Metropolitan**Planning**Council

TOWARD UNIVERSAL MOBILITY:

Charting a Path to Improve Transportation Accessibility

December 2019

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A special thanks to **transdev** the mobility company

A LETTER FROM MARYSUE BARRETT

A transportation system should meet the needs of everyone. But far too often, **transportation choices are severely limited for those who need them most**, leaving people stranded and isolated in their homes. This report identifies how our transportation network falls short, and offers a guide on how to remedy these shortcomings.

When the Metropolitan Planning Council staff and advisors took on the challenge of studying how people with disabilities and the elderly navigate the region's transportation system, we were inundated with examples of the enormous hurdles people face. Our region's trains and buses can be difficult to use for anyone with a disability. In many cases, bus stops and train stations can be impossible to reach, due to the lack of sidewalks and elevators. Paratransit options are limited and fractured with a multitude of funding sources, disconnected political jurisdictions, and providers with competing priorities.
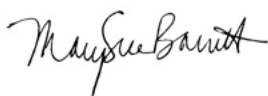
This report documents these challenges and offers real solutions to better serve those who may need only slight accommodations to see huge improvements to their mobility. Our team's **32 recommendations** are presented to public sector leaders and transit operators, as well as private-sector transportation providers, to unlock opportunities for older residents and people with disabilities to thrive.

This study's top recommendation is to create a Mobility Coordinator to break down the silos in providing accessible transportation services across the entire region. Working collaboratively with local governments, transit agencies, and private-sector partners, a Mobility Coordinator would increase the quality of life for everyone.

As someone who developed a visual disability in my 30s, I have become more reliant on public transit myself. I understand the frustrations people face when trying to navigate a system not designed to accommodate their unique needs.

When a system fails those who need it the most, it fails us all. Eventually everyone will face illness, impairment, or old age and need transportation choices for themselves and their loved ones. Now is the time to make the necessary improvements that can improve our neighbors' lives, and our own.

Yours in Mobility,

MarySue Barrett,
President, Metropolitan Planning Council

SECTION 1:
Setting the Stage

1 ACCESSIBLE TRANSPORTATION IS A HUMAN RIGHT

What if it were just as easy for people with disabilities to get around the region as it is for people without? What if there were high quality sidewalks leading to every bus stop, and all pedestrian signals were audible? What if demand-response van services operated whenever riders need them? What if every person who uses a mobility device or cannot climb stairs could go anywhere the transit system goes? What if every time a person using a wheelchair called Uber or Lyft, they got a ride as quickly as somebody who does not need an accessible vehicle?

It would mean that all residents of the Greater Chicago region could get anywhere they need to, when they need to. This is the vision of universal mobility. This is the life that the 800,000[1] people in the Chicago region who experience a disability would like to live.

Nearly every person in the Chicago region, or someone they care for, will face a disability that will impact their mobility at some point in their life. It is reasonable to expect a public transportation system that meets the needs of all its customers, no matter their age or ability.

Mobility is enabled by a combination of infrastructure and services that get us around our neighborhoods, cities, and the region.

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[1] ACS five year estimate, 2013-2017

For people with the resources and ability to access and operate a personal vehicle, driving likely meets most of their mobility needs. But a large number of people cannot or do not drive and need to get places. Nearly 20% of people over age sixteen in Illinois do not have a license.[2] In the City of Chicago, 26% of households have no car.[3] These numbers are even higher for older adults and people with disabilities. The system this community depends on is comprised of sidewalks, buses, trains, community-based Dial-a-Ride services, ADA paratransit, ride-hailing services like Uber or Lyft, taxis, and all the apps that enable their use.

Technology has certainly increased the overall number of mobility options for people who do not drive. On-demand services have notably expanded mobility for some, but not all. It is critical that we ensure technology is tested and accessible to people with a wide range of physical and cognitive abilities.

So which parts of our transportation system are truly accessible? The short answer: not enough. This report investigates how well transportation in the greater Chicago region meets the mobility needs of people with disabilities and the elderly, and proposes an ambitious and wide-ranging set of policies and programs that will move us closer to universal mobility.

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[2] US DOT Bureau of Transportation Statistics, 2015

[3] ACS five year estimate, 2013-2017

"People who are very healthy one day can become temporarily disabled — because of a surgery or an injury — and they don't know what to do. An everyday commute becomes a challenge."

Vicky Schmitz said. "It happens suddenly. You go in for a procedure, and your doctor tells you you're not supposed to bear weight for six weeks... or they put you in a scooter. How do you manage your commute?"

It happened to Vicky fifteen years ago. One day after walking in high heels, she noticed a bump on her foot. It didn't seem like a big deal, but it was a dislocated metatarsal. Some time after that, a doctor told her something she had not known before.

PROFILE
VICKY »

Vicky has a hypermobility disability, a rarely diagnosed genetic disorder called Ehlers-Danlos Syndrome. There is no cure or treatment and her mobility will worsen over time.

The BNSF train Vicky took to her job for 35 years quickly became more difficult to board. She didn't used to notice the number of stairs on her route, the closest handrail, unexpected stones on the sidewalk. "I used to walk six blocks from my house to the Burlington Metra station in Brookfield and a mile from Union Station to my job," Vicky said. "Now I make sure I can park next to the ramp instead of taking four stairs."

Vicky has since become an advocate and serves on Metra's ADA Advisory Committee. She calls herself a "broken record" talking about the importance of accurate information about delayed trains, broken escalators, and all the little things that can make or break her commute. She once entered Union Station to find a stalled escalator and a crowd of hundreds of people. She enlisted the help of Metra police to navigate through the shoulder-to-shoulder crowd. Had Vicky known, she could have just entered from street level at a different entrance, and not risked being knocked over and overwhelmed. When a person's balance feels off, and their body feels weak, an unexpected crowd is dangerous.

That all could have been prevented with better information that helps the elderly, people with disabilities, pregnant women, the sick or injured, and everyone who depends on public transportation.

"If you make commuting convenient and comfortable for people with disabilities, it will help everyone," Vicky said.

2 UNIVERSAL MOBILITY DEFINED

Universal mobility means that everyone — in all stages of life, regardless of any disability — can access transportation options that will get them anywhere they need to go. A practical definition is a system of partnerships and policies that provide a minimum level of mobility to all members of society.

"Universal mobility combines the philosophy of community mobility with the tenets of universal design. It is the belief that mobility is a human right and that access to high-quality accessible transportation is fundamental to exercising that right."

Universal mobility is closely related to **universal design**, which is the composition of an environment such that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, or disability. Architects and designers aim for an environment, building, product, or service that meets the needs of all people who wish to use it. This is not a special requirement for the benefit of only a minority of the population, but a fundamental condition of good design. If an environment is accessible, usable, convenient, and a pleasure to

use, everyone benefits. By considering the diverse needs and abilities of all throughout the design process, universal design creates product, services, and environments that meet everyone's needs.[4]

Another similar concept, **community mobility**, is frequently used in occupational therapy and views mobility as essential to participation in society and a key indicator of health. According to the American Occupational Therapy Association, "community mobility is grounded in independence, spontaneity, and identity... Although the mode of transportation may change, the meaning remains constant: transport from one location to another enables participation in the things we want and need to do."[5] This concept represents the philosophy that it is critical for people to have full access to the communities where they live. They must be able to access what they need, and have a transportation system that is built with those needs in mind.

Universal mobility combines the philosophy of community mobility with the tenets of universal design. It is the belief that mobility is a human right and that access to high-quality accessible transportation is fundamental to exercising that right. It is also the belief that building a fully inclusive transportation system, from the most basic pedestrian infrastructure to the cutting edge of on-demand mobility, will benefit all of us.

Remembering Marca Bristo (1953-2019)

Marca Bristo was the founder of Chicago's Access Living, one of the nation's leading disability rights and services organizations. A highly effective national disability advocate, Marca played a key role in drafting and passing the Americans with Disabilities Act in 1990 — and making sure it was enforced. She was integral to ensuring all CTA buses are now accessible.

Photo credit: Access Living

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[4] http://universaldesign.ie/What-is-universal-design

[5] https://www.aota.org/About-Occupational-Therapy/Professionals/CY/Driving-Across-Lifespan.aspx

The Americans with Disabilities Act of 1990 (ADA) prohibited discrimination based on disability in all public places. The ADA has without a doubt been life changing for countless Americans who are able to leave their homes, seek employment, be a part of society, and have a much higher quality of life.

As a result of the ADA's requirements, a parallel transit system has been built over the last 30 years to complement traditional trains and buses (referred to as "fixed-route") that are not fully accessible. While important, this policy has had the unfortunate outcome of marginalizing those with disabilities by providing a limited separate public transportation service — ADA paratransit — and reducing the urgency to modify our fixed-route systems to be fully accessible to people of all ages and abilities.

As this report will explain in detail, while Federal law requires new infrastructure to be built so it is accessible to all, many gaps still exist. Transportation infrastructure built before the ADA is still being retrofitted, and our system has a long way to go to be universally accessible.

3 DISABILITY AFFECTS US ALL

Even those who do not currently experience a disability are impacted by the accessibility shortcomings in our transportation system. We all have a vested interest in how the system can be improved to better meet the needs of everyone.

THE PREVALENCE OF DISABILITY: HIGH AND RISING

A surprisingly large share of the population experiences a disability. 7% of people between the ages of 18 to 64, and 33% of those over the age of 65 have disabilities as defined by the American Community Survey.[6] This includes visual, hearing and cognitive impairments, as well as disabilities affecting mobility.

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[6] American Community Survey 5-year estimate, 2013-2017 for the Chicago region.

Figure 1. Prevalence of Disability in the Chicago Region, 2017
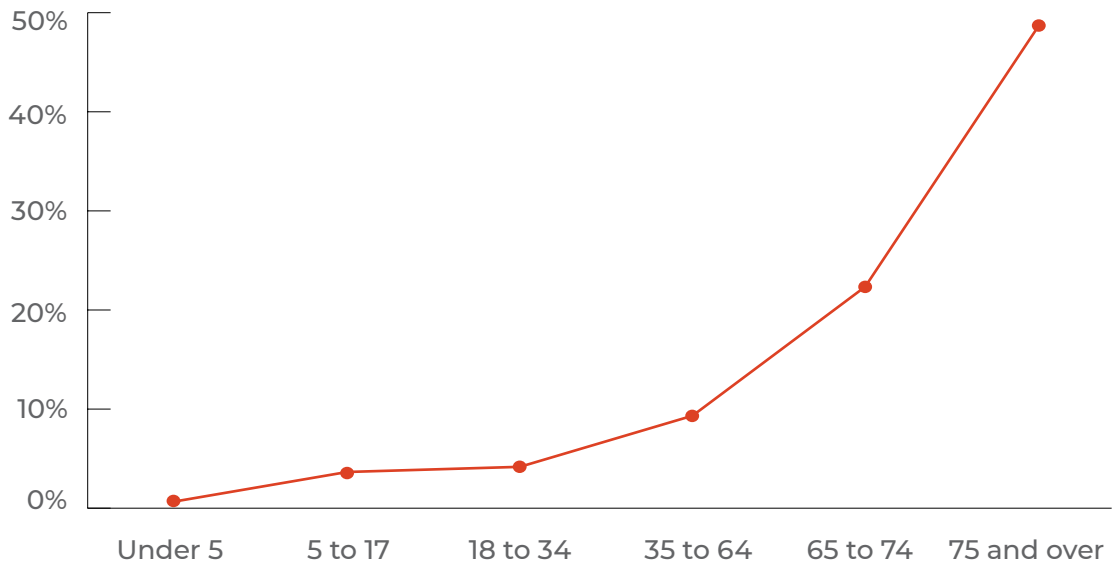
Source: American Community Survey 5-year estimate, 2013-2017. Data for Cook, Lake, DuPage, Kane, McHenry and Will Counties.

Moreover, while many older Americans do not meet the legal definition of having a disability, they still experience age-related conditions that can make getting around more challenging.

For the Chicago region, mobility for those with disabilities will be an increasingly important need as the region's population grows older. The Chicago Metropolitan Agency for Planning (CMAP) has projected that large increases in the number of people over 85 will draw the region's median age upward from 35.7 in 2010 to 39.4 in 2050. Men over the age of 85 will increase from 0.5% of the total population in 2010 to 1.5% in 2050, and the share of women over 85 will grow from 1.0% to 2.5%.[7]

A national survey by the National Aging and Disability Transportation Center found that among adults age 60 and older, one third have a disability that limits physical activities, vision, or hearing, and 71% use medical equipment or mobility aids. More than 60% of caregivers help with transportation needs. More than two thirds (68%) said it will be difficult to find alternative transportation options if they stop driving. Among younger adults (age 18-59) with a disability, 80% said it would be difficult to find alternative transportation options to driving.[8]

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[7] https://www.cmap.illinois.gov/data/demographics/population-forecast

[8] https://www.nadtc.org/wp-content/uploads/KRC-nadtc-Survey-Report-120718-FINAL_for-web508.pdf

People with disabilities and those over age 65 who are more likely to need accessible transportation services live all over the region, as shown on the next page in Figure 2, at rates that are comparable with the region's overall population density.

The locations where people choose to live impact the types and levels of transportation services and amenities available to them. Accessible and high-frequency fixed-route bus and rail transit service is possible only in areas with certain levels of density. We spoke to many people with disabilities who proactively moved to more densely developed areas of the region in order to have a higher level of mobility. But it is important to recognize that many people live in locations where driving is nearly mandatory, and don't have the resources or desire to move elsewhere. As they age, many experience a disability that suddenly limits or curtails their ability to drive, thus majorly impacting their mobility. Transportation's role in the ability to age in place is emerging as a significant concern. A minimum level of transportation service region-wide should be the goal.
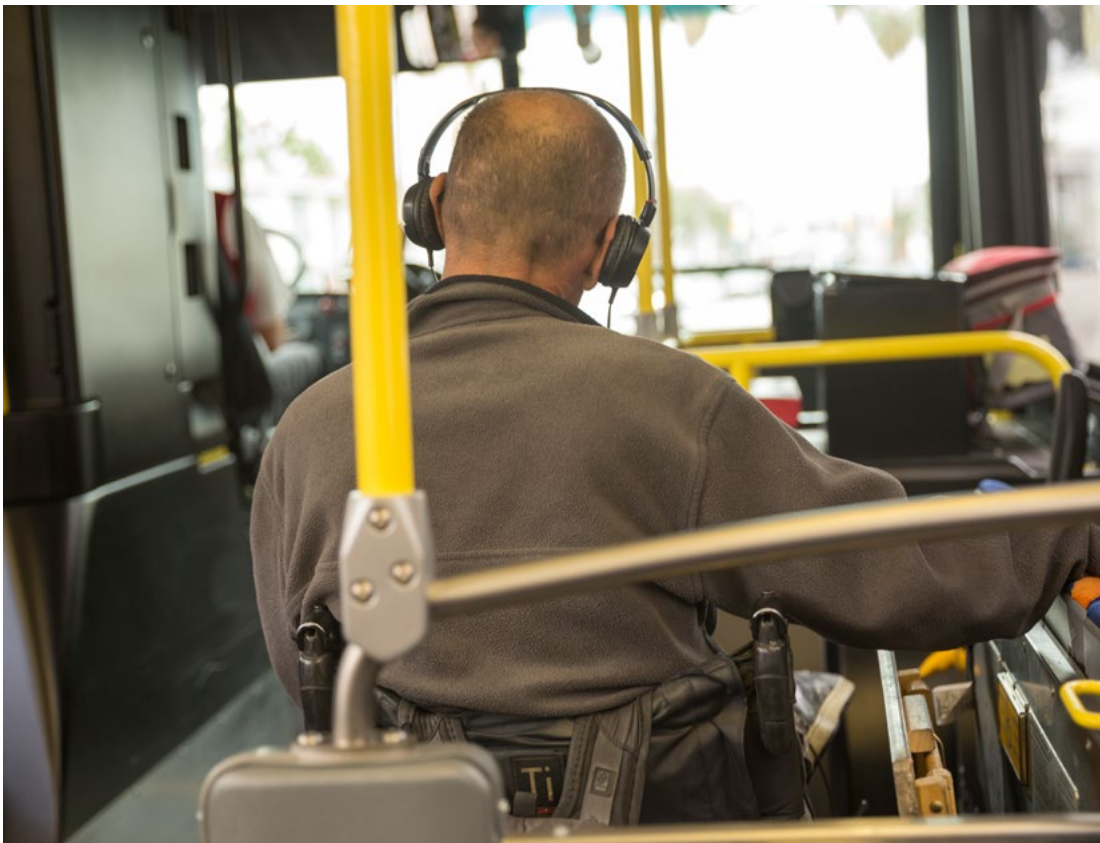
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Figure 2. Distribution of Populations with Enhanced Transportation Needs
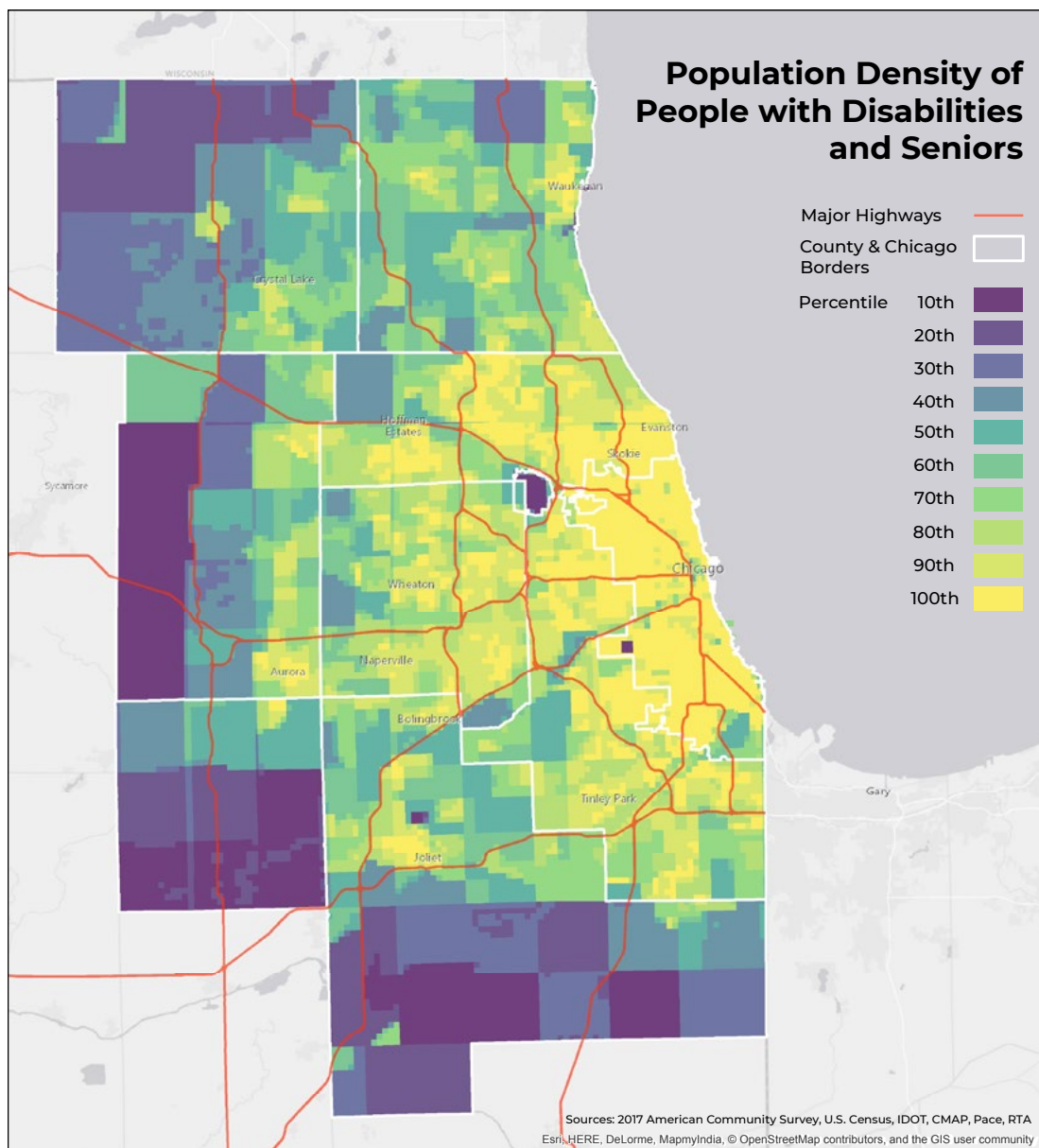
PEOPLE WITH DISABILITIES AND EMPLOYMENT

It is hard to maintain employment when a disability affects mobility. According to a survey conducted by the Federal Highway Administration (FHWA), nationally, only 20% of people age 18 to 64 work full- or part-time if they have travel-limiting disabilities.[9] This percentage has declined from previous years. In contrast, over 75% of people without disabilities age 18 to 64 work. In other words, if you have a disability, you are nearly four times less likely to be working.

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[9] Ibid.

As shown in Figure 3, people reporting travel-limiting disabilities steadily rises with age. Overall, people age 18 to 64 with disabilities make fewer trips per day on average than people without disabilities (2.6 versus 3.6 trips).[10]

Figure 3. Share of people reporting travel-limiting disabilities by age
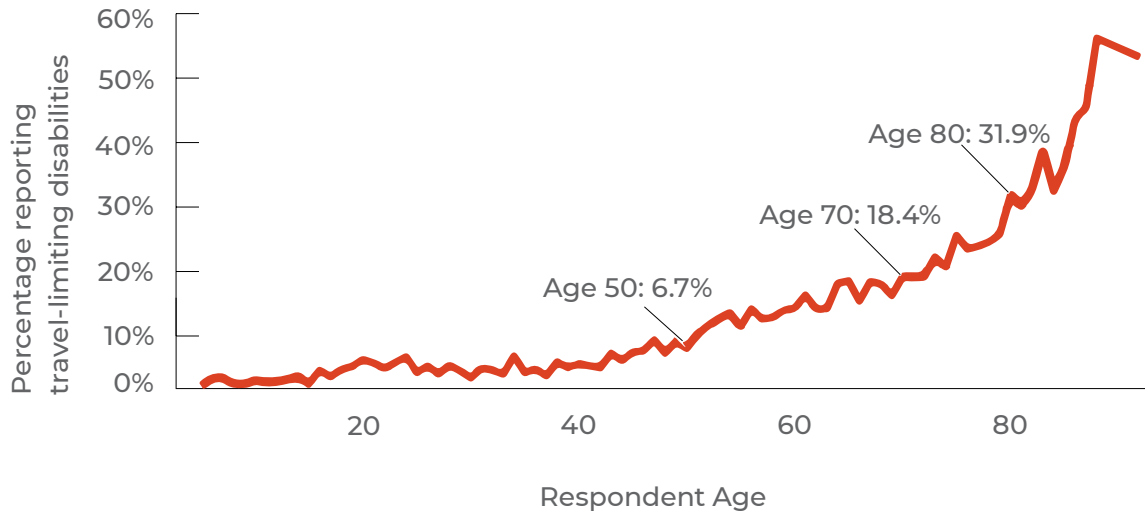
As shown in Figure 4, people with disabilities who are employed are far less likely to hold full-time positions than those not experiencing a disability. This could be related to the type of transportation available to support access to full-time employment. For example, in the Chicago region, many of the county-level paratransit services do not start before 8 a.m. or extend past 5 p.m., which would not enable a person to work traditional business hours.

Figure 4. Employment Status for Workers age 18-64 by Disability Status, 2017
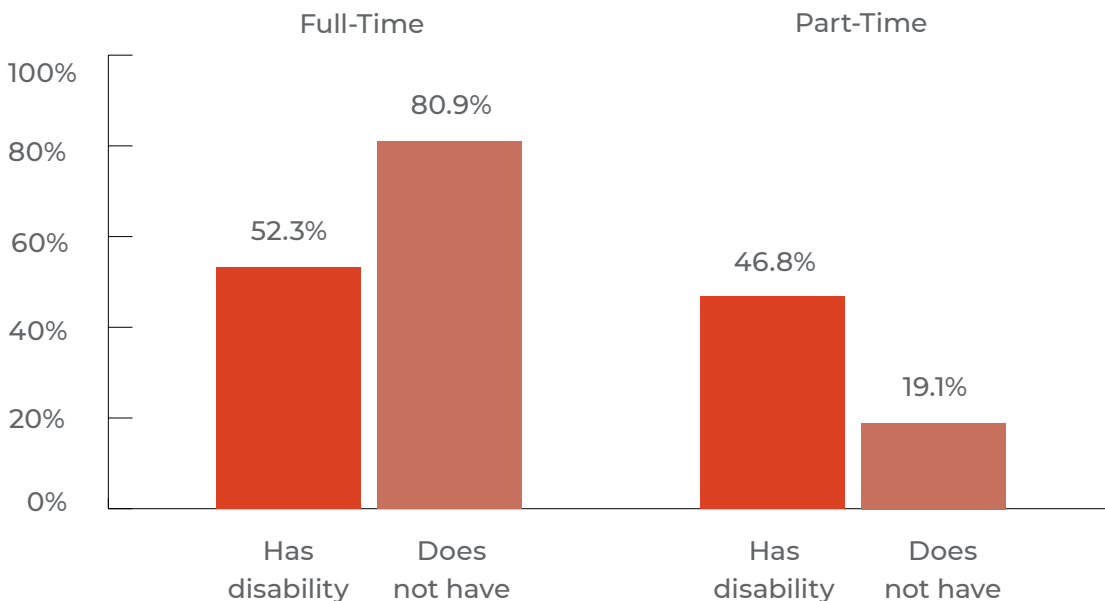
[10] Ibid.

Even if a person with a disability is able to drive a vehicle, many cannot afford to own a car and require alternatives to driving. Slightly over half of people age 18 to 64 with disabilities live in households with annual incomes under $25,000 versus 15% of people without disabilities. Over 20% of non-workers and 12% of workers age 18 to 64 with disabilities live in households that do not own a vehicle. Providing accessible alternatives to driving is a critical equity issue.[11]

People with disabilities and the elderly are also at a higher risk of being seriously or fatally injured in traffic crashes. Table 1 shows that since 2013, the percentage of crash victims that are over 65 increases significantly as injury severity increases. Over 25% of pedestrian fatalities were seniors, despite making up only around 12% of the region's population.

Table 1. Percent of People in the Chicago Region Injured in a Crash that are 65 or older, 2013-2017

Severity	All Crash Victims	Pedestrians Only
No Injury	7.7%	7.2%
Possible Injury	8.7%	8.2%
Minor Injury	8.6%	9.8%
Serious Injury	9.7%	11.3%
Fatal	18.2%	25.2%

Source, Chicago Metropolitan Agency for Planning; data for Cook, Lake, DuPage, Kane, McHenry and Will Counties

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[11] Issue Brief, Travel Patterns of American Adults with Disabilities. https://www.bts.gov/sites/bts.dot.gov/files/docs/explore-topics-and-geography/topics/passenger-travel/222466/travel-patterns-american-adults-disabilities-9-6-2018.pdf

For University Park resident and advocate Jemal Powell, public transportation is a lifeline.

As a man who experiences blindness, Jemal's schedule is studded with meetings. Jemal's activism, a big part of his identity and his social life rely on the fixed-route buses and trains which make up 80% of his journeys.

Jemal has many places to go during the workweek and on the weekends. He's been a member of the National Federation of the Blind since 1991, and he is now second Vice President at the Chicago Chapter. He currently chairs the Pace Suburban Buses ADA Advisory Committee and sits on its Citizen Advisory Committee. Commuting to one full-time job can be challenging enough, but with meetings all across the region, the logistics multiply.

PROFILE
◀◀ JEMAL

Public transportation allows Jemal the freedom to change his plans, stop unexpectedly for groceries on the way home, and make spontaneous plans that are impossible when he has to call 24 hours ahead for Dial-A-Ride or ADA Paratransit service.

Jemal knows he is lucky to have access to fixed-route transit. Years back, Pace planned to cut his Saturday bus. "We were going to lose Saturday service, which means that we were going to lose what we do on Saturdays," Jemal said. He would have had to resign from at least one of his boards because he would not be able to make their meetings. Jemal and a friend collected 400 signatures in 18 days to fight the change. And it worked: Pace kept the route.

Things could be better, but the system serves Jemal pretty well. He relies on it. He punctuates his stories with the matter-of-fact realities of public transit: "interline," "the 367... the 366... the 352...," "that route was made much more convenient when Metra changed its schedule in September 2017..."

Jemal rattles off his bus times so fast it is dizzying: "I've had those schedules read to me, so I know them by heart."

4 OVERVIEW OF PUBLIC TRANSIT SERVING PEOPLE WITH DISABILITIES IN NORTHEASTERN ILLINOIS

Our current system of public transit accessible to older adults and people with disabilities can only be described as fragmented.

OVERVIEW OF A FRAGMENTED SYSTEM

Over decades, countless systems have been established to address very specific transportation needs, but are rarely planned or operated in a coordinated way. When looking at the transportation system holistically, it immediately becomes clear that, from a rider perspective, accessing service is often difficult. Services may be operated by a municipality, township, county, or at a regional level. The hours of service vary depending on the operator or location. Rider eligibility rules vary widely and trip purpose requirements are not standardized. Fare structures and reservation policies also change depending on where the rider lives, or where their destination might be. Critically, information on these services is not provided in a centralized location. Some transit operators

consciously do not market their service because budgets are so limited that they cannot afford to serve more riders. This patchwork exists for many historical reasons. State and federal funding plays an important role, as do local and regional politics.

The variations in customer experience can be dramatic. While some services are required by law to provide every ride requested, on others rides may be declined because available slots fill up due to resource constraints. In one town a rider may be able to use the demand-response van to get to the hair salon, while in the adjacent town rides may be limited to only medical and supermarket trips. One municipality may offer demand-response rides to seniors and people with disabilities and another may not, because the municipality has not opted into the program. For the Ride DuPage program, in the participating jurisdictions, every ride requested is provided but the fares are assessed based on distance, so they can be costly. Under McHenry County's MCRide Program the fare rate is flat for the first five miles, but rides can be denied if the vehicle is fully booked for the day or time requested. For many rides it is necessary to make a reservation one or more days in advance to ensure a booking. In some areas there is no service available at all. The bottom line is that the experience of getting around using this patchwork of systems ranges from fairly reliable and affordable to maddeningly frustrating and expensive.

Figure 5 shows the geographic extent of accessible transportation services in the region, revealing the fragmented patchwork of services, which is difficult for users to understand.

Figure 5. Accessible Transportation Services in Northeastern Illinois
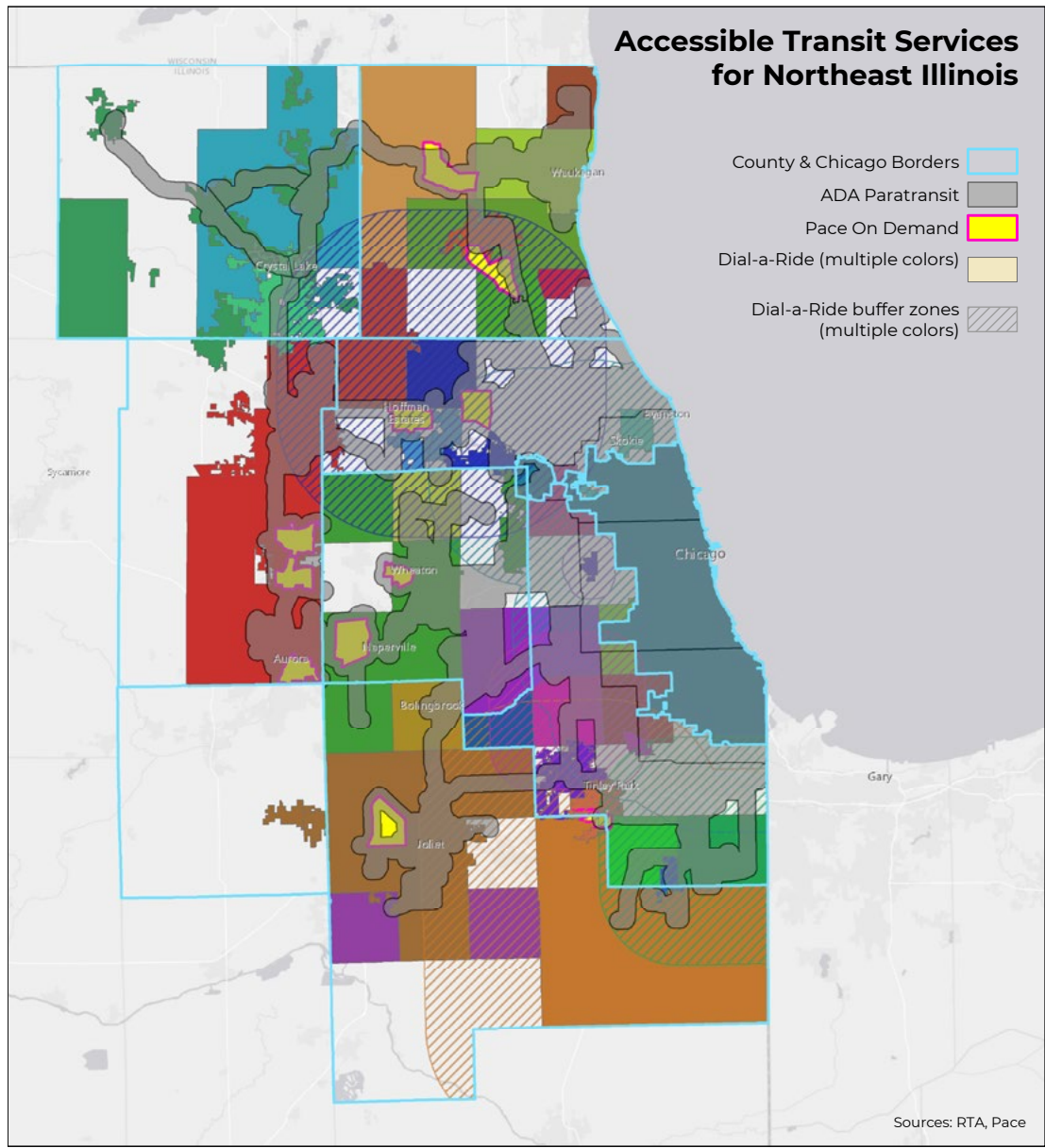
ADA PARATRANSIT

ADA Paratransit is a requirement under the Americans with Disabilities Act of 1990 (ADA) that requires a complementary transit system for people who have a disability and are unable to use the fixed-route transit service.[12] Service must be provided within an area of three-quarters of a mile on either side of a fixed-route bus service and a three-quarters of a mile radius around rail stations. ADA Paratransit service must function as a demand-response, door-to-door, or feeder service for eligible riders. ADA paratransit provides a minimum level of transit service for disabled riders as defined by Federal requirements. Rides are shared and must be reserved in advance. However, since no rides can be declined for qualified users, and costs must be managed, the service is a series of compromises.

Paratransit riders can be charged no more than double the cost of fixed-route fare for each ride, which is just a fraction of the overall cost of providing each trip. In our region that cost is more than $30 per trip. As such, paratransit is a significant part of our transit system's operating budget. If fixed-route services were easier to use for people with disabilities, then more trips could be on fixed-route services instead, which would offer people greater travel flexibility and be more cost effective.

The federal ADA paratransit requirement excludes commuter rail services, so in northeastern Illinois it only applies to CTA and Pace, not Metra. Historically, both CTA and Pace have used private contractors to provide ADA paratransit. In an effort to streamline services, the General Assembly passed a law in 2005 requiring Pace to operate service for the entire region. The RTA is responsible for certifying who is eligible for ADA paratransit[13] and funds the service through a special sales tax collected throughout the RTA region. The state also provides funding through a sales tax match.

While it may meet the minimum legal requirements, ADA paratransit was not built as a customer-focused system. The system adheres to Federal mandates to get people to appointments within a minimum buffer time, but does not offer flexibility and can be very time consuming to use as shared rides with multiple pickups and drop-offs can be long. Given the size of the northeastern Illinois region, service is provided in twelve zones, and people who need to travel between zones must transfer between services at designated transfer points.

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[12] https://www.transit.dot.gov/regulations-and-guidance/civil-rights-ada/ada-guidance

[13] https://rtachicago.org/rider-resources/accessible-transit/paratransit-certification

Each additional transfer adds serious uncertainty to the trip, as coordination of pickup and drop-off schedules between two services is often unreliable.

Because there is a dense network of CTA buses and trains in Chicago, ADA paratransit is available anywhere in the city. Because of Chicago's unique nature in the region, there is an additional special service available: the Taxi Access Program (TAP).[14] TAP enables certified ADA paratransit riders to take a subsidized taxi ride within Chicago 24 hours a day, on demand. Use of the program has ebbed and flowed since its inception, but the model has great potential to be transformative for some riders.

OTHER SERVICES FOR PEOPLE WITH DISABILITIES AND SENIORS

Other types of transportation, many of which serve primarily older users and people with disabilities, are available to a broader set of riders — people that are not certified as ADA paratransit users. These services are used to travel places not served by ADA paratransit, which is only available along fixed-route transit corridors. Most non-ADA paratransit services — often known as Dial-a-Ride — are operated by Pace in partnership with local jurisdictions at the county, municipal, or township level. These services are generally intended to fill largely medical, grocery shopping, and other daily needs. A significant share of riders also use these services to get to employment or training, but service hours can be quite limiting, with many services ending at or before 5 p.m. Many Dial-a-Ride services are open to the general public, but some provide services to only older riders or those with a disability. Some townships or municipalities operate a few vehicles for rides only within their boundaries. Additional services may be provided independently by nonprofits or medical institutions; information about them is likely available only to their existing clients in need of transportation assistance.

Challenges with operations of paratransit services include the fact that municipal, township, and county boundaries can play a significant role in a rider's travel experience. A person who lives near a border between counties or townships may have to transfer between services to travel a short distance, or find that the hours of service in one jurisdiction are different than those in the adjacent jurisdiction.

Coordinated services funded through local sponsor matches — like Ride in Kane, Ride DuPage, and Will Ride — let sponsors set population eligibility and trip purposes independently. This results in very different services across counties, and even within counties. These coordinated services do not typically cover the entire county either. Local providers at the township level have the option to participate, which usually requires a local funding match. As a result, some communities are reluctant to participate due to the ongoing financial commitment. For example, only about 60% of the population in DuPage County has access to Ride DuPage.

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[14] https://www.pacebus.com/pdf/paratransit/TAP_User_Guide.pdf

BUS AND RAIL TRANSIT

All fixed-route CTA and Pace buses have ramps to allow people with mobility challenges or using wheelchairs to board. These services provide coverage and predictability, but the frequency of buses is not very high in less dense suburban areas (often every 30 minutes). In more rural, low-density, outlying areas such as McHenry and Will County, there are few fixed-route Pace buses.

Pace's On Demand (formerly Call-n-Ride) services are available to any rider for any purpose in places where residential densities are not high enough to support fixed-route transit. The reservation-based shared ride service is available in eleven suburban areas for the same cost as a regular Pace bus ride. Most On Demand services have certain scheduled stops where riders can board the vehicle without a pre-arranged reservation.

On the CTA 'L' rail network, 103 out of 145 stations are vertically accessible, meaning they have elevators to the platforms for those who cannot use stairs. The CTA has developed a 20-year All Stations Accessibility Program to make all stations vertically accessible, but has not yet identified funding for full implementation. While vertical accessibility enables access to the platform, this still does not mean the station is universally accessible, which would include having features to accommodate people with other disabilities such as low-vision or deaf riders.

Metra currently has 185 fully accessible stations, 13 partially accessible stations and 44 inaccessible stations. On the Metra Electric District line, bridge plates are used to cover the gap between the vestibule and platform so a wheelchair can roll onto the train. On the other Metra lines at least one car on each train is equipped with a wheelchair lift to provide access from low-level platforms; there is space for three wheelchairs in each accessible car. Metra operates a shuttle bus service called P-8 that provides rides to the closest accessible Metra station. However, riders must call three hours in advance to arrange these services.[15]

Just making trains accessible to people with disabilities is not sufficient, since the stations also need to be accessible. To add another layer of complexity, almost all of Metra's stations are owned and maintained by the local municipality, not Metra. So mostly local communities are responsible for accessibility upgrades to stations.

PEDESTRIAN INFRASTRUCTURE & WALKABILITY

One of the biggest factors driving riders with disabilities to use paratransit over the fixed-route system is uncertainty. Wheelchair access to bus stops is absent in many suburban locations because stops lack the concrete pads necessary to board using a ramp. Furthermore, in many locations the local municipality or township has not provided sidewalks adjacent to the bus stop at all, preventing any kind of safe, meaningful access, as shown in Figure 6. That means that once a

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[15] https://metrarail.com/riding-metra/accessibility

person gets off the bus, they cannot get where they want to go without walking in the grass or rolling their chair into the street, which is extremely dangerous and terrifying on many of the region's roads where cars are driving at high speeds.

Figure 6. Pace bus stop without sidewalk access

A bus stop island in a sea of grass, making access difficult for people with disabilities.

A number of door-to-door services are available to people with disabilities in the region, but most trips require some amount of walking to the nearest stop or pick-up location. The region's urban core, led by the City of Chicago, has a robust network of pedestrian infrastructure. However, many parts of the region served by transit have limited walkability. To better understand how the region's pedestrian infrastructure matches up with the suburban transit network, MPC conducted an analysis using CMAP's newly created regional sidewalk inventory.[16] The inventory looked at every street in the region, except for limited access highways, and recorded whether a street segment had no sidewalks, a sidewalk on one side, or on both sides. We combined this data with Pace bus stop locations and measured how complete the sidewalk network was along streets extending a quarter mile and half mile from each stop. Figure 7 shows an example of a typical bus stop that has a 50% sidewalk network completeness.

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[16] https://datahub.cmap.illinois.gov/dataset/regional-sidewalk-inventory

Figure 7. An example of a bus stop with 50% sidewalk network completeness for streets within a half mile
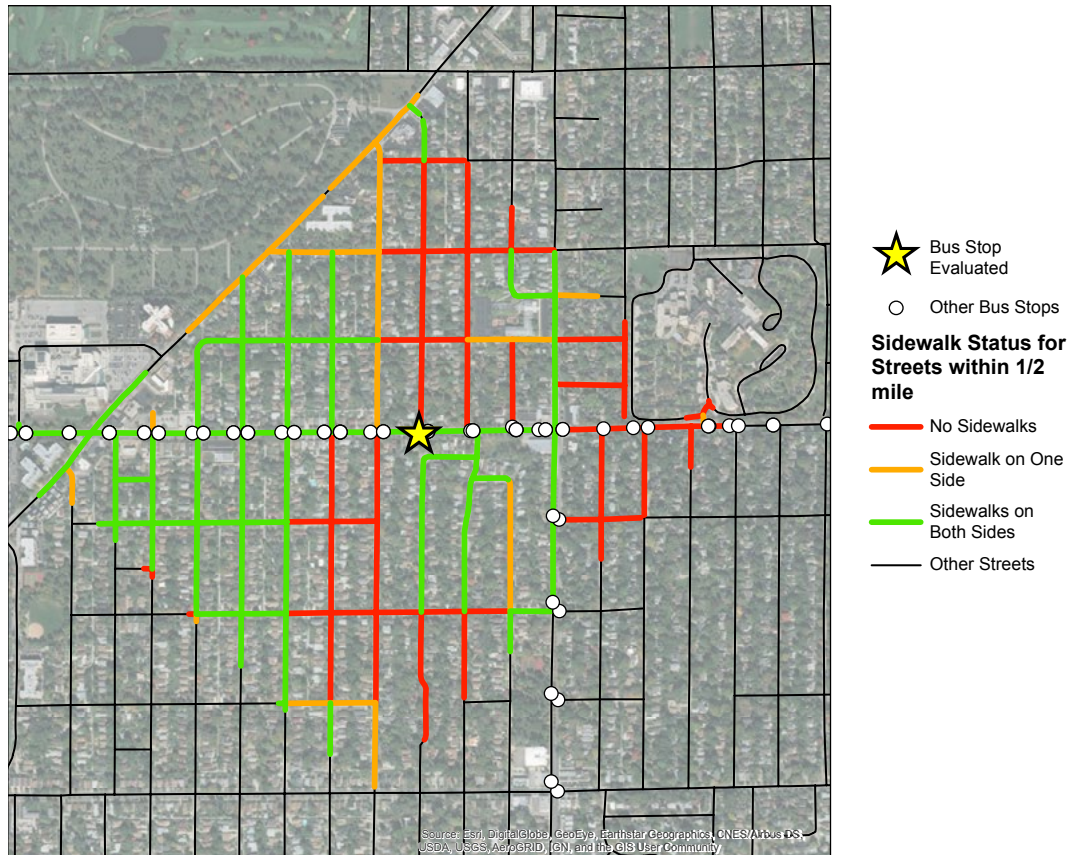

Table 2 on the next page tabulates the results of the analysis. It shows the count of bus stops under each level of sidewalk network completeness at two different distances. For the purposes of the analysis, stops within 100 feet of each other were considered a single stop. Nearly 900 Pace bus stops have no sidewalks along any streets within a quarter mile of the stop in all directions; 26% of stops have sidewalks on less than 50% of streets within a half mile. Only 1% of all Pace bus stops have a fully completed sidewalk network extending a half mile from the stop. This incompleteness is a major barrier to people with disabilities who would like to use the fixed-route system in the suburbs. A gap in the sidewalk network means riders have to take a longer route to get to the stop or travel in unsafe conditions.

## Table 2. Extent of Sidewalk Availability Serving Pace Bus Stops

Sidewalk Network Completeness	Half Mile from Stop		Quarter Mile from Stop	
	Stop Count	Percent of Total Stops	Stop Count	Percent of Total Stops
0%	385	2%	888	4%
1 - 25%	1,932	10%	1,754	9%
25 - 50%	2,841	14%	2,761	14%
50 - 75%	4,804	24%	3,960	20%
75 - 99%	10,003	49%	8,782	43%
100%	271	1%	2,091	10%
Total	20,236	100%	20,236	100%

Source: MPC analysis of CMAP sidewalk inventory data and Pace bus stops

Note: 100% completeness means there are sidewalks on both sides of all streets radiating from a specific bus stop for the specified distance (either ½ or ¼ mile). A bus stop with sidewalks on only one side of all streets radiating from it would have a sidewalk completeness of 50%.

Figure 8 on the next page shows the location of Pace bus stops with the lowest levels of sidewalk network completeness. Red points mark bus stops with no sidewalks along any streets within a half mile, and yellow points mark stops where only a maximum of 25% of the streets have sidewalks. These are not only in the farthest reaches of the region with the lowest density, but also in areas with important destinations and a significant number of riders.

Figure 8. Sidewalk Network Completeness Near Pace Bus Stops
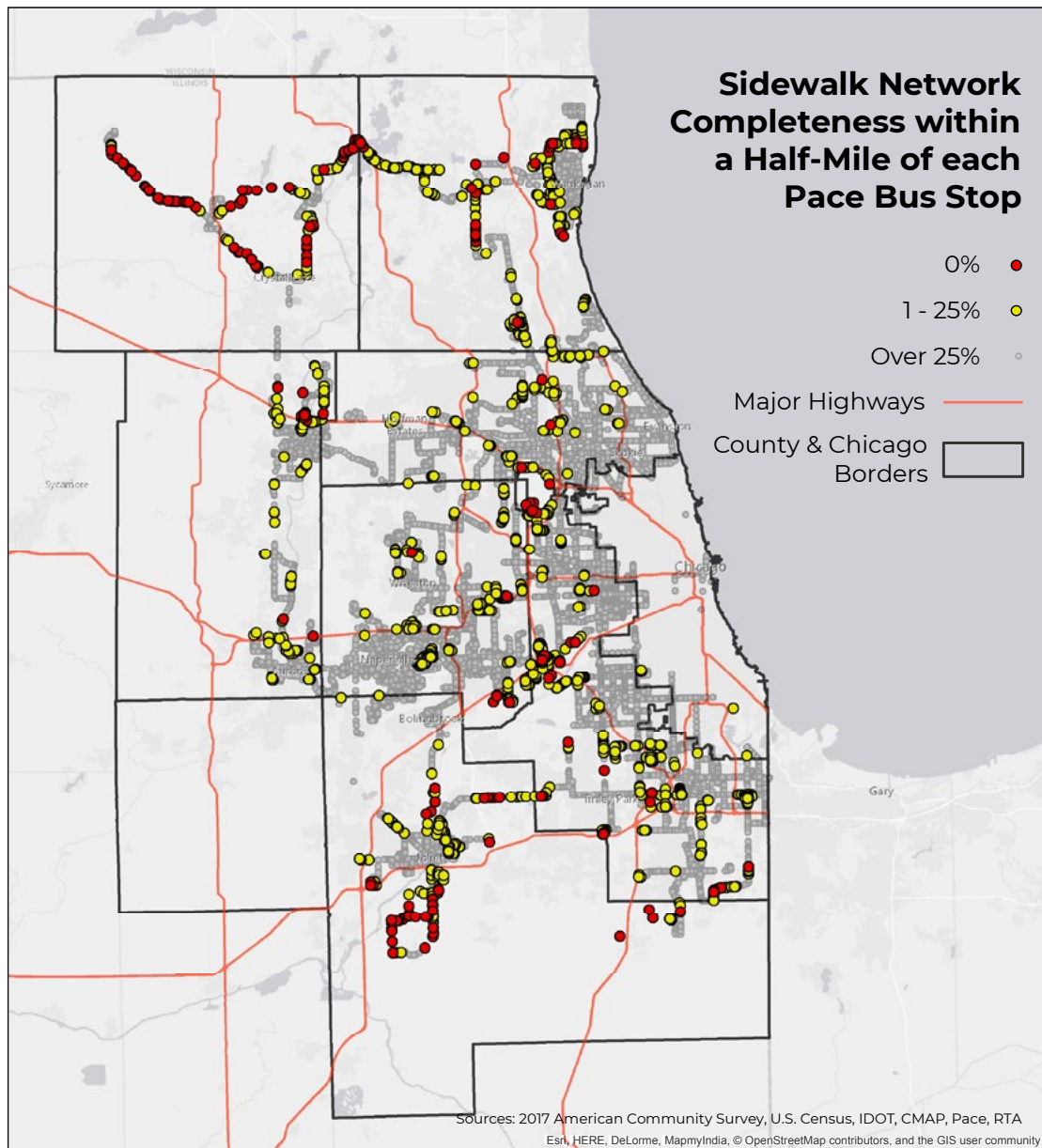
Note: 100% completeness means there are sidewalks on both sides of all streets radiating from a specific bus stop for the specified distance (either ½ or ¼ mile). A bus stop with sidewalks on only one side of all streets radiating from it would have a sidewalk completeness of 50%.

SHARED MOBILITY: CARS AND BIKES

A major shift in mobility has resulted from the growth of transportation network companies (TNCs),[17] like Uber and Lyft, which provide private demand-response service via an app. These TNC rides, which are provided by drivers who use their own personal vehicles, take customers to a destination chosen by the rider. The availability of these services is greatest in more dense areas like the City of Chicago where there are many requested rides in a smaller geography. While services like Lyft and Uber are available in the suburbs, and do increase options for people that are ambulatory, wheelchair-accessible vehicles (WAVs) may not be widely available through this service. Users have the ability to request a WAV, but availability is not guaranteed and wait times may be high.

Regulation of TNCs with regard to serving people with disabilities is evolving. The City of Chicago requires TNC providers to be accessible to people with disabilities, and customers have the option to request a wheelchair-accessible vehicle. This means that in Chicago, TNCs must provide services to people with disabilities by either connecting them to WAVs that are a part of their own fleet, or they may provide the service through an outside vendor. According to MPC's research, none of the Chicago suburbs have this same requirement. This has resulted in differing availability of TNCs to people with disabilities depending on geography. Advocacy groups have asked for regulations that would require providers to deliver equivalent response time for trips with WAV vehicles as those with non-WAV vehicles, and that WAV vehicles comprise a set percentage of the fleet to ensure availability when requested.

Some companies are providing car sharing options, which let drivers reserve a personal vehicle to use for a few hours, similar to car rental. Car sharing offers minimal accessible options but it is possible to request a vehicle with hand controls from ZipCar, a popular car-sharing service in Chicago.

Currently there are no accessible bike-share options in Chicago, such as handcycles, tricycles or tandems.

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[17] In the City of Chicago, these services are called transportation network providers (TNP)

5 INDEX OF FIXED-ROUTE AND PARATRANSIT SYSTEMS

To evaluate the comprehensive accessibility of public transportation, MPC worked with a student team from the University of Chicago's Harris School for Public Policy to develop a regional transit accessibility index.[18] The index is comprised of two equally weighted components: the fixed-route index and the paratransit index.

The fixed-route index was developed based on a set of weighted characteristics largely adapted from the Chicago Metropolitan Agency for Planning's transit availability index, which includes the following:

- **Frequency** — average number of times a stop in the area is visited by a fixed-route transit service (bus or train) vehicle during one week.

- **Proximity** — a measure of the average distance one must travel to reach the nearest transit stop or station.

- **Connectivity** — the number of activities that can be reached from each area using a single direct transit route without transferring.

- **Walkability** — sidewalk availability was combined with environmental factors such as block length and population density, plus presence or absence of amenities like supermarkets or schools.

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[18] https://datahub.cmap.illinois.gov/dataset/access-to-transit-index

Figure 9 shows the fixed-route transit availability index. More urban dense and walkable areas, which are more easily served by fixed-route transit, have the highest scores.

## Figure 9. Fixed-Route Transit Availability Index
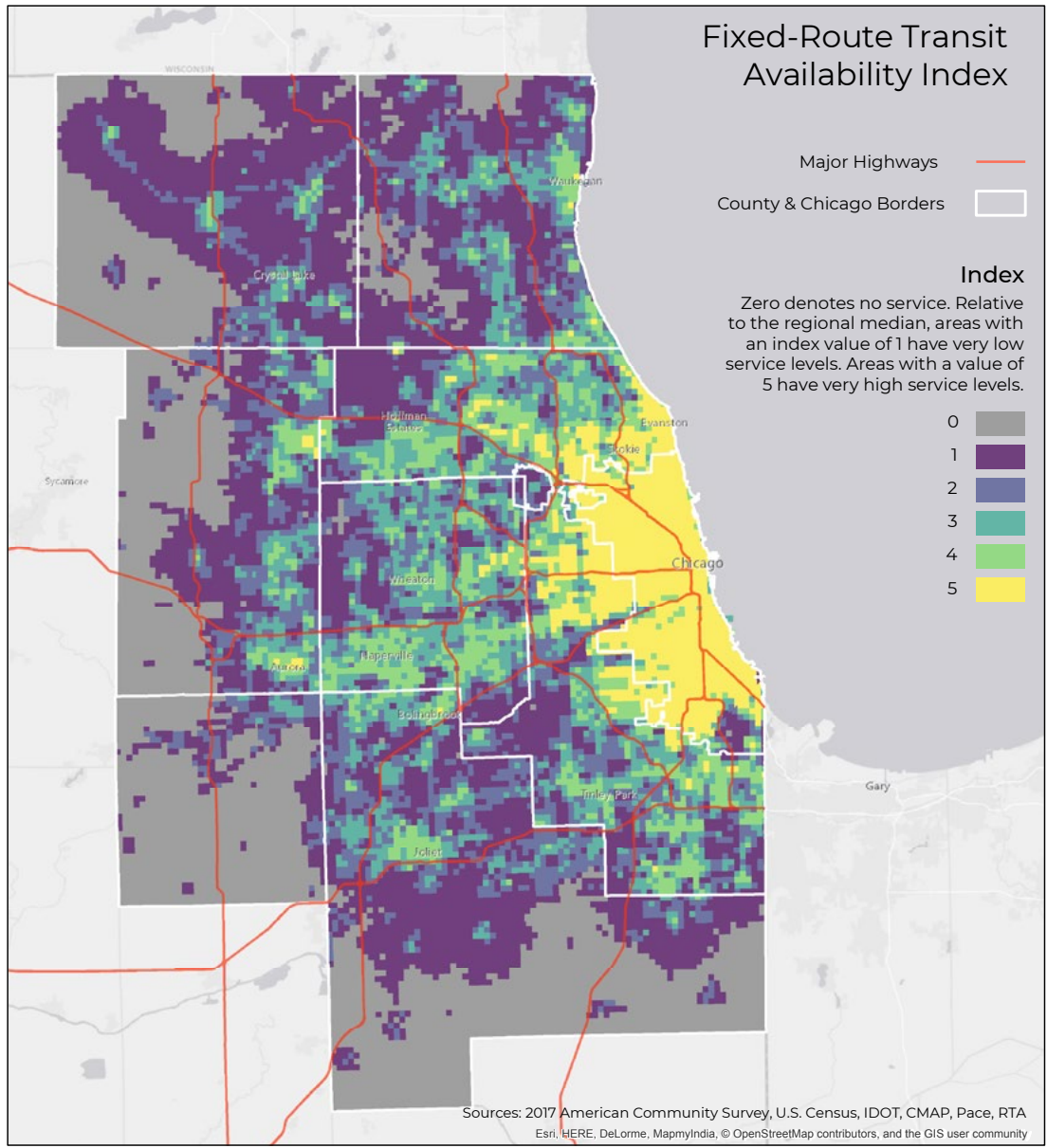
The paratransit index is made up of four equally weighted components, and is a measure of access to three types of services: ADA paratransit, Pace On Demand (formerly Call-n-Ride), and Dial-a-Ride community services operated in partnership with Pace. The components measured in the paratransit index are:

- **Service Span** — measure of the hours per week that one of the three service types is available in each area.

- **Call-in Flexibility** — measure of how far in advance a user has to reserve a ride to use the service, with longer required advance reservation times receiving lower scores.

- **Service Count** — measure of how many overlapping services are available in each area.

- **ADA Eligibility** — location is within the ADA paratransit service area — within ¾ mile of an eligible CTA or Pace bus or rail station.

Figure 10 shows the extent to which one or more paratransit services is available. The areas shown in yellow or green have more higher quality services, which means riders have service during more hours of the day, and may have multiple service options.

Figure 10. Paratransit Index
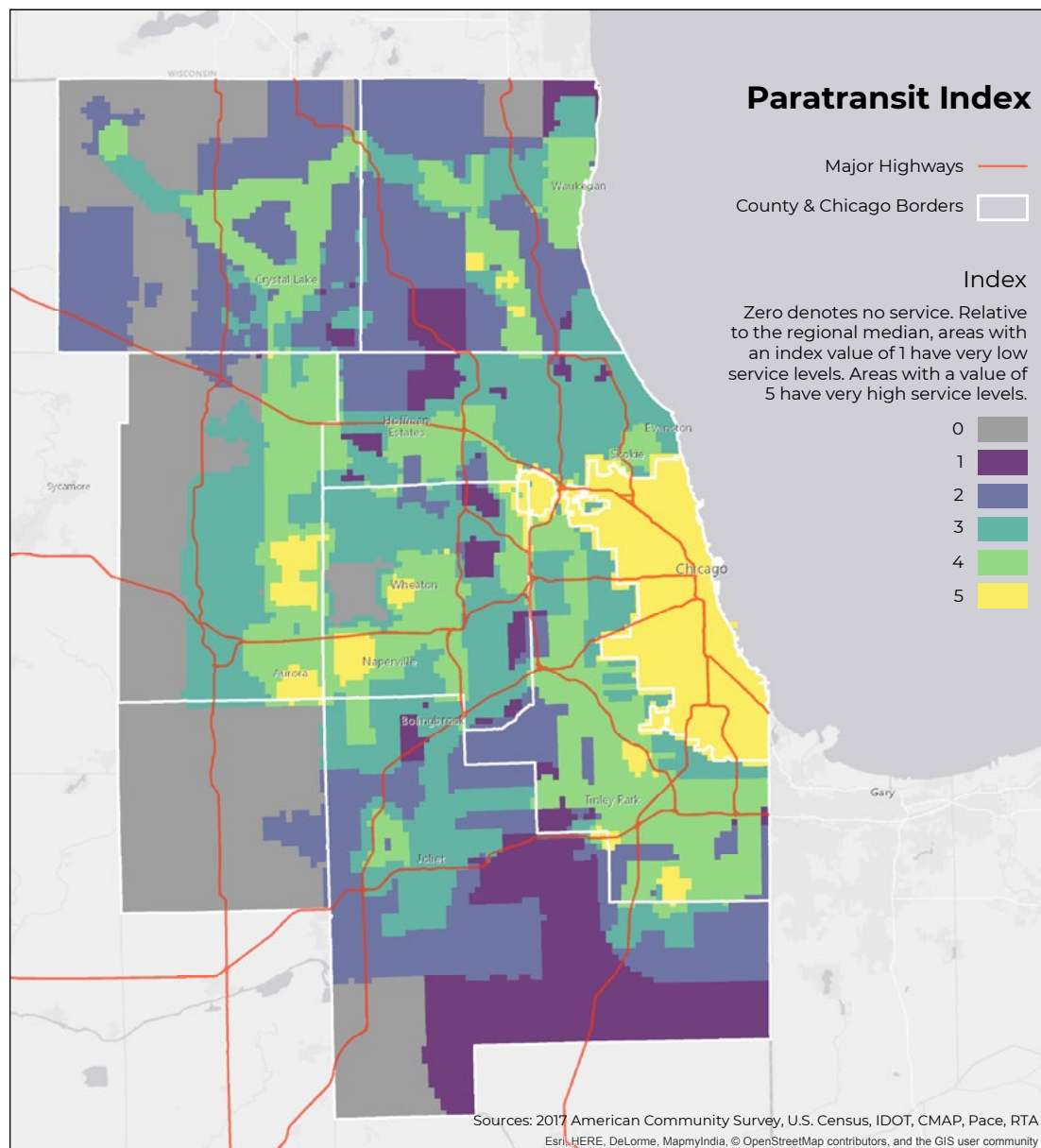
As a result of the fragmented system described in the previous section, people's ability to get around using any combination of transit and paratransit services varies significantly across the region. Figure 11 shows the index of fixed-route and paratransit availability.

Figure 11. Index of Fixed-Route and Paratransit Availability
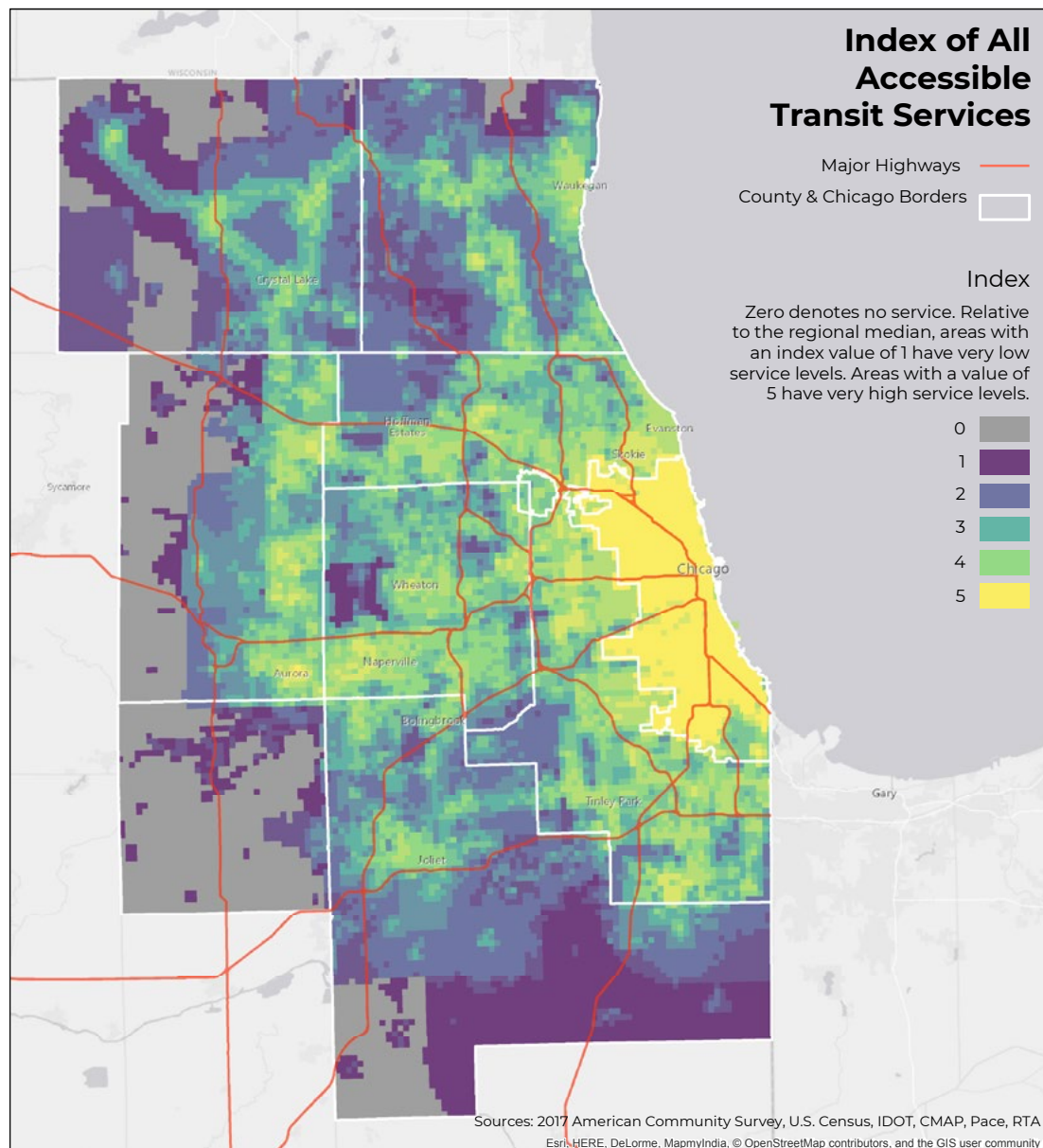
As noted previously, an important facet of accessibility is the number of hours per week a person can access public transportation. In the case of on-demand paratransit, the hours of available service often do not include evenings and weekends. This can be very limiting in terms of the ability to maintain full time — or even part time — employment. It is also important to acknowledge the impact for many people of being unable to get around via public transportation during nights and weekends, when many family or social activities may occur. Figure 12 shows the variation in accessible paratransit availability between weekdays and weekends.

Figure 12. Accessible Paratransit Availability on Weekdays and Weekends
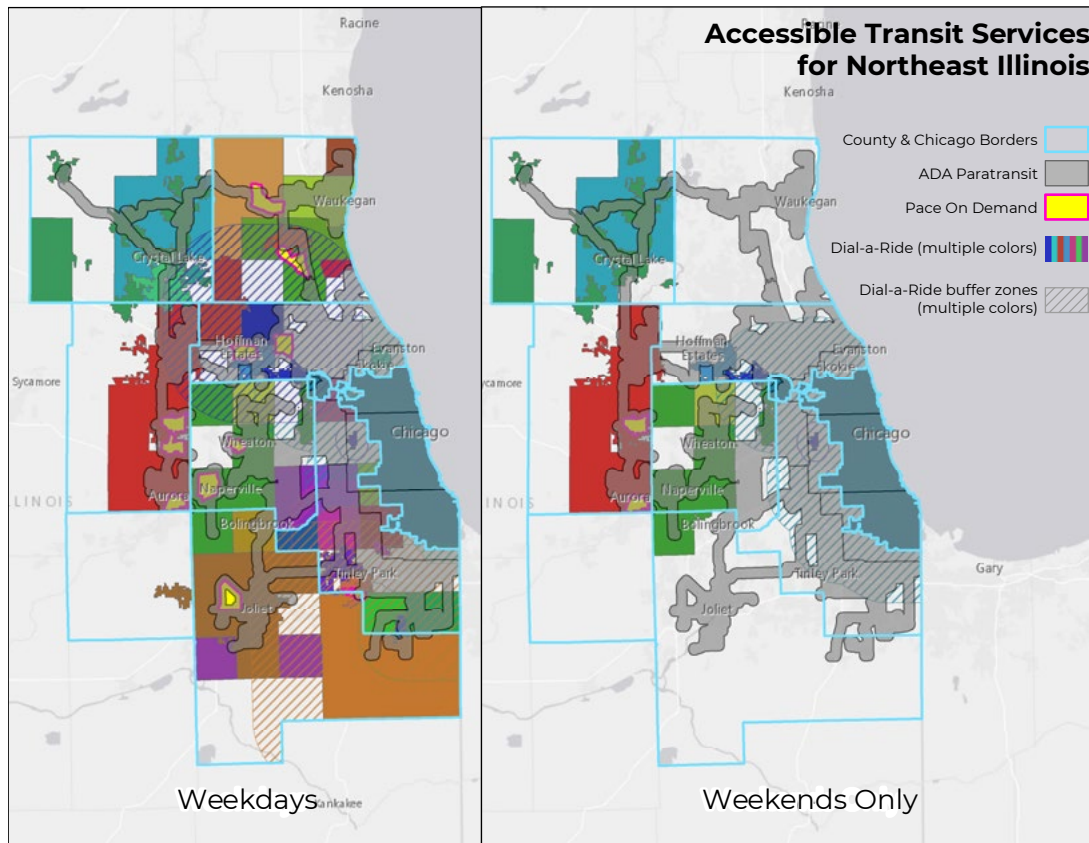
PROFILE
MICHELE »

"The winter in Chicago is already depressing enough when it's cold and bleak — cabin fever is real, and to not be able to get somewhere because of accessibility, it's a bummer."

Michele Lee enjoys trying new restaurants. She is savvy person whose Instagram photo of a well-executed entrée would inspire copycat reservations from her friends and followers. A resident of the West Loop — where construction cranes tower above hyped new bars and restaurants — Michele is right at home in her neighborhood. She watches storefronts open from her windows.

But even nearby dining requires planning and logistics. Michele uses a power chair after a college car crash paralyzed her from the chest down, so something as simple as a missing ramp or curb cut can keep her from getting in the door of an "accessible" establishment. Other parts of our city and region, they up the ante.

"I kind of have to stick to my neighborhood, and I don't get to explore as much because of transportation and accessibility constraints," Michele said, adding, "I'd love to go to Wicker Park more. There are so many bars and restaurants. Big Star, Violet Hour, Mindy's..."

She added, "But the Damen Blue Line stop is not wheelchair accessible. There's no elevator, only stairs. Especially in the winter, when some Piece Pizza or Mindy's Hot Chocolate could really hit the spot, because of my wheelchair I can't go. It sucks. The winter in Chicago is already depressing enough when it's cold and bleak — cabin fever is real, and to not be able to get somewhere because of accessibility, it's a bummer."

The truth is, Michele can afford to live in a dense, transit-rich hub. Tricky as the West Loop can be, it is a haven. Michele moved from Glenview years ago because getting home to the suburbs from her downtown office took three hours.

"Many people with disabilities are underemployed and one reason is lack of access to transportation, not because they cannot work," Michele said. "The reason I chose where I live is because it's directly on the bus route that goes to my office. I was very intentional about it. I'm kind of stuck, because of where I work, where I can live."

SECTION 2:
Recommendations

6 METHODOLOGY FOR DEVELOPING RECOMMENDATIONS

To address the systemic challenges presented in chapters 1 to 5, MPC developed a series of recommendations presented here. These recommendations were developed by engaging with nearly 100 people through one-on-one interviews, focus groups, and meetings. MPC presented to the ADA Advisory Committee at each of the service boards, to the RTA Transit Access Citizens Advisory Board, and to the Section 5310 working group. MPC consulted with county DOT officials and paratransit service managers for all counties within the RTA service area. Representatives from the area's Centers for Independent Living were contacted for their expertise in mobility issues for the disabled community. MPC held focus groups at Access Living, Shore Koenig Training Center, and with a group of organizations representing older adults. MPC conducted numerous one-on-one interviews with paratransit users to hear first-hand the mobility challenges they face. RTA's mobility outreach coordinators were interviewed to understand how people with disabilities learn about mobility services and what kind of training is available. MPC also interviewed a number of providers operating outside the region.

MPC synthesized the qualitative findings from our outreach process with a broad literature review to develop a list of common problems and themes. MPC then worked with a technical committee made up of transportation experts, paratransit users, and advocates to refine these themes and develop the set of recommendations presented in this report.

7 IMPROVE SERVICE COORDINATION

RECOMMENDATION #1:
Establish a regional mobility coordinator.

Municipal, township, and county boundaries play a significant role in our travel options, despite the fact that crossing jurisdictions to work, shop, or visit the doctor is routine. Unfortunately, service conditions are not consistent across these arbitrary divisions. For instance, paratransit service hours end much earlier in western Cook County than in Chicago, despite many trips crossing between Chicago, Oak Park, Cicero and other nearby communities. To better align adjacent services, the region needs a Mobility Coordinator, which could take the form of an individual position or a council. Coordination should occur between transportation staff and personnel from other agencies that provide transportation services but for whom transportation is not the agency's primary role, such as human services, housing, and agriculture. This position or council could be housed at CMAP, RTA, or IDOT.

The main objective of the Coordinator would be:

- Facilitate collaboration between different units of government

- Identify gaps and needs in service

- Work with planners and providers to create accessible mobility solutions and a more seamless service experience

- Better align paratransit with fixed-route services, facilitating easier and more reliable transfers

- Lead regional mobility management across all of the region's transportation providers and services

Additionally, to provide more localized coordination, each county should establish a County Mobility Manager to interact and collaborate with the Regional Coordinator.

RECOMMENDATION #2:
Provide consistent demand-response services in counties.

Most collar counties including DuPage, Kane, McHenry and Will have a coordinated Dial-a-Ride service covering only portions of the county. These coordinated services — such as Ride DuPage, Will Ride and MCRide — include some, but not all of the non-ADA Dial-a-Ride services available to residents of townships or municipalities in their county. The structure of each county's respective coordinated service is unique. For example, Ride in Kane and Ride DuPage require that individual communities sponsor services with a local match.

PRACTICE EXAMPLE
Will County Mobility Manager[19]

Will County established a mobility manager position in 2010 after conducting a coordinated paratransit study.[20] The mobility manager is responsible for leading the paratransit coordinating council to foster, organize and guide coordination efforts in the County. The manager also evaluates programs, identifies funding sources, writes grants, and collaborates with other county mobility managers.

[19] https://www.willcountyillinois.com/County-Offices/Special-Services/Will-Ride-Dial-A-Ride

[20] http://www.rtams.org/reportLibrary/2058.pdf

Local sponsors are then empowered to determine rider eligibility and trip purpose rules for rides beginning within their jurisdiction. Therefore, service conditions can vary significantly within each county. With such structures, not all jurisdictions choose to participate, resulting in inequitable transportation services among communities within the same county. MCRide, on the other hand, is managed centrally by the McHenry County DOT and has unified eligibility and trip purpose rules. This is partially enabled by McHenry County's establishment of a centralized funding source that lessens the burden on individual communities. If each county establishes a county-level mobility manager as provided in Recommendation #1, those managers can develop solutions to ensure such consistency. One possible model is to create a program where funding throughout each county is aggregated to fund a single countywide system, allowing equivalent services to be provided to all participating communities.

According to the National Center for Mobility Management, mobility management is designed to respond to the individual needs of each rider, regardless of where they live or how they choose to get around. Mobility management thrives when there is a coordinated effort and combining of assets among private organizations and public agencies, all working together in pursuit of better service at lower costs.

"If it's going to cost me to have peace of mind and travel with ease, I'll spend extra dollars."

Andre Johnson is in a make-it-happen moment. An entrepreneur with a background in engineering, in 29 days he will attend a Pitch Night through a renowned Chicago technology incubator. In 29 days, he will pitch his business idea to the public and investors, people with the power to make or break his entrepreneurial dreams. He needs to knock it out of the park.

That means for Andre, right now, every moment counts. A wheelchair user, he cannot afford to wait around for a late paratransit van. He finished his bachelor's degree and hustled, so he has earned himself a few cab and UberWAV rides.

PROFILE
« ANDRE

"If it's going to cost me to have peace of mind and travel with ease, I'll spend extra dollars," Andre said. "Stuff happens on the train. On the bus, people will have to move for me and they won't want to. Of course I could save money if the system were more efficient — it makes me angry — but I'm going to do what's best for me, for my mental state, for the things I'm trying to do in the world. I'm gonna worry about that, rather than how screwed up the system is."

Andre's company, LiveEquipd, is a platform that empowers people with paralysis-related disabilities and life needs to find products, assistive technology and innovations they need. This technology serves as a care tool for those health professionals that serve them as well.

LiveEquipd, and Andre's relationship to Chicago's 1871 incubator, both stemmed from gun violence. Shortly after high school graduation, he and a friend were carjacked and shot. Andre woke up with a spinal cord injury. His friend didn't wake up.

"That was my brutal introduction to disability," Andre said. "I was left with — what do I do now? How am I going to navigate this?" A series of hospital stays, nursing home stints, coincidences, and hard work led Andre to create LiveEquipd.

Andre knows how much easier life could be for people with disabilities. Paratransit vans would be trackable on your cell phone. More CTA stations would be wheelchair accessible. Rides would not be over two hours late. The Chicago region's transportation network, Andre can't fix himself. But with his business, LiveEquipd, he can do his best to make everything perfect.

8 UNLOCK TRANSPORTATION OPTIONS WITH INFORMATION

People with disabilities need extra information to plan a safe trip. The consequences of making a mistake in this planning process are high: being stranded on a platform with no elevator or getting off at a bus stop without a sidewalk to the final destination. In practice, the first time a person with mobility issues takes a trip, it takes a lot of homework. Riders told us that they regularly call their destinations for advice on the area, or call the transit agency for a rundown of a stop or station. One rider told us that she even uses Google Streetview to try to assess sidewalk conditions leading to a transit stop. If reliable real-time information were available and were better integrated into transportation and mapping apps, fixed-route service could be a much more viable option for many with mobility limitations.

Looking beyond bus and rail, people need a one-stop-shop for all mobility services in the region. The existing call center for ADA paratransit and Pace On Demand service is not set up to provide comprehensive information but to book rides for these specific services only. Current trip planning information sources, such as apps, do not include paratransit or community-based services; nor do they reliably reflect service outages for accessible features. Any app-based service should be designed to work

just as well for users with disabilities as for those without.

RECOMMENDATION #3:
Centralize information on available transportation services.

Pace has spent considerable resources improving its call center, which can help riders determine which services they are eligible for and assist them in making reservations. However, only services affiliated with Pace are included, and even that list is not comprehensive. Riders need a centralized information source for all mobility services in the region. An ideal system would provide information on all public, private, and nonprofit transportation services available to riders for their specific trip. ADA paratransit riders should be provided information about the full range of alternative mobility options so they can consider transportation options beyond paratransit that may provide them with increased flexibility. The online tool and/or call center would have information on provider service hours, rider costs, method of payment, vehicle types, location, and populations served. An operator or online questionnaire would be able to gather enough information to determine eligibility for all providers in the region. Most importantly, the centralized resource would allow seamless scheduling between services, and would provide confirmation via callback, email, or text.

Many riders we spoke to expressed frustration that accessible transit services are not keeping up with technological advances in other sectors, such as the ability to reserve rides online instead of having to call and wait on hold with a call center. By upgrading the consistency, technical capabilities, and quality of information available, many more people will be able to navigate our transit system

PRACTICE EXAMPLE
FindMyRidePA

FindMyRidePA is a Pennsylvania-based service designed to help all travelers identify and evaluate options to meet their transportation needs. In some cases, users can even book a trip directly through this service. Currently, FindMyRidePA is available in seven counties in and around Harrisburg, with plans for future expansion. At this time, the transportation services available through FindMyRidePA are limited to local public transportation options (i.e., fixed-route buses that operate on fixed schedules and shared-ride services) but will be expanded over time to include commercial services such as taxis and private buses, and other nonprofit transportation services.

better. RTA or IDOT should explore options for development of a One-Click type service. Concurrently, residents should be educated on how to use smartphone apps that have features such as "show step-free options."

RECOMMENDATION #4:
Improve and expand mobility outreach and travel training programs.

RTA travel training is available to assist customers with disabilities and older adults in determining how to make trips via public transit.[22] This training includes an assessment of the entire trip from home to destination, including access to pick-up points. A travel trainer explains the features of public transportation, teaches riders how to use it, educates riders on their rights as passengers, and accompanies riders while they learn their trip. It is a valuable resource, but the program has a limited capacity. There is only one mobility outreach coordinator per county. For certain types of disability, there can be a very long waitlist, up to six months, to receive travel training. An expanded program would have a higher capacity and could proactively recruit new riders at schools, social service organizations, senior centers, job centers, and disability advocacy organizations. The target should be providing training within no more than 60 days of a request. A key goal of the program should be to move riders from ADA paratransit service to the fixed-route system. A substantial ridership shift to the fixed-route system would likely more than offset the cost of an expanded outreach program.

PRACTICE EXAMPLE

GoVermont Trip Planner[21]

The GoVermont flexible trip planner allows a person to enter any origin and destination in the state using a map or a menu and identify options for travel.

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[21] https://plan.govermont.org/

[22] https://rtachicago.org/rider-resources/accessible-transit/mobility-management-program

Additionally, efforts should be made to develop travel trainer competency for professionals who interact with people with disabilities, beyond those employed by the RTA.

RECOMMENDATION #5:
Incorporate real-time accessibility information into trip planning tools.

"Before leaving home I check the CTA's website to make sure the elevator I will need is working, but recently CTA didn't report a malfunction on their website. At the Lake Street station the elevator was broken and I had to get back on the train and go to another station."
— Daryl, Chicago

Riders with disabilities need more information than people not experiencing a disability. They need to know which stations have facilities to get them to and from the boarding platform, and that their path of travel will be safe and accessible. RTA's Trip Planner and Google Maps both allow users to specify the need for a wheelchair-accessible trip, and will route trips away from stations without elevators or lifts. Elevator statuses for CTA 'L' stations are also available online, and riders can sign up for text or email alerts for specific lines. But this information is only as accurate as the data behind it. For instance, if an agency does not report elevator outages in real time, passengers could still end up getting stuck. Nearly every rider we spoke to had a story of an unexpected outage that forced them to

[23] https://nationalcenterformobilitymanagement.org/milwaukee-county-transit-system-flexible-approach-to-partnerships/

PRACTICE EXAMPLE
Milwaukee County Transit System's New Freedom Program[23]

This program, which helps seniors and people with disabilities ride the bus safely and independently, took a multifaceted approach to make fixed-route transit easier and more appealing. The program trained drivers to present a welcoming face to people with disabilities, and to help them ride the system. The program also implemented a barrier removal project targeting non-ADA compliant bus stops, which increased boardings at those stops. The program has established partnerships with public health nurses who can disseminate information on the different public transit training programs to a broader segment of the population. Overall, the program was successful at shifting a substantial number of trips from ADA paratransit to the fixed-route system, which provided riders with more flexibility in their transportation and preserved resources for the ADA paratransit system.

backtrack, going far out of the way to reach their destination.

Information on elevator and escalator outages should be consistently incorporated into trip planning apps through application program interfaces (API) that each transit agency can provide to app developers on the real-time status of features used by people with disabilities throughout the system.

Other information like flights of stairs in a station, steepness of sidewalk grade, sidewalk condition, and presence of crosswalks or pedestrian signals would empower travelers with disabilities to take routes that accommodate their needs. Often, uncertainty about these elements drives riders to a door-to-door service instead of a fixed-route trip. The Ventra[24] fare platform and app managed by CTA is a powerful tool that should be leveraged to include accessible trip planning. Additionally, the app could be leveraged to provide crowdsourced information on system problems and accessibility barriers, not unlike the Waze[25] trip planner, which allows drivers to report problems on the roadway system.

RECOMMENDATION #6:
Require ride-hailing services to provide information on fixed-route transit.

Ride-hailing services like Lyft and Uber should be required by the jurisdictions in which they operate to provide information on fixed-route transit options within their apps so that those services can be used for access to fixed-route transit. This will allow riders to more easily use ride-hailing services to access fixed-route transit.

PRACTICE EXAMPLE
AccessMap and OpenSidewalks

AccessMap is a tool created by the Taskar Center at the University of Washington that incorporates information on road steepness into a trip planning tool. It displays all the streets in Seattle based on their percent incline, and it allows users to set their preferences for maximum grade. Chicago does not have the same topographical challenges as Seattle, but this is an open-source example of how accessible information could be incorporated.

OpenSidewalks is a project in OpenStreetMaps (US) to create a new digital specification for representing sidewalk data. Currently, on platforms like OSM and Google Maps, sidewalks are treated as addendum to streets with little to no unique information. OpenSidewalks allows users to include information on sidewalk condition, elevation, and location of curb ramps.

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24 https://www.ventrachicago.com/

25 https://www.waze.com/

9 IMPROVE WAYFINDING

For universally accessible transportation, it is important that wayfinding be useful for people with a range of abilities, including for those with hearing and visual disabilities. Currently, CTA buses and trains provide both audible and visual announcements, and all Pace buses are equipped with an audio enunciator and visual display that automatically announces stops, points of interest, and other important information. All buses are also equipped with an exterior enunciator, which provides passengers at bus stops with information about the bus's route and its destination to those waiting at the bus stop. Each Metra train has at least one accessible car, where audible and visual announcements are provided.

"I rely on my hearing to know when it's safe to cross a street, so areas with lots of ambient noise make it really hard to cross confidently. People honking, the 'L', sirens, highway traffic — it all freezes you. Audible pedestrian signals are so helpful in those situations."
— Ray, Glen Ellyn

Signage consistency is very important to people with visual disabilities as they look for specific visual cues to locate information. When information is provided using different fonts, colors and icons, it can be difficult for visually disabled people to find what they need. Ensuring that audible and visual information is clear and consistent throughout the transit system will go a long way to making fixed-route transit easier to use for people with disabilities.

RECOMMENDATION #7:
Standardize wayfinding among transit providers.

RTA has developed an interagency design standards manual available for use by CTA, Pace, and Metra.[26] The agencies have adopted most elements of the standards, which are used when re-signing a stop or station. However, there is a great deal of variation among already existing signage. CTA, Metra, and Pace should continue to work together to standardize their informational signage so the same information is located in the same place in stations and at stops. Additionally, information on service and station conditions should be consistently posted at station entrances so that riders with disabilities can make informed decisions before entering. A pilot program by the RTA showed the need for this effort.

"At Union Station when it's busy they deactivate escalators for crowd control, but they don't warn people who depend on them until it's too late. I can't move very fast and the crowds knock me over. If they posted this information I could make other plans and avoid danger." — Vicki, Brookfield

RECOMMENDATION #8:
Increase audible cues at intersections.

People with vision problems often cannot see the signs at crosswalks indicating whether it is safe to cross or not. However, sound cues can be played when it is safe. Municipalities should install these audio cues — usually as part of pedestrian signals — at all busy intersections throughout the region.

The Chicago DOT and the Mayor's Office of People with Disabilities are working on a federally funded pilot project to develop best practices for the design and installation of audible pedestrian signals. The research will address challenges in hearing a beep or feeling a vibration on a noisy downtown street or crosswalk located under 'L' tracks. The study will examine six different types of intersections at sites including the Loop, university campuses, and six-legged intersections. As of 2019, the City of Chicago had 11 audible pedestrian signals but plans to add 100 more by mid-2021. Moving forward, any new traffic signals, reconstruction projects, and modernizations must include audible pedestrian signals, according to the Chicago Mayor's office of People with Disabilities.

[26] https://www.rtachicago.org/sites/default/files/documents/plansandprograms/SignageDesignManual.pdf

PROFILE
CATHY >>

"I've used the door-to-door service a few times when the weather is bad, but it's challenging because it's less predictable."

Cathy Garcia leads a pretty normal life. On a typical weekday she wakes up in her home in Des Plaines and shares a meal with her roommates before commuting a short distance to Morton Grove to work at a small fulfillment center. On the weekends she may catch a movie, visit family, or go shopping. There is only one small difference: Cathy has an intellectual disability and relies on a number of supportive services to lead her active life.

Cathy lives in a group home, or community-integrated living arrangement, where she and her roommates cook, clean and live communally with supervision from independent living coaches who work to help them achieve their goals and fully participate in community life. Most days she travels to Shore Community Services in Morton Grove where she participates in their vocational work program. Shore provides her with job training and helps her gain work experience through community partnerships.

The linchpin that holds Cathy's independent lifestyle together is accessible public transit. Because of her disability, she is not able to drive. "I take Pace everywhere," she said. "I've used the door-to-door service a few times when the weather is bad, but it's challenging because it's less predictable. Sometimes it comes really early and sometimes it comes late." She finds that using the bus allows her to keep a routine schedule, which allows her to work.

Customer service is especially important to Cathy. "If I'm not sure where to get off or if there's a service change, I ask the bus driver for help. Usually they're really nice." Like most, she has experienced negative service as well. "Sometimes the driver is rude when you ask them a question. And in the winter, sometimes the bus stations aren't shoveled." Nonetheless, she is pretty satisfied with the service which allows her the freedom to live and work independently.

10 ENGAGE PRIVATE-SECTOR TRANSPORTATION SERVICES

Smartphone technology has helped create an entirely new multi-billion dollar transportation industry in the form of transportation network companies (TNCs) such as Uber and Lyft. For those who can afford TNCs, also known as ride-hail services, and who are comfortable using demand-response technology, this new option can revolutionize travel, especially in the suburbs. Perhaps the greatest benefit is that it allows people to be far more spontaneous. Ride-hailing can complement public transit services by providing one-way trips, such as a return trip after fixed-route or paratransit service stops running. However, for many budget-conscious people, ride-hail services serve only as an emergency backup. Additional limitations are that these services may be less appropriate for people with mobility aides or with cognitive disabilities, given that drivers are not professionally trained to handle riders with special needs. To make ride-hailing services more user friendly, driver training on how to serve people with disabilities will ensure a positive and more consistent experience.

It is critical that any service provide equivalency for people with and without disabilities — that means equivalent wait times for a ride. It is not enough that a provider simply has wheelchair-accessible vehicles (WAVs)

available — there need to be enough in circulation to provide equivalent service to all other riders. It is also important to have clear policies in place regarding support animal use.

All transportation services must be built from the start with accessibility in mind so that the full experience — from using the app to communication during the ride — goes smoothly.

RECOMMENDATION #9:
Encourage additional training on accessibility for drivers of ridehail vehicles.

Transportation network companies such as Uber and Lyft provide only minimal information about rules and regulations for serving passengers with disabilities in simple e-mail reminders to drivers. That minimal education has resulted in drivers routinely refusing to provide service for people with disabilities, such as those with service dogs. The companies should provide incentives for their drivers to participate in additional educational opportunities and sensitivity training on providing service to people with disabilities.

RESOURCE
OpenDoors

Open Doors is a 501(c)(3) non-profit organization based in Chicago, Illinois, that was founded in 2000 for the purpose of creating a society in which all persons with disabilities have the same consumer opportunities as everyone else. They provide ongoing training for non-union bus operators.[27]

"Uber and Lyft drivers are way too dependent on GPS, and when it's wrong you can end up somewhere unsafe or become really disoriented. Once, an Uber driver dropped me off on the wrong block and drove away without double-checking. Because of my blindness, I was completely lost. It was terrifying. They really need better training." — **Karyn, Glen Ellyn**

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[27] https://opendoorsnfp.org/workshopsconferences/current-projects/featured-project/

RECOMMENDATION #10:

Enforce adherence to service standards.

Customers who are refused service by a TNC in Chicago can call 311 to complain about their negative experience, and the fine is passed on to the TNC. There is no requirement that the TNC re-educate the driver, and this fine is only applicable within the City of Chicago. The City of Chicago and other municipalities should track 311 complaint data and follow up with companies on drivers that provide poor service, including requesting that they be dropped from the driver rolls if repeated complaints occur.

RECOMMENDATION #11:

Develop a pilot program to subsidize ride-hailing services to supply ADA-complementary services.

Given the high cost to operate paratransit service and its low flexibility for users, some regions are exploring the use of subsidized ride-hailing services to provide some demand-response services instead. The Mobility Coordinator can work with ride-hailing providers to create pilot programs that provide affordable on-demand rides for eligible users, and include an evaluation component to comprehensively measure the actual benefits and costs.

While this option has potential, it would also require a significant number of contractually established provisions for riders with disabilities to receive adequate service. Additionally, there are large segments of the population, particularly older people, who are skeptical of using apps, especially for financial transactions, given the number of scams that target older people. In a survey by AARP in 2018, less than one-third of those over the age of 50 had used ride-hailing apps, and two-thirds said they were not likely to do so

PRACTICE EXAMPLE

MBTA partnership with Lyft, Uber and Curb

Since 2016, Boston has been piloting the use of ride-hailing companies to provide paratransit service as a supplemental service that is available to people who are ADA eligible. Riders hail a vehicle through the app, pay the first $2 of the fare, and anything over a $42 total trip cost. This transitions a substantial number of riders out of the costlier service for some of their trips, and simultaneously improves their mobility outcomes. However, the program has struggled with different response times for WAV vehicle requests. The pilot has been so popular that MBTA has had to institute a monthly cap for riders, illustrating how much demand there is for high-quality accessible mobility.

in the coming year, citing in part concerns about safety and privacy. However, for those who become comfortable with the service, the flexibility can be transformative. These services can provide people who no longer feel able to drive greater comfort in giving up their driver's license, while allowing them to retain mobility and remain connected to their social network. The availability of wheelchair-accessible vehicles and wait times for arrival would need to be taken into consideration.

PRACTICE EXAMPLE

Grand Rapids Paratransit Pilot[28]

The Rapid, the transit agency serving Grand Rapids, Michigan, has launched a six-month pilot paratransit program called Rapid On Demand. The service allows paratransit users to summon rideshare vans to take them where they need to go, when they need to go, using a smartphone app.

RESOURCE

AARP

AARP provides educational material and training to older adults on many topics related to mobility. Their Ride@50+ program[29] featured a 90-minute workshop to teach their members how to use ride-hailing platforms like Lyft and Uber.

[28] https://nextcity.org/daily/entry/now-in-grand-rapids-paratransit-thats-ready-when-you-are

[29] https://www.aarp.org/auto/driver-safety/info-2018/uber-lyft-guide.html

11 UPGRADE TECHNOLOGY TO THAT CAN IMPROVE THE CUSTOMER EXPERIENCE

From a rider perspective, the experience of using paratransit can be cumbersome and frequently involves long trips. Most paratransit users we spoke to had at least one story where an expected short trip became a multi-hour affair. Modernized dispatching software has the potential to improve routing and be more accommodating to real-time schedule modifications, which should greatly improve the customer experience. Additionally, people with disabilities deserve improved customer-facing tools and apps that are similar to other transportation services currently available.

Fortunately, Pace has recently announced upgrades to its dispatching software, which will enhance the user experience. With new funding in the state capital bill passed in June 2019, Pace will also be able to support online booking and a mobile app for riders by the end of 2020. Riders will have access to an Interactive Bus Response telephone system that will provide an audible notification that an ADA ride is arriving shortly and enable cancellation of rides.

Paratransit TripCheck[30] will allow riders to view or cancel trips online without calling the reservation hotline. In the future, the app will allow the rider to track the vehicle as it approaches within 30 minutes of arrival. This app will enable text and email notifications of booking and cancelation confirmations, notification of imminent arrival, upcoming itineraries, and no-show alerts. These upgrades will be implemented in late 2019 and 2020.

Additionally, it is not yet common practice for demand-response operators to provide real-time information that can be incorporated into trip planning tools. While this data is currently provided for fixed-route services, which enables information to be pulled into apps like Google Maps, this is not yet the case for demand-response transit. No standardized data format has been established to be used by all transportation providers.

RECOMMENDATION #12:
Modernize routing and dispatching software.

"Everybody who uses paratransit has a story about being 'taken for a ride' because of a screwy manifest. One time I needed to go to shopping on Western and 95th. They put me in a van with somebody going to a hospital on Western and Division. That's at least 10 miles apart!" — Marcia, South Chicago

Suboptimal rider experiences related to Pace's dispatching software were one of the most common complaints we heard from riders. Some commonly reported issues include manifests that incorrectly put two rides that are very far apart on one vehicle, two rides with the same origin and destination in separate vehicles, and inflexible drop-off orders. This can result in late arrivals and rides that are longer than necessary. Some of the issues are a consequence of the ADA paratransit mandate. The service is an entitlement, meaning that no eligible ride can be refused. To manage costs, rides are provided in shared vehicles making multiple pick-ups and drop-offs, so there are some inherent structural inefficiencies. However, in recent years, dispatching software designed to optimize demand-response trips has become more widely available and more flexible. Pace should conduct a comprehensive review of its current software and performance and its use by dispatchers, ensuring that real-time optimization features are maximized. Pace should consider piloting a new version of Trapeze software

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[30] http://www.pacebus.com/sub/paratransit/tripcheck.asp

with a subset of users, or consider other options such as Ecolane, MUVE, TransLoc or Via. Since ADA paratransit is operated by different subregional providers, Pace can try piloting new or upgraded dispatching software in a small section of the overall service area or with a subset of vehicles. A single On Demand service area could also be a good candidate for a contained pilot.

RECOMMENDATION #13:
Introduce rider tools for ADA paratransit.

To improve customer satisfaction, Pace should introduce rider-facing tools (e.g. cellphone apps) that enable real-time views of ADA Paratransit vehicle location and updated pickup times by users. This would improve riders' ability to make decisions in real time based on ADA paratransit schedules and could reduce frustration given the longer on-time performance windows for ADA paratransit. Additionally, Pace should ensure that Ventra farecards can be used to pay fares for all types of rides including demand response and ADA Paratransit trips to improve ease of use of these services.

RECOMMENDATION #14:
Establish rigorous reporting requirements for service contractors.

According to the 2017 Access Living report *Transportation Delayed is Transportation Denied*, only 62% of surveyed paratransit pickups arrived on time (within the allowed 20-minute window). This is well below the 87.5% on-time performance rate reported by Pace. Of those trips that were late, 41% were over 40 minutes late and 16% were over an hour late. Pace should require GPS devices in all paratransit vehicles so data can be electronically reported. New software upgrades to be installed by Pace in 2020 should enable new types of reporting to facilitate this evaluation. Pace should use this data to run regular analysis on contractor performance and structure contracts to incentivize good performance.

RECOMMENDATION #15:
Integrate ADA paratransit scheduling with real-time fixed-route information.

To maximize access to fixed-route transit, riders should use paratransit for short connecting trips to a bus stop or rail station. However, it is difficult to do this in practice because of frequent paratransit delays. A 20-minute window is considered on time for ADA paratransit. This margin is sufficient for high-frequency routes like the 'L' but becomes problematic in suburban settings where a missed connection may mean an hour wait. Additionally, many paratransit services end before evening rush hour and cannot be used for a last-mile connection home from a work commute. Paratransit service schedules, including non-ADA Dial-a-Rides, should be coordinated with fixed-route schedules to encourage more transferring between the two services. Pace should also expand and better promote

subscription services, which provide a more consistent experience. We spoke with riders who use subscription service to successfully make daily connections to commuter rail. Unfortunately, for many Dial-a-Ride services, there is a long waitlist for subscription service.

RECOMMENDATION #16:
Establish ridership and cost reporting standards for all transportation services.

Currently, ridership data for non-ADA Dial-a-Ride services are incomplete or not conducive to a regional analysis. Having better data would allow a regional Mobility Coordinator to understand where substitution between services is taking place and where there are opportunities for consolidation or improvements. This would allow for a comprehensive understanding of how services are used and where demand is growing. All transportation providers, whether they are affiliated with Pace or not, should report ridership data in a concise and standardized way to the RTA for analysis. The RTA or state should provide assistance to providers about methods to ensure that data reported is as consistent as possible. When available, agencies and providers should report data regarding shared-use mobility ridership, and descriptions of services provided by non-traditional providers (ride-hail, microtransit, etc.). The cost of providing service also varies widely across the region, and comprehensive reporting could reveal opportunities for innovative financing. RTA is relaunching an enhanced Regional Transportation Authority Mapping and Statistics data warehouse platform, which can house this data.[31]

RESOURCE
Two-Variable Cost Allocation Calculator[32]

As a requirement of reporting to the National Transit Database (NTD), public transit agencies must be able to provide expense information by different travel modes, jurisdictions, and service types. Transit agencies must also understand the costs of different services for managing federal and state grants as well as pricing and planning for new services. The Two-Variable Cost Allocation Calculator is a tool to help transit agencies with the process of cost allocation.

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[31] http://www.rtams.org/

[32] http://www.nationalrtap.org/Web-Apps/Cost-Allocation-Calculator

RECOMMENDATION #17:

Establish demand-response transportation data specifications.

As documented in the Transportation Cooperative Research Program Report 210, there is no consistent format for disseminating real-time data on demand-response transportation like the general transit feed specification (GTFS), spearheaded by Google, which allows public agencies to publish their fixed-route transit data in a format that can be used for software applications and apps. A primary purpose of a transactional data specification is to enable demand-response services in the U.S. to more fully and easily participate in an era of "new mobility" by facilitating interactions among the software systems that manage such services. A transactional data specification sets forth the "vocabulary" and "syntax" for how packets of information about individual demand-response trips can be transmitted from one computer system to another. The RTA should establish a data format that all demand-response providers operating in the region are encouraged to use. This data would enable travel apps and routing tools to include real-time updates on vehicles and service conditions. The data could also improve overall coordination efforts and may bring down operating costs.

PRACTICE EXAMPLE

LADOT Mobility Data Specification[33]

Use of a common Mobility Data Specification (MDS) gives cities a cost-effective tool to actively manage private mobility providers and the public right-of-way. MDS allows cities to collect valuable insights through a shared data vocabulary and to communicate directly with product companies in real time using code.

RESOURCE

Transportation Cooperative Research Program Report 210

Development of Transactional Data Specification for Demand-Responsive Transportation

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[33] https://ladot.io/wp-content/uploads/2018/12/What-is-MDS-Cities.pdf

"I want others to understand that people with disabilities generally seek the greatest degree of independence possible."

Andrew Webb's commute to work downtown as a lawyer from his home in Glenview is basically the same every workday: A Metra train to Union Station and a bus to his office on Michigan Avenue. That keeps his rush hour travel relatively simple.

But one thing that can complicate Webb's journey is a shortage of accessible signage. Since an injury left him blind about a decade ago, he has relied on his other senses — namely hearing, touch and smell — to navigate our region.

Imagine that it's 5:30 p.m., and Webb wants to catch a Metra train home out of Union Station. Sighted travelers simply glance at the digital signs posted at the entrance to each platform to identify the number, destination and departure time of their trains. But when Webb stands before one of those signs, he hears only this: "Track number five... Track number five... Track number five...."

PROFILE
◄◄ ANDREW

"[That looping noise] would drive me crazy if I worked there, but I'll bet a lot of commuters don't even notice it," Webb said. "What those announcements don't tell you is which train is on the platform that you're approaching. That can be a nightmare when you're rushing to catch a train that you know is about to leave."

To compensate, Webb memorizes schedules. He also carries a cheat sheet and uses Metra's app. However, although the app provides an updated train schedule, it lacks platform numbers for departing trains.

In fact, there are very few places in Union Station to hear audible announcements of schedule and train information. In order to access this information for his trains, Webb and his guide dog, Lance, travel two blocks off his route. On those occasions when the normal train schedule is disrupted and he must quickly determine where to find the train he needs, Andrew sucks up a little pride and asks strangers in the station to point him to the right platform.

"I want others to understand that people with disabilities generally seek the greatest degree of independence possible," Webb said. "Barriers to independence are usually a function of societal and architectural barriers, rather than of a disabled individual's reluctance to pursue independence."

12 IMPROVE THE FINAL STEPS OF A JOURNEY

A transit trip is not just from the first station to the last. It includes getting to the first station, traveling to the destination station, walking or rolling to the final destination, and going inside. If any portion of the trip is not accessible, the whole trip is impossible. Sidewalks, curb cuts, loading zones, ramps, crosswalks, pedestrian call buttons, and pedestrian signals matter to everyone, but they matter more to people with disabilities who face additional challenges along their journeys. For a person in a wheelchair or using a walker, it is not merely inconvenient to get over a curb and across the grass to a bus stop, it is impossible. For a low-vision person to know when it is safe to cross the street, audible pedestrian signals make all the difference. Despite all CTA and Pace buses having ramps and being accessible vehicles, many stops,

Research has found that walking speed is closely correlated to mortality in older adults. People need access to pedestrian infrastructure where they can maintain their ability to walk, especially to maintain their health later in life.[34]

[34] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3080184/

particularly in the suburbs, are not accessible at all because of the condition of or complete lack of sidewalks.

By improving sidewalks, people can make more trips by walking or rolling to destinations in their local area, and existing bus and train services will become a real option for more people.

Pedestrian infrastructure is the most basic transportation system of all, since it is used by people of every age and ability and provides critical connections to other modes of transportation like buses and trains.

"When the sidewalks are a mess, I'm basically trapped in my house. I call 311 but sometimes it takes days before things get cleared. Fortunately, my boss is understanding and allows me to work from home. A lot of people aren't so lucky. People definitely lose their jobs."
— Chicago wheelchair user

Weather in our region plays an important role. Prompt clearance of snow on sidewalks is critical to older people and those with disabilities — it can mean the difference between being able to get to the bus, needing to use door-to-door ADA paratransit, or being unable to leave the house to make the trip at all. It is also critical that strong policies and enforcement are established so new mobility options like scooters do not make sidewalks inaccessible.

RECOMMENDATION #18:
Assemble regional data on pedestrian infrastructure and its use.

Often, the biggest barrier to mobility is the first and last 100 feet of a trip. Having accessible transit vehicles and stations is not enough if riders cannot safely reach the door; sidewalks must be useable for people

with disabilities. While the City of Chicago does a good job of meeting these standards, suburban communities often do not; extreme examples of this challenge include many bus stops with no sidewalk at all. To fix this, the problem first has to be analyzed with data, and most of that data is not currently collected.

As a first step, CMAP has recently developed the region's first comprehensive sidewalk dataset by analyzing aerial imagery. This dataset identifies whether a sidewalk exists on one or both sides of a street and will be a valuable resource for communities. However, a much richer dataset is needed to fully understand pedestrian accessibility. We need to know the location and condition of all sidewalks, curb ramps, crosswalks, pedestrian signals, and street furniture, so that plans can be made for improving pedestrian environment conditions. Knowing this could enable the development of innovative technology applications for routing pedestrians around barriers based on the degree of mobility limitation. It may also be possible to collate data from existing ADA transition plans that have completed inventories of their pedestrian infrastructure.

Because of the expansiveness of such data, it is critical to develop awareness and interest in prioritizing barrier removal strategies among people with disabilities. Public involvement of people with disabilities is a requirement for ADA transition plans. To successfully engage citizens with disabilities it is necessary to create clear communication strategies and opportunities for meaningful involvement. Traditional urban planning methods can be used along with new tools that use crowdsourcing.

In addition to robust public involvement, better pedestrian counts are needed to

PRACTICE EXAMPLE

DuPage County Infrastructure Conditions

DuPage County created software to enable collection of data on infrastructure condition and ADA compliance using electronic tablets in the field. The County has collected comprehensive information shown in Figure 13 on the ADA compliance of transportation infrastructure including ramps, pedestrian buttons, sidewalks, and bus stop areas for development of the County's ADA Transition Plan.

analyze how the current transportation system is being used. This will involve establishment of pedestrian counting program. Combining this data with the expertise of users would allow us to develop a plan to strategically prioritize investments to close gaps and improve safety. A regional pedestrian infrastructure plan, potentially focusing on priority pedestrian/transit corridors and station areas, should also address the different ways that pedestrian infrastructure gets financed, built and maintained. Snow removal plays a special role in the Chicago area, and new regulations around sidewalk clearance should be explored. As shown in Figure 13, DuPage County has collected accessibility data for county-owned roadways.

RESOURCE

NADTC Guide on Effective Snow Removal[35]

The National Aging and Disability Transportation Center has put together a guide to highlight innovate policies and strategies used by North American communities to improve access to transit during winter weather.

Figure 13. DuPage County Data on Accessible Features on County Roadway Corridors

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[35] https://www.nadtc.org/resources-publications/effective-snow-removal-for-pathways-and-transit-stops-easter-seals-project-action/
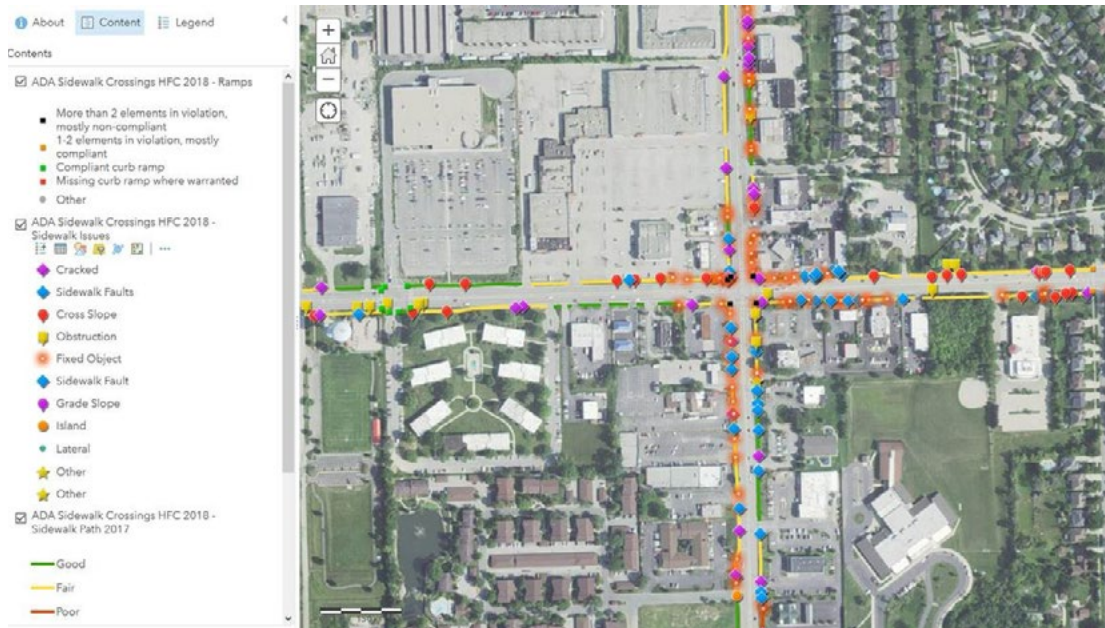
RECOMMENDATION #19:
Create a technical assistance program for development of ADA transition plans.

The Americans with Disabilities Act requires that all municipalities conduct an accessibility self-assessment, and those with over 50 employees create a formal transition plan for public facilities and rights-of-way. In 2014, IDOT sent out a letter to agencies that receive any federal transportation funding emphasizing the federal requirement to have an updated ADA transition plan. These plans are critical documents that help communities prioritize accessibility improvements that directly improve the experience of people with disabilities. Improving the accessibility of the built environment will improve the capacity for people with disabilities to use fixed-route transit, lower demand for demand-response services and provide more freedom of movement for all. In 2015 IDOT established a goal of full ADA compliance by 2040 for the 3,000 miles of highway and 70,000 curb ramps it manages in the six-county area, which amounts to a 4% increase in compliance annually. In 2015 IDOT conducted a full inventory of ADA compliance for all the state highways it owns and operates in Northeast Illinois. That data is stored in an IDOT GIS database and used as a reference when developing projects and prioritizing investments. Similar plans and databases are needed for local municipalities managing their own streets.

While CMAP has provided some resources to inform the ADA transition plan development process, the agency should assess how many communities in Northeast Illinois have updated transition plans.

RESOURCE
CMAP Data Hub

The CMAP Data Hub is a great resource for data on the Chicago region. Data available for download include the Regional Sidewalk Inventory and Bike and Pedestrian Count Geodatabase [36,37]

RESOURCE
Open Data Kit

Open Data Kit provides open-source software tools for collecting, managing and using data in resource-constrained environments.[38]

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[36] https://datahub.cmap.illinois.gov/

[37] https://datahub.cmap.illinois.gov/dataset?tags=Pedestrian

[38] https://opendatakit.org/

CMAP should collaborate with technical assistance providers, such as the Great Lakes ADA Center, to develop a "toolbox" with resources to support communities in data collection, prioritization of improvements, and overall plan development. Such guidance could include identification of technology to allow crowdsourcing of field data collection by residents via cell phone apps and other methods.

Separately, CMAP and the Great Lakes ADA Center could also create a technical assistance program that includes experts to help communities become compliant with this federal mandate, starting with low capacity municipalities, and potentially working with groups of communities.

"I live in a pretty walkable neighborhood, but the problem for me is that the places I need to go aren't accessible. There's a grocery store a couple blocks away, but it's not wheelchair accessible. So instead I have to take a 30-minute bus ride just to buy food. This sort of thing happens all the time."
– Justin, Chicago

Additional coordination is needed between State, County and Municipal staff responsible for infrastructure to ensure pedestrian transitions between facilities owned and maintained by different jurisdictions is seamless.

Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations.

By adopting a Complete Streets policy, communities direct their transportation planners and engineers to routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation. This means that every transportation project will make the street network better and safer for drivers, transit users, pedestrians, and bicyclists.

RECOMMENDATION #20:

Integrate ADA transition planning into local Complete Streets programs.

Detailed infrastructure accessibility data gathered through the development of ADA transition plans should be integrated into communities' Complete Streets programs to ensure that accessibility is comprehensively addressed in all transportation planning. Peer-to-peer training and support on ADA transition plans is needed to help facilitate this change in planning practices. The federally required Coordinated Public Transit Human Services Transportation Plan developed by RTA should integrate information about municipal ADA transition plans and implementation status of improvements. Additionally, any County or community plans for public health should integrate information on the status of implementation of ADA transition plan elements. CMAP should work with the Great Lakes ADA Center on developing a toolkit and best-practice models for communities to coordinate on transportation, public health, accessibility, Complete Streets and other plans, as well as assisting in coordination among state, county, and local agencies that own and maintain various roads in communities.[39]

RECOMMENDATION #21:

Eliminate IDOT's local financial match requirement for sidewalk construction.

While IDOT has a Complete Streets policy and must consider sidewalks and bicycle facilities in all projects, municipalities are required to provide 20% matching funds for each sidewalk project that occurs on an IDOT corridor. The policy was established to ensure that communities are committed to taking on ownership and maintenance of the sidewalk once it is built by IDOT.

Unfortunately, the match requirement has become a barrier to a complete pedestrian infrastructure network, and it's also inequitable for low-income communities that are already at an elevated risk for traffic crashes. Eliminating the match requirement would decrease financial barriers for communities to have sidewalks built. But building infrastructure in communities without the capacity to maintain it is not smart fiscal policy. The region should also explore new maintenance models for sidewalks that are adjacent to IDOT highways that may not involve local jurisdictions taking on full responsibility.

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[39] https://smartgrowthamerica.org/program/national-complete-streets-coalition/publications/what-are-complete-streets/

13 UPGRADE THE ACCESSIBILITY OF THE FIXED-ROUTE SYSTEM

While the CTA has done an excellent job of upgrading its stations to provide vertical access for wheelchairs, as of 2019 30% still do not meet this basic need. This means that a significant share of the extensive 'L' system cannot be used by anyone who needs a trip without stairs. Funding and accelerating implementation of CTA's All Stations Accessibility Program[40] will make fixed-route transit even more viable. Taking a comprehensive approach to making our existing fixed-route transit system universally accessible will be transformative for many of the region's residents and provide opportunities for more people to move around the region more spontaneously at an affordable cost.

As noted previously, while the transit vehicles may be accessible, if there is no sidewalk to get to the stop or station safely, the system is not truly accessible. Additionally, many transit systems around the world are now using extra-wide doors and level boarding that is easier for seniors and people with disabilities to access. Newer bus models allow people in wheelchairs to board at the center door with a ramp that can be activated by the driver when needed.

The provision of safe and comfortable places to sit at stops and stations and along routes is more important to older riders and those with

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[40] https://www.transitchicago.com/accessibility/asap/

disabilities given their greater need to take breaks and rest. Because many disabilities involve chronic pain and fatigue, amenities like shelters and benches can make a big difference. Escalators can be critical for people with limited energy or agility who may not be able to walk up a long flight of stairs, especially if they are carrying items. For those with low vision, shelters serve as a helpful visual indicator of where a bus stop is located. The difference between a bus ride that seems feasible and one that is not may come down to whether there is a sidewalk, shelter and bench.

Riders with disabilities also want all of the same operational improvements that benefit everybody else such as frequent, reliable service with easy connections. Efficient operations and smooth transitions are even more important to minimize vulnerable riders' wait time exposed to heat and cold, and to help people move about more easily.

RECOMMENDATION #22:
Prioritize funding for universal accessibility of all regional rail stations.

Future transit investments should prioritize making all existing CTA and Metra rail stations vertically accessible, and should include upgrades to wayfinding for blind, low-vision and deaf riders. The RTA Board of Directors should recommend this priority through its annual budget process.

RECOMMENDATION #23:
Build shelters with seating at stops, stations, and transfer points.

Seating and shelters are important amenities for all passengers, but they are critical for people with disabilities. An absence of this supportive infrastructure at bus stops and rail stations is a significant factor driving riders to choose door-to-door paratransit services over the fixed-route system. Additionally, when riders transfer between sub-regional paratransit services they do so at one of two dozen regional transfer points. Wait times can be quite long, and these locations are frequently in parking lots without dedicated waiting areas or restrooms. In some cases, riders may use a nearby business, but that business could close before the traveler's ride has arrived. This uncertainty is stressful and discourages trips. Pace announced in August 2019 that new State capital bill funds will enable upgrades of transfer locations to add secure buildings where passengers can wait. Pace can also pursue building comprehensive mobility hubs at which social service providers are co-located at all transfer points.

RECOMMENDATION #24:
Crowdsource data to improve wayfinding and navigation tools.

Transportation providers should provide methods for system users to report barriers to accessibility, including locations with insufficient wayfinding for people

with a range of disabilties. Agencies should engage these groups in planning for signage, on-board and off-board visual and audible information, and other tools to make transit use easier for people of all ages and abilities. This should include participatory mapping tools developed by County DOTs to document locations in need of upgrades and barriers to accessibility.

RECOMMENDATION #25:
Provide real-time vehicle information and station condition updates.

Having reliable information on service conditions is important for all transit riders, but it is even more critical for those with disabilities. When elevator or escalator outages are not promptly reported, riders can find themselves stuck on platforms or mezzanines, having to re-board and depart at a different station. In some cases, the next accessible station may be quite distant. Transit service boards should evaluate procedures to ensure that current conditions are reflected immediately in data feeds and online information.

CTA riders can sign up for email or text alerts[41] about elevator outages, and service disruptions and delays. Riders can sign up by route and time of day when information is desired. The ideal would be for such information to be integrated into trip planning services so that riders have routing alternatives in the case of elevator or other accessibility outages.

Real-time vehicle location information is now available on most Pace, Metra and CTA buses and trains, but is not available for ADA paratransit or Dial-a-Ride services.

Inclusive Transportation Planning

produces better results. A well-designed inclusive transportation planning process — one that actively involves older adults and people with disabilities throughout the process — leads to the development of community and public transportation programs that effectively meet the needs of the people whom they are designed to serve.

RESOURCE

Inclusive Transit Planning Toolkit

A product of Transit Planning 4 All, which is sponsored by the Department of Health and Human Services' Administration for Community Living (ACL) in collaboration with the U.S. Department of Transportation's Federal Transit Administration (FTA), this toolkit provides information for engaging older and disabled populations in planning efforts.

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[41] https://www.transitchicago.com/updates/

Providing that information would decrease travel uncertainty, reduce the number of calls to the customer service line, and reduce idle waiting time.

RECOMMENDATION #26:
Enact housing policies that encourage accessible housing near fixed-route transit.

People with mobility challenges greatly benefit from living in walkable areas with good access to transit. Unfortunately, areas with the best access frequently have a shortage of affordable housing options. Unemployment and poverty rates are high among people with disabilities, which makes locating housing in transit-rich areas even more difficult. Municipalities with affordable housing regulations, such as Chicago's Affordable Requirements Ordinance, should ensure that all affordable housing is also accessible.

"The closest Metra station to my house is over a mile away, and I don't have any bus service. I'd love to live closer to transit, but there's nothing I can afford. And because of my disability and lack of access, I can't work regularly. It's a vicious cycle."
– Scott, Barrington

The concept of "housing plus services" views affordable housing as a platform to provide health and social services to help low income older people remain in community settings. Transportation stakeholders should work with housing leaders on policies for locating housing near accessible public

PRACTICE EXAMPLE
Housing and Urban Development Assisted Housing

The HUD Supportive Services Demonstration (SSD), also referred to as Integrated Wellness in Supportive Housing (IWISH), is a program that coordinates delivery of services to better address the interdependent health and supportive service needs of older residents to delay or avoid nursing home care for low-income elderly residents in HUD-assisted housing. Participating properties were not selected based on proximity to public transport. While the program staff will help coordinate transportation services for residents as possible, focus on proximity to public transit could be improved in the future.

transit and training housing professionals on transportation services available to residents.

RECOMMENDATION #27:

Require all new development to have pedestrian-friendly site design.

In much of the region, development patterns are very hostile to pedestrians, and difficult for transit to serve. Office, retail, and medical spaces are frequently set back far from the street, requiring transit users and pedestrians to cross large parking lots without safe accommodations. Immense block lengths along high-speed arterials create unpleasant and dangerous walking conditions. These design choices contribute to reducing appeal and feasibility of even providing fixed-route transit and the feasibility of using what is available, which can result in more people using paratransit. Municipalities should use their regulatory powers to require street-facing pedestrian-friendly designs and develop walkable places that will encourage transit use and foster safe streets so that people with disabilities can have access to the buildings.

RESOURCE

Pace Transit Supportive Guidelines

Pace has developed a comprehensive guide for transit supportive design that addresses each "component" of a trip, from the rider to the public way to the destination. It gives recommendations on site design, parking, building design, on-site transit facilities and more.

RESOURCE

Access Living

Access Living is a Chicago-based advocacy organization that serves as a bridge to connect low income housing developers to people with disabilities in search of housing. The organization works to utilize available housing stock, ensuring that providers fulfill housing commitments to people with disabilities through tax credit applications and other programmatic requirements.

14 IMPROVE FUNDING STRUCTURES

Funding for paratransit is insufficient and very fragmented, which has resulted in a variety of services being developed in different jurisdictions with different funding structures and operating policies. The key issue that must be addressed is how can we use transportation funds smarter to serve these transportation needs better and more efficiently.

The equity of funding structures for non-ADA paratransit is a significant concern because it relies on local matches. Low capacity communities may struggle to fund a local match and be concerned about committing to long-term obligations. Non-ADA transportation services provided by communities or townships are not a federal mandate and can be discontinued if communities have financial difficulty sustaining the service, which would be a major disappointment to riders who have grown accustomed to the service.

RECOMMENDATION #28:
Prioritize accessibility in transportation investments.

The Rebuild Illinois capital funding bill passed in June 2019 includes significant new dedicated transportation revenues. It also enables counties to levy an additional motor fuel tax to raise transportation revenues. As these new funds are invested, every effort should be made to ensure that improvements make the system more accessible. However, there are other established transportation funding mechanisms that are being diverted away from transportation projects. Most notably, the 2008 RTA Act established a 0.25% sales tax in the counties outside Cook for

transportation. Due to a political compromise, the RTA sales tax revenue can also be used for "public safety" purposes. Funds used in this way generally go toward capital projects for law enforcement or other emergency services. However, as shown in Table 3, DuPage County chose to spend none of the sales tax revenue on transportation. With the increased state motor fuel tax passed with Rebuild Illinois, other counties are choosing to divert more of the RTA sales tax. For instance, Kane County recently passed Resolution No. 19 - 363 to use RTA sales tax money to plug gaps in the county's general fund. Ending the diversion of transportation revenue already being collected would enable the provision of a minimum level of accessible demand-response service for all residents. Given the scale of revenue invested in transportation annually, counties should appropriate at least some of these funds to dedicated universal mobility programs. Even allocating a few million dollars to this purpose could make a massive difference in the lives of people with limited mobility.

Table 3. Percent of RTA Sales Tax Revenue in Collar Counties going to Transportation

	Funding Amount from RTA Sales Tax (2018)	Percent going to Transportation
DuPage County	$52,068,852	0%
Kane County	$18,498,965	75%
Lake County	$32,054,503	100%
McHenry County	$10,615,161	100%
Will County	$24,929,887	93%

RECOMMENDATION #29:

Assess transportation impact fees on trip-generating developments.

Some communities, especially in outlying areas of Kane, Kendall and McHenry Counties, have experienced significant increases in demand for paratransit services associated with new senior and medical developments in greenfield locations. The future demand for transportation services should be taken into consideration when developing impact fees. Some of these developments designed for seniors become non-ADA paratransit service "sponsors," meaning they provide a local match for sub-regional dial-a-ride service, but others benefit from paratransit services without making any financial contribution to address the new transportation demand generated by their residents.

RECOMMENDATION #30:

Eliminate "legacy subsidies."

RTA's 2016 report on sustainable funding for coordinated demand-response services proposed implementing a more equitable, flat rate of subsidy for all communities that participate in a coordinated transit system. This would create equivalent services across a region and also encourage more townships and municipalities to participate. MCRide in McHenry County can be used as a model. There, a negotiated flat fee replaced legacy subsidies, but was also supplemented by a county match, which draws revenue from a special property tax to fund a Senior Services Grant Fund. This took some of the sting away from communities losing their previous subsidies. In other coordinated services, a 50% local match is required, meaning that low-capacity communities end up with less service. By eliminating legacy subsidies, we can clarify funding sources, improve equity, and improve service.

RECOMMENDATION #31:

Reduce restrictions on federal funding sources that can be used for transportation.

The National Center for Mobility Management has identified 122 Federal agencies that fund various types of transportation services, ranging from the Department of Agriculture to the Department of Veterans Affairs. A national Coordinating Council on Access and Mobility[43] was established to coordinate the efforts of federal agencies that fund transportation service. The Council has been successful in influencing an increasing number of agencies to allow a transportation focus in their grants

PRACTICE EXAMPLE

Mobility Transformation in Ohio[42]

The Ohio Departments of Transportation and Medicaid have enacted a statewide policy alignment to enable coordination between the 14 state agencies that provide money for non-emergency medical transportation. The state is establishing a brokerage system that will centralize all Medicaid funding dedicated to transportation. This should create more fairly funded, consistent, customer-focused service throughout the state by standardizing requirements, enhancing coordination, and reducing administration costs.

[42] https://ddc.ohio.gov/Portals/0/transportation-poli-cy-align.pdf

[43] https://www.transit.dot.gov/ccam

programs, which has broadened the overall pool of funds available. However, other agencies are considering changes that would have significant impacts on transportation funding for accessible services. For example, the Department of Health and Human Services is considering making funding for non-emergency medical transportation under Medicaid optional. Given the importance of having transportation availability to attend medical appointments, non-emergency transportation costs should continue to be an eligible Medicaid expense. Additionally, while it is good that multiple federal agencies have transportation programs to service clients, they need to be better coordinated among themselves. Chicago-area stakeholders should engage with our Federal agency representatives serving this region to identify ways to increase the flexibility of different funding sources to support improvement of transportation services, particularly for people who are older or have disabilities.

PROFILE
ADAM »

"**Rather than maintaining an accessible vehicle of my own, it makes sense financially to use public transit, paratransit and taxis — everything I use here [in Chicago].**"

For Adam Ballard, transportation is personal. He grew up in downstate Illinois, and moved to the Chicago suburbs in order to access the Metra system. Now he lives in Chicago's Pilsen neighborhood, where he gets around independently in his power chair without needing to buy an expensive retrofitted vehicle.

"Transit and transportation infrastructure have been important to me for a long time," Adam says.

"[People with disabilities are] still developing a political identity and a political voice around our disability identity," said Adam, Housing and Transportation Policy Analyst at Access Living. Founded in 1980, Access Living is a Chicago-based center of advocacy, service, and social change led by and for people with disabilities.

For decades, the organization has been a hub for Chicago's disability community. Cumulatively, its employees and constituents use their hard-earned political voice to advocate, including for better transportation.

Two to five times per year, for at least the past decade, Access Living takes an Amtrak train to lobby Springfield. They don't just bring staff, but folks who receive services, volunteers, and organizers. They share their stories and lift each others' voices. "At this point, we're a known entity," Adam says. "People are familiar with the kinds of things we're asking for. We've developed relationships by being [in Springfield]."

A number of the transportation improvements that Access Living fought for made the Illinois $45 billion capital improvement plan that Governor Pritzker signed into law in July 2019. These include funding for the Chicago Transit Authority to expand its accessible stations program. And for Pace to upgrade its computerized dispatch system to allow for real-time vehicle tracking, so that fewer people wait indefinitely in the winter winds for their rides.

"We'd like to see transportation systems that are fully integrated every step of the way. No matter the mode of transportation, no matter your disability or disability type, you're going to be able to access the same level of service that a non-disabled person would."

15 EMPOWER PEOPLE WITH DISABILITIES AND CAREGIVERS TO ADVOCATE

Disability resource centers and advocacy organizations play an important role in disseminating information on how to use transit. Because accessible transportation is often given second-class status, advocacy for universal mobility plays an important role. However, the goal is for a universally accessible system to be a priority for all.

"It's possible to be heard, but you need to know the right folks and go straight to the top. You've got to have a big voice and you've got to be really articulate. You also have to be patient, because it can take a long time to get through." — Marcia, South Chicago

Too often people reluctantly accept they can only travel to certain destinations and must live within restricted parameters because of physical infrastructure barriers. People whose lives are limited by the accessibility of the transportation system should be encouraged not to accept that parts of the system and region are off limits to them. They

should be empowered to demand access to more places. Vocal advocates can achieve improvement to service.

All residents of this region should care about the accessibility of the system, given that at some point in their lives, nearly everyone will experience a change to their physical ability, which may well affect their mobility options. People with temporary or long-term disabilities who cannot be accommodated by our current system should be encouraged to proactively engage on these issues with decision makers.

RECOMMENDATION #32:
Give people the tools to change the systems they use.

People with mobility challenges should be empowered to advocate for high quality pedestrian and transit infrastructure that will benefit their mobility by enabling them to walk or roll to key destinations or to fixed-route transit stops. Such advocacy can be a chief responsibility of the Mobility Coordinator. This effort can be accomplished by training community members on how to advocate for transportation and sidewalk improvements. The expertise of on-the-ground users is valuable and should be incorporated into planning efforts. RTA, with the support of community partners, should develop accessible and practical communication channels through which people with mobility challenges can easily transmit information about needed infrastructure improvements, particularly to improve wayfinding, pedestrian conditions and last-mile connections.

PRACTICE EXAMPLE

Map-based Crowdsourcing Tools on First Mile/last Mile Bus Stop Accessibility

Delaware's statewide transit agency, DART, has collaborated with the University of Delaware to create three map-based crowdsourcing tools on first mile/last mile bus stop accessibility. DART is asking riders and pedestrians, including users of mobility devices, to download an app and input data about the presence and condition of bus shelters and the accessibility of intersections, sidewalks and curbs, all the way from the bus stop location to their destination.

The information is being used to inform a Coordinated Public Transit-Human Services Transportation Plan for Delaware. Information collected from the crowdsourcing tools will help to identify needed bus stop accessibility improvements related to pedestrian and bicycle infrastructure, ADA accessibility and connectivity.[44]

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[44] www.acltoolkit.com

This could take the form of a county level or regional level 311 system that can capture crowdsourced data, where input from residents on transportation needs and infrastructure problems is collected at the regional level.

AARP created a walk audit tool kit to help individuals, groups or leaders in assessing the walkability of the streets in their community. It provides a step-by-step guide to help people assess sidewalk and crosswalk conditions, driver behavior, safety and comfort. The tool kit also provides action steps for engaging with decision makers and sharing the audit's findings. Local AARP groups could be enlisted to organize walk audits throughout the region.

RESOURCE

AARP Walk Audit Tool Kit[45]

The walk audit tool provides step-by-step instructions and checklists for examining intersections, sidewalks, driver behavior, public safety and more. Since the survey is user-directed, the walk audit can take as little or as much time as desired by, say, spending 15 minutes at one busy corner or devoting several hours to documenting several roadways in a neighborhood.

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[45] https://www.aarp.org/livable-communities/getting-around/info-2014/aarp-walk-audit-tool-kit.html

16 NEXT STEPS

MPC is eager to remain engaged with the organizations, agencies and individuals whose input shaped the recommendations in this report. Together, we can change our transportation system and move our region toward universal mobility.

This report recommends policies to empower and engage people with disabilities and improve their mobility outcomes. It reflects the ideas and experiences of nearly 100 people with close personal knowledge of transportation accessibility issues.

We have identified stakeholders with a role in implementation and will form a coalition to meet regularly to advance these policy recommendations. Some will be challenging, but with the right partners and enough political will, we can make lasting change.

ACRONYMS AND IMPORTANT TERMS

ADA
Americans with Disabilities Act of 1990, a federal law that prohibits discrimination against people in employment and in public places based on their disability.

CMAP
Chicago Metropolitan Agency for Planning, the metropolitan planning organization for all of northeastern Illinois charged with regional transportation planning. CMAP's jurisdiction is slightly larger than the RTA's.

CTA
Chicago Transit Authority, one of three service boards that operates light rail and bus in the City of Chicago and some surrounding suburbs.

FHWA
Federal Highway Administration, an agency in the U.S. Department of Transportation that supports state and local governments with the design, construction, and maintenance of the nation's highway system.

IDOT
Illinois Department of Transportation, the state agency that oversees transportation for the entire State of Illinois, and provides significant funding to the RTA, counties, and municipalities.

'L'
Shorthand for elevated light rail lines on the CTA.

Metra
Metra Commuter Rail, one of the three service board that operates commuter rail throughout the RTA region.

MPC
The Metropolitan Planning Council, a Chicago-based not-for-profit research and policy organization, which issued this report.

Pace

Pace Suburban Bus, one of the three service boards that provides bus services in the suburbs not served by CTA. Starting in 2005 Pace also entered into a contract with CTA (that also was approved by the legislature) to provide Paratransit services in the CTA service region.

RTA

Regional Transportation Authority, created by referendum in 1970 and restructured in 1983 and 2008, which operates as the oversight and funding agency for the three transit providers, also known as "service boards:" CTA, Metra, and Pace. The RTA imposes a sales tax upon the six-county region of Cook, Lake, McHenry, DuPage, Kane, and Will. The proceeds of that tax are shared with CTA, Metra, Pace (Bus), and Pace (Paratransit) using a formula dictated by state law with some discretionary options.

TNC

Transportation network companies (also referred to ride-hailing) such as Uber or Lyft.

WAV

Wheelchair accessible vehicle, a vehicle that can accommodate wheelchairs.

ACKNOWLEDGEMENTS