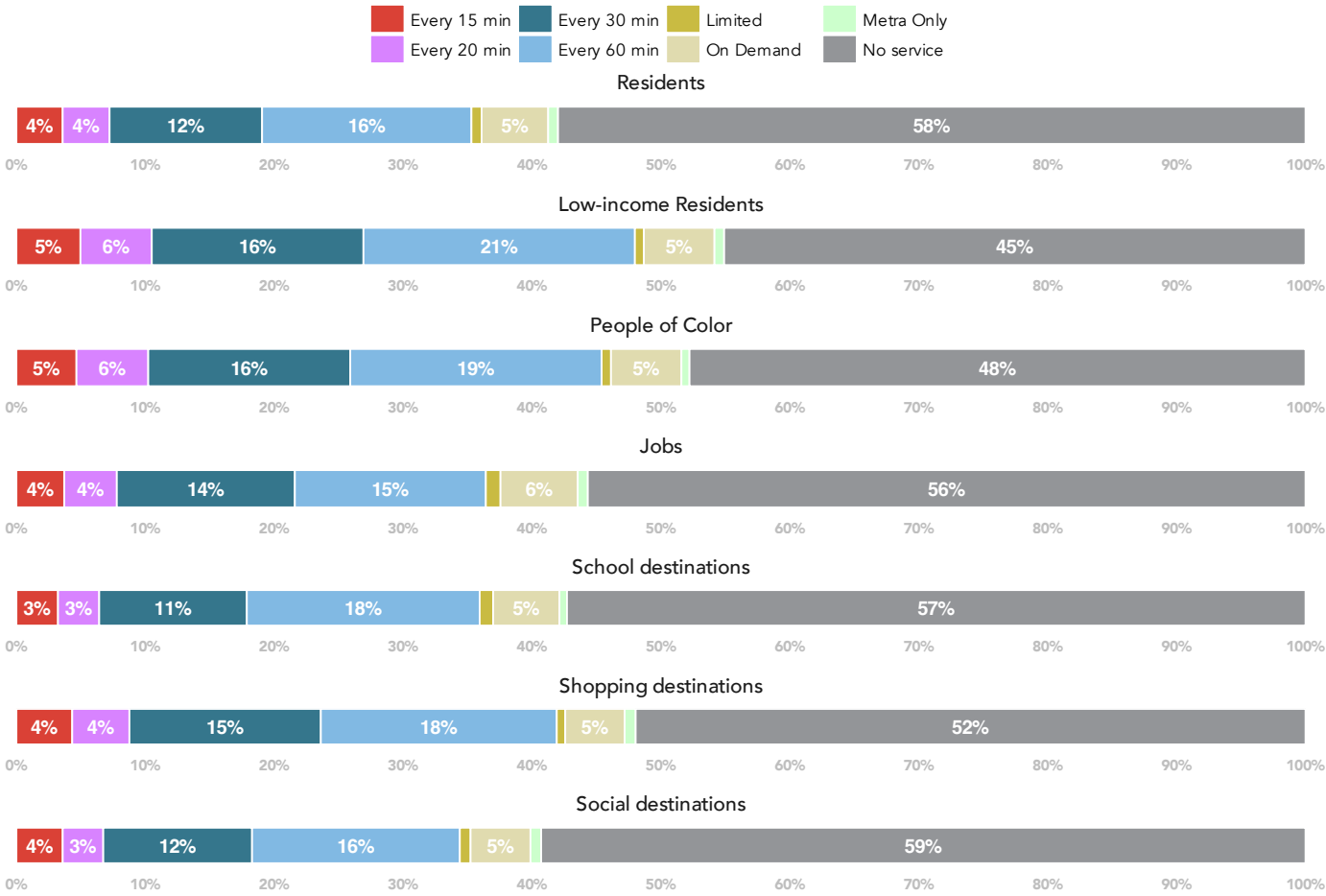


Figure 27: Chart showing the percentage of residents, jobs and destinations within a 1/2-mile walk of transit in the Pace service area. Residential and job locations based on Census data (ACS, LEHD), trip destinations based on Replica data for a typical weekday in Fall 2023.



Many Pace routes have complex schedules that are difficult to learn.

Routes change according to the time of day, week and year.

Pace suburban service is very complex. Almost every Pace bus route and On Demand zone has unique characteristics built into its schedule.

- Some routes operate seven days a week, but most do not. Some routes operate six days a week, and some routes (and all but two On Demand zones) operate only Monday to Friday.
- Many routes operate higher levels of service at weekday peak hours, while others do not. A few routes only operate at weekday peak hours. The specific hours that warrant extra peak service are different on every route.
- Many routes operate on different streets or make different stops for some or all peak-hour trips. There is no larger pattern to which or how many of these trips are involved, as they depend on the specifics of local destinations.

- A few routes operate special summer service patterns, like additional trips to Six Flags only on Route 565 (Grand Ave), or Monday to Thursday service on Route 905 (Schaumburg Trolley).

For a new rider – or even a regular rider looking to travel at a different time of day or week than they usually do – **this level of route and schedule customization can make learning the network very difficult.**

Why would Pace do this?

This reflects two forces that have shaped the network over several decades:

- As the suburbs have grown, **Pace’s resources have been stretched to expand coverage and add new long-distance express services. This has pushed Pace to optimize costs on existing routes.** This has been done by reducing

off-peak frequencies, and shorter route patterns at certain times of day.

- **Pace has strived to respond to a constant stream of separate service requests from local stakeholders.** This level of responsiveness results in high levels of differentiation from one route to another.

Pace’s complex schedules exist partly to limit operating costs, and partly in response to widely varying local service requests.

Example: Route 290 (Touhy Ave)

No single Pace route includes every type of complexity described above. However, Route 290’s schedule includes many common cost-reducing features that are likely to cause rider confusion.

In particular, Route 290 exemplifies how hard it can be to identify the “normal” route, when “special” trips occur so many times per day (64 of 140 weekday trips).

Route 290 operates mostly in inner north Cook County. It connects CTA Howard Station with CTA Cumberland station via parts of Lincolnwood, Skokie, Niles and Park Ridge, as shown on the following page.

Route 290’s current published weekday and Saturday schedules are shown in Figure 28 on this page, and its Sunday schedule is shown in Figure 29 on page 34. Route 290’s official map is shown in Figure 30 on page 34. These show that:

- **Generally speaking, Route 290 operates about every 20 minutes in the daytime, Monday to Saturday, with additional peak trips that**

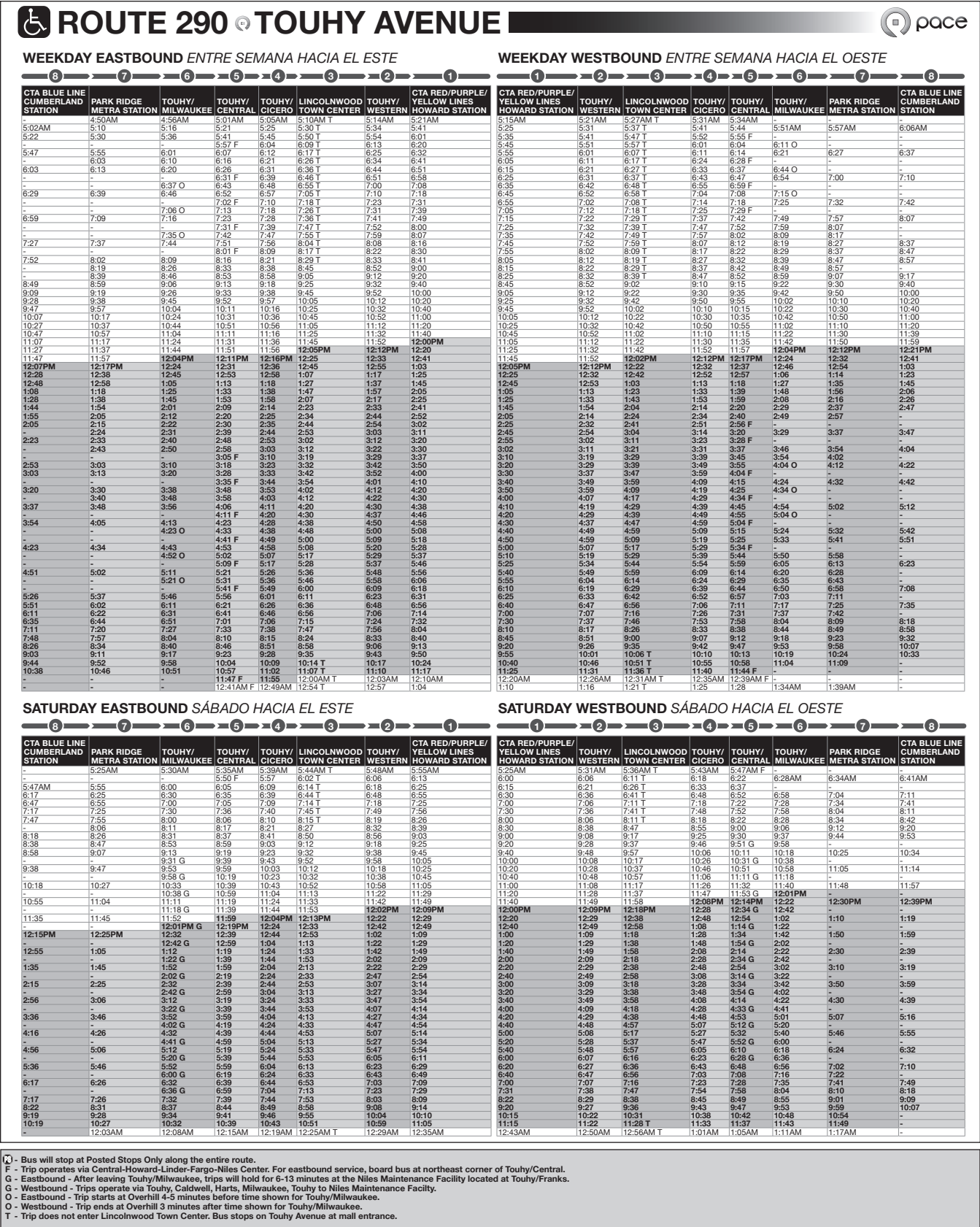


Figure 28: Route 290 published schedule, on weekdays and Saturdays.



create 10 minute frequency.

- **There's less service in Park Ridge** (between timepoints 6, 7 and 8 on the schedule). Park Ridge doesn't get extra service at peak hours. On Saturdays, Park Ridge is served only every 40 minutes, except for 6 to 9 AM. Given the lower densities and higher incomes in Park Ridge, this is consistent with optimizing costs by reducing service in the part of the route with the lowest ridership potential. But it is also associated with some of the complexities below.

- **In addition to the "normal" route, there are six different special stopping patterns** marked at different times of the day. These are marked by the letters F, G, O and T, except G and O mean slightly different things depending on the direction of travel.

- Patterns F, G and O are related to short-turn trips that don't serve Park Ridge. They involve streets not served by the "normal" route. Pattern F is the shortest of these patterns, ending one of every three peak-hour trips just east of the Niles village boundary.

- Pattern T is related to a transfer to other routes at Lincolnwood Shopping Center that is only offered after 9 AM. "T" trips skip the transfer point at times when the shopping center is not open. This saves several minutes in the morning peak, and therefore likely requiring Pace to deploy one bus less to maintain 10 minute frequency in the morning peak between Niles and CTA Howard station.

- **There are different special patterns on Saturdays and Sundays than on weekdays.**

- Patterns F and O only operate on weekdays.

- Pattern G only operates on Saturdays and Sundays. It exists partly to save several minutes compared to Pattern O, maintaining a 20 minute frequency between Niles and CTA Howard Station without adding one more vehicle. Pattern G also allows Route 290 to make this short turn while preserving a connection to the Pulse Milwaukee route.
- Pattern T operates seven days a week, before 9 AM and during late evenings.

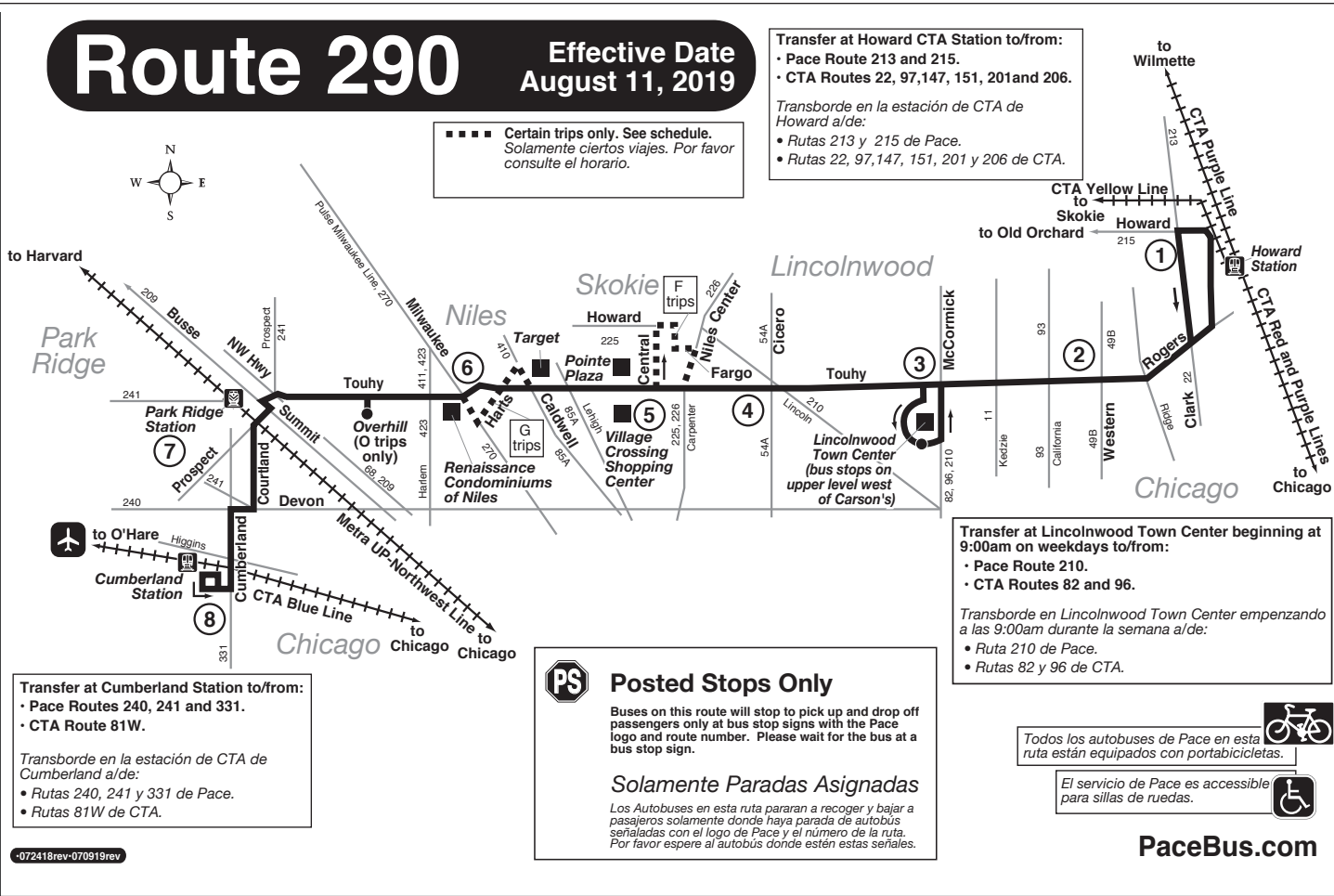
**These special patterns involve nearly half of all trips, but at select locations only.** These exceptional patterns mean that even a regular user of Route 290 might wait at the wrong bus stop or might wait a lot longer than they expected, if they don't consult the schedule or real-time information for the pattern operating right now.

**Complicated schedules tend to reward rider expertise, and to rebuff potential new users.**

**In many places, it would be easy for a new rider - or an experienced rider travelling at a new time of day - to make a mistaken assumption about where the next bus is going, or even to miss their bus entirely because they are waiting at the wrong bus stop for that particular time of day.**

SUNDAY EASTBOUND DOMINGO HACIA EL ESTE											SUNDAY WESTBOUND DOMINGO HACIA EL OESTE										
CTA BLUE LINE CUMBERLAND STATION	PARK RIDGE METRA STATION	TOUHY/ MILWAUKEE	TOUHY/ CENTRAL	TOUHY/ CICERO	LINCOLNWOOD TOWN CENTER	TOUHY/ WESTERN	CTA RED/PURPLE/ YELLOW LINES HOWARD STATION	CTA RED/PURPLE/ YELLOW LINES HOWARD STATION	TOUHY/ WESTERN	LINCOLNWOOD TOWN CENTER	TOUHY/ CICERO	TOUHY/ CENTRAL	TOUHY/ MILWAUKEE	PARK RIDGE METRA STATION	CTA BLUE LINE CUMBERLAND STATION						
7:16AM	7:24AM	7:28AM	7:38AM	7:58AM	7:58AM	7:58AM	7:58AM	8:00AM	8:07AM	8:12AM	8:17AM	8:22AM	8:28AM	8:33AM	8:40AM						
8:01	8:09	8:14	8:20	8:24	8:29	8:33	8:40	8:45	8:52	8:57	9:02	9:07	9:14	9:19	9:26						
8:46	8:54	8:59	9:05	9:09	9:14	9:18	9:25	9:30	9:37	9:42	9:47	9:52	9:59	10:06	10:15						
9:43	9:52	9:58	10:05	10:09	10:17	10:26	10:34	10:40	10:47	10:54	11:00	11:06	11:14	11:22	11:30						
10:23	10:32	10:38	10:45	10:49	10:57	11:06	11:14	11:20	11:27	11:34	11:40	11:46	11:54	12:02	12:10						
11:03	11:12	11:18	11:25	11:29	11:37	11:46	11:54	12:00	12:07	12:14	12:20	12:27	12:34	12:43	12:51						
11:43	11:52	11:58	12:05	12:09	12:17	12:26	12:34	12:40	12:47	12:54	13:00	13:07	13:14	13:22	13:30						
12:23PM	12:32PM	12:38	12:45	12:49	12:57	1:06	1:14	1:20	1:27	1:34	1:40	1:46	1:54	2:02	2:10						
1:03	1:12	1:18	1:25	1:29	1:37	1:46	1:54	2:00	2:07	2:14	2:20	2:27	2:34	2:42	2:50						
1:43	1:52	1:58	2:05	2:09	2:17	2:26	2:34	2:40	2:47	2:54	3:00	3:07	3:14	3:22	3:30						
2:22	2:31	2:37	2:45	2:50	2:58	3:07	3:15	3:20	3:27	3:34	3:40	3:47	3:54	4:02	4:10						
3:02	3:11	3:17	3:25	3:30	3:38	3:47	3:55	4:00	4:07	4:15	4:20	4:27	4:34	4:42	4:50						
3:42	3:51	3:57	4:05	4:10	4:18	4:27	4:35	4:40	4:47	4:54	5:00	5:07	5:14	5:22	5:30						
4:22	4:31	4:37	4:45	4:50	4:58	5:07	5:15	5:20	5:27	5:34	5:40	5:47	5:54	6:02	6:10						
5:04	5:13	5:19	5:25	5:30	5:38	5:47	5:55	6:00	6:07	6:15	6:20	6:27	6:34	6:42	6:50						
6:44	6:53	6:59	7:05	7:10	7:18	7:27	7:35	7:40	7:47	7:54	8:00	8:07	8:14	8:22	8:30						
8:24	8:33	8:39	8:45	8:50	8:58	9:07	9:15	9:20	9:27	9:34	9:40	9:47	9:54	10:02	10:10						
9:00	9:08	9:14	9:20	9:25	9:31	9:38	9:44	9:50	9:57	10:04	10:10	10:17	10:24	10:32	10:40						
10:00	10:08	10:14	10:20	10:25	10:31	10:38	10:44	10:50	10:57	11:04	11:10	11:17	11:24	11:32	11:40						
11:00	11:08	11:14	11:20	11:25	11:31	11:38	11:44	11:50	11:57	12:04	12:10	12:17	12:24	12:32	12:40						

Figure 29: Route 290 published schedule, on Sundays





# Weekend and evening service levels are so low that they likely suppress ridership.

## Service declines more steeply than ridership after 6 PM.

Figure 31(below) shows how Pace service levels and ridership evolved over the course of an average weekday in Spring 2023. On this chart:

- The **blue line** represents ridership, measured in bus **boardings** (total number of people getting on a bus).
- The **orange line** represents service levels, measured in number of **bus trips per hour**.
- The **red line** represents productivity, or the number of **boardings per bus trip**.

In the morning, both ridership and service levels peak between approximately 6 and 8 AM. In the afternoon, ridership has a very early peak, around 3 PM, suggesting a high level of school-related ridership.

However, after 6 PM the pattern reverses. Although both ridership and service levels are declining, the average number of boardings per bus trip increases from about 7 PM to 9 PM.

Typically, there is a feedback loop between service levels and productivity. As frequencies decrease, service becomes less convenient, and attracts ever fewer riders. **An increase in productivity in the same hours that service is declining suggests that there may be significant untapped demand for higher levels of service in the evening.**

This would be consistent with ridership patterns associated with low-income adults. Many lower-wage jobs in service and healthcare are on-site and include evening work. People with those jobs are thus more likely to need to travel at later hours.

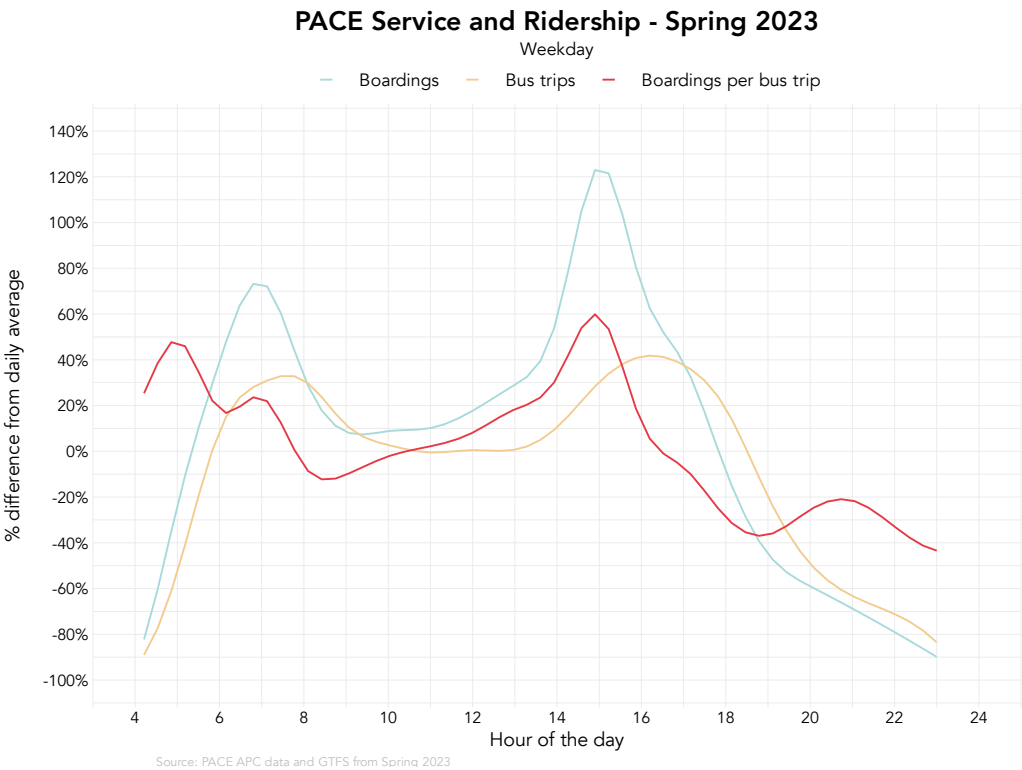


Figure 31: Chart showing Pace service levels and boardings by time of day on a weekday, in Spring 2023.

## On weekends, fewer routes operate, service hours are shorter, and frequencies are lower.

Figure 32 (below) shows how Pace bus and On Demand service changes between weekdays, Saturdays and Sundays.

This chart measures service in revenue hours. Every hour that a bus is on the road and in service is a revenue hour<sup>1</sup>. It shows that **on Saturdays, Pace only provides 54% as much service as on weekdays. On Sundays, Pace only provides 29% as much service as on weekdays.**

This is partly to be expected, because on weekdays, about 20% of Pace's service is additional service provided at peak hours only. Saturdays and Sundays do not have the same morning and afternoon demand peaks.

<sup>1</sup> As usually measured in the United States, revenue hours also include driver break times between bus trips.

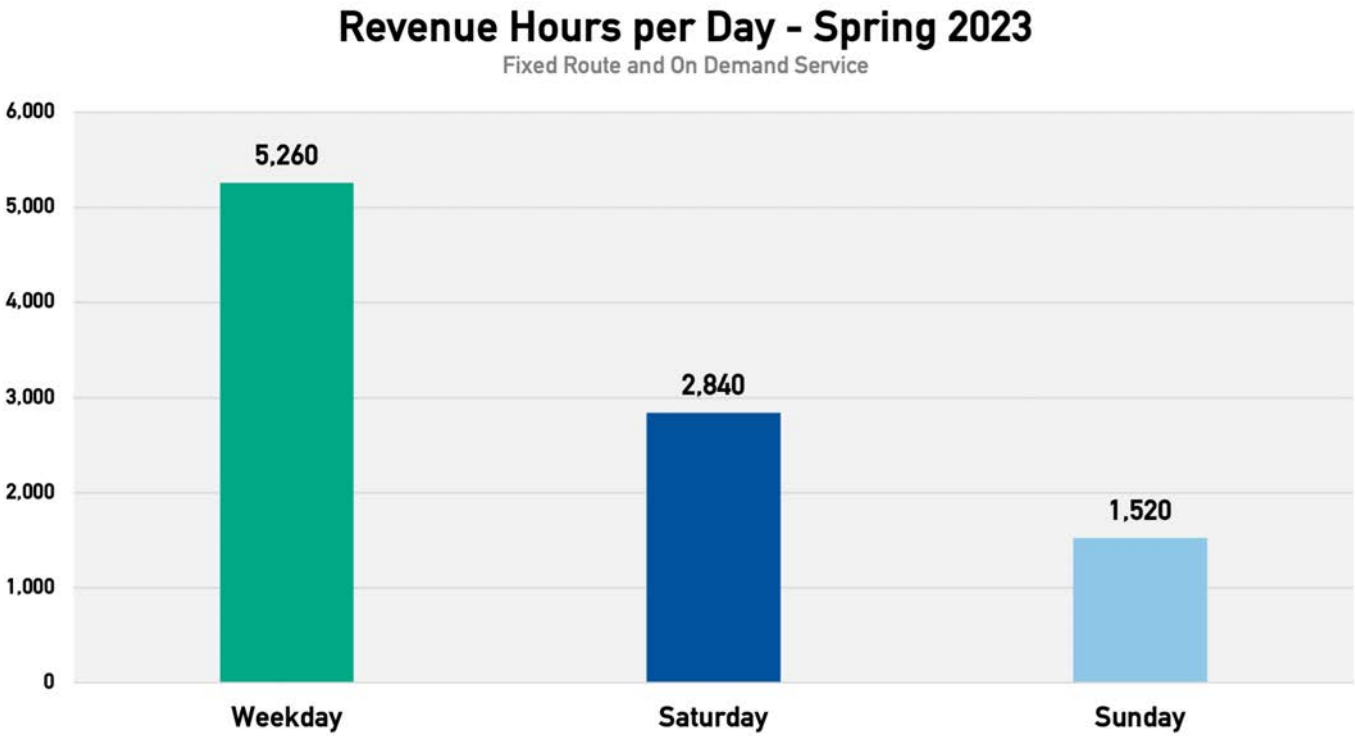


Figure 32: Chart comparing total Pace service on weekdays vs. Saturdays and Sundays, in Spring 2023.

In addition, overall travel demand is slightly lower on weekends. Replica data from Spring 2023 suggest that people in Chicagoland make about 80% as many trips on Saturdays as on weekdays.

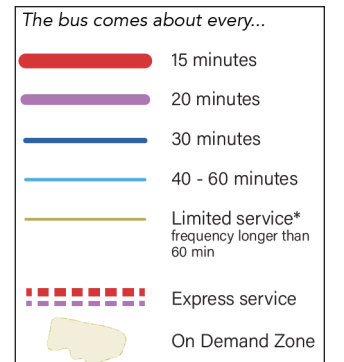
**However, there's no evidence that people who ride Pace buses are less likely to travel on weekends than anyone else.** In fact, many low-income riders are likely to travel at higher rates than average on weekends, due to work requirements in many retail, service and healthcare jobs. This suggests that Pace's lower weekend service levels are mostly due to funding and cost limitations.

**Pace's Sunday service levels are especially low because several of its divisions do not operate:** River, East Dundee, Fox Valley, Heritage and North Shore. As a result, there's almost no service outside of Cook County on Sundays.

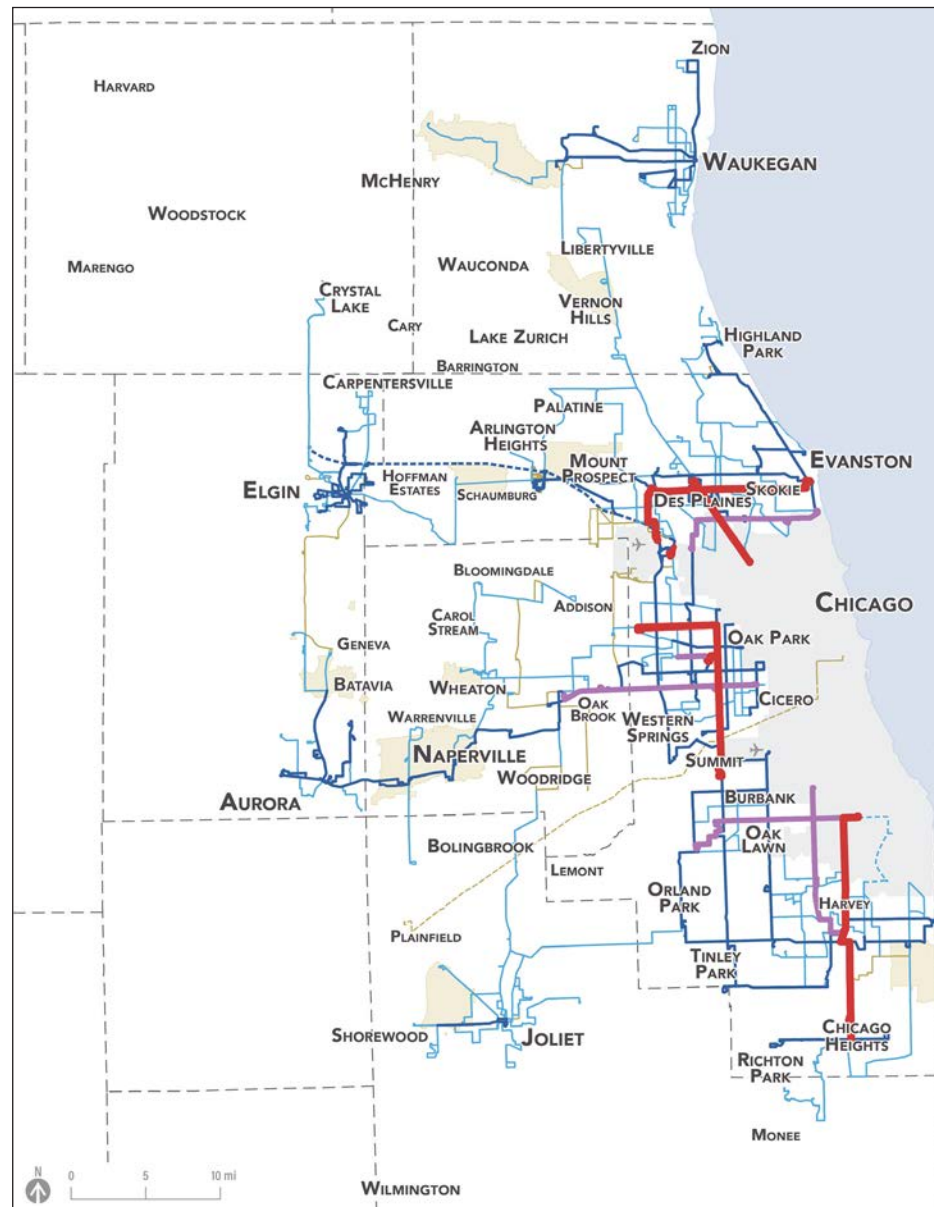


## Maps of Pace Bus Frequencies at Different Times of the Day and Week

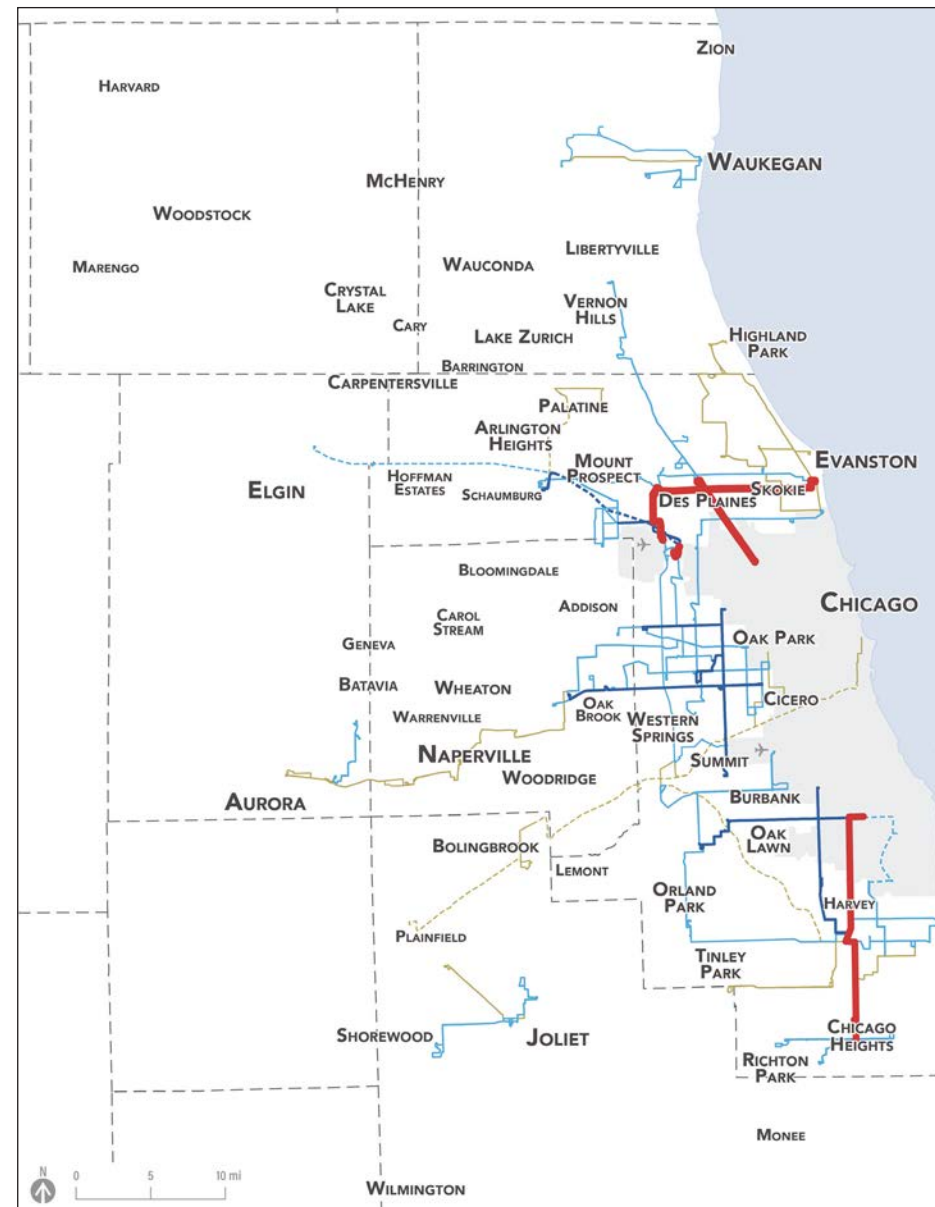
These simplified maps show that fewer routes operate on evenings and weekends, and typically at lower frequencies, compared to weekdays in the daytime. They use the same frequency colors as other maps in this report, as shown at right.



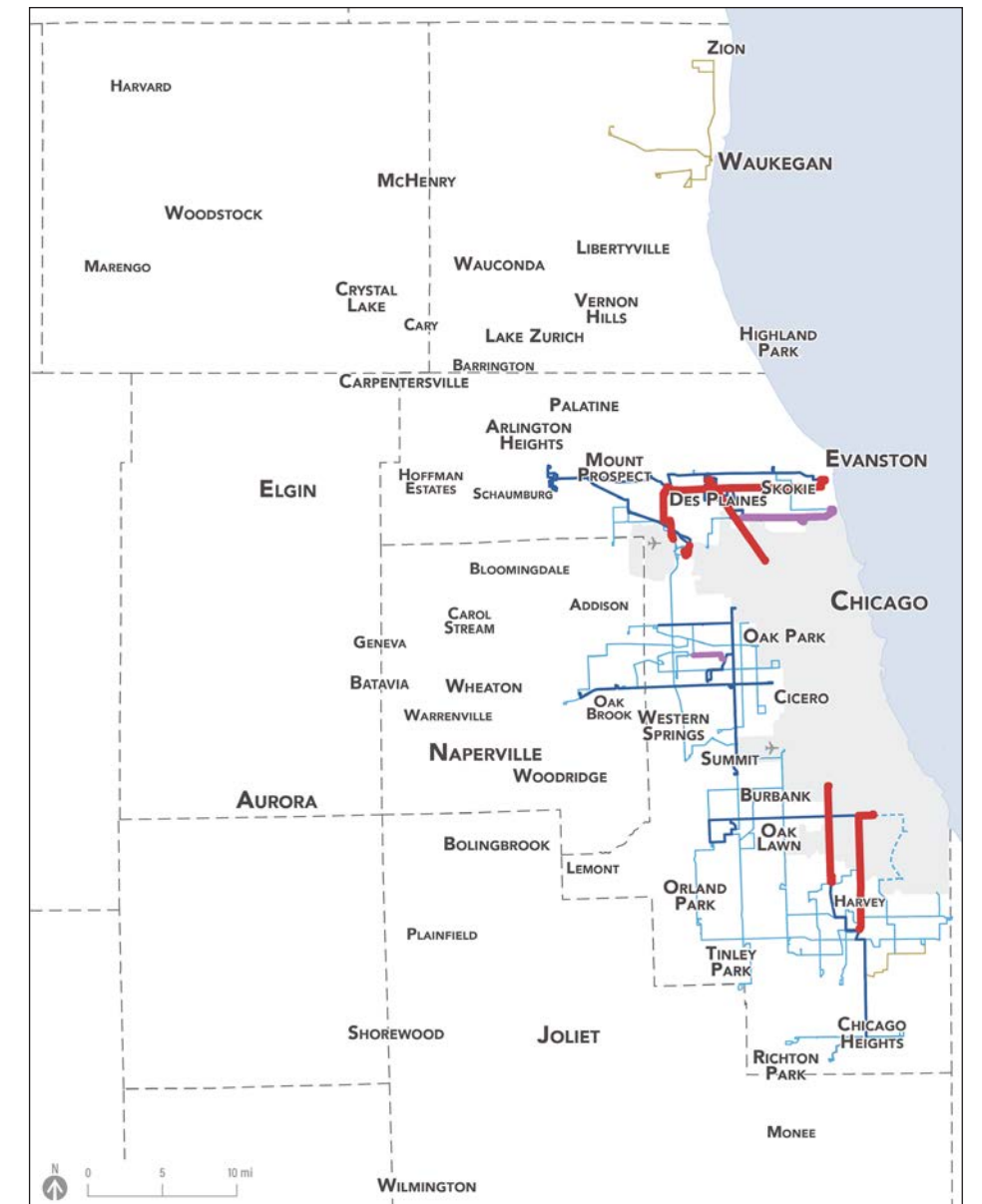
Weekdays at 12 PM



Weekdays at 9 PM



Sundays at 12 PM





# Route frequencies and ridership potential don't always line up.

The chart in Figure 33 shows how each Pace bus route's frequency compares to its productivity. On this chart: This type of chart is often useful for identifying routes that perform especially well or badly given the level of investment being made in them.

**Productivity is the number of people who board a bus for each hour that a bus is operating.** It is a “bang for buck” measure, weighing ridership against the cost of serving it. Higher productivity means lower cost per rider.

**More frequent routes tend to be more productive.** This is partly because frequency is expensive, so transit agencies make that investment only in the places where the highest ridership is expected. But it also relates to convenience. More frequent service requires less waiting, and so it tends to be more attractive and generate higher ridership relative to the underlying demand.

Therefore, in Figure 33, **a high performance within a frequency category can be a signal of untapped ridership potential.** A low performance can be a signal that the route is providing limited usefulness compared to its cost.

The remainder of this chapter therefore examines the reasons why certain routes are outliers on this chart and actions Pace might take in response.

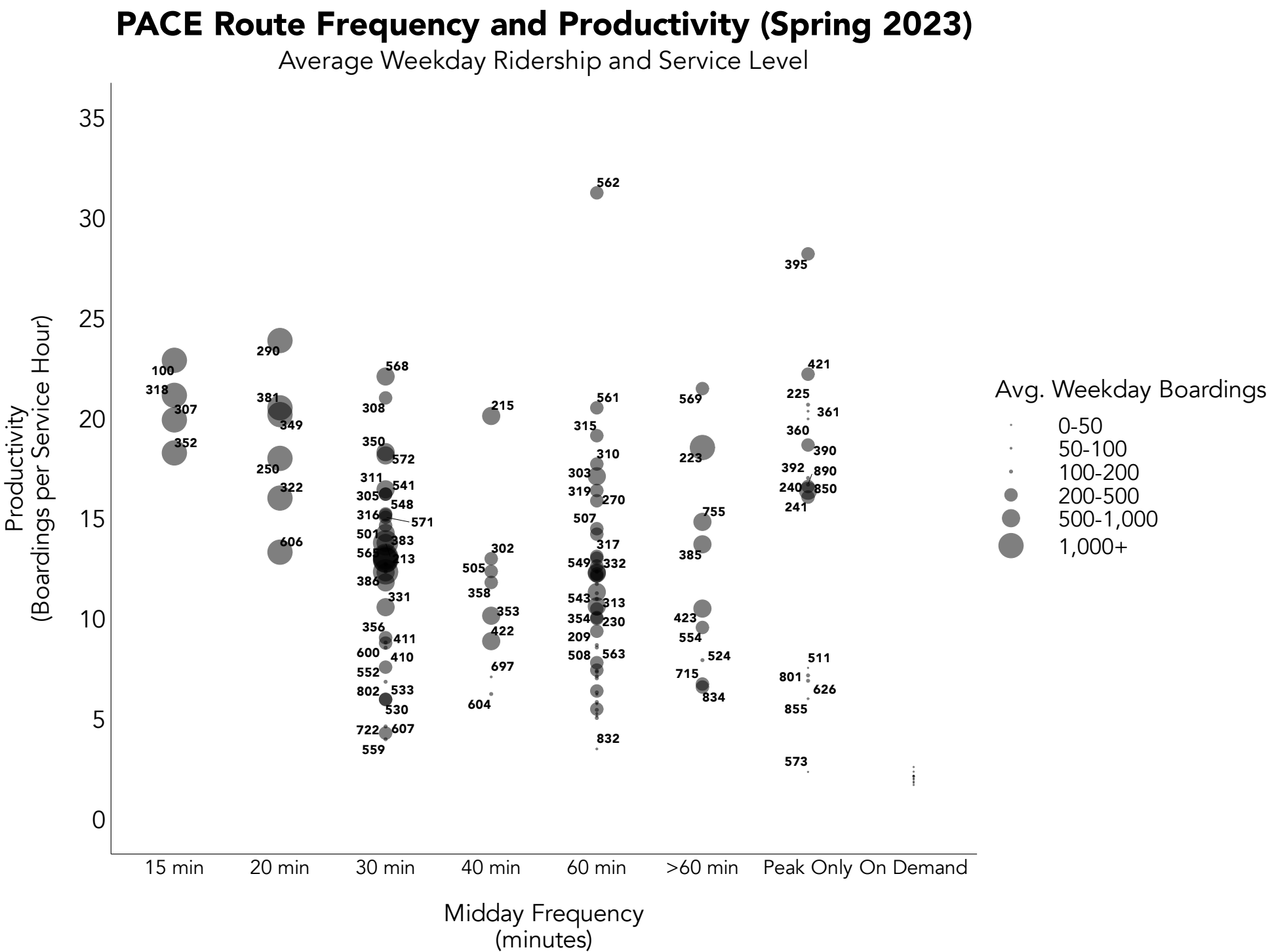


Figure 33: Chart comparing Pace route frequencies (horizontal axis) with their productivity (vertical axis).



# Network Analysis by Area

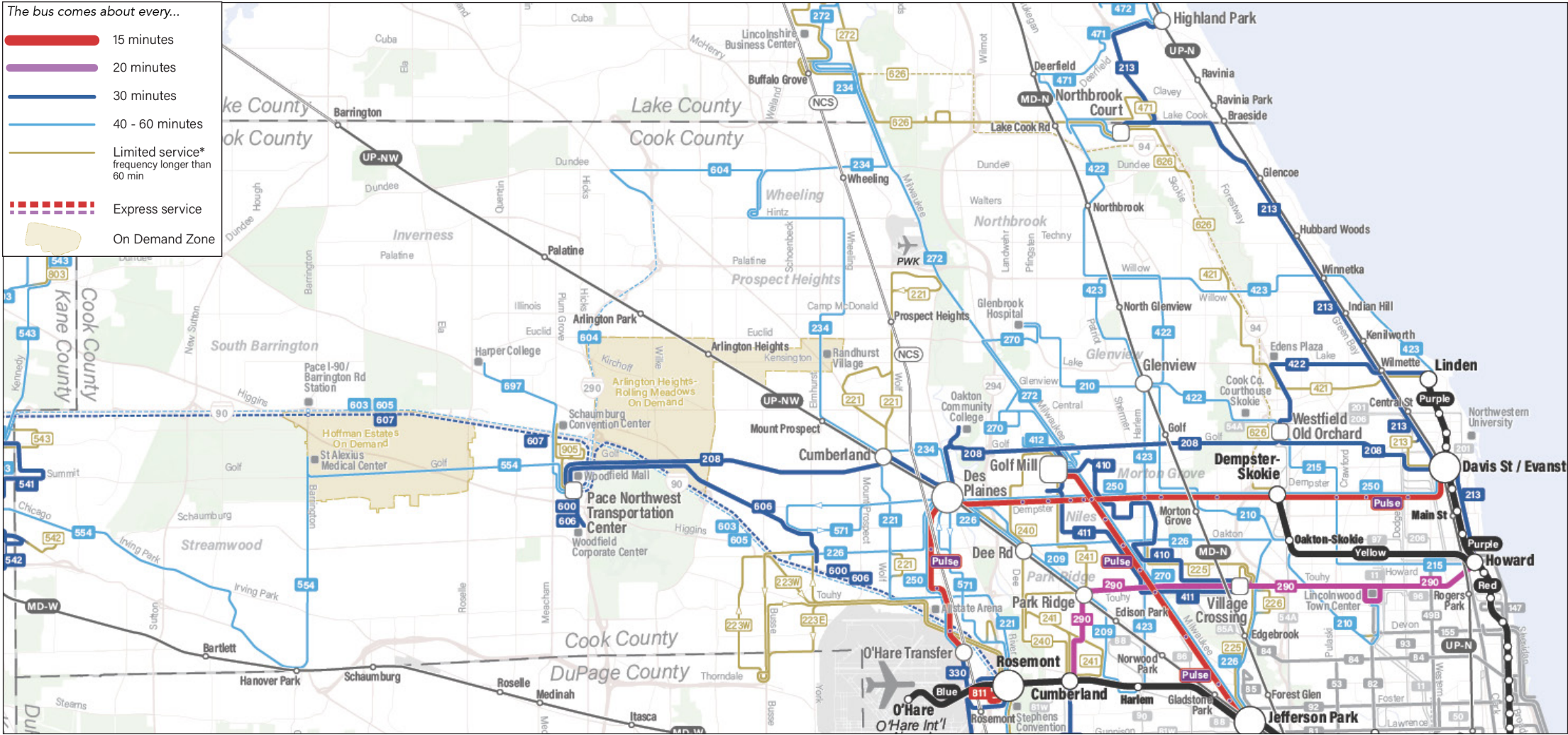
## North Cook County

North Cook County includes three distinct areas in terms of transit demand:

- The mostly higher density areas south of Golf Road and east of Des Plaines. These areas feature a dense and connected bus network.
- The lower density and often higher income areas north of Golf Road, with fewer, mostly hourly routes.
- Areas south of I-90, which are mostly disconnected from the transit network apart from the major employment and retail center around Woodfield Mall in Schaumburg.

Pace bus routes notable for their ridership performance in this part of the region include:

- **Route 215** (Howard) is exceptionally productive (20 passengers per revenue hour) for a 40-minute route in Pace's system. This is likely because it is situated in very high-density areas at the northern edge of the City of Chicago, and connects to a major regional destination at Westfield Old Orchard. Nearby CTA routes in this area operate every 15 to 30 minutes. This route would likely attract higher ridership with higher frequency service.
- **Route 234** (Wheeling - Des Plaines) is very unproductive (5 passengers per revenue hour), despite connecting a few relatively high-density and low-income areas. This may be due to the route's very circuitous north-south path. For a southbound passenger boarding on Dundee Road, service on Hintz Road may feel like several miles of backtracking. This may be an indication that more than one north-south route is needed to serve this area.
- **Route 290** (Touhy Ave) is the most productive route in the 20 minute category (24 passengers per revenue hour). Given its high level of



- schedule complexity (see page 33), this is a signal that demand along this route would likely support 15 minute all-day frequency.
- **Routes 410 and 411** are less productive than average for routes in the 30 minute category, at below 9 passengers per hour. These routes are two of three circulators operated and partly funded by the Village of Niles. They have short service hours and overlap with parts of many other Pace routes. This is a signal that, although these routes may be an important resource to the Village of Niles, they provide limited value to the broader network.

- **Routes in the 600-series** tend to have low productivity compared to other routes at similar frequencies. This is because they are freeway express routes that pick passengers up at just a few locations. This may be a reason to review the specific value of each freeway express pattern, to make sure that these services benefit as many people as possible.
- **Route 697** (NWTC - Harper College) is a short route between Pace Northwest Transportation Center and Harper College. Its very low productivity (7 passengers per revenue hour) may be related to the fact that it connects very few students and staff directly to the college - it's very challenging to transfer to a route that

Figure 34: Map of existing Pace routes and frequencies in northern Cook County

only operates every 40 minutes, from other routes that operate every 25 to 60 minutes. Furthermore, although Algonquin Road near Harper College has experienced increased high-density development, there are very few sidewalks and crosswalks along this route to facilitate local ridership.



### West Cook and Eastern DuPage County

Most routes in this area have average or above-average productivity within their frequency category. This reflects generally high densities in western Cook County compared to other parts of Pace's service area, including high densities of people with low incomes and zero-car households. Furthermore, many Pace routes in this area connect to high-frequency CTA bus and rail routes.

There are generally fewer and less frequent routes in eastern DuPage County than in western Cook County. Within western Cook County, there is also less service south of Cermak Road than north of Cermak Road. These lower levels of bus service reflect relatively lower densities and higher incomes, and also the prominent role of the BNSF and UP-W Metra lines in serving some of these areas.

Pace bus routes notable for their performance in this part of the region include:

- **Route 303** (Forest Park - Rosemont) and **Route 310** (West Madison - Hillside) have relatively high productivity (17 passengers per hour) compared to other routes in the 60 minute category. This is likely related to the relatively high densities on West Madison St between Forest Park and 25th Avenue, where Routes 303, 310 and 317 combine for service every 20 minutes in the daytime. In the case of Route 303, the other major factor may be the connection to Pace's single busiest transit center at Rosemont.

- **Route 308** (Medical Center) is highly productive (21 passengers per hour) for a 30-minute route in Pace's system. This is likely because it is a relatively short and direct route that connects Forest Park CTA Station (and the many Pace bus lines that end there) with Loyola Medicine and the Hines VA Medical Center. Furthermore, access into those hospitals is difficult from the Route 301 stops on Roosevelt Road.
- **Route 315** (Austin Blvd) is exceptionally productive (19 passengers per hour) for a 60-minute route in Pace's system. This is likely due to the high-density built environment around Austin Blvd, comparable to many parts of west and northwest Chicago. Route 315's productivity is similar Routes 311 and 316, which run every 30 minutes, on parallel paths a half-mile away in either direction. In addition, Route 315 also overlaps partly with CTA Route 91, which runs every 15 minutes. Route 91 has ten times as much ridership as Route 315<sup>1</sup>, despite being only marginally longer and serving areas with similar densities. These are strong indicators that Route 315 would support higher ridership if its frequency were upgraded.

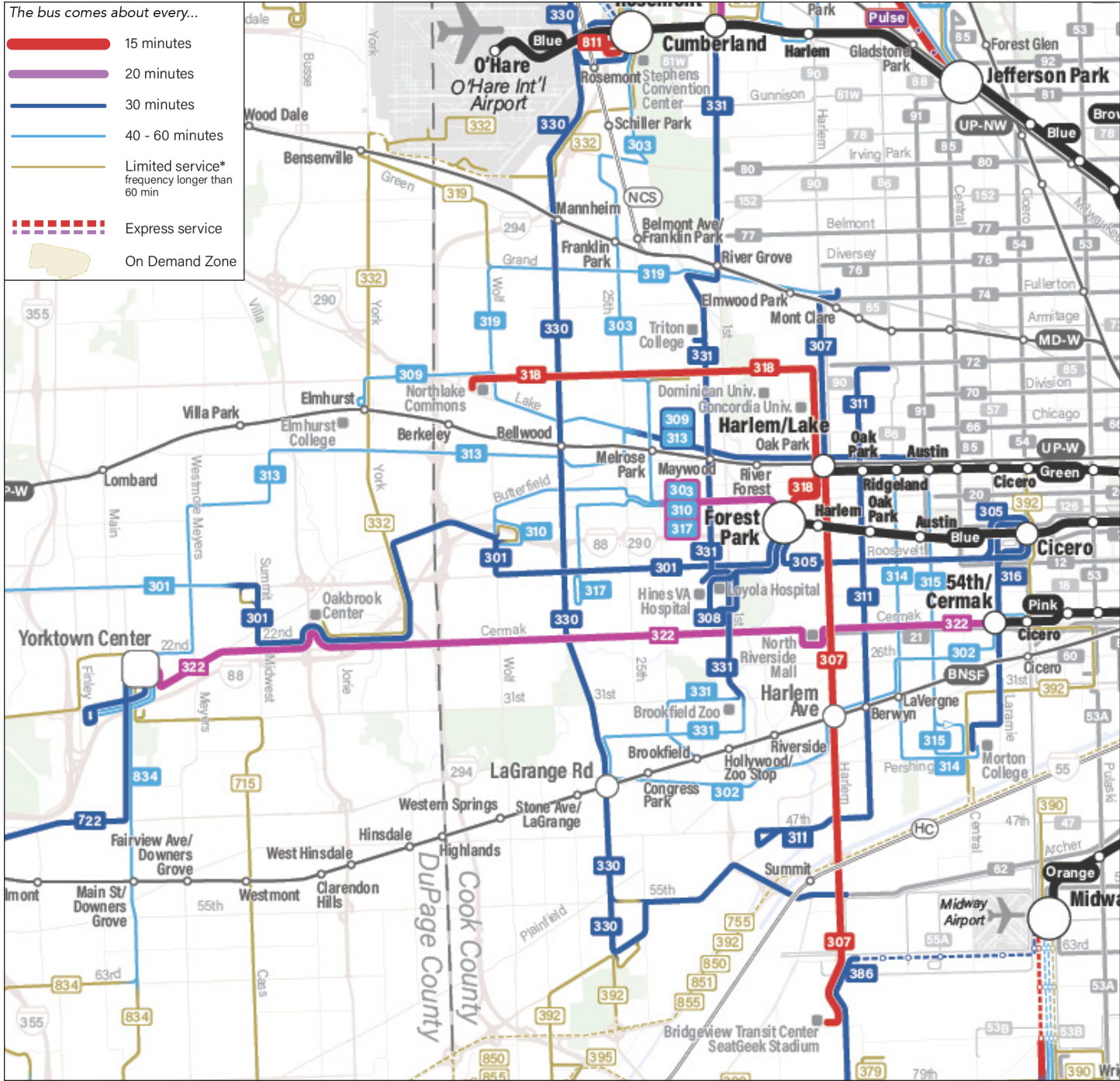


Figure 35: Map of existing Pace routes and frequencies in western Cook County and eastern DuPage County.

<sup>1</sup> 4,603 average daily boardings on Route 91 in May 2023 vs. 466 average daily boardings on Route 315 in Spring 2023.



South Cook County and Northeastern Will County

Southern Cook County is generally developed less continuously and at lower densities than other parts of the inner suburbs. However, it is also the area with the largest concentrations of low-income and zero-vehicle households. As a result, most routes in this area have average or above-average productivity within their frequency category.

Within southern Cook County, nearly all Pace service is provided east of La Grange Road. West of this road lie large forest preserves and much less continuous suburban development, backing into the Des Plaines River, which is bordered on the north side by Argonne National Laboratory. These features present significant obstacles to developing efficient transit service.

Much of northeastern Will County remains rural at this time, and is mostly unserved by Pace fixed route service, except for Route 367 in University Park, and Route 360 to Amazon in Monee. However, there are certain more recently developed suburban neighborhoods in the areas of Frankfort, Mokena and New Lenox.

Pace bus routes notable for their performance in this part of the region include:

- **Route 350** (Sibley) has significantly above average productivity (18 passengers per revenue hour) for a 30-minute route in Pace's system. This is likely because it follows the single densest residential corridor in the South suburbs, including very high densities of people with low incomes. Route 350 is also notable for having higher productivity on weekends than on weekdays. On Sundays, despite limited hours and service every 60 minutes, Route 350 carries 22 passengers per revenue hour. These factors suggests Route 350 would likely generate higher ridership with higher frequency service.

- **Route 352** (Halsted) has the highest total ridership of any route in the Pace system, about 4,200 passengers per day. However, its productivity (18 passengers per revenue hour) is lower than other 15-minute routes. This is because Route 352 operates much longer service hours than any other route. This includes service every 15 minutes until about 8 PM every day, and 24-hour service every 30 minutes or better in the northern half of the route, from CTA 95th/Dan Ryan Station to Pace Harvey Transportation Center.
- The overall productivities of **Route 379** (Midway - Orland Park) and **Route 386** (South Harlem) are squarely average for 30-minute routes in Pace's system, at 12 passengers per revenue hour. However, this number obscures the difference between areas north and south of 111th Street. South of 111th, both routes traverse long areas of forest preserve with almost no boardings. These areas are unlikely to generate high ridership at any frequency. However, areas north of 111th are densely populated and would likely generate higher ridership if service were provided at higher frequency.

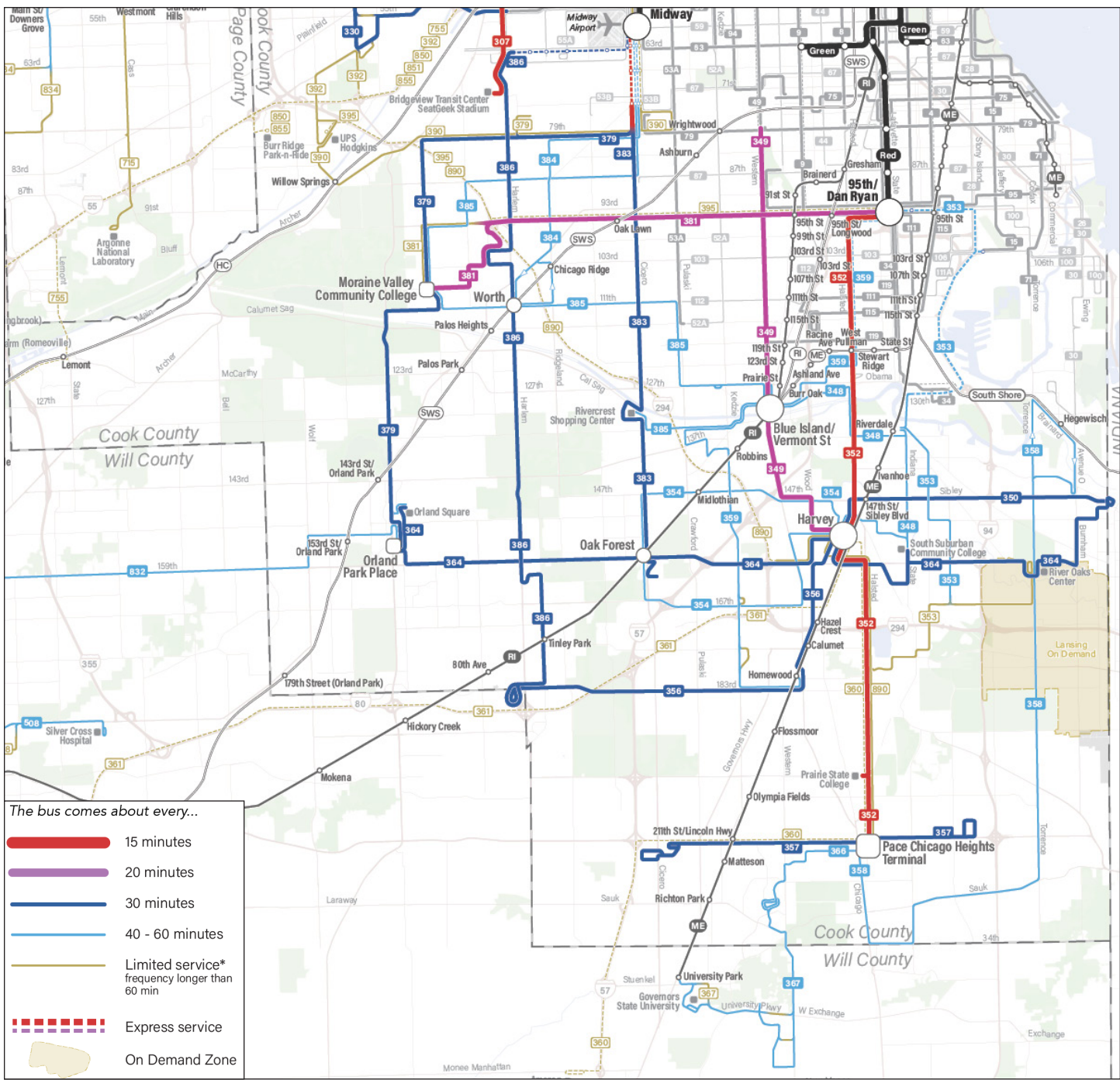


Figure 36: Map of existing Pace routes and frequencies in southern Cook County, and adjacent areas in northeastern Will County.



### Waukegan and Lake County

There is a strong distinction in Lake County between:

- Waukegan and immediately surrounding areas, like North Chicago and Zion. These areas are continuously developed at medium to higher densities, and have many relatively low-income neighborhoods. Much of Waukegan and North Chicago were developed in the streetcar era before World War II. These conditions tend to favor relatively high ridership.
- The remainder of the county, where development has mostly occurred in the automobile era at low to medium densities, most neighborhoods are mid- to very high-income, and there are large stretches of undeveloped or rural land. These conditions tend to work against high ridership.

Pace bus routes notable for their performance in this part of the region include:

- **Routes 471 and 472** are among the least productive routes in the 60 minute category, at about 6 passengers per revenue hour. These routes are both operated and partly funded by the City of Highland Park. Because they focus primarily on covering this city, they are both short routes, about 4 miles in each direction. Route 472 also follows a circuitous path to achieve maximum coverage. Short, low-frequency routes tend to be useful to a small number of people.
- **Pace routes in Waukegan** are among the most productive in the entire suburban bus network. This is partly due to the demographic and built environment reasons mentioned above, but also in large part because the local high school district provides Pace bus passes rather than operating its own bus system. As a result, Pace is required to provide service within

a half-mile of all enrolled students, and the exceptionally high productivities of **Routes 561, 562, 568 and 569** are partly related to peak-hour ridership. This is not necessarily a signal that the level of ridership near these routes suggests demand for higher all-day frequency.

- Despite operating partly in Waukegan, **Route 565** (Grand Ave) has only average productivity (14 passengers per revenue hour) for a 30-minute route in Pace's system. This may be related to the relatively long path it takes (compared to Route 572) through lower-density areas from Waukegan to College of Lake County, including a half-mile deviation to reach Gurnee Mills. Because of this long path, increasing frequency on Route 565 may be expensive compared to the number of new riders who might use the service. Any increase in all-day, all-year frequency would also potentially be complicated by current extra summer service to Six Flags only.
- **Route 570** (Fox Lake - CLC) and **Route 574** (CLC - Hawthorn Mall) face similar challenges leading to very low productivity (5 to 7 passengers per revenue hour). Both routes connect a few isolated low-income areas with local schools, shopping malls and the College of Lake County. However, in both cases, the destinations they serve are not located along a straight line. Both routes require some out-of-direction travel, making transit less convenient. Furthermore, the areas served by these routes have relatively low densities of zero-car households. Pace has addressed the linearity issue by creating two On Demand zones, but these also have very low overall ridership and productivity. Ultimately, Pace may need to continue operating these routes to provide basic coverage in these parts of Lake County. However, they are unlikely to ever achieve high levels of ridership in their current form.

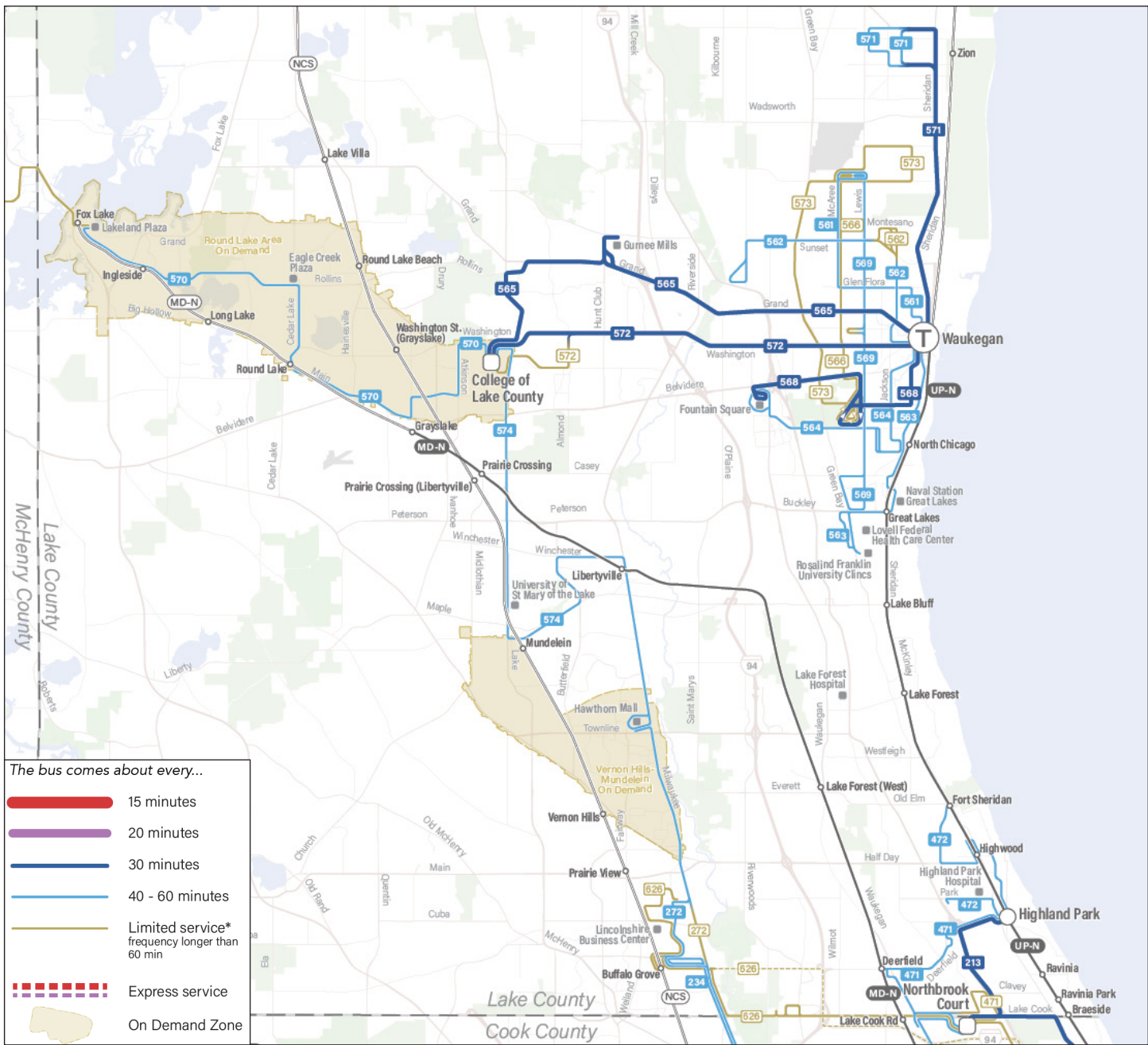


Figure 37: Map of existing Pace routes and frequencies in Lake County.

- **Route 573** (Green Bay Rd) is exceptionally unproductive (2 passengers per revenue hour). This route provides peak-only service on the western and northern edges of Waukegan, and exists only to bring service close to the small number of Waukegan high school students near Green Bay Road who are not otherwise served by Pace. However, Route 573 only reaches a single school, McCall Elementary. From a ridership perspective, it would be more efficient to reallocate the resources currently spent on Route 573 to other routes in this area.



### Elgin, Northern Kane County and McHenry County

Almost all Pace service in the northwestern part of the region is provided in Elgin and its immediate neighbors, including West Dundee and Carpentersville.

Similarly to Waukegan or Aurora, Elgin is a city largely developed in the streetcar era, with higher densities than surrounding suburban areas, and relatively high concentrations of low-income and zero-vehicle households. Despite this, most Pace routes in Elgin have average to below-average productivity compared to other Pace routes that operate at similar frequencies. This is likely related to the unique features of the local Pace network.

Nearly all routes in Elgin are designed as one-way loops that leave Elgin Transportation Center every 30 minutes and return within 25 minutes. As a result, nearly everyone in Elgin is very close to a bus stop, but they are served by a loop that will require them to accept long detours for relatively short distances, and to transfer to go anywhere other than Downtown Elgin.

Another possible reason why many routes in this part of the region have relatively low productivity is the absence of any Pace service on Sundays. When service isn't available every day, people who might otherwise rely on transit are motivated to find other ways to get around. This reduces ridership generally, including on weekdays.

West of Randall Road, northern Kane County is almost entirely rural and does not have any regular bus or rail service.

This is also the case for most of McHenry County. However, Pace does operate peak-only Routes 806, 807 and 808 that connect the county's larger towns: Harvard, Woodstock, Crystal Lake and McHenry. There is also an all-day hourly connection from Crystal Lake to Elgin on Route 550.

Specific Pace bus routes notable for their performance in this part of the region include:

- **Route 550** (Elgin TC - Crystal Lake) has one of the lowest productivities (5.5 passengers per revenue hour) of all Pace routes in the 60 minute category. This is likely due in large part to low population and job densities in the parts of the route between I-90 and Algonquin Road, including with very low densities of low-income and zero-vehicle households.
- **Routes 552 and 803** connect Elgin, West Dundee and Carpentersville, including many areas with concentrated low-income populations. Despite this, they both have very low productivity (6 to 8 passengers per revenue hour). This is likely because:
  - Route 552 makes a significant deviation off of State Street near I-90 to provide service to a mobile home park at Willow Lake Estates. This adds several minutes of delay for passengers travelling between Elgin and West Dundee.
  - Route 552 and 803 are operated as two separate routes, even though they are both relatively short and their ends meet at Spring Hill Mall. As a result, many trips that could be one-seat rides between Elgin and Carpentersville require waiting for a second bus.
  - There may also be some temporary causes for low ridership in West Dundee, due to the ongoing redevelopment of Spring Hill Mall.

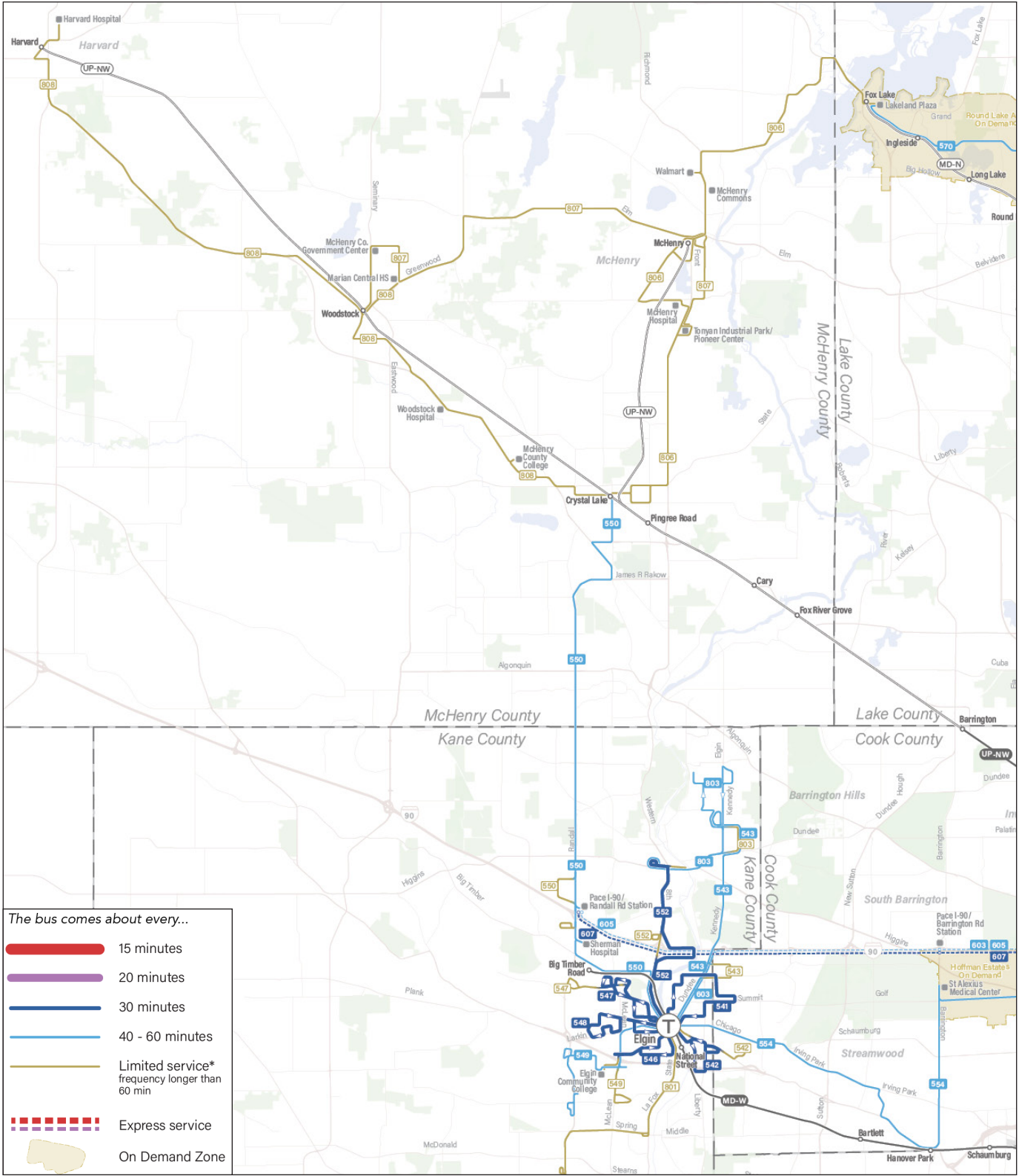


Figure 38: Map of existing Pace routes and frequencies in northern Kane County and McHenry County.



Aurora, southern Kane County and western DuPage County

From a transit planning perspective, this part of the region can generally be divided into:

- Aurora and its surroundings, extending more or less from Highway 59 to Orchard Road, mostly south of I-88. The Aurora area is the main focus of Pace service in this part of the region. Inner neighborhoods of Aurora share many of the features of other streetcar-era cities like Elgin. This includes relatively high population densities and relatively high densities of people with low income households, combined with a mostly walkable built environment.
- Geneva, Batavia and Saint Charles. Routes 801 and 802 in this area are extensions of routes that start in Aurora and Elgin. There are also two local On Demand zones.
- Western DuPage County. Few Pace routes operate in this comparatively large and highly populated area. This is mainly due to the following:
  - Historically, there was no local transit operator in the area prior to the establishment of Pace. As a result, the area is relatively distant from Pace’s operating bases in Aurora and west Cook County.
  - Development is mostly low to mid-density. Low-income and zero-car populations are present, but in many isolated small pockets. Within its limited resources, Pace has chosen to prioritize areas that are more dense and closer-in.
  - Compared to other parts of the region, Metra provides a relatively high amount of all-day service in DuPage county, on the MD-W, UP-W and BNSF lines.
  - As noted on page 29, the area between

Highway 59 and the Kane County line is a significant barrier to transit service, because it includes large undeveloped areas, combined with a few very large facilities (Fermi Lab, DuPage Airport) that generate very few trips per square mile.

Nearly every Pace route in this part of the region is much less productive than the system average at similar frequencies. As in other outlying areas, this may be partly due to the absence of Pace service on Sundays, which motivates people to find alternatives to transit, even if they don’t own a car. Another contributing factor may be the lower densities of zero-vehicle households in Aurora, compared to Elgin, Waukegan and Joliet. However, the built environment and route design are also contributing factors.

- **Several routes have low frequencies and circuitous routings.** This is especially true in western DuPage County, where **Routes 711, 714 and 715** have long paths with many deviations, while offering service only every 60 to 75 minutes. This is largely due to the fact Pace only operates three routes in this area. As a result, each route tries to provide a minimum level of coverage to as many disparate locations as possible.
- **Some routes just don’t serve many trips.** This includes two routes on the west side of Aurora: **Route 540** (Farnsworth Ave) and **Route 559** (Illinois Route 59). Route 540 connects mostly low-density residential areas to local destinations, but doesn’t meaningfully connect to the regional network. Route 559

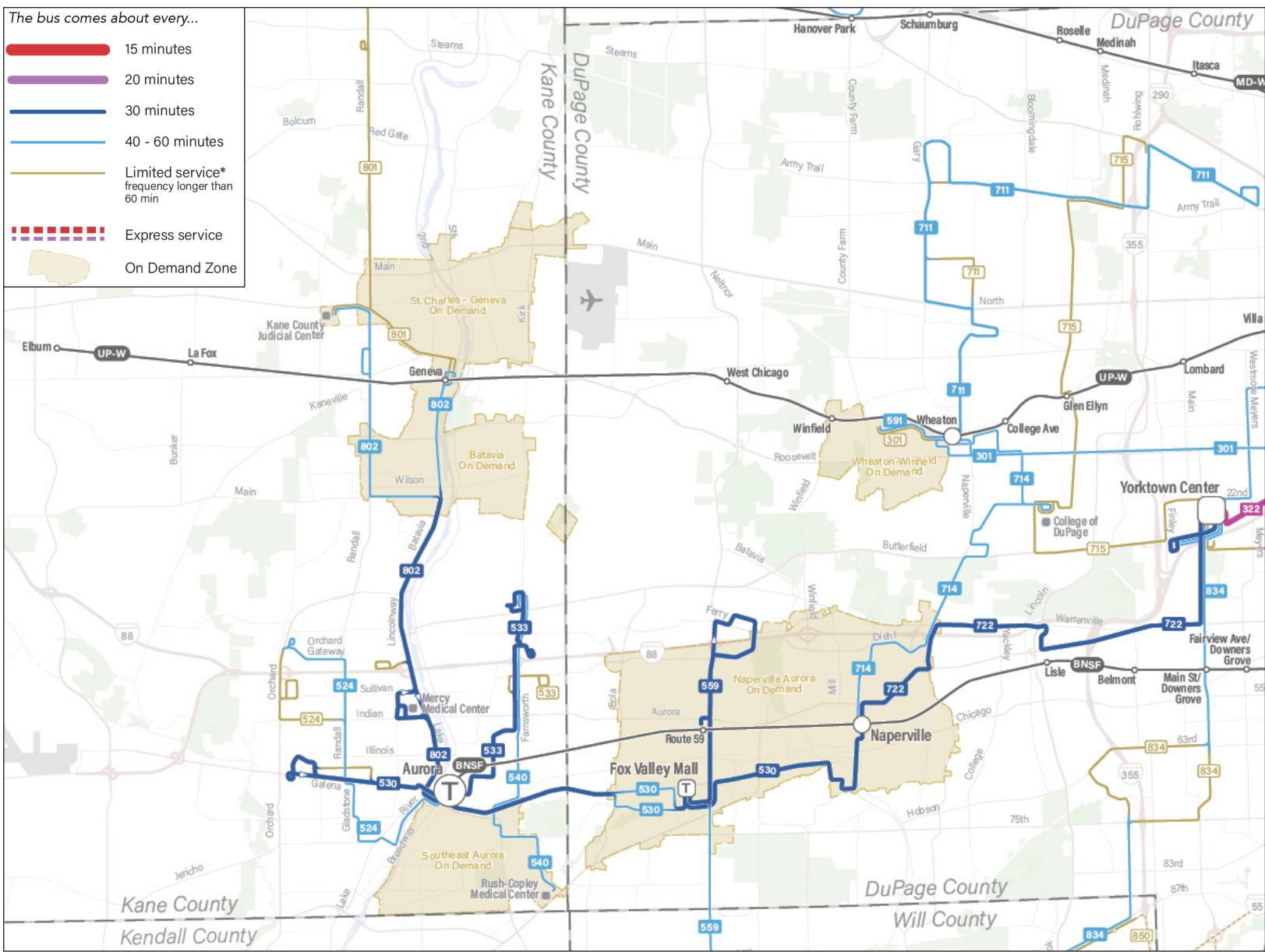


Figure 39: Map of existing Pace routes in southern Kane County and western DuPage County.

follows Highway 59, which has many retail destinations but is generally difficult to reach from surrounding residential areas.

- **Route 530** (West Galena - Naperville) **requires passengers to sit through two long pauses for timed transfers.** This includes a 10-minute break at Aurora Transportation Center and

an 8-minute break at Fox Valley Mall. Many people’s trips on this route are delayed by 10 to 20 minutes, which is extremely inconvenient. As a result, this route - which likely connects the highest possible number of origins and destinations in this part of Chicagoland - carries fewer than 6 passengers per revenue hour.



### Joliet and northwestern Will County

The transit network in this part of the region is centered around Downtown Joliet, which is both the terminus of the Heritage and Rock Island Metra lines, and the meeting point for nearly all local Pace routes.

Joliet is both larger and less dense overall than satellite cities at similar distances to Chicago, like Aurora and Elgin. However, it features similarly high densities of low-income residents and zero-car households. Joliet also features large low-density industrial and logistics employment areas south of town along Highway 53 and Centerpoint Way.

Partly due to its larger size for a similar population, Pace routes in Joliet are less frequent than in Elgin and Aurora. Most routes in Joliet run every 40 to 60 minutes, whereas most routes in Elgin and Aurora run every 30 minutes.

**Despite these lower densities, lower frequencies, no service on Sundays, and relatively short service hours, most Pace local routes in Joliet have average or above-average productivity** compared to the system average for routes at similar frequencies. This is a signal that the area may be under-served. More frequent and convenient Pace service would likely generate higher ridership.

Outside of Joliet, Pace operates I-55 Bus-on-Shoulder express service on Routes 755, 850, 851 and 855. These routes provide peak-only express service to and from Downtown Chicago. There is no current Pace service in southern Will County, which is mostly rural.

Specific Pace bus routes notable for their performance in this part of the region include:

- **Route 507** (Plainfield Rd) is highly productive (16 passengers per revenue hour) compared to other Pace routes in the 60 minute category. This is likely related to the fact that it connects Downtown Joliet with a major local destination at Louis Joliet Mall. In addition, Route 507 is very straight and direct. Although its low frequency requires long waits, passengers are not further delayed once they get on the bus.
- **Route 832** (Joliet - Orland Park) is very unproductive, at 4 passengers per revenue hour. Although this route follows a reasonably direct path, it travels through semi-rural areas on Broadway between Joliet and Lockport, and on 159th Street between Lockport and Orland Park. As a result, this is almost comparable to an express intercity bus service. Furthermore, the areas served in Orland Park have many commercial destinations, but they are very auto-oriented and pedestrian-unfriendly.
- **Route 834** (Joliet - Downers Grove) faces similar challenges, and also is relatively unproductive, at 7 passengers per revenue hour. Its slightly higher productivity compared to Route 832 is likely due to the higher overall number of people and destinations along the way.

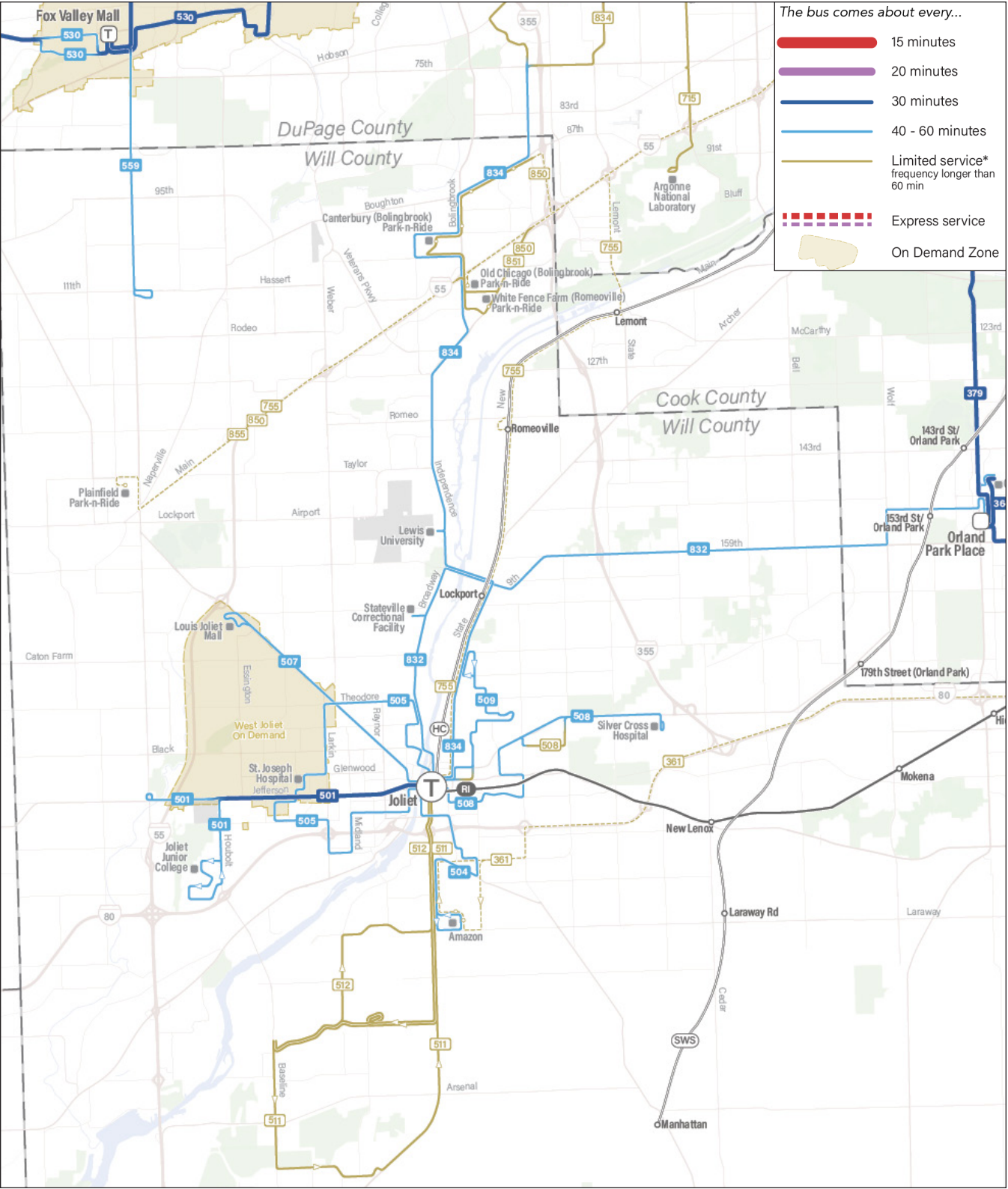


Figure 40: Map of existing Pace routes in northwestern Will County.



4

## Pace Plus 50 – Future Network Concepts



# What goals should Pace prioritize, if more funding were available?

## How much more service could Pace provide?

So far, this report has described the limitations of the existing suburban bus network. Some of these limitations are due to the region's built environment. But many of Pace's limitations are simply the result of inadequate funding. Under its current funding structure, Pace can't add new service. Improving service in one part of the region requires making it worse somewhere else.

However, as described on page 10, the current regional transit funding system is in crisis. The consequences of inaction – large service cuts at CTA, Metra and Pace starting in 2026 – are so stark that policymakers throughout the region are now advocating for change.

To achieve “the system we want” – as described in CMAP's [Plan of Action for Regional Transit](#) (PART) – requires transformational new investments, including a large increase in suburban bus service.

### Pace Plus 50

This report takes the position that Pace should be funded to provide at least **50% more suburban bus service** than in 2019, for the following reasons:

- Pace's existing system and schedules are so stretched that a 50% increase is the minimum necessary to provide **visible, region-wide improvements, seven days a week.**
- The new funding required – **about \$150 million per year** – fits within the \$500 million per year contemplated for new service in PART.
- Pace would likely be able to accommodate this level of growth within its current garages. Any further investments would require much higher initial capital costs.

As described on page 11, the Pace Plus 50

funding scenario would place per capita suburban bus levels in the Chicago region within range of its peers – slightly higher than those offered by CT Transit in Connecticut, and a little lower than those offered by NJ Transit in New Jersey.

## Where should that service be invested?

This chapter describes two concepts for how the Pace suburban bus network might be redesigned, depending on what priorities are emphasized. These concepts are meant to highlight the Ridership vs. Coverage trade-off, as described on page 21. Simply put:

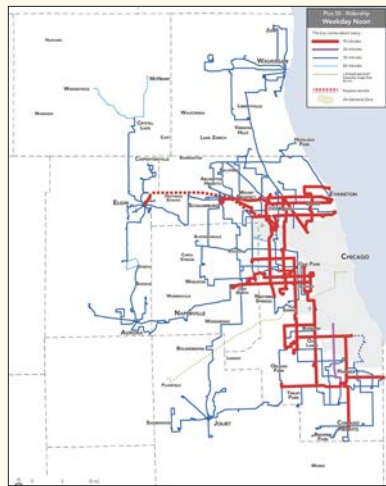
- The **Plus 50 - Ridership Concept** illustrates what Pace could do with new funding, if it concentrated mostly on providing frequent service in areas with high densities of people and destinations.
- The **Plus 50 - Coverage Concept** illustrates what Pace could do with new funding, if it focused mostly on extending a basic level of service to as many places as possible.

**Neither of these concepts is a proposal.** Rather, they illustrate the ends of a spectrum of possible changes Pace could make.

The Pace reVision Draft Network Plan will depend on what we hear from the community. You can compare these concepts and their outcomes to help you clarify your preferences.

**Public input on these concepts will guide the project team and decision-makers in 2025, as we develop a proposal with the right balance** between these competing goals. This future proposal may be similar to one of these concepts, or somewhere in between. Its final shape will also be determined by future information about Pace's likely service budget in 2026 and beyond. It remains unclear at this time whether the Plus 50 funding level will be achieved.

### Plus 50 - Ridership

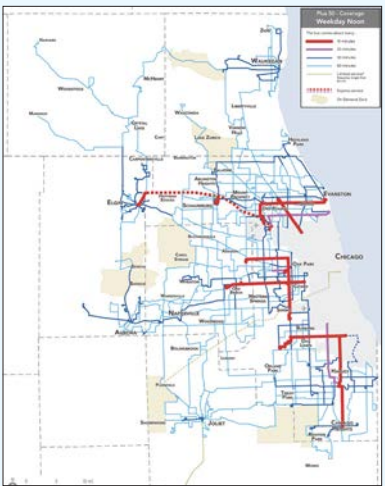


Many more people near frequent service

More improvement in access to opportunity

Fewer people near service overall

### Plus 50 - Coverage



A few more people near frequent service

Less improvement in access to opportunity

Many more people near service overall



**By showing the public, stakeholders, and decision-makers the range of possibilities, Pace is asking:**

- *Now that you see what it would be like to prioritize one goal over another, how do you wish to balance these goals?*
- *Is the Plus 50 funding level the right amount of investment to meet the transit needs of the Chicago suburbs?*

**In other words: if you want better service, what is your definition of better?**



# How were the Plus 50 concepts developed?

## Process

These concepts were developed in a multi-week collaborative design workshop involving Pace planning, scheduling and community relations staff, in addition to project consultants.

The project team presented preliminary drafts to staff from the six county departments of transportation, and the Pace Board of Directors Planning and Infrastructure Committee.

The concepts were then mapped and analyzed in detail for this report.

## Shared Elements

Both concepts presented in this chapter were built based on the following set of shared assumptions.

### Additional Service

Both concepts include a 50% overall increase in service compared to 2019. This means that Pace would have an additional \$150 million per year for suburban bus service, or about 30% of the “transformational investment” in service in PART.

### Blank Slate Design

With few exceptions (see further assumptions below) both concepts were designed from a completely “blank slate”, i.e. without reference to existing service or history. Where a route in one of these concepts resembles an existing route, this indicates that the existing route makes sense in the context of the geography, travel demands and the design of a connected network meeting either a Ridership or Coverage goal.

### Bus Operating Speeds

Both concepts assume that buses will travel at similar speeds as they do now.

### Seven-Day-a-Week Frequencies

Both concepts are designed to provide higher levels of weekend service than today. Specifically, in both concepts, nearly all routes operate at full weekday frequencies on Saturdays and Sundays.

### Pulse Arterial Rapid Transit

Both concepts assume that Pace will continue to invest in service every 15 minutes on all routes intended for an upgrade to Pulse service, and that these routes will continue to use their currently intended alignments.

### No Changes to Employer-Funded Routes

A small number of existing Pace routes are funded mostly or entirely by employers (e.g. UPS, Fedex Amazon, Centerpoint) to serve their work sites at shift change times. These routes would not change

### No changes to Dial-A-Ride or Vanpools

Pace operates and manages a number of local Dial-A-Ride services funded in partnership with municipal and county governments. These concepts do not assume any particular change to these Dial-A-Rides, or to Pace’s vanpool services.

### Some Peak Service Not Included

Both concepts leave a small contingency of undesigned service for extra service at weekday peak hours, for peak-specific needs such as school trips and generally meeting higher passenger loads. Both concepts also leave some existing peak-only services intact, such as the I-55 express routes.

### No changes to Metra and CTA

Both concepts are designed considering connections and interactions with Metra and CTA service, at current frequencies. We used Metra and CTA schedules from Spring 2024.

## Key Differences

### Distribution of Service

The Ridership and Coverage concept take different approaches to the question of geographic equity.

**Both concepts intentionally increase service in every county** in Pace’s service area. However:

- The **Plus 50 - Ridership Concept** started from the assumption that suburban bus service would **grow by about 50% in every county**. This reflects the fact that most of the existing suburban bus network is already in the parts of the region where investments in frequency would result in improved access outcomes.
- The **Plus 50 - Coverage Concept** started from the assumption that service growth would be **proportional to each county’s total population**. As a result, service would be about 30% higher in Cook County, but would at least double in the collar counties, reflecting the lack of existing service availability.

As the concepts were developed, these allocations of service by area served as a general guide but were not a hard criterion. The ultimate priority was that each concept should result in a coherent regional network.

### On Demand Zones

As described on page 32, On Demand zones have very limited passenger capacity and variable wait times. They cannot be designed to accommodate high ridership, or create high levels of regional access. Therefore, On Demand zones are an important tool, but **only in the context of increasing coverage, as in the Plus 50 - Coverage Concept**. The Ridership concept does not feature any On Demand zones.

### Focus on the Big Picture

The Plus 50 network concepts focus on all-day service, and how frequencies would change throughout the day and week.

They do not include most details of peak-only routes, or trips that only happen a few times per day.

This is because the feedback Pace needs now is about the bigger picture: **what’s the right pattern of routes and frequencies running most of the time?**



# Ridership Concept - Higher Frequency, Focused Service

## Concept Definition

The **Plus 50 - Ridership Concept** is designed to provide the highest possible number of people with transit service that allows them to reach many places in a reasonable amount of time.

The consequences of this approach are that:

- **The network focuses on frequency, in densely populated and active areas.** As many routes as possible would operate every 15 minutes. With few exceptions, the minimum frequency allowable on any route would be every 30 minutes. This is the same minimum service standard applied by the CTA in the City of Chicago.
- **Routes are as direct as possible,** given the local street network. Deviations off the main path of a route are limited to only the largest destinations.
- A few new areas are served, but **overall, the level of coverage is reduced.** This is largely related to the absence of On Demand zones. Fixed routes would be located within a half-mile of a similar number of people and places as in existing service.

## Key Service Features

- **In the inner suburbs, a frequent grid** of East-West and North-South routes running every 15 minutes, seven days a week.
- At the edges of this grid, routes with **service every 30 minutes through mid-suburban areas with higher densities**, especially high densities of low-income people. This is most notable in northwest Cook County, eastern DuPage County, and parts of south Cook County.
- **Streamlined networks in the satellite cities.**

Service every 30 minutes, but on slightly fewer routes in Waukegan, Elgin, Aurora and Joliet, with timed connections at their transit centers.

- **Service seven days a week, at the same frequencies, on nearly all routes.**

## Equity

### Economic Equity

By focusing frequent service in denser places, this network would provide the most benefit to economically disadvantaged populations. This is because many of the most densely populated areas in this region are places with high densities of low-income people and zero-car households.

### Racial Equity

Similarly, this network would provide the most benefit to people of color. This is related to the economic equity outcomes, because many of the places with high densities of low-income people in this region are also places with concentrated Black and Hispanic populations.

### Geographic Equity

This network would increase service by a similar percentage (+50% compared to 2019) in all counties. As a result, although service in the collar counties would increase, there would continue to be significantly more service in Cook County overall. This is because most of the region's densely-populated places are concentrated in the areas Pace serves most today.

### Impacts on Existing Riders

97% of existing boardings are located within a half-mile of this network. 3% of existing boardings take place in areas not served by this network.

70% of existing boardings are located within a half-mile of frequent service on this network.

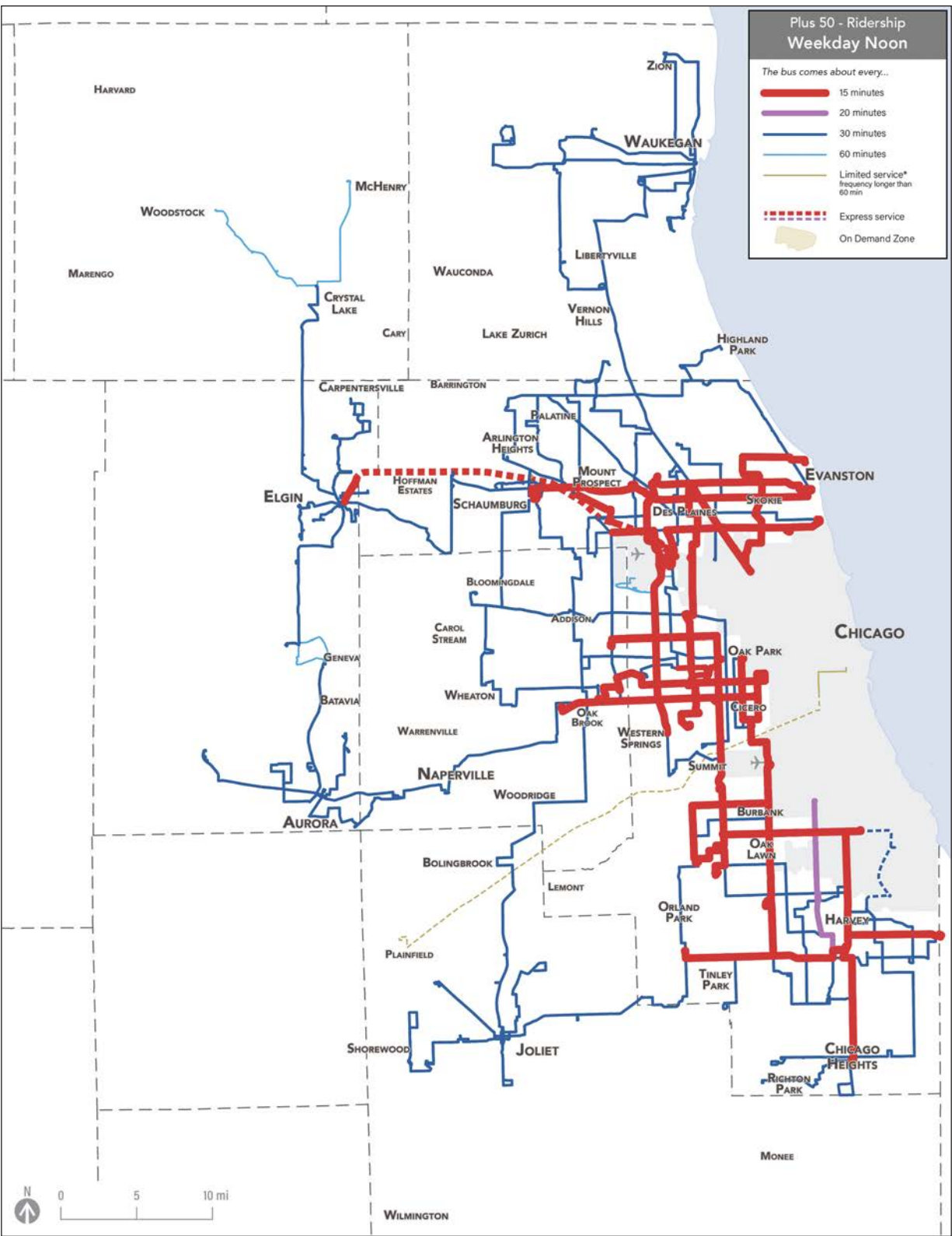


Figure 41: Ridership Concept during the Weekday midday



# Coverage Concept – Spread Service Out

## Concept Definition

The **Coverage Concept** is designed to maximize the number of people and destinations located within a half-mile of a basic level of transit service, seven days a week.

The consequences of this approach are that:

- Service is spread out thinly. There is almost **no new frequency** outside of current and planned Pulse Corridors, and almost all **new coverage is achieved with service every 60 minutes**.
- **Routes tend to be very long**. This is partly because many of the new areas served lack strong anchor destinations, and partly to maximize one-seat rides because many untimed transfers will require very long waits. In practice, this may impact schedule reliability.
- **Transit would expand into many areas with no service today**. However, because of the low frequencies, there will be a much smaller impact on the number of people who can use transit to reach many places in a reasonable amount of time.

## Key Service Features

- Frequent service limited to existing and planned Pulse corridors (see page 30). **Service every 15 to 30 minutes mostly in the same areas served at that level today**.
- **Otherwise, most places served every 60 minutes**.
- **On Demand Zones** provide additional coverage, but with no wait time guarantee (see page 32), in areas at the edge of the network.
- **Expanded networks in the satellite cities**, focused on a mix of routes every 30 and 60 minutes.

- Timed transfers between most routes at transit centers in Waukegan, Crystal Lake, Elgin, Aurora, Schaumburg, Yorktown and Joliet.
- **Service seven days a week, at the same frequencies on nearly all routes**.

## Equity

### Economic Equity

Fewer of the benefits of the Coverage concept would accrue to economically disadvantaged groups, compared to the Ridership concept. This is because most of the areas not currently served by Pace bus routes or On Demand zones have predominantly mid- to high-income populations.

### Racial Equity

Similarly, fewer of the benefits of the Coverage concept would accrue to people of color, compared to the Ridership concept. This is because most of the areas not currently served by Pace bus routes are predominantly White.

### Geographic Equity

This network would significantly rebalance service allocation. More than half of the service added in this network would be in the collar counties, who have historically had much less bus service per capita than Cook County.

### Impacts on Existing Riders

Over 99% of existing boardings are located within a half-mile of this network. Fewer than 1% of existing boardings take place in areas not served by this network.

55% of existing boardings are located within a half-mile of frequent service on this network.

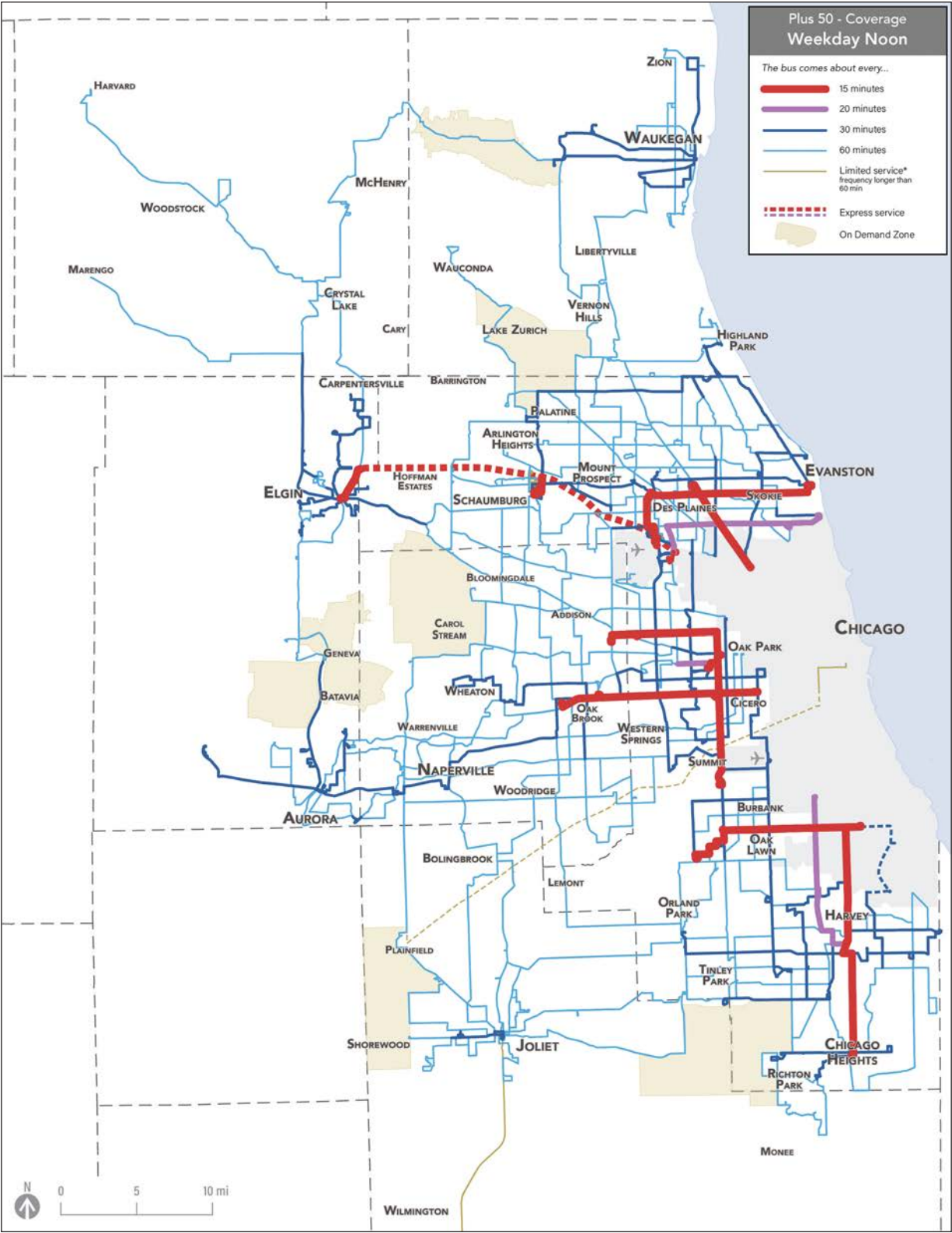
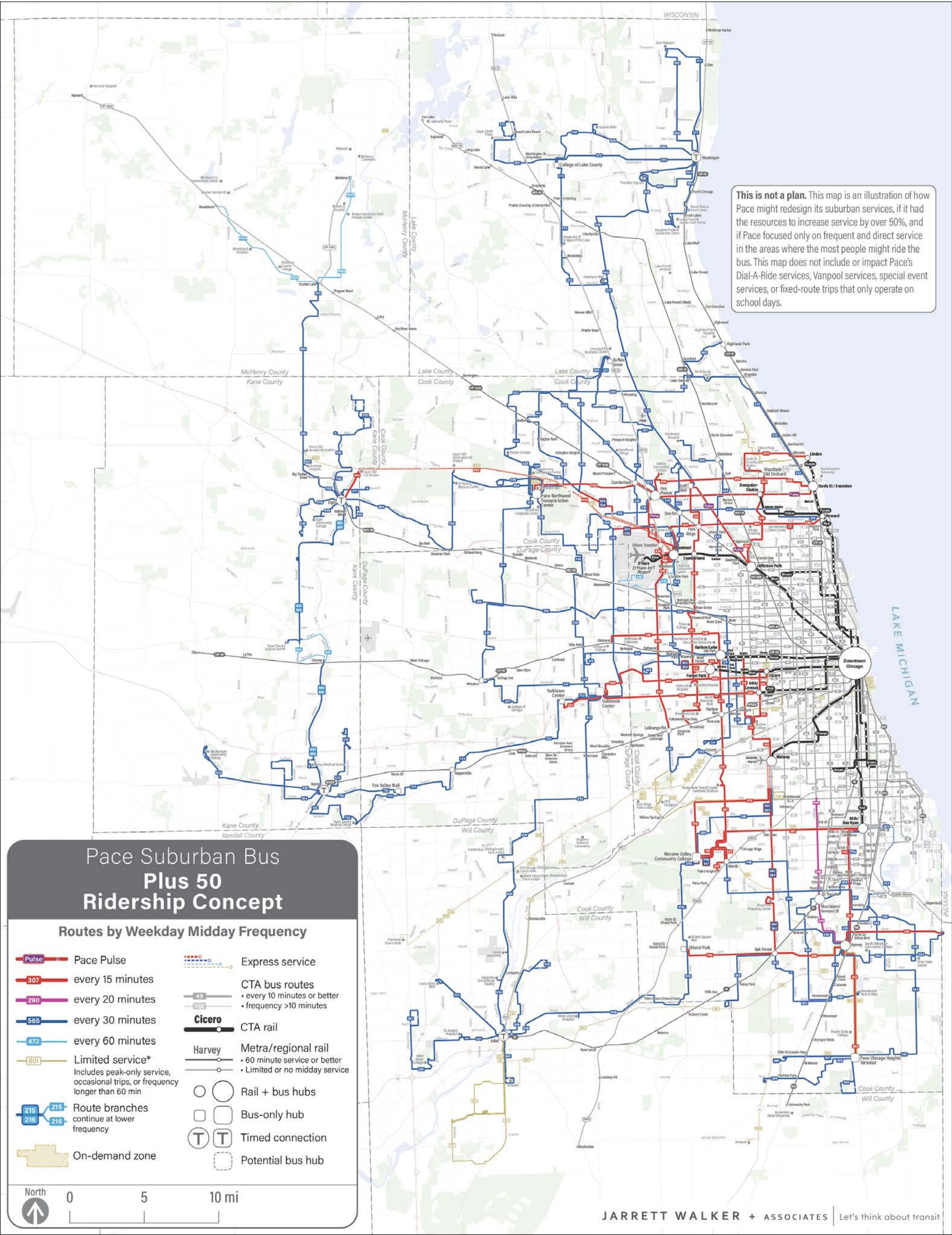


Figure 42: Coverage Concept during the Weekday midday

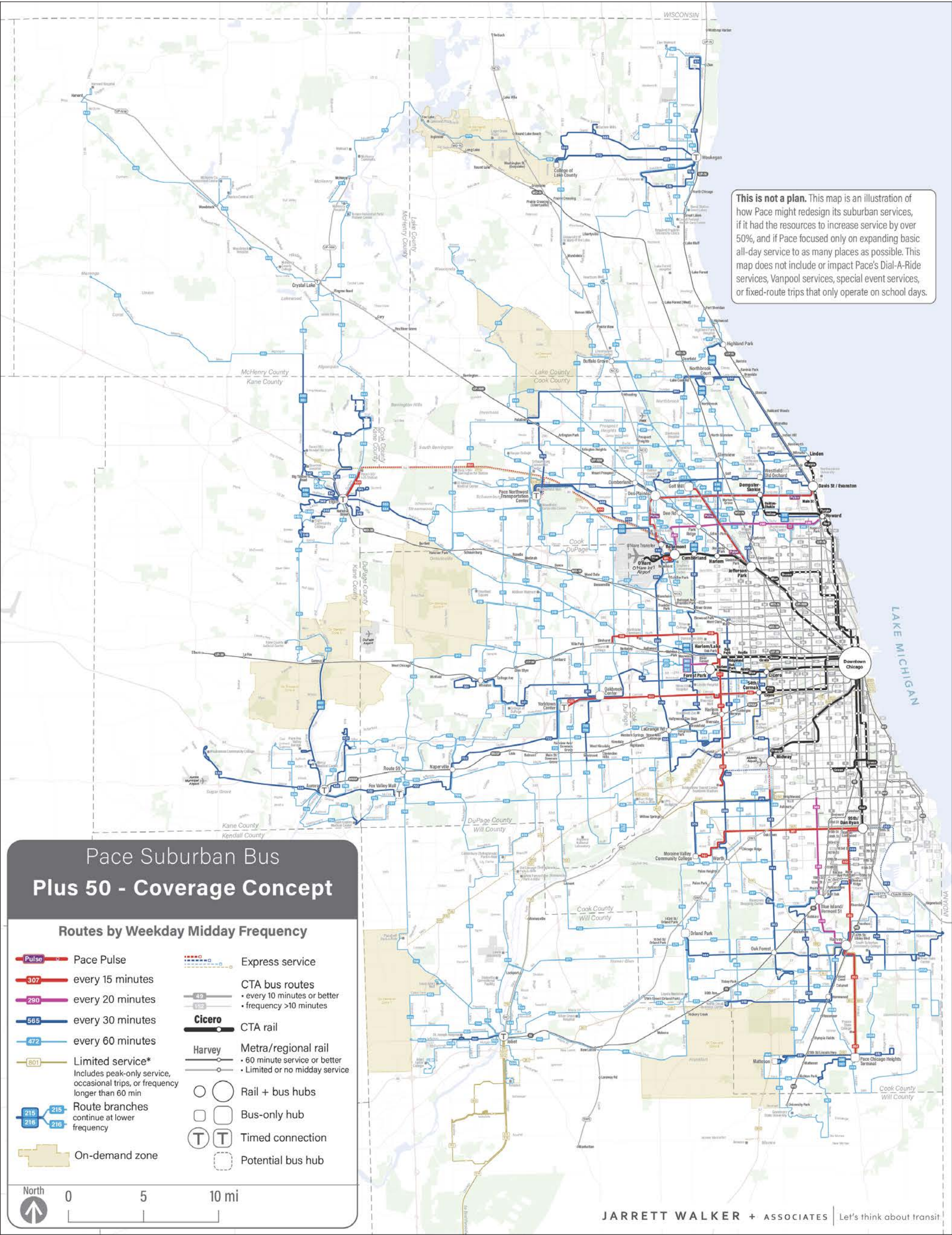


# Network Overview Map - Ridership Concept





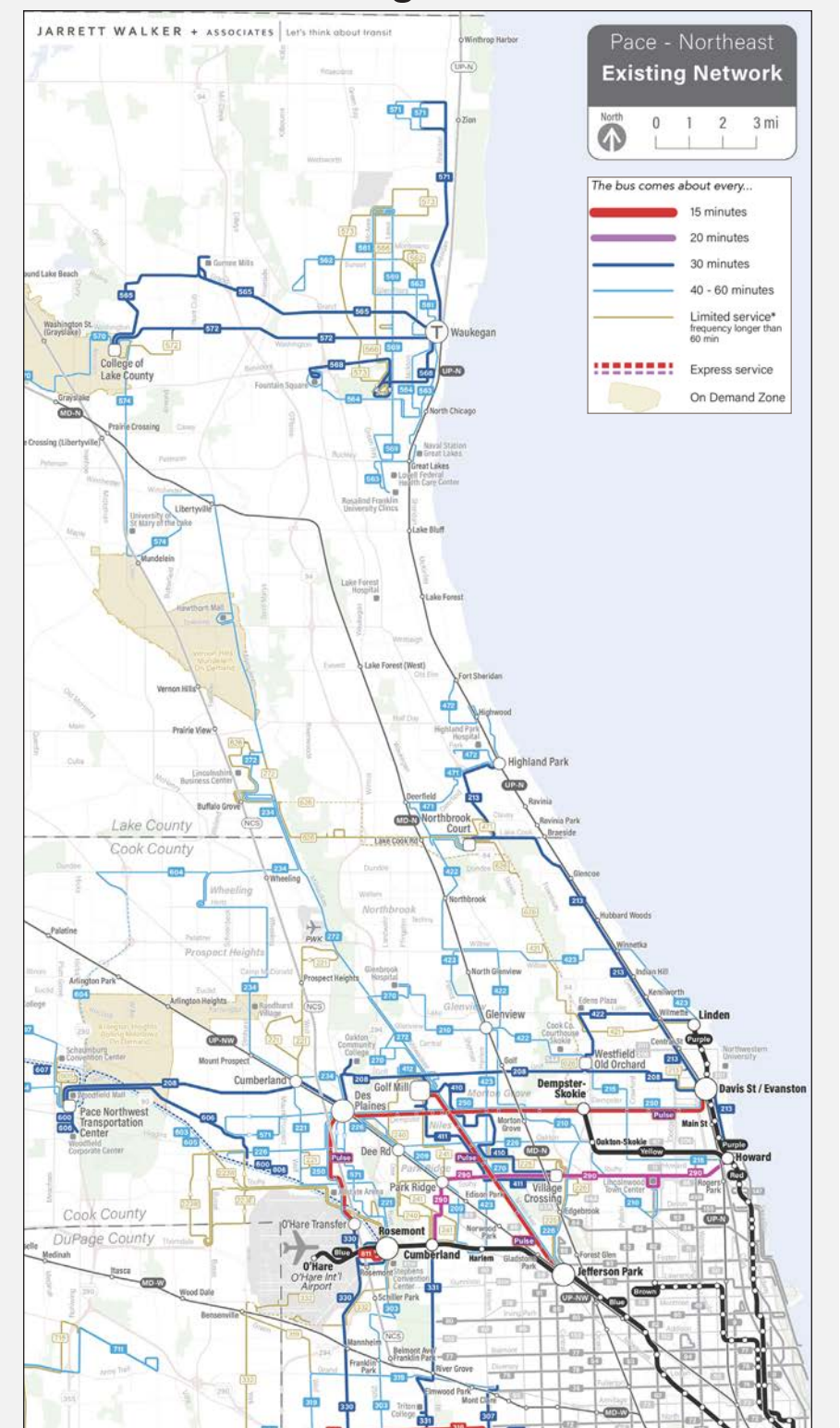
# Network Overview Map - Coverage Concept



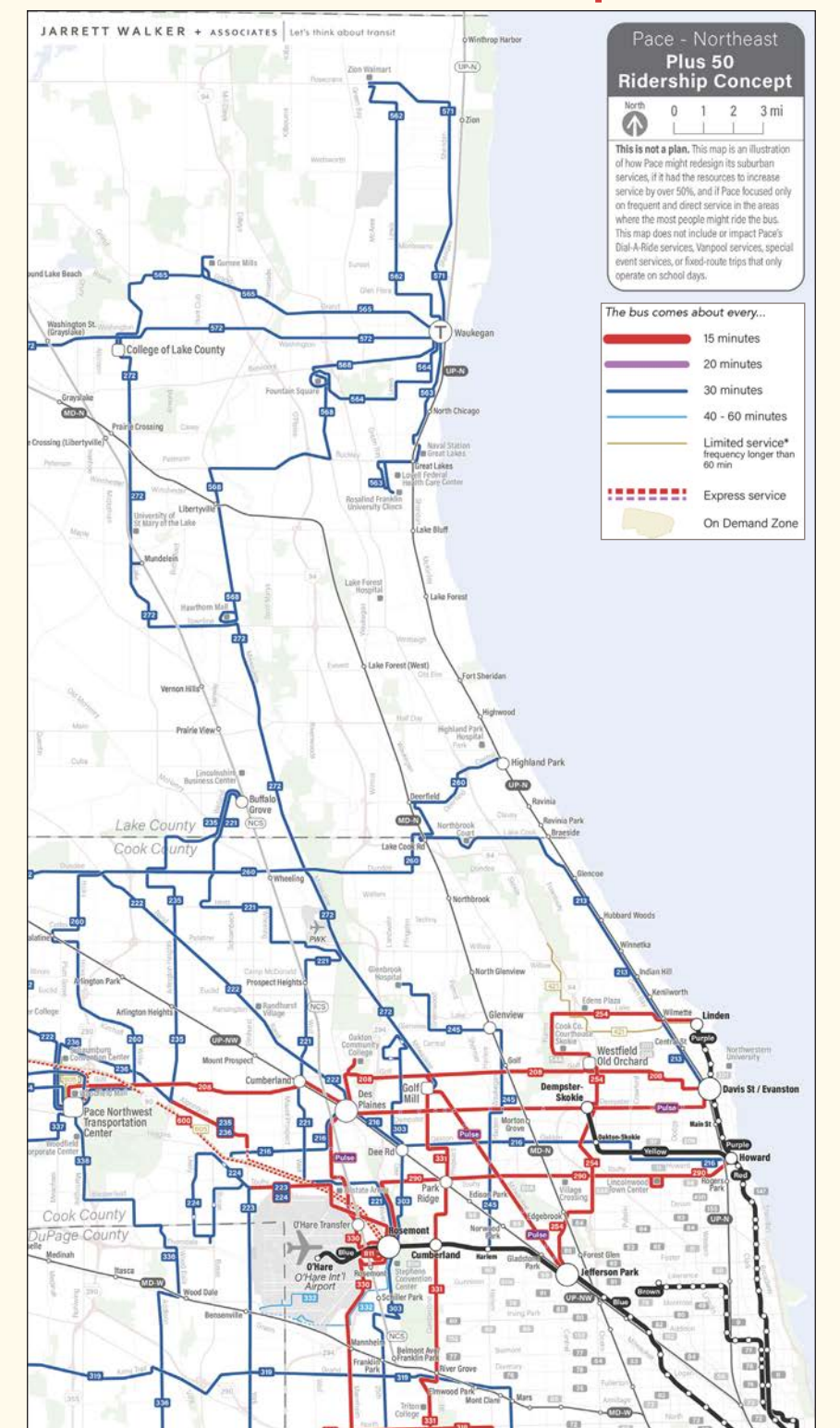


# Northeast Area – Existing Network vs. Plus 50 Concepts

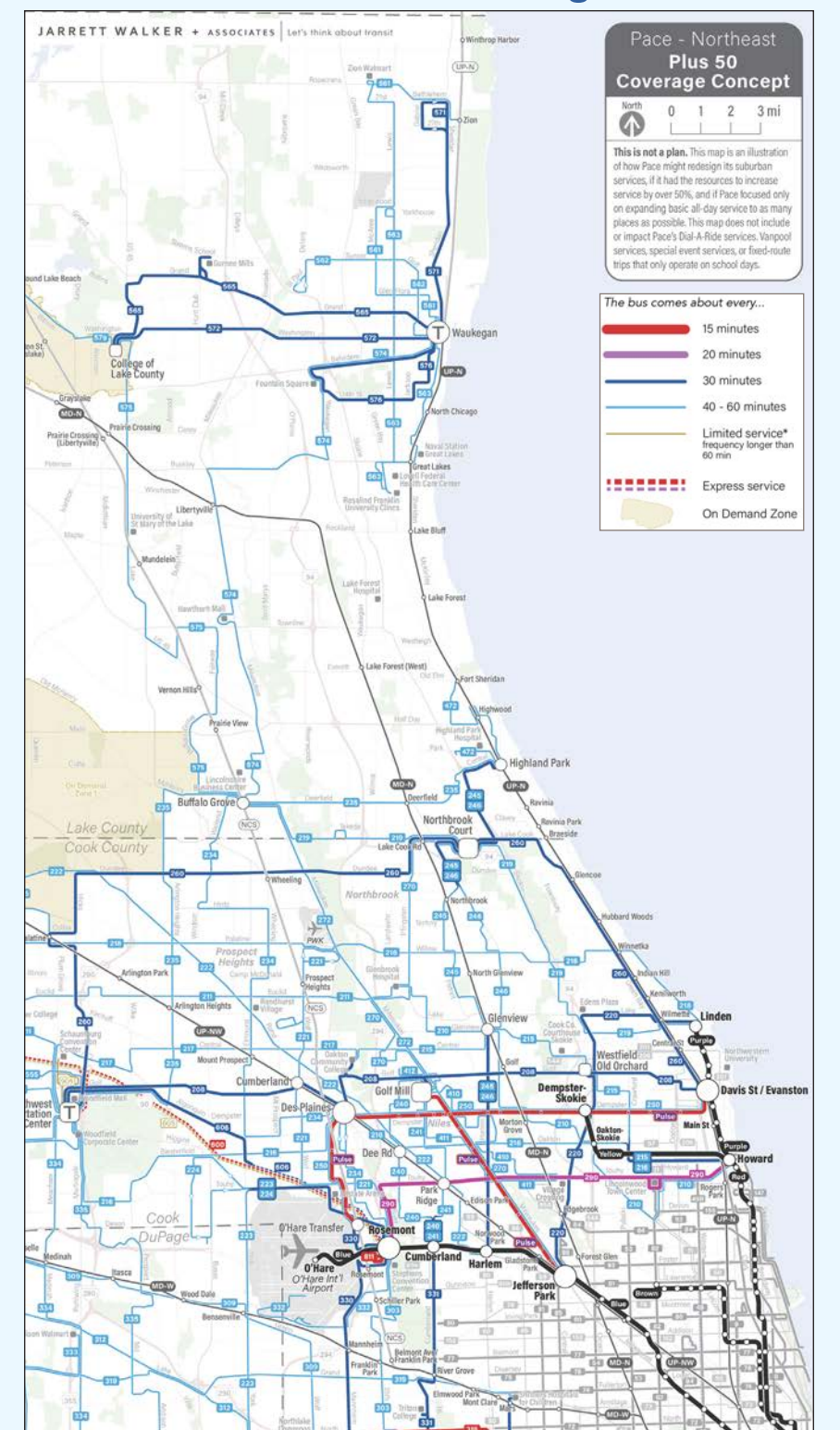
## Existing Service



## Plus 50 - Ridership

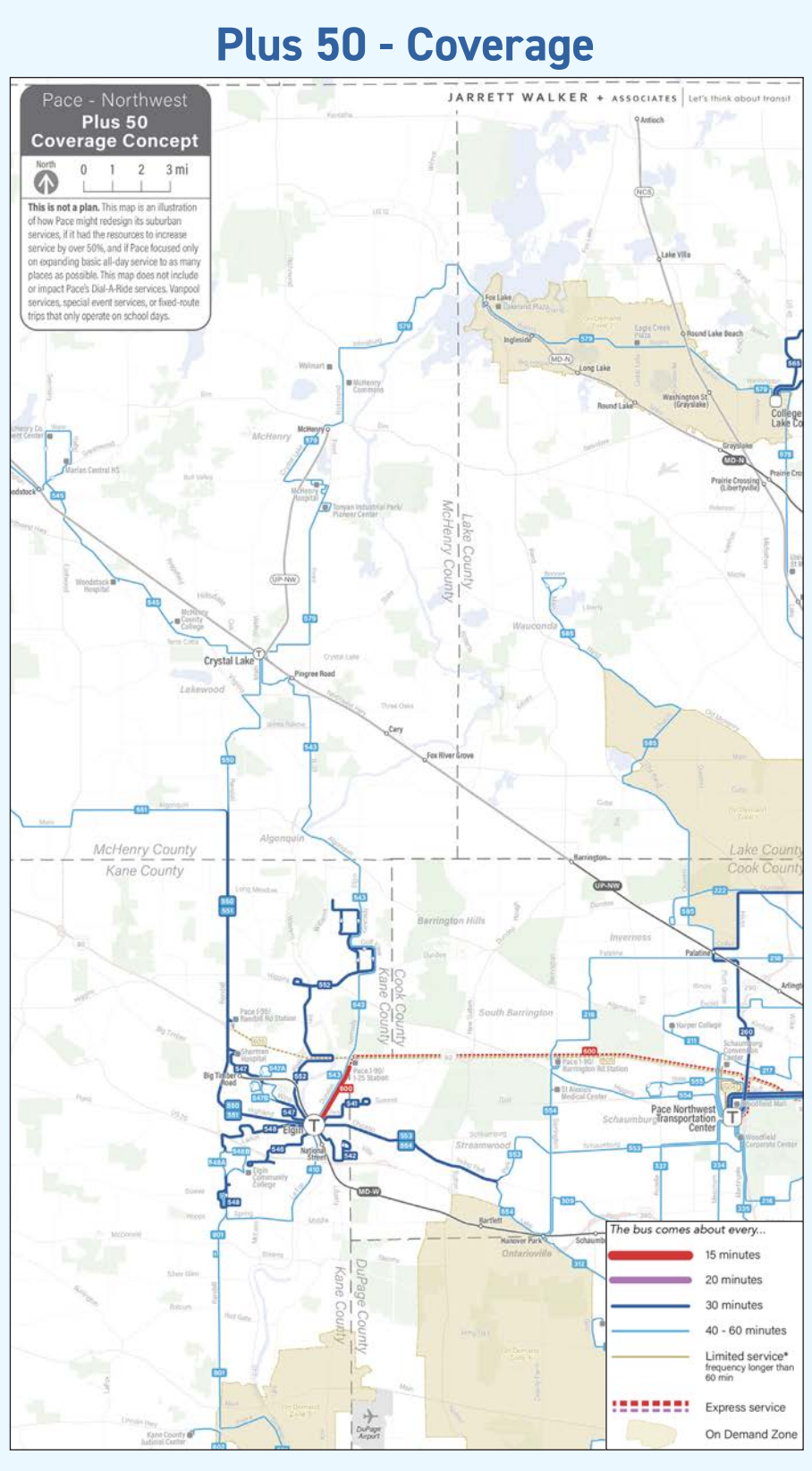
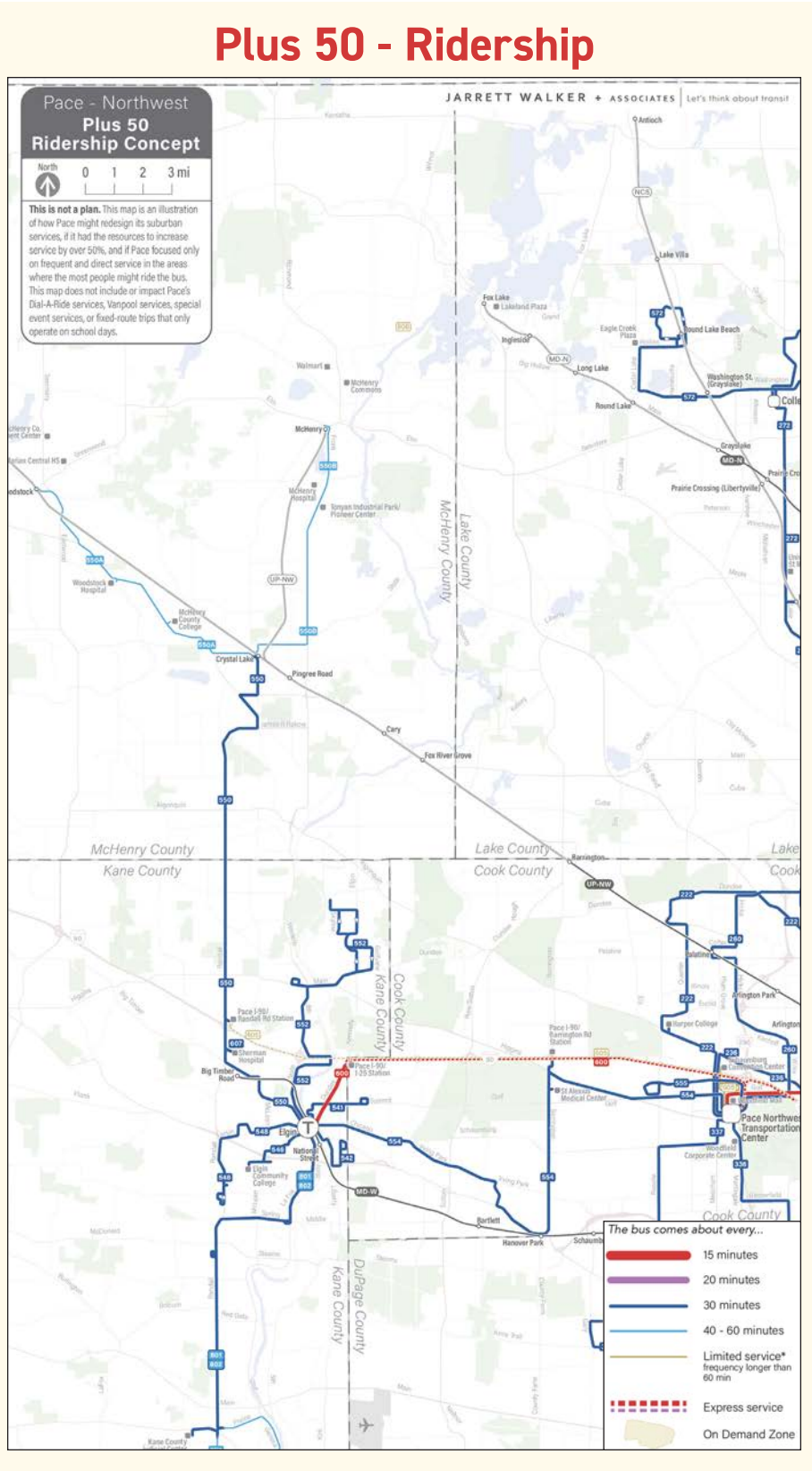
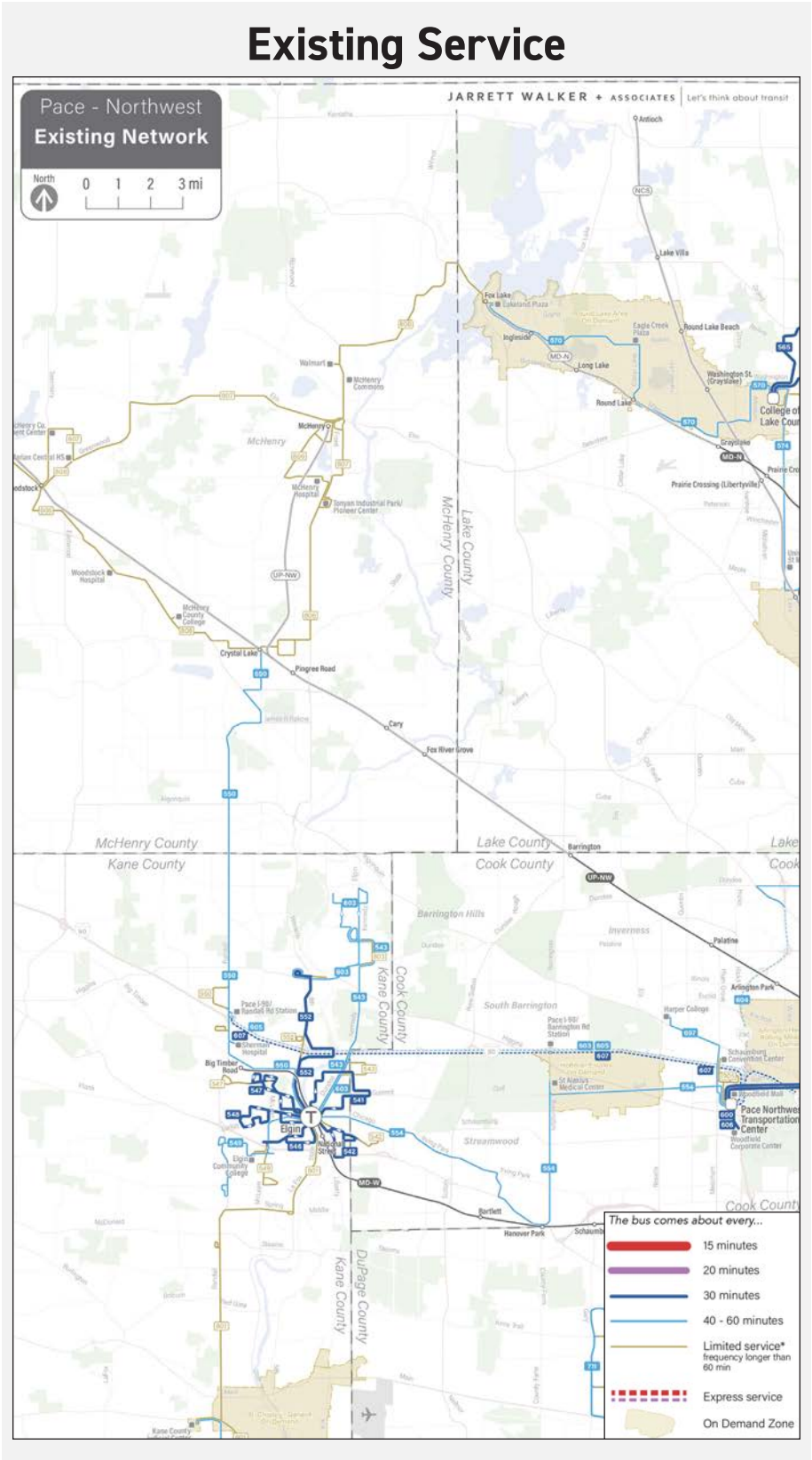


## Plus 50 - Coverage





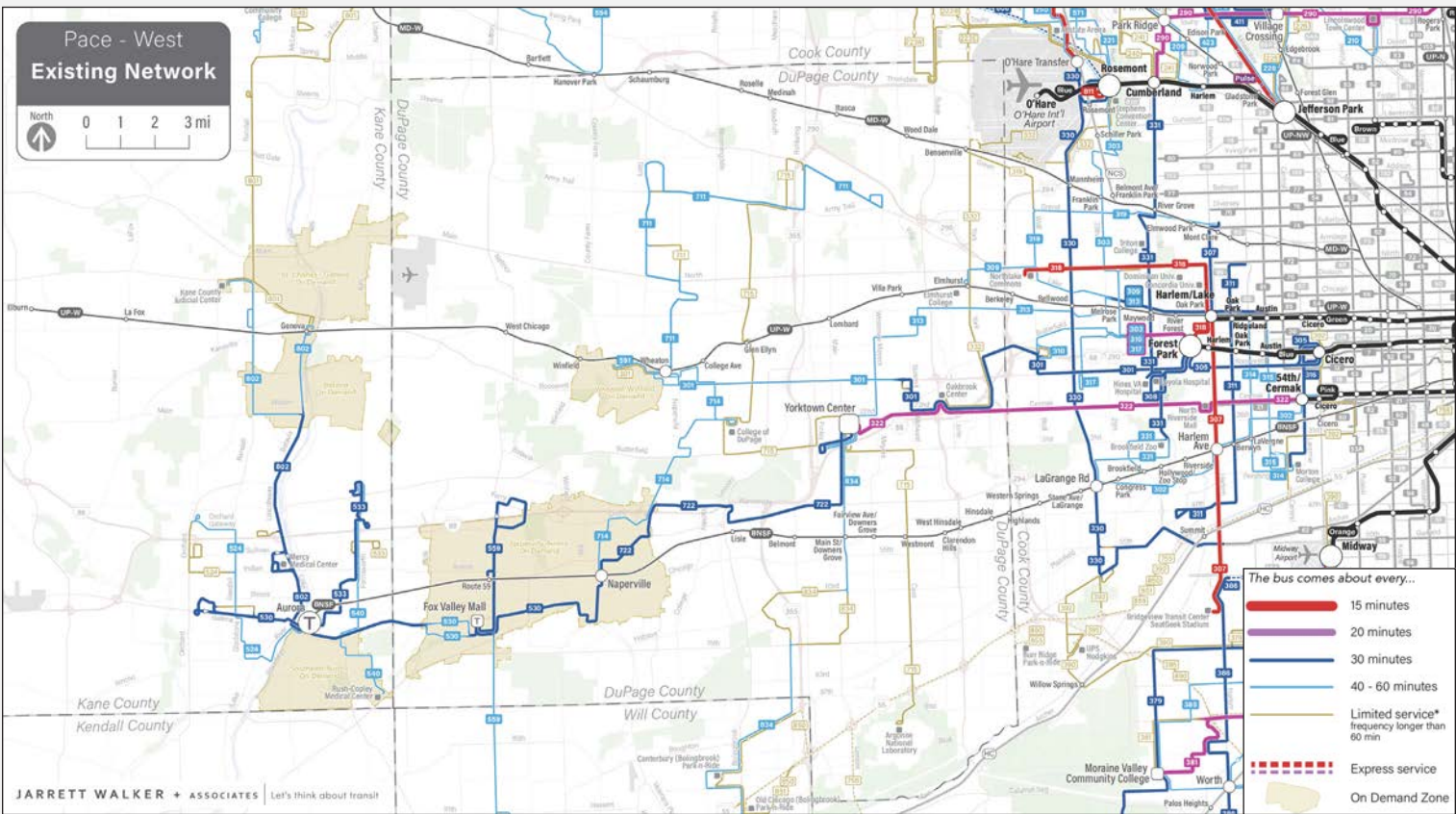
# Northwest Area Map – Existing Network vs. Plus 50 Concepts



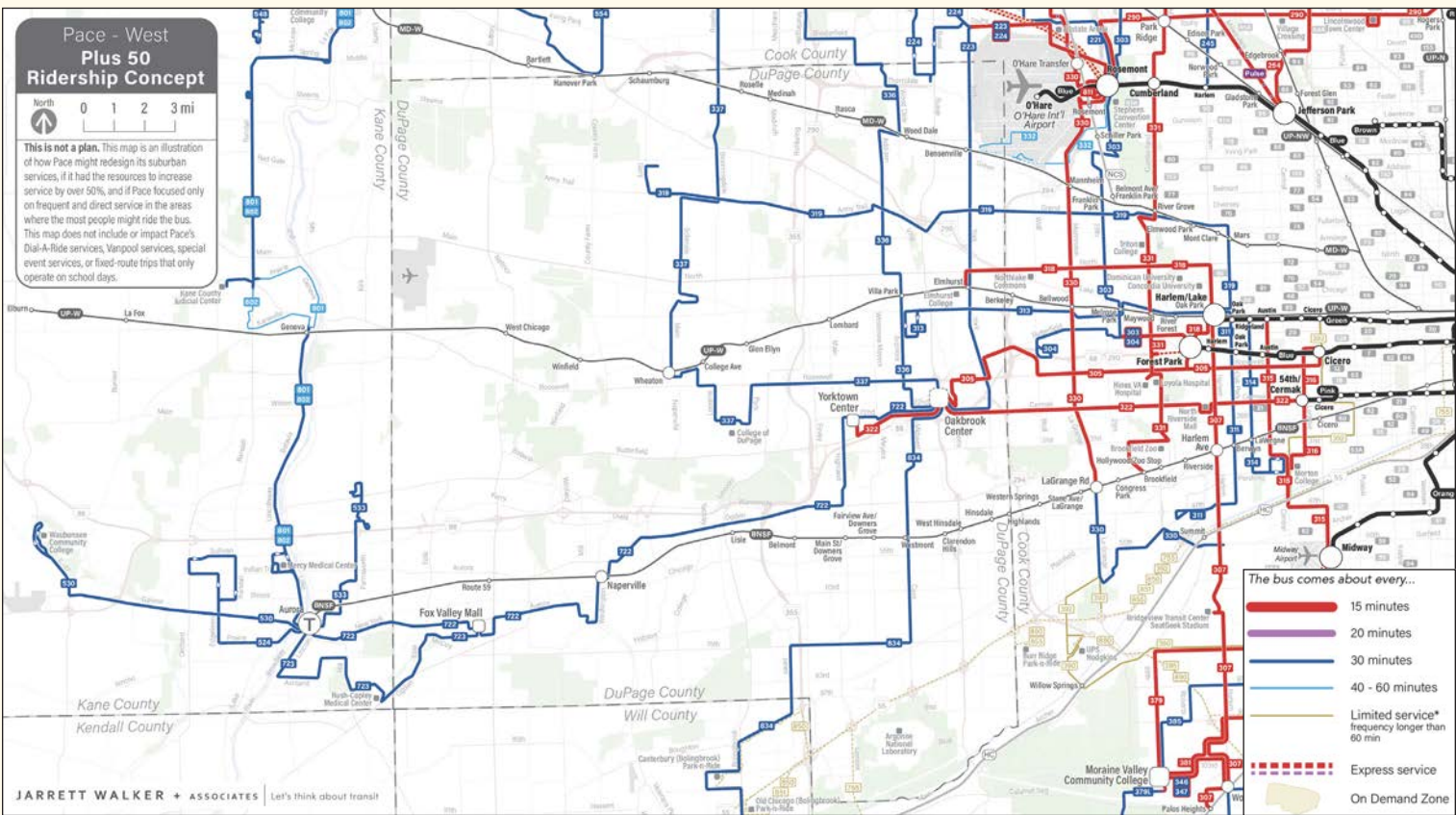


# West Area Map - Existing Network vs. Plus 50 Concepts

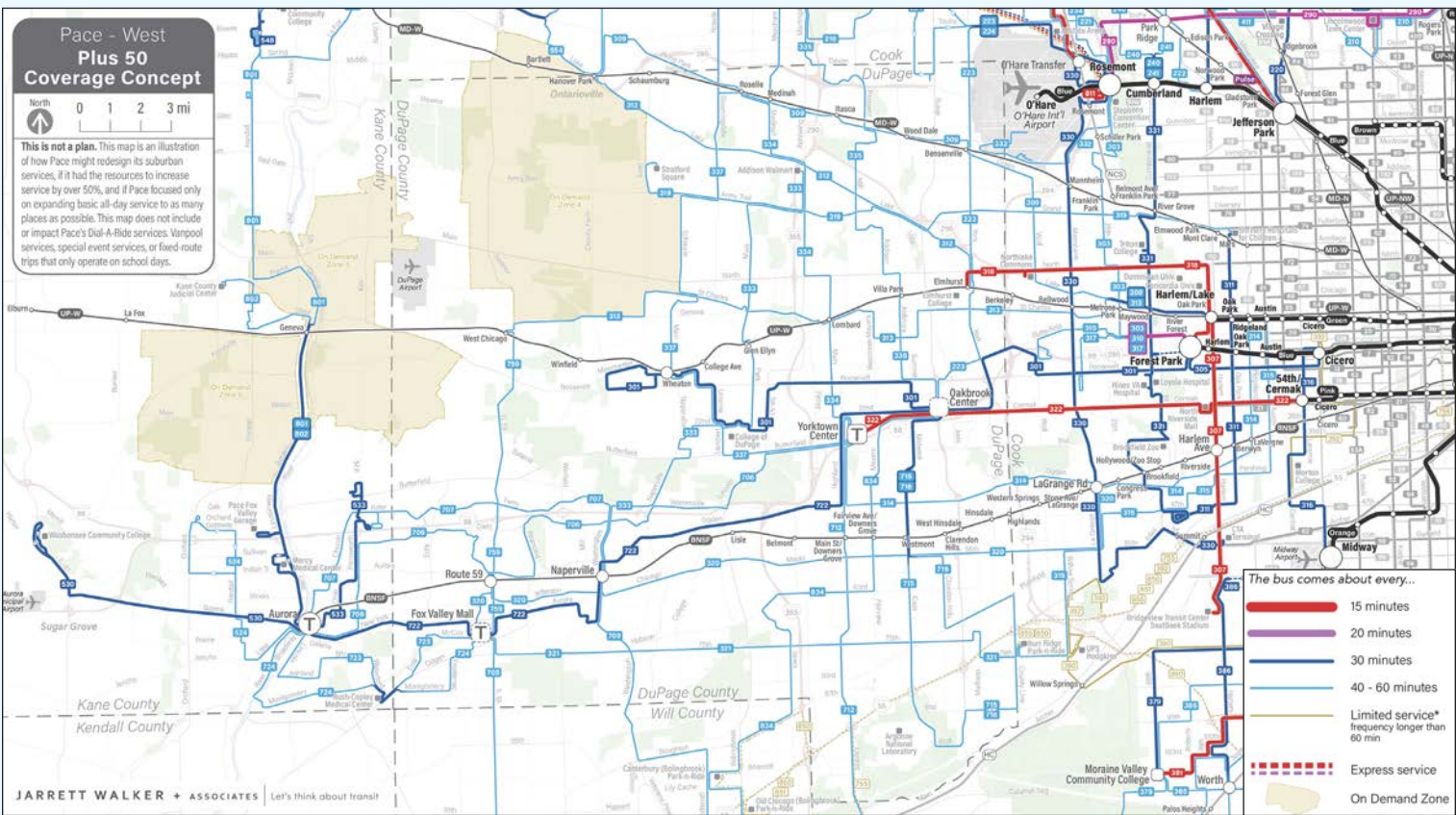
Existing Service



Plus 50 Ridership



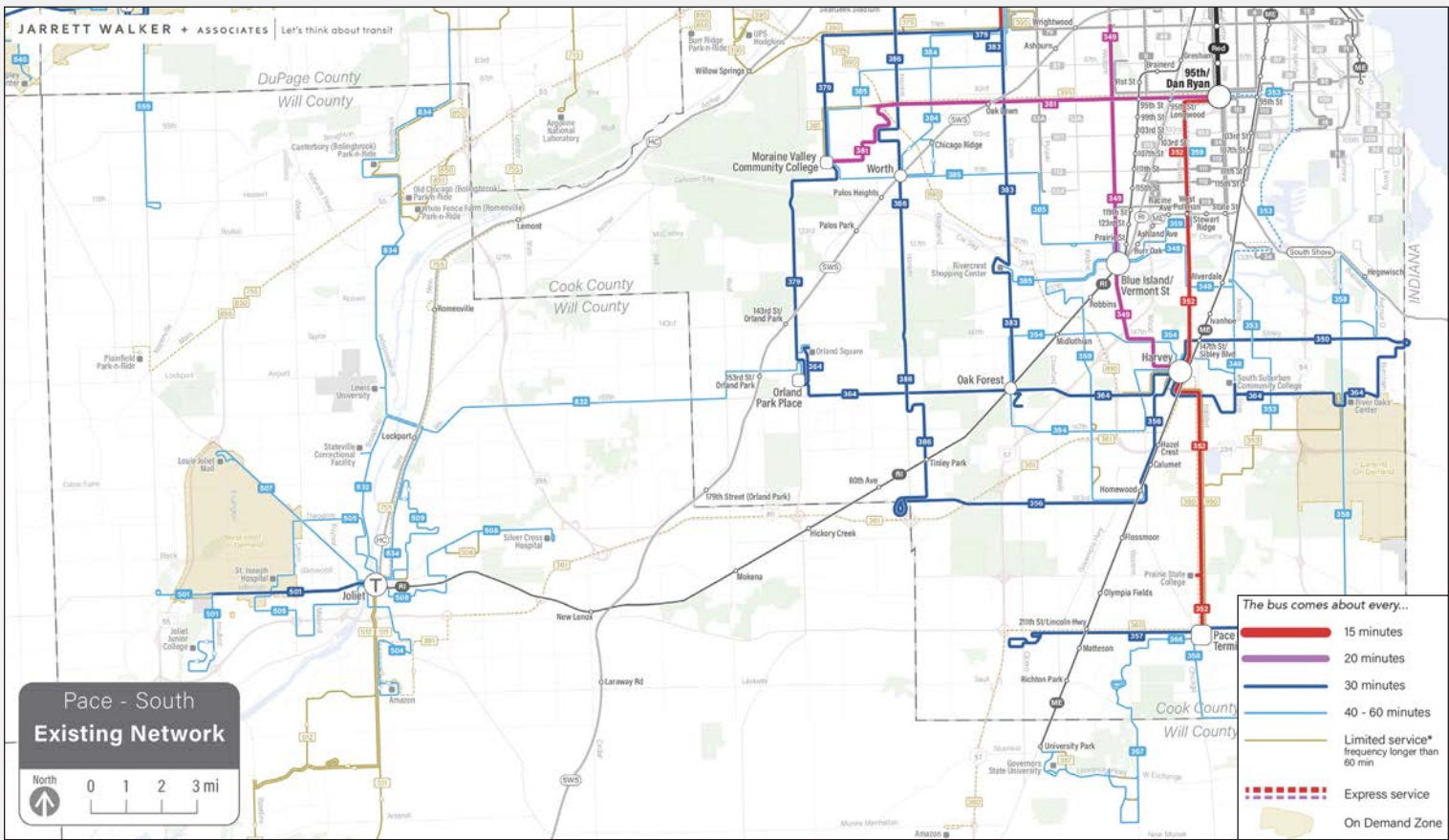
Plus 50 Coverage



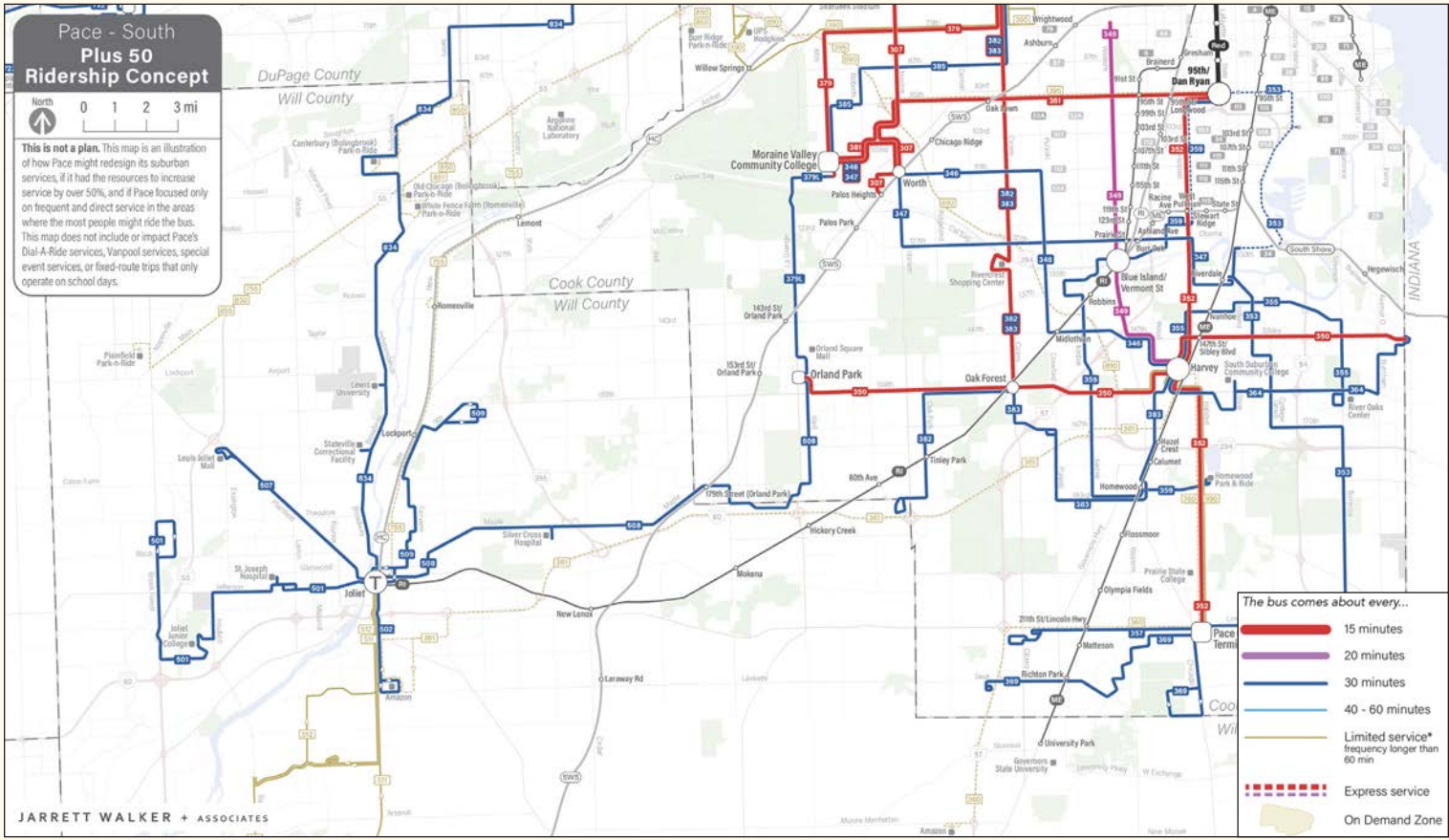


# South Area Map - Existing Network vs. Plus 50 Concepts

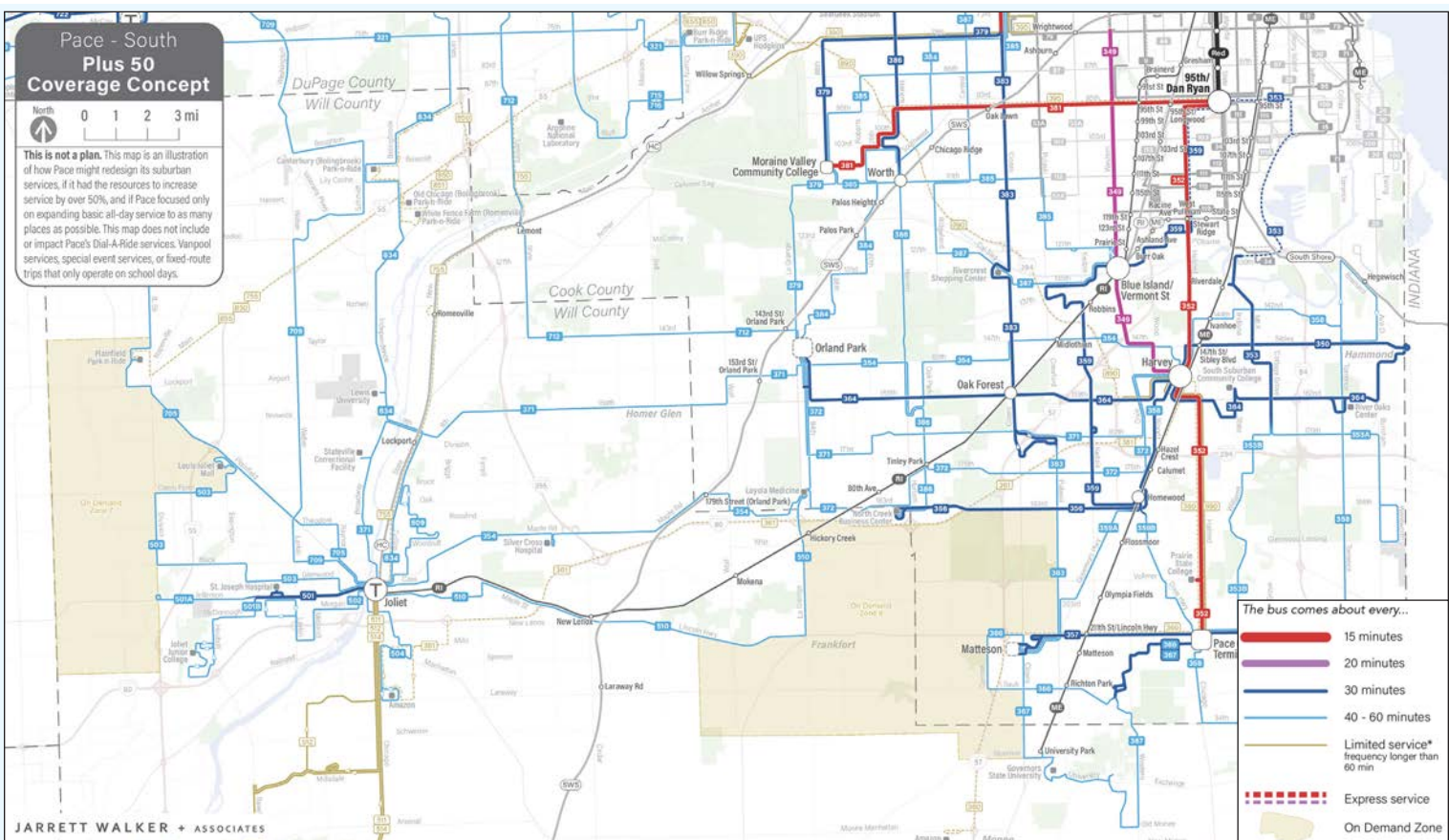
Existing Service



Plus 50 Ridership



Plus 50 Coverage





# People and Jobs Near Service - Existing Network vs. Plus 50 Concepts

The charts on this page describe proximity to transit at various frequencies on weekdays in the daytime. They show the percentage of people and jobs that would be near a bus or rail stop, within Pace's service area<sup>1</sup>.

## Existing Network

- **Most people and jobs are far from transit.** Only 42% of residents and 44% of jobs are within a half-mile of service.
- Low-income residents (55%) and people of color (52%) are more likely to live within a half-mile of service than the population as a whole.
- **Very few people and jobs (4%) are near frequent service**, every 15 minutes or better.

1 Includes suburban Cook County, DuPage County, Kane County, Lake County, McHenry County and Will County. Measure includes CTA and Metra service operating within Pace's service area.

## Ridership Concept

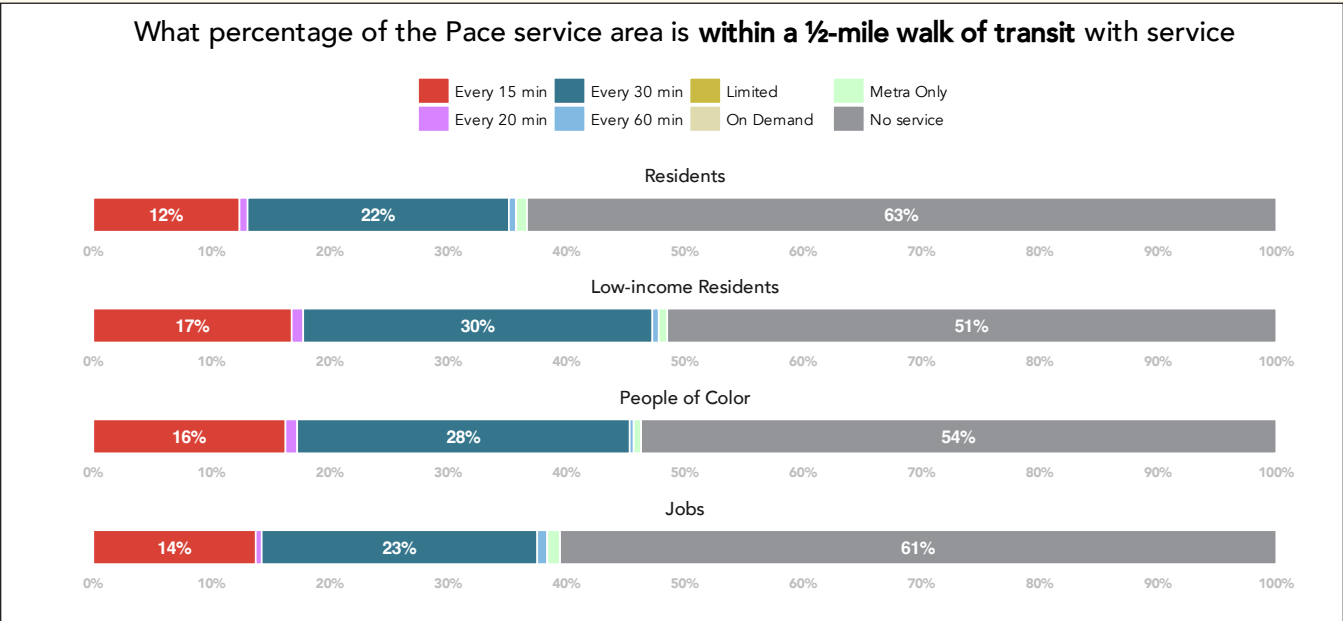
- Even fewer people and jobs would be near transit, including only 37% of residents and 39% of jobs<sup>2</sup>.
- Low-income residents (49%) and people of color (46%) would still be more likely to live near transit.
- **Over three times as many residents (12%) and jobs (14%) would be near frequent service.**

## Coverage Concept

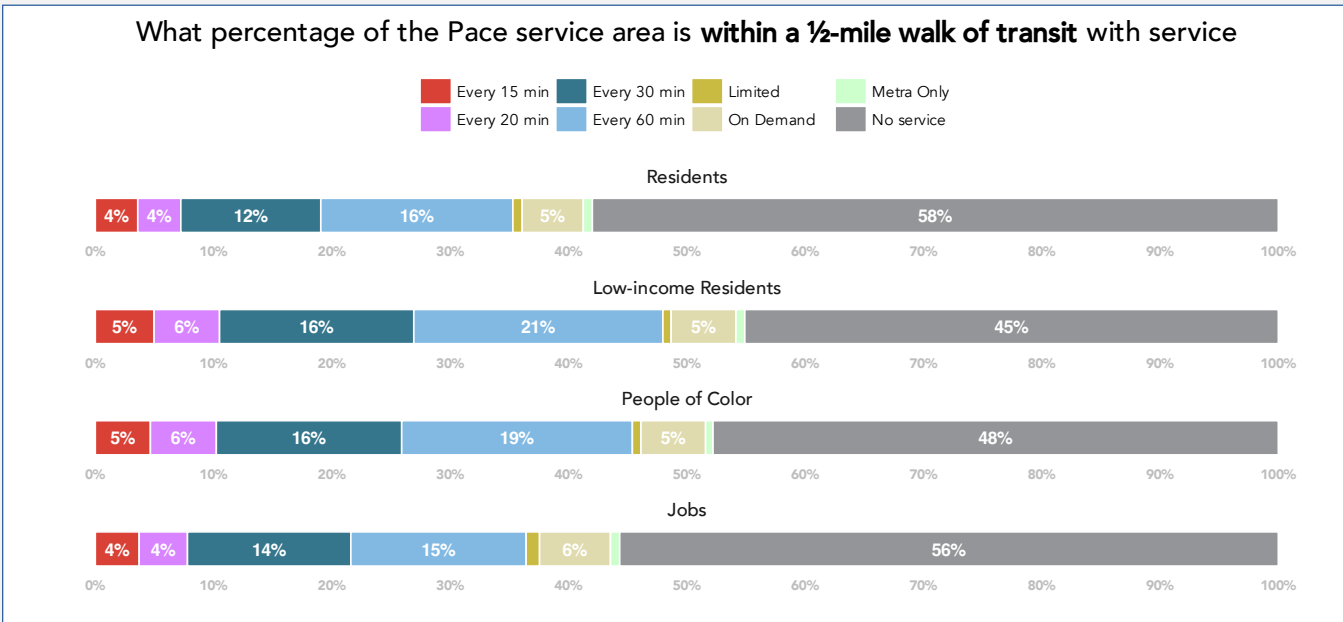
- **Many more people and jobs would be near transit**, including 56% of residents and 57% of jobs.
- Low-income residents (64%) and people of color (63%) would still be more likely to live near transit.
- Slightly more residents (5%) and jobs (7%) would be near frequent service.

2 However, these charts slightly understate the benefits of the Plus 50 concepts, as both the Ridership and Coverage concepts would maintain similar service levels, seven days a week.

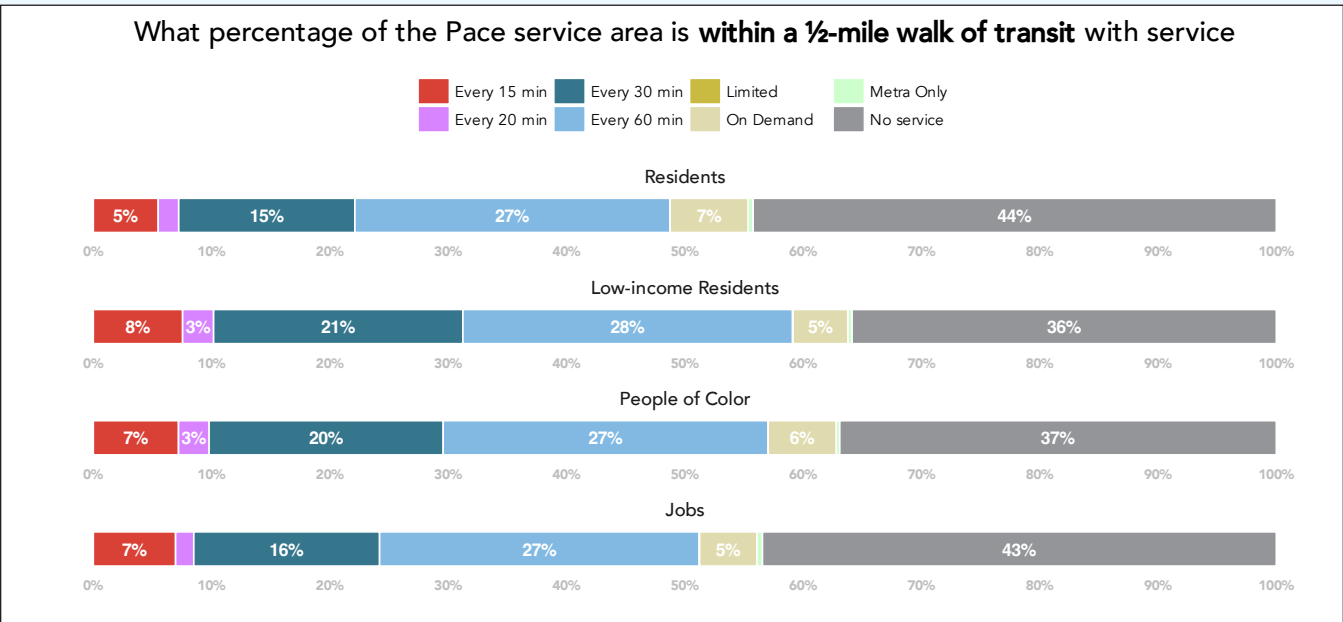
## Plus 50 - Ridership



## Existing Service



## Plus 50 - Coverage





# Destinations Near Service - Existing Network vs. Plus 50 Concepts

The charts on this page are similar to those on the prior page, except show the percentage of estimated **work, school, shopping and social destinations** near transit.

The number of daily trips to these destinations are estimated based on Replica estimates of regional travel on a typical weekday in Spring 2023 (see page 17). Measuring impacts to these locations is important as it allows us to verify that the network concepts take into account the many non-home destinations people travel to.

## Existing Network

- Overall, the numbers are similar to residents and jobs near transit. The existing network provides service near about 41% to 48% of these destinations.
- Slightly more -shopping destinations (48%) are near transit, compared to work (44%), school (43%) and social (41%) destinations.

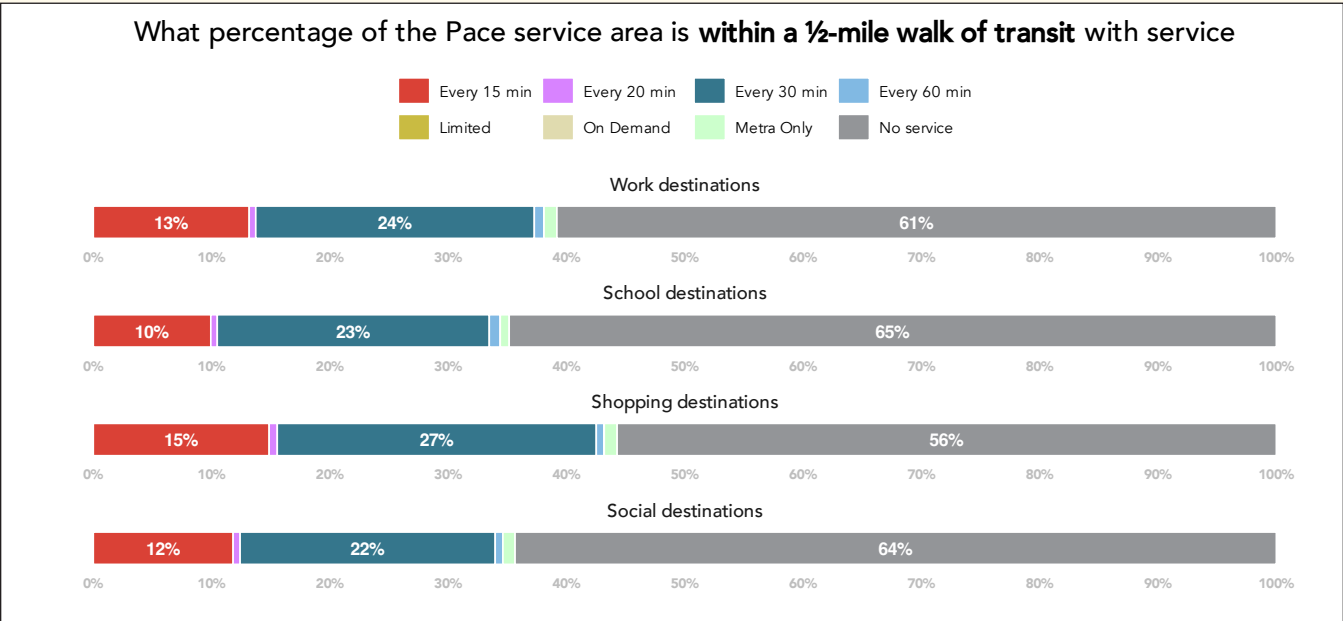
## Ridership Concept

- Fewer destinations of all types (35 to 44%) would be near transit, and **more destinations of all types would be near frequent service** (10 to 15%).
- **This concept appears to focus less on school destinations, compared to other types.** This is likely related in part to the all-day focus of design: K-12 school travel is heavily peaked. Schools are also more evenly spread across the region than other types of destinations, so a concept that focuses more on inner parts of the region might cover fewer of them.

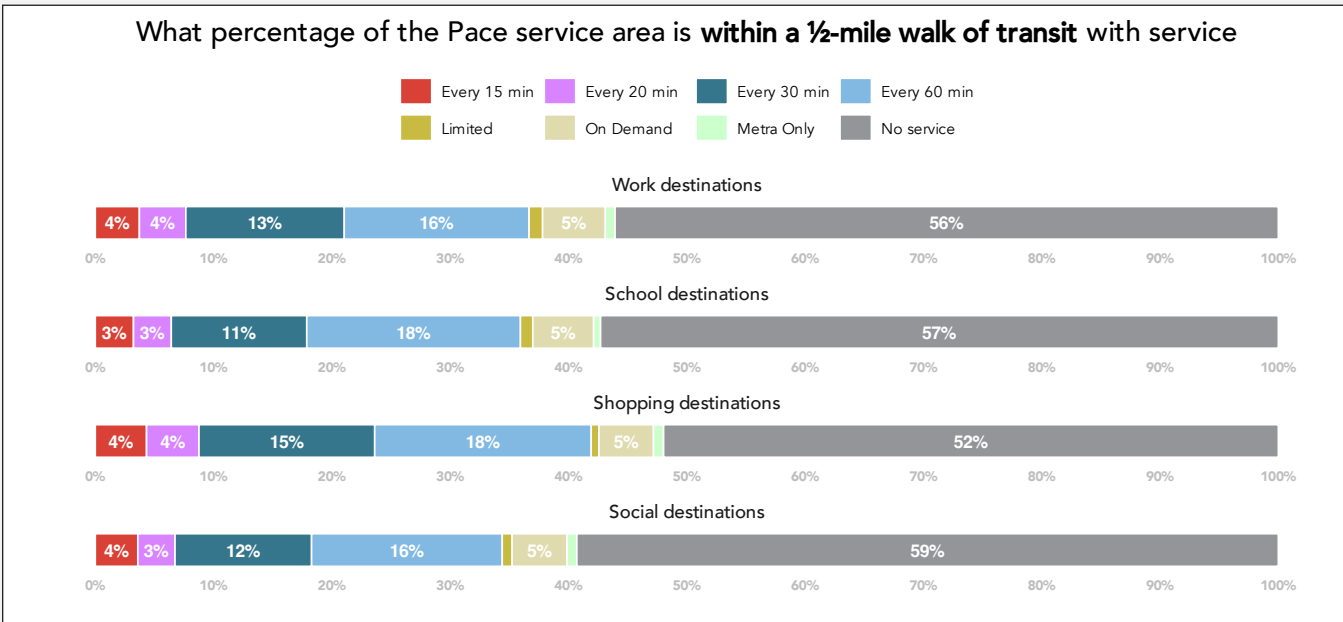
## Coverage Concept

- **More destinations of all types (54 to 63%) would be near transit**, and slightly more destinations of all types would be near frequent service (10 to 15%).
- The balance of different types of destinations near transit would not change significantly.

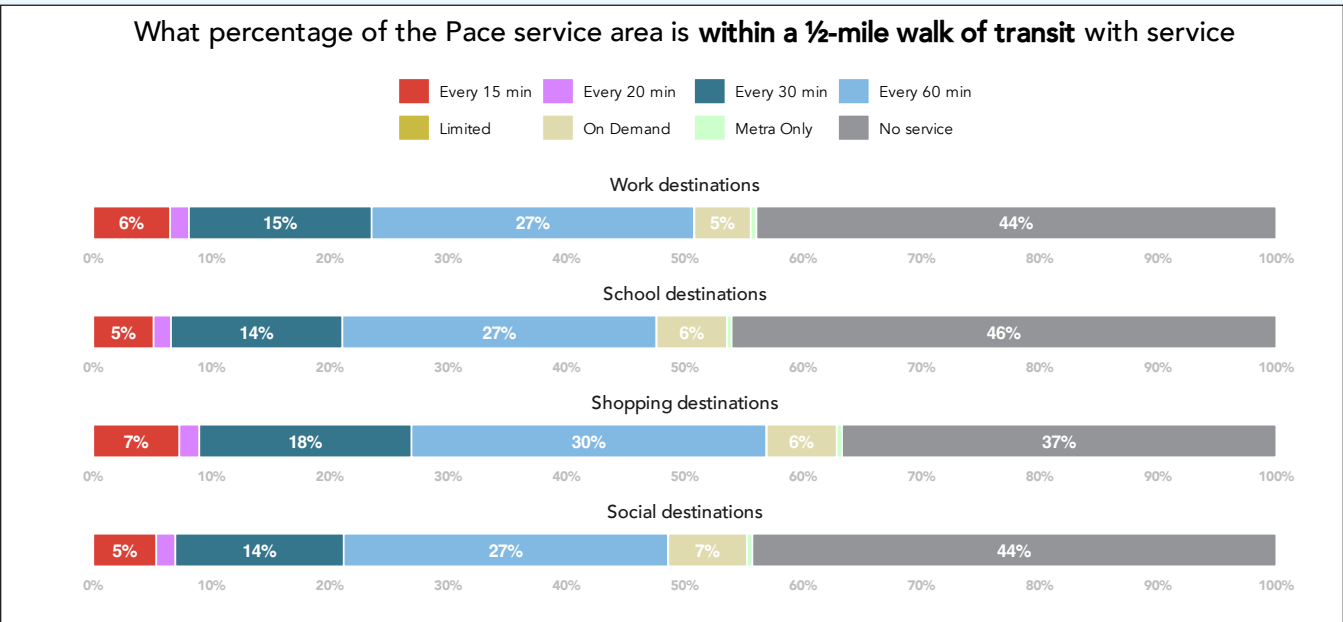
## Plus 50 - Ridership



## Existing Service



## Plus 50 - Coverage





# Weekday Daytime Service - Existing Network vs. Plus 50 Concepts

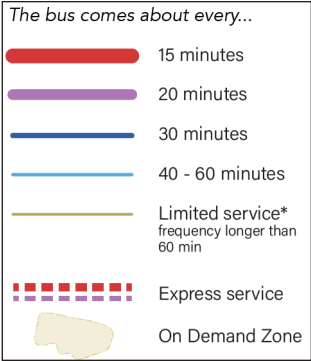
## Maps of Frequencies at Different Times of the Day and Week

These simplified maps show the overall differences between where and how often buses operate in the existing network, the Ridership concept and the Coverage concept.

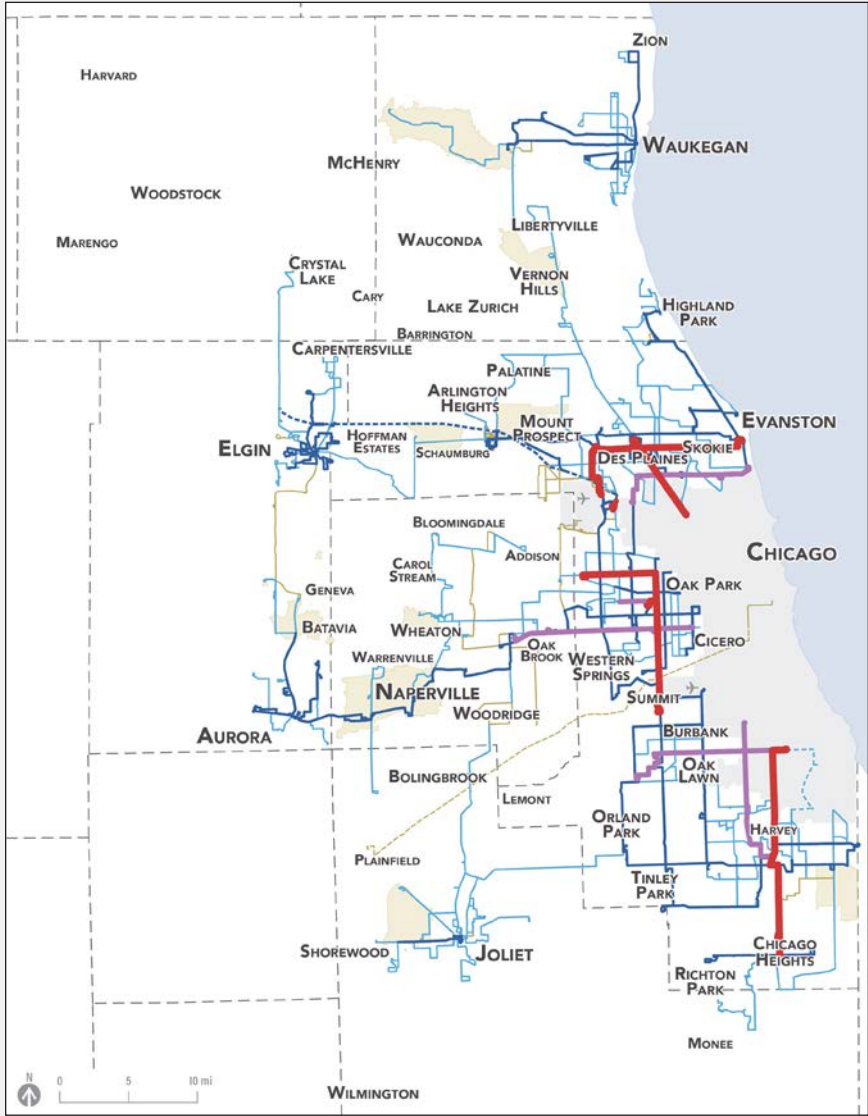
They reflect the descriptions of the Existing Network in Chapter 3, and the descriptions of the Plus 50 concepts provided in prior pages of this chapter.

This page illustrates the difference on weekdays in the daytime, more or less between 9 AM and 3 PM.

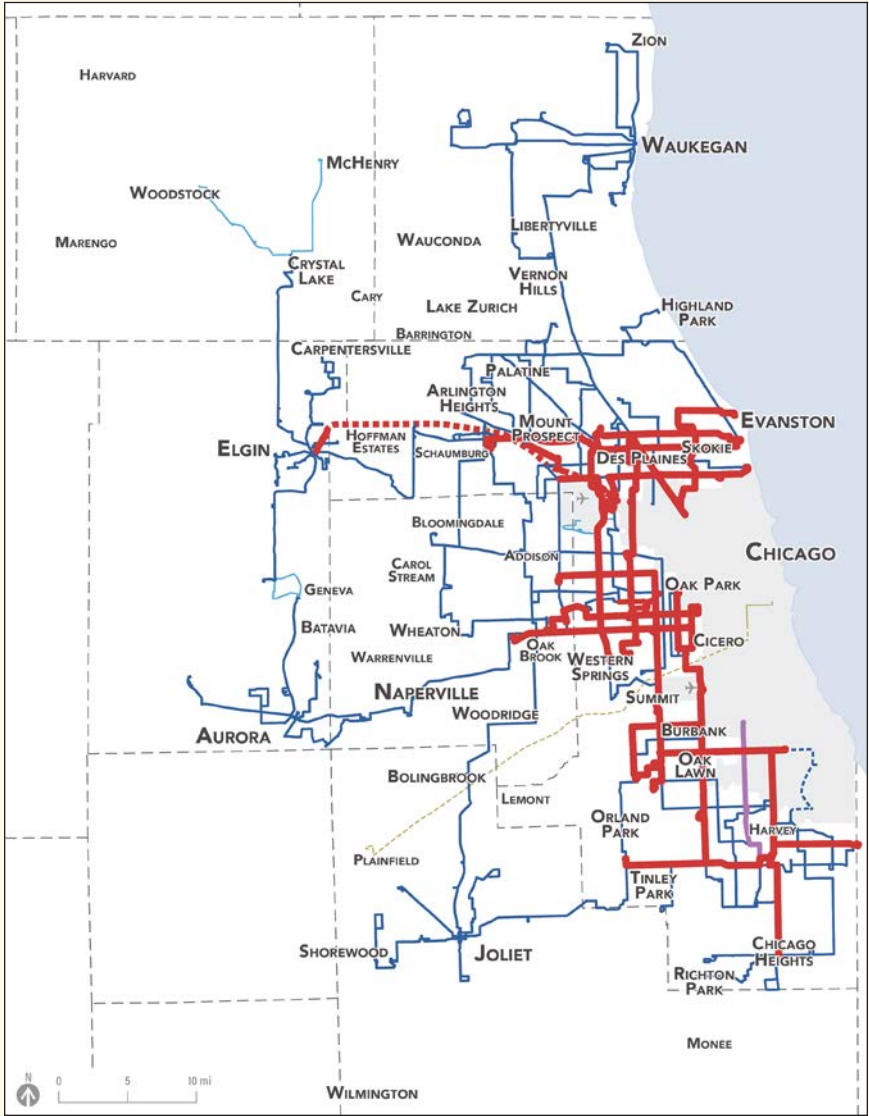
This illustrates the level of service that people who use transit frequently often come to think of their baseline, if they are not travelling at peak hours. If it's daylight out, the bus will come at least this often.



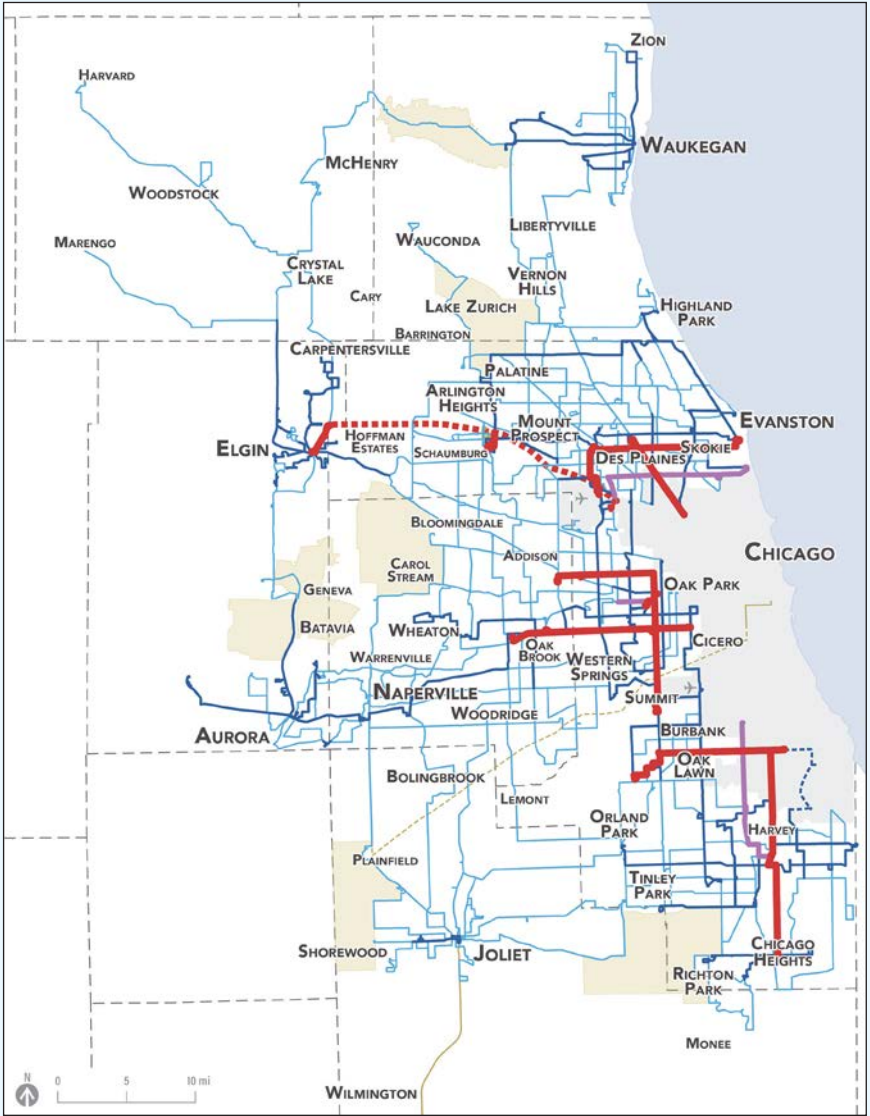
Existing Service



Plus 50 - Ridership



Plus 50 - Coverage





# Weekday Evening Service - Existing Network vs. Plus 50 Concepts

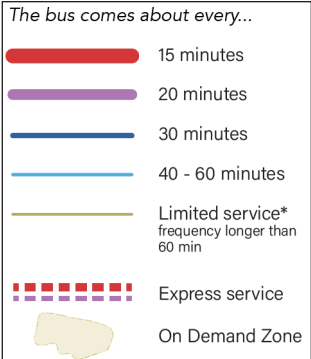
## Maps of Frequencies at Different Times of the Day and Week

These simplified maps show the overall differences between where and how often buses operate in the existing network, the Ridership concept and the Coverage concept.

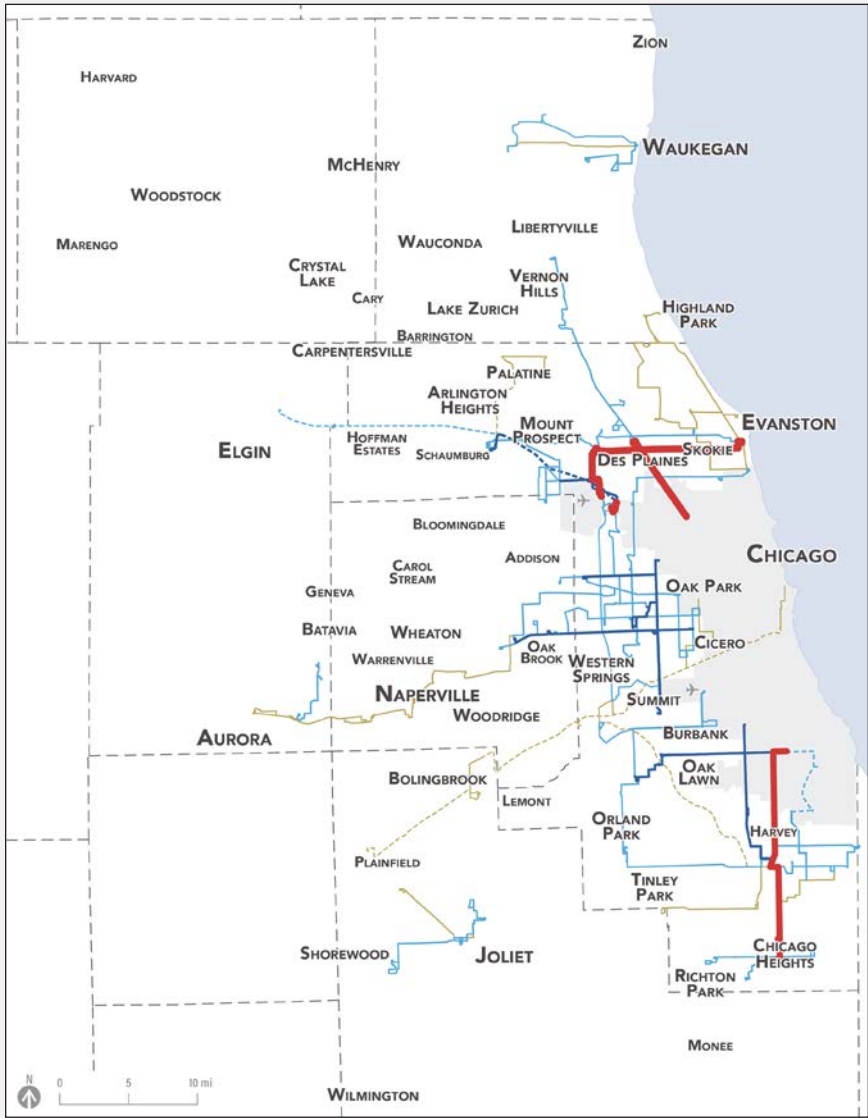
They reflect the descriptions of the Existing Network in Chapter 3, and the descriptions of the Plus 50 concepts provided in prior pages of this chapter.

This page illustrates the difference on weekdays in the evening, around 9 PM.

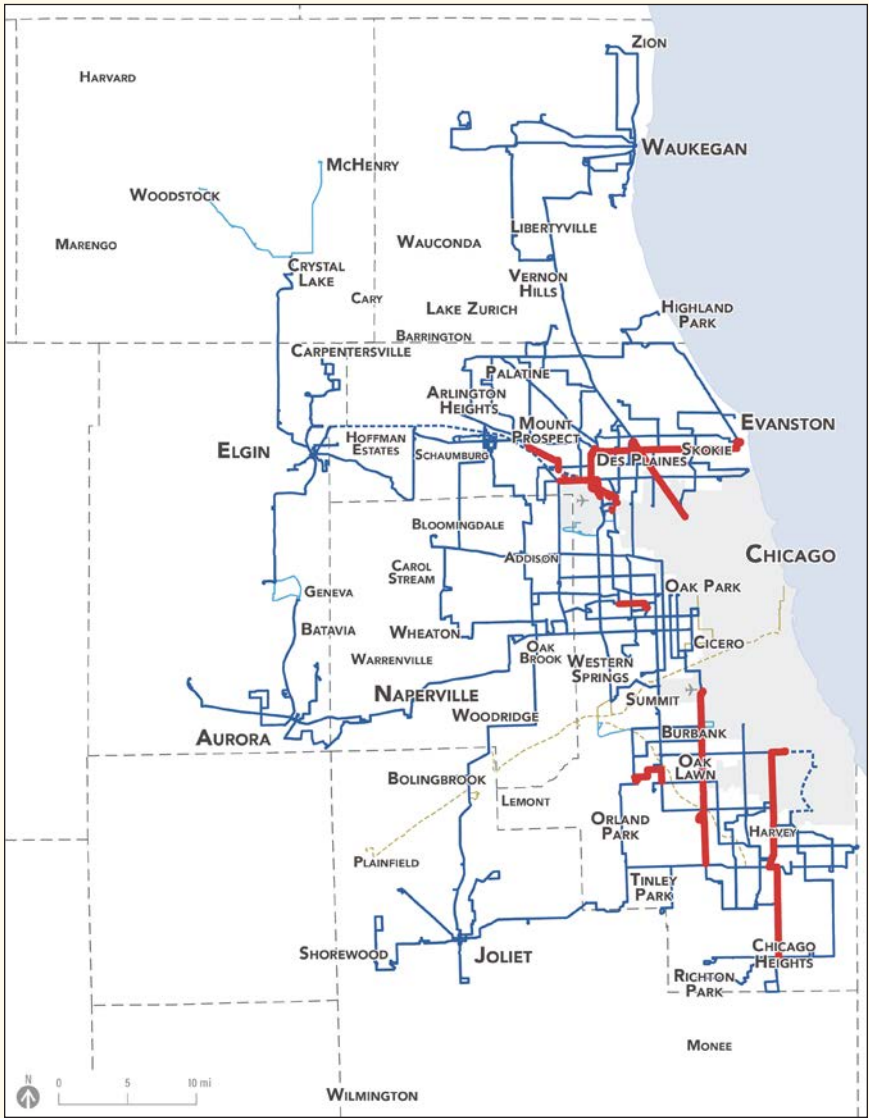
Evening service doesn't usually attract as many riders as daytime service. Nonetheless, good evening service is important in building high ridership, because it allows people to rely on transit even if they are travelling at a time when fewer people are out. This is especially vital for retail, service and healthcare, but also facilitates evening social and shopping trips, and provides a "just-in-case" option for 9-to-5 commuters working late.



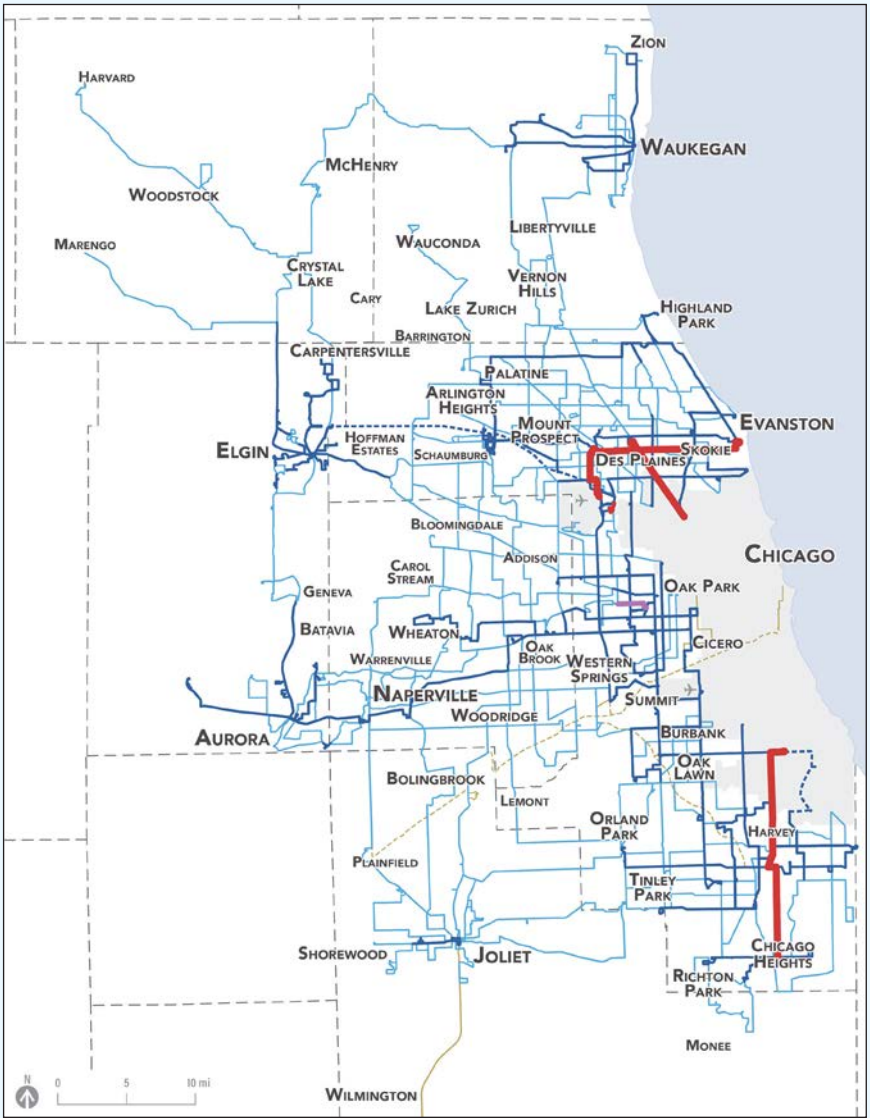
Existing Service



Plus 50 - Ridership



Plus 50 - Coverage





# Sunday Daytime Service - Existing Network vs. Plus 50 Concepts

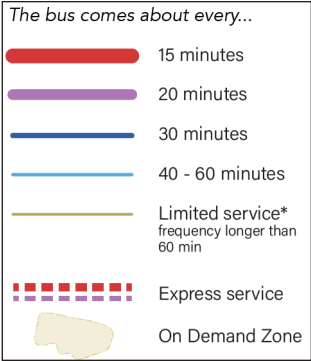
## Maps of Frequencies at Different Times of the Day and Week

These simplified maps show the overall differences between where and how often buses operate in the existing network, the Ridership concept and the Coverage concept.

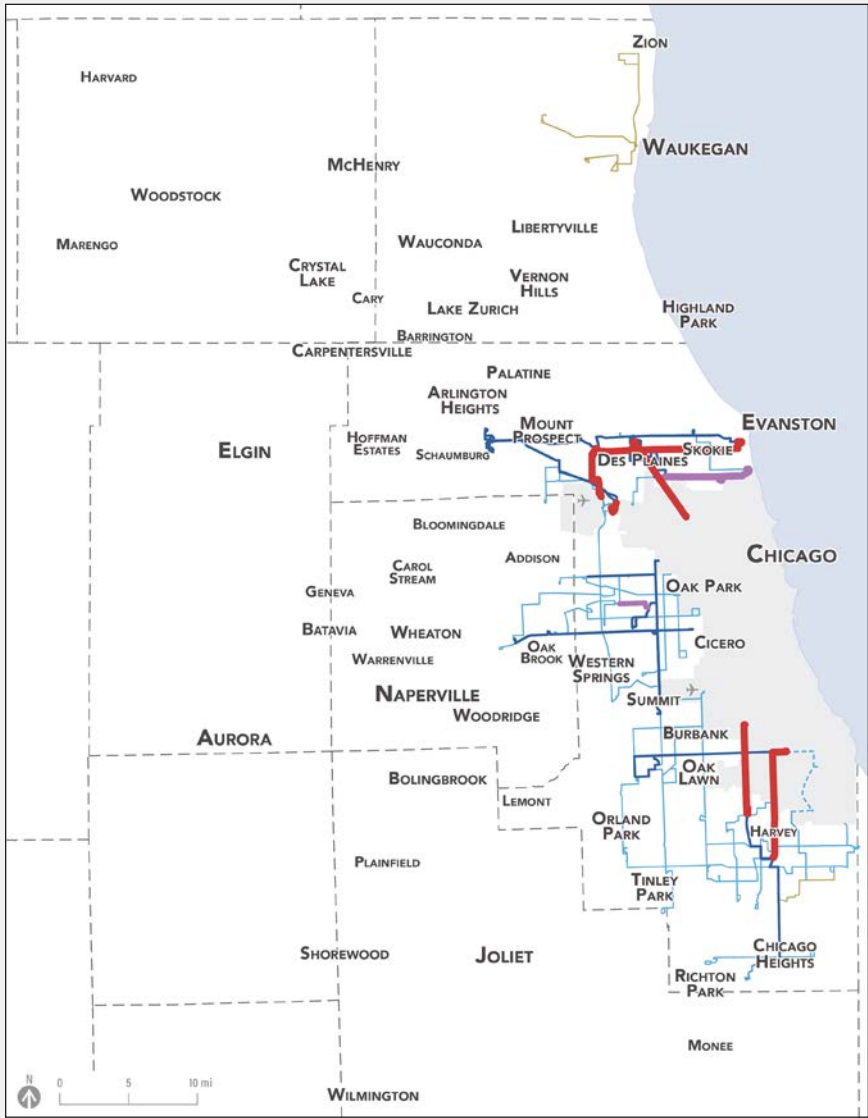
They reflect the descriptions of the Existing Network in Chapter 3, and the descriptions of the Plus 50 concepts provided in prior pages of this chapter.

This page illustrates the difference on Sundays in the daytime, more or less between 8 AM and 7 PM.

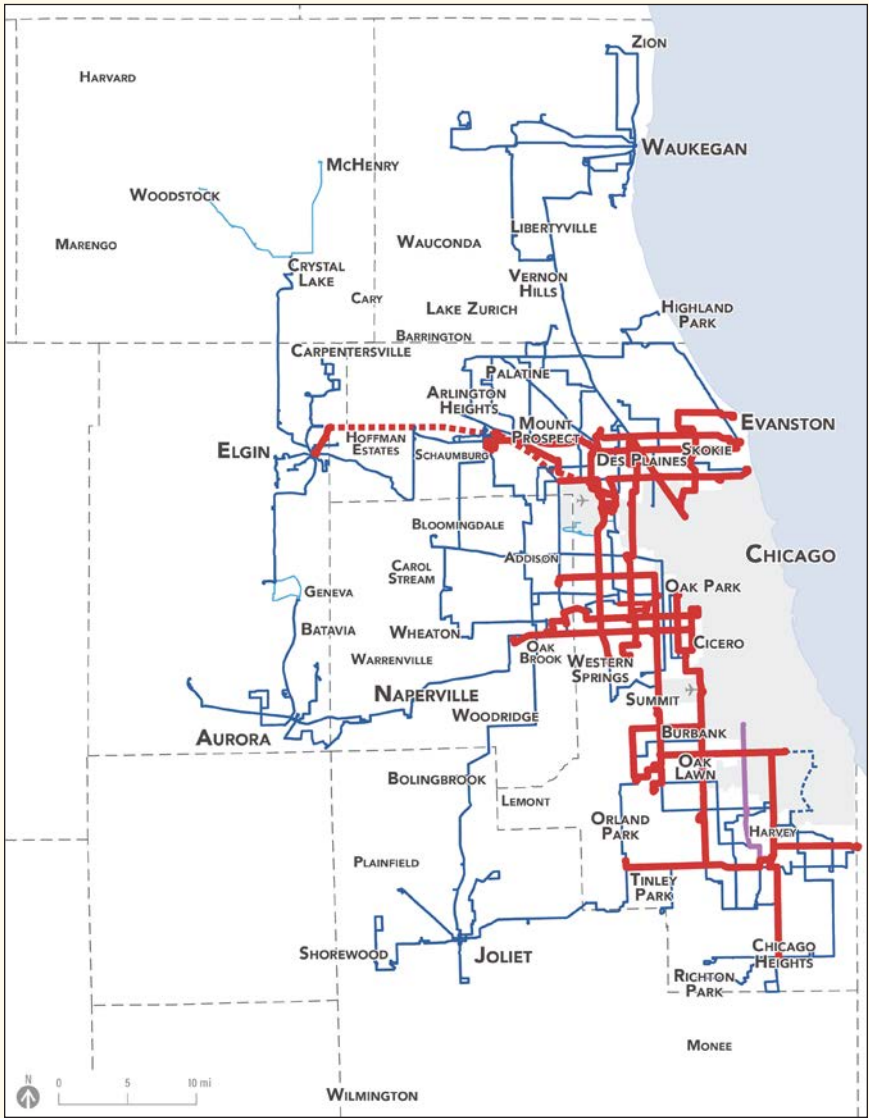
Weekend travel has grown over the past 50 years, as the U.S. economy has shifted towards consumption and services, and as car transportation has become cheaper. Most people travel on Saturdays and Sundays, for a variety of social, recreational, shopping and personal maintenance purposes. But weekend travel also includes many commutes – most retail and service workers are required to take at least one weekend shift per week.



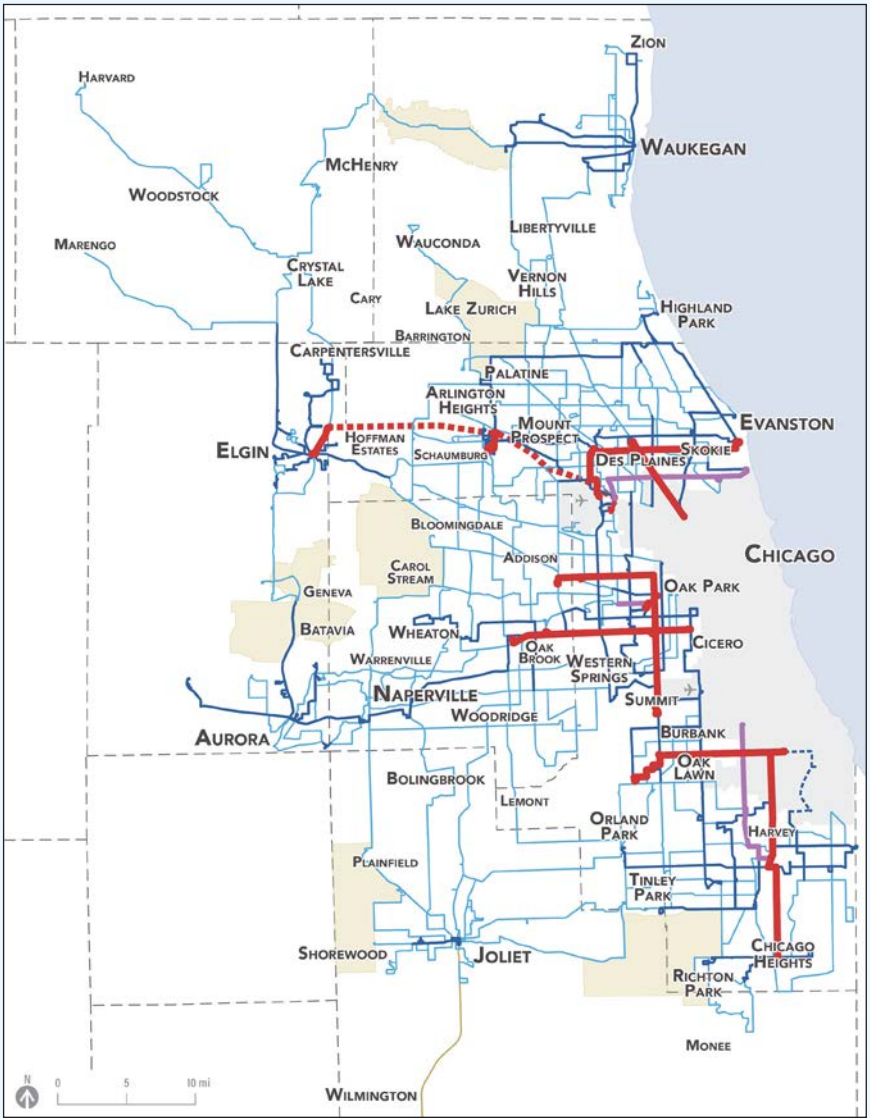
Existing Service



Plus 50 - Ridership



Plus 50 - Coverage





# Reminder: Transit is useful because it provides access to opportunities.

## Access to Opportunity

Many factors affect people's decision to use transit, but the most fundamental one is time. Most potential riders are working, studying, or raising children (or all three!) and have a limited amount of time in their day that they can devote to traveling. Even people who can't drive won't use public transit if it takes more time than they can spare.

For this reason, this report focuses on **how many destinations someone can reach in a fixed amount of time**, and whether changes to bus service could improve that.

## The “Wall Around Your Life”

Wherever you are, there is a limited number of places you could reach in a given amount of time. These places can be viewed on a map as a blob around your location, as shown in Figure 43 .

You can think of the edges of this blob as a “wall around your life.” Beyond this area are things you can't do on most days because it simply takes too long to get there. The jobs, education, shopping, and any other resources outside this area are less likely to be available to you.

**Changes in transit service can make a measurable difference.** The best changes in network design bring more of these opportunities within reach.

## Measuring Access

Measuring access to and from useful destinations is a good way to capture how the design of the network leads to ridership.

**When access is high, it means that when someone looks up a trip they want to make, they are more likely to find that the travel time is reasonable.**

But access to opportunity is a good thing separate from the ridership that it generates.

- In real estate, access contributes to the value of a location.
- Access to jobs and education is a critical need for people with low incomes, who are more likely to rely on transit, because transportation is a common barrier to these things.
- Access is a measure of how many options we have in our lives. In this sense, **access to opportunity is a measure of freedom**, which needs no other justification.

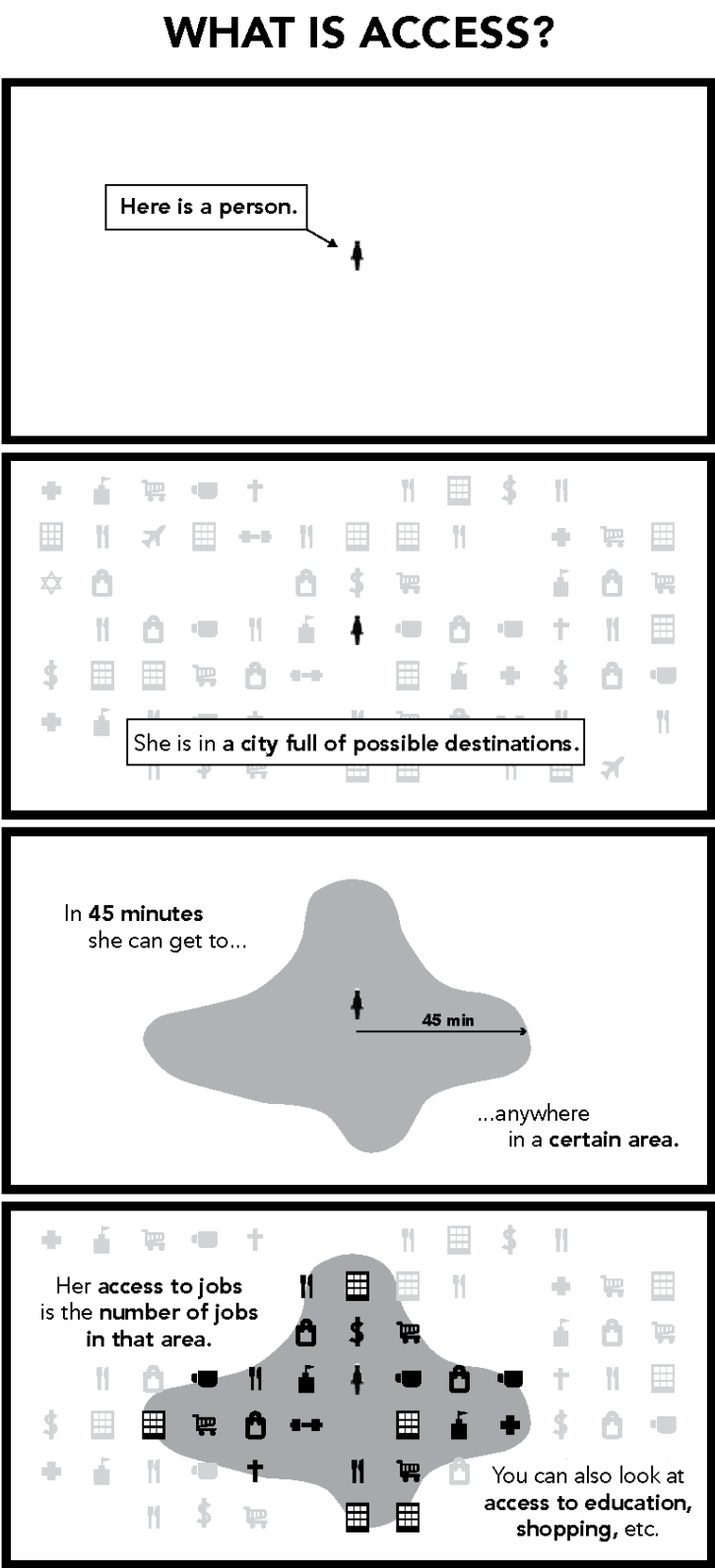


Figure 43: Cartoon describing the concept of Access to Opportunity.



## Example – Access to Opportunity from One Location

## Measuring Change In a Single Location

Figure 44 illustrates how route and frequency changes in the Plus 50 concepts can change transit's usefulness from a single location.

RiverCrest Shopping Center, in south Cook County, illustrates an “average” impact from both the Ridership and Coverage concepts. On the maps:

- The **purple area** represents where a person could go by transit today, in 60 minutes or less.
- The **blue area** represents how much farther someone could go by transit in future.
- The **pink area** represents places someone could go by transit today, but not in future.

**The 60 minute travel time on these maps covers an entire door-to-door trip**, including walking, waiting, riding and transfers. Average waiting and transfer time is based on half of the frequency of each route. These maps assume buses would travel at about the same speed in the future as they do today. **So most of the difference comes from reduced waiting, which comes from higher frequency.**

- In the **Existing Network**, this location is served by Route 383 every 29 to 33 minutes. Most connecting routes are even less frequent, so within an hour you can usually only reach places near Cicero Ave, between 75th and 167th streets.
- In the **Plus 50 - Ridership concept**, this location would be served every 15 minutes on Cicero Ave, and would be near service every 30 minutes on 127th St. Multiple connecting routes would operate every 15 to 30 minutes. As a result, **you could get to many more places**, including along 79th, 87th, 111th, 127th and 159th streets.
- In the **Plus 50 - Coverage concept**, this location would be served by Route 383 every 30 minutes on Cicero Ave, and a route every 60 minutes on Cal Sag Rd/135th St. Connecting service at 95th St would operate every 15 minutes. As a result, **you could get to a few more places than today.**

On a weekday in the daytime, **how far could I go in 60 minutes by transit** and walking, depending on the network concept, **compared to where I can go now?**

**Starting location: Cook County**  
13200 Cicero Ave, Crestwood, IL

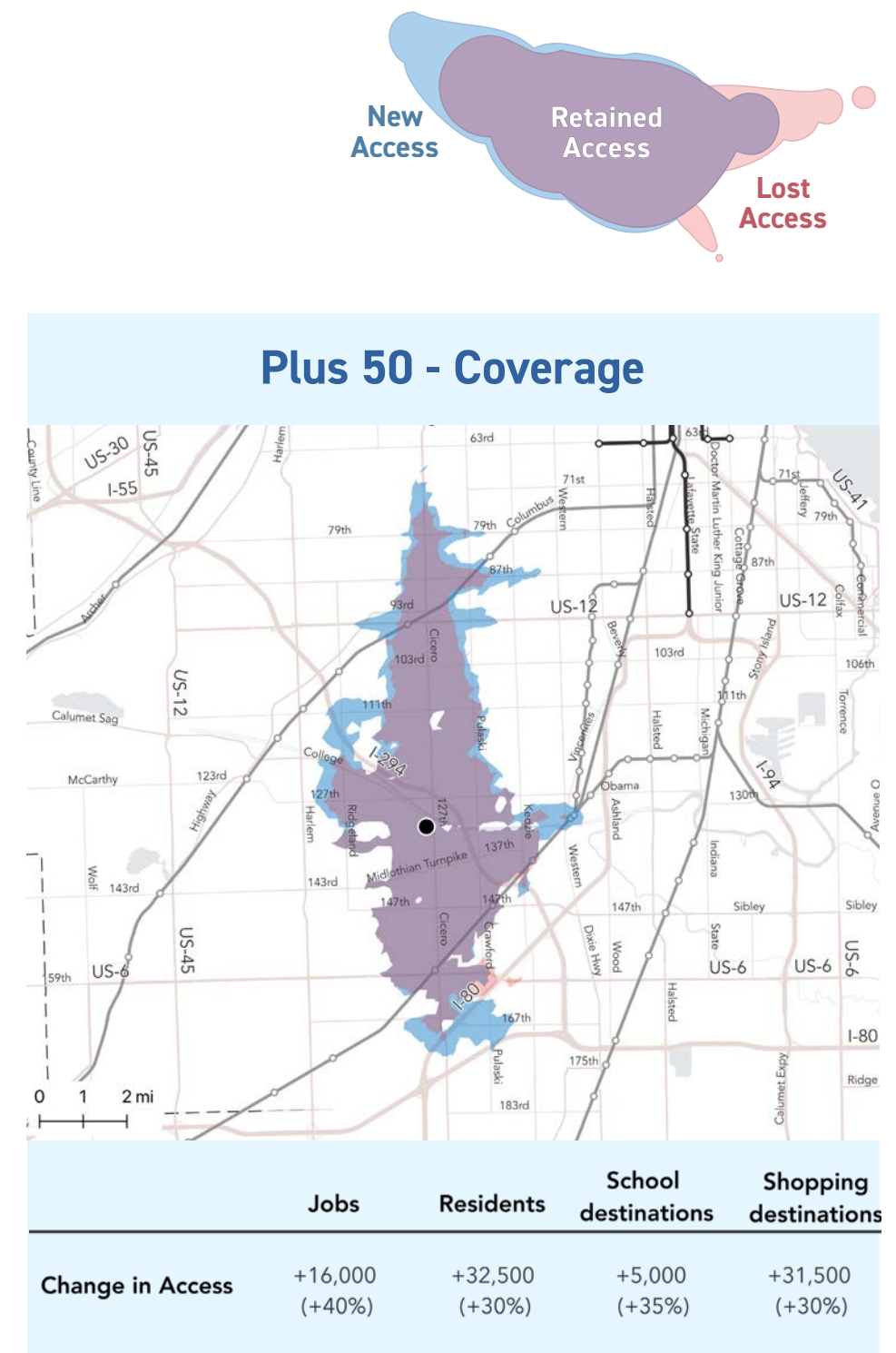
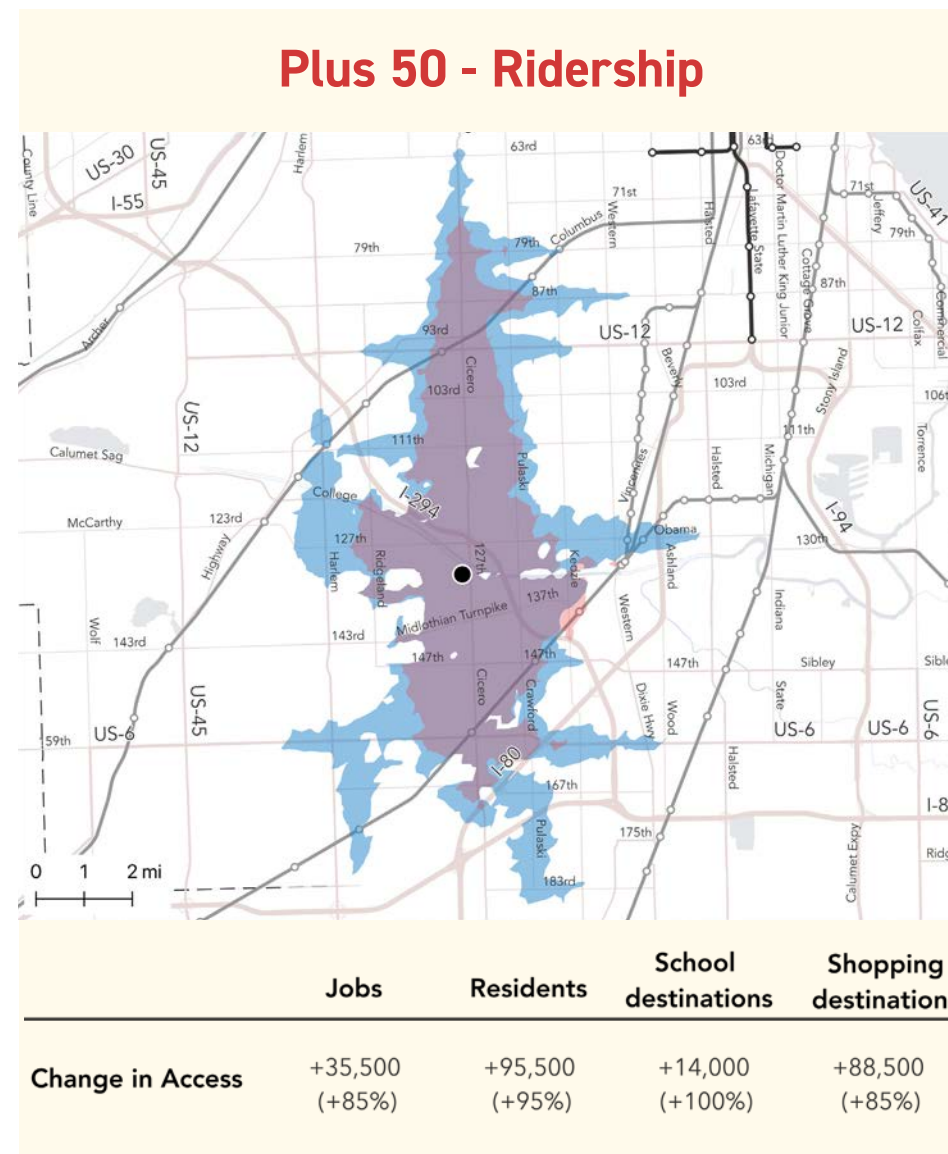


Figure 44: Isochrone maps, showing the difference between where transit can take someone within 60 minutes in existing service (purple area), where they could go in 60 minutes if either of the Plus 50 concepts were implemented (blue area), and where they could no longer get to in 60 minutes (pink area).



# Access to Opportunity - Regional Impacts of the **Ridership** Concept

## How to Read the Maps

The maps on this and the next page illustrate how the total level of access to opportunity within 60 minutes would change, from anywhere people might live in the six counties served by Pace, if the **Plus 50 - Ridership** concept were implemented.

- Figure 45 focuses on access to jobs.
- Figure 46 focuses on access to shopping.
- Figure 47 focuses on access to schools.

Each dot on the maps represents approximately 100 nearby residents, highlighting the areas where the Concepts would have the most impact.

- **Green dots mean that access improves.** The number of destinations someone could get to would increase.
- **Brown dots mean access gets worse.** The number of destinations someone could get to would decrease.

If the **Ridership** concept were implemented, the median suburban resident could reach:

- + **86% more jobs**
- + **79% more shopping destinations**
- + **49% more school destinations.**

within 60 minutes or less by transit and walking, compared to today.

## Key Outcomes

The Plus 50 - Ridership Concept would **greatly increase the places most people can go to by transit** from large parts of the region.

Even though there would not be any new coverage, the frequency increases in relatively dense areas would result in transit connecting many more people to the places they need to go.

### Access to Jobs

- **51% of residents would have access to more jobs.** This includes 60% of low-income residents and 59% of people of color.
- **2.5% of residents would have access to fewer jobs.** This includes 1.9% of low-income residents and 2.1% of people of color.
- **The median resident could reach about 26,000 more jobs.**

### Access to Shopping

- **60% of residents would have access to more shopping destinations.** This includes 70% of low-income residents and 68% of people of color.
- **4.3% of residents would have access to fewer shopping destinations.** This includes 3.7% of low-income residents and 3.8% of people of color.

### Access to Schools

- **46% of residents would have access to more school destinations.** This includes 55% of low-income residents and 53% of people of color.
- **2.1% of residents would have access to fewer school destinations.** This includes 1.8% of low-income residents and 1.9% of people of color.

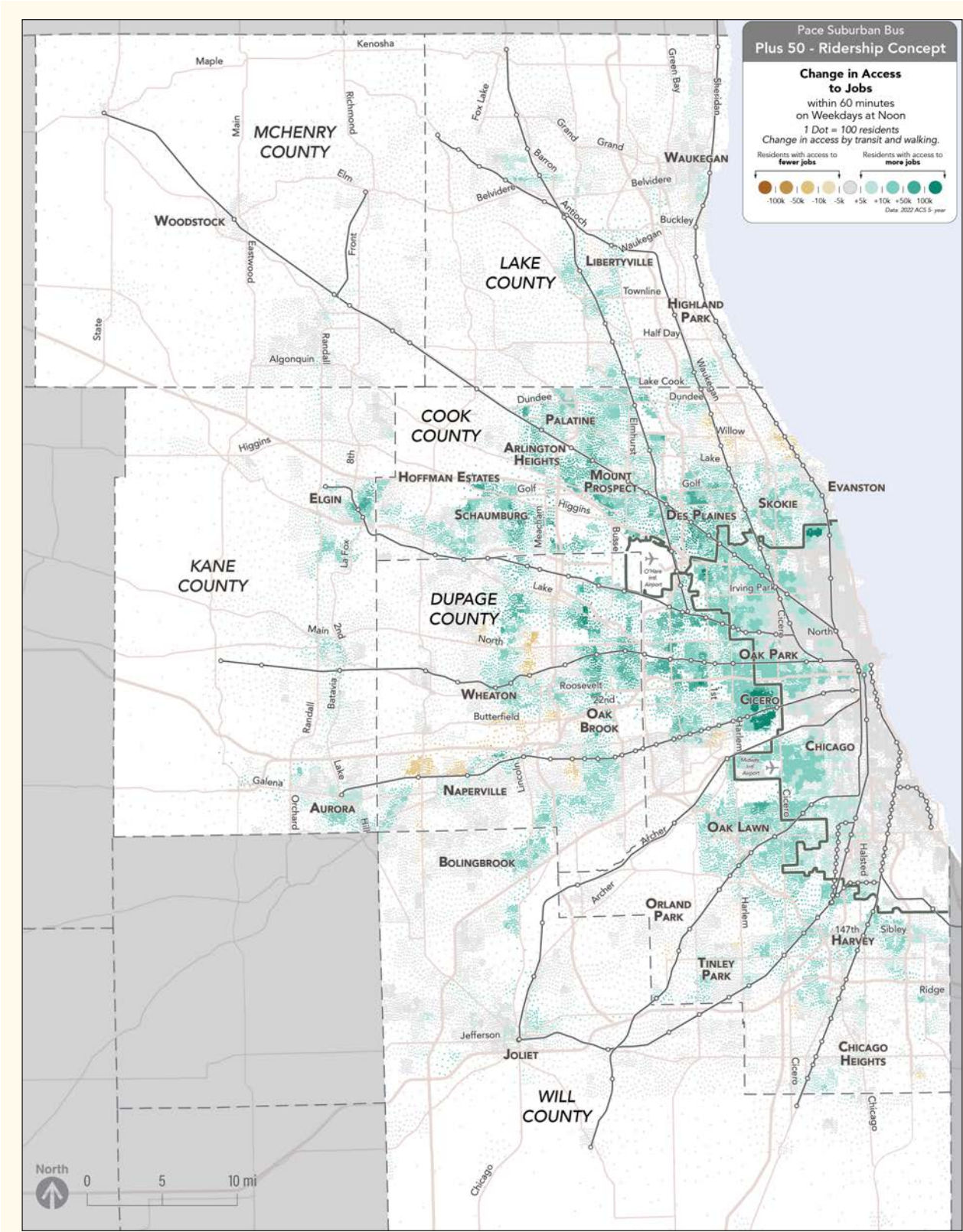


Figure 45: Ridership Concept - Map of change in access to jobs by transit within 60 minutes, on weekdays.



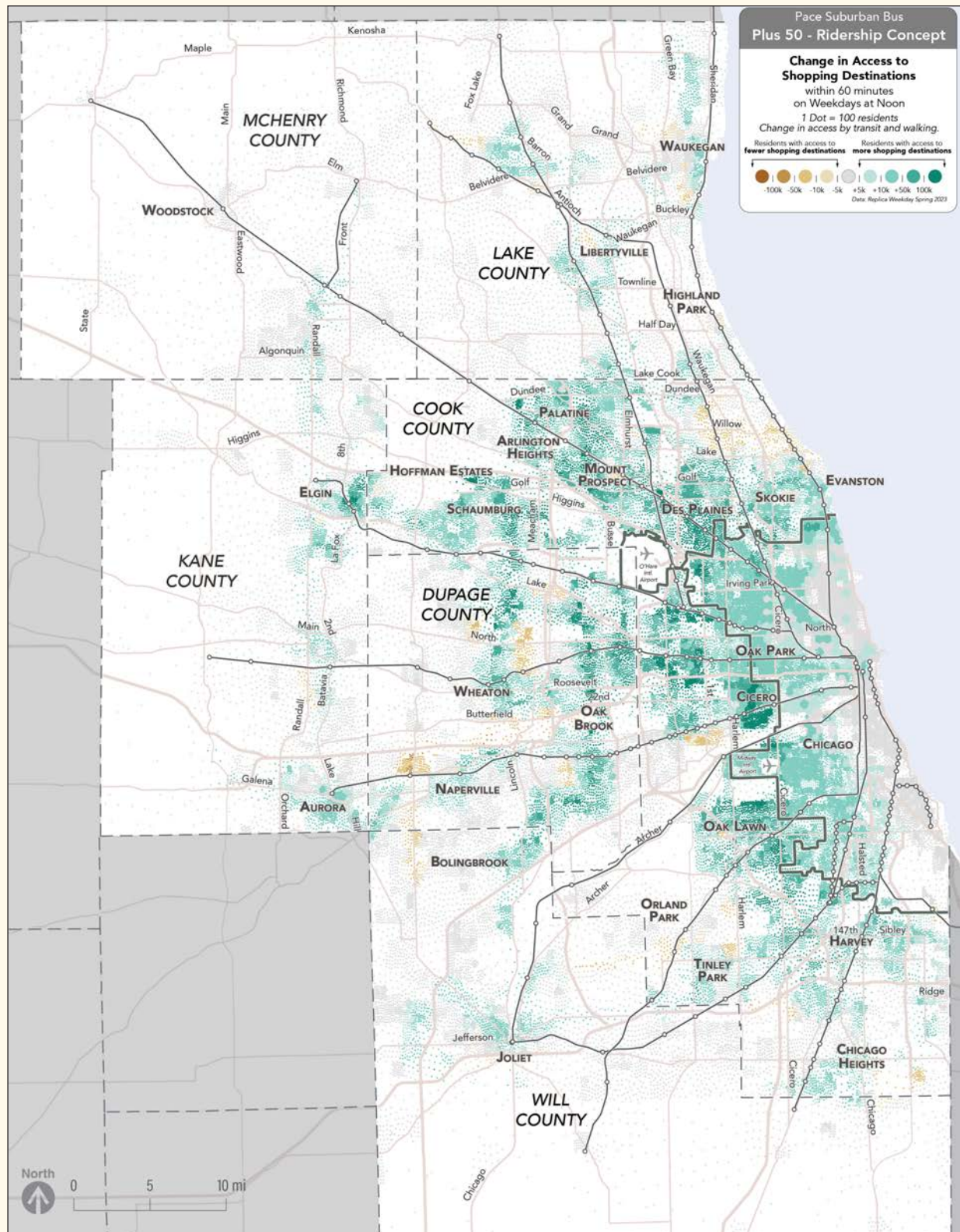


Figure 46: Ridership Concept - Map of change in access to shopping destinations by transit within 60 minutes, on weekdays.

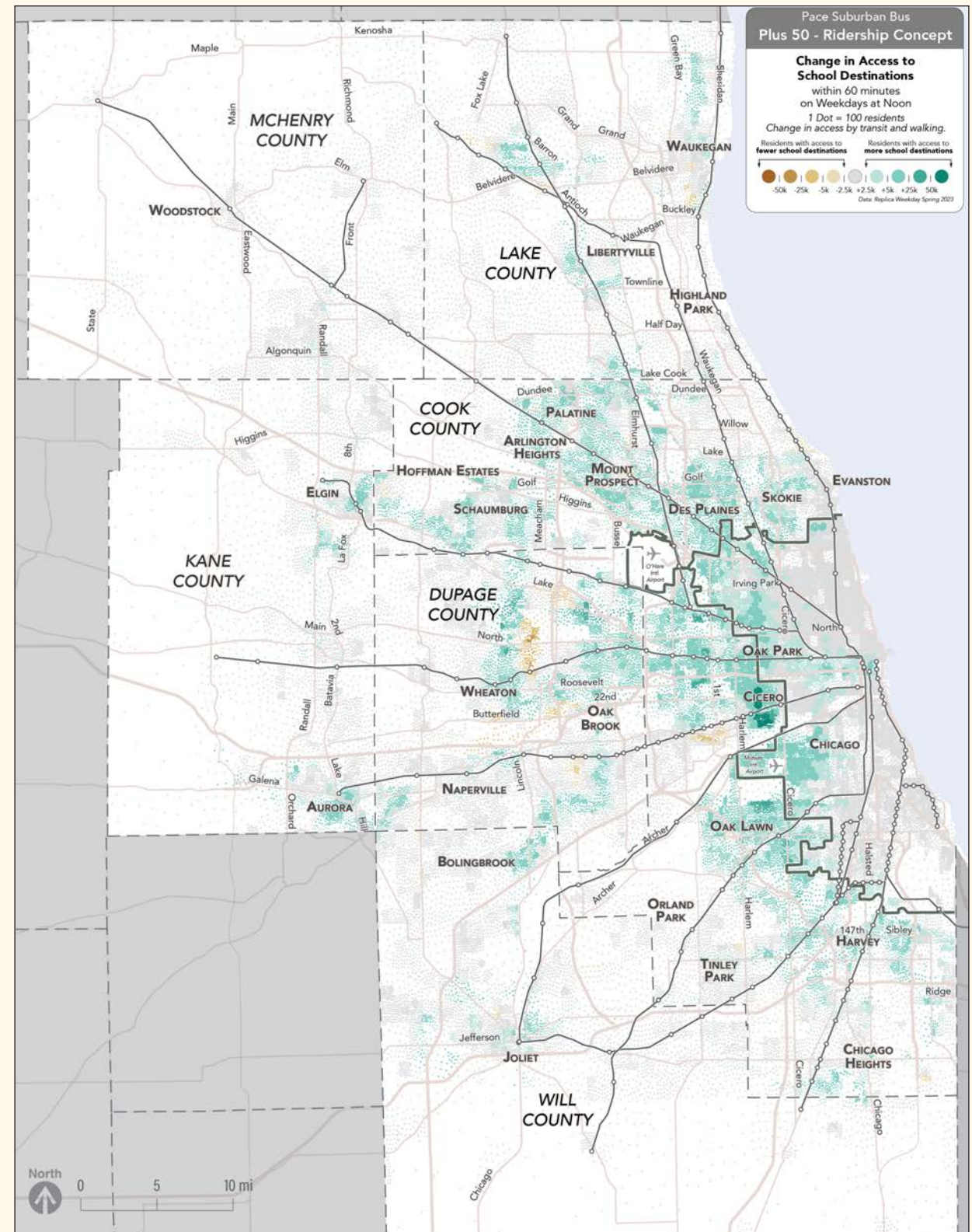


Figure 47: Ridership Concept - Map of change in access to school destinations by transit within 60 minutes, on weekdays.



# Access to Opportunity - Regional Impacts of the Coverage Concept

## How to Read the Maps

The maps on this and the next page illustrate how the total level of access to opportunity within 60 minutes would change, from anywhere people might live in the six counties served by Pace, if the **Plus 50 - Coverage** concept were implemented.

- Figure 48 focuses on access to jobs.
- Figure 49 focuses on access to shopping.
- Figure 50 focuses on access to schools.

Each dot on the maps represents approximately 100 nearby residents, highlighting the areas where the Concepts would have the most impact.

- **Green dots mean that access improves.** The number of destinations someone could get to would increase.
- **Brown dots mean access gets worse.** The number of destinations someone could get to would decrease.

If the **Coverage** concept were implemented, the median suburban resident could reach:

- + 30% more jobs
- + 25% more shopping destinations
- + 16% more school destinations.

within 60 minutes or less by transit and walking, compared to today.

## Key Outcomes

The Plus 50 - Coverage concept would **modestly increase the places most people can go to by transit**, compared to the Ridership concept.

Many places would not be significantly impacted, because so much of the service extended to new locations would be provided at very low frequencies, in places far from major destinations.

### Access to Jobs

- **30% of residents would have access to more jobs.** This includes 27% of low-income residents and 28% of people of color.
- **2.9% of residents would have access to fewer jobs.** This includes 2.9% of low-income residents and 2.8% of people of color.
- **The median resident could reach about 9,000 more jobs.**

### Access to Shopping

- **43% of residents would have access to more shopping destinations.** This includes 42% of low-income residents and 43% of people of color.
- **6.1% of residents would have access to fewer shopping destinations.** This includes 6.6% of low-income residents and 6.8% of people of color.

### Access to Schools

- **20% of residents would have access to more school destinations.** This includes 21% of low-income residents and 20% of people of color.
- **2.6% of residents would have access to fewer school destinations.** This includes 2.8% of low-income residents and 2.8% of people of color.

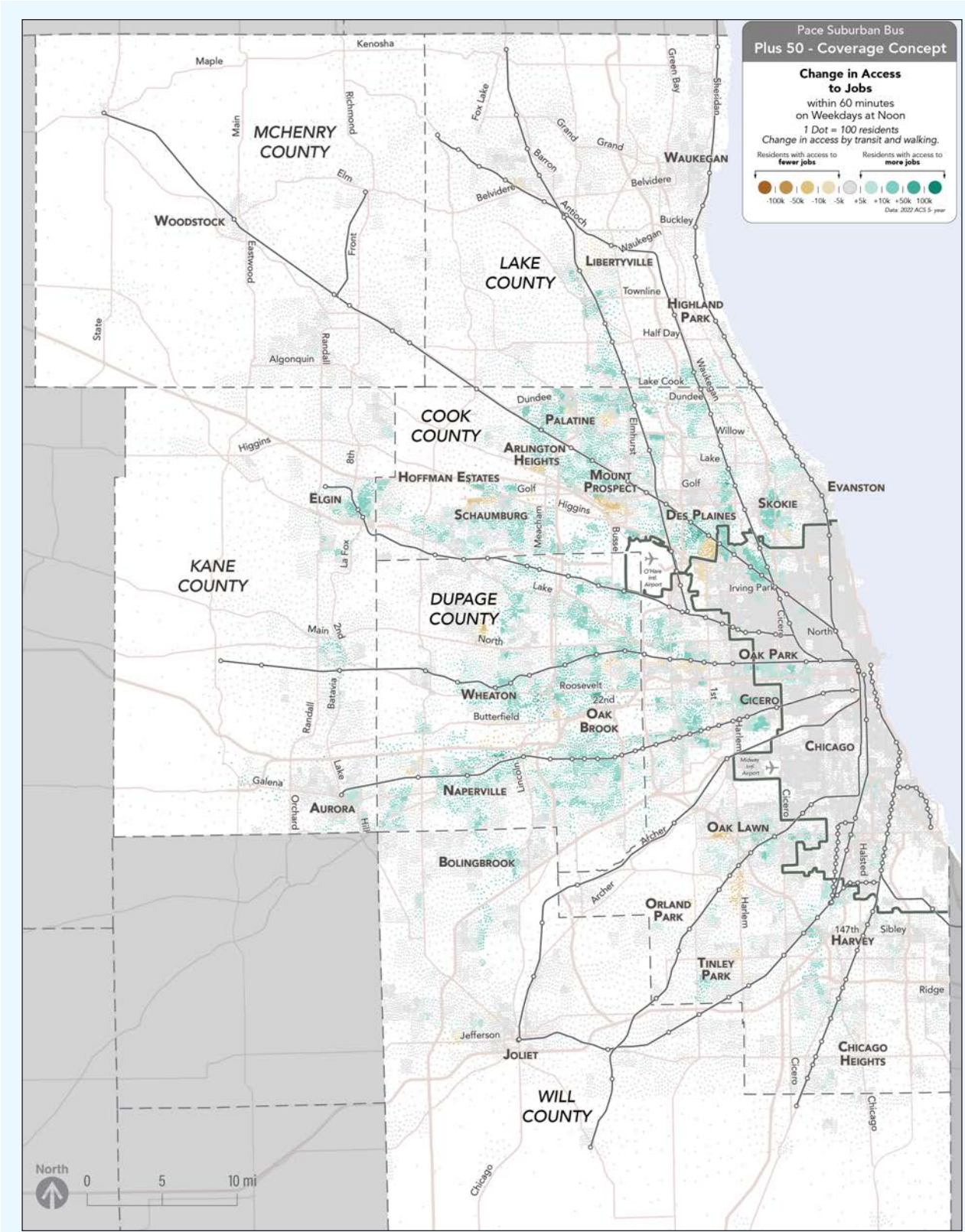


Figure 48: Coverage Concept - Map of change in access to jobs by transit within 60 minutes, on weekdays.



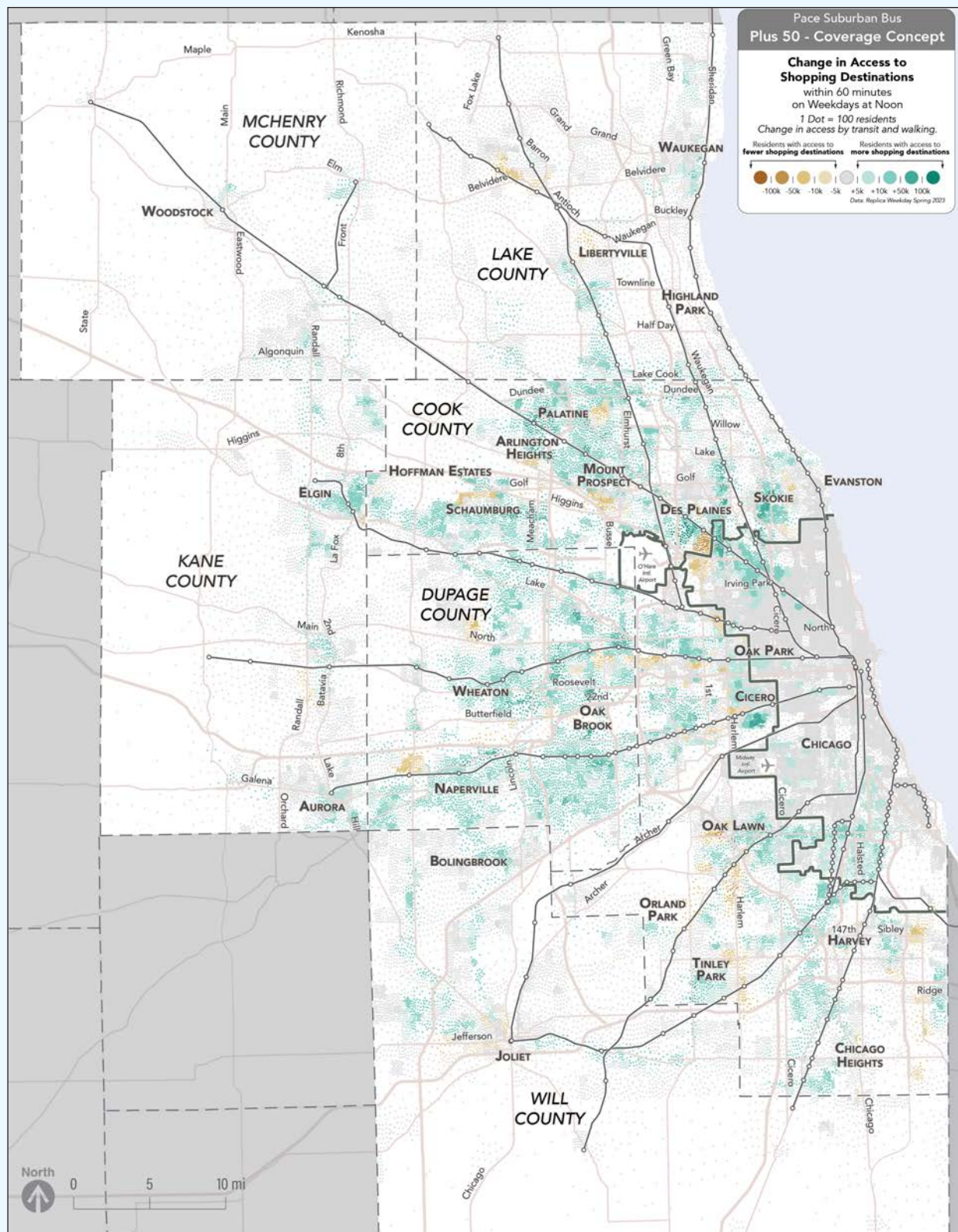


Figure 49: Coverage Concept - Map of change in access to shopping destinations by transit within 60 minutes, on weekdays.

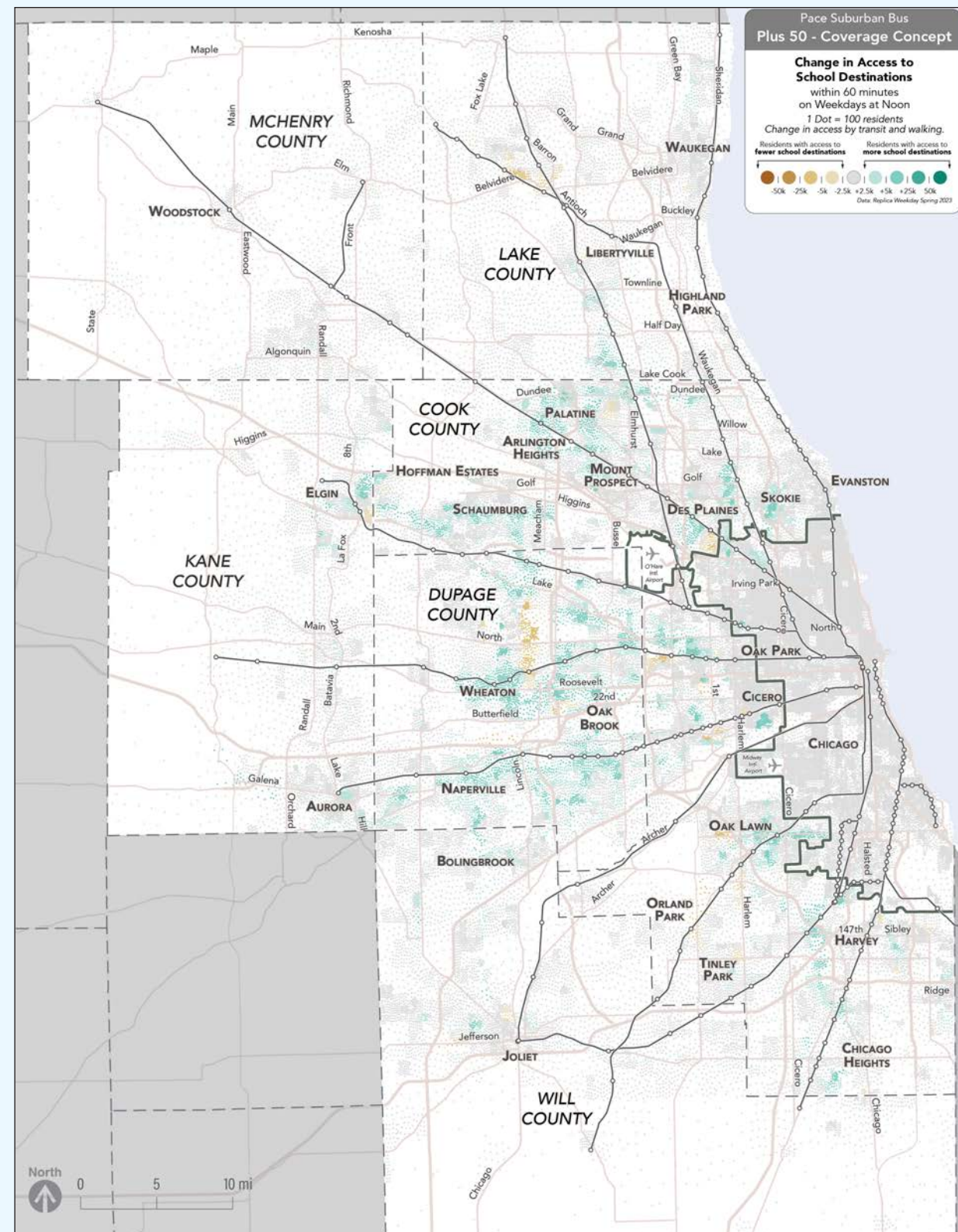


Figure 50: Coverage Concept - Map of change in access to school destinations by transit within 60 minutes, on weekdays.



5

**Pace Plus 10 - What could Pace do  
with a limited investment?**



# Pace Plus 10 - Filling the Existing Funding Gap

## Concept Definition

The **Pace Plus 10** concept makes a different set of assumptions about funding than the Plus 50 concepts. In this scenario:

- The identified regional funding gaps starting in 2026 are backfilled, but no additional investment is made.
- As a result, Pace would have enough public funding to increase service by about 10%.
- Pace would remain funded within the current RTA system. As the pandemic recedes, the requirement to qualify for public funding based on meeting farebox recovery targets would be reinstated.

Within these constraints, Pace would not be in a position to make radical network changes. Therefore, this concept takes the existing network as a baseline, and would modify it in limited ways, such as:

- **Increased frequencies on planned Pulse routes**, as a first step toward a regional frequent network.
- **Local network changes**, targeted at better matching existing routes and frequencies with observed demand. The most impactful change would be a restructuring of service in Elgin similar to the Plus 50 concepts, and restructuring of several routes in inner north Cook County and in southwest Cook County.
- **Increased weekend and evening service**. As described in page 35, Pace has extremely low evening and weekend service levels, especially on Sundays. Transit agencies throughout the United States have experienced significant ridership growth in response to increased weekend service in recent years.

## Key Service Features

- **Targeted route and frequency changes**, as described above, to better match service with current demand.
- **All-day routes would run seven days a week, region-wide**. Routes that currently operate six days a week would add Sunday service, at Saturday levels. Routes that currently operate Monday to Friday only would add Saturday and Sunday service, at a level comparable to existing Saturday service on similar routes.

## Equity

To some extent, **the lower level of change in this concept would perpetuate many existing inequities** in the regional transportation system.

However, viewed strictly from the perspective of relative transit service change impacts on different groups and locations:

- **Economic**. Improving weekend service, and focusing on the areas already served by Pace, would allow low-income people and zero-car households to benefit at equal or higher rates than average.
- **Racial**. Similarly, focusing on service increases in areas already served by Pace would benefit people of color at equal or higher rates than average.
- **Geographic**. This network would increase service by a similar percentage (about +10% compared to 2019) in all counties. There would be no change to the current distribution of services between Cook and collar counties.
- **Existing Riders**. 99% of existing boardings are located within a half-mile of this network. Less than 1% of existing boardings take place in areas not served by this network.

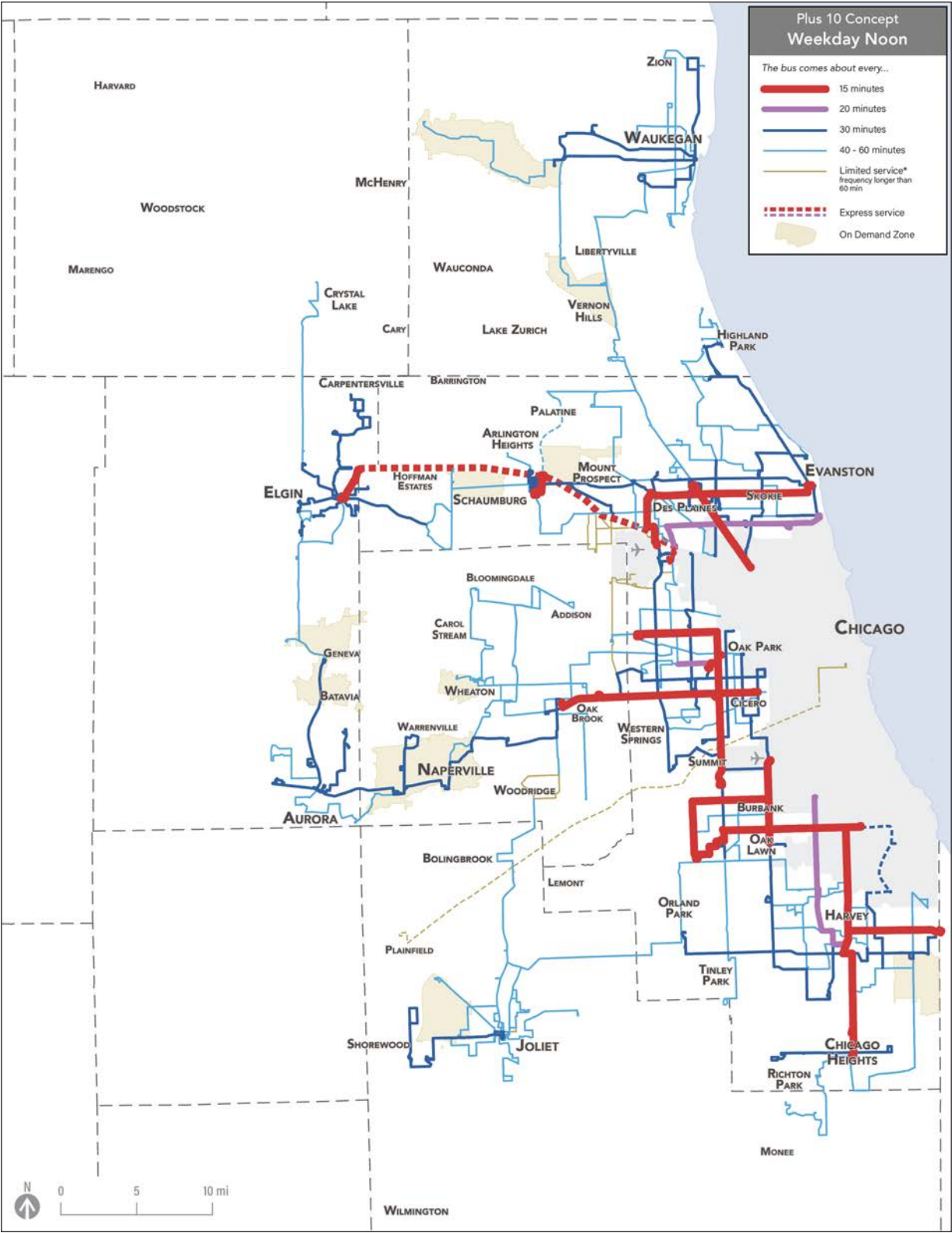
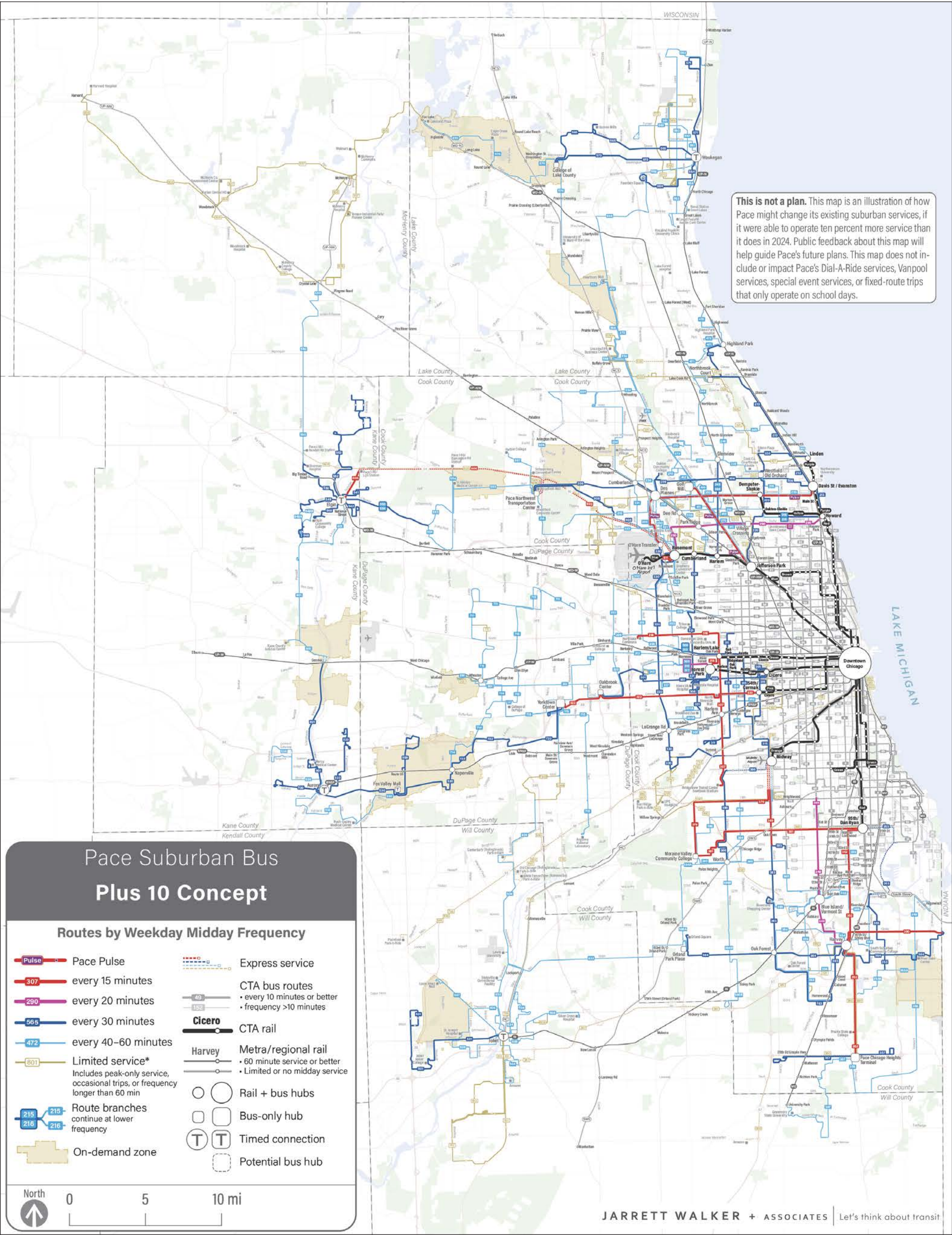


Figure 51: Pace Plus 10 concept during the Weekday midday



# Network Overview Map - Pace Plus 10





# People and Jobs Near Service - Existing Network vs. Plus 10 Concept

The charts on this page describe proximity to transit at various frequencies on weekdays in the daytime. They show the percentage of people and jobs that would be near a bus or rail stop, within Pace's service area<sup>1</sup>.

## Existing Network

- **Most people and jobs are far from transit.** Only 42% of residents and 44% of jobs are within a half-mile of service.
- Low-income residents (55%) and people of color (52%) are more likely to live within a half-mile of service than the population as a whole.
- **Very few people and jobs (4%) are near frequent service**, every 15 minutes or better. This includes 5% of low-income residents and people of color.

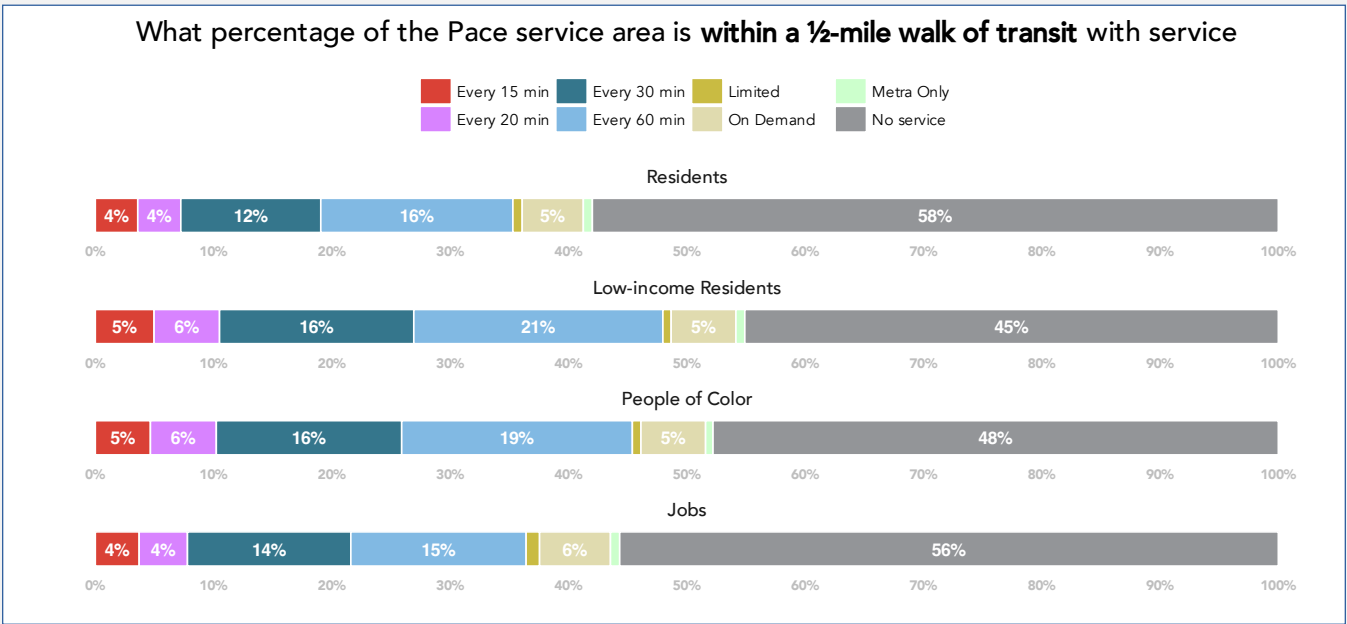
## Plus 10

- The number of people and jobs near transit overall would remain almost the same<sup>2</sup>. 42% of residents and 45% of jobs would be within a half-mile of service.
- Low-income residents (55%) and people of color (52%) would still be more likely to live near transit than average.
- **More residents (6%) and jobs (7%) would be near frequent service.** This includes 10% of low-income residents, and 9% of people of color.

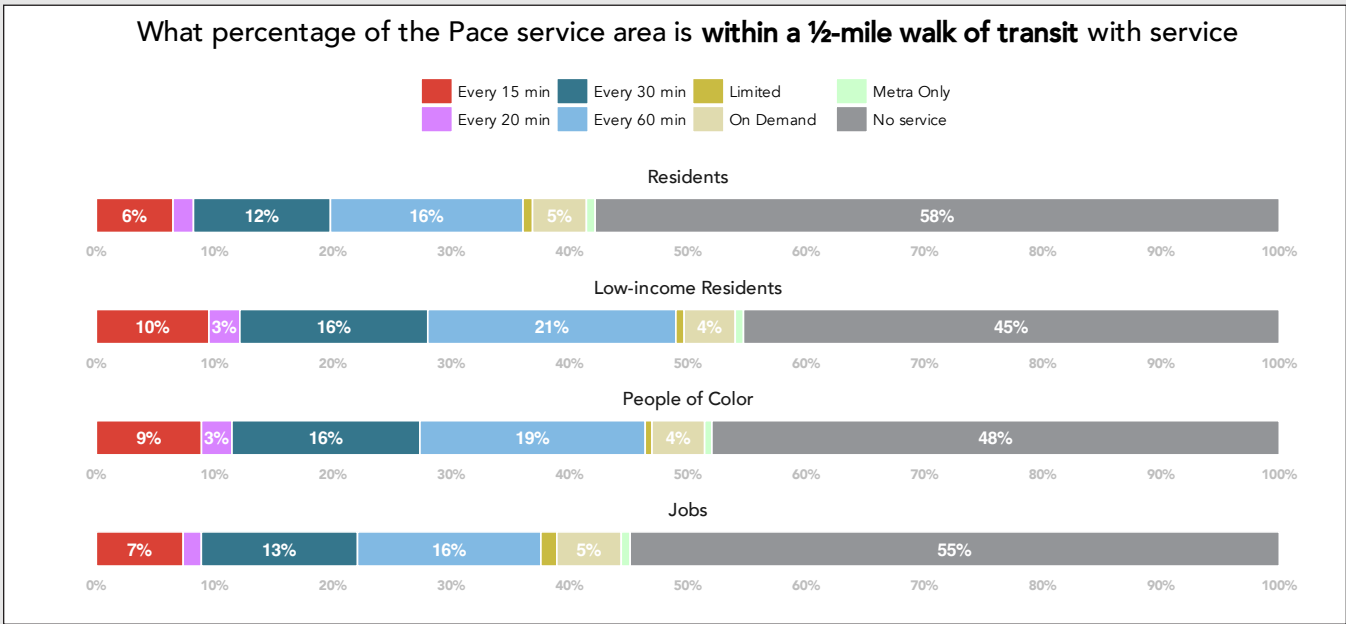
1 Includes suburban Cook County, DuPage County, Kane County, Lake County, McHenry County and Will County. Measure includes CTA and Metra service operating within Pace's service area.

2 However, these charts slightly understate the benefits of the Plus 10 concepts, because they do not portray improvements in service coverage on Saturday and Sunday.

## Existing Service



## Plus 10





# Destinations Near Service - Existing Network vs. Plus 10 Concept

The charts on this page are similar to those on the prior page, except show the percentage of estimated **work, school, shopping and social destinations** near transit.

The number of daily trips to these destinations are estimated based on Replica estimates of regional travel on a typical weekday in Spring 2023 (see page 17). Measuring impacts to these locations is important as it allows us to verify that the network concepts correctly take into account the many non-home destinations people travel to.

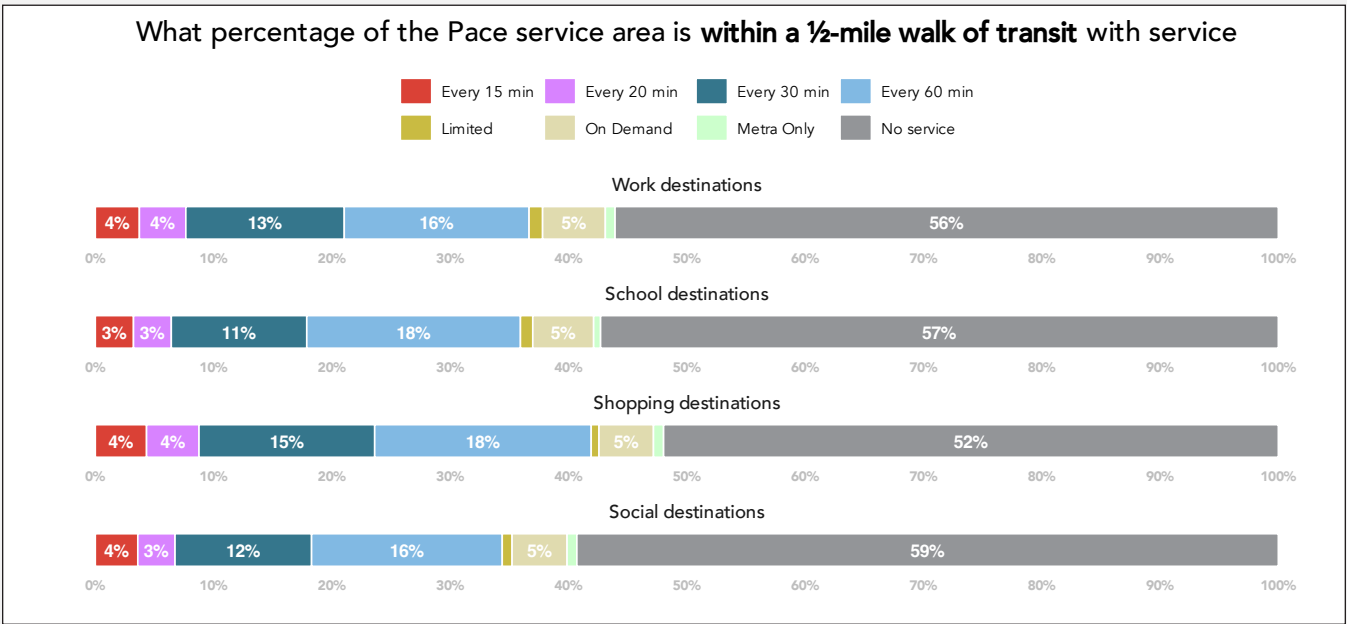
## Existing Network

- Overall, the numbers are similar to residents and jobs near transit. The existing network provides service near about 41% to 48% of these destinations.
- Slightly more shopping destinations (48%) are near transit, compared to work (44%), school (43%) and social (41%) destinations.

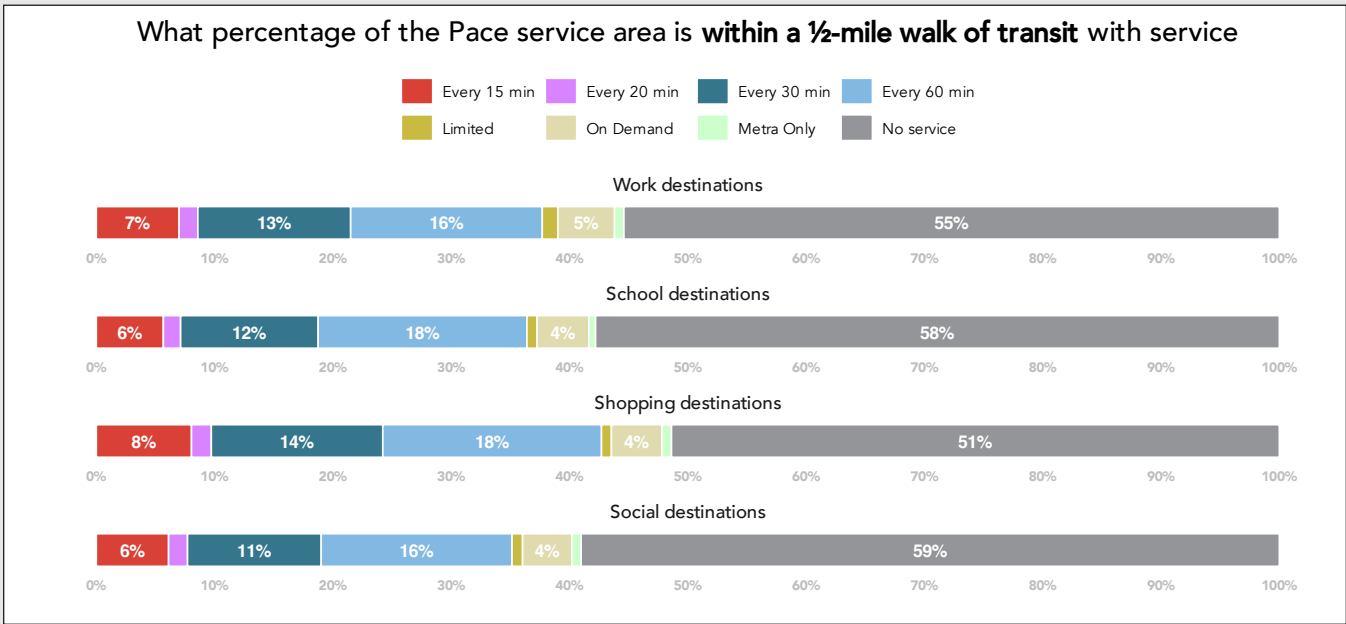
## Plus 10

- The share of trip destinations within a half-mile walk to transit would essentially stay the same.
- There would be a very small decrease in the percentage of school destinations (42%) near transit, and very small increases in the percentage of work (45%) and shopping (49%) destinations near transit.

### Existing Service



### Plus 10





# Weekday Daytime Service - Existing Network vs. Plus 10 Concept

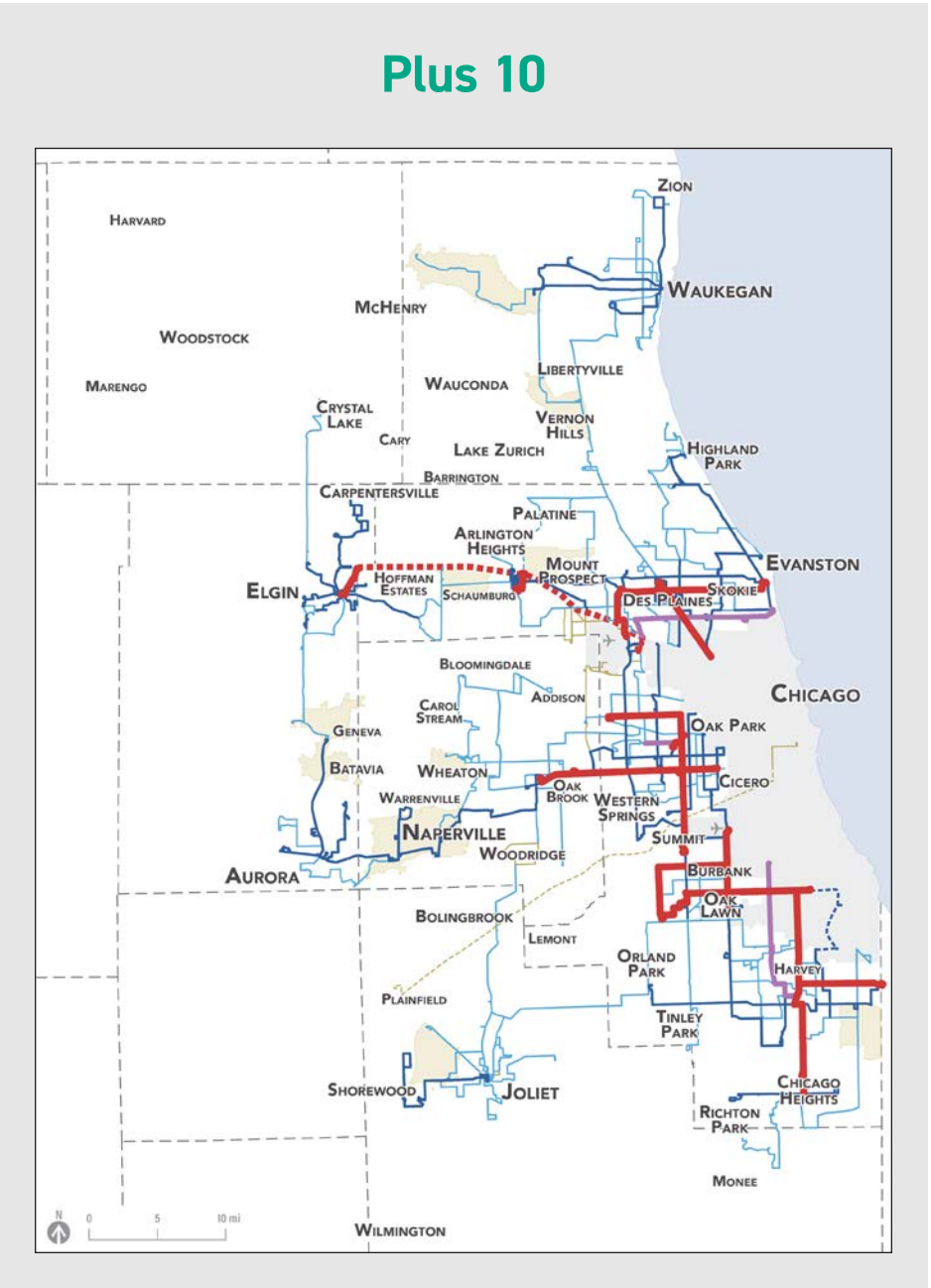
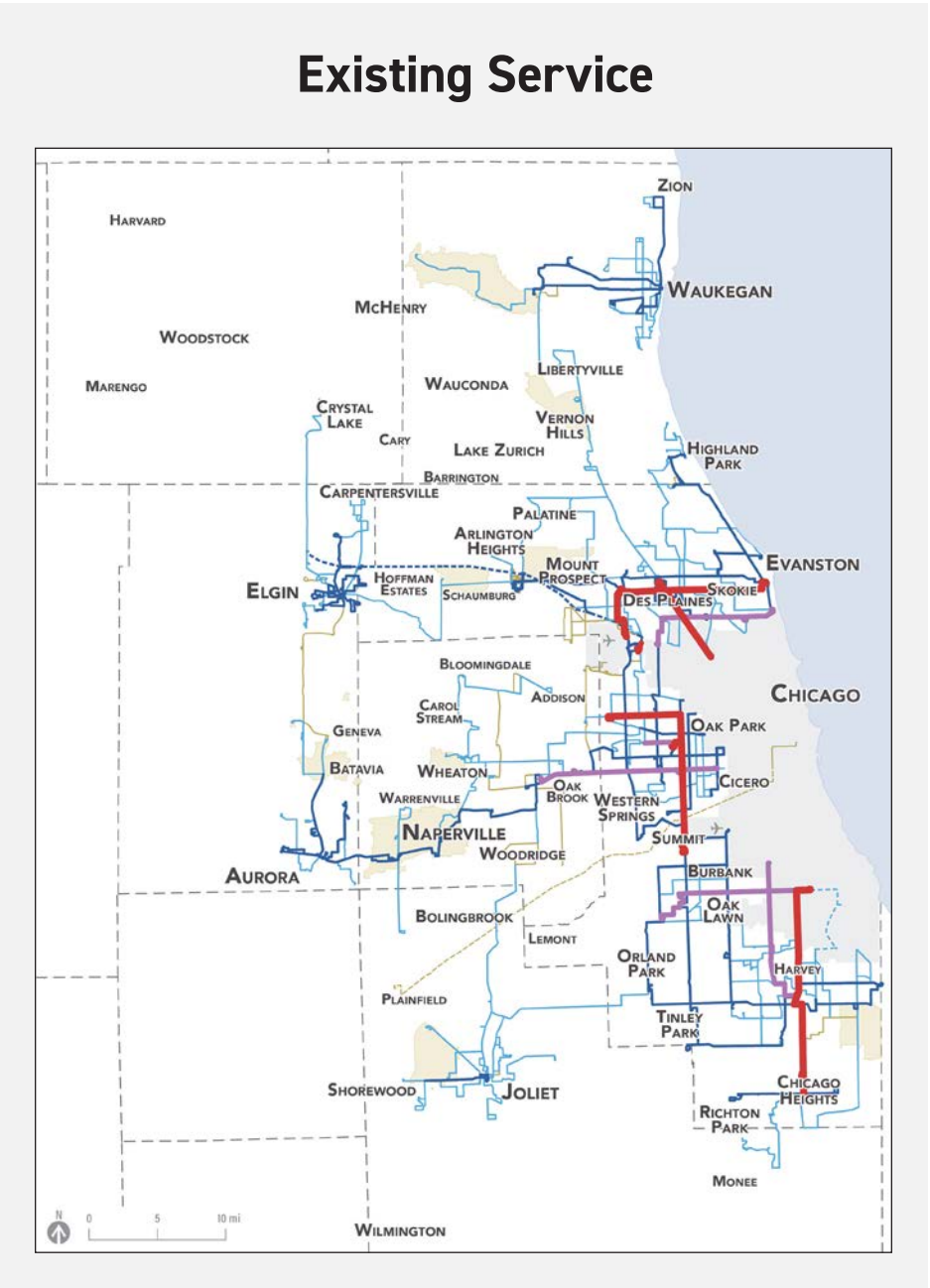
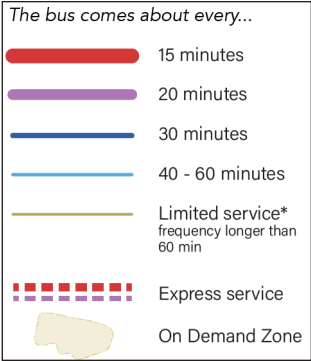
## Maps of Frequencies at Different Times of the Day and Week

These simplified maps show the overall differences between where and how often buses operate in the existing network and the Plus 10 concept.

They reflect the descriptions of the Existing Network in Chapter 3, and the descriptions of the Plus 10 concepts provided in prior pages of this chapter.

This page illustrates the difference on weekdays in the daytime, more or less between 9 AM and 3 PM.

This illustrates the level of service that people who use transit frequently often come to think of their baseline, if they are not travelling at peak hours. If it's daylight out, the bus will come at least this often.





# Weekday Evening Service - Existing Network vs. Plus 10 Concept

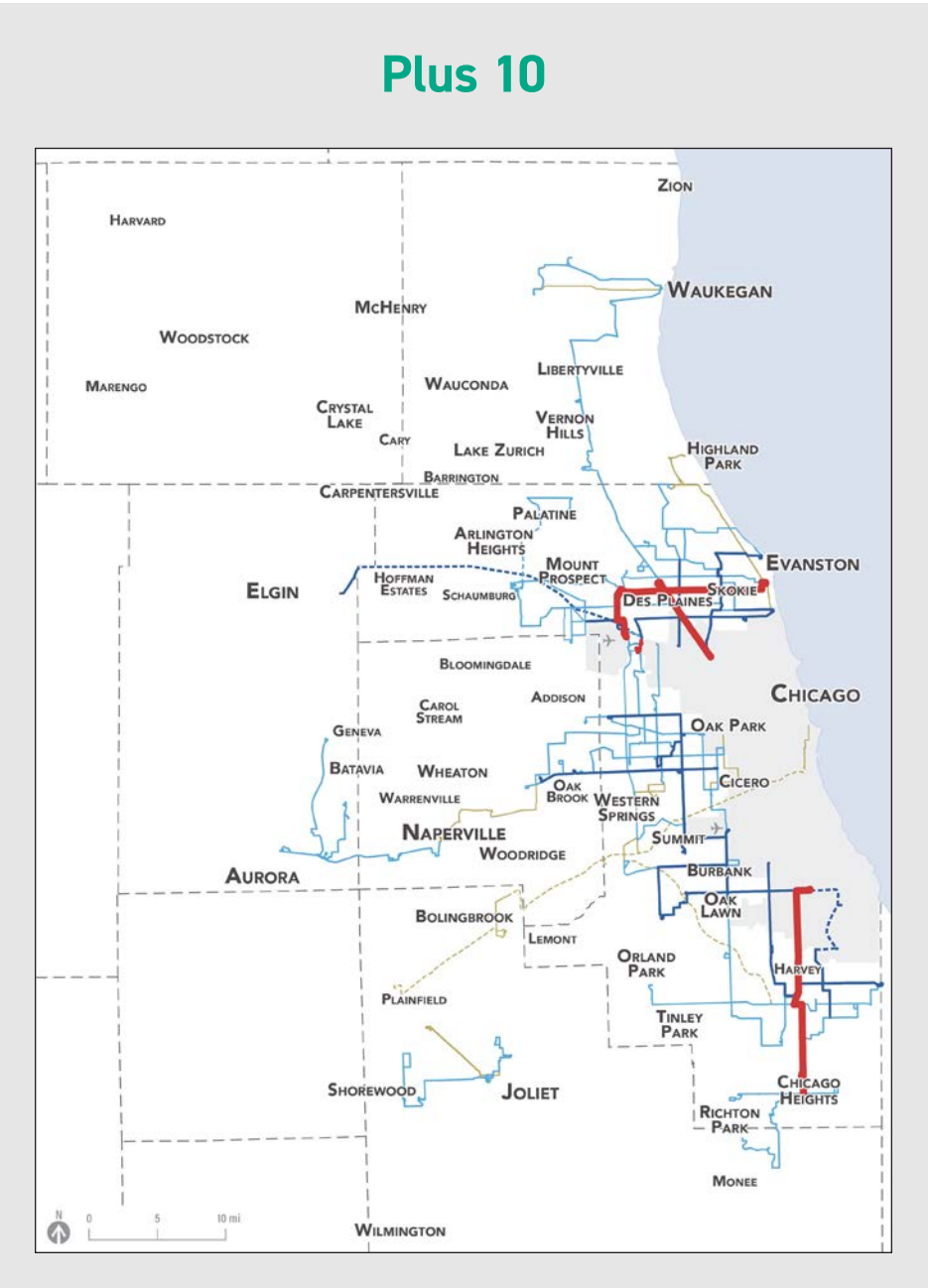
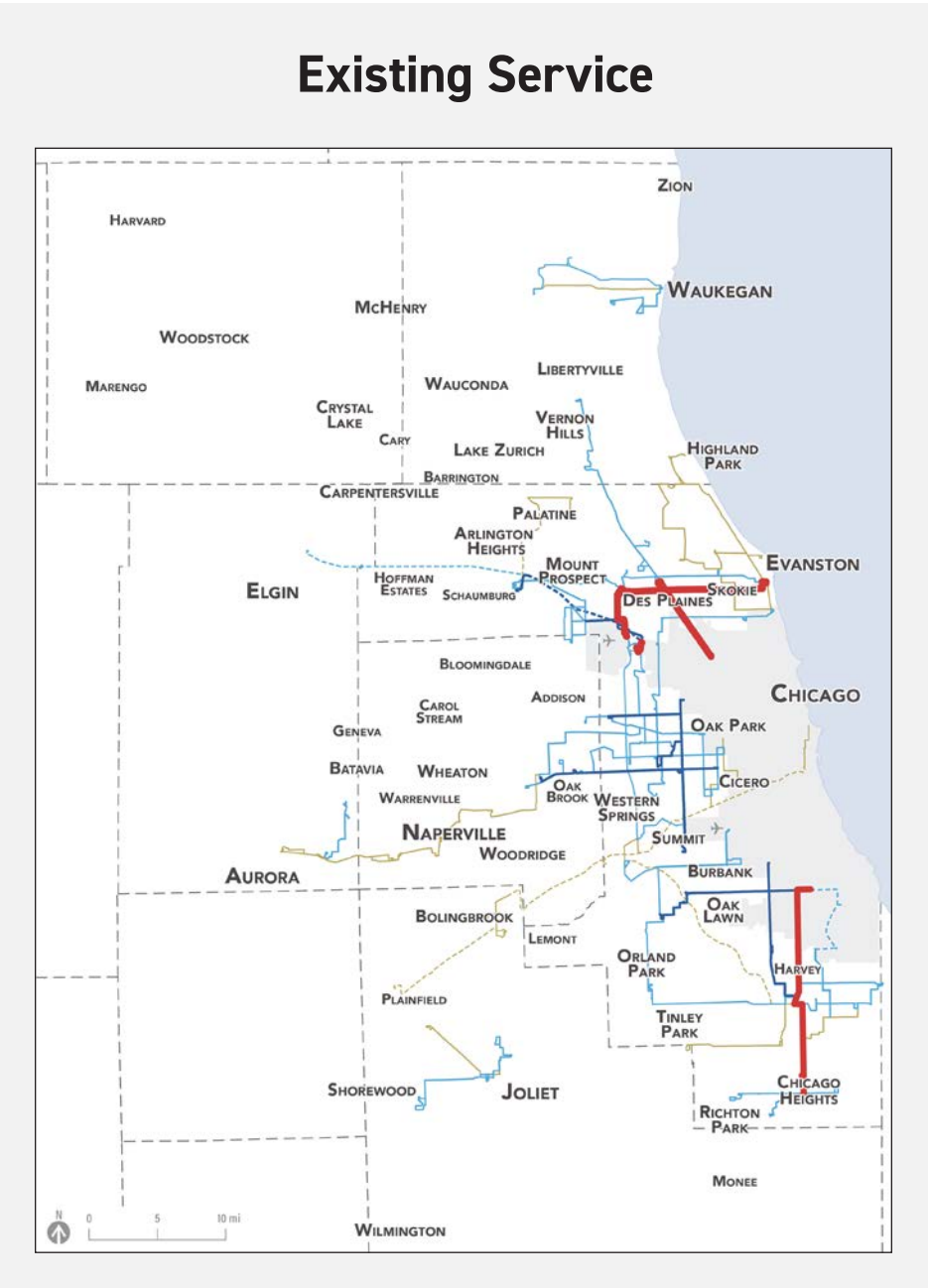
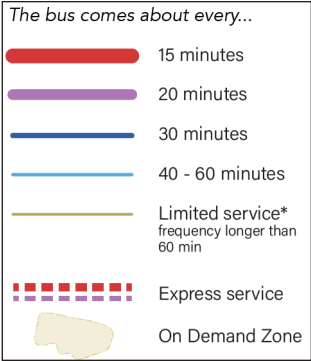
## Maps of Frequencies at Different Times of the Day and Week

These simplified maps show the overall differences between where and how often buses operate in the existing network and the Plus 10 concept.

They reflect the descriptions of the Existing Network in Chapter 3, and the descriptions of the Plus 10 concepts provided in prior pages of this chapter.

This page illustrates the difference on weekdays in the evening, around 9 PM.

Evening service doesn't usually attract as many riders as daytime service. Nonetheless, good evening service is important in building high ridership, because it allows people to rely on transit even if they are travelling at a time when fewer people are out. This is especially vital for retail, service and healthcare, but also facilitates evening social and shopping trips, and provides a "just-in-case" option for 9-to-5 commuters working late.



Under the Plus 10 concept, the percentage of people near transit service would increase slightly in the evenings to:

- 27% of all residents (from 21%).
- 36% of low-income residents (from 29%)
- 34% of people of color (from 27%)



# Sunday Daytime Service - Existing Network vs. Plus 10 Concept

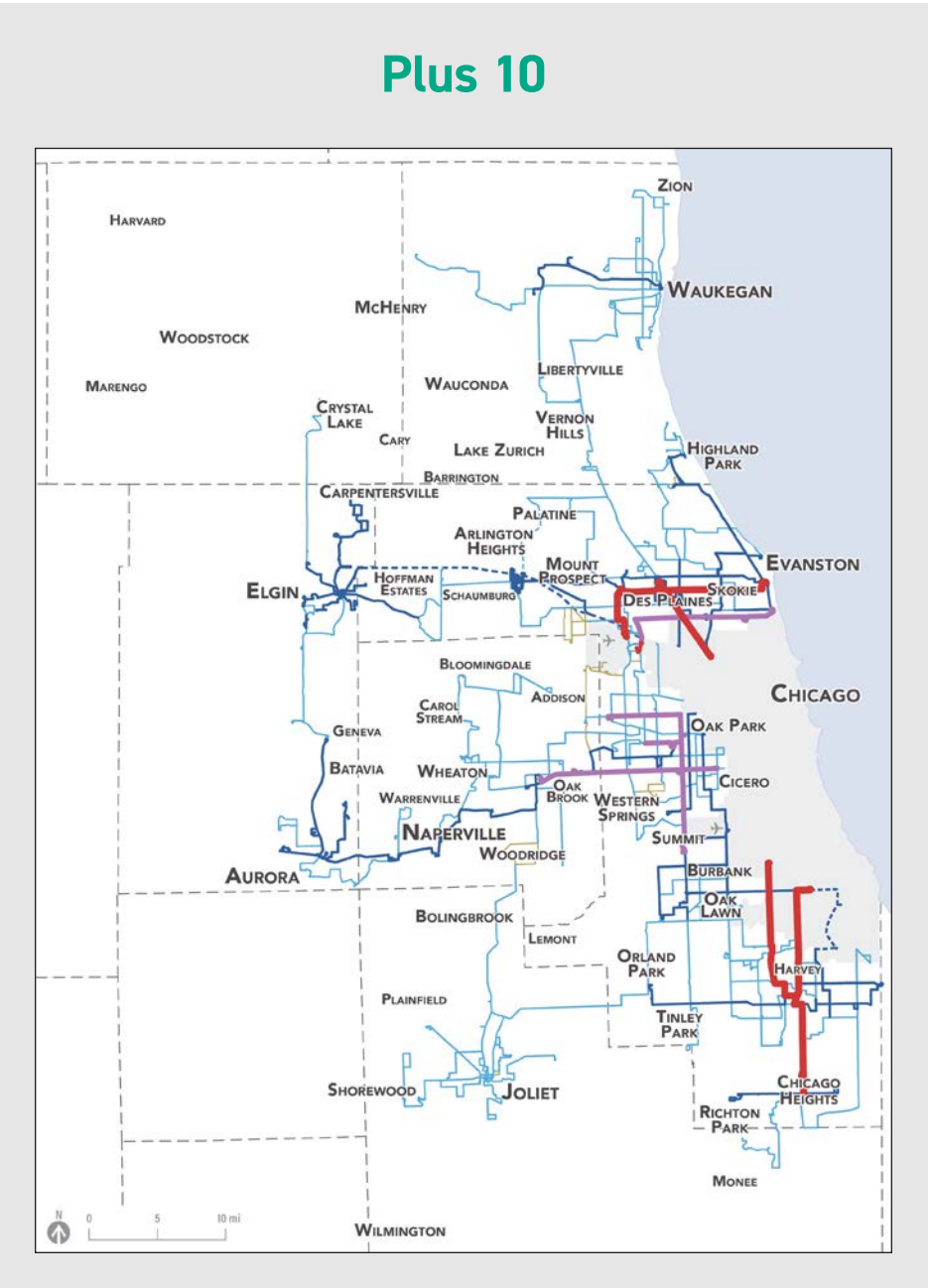
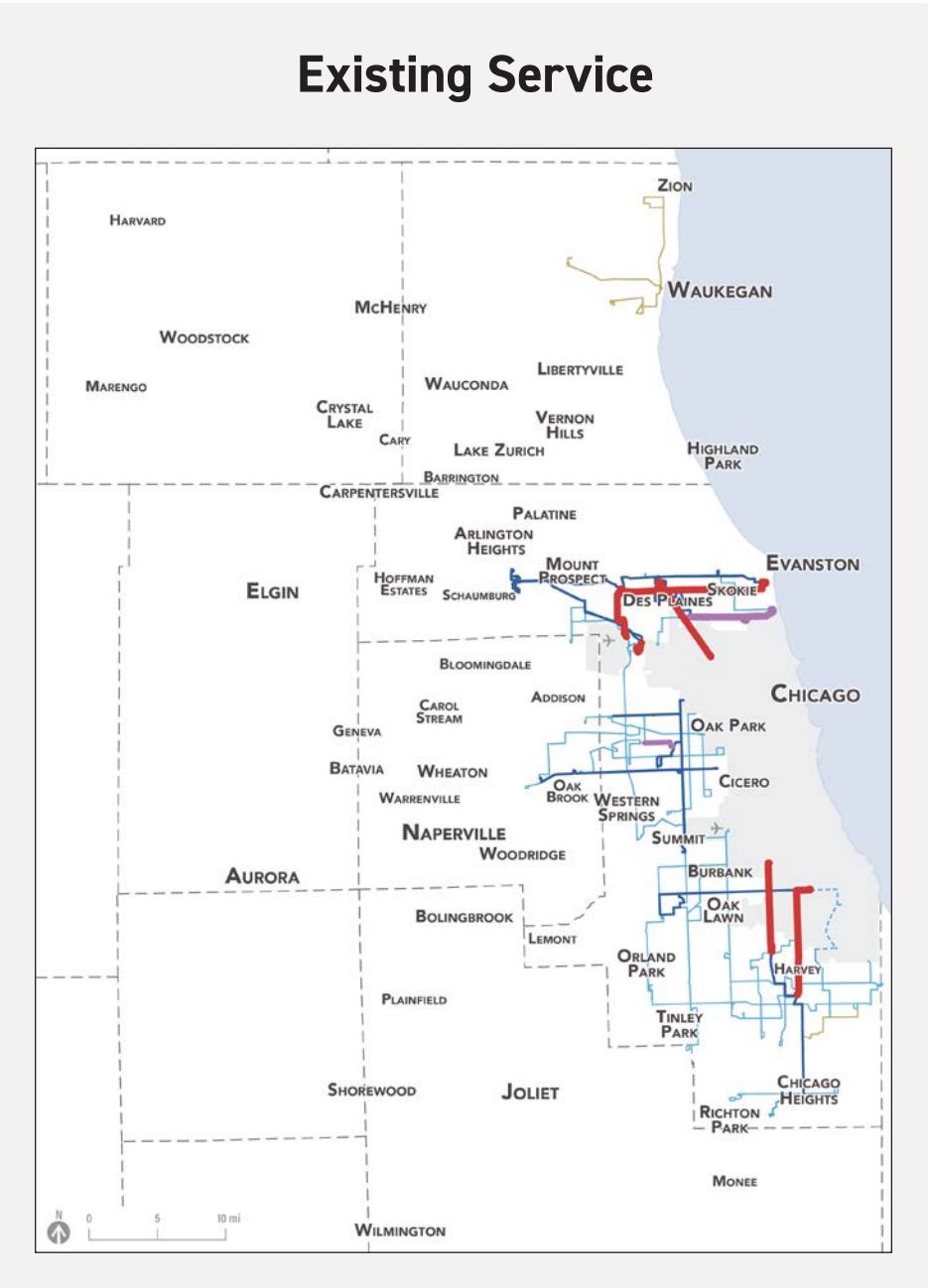
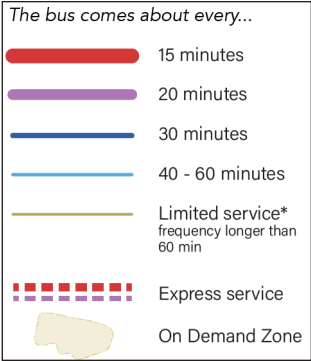
## Maps of Frequencies at Different Times of the Day and Week

These simplified maps show the overall differences between where and how often buses operate in the existing network and the Plus 10 concept.

They reflect the descriptions of the Existing Network in Chapter 3, and the descriptions of the Plus 10 concepts provided in prior pages of this chapter.

This page illustrates the difference on Sundays in the daytime, more or less between 8 AM and 7 PM.

Weekend travel has grown over the past 50 years, as the U.S. economy has shifted towards consumption and services, and as car transportation has become cheaper. Most people travel on Saturdays and Sundays, for a variety of social, recreational, shopping and personal maintenance purposes. But weekend travel also includes many commutes – most retail and service workers are required to take at least one weekend shift per week.



Under the Plus 10 concept, the percentage of people near transit service on Sundays would increase to:

- 36% of all residents (from 31%).
- 49% of low-income residents (from 44%)
- 46% of people of color (from 41%)



# Access to Opportunity - Regional Impacts of the Plus 10 Concept

## How to Read the Maps

The maps on this and the next page illustrate how the total level of access to opportunity within 60 minutes would change, from anywhere people might live in the six counties served by Pace, if the **Plus 10** concept were implemented.

- Figure 52 focuses on access to jobs.
- Figure 53 focuses on access to shopping.
- Figure 54 focuses on access to schools.

Each dot on the maps represents approximately 100 nearby residents, highlighting the areas where the Concepts would have the most impact.

- **Green dots mean that access improves.** The number of destinations someone could get to would increase.
- **Brown dots mean access gets worse.** The number of destinations someone could get to would decrease.

If the **Plus 10** concept were implemented, the median suburban resident could reach:

- + 7% more jobs
- + 8% more shopping destinations
- + 5% more school destinations.

within 60 minutes or less by transit and walking, compared to today.

## Key Outcomes

The Plus 10 would **very modestly increase the places people can go to by transit** in this region.

Nearly all of the people who would be impacted live near existing Pace bus service, in the areas where the most route changes are proposed, especially Elgin, inner north Cook County, and inner southwest Cook County.

### Access to Jobs

- **13% of residents would have access to more jobs.** This includes 15% of low-income residents and 16% of people of color.
- **1.8% of residents would have access to fewer jobs.** This includes 1.5% of low-income residents and 1.4% of people of color.
- **The median resident could reach about 2,000 more jobs.**

### Access to Shopping

- **19% of residents would have access to more school destinations.** This includes 25% of low-income residents and 25% of people of color.
- **3.9% of residents would have access to fewer school destinations.** This includes 3.4% of low-income residents and 3.5% of people of color.

### Access to Schools

- **9% of residents would have access to more school destinations.** This includes 12% of low-income residents and 12% of people of color.
- **1.3% of residents would have access to fewer school destinations.** This includes 1.3% of low-income residents and 1.3% of people of color.

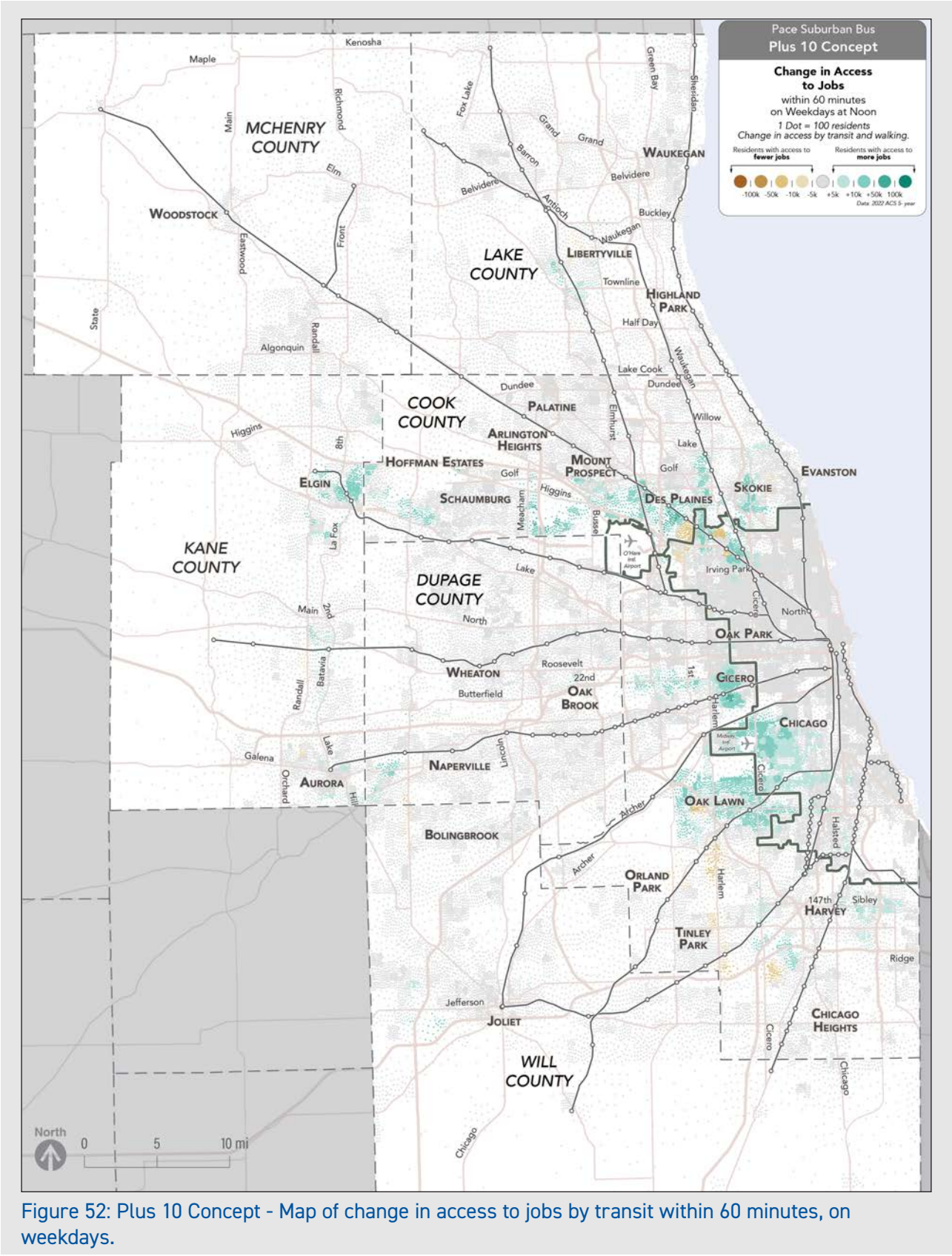


Figure 52: Plus 10 Concept - Map of change in access to jobs by transit within 60 minutes, on weekdays.

5 Pace Plus 10 - What could Pace do with a limited investment?



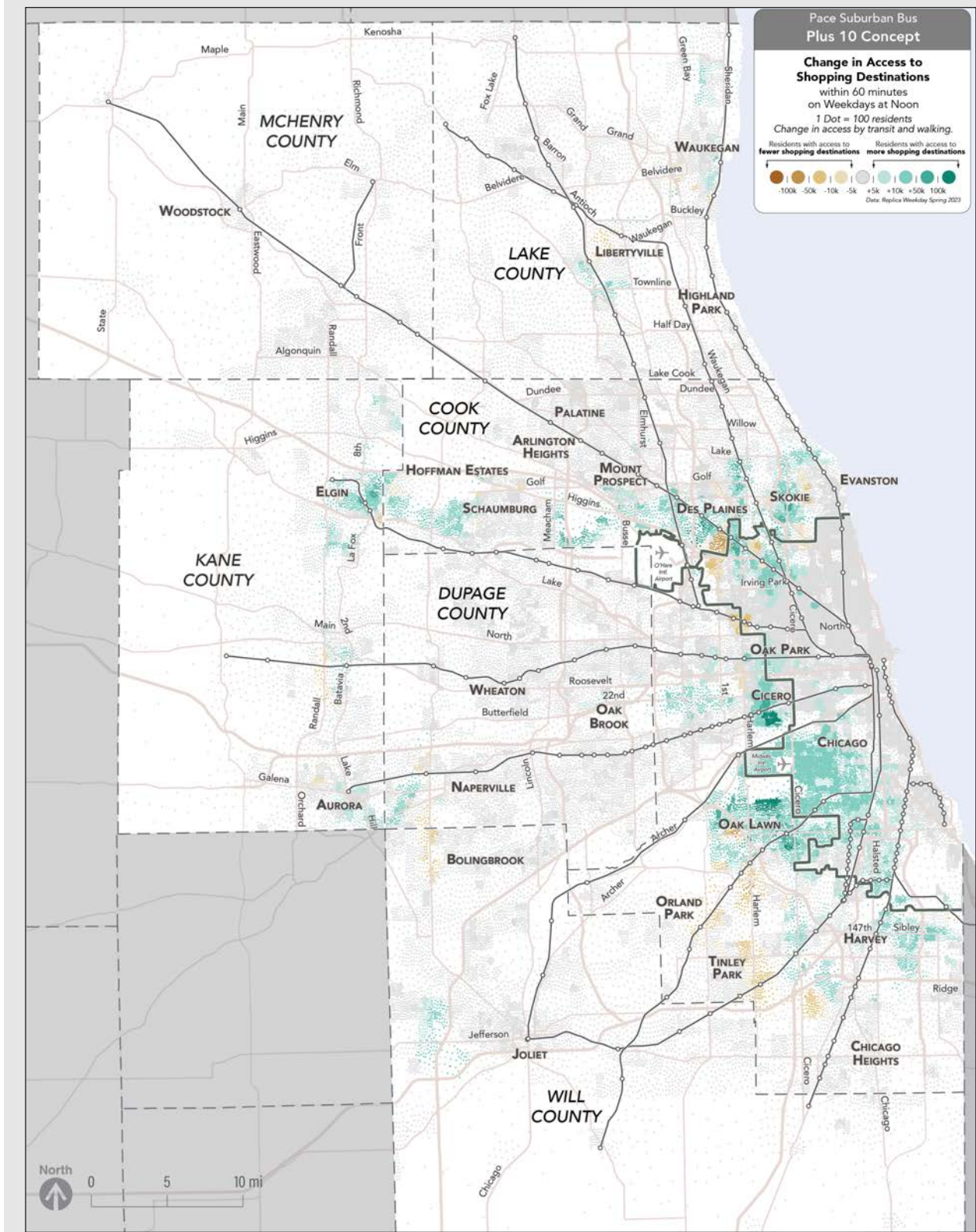


Figure 53: Plus 10 Concept - Map of change in access to shopping destinations by transit within 60 minutes, on weekdays.

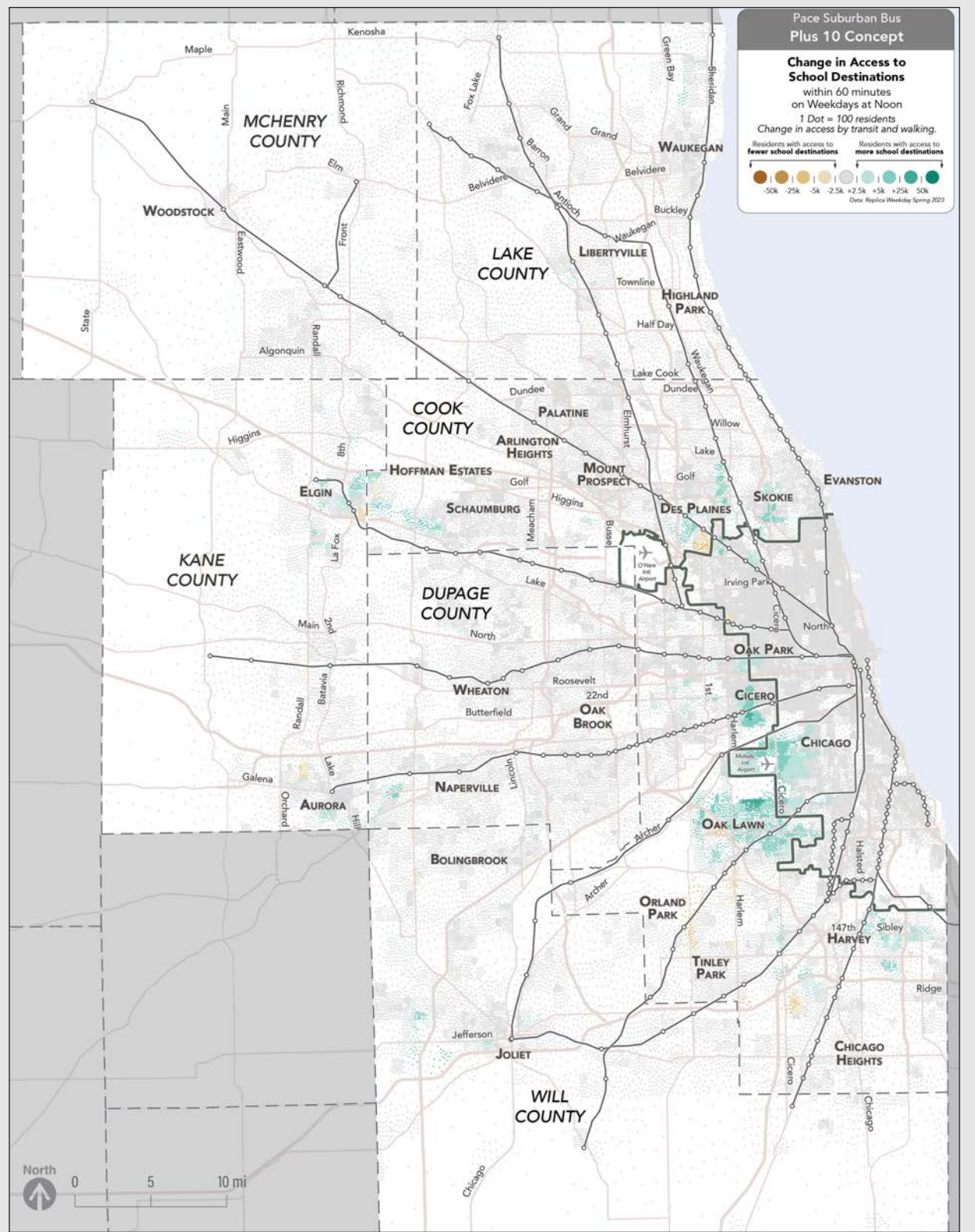


Figure 54: Plus 10 Concept - Map of change in access to school destinations by transit within 60 minutes, on weekdays.